

**SEBASTIAN INLET MANAGEMENT STUDY  
IMPLEMENTATION PLAN**

**CERTIFICATE OF ADOPTION**

WHEREAS, the Department of Environmental Protection (“Department”), in conjunction with the Sebastian Inlet Tax District Commission, Brevard County and Indian River County, established a Technical Review Committee (“TRC”) to review information and make recommendations as to the adequacy of supporting studies and reports, under the provisions of Section 161.161, Florida Statutes, for the purposes of evaluating the erosive impact of Sebastian Inlet on adjacent beaches, and

WHEREAS the Department has developed an implementation plan to meet the Requirements of Chapter 161, Florida Statutes, 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) **Continue to bypass suitable sediment to the downdrift beaches.** Periodic maintenance dredging activities, including dredging of the channel and sand trap, will be conducted with placement of all beach compatible material on the downdrift beaches. Supplemental material from alternative sources will be used to meet, or exceed, an average annual placement objective of 70,000 cubic yards (“cy”). As a first priority, material should be placed on the beach in areas of greatest need based upon a plan approved by the Department. Areas of placement may be further refined based upon results from long term monitoring of the inlet and adjacent beaches. The bypassing objective of 70,000 cy is adopted as an interim measure and will be formally validated or redefined in subsequent revisions of the plan, based on a comprehensive monitoring plan, within 5 years of adoption of the Inlet Management Plan.
- 2) Restore the downdrift beaches designated by the Department as experiencing critical erosion. Downdrift beach restoration will be pursued in conjunction with implementation of shore protection activities under the Indian River County Beach Preservation Plan (IRCBPP) and be considered an integral part of both plans. The restoration of these beaches as stated in the IRCBPP, will be considered to meet state objectives for restoration of any possible adverse effects of the inlet. The activities under both plans will jointly maintain the restored shorelines.
- 3) **Evaluate possible alternatives to facilitate sediment bypassing.** Specific alternatives to be investigated include modifications to the

trapping capacity of the sand trap, structural changes to the south jetty to minimize backpassing of material into the inlet, and identification and use of possible sources of trapped littoral sediments (i.e. floodshoal and north shore) for bypassing to the downdrift beaches.

- 4) **Implement a comprehensive beach and offshore monitoring program.** Monitor inlet shoals and shoreline change, identify beach placement locations for future bypassing efforts and revalidate the sediment budget. The program will be coordinated with monitoring activities associated with the Indian River County shore protection projects.

This plan is based on the findings and recommendations of the Sebastian Inlet Technical Review Committee and comments provided by public agencies and the citizenry of Brevard and Indian River counties. Each implementation action contained in this plan is subject to further evaluation, and subsequent authorization, as part of the Department's environmental permitting and authorization process.

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. 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 Sebastian Inlet.

APPROVED FOR ADOPTION

  
Kirby B. Green, Deputy Secretary  
Department of Environmental Protection

16 Mar 00  
Date

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

Introduction

The Department of Environmental Protection, in conjunction with the Sebastian Inlet Tax District Commission, Brevard County and Indian River County, established a Technical Review Committee (“TRC”) to review information and make recommendations as to the adequacy of supporting studies and reports for adoption of an Inlet Management Plan pursuant to Section 161.161, Florida Statutes. The TRC reviewed the 1988 Sebastian Inlet District Comprehensive Management Plan, as amended, and the 1997 Survey-Based Sediment Budget Analysis for Sebastian Inlet.

The findings and recommendations of the TRC have been evaluated by the staff of the Office of Beaches and Coastal as they relate to the Office’s statutory responsibilities and program objectives. As a result of that evaluation, the Office has developed a recommended implementation plan to meet those responsibilities and objectives. Adoption of the plan will enable governmental entities to seek financial assistance from the Department for the conduct of management activities authorized in the plan.

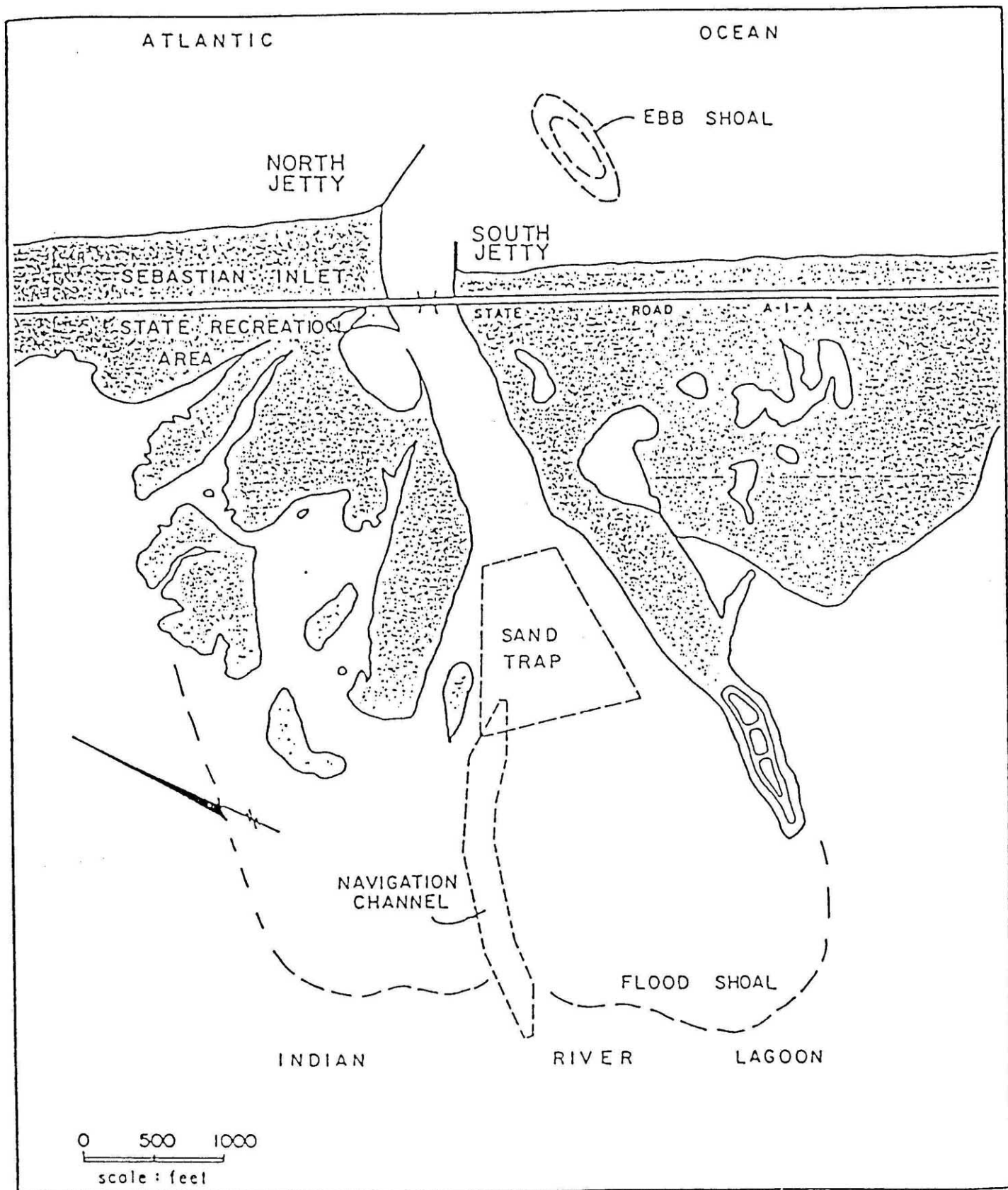
This report contains a brief history of Sebastian Inlet, a summary of the TRC’s findings, and recommendations, and the recommended implementation plan.

History of Sebastian Inlet

Sebastian Inlet forms the border between Brevard and Indian Counties. The first attempt to cut a man-made inlet in the Sebastian area was made in 1886, but a hurricane closed the inlet. Since that time, numerous efforts to establish and stabilize the inlet for navigation have occurred over the years resulting in the construction of jetties and a sand trap. The current structural configuration consists of a north jetty approximately 1600 feet in length, and a southern jetty of approximately 1200 feet. The sand trap has a design capacity of 180-190,00 cubic yards (cy).

The inlet channel, sand trap and associated structures are maintained by the Sebastian Inlet Tax District Commission. Maintenance dredging of the channel and sand trap occur periodically, with placement of suitable material on the downdrift beaches located south of the inlet.

Previous studies of the inlet suggest the need to bypass between 70,000 and 75,000 cy of material annually to offset the impacts of the inlet, In an effort to meet the bypassing



objective, the District places material from an upland source on the downdrift beaches when sufficient material is not available from the sand trap.

### **Technical Review Committee Findings and Recommendations**

1. Annual Bypassing Volume - Several reference sources reported annual bypassing volumes. There is some variation in the reported bypassing volumes, but most of them consistently report values of 70-75,000 cy/yr. The TRC agreed that a minimum of 70,000 cy/yr should be adopted in the inlet management plan with further refinement to be made following adoption of the Inlet Management Plan (IMP).
2. Flood Shoal - The TRC agreed that further study of long-term effects of the flood shoal on the inlet-related sediment budget should be performed. The position of the TRC was that existing studies do not provide sufficient information to answer questions regarding sand losses to the flood shoal. However, it was agreed that the IMP should move forward for adoption before additional studies are considered.
3. Historic Impacts - The consensus position of the TRC is that identification of the long-term impacts associated with the inlet in terms of impoundment of sand and sediment volume deficit to downdrift areas is incomplete and should be given priority in the implementation phase of the IMP. The TRC acknowledged that there is a high degree of interest from areas downdrift of the inlet with regard to the long-term impact of the inlet. The TRC agreed that there is a lack of sufficient information currently available to establish the long-term inlet impact. The TRC agreed that the long-term impact determination would require further study following adoption of the IMP.
4. Area of Inlet Influence - This item is closely linked to item three above. The TRC position is that there is variation in existing numbers and that there is a lack of sufficient analysis and information existing to establish a consensus position on the area of influence. The TRC agreed that this item should be given high priority for determination following adoption of the IMP.
5. Methods of Calculating Sand Budget - The consensus position of the TRC was that continued refinement of the sand budget formulation methodology is desired.
6. Sources of Supplemental Fill - Supplemental sand fill is sand that is placed in addition to the annual sand bypassing needed to maintain the annual sand budget. The supplemental sand would be placed in order to restore eroded beaches downdrift of the inlet. Indian River County is initiating sand search activities for supplemental sand for restoration work with a focus on offshore sand sources. The TRC agreed that cooperative sand search studies should be conducted for the supplemental sand following adoption of the IMP.

7. Sand Bypassing and Placement - Sand bypassing has been performed at Sebastian Inlet by either dredging of sand from the Inlet's sand trap and transfer by pipeline or by truck haul to downdrift beaches within the Sebastian Inlet State Recreation Area. The bypassing is performed generally on a 2-year cycle rather than on an annual basis, so that larger sand volumes can be transferred in a more economical manner. Currently, the inlet sand trap has a 180-190,000 cy capacity and is dredged when the sand volume reaches 150,000 cy. The TRC agreed that any further consideration of modifications to the inlet sand trap should be a subject of future study. Sand placement utilizing material from the sand trap starts at a distance of 3,000 feet south of the inlet and extends southward. The TRC agreed that sand placement should be in the downdrift area of greatest need within the area of influence of the inlet and be placed in an environmentally sensitive manner.
8. Environmental - The TRC identified and discussed a number of environmental issues relevant to sand management and sand bypassing at Sebastian Inlet. Environmental concerns discussed by the TRC included impacts to nearshore hardbottom areas, nesting marine turtles, dune vegetation, sea grasses, beach mouse habitat, and turbidity impacts. The TRC acknowledged that further environmental studies would likely be required in relation to larger mitigative fill projects or other components of the IMP in the permitting process for those projects. The TRC agreed that no further environmental studies should be required prior to adoption of the IMP.
9. Structural - Technical studies conducted to analyze structural improvements at Sebastian Inlet, particularly studies conducted by the University of Florida for the District, included recommendations to extend the south jetty. A jetty extension would prevent bypassed sand placed on the downdrift beaches from being transported back into the inlet and promote more efficient bypassing. A north jetty extension was also addressed in the studies. The TRC does not support a north jetty extension.
10. Public Resources – The Sebastian Inlet area is heavily used for a number of recreational and public interest activities, including boating, fishing, surfing, etc. The TRC concurred that all public resources associated with the inlet should not be addressed by the TRC or be included in the IMP, but be considered prior to implementation of any IMP components.

#### Recommended Implementation Plan

The Office of Beaches and Coastal Systems recommends the following implementation plan be adopted to meet the requirements of Chapter 161, Florida Statutes:

1. Continue to bypass suitable sediment to the downdrift beaches. Periodic maintenance dredging activities, including dredging of the channel and sand trap, will be conducted with placement of all beach compatible material on the

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