sloped banks bordering the ICWW. Other invertebrates and small fish provide food resources that may be utilized by great blue heron, little blue heron, great egret, green-backed heron, and others. Foragers that may take advantage of a variety of small fish in the open waters of the ICWW include osprey, pelican, and cormorant.

4.2 ENDANGERED AND THREATENED ANIMALS

Table 4-2 lists protected species that are or may be found at the MSA 641A proposed dredged material disposal site or adjacent waters. Various protected birds such as herons, egrets and wood stork may find some limited perching and foraging habitat along the fringing wetlands adjacent to the ICWW. In addition, least tern, pelican, and osprey utilize the estuarine waters of the ICWW for foraging.

Manatees and sea turtles may move through the waters of the ICWW, but good foraging opportunities for these species do not occur near Site MSA 641A because of the lack of submerged aquatic vegetation.

Migrating raptors that may forage over terrestrial and/or aquatic habitats include American kestrel, Cooper's hawk, merlin, and peregrine falcon.

Table 4-2. Status of State or Federally Listed Endangered and Threatened Wildlife That May Occur on MSA 641A Proposed Dredged Material Disposal Site, Proposed Pipeline Access, or Adjacent Waters, Palm Beach County, Florida (Page 1 of 3)

Species	Status			Occurrence
	State	FCREPA	Federal	
REPTILES AND AMPHIBIANS				
Caretta caretta Atlantic loggerhead turtle	T	T	T,I	OV
Chelonia mydas Atlantic green turtle	E	E	E,I	OV
Nerodia fasciata taeniata Atlantic saltmarsh water snake	T	E	T	PR
BIRDS				
Accipiter cooperii Cooper's hawk		SSC		OV
Buteo brachyurus Short-tailed hawk		R		OV
Casmerodius albus Great egret		SSC		OV
Egretta caerulea Little blue heron	SSC	SSC		OV
Egretta thula Snowy egret	SSC	SSC		OV
Egretta tricolor Tricolored heron	SSC	SSC		OV
Eudocimus alba White ibis		SSC		OV
Falco columbarius Merlin			II	OV
Falco peregrinus Peregrine falcon	E	E	T	OV

Table 4-2. Status of State or Federally Listed Endangered and Threatened Wildlife That May Occur on MSA 641A Proposed Dredged Material Disposal Site, Proposed Pipeline Access, or Adjacent Waters, Palm Beach County, Florida (Page 2 of 3)

Species	Status			Occurrence
	State	FCREPA	Federal	
Falco sparverius paulus Southeastern kestrel	T	T	C2,II	OV
Falco sparverius sparverius American kestrel			II	OV
Mycteria americana Wood stork	E	E	E	OV
Nyctanassa violacea Yellow-crowned night heron		SSC		OV
Nycticorax nycticorax Black-crowned night heron		SSC		OV
Pandion haliaetus Osprey		T	II	OV
Pelecanus occidentalis Brown pelican	SSC	T		OV
Sterna antillarum Least tern	T			OV
Vireo altiloquus Black-whiskered vireo		R		PR
MAMMALS				
Trichechus manatus West Indian manatee	E	T	E,I	OV

State: Florida Game and Fresh Water Fish Commission; E = Endangered; T = Threatened; SSC = Species of Special Concern.

Table 4-2. Status of State or Federally Listed Endangered and Threatened Wildlife That May Occur on MSA 641A Proposed Dredged Material Disposal Site, Proposed Pipeline Access, or Adjacent Waters, Palm Beach County, Florida (Page 3 of 3)

FCREPA: Florida Committee on Rare and Endangered Plants and Animals (Unofficial); E = Endangered; T = Threatened; SSC = Species of Special Concern; R = Rare.

Federal: United States Fish and Wildlife Service. E = Endangered; T = Threatened; C2 = A candidate for federal listing, with some evidence of vulnerability, but for which not enough data exists support listing.

Convention on International Trade in Endangered Species of Wild Fauna and Flora; I = Appendix I species; II = Appendix II species.

Occurrence Code: OV = Occasional Visitor (migrants, accidentals, or may be within part of home range of this species); PR = Possible Resident.

Sources: FGFWFC 1990.
NeSmith 1990.
WAR 1990.

5.0 WETLAND JURISDICTIONS

There is one wetland area located on the eastern portion of the site (Figure 3-1). It consists of a band of fringing mangrove along the ICWW. This wetland area is likely considered jurisdictional by the Department of Environmental Regulation (DER) and the U.S. Army Corps of Engineers (COE).

6.0 PIPELINE ROUTE

The pipeline will enter the proposed disposal Site MSA 641A directly from the ICWW located to the east. It will cross through a fringing mangrove wetland along the ICWW.

7.0 REFERENCES

Ashton, R.E. Jr. and R.S. Ashton. 1978, 1981, 1982. Handbook of Florida Amphibians and Reptiles Vols. I-III. Windward Publishing, Miami, Florida.

Bromwell and Carrier, Inc. 1989. Phase One: Long-range Dredged Material Management Plan Atlantic Intracoastal Waterway, Palm Beach County, Florida. Lakeland, Florida.

Florida Department of Transportation (FDOT). 1985. Florida Land Use, Cover and Forms Classification System. FDOT, State Topographic Bureau, Tallahassee, Florida.

Florida Game and Fresh Water Fish Commission (FGFWFC). 1990. Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida. Compiled by Don A. Wood.

Florida Natural Areas Inventory and Florida Department of Natural Resources. 1990. Guide to the Natural Communities of Florida.

Kale, H.W. (ed.) 1978. Rare and Endangered Biota of Florida, Volume II, Birds. Florida Committee on Rare and Endangered Plants and Animals, University Presses of Florida, Gainesville, Florida.

Kale, H.W. and D.S. Maehr. 1990. Florida's Birds. Pineapple Press, Sarasota, Florida.

Layne, J.N. (ed.) 1978. Rare and Endangered Biota of Florida, Volume I, Mammals. Florida Committee on Rare and Endangered Plants and Animals, University Presses of Florida, Gainesville, Florida.

Long, R.W. and O. Lakela. 1971. A Flora of Tropical Florida. University of Miami Press, Coral Gables, Florida.

McCollum, S.H., O.E. Cruz, L.T. Stem, W.H. Wittstruck, R.D. Ford and F.C. Watts. 1978. Soil Survey of Palm Beach County Area, Florida. United States Department of Agriculture, USDA Soil Conservation Service.

McDiarmid, R. (ed.) 1978. Rare and Endangered Biota of Florida, Volume III, Amphibians and Reptiles. Florida Committee on Rare and Endangered Plants and Animals, University Presses of Florida, Gainesville, Florida.

Nesbitt, S.A., J.C. Ogden, H.W. Kale, III, P.W. Patty and L.A. Rowse. 1982. Florida Atlas of Breeding Sites for Herons and Their Allies: 1976-78. FWS/OBS-81/49.

NeSmith, K. 1990. Personal Communication. Florida Natural Areas Inventory Tallahassee, Florida.

Sprunt, A., Jr. 1954. Florida Bird Life. Coward-McCann, Inc., and National Audubon Society.

Stevenson, H. 1976. Vertebrates of Florida, Identification and Distribution. University Presses of Florida, Gainesville, Florida.

Water and Research, Inc. (WAR). 1990. Collected Data. Gainesville, Florida.

Engineering Narrative

MSA 641A Disposal Area

This narrative summarizes the documents comprising the permit application package for the development of the MSA 641A dredged material containment area. Site MSA 641A will be a permanent facility to service the maintenance requirements of Reach IV of the Intracoastal Waterway (ICWW) in Palm Beach County, Florida from the S.R. 812 bridge in Lantana, to the southern county line (ICWW mile 291.72 to mile 310.22).

The submission of this application package represents an intermediate step towards completion of the second phase of a two phased program element addressing the maintenance requirements of the Intracoastal Waterway in Palm Beach County, Florida. This element is part of a fifteen year program sponsored by the Florida Inland Navigation District to develop a long-term dredged material management plan for the Intracoastal Waterway along the entire east coast of Florida. Phase I of the Palm Beach County program element, which is documented in two reports included as Attachments 1, and 2 to this permit application, developed basic plan concepts for the continuing management of maintenance material dredged from the Intracoastal Waterway in Palm Beach County, defined short and long term program needs based on a comprehensive examination of historical dredging records for the project area, and identified suitable centralized sites which satisfy these needs based on preliminary environmental, engineering, and operational criteria. Phase II consists of the gathering of detailed, site specific information required for the preparation and submission of permit applications for the eight primary containment sites identified in Phase I. In addition, Phase II also addresses the preliminary design of the site containment facilities; the acquisition of these sites (where appropriate), through negotiated purchase or condemnation, by the Florida Inland Navigation District; and the construction and continuing operation and maintenance of these sites as permanent dredged material management facilities.

No attempt is made in this narrative to recount, in detail, the information contained in the documents which accompany the permit application. Rather, this narrative is designed to assist the reviewer in organizing this information, while emphasizing the engineering considerations and design specifications presented in the attached permit drawings (Attachment 3). In addition to the permit drawings and the Phase I reports already mentioned, the permit application package for Site MSA 641A includes: Attachment 4, a topographic survey, documenting pre-construction topography and drainage patterns, and providing information necessary for site design, volumetric calculations, and grade analysis; Attachment 5, the sub-surface and soils report, identifying site foundation conditions and in-situ construction material suitability, as well as locating the water table on-site; Attachment 6, the environmental report, documenting existing

environmental conditions, including vegetation communities and wildlife habitats, and serving to guide the configuration of the containment area within the site so as to avoid, to the greatest extent possible, the most sensitive environmental areas; and Attachment 7, a site specific management plan, insuring that the containment area will continue to be operated in an efficient manner without undue conflicts with adjacent off-site land use, and allowing the site to be maintained as a permanent facility.

Site MSA 641A is an existing Florida Inland Navigation District dredged maintenance disposal site with a total area of 11.48 acres. The site is located in the town of Gulf Stream, on the western shore of the ICWW (Attachment 3, Sheet 1 of 4). It is bounded on the north and south by residential developments, and on the west by commercial properties. Soils on the site consist predominantly of an Arents-Urban complex, which is a poorly drained sandy fill overlying organic soil. Also present on the western side of the site is a small area of St. Lucie-Urban land complex soil, an excessively drained soil type that has been modified by earth moving for urban land uses. No historical or archaeological sites are recorded for this property, based on a review of the Florida Master Site File.

Site vegetation consists mainly of Australian pine (437) and Brazilian pepper (422) communities. A large area of disturbed land (740) lies along the southern site boundary. The eastern portion of the site is vegetated by a band of mangrove swamp (612) which is likely to be considered jurisdictional wetland by the Department of Environmental Regulation and the Army Corps of Engineers (Attachment 3, Sheet 4 of 4). No other wetlands are present on site. Detailed environmental information for Site MSA 641A is provided in the attached environmental report (Attachment 6).

The preliminary site design layout includes a buffer area surrounding the containment dike, separating it from adjacent properties (Attachment 3, Sheet 2 of 4). The buffer on the north side of the site will be 100 ft wide, while the south and west buffers will be approximately 50 ft wide. The eastern buffer varies in width from 70 to 150 ft. A portion of these buffer areas will consist of undisturbed vegetation occurring along the site perimeter.

The proposed containment basin is defined by earthen dikes to be constructed of material excavated from the site interior. The existing mean elevation of the projected containment area was determined from topographic survey (Attachment 4) to be +9.06 feet NGVD. Specific soil and foundation information (soils/sub-surface report, Attachment 7) confirm the utility of the preliminary facility design as being well within the range of standard COE practice for similar sites and materials. Design dike specifications include

a dike crest height of 10.0 ft above grade (+19.06 ft NGVD), a side slope of 1V:3H, and a crest width of 12.0 ft, yielding a dike width at grade of 72 ft. As measured at the crest centerline, the dike perimeter is 1,887 ft, requiring 29,406 c.y. of material to construct. The containment basin will provide a capacity of 66,788 c.y., which is approximately 42 per cent of the projected 50 yr disposal requirement (158,000 c.y.) for Reach IV. The remainder of the 50 yr requirement will be met by the utilization of three additional dredged material management sites located elsewhere in the reach.

An additional feature of the containment structure is a ramp to allow ingress and egress of heavy equipment to and from the interior of the diked area. Ramp details are shown in the permit application drawings (Attachment 3, Sheets 2 and 3 of 4). The outside of the ramp and the supporting toe maintain the same 1V:3H slope as the main dike. The ascending/descending grade is 5 per cent. These ramps will facilitate the regrading of material deposited in the containment basin to promote complete dewatering and ensure proper stormwater collection and drainage. In addition, the ramps will provide an efficient means of removing the material for use as detailed in the site-specific management plan (Attachment 9), as prevailing restrictions and market conditions dictate.

The total volume of material required for the ramp construction is 1,413 c.y. which, when added to the initial dike requirement of 29,406 c.y., yields a total construction material requirement of 30,879 c.y. This is to be provided by the uniform excavation of the containment area interior to an average depth of +3.18 ft NGVD (5.88 ft below grade), maintaining the 1V:3H dike slope and a 20 foot excavation setback from the interior toe of the dike. Allowing for 2 ft of freeboard, and an additional 2 ft of ponding depth at the completion of final dredging operations (i.e, filling the containment area to 4 ft below the dike crest, or 11.88 ft above the excavated interior grade elevation) yields an initial site disposal capacity of 66,788 c.y. Also to be noted is the existence of the on-site water table located at a mean elevation of +2.66 ft NGVD, or 0.52 ft below the mean excavation grade, at the time of the sub-surface survey. Therefore, a sump and/or pumping of groundwater seepage may be required during construction, due to the close proximity of the water table to the finished interior grade.

Inlet pipeline access to the site from the Waterway will be located approximately 100 ft north of the southeast site corner (Attachment 3, Sheet 2 of 4). The inlet pipeline will be extend from the shoreline to the outside toe of the containment dike. It will follow the east and south sides of the dike, to the southwest corner of the containment basin where it will enter the basin by passing over the dike crest (Attachment 3, Sheet 2 of 4).

Decanting of the ponded water will be accomplished by a parallel arrangement of three (3) corrugated metal half-pipes, located in the northeast corner of the containment area, diagonally opposite the slurry inlet (Attachment 3 Sheet 2 of 4). Each half-pipe will provide for the release of effluent over a sharp-crested weir section of minimum length of 8 ft, for a total minimum crest length of 24 ft. The weir crest height will be adjustable by means of removable flash boards from the excavated basin interior grade to 13.98 ft above the interior grade. The minimum weir crest elevation facilitates the control of stormwater runoff prior to disposal operations, while the maximum elevation facilitates control of the final elevation of the deposition layer surface. The three weirs are to be connected by a manifold, with a single outlet pipe passing under the dike and extending approximately 70 ft to the ICWW.

The specification of a minimum weir crest length of 24 ft is based on U.S. Army Corps of Engineers guidelines related to the dredge equipment. For this and all project calculations, it has been assumed that an 18 inch O.D. dredge, (discharge velocity of 16 ft/sec, a volumetric discharge of 3,560 c.y./hr, and a 20/80 solids/liquid slurry mix) would be used for future channel maintenance. Analysis of weir performance based on nomograms developed at the COE Waterways Experiment Station (WES) under the Dredged Material Research Program (DMRP) (Walski and Schroeder, 1978) indicates that these design parameters may be expected to produce an effluent suspended solids concentration of 0.45 g/l, assuming a minimum average ponding depth of 2 ft. Translation of suspended solids concentration to a measure of turbidity on which Florida water quality standards are based is highly dependent on the suspended material characteristics. However, WES guidelines (Palermo, 1978) indicate that the estimated effluent suspended solids concentration of 0.45 g/l correlates to an acceptable level of turbidity. Should effluent quality deteriorate below the ambient conditions of the receiving waters, steps shall be taken to decrease effluent turbidity. These may include intermittent dredge operation, increased ponding depth, or the use of turbidity curtains surrounding the site outlet weirs.

Road access to the site will be provided via a separate road easement, connecting the site to Federal Highway (U.S. 1), which lies west of the site. The location of the access road will be determined upon further evaluation of several alternative routes being considered.

A system of perimeter ditches will be constructed at a 20 ft setback from the outside toe of the containment dike to control stormwater runoff from the exterior face of the containment dike, perimeter road, and portions of the buffer area. As part of this system, an existing 460 ft ditch lying along the southern site boundary to will be utilized to provide connection to the ICWW. These ditches will also

provide a means for intercepting any horizontal migration of saltwater from the interior of the containment area. Preliminary analysis indicates that at a minimum depth of 3.0 ft, the ditches will provide adequate conveyance for the 25 yr storm runoff.

Finally, as part of this application an analysis of containment area efficiency was performed. No data are available to characterize the channel sediments in Reach IV of the ICWW in Palm Beach County. Therefore, the analysis was based on a conservative estimate that the sediment to be encountered within this reach includes up to 25 per cent silt, that is, up to 25 per cent of the material would pass a #200 sieve. This estimate is supported by the experience of the Jacksonville District Corps of Engineers. From the estimated silt content of the sediment to be dredged, a characteristic zone settling velocity was determined from an empirical relationship between silt content and settling behavior. This relationship was developed from Corps of Engineers sediment data characterizing the silt content of a variety of ICWW channel sediments and the corresponding settling behavior of slurry concentrations similar to those typically encountered in dredging operations (Attachment 7). The resulting zone settling velocity for the sediment to be placed in Site MSA 641A was determined to be 0.5 cm/min. This settling velocity was then used to determine the retention time needed to provide adequate sedimentation within the containment basin.

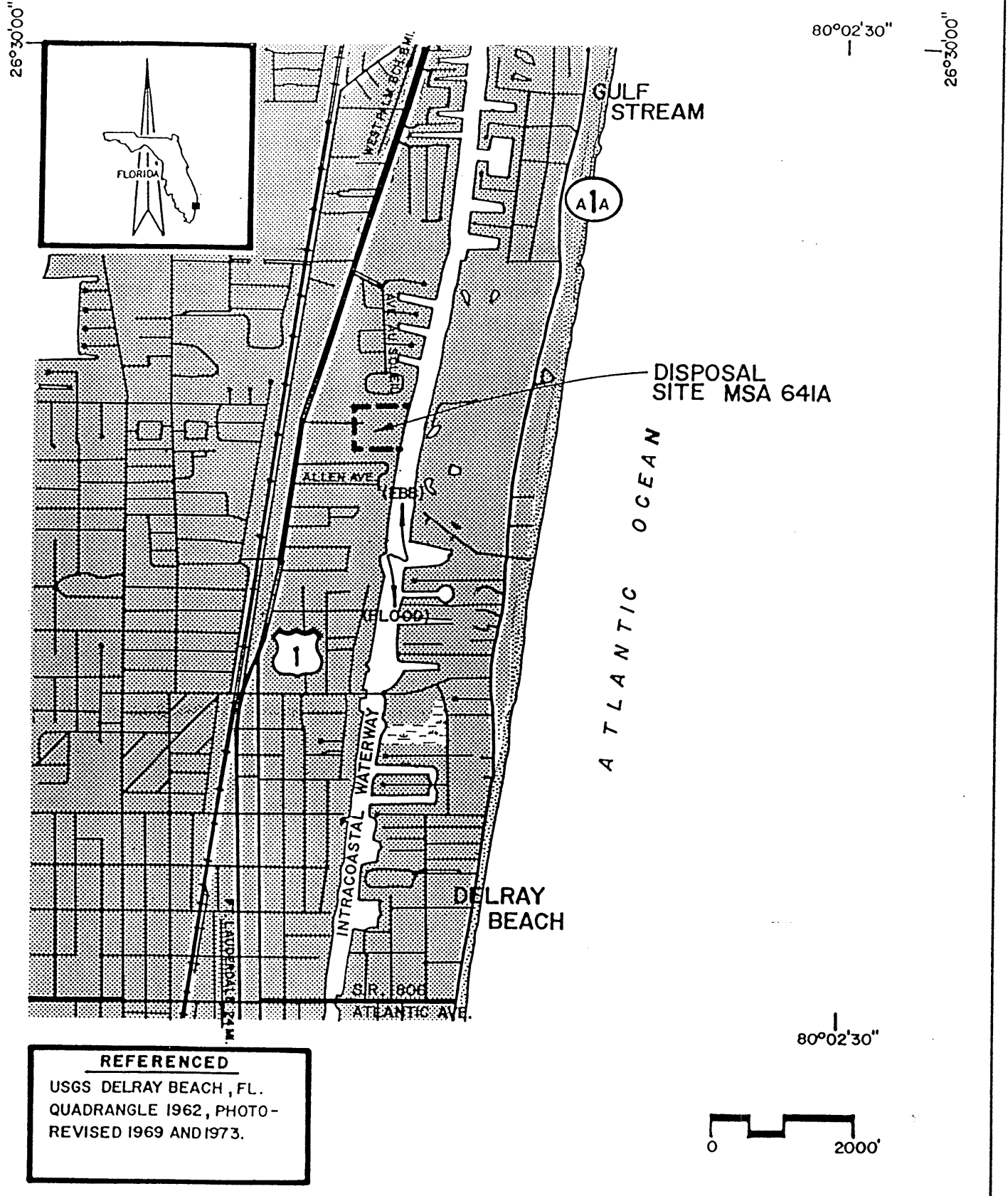
Analysis of the hydraulic characteristics of the proposed containment basin indicates that a 2 ft ponding depth provides a maximum retention time of 4.37 hours during the period in which flow over the weir balances the liquid discharge of the dredge. In comparison, the time required for the suspended sediment to settle out of the withdrawal layer of 2 ft is 2.03 hours, based on the zone settling velocity derived above. Research by the U.S. Army Waterways Experiment Station (WES) under the Dredged Material Research Program (DMRP) (Shields et al., 1987) indicates that to account for field conditions, the required settling time should be multiplied by a safety factor of 2.25. This corrected settling time of 4.57 hrs. slightly exceeds the calculated maximum retention time of 4.37 hours produced by the minimum ponding depth of 2 ft. Therefore, it is recommended that a minimum operational ponding depth of 3 ft be maintained whenever possible. This would result in a basin retention time of 6.56 hours which is sufficient to maintain the required effluent quality. Moreover, DMRP research indicates that under field conditions the depth of withdrawal may be significantly less than that predicted by the WES Selective Withdrawal Model referenced above. Therefore, providing the recommended operational ponding depth of 3 ft should eliminate the possibility of resuspension. This should ensure that the turbidity of the effluent released from Site MSA 641A meets state water quality standards. In order to achieve the maximum capacity of the containment basin, it will be necessary to reduce the ponding depth to less than the recommended depth of

3 ft during the final stages of disposal operations. At this time, additional measures may be required to maintain adequate water quality. These include installing turbidity screens or floating baffles around the weirs, or requiring the dredge plant to shut down until the surface water quality reaches acceptable limits.

REFERENCES

Palermo, M.R., R.L. Montgomery, and M.E. Poindexter, "Guidelines for Designing, Operating, and Managing Dredged Material Containment Areas",Technical Report DS-78-10, Dec. 1978, U.S. Army Engineer Waterways Experiment Station, CE, Vicksburg, MS.

Walski, T.M. and P.R. Schroeder, "Weir Design to Maintain Effluent Quality from Dredged Material Containment Areas", Technical Report D-78-18, May 1978, U.S. Army Engineer Waterways Experiment Station, CE, Vicksburg, MS.



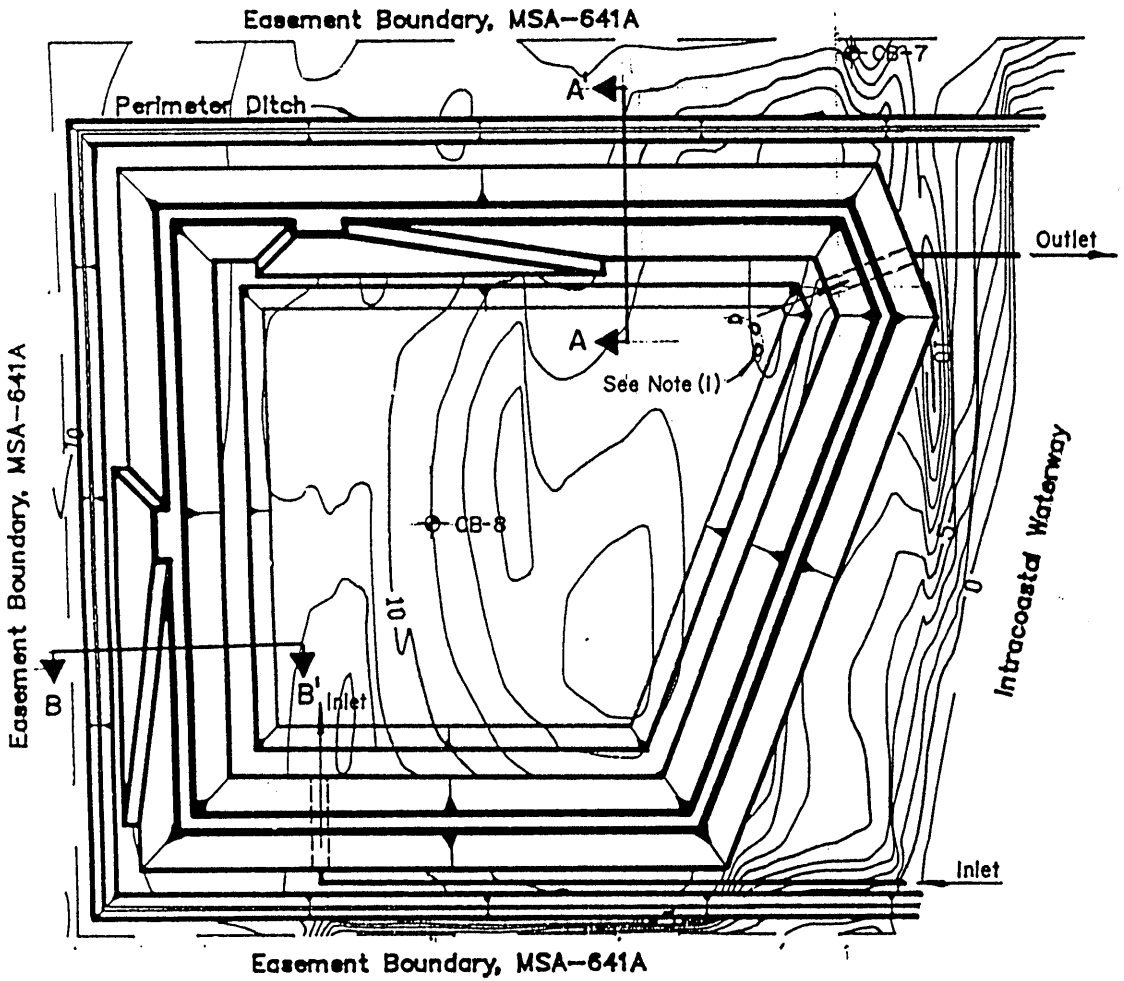
REFERENCED

USGS DELRAY BEACH, FL. QUADRANGLE 1962, PHOTO-REVISED 1969 AND 1973.

TAYLOR ENGINEERING INC
9086 CYPRESS GREEN DRIVE
JACKSONVILLE, FLORIDA 32256

Location of FIND MSA 641A
Dredged Material Disposal Site
Palm Beach County, Florida

PROJECT	C-9005
REVISION	
SHEET	1 of 4
DATE	April, 1992



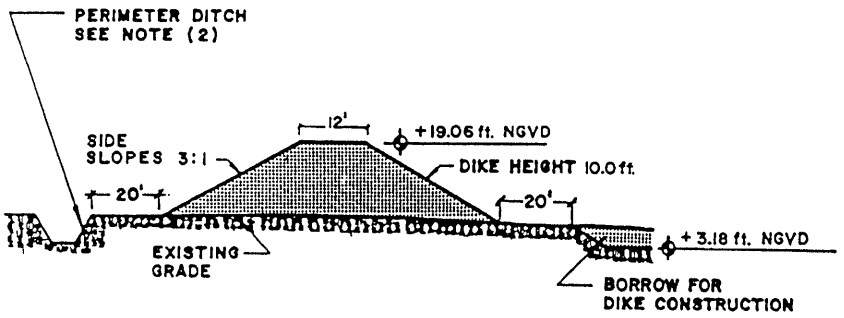
Notes:

1. Weirs: Three 8 ft. dia. CM Half-Pipes With Removable Flash Boards Adj. From +7.58ft. Above Grade to Below Grade (With Connecting Manifold.)
2. Containment Area:
   Within Outside Toe of Dike: 6.98 Acres
   Within Inside Toe of Dike: 3.86 Acres
   Capacity: 66,788 Cubic Yards
3. Sections A-A', B-B' See Sheet 3 of 4.
4. Elevation Datum: NGVD of 1929
5. Area Outside Dike Within Site Boundary to be a Buffer of Natural Vegetation.
6. Perimeter Ditch, See Sheet 3 of 4.
7. ⊕ Indicates Core Boring Locations.

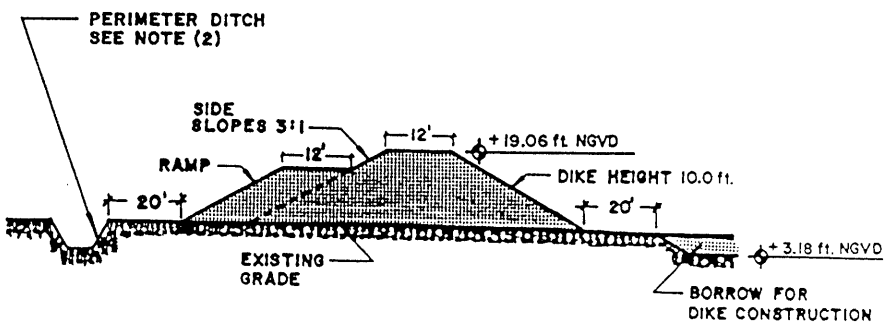
TAYLOR ENGINEERING INC
9086 CYPRESS GREEN DRIVE
JACKSONVILLE, FLORIDA 32256

Disposal Area Site Plan
Site MSA-641A
Palm Beach County, Florida

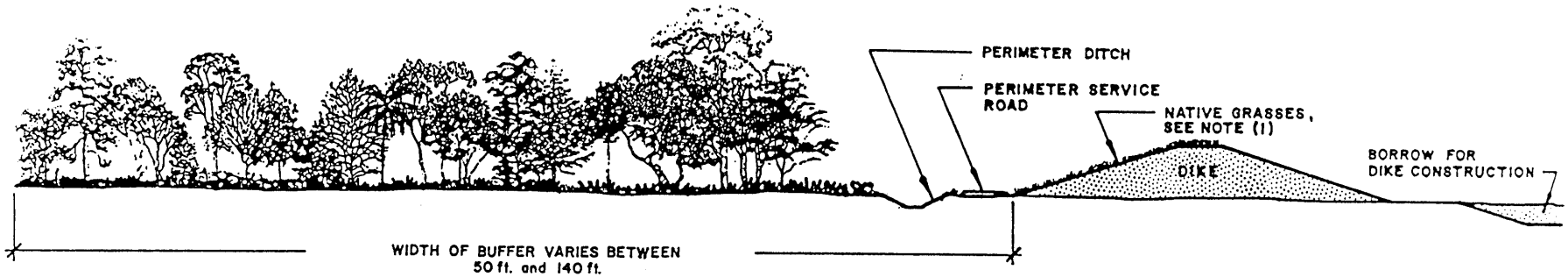
PROJECT	C-9005
REVISION	
SHEET	2 of 4
DATE	April, 1992



SECTION A-A'
N.T.S.



SECTION B-B'
N.T.S.



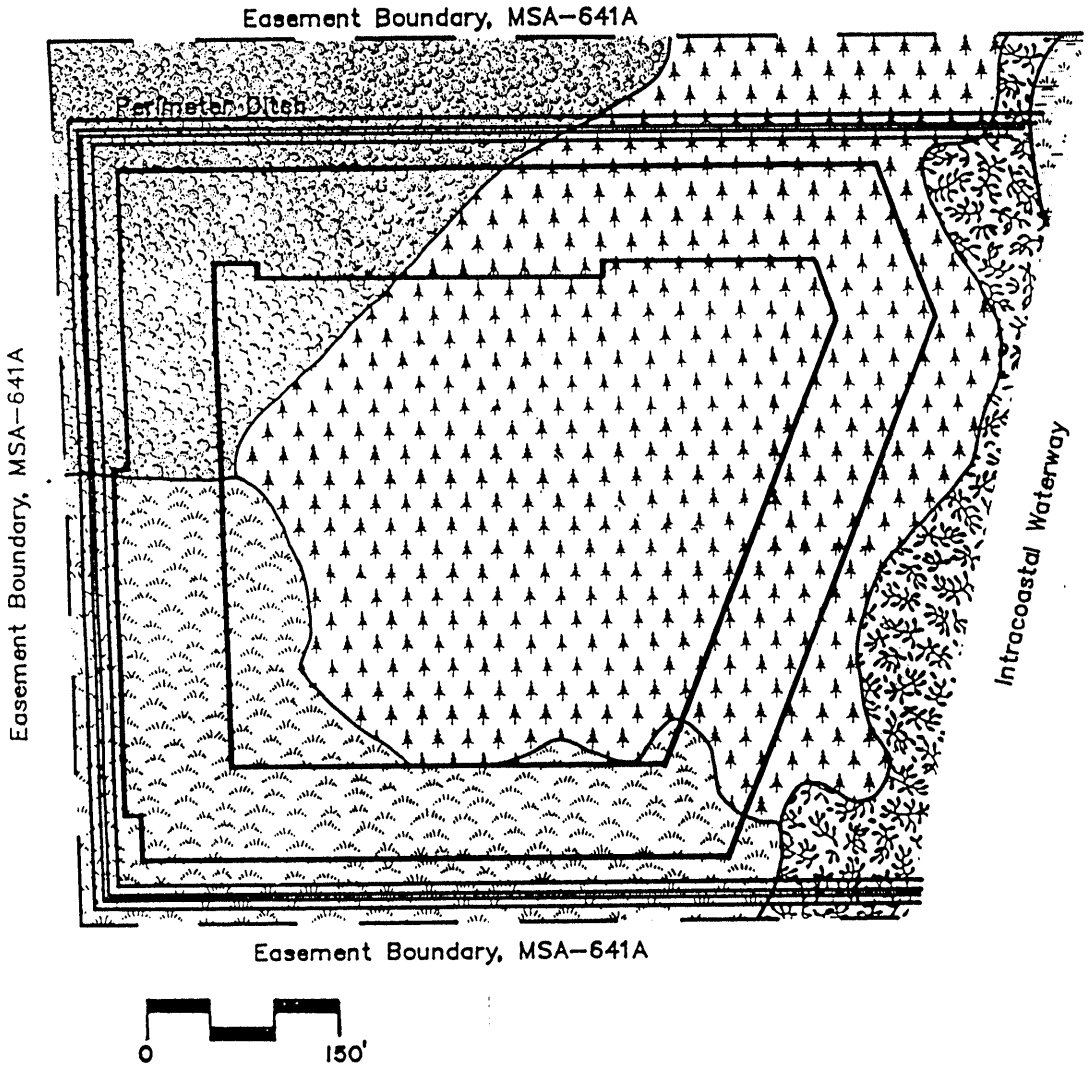
DISPOSAL AREA - VEGETATION PLAN
N.T.S.

NOTES:
1. TYPICAL SPECIES INCLUDE:
   PASPALUM VAGINATUM
   SPARTINA PATENS
   SPOROBOLUS SPECIES
2. PERIMETER DITCH:
   SIDE SLOPE: 1:1
   BOTTOM WIDTH: 3 ft.
   MIN. DEPTH BELOW GRADE: 5.3 ft.
   BOTTOM SLOPE AS REQUIRED
   FOR DRAINAGE

TAYLOR ENGINEERING INC
9086 CYPRESS GREEN DRIVE
JACKSONVILLE, FLORIDA 32256

Typical Dike and Ramp Sections, Vegetation Plan
Site MSA 641A
Palm Beach County, Florida

PROJECT	C-9005
REVISION	
SHEET	3 of 4
DATE	April, 1992



NOTES:

1. Area of Brazilian Pepper on Site: 2.1 Acres
   Area Impacted: 1.53 Acres
2. Area of Australian Pine on Site: 5.9 Acres
   Area Impacted: 5.53 Acres
3. Area of Streams and Waterways on Site: 0.1 Acres
   Area Impacted: Ø Acres
4. Area of Disturbed Land on Site: 2.6 Acres
   Area Impacted: 2.17 Acres
5. Area of Mangrove Swamp on Site: 0.8 Acres
   Area Impacted: 0.06 Acres

Legend

- Brazilian Pepper
- Australian Pine
- Streams and Waterways
- Disturbed Land
- Mangrove Swamp

TAYLOR ENGINEERING INC
9086 CYPRESS GREEN DRIVE
JACKSONVILLE, FLORIDA 32256

Disposal Area Vegetation Map
Site MSA-641A
Palm Beach County, Florida

PROJECT	C-9005
REVISION	
SHEET	4 of 4
DATE	April, 1992

APPENDIX II

FLORIDA COASTAL ZONE MANAGEMENT CONSISTENCY DETERMINATION

Florida Coastal Zone Management Program
Federal Consistency Evaluation Procedures
DREDGED MATERIAL DISPOSAL AREAS
PALM BEACH COUNTY, FLORIDA

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 is not seaward of the mean high water line and therefore, would not affect shorelines or shoreline processes. Therefore, this chapter does not apply.

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. It's 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 by the issuance of a public notice and the submittal of the environmental assessment.

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 clearing and grubbing and construction of the disposal dikes will assist in the protection of navigation on the Atlantic Intracoastal 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: No State lands would be affected by the proposed work. The work was coordinated with the State Historic Preservation Officer (SHPO). The SHPO concurred that disposal site construction would have no effect on cultural resources.

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

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

Response: No environmentally sensitive areas are located within project boundaries.

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 parks or preserves, and would be consistent with this chapter.

7. Chapter 267, Historic Preservation.

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

Response: A cultural resources site assessment has been conducted for the site. The results of this survey were coordinated with the SHPO. The SHPO concurred with the District's No effect determination by letter dated April 8, 1992. 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 creation of disposal areas for the maintenance dredging of the AIWW navigation channel encourages the development economic growth of 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 disposal area construction allows for the continued maintenance dredging of the AIWW navigation channel which promotes recreational navigation development in 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 fisherman 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 the studies and research.

Response: The disposal area construction would not adversely affect saltwater living resources. Based on the overall impacts of the work, the work appears to be 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: The work would comply with the goals of this chapter as the completed work will not discourage use of this site by wildlife.

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.

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 this chapter 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 disposal area construction has been coordinated with the local regional planning commission. No adverse comments were received. 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: Effects of the operation of construction equipment on air quality would be minor. Burning permits will be obtained if the cleared vegetation is to be burned. 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 will not affect agricultural lands or contribute to soil erosion, and complies with this chapter.

APPENDIX III

ENDANGERED SPECIES
AND
CULTURAL RESOURCE
CONSULTATION

United States Department of the Interior
FISH AND WILDLIFE SERVICE
P.O. BOX 2676
VERO BEACH, FLORIDA 32961-2676

March 13, 1992

Colonel Terrence C. Salt
District Engineer
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Attn: Planning Division

Dear Colonel Salt:

By letter dated February 18, 1992, the Chief of your Planning Division provided information related to maintenance dredging of the Intracoastal Waterway (IWW) in Palm Beach County. That letter made a determination for several endangered and threatened species and requested concurrence of the U.S. Fish and Wildlife Service. This report is submitted in accordance with the provisions of the Endangered Species Act of 1973, as amended.

The project proposes use of Maintenance Spoil Area (MSA) 640 and MSA-641, two disposal areas controlled by the Florida Inland Navigation District, and adjacent to the IWW, that had been used for disposal in the past. A biologist from this office participated in field inspections of the disposal areas.

The listed species considered were the bald eagle, red-cockaded woodpecker, Eastern indigo snake, peregrine falcon, and Florida scrub jay. We find that because of the disturbed nature of the sites, we can concur with your determination of "no effect" for the listed species. We have assigned FWS Log Number 4-1-92-257 to this informal consultation.

Although this does not constitute a Biological Opinion described under Section 7 of the Endangered Species Act, it does fulfill the requirements of the Act, and no further action is required. If modifications are made in the project or if additional information involving potential impacts on listed species becomes available, please notify our office (407-562-3909).

Sincerely yours,

David L. Ferrell
Field Supervisor

FLORIDA DEPARTMENT OF STATE
Jim Smith
Secretary of State
DIVISION OF HISTORICAL RESOURCES
R.A. Gray Building
500 South Bronough
Tallahassee, Florida 32399-0250
Director's Office (904) 488-1480
Telecopier Number (FAX) (904) 488-3353

April 8, 1992

Mr. A. J. Salem, Chief
Planning Division, Environmental
Resources Branch
Jacksonville District Corps of
Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

In Reply Refer To:
Denise M. Breit
Historic Sites
Specialist
(904) 487-2333
Project File No. 920609

RE: Cultural Resource Assessment Request
Use of MSA 641A and MSA 640 as Dredge Disposal Sites
Palm Beach 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(s) for possible impact to archaeological and historical sites or 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.

The mentioned U.S. Army Corps of Engineers Planning Division project application, issued by the Jacksonville District Office, has been reviewed by this agency. It is the opinion of this agency that because of the project location and/or nature the proposed project will have no effect on any sites listed, or eligible for listing, in the National Register of Historic Places. The project is also consistent with Florida's Coastal Management Program and its historic preservation laws and concerns, and may proceed.

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,

Suzanne P. Walker
for George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Bdb