

**FORT PIERCE INLET MANAGEMENT STUDY
IMPLEMENTATION PLAN**

CERTIFICATE OF ADOPTION

WHEREAS the Department of Environmental Protection, in partnership with St. Lucie County, has conducted a study of Fort Pierce Inlet, under the provisions of Section 161.161, Florida Statutes, for the purposes of evaluating the erosive impact of the inlet on adjacent beaches, and

WHEREAS the Department has developed an implementation plan which contains corrective measures to mitigate the identified impacts of the inlet, and

WHEREAS the implementation plan is consistent with the Department's program objectives under Chapter 161, Florida Statutes,

The Department does hereby adopt the following implementation actions:


- 1) Initial restoration of 2.3 miles of beach south of the inlet.
- 2) Placement of all beach compatible maintenance or offshore dredged material on downdrift beaches. Material shall be placed on beaches in areas of greatest need.
- 3) Placement of supplemental material from upland sources, or dredged from nearshore north of the inlet, or from seaward of depth of closure on the beaches south of the inlet such that the combined total of material from all sources equals or exceeds 130,000 cubic yards on an average annual basis at a minimum.
- 4) Improvement of the south jetty to incorporate a spur jetty or other measures to reduce backflow of material into the inlet.
- 5) The sediment budget contained in the study report is adopted as an interim measure and shall be formally validated or redefined in subsequent revisions of the plan based on a comprehensive monitoring plan by December 31, 2001.
- 6) Implement a comprehensive inlet, beach, and offshore monitoring program subject to approval of the Department.
- 7) Evaluate possible alternatives to facilitate the bypassing of sand from the shoreline north of the inlet to the downdrift beaches.

This plan is based on the supporting data contained in the study report, Fort Pierce Inlet Management Plan, Coastal Planning & Engineering, Inc., January 1996 studies conducted by the U.S. Army Corps of Engineers, and comments provided by public agencies and the citizenry of St. Lucie County. Each implementation action contained in this plan is subject to further evaluation, and subsequent authorization. Any action that may affect navigation associated with the inlet shall be consistent with all applicable federal requirements and subject to authorization from the U.S. Army Corps of Engineers.

It is the intent of the Department to assist in the implementation of the plan through the provision of funds granted under the Florida Beach Erosion Control Program. The Department's financial obligations shall be contingent upon sufficient legislative appropriations.

Nothing in this plan precludes the evaluation and potential adoption of other alternatives or strategies for management at Fort Pierce Inlet.

APPROVED FOR ADOPTION


G. Virginia B. Wetherell, Secretary
Department of Environmental Protection

5.30.97
Date

**FORT PIERCE INLET MANAGEMENT STUDY
SUMMARY OF FINDINGS REPORT
and
RECOMMENDED IMPLEMENTATION PLAN**

Introduction

The Department of Environmental Protection, in partnership with St Lucie County, completed an inlet management study of Ft. Pierce Inlet. The study, Fort Pierce Inlet Management Plan, Coastal Planning & Engineering, Inc., January 1996, was conducted under the provisions of Section 161.161, Florida Statutes, for the purpose of evaluating the erosive impact of the inlet on adjacent beaches, and to recommend corrective measures to mitigate identified impacts.

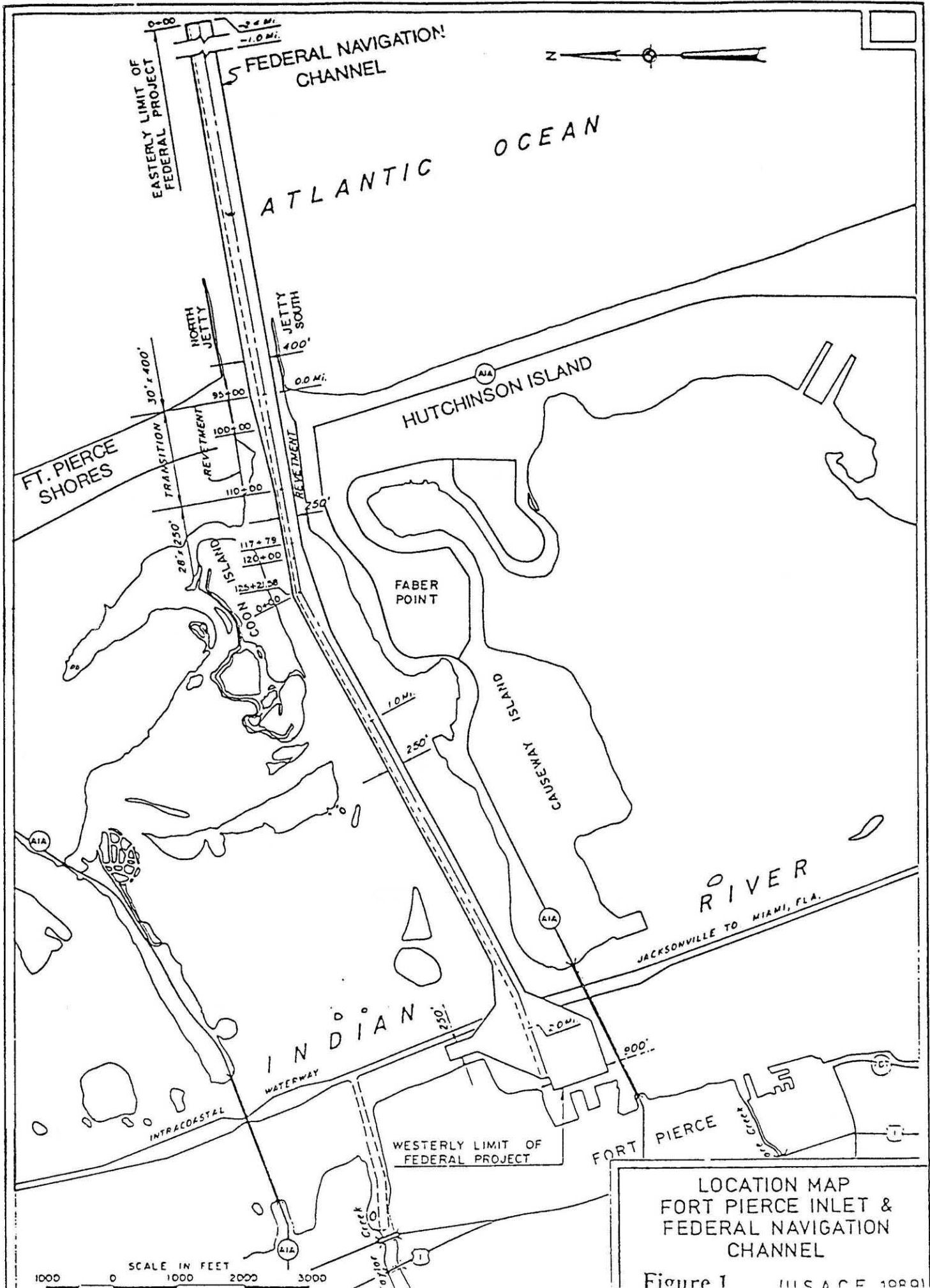
The study has been evaluated by the staff of the Bureau of Beaches and Coastal Systems as it relates to the Bureau's statutory responsibilities and program objectives. As a result of that evaluation, the Bureau has developed a recommended implementation plan. Adoption of the plan will facilitate and streamline the coastal construction permitting process during its implementation by providing a basis for consistency determination, and enable governmental entities to seek financial assistance from the Department to conduct management activities authorized in the plan.

This report contains a brief history of Ft. Pierce Inlet a summary of the Inlet study findings, and a consistency determination. The report also contains the recommended implementation plan.

History of Ft. Pierce Inlet

Fort Pierce Inlet was historically a meandering natural passage from the Indian River to the Atlantic Ocean in St. Lucie County and was known as the Indian River Inlet. After 1892 with the opening of the St. Lucie Inlet, the Fort Pierce Inlet became unusable due to shoaling. In 1920-1921 the current inlet was first modified by dredging and the construction of jetties.

In 1926 the jetties were reconstructed 900 feet apart and extended. In 1935 the inlet became a Federal Navigation Project and the entrance channel, interior channel, and turning basin were dredged in 1938. In 1995 the U.S. Army Corps of Engineers modified the Fort Pierce Harbor and enlarged the entrance channel to 30 feet by 400 feet, the interior channel to 28 feet by 250 feet, and dredging of the turning basin to a depth of 28 feet (Figure 1). The existing south jetty is approximately 1,200 feet long while the northern jetty is approximately 1,600 feet long.



The inlet modifications have caused the interruption of longshore sand transport along the adjacent shorelines. The area of influence of the inlet in its current configuration is 15,000 feet to the north and 12,000 feet to the south. A sediment budget, developed as part of the study, estimates the need to bypass 130,000 cubic yards annually to offset the impacts of the inlet (Figure 2). The sediment budget is based primarily on the evaluation of data from 1966 to 1988.

Study Summary

To accomplish the plan objectives, the study evaluated numerous potential management activities in terms of environmental impacts, permitting constraints, fiscal concerns, and potential achievability. The study recommends six principle elements involving sand bypassing and inlet improvements (Figure 3).

- 1) Continuation of U.S. Army Corps of Engineers navigation channel dredging with sand disposal onto downdrift beaches.
- 2) Construction of a 200 foot spur jetty on the south jetty.
- 3) Beach restoration of the 2.3 miles of shoreline south of the inlet.
- 4) Periodic beach fill maintenance.
- 5) Conduct beach and inlet monitoring.
- 6) Conduct environmental monitoring.

Consistency Determination and Comments

Each of the six primary recommendations has been evaluated for consistency with program objectives under Chapter 161, Florida Statutes. The consistency determination is based solely upon the recommendation as presented in the study report. A determination does not preclude further study of other potential management alternatives. Comments regarding each recommendation are as follows:

- 1) Continued maintenance dredging with beach disposal is consistent, but should include optimization of dredging cycles to facilitate sand bypassing. Efforts should be made to identify means to increase sand bypassing from north of the inlet. Management efforts should be undertaken with the State, the Corps of Engineers, and the local sponsor to ensure that maintenance dredging material is placed onto downdrift beaches in an optimal manner. There should also be an allowance for disposal sites to be located in areas of greatest need based on results from long term monitoring and be subject to Department approval.
- 2) Construction of a 200 foot spur jetty on the south jetty is consistent based on the expectation that it will reduce the amount of material migrating back into the navigation channel.

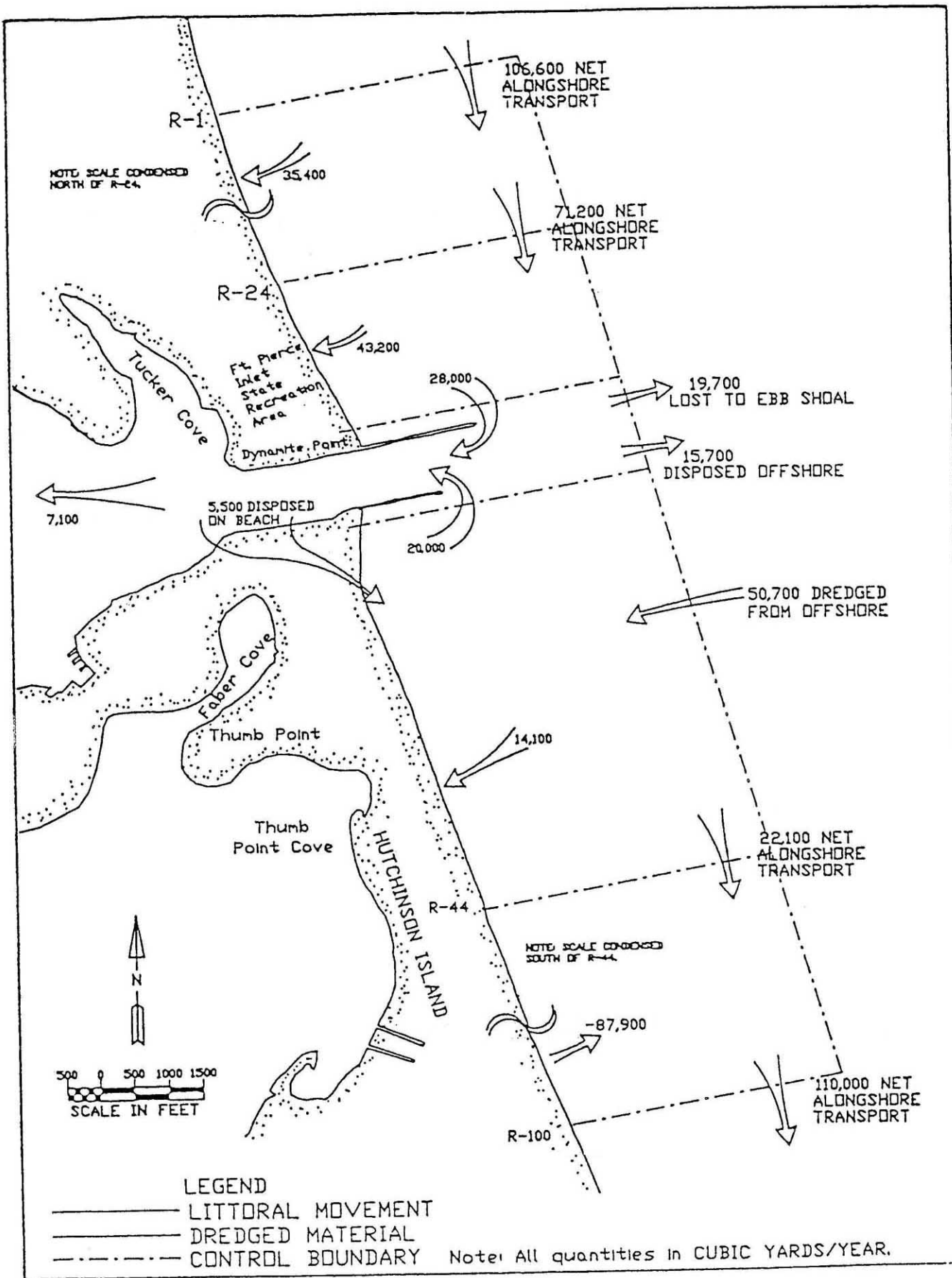


Figure 2

Coastal Planning and
Engineering, Inc.
(1996)

Recommended Implementation Plan

The Bureau recommends the following implementation plan be adopted to meet the requirements of Chapter 161, Florida Statutes:

- 1) Initial restoration of 2.3 miles of beach south of the inlet.
- 2) Placement of all beach compatible maintenance or offshore dredged material on downdrift beaches. Material shall be placed on beaches in areas of greatest need.
- 3) Placement of supplemental material from upland sources, or dredged from nearshore north of the inlet, or from seaward of depth of closure on the beaches south of the inlet such that the combined total of material from all sources equals or exceeds 130,000 cubic yards on an average annual bases at a minimum.
- 4) Improvement of the south jetty to incorporate a spur jetty or other measures to reduce backflow of material into the inlet.
- 5) The sediment budget contained in the study report is adopted as an interim measure and shall be formally validated or redefined in subsequent revisions of the plan based on a comprehensive monitoring plan by December 31, 2001.
- 6) Implement a comprehensive inlet, beach, and offshore monitoring program subject to approval of the Department.
- 7) Evaluate possible alternatives to facilitate the bypassing of sand from the shoreline north of the inlet to the downdrift beaches.

This plan is based on the supporting data contained in the study report, Fort Pierce Inlet Management Plan, Coastal Planning & Enaineering. Inc, January, 1996, studies conducted by the U.S. Army Corps of Engineers and comments provided by public agencies and the citizenry of St Lucie County. Each implementation action contained in this plan is subject to further evaluation, and subsequent authorization or denial, as part of the Department's environmental permitting and authorization process. Any action that may affect navigation associated with the inlet shall be consistent with all applicable federal requirements and subject to

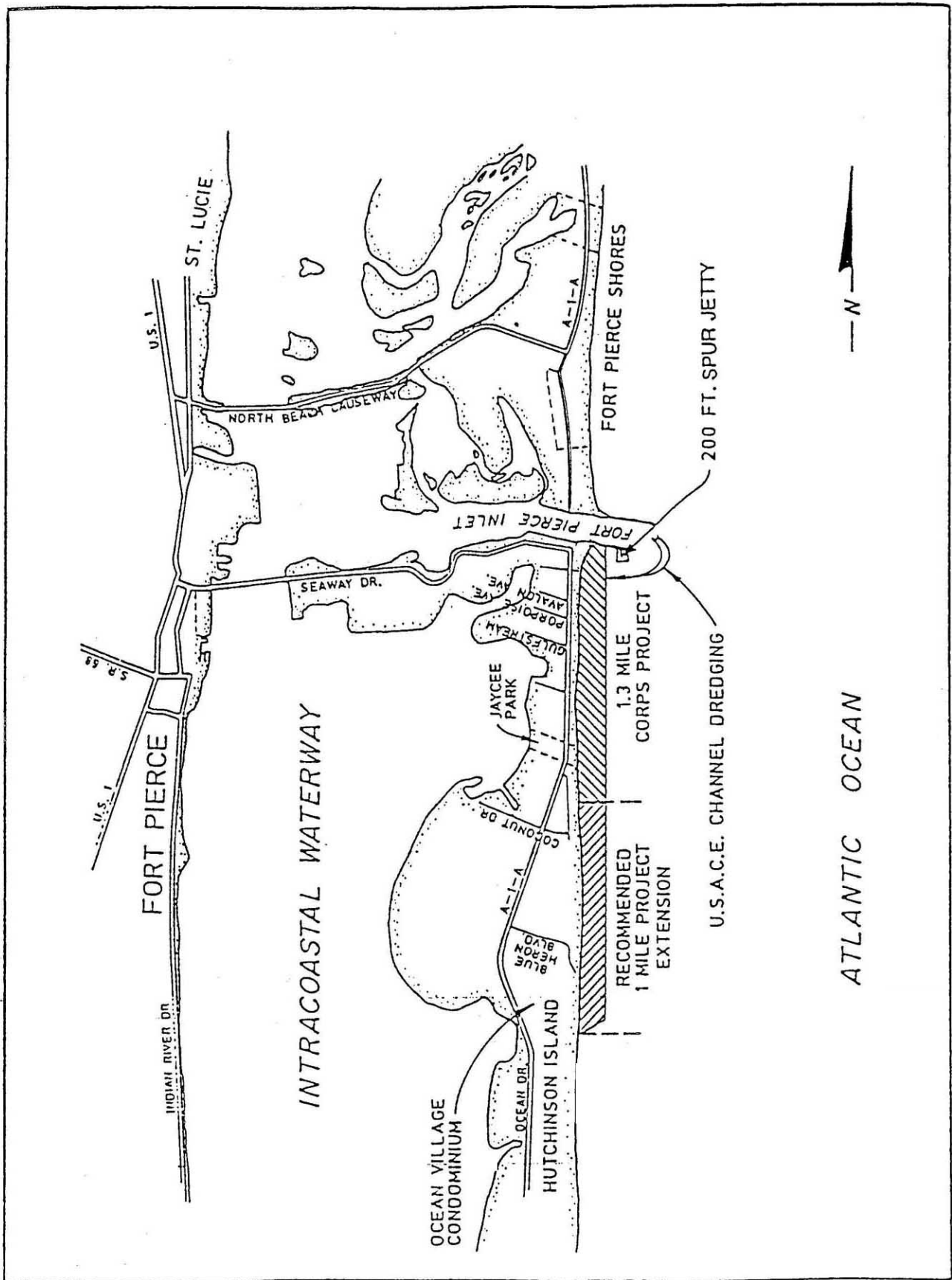


Figure 3

Coastal Planning and
Engineering, Inc.
(1996)

authorization from the U.S. Army Corps of Engineers.

The implementation activities identified above shall be eligible for state financial participation subject to Department approval and an appropriation from the Florida Legislature. The level of state funding shall be determined based upon the activity being conducted and Department policy. The Department may choose not to participate financially if the proposed method for implementation is not cost effective or fails to meet the intent of Section 161.142, Florida Statutes.

Nothing in this plan precludes the evaluation and potential adoption of other alternatives or strategies for management at Fort Pierce Inlet.