NA-79-AA-D-CZ070

Final Environmental Impact Statement

Apalachicola River and Bay Estuarine Sanctuary

Proposed Estuarine Sanctuary Grant Award
for Apalachicola River and Bay, Florida

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Coastal Zone Management
and
STATE OF FLORIDA
Department of Environmental Regulation
Bureau of Coastal Zone Management

QH
541.5
.E8
N27
1979

Property of CSC Library

UNITED STATES

DEPARTMENT OF COMMERCE

U.S. DEPARTMENT OF COMMERCE NOAA
COASTAL SERVICES CENTER
2234 SOUTH HOBSON AVENUE
CHARLESTON, SC 29405-2413

FINAL ENVIRONMENTAL IMPACT STATEMENT

PROPOSED

ESTUARINE SANCTUARY GRANT AWARD

FOR

APALACHICOLA BAY AND LOWER APALACHICOLA RIVER, FRANKLIN COUNTY, FLORIDA

TO

STATE OF FLORIDA

Prepared by:

Office of Coastal Zone Management
National Oceanic and Atmospheric
Administration
Department of Commerce
3300 Whitehaven Street, N. W.
Washington, D.C. 20235

and

Bureau of Coastal Zone Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

QH541.5.E8 N27 1979
6153142

FEB 5 1997

TABLE OF CONTENTS

Page

SUMMARY..... i

PART I: PURPOSE OF AND NEED FOR ACTION..... 1

PART II: ALTERNATIVES (INCLUDING PROPOSED ACTION)..... 5

A. Preferred Alternative..... 5

1. Boundaries and Acquisition of Sanctuary Lands

2. Management

a. General and Specific Management Requirements

b. Administration of the Sanctuary

c. Management Committee

B. Alternatives Considered..... 19

1. Funding

2. Site Selection

3. Boundaries

4. Management

5. Methods of Acquisition and Protection

6. No Action

PART III: ENVIRONMENTAL CONSEQUENCES..... 23

A. Impacts on the Environment of the Proposed Action. 23

1. Local Impacts on Franklin County

2. Regional Impacts on the Apalachicola-Chattahoochee-Flint River Basin

3. State and Federal Impacts

TABLE OF CONTENTS
(Continued)

Page

B. Relationship Between Local Short Term Uses of the Environment and the Maintenance and Enchancement of Long Term Productivity..... 27

C. Irreversible or Irretrievable Commitments of Resources..... 27

D. Possible Conflicts Between the Proposed Action and the Objectives of Federal, Regional, State and Local Land Use Plans, Policies, and Controls for the Area Concerned..... 28

PART IV: AFFECTED ENVIRONMENT..... 33

A. General Physiography..... 33

B. Soils Geology..... 33

C. Drainage..... 34

D. Biological Characteristics..... 34

1. Vegetation

2. Fish and Wildlife

E. Socioeconomic Characteristics..... 37

PART V: LIST OF PREPARERS..... 41

PART VI: LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS RECEIVING COPIES..... 45

PART VII: APPENDICES..... 49

SUMMARY

BACKGROUND

In response to the intense pressures upon and conflicts within the coastal zone of the United States, Congress passed the Coastal Zone Management Act (P.L. 92-583) in 1972, with amendments passed in 1976 (P.L. 94-370). The Act authorized a new Federal program--administered by the National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce--to assist and encourage coastal States to develop and implement rational programs for managing their coastal resources. The Act affirms a national interest in the coastal zone's effective management, beneficial use, and development, and it permits the awarding of grants for the purpose of meeting these ends.

Section 315 of the Coastal Zone Managment Act established the Estuarine Sanctuary program, which, on a matching basis, provides grants to States to acquire, develop, and operate estuarine areas to be set aside as natural field laboratories. These areas will be used primarily for long term scientific and educational purposes, which, in addition to other benefits, will provide information essential to coastal management decisionmaking. Examples of estuarine sanctuary purposes are:

- To gain a thorough understanding of the ecological relationships within the estuarine environment;
- To make baseline ecological measurements;
- To serve as a natural control in order to monitor changes and assess the impacts of human stresses on the ecosystem;
- To provide a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their values and benefits to man and nature, and the problems that confront them; and,
- To encourage multiple use of the estuarine sanctuaries to the extent that such usage is compatible with the primary sanctuary purposes: research and education.

In order to ensure that the sanctuary program adequately represents regional and ecological differences, the programmatic guidelines establish a biogeographic classification scheme that reflects geographic, hydrographic, and biologic characteristics.

The Estuarine Sanctuary Guidelines, which were published in 1974, were modified in 1977 to authorize specifically the granting of acquisition

money in three stages: (1) An initial grant for such preliminary purposes as surveying and assessing the lands to be acquired, and for developing management procedures and research programs; (2) A second grant for the actual acquisition of the land; and (3) subsequent grants for administration and operation of the sanctuary.

In February 1978, the State of Florida submitted to the Office of Coastal Zone Management (OCZM)/NOAA a preacquisition grant application for an estuarine sanctuary to be located in the Apalachicola River/Bay region of Franklin and Gulf Counties. Subsequently, OCZM awarded a preacquisition grant for $50,000 (which was matched by an equivalent amount from the State). In March 1979, the State of Florida submitted an acquisition grant application for $1.8 million--to be matched by $1.95 million in State Environmentally Endangered Lands (EEL) funds--for the acquisition, development, and operation of this estuarine sanctuary, which will be representative of the Louisianian biogeographic region. The State will also have the option of requesting up to $50,000 (also 50 percent matching) for three years of operational funds if the acquisition grant is given.

PROPOSED ACTION

The grant request to OCZM is for the acquisition of 12,467 acres of land, to be included within the boundaries of a proposed sanctuary consisting of approximately 192,758 acres. All other lands, excluding those proposed for purchase, are currently publicly owned and managed. The composition of the entire area within the proposed sanctuary boundary is as follows:

Parcel	Size (in acres)
Existing State EEL purchase	28,045
Existing State EEL purchase on Little St. George Island	2,193
Existing State Park on St. George Island	1,883
Existing Federal St. Vincent Island National Wildlife Refuge	12,490
Existing State-owned estuarine waters and submerged lands	135,680
PROPOSED ADDITIONAL LAND ACQUISITION	12,467
Total	192,758

St. Vincent Island and the State-owned uplands were acquired for a variety of purposes, including recreation, wildlife management, and conservation and protection of environmentally unique and irreplaceable lands. Although management of these lands differs according to the objective of each parcel's acquisition, these varied, currently existing objectives are compatible and in harmony with the objective of managing the sanctuary over the long term for research and educational purposes within an estuarine system. Inclusion of these lands within the sanctuary will not affect their present management practices, and ownership and management decisions will continue to be made by currently involved State and Federal agencies.

The establishment of a Sanctuary Management Committee is proposed for the purposes of advising the State's Department of Natural Resources (DNR), which will hold title to the lands proposed for acquisition, in the administration of the sanctuary. The Committee will:

- Review applicants for Sanctuary Coordinator and staff positions, and advise DNR prior to final selection;
- Review and approve proposals for educational or research use and activities in state owned sanctuary lands and waters;
- Review and approve the management plans for the newly purchased lands (12,467 acres), prior to final adoption of these plans by DNR.
- Advise appropriate Federal, State, or local government(s) on proposed actions, plans, and projects in, adjacent to, or affecting the sanctuary, such as: A-95 projects, developments of regional impact, dredge and fill requests, waste discharge permits, lease and sale of State-owned lands, rules for the Aquatic Preserves program, and local government zoning plans and proposed zoning changes on adjacent lands.
- Enhance communication and cooperation among all interests involved in the sanctuary.

The proposed Sanctuary Management Committee voting membership will be comprised of the following groups, organizations, or their representatives: The Franklin County Commission, the Apalachicola Bay resource users, research and educational institutions, and the State's Department of Environmental Regulation (DER), Game and Freshwater Fish Commission, and Department of Natural Resources (DNR). The Management Committee also has a non-voting membership which includes representation from: the State's Department of Community Affairs, Division of Local Resource Management (Apalachicola River Committee), the National Oceanic and Atmospheric Administration, U.S. Army Corps

of Engineers; U.S. Fish and Wildlife Service; and the Northwest Florida Water Management District. Recognizing the interstate nature of the Apalachicola River/Bay system, the States of Alabama and Georgia will have access and input to the Committee through the DER.

ALTERNATIVES

The major boundary options included the following:

1. Reducing the land mass by excluding St. Vincent Island National Wildlife Refuge and/or all State-owned lands on St. George and Little St. George Island.

2. Expanding the sanctuary boundaries to include additional water areas (Lake Wimico, Jackson River, and water areas north of the proposed boundaries).

3. Expanding the lands included within the sanctuary specifically to include Tate's Hell Swamp and all private uplands on St. George Island.

The State of Florida, OCZM, and other reviewers felt that the barrier islands were an integral part of the island/bay/river estuarine ecosystem, which, if kept as a unit, would present increased research and educational opportunities. For this reason, it was felt that these islands should be included within the sanctuary boundaries.

The additional water areas were recommended by the Apalachicola River/Bay Symposium panelists for inclusion within the sanctuary boundaries. These areas were not included because the State does not own the adjacent lands, so that the quality of these waters would not be under scientific control and the long term impacts on research and education would be unknown. Within the sanctuary as proposed, all State-owned uplands and waters are contiguous.

Ownership of Tates Hell Swamp and the privately owned portions of St. George Island would be desirable from an ecological standpoint. However, funds are not available for additional purchases and OCZM felt that existing State and local regulatory authorities are adequate for these lands.

The only major alternative management structure considered was to have a single agency manager: DNR. Although this would be a less complex structure than the proposed one, its adoption would cause the loss of a coordinated management approach to the Apalachicola River and Bay estuarine system. Under the management structure proposed, DNR shall still maintain major responsibilities within the system, due to its continued management of existing and future State-owned lands within the sanctuary borders, its role as chairman of the Sanctuary Management Committee, and as the employer of sanctuary staff.

ISSUES

A substantial amount of support has been expressed for an estuarine sanctuary within the Apalachicola River/Bay system. This support has come from all sectors, including Federal, State, local, and private. The major concern that has been expressed is the proposed project's effect upon navigation and commercial waterborne transportation on the Apalachicola River and Bay system. During the preparation of this FEIS, the authors were cognizant of this important concern and attempted to be as explicit as possible regarding the proposed sanctuary's impacts upon navigation, waterborne commerce, and other related uses.

There appear to be several misconceptions regarding what an estuarine sanctuary actually is or is not. An estuarine sanctuary is established through matching grants to the requesting State. The individual State owns and manages, with State regulations, all land that is purchased. No "OCZM" laws are attached to sanctuary designation.

Similarly, estuarine sanctuary status cannot change or alter the Congressionally authorized navigation projects within the sanctuary boundaries, which specifically includes the Apalachicola-Chattahoochee-Flint (A-C-F) waterway authorization of a 9'x 100' channel, 95% of the time. Any proposed navigation project must still go through the existing local, State, and Federal regulatory process. However, sanctuary status does imply that one of the major objectives for the area, within the sanctuary boundaries, will be the long term preservation of the natural ecosystem for baseline research and educational purposes.

Another concern expressed was for the possible restrictions on navigation especially for transportation to the States of Alabama and Georgia. Legally, such restrictions are not possible, according to such laws as the Interstate Commerce Act, the Ports and Waterways Safety Act, Clean Water Act of 1977, and others, including the Coastal Zone Management Act (CZMA) itself. The CZMA states that "Nothing in this title shall be construed--to diminish either Federal or state jurisdiction, responsibility, or rights in the field of planning, development, or control of water resources, submerged lands or navigable waters; nor to displace, supersede, limit, or modify any interstate compact or the jurisdiction or responsibility of any legally established joint or common agency of two or more states or of two or more states and the Federal Government; nor to limit the authority of Congress to authorize and fund such projects" (CZMA, §307(e)(1)). This proposal specifically allows navigation, including the maintenance dredging of existing channels, subject to existing State and Federal permit reviews. In particular, this includes the A-C-F waterway and maintenance dredging to 9' x 100 '.

An additional potential impact on the State of Florida is the prohibition against the incorporation of new public works projects, requiring dredging and filling, into the official Florida resource development water program,

that is annually presented to Congress. This prohibition shall terminate upon completion of a long term disposal plan approximately one year from sanctuary establishment. This prohibition does not apply to the Corps of Engineers or other Federal agencies.

Furthermore, land use practices outside the sanctuary boundaries shall continue under existing State rules and regulations. There shall be no additional rules and regulations affecting land use practices outside the sanctuary boundaries resulting from sanctuary designation.

PART I: PURPOSE OF AND NEED FOR ACTION

In response to the intense pressures upon the vitally important coastal zone of the United States, Congress passed the Coastal Zone Management Act (CZMA), which was signed into law on October 27, 1972, (P.L. 92-583), and amended in 1976. The CZMA authorized a Federal grant-in-aid and assistance program to be administered by the Secretary of Commerce, who in turn delegated this responsibility to the Office of Coastal Zone Management (OCZM) of the National Oceanic and Atmospheric Administration (NOAA).

The CZMA affirms a national interest in the effective protection and development of the Nation's coastal zone, and provides assistance and encouragement to coastal States (including those bordering the Atlantic and Pacific Oceans, the Gulf of Mexico, and the Great Lakes) and U.S. territories to develop and implement State programs for managing their coastal zones. The Act established a variety of grant-in-aid programs to such States for the purposes of:

- o developing coastal zone management programs (Sec. 305);
- o implementing and administering management programs that receive Federal approval (Sec. 306);
- o avoiding or minimizing adverse environmental, social, and economic impacts resulting from coastal energy activities (Sec. 308);
- o coordinating, studying, planning, and implementing interstate coastal management activities and programs (Sec. 309);
- o conducting research, study, and training programs to support both scientifically and technically the State coastal management programs (Sec. 310); and
- o acquiring estuarine sanctuaries, and land to provide for shorefront access and island preservation (Sec. 315).

The estuarine sanctuary program authorized by Section 315 of the CZMA establishes a program to provide matching grants to States to acquire, develop, and operate natural estuarine areas as sanctuaries so that scientists and students may be provided the opportunity to examine the ecological relationships within the areas over a period of time. Section 315 provides a maximum of $2,000,000 of Federal funds, to be matched by the equivalent amount from the State, for each sanctuary. Guidelines for implementation of the estuarine sanctuary program were published in final form on June 4, 1974 [15 CFR part 921, Federal Register 39 (105): 19922-19927] and amended on September 9, 1977 [15 CFR Part 921, Federal Register 42 (175): 45522-45523] (Appendix I).

Sanctuaries established under this program have the dual purpose of (1) providing relatively undisturbed areas so that a representative series of natural coastal ecological systems will always remain available for ecological research and education; and (2) ensuring the availability of natural areas for use as a control against which impacts of man's activities in other areas can be assessed. These sanctuaries are to be used primarily for long term scientific and educational purposes, especially to provide information essential to coastal zone management decisionmaking. Such research purposes may include:

- o Gaining a thorough understanding of the natural ecological relationships within the variety of estuarine environments of the United States;
- o Making baseline ecological measurements;
- o Serving as a natural control against which changes in other estuaries can be measured, and facilitating evaluation of the impacts of human activities on estuarine ecosystems; and
- o Providing a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their values and benefits to man and nature, and problems with which estuaries are confronted.

While the primary purpose of estuarine sanctuaries is scientific and educational, multiple use of estuarine sanctuaries will be encouraged to the extent such usage is compatible with the primary sanctuary purpose. Such uses may generally include such activities as low intensity recreation, fishing, hunting, and wildlife observation.

The CZMA and the sanctuary guidelines envision that the estuarine sanctuary program ultimately will fully represent the variety of regional and ecological differences among estuaries. The regulations indicate that "the purpose of the estuarine sanctuary program. . .shall be accomplished by the establishment of a series of estuarine sanctuaries which will be designated so that at least one representative of each estuarine ecosystem will endure into the future for scientific and educational purposes" (15 CFR 921.3(a)). As administered by OCZM, the estuarine sanctuary program defined 11 different biogeographic provinces or classifications based on geographic, hydrographic, and biologic characteristics. Subcategories of this basic system will be utilized as appropriate to distinguish major regions or subclasses of each province. OCZM anticipates that a minimum of 21 sanctuaries will be necessary to provide adequate representation of the Nation's estuarine ecological systems.

Between 1974 and the present, OCZM has awarded grants to establish five estuarine sanctuaries. These include:

Sanctuary	Biogeographic Classification
South Slough Coos Bay, Oregon	Columbian
Duplin River/ Sapelo Island, Georgia	Carolinian
Waimanu Valley, Island of Hawaii, Hawaii	Insular
Rookery Bay, Collier County, Florida	West Indian
Old Woman Creek, Erie Co., Ohio	Great Lakes

The proposed action currently under consideration by OCZM is the formal grant application by the State of Florida for an estuarine sanctuary consisting of approximately 192,758 acres of lands and waters in the lower Apalachicola River delta and bay system. The application requests $1,800,000 from NOAA, to be matched by $1,950,000 from the State's Environmentally Endangered Lands (EEL) Fund, for the purchase of approximately 12,467 acres of uplands. The proposed sanctuary would be representative of the Louisianian Biogeographic Classification, further completing the series of nationwide representative estuarine systems established as provided for in Section 315 of the CZMA (biographic regions are defined in the Estuarine Sanctuary Guidelines, which are included in Appendix I).

This proposal follows several years of interest in and concern about the Apalachicola River/Bay system by State and local officials, Federal agencies, universities, environmentally oriented organizations, and concerned individuals. As a result of this concern, in 1978, Florida submitted an application to OCZM for a preliminary acquisition grant for the Apalachicola River/Bay system. In May 1978, OCZM awarded Florida a $50,000 preliminary acquisition grant, which enabled the State to (1) complete a preliminary appraisal of the lands proposed to be acquired; (2) convene a conference of scientists and technicians to identify research and management needs in the estuary; and (3) develop a specific management program for the proposed sanctuary.

On October 17-19, 1978, a symposium and workshop was held in Tallahassee, Florida, to examine the proposed National Estuarine Sanctuary within the Apalachicola River/Bay system. Their report, "Summary of Workshops and Recommendations for Boundaries and Environmental Management of a Proposed Estuarine Sanctuary" is reproduced as Appendix 2.

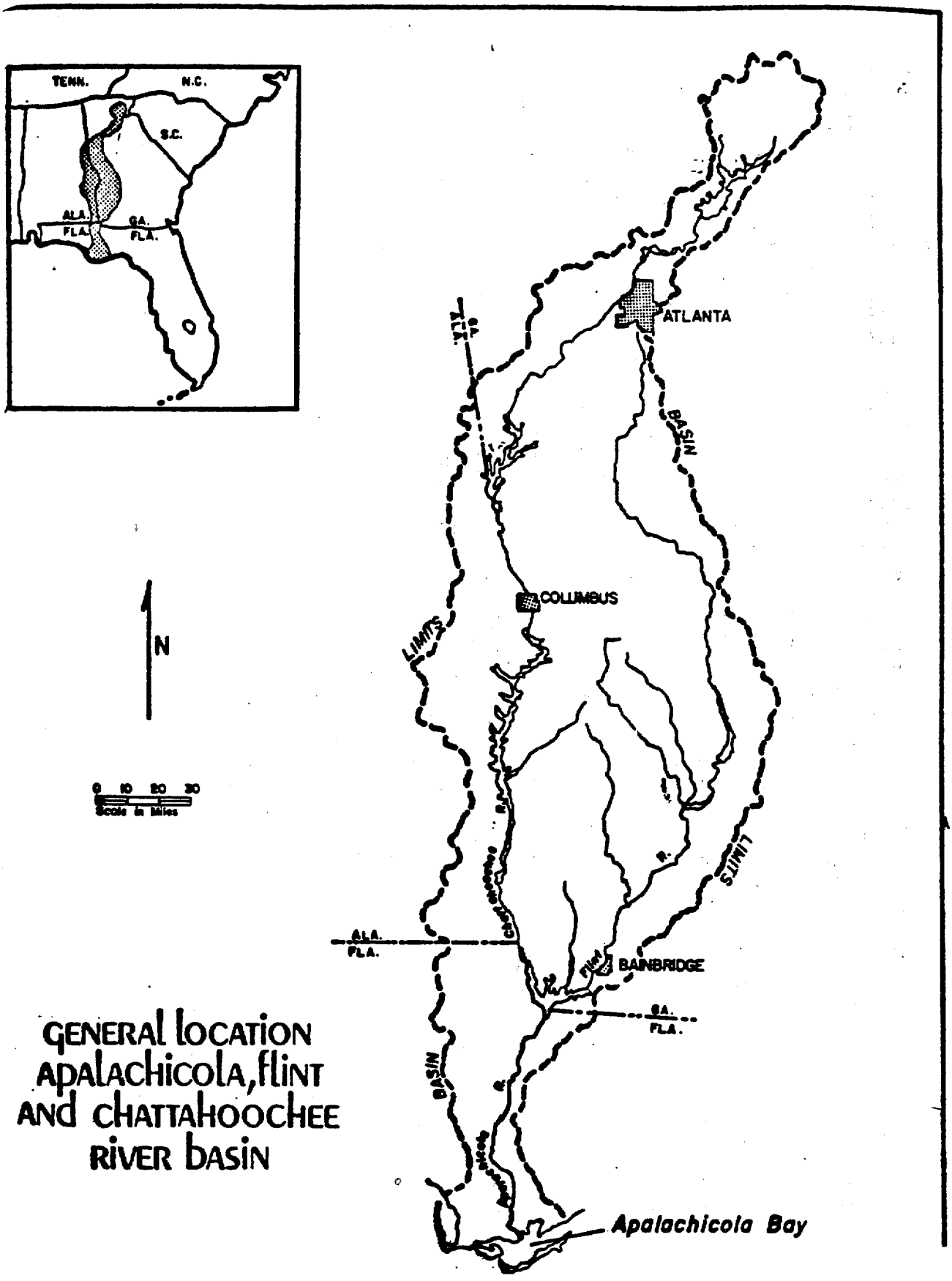
PART II: ALTERNATIVES (INCLUDING PROPOSED ACTION)

A. Preferred Alternative

Florida has submitted an application for a grant in the amount of $1,800,000 from OCZM, to be matched by an equivalent (or greater amount) of State funds, for the acquisition and establishment of an estuarine sanctuary in the Lower Apalachicola River delta area and Apalachicola Bay. The grant would enable Florida to acquire and operate an estuarine sanctuary that approximates a natural ecologic unit: the tidal, estuarine lower Apalachicola ecosystem. The proposed sanctuary would include approximately 135,680 acres of State-owned submerged lands (water area), and about 57,000 acres of publicly owned (State and Federal) tidelands and uplands, of which approximately 12,467 acres would be acquired as a result of this grant. The lands to be acquired will be purchased through the EEL program. Acquisition will be through negotiation with individual landowners, since, by law, condemnation is not permitted for EEL purchases. The proposed sanctuary will be managed by the Florida Department of Natural Resources in conjunction with a sanctuary management committee. Upon establishment of the sanctuary, the State has the option of applying for matching operational funds for a maximum period of three fiscal years. See Figures 1-4 for the location of the project area and the components of the proposed sanctuary.

Because of the variety of existing State and local government authorities in, or affected by, the Apalachicola River and Bay, Florida proposes to avoid creating new authorities, and to use existing authorities to provide for the administration and management of the sanctuary. The sanctuary will, however, provide a unique opportunity to better coordinate the variety of agencies and authorities--thereby providing a clear focus for the management. The essential components of the management plan proposed by Florida for the sanctuary include: creation of sanctuary management objectives and policies; acquisition and management of sanctuary lands; day-to-day administration of the sanctuary program; and coordination and cooperation with the variety of local, State, and Federal interests affected by the sanctuary.

FIGURE 1



GENERAL LOCATION APALACHICOLA, FLINT AND CHATTAHOOCHEE RIVER BASIN

FIGURE 2

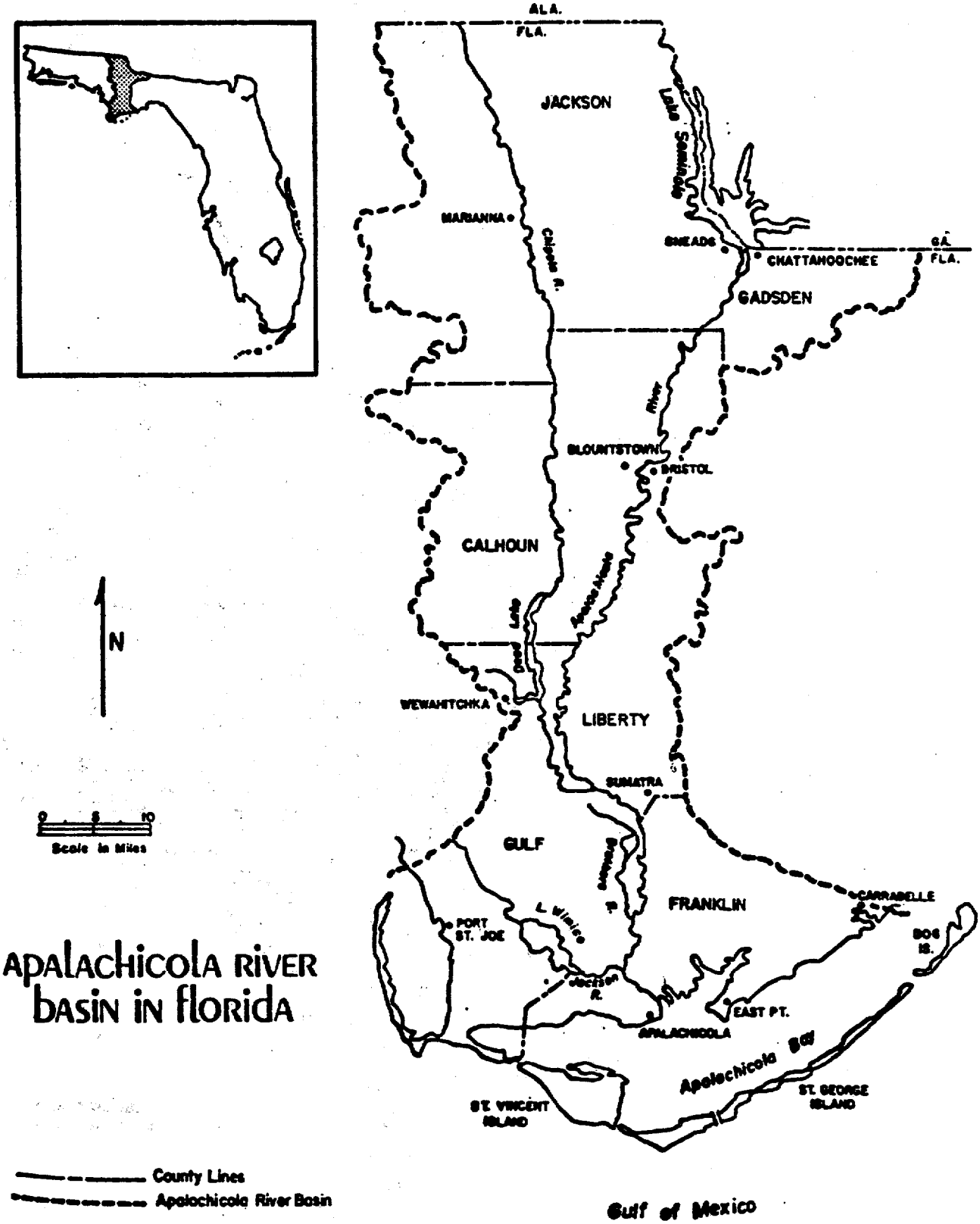

ALA.
FLA.
JACKSON
Lake Seminole
MARIANNA
Chipola R.
SNEADS
CHATTAHOOCHEE
GA.
FLA.
GADSDEN
River
BLOUNTSTOWN
BRISTOL
CALHOUN
Lake
Apalachicola
Dead
WEWAHITCHKA
LIBERTY
SUMATRA
GULF
Brothers
R.
FRANKLIN
CARRABELLE
PORT ST. JOE
L. Wimico
Jackson R.
DOG IS.
EAST PT.
APALACHICOLA
Apalachicola Bay
ST. VINCENT ISLAND
ST. GEORGE ISLAND
N
0 5 10
Scale in Miles
Apalachicola River Basin in Florida
County Lines
Apalachicola River Basin
Gulf of Mexico

FIGURE 3 PROPOSED SANCTUARY BOUNDARIES

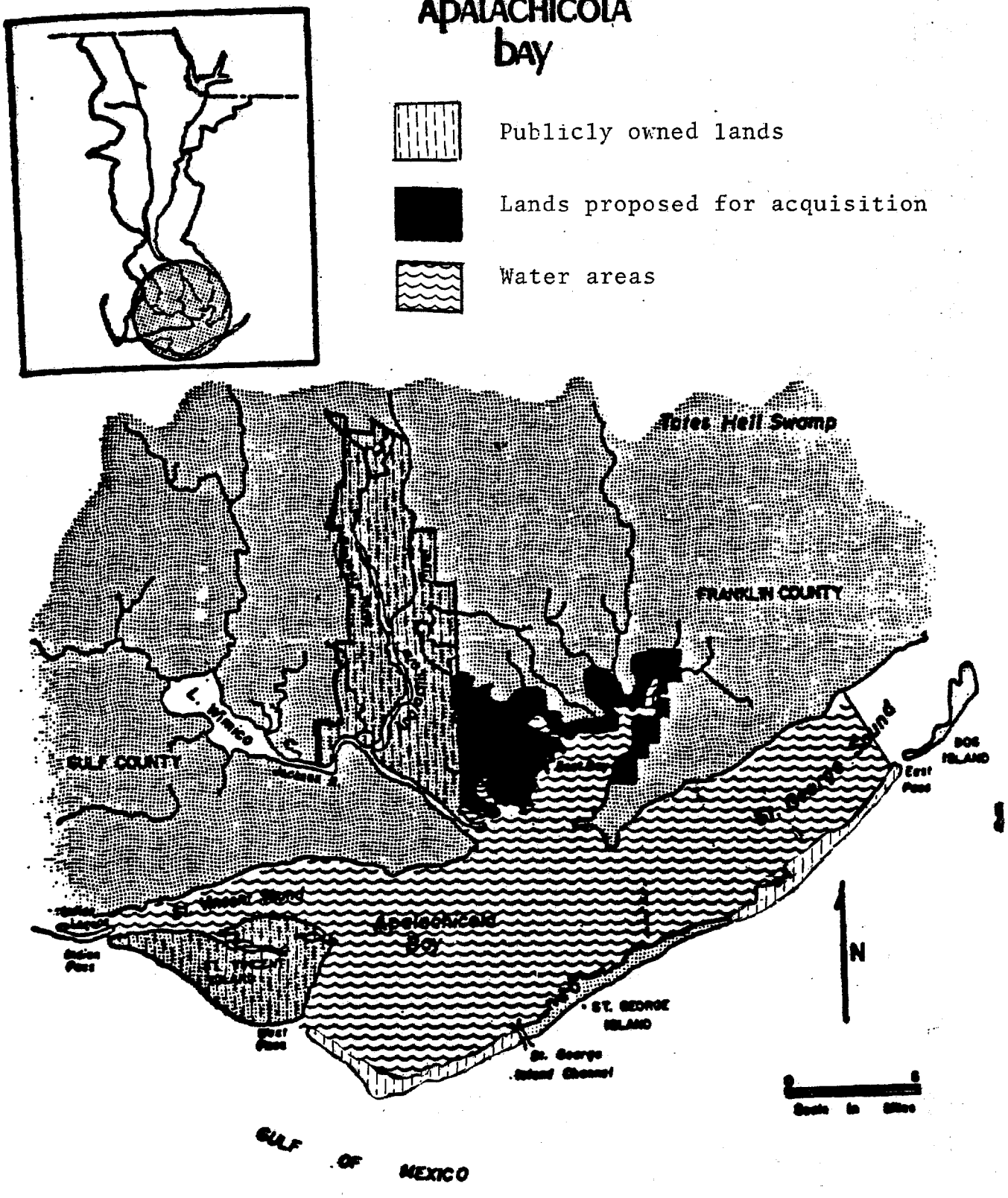


FIGURE 4

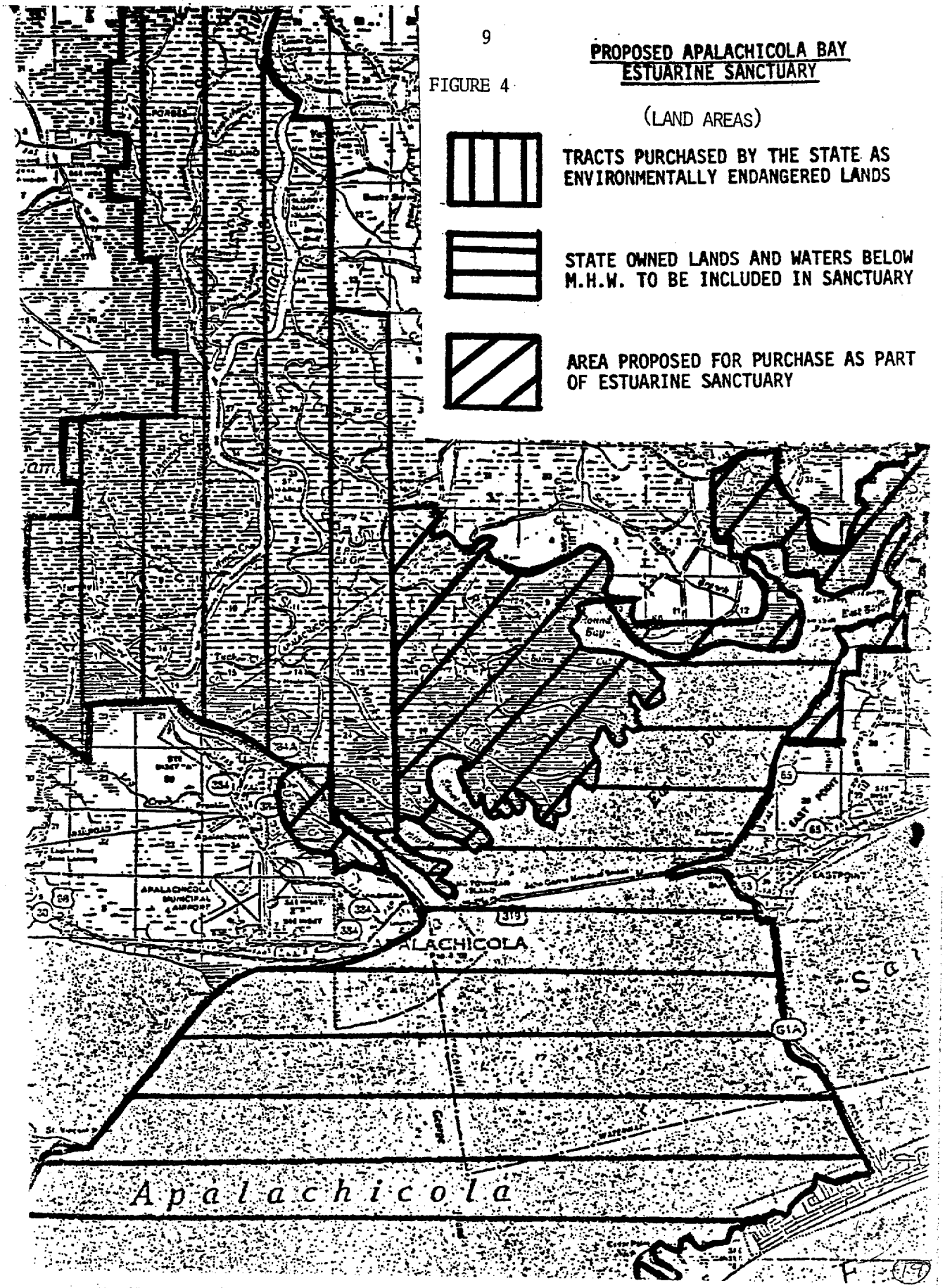
PROPOSED APALACHICOLA BAY ESTUARINE SANCTUARY

(LAND AREAS)

TRACTS PURCHASED BY THE STATE AS ENVIRONMENTALLY ENDANGERED LANDS

STATE OWNED LANDS AND WATERS BELOW M.H.W. TO BE INCLUDED IN SANCTUARY

AREA PROPOSED FOR PURCHASE AS PART OF ESTUARINE SANCTUARY



1. Boundaries and Acquisition of Sanctuary Lands

The proposed estuarine sanctuary approximates a natural ecological unit and is composed of several components, including publicly owned wetlands, estuarine waters, existing publicly owned uplands, and additional uplands proposed for acquisition. The following table summarizes the areas proposed for the sanctuary boundaries.

Acres	Size in Acres
Existing State EEL purchases along river	28,045
Existing State EEL parcel on Little St. George Island	2,193
Existing State Park on St. George Island	1,883
Existing Federal St. Vincent Island National Wildlife Refuge	12,490
Proposed upland acquisitions	12,467
Subtotal Uplands:	57,078
State-Owned estuarine waters and submerged lands	135,680
	192,758 Acres

The major components within the boundaries of the proposed estuarine sanctuary are the estuarine waters and submerged lands (135,680 acres), uplands that are currently owned by public agencies (44,611 acres), and the additional uplands proposed for acquisition (12,467 acres). All upland areas included within the sanctuary would thus be publicly owned lands, either State or Federal. For the purposes of the sanctuary boundary, the lower Apalachicola River shall be defined as that portion from Apalachicola Bay, north to mile 21, which is the approximate extent of tidal influence. The sanctuary size, including lands and waters, would be approximately 192,758 acres. The proposed acquisition includes the following ownerships:

	Name	Acres
1.	Harlan Franklin	285
2.	St. Joe Paper Co.	1051
3.	Buckeye Cellulose Corp.	100
4.	Jay Sholer	1203
5.	U.S. Home Corp	1550
6.	Southwest Forestry Paper Co.	413
7.	Marion Chason	63
8.	Willedine Vauchn	63

9.	Emmie C. Adams	60
10.	Mildred C. Odum	56
11.	Ann C. McDaniel	106
12.	St. Regis Paper Co.	800
13.	Elberta Crate and Box Co.	1900
14.	Hamilton Foreman	740
15.	St. Joe Land and Development Co.	3800
16.	Ray Mabrey	50
17.	Elizabeth Atkinson	57
18.	Undetermined	170
	Total:	12,467

The estuarine sanctuary grant itself will be for the purchase of the additional 12,467 acres of upland. The lands will be acquired by the Florida Department of National Resources as part of the EEL program at an approximate cost of $3.75 million, consisting of a grant of $1.8 million from OCZM that will be matched by $1.95 million in EEL funds. After acquisition, DNR will prepare, or contract with another agency such as the Florida Game and Freshwater Fish Commission to prepare, a management plan for the newly acquired sanctuary lands . Prior to its adoption, the plan will be reviewed and approved by the Sanctuary Management Committee. A management plan has been completed for the existing 28,045 acres of EEL lands by the Florida Game and Freshwater Fish Commission. (The completed management plan can be obtained by contacting this agency.)

Acquisition will be performed in accordance with Federal Guidelines for real estate acquisition. This process includes independent real estate appraisals, and the offer of Fair Market Value. Since there will be no condemnation, all transactions will be negotiated sales.

2. Management

The State and Federally owned uplands were acquired for a number of different purposes, including recreation, wildlife management, and conservation and protection of environmentally unique and irreplaceable lands. Although management of these lands differs according to the objective of acquisition, the present management objectives are compatible with the objectives of managing the sanctuary for its long term use for research and education within an estuarine system. Therefore, inclusion of these lands within the sanctuary boundaries will not affect the present management practices, and the existing State and Federally owned parcels will continue to be managed according to existing management concepts and plans. Ownership and management decision authority will be retained by the agencies now exercising those responsibilities. Changes in management plans and development projects on these lands will be reviewed by the Sanctuary Management Committee (discussed later), which may provide advisory comments on the plans and activities, but will have no regulatory authority over these lands.

The management and operations of the sanctuary will not be superimposed upon St. Vincent Wildlife Refuge, and the refuge will be managed as a part of the National Wildlife System. The end result will be important contributions, by the refuge, to the objectives of the estuarine sanctuary, but the refuge will not administratively be included.

The specific management policies developed for the newly acquired uplands and wetlands (not the water body itself) will be based on the primary objective of managing the lands to maintain their ecoystem, in order to ensure the long term protection of natural processes and resources for research and education. Uses that would alter the nature of the ecosystem will not be allowed on this or the newly acquired lands; dredge and fill (except maintenance dredging, as described below), mineral extraction (except for slant drilling from outside the boundaries of the parcel), waste discharge or disposal, silviculture, and agriculture are examples of activities that would not be allowed on these lands. Fishing, hunting, nonintensive recreation, education, and research would be allowed as prescribed under conditions established pursuant to EEL purchase, existing State laws, and a management concept approved by the Sanctuary Management Committee. Thus, the newly acquired sanctuary lands will be managed according to policies and rules of Chapter 259, F.S. (Appendix 5), governing EEL lands. With this parcel, however, unlike the case with existing parcels within the sanctuary, the Sanctuary Management Committee will have a formal role in actually approving the management concept before it is adopted.

About two-thirds of the water area of the sanctuary has already been designated as an aquatic preserve under Chapter 258, F.S. (Appendix 4). However, rules for the aquatic preserve have not yet been developed. Hence, the Sanctuary Management Committee will review these rules, which will be developed by DNR, and will play a formal role in their development and adoption. No new or special management regulations will be applied in the water areas of the sanctuary as a result of sanctuary designation, except as stated subsequently under "prohibited activities,"

The combination of lands and waters within the sanctuary boundary represents the major components of a viable ecosystem. However, some uses or activities beyond the boundary of the sanctuary could significantly affect the ecology of the sanctuary. Of particular importance are: (1) activities in the bay and lower river floodplain; and (2) upstream impacts on water quality or discharge (from Lake Wimico, as well as the Upper Apalachicola River). Existing local and State authorities appear fully adequate to address any potential problems resulting from uses of these waters or adjacent lands. Because of the support that they have provided to this proposal, OCZM anticipates that these jurisdictions will administer their programs or responsibilities in a manner that will not jeopardize the integrity of the sanctuary. Designation of the sanctuary would not, therefore, result in the need for new or additional regulations in these areas.

In this manner, it will be possible to maintain the sanctuary and achieve its objectives while continuing to use the Apalachicola River and Bay as a multiple-use resource. By underscoring the objective of maintaining the natural resources and processes of the bay, natural resource protection will be placed in the same context and level of importance as other uses of the river, including its uses for power generation, recreation, drinking water supply, and navigation.

a. General and Specific Management Requirements

Three major requirements have been identified in order to maintain the sanctuary ecosystem:

1. The maintenance of sufficient quantities of water inflow from the Apalachicola Tri-River system, from Lake Wimico, and from overland drainage, delivered at appropriate seasonal and annual schedules, to maintain the natural ecological system. Significant alterations of flow patterns, including alterations to the natural variability of river flows, should be avoided. The authorities of Chapter 373, F.S. will will be used to help insure that the estuarine productivity, processes, and living resources in the Apalachicola River/Bay are maintained.

2. The maintenance of water quality by the prevention of significant degradation of sanctuary waters. Existing authorities under Chapter 403 F.S., and the newly adopted Chapter 17-3, Florida Administrative Code, which designates Apalachicola Bay as an Outstanding Florida Water, are adequate to maintain water quality. Special attention will have to be paid, however, to problems of non-point discharge and the installation, operation, and practice of drainage pumps for agricultural and silvicultural purposes.

3. The prevention of physical alteration, through dredging, filling, or any other similar activity, that would significantly alter hydrographic patterns, ecological productivity, or surface area of the bay. Again, existing authorities under Chapters 253 (Appendix 3) and 403 F.S., are adequate to provide the necessary protection.

The regulatory authorities of the State under Chapter 373, F.S., and other Florida Statutes will be exercised, to the extent allowed by Florida law, to insure that activities within the boundaries of Florida do not impair such estuarine productivity, processes, or living resources. However, the paramount power of the Federal Government to control navigable waters, and the associated authority of the Corps of Engineers and the Federal Power Commission to control the operation of dams on the Tri-River system is expressly recognized. Neither the State nor its agencies will attempt to utilize State regulatory powers to displace Federal control of those facilities.

The sanctuary, then, will be managed with existing State policies and laws, especially those in Chapters 373, 403, and 253 F.S. and Florida Administrative Code Chapters 17-3 and 17-4. In addition, policies and practices relating to Environmentally Endangered Lands (Chapter 259, F.S.) will be relied upon to provide specific management procedures for individual parcels within the sanctuary. (Note: All referenced Florida statutes

(F.S.) and Florida Administrative Codes (F.A.C.) that are not included in the Appendix to this document may be found in the Appendix to the Florida Coastal Management Program, March 1978).

Within the context of the existing statutes, the following specific policies apply to the general management of the sanctuary:

Allowed Uses

- Sport and commercial fishing and shellfish harvest, subject to existing fishing regulations.
- Hunting, subject to game rules and EEL regulations.
- Non-intensive recreation (intensive recreation on State Park lands).
- Education as approved by the Sanctuary Committee.
- Research as approved by the Sanctuary Committee.
- Navigation, including maintenance dredging of existing channels and limited dredging for creation of boat launching facilities in the State park, subject to existing State permit reviews. Maintenance dredging of existing channels includes dredging by the Corps of Engineers to Congressionally authorized depths and dimensions. No new State regulatory requirements shall be imposed upon such maintenance dredging because of achievement of status as an estuarine sanctuary, and State regulatory permit reviews shall continue to be applied in a manner consistent with applicable Federal law. (Channels, for the purpose of this EIS, are defined as waterways that would require dredging in order to maintain their dimensions, or new waterways created by dredging).
- Continuation of existing permits and spoil disposal practices, until a comprehensive spoil disposal plan is developed for the bay.
- Continuation of the existing shellfish rehabilitation program.

Prohibited Activities

- Incorporation of new public works projects, which include the expansion of existing or creation of new channels, that require dredging or additional filling within the official Florida water resource development program, which is annually presented and recommended to Congress pursuant to Chapter 373, F.S. The temporary exclusion of such projects affecting the bay shall terminate upon adoption of a long term disposal plan expected to be completed within approximately one year of the establishment of the estuarine sanctuary. The omission of such dredging and filling public works projects from the official Florida program does not preclude the submission or recommendation of such public works by other persons or public agencies to the Congress, nor Congressional authorization of such projects. Upon completion of the spoil disposal plan, all

projects must also examine the hydrographic impacts and provide assurance that the project will not lead to significant degradation of water quality and biological productivity, which is currently required under Florida law. (Note: This prohibition shall not be applied to the pending East Point Breakwater/ Channel Project, and Apalachicola Seafood Industrial Park, which will be judged according to existing local, State, and Federal regulations).

° Oil drilling, except for slant drilling from outside the sanctuary boundaries.

° Significant alteration of water flow patterns, including circulation patterns within the bay.

In order to augment these policies, the following research priorities have been established: determination of minimum rates and delivery schedules for freshwater inflows; definition of significant degradation as applied to water quality and dredge and fill activities; development of a a spoil disposal plan and acceptable procedures for spoil disposal (e.g. relating dredging and spoil disposal to biological cycles); development of a hydrographic model of the bay and lower river area; and identification of restoration priorities, including means to restore shellfish productivity and water quality (fresh/salt water balance) reduced as a result of Sikes Cut, while maintaining navigational access. (See the Conservation Foundation's report in the Appendix for complete recommendations regarding research).

b. Administration of the Sanctuary

As the major landowner and manager for the lands and waters of the sanctuary, the Florida Department of Natural Resources will be responsible for the day-to-day administration of the estuarine sanctuary. To assist in this task, DNR will, at a minimum, hire a full-time Sanctuary Coordinator, to be located in the Apalachicola area. The duties of the Sanctuary Coordinator, who will be trained as a resource manager/planner, will include:

1. Administration of the sanctuary, including preparing required State and Federal grant applications, proposals, budgets, and reports and maintaining necessary records.

2. Serving as staff to the Sanctuary Management Committee.

3. Representing the Sanctuary Management Committee in public meetings.

4. Advising and coordinating units of government on particular issues, questions, or projects, and their impacts on or relationship to the sanctuary, at their request.

5. Coordinating all special studies and research activities within or related to the sanctuary, and interpreting and applying research results to produce benefits of a general nature.

6. Developing an oversight of the educational program for the sanctuary.

7. Coordinating and taking appropriate action on all projects or activities that might affect the sanctuary.

The Sanctuary Coordinator will be hired by and held accountable to the Department of Natural Resources.

c. Management Committee

In order to provide for effective coordination and cooperation among all interests involved in the sanctuary program, a Sanctuary Management Committee (SMC) will be established (Figure 5). Membership on the committee will include the Chairman of the Franklin County Commission, or representative; a representative of local Apalachicola Bay resource users, selected by the Franklin County Commission; a representative from research and educational institutions, selected by the Franklin County Commission; and one representative each of the State's Department of Environmental Regulation, Department of Natural Resources, and the Game and Freshwater Fish Commission. These six individuals will form the voting members of the committee. In addition to the voting members, the State Department of Community Affairs, Division of Local Resource Management (Apalachicola River Committee); the National Oceanic and Atmospheric Administration; the U.S. Army Corps of Engineers; the U.S, Fish and Wildlife Service; and the Northwest Florida Water Management District will each designate an advisory non-voting representative.

In addition, three subcommittees will be formed as discussed below. Other subcommittees may be formed as determined by the Sanctuary Management Committee.

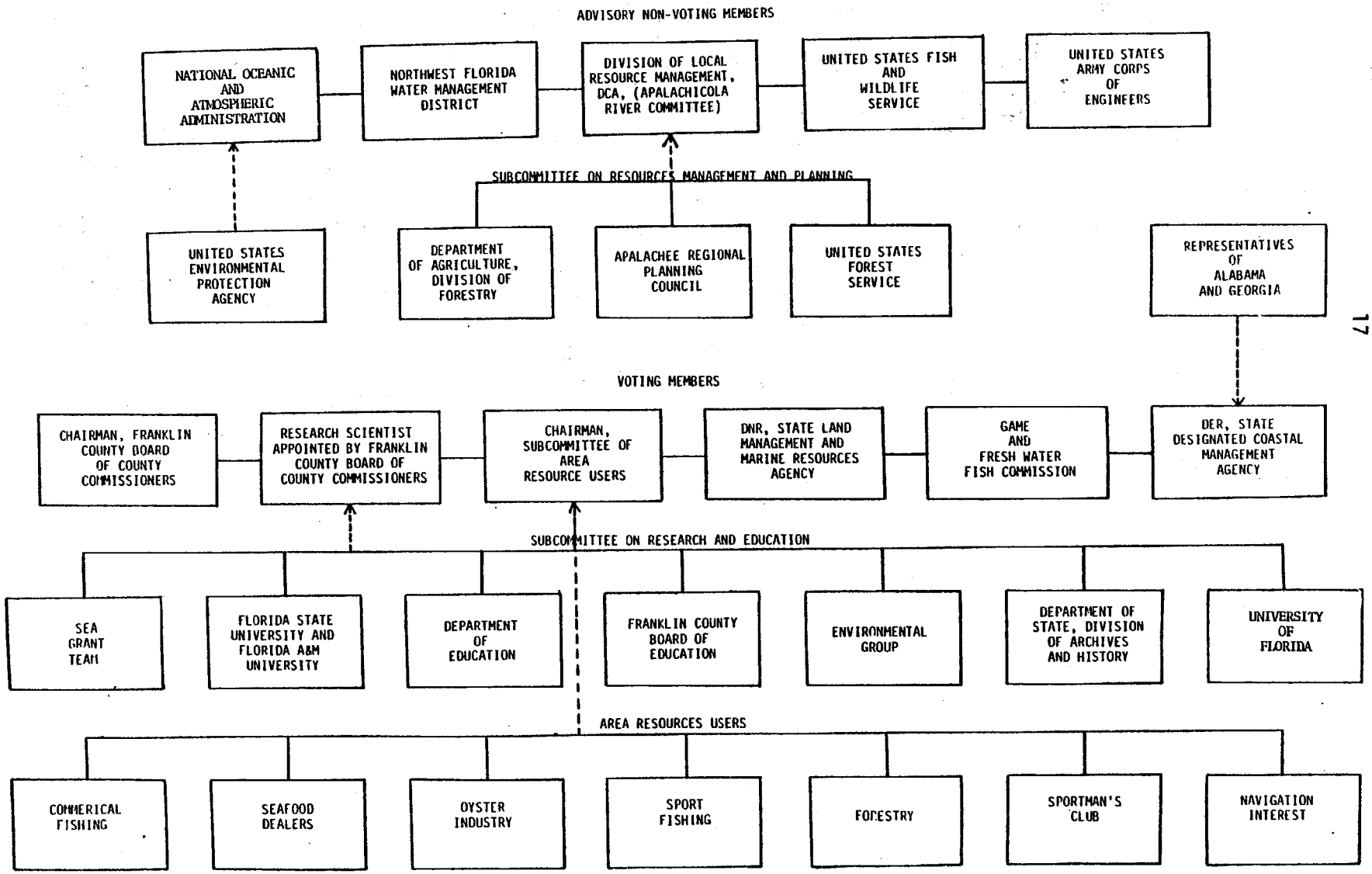
The Subcommittee on Resource Users will represent local area resource users; it will be made up of one representative each of the commercial fishing industry, the seafood dealers, the oystermen, sport fishing interests, forestry landowners, the Sportsman's Club, and navigation interests. This subcommittee will be selected by the Franklin County Commission, and will be represented on the Management Committee by one voting member.

The Subcommittee on Research and Education will include representatives of the Florida Sea Grant Program; Florida State University; University of Florida; Florida Agriculture and Mining University; the Florida Department of Education; Florida Department of State, Division of Archives and History; Franklin County Board of Education; and a local or State environmental organization. These representatives will be selected by the respective agencies and institutions themselves. They will be represented on the committee by the research scientist selected by the Franklin County Commission.

The Department of Community Affairs will coordinate the input of the Subcommittee on Resources Management and Planning, which will consist of representatives from a variety of agencies with planning and management responsibilities, including the U.S. Forest Service, Florida Division of Forestry, and the Apalachee Regional Planning Council. The U.S. Environmental Protection Agency will provide input

FIGURE 5

APALACHICOLA ESTUARINE SANCTUARY MANAGEMENT COMMITTEE



through the National Oceanic and Atmospheric Administration, which in- the Office of Coastal Zone Management, the National Marine Fisheries Service, and the Office of Sea Grant.

Finally, reflecting the multi-State nature of both the Apalachicola River/Bay system and the estuarine sanctuary, Alabama and Georgia will each be asked to designate one representative. Their input will be coordinated through the representative from the Florida Department of Environmental Regulation.

The Sanctuary Management Committee will serve in a variety of both advisory and substantive roles, which include:

1. To review and advise DNR on administration of the sanctuary. In this role, the Committee will:

a. review the sanctuary coordinator and staff job specifications and qualifications prior to approval.

b. review applications for sanctuary coordinator and staff positions and advise DNR prior to final selection.

2. To review and approve proposals for educational or research use activities in State-owned sanctuary lands and waters.

3. To review and approve the management plans for the newly purchased lands (12,467 acres) prior to their final adoption.

4. To advise the appropriate State agency or local government on proposed actions, plans, and projects in, adjacent to, or affecting the sanctuary. These include A-95 projects, developments of regional impact, dredge and fill requests, waste discharge permits, the lease and sale of State-owned lands, rules for the Aquatic Preserves Program, and local government zoning plans and proposed zoning changes on adjacent lands.

5. To initiate, coordinate, and recommend special projects, including:

a. development of a long term spoil disposal plan for the Lower Apalachicola River and Bay.

b. identification of the need for, and the initiation of, projects to restore the sanctuary ecosystem where alterations have adversely affected the bay.

c. identification of cultural projects that will go towards increasing knowledge about the history and pre-history of this area.

6. To enhance communication and cooperation among all interests involved in the sanctuary.

The Sanctuary Management Committee will meet at least bi-monthly during the first year following the award of the sanctuary grant; thereafter, the committee itself shall determine the frequency of its meetings.

B. Alternatives Considered

In response to the Florida proposal, OCZM has identified and considered a variety of alternatives regarding its options, as well as those of the State, with respect to action on the proposed sanctuary. Many of these alternatives also relate to choices addressed by the State in the development of its proposal. Alternatives with respect to sites, boundaries, and management structure were addressed, and are discussed further below:

1. Funding

Florida has already spent about $22,000,000 on the acquisition of EEL parcels and the State Park in the proposed sanctuary area, representing a substantial commitment for the Apalachicola resource. Demands upon the State's EEL fund exceed its present capabilities. Although the State is adding additional State funds to the proposed sanctuary purchase, it could not, by itself, purchase all of the area proposed for acquisition. Although the sanctuary proposal has received extensive State and Federal review as it developed, no other agency has expressed the ability to provide funding for acquisition. Moreover, even if other State or Federal funds were available, such funding would not meet the explicit needs and objectives of the estuarine sanctuary program.

Because the estuarine sanctuary program is basically one of Federal response to State initiatives, the alternatives for Federal action are limited. OCZM could accept the application as presented or request modification, but award a grant in either case; or it could refuse to accept the application and decline the grant. OCZM has worked with the State of Florida since it first indicated interest in the estuarine sanctuary program, and OCZM's input has caused some modification of the proposal.

Delay of the grant would permit other States within the Louisianian classification to develop estuarine sanctuary proposals for submission to NOAA. However, the States are not in direct competition for designation of a single sanctuary, and the award of a grant does not preclude other grants in the same region if an appropriate subcategory is identified.

Unless the application lacked merit, the outright refusal to award a grant would serve no purpose. Indeed, in view of the widely acknowledged need for estuarine preservation (for example, the National Estuary Study, 1970, and Ketchum, 1972), such action would be contrary to the public interest.

2. Site Selection

In developing an estuarine sanctuary proposal, and in OCZM's initial

review, a variety of sites were considered for potential sanctuary designation. Because the sanctuaries are to be State-owned and managed, OCZM cannot, on its own initiative, propose or designate an area as a sanctuary. OCZM is dependent upon the State's identifying potential sanctuary sites and formally applying for funding.

The State of Florida, initiated internally a broad solicitation of nominations for potential sanctuaries, and submitted these to a broad review process. The Apalachicola site was a virtually unanimous selection for a sanctuary representing the Louisianian biogeographic region. A description of this region is found in the Estuarine Sanctuary guidelines, located within the Appendix.

Following the Apalachicola selection, in early Spring 1978, Florida, as required by OCZM regulations, circulated a draft sanctuary proposal to each State within the Louisianian biogeographical region (Alabama, Mississippi, Louisiana, and Texas), as well as to Georgia. Although responses were limited, the result was virtually unanimous support for the proposal, including strong support by a variety of State, Federal, and local government agencies and interests. No other State proposed an alternative location, or objected to the Apalachicola River/Bay proposal.

Following the October 1978 Apalachicola Estuarine Sanctuary Symposium, the Tri-Rivers Waterway Development Association submitted a report that suggested potential sites from Cedar Key to Apalachee Bay. OCZM and Florida reviewed this proposal and found that there were no research institutions that expressed an interest in the areas, and no Federal, State, or local support for the other areas was exhibited. Additionally, in its report on the Apalachicola Estuarine Sanctuary Symposium, the Conservation Foundation concluded that the "Apalachicola ecosystem is the best choice for a Louisianian province representative for the National Estuarine Sanctuary system."

3. Boundaries

Several alternatives were considered by Florida and OCZM regarding the boundaries of the proposed sanctuary. Although they differed in specifics, the basic concepts included:

a. Using the entire bay as the sanctuary, but reducing the land masses (specifically by deleting St. Vincent Island National Wildlife Refuge and/or all State-owned lands on St. George and Little George Islands);

b. Expanding the currently proposed sanctuary to include additional water areas (specifically Lake Wimico, Jackson River, and water areas above the proposed area); and

c. Expanding the lands included within the sanctuary (specifically to include Tate's Hell Swamp and all private uplands on St. George Island).

Deletion of some of the publicly owned barrier island parcels would not have any adverse environmental impact, as these lands would still be

publicly owned, and the sanctuary proposal does not propose to alter their management practices. However, the State, the Apalachicola Symposium panelists, and OCZM felt that the State and Federal barrier island parcels were an integral part of the estuarine ecosystem and would present expanded opportunities for research and educational activities within the sanctuary. Benefits would also be realized through coordination of a major part of the Apalachicola River/Bay system itself.

The inclusion of additional water areas (i.e. Lake Wimico and Jackson River) in the sanctuary would not be expected to provide greatly increased environmental benefits to the sanctuary. Also, both water bodies are basically fresh water, which is not as critical for boundary purposes as estuarine waters. However, the areas, if unregulated, could adversely affect the sanctuary, and the inclusion of the waters might serve to underscore their relationship to the proposed estuarine sanctuary.

Finally, activities on some privately owned uplands and wetland areas, especially Tate's Hell Swamp and St. George Island, do appear to have the potential for significant adverse impacts in the estuary. Of particular importance are the effects of forestry and drainage practices in Tate's Hell Swamp, and the effect of runoff, septic tank leachate, and commercial development on St. George Island. Acquisition of these areas would have some environmental benefit. However, additional funds have not been appropriated for these lands and the commercial values of forestry in Tate's Hell Swamp and the residential uses of St. George Island do provide economic benefits to Franklin County. The Apalachicola Symposium panelists recommended research studies addressing these two areas and their effects on the system.

4. Management

One alternative considered was to have the Florida Department of Natural Resources, as landowner, serve as sole administrator for the sanctuary. In this role, DNR would directly administer, or by contract administer through another State agency, all proposed sanctuary lands as any normal purchase made under the Environmentally Endangered Lands Program, and also exercise its responsibilities under the State Aquatic Preserves program to develop specific management policies and practices for the water areas of the sanctuary. While this would not likely result in different environmental benefits or impacts, administration of the sanctuary from DNR's standpoint might be easier. Also, this approach would basically preclude the inclusion of St. Vincent Island Federal Wildlife Refuge within the sanctuary.

The management committee that is proposed may administratively prove to be a more awkward organization than management by a sole agency. However, this awkwardness should be offset by the fact that the proposed structure will provide a coordinative mechanism for the array of Federal,

State, regional, and local interests that have a concern with the management of the system. This mechanism also assures that local interests will have a major role in regard to the management of the bay. The composition of the committee represents a balanced group in which all major interests are represented. Several additions have been made as a result of comments received on the DEIS.

5. Alternate Methods of Acquisition and Protection

Florida, during the development of its application, examined a variety of possible funding sources and alternative methods of protection. These possible sources included:

Federal Acquisition

Pittman-Robertson Fund

Dingell-Johnson Act

Migratory Bird Conservation Fund

Land and Water Conservation Fund

Estuarine Sanctuary Program

State Acquisition

Environmentally Endangered Lands Fund (EEL)

Florida annually receives funds from the Pittman-Robertson Fund and the Dingell-Johnson Act. However, these funds are used for wildlife habitat restoration and fish habitat restoration respectively. These funds generally are used for manipulative management programs, which would not be entirely compatible with sanctuary objectives. Similar considerations apply to the Migratory Bird Conservation Fund, as the objectives are somewhat different. The Land and Water Conservation Funds are generally appropriated for projects that provide more recreational uses of the land than is envisioned within the sanctuary.

The State's matching funds will come from a funding source that is specifically geared to purchase environmentally endangered lands, which is a parallel purpose of the estuarine sanctuaries program. It should also be noted that Congress, during the passage of the Coastal Zone Management Act of 1972, intended the sanctuaries program not to duplicate existing Federal acquisition programs.

PART III: ENVIRONMENTAL CONSEQUENCES

A. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Awarding of the land acquisiton grant by OCZM would enable the State of Florida to purchase additional EEL lands, which, combined with the other protected lands already owned by the State, would establish a National Estuarine Sanctuary representative of the Louisianian Biogeographic Region. The proposed action would have a variety of environmental and economic impacts.

Creation of this estuarine sanctuary would initiate a long term learning process for research and education regarding estuarine systems and dynamics. It would allow coastal zone decisionmakers and members of the public to become more cognizant of how best to utilize the natural resources or protect their important benefits for long term usage. This would apply not only for this, but for other Louisianian Type estuaries as well. Such use will have little, if any, detrimental effect upon the environment, and will be of vital importance to the development of rational coastal zone management programs at the local, State, and regional levels. It is anticipated that this would be a positive environmental impact.

Establishment of the sanctuary would also help to assure the permanent protection and management of a productive, relatively undisturbed estuarine area. By protecting the marshes and wetlands, the water quality would also be maintained. The proposed sanctuary acquisition would preclude development on approximately 12,467 acres of wetlands and uplands, thereby avoiding a potential flood hazard to man and property that would occur if the lands were developed, as well as preventing the irreversible damage to the environment that would be caused by the loss of wildlife, vegetation, fish, and other marine life. Sanctuary designation does not preclude human activities within the sanctuary boundaries, but it would prevent those that cause significant degradation of the system, either by outright destruction or by overuse. The scientific research conducted in the sanctuary will assist in this control and will provide for the enhancement of the economic and environmental resources of this and other estuaries.

A complete analysis of the socioeconomic impacts of the proposed sanctuary is contained in Appendix 6. The following is a brief synopsis of the conclusions regarding the anticipated net impacts associated with the designation of a National Estuarine Sanctuary in the Apalachicola Bay/River area.

1. Local Impacts on Franklin County

The area in which the proposed sanctuary will be located is currently rural in character and economically dependent upon the commercial fishing industry. The sanctuary will have the long term non-quantitative benefit of protecting and enhancing the local community's desired objective of retaining its natural resource base.

Land acquisition for the proposed sanctuary will have several effects, the net impact of which is anticipated to be positive. Although there will be a loss of approximately $ 9,000 in tax revenues each year due to removal of approximately 12,467 acres of land from the tax base, this shortrun loss is expected to be completely offset by a longrun rise in adjacent property values and tax revenues partially attributable to the operation of the sanctuary. In addition, approximately $326,000 in new money will be injected into the county's economy as a result of land purchased from local owners. No permanent residents will be displaced by the purchase of the 12,467 acres of land. One property includes a seasonal dwelling and the owner is currently unwilling to sell. Alternatives to sale could include an easement, or life estate on this particular property. In the long run, the impacts of purchasing this land are minimal, since the lands are generally unsuitable for development and there is a low growth potential for the area.

In terms of renewable and non-renewable resources, the net impact of the sanctuary is expected to be beneficial. The economic benefits associated with the maintenance of valuable fishing and wildlife resources are expected to far outweigh the relatively minor negative impacts resulting from preclusion of future timber harvesting, mining and mineral activities within the sanctuary boundary.

The net impact on tourism is anticipated to be significantly beneficial. The tourism potential of the area is currently considered an underutilized resource due to lack of facilities and lack of public awareness. The estuarine sanctuary is expected to stimulate tourism in four principal ways: increased awareness of the Apalachicola Bay region; long term protection of the area's principal tourist attraction (the natural environment); creation of a new tourist destination (the sanctuary's educational center); and the possible creation of an historic district in the City of Apalachicola in conjunction with sanctuary designation. The increased tourist activity associated with the proposed sanctuary will, in turn, stimulate an increased supply of facilities and services to meet that demand.

The sanctuary will have a slight positive impact on employment in the county. The sanctuary itself will provide a small, though long term stimulus to local employment. In the long run, the existence of the sanctuary is expected to ensure continued employment in the commercial fishing industry, have a positive impact on employment in the service industry (tourism, research, and education), and have a negligible impact on forestry-related employment.

Activities associated with the sanctuary will have a positive impact on the local economy. The annual operating budget will provide a small, but long term, stimulus to the local economy. In addition, the sanctuary is expected to stimulate additional State and Federal funding for research activities in the area, and its existence will protect and enhance the value of numerous past publicly funded research projects over time. The proposed educational facility will provide non-quantifiable educational benefits to the public, and its visitors will exert a positive impact on local economic activity.

2. Regional Impacts on the Apalachicola-Chattahoochee-Flint River Basin

Because the proposed National Estuarine Sanctuary lies at the mouth of a vast river system, it has the potential to affect activities upstream. These possible impacts were evaluated in terms of the basic objectives now governing the management of the river system: navigation, hydropower, water supply, water-based recreation, flood control, and maintenance of the ecological resources of the river system and bay. The following is a summary on each of these objectives.

Although the sanctuary may preclude shortrun alteration of navi-avigation channels until certain studies are completed and plans developed, it is not anticipated to have any long term negative impacts on navigation projects. Rather, the sanctuary is expected to focus its research efforts in areas that will resolve existing conflicts and provide decisionmakers with objective criteria by which to evaluate the implications of future navigation projects. Consequently, the long term impacts on navigation are anticipated to be beneficial.

Major concern has been expressed about maintenance dredging of the A-C-F waterway to its authorized dimensions, 9' x 100'. The State of Florida is not opposed to maintenance dredging, but has always been concerned about proper spoil disposal. To alleviate the recurring problems regarding maintenance dredging, Florida has taken the following major actions:

(1) The State of Florida has met with the Corps of Engineers (COE) and a memorandum of understanding is being prepared to establish a procedure for processing COE dredge and fill permits.

(2) The Department of Environmental Regulation (DER) has issued a permit for desnagging and is processing an application for maintenance dredging.

(3) The following clarification has been added to the Section on navigation in the FEIS under "Allowed Uses":

Maintenance dredging of existing channels includes dredging by the Corps of Engineers to Congressionally ordered depths and dimensions. No new State regulatory requirements shall be imposed upon such maintenance dredging because of achievement of status as an estuarine sanctuary, and State regulatory permit reviews shall continue to be applied in a manner consistent with applicable Federal law.

(4) New language has been added concerning prohibited activities to clarify the one year exclusion on public works. The wording, under the heading "Prohibited Activities," is as follows:

. . . incorporation of new public works projects that require dredging or additional filling within the official Florida water resource development program, which is annually presented and recommended to Congress pursuant to Chapter 373, Florida Statues. The temporary exclusion of such projects affecting the bay shall terminate upon adoption of a long term disposal plan expected to be completed within one year of the establishment of the estuarine sanctuary. The omission of such dredging and filling public works projects from the official Florida program does not preclude the submission or recommendation of such public works by other persons or public agencies to the Congress, nor Congressional authorization of such projects.

(5) The State of Florida has also agreed to take priority action on pending COE maintenance dredging applications.

The proposed sanctuary will have no impact on existing river flow and discharge patterns relating to generation of hydropower. Therefore, the designation is not expected to have any negative impact on the provision of hydropower on the A-C-F system. Indeed, the existence of the sanctuary may have the beneficial effect of providing additional scientific data regarding present flow and discharge patterns, which will be useful in predicting long term goals.

A potential conflict exists between future water supply needs of upstream users and the maintenance of an adequate water supply for competing downstream users. Since the proposed sanctuary is designed to maintain the integrity of the natural ecosystem at the mouth of the river system, the emphasis on maintaining adequate minimum flow rates may serve to heighten this conflict in the short run. In the long run, however, this negative impact may be partially or wholly offset by the results of sanctuary research, which should facilitate rational decisionmaking regarding consumptive use of the river's water supply, and thus assist upstream users to plan effectively for its future needs. It is again emphasized that Florida standards cannot apply to adjacent States and that currently Florida is required by law to determine minimum flow requirements for the Apalachicola River.

The proposed sanctuary will have no impact on recreational uses in existing upstream impoundments. Also, the creation of the sanctuary will open up new opportunities for "natural" resource recreational uses. In the absence of the estuarine sanctuary, the alternative of a unique, natural environment-oriented recreational area may be irretrievably lost. Consequently, the impact of the sanctuary on recreation is positive.

The sanctuary will have no impact on flood control projects on the river system, it is in compliance with Executive Order 11988 (Floodplain Management), and it is compatible with the management objective of maintaining the ecological resources of the river system and bay.

3. State and Federal Impacts

Acquisition and management of the national estuarine sanctuary will have relatively minor shortrun fiscal impacts on the Federal Government and the State of Florida. In addition, the State will be responsible for funding the long term operation of the sanctuary. These expenditures are expected to be offset by two nonquantifiable benefits: (1) improved scientific and technical knowledge to be applied toward management practices concerning estuarine resources here and in other areas and (2) improved intergovernmental coordination in the bay and river system as a whole. The sanctuary would also protect wetlands and be in complete harmony with Executive order 11990, the Protection of wetlands.

B. Relationship Between Local Short Term Uses of the Environment and the Maintenance and Enhancement of Long Term Productivity

While designation of the proposed estuarine sanctuary will restrict local short term uses of the environment, it will also provide long term assurance that natural resources and benefits of the area will be available for future use and enjoyment. Without sanctuary designation, intense short term uses and gains, such as provided by silviculture, might be realized. However, such uses would most likely result in long term restrictions on use and benefit because of degradation of environmental factors. Without some additional control, the traditional conflicts between estuarine users--commercial, industrial, and wildlife--could be expected to increase in intensity.

Research information derived from the estuarine sanctuary over the long term will assist in the coastal zone management decisionmaking process, and the public education program will provide a basis for the wise use of the estuarine resources. These results, which will apply to areas other than Apalachicola, will help avoid conflicts and mitigate adverse impacts caused by man's activities in the coastal zone. Thus, the sanctuary research would result in long term benefits.

The proposed sanctuary will protect this natural estuarine system, thus directly contributing to the long term maintenance of this environment and its economic benefits. In addition, the estuary will serve as a refuge for part of the living resources of the Louisianian province requiring this type of habitat for survival. Furthermore, since most economic activity in the county is a direct product of the natural environment, the sanctuary will ensure the maintenance and enhancement of long term economic as well as ecological productivity.

C. Irreversible or Irretrievable Commitments of Resources

Within the proposed sanctuary, there are no resources that will be irreversibly or irretrievably lost, and there appear to be no major, unavoidable, adverse environmental effects from its establishment, since

the area's resources will be protected. However, as the intent of this action is to provide permanent protection of the estuary and adjacent lands, in practice, silviculture and mining will be removed from direct utilization in the lands proposed for acquisition (only).

D. Possible Conflicts Between the Proposed Action and the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls for the Area Concerned

The City of Apalachicola and Franklin County are the localities most affected by this proposal. They have publicly expressed a position supporting the sanctuary designation. On August 1, 1978, the Board of County Commissioners of Franklin County passed a resolution supporting the proposal to designate Apalachicola Bay as a National Estuarine Sanctuary. On January 31, 1978, the Board of City Commissioners of Apalachicola adopted a resolution stating that all levels of government should assist in the prevention of the destruction or deterioration of the lower Apalachicola River and Bay System. This resolution was also adopted by the Franklin County Board of Commissioners on February 7, 1978. Also, both groups requested the U.S. Department of Commerce to approve a preliminary acquisition grant for a proposed Louisianian National Estuarine Sanctuary for this area. These three resolutions are located in Appendix VII.

On a regional level, the Apalachicola Resource Management and Planning Program (ARMPP) has been established. This program is a cooperative interagency effort set up to resolve land use planning and resource management problems that could adversely affect Apalachicola River and Bay. Involved in this effort are the six Florida counties adjacent to the River (Franklin, Gulf, Calhoun, Liberty, Gadsden, and Jackson), the Apalachee Regional Planning Council, the Northwest Florida Water Management District, and a number of concerned State and Federal agencies. One objective of the program is to assert the State's interest in protecting the Apalachicola River and Bay System (Florida Division of State Planning, 1977). In response to this objective and the establishment of the ARMPP, the Board of County Commissioners in each of the six river basin counties passed a resolution opposing any structural modifications to the Apalachicola River that would jeopardize fishing in Apalachicola Bay.

The State of Florida on April 28, 1978, transmitted its official policies for the Apalachicola River Basin to the Corps of Engineers. The proposed sanctuary uses are consistent with the State's policies. The State's role in organizing the ARMPP and the purchase of 28,000 acres of land indicates intense interest in the rational use of the Apalachicola River/Bay System. On June 26, 1979 the Governor and Cabinent of Florida passed a resolution supporting the designation of Apalachicola River Basin as a National Estuarine Sanctuary (See Appendix XII).

The Apalachicola-Chattahoochee-Flint River System is currently being managed by the Corps of Engineers for the following objectives: (1) navigation; (2) hydropower; (3) water supply; (4) water based recreation; and (5) flood control. In regard to these activities, the Corps of Engineers sent a letter to the State of Florida requesting that adequate provisions be made for the continuation of Federal activities in the Apalachicola River if a decision is made to establish a National Estuarine Sanctuary in Apalachicola Bay. The States of Alabama and Georgia have also asked OCZM to consider the impacts of the sanctuary upon the above objectives in relation to their respective States.

In response to these concerns, the proposed management structure for the Apalachicola Estuarine Sanctuary specifically allows navigation, including maintenance dredging of existing and authorized channels, subject to existing State and Federal permit reviews. In reviewing the economic tradeoffs of establishing a sanctuary (see Appendix VI), an analysis was performed of the impacts upon the Corps projects of designating a sanctuary in the river system. In general, this analysis concluded that:

1. A conflict in satisfying all management objectives for the river currently exists in low water periods.

2. The sanctuary designation further emphasizes Florida's position that the maintenance of the ecological resources of Apalachicola Bay is its prime management concern for the river system.

3. The sanctuary will not have a negative impact upon waterborne navigation, and, in fact, will benefit navigation by being a catalyst towards the preparation of a spoil disposal plan for Apalachicola Bay, by providing more knowledge towards the functioning of the river and bay system, and by establishing a management committee to assist in resolving conflicting use problems.

4. The sanctuary designation would have no significant negative impacts upon the other management objectives of the Corps.

Concerns have also been expressed by the States of Alabama and Georgia, the Tri-Rivers Waterway Development Association, and others that the proposed sanctuary would prohibit the currently proposed structural modifications to the Apalachicola River intended to provide a 9 x 100 foot channel in the Apalachicola River 95 percent of the time. In regard to these concerns, it should be understood that the establishment of an estuarine sanctuary itself cannot prevent the continued operation, maintenance, or enhancement of a Congressionally authorized project. All estuarine sanctuaries are owned and managed by the individual coastal States, under existing or future State law, not Federal law relating to the OCZM Estuarine Sanctuary Program.

The question of structural modification to the Apalachicola River is not a recent phenomenon and has been argued for the past 10 years. For example, Apalachicola River and Bay Resolution No. 73-12, dated March 20, 1973, and adopted April 16, 1974, by the Florida Department of Pollution Control, publicly stated the essential importance of the Apalachicola system both locally and statewide. It continued by resolving "that any proposed dam, water control structure, or development project that may affect sensitive and vital areas of the Apalachicola River and Bay should be subject to careful study and that until irrefutable evidence is provided that the said project will not adversely affect the River or Bay, no dams, water control structures, or other such devices should be constructed in the Apalachicola River." Similar resolutions have been passed by the Governor and cabinet and the six counties adjacent to the river. A copy of these resolutions may be found in Appendix VIII. It is important to understand that the State position on structural modifications to the Apalachicola River was made prior to the conception of the proposed sanctuary and that it is not intended that the proposed sanctuary designation be used either to encourage or discourage such projects. Obviously, there has been a long standing controversy over structural modification of the Apalachicola River. These issues must still be resolved according to Federal, State, and local policies.

Concern has also been raised at public hearings, and through correspondence, regarding the sanctuary's impact on navigation. Legally, the estuarine sanctuary cannot interfere with navigation under laws such as the Interstate Commerce Act, Ports and Waterways Safety Act, Clean Water Act, and others. The Coastal Zone Management Act (CZMA) itself clearly states, "Nothing in this title shall be construed--to diminish either Federal or State jurisdiction, responsibility, or rights in the field of planning, development, or control of water resources, submerged lands, or navigable waters; nor to displace, supersede, limit, or modify any interstate compact or the jurisdiction or the responsibility of any legally established joint or common agency of two or more States or of two or more States and the Federal Government; nor to limit the authority of Congress to authorize and fund projects" (CZMA, Section 307(e)(1)). In addition, Section 404(t) of the Clean Water Act of 1977 clearly states, "This Section shall not be construed as affecting or impairing the authority of the Secretary (of the Army) to maintain navigation."

During the preparation of this FEIS it has been repeatedly emphasized that the proposed estuarine sanctuary is a small part of a large watershed that includes three States (Florida, Alabama, and Georgia) and comprises three major rivers--the Apalachicola, Chattahoochee, and Flint. There currently exist competing, and oftentimes conflicting, objectives for the use of this system. Resolution of these conflicting objectives is outside the scope of the estuarine sanctuary. Resolution will require joint efforts on the part of all. OCZM will support any agreements between the three States affecting the estuarine sanctuary, as long as the area is not significantly altered for research or education purposes.

The Florida Department of Transportation currently has plans to replace the John Gorrie Bridge across the Apalachicola River. The DOT Act of 1966 declared it to be "national policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Since Apalachicola Bay has been designated an aquatic preserve and transportation project, it would presumably fall under the intent of the DOT Act.

The Act also requires the Secretary of Transportation to cooperate and consult with States in developing transportation plans that include measures to maintain or enhance the natural beauty of the lands traversed.

A mechanism exists for State agency input into plans for the John Gorrie Bridge replacement that will assure maintenance of the natural beauty and resources of lands and waters within the estuarine sanctuary. Therefore, OCZM will support the alternative for replacement of the bridge, that is acceptable to the appropriate Florida agencies. Estuarine sanctuary status will not cause any negative impact, including costly time delays, on the replacement of the existing bridge.

In summary, the proposed sanctuary is consistent with the current policies and objectives of Federal, State, and regional governments, and local land-use plans, policies, and controls for the area concerned. A major problem that has caused delay in terms of dredging and maintenance projects is the concern over spoil disposal. The completion of a spoil disposal plan is the highest research priority for the proposed sanctuary, and its completion will be of benefit to maintenance dredging for waterborne transportation.

PART IV: AFFECTED ENVIRONMENT

The Apalachicola River Basin is a biologically rich and distinctive system. This basin contains the greatest variation in physical land contours within the State of Florida. Its topography includes numerous caves, deeply entrenched ravines containing relict and endemic plants and animals, steep heads, extensive flatwoods, and a well balanced and extremely productive estuarine system of lagoons and flats. The area is predominantly rural, and the primary land uses are agriculture and forestry.

The proposed sanctuary will consist of approximately 135,680 acres of estuarine waters and submerged lands, and about 57,000 acres of publicly owned lands and wetlands which surround or are adjacent to the estuarine water body. Of the 57,000 acres of land, approximately 12,467 acres are proposed for acquisition with matching (50 percent) funds by OCZM and the State of Florida.

A. General Physiography

The Apalachicola River and Bay system is characterized by a series of rivers, bays, bayous, and tidal creeks that are separated from the Gulf of Mexico by a chain of barrier islands, including St. George Island, Little St. George Island, Dog Island, and St. Vincent Island. The system's major topographic featues are Apalachicola River, East Bay, Round Bay, St. Marks and Little St. Marks Rivers, Apalachicola Bay, the barrier islands, and a number of small creeks and bayous.

The Apalachicola River is 105 miles long (Livingston et al., 1974-75), and it is the largest water volume carrier in the State of Florida (DSP-BLWM, 1977). Pine flatwoods, hardwood hammocks, swamps, and marshes comprise the river system. The wetlands include rivers, streams, swamps, shallow freshwater and brackish marshes, and various forms of emergent and submerged vegetation that contribute to an exceptionally productive ecosystem (Livingston et al., 1974-75).

Apalachicola Bay itself is a shallow coastal estuary bounded by a series of barrier islands, and averages nine feet in depth at mean low water. The bay is connected to open portions of the Gulf of Mexico via Indian Pass, West Pass, East Pass, the St. George Sound, and Sikes Cut, an artificial inlet.

B. Soils-Geology

The major soil associations in the proposed sanctuary are the Leon-Chipley Plummer association (nearly level sandy soils that are moderately to poorly drained), the alluvial land association (nearly level soils that are poorly and very poorly drained), the Plummer-Rutledge Association (nearly level, poorly drained to very poorly drained soils that are

sandy throughout), salt water marsh, and coastal beaches and dunes. All of these soils associations have severe limitations for commercial and residential development and sanitary facilities.

The Apalachicola River floodplain consists of Halocene sediments lying directly on Miocene strata, due to the erosion of Pliocene and Pleistocene sediments during low sea level and strong river flow. The barrier islands and spits were formed about 5,000 years ago on top of the remains of islands and dunes from early Pleistocene, interglacial, and high sea level times (Clewell, 1976).

The only mineable materials of potential economic importance in the sanctuary are road fill, foundation fill, and peat (Schmidt, 1979). Although the area is believed to have some potential for oil, to date no oil has been found in the ten test wells drilled in the region (Applegate, 1979). There currently are no active oil leases within the proposed sanctuary boundaries.

C. Drainage

The Apalachicola-Chattahoochee-Flint River system drains about 19,200 square miles in the States of Alabama, Florida, and Georgia. About 76 percent of the River basin is in Georgia, 14 percent in Alabama and 10 percent in Florida (U.S. Army Corps of Engineers, 1978). The Apalachicola River is formed by the confluence of the Flint and Chattahoochee Rivers at Lake Seminole, an impounded reservoir. The major sources of freshwater inflow to Apalachicola Bay are the Apalachicola River and the Chipola River.

Recorded discharge rates in the Apalachicola River range from lows of about 9300 cubic feet per second (cfs) to highs of about 200,000 cfs (U.S. Army Corps of Engineers, 1978) with an average flow of about 23,500 cfs. The influences of the Apalachicola River have been detected as far as 160 miles into the Gulf of Mexico (Livingston, et al., 1974-1975).

The biological productivity of Apalachicola Bay has been linked to the pulsed flooding from the river. Oysters, for instance, would be subject to predation without regular pulses of fresh water (Livingston, 1978).

D. Biological Characteristics

1. Vegetation

The river system is characterized by various dominant forms of vegetation. The dry, sandy uplands contain pines, herbs, and oaks; the bluffs or shoal river formations have magnolia, beech, oak, maple, and holly; in the floodplain areas can be seen black willow, cottonwood, sycamore, river birch, tupelo, sweetgum, ash, and oaks; the gulf coastal lowlands have pine, palmetto, blackgum, sweet bay, shrubs, and flowers; in the coastal plains there are oak, pine, and shrubs; and finally cord grass, needlerush, saw grass, and cattails can be seen in the marshes,

though only the last three are in the proposed sanctuary. At least 116 species of plants have been found in the immediate vicinity of the Apalachicola River, of which 17 are endangered, 28 threatened, and 30 are rare. Nine species are endemic locally and 27 are endemic to the general Apalachicola region (Clewell, 1977). Of these plants only Leitneria floridiana, the common corkwood, lies within the sanctuary. However, little botanical work has been done in the area, and it is possible that additional species may exist. The proposed purchase area is not considered to be a likely habitat for rare, endangered, or threatened species (Clewell, 1979).

The Apalachicola Bay system includes numerous submerged and emergent vegetation types. Submerged vegetation is relatively restricted but includes sea grass, turtle grass, Manatee grass, and Cuban shoalweed, while the emergent vegetation is characterized by smooth and marsh hay cordgrass, black needlerush, saltgrass, and glasswort.

Appendix 9 provides a list of the major vegetation types for each ecological region within the system.

2. Fish and Wildlife

a. Fish

Of the 116 fish species (see Appendix 10) identified within the system, three are endemic to the river system while a fourth originated in the system. The Apalachicola system provides spawning areas for anadromous fish. It supports an abundant striped bass population and contains such fish as the Atlantic sturgeon, the Alabama shad, skipjack herring, and the Atlantic needlefish. The hog choker lives in the river but migrates to the sea to breed. Striped mullet and gulf flounder swim upriver from the marine areas in the bay. Sports fishing in the river is supported by sunfish, striped bass, white bass, catfish, and sturgeon. Commercial species include channel and white catfish and bullheads (Yerger, 1976).

The major economic activity conducted within the proposed sanctuary is commercial fishing. A combination of beneficial physical and biological circumstances allows Apalachicola Bay to be one of the most productive fishery areas in the country. The bay supports major fisheries for oyster, shrimp, crab, and finfish; it is also the major breeding grounds for blue crab for the eastern Gulf of Mexico.

Table 1 summarizes the marine landings from Franklin County for species that are estuarine dependent.

Table 1

Marine Landings of Estuarine Dependent Fish in Franklin County, 1975, 1976.

	1975				1976			
	Pounds	%*	Value	%*	Pounds	%*	Value	%*
Food Fish (total)	1,241,315	(1.5)	$207,240	(0.9)	1,058,348	(1.3)	$221,605	(0.8)
Black Mullet	984,205	(3.8)	154,304	(4.1)	744,675	(4.0)	132,136	(4.3)
Spot Sea Trout	73,847	(2.7)	28,513	(2.5)	100,655	(3.6)	43,396	(3.3)
Non-Food Fish (total)	5,610	(0.0)	411	(0.0)	45,595	(0.3)	3,289	(0.4)
Shellfish excluding Shrimp (total)	3,700,000	(12.0)	1,350,000	(8.0)	4,254,884	(14.6)	1,893,590	(11.0)
Blue Crabs	1,658,981	(9.8)	224,488	(10.1)	1,742,161	(10.8)	300,215	(11.1)
Oysters	2,032,612	(91.8)	1,107,017	(87.9)	2,503,441	(92.2)	1,591,128	(89.5)
Shrimp (total)	4,264,056	(13.3)	4,082,899	(12.6)	3,702,656	(12.1)	4,802,972	(11.1)
Grand Total	9,210,981	(5.7)	5,640,550	(716)	9,061,483	(5.8)	6,921,456	(7.9)

*All percentages are relative to the total Florida catch. Sources: Florida Department of Natural Resources (1975, 1976 a), Percy Thompson (1979).

It should be understood that fish landings fluctuate and the years listed in Table 1 were not peak oyster years. Unofficially, the 1977 oyster catch is estimated to be over 5,000,000 pounds (Snell, 1979).

Since the output multiplier for commercial fisheries in the region is estimated to be about 2.0 (Bell, 1979), commercial fishing contributes well over $10 million annually to Franklin County's economy.

The proposed sanctuary area is also used extensively for marine recreational fishing, although sportfishing in Apalachicola Bay and the lower River is currently considered to be an underutilized resource. The three fishing lodges in Apalachicola are patronized by an estimated average of 1125 fishermen per month (Northwest Florida Planning and Advisory Council, 1976). A recent study estimated that the average marine recreational fisherman, utilizing charter facilities, spends about $40 to $75 per day (North, 1976). Using the low value, marine recreational fishing from just the three facilities contributes over one-half million dollars annually to Franklin County's economy. This does not include additional incomes brought in by marine recreational fishermen not using the lodges.

b. Wildlife

The highest species density of amphibians and reptiles in North America, north of Mexico, occurs in the upper Apalachicola River Basin (Appendix 10). Rare species include the mole snake and various types of salamanders (Means, 1976). The floodplain forest is one of the most important bird habitats in the Southeast. Florida's rare or endangered birds such as the southern bald eagle, osprey, and peregrine falcon, also dwell within the river/bay system (Stevenson, 1976).

Important mammals in the area include the black bear, roundtailed muskrat, white-tailed deer, and the gray squirrel (Means, 1976). Marine mammals and populations of sea turtles also frequent the area.

Although significant hunting occurs in the sanctuary region, no data exists estimating the number of hunter-days. Deer, squirrel, hog, bear, and duck are all hunted in the lower river.

E. Socioeconomic Characteristics

Table II indicates selected socioeconomic characteristics for Franklin County, where the proposed lands for acquisition lie.

Table II

Selected Socioeconomic Characteristics of Franklin County

	1965*	1970*	1975*	1977**
Per Capita Personal Income	$1004	$1626	$2750	$3061***
Unemployment Rate	5.4%	2.4%	12.1%	14.0%
Population	6,750	7,065	7,856	8,128

*Florida Department of Commerce Data

**University of Florida Data

***Data for 1976, 1977 Data Unavailable

Franklin County's economy is centered about the fishing industry. Approximately 60 percent of the employment is directly associated with fishing. State and local governments provide another 14 percent of the employment. Over 85 percent of the land in the county is in commercial forestry and is a major economic factor. However, forestry provides little employment to the residents of the county, and the forestry resources within the sanctuary boundaries are not being actively harvested.

The future development of the sanctuary region is expected to focus around the natural environment. The economic development of Franklin County probably will center around commercial fishing and allied industries, tourism and recreational fishing and boating, and light industry that is compatible with the environment of the county. Residential development in the county is expected to occur in the City of Apalachicola, its outskirts, and St. George Island (Meyer, 1979). The area is being increasingly used for recreation and second-home development by residents of Tallahassee, the State's Capitol.

The State of Florida had contributed a significant amount of money into the sanctuary region. The Department of Natural Resources (DNR) spends about $40,000 to $50,000 per year establishing artificial oyster reefs in the bay, and is sponsoring a $300,000 project to develop and bring into Apalachicola an oyster fattening plant. Within DNR's operating budget is $250,000 for Division of Marine Resources activities in the bay, and $400,000 for Marine Patrol activities. The budget of the Division of Recreation and Parks for the State park on St. George Island will be over $200,000 in 1979. Also, the Marine Research Laboratory in St. Petersburg spends about $1.5 million per year on fisheries research that would have application to Apalachicola Bay (Joyce (1979), Thomas (1978)).

In addition, another $270,0000 in scientific research through the Sea Grant Program will be spent on Apalachicola River and Bay in 1979 (Livingston, 1979). It is uncertain what portion of these monies will actually be expended in Franklin County. However, since researchers can essentially be considered tourists in regard to economic activity necessary to accommodate them, and the estimated multiplier for tourist activity in Florida is about 3.0-4.0, the input of these research dollars probably will have a significant contribution to the County's economy.

The proposed estuarine sanctuary has two inland waterways; the Gulf Intracoastal Waterway (GIWW) and the Apalachicola-Chattahoochee-Flint (A-C-F) Navigation project. Approximately 2,000,000 tons of commerce are barged over these waterways each year. Major commodities moved include gasoline fuel, oil, crude petroleum, sand/gravel, and fertilizer. It is recognized that the use of waterborne transportation results in valuable energy savings over alternate forms of transportation, and that Georgia, Alabama and, to a lesser degree, Florida, have a substantial investment in the usage of waterborne transportation within the Tri-River system.

PART V: LIST OF PREPARERS

Mr. James W. MacFarland - U.S. Department of Commerce

Mr. MacFarland received his B.A. and M.A. in Economics and has previously prepared land acquisition strategies, purchased land, acted as a consultant, and analyzed the socioeconomic impacts of land preservation for major land conservation organizations. He is the author of several articles and studies on natural resource protection and is a former college lecturer in economics.

Currently he is the Estuarine Sanctuary Program Coordinator for the Office of Coastal Zone Management within the National Oceanic and Atmospheric Administration. His present position includes direct project responsibility for five existing estuarine sanctuaries, and the establishment of future estuarine sanctuaries.

Primary responsibility in the preparation of this DEIS included overall direction, organization, and preparation of the report for publication. In addition, he prepared all sections not specifically discussed below.

Mr. Richard Weinstein - U.S. Department of Commerce

Mr. Weinstein currently is a writer/editor for OCZM/NOAA. He has a B.S. in zoology, but at the present time he is completing the requirements for an M.A. in English by writing a novel that will serve as his Master's Thesis. He is a published author of fiction and has written and edited several major studies prepared by OCZM.

Mr. Weinstein edited this DEIS.

Mr. Frank Christhilf - U.S. Department of Commerce

Mr. Christhilf holds both the B.E. and M.L.A. degrees and has an extensive background in administration, particularly in the area of public policy. His background includes working as a professional engineer, as well as surveyor, and eight years experience as a member of a standing committee of the Arlington County Planning Commission, Arlington, Virginia.

In addition, he has recently been involved in full-time graduate study in marine affairs with emphasis on environmental law, economics, national marine policy, and public administration.

Currently, he is working with the Estuarine Sanctuary Program in OCZM/NOAA.

His primary responsibilities included coordinating recent changes in this FEIS and putting together the Response to Comments Section of the Appendix.

Dr. Ted LaRoe - Florida Department of Environmental Regulation

Dr. LaRoe received his Ph.D. in Marine Sciences (biological oceanography) and is currently Chief, Bureau of Coastal Zone Management. Previously, he was Chief Scientist and Coastal Ecologist for the Federal Office of Coastal Zone Management. In this capacity, he authored the South Slough, Oregon, Estuarine Sanctuary EIS, the June 4, 1974, Rules and Regulations for Estuarine Sanctuaries, and the Oregon Coastal Zone Management Program. In addition, he completed the comprehensive plan for the Rookery Bay Sanctuary prior to its becoming a national estuarine sanctuary.

His primary responsibilities in the preparation of the DEIS were the sections on Purpose of and Need for Action, and Alternatives including Proposed Action.

Mr. Steven Leitman - Florida Department of Environmental Regulation

Mr. Leitman holds a B.A. degree in Mathematics and an M.S.P. in Regional Environmental Planning. Related work experience includes staff responsibilities in the organization of the Apalachicola Committee within the Florida Division of State Planning, and preparation of economic impact analyses of various coastal zone/water resource related projects over the last three years.

In addition, he assisted in the development of the agriculture, water, and utility elements of the Florida State Comprehensive Plan. At the present time, he is employed by the Florida Bureau of Water Management analyzing the economic aspects of Federal water projects.

Mr. Leitman coauthored the Environmental Consequences Section and the Economic Impact Assessment (Appendix 6), in addition to assisting in the preparation of the Affected Environment Section.

Mr. Eric Nuzie - Florida Department of Environmental Regulation

Mr. Nuzie received his B.A. in Social Studies. He has been employed by DER for the past six years, primarily within the enforcement section. In this capacity, he specialized in solid waste, domestic waste, air pollution, and industrial waste, but has worked in all other phases of the State Environmental Regulation program. Recently, he transferred to the Bureau of Coastal Zone Management with primary responsibility for development of the Apalachicola estuarine sanctuary proposal.

Mr. Nuzie was primarily responsible for the preparation of the Affected Environment Section.

Elisabeth S. Roy - Florida Department of Environmental Regulation

Elizabeth Roy holds a B.A. in History and a Master's in Public Administration with emphasis on public finance and urban economics. She is currently employed as an Economic Planner in the Department's Office of Economic Analysis. She formerly taught microeconomics at Louisiana State University and was a research associate at the Joint Center for Environmental and Urban Problems at Florida Atlantic University.

Ms. Roy co-authored the Environmental Consequences Section and the Economic Impact Assessment (Appendix 6).

The following individuals were coordinators for the Apalachicola Symposium held in October 1978. They analyzed and summarized the recommendations which appear in Appendix 2.

Mr. John Clark - The Conservation Foundation

Mr. Clark is currently a Senior Associate and staff ecologist for the Conservation Foundation. He holds advanced degrees in marine ecology and ichthyology. He was formerly with the Woods Hole Fishery Laboratory, and the Sandy Hook Marine Laboratory in New Jersey. Mr. Clark currently serves as the Executive Secretary to the National Wetlands Technical Council and is the author of Coastal Ecosystem Management, a nationally recognized text concerned with Coastal Zone Management principles.

Mr. John Banta - The Conservation Foundation

Mr. Banta is a Senior Associate at the Conservation Foundation, specializing in coastal resources law. In addition to his J.D. degree, he also has a B.A. in mathematics. In his present capacity, he is the coauthor of The Physical Management of the Coastal Floodplain and has also analyzed States' interactions in the coastal zone decisionmaking process. Prior work experience included the examination of Critical Area Designations within the State of Florida.

FEDERAL AGENCIES

Department of the Air Force
Department of Commerce
Department of Housing and Urban Development
Department of the Interior
Department of Transportation
Environmental Protection Agency

CONGRESS

Honorable Richard (Dick) Stone, United States Senate (Florida)
Honorable Tom Bevill, William L. Dickenson, Bill Nichols, Jack Brinkley, Dawson Mathis, United States House of Representatives (Georgia and Alabama)
Honorable Don Fuqua, United States House of Representatives (Florida, 2nd District)

STATE AGENCIES

Alabama

State of Alabama, Governor's Office - Honorable Fob James, Governor
State of Alabama, Legal Advisor to Governor James - Mike Waters
State of Alabama, Attorney General's Office - George Hardesty
Alabama - Walter Stevenson, State Planning Division
Southeast Alabama Regional Planning and Development Commission, Dothan, Alabama - W.T. Cathell
Alabama State Docks Department, Mobile, Alabama - Gerry P. Robinson, W.H. Blade, Jr.
Houston County Commission, Dothan, Alabama - Charles Whidden

Florida

State of Florida, Governor's Office - Statement of Governor Bob Graham, read by Ken Woodburn
State of Florida, Governor's Office - Ken Woodburn
Florida Secretary of State, Tallahassee, Florida - L. Ross Morrell
Florida Department of Commerce, Tallahassee, Florida - William Stanley
Florida Game and Fresh Water Fish Commission, Tallahassee, Florida - H.E. Wallace
Florida Department of Transportation, Tallahassee, Florida - Ray G. L'Amoreaux
Florida Department of Agriculture and Consumer Services, Tallahassee, Florida - Harold Hoffman
Florida Division of State Planning, Tallahassee, Florida - R.G. Whittle, Jr.

Georgia

State of Georgia, Executive Assistant to Governor Busbee - Tom Perdue
Georgia Ports Authority, Savannah, Georgia - George J. Nichols
Chattahoochee River Basin Development Commission, Atlanta, Georgia - Burton J. Bell
Southwest Georgia Planning and Development Commission, Camilla, Georgia - Bob Thomas
Atlanta Regional Commission, Atlanta, Georgia - Paul B. Kelman

LOCAL AGENCIES

City of Phenix City, Alabama - George E.H. Chard
Franklin County Board of Commissioners, Apalachicola, Florida - Robert Howell
Gulf County Commissioners, Wewahitchka, Florida - Douglas C. Birmingham
Apalachee Regional Planning Council (ARPC) Blountstown, Florida - Ed Leuchs
Jackson County Commissioners - Thomas Tyus
Jackson County Port Authority, Sneads, Florida - Homer B. Hirt
Town of Sneads, Florida - J.P. McDaniel
Bainbridge and Decatur Counties, Georgia - Winston Brock
City of Bainbridge, Georgia - B.K. Reynolds
City of Blakely, Georgia - G.H. Dunaway
City of Camilla, Georgia - Lewis B. Campbell
Columbus, Georgia, Mayor's Office - Harry C. Jackson
Board of Commissioners, Decatur County - J. Clifford Dallas
Decatur County Farm Bureau, Bainbridge, Georgia - Bernard Rentz
Board of Commissioners, Dougherty County, Georgia - Gil Barrett
Commissioners of Early County, Georgia - E.C. Scarborough
The Decatur-Bainbridge Industrial Development Authority, Georgia, John E. Prorenci

NATIONAL INTEREST GROUPS

Barrier Islands Coalition, Washington, D.C. - Dinesh Sharma
Natural Resources Defense Council Inc., Washington, D.C. - Peter S. Holmes
Sierra Club, Gulf Coast Regional Conservation Committee, Baton Rouge, Louisiana - Doris Falkenheimer
Sierra Club, Chattahoochee Chapter, Atlanta, Georgia - Sally Sierer
Sierra Club, Cahaba Group, Alabaster, Alabama - Ernest McMeans
Sierra Club, Chattahoochee Chapter, Wiregrass Group, Dothan, Alabama - Darryl Wiley

STATE INTEREST GROUPS

Tri-Rivers Waterway Development Association, Dothan, Alabama - Addie Summers
Florida Federation of Garden Clubs, Inc., Winter Park, Florida - Dursie Ekman

Florida Audubon Society, Maitland, Florida - Archie Carr III
The Apalachicola Committee, Tallahassee, Florida - Ed Conklin
Atlanta Audubon Society, Atlanta, Georgia - Elmer Butler
Florida Defenders of the Environment, Gainesville, Florida - Marjorie H. Carr
Georgia Clean Water Coalition, Atlanta, Georgia - Jo Jones
The Georgia Conservancy, Savannah, Georgia - Hans Neuhauser
Southeastern Wildlife Services, Inc., Athens, Georgia - Billy Hillestad

LOCAL INTEREST GROUPS

Live Oak Garden Club, Suwanee County, Florida - Ileen C. Moore, Marilyn B. Fowler
Albany Chamber of Commerce, Albany, Georgia - Steve Bailey
Bainbridge and Decatur County Chamber of Commerce, Blakely, Georgia - D. Smith
Pelham Chamber of Commerce, Pelham, Georgia - Eddie Bowen
Columbus Chamber of Commerce, Columbus, Georgia - Joe Ragland
Blakely - Early County Chamber of Commerce, Blakely, Georgia - Wayne R. Foster

INDIVIDUALS

Dr. Robert Livingston, Tallahassee, Florida
Samuel T. Adams, Apalachicola, Florida
Charles R. McCoy, Blountstown, Georgia
Dr. C.H. Oppenheimer, Consultant, Port Aransas, Texas
George Atkins, WKDY Radio Station, Blountstown, Florida
George Kirvin, Apalachicola, Florida
A.M. Chason McDaniell, Property Owner, Gainesville, Florida
W.W. Glenn, Marianna, Florida
C.O. Beall, Eufaula, Alabama
Charles Fryling, Jr., Baton Rouge, Louisiana
Sven O. Lovegren, Decatur, Georgia
Lyle A. Taylor, Huntsville, Alabama
Ms. Deborah Gail Watson, Birmingham, Alabama
Patricia E. Bardorf, Birmingham, Alabama
Tom Cullen, Middletown, Virginia
Gary Davis, Birmingham, Alabama
Joe and Dottie McCain, Birmingham, Alabama

PRIVATE INDUSTRY

Continental Carbon Company, Phenix City, Alabama - J.D. Rodriguez
Elberta Crate and Box Company, Bainbridge, Georgia - D.R. Simmons
Mississippi Chemical Corporation, Yazoo, Mississippi - James A. Pierce

Craft Company, Mahrt, Alabama - C.O. Beall
Brent Towing Company, Inc., Greenville, Mississippi - Michael M. Measells
The Buckeye Cellulose Corporation, Perry, Florida - Walter L. Beers
Childress Company, Foley, Alabama - Bruce Childress
Continental Carbon Company, Houston, Texas - N.R. Higgins
Great Southern Paper Company, Cedar Springs, Georgia - James W. Stewart
Kaiser Aluminum and Chemical Corporation, Washington, D.C. - T.K. Singer
Cook and Henderson, Washington, D.C. - John C. Kirtland
John T. Brown Law Firm, Washington, D.C. - Stephen E. Roady
St. Joe Paper Company, Port St. Joe, Florida - Hugh W. White, Jr.

UNIVERSITIES

Institute of Food and Agricultural Sciences, University of Florida, Gainesville, Florida - Wayne H. Smith, Hans Riekerk
Division of Engineering Research, Louisiana State University, Baton Rouge, Louisiana - John M. Hill

PART VII: APPENDICES

I. Estuarine Santuary Guidelines (June 4, 1974 and September 9, 1977).

II. Apalachicola Symposium and Workshop: Summary of Workshops and Recommendations for Boundaries and Environmental Management of a Proposed Estuarine Sanctuary.

III. Florida Statute, Chapter 258; Land Conservation Act of 1972.

IV. Florida Statute, Chapter 259; State Parks and Preserves.

V. Florida Statute, Chapter 253; Land Acquisition Trust Fund.

VI. Economic Impact Assessment for the Designation of Apalachicola Bay National Estuarine Sanctuary.

VII. Local and Regional Resolutions Supporting Establishment of an Estuarine Sanctuary.

VIII. Governor and Cabinet Resolutions Regarding Structured Modification to the Apalachicola River.

IX. Major Types of Vegetation Within the Apalachicola River/Bay System.

X. Fish and Wildlife Resources of the Lower Apalachicola River and Bay. Legal status of endangered and potentially endangered species in Florida.

XI. Florida Statute, Chapter 267; Archives and History Act.

XII. Florida Cabinet Resolution of June 26, 1979, Supporting Designation of the Apalachicola River Basin as a National Estuarine Sanctuary.

XIII. Summarized Comments on the DEIS and Responses by OCZM to these comments.

APPENDIX I

federal register

TUESDAY, JUNE 4, 1974

WASHINGTON, D.C.

Volume 39 ■ Number 108

PART IV

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

■

Estuarine Sanctuary Guidelines

Title 15—Commerce and Foreign Trade

CHAPTER IX—NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

PART 921—ESTURAINE SANCTUARY GUIDELINES

The National Oceanic and Atmospheric Administration (NOAA) on March 7, 1974, proposed guidelines (15 CFR Part 921) pursuant to section 312 of the Coastal Zone Management Act of 1972 (Pub. L. 92-583, 86 Stat. 1280), hereinafter referred to as the "Act," for the purpose of establishing the policy and procedures for the nomination, selection and management of estuarine sanctuaries.

Written comments were to be submitted to the Office of Coastal Environment (now the Office of Coastal Zone Management), National Oceanic and Atmospheric Administration, before April 8, 1974, and consideration has been given those comments.

The Act recognizes that the coastal zone is rich in a variety of natural, commercial, recreational, industrial and esthetic resources of immediate and potential value to the present and future well-being of the nation. States are encouraged to develop and implement management programs to achieve wise use of the resources of the coastal zone, and the Act authorizes Federal grants to the States for these purposes (sections 305 and 306).

In addition, under section 312 of the Act, the Secretary of Commerce is authorized to make available to a coastal State grants of up to 50 per centum of the cost of acquisition, development and operation of estuarine sanctuaries. The guidelines contained in this part are for grants under section 312.

In general, section 312 provides that grants may be awarded to States on a matching basis to acquire, develop and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time ecological relationships within the area. The purpose of these guidelines is to establish the rules and regulations for implementation of this program.

The National Oceanic and Atmospheric Administration is publishing herewith the final regulations describing the procedures for applications to receive grants for estuarine sanctuaries under section 312 of the Act. The final regulations and criteria were revised from the proposed guidelines based on the comments received. A total of fifty (50) States, agencies, organizations and individuals submitted responses to the proposed section 312 guidelines published in the FEDERAL REGISTER on March 7, 1974. Of those responses received, eight (8) offered no comment or were wholly favorable as to the nature and content of the guidelines as originally proposed. Forty-two (42) commentators submitted suggestions concerning the proposed section 312 guidelines.

The following summary analyzes key comments received on various sections of the proposed regulations and presents the rationale for the responses made.

Section 921.2 *Definitions.* Three comments requested that the term "estuary" be defined. Although the term is defined in the Act and also in the regulations dealing with Coastal Zone Management Program Development Grants (Part 920 of this chapter) published November 29, 1973, it has been added to these regulations and broadened slightly to include marine lagoons with restricted freshwater input such as might occur along the south Texas coast.

Two other comments requested that the "primary purpose" referred to in § 921.2(b) be clearly defined. Although elaborated upon in § 921.3(a), for the purpose of clarity this change has been made.

Section 921.3 *Objectives and Implementation.* Several comments suggested that the estuarine sanctuary program objectives were too narrowly defined and specifically that they should be broadened to include the acquisition and preservation of unique or endangered estuaries for wildlife or ecological reasons. Although the Act (section 302) declares it the nation's policy to preserve, protect, develop, and where possible, to restore or enhance coastal resources, this is perceived to be achievable through State actions pursuant to sections 305 and 305. While it is recognized that the creation of an estuarine sanctuary may in fact serve to preserve or protect an area or biological community, the legislative history of section 312 clearly indicates the estuarine sanctuary program was not intended to duplicate existing broad purpose Federal preservation programs, such as might be accommodated by use of the Land and Water Conservation Fund Act. Instead, both in the Act as well as its legislative history, the objective is defined as preserving representative estuarine areas for long-term research and educational uses.

Three other comments suggested the objectives of the program should be enlarged to include the restoration of environmentally degraded areas. This, too, is perceived to be a State requirement separate from section 312. In addition, adequate authority for restoring degraded water areas now exists (for example, Pub. L. 92-500 in addition to sections 302, 305 and 306 of the Act). No significant additional benefit would appear to result from declaring an area an estuarine sanctuary for the purposes of restoration.

A few comments indicated that the examples of sanctuary use were too heavily weighted toward scientific uses to the exclusion of educational uses. Public education concerning the value and benefits of, and the nature of conflict within the coastal zone, will be essential to the success of a coastal zone management program. The section has been changed to reflect an appropriate concern for educational use.

Some commentators suggested changes in or additions to the specific examples of sanctuary uses and purposes. These examples were taken from the Senate and House Committee Reports and are considered sufficient to reflect the kinds of uses intended within an estuarine sanctuary.

Several comments were received pertaining to § 921.3(c) involving the restrictions against overemphasis of destructive or manipulative research. Ten comments indicated that the section was too weak and would not provide sufficient long-term protection for the sanctuary ecosystem. Several commentators specifically recommended deleting the words "would not normally be permitted" and inserting in their place "will not be permitted." In contrast, three respondents indicated that the potential use of estuarine sanctuaries for manipulative or destructive research was too restricted, and that these uses should be generally permitted if not encouraged.

The legislative history of section 312 clearly indicates that the intent of the estuarine sanctuary program should be to preserve representative estuarine areas so that they may provide long-term (virtually permanent) scientific and educational use. The uses perceived are compatible with what has been defined as "research natural areas." In an era of rapidly degrading estuarine environments, the estuarine sanctuary program will ensure that a representative series of natural areas will be available for scientific or educational uses dependent on that natural character, for example, for baseline studies, for use in understanding the functioning of natural ecological systems, for controls against which the impacts of development in other areas might be compared, and as interpretive centers for educational purposes. Any use, research or otherwise, which would destroy or detract from the natural system, would be inappropriate under this program.

In general, the necessity of or benefit from permitting manipulative or destructive research within an estuarine sanctuary is unclear. While there is a legitimate need for such kinds of research, ample opportunity for manipulative or destructive research to assess directly man's impact or stresses on the estuarine environment exists now without the need for creation or use of an estuarine sanctuary for this purpose. In contrast, a clear need exists for natural areas to serve as controls for manipulative research or research on altered systems.

The section on manipulative research has been changed to reflect the concern for continued maintenance of the area as a natural system. However, the modifier "normally" has been retained because, within these limits, it is not felt necessary to preclude all such uses; the occasion may rarely arise when because of a thoroughly demonstrated direct benefit, such research may be permitted.

Several comments suggested that the program should include degraded estuarine systems, rather than be limited to areas which are "relatively undisturbed by human activities." Such areas would permit research efforts designed to restore an estuarine area. As indicated

above, an ample legislative mandate to restore environmentally degraded areas already exists; the benefits to be derived from declaring such areas estuarine sanctuaries would be marginal. Indeed, it would appear that if restoration efforts cannot occur without estuarine sanctuary designation, then, given the limited resources of this program, such efforts would not be feasible.

A few commentators suggested that the phrase (§ 921.3(e)) "if sufficient permanence and control by the State can be assured, the acquisition of a sanctuary may involve less than the acquisition of a fee simple interest" be more clearly defined. Explanatory language has been added to that section.

Section 921.4 *Zoogeographic Classification.* Because the classification scheme utilized plants as well as animals, two commentators suggested that zoogeographic be changed to biogeographic. This change is reflected in the final regulations.

One comment suggested that selection of sanctuaries should depend on the pressures and threats being brought to bear upon the natural areas involved even if this meant selecting several sanctuaries from one classification and none from another.

The legislative history of section 312 clearly shows the intent to select estuarine sanctuaries on a rational basis which would reflect regional differentiation and a variety of ecosystems. The biogeographic classification system, which reflects geographic, hydrographic, and biologic differences, fulfills that intention. A scheme which would abandon that system, or another similar one, and would not fulfill the requirements of providing regional differentiation and a variety of ecosystems, would not be consistent with the intended purpose of the Act.

A few comments received suggested that the biogeographic classification scheme be enlarged by the addition of a new class reflecting an area or State of special concern or interest to the respondent. (No two commentators suggested the same area.) It is felt that adequate national representation is provided by the biogeographic scheme proposed, and that the changes offered were in most cases examples of sub-categories that might be utilized.

One comment suggested a specific change in the definition of the "Great Lakes" category. Portions of that suggestion have been incorporated into the final rules.

Two commentators requested assurance that sub-categories of the biogeographic scheme will in fact be utilized. The final language substitutes "will be developed and utilized" for "may be developed and utilized."

Section 921.5 *Multiple Use.* Several comments were received pertaining to the multiple use concept. Three commentators suggested that the multiple use directive was contrary to or absent from the Act and should be omitted. Ten respondents felt the concept should be more explicitly defined and restricted so that the primary purpose of the sanctuary would be more clearly protected. In contrast, two commentators felt that the definition might prove too restrictive and should be broadened. Several commentators suggested that examples of anticipated multiple use might be appropriate.

While recognizing that it is not always possible to accommodate more than a single use in an environmentally sensitive area, it is not the intention to unnecessarily preclude the uses of sanctuary areas where they are clearly compatible with and do not detract from the long-term protection of the ecosystem for scientific and educational purposes. The language of § 921.5 has been changed accordingly.

Section 921.6 *Relationship to Other Provisions of the Act and to Marine Sanctuaries.* Several comments were received which commended and stressed the need for close coordination between the development of State coastal zone management programs, especially and land and water use controls, and the estuarine sanctuary program.

The relationship between the two programs is emphasized: estuarine sanctuaries should provide benefit—both short-term and long-term—to coastal zone management decision-makers; and State coastal zone management programs must provide necessary protection for estuarine sanctuaries. This necessary coordination is discussed not only in the estuarine sanctuary regulations, but will also be addressed in an appropriate fashion in guidelines and rules for Coastal Zone Management Program Approval Criteria and Administrative Grants.

Three commentators discussed the need for swift action by both State and Federal governments to establish and acquire estuarine sanctuaries. The Office of Coastal Zone Management intends to pursue the program as swiftly as available manpower restraints will permit.

A few comments sought reassurance that the estuarine sanctuaries program will in fact be coordinated with the Marine Sanctuaries Program (Title III, Pub. L. 92-532). The guidelines have been changed to reflect that both programs will be administered by the same office.

SUBPART B—APPLICATION FOR GRANTS

Section 921.10 *General.* One reviewer indicated uncertainty about which State agency may submit applications for grants under section 312. Although individual States may vary in the choice of individual agencies to apply for an estuarine sanctuary, because of the necessity for coordination with the State coastal zone management program the entity within the State which is the certified contact with the Office of Coastal Zone Management, NOAA, responsible for the administration of the coastal zone management program must endorse or approve an estuarine sanctuary application.

Appropriate language has been included to ensure this coordination.

Section 921.11 *Initial Application for Acquisition, Development and Operation Grants.* Two comments requested that the source and nature of acceptable matching funds should be explicitly identified.

OMB Circular A-102 generally defines and identifies legitimate "match" for Federal grant projects. In general, reference should be made to that document. However, the section has been expanded in response to some specific and frequent questions.

Two comments stressed the need for increased availability of research funds to adequately utilize the potential of estuarine sanctuaries. While not an appropriate function of the estuarine sanctuary program, the Office of Coastal Zone Management is discussing the necessity of adequate funding with appropriate agencies.

One comment suggested that the term "legal description" of the sanctuary (§ 921.11(a)) is not appropriate for all categories of information requested. The word "legal" has been omitted.

Three reviewers indicated that the Act provides no basis for consideration of socio-economic impacts (§ 921.11(i)) and that this criterion seemed inappropriate to selecting estuarine sanctuaries. Apparently these reviewers misunderstood the intention of this requirement. The information in this section is necessary for preparation of an environmental impact statement which will be prepared pursuant to NEPA. Although required in the application, such information is not a part of the selection criteria, which are addressed in Subpart C, § 921.20.

One similar comment was received with regard to consideration of existing and potential uses and conflicts (§ 921.11(h)). This item is also discussed under selection criteria (§ 921.20(h)). It is intended that this criterion will only be considered when choosing between two or more sanctuary applications within the same biogeographic category which are of otherwise equal merit.

One comment drew attention to an apparent typographic error in § 921.11 (m) where the term "marine estuaries" seems out of context. This has been corrected.

Two commentators suggested that public hearings should be required in the development of an estuarine sanctuary application. Although such a hearing is deemed desirable by the Office of Coastal Zone Management, it would not always seem to be necessary. The language in § 920.11(l) has been changed to reflect the sincere concern for the adequate involvement of the public, which is also addressed under a new § 920.21.

One respondent suggested that a new section be added requiring the applicant to discuss alternative methods of acquisition or control of the area, including the designation of a marine sanctuary, in place of establishing an estuarine sanctuary. A new section (§ 920.11(n)) has been added for this purpose.

Section 921.12 *Subsequent Application for Development and Operation Grants.* Three commentators expressed concern that the intent of § 921.12 be more clearly expressed. Appropriate changes have been made.

One comment was made that a provision should be included to use existing Federally owned land for the purpose of the estuarine sanctuary program. A section has been added for that purpose.

Section 921.20 *Criteria for Selection.* One comment suggested that the consideration of conflict with existing or potential competing uses should not be included as a selection criterion. As discussed above, this criterion is considered appropriate.

Another reviewer suggested the addition of a new criterion, consideration of "the need to protect a particular estuary from harmful development." As discussed earlier, this criterion is not considered appropriate. Such a basis for determining selection would lead to a reactionary, random series of estuarine sanctuaries, rather than the rationally chosen representative series mandated in the legislative history.

Two reviewers commented that the limitation on the Federal share ($2,000,000 for each sanctuary) was too low and would severely restrict the usefulness of the program. However, this limitation is provided by the Act.

Another commentator suggested that § 921.20(g) was unnecessarily restrictive in that it might prevent selecting an estuarine sanctuary in an area adjacent to existing preserved lands where the conjunction might be mutually beneficial. The language of § 921.20(g) does not preclude such action, but has been changed to specifically permit this possibility.

Two commentators inquired whether the reference to a "draft" environmental impact statement (§ 921.20, last paragraph) indicated an intention to avoid further compliance with NEPA. It is the firm intention of the Office of Coastal Zone Management to fully comply in all respects with NEPA. The word "draft" has been struck.

Three reviewers addressed the problems of providing adequate public participation in the review and selection process. In addition to the change in § 920.11(1), a new section has been added to address this issue.

SUBPART D—OPERATION

Section 921.30 *General.* One commentator suggested that during contract negotiations, there should be a meeting between the applicant agency and proposed sanctuary management team, and representatives of the Office of Coastal Zone Management. The general provisions have been broadened to provide for this suggestion.

Two comments were submitted which urged that some discretion be exercised in the use and access to the sanctuary by scientists and students. Two other comments were received which requested specific protection for use by the general public. The guidelines have been changed to include these suggestions.

One comment was received suggesting language to clarify § 921.30(g). This was incorporated into the guidelines.

Two commentators expressed concern for enforcement capabilities and activities to ensure protection of the estuarine sanctuaries. A new section has been added which addresses this issue.

Finally, one suggestion was received that a vehicle for change in the management policy or research programs should be provided. A new section has been added for that purpose.

Accordingly, having considered the comments received and other relevant information, the Secretary concludes by adopting the final regulations describing the procedure for applications to receive estuarine sanctuary grants under section 312 of the Act, as modified and set forth below.

Effective date: June 3, 1974.

Dated: May 31, 1974.

ROBERT M. WHITE,
Administrator.

Subpart A—General

Sec.

921.1 Policy and objectives.
921.2 Definitions.
921.3 Objectives and implementation of the program.
921.4 Biogeographic classification.
921.5 Multiple use.
921.6 Relationship to other provisions of the Act and to marine sanctuaries.

Subpart B—Application for Grants

921.10 General.
921.11 Application for initial acquisition, development and operation grants.
921.12 Application for subsequent development and operation grants.
921.13 Federally owned lands.

Subpart C—Selection Criteria

921.20 Criteria for selection.
921.21 Public participation.

Subpart D—Operation

921.30 General.
921.31 Changes in the sanctuary boundary, management policy or research program.
921.32 Program review.

AUTHORITY: Sec. 312 of the Coastal Zone Management Act of 1972 (Pub. L. 92-583, 86 Stat. 1280).

Subpart A—General

§ 921.1 Policy and Objectives.

The estuarine sanctuaries program will provide grants to States on a matching basis to acquire, develop and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time the ecological relationships within the area. The purpose of these guidelines is to establish the rules and regulations for implementation of the program.

§ 921.2 Definitions.

(a) In addition to the definitions found in the Act and in the regulations dealing with Coastal Zone Management Program Development Grants published November 29, 1973 (Part 920 of this chapter) the term "estuarine sanctuary" as defined in the Act, means a research area which may include any part or all of an estuary, adjoining transitional areas, and adjacent uplands, constituting to the extent feasible a natural unit, set aside to provide scientists and students the opportunity to examine over a period of time the ecological relationships within the area.

(b) For the purposes of this section, "estuary" means that part of a river or stream or other body of water having unimpared connection with the open sea where the seawater is measurably diluted with freshwater derived from land drainage. The term includes estuary-type areas of the Great Lakes as well as lagoons in more arid coastal regions.

(c) The term "multiple use" as used in this section shall mean the simultaneous utilization of an area or resource for a variety of compatible purposes or to provide more than one benefit. The term implies the long-term, continued uses of such resources in such a fashion that other uses will not interfere with, diminish or prevent the primary purpose, which is the long-term protection of the area for scientific and educational use.

§ 921.3 Objectives and implementation of the program.

(a) General. The purpose of the estuarine sanctuaries program is to create natural field laboratories in which to gather data and make studies of the natural and human processes occurring within the estuaries of the coastal zone. This shall be accomplished by the establishment of a series of estuarine sanctuaries which will be designated so that at least one representative of each type of estuarine ecosystem will endure into the future for scientific and educational purposes. The primary use of estuarine sanctuaries shall be for research and educational purposes, especially to provide some of the information essential to coastal zone management decision-making. Specific examples of such purposes and uses include but are not limited to:

(1) To gain a thorough understanding of the ecological relationships within the estuarine environment.

(2) To make baseline ecological measurements.

(3) To monitor significant or vital changes in the estuarine environment.

(4) To assess the effects of man's stresses on the ecosystem and to forecast and mitigate possible deterioration from human activities.

(5) To provide a vehicle for increasing public knowledge and awareness of the complex nature of estuarine systems, their values and benefits to man and nature, and the problems which confront them.

(b) The emphasis within the program will be on the designation as estuarine sanctuaries of areas which will serve as natural field laboratories for studies and investigations over an extended period. The area chosen as an estuarine sanctuary shall, to the extent feasible, include water and land masses constituting a natural ecological unit.

(c) In order that the estuarine sanctuary will be available for future studies, research involving the destruction of any portion of an estuarine sanctuary which would permanently alter the nature of the ecosystem shall not normally be

permitted. In the unusual circumstances where permitted, manipulative field research shall be carefully controlled. No experiment which involves manipulative research shall be initiated until the termination date is specified and evidence given that the environment will be returned to its condition which existed prior to the experiment.

(d) It is anticipated that most of the areas selected as sanctuaries will be relatively undisturbed by human activities at the time of acquisition. Therefore, most of the areas selected will be areas with a minimum of development, industry or habitation.

(e) If sufficient permanence and control by the State can be assured, the acquisition of a sanctuary may involve less than the acquisition of a fee simple interest. Such interest may be, for example, the acquisition of a conservation easement, "development rights", or other partial interest sufficient to assure the protection of the natural system. Leasing, which would not assure permanent protection of the system, would not be an acceptable alternative.

§ 921.4 Biogeographic classification.

(a) It is intended that estuarine sanctuaries should not be chosen at random, but should reflect regional differentiation and a variety of ecosystems so as to cover all significant variations. To ensure adequate representation of all estuarine types reflecting regional differentiation and a variety of ecosystems, selections will be made by the Secretary from the following biogeographic classifications:

1. *Arcadian.* Northeast Atlantic coast south to Cape Cod, glaciated shoreline subject to winter icing; well developed algal flora; boreal biota.

2. *Virginian.* Middle Atlantic coast from Cape Cod to Cape Hatteras; lowland streams, coastal marshes and muddy bottoms; characteristics transitional between 1 and 3; biota primarily temperate with some boreal representatives.

3. *Carolinian.* South Atlantic coast, from Cape Hatteras to Cape Kennedy; extensive marshes and swamps; waters turbid and productive; biota temperate with seasonal tropical elements.

4. *West Indian.* South Florida coast from Cape Kennedy to Cedar Key; and Caribbean Islands; shoreland low-lying limestone; calcareous sands, marls and coral reefs; coastal marshes and mangroves; tropical biota.

5. *Louisianian.* Northern Gulf of Mexico, from Cedar Key to Mexico; characteristics of 3, with components of 4; strongly influenced by terrigenous factors; biota primarily temperate.

6. *Californian.* South Pacific coast from Mexico to Cape Mendocino; shoreland influenced by coastal mountains; rocky coasts with reduced fresh-water runoff; general absence of marshes and swamps; biota temperate.

7. *Columbian.* North Pacific coast from Cape Mendocino to Canada; mountainsous shoreland; rocky coasts; extensive algal communities; biota primarily temperate with some boreal.

8. *Fiords.* South coast Alaska and Aleutians; precipitous mountains; deep estuaries, some with glaciers; shoreline heavily indented and subject to winter icing; biota boreal to sub-Arctic.

9. *Subarctic.* West and north coasts of Alaska; ice stressed coasts; biota Arctic and sub-Arctic.

10. *Insular.* Larger islands, sometimes with precipitous mountains; considerable wave action; frequently with endemic species; larger island groups primarily with tropical biota.

11. *Great Lakes.* Great Lakes of North America; bluff-dune or rocky, glaciated shoreline; limited wetlands; freshwater only; biota a mixture of boreal and temperate species with anadromous species and some marine invaders.

(b) Various sub-categories will be developed and utilized as appropriate.

§ 921.5 Multiple use.

(a) While the primary purpose of estuarine sanctuaries is to provide long-term protection for natural areas so that they may be used for scientific and educational purposes, multiple use of estuarine sanctuaries will be encouraged to the extent that such use is compatible with this primary sanctuary purpose. The capacity of a given sanctuary to accommodate additional uses, and the kinds and intensity of such use, will be determined on a case by case basis. While it is anticipated that compatible uses may generally include activities such as low intensity recreation, fishing, hunting, and wildlife observation, it is recognized that the exclusive use of an area for scientific or educational purposes may provide the optimum benefit to coastal zone management and resource use and may on occasion be necessary.

(b) There shall be no effort to balance or optimize uses of an estuarine sanctuary on economic or other bases. All additional uses of the sanctuary are clearly secondary to the primary purpose and uses, which are long-term maintenance of the ecosystem for scientific and educational uses. Non-compatible uses, including those uses which would cause significant short or long-term ecological change or would otherwise detract from or restrict the use of the sanctuary as a natural field laboratory, will be prohibited.

§ 921.6 Relationship to other provisions of the act and to marine sanctuaries.

(a) The estuarine sanctuary program must interact with the overall coastal zone management program in two ways: (1) the intended research use of the sanctuary should provide relevant data and conclusions of assistance to coastal zone management decision-making, and (2) when developed, the State's coastal zone management program must recognize and be designed to protect the estuarine sanctuary; appropriate land and water use regulations and planning considerations must apply to adjacent lands. Although estuarine sanctuaries should be incorporated into the State coastal zone management program, their designation need not await the development and approval of the management program where operation of the estuarine sanctuary would aid in the development of a program.

(b) The estuarine sanctuaries program will be conducted in close cooperation with the marine sanctuaries program (Title III of the Marine Protection, Research Act of 1972, Pub. L. 92-532, which is also administered by the Office of Coastal Zone Management, NOAA), which recognizes that certain areas of the ocean waters, as far seaward as the outer edge of the Continental Shelf, or other coastal waters where the tide ebbs and flows, or of the Great Lakes and their connecting waters, need to be preserved or restored for their conservation, recreational, ecologic or esthetic values. It is anticipated that the Secretary on occasion may establish marine sanctuaries to complement the designation by States of estuarine sanctuaries, where this may be mutually beneficial.

Subpart B—Application for Grants

§ 921.10 General.

Section 312 authorizes Federal grants to coastal States so that the States may establish sanctuaries according to regulations promulgated by the Secretary. Coastal States may file applications for grants with the Director, Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Rockville, Maryland 20852. That agency which has been certified to the Office of Coastal Zone Management as the entity responsible for administration of the State coastal zone management program may either submit an application directly, or must endorse and approve applications submitted by other agencies within the State.

§ 921.11 Application for initial acquisition, development and operation grants.

(a) Grants may be awarded on a matching basis to cover the costs of acquisition, development and operation of estuarine sanctuaries. States may use donations of land or money to satisfy all or part of the matching cost requirements.

(b) In general, lands acquired pursuant to this section, including State owned lands but not State owned submerged lands or bay bottoms, that occur within the proposed sanctuary boundary are legitimate costs and their fair market value may be included as match. However, the value of lands donated to or by the State for inclusion in the sanctuary may only be used to match other costs of land acquisition. In the event that lands already exist in a protected status, their value cannot be used as match for sanctuary development and operation grants, which will require their own matching funds.

(c) Development and operation costs may include the administrative expenses necessary to monitor the sanctuary, to ensure its continued viability and to protect the integrity of the ecosystem. Research will not normally be funded by Section 312 grants. It is anticipated that other sources of Federal, State and

private funds will be available for research in estuarine sanctuaries.

(d) Initial applications should contain the following information:

(1) Description of the proposed sanctuary include location, boundaries, size and cost of acquisition, operation and development. A map should be included, as well as an aerial photograph, if available.

(2) Classification of the proposed sanctuary according to the biogeographic scheme set forth in § 921.4.

(3) Description of the major physical, geographic and biological characteristics and resources of the proposed sanctuary.

(4) Identification of ownership patterns; proportion of land already in the public domain.

(5) Description of intended research uses, potential research organizations or agencies and benefits to the overall coastal zone management program.

(6) Demonstration of necessary authority to acquire or control and manage the sanctuary.

(7) Description of proposed management techniques, including the management agency, principles and proposed budget including both State and Federal shares.

(8) Description of existing and potential uses of and conflicts within the area if it were not declared an estuarine sanctuary; potential use, use restrictions and conflicts if the sanctuary is established.

(i) Assessment of the environmental and socio-economic impacts of declaring the area an estuarine sanctuary, including the economic impact of such a designation on the surrounding community and its tax base.

(9) Description of planned or anticipated land and water use and controls for contiguous lands surrounding the proposed sanctuary (including if appropriate an analysis of the desirability of creating a marine sanctuary in adjacent areas).

(10) List of protected sites, either within the estuarine sanctuaries program or within other Federal, State or private programs, which are located in the same regional or biogeographic classification.

(i) It is essential that the opportunity be provided for public involvement and input in the development of the sanctuary proposal and application. Where the application is controversial or where controversial issues are addressed, the State should provide adequate means to ensure that all interested parties have the opportunity to present their views. This may be in the form of an adequately advertised public hearing.

(ii) During the development of an estuarine sanctuary application, all landowners within the proposed boundaries should be informed in writing of the proposed grant application.

(iii) The application should indicate the manner in which the State solicited the views of all interested parties prior to the actual submission of the application.

(e) In order to develop a truly representative scheme of estuarine sanctuaries, the States should attempt to coordinate their activities. This will help to minimize the possibility of similar estuarine types being proposed for designation in the same region. The application should indicate the extent to which neighboring States were consulted.

(f) Discussion, including cost and feasibility, of alternative methods for acquisition, control and protection of the area to provide similar uses. Use of the Marine Sanctuary authority and funds from the Land and Water Conservation Fund Act should be specifically addressed.

§ 921.12 Application for subsequent development and operation grants.

(a) Although the initial grant application for creation of an estuarine sanctuary should include initial development and operation costs, subsequent applications may be submitted following acquisition and establishment of an estuarine sanctuary for additional development and operation funds. As indicated in § 921.11, these costs may include administrative costs necessary to monitor the sanctuary and to protect the integrity of the ecosystem. Extensive management programs, capital expenses, or research will not normally be funded by section 312 grants.

(b) After the creation of an estuarine sanctuary established under this program, applications for such development and operation grants should include at least the following information:

(1) Identification of the boundary.

(2) Specifications of the management program, including managing agency and techniques.

(3) Detailed budget.

(4) Discussion of recent and projected use of the sanctuary.

(5) Perceived threats to the integrity of the sanctuary.

§ 921.13 Federally owned lands.

(a) Where Federally owned lands are a part of or adjacent to the area proposed for designation as an estuarine sanctuary, or where the control of land and water uses on such lands is necessary to protect the natural system within the sanctuary, the State should contact the Federal agency maintaining control of the land to request cooperation in providing coordinated management policies. Such lands and State request, and the Federal agency response, should be identified and conveyed to the Office of Coastal Zone Management.

(b) Where such proposed use or control of Federally owned lands would not conflict with the Federal use of their lands, such cooperation and coordination is encouraged to the maximum extent feasible.

(c) Section 312 grants may not be awarded to Federal agencies for creation of estuarine sanctuaries in Federally owned lands; however, a similar status may be provided on a voluntary basis for Federally owned lands under the provisions of the Federal Committee on Ecological Preserves program.

Subpart C—Selection Criteria

§ 921.20 Criteria for selection.

Applications for grants to establish estuarine sanctuaries will be reviewed and judged on criteria including:

(a) Benefit to the coastal zone management program. Applications should demonstrate the benefit of the proposal to the development or operations of the overall coastal zone management program, including how well the proposal fits into the national program of representative estuarine types; the national or regional benefits; and the usefulness in research.

(b) The ecological characteristics of the ecosystem, including its biological productivity, diversity and representativeness. Extent of alteration of the natural system, its ability to remain a viable and healthy system in view of the present and possible development of external stresses.

(c) Size and choice of boundaries. To the extent feasible, estuarine sanctuaries should approximate a natural ecological unit. The minimal acceptable size will vary greatly and will depend on the nature of the ecosystem.

(d) Cost. Although the Act limits the Federal share of the cost for each sanctuary to $2,000,000, it is anticipated that in practice the average grant will be substantially less than this.

(e) Enhancement of non-competitive uses.

(f) Proximity and access to existing research facilities.

(g) Availability of suitable alternative sites already protected which might be capable of providing the same use or benefit. Unnecessary duplication of existing activities under other programs should be avoided. However, estuarine sanctuaries might be established adjacent to existing preserved lands where mutual enhancement or benefit of each might occur.

(h) Conflict with existing or potential competing uses.

(i) Compatibility with existing or proposed land and water use in contiguous areas.

If the initial review demonstrates the feasibility of the application, an environmental impact statement will be prepared by the Office of Coastal Zone Management in accordance with the National Environmental Policy Act of 1969 and implementing CEQ guidelines.

§ 921.21 Public participation.

Public participation will be an essential factor in the selection of estuarine sanctuaries. In addition to the participation during the application development process (§ 921.11(e)), public participation will be ensured at the Federal level by the NEPA process and by public hearings where desirable subsequent to NEPA. Such public hearings shall be held by the Office of Coastal Zone Management in the area to be affected by the proposed sanctuary no sooner than 30 days after it issues a draft environmental impact

statement on the sanctuary proposal. It will be the responsibility of the Office of Coastal Zone Management, with the assistance of the applicant State, to issue adequate public notice of its intention to hold a public hearing. Such public notice shall be distributed widely, especially in the area of the proposed sanctuary; affected property owners and those agencies, organizations or individuals with an identified interest in the area or estuarine sanctuary program shall be notified of the public hearing. The public notice shall contain the name, address and phone number of the appropriate Federal and State officials to contact for additional information about the proposal.

Subpart D—Operation

§ 921.30 General.

Management of estuarine sanctuaries shall be the responsibility of the applicant State or its agent. However, the research uses and management program must be in conformance with these guidelines and regulations, and others implemented by the provisions of individual grants. It is suggested that prior to the grant award, representatives of the proposed sanctuary management team and the Office of Coastal Zone Management meet to discuss management policy and standards. It is anticipated that the grant provisions will vary with individual circumstances and will be mutually agreed to by the applicant and the granting agency. As a minimum, the grant document for each sanctuary shall:

(a) Define the intended research purposes of the estuarine sanctuary.

(b) Define permitted, compatible, restricted and prohibited uses of the sanctuary.

(c) Include a provision for monitoring the uses of the sanctuary, to ensure compliance with the intended uses.

(d) Ensure ready access to land use of the sanctuary by scientists, students and the general public as desirable and permissible for coordinated research and education uses, as well as for other compatible purposes.

(e) Ensure public availability and reasonable distribution of research results for timely use in the development of coastal zone management programs.

(f) Provide a basis for annual review of the status of the sanctuary, its value to the coastal zone program.

(g) Specify how the integrity of the system which the sanctuary represents will be maintained.

(h) Provide adequate authority and intent to enforce management policy and use restrictions.

§ 921.31 Changes in the sanctuary boundary, management policy or research program.

(a) The approved sanctuary boundaries; management policy, including permissible and prohibited uses; and research program may only be changed after public notice and the opportunity of public review and participation such as outlined in § 921.21.

(b) Individuals or organizations which are concerned about possible improper use or restriction of use of estuarine sanctuaries may petition the State management agency and the Office of Coastal Zone Management directly for review of the management program.

§ 921.32 Program review.

It is anticipated that reports will be required from the applicant State on a regular basis, no more frequently than annually, on the status of each estuarine sanctuary. The estuarine sanctuary program will be regularly reviewed to ensure that the objectives of the program are being met and that the program itself is scientifically sound. The key to the success of the estuarine sanctuaries program is to assure that the results of the studies and research conducted in these sanctuaries are available in a timely fashion so that the States can develop and administer land and water use programs for the coastal zone. Accordingly, all information and reports, including annual reports, relating to estuarine sanctuaries shall be part of the public record and available at all times for inspection by the public.

[FR Doc.74-12775 Filed 5-31-74;9:57 am]

federal register

FRIDAY, SEPTEMBER 9, 1977

PART IV

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

■

ESTUARINE SANCTUARY

Guidelines

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[15 CFR Part 921]

ESTUARINE SANCTUARY GUIDELINES

Policies and Procedures for Selection Acquisition and Management

AGENCY: National Oceanic and Atmospheric Administration, Department of Commerce.

ACTION: Proposed rule.

SUMMARY: This proposed rule will allow the National Oceanic and Atmospheric Administration to make a preliminary acquisition grant to a State to undertake a fair market value appraisal, and to develop a uniform relocation act plan, a detailed management plan and a research framework for a proposed estuarine sanctuary, developed pursuant to Section 315 of the Coastal Zone Management Act of 1972, as amended.

DATE: Comments must be received on or before October 1, 1977.

FOR FURTHER INFORMATION CONTACT:

Robert R. Kifer, Physical Scientist, Policy and Programs Development Office, Office of Coastal Zone Management, 3300 Whitehaven Parkway, Page One Building, Washington, D.C. 20235 (202–634–4241).

SUPPLEMENTARY INFORMATION: On June 4, 1974, The National Oceanic and Atmospheric Administration (NOAA) published 15 CFR Part 921 entitled, "Estuarine Sanctuary Guidelines" pursuant to then section 312 of the Coastal Zone Management Act of 1972, as amended, for the purpose of establishing policy and procedures for the selection, acquisition, and management of estuarine sanctuaries.

Under new subsection 315(1) of the Act, the Secretary of Commerce is authorized to make available to coastal States grants of up to 50 per centum of the cost of acquisition, development, and operation of estuarine sanctuaries. In general, subsection 315(1) provides that grants may be awarded to States on a matching basis to acquire, develop, and operate natural areas as estuarine sanctuaries in order that scientists and students may be provided the opportunity to examine over a period of time ecological relationships within the area. The purpose of these guidelines is to implement this program.

As a result of two years of program implementation, the regulations are proposed to be modified to specifically authorize the granting of acquisition money to States in two stages:

(i) An initial grant for such preliminary purposes, as surveying and assessing the land to be acquired, and the development of management procedures and research programs; and

(ii) A second grant for the actual acquisition of the land. The Federal share of the sum of the two grants shall not exceed 50 percent of the acquisition costs involved. Any State receiving an initial grant shall be obligated to repay it if, due to any fault of the State, the sanctuary is not established.

As a result of this new grant procedure, much more information relating to costs, values, management procedures, and research programs will be available at the time of the publication of a draft environmental impact statement. Proposals made public to date in the form of an Environmental Impact Statement (EIS) have been criticized for lack of specificity in these areas. By making a small preliminary acquisition grant to a State, the estuarine sanctuary proposal can be more fully developed and the public can become more aware of the costs and the exact nature of the long-term management.

In response to State questions about estuarine sanctuary research, the proposed regulations provide that such research can be funded if it can be shown to be related to program administration.

NOAA has reviewed these proposed regulations pursuant to the National Environmental Policy Act of 1969 and has determined that promulgation of these regulations will have no significant impact on the environment.

Compliance with Executive Order 11821. The economic and inflationary impact of these proposed regulations has been evaluated in accordance with OMB Circular A–107 and it has been determined that no major inflationary impact will result.

Dated: August 26, 1977.

T. P. GLEITER,
Assistant Administrator for Administration.

It is proposed to amend 15 CFR Part 921 as follows:

(1) By revising the table of contents and authority citation to read as follows:

Subpart A—General

Sec.
921.1 Policy and objectives.
921.2 Definitions.
921.3 Objectives and implementation of the program.
921.4 Biogeographic classification.
921.5 Multiple use.
921.6 Relationship to other provisions of the Act and to marine sanctuaries.

Subpart B—Application for Grants

921.10 General.
921.11 Application for preliminary acquisition grants.
921.12 Application for land acquisition grants.
921.13 Application for operational grants.
921.14 Federally-owned lands.

Subpart C—Selection Criteria

921.20 Criteria for selection.
921.21 Public participation.

Subpart D—Operation

921.30 General.
921.31 Changes in the sanctuary boundary, management policy, or research program.
921.32 Program review.

AUTHORITY: Sec. 315(1), Coastal Zone Management Act of 1972, as amended (90 Stat. 1030, (16 U.S.C. 1461) Pub. L. 94–370).

(2) By revising Subpart B—Application for Grants—as follows:

Subpart B—Application for Grants

§ 921.10 General.

Section 315 authorizes Federal grants to coastal States so that the States may establish sanctuaries according to regulations promulgated by the Secretary. Coastal States may file applications for grants with the Associate Administrator for Coastal Zone Management (OCZM), Office of Coastal Zone Management, Page 1, 3300 Whitehaven Parkway NW, Washington, D.C. 20235. That agency which has been certified to the Office of Coastal Zone Management as the entity responsible for administration of the State coastal zone management program may either submit an application directly, or must endorse and approve applications submitted by other agencies within the State.

§ 921.11 Application for preliminary acquisition grants.

(a) A grant may be awarded on a matching basis to cover costs necessary to preliminary actual acquisition of land. As match to the Federal grant, a State may use money, the cost of necessary services, the value of foregone revenue, and/or the value of land either already in its possession or acquired by the State specifically for use in the sanctuary. If the land to be used as match already is in the State's possession and is in a protected status, the State may use such land as match only to the extent of any revenue from the land foregone by the State in order to include it in the sanctuary. Application for a preliminary acquisition grant shall be made on form SF 424 application for Federal assistance (non-construction programs).

(b) A preliminary acquisition grant may be made for the defrayal of the cost of:

(1) An appraisal of the land, or of the value of any foregone use of the land, to be used in the sanctuary;

(2) The development of a Uniform Relocation Assistance and Real Property Acquisition Policies Act plan;

(3) The development of a sanctuary management plan;

(4) The development of a research and educational program; and/or,

(5) Such other activity of a preliminary nature as may be approved in writing by OCZM. Any grant made pursuant to this subsection shall be refunded by the State to whatever extent it has spent in relation to land not acquired for the sanctuary, and if OCZM requests such refund.

(c) The application should contain:

(1) Evidence that the State has conducted a scientific evaluation of its estuaries and selected one of those most representative.

(2) Description of the proposed sanctuary including location, proposed boundaries, and size. A map(s) should be included, as well as an aerial photograph if available.

(3) Classification of the proposed sanctuary according to the biogeographic scheme set forth in § 921.4.

(4) Description of the major physical, geographic, biological characteristics and resources of the proposed sanctuary.

(5) Demonstration of the necessary authority to acquire or control and manage the sanctuary.

(6) Description of existing and potential uses of, and conflicts within, the area if it were not declared an estuarine sanctuary; and potential use restriction and conflicts if the sanctuary is established.

(7) List of protected sites, either within the estuarine sanctuaries program or within other Federal, State, or private programs, which are located in the same region or biogeographic classification.

(8) The manner in which the State solicited the views of interested parties.

(9) In addition to the standard A–95 review procedures, the grant application should be sent to the State Historic Preservation Office for comment to insure compliance with section 106 of the National Preservation Act of 1966.

(d) In order to develop a truly representative scheme of estuarine sanctuaries, the States should coordinate their activities. This will help to minimize the possibility of similar estuarine types being proposed in the same region. The extent to which neighboring States were consulted should be indicated.

§ 921.12 Application for land acquisition grants.

(a) Acquisition grants will be made to acquire land and facilities for estuarine sanctuaries that have been thoroughly described in a preliminary acquisition grant application, or where equivalent information is available. Application for an acquisition grant shall be made on SF 424 application for Federal assistance (construction program).

In general, lands acquired pursuant to this subsection are legitimate costs and their fair market value, developed according to Federal appraisal standards, may be included as match. The value of lands donated to the State and cash donations may also be used as match. If the State already owns land which is to be used in the sanctuary, the value of any use of the land foregone by the State in order to include such land in the sanctuary, capitalized over the next 20 years, may be used by the State as match. The value of lands purchased by a State within the boundaries of proposed sanctuaries while an application for a preliminary acquisition grant or land acquisition grant is being considered may also be used as match.

(b) An acquisition application should contain the following information:

(1) Description of any changes in proposed sanctuary from that presented in the preliminary acquisition grant application. If such an application has not been made, then, information equivalent to that required in such a grant application should be provided.

(2) Identification of ownership patterns, proportions of land already in the public domain; fair market value appraisal and Uniform Relocation Act plan.

(3) Description of research programs, potential and committed research organizations or agencies, and benefits to the overall coastal zone management program.

(4) Description of proposed management techniques, including the management agency and proposed budget—including both State and Federal shares.

(5) Description of planned or anticipated land and water use and controls for contiguous lands surrounding the proposed sanctuary (including, if appropriate, an analysis of the desirability of creating a marine sanctuary in adjacent areas).

(6) Assessment of the environmental, and socio-economic impacts of declaring the area an estuarine sanctuary, including the economic impact on the surrounding community and its tax base.

(7) Discussion, including cost and feasibility of alternative methods for acquisition and protection of the area.

§ 921.13 Application for operation grants.

(a) Although an acquisition grant application for creation of an estuarine sanctuary should include initial operation costs, subsequent applications may be submitted following acquisition and establishment of an estuarine sanctuary for additional operational funds. As indicated in § 921.11, these costs may include administrative costs necessary to monitor the sanctuary and to protect the integrity of the ecosystem. Extensive management programs, capital expenses, or research will not normally be funded by section 315 grants.

(b) After the creation of an estuarine sanctuary established under this program, applications (Form SF 424) for Federal assistance (non-construction program), for such operational grants should include at least the following information:

(1) Identification of the boundary (map).

(2) Specifications of the research and management programs, including managing agency and techniques.

(3) Detailed budget.

(4) Discussion of recent and projected use of the sanctuary.

(5) Perceived threats to the integrity of the sanctuary.

§ 921.14 Federally-owned lands.

(a) Where Federally-owned lands are a part of or adjacent to the area proposed for designation as an estuarine sanctuary, or where the control of land and water uses on such lands is necessary to protect the natural system within the sanctuary, the State should contact the Federal agency maintaining control of the land to request cooperation in providing coordinated management policies. Such lands and State request, and the Federal agency response, should be identified and conveyed to the Office of Coastal Zone Management.

(b) Where such proposed use or control of Federally-owned lands would not conflict with the Federal use of their lands, such cooperation and coordination is encouraged to the maximum extent feasible.

(c) Section 315 grants may not be awarded to Federally-owned lands; however, a similar status may be provided on a voluntary basis for Federally-owned lands under the provisions of the Federal Committee on Ecological Perserves program.

§ 921.20 [Amended]

(4) Subpart C—Selection Criteria—is amended by changing the first sentence in § 921.20 to read: "Applications for preliminary acquisition or land acquisition grants to establish estuarine sanctuaries will be reviewed and judged on criteria including:"

(5) Section 921.21 is revised, as follows:

§ 921.21 Public participation.

(a) Public participation in the selection of an estuarine sanctuary is required. In the selection process, the selecting entity (see § 921.10) shall seek the views of possibly affected landowners, local governments, and Federal agencies, and shall seek the views of possibly interested other parties and organizations. The latter would include, but need not be limited to, private citizens and business, social, and environmental organizations in the area of the site being considered for selection. This solicitation of views may be accomplished by whatever means the selecting entity deems appropriate, but shall include at least one public hearing in the area. Notice of such hearing shall include information as to the time, place, and subject matter, and shall be published in the principal area media. The hearing shall be held no sooner than 15 days following the publication of notice.

(b) The Office of Coastal Zone Management (OCZM) shall prepare draft and final environmental impact statements pertaining to the site finally selected for the estuarine sanctuary following public participation in the selection of that site, and shall distribute these as appropriate. OCZM may hold a public hearing in the area of such site at which both the draft environmental impact statement (DEIS) and the merits of the site selection may be addressed by those in attendance. OCZM shall hold such a hearing if: (1) In its view, the DEIS is controversial, or (2) if there appears to be a need for further informing the public with regard to either the DEIS or one or more aspects of the site selected, or (3) if such a hearing is requested in writing (to either the selecting entity or (CZM) by an affected or interested party, or (4) for other good cause. If held, such hearing shall be held no sooner than 30 days following the issuance of the DEIS and no sooner than 15 days after appropriate notice of such hearing has been given in the area by OCZM with the assistance of the selecting entity.

[FR Doc.77-26193 Filed 9-8-77;8:45 am]

APPENDIX II

REVIEW DRAFT

APALACHICOLA SYMPOSIUM AND WORKSHOPS

Summary of Workshop and Recommendations for Boundaries, Resource Maintenance, and Research Needs for a Proposed Estuarine Sanctuary

A Report to:

The Florida Department of Environmental Regulation

The Office of Coastal Management, U.S. Department of Commerce

The Fish and Wildlife Service, U.S. Department of Interior

By:

The Conservation Foundation
Washington, D.C.

January 31, 1979

TABLE OF CONTENTS

SECTION I -	INTRODUCTION	1
II -	WORKSHOP METHODOLOGY	4
III -	CONCLUSIONS AND RECOMMENDATIONS	6
	Boundaries	6
	Resource Maintenance	10
	Research Program	20
IV -	PANEL REPORTS	23
	Boundaries	26
	Resource Maintenance	33
	Research Recommendations	48
V -	CONTRIBUTIONS FROM INTERESTED OBSERVERS	64
VI -	ATTENDEES	71

SECTION I - INTRODUCTION

This is a report of a Symposium and Workshops conducted by the Conservation Foundation in Tallahassee, Florida, October 17-19, 1978. The workshops examined a proposal by the Bureau of Coastal Zone Management of the State of Florida that an area around Apalachicola Bay be designated a National Estuarine Sanctuary (see Figure 1), providing funds for state acquisition of land and a structure for a research and educational program in this area.

The Symposium and Workshops brought together scientists who have conducted research in the area proposed for designation and other nationally recognized experts to:

--consider the ecological boundaries of the area proposed for sanctuary designation;

--seek consensus on the needs for resource maintenance in keeping with sanctuary status in view of the present ecological condition of the system and past impacts;

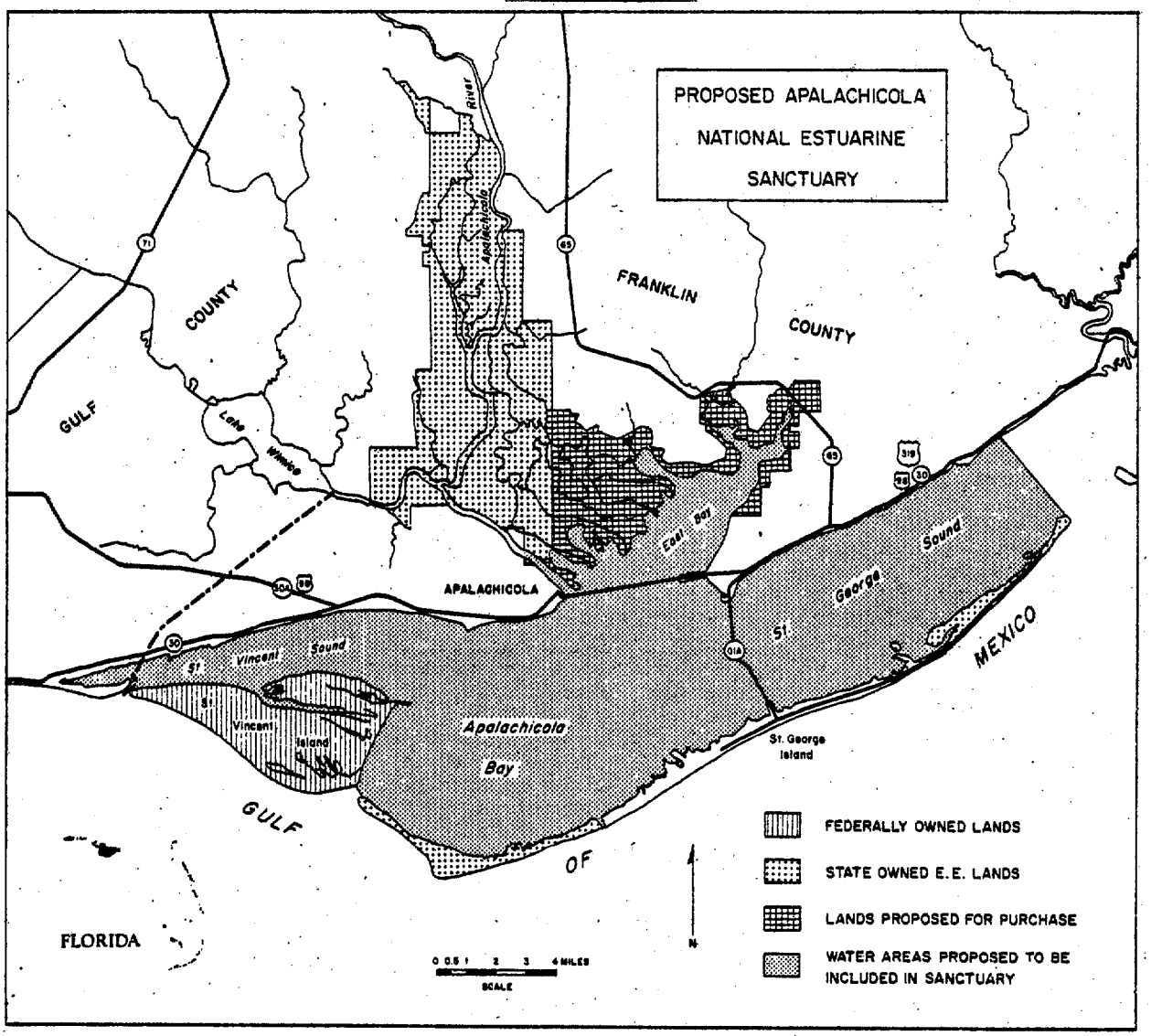
--seek a short term and long term research agenda.

The contribution of such a group of scientists was timely. This area includes large land areas currently managed under the Florida Environmentally Endangered Lands program. Much of the water area is designated as a state Aquatic Preserve. Sanctuary designation provides an opportunity for some additional land acquisition to protect the valuable estuary, and an opportunity to continue and expand a research program providing valuable lessons for the state and local fisheries and natural resource management. The sanctuary, owned and operated by the State would also provide an opportunity to coordinate interests in fisheries, ecological research, navigation and economic development with sound scientific information.

The federal Office of Coastal Zone Management (U.S. Department of Commerce) provides grants, on a matching basis, to states to enable them to acquire, develop and operate "National Estuarine Sanctuaries," or natural areas for research and educational purposes. Only 18 to 22 will be created nationwide. Once established the states operate these areas to study "the natural and human processes occurring within the estuaries of the coastal zone." The proposed Apalachicola research area would not interfere with the "multiple" uses--fishing, navigation, recreation--that the area is now subject to unless they significantly degrade the Bay's natural resources.

Because the multiple use of this area is essential to state and local support for the proposed research area, a meeting of the scientists most likely to conduct research in the area, along with nationally recognized experts on ecosystem function was an important prerequisite to finalizing the sanctuary proposal. Along with preliminary land evaluation for acquisition, and discussions of potential management structures, these scientists had a key contribution to make to the formulation of this sanctuary proposal. The scientists were asked to evaluate ecological boundaries, ecosystem condition, resource

Figure One



The total land area of the proposed sanctuary is about 44,000 acres

. . .water areas include Apalachicola Bay, St. George and St. Vincent sounds

maintenance, and a research agenda to provide guidance to the state and local interests as a more formal proposal was developed.

The materials that follow describe the methodology used for the Symposium and Workshops, The Conservation Foundation's Conclusions and Recommendations, detailed recommendations from the scientific workshops, contributions from interested observers, and a list of attendees, all of whom requested that they be included in future discussions and deliberations regarding this proposal. These materials are necessarily preliminary. They are written from the perspective of a scientist concerned with the definition and conservation of an economically valuable and productive ecosystem. We hope that, together with the technical contributions of the land acquisition and management agencies, and management recommendations from the state and local governments involved, they will provide the raw material for a well informed evaluation of a formal proposal for Sanctuary designation.

II - WORKSHOP METHODOLOGY

The Foundation has developed a method of fusing broadly based scientific knowledge with resource management initiatives that is particularly suited for considering the Apalachicola Bay ecosystem as an estuarine sanctuary. This "Coordinate Planning System" utilizes a process for reaching an informed scientific consensus on the resource management needs of an ecosystem and the consequences of failure to meet those needs. The consensus does not produce a set of regulatory requirements to which public policy must somehow adapt itself; rather, it provides scientifically based standards of ecosystem tolerances--a series of measuring sticks--for policy makers to use in weighing and balancing levels and types of resource use and resource impact.

For the Apalachicola, the Foundation invited nationally recognized experts on living resources, critical habitats, system dynamics, physical processes, and socio-economic concerns. Each of these panel chairmen oversaw a workshop session which consisted of the scientists that the Foundation had been able to identify as active in research on the Apalachicola River and Bay in these panel areas.

The resulting panels varied in size from five to ten members. In addition, other individuals from the interested public attending the general sessions also made valuable contributions to the workshops. But the primary purpose of the workshop sessions was to assemble experienced individuals and nationally recognized experts for a critical dialog focusing on the Sanctuary proposal.

The workshop process included five structured phases: 1) preparation, 2) indoctrination, 3) interaction, 4) summarization, and 5) review. A brief explanation of each phase is provided in the following overview.

Preparation of the participants for the Symposium and Workshop was accomplished through a telephone introduction followed by correspondence setting forth the purposes and terms of the event. Background papers on the Apalachicola ecosystem were also transmitted. Workshop participants were chosen largely because of their knowledge of the ecosystem although a few were chosen because of their expertise in the general subjects to be discussed. To guarantee the maximum in objectivity, the six panel chairmen were chosen on the basis of their not having been significantly involved with the area previously.

Indoctrination of the workshop participants occurred during a one half day general Symposium session that immediately preceded the workshops (the morning of October 17). This session was attended by local state and Federal officials, special interest representatives, and citizens as well as the scientists and other technical experts who would participate in the workshops. Purposes and goals for the workshops were elaborated and the work process explained. The mission of the participants was outlined and their responsibility narrowed to technical matters.

Interaction occurred in six separate concurrent panel sessions that lasted for 1-1/2 days each (the afternoon of October 17 and a full day on October 18). Each panel was comprised of a core group of participants who were accountable for the conclusions and a number of observers who assisted the panels as needed. The discussions were conducted in typical academic fashion by the chairmen using no formal decision process but rather depending upon the building of general consensus. A taped record was maintained by the reporter for each panel.

Summarization began on the second day of the workshops with an incremental reporting schedule for each of the three major outputs: 1) boundaries of the Sanctuary, 2) resource maintenance requirements, and 3) future research needs. Integration of the panels was maintained by informal cross-panel interaction during the sessions and by a final meeting of panel chairman to jointly consider major conclusions and recommendations and to resolve any important differences. Verbal reports were given to a final session of the Symposium (morning of October 19) by the general chairman and each of the panel chairman.

Review by the participants of the panel outputs and the integrated conclusions and recommendations was provided as follows: first, by review of the written panel draft reports produced by the workshops; second, by the verbal reviews at the final Symposium session; and third, by circulating copies of the draft comprehensive report following the workshops.

SECTION III - CONCLUSIONS AND RECOMMENDATIONS

This section presents the summary of conclusions and recommendations prepared by the Conservation Foundation for the Symposium sponsors--the Bureau of Coastal Zone Management of the Florida Department of Environmental Regulation, the Office of Coastal Zone Management of the U.S. Department of Commerce, and the U.S. Fish and Wildlife Service. It is based principally upon the Panel Reports and the discussions at the Plenary Sessions (a verbatim transcript is on file) but also has relied to a degree on the detailed panel discussions (a taped transcript is on file). Where the Conservation Foundation has rendered its own opinions or judgments these are noted as such in the text.

The Conservation Foundation and the Symposium participants were charged with the following major tasks by the sponsors:

(1) Recommend boundaries for the proposed Apalachicola National Estuarine Sanctuary;

(2) Identify management needs for resource maintenance; and

(3) Suggest important short and long-term research needs associated with the Sanctuary program.

A review of the results of each task is given in the following pages. The complete panel summary reports on each task are given in Section IV.

In general, the Lower River and Bay ecosystems are believed to be in good health, and management should be aimed primarily at maintaining the resources at present levels. This means that the present mix of uses of the Bay should not be augmented with new uses that are potentially damaging or that would compromise the health of the sanctuary or its natural resource base. This management can be achieved for the most part, with present authorities, and no new regulations would be needed. While some restoration activity is most desirable, it is the opinion of the Conservation Foundation that:

> The basic theme for the sanctuary should be maintaining the ecologic status quo in the face of any new development pressures.

BOUNDARIES

Selection of the boundaries for the Apalachicola National Estuarine Sanctuary must incorporate a great variety of technical and general considerations. The task assigned to the Symposium was to consider and recommend boundaries which would to the best extent possible encompass a complete functional ecosystem. Yet the scientific participants were at the same time constrained to include practical limitations in their deliberations such as the present extent of public ownership in the area under consideration.

In considering the subject of boundaries the Symposium participants had available the state recommendation, as contained in the preliminary application

to the federal Office of Coastal Zone Management along with some written comments from agencies. From this starting point the six panels considered any modifications that might be advisable and other alternative locations. Interactions between the panels occurred during the course of the Workshops. In addition, a special review and coordination session of panel chairmen was held after the panel sessions were adjourned. Consensus was achieved on all boundary matters except that one panel maintained an independent opinion on the eastward boundary of the Sanctuary.

Certain requirements for national estuarine sanctuaries affect boundary selection. For example, an estuarine sanctuary "...shall, to the extent feasible, include water and land masses constituting a natural ecological unit." For another, "Estuarine sanctuaries might be established adjacent to existing preserved lands where mutual enhancement or benefit of each might occur." The panels considered these requirements as well as the stated educational and research purposes of the sanctuary program before making their recommendations. It is the opinion of the Conservation Foundation that:

> The proposed sanctuary must embrace a complete ecosystem to accomplish its purpose.

The Sanctuary proposed by the state was to be representative of the "Louisianian" ecological province. In the opinion of the Conservation Foundation, the Apalachicola site is clearly representative of this province and to our knowledge Florida is the only state to propose a "Louisianian" sanctuary. No other options were suggested by the panels as equal to the Apalachicola ecosystem. One suggestion brought to our attention after the close of the Symposium (see Section V) was seriously considered but judged not to be of sufficient merit to reinstitute the Symposium for review. This proposal was for designation of an open water area lying along the coast from Cedar Key to Apalachee Bay. This proposed alternative area is fed by several small rivers and the Suwanee River which originates in Georgia's Okeefenokee Swamp. While this area has significant value, and fresh and salt water mixing with characteristics of an estuary, it is more properly a series of very small estuaries, and not a single ecosystem of major importance, and therefore, does not qualify. Nor does it have the extensive, coherent body of research data upon which to base an educational or research program. It would seem to have merit as a Marine Sanctuary, however, which is authorized under another federal program. In conclusion, it is the opinion of the Conservation Foundation that:

> The Apalachicola ecosystem is the best choice for a Louisianan province representative of the National Estuarine Sanctuary system.

Accordingly, the remainder of this section is focused on detailing the boundaries for this ecosystem that would be most appropriate for an estuarine sanctuary.

To embrace the essential influences on the sanctuary ecosystem it is apparent that the sources of its water supply must be addressed in the formulation of boundaries. The panels were unanimous that the Apalachicola River was a primary influence. It was also evident that water exchange with the Gulf of Mexico was a primary influence. Therefore, these two water sources must be accounted for in considering sanctuary boundaries. There was general agreement that the primary sanctuary boundaries should be drawn around the

tidal part of the Bay, but that the water sources should be considered for a secondary management arrangement as areas of limited management concern. In consideration of these factors the Conservation Foundation recommends that:

> The State should designate the public lands and water areas, already largely devoted to public ownership and conservation management, as the sanctuary; and a second tier of lands and waters as an area of management concern because of potential impacts on the sanctuary, defined in terms of the floodplain and wetlands systems of the Apalachicola (for land) and in terms of the Apalachicola River's water supply or flow (for water).*

The first tier of lands would constitute the sanctuary for active management and research purposes. However, the second tier of lands and waters must be identified as an area of limited management concern because certain activities and alterations in this tier can significantly influence the sanctuary, and research and education in the sanctuary can provide valuable information to the public and private owners in the second tier. For instance, significant changes in the volume and periodicity of river flow could have a adverse effect on the productivity of marine resources in the Bay.

The proposed sanctuary lands and waters would constitute a "natural ecological unit", an ecosystem. As originally proposed by the state the sanctuary did not fully satisfy this principle. Specific additions recommended to embrace all major elements of the ecosystem include:

1) The public waters and wetlands transition zone of the Lake Wimico-Jackson River complex and its associated wetlands (as detailed in Section IV).

2) The Apalachicola River and its associated wetlands to the limit of tidal influence, approximately twenty miles north of the Bay.

3) All publicly owned lands lying adjacent to the Sanctuary.*

With these additions, the sanctuary would include all ecosystem components essential to an active ecosystems research and management agenda. The panels were particularly emphatic about the essential need to include Lake Wimico/Jackson River because: 1) it is an integral and exceptionally valuable part of the ecosystem providing key nursery habitat for fishes and crustaceans, and 2) a research program that concentrates on the circulation patterns of this Bay ecosystem and their relationships to marine productivity and navigation activities would omit key data if this area were not included.

The second tier of land and water should be reflected in the management concept for the sanctuary utilizing whatever management tools the state and local governments responsible for these areas find appropriate. The sanctuary managers would have only limited interest in these areas; for the most part, they should be expected to provide technical assistance for setting and evaluating standards and criteria used by other decision-makers. As an independent research-oriented voice with some local ties, the sanctuary is expected to be both

---

*This would not change any part of the federal Management Status of St. Vincent National Wildlife Refuge,an area excluded by law from the coastal zone, as defined in the Coastal Zone Management Act of 1972.

critic and aid in different decisions and on their own behalf to review development proposals in light of effects on the sanctuary. These areas would include:

1. The water flowing into Apalachicola Bay from Lake Seminole and the Flint-Chatahoochee River systems.

2. All non-public areas of the floodlands of the Apalachicola River. (floodable areas above the wetlands boundary).

3. Tate's Hell Swamp and other wetlands drainages of concern, such as Indian Swamp.

4. The non-public areas of the barrier islands that enclose the sanctuary on the south.

The sanctuary is influenced strongly by the fresh water inflow from tributaries, principally the Apalachicola River, and by oceanic influences, or the entry of ocean water into the Bay. Land runoff--the quantity and rate of flow of water from the floodplains of the Apalachicola--is equally important to the integrity of this ecosystem. Runoff into Lake Wimico from its adjacent lands and thence into the bay is of concern, because relatively little is known about its relationships to the Bay beyond evidence that the two are closely linked.

A suggestion by one panel to include an additional area above the proposed Environmentally Endangered Lands (EEL) purchase north of East Bay was not supported by any other panel. This area presently has a lower priority than proposed purchases but should be studied for possible future inclusion when funds become available for purchase of additions to the sanctuary.

A suggestion by one panel that the sanctuary be extended eastward to the eastern end of Dog Island was not supported by the other panels because water circulation data show a moderately weak water transport connection between the proposed additional area and the rest of the Sanctuary.

Suggestions made by some panels to include in the sanctuary the entire barrier islands enclosing it to the south were made before the concept of a two-tier sanctuary was agreed upon later in the workshop. In this approach the sanctuary core does not include the whole of the islands, but only the public lands and waters. The non-public parts of the islands are, however, included in a second tier as areas of special management concern. Inlets would be included in the core sanctuary up to the normal high water mark or other boundary of public jurisdiction.

A third "second-tier" concern that must be addressed is the watershed and water flows of the Flint and Chatahootchee Rivers into Lake Seminole and over the Jim Woodruff Dam. Coordinating mechanisms will have to be arranged to ensure that the sanctuary is not degraded by inappropriate rates of flow or levels of water quality during seasonal high and low flow periods.

RESOURCE MAINTENANCE

If the sanctuary is to serve its educational and research purposes, its natural resource base must be maintained (at current levels or at higher levels if such a goal is possible through restoration programs). Certainly, the agencies responsible for the Apalachicola ecosystem have afforded increasing protection for its resources over recent years and thus conserved it in a state that makes it ideally suited for a National Estuarine Sanctuary. Yet, the point appears to have been reached where both the additional acquisitions possible for an approved sanctuary and the coordinative framework necessary for the management structure are needed to continue this level into the future. New pressures are being brought to bear on the system and its future can be made more secure by a coordinated program of resource maintenance.

Background

As things stand today, the natural resources of the Apalachicola ecosystem are in good shape and well suited for its proposed role as a sanctuary. It has been altered, certainly, but the panel discussions failed to reveal any other coastal ecosystem of this size along the Gulfshore that is in better shape.

The existing deep commitment to the conservation of the Apalachicola system means that in a very real sense the Apalachicola ecosystem is already approaching sanctuary status care. Particularly from the ecologist°s viewpoint, the ecosystem is receiving the special attention that enables its resources to flourish and to maintain the ecosystem and its biotic units at high levels. The participating scientists recognized a need to maintain a high level of habitat quality to support oysters, shrimp, blue crab, and other marine resources. The operating presumption of scientists studying bay resources is that the more natural the system is, the more productive it will be. It is our conclusion that there is an extraordinary opportunity for the state to obtain further recognition of this fact and to move the Apalachicola proposal forward through the National Estuarine Sanctuary program.

A National Estuarine Sanctuary in Apalachicola Bay could be in many respects a new type of venture in natural resource management by addressing the coordinated management of a whole ecosystem and incorporating the interest and initiative of local governments as well as the traditional state agencies and multi-state groups that become involved in these sorts of efforts.

The State°s initiative with a sanctuary program of research and education would complement the conservation agenda already set for lands proposed for sanctuary status through the State of Florida°s Environmentally Endangered Lands (EEL) program, and for the estuarine and marine resources managed by the state. In this respect, the sanctuary proposal augments and supplements with federal funds a program that already represents a multi-million dollar

commitment by the State. It would also enhance an extremely valuable fishery resource, benefiting the local economy, and through the research program, other areas of the state as well.

The items on the agenda addressed by the workshops are important and need public attention whether or not the formal sanctuary designation and the federal financial assistance to the state are obtained. The state's management needs for its EEL lands, its aquatic preserves program, and related fisheries, forestry, and water quality programs will continue undiminished.

This Estuarine sanctuary proposal must be distinguished from the federal Marine sanctuary program which is an aquatic "wilderness" program with no land acquisition, managed directly by the federal government. Though the two programs both refer to sanctuaries, the Estuarine sanctuary is a state management program for research and education.

It is the Conservation Foundation's belief that:

> The Apalachicola Sanctuary proposal advanced by the State illustrates the attractiveness of a formula for federal aid for land acquisition that depends on the state to formulate the management concept and the research program that will sustain it.

The Conservation Foundation developed the Apalachicola Symposium and Workshops to isolate questions of management structure for separate attention by the state. Nonetheless, in the opening plenary session, the scientists were introduced to many of the conservation management interests in state and local government. We assume a structure will evolve that will include those needed to make our recommendations for the sanctuary work. If one state agency has responsibility for purchasing land, that agency has an important role. If local governments set standards for new subdivisions on barrier islands, they also have an important role. We did not expect the sanctuary to change any management institutions rights and prerogatives except on terms of voluntary participation.

The Symposium's general sessions included ample evidence that relationships among state agencies and between state and local governments are complex in Florida. But the support and initiative generated by the existng ad hoc interagency committee convened by the Division of State Planning show that these problems can be overcome. The suggestion of the Symposium workshop session on socio-economic needs and impacts that "the Governor and Cabinet appoint an ad hoc committee for the purpose of developing recommendations for a specific management structure for the estuarine sanctuary which recognizes the unique social, economic, and environmental attributes of the River and Bay system" is the only comment regarding management structure to come from the Symposium.

In the summary that follows only the major components of a resource maintenance program are presented. Details are reported in panel summaries and are not repeated here. It should be noted that the following summary focuses on needs for maintaining the condition of the ecosystem and its resources rather than the administrative mechanisms for doing so, or on the socio-economic impacts.

The Sanctuary

The areas and resources proposed for inclusion within the sanctuary core are virtually all within the public domain (see Boundary section). Therefore, their conservation should involve primarily the coordination and improvement of existing agency programs. Some additional vigilance over sources of pollution originating outside the boundaries of the sanctuary core would also be desirable. In the opinion of The Conservation Foundation:

> The sanctuary management authority should be empowered to issue guidelines for sanctuary management and given authority to review development actions within the sanctuary for conformance to the guidelines.

The panels considered many of the activities that could interfere with resource maintenance in the sanctuary and abort its educational and scientific purposes. These are summarized below and presented in some detail in Section IV of this report.

Dredging and spoil disposal was a subject of considerable panel discussion. Basically, the scientists recognized that spoil is going to be created in the Bay and it must be put some place. They suggested that creative use be made of the spoil; for example, island refuge for birds, spoil breakwaters, or other engineered structures. Often problems created by navigation or fishing boat operations can be solved by the creative use of spoil through building breakwaters or creating other engineered structures. But caution was urged in designing and constructing such structures to avoid pollution or interference with circulation of water in the Bay. Because water circulation is considered a prime factor in resource maintenance, projects that significantly change circulation should be considered potentially deleterious and be given scrutiny by the sanctuary management authority. Of particular concern are channel deepening, constructing berms, or inlet alteration. All such projects should be included in the guidelines reviewed by the sanctuary management authority.

The Area of Special Management Concern

The panels reached a strong opinion on the subject of fresh water supply. They were virtually unanimous in their agreement that the Apalachicola River (along with some other sources of fresh water) held the key to the maintenance of the resources of the proposed Sanctuary through control of salinity, nutrients, circulation, and other primary determinants of seafood productivity. Many panelists would agree to limiting the size of the sanctuary only if an enforcable means could be identified to ensure the quantity, quality, and normal rates of flow of fresh water to the proposed sanctuary. It is the opinion of the Conservation Foundation that:

> Significant man-induced changes in watershed drainage and river flow into the sanctuary must be included on both the research and management agenda of any proposed sanctuary authority.

While the Panels did not recommend an administrative mechanism for accomplishing this need for water inflow control because they were charged with technical matters, there was discussion of the subject. It seems clear that a system of monitoring certain types of activities in the watersheds and the river channels and making recommendations to relevant existing authorities would satisfy most concerns. Therefore, it is the opinion of the Conservation Foundation that:

> A mechanism should be established for review of major projects in the second tier, the watersheds and river channels of the Apalachicola.

This area includes the non public lands of the barrrier islands, floodplains, and critical drainage-connected swamplands, the river ways that drain into Apalachicola Bay and the watershed lands immediately adjacent to the Sanctuary and to these riverways (see Section Boundaries subsection for details).

Details on the fresh water supply issue are given in the Panel reports in Section IV. These views are summarized below.

River Flow and Channel Condition

The fresh water inflow from the tributaries, principally the Apalachicola River, is a driving force for the ecosystem. The state must recognize the important influence of these flows that enter the core area of the sanctuary and how significantly they control the ecosystem within the core of the sanctuary. This was summarized for the Symposium by Dr. Robert Livingston as follows:

"The dominant characteristic of this system is that it is a pulsed system. We have observed mean river flows and the range of flows over a period of more than four years. The tri-river system drains a piedmont area, with a different pattern of rainfall than in Florida.

"The river floods in the winter time. And this flood is not only seasonally periodic--it has a six- to eight-year period. This is very important. The Bay salinities are significantly affected by the changes in river flow. The river dominates the salinity structure of the Bay, and the salinity structure in turn dominates the structure of all of the natural communities in the system and the productivity of the system.

"We have also reviewed 50 years of river flow data, rainfall data from Columbus, Georgia to Apalachicola, Florida. We modeled it, using time series analysis. Every six to eight years there is a major peak in this river flow. When we looked at rainfall patterns in Florida, they showed a similar 6-8 year periodicity, but different from the river flow patterns because the Georgia rainfall pattern dominates the river flow. The rainfall in Apalachicola and the Florida Panhandle dominates how much actual overland flow there is.

"Because the rain falls heaviest in the summer in Florida, there is a two-barrel productivity cycle, when the nutrients come into the bay system once during the winter floods and then again during overflow periods in the summer. The natural communities follow a series of changes over these six to eight-year periods. The productivity of the system is determined by these flows and temperature, salinity, and various other water quality parameters.

"The food base depends on detritus and phytoplankton productivity. Both sediment and organic matter move through the system not only on a seasonal cycle but also on an annual cycle.

"The biological system actually is a disequilibrium system, a pulse system that depends on pulses in both water quality and productivity for its life. The organisms in the system are adapted to the pulsing. Oyster production, shrimp production, and blue crab production correlate with river fluctuations. It is therefore necessary to maintain the flow oscillations to perpetuate the system."

In summary, The Conservation Foundation recognizes that:

<u>It is necessary to retain the natural hydroperiod delivery schedules and flow rates into the Bay so that natural cycles are not diminished</u>.

The winding natural bed of the river is apparently optimal for maintaining the resources of the sanctuary. Additionally, it is optimal for maintaining the resources of the riverway because of the habitats provided.

The Conservation Foundation concludes that:

> The Apalachicola River, particularly, should not be engineered into an artificial system.

It would not fit with the sanctuary's purpose and would considerably reduce its resource benefits. But the legitimate needs for transportation can be met in the context of the needs for the Sanctuary if navigation improvement work is done thoughtfully. Ecological scientists working with engineers can develop creative projects to provide all needed transportation on the river without making it into an artificial waterway.

Water Quality. A review of Section IV will show that water quality is considered to be a primary matter for concern by the sanctuary authority. While it is recognized that the state has effective control programs, particular vigilance is needed. Maintaining the proper oxygen level is a key; temperature, salinity, and turbidity are also important. The suitability of water for the resources of the sanctuary is also important--it must be free of serious influences from toxic chemicals such as heavy metals or organic poisons. Serious problems can be expected from poorly managed sewage--pathogens, organic material that affects oxygen, and chemical residuals from chlorination. Industrial pollution must be closely controlled, particularly if the area becomes more heavily industrialized than it is now. The Sanctuary authority should be involved in developing guidelines and reviewing permits for potential polluting activities like acid drainage from forestry, agricultural drainage, dredge spoil disposal, sewage discharges.

Riverine Wetlands and Floodland. The maintenance of resources in the sanctuary requires the conservation of wetlands and floodlands along the riverways that discharge into it. Every effort should be made, on behalf of the sanctuary, to influence activities upstream toward maintaining these riparian resources in a natural condition. Wetlands protection is already appreciated and in force in the area but restoration of wetlands should be spurred. However, floodlands conservation needs improvement to control forest cutting, berming, draining, and so forth and to ensure that the organic product upon which the ecosystem depends--particularly the leaf litter supply--continues coming down to drive the basic food web of the bay. Therefore, there has to be very special concern given to the wetlands and flood plains. These could be accomplished by encouraging review of all major contemplated upriver projects by the Sanctuary authority.

Wetlands within the Sanctuary core were discussed by the panels; it was agreed that wetlands should be maintained as close to their present condition as possible--a straight preservation goal. This position can be summarized by saying that if wetlands must be used for some purpose,

the work should be done in such a way that:

The basic function should not be altered.

Opportunities to restore the ecosystem where it is significantly altered should also be part of the sanctuary program. Where alterations such as diking and pumping for drainage, agricultural purposes and so forth have had a negative effect, corrective efforts should be planned and implemented to restore them to their natural state.

Watersheds. Another factor of concern to the Sanctuary is land runoff--the quantity, quality, and rate of flow of water coming off the land into the river and into the sanctuary off the streets of towns, farm fields, and forests. The sanctuary should not be jeopardized by some change in the watershed that, for instance, introduces a lot of natural coliform into the system which could result in closure of the oyster beds which has happened in many other bays around the country. Organic, toxic, and pathogenic pollution from septic tank wastes is another strong concern.

Connected Drainage Areas. The Panels recommended and The Conservation Foundation agrees that:

Areas such as large swamps that lie outside the sanctuary core but discharge large amounts of water into the sanctuary should be addressed in the management and research program.

Of particular concern is the Tate's Hell Swamp Area because when it is disturbed during forest cutting it may discharge acid water in large quantities (during the runoff season) into East Bay and down into the Apalachicola Bay system. This discharge has a strong negative influence on the productivity of the Bay. Attention must be given to this problem and some way of addressing it should be arranged. No new regulatory initiatives are required; this could be done by requiring the Sanctuary management authority to review sufficient activities in the major feeder swamps of the Sanctuary core area.

This means serious attention must be given to any sources of contamination through flow of water from the land into the sanctuary. Not only from the landside areas but also from the barrier islands (as discussed in the following statements.). These matters can be resolved by providing a system of review by the Sanctuary authority of major alterations of the watersheds in the area of special management concern along the riverway, around the Bay, and on the islands.

The Barrier Islands. The barrier islands that enclose Appalachicola Bay are a part of, and unity with the estuarine system and should be included in the Sanctuary program. Many panelists simply believed that the islands should be included in the core of the Sanctuary, out to the low water line in the Gulf. But if that cannot be accommodated, at least they should be identified

as areas of special concern to the sanctuary. It was agreed in discussions of the islands that they form an essential and integral part of the sanctuary ecosystem because of the way they are situated in terms of biota, water exchange, physical structure, wetlands transition areas, and so forth. It was particularly emphasized that wastewater originating on the islands could contaminate the waters of the sanctuary to the extent that the oyster industry would be closed down as it has in so many parts of Florida. This was perceived as an immediate threat, not a vague threat. The only solution to the problem is some purview over private development of the islands through a system of review of subdivision and construction permits. Therefore, it is the opinion of the Conservation Foundation that:

> The private lands of the barrier islands surrounding the sanctuary core should be considered areas of of special concern.

Inlets. In addition to the upstream area of management concern, the sanctuary authority should have purview over alterations of the inlets through or between the islands. Maintaining the status quo is believed to be acceptable but it is believed that cuts in the islands should not be greatly enlarged nor should new channels be cut through. Altering the inlets may adversely alter the exchange with the Gulf Bay by altering the basic circulation of the bay changing the salinity, and introducing predators into the system. The Conservation Foundation recognizes that:

> The entry of massive amounts of oceanic water into this estuarine system can completely change its function and endanger the oysters and the balance of life in the system.

SUMMARY

In summary, The Conservation Foundation recommends that the following be given special attention by the state and local governments in framing the cooperative resource maintenance program for the proposed Apalachicola National Estuarine Sanctuary to preserve its present high value for research and education:

1) Appropriate control over dredging and spoil disposal to prevent impacts adverse to the sanctuary ecosystem and to gain any potential benefits from judicious placement of spoil.

2) Appropriate control over inlet dredging or new structures to prevent adverse impacts on the sanctuary ecosystem through alterations of circulation, salinity, or predator ingress.

3) Appropriate control over domestic waste to prevent the increase of human pathogen into the sanctuary ecosystem.

4) Appropriate controls of liquid waste effluent to prevent an increase in toxic, organic, or nutrient pollutants within the sanctuary ecosystem.

5) Appropriate controls of alterations in the watershed of the sanctuary ecosystem to prevent an increase in non-point source pollutants from

residential, agricultural, or forest cutting activities.

6) Vigilant protection of the wetlands of the sanctuary ecosystem and the Apalachicola River.

7) Identification of past damage to the sanctuary ecosystem and appropriate programs of restoration.

8) A system of review by the Sanctuary management authority of major projects in the Apalachicola River and watershed and feeder swamps to ensure that sanctuary needs are duly considered.

9) A program of continuous monitoring of development activities throughout the basin and impacts on physical, chemical, and biological functions of the ecosystem.

RESEARCH PROGRAM

The major research recommendations for the proposed sanctuary are covered in the six panel reports in Part IV. The Panels were not charged with prioritizing these recommendations because to do so which would have taken more time for discussion than was available. Nor did it seem advisable at this point to recommend a rigid schedule of research topics for the sanctuary to address.

The U.S. Geological Survey is undertaking a research program on the fresh water section of the Apalachicola River. Therefore, any research concerning the area of special management concern, Tier Two, in conjunction with the sanctuary should be coordinated with the U.S.G.S. to avoid overlap and to achieve the best program synchronization and data compatibility. The U.S.G.S. preliminary program includes flow rates, wetlands delineation, pesticides, dredging, spoil disposal, nutrients, oxygen, sediments, plankton, and effects of barge traffic.

In the sanctuary "Core Area", Tier I, a considerable amount of research has been done and further work must be closely related to the existing data base. It is recommended that augmenting and improving the existing program should have high priority. Continuous field data have been collected since 1972 on the interaction of various physico-chemical factors and leading biological components. The original research initiatives were related to the impact of pesticides and upland forestry operations on the Apalachicola estuary. These studies are now completed and have been expanded into a comprehensive analysis of the spatial and temporal variability of system functions, population and community response to habitat gradients (temperature, salinity, pH, dissolved oxygen, pollutants, etc), sources and direction of energy flow, trophic interrelationships, and the influence of feeding habits of key populations on community structure. There have been associated efforts to develop an integrated computer system for analysis of extensive multi-disciplinary data sets. In addition to various key physico-chemical functions, the field monitoring data include detritus-associated organisms, benthic macrophytes (sea-grass and algae), benthic infauna, and benthic epifauna (fishes and invertebrates). Cooperative research with other investigators in the primary study areas include analysis of microbiota, phytoplankton, and zooplankton.

Associated laboratory studies have included plant and animal bioassays, behavioral studies, and the development of microcosms (detritus-microbiota-macrobiota). Such laboratory efforts are directed at specific questions related to findings in the field program.

It is the opinion of the Conservation Foundation that: The research agenda for the Sanctuary should be recognized as meeting two clear and urgent needs: 1) research for immediate use in designing the program for the Sanctuary and 2) research to be incorporated into long term program of the sanctuary for providing a better understanding of Louisiana Province estuarine systems and their management needs. The latter of these was emphasized in the panel discussions.

The long term research recommendations of the panels are not readily summarized and integrated because they arose from a complex dialog and cannot easily be removed from their context. The reader is referred to the actual panel reports in Section IV for the details. The following ecological research needs highlighted the discussions:

1. Conduct ecological studies embracing the full range of river flows to relate major land use activities and water area projects to changes in biotic resources.

2. Conduct specific research projects to provide a basis for improved quantitative prediction of the abundance of species of fish, reptiles, and birds.

3. Collect sufficient data and develop methodology for systems analysis including: study of ecosystem elements, coupling of elements, and response of system to natural cycles and human perturbations.

4. Develop a computerized methodology for analyzing and predicting the hydrologic patterns of the ecosystem including: precipitation, ground and surface water flows, withdrawals, river flow, and transport of substances.

5. Accelerate research on the sources and cycling of nutrients in the ecosystem and the factors that provide high productivity.

6. Give high priority to identifying baseline conditions in the ecosystem.

7. Emphasize the following aspects of water quality research: the significance of suspended and deposited sediments; upstream and localized sources of toxicants, coliform bacteria, and exotic chemicals; and the impacts of septic tanks, dredging, and forestry activities.

8. Conduct comprehensive research on circulation of the bay and riverine system including such parameters as: waves, sediments, salinity, nutrients, detritus, mixing, stratification, transport, and effects of structures.

9. Assess fluctuations in freshwater inflow from Apalachicola River, Jackson Creek, Tate°s Swamp, and New River using long-term time-series data on flows, and interaction with productivity, and establish the role of short-term (annual) and long-term (cyclic 6-8 year) fluctuations in water flows on the nutrient, detritus, sediment influx and productivity of the system.

10. Assess the following geologic aspects: erosion rates within the sound, longshore sediment transport in the Gulf; and threshold values for significant bed load delivery of sediment through the river channel.

11. Identify the role of floodplain and wetland vegetation on the nutrient cycling (detritus may be generated and even absorbed in the floodplain vegetation).

In addition to ecological research, a number of socio-economic research needs were highlighted:

1. A study of economic alternatives for waterborne transportation of

commodities on the Apalachicola, Chattahoochee, and Flint Rivers.

2. Design methods (including but not limited to structural design, location and spacing) for land development with the Apalachicola River floodplain which will minimize adverse impacts on the Sanctuary.

3. Conduct archeological and historical surveys of the Sanctuary and surrounding areas.

4. Examine ways of enhancing the quality and marketability of fishery products from the Bay Area, the feasibility of large scale revitalization of old oyster beds, and enhanced production and marketing techniques and programs.

5. Conduct specific sociological investigations within and adjacent to the Sanctuary for use in the management decision-making process.

6. Evaluate current recreational uses of the Apalachicola River and Bay and the potential for additional recreational uses that would enhance the value of the resource system.

SECTION IV - PANEL REPORTS

This section presents the reports of the six individual panels prepared during the workshops on the second day of the Symposium. Except for editing they are presented in their original form in order to preserve their value as a record of the workshop. In order to facilitate their use, however, they have been divided into their three separate parts--boundaries, resource maintenance, and research recommendations--for presentation. In this way all the conclusions of the panels on boundaries will be found in one subsection, all those on resource maintenance in a second, and all those on research in a third. These brief reports represent the distillation of a full day's discussion by each of the panels (a taped transcript of the full discussion of each panel is on file). Panel membership was as follows:

Aquatic and Terrestrial Life (Panel One)

Panel Chairman

Hilburn O. Hillestad, Southern Wildlife Services, Inc.

Panel Members

Jim Barkuloo, U.S. Fish and Wildlife Service
David Cox, Florida Game and Freshwater Fish Commission
Brad Hartmann, Florida Game and Freshwater Fish Commission
R. W. Menzel, Florida State University
Michael J. Oesterling, Marine Advisory Program
William M. Beck, Florida A&M University
Charles Futch, Chief of Marine Resources, Florida DNR

Critical Habitats (Panel Two)

Panel Chairman

Rezneat Darnell, Texas A&M University

Panel Members

Andre Clewell, Florida State University

Pledger Moon, U.S. Fish and Wildlife Service
Hanley Smith, Waterways Experiment Station
Michael Brim, U.S. Fish and Wildlife Service
Elaine Runkle, Florida Department of Natural Resources
Charles Wharton, Georgia State University (emeritus)
Archie Carr, Florida Audubon Society

Physical Processes (Panel Three)

Panel Chairman

Jon Kusler, Environmental Law Institute

Panel Members

Ellison Madden, U.S. Fish and Wildlife Service
Dinesh Sharma, Environmental Consultant
Steve Graham, University of Florida
W.F. Tanner, Florida State University

Water Quality and Watersheds (Panel Four)

Panel Chairman

G. Fred Lee, Colorado State University

Panel Members

Jeffrey Lincer, Board of County Commissioners, Sarasota
Helen McAnich Leitman, Florida Department of Environmental Regulation
Wayne H. Smith, University of Florida
Steve Graham, University of Florida
Anne Jones, Colorado State University

System Dynamics (Panel Five)

Panel Chairman

Herbert Windom, Skidaway Institute of Oceanography

Panel Members

Robert Livingston, Florida State University
John M. Hill, Louisiana State University
D. Bruce Means, Tall Timbers Research Station
David C. White, Florida State University

Socio-Economic Effects (Panel Six)

Panel Chairman

Estus Whitfield, Florida Department of State Planning

Panel Members

Charles Rockwood, Florida State University
Walter Milon, University of Florida
Daniel T. Penton, Florida Department of Natural Resources
Steve Leitman, Florida Department of Environmental Regulation

BOUNDARIES

Panel One: Aquatic and Terrestrial Resources

The Panel having reviewed the State's proposal recommends three major additions to the proposed sanctuary (is is recognized that other panels may recommend additional areas). These additional areas are described as follows:

1) All barrier islands surrounding Apalachicola Bay including St. Vincent, Little St. George and St. George Islands;

2) The entire Lake Wimico/Jackson River, water body to the west, and

3) A definable ecological system southward of Graham and Doyle Creeks and above the lands proposed for purchase for the sanctuary north of East Bay.

These areas, if incorporated, into the proposed sanctuary will enhance the "functional" (i.e. ecosystem) definition of the estuary. The barrier islands should be included in the proposal as they constitute an extremely important ecological element.

Lake Wimico is an estuarine body and occurs to the west of the present boundaries. Lake Wimico, connected to the Bay system by Jackson River; contains most fishes common to the Bay proper. Lake Wimico is considered to be essential to a functional delimitation of the proposed sanctuary.

The inclusion and hence protection of an ecologically distinct unit (an "ecological island") occurring on the northeastern side of Apalachicola Bay and south of Doyle and Graham Creek is considered to be important in preserving the integrity of Apalachicola Bay System. The area is not completely developed at this time and hence retains many of its natural features. This would represent a northward expansion of the present limit of the sanctuary as proposed by the state.

The panel suggests all of these areas for inclusion since the areas provide essential transition habitat (i.e. ecotones) for numerous species of wildlife that interact between aquatic and terrestrial habitats. Examples include inland ponds, sloughs, and lakes which provide rookery sites for wading birds, terrestrial and marsh-island habitats for alligators, Clark's water snakes, diamondback terreapins; and sea turtle rests (on the barrier beaches and in the bay). Numerous other vertebrates, including shorebirds utilize the island/marsh/bay ecotone. Lake Wimico and the area south of Graham and Doyle Creeks provide similar habitat species interaction opportunities.

To include these additional areas the boundary would start on the west at Indian Pass on St. Vincent's island. It would then extend across St. Vincent's Island along the Gulf Mean High Water (MHW) line, cross West Pass, at its narrowest point, to Little St. George Island. The boundary would encompass all of Little St. George Island and St. George Island landward of the MHW line on the south side (i.e. Gulf of Mexico side). At the eastern end of St. George Island, the boundary would cross St. George Sound to the mainland and go west along the MHW line of the north shore of St. George Sound to Cat Point and north to include the proposed boundary of the future environmentally endangered lands (EEL) purchase. The boundary would follow the eastern bank of Whiskey George Creek to the point where Doyle Creek departs northwest. Then along the northeast shore of Doyle Creek to the point closest to Graham Creek. Then west along the north bank of Graham Creek to the state-owned EEL tract, and then to the Apalachicola River and along its east bank north to the Brickyard Cutoff. The boundary would then go northwest along the Brothers River to the EEL purchase and continue to the Jackson River and west to Lake Wimico, following its shoreline at the high water mark to include the entire water body. The Jackson River

would be included as well as the adjacent EEL purchase east to the Apalachicola River and along its west bank to the Bay. The boundary would then go west along the MHW line of the Bay around to Indian Pass. The intention is to include in the sanctuary all waters and other areas over which the state and federal governments now have or would have (through purchase) jurisdiction.

Panel Two: Critical Habitats

This panel finds the boundary as roughly specified in the state's proposal to include most of habitat critical to the estuarine and lower river water ecosystem. However, we note the following problems:

1. Delineation of the seaward boundary of system has not been specified and panel recommends extension to the MLW mark (Gulfside). This should be relatively simple for all the barrier islands except St. George. It is noted that St. George Island is already subject to private development. However, it is also noted that St. George is important in maintaining quality of Apalachicola Bay ecosystem. We recommend that however the boundary is resolved that the St. Goerge Island be managed in such a way as to minimize any damage to the Sanctuary's ecosystem. (For example, no further cuts should be made to the Gulf, and existing Sike's cut should not be deepened and no activities be permitted on the island which would materially alter natural circulation patterns of bay or add significant quantities of sediments to bay.)

2. The freshwater systems on the barrier islands are part (albeit small) of the freshwater input into the entire system. These freshwater perched aquifers, ponds, swamps, marshes and streamlets discharge generally into the bay. They, of themselves, are important and very fragile sub-ecosystems of the barrier islands. They are also directly important to the bay estuary system in general because they duplicate the larger fresh-to-salt water gradient of communities which the Apalachicola River and Bay form. The value of these smaller freshwater inputs to the larger Bay system is similar to that of the River-Bay input, providing as they do nursery ground and marsh habitats of their own to protect these water systems the barrier islands should be included in the sanctuary or secondary arrangements should be made to prevent adverse impacts from their alteration.

3. Lake Wimico is a critical nursery area for numerous estuarine species. It would be most desirable to include Lake Wimico and its water connection with the bay, including both banks of the Jackson River.

4. Prior to historic human alteration of the drainage basin the Apalachicola River normally overflowed across the lowland into Lake Wimico, a process which added considerable organic enrichment to this important nursery area.

It would be highly desirable to include this nursery area with suitable areas in the proposed sanctuary since it is an integral part of the nutritive sustenance of the system.

5. East Bay receives drainage from the Tate's Hell region which is strongly influenced by acid waters. Massive flow of acid waters into the system is clearly inimicable to its ecological health. It is recommended that either a portion of Tate's Hell section be included in the Sanctuary or that secondary arrangements be made to discourage significant drainage of acid swamp waters from this region into East Bay.

6. It is noted that a number of anadromous species of fishes which inhabit the bay carry out their spawning activities at various places in the upstream reaches of Apalachicola River, at least as far as Jim Woodruff dam. It would be highly desirable to include the river in the sanctuary itself in order to protect spawning and nursery areas of anadromous species (Atlantic sturgeon, several species of shad [Genus Alosa], striped bass [Genus Morone]). If this is not possible a secondary arrangement should be made to provide control over adverse impacts to natural spawning.

7. The primary source of food and nutrients for the entire Apalachicola Bay marine system is the upstream-derived nutrient and particulate detrital material derived from overflow sections of the Apalachicola River Basin (the floodlands). It is critical that this source of nutrient be maintained if the ecological health of estuary is to be preserved. Therefore the floodplains of the Apalachicola to Jim Woodruff Dam should be included in the sanctuary or the use of floodplain should be controlled through secondary arrangements in such a way as to maintain integrity of these processes.

8. The panel recognizes the existence in the upstream drainage basin of Apalachicola River system a number of unique habitats and species which are (a) endemic, (b) rare, (c) adjunct (not found locally for many miles). Recognition should be taken of importance of such areas in any overall management scheme for total area, even though they are not critical to estuarine system per se.

Panel Three: Ecosystem Dynamics

The boundary for the Apalachicola National Estuarine Sanctuary as proposed does not encompass the area which this panel feels is adequate to represent all important aspects of the ecosystem. Additional areas or arrangements are needed, some of which are being proposed by the other panels. We recommend for consideration the value of including the eastern part of St. George Sound adjacent to Dog Island along with the mouth of New River. It may be unnecessary to include the drainage

basin of this river since it is unlikely that perturbation here will have major impacts on the Apalachicola Bay system as a whole. It is also recommended that Tate's Hell Swamp be incorporated into the sanctuary, or otherwise addressed in the program, since runoff from this area has a major influence on ecosystem dynamics.

Panel Four: Water Quality and Watersheds

This panel wishes to recommend that the proposed sanctuary area be expanded to include the waters of Lake Wimico and Jackson River and include means of protection for the adjacent lands.

The sanctuary should extend upriver to the limit of tide to include those lands under jurisdiction of federal and state agencies. There should be coordination of land-use activity restrictions within the sanctuary and adjacent federally-controlled land.

There should be a detailed continuing inventory of activities occurring outside the sanctuary but within the basin (including Georgia and Alabama), which potentially affect water quality (such as pesticide and other toxic chemical transport, manufacture and use) in order to make arrangements for their control in the interest of the sanctuary. Monitoring programs established within the Sanctuary would assess the presence of contaminants and their potential significance and provide details for the effect of upstream controls. The panel places utmost importance on establishing a working relationship between Georgia, Alabama and Florida in maintaining (and where possible enhancing) the quality, quantity, and hydrologic characteristics of the water entering the sanctuary.

The reason for annexing through purchase already protected wetlands rather than giving priority to those under heavy development impact is questioned.

It is recommended that the entire St. George Island and other barrier islands be included within the sanctuary or controls on land use there otherwise addressed in the program.

An area of concern to participants was Tate's Hell Swamp.

Panel Five: Physical Processes

This panel feels that the proposed boundaries, with suggested modifications, are acceptable for the protection and management of the Estuarine Sanctuary. One modification would provide for the critical need to protect water supply to the sanctuary. Since the influence of fluctuations in water quantity and quality reaching the bay plays a most important role in the productivity of the estuary, and since most of this influence is generated outside the proposed sanctuary boundaries, it is recommended that some secondary mechanism be established to maintain the quantity and quality of flows and fluctuations within the larger watershed boundary.

The panel proposes that the primary sanctuary boundaries include all the area now proposed but embrace the barrier islands to the low tide line on the Gulf or provide a secondary mechanism to control development on the islands. There is need to include St. Vincent Island within the program framework if not within the Sanctuary itself. Additional areas that should be considered for inclusion in the primary sanctuary or secondary arrangements are Indian Swamp, Tate's Hell Swamp, Jackson River and Lake Wimico. A secondary boundary or the maintenance of the quantity and quality of flow reaching the Apalachicola Bay should be delineated and watershed boundaries defined as a specific area of influence under secondary management.

Panel Six: Socioeconomics

Based upon the information available to this panel the impact on the local tax base within the various areas proposed for the Sanctuary would not be significant to the Franklin County economy, and further given that sanctuary designation does not change the status of the area under state law there should be no economic impacts of including state-owned uplands with the proposed sanctuary ownership boundaries. Therefore, the proposal should not result in significant negative impacts on the Franklin County tax base of the economic potential of state owned uplands.

RESOURCE MAINTENANCE

Panel One: Aquatic and Terrestrial Resources

Circulation: Natural variations in riverflow cause variations in species composition and distribution within Apalachicola Bay. For example, during periods of years with high river discharge, oyster landings are lowest indicating low populations. Conversely, low river discharge may raise salinity sufficiently to cause oyster mortality either through decreased resistance to Labyrinthulamixa marina, or through increased predation by Thais or Menippe. Likewise, man-induced changes in the hydrographic regime can have similar effects. (check Latin spellings)

The man-induced changes that are most likely to occur are related to the requirement for access to fishery resources and to the historic water transportation corridor. Maintenance dredging and deposition of resulting spoil could have forseeable effects on the current patterns in the Bay. Density and/or temperature gradients in the water column could be altered, thereby changing circulation and resulting salinities. Creation of new spoil areas, or enlargement of existing areas would impose physical barriers with these potential effects. Additional local access channels could have similar consequences.

Very little data are available describing the circulation patterns of the Bay as they exist today. The panel notes some evidence of changes in salinity in the vicinity of Bob Sikes Cut, leading to changes in species diversity indices inside the Bay proper. Deepening the cut could amplify the salinity effects as a result of influx of denser Gulf waters into the Bay.

Current shellfish management practices in the Bay include planting of dead

shell to create new reefs, or rehabilitate old ones. Conservation of resources and the protection of nursery areas for mobile species will require better understanding of Bay circulation patterns and of the types of dredge spoil disposal that do not alter or significantly impact these areas.

Water Quality and Quantity: The proper quality and quantity of fresh and saltwater mixture is absolutely necessary for all life in the Apalachicola Bay estuary. While the quality and quantity affects the entire food web, emphasis is placed on those groups of crustacea, molluscs and fin fishes that are desirable and of economic importance.

This estuary is a very dynamic system, with frequent changes that affect the biota. The biota has, by necessity, a wide tolerance for these changes, but there exist definite limits to this tolerance. The key influences on the Apalachicola stem from the interaction of the Gulf of Mexico sea water and the inflowing Apalachicola River freshwater. Both of these water masses are subject to climatic fluctuations which may prove detrimental to the biota. There is no real control recommended of these changes when natural; they tend to be transitory and the desirable biota can recover. Man-induced fluctuations, however, are often not transitory and the desirable biota generally does not recover.

Of the desirable crustaceans, the penaeid shrimp and blue crabs are the most economically important in the Apalachicola Bay estuary. Both of these crustaceans are estuarine dependent and investigations have shown the Apalachicola Bay to be extremely important for the entire Gulf Coast of Florida. Recent investigations have shown that the region is a major spawning area for Blue Crabs of the middle and lower Gulf coast of Florida. The Bay serves as a nursery ground for juvenile blue crabs in large numbers and also supports a large commercial fishery for adults.

Several species of shrimp use the Bay as a nursery area and research in both

Louisiana and Texas has shown that during periods of drought, with subsequent decrease in brackish water areas, there have been drastic decreases in populations of shrimp. The Apalachicola Bay also supports a commercial fishery for the larger shrimp. Any alteration in the normal regime of fresh water influx would drastically affect the populations of these crustacea.

The only mollusc of importance is the eastern oyster. This oyster is the most important commercial species in the Bay, accounting for about 80% of the total oyster catch for the State of Florida. Studies have shown that at least half of the economy of Franklin County is dependent on oyster production. Although the oyster will survive in sea water salinity, its best production occurs roughly in a salinity range of 10-25ppt. Again, any change in the existing fresh-salt water regime would be significantly disruptive to this most valuable fishery.

Many of the commercial fin-fish, e.g. striped bass, also seem to be estuary dependent and any destruction of the estuary would affect these fishes.

Oysters are the most sensitive of these living resources to changes in water quality. However, during certain periods of life cycles, most of the desirable species are subject to serious effects from such conditions as low oxygen, heavy metals, other toxic materials, or abnormal salinities.

The panel recommended the following guidelines:

-- Present cuts through the barrier islands should not be enlarged, nor additional cuts made because of the effects on Bay salinity.

-- Any additional impoundments or major channelization of the Apalachicola River should not occur because of detrimental effects on the biota of the bay.

-- Any future development within the drainage of the Apalachicola River should not be allowed to degrade current water quality or quantity to the detriment of the estuary.

-- Local development within the Apalachicola Bay area should not be allowed to reduce the quality or quantity of estuary water.

Anadromous Fishes: Regulation and management of anadromous fishes within the system should emphasize the maintenance and restoration of historic population levels of Striped Bass and Atlantic Sturgeon. Population levels of Alabama Shad are considered high enough to support a regulated sport and commercial fishery.

Dams and pesticide pollution are believed to be the major factors limiting striped bass abundance. These above factors plus over-harvest by commercial fishermen are believed responsible for the low population of sturgeon. Both species have potential to recover if water quality is improved, commercial fishing for sturgeon is regulated, and no additional dams are built.

Commercial and Sport Fishes in the Estuary: Existing regulation and management of the sport and commercial fishing in the estuary are considered adequate at the present level of fishing pressure.

Terrestrial Land Uses: The U.S. Army Corps of Engineers routinely dredge the Apalachicola River as needed to maintain the authorized 9' x 100' navigation channel. The dredged material is deposited either between banks in open water, or on the shore near the dredging operation. Approximately 20 miles of the navigation channel lie within the state-owned EEL lands purchase and at least seven spoil sites are designated in the navigation project EIS, most of which have been used in the past.

The bottomland hardwood levee and backswamp communities are a heavily impacted resource. Of importance is the immediate and often permanent loss of habitat. This is particularly critical with regard to the levee community. This community consists of a diverse number of hardwood species which appear

to have somewhat higher wildlife value than the backswamps. Impacts are magnified because of the relative scarcity of the levee habitat within the proposed sanctuary boundaries. The levee community is largely restricted to the main river in a band 100 yards wide, or less.

A second impact of spoil disposal is the blocking of the parallel sloughs and drainageways as well as blocking gaps in the levee system which could alter the flooding and draining of the floodplain.

The alternative to bottomland hardwood disposal is some form of between banks disposal, which has its own potential problems. The resolution of this problem is necessary for the management of the bottomland hardwoods and the river itself.

Forestry Practices Within the Ecosystem: Forestry practices which appear to have an effect on organisms within the Apalachicola Bay ecosystem include ditching, clearcutting, roller chopping and other site preparation activities carried out prior to revegetation. Although the long-term effect of these practices has not been documented, some of the short term effects have.

During clearcut operations there is an apparent change in pH of waters coming out of watersheds adjacent to the operations. Many commercial motile species exhibit avoidance behavior causing them to seek refuge in other parts of the Bay system. Although the pH change itself is quickly buffered by the Bay water, this avoidance phenomenon could have its effect on overall production of these motile species. Non-motile species also are affected by the water marked by the pH change. For example, the acid waters significantly reduce phytoplankton levels, thereby reducing the nutrition available to filter feeders such as oysters.

Panel Two: Critical Habitats

The panel noted the following considerations which should be incorporated into the sanctuary program in the interest of conservation of critical habitats.

For barrier islands it will be desirable to

- Determine and limit where construction can take place.
- Consider interference with marshes and take steps to protect them.
- Consider water quality and ensure that it is properly maintained.
- Consider dredging, inlet and beach activities and ensure that appropriate precautions are taken (e.g. it is noted that Sike's Cut needs stabilization on the back side and this should be done with appropriate caution).
- Maintain a low level of human alteration (e.g. highlighting of dunes as a most critical factor of the barrier system to be maintained would be desirable).

For Apalachicola Bay it will be desirable to:

- Forestall further causeways or other development incentives without advance study and research to determine their imapacts.
- Survey potential toxic contaminants of the Bay as well as those that exist in the Bay area at present.
- Preserve existing beneficial bottom vegetation.

In the interest of protecting marshes it will be desirable to

- Restore surface "sheet water" (i.e., overland) flow into Apalachicola where it has been impaired.
- Provide a special protective buffer area around Lake Wimico to protect the Bay system.
- Establish fail-safe mechanisms for barge traffic to protect Lake Wimico from adverse impacts from accidental and routine effects.

To reduce the potential effects from Tate's Hell Swamp the following are suggested:

- Efforts should begin to retain and recover the historic biological communities that have been adversely affected.

- Acid water drainage should be controlled so as to minimize impacts on East Bay.
- Rotational timber harvest methods utilizing small or separated cuts should be considered.

Concerning the Apalachicola River, the ecosystem would be damaged by the following activities:

- Reducing length by cutting meanders.
- Changing the seasonal flow regime, both quantity and quality of flow-through.
- Elimination of habitat by snagging and elimination of backwater areas and destruction of rock out-crop bottom types and rock ledges which are the spawning areas of Atlantic Sturgeon.
- Onbank disposal of river dredge materials.
- Inriver groin systems; dams, weirs, dikes, and other structures within the Sanctuary area.

Concerning the Apalachicola River Floodplain, the ecosystem would be damaged by the following activities:

- Modification of seasonal programming and peak levels of stream flow.
- Improper disposal of dredge material on the floodplain.
- Clearcutting.
- Construction in the floodplain, particularly if it results in large paved areas, or the storage of dangerous materials.
- Sewage treatment facilities with inadequate floodproofing.
- Lumbering with replacement growth of species different from the species removed, with consequent impacts on the species dependent on the habitat for food and shelter.

Panel Three: Ecosystems Dynamics

This panel did not present detailed recommendations for resource maintenance because the subject was more appropriately addressed by the other panels.

However, the panel did consider the subject in light of resource maintenance considerations.

It is stressed that the dynamics of an ecosystem include transfer of both energy and material between biologic and non-biologic components of the system and is influenced by climatic conditions, nutrient inputs, circulation and water exchange. In ecosystems where man is present, systems are altered by selective harvesting and habitat modification and inputs of nutrients and other pollutants.

Several primary natural features (temperature, Apalachicola River flow, tidal fluctuations, wind, local rainfall) determine major habitat features of the Apalachicola Bay system within the context of the basic physiographic features of the area. Various cycles dominate the biological functions of this estuary, including periods of days (lunar tides), months (seasonal effects), and years (annual fluctuations). The distribution of microhabitats (bottom type, salinity, water quality) in the Bay system is determined by spatial/temporal interactions of the principal forcing functions, which in part determine population distributions, and community. Hydrological features and latitudinal sunfall, together with independent wetland functions, determine the movement and utilization patterns of nutrients, dissolved organics and particulate matter. Within the context of microhabitat distribution, this drives the primary production (marshes, benthic macrophyte beds, phytoplankton) and secondary production (microorganisms) of the bay. The various biotic components are linked to a seasonal succession of energy inputs related to river flow cycles, influxes of dissolved and particulate organic matter, phytoplankton blooms, and benthic macrophyte productivity. Temporal succession of populations in the Apalachicola System is thus mediated by energy flow and physical-chemical limiting factors

which, in turn, are dependent on river flow, rainfall, and temperature patterns.

The critical importance of the Apalachicola River to the functioning of the Bay ecosystem cannot be overstressed. The drainage basin above the Woodruff Dam and the Apalachicola River and Estuary consists of 19,500 square miles of the Flint and Chattahoochee watersheds. This large system provides a major portion of the water flow and accompanying nutrients, and other significant materials that influence the estuary. Lake Seminole, formed by the construction of Woodruff Dam in 1954-57, impounds 37,500 acres of the combined upper rivers and thus acts as the direct headwaters source for the Apalachicola system.

The trophodynamics of the estuarine system are critically effected by the interaction of the river flow and the surface runoff from local rainfall, with the currents and mixing of saline water that enters the estuary via St. Vincent's Sound, West Pass, Sikes Cut, East Pass and St. George's Sound. Salinity is a particularly important secondary forcing function critical to the biotic structure of the estuary. Interrelationships that must be considered in the distribution of saline intrusions are weather patterns, wind directions, wind duration, and the man made impacts such as cuts in the barrier islands, dredging operations, causeway embankments, dredge spoil accumulation and changes in the area and position of oyster beds. It is particularly important that any modification of currents by dredging and spoil placement be controlled so as not to degrade productive oyster beds.

The panel notes that the man-created, channelized, drainage from Tate's Hell Swamp may be quite deleterious to the ecology of the East Bay subsystem. Alternatives to the present drainage techniques should be examined, both from an engineering and an ecological perspective, to minimize deleterious effects. In addition, efforts should be made to determine whether the unique and nearly destroyed native ecosystem of Tate's Hell Swamp area could be recovered from the existing remnants.

Engineering activities in and on the Apalachicola River can cause deleterious effects upon the river, its floodplains, and the downstream ecosystem. Engineering alternatives for stream flow modifications should be designed and examined ecologically to determine the most feasible means of meeting demands of society while maintaining the integrity of local and downstream systems. Additional studies should be carried out to determine the economic and social impacts of such ecological modifications of the river.

The panel recognizes the importance of the impacts of man's past, present and future activities on the total Apalachicola System, including the river, its floodplain the estuary and bays. It recommends, particularly, that a system be developed to monitor man's future activities (both aerial and in-situ) in the entire basin and to evaluate the impact of these changes on the physical, chemical and biological characteristics of the system.

Panel Four: Water Quality and Watersheds

The panel organized its discussions around ecosystem conditions required for maintenance of the resource base at its highest levels. Because of data shortages on the relationship between resource maintenance and water quality it was believed desirable to discuss research needs along with management implications (a research synthesis is presented in the following section). The summary of the panel discussion and findings given below therefore concentrates on guidelines toward a framework for resource maintenance:

Water circulation in the Bay: Because of the lack of research and shortage of data, specific recommendations cannot be made. It is recognized that changes

in circulation could have profound effects. (A water circulation model for this Bay is a high priority.)

Quantity and seasonality of channeled freshwater inflow to the Bay: Factors of importance include salinity (relationship between salinity and predators in particular); the Jim Woodruff Dam which might be ecologically useful in storing and releasing water strategically; new channels and structures within the Bay system (which should be accomodated without changing the freshwater inflow). It is noted that the Wewahitchka guage data may be useful in future studies.

Pathogens: Factors of importance are sources of viral and bacterial contamination. The participants in the group were not aware of a great deal of data in this subject area, but suggested that more may be available. Wastewater disposal problems are clearly of prime interest.

Dissolved Oxygen: Every effort should be made to maintain existing and historic dissolved oxygen levels. An effort should be made to determine the impact of dredged holes (e.g. from shellfishing, etc.) and dredge spoil deposition (i.e. mud flow). The occurrence and potential influence of ammonia production in anerobic muds may be important.

Heavy Metals: The potential adverse impact from this source suggests that monitoring shellfish should be considered to spot problems and that more monitoring of sediments is appropriate. (Fish and Wildlife Service data from a recently initiated monitoring program on the Apalachicola River will be valuable for this purpose.)

Organic Toxics: As an obvious guiding principle, the levels of toxics must be kept as low as possible. The initial emphasis should go towards surveying use patterns within the basin, including transportation of toxicants, transfer

locations, and possible formulation areas. Fish and Wildlife Service data mentioned above may be helpful. An effort should be made to determine which species would be the most meaningful to sample.

Salinity: The panel recognized the importance of salinity as a controlling factor, as discussed in other panel reports.

Temperature: Every effort should be made to discourage land uses (such as thermal power plants) that would alter historic temperature patterns. An historic review of this parameter is needed.

Nutrient Supply: Factors of major importance are nitrogen; phosphorus; total organic carbon. Questions to be answered are: What controls phytoplankton production? What is the availability of detritus? Where are the sinks? What is the meaningfulness of chlorophyl A as a parameter in a turbid system such as this?

Sedimentation and turbidity: (See point above on nutrients.) The principle remaining questions relate to the impacts of dredging. Every effort should be made to determine the impact of dredging on the system as a whole. At what times of the year is it most and least harmful?

Wetlands and floodplains: Recent Section 208 water quality studies and recommendations may be helpful in providing guidelines on this subject. (An area of concern to participants was Tate's Hell Swamp.)

Panel Five: Physical Processes

The panel derived the following general ecologically oriented principles dealing with physical processes:

- Maintain the cyclical fluctuations in the freshwater flows in the Apalachicola River because these fluctuations seem to play a major role in the production of the system.
- Maintain the circulation system and water mixing in the bay, recognizing that it is an essential dynamic process.

- Maintain the ecologic condition of the barrier islands and associated features because they provide the protective features and important inlets for the mixing and circulation in the bay.

The panel advances the following general management oriented principles for maintaining resources of the proposed sanctuary:

- Permit major alterations in the sanctuary only if we know the consequences of that activity on the productivity of the system.
- Permit activities or alterations which do not substantially interfere with the natural processes and cycles.
- Focus management plans and programs on those human activities which may have significant impacts on the estuarine system and the activities that we can control via management programs.
- Give priority to collection of information about the functions and operation of the estuarine system and associated processes.

The panel notes that the dynamics of the ecosystem, being strongly controlled by water movement, are dependent to a large part on downriver flow. This downriver flow may be adversely altered by: dams and other obstructions, alterations to the river channel (straightening, deepening, etc), enhanced drainage of watersheds and floodplains, land surface alteration (clear cutting, extensive paving, etc), diking and leveeing, and land altering practices in areas above the Woodruff dam.

The panel notes that the exchange of water between the Bay and the Gulf is of most critical importance and that any inlet construction or modification (widening, deepening, etc.) could have severe impacts upon the sanctuary ecosystem.

Panel Six: Socioeconomics

Specific recommendations on the establishment of a detailed management structure for the estuarine sanctuary seem to be beyond the scope of the symposium. Therefore, it might be appropriate for the State to appoint an ad hoc committee for the specific purpose of developing recommendations for a specific management

structure for the estuarine sanctuary which recognizes the unique social, economic, and environmental attributes of the river and bay system. All uses within the sanctuary and decisions which impact it should be predicated upon knowledge of social, economic, and environmental impacts determined by professionally accepted methodology. Specifically, comprehensive plans for counties and municipalities within the six counties which lie along the river and bay should be reviewed by state resources agencies to provide specific comments as to the consistency of these plans with sanctuary resource maintenance.

The specific advice of the panel is summarized below:

- Economic development plans and activities should be consistent with approved state and local plans and policies.
- It should be understood that the Estuarine Sanctuary cannot be considered in isolation from the surrounding population centers and economy. The sanctuary management system should encourage planning within the six county river basin area. Further, local governments should recognize economic opportunities arising from the establishment and management of the Apalachicola Estuarine Sanctuary and encourage local responses to meet these new economic opportunities.
- Establishment of sanctuary management concepts and guidelines should remain flexible enough to accommodate innovative solutions to potentially conflicting uses of the Sanctuary. Establishment of an Estuarine Sanctuary could have impacts on neighboring states. Therefore this proposal should be coordinated with Alabama and Georgia to ensure that economic, environmental, water supply and other considerations and potential impacts of importance be recognized.
- As public needs arise, public support facilities, including non-waterborne transportation, should be allowed consistent with the management provisions and approved state and local plans and policies affecting the Apalachicola Estuarine Sanctuary.
- The area contains significant historic and archeological resources. These resources should be surveyed, inventoried, analyzed, and preserved within the Estuarine Sanctuary.
- Fisheries constitute the most important part of the economic base for the Apalachicola Bay area. The fisheries of the Bay should be protected, and should also be enhanced to the extent that they are compatible with protection of the Bay ecosystem and the needs of the area's people.

- The economic vitality of the Bay area depends upon water transportation within the Bay. Maintenance of the navigational channels, which enable and facilitate fisheries production, should be continued, and economically feasible and environmentally acceptable projects for this purpose should be developed.

- Sanctuary management should recognize that the intercoastal waterway and Apalachicola river are a portion of the National Waterways System and are important to the region's economy and particularly to the neighboring states of Alabama and Georgia. The navigability of these waterways should be maintained consistent with approved state policies regarding this region.

RESEARCH RECOMMENDATIONS

Panel One: Aquatic and Terrestrial Resources

Short term research is recommended to develop a characterization of the area to include a synthesis of existing literature, detailed land cover/land-use maps, and historical data on the River and Bay.

A plan should be prepared for long term studies. This would include developing ecological studies covering the full cycle of water flow in the River. Studies should be designed so that major land use practices and water projects can be related to changes in aquatic organisms and riverine/estuarine dependent organisms. Emphasis should be placed on the effects of:

- pesticides, including herbicides
- clear-cutting and other forest practices
- dredging, spoil disposal, locks and dams, ditching, groins in navigable waters
- ditching and draining wetlands and lowlands

Special studies should be conducted to improve predictive capacity regarding species abundance. Determine current fishing in terms of catch per unit of effort for both commercial and sport fishing in the area. Develop or use available hydrographic and faunal sampling data to gain predictive capacity; monitoring should cover a complete hydrographic cycle in the river. Determine the population status of the Atlantic Sturgeon and Gulf Striped Bass. (Striped bass are important to preservation of the genetic population for the Gulf race of striped bass).

Data should be developed on distribution and specific habitats of reptiles and amphibians (e.g. Clark's water snake): get data on the relative abundance of the diamond back terrapin, etc.; explore life history relationships to

environmental fluctuations associated with habitat in long and short term cycles; identify the preferred nesting grounds of species sensitive to lowland habitats (e.g. alligators, alligator snapping turtle, Apalachicola kingsnake, Amphium pholete).

It would be advisable to generate data on nesting distribution and occurrence of: the bald eagle, osprey, Mississippi kite, swallowtailed kite, oyster catcher, snowy plover, red-cockaded woodpecker, least tern, caspian tern, pelican, pergrine falcon, migratory species using the barrier islands, and birds sensitive to swamp forest habitat.

It would also be advisable to develop data on species composition of vegetation within the sanctuary, variation in species before and after timber harvest; recovery periods of environmentally damaged vegetation, and effects of tidal waters on fresh water marsh and swamp forest.

Rich opportunities exist for research on the relationship of upland forestry and the estuarine ecosystem. Research should emphasize the impacts of forest management practices on pH, water flows, detritus levels, water tables, and turbidity. The state's Division of Forestry (Florida Department of Agriculture) is developing "Best Management Practices" (BMP's) to be used on a voluntary basis by the forest industry throughout the state. The goal of these BMP's is meeting the water quality standards of federal P.L. 92-500 (the Clean Water Act). The standards will probably provide guidelines limiting clear-cutting and roller chopping within 300 feet of a stream edge.

The sanctuary proposal would lend itself to a special demonstration effort, perhaps on one of the boundaries of the sanctuary to make specific measurements to test the effectiveness of the proposed BMP's. The demonstration effort could take advantage of the sanctuary research program to enhance knowledge of fresh-

water quality problems. Also it would be appropriate to survey the extent of existing spoil deposits and wildlife utilization of both deposits and adjacent undisturbed habitat to determine wildlife impacts and to determine the hydrographic regime of the lower river to allow better assessment of the impact of spoil disposal in the floodplain and in the river.

Other issues that are relevant to resource maintenance include:

- The extent of dispersion of upstream alochthonous materials in the Bay.
- Effects of pollutants in the inflow from the River.
- Effects of sediment redistribution due to propellor wash disturbance on the sesside organisms of the Bay.
- Effects of periodic migrations of diadromous fishes from the river into the Bay.
- Distances upstream from which various pollutants and sediments originate.
- Delineation of influence by the river from local freshwater sources and rainwater.

General research goals include: identification and (as feasible) quantification of all values of the Estuarine Sanctuary to the people of the locality, region, and nation. These values would include but not be limited to economic, aesthetic, recreation, and "quality-of-life" values of sport and commercial fishing and shellfishing, research, hunting, water quality enhancement, nature observation, etc. Some quantification could be expressed in dollars. Other quantification might be possible in terms of habitat unit values as per the Fish and Wildlife Service's Habitat Evaluation Procedures.

The above would greatly facilitate comparisons of the ecological values of the Sanctuary to values derived from subordinating ecological interaction to navigation and commercial interests.

Panel Two: Critical Habitats

The system under consideration lends itself to the examination of a number of problems of basic ecological importance. These studies may or may not have immediate management implications, but all will have ultimate management significance.

Basic research should be carried out in the following areas:

- The detailed functioning of each critical habitat type and subsystem (e.g. grass beds, mud flats, barrier islands, floodplains, etc.).
- The coupling of subsystems to produce the total dynamic processes of the total ecosystem of the area.
- Response of each system component and of the coupling processes to natural seasonal programming of environmental factors.
- Response of each system component and of coupling processes to actual and potential human perturbations.
- The development of an in-depth ecological model or a series of models to provide a quantitative description of system functions.

A series of research activities related to sanctuary management should also be carried out. The following are only representative samples of such work.

The relationship of the human use of the barrier island system to the preservation of the ecosystem's integrity (fringing wetlands and the Bay).

Significance and effect of human intrusions on the Bay itself (e.g. adding new oyster reefs, engineering modification of circulation, salinity, suspended particulate matter, construction activities in and adjacent to the Bay, commercial harvest, etc.)

There is a need to understand the ecological implication of the restoration of sheet-flow from the Apalachicola River across the lowlands into Lake Wimico (the effects upon the lowland system and Lake Wimico itself).

Panel Three: Ecosystem Dynamics

The recommendations given relate to research needs to better understand ecosystem dynamics of the Apalachicola Bay estuary and to management requirements necessary to maintain the ecosystem in a way to insure that meaningful results can be obtained for these studies.

Recommended Total River Basin Studies

Any significant study of the estuary should include the following:

- A long range computerized study of the precipitation along the upper basin.
- A total hydrologic investigation to include such areas as stream flow gauge records, surface and ground water features, etc.
- A forecast of water withdrawal from the basin by urban, industrial and agriculture activities.
- A study of mass transport and flow mechanisms of environmentally significant substances.
- A monitoring study of basin land-use changes through aerial and in-situ monitoring.

The monitoring functions should tie remote sensing observations to on-site measurement of physical and biological parameters as they effect economically important nursery functions of the estuary.

Nutrient Dynamics Studies

Nutrients on the basis of seasonal and annual dynamics should be understood so as to better predict general allowances of changes that could effect the system. Thus, a major research program should be a comprehensive nutrient/mass investigation that includes such parameters as input, residence times, and outputs of the Bay system.

"Qualitative biological" investigations are a tandem necessity, for mass balance studies are not considered to be an end in themselves. This effort would include a better understanding of the function of marshes and organisms as nutrient transport mechanisms in the Bay system. A major project would be to determine what nutrients are in fact limiting in the system. A determination should be made, through field and/or laboratory studies of the actual form (qualitative organic or inorganic state) of the nutrients that are important to the communities of the Apalachicola System, both terrestrial and aquatic. Included in this research would be the monitoring of the sedimentary and detrital microbial populations and the microvore mass and diversity as a measure of the base food chain.

Monitoring of Alterations

The monitoring of impacts should include, but not be limited to:

- construction of dams and other structures
- drainage and alteration of wetlands and floodplains
- navigational dredging and associated activities
- agriculture and forestry practices (including clearcutting and pesticide use)
- municipal and industrial waste disposal
- ubanization
- recreational and commercial fishing
- land development

Methods need to be developed to monitor biological communities in the Apalachicola System that reflect short and long term changes in the natural system function and anthropogenic sources of activity. The community structure, through trophodynamic processes, should be included in any such study. Methods

of aerial detection and in-situ monitoring of the desired physical, biological and chemical features of interest must also be optimized and/or developed for use in the overall research, monitoring and management program.

Comment

The Apalachicola River system is dominated by phytoplankton productivity and allochthonous detritus input from upland wetlands systems. Particulate matter serves as a substrate for communities of microorganisms which utilize dissolved nutrients (N,C) for growth. Thus energy from imported dissolved and particulate matter and autochthonous photosynthetic processes is transferred to various detritus-based food webs in the Bay. These webs interlocked with phytoplankton based webs, form the trophic basis for most biological systems in the Apalachicola Estuary. There is a distinct resource (food) partitioning among the dominant populations of fishes and invertebrates. Seasonal changes in temperature and salinity, together with the distinctive trophic interactions and predator prey relationships, lead to the high dominance of key commercial species in the Apalachicola system, including oysters, (Crassostrea virginica), blue crabs (Callinectes sapidus), penaeid shrimp (Penaeus spp), and sciaenid finfishes. The individual species specific strategies of such dominants follow long term (6-8 year) cycles of river function and this drives the seasonal and annual cycles of the sports and commercial fisheries in the associated Gulf coastal systems.

Panel Four: Water Quality and Watersheds

The proposed Apalachicola Estuarine Research Sanctuary provides a unique opportunity to examine the behavior of what appears to be a relatively uncontaminated system. One of the most pressing problems facing those

attempting to assess the impact of physical, chemical and biological contaminants on water quality is that of trying to determine the "normal" situation that would be present in the absence of man. The first phase of research in the sanctuary should be a critical evaluation of the existing data base pertinent to characterizing the water quality in the proposed sanctuary. This evaluation should be used to define future water quality research that should be conducted on the sanctuary.

At the present time, the Apalachicola estuary has a number of the sought-after characteristics of estuarine ecosystems that are frequently thought to be associated with unpolluted systems, such as a high level of production of commercially important marine organisms. While the current system is not completely "natural", i.e. it is influenced to some extent by the activities of man, the magnitude of contaminant to this system is small compared to its assimilative capacity so that the system appears relatively uncontaminated by residuals. One of the chief focal points of research activity within the proposed research sanctuary should be directed toward understanding the functioning of this system with particular reference to the factors that bring about its high levels of production.

The proposed sanctuary is situated downstream from several municipal and industrial wastewater discharges. Further, there is intensive agriculture within the proposed sanctuary watershed. This situation could readily lead to significant alterations in the proposed sanctuary ecosystem. Chemical contaminants such as pesticides, organic and inorganic components of municipal and industrial wastes which could have an adverse effect within the sanctuary, are being added to the tributaries upstream of the proposed sanctuary. It is important to assess through inventorying, what contaminants are being added to the waters that

could have a significant deleterious effect on water quality within the proposed sanctuary.

Estuarine systems such as the Apalachicola have relatively large contaminant assimilative capacities. Large amounts of chemical contaminants can be added to the system without adversely affecting it. This high contaminant assimilative capacity is related to the ability of suspended and deposited sediments present to render many contaminants unavailable to aquatic life. One of the long range goals of water quality research in the proposed sanctuary should be a careful evaluation of the significance of suspended and deposited sediments in controlling the availability of contaminants to aquatic life within the system. Research in this area would be of value not only to this sanctuary but also to many other areas of the world.

Despite the present status, many of the panel felt there was a need to establish a toxicant monitoring program oriented towards elucidating what toxicants are coming down the river from the states to the north as well as from below the Florida border. Efforts like the work of the U.S. Fish and Wildlife Service to establish which species are meaningful in such a program are important and should be continued. But the program also needs to be preceded with an exhaustive survey of use patterns, transportation, manufacturing, and formulation of toxicants in the basin. Also an examination of the adequacy of plans to deal with catastrophic accidents like oil or toxic chemical spills on the river system should be conducted.

While the Apalachicola estuarine system seems to be relatively free of contaminants, it does appear to have some water quality problems. These range from the unexplained death of clams within the estuary, to colored water associated with forest cutting activities. It is important to emphasize the estuaries such

as the Apalachicola are in a continuous state of change which is related to the long-term cycles governing the relative fluxes of fresh and saline water to the system. To a marine organism, fresh water is a contaminant which can destroy its habitat and cause vast devestation of organisms having low tolerance to low salinity.

Any study on the impact of contaminants on water quality and the functioning of the ecosystem must determine the effects of climate (fresh water and marine water inputs) on the numbers, types and activities of the organisms within the system. In addition to conducting the environmental impact of climatological factors such as hurricanes, consideration must be given to the impact of increasing the amount of exchange of water with the open Gulf of Mexico, such as by enlarging the cuts through the barrier islands. It is only with an understanding of these areas that the effects of toxicants such as pesticides, heavy metals, etc. can be properly evaluated.

There are a number of areas of water quality research that should be initiated in order to provide information needed for sanctuary operation. One of the most pressing questions concerns the environmental impact of dredging and dredged material disposal within and upstream from the proposed sanctuary. The first phase of research in this area should be a critical evaluation of the potential environmental impacts of existing and proposed dredging/disposal operations in light of the results of the large amount of work that has been done in the recently completed Corps of Engineers Dredged Material Research Program. This program has provided a substantial amount of information which is directly applicable to assessing the real environmental impact of dredging and dredged material disposal within the sanctuary. The evaluation of the current state of knowledge in this area should include the delineation of

research needed to develop information necessary to minimize adverse environmental impact of dredging and dredged material disposal.

Another area that needs research in connection with sanctuary operation is that of the environmental impact of forest harvest and silvaculture practices within the proposed sanctuary and adjacent to it. As in the case of dredging, a number of the participants at the workshop indicated that current silvaculture practices especially clear-cutting, ditching and draining were having deleterious effects on water quality within the proposed sanctuary. However, there appear to have been few studies defining the necessary changes in the current practices to minimize any adverse effects which may be occurring due to present practices. The relationship between current and proposed silvaculture practices in and adjacent to the proposed sanctuary and water quality needs to be investigated.

There are a number of what are apparently localized sources of contaminants for the system which could be influencing its overall behavior. These include municipal and industrial wastewater discharges including those from shellfish harvesting and processing, and land disposal of wastes. Of particular importance in any investigation of these sources is a careful evaluation for coliform bacteria and exotic chemicals. It appears that there is a problem today of excessive numbers of coliforms in some shellfish harvested from the area. Research should be undertaken to define the sources of these coliforms and to develop control programs to reduce the input of these organisms to the system to concentrations below those which cause the shellfish to be unsuitable for use as human food. Research in this area will likely require detailed description of the mixing and circulation patterns of waters within the proposed sanctuary. In addition, information should be gathered on the exchange of waters between the proposed sanctuary and adjacent waters.

It is important to note that the intense oyster culture that is taking place within the proposed sanctuary represents a potential source of contaminants which could have adverse effects on the proposed sanctuary aquatic ecosystem. Before any additional large-scale oyster culture practices are permitted within the sanctuary, a careful evaluation should be made of the effects of such practices on water quality in the proposed sanctuary.

It was generally agreed by the participants at the workshop, that the sanctuary should include the barrier islands. However, if political considerations overrule any simplistic approach to this need, it should be noted that whether part of the core sanctuary or the area of management concern, from a water quality point of view, the rapid development that is taking place on the barrier islands must be considered as a source of contaminants for the sanctuary. Of particular concern is the potential impact of septic tank wastewater disposal systems as a source of contaminants for the bay. Wide spread coliform pollution could quickly disable the oyster fishery. The impact of urban and recreational development on the barrier islands on water quality within the proposed sanctuary should be investigated.

Concern was expressed by some participants about the current coupling of surface and groundwaters within the proposed sanctuary area. The groundwater resources and quality of the area should be defined and a monitoring program should be established to determine changes in groundwater quality that may result from activities in the sanctuary and adjacent to it.

Panel Five: Physical Processes

An over-riding recommendation of the panel is that an increased effort should be made to transfer information to all interested parties, including available

literature, ongoing research and proposed research projects. There is presently a lack of communication and information exchange between the scientists and user groups.

The first priority of research is a comprehensive study of the circulation system/pattern of the bay and the riverine system. This includes such parameters as waves, sediments, salinity, nutrients, detritus, mixing, stratification, transport, and effects of structural modifications or emplacement. The role of cyclic fluctuations in freshwater inflow from Apalachicola River, Jackson Creek, Tate's Swamp, and New River into the bay should be assessed and a long-term time-series data on the flows and interaction on the productivity developed.

An important need is to assess the effects of adjacent upstream land and water uses on the water quality, quantity and pulses (fluctuations) because upstream land and water uses may have significant influence/impacts on the productivity of the estuarine system (and dams may work as a filtering system).

In order to understand the dynamic geologic and geomorphologic processes that affect the estuarine sanctuary the following basic studies are recommended:

(a) Assess the erosion rates at various places within the sound and longshore sediment transport at various locations along the Gulf.

(b) Assess the growth rates of various parts of the delta front, and sediment rates immediately in front of the delta.

(c) Evaluate threshold values for significant bed load delivery of sediment through the river channel and use of this result to compare sub-critical discharge rates prior to and since the construction of dams.

(d) Conduct coring and dating of modern sub-delta to provide prehistorical growth rates (prior to construction of dams on the river).

In addition, the following are recommended:

- Evaluate and assess the functional relationship between the lower and the upper reaches of the Apalachicola River (boundary is defined at the FWS Boundary)(immediate reaches may have different impact than distant reaches).

- Identify the sources of nutrient inputs and role of floodplain and wetland vegetation on the nutrient cycling (detritus may be generated and even absorbed in the floodplain vegetation).
- Establish the role of short-term (annual) and long-term (cyclic 6-8 year) fluctuations in water flows on the nutrient, detritus, sediment influx and productivity of the system (both fluctuations are complimentary and work towards dynamic equilibrium of the system).
- Assess the effects of snagging and dredge spoil on the quality of the river and impact on the productivity of biotic community.
- Assess the long-term and short-term impacts of clear-cutting on the Bay's water quality and productivity (runoff from clear cut forest may be adversely affecting the productivity of shellfish). Note: This study should build upon the work being conducted at the University of Florida, Sea Grant and others.)
- Assess the ground water resources for water quality, base flow maintenance, and water supplies (no data exists about the interrelationships between the surface and ground waters). Note: Franklin County should be the area of special attention but 5 other counties should be included.
- Assess the impacts of various activities and uses on the estuarine system, including barge traffic, breakwaters, dredge spoils (some of these activities may cause alteration in the system or destruction of critical habitat).

Panel Six: Socioeconomics

Future sanctuary research funding should encourage socio-economic studies within and adjacent to the Sanctuary. Specifically, available socio-economic data should be commensurate with environmental data so as to ensure balanced management decision-making.

A study should be conducted of the economic alternatives for waterborne transportation of commodities on the Apalachicola, Chattahoochee, and Flint Rivers. The study should include but not be limited to the feasibility of scheduling traffic consistent with annual and seasonal fluctuations, warehousing of commodities during low-water periods, and other means of adapting waterborne transport to the River as it currently exists within the Sanctuary.

Develop alternative management strategies, plans, and techniques on state-owned land within the Sanctuary which are economically efficient and environmentally acceptable.

Design methods (including but not limited to structural design, location and spacing) for land development within the Apalachicola River floodplain that will not degrade water quality or impede or alter the flow of water through the floodplain and river and which will ensure human and structural safety.

An economic evaluation should be conducted of the productive relationship between forestry activities along the river basin and the yield from the Bay fishery. This activity would serve as a basis for management plans to maximize the economic value of the resource system and would incorporate data from biological studies already available.

An economic evaluation of the regional dependence upon the water resources of the River system for consumptive uses. This would include an evaluation of alternative water uses and the associated costs and benefits.

Conduct archeological excavations to develop a well dated framework for understanding the cultural evolution of the area, to determine the nature of prehistoric subsistence patterns, and to determine prehistoric social organizations, provided such excavations are consistent with overall E.S. management concepts and guidelines.

Archeological and historical surveys of the Sanctuary and surrounding areas should be conducted to locate sites, assess the value of those sites, predict prehistoric settlement patterns, and predict prehistoric and historic land use patterns, provided such surveys are consistent with overall E.S. management concepts and guidelines.

In addition, the panel suggests that attention be given to the following possibilities:

- Conduct a feasibility study of establishing a research and management center within the sanctuary.
- Encourage development research design and application which utilizes a multi-disciplinary approach, specifically including socio-economic, and environmental disciplines.
- Examine ways of enhancing the quality and marketability of fishery products from the Bay Area.
- Examine the feasibility of large scale revitalization of old oyster beds.
- Specific sociological investigations should be conducted within and adjacent to the Sanctuary and the resultant data included in the management decision-making process.
- Encourage funding of economic feasibility studies regarding enhanced production and marketing techniques and programs.
- An evaluation of the current recreational uses of the Apalachicola River and Bay and the potential for additional recreational uses that would enhance the value of the resource system.

SECTION V - CONTRIBUTIONS

The purpose of this section is to present the prepared contributions of interests who responded after the close of the sessions on the first day of the Symposium. The Tri-Rivers Waterway Development Association took advantage of the opportunity by making arrangements for a formal contribution, the states of Georgia and Alabama also made less formal statements at the plenary sessions of the Symposium.

Statement on Behalf of the State of Georgia

MR. GORDON HARRISON: First of all I want to say that I feel in a strange position today because the President signed a bill last month that allowed the State of Georgia 30 million dollars for the Chattahoochee National Recreation Area in which some 5600 acres was provided to the State of Georgia for preservation on the river. And in working the bill through Congress for the past three years, I suppose I have sat down with a hundred agencies, a hundred public interest groups and worked out their problems on our bill. And what was usually involved was sitting down across the table from them and working into the language in the bill and major concepts in the bill and somehow or another from Baptist ministers to the Corps of Engineers to just about every public interest group you can imagine, we worked out their problems. So I'm sitting here as a special interest group, the State of Georgia, with a concern about the bill that you have in Florida.

I want to thank the State of Florida, the Conservation Foundation, for inviting the State of Georgia to participate in this symposium. We always enjoy working with our neighboring states on matters of mutual interest.

I attended the meeting last year in Apalachicola when the Estuarine Sanctuary Proposal was initially, I suppose, drafted. We are very interested in the Estuarine Sanctuary Proposal and we definitely support the basic concept involved. We have our own Estuarine Sanctuary Proposal -- I'm sorry -- we have our own Estuarine Sanctuary in Georgia south of Atlanta. We gained a great deal of experience and knowledge from that and we are very pleased and delighted with the results that we have from it. Georgia does support this program very strongly.

Our primary interest remains in the area of impact that this proposal may have on the waterborne commerce along the Chattahoochee River. We strongly

have on the waterborne commerce along the Chattahoochee River. We strongly urge the framers of this proposal to keep this interest in mind and respect the neighboring states.

I believe this group has done an excellent job in assessing the economic needs of such a study. We believe it's very important that the individuals who are drawing up the proposals look at the various impacts that Whit mentioned and incorporate them into some type of draft environmental impact statement which Whit also mentioned.

We would appreciate very much the opportunity to review and comment on this and I will assume we will as it goes through the A95 process.

If we can assist in any way, the State of Georgia, we would be very delighted to do so and other than that, at this point in time we wish you very much success with your proposal. Again, I thank you for the opportunity to participate.

Statement on Behalf of the Georgia Port Authority

MR. JAKUBSEN: Thank you. I am Bill Jakubsen and I am the project manager for the rivers and harbors of the State of Georgia and for the Georgia Port Authority. The Georgia Port Authority was created by an act of the Georgia General Assembly in 1945. And it's comprised of seven members appointed by the Governor.

Implicit with the act that created the Georgia Port Authority, certain directives are set forth, to wit: Article 16, to develop and improve the harbors and seaports of this state for the handling of water port commerce from and to any port of the State of Georgia and other states and foreign countries; Article 18, to foster and stimulate the shipment of trade and commerce through said ports, whether they're originating within the state or without the state; Article 21, to do any other things necessary or proper to foster or encourage the commerce, domestic or foreign, of the states, the United States or the several sister states of Georgia.

Consistent with these directives, the Georgia Port Authority has purchased land in Brunswick and Savannah, Georgia, for the establishment of three deep-water terminals and has also acquired land in Augusta, Bainbridge and Columbus, Georgia and has built their own terminals for the handling of barges.

As a consequence of this, the Georgia Port Authority is now handling some 3 1/2 million tons of cargo, international and domestic commerce. The total capital investment by the authority and facilities for the handling of commodities is in excess of 76 1/2 million dollars.

It follows quite naturally, then, that the Georgia Port Authority has a keen interest in the conclusions of this hearing, which is relative to the Estuarine Sanctuary and navigation on the tri-river system. And it should be recorded that the Corps of Engineers is to be complimented for their constant and valiant effort over the past decade to provide a dependable year-round 9-foot channel to satisfy the needs of the commodity-filled barges on the tri-river system.

In a sincere effort to accomplish their goals to provide a dependable 9-foot channel, the Corps has introduced cutoffs, dikes and revetments in addition to extensive dredging in the hope that a navigation 9-foot channel would be. Despite their efforts, however, the problem of navigation is still there.

The announcement of this hearing refers to the fact that the Georgia Port Authority, there for the State of Georgia, has invested inland port facilities in Bainbridge and in Columbus of a sum of 4 million dollars. With a dependable year-round 9-foot channel accommodating these ports, the investment by the Authority would be many times this. And as a result, hundreds of jobs would have been created. The 9-foot year-round channel is needed for a dependable barge transportation system of the tri-river system. And I was pleased this

morning to hear Lt. Governor Williams in his opening statement mentioned that a management system should be considered that satisfies many needs, one of them is the transportation on the tri-river system. Thank you.

Statement on Behalf of the State of Alabama

MR. STEVENSON: I am Walter Stevenson with the Office of State Planning. I am here today representing Governor Wallace of Alabama. The reason I am here is to indicate our interest with the proposal to establish a National Estuarine Sanctuary in the Apalachicola River and Bay area. Several of the previous speakers, including Lt. Governor Williams, have indicated how the upstream activities affect the Apalachicola River and Bay system. I would like to point out that what happens in the future in the Apalachicola Bay area also effects the upstream activities and goals of the states involved.

With this in mind, I would remind you that the system, the Apalachicola, Chattahoochee and Flint River system, are interstate streams. We would request that any future activities related to the planning and management of the system, we in the State of Alabama, be involved. Thus far there appears to be no recognition on the part of the local interests for the Office of Coastal Zone Management of the multi-state interests nor the acknowledgement that there are multi-millions of dollars in investments in the system for navigation purposes, both at the state and Federal level. Thank you.

Statement on Behalf of the Tri-Rivers Waterway Development Association

Tri-Rivers Waterway Development Association is a non-profit citizens' organization which includes in its dues-paying membership the boards of country commissioners of 15 counties of Southwest Georgia, Northwest Florida and Southeast Alabama. Our individual, civic and business membership is drawn primarily from the same area. Membership is open to all.

We are interested in all appropriate uses of the Apalachicola-Chattahoochee-Flint river system. Proper planning and management based on recognition of the unity of the system, we believe, can insure the desired benefits to all population groups, from municipal water users in the Atlanta area to commercial fishermen in Apalachicola Bay.

We consider transportation a particularly important use because of low income level and inadequate rail facilities along the navigable portion of the waterway. River barges are acknowledged as the cheapest and most energy-efficient means of moving bulk commodities long distances. A good case can also be made for their environmental advantages. We are convinced that barge transportation and the seafood industry can flourish side by side, as they do in Louisiana, the nation's top oyster-producing state.

Tri-Rivers was represented at the symposium conducted by The Conservation Foundation Oct. 15-17 by Dr. Carl H. Oppenheimer. We are attaching his report as our contribution for inclusion in the proceedings.

On the basis of Dr. Oppenheimer's report, this association recommends:

1. That representatives of the governors of Alabama and Georgia be included as equal, voting members with Florida on planning and management advisory committees for any estuarine sanctuary that may be created on the on the Congressionally authorized navigational channel.

2. That the State of Florida consider alternate sites which would better satisfy the description of an estuarine sanctuary as pristine or only slightly affected by human activity and would provide scientists freedom to carry out certain research undisturbed by commercial and recreational demands. Dr. Oppenheimer has suggested one such site. Guidelines for estuarine sanctuaries specifically dictate that no effort be made to balance or optimize uses of the sanctuary on the economic or other bases. Yet no plan for research involving

the Apalachicola-Chattahoochee-Flint Waterway would be realistic if it ignored commercial fishing, recreation, forestry activities, agriculture, transportation, flood control and electrical generation.

3. That if the Apalachicola ecosystem is chosen, research appropriate to a disturbed estuary of regional and national economic importance be planned. Scientists might study changes to the ecosystem and likely changes from projected population increases rather than entirely natural sequences. A study of transportation modes in a productive ecosystem would also undoubtedly provide valuable information. It would be important in such a study to recognize transportation as a field with its own expertise and to include transportation experts along with specialists of other disciplines.

Under these conditions, Tri-Rivers would welcome the creation of a National Estuarine Sanctuary in Northwest Florida. We cannot emphasize too strongly, however, our insistence that the States of Georgia and Alabama, through the governor's officers, be invited to participate as full partners in the planning and management of any sanctuary on the Apalachicola River.

REGISTERED ATTENDEES AT SYMPOSIUM PLENARY SESSIONS
Tallahassee, Florida, Oct. 17-19, 1978

Jack Abstein
Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Don Albright
Office of the Attorney General
The Capitol
Tallahassee, Florida 32304

Doug Alderson
Sierra Club
2311 Mavis Circle
Tallahassee, Florida 32301

Dale Allen
Sierra Club
508 Oakland Avenue
Tallahassee, Florida 32301

James Barkuloo
U.S. Fish & Wildlife Service
P.O. Box 4696
Panama City, Florida 32401

John V. Bass
U.S. Forest Service
P.O. Box 1050
Tallahassee, Florida 32302

W.M. Beck, Jr.
Florida A&M University
Univ. P.O. Box 111
Tallahassee, Florida 32307

Norman G. Benson
National Coastal Ecosystem Team
Fish & Wildlife Service
National Space Tech. Labs.
NSTL Station, Mississippi

David H. Bickner
Dept. of Environmental Regulation
2600 Blair Stone Road
Twin Towers Office Bldg.
Tallahassee, Florida 32301

Charlie L. Blalock
Corps of Engineers, Mobile District
U.S. Army Engineer District
P.O. Box 2288
Mobile, Alabama 36628

John R. Botzum
Nautilus Press Inc.
1056 Natl. Press Bldg.
Washington, D.C. 20045

H. Hugh Boyter, Jr.
Florida Division of Forestry
Collings Bldg.
Tallahassee, Florida 32304

Michael Brim
U.S. Fish & Wildlife Service
P.O. Box 4277
Panama City, Florida 32401

Walter W. Burdin
Mobile Dist., Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628

Archie Carr III
Florida Audubon Society
P.O. Dr. 7
Maitland, Florida 32751

Marjorie Carr
Florida Defenders of the Environment
622 N. Main
Gainesville, Florida 32601

Jim Cason
NW Florida Water Mgt. Dist.
325 John Knox Road C-135
Tallahassee, Florida 32303

Ralph R. Clark
State of Florida
Dept. of Natural Resources
Bureau of Beaches & Shores
202 Blount Street
Tallahassee, Florida 32301

Robert L. Clay
Northwest Florida Water Mgt. Dist.
325 John Knox Road
Suite 135-C
Tallahassee, Florida 32303

Andre F. Clewell
FSU & Conservation Consultants, Inc.
P.O. Box 35
Palmetto, Florida 33561

Paul A. Coley
Dept. of Education
Park 20 West
Knolt Bldg.
Tallahassee, Florida 32304

Quentin Collins
Sierra Club
902 Parker Drive
Tallahassee, Florida 32303

Ed Conklin
Coastal Management DER
2600 Blair Stone Road
Twin Towers Office Bldg.
Tallahassee, Florida 32301

Clyde S. Conover
U.S. Geological Survey
325 John Knox Road 240-F
Tallahassee, Florida 32303

Suzanne T. Cooper
Game & Fresh Water Fish Commission
620 S. Meridian
Tallahassee, Florida 32304

Carroll Cordes
U.S. Fish & Wildlife Service
National Coastal Ecosystems Team
NSTL Station, MS 39529

Phyllis Corwer
Dept. of Environmental Regulation
Bureau of Coastal Zone Planning
2600 Blair Stone Road
Twin Towers Building
Tallahassee, Florida 32301

David J. Cox
Florida Game & Fresh Water Fish Comm.
7630 Coral Drive
W. Melbourne, Florida 32901

Edward J. Crateau
U.S. Fish & Wildlife Service
1612 June Avenue
Panama City, Florida 32405

Harry Dail
Dept. of Environmental Regulation
Twin Towers Bldg.
2600 Blair Stone Road
Tallahassee, Florida 32301

Rezneat M. Darnell
Texas A&M University
Department of Oceanography
College Station, Texas 77843

Neal E. Eichholz
Fla. Game & Fresh Water Fish Comm.
Bryant Bldg.
Tallahassee, Florida

W.H. Ellis (Nap)
Florida Dept. of Transportation
Burns Bldg.
Room 278
Tallahassee, Florida 32304

Leonard Elzie
Florida Dept. of Commerce,
Bureau of Economic Analysis
1240 Blountstown Highway
Suite A
Tallahassee, Florida 32304

Gary L. Evink
Florida Dept. of Transportation
MS #37
Hayden Burns Bldg.
Tallahassee, Florida 32304

Robin L. Fletcher
Trust for Public Land
1300 Executive Center Dr.
Tallahassee, Florida 32304

Paul L. Fore
U.S. Fish & Wildlife Service
National Coastal Ecosystem Team
NSTL Station, MS 39529

Charles R. Futch
Florida Dept. of Natural Resources
202 Blount Street
Tallahassee, Florida 32304

Steve Graham
University of Florida/Civil Engineering
Gainesville, Florida 32611

Rima Greenberg
Florida Secretary of State,
Cabinet Affairs
The Capitol
Tallahassee, Florida 32304

John Greis
Florida Division of Forestry
Collins Bldg.
Tallahassee, Florida 32304

Jerry C. Groves
U.S. Fish & Wildlife Service
900 San Marco
Jacksonville, Florida 32207

Donald J. Hankla
U.S. Fish & Wildlife Service
900 San Marco
Jacksonville, Florida 32207

Brad Hartman
Florida Game & Fish
620 S. Meridian Street
Tallahassee, Florida 32304

Dr. John M. Hill
Louisiana State University
Division of Engineering Research
Baton Rouge, Louisiana 70803

Hilburn O. Hillestad
Southeastern Wildlife Service, Inc.
1060 Gaines School Road
Athens, Georgia 30605

Homer Hirt, Jr.
Jackson Co. Port Authority
P.O. Drawer 719
Sneads, Florida 32460

Helen Hood
Florida Defenders of the Environment
Suwannee River Coalition
622 North Main Street
Gainesville, Florida 32601

Rosalyn Holzer
Senate Committee on Natural Resources
Room 416, Senate Office Bldg.
Tallahassee, Florida 32304

Duncan Hosford
Clerk of Circuit Court
P.O. Box 398
Bristol, Florida

Bob Howell
FSU Biology
126 B Conradi Bldg.
Florida State University
Tallahassee, Florida 32306

Robert L. Howell
Franklin County, P.O. Box 340
Apalachicola, Florida 32320

Curry Hutchinson
Division State Planning
530 Carlton Bldg.
Room 241
Tallahassee, Florida 32304

G.A. Irwin
U.S. Geological Survey
325 John Knox Road
Tallahassee, Florida 32303

William Jakubsen
Georgia Ports Authority
Box 2406
Savannah, Georgia 314

Anne Jones
Colorado State University
Engineering Research Center
Ft. Collins, Colorado 80523

Walter O. Kolb
DOA - Division of State Planning
530 Carlton Bldg.
Room 241
Tallahassee, Florida 32304

Wilfred Kucera
Fisheries, USF&WS
1612 June Avenue
Panama City, Florida 32405

Jon Kusler
Environmental Law Institute
Suite 620
1346 Conn. Avenue, N.W.
Washington, D.C. 20036

Edward T. LaRoe
Bureau of Coastal Management
Florida Dept. Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

G. Fred Lee
Colorado State University
Engineering Research Center
Fort Collins, Colorado 30523

Helen McAninch Leitman
State of Florida
Dept. of Environmental Regulation
Office of Enforcement, DER
2600 Blair Stone Road
Winewood Twin Towers
Tallahassee, Florida 32301

Steve Leitman
Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Jeff Lincer
County of Sarasota
P.O. Box 8
Board of County Commissioners
Sarasota, Florida 33578

Bruce W. Lium
U.S. Geological Survey
6481 Peachtree Ind. Blvd., Suite H
Doraville, Georgia 30340

William P. Lueck
Private Individual
2321 Limerick Drive
Tallahassee, Florida 32308

James A. McCann
U.S. Fish & Wildlife Service
National Fishery Research Lab.
Bldg. 737 IFAS
Gainesville University of Florida
Gainesville, Florida 32611

Charles R. McCoy
Apalachee Regional Planning Council
P.O. Box 428
Blountstown, Florida 32424

Harry McGinnis
Dept. of Environmental Regulation
Federal Water Programs
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, Florida 32303

Ben McPherson
U.S. Geological Survey
7815 Coral Way
Suite 110
Miami, Florida 33155

Pam McVety
Dept. of Environmental Regulation
Twin Towers Bldg.
2600 Blair Stone Road
Tallahassee, Florida 32301

Jim MacFarland
Office of Coastal Zone Management
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Ellison Madden
U.S. Fish & Wildlife Service
1503 Eastwood Drive
Slidell, Louisiana 70458

Henry Malec
Corps. of Engineers
P.O. Box 2288
Mobile, Alabama 36628

William B. Mann IV
U.S. Geological Survey
325 John Knox Road L-103
Tallahassee, Florida 32303

Dr. Harold C. Mattraw, Jr.
U.S. Geological Survey
7815 S.W. Coral Way
Suite 110
Miami, Florida 33155

James W. May
Division of State Planning
530 Carlton Bldg. Room 241
Tallahassee, Florida 32304

D. Bruce Means
Tall Timbers Research Station
Rt. 1, Box 160
Tallahassee, Florida 32312

A.J. Mehta
Dept. of Coastal & Oceanographic
Engineering
336 Weil Hall
University of Florida
Gainesville, Florida 32611

Winston Menzel
Florida State University
Dept. of Biological Science
Tallahassee, Florida 32306

Walter Milon
University of Florida
Rm 1083 McCarty Hall
Dept. of Food & Resource Economic
Gainesville, Florida 32611

Pledger A. Moon
U.S. Fish & Wildlife Service
1612 June Avenue
Panama City, Florida 32401

Roger L. Morris
University of West Florida
Biology Department
Pensacola, Florida 32504

A.W. Morrison, Jr.
Florida Dept. HRS
1323 Winewood Blvd.
Tallahassee, Florida 32301

Susan J. Morrison
Florida State University
Department of Biological Science
325 Nuclear Research Building
Tallahassee, Florida 32306

Dr. Gerald A. Moshiri
University of West Florida
Biology Department
Pensacola, Florida 32504

Gary L. Nelson
National Marine Fisheries Service
3500 Delwood Beach Road
Panama City, Florida 32407

Alice Noland
Division of State Planning
530 Carlton Building Room 241
Tallahassee, Florida 32304

Floyd A. Nudi
U.S. Fish & Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

Michael J. Oesterling
Florida Marine Advisory Program
Route 1, Box 6
Inverness, Florida 32636

Carl H. Oppenheimer
Tri Rivers
Box 368
Port Aransas, Texas 78373

John Outland
Dept. of Environmental Regulation
Twin Tower Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

J.W. Pearce
Department of Natural Resources
202 Blount Street
Tallahassee, Florida 32304

Marcia Penman
Northwest Florida Water Management
District
325 John Knox Road, Suite C-135
Tallahassee, Florida 32303

Daniel T. Penton
Department of Natural Resources
202 Blount Street
Tallahassee, Florida 32304

William J. Platt
Tall Timbers Research Station
Route 1, Box 160
Tallahassee, Florida 32312

David Powell
Associated Press
306 S. Duval Street
Tallahassee, Florida 32301

Ann M. Pedmond
N.W. Florida Water Management District
325 John Knox Road
G-135
Tallahassee, Florida 32303

James S. Richardson
Southeastern Wildlife Services, Inc.
1060 Gaines School Road
Athens, Georgia 30605

Charles Rockwood
Florida State University
Department of Economics
Tallahassee, Florida 32306

Elaine Runkle
Bureau of State Lands
Florida Dept. of Natural Resources
202 Blount Street
Tallahassee, Florida 32301

John W. Rushing
U.S. Army Corps of Engineers
South Atlantic Division
510 Title Building
30 Pryor Street, S.W.
Atlanta, Georgia 30303

Jack C. Rosenau
U.S. Geological Survey (WRD)
Suite L-103
325 John Knox Road
Tallahassee, Florida 32303

Thomas Savage
Florida Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Thomas Savage
Alabama Coastal Area Board
405 Laborde Drive
Mobile, Alabama 36609

John Scarry
Florida Dept. of State
R.A. Gray Building
Tallahassee, Florida 32304

Abe Schestopol
Consultant
2913 Ivanhoe Road
Tallahassee, Florida 32312

Charles Segelqvist
U.S. Fish & Wildlife Service
Eastern Energy & Land Use Team
Harpers Ferry Center
Harpers Ferry, West Virginia 25425

Dinesh C. Sharma
Environmental Consultant
1630 Park Avenue
Ft. Myers, Florida 33901

D. Max Sheppard
COE Department
University of Florida
336 Weil Hall
Gainesville, Florida 32611

Hanley Smith
Corps of Engineers
P.O. Box 631
Vicksburg, MS 39180

Sarah Smith
Div. of Recreation & Parks
Crown Building
202 Blount Street
Tallahassee, Florida 32304

Vickie M. Smith
U.S. Senator Richard Stone
S 208B
2639 N. Monroe
Tallahassee, Florida 32303

Wayne H. Smith
University of Florida
Ctr. Environment & Natural Resources
G027 McCarty Hall
Gainesville, Florida 32611

Ricky Stats
Leisure Properties
P.O. Box 430
East Point, Florida 32328

Walter Stevenson
Governors' Office - Alabama
ADO
State Capital
Montgomery, Alabama 36130

Lloyd Stith
Fish & Wildlife Service
Box 4277
Panama City, Florida 32401

John R. Stocks
Leisure Properties Ltd
P.O. Box 632
East Point, Florida 32328

Linda C. Sumarlidason
Dept. of Natural Resources
202 Blount Street
Bureau of State Lands
Tallahassee, Florida 32301

Addie Summers
Tri-Rivers
P.O. Box 2232
Dothan, Alabama 36302

Shirley Taylor
Sierra Club
1414 Hilltop Drive
Tallahassee, Florida 32303

W.F. Tanner
Florida State University
Dept. of Geology
Tallahassee, Florida 32306

Charles C. Thomas
Dept. of Natural Resources
Crown Bldg.
202 Blount Street
Tallahassee, Florida 32304

C. Richard Tillis
Office of Environmental Education
Department of Education
Park 20 West
Tallahassee, Florida 3230

Gloria Van Treese
U.S. Senator Richard Stone
2639 N. Monroe Street
S 200B
Tallahassee, Florida 32303

Noel O. Wamer
Division of Recreation & Parks
District II Office
3540 Thomasville Road
Tallahassee, Florida

C.H. Wharton
Georgia State University
4440 Hidden Valley Road
Decatur, Georgia 30035

David C. White
Florida State University
310 Nuclear Science
Tallahassee, Florida 32306

Estus Whitfield
Division of State Planning
Room 243
Carlton Building
Tallahassee, Florida 32304

W.K. Whitfield, Jr.
Florida - Dept. of Natural Resources
202 Blount Street
Tallahassee, Florida 32304

Richard Wieckowicz
Florida - Dept. of Environmental
Regulation
Twin Towers Building
2600 Blair Stone Road
Rallahassee, Florida 32302

Herbert L. Windom
Skidaway Institute of Oceanography
P.O. Box 13687
Savannah, Georgia 31406

Douglas B. Winfoed
U.S. Fish & Wildlife Service
P.O. Box 4277
Charleston, South Carolina 29412

APPENDIX III

CHAPTER 258

STATE PARKS AND PRESERVES

258.08 Guide meridian and base parallel park located.
258.09 Rauscher Park designated.
258.10 Division of Recreation and Parks to supervise and maintain Rauscher Park.
258.11 Land ceded for Royal Palm State Park; proviso.
258.12 Additional lands ceded for Royal Palm State Park.
258.14 Royal Palm State Park and endowment lands exempt from taxation.
258.15 St. Michael's Cemetery designated a state park.
258.16 Boca Ciega Bay Aquatic Preserve.
258.165 Biscayne Bay Aquatic Preserve.
258.17 Short title.
258.18 Statement of legislative intent.
258.19 Definitions.
258.21 Use of areas.
258.22 Selection of wilderness areas.
258.23 Authorization to acquire lands; dedication by lease agreement.
258.24 Size.
258.25 Number.
258.26 Priority of establishment.
258.28 Interagency advisory committee.
258.29 Atlas of areas.
258.30 Rules and regulations.
258.31 Signs and markers.
258.32 Withdrawal of lands from system.
258.331 Penalty for violation of ss. 258.17-258.32.
258.332 Construction of ch. 77-126.
258.35 Short title.
258.36 Legislative intent.
258.37 Definitions.
258.38 Types of aquatic preserves.
258.39 Boundaries of preserves.
258.391 Cockroach Bay Aquatic Preserve.
258.40 Scope of preserves.
258.41 Establishment of aquatic preserves.
258.42 Maintenance of preserves.
258.43 Rules and regulations.
258.44 Effect of preserves.
258.45 Provisions not superseded.
258.46 Enforcement; violations; penalty.

258.08 Guide meridian and base parallel park located.—Guide meridian and base parallel park, a park for the perpetuation and preservation of the point or place from which the state was surveyed, is established and located in Tallahassee, Leon County, on a parcel of land one-half acre square, having for its center the intersection of the guide meridian and the base parallel of Florida, more particularly described as follows, to wit:

One-eighth of an acre in the form of a square, in the northwest corner of section six in township one south, range one east; one-eighth of an acre in the form of a square, in the southwest corner of section thirty-one in township one north, range one east; one-eighth of an acre in the form of a square, in the southeast corner of section thirty-six in township one north, range one west; and one-eighth of an acre in the form of a square in the northeast corner of section one in township one south, range one west.

History.—s. 1, ch 10188, 1925; ss. 1, 2, ch. 11902, 1927; CGL 1740, 1742, 1743.

258.09 Rauscher Park designated.—There is designated and established as a state park to be known as Rauscher Park, in Escambia County, the lands lying between the Big Lagoon and the Gulf of Mexico, now owned by Escambia County, or hereafter acquired by Escambia County, adjacent or contiguous thereto, from private owners or from the United States Government; and the board of county commissioners of Escambia County may execute proper conveyance to the board of commissioners of state institutions covering the property now owned by Escambia County, as aforesaid, and said board of county commissioners of Escambia County may acquire in the name of the Division of Recreation and Parks of the Department of Natural Resources any property adjacent or contiguous thereto, from private owners or from the United States Government; and said division may accept in the name of the state the title to any such lands, whether from said Escambia County, or whether same be property acquired from private owners or the United States Government.

History.—s. 1, ch. 19345, 1939; ss. 25, 35, ch. 69-106.

258.10 Division of Recreation and Parks to supervise and maintain Rauscher Park.—After the conveyance of said lands and such additional land as may, from time to time, be acquired, under the provisions of s. 258.09, said lands shall be deemed and held to be a state park, under the supervision of the Division of Recreation and Parks of the Department of Natural Resources, and the said division is charged with the duty of providing for the development, care, upkeep, maintenance and beautification of said Rauscher Park.

History.—s. 2, ch. 19345, 1939; s. 24, ch. 57-1; ss. 25, 35, ch. 69-106.

258.11 Land ceded for Royal Palm State Park; proviso.—Section fifteen, and the north half of section twenty-two of township fifty-eight south, range thirty-seven east, situated in Dade County, is ceded to the Florida Federation of Women's Clubs and designated as the "Royal Palm State Park," to be cared for, protected, and to remain in the full possession and enjoyment, with all the possessory rights and privileges thereunto, belonging to the Florida Federation of Women's Clubs, for the purpose of a state park, for the benefit and use of all the people of Florida, perpetually; provided, that the Florida Federation of Women's Clubs shall procure a deed to 960 acres of land in Dade County, in the vicinity of said state park, suitable for agricultural purposes, conveying to said Florida Federation of Women's Clubs fee simple title thereto, said land to be used as an endowment for the perpetual use and benefit of the said park, its protection, improvement and the beautifying thereof, including the construction of roads and other improvements, either in kind or by the use of the rents and profits accruing therefrom, or the proceeds of sale thereof or any part of said endowment tract.

History.—s. 1, ch. 6949, 1915; RGS 1210; CGL 1701.

258.12 Additional lands ceded for Royal Palm State Park.—For the use and benefit of all the people of the state, the state cedes to the Florida Federation of Women's Clubs the south half of section ten, southwest quarter of section eleven, west half of section fourteen, west half of section twenty-three, south half of section twenty-two, northwest quarter of section twenty-seven, north half of section twenty-eight, and northeast quarter of section twenty-nine, township fifty-eight south, range thirty-seven east, situated in Dade County, as additional acreage to "Royal Palm State Park," to be cared for and remain in the full possession and enjoyment of said Florida Federation of Women's Clubs, with all the possessory rights and privileges to the same belonging or in anywise appertaining; provided, that said land is granted to the said Florida Federation of Women's Clubs upon the express condition that said land and every part thereof shall be used as a state park for the use and benefit of all the people of Florida, and for no other purpose; and in the event said grantee shall permit or suffer the use of said land for any other purpose, or shall discontinue the use thereof for such purpose, such misuse or discontinuance shall operate as a defeasance and said land and every part thereof shall revert to the state.

History.—s. 1, ch. 8577, 1921; CGL 1706.

258.14 Royal Palm State Park and endowment lands exempt from taxation.—The lands described in ss. 258.11 and 258.12 as the Royal Palm State Park, and the lands conveyed, and to be conveyed to the Florida Federation of Women's Clubs as an endowment for the use and benefit of said state property, are exempt from the payment of state, county, municipal, or any special assessment or any assessment of taxes.

History.—s. 2, ch. 6949, 1915; RGS 1212; s. 2, ch. 8577, 1921; CGL 1704, 1706.

258.15 St. Michael's Cemetery designated a state park.—

(1) St. Michael's Cemetery in Pensacola is designated and declared to be a state park.

(2) The Division of Recreation and Parks of the Department of Natural Resources shall manage and operate the said cemetery and shall be authorized to make such reasonable rules and regulations with respect to the said cemetery as the said division shall deem necessary for the orderly operation, protection and preservation of said cemetery. However, this section shall not be construed to prevent, and no rule and regulation shall be made which will prevent, the continued interment of bodies in the cemetery lots which are privately owned.

History.—ss. 1-3, ch. 25464, 1949; ss. 25, 35, ch. 69-106, s. 83, ch. 77-104.

258.16 Boca Ciega Bay Aquatic Preserve.—

(1) Boca Ciega Bay, in Pinellas County, as hereinafter described, is designated and established as an aquatic preserve under the provisions of this section. It is the intent of the Legislature that Boca Ciega Bay be preserved, insofar as possible, in an essentially natural condition so that its biological and aesthetic values may endure for the enjoyment of future generations.

(2)(a) For the purposes of this section, Boca Ciega Bay, sometimes referred to in this section as "the preserve," shall be comprised of that body of water in Pinellas County which lies south of the state road 688 bridge at, or near, Indian Rocks Beach and within the area enclosed by a line as follows: Beginning at a point where the east end of said bridge crosses the western shoreline of mainland Pinellas County and extending in a generally southerly direction along the western shoreline of mainland Pinellas County to the west end of the Seminole Bridge following the bridge easterly to exclude Long Bayou and Cross Bayou, thence in a southerly direction including the western shoreline of the Sunshine Skyway Causeway and extending to the southern boundary of Pinellas County, thence westerly along the Pinellas County line and around Mullet Key along a line one hundred yards seaward of the shoreline of Mullet Key and northerly along a line passing one hundred yards to the west of the shorelines of Summer Resort Key, Cabbage Key and Shell Key to the southernmost point of Long Key, thence in a generally northerly direction along the inner shoreline of Long Key, Treasure Island and Sand Key to a point where the west end of the state road 688 bridge crosses the inner shoreline of Sand Key, thence easterly along the south side of said bridge to the point of beginning. The boundary of the preserve designated as the shoreline shall mean the line of mean high water along such shoreline.

(b) The preserve established by this section shall include the submerged bottom lands, the water column upon such lands, and the islands owned by the state within the boundaries of the preserve. Any privately held land or submerged land within the established bulkhead lines or privately held islands within the preserve shall be deemed to be excluded therefrom. The 'Board of Trustees of the Internal Improvement Trust Fund may negotiate an arrangement with any such private owner whereby such lands or water bottoms may be included within the preserve.

(3) The 'Board of Trustees of the Internal Improvement Trust Fund are hereby directed to maintain Boca Ciega Bay as an aquatic preserve subject to the following provisions:

(a) No further sale, transfer, or lease of sovereignty submerged lands within the preserve shall be approved or consummated by the 'board of trustees except upon a showing of extreme hardship on the part of the applicant or when the overwhelming public interest so demands.

(b) No further dredging or filling of submerged lands within the preserve shall be approved or tolerated by the 'board of trustees except:

1. Such minimum dredging and spoiling as may be authorized for public navigation projects;

2. Such other alteration of physical conditions as may be necessary to enhance the quality or utility of the preserve as determined by the Pinellas County Water and Navigation Control Authority in a public hearing; and

3. Such dredging as is necessary for the purpose of eliminating conditions hazardous to the public

health or for the purpose of eliminating stagnant waters, unsightly mud flats, islands, and spoil banks the dredging of which would enhance the aesthetic quality and utility of the preserve and is clearly in the public interest as determined by the Pinellas County Water and Navigation Control Authority in a public hearing.

There shall be no dredging beyond the bulkhead line for the sole purpose of providing fill for upland or submerged land within the bulkhead line. In addition there shall be no drilling of wells, excavation for shell or minerals, and no erection of structures (other than docks) within the preserve, unless such activity is associated with activity authorized by this section.

[2](c) The [1]board of trustees shall not approve any seaward relocation of bulkhead lines or further establishment of bulkhead lines except when a proposed bulkhead line is located at the line of mean high water along the shoreline.

(4)(a) The [1]board of trustees shall adopt and enforce reasonable rules and regulations to carry out the provisions of this section and specifically to provide:

1. Additional preserve management criteria as may be necessary to accommodate special circumstances; and

2. Regulation of human activity within the preserve in such a manner as not to interfere unreasonably with such lawful and traditional public uses of the preserve as fishing (both sport and commercial), boating, and swimming.

(b) Other uses of the preserve, or human activity within the preserve, although not originally contemplated, may be permitted by the [1]board of trustees, but only subsequent to a formal finding of compatibility with the purposes of this section.

(5) Neither the establishment nor the management of the Boca Ciega Bay Aquatic Preserve shall operate to infringe upon the riparian rights of upland property owners adjacent to or within the preserve. Reasonable improvement for ingress and egress, mosquito control, shore protection, bridges, causeways, and similar purposes may be permitted by the [1]board of trustees, subject to the provisions of any other applicable laws under the jurisdiction of other agencies.

(6) Nothing herein shall be construed to deprive the Pinellas County Water and Navigation Control Authority of its jurisdiction, powers, and duties.

History.—ss. 1-8, ch. 69-342; ss. 27, 36, ch. 69-106.

[1]Note.—See s. 15, ch. 75-22, which abolished the Board of Trustees of the Internal Improvement Trust Fund by merging it into the Department of Natural Resources and transferring to that department all functions not transferred elsewhere by that act, and which effectively abolished the Internal Improvement Trust Fund by transferring all uncommitted balances and all future revenues to the Land Acquisition Trust Fund. Also see s. 10, ch. 75-22, transferring all functions of the board relating to the issuance of permits, certificates, licenses, exemptions, and enforcement pursuant to ch. 253 to the Department of Environmental Regulation.

[2]Note.—See s. 28, ch. 75-22, which repealed s. 253.122, relating to the power to fix bulkhead lines, and s. 7(3), ch. 75-22 (s. 253.1221), which reestablished all previously established bulkhead lines at the line of mean high water or ordinary high water.

258.165 Biscayne Bay Aquatic Preserve.—

(1) DESIGNATION.—Biscayne Bay in Dade and Monroe Counties, as hereinafter described to include Card Sound, is designated and established as an aquatic preserve under the provisions of this section. It is the intent of the legislature that Biscayne Bay be preserved in an essentially natural condition so that its biological and aesthetic values may endure for the enjoyment of future generations.

(2) BOUNDARIES.—

(a) For the purposes of this section, Biscayne Bay, sometimes referred to in this section as "the preserve," shall be comprised of the body of water in Dade and Monroe Counties known as Biscayne Bay whose boundaries are generally defined as follows:

Begin at the southwest intersection of the right-of-way of State Road 826 and the mean high-water line of Biscayne Bay (Township 52 South, Range 42 East, Dade County); thence southerly along the westerly mean high-water line of Biscayne Bay to its intersection with the right-of-way of State Road 905A (Township 59 South, Range 40 East, Monroe County); thence easterly along such right-of-way to the easterly mean high-water line of Biscayne Bay; thence northerly along the easterly mean high-water line of Biscayne Bay following the westerly shores of the most easterly islands and Keys with connecting lines drawn between the closest points of adjacent islands to the southeasterly intersection of the right-of-way of State Road 826 and the mean high-water line of Biscayne Bay; thence westerly to the point of beginning. Said boundary extends across the mouths of all artificial waterways, but includes all natural waterways tidally connected to Biscayne Bay. Excluded from the preserve are those submerged lands conveyed to the United States for the establishment of the Biscayne National Monument as defined by Public Law 90-606 of the United States.

(b) The preserve established by this section shall include the submerged bottom lands and the water column upon such lands, as well as all publicly owned islands, within the boundaries of the preserve. Any privately held upland within the boundaries of the preserve shall be deemed to be excluded therefrom. However, the [1]Board of Trustees of the Internal Improvement Trust Fund may negotiate an arrangement with any such private upland owner by which such land may be included in the preserve.

(3) AUTHORITY OF [1]TRUSTEES.—The [1]Board of Trustees of the Internal Improvement Trust Fund is authorized and directed to maintain the aquatic preserve hereby created pursuant and subject to the following provisions:

(a) No further sale, transfer, or lease of sovereignty submerged lands in the preserve shall be approved or consummated by the [1]Board of Trustees, except upon a showing of extreme hardship on the part of the applicant and a determination by the [1]Board of Trustees that such sale, transfer, or lease is in the public interest.

(b) No further dredging or filling of submerged lands of the preserve shall be approved or tolerated by the [1]Board of Trustees except:

1. Such minimum dredging and spoiling as may be authorized for public navigation projects or for such minimum dredging and spoiling as may be constituted as a public necessity or for preservation of the bay according to the expressed intent of this section.

2. Such other alteration of physical conditions as

may be necessary to enhance the quality or utility of the preserve.

3. Such minimum dredging and filling as may be authorized for the creation and maintenance of marinas, piers, and docks and their attendant navigation channels and access roads. Such projects may only be authorized upon a specific finding by the [1]Board of Trustees that there is assurance that the project will be constructed and operated in a manner that will not adversely affect the water quality of the preserve. This paragraph shall not approve the connection of upland canals to the waters of the preserve.

4. Such dredging as is necessary for the purpose of eliminating conditions hazardous to the public health or for the purpose of eliminating stagnant waters, unsightly mud flats, islands, and spoil banks, the dredging of which would enhance the aesthetic quality and utility of the preserve and be clearly in the public interest as determined by the [1]Board of Trustees.

Any dredging or filling under this subsection or improvements under subsection (5) shall be approved only after public notice and hearings in the area affected, pursuant to chapter 120.

(c) There shall be no drilling of wells, excavation for shell or minerals, or erection of structures other than docks within the preserve unless such activity is associated with activity authorized by this section.

[2](d) The [1]Board of Trustees shall not approve any seaward relocation of bulkhead lines or further establishment of bulkhead lines except when a proposed bulkhead line is located at the line of mean high water along the shoreline. Construction, replacement, or relocation of seawalls shall be prohibited without the approval of the [1]Board of Trustees, which approval may be granted only if riprap construction is used in the seawall.

(e) Notwithstanding other provisions of this section, the [1]Board of Trustees may, respecting lands lying within Biscayne Bay:

1. Enter into agreements for and establish lines delineating sovereignty and privately owned lands.

2. Enter into agreements for the exchange of, and exchange, sovereignty lands for privately owned lands.

3. Accept gifts of land within or contiguous to the preserve.

4. Negotiate for, and enter into agreements with owners of lands contiguous to sovereignty lands for, any public and private use of any of such lands.

5. Take any and all actions convenient for, or necessary to, the accomplishment of any and all of the acts and matters authorized by this paragraph.

(4) RULES.—

(a) The [1]Board of Trustees shall adopt and enforce reasonable rules and regulations to carry out the provisions of this section and specifically to provide:

1. Additional preserve management criteria as may be necessary to accommodate special circumstances.

2. Regulation of human activity within the preserve in such a manner as not to interfere unreasonably with lawful and traditional public uses of the preserve, such as fishing, (both sport and commercial), boating, and swimming.

(b) Other uses of the preserve, or human activity within the preserve, although not originally contemplated, may be permitted by the [1]Board of Trustees, but only subsequent to a formal finding of compatibility with the purposes of this section.

(c) Fishing involving the use of seines or nets is prohibited in the preserve, except when the fishing is for shrimp or mullet and such fishing is otherwise permitted by state law or rules promulgated by the Department of Natural Resources.

(5) RIPARIAN RIGHTS.—Neither the establishment nor the management of the Biscayne Bay Aquatic Preserve shall operate to infringe upon the riparian rights of upland property owners adjacent to or within the preserve. Reasonable improvement for ingress and egress, mosquito control, shore protection, public utility expansion, and similar purposes may be permitted by the [1]Board of Trustees or Department of [3][Environmental Regulation], subject to the provisions of any other applicable laws under the jurisdiction of other agencies.

(6) DISCHARGE OF WASTES PROHIBITED.—No wastes or effluents which substantially inhibit the accomplishment of the purposes of this section shall be discharged into the preserve.

(7) ENFORCEMENT.—The provisions of this section may be enforced in accordance with the provisions of s. 403.412. In addition, the Department of Legal Affairs is authorized to bring an action for civil penalties of $5,000 per day against any person, natural or corporate, who violates the provisions of this section or any rule or regulation issued hereunder.

(8) SECTIONS 403.501-403.515 APPLICABLE.—The provisions of this section shall be subject to the provisions of ss. 403.501-403.515.

History.—ss. 1-8, ch. 74-171; s. 2, ch. 75-109; s. 1, ch. 77-174.

[1]Note.—See Note 1 following s. 258.16.

[2]Note.—Bracketed language substituted for "Pollution Control." See s. 8, ch. 75-22, which transferred the Department of Pollution Control to the Department of Environmental Regulation.

[3]Note.—Section 28, ch. 75-22, repealed s. 253.122, relating to the power to fix bulkhead lines.

258.17 Short title.—Sections 258.17-258.32 shall be known and may be cited as the "State Wilderness System Act."

History.—s. 1, ch. 70-355; s. 1, ch. 77-126.

258.18 Statement of legislative intent.—It is the legislative intent to establish a state wilderness system consisting of designated wilderness areas which shall be set aside in permanent preserves, forever off limits to incompatible human activity. These areas shall be dedicated in perpetuity as wilderness areas and shall be managed in such a way as to protect and enhance their basic natural qualities for public enjoyment and utilization as reminders of the natural conditions that preceded man.

History.—s. 2, ch. 70-355.

258.19 Definitions.—As used in ss. 258.17-258.32:

(1) "Wilderness area" means an area formally set aside for preservation essentially in its natural or existing condition by regulating all human activity which might have an effect on it. Such an area is

generally unaltered by man and provides a feeling of solitude and remoteness. These areas are set aside for aesthetic, biological, or scientific reasons.

(2) "Department" means the Department of Natural Resources.

History.—s. 3, ch. 70-355; s. 1, ch. 70-439; s. 2, ch. 77-126.

258.21 Use of areas.—

(1) Wilderness areas may be available for use by the public, to the extent compatible with the purposes for which the areas are established, for the following activities:

(a) Hiking;
(b) Swimming;
(c) Fishing;
(d) Restricted boating;
(e) Hunting;
(f) Picnicking;
(g) Sightseeing;
(h) Primitive camping;
(i) Nature study; and
(j) Research.

(2) Wilderness areas may also be designated for use for, but not limited to, the following purposes:

(a) Natural water storage;
(b) Ground water recharge areas;
(c) Preservation of estuarine and marsh systems; and
(d) Fish and wildlife breeding grounds and refuges.

(3) Artificial manipulation to further the purposes enumerated in subsection (2) is prohibited, except for the purpose of restoring and maintaining optimum natural conditions.

History.—s. 5, ch. 70-355; s. 3, ch. 77-126.

258.22 Selection of wilderness areas.—

(1) The Department of Natural Resources may, upon recommendation of the state agency which manages any lands involved and after public notice and a public meeting in each county in which the area is to be located, establish wilderness areas, formally setting aside such areas by proper resolution.

(2) The resolution establishing a wilderness area shall include:

(a) A legal description of the area to be included.
(b) Dedication of the area in perpetuity.
(c) A general statement of what is sought to be preserved.
(d) A clear statement of the management objectives and procedures for the area.

(3) Such resolutions shall be filed for record in each county in which a portion of the wilderness area is located.

(4) Lands owned by the [1]Board of Trustees of the Internal Improvement Trust Fund may, upon recommendation of the state agency which manages such lands, be included in wilderness areas if accepted by the department. Lands owned by any governmental agency may be included in a wilderness area, subject to affirmative action of the governmental agency owning the land and acceptance by the department.

History.—s. 6, ch. 70-355; s. 1, ch. 70-439; s. 4, ch. 77-126.
[1]Note.—See Note 1 following s. 258.16.

258.23 Authorization to acquire lands; dedication by lease agreement.—

(1) For the purpose of establishing wilderness areas, the Department of Natural Resources is authorized to acquire lands by any lawful means other than through the use of the power of eminent domain.

(2) Notwithstanding the provisions of s. 258.18 and s. 258.22(2)(b) requiring dedication in perpetuity, the department is authorized to lease privately owned lands to be included in the wilderness system upon the recommendation of the interagency advisory committee established pursuant to s. 258.28 and upon application by the owner of the property. Such lease shall be evidenced by a written instrument containing the following conditions:

(a) Term of the lease shall be for a minimum period of 50 years.

(b) The department shall have the power and duty to enforce the provisions of each lease agreement and shall additionally have the power to terminate any lease if the termination is demonstrated to be in the best interest of the wilderness system.

(c) The department shall pay no more than $1 per year for any such lease.

(d) The owner of such leased land is prohibited from any use of the land which use is incompatible with ss. 258.17-258.32.

(3) In assessing the leased land, the property appraiser of the county in which the land is located shall give full recognition to the duration of the lease and the extent of the restrictions imposed therein.

History.—s. 7, ch. 70-355; s. 1, ch. 70-439; s. 1, ch. 73-309; s. 1, ch. 77-102; s. 5, ch. 77-126.

258.24 Size.—The size of a wilderness area shall be large enough to include the principal features which justify its establishment.

History.—s. 8, ch. 70-355.

258.25 Number.—There shall be no fixed limit on the number of wilderness areas to be established, but each such area shall be justified by its intrinsic merit, as determined by the department.

History.—s. 9, ch. 70-355; s. 1, ch. 70-439; s. 6, ch. 77-126.

258.26 Priority of establishment.—The order of selection and establishment of wilderness areas shall be governed by the relative vulnerability of the features of the area sought to be preserved. The Department of Natural Resources is directed to give early consideration to wilderness areas which:

(1) Are in close proximity to urban or rapidly developing areas.

(2) Are in imminent danger from some other source.

(3) Are designed to protect rare or endangered species or other unique natural features.

(4) Constitute the last vestiges of natural conditions within a given region.

History.—s. 10, ch. 70-355; s. 1, ch. 70-439; s. 7, ch. 77-126.

258.28 Interagency advisory committee.—The Department of Natural Resources shall create a continuing interagency advisory committee to advise and assist in:

(1) The selection of wilderness areas; and

(2) The formulation of rules and regulations for the use of such areas.

History.—s. 12, ch. 70-355; s. 1, ch. 70-439; s. 8, ch. 77-126.

258.29 Atlas of areas.—The Department of Natural Resources shall maintain an atlas of wilderness areas, on maps of suitable scale.

History.—s. 13, ch. 70-355; s. 1, ch. 70-439; s. 9, ch. 77-126.

258.30 Rules and regulations.—The Department of Natural Resources shall adopt rules and regulations prescribing a uniform set of general management criteria covering all wilderness areas.

(1) No alteration of physical conditions within a wilderness area shall be permitted except to provide:

(a) Minimal use facilities, such as hiking trails, pit toilets, manually operated water pumps, and primitive camp sites; and

(b) Minimum management facilities, which may include boundary fences and unimproved vehicle trails for control purposes and emergency access.

(2) The following are specifically prohibited activities or uses:

(a) Dredging and dredge spoil dumping;
(b) Artificial drainage or impoundments;
(c) Farming;
(d) Clearing of land;
(e) Dumping of wastes;
(f) Mining;
(g) Pesticide spraying, except emergency measures required to protect public health '[and] spraying for forestry disease control;
(h) The use of motorized vehicles on land or water, except for emergencies or valid management purposes; and
(i) Removal of timber, except to restore original plant communities.

(3) All human activity within each wilderness area shall be subject to special rules and regulations for implementing the intent and purpose of ss. 258.17-258.32 for the particular area involved.

(4) Other uses of a wilderness area, or human activity within the area, although not originally contemplated, may be permitted by the department, but only after a formal finding of compatibility made by the department, and subject to regulation.

History.—s. 14, ch. 70-355; s. 1, ch. 70-439; s. 10, ch. 77-126.
[1]Note.—Bracketed word substituted by the editors for the word "or."

258.31 Signs and markers.—Wilderness areas shall be identified by appropriate signs and boundary markers.

History.—s. 15, ch. 70-355.

258.32 Withdrawal of lands from system.—Except pursuant to s. 258.23(2)(b), no part of any wilderness area may be withdrawn from the state wilderness system except by resolution of the Department of Natural Resources and only after notice of such proposed withdrawal is published in each county in which the area affected is located, in the manner prescribed by law and after a public meeting is held, if requested.

History.—s. 16, ch. 70-355; s. 2, ch. 73-309; s. 11, ch. 77-126.

258.331 Penalty for violation of ss. 258.17-258.32.—Any violation by any person, natural or corporate, of the provisions of this act or any rule or regulation issued hereunder shall be punishable by a fine not to exceed $500 per violation.

History.—s. 12, ch. 77-126.

258.332 Construction of ch. 77-126.—Nothing in this act shall be construed so as to prevent the lawful management of water resources by any water management district created pursuant to chapter 373, or so as to divest any lawful rights acquired prior to the effective date of this act.

History.—s. 13, ch. 77-126.

258.35 Short title.—Sections 258.35-258.46 shall be known and may be cited as the "Florida Aquatic Preserve Act of 1975."

History.—s. 1, ch. 75-172.

258.36 Legislative intent.—It is the intent of the Legislature that the state-owned submerged lands in areas which have exceptional biological, aesthetic, and scientific value, as hereinafter described, be set aside forever as aquatic preserves or sanctuaries for the benefit of future generations.

History.—s. 1, ch. 75-172.

258.37 Definitions.—As used in ss. 258.35 through 258.46:

(1) "Aquatic preserve" means an exceptional area of submerged lands and its associated waters set aside for being maintained essentially in its natural or existing condition.

(2) "Biological type" means an area set aside to promote certain forms of animal or plant life or their supporting habitat.

(3) "Aesthetic type" means an area set aside to maintain certain scenic qualities or amenities.

(4) "Scientific type" means an area set aside to maintain certain qualities or features which have scientific value or significance.

'(5) "Board" means the Board of Trustees of the Internal Improvement Trust Fund.

History.—s. 1, ch. 75-172.
[1]Note.—See Note 1 following s. 258.16.

258.38 Types of aquatic preserves.—Each aquatic preserve shall be characterized as being one or more of the following principal types:

(1) Biological.
(2) Aesthetic.
(3) Scientific.

History.—s. 1, ch. 75-172.

258.39 Boundaries of preserves.—The submerged lands included within the boundaries of Nassau, Duval, St. Johns, Flagler, Volusia, Brevard, Indian River, St. Lucie, Charlotte, Pinellas, Martin, Palm Beach, Broward, Dade, Monroe, Collier, Lee, Citrus, Franklin, Gulf, Bay, Okaloosa, Santa Rosa, and Escambia Counties, as hereinafter described, with the exception of privately held submerged lands lying landward of established bulkheads and of privately held submerged lands within Monroe County where the establishment of bulkhead lines is not required, are hereby declared to be aquatic pre-

serves. Such aquatic preserve areas include:

(1) The Fort Clinch State Park Aquatic Preserve, as described in the Official Records of Nassau County in Book 108, pages 343-346, and in Book 111, page 409.

(2) Nassau River-St. Johns River Marshes Aquatic Preserve, as described in the Official Records of Duval County in Volume 3183, pages 547-552, and in the Official Records of Nassau County in Book 108, pages 232-237.

(3) Pellicer Creek Aquatic Preserve, as described in the Official Records of St. Johns County in Book 181, pages 363-366, and in the Official Records of Flagler County in Book 33, pages 131-134.

(4) Tomoka Marsh Aquatic Preserve, as described in the Official Records of Flagler County in Book 33, pages 135-138, and in the Official Records of Volusia County in Book 1244, pages 615-618.

(5) Mosquito Lagoon Aquatic Preserve, as described in the Official Records of Volusia County in Book 1244, pages 619-623, and in the Official Records of Brevard County in Book 1143, pages 190-194.

(6) Banana River Aquatic Preserve, as described in the Official Records of Brevard County in Book 1143, pages 195-198.

(7) Indian River-Malabar to Sebastian Aquatic Preserve, as described in the Official Records of Brevard County in Book 1143, pages 199-202, and in the Official Records of Indian River County in Book 368, pages 5-8.

(8) Indian River-Vero Beach to Fort Pierce Aquatic Preserve, as described in the Official Records of Indian River County in Book 368, pages 9-12, and in the Official Records of St. Lucie County in Book 187, pages 1083-1086.

(9) Jensen Beach to Jupiter Inlet Aquatic Preserve, as described in the Official Records of St. Lucie County in Book 218, pages 2865-2869.

(10) Loxahatchee River-Lake Worth Creek Aquatic Preserve, as described in the Official Records of Martin County in Book 320, pages 193-196, and in the Official Records of Palm Beach County in Volume 1860, pages 806-809.

(11) Biscayne Bay-Cape Florida to Monroe County Line Aquatic Preserve, as described in the Official Records of Dade County in Book 7055, pages 852-856, less, however, those lands and waters as described in s. 258.165.

(12) North Fork, St. Lucie Aquatic Preserve, as described in the Official Records of Martin County in Book 337, pages 2159-2162, and in the Official Records of St. Lucie County in Book 201, pages 1676-1679.

(13) Yellow River Marsh Aquatic Preserve, as described in the Official Records of Santa Rosa County in Book 206, pages 568-571.

(14) Fort Pickens State Park Aquatic Preserve, as described in the Official Records of Santa Rosa County in Book 220, pages 60-63, and in the Official Records of Escambia County in Book 518, pages 659-662.

(15) Rocky Bayou State Park Aquatic Preserve, as described in the Official Records of Okaloosa County in Book 593, pages 742-745.

(16) St. Andrews State Park Aquatic Preserve, as described in the Official Records of Bay County in Book 379, pages 547-550.

(17) St. Joseph Bay Aquatic Preserve, as described in the Official Records of Gulf County in Book 46, pages 73-76.

(18) Apalachicola Bay Aquatic Preserve, as described in the Official Records of Gulf County in Book 46, pages 77-81, and in the Official Records of Franklin County in Volume 98, pages 102-106.

(19) Alligator Harbor Aquatic Preserve, as described in the Official Records of Franklin County in Volume 98, pages 82-85.

(20) St. Martins Marsh Aquatic Preserve, as described in the Official Records of Citrus County in Book 276, pages 238-241.

(21) Matlacha Pass Aquatic Preserve, as described in the Official Records of Lee County in Book 800, pages 725-728.

(22) Pine Island Sound Aquatic Preserve, as described in the Official Records of Lee County in Book 648, pages 732-736.

(23) Cape Romano-Ten Thousand Islands Aquatic Preserve, as described in the Official Records of Collier County in Book 381, pages 298-301.

(24) Lignumvitae Key Aquatic Preserve, as described in the Official Records of Monroe County in Book 502, pages 139-142.

(25) Coupon Bight Aquatic Preserve, as described in the Official Records of Monroe County in Book 502, pages 143-146.

(26) Lake Jackson Aquatic Preserve, as established by chapter 73-534, Laws of Florida, and defined as authorized by s. 253.151 or as otherwise authorized by law.

(27) Pinellas County Aquatic Preserve, as established by chapter 72-663, Laws of Florida; Boca Ciega Aquatic Preserve, as established by s. 258.16; and the Biscayne Bay Aquatic Preserve, as established by s. 258.165. *If any provision of this act is in conflict with* an aquatic preserve established by s. 258.16, chapter 72-663, Laws of Florida, or s. 258.165, the stronger provision for the maintenance of the aquatic preserve shall prevail.

(28) Estero Bay Aquatic Preserve, the boundaries of which are generally: All of those sovereignty submerged lands located bayward of the mean high water line being in Sections 13, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 26, 27, 35 and 36, Township 46 South, Range 24 East; and in Sections 19, 20, 28, 29 and 34, Township 46 South, Range 24 East, lying north and east of Matanzas Pass Channel; and in Sections 19, 30 and 31, Township 46 South, Range 25 East; and in Section 6, Township 47 South, Range 25 East; and in Sections 1, 2 and 3, Township 47 South, Range 24 East, in Lee County, Florida. Any and all submerged lands conveyed by the Trustees of the Internal Improvement Trust Fund prior to October 12, 1966, and any and all uplands now in private ownership are specifically exempted from this preserve.

(29) Cape Haze Aquatic Preserve, the boundaries of which are generally: That part of Gasparilla Sound, Catfish Creek, Whiddon Creek, "The Cutoff", Turtle Bay, and Charlotte Harbor lying within the following described limits: Northerly limits: Commence at the northwest corner of Section 18, Township 42 South, Range 21 East, thence south along the west line of said Section 18 to its intersection with the Government Meander Line of 1843-1844, and the point of beginning, thence southeasterly along said Meander Line to the northwesterly shore line of Catfish Creek, thence northeasterly along said shore line to the north line of said Section 18, thence east along said north line to the easterly shore line of Catfish Creek, thence southeasterly along said shore line to the east line of said Section 18, thence south along said east line, crossing an arm of said Catfish Creek to the southerly shore line of said creek, thence westerly along said southerly shore line and southerly along the easterly shore line of Catfish Creek to said Government Meander Line, thence easterly and southeasterly along said Meander Line to the northerly shore line of Gasparilla Sound in Section 21, Township 42 South, Range 21 East, thence easterly along said northerly shore line and northeasterly along the westerly shore line of Whiddon Creek to the east west quarter line in Section 16, Township 42 South, Range 21 East, thence east along said quarter line and the quarter Section line of Section 15, Township 42 South, Range 21 East to the easterly shore line of Whiddon Creek, thence southerly along said shore line to the northerly shore line of "The Cutoff", thence easterly along said shore line to the westerly shore line of Turtle Bay, thence northeasterly along said shore line to its intersection with said Government Meander Line in Section 23, Township 42 South, Range 21 East, thence northeasterly along said Meander Line to the east line of Section 12, Township 42 South, Range 21 East, thence north along the east line of said Section 12, and the east line of Section 1, Township 42 South, Range 21 East to the northwest corner of Section 6, Township 42 South, Range 22 East, thence east along the north line and extension thereof of said Section 6 to a point 2640 feet east of the westerly shore line of Charlotte Harbor and the end of the northerly limits. Easterly limits: Commence at the northwest corner of Section 6, Township 42 South, Range 22 East, thence east along the north line of said Section 6 and extension thereof to a point 2640 feet east of the westerly shore line of Charlotte Harbor and the point of beginning, thence southerly along a line 2640 feet easterly of and parallel with the westerly shore line of Charlotte Harbor and along a southerly extension of said line to the line dividing Charlotte and Lee Counties and the end of the easterly limits. Southerly limits: Begin at the point of ending of the easterly limits, above described, said point being in the line dividing Charlotte and Lee Counties, thence southwesterly along a straight line to the most southerly point of Devil Fish Key, thence continue along said line to the easterly right of way of the Intracoastal Waterway and the end of the southerly limits. Westerly limits: Begin at the point of ending of the southerly limits as described above, thence northerly along the easterly right of way line of the Intracoastal Waterway to its intersection with a southerly extension of the west line of Section 18, Township 42 South, Range 21 East, thence north along said line to point of beginning.

(30) Wekiva River Aquatic Preserve, the boundaries of which are generally: All the state-owned sovereignty lands lying waterward of the ordinary high water mark of the Wekiva River and the Little Wekiva River and their tributaries lying and being in Lake, Seminole, and Orange counties and more particularly described as follows:

(a) In Sections 15, 16, 17, 20, 21, 22, 27, 28, 29, and 30, Township 20 South, Range 29 East. These sections are also depicted on the Forest City Quadrangle (U.S.G.S. 7.5 minute series-topographic) 1959 (70PR); and

(b) In Sections 3, 4, 8, 9 and 10, Township 20 South, Range 29 East and in Sections 21, 28 and 33, Township 19 South, Range 29 East lying north of the right-of-way for the Atlantic Coast Line Railroad and that part of Section 33, Township 19 South, Range 29 East lying between the Lake and Orange County lines and the right-of-way of the Atlantic Coast Line Railroad. These sections are also depicted on the Sanford SW Quadrangle (U.S.G.S. 7.5 minute series-topographic) 1965 (70-1); and

(c) All state-owned sovereignty lands, public lands, and lands whether public or private below the ordinary high water mark of the Wekiva River and the Little Wekiva and their tributaries within the Peter Miranda Grant in Lake County lying below the 10 foot m.s.l. contour line nearest the meander line of the Wekiva River and all state-owned sovereignty lands, public lands, and lands whether public or private below the ordinary high water mark of the Wekiva River and the Little Wekiva and their tributaries within the Moses E. Levy Grant in Lake County below the 10 foot m.s.l. contour line nearest the meander lines of the Wekiva River and Black Water Creek as depicted on the PINE LAKES 1962 (70-1), ORANGE CITY 1964 (70PR), SANFORD 1965 (70-1), and SANFORD S.W. 1965 (70-1) QUADRANGLES (U.S.G.S. 7.5 minute topographic); and

(d) All state-owned sovereignty lands, public lands, and lands whether public or private below the ordinary high water mark of the Wekiva River and the Little Wekiva River and their tributaries lying below the 10 foot m.s.l. contour line nearest the meander line of the Wekiva and St. John's Rivers as shown on the ORANGE CITY 1964 (70PR), SANFORD 1965 (70-1), and SANFORD S.W. 1965 (70-1) QUADRANGLES (U.S.G.S. 7.5 minute topographic) within the following described property: Beginning at a point on the south boundary of the Moses E. Levy Grant, Township 19 South, Range 29 East, at its intersection with the meander line of the Wekiva River; thence south 60½ degrees east along said boundary line 4915.68 feet; thence north 29½ degrees east 15,516.5 feet to the meander line of the St. John's River; thence northerly along the meander line of the St. John's River to the mouth of the Wekiva River; thence southerly along the meander line of the Wekiva River to the beginning; and

(e) All state-owned sovereignty lands, public lands, and lands whether public or private below the ordinary high water mark of the Wekiva River and the Little Wekiva River and their tributaries within the Peter Miranda Grant lying east of the Wekiva River, less the following:

1. State Road 46 and all land lying south of said State Road No. 46.
2. Beginning 15.56 chains West of the Southeast

corner of the SW ¼ of the NE ¼ of Section 21, Township 19 South, Range 29 East, run east 600 feet; thence north 960 feet; thence west 340 feet to the Wekiva River; thence southwesterly along said Wekiva River to point of beginning.

3. That part of the east ¼ of the SW ¼ of Section 22, Township 19 South, Range 29 East, lying within the Peter Miranda Grant east of the Wekiva River.

(31) Rookery Bay Aquatic Preserve, the boundaries of which are generally: All of the state owned sovereignty lands lying waterward of the mean high water line in Rookery Bay and in Henderson Creek and the tributaries thereto in Collier County, Florida. Said lands being more particularly described as lying and being in Sections 1, 2, 11, 12 and 13, Township 51 South, Range 25 East and in Sections 7, 8, 9, 16, 17, 18, 19 and 20, Township 51 South, Range 26 East, Collier County, Florida.

Any and all submerged lands theretofore conveyed by the Trustees of the Internal Improvement Trust Fund and any and all uplands now in private ownership are specifically exempted from this dedication.

History.—s. 1, ch. 75-172; s. 1, ch. 76-100; s. 1, ch. 76-211; s. 84, ch. 77-104.

258.391 Cockroach Bay Aquatic Preserve.—The designation by the [1]Board of Trustees of the Internal Improvement Trust Fund on May 18, 1976, of the following described area in Hillsborough County for inclusion in the aquatic preserve system under the Florida Aquatic Preserve Act of 1975 is hereby confirmed. Such area, to be known as the Cockroach Bay Aquatic Preserve, shall be included in the aquatic preserve system for the period of a 40-year lease of such area by the board from the Tampa Port Authority and shall include the following described real property: Begin at the northeast corner of Section 1, Township 33 South, Range 17 East, Manatee County, thence west along the north line of said Section 1 to its intersection with the mean high water line of Tampa Bay, said point being the point of beginning; from said point of beginning continue west 500 feet into the waters of Tampa Bay, thence northeasterly along a line 500 feet westerly of the mean high water line of Tampa Bay, said line also being 500 feet westerly of the mean high water line on Beacon Key, Snake Key, Camp Key, Big Pass Key, Little Cockroach Island, and Sand Key, to a point due west from Bird Key, thence east to the most southwesterly point of Bird Key, thence easterly along a channel along the northerly side of Tropical Island and of Goat Island to the most easterly point of said Goat Island, thence south to the intersection of the mean high water line of the southerly shore of the Little Manatee River, thence in a northwesterly, westerly, and southwesterly direction along the mean high water line of Tampa Bay and Cockroach Bay to the point of beginning. Less any islands, submerged lands, or uplands not owned by the Tampa Port Authority.

History.—s. 1, ch. 76-197.
[1]Note.—See Note 1 following s. 258.16.

258.40 Scope of preserves.—

(1) The aquatic preserves established under this act shall include only lands or water bottoms owned by the state as set forth in s. 253.03 and such lands or water bottoms owned by other governmental agencies as may be specifically authorized for inclusion by appropriate instrument in writing from such agency. Any privately owned lands or water bottoms shall be deemed to be excluded therefrom; however, the [1]board may negotiate an arrangement with any such private owner by which such land may be included in the preserves.

(2) Any publicly owned and maintained navigation channel or other public works project authorized by the United States Congress designed to improve or maintain commerce and navigation shall be deemed excluded from the aquatic preserves established under this act.

(3) All lands lost by avulsion or by artificially induced erosion shall be deemed excluded from the provisions of this act.

History.—s. 1, ch. 75-172.
[1]Note.—See Note 1 following s. 258.16.

258.41 Establishment of aquatic preserves.—

(1) The [1]board may establish additional areas to be included in the aquatic preserve system, subject to confirmation by the Legislature.

(2) The [1]board may, after public notice and public hearing in the county or counties in which the proposed preserve is to be located, adopt a resolution formally setting aside such areas to be included in the aquatic preserve system.

(3) The resolution setting aside an aquatic preserve area shall include:

(a) A legal description of the area to be included.

(b) The designation of the type of aquatic preserve being set aside.

(c) A general statement of what is sought to be preserved.

(d) A clear statement of the management responsibilities for the area.

(4) Lands and water bottoms owned by other governmental agencies may be included in an aquatic preserve upon specific authorization for inclusion by an appropriate instrument in writing from the governmental agency.

(5) Lands and water bottoms in private ownership may be included in an aquatic preserve upon specific authorization for inclusion by an appropriate instrument in writing from the owner. The appropriate instrument shall be either a dedication in perpetuity or a lease. Such lease shall contain the following conditions:

(a) Term of the lease shall be for a minimum period of 10 years.

(b) The [1]board shall have the power and duty to enforce the provisions of each lease agreement and shall additionally have the power to terminate any lease if the termination is in the best interest of the aquatic preserve system.

(c) The [1]board shall pay no more than $1 per year for any such lease.

(6) Except as provided in subsection (5) no aquatic preserve or any part thereof shall be withdrawn from the state aquatic preserve system except by an act of the Legislature. Notice of such proposed legislation shall be published in each county in which the affected area is located, in the manner prescribed by law relating to local legislation.

(7) Within 30 days of the designation and establishment of an aquatic preserve, the [1]Board of Trustees of the Internal Improvement Trust Fund shall record in the public records of the county or counties in which the aquatic preserve is located a legal description of the aquatic preserve.

History.—s. 1, ch. 75-172.
[1]Note.—See Note 1 following s. 258.16.

258.42 Maintenance of preserves.—The [1]Board of Trustees of the Internal Improvement Trust Fund shall maintain such aquatic preserves subject to the following provisions:

(1) No further sale, lease, or transfer of sovereignty submerged lands shall be approved or consummated by the [1]trustees except when such sale, lease, or transfer is in the public interest.

[2](2) The [1]trustees shall not approve the waterward relocation or setting of bulkhead lines waterward of the line of mean high water within the preserve except when public road and bridge construction projects have no reasonable alternative and it is shown to be not contrary to the public interest.

(3)(a) No further dredging or filling of submerged lands shall be approved by the [1]trustees except the following activities may be authorized pursuant to a permit:

1. Such minimum dredging and spoiling as may be authorized for public navigation projects.

2. Such minimum dredging and spoiling as may be authorized for the creation and maintenance of marinas, piers, and docks and their attendant navigation channels.

3. Such other alteration of physical conditions as may, in the opinion of the [1]trustees, be necessary to enhance the quality or utility of the preserve or the public health generally.

4. Such other maintenance dredging as may be required for existing navigation channels.

5. Such restoration of land as authorized by s. 253.124(8).

6. Such reasonable improvements as may be necessary for public utility installation or expansion.

7. Installation and maintenance of oil and gas transportation facilities, provided such facilities are properly marked with marine aids to navigation as prescribed by federal law.

(b) There shall, in no case, be any dredging seaward of a bulkhead line for the sole or primary purpose of providing fill for any area landward of a bulkhead line.

(c) There shall be no drilling of gas or oil wells. However, this will not prohibit the state from leasing the oil and gas rights and permitting drilling from outside the preserve to explore for oil and gas if approved by the [1]board.

(d) There shall be no excavation of minerals, except the dredging of dead oyster shells as approved by the Department of Natural Resources.

(e) There shall be no erection of structures within the preserve, except:

1. Private docks for reasonable ingress or egress of riparian owners;

2. Commercial docking facilities shown to be consistent with the use or management criteria of the preserve; and

3. Structures for shore protection, approved navigational aids, or public utility crossings authorized under subsection (3)(a).

(f) No wastes or effluents shall be discharged into the preserve which substantially inhibit the accomplishment of the purposes of this act.

(g) No non-permitted wastes or effluents shall be directly discharged into the preserve which substantially inhibit the accomplishment of the purposes of this act.

History.—ss. 1, 2, 4, ch. 75-172; s. 1, ch. 77-174.
[1]Note.—See Note 1 following s. 258.16.
[2]Note.—See s. 26, ch. 75-22, which repealed s. 253.122, relating to the power to fix bulkhead lines, and s. 7(3), ch. 75-22 (s. 253.1221), which reestablished all previously established bulkhead lines at the line of mean high water or ordinary high water.

258.43 Rules and regulations.—

(1) The [1]Board of Trustees of the Internal Improvement Trust Fund shall adopt and enforce reasonable rules and regulations to carry out the provisions of this act and specifically to provide regulation of human activity within the preserve in such a manner as not to unreasonably interfere with lawful and traditional public uses of the preserve, such as sport and commercial fishing, boating, and swimming.

(2) Other uses of the preserve, or human activity within the preserve, although not originally contemplated, may be permitted by the [1]trustees, but only subsequent to a formal finding of compatibility with the purposes of this act.

History.—s. 1, ch. 75-172.
[1]Note.—See Note 1 following s. 258.16.

258.44 Effect of preserves.—Neither the establishment nor the management of the aquatic preserves under the provisions of this act shall operate to infringe upon the traditional riparian rights of upland property owners adjacent to or within the preserves. Reasonable improvement for ingress and egress, mosquito control, shore protection, public utility expansion, surface water drainage, installation and maintenance of oil and gas transportation facilities, and similar purposes may be permitted by the [1]trustees subject to the provisions of any other applicable laws under the jurisdiction of other agencies.

History.—s. 1, ch. 75-172.
[1]Note.—See Note 1 following s. 258.16.

258.45 Provisions not superseded.—The provisions of this act shall not supersede, but shall be subject to, the provisions of ss. 403.501 through 403.515.

History.—ss. 3, 6, ch. 75-172.

258.46 Enforcement; violations; penalty.—The provisions of this act may be enforced by the [1]Board of Trustees of the Internal Improvement Trust Fund or in accordance with the provisions of s. 403.412. However, any violation by any person, natural or corporate, of the provisions of this act or any rule or regulation issued hereunder shall be further punishable by a civil penalty of not less than $500 per day or more than $5,000 per day of such violation.

History.—s. 5, ch. 75-172.
[1]Note.—See Note 1 following s. 258.16.

APPENDIX IV

CHAPTER 259

LAND CONSERVATION ACT OF 1972

259.01 Short title.
259.02 Authority; full faith and credit bonds.
259.03 Definitions.
259.04 Board; powers and duties.
259.05 Issuance of bonds.
259.06 Construction.
259.07 Public meetings.

259.01 Short title.—This chapter shall be known and may be cited as the "Land Conservation Act of 1972."

History.—s. 1, ch. 72-300.

259.02 Authority; full faith and credit bonds.—Pursuant to the provisions of s. 11(a) of Art. VII of the State Constitution and s. 215.59, the issuance of state bonds pledging the full faith and credit of the state in the principal amount, including any refinancing, not to exceed $200 million for state capital projects for environmentally endangered lands and $40 million for state capital projects for outdoor recreation lands is hereby authorized, subject to the provisions of ss. 259.01-259.06.

History.—s. 1, ch. 72-300.

259.03 Definitions.—The following terms and phrases when used in ss. 259.01-259.06 shall have the meaning ascribed to them in this section, except where the context clearly indicates a different meaning:

(1) "State capital projects for environmentally endangered lands" means a state capital project, as required by s. 11(a) of Art. VII of the State Constitution, which shall have as its purpose the conservation and protection of environmentally unique and irreplaceable lands as valued ecological resources of this state, including without limitation:

(a) Those areas of ecological significance the development of which by private or public works would cause the deterioration of submerged lands, inland or coastal waters, marshes, or wilderness areas essential to the environmental integrity of the area or of adjacent areas;

(b) Those areas which, in the judgment of the Game and Fresh Water Fish Commission, Department of Natural Resources, or Department of "[Environmental Regulation], the development of which would require a remedial public works project to limit or correct environmental damage; or

(c) Any beaches or beach areas within the state which have been eroded or destroyed by natural forces or which are threatened, or potentially threatened, by erosion or destruction by natural forces.

(2) "State capital project for outdoor recreation lands" means a state capital project, as required by s. 11(a) of Art. VII of the State Constitution, which shall be for the purposes set out in chapter 375.

(3) "Board" means the Governor and cabinet, as the head of the Department of Natural Resources.

(4) "Division" means the Division of Bond Finance of the Department of General Services.

History.—s. 1, ch. 72-300.
"Note.—Bracketed language substituted for "Pollution Control." See s. 8, ch. 75-22.

259.04 Board; powers and duties.—

(1) *For state capital projects for environmentally endangered lands:*

(a) The board is given the responsibility, authority, and power to develop and execute a comprehensive plan to conserve and protect environmentally endangered lands in this state. This plan shall be kept current through continual reevaluation and revision.

(b) The board may enter into contracts with the government of the United States or any agency or instrumentality thereof; the state or any county, municipality, district authority, or political subdivision; or any private corporation, partnership, association, or person providing for or relating to the conservation or protection of certain lands in accomplishing the purposes of ss. 259.01-259.06.

(c) The board is authorized to acquire lands, water areas, and related resources. The board is authorized to enter into contracts for purchase and to purchase the fee or any lesser interest sufficient to meet the purposes of ss. 259.01-259.06 of any environmentally endangered lands or outdoor recreation lands.

(2) *For state capital projects for outdoor recreation lands,* the provisions of chapter 375 shall apply.

History.—s. 1, ch. 72-300.

259.05 Issuance of bonds.—

(1) Upon request of the board, by appropriate resolution, the Division of Bond Finance from time to time, subject to the debt limitation provided herein, may issue bonds pledging the full faith and credit of the state as shall be necessary to provide sufficient funds to achieve the purposes set out in such request.

(2) The issuance of such bonds to finance state capital projects for environmentally endangered lands or outdoor recreation lands is authorized in the manner, and subject to the limitations, provided by the State Bond Act, except as otherwise expressly provided herein.

History.—s. 1, ch. 72-300.
cf.—ss. 215.57-215.83 State Bond Act.

259.06 Construction.—The provisions of ss. 259.01-259.06 shall be liberally construed in a manner to accomplish the purposes thereof.

History.—s. 1, ch. 72-300.

259.07 Public meetings.—The Department of Natural Resources, before making recommendations to the board for the purchase of any environmentally endangered land, shall hold a public meeting on the proposed purchase of such land in the county where a major portion of such land is situated. At least 30 days in advance of such public meeting, notice shall be published in a newspaper of general circulation in the area where such land is located, indicating the date, time, and place of such public meeting. A report of the public meeting shall be submitted to the board along with the recommendation for purchase of such land.

History.—s. 1, ch. 74-80

TITLE XVII

PUBLIC LANDS AND PROPERTY

CHAPTER 253

LAND ACQUISITION TRUST FUND

253.01 Internal Improvement Trust Fund established.
253.015 Limitation on expenditure of trust fund.
253.02 Board of trustees; powers and duties.
253.03 Board of trustees to administer state lands; lands enumerated.
253.031 Land office; custody of documents, etc., concerning land; moneys; plats, etc.
253.032 Land office; Commissioner of Agriculture transfer of powers and duties.
253.033 Inter-American Center property; transfer to board; continued use for government purposes.
253.04 Duty of board to protect, etc., state lands; state may join in any action brought.
253.05 Prosecuting officers to assist in protecting state lands.
253.111 Notice to board of county commissioners before sale.
253.115 Public notice and hearings.
253.12 Title to tidal lands vested in state.
253.121 Conveyances of such lands heretofore made, ratified, confirmed, and validated.
253.1221 Bulkhead lines; reestablishment.
253.123 Restrictions on filling land and dredging.
253.124 Application for filling land.
253.1241 Studies by Department of Natural Resources.
253.1242 Hearings.
253.125 Permit; filing fee and cost.
253.126 Legislative intent.
253.127 Enforcement.
253.128 Enforcement; board or agency under special law.
253.1281 Review by board.
253.129 Confirmation of title in upland owners.
253.135 Construction of ss. 253.12, 253.123, 253.124, 253.125-253.128, 253.129.
253.14 Rights of riparian owners; board of trustees to defend suit.
253.151 Navigable meandered freshwater lakes.
253.21 Board of trustees may surrender certain lands to the United States and receive indemnity.
253.29 Board of trustees to refund money paid where title to land fails.
253.34 Transfer of notes owned by board.
253.36 Title to reclaimed marsh, etc., lands in board of trustees.
253.37 Survey to be made; sale of lands; preference to buyers.
253.38 Riparian rights not affected.
253.381 Unsurveyed marsh lands; sale to upland owners.
253.382 Oyster beds, minerals, oils, etc., reserved to state.
253.39 Surveys, etc., approved by chief cadastral surveyor validated.
253.40 To what lands applicable.
253.41 Plats and field notes filed in office of Board of Trustees of Internal Improvement Trust Fund.
253.42 Board of trustees may exchange lands.
253.43 Convey by deed.
253.431 Agents may act on behalf of board of trustees.
253.44 Disposal of lands received.
253.45 Sale or lease of phosphate, clay, minerals, etc., in or under state lands.
253.451 Construction of term "land the title to which is vested in the state."
253.47 Board of trustees may lease, sell, etc., bottoms of bays, lagoons, straits, etc., owned by state, for petroleum purposes.
253.51 Oil and gas leases on state lands by the board of trustees.
253.511 Reports by lessees of oil and mineral rights, state lands.
253.512 Applicants for lease of gas, oil, or mineral rights; report as to lease holdings.
253.52 Placing oil and gas leases on market by board.
253.53 Sealed bids required.
253.54 Competitive bidding.
253.55 Limitation on term of lease.
253.56 Responsibility of bidder.
253.57 Royalties.
253.571 Surety or property bond required of lessee prior to commencement of drilling.
253.58 Manner of drilling.
253.60 Conflicting laws.
253.61 Lands not subject to lease.
253.62 Board of trustees authorized to convey certain lands without reservation.
253.66 Change in bulkhead lines, Pinellas County.
253.665 Grant of easements, licenses, leases, etc.
253.67 Definitions.
253.68 Authority to lease submerged land and water column.
253.69 Application to lease submerged land and water column.
253.70 Public notice and hearings.
253.71 The lease contract.
253.72 Marking of leased areas; restrictions on public use.
253.73 Rules and regulations; ss. 253.67-253.75.
253.74 Penalties.
253.75 Studies and recommendations by the Department of Natural Resources and the Game and Fresh Water Fish Commission; designation of recommended traditional and other use zones; supervision of aquaculture
253.76 Appeals; proceedings.
253.77 State lands; state agency authorization for use prohibited without consent of agency in which title vested.

[1]253.01 Internal Improvement Trust Fund established.—So much of the 500,000 acres of land granted to this state for internal improvement purposes, by an Act of Congress passed March 3, A. D. 1845, as remains unsold, and the proceeds of the sales of such said lands heretofore sold as now remain on hand and unappropriated, and all proceeds that may hereafter accrue from the sales of said lands; also, all the swampland or lands subject to overflow, granted this state by an Act of Congress approved September 28, A. D. 1850, together with all the proceeds that have accrued or may hereafter accrue to the state from the sale of such lands, are set apart, and declared a separate and distinct fund called the Internal Improvement Trust Fund of the state, and are to be strictly applied according to the provisions of this chapter.

History.—s. 1, ch. 610, 1854; RS 428; GS 616; RGS 1054; CGL 1384; s. 2, ch. 61-119.

[1]Note.—See s. 15, ch. 75-22, transferring the uncommitted balance and all subsequently accruing revenues of the Internal Improvement Trust Fund to the Land Acquisition Trust Fund, to be used in accordance with ch. 375 cf.—s. 270.08 Sale of public lands, disposal of proceeds.

253.015 Limitation on expenditure of trust fund.—Other provisions of law to the contrary notwithstanding, effective January 1, 1972 and thereafter, all revenues and receipts accruing to the [1]board of trustees for the benefit of the [2][Land Acquisition Trust Fund] shall be available for appropriation by the Legislature solely and exclusively for the acquisition of land and the incidental expenses related thereto. Effective January 1, 1972, the uncommitted fund balance of the [2][Land Acquisition Trust Fund] as of that date shall be expended or loaned only upon specific legislative appropriation or authorization.

History.—s. 2, ch. 71-961

[1]Note.—See s. 15, ch. 75-22, which abolished the Board of Trustees of the Internal Improvement Trust Fund by merging it into the Department of Natural Resources and transferring to that department all functions not transferred elsewhere by that act, and which effectively abolished the Internal Improvement Trust Fund by transferring all uncommitted balances and all future revenues to the Land Acquisition Trust Fund. Also see s. 10, ch. 75-22, transferring all functions of the board relating to the issuance of permits, certificates, licenses, exemptions, and enforcement pursuant to ch. 253 to the Department of Environmental Regulation

[2]Note.—Bracketed words substituted by the editors for "Internal Improvement Trust Fund." See s. 15, ch. 75-22, transferring the uncommitted balance and all subsequently accruing revenues of the Internal Improvement Trust Fund to the Land Acquisition Trust Fund, to be used in accordance with ch. 375

253.02 Board of trustees; powers and duties.—

(1) For the purpose of assuring the proper application of the [1][Land Acquisition Trust Fund] for the purposes of this chapter, the land provided for in ss. 253.01 and 253.03, and all the funds arising from the sale thereof, after paying the necessary expense of selection, management and sale, are irrevocably vested in a [2]board of seven trustees, to wit: The Governor, the Secretary of State, the Attorney General, the Comptroller, the State Treasurer, the Commissioner of Education, the Commissioner of Agriculture and their successors in office, to hold the same in trust for the uses and purposes provided in this chapter, with the power to sell and transfer said lands to the purchasers and receive payment for the same, and invest the surplus moneys arising therefrom, from time to time, in stocks of the United States, stocks of the several states, or the internal improvement bonds issued under the provisions of law; also, the surplus interest accruing from such investments. Said [2]board of trustees have all the rights, powers, property, claims, remedies, actions, suits and things whatsoever belonging to them, or appertaining before and at the time of the enactment hereof, and they shall remain subject to and pay, fulfill, perform and discharge all debts, duties and obligations of their trust, existing at the time of the enactment hereof or provided in this chapter.

(2) The [2]board of trustees shall not sell, transfer or otherwise dispose of any lands the title to which is vested in the [2]board of trustees except by vote of at least five of the seven trustees.

(3) In the event submerged tidal land is to be sold and transferred by said [2]board of trustees, the [2]board of trustees shall first require the Department of Natural Resources to inspect said lands and to file a written report with the [2]board of trustees which report shall state whether or not the development of said lands would be detrimental to established conservation practices.

(4) The [2]board of trustees is authorized to acquire by condemnation such submerged lands, except Murphy Act Lands and Holland Act Lands, as shall be in the public interest and for a public purpose.

(5) The [2]board of trustees shall be a necessary party to any action or petition which seeks to acquire submerged lands or lands lying beneath any navigable waters in the state through eminent domain proceedings.

History.—s. 2, ch. 610, 1854; RS 428; GS 617; RGS 1055; CGL 1385; s. 2, ch. 61-119; s. 1, ch. 67-5; s. 1, ch. 67-269; s. 1, ch. 67-2236; ss. 26, 27, 35, ch. 69-106; s. 1, ch. 69-360; s. 1, ch. 70-358.

[1]Note.—Bracketed words substituted by the editors for "Internal Improvement Trust Fund." See s. 15, ch. 75-22, transferring the uncommitted balance and all subsequently accruing revenues of the Internal Improvement Trust Fund to the Land Acquisition Trust Fund, to be used in accordance with ch. 375

[2]Note.—See Note 1 following s. 253.015

253.03 Board of trustees to administer state lands; lands enumerated.—

(1) The [1]Board of Trustees of the Internal Improvement Trust Fund of the state is vested and charged with the acquisition, administration, management, control, supervision, conservation, protection, and disposition of all lands owned by, or which may hereafter inure to, the state or any of its agen-

cies, departments, boards or commissions, excluding lands held for road and canal rights-of-way, spoil areas and lands required for disposal of materials or borrow pits, any land, title to which is vested or may become vested in any port authority, flood control district or water management district or navigation district or agency created by any general or special act, and any lands, including the Camp Blanding Military Reservation, which have been conveyed to the state for military purposes only, and which are subject to reversion if conveyed by the original grantee, or if the conveyance to the 'Board of Trustees of the Internal Improvement Trust Fund under this act would work a reversion from any other cause, or where any conveyance of lands held by a state agency which are encumbered by or subject to liens, trust agreements or any form of contract which encumbers state lands for the repayment of funded debt. Lands vested in the 'Board of Trustees of the Internal Improvement Trust Fund shall be deemed to be:

(a) All swamp and overflowed lands held by the state, or which may hereafter inure to said state;

(b) All lands owned by the state by right of its sovereignty;

(c) All internal improvement lands proper;

(d) All tidal lands;

(e) All lands covered by shallow waters of the ocean, gulf, or bays or lagoons thereof, and all lands owned by the state covered by fresh water;

(f) All parks, reservations, or lands or bottoms set aside in the name of the state, excluding lands held for road and canal rights of way;

(g) All lands which have accrued, or which may hereafter accrue, to the state from any source whatsoever, excluding lands held for road and canal rights-of-way or spoil areas or borrow pits, or any land, title to which is vested or may become vested in any port authority, flood control district, water management district or navigation district or agency created by any general or special act.

(2) It is the intent of the Legislature that the 'Board of Trustees of the Internal Improvement Trust Fund shall continue to receive proceeds from the sale or disposition of the products of lands and the sale of lands of which the use and possession are not subsequently transferred by appropriate lease or similar instrument from the 'board of trustees to the proper using agency. Such using agency shall be entitled to the proceeds from the sale of products on, under or growing out of, or connected with, lands which such using agency shall hold under lease or similar instrument from the 'board of trustees. The 'Board of Trustees of the Internal Improvement Trust Fund is directed and authorized to enter into leases or similar instruments, without consideration, for the use, benefit and possession of public lands by state agencies which may properly use and possess them for the benefit of the state.

(3) The provisions of s. 270.11, requiring the 'board of trustees to reserve unto itself certain oil and mineral interest in all deeds of conveyances executed by said 'board of trustees, shall not have application to any lands that inure to the 'board of trustees from other state agencies, departments, boards or commissions under the terms and provisions of this act.

(4) It is the intent of the Legislature that where title to any lands are in the State of Florida, with no specific agency authorized by the Legislature to convey or otherwise dispose of such lands, the 'Board of Trustees of the Internal Improvement Trust Fund shall be vested with such title and shall hereafter be authorized to exercise over such lands such authority as may be provided by law.

(5) It is the specific intent of the Legislature that this act shall repeal any provision of state law which may require the 'Board of Trustees of the Internal Improvement Trust Fund to pay taxes or assessments of any kind to any state or local public agency on lands which are transferred or conveyed to the 'Board of Trustees of the Internal Improvement Trust Fund under the terms of this act and which at the time of the passage of this act are entitled to tax-exempt status under the Constitution or laws of the state.

(6) Commencing September 1, 1967, all land held in the name of the state or any of its boards, departments, agencies or commissions shall be deemed to be vested in the 'Board of Trustees of the Internal Improvement Trust Fund for the use and benefit of the state. By October 1, 1967, any board, commission, department or agency holding title to any state lands used for public purpose shall execute all instruments necessary to transfer such title to the said 'Board of Trustees of the Internal Improvement Trust Fund for the use and benefit of the state, except lands which reverted to the state under the provisions of chapter 18296, Laws of Florida, 1937, commonly known and referred to as the "Murphy Act."

(7) The 'Board of Trustees of the Internal Improvement Trust Fund is hereby authorized and directed to administer all state-owned lands and shall be responsible for the creation of an overall and comprehensive plan of development concerning the acquisition, management and disposition of state-owned lands so as to insure maximum benefit and use. The 'Board of Trustees of the Internal Improvement Trust Fund shall maintain a current inventory of all state-owned lands. The 'Board of Trustees of the Internal Improvement Trust Fund shall adopt rules and regulations necessary to carry out the purposes of this act as herein set forth.

(8) The 'Board of Trustees of the Internal Improvement Trust Fund shall be responsible for the acquisition and disposal of federal lands and buildings which are declared surplus or excess. The 'Board of Trustees of the Internal Improvement Trust Fund shall establish regular procedures to assure that state and local agencies are made aware of the availability of federal lands and buildings.

(9) The 'Board of Trustees of the Internal Improvement Trust Fund and the State of Florida through any of its agencies are hereby prohibited from levying any charge, by whatever name known or attaching any lien, on any and all materials dredged from state-sovereignty tidal lands or submerged bottom lands or on the lands constituting the spoil areas on which such dredged materials are placed, except as otherwise provided for in this subsection, when such materials are dredged by or on behalf of the United States or the local sponsors of

active federal navigation projects in the pursuance of the improvement, construction, maintenance, and operation of such projects or by a public body authorized to operate a public port facility (all such parties referred to herein shall hereafter be called "public body") in pursuance of the improvement, construction, maintenance, and operation of such facility, including any public transfer and terminal facilities, which actions are hereby declared to be for a public purpose. "Local sponsor" shall mean the local agency designated pursuant to an Act of Congress to assume a portion of the navigation project costs and duties. Active federal navigation projects are those congressionally approved projects which are being performed by the Corps of Engineers, United States Army, or maintained by the local sponsors.

(a) No materials dredged from state-sovereignty tidal or submerged bottom lands by a public body shall be deposited on private lands until:

1. The United States Army Corps of Engineers shall first have certified that no public lands are available within a reasonable distance of the dredging site, and

2. The public body shall have published notice of its intention to utilize certain private lands for the deposit of materials in a newspaper published and having general circulation in the appropriate county at least three times within a 60-day period prior to the date of the scheduled deposit of any such material, and therein advised the general public of the opportunity to bid on the purchase of such materials for deposit on the purchaser's designated site, provided any such deposit shall be at no increased cost to the public body. Such notice shall state the terms, location, and conditions for receipt of bids and shall state that the public body shall accept the highest responsible bid. All bids shall be submitted to the 'Trustees of the Internal Improvement Trust Fund. All moneys obtained from such purchases of materials shall be remitted forthwith to the 'Trustees of the Internal Improvement Trust Fund. Compliance with this subsection shall vest, without any obligation, full title to the said materials in the owner of the land where deposited.

(b) When public lands on which are deposited materials dredged from state-sovereignty tidal or submerged bottom lands by the public body, are sold or leased for a period in excess of 20 years, which term shall include any options to a private party, 50 percent of any remuneration received shall forthwith be remitted to the 'Trustees of the Internal Improvement Trust Fund and the balance shall be retained by the public body owning the land.

(c) Any materials which have been dredged from state-sovereignty tidal or submerged bottom lands by the public body and deposited on public lands may be removed by the public body to private lands or interests only after due advertisement for bids, which shall mean a notice published at least three times within a 60-day period in a newspaper published and having general circulation in the appropriate county. The purchase price submitted by the highest responsible bidder shall be remitted to the 'Trustees of the Internal Improvement Trust Fund. If no bid is received, the public body shall have the right to fully convey title to, and dispose of, any such material on its land, with no requirement of payment to the 'Trustees of the Internal Improvement Trust Fund.

(d) Nothing in this subsection shall affect any preexisting contract or permit to engage in dredging of materials from state-sovereignty tidal and submerged bottom lands, nor shall it be construed to void any preexisting agreement or lien against the lands upon which dredged materials have been placed or to have any retroactive effect.

History.—s. 1, ch. 15642, 1931; CGL 1936 Supp. 1448(13); s. 2, ch. 61-116; ss. 2, 3, ch. 67-2286; s. 2, ch. 67-2236; ss. 27, 28, ch. 69-106; s. 8, ch. 71-2866; s. 1, ch. 75-76.

'Note.—See Note 1 following s. 253.015.

253.031 Land office; custody of documents, etc., concerning land; moneys; plats, etc.—

(1) The 'Board of Trustees of the Internal Improvement Trust Fund, hereinafter called the board, shall establish and maintain a public land office to be located at the seat of government of the state, in which office shall be deposited and preserved all records, surveys, plats, maps, field notes, and patents, and all other evidence touching the title and description of the public domain, and all lands granted by Congress to this state, or which may hereafter be granted, for whatever purpose the same may be given.

(2) The 'Board of Trustees of the Internal Improvement Trust Fund shall have custody of all the records, surveys, plats, maps, field notes, patents and all other evidence touching the title and description of the public domain.

(3) The 'board shall draw all deeds and conveyances and deliver the same for all sales and transfers, and other disposition of the public domain, that may from time to time be ordered and made by authority of law, and keep a true and faithful record of the same. The 'board shall keep accounts of the several grants or donations for fixing the seat of government, for seminaries of learning, for common schools, for internal improvements, or for any other purpose, in separate books, accounts, and reports, so that the rights and interests of one shall not be blended or mixed with the rights and interests of another, and each class of land shall pay the expenses of locating the same.

(4) The 'board shall, in behalf of this state, receive from the Treasury of the United States the 5 percent on sales of the public lands, or any other sums accruing from the general government to the seminary, common school, or [1][Land Acquisition] funds; and shall pay the same into the treasury of this state, or, if they shall belong to a fund, to the treasurer of such fund keeping the same separate and distinct under their respective proper heads. The 'board shall hold all needful correspondence with the several land offices of the United States in this state, or with the general land office at Washington, and shall attend the public land sales in this state, and visit the said land offices whenever, in their opinion, the interest of the state shall require it, and do and perform all things needful and proper to advance and promote the interests of the same.

(5) The 'board shall make selections of and secure all swamp and overflowed lands and any other lands enuring to the state under the several acts of Congress providing therefor, and shall provide plats

or maps of all lands selected and secured, and append thereto an accurate description of the quality, situation and location of the same, and whatever else may affect the value of each tract or body of land selected and secured, taking care to keep in separate books, and maps or plats, the lands belonging to each separate fund, which books and maps and plats, with the description thereof, shall be kept and preserved in the office of the 'board.

(6) Upon the discontinuance by the federal authorities of the office of surveyor-general for the state, the 'board shall receive all of the field notes, surveys, maps, plats, papers and records heretofore kept in the office of said surveyor-general as part of the public records of its office, and shall at all times allow any duly accredited authority of the United States full and free access to any and all of such field notes, surveys, maps, plats, papers and records; and may make and furnish under their hands and seal certified copies of any or all of the same to any person making application therefor.

(7) The 'board shall receive all of the tract books, plats and such records and papers heretofore kept in the United States Land Office at Gainesville, Alachua County, as may be surrendered by the Secretary of the Interior, and the 'board shall carefully and safely keep and preserve, all of said tract books, plats, records and papers as part of the public records of its office, and at any time allow any duly accredited authority of the United States, full and free access to any and all of such tract books, plats, records and papers, and shall furnish any duly accredited authority of the United States with copies of any such records without charge.

(8) The 'board shall keep a suitable seal of office. An impression of this seal shall be made upon the deeds conveying lands sold by the state, by the Board of Education, and by the 'Board of Trustees of the Internal Improvement Trust Fund of this state, and all such deeds shall be personally signed by the officers or 'trustees making the same and impressed with said seal and shall be operative and valid without witnesses to the execution thereof; and the impression of such seal on any such deeds shall entitle the same to record and to be received in evidence in all courts.

(9) The fees of the 'board in the following matters shall be as follows: certification under seal of copies of maps or records in the office will be performed for a fee of $1.50 minimum. The charges for copying, making record searches and compiling reports and statistical data shall be commensurate with the work involved and cost of material used.

History.—s. 1, ch. 63-294, ss. 27, 35, ch. 69-106, s. 1, ch. 74-18
'Note.—See Note 1 following s. 253.015
*Note.—Bracketed words substituted by the editors for "Internal Improvement Trust Fund." See s. 15, ch. 75-22, transferring the uncommitted balance and all subsequently accruing revenues of the Internal Improvement Trust Fund to the Land Acquisition Trust Fund, to be used in accordance with ch. 375.

253.032 Land office; Commissioner of Agriculture transfer of powers and duties.—The powers and duties of the Commissioner of Agriculture in relation to the state land office, field notes, plats, and to any other public lands are hereby transferred to the 'Board of Trustees of the Internal Improvement Trust Fund. All records, files, supplies, papers and equipment of any nature pertaining to the commissioner's functions as set forth in chapter 19, pertaining to public lands, shall be transferred to the 'Board of Trustees of the Internal Improvement Trust Fund.

History.—s. 2, ch. 63-294; ss. 27, 35, ch. 69-106
'Note.—See Note 1 following s. 253.015.

253.033 Inter-American Center property; transfer to board; continued use for government purposes.—

(1) All real and personal property presently owned by the Inter-American Center Authority, pursuant to s. 554.072 or otherwise, and all existing liabilities of said authority are hereby transferred to the 'Board of Trustees of the Internal Improvement Trust Fund. However, the liability to the Department of Transportation for road and bridge work is hereby waived and satisfied. Except as provided in s. 4, chapter 75-131, Laws of Florida, all obligations in connection with contracts and bond issues of the authority shall be assumed and performed by the 'trustees as provided by law or contract. No action shall be taken as a result of this act that will impair the obligations of any such contract or outstanding bonds.

(2) It is hereby recognized that certain governmental entities have expended substantial public funds in acquiring, planning for, or constructing public facilities for the purpose of carrying out or undertaking governmental functions on property formerly under the jurisdiction of the authority. All property owned or controlled by any governmental entity shall be exempt from any local building and zoning regulations which might otherwise be applicable in the absence of this section in carrying out or undertaking any such governmental function and purpose.

(3) In no event shall any of the lands known as "the Graves tract," including, without limitation, the land previously transferred to the Cities of Miami and North Miami and Dade County by the Inter-American Center Authority and the lands transferred pursuant to this act, be used for other than public purposes.

(4) The 'Board of Trustees of the Internal Improvement Trust Fund may lease to Dade County approximately 300 acres of land, and approximately 90 acres of abutting lagoon and waterways, designated as the Primary Development Area, and may also transfer to Dade County all or any part of the plans, drawings, maps, etc., of the Inter-American Center Authority existing at the date of transfer, provided Dade County:

(a) Assumes responsibilities of the following agreements:

1. That certain agreement entered into on June 12, 1972, between the City of Miami and Inter-American Center Authority whereby the authority agreed to repurchase, with revenues derived from the net operating revenue of the project developed on the leased lands after expenses and debt service requirements, the approximately 93 acres of lands previously deeded to the City of Miami as security for repayment of the $8,500,000 owed by the authority to the City of Miami. Title to the land repurchased pursuant to the provisions of this subsection shall be conveyed to the State of Florida.

2. Those certain rights granted to the City of North Miami pursuant to the provisions of paragraph 554.29(1)(a) and section 554.30 obligating the authority to issue a revenue bond to the City of North Miami, containing provisions to be determined by Dade County, to be repaid from all ad valorem taxes, occupational license fees, franchise taxes, utility taxes, and cigarette taxes which would have accrued to the authority or the City of North Miami by nature of property owned by the authority having been in the City of North Miami and from the excess revenue after operating expenses, development cost and debt service requirements, of the project developed on the leased lands.

(b) Develops a plan for the use of the land that meets the approval of the 'Board of Trustees of the Internal Improvement Trust Fund or that meets the following purposes heretofore authorized:

1. To provide a permanent international center which will serve as a meeting ground for the governments and industries of the Western Hemisphere and of other areas of the world.

2. To facilitate broad and continuous exchanges of ideas, persons, and products through cultural, educational, and other exchanges.

3. By appropriate means, to promote mutual understanding between the peoples of the Western Hemisphere and to strengthen the ties which unite the United States with other nations of the free world.

Any property leased under this subsection shall not be leased for less than fair market value.

History.—ss. 2, 3, 5, 7, 8, ch. 75-131.
'Note.—See Note 1 following s. 253.015.

253.04 Duty of board to protect, etc., state lands; state may join in any action brought.—The 'Board of Trustees of the Internal Improvement Trust Fund may police, protect, conserve, improve; prevent trespass, damage, or depredation upon the lands and the products thereof, on or under the same, owned by the state as set forth in s. 253.03. Said 'board may bring in the name of the 'board all suits in ejectment, suits for damage, and suits in trespass, which in the judgment of the said 'board may be necessary to the full protection and conservation of the said lands, or take such other action or do such other things as may in the judgment of the 'board be necessary for the full protection and conservation of the said lands, and the state may join with the said 'board in any action or suit, or take part in any proceeding, when it may deem necessary, in the name of this state through the Department of Legal Affairs.

History.—s. 2, ch. 15642, 1931; CGL 1936 Supp. 1446(14); s. 11, ch. 25035, 1949; s. 2, ch. 61-119; ss. 11, 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.05 Prosecuting officers to assist in protecting state lands.—State Attorneys, other prosecuting officers of the state or county, wildlife officers of the Florida Game and Fresh Water Fish Commission, conservation officers, together with the executive director of the Department of Natural Resources, and county sheriffs and their deputies shall see that the lands owned by the state, as described in ss. 253.01 and 253.03, shall not be the object of damage, trespass, depredation, or unlawful use by any person. The said officers and their deputies shall, upon information that unlawful use is being made of state lands, report the same, together with the information in their possession relating thereto, to the 'Board of Trustees of the Internal Improvement Trust Fund and shall cooperate with the said 'board in carrying out the purposes of ss. 253.01-253.04 and this section. State Attorneys and other prosecuting officers of the state or any county, upon request of the Governor or 'Board of Trustees of the Internal Improvement Trust Fund, shall institute and maintain such legal proceedings as may be necessary to carry out the purpose of said sections.

History.—s. 3, ch. 15642, 1931; CGL 1936 Supp. 1446(15); s. 2, ch. 61-119; ss. 27, 35, ch. 69-106, s. 1, ch. 70-117
'Note.—See Note 1 following s. 253.015.
cf.—Ch. 27 State attorneys, duties.
Ch. 30 Sheriffs, duties.

253.111 Notice to board of county commissioners before sale.—The 'Board of Trustees of the Internal Improvement Trust Fund of the state shall not sell or convey any land to which they hold title unless and until they shall afford an opportunity to the county in which such land is situated to receive such land for public purposes on the following terms and conditions:

(1) If an application is filed with the 'board requesting that they sell certain land to which they hold title and the 'board shall decide to sell such land or if the 'board shall, without such application, decide to sell such land the 'board shall, before consideration of any private offers, notify the board of county commissioners of the county in which such land is situated that such land is available to such county. Such notification shall be given by registered mail, return receipt requested.

(2) The board of county commissioners of the county in which such land is situated shall, within 90 days after receipt of such notification from the 'board, determine by resolution whether or not it proposes to devote such land to public parks, public beaches, public fishing piers, public boat ramps, public dockage facilities or other public outdoor recreational purposes, hereinafter referred to generally as public outdoor recreational purposes.

(3) If the board of county commissioners shall determine that it proposes to devote such land in perpetuity to public outdoor recreational purposes it shall adopt a resolution specifying such determination and setting forth:

(a) The specific public outdoor recreational purpose or purposes to which it proposes to devote such land;

(b) A tentative plan of development for such land;

(c) A tentative time schedule of development, which tentative time schedule shall set a date of commencement of development not later than 2 years after the date of such resolution and a date of conclusion of development not later than 4 years after the date of such resolution.

A certified copy of such resolution shall be furnished to the 'board within such 90-day period by registered mail, return receipt requested.

(4) If the board of county commissioners deter-

mines that it does not propose to devote such land to public outdoor recreational purposes it shall notify the 'board of such determination by sending, immediately after adoption, a certified copy of the resolution so specifying to the 'board by registered mail, return receipt requested. If the board of county commissioners shall fail to act as provided in subsection (3) within the 90-day period, such failure shall constitute a determination that it does not propose to devote such land to public recreational purposes.

(5) If the 'board receives within the 90-day period the certified copy of the resolution provided in subsection (3), the 'board shall forthwith convey to the county such land upon such terms and conditions and at such price as the 'board shall determine (but in no case at a price higher than such property would be disposed of under any other provision of this chapter), but subject to a reverter to the 'board if such land shall not be devoted to the public outdoor recreational purpose or purposes specified in such resolution in substantial accordance with the plan of development and the time schedule for development set forth in such resolution, and shall not be devoted in perpetuity to some public purpose.

(6)(a) If the board of county commissioners shall determine that it does not propose to devote the land to public outdoor recreational purposes the 'board may dispose of the property as otherwise provided in this chapter.

(b) It shall not be a violation of the reverter clause of any deed from the 'board to a county under this section if the county shall in fact use the property for a public outdoor recreational purpose other than that specified in the resolution provided in subsection (3) or not in substantial accordance with the plan of development and time schedule set forth in such resolution if the 'board shall by appropriate resolution approve such change or such failure to act in substantial accordance with the plan of development or time schedule.

(c) Nothing in this section shall restrict any right otherwise granted to the 'board by this chapter to convey land to which they hold title to the state or any department, office, authority, board, bureau, commission, institution, court, tribunal, agency or other instrumentality of or under the state. The word "land" as used in this act means all lands vested in the 'Board of Trustees of the Internal Improvement Trust Fund.

(7) If any riparian owner shall exist with respect to any land to be sold by the 'board, such riparian owner shall have a right to secure such land, which right shall be prior in interest to the right in the county created by this section, provided that such riparian owner shall be required to pay for such land upon such prices, terms and conditions as determined by the trustees. Such riparian owner may waive this prior right in which case this section shall apply.

History.—s. 1, ch. 65-324, ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.018.

253.115 Public notice and hearings.—

(1) After receiving an application in compliance with such forms as may be required by this chapter requesting the 'board to sell, exchange, or lease any land to which it holds title, the 'board shall give notice of the application by publication in a newspaper published in the county in which the lands are located not less than once a week for 3 consecutive weeks and mail copies of such notice by certified or registered mail to each owner of land lying within 1,000 feet of the land proposed to be leased, sold, or exchanged, addressed to such owner as his name and address appears on the latest county tax assessment roll.

(2) If no written objections are filed within 30 days after the date of first publication of the notice, and if the 'board finds that the proposed lease, sale, or exchange is not incompatible with the public interest, the 'board has authority to consummate the contract. However, failure to mail the notice to all landowners as set out in subsection (1) shall not invalidate the conveyance.

(3) If written objections are filed, the 'board or its designee shall hear and consider the same at a public hearing which shall be held in the county in which the lands are located. If the lands are located in more than one county, the required hearing may be held in any county in which the lands lie. Timely notice of such hearing shall be given by at least one publication in a newspaper published in the county in which the lands are located and by certified or registered mail to each owner of land lying within 1,000 feet of the land proposed to be leased, sold, or exchanged, addressed to such owner as his name and address appears on the latest county tax assessment roll.

(4) This section shall not apply to the release of any reservations contained in Murphy Act deeds or 'board of trustees' deeds; to any conveyance of land lying landward of the line of mean high water, the area of which is less than 1 acre in size; to any lands covered by the provisions of ss. 253.12(6) and 253.129; or to the lease of any land acquired under the provisions of chapter 375, when the land is being leased to a state agency or political subdivision of the state.

History.—s. 1, ch. 74-28, s. 1, ch. 77-130.
'Note.—See Note 1 following s. 253.018.
cf.—s. 1.01 Registered mail defined to include certified mail.

253.12 Title to tidal lands vested in state.—

(1) Except submerged lands heretofore conveyed by deed or statute, the title to all sovereignty tidal and submerged bottom lands, including all islands, sandbars, shallow banks, and small islands made by the process of dredging any channel by the United States Government and similar or other islands, sandbars, and shallow banks located in the navigable waters, and including all coastal and intracoastal waters of the state and all submerged lands owned by the state by right of its sovereignty in navigable freshwater lakes, rivers and streams, is vested in the 'Board of Trustees of the Internal Improvement Trust Fund. For purposes of fixing bulkhead lines, restrictions on filling land and dredging beyond bulkhead lines, and permits required for filling and dredging, the 'board shall exercise the same authority over submerged lands owned by the state by right of its sovereignty in navigable freshwater lakes, rivers, and streams as it does over submerged lands otherwise defined in this subsection. Submerged lands owned by the state by right of its sovereignty in navigable meandered freshwater lakes shall be administered in accordance with the provisions of s.

253.151, and the provisions of s. 253.151 shall be controlling when in conflict with other statutory provisions.

(2)(a) The 'Board of Trustees of the Internal Improvement Trust Fund may sell and convey such islands and submerged lands if determined by the 'board to be in the public interest, upon such prices, terms, and conditions as it sees fit. However, prior to consummating any such sale, the 'board shall determine to what extent the sale of such islands or submerged lands and their ownership by private persons or the conveyance of such islands or submerged lands to political subdivisions or public agencies would interfere with the conservation of fish, marine and other wildlife, or other natural resources, including beaches and shores, and would result in destruction of oyster beds, clam beds, or marine productivity, including, but not limited to, destruction of marine habitats, grass flats suitable as nursery or feeding grounds for marine life, and established marine soils suitable for producing plant growth of a type useful as nursery or feeding grounds for marine life, and if so, in what respect and to what extent, and it shall consider any other factors affecting the public interests.

(b) In addition to the requirements in paragraph (a), the 'board shall not sell or convey any interest in such islands and submerged lands to any applicant who does not, at the time of making application for purchase or conveyance, also have before the 'board:

1. An application for the establishment of a bulkhead line, in the event no bulkhead line is established for the lands subject to the application; and

2. An application for approval of a fill permit issued in accordance with the provisions of this chapter; and

3. A permit or application for a permit to dredge fill material from beneath the navigable waters of the state, in accordance with the provisions of this chapter, in the event the applicant intends to secure such fill material. However, such islands or submerged lands may be sold or conveyed to an applicant who does not have such an application for a permit to dredge or fill lands before the 'board, upon the condition that the sale or conveyance to such an applicant shall contain a restrictive covenant prohibiting dredging, except for navigation purposes, or filling of such islands or submerged lands. The 'board shall reserve the authority to waive such restrictive covenant when such waiver is in the public interest, pursuant to such terms and conditions as the 'board may impose.

(3) After receiving application in compliance with such forms as may be required to show clearly what is intended to be accomplished in any proposed development of said lands and the manner in which said development will be accomplished, and after making the determination required by subsection (2)(a), the 'board shall give notice by publication in a newspaper published in the county in which such islands or submerged lands are located, not less than once a week for 3 consecutive weeks and mail copies of such notice by certified or registered mail to each riparian owner of upland lying within 1,000 feet of the island or submerged land proposed to be conveyed, addressed to such owner as his name and address appear upon the latest county tax assessment roll, in order that any persons who have objections to the sale or conveyance may have the opportunity to present the same. If no objections are filed within 30 days after the date of first publication of the aforesaid notice, the 'board has authority to consummate such sale or conveyance except as hereinafter provided. However, failure to mail the notice herein provided to such riparian upland owners shall not invalidate such sale or conveyance or the title or interest conveyed by the 'board pursuant thereto.

(4) If objections are filed, the 'board or its designee shall hear and consider the same at a public hearing, and when determined by the 'board said hearing may be held at the county seat from whence the application to purchase has been received. The report required by subsection (7) shall be read into the record and duly considered at any such public hearing. If it appears that the sale of such islands and submerged lands and their ownership by private persons or the conveyance of such islands or submerged lands to political subdivisions or public agencies would:

(a) Be contrary to the public interest;

(b) Interfere with the lawful rights granted riparian owners;

(c) Be, or result in, a serious impediment to navigation;

(d) Interfere with the conservation of fish, marine, and wildlife or other natural resources, including beaches and shores, to such an extent as to be contrary to the public interest;

(e) Result in the destruction of oyster beds, clam beds, or marine productivity, including, but not limited to, destruction of natural marine habitats, grass flats suitable as nursery or feeding grounds for marine life, and established marine soils suitable for producing plant growth of a type useful as nursery or feeding grounds for marine life to such an extent as to be contrary to the public interest,

the 'board shall withdraw the said lands from sale. Prior to making the determinations above required, the 'board may consider any other factors affecting the public interest. Anything in this section to the contrary notwithstanding, lands defined herein lying between the ordinary mean high waterline and any 'bulkhead line established hereunder shall be sold only to the upland riparian owner and to no other person, firm or corporation; and such sale to said upland riparian owner shall be made pursuant to the provisions herein.

(5)(a) When any state agency or county, city, or other political subdivision extends or adds to existing lands or islands bordering on or being in the navigable waters, as defined in this section, of the state by filling in or causing to be filled in or by draining or causing to be drained such waters, the 'board may, upon application therefor, convey to the riparian owner or owners of the upland so extended or added to so much of such extended or added land as is not required exclusively for a municipal, county, state, or other public purpose. The 'board may, however, require a deposit to accompany such application of a sum sufficient to cover the actual cost and

expenses of processing such application and preparing instruments of conveyance.

(b) Neither this subsection nor any other provision of this chapter shall be construed to permit any state agency or county, city, or other political subdivision to construct islands or extend or add to existing lands or islands bordering on or being in the navigable waters as defined herein or drain such waters for a municipal, county, state or other public purpose unless such agency is the riparian upland owner or holds the consent in writing of the riparian upland owner consenting to such construction or extension or drainage operation. For the purposes of this subsection, "riparian upland owners" shall be defined as those persons owning upland property abutting those portions of the waters to be filled or drained, which are within 1,000 feet outboard of said riparian upland, but not more than one-half the distance to the opposite upland, if any, and within the extensions of the side boundary lines thereof, when said side boundary lines are extended in the direction of the channel along an alignment which would be required to distribute equitably the submerged land between the upland and the channel. However, nothing herein shall be construed to deny or limit any state agency or county, city, or other political subdivision from exercising the right of eminent domain to the extent and for the purposes authorized by law in connection with such construction, extension, or drainage projects; and nothing herein shall be construed to have application in those instances when the [1]board is authorized by law to establish an erosion control line to implement an authorized beach nourishment, replenishment, or erosion-control project.

(6) Where any person, state agency, county, city, or other political subdivision prior to June 11, 1957, extended or added to existing lands or islands bordering on or being in the navigable waters as defined in this section by filling in or causing to be filled in such lands, the [1]board shall upon application therefor convey said land so filled to the riparian owner or owners of the upland so extended or added to. The consideration for such conveyance shall be the appraised value of said lands as they existed prior to such filling.

(7)(a) In order to assist it in making the determination required by subsection (2)(a), the [1]board shall require that a biological survey and an ecological study of the lands or interests therein proposed to be sold or conveyed pursuant to any particular application be made, and, when determined by the Department of Natural Resources to be necessary, that a hydrographic survey be made. All such surveys and studies shall be made by or under the direction of the Department of Natural Resources, which shall make a report of all such surveys and studies to the [1]board together with its recommendations. The [1]board may adopt regulations requiring that the cost of making any such survey and report be paid by the applicant for purchase of such lands, requiring a deposit by the applicant sufficient to insure such payment, and providing procedures to be followed in applying for and obtaining such survey and report.

(b) If, in accordance with the provisions of subsection (2)(b), the surveys and study required by paragraph (a) above have already been made, the provisions of this section shall not operate to require an applicant to pay for any additional surveys or studies within 3 years prior to the issuance of such permit.

(8) All conveyances of sovereignty lands or fill material therein heretofore made by the Board of Trustees of the Internal Improvement Trust Fund of Florida subsequent to the enactment of chapter 6451, Acts of 1913, chapter 7304, Acts of 1917 and chapter 57-362, as amended, are hereby ratified, confirmed and validated in all respects.

History.—s. 1, ch. 7304, 1917; RGS 1061; CGL 1391; ss. 1, 2, ch. 26778, 1951; s. 1, ch. 57-362; s. 2, ch. 61-119; s. 1, ch. 67-393; ss. 25, 27, 36, ch. 69-106; s. 1, ch. 69-306; s. 1, ch. 70-81; s. 1, ch. 70-97; s. 1, ch. 70-147; s. 1, ch. 70-436; s. 1, ch. 73-214.

[1]Note.—See Note 1 following s. 253.015.

[2]Note.—See s. 36, ch. 75-22, which repealed s. 253.122, relating to the power to fix bulkhead lines, and s. 7(3), ch. 75-22, (s. 253.1221), which reestablished all bulkhead lines previously established pursuant to s. 253.122 at the line of mean high water or ordinary high water.

253.121 Conveyances of such lands heretofore made, ratified, confirmed, and validated.—All conveyances of sovereignty lands heretofore made by the Board of Trustees of the Internal Improvement Trust Fund subsequent to the enactment of chapter 6451 (June 5, 1913), 6960 (June 2, 1915) and 7304 (May 21, 1917), Acts of 1913, 1915 and 1917, respectively, where advertisement therefor was published in the county of sale but not in the county seat, are hereby ratified, confirmed and validated in all respects, including all defects subject to ratification, confirmance and validation by the Legislature. Said conveyances shall be deemed valid notwithstanding defects in the publication of newspaper notices and the publication of such newspaper notices in newspapers not published at the county seat of the county in which the lands are located.

History.—s. 1, ch. 29763, 1955; s. 2, ch. 61-119; ss. 27, 36, ch. 69-106.

253.1221 Bulkhead lines; reestablishment.—All bulkhead lines heretofore established pursuant to former s. 253.122 are hereby established at the line of mean high water or ordinary high water. There shall be no filling waterward of the line of mean high water or ordinary high water except upon compliance with this chapter.

History.—s. 7, ch. 75-22.

253.123 Restrictions on filling land and dredging.—

(1) No private person, firm or corporation shall construct islands or add to or extend existing lands or islands bordering on or being in the navigable waters of the state as defined in s. 253.12(1) by pumping sand, rock or earth from such waters or by any other means without first complying with [2]s. 253.122; provided, nothing herein contained shall relate to artificially created navigable waters.

(2) The removal of sand, rock or earth from the navigable waters of the state as defined in s. 253.12 and the submerged bottoms thereof by dredging, pumping, digging, or any other means shall not be permitted except in the following instances:

(a) For the construction, improvement or maintenance of navigation channels and drainage and water-control facilities;

(b) For the construction of trenches for the burial

or installation of water, sewer, gas, oil, gasoline, fuel, electric, telegraph or telephone lines, cables or mains;

(c) For the operation of sand transfer plants; and

(d) For other purposes when, but only when, the [1]board of trustees has determined, after consideration of a biological survey and an ecological study and a hydrographic survey, if such hydrographic survey is required by the [1]board, made by or under the supervision of the [2]Department of Natural Resources of the area from which such sand, rock or earth is proposed to be removed, that such surveys and study show that such removal will not interfere with the conservation of fish, marine and wildlife or other natural resources, to such an extent as to be contrary to the public interest, and will not result in the destruction of oyster beds, clam beds, or marine productivity, including, but not limited to, destruction of natural marine habitats, grass flats suitable as nursery or feeding grounds for marine life, and established marine soils suitable for producing plant growth of a type useful as nursery or feeding grounds for marine life or natural shoreline processes to such an extent as to be contrary to the public interests.

(3)(a) Works authorized under paragraphs (a) and (b) of subsection (2) shall only be undertaken after receipt of a permit from the [1]board of trustees, which permit shall be granted after consideration of a biological or ecological study, unless waived by the affirmative vote of at least five of the seven members of the [1]board of trustees, upon a showing of the public interest which will be served by such works.

(b) The provisions of paragraph (d) of subsection (2) shall not be construed to eliminate the requirement of obtaining a permit for the removal of sand, rock or earth from any part of the navigable waters of the state as defined in s. 253.12, and the submerged bottoms thereof from the appropriate authority as elsewhere in this chapter or otherwise by law provided.

(4) Neither the sale and conveyance of islands and lands by the [1]Board of Trustees of the Internal Improvement Trust Fund under the provisions of s. 253.12 nor the establishment of a [1]bulkhead line or lines by the appropriate authority under the provisions of s. 253.122, nor the granting of a construction permit under the provisions of s. 253.124 shall operate to vest any right whatsoever in the grantee, upland owner, or construction permitholder to remove sand, rock or earth from the navigable waters of the state as defined in s. 253.12, and the submerged bottoms thereof, unless a construction permit issued pursuant to the provisions of s. 253.124, and of this section specifically permits such removal.

History.—s. 3, ch. 57-362; s. 2, ch. 61-119; s. 5, ch. 67-393; ss. 25, 27, 35, ch. 69-106; s. 1, ch. 70-118; s. 1, ch. 70-167; s. 1, ch. 70-439.

[1]Note.—See Note 1 following s. 253.015.

[2]Note.—See s. 11, ch. 75-22, which transfers all powers of the Department of Natural Resources relating to permits, licenses, and exemptions to the Department of Environmental Regulation.

[2]Note.—See s. 36, ch. 75-22, which repealed s. 253.122, relating to the power to fix bulkhead lines, and s. 7(3), ch. 75-22 (s. 253.1221), which reestablished all previously established bulkhead lines at the line of mean high water or ordinary high water.

253.124 Application for filling land.—

(1) Any private person, firm or corporation desiring to construct islands or add to or extend existing lands or islands located in the unincorporated area of any county bordering on or in the navigable waters of the state, as defined in s. 253.12, by pumping sand, rock or earth from such waters or by any other means shall make application in writing to the board of county commissioners of the county wherein such construction is desired for a permit authorizing such person, firm or corporation to engage in such construction; provided, that where it is desired to construct islands or add to or extend existing lands or islands within the territory of any municipality such application for a construction or fill permit shall be made to the governing body of such municipality.

(2) In each instance the written application herein provided for shall be accompanied by a plan or drawing showing the proposed construction and the manner in which said construction will be accomplished and also the area from which any fill material is to be dredged if the proposed construction is intended to be created from dredged material. In the event the board of county commissioners or other authorized body shall find that such proposed extension or filling of land or such proposed dredging is not violative of any statute, zoning law, ordinance, or other restrictions which may be applicable thereto, that no harmful obstruction to or alteration of the natural flow of the navigable water, as defined in s. 253.12, within such area will arise from the proposed construction, that no harmful or increased erosion, shoaling of channels or stagnant areas of water will be created thereby, and that no material injury or monetary damage to adjoining land will accrue therefrom, the same shall be granted to the applicant, subject to the approval of the [1]Board of Trustees of the Internal Improvement Trust Fund, who shall have the power to approve, reject or issue; provided, however, that prior to the issuance of such permit, the board of county commissioners or other authorized body shall determine whether the granting of such permit and the construction to be done pursuant thereto would interfere with the conservation of fish, marine and wildlife or other natural resources to such an extent as to be contrary to the public interest, and whether the destruction of oyster beds, clam beds, or marine productivity, including, but not limited to, destruction of natural marine habitats, grass flats suitable as nursery or feeding grounds for marine life, including established marine soils suitable for producing plant growth of a type useful as nursery or feeding grounds for marine life, will result therefrom to such an extent as to be contrary to the public interest. The [1]board shall also consider any other factors affecting the public interests.

(3) No construction permit shall be issued or approved until the board of county commissioners or other authorized body shall have obtained, at the expense of the applicant, a biological survey, an ecological study, and, where deemed necessary by the [2]Department of Natural Resources, a hydrographic survey of the area within which such construction and dredging is proposed, each by or under the supervision of the [2]Department of Natural Resources and shall have in hand the report and findings thereof. The report shall be read into the record and duly considered at the same meeting at which the board of county commissioners or other authorized body

takes final action on the application for permit. [4]Such surveys and studies may not be required if the proposed construction or dredging is wholly shoreward of a previously established bulkhead line which was fixed after consideration by the bulkhead authority of a biological survey and ecological study previously made by the [2]Department of Natural Resources or under its supervision in connection with the fixing of such line or if the proposed construction or dredging is wholly within lands or islands heretofore purchased from the [1]Board of Trustees of the Internal Improvement Trust Fund under s. 253.12 and in the consummation of such sale the [1]board had before it a biological survey made by or under the supervision of the [2]Department of Natural Resources.

(4) No construction permit shall authorize work for a period of time in excess of 3 years. After approval and issuance of such permit, said 3-year period shall commence upon receipt by the applicant of all governmental authorizations, state and federal, including such license, permit, or variance from the [3][Department of Environmental Regulation] under chapter 403 as may be required for completion of the proposed work. The board may revoke such construction permit if the applicant fails to use due diligence in obtaining such required governmental authorizations. Such time may be extended for additional periods of up to 3 years by the board for good cause, upon showing that all due efforts and diligence toward completion of said work have been made. Before such time may be extended, the studies required by s. 253.12(2)(a) shall be brought up to date to assist the board in determining if such extension of time would not be contrary to the public interest. The construction permit herein provided for may be revoked by the board for noncompliance with, or violation of, its terms after notice of intention to do so has been furnished to the holder thereof and an opportunity for a hearing has been afforded. In the event an application for a construction permit is denied, the applicant therefor may have the order refusing the permit reviewed within the time and in the manner set forth in s. 253.122(6).

(5)(a) Except as provided in paragraph (b), any person who violates any provision of this section is guilty of a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083.

(b) Any person who violates this section by creating or causing to be created an illegal fill is guilty of a misdemeanor of the first degree punishable as provided in s. 775.082 or s. 775.083. Each day in which such a violation continues, subsequent to the initial citation, shall constitute a separate offense.

(6) The [1]board shall have the authority to direct the abutting upland owner to remove any fill created in violation of this section, either on behalf of itself or on behalf of itself and the Department of Natural Resources. In the event that the abutting upland owner does not remove said fill as directed, the [1]board may remove it at its own expense and the costs thereof shall become a lien upon the property of said abutting upland owner; provided, that the [1]board may, if it chooses, allow said fill to remain as state-owned land, and may employ a surveyor to determine the boundary between such state land and that of the previous abutting upland owner. The amount of the cost of such survey shall become a lien upon the property of the previous abutting upland owner. Nothing herein shall be construed to grant the [1]board authority to direct an upland owner to adjust, alter or remove silt, fill or other solid material which has accumulated or been deposited seaward of his property through no action on his part.

(7)(a) The board shall in no case issue an "after the fact" construction permit to any applicant authorizing construction regulated by this section subsequent to the time it has occurred, unless, upon consideration of a report by the [2]Department of Natural Resources, the board finds that the exercise of any other remedy or penalty available to it, either as provided by subsection (6) or otherwise by law or by rule or regulation adopted by the board would be more damaging to the environment or the marine resources sought to be protected by this chapter than would be the granting of such permit.

(b) The granting of such an "after the fact" construction permit shall not absolve any applicant from the provisions of subsection (5) of this section.

(8) Any riparian upland owner of land bordering on or in the navigable waters of the state who desires to repair, rebuild, replace, or reconstruct coastal structures in the nature of seawalls, revetments, retaining walls, bulkheads, or other similar protective structures installed upon his riparian upland, or who desires to restore such uplands after damage by avulsion or by artificially induced erosion, shall, before undertaking such project, obtain a permit for such work from the board of county commissioners or other authorized body or from the governing body of a municipality if the work proposed shall be within the territory of such municipality. Such a permit shall be subject to the approval of the [1]board of trustees and shall not be valid without such approval. [4]The riparian owner making application for such a permit may not be required to comply with s. 253.122. A biological survey and ecological study may not be required if the proposed work lies at no greater distance than 25 feet into the waters where such work is proposed from the existing and established line of mean high water or existing coastal structure. A permit issued under the provisions of this subsection shall not be construed to allow construction of coastal structures or restoration of lands that may be subject to the provisions of chapter 161. In an emergency threatening damage to life or public property, the Department of Transportation will be permitted temporarily to repair, reconstruct, rebuild, or replace any structures or roadways on the state-maintained transportation system, subject to immediate notification of the executive director of the [1]Board of Trustees of the Internal Improvement Trust Fund and his subsequent review and approval.

(9)(a) The written application herein provided for shall indicate whether the applicant holds title to the submerged land or islands upon which he seeks permission to dredge or fill lands and whether he is a riparian owner with respect to such submerged lands or islands. If the applicant does not hold title to such lands and is not a riparian owner with respect to such lands and his application so indicates, the board of county commissioners shall, upon receipt of the application, be on notice that the applicant intends to apply to the [1]Board of Trustees of the Internal Improvement Trust Fund for purchase of such lands, and the provisions of s. 253.111(2)-(5) shall become operative.

(b) If as a result of the provisions of paragraph (a) above, the provisions of s. 253.111(2)-(5) become operative and the board of county commissioners determines that it does not propose to devote the land to public outdoor recreational purposes, the board of county commissioners shall proceed to consider the application for permission to dredge or fill land.

History.—s. 4, ch. 57-362, s. 2, ch. 61-119, s. 7, ch. 61-530, s. 10, ch. 63-512, s. 4, ch. 67-393, ss. 25, 27, 35, ch. 69-106, s. 1, ch. 69-336, s. 3, ch. 70-81, s. 1, ch. 70-116, s. 1, ch. 70-333, s. 1, ch. 70-439; s. 153, ch. 71-136, s. 1, ch. 72-89; ss. 2-4, ch. 72-214.

[1]Note.—See Note 1 following s. 253.015.

[2]Note.—See s. 11, ch. 75-22, which transfers all powers of the Department of Natural Resources relating to permits, licenses, and exemptions to the Department of Environmental Regulation.

[3]Note.—Bracketed language substituted for "Department of Pollution Control." See s. 8, ch. 75-22, which transferred the Department of Pollution Control to the Department of Environmental Regulation.

[4]Note.—See s. 26, ch. 75-22, which repealed s. 253.122, relating to the power to fix bulkhead lines, and s. 7(3), ch. 75-22 (s. 253.1221), which reestablished all previously established bulkhead lines at the line of mean high water or ordinary high water.

253.1241 Studies by Department of Natural Resources.—The [1]Department of Natural Resources shall have a period of 90 days, after application therefor, in which to make the studies and surveys required by ss. 253.12, 253.123 and 253.124. The [2]Board of Trustees of the Internal Improvement Trust Fund and other governing bodies required by said sections to obtain such studies and surveys shall request them from the [1]Department of Natural Resources within 30 days after the receipt of an application for sale, [3]setting of a bulkhead line, or a dredge or fill permit as the case may be.

History.—s. 6, ch. 67-393; ss. 25, 27, 35, ch. 69-106, s. 1, ch. 69-337, s. 79, ch. 77-104.

[1]Note.—See s. 11, ch. 75-22, which transfers all powers of the Department of Natural Resources relating to permits, licenses, and exemptions to the Department of Environmental Regulation.

[2]Note.—See Note 1 following s. 253.015.

[3]Note.—See s. 26, ch. 75-22, which repealed s. 253.122, relating to the power to fix bulkhead lines, and s. 7(3), ch. 75-22 (s. 253.1221), which reestablished all previously established bulkhead lines at the line of mean high water or ordinary high water.

253.1242 Hearings.—All hearings required by ss. 253.12, 253.123 and 253.124 shall be conducted according to the Administrative Procedure Act.

History.—s. 6, ch. 67-393, s. 79, ch. 77-104.

253.125 Permit; filing fee and cost.—The board of county commissioners or governing body of any municipality shall assess such filing fees and costs as may be necessary for the filing, processing and issuance of such construction permit as provided for herein.

History.—s. 5, ch. 57-362.

253.126 Legislative intent.—The limitations and restrictions imposed by this chapter as amended by chapter 67-393 upon the construction of islands or the extension or addition to existing lands or islands bordering on or being in the navigable waters, as defined in s. 253.12, shall apply to the state, its agencies and all political subdivisions and governmental units. No other general or special act shall operate to grant exceptions to this section unless this section is specifically repealed thereby.

History.—s. 6, ch. 57-362; ss. 8, 9, ch. 67-393; ch. s. 75, 71-355.

253.127 Enforcement.—The [1]Board of Trustees of the Internal Improvement Trust Fund, the board of county commissioners or governing body of any municipality, or any aggrieved person, shall have the power to enforce the provisions of this law by appropriate suit in equity.

History.—s. 7, ch. 57-362; s. 2, ch. 61-119, ss. 27, 35, ch. 69-106.

[1]Note.—See Note 1 following s. 253.015.

253.128 Enforcement; board or agency under special law.—In any county where the Legislature by special law or general law with local application has heretofore or hereafter transferred or delegated to any county board or agency other than the board of county commissioners or the governing body of any municipality powers and duties over the establishment of bulkhead line or lines, dredging permits, fill permits, seawall construction or any other powers of a like nature such agency shall have jurisdiction under this law in lieu of the board of county commissioners or the governing body of any municipality as the case may be.

History.—s. 8, ch. 57-362.

253.1281 Review by board.—

(1) All special acts granting exceptions to the provisions of this chapter relating to issuance of dredge or fill permits shall provide that all action on applications for such permits shall be subject to approval of the [1]Board of Trustees of the Internal Improvement Trust Fund, which shall have the power to reject such permits.

(2) Notwithstanding any provisions to the contrary, any action after July 7, 1970, on any application for a dredge or fill permit pursuant to any special act heretofore or hereafter enacted shall be subject to approval of the [1]board of trustees, which shall have the power to reject such permit.

History.—s. 1, ch. 70-376.

[1]Note.—See Note 1 following s. 253.015.

253.129 Confirmation of title in upland owners.—The title to all lands heretofore filled or developed is herewith confirmed in the upland owners and the [1]trustees shall on request issue a disclaimer to each such owner.

History.—s. 9, ch. 57-362; s. 13, ch. 59-1.

[1]Note.—See Note 1 following s. 253.015.

253.135 Construction of ss. 253.12, 253.123, 253.124, 253.125-253.128, 253.129.—

(1) This law shall not be construed to be in conflict with any general or special law whereby the state has divested itself of title to submerged land or has granted such title to another.

(2) The provisions of ss. 253.12, 253.123, 253.124, 253.125-253.128, 253.129 shall not affect or apply to the construction of islands or the extension or addition to existing lands or islands bordering on or being in the navigable waters as defined in s. 253.12 of the state which was commenced or application for permit to fill which was filed with the United States Corps of Engineers prior to June 11, 1957, as to lands or bottoms lying between ordinary high watermark

and a bulkhead line heretofore established by any county, city or other political subdivision of the state by official action of its governing body.

History.—ss. 10-12, ch. 57-362; s. 1, ch. 72-261; s. 79, ch. 77-104.
Note.—Former s. 253.0013.

253.14 Rights of riparian owners; board of trustees to defend suit.—

(1) It is expressly provided that nothing contained in this chapter shall be so construed as to deprive any private riparian owner from bringing an injunction suit in equity against the sale provided for in s. 253.12 on the ground that he would be thereby deprived of his riparian rights granted to him by law; provided, that such suit must be commenced within 30 days after the 'board of trustees shall have overruled the objections of such owner to such proposed sale.

(2) In case suit is brought by any private owner to enjoin such sale, it shall be in the discretion of the 'board of trustees to defend such suit or to withdraw said lands from sale.

History.—ss. 3, 4, ch. 7304, 1917; RGS 1063; CGL 1393, ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.151 Navigable meandered freshwater lakes.—

(1) The submerged lands located under navigable meandered freshwater lakes shall be considered as a separate class of sovereignty lands. Such separate class of sovereignty lands shall not be construed to be of the same character as tidal lands, streams, watercourses, or rivers or as lakes attached to tidal waters by means of navigable watercourses, but, rather, shall be administered in accordance with the provisions of this section.

(2) For the purposes of this section:

(a) "Board" means the 'Board of Trustees of the Internal Improvement Trust Fund.

(b) "Boundary line" means the line which separates the sovereignty lands of the state from those of a riparian upland owner. Such boundary line shall be described in terms of elevation above mean sea level of the state as indicated on the bench mark of the United States Coast and Geodetic Survey nearest the respective navigable meandered freshwater lake.

(c) "Elevation" means the distance above mean sea level as established by official United States Coast and Geodetic Survey bench marks.

(d) "Usufructuary right" means the temporary right of using the land lakeward of the boundary line to the existing waterline. The term shall not be construed to convey to any riparian owner the right to erect permanent structures of any type upon sovereignty lands without the express consent of the 'board.

(e) "Commercial operation" means the operation of any facility located on submerged land in navigable meandered freshwater lakes for the purpose of earning a profit from such operations.

(3) The boundary line shall be established by, or under the supervision of, the 'board by use of one or more of the following procedures:

(a) Where physical evidence exists indicating the actual water's edge of any navigable meandered freshwater lake as of the date such body came under the jurisdiction of the state, regardless of where the water's edge exists on the date of the determination of the boundary line, the water's edge as evidenced on the former date shall be deemed the boundary line.

(b) Where sufficient physical evidence cannot be found, or in conjunction with such physical evidence as may exist, affidavits of local, longtime residents attesting to the average levels of such lakes shall be used. Such affidavits shall not be used unless they can be dated back to a period of time at least 25 years prior to July 1, 1970.

(c) Where gauging stations have been installed and continuous data at lake water elevations have been obtained therefrom for a period of no less than 10 consecutive years, such data may be used for ascertaining the boundary line at such lake.

(d) Actual onsite examination of the terrain (landward and lakeward of the existing waterline) and of plant life, including upland and aquatic, by qualified personnel and the other physical indications of present and past waterlines which shall be deemed reasonable may be used in determining the boundary line. This investigation may include public hearings, as well as examination of existing docks, structures, and other physical evidence which may properly be construed as germane to the location of the boundary line.

(4) A boundary line shall become effective only after a description of its location has been approved by the formal action of the 'board and this description has been published in a newspaper of general distribution in the county where located at least once a week for 3 consecutive weeks. The boundary line elevation shall then be placed in the public records of the county or counties in which the navigable meandered freshwater lake is situated. A suitable monument shall be placed in or on such lake as a permanent point of reference so that all interested persons may be able to determine the physical boundary line by proper survey and projection onto the shoreline.

(5) The riparian owner shall have the usufructuary right over lands lakeward of the boundary line down to the existing waterline, but such riparian owner shall not deny the use of the water above the established boundary line to any other owner or to the general public so long as such public does not come onto the land above the existing waterline. A riparian owner shall have the right of ingress and egress to and from the water for purposes of boating, swimming, fishing, skiing, and similar activities and shall:

(a) Be granted the privilege of clearing the aquatic vegetation, except woody plants of a diameter greater than 2 inches, measured at the base, out in the water to the extent necessary to enable him to use the public waters reasonably for boating, swimming, skiing, fishing, and similar activities. If an area greater than one-fifth of an acre is to be cleared within a period of 3 months, a permit must be applied for and granted by the 'board.

(b) Be permitted to fill to combat erosion. However, in no case shall this section be construed to grant a riparian owner the right to add on land out into the main body of the water in such a manner as to constitute an encroachment upon the sovereignty submerged bottoms to gain more property or to restrict others from reasonable use of the water. A permit from the 'board shall be necessary for such fill projects to combat erosion.

(c) Be granted usufructuary right in any strip of land which may be exposed due to natural recession of the waters, between the boundary line and the existing waterline.

(6) Any authorized dock, boathouse, or other structure, erected under permit, shall be for the sole use and control of the riparian owner.

(7) Nothing contained in this section or s. 253.12(1) shall be construed as affecting privately owned lakes, streams, watercourses, or submerged lands.

(8) The 'board shall promulgate such rules and regulations as may be necessary to carry out the purposes of this section.

History.—s. 2, ch. 70-97.
'Note.—See Note 1 following s. 253.015.

253.21 Board of trustees may surrender certain lands to the United States and receive indemnity.—Whenever it may appear that any of the swamplands, granted by the United States to this state by Act of Congress approved September 28, 1850, entitled "An Act to enable the State of Arkansas and other states to reclaim the swamplands within their limits," have been sold or located, the 'Board of Trustees of the Internal Improvement Trust Fund may surrender to the United States the right, title and claim of the state to said lands, and receive from the United States, in lieu thereof, such reclamation as may be due.

History.—Ch. 631, 1855; RS 439; GS 627; RGS 1076; CGL 1407; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.29 Board of trustees to refund money paid where title to land fails.—Any person having heretofore, or who may hereafter purchase in good faith and for value, any lands in the state from the 'Board of Trustees of the Internal Improvement Trust Fund of the state, and which title has failed by reason of the fact that the 'Board of Trustees of the Internal Improvement Trust Fund had no title or right to convey the same, the 'Board of Trustees of the Internal Improvement Trust Fund shall refund to said party the sums of money so paid for said lands without interest thereon upon due proof being made.

History.—s. 1, ch. 5175, 1903; GS 635; RGS 1064; CGL 1415, s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.34 Transfer of notes owned by board.—The 'Board of Trustees of the Internal Improvement Trust Fund may endorse and transfer to any person, with or without recourse, any bills, notes or other obligations which the said 'board may now own, or may hereafter acquire.

History.—s. 5, ch. 6453, 1913; RGS 1069; CGL 1420; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.36 Title to reclaimed marsh, etc., lands in board of trustees.—The title to all marsh, wet or lowlands as have become permanently reclaimed, title to which is in the state, is vested in the 'Board of Trustees of the Internal Improvement Trust Fund to be held by the state and disposed of, as provided in this chapter.

History.—s. 1, ch. 7891, 1919; CGL 1425; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.37 Survey to be made; sale of lands; preference to buyers.—When it shall be brought to the attention of the 'Board of Trustees of the Internal Improvement Trust Fund that such lands exist as are defined in s. 253.36, the 'board may cause a survey of the same to be made, which survey shall be connected with the surveys of the United States Government, or other surveys adjoining such lands, as far as may be practicable, and shall be made in conformity with the rules and regulations prescribed by the Department of the Interior for making federal surveys. When such surveys have been completed and, with the plats thereof, have been filed in the office of the said 'board, the 'board may proceed to sell and convey the said lands so surveyed in the same manner that other swamp and overflowed lands are sold and disposed of; provided, that in making sales of such land the 'board shall give first right to purchase to any adjacent owner thereof who desires to complete or square up any fractional section now owned by him or to any person who has settled on, or preempted the same, in amounts not exceeding 80 acres; and, provided further, that any and all other such lands as are covered hereby shall be sold by the 'board to bona fide settlers in amounts not exceeding 80 acres to each settler.

History.—s. 2, ch. 7891, 1919; CGL 1426; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.38 Riparian rights not affected.—Nothing in ss. 253.36 and 253.37 shall be construed as in anywise affecting the riparian rights now or heretofore existing under the laws of this state; but it is expressly provided that the provisions of said sections shall apply only to such lands as the Department of the Interior has declined to convey to the state, or which have become permanently reclaimed; and in making sales thereof, the 'board of trustees may provide for a complete system of reclamation as part of the consideration thereof, or contract for such permanent reclamation in the manner it deems advisable.

History.—s. 3, ch. 7891, 1919; CGL 1427; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.381 Unsurveyed marsh lands; sale to upland owners.—The 'Board of Trustees of the Internal Improvement Trust Fund of the state and the State Board of Education are hereby authorized to make sales of unsurveyed marshlands to record owners of uplands which have been surveyed by the United States, and to make equitable divisions of unsurveyed marsh areas and allocations of the same for sales with due respect to upland ownership, sales heretofore made,' natural divisions of the unsurveyed marshes which are indicated by the general courses of water channels within or across the unsurveyed marshes and to other topographical features of the affected areas.

History.—s. 1, ch. 59-497; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.382 Oyster beds, minerals, oils, etc., reserved to state.—The state saves, reserves and excepts all natural oyster beds upon and all minerals and oils in or under the submerged lands until the same shall be filled in and improved by the riparian owner.

History.—s. 4, ch. 8537, 1921; CGL 1777.
Note.—Former s. 271.04.

253.39 Surveys, etc., approved by chief cadastral surveyor validated.—All surveys of lands into townships, sections or other regular land divisions, heretofore or hereafter made in this state, and which have or may hereafter be approved by the chief cadastral surveyor for the 'Board of Trustees of the Internal Improvement Trust Fund, together with the field notes, plats, or other accessories pertaining thereto, are validated and confirmed and are official public surveys of this state of equal force, tenor and effect as surveys made by or under the direction of the United States Government.

History.—s. 1, ch. 7892, 1919; CGL 1428; s. 1, ch. 61-187; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.40 To what lands applicable.—The provisions for land surveys in ss. 253.39 and 253.41 shall only apply to such lands as have not heretofore been surveyed by the Federal Government; and all acts of the 'Board of Trustees of the Internal Improvement Trust Fund, together with any and all contracts, resolutions and instructions relating to such surveys, are approved, validated and confirmed.

History.—s. 2, ch. 7892, 1919; CGL 1429; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.41 Plats and field notes filed in office of Board of Trustees of Internal Improvement Trust Fund.—When such surveys, as provided for in ss. 253.39 and 253.40, shall have been made and approved by the chief cadastral surveyor, the plats and field notes thereof shall be filed in the office of the 'Board of Trustees of the Internal Improvement Trust Fund of this state, which shall be the custodian of such plats and field notes for the use of the public, under such regulations as may apply to the use of plats and field notes of the public land surveys of the United States, and a duly certified copy of the same shall be admissible as evidence in any court of this state.

History.—s. 3, ch. 7892, 1919; CGL 1430; s. 5, ch. 63-294; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.42 Board of trustees may exchange lands.—The 'Board of Trustees of the Internal Improvement Trust Fund of the state may exchange lands held or owned by, or vested in, said board for other lands in the state owned by private individuals or corporations; and fix the terms and conditions of any such exchange, and select and agree upon the lands to be so conveyed by said 'board; and the lands to be conveyed to said 'board in exchange therefor; and agree upon and pay or receive, as the case may in the judgment of said 'board require, any sum or sums of money deemed necessary by said 'board for the purpose of equalizing the values of such exchanged property, and make and enter into contracts or agreements for such purpose or purposes.

History.—s. 1, ch. 8525, 1921; CGL 1432; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.
cf.—ss. 285.04, 285.06 Exchanged state lands for benefit of Seminole Indians.

253.43 Convey by deed.—The 'Board of Trustees of the Internal Improvement Trust Fund may execute and deliver a deed of conveyance, in its discretion necessary or proper, for the purpose of carrying into effect any such exchange or any contract or agreement therefor, made by said 'board under or pursuant to the power vested in it by this chapter, or otherwise; and any such deed shall fully convey to and vest in the purchaser or grantee the property so conveyed.

History.—s. 2, ch. 8525, 1921; CGL 1433; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.431 Agents may act on behalf of board of trustees.—The 'Board of Trustees of the Internal Improvement Trust Fund may, by resolution duly recorded in the records of said 'board, authorize or employ agents or employees to act in its behalf in the execution and delivery of deeds of conveyance, for the purpose of carrying into effect any exchange or contract or agreement therefor made by said 'board under or pursuant to the power vested in said 'board by this chapter, by virtue of the state's equity in lands under chapter 197, pursuant to conveyances by authority of s. 288.14 or chapter 270, by authority of s. 591.19 or s. 285.14, and by such agents or employees issue disclaimers, releases of oil and mineral rights, quit claim deeds, releases of any and all reservations of whatever kind in the lands of the state, and such other documents as may be authorized by the 'board to release or convey the state's interests. Any deed executed by said agents or employees shall fully convey to and vest in the purchaser or grantee the property so conveyed.

History.—s. 2, ch. 67-5; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.44 Disposal of lands received.—All lands conveyed to the 'Board of Trustees of the Internal Improvement Trust Fund, pursuant to ss. 253.42, 253.43, 253.44, or ratified by s. 253.43, shall be held and disposed of by said 'board, pursuant to the laws of the state affecting said 'Board of Trustees of the Internal Improvement Trust Fund, and acts amendatory thereto.

History.—s. 3, ch. 8525, 1921; CGL 1434; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.45 Sale or lease of phosphate, clay, minerals, etc., in or under state lands.—

(1) The 'Board of Trustees of the Internal Improvement Trust Fund may sell or lease any phosphate, earth or clay, sand, gravel, shell, mineral, metal, timber or water, or any other substance similar to the foregoing, in, on, or under, any land the title to which is vested in the state, the Department of General Services, the Department of Natural Resources, the Game and Fresh Water Fish Commission, the State Board of Education, or any other state board, department, or agency; provided that the 'board of trustees may not grant such a sale or lease on the land of any other state board, department or agency without first obtaining approval therefrom.

No sale or lease provided for in this section shall be allowed on hard-surfaced beaches that are used for bathing or driving and areas contiguous thereto out to a mean low-water depth of 3 feet and landward to the nearest paved public road. Any sale or lease provided for in this section shall be conducted by competitive bidding as provided for in ss. 253.52, 253.53 and 253.54. The proceeds of such sales or leases are to be credited to the 'board of trustees, board, department or agency which has title or control of the land involved.

(2) The 'Board of Trustees of the Internal Improvement Trust Fund or any other state agency authorized to grant leases under this section shall specify in each such lease, in clear and precise terms, the particular minerals for which the lessee is permitted to drill or mine and the manner in which the same may be extracted.

History.—s. 1, ch. 9289, 1923; ss. 1, 2, ch. 9316, 1923; s. 1, ch. 13670, 1929; CGL 1936 Supp. 1438(1); s. 1, ch. 59-178; s. 2, ch. 61-119; s. 1, ch. 69-181; s. 1, ch. 69-239; s. 1, ch. 69-369; ss. 22, 25, 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.
cf.—s. 270.13 Disposition of money derived from sale, lease or rental of products in, on, or under state lands.

253.451 Construction of term "land the title to which is vested in the state."—For the purposes of ss. 253.45-253.61 the phrase "land the title to which is vested in the state" or words of similar import shall include lands previously held by the state or any agency thereof, in which mineral rights have been retained by the state or such agency.

History.—s. 10, ch. 69-369.

253.47 Board of trustees may lease, sell, etc., bottoms of bays, lagoons, straits, etc., owned by state, for petroleum purposes.—The 'Board of Trustees of the Internal Improvement Trust Fund of the state may lease for royalties or for other agreed compensation, or sell and otherwise dispose of the right to drill wells for the discovery and the production of petroleum and natural gas in the bottoms, owned by the state in its sovereign capacity, of the bays, lagoons, straits, sounds, gulf, streams and lakes within the state; provided, that such leases or sales shall not confer upon the person acquiring the same the right to enter upon any private property of another, nor the right to drill any well or otherwise place permanent or stationary obstruction in such waters or upon such bottoms within one-quarter of 1 mile of the shoreline of the lands of any upland owner, without first having the written consent of such upland owner so to do. The leases and sales so made shall convey to the lessee or vendee the rights of ingress and egress to, from, and over the bottoms leased or acquired, and the right to construct and maintain on and over such leased or acquired bottoms, in such manner as not to obstruct transportation, any structures, tanks, docks, stations and other equipment, as may be required for the proper development of such leases and the purposes for which the same are made.

History.—s. 1 ch. 12429, 1927; CGL 1445; s. 7, ch. 22858, 1945; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.
cf.—s. 270.13 Disposition of money derived from leases.

253.51 Oil and gas leases on state lands by the board of trustees.—The 'Board of Trustees of the Internal Improvement Trust Fund is hereby authorized and empowered to negotiate, sell, and convey leasehold estates in and to lands the title to which is vested in any state board, department or agency thereof or lands the title to which is vested in the state with its control and management in any such board, department or agency, for the purpose of the development thereof, and the production therefrom, of oil and gas, to any person, firm, corporation or association authorized to do business in the state, upon such terms and conditions as may be agreed upon by the contracting parties, not inconsistent with law and the provisions of the chapter.

History.—s. 1, ch. 22824, 1945; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106; s. 2, ch. 69-369.
'Note.—See Note 1 following s. 253.015.

253.511 Reports by lessees of oil and mineral rights, state lands.—

(1) The 'Board of Trustees of the Internal Improvement Trust Fund shall require from each lessee of public land under s. 253.45, s. 253.47 or s. 253.51 an annual notarized report as to the status of operations on the land under lease. Such report shall include the number of holes drilled, the dates of drilling, the depth of drilling, and the results of the operation. Reports of mining operations shall also include the number of cubic yards mined. The notarized report of both mining or drilling operations shall include a financial report of moneys paid over to the state, if any. The 'board may require reasonable additional information, as may be necessary, for a better understanding of the operation under lease; provided, that this shall not be construed as authorizing the 'board to require any lessee to divulge information relating to its work product, trade secrets, or methods of operation not commonly shared with a leasing agency. Failure to submit the report required by this section within 90 days following the anniversary date of the respective lease may be grounds for revoking and setting aside any lease as to which such report should have been made.

(2) The report required by this section may be introduced in evidence in behalf of the state or any agency thereof in any court proceeding as prima facie evidence of the information contained therein.

History.—s. 1, ch. 69-246; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.512 Applicants for lease of gas, oil, or mineral rights; report as to lease holdings.—Each applicant for a lease concerning oil, gas, or mineral exploitation or exploration in the state shall submit to the agency of the state issuing the lease a certified statement as to any lease holdings regarding oil, gas, or minerals the applicant has which were granted by the same or any other agency of the state. Such statement shall also include the number and identification of such leases issued and the state agency which issued the lease or leases.

History.—s. 1, ch. 69-237.

253.52 Placing oil and gas leases on market by board.—Whenever in the opinion of the 'Board of Trustees of the Internal Improvement Trust Fund there shall be a demand for the purchase of oil and gas leases on any area, tract, or parcel of the land so owned, controlled, or managed, by any state board, department, or agency, then the 'board shall place such oil and gas lease or leases on the market in such blocks, tracts, or parcels as it may designate. The lease or leases shall only be made after notice by publication thereof has been made not less than once a week for 4 consecutive weeks in a newspaper of general circulation published in Leon County, and in a similar newspaper for a similar period of time published in the vicinity of the lands offered to be leased, the last publication in both newspapers to be not less than 5 days in advance of the sale date. Such notice shall be to the effect that a lease or leases will be offered for sale at such date and time as may be named in said notice and shall describe the land upon which such lease, or leases, will be offered. Before any lease of any block, tract, or parcel of land, submerged, or unsubmerged, within a radius of 3 miles of the boundaries of any incorporated city, or town, or within such radius of any bathing beach, or beaches, outside thereof, such board, department, or agency, shall through one or more of its members hold a public hearing, after notice thereof by publication once in a newspaper of general circulation published at least 1 week prior to said hearing in the vicinity of the land, or lands, offered to be leased, of the offer to lease the same, calling upon all interested persons to attend said hearing where they would be given the opportunity to be heard, all of which shall be considered by the 'board prior to the execution of any lease or leases to said land, and the 'board may withdraw said land, or any part thereof, from the market, and refuse to execute such lease or leases if after such hearing, or otherwise, it considers such execution contrary to the public welfare. Before advertising any land for lease the form of the lease or leases to be offered for sale, not inconsistent with law, or the provisions of this section, shall be prescribed by the 'board and a copy, or copies, thereof, shall be available to the general public at the office of the 'Board of Trustees of the Internal Improvement Trust Fund and the advertisements of such sale shall so state.

History.—s. 2, ch. 22824, 1945; s. 1, ch. 24339, 1947; s. 11, ch. 25035, 1949; s. 10, ch. 26484, 1951; ss. 27, 35, ch. 69-106; s. 3, ch. 69-369
'Note.—See Note 1 following s. 253.015.

253.53 Sealed bids required.—All lands subject to this law shall be leased upon sealed bids. All bids shall be directed to the 'Board of Trustees of the Internal Improvement Trust Fund. The 'board shall determine in advance the amount of royalty, never less than one-eighth in kind, or in value, and a definite rental, increasing annually after the first 2 years, upon lands not developed for oil or gas, or upon which no well has been commenced in good faith to secure production in paying quantities of gas or oil. The 'board may, in its discretion, incorporate within the terms of any lease provisions for pooling or unitizing the leased premises, in whole or in part, with other lands or leases; and provisions for payments that may be made in lieu of royalty on wells which have been completed as gas wells and are capable of producing gas in paying quantities but are shut in pending development of a satisfactory market outlet, provided this shut-in period pending development of a satisfactory market outlet shall not exceed 48 months from the date of completion of such gas well or wells as herein described, if the lease is not being otherwise maintained by drilling or reworking or by production, which, if made, shall operate to cause the lease to be considered as producing in paying quantities for all purposes thereof. In addition to such fixed charges for said lease, there shall be a cash consideration. The bids shall be for this cash consideration, offered for said lease, in addition to such fixed charges for royalty, rental, and payments in lieu of royalty, and shall be payable upon acceptance of said bid. All bids shall be accompanied by a cashier's check, or certified check, for the amount of such cash consideration and shall be payable to the state board, department, or agency which holds title to or controls the land offered for lease. No bid filed subsequent to the date and hour of sale specified in the advertisement of sale shall be considered.

History.—s. 3, ch. 22824, 1945; s. 4, ch. 69-369; s. 1, ch. 69-406; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.54 Competitive bidding.—On the date and at the hour specified in the advertisement of sale, the 'Board of Trustees of the Internal Improvement Trust Fund shall at a public meeting, open and consider any and all bids submitted prior to such date and hour for the leasing of the land, or lands, so advertised, and, in the discretion of the 'board, award the lease to the highest and best bidder submitting a bid therefor; provided, that if, in the judgment of the 'board, the bids submitted do not represent the fair value of such lease, or leases, or the execution of same is contrary to the public welfare, or the responsibility of the bidder offering the highest amount has not been established to its satisfaction, or for any other reason, it may in its discretion reject said bids, give notice and call for new or other bids, or withdraw said land from the market. If several distinct blocks, parcels, or tracts of land can be separately considered, then, and in that event, the 'board may so consider them, but, if they cannot be so considered, then the rejection for any cause of the highest and best bid shall result in the rejection of all bids.

History.—s. 4, ch. 22824, 1945; ss. 27, 35, ch. 69-106; s. 5, ch. 69-369.
'Note.—See Note 1 following s. 253.015.

253.55 Limitation on term of lease.—

(1) Subject to the further provisions hereof, each lease shall be for a primary term prescribed by the 'Board of Trustees of the Internal Improvement Trust Fund not to exceed 10 years from the date of the lease, and shall provide that such lease, upon which operations are being carried on in good faith and in a workmanlike and diligent manner with no cessation of more than 30 consecutive days, or oil or gas is being produced therefrom in paying quantities, shall remain in force and effect. The lease shall provide that if, after production is obtained therefrom, such production should cease, the lease may be maintained, if it is within the primary term, by commencing or resuming the payment of rentals or commencing operations for drilling or reworking said land, in good faith and in a workmanlike and diligent manner, on or before the rental payment date next ensuing after the expiration of 60 days, or, if it be after the expiration of the primary term, the lease may be maintained in force and effect by commencing and continuing operations for drilling or reworking said land for the development and production of oil or gas on or before 60 days after the cessation of production and prosecuting same with diligence and in a workmanlike manner with no cessation for more than 30 consecutive days, and if such operations within a reasonable time thereafter result in the production of oil or gas from such leased land in paying quantities, the lease shall remain in effect thereafter as long as oil or gas is produced therefrom in paying quantities. The provisions of this section shall not be construed to permit the automatic renewal of a lease by option after the expiration of the primary term, nor to permit the continuance of any lease except in accordance with the provisions of this section.

(2) Each lease shall provide for its termination in the absence of drilling or reworking operations or production of oil or gas therefrom in paying quantities.

(3) Every such lease executed by the 'board of trustees shall require the lessee and his assigns to commence and complete operations for the drilling of at least one test well on the lands leased within the first two and one-half year period of the term of such lease and to commence and complete operations for the drilling of at least one additional well in each succeeding two and one-half-year period of the term of said lease, until the total number of wells drilled shall equal one-half the number of sections of land embraced in the lease, and, after commencing such operations, to prosecute same in good faith, and with reasonable diligence and in a workmanlike manner, to discover and to develop said land for the production of oil and gas, until such well is completed or abandoned. The lessee and his assigns, at the time the drilling of each well is commenced, shall file with the lessor a written declaration describing the two sections of land to which such well shall apply. If no well shall be commenced and continued to completion with reasonable diligence and in a workmanlike manner, to discover and develop said land for the production of oil and gas, until such well is completed or abandoned, within the first two and one-half year period of the term of such lease, the entire lease shall be void. If no additional well shall be commenced and continued to completion with reasonable diligence and in a workmanlike manner, to discover and develop said land for the production of oil and gas, until such well is completed, or abandoned, then such lease at the end of such applicable two and one-half year period of the term of such lease shall become forfeited and void as to all of the land covered by said lease except that upon which wells have been drilled in accordance with the provisions of this law.

History.—s. 5, ch. 22824, 1945; s. 1, ch. 69-238, ss. 27, 35, ch. 69-106; s. 6, ch. 69-369
'Note.—See Note 1 following s. 253.015.

253.56 Responsibility of bidder.—Before the acceptance of any bid for such lease the 'Board of Trustees of the Internal Improvement Trust Fund shall establish to its satisfaction the responsibility of the bidder. And no lease shall be assigned in whole, or in part, nor any land covered thereby, until and except the 'board shall approve and consent to such assignment, and such permission shall not be unreasonably withheld.

History.—s. 6, ch. 22824, 1945; ss. 27, 35, ch. 69-106; s. 7, ch. 69-369.
'Note.—See Note 1 following s. 253.015.

253.57 Royalties.—The state's royalties, a part of the consideration of every lease, shall be computed after deducting any oil or gas reasonably used for the production hereof.

History.—s. 7, ch. 22824, 1945.

253.571 Surety or property bond required of lessee prior to commencement of drilling.—The 'Board of Trustees of the Internal Improvement Trust Fund shall require a surety or property bond from each lessee of public land prior to the time such lessee mines, drills or extracts in any manner, petroleum, petroleum products, gas, sulphur, or any other mineral from such land. The surety bond shall be from a surety company authorized to do business in the state. The bond shall serve as security and is to be forfeited to the 'board to pay for any damages caused by mining or drilling operations of the lessee. In the case of operations planned in the waters of the state or under other particular circumstances which, by their nature warrant greater security in view of possible damages, the 'board shall give special consideration to the extent of such possible damages and shall set the amount of an adequate and sufficient bond accordingly. For the purposes of this section damages shall include but not be limited to air and water pollution, destruction of wildlife or marine productivity and any other damage which impairs the health and general welfare of the citizens of the state.

History.—s. 1, ch. 69-367; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.58 Manner of drilling.—All wells in this law referred to required in the several periods of said lease to be drilled, shall be drilled in an efficient, diligent, and workmanlike manner, and in accordance with the best practice, to a depth of 6,000 feet before the abandonment thereof, unless oil or gas has been found in paying quantities at a lesser depth.

History.—s. 8, ch. 22824, 1945

253.60 Conflicting laws.—The development of the lands leased by the 'Board of Trustees of the Internal Improvement Trust Fund for the production of oil and gas therefrom shall be in accord with the laws of Florida relating to conservation and control and, if herein is found any conflict with those laws, such laws relating to conservation and control shall prevail.

History.—s. 10, ch. 22824, 1945; ss. 27, 35, ch. 69-106; s. 8, ch. 69-369.
'Note.—See Note 1 following s. 253.015.

253.61 Lands not subject to lease.—
(1) Regardless of anything to the contrary contained in this law in any previous section or part thereof, no board or agency mentioned therein or the state shall have the power or authority to sell, execute or enter into any lease of the type covered by this law relating to any of the following lands, submerged or unsubmerged, except under the circumstances and conditions as hereinafter set out in this section, to wit:
(a) No lease of the type covered by this law shall be granted, sold or executed covering such lands within the corporate limits of any municipality unless the governing authority of the municipality shall have first duly consented to the granting or sale of such lease by resolution.
(b) No lease of the type covered by this law shall be granted, sold or executed covering any such lands in the tidal waters of the state, abutting on or immediately adjacent to the corporate limits of a municipality or within 3 miles of such corporate limits extending from the line of mean high tide into such waters, unless the governing authority of the municipality shall have first duly consented to the granting or sale of such lease by resolution.
(c) No lease of the type covered by this law shall be granted, sold or executed covering such lands on any improved beach, located outside of an incorporated town or municipality, or covering such lands in the tidal waters of the state abutting on or immediately adjacent to any improved beach, or within 3 miles of an improved beach extending from the line of mean high tide into such tidal waters, unless the county commissioners of the county in which such beach is located shall have first duly consented to the granting or sale of such lease by resolution.
(2) For the purposes of this section and law an improved beach, situated outside of the corporate limits of any municipality or town, shall be and is hereby defined to be any beach adjacent to or abutting upon the tidal waters of the state and having not less than ten hotels, apartment buildings, residences or other structures, used for residential purposes, on or to any given miles of such beach.
History.—s. 11, ch. 22824, 1945.

253.62 Board of trustees authorized to convey certain lands without reservation.—
(1) The 'Board of Trustees of the Internal Improvement Trust Fund in making exchanges of land under ss. 253.42 and 253.43, is hereby authorized in its discretion to convey said land without reservations of oil and gas or of phosphate and other minerals required by s. 270.11, where deeds to lands received in exchange convey title in fee simple without such reservations or to determine the part or parts to be reserved and the part or parts to be conveyed, so as to facilitate exchange on a basis as nearly equal as may be.
(2) The 'Board of Trustees of the Internal Improvement Trust Fund is further authorized in its discretion to convey land to the United States free from reservations for oil, gas, phosphate and other minerals, provided agreement satisfactory to the 'board be effectuated with the United States whereby, in the event oil, gas, phosphate or other minerals are ever produced from said land, said board shall receive the customary royalty therefrom. In any conveyance heretofore made to the United States for national park or related purpose subsequent to June 30, 1943, which contained such reservations, said 'board shall have authority to convey said reservations subject to the conditions hereof in respect to customary royalty.
(3) The authority to convey, granted in subsection (2), shall apply to the conveyance of lands by the 'board of trustees to the United States for the establishment of the Biscayne National Monument, as defined by Public Law 90-606 of the United States, and the 'board is authorized to convey public lands to the United States for the establishment of the Biscayne National Monument. All acts and actions of the 'board of trustees and all agreements between the 'board and the United States Government regarding the conveyance of any state lands to the United States for the establishment of the Biscayne National Monument are hereby ratified, confirmed, and validated. For the purposes of the conveyance authorized by this subsection, no provision of this chapter shall apply, and the 'board of trustees shall not be required, prior to such conveyance, to comply with any conditions precedent to sale of lands set out in this chapter, nor shall the board be required to reserve oil, gas, phosphate, or other mineral rights, or enter into an agreement for royalties, if any, if same are produced from said lands. However, the waiver herein shall not apply to the requirements of this chapter relating to the setting of bulkhead lines and to dredging and filling.
(4) The legislative intent embodied in this section is to authorize the 'board of trustees to convey or obligate itself to convey the herein referred to state-owned lands in accordance with the provisions of Public Law 90-606. Upon certification to the 'board by the United States Government that all private lands intended to be acquired have been acquired and that owners of private property who have not donated or otherwise conveyed their lands have been paid therefor, the conveyance herein authorized shall become absolute. Nothing herein shall alter the right of the United States Government to immediate possession of said state-owned lands.
History.—ss. 1, 2, ch. 23617, 1947; s. 11, ch. 25035, 1949; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106; s. 1, ch. 70-364; s. 1, ch. 70-439.
'Note.—See Note 1 following s. 253.015.

***253.66 Change in bulkhead lines, Pinellas County.—**
(1) As soon as a county bulkhead line as provided in s. 253.122 has been fixed by the water and navigation control authority of Pinellas County around the mainland of the county and the offshore islands therein, and the bulkhead line has been formally approved by the 'Board of Trustees of the Internal Improvement Trust Fund of the state, all in accordance with the provisions of s. 253.122, no further change in said bulkhead line shall be made notwithstanding the provisions of s. 253.122(5).
(2) It is hereby declared to be the intent of the Legislature that subsection (1) is necessary for the protection of navigable waters in Pinellas County and the fish, wildlife and natural resources therein.
History.—ss. 1-3, ch. 69-522; s. 2, ch. 61-119; s. 1, ch. 61-264; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

*Note.—See s. 25, ch. 75-22, which repealed s. 253.122, relating to the power to fix bulkhead lines, and s. 7(3), ch. 75-22 (s. 253.1221), which reestablished all previously established bulkhead lines at the line of mean high water or ordinary high water.

253.665 Grant of easements, licenses, leases, etc.—
(1) The 'Board of Trustees of the Internal Improvement Trust Fund of this state is authorized and empowered to grant unto riparian owners as herein defined, their heirs, successors and assigns, perpetual easements and easements, licenses and leases for specified terms of years, permitting such riparian owners, their heirs, successors and assigns, to construct, maintain and operate structures and facilities on, in and under the bed of any navigable stream or any river owned in whole or in part by the state, for the purpose of providing water of a suitable quality for industrial, domestic or other use; provided, however, any instrument granting such easement, lease or license may contain provisions to the effect that such structures and facilities shall be so constructed as not to obstruct the channel of the stream or river or unreasonably interfere with navigation, commerce or fishing thereon.
(2) For the purposes of this section, the term "riparian owners" shall include the owners of uplands bounded by either the high-or low-water mark of any stream or river and shall include lessees and licensees of any such owners or grantees in easements from such owners of such uplands or river bottoms. The term "channel" shall mean the marked, buoyed, or artificially dredged channel, if any, and if none, shall mean a space equal to 20 percent of the average width of the river or stream at the point concerned which furnishes uninterruptedly, through its course, the deepest water at mean low water.
(3) This section is cumulative and shall not restrict or limit any title, right, interest or privilege of any riparian owner under the common law.
History.—ss. 1-3, ch. 57-325; s. 2, ch. 61-119; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.
Note.—Former s. 271.10.

253.67 Definitions.—As used in ss. 253.67-253.75:
(1) "Aquaculture" means the cultivation of animal and plant life in a water environment.
(2) "Water column" means the vertical extent of water, including the surface thereof, above a designated area of submerged bottom land.
(3) "Department" means the Department of Natural Resources.
(4) "Board" means the 'Board of Trustees of the Internal Improvement Trust Fund.
History.—s. 1, ch. 69-46; ss. 25, 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.68 Authority to lease submerged land and water column.—To the extent that it is not contrary to the public interest, and subject to limitations contained in ss. 253.67-253.75, the 'board of trustees may lease submerged lands to which it has title for the conduct of aquaculture activities and grant exclusive use of the bottom and the water column to the extent required by such activities. Such leases may authorize use of the submerged land and water column for either commercial or experimental purposes. However no lease shall be granted by the 'board when there is filed with it a resolution of objection adopted by a majority of the county commission of a county within whose boundaries, if the same were extended to the extent of the interest of the state, the proposed leased area would lie. Said resolution shall be filed with the 'board of trustees within 30 days of the date of the first publication of notice as required by s. 253.70. Prior to the granting of any such leases, the 'board shall establish and publish a list of guidelines to be followed when considering applications for lease. Such guidelines shall be designed to protect the public's interest in submerged lands and the publicly owned water column.
History.—s. 1, ch. 69-46; ss. 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.69 Application to lease submerged land and water column.—Any applicant desiring to lease a portion of the submerged lands of this state for the purpose of conducting aquaculture activities shall file with the 'board a written application in such form as it may prescribe, setting forth the following information:
(1) The name and address of the applicant.
(2) A reasonably concise description of the location and amount of submerged land desired and either:
(a) Attaching a map or plat of a survey of such lands; or
(b) Enclosing a sum sufficient to defray the cost of such a survey as estimated by the department.
(3) A description of the aquaculture activities to be conducted, including a specification whether such activities are to be experimental or commercial and an assessment of the current capability of the applicant to carry on such activities.
(4) Such other information as the 'board of trustees may by regulation require.
History.—s. 1, ch. 69-46; ss. 25, 27, 35, ch. 69-106.
'Note.—See Note 1 following s. 253.015.

253.70 Public notice and hearings.—
(1) Upon receiving an application under this act that satisfactorily sets forth the information required by s. 253.69, the 'board shall give notice of the application by publication in a newspaper published in the county in which the submerged lands are located not less than once a week for 3 consecutive weeks and mail copies of such notice by certified or registered mail to each riparian owner of upland lying within 1,000 feet of the submerged land proposed to be leased, addressed to such owner as his name and address appears on the latest county tax assessment roll.
(2) If no written objections are filed within 30 days after the date of first publication of the notice and if the 'board finds that the proposed lease is not incompatible with the public interest, the 'board has authority to consummate the lease contract as hereinafter provided. However, failure to mail the notice to the riparian upland owners shall not invalidate such lease.
(3) If written objections are filed, the 'board or its designee shall hear and consider the same at a public hearing which shall be held in the county from which the application was received. Timely notice of such hearing shall be given by at least one publica-

tion in a newspaper published in the county in which the submerged lands are located and by certified or registered mail to each riparian owner of upland lying within 1,000 feet of the submerged land proposed to be leased, addressed to such owner as his name and address appears on the latest county tax assessment roll.

History.—s. 1, ch. 69-46; ss. 27, 28, ch. 69-106.
[1]Note.—See Note 1 following s. 253.015.
cf.—s. 1.01 "Registered mail" defined to include certified mail.

253.71 The lease contract.—When the [1]board has determined that the proposed lease is not incompatible with the public interest and that the applicant has demonstrated his capacity to perform the operations upon which the application is based, it may proceed to consummate a lease contract having the following features in addition to others deemed desirable by the [1]board:

(1) TERM.—The maximum initial terms shall be 10 years. Leases shall be renewable for successive terms up to the same maximum upon agreement of the parties. However, before renewing the term of any lease, the [1]board shall invite objections by following the publication procedures of s. 253.70.

(2) RENTAL FEES.—

(a) The lease contract shall specify such amount of rental per acre of leased bottom as may be agreed to by the parties and shall take the form of:

1. Fixed rental to be paid throughout the term of the lease; or

2. A basic rental charge which will be supplemented by royalties after the productivity of the aquaculture enterprise has been established.

(b) In setting the amount of the rental charge or royalties the [1]board shall consider such factors as the probable rates of productivity and the marketability and value of the product of the enterprise.

(c) All leases shall stipulate for the payment of the annual rental in advance on or before January 1. Failure of the lessee to pay such rent within 30 days of such date shall constitute ground for cancellation of the lease and forfeiture to the state of all works, improvements, and animal and plant life in and upon the leased land and water column.

(3) MAXIMUM AREA TO BE LEASED.—The [1]board shall not lease a larger area of submerged land to any single lessee than has been demonstrated to be within his capacity to utilize efficiently and consistent with the public interest. However, the [1]board may hold a reasonable area of adjacent bottom land in reserve for the time when a holder of an experimental lease will begin operation under a commercial lease. Successful conduct of aquaculture activities on an experimental basis may be accepted as a demonstration of capacity to conduct such operations on a commercial basis.

(4) PERFORMANCE REQUIREMENTS; BOND.—Failure of the lessee to perform substantially the aquaculture activities for which the lease was granted shall constitute ground for cancellation of the lease and forfeiture to the state of all the works, improvements, and animal and plant life in and upon the leased land and water column. In addition, the [1]board shall require execution of a bond in an amount and with a surety satisfactory to it and conditioned upon the active pursuit of the aquaculture activities specified in the lease.

(5) DISPOSITION OF IMPROVEMENTS AT TERMINATION OF CONTRACT.—Each contract entered into under this act shall stipulate the disposition of improvements and assets upon the leased lands and waters, including animal and plant life resulting from aquaculture activities.

(6) ASSIGNABILITY OF LEASES.—Leases granted under this act shall be assignable in whole or in part with the approval of the [1]board.

History.—s. 1, ch. 69-46; ss. 27, 35, ch. 69-106.
[1]Note.—See Note 1 following s. 253.015.

253.72 Marking of leased areas; restrictions on public use.—

(1) The [1]board shall require all lessees to stake off and mark the areas under lease by appropriate ranges, monuments, stakes, buoys, and fences, so placed as not to interfere unnecessarily with navigation and other traditional uses of the surface. All lessees shall cause the area under lease and the names of the lessees to be shown by signs appropriately placed pursuant to regulations of the [1]board.

(2) Except to the extent necessary to permit the effective development of the species of animal or plant life being cultivated by the lessee, the public shall be provided with means of reasonable ingress and egress to and from the leased area for traditional water activities such as boating, swimming, and fishing. All limitations upon the use by the public of the areas under lease that are authorized by the terms of the lease shall be clearly posted by the lessee pursuant to regulations by the [1]board. Any person willfully violating posted restrictions shall be guilty of a misdemeanor of the second degree, punishable as provided in s. 775.082 or s. 775.083.

History.—s. 1, ch. 69-46; ss. 27, 35, ch. 69-106; s. 184, ch. 71-136.
[1]Note.—See Note 1 following s. 253.015.

253.73 Rules and regulations; ss. 253.67-253.75.—Subject to the requirements of chapter 120, the [1]board may adopt rules and regulations necessary and appropriate to carry out the provisions of ss. 253.67-253.75.

History.—s. 1, ch. 69-46; ss. 27, 35, ch. 69-106.
[1]Note.—See Note 1 following s. 253.015.

253.74 Penalties.—

(1) Any person who conducts aquaculture activities in excess of those authorized by lease agreement with the [1]board or who conducts such activities on state-owned submerged lands without having previously leased the same shall be guilty of a misdemeanor and subject to imprisonment for not more than 6 months or fine of not more than $1,000, or both. In addition to such fine and imprisonment, all works, improvements, animal and plant life involved in the project, may be forfeited to the state.

(2) Any person who is found by the Department of Natural Resources or the [2][Department of Environmental Regulation] to have violated the provisions of chapter 403 shall be subject to having his lease of state-owned submerged lands canceled.

History.—s. 1, ch. 69-46; ss. 26-27, 35, ch. 69-106; s. 2, ch. 71-137.
[1]Note.—See Note 1 following s. 253.015.
[2]Note.—Bracketed words substituted for "Department of Pollution Control." See s. 8, ch. 75-22, which transferred the Department of Pollution Control to the Department of Environmental Regulation.

253.75 Studies and recommendations by the Department of Natural Resources and the Game and Fresh Water Fish Commission; designation of recommended traditional and other use zones; supervision of aquaculture operations.—

(1) Prior to the granting of any lease under this act, the [1]board shall request a recommendation by the [2]Department of Natural Resources, when the application relates to tidal bottoms, and by the Game and Fresh Water Fish Commission, when the application relates to bottom land covered by fresh water. Such recommendations shall be based on such factors as an assessment of the probable effect of the proposed leasing arrangement on the lawful rights of riparian owners, navigation, commercial and sport fishing, and the conservation of fish or other wildlife or other natural resources, including beaches and shores.

(2) The [2]department and the Game and Fresh Water Fish Commission shall both have the following responsibilities with respect to submerged land and water column falling within their respective jurisdictions:

(a) To undertake, or cause to be undertaken, the studies and surveys necessary to support their respective recommendations to the [1]board;

(b) To institute procedures for supervising the aquaculture activities of lessees holding under this act and reporting thereon from time to time to the [1]board; and

(c) To designate in advance areas of submerged land and water column owned by the state for which they recommend reservation for uses that may possibly be inconsistent with the conduct of aquaculture activities. Such uses shall include, but not be limited to, recreational, commercial and sport fishing and other traditional uses, exploration for petroleum and other minerals, and scientific instrumentation. The existence of such designated areas shall be considered by the [1]board in granting leases under this act.

History.—s. 1, ch. 69-46; ss. 26, 27, 35, ch. 69-106.
[1]Note.—See Note 1 following s. 253.015.
[2]Note.—See s. 11, ch. 75-22, which transfers all powers of the Department of Natural Resources relating to permits, licenses, and exemptions to the Department of Environmental Regulation.

253.76 Appeals; proceedings.—The Governor and Cabinet sitting as the [1]Board of Trustees of the Internal Improvement Trust Fund and as the owners of state lands are vested with the authority to hear and decide appeals of [2][decisions of the Department of Environmental Regulation] under this chapter. Notice of such appeal shall be filed with the Governor and Cabinet within 15 days of such decision. The hearing shall be appellate in nature; however, the Governor and Cabinet may, at their discretion, take additional testimony. Such hearings shall be completed and a decision rendered within 60 days of receipt of the appeal. Hearings shall be in accordance with provisions of chapter 120.

History.—s. 8, ch. 75-22.
[1]Note.—See Note 1 following s. 253.015.
[2]Note.—Bracketed words substituted by the editors for "department decisions" for clarity and conformity with ch. 75-22.

253.77 State lands; state agency authorization for use prohibited without consent of agency in which title vested.—

(1) No department, including any division, bureau, section, or other subdivision thereof, or any other agency of the state possessing regulatory powers involving the issuance of permits shall issue any permit, license, or other evidence of authority involving the use of sovereignty or other lands of the state, title to which is vested in the [1]Board of Trustees of the Internal Improvement Trust Fund or the Department of Natural Resources under chapter 253, until the applicant for such permit, license, or other evidence of permission shall have received from the [1]Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use and exhibited it to such agency or department or subdivision thereof having regulatory power to permit such use.

(2) This act shall not apply to any permit, license, or other form of consent to take the regulated action which was issued and outstanding on June 23, 1976.

History.—ss. 1, 2, ch. 76-245.
[1]Note.—See Note 1 following s. 253.015.

APPENDIX VI

ECONOMIC IMPACT ASSESSMENT FOR THE DESIGNATION OF APALACHICOLA NATIONAL ESTUARINE SANCTUARY

The following economic analysis evaluates the costs and benefits that can be expected with the creation of Apalachicola Bay/River Estuarine Sanctuary, and it attempts to assess the net changes resulting from the proposed sanctuary designation. The purpose of this analysis is to estimate the opportunity costs associated with preserving this area in its natural state, which includes examining the anticipated effects on industrial and commercial activity, employment, and tax revenues.

There are many difficulties inherent in any attempt to accurately measure the economic impacts of the proposed sanctuary. Precise analysis is complicated by the fact that an estuarine sanctuary can be viewed as:

> "... a store of public values due to the ecological, cultural, recreational, aesthetic, historic, and economic services provided by the preserve.... Thus an estuarine sanctuary is more valuable to future generations than to current generations." 1/

Consequently, the long term positive impacts of an estuarine sanctuary devoted to long term research and education are far more difficult to estimate than the shortrun positive and negative impacts.

The following analysis will address impacts on the local, regional, and State/Federal levels, with emphasis on the immediate environment (Franklin County). Due to the interdependent nature of the economic impacts to be assessed, the numerical values derived are not strictly comparable and cannot be totalled for direct comparison.

LOCAL IMPACTS

The proposed sanctuary lies primarily in Franklin County, Florida, with a very small portion in Gulf County. Of the total acreage for the proposed sanctuary (192,758 acres), 180,291 acres are already in public ownership (State and Federal) and these are subject to management objectives compatible with sanctuary designation. The remaining 12,467 acres proposed for acquisition lie entirely in Franklin County. Consequently, the following discussion of local impacts focusses entirely on Franklin County and assumes the sanctuary designation will have little or no impact on Gulf County.

Socioeconomic Characteristics of Franklin County

Franklin County and the surrounding region have experienced a relatively slow population growth (61st in the State), low per capita personal income ($3,061 or 67th in the State), and a high unemployment rate (14 percent in comparison with 8.2 percent statewide). The county's economy is extremely dependent upon the commercial fishing industry, which accounts for approximately 60 percent of total employment. Seafood processing and manufacturing, another source of employment, represents 7 percent of the work force. State and local governments are the second largest source of employment, and comprise another 14 percent of the county's work force. Although nearly 85 percent of the county's land is devoted to commercial forestry, that industry accounts for a very small portion of the total employment in Franklin County.

Future development of the bay region is expected to focus on its natural attributes, with emphasis on commercial fishing and its allied industries of tourism and recreational fishing and boating. Also, there may be some light industry compatible with the rural nature of the county. Future residential development is expected to occur in the vicinity of the City of Apalachicola and on St. George Island, a rapidly growing second-home community for residents of nearby Tallahassee. 2/

It is important to note that the local community acknowledges the following: that it is dependent upon the natural ecosystem, that the proposed Apalachicola Estuarine Sanctuary is extremely compatible with the existing socioeconomic/environmental characteristics of the area, and that the sanctuary will serve to protect and enhance the community's desire to retain its symbiotic relationship with the natural environment. Although this community awareness is subjective and non-quantifiable, it must be considered a significant positive benefit that has occurred, and would further occur from sanctuary designation.

Impacts Resulting From Land Acquisition

A total of 12,467 acres of land in Franklin County will be acquired for the proposed sanctuary under the Environmentally Endangered Lands (EEL) Program. The appraised value of the proposed purchase ranges from $3.47 million to $3.77 million, approximately half of which will be provided by the State and half by the Federal government. 3/

Three principal impacts willl be associated with this land acquisition: the impact on local property tax revenues, impacts associated with injection of acquisition money into the local economy, and impacts resulting from preclusion of existing and future residential, commercial, and industrial development. Each of these impacts will be addressed separately.

Tax Revenues

Although the appraised value of the sanctuary land acquisition ranges from $3.47 to $3.77 million, the land is currently assessed for agricultural use and taxed accordingly. It is estimated that the proposed purchase land generated approximately $9,000 in property taxes during fiscal 1977. 4/ This represents 0.596 percent of the total county taxes levied during that same year ($1,511,000). 5/ Consequently, the loss of tax revenue associated with the proposed land acquisition will have a relatively minor negative impact on the fiscal resources of Franklin County.

Research regarding property values and tax revenues has indicated that there is a positive correlation between the quality of the environment and the value of some residential property. 6/ Property values are partially affected by the demand for land and the degree of this demand is a subjective determination based upon a person's perceived value of property over time. In other words, degradation of the environment can cause property values to decline or to rise more slowly than might otherwise be expected. Likewise, the protection or enchancement of an area's natural environmental assets can result in an increase in the value of adjacent property.

It is anticipated that the relatively small loss of tax revenues in Franklin County (noted above) could be completely offset by an increase in property values (and taxes) on St. George Island that will be partially attributable to the estuarine sanctuary. This island is being developed primarily as a second-home community for residents of nearby Tallahassee and other North Florida/South Georgia communities. Since this development is recreation and natural environment oriented, the value of the property is positively correlated with the quality of the surrounding environment. The guarantee of long term preservation and enhancement of that environment is anticipated to exert a positive impact on land values on St. George Island.

The current assessed value of all platted lots on St. George Island is approximately $11 million. Once development is completed (approximately 1994), however, the assessed value of property on St. George Island is estimated to exceed $18 million. 7/ At the current county millage rate (17.418 mills), this property will generate about $313,500 annually in tax revenues. Assuming the existence of the estuarine sanctuary resulted in an additional three percent increase in property values assessed at fair market price, the additional tax revenues generated would completely offset the tax loss associated with the EEL purchase. Since it is anticipated that the sanctuary will stimulate increased property values in excess of three percent, the designation has the potential for a positive net impact on local tax revenues.

In summary, there will be a relatively small negative impact on county tax revenues in the short run (approximately $9,000/year). In the long run, however, it is anticipated that this loss will be more than offset by a rise in adjacent land values (and property taxes) partially

attributable to the existence of the sanctuary. The net longrun impact on local tax revenues, therefore, is expected to be positive.

Injection of Acquisition Money Into the County Economy

A total of 12,467 acres of Franklin County land will be acquired with approximately $3.5 million in State and Federal monies. Of this total, however, only one parcel (1203 acres) valued at $326,700 is in the apparent ownership of a resident of that county. The remainder of the land is owned by Florida and Georgia corporations and residents.

Therefore, it appears that only about 9.3 percent of the acquisition monies will flow directly into the county. It is important to recognize, however, that this money represents an injection of new funds (State and Federal) as opposed to a redistribution of money within the county, and can be expected through a multiplier effect to provide a stimulus to local economic activity. Therefore, the sanctuary land acquisition is expected to have a small positive impact on the local economy.

Preclusion of Existing and Future Development

The proposed purchase involves essentially undeveloped land composed primarily of marsh (approximately 80 percent) and some upland covered in timber (approximately 20 percent). Although timber has been harvested in the past, no logging operations are currently underway. Consequently, the sanctuary land acquisition will not interrupt any current commercial activity.

There is only one parcel of land on which structures now exist. These structures include some storage facilities, a family residence, and a mobile home. Since the residences are used as a recreational fish camp, the proposed purchase will not displace any existing permanent residents.

In the long run, the sanctuary designation will effectively preclude further development on the acquired land. In order to assess the net impacts associated with precluding development, it is necessary to determine what type of development (if any) might have occurred in the absence of the estuarine sanctuary. Such a determination is highly conjectural, but some indications exist that allow a reasonably accurate projection.

The vast majority of the land in question is marsh (80 percent) and, therefore, unsuitable for intensive development (residential, commercial, or industrial). Indeed, current State regulatory practices make it highly unlikely that even low-density development will be permitted in this area. In addition, the fact that only one residence currently exists on the land attests to the absence of residential, commercial, or industrial demand for the land, which is zoned for agricultural use and lacks the public facilities necessary to support such development.

These are observable factors which appear to forestall future development on the land in question. Studies and projections regarding future growth and development in the Apalachicola Bay area tend to reinforce these observations by forecasting "limited opportunity for growth,... a trend toward out-migration from the County,... and community services and facilities [that] are... inadequate to foster viable economic development." 8/ Collectively, these factors seem to indicate that the area will retain its rural character and experience a low rate of growth and development. Hence, the opportunity cost of developing this land would be quite low due to the previously mentioned constraints.

Summary

It appears that the shortrun impact of land acquisition is negligible. No permanent residents will be displaced, and no current commercial or industrial activities will be affected. In the long run, land generally unsuitable for development, combined with a low growth potential for the area, should serve to minimize the opportunity costs associated with precluding 12,467 acres of county land from future development.

Impact on Renewable and Non-renewable Resources

The economy of Franklin County is vitally dependent upon its renewable resources (fishing and forestry), while non-renewable resources play a far less important role. The following analysis will focus on the net impacts of the sanctuary designation on fishing (commercial, recreational and subsistence), forestry, and mining, each of which will be discussed separately.

Fishing

Franklin County's economy is almost totally dependent upon commercial fishing, the principal economic activity now occurring in the Apalachicola Bay region. Commercial fishing accounts for approximately 60 percent of the county's total employment and seafood processing and packaging plants employed another 7 percent of the 1974 labor force; Apalachicola Bay supplied approximately 90 percent of the oysters consumed in the State; and total marine landings in Franklin County were valued at nearly $7 million, ex. vessel, in 1976. The output multiplier for commercial fisheries is estimated to be approximately 2.0. 9/ Consequently, it is estimated that commercial fishing contributes in excess of $14 million annually to Franklin County's economy.

In addition to commercial fishing, recreational fishing is a principal attraction for tourists coming to the region. Although the proposed sanctuary is already used extensively for recreational fishing, sportfishing in the bay and lower river is generally considered an underutilized resource.

At the present time, there are three fishing lodges in Apalachicola, patronized by an average of 1125 fishermen per month. 10/ One study using percents estimates that a recreational fisherman utilizing charter facilities spends an average of $40 to $75 per day. 11/ Using the lower of these

two values and assuming a stay of only one day duration for each fisherman, it is conservatively estimated that recreational fishermen from these three facilities alone contribute in excess of one-half million dollars annually to Franklin County's economy. Although figures indicating the total number of recreational fishermen using the bay are not available, their positive impact on the local economy is substantial.

Landings of estuarine dependent fish in the lower river and bay area are of great worth to State and national markets, but they also have intrinsic though non-quantitiable food value for local residents. There is no specific documentation regarding the value of estuarine dependent species landed and consumed by individuals within Franklin County, but the area's waters are believed to provide a significant portion of the basic food requirements of the native population.

The acquisition, management, and research conducted within the estuarine sanctuary will have the beneficial longrun impact of ensuring the productivity of the estuarine waters, maintaining the vitality of Franklin County's fishing-dependent economy, and assuring a continued supply of estuarine dependent species for statewide/national export and local consumption.

Forestry

Forestry is a major land use in Franklin County, with over 80 percent of the county's total land area devoted to commercial forestry (290,000 acres). Of the 12,467 acres of land to be acquired for the proposed sanctuary, however, less than 20 percent (2,500 acres) is timberland. This represents a long term loss of approximately 0.862 percent of the total commercial forestry acreage in the county. The principal species of timber found within sanctuary boundary are Long Leaf Pine and Slash Pine. The ability to harvest these resources is relatively good. Hardwood timber predominates in lower areas, and logging conditions for these species are fair to poor. Forestry resources within the boundaries of the proposed sanctuary are not currently being harvested.

Since the land in question is not being harvested at this time, preservation status will have no shortrun impacts on the local economy. In the absence of complete information regarding the value of the timber lying within the sanctuary boundary, it is difficult to estimate the possible long term loss of income resulting from its preservation. Given that the acreage represents a relatively small portion of the

county's total forestry acreage (0.862 percent), however, the opportunity costs associated with preservation of this timber are anticipated to be relatively low. In addition, any loss that might be attributable to preservation of these stands of timber will be partially offset by the non-quantifiable beneficial impact of maintaining a natural buffer between the bay and upland activities, thereby minimizing non-point source pollution to the adjacent waters.

Mining

The known non-renewable resources lying within the sanctuary boundary are road fill, foundation fill, and peat. In addition, there are potential deposits of heavy minerals and oil. 12/

The sanctuary designation will preclude further mining for fill and peat. Since these are very minor activities, however, the negative impacts are anticipated to be negligible.

Ten exploratory oil wells have been sunk in the region, but no oil has been discovered. 13/ Thus, it appears highly improbable that large-scale oil drilling will occur in the area. In the unlikely event that oil is discovered in the future, however, slant drilling will be permitted from outside the sanctuary boundary to recover oil lying beneath sanctuary lands. Although all areas will not be accessible by means of this drilling technique, the possible negative impacts are considered to be relatively minor. 14/

Summary

Long term preservation of approximately 12,500 acres of land in Franklin County will preclude timber harvesting and mining. Since these are relatively minor activities in the area, the opportunity costs associated with preclusion of these activities should be more than offset by the beneficial impacts on fishery resources, which are the mainstay of the county's economy.

Impact on Tourism

At the present time, tourism in the Apalachicola Bay area is considered an underutilized resource. 15/ The probable causes for the tourist industry failing to reach its full potential are twofold: lack of facilities (motels, sportfishing fleets, etc.) and lack of publicity. The toll facility data for the bridge to St. George Island can give some indications of the number of visitations to the area.

Monthly Toll Facility Data for Bridge to St. George Island

	1977	1978
January	8,786	11,108
February	10,836	12,328
March	17,276	22,602
April	24,998	30,534
May	22,774	26,138
June	23,696	26,936
July	28,274	30,584
August	19,402	24,332
September	17,712	23,782
October	18,326	20,388
November	15,958	19,352
December	12,004	14,716
TOTAL	220,042	262,800

Source: Florida Department of Transportation.

It is anticipated that recreational demands on the area will increase significantly over the next decade, and the State is currently planning to develop facilities at St. George Island State Park in order to accommodate this additional demand. 16/ The estuarine sanctuary is expected to stimulate tourism into the area in four principal ways: promotion of increased awareness of the Apalachicola Bay region; long term protection of the area's principal tourist attraction (the natural environment); creation of a new tourist destination (the educational/visitor center located within the sanctuary boundary); and possible creation of an historic district in the City of Apalachicola in conjunction with the sanctuary designation. 17/ The increased tourist activity associated with the proposed sanctuary will, in turn, stimulate an increased supply of facilities and services to meet that demand.

Although specific documentation is not available, the existence of estuarine sanctuaries in other parts of the Nation has been observed to have a positive impact on recreational and tourist usage. 18/ Given an estimated tourist multiplier ranging from 3.0 to 4.0, the increased tourist activity resulting from the sanctuary is expected to contribute substantially to the county's economy.

Impact on Employment

The proposed sanctuary itself will provide a small long term stimulus to local employment (see following section). In the long run, the sanctuary is expected to ensure continued employment in the commercial fishing industry, have a positive impact on employment in the service sector (tourism, research, and education), and have a negligible impact on forestry-related employment.

Impacts Associated with Sanctuary Activities

The major objective for the proposed sanctuary is the preservation of the natural ecosystem for baseline research and educational purposes. In order to accomplish this objective, the sanctuary will establish a permanent office employing a management task force, conduct ongoing research, and develop an educational program and facilities. These three activities have associated economic impacts, each of which is discussed below. It should be noted that some of these activities impact directly on Franklin County while others affect the surrounding region as well.

Management Task Force Expenditures

The initial sanctuary management task force will probably consist of two employees: a manager and possibly a part-time secretary. The combined salaries of these employees should range from $20,000 to $25,000. Another $75,000 will be expended for operations and maintenance costs.

Since the money to fund sanctuary operations will be provided by State and Federal governments, this represents an injection of about

$100,000 in new money into the county's economy each year. Given an output multiplier of about 3.0, this operating budget is expected to generate about $300,000 yearly in economic activity in Franklin County. 19/

Research

A number of research projects and activities are currently underway in the sanctuary region, most of which are funded by State agencies. Some of these include:

- establishing artificial oyster reefs in Apalachicola Bay (Department of Natural Resources, $40,000-$50,000/year).
- developing an oyster fattening plant (DNR, $300,000 total).
- marine patrol activities (DNR, $400,000/year).
- St. George Island State Park (DNR, Division of Recreation and Parks, $200,000 in 1979).
- fisheries research applicable to Apalachicola Bay (Marine Research Lab, $1.5 million/year). 20/
- scientific research on Apalachicola River and Bay (U.S. Sea Grant Program, $270,000 in 1979). 21/
- long range effects of intensive forest management on water resources of the bay area (U.S. Forest Service and Florida Center for Environmental and Natural Resources Program, Univ. of Florida).

Although the exact amount of research money flowing directly into the county is unknown, these projects are estimated to make substantial direct and indirect contributions to the local economy.

The establishment of Apalachicola Bay as an estuarine sanctuary is expcted to stimulate an additional amount of research grant money flowing into the area. Among the studies proposed during the initial stages are baseline studies to quantify current conditions and studies to determine the effects of varying inflows on estuarine productivity and shoaling.

The cost of conducting these and other studies is not known at this time. However, a recent study has determined that educational services have an output multiplier of about 3.0. 22/ Since educational and research are comparable activities, each $20,000 grant for sanctuary research has the potential to generate $60,000 in economic activity in Franklin County. It is highly probable that research grants associated with sanctuary activities will be in excess of this figure. Consequently, expenditures associated with sanctuary research are expected to have a significantly positive impact on the local economy.

In addition, certain non-quantifiable benefits will accrue as a result of the sanctuary designation. Numerous studies of the Apalachicola ecosystem have been conducted over the past decade,

representing a sizeable investment of public funds. The creation of the estuarine sanctuary will maintain the estuarine ecosystem in its natural state, thereby protecting the investment in, and enhancing the value of, these research projects over time.

Education

One of the principal activities for the proposed sanctuary is the development and implementation of an educational program. During the second year of operation, a nature center will be constructed at an estimated cost of $200,000. This center is expected to provide non-quantifiable educational benefits to local and regional elementary and secondary schools, universities (FSU and UWF), the local public at large, and tourists.

In addition to these non-quantifiable benefits, sanctuary visitors and tourists engage in somewhat similar activities. Consequently, visitors to the nature center will have a direct positive impact on the local economy. Although the magnitude of this impact is impossible to predict, the estimated multiplier for tourist activity in Florida ranges from 3.0 to 4.0. This means that every dollar spent by these visitors can be expected to generate $3 to $4 in local economic activity.

REGIONAL IMPACTS ON THE APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER BASIN

Apalachicola Bay lies at the mouth of the Apalachicola River. With the exception of the Mississippi, this river system is the longest and largest river system in the Southeastern United States, and is formed by the convergence of the Chattahoochee River of eastern Alabama and the Flint River of western Georgia at the Florida border. Although the Florida portion of the river remains in a relatively natural state, the system as a whole is managed for the following objectives: navigation, hydro-power, water supply, water-based recreation, flood control, and maintenance of the ecological resources of the river system and bay.

During periods of low flow, these six management objectives concurrently come into conflict with one another. Since the proposed sanctuary will place additional emphasis on one of these objectives (maintenance of the ecological resources of the river and the bay), the proposed designation has the potential to exacerbate the existing conflict.

The following analysis will address the relationship between the management objective of the proposed sanctuary and each of the objectives that now govern the management of the river system as a whole.

Impact on Federal Navigation Projects

The proposed estuarine sanctuary is crossed by two inland waterways: Gulf Intracoastal Waterway (GIWW) and the Apalachicola-Chattahoochee-Flint Navigation Project (A-C-F). The latter is authorized to provide a 9 foot by 100 foot channel, 95 percent of the time. This authorization applies to the entire Apalachicola River, the Chattahoochee River as far north as Columbus, Georgia, and the Flint River as far north as Bainbridge, Georgia. Approximately one million tons of cargo/year are shipped on the A-C-F, consisting primarily of sand, gravel, petroleum products, and fertilizer products.

Since 1971, the authorized 9 foot channel depth has been maintained only 80 percent of the time. The U.S. Army Corps of Engineers maintains that the amount of cargo transported on the A-C-F is stunted due to the "unreliable nature of the channel." Consequently, the Corps has proposed structural modification of the Apalachicola River by means of a dam or open-river regulation. The purpose of these proposals is to provide the authorized 9 foot channel depth, 95 percent of the time, in an effort to increase the tonnage transported.

In 1974, Florida adopted a resolution in opposition to the proposed structural modifications. 23/ It is important to note that the Cabinet's action on this issue occurred prior to and independent of the proposed estuarine sanctuary. In addition, Florida has existing statutory authority to prevent construction of the proposed dam in its waters regardless of the proposed sanctuary. 24/

The proposed management program for the sanctuary specifically states that "the sanctuary designation will not prohibit or preclude any activity now occurring on the River." In addition, the list of allowed uses cites two specific activities having a direct impact on navigation: maintenance dredging of existing channels and a continuation of existing permits and spoil disposal practices until a comprehensive spoil disposal plan is developed. Expansion of existing channels or creation of new channels is prohibited only until certain studies are completed and plans developed; specifically this refers to a long term spoil disposal plan, and is applicable to Florida only.

The studies cited above as prerequisite to channel alteration are listed as research priorities for the sanctuary, and should be completed within one year after land acquisition commences. Therefore, any negative impacts associated with the proposed sanctuary are anticipated to be short run. Once the necessary studies are completed, the estuarine sanctuary is not expected to have any long term negative impacts on Florida navigation projects.

In addition, the sanctuary is expected to have the beneficial impact of resolving a long term dispute between State environmental agencies and the Corps of Engineers regarding spoil disposal. This dispute has centered around locations for spoil disposal sites and differences of

opinion regarding the impacts of certain disposal practices. These conflicts have resulted in past delays and problems associated with maintenance of existing navigation channels. It is anticipated that the sanctuary designation will serve as a catalyst to develop a long term spoil disposal plan, and thereby have the beneficial impact of alleviating this existing controversy.

In summary, the sanctuary is not anticipated to have any long term negative impacts on navigation projects. Rather, the sanctuary is expected to focus its research efforts in areas that will resolve existing conflicts and provide decisionmakers with objective criteria by which to evaluate the implications of future navigation projects. Consequently, the long term impacts on navigation are anticipated to be beneficial.

Impact on Hydropower on the A-C-F

At the present time, there are 16 hydropower dams on the A-C-F system, five of which are operated by the U.S. Corps of Engineers and the remainder by the Federal Power Commission. 25/ The principal concern regarding these projects centers around any possible alterations to river flow which might affect the ability of these facilities to generate power.

The proposed sanctuary will have no impact on river flow and discharge patterns. Consequently, it is not expected to have any negative impact on the provision of hydropower on the A-C-F system. Indeed, the existence of the sanctuary may have the beneficial impact of providing research results regarding present flow and discharge patterns that should be maintained on a long term basis.

Impact on Water Supply

The Chattahoochee River (including the Sydney Lanier Impoundment) is the source of 90 percent of the metropolitan Atlanta's water supply. During the next twenty years, the population of that region is expected to increase by 1.5 million people, and its water consumption is expected to more than double, exceeding 500 million gallions per day (mgd) by the year 2000. 26/

Given the existing downstream water demands for other needs (navigation, hydropower, and recreation), it is unlikely that Atlanta will be able to withdraw water from the Chattahoochee River in the magnitudes necessary to meet its projected demand. In the absence of a sanctuary, therefore, a potential conflict exists between Atlanta's future water supply needs and the navigational, hydropower, and recreational uses of the river system as a whole. As a result, it is highly probable that metropolitan Atlanta will have to seek alternate supplies of water and/or institute water conservation measures as recommended by the Corps of Engineers.

It appears that a conflict already exists between Atlanta's future water supply needs and maintenance of an adequate water supply for competing downstream river users. The proposed sanctuary's purpose is

to maintain the integrity of the natural ecosystem for research and educational use at the mouth of the river system, and the emphasis on maintaining adequate minimum flow rates may heighten this conflict in the short run. In the long run, however, the negative impact may be partially or wholly offset by the results of sanctuary research, which should facilitate rational decisionmaking regarding consumptive use of river's water supply.

Impact on Recreational Uses of the A-C-F System

Two types of recreation now take place on the A-C-F river system: impoundment-oriented and natural environment-oriented. Four major recreational impoundments currently exist: Lake Seminole, Lake George, West Point Lake, and Lake Sydney Lanier. These impoundments provide recreation opportunities for residents of Atlanta, South Georgia, and North Florida. The proposed sanctuary will have no impact on these upstream impoundments.

In the absence of the estuarine sanctuary, the alternative of a major natural environment-oriented recreational area may be irretrievably lost. Consequently, the net impact of the sanctuary is anticipated to be positive because it will act to preserve the existing diversity of both impoundment- and natural-oriented recreation alternatives for future generations of users.

Impact on Flood Control

The proposed sanctuary will have no impact on flood control projects on the river system.

Impact on Maintaining the Ecological Resources of the River System and Bay

The proposed sanctuary is completely compatible with the objective of maintaining the ecological resources of the river system and bay. Although this is not currently a formal management objective for the Corps of Engineers, it has been Florida's predominant objective for the past decade and is a concern of other agencies, e.g. the U.S. Fish and Wildlife Service, as well. The proposed sanctuary will place new emphasis on this objective, thereby serving to promote its realization. In addition, the sanctuary will have the beneficial impact of improving the store of scientific knowledge and technical expertise necessary to achieve this objective.

STATE AND FEDERAL IMPACTS

The proposed national estuarine sanctuary will have a shortrun fiscal impact on both the Federal Government and the State of Florida, each of which will assume half of the total cost of land acquisition for the project (a total of approximately $3.6 million). During the

first three years of operation, the State will request $50,000 annually in funding from the Office of Coastal Zone Management for administrative expenses. This will be matched by the values of EEL lands acquired in anticipation of the sanctuary, or appropriation from the Florida legislature. Commencing in the fourth year, the State will assume the full financial responsibility for long term management of the sanctuary.

These Federal and State fiscal expenditures are expected to result in two principal categories of non-quantifiable benefits: improved scientific and technical knowledge regarding optimum management practices for estuarine resources, and improved intergovernmental coordination in the bay and the river system as a whole.

The Estuarine Sanctuary Management Committee will promote research efforts that will ensure proper use of basic estuarine resources, promote the development and implementation of optimum resource management practices, and assure the longrun productivity of the Apalachicola Bay area. This, in turn, will ensure the continued export of seafood to meet growing statewide and national demands. In addition, the knowledge gained from the Apalachicola Bay Sanctuary can subsequently be applied to the management of other similar estuarine areas, specifically in the Louisianian Region and nationwide.

The environmental quality goals of other Federal or State agencies could be assisted by sanctuary designation. For example, the statewide 208 water quality planning efforts will be benefited directly by the acquisition of 12,467 acres of land. Planning for 208, or other planning efforts, outside the sanctuary boundary will continue according to Federal and State law and will not be affected by estuarine sanctuary status.

Improved intergovernmental coordination is also expected to occur as a result of the proposed sanctuary, its manager, and the managment committee. Federal, State, regional, and local agencies are now involved in various management activities in the region. Federal agencies involved in the development of the lower Apalachicola River include: U.S. Geological Survey, Fish and Wildlife Service, Office of Coastal Zone Management, Corps of Engineers, National Marine Fisheries Service, and the Economic Development Administration. Also participating in these activities are several State agencies, including: Game and Freshwater Fish Commission, Department of Natural Resources, Department of Environmental Regulation, Division of State Planning, Department of Commerce, Division of Archives, History and Records Management, Department of Community Affairs and Department of Transportation. On a regional level, both the Northwest Florida Water Management District and the Apalachee Regional Planning Council are also involved in bay-related activities, as are the local entities (county and municipal). Improved coordination among all these agencies and their numerous respective activities should result in more effective management of the entire river system and reduced potential for conflict in the future.

As part of the sanctuary management program, interstate coordination efforts will be initiated with the States of Georgia and Alabama. This effort is expected to result in the positive impact of resolution of existing competing uses within the entire Apalachicola-Chattahoochee-Flint River Basin System. It should also produce more effective long term planning for multiple use of the entire river system, reduce the potential for future conflict, and promote a more rational process by which to make future decisions regarding optimal use of this valuable system.

FOOTNOTES

1. J.M. Friedman, "The Growth of Economic Values in Preservation: An Estuarine Case Study," Coastal Zone Management Journal, Vol.3, No. 2 (Crane, Russack & Company, Inc., 1977), p. 171.

2. J. Meyer, Apalachicola City Planner, personal communication on January 29, 1979.

3. C.L. Neff, Senior Appraiser for the Bureau of Land Acquisition and Development, Florida Department of Natural Resources, letter to Douglas Strickland, Chief of the Bureau of Land Acquisition and Development, Department of Natural Resources, January 10, 1979.

4. Two separate appraisals of the proposed land acquisition were made. The amount of tax revenue currently generated by the land was estimated from those appraisals. Since some of the parcels will be partially acquired, it was not possible to calculate the precise amount of tax generated by the portion to be acquired. Consequently, $9,000 is a rough approximation of the tax revenues currently derived from the land to be acquired.

5. Florida Statistical Abstract (The University Presses of Florida, 1978), p. 572.

6. D. Hagman and D. Misczynski, Windfall for Wipeouts: Land Value Capture and Compensation, 1978.

7. S. Donahoe, Realtor for St. George Island Estates, personal communication, February 2, 1979, and personal communication with the Franklin County Property Tax Appraisers Office, January 30 and February 2, 1979.

8. Florida Department of Environmental Regulation, Bureau of Coastal Zone Management, Florida Regional Coastal Zone Economic Analysis: Region 2, Northwest Florida, p. 83.

9. F. Bell, Department of Economics, Florida State University, personal communication, February 15, 1979.

10. Northwest Florida Planning and Advisory Council (NWFPAC), Apalachicola, Florida, Economic Development Plan, June, 1976.

11. R.M. North, "Economic Values for Marine Recreational Fisheries," Marine Recreational Fisheries (Sport Fishing Institute), 1976.

12. W. Schmidt, Bureau of Geology, Florida Department of Natural Resources, personal communication, January 31, 1979.

13. A. Applegate, Bureau of Geology, Florida Department of Natural Resources, personal communication, January 31, 1979.

14. C. Jensen, Florida Petroleum Council, personal communication.

15. NWFPAC, op.cit.

16. J. Ross, Division of Recreation and Parks, Department of Natural Resources, personal communication, February 8, 1979.

17. Meyer, op.cit.

18. J. MacFarland, Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, personal communication, January 28, 1979.

19. N.P. Sharma and M.C. Conner, "Economic Relationships Among Business Sectors: Eastern Shore, Virginia," 1975.

20. E. Joyce, Florida Department of Natural Resources (FDNR), personal communication, February 1, 1979; and C. Thomas, FDNR, comments before the Apalachicola Symposium and Workshop, October 17, 1978.

21. R.J. Livingston, Department of Biological Science, Florida State University, comments before the Apalachicola Symposium and Workshop, October 17, 1978.

22. Sharma and Conner, op.cit.

23. Resolution adopted by the Florida Cabinet, May 7, 1974.

24. U.S. Army Corps of Engineers, Mobile District, Apalachicola, Chattahoochee and Flint Rivers (Operation and Maintenance). Alabama, Florida, and Georgia, Final EIS, April 1976.

25. U.S. Army Corps of Engineers, Savannah District, Metropolitan Atlanta Area Water Resources Study: Summary Report, September, 1978.

26. Corps, op.cit.

REFERENCES

1. Personal Communication, Al Applegate, Florida Department of Natural Resources, Bureau of Geology, January 31, 1979.

2. Personal Communication, Watler Burdin, U.S. Army Corps of Engineers, Mobile District, December 21, 1978.

3. Louis E. Clark, Appraisal Report of 19 Parcels of Land at East Bay, Franklin County, for DNR, November 30, 1978.

4. Personal Communication, Dr. Andre Clewell, January 27, 1979.

5. Florida Department of Commerce, Division of Economic Development Franklin County Economic Data, April 1977.

6. Florida Department of Natural Resources, Outdoor Recreation in Florida: 1976

7. Florida Department of Environmental Regulation, Bureau of Coastal Zone Management, Florida Regional Coastal Zone Economic Analysis: Region 2 Northwest Florida, July 1977.

8. Florida Department of Natural Resources, Summary of Florida Commercial Marine Landings, 1975, 1976.

9. Personal Communication with Franklin County Property Tax Appraisers Office, January 30, 1979, February 2, 1979.

10. Donald Hagman and Dean Misczynski, Windfall for Wipeouts: Land Value Capture and Compensation 1978.

11. Florida Division of Forestry, Update '76: Florida's Timber Resources May 1977.

12. Florida Division of Forestry, Estimated County Income from Forest Products - 1976, February 1978.

13. Personal Communication, Ed Joyce, Florida Department of Natural Resources, February 1, 1979.

14. Bostick H. Ketchum, Editor, The Water's Edge: Critical Problems of the Coastal Zone, 1972.

15. Robert J. Livingston (1), Richard L. Iverson (2), Robert H. Estabrook (3), Vernon E. Keys (4), and John Taylor, Jr. (5), Major Features of the Apalachicola Bay System: Physiography, Biota, and Resource Management, 1974-75.

16. Phillip Pickins, Appraisal of 12,500 + Acres Near Apalachicola (Lower Apalachicola River and Bay System), October 25, 1978.

17. Personal Communication, James Ross, Department of Natural Resources, Division of Recreation and Parks, February 8, 1979.

18. Dr. D. Bruce Means, "Aspects of the Significance to Terrestrial Vertebrates of the Apalachicola River Drainage Basin, Florida" in Proceedings of the conference on the Apalachicola Drainage System edited by Dr. Robert J. Livingston, April 1976.

19. Personal Communication, Mr. John Meyer, Apalachicola City Planner, January 29, 1979.

20. Ronald M. North, "Economic Values for Marine Recreational Fisheries" Marine Recreational Fisheries, Sport Fishing Institute, 1976.

21. U.S. Army Corps of Engineers, Mobile District, Apalachicola, Chattachoochee and Flint Rivers (Operation and Maintenance) Alabama, Florida and Georgia, Final EIS, April 1976.

22. U.S. Army Corps of Engineers, Mobile District, Coordination Report on Navigational Improvements for the Apalachicola River Below Jim Woodruff Dam, Florida, October 1978.

23. U.S. Army Corps of Engineers, Savannah District, Metropolitan Atlanta Area Water Resources Study: Summary Report, Sept. 1978.

24. Dr. Harry M. Stevenson, "A Comparison of the Apalachicola River Autfauna Above and Below Jim Woodruff Dam" in Proceedings of the Conference on the Apalachicola Drainage System edited by Dr. Robert V. Livingston, April 1976.

25. Charles Thomas, Florida Department of Natural Resources, comments before the Apalachicola Symposium and Workshop, October 17, 1978.

26. Personal Comments, Percy Thompson, National Marine Fisheries Service, February 8, 1979.

27. U.S. Army Corps of Engineers, Mobile District, Coordination "Report on Navigational Improvements for the Apalachicola River Below Jim Woodruff Dam", Florida, October 1978.

28. United States Department of Interior, Bureau of Sport Fisheries and Wildlife, National Estuary Study, 1970.

29. University of Florida, Bureau of Economic and Business Research, Florida Statistical Abstract, 1978.

30. Dr. Ralph W. Yerger, "Fishes of the Apalachicola River" in Proceedings of the Conference on the Apalachicola Drainage System, edited by Dr. Robert V. Livingston, April 1976.

31. Personal Communication, Fred Bell, Florida State University, Economic Department, February 15, 1977.

32. Personal Communication, Ernie Snell, National Marine Fisheries Services, February 14, 1979.

33. Personal Communication, Walter Schmidt, Florida Department of Natural Resources, Bureau of Geology, January 31, 1979.

34. Personal Communication, Dr. Robert J. Livingston, Florida State University, January 31, 1979.

35. Dr. Robert V. Livingston, Comments before the Apalachicola Symposium and Workshop, October 17, 1978.

36. Letter from Cecil L. Neff, Jr., Senior Appraiser, Bureau of Land Acquisition and Development, Florida Department of Natural Resources to Douglass Strickland, Chief, Bureau of Land Acquisition and Development, Department of Natural Resources on appraisals for EEL purchase for the Lower Apalachicola River, January 10, 1979.

37. Personal Communication, Shaun Donahoe, realtor for St. George Island Estates, February 2, 1979.

38. Florida Department of Transportation, Toll Facility Data, 1977 and 1978.

39. Northwest Florida Planning and Advisory Council, Apalachicola, Florida Economic Development Plan, June 1976.

40. Personel Communications, Jim MacFarland, Office of Coastal Zone Management, January 28, 1979.

41. Personal Communication, Walt Schmidt, Florida DNR, Bureau of Geology, January 31, 1979.

42. U.S. Army Corps of Engineers, Mobile District, Maintenance Dredging of the Gulf Intracoastal Waterway from Pearl River, Louisiana - Mississippi to Apalachee Bay, Florida, Final EIS.

43. David Dornbusch and Company Benefit from Water Pollution Abatement: Property Values, 1975.

44. Personal Communication, Elizabeth Finn, Florida Division of Tourism, February 15, 1979.

45. N. P. Sharma, and M.C. Conner, Economic Relationships Among Business Sectors, Eastern Shore, Virginia 1975.

APPENDIX VII

RESOLUTION

BOARD OF COUNTY COMMISSIONERS

FRANKLIN COUNTY

SUPPORT OF ESTUARINE SANCTUARY PROPOSED FOR APALACHICOLA BAY

The Board of County Commissioners of Franklin County, assembled in regular session on the first day of August, 1978, a quorum of the members of the said Board being present and acting in its official capacity; and upon proper presentation, motion and vote, the Commission decided the following:

WHEREAS, the continued well-being of the Apalachicola Bay and River System is essential to commercial fin and shell fishing in the County, and despoilation of the system would be of great environmental and economic loss;

WHEREAS, the County has passed resolutions stating opposition to construction of any dam on the Apalachicola River, in support of economic development; and of desire to cooperate with other Basin Counties in comprehensive planning as it addresses the River; and

WHEREAS, the proposed designation of Apalachicola Bay as a National Estuarine Sanctuary would maintain environmental integrity while protecting commercial fishing interests;

NOW, THEREFORE, BE IT RESOLVED:

That the Board of County Commissioners of Franklin County commends and supports the proposal to designate Apalachicola Bay a National Estuarine Sanctuary; and that the Board of County Commissioners of Franklin County support the proposal by the Apalachee Regional Planning Council to work with the Bureau of Coastal Zone Management and Florida State University in the organization of workshops and public meetings on the sanctuary proposal, and coordination of technical assistance to Franklin County for coastal management planning responsibilities.

PASSED AND DULY ADOPTED in regular session by the Board of County Commissioners of Franklin County, this first day of August, 1978.

BOARD OF COUNTY COMMISSIONERS OF FRANKLIN COUNTY, FLORIDA.

BY Cecil Thames
Chairman

SEAL

ATTEST:

Robert L. Howell
Robert L. Howell, Clerk

APPENDIX VII (Cont'd.)

RESOLUTION

BOARD OF CITY COMMISSIONERS

City of Apalachicola

WHEREAS, the Apalachicola Bay System requires special attention for the harvesting of oysters, shrimp, fish, and other seafood, and

WHEREAS, this system requires the complete cooperation of city government, state government, and federal government to preserve the purity of this Bay, and

WHEREAS, without the preservation of this system, the commercial seafood harvesting within this city and the entire state of Florida will suffer a devastating effect, and

WHEREAS, it is the desire of this Board to seek assistance from all levels of government to prevent the destruction or deterioration of this estuarine sanctuary for the lower Apalachicola River and Bay System, and

NOW, THEREFORE, BE IT RESOLVED, this Board requests the U. S. Department of Commerce to approve a preliminary acquisition grant for a Louisianian national estuarine sanctuary for the lower Apalachicola River and Bay System pursuant to Section 315 of the amended Federal Coastal Zone Management Act.

BE IT FURTHER RESOLVED that this Board requests the Department of Environmental Regulation to support the City of Apalachicola in requesting said grant from the U. S. Department of Commerce.

ADOPTED in open session this 31st day of January, 1978.

Jimmie J. Nichols

Jimmie J. Nichols, Mayor

ATTEST:

Dorothy Roystad

Dorothy Roystad, City Clerk

RECEIVED

FEB 6

OFFICE OF
SECRETARY
DEPT. OF ENVIRONMENTAL REGULATION

RESOLUTION

BOARD OF COUNTY COMMISSIONERS
FRANKLIN COUNTY

WHEREAS, the Apalachicola Bay System requires special attention for the harvesting of oysters, shrimp, fish, and other seafood, and

WHEREAS, this system requires the complete cooperation of county government, state government, and federal government to preserve the purity of this Bay, and

WHEREAS, without the preservation of this system, the commercial seafood harvesting within this county and the entire state of Florida will suffer a devastating effect, and

WHEREAS, it is the desire of this Board to seek assistance from all levels of government to prevent the destruction or deterioration of this estuarine sanctuary for the lower Apalachicola River and Bay System, and

NOW, THEREFORE, BE IT RESOLVED, this Board requests the U. S. Department of Commerce to approve a preliminary acquisition grant for a Louisianian national estuarine sanctuary for the lower Apalachicola River and Bay System pursuant to Section 315 of the amended Federal Coastal Zone Management Act.

BE IT FURTHER RESOLVED that this Board requests the Department of Environmental Regulation to support Franklin County in requesting said grant from the U. S. Department of Commerce.

ADOPTED in open session this 7th day of February, 1978.

Cecil Varnes, Chairman

ATTEST:

Robert L. Howell, Clerk

RECEIVED
FEB 10 1978
BUREAU OF
COASTAL ZONE PLANNING
Dept. of Environmental Regulation

APPENDIX VII (Cont'd.)

RESOLUTION

The Board of County Commissioners of Calhoun County, assembled in regular session on the 5th day of July, 1977, a quorum of the members of the said Board being present and acting in its official capacity; and upon proper presentation, motion and vote, the Commission decided the following:

WHEREAS, the six counties which form the Apalachicola River Basin: Calhoun, Franklin, Gadsden, Gulf, Jackson, and Liberty Counties, share common problems, opportunities, and challenges which we should undertake in a united fashion; and

WHEREAS, we recognize that one of these challenges is Chapter 163.3167, Florida Statutes, which stipulates that if our counties do not pass ordinances designating county planning agencies and complete our plans by July 1, 1979, then the State of Florida in Tallahassee will write our plans for us and take the cost from our unencumbered revenues and other tax sharing funds; and

WHEREAS, we want to go on record stating that the six counties must join together in order to assert our local, county control over our destiny:

local, county control — not State and Federal control — over the development of our lands in order to protect the property rights, health, safety, and welfare of our people,

local, county control over the development of our local economies, and

local, county control over the destiny of our Apalachicola River; and

WHEREAS, we do not want to see the Federal government directing the fate of our river or our lands; and

NOW, THEREFORE, BE IT RESOLVED:

1. That the Board of County Commissioners of Calhoun County, Florida hereby joins with the other five Florida Counties in stating our unequivocal opposition to the construction of any dam, or any alteration to the flow of the Apalachicola River, unless it is proven conclusively that such a dam would not disrupt the River's natural cycles, cause permanent flooding of valuable lands, destroy the bountiful fishing along the river, and jeopardize the Apalachicola Bay oysters and fisheries which are of great value to this area.

2. That we favor promoting the economic development of our areas, the creation of new jobs, and the attraction of businesses to our counties, of the kind and location compatible with our farming and fishing way of life, and with our clean and healthy environment.

3. That the Board of County Commissioners of Calhoun County, Florida, hereby resolves to work with the other five counties bordering the Apalachicola River, to work together, to meet together, to invest our time and resources to assure that we plan for the futures of each of our counties in the Apalachicola Basin.

4. That we are asking our designated Calhoun County Planning Commission to join with the other five planning commissions, to work together, to meet together and to stick together, so that we can form a united front to determine our own destinies and to protect our beautiful Apalachicola River and the lands which surround her, for our livelihoods and enjoyment, and for the benefit of generations yet unborn.

PASSED AND DULY ADOPTED in regular session by the BOARD OF COUNTY COMMISSIONERS OF Calhoun COUNTY, FLORIDA, this 5th day of July, 1977.

BOARD OF COUNTY COMMISSIONERS OF Calhoun COUNTY, FLORIDA

By _____, Chairman

ATTEST: _____
Clerk of Circuit Court and Ex-officio Clerk to the Board of County Commissioners

APPROVED AS TO FORM: _____, County Attorney

BEFORE THE STATE OF FLORIDA POLLUTION CONTROL BOARD

APALACHICOLA RIVER AND BAY
RESOLUTION NO. 73-12
March 20, 1973

WHEREAS: The Apalachicola River, its drainage basin located within Jackson, Gadsden, Calhoun, Liberty, Gulf, and Franklin Counties Florida, and the Apalachicola Bay constitute valuable and productive natural and ecological resources of the State of Florida which can be seriously and adversely effected by uncontrolled development;

WHEREAS: The Apalachicola Bay is an extremely productive Bay producing valuable commercial fisheries with oysters, shrimp, claws, crabs, and finfish among the more important catches;

WHEREAS: This productivity of Apalachicola Bay is dependent on the environmental integrity of the surrounding uplands and the Apalachicola River and its drainage system for survival;

WHEREAS: A number of endangered species of flora and fauna exist in the Apalachicola drainage basin;

WHEREAS: The wetlands, swamps, sloughs, and marshes within the Apalachicola drainage basin, and the marshes, estuaries, and barrier islands adjacent to the Apalachicola Bay are vital to the continued environmental integrity of the Bay;

WHEREAS: At present there are many development activities within the Apalachicola drainage basin which if left unregulated could seriously, irreparably, and adversely affect the environmental integrity of the area;

environmental and natural resources of regional and statewide importance; and

WHEREAS, there are many environmentally unique and irreplaceable lands which are valued ecological resources of the State and which cannot be developed or altered if the ecological system of the area is to be protected.

NOW, THEREFORE, BE IT RESOLVED that the Florida Pollution Control Board recommends and strongly advocates:

THAT any proposed dam, water control structure, or development project that may effect sensitive and vital areas of the Apalachicola River should be subject to very careful study by the Department of Pollution Control Staff in order to ensure that the unique resources of the Apalachicola River and Bay are fully protected.

THAT, until irrefutable and conclusive scientific evidence is provided showing that said project will not adversely affect the River or the Bay, no dams, water control structure or other such devices should be constructed in the Apalachicola River.

THAT this Resolution be forwarded to all appropriate governmental officials;

THAT this Resolution shall be effective upon adoption.

ADOPTED this 16th day of April, 1974.

FOR THE BOARD:

DAVID H. LEVIN, Chairman
State of Florida Pollution
Control Board

APPENDIX VIII

State Of Florida

R E S O L U T I O N

WHEREAS, the Apalachicola River is an important natural resource of Florida, and

WHEREAS, the Apalachicola River empties into the pristine, class two waters, of the Apalachicola Bay, and

WHEREAS, the Apalachicola Bay is the world's finest oyster bedding area, and

WHEREAS, the announced U. S. Army, Corps of Engineers project which proposes damming the Apalachicola River will produce great stress on the ecology of the area, and

WHEREAS, the resulting commercialization of the Apalachicola River will endanger the water quality of the Apalachicola River and Bay, and

WHEREAS, the degradation of this outstanding natural resource is an act that cannot be condoned, and

WHEREAS, the Department of Administration, Division of Planning, has recommended against this project as being economically unjustifiable and environmentally dangerous to the State of Florida.

NOW, THEREFORE, BE IT RESOLVED, that the Governor and Cabinet of the State of Florida do not believe that this project could provide justifiable economic benefits to Florida in comparison to the monetary cost.

BE IT FURTHER RESOLVED, that the Governor and Cabinet do hereby adopt the report, submitted on May 6, 1974, by the Department of Administration as the official position of the State of Florida against the damming of the Apalachicola River.

BE IT FURTHER RESOLVED, that this Resolution be transmitted to the U.S. Army, Corps of Engineers as the official position of the Governor and Cabinet opposing this project.

IN TESTIMONY WHEREOF, the Governor and Cabinet of the State of Florida have hereunto subscribed their names and

the Department of Administration as the official position of the State of Florida against the damming of the Apalachicola River.

BE IT FURTHER RESOLVED, that this Resolution be transmitted to the U.S. Army, Corps of Engineers as the official position of the Governor and Cabinet opposing this project.

IN TESTIMONY WHEREOF, the Governor and Cabinet of the State of Florida have hereunto subscribed their names and have caused the official seal of the said State of Florida to be hereunto affixed, in the City of Tallahassee, Florida, on this 7th day of May A.D. 1974.

Governor

Secretary of State

Attorney General

Comptroller

Treasurer

Commissioner of Agriculture

Commissioner of Education

APPENDIX IX

MAJOR TYPES OF VEGETATION WITHIN THE

APALACHICOLA RIVER/BAY SYSTEM

APALACHICOLA BAY

* Submerged Vegetation

Halophila engelmannii
Thalassia testudina - (Turtle Grass)
Syringodium filiforme - (Manatee Grass)
Diplanthera wrightii - (Cuban Shoalweed)

* Emergent Vegetation

Juncus roemerianus - (Black needlerush)
Spartina Alterniflora - (Smooth cordgrass)
Distichlis spicata - (Seashore saltgrass)
Salicornia perennis - (Glasswort)
Spartina pateus - (Marsh hay cordgrass)
Spartina spp - (Cordgrass)

Dry, Sandy Upland

Longleaf pine
Scrub oaks
Turkey oak
Wiregrass

Bluffs

Southern Magnolia
Beech
White Oak
Souther Sugar Maple
American Holly
Dogwood
Souther Red Oak
Mockernut Hickory

* River Swamp

Cut-grass
Saw-grass
Cat-tail
Bulrushes
Rushes

* Floodplain

Black Willow
Cottonwood
Sycamore
Birch
Ogechee-tupelo
Alder
Swamp-Chestnut oak
Spruce pine
Silver bells
Sweetgum
Bald-cypress
Water tupelo
Ash
Water hickory

* Gulf Coastal Lowlands

Longleaf pine
Saw palmetto
Wiregrass
Runner oak
Gallberry
Blackgum
Titi
Grass-sedge Savannahs (bogs)
St. John's Wort
Orchids
Pitcher Plants
Wild flowers

* Major areas of the Sanctuary

APPENDIX X

Fish and Wildlife Resources of The Lower
Apalachicola River and Bay

FISH

Southern brook lamprey	*Ichthyomyzon gagei*
Atlantic sturgeon	*Acipenser oxyrhynchus*
Spotted gar	*Lepisosteus oculatus*
Longnose gar	*Lepisosteus osseus*
Bowfin	*Ami calva*
American eel	*Anguilla rostrata*
Alabama shad	*Alosa alabamae*
Skipjack herring	*Alosa chrysochloris*
Gizzard shad	*Dorosoma cepedianum*
Threadfin shad	*Dorosoma petenense*
Redfin pickerel	*Esox americanus*
Chain pickerel	*Esox niger*
Carp	*Cyprinus carpio*
Silverjaw minnow	*Ericymba buccata*
Chub	*Hybopsis winchelli*
Golden shiner	*Notemigonus crysoleucas*
Bluestripe shiner	*Notropis atrapiculus*
Ironcolor shiner	*Notropis chalybaeus*
Dusky shiner	*Notropis cummingseae*
Pugnose minnow	*Notropis emiliae*
Redeye chub	*Notropis harperi*
Sailfin shiner	*Notropis hypselopterus*
Longnose shiner	*Notropis longirostris*
Taillight shiner	*Notropis maculatus*
Coastal shiner	*Notropis petersoni*
Flagfin shiner	*Notropis signipinnis*
Weed shiner	*Notropis texanus*
Blacktail shiner	*Notropis venustus*
Bluenose shiner	*Notropis welaka*
Bandfin shiner	*Notropis zonistius*
Creek chub	*Semotilus atromaculatus*
Quill back	*Carpiodes cyprinus*
Orangespotted sunfish	*Lepomis humilis*
Bluegill	*Lepomis macrochirus*
Dollar sunfish	*Lepomis marginatus*
Redear sunfish	*Lepomis microlophus*
Spotted sunfish	*Lepomis punctatus*
Shoal bass	*Micropterus sp.*
Spotted bass	*Micropterus punctulatus*
Largemouth bass	*Micropterus salmoides*

FISH (Continued)

Creek chubsucker	*Erimyzon oblongus*
Lake chubsucker	*Erimyzon sucetta*
Spotted sucker	*Minytrema melanops*
Grayfin redhorse	*Moxostoma sp.*
snail bullhead	*Ictalurus brunneus*
White catefish	*Ictalurus catus*
Yellow bullhead	*Ictalurus natalis*
Brown bullhead	*Ictalurus nebulous*
Channel catfish	*Ictalurus punctatus*
Spotted bullhead	*Ictalurus serracanthus*
Black madtom	**Nerodia cyclopion**
Tadpole madtom	**Nerodia erythrogaster**
Speckled madtom	**Nerodia fasciatus**
Pirate perch	*Aphredoderus sayanus*
Atlantic needlefish	*Strongylura marina*
Golden topminnow	*Fundulus chrysotus*
Banded topminnow	*Fundulus cingulatus*
Starhead topminnow	*Fundulus notti*
Pygmy killifish	*Leptolucania ommata*
Bluefin killifish	*Lucania goodei*
Mosquitofish	*Gambusia affinis*
Least Killifish	*Heterandria formosa*
Brook silverside	*Labidesthes sicculus*
White bass	*Morone chrysops*
Striped bass	*Morone saxatilis*
Flier	*Centrarchus macropterus*
Pygmy sunfish	*Unknown*
Bluespotted sunfish	*Enneacanthus gloriosus*
Banded sunfish	*Enneacanthus obesus*
Redbreast sunfish	*Lepomis auritus*
Green sunfish	*Lepomis cyanellus*
Warmouth sunfish	*Lepomis gulosus*
Gulf darter	*Etheostoma swaini*
Yellow perch	*Perca flavescens*
Blackbanded darter	*Percina nigrofasciata*
Sauger	*Stizostedion canadense*
Mountain mullet	*Agonostomus monticola*
Striped mullet	*Striped mullet*
Southern flounder	*Paralichthys lethostigma*
Hogchoker	*Trinectes maculatus*
Black crappie	*Pomoxis nigromaculatus*
Brown darter	*Etheostoma edwini*
Swamp darter	*Etheostoma fusiforme*
Goldstripe darter	*Etheostoma parvipinne*

Source: Yerger (1977)

WILDLIFE

BIRDS

Shallow-tailed Kite	*Kite Elanoides florficatus*
Mississippi Kite	*Ictinia misisippiensis*
Red-Shouldered Hawk	*Buteo Lineatus*
Pileated Woodpecker	*Dryocopus pileatus*
Hairy Woodpecker	*Dendrocopos villosus*
Acadian Flycatcher	*Empidonax virescens*
Red-eyed Vireo	*Vireo olivaceus*
Prothonotary Warbler	*Protonotaria citrea*
Swinson's Warbler	*Limothlypis swainsonii*
Northern Parula	*Parula americana*
Yellow-throated Warbler	*Dendroica dominica*
Hooded Warbler	*Wilsonia citrina*
Pied-billed Grebe	*Podilymbus podiceps*
Anhinga	*Anhinga*
Great Blue Heron	*Ardea herodias*
*Bachman's Warbler	*Unknown*
Turkey	*Meleagris gallopavo*
Purple Gallinule	*Porphyrula martinica*
Common Gallinule	*Gallinula chloropus*
Killdeer	*Charadrius vociferus*
American Woodcock	*Philohela minor*
Mourning Dove	*Zenaida macroura*
Ground Dove	*Columbina passerina*
Carolina Parakeet	*Conuropsis carolinensis*
Yellow-billed Cuckoo	*Coccyzus americanus*
Barn Owl	*Tyto alba*
Great Horned Owl	*Bubo virginianus*
Chuck-will's--widow	*Caprimulgus carolinensis*
Common Nighthawk	*Chordeilus minor*
Chimney Swift	*Chaetura pelagica*
Ruby-throated Hummingbird	*Archilochus colubris*
Barred Owl	*Strix varia*
Green Heron	*Butorides virescens*
Little Blue Heron	*Florida caerulea*
Cattle Egret	*Bubulcus ibis*
Common Egret	*Casmerodius alba*
Snowy Egret	*Leucophoyx thula*
Louisiana Heron	*Hydranassa tricolor*
Wood Duck	*Aix sponsa*
Turkey Vulture	*Carthartes aura*
Black Vulture	*Coragyps atratus*
Cooper's Hawk	*Accipiter cooperii*
Red tailed Hawk	*Buteo Jamaicensis*
Broad-winged Hawk	*Buteo platypterus*

BIRDS (Continued)

*Bald eagle	*Haliaeetus leucocephalus*
**Osprey	*Pandion haliaetus*
American Kestrel	*Falco sparverius*
Northern Bobwhite	*Colinus virginianus*
White-breasted Nuthatch	*Sitta carolinensis*
Brown-head Nuthatch	*Sitta pusilla*
Carolina Wren	*Thryothorus ludovicianus*
Northern Mockingbird	*Mimus polyglottos*
Brown Thrasher	*Toxostoma rufum*
Wood Thrush	*Hylocichla mustelina*
Eastern Bluebird	*Sialia sialis*
Blue-gray Gnatchatcher	*Polioptila caerula*
Loggerhead Shrike	*Lanius ludovicianus*
European Starling	*Sturnus vulgaris*
Yellow-throated Vireo	*Vireo flavifrons*
White-eyed Vireo	*Vireo grseus*
Pine Warbler	*Dendroica pinus*
Prairie Warbler	*Dendroica discolor*
Louisiana Waterthrush	*Seiurus motacilla*
Kentucky Warbler	*Oporonis formosus*
Belted Kingfisher	*Megacerlye alcyon*
Common Flicker	*Colaptes auratus*
Red-bellied Woodpecker	*Centurus carolinus*
Red-headed Woodpecker	*Melanerpes erythrocephalus*
Downy Woodpecker	*Dendrocopos pubescens*
*Red-cockaded Woodpecker	*Dendrocopos borealis*
*Ivory-billed Woodpecker	*Campephilus principalis*
Eastern Kingbird	*Tyrannus tyrannus*
Great Crested Flycatcher	*Myiarchus crinitus*
Eastern Wood Pewee	*Contopus virens*
Rough-Winged Swallow	*Stelgidopteryx ruficollis*
Barn Shallow	*Hirundo rustica*
Blue Jay	*Cyanocitta cristata*
Common Crow	*Corvus brachyrhynchos*
Fish Crow	*Corvus ossifragus*
Carolina Chickadee	*Parus carolinensis*
Tufted Titmouse	*Parus bicolor*
Common Yellowthroat	*Geothylypis trichas*
Yellow-breasted Chat	*Icteria virens*
House Sparrow	*Passer domesticus*
Eastern Meadowlark	*Sturnella magna*
Red-winged Blackbird	*Agelaius phoeniceus*
Orchard Oriole	*Icterus spurius*
Common Grackle	*Quiscalus quiscula*
Brown-headed Cowbird	*Molothrus ater*
*Louisiana Water Thrush	*Seiurus motacilla*
Summer Tanager	*Piranga rubra*
Cardinal	*Cardinalis cardinalis*

BIRDS (Continued)

Blue Grosbeak	*Guiraca caerulea*
Indigo-Bunting	*Passerina cyanea*
Rufous-Sided Towhee	*Piplio erythrophthalmus*
Bachman's Sparrow	*Aimophila aestivalis*
Field Sparrow	*Spizella pusilla*
Chipping Sparrow	*Spizella passerina*
*Short-tailed Hawk	*Unknown*

AMPHIBIANS

SALAMANDERS

Dwarf Siren	*Pseudobranchus striatus*
Lesser Siren	*Siren intermedia*
Greater Siren	*Siren lacertina*
Gulf Coast Waterdog	*Necturus beyeri*
Two-toed Amphiuma	*Amphiuma means*
*One-toed Amphiuma	*Amphiuma pholeter*
Spotted Newt	*Notophthalmus viridescens*
*Flatwoods Salamander	*Ambystoma cingulatum*
Marbled Salamander	*Ambystoma opacum*
Mole Salamander	*Ambystoma talpoideum*
Tiger Salamander	*Ambystoma tigrinum*
Southern Dusky Salamander	*Desmognathus auriculatus*
Two-lined Salamander	*Eurycea bislineata*
Long-tailed Salamander	*Eurycea longicauda*
Dwarf Salamander	*Manculus quadridigitatus*
*Georgia Blind Salamander	*Haideotriton wallacei*
*Four toed Salamander	*Hemidactylium scutatum*
Mud Salamander	*Pseudotriton montanus*
Red Salamander	*Pseudotriton ruber*

FROGS

Eastern Spadefoot	*Scaphiopus holbrooki*
Oak Toad	*Bufo quercicus*
Southern Toad	*Bufo terrestris*
Cricket Frog	*Acris*
Tree Frogs	*Unknown*
Spring Peeper	*Hyla crucifer*
Little Grass Frog	*Limnaeodus ocularis*
Chorus Frog	*Unknown*
**Gopher Frog	*Rana areolata*
Bullfrog	*Rana catesbeiana*

FROGS (Continued)

Bronze Frog	*Rana clamitans*
Pig Frog	*Rana grylio*
River Frog	*Rana heckscheri*
Leopard Frog	*Rana pipiens*
Narrow-Mouthed Toad	*Gastrophyrne carolinensis*

REPTILES

*American Alligator	*Alligator mississippiensis*
Snapping Turtle	*Chelydra serpentina*
Eastern Mud Turtle	*Kinosternon subrubrum*
Loggerhead Musk Turtle	*Sternotherus minor*
Stinkpot	*Sternotherus odoratus*
Chicken Turtle	*Deirochelys reticularia*
**Gopher Tortoise	*Gopherus polyphemus*
*Map Turtle	*Graptemys barbouri*
**Suwanee Cooter	*Chrysemy concinna suwanniensis*
Red-bellied Turtle	*Chrysemys nelsoni*
Diamond Terrapin	*Malaclemys terrapin*
Box Turtle	*Terrapene carolina*
Diamondback Terrapin	*Unknown*
Florida Softshell	*Trionyx ferox*
Green Anole Lizzard	*Anolis carolinensis*
Fence Swift Lizzard	*Sceloporus undulatus*
Six-lined Racerunner	*Cnemidophrus sexlineatus*
Coal Skink	*Eumeces anthracinus*
Red-tailed Skink	*Eumeces egregius*
Five-lined Skink	*Eumeces fasciatus*
Broad-Headed Skink	*Eumeces laticeps*
Ground Skink	*Scincella laterale*
Glass Lizard	*Unknown*
Pygmy Rattlesnake	*Sistrurus miliarius*
Eastern Diamondback Rattlesnake	*Crotalus adamanteus*
Yellow-bellied Turtle	*Chrysemys scripta*
Scarlet Snake	*Cemophora coccinea*
Black Racer	*Coluber constrictor*
Ringneck Snake	*Diadophis punctatus*
**Indigo Snake	*Drymarchon corais*
Corn Snake	*Elaphe guttata*
Rat Snake	*Elaphe obsoleta*
Mud Snake	*Farancia abacura*
Rainbow Snake	*Farancia erytrogramma*
Hognose Snake	*Unknown*
*Mole Snake	*Lampropeltis calligaster*

REPTILES (Continued)

*Kingsnake	*Lampropeltis getulus*
Coachwip	*Masticophis flagellum*
Green Water Snake	*Natrix cyclopion*
Red-bellied Water Snake	*Natrix erythrogaster*
Banded Water Snake	*Natrix fasciatus*
Rough Green Snake	*Opheodrys aestivus*
Pine Snake	*Pituophis melanoleucas*
Glossy Water Snake	*Regina rigida*
Queen Snake	*Regina septemvittata*
Yellow-lipped Snake	*Rhadinea flavilata*
Black Swamp Snake	*Seminatrix pygaea*
Brown Snake	*Storeria dekayi*
Red-bellied Snake	*Storeria occipitomaculata*
Crowned Snake	*Tantilla coronata*
Ribbon Snake	*Thamnophis sauritus*
Garter Snake	*Thamnophis sirtalis*
Earth Snake	*Virginia striatula*
Coral Snake	*Micrurus fulvius*
*Copperhead	*Agkistrodon contortrix*
Cottonmouth	*Agkistrodon piscivorus*

MAMMALS

Opossum	*Didelphis virginiana*
Shrew	*Unknown*
Eastern Mole	*Scalopus aquaticus*
*Myotis	*Unknown*
Eastern Pipistrelle	*Pipistrellus subflavus*
*Big Brown Bat	*Eptesicus fuscus*
*Hoary Bat	*Lasiurus cinereus*
*Red Bat	*Lasiurus borealis*
Indiana Bat	*Unknown*
Seminole Bat	*Lasiurus seminolus*
Northern Yellow Bat	*Lasiurus intermedius*
Evening Bat	*Nycticeius humeralis*
*Big-eared Bat	*Plecotus rafinesquii*
Brazilian Freetailed Bat	*Tadarida brasiliensis*
Nine-banded Armadillo	*Dasypus novemcinctus*
Eastern Cottontail	*Sylvilagus floridanus*
Marsh Rabbit	*Sylvilagus palustris*
Gray Squirrel	*Sciurus carolinensis*
Fox Squirrel	*Sciurus niger*
Southern Flying Squirrel	*Glaucomys volans*
Southeastern Pocket Gopher	*Geomys pinetus*
American Beaver	*Castor canadensis*
Woodland Vole	*Microtus pinetorum*

MAMMALS (Continued)

**Round-tailed Muskrat	*Neofiber alleni*
Eastern Woodrat	*Neotoma floridana*
Hispid Cotton Rat	*Sigmodon hispidus*
Eastern Harvest Mouse	*Reithrodontomy humulis*
Marsh Rice Rat	*Oryzomys palustris*
Oldfield Mouse	*Peromyscus polionotus*
Cotton Mouse	*Peromyscus gossypinus*
Golden Mouse	*Ochrotomys nuttalli*
House Mouse	*Mus musculus*
Black Rat	*Rattus rattus*
Norway Rat	*Rattus norvegicus*
Gray Fox	*Urocyon cinereoargenteus*
Red Fox	*Vulpes vulpes*
*Black Bear	*Urus americanus*
Raccoon	*Procyon lotor*
River Otter	*Lutra canadensis*
Striped Skunk	*Mephitis mephitis*
Eastern Spotted Skunk	*Spilogale putorius*
*Mink	*Mustela vison*
Long-tailed Weasel	*Mustela frenata*
Bobcat	*Lynx rufus*
*Mountain Lion	*Felis concolor*
Feral Pig	*Sus scrofa*
White-tailed Deer	*Odocoileus virginianus*
*Southeastern Weasel	*Mustela frenata olivacea*
*Southeastern Shrew	*Sorex longirostris longirostris*

*Signifies rare or endangered species
**Signifies threatened species

Source: Manns (1977)

Species	Legal Status[1] GFWFC[2]	USFWS[3]	CITES[4]
Roseate spoonbill (Ajaia ajaja)	SSC		
Limpkin (Aramus guarauna)	SSC		
Roseate tern (Sterna dougallii)	T		
Least tern (Sterna albifrons)	T		
White-crowned pigeon (Columba leucocephala)	T		
Ivory-billed woodpecker (Campephilus principalis)	E	E	
Red-cockaded woodpecker (Picoides borealis)	T	E	
Florida scrub jay (Aphelocoma coerulescens coerulescens)	T		
Marian's marsh wren (Cistothorus palustris marianae)	SSC		
Worthington's marsh wren (Cistothorus palustris griseus)	SSC		
Cuban yellow warbler (Dendroica petechia gundlachi)	SSC		
Bachman's warbler (Vermivora bachmanii)	E	E	
Kirtland's warbler (Dendroica kirtlandii)	E	E	
Dusky seaside sparrow (Ammospiza maritima nigriscens)	E	E	
Cape Sable seaside sparrow (Ammospiza maritima mirabilis)	E	E	
Scott's seaside sparrow (Ammospiza maritima peninsulae)	SSC		
Wakulla seaside sparrow (Ammospiza maritima junicola)	SSC		
Florida grasshopper sparrow (Ammodramus savannarum floridanus)	E		
Mammals			
Gray bat (Myotis grisescens)	E	E	
Indiana bat (Myotis sodalis)	E	E	
Eastern chipmunk (Tamias striatus)	SSC		
Mangrove fox squirrel (Sciurus niger avicennia)	T		
Sherman's fox squirrel (Sciurus niger shermani)	SSC		
Goff's pocket gopher (Geomys pinetis goffi)	E		
Silver rice rat (Oryzomys argentatus)	E		
Pallid beach mouse (Peromyscus polionotus decoloratus)	E		
Choctawhatchee beach mouse (Peromyscus polionotus allophrys)	T		
Perdido Bay beach mouse (Peromyscus polionotus trissyllepsis)	T		

Species	Legal Status[1] GFWFC[2]	USFWS[3]	CITES[4]
Florida mouse (Peromyscus floridanus)	T		
Key Largo cotton mouse (Peromyscus gossypinus allapaticola)	E		
Chadwick Beach cotton mouse (Peromyscus gossypinus restrictus)	SSC		
Lower keys cotton rat (Sigmodon hispidus exsputus)	T		
Key Largo woodrat (Neotoma floridana smalli)	E		
Florida black bear (Ursus americanus floridanus)--except in Baker and Columbia counties and Apalachicola National Forest	T		
Key Vaca raccoon (Procyon lotor auspicatus)	T		
Everglades mink (Mustela vison evergladensis)	T		
River otter (Lutra canadensis)		UR	II
Florida panther (Felis concolor coryi)	E	E	I
Bobcat (Lynx rufus)		UR	II
Caribbean manatee (Trichechus manatus latirostris)	E	E	I
Key deer (Odocoileus virginianus clavium)	T	E	
Blue whale (Balaenoptera musculus)	E	E	I
Finback whale (Balaenoptera physalus)	E	E	II
Sei whale (Balaenoptera borealis)	E	E	II
Humpback whale (Megaptera novaeangliae)	E	E	I
Sperm whale (Physeter catodon)	E	E	
Invertebrates			
Stock Island tree snail (Orthalicus reses)	T	T	
Florida tree snail (Liguus fasciatus)		UR	
Bahamas swallowtail butterfly (Papilio andraemon bonhotei)	T	T	
Schaus swallowtail butterfly (Papilio aristodemus ponceanus)	T	T	
Atala butterfly (Eumaeus atala florida)		UR	
Oklawaha sponge (Dorsilia palmeri)		UR	
Kissimmee sponge (Ephydatia subtilis)		UR	
Palm Springs cave crayfish (Procambarus acherontis)		UR	
Florida cave scud (Crangonyx grandimanus)		UR	
Squirrel Chimney cave shrimp (Palaemonetes cummingi)		UR	
Plants			
Chapman's rhododendron (Rhodendron chapmanii)		E	

Legal Status of Endangered and Potentially Endangered Species in Florida
1 August 1979

Species	Legal Status[1] GFWFC[2]	USFWS[3]	CITES[4]
Fishes			
Shortnose sturgeon (Acipenser brevirostrum)	E	E	I
Atlantic sturgeon (Acipenser oxyrhynchus)	SSC		II
Key silverside (Menidia conchorum)	E		
River redhorse (Moxostoma carinatum)	SSC		
Alligator gar (Lepisosteus spatula)	SSC		
Bluestripe shiner (Notropis callitaenia)	T	UR	
Lake Eustis Pupfish (Cyprinodon variegatus hubbsi)	SSC		
Saltmarsh topminnow (Fundulus jenkinsi)	SSC		
Rivulus (Rivulus marmoratus)	SSC		
Okaloosa darter (Etheostoma okaloosae)	E	E	
Harlequin darter (Etheostoma histrio)	SSC		
Southern tessellated darter (Etheostoma olmstedi maculaticeps)	SSC		
Crystal darter (Ammocrypta asprella)	T	UR	
Key blenny (Starksia starcki)	SSC		
Shoal bass (Micropterus undescribed species)	SSC		
Suwannee bass (Micropterus notius)	SSC		
Amphibians and Reptiles			
Pine Barrens treefrog (Hyla andersonii)	E	E	
Florida gopher frog (Rana areolata)	SSC		
American crocodile (Crocodylus acutus)	E	E	I
American alligator (Alligator mississippiensis)	SSC	T	II
Leatherback turtle (Dermochelys coriacea)	E	E	I
Atlantic green turtle (Chelonia mydas mydas)	E	E	I
Atlantic hawksbill turtle (Eretmochelys imbricata imbricata)	E	E	I
Atlantic ridley turtle (Lepidochelys kempi)	E	E	I
Atlantic loggerhead turtle (Caretta caretta caretta)	T	T	I
Key mud turtle (Kinosternon bauri bauri)	T	UR	
Barbour's map turtle (Graptemys barbouri)	SSC		
Suwannee cooter (Chrysemys concinna suwanniensis)	SSC	UR	
Gopher turtle (Gopherus polyphemus)	SSC		II
Florida key mole skink (Eumeces egregius egregius)	SSC		

Species	Legal Status[1] GFWFC[2]	USFWS[3]	CITES[4]
Blue-tailed mole skink (Eumeces egregius lividus)	T		
Sand skink (Neoseps reynoldsi)	T		
Atlantic salt marsh water snake (Nerodia fasciata taeniata)	E	T	
Short-tailed snake (Stilosoma extenuatum)	T	UR	
Big Pine Key ringneck snake (Diadophis punctatus acricus)	T		
Red rat snake (Elaphe guttata guttata)--lower Keys population only	SSC		
Florida brown snake (Storeria dekayi victa)--lower Keys population only	T		
Miami black-headed snake (Tantilla oolitica)	T	UR	
Eastern indigo snake (Drymarchon corais couperi)	T	T	
Florida ribbon snake (Thamnophis sauritus sackeni)--lower Keys population only	T		
Birds			
Eastern brown pelican (Pelecanus occidentalis carolinensis)	T	E	
Wood stork (Mycteria americana)	E		
Golden eagle (Aquila chrysaetos)			II
Bald eagle (Haliaeetus leucocephalus)	T	E	I
Osprey (Pandion haliaetus)			II
Everglade kite (Rostrhamus sociabilis plumbeus)	E	E	
Marsh hawk (Circus cyaneus)			II
Southeastern kestrel (Falco sparverius paulus)	T		II
Eastern kestrel (Falco sparverius sparverius)			II
Pigeon hawk (Falco columbarius)			II
Peregrine falcon (Falco peregrinus)	E	E	I
Audubon's caracara (Caracara cheriway auduboni)	T		
Burrowing owl (Athene cunicularia)	SSC		
Cuban snowy plover (Charadrius alexandrinus tenuirostris)	E		
Florida sandhill crane (Grus canadensis pratensis)	T		II
American oystercatcher (Haematopus palliatus)	SSC		
Little blue heron (Florida caerulea)	SSC		
Snowy egret (Egretta thula)	SSC		
Reddish egret (Dichromanassa rufescens)	SSC		
Louisiana heron (Hydranassa tricolor)	SSC		

Species	Legal Status[1] GFWFC[2]	USFWS[3]	CITES[4]
Orchids (all species)			II
Cycads (all species)			II
Euphorbias (all succulent species)			II
Lignum-vitae (Guiacum sanctum)			II
Cacti (all species)			II

[1]E=Endangered; T=Threatened; UR=Under Review (for possible listing); I=included in Appendix I; II=included in Appendix II.

[2]Game and Fresh Water Fish Commission.

[3]U. S. Fish and Wildlife Service.

[4]Convention on International Trade in Endangered Species of Wild Fauna and Flora.

section prior to that date.]

266.114 Treasurer; receipts and disbursement of funds.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

266.115 Powers of the board of trustees.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

PART IV

HISTORIC KEY WEST PRESERVATION BOARD OF TRUSTEES

266.201 Historic Key West Preservation Board of Trustees.
266.202 Definitions.
266.203 Membership; terms; compensation; bond.
266.204 Organization; records.
266.205 Treasurer; finances.
266.206 Powers of the board.

266.201 Historic Key West Preservation Board of Trustees.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

266.202 Definitions.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

266.203 Membership; terms; compensation; bond.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

266.204 Organization; records.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

266.205 Treasurer; finances.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

266.206 Powers of the board.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

PART V

HISTORIC BOCA RATON PRESERVATION BOARD OF COMMISSIONERS

266.301 Historic Boca Raton Preservation Board of Commissioners.

266.301 Historic Boca Raton Preservation Board of Commissioners.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

PART VI

HISTORIC TAMPA-HILLSBOROUGH COUNTY PRESERVATION BOARD OF TRUSTEES

266.401 Historic Tampa-Hillsborough County Preservation Board of Trustees.

266.401 Historic Tampa-Hillsborough County Preservation Board of Trustees.-[Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.]

CHAPTER 267

FLORIDA ARCHIVES AND HISTORY ACT

267.031 Division of Archives, History, and Records Management.
267.0615 Historic Preservation Project Review Council; creation; members; membership; powers and duties.
267.0616 Submission of proposals for state historical preservation boards of trustees required; procedure.
267.0617 Historic Preservation Trust Fund.

267.031 Division of Archives, History, and Records Management.—

(1) The Division of Archives, History, and Records Management shall be organized into as many bureaus as deemed necessary by the division for the proper discharge of its duties and responsibilities under this chapter; provided, however, that in addition to the office of the director, there shall be at least four bureaus to be named as follows:

(a) Archives and records management.
(b) Historic sites and properties.
(c) Historical museums.
(d) Publications.

[1](2)(a) The Secretary of State is hereby authorized to appoint advisory councils to provide professional and technical assistance to the division. The councils shall consist of not less than five nor more than nine members, and such appointments shall consist of persons who are qualified by training and experience and possessed of proven interest in the specific area of responsibility and endeavor involved.

(b) The chairman of each of said councils shall be elected by a majority of the members of the council and shall serve for 2 years. If a vacancy occurs in the office of chairman before the expiration of his term, a chairman shall be elected by a majority of the members of the council to serve the unexpired term of such vacated office.

(c) It shall be the duty of any of the advisory councils appointed hereunder to provide professional and technical assistance to the division as to all matters pertaining to the duties and responsibilities

of the division in the administration of the provisions of this chapter. Members of the councils shall serve without pay, but shall be entitled to reimbursement for their necessary travel expenses incurred in carrying out their official duties, as provided by s. 112.061.

(3) The division may employ a director of the division and shall establish his qualifications. The director shall act as the agent of the division in coordinating, directing, and administering the activities and responsibilities of the division. The director may also serve as the chief of any of the bureaus herein created. The division may employ other employees as deemed necessary for the performance of its duties under this chapter.

(4) The division shall adopt such rules and regulations deemed necessary to carry out its duties and responsibilities under this chapter, which rules shall be binding on all agencies and persons affected thereby. The willful violation of any of the rules and regulations adopted by the division shall constitute a misdemeanor.

(5) The division may make and enter into all contracts and agreements with other agencies, organizations, associations, corporations and individuals, or federal agencies as it may determine are necessary, expedient, or incidental to the performance of its duties or the execution of its powers under this chapter.

(6) The division may accept gifts, grants, bequests, loans, and endowments for purposes not inconsistent with its responsibilities under this chapter.

(7) All law enforcement agencies and offices are hereby authorized and directed to assist the division in carrying out its duties under this chapter.

History.—s. 3, ch. 67-50; ss. 10, 25, 27, 35, ch. 69-106; s. 73, ch. 71-377; s. 1, ch. 73-250; s. 4, ch. 78-323.

[1]Note.—Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this subsection prior to that date.

[1]267.0615 Historic Preservation Project Review Council; creation; members; membership; powers and duties.—

(1) There is hereby created within the Division of Archives, History, and Records Management the Historic Preservation Project Review Council. The council shall consist of the State Historic Preservation Officer, designated pursuant to Pub. L. No. 89-655, and six additional members to be appointed by the Governor not later than 60 days after July 1, 1978. Initial appointments shall be for terms as follows: One for 2 years; two for 3 years; and three for 4 years. Thereafter, members shall be appointed for 4-year terms, except for appointments for unexpired terms, in which event the appointment shall be for the unexpired term only. Members may be reappointed. Council members shall be qualified through the demonstration of special interest, experience, or education in historic preservation. At least three members shall possess professional educational credentials representing one or more of the following disciplines: Archaeology, architecture, architectural history, history, or urban planning. A chairman shall be elected by the council's members. The director of the Division of Archives, History, and Records Management of the Department of State, or his designee, shall serve without voting rights as secretary of the council; and it shall be his responsibility to provide staff assistance to the council. All action taken by the council shall be by majority vote.

(2) It shall be the responsibility of the council to evaluate all proposals for capital outlay involving projects requiring financial assistance from the state, relating to the preservation, restoration, reconstruction, or acquisition of any historical site; and, in making such evaluation, it shall apply, as a minimum standard, the following criteria:

(a) Benefit to the public.
(b) Historical significance.
(c) Site development plan.
(d) Economics.
(e) Maintenance.
(f) Need.
(g) Compatibility with the statewide historic preservation plan.

The council shall prepare a report and make recommendations reflecting such evaluation. The report and recommendations of the council shall be filed with the President of the Senate, the Speaker of the House of Representatives, the chairmen of the appropriations committees of both houses of the Legislature, the Secretary of State, and the division. No capital outlay projects shall be eligible for state financial assistance until the council's report and recommendations have been filed with the Division of Archives, History, and Records Management and have received the affirmative recommendation of the Secretary of State.

(3) The council shall develop and recommend to the Division of Archives, History, and Records Management appropriate rules and regulations relating to the performance of the duties and responsibilities of the council as provided in this act. Upon the adoption of said rules and regulations by the Department of State, the same shall govern the activities of the council. Said rules and regulations shall include, but not be limited to, rules and regulations relating to the following:

(a) The preparation and submission of proposals relating to historic preservation, restoration, reconstruction, or acquisition and their evaluation by the council.

(b) Contributions by federal, state, or local governments and private sources, except that no more than 50 percent of the nonfederal funds for any one capital outlay project shall be funded from state sources. In determining levels of nonstate funding for purposes of this chapter, "funds" may be construed to include the fair market value of real property donated from any source to any bona fide historic preservation board of trustees established under chapter 266.

(c) The preparation and submission of proposals relating to the creation of historic preservation boards of trustees and their evaluation by the council.

(4) It shall further be the responsibility of the council to monitor and evaluate all proposals for state historic preservation boards of trustees created after July 1, 1976; and, in making such evaluation, the council shall apply, as a minimum standard, the following criteria:

(a) *Geographic jurisdiction.*—The proposal shall specify geographic boundaries for the jurisdiction of the proposed board. The boundaries shall include at least one Historic Preservation District designated as such on the National Register of Historic Places.

(b) *Membership.*—The proposal shall specify that no less than one-third of the membership of the board shall possess professional educational credentials representing one or more of the following disciplines: History, architecture, architectural history, urban planning, or archaeology.

(c) *Architectural review board.*—The proposal shall provide evidence in the form of an ordinance or resolution that the local governing body shall empanel and empower an architectural review board as defined by the statutes covering state historic preservation boards of trustees previously created under chapter 266.

(d) *Responsibilities and duties; survey, inventory, and preliminary preservation plan.*—The proposal shall specify that it shall be the responsibility and duty of the proposed board to perform, as a minimum, the following tasks:

1. To locate and identify through research all historic districts, sites, buildings, structures, and objects of historical significance, as determined by evaluative criteria of the division, that are contained in the geographic jurisdiction of the board. Within 2 years of the first operational funding of the board, it shall be the duty of the board to have completed a professionally conducted intensive survey and inventory of all historic, architectural, and archaeological sites contained in the geographic jurisdiction of the board. Said survey and inventory shall not be considered complete until it is reviewed and approved by the division.

2. To develop a preliminary historic preservation plan for the area contained in the geographic jurisdiction of the board. Within 6 months of the approval of the survey and inventory by the division, the board shall develop a preliminary historic preservation plan to be submitted to the division for review and approval.

(e) *Economics.*—The proposal shall provide evidence in the form of an ordinance or resolution that the local governing body shall participate in the operational funding of the proposed board. The proposal shall specify the annual operating budget of the board and how it shall be funded.

(f) *Additional criteria.*—

1. Benefit to the public.
2. Need.
3. Compatibility with the comprehensive statewide historic preservation plan as provided for in s. 267.061(2)(b).

History.—s. 1, ch. 73-279; s. 1, ch. 76-93; s. 4, ch. 78-323; s. 1, ch. 78-357.
[1]Note.—Repealed by s. 4, ch. 78-323, effective October 1, 1981, except for the possible effect of laws affecting this section prior to that date.

267.0616 Submission of proposals for state historical preservation boards of trustees required; procedure.—

(1) Any person seeking the creation of a state historic preservation board of trustees shall submit the proposal to the division for review by the Historic Preservation Project Review Council as provided in s. 267.0615(4).

(2) The council shall submit each proposal it receives, together with a report and recommendation by the council regarding such proposal, to the President of the Senate, the Speaker of the House of Representatives, the chairmen of the appropriations committees of both houses of the Legislature, the Secretary of State, and the division.

History.—s. 2, ch. 76-93; s. 2, ch. 78-357.

267.0617 Historic Preservation Trust Fund.—

(1) There is hereby created within the Division of Archives, History, and Records Management of the Department of State the Historic Preservation Trust Fund, which shall consist of moneys appropriated by the Legislature, moneys deposited pursuant to s. [1]550.037(2), and moneys contributed to the fund from any other source. The fund shall be administered by the Department of State through the Division of Archives, History, and Records Management for the purpose of financing grants in furtherance of the purposes of this section.

(2) The division is authorized to conduct and carry out a program of grants-in-aid for historic preservation projects that meet the criteria of s. 267.0615(2) and (4) to any department or agency of the state; any unit of county, municipal, or other local government; or any nonprofit corporation or organization meeting the requirements of chapter 617. All moneys received from any source as appropriations, deposits, or contributions to this program shall be paid and credited to the Historic Preservation Trust Fund.

History.—s. 3, ch. 78-357.
[1]Note.—Section 4 of H.B. 1571 (ch. 78-357), which created s. 550.037, was amended (see 1978 House Journal p. 844). As a result of the amendment, the correct reference is s. 550.03(2)(i).

CHAPTER 272

CAPITOL CENTER

272.12 Florida Capitol Center Planning District.
272.128 Florida Historic Capitol Preservation Act.
272.18 Governor's Mansion Advisory Council.

272.12 Florida Capitol Center Planning District.—

(1) There is hereby created the Florida Capitol Center Planning District, which may be referred to in this chapter as "Capitol Center" or "district." The district shall extend to and include all lands within the following boundaries of the City of Tallahassee: Commence at the Northwest corner of lot 293 of the Old Plan of the City of Tallahassee as recorded in the office of the clerk of the circuit court, Leon County, Florida; thence East along the South right-of-way line of West College Avenue and East College Avenue and the East prolongation of East College Avenue to its intersection with the Westerly right-of-way line of the Seaboard Coastline Railroad; thence Southerly and Westerly along said Seaboard Coastline Railroad right-of-way line to a point of intersection with the South prolongation of the East right-of-way line of South Boulevard Street; thence North

APPENDIX XII

DEPARTMENT OF LEGAL AFFAIRS
OFFICE OF THE ATTORNEY GENERAL
THE CAPITOL
TALLAHASSEE, FLORIDA 32304

JIM SMITH
Attorney General
State of Florida

June 29, 1979

Mr. James MacFarland, Director
Sanctuary Programs Office
Office of Coastal Zone Management
3300 Whitehaven Street, N.W.
Washington, D.C. 20235

Dear Mr. MacFarland:

The Florida Cabinet passed a resolution on June 26, 1979 supporting the designation of the Apalachicola River Basin as a National Estuarine Sanctuary. Enclosed is a copy of this resolution for your information.

Sincerely,

Jim Smith
Attorney General

JS/lnh

State Of Florida

RESOLUTION

WHEREAS, the Department of Environmental Regulation has requested that the Federal Office of Coastal Zone Management designate the Apalachicola Bay and Lower River as a National Estuarine Sanctuary; and

WHEREAS, the Department of Environmental Regulation has requested financial assistance from the OCZM in acquiring the property necessary for a sanctuary; and

WHEREAS, the Apalachicola River Basin would appear to be the most representative example of the Louisianian Biogeographic classification in the United States; and

WHEREAS, the dual purpose of this sanctuary will be to provide relatively undisturbed areas so that a representative series of natural coastal ecological systems will remain available for ecological research and education and ensure the availability of natural areas for use as a control against which impacts of man's activities in other areas can be assessed; and

WHEREAS, a major benefit of the sanctuary will be to provide a buffer area to help protect the Apalachicola Bay from the impacts of runoff and drainage; and

WHEREAS, the sanctuary will protect and promote the recreational enjoyment of the river basin; and

WHEREAS, an estuarine sanctuary will not impede or otherwise restrict navigations on the Apalachicola-Chattahoochee-Flint river system; and

WHEREAS, the Apalachicola Bay produces more than ninety percent of Florida's oysters and a large proportion of Florida's other commercial seafood products and is therefore a state resource and in need of protection; and

WHEREAS, the proposed sanctuary will ensure the continued economic viability of the community which is primarily dependent on the living resources of the bay; and

WHEREAS, the estuarine sanctuary will help implement a long-term spoil disposal plan; and

WHEREAS, the National Estuarine Sanctuary will be a statement of national interest and concern for the long-term protection of the area's resources;

NOW, THEREFORE, BE IT RESOLVED:

1. That the Governor and the Cabinet of the State of Florida do hereby support the designation of the Apalachicola Bay and Lower River as a National Estuarine Sanctuary.

2. That copies of this Resolution be sent to the Florida Congressional Delegation, the Executive Board of the Apalachee Regional Planning Council, the Chairmen of the Franklin, Gulf, Liberty, Calhoun, Gadsden and Jackson County Boards of County Commissioners, the Office of Coastal Zone Management, and the United States Army Corps of Engineers.

IN TESTIMONY WHEREOF, the Governor and Cabinet of the State of Florida have hereunto subscribed their names and have caused the official seal of the said State of Florida to be hereunto affixed, in the City of Tallahassee, Florida, on this 26th day of June, A.D., 1979.

Bob Graham
Governor

George Firestone
Secretary of State

Jim Smith
Attorney General

Gerald A. Lewis
Comptroller

Bill Gunter
Treasurer

Doyle Conner
Commissioner of Agriculture

Ralph D. Turlington
Commissioner of Education

APPENDIX XIII

Responses to Comments Received on the Apalachicola River and Bay Estuarine Sanctuary Draft Environmental Impact Statement

This section summarizes the written and verbal comments received on the Draft Environmental Impact Statement (DEIS) and provides OCZM's response to these comments. Generally, responses are made in one or more of the following ways:

(1) Expansion, clarification, or revision of the DEIS

(2) General responses to comments raised by several reviewers, and/or

(3) Specific responses to the individual comments made by each reviewer.

OCZM will publish all comments in a compendium and distribute it to persons who commented on the DEIS, or anyone else upon request. Comments received after July 5, 1979, are not addressed but may be included in the compendium of comments.

The following are some of the most common issues raised by reviewers:

General Comments and Responses

A. Concern over the impacts of sanctuary status upon river navigation.

Many reviewers expressed concern about how Florida's existing permit authority may be used to regulate external influences upon the sanctuary. It is feared the State will limit maintenance dredging in or upriver from the sanctuary, thereby severely affecting upriver navigation interests.

With respect to the question of maintenance dredging, the State of Florida's concern has always been to find proper spoil disposal sites. A spoil disposal plan pertaining to dredging the bay will be completed within one year of sanctuary establishment.

The U.S. Army Corps of Engineers began applying for dredge and fill permits for the first time at the beginning of 1979 as a result of the implementation of the Clean Water Act of 1977. Since this is a new Act, procedures had to be established between the Corps and the State of Florida to ensure that the intent of this law is fulfilled. To respond to concerns raised by DEIS commentors and to resolve the outstanding procedural questions about maintenance dredging, the State of Florida has taken the following actions:

(1) The State of Florida met with the Corps of Engineers on July 5, 1979, and a memorandum of understanding is being prepared to establish a procedure for processing COE dredge and fill requests.

(2) The Department of Environmental Regulation (DER) has issued a permit for desnagging on the Apalachicola River and is processing an application for maintenance dredging of the river.

(3) The following clarification has been added to the Section on navigation in the EIS under "Allowed Uses:"

"Maintenance dredging of existing channels includes dredging by the Corps of Engineers to Congressionally ordered depths and dimensions. No new State regulatory requirements shall be imposed upon such maintenance dredging because of achievement of status as an estuarine sanctuary, and State regulatory permit reviews shall continue to be applied in a manner consistent with applicable Federal law."

(4) New language has been added concerning prohibited activities to clarify the one year exclusion on public works. The wording, under the heading "Prohibited Activities," is as follows:

". . . incorporation of new public works projects that require dredging or additional filling within the official Florida water resource development program, which is annually presented and recommended to Congress pursuant to Chapter 373, Florida Statutes. The temporary exclusion of such projects affecting the bay shall terminate upon adoption of a long term disposal plan expected to be completed within one year of the establishment of the estuarine sanctuary. The omission of such dredging and filling public works projects from the official Florida program does not preclude the submission or recommendation of such public works by other persons or public agencies to the Congress, nor Congressional authorization of such projects."

(5) The State of Florida has also agreed to take priority action on pending COE maintenance dredging applications.

B. Florida restrictions on Federal authority over interstate navigation.

Concern was raised over Florida's authority to regulate certain activities (e.g. minimum water flow) outside the established sanctuary boundary that could conflict with the rights of the Federal government in navigable waters.

To distinguish between State and Federal authority, the following language has been added to the "General and Specific Management Requirements."

"The regulatory authorities of the State under Chapter 373, F.S., and other Florida Statutes will be exercised, to the extent allowed by Florida law, to ensure that activities within the boundaries of Florida do not impair such estuarine productivity, processes, or living resources. However, the paramount power of the Federal government to control navigable waters, and the associated authority of the Corps of Engineers and the Federal Power Commission to control the operation of dams on the Tri-River system, is expressly recognized. Neither the State or its agencies will attempt to utilize State regulatory powers to displace Federal control of those facilities."

In addition, the State of Florida cannot set minimum flow standards, or any other standards, for the States of Alabama and Georgia. OCZM/NOAA also is precluded from such activities by the Coastal Zone Management Act, as stated in this FEIS. Stronger language from Section 404(t) of the Clean

Water Act of 1977 has been added. OCZM will not interfere with any agreements the Governors of Alabama, Georgia, and Florida may wish to enter into regarding the usage of the A-C-F System, assuming there is no significant alteration of the sanctuary for educational and research use. OCZM encourages joint examination of the entire A-C-F watershed.

C. Georgia and Alabama must be represented on the Sanctuary Management Committee.

The primary responsibilities of the Sanctuary Management Committee concern research and education within the sanctuary. This Management Committee has certain specific powers that are enumerated in the FEIS--most of which are advisory. While it is fully recognized that Georgia and Alabama have considerable interest in the multiple uses of the A-C-F waterway, Florida feels that this interest goes well beyond the scope of the Sanctuary Management Committee. It should be emphasized that the Sanctuary Management Committee does not have as one of its functions, nor does it have the statutory authority, to resolve navigation issues. Georgia and Alabama always have the option of giving their input directly to Florida agencies, or the Governor, if their concerns are not not adequately addressed by the Sanctuary Mangement Committee.

D. The EIS must include the economic impacts of the sanctuary upon Georgia and Alabama.

Many letters referred to the economic value of goods shipped on the Apalachicola and other rivers and the value of these waterways to upstream industries in Alabama and Georgia. We fully realize that the Tri-River system is an important transportation resource for Alabama, Georgia, and Florida commerce. New language was added to the EIS text, as mentioned above, to make it clear that Florida has no intention of interfering with the maintenance dredging of the A-C-F waterway to its authorized depth.

The proposed sanctuary is not intended to interfere with waterborne navigation, hence no environmental or economic impact upon Georgia or Alabama is anticipated.

Other than this general concern over navigation and transportation, no specific examples of economic impact caused by creation of an estuarine sanctuary were presented during the comment period.

E. Inclusion of additional areas within the sanctuary boundaries (e.g. all barrier islands, Tate's Hell Swamp, Jackson River, Lake Wimico) and/or control over their uses.

The factors weighing against the acquisition of additional land were funding limitations and the consideration of achieving a maximum return in the control of valuable estuarine lands. It was felt that, although important, the developed portions of St. George Island and Dog Island would require more monies than were available. Tate's Hell Swamp also would have been an important addition to the estuarine sanctuary had

funds been available. The Lake Wimico - Jackson River area is an important part of the Apalachicola drainage system. It was excluded, however, because it is basically a freshwater system, rather than an estuary, and there is no public ownership of the adjacent lands, as exists in the proposed sanctuary. In addition, the ecological integrity of the area is currently under the protection of existing State laws.

Including additional areas within the sanctuary by controlling their uses was not considered due to the possibility of inverse condemnation. The proposed sanctuary boundaries will consist only of land owned by public agencies (i.e. Florida's Department of Natural Resources and, on St. Vincent Island, The U.S. Fish and Wildlife Service) adjacent to the Apalachicola River or Bay.

F. Hold sanctuary designation in abeyance pending further study of alternate sites for establishing a representative Louisianian Estuarine Sanctuary.

Some local governments have issued nearly identical resolutions requesting that the U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA), Office of Coastal Zone Management (OCZM) and the U.S. Army Corps of Engineers hold in abeyance any designation of an estuarine sanctuary within the Apalachicola Bay/River area until such time as the State of Florida and NOAA/OCZM have done further study of alternate areas for the establishment of a typical Louisianian estuary.

The selection of the Apalachicola area was a thorough process that included very extensive study of alternate areas. The States of Alabama and Georgia were informed of the sanctuary proposal a year and a half ago, at the time the application was submitted to OCZM. A symposium of leading scientists has supported Florida's conclusion that the Aplachicola was the best site in the State for establishment of an esturine sanctuary of the Louisianian region. No other states have proposed alternate sites for a sanctuary in this region.

Summary of Specific Comments and Responses

Department of the Air Force, HQ AFESC, Atlanta, Georgia
(Charles R. Smith, 5/30/79)

C - Proposed sanctuary would not adversely affect existing Air Force operations.

R - Comment accepted.

U.S. Environmental Protection Agency, Alanta, Georgia
(John E. Hagan, III, 6/21/79)

C - Finds the DEIS generally adequate and a rating of LO-2 was assigned, i.e. we have no significant environmental objections, but some additional information is requested.

R - Comment accepted.

C - Would like to see a decision on the role of the 208 statewide program relative to the drainage within the watershed included in the FEIS.

R - Discussion of the 208 program was included in the FEIS.

C - An appraisal within the FEIS of the potential losses through storm damage to St. George Island development versus additional tax revenues from development of the island is necessary to gain an overall perspective of the true cost/benefit ratio of the project.

R - The DEIS made certain assumptions regarding an increase in land values on St. George Island that might be attributed to purchase of 12,467 acres of land, which could offset some of the property tax loss from this purchase. These were only assumptions to show a possible positive effect on land values. We do not feel that any negative impact will occur to the development on St. George Island from creation of the sanctuary. Although it is true that economic losses from storm damages would probably occur, the sanctuary proposal is not applicable to this situation.

Code

C = Comment received and summarized
R = Response by OCZM
FEIS = Final Environmental Impact Statement
DEIS = Draft Environmental Impact Statement

U.S. Department of Housing and Urban Development, Washington, D.C.
(Trudy McFall, 6/7/79)

C - Our review team indicates that the Apalachicola River and Bay DEIS proposal is consistent with HUD 701 and other program requirements insofar as they are relevant to associated land use and other plans and to the impact of Federal programs supported by HUD.

R - Comment accepted.

C - HUD recognizes the significance and importance of this sanctuary area, and supports efforts to establish it as a wildlife and aquatic enclave.

R - Comment accepted.

Department of Housing and Urban Development, Atlanta, Georgia
(Charles N. Straub, 5/18/79)

C - The relationship of the sanctuary to pertinent Presidential Executive Orders, e.g. E.O. 11988, Floodplain Management and E,O. 11990, Protection of Wetlands, should be discussed in the FEIS.

R - The establishment of an estuarine sanctuary is in harmony with Executive Order 11988, Floodplain Management and Executive Order 11980, Protection of Wetlands. The acquisition of approximately 12,467 acres of land will not only protect the wetlands within this parcel, but preclude any development in this area, of which a substantial portion is within the 100 year floodplain. This comment has been added to the FEIS.

C - The impact of upstream pollutants, e.g. insecticides and effluents, and the regulatory controls that will protect the quality of water, should be discussed in the FEIS.

R - Little is currently known about the impacts from upstream pollutants. This is one of the areas of research recommended by the Workshop and Symposium participants (See Appendix 2 - Research Program and Recommendations of Panel 4 - Water Quality and Watersheds). The responsibility for the protection of water quality in Florida rests with the Department of Environmental Regulation (DER) and its authorities are cited in the FEIS. Federal water laws such as the Clean Water Act would at a minimum protect water quality upriver of the sanctuary.

C - Protection of the sanctuary from the placement of spoil and increased sedimentation from maintenance dredging needs further amplification in the FEIS.

R - See General Response A. The basic protection for the sanctuary from spoil disposal and sedimentation will be the completion of the spoil disposal plan for the bay. Another high priority research item is a circulation study of the bay that will help determine spoil disposal sites and optimum seasonal times for dredging activity. It must be recognized that maintenance dredging will occur within the sanctuary. However, the spoil disposal plan will establish the environmentally preferable method and also save public dollars by eliminating one of the biggest delay factors for Corps dredging permits--proper disposal sites.

U.S. Department of the Interior, Washington, D.C.
(Hon. Cecil A. Andrus, No Date)

C - Migratory bird management on refuges can involve manipulative habitat management, which appears to conflict with estuarine sanctuary objectives. To avoid any misunderstanding regarding the inclusion of St. Vincent Island within the sanctuary, it is recommended that the FEIS contain assurances that management actions and operations of the sanctuary cannot be superimposed upon the St. Vincent National Wildlife Refuge. The end result will be that the refuge will make an important contribution to the objectives of the estuarine sanctuary but will not administratively be part of it.

R - Comment accepted, changes made in the FEIS.

C - Several properties are within or adjacent to the proposed sanctuary boundaries that are on the National Register of Historic Places. Recommend the FEIS include discussion of the historic, archeological, and other cultural resources and the potential for impacts to these resources resulting from sanctuary status. The Florida State Historic Preservation Office should be consulted to aid in this effort.

R - OCZM supports and encourages research on the historic, archeological, and other cultural resources within the sanctuary boundaries. Since the lands within the boundaries have all been acquired for preservation/recreation purposes, any historic, archeological, or cultural resources will be preserved, not developed; hence, no adverse impact from sanctuary status is anticipated. The Florida Historic Preservation Officer has been added to the Subcommittee on Research and Education.

C - Does the management plan for sanctuary lands include all sanctuary lands or only those newly acquired?

R - Only those newly acquired are included.

C - Add words: "but will have no regulatory authority over these lands" to the section dealing with functions of the management committee.

R - New language was added to FEIS.

C - Noted omission of many estuarine and marine fishes from the list in Appendix X.

R - Some changes were made in response to more accurate data provided by the Florida Department of Game and Freshwater Fish. The list is not intended to be all-inclusive, however. Any additional data the Department of Interior has will be respectfully submitted to the Sanctuary Management Committee.

C - What are the mechanics of estuarine sanctuary management and what rules or statutes specifically apply to the estuarine sanctuary?

R - The sanctuary will basically be managed by the agency having primary responsibility. For example, the EEL lands will be managed by Florida's DNR in accordance with State rules for EEL lands. The DNR and DER will have major responsibilities within the water areas, and U.S. Fish and Wildlife Service will manage St. Vincent's Island in accordance with U.S. Fish and Wildlife Service regulations. The major statutes that will specifically apply to the sanctuary are discussed in the EIS.

C - How much jurisdiction will the management committee be able to exert? In what manner will the Sanctuary Management Committee exert influence on other agency management practices?

R - The Management Committee's role and jurisdiction is well defined under the "Management Committee" section. Important considerations are that its role is to provide for effective coordination and cooperation among all interests that will be involved with the estuarine sanctuary. This includes advising DNR on sanctuary administration, and advising the appropriate State agency or local government on proposed actions, plans, and projects in, adjacent to, or affecting the sanctuary after proper review. The Management Committee has no legal mechanism to exert influence on any State or Federal agencies. Its function is to be an advisor to foster cooperation and coordination among the sanctuary resource users. It should be noted that the Management Committee does not have advisory powers over the U.S. Fish and Wildlife Service activities on St. Vincent Island and will not perform any functions not listed in the FEIS.

C - We question the manner in which the Management Committee would attempt to monitor and/or guide changes within the upstream Apalachicola River Basin that may affect the estuarine ecosystem.

R - The Management Committee's function is not to monitor or guide changes within the upstream system. This function belongs to those State agencies having the appropriate legal authority over any proposed changes. The Management Committee may only advise the appropriate State agency or local governemnt on "proposed actions, plans, and projects in, adjacent to, or affecting the sanctuary."

C - We have a general concern over the sanctuary management concept, and suggest that U.S. Fish and Wildlife Service be a full, non-voting member of the committee. A "majority" vote structure should be implemented (suggest Florida Division of State Planning), and the committee appears to be biased toward Franklin County. Suggest the Subcommittee on Research and Education select its representative rather than Franklin County.

R - U.S. Fish and Wildlife Service has been added as a full, non-voting member of the Management Committee. The State of Florida examined the above alternative and decided that a six member voting committee was preferable and that Franklin County should appoint the two subcommittee members. There are other major changes to this management committee that are included in the FEIS.

C - The Subcommittee on Resources Management and Planning should include EPA, NMFS, and the U.S. Army Corps of Engineers.

R - Comment accepted. The Corps has been added as a full, non-voting member of the Subcommittee. EPA will have input through OCZM, and NMFS as a subagency of NOAA.

National Marine Fisheries Services (NOAA), Washington, D.C.
(Terry L. Leitzell, 6/5/79)

C - NMFS approves the great weight given the management of fisheries resources and the use of the Sanctuary Management Committee to catalyze a long term dredge disposal plan. Marine mammal and sea turtle populations that frequent the area should be mentioned specifically in the FEIS.

R - Comments accepted. This has been included in the FEIS.

C - Federal regulations still apply: e.g. DOA permits under the Rivers and Harbors Act, Section 10, and Clean Water Act, Section 404 (b), are still required for structures or dredging and filling.

R - Comment accepted. Sanctuary establishment will not diminish Federal agency authority under Section 10, Rivers and Harbors Act, and Section 404(b) of the Clean Water Act. This fact is specifically stated in the FEIS.

U.S. Department of Transportation, Atlanta, Georgia
(Thomas H. Lewis, 6/21/79)

C- No mention is made of highway transportation across the proposed sanctuary and the effect on existing and future transportation facilities, particularly proposals to replace the existing US 98 East Bay Causeway and the Gorrie Bridge. Recommend that the estuarine sanctuary proposal reserve a corridor for transportation purposes that will accommodate the future replacement of the existing crossing structure.

R- This comment is similar to that made by Ray G. L'Amoreaux of the State of Florida Department of Transportation. Please refer to the response to that letter.

Hon. Richard (Dick) Stone, United States Senate (Florida)
(6/15/79)

C - Strongly supports the establishment of the proposed sanctuary because it is a very productive natural resource base for people throughout the Apalachicola Valley and because it protects the area while not precluding multiple uses beneficial to citizens of Florida, Georgia, and Alabama. Urges NOAA to promptly approve funding for sanctuary designation.

R - Comment accepted.

Hon. Tom Bevill, Hon. Wm. L. Dickenson, Hon. Bill Nichols, Hon. Jack Brinkley, Hon. Dawson Mathis, United States House of Representatives (Georgia and Alabama)
(6/4/79)

C - Object to the approval of funds for the establishment of the sanctuary at this time. Have serious questions regarding the effect of sanctuary establishment upon navigation and water flow on the A-C-F system. Have no objections to sanctuary if Governors of Alabama, Florida, and Georgia meet and reach agreement on a long-range plan to guarantee a navigable nine-foot channel. Florida's political leaders are urged to recognize the need for multiple uses on the A-C-F system.

R - See General Response A. Establishment of the sanctuary will not adversely affect navigation on the Apalachicola, Flint, and Chattahoochee rivers. Governors Busbee, James, and Graham are scheduled to meet on 7/31/79 to discuss the effect of the sanctuary on long-range plans for the Tri-Rivers waterway. The State of Florida has also consistently recognized the interstate nature of the A-C-F waterway and its Congressionally authorized multiple uses.

State of Alabama, Governor's Office
(Hon. Fob James, Governor, 7/2/79)

C - Requests that further consideration to establish the sanctuary be withdrawn because of irreconcilable differences between multiple-use of the A-C-F system and the goals of the sanctuary program.

R - OCZM recognizes in the FEIS that the strategic location and size of the proposed sanctuary could potentially affect upriver uses, especially in the States of Alabama and Georgia. OCZM has also recognized the importance of the multiple-uses of the ACF system. Because of this recognition and the considerable concerns expressed over impacts to upriver users, OCZM has taken a close look at the sanctuary designation, its goals and objectives, methods of control, potential impacts to navigation, etc., and has come to the conclusion that the differences are not irreconcilable. Every effort is being undertaken to assure Alabama and Georgia that their interests in the Tri-River system will be recognized while, at the same time, efforts are made to maintain the integrity of the estuarine ecosystem. OCZM believes that it would be premature to stop further Federal action at this time, especially prior to meeting NEPA requirements. We are bound by law and executive orders to react in an expeditious and reasonable fashion to State requests. The power to withdraw the application rests with the State of Florida. OCZM, however, is still in a position to reject the State request if a determination is made that there would be unacceptable environmental impacts, or other reasons.

C - Throughout the development of this proposal, the State of Florida and OCZM have systematically excluded the upstream States from meaningful participation.

R - We are unaware of any concerted effort to exclude Alabama and Georgia from participation. Representatives from the States of Alabama and Georgia expressed their views during the October 17-19, 1978, Symposium and Workshop (See statements by Mr. Gordon Harris and Walter Stevenson under Section V Contributions) in which the interstate nature of the river and its multiple uses were described. Additional efforts have been made to hold a Tri-State Governors' meeting, which is now scheduled for 7/31/79, concerning the sanctuary designation. There are naturally some limitations as to what may be perceived as meaningful participation. It is the State of Florida that has proposed the sanctuary. It is its lands that will be purchased, its waters that that will receive the spoil disposal, and its regulations of lands and water uses within the sanctuary that are the major focus of concern. OCZM believes that reasonable efforts have been made to accommodate the existing multiple uses and needs of upriver States and several revisions to the EIS point this out.

C - The proposed sanctuary, if established, would have an extremely detrimental effect to upstream use of the ACF River System because of controls that may be placed on water flow.

R - See General Response A. Any water flow requirements apply only to Florida. The EIS is very specific that Georgia, Alabama, or Federal water projects will not be prohibited because of sanctuary designation alone. The quotations taken from the Federal regulations apply only to uses within the sanctuary and have no force and effect outside the sanctuary. The regulation emphasis is on "uses of the sanctuary."

C - The proposed sanctuary does not recognize a pre-existing commitment by the Federal Government through Congressional authorization to provide a navigation channel on the A-C-F system.

R - See General Response B.

C - The DEIS failed to adequately consider the economic and energy impact of the proposed sanctuary to Alabama, Georgia, and Florida.

R - See General Response D.

C - Designation of the sanctuary would impose another burden on the already difficult permitting process and would potentially subordinate many navigational projects and priorities to the primary sanctuary purposes of research and education.

R - In the DEIS, OCZM stated that the estuarine sanctuary could become a catalyst to resolve outstanding issues on the A-C-F waterway that were not directly related to the proposed sanctuary. This has indeed happened--The Corps of Engineers and the State of Florida have made tentative agreements for maintenance dredging procedures on the Apalachicola River, and the Governors of the three States will meet on July 31, 1979, to discuss outstanding issues in the ACF waterway system.

OCZM still feels that, with a sanctuary management committee composed of the major Florida interests relating to the Apalachicola River, problems can be resolved more expeditiously than they are under present methods. In any event, there are no "OCZM laws" that will add any layers of regulation: only existing State law. Navigation has been recognized by the State of Florida as a legitimate multiple-use of the river, including the portion within the estuarine sanctuary.

No multiple use of the Apalachicola River is intended to be subordinated to another. Within the estuarine sanctuary boundaries (only) research and education are the highest priority, but obviously many other uses can also occur and are indeed encouraged by OCZM's regulations. It is crucial to note that the estuarine sanctuary itself fits within the State of Florida's priorities for the Apalachicola River/Bay (see Appendix). This is a critical test for any project proposed within the State of Florida.

C - The estuarine sanctuary proposal should not be accepted until a plan is agreed upon for dredge spoil disposal and permitting.

R - The spoil disposal plan only applies to projects proposed by Florida, not Federal agencies, and hence will not affect Alabama. See General Responses A and B.

C - Alabama's and Georgia's representation through the Florida Department of Environmental Regulation is not meaningful and is unacceptable.

R - See General Response D.

C - A clear definition of "natural environment" is lacking in the choice of the Apalachicola River and Bay as a site for a sanctuary. The site and system is greatly influenced by man (dams, waterways, sewage, etc.). Since the guidelines require that it be maintained as a natural environment, it should be decided what constitutes a natural system.

R - It is true that the proposed sanctuary is greatly influenced by man. There are no large estuaries in the U.S. that are not. Recognition of this fact is evident in the estuarine sanctuary guidelines, which has as a research priority to "assess the effects of man's stresses on the ecosystem and to forecast and mitigate possible deterioration from human activities."

Generally speaking, a natural environment is one created by nature, rather than man. The portions of the Apalachicola River and Bay within the proposed boundaries is such a system. The river follows a natural waterway course and floods periodically, providing habitat for an extremely diverse flora and fauna population. The river has very few signs of pollution, and yields a substantial seafood harvest, all indicators of a relatively "natural environment."

It is extremely difficult to define when a natural system deteriorates into a man-made one. Obviously, there are a relatively broad range of possibilities. OCZM feels that as long as researchers and educators can continue to use the estuarine sanctuary as a natural area to examine the ecological relationships within the area over a period of time, it is a "natural environment."

State of Alabama, Attorney General's Office
(George Hardesty, 6/7/79)

C - The interstate waterway provides economic and employment opportunities to the three State area. Specifically, the River and Harbor Act of 1945 listed four purposes for development of the A-C-F waterway: navigation, flood control, hydropower, and recreation. Concerned about the lack of upstream users' input into preparation of the DEIS.

R - See General Responses A and D.

C - There are no existing estuarine sanctuaries that include an interstate waterway and therefore no model upon which to base expectations for the Apalachicola Sanctuary. Related is the fact that the estuarine sanctuary guidelines are ambiguous, inconsistent, and lacking in flexibility to balance the needs of ecological study without handicapping upstream interests.

R - It is correct that there are no existing sanctuaries that include an interstate waterway. However, the Estuarine Sanctuary Guidelines reflect the "real world" situation that all States are different and each sanctuary will be established and operated in accordance with individual State laws. OCZM does not agree with statement that there is no flexibility in the guidelines and DEIS for consideration of upstream interests. As stated in General Responses A, B, and elsewhere, upstream users' concerns are taken into consideration and the Management Committee will coordinate with Alabama and Georgia in those areas of mutual concern.

C - No evidence is offered to establish any pressing need for sanctuary status, nor is the ecosystem in a "crisis stage." It would therefore be in the best interests of the entire three State region to postpone the grant award until upstream questions are resolved.

R - The estuarine sanctuary program is not intended to react to immediate desires, or needs, to purchase and protect estuarine type areas. As indicated in the FEIS, Apalachicola was first discussed as an estuarine sanctuary in 1971, underwent a State selection process to determine that it was the best candidate site, then early in 1978 a pre-acquisition grant was awarded for further investigation to gather information that was used in the DEIS. Intensive study has been ongoing for approximately one and one-half years. The States of Alabama and Georgia were made aware of the proposal at the beginning of this intensive planning effort. Some of the questions regarding competing upstream and downstream uses may take years to resolve. The FEIS reflects this fact, and indicates the estuarine sanctuary will not hinder the resolution of these differences. As was stated in the DEIS, these competing use problems exist now and will continue into the future. If an estuarine sanctuary is established, the discussions surrounding its implementation may help to resolve some of the other questions concerning usage of the A-C-F system by all three States.

State of Alabama, Legal Advisor to Governor James
(Mike Waters, 6/7/79)

C - Alabama is not opposed to an estuarine sanctuary, but concerned about ramifications on interstate commerce, recreation, water supply, hydro-electric generation, and lack of participation of Alabama and Georgia in development of the DEIS.

R - See General Responses A and B. In early 1978, Alabama and Georgia were sent copies of Florida's proposal for an estuarine sanctuary grant, and OCZM has accommodated all specific requests for a meeting or information regarding the proposal.

C - Recreational sites, including lakes and rivers, could be adversely affected by the sanctuary, as could the public's water supply, because of the minimum water flow standards in Florida.

R - See General Response B.

C - No representatives from Alabama or Georgia are included on the Management Committee. Requests that no decision be made on the sanctuary proposal until the Governors of the three States meet to examine possible alternatives.

R - See General Response C. OCZM has agreed to take appropriate action in the FEIS with regard to any outcome of the Governors meeting on July 31, 1979, which significantly affects the sanctuary proposal.

State of Alabama, Office of State Planning and Federal Programs, Montgomery, Alabama (Walter Stevenson, State Planning Division, no date)

C - Correct the DEIS text as follows:

(1) Appendix II p.63 section II titled "contributions" - Statements by Walter Stevenson, Mr. Jakubsen, and Tri-Rivers were provided on the "first" (not third) day.

(2) Water Stevenson's statement in 12th line should read "...we in the state of Alabama be involved." Also in 13th line change the word "regulation" to "recognition" to read "no recognition on the part of local interests. . .".

R - Comment accepted and changes are incorporated in FEIS.

Alabama State Docks Department, Mobile, Alabama
(Gerry P. Robinson, 6/7/79) (W. H. Blade, Jr., 6/7/79)

C - River terminals in which the State Docks Department has invested several million dollars require maintenance of river channels, and this maintenance, in addition, is in the national interest. The proposed sanctuary is not in the national interest because proposed restrictions will interfere with rights of citizens of Alabama, Georgia, and Florida. As such, the DEIS unfairly discriminates against citizens outside of the State of Florida. The sanctuary should be reevaluated and the interests of adjoining States and the Nation should be considered.

R - See General Responses A and B. The proposed sanctuary will impose no restrictions upon maintenance of river channels at Congressionally authorized depths and dimensions. It should be noted that establishing National Estuarine Sanctuaries is in the national interest, as stated in the Coastal Zone Management Act.

C - The State Parks Department objects to the proposed management committee.

R - See General Response C. The proposed management committee composition was carefully chosen with the sanctuary goals of research and education in mind. Certain changes were made and are in the FEIS.

C - The DEIS does not adequately discuss economic impacts.

R - See General Response D. Because it will not affect navigation on the A-C-F system, the only economic impacts of sanctuary establishment are upon the immediate area of the proposed sanctuary. These impacts are discussed extensively in the Environmental Consequences Section and in Appendix VI.

C - The sanctuary would interfere with the authority and activity of other Federal agencies, and the EIS duplicates other studies.

R - We disagree with this statement (See General Response A). The EIS is not a study but a proposed course of action that has undergone public scrutiny during the DEIS process.

C - The sanctuary will retard, impede, and interfere with the rights of citizens of Alabama and Georgia and with the economic development and current use of the Tri-River waterway.

R - There is no intention of discrimination against Alabama or Georgia. The proposal is to purchase Florida land and combine it with existing publicly owned land, including the Federal St. Vincent Wildlife Refuge. The proposal reflects Florida's and Congress's interest in protecting relatively natural estuarine systems for education and research. Florida has not proposed changing any of the uses of the river now enjoyed by Alabama and Georgia. The economic impacts are summarized in the FEIS and more fully detailed in Appendix 6. There have been few specific criticisms of this analysis by any commentors. It has been stated earlier that the sanctuary will have no impact on navigation on the Apalachicola Bay or River.

Southeast Alabama Regional Planning and Development Commission, Dothan, Alabama
(William T. Cathell, 6/5/79)

C - All statements regarding policy in the FEIS should be clear and without need for interpretation.

R - Comment accepted. New language was added to the FEIS to accomplish this objective.

C - Action on the application should be delayed pending issuance of a joint policy statement from Governors Graham, Busbee, and James.

R - The three Governors are scheduled to meet on 7/31/79 to attempt to resolve any conflicts, and any actions taken pertinent to the estuarine sanctuary are reflected in the FEIS.

C - The Corps of Engineers (COE) must have the right to maintain a 9' by 100' channel. Also the COE should have only one agency in Florida at the State Cabinet level to contact for coordination of dredging and snagging operations.

R - See General Responses A and B. A single agency contact is not possible under Florida law; however, the DER informally acts as the point of contact and coordinates all actions. The Corps of Engineers will be a non-voting member of the Management Committee, which should expedite proposals.

C - Access to shipping lanes of the inland waterway system is essential. Having a permanent channel will not impair operation of the sanctuary.

R - Comment accepted. See General Response A.

Houston County Commission, Dothan, Alabama
(Charles Whidden, 6/6/79)

C - Supports incorporation into EIS of a statement giving the Corps the right to maintain a 9' by 100' channel in the sanctuary.

R - Comment accepted. See General Response A.

C - Urges both withholding of funds until further study of the impact on navigation, and that the Corps have only one agency in Florida to contact for coordination of dredging operations.

R - As indicated earlier, the Assistant Administrator for OCZM will make a decision after public review of the FEIS. A single agency contact is not possible under Florida law.

City of Phenix City, Alabama
George E. H. Chard, Jane Gullet and Gene Oswalt, 5/5/79 & 5/6/79)

C - Urges OCZM to delay approval until problems relating to maintaining the nine foot channel can be resolved.

R - See General Response A.

Honorable Don Fuqua, U.S. House of Representatives (Florida, 2nd District)
(John Clark, 6/7/79)

C - Supports the proposal so long as there are no restrictions on the commercial fishing industry.

R - Comment accepted.

State of Florida, Governor's Office
(Statement of Governor Bob Graham, read by Ken Woodburn, 6/7/79)

C - Florida strongly supports the proposed sanctuary, as the River and Bay comprise one of the most productive biological systems in the Nation. A resource of national importance, the river benefits Alabama, Georgia, and Florida. However, Florida is concerned about the river and bay's future, along with that of the area's economy and the controversies over development and protection of this great resource. To help guide growth and accommodate the various interest groups who depend on the river for their diverse pursuits, we recommend creation of the proposed estuarine sanctuary as a focus for better scientific understanding and management. The sanctuary will allow continued use of marine resources and should enable increased multiple-use consistent with protecting long term benefits; such as development of a long term spoil disposal plan. Florida is committed to regional uses of the Apalachicola River. The Governor will meet soon with the Governors of Georgia and Alabama to discuss multiple-use and the future of the river.

R - Comments accepted.

State of Florida, Governor's Office
(Ken Woodburn, 6/7/79)

C - The Bay is fed and nourished by a great river whose mixture of fresh-water nutrients and life from the Gulf of Mexico results in the greatest single area of seafood production concentrated in the State of Florida. Sanctuary establishment will ensure continuation of this most important seafood industry. Also, benefits will be increased since Florida already has many investments in this area. With these investments, not only with this proposal, Florida has demonstrated its commitment to and concern for this bay.

R - Comments accepted.

Florida Secretary of State, Tallahassee, Florida
(L. Ross Morrell, 5/18/79)

C - The Division of Archives, History, and Records Management supports the estuarine sanctuary proposal because of the protection afforded for the irreplaceable cultural resources of the area, and the possibilities for archeological research. Suggests management of cultural resources be added as a function of the Management Committee and requests representation on the Subcommittee on Research and Education. The Florida Archives and History Act, Chapter 267 F.S., should be added to the Appendix.

R - OCZM accepts all comments and appropriate changes have been made in the FEIS. The Division of Archives, History, and Records Management will have a representative on the Subcommittee on Research and Education.

Florida Department of Commerce, Tallahassee, Florida
(William Stanley, 6/7/79)

C - We are concerned with the relationship between the proposed sanctuary and a proposed facility for Apalachicola now being studied by the Florida Department of Commerce. We understand that the DER supports a clause in the FEIS that would "grandfather in" the proposed facility. We support this "grandfather" agreement and request clarification from the DER.

R - We assume this refers to the proposed Apalachicola Seafood Industrial Park (ASIP). The proposed ASIP has been exempted from the prohibition regarding expansion of existing channels or creation of new navigation channels until certain impacts are addressed. The language has been added to the FEIS.

Florida Game and Fresh Water Fish Commission, Tallahassee, Florida.
(H. E. Wallace, 6/8/79)

C - We feel that the osprey nesting area concentrated between Lake Wicomico and the Apalachicola Bay, where we have also sighted a bald eagle's nest (one of perhaps a dozen in northwest Florida), should be included in the National Estuarine Sanctuary. Eagles are on the Federal endangered species list; ospreys and eagles are also listed as threatened species in Florida. Most of the nesting area land is owned by the St. Joe Paper Company, which has a favorable attitide toward wildlife and conservation.

R - See General Response E. We agree with the comment that this valuable nesting area should be protected if at all possible. However, the funds available for the acquisition of lands surrounding the estuarine sanctuary will not be sufficient to include this area within the sanctuary boundary. The possibility of using Endangered Species Act, Section 6 funds for this purpose might be explored by appropriate parties.

C - The management section of the EIS, beginning on p.11, states that "existing State and Federally owned parcels will continue to be managed according to existing concepts and plans." However, no listing of the plans is given nor are the management plans included. Management plans such as the GFWFC fish and wildlife plan for the Lower Apalachicola EEL tract as well as other existing plans for timber and archeological resources should be included in the FEIS.

R - The GFWFC plan for the lower Apalachicola EEL tract (28,045 acres) has been newly referenced in the FEIS, and it was also indicated that copies of this plan were available from the GFWFC. OCZM has referenced any plans if brought to its attention by the appropriate agencies. These plans are important from a management perspective but are not essential in a decision document such as an Impact Statement. This is why these plans were not included within the EIS.

C - Under the "Possible Conflicts" section of the EIS, p. 28 carries the statement: "the Proposed Management Program for the Apalachicola Estuarine Sanctuary specifically allows navigation ..." The FEIS should clarify what is meant by "Proposed Management Program."

R - The intent here was to make a statement of fact regarding Federal rights within navigable waters of the United States. The word "program" has been changed in the FEIS to "structure" to read "proposed management structure."

C - There are several errors in Part IV (Affected Environment) with respect to fish and wildlife resources. Catadromous fishes do not spawn in the Apalachicola River, but, by definition, spawn at sea. Of the three catradomous fish mentioned on page 33, only the hogchoker may spawn in the "Apalachicola system" as this species may spawn in estuaries.

R - Comment accepted. The FEIS was changed to correct this error.

C - On page 35 under the heading "Wildlife," the DEIS indicates that, "although significant hunting occurs in the sanctuary region, no data exists estimating the number of hunter days." This is incorrect. Pertinent data concerning this were included in our Conceptual Fish and Wildlife Management Plan for the Lower Apalachicola EEL Tract. These data should be included in the final EIS.

R - The FEIS was changed to reflect data availability; however, the data is not included in the FEIS. The interested reader is referred to the above named document, which is available from the Florida Game and Fresh Water Fish Commission.

C - We support the establishment of the Apalachicola River and Bay Estuarine Sanctuary. This designation should produce many long term benefits to fish and wildlife resources by protecting the unique environmental amenities of the sanctuary itself, as well as by enhancing the chances of permanent protection of the upper reaches of the river and associated floodplain habitat.

R - Comments accepted.

C - Several comments were made regarding the accuracy of certain scientific information in Appendix X.

R - Several changes were made and an updated endangered species list has been incorporated into the Appendix. All of the changes could not be made because of incomplete information provided. However, it is suggested that an up-to-date species list be prepared as part of the research agenda for the estuarine sanctuary.

Florida Department of Transportation, Tallahassee, Florida
(Ray G. L'Amoreaux, 6/5/79 and 7/12/79)

C - Requests assurances that establishment of this sanctuary will retain and preserve Gulf Intracoastal Waterway and Apalachicola River navigation according to Congressional authorization and present and future traffic demands.

R - See General Response A. Just as the sanctuary cannot and will not affect river navigation, it also cannot and will not affect transportation along the Gulf Intracoastal Waterways.

C - This Department currently has plans to replace the John Gorrie Bridge across the Apalachicola River. As now planned, the new structure would utilize the existing causeway but would parallel the old bridge about 300 feet to the south. It will be a high-level bridge to accommodate navigation and will require increasing the height of the causeway on the approaches. The DEIS noted that "no new Federal laws come with the sanctuary designation." While this may be true, there are additional regulations that come with the designation. What is commonly referred to as "Section 4-F" of 49 USC 1653 (F), the DOT Act of 1966, PL 89-670, would become a controlling Federal condition that does not currently apply. Satisfying the requirements of "Section 4-F" can be quite complex and time consuming and could create costly delays in making essential emergency repairs to this causeway and bridge. This is an important consideration in an area that is vulnerable to hurricanes. The Florida Department of Transportation fully supports the establishment of the estuarine sanctuary, but would like to request that our transportation rights of way be exempted from the sanctuary designation to eliminate any future "Section 4-F" complications. We feel that this exemption would in no way adversely affect the proposed sanctuary.

R - Section "4-f" of 49 USC 1653, DOT Act of 1966, P.L. 89-670, "Maintenance and enhancement of natural beauty of land traversed by transportation lines" states: "After August 23, 1968, the Secretary (DOT) shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof...unless

1) there is no feasible and prudent alternative to the use of such land, and
2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife, and waterfowl refuge..."

The intent of this provision is to ensure that various levels of government that have set aside places of natural beauty for preservation and recreation are consulted by the U.S. Department of Transportation in planning any projects that have impacts on such areas.

The John Gorrie causeway and bridge are located in an area already designated by the State of Florida as an Aquatic Preserve (Florida Aquatic Preserve Act of 1975). Florida's statutes and regulations will control the procedures required for making emergency repairs to the bridge or replacing it. Having the area designated as an National Estuarine Sanctuary will not add any complications or time consuming delays to the bridge or causeway project. The Sanctuary Management Committee would not become involved unless the project seriously impaired the sanctuary's use for research and education. OCZM is not in a position to grant the request for an exemption pertaining to transportation rights of way.

Northwest Florida Water Management District, Havana, Florida
(J. William McCartney, 6/14/79)

C - Since the proposed sanctuary is within the bounds of the Northwest Florida Water Management District and especially since portions of Ch. 373, F.S., apply directly to the management of surface waters and hence to management strategies as proposed for the sanctuary, the District should be designated as a voting member of the Sanctuary Management Committee.

R - The Management Committee structure was arranged, under the direction of the Governor's office, to bring together the parties most involved with the sanctuary's goals of research and education. However, it is recognized that the Northwest Florida Water Management District is of great importance to the sanctuary, and its status has been changed to a non-voting member of the Management Committee.

C - The Subcommittee on Resources Management and Planning (DEIS, Part II, 2c, page 1, paragraph 5), as mentioned, is not adequately discussed.

R - The core members of the subcommittee are mentioned in the FEIS. Additions and/or deletions may be expected to occur as the Subcommittee evolves.

C - A description of the hydrology and hydraulics for the river and bay systems should be included in Part IV, p. 31. Any changes in these systems should be documented even though they may be minor.

R - Hydrology and hydraulics have not been included since they are not critical for a decision establishing a sanctuary. These two areas have been given high research priority for the Management Committee.

Florida Department of Agriculture and Consumer Services, Tallahassee, Florida (Harold Hoffman, 6/12/79)

C - Agrees with the sanctuary concept but sees problems with the near exclusion of forestry professionals from sanctuary involvement. Forestry is an integral part of the livelihood of many landowners in the area. Excluding forestry concerns alienates forestry interests and sets up adversary relationships.

R - That forestry is a major land use in Franklin County is acknowledged. This fact is reflected in the inclusion of Forestry interests on the Subcommittee of Area Resource Users. Forestry interests are welcome as a part of the estuarine sanctuary and an adversary relationship does not seem possible.

C - Forestry scientists from the University of Florida's Center for Environmental and Natural Resources Program and the U.S. Forest Service are carrying out research in the area to assess the long range effects of intensive forest management on the water resources of the area. No mention of this research was made in the DEIS. This seems to offer further fuel to fire an adversary relationship.

R - Appropriate language has been added to the FEIS to include a reference to this research.

C - In the DEIS, silviculture is identified as a use of the land that would ". . destroy or alter the ecosystem." We do not agree that siviculture practices, in general, are guilty of this. (Ref. p. 12, paragraph 1).

R - We agree. Language in the FEIS has been changed.

C - In our opinion, the School of Forest Resources and Conservation (IMPAC Program) and the Institute of Food and Agricultural Sciences, Center for Environmental and Natural Resources Programs at the University of Florida should be included by name on the Sanctuary Management Committee.

R - The FEIS was changed to show that the University of Florida has been added to the Subcommittee on Research and Education. How the various schools and programs within the University are represented is up to the University administration.

C - Concerning the make-up of the Sanctuary Management Committee, in addition to a "representative of local Apalachicola Bay resource users, selected by the Franklin County Commission," there should also be a representative of the local land resource users, since we are talking about a land resource management committee.

R - An estuary concerns both the land and the sea. We and the State of Florida feel it is best to let Franklin County decide who is to represent its citizens.

C - The DEIS states, "The economic benefits associated with the maintenance of valuable fishing and wildlife resources are expected to far outweigh the relatively minor negative impacts resulting from preclusion of future timber harvesting. . ." First, we do not see that timber harvesting would preclude "maintenance of valuable fishing and wildlife resources. Furthermore, we do not think that the draftee of this statement has an adequate understanding of the economic benefits lost by precluding timber harvest. We would ask that a thorough analysis of economic losses be done prior to making such statements. (Ref. p. 24, paragraph 2).

R - It was never considered that timber harvesting precludes the maintenance of fishing and wildlife resources. This benefit is merely a side effect of preserving the area for research and educational purposes. The statement you have quoted was intended to balance the benefits against the losses of sanctuary establishment and we do consider the restriction on forestry potential to be a loss. However, the land proposed for purchase is marginal timber, not currently being forested, so the loss is minimal.

C - The Estuarine Sanctuary Guidelines, under section 921.5, say that, "While the primary purpose of estuarine sanctuaries is to provide long term protection for natural areas so that they may be used for scientific and educational purposes, multiple-use of estuarine sanctuaries will be encouraged to the extent that such use is compatible with this primary sanctuary purpose." We would certainly agree that site conversion by means of drainage and intensive site preparation and tree planting would not be compatible with the sanctuary management objectives, but a less intensive silvicultural practice such as selection cutting might well be. Further, under "Subpart C - Selection Criteria" for grants to establish estuarine sanctuaries (p. 19926, Section 921.20), it was noted that one of the aspects examined in awarding grants is the amount of "Conflict with existing or potential competing uses." We would suggest that one method of reducing conflict over future potential use of the land for management of renewable natural resources would be to include some provision now for making as many uses of this land compatible as is possible. (That is, allow timber harvesting within guidelines established by the Sanctuary Management Committee).

R - It is currently our opinion that even non-intensive sivilculture practices like selection cutting would be disruptive to the sensitive scientific experiments expected to occur within the proposed sanctuary. Actually, since the land is being purchased to preserve the area in its natural state, there is no need to harvest any timber. There are still millions of acres of land available for timber harvest within the Apalachicola watershed.

C - In the section of the DEIS that reported the proceedings of the Conservation Foundation Workshop, several research needs were highlighted (p.21). Several of these needs, specifically items 3, 5, 7, and 11 are being addressed in research being conducted by the Intensive Management Practices Assessment Center at the University of Florida School of Forest Resources and Conservation. Yet there has been no attempt to include this research, or the scientists doing it, in the proposal for the Estuarine Sanctuary. We feel they should be included.

R - Comment accepted. The University of Florida is to be on the Subcommittee on Research and Education. We are confident that the University will alert the Sanctuary Management Committee of all nearby ongoing non-manipulative research that can be benefited by the sanctuary or that can be of benefit. Presumably, such research will include that which you have mentioned.

C - We feel that Appendix VI is both adequate and fair as an assessment of the socioeconomic impact of the establishment of the sanctuary. The section on Forestry lacks a table that would show the value of the harvest of timber in Franklin County. We do feel that if the draftees of this proposal insist on precluding timber harvest operations in any form in the sanctuary, a full analysis of the opportunity costs referred to in this section would be in order.

R - As mentioned in Appendix VI, the opportunity costs are anticipated to be relatively low and will be partially offset by other benefits. In addition, the land will be purchased at fair market value, reflecting the present value of the timber to the economy.

Franklin County Board of Commissioners, Apalachicola, Florida
(Robert Howell, 6/7/79)

C - The Apalachicola Sanctuary proposal is entirely within Franklin County. The Board of Commissioners is not opposed to transportation on the Tri-River system nor the proper use of the Apalachicola.

R - Comment accepted.

C - Franklin County has spent in excess of $1,000,000 for scientific study of the river system and is dedicated to conservation, protection, and continuation of the seafood industry, recreation, transportation, and the esthetic beauty of the Apalachicola River.

R - Comment accepted.

C - Dr. Robert J. Livingston requested Mr. Howell to read his comments into the record.

R - Responses to these comments are contained elsewhere in the FEIS.

Florida Division of State Planning, Tallahassee, Florida
(R.G. Whittle Jr., 6/29/79)

C - The sanctuary will provide an excellent mechanism for managing the important State resource.

R - Comment accepted.

C - The Management Committee should include a local land resource user representative, and the University of Florida should be included on the subcommittee on Research and Education. The Florida Water Management District is required to manage surface waters within the northwest Florida area and therefore should be a voting member of the Management Committee. The Florida Department of State should be a part of the Management Committee and should be represented on the Subcommittee on Research and Education. Further dialogue between the responsible agencies and the Florida Department of Agriculture is necessary.

R - Comment accepted. Most of the changes have been incorporated into the FEIS. The University of Florida and the Florida Department of State will be represented on the subcommittee on Research and Education and the Florida Water Management District will have a non-voting representative on the Management Committee. Appropriate communication with the Florida Department of Agriculture is encouraged.

C- Navigation must be preserved and reasonable improvements to highways and bridges within the sanctuary must be allowable.

R - See General Response A. Such projects are not prohibited if they will have no significant impacts upon research and education within the sanctuary.

C - There should be a memorandum of understanding between the Florida DNR and the Sanctuary Management Committee (SMC) establishing roles. (Reference p.12, paragraph 2). The role of the Sanctuary coordinator also must be clarified. Is the Manager accountable to both the Management Committee and the DNR?

R - Comment accepted. We agree that when the sanctuary has been approved by OCZM and the Management Committee has been formed, discussions between DNR and the SMC regarding their respective roles, responsibilities, and relationships will be necessary, and a memorandum of understanding would be in order at that time. The Sanctuary Coordinator will obviously have to work closely with the SMC as the advisory committee, but will ultimately be accountable to the DNR as his/her employer.

C - In the DEIS, silviculture is identified as a use of the land that would ". . .destroy or alter the nature of the ecosystem." Silviculture practices in general are not guilty of this.

R - Comment accepted. Language in the FEIS is changed.

C - The School of Forest Resources and Conservation and the Institute of Food and Agricultural Sciences, Center for Environmental and Natural Resources Programs at the University of Florida should be included by name on the Subcommittee on Research and Education.

R - The University of Florida has been added to the Subcommittee on Research and Education. The University has the privilege of appointing its representatives.

C - Page 24, paragraph 2. Timber harvesting does not necessarily preclude "maintenance of valuable fishing and wildlife resources." The draftee of the EIS does not understand the economic benefits lost by precluding timber harvesting.

R - See earlier response to Mr. Harold Hoffman.

C - One method of reducing conflict over future land use would be to include some provision now for making as many uses of this land as compatible as possible.

R - Multiple uses are encouraged as long as they do not interfere with sanctuary goals of research and education. The appropriate agencies, with the advice of the Management Committee, will determine the multiple uses that are compatible.

C - Research done by the Intensive Management Practices Assessment Center at the University of Florida School of Forest Resources and Conservation should be considered.

R - Comment accepted. The results at this research project will be made available. To further the sanctuary research and education goals, the Sanctuary Coordinator will be encouraged to establish close working relationships with all nearby research and educational institutions on an ongoing basis.

Apalachee Regional Planning Council (ARPC), Blountstown, Florida
(Ed Leuchs, 6/7/79)

C - The ARPC concurs with the proposed use of Federal funds matched with Florida funds for the land purchase of the sanctuary. ARPC concurs with the findings of the DEIS, and particularly concurs that the DEIS is in agreement with the overall Economic Development Plan adopted by the Apalachee Regional Planning Council in October 1978. ARPC agrees with the partnership between Franklin County and State of Florida for management of the resource. The Executive Board of the ARPC passed a resolution by each of the counties in the Apalachicola River Basin opposing any dam on the Apalachicola River and concurring with Governor Graham's position on the River. (Submitted with testimony)

R - Comment accepted.

Gulf County Commissioners, Wewahitchka, Florida
(Douglas C. Birmingham, 6/7/79)

C - The Commission supports creation of the estuarine sanctuary and opposes damming and further dredging of the Apalachicola River.

R - Comment accepted; however, see General Response A.

Jackson County Port Authority, Sneads, Florida
(Homer B. Hirt, Jr., 6/7/79)

C - The Port Authority does not think the sanctuary is necessary or desirable, and requests deferral of the proposed sanctuary until navigation and spoil disposal can be studied. Barge movement through the port is essential for fuel, agriculture, and fertilizer cargo, which is a major base of Jackson County economy.

R - See General Response A. Adoption of a long term disposal plan is expected to be completed within approximately one year of the establishment of the estuarine sanctuary. We are aware that movement of goods is a major economic factor for Jackson County.

C - The proposal does not provide safeguards to ensure navigation improvements approved by Congress.

R - See General Response B.

C - Port Authority requests representation in further planning meetings.

R - The Jackson County Port Authority is represented by the Resource Users Subcommittee for the proposed Management Committee.

Jackson County Commission, Sneads, Florida
(Thomas Tyus, 6/7/79)

C - Reflected on the early settlement of the Apalachicola River; sees an indication that some people want to go back in that direction, but does not think it is necessary. We can have both recreational use of the river and share it for other uses. The Governors of the three States should be able to decide on the long range use of the river before the funds are dispersed for the sanctuary.

R - The Governors will hold a joint meeting on July 31, 1979, on the uses of the river bay and any potential conflicts caused by the sanctuary. OCZM does not believe, however, that all issues must be resolved prior to approving the sanctuary.

Town of Sneads, Sneads, Florida
(J.P. McDaniel and Adell DeMont, 6/4/79)

C - Request further consideration of sanctuary designation be deferred until definite plans are established for providing a year-round navigation channel, including designation of spoil disposal sites, in the areas to be covered by the proposed sanctuary.

R - See General Response A.

State of Georgia, Executive Secretary to Governor Busbee
(Tom Perdue, 6/7/79)

C - Georgia's policy relative to Estuarine Sanctuaries is supportive, but also recognizes the need for balance among competing demands on natural resources. The major unresolved concern is navigation and its economic impact upon Georgia, especially since the economics of waterway transportation is used as an inducement to relocating industries. Navigation has been held up because needed snagging and dredging operations haven't been done.

R - See General Response A. A statement regarding the impact on waterway transportation has been added to the FEIS, and a desnagging permit has been issued by the State of Florida.

C - Dredging and snagging alone will not provide a reliable 9' x 100' channel, and the Corps has studied alternatives. Concern also expressed over the vagueness of Section 307(e)(1) of the Coastal Zone Management Act and the potential conflict with language in Section 921.5 of the Estuarine Sanctuary Guidelines. Stronger language from Section 404(t) of the Clean Water Act of 1977 is suggested.

R - The question and conflict over structural alterations to the Apalachicola will remain open. The State of Florida has certain policies regarding such alterations, and these policies are reproduced within the Appendix. Estuarine sanctuary status will neither preclude the Corps's proceeding with its planning alternative for the river, nor Florida's continuing to establish policy for the river. More importantly, OCZM has agreed that it will not oppose any agreement the Governors of the three States make except in the unusual circumstance where the sanctuary could not be used for research or education. The stronger language of Section 404(t) of the Clean Water Act has been added to the FEIS.

C - Requests postponing the sanctuary grant until a comprehensive navigation plan including spoil disposal is developed and accepted by the three Governors.

R - It has been stated that the sanctuary will not interfere with such a plan approved by the Governors. However, from a practical point of view it will be impossible to draw up a navigation plan without a comprehensive plan for all competing uses--including recreation, drinking water, hydroelectric generation, and water quality and quantity. The spoil disposal plan will be developed within one year. See General Responses A and B.

Atlanta Regional Commission, Atlanta, Georgia
(Paul B. Kelman, 6/15/79)

C - Because of the interrelated nature of the problems and resources of the A-C-F River basin, the State of Georgia should have a representative on the Management Committee. A representative of the Georgia DNR would probably be appropriate.

R - See General Responses A and C. The State of Georgia will have input directly to the Management Committee through the voting member representing the Florida DER.

C - In the DEIS, Appendix 6 discusses the impact of the proposal on the water supply in the A-C-F River system. Only metropolitan Atlanta's water supply is discussed including a statement that says, "it is unlikely that Atlanta will be able to withdraw water from the Chattahoochee River in the magnitudes necessary to meet its projected demands." In our opinion, The Atlanta Region can meet its water supply needs beyond the year 2000 with proper management. It is presumptuous of OCZM and the Florida Bureau CZM to suggest otherwise.

R - The source of this evaluation of Atlanta's potential water supply need and the availability of water from the Chattahoochee River is the U.S. Army Corps of Engineers, Savannah District, Metropolitan Atlanta Area Water Resources Study: Summary Report, September, 1978.

Georgia Ports Authority, Savanna, Georgia
(George J.Nichols, 6/6/79)

C - The true impacts of the sanctuary on commerce within the river basin of the Chattachoochee, Flint, and Apalachicola Rivers have not been assessed by OCZM.

R - See General Responses A & D. Sanctuary establishment will have no impact upon interstate commerce, and cannot, by law, as stated in the FEIS.

C - The sanctuary will compound regulatory problems associated with dredging required for channel maintenance by the Army Corps of Engineers.

R - See General Response A.

C - A much more thorough analysis by the Department of Commerce of the primary and secondary effects of the sanctuary should be undertaken prior to furnishing funds for sanctuary establishment.

R - See General Response D. We feel that the Environmental Consequences Section and Appendix VI adequately cover all sanctuary impacts.

C - The statements that there will be no negative impact on waterborne navigation are not supported by good evidence.

R - See General Responses A, B, & D. Specific impacts were not brought to our attention, hence we feel the FEIS describes accurately any impacts.

C - Alternatives to the sanctuary proposal, elsewhere in Florida or in other States, would have less impact on commercial navigation.

R - This may be true but the EIS recognizes that the sanctuary is located on an interstate navigable body of water and that the rights of navigation are preserved. There should be no adverse economic impact on navigation at the currently authorized levels of maintenance.

C - Ecological restoration could be interpreted as meaning restoration of traditional disposal areas used to maintain the navigation channel.

R - The spoil disposal plan to be completed within one year should determine the best use of spoil disposal areas.

C - Corps of Engineers studies show that some channel improvements would actually help some fish and benthic organisms.

R - Comments accepted.

Chattahoochee River Basin Development Commission, Atlanta, Georgia
(Burton J. Bell, 5/30/79)

C - Sanctuary should have no effect on the 9' X 100' channel from from Columbus, GA, to the Chattahoochee because it is already guaranteed.

R - This is a true statement and is verified in General Response B.

C - Sanctuary research on Atlanta's water needs is unnecessary and the navigation lock chamber in Blountstown would have no effect upon the Apalachicola.

R - There is a difference of opinion on both of these subjects between the various users of the Tri-River system. In any event, the research done in Florida cannot force Georgia into any particular course of action; it can only be used as baseline research to assist decisionmakers when planning for multiple uses within the Tri-River system. The consideration of a low navigation lock chamber by the Corps is not specifically precluded by establishment of an estuarine sanctuary--nor is any other alternative--as outlined in General Response B.

C - A 20 mile segment should not dictate uses of the entire river.

R - We basically agree with this statement. Careful consideration went into the DEIS to distinguish the estuarine sanctuary from other issues. Language changes have been made in the FEIS, and discussed in General Responses A & B, in order to clarify the relationship of the estuarine sanctuary to other present activities/uses of the A-C-F river system.

Southwest Georgia Planning and Development Commission, Camilla, Georgia
(Bob Thomas, 6/7/79)

C - The composition of the Management Committee discriminates against Alabama and Georgia by denying representation.

R - See General Response C.

C - The DEIS ignores biogeographic studies that indicate better examples of estuaries within the Louisianian region. The "do nothing" alternative received no attention at all.

R - See Appendix II. A well known national panel of estuarine scientists stated that: "The Apalachicola ecosystem is the best choice for a Louisianian province representative of the National Estuarine Sanctuary System." Other sites were rejected as not being comparable to the Apalachicola proposals. The "do nothing" alternative was explored, but unless the application submitted lacked merit, a refusal to award the grant serves no useful purpose. The sanctuary proposal is a function of various States submitting applications. No other States in the Louisianian biogeographic region have suggested alternatives.

C - "Channels" and "Existing Channels" are not defined in the EIS: "Existing Channels" should be replaced with words "assuming the 9' x 100' channel is maintained." Concern also exists over limitations of transportation and other uses through Florida relative to the minimum flow requirements for the sanctuary. A study of adequate flow for the sanctuary should precede any final decision on a grant.

R - Definitions and new language have been added to FEIS. There will be no limitation of transportation on the Apalachicola due to minimum flow standards. The setting of minimum flow standards is already required by Florida Law - Chapter 373, F.S. General Response B indicates that Florida standards apply to Florida only.

C - What will the impact be if the Apalachicola naturally changes its course?

R - If the Apalachicola River naturally changes its course, the authority of the Corps of Engineers to maintain the river at the 9' X 100' level still exists. It would still be a navigable river. The State of Florida has recognized the appropriate Federal rights in General Responses A and B. The proposal to construct no new channels until a spoil disposal plan is complete does not change the fact that there are currently two authorized waterway systems that will continue to operate and that this constraint applies to Florida only. The spoil disposal plan will be complete within one year and is designed to make maintenance dredging cost efficient, limit any delays that could occur because spoil disposal was not adequately addressed by the Corps of Engineers, and define the least environmentally damaging alternative disposal sites for the entire system.

C - Sanctuary creation should be withheld until the three States enter into a compact. Levels of utilization should be determined and assurances given regarding river navigation.

R - Assurances have been given regarding river navigation in General Responses A and B. As previously stated, and evidenced by the Tri-State Governors' meeting set for July 31, 1979, the sanctuary itself will not preclude negotiations and agreements among the three States to resolve any use conflicts that may arise within the A-C-F system.

Albany Chamber of Commerce, Albany, Georgia
(Steve Bailey, 6/7/79)

C - There is no need for the State of Florida to purchase 12,467 acres of land for the sanctuary, since the current managing agencies of this already publicly owned land would continue to represent the State, and the existing land uses would not change.

R - There is a misunderstanding over the sanctuary boundary and the land proposed for purchase. As can be seen in the FEIS, 3,800 of the 12,467 acres are owned by St. Joe Land and Development Company, 1,900 are owned by Elberta Crate and Box Company, 1,550 by U.S. Home Corporation, etc. None of the land proposed for purchase is publicly owned.

C - Alabama and Georgia do not have adequate representation on the management committee for this proposed sanctuary. These States currently have one such representative who is required to work through an agency of Florida, the Florida Department of Environmental Regulation.

R - See General Response C.

C - It is strongly urged that sanctuary designation be withheld until the three States affected by the use of the river for navigation have entered agreement and have defined the acceptable levels of utilization of the river and the extent to which the assurance of the availability of the river for navigation is agreed upon. This concern is not adequately dealt with in the DEIS.

R - See General Response A.

C - In the DEIS section on navigation, there are no definitions of "channels" or "existing channels." Thus, in order to insure a future for water-borne transportation on the river, these references should be deleted and words that will assure a 100 foot wide, 9 foot deep channel throughout the entire length of the river should be used.

R - Comment accepted. Appropriate language has been added to the FEIS.

C - The FEIS should contain a provision saying that sanctuary designation will not interfere with or prevent the State of Florida and the Army Corps of Engineers from developing a long term spoil disposal plan for this area.

R - Comment accepted. See General Responses A and B.

C - Although there are DEIS references (e.g., p. 12) to water flow levels, the complete environmental study should include whether or not adequate flow can be achieved to assure a typical, naturally viable environment. The FEIS should establish the full interaction between the proposed sanctuary and present uses of the river. If these uses are not compatible, then the sanctuary should not be designated.

R - It is impossible to be certain now whether a typical, naturally viable waterflow can be achieved. This will be one of the priorities of the proposed Management Committee after sanctuary establishment. The setting of minimum flow standards is required by existing Florida Law. These standards will apply for the Apalachicola River, including the portion within the proposed sanctuary boundaries. See General Response B.

C - Although there are DEIS references (e.g. p. 13) to Florida Statute authority over the river, there are no statements with regard to upstream authority. This should be clarified.

R - See General Response B.

C - On page 14 of the DEIS, the proposed prohibited activities discuss the creation of new navigation channels. Does this mean that if the river naturally alters its channel, the State of Florida will use this as a reason for prohibiting the dredging for clearance of a 100' wide, 9' deep navigation channel? This should be clarified.

R - Should the river naturally alter its course, the status of the Congressionally authorized 100' wide, 9' deep channel will remain the same, i.e. maintenance dredging will continue.

C - The functions of the Sanctuary Management Committee (DEIS, p. 18) are not detailed clearly enough to delineate who is to have responsibility for restoration projects and how such projects affect the Bay. This should be clarified.

R - Any restoration projects will be the responsibility of the appropriate Florida agency. The Sanctuary Management Committee will advise on the impacts of such projects before their undertaking.

C - No real work has been done to show what impact the proposal will have on local areas, such as counties affected by and benefiting from the river.

R - Florida and OCZM feels that the Environmental Consequences Section and Appendix VI adequately explain the impacts on local areas. See General Response D.

C - The recommendation on page 29 of the DEIS that the three State Governors form a body for resolving problems arising from use of the river should be made a requirement before approval of the sanctuary.

R - Comment accepted. The three Governors are scheduled to meet on July 31, 1979, and it is up to their discretion as to which solutions may be employed to any problems which may exist in the Tri-River System.

C - The statements in the DEIS, p.10 that the sanctuary is consistent with the policies and plans of all affected levels of government and that completion of a spoil disposal plan is the highest research priority are not true. Georgia and Alabama have River policies conflicting with Florida, and no provision for a spoil disposal plan is made, as pointed out in our earlier comment.

R - See General Response A. If policies are different than those outlined in the DEIS, we were not so advised.

Bainbridge and Decatur Counties, Georgia
(Winston Brock, 6/7/79)

City of Bainbridge, Georgia
(B. K. Reynolds, 6/6/79)

Bainbridge and Decatur County Chamber of Commerce, Blakely, Georgia
(J. David Wansley, 5/30/59)

City of Blakely, Blakely, Georgia
(G. H. Dunaway,6/5/79)

Blakely-Early County Chamber of Commerce, Blakely, Georgia
(Wayne R. Foster, 5/30/79)

Board of Commissioners, Decatur County, Georgia
(J. Clifford Dallas, 6/5/79)

Decatur County Farm Bureau, Bainbridge, Georgia
(Bernard Rentz, 6/6/79)

Decatur County-Bainbridge Industrial Development Authority, Bainbridge, Georgia (John E. Provenci, 6/4/79)

Board of Commissioners, Dougherty County, Georgia
(Gil Barrett, 6/4/79)

Commissioners of Early County, Georgia
(E. C. Scarborough, 6/7/79)

Pelham Chamber of Commerce, Pelham, Georgia
(J. Donohue Tennyson, 6/6/79)

C - Presented four resolutions requesting OCZM and the U.S. Army Corps of Engineers to hold in abeyance any designation of an estuarine sanctuary until further studies of both alternate areas and the availability of transportation, and until adequate input is given by the States of Georgia and Alabama and their local governments and development groups.

R - See General Responses A and F.

City of Camilla, Georgia
(Lewis B. Campbell, 6/11/79)

C - Resolution stating the economic importance of all modes of transportation to the area. The continuing problems with navigation on the Tri-River system will be further complicated by the proposed estuarine sanctuary. The State of Florida has not investigated all of the alternatives to designation of this specific estuarine area. Also, Georgia and Alabama have had little opportunity for input. Requests delay of designation until further study of alternative sites is done, assurances of availability of transportation on the Tri-River system are given, and processes and procedures have been developed to allow adequate input from Alabama and Georgia.

R - See General Responses A & D for comments regarding navigation, especially maintenance dredging, in relation to Alabama and Georgia. As indicated previously, Florida went through an extensive process over several years to propose Apalachicola as an estuarine sanctuary. In October 1978, a workshop composed of nationally recognized scientists reaffirmed Apalachicola as the best possible site within the Louisianian biogeographic region. Alabama and Georgia were notified approximately one and one-half years in advance of the proposed sanctuary. OCZM feels that all alternative areas have been adequately examined and accepts Apalachicola as the proposed site. Additionally, no other State within this region has seriously proposed a competing alternative site to OCZM. See General Response C regarding Alabama and Georgia's input into the Sanctuary Management Committee.

Mayor's Office, Columbus, Georgia
(Harry C. Jackson, 6/6/79)

C - Has no objection to the proposed estuarine sanctuary as long as it is clearly assured that it will in no way impair navigation on the waterway.

R - Comment accepted. OCZM believes that the sanctuary would not impact upriver navigation interests. See General Response A.

Sierra Club, Gulf Coast Regional Conservation Committee, Baton Rouge, Louisiana
(Doris Falkenheiner, 6/11/79)

C - Whereas the Apalachicola Bay is such a productive resource and the delta, floodplains, and wetlands are essential to the continued economic viability of the Apalachicola Valley community, and whereas the designation of a sanctuary will not halt river navigation, resolved that the GCRCC of the Sierra Club vigorously reaffirms its support of the National Estuarine Sanctuary, which will provide a balanced and equitable resource management program.

R - Resolution accepted.

Sierra Club, Chattahoochee Chapter, Atlanta, Georgia
(Sally Sierer, 6/15/79)

C - Establishment of the sanctuary will assist environmentally sound development and create a better basis for decisionmaking concerning long term protection of the Apalachicola. Requests Governor Busbee's endorsement of the proposal.

R - Comment accepted.

Sierra Club, Cahaba Group, Alabaster, Alabama
(Ernest McMeans, 6/16/79)

C - Supports Florida's application for a sanctuary grant and opposes any new channel on the Chattahoochee until a long term spoil disposal plan can be completed.

R - Comment accepted. The sanctuary designation, however, has no impact on the channelization of the Chattahoochee River.

Sierra Club, Chattahoochee Chapter, Wiregrass Group, Dothan, Alabama
(Darryl Wiley, 6/14/79)

C - Strongly supports the principle of having an Apalachicola Estuarine Sanctuary to provide good recreation as well as sport and commercial fishing for the Tri-State area.

R - Comment accepted.

Barrier Islands Coalition, Washington, D.C.
(Dinesh Sharma, 5/16/79)

C - Strongly supports the sanctuary since it will provide a rare opportunity for scientific studies of an unaltered ecosystem, which will develop baseline data, provide habitats, and protect a unique natural heritage.

R - Comment accepted.

C - Recommends inclusion of all barrier islands and Lake Wimico/Jackson River floodplains. Declare Tate's Hell Swamp, Indian Swamp, and the Barrier Islands as areas of special concern.

R - See General Response E. The areas mentioned above are unique and deserve special attention. However, they are not within the boundaries of the sanctuary and the "sanctuary" cannot control their uses. This is the proper function of local and State planning agencies under State and local law.

C - Requests OCZM monitor the sanctuary and the management framework.

R - OCZM is an ex-officio member of the Management Committee and will assist in establishing the sanctuary in a positive manner.

Natural Resources Defense Council, Inc., Washington, D.C.
(Peter S. Holmes, 7/5/79)

C - States that the $1.8 million grant represents a sound investment of public funds to protect a highly productive and valuable estuarine system. This grant also furthers the intent of the President's Executive Orders on Wetlands and Floodplain Management (#11990 and #11988).

R - Comment accepted.

C - Notes the weaknesses in Florida's proposed management plan, namely having too many agencies involved rather than having the Florida Department of Natural Resources act as the sole State management agency. The FEIS must thoroughly examine alternative management schemes to ensure that the sanctuary will maintain those values for which it is being designated.

R - Any management scheme for an estuarine sanctuary will of necessity involve many elements and will therefore be complex. The Florida DNR will manage the sanctuary through a full-time Sanctuary Coordinator who will be employed by DNR. However, to preserve the interest and enthusiasm of all of the local entities affected by the use of the sanctuary, a Management Committee with advisory powers is a useful and valuable arm of management.

C - Control of the severe septic leachate problem around Apalachicola Bay is not addressed adequately in the DEIS. NOAA should provide a minimum of $150,000 to help Florida manage this sanctuary.

R - The State of Florida is aware of the septic leachate problem. One obvious research project connected with sanctuary designation is to discover how bad the leachate pollution problem is and how much it will cost to overcome it. Florida may apply to NOAA/OCZM for an operations grant whenever it is appropriate.

C - The sanctuary boundaries should encompass Dog Island because it provides a nearly pristine wildlife habitat, and acts as a protective storm buffer for the bay. Development of Dog Island would adversely affect surrounding water quality. Acquiring Dog Island now while it is undeveloped should be given high priority.

R - See General Response E. Were more funds available for acquisition, Dog Island would be given high priority. As funding is limited, it is not possible to go ahead with this recommendation.

C - The FEIS should elaborate on how the natural rhythmic fluctuations and flow patterns of the estuary's freshwater inputs will be maintained. Florida, with NOAA's assistance, must seek out strong agreements with Alabama and Georgia to ensure a free flowing river system.

R - Given the size and interstate nature of the watershed vs. the size of sanctuary, it is impossible to ensure a free flowing river system. The river system is currently regulated to some degree for transportation, power, and other purposes. It is not felt that the approval of the sanctuary should be contingent upon a Tri-State agreement to prevent any future consideration of water control projects. Florida has the authority to oppose such structures within the State but not outside the State. Alabama and Georgia have strongly emphasized their concerns that their future water resource development options not be taken away by the sanctuary. Florida recognizes that agreements are necessary with Alabama and Georgia to ensure Apalachicola water quality and quantity.

Sierra Club, Gulf Coast Regional Conservation Committee, Baton Rouge, Louisiana (Doris Falkenheiner, 6/11/79)

C - Whereas the Apalachicola Bay is such a productive resource and the delta, floodplains, and wetlands are essential to the continued economic viability of the Apalachicola Valley community, and whereas the designation of a sanctuary will not halt river navigation, resolved that the GCRCC of the Sierra Club vigorously reaffirms its support of the National Estuarine Sanctuary, which will provide a balanced and equitable resource management program.

R - Resolution accepted.

The Apalachicola Committee, Tallahassee, Florida
(Mr. Ed Conklin, 6/29/79)

C - This committee, a policymaking advisory body composed of local, regional, and State agency representatives, passed without dissent the following resolution on June 27, 1979 (summarized):

> Acknowledges that the primary purpose of the National Estuarine Sanctuary Program is to provide for long term protection for natural areas, and that multiple uses, when compatible with maintenance of the ecosystems for scientific and educational purposes, are encouraged; that the management plan provides for local participation and representation in policymaking; and that hunting, timber, commercial, sport fishing, and existing barge transportation interests are protected in the management plan. The committee states that the continued well-being of the Apalachicola Bay and River System is essential to the commercial seafood industry and other waterborne traffic, including fishing boats. The committee supports the proposal to designate the lower Apalachicola River and Bay as a National Estuarine Sanctuary.

R - Resolution accepted.

Florida Audubon Society, Maitland, Florida
(Archie Carr III, 6/21/79)

C - Apalachicola Bay contributes to the productivity of the Gulf of Mexico and the Apalachicola River. Preserving the complex ecosystem intact is of incomparable value to all concerned. Without sanctuary status, these values will be lost.

R - Comment accepted.

C - The inclusion of Tate's Hell Swamp in the sanctuary is strongly endorsed.

R - See General Response E.

Florida Defenders of the Environment, Gainesville, Florida
(Marjorie H. Carr, 6/12/79)

C - Strongly supports the effort to create the sanctuary because 1) there are obvious benefits from protecting the natural environment, including economic benefits, and 2) creation of the sanctuary will not interfere with other current uses of the river and bay, including navigation.

R - Comment accepted.

C - Recommends that Tate's Hell Swamp and privately owned portions of St. George Island be added to the sanctuary or regulated to prevent adverse impact on the estuarine system.

R - See General Response E.

Florida Federation of Garden Clubs, Inc., Winter Park, Florida
(Mrs. Dursie Ekman, 6/13/79)

C - Board of Directors passed resolution endorsing Florida's application for a matching grant from the Federal Government to purchase additional lands and establish a sanctuary for protection of Apalachicola Bay and River.

R - Comment accepted.

Live Oak Garden Club, Suwannee County, Florida
(Ileen C. Moore, Marilyn B. Fowler, 6/18/79)

C - Requests that the estuarine sanctuary be extended to the Apalachicola River.

R - A portion of the river, approximately 21 miles, bordered by publicly owned lands, already owned or to be acquired, will be within the sanctuary boundary.

Atlanta Audubon Society, Atlanta, Georgia
(Elmer Butler, 6/15/79)

C - Urges acquisition of land for the sanctuary to preserve the nutrients for oysters (90% of Florida production), shrimp, blue crabs, and various finfish.

R - Comment accepted.

Columbus Chamber of Commerce, Columbus, Georgia
(Joe Ragland, 6/7/79)

C - Columbus Chamber of Commerce takes no position concerning the estuarine sanctuary so long as its establishment does not impinge in any way upon the navigibility of the A-C-F waterway.

R - See General Responses A & B.

C - The navigation channel on the waterway seems to be worsening.

R - Sanctuary status should have a positive impact upon the channel because of the dredge spoil disposal plan that will be completed in a years time.

C - The Columbus Chamber of Commerce advocates the resolution of outstanding problems associated with maintenance of mandated navigation standards before progressing further with the sanctuary.

R - Comment accepted. See General Comment A.

Georgia Clean Water Coalition, Atlanta, Georgia
(Jo Jones, 6/14/79)

C - The estuary is part of the food chain and is irreplaceable. Applauds Florida for its foresight in requesting sanctuary status. Deplores spoil disposal in the wetlands and cites other wetlands that are now covered up, leaving no choice but to haul the spoils elsewhere at $6-10/cubic yard, which is less cost in the long run than ruining the wetlands.

R - Comment accepted.

The Georgia Conservancy, Savannah, Georgia
(Hans Neuhauser, 6/18/79)

C - Notes that the present Tri-River controversy goes back to 1874 when the Congress authorized a channel to Columbus on the Chattahoochee and to Bainbridge on the Flint. The river traffic to Columbus and Bainbridge never developed as planned; yet the Federal government continues to subsidize transportation. In considering competing values, the maintenance of the food chain and viability of fin fish and shellfish production is primary; hence the need for the sanctuary.

R - OCZM is not in a position to say that river transportation has not developed to the level originally envisioned. The comment, otherwise, is accepted.

Southeastern Wildlife Services, Inc., Athens, Georgia
(Billy Hillestad, 5/21/79)

C - Served as the Workshop Panel Chairman of the Aquatic and Terrestrial Life Panel (see Section IV, p. 23 of Appendix), and has no further comments on what is contained in the Panel's report.

R - Mr. Hillestad's work at the Apalachicola Symposium is very much appreciated and his comment is accepted.

Samuel T. Adams, Apalachicola, Florida
(5/29/79)

C - Freezing Apalachicola Bay in its present state may perpetuate past environmental errors (e.g. Bob Sikes cut, spoil islands). Recommends spoil disposal plan before sanctuary establishment.

R - The Sanctuary will not be "frozen" in its present state but can evolve within the proposed sanctuary management structure under Florida Law. The proposed spoil disposal plan should help to alleviate the problem of past environmentally inappropriate disposal sites. OCZM does not feel any useful positive purpose would be served by delaying estuarine sanctuary establishment until a spoil disposal plan is completed. Steps are already being taken by Florida to develop a spoil disposal plan.

George Atkins, WKDY, Radio Station, Blountstown, Florida
(6/7/79)

C - Has seen attempts of upstream groups to destroy the river system using the Corps of Engineers, and says it is unthinkable that the people of Florida have no control over the Apalachicola. Notes the threat of a possible spill of hazardous substances from barges.

R - A priority of the Management Committee will be to develop a hazardous substance spill plan.

Patricia E. Bardorf, Birmingham, Alabama
(6/21/79)

C - The Apalachicola Bay area is one of the few coastal zones still left in its natural state. Strongly urges designation of the sanctuary.

R - Comment accepted.

C.O. Beall, Eufaula, Alabama
(7/6/79)

C- Limits or alterations on normal flow patterns on the A-C-F system would prohibit other uses, such as water supply for cities, flood control, and power generation. These present uses should not be restricted.

R- Establishment of the sanctuary does not alter the current uses of the rivers nor restrict flow patterns. See General Responses A and B.

C- Having Alabama's and Georgia's input to the Management Committee accessible only through the Florida DER is too restrictive.

R- See General Response C.

C- Prohibition of the expansion of new channels would mean an immediate hardship on river navigation.

R- See General Response A and B. Restriction on channel expansion is limited to the State of Florida for approximately one year only.

C- Reference in the DEIS to continuation of existing permits and spoil disposal practices needs to be clarified.

R- The continuation of existing permits basically states that Florida will not hold in abeyance the issuance of maintenance dredging permits and existing spoil disposal practices while a spoil disposal plan is being prepared. See General Responses A and B.

C- Under Regional Impacts in the DEIS, a statement is made that designation of the sanctuary could "exacerbate" the present conflicts regarding multiple use of the Tri-River system. This cannot be justified and the grant should be postponed.

R- The current conflicts have existed in the past and will continue into the future regardless of whether an estuarine sanctuary is established. We expect that the sanctuary will act as a catalyst to help resolve differences. This has already occurred, as seen by the meeting of the Governors of Alabama, Georgia, and Florida on July 31, 1979. We feel that any differences or conflicts can be solved with the establishment of the estuarine sanctuary, and there is no cause to delay the grant for this particular reason.

Joe and Dottie McCain, Birmingham, Alabama
(6/16/79)

C - Sanctuary is needed to help protect the bay area from agricultural runoff and drainage, but supports continuing research, fisheries, recreation, and navigation in the sanctuary.

R - Comment accepted.

Gary Davis, Birmingham, Alabama
(6/17/79)

C - Supports the grant for acquisition. Opposes further channelization of the Chattahoochee.

R - Comment accepted. Sanctuary, however, will not impose restrictions on the Chattahoochee River.

Tom Cullen, Middletown, Virginia
(6/17/79)

C - Supports purchase of lands for sanctuary and opposes further channelization of Chattahoochee.

R - Comment accepted. Sanctuary will not impose restrictions on the Chattahoochee River.

Charles Fryling, Jr., Baton Rouge, Louisiana
(7/15/79)

C- Supports the designation of Apalahicola Bay as a National Estuarine Sanctuary because this will help preserve the long term productivity of this important area.

R- Comment accepted.

Sven O. Lovegren, Decatur, Georgia
(6/19/79)

C- Urges OCZM to award a grant to Florida for acquisition of land to make a National Estuarine Sanctuary. Based on visits to the area, sees the value at the bay and river for seafood, recreation, water supply, and reasonable navigational usage. Expansion of channels will damage the potential habitat for fish and shellfish.

R- Comment accepted.

W. W. Glenn, Marianna, Florida
(6/7/79)

C - Jackson County needs the proposed estuarine sanctuary as an experimental station to learn about the estuary. Only a few special interests are against the proposal and the river cannot be used only for transportation.

R - Comment accepted.

Dr. Robert Livingston, Tallahassee, Florida
(6/1/79)

C - Apalachicola system is among the most productive in the country and the public should act to support this proposal.

R - Comment accepted.

Charles R. McCoy, Blountstown, Florida
(6/4/79)

C - Requests Alabama and Georgia input on Management Committee. Also, other jurisdictions such as Apalachicola, Wakulla County, and Gulf County should be represented. The committee should not have an even number of members. Somewhat related is the potential of the Management Committee to influence land use outside of the sanctuary guidelines.

R - See General Response C. The committee has only advisory capacity over activities outside the sanctuary that may themselves affect the sanctuary. The tier system suggested at the Apalachicola Symposium was not incorporated by Florida into the sanctuary proposal, and has been dropped.

C - How can slant drilling occur if the State owns fee simple title to the land? Slant drilling should have to await a long term plan similar to spoil disposal.

R - Slant drilling could occur if the State itself leased the mineral rights to an oil company. Since the possibility of oil in this area is very remote, a plan does not seem to be warranted at this time. However, if this situation changed, Federal and State law is sufficient to warrant an environmental assessment of energy development in the Apalachicola Bay Region.

C - The University of Florida's interest in wetlands warrants its inclusion on the the Research and Education Subcommittee.

R - Comment accepted. This change is included in the FEIS.

George Kirvin, Apalachicola, Florida
(6/7/79)

C - Through proper care of the Bay, the seafood industry can expand to millions of dollars worth of seafood, employ hundreds of workers, and feed thousands of people. Channelization of the river and building of the Jim Woodruff Dam upset the mixture of salt and fresh water in the Bay, bringing in seafood predators that destroyed 50% of the commercial oyster beds. If another dam is built on the Apalachicola River, we can kill the Bay.

R - Sanctuary establishment carries with it no laws or regulations that can affect the building of another dam. However, it is hoped that data obtained from research conducted in the sanctuary will enable decisions concerning such projects to be made more intelligently.

A.M. Chason McDaniell, Gainesville, Florida
(6/7/79)

C - We are not interested in selling our land. Our homestead is in its natural state. The family keeps it in its natural state as a "sanctuary."

R - "Selling" (i.e. fee simple acquisition) is merely one alternative in the negotiation process. Other options include life estates, easements, etc. We are confident that something can be worked out that will be acceptable to both negotiating parties, since Florida does not have condemnation authority for EEL purchases.

C - Objected to the order of the speakers at the public hearing.

R - The order was essentially the order of arrival with the exception of various dignitaries and elected officials.

Lyle A. Taylor, Huntsville, Alabama
(6/12/79)

C- Urges Governor James's support for the establishment of a National Estuarine Sanctuary as proposed by Florida and praises the kind of thinking that went into the proposal.

R- Comment accepted.

Dr. C.H. Oppenheimer, Consultant, Port Aransas, Texas
(6/7/79 and 6/15/79)

C - The DEIS does an inadequate job of documenting the need for an estuarine sanctuary, including site selection.

R - OCZM feels the DEIS and FEIS fully documents the need for the estuarine sanctuary, and the site selected.

C - Questions concept of the term "natural environment," whether the Apalachicola estuary is natural, and whether it would be better to study man's use of the system.

R - OCZM believes the sanctuary is predominately a natural environmental even though it is not unaltered by man's influences. Man's uses and impact upon the system will be studied in the future as part of the sanctuary research program.

C - The DEIS did not address or provide for a balanced river basin program, since the downstream system comprises only 10 per cent of the river basin system.

R - It is not the function of the estuarine sanctuary proposal to address these issues if no impacts are caused by the sanctuary.

C - The Corps of Engineers' management of the system would be frustrated by the proposed control. The question of impact on private uplands was not addressed in detail. No mention was made of the regional energy balance.

R - See General Response B. The sanctuary does not affect uplands, nor factors involved in any regional energy balance.

C - Past alterations of the system have not decreased the fisheries output of the system. Management, not preservation, is essential to maintain the continued fisheries output and ecological balance.

R - We are not sure of the effects of past alterations; however, it remains a very productive fisheries resource. The purpose of the Sanctuary is preservation for research and education. Maintenance of the fisheries resource is but one additional benefit of the sanctuary designation.

C - Dr. Oppenheimer also made a substantial number of marginal comments in the DEIS and it would be too lengthy to repeat them here.

R - Many comments were responded to above. Several were accepted and incorporated into the FEIS and others were rejected or were unclear in their meaning.

C - OCZM should not approve the proposed sanctuary until the above items are addressed and total basin planning is made integral with the proposed sanctuary.

R - Integral basin planning, if desired by Alabama, Georgia, and Florida, can still be accomplished if an estuarine sanctuary is established.

Ms. Deborah Gail Watson, Birmingham, Alabama
(7/2/79)

C- Supports having Apalachicola River and Bay designated as a National Estuarine Sanctuary and opposes channelization of the Apalachicola.

R- Comment accepted. However, the examination of alternatives to reach the 9' x 100' channel 95 % of the time is still a prerogative of the Corps of Engineers.

Alabama Kraft Company, Mahrt, Alabama
(C.O. Beall, 6/18/79)

C - Further study is needed to determine the sanctuary's impact on present use of the river system. Grants should be witheld until firm agreements are reached among the Governors of Alabama, Georgia, and Florida.

R - See General Response A.

Brent Towing Company Inc., Greenville, Mississippi
(Michael M. Measells 6/18/79)

C - States that the establishment of an estuarine sanctuary at Apalachicola Bay would, in effect, close the A-C-F river system to barge traffic. Cites damage and danger to towboats given the chronic condition of the river's having too low water depth for adequate bottom clearance, plus the existence of boulders and snags.

R - See General Responses A and B. The FEIS makes it clear that existing channels can be dredged. The problems upriver that adversely affect barges are not going to be made worse by designating the lower river and bay as a sanctuary.

The Buckeye Cellulose Corporation, Perry, Florida
(Walter L. Beers, Jr. 6/13/79)

C - Conditionally supports the establishment of the sanctuary but expresses dissatisfaction with the confusing way the DEIS was written, edited, and assembled. Notes that "sanctuary" is a misnomer for an area with such a variety of uses. Expresses concern both over the possibility that boundaries could be extended to acquire more privately owned areas, and over the lack of adequate description of the economic contribution of forestry.

R - Comment accepted. New language and additional editing have been used in the FEIS to overcome some of the problems of the DEIS. "Sanctuary" is the term used in the legislation (Coastal Zone Management Act of 1972, 16 USC 1451 et seq.) and we admit that it is confusing. The boundaries are definite at this particular time and any future land acquisition will be done by Florida without OCZM funds. OCZM's maximum legal limit is $2,000,000, which will be reached after operation grants are given. A discussion of forestry is included in Appendix VI.

C - Recommends that the Management Committee be appointed by the Governor of Florida to assure objectivity, and that membership be expanded to include more Florida agencies, e.g. Department of Environmental Regulation, Department of Natural Resources, Division of Forestry, Game and Freshwater Fish Commission, and the State University system. Also recommend adding members from the Sea Grant and Marine Advisory Program, Florida Forestry Association, the U.S. Corps of Engineers, and a key legislator to represent the people. A number of other groups, including the U.S. Forest Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Soil Conservation Service, and the States of Alabama and Georgia are recommended for membership on the subcommittees.

R - We disagree that a management committee appointed by the Governor would be more objective per se. Having several agencies select representatives presents a reasonable way, we feel, to get broad representation. Some of the agencies mentioned (DER, DNR, and GFWFC) do select members for the Management Committee. Other agencies, including Florida universities, Sea Grant, the U.S. Corps of Engineers, USFWS, USFS, as well as the States of Alabama and Georgia will have representation on the subcommittees. It is necessary, however, to keep the size of the Management Committee itself limited so that it can make decisions efficiently and effectively.

Childress Company, Foley, Alabama
(Bruce Childress, 6/7/79)

C - Notes that the DEIS presents socioeconomic characteristics only from the viewpoint of Franklin County and omits the economic impact assessment of the region surrounding the sanctuary and particularly of competing uses of the river system and bay, e.g. navigation. Barge transportation is the safest and most efficent form of bulk transportation in the region, in economic and energy terms; yet, the economic impact of the sanctuary on barge transportation and other uses is left out of the DEIS.

R - OCZM believes that this subject was adequately described in Appendix VI. As shown in General Responses A and B, OCZM's assessment is that barge transportation will not be adversely affected.

C - There is no voting position on the Management Committee given to industry, barge transportation, or commercial developers. Having only one representative for "Navigational Interests" is completely inadequate.

R - The Management Committee will primarily be discussing subjects and advising the Florida Department of Natural Resources in areas that pertain to the research and educational programs within the sanctuary. When problems arise that affect users of the waters and lands within the sanctuary or vice-versa, it is logical to assume that the Management Committee, through its Resource Users Subcommittee, will consult and coordinate with any and all parties who are affected.

C - The Management Committee is unfairly balanced in favor of Franklin County Commissioners, who can appoint three of the six voting members. The lack of Alabama and Georgia representation means that the Management Committee has no control over effects of situations outside the sanctuary boundaries, which leaves very uncertain one of the criteria in the Federal Guidelines; i.e. "Compatibility with existing or proposed land and water use in contiguous areas."

R - It should not be assumed that the two persons selected by Franklin County to represent the local resource users and the research and educational institutions, respectively, would always agree or vote with the representative of the Frankin County Commissioners. The issue of having Alabama and Georgia's views represented is important. The meeting of the Governors of the three States on July 31, 1979, will, it is hoped, begin a process whereby the common use of the Tri-River System, including the Apalachicola, by all three States can be resolved by agreements that will be larger in scope than the sanctuary. Also, see General Response C.

Continental Carbon Company, Houston, Texas
(N.R. Higgins, 6/15/79)

C - In view of the Management Committee's role to ". . .review and advise the appropriate State agency or local government on proposed actions, plans, or projects in, adjacent to, or affecting the sanctuary," including dredging and filling, it is imperative that both Alabama and Georgia have an active role in decisions on matters that are so vital to their interests. Therefore, the Management Committee should be expanded to include a voting member from each State, to be appointed by their respective Governors.

R - See General Response C. The issue of Alabama and Georgia working closely with Florida in decisions regarding the multiple uses of the Apalachicola River and Bay is recognized. The scheduled meeting of the Governors of all three States on July 31, 1979, should begin a process whereby the common use of the Tri-River System by all three States can be resolved mutual agreement. The management mechanism for the sanctuary would seem to be too small a forum for decisions affecting the Tri-River system.

C - The concept of an estuarine sanctuary at the mouth of a major navigable river invites conflict and controversy and is in direct opposition to the long-standing authority of the Corps of Engineers to maintain a navigable waterway.

R - See General Response A.

Continental Carbon Company, Phenix City, Alabama
(J. D. Rodriguez, 6/7/79)

C - Dredging must be allowed to keep rivers navigable for transportation of raw material by barge or ship in order to keep their $5 million plant in operation. Concerned that the sanctuary will have an adverse effect.

R - See General Response A.

Cook and Henderson, Washington, D.C.
(John C. Kirtland, 6/19/79)

C - Represents Tri-River Development Association. Private investment in Tri-River facilities that are directly dependent on waterborne transportation exceeds $1 billion. Federal sanctuary guidelines (15 CFR 921.5) subordinate all economic activities to research and educational activities, i.e. "all additional uses of the sanctuary are clearly secondary..." The DEIS gives the impression that all existing uses will be continued but the CZM Act (16 USC §1451) and Federal sanctuary guidelines (15 CFR 921.5) control multiple use. The FEIS should clearly state that expansion of commercial fishing interests (and others) must be subordinated to research and education.

R - We do not agree with the inference that the commercial fishing interests (and others) will be adversely affected by the sanctuary. To the contrary, the commercial fishermen support the establishment of the sanctuary as a means of protecting and preserving the bay ecologically and increasing the yield of finfish and shellfish over time.

C - Adequate protection of the Federal (U.S. COE) interest in navigation in the Apalachicola Basin must be included in the FEIS, specifically the 25 miles of Gulf Intracoastal Waterway that includes a channel 9 feet deep and 125 feet wide, and other channels requiring constant dredging. Otherwise, navigation will be subordinated to sanctuary research and educational purposes.

R - New language has been added to the FEIS explicitly stating the primacy of the Federal Government to control navigible waters. See General Response B.

C - OCZM should defer awarding a grant until the affected States reach an agreement on unresolved navigation issues and adopt a long range plan.

R - See General Response A. The meeting of the Governors of Alabama, Georgia, and Florida on July 31, 1979, should initiate a process whereby the common use of the A-C-F river system by various interests in all three States can be resolved and a plan developed. This can occur just as well after the sanctuary is established, as described in the FEIS.

Elberta Crate and Box Company, Bainbridge, Georgia
(D. R. Simmons, Jr. 5/7/79)

C - Section 26, Township 7, South Range 8 is owned by Elberta Crate and Box Company and is not publicly owned as indicated in the DEIS.

R - This is correct. There are also other inholdings within the area shown in the FEIS as owned by the State. Any privately owned property will be purchased with EEL funds on a negotiated basis. Private holdings are accurately reflected on page 9 of the FEIS.

Florida Waterways Association, Inc., Palatka, Florida
(Raymond B. Bunton, 6/7/79)

C - The sanctuary will perpetuate the current below average income level of area residents.

R - OCZM does not agree with this assessment. The possible economic benefits have been described in the EIS. Unless specific information is provided we feel that the sanctuary will be an economic benefit to area residents.

C - Since navigation interests are not represented on the Management Committee, navigation will not be improved by having the sanctuary, and may be adversely affected.

R - The purpose of the sanctuary is not to improve navigation; however, waterborne transportation will remain as one of the uses within portions of the sanctuary. Navigational interests will be represented by the "local resource users" subcommittee and the Corps of Engineers.

C - Navigation and water transportation requirements are not given adequate treatment in the DEIS considering their economic impact. We do not support the construction of the Blountsville Dam but we encourage other measures that would improve the water depth for a higher percentage of the time.

R - See General Response A. Consideration of other methods of improving water depth is not precluded by sanctuary establishment.

Great Southern Paper Company, Cedar Springs, Georgia
(James W, Stewart, 6/13/79)

C - The availability of economical, dependable, barge transportation is essential for transportation of fuel and other bulk commodities on the A-C-F waterway. The maintenance of a dependable 9-foot channel should be guaranteed before a sanctuary is designated. Also, the use of the Tri-River system for water supply, power generation, and recreation must be preserved.

R - See General Responses A and B. The preservation and enhancement of water quality and quantity are also priority uses for the Apalachicola River/Bay system.

Kaiser Aluminum and Chemical Corporation, Washington, D.C.
(T.K. Singer, 6/19/79)

C - Repairs to our barges have just completed costing more than $1 million because the Apalachicola River channel has not been maintained. Savings of $150,000 per year could be realized if water transportation could be expanded. Locating the sanctuary at the mouth of a major navigable river involves policy questions. A Tri-River navigation plan is essential before a sanctuary grant is approved.

R - See General Responses A and B. The policy issues involved are on the agenda of a meeting of the Governors of Alabama, Georgia, and Florida, scheduled for July 31, 1979.

Jon T. Brown Law Firm, Washington, D.C.
(Stephen E. Roady, 7/5/79)

C- Expresses support for the proposed estuarine sanctuary grant. Preserving this area for purposes of baseline research and education will prove beneficial both environmentally and economically.

R- Comment accepted.

Mississippi Chemical Corporation, Yazoo City, Mississippi
(James A. Pierce, 5/10/79)

C - The Tri-River System has been plagued by low water. Maintenance dredging is a necessity for low cost barge transportation.

R - Comment accepted. See General Response A.

St. Joe Paper Company, Port St. Joe, Florida
(Hugh W White, Jr., 6/7/79)

C - Some of the proposed land includes good pine timberland and our future operations depend on this and other timberlands. We are not willing to sell that part of our land within the designated boundaries in Township 8 South, Range 6 East.

R - Position accepted. However, there are many alternatives available in addition to outright sale. It is hoped a mutually satisfactory arrangement can be worked out if the sanctuary is established. (Note: Under Florida law, condemnation is legally not an alternative).

Tri-Rivers Waterway Development Association, Dothan, Alabama
(Ms. Addie Summers, 6/7/79)

C - Accommodations must be made for all users of the river system and bay, including representatives from Georgia and Alabama. The Franklin County Board of Commissioners is overrepresented on the Management Committee.

R - See General Response D. Franklin County has only one vote on the Committee although they have the responsibility for appointing two other members. This does not mean that these appointees will vote the same as Franklin County representatives. Franklin County is the most affected area in terms of sanctuary impact. Not only is the 12,467 acres of land proposed for acquisition in Franklin County, the county's economy depends upon the health of the bay and river.

C - The sanctuary subordinates the welfare of a large system to a small area and ignores environmental, economic, and energy factors.

R - We disagree with this statement. Goals for the sanctuary do not preclude benefits accruing to the larger system (i.e., navigation, recreation, hydroelectric power, etc.) as stated in the FEIS. The impacts of the sanctuary on barge transportation were not discussed, since barge traffic will continue as it has in the past.

C - Florida statutes will be invoked to delay or prevent any uses that are not compatible, thus precluding legitimate multiple use and flexibility regarding navigation, etc.

R - See General Responses A and B.

C - The DEIS skirts the issue of point source pollution of the bay from sewage treatment plants.

R - There is no attempt to skirt any water quality issue on the proposed National Estuarine Sanctuary. The Apalachicola is one of the cleanest rivers of its size in the United States (per Dr. Robert Livingston's remarks to the Apalachicola Symposium participants, October 1978). Point source pollution is being addressed by the DER and is one of the many topics to be researched in the future (see Appendix II).

C - The Corps of Engineers should not be inhibited by any State from discharging its Federal responsibility. The record of Florida's State environmental agencies on "cooperation" and "coordination" with Alabama and Georgia is discouraging. The DEIS reliance on cooperation is not well founded.

R - The State of Florida has taken positive steps towards resolving resolving differences with Alabama, Georgia, and the COE. See General Responses A and B. Also, the Governors of the three States will meet on 7/31/79 to discuss the sanctuary and related issues. The sanctuary has been the catalyst for these initial steps, which provides good evidence that improvement can continue into the future.

C OCZM should disapprove Florida's application.

R - This decision is left to the Assistant Administrator for Coastal Zone Management after the FEIS is submitted to EPA and the public, and the merits of the grant application are weighed.

Institute of Food and Agricultural Sciences, Univ. of Florida, Gainesville, Florida (Wayne H. Smith, 6/15/79)

(Comments are on the on symposium/workshops held on the proposed sanctuary by the Conservation Foundation in Tallahassee, Florida, 10/17-19/78).

C - Workshop presentations were not unanimously accepted by the scientific community and did not include enough useful information for participants to reach conclusions. Florida Division of Forestry, researchers from the State universities, researchers and resource managers from both public agencies and private industry, or non-State institutions with experience in the subject area should have been included in the "indoctrination" portion of the symposium. In addition, the University of Florida was not given the opportunity to review the panel's report.

R - The symposium (see Appendix II) is not our present concern here but the comments are appreciated. A copy of your concerns has been sent to the Conservation Foundation and the Florida State Department of Environmental Regulation.

C - There were oversights in the distribution of the Impact Statement.

R - Although OCZM attempts to be as comprehensive as possible with its EIS distribution, some oversights are inevitable. For this reason, copies are sent to libraries and various offices in the involved area so that copies will be available to the concerned public. We regret any inconvenience our oversights may have created.

C - The DEIS is vague, ambiguous, and poorly written and edited.

R - New language has been added to the FEIS in hopes of correcting such deficiencies.

C - The following would improve the credibility of the document:

1) Define "sanctuary" fully and state all implications.

2) Identify and quantify support for the sanctuary to dispel the appearance that advocates have a vested interest.

3) Define "baseline" in scientific terms and specific measurement parameters needed.

4) Describe the sanctuary in legal survey terms. "Sanctuary" is used in several different contexts.

5) Define selection criteria for candidate sites, rationale used for choice, and parties involved in the process.

R - OCZM feels that all of the above points or definitions have been adequately explained in the FEIS, or the Appendices, and the document adequately describes the proposals.

C - The alternative of purchasing all bay/river sanctuary perimeter lands--especially St. George Island--should be considered.

R - See General Response E.

C - The qualifications of the Sanctuary Coordinator need to be in sufficient detail to assure adequate backgound in (a) ecology, (b) physical science, (c) quantitative management science, and (d) experience in applying these disciplines to natural resources management.

R - After sanctuary establishment, Florida's DNR will select a person as Sanctuary Coordinator to handle the responsibilities outlined in the FEIS. We are confident they will hire the most qualified person available using criteria similar to that suggested.

C - The Management Committee should be comprised of resource management professionals and scientists and be advised by technical and lay person advisory committees. Members should be appointed by the Governor and include one or more representatives from (a) Department of Environmental Regulation, (b) Game and Fresh Water Fish Commission, (c) Department of Natural Resources (Committee Chairperson), (d) Division of Forestry, (e) State University System - Resource Management Academician, and (f) State University System - Sea Grant and Marine Advisory Program.

The Lay-advisory Committee should include non-State agency persons to represent all interests affected in the Apalachicola Basin:

- o County Commissioners - Franklin, Gulf, Jackson, Calhoun, Gadsen, Leon, and Wakulla.
- o Commercial interests - fishing industry, seafood dealers, forest landowners, navigation organizations, agricultural landowners, sports clubs, campers and other recreationists, conservation groups, and soil and water conservation districts.

The Technical Advisory Committee should include: Northwest Florida Water Management District, Apalachee Regional Planning Council, U.S. Forest Service, U.S. Fish and Wildlife Service, U.S. Corps of Engineers, U.S. Geological Survey, Cooperative Extension Service, and representatives of Georgia and Alabama.

R - The Management Committee is intended to represent local and State interests. It is concerned primarily with sanctuary management and the sanctuary goals of research and education. As such, it is limited both in size and in scope. However, it is advised by subcommittees. The structures of both it and they have been changed in the FEIS and include most of the organization suggested, but are organized somewhat differently.

C - Franklin County cannot adequately represent the State University system.

R - It was never intended to. It merely selects someone to represent educational and scientific interests.

C - The University of Florida should be given the opportunity to review the Tri-Rivers Waterway Report.

R - This comment is outside the scope of the FEIS.

C - The Environmental Consequences Section gives little attention to scientific and professional papers that have stood the test of peer review and validation.

R - The FEIS is not a professional scientific journal. It is intended to analyze the environmental impacts in as clear, concise, and accurate a manner as possible, and it clearly meets the requirements of the NEPA regulations.

Institute of Food and Agricultural Sciences, University of Florida, Gainesville, Florida (Hans Riekerk, 6/18/79)

C- Notes that the consolidation of water and land areas into an estuarine sanctuary for purposes of research, education, and conservation is a laudable effort. However, does not subscribe to the presumption that "the more natural an ecosystem is, the more productive it will be" (Ref. Appendix II, p. 10). The functioning of the estuarine ecosystem depends upon continuous exchanges of detritus and salts with fresh and sea water fluxes that include catastrophic events.

R- We see no discrepancy between maintaining as natural an ecosystem as possible and the potentiality of hurricane floods, tidal waves, etc. having an influence on productivity since these also are natural events. The goal of the sanctuary is to keep man made influences to a minimum where these will adversely affect the ecosystem.

C- There appears to be a definitive bias toward utilization of the water-related resources and inhibition of land resources uses such as silviculture, based on an erroneous notion that silviculture is limited to the logging and regeneration activities of the first year, while in reality silviculture includes tending, disease, pest, fire, and admininstration management practices throughout the long rotation. The bias is most apparent in disacussions on economic impacts on Franklin County, perhaps because silviculture here is not labor intensive in contrast to the fisheries industry.

R- The prohibition on silviculture applies only to the lands proposed for acquisition. The restriction is for maintaining this land only as a relatively non-altered part of the estuarine ecosystem. There is not intended to be any bias towards utilization of any part of the system. It is true that approximately 60 percent of Franklin County's economy is dependent on the fishing industry and the utilization of this resource, within Federal and State game laws, will not harm the ecosystem.

C- Considering the importance of proper forestland management upstream from the proposed sanctuary, it appears logical to include representatives of the University of Florida in the Subcommittee on Research and Education.

R- Comment accepted. The FEIS shows that the University of Florida is included as a member of the subcommittee on Research and Education. It is recognized that Forestry and forest research will be immensely valuable to the estuarine sanctuary, and such research is encouraged.

Division of Engineering Research, Louisiana State University, Baton Rouge, Louisiana (John M. Hill, 5/21/79)

C- Approves and highly encourages the preservation of the estuary as a sanctuary for future generations. Submitted two Landsat generated photographs depicting water quality problems in the Apalachicola Bay and forestry activities surrounding the bay system.

R- Comment accepted and pictures appreciated.

St. Joe Paper Company, Port St. Joe, Florida
(Hugh W. White, Jr., 6/7/79)

C - Some of the proposed land includes good pine timberland and our future operations depend on this and other timberlands. We are not willing to sell that part of our land within the designated boundaries in Township 8 South, Range 6 East.

R - Position accepted. However, there are many alternatives available in addition to outright sale. It is hoped a mutually satisfactory arrangement can be worked out if the sanctuary is established. (Note: Under Florida law, condemnation is legally not an alternative).

☆ U. S. GOVERNMENT PRINTING OFFICE : 1979 _298-470/6385