

MAINTENANCE DREDGING
INTRACOASTAL WATERWAY
VICINITY BAKERS HAULOVER
DADE COUNTY, FLORIDA

FINDING OF NO SIGNIFICANT IMPACT

I have reviewed the Environmental Assessment (EA) of the proposed action. Based on information analyzed in the EA, reflecting pertinent information obtained from other agencies and special interest groups having jurisdiction by law and/or special expertise, I conclude that the proposed action will have no significant impact on the quality of the human environment. Reasons for this conclusion are, in summary:

1. There will be no adverse impacts to endangered or threatened species, if the work is conducted in accordance with the Biological Opinion issued by the U.S. Fish and Wildlife Service for dredging within the Intracoastal Waterway and beach placement.

2. It is the District's determination that there will be no affect on significant historic properties. The Florida State Historic Preservation Officer concurred with this determination.

3. State water quality standards will be met.

4. The proposed project has been determined to be consistent with the Florida Coastal Zone Management Program.

5. Measures to eliminate, reduce, or avoid potential impacts to fish and wildlife resources will be implemented during project construction.

6. Benefits to the public will be maintenance of the navigation channel, continued local economic stimulus, increased sea turtle nesting habitat, and increased recreational beach area.

In consideration of the information summarized, I find that the proposed action will not significantly affect the human environment and does not require an Environmental Impact Statement.

Date

TERRY L. RICE
Colonel, Corps of Engineers
Commanding

Fonferek/CESAJ-PD-ER/2803/mw
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July 1997

MAINTENANCE DREDGING

IWW - VICINITY BAKERS HAULOVER
DADE COUNTY, FLORIDA

ENVIRONMENTAL ASSESSMENT

**US Army Corps
of Engineers**
Jacksonville District
South Atlantic Division

Table of Contents

1. PURPOSE AND NEED FOR ACTION.....	1
1.1 INTRODUCTION.....	1
1.2 AUTHORITY.....	1
1.3 DECISION TO BE MADE.....	1
1.4 RELEVANT ISSUES.....	1
1.5 PERMITS REQUIRED.....	1
1.6 METHODOLOGY.....	1
2. ALTERNATIVES.....	1
2.1 INTRODUCTION.....	1
2.2 HISTORY OF ALTERNATIVE FORMULATION.....	2
2.3 ELIMINATED ALTERNATIVES.....	2
2.4 DESCRIPTION OF ALTERNATIVES.....	2
2.4.1 <i>No Action Alternative</i>	2
2.4.2 <i>Dredging and North Beach Placement</i>	2
2.4.3 <i>Dredging and South Beach Placement</i>	3
2.5 ALTERNATIVE COMPARISON.....	5
2.6 PREFERRED ALTERNATIVE.....	6
3. AFFECTED ENVIRONMENT.....	6
3.1 INTRODUCTION.....	6
3.2 GENERAL DESCRIPTION.....	6
3.3 RELEVANT ISSUES.....	7
3.3.1 <i>Physical</i>	7
3.3.2 <i>Biological</i>	7
3.3.3 <i>Social</i>	8
3.3.4 <i>Economics</i>	8
4. ENVIRONMENTAL CONSEQUENCES.....	8
4.1 INTRODUCTION.....	8
4.1.1 <i>Cumulative Impacts</i>	8
4.1.2 <i>Irreversible and Irretrievable Commitment of Resources</i>	9
4.2 NO ACTION ALTERNATIVE.....	9
4.2.1 <i>Physical</i>	9
4.2.2 <i>Biological</i>	9
4.2.3 <i>Social</i>	9
4.2.4 <i>Economic</i>	9
4.2.5 <i>Cumulative effects</i>	9
4.2.6 <i>Unavoidable effects</i>	10
4.2.7 <i>Irreversible and Irretrievable Resource Commitments</i>	10
4.3 DREDGING AND NORTH BEACH PLACEMENT.....	10
4.3.1 <i>Physical</i>	10
4.3.2 <i>Biological</i>	10
4.3.3 <i>Social</i>	11
4.3.4 <i>Economic</i>	11
4.3.5 <i>Cumulative effects</i>	11
4.3.6 <i>Unavoidable effects</i>	11
4.3.7 <i>Irreversible and Irretrievable Resource Commitments</i>	12
4.4 DREDGING AND SOUTH BEACH PLACEMENT.....	12

4.4.1 <i>Physical</i>	12
4.4.2 <i>Biological</i>	12
4.4.3 <i>Social</i>	13
4.4.4 <i>Economic</i>	13
4.4.5 <i>Cumulative effects</i>	13
4.4.6 <i>Unavoidable effects</i>	13
4.4.7 <i>Irreversible and Irretrievable Resource Commitments</i>	13
5. LIST OF PREPARERS	14
6. CONSULTATION WITH OTHERS - PUBLIC INVOLVEMENT PROCESS	15
7. INDEX	15
8. REFERENCES	16

1. Purpose and Need for Action

- i. Economics
- j. Navigation

1.1 Introduction.

The Jacksonville District, US Army Corps of Engineers is the responsible federal agency for maintaining the Intracoastal Waterway (IWW), Jacksonville to Miami, Florida. Certain areas of the waterway develop shoals and impede the navigable capacity of the channel. The IWW near Bakers Haulover Inlet has been previously dredged and the material has been placed on the beach near the Inlet. An additional area located near the channel and the Inlet has been proposed for dredging, in order to reduce the long-term costs associated with maintenance dredging of the channel.

1.2 Authority.

The project was authorized by House Document 1889/86/1, the River and Harbors Act of 14 July 1960. The authority to dredge outside the channel is in accordance with 33 CFR 335-338 for advanced maintenance outside the dredging prism was granted by the Division Engineer by memorandum.

1.3 Decision to be Made.

The decision to be made is whether to conduct maintenance dredging, dredge the new area and whether to place the material on the beach either north or south of the Inlet.

1.4 Relevant Issues

- a. Water quality
- b. Benthos
- c. Seagrasses
- d. Sea turtles
- e. Manatees
- f. Cultural resources
- g. Aesthetics
- h. Recreation

1.5 Permits Required.

The maintenance dredging and beach placement of the dredged material will require a Florida Department of Environmental Protection Water Quality Certification in accordance with the Memorandum of Understanding between DEP and the US Army Corps of Engineers, and in accordance with Section 401 of the Clean Water Act.

1.6 Methodology.

An interdisciplinary team used a systematic approach to analyze the affected area, to estimate the environmental effects, and to write the environmental impact assessment. This included literature searches, coordination with agencies and private groups having expertise in particular areas, and field investigations.

2. ALTERNATIVES.

2.1 Introduction.

The alternatives section is the heart of this Environmental Assessment. This section describes in detail the no-action alternative, the proposed action, and other reasonable alternatives that were studied in detail. Then based on the information and analysis presented in the sections on the Affected Environment and the Probable Impacts, this section presents the beneficial and adverse environmental effects of all alternatives in comparative form, providing a clear basis for choice among the options for the decisionmaker and the public. A summary of this comparison is located in the alternative comparison chart, Table 2.1, page 5. This section has five parts:

- a. A description of the process used to formulate alternatives.
- b. A description of alternatives that were considered but were eliminated from detailed consideration.
- c. A description of each alternative.
- d. A comparison of the alternatives.
- e. The identification of the preferred alternative.

2.2 History of Alternative Formulation.

During the construction and subsequent maintenance of the existing channel, dredged materials have been placed in numerous locations including adjacent mangrove and emergent wetland areas. Sometimes the dredged material from maintenance was placed in these wetland areas to eliminate the wetland characteristics and allow the newly created fast land for residential and commercial development. As more and more areas became upland residential, no upland sites remained and available disposal options became limited. Beach placement became the only viable option. In addition, the State of Florida also requested that all suitable beach quality material be placed on the beach.

2.3 Eliminated Alternatives.

With the passage of the Clean Water Act, the placement of dredged material into waters of the United States became more difficult. The State of Florida would not issue water quality certification for placement of this dredged material into these waters. Therefore, the filling of wetlands and the creation of disposal islands were eliminated as alternatives. Upland sites are also not available in the area. Because the

material to be dredged is beach quality, the State of Florida objects to the placement in an ocean disposal site and since no ocean sites are within a range which would economically justify its use, the use of an ODMDS site was eliminated.

2.4 Description of Alternatives.

The only alternative to maintenance dredging is the No Action alternative. Only two alternative disposal options are available other than the No Action alternative; the beach area north and south of the Inlet.

2.4.1 No Action Alternative.

With this alternative no maintenance dredging or disposal operations would occur.

2.4.2 Dredging and North Beach Placement.

The work consists of dredging approximately 34,000 cubic yards of material from the IWW and 108,000 cubic yards of material from adjacent advanced maintenance dredging area. The material would be placed south of the Inlet on Haulover Beach. The impacts to manatees would be mitigated by the implementation of the standard manatee protection conditions (Appendix II). The seagrass beds would also be avoided. Impacts to nesting sea turtles would be avoided by placing the material on the beach outside of sea turtle nesting season. If this is not possible, then, the impacts would be mitigated by implementing a nest relocation program. Impacts from the physical placement of the material on subsequent sea turtle nesting would be mitigated by monitoring compaction of the beach material and if the placed material exceeds 500 cone penetrometer units (cpu's) then the beach will be tilled. Also, the beach will be

monitored for escarpments. If they are identified as being harmful to sea turtles trying to nest on the beach, then, the beach would also be tilled in that area.

2.4.3 Dredging and South Beach Placement.

The work consists of dredging approximately 34,000 cubic yards of material from the IWW and 108,000 cubic yards of material from adjacent advanced maintenance dredging area. The material would be placed south of the Inlet on Bal Harbour Beach. The impacts to manatees would be mitigated by the implementation of the standard manatee protection conditions (Appendix II). The seagrass beds would also be avoided. Impacts to nesting sea turtles would be avoided by placing the material on the beach outside sea turtle nesting season. If this is not possible, then, the impacts would be mitigated by implementing a nest relocation program. Impacts from the physical placement of the material on subsequent sea turtle nesting would be mitigated by monitoring compaction of the beach material and if the placed material exceeds 500 cone penetrometer units (cpu's) then the beach will be tilled. Also, the beach will be monitored for escarpments. If they are identified as being harmful to sea turtles trying to nest on the beach, then, the beach would also be tilled in that area.

2.5 ALTERNATIVE COMPARISON.

Table 2.1, Alternative Comparison

RESOURCES	NO ACTION	DREDGING AND NORTH BEACH PLACEMENT - SITE A	DREDGING AND SOUTH BEACH PLACEMENT - SITE B
Water Quality	No impacts.	Minor short-term increase in turbidity at dredge site and from return water along the beach.	Minor short-term increase in turbidity at dredge site and from return water along the beach.
Navigation	Major decrease in navigable capacity of the channel.	Major long-term benefit to recreational navigation.	Major long-term benefit to recreational navigation.
Benthos	No impact.	Minor long-term reduction of benthos at the dredging site and disposal site.	Minor long-term reduction of benthos at the dredging site and disposal site.
Manatees	No impact.	No impact with inclusion of special manatee protection conditions in contract.	No impact with inclusion of special manatee protection conditions in contract.
Seagrasses	No impact.	No impact.	No impact.
Biscayne Bay Aquatic Preserve	No impact.	Minor impact on resources in the preserve from the turbidity generated during dredging.	Minor impact on resources in the preserve from the turbidity generated during dredging.
Nearshore hardbottoms	No impact.	No impact.	No impact.
Sea turtle nesting	Minor reduction in the overall available nesting habitat in the area.	Medium long-term benefit from the maintenance of turtle nesting areas. Minor short-term impact from the relocation of turtles from construction area.	Medium long-term benefit from the maintenance of turtle nesting areas. Minor short-term impact from the relocation of turtles from construction area.
Cultural resources	No effect.	No adverse effect.	No adverse effect.
Recreation	Minor reduction in available beach for recreational purposes.	Medium short-term impact from beach placement of sandy material during recreational season. Medium long-term benefit to recreational activities by maintaining beach.	Medium short-term impact from beach placement of sandy material during recreational season. Medium long-term benefit to recreational activities by maintaining beach.
Aesthetics	Minor long-term reduction in the aesthetics from the loss of beach.	Major short-term impact from the presence and operation of construction equipment on the beach.	Major short-term impact from the presence and operation of construction equipment on the beach.
Economics	Minor long-term economic impact from reduction in tourism due to loss of beach.	Medium short-term impact on the local economy from the sale of goods and services in support of the construction. Medium long-term benefit on tourism from the maintenance of the beach.	Medium short-term impact on the local economy from the sale of goods and services in support of the construction. Medium long-term benefit on tourism from the maintenance of the beach.

2.6 PREFERRED ALTERNATIVE.

Both disposal alternatives are environmentally acceptable. The selected alternative would be dependent upon the desired results on the respective beach.

3. AFFECTED ENVIRONMENT.

3.1 INTRODUCTION.

The Affected Environment section succinctly describes the existing environmental resources of the areas that would be affected if any of the alternatives were implemented. This section describes only those environmental resources that are relevant to the decision to be made. It does not describe the entire existing environment, but only those environmental resources that would affect or that would be affected by the alternatives if they were implemented. This section, in conjunction with the description of the "no-action" alternative forms the base line conditions for determining the environmental impacts of the proposed action and reasonable alternatives. The environmental issues that are relevant to the decision to be made are the following:

- a. Water quality.
- b. Navigation.
- c. Benthos
- d. Manatees.
- e. Seagrasses.
- f. Nearshore hardbottom communities.
- g. Biscayne Bay Aquatic Preserve.

- h. Sea turtle nesting.
- i. Cultural resources.
- j. Recreation.
- k. Aesthetics.
- l. Economics.

3.2 GENERAL DESCRIPTION.

Bakers Haulover connects the Atlantic Ocean with the Intracoastal Waterway in the upper portions of Biscayne Bay through a barrier island in Miami, Dade County, Florida. Bal Harbour Park is a narrow fringe of public owned beach in front of a line of privately owned hotels and condominiums located on the south side of the Inlet. A public parking area is located adjacent to the Inlet with a paved path used for beach access. No motorized vehicles are allowed on the beach except for police and beach maintenance crews that drag the beach for debris. This beach has a exercise/jogging/walking path running parallel to the shoreline. The dune vegetation is watered by a sprinkler system. Haulover Park is located on the north side of the inlet. The park is highly developed with a marina, restaurant and a launching ramp in addition to the beach facilities. Parking facilities are located on the west side of the main highway with tunnels connecting the parking areas to the beach. Isolated mangrove wetlands subject to some tidal influence are located between the highway and paved parking areas. Feral cats inhabit most of the dune environment along both parks. It is thought that these cats were released due to the inability of the former owners to care for the pets. Some of these cats are still being feed by new residents of

the local community. These cats are also predators on birds and rodents that inhabit this area.

3.3 RELEVANT ISSUES.

3.3.1 *Physical.*

a. Water quality. The water quality of the area around the Inlet is quite high. This is also evidenced by the aquatic preserve and Class I, Outstanding Florida waters designation by the State of Florida. This is mostly attributed to the tidal flushing action through the inlet and the Gulf stream waters located near the shoreline. Indicators present which confirm this are the seagrass beds and abundant aquatic life in the inlet.

3.3.2 *Biological.*

a. Benthos. Benthos in the channel and along the beach would likely consist of worms and clams. There are no hardbottoms for colonization by algae.

b. Manatees. The Florida manatee, *Trichechus manatus*, is a federally-listed endangered species. It uses the Bay and IWW as a corridor for transportation up and down the coastline and the lush seagrass beds provide food.

c. Seagrasses. Seagrasses are located in the inlet within the photic zones of the IWW but outside the navigation channel. The clean saltwater from the ocean allows the light penetration for the growth of

the Seagrasses in this area. Seagrasses are limited within the channel due to the continual dredging, bottom disturbance from large vessels and the water depths within the channel.

d. Hardbottom communities. Hardbottom communities are located offshore of the beach areas. South of the Inlet, the hardbottoms are located far from the shoreline. North of the Inlet these hardbottom areas are located closer toward the shoreline. These provide cover for small fishes and crustaceans. These hardbottoms are colonized by algae and soft corals.

e. Sea turtles. Four species of sea turtles are found in the waters off the coast of Florida. They include the green (*Chelonia mydas*), loggerhead (*Caretta caretta*), leatherback (*Dermochelys coriacea*) and the hawksbill (*Eretmochelys imbricata*) sea turtles (USFWS, 1991). The green and leatherback comprise a small percentage of the turtles that nest in this area while the loggerhead makes up 97% of the nests on these beaches (Hoover, 1990).. The green sea turtles feed off the algae colonizing the reefs and jetties in the area. Loggerheads like to forage on the jelly fish and crustaceans on the bottom. The limiting factor for nesting along the beaches is *development.*

f. Biscayne Bay Aquatic Preserve. The State of Florida has designated this area of Biscayne Bay as an aquatic preserve due to its unusual and sensitive habitat for seagrasses

and manatees and good water quality.

3.3.3 *Social.*

a. **Historic, Archeological and Cultural Resources.** The National Register of Historic Places has been consulted and no properties listed therein are located within the project area. The project has been coordinated with the State Historic Preservation Officer who confirmed that the project would not affect Register properties. The area located adjacent to the confluence of the Inlet and the IWW has been surveyed for cultural resources. No resources were identified within the area to be dredged.

b. **Recreation.** Haulover Beach and Bal Harbour Beach Parks are located north and south of the Inlet, respectively. Overall the recreation of area is centered around tourism with the hotels and parks along the beaches. Beach activities include swimming, fishing, snorkeling, sunbathing, volleyball, surfing, sailing and various forms of exercising. Waterborne activities on the IWW and ocean include boating, sailing, and fishing.

c. **Aesthetics.** The Bal Harbour area is typical of urban beach environments with public access in that there are tall buildings adjacent to the beach with numbers of beach goers using the beach and its exercise trail. Haulover Park area is a typical public beach with its numerous parking lots and

recreational facilities. The Inlet has State Highway A-1A bridge over it with its concrete bulkheads.

3.3.4 *Economics.*

a. **Navigation.** Much of the navigation using the Inlet and IWW is for recreational purposes.

b. **Economics.** The economics of the area is centered around tourism and recreation. The placement areas are located in Bal Harbour and Haulover Parks north and south of the Inlet. Much of the adjacent beaches contain hotels and residential condominiums. The inlet is used by people renting vessels for fishing or boating.

4. ENVIRONMENTAL CONSEQUENCES.

4.1 INTRODUCTION.

This section describes the probable consequences of implementing each alternative on selected environmental resources. These resources are directly linked to the relevant issues listed in Section 1.4 that have driven and focus the environmental analysis. The following includes anticipated changes to the existing environment including direct and indirect impacts, irreversible and irretrievable commitment of resources, unavoidable effects and cumulative impacts.

4.1.1 Cumulative Impacts.

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (40 CFR 1508.7).

4.1.2 Irreversible and Irretrievable Commitment of Resources.

a. Irreversible. An irreversible commitment of resources is one in which the ability to use and/or enjoy the resource is lost forever. One example of an irreversible commitment might be the mining of a mineral resource.

b. Irretrievable. An irretrievable commitment of resources is one in which, due to decisions to manage the resource for another purpose, opportunities to use or enjoy the resource as they presently exist are lost for a period of time. An example of an irretrievable loss might be where a type of vegetation is lost due to road construction.

4.2 NO ACTION ALTERNATIVE

4.2.1 Physical.

a. Water quality. There would be no impact on water quality.

4.2.2 Biological

a. Benthos. There would be no impact on benthos.

b. Manatees. There would be no impact on manatees.

c. Seagrasses. There would be no impact on seagrass beds in the area.

d. Hardbottom communities. There would be no impact on hardbottoms.

e. Sea turtles. There would be a long-term minor impact on sea turtle nesting from the erosion of the beach without replenishment.

f. Biscayne Bay Aquatic Preserve. There would be no impact on the aquatic preserve.

4.2.3 Social.

a. Historic, archeological and historic resources. There would be no impacts on historic properties.

b. Recreation. There would be a long-term minor impact on recreation from the continual loss of navigation channel for recreational boat traffic and from the continual erosion of the beach.

c. Aesthetics. There would be a minor long-term adverse impact from the loss of beach area.

4.2.4 Economic.

a. Navigation. There would be a long-term major impact on navigation from the decrease in navigable capacity of the channel.

b. Economics. There would be a long-term impact on economics from the reduction in revenues attributed to the loss of recreational beach and the loss of navigable capacity of the channel.

4.2.5 Cumulative effects.

If this action was considered in conjunction with other similar projects and similar No Actions, there would be a substantial

adverse impact on recreation and economics of the State of Florida.

4.2.6 Unavoidable effects.

There would be an eventual loss of navigable capacity of the waterway and recreational beach from the continual sedimentation of the channel and erosion of the shoreline.

4.2.7 Irreversible and Irrecoverable Resource Commitments.

There would be no irreversible or irretrievable commitment of resources from the selection of this alternative.

4.3 DREDGING AND NORTH BEACH PLACEMENT

4.3.1 Physical.

a. Water quality. There would be a minor short-term increase in turbidity at the dredging site and the beach placement area.

4.3.2 Biological

a. Benthos. The benthic organisms at the dredging site would be eliminated. This area would be rapidly recolonized by the organisms that can be moved by tidal flows from adjacent areas. Crustaceans and clams would take longer to re-enter the area. The benthic organisms would be covered and smothered by the placement of material along the beach. The organisms in the dredged material would help recolonize the beach area.

b. Manatees. The auxiliary vessels associated with the dredging operation could impact manatees. In

order to reduce this impact, the standard state and Federal manatee protection conditions would be implemented. Included in these conditions are an education requirement, monitoring and avoidance of manatees. This avoidance includes a requirement to shutdown equipment should individuals come close to the equipment.

c. Seagrasses. Seagrasses in the area would be avoided and the contractor would be instructed to the presence of seagrasses in the area. No anchoring or disturbance of seagrass beds would be allowed. If seagrasses are inadvertently disturbed, the beds would be restored to their pre-project conditions. Minor, short-term increases in turbidity could impact seagrasses, however, the turbidity levels would be dissipated by the tidal velocities in the Inlet.

d. Hardbottom communities. There would be no impacts on hardbottom communities in the beach placement area.

e. Sea turtles. Dredging would not impact sea turtles. The placement of the material on the beach would impact sea turtle nesting if placed during the nesting season. This impact could be avoided by monitoring nesting activities and relocating the nests outside the construction area. Handling the eggs reduces the nesting success. However, when relocating the nests to a protected area, predation, a major cause of mortality in natural nests, would be eliminated having no

net loss or gain. Placing the material on the beach would have a long-term benefit on sea turtle nesting both on this beach and downdrift of this beach by retarding the erosion rate of the beach which is important nesting area.

f. Biscayne Bay Aquatic Preserve. There would be no adverse impacts on the integrity of the resources contained within the aquatic preserve.

4.3.3 *Social.*

a. Historic, archeological and historic resources. There would be no impact on historic resources within the project area.

b. Recreation. There would be a short-term minor impact on recreational navigation from the presence and operation of the dredging equipment in the navigation channel. There would also be a short-term minor impact on recreational activities on the beach from the presence and operation of the pipeline and heavy equipment at the placement area. There would be a short-term benefit on recreation from this same equipment as it provides entertainment in the form of curiosity to the beach goes on vacation as well as a source of new shell for collecting. There would be along-term minor benefit to beach recreation from the retardation of beach erosion which allows for a larger beach to recreate from.

c. Aesthetics. There would be a short-term degradation of the aesthetics of the navigation channel and a more substantial impact on aesthetics from the noise from the presence and the noise from the operation of heavy equipment and a disruption of the seascape.

4.3.4 *Economic.*

a. Navigation. There would be a long-term major benefit from the continued maintenance on the navigable capacity.

b. Economics. There would be a medium, short-term benefit to the local economy from the sale of goods and services in support of the construction effort. There would also be a medium long-term benefit on tourism from the maintenance of the beach.

4.3.5 *Cumulative effects.*

If this action was considered in conjunction with other similar projects and similar No Actions, there would be a substantial adverse impact on recreation and economics of the State of Florida.

4.3.6 *Unavoidable effects.*

There would be an eventual loss of navigable capacity of the waterway and recreational beach from the continual sedimentation of the channel and erosion of the shoreline.

4.3.7 Irreversible and Irretrievable Resource Commitments.

There would be no irreversible or irretrievable commitment of resources from the selection of this alternative.

4.4 DREDGING AND SOUTH BEACH PLACEMENT

4.4.1 Physical.

a. Water quality. There would be a minor short-term increase in turbidity at the dredging site and the beach placement area.

4.4.2 Biological

a. Benthos. The benthic organisms at the dredging site would be eliminated. This area would be rapidly recolonized by the organisms that can be moved by tidal flows from adjacent areas. Crustaceans and clams would take longer to re-enter the area. The benthic organisms would be covered and smothered by the placement of material along the beach. The organisms in the dredged material would help recolonize the beach area.

b. Manatees. The auxiliary vessels associated with the dredging operation could impact manatees. In order to reduce this impact, the standard state and Federal manatee protection conditions would be implemented. Included in these conditions are an education requirement, monitoring and avoidance of manatees. This avoidance includes a requirement to shutdown equipment should

individuals come close to the equipment.

c. Seagrasses. Seagrasses in the area would be avoided and the contractor would be instructed to the presence of seagrasses in the area. No anchoring or disturbance of seagrass beds would be allowed. If seagrasses are inadvertently disturbed, the beds would be restored to their pre-project conditions. Minor, short-term increases in turbidity could impact seagrasses, however, the turbidity levels would be dissipated by the tidal velocities in the Inlet.

d. Hardbottom communities. There would be no impacts on hardbottom communities in the beach placement area.

e. Sea turtles. Dredging would not impact sea turtles. The placement of the material on the beach would impact sea turtle nesting if placed during the nesting season. This impact could be avoided by monitoring nesting activities and relocating the nests outside the construction area. Handling the eggs reduces the nesting success. However, when relocating the nests to a protected area, predation, a major cause of mortality in natural nests, would be eliminated having no net loss or gain. Placing the material on the beach would have a long-term benefit on sea turtle nesting both on this beach and downdrift of this beach by retarding the erosion rate of the beach which is important nesting area.

f. Biscayne Bay Aquatic Preserve. There would be no adverse impacts on the integrity of the resources contained within the aquatic preserve.

4.4.3 *Social.*

- a. Historic, archeological and historic resources. There would be no impact on historic resources within the project area.
- b. Recreation. There would be a short-term minor impact on recreational navigation from the presence and operation of the dredging equipment in the navigation channel. There would also be a short-term minor impact on recreational activities on the beach from the presence and operation of the pipeline and heavy equipment at the placement area. There would be a short-term benefit on recreation from this same equipment as it provides entertainment in the form of curiosity to the beach goers on vacation as well as a source of new shell for collecting. There would be along-term minor benefit to beach recreation from the retardation of beach erosion which allows for a larger beach to recreate from.
- c. Aesthetics. There would be a short-term degradation of the aesthetics of the navigation channel and a more substantial impact on aesthetics from the noise from the presence and the noise from the operation of heavy equipment and a disruption of the seascape., especially near the condominiums

and hotels along the beach. This impact could be offset by the limitation of construction equipment after dark.

4.4.4 *Economic.*

- a. Navigation. There would be a long-term major benefit from the continued maintenance on the navigable capacity.
- b. Economics. There would be a medium, short-term benefit to the local economy from the sale of goods and services in support of the construction effort. There would also be a medium long-term benefit on tourism from the maintenance of the beach.

4.4.5 *Cumulative effects.*

If this action was considered in conjunction with other similar projects and similar No Actions, there would be a substantial adverse impact on recreation and economics of the State of Florida.

4.4.6 *Unavoidable effects.*

There would be an eventual loss of navigable capacity of the waterway and recreational beach from the continual sedimentation of the channel and erosion of the shoreline.

4.4.7 *Irreversible and Irretrievable Resource Commitments.*

There would be no irreversible or irretrievable commitment of resources from the selection of this alternative.

5. LIST OF PREPARERS.

The following professionals prepared the Environmental Assessment.

<u>NAME</u>	<u>DISCIPLINE</u>	<u>EXPERIENCE</u>	<u>ROLE IN PREPARING EIS</u>
William J. Fonferek	Biologist	19 years environmental impacts assessment	NEPA Coordinator, Biological Impact Assessment, Endangered Species Consultation
Don Fore	Civil Engineer	6 ½ years experience	Project Manager
Paul Stevenson	Landscape Architect	5 years experience recreation design, construction and development	Recreation Resources Analysis and Mitigation Development
Janice E. Adams	Archeologist	10 years cultural resources assessment	Cultural Resources
Matthew Miller	Environmental Engineer	3 years	HTRW and Water Quality Investigations and Impact Assessment

6. CONSULTATION WITH OTHERS - PUBLIC INVOLVEMENT PROCESS.

a. A public notice (PN-IWB-150) dated 23 April 1987 was initially issued for the project. A new area of advanced maintenance is now proposed for inclusion in the project. A public notice (PN-BH-212) dated 5 December 1996 and an addendum public notice (PN-BH-213) dated was issued for this addition. Comments following comments were received.

b. Ms Estelle Stern Spiegel, Mayor, Bal Harbour Village, responded to the public notice by letter dated 7 March 1997 strongly urging that the sand be placed on the Bal Harbour beach versus the Haulover Beach area since the natural sand transport southward is interrupted by the inlet. She also stated a willingness to provide financial assistance to ensure that sand is placed there.

Response: This area is within the federal standard and material could be placed there depending upon the wishes of the local sponsor.

c. Mr. Stanley Feinman responded to the public notice by telephone conversation dated 18 February 1997 stating his preference for placement of the material north of the Inlet.

d. Mr. Charles Edwards (sp.) responded to the public notice by letter dated 25 February 1997 suggesting a new alignment to the channel.

Response: This information will be considered if the project is re-evaluated.

7. INDEX.

A
aesthetics.....5
alternative comparison.....1
alternatives.....1, 2, 6
authority.....1

C
cultural resource7, 10

D
decision to be made1, 6
description of alternatives.....2

E
economics7, 8, 9

M
manatee.....2, 3, 4
mangrove2

N
navigation4, 7

O
ocean disposal.....2

P
physical.....2, 3
preferred alternative.....2

R
recreation7, 9, 10
relevant issues.....7

S
sea turtle.....2, 3
seagrass.....2, 3

U
unavoidable effects8

W
water quality2
wetlands.....2

8. REFERENCES

U.S. Army Corps of Engineers. June 1982. Survey Report and EIS Supplement. *Beach Erosion Control and Hurricane Protection Study for Dade County, Florida, North Haulover Beach Park.*

U.S. Army Corps of Engineers. June 1982. Appendices. . *Beach Erosion Control and Hurricane Protection Study for Dade County, Florida, North Haulover Beach Park.*

U.S. Fish And Wildlife Service. 1992. *Endangered and Threatened Species of the Southeast United States* (The Red Book). Prepared by the Ecological Services, Division of Endangered Species, Southeast Region. Government Printing Office, Washington, D.C. 1,606 pp. (two volumes).

U.S. Fish and Wildlife Service. 1991. Biological Opinion (FWS Log No. 4-1-91-210) , Baker's Haulover Cut.

APPENDIX I

COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

1.0 National Environmental Policy Act of 1969, as amended. Environmental information on the project has been compiled and the draft Environmental Assessment, was made available for public review through public notice in compliance with 33 CFR Parts 335-338. These regulations govern the Operations and Maintenance of US Army Corps of Engineers Civil Works Projects involving the Discharge of Dredged or Fill Material into Waters of the US or Ocean Waters. Public notice PN-IWB-150 dated 23 April 1987 initially advertised the work with an Environmental Assessment prepared. An additional area was proposed for advanced maintenance dredging. Public notice PN-BH-212 dated 5 December 1996 was issued. It was decided to include additional interested members of the public and a second notice PN-BH-213 dated shortly thereafter. Comments received in response to the public notice have been included in the new environmental assessment. This public coordination and environmental impact assessment complies with the intent of NEPA. The process will fully comply with the Act once the Findings of No Significant Impact has been signed by the District Commander.

2.0 Endangered Species Act of 1973, as amended.

Consultation was initiated with the US Fish and Wildlife Service by letter dated 25 January 1991 stating that the project would not impact sea turtles because it was initially scheduled outside the nesting season. Subsequent to that letter, it was determined that the completion would be delayed. Therefore, the USFWS responded with a Biological Opinion dated 15 February 1991. The Terms and Conditions of the BO require a monitoring and relocation program to begin on 1 March and continue until 15 October. The BO also requires compaction testing and escarpment monitoring for at least 2 years after the project is completed. These actions must be reported to the USFWS within 60 days after completion of the work. We reinitiated consultation by FAX dated 17 September 1993 to include the placement area located on the south side of the Inlet. The USFWS responded by letter dated 5 October 1993 stating the existing BO would apply to the alternative area. This project was fully coordinated under the Endangered Species Act; therefore, this project is in full compliance with the Act.

3.0 Fish and Wildlife Coordination Act of 1958, as amended. The project has been coordinated with the USFWS during the public notice period. No adverse comments were received. Therefore, it is in compliance with the Act.

4.0 National Historic Preservation Act of 1966, as amended (PL 89-665). An archival and literature review, including a review of the current National Register of Historic Places listing and consultation with the Florida State Historic Preservation Officer (SHPO), was conducted to determine if significant cultural resources are present in the project area. No significant archeological sites or historic properties are recorded in the project area, and the area is judged to have little potential for containing significant cultural resources. January 1995, the SHPO recommended that no further cultural resources investigations are required to meet the

requirements of the National Historic Preservation Act (PL 89-665). Therefore, the project would be in compliance.

5.0 Clean Water Act of 1972, as amended.

5.1. Section 401. A Water Quality Certification was issued by the Florida Department of Environmental Protection by letter dated 18 September 1995 (#502233929).

5.2. Section 404 (b)(1). The purpose of Section 404(b)(1) of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States through the control of discharges of dredged or fill material. Controls are established through restrictions placed on the discharges in Guidelines published in 40 CFR 230. The return water discharge is subject to evaluation pursuant this Section. An evaluation of the dredged material was conducted in accordance with Part 230.61 (Appendix I). The impacts are addressed in the Environmental Assessment and are primarily related to a minor increases in turbidity levels adjacent to the disposal area from the return water in the surf zone. Since there would be no other practicable alternatives to the proposal, the adverse impacts have been minimized to the extent possible, and no other restrictions have been violated, and, consequently, the proposed work would comply with the restrictions in Section 230.10. In addition, there is no indication that the return water from the dredged material to be used for the project would be contaminated above background levels. Therefore, the dredged material is designated as a Category 1 discharge and, in accordance with Part 230.63(a), no testing of chemical-biological interactive affects is required. Based on the probable impacts addressed above, compliance with the restrictions, and all other information concerning the fill materials to be used, the proposed work would comply with the Guidelines and the intent of Section 404(b)(1) of the Clean Water Act.

6.0 Clean Air Act of 1972, as amended. No air quality permits will be required for this project. Therefore, this Act would not be applicable.

7.0 Coastal Zone Management Act of 1972, as amended. The project has been evaluated in accordance with Section 307 of the Coastal Zone Management Act. It has been determined that the project would have no unacceptable impacts and would be consistent with the Florida Coastal Management Plan (Appendix III). In accordance with the 1979 Memorandum of Understanding and the 1983 Addendum to the Memorandum concerning acquisition of water quality certifications and other State of Florida authorizations, the final acceptance of the federal consistency determination is the issuance of the State water quality certification.

8.0 Farmland Protection Policy Act of 1981. No prime or unique farmland will be impacted by implementation of this project. This act is not applicable.

9.0 Wild and Scenic River Act of 1968, as amended. No designated Wild and Scenic river reaches will be affected by project related activities. This act is not applicable.

10.0 Marine Mammal Protection Act of 1972, as amended. Incorporation of the safe guards used to protect manatees during dredging and disposal operations will be implemented during construction, therefore, this project is in compliance with the Act.

11.0 Estuary Protection Act of 1968. No designated estuary will be affected by project activities. This act is not applicable.

12.0 Federal Water Project Recreation Act, as amended. There is no recreational development proposed for maintenance dredging or disposal. Therefore, this Act does not apply.

13.0 Resource Conservation and Recovery Act of 1976, (PL 94-580; 7 U.S.C. 100, et seq. This law has been determined not to apply as there are no items regulated under this act being disposed of or affected by this project.

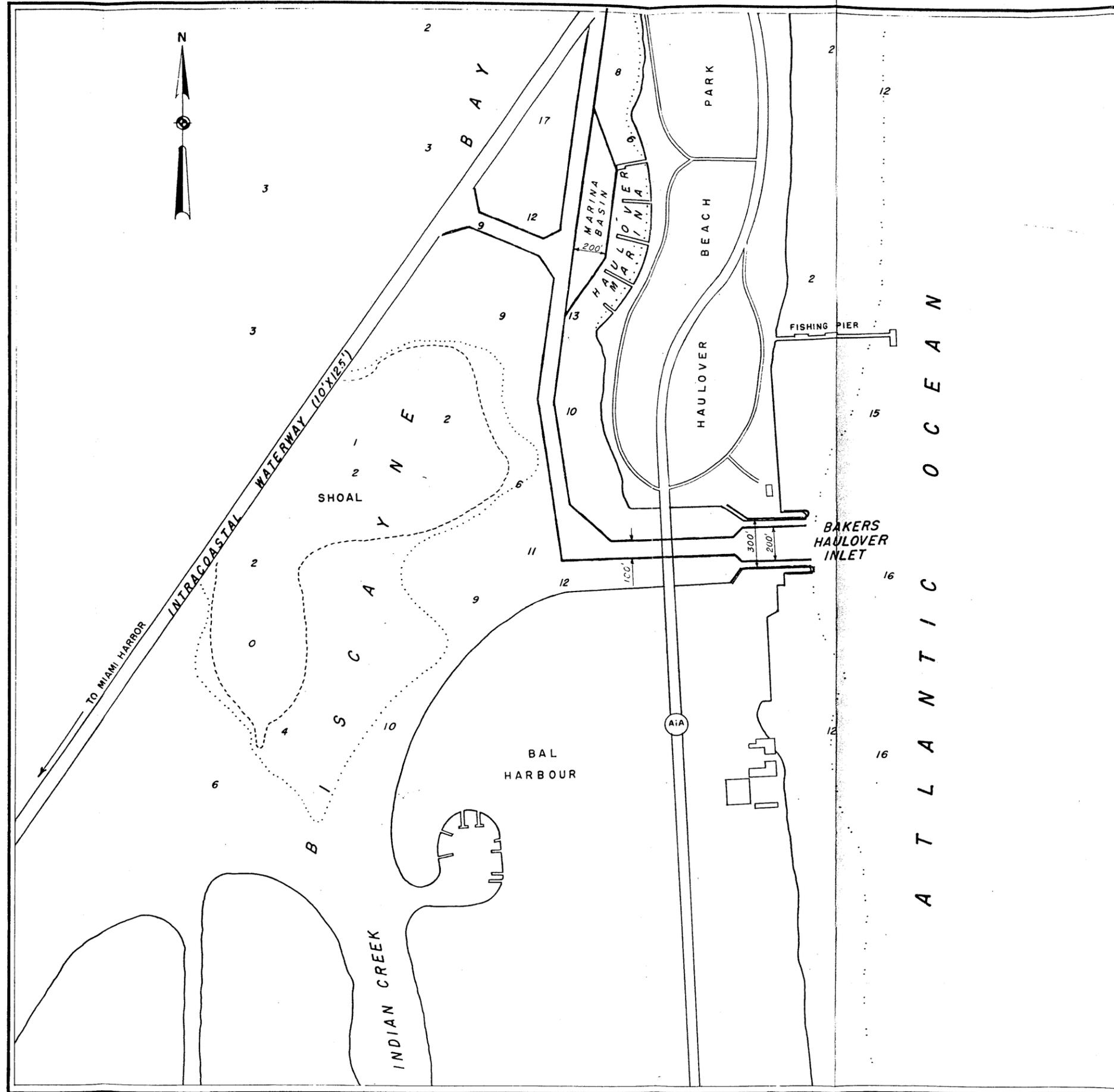
14.0 Toxic Substances Control Act of 1976, (PL 94-469; U.S.C. 2601, et seq. This law has been determined not to apply as there are no items regulated under this act being disposed of or affected by this project.

15.0 Migratory Bird Treaty Act. The work has been evaluated pursuant to the Migratory Bird Treaty Act. No migratory bird nesting areas would be affected by the proposed work.

16.0 E.O. 11990, Protection of Wetlands. No wetlands will be affected by project activities. This project is in compliance with the goals of this Executive Order.

17.0 E.O. 11988, Floodplain Management. No activities associated with this project will take place within a floodplain, therefore this project is in compliance with the goals of this Executive Order.

18.0 E.O. 11593, Protection and Enhancement of the Cultural Environment. An archival and literature review, including a review of the current National Register of Historic Places listing and consultation with the Florida State Historic Preservation Officer (SHPO), was conducted to determine if significant cultural resources are present in the project area. No significant archeological sites or historic properties are recorded in the project area, and the area is judged to have little potential for containing significant cultural resources. In a letter dated 21 February, 1995, the SHPO recommended that no further cultural resources investigations are required to meet the requirements of the National Historic Preservation Act (PL 89-665). Therefore, the work would comply with this Executive Order.



PROJECT: Reconstruction of existing jetties; protection of inlet shores seaward of existing 500-foot section; provision of a channel 11 feet deep and 200 feet wide in the ocean entrance, thence 8 feet deep and 100 feet wide to the Intracoastal Waterway, and a marina basin 8 feet deep and 200 feet wide. Length of project is 1.02 miles.

MEAN TIDAL RANGE: 2.5 feet near the inlet in the ocean and 2 feet in Biscayne Bay.

AUTHORIZATION FOR EXISTING PROJECT		
ACT	WORK AUTHORIZED	DOCUMENT
14 July 1960	Channel 11 x 200 feet in ocean entrance, thence 8 x 100 feet to Intracoastal Waterway; marina basin 8 x 200 feet; reconstruction of jetties and protection of inlet shores.	H.Doc. 189/86/1

BAKERS HAULOVER INLET, FLORIDA

SCALE IN FEET

200 0 200 400 600 800 1000

DEPARTMENT OF THE ARMY
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
 JACKSONVILLE, FLORIDA 6-30-71

APPENDIX II

ENDANGERED SPECIES CONSULTATION

file

September 20, 1993

Planning Division
Environmental Branch

Mr. David L. Ferrell
Field Supervisor
U.S. Fish and Wildlife Service
P.O. Box 2676
Vero Beach, Florida 32961-2676

Dear Mr. Ferrell:

This is in reference to the proposed maintenance dredging of the Intracoastal Waterway and Bakers Haulover Inlet in Dade County, Florida, and the subsequent placement of the dredged material on the beach south of the inlet (enclosure 1).

Consultation was previously conducted by letters dated September 24, 1990 and January 24, 1991 for the dredging and beach placement north of the inlet. We would like to incorporate by reference your previous Biological Opinion (BO) (FWS Log No. 4-1-91-210) dated February 15, 1991, and amend the project to include the beach south of the inlet as advertised in the April 23, 1987, public notice issued for the project. The work is likely to be conducted by a pipeline or suction dredge.

We do not believe this addition to the work first coordinated with your office would alter the conclusions of the BO. Therefore, we are asking for your concurrence in this matter. Your verbal or faxed response is required by September 21, 1993.

If you have any question regarding this request or project, please contact Mr. Bill Fonferok at 909-232-2803.

Sincerely,

A. J. Salem
Chief, Planning Division

Enclosure

bcc:
CESAJ-CO-ON
CESAJ-DP

Fonferok/CESAJ-PD-ES
Kurzbach/CESAJ-PD-ES
Smith/CESAJ-PD-E
Davis/CESAJ-PD-A
TOY Salem/CESAJ-PD

January 24, 1991

Planning Division
Environmental Resources Branch

Mr. David Ferrell
Field Supervisor
U.S. Fish and Wildlife Service
P.O. Box 2676
Vero Beach, Florida 32961-9712

Dear Mr. Ferrell:

This reinitiates consultation under Section 7 of the Endangered Species Act regarding proposed maintenance dredging of 30,000 cubic yards of sandy material from the vicinity of Baker's Haulover Cut with disposal on the beach at Sunny Isles, Dade County, Florida.

Consultation was initiated ^{by} ~~conducted~~ with your office by our letter of September 24, 1990. In your October 17, 1990 response, you concurred with our no effect determination provided work be completed before March 31, 1991. You required reinitiation of Section 7 consultation if work was expected to continue beyond March 31, 1991.

Work is scheduled to start mid-February and would be finished by March 31, 1991, barring delays due to weather or equipment failure. To allow for such contingencies, your concurrence with an extension of the dredging period until May 15, 1991 is requested.

Since our initial letter, the method of beach disposal has changed. The contractor intends to haul the material by truck on local roads to the Sunny Isles disposal site. This will eliminate the hydraulic pipeline initially proposed along 4 miles of beach.

To avoid affecting any turtle nests the contractor will begin beach monitoring and nest relocation activities March 1, and continue concurrently with project work until the contract is complete. Except for the above stated changes, project and biological information previously submitted remains unchanged.

Based on the above information, the Corps has determined that the proposed action will not affect any threatened or endangered species.

We would appreciate your prompt response to this notification.

Sincerely,

A. J. Salem
Chief, Planning Division

Lang/CESAJ-PD-ES/3691

pkp 1/28/91

Atmar/CESAJ-PD-ES

Smith/CESAJ-PD-E

Davis/CESAJ-PD-A

Salem/CESAJ-PD



Based on the above information, the Corps has determined that the proposed action will not affect any threatened or endangered species.

~~Your prompt response to this notification is respectfully requested.~~

Sincerely,

A. J. Salem
Chief, Planning Division

LANG/CESAJ-PD-ES/3691

WL/RKD/1/23/91

TMAR/CESAJ-PD-ES

SMITH/CESAJ-PD-E

DAVIS/CESAJ-PD-A

SALEM/CESAJ-PD

AS

BIOLOGICAL INFORMATION
INTRACOASTAL WATERWAY - MAINTENANCE DREDGING
IN THE VICINITY OF BAKERS HAULOVER CUT, DADE COUNTY, FLORIDA

1. Location: The Corps proposes to dredge in the Intracoastal Waterway (IWW) in the vicinity of Bakers Haulover Cut, Dade County and place the material on 400 feet of eroded beach at Sunny Isles, Florida (Figure 1).

2. Identification of Listed Species and Critical Habitat in the Area of the Proposed Activity. The Corps has identified the Florida manatee and the loggerhead, green and leatherback sea turtles as occurring in the project area.

3. Project Description: The Corps proposes to remove approximately 30,000 cubic yards of shoaled material from the IWW and to place it on 400 feet of eroded beach at Sunny Isles, north of Bakers Haulover Cut. A hydraulic pipeline dredge will remove the shoal to a depth of 10 feet (project depth of 8 feet with 2 feet of advanced maintenance). The material is primarily sand with some rock and shell.

Sand grain analysis data (enclosure 2) indicate that borrow sources for material suitable for beach disposal contain 2 - 10% fines. Based on the quantities of material to be dredged from these areas, the composition of fines contained in the material to be placed on the beach will be 4 - 7%

4. Assessment of Potential Impacts of the Proposed Activity on Listed Species or Critical Habitat. Manatees forage in the the project area and could be encountered during dredging operations in the Intracoastal Waterway. Dredged material disposal on the Sunny Isles beach front will occur in areas which are used for nesting by listed sea turtles.

Based on a personal communication with Mr. James Hoover, Supervisor for beach Maintenance in Dade County and DNR Marine Turtle permit holder for the subject area, the disposal beach is eroded and heavily used for recreation. Placement of the sandy dredged material on the Sunny Isles beach could benefit turtle nesting as project completion should result in a wider beach. Additionally, adverse impacts from erosion of turtle nesting habitat could be reduced as a result of project completion.

5. Efforts to Eliminate Potential Impacts on Listed Species.

a. Manatee: The usual contract provisions to educate work crews concerning the manatee's endangered and protected status will be implemented. Its presence/absence in the work area will be monitored daily and every precaution (including the shut-down of operations if appropriate) will be taken to avoid any encounter with or affect on this species.

b. Sea Turtles: According to Mr. Hoover, 185 nests were found on Miami beaches this year. Loggerhead nests represented 97% of the total; while green turtle nests comprised 3%. In 1989, 164 nests were found. Again, loggerheads represented 97% of the total while green and leatherback turtles accounted for 1% and 2%, respectively.

Mr. Hoover also advised the Corps that the total number of turtle nests has increased each year since the beaches were renourished in the mid 1980's. However, due to the extensive development and heavy recreational use of the beach, all nests found on the Miami beaches are moved to a hatchery.

As this project is scheduled to be completed during the winter of 1990-91, turtles will not be present and all direct affects will be avoided. However, the composition of the dredged material to be placed on the beach may affect sea turtle nesting habitat. To eliminate this affect, beach compaction measurements will be taken immediately after completion of dredged material disposal operations. If penetrometer readings are 500 or higher the beach will be thoroughly tilled to a 30 inch depth. Based on the planned measures to avoid impacts to species listed, the Corps has determined that project implementation will not affect the continued existence of those species which occur in the project area.

REFERENCES

Hoover, James. Personal communication. September 6, 1990,
(305) 868-7075.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

P.O. BOX 2676

VERO BEACH, FLORIDA 32961-2676

October 5, 1993

U.S. Army Corps of Engineers
Planning Division
Attn: Mr. A.J. Salem
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Salem,

This letter is in response to a FAX sent to us on September 17, 1993, regarding a change in the proposed maintenance dredging of Bakers Haulover Inlet in Dade County, Florida. The proposed change is to deposit dredged material on the south side of the inlet, rather than the north side. The U.S. Fish and Wildlife Service does not anticipate any additional adverse impact to listed sea turtles by this proposed change. Provided the area to be dredged does not contain material with more than 7 percent fines (as stated in the original project) the Service believes our February 15, 1991, Biological Opinion address the currently proposed activity.

If you have any questions, please contact Mr. Mark Yanno at (407) 562-3909.

Sincerely yours,

Kalani D. Cairns
Acting Field Supervisor

cc:

FWS, Jacksonville, FL
EPA, Atlanta, GA
NMFS, St. Petersburg, FL
NMFS, Panama City, FL
DEP, Tallahassee, FL (Attn: Dave Arnold)
DEP, Stuart, FL (Attn: Barbara Schroeder)



United States Department of the Interior

FISH AND WILDLIFE SERVICE

P.O. BOX 2676

VERO BEACH, FLORIDA 32961-2676

AD

February 15, 1991

Mr. A.J. Salem
Chief, Planning Division
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

FWS Log No: 4-1-91-210
Corps' Project: Baker's Haulover Cut

Dear Mr. Salem:

This responds to your letter, dated January 25, 1991, regarding the above-referenced project. Our comments are submitted in accordance with the consultation requirements of Section (7)(a)(2) of the Endangered Species Act, as amended (16 U.S.C. 1531 et. seq.).

PROJECT DESCRIPTION

The proposed work will consist of placing approximately 30,000 cubic yards of sandy dredged material along 1300 linear feet of beach at Baker's Haulover Cut, Dade County, Florida. The material will be dredged from the inlet, and hauled by trucks to the beach. The Corps of Engineers (Corps) reports less than 7 percent fines from samples in the area to be dredged, with most samples around 5 percent fine material.

CONSULTATION HISTORY

The Corps provided information on the project by letter, dated September 24, 1990, including grain size of sample borings, and density of sea turtle nesting. The Corps determined at that time that the project was not likely to adversely affect threatened and endangered species of sea turtles, because the work would be completed prior to March 31, 1991, thereby not affecting the beach during the turtle nesting season. Your letter, dated January 25, 1991, stated that the work was scheduled to start in mid-February, and that barring any delays, should be completed by March 31. However, your letter requested that the Service concur with an extension of the project completion date to May 15, 1991, due to uncertainties about weather conditions or other circumstances that may delay the project. Due to the probability of incidental take of sea turtle nests later in the spring, the Service is unable to concur with a "not likely to adversely affect" determination, and provides the following Biological Opinion.

BIOLOGICAL OPINION

This represents the Biological Opinion of the Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act. An administrative record of this consultation is on file in the Vero Beach, Florida, Field Office.

A. Species affected

Four species of sea turtles are known to nest in Florida: the loggerhead (Caretta caretta), green (Chelonia mydas), leatherback (Dermochelys coriacea), and hawksbill (Eretmochelys imbricata). The loggerhead turtle is expected to be by far the most common nesting species at the project site. Nesting by green turtles and leatherback turtles is relatively low along Florida's Atlantic coast. Hawksbill turtles are rarely found nesting on Florida's beaches, although they have been known to nest on other beaches in Dade County.

The loggerhead sea turtle (Caretta caretta) was listed as threatened on July 28, 1978. The nesting population of loggerheads in the United States is one of the two most significant nesting populations in the world, representing up to 30 percent of the worldwide loggerhead nesting population (Ross, 1982). This is in contrast to all other species of sea turtles, which nest primarily outside the U.S. Within the U.S., it nests primarily on beaches from North Carolina to Florida. Approximately 90 percent of loggerhead nesting within the U.S. occurs in Florida (Murphy and Hopkins, 1984). The highest density nesting beaches in Florida occur from Canaveral National Seashore, Volusia County, south to John U. Lloyd State Recreation Area in Broward County (Conley and Hoffman, 1986). Nesting densities vary from less than one nest per kilometer (km) on the average for some beaches in the northeast, southeast, and panhandle of Florida to over 600 nests per km on some stretches of beach in southern Brevard County (Conley and Hoffman, 1986; Ehrhart and Witherington, 1986). The most recent estimate for total annual nesting effort for the southeastern U.S. is 50,000 nests, based on ground surveys conducted in 1989 (Florida DNR, unpublished data; Georgia DNR, unpublished data; South Carolina WMRC, unpublished data; North Carolina WC, unpublished data).

The loggerhead nesting season is from late April to August, with most nesting occurring in June and July, and occasional nesting during September. The incubation period is temperature-dependent, and most nests hatch within 60 days, although 70 days may be required for some nests, particularly in the northern periphery of the nesting range. Primary threats to loggerheads within the U.S. include: 1) accidental drowning of sub-adult and adult turtles by commercial fishing activities; 2) degradation of nesting habitat by human activities from beach-front developments and the resulting artificial lighting, riprap bulkheads, seawalls, and other human disturbances; and 3) excessive nest predation by raccoons or hogs on some major nesting beaches, which is also associated with human alteration of the coastal environment.

Green sea turtle (*Chelonia mydas*) nesting within the U.S. occurs principally along the east-central and southeast Florida beaches. Nesting densities are much lower than for the loggerhead and range from 1-5 nests per km on most beaches within its major nesting range to 13-20 nests per km on high density green turtle nesting beaches in southern Brevard County and south Jupiter Island in Palm Beach County (Conley and Hoffman, 1986; Ehrhart and Witherington, 1986). Overall green turtle nesting in Florida has shown an increasing trend, with the highest recorded total of 746 nests in 1985 (Conley and Hoffman, 1986; Dodd, 1981). Nesting occurs from May to September, with the peak nesting occurring in July and August. The hatching period is similar to that of the loggerhead. The green turtle was listed on July 28, 1978, as endangered in Florida and on the west coast of Mexico, and as threatened elsewhere. Major threats to the green turtle within the U.S. are similar to those for the loggerhead. Green turtles, however, appear to be more sensitive to human disturbance and artificial lighting.

The leatherback sea turtle (*Dermochelys coriacea*) was listed as endangered throughout its range on June 2, 1970. Nesting within the U.S. occurs primarily in Puerto Rico and the Virgin Islands. However, the following total of leatherback turtle nests were reported from Florida's east coast beaches: 45 in 1986, 125 in 1987, 111 in 1988, and 99 in 1989 (B. Schroeder, 1990, pers. comm.). Nesting begins as early as late February and terminates by late July. Much of the leatherback's nesting effort is centered in Palm Beach County, but scattered nesting has been recorded on almost all of Florida's east coast beaches, with the most northerly record being from Blackbeard Island, Georgia (Conley and Hoffman, 1986; Seyle, 1985). The primary threat to this species in Florida is degradation of nesting habitat from beach-front developments.

The hawksbill sea turtle (*Eretmochelys imbricata*), listed as endangered on June 2, 1970, is a rare nester on the southeastern U.S. beaches, with only 1-2 nests recorded annually in Florida (Conley and Hoffman, 1986; Lund, 1985; McMurtray and Richardson, 1985). Nesting has been recorded for the months of June, July, August, and October and from Volusia, Brevard, Martin, and Dade Counties (Dalrymple, 1985; McMurtray and Richardson, 1985; Florida DNR, unpublished data).

B. Potential adverse impacts

We are concerned with the timing of the nourishment activities and compaction of the beach from nourishment material. We believe that if beach nourishment is undertaken during the nesting season, even with a relocation program, some nests will most likely remain undetected and subsequently buried by the nourishment material or crushed by heavy equipment. In spite of the best intentions and efforts by persons relocating nests; wind, rain, and tides can quickly obscure tracks and prevent workers from finding nests. In addition, turtle activities can often obscure nest locations, making interpretation of the site difficult, and depending on the experience and motivation of workers, some nests will remain undetected. Nearly all the nests are already relocated along this beach, mainly to avoid the disorientation of hatchlings caused by the bright lights along this beach. However, the depositing of material will further complicate the attempts to identify and relocate the nests and will pose an added threat to any undetected nests by the physical impact of the construction equipment on the beach. Although the material appears to be suitable, compaction of the sand could also adversely affect sea turtle nesting.

C. Determination

It is the Service's Biological Opinion that the project is not likely to jeopardize the continued existence of listed sea turtles. We do believe, however, that adverse impacts to sea turtles could result, particularly when viewed cumulatively in the context of other nourishment projects planned on sea turtle nesting beaches in Florida this year. The Reasonable and Prudent Measures provided with the Incidental Take Statement will reduce these possible impacts.

INCIDENTAL TAKE

Section 7(b)(4) of the Act requires that when a proposed agency action is found to be consistent with Section 7(a)(2) of the Act and the proposed action is likely to result in the take of some individuals of the listed species incidental to the action, the Service will issue a statement that specifies the impact (amount or extent) of such incidental taking. It also states that reasonable and prudent measures, coupled with terms and conditions to implement these measures, be provided to minimize such impacts. The Service must also specify procedures to be used to handle or dispose of any individual specimens taken. Reasonable and prudent measures are requirements of the action agency.

We have reviewed the biological information and other information relevant to this action, and based on our review, incidental take is authorized for all nests missed by a nest relocation program within the project boundary. This is inclusive of the direct impacts of nest burial and crushing and the indirect impacts of aberrant nests and broken eggs which may result from sand compaction in nesting seasons subsequent to nourishment activities.

REASONABLE AND PRUDENT MEASURES

The Service considers the following reasonable and prudent measures are necessary and appropriate to minimize the take of threatened and endangered sea turtles:

1. As stated in our previous concurrence letter on this project, all possible efforts should be made to complete the project prior to March 31.
2. If any beach nourishment activity occurs after March 1, nest surveys and relocation must begin on that date.
3. Nourished beaches will be tilled if compaction or escarpments occur.

TERMS AND CONDITIONS

Section 9 of the Endangered Species Act prohibits the taking of listed species without a special exemption. In order to be exempt from the prohibitions of Section 9 of the Act, the following terms and conditions, which implement the reasonable and prudent measures described above, must be complied with.

1. If any beach nourishment activity occurs after March 1, nest surveys and relocation must begin on that date. This small project is expected to be completed quickly; however, if it suffers a lengthy delay, nest relocation must continue until completion of the project or until October 15, whichever comes first.
3. Nourished beaches will be plowed to a depth of at least 36 inches immediately following completion of beach nourishment if sand compaction measures greater than 500 cone penetrometer index units (cpu). Sand compaction measurements will be taken in February for at least two consecutive years and tilling repeated if 500 cpu is exceeded.
4. Nest surveys and relocations will be conducted by personnel with prior experience and training in nest survey and relocation procedures, and with a valid Florida Department of Natural Resource permit. This is essential to reduce the number of undetected nests.
5. Nests shall be relocated between sunrise and 10 a.m. each day, and the relocation will be to a nearby self-release beach hatchery in a secure setting where artificial lighting will not conflict with hatchling orientation.
6. A report describing the actions taken to implement the terms and conditions will be submitted to this office within 60 days of completion of the proposed work for each year when activity has occurred. This report will include dates of actual construction activities, names and qualifications of personnel involved in nest surveys and relocation activities, description and location of hatcheries, nest survey and relocation results and hatching success of nests.

In the event a turtle nest is dug up by beach construction activities, the following procedure should be followed:

1. Immediately notify the Florida Department of Natural Resources-permitted individual responsible for nest relocation on the project for removal of the nest to the beach hatchery. Before eggs are relocated, the top of each egg will be marked with a non-toxic felt-tipped pen and individually and gently placed on 2-3 inches of moist sand in a rigid-walled container, being careful not to change the axis of the eggs. Eggs will be covered with a fine nylon mesh and then 2-3 inches of moist sand, shaded from the sun, and immediately transported to the hatchery. Eggs will be placed one at a time in the artificial nest chamber, while ensuring that the orientation of each egg remains as in the natural nest.

This concludes consultation under Section 7 of the Act, as amended. If there are modifications made in the project or if additional information becomes available relating to threatened or endangered species, re-initiation of consultation may be necessary.

Sincerely yours,


David L. Ferrell
Field Supervisor

cc:
FWS, Jacksonville, FL (Attention: E. Possardt)
EPA, Atlanta, GA
NMFS, St. Petersburg, FL
NMFS, Panama City, FL
DER, Tallahassee, FL
DNR, Tallahassee, FL
DNR, Stuart, FL (Attention: Barbara Schroeder)

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APPENDIX III

COASTAL ZONE MANAGEMENT CONSISTENCY
DETERMINATION

Florida Coastal Zone Management Program Federal Consistency Evaluation Procedures

1. Chapter 161, Beach and Shore Preservation.

The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes.

Response: The proposed work project is not seaward of the mean high water line and beach disposal would preserve shorelines and not affect shoreline processes.
Information will be submitted to the state for a permit in compliance with this chapter.

2. Chapters 186 and 187, State and Regional Planning.

These chapters establish the State Comprehensive Plan which sets goals that articulate a strategic vision of the State's future. Its purpose is to define in a broad sense, goals, and policies that provide decision-makers directions for the future and provide long-range guidance for an orderly social, economic and physical growth.

Response: The proposed work has been coordinated with the State without objection.

3. Chapter 252, Disaster Preparation, Response and Mitigation.

This chapter creates a state emergency management agency, with the authority to provide for the common defense; to protect the public peace, health and safety; and to preserve the lives and property of the people of Florida.

Response: The dredging and disposal of material on Juno Beach will protect the waterway which could be used in emergency situations for transportation purposes. Therefore, this work would be consistent with the efforts of Division of Emergency Management.

4. Chapter 253, State Lands.

This chapter governs the management of submerged state lands and resources within state lands. This includes archeological and historical resources; water resources; fish and wildlife resources; beaches and dunes; submerged grass beds and other benthic communities;

swamps, marshes and other wetlands; mineral resources; unique natural features; submerged lands; spoil islands; and artificial reefs.

Response: The maintenance dredging the Intracoastal waterway with beach disposal has been previously accomplished. The use of these State lands has been approved by the State. The proposal would comply with the intent of this chapter.

5. Chapters 253, 259, 260, and 375, Land Acquisition.

This chapter authorizes the state to acquire land to protect environmentally sensitive areas.

Response: Since the affected property already is in public ownership, this chapter would not apply.

6. Chapter 258, State Parks and Aquatic Preserves.

This chapter authorizes the state to manage state parks and preserves. Consistency with this statute would include consideration of projects that would directly or indirectly adversely impact park property, natural resources, park programs, management or operations.

Response: The proposed work would not affect any state parks or preserves, and would, therefore, be consistent with this chapter.

7. Chapter 267, Historic Preservation.

This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities.

Response: Maintenance of the existing waterway and use of the beach disposal area has been coordinated with the Florida State Historic Preservation Officer (SHPO). There are no known historic properties within the waterway or on the beach segments proposed as disposal area. If such resources are identified during construction, procedures will be implemented to avoid affects on such resources within the area of project impact. Therefore, the work will be consistent with the goals of this chapter.

8. Chapter 288, Economic Development and Tourism

This chapter directs the state to provide guidance and promotion of beneficial development through encouraging economic diversification and promoting tourism.

Response: The maintenance dredging of the waterway and beach disposal encourages commercial and recreational use which provides economic benefits to the area. Therefore, the work would be consistent with the goals of this chapter.

9. Chapters 334 and 339, Public Transportation.

This chapter authorizes the planning and development of a safe balanced and efficient transportation system.

Response: The maintenance dredging of the waterway promotes commercial navigation within the area.

10. Chapter 370, Saltwater Living Resources.

This chapter directs the state to preserve, manage and protect the marine, crustacean, shell and anadromous fishery resources in state waters; to protect and enhance the marine and estuarine environment; to regulate fishermen and vessels of the state engaged in the taking of such resources within or without state waters; to issue licenses for the taking and processing products of fisheries; to secure and maintain statistical records of the catch of each such species; and, to conduct scientific, economic, and other studies and research.

Response: The maintenance dredging of this area would not adversely affect saltwater living resources. Based on the overall impacts of the work, the work is consistent with the goals of this chapter.

12. Chapter 372, Living Land and Freshwater Resources.

This chapter establishes the Game and Freshwater Fish Commission and directs it to manage freshwater aquatic life and wild animal life and their habitat to perpetuate a diversity of species with densities and distributions which provide sustained ecological, recreational, scientific, educational, aesthetic, and economic benefits.

Response: No living land or freshwater resources would be impacted by the maintenance dredging. Therefore, the work would comply with the goals of this chapter.

13. Chapter 373, Water Resources.

This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

Response: This work does not involve water resources as described by this chapter.

14. Chapter 376, Pollutant Spill Prevention and Control.

This chapter regulates the transfer, storage, and transportation of pollutants and the cleanup of pollutant discharges.

Response: This work does not involve the transportation or discharging of pollutants. Condition will be placed in the contract to handle any inadvertent spill of pollutants. Therefore, the project would comply with this Act.

15. Chapter 377, Oil and Gas Exploration and Production.

This chapter authorizes the regulation of all phases of exploration, drilling, and production of oil, gas, and other petroleum products.

Response: This work does not involve the exploration, drilling or production of gas, oil or petroleum product and therefore does not apply.

16. Chapter 380, Environmental Land and Water Management.

This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development.

Response: The maintenance dredging of the waterway has been coordinated with the local regional planning commission. Therefore, the work would be consistent with the goals of this chapter.

17. Chapter 388, Arthropod Control.

This chapter provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the state.

Response: The work would not further the propagation of mosquitoes or other pest arthropods.

18. Chapter 403, Environmental Control.

This chapter authorizes the regulation of pollution of the air and waters of the state by the DEP.

Response: The DEP issued a water quality certification for the project. No air pollution permits are necessary for the project. Effects of the operation of construction

equipment on air quality would be minor. Therefore, the work is complying with the intent of this chapter.

19. Chapter 582, Soil and Water Conservation.

This chapter establishes policy for the conservation of the state soil and water through the Department of Agriculture. Land use policies will be evaluated in terms of their tendency to cause or contribute to soil erosion or to conserve, develop, and utilize soil and water resources both onsite or in adjoining properties affected by the work. Particular attention will be given to work on or near agricultural lands.

Response: The proposed work is not located near or on agricultural lands. Therefore, the project would comply with this chapter.

APPENDIX IV

COORDINATION DOCUMENTATION



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF
Construction-Operations Division
Public Notice No. PN-IWB-150

APR 23 1987

PUBLIC NOTICE

TO WHOM IT MAY CONCERN: The District Engineer, Jacksonville District, U.S. Army Corps of Engineers, has forwarded an application to the State of Florida Department of Environmental Regulation pursuant to Section 404 of the Clean Water Act of 1977. This Federal project is being evaluated and coordinated pursuant to 33 CFR 209.145.

Comments regarding the application should be submitted in writing to the District Engineer at the above address within 30 days from the date of this notice. Any person who has an interest which may be affected by the disposal of this dredged material may request a public hearing. The request must be submitted in writing to the District Engineer within 30 days of the date of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity.

If you have any questions concerning this application, you may contact Patricia Hanson of this office, telephone 904-791-3729.

WATERWAY AND LOCATION: IWW, vicinity of Bakers Haulover Inlet, Dade County, Florida.

WORK AND PURPOSE: The work consists of dredging an estimated 100,000 cubic yards of sand from the Intracoastal Waterway from an area approximately 150 feet wide by 7,200 feet long and 14 feet deep. The sand material will be placed by pipeline on one or both beaches located immediately north and south of Bakers Haulover Inlet.

PROJECT AUTHORIZATION: Act of 14 July 1960, House Document 189/86/1.

EVALUATION:

a. Disposal Alternatives: Designation of the proposed disposal site for dredged material associated with this Federal project shall be made through the application of guidelines promulgated by the Administrator, EPA, in conjunction with the Secretary of the Army. If these guidelines alone prohibit the designation of this proposed disposal site, any potential impairment to the maintenance of navigation, including any economic impact on navigation and anchorage which would result from the failure to use this disposal site, will also be considered.)

b. Historical Resources: The National Register of Historic Places and the latest supplement to the Register were consulted. No resources have been listed in the Register that may be affected by the project's operations. Existing historical, archeological, and cultural resources within the work area will be so designated by the Corps and precautions taken to preserve all such resources as they existed at the time they were located. If during construction activities the Corps observes unusual items that might have historical or archeological value, such observations shall be reported as soon as practicable.

c. Fish and Wildlife Resources: Construction activities will be kept under surveillance, management, and control to minimize interference with, disturbance to, and damage of fish and wildlife. The surveillance, management, and control will be performed by either Corps or Contractor depending upon who is performing the work. Contract work is under the supervision of the Corps.

d. Threatened or Endangered Species: The Corps or Contractor will monitor and instruct all personnel associated with the construction of the project about the presence of manatees and/or sea turtles in the area and the need to avoid collisions. All vessels associated with the project will be required to operate at "no wake" speeds at all times while in shallow waters, or channels, where the draft of the boat provides less than 3 feet clearance of the bottom. Boats used to transport personnel will be shallow-draft vessels, preferably of the light-displacement category, where navigational safety permits. Vessels transporting personnel between the landing and the dredge shall follow routes of deep water to the extent possible. The Corps or Contractor will brief their personnel concerning the civil and criminal penalties for harming, harassing, or killing manatees and/or sea turtles, which are protected under the Endangered Species Act and the Marine Mammal Protection Act. The Corps or Contractor will be held responsible for any manatee and/or sea turtles harmed, harassed, or killed as a result of the construction of the project. The Corps or Contractor will keep a log detailing all sightings, collisions, damage, or killing of manatees and/or sea turtles which have occurred during the maintenance dredging period. Any collision with a manatee and/or sea turtle resulting in death or injury to the animal shall be reported immediately to the Corps' Environmental Resources Branch for Contractor work and to the Fish and Wildlife Service (Jacksonville Area Office) for Corps' work for investigations so the appropriate course of action can be taken. Following project completion, the Corps will submit a report summarizing the above incidents to the U.S. Fish and Wildlife Service.

APPLICABLE LAWS: The following laws are, or may be, applicable to the review of the proposed disposal sites and to the activities affiliated with this Federal project:

1. Section 404 of the Clean Water Act of 1977 (PL 95-217) (33 U.S.C. 1344).

2. Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (PL 92-532) (33 U.S.C. 1413, 86 Stat. 1052).

3. Section 302 of the Marine Protection, Research, and Sanctuaries Act of 1972 (PL 92-532, 86 Stat. 1052).

4. The National Environmental Policy Act of 1969 (PL 91-190) (42 U.S.C. 4321-4347).

5. Sections 307(c)(1) and (2) of the Coastal Zone Management Act of 1972 (16 U.S.C. 1456(c)(1) and (2), 86 Stat. 1280).

6. The Fish and Wildlife Act of 1956 (16 U.S.C. 472a et seq).

7. The Migratory Marine Game-Fish Act of 1959 (16 U.S.C. 760c-760g).

8. The Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661-666c).

9. The Endangered Species Act of 1973 (PL 93-205) (16 U.S.C. 668aa-668cc-6, 87 Stat. 884).

10. The National Historic Preservation Act of 1966 (16 U.S.C. 470, 80 Stat. 915).

11. Section 313 of the Clean Water Act of 1977 (33 U.S.C. 1323, 82 Stat. 816).

DISSEMINATION OF NOTICE: You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have an interest in this matter.

COORDINATION: This notice is being sent to, and coordinated with, the following agencies:

FEDERAL AGENCIES:

Commander, Seventh Coast Guard District, Miami, FL
Director, Atlantic Marine Center, National Ocean Service, Norfolk, VA
FDA, Regional Shellfish Specialist, Atlanta, GA
Director, National Park Service, Southeast Region, Atlanta, GA
Regional Director, National Park Service, Southeast Region, Atlanta, GA
Regional Director, Fish & Wildlife Service, Atlanta, GA
Field Supervisor, Fish & Wildlife Service, Jacksonville, FL
Field Supervisor, Fish & Wildlife Service, Vero Beach, FL
Regional Hydrologist, U.S. Geological Survey, Atlanta, GA
District Chief, U.S. Geological Survey, WRD, Tallahassee, FL
Regional Hydrologist, NOAA, National Weather Service, Ft. Worth, TX
Southeast River Forecast Center, NOAA, National Weather Service, Atlanta, GA

Environmental Protection Agency, EA Branch, Review Section, Atlanta, GA
Environmental Protection Agency, Ofc of Fed Activities, Washington, DC
Federal Energy Regulatory Commission, Atlanta, GA
National Marine Fisheries Service, EA Branch, Panama City, FL
National Marine Fisheries Service, EA Branch, St. Petersburg, FL
Federal Maritime Commission, Ofc of Energy & Environ. Impact, Wash, DC
USDA, Soil Conservation Service, Gainesville, FL

STATE AGENCIES:

Executive Dir, DNR, Tallahassee, FL
DNR, Div of Beaches & Shores, Tallahassee, FL
Fla. Game & Fresh Water Fish Comm, Lakeland, FL
Secretary, Dept of Environmental Regulation, Tallahassee, FL
Dept of Agriculture, Bureau of Soil & Water Conservation, Gainesville, FL
Director, Florida Game & Fresh Water Fish Commission, Tallahassee, FL
Dir, Div of Archives, History & Records Management, Tallahassee, FL
Secretary, Dept of Transportation, Tallahassee, FL
Sanitary Engineer, Dept of HRS, Jacksonville, FL
Federal Highway Admin, Tallahassee, FL

ENVIRONMENTAL ORGANIZATIONS:

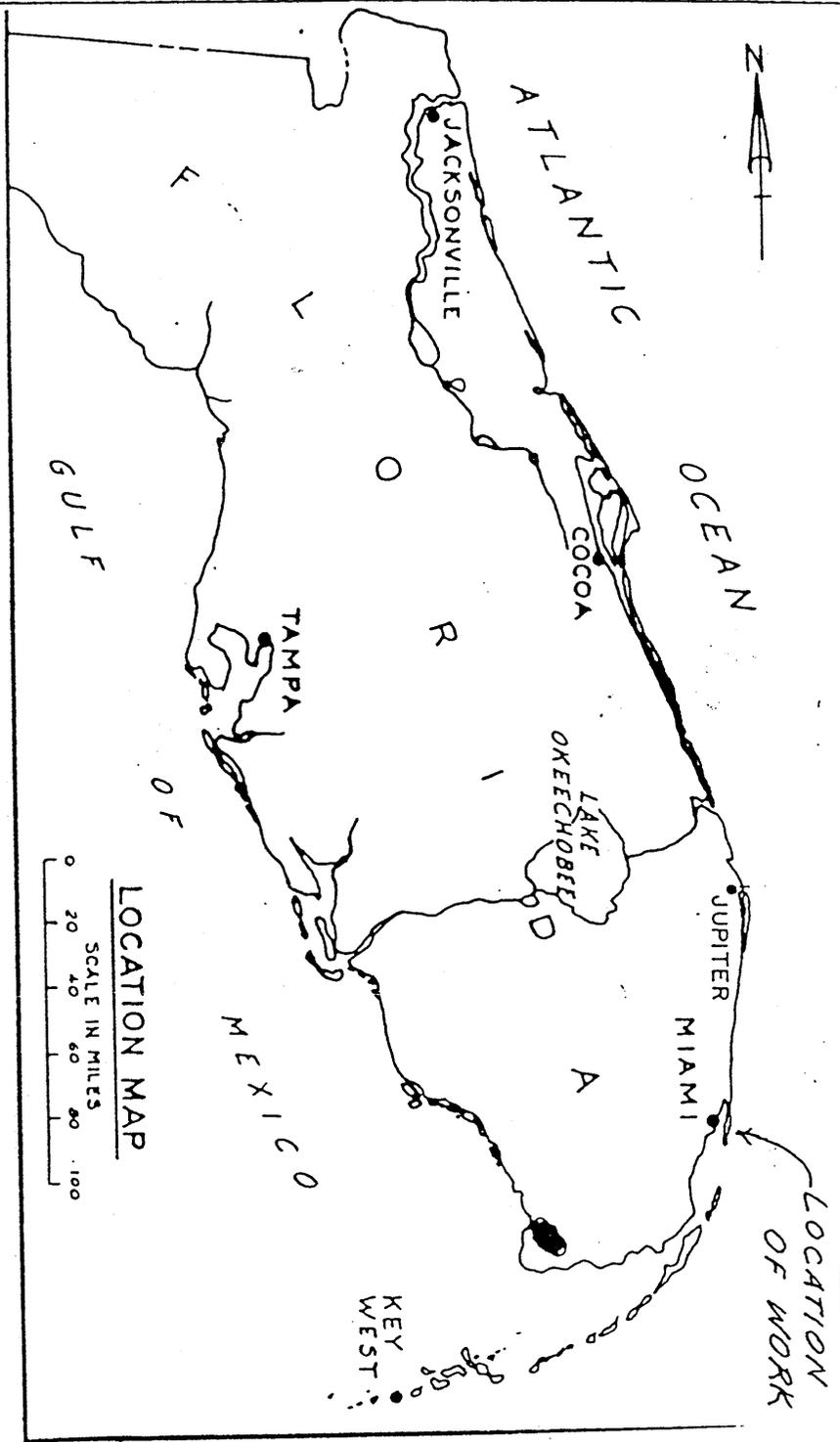
Executive Director, Florida Audubon Society, Maitland, FL
Executive Director, Florida Wildlife Federation, West Palm Beach, FL

LOCAL GOVERNMENTS:

County Commissioner, Palm Beach County, FL
Florida Inland Navigation District, North Palm Beach, FL
Mayor, Bal Harbor, FL
City Engineer, Bal Harbor, FL
Mayor, N. Miami Beach, FL
City Engineer, N. Miami Beach, FL



Gail G. Gren
Chief, Construction-Operations Division



DEPARTMENT OF THE ARMY
 Jacksonville District, Corps of Engineers

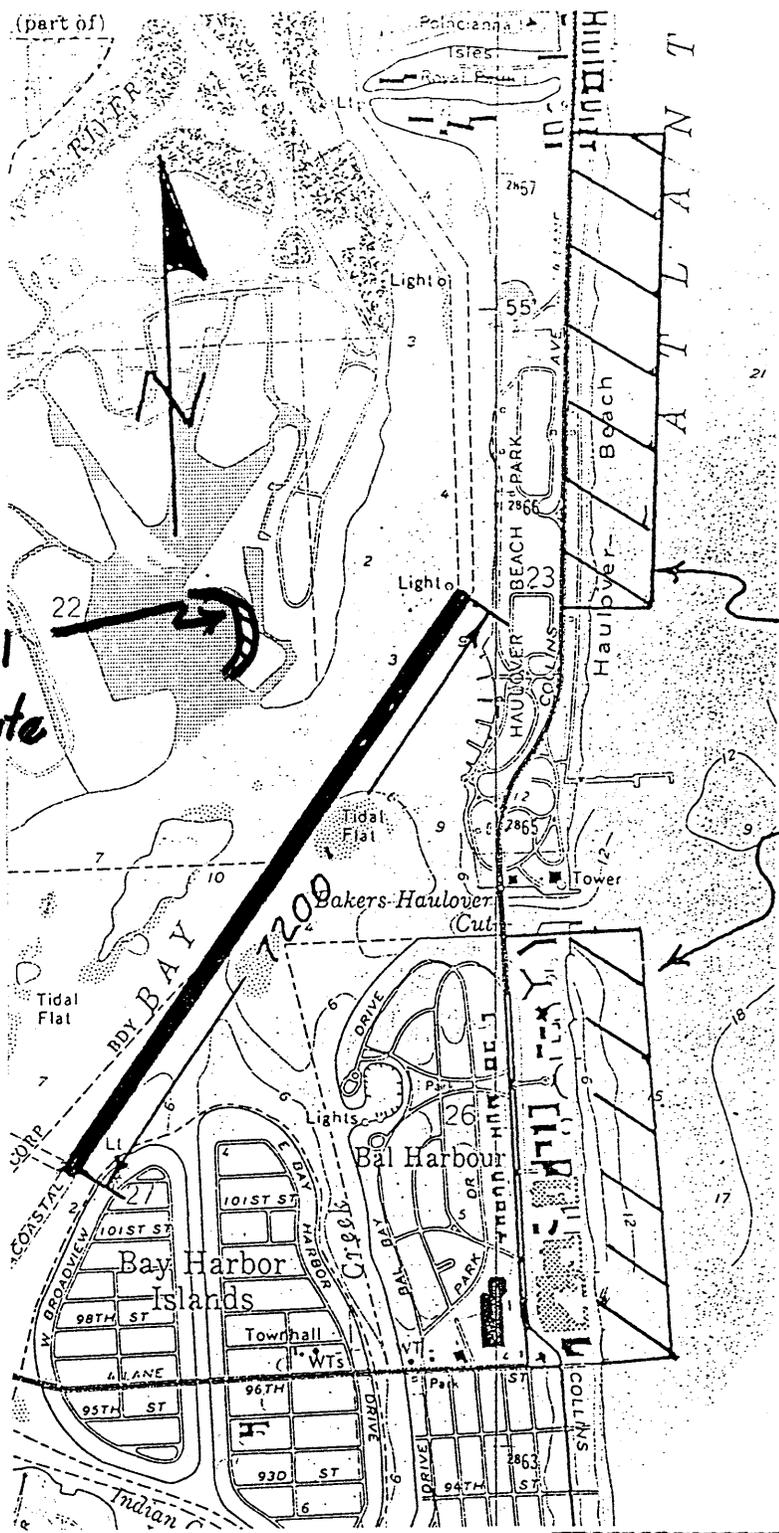
INTERCOASTAL WATERWAY
 Vicinity of Bakers Haulover

Location Map

SCALE AS SHOWN

DATED Mar 1986

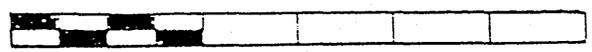
Sheet 1 of 4



Possible
Beach
Disposal
Area State
Park

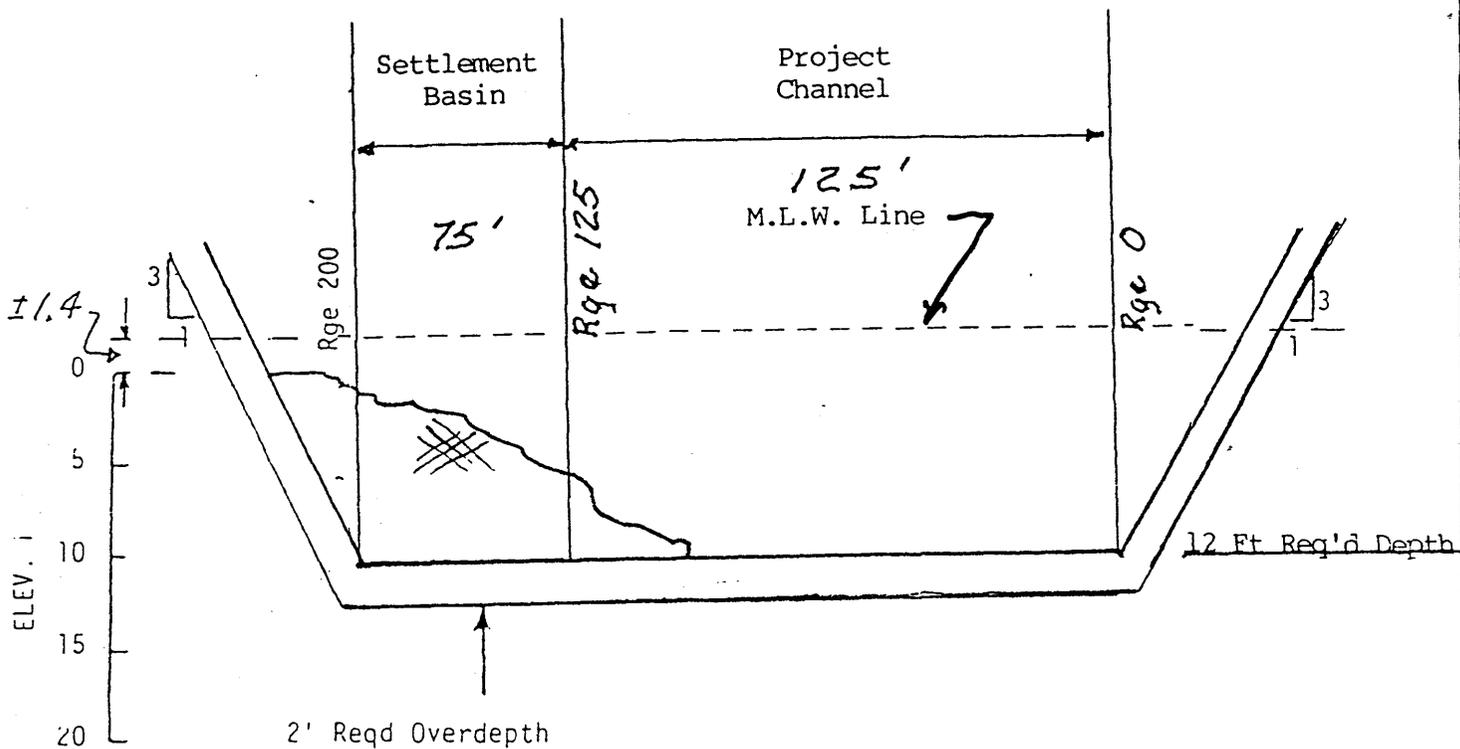
Proposed
Beach
Disposal
Areas

SCALE
(In Feet)



1000 0 1000 2000

DEPARTMENT OF THE ARMY Jacksonville District, Corps of Engineers		
INTERCOASTAL WATERWAY Vicinity of Bakers Haulover		
Proposed Dredging & Beach Disposal Locations		
SCALE AS SHOWN	DATED Mar 1986	Sheet 2 of 4



MEAN LOW WATER (M.L.W.) DATUM AND MEAN HIGH WATER (M.H.W.) LINE RELATIONSHIP IS APPROXIMATE AND IS REFERRED TO MEAN SEA LEVEL DATUM ESTABLISHED BY U.S. COAST AND GEODETIC SURVEY.

DEPARTMENT OF THE ARMY
Jacksonville District, Corps of Engineers

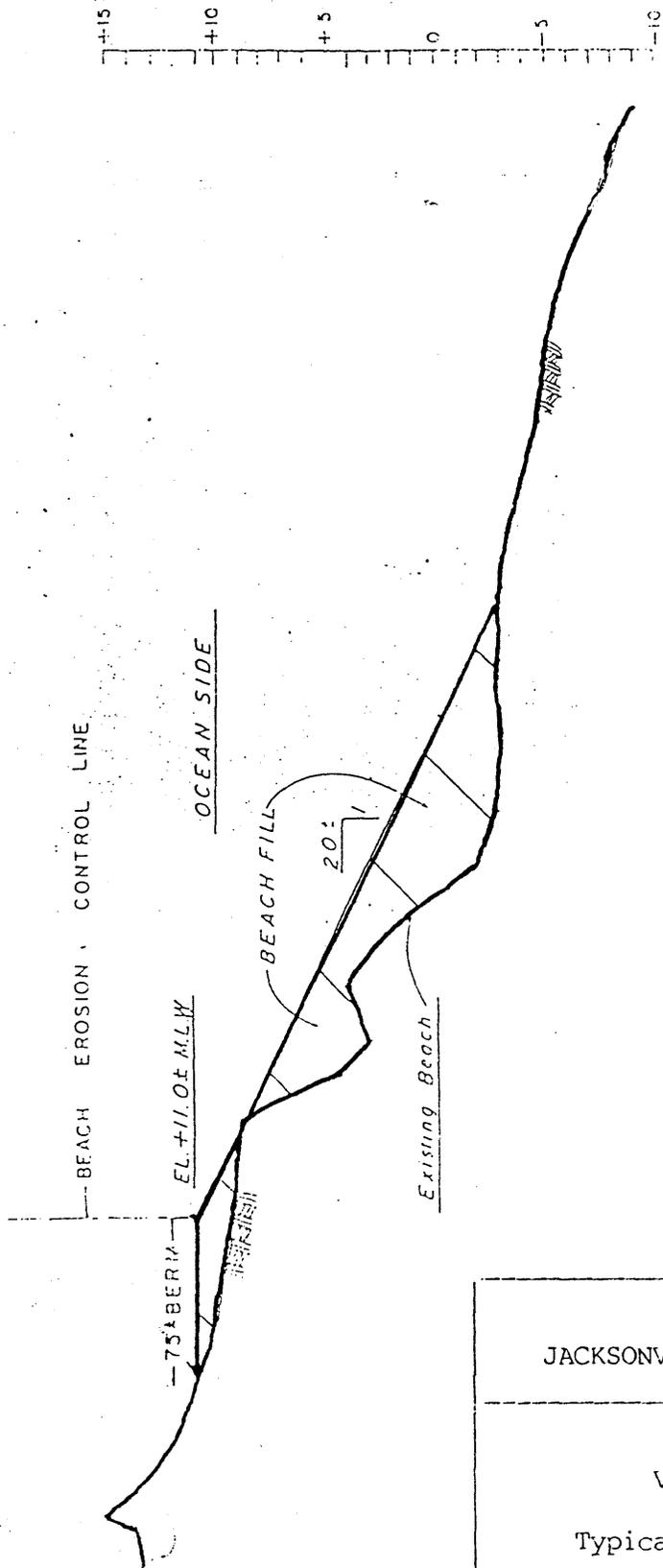
INTERCOASTAL WATERWAY
Vicinity of Bakers Haulover

Typical Cross Section

SCALE AS SHOWN

DATED Mar 1986

Sheet 3 of 4



DEPARTMENT OF THE ARMY
 JACKSONVILLE DISTRICT, CORPS OF ENGINEERS

INTERCOASTAL WATERWAY
 Vicinity of Bakers Haulover
 Typical Cross Section - Disposal Area

SCALE AS SHOWN

DATED Mar 1986

Sheet 4 of 4

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, JACKSONVILLE
P. O. Box 4970
JACKSONVILLE, FLORIDA 32232-0019

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

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POSTAGE & FEES PAID
DEPARTMENT OF THE ARMY
PERMIT No. G-5

IMPORTANT

This is NOT a circular.

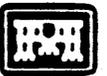
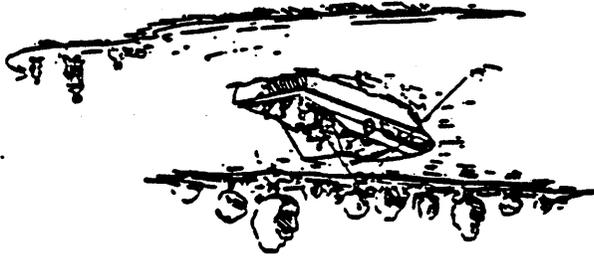


MAPPING THE WORLD

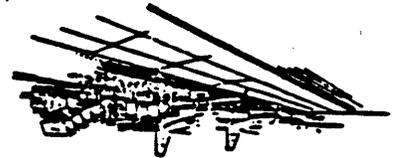


U.S. ARMY
CORPS OF ENGINEERS

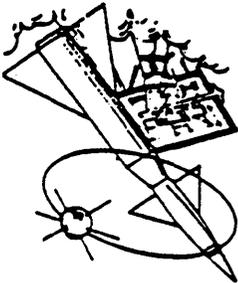
RECREATION & WATER SUPPLY



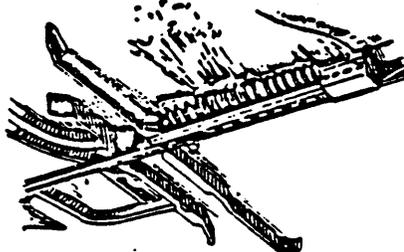
MILITARY CONSTRUCTION



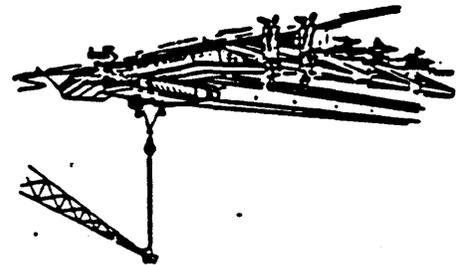
RESEARCH & DEVELOPMENT



NAVIGATION, POWER & FLOOD CONTROL



A FIGHTING ARM



DEFENDING OUR FREEDOM-DEVELOPING OUR RESOURCES

DEC 05 1996

PUBLIC NOTICE

TO WHOM IT MAY CONCERN: The District Engineer, Jacksonville District, U.S. Army Corps of Engineers, has forwarded a request to the State of Florida Department of Environmental Protection for modification to the Water Quality Certification, pursuant to Section 401 of the Clean Water Act of 1977, for maintenance dredging of Bakers Haulover Inlet and the Intracoastal Waterway (IWW), Cut DA-9 in the vicinity of Bakers Haulover Inlet. The project sponsor, the Florida Inland Navigation District, has coordinated with Jacksonville District in developing a plan to have additional material be removed that is outside the limits of the Federal channel. This area will serve as a settling basin which will help to limit future shoaling in the IWW. This Federal project is being evaluated and coordinated pursuant to 33 CFR 335 through 338.

Comments regarding the project should be submitted in writing to the District Engineer at the above address within 30 days from the date of this notice. Any person who has an interest which may be affected by the construction of this project may request a public hearing. The request must be submitted in writing to the District Engineer within 30 days of the date of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity.

If you have any questions concerning this application, you may contact Mr. Brian Brodehl of this office, telephone 904-232-3600.

WATERWAY & LOCATION: Bakers Haulover Inlet, Intracoastal Waterway Cut DA-9, Dade County, Florida

WORK & PURPOSE: The proposed work consists of dredging approximately 12,000 cubic yards of shoal material from Bakers Haulover Inlet channel (Sta. 2+50 Cut-2 - Sta. 4+00 Cut-3), 22,000 cubic yards from the Intracoastal Waterway channel (Sta. 23+50 - 40+00 Cut DA-9), and an estimated 108,000 cubic yards material from the 28.6 acre region between the two aforementioned Federally authorized navigation channels. All of the material is planned to be transported via pipeline to a 3000' reach of Bal Harbor Beach south of the inlet. Another disposal option available to the

project is the Haulover Beach Park to the north of the inlet. The dredging and disposal areas are depicted in the attached drawings. The composition of the material is predominantly sand with some shell.

The purpose of dredging is to restore portions of both Bakers Haulover Inlet channel and the Intracoastal Waterway (in the vicinity of Bakers Haulover) to authorized project depths and to provide safe navigation conditions for both commercial and recreational boaters.

PROJECT AUTHORIZATION: Intracoastal Waterway Jacksonville to Miami, Florida - House Document 740, 79th Congress, 2nd Session, 17 June 1947, modified by the Chief of Engineers Report, 22 July 1960.

APPLICABLE LAWS: The following laws are, or may be, applicable to the review of the proposed disposal sites and to the activities affiliated with this Federal project:

1. Section 404 of the Clean Water Act of 1977 (PL 95-217) (33 U.S.C. 1344).
2. Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (PL 92-532) (33 U.S.C. 1413, 86 Stat. 1052).
3. Section 302 of the Marine Protection, Research, and Sanctuaries Act of 1972 (PL 92-532, 86 Stat. 1052).
4. The National Environmental Policy Act of 1969 (PL 91-190) (42 U.S.C. 4321-4347).
5. Sections 307(c)(1) and (2) of the Coastal Zone Management Act of 1972 (16 U.S.C. 1456(c)(1) and (2), 86 Stat. 1280).
6. The Fish and Wildlife Act of 1956 (16 U.S.C. 472a et seq).
7. The Migratory Marine Game-Fish Act of 1959 (16 U.S.C. 760c-760g).
8. The Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661-666c).
9. The Endangered Species Act of 1973 (PL 93-205) (16 U.S.C. 668aa-668cc-6, 87 Stat. 884).

10. The National Historic Preservation Act of 1966 (16 U.S.C. 470, 80 Stat. 915).

11. Section 313 of the Clean Water Act of 1977 (33 U.S.C. 1323, 85 Stat. 816).

COASTAL ZONE MANAGEMENT: The proposed project has been evaluated in accordance with the Florida Coastal Zone Management Act and determined to be consistent with the goals and intent of the appropriate State statutes. This determination is based on the Environmental Assessment, the Section 404(b)(1) Evaluation, and the Coastal Zone Consistency Determination. Full compliance will be confirmed by issuance of the necessary modification to the Water Quality Certification from the State.

EVALUATION: An Environmental Assessment is being prepared for this project. Preliminary evaluation of the available information indicates that the proposed project will have no significant impact on the quality of the human environment and an Environmental Impact Statement pursuant to the National Environmental Policy Act (NEPA) will not be required. Additional coordination will be performed to ensure that the new dredging areas are in environmental compliance.

ENDANGERED SPECIES: Consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act has been conducted. A determination of "No Effects" has been reached concerning impacts to sea turtles and manatees within the dredging and beach placement areas. The additional dredging area will not affect this determination.

All standard conditions and protection practices for the sea turtles, manatees, whales, migratory birds, and all other local threatened or endangered species will be adhered to during the dredging and disposal operations.

EVALUATION FACTORS: All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Among these are conservation, economics, aesthetics, general environmental concerns, wetlands, historic resources, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, seagrasses, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership and, in general, the needs and welfare are of the people.

HISTORICAL RESOURCES: The National Register of Historic Resources is currently being consulted to determine if any resources are present which may be affected by the project operations. Preliminary determination is that no archeological, historical, or cultural resources are listed in the project area. However, if such resources are found within the project area prior to or during construction, all precautions will be taken to preserve those resources in their pre-discovery condition. Any unusual items as observed by Corps personnel or by the Contractor to have historical or archeological value shall be reported as soon as practicable.

OTHER IMPORTANT RESOURCES: An area of sea grasses exists along the Intracoastal Waterway to the south of the project area, as identified by the Department of Environmental Resource Management in Dade County. No sea grasses will be impacted by the proposed dredging operation.

DISSEMINATION OF NOTICE: You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have an interest in this matter.

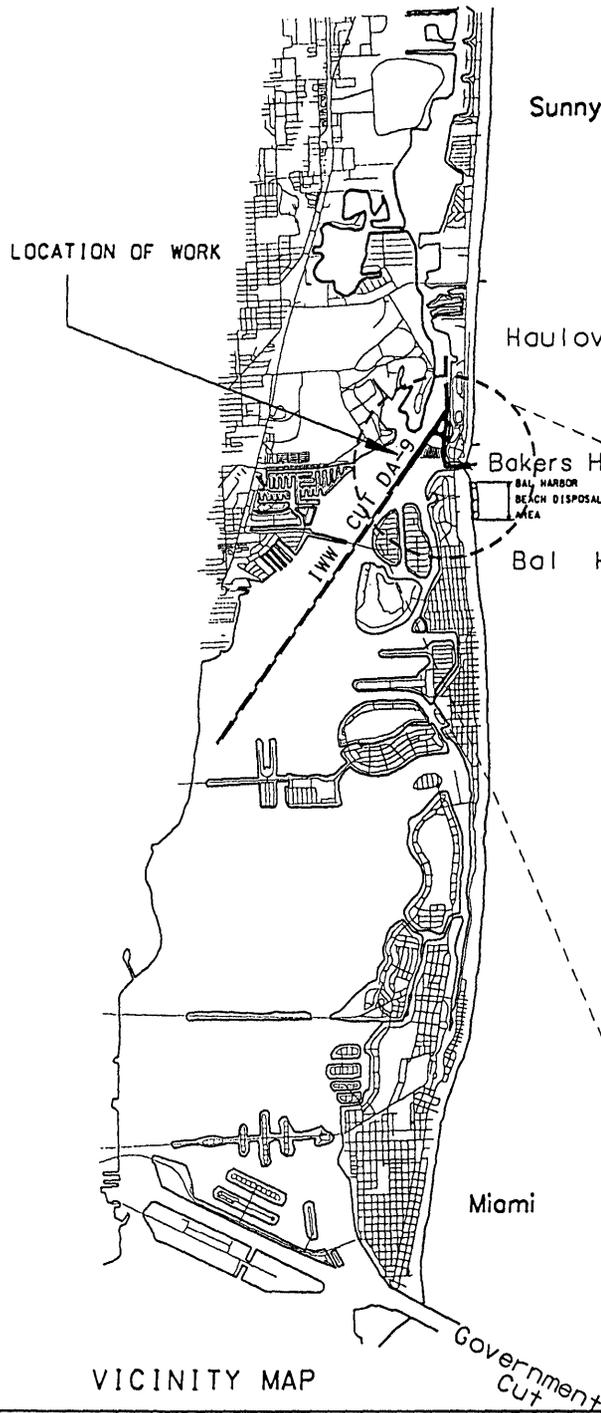
COORDINATION: This notice is being sent to the following agencies:

FEDERAL AGENCIES:

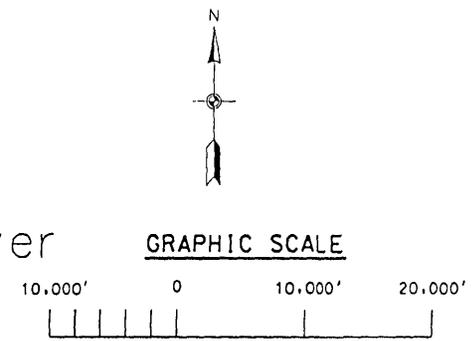
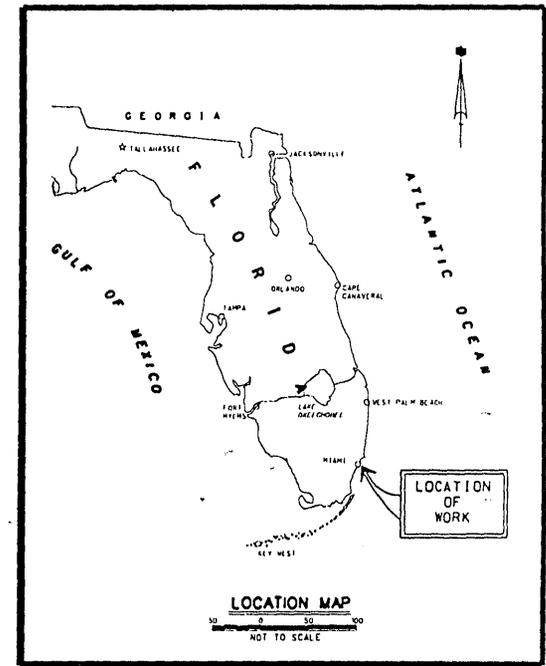
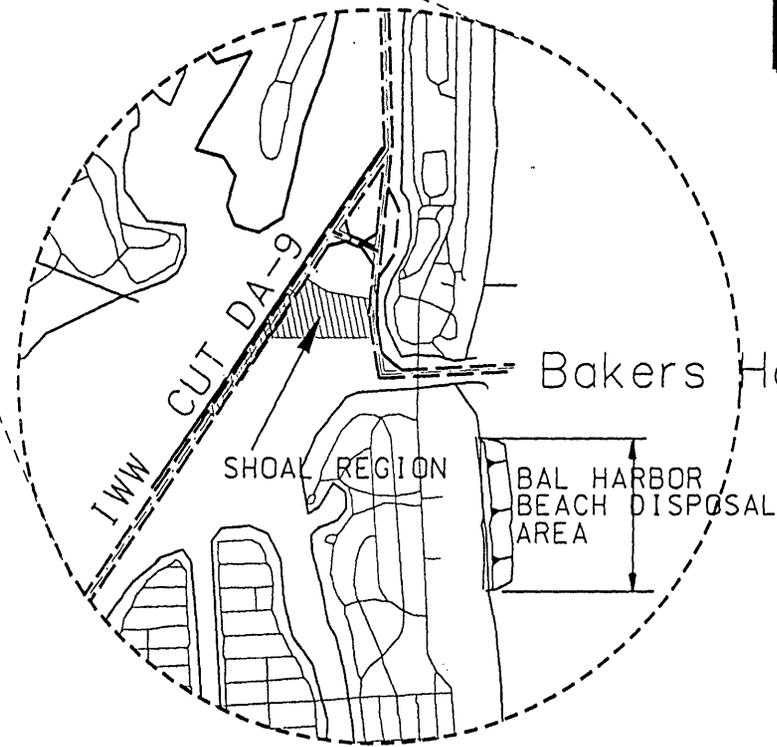
FEDERAL HIGHWAY ADMINISTRATION
U.S. COAST GUARD
U.S. FISH & WILDLIFE SERVICE
ATLANTIC MARINE CENTER
NATIONAL MARINE FISHERIES SERVICE
NATIONAL PARK SERVICE
U.S. GEOLOGICAL SURVEY
FEDERAL ENERGY REGULATIONS
U.S. ENVIRONMENTAL PROTECTION AGENCY
NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION
FEDERAL MARITIME COMMISSION
U.S. DEPARTMENT OF AGRICULTURE

STATE AGENCIES:

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF SOLID WASTE MANAGEMENT
FLORIDA INLAND NAVIGATION DISTRICT
FLORIDA GAME & FRESH WATER FISH COMMISSION
DIVISION OF ARCHIVES, HISTORY & RECORDS
STATE HISTORIC PRESERVATION OFFICE
FLORIDA DEPARTMENT OF TRANSPORTATION



VICINITY MAP



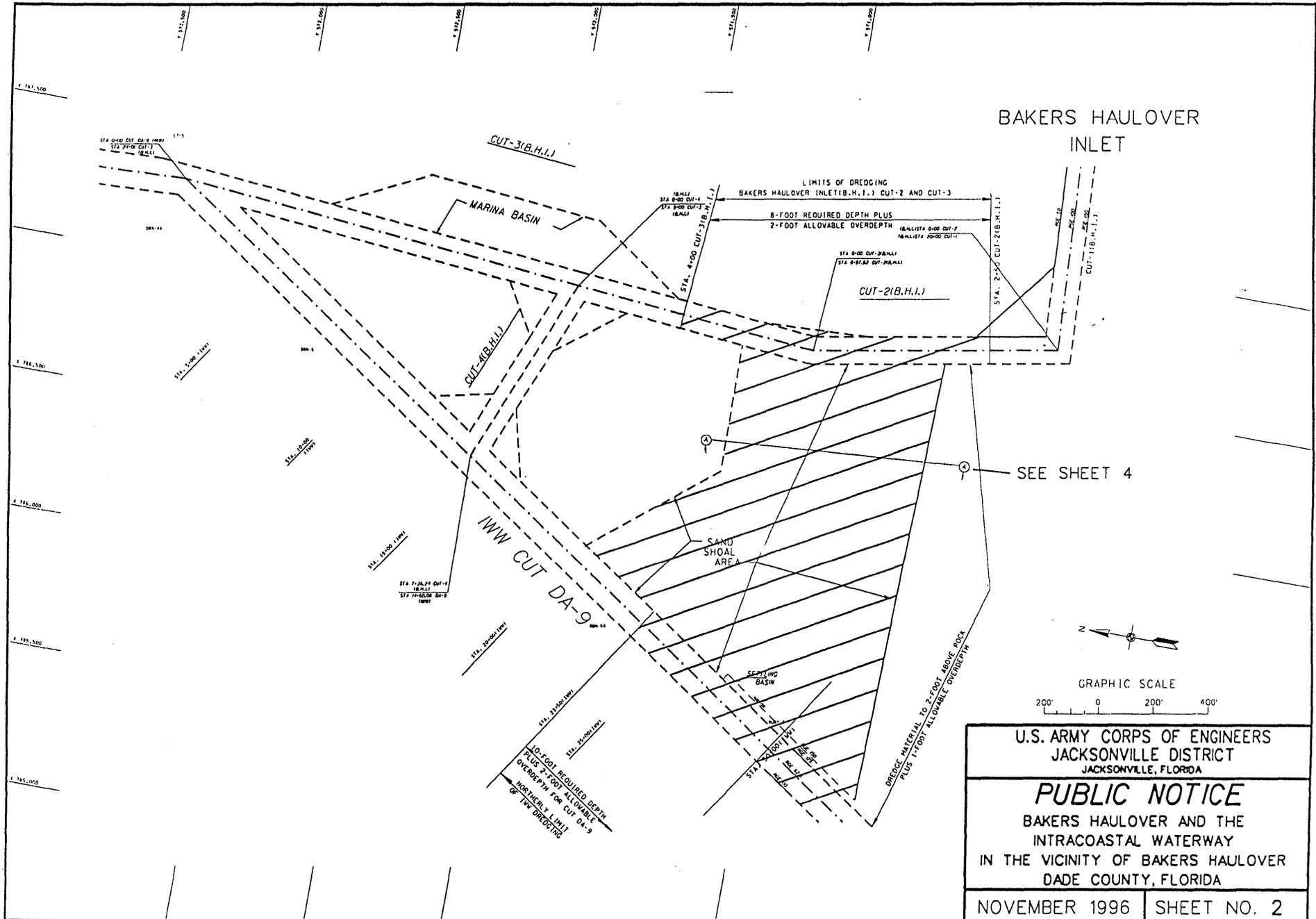
U.S. ARMY CORPS OF ENGINEERS
 JACKSONVILLE DISTRICT
 JACKSONVILLE, FLORIDA

PUBLIC NOTICE

BAKERS HAULOVER AND THE
 INTRACOASTAL WATERWAY
 IN THE VICINITY OF BAKERS HAULOVER
 DADE COUNTY, FLORIDA

NOVEMBER 1996 SHEET NO. 1

BAKERS HAULOVER INLET

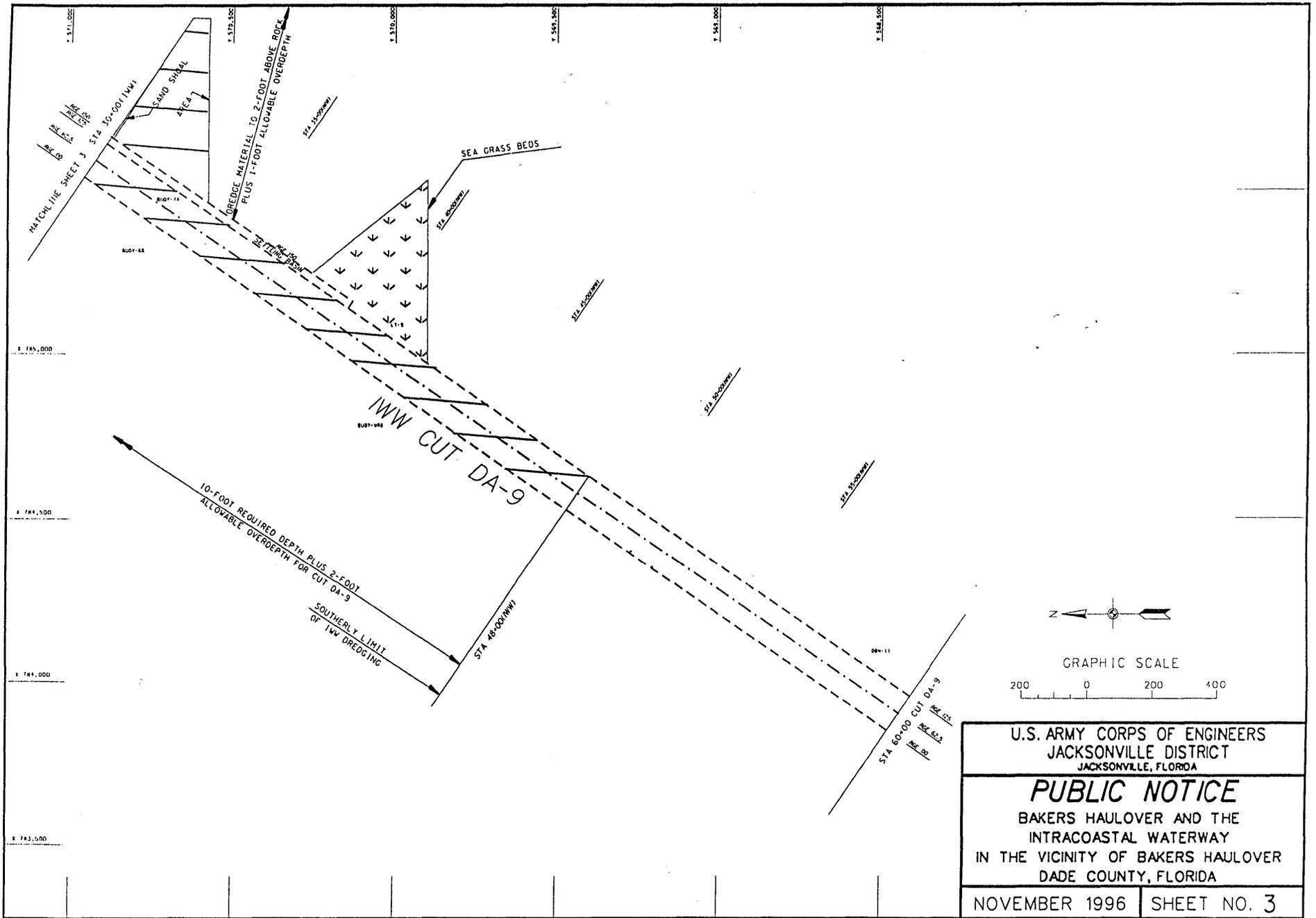


U.S. ARMY CORPS OF ENGINEERS
 JACKSONVILLE DISTRICT
 JACKSONVILLE, FLORIDA

PUBLIC NOTICE

BAKERS HAULOVER AND THE
 INTRACOASTAL WATERWAY
 IN THE VICINITY OF BAKERS HAULOVER
 DADE COUNTY, FLORIDA

NOVEMBER 1996 | SHEET NO. 2

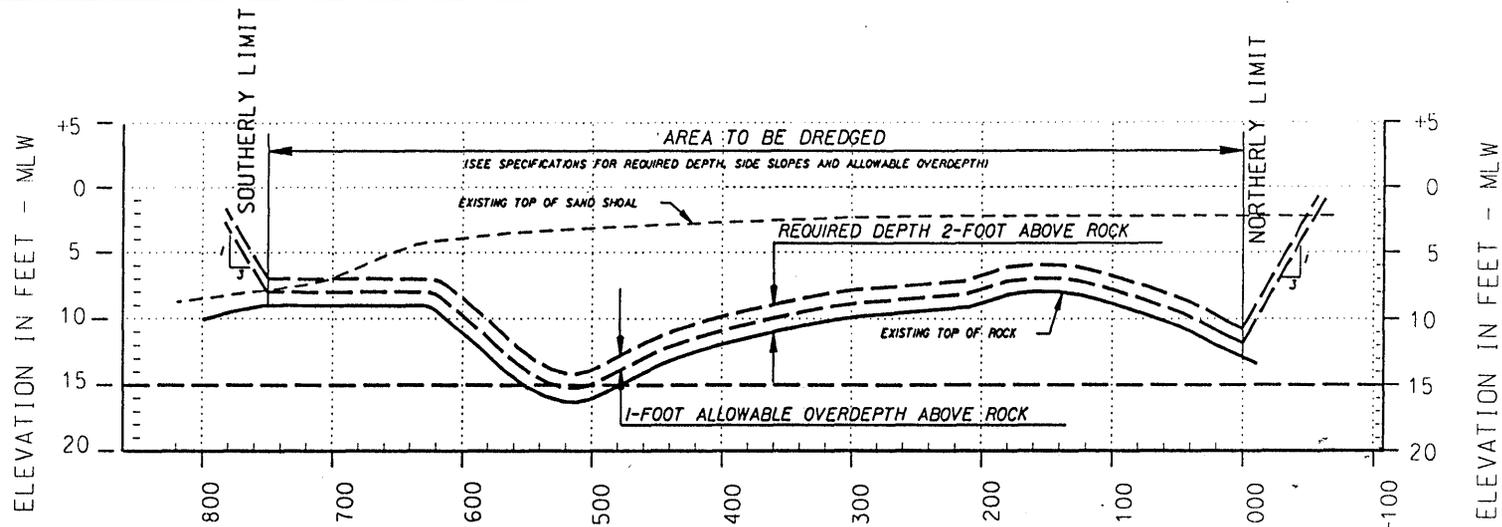


U.S. ARMY CORPS OF ENGINEERS
 JACKSONVILLE DISTRICT
 JACKSONVILLE, FLORIDA

PUBLIC NOTICE

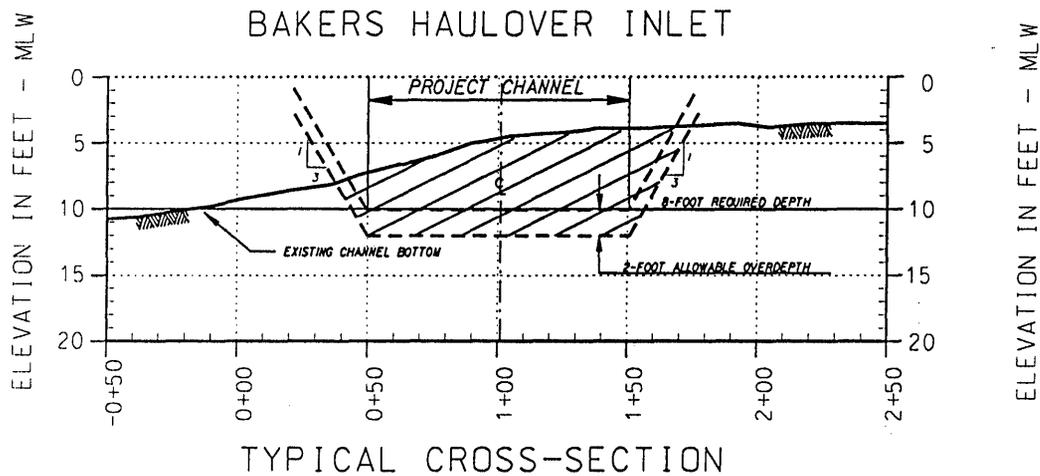
BAKERS HAULOVER AND THE
 INTRACOASTAL WATERWAY
 IN THE VICINITY OF BAKERS HAULOVER
 DADE COUNTY, FLORIDA

NOVEMBER 1996 | SHEET NO. 3



SECTION A-A
TYPICAL CROSS SECTION
SAND SHOAL AREA

SCALE: "A" HORIZONTAL
"B" VERTICAL



GRAPHIC SCALES

"A" 40 0 40 80

"B" 4 0 4 8

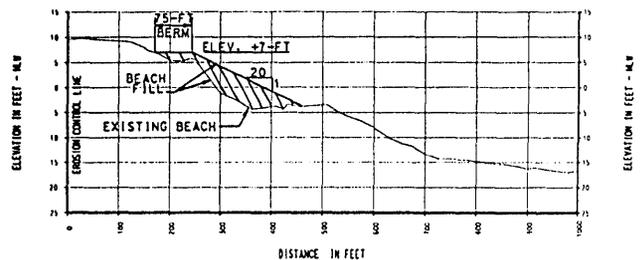
U.S. ARMY CORPS OF ENGINEERS
JACKSONVILLE DISTRICT
JACKSONVILLE, FLORIDA

PUBLIC NOTICE

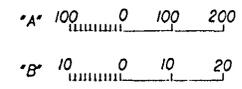
BAKERS HAULOVER AND THE
INTRACOASTAL WATERWAY
IN THE VICINITY OF BAKERS HAULOVER
DADE COUNTY, FLORIDA

NOVEMBER 1996 | SHEET NO. 4

DNR 29

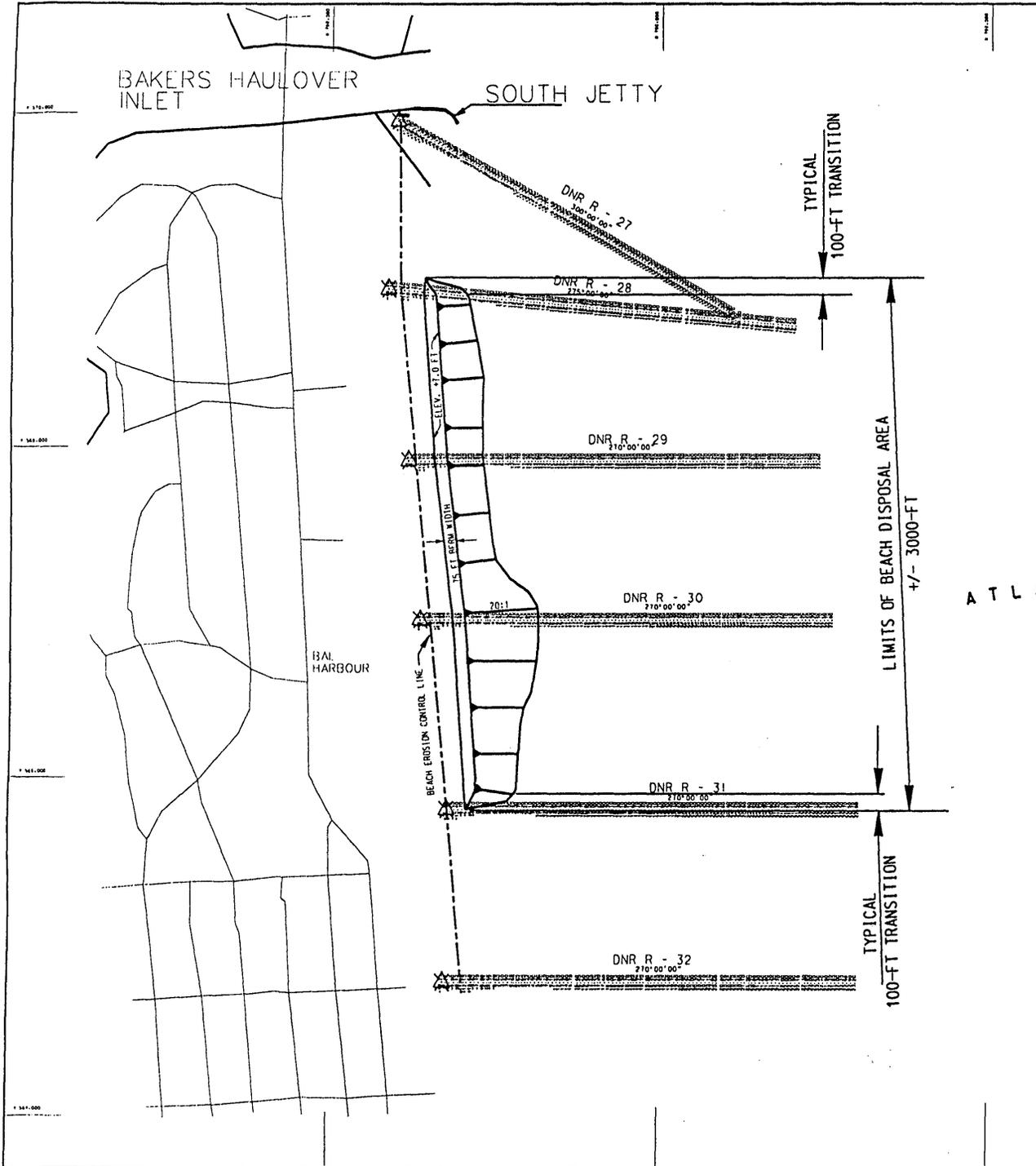


GRAPHIC SCALES



BAKERS HAULOVER INLET

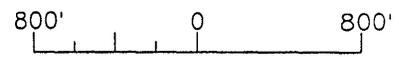
SOUTH JETTY



ATLANTIC OCEAN



GRAPHIC SCALE



U.S. ARMY CORPS OF ENGINEERS
 JACKSONVILLE DISTRICT
 JACKSONVILLE, FLORIDA

PUBLIC NOTICE

BAKERS HAULOVER AND THE
 INTRACOASTAL WATERWAY
 IN THE VICINITY OF BAKERS HAULOVER
 DADE COUNTY, FLORIDA

NOVEMBER 1996 | SHEET NO. 5

11/21/96
CESAJ-CO-OM/Brodent

l:\cocommon\bkb\pn-bh96/doc

CESAJ-CO-O/Fore-~~cut~~

~~11/21/96~~
CESAJ-PD-ER

CESAJ-CO-OM/Beasley

CESAJ-CO-O/Adams

CESAJ-CO/DiChiara

2

SOIL CONSERVATION SERVICE
PLANNING MANAGER BUREAU OF SUBMERGED LANDS DEPARTMENT
BUREAU OF SOIL AND WATER CONSERVATION
FLORIDA OFFICE OF ENTOMOLOGY
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
FLORIDA STATE CLEARINGHOUSE
FLORIDA MARINE PATROL
BUREAU OF STATE PLANNING
FLORIDA DIVISION OF RECREATION
NORTHEAST FLORIDA REGIONAL PLANNING COUNCIL
HABITAT CONSERVATION SERVICE
FLORIDA STATE CONSERVATION SERVICE

ENVIRONMENTAL ORGANIZATIONS:

FLORIDA AUDUBON SOCIETY
FLORIDA WILDLIFE FEDERATION
SIERRA CLUB
FLORIDA DEFENDERS OF THE ENVIRONMENT
NATIONAL ESTUARY PROGRAM

LOCAL GOVERNMENTS AND ORGANIZATIONS:

DIRECTOR, PUBLIC WORKS DEPARTMENT, MIAMI BEACH
FLORIDA INLAND NAVIGATION DISTRICT
METRO DADE PLANNING DEPARTMENT
BOARD OF COUNTY COMMISSIONERS, DADE COUNTY
DEPARTMENT OF ENVIRONMENTAL RESOURCE MANAGEMENT
FLORIDA INLAND NAVIGATION DISTRICT
SOUTH FLORIDA REGIONAL PLANNING COUNCIL

LOCAL MEDIA:

THE MIAMI HERALD
BROWARD REVIEW

FOR THE COMMANDER:



GIRLAMO DiCHIARA
Chief, Construction-Operations
Division

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Administrative Services
Division of Corporations
Division of Cultural Affairs
Division of Elections
Division of Historical Resources
Division of Library and Information Services
Division of Licensing



MEMBER OF THE FLORIDA CABINET
Historic Florida Keys Preservation Board
Historic Palm Beach County Preservation Board
Historic Pensacola Preservation Board
Historic St. Augustine Preservation Board
Historic Tallahassee Preservation Board
Historic Tampa/Hillsborough County
Preservation Board
Ringling Museum of Art

FLORIDA DEPARTMENT OF STATE
Sandra B. Mortham
Secretary of State
DIVISION OF HISTORICAL RESOURCES

September 30, 1996

Mr. A. J. Salem
Regulatory Division, Permits Branch
Jacksonville District, Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

In Reply Refer To:
Scott B. Edwards
Historic Sites Specialist
(904) 487-2333
Project File No. 963271

RE: Cultural Resource Information Assessment Request
Dredging in the vicinity of Bakers Haulover Inlet
Dade County, Florida

Dear Mr. Salem:

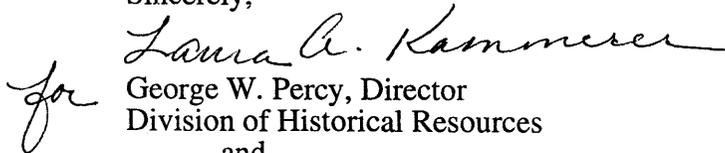
In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

A review of the Florida Master Site File and our files indicated that there are no archaeological or historic sites recorded within the project area. However, the lack of recorded historic properties is not considered significant because the area has never been subjected to a systematic, professional survey to locate such properties. We have discussed the matter of shipwrecks with Jim Dunbar of the Underwater Archaeology Section. Mr. Dunbar is unaware of the location of the historic wrecks in Biscayne Bay, as mentioned in your letter, but would recommend that, prior to initiating any project related activities within the project area, a systematic, professional magnetometer survey be performed.

The results of the investigations will determine if significant historic properties would be disturbed by this project. In addition, if significant remains are located, the data described in the report and the archaeologist's conclusions will assist this office in determining measures that must be taken to avoid, minimize, or mitigate adverse impacts to historic properties listed, or eligible for listing in the *National Register of Historic Places*.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,


George W. Percy, Director
Division of Historical Resources
and

State Historic Preservation Officer

GWP/Ese

DIRECTOR'S OFFICE

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • (904) 488-1480
FAX: (904) 488-3353 • WWW Address <http://www.dos.state.fl.us>

ARCHAEOLOGICAL RESEARCH
(904) 487-2299 • FAX: 414-2207

HISTORIC PRESERVATION
(904) 487-2333 • FAX: 922-0496

HISTORICAL MUSEUMS
(904) 488-1484 • FAX: 921-2503

2/25/97

Gentlemen:

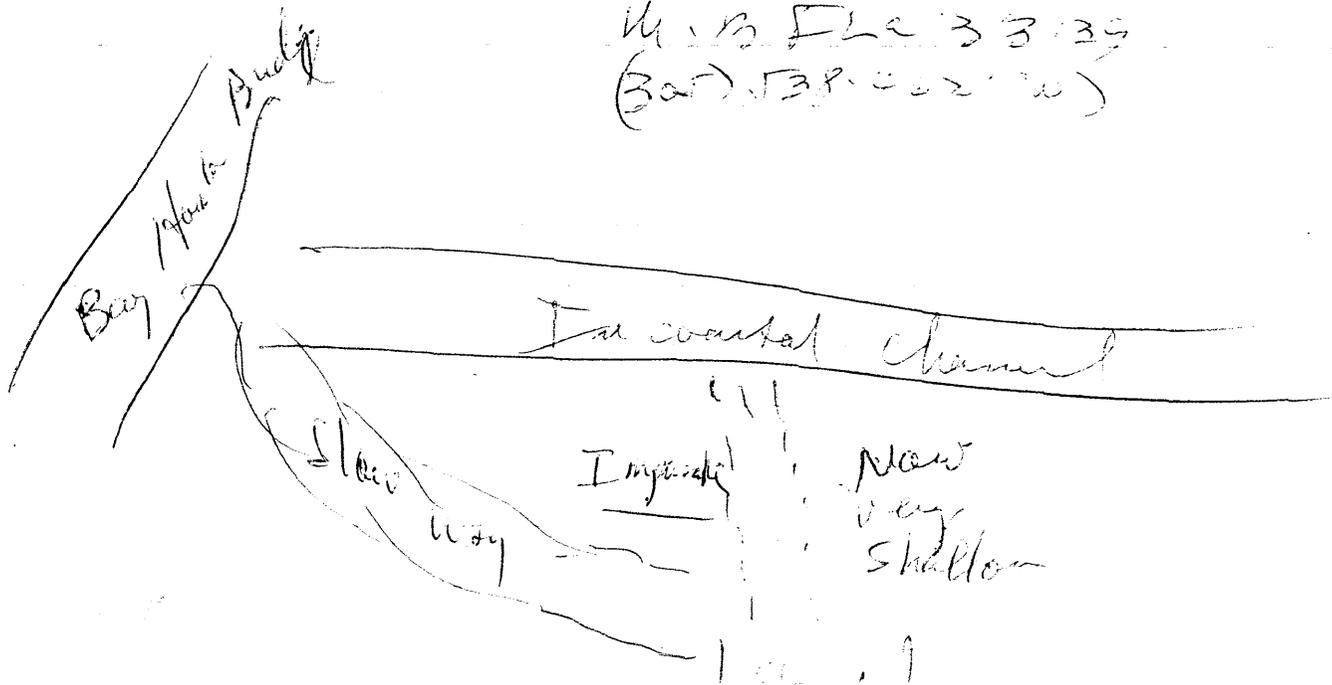
I looked over your proposed dredging. May I strongly suggest you dredge a channel from the Harbor Channel on the Bay straight across the North-South Intocoastal Channel.

This would permit boats heading North that want to go into the ocean than Harbor, the ability to keep a big at speed.

As it is now, one has to get out of the Channel at the edge of Bay Harbor & get at a slow speed to Harbor. No one goes by quickly & so many are speeding. By connecting the Channel to Harbor, it would eliminate this problem.

What do you think?

Sincerely yours
Chuck Shuck
201 E. D. Liss Dr
M. B. Fla 33139
(305) 538-0027



1

CONVERSATION RECORD

TIME

1:45

DATE

2/18/97

TYPE

VISIT

CONFERENCE

TELEPHONE

INCOMING

OUTGOING

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

MR STANLEY FEINMAN

ORGANIZATION (Office, dept., bureau, etc.)

TELEPHONE NO:

ROUTING

NAME/SYMBOL

INT

SUBJECT

1 BAKER'S HAULOVER DREDGING
PUBLIC NOTICE

SUMMARY

• MR FEINMAN EXPRESSED CONCERNS ABOUT THE PLACEMENT OF MATERIAL IN BAL HARBOR DISPOSAL AREA RATHER THAN NORTH OF THE INLET

• HE ALSO MENTIONED THE PRESENCE OF SMOG MATERIAL IN THE REGION OUTSIDE OF THE FEDERAL CHANNEL.

I ATTEMPTED TO HELP MR FEINMAN WITH INFORMATION ON THE PROJECT.

ACTION REQUIRED

- REFER BEACH NOURISHMENT QUESTIONS TO CHARLIE STEVENS (2113)

NAME OF PERSON DOCUMENTING CONVERSATION

BRODEHL, BRIAN

SIGNATURE

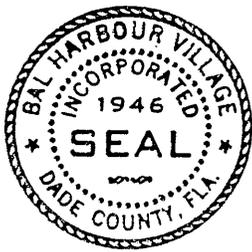
DATE

ACTION TAKEN

SIGNATURE

TITLE

DATE



OFFICE OF THE MAYOR
BAL HARBOUR VILLAGE
655 NINETY SIXTH STREET
BAL HARBOUR, FLORIDA 33154

ESTELLE SPIEGEL
MAYOR

(305) 866-4633

March 7, 1997

Colonel Terry L. Rice
District Engineer
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Re: Public Notice No. PN-BH-213

Dear Colonel Rice:

Bal Harbour feels very strongly that the sand generated by the above referenced dredging project should be placed on Bal Harbour's beach. If not for the "man made" Haulover Inlet, this sand would have naturally flowed south to our beach. In addition, it makes economic sense to dispose of this excess sand in the most cost effective manner. Since Bal Harbour is located immediately south of this area, the cost involved with moving the sand to its new location would be minimized.

Finally, Bal Harbour is willing to discuss the possibility of assisting financially to ensure that we receive this sand.

Should you have any questions, or would like to discuss this issue, please contact me. Thank you.

Sincerely,

Estelle Stern Spiegel
Estelle Stern Spiegel
Mayor

ESS/elw

cc: Mr. Giralmo Dichiara, Division Engineer, Army Corps of Engineers
Mr. Brian Brodehl, Construction-Operations Division, Army Corps of Engineers

CONVERSATION RECORD

TIME
14:30DATE
14 Sep 93

TYPE

 VISIT CONFERENCE TELEPHONE INCOMING OUTGOING

Location of Visit/Conference:

ROUTING

NAME/SYMBOL
INITIALS

Mazer

NAME OF PERSON(S) CONTACTED
OR IN CONTACT WITH YOUSusan
HammerstenORGANIZATION (Office, dept., bureau,
etc.)SHPO/Compliance
Review Section

TELEPHONE NO:

904-487-2333

SUBJECT

Bakers Haulover O&M, Dade County, FL

SUMMARY

(note: LAURA KAMMUSER WAS TDY.)

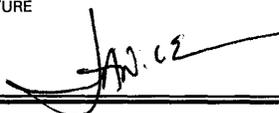
Advised her that CESAJ was revising the EA for the subject project and the disposal area is being moved from the north side of the inlet to the south.

She concurred with our determination that maintenance dredging with placement of dredged material on the beach will have no new impacts on cultural resources.

ACTION REQUIRED Coordinate with PD-ES. Revise cultural sections of EA to reflect beach disposal area south of Bakers Haulover Cut.

NAME OF PERSON DOCUMENTING CONVERSATION
Janice E. Adams

SIGNATURE

DATE
14 Sep 93

ACTION TAKEN

SIGNATURE

TITLE

DATE

APPENDIX V

SECTION 404(B)(1) EVALUATION

SECTION 404(b)(1) EVALUATION
DREDGED MATERIAL

I. Project Description

- a. Location. Intracoastal Waterway, Vicinity Bakers Haulover, Dade County, Florida.
- b. General Description. The proposed maintenance dredging of the Intracoastal Waterway in the vicinity of Bakers Haulover, Dade County, Florida, includes the excavation of shoaled bottom material from the inlet cut and the IWW (Figure 1). Dredging would be required to a depth of 10 feet with 2 feet of allowable overdepth. Dredged material would be placed either on Bal Harbour Beach or Haulover Park Beach south and north of the inlet respectively.
- c. Authority and Purpose. The Intracoastal Waterway was authorized by House Document 740, 79th Congress, 2nd Session, and modified by Chief of Engineers Report dated 22 July, 1960. Since the initial maintenance, sand and sediments have periodically accumulated in the channel reducing the navigable capacity of the project. The navigation channel is used by commercial and recreational vessels. The channel depths are reduced by sedimentation. In order to maintain the Federal standard, the channel must be dredged.
- d. General Description of Dredged or Fill Material
 - (1) General Characteristics of Material. The material to be dredged is material deposited due to flood tides entering the Inlet. The material is sandy, well sorted containing less than 7% fines.
 - (2) Quantity of Material. Approximately 100,000 cubic yards of material.
 - (3) Source of Material. IWW Cuts .
- e. Description of the Proposed Discharge Site.
 - (1) Size and Location.
 - (2) Type of Site. They are beach disposal sites.
 - (3) Type of Habitat. The return water would be discharged to the surf zone.

(4) **Timing and Duration of Discharge.** Dredging and disposal will be conducted within less than 135 days.

f. **Description of Disposal Method.** The material will be pumped onto the beach disposal site where sand would settle out before the return water reaches the adjacent Atlantic Ocean.

II. Factual Determinations

a. Physical Substrate Determinations.

(1) **Substrate Elevation and Slope.** There would be a 10-foot elevation change over a 40-foot width.

(2) **Sediment Type.** The waterway bottom at the site of effluent return from the disposal area will not be affected by the discharge because turbidity standards will be met.

(3) **Dredged/Fill Material Movement .** Dredged material would be confined within berms. The suspended material easily settles out as a result of the large grain size and reduction in water velocity after exiting the discharge pipe. Effluent discharges entering the adjacent ocean will not have enough suspended particulates to cause dredge material deposition and movement concerns.

(4) **Physical Effects on Benthos.** Sand pumped on the beach would cover benthic organisms located in the surf zone.

(5) **Other Effects.** There is a high probability that sea turtle nesting would be affected by the placement of dredged material on the beach placement areas.

(6) **Actions Taken to Minimize Impacts.** Current U.S. Fish and Wildlife Service Reasonable and Prudent measures would be followed to avoid impacts to nesting and swimming sea turtles.

b. Water Circulation, Fluctuation and Salinity Determinations

(1) Water

(a) **Salinity.** No impacts to salinity at disposal site.

(b) **Water Chemistry.** Return water effluent will meet State water quality criteria.

(c) Clarity. Return water effluent will meet State water quality criteria for turbidity.

(d) Color. There would be no relative differences to receiving water color expected.

(e) Odor. The dredged material and return water effluent should have little or no odor and is not expected to cause either short or long-term odor problems.

(f) Taste. Not applicable.

(g) Dissolved Gas Levels. Dissolved oxygen levels in the return effluent should be sufficient to preclude adverse effects in the receiving waters. Other dissolved gases (methane, hydrogen sulfide) will be at levels that will not cause adverse impacts to the ocean.

(h) Nutrients. None.

(i) Eutrophication. None.

(2) Current Patterns and Circulation. Not applicable.

(3) Normal Water Level Fluctuations. Not applicable.

(4) Salinity Gradients. Not applicable.

(5) Actions That Will Be Taken to Minimize Impacts. The disposal site will be operated to maintain state water quality standards.

c. Suspended Particulate/Turbidity Determinations

(1) Expected Changes in Suspended Particulate and Turbidity Levels in Vicinity of Disposal Site. There will be a short-term increase in the suspended particulate/turbidity in the return effluent from the disposal area. Levels should not exceed state standards.

(2) Effects (degree and duration) on Chemical and Physical values

(a) Light penetration. Slight light penetration reduction will be temporarily experienced at the disposal site effluent return.

(b) Dissolved Oxygen. Dissolved oxygen (D.O.) levels in return water may be lower than the D.O. receiving waters due to increased biological oxygen demand (BOD) in the dredged material, but D.O. levels should not be so low as to cause adverse impacts to biota at the site.

(c) Toxic Metals and Organic. Not Applicable.

(d) Pathogens. Not Applicable.

(e) Aesthetics. No appreciable impact at the disposal site because dredging and disposal are common practices within the waterway. Turbidity plumes generated at the disposal site would be masked by the surf action.

(f) Others as Appropriate. None.

(3) Effects on Biota (consider environmental values in sections 230.21, as appropriate)

(a) Primary Production, Photosynthesis. No impact outside the surf zone.

(b) Suspension/Filter Feeders. Little or no impact is expected.

(c) Sight Feeders. Little or no impact is expected.

(4) Actions taken to Minimize Impacts. Most suspended particulate will settle out before the effluent reaches the ocean due to the large grain size of the majority of dredged material.

d. Contaminant Determinations. No sources of pollution have been identified in the project area, therefore, no contaminants are expected to be encountered.

e. Aquatic Ecosystem and Organism Determinations

(1) Effects on Plankton. No significant effects.

(2) Effects on Benthos. There would be no significant impacts on benthos in the area from the return water plume. Dredged material would cover benthic organisms at the beach site. This impact would be short-term as the area would be recolonized.

(3) Effects on Nekton. There would be no significant impact on the nekton community within the area from this dredging and disposal occurrence.

(4) Effects on Aquatic Food Web. There would be no significant impact on the aquatic food web within the waterway and ocean area from this dredging and disposal occurrence.

(5) Effects on Special Aquatic Sites.

(a) Sanctuaries and Refuges. The work is being conducted in the Biscayne Bay Aquatic Preserve. The important attributes of the preserve which include Seagrasses, manatees and good water quality would not be impacted by the work..

(b) Wetlands. Not applicable.

(c) Mud Flats. Not applicable.

(d) Vegetated Shallows. None would be affected.

(e) Coral Reefs. None.

(f) Riffle and Pool Complexes. Not applicable.

(6) Threatened and Endangered Species. There would be a short-term impact on sea turtle nesting during construction. There would be an increase in the amount of sea turtle nesting habitat available. Dredging would occur in areas used by manatees and construction boat traffic could affect manatees.

(7) Other Wildlife. None.

(8) Actions to Minimize Impacts. Work is being scheduled outside the normal sea turtle season to avoid impacts. However, should the dredging be delayed precautions will be taken to avoid impacting nesting until the project is complete. Also precautions will also be taken to avoid impacting manatees within the work area.

f. Proposed Disposal Site Determinations

(1) Mixing Zone Determination. Not applicable.

(2) Determination of Compliance with Applicable Water Quality Standards. The discharge of effluent on the beach within the disposal area would comply with State water quality standards.

(3) Potential Effects on Human Use Characteristic

(a) Municipal and Private Water Supply. Not applicable.

(b) Recreational and Commercial Fisheries. Immediate impacts to commercial fisheries resources will be insignificant.

(c) Water Related Recreation. Beach activities would be curtailed by the presence and operation of heavy equipment and pipeline discharge.. However, there would be some entertainment provided by the activity itself as well as the increased sea shell collecting that subsequently follows placing material on the beach..

(d) Aesthetics. There will be minor impacts on aesthetics because the Intracoastal waterway is dredged often. The turbidity plume generated at the disposal area would be masked by the surf zone action.

(e) Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. The dredging would occur within the Biscayne Bay Aquatic Preserve. No adverse impacts on resources within the preserve are anticipated. The discharge could occur at Bal Harbour Park or on Haulover Park located south and north of the inlet respectively. No long-term adverse impacts are anticipated. Long-term benefits associated with slowing the erosion rate of the beach, providing additional sea turtle nesting habitat, and additional beach recreational areas.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. There would be no cumulative effects on the aquatic ecosystem.

h. Determination of Secondary Effects on the Aquatic Ecosystem. Not applicable.