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

REPLY TO
ATTENTION OF

DREDGED MATERIAL MANAGEMENT AREA CONSTRUCTION
MSA 204
INTRACOASTAL WATERWAY
ST. JOHNS COUNTY, FLORIDA

FINDING OF NO SIGNIFICANT IMPACT

I have reviewed the Environmental Assessment of the proposed action. This Finding incorporates by reference all discussions and conclusions contained in the Environmental Assessment enclosed hereto. Based on information analyzed in the Environmental Assessment, 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 work will be conducted in accordance with the Biological Opinion issued by the U.S. Fish and Wildlife Service for impacts to manatees and wood storks. The proposed action will not jeopardize the continued existence of any threatened or endangered species or adversely impact any designated "critical habitat".

2. In coordination with the Florida State Historic Preservation Officer, it was determined that the proposed dredged material management area construction will not impact any sites of cultural or historical significance.

3. A Water Quality Certification (WQC) from the Florida Department of Environmental Protection will be obtained for the construction of this disposal site. Wetland habitat impacts will be mitigated per coordination with the National Marine Fisheries Service and the Florida Department of Environmental Protection such that there will be no net loss of wetland function.

4. The proposed work has been determined to be consistent with the Florida Coastal Zone Management Program (CZMP).

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, and increased recreational benefits.

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.

20 MAR 06
Date

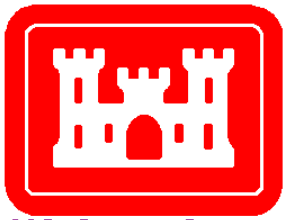
FOR
ROBERT M. CARPENTER
Colonel, U. S. Army
District Engineer

Erik L. Stor
Major, U.S. Army
Deputy District Engineer

FEBRUARY 2006

DREDGED MATERIAL MANAGEMENT AREA CONSTRUCTION
MSA 204
INTRACOASTAL WATERWAY
ST. JOHNS COUNTY, FLORIDA

FINAL ENVIRONMENTAL ASSESSMENT



US Army Corps
of Engineers
Jacksonville
District

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1.0. **PURPOSE OF AND NEED FOR ACTION**.

1.1. **INTRODUCTION**. When a Federal navigation project is authorized, it is generally the responsibility of the U.S. Army Corps of Engineers to maintain that channel. As part of that responsibility, the channels are monitored for shoaling and if the situation warrants it maintenance dredging is performed. As part of the Federal standard for the project, disposal areas are acquired by the local sponsor. The disposal option with the least cost is designated the baseline for the project. If the local sponsor should desire another option then, that option is cost shared.

1.2. **LOCATION**. The proposed action consists of the reconstruction of MSA 204 (Figure 1), a dredged material management area (DMMA) serving Reach I of the Northeast Florida portion of the Intracoastal Waterway (IWW). Reach I spans from the Duval / St. Johns County line to 0.5 miles south of the Palm Valley Bridge. MSA 204 would be a 44.0-acre diked containment basin bordered on the west by the IWW and on the east by Cabbage Creek and associated salt marsh located in St. Johns County, Florida. Originally a natural freshwater marsh / forested wetland system, the area has been subjected to past-uncontained deposition of dredged material. The Corps obtained an easement to utilize the property for the management of dredged material from the IWW project in 1935. Shortly thereafter, during the initial dredging of the IWW, the Corps placed the dredged material atop the site without containment. This method of dredged material management occurred at MSA 204 until the 1972 Clean Water Act passage, when water quality protection measures such as dikes to contain the dredged material were incorporated into the onsite dredged material placement. Long, north to south flow-ways were constructed in which the dredged material would be placed at the northern end and then the decant water would flow to the southern end where it discharged through openings in the dikes at the southwest and southeast corners. This type of dredged material placement occurred onsite until, in 1986, the Corps reconstructed the northern cell with soil borrowed from the sites interior. During this reconstruction, modern weir structures were placed at the southwestern corner of the northern cell. These weirs provided greater management of the effluent turbidity levels through increased retention periods. Finally, the Marsh Landing Community Development used the site in 2002 for dredged material placement during the dredging of their marina system.

1.3. **NEED AND PURPOSE**. The tidal flows and the littoral transport of sediments cause shoaling in the man-made channel, which acts like a settling basin. Periodic dredging is required to maintain adequate navigation depths. Surveys indicate sufficient shoaling to justify maintenance.

1.4. **AUTHORITY**. The construction and maintenance of the IWW was first authorized by the Rivers and Harbors Act of January 21, 1927. Expansion of the channel to a width of 100 feet was authorized by Senate Document 71, 71st Congress, 2nd Session, dated July 3, 1930. The depth was increased to its current 12 feet in 1953. The Corps is responsible for maintaining the authorized depth of the IWW while the local sponsor, the Florida Inland Navigation District (FIND), is responsible for acquiring and maintaining the DMMA's.

1.5. **DECISION TO BE MADE**. The decision to be made is whether to reuse the MSA 204 dredged material management area in St. Johns County, Florida.

1.6. **RELEVANT ISSUES**. The following issues have been determined to be relevant to the decision to be made:

a. Navigation.
b. Water Quality.
c. Hazardous, Toxic, Radioactive Waste.
d. Wetlands.
e. Essential Fish Habitat.
f. Migratory Birds.
g. Threatened and Endangered Species.
h. Cultural Resources.
i. Aesthetics.
j. Economics.

1.7. **PERMITS REQUIRED**. Water Quality Certification from the Florida Department of Environmental Protection (DEP) in accordance with policy agreements between the DEP and the Corps, and in accordance with Section 401 of the Clean Water Act of 1977, as amended, would be required for the proposed DMMA reconstruction. Permits to burn or dispose of the cleared vegetation would be obtained from appropriate local governments.

1.8. **METHODOLOGY.** In 1986, the FIND initiated a long-range dredged material management program to provide a permanent infrastructure of management facilities for all maintenance material dredged from the IWW. In support of this program, Taylor Engineering, Inc., under contract to the FIND, has prepared dredged material management plans for the IWW on a county-by-county basis. The management program for each county includes a systematic plan comprising the following elements:

- Review of all available dredging records, channel surveys, existing FIND dredged material easements, and pertinent sediment data;

- Establishment of operational channel reaches and corresponding 50 yr maintenance dredging and material storage/management requirements;

- Determination of operational reach deficits in existing material storage capacity;

- Evaluation of dredged material management alternatives and definition of the dredged material management concept most appropriate for each reach;

- Identification, where appropriate, of candidate upland sites for evaluation as dredged

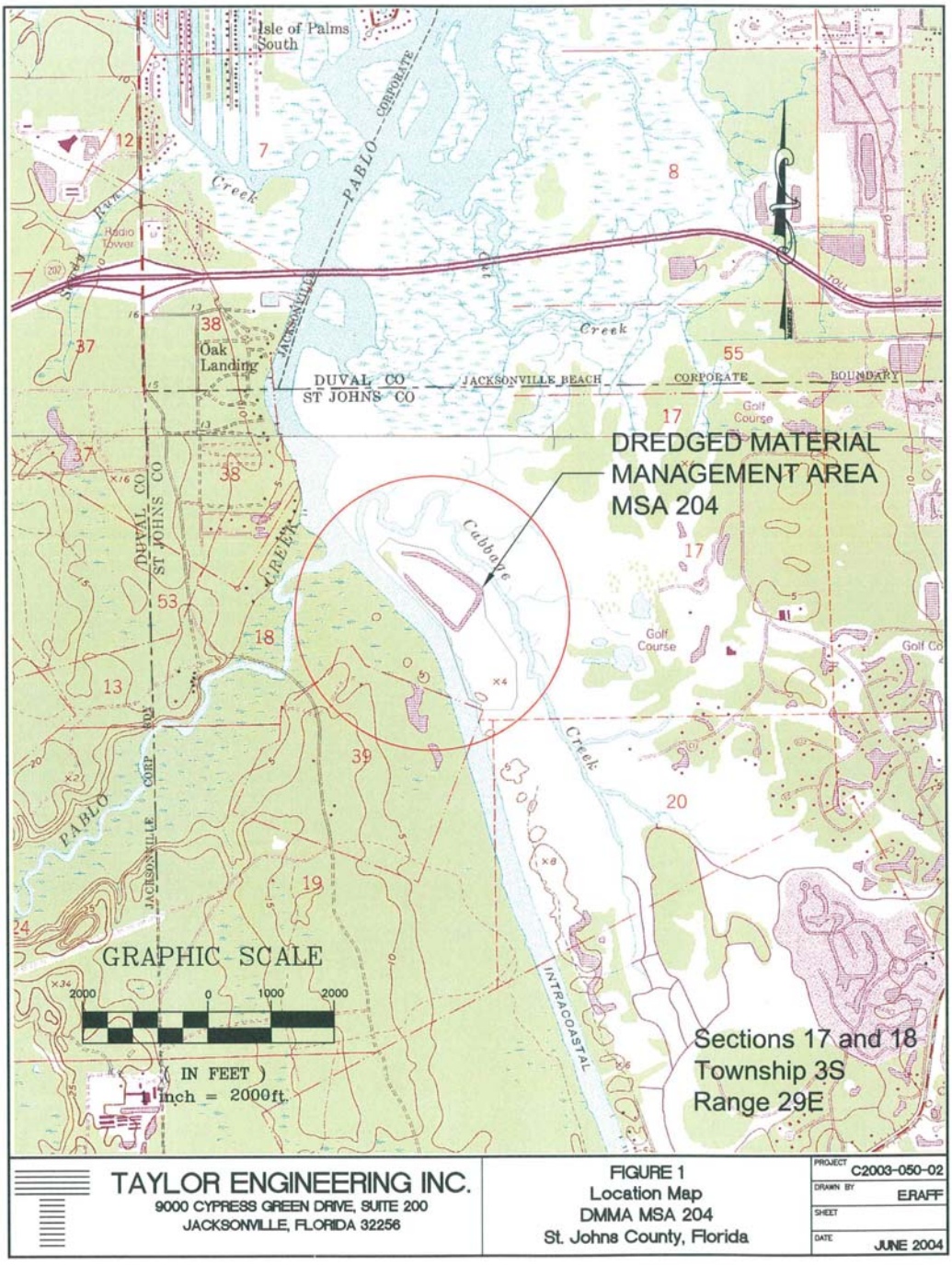
material management areas;

- Evaluation of suitable existing easements and candidate sites for development as dredged material management areas using a standard set of engineering, environmental, and socioeconomic criteria; and

- Establishment of a site bank of primary (first-choice) and secondary (second-choice) dredged material management alternatives for each reach.

1.8.1. The Northeast Florida plan, covering Nassau, Duval, and a small part of St. Johns Counties, is described in the Long-range Dredged Material Management Plan for the Intracoastal Waterway in Northeast Florida (Taylor and McFetridge, 1986), an accompanying engineering plan book, and subsequent technical reports (Taylor Engineering, 1989; Taylor and McFetridge, 1988). The plan was prepared by an interdisciplinary team of engineers and environmental scientists using the systematic process outlined above. The evaluation of alternatives described in the above documents (reviewed in Sections 2.1-2.4) resulted in the selection of DU-9 as the primary dredged material management area for Reach VII. The Corps prepared and coordinated an environmental assessment (Corps, 2001) for DU-9. Subsequently, onsite conditions have limited the construction area of DU-9 to 40% of it's original capacity. Therefore, construction of MSA 204 is needed in order to meet the dredged material disposal requirements of IWW reach I and II (Reach VII from Taylor and McFetridge, 1986) in St. Johns County during the 2005-2006 maintenance event.

Figure 1. Location Map



2.0. **ALTERNATIVES INCLUDING THE PROPOSED ACTION.**

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 12-14. 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 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, fewer upland sites remained and available disposal options became limited.

Dredged material management alternatives for the IWW in Northeast Florida were developed as part of the FIND's long-range dredged material management program. The alternative selected for Reach VII must be able to handle 1.95 million cubic yards of maintenance dredging material, the projected 50-year material storage requirement. Throughout the alternative evaluation process, federal, state, and local regulatory issues were addressed through continued coordination with appropriate agencies via an interagency project advisory committee. The long-range dredged material program and alternative evaluation procedures, summarized in Section 1.5, are documented in Taylor and McFetridge (1989) and Taylor Engineering, Inc. (1989).

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 unconfined placement of dredged

material into these waters. Therefore, the filling of wetlands and the creation of disposal islands could be eliminated as alternatives. Because the material to be dredged is not beach quality, beach placement was not an alternative. Finally, since no ocean site is within a reasonable range, which would economically justify its use, the use of an Ocean Dredged Material Disposal Site was also eliminated. These eliminated alternatives are discussed in more detail below.

2.3.1. Ocean Disposal. Ocean disposal of dredged material requires the use of deep draft ocean barges or hopper dredges. These vessels, because of their size, cannot operate in the relatively shallow depths of the IWW. Therefore, ocean disposal would require multiple handling of dredged material using shallow draft vessels or pumping in combination with seagoing barges. Limited ocean access within the project area would introduce significant increases in transport or pumping distances with associated increases in operational costs. Collectively, these requirements render ocean disposal impractical and prohibitively expensive.

2.3.2. Beach Placement. The sediments in the northern portion of Northeast Florida segment of the IWW contain significant amounts of fine, organic-rich materials (Taylor and McFetridge, 1989). Sediments in Reach VII would therefore not be suitable for beach placement.

2.3.3. Open Water Placement with Habitat Restoration. Open water placement in artificial dikes followed by habitat restoration was the only form of open water placement that could be considered feasible in Northeast Florida. The opportunity to employ this alternative is restricted, however, by the limited amount of open water in much of Reach I, an artificial cut. Further, should this alternative be considered for parts of Reach II, significant difficulties would be encountered, including the unproven likelihood of success and the uncertainty of obtaining environmental permits and approval to use submerged state lands. Additionally, this alternative would require increasing acreages of submerged land for each dredging operation. These limitations preclude the use of this alternative as a long-term management strategy.

2.3.4. Other Upland Sites. Taylor and McFetridge (1989) evaluated several alternative upland dredged material management sites. Their evaluation was based on the engineering, environmental, and cultural considerations listed below.

Engineering/Operational Considerations
Capacity
Adequate dike material
Pumping distance
Pipeline access
Upland access
Soil properties
Environmental Considerations
Wetland avoidance or minimum wetland impact
Isolated wetlands and wetland quality
Upland impacts

Ability to provide buffer zone
Groundwater conditions
Cultural/Economic Considerations
Minimal existing development
Ownership
Archeological or historical sites

The candidate sites evaluated for Reach VII included several existing dredged material placement easements that were eliminated from consideration because they were partly submerged, too small, lacked road access, or a combination of these factors. One existing easement was considered as a possible alternative as were five additional upland sites. From these, a site situated on the north side of Pablo Creek (identified as site I-11.5 W SJ3-5 in Taylor and McFetridge, 1986) was determined to best satisfy the evaluation criteria listed above and was thus selected as the primary dredged material management area for Reach VII. Subsequently, the Danov Corporation, owner of the large tract of land upon which the site was located, requested that the primary site be repositioned to the south of Pablo Creek. Relocation alternatives were examined (Taylor and McFetridge, 1988; Taylor Engineering, 1989), resulting in the selection of the site now known as Pablo Creek Alternative 2 Southern Extension or DU-9. MSA 204 was also evaluated in this study and was designated as a secondary site due to potential wetland impacts.

2.3.4.2. A final alternative eliminated from further consideration was to construct a second containment basin on the southern portion of the DU-9 parcel. An Interim Remedial Action System Status Report dated February 2005 by CH2M HILL indicated that active cleanup of the contaminated area had not yet reached target contaminant levels. Per Consent Order 01-0219 between DEP and Estuary Corporation, once the clean up target level is reached a mandatory 2-year monitoring period will commence (DEP 2002). If after 2 years, the contamination is found to have naturally attenuated 33% from the initial levels, monitoring could cease. So use of the full area of DU-9 could not occur for a minimum of 2 additional years. Finally, the time delays that would be required to coordinate, permit, design, contract, and construct a second containment basin south of the sludge farm contamination area, it's cost, and the uncertainties of the effects a second containment basin would have on the contamination plume eliminated this alternative from consideration for use during the 2005-2006 IWW Palm Valley maintenance-dredging event.

2.4. **DESCRIPTION OF ALTERNATIVES**.

2.4.1. No Action Alternative. With this alternative, a dredged material management site would not be constructed to accommodate the lost capacity at DU-9 for Reach I and II of the IWW in St. Johns County, Florida and maintenance dredging operations would be reduced in scope. In addition, DU-9 would be completely filled leaving no future capacity without offloading.

2.4.2. DMMA Construction, 26.0 acres. Alternative 2 would be to construct a 26.0 acre site

containing a dredged material containment basin. Construction would occur only within the Northern cell previously reconstructed in 1986. Activities would consist of minor repairs to the existing dikes and weir structures. Compensatory mitigation would be required for wetland habitat impacts. Maintenance dredging operations would occur to the fully authorized project scope and DU-9 would be completely filled leaving no future capacity without offloading.

2.4.3. DMMA Construction, 44.0 acres. Alternative 3 would be to construct an approximately 44.0 acre site containing a dredged material containment basin. Construction would occur within the MSA 204 easement. Activities would consist of repairs to the existing dikes and weir structures. Maintenance dredging operations would occur to the fully authorized project scope and DU-9 would retain future capacity, as MSA 204 would accommodate the portion of the dredged material-handling requirement that was temporarily lost at DU-9. Compensatory mitigation would be required for wetland habitat impacts. MSA 204 would be completely filled during the 2005-2006 IWW Palm Valley Maintenance Dredging project after which either the government easement could be relinquished to the landowner, or the site could be offloaded for future use.

2.4.4. DMMA Construction, 38.0 acres. Alternative 4 would be to construct an approximately 38.0 acre site containing a dredged material containment basin. Construction would occur within the MSA 204 easement. Activities would consist of repairs to the existing dikes and weir structures. Maintenance dredging operations would occur to the fully authorized project scope and DU-9 would retain future capacity, as MSA 204 would accommodate the portion of the dredged material-handling requirement that was temporarily lost at DU-9. Compensatory mitigation would be required for wetland habitat impacts, but there would be less impacts and required mitigation than alternative 3. MSA 204 would be completely filled during the 2005-2006 IWW Palm Valley Maintenance Dredging project after which either the government easement could be relinquished to the landowner, or the site could be offloaded for future use.

Figure 2. Alternative 2. 26.0 acre DMMA Footprint

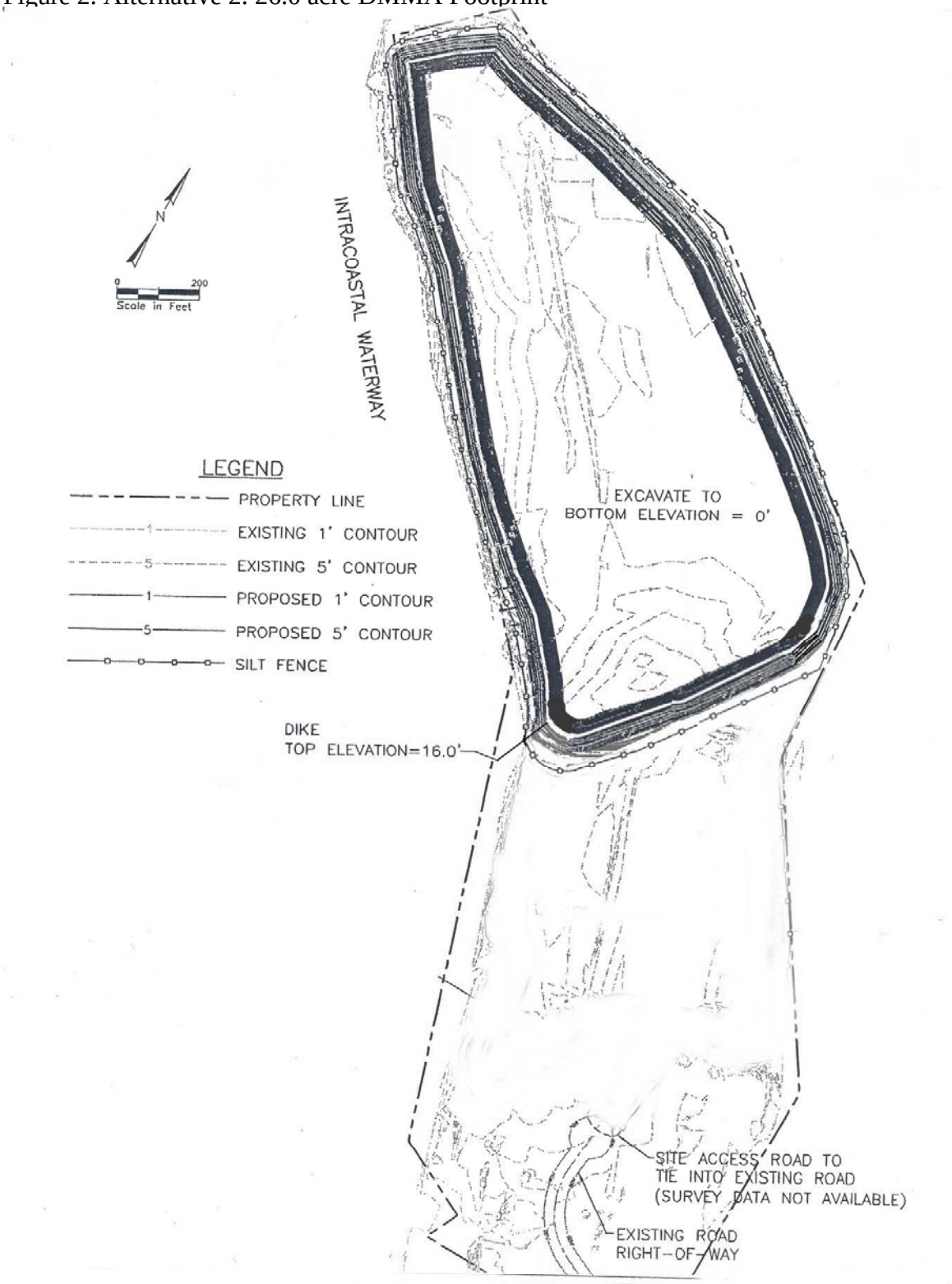


Figure 3. Alternative 3. 44.0-acre DMMA Footprint

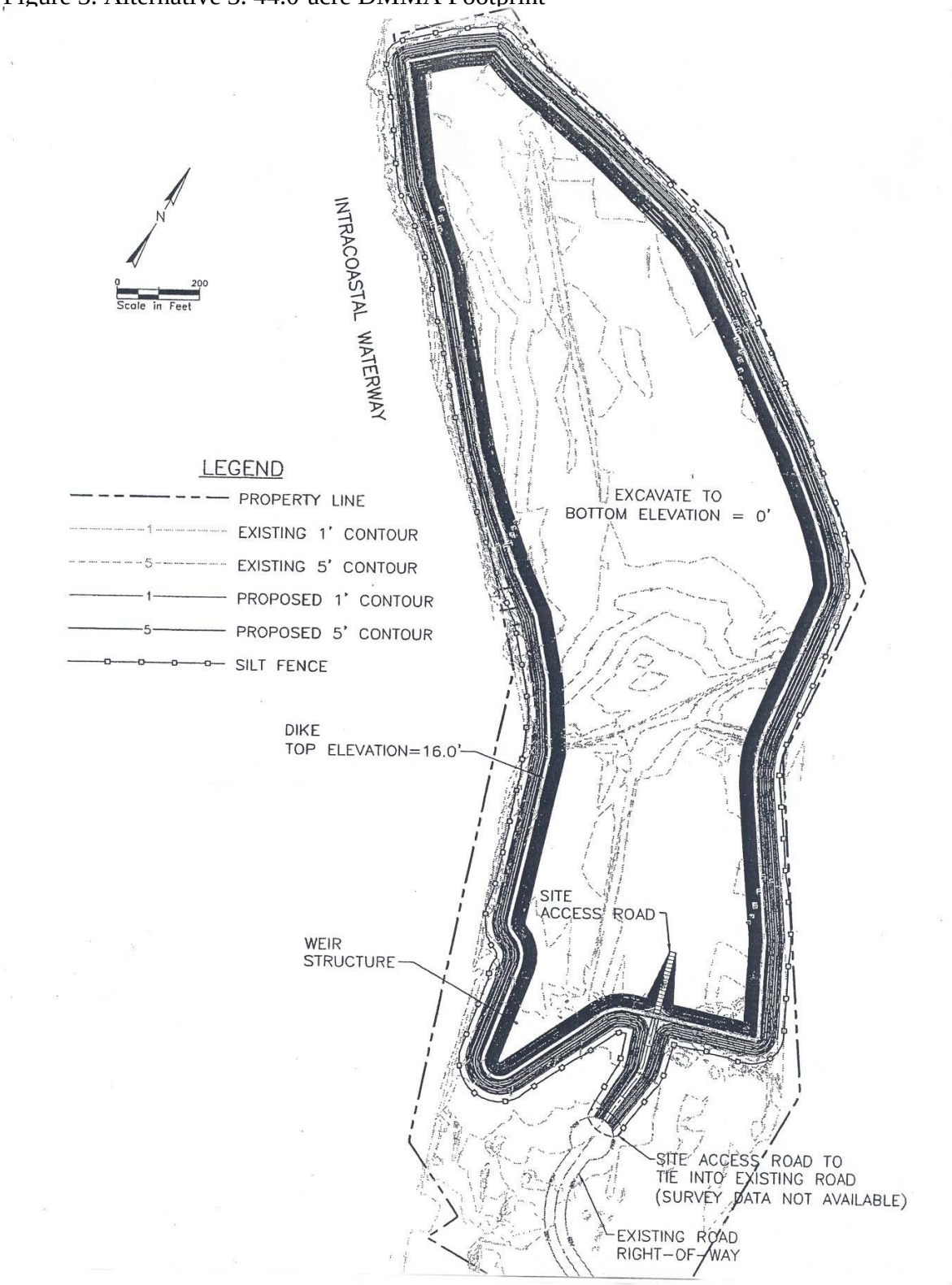


Figure 4. Alternative 4. 38.0-acre DMMA Footprint

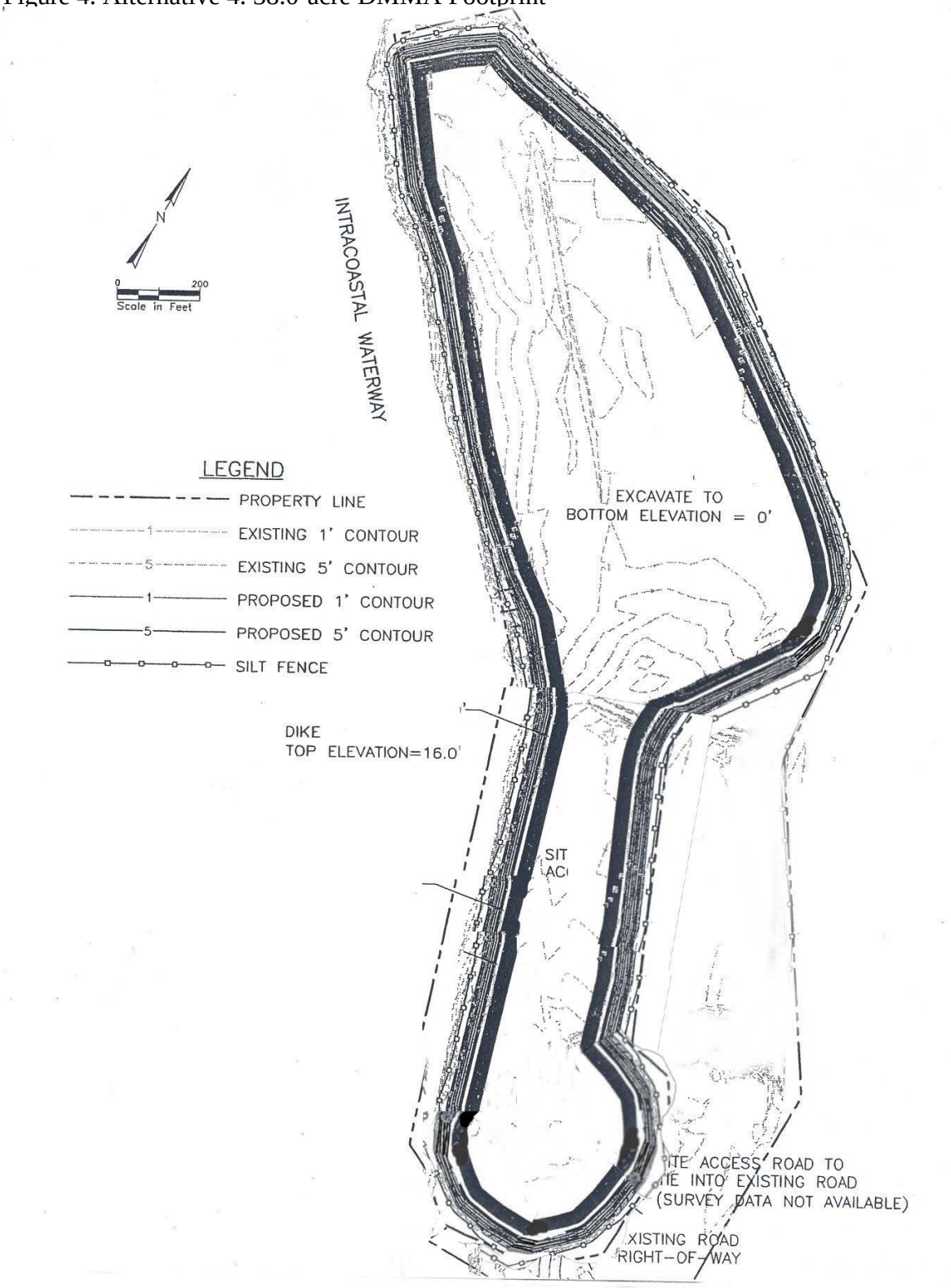


Figure 5. Wetland Impact and Mitigation Areas

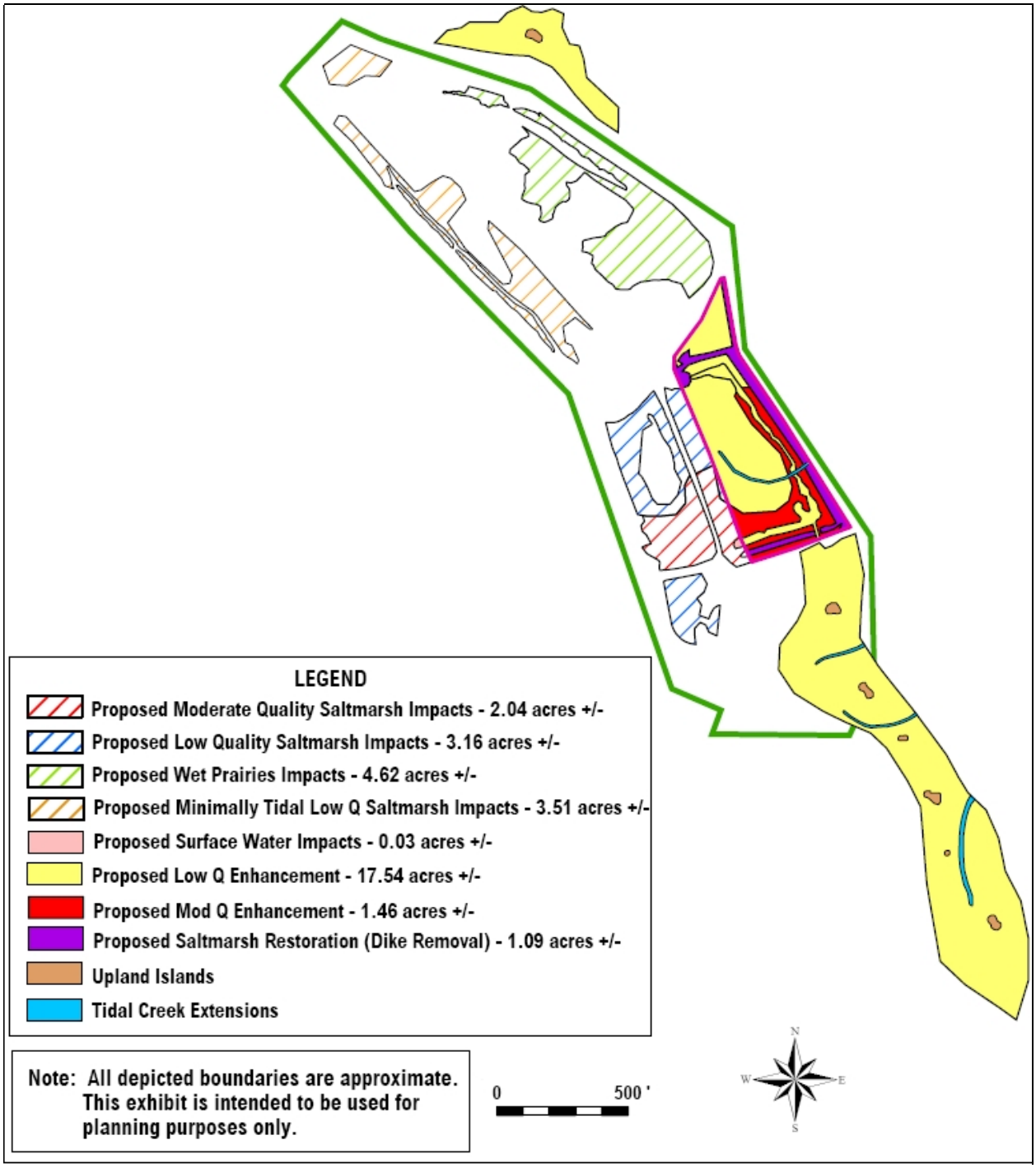
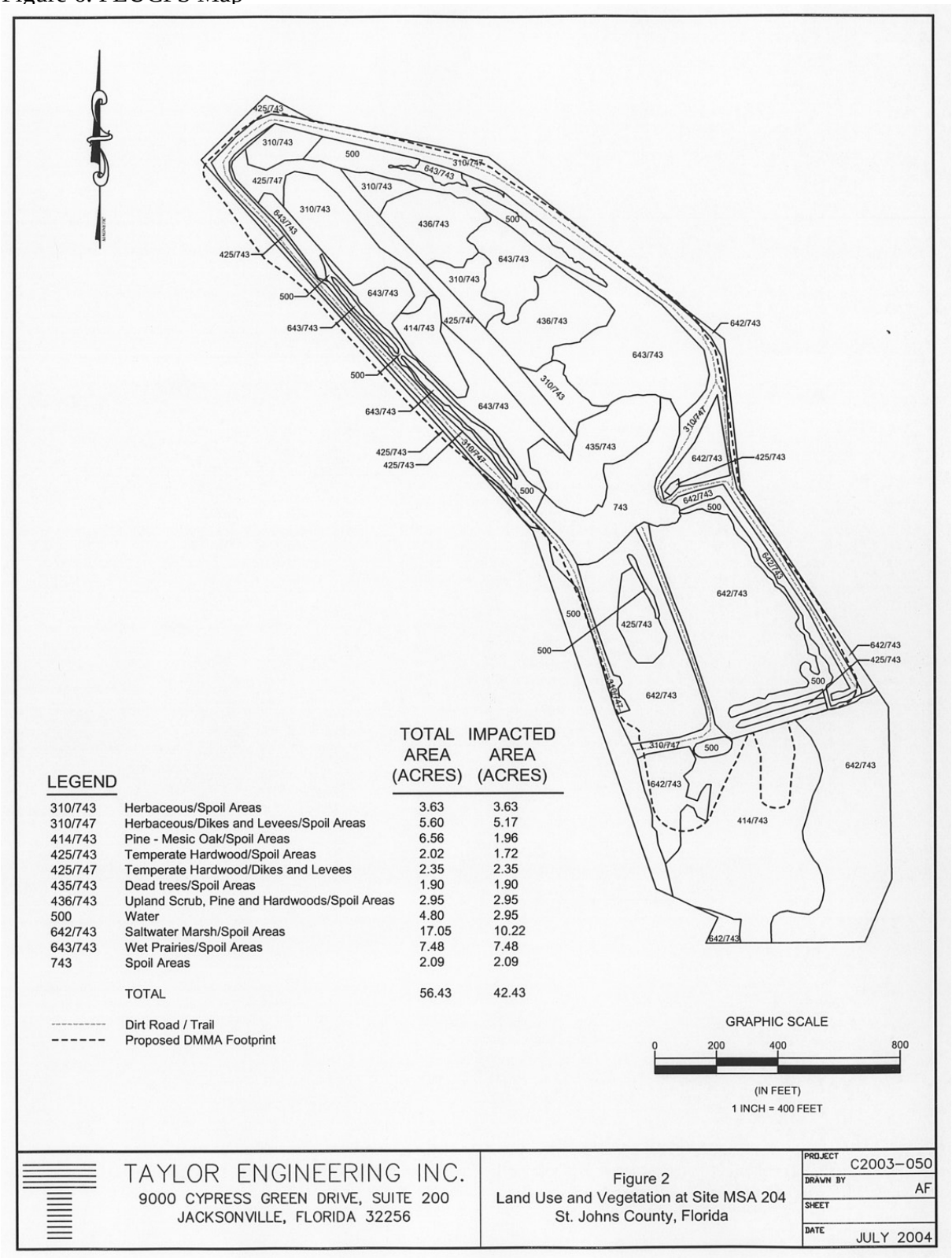


Figure 6. FLUCFS Map



LEGEND		TOTAL AREA (ACRES)	IMPACTED AREA (ACRES)
310/743	Herbaceous/Spoil Areas	3.63	3.63
310/747	Herbaceous/Dikes and Levees/Spoil Areas	5.60	5.17
414/743	Pine - Mesic Oak/Spoil Areas	6.56	1.96
425/743	Temperate Hardwood/Spoil Areas	2.02	1.72
425/747	Temperate Hardwood/Dikes and Levees	2.35	2.35
435/743	Dead trees/Spoil Areas	1.90	1.90
436/743	Upland Scrub, Pine and Hardwoods/Spoil Areas	2.95	2.95
500	Water	4.80	2.95
642/743	Saltwater Marsh/Spoil Areas	17.05	10.22
643/743	Wet Prairies/Spoil Areas	7.48	7.48
743	Spoil Areas	2.09	2.09
	TOTAL	56.43	42.43

---------- Dirt Road / Trail
------ Proposed DMMA Footprint

TAYLOR ENGINEERING INC.
9000 CYPRESS GREEN DRIVE, SUITE 200
JACKSONVILLE, FLORIDA 32256

Figure 2
Land Use and Vegetation at Site MSA 204
St. Johns County, Florida

PROJECT C2003-050
DRAWN BY AF
SHEET
DATE JULY 2004

2.5. **ALTERNATIVE COMPARISON**.

Table 2.1, Alternative Comparison

RESOURCES	**1** - NO ACTION	**2** - 26 AC DMMA MSA 204	**3** - 44 AC DMMA MSA 204	**4** – 38 AC DMMA MSA 204
Navigation	Adverse effects from shallower dredging depth or omitted cuts and filling of DU-9 necessitating offloading prior to next maintenance.	Adverse effects from reduced dredging depth or omitted cuts and from filling of DU-9 necessitating offloading prior to next maintenance.	Benefit from dredging to authorized depth, no omitted cuts, and retained DU-9 capacity.	Benefit from dredging to authorized depth, no omitted cuts, and retained DU-9 capacity.
Groundwater quality	No adverse effects.	Because the site is surrounded by salt marsh, no adverse impacts to groundwater quality are anticipated through use of the site.	Because the site is surrounded by salt marsh, no adverse impacts to groundwater quality are anticipated through use of the site.	Because the site is surrounded by salt marsh, no adverse impacts to groundwater quality are anticipated through use of the site.
Surface water quality	Minor adverse effect from continued erosion along western site border.	No adverse effects are anticipated during construction and operation based upon site design.	No adverse effects are anticipated during construction and operation based upon site design.	No adverse effects are anticipated during construction and operation based upon site design.
Hazardous, toxic, radioactive waste	No adverse effects.	No HTRW items have been identified within the boundaries of the site. No adverse effects.	No HTRW items have been identified within the boundaries of the site. No adverse effects.	No HTRW items have been identified within the boundaries of the site. No adverse effects.

RESOURCES	**1** - NO ACTION	**2** - 26 AC DMMA MSA 204	**3** - 44 AC DMMA MSA 204	**4** – 38 AC DMMA MSA 204
Wetlands	No adverse effects.	Impacts to 9.96 acres of altered wetlands; 3.51 acres tidally connected. Compensatory mitigation would be required	Impacts to 21.5 acres of altered wetlands; 14.39 acres tidally connected. Compensatory mitigation would be required	Impacts to 13.3 acres of altered wetlands; 8.7 acres tidally connected. Compensatory mitigation would be required
Essential Fish Habitat	Continued erosion along western site border would degrade habitat.	Impacts to 3.51 acres of altered estuarine emergent marsh. 2:1 compensatory mitigation would be required	Impacts to 14.39 acres of altered estuarine emergent marsh. 2:1 compensatory mitigation would be required	Impacts to 8.7 acres of altered estuarine emergent marsh. 2:1 compensatory mitigation would be required
Migratory Birds	No adverse effects.	No impact; Jacksonville COE migratory bird protection policy would be implemented.	No impact; Jacksonville COE migratory bird protection policy would be implemented.	No impact; Jacksonville COE migratory bird protection policy would be implemented.
Threatened / endangered species	No adverse effects.	No adverse effects.	No adverse effects.	No adverse effects.
Cultural resources	No adverse effects.	No adverse effects.	No adverse effects.	No adverse effects.
Aesthetics	No adverse effects.	Impact during construction and use on view of MSA 204 from the IWW and J. Turner Butler bridge.	Impact during construction and use on view of MSA 204 from the IWW and J. Turner Butler bridge.	Impact during construction and use on view of MSA 204 from the IWW and J. Turner Butler bridge.

RESOURCES	**1** - NO ACTION	**2** - 26 AC DMMA MSA 204	**3** - 44 AC DMMA MSA 204	**4** – 38 AC DMMA MSA 204
Economics	Adverse effects due to decreased dredging scope and need to offload DMMA DU-9 prior to next maintenance.	Short-term benefit to the local economy from the sale of goods and services in support of the construction. Short-term benefit to water related business. Adverse effect from need to offload DMMA DU-9 prior to next maintenance.	Short-term benefit to the local economy from the sale of goods and services in support of the construction. Short-term benefit to water related business.	Short-term benefit to the local economy from the sale of goods and services in support of the construction. Short-term benefit to water related business.

2.6. **ALTERNATIVE COST ANALYSIS.**

	MSA 204 ALTERNATIVES COST ANALYSIS		**Costs**						
Alternative	Description	Construction	Mobilization	Dredge	Rebuild	Offload DU-9	Mitigation	Total*	Time
2.3.4.2	Construct DU-9-2; dredge to 13'; dewater, raise dikes, redredge	X	X	X	X	X		$1.97	5 Years
3	Use all of MSA 204; includes dredging and mitigation costs	X		X			X	$1.10	2 Years
4 Federal Standard	**Realign MSA 204 placement area (minimize impacts)**	**X**		**X**			**X**	**$1.00**	**2 Years**
2	Use only northern 26.0 ac cell of MSA 204; dredge to 12'; dewater DU-9, raise dikes, redredge	X	X	X	X	X	X	$2.00	5 Years
1	Use only DU-9; dredge to 10'; dewater, raise dikes, redredge		X	X	X	X		$2.20	5 Years
	*Totals show increase in cost from base alternative (Federal Standard)								

2.7. **PREFERRED ALTERNATIVE**. Alternative 4, construction of the 38.0 acre MSA 204 is the preferred dredged material management alternative for the 2005-2006 maintenance dredging of IWW Reach I in St. Johns County, Florida.

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. Navigation.
b. Water Quality.
c. Hazardous, Toxic, Radioactive Waste.
d. Wetlands.
e. Essential Fish Habitat.
f. Migratory Birds.
g. Threatened and endangered species.
h. Cultural resources.
i. Aesthetics.
k. Economics.

3.2. **GENERAL DESCRIPTION**. Dredged material management area MSA 204 would be a diked containment basin located in St. Johns County, north of the Marsh Landing Community Development. The site is directly south of the confluence of Pablo and Cabbage Creeks. Originally a natural freshwater marsh / forested wetland system, the area has been subjected to past-uncontained deposition of dredged material. The Corps obtained an easement to utilize the property for the management of dredged material from the IWW project in 1935. Shortly thereafter, during the initial dredging of the IWW, the Corps placed dredged material atop the site without containment. The IWW dredging changed the hydrologic regime of the freshwater marsh system, allowing salt and brackish water further inland and the establishment of more salt tolerant vegetative communities. In addition, the uncontained deposition of dredged material altered the topography of the site by forming upland dredged material islands along the waterway perimeter. After the 1972 Clean Water Act passage, long, diked, north to south flow-ways were constructed on the site to protect water quality. The decant water would discharge through openings in the dikes at the southwest and southeast corners of the flow ways. These same dike openings also let in unrestricted tidal flows and salt marsh vegetation became

established within the diked flow ways. During the 1986 reconstruction of the northern 26.0-acre cell of MSA 204, dikes were constructed from soil borrowed from the sites interior creating a rim ditch around the basin immediately inside the diked perimeter. The Corps then placed approximately 4,000 yd^3 of dredged material from the 1986 dredging of the IWW at the confluence of Pablo and Cabbage Creeks into the northern portion of the northern cell, filling the rim ditch in this area. Weir structures placed at the southwestern corner of the northern cell during the 1986 reconstruction prohibited tidal flow into this northern cell and predominantly freshwater vegetative communities formed around the perimeter ditch and ponded storm water areas. However, the weirs have been undermined through boat wake turbulence from the IWW channel and have permitted limited tidal flow into the northern cell. This has allowed reestablishment of salt marsh vegetation on the West side of the northern cell. Finally, the Marsh Landing Community Development used the northern cell in 2002 for the placement of approximately 17,000 yd^3 of dredged material during the dredging of their marina system. This material was pumped into the southern portion of the northern cell, which filled the rim ditch burying the wetland communities that had developed there along with adjacent upland pine-mesic oak habitat. Therefore, most of the MSA 204 property is classified as spoil areas in addition to an either upland or wetland classification. These habitat classifications are further detailed in section 3.3.2., Figure 4 and Appendix IV.

3.3. **RELEVANT ISSUES**.

3.3.1. **Physical**.

a. Navigation. The major navigation activity on the IWW is recreational. Commercial craft on the waterway include barges, fishing vessels, and excursion boats. Several types of government vessels also use the IWW.

b. Groundwater quality. There are limited data concerning groundwater conditions at the project site. The groundwater plays an intricate role in providing local vegetation with a source of water.

c. Surface water quality. The waters of the IWW to the west of MSA 204 are used for recreational and commercial fin fishing and shell fishing, boating, and other recreational uses. The Florida Department of Environmental Protection (DEP) lists the waters as Class III quality (suitable for recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife).

d. Hazardous, toxic, radioactive waste. No evidence of hazardous, toxic, or radioactive wastes was noted on MSA 204 during site visits.

3.3.2. **Biological**.

a. Uplands. MSA 204 contains eight upland vegetative communities (Figure 4) —

herbaceous /spoil areas (4.67 acres), herbaceous/dikes and levees/spoil areas (8.93 acres), pine-mesic oak/spoil areas (6.65 acres), temperate hardwood/spoil areas (1.69 acres), temperate hardwood/dike s and levees (2.35), dead trees/spoil areas (1.90 acres), upland scrub, pine and hardwoods/spoil areas (2.95 acres), and spoil areas (2.09 acres). The composition and locations of these communities are described in Appendix IV. Wildlife observed using these upland communities during site surveys were: eastern box turtle, American alligator, green anole, and six-lined racerunner, raccoon, bobcat, and white-tail deer as well as many varieties of birds. As stated in section 3.2 above, MSA 204 has been used for dredged material placement over the last sixty-nine years, which has influenced vegetative community development.

b. Wetlands. MSA 204 contains three wetland communities (Figure 3) — water (5.09 acres), saltwater marsh/spoil areas (11.36 acres), and wet prairies/spoil areas (7.48 acres). The composition and locations of these wetland communities are described in Appendix V. The wet prairies offer important reproductive habitat for amphibians. Other animals that probably use the wet prairies or their perimeter include snakes, wading birds, marsh rabbits, bobcat, deer, and rice rats. The saltwater marsh is probably utilized by raccoon, otter, deer, mink, rabbits, and rice rats, alligators, snakes and toads, as well as many varieties of birds. Again, section 3.2 above outlines the dredged material placement history of this easement by the Corps. Various dredged material placement techniques over the years have also directly and indirectly influenced wetland community development. For instance, the saltwater marsh at the site's southeastern corner has been open to tidal flow from Cabbage Creek since at least the early 1970's while the wet prairies developed within the northern cell as a result of ponded storm water which accumulated after the Corps rebuilt the dikes there in 1985.

c. Essential Fish Habitat. Species managed under the Magnuson-Stevens Fishery Conservation and Management Act (PL 94-265) within Reach VII of the IWW include, but are not limited to, postlarval and juvenile penaeid shrimp (*Penaeus sp.*), and juvenile red drum (*Sciaenops ocellatus*) and summer flounder (*Paralichthys dentatus*). These species and their food organisms use the IWW channel as a travel corridor to reach nursery or staging areas possibly including the onsite salt marsh habitat.

The area in the vicinity of MSA 204 contains the following inshore/estuarine habitats designated as Essential Fish Habitat (EFH):

- Estuarine Emergent Marsh. Estuarine emergent marshes are complex ecosystems that serve as EFH. Estuarine emergent marsh provides vital life requisites to wildlife including endangered and threatened species, furbearers, waterfowl, wading birds, shore and other birds, reptiles and amphibians, shellfish and invertebrates (SAFMC 1998).

- Estuarine Water Column. This habitat typically contains four salinity regimes: Oligohaline (<8 ppt), mesohaline (8-18 ppt), polyhaline (18-30 ppt), and euhaline (>30 ppt) water around inlets. These saline environments have moving boundaries that are generally maintained by seawater transported through inlets by tide and wind mixing with fresh water

from land runoff. Both the horizontal and vertical salinity gradients in these areas strongly influence the distribution of biota (SAFMC 1998).

d. Migratory birds. MSA 204 is a suitable site for migratory bird roosting, loafing, foraging and nesting. Past deposition of dredged material provides ideal nesting habitat for migratory species such as Least terns and Wilson's plovers. The open, sandy, and relatively isolated nature of the site would appeal to these beach nesting species. Additionally, foraging and loafing habitat is located onsite, which could be utilized by these and other migratory bird species.

e. Threatened and endangered species. The following species listed as threatened (T) or endangered (E) by the USFWS pursuant to the Endangered Species Act are known to inhabit St. Johns County and could be located in the project area (Refer to Appendix II):

Bald Eagle……..…… *Haliaeetus leucocephalus* (T)
Eastern indigo snake……*Drymarchon corais couperi* (T)
Piping plover……...*Charadrius melodus* (T)
Wood stork…… *Mycteria americana* (E)
Source:(http://northflorida.fws.gov/CountyList/Johns.htm)

The wood stork (*Mycteria americana)* occasionally uses MSA 204 for foraging and loafing purposes. Least terns, a state-listed threatened species were observed in flight over the adjacent waters of the IWW. In addition, a peregrine falcon (state listed endangered) and a little blue heron (state listed species of special concern) were observed onsite during the surveys.

3.3.3. **Social**.

a. Cultural resources. The Florida Master Site File contains no records of archaeological or historical resources on MSA 204. The Florida Department of State indicated by letter dated June 20, 2004 that "because of the location and/or nature of the project it is unlikely that any such sites will be affected" (Appendix II).

b. Aesthetics. MSA 204 contains relic dikes covered with woody vegetation surrounding and surrounded by, salt marsh. The IWW lies immediately west of the site. The nearest developed property is the Marsh Landing Community Development (MLCD) which lies approximately 1,200 ft south of MSA 204. MSA 204 therefore provides a view of a highly disturbed salt marsh with mounded unvegetated dredged material and relic vegetated dikes, visible from the adjacent IWW or MLCD. MSA 204 is also visible from the J. Turner Butler State Road 202 Bridge, which spans the IWW about 5,000 ft north of the site.

3.3.4. **Economics**.

a. Economics. The area surrounding the proposed MSA 204 site on the north, east and west is salt marsh, making it relatively inaccessible except through the MLCD from the south. Due to the

one-time use nature of the site, future economic growth in the project area is expected. Deposition of dredged material will render the site suitable for residential development.

3.4. **DMMA DU-9-2.** A detailed description of the DMMA DU-9 project area can be found in the DMMA DU-9 final Environmental Assessment dated July 2000 and EA addendum dated August 2004 here by incorporated by reference. Physical construction of DMMA DU-9 was completed December 2005. Onsite remediation activities consisting of excavation and removal of contaminated sediment and air stripping of contaminated groundwater were estimated to be complete in early 2006 after which natural attenuation of any remaining contamination to background levels and long-term groundwater monitoring would occur. It is also estimated that construction on the sludge farm contamination site would be possible within 15-20 years.

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 1**.

4.2.1. **Physical**

a. Navigation. The scope of the Palm Valley IWW dredging project would be reduced in order to lower the dredged material handling requirements. This could be accomplished by dredging the channel shallower to 9’ + 2’ of allowable over dredge instead of the 12’ + 2’

proposed. Additionally, IWW cuts could be omitted from this maintenance event. These measures would reduce the time period between the next maintenance event and reduce the navigational safety of the channel.

b. Groundwater quality. There would be no adverse effects upon groundwater quality from the No-Action Alternative..

c. Surface water quality. Continued shoaling and decreasing channel depths would increase turbidity in the surface waters as vessels disturb bottom sediments and run aground. In addition, the western shoreline of MSA 204, which is significantly eroded from wakes of the IWW boat traffic, would continue to erode and contribute to the increased turbidity.

d. Hazardous, Toxic, Radioactive Waste. There would be no adverse effects by hazardous, toxic, radioactive waste from the No-Action Alternative.

4.2.2. **Biological**.

a. Uplands. There would be no adverse effects upon the uplands located within the boundaries of the MSA 204 site from the No-Action Alternative. However, it should be noted that the landowner could seek relinquishment of the government easement if the site is not used.

b. Wetlands. There would be no adverse effects upon the wetlands located within the interior of the MSA 204 site from the No-Action Alternative. However, the fringing salt marsh along the western border of the site bordering the IWW would continue to erode into the IWW channel. In addition, should the landowner seek relinquishment of the government easement, the wetlands could be impacted from site development.

c. Essential Fish Habitat. There would be continued impacts to the estuarine emergent marsh fringing the western site border along the IWW. Continued erosion could result in loss of this emergent wetland habitat and chronic turbidity impacts to fishery resources in the area. Conversely, should the landowner seek relinquishment of the government easement and develop the site, EFH impacts could include loss of the onsite emergent wetland habitat and water quality impacts from residential storm water runoff.

d. Migratory Birds. There would be no adverse effects upon Migratory Birds from the No-Action Alternative unless the government easement was relinquished to the landowner. Site development could result in the loss of migratory bird forage and nesting habitat.

e. Threatened and Endangered Species. There would be no adverse effects upon threatened and endangered species from the No-Action Alternative. However, should the government easement be relinquished, site development by the landowner could result in loss of wood stork loafing and foraging habitat.

4.2.3. **Social**.

a. Cultural Resources. This alternative would have no effect on cultural resources included in or eligible for inclusion in the National Register of Historic Places.

b. Aesthetics. There would be no adverse effects upon the aesthetics of the MSA 204 site from the No-Action Alternative except for possible unsightly shoreline erosion seen from vessels traveling the IWW. Should the government easement be relinquished, site development by the landowner could result in conversion of the highly altered and semi-diked habitat to residential development.

4.2.4. **Economic**. If the MSA 204 site were not used, the scope of the Palm Valley IWW dredging project would be reduced. This could result in economic impacts due to increased maintenance dredging frequency. The interval between the next maintenance could be shortened thus resulting in increased costs. In addition, the lifespan of DMMA DU-9 would be reduced, resulting in increased costs from the need to offload DU-9 sooner than expected. Conversely, site development by the landowner could produce a short-term minor stimulus to the local economy from the sale of goods and services in support of the construction work and a long-term stimulus to the local economy from sale of goods and services in support of residential development.

4.2.5. **Cumulative effects**. The cumulative effect of the implementation of this alternative could be the possible site development by the landowner with associated habitat loss, utility demand, and nutrient/contamination burden. Storm water effluent containing pesticides, herbicides, fertilizers, and petroleum residues could burden the marsh system surrounding the site. As stated in 4.2.4. above economic benefits to the local economy could also occur from site development.

4.2.6. **Unavoidable effects**. There could be an increase in maintenance dredging costs resulting from this alternative.

4.2.7. **Irreversible and Irretrievable Resource Commitments**. There would be no permanent loss of resources. However, relinquishment of the government easement would constitute an irretrievable commitment of resources. As it is anticipated that DU-9 will be expanded in the future to accommodate the 50-year dredged material management requirement for these reaches of the IWW, loss of this easement is not expected to result in increased maintenance dredging costs or other adverse effects.

4.3. **ALTERNATIVE 2, CONSTRUCTION OF 26.0-ACRE MSA 204**.

4.3.1. **Physical**

a. Navigation. Construction of the 26.0 acre MSA 204 dredged material management

area would have short-term benefits to navigation on the IWW by facilitating maintenance dredging to the full scope of the authorized project. Estimated bulked volume capacity of the 26.0-acre MSA 204 would be approximately 300,000 cy, which would necessitate placement of an additional 230,000 cy into the 400,000 cy capacity DU-9. Therefore, negative impacts would also occur due to reduced capacity and service life of DU-9.

b. Groundwater quality. The construction of the 26.0 acre DMMA should have no effects upon local groundwater quality. Adverse effects upon surrounding vegetation, as well as intrusion of saline water into the surficial aquifer, are not anticipated as the site is surrounded by salt marsh and lies immediately adjacent to the IWW. Additionally, the design of the containment site should prevent impacts to the surficial aquifer resulting from the use of the MSA 204 project site. Finally, the local aquifer does not appear to be utilized as a potable source by adjacent property owners.

c. Surface water quality. Disposal of a slurried dredged material at MSA 204 is not expected to result in the degradation of local water quality. Sediment sampling within Reach I was utilized to determine the sediment composition likely to be dredged during site operations. The majority of sediment samples taken within Reach I yield fine, brown to dark brown silty sand, with some clay and organic content (Taylor, et al, 1986). Subsequently, the DMMA design would insure site effluent meets state water quality levels for suspended sediments including but not limited to: increased ponding depth and retention time when material is dredged from this cut. Land moving activities associated with the construction of the containment cell would influence the flow and drainage patterns of surface waters. Erosion control techniques will prevent degradation of off-site surface waters. However, minor, temporary degradation of water quality may occur during construction of the dredged material management site.

d. Hazardous, Toxic, Radioactive Waste. An HTRW database survey meeting the requirements of ER 1165-2-132 has not been conducted. However, due to the highly disturbed nature of the site from past deposition of IWW sediments and the fact that the site was originally tidal wetlands, it is highly unlikely that items of potential HTRW would be located onsite.

4.3.2. **Biological**.

a. Uplands. Construction of the 26.0 acre MSA 204 would result in the conversion of approximately 16 acres of disturbed uplands. The site would be completely filled with approximately 300,000 yd^3 of dredged material from the 2005-2006 Palm Valley IWW dredging project. Afterwards, because the site would be filled to capacity, either the site could be offloaded for future use or the government easement could be relinquished to the property owner.

b. Wetlands. Of the 9.96 acres of wetlands located onsite, approximately 3.51 acres are connected to waters of the state. However, DEP has claimed jurisdiction and permitting authority over all onsite wetlands. Limited tidal exchange occurs through and around the degraded weir structures within the Northwest cell. The proposed work is being coordinated with the FDEP to

obtain a water quality certification for the project. Since federal policy requires no net loss of wetland values, mitigation would be required to offset impacts to these wetlands.

c. Essential Fish Habitat. EFH coordination with the National Marine Fisheries Service (NMFS) was initiated during the public notice process. Because the MSA 204 marsh has been significantly altered by past deposition of dredged material and tidal flows are restricted, the functionality of these areas is relatively low compared to surrounding uncontained marsh areas. Secondary and indirect impacts to EFH are not anticipated during operation and maintenance of the site because erosion control measures would insure erosion of the dikes and roads does not occur. The containment basin design would insure decant waters would meet State turbidity standards thereby preventing impacts to fishery resources. Although the Corps believes the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries along the eastern coast of Florida, mitigation would be required because of unavoidable impacts to 3.51 acres of EFH from construction of the 26 acre MSA 204 DMMA.

It should be noted that the site is to be completely filled during its initial use and then the easement could be relinquished to the landowner. Site development by the landowner could result in secondary and cumulative impacts to EFH through the associated habitat loss and nutrient/contamination burden. Storm water effluent containing pesticides, herbicides, fertilizers, and petroleum residues could adversely affect EFH surrounding the site.

d. Migratory Birds. Nesting, foraging, and loafing habitat would be created by construction of the site and deposition of dredged material. Typically species such as least terns and Wilson's plovers utilize the open sandy areas within the containment basin for nesting and the site could become significant migratory bird habitat between dredging events. In order to prevent impacts to migratory bird species during construction, MSA 204 would be constructed in compliance with the Jacksonville District Corps of Engineers district-wide migratory bird protection policy (COE, 1993). However, migratory bird habitat could be lost if the government were to relinquish the easement after use during the 2005-2006 IWW Palm Valley maintenance event and the landowner were to develop the site.

e. Threatened and Endangered Species. Consultation with the USFWS was initiated on December 12, 2003. A "Not likely to adversely affect" determination was made with respect to wood storks. The USFWS concurred with this determination on January 14, 2004. There would be no adverse effects upon threatened and endangered species from construction of MSA 204. Wood storks would likely continue to utilize the DMMA as loafing and foraging habitat between dredging events. However, this habitat could be lost if the easement were relinquished post project and the landowner were to develop the site.

4.3.3. **Social**.

a. Cultural Resources. As described in section 3.0 Affected Environment, because the MSA 204 easement has been previously used over the past sixty-nine years for dredged material

placement, it is not likely that significant cultural resources are located onsite. Although no significant archeological resources are recorded for the site, no systematic surveys have been conducted for the proposed disposal area. However, it is the District's determination that construction of MSA 204 will not have an adverse effect on significant cultural resources, which may be located there. The Florida Division of State concurred with this determination by letter dated June 20, 2004 (Appendix II).

b. Aesthetics. There would be a short-term impact on aesthetics from the presence and operation of heavy equipment during construction. The long-term impact to the aesthetics of the site is difficult to gauge because the future fate of the site is unknown. If the easement were relinquished, the site could be developed. Residential housing with associated landscaping might benefit the sites aesthetics while a diked containment basin might negatively impact the sites aesthetics.

4.3.4. **Economic**. There would be a minor stimulus to the local economy from revenues generated by commercial and recreational navigation along the IWW. There would be a short-term minor stimulus to the local economy from the sale of goods and services in support of the dredging work. Utilization of MSA 204 would permit implementation of the Palm Valley IWW dredging project to it's full authorized scope, thereby reducing overall dredging costs by increasing the interval required until the next maintenance operation. In addition, by placing material into MSA 204, DU-9 would retain additional capacity thus delaying the cost of offloading the site. Should the easement be relinquished after use, site development by the landowner could produce a long-term stimulus to the local economy from sale of goods and services in support of residential development.

4.3.5. **Cumulative effects**. Construction and the one-time use of MSA 204 could facilitate possible future construction of residential housing on the site. This could increase storm water runoff and it's associated nutrient burdens and contaminants from lawn fertilizers, herbicides, pesticides, and petroleum residues into the surrounding marsh. This could degrade water quality and cause impacts to fishery resources and wildlife habitat in the area. As stated in 4.2.4. and 4.3.4. above economic benefits to the local economy could occur from site development.

4.3.6. **Unavoidable effects**. There would be short-term adverse impacts on aesthetics and navigation associated with the construction period. There would be a long-term change on aesthetics from conversion of the area from highly altered marsh to a modern DMMA or to possible residential housing. The unavoidable impacts to estuarine emergent marsh and DEP jurisdictional wetlands would be mitigated, thus reducing the impact of these effects.

4.3.7. **Irreversible and Irretrievable Resource Commitments**. There would be no permanent loss of resources. However, relinquishment of the government easement would constitute an irretrievable commitment of resources. As it is anticipated that DU-9 will be expanded in the future to accommodate the 50-year dredged material management requirement for these reaches of the IWW, loss of this easement is not expected to result in increased maintenance dredging

costs or other adverse effects. Finally, although compensatory mitigation would insure no net loss of wetland functional values, there would be an irretrievable loss of wetland habitat from construction of the site.

4.4. **ALTERNATIVE 3, CONSTRUCTION OF 44.0-ACRE MSA 204**.

4.4.1. **Physical**

a. Navigation. Construction of the 44.0 acre MSA 204 dredged material management area would have short-term benefits to navigation on the IWW by facilitating maintenance dredging to the full scope of the authorized project. Estimated bulked volume capacity of the 44.0-acre MSA 204 would be approximately 530,000 cy, which would eliminate placement of additional material into the 400,000 cy capacity DU-9. Therefore, additional navigation benefits would occur due to prolonged service life of DU-9.

b. Groundwater quality. The construction of the DMMA should have no effects upon local groundwater quality. Adverse effects upon surrounding vegetation, as well as intrusion of saline water into the surficial aquifer, are not anticipated as the site is surrounded by salt marsh and lies immediately adjacent to the IWW. Additionally, the design of the containment site should prevent impacts to the surficial aquifer resulting from the use of the MSA 204 project site. Finally, the local aquifer does not appear to be utilized as a potable source by adjacent property owners.

c. Surface water quality. Disposal of a slurried dredged material at MSA 204 is not expected to result in the degradation of local water quality. Sediment sampling within Reach I was utilized to determine the sediment composition likely to be dredged during site operations. The majority of sediment samples taken within Reach I yield fine, brown to dark brown silty sand, with some clay and organic content (Taylor, et al, 1986). Subsequently, the DMMA design would insure site effluent meets state water quality levels for suspended sediments including but not limited to: increased ponding depth and retention time when material is dredged from this cut. Land moving activities associated with the construction of the containment cell would influence the flow and drainage patterns of surface waters. Erosion control techniques will prevent degradation of off-site surface waters. However, minor, temporary degradation of water quality may occur during construction of the dredged material management site.

d. Hazardous, Toxic, Radioactive Waste. An HTRW database survey meeting the requirements of ER 1165-2-132 has not been conducted. However, due to the highly disturbed nature of the site from past deposition of IWW sediments and the fact that the site was originally tidal wetlands, it is highly unlikely that items of potential HTRW would be located onsite.

4.4.2. **Biological**.

a. Uplands. Construction of MSA 204 DMMA would result in the conversion of approximately 22 acres of disturbed uplands. The site would be completely filled with

approximately 530,000 yd^3 of dredged material from the 2005-2006 Palm Valley IWW maintenance-dredging project. Afterwards, because the site would be filled to capacity, either the site could be offloaded for future use or the government easement could be relinquished to the property owner.

b. Wetlands. Of the 21.47 acres of wetlands located onsite, approximately 14.39 acres are connected to waters of the state and experience daily tidal exchange. However, DEP has claimed jurisdiction and permitting authority over all onsite wetlands. The proposed work is being coordinated with the FDEP to obtain a water quality certification for the project. Since federal policy requires no net loss of wetland values, mitigation would be required to offset impacts to these wetlands. The DEP negotiated mitigation plan is located in Appendix VI.

c. Essential Fish Habitat. EFH coordination with the National Marine Fisheries Service (NMFS) was initiated during the public notice process. The NMFS responded to the public notice by letter dated June 29, 2004 and requested an EFH assessment from the Corps. The draft EA was submitted to the NMFS by letter dated August 4, 2004 and the Corps requested NMFS EFH conservation recommendations. Site development would impact 14.39 acres of EFH. However, because the MSA 204 marsh has been significantly altered by past deposition of dredged material and tidal flows are restricted, the functionality of these areas is relatively low compared to surrounding uncontained marsh areas. Secondary and indirect impacts to EFH are not anticipated during operation and maintenance of the site because erosion control measures would insure erosion of the dikes and roads does not occur. The containment basin design would insure decant waters would meet State turbidity standards thereby preventing impacts to fishery resources. The NMFS submitted their EFH conservation recommendations by letter dated September 10, 2004, which recommended investigation of other “less damaging” alternatives. The Corps addressed the NMFS EFH conservation recommendations by letter dated October 5, 2004. The NMFS responded by letter dated October 18, 2004 which stated that if use of the MSA 204 site is to be pursued, EFH mitigation should entail creation or restoration of comparable habitat (to that impacted) at a 2:1 ratio (creation-restoration:impact). Although the Corps believes the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries along the eastern coast of Florida, mitigation will be required because of unavoidable impacts to 14.39 acres of EFH from use of the MSA 204 site. The NMFS negotiated mitigation plan is located in Appendix VI.

It should be noted that the site is to be completely filled during its initial use and then the easement could be relinquished to the landowner. Site development by the landowner could result in secondary and indirect impacts to EFH through the associated habitat loss and nutrient/contamination burden. Storm water effluent containing pesticides, herbicides, fertilizers, and petroleum residues could adversely affect EFH surrounding the site.

d. Migratory Birds. Nesting, foraging, and loafing habitat would be created by construction of the site and deposition of dredged material. Typically, species such as least terns and Wilson’s plovers utilize the open sandy areas within the containment basin for nesting and

the site could become significant migratory bird habitat between dredging events. In order to prevent impacts to migratory bird species during construction, MSA 204 would be constructed in compliance with the Jacksonville District Corps of Engineers district-wide migratory bird protection policy (COE, 1993). However, migratory bird habitat could be lost if the government were to relinquish the easement and the landowner were to develop the site

e. Threatened and Endangered Species. Consultation with the USFWS was initiated on December 12, 2003. A "Not likely to adversely affect" determination was made with respect to wood storks. The USFWS concurred with this determination on January 14, 2004. There would be no adverse effects upon threatened and endangered species from construction of MSA 204. Wood storks would likely continue to utilize the DMMA as loafing and foraging habitat between dredging events. However, this habitat could be lost if the easement were relinquished and the landowner were to develop the site.

4.4.3. **Social**.

a. Cultural Resources. As described in section 3.0 Affected Environment, because the MSA 204 easement has been previously used over the previous sixty-nine years for dredged material placement, it is not likely that significant cultural resources are located onsite. Although no significant archeological resources are recorded for the site, no systematic surveys have been conducted for the proposed disposal area. However, it is the District's determination that construction of MSA 204 will not have an adverse effect on significant cultural resources which may be located there. The Florida Division of State concurred with this determination by letter dated June 20, 2004 (Appendix II).

b. Aesthetics. There would be a short-term impact on aesthetics from the presence and operation of heavy equipment during construction. The long-term impact to the aesthetics of the site is difficult to gauge because the future fate of the site is unknown. If the easement were relinquished, the site could be developed. Residential housing with associated landscaping might benefit the sites aesthetics while a diked containment basin might negatively impact the sites aesthetics.

4.4.4. **Economic**. There would be a minor stimulus to the local economy from revenues generated by commercial and recreational navigation along the IWW. There would be a short-term minor stimulus to the local economy from the sale of goods and services in support of the dredging work. Utilization of MSA 204 would permit implementation of the Palm Valley IWW dredging project to it's full authorized scope, thereby reducing overall dredging costs by increasing the interval required until the next maintenance operation. In addition, by placing material into MSA 204, DU-9 would retain additional capacity thus delaying the cost of offloading the site. Should the easement be relinquished after use, site development by the landowner could produce a long-term stimulus to the local economy from sale of goods and services in support of residential development.

4.4.5. **Cumulative effects**. Construction and the one-time use of MSA 204 could facilitate possible future construction of residential housing on the site. This could increase storm water runoff and it's associated nutrient burdens and contaminants from lawn fertilizers, herbicides, pesticides, and petroleum residues into the surrounding marsh. This could degrade water quality and cause impacts to fishery resources and wildlife habitat in the area. As stated in 4.2.4., 4.3.4., and 4.4.4. above economic benefits to the local economy could occur from site development.

4.4.6. **Unavoidable effects**. There would be short-term adverse impacts on aesthetics and navigation associated with the construction period. There would be a long-term change on aesthetics from conversion of the area from highly altered marsh to a modern DMMA or to possible residential housing. The unavoidable impacts to estuarine emergent marsh and DEP jurisdictional wetlands would be mitigated, thus reducing the impact of these effects.

4.4.7. **Irreversible and Irretrievable Resource Commitments**. There would be no permanent loss of resources. However, relinquishment of the government easement would constitute an irretrievable commitment of resources. As it is anticipated that DU-9 will be expanded in the future to accommodate the 50-year dredged material management requirement for these reaches of the IWW, loss of this easement is not expected to result in increased maintenance dredging costs or other adverse effects. Finally, although compensatory mitigation would insure no net loss of wetland functional values, there would be an irretrievable loss of wetland habitat from construction of the site.

4.5. **ALTERNATIVE 4, CONSTRUCTION OF 38.0-ACRE DMMA MSA-204**.

4.5.1. **Physical**

a. Navigation. Construction of the 38.0 acre MSA 204 dredged material management area would have short-term benefits to navigation on the IWW by facilitating maintenance dredging to the full scope of the authorized project. Estimated bulked volume capacity of the 38.0-acre MSA 204 would be approximately 530,000 cy, which would eliminate placement of additional material into the 400,000 cy capacity DU-9. Therefore, additional navigation benefits would occur due to prolonged service life of DU-9.

d. Groundwater quality. The construction of the DMMA should have no effects upon local groundwater quality. Adverse effects upon surrounding vegetation, as well as intrusion of saline water into the surficial aquifer, are not anticipated as the site is surrounded by salt marsh and lies immediately adjacent to the IWW. Additionally, the design of the containment site should prevent impacts to the surficial aquifer resulting from the use of the MSA 204 project site. Finally, the local aquifer does not appear to be utilized as a potable source by adjacent property owners.

e. Surface water quality. Disposal of a slurried dredged material at MSA 204 is not expected to result in the degradation of local water quality. Sediment sampling within Reach I was utilized to determine the sediment composition likely to be dredged during site operations.

The majority of sediment samples taken within Reach I yield fine, brown to dark brown silty sand, with some clay and organic content (Taylor, et al, 1986). Subsequently, the DMMA design would insure site effluent meets state water quality levels for suspended sediments including but not limited to: increased ponding depth and retention time when material is dredged from this cut. Land moving activities associated with the construction of the containment cell would influence the flow and drainage patterns of surface waters. Erosion control techniques will prevent degradation of off-site surface waters. However, minor, temporary degradation of water quality may occur during construction of the dredged material management site.

d. Hazardous, Toxic, Radioactive Waste. An HTRW database survey meeting the requirements of ER 1165-2-132 has not been conducted. However, due to the highly disturbed nature of the site from past deposition of IWW sediments and the fact that the site was originally tidal wetlands, it is highly unlikely that items of potential HTRW would be located onsite.

4.5.2. **Biological**.

a. Uplands. Construction of MSA 204 DMMA would result in the conversion of approximately 26 acres of disturbed uplands. The site would be completely filled with approximately 530,000 yd^3 of dredged material from the 2005-2006 Palm Valley IWW maintenance-dredging project. Afterwards, because the site would be filled to capacity, either the site could be offloaded for future use or the government easement could be relinquished to the property owner.

b. Wetlands. Of the 13.36 acres of wetlands located onsite, approximately 8.70 acres are connected to waters of the state and experience daily tidal exchange. However, DEP has claimed jurisdiction and permitting authority over all onsite wetlands. The proposed work is being coordinated with the FDEP to obtain a water quality certification for the project. Since federal policy requires no net loss of wetland values, mitigation would be required to offset impacts to these wetlands. The DEP negotiated mitigation plan is located in Appendix VI.

c. Essential Fish Habitat. EFH coordination with the National Marine Fisheries Service (NMFS) was initiated during the public notice process. The NMFS responded to the public notice by letter dated June 29, 2004 and requested an EFH assessment from the Corps. The draft EA was submitted to the NMFS by letter dated August 4, 2004 and the Corps requested NMFS EFH conservation recommendations. Site development would impact 8.7 acres of tidal EFH. However, because the MSA 204 marsh has been significantly altered by past deposition of dredged material and tidal flows are restricted, the functionality of these areas is relatively low compared to surrounding uncontained marsh areas. Secondary and indirect impacts to EFH are not anticipated during operation and maintenance of the site because erosion control measures would insure erosion of the dikes and roads does not occur. The containment basin design would insure decant waters would meet State turbidity standards thereby preventing impacts to fishery resources. The NMFS submitted their EFH conservation recommendations by letter dated September 10, 2004, which recommended investigation of other “less damaging” alternatives.

The Corps addressed the NMFS EFH conservation recommendations by letter dated October 5, 2004. The NMFS responded by letter dated October 18, 2004 which stated that if use of the MSA 204 site is to be pursued, EFH mitigation should entail creation or restoration of comparable habitat (to that impacted) at a 2:1 ratio (creation-restoration:impact). Although the Corps believes the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries along the eastern coast of Florida, mitigation will be required because of unavoidable impacts to 8.7 acres of EFH from use of the MSA 204 site. The NMFS negotiated mitigation plan is located in Appendix VI.

It should be noted that the site is to be completely filled during its initial use and then the easement could be relinquished to the landowner. Site development by the landowner could result in secondary and indirect impacts to EFH through the associated habitat loss and nutrient/contamination burden. Storm water effluent containing pesticides, herbicides, fertilizers, and petroleum residues could adversely affect EFH surrounding the site.

d. Migratory Birds. Nesting, foraging, and loafing habitat would be created by construction of the site and deposition of dredged material. Typically, species such as least terns and Wilson's plovers utilize the open sandy areas within the containment basin for nesting and the site could become significant migratory bird habitat between dredging events. In order to prevent impacts to migratory bird species during construction, MSA 204 would be constructed in compliance with the Jacksonville District Corps of Engineers district-wide migratory bird protection policy (COE, 1993). However, migratory bird habitat could be lost if the government were to relinquish the easement and the landowner were to develop the site

e. Threatened and Endangered Species. Consultation with the USFWS was initiated on December 12, 2003. A "Not likely to adversely affect" determination was made with respect to wood storks. The USFWS concurred with this determination on January 14, 2004. There would be no adverse effects upon threatened and endangered species from construction of MSA 204. Wood storks would likely continue to utilize the DMMA as loafing and foraging habitat between dredging events. However, this habitat could be lost if the easement were relinquished and the landowner were to develop the site.

4.5.3. **Social**.

a. Cultural Resources. As described in section 3.0 Affected Environment, because the MSA 204 easement has been previously used over the previous sixty-nine years for dredged material placement, it is not likely that significant cultural resources are located onsite. Although no significant archeological resources are recorded for the site, no systematic surveys have been conducted for the proposed disposal area. However, it is the District's determination that construction of MSA 204 will not have an adverse effect on significant cultural resources which may be located there. The Florida Division of State concurred with this determination by letter dated June 20, 2004 (Appendix II).

b. Aesthetics. There would be a short-term impact on aesthetics from the presence and operation of heavy equipment during construction. The long-term impact to the aesthetics of the site is difficult to gauge because the future fate of the site is unknown. If the easement were relinquished, the site could be developed. Residential housing with associated landscaping might benefit the sites aesthetics while a diked containment basin might negatively impact the sites aesthetics.

4.5.4. **Economic**. There would be a minor stimulus to the local economy from revenues generated by commercial and recreational navigation along the IWW. There would be a short-term minor stimulus to the local economy from the sale of goods and services in support of the dredging work. Utilization of MSA 204 would permit implementation of the Palm Valley IWW dredging project to it's full authorized scope, thereby reducing overall dredging costs by increasing the interval required until the next maintenance operation. In addition, by placing material into MSA 204, DU-9 would retain additional capacity thus delaying the cost of offloading the site. Should the easement be relinquished after use, site development by the landowner could produce a long-term stimulus to the local economy from sale of goods and services in support of residential development.

4.5.5. **Cumulative effects**. Construction and the one-time use of MSA 204 could facilitate possible future construction of residential housing on the site. This could increase storm water runoff and it's associated nutrient burdens and contaminants from lawn fertilizers, herbicides, pesticides, and petroleum residues into the surrounding marsh. This could degrade water quality and cause impacts to fishery resources and wildlife habitat in the area. As stated in 4.5.4. above, economic benefits to the local economy could occur from site development.

4.5.6. **Unavoidable effects**. There would be short-term adverse impacts on aesthetics and navigation associated with the construction period. There would be a long-term change on aesthetics from conversion of the area from highly altered marsh to a modern DMMA or to possible residential housing. The unavoidable impacts to estuarine emergent marsh and DEP jurisdictional wetlands would be mitigated, thus reducing the impact of these effects.

4.5.7. **Irreversible and Irretrievable Resource Commitments**. There would be no permanent loss of resources. However, relinquishment of the government easement would constitute an irretrievable commitment of resources. As it is anticipated that DU-9 will be expanded in the future to accommodate the 50-year dredged material management requirement for these reaches of the IWW, loss of this easement is not expected to result in increased maintenance dredging costs or other adverse effects. Finally, although compensatory mitigation would insure no net loss of wetland functional values, there would be an irretrievable loss of wetland habitat from construction of the site.

5.0 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

5.1 **Environmental Policy Act (NEPA) of 1969, as amended.** Environmental information on

the project was compiled and the Environmental Assessment was made available for review by the public in compliance with Regulation 33 CFR Parts 335-338. These regulations govern the Operations and Maintenance of U.S. Army Corps of Engineers Civil Works Projects involving the Discharge of Dredged or Fill Materials into Waters of the US or Ocean Waters. Public Notice Number PN-CO-IWW-269 dated March 4, 2004 was issued soliciting comments from all interested parties. Information and issues received from these responses were used in the preparation of the environmental assessment. This public coordination and environmental impact assessment complies with the intent of the NEPA.

5.2 **Endangered Species Act of 1973, as amended.** Consultation with the USFWS was initiated by letter dated December 12th, 2003 and completed on January 14, 2004. It was determined that the proposed construction project would be "Not Likely To Adversely Affect" the Wood Stork. In addition, there would be No Effect on any other threatened or endangered species that could be within the dredged material management area or along the pipeline easement.

5.3 **Fish and Wildlife Coordination Act of 1958, as amended.** The project has been coordinated with the USFWS. All Federal activities within the proposed disposal site would be in compliance with this Act.

5.4 **National Historic Preservation Act of 1966, as amended (PL 93-291).** There are no known historic, cultural, or archeological resources within the vicinity of the project area and along the proposed pipeline easement. Therefore, it is the District's determination that construction of MSA 204 will not have an adverse effect on significant cultural resources, which may be located there. The Florida Division of State concurred with this determination by letter dated June 20, 2004 (Appendix II).

5.5 **Clean Water Act of 1972, as amended.**

5.5.1 **Section 401.** A Water quality certification would be obtained for this project. An Environmental Resource Permit application will be submitted to the Florida Department of Environmental Protection. The issued permit would constitute water quality certification in compliance with Section 401.

5.6 **Clean Air Act of 1972, as amended.** At this stage of planning, this project complies with Section 309 of the Clean Air Act of 1972, as amended, 42 U.S.C. 1857h-7, *et. seq*. P.L. 91-604. Permits to burn or dispose of the cleared vegetation would be obtained from the appropriate local governments during construction.

5.7 **Coastal Zone Management Act of 1972, as amended.** This project was reviewed and coordinated with the State of Florida and is in compliance with the Coastal Zone Management Program (Appendix III).

5.8 **Farmland Protection Policy Act of 1981.** No prime or unique farmland occurs within the

boundaries of the proposed dredged material management area, nor is any proposed for impact along the pipeline route. Therefore, this Act would not be applicable.

5.9 **Wild and Scenic River Act of 1968, as amended.** There are no designated Wild or Scenic Rivers within the project area. Therefore, this Act is not applicable.

5.10 **Marine Mammal Protection Act of 1972, as amended.** The work was coordinated with the USFWS during Section 7 Consultation pursuant to the Endangered Species Act. The West Indian manatee (*Trichechus manatus*) could be located in the project area. Standard manatee protection guidelines, developed by the State of Florida, will be required during maintenance dredging operations.

5.11 **Estuary Protection Act of 1968.** Although related actions occur within the IWW, there should be no deleterious effects as a result of the proposed action.

5.12 **Federal Water Project Recreation Act of 1976, as amended.** There is a potential for increased recreational opportunities within the IWW as a result of maintenance dredging operations associated with the proposed action, or at least an enhancement of these opportunities.

5.13 **Magnuson-Stevens Fishery Conservation and Management Act of 1996.** The proposed action should not have any significant deleterious effects upon fisheries adjacent to the project site. However, the National Marine Fisheries Service was coordinated with and although the site is highly disturbed, impacts to estuarine emergent marsh and wet prairie will require mitigation. The final mitigation plan is located in Appendix VI.

5.14 **Submerged Lands Act of 1953.** The proposed action would occur (in part) on submerged lands of the State of Florida. The project was coordinated with the State of Florida and is in compliance with the Act.

5.15 **Coastal Barrier Resources Act and Coastal Barrier Improvement Act of 1990.** There are no designated coastal barrier resources in the project area that would be affected by this project. These Acts are not applicable.

5.16 **Rivers and Harbors Act of 1899.** The proposed action would not obstruct navigable waters of the United States. The proposed action has been subject to the public notice and other evaluations normally conducted for activities subject to the Act. The project is in full compliance.

5.17 **Anadromous Fish Conservation Act.** The proposed action should not have any significant deleterious effects upon anadromous fish populations adjacent to the project site. However, the project was coordinated with the NMFS and compensatory mitigation will be required in order for this project to be in compliance with the Act.

5.18 **Migratory Bird Treaty Act and Migratory Bird Conservation Act.** Migratory birds are

not anticipated to be significantly affected by the proposed action. A migratory bird protection program would be implemented to avoid nesting areas during the 1 April to 31 August nesting season. The proposed action will be in compliance with these Acts.

5.19 **Marine Protection, Research and Sanctuaries Act.** This Act is not applicable to the construction of an upland dredged material management area.

5.20 **Executive Order 11990, Protection of Wetlands.** Wetlands will be affected by the proposed action. Avoidance and minimization of impacts were considered in the evaluation of the proposed action, and suitable mitigation for unavoidable impacts will be performed.

5.21 **Executive Order 11988, Floodplain Management.** The project is within the base floodplain (100-year storm) and has been evaluated in accordance with this Executive Order. The project could directly effect and indirectly encourage development within the floodplain if the government easement were relinquished after use.

5.22 **Executive Order 12898, Environmental Justice.** The purpose of the proposed action is to provide a suitable site for dredged material disposal associated with one-time maintenance of the IWW. This action will provide increased safety, efficiency, and lower costs for navigation. The proposed activity would not (a) exclude persons from participation in, (b) deny persons the benefit of, or (c) subject persons to discrimination because of their race, color, or national origin.

6.0. **LIST OF PREPARERS**. The following professionals prepared the Environmental Assessment.

NAME	DISCIPLINE	EXPERIENCE	ROLE IN PREPARING EA
Paul M. DeMarco	Biologist	4 years environmental impacts assessment	NEPA Coordinator, Biological Impact Assessment, Endangered Species Consultation
Frank Morrison	Civil Engineer	6 ½ years experience	Project Manager
Grady C. Caulk	Archeologist	10 years cultural resources assessment	Cultural Resources

7.0. **CONSULTATION WITH OTHERS - PUBLIC INVOLVEMENT PROCESS**. A public notice (PN-CO-IWW-269) dated 4 March 2004 was issued for the project.

7.1. The National Marine Fisheries Service (NMFS) responded to the public notice by letter dated 29 June 2004 providing information concerning Essential Fish Habitat (EFH) types that occur in the project area. They stated that impacts to EFH would occur if the project were implemented as designed and recommended against project implementation. Additionally, they recommended impact avoidance and minimization by locating the DMMA in uplands with elevated roads and pipelines through wetland areas. They also recommended limiting construction to periods when utilization by federally managed species is less likely.

7.1.1. Response: Previous consultation was conducted by telephone on 11 October 2000 and NMFS stated "We anticipate that any adverse effect that might occur on marine and anadromous fishery resources would be minimal and, therefore, do not object to issuance of the permit(s)." The public notice process initiated EFH coordination. NMFS provided their initial comments by their letter dated 29 June 2004. Additionally, the NMFS provided comments to the MSA 204 draft EA/EFH assessment by letter dated September 10, 2004 with specific EFH conservation recommendations and continued to voice objections to use of the site. The Corps sent a response to NMFS by letter dated October 5, 2004 detailing our disagreement with their assessment of EFH impacts. Finally, NMFS responded by letter dated October 18, 2004 in which they recommended in-kind mitigation at a 2:1 ratio (creation-restoration:impact). As a result, impacts to approximately 8.7 acres of tidal estuarine emergent marsh and wet prairie would require mitigation. The final mitigation plan is located in Appendix IV.

7.2. The Florida State Clearinghouse responded to the public notice by letter dated 9 July 2004 stating that an Environmental Resource Permit would need to be obtained from the Department of Environmental Protection (DEP) Northeast District Office in Jacksonville. They also stated that DEP staff had already met with the Corps onsite to examine a preliminary wetland delineation. Finally, the Clearinghouse stated that coordination should continue with DEP throughout the planning process.

7.2.1. Response: Corps staff met with DEP Northeast District staff Danielle Harvey Fondren and Laura Pennington at MSA 204 on May 19, 2004 for an informal verification of the jurisdictional wetland line delineated by Taylor Engineering Inc. for the Corps. DEP staff requested additions to the wetland line and Taylor submitted a revised wetland figure to DEP on June 10, 2004. Mrs. Harvey Fondren submitted a letter to Taylor on June 14, 2004 accepting the revised jurisdictional wetland delineation. Coordination is ongoing with DEP and a permit would be obtained prior to construction.

7.3. The Florida Department of State Division of Historic Resources responded to the public notice by letter dated June 20, 2004 stating that their review of the Florida Master Site File indicated that no significant archaeological or historical resources were recorded within the project area. In addition, because of the location and/or nature of the project it is unlikely that any such sites would be affected.

7.3.1. Response: None required.

7.4. No further comments were received to public notice (PN-CO-IWW-269) dated 4 March 2004.

8.0. **INDEX.**

9.0. **REFERENCES**

South Atlantic Fishery Management Council. 1998. Essential Fish Habitat Requirements for Fishery Management Plans of the South Atlantic Fishery Management Council.

Taylor Engineering, Inc. 2004. Natural Resources Report, Dredged Material Management Area MSA 204. Taylor Engineering, Inc., Jacksonville, FL.

Taylor Engineering, Inc. 2004. Wetland Delineation Report, Dredged Material Management Area MSA 204. Taylor Engineering, Inc., Jacksonville, FL

Taylor R.B., McFetridge, W.F. 1986. Long-range Dredged Material Management Plan for the Intracoastal Waterway in Northeast Florida. Taylor Engineering, Inc., Jacksonville, FL.

U.S. Army Corps of Engineers (COE). 2000. Dredged Material Management Area Construction, Pablo Creek Site (DU-9, Alt. 2) Environmental Assessment. Jacksonville, FL.

U.S. Army Corps of Engineers (COE). 1993. Draft Final Migratory Bird Protection Policy. Jacksonville, FL.

APPENDIX I

404(b)(1) EVALUATION OF DREDGED MATERIAL

SECTION 404(b)(1) EVALUATION
DREDGED MATERIAL

I. Project Description

a. Location. Intracoastal Waterway, St. Johns County, Florida.

b. General Description. The proposed construction of Dredged Material Management Area MSA 204 would consist of the clearing and grubbing of the site and then the construction of a diked containment basin.

c. Authority and Purpose. Spanning nearly the length of Florida from Jacksonville to Miami, an 8 x 75 ft ICWW channel was authorized January 21, 1927 by House Document 586, 69th Congress, 2nd Session. The present channel configuration (12 x 125 ft) was authorized in 1945 by House Document 740, 79th Congress, 2nd Session. The U.S. Army Corps of Engineers is responsible for maintenance of the channel and the Florida Inland Navigation District (FIND) serves as the local sponsor for that portion of the IWW located in the State of Florida.

d. General Description of Dredged or Fill Material

(1) General Characteristics of Material. The material to be utilized for dike construction is the subsoil from within the disposal area site. The material is classified as Leon and Arents Soils.

(2) Quantity of Material. Approximately 137,274 cubic yards of material would be required to construct the diked containment basin.

(3) Source of Material. The dike material would come from the interior of the site.

e. Description of the Proposed Discharge Site. The material would be moved using heavy earth moving equipment from the interior to the exterior of the site thus creating the diked containment basin.

(1) Size and Location. Dredged material management area MSA 204 would be a 44-acre parcel located north of the Marsh Landing Community Development (MLCD), St. Johns County, Florida. MSA 204 is on the east side of the IWW, west of Cabbage Creek. The containment area within the outside toe of the Dike would be 38.0 acres.

(2) Type of Site. The site would be a Dredged Material Management Area (DMMA) along the IWW.

(3) Type of Habitat. MSA-204 contains eleven land uses / vegetative

communities — herbaceous/spoil areas, herbaceous/dikes and levees/spoil areas, pine-mesic oak/spoil areas, temperate hardwood/spoil areas, temperate hardwood/dikes and levees, dead trees/spoil areas, upland scrub, pine, and hardwoods/spoil areas, water, saltwater marsh/spoil areas, wet prairies/spoil areas, and spoil areas.

(4) Timing and Duration of Discharge. Construction will be conducted during the FY06.

f. Description of Disposal Method. The diked containment basin will be formed using heavy earth moving equipment to move the fill material from the interior of the site to the exterior.

II. Factual Determinations

a. Physical Substrate Determinations.

(1) Substrate Elevation and Slope. Current mean site elevation of MSA-204 is +6.51ft NGVD and post construction mean site elevation would be +0.8ft NGVD. Proposed dike slopes of 1V:3H will provide a dike crest elevation of +21.5ft NGVD.

(2) Sediment Type. Soils at MSA-204 are classified as Leon and Arents Soils.

(3) Dredged/Fill Material Movement. Fill material would be moved from the interior to the exterior of the site to construct the dikes. The containment basin would cover 13.36 acres of jurisdictional wetlands.

(4) Physical Effects on Benthos. NA

(5) Other Effects. NA

(6) Actions Taken to Minimize Impacts. None.

b. Water Circulation, Fluctuation and Salinity Determinations

(1) Water

(a) Salinity. No impacts to salinity at the construction site.

(b) Water Chemistry. None.

(c) Clarity. None.

(d) Color. None.

(e) Odor. None.

(f) Taste. Not applicable.

(g) Dissolved Gas Levels. NA.

(h) Nutrients. NA.

(i) Eutrophication. NA.

(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 Sites. There will be a short-term increase in the suspended particulate/turbidity in the runoff from the construction area. Levels should not exceed state standard.

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

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

(b) Dissolved Oxygen. NA

(c) Toxic Metals and Organics. NA

(d) Pathogens. Not Applicable.

(e) Aesthetics. Long-term impact on view of MSA 204 from the IWW and the J. Turner Butler Blvd Bridge.

(f) Others as Appropriate. None.

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

(a) Primary Production, Photosynthesis. Little or no impact is expected.

(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. None.

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. Little or no impact is expected.

(2) Effects on Benthos. Little or no impact is expected.

(3) Effects on Nekton. Little or no impact is expected.

(4) Effects on Aquatic Food Web. Little or no impact is expected.

(5) Effects on Special Aquatic Sites.

(a) Sanctuaries and Refuges. None.

(b) Wetlands. The wetlands would be eliminated. Compensatory mitigation would occur.

(c) Mud Flats. Little or no impact is expected.

(d) Vegetated Shallows. Some would be affected.

(e) Coral Reefs. Not applicable.

(f) Riffle and Pool Complexes. Not applicable.

(6) Threatened and Endangered Species. Minor impacts expected.

(7) Other Wildlife. Wildlife would relocate or be extirpated.

(8) Actions to Minimize Impacts. Standard Migratory bird and Manatee measures would be followed during construction to avoid impacts to these species.

f. Proposed Disposal Site Determinations

(1) Mixing Zone Determination. Not applicable.

(2) Determination of Compliance with Applicable Water Quality Standards. Surface water run-off will be controlled to meet State standards and NPDES requirements for disposal area construction.

(3) Potential Effects on Human Use Characteristic

(a) Municipal and Private Water Supply. No local wells occur in the immediate vicinity of the site.

(b) Recreational and Commercial Fisheries. No significant impacts are expected.

(c) Water Related Recreation. Not applicable.

(d) Aesthetics. Impacts will occur.

(e) Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves. Not applicable.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. There would be no long-term adverse impact on the adjacent aquatic environment from the construction and use of this site. Should the site be relinquished after use to the landowner, possible cumulative impacts could result to water quality from residential storm water runoff.

h. Determination of Secondary Effects on the Aquatic Ecosystem. Should the site be relinquished after use to the landowner, possible secondary impacts could result to water quality from residential storm water runoff.

APPENDIX II

Coordination Letters

APPENDIX III

Florida Coastal Zone Management Program
Federal Consistency Evaluation Procedures

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: This chapter is not applicable to the MSA 204 Dredged Material Management Area Project.

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 was planned with the cooperation of the State and was coordinated with relevant agencies.

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

This chapter creates a State emergency management agency with 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: This chapter is not applicable to the MSA 204 Dredged Material Management Area Project.

4. Chapter 253, State Lands.

This chapter governs the management of submerged State lands and resources within State lands. This includes archeological and historic 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 project was planned with the technical advice of the Florida Department of Environmental Protection (FDEP) and other State of Florida agencies. The project is wholly on private lands, but complies with pertinent State regulations and 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: There are environmentally-sensitive lands adjacent to the project boundaries. However, these lands already receive State protection from DEP.

6. Chapter 258, State Parks and Aquatic Preserves.

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

> Response: This construction project is not located within a close enough proximity of any State park or preserve to have a foreseeable impact.

7. Chapter 267, Historic Preservation.

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

> Response: This project was coordinated with the Florida State Historic Preservation Officer. Historic preservation compliance was completed to meet all responsibilities under Chapter 267.

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: Economic contribution from the project area will not be compromised by this action. The associated maintenance dredging of the Intracoastal Waterway encourages commercial and recreational use of the area, which is 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: There will be no impacts to public transportation systems associated with this action. The associated maintenance dredging of the Intracoastal Waterway encourages

commercial and recreational 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 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: Based upon the overall impacts of this work, this project is consistent with the goals of this chapter.

11. Chapter 372, Living Land and Freshwater Resources.

This chapter establishes the Florida 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: Coordination with the Florida Fish and Wildlife Conservation Commission determined this action to be consistent with State policies and practices as set forth in this chapter.

12. 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 in this chapter.

13. 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 action does not involve the transportation or discharging of pollutants. Environmental protection measures will be employed during construction and operation of the site to avoid inadvertent spills or other sources of pollution. Therefore, this action will be in compliance with this chapter.

14. 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 oil, gas, or other petroleum product and, therefore, does not apply.

15. 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 proposed construction of the MSA 204 Dredged Material Management Area project was coordinated with the Department of Community Affairs during the planning stage and therefore, the work is consistent with the intent of this chapter.

16. 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 will not further the propagation of mosquitoes or other pest arthropods.

17. Chapter 403, Environmental Control.

This chapter authorizes the regulation of pollution of the air and waters of the State by the FDEP.

Response: A Water quality certificate will be obtained from the FDEP for this project. No air pollution permits are required for the project. Effects of the operation of construction equipment on air quality will be minor and conform to State of Florida emission standards. Therefore, the work will comply with this chapter.

18. 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 on-site or in adjoining properties affected by the work. Particular attention will be given to work on or adjacent to agricultural lands.

Response: This project will not involve any impacts upon agricultural lands. Project

construction will include appropriate erosion control plans and standard Best Management Practices in order to ensure compliance with the intent of this chapter.

APPENDIX IV

Environmental Site Documentation

APPENDIX V

Wetland Delineation Report

APPENDIX VI

Compensatory Mitigation Plan