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

REPLY TO
ATTENTION OF

MAINTENANCE DREDGING
ATLANTIC INTRACOASTAL WATERWAY
LOWER NASSAU AND UPPER DUVAL 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. The proposed work would not jeopardize the continued existence of any endangered or threatened species, since the work will be conducted in accordance with the Regional Biological Opinion issued by the National Marine Fisheries Service and the Biological Opinion issued by the U.S. Fish and Wildlife Service for dredging within the Atlantic Intracoastal Waterway and upland or beach disposal.

2. In coordination with the State Historic Preservation Officer, it was determined there would be no impacts on sites of cultural or historical significance.

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. The proposed project has been evaluated pursuant to the Migratory Bird Treaty Act. The Migratory Bird Protection Policy for the Atlantic Intracoastal Waterway has been prepared and will be implemented for this project and for future projects. The Policy has been coordinated with the U.S. Fish and Wildlife Service and the State of Florida.

7. Benefits to the public will be maintenance of the navigation channel, continued local economic stimulus, and increased suitable migratory bird and sea turtle nesting habitat.

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.

22 Jul 96
Date

TERRY L. RICE
Colonel, Corps of Engineers
Commanding

AIWW N-SJ Nassau County / Duval County NEPA Doc

JULY 1996

MAINTENANCE DREDGING

AIWW - SAWPIT CREEK

LOWER NASSAU AND UPPER DUVAL COUNTY, FLORIDA

ENVIRONMENTAL ASSESSMENT

US Army Corps
of Engineers
Jacksonville District
South Atlantic Division

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1.0 PURPOSE OF AND NEED FOR ACTION.

1.1. INTRODUCTION. The Jacksonville District, U.S. Army Corps of Engineers is proposing to conduct routine maintenance dredging of approximately 415,000 cubic yards of material from the Atlantic Intracoastal Waterway (AIWW), Amelia River south to the St. Johns River, Nassau and Duval County, Florida, in the vicinity of Sawpit Creek (AIWW mile 717 to mile 738.9) (Figure 1.1), to restore the authorized depths of 12 feet mean low water, with two feet of allowable overdepth. The length of the area to be maintained is approximately 21.9 miles. Figure 1 shows the location of the federal project and specific dredging and disposal areas. Dredging will likely be accomplished by mechanical (clamshell or bucket) or hydraulic (pipeline with cutterhead) dredge.

1.2. AUTHORITY. The construction and maintenance of the waterway with dimensions 7 feet deep and 100 feet wide was first authorized by House Document 898, 62nd Congress, 2nd Session, dated 4 March 1913. Expansion of the waterway to it's present status of 12 feet deep and 90-150 feet wide from Fernandina Harbor to the St. Johns River was authorized by House Document 618, 75th Congress, 3rd Session, dated 20 June 1938. The length of the project is approximately 21.9 miles (AIWW - Jacksonville District).

1.3. DECISION TO BE MADE. The decision to be made is whether to conduct maintenance dredging and where to place the dredged material.

1.4. RELEVANT ISSUES.

a. Water quality
b. Sea turtles
c. Manatees
d. Shortnose sturgeon
e. Cultural Resources
f. Aesthetics
g. Navigation
h. Economics
i. Recreation

1.5. PERMITS REQUIRED. In accordance with the Clean Water Act, a water quality certification would be required from the Florida Department of Environmental Protection (DEP) for the maintenance dredging of the AIWW in Nassau and Duval County.

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 assessment. This included literature searches, coordination with agencies and private groups having expertise in particular areas, and field investigations.

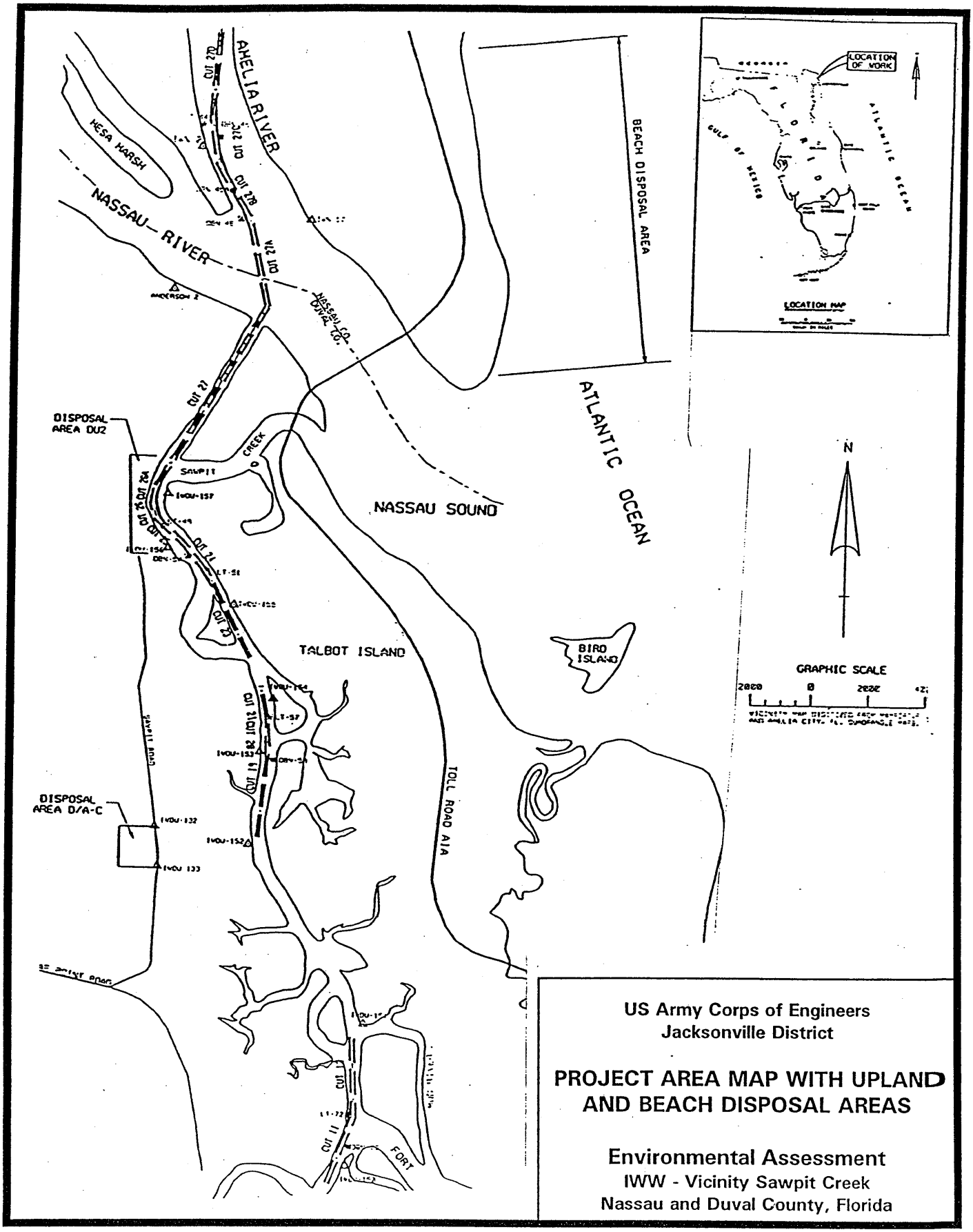
AMELIA RIVER
NASSAU RIVER
MESA MARSH
BEACH DISPOSAL AREA
ATLANTIC OCEAN
NASSAU SOUND
DISPOSAL AREA DU2
DISPOSAL AREA D/A-C
TALBOT ISLAND
BIRD ISLAND
TOLL ROAD A1A
SAWPIT CREEK
LOCATION OF WORK
LOCATION MAP
N
GRAPHIC SCALE
US Army Corps of Engineers
Jacksonville District
PROJECT AREA MAP WITH UPLAND AND BEACH DISPOSAL AREAS
Environmental Assessment
IWW - Vicinity Sawpit Creek
Nassau and Duval County, Florida

FIGURE 1

2.0 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. The key to this section is the alternative comparison chart, Figure 2.1, page 7. 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. Maintenance dredging of the navigation channel has not occurred since August 1982. Three Florida Inland Navigation District (FIND) upland disposal areas would serve the disposal needs of this project: Northeast Black Hammock Island disposal area DA-1, Duval County, Florida; West Central Black Hammock Island disposal area DU-20, Duval County, Florida; and Fanning Island disposal area DU-3, Duval County, Florida. In addition, should the dredged material be suitable, beach placement would occur from the mouth of Nassau Sound and extend 4000' north along Amelia Island Beach.

2.3. ELIMINATED ALTERNATIVES. There were no eliminated alternatives.

2.4. DESCRIPTION OF ALTERNATIVES.

2.4.1. No Action Alternative. No maintenance dredging and placement of material would occur. The existing shoaling would continue to decrease the channel depth and could render the channel unnavigable.

2.4.2. Dredging and Disposal at Dredged Material Management Area DA-1, Northeast Black Hammock Island. The AIWW would be dredged to the 12-foot project depth plus 2 feet allowable overdepth from the Nassau River south to Cut 23. This material would be placed in Dredged Material Management Area DU-2, Northeast Black Hammock Island. The maximum pumping distance for this area is approximately 6 miles.

2.4.3. Dredging and Disposal at Dredged Material Management Area DU-3, West Central Black Hammock Island. The AIWW would be dredged to the 12-foot project depth plus 2 feet allowable overdepth from Cut 22 south to Cut 12 near the Fort George River. This material would be placed in Dredged Material Management Area DU-3/4, West Central Black Hammock Island. The maximum pumping distance for this area is approximately 6 miles.

2.4.4. Dredging and Disposal at Dredged Material Management Area DU-20, Fanning Island. The AIWW would be dredged to the 12-foot project depth plus 2 feet allowable overdepth from Cut 11 south near the Fort George River to the St. Johns River. This material would be placed in Dredged Material Management Area DU-20 at Fanning Island. The maximum pumping distance for this area is approximately 6 miles.

2.4.5. Dredging and Beach Placement on Amelia Island. The AIWW would be dredged to the 12-foot project depth plus 2 feet allowable overdepth in the vicinity of Nassau Sound from Cut 27D in the Amelia River to Cut 27 near Sawpit Creek. This material would be placed in Beach Placement area on the southern tip of Amelia Island. This material is typically beach quality sand. The maximum pumping distance for this area is approximately 6 miles.

2.5. ALTERNATIVE COMPARISON.

Figure 2.2, Alternative Comparison Chart

RESOURCES	NO ACTION ALTERNATIVE	Dredging and Disposal at DA-1	Dredging and Disposal at DU-3	Dredging and Disposal at DU-20	Dredging and Disposal at Amelia Island
Water Quality	No impact.	Short-term localized increase in turbidity at dredge site.	Short-term localized increase in turbidity at dredge site.	Short-term localized increase in turbidity at dredge site.	Short-term localized increase in turbidity at dredge site and within the surf zone along the beach placement area.
Sea turtles	No impact.	No impact for dredging with other than hopper dredge. If a hopper dredge is used special conditions contained in Regional Biological Opinion would apply.	No impact for dredging with other than hopper dredge. If a hopper dredge is used special conditions contained in Regional Biological Opinion would apply.	No impact for dredging with other than hopper dredge. If a hopper dredge is used special conditions contained in Regional Biological Opinion would apply.	No impact for dredging with other than hopper dredge. If a hopper dredge is used special conditions contained in Regional Biological Opinion would apply. Minor short-term adverse impact on turtle nesting from construction activities. This impact would be mitigated by implementing a nest monitoring and relocation program and by tilling the beach area after construction and for the flowing year
Manatees	No impact.	No impact with implementation of standard protection conditions.	No impact with implementation of standard protection conditions.	No impact with implementation of standard protection conditions.	No impact with implementation of standard protection conditions.
Shortnose sturgeon	No impact.	No impact.	No impact.	No impact.	No impact.
Cultural Resources	No impact.	No impact.	No impact.	No impact.	No impact.

RESOURCES	NO ACTION ALTERNATIVE	Dredging and Disposal at DA-1	Dredging and Disposal at DU-3	Dredging and Disposal at DU-20	Dredging and Disposal at Amelia Island
Aesthetics	No impact.	Short-term adverse impact on recreational and navigation along the AIWW from dredging. Short-term adverse impact at disposal site from odors caused by exposing anaerobic material to the air.	Short-term adverse impact on recreational and navigation along the AIWW from dredging Short-term adverse impact at disposal site from odors caused by exposing anaerobic material to the air.	Short-term adverse impact on recreational and navigation along the AIWW from dredging. Short-term adverse impact at disposal site from odors caused by exposing anaerobic material to the air.	Short-term adverse impact on recreational and navigation along the AIWW from dredging. Short-term adverse impact from disruption of beach activities such as fishing , sunbathing, surfing etc. Long-term beneficial impact for beach aesthetics from reducing erosion rate thereby maintaining the beach.
Economics	Long-term reduced channel capacity limits recreational boat traffic and a reduction in the sale of goods and services in support of same.	Short-term benefit from the sale of goods and services in support of the dredging. Long-term benefits from generating income to local commercial facilities from the maintenance of navigation channel.	Short-term benefit from the sale of goods and services in support of the dredging. Long-term benefits from generating income to local commercial facilities from the maintenance of navigation channel.	Short-term benefit from the sale of goods and services in support of the dredging. Long-term benefits from generating income to local commercial facilities from the maintenance of navigation channel.	Short-term benefit from the sale of goods and services in support of the dredging. Long-term benefits from generating income to local commercial facilities from the maintenance of navigation channel.

RESOURCES	NO ACTION ALTERNATIVE	Dredging and Disposal at DA-1	Dredging and Disposal at DU-3	Dredging and Disposal at DU-20	Dredging and Disposal at Amelia Island
Recreation	Moderate impact to recreational boat traffic from loss of navigable capacity of channel. Moderate impact to recreational beach activities from beach erosion.	Long-term moderate impact on recreational navigation from maintaining the navigable capacity of the channel. There would be a short-term impact to recreational boat traffic and beach activities from construction vessel congestion.	Long-term moderate impact on recreational navigation from maintaining the navigable capacity of the channel. There would be a short-term impact to recreational boat traffic and beach activities from construction vessel congestion.	Long-term moderate impact on recreational navigation from maintaining the navigable capacity of the channel. There would be a short-term impact to recreational boat traffic and beach activities from construction vessel congestion.	There would be a short-term impact to recreational boat traffic and beach activities from construction vessel congestion and beach placement activities. There would be a long-term benefit from the increased navigable capacity of the channel and the increased beach area.
Navigation	Reduction in navigable capacity of channel	Long-term maintenance of navigable capacity There would be a moderate short-term impact on navigation from presence and operation of dredging equipment	Long-term maintenance of navigable capacity There would be a moderate short-term impact on navigation from presence and operation of dredging equipment	Long-term maintenance of navigable capacity There would be a moderate short-term impact on navigation from presence and operation of dredging equipment	There would be a moderate short-term impact on navigation from presence and operation of dredging equipment. Long-term moderate benefit to navigation from maintaining the channel.

2.6. PREFERRED ALTERNATIVE. The preferred alternative would be to conduct maintenance dredging and use the upland and beach disposal areas.

3.0. 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. Sea turtles
c. Manatees
d. Short-nose sturgeon
e. Cultural Resources
f. Aesthetics
g. Navigation
h. Economics
i. Recreation

3.2. GENERAL DESCRIPTION. The Atlantic Intracoastal Waterway in northeast Florida originates in Duval County at the confluence of the St. Johns River and Sisters Creek. The waterway is authorized to be 12 feet deep and 90 to 150 feet wide from Fernandina Harbor to the St. Johns River Duval County, Florida. Since the initial construction, sand and sediments have periodically accumulated in the channel reducing the navigable capacity of the project. Maintenance dredging and disposal have previously been conducted to maintain the channel. In order to meet the public need as authorized by Congress, the Federal standard must be maintained.

The Atlantic Intracoastal Waterway is used both by pleasure and commercial craft. Shoals that develop in the Federal navigation project may inhibit navigation.

3.3. RELEVANT PHYSICAL, BIOLOGICAL, SOCIAL, AND ECONOMIC FACTORS OF THE ENVIRONMENT THAT WOULD BE AFFECTED.

3.3.1. Physical

a. Water quality. The waters in the study area are used for fishing, boating and

other recreational uses. The standard quality of the AIWW is affected by these activities. The State of Florida lists the area's waters as being of Class III quality (suitable for recreation and the propagation of fish and wildlife). No other water use classification is known to be within the project area.

b. Cultural Resources. The AIWW passes through the Timucyan Ecological and Historical Preserve. This area is rich in cultural and historical properties. Included in that area is Kingsley Plantation which is included on the National Register of Historic Places. Consultation with the State Historic Preservation Officer (SHPO) was initiated by public notice dated 9 February 1995. The SHPO responded by letter dated 28 April 1995 and expressed concerns for known sites in the area. Based on conversations the SHPO responded by letter dated 12 May 1995 stating it withdrew its concerns and that no further cultural resource coordination was necessary.

3.3.2. Biological.

a. General. The presence of wildlife in the vicinity of the dredging and disposal sites is dependent on man's use of the area and vegetative cover. The vegetative cover is scattered and sparse. The presence of wildlife in the area is further dependent on migrations of species from surrounding areas. Small mammals such as shrews, muskrats, rats, raccoons, and otters may appear in the general vicinity. Dolphins , porpoise, and manatees also inhabit the nearby waters. Birdlife is abundant. An estimated 30 species of waterfowl, consisting of grebes, pelicans, cormorants, frigate-birds, herons, bitterns, storks, ibis, mergansers, and ducks are present seasonally or year round. Marshhawks, ospreys, and kestrels are common. Various marsh and shorebirds may use the beach disposal area. Other species common along the open waters and contiguous wetlands include Kingfishers, swallows, crows, wrens, warblers, and sparrows. Many sport and commercial species of fish are common to the area. These include tarpon, bluefish, drum, weakfish, sheepshead, flounder, jacks, snook, sea catfish, and mullet.

b. Threatened and Endangered Species. The following species listed as threatened or endangered by U.S.Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) pursuant to the Endangered Species Act (USFWS, 1987) could possibly be located in the project area:

Green sea turtle.....*Chelonia mydas*
Hawksbill sea turtle.....*Eretmochelys imbricata*
Kemp's Ridley sea turtle.....*Lepidochelys kempii*
Leatherback sea turtle.....*Dermochelys coriacea*
Loggerhead sea turtle.....*Caretta caretta*
West Indian Manatee.....*Trichechus manatus*
Brown Pelican.....*Pelecanus occidentalis*

Southern Bald Eagle.....*Haliaeetus leucocephalus*
American Alligator.....*Alligator mississippiensis*
Eastern Indigo Snake.....*Drymarchon corais couperi*
Atlantic Salt Marsh Snake...*Neridua fascuata taebuata*
Shortnose Sturgeon.....*Acipenser brevirostrum*

c. Species listed as species of special concern by the State of Florida, exclusive of the above, include the osprey, least tern, great white heron, peregrine falcon, and gopher tortoise.

d. The U.S. Fish and Wildlife Service (USFWS) identified the West Indian Manatee, the Shortnose Sturgeon, and the Green, Hawksbill, Kemp's Ridley, Leatherback, and Loggerhead sea turtles as species which are likely to occur within the project area. The manatee uses the AIWW as a travel corridor between Fernandina harbor and the St. Johns River in Nassau and Duval Counties during the spring, summer and fall months.

e. The shortnose sturgeon may be present in the waterway and adjacent rivers and streams as the southern most limit of it's range is the St. Johns River, Florida. The sturgeons' general pattern of seasonal movement involves using an upstream spawning area in late winter to spring, spending summer and fall in the lower river near the mouth, and then moving out into a deeper and sometimes more saline environment for winter.

f. Sea turtles are known to nest at the beach placement area on Amelia Island between 1 April and 30 October.

3.3.3. Social.

a. Aesthetics. The project area offers scenic rural views along the AIWW and adjacent forested lands. Salt marshes, pocket wetlands, mixed hardwood flatlands, and largely unspoiled river views characterize the positive visual elements of the immediate area.

b. Recreation. Much of the recreation along he AIWW is associated with recreational navigation. The AIWW passes through the Timucyan Ecological and Historical Preserve. The major activity assocaited with the waterway is fishing, shell fishing, and waterfowl hunting. Major acitivities along the beach including sunbathing, fishing and surfing.

3.3.4. Economic

a. Navigation. The AIWW, vicinity of Sawpit Creek, is an important part of the main AIWW system which reaches northward to Trenton, N.J., New York City, and

Boston, MA. Commercial vessels such as tugboats, barges, and fishing vessels as well as recreational craft (both transient and local) share the waterway. Large numbers of yachts travel the waterway between the populous upper east coast of the U.S. and the vacation areas of south Florida.

b. Economics. Major land uses in the project area include residential, commercial, and pine/hardwood forest. Most of the area along the AIWW is rural. There are several marinas along the AIWW that derive income from the waterway.

4.0 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: No Impact

4.2.2. Biological: No Impact

4.2.3. Social: Recreation on the AIWW would be affected if the channel were to become unnavigable.

4.2.4. Economic: A loss of revenues from the recreational and commercial use of the

AIWW would be felt if this alternative were to be implemented due to the possibility of the channel becoming unnavigable.

4.2.5. Recreation: Impacts to recreational boat traffic along the AIWW would result from increased shoaling and decreased navigable capacity of the channel. In addition, recreational beach activities would be impacted due to continued loss of beach area.

4.2.6. Cumulative effects: Cumulative effects on the project area if this alternative were implemented would be the shoaling of the navigation channel which would affect navigation and therefore, the local economy.

4.2.7. Unavoidable effects: No Impact

4.2.8. Irreversible and Irretrievable Resource Commitments: There would be no utilization of resources if this alternative were implemented. Therefore, there would be no irreversible or irretrievable resource commitments.

4.3. DREDGING AND DISPOSAL AT DREDGED MATERIAL MANAGEMENT AREA DA-1, NORTHEAST BLACK HAMMOCK ISLAND

4.3.1. Physical:

a. Water Quality. Dredging operations would result in some minor temporary changes in water quality. Turbidity in the area of dredging would be elevated above normal but would not exceed state established levels. Minor visible plumes at the water surface would be expected in the immediate vicinity of the dredging operation. Minor elevated turbidity levels would be expected to dissipate rapidly, returning to background levels in a short period of time. Water quality would return to normal levels shortly after completion of the proposed project.

b. Cultural Resources. Consultation with the State Historic Preservation Officer (SHPO) was initiated by public notice dated 9 February 1995. The SHPO responded by letter dated 28 April 1995 and expressed concerns for known sites in the area. Based on conversations the SHPO responded by letter dated 12 May 1995 stating it withdrew its concerns and that no further cultural resource coordination was necessary.

4.3.2. Biological:

a. General. Maintenance dredging would disrupt the benthic communities in the areas to be dredged. However, benthos would quickly recolonize the newly dredged areas and no long-term adverse effects would result.

b. Manatees. Manatees could be affected during dredging, generally from the

operation of crew boats or auxiliary equipment. In order to minimize this potential current US Fish and Wildlife Service Standard Manatee Conditions would be implemented during maintenance dredging. This would ensure manatee protection should any wander into the work area during construction.

c. Sea turtles. There would be no impacts to sea turtles from the dredging should the equipment to be used is other than a hopper dredge. If a hopper dredge is used there could be impacts to sea turtles in the area. These impacts would be reduced by the use of the new deflector draghead, monitoring the intake and restricting its use to the winter hopper dredging window (1 December to 15 April).

d. Shortnose sturgeon. Dredging should not impact this species as in prefers the emergent salt marsh vegetation along the waterway. There would be no impacts from upland disposal on this species.

4.3.3. Social:.

a. Recreation. Recreational boat traffic would experience temporary delays due to construction traffic and congestion and minor temporary impacts to recreational beach activities would occur during beach placement. However, recreational boat traffic along the AIWW would benefit from the increased navigable capacity of the channel and recreational beach activities would benefit from the increased beach area as a result of the dredging and beach placement.

b. Aesthetics. Since the only aesthetic impacts would result from construction activities (vessel traffic and noise), all impacts to the aesthetics of the area would end following project completion and no permanent impacts would occur.

4.3.4. Economic: Any expansion to the movement of commodities through the AIWW in the vicinity of Sawpit Creek may be a stimulus for attracting new business and small industry to the area including commercial interests directly or indirectly associated with charter and head boats and commercial fisheries. This could possibly increase employment in the area. Transportation cost savings may be derived through the use of deeper draft vessels and from potential new commodity movements which would utilize the AIWW.

4.3.5. Cumulative effects: Cumulative effects may include benefits to the economy of the area through expanded vessel use of the waterway and increased migratory bird habitat and sea turtle nesting habitat.

4.3.6. Unavoidable effects: Temporary degradation in water quality at the dredging sites will occur. The material to be dredged is predominately sand and adverse impacts should be short-term and minor.

4.3.7. Irreversible and Irretrievable Resource Commitments: Some loss of benthic

organisms at the dredging sites will occur. However, this impact will be minimized by the repopulation of various benthic organisms at the dredged sites.

4.4. DREDGING AND DISPOSAL AT DREDGED MATERIAL MANAGEMENT AREA DU-3, WEST CENTRAL BLACK HAMMOCK ISLAND

4.4.1. Physical.

a. Water Quality. Dredging operations would result in some minor temporary changes in water quality. Turbidity in the area of dredging would be elevated above normal but would not exceed state established levels. Minor visible plumes at the water surface would be expected in the immediate vicinity of the dredging operation. Minor elevated turbidity levels would be expected to dissipate rapidly, returning to background levels in a short period of time. Water quality would return to normal levels shortly after completion of the proposed project.

b. Cultural Resources. Consultation with the State Historic Preservation Officer (SHPO) was initiated by public notice dated 9 February 1995. The SHPO responded by letter dated 28 April 1995 and expressed concerns for known sites in the area. Based on conversations the SHPO responded by letter dated 12 May 1995 stating it withdrew its concerns and that no further cultural resource coordination was necessary.

4.4.2. Biological:

a. General. Maintenance dredging would disrupt the benthic communities in the areas to be dredged. However, benthos would quickly recolonize the newly dredged areas and no long-term adverse effects would result.

b. Manatees. Manatees could be affected during dredging, generally from the operation of crew boats or auxiliary equipment. In order to minimize this potential current US Fish and Wildlife Service Standard Manatee Conditions would be implemented during maintenance dredging. This would ensure manatee protection should any wander into the work area during construction.

c. Sea turtles. There would be no impacts to sea turtles from the dredging should the equipment to be used is other than a hopper dredge. If a hopper dredge is used there could be impacts to sea turtles in the area. These impacts would be reduced by the use of the new deflector draghead, monitoring the intake and restricting its use to the winter hopper dredging window (1 December to 15 April).

d. Shortnose sturgeon. Dredging should not impact this species as in prefers the emergent salt marsh vegetation along the waterway. There would be no impacts from upland disposal on this species.

4.4.3. Social:

a. Recreation: Recreational boat traffic would experience temporary delays due to construction traffic and congestion and minor temporary impacts to recreational beach activities would occur during beach placement. However, recreational boat traffic along the AIWW would benefit from the increased navigable capacity of the channel and recreational beach activities would benefit from the increased beach area as a result of the dredging and beach placement.

b. Aesthetics. Since the only aesthetic impacts would result from construction activities (vessel traffic and noise), all impacts to the aesthetics of the area would end following project completion and no permanent impacts would occur.

4.4.4. Economic: Any expansion to the movement of commodities through the AIWW in the vicinity of Sawpit Creek may be a stimulus for attracting new business and small industry to the area including commercial interests directly or indirectly associated with charter and head boats and commercial fisheries. This could possibly increase employment in the area. Transportation cost savings may be derived through the use of deeper draft vessels and from potential new commodity movements which would utilize the AIWW.

4.4.5. Cumulative effects: Cumulative effects may include benefits to the economy of the area through expanded vessel use of the waterway and increased migratory bird habitat and sea turtle nesting habitat.

4.4.6. Unavoidable effects: Temporary degradation in water quality at the dredging sites will occur. The material to be dredged is predominately sand and adverse impacts should be short-term and minor.

4.4.7. Irreversible and Irretrievable Resource Commitments: Some loss of benthic organisms at the dredging sites will occur. However, this impact will be minimized by the repopulation of various benthic organisms at the dredged sites.

4.5. DREDGING AND DISPOSAL AT DREDGED MATERIAL MANAGEMENT AREA DU-20, FANNING ISLAND

4.5.1. Physical:

a. Water Quality. Dredging operations would result in some minor temporary changes in water quality. Turbidity in the area of dredging would be elevated above normal but would not exceed state established levels. Minor visible plumes at the water surface would be expected in the immediate vicinity of the dredging operation. Minor elevated turbidity levels would be expected to dissipate rapidly, returning to background levels in a short period of time. Water quality would return to normal levels shortly after completion of the proposed project.

b. Cultural Resources. Consultation with the State Historic Preservation Officer (SHPO) was initiated by public notice dated 9 February 1995. The SHPO responded by letter dated 28 April 1995 and expressed concerns for known sites in the area. Based on conversations the SHPO responded by letter dated 12 May 1995 stating it withdrew its concerns and that no further cultural resource coordination was necessary.

4.5.2. Biological:

a. General. Maintenance dredging would disrupt the benthic communities in the areas to be dredged. However, benthos would quickly recolonize the newly dredged areas and no long-term adverse effects would result.

b. Manatees. Manatees could be affected during dredging, generally from the operation of crew boats or auxiliary equipment. In order to minimize this potential current US Fish and Wildlife Service Standard Manatee Conditions would be implemented during maintenance dredging. This would ensure manatee protection should any wander into the work area during construction.

c. Sea turtles. There would be no impacts to sea turtles from the dredging should the equipment to be used is other than a hopper dredge. If a hopper dredge is used there could be impacts to sea turtles in the area. These impacts would be reduced by the use of the new deflector draghead, monitoring the intake and restricting its use to the winter hopper dredging window (1 December to 15 April).

d. Shortnose sturgeon. Dredging should not impact this species as in prefers the emergent salt marsh vegetation along the waterway. There would be no impacts from upland disposal on this species.

4.5.3. Social:

a. Recreation: Recreational boat traffic would experience temporary delays due to construction traffic and congestion and minor temporary impacts to recreational beach activities would occur during beach placement. However, recreational boat traffic along the AIWW would benefit from the increased navigable capacity of the channel and recreational beach activities would benefit from the increased beach area as a result of the dredging and beach placement.

b. Aesthetics. Since the only aesthetic impacts would result from construction activities (vessel traffic and noise), all impacts to the aesthetics of the area would end following project completion and no permanent impacts would occur.

4.5.4. Economic: Any expansion to the movement of commodities through the AIWW in the vicinity of Sawpit Creek may be a stimulus for attracting new business and small

industry to the area including commercial interests directly or indirectly associated with charter and head boats and commercial fisheries. This could possibly increase employment in the area. Transportation cost savings may be derived through the use of deeper draft vessels and from potential new commodity movements which would utilize the AIWW.

4.5.5. Cumulative effects: Cumulative effects may include benefits to the economy of the area through expanded vessel use of the waterway and increased migratory bird habitat and sea turtle nesting habitat.

4.5.6. Unavoidable effects: Temporary degradation in water quality at the dredging sites will occur. The material to be dredged is predominately sand and adverse impacts should be short-term and minor.

4.5.7. Irreversible and Irretrievable Resource Commitments: Some loss of benthic organisms at the dredging sites will occur. However, this impact will be minimized by the repopulation of various benthic organisms at the dredged sites.

4.6. DREDGING AND BEACH PLACEMENT AT AMELIA ISLAND

4.6.1. Physical:

a. Water Quality. Dredging operations would result in some minor temporary changes in water quality. Turbidity in the area of dredging would be elevated above normal but would not exceed state established levels. Minor visible plumes at the water surface would be expected in the immediate vicinity of the dredging operation. Minor elevated turbidity levels would be expected to dissipate rapidly, returning to background levels in a short period of time. Water quality would return to normal levels shortly after completion of the proposed project.

b. Cultural Resources. Consultation with the State Historic Preservation Officer (SHPO) was initiated by public notice dated 9 February 1995. The SHPO responded by letter dated 28 April 1995 and expressed concerns for known sites in the area. Based on conversations the SHPO responded by letter dated 12 May 1995 stating it withdrew its concerns and that no further cultural resource coordination was necessary.

4.6.2. Biological:

a. General. Maintenance dredging would disrupt the benthic communities in the areas to be dredged. However, benthos would quickly recolonize the newly dredged areas and no long-term adverse effects would result.

b. Manatees. Manatees could be affected during dredging, generally from the operation of crew boats or auxiliary equipment. In order to minimize this potential