MAY 2014

Final Environmental Assessment

MAINTENANCE DREDGING INTRACOASTAL WATERWAY REACH I INDIAN RIVER COUNTY, FLORIDA

Includes placement in IR-2

U.S. Army Corps
of Engineers
JACKSONVILLE
DISTRICT

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

REPLY TO
ATTENTION OF

FINDING OF NO SIGNIFICANT IMPACT
MAINTENANCE DREDGING INTRACOASTAL WATERWAY REACH I
INDIAN RIVER COUNTY, FLORIDA

I have reviewed the May 2014 Environmental Assessment (EA) for the proposed maintenance dredging of the federally authorized Intracoastal Waterway in Indian River County, FL. Dredged material would be placed in Dredged Material Management Area (DMMA) IR-2. This Finding incorporates by reference all discussions and conclusions contained in the EA enclosed hereto. Based on information analyzed in the EA, reflecting pertinent information obtained from agencies having jurisdiction by law and/or special expertise, I conclude that the proposed action will not significantly impact the quality of the human environment and does not require an Environmental Impact Statement. Reasons for this conclusion are in summary:

a. The proposed action would be conducted in accordance with the Endangered Species Act, and specifically in compliance with the Regional Biological Opinion issued by the National Marine Fisheries Service and the informal consultation documentation issued by the US Fish and Wildlife Service. The work would be not likely to adversely affect any threatened or endangered species or impact any designated "critical habitat."

b. This project has been coordinated with the State of Florida, and all applicable water quality standards will be met.

c. The State of Florida has concurred with the Corps consistency determination that the proposed work is consistent with the enforceable policies of the Florida Coastal Management Program.

d. The proposed work has been coordinated with the Florida State Historic Preservation Officer and appropriate federally recognized tribes. No effects to cultural resources are anticipated.

e. Measures will be in place during construction to eliminate, reduce, or avoid adverse impacts below the threshold of significance to fish and wildlife resources.

f. Public benefits will be provided with unobstructed channel navigation.

In consideration of the information summarized, I find that the proposed Federal Navigation Project, maintenance dredging of the Intracoastal Waterway with dredged material placement in DMMA IR-2, will not significantly affect the human environment and does not require an Environmental Impact Statement. A copy of this document will be made available to the public at the following website:

http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#Indian_River

A M DM

ALAN M. DODD.
Colonel, Corps of Engineers
Commanding

20 July 2014

Date

ENVIRONMENTAL ASSESSMENT
ON
MAINTENANCE DREDGING
INTRACOASTAL WATERWAY REACH I
INDIAN RIVER COUNTY, FLORIDA

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1 PROJECT PURPOSE AND NEED

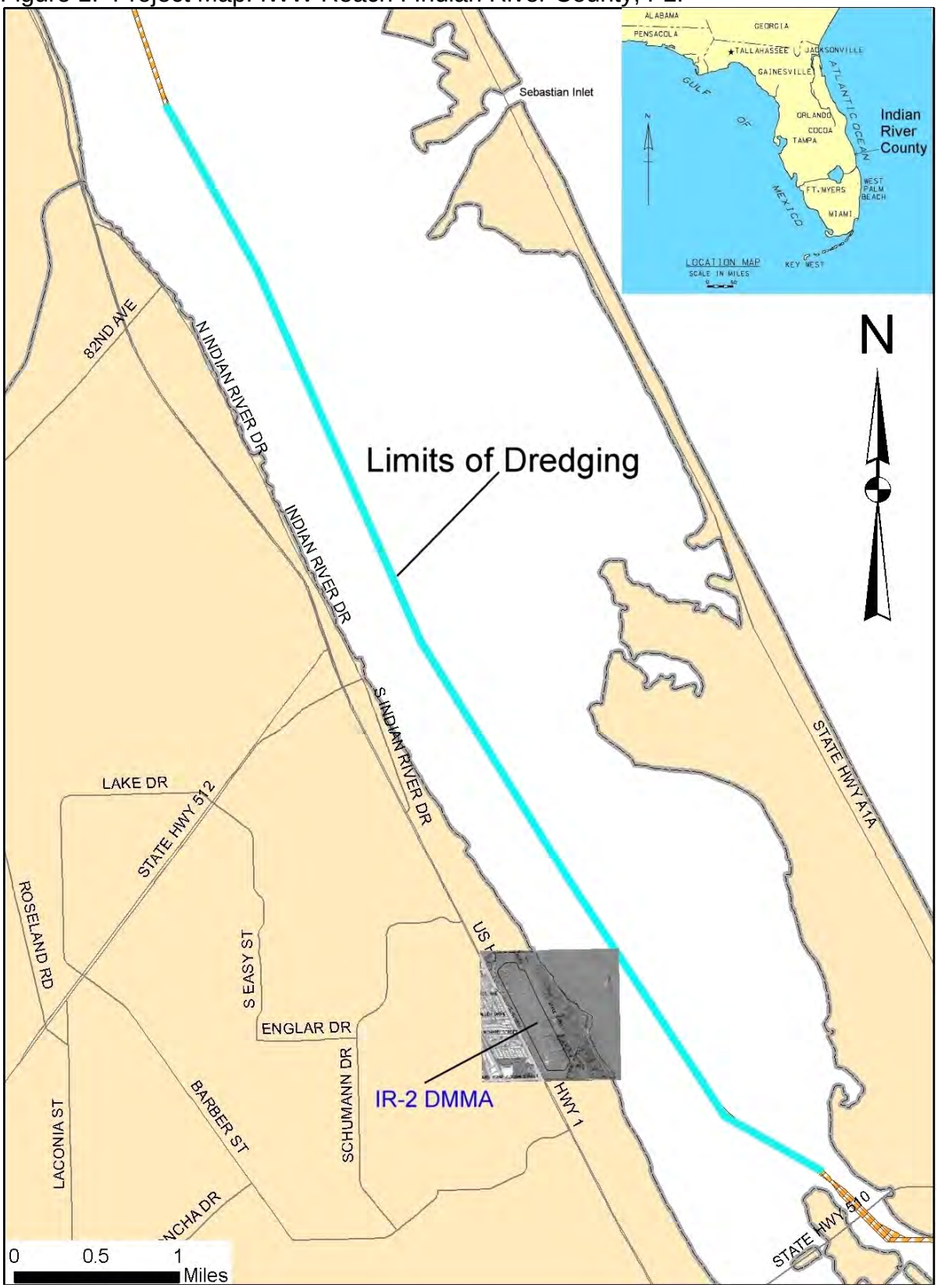
1.1 PROJECT DESCRIPTION.

The U.S. Army Corps of Engineers (Corps), Jacksonville District, is proposing to conduct periodic maintenance dredging of the Indian River County, Florida portion of the Intracoastal Waterway (IWW) in the vicinity of Sebastian Inlet. This would include all of Reach I (as defined in Taylor et al., 1997) which extends from Sebastian Inlet (IWW mile 195.15) southward 8.09 miles to the Wabasso Bridge (IWW mile 203.24) (see Figure 1, Project Map). Dredged material would be placed in the previously constructed Dredged Material Management Area (DMMA) IR-2 located about 5.5 miles south of the Brevard/Indian River County line (about 1.6 miles north of Wabasso). IR-2 is designed to accommodate the projected 50 year Reach I dredged material storage requirement of approximately 430,000 cubic yards (cy). The federal channel would be maintained to its authorized dimensions of 125-feet wide by 12-feet deep plus 2-feet of allowable over-depth at mean lower low water (mllw). The accumulation of sediment, commonly referred to as shoaling, has restricted the width of the project channel and significantly reduced its depth.

1.2 PROJECT NEED OR OPPORTUNITY.

The most recent examination survey documented a total in situ shoaling volume of 429,170 cy within the authorized channel. Minimum depths recorded from the project channel are less than 6.7 ft causing navigation problems for commercial and larger recreational vessels. Vessels are currently being forced outside the authorized channel in search of deeper water, waiting for high tides, or prop dredging through the channel. Removal of the shoal material would maintain the navigable capacity of the project channel.

Figure 1. Project Map. IWW Reach I Indian River County, FL.



1.3 PROJECT AUTHORITY.

1.3.1 INITIAL AUTHORIZATION.

Spanning nearly the entire length of Florida from Jacksonville to Miami, an 8 ft deep x 75 ft wide channel was authorized January 21, 1927 by House document 586, 69th Congress, 2nd Session.

1.3.2 SUPPLEMENTAL AUTHORIZATIONS.

The present configuration (12 ft deep x 125 ft wide) was authorized by House Document 740, 79th Congress, 2nd Session, 2 March 1945. Maintenance of the channel is the responsibility of the Corps. The Florida Inland Navigation District (FIND) serves as the local sponsor and is responsible for providing and maintaining the DMMAs.

1.4 RELATED ENVIRONMENTAL DOCUMENTS.

Related NEPA, design, and planning documents of the IWW Vicinity Sebastian Inlet area include the following:

- Long-Range Dredged Material Management Plan for The Intracoastal Waterway, Indian River County, Florida. Taylor Engineering, Inc., Jacksonville, FL, August 1997. (hereafter Long-Range Plan)

- Final Environmental Assessment and Finding of No Significant Impact (FONSI), IR-2 DMMA Indian River County, Florida. Corps of Engineers. October 2006.

1.5 DECISIONS TO BE MADE.

This Environmental Assessment will evaluate whether to conduct maintenance dredging of Reach I of the IWW in Indian River County, FL (hereafter Project Channel) and, if so, recommend alternatives to accomplish that goal.

1.6 SCOPING AND ISSUES.

1.6.1 RELEVANT ISSUES.

The following issues were identified as relevant to the proposed action and appropriate for further evaluation: threatened and endangered species including sea turtles, West Indian manatee, smalltooth sawfish, and Johnson's seagrass; water quality; essential fish habitat (including seagrass); wildlife resources; air quality; cultural resources; aesthetics; recreation; socio economics; noise; and navigation.

1.6.2 ISSUES ELIMINATED FROM FURTHER ANALYSIS.

The proposed action is expected to have little or no impact on soils, housing, or population dynamics.

1.7 ENVIRONMENTAL COORDINATION

1.7.1 WATER QUALITY CERTIFICATION

The project shall be in compliance with State of Florida water quality Standards. A 373.406(6) Florida Statute (F.S.) dredging exemption verification has been obtained from the Florida Department of Environmental Protection. All state water quality standards will be met.

1.7.2 ENDANGERED SPECIES ACT- SECTION 7 COORDINATION

In accordance with Section 7 of the Endangered Species Act, the proposed work was coordinated with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS).

2 ALTERNATIVES

The alternatives section is perhaps the most important component of this EA. It describes the no-action alternative, the proposed action, and other reasonable alternatives that were evaluated. The beneficial and adverse environmental effects of the alternatives are presented in comparative form, providing a clear basis for choice to the decisionmaker and the public. A preferred alternative was selected based on the information and analysis presented in the sections on the Affected Environment and Probable Impacts.

2.1 DESCRIPTION OF ALTERNATIVES.

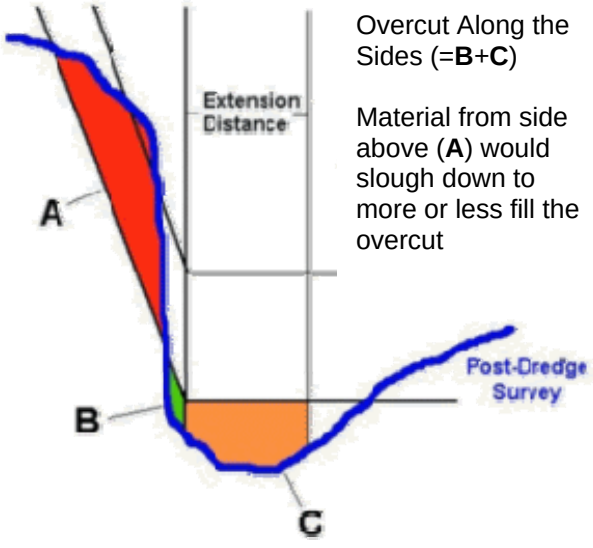
2.1.1 NO-ACTION ALTERNATIVE

The IWW would not be maintenance dredged. This would result in increased shoaling and unsafe navigation conditions for vessels.

2.1.2 DREDGING ALTERNATIVE

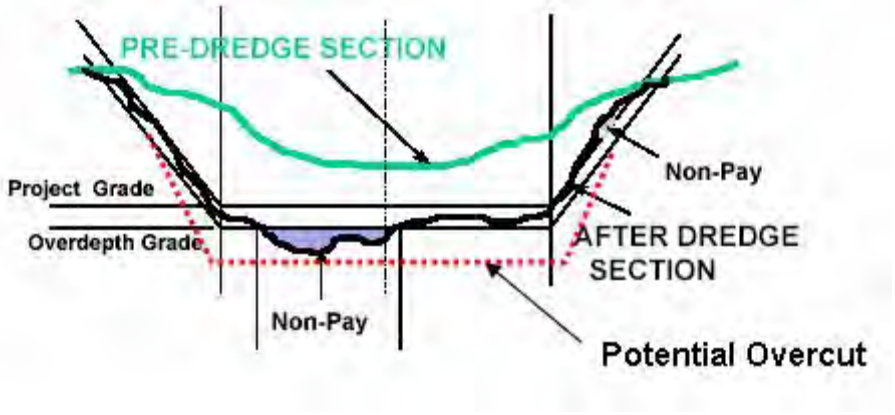
The proposed periodic maintenance dredging of the IWW would occur as planned (refer to Section 1.1 for more detail). The Corps does not normally specify the type of dredging equipment to be used. This is generally left to the dredging industry to offer the most appropriate and competitive equipment available at the time. Never-the-less, certain types of dredging equipment are normally considered more appropriate depending on the type of material, the depth of the channel, the depth of access to the disposal or placement site, the amount of material, the distance to the disposal or placement site, the wave-energy environment, etc. A more detailed description of types of dredging equipment and their characteristics can be found in Engineer Manual, EM 1110-2-5025, *Engineering and Design - Dredging and Dredged Material Disposal*. This Engineer Manual is available on the internet at http://www.usace.army.mil/publications/eng-manuals/em1110-2-5025/toc.htm.

The plans and specifications normally require dredging beyond the project depth or width. The purpose of the “required” additional dredging is to account for shoaling between dredging cycles (reduce the frequency of dredging required to maintain the project depth for navigation). In addition, the dredging contractor is allowed to go beyond the required depth. This “allowable” accounts for the inherent variability and inaccuracy of the dredging equipment (normally ±2 feet). In



Overcut Along the Sides (=**B**+**C**)

Material from side above (**A**) would slough down to more or less fill the overcut



addition, the dredge operator may practice over-cutting. An “over-cut” along the sides of the channel may be employed in anticipation of movement of material down the sides of the channel. Over-cut throughout the channel bottom may be the result of furrowing or pitting by the dredging equipment (the suction dredge’s cutterhead, the hopper dredge’s drag arms, or the clam-shell dredge’s bucket). In addition, some mixing and churning of material below the channel bottom may occur (especially with a large cutterhead). Generally, the larger the equipment, the greater the potential for over-cut and mixing of material below the “allowable” channel bottom. Some of this material may become mixed-in with the dredged material. If the characteristics of the material in the overcut and mixing profile differ from that above it, the character of the dredged material may be altered. The quantity and/or quality of material for disposal or placement may be substantially changed depending on the extent of over-depth and over-cut.

This segment of the IWW was dredged to the present project depth of -12 ft MLLW in 1957. There have been no maintenance dredging operations since then. Dredging of the IWW is typically performed with a hydraulic pipeline cutterhead suction dredge although a clamshell or small hopper dredge could also perform the work, albeit less efficiently.

Since dredging equipment does not typically result in a perfectly smooth and even channel bottom (see discussion above); a drag bar, chain, or other item may be drug along the channel bottom to smooth down high spots and fill in low spots. This finishing technique also reduces the need for additional dredging to remove any high spots that may have been missed by the dredging equipment. It may be more cost effective to use a drag bar or other leveling device.

2.1.3 DREDGED MATERIAL PLACEMENT OPTIONS

2.1.3.1 UPLAND PLACEMENT

Upland storage offers a number of significant advantages over the other available methods: (1) upland storage provides an efficient means of dredged material management without the excessive costs of transportation and material re-handling

involved with the use of ocean disposal; (2) provided suitable upland sites can be identified, upland storage avoids most wetland impact issues inherent in the use of open water disposal; and (3) unlike beach disposal, the use of upland sites does not depend upon the physical characteristics of the dredged material. The use of a limited number of centralized upland sites has additional economic, operational, and environmental advantages over the use of a greater number of smaller sites: (1) fewer, larger sites reduce the total acreage required and thereby reduce the total cost of site acquisition; (2) developing and constructing fewer, larger sites is more cost effective than developing and constructing a number of smaller sites; (3) the use of centralized sites allows for improved site security and requires the allocation of fewer operating personnel; and (4) the use of fewer, larger sites reduces the total impact to upland habitat and allows for improved effluent and storm water control, as well as the institution of more efficient and comprehensive monitoring procedures.

The use of fewer centralized sites as discussed above also facilitates the active management of these sites as permanent operating facilities. This represents a significant departure from the historic practice of more or less abandoning sites after limited use. Operating sites as permanent facilities allows for the implementation of a suite of management procedures and techniques with long-term operational and environmental benefits. Example management measures include improved detention area design; material handling and processing to increase dewatering efficiency (e.g., mechanical grading, trenching, storm water control); and the use of natural buffer areas and dike vegetation to improve their appearance. Most importantly, the permanency of the sites encourages exploring ways to remove and reuse the dewatered material. Alternatively, if no market for the material is found, it could be removed and stored in less ecologically sensitive upland areas further inland. Road access, existing or potential, is therefore essential. Sites managed as intermediate processing areas rather than one-time holding facilities will serve the needs of the IWW in perpetuity. This approach, in combination with effective site management measures, will establish the long-term material management capability required.

2.2 PREFERRED ALTERNATIVE

The preferred alternative is to perform the proposed dredging of the IWW in order to maintain the authorized depths. The upland placement alternative is considered environmentally acceptable.

2.3 ALTERNATIVES ELIMINATED FROM FURTHER EVALUATION

2.3.1 OCEAN DISPOSAL

Ocean disposal of material dredged from the IWW is not a realistic option for the Indian River County project area. Ocean disposal requires the transport of dredged material from the dredging site to an authorized offshore disposal area. In the case of Indian River County, this operational requirement poses a very costly and difficult task for the following reasons. First, the material must be loaded into hopper barges capable of transiting the relatively shallow depths of the IWW. This consideration places severe

limits on hopper capacity. Regulatory restrictions on hopper overflow during filling further limit hopper capacity. These barges must then proceed to Sebastian Inlet for passage to sea. Once reaching the inlet the material must then be transferred to deep draft seagoing barges for transport to the authorized disposal area. A review of offshore disposal areas currently authorized by the U.S. Environmental Protection Agency to receive dredged material identified an approved offshore placement site 32 miles southeast of Sebastian Inlet. Therefore, the costs associated with this type of operation and the likely increase in future regulatory restrictions on the use of ocean dumping, together make reliance on this method of material disposition inappropriate for the long-term maintenance of the Waterway.

2.3.2 OPEN WATER DISPOSAL

This particular method of material disposition was perhaps the most widely used approach prior to the evolution of today's environmental regulatory programs addressing wetlands protection. Discussions with representatives of the relevant regulatory agencies have confirmed that this approach carries unacceptable environmental impacts in terms of the degradation or destruction of wetlands. In addition, the intent of the FIND's dredged material management program is to provide a permanent infrastructure of material management facilities. The creation or expansion of open water islands represents a one-time opportunity for material placement and does not lend itself to active material management practices which require upland access for equipment and personnel. As a result, the use of open water disposal was not considered an acceptable dredged material management strategy for the IWW in Indian River County.

2.3.3 NEARSHORE PLACEMENT

Extensive areas of exposed hardbottom habitat occur in the nearshore off the beaches of Indian River County. Nearshore hardbottom reefs serve as settlement habitats for immigrating sub-adults of fish and invertebrates, or as intermediate nursery habitats for juveniles emigrating out of nearby inlets (Vare 1991). At least 86 taxa of fish have been identified around nearshore hardbottom habitats along southeast mainland Florida, including at least 34 species of juvenile reef fish which may utilize these habitats as nursery areas (Lindeman and Snyder 1999). Therefore due to the presence of and the need to avoid impacts to this important resource, nearshore placement was eliminated from further consideration.

2.3.4 BEACH PLACEMENT

The sediments in the portion of the IWW to be served by the IR-2 dredged material management facility are not suitable for beach placement because they contain significant amounts of fine, organic-rich materials (Taylor et al., 1997). Of the three sediment samples taken from the project channel and analyzed by Ellis and Associates Inc. in 1995, two were classified as silt and one as fine sand under the Unified Soil Classification (USC) system. The percentage of silt and clay-sized particles ranged between 19-87%. Pursuant to F.A.C. 62B-41.007, the FDEP "sand rule" subsection 62B-41.005(15), sandy sediment derived from the maintenance of coastal navigation

channels shall be deemed suitable for beach placement with up to 10% fine material passing the #230 sieve. Therefore, this alternative was eliminated from further consideration.

2.4 COMPARISON OF ALTERNATIVES

Table 1 lists alternatives considered and summarizes the major features and consequences of the proposed action and alternatives. See section 4.0 Environmental Effects for a more detailed discussion of impacts of alternatives.

2.5 MITIGATION

The Corps proposes to require the dredging contractor to check for seagrasses prior to each anchor drop or pipeline placement. Appropriate measures to avoid impacting seagrass shall be implemented. Therefore, impacts to seagrass are not anticipated and no mitigation is proposed.

Table 1: Summary of Direct and Indirect Impacts

ALTERNATIVE ENVIRONMENTAL FACTOR	No Action Status Quo	Dredging with Upland Placement in DMMA IR-2
SEA TURTLES	No effect.	May affect, but not likely to adversely affect.
WEST INIDIAN MANATEE	No effect.	May affect, but not likely to adversely affect, with implementation of protection measures.
SMALLTOOTH SAWFISH	No effect.	May affect, but not likely to adversely affect, with implementation of protection measures.
JOHNSON'S SEAGRASS	No effect.	No effect with implementation of avoidance measures.
WATER QUALITY	No effect.	Short-term localized increase in turbidity at dredge site.
ESSENTIAL FISH HABITAT	No effect.	Estuarine water column with unconsolidated sediment habitat would be impacted during dredging. Seagrass survey would be performed prior to dredging so that avoidance measures can be followed to prevent impacts to seagrass.
FISH AND WILDLIFE RESOURCES	No effect.	Wildlife protection measures would be implemented including monitoring for migratory birds and establishing buffer zones around active nests.
AIR QUALITY	No effect.	Minor and short-term impacts caused by dredging and construction equipment.
CULTURAL RESOURCES	No known historic properties present	No known historic Properties present.
RECREATION	Shoaling would result in moderate adverse impact to recreational boaters.	Moderate long-term benefit to recreational boaters. Short-term disruption of recreation within IWW during construction.
AESTHETICS	No effect.	Minor short-term adverse impact due to construction activities.
NOISE	No effect.	Minor and temporary adverse effect.

ALTERNATIVE ENVIRONMENTAL FACTOR	No Action Status Quo	Dredging with Upland Placement in DMMA IR-2
SOCIO ECONOMICS	Major long-term adverse impact to local, regional and statewide economies.	Major long-term benefit to local, regional and statewide economies.
NAVIGATION	Major long-term adverse impact to vessels, both private and commercial.	Major long-term benefit to vessels, both private and commercial.

3 AFFECTED ENVIRONMENT

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.

3.1 GENERAL ENVIRONMENTAL SETTING

3.1.1 AREA TO BE DREDGED

The IWW in the vicinity of Sebastian Inlet is located on the southeast coast of Florida (refer to Figure 1). This portion of the IWW serves commercial and recreational vessels. Access from the Atlantic Ocean to the IWW, which is located within the Indian River Lagoon (IRL), is provided via the Sebastian Inlet. The IRL is a shallow, tidal lagoon and is considered to be extremely biologically diverse (Swain 1995; Swain 1996). An estimated 4,300 species of plants and animals have been documented from the IRL according to the St. Johns River Water Management District (2000) making it the most diverse estuary in North America. Although much of the shoreline has been developed, portions remain in a natural state and are relatively undisturbed.

3.1.2 UPLAND PLACEMENT AREA

The IR-2 DMMA is located about 5.5 miles south of the Brevard/Indian River County line (about 1.6 miles north of Wabasso) on the west side of the IRL (refer to Figure 1). IR-2 was constructed on a 179-acre parcel that was formerly an abandoned citrus grove and mangrove impoundment. The IR-2 diked containment basin, perimeter ditch and access roads now cover approximately 60 acres of the abandoned citrus land. The remaining 119-acres of the site consist of the remaining abandoned citrus grove and fallow cropland and the mangrove impoundment. More information on IR-2 can be found in the final EA and FONSI referenced on page 3 above (Corps, 2006).

3.2 GEOLOGY

3.2.1 AREA TO BE DREDGED

Bottom substrates within the IWW channel are comprised of shoal deposits that have formed since the area was last dredged in 1957. Data characterizing channel sediments in the project area are documented in the Long-Range Plan (Taylor et al., 1997). Based on mean grain diameter, sediments from the three sampling locations within the project area were classified as either silt or fine sand under the USC system. The percentage of silt and clay-sized particles ranged from 19-87%.

3.2.2 UPLAND PLACEMENT SITE

DMMA IR-2 was constructed using existing sediments on the site which were EauGallie Fine Sand, Immokalee Fine Sand, and Riviera Fine Sand. These soils consist of deep or very deep, poorly or very poorly drained, slowly permeable soils in flats, sloughs and depressional areas. They formed in sandy and loamy marine sediments in Peninsula Florida (http://www2.ftw.nrcs.usda.gov/osd/dat/E/EAUGALLIE.html).

3.3 THREATENED AND ENDANGERED SPECIES

Threatened and Endangered species that may occur in the project area, and that may be affected by the proposed work, can be found in Table 2.

Table 2. Status of Listed Species that May Occur Within the Project Area.

Species	***State Listing****	***Federal Listing****
Green Sea Turtle	LE	LE
Loggerhead Sea Turtle	LT	LT
Leatherback Sea Turtle	LE	LE
Hawksbill Sea Turtle	LE	LE
Kemp's Ridley Sea Turtle	LE	LE
West Indian Manatee	LE	LE
Smalltooth Sawfish	LE	LE
Johnson's Seagrass	LT	LT

* LE=Endangered and LT=Threatened

3.3.1 SEA TURTLES

The IRL provides developmental habitat for immature loggerhead (*Caretta caretta*) and green sea turtles (*Chelonia mydas*) (Ehrhart *et al.* 1996). In addition, area beaches are known to support high density nesting populations of green, loggerhead, and leatherback (*Dermochelys coriacea*) sea turtles. Finally, although hawksbill (*Eretmochelys imbricata*) and Kemp's ridley (*Lepidochelys kempii*) sea turtles are known to occur in the vicinity of the project area, nesting has not been documented. The proposed work does not overlap any designated critical habitat for these species.

3.3.2 WEST INDIAN MANATEE

Manatees can be found in the inshore waters of the IRL where extensive seagrass beds provide essential foraging habitat and in the coastal waters of the Atlantic Ocean primarily during migration. The project lies within designated critical habitat for this species. Between 1974 and 2008 there have been 140 documented manatee mortalities in Indian River County. The probable cause of death for 27 (19%) of these mortalities was watercraft (http://www.floridamarine.org/manatees/search_individual.asp). The northern portion of the project channel runs through the boundaries of the Sebastian Inlet Important Manatee Area (IMA). IMAs are areas where increased densities of manatees occur due

to the proximity of warm water discharges, freshwater discharges, natural springs and other habitat features that are attractive to manatees.

3.3.3 SMALLTOOTH SAWFISH

The endangered smalltooth sawfish (*Pristis pectinata*) may occur in the vicinity of the project. Densities of this species in these waters may be as low as 0.001-0.099 fish/square km (Simpfendorfer and Wiley 2006). Of the three Indian River County sightings of this large shark-like ray reported to the Smalltooth Sawfish sightings database (http://www.mote.org/index.php?src=forms&id=Sawfish%20Encounter%20Report%20Form&PHPSESSID=688d54a53a6ceb91dada63ac798a0550) over the last ten years, one was within the IRL, one was within Sebastian Inlet, and one was in the Atlantic Ocean. The IRL sighting was located north of the project area and well east of the IWW channel in shallow water approximately 1 meter deep (see figure 2). The proposed work does not overlap any designated critical habitat for this species.

3.3.4 JOHNSON'S SEAGRASS

The project occurs within the geographic range of the threatened Johnson's seagrass (*Halophila johnsonii*). In addition, critical habitat for this species is designated for a portion of the IRL in the vicinity of Sebastian Inlet. These two sites are located approximately 3,750 feet east of the IWW channel adjacent to the inlet entrance channel. See figure 3 for the locations of these two critical habitat areas. The St. Johns River Water Management District (SJRWMD) has been studying the northern range of Johnsons' seagrass for the past 20+ years. In fact, one of their fixed permanent transects which is surveyed annually runs from Duck Point eastward. Survey data from summer 2012 and winter 2013 indicate that there was no seagrass present. Despite the past seagrass coverage for this area of the northern IRL (Figure 2), seagrasses have experienced a major die-off in the past few years. "From early spring through late fall of 2011, a massive bloom of phytoplankton and loss of seagrass occurred throughout most of the IRL system, extending from southern Mosquito Lagoon to just north of Ft. Pierce Inlet. This bloom and seagrass decline far exceeded any past events remembered or documented in terms of geographic scale, bloom intensity and duration, and rate and magnitude of seagrass loss." (SJRWMD 2012)

Figure 2. Project area seagrass coverage and smalltooth sawfish sitings.

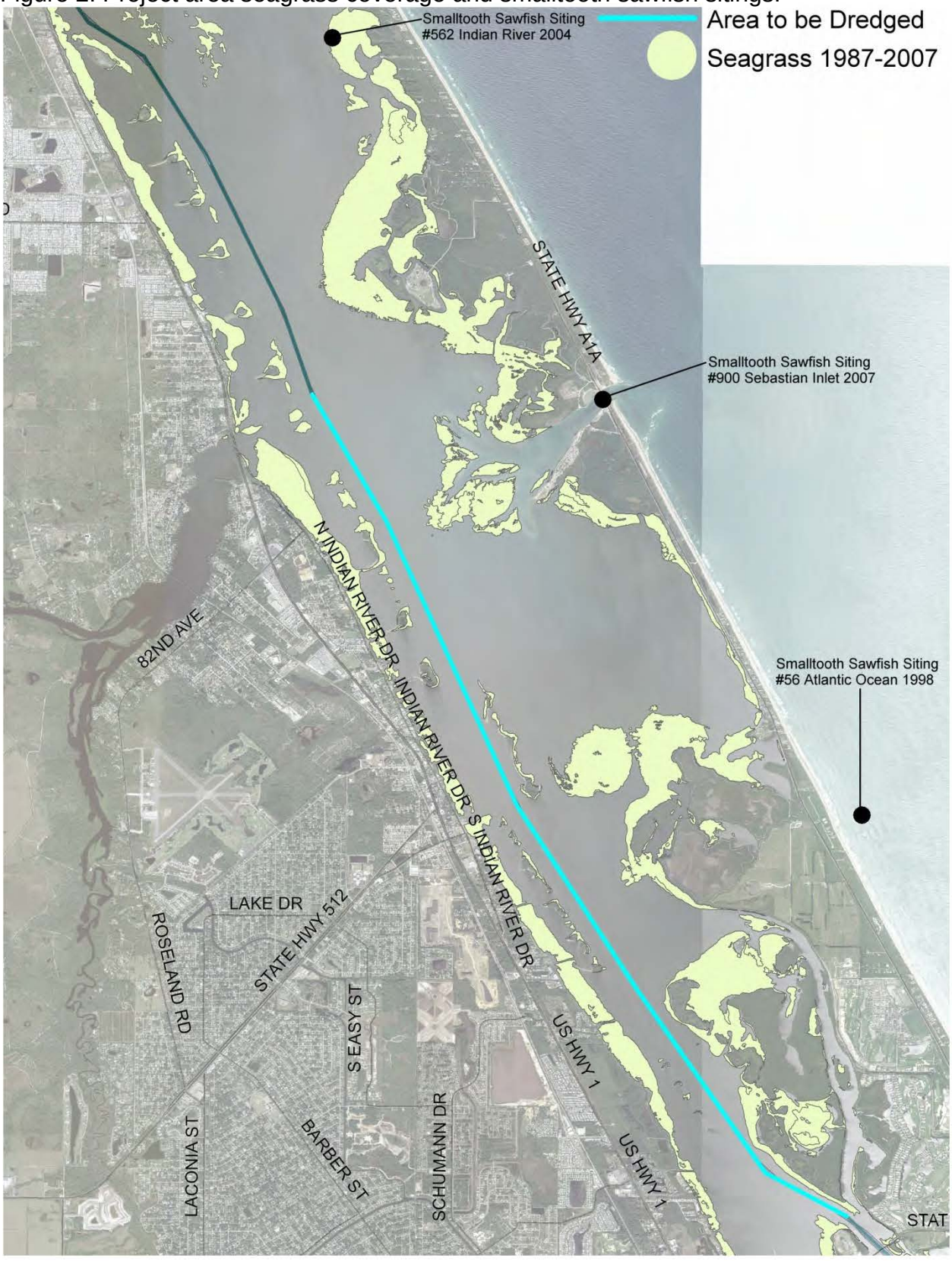


Figure 3. Critical Habitat for *H. Johnsonii* within the project area

3.4 WATER QUALITY

3.4.1 WATER USE CLASSIFICATION

Waters within the proposed dredging area have been designated by the State of Florida as Class II - Shellfish Propagation or Harvesting Generally coastal waters where commercial shellfish harvesting occurs. In addition, the project is located within the Indian River – Malabar to Vero Beach Aquatic Preserve which was established by the state of Florida in 1969. Additional information on this preserve, including maps, can be found at the following website: http://www.dep.state.fl.us/coastal/sites/indian-malabar/info.htm. Water quality within the northern portion of the project is influenced by freshwater inflows from the St. Sebastian River which include the C-54 canal. The C-54 canal is part of the Upper St. Johns River Basin project and was built to convey excess floodwaters from the St. Johns River marsh and the Fellsmere Water Control District to the Indian River via the St. Sebastian River (Steward and Van Arman, 1987). In addition, Sebastian inlet also influences project area water quality through saltwater inflow during flood tides and flushing action during ebb tides.

3.4.2 SEDIMENT ANALYSIS

Analysis was performed by Ellis & Associates, Inc. on three sediment samples taken from the project area by Taylor Engineering in 1995. The results indicated that shoaling material from this portion of the IWW contained between 19-87% silt-sized particles (passing a #200 sieve) and was classified as fine sand and silt under the USC system. Chemical analysis was completed on one of the samples by Savannah Laboratories & Environmental Services, Inc. in 1995. This sample contained metal enrichment ratios and concentrations below predicted natural ranges and below values considered to pose a threat to aquatic organisms. In addition, organochlorine pesticides, PAH, and PCB concentrations were below detectable limits. Additional information on this sediment analysis can be found in the Long-Range Plan.

3.5 ESSENTIAL FISH HABITAT

Pursuant to the Magnuson-Stevens Fishery Conservation and Management Act of 1996, waters and substrate within the project area have been identified as Essential Fish Habitat (EFH) by the South Atlantic Fishery Management Council (1998). EFH is defined as those waters and substrate necessary for fish to spawn, breed, feed, or grow to maturity. Estuarine/inshore EFH within the footprint of the project channel consists of estuarine water column with an unconsolidated substrate. There are also wide bands of seagrass and some oyster beds mapped along the eastern and western shorelines and other shallow water areas of the IRL. Species managed by the NMFS that may occur within the project channel can be found in Table 3, and possible prey species in Table 4.

Table 3. Federally Managed Species of Fish that May Occur within the Project Area.

Species	Life Stage	Substrate Preference*	
		Unconsolidated Sediment	Seagrass
Brown shrimp	A, J, L	A, J, L	J, L

Species	Life Stage	Substrate Preference*	
		Unconsolidated Sediment	Seagrass
Farfantepenaeus aztecus			
Pink shrimp *Farfantepenaeus duorarum*	A, J	A, J	J
White Shrimp *Litopenaeus setiferus*	A, J	A, J	J, L
Spiny Lobster *Panulirus argus*	A, J	A, J	A, J
Black seabass *Centropristis striata*	A, J	A, J	
Gag *Mycteroperca microlepis*	A, J	A, J	
Cobia *Rachycentron canadum*	J	J	
Mutton snapper *Lutjanus analis*	A, J	J	J
Gray snapper *Lutjanus griseus*	A, J, L	A, J, L	A, J, L
Lane snapper *Lutjanus synagris*	A, J	A, J	J
Yellowtail snapper *Lutjanus chrysurus*	A, J	J	J
White grunt *Haemulon plumieri*	A, J	A, J	A, J
Sheepshead *Archosargus probatocephalus*	A, J, L	A, J	J, L
Red drum *Sciaenops ocellatus*	A, J, L	A, J, L	J, L
Hogfish *Lachnolaimus maximus*	A, J	J	J
Spanish mackerel *Scomberomorus maculatus*	A, J	A, J	
Black drum *Pogonias cromis*	A, J	A, J	A, J
Southern flounder *Paralichthys lethostigma*	A, J	A, J	J

Table 4. Prey Species that May Occur within the Project Area.

Species	Life Stage	Substrate Preference*	
		Unconsolidated Sediment	Seagrass
Thinstripe hermit crab *Clibanarius vittatus*	A, J	A, J	
Horse conch *Pleuroploca gigantea*	A, J	A, J	A, J
Bay anchovy *Anchoa mitchilli*	A, J, L	A, J, L	L
Sheepshead minnow *Cyprinodon variegatus*	A, J, L	A, J, L	
Atlantic menhaden *Brevoortia tyrannus*	A, J, L	A	J, L
Bay scallop *Argopecten irradians*	A, J, L	A, J	A, J, L
Atlantic rangia *Rangia cuneata*	A, J, L	A, J, L	
Quahog	A, J	A, J	

Species	Life Stage	Substrate Preference*	
		Unconsolidated Sediment	Seagrass
Mercenaria mercenaria			
Grass shrimp *Palaemonetes pugio*	A, J		A, J
Striped mullet *Mugil cephalus*	A, J	A, J	A, J
Spot *Leiostomus xanthurus*	A, J	A	J
Atlantic croaker *Micropogonias undulatus*	A, J	A, J	
Silversides *Menidia menidia*	A, J, L	A, J, L	A, J, L
Code Goby *Gobiosoma robustum*	A, J, L	A, L	A, J
Silver Jenny *Eucinostomus gula*	A, J, L	A, J, L	J, L
American eel *Anguilla rostrata*	A, J, L	J, L	A, J, L

Source: South Atlantic Fishery Management Council 1998; Florida Museum of Natural History-Ichthyology website 2008.

*Substrate preference, unconsolidated sediment and seagrass habitats occur in or near the project area. A=adult; J=juvenile; L=larvae

3.6 FISH AND WILDLIFE RESOURCES

Marine life common to east-central Florida can be found within the project channel. The bottlenose dolphin is found throughout the IRL, with a resident population estimated to be between 200 and 800 individuals (http://www.sms.si.edu/irlspec/Tursio_trunca.htm). Sub-tidal oyster beds should not occur within the project channel due to depth and vessel traffic. However, oyster beds can be found within the shallower IRL waters adjacent to the channel. Other macro invertebrates commonly found in soft-bottom estuarine habitat within Florida include annelids, a variety of mollusks besides oysters, arthropods, sponges and polyps (Hoffman and Olsen 1982). Extensive seagrass beds consisting of seven species of seagrasses occur within the IRL and serve as both habitat and food source for marine animals. Figure 2 depicts seagrass beds drawn from a compilation of survey data between 1987 and 2007.

Designated as the first National Wildlife Refuge (NWR), Pelican Island NWR is located east of the IWW channel and south of Sebastian Inlet. It was at the urging of both the Florida Audubon Society and the American Ornithologist's Union, that President Theodore "Teddy" Roosevelt issued the executive Order on March 14, 1903, proclaiming Pelican Island be "reserved and set aside...as a preserve and breeding ground for native birds" (USFWS 1998). "Over thirty species of birds use Pelican Island as a rookery, roost, feeding ground, or loafing area. Sixteen different species of birds nest on Pelican Island..." http://www.fws.gov/pelicanisland/wildlife.html. In addition, some species of migratory birds, especially common passerines, are likely to nest on the IR-2 DMMA. Colonial nesting species, such as wading birds or terns, have been

observed there. Common species of mammals, amphibians, and reptiles known to occur in east-central Florida may be found at the disposal site as well.

3.7 AIR QUALITY

According to the Florida Department of Environmental Protection, Florida is one of only three states east of the Mississippi River to meet all national air quality standards.

3.8 HISTORIC PROPERTIES

The earliest widely accepted date of occupation by aboriginal inhabitants of Florida dates from around 12,000 years ago. This earliest cultural period, called the Paleo-Indian period, lasted until about 10,000 YBP (years before present). Sea level was lower and the continental shelves were exposed - an area almost twice the width of the current size of the state. During the Archaic period (ca. 10,000 YBP - ca. 2500 YBP), a wider range of resources was exploited and may have led to a more sedentary existence. Sea level rose to its present position. Known terrestrial archeological sites in Indian River County mostly date to the Late Archaic time period and are located along existing inland waterways and marshes. Presumably, Early Archaic sites (~9,000 YBP) are located in now drowned river valleys and positive relief features offshore since sea level rise around 10,000 years ago. Indian River County contains one of the first recorded underwater archeological sites from this time period (IR2).

The native cultures that developed out of the Late Archaic became more sedentary and populated the coastal barrier island-salt marsh lagoon system and interior lakes and streams. They produced shell mounds, ceramics and shell tools and subsisted on fish and reptiles available in the wetlands, marshes and oceans. Known as the Malabar period, the people from this time were the ancestors of the Ais, who inhabited the Indian River area when the Europeans arrived.

From the early Colonial period onward, numerous vessels sailed up and down the Atlantic Coast. The French, Spanish and British all vied for territory in the New World. There are over 15 recorded shipwrecks from the Early Spanish to World War II time periods off the Coast of Indian River County. Although Florida became a US territory in 1821 and was granted statehood in 1845, it was not until the late 1800s that several towns were established in Indian River County.

3.9 RECREATION RESOURCES

Recreational boat traffic regularly transits the IWW and Sebastian Inlet in order to access the IRL and the Atlantic Ocean. In addition to boating, other locally available recreational activities include fishing, beach and park sports, wildlife viewing and photography, and camping.

3.10 AESTHETIC RESOURCES

The project area consists of a Federal navigation channel and upland DMMA bordered by various types of natural areas and development. The IRL and Atlantic coastline in the vicinity of the project are considered to be picturesque waterways.

3.11 NOISE

Background noise from IWW vessel traffic and nearby roadways appears to be minimal.

3.12 SOCIO-ECONOMIC

Statewide, the IWW has been shown to increase property values by $38.4 billion and provide $18 billion in economic output which includes $6 billion in personal wages and 203,519 jobs (FIND 2008). Indian River County specific beneficial economic impacts are summarized below:

- $80.1 million in business volume
- $29.2 million in personal income
- 1,185 jobs
- $614 to $724 million in property values

(source: GEC 2001)

3.13 NAVIGATION

The Intracoastal Waterway in Florida annually transports over 1.7 million tons of commercial cargo and over 500,000 recreational vessels (FIND 2008). There were 11,740 vessels registered in Indian River County in 2007 (http://hsmv.state.fl.us/dmv/vslfacts.html).

4 ENVIRONMENTAL EFFECTS

This section is the scientific and analytic basis for the comparisons of the alternatives. See table 1 in section 2.0 Alternatives, for summary of impacts. The following includes anticipated changes to the existing environment including direct, indirect, and cumulative effects.

4.1 THREATENED AND ENDANGERED SPECIES

4.1.1 NO-ACTION ALTERNATIVE

There would be no effect on threatened and endangered species if the proposed maintenance dredging was not performed.

4.1.2 DREDGING ALTERNATIVE

In accordance with Section 7 of the Endangered Species Act, consultation with the USFWS and NMFS has been performed. The Corps has determined that the proposed dredge work with placement of the material into DMMA IR-2 may affect, but is not likely to adversely affect sea turtles, manatees, or the smalltooth sawfish and have no-effect on Johnson's seagrass. These determinations were based on the implementation of species specific protective measures from the South Atlantic Division Regional Biological Opinion (SARBO) issued by the NMFS and the type of dredging equipment typically used to maintain the IWW (cutterhead). These determinations were forwarded to the USFWS via letter dated 20 December 2013 and to the NMFS via letter dated 27 February 2014. The USFWS concurred with the determination for manatees on 12 February 2014 and the NMFS via email on 5 March 2014 and telephone 6 March 2014 for the sea turtle, smalltooth sawfish, and Johnson's seagrass.

4.1.2.1 Sea Turtles

Since it is likely that a hydraulic cutter suction pipeline dredge, would be used for this project, adverse impacts or "takings" of sea turtles or smalltooth sawfish within the proposed work area would not be anticipated. Pursuant to the SARBO issued by the NMFS, these types of dredges do not pose a risk to sea turtles like hopper dredges do. However, in order to minimize potential adverse impacts to sea turtles and smalltooth sawfish, the following measures would be implemented:

- The contractor would instruct all personnel associated with construction activities about the potential presence of sea turtles and smalltooth sawfish in the area and the need to avoid collisions with them.

- Project lighting would comply with lighting requirements set by the USFWS.

- All personnel would be advised that there are civil and criminal penalties for harming, harassing, or killing sea turtles and smalltooth sawfish, which are protected under the Endangered Species Act.

4.1.2.2 West Indian Manatee

Standard protective measures would be taken during dredging activities to ensure the safety of manatees. To make the contractor and his personnel aware of the potential presence of this species in the project area, their endangered status, and the need for precautionary measures, the contract specifications would include the following standard manatee protection clauses:

- The contractor would instruct all personnel associated with construction activities about the potential presence of manatees in the area and the need to avoid collisions with them.

- If siltation barriers are used, they shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.

- If a manatee were sighted within 100 yards of the project area, all appropriate precautions would be implemented by the contractor to ensure protection of the manatee. These precautions would include the operation of all moving equipment no closer than 50 feet of a manatee. If a manatee were closer than 50 feet to moving equipment or the project area, the equipment would be shut down and all construction activities would cease to ensure protection of the manatee. Construction activities would not resume until the manatee has departed the project area.

- All vessels associated with the project would operate at 'no wake' speeds at all times while in shallow waters or channels where the draft of the boat provides less than three feet clearance from the bottom. Boats used to transport personnel would be shallow draft vessels, preferably of the light-displacement category, where navigational safety permits. Vessels transporting personnel between the landing and any workboat would follow routes of deep water to the greatest possible extent. Shore crews would use upland road access if available.

- Mooring bumpers would be placed on all large vessels wherever and whenever there is a potential for manatees to be crushed between two moored vessels. The bumpers would provide a minimum stand-off distance of four feet.

- All personnel would be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, which are protected under the Endangered Species Act and the Marine Mammal Protection Act.

In addition, due to the presence of the Sebastian Inlet IMA within a portion of the dredge area, the USFWS is also requiring:

- The use of a clamshell dredge will be prohibited at night year round.

• Backhoe/excavator dredging activities will be permitted to take place 24 hours per day, except between November 15 and March 31, during which time these dredging activities will only be permitted during daylight hours.

4.1.2.3 Johnson's Seagrass

Although Johnson's seagrass has been documented to occur within the project vicinity, it has not been mapped within the channel or the pipeline route from the IWW to the DMMA. A survey of the pipeline route was conducted by Atkins on 20-21 September 2011. The results indicated "… extremely sparse, non-bed forming seagrasses in the nearshore environment…" (Deis, 2011). The discontinuous seagrass consisted of sparse, short shoots of *Halodule wrightii* (shoal grass) in a thin band approximately 20 to 30m offshore (see Figure 5). A subsequent field inspection conducted by DEP divers on 19 September 2013 found no seagrass was present in the pipeline corridor.

In addition, Dial Cordy and Associates (DC&A) conducted seagrass spot checks at 10 locations within the project channel in Indian River County (see Figure 4) on 19 November 2009 on behalf of the Corps. Diver depths ranged from 8.5 feet to 11.5 feet. Visibility was low (1-6 feet) at all locations visited. At 50% of the locations, drift macroalgae was documented covering the benthos. Silt and/or sand were the substrate cover recorded at all other locations. No seagrasses were found at any of the locations.

Finally, in order to identify and avoid seagrass during construction, the Corps shall require the contractor to check for seagrasses prior to each anchor drop or pipeline placement. Dredging impacts to Johnson's seagrass are not anticipated. Therefore the Corps has determined that the project would have no-effect on Johnson's seagrass.

4.1.3 MATERIAL PLACEMENT OPTION

As with the proposed dredging, the Corps also coordinated with the USFWS on material placement within DMMA IR-2. The Corps has determined that placement of dredged material into DMMA IR-2 would have no effect on Federally listed species. This determination was based on the implementation of protective measures for these species.

4.2 WATER QUALITY

4.2.1 NO-ACTION ALTERNATIVE

There would be no change in water quality if the proposed maintenance dredging was not performed.

4.2.2 DREDGING ALTERNATIVE

The primary anticipated change in water quality at the dredging site would be a temporary increase in turbidity. The project is located within the Indian River– Malabar to Vero Beach Aquatic Preserve, which is an Outstanding Florida Water, where turbidity levels during dredging or placement of dredged material are not to exceed 0 nephelometric turbidity units (NTUs) above background levels. Therefore, a variance

would generally be necessary in order to conduct dredging. Turbidity would be monitored according to state protocols during the proposed dredging work. If at any time the turbidity standard were exceeded, those activities causing the violation would cease. Although some of the shoal material sampled in the Long-Range Plan was classified as silt, water quality impacts from the re-suspension of chemicals electrostatically bound to the small sediment particles within the silty dredged material should not be an issue because the chemical constituents analysis did not indicate any levels of concern. A 373.406(6) F.S. dredging exemption verification was obtained from the Florida Department of Environmental Protection on 23 January 2014 (Appendix C).

4.2.3 MATERIAL PLACEMENT OPTION

As with the dredging activity, the primary change in water quality during placement of dredged material within DMMA IR-2 would be a temporary increase in turbidity at the site of the weir return water outfall. For this reason any discharges from the weirs at DMMA IR-2 would be monitored similar to the dredging activity.

4.3 ESSENTIAL FISH HABITAT

4.3.1 NO-ACTION ALTERNATIVE

There would be no impact to EFH if the proposed maintenance dredging was not performed.

4.3.2 DREDGING ALTERNATIVE

This section (4.3) along with Section 3.5 of this document constitutes our EFH Assessment in accordance with procedures between the Corps and NMFS as stated in a letter from NMFS dated May 3, 1999. The proposed maintenance dredging of the project channel would impact approximately 144 acres of previously dredged estuarine/inshore water column and unconsolidated substrate. This dredging is not anticipated to affect adjacent seagrass beds. However, in order to identify and avoid seagrass, the Corps shall require the contractor to check for seagrasses prior to each anchor drop or pipeline placement. However, as previously stated, it is the Corps' intention to avoid impacts to this resource. Species managed by the NMFS that may occur within the project area can be found in Table 3, and prey species in Table 4. The Corps has determined that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries along the east coast of Florida. This determination was based on the fact that the substrate of the project area is comprised of a naturally dynamic unconsolidated substrate, and measures shall be taken to protect any seagrass habitat. Turbidity would affect vision of marine life within the sediment plume as well as those marine organisms with gills, but these effects would be temporary as they would be limited to the actual dredging and placement operations. Routine maintenance dredging may suppress re-colonization of certain benthic organisms and therefore could impact other trophic levels within the food chain. However, it is important to note that the IWW is a man-made channel, maintenance events are anticipated to occur every 10 to 20 years, the actual channel width encompasses a fraction of the entire water body, and similar habitat occurs immediately

adjacent to the channel. This document was coordinated with the NMFS HCD on 29 March 2010. Subsequent email communications occurred on 7 and 9 April and 27 July 2010. No EFH recommendations were received from NMFS HCD and coordination is complete.

Figure 4. Seagrass Spot Check Locations.

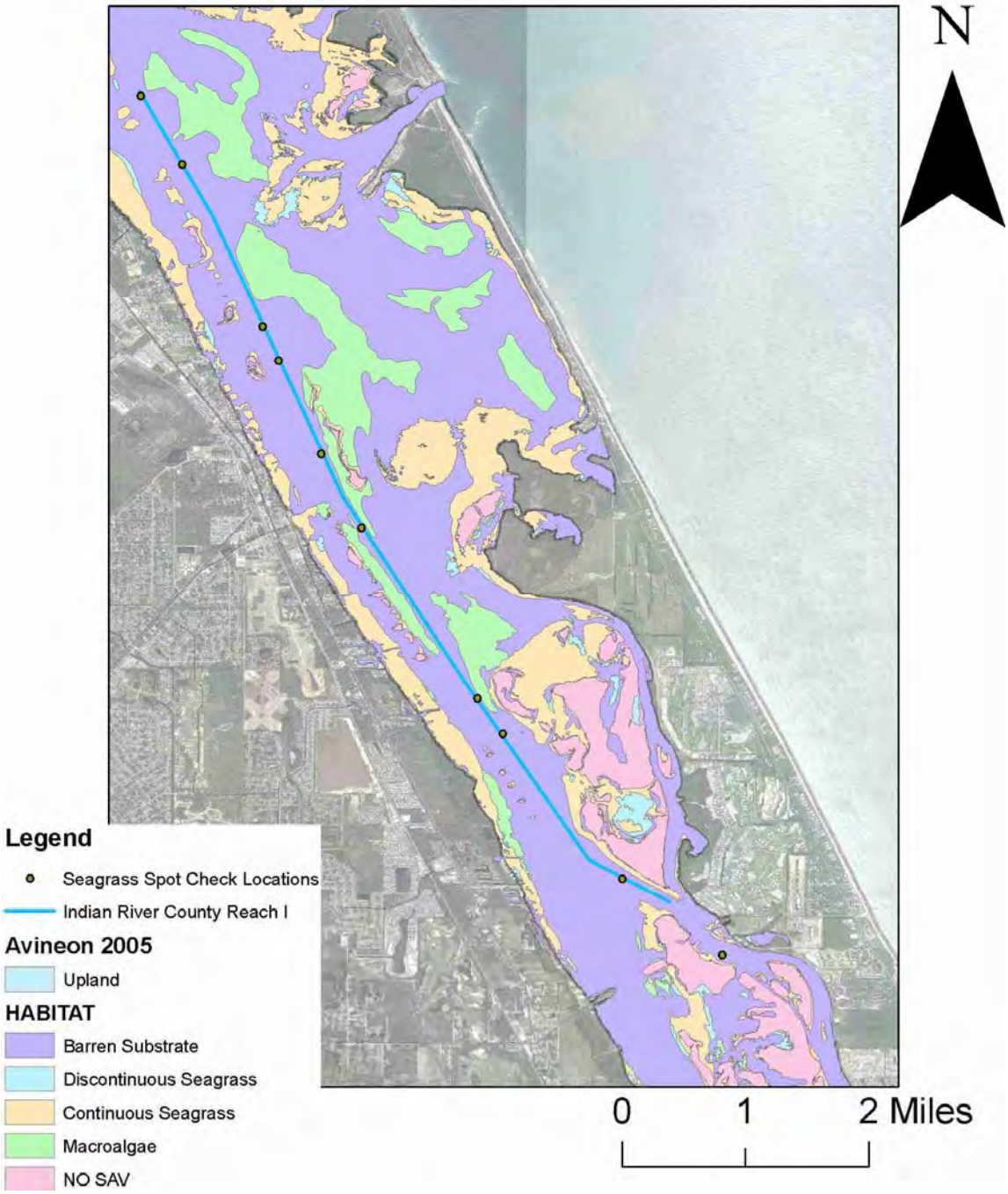
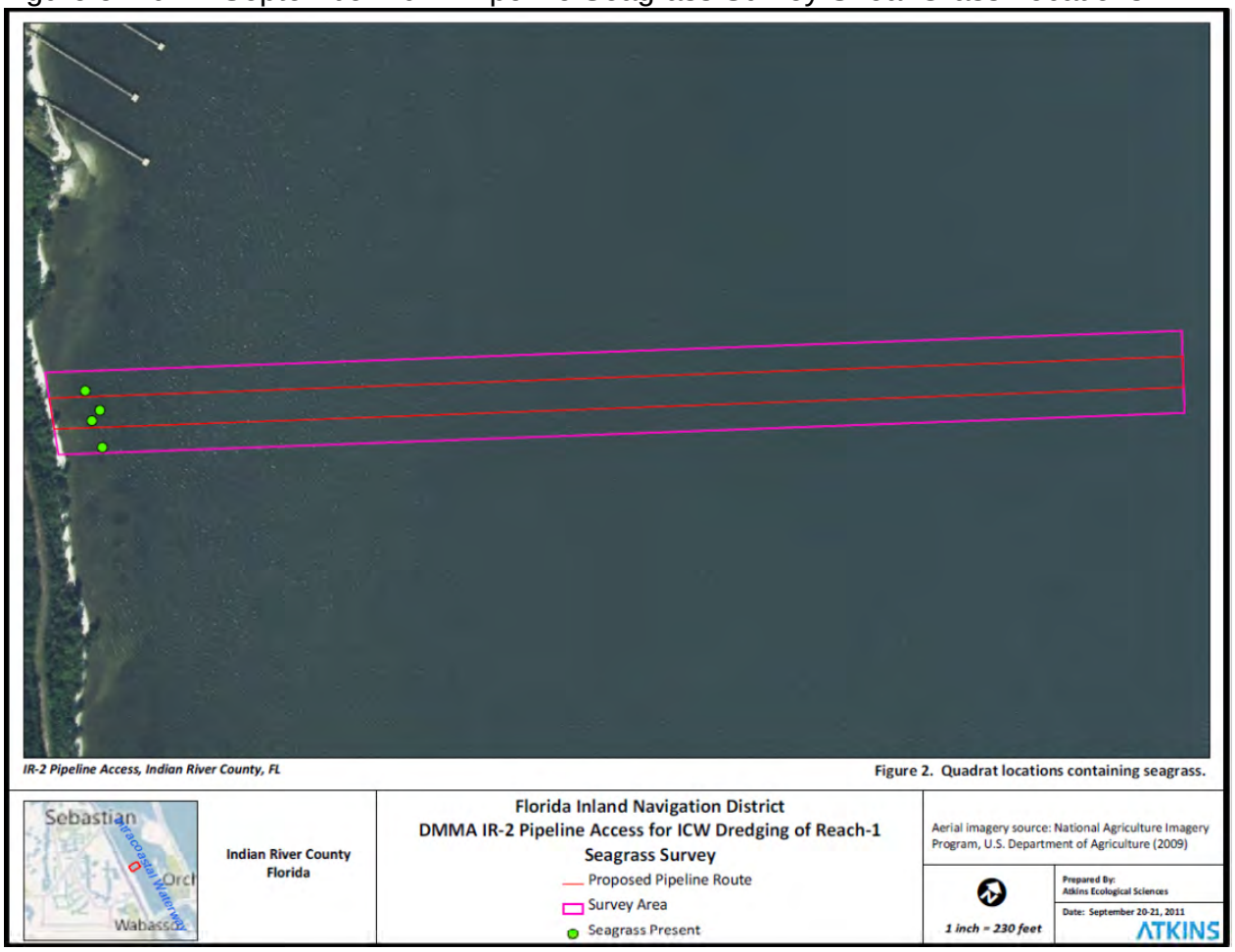


Figure 5. 20-21 September 2011 Pipeline Seagrass Survey Shoal Grass Locations



4.4 FISH AND WILDLIFE RESOURCES

4.4.1 NO-ACTION ALTERNATIVE

There would be no impact to fish and wildlife resources if the proposed maintenance dredging was not performed.

4.4.2 DREDGING ALTERNATIVE

As previously stated, dredging the project channel would result in impacts to benthos. The bottom of the channel would normally be re-colonized with organisms such as annelids and arthropods from adjacent similar habitats. In addition, since the channel is anticipated to be dredged every 10-20 years, benthic organisms should fully recover. Sub-tidal oyster beds do not occur within the project footprint. The western boundary of Pelican Island NWR lies immediately east of the IWW channel. While it is unlikely that the dredging activity would negatively impact the refuge, the Corps has coordinated this action with the USFWS during the public notice process. However, no comments were received from USFWS on the matter.

4.4.3 MATERIAL PLACEMENT OPTION

The Corps would implement its migratory bird protection plan if work is performed at the upland disposal site during the nesting season, April 1 through August 31. The plan would include monitoring the site during the nesting season. If nests were found, then a buffer zone of at least 200 feet would be placed around each nest. It is anticipated that the containment basin within DMMA IR-2 will attract foraging wading birds and nesting shorebirds and become useful habitat for these species between dredging events. No adverse impacts to migratory birds are anticipated with the migratory bird protection plan in effect. Other types of wildlife that utilize the site would be temporarily displaced during construction.

4.5 AIR QUALITY

4.5.1 NO-ACTION ALTERNATIVE

There would be no impact to air quality if the proposed maintenance dredging was not performed.

4.5.2 DREDGING ALTERNATIVE

Dredging equipment would emit exhaust fumes, but it is anticipated that this would be a temporary and minor degradation of local air quality.

4.5.3 MATERIAL PLACEMENT OPTION

Construction equipment at the upland disposal site would emit exhaust fumes and could generate soil billows. The contract specifications would require the contractor to minimize pollution of air resources such as controlling particulates, i.e. dust, or excess machinery emissions.

4.6 HISTORIC PROPERTIES

A submerged cultural resources survey incorporating the use of a magnetometer, sidescan sonar and subbottom profiler was conducted 2010 for the entire IWW in Indian River County, Florida. The resulting report, "*Historic Assessment, Remote Sensing Survey and Diver Identification of Five Potentially Significant Magnetic and Six Geomorphic Targets of the Intracoastal Waterway, Indian River County, Florida,"* recommended a total of 11 anomalies (1 magnetic, 4 sidescan and 6 subbottom) for avoidance or further investigation (PCI, 2010). Subsequent diver identification of the magnetic and sidescan targets determined them to be modern watercraft and culturally non-significant.

Of the subbottom anomalies, all except one subbottom feature was negative for cultural remains. Feature 109 was located in the channel adjacent to a recorded archeological shell midden site (IR843 Barker's Nose) and the deposit consisted of oyster shell and columella fragments. Due to the lack of temporal and cultural affiliation and redeposition from previous dredging events, this deposit lacks integrity and the Corps has determined that it is not eligible for listing on the National Register of Historic Places (NRHP).

An existing and previously constructed DMMA is being used for dredged material placement. Prior consultation (DHR Project file number 2002-02266) for construction of IR-2 determined that there would be no effect on historic properties.

Coordination with the SHPO and the appropriate federally recognized Native American tribes for this project was initiated 24 November 2010, and is ongoing.

4.7 RECREATION RESOURCES

4.7.1 NO-ACTION ALTERNATIVE

There would be a moderate adverse impact to recreational boating if the proposed maintenance dredging was not performed.

4.7.2 DREDGING ALTERNATIVE

Maintenance dredging of the project channel would provide a moderate long-term benefit to recreational boating. Recreational traffic within the IWW channel could be temporarily disrupted due to construction activities.

4.7.3 MATERIAL PLACEMENT OPTION

The upland disposal site IR-2 is not open to the public, and therefore the use of that site would not impact recreational resources.

4.8 AESTHETIC RESOURCES

4.8.1 NO-ACTION ALTERNATIVE

There would be no impact to aesthetic resources if the proposed maintenance dredging was not performed.

4.8.2 DREDGING ALTERNATIVE

Construction activities within the IWW channel would temporarily impact the aesthetics of the area.

4.8.3 MATERIAL PLACEMENT OPTION

The upland disposal site IR-2 is not open to the public. The vegetated buffer should shield the construction activity such that it would not adversely impact aesthetic resources of adjacent areas.

4.9 NOISE

4.9.1 NO-ACTION ALTERNATIVE

There would be no increased levels of noise if the proposed maintenance dredging was not performed.

4.9.2 DREDGING ALTERNATIVE

Construction activity would result in a minor short term increase over the existing background level.

4.9.3 MATERIAL PLACEMENT OPTION

Although DMMA IR-2 is surrounded by a naturally vegetated buffer, it is also adjacent to residential developments. The noise created by construction equipment could have a short term negative impact on the surrounding area. However, this impact is anticipated to be minor due to the existing noise created by vehicles traveling along US 1 which lies between the DMMA and the adjacent developments.

4.10 SOCIO-ECONOMIC

4.10.1 NO-ACTION ALTERNATIVE

There would be a long-term adverse impact to commercial shipping and other marine related business if the IWW channel was not maintained. The estimated adverse impacts to Indian River County are summarized below:

- Decrease of $27.4 million in business volume
- Decrease of $9.9 million in personal income
- Decrease of 396 jobs
- Decrease of $290 million in property values

(source: GEC 2001)

4.10.2 DREDGING ALTERNATIVE

Commercial shipping and other marine related business would benefit if the proposed work was performed. There were 11,740 vessels registered in Indian River County in 2007 (http://hsmv.state.fl.us/dmv/vslfacts.html).

4.10.3 MATERIAL PLACEMENT OPTION

There would be no impact to the local, regional and statewide economies with the use of IR-2.

4.11 NAVIGATION

4.11.1 NO-ACTION ALTERNATIVE

If the authorized depth of the project channel was not maintained, then shoaling would eventually make the IWW un-navigable for vessel traffic including commercial ships and unsafe for shallow-draft vessels.

4.11.2 DREDGING ALTERNATIVE

Performing the proposed work would result in safer navigation conditions. Vessel traffic within the IWW channel could be temporarily disrupted due to construction activities.

4.11.3 MATERIAL PLACEMENT OPTION

The use of IR-2 would have minimal impact on navigation. However, if a hydraulic pipeline dredge is used, temporary impacts to vessel traffic within the IWW could occur due to the presence of the floating and submerged pipeline.

4.12 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 regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Table 5 summarizes the impact of such cumulative actions by identifying the past, present, and reasonably foreseeable future condition of the various resources which are directly or indirectly impacted by the proposed action and its alternatives. The table also illustrates the with-project and without-project condition (the difference being the incremental impact of the project). Also illustrated is the future condition with any reasonable alternatives (or range of alternatives).

TABLE 5: SUMMARY OF CUMULATIVE IMPACTS (NOTE: The IWW was completely man made. Dredging of the IWW to it's current depths was completed by 1957. Therefore, the timeline for this cumulative impacts analysis is from 1957 to the present, and is limited in space to the project area.)

	Past (historical project impacts)	Present (current project impacts)	Future without project	Future with Proposed Dredging and upland disposal
Sea turtles	Construction of Sebastian Inlet and Jetties disrupted sand transfer affecting nesting areas. Inlet created access point to IRL habitat.	Use of clamshell or cutterhead results in no mortalities.	No effect.	Minimal effect with use of clamshell or cutterhead dredge.
Manatees	Dredging of the IWW increased vessel traffic.	Minimal effect with use of standard protection measures.	Channel depths would decrease.	Minimal effect with use of standard protection measures.
Smalltooth sawfish	Mortality from commercial fishing by-catch.	Minimal effect.	Minimal effect.	Minimal effect.
Johnson's seagrass	Historic impact unknown.	No effect occurring with avoidance measures.	No effect.	No effect occurring with seagrass avoidance measures.
Water quality	Temporary increase in turbidity with past dredging events. Long-term alteration of the historic water quality conditions from construction of Sebastian inlet.	Pollution prevention measures have resulted in Class II designation. Temporary increase in turbidity with dredging.	Pollution prevention measures should continue. Decreased depths could lead to chronic turbidity from prop dredging.	Temporary increase in turbidity with dredging.
Essential Fish Habitat	Inlet and channels increased saltwater flow. No substantial effect on Federally managed fish species	No substantial effect on Federally managed fish species with avoidance of seagrass.	No effect.	No substantial effect on Federally managed fish species with avoidance of seagrass.
Fish and Wildlife Resources	Loss of terrestrial habitat with construction of inlet and upland disposal site.	Minimal impact on migratory birds with protective measures. Other wildlife temporarily displaced when upland site is used.	No effect.	Maintenance dredging would impact benthic organisms. Minimal impact on migratory birds with protective measures. Other wildlife temporarily displaced when upland site is used.

	Past (historical project impacts)	Present (current project impacts)	Future without project	Future with Proposed Dredging and upland disposal
Air Quality	Local emissions increased with creation of inlet and navigation channels. Minor emissions from dredging equipment.	Minor emissions from dredging equipment. In attainment with air quality standards.	No effect.	Minor emissions from dredging equipment. Expected to be in attainment.
Cultural Resources	No Historic Properties affected.	No Historic Properties affected.	No Historic Properties affected.	No Historic Properties affected.
Recreation Resources	Construction of inlet and navigation channels created recreational opportunities (boating).	Dredging beneficial to recreational boating. Equipment disrupts boat traffic.	Impact to recreational boating from channel shoaling.	Dredging beneficial to recreational boating. Equipment could disrupt boat traffic.
Aesthetic Resources	Construction of inlet affected local aesthetic resources.	Equipment temporarily affects aesthetic resources.	No effect.	Equipment would temporarily affect aesthetic resources.
Noise	Construction of inlet and navigation channels minimally increased local noise levels.	Equipment noise is minimal.	No effect.	Equipment noise would be minimal.
Socio-Economics	Construction of inlet and navigation channels created a significant positive economic stimulus.	IWW continues to provide an economic stimulus.	There would be a significant adverse economic impact if the proposed work was not performed.	There would be a significant positive economic impact if the proposed work was performed.
Navigation	Construction of inlet and channels improved navigation along the east-central coast of Florida.	Continued maintenance dredging of the IWW provides safe navigation.	There would be a significant adverse impact to navigation if the proposed work was not performed.	There would be a significant beneficial impact to navigation if the proposed work was performed.

4.13 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

4.13.1 IRREVERSIBLE

An irreversible commitment of resources is one in which the ability to use and/or enjoy the resource is lost forever. Other than the use of fuel, equipment and supplies, there would be no irreversible commitment of resources.

4.13.2 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. Dredging would temporarily disrupt navigation and recreational activities.

4.14 UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

The dredging of the project channel would adversely impact benthic organisms. Use of the upland disposal site could temporarily displace wildlife.

4.15 LOCAL SHORT-TERM USES AND MAINTENANCE/ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed maintenance work is typically of short duration. Adversely affected benthos would be expected to recover in less than a year, possibly longer. Most fish species and other motile organisms like crabs should be able to avoid the dredging equipment. Since the project area is limited in size, the long-term productivity of fish and other motile species should not be significantly affected. Placement of dredged material within the upland disposal site is also typically of short duration but could adversely impact wildlife. As this site is only periodically used, the wildlife would re-colonize the interior of the property and habituate the site between dredging events.

4.16 INDIRECT EFFECTS

Maintaining the authorized depth of the project channel would benefit the shipping industry and local and statewide economies. This may contribute to increased development in adjacent areas.

4.17 COMPATIBILITY WITH FEDERAL, STATE, AND LOCAL OBJECTIVES

This project has wide support and is compatible with federal, state, and local objectives.

4.18 CONFLICTS AND CONTROVERSY

Dredging of the IWW would be done in a manner that would avoid impacts to seagrass. Surveys would be performed before dredging in order to determine areas to avoid. Dredging in the vicinity of the Indian River – Malabar to Vero Beach Aquatic Preserve and Pelican Island NWR would be performed in compliance with the State water quality standards.

4.19 UNCERTAIN, UNIQUE, OR UNKNOWN RISKS

There are no uncertain, unique or unknown risks associated with the proposed work.

4.20 PRECEDENT AND PRINCIPLE FOR FUTURE ACTIONS

As this project involves maintenance dredging, there would be no precedent and or principle for future actions established.

4.21 ENVIRONMENTAL COMMITMENTS

The U.S. Army Corps of Engineers and contractors commit to avoiding, minimizing or mitigating for adverse effects during construction activities by including the following commitments in the contract specifications:

1. A clamshell or cutterhead dredge would most likely be used to perform the proposed work; therefore, adverse impacts to sea turtles would not be anticipated. Other sea turtle protective measures, such as informing contract personnel of the presence of sea turtles in the area and the need to avoid collisions with them as well as equipment lighting requirements shall also be implemented.

2. Standard protective measures for manatees shall be required.

3. The District's migratory bird protection policy shall be implemented.

4. The work shall be performed in compliance with state water quality statutes.

5. A pre-construction seagrass survey shall be performed to identify areas outside the Federal channel to avoid.

6. Air emissions such as vehicular exhaust and dust shall be controlled.

7. The contracting officer would notify the contractor in writing of any observed noncompliance with federal, state, or local laws or regulations, permits and other elements of the contractor's Environmental Protection Plan. The contractor would, after receipt of such notice, inform the contracting officer of proposed corrective action and take such action as may be approved. If the contractor fails to comply promptly, the contracting officer would issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions would be granted or costs or damages allowed to the contractor for any such suspension.

8. The contractor would train his personnel in all phases of environmental protection. The training would include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities to insure adequate and continuous environmental pollution control. Quality control and supervisory personnel would be thoroughly trained in the proper use of monitoring devices and abatement equipment, and would be thoroughly knowledgeable

of federal, state, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the contractor.

9. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract would be protected during the entire period of this contract. The contractor would confine his activities to areas defined by the drawings and specifications.

10. As stated in the standard contract specifications, the disposal of hazardous or solid wastes would be in compliance with federal, state, and local laws. A spill prevention plan would also be required.

4.22 COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS

4.22.1 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

Environmental information on the project was compiled and an Environmental Assessment was prepared and noticed on 8 March 2010. The project is in compliance with the National Environmental Policy Act.

4.22.2 ENDANGERED SPECIES ACT OF 1973

Consultation was completed with the NMFS and the USFWS. The terms and conditions of the South Atlantic Regional Biological Opinion issued by the NMFS would be followed during dredging. In addition, the standard manatee, sea turtle and smalltooth sawfish construction conditions would be followed during dredging. This project has been fully coordinated under the Endangered Species Act and therefore, is in full compliance with the act.

4.22.3 FISH AND WILDLIFE COORDINATION ACT OF 1958

This project has been coordinated with the USFWS. A Coordination Act Report (CAR) is not required for the proposed work. This project is in full compliance with the act.

4.22.4 NATIONAL HISTORIC PRESERVATION ACT OF 1966 (INTER ALIA)

(PL 89-665, the Archeology and Historic Preservation Act (PL 93-291), and executive order 11593)
Consultation with the Florida State Historic Preservation Officer (SHPO) was initiated in November, 2010, and is ongoing in accordance with the National Historic Preservation Act of 1966, as amended, and as part of the requirements and consultation processes contained within the NHPA implementing regulations of 36 CFR 800, this project is also in compliance, through ongoing consultation, with the Archeological Resources Protection Act (96-95), the Abandoned Shipwreck Act of 1987 (PL 100-298; 43 U.S.C. 2101-2106); American Indian Religious Freedom Act (PL 95-341), Executive Orders (E.O) 11593, 13007, & 13175 and the Presidential Memo of 1994 on Government to Government Relations. Consultation is ongoing with the SHPO and appropriate federally recognized tribes.

4.22.5 CLEAN WATER ACT OF 1972

The project is in compliance with this act. A 373.406(6) F.S. dredging exemption verification has been obtained from the Florida Department of Environmental Protection. All state water quality standards would be met. A public notice has been issued in a manner which satisfies the requirements of Section 404 of the Clean Water Act.

4.22.6 CLEAN AIR ACT OF 1972

Vehicular emission and airborne dust particulates resulting from construction activities shall be controlled. This project has been coordinated with U.S. Environmental Protection Agency (EPA) and is in compliance with Section 309 of the act.

4.22.7 COASTAL ZONE MANAGEMENT ACT OF 1972

A federal consistency determination in accordance with 15 CFR 930 Subpart C is included in this report as Appendix A. State consistency review was performed during the coordination of the draft EA to ensure that the project is consistent with the Florida Coastal Management Program. The State concurred with the Corps consistency determination via letter dated 26 April 2010.

4.22.8 FARMLAND PROTECTION POLICY ACT OF 1981

Coordination with the Natural Resources Conservation Service (NRCS) was completed on September 19, 2003 for the IR-2 DMMA. In addition, no prime or unique farmland would be impacted by the IWW dredging. Therefore, the work is in compliance with this act.

4.22.9 WILD AND SCENIC RIVER ACT OF 1968

No designated Wild and Scenic river reaches would be affected by project related activities. This act is not applicable.

4.22.10 MARINE MAMMAL PROTECTION ACT OF 1972

Protective measures for marine mammals such as manatees and dolphins shall be implemented. This project has been coordinated with the USFWS and NMFS. The work is in full compliance with the act.

4.22.11 ESTUARY PROTECTION ACT OF 1968

The IRL is considered the most biologically diverse estuary in North America. The protective measures described in section 4 would insure avoidance and minimization of impacts to this estuary from the proposed dredging. This project is in compliance with this act.

4.22.12 FEDERAL WATER PROJECT RECREATION ACT

Although the IWW provides recreational benefits, the principles of the Federal Water Project Recreation Act, (Public Law 89-72) as amended, are not applicable to this project which is Operations and Maintenance of an existing Federal navigation channel.

4.22.13 SUBMERGED LANDS ACT OF 1953

The project would occur on submerged lands of the state of Florida. The project has been coordinated with the state and is in compliance with the act.

4.22.14 COASTAL BARRIER RESOURCES ACT AND COASTAL BARRIER IMPROVEMENT ACT OF 1990

The project lies adjacent to CBRA unit P-10. Maintenance dredging of the IWW is consistent with provisions of the CBRA which excepts "maintenance of existing channel improvements... and including the disposal of dredge materials related to such improvements". CBRA has no requirement to dispose of the material within the same CBRA Unit. CBRA does not otherwise regulate how the maintenance material may be used. This CBRA exemption was verified by Service letter dated 25 September 2003.

4.22.15 RIVERS AND HARBORS ACT OF 1899

The proposed work could temporarily obstruct navigable waters of the United States but would ultimately improve navigability of these waters. The proposed action was subject to the public notice, possible public hearing, and other evaluations normally conducted for activities subject to the act. The project is in full compliance.

4.22.16 ANADROMOUS FISH CONSERVATION ACT

Anadromous fish species would not be affected. The project has been coordinated with the NMFS and is in compliance with the act.

4.22.17 MIGRATORY BIRD TREATY ACT AND MIGRATORY BIRD CONSERVATION ACT

Measures shall be taken to protect migratory birds, i.e. avoiding nesting sites. The project shall be in compliance with these acts.

4.22.18 MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT

The term "dumping" as defined in the Act (3[33 U.S.C. 1402](f)) does not apply to the placement of material for a purpose other than disposal (i.e. placement of rock material as an artificial reef or the construction of artificial reefs as mitigation). Therefore, the Marine Protection, Research and Sanctuaries Act does not apply to this project.

4.22.19 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

The Corps has determined that the project would not have a substantial adverse impact on EFH or federally managed fish species occurring along the east-central coast of Florida. The proposed work has been fully coordinated with the NMFS. The project is in full compliance with the act.

4.22.20 E.O. 11990, PROTECTION OF WETLANDS

No wetlands would be affected by project activities. This project is in compliance with the goals of this Executive Order.

4.22.21 E.O. 11988, FLOOD PLAIN MANAGEMENT

This project would have no adverse impacts to flood plain management.

4.22.22 E.O. 12898, ENVIRONMENTAL JUSTICE

The proposed action would not result in adverse human health or substantial environmental effects. The work would not impact "subsistence consumption of fish and wildlife".

4.22.23 E.O. 13089, CORAL REEF PROTECTION

This project would not impact those species, habitats, and other natural resources associated with coral reefs.

4.22.24 E.O. 13112, INVASIVE SPECIES

This project would not introduce any invasive species. Invasive species of plants such as Brazilian pepper are well established at the upland disposal site.

5 LIST OF PREPARERS

5.1 PREPARERS

Preparer	Discipline	Role
Paul DeMarco, U.S. Army Corps of Engineers	Biologist	Principal Author
Wendy Weaver, U.S. Army Corps of Engineers	Archaeologist	Cultural Resources
Geoffrey Klug, U.S. Army Corps of Engineers	Environmental Engineer	Water Quality

5.2 REVIEWERS

This Environmental Assessment has been reviewed by the supervisory chain of the Environmental Branch and Planning Division, as well as Project Management and the Office of Counsel of the US Army Corps of Engineers, Jacksonville District.

6 PUBLIC INVOLVEMENT

6.1 SCOPING AND DRAFT EA

A Public Notice was issued for this action on 8 March 2010. The draft EA and Finding of No Significant Impact (FONSI) were made available to the public.

6.2 AGENCY COORDINATION

Coordination was conducted with appropriate agencies and described in this report. Agency coordination letters have been placed in Appendix B.

6.3 LIST OF RECIPIENTS

Per the Public Notice, copies of the draft EA were made available to appropriate stakeholders upon request. A list of stakeholders receiving notification can be found within the Public Notice.

6.4 COMMENTS RECEIVED AND RESPONSE

The following comments were received in response to the public notice.

The FWC notes that the proposed Intracoastal Waterway channel dredging would take place within the known range of Johnson's seagrass *(Halophila johnsonii),* which will require that proposed mitigation include impacts outside of the federal channel. The draft EA states that protective measures for sea turtles, manatees, smalltooth sawfish and migratory birds will be implemented during all dredging activities. Since the Sebastian inlet area and the areas proposed to be dredged are highly used by manatees, FWC recommends that experienced personnel be designated as responsible for observing for manatees and sea turtles during *all* dredging operations, including the transport of dredged material. ln addition, Staff recommends that proposed mitigation plans be developed during the permitting process in the event seagrass is accidentally impacted during dredging operations.

- As discussed in section 4.1.2.3 above, no impacts to Johnson's seagrass are anticipated. The Corps determined that the dredging would have no effect on the species. Protection measures would be included within the contract specifications to avoid any impacts to seagrass. Consultation with the USFWS has been completed and the protection measures required per the ESA are discussed in section 4.1.2.2 above. State permitting has been completed and no mitigation is required.

The DEP Central District Office in Orlando notes that the Corps has submitted an application to the DEP for an Environmental Resource Permit (ERP) Exemption to maintenance dredge a portion of the IWW that appears to include the draft EA project area. DEP staff has provided a number of comments and requests additional information to complete the ERP application currently under review. Please be advised that a permit will be required for the proposed pipeline used to pump dredged material

to the disposal site. The DEP also notes that a portion of the project appears to lie within the Indian River-Malabar to Vero Beach Aquatic Preserve, designated Outstanding Florida Waters (OFW) under Rule 62-302.700(9), *Florida Administrative Code* (F.A.C.). The project will, therefore, require a variance to Rule 62-302.700(1), *F.A.C.,* which states that no degradation of water quality, other than that allowed in Sections 62-4.242(2)(3), *F.A.C.,* is permitted in OFWs.

- As discussed in section 4.2.2 above, the activity was deemed exempt in DEP file number 31-0273920-007 dated 23 January 2014. Per 62-302.700 F.A.C. and 62-4.242(2)(e) F.A.C., any activity that is exempted from permit programs administered by the department is not subject to the anti-degradation requirements of rule 62-4.242. Therefore a variance is not required. Since the coordination of the public notice, a seagrass survey on 20-21 September 2011 showed the pipeline route to be mostly devoid of resources. Subsequently, a site visit by Corps, FIND and DEP staff on 19 September 2013 confirmed the 2011 survey except that the seagrass that had been present 2011 were no longer present in 2013. Therefore, DEP file number 31-0273920-007 also verified a deminimus exemption (373.406(6) F.S.) for the pipeline route.

The DEP Bureau of Beaches and Coastal Systems (Bureau) notes that the material to be dredged will not be beach-compatible, will be placed in an upland disposal site and therefore, may be eligible for the maintenance dredging exemption in Section 403.813(1)(f), *Florida Statutes.* The Bureau advises that the final EA should contain additional information regarding potential turbidity levels that will occur during the proposed dredging.

- As discussed above, the activity was deemed exempt by DEP in file number 31-0273920-007 dated 23 January 2014. Turbidity will be monitored daily to insure the standards within 62-302 F.A.C are met.

The Florida Department of State (DOS) concurs with the Corps recommendation that a submerged cultural resource survey be performed. The resultant survey report must conform to the specification set forth in Chapter 1A-46, *F.A.C.,* and be forwarded to the DOS in order to complete the reviewing process for the proposed project and its impacts.

- As discussed in section 4.6 above, the survey was completed in 2010 and consultation with the SHPO completed on 24 November 2010.

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APPENDIX A - COASTAL ZONE MANAGEMENT CONSISTENCY

FLORIDA COASTAL MANAGEMENT PROGRAM
FEDERAL CONSISTENCY EVALUATION PROCEDURES

MAINTENANCE DREDGING
IWW REACH I
INDIAN RIVER COUNTY, FLORIDA

1. Chapter 161, Beach and Shore Preservation. The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes. In addition this chapter encompasses the entire process of planning for and managing Florida's sandy beaches and inlets, as well as the joint coastal permitting program.

Response: The proposed project is consistent as it does not impact the sandy beach at all.

2. Chapters 163(part II), 186, and 187, County, Municipal, State and Regional Planning. These chapters establish the Local Comprehensive Plans, the Strategic Regional Policy Plans, and the State Comprehensive Plan (SCP). The SCP 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 project has been coordinated with various federal, state and local agencies during the planning process. The project meets the primary goal of the State Comprehensive Plan through maintenance of navigation channels.

3. Chapter 252, Disaster Preparation, Response and Mitigation. This chapter creates a state emergency management agency, with the authority to provide for the common defense; to protect the public peace, health and safety; and to preserve the lives and property of the people of Florida.

Response: The proposed project involves the maintenance dredging of the IWW in order to maintain safe navigation conditions. Therefore, this project is consistent with the efforts of Division of Emergency Management.

4. Chapter 253, State Lands. This chapter governs the management of submerged state lands and resources within state lands. This includes archeological and historical resources; water resources; fish and wildlife resources; beaches and dunes; submerged grass beds and other benthic communities; swamps, marshes and other wetlands; mineral resources; unique natural features; submerged lands; spoil islands; and artificial reefs.

Response: The proposed project would comply with state regulations pertaining to the above resources. The work would comply with the intent of this chapter.

5. Chapters 253, 259, 260, and 375, Land Acquisition. This chapter authorizes the state to acquire land to protect environmentally sensitive areas.

Response: Since the affected property already is in public ownership or is under an easement for public placement use, this chapter does not apply.

6. Chapter 258, State Parks and Aquatic Preserves. This chapter authorizes the state to manage state parks and preserves. Consistency with this statute would include consideration of projects that would directly or indirectly adversely impact park property, natural resources, park programs, management or operations.

Response: The proposed project was coordinated with the State of Florida regarding project activities adjacent to the Indian River – Malabar to Vero Beach Aquatic Preserve. The project is consistent with this chapter as it will maintain a public navigation channel for recreational and commercial traffic.

7. Chapter 267, Historic Preservation. This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities.

Response: A submerged cultural resources survey was performed and subsequently the project was coordinated with the State Historic Preservation Officer (SHPO). The project is consistent with this chapter.

8. Chapter 288, Economic Development and Tourism. This chapter directs the state to provide guidance and promotion of beneficial development through encouraging economic diversification and promoting tourism.

Response: The proposed maintenance dredging encourages commercial and recreational use that in turn provides economic benefits to the area. This would be compatible with tourism for this area and therefore, is consistent with the goals of this chapter.

9. Chapters 334 and 339, Transportation. This chapter authorizes the planning and development of a safe balanced and efficient transportation system.

Response: No public transportation systems would be impacted by this project.

10. Chapter 370, Saltwater Living Resources. This chapter directs the state to preserve, manage and protect the marine, crustacean, shell and anadromous fishery resources in state waters; to protect and enhance the marine and estuarine environment; to regulate fishermen and vessels of the state engaged in the taking of such resources within or without state waters; to issue licenses for the taking and

processing products of fisheries; to secure and maintain statistical records of the catch of each such species; and, to conduct scientific, economic, and other studies and research.

Response: The proposed maintenance dredging would not have a substantial adverse impact on saltwater living resources. Benthic organisms may be adversely affected by the work. However, the project footprint is relatively small and lies adjacent to similar habitat. Therefore, substantial impacts to the aquatic ecosystem are not anticipated. Based on the overall impacts of the project, the project is consistent with the goals of this chapter.

11. Chapter 372, Living Land and Freshwater Resources. This chapter establishes the Fish and Wildlife Conservation Commission and directs it to manage freshwater aquatic life and wild animal life and their habitat to perpetuate a diversity of species with densities and distributions which provide sustained ecological, recreational, scientific, educational, aesthetic, and economic benefits.

Response: The project would not have a substantial adverse impact on living land and freshwater resources. Use of the upland disposal site could adversely impact wildlife, but this area should be re-colonized as it is only periodically used.

12. Chapter 373, Water Resources. The waters in the state of Florida are managed and protected to conserve and preserve water resources, water quality, and environmental quality. This statute addresses sustainable water management; the conservation of surface and ground waters for full beneficial use; the preservation of natural resources, fish, and wildlife; protecting public land; and promoting the health and general welfare of Floridians. The state manages and conserves water and related natural resources by determining whether activities will unreasonably consume water; degrade water quality; or adversely affect environmental values such as protected species habitat, recreational pursuits, and marine productivity.

Specifically, under Part IV of Chapter 373, the Department of Environmental Protection, water management districts, and delegated local governments review and take agency action on wetland resource, environmental resource, and stormwater permit applications, which address the construction, alteration, operation, maintenance, abandonment, and removal of any stormwater management system, dam, impoundment, reservoir, or appurtenant work or works, including dredging, filling and construction activities in, on, and over wetlands and other surface waters.

Response: This project has been coordinated with the State of Florida and is in compliance with this act.

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: The contract specifications will prohibit the contractor from dumping oil, fuel, or hazardous wastes in the work area and will require that the contractor adopt safe and sanitary measures for the disposal of solid wastes. A spill prevention plan will be required.

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 project does not involve the exploration, drilling or production of gas, oil or petroleum product. Therefore, this chapter does not apply.

15. Chapter 379, Fish and Wildlife Conservation. This chapter establishes the Florida Fish and Wildlife Conservation Commission, and it regulates the conservation of marine and freshwater aquatic and wild animal life and their habitats to perpetuate a diversity of species with densities and distributions sufficient to provide sustained ecological, recreational, scientific, educational, aesthetic, and economic benefits.

Response: The project will have little effect on freshwater aquatic life or wild animal life. Based on the overall impacts, the project is consistent with the goals of this chapter.

16. Chapter 380, Environmental Land and Water Management. This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development. This chapter also deals with the Area of Critical State Concern program and the Coastal Infrastructure Policy.

Response: The proposed maintenance dredging project was coordinated with the local regional planning commission. The project is consistent with the goals of this chapter.

17. Chapters 381 (selected subsections on on-site sewage treatment and disposal systems) and 388 (Mosquito/Arthropod Control). Chapter 388 provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the state.

Response: The project shall not further the propagation of mosquitoes or other pest arthropods.

18. Chapter 403, Environmental Control. This chapter authorizes the regulation of pollution of the air and waters of the state by the Florida Department of Environmental Regulation (now a part of the Florida Department of Environmental Protection).

Response: An Environmental Assessment addressing project impacts has been prepared and was reviewed by the appropriate resource agencies including the Florida Department of Environmental Protection. Environmental protection measures will be implemented to ensure that no lasting adverse effects on water quality, air quality, or other environmental resources will occur. A 373.406(6) F.S. dredging exemption verification has been obtained from the Florida Department of Environmental Protection. The project complies with the intent of this chapter.

19. Chapter 582, Soil and Water Conservation. This chapter establishes policy for the conservation of the state soil and water through the Department of Agriculture. Land use policies will be evaluated in terms of their tendency to cause or contribute to soil erosion or to conserve, develop, and utilize soil and water resources both onsite or in adjoining properties affected by the project. Particular attention will be given to projects on or near agricultural lands.

Response: Agricultural lands do occur in the vicinity of the project; Construction and use of IR-2 has been coordinated with the NRCS, therefore the project complies with the intent of this chapter.

APPENDIX B - PERTINENT CORRESPONDENCE

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

REPLY TO
ATTENTION OF

Operations Division
Public Notice NO. PN-CO-IWW-288

March 8, 2010

PUBLIC NOTICE

TO WHOM IT MAY CONCERN: The Jacksonville District, U.S. Army Corps of Engineers, will be coordinating with the State of Florida, Department of Environmental Protection regarding water quality certification for the maintenance dredging of the Federal Intracoastal Waterway Indian River Reach I and Portion of Reach II (in the vicinity of Sebastian Inlet), Indian River County, Florida. The dredged material would be placed in Dredged Material Management Area (DMMA) IR-2.

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

If you have any questions concerning this project, you may contact Mr. Robert Riddell of this office, telephone 904-232-2451; or E-mail: *robert.c.riddell@usace.army.mil.*

WATERWAY & LOCATION: Federal Intracoastal Waterway in the Intracoastal Waterway Indian River Reach I and Portion of Reach II (in the vicinity of Sebastian Inlet), Indian River County, Florida.

WORK & PURPOSE: The proposed work consists of performing maintenance dredging of the federally authorized Intracoastal Waterway in the Intracoastal Waterway Indian River Reach I and Portion of Reach II (in the vicinity of Sebastian Inlet), Indian River County, Florida. The dredged material will be placed in the constructed DMMA IR-2. Approximately 400,000 cubic yards of material will likely be dredged from cuts IR-1 though IR-7 by hydraulic cutter-suction dredge. All dredging operations will conform to the provisions of either the State Water Quality Certificate, F.S. 403.813(3), or F.S. 373.406(6).

The purpose of the maintenance dredging is to restore full navigation depth of the Federal navigation project. Dredging will serve to eliminate the hazardous, and in some instances impassable navigation conditions created by shoaling.

PROJECT AUTHORIZATION: Rivers and Harbors Act of 2 March 1945, House Document 740, 79th Congress; and House Resolution Number 95-1247, 18 October 1978, 95 Congress, 2nd Session.

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

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

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

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

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

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

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

7. The Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 66l-666c).

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

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

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

11. The Magnuson-Stevens Fishery Conservation and Management Act of 1966 (16 USC 1801 et seq. PL 104-208).

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

EVALUATION:

a. Environmental Assessment (EA): A draft EA for the Intracoastal Waterway, Indian River Reach I and Portion if Reach II (in the vicinity of Sebastian), Indian River County maintenance dredging has been prepared and is available for review online at: ftp://ftp.saj.usace.army.mil/pub/Public_Dissemination/Indian_River_County_IWW/IWW_Indian_River_County_DEA_2-22-10.pdf or a copy of this draft EA can be made available upon request.

b. Environmental Impact Statement (EIS): The evaluation of the proposed maintenance dredging and DMMA IR-2 placement suggests that the proposed action would have no significant impacts on the quality of the human environment and an Environmental Impact Statement, pursuant to the National Environmental Policy Act (NEPA), will not be required.

c. Threatened or Endangered Species: Consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act will be conducted. Channel dredging occurs within the known range of Johnson's seagrass (*Halophila Johnsonii)*, therefore dredging operations will be conducted in accordance with the conditions of the 2001 NMFS Biological Opinion. In addition, manatees and the endangered smalltooth sawfish (*Pristis pectinata*) may occur in the vicinity of the project. Therefore, standard protective measures would be taken during dredging activities.

d. Coastal Zone Management: A federal consistency determination in accordance with 15 CFR 930 Subpart C is included in the draft EA. The Corps has determined this action is consistent with the CZM.

e. Essential Fish Habitat: This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The proposal could impact estuarine water column with an unconsolidated substrate, and sea grass habitat considered EFH by the NMFS. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries along the eastern coast of Florida. However, our final determination is subject to review by and coordination with the National Marine Fisheries Service.

f. Cultural Resources: A survey and impact analysis has been completed for DMMA IR-2 (Department of Historic Resources file number 2002-02266) with a determination that no historic properties would be affected. A submerged cultural resources survey is being conducted and potential effects from the Intracoastal Waterway Indian River Reach I and Portion of Reach II (in the vicinity of Sebastian Inlet) dredging will be coordinated with the Florida State Historic Preservation Officer.

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

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

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

STATE AGENCIES:
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF SOLID WASTE MANAGEMENT
FLORIDA INLAND NAVIGATION DISTRICT
FLORIDA GAME & FRESH WATER FISH COMMISSION
DIVISION OF ARCHIVES, HISTORY & RECORDS
STATE HISTORIC PRESERVATION OFFICE
FLORIDA DEPARTMENT OF TRANSPORTATION
PLANNING MANAGER BUREAU OF SUBMERGED LANDS DEPARTMENT
BUREAU OF SOIL AND WATER CONSERVATION
FLORIDA OFFICE OF ENTOMOLOGY
FLORIDA WATER MANAGEMENT DISTRICTS
FLORIDA STATE CLEARINGHOUSE
FLORIDA MARINE PATROL
BUREAU OF STATE PLANNING
FLORIDA DIVISION OF RECREATION
NORTHEAST FLORIDA REGIONAL PLANNING COUNCIL
HABITAT CONSERVATION SERVICE
FLORIDA STATE CONSERVATION SERVICE

ENVIRONMENTAL ORGANIZATIONS:
FLORIDA AUDUBON SOCIETY
NATIONAL AUDUBON SOCIETY
FLORIDA WILDLIFE FEDERATION
SIERRA CLUB
FLORIDA DEFENDERS OF THE ENVIRONMENT
NATIONAL ESTUARY PROGRAM
SAVE THE MANATEE CLUB
NATURE CONSERVANCY

LOCAL GOVERNMENTS:
INDIAN RIVER COUNTY, SEBASTIAN, FL
CITY OF SEBASTIAN, FT. PIERCE, FL

FOR THE COMMANDER:

for Jim Jeffords, P.E.
Chief, Operations Division

Florida Department of
Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

April 26, 2010

Mr. Robert C. Riddell
Jacksonville District, Operations Division
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

RE: Department of the Army, Jacksonville District Corps of Engineers – Draft Environmental Assessment, Maintenance Dredging the Intracoastal Waterway Reach I and II near the Sebastian Inlet, with Placement in DMMA IR-2 – Sebastian, Indian River County, Florida.
SAI # FL201003115145C

Dear Mr. Riddell:

The Florida State Clearinghouse has coordinated a review of the referenced Draft Environmental Assessment (EA) under the following authorities: Presidential Executive Order 12372; § 403.061(40), *Florida Statutes;* the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

The Florida Fish and Wildlife Conservation Commission (FWC) notes that the proposed Intracoastal Waterway channel dredging would take place within the known range of Johnson's seagrass (*Halophila johnsonii*), which will require that proposed mitigation include impacts outside of the federal channel. The draft EA states that protective measures for sea turtles, manatees, smalltooth sawfish and migratory birds will be implemented during all dredging activities. Since the Sebastian inlet area and the areas proposed to be dredged are highly used by manatees, FWC recommends that experienced personnel be designated as responsible for observing for manatees and sea turtles during all dredging operations, including the transport of dredged material. In addition, staff recommends that proposed mitigation plans be developed during the permitting process in the event seagrass is accidentally impacted during dredging operations. Please refer to the enclosed FWC letter for further detailed comments and recommendations.

The Florida Department of Environmental Protection's (DEP) Central District Office in Orlando notes that the U.S. Army Corps of Engineers (USACE) has submitted an

application to the DEP for an Environmental Resource Permit (ERP) Exemption to maintenance dredge a portion of the Intracoastal Waterway that appears to include the draft EA project area. DEP staff has provided a number of comments and requests additional information to complete the ERP application currently under review. Please be advised that a permit will be required for the proposed pipeline used to pump dredged material to the disposal site. The DEP also notes that a portion of the project appears to lie within the Indian River-Malabar to Vero Beach Aquatic Preserve, designated Outstanding Florida Waters (OFW) under Rule 62-302.700(9), *Florida Administrative Code* (*F.A.C.*). The project will, therefore, require a variance to Rule 62-302.700(1), *F.A.C.*, which states that no degradation of water quality, other than that allowed in Sections 62-4.242(2)(3), *F.A.C.*, is permitted in OFWs. Please refer to the enclosed memorandum and contact Ms. Nicole Martin in the DEP Central District Office at nicole.martin@dep.state.fl.us or (407) 893-7865 for additional information and assistance.

The DEP's Bureau of Beaches and Coastal Systems (Bureau) notes that the material to be dredged will not be beach-compatible, will be placed in an upland disposal site and therefore, may be eligible for the maintenance dredging exemption in Section 403.813(1)(f), *Florida Statutes*. The Bureau advises that the final EA should contain additional information regarding potential turbidity levels that will occur during the proposed dredging. Please see the enclosed Bureau memorandum and contact Ms. Roxane Dow at (850) 922-7852 or roxane.dow@dep.state.fl.us for further information.

The Florida Department of State (DOS) concurs with the USACE's recommendation that a submerged cultural resource survey be performed. The resultant survey report must conform to the specification set forth in Chapter 1A-46, *F.A.C.*, and be forwarded to the DOS in order to complete the reviewing process for the proposed project and its impacts. Please refer to the enclosed DOS letter for additional information.

Based on the information contained in the draft EA and the enclosed state agency comments, the state has determined that, at this stage, the proposed activity is consistent with the Florida Coastal Management Program (FCMP). To ensure the project's continued consistency with the FCMP, the concerns identified by our reviewing agencies must be addressed prior to project implementation. The state's continued concurrence will be based on the activity's compliance with FCMP authorities, including federal and state monitoring of the activity to ensure its continued conformance, and the adequate resolution of issues identified during this and subsequent reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the environmental permitting process.

Thank you for the opportunity to review the subject document. Should you have any questions regarding this letter, please contact Ms. Suzanne E. Ray at (850) 245-2172.

Yours sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/ser
Enclosures

cc: Lisa Kelley, DEP, Central District
Roxane Dow, DEP, BBCS
Mary Ann Poole, FWC
Laura Kammerer, DOS

Project Information

Project:	FL201003115145C
Comments Due:	04/16/2010
Letter Due:	04/26/2010
Description:	DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT CORPS OF ENGINEERS - DRAFT ENVIRONMENTAL ASSESSMENT, MAINTENANCE DREDGING THE INTRACOASTAL WATERWAY REACH I AND II NEAR THE SEBASTIAN INLET, WITH PLACEMENT IN DMMA IR-2 - SEBASTIAN, INDIAN RIVER COUNTY, FLORIDA.
Keywords:	ACOE - MAINTENANCE DREDGING ICWW NEAR SEBASTIAN INLET - INDIAN RIVER CO.
CFDA #:	12.107

Agency Comments:

TREASURE COAST RPC - TREASURE COAST REGIONAL PLANNING COUNCIL

The proposed project is neither inconsistent nor in conflict with the Strategic Regional Policy Plan.

FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

The FWC notes that the proposed Intracoastal Waterway channel dredging would take place within the known range of Johnson's seagrass (Halophila johnsonii) and that mitigation would be proposed and implemented for any impacts outside of the federal channel. The draft EA also states that protective measures for sea turtles, manatees, smalltooth sawfish and migratory birds will be implemented during all dredging activities. Since the Sebastian inlet area and the areas proposed to be dredged are highly used by manatees, FWC recommends that experienced personnel be designated as responsible for observing for manatees and sea turtles during all dredging operations, including the transport of dredged material. In addition, staff recommends that proposed mitigation plans be developed during the permitting process in the event seagrass is accidentally impacted during dredging operations.

STATE - FLORIDA DEPARTMENT OF STATE

The DOS concurs with the USACE's recommendation for a submerged cultural resource survey. The resultant survey report must conform to the specification set forth in Chapter 1A-46, F.A.C., and be forwarded to this agency in order to complete the reviewing process for the proposed project and its impacts.

ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

The DEP Central District Office in Orlando notes that the USACE has submitted an application to the DEP for an Environmental Resource Permit (ERP) Exemption to maintenance dredge a portion of the Intracoastal Waterway that appears to include the draft EA project area. DEP staff has provided a number of comments and requests additional information to complete the ERP application currently under review. Please be advised that a permit will be required for the proposed pipeline used to pump dredged material to the disposal site. The DEP also notes that a portion of the project appears to lie within the Indian River-Malabar to Vero Beach Aquatic Preserve, designated Outstanding Florida Waters (OFW) under Rule 62-302.700(9), F.A.C. The project will, therefore, require a variance to Rule 62-302.700(1), F.A.C., which states that no degradation of water quality, other than that allowed in Sections 62-4.242(2)(3), F.A.C., is permitted in OFWs. Please refer to the enclosed memorandum and contact Ms. Nicole Martin in the DEP Central District Office at nicole.martin@dep.state.fl.us or (407) 893-7865 for additional information and assistance. The DEP¿s Bureau of Beaches and Coastal Systems (Bureau) notes that the material to be dredged will not be beach-compatible, will be placed in an upland disposal site and therefore, may be eligible for the maintenance dredging exemption in Section 403.813(1)(f), F.S. The Bureau advises that the final EA should contain additional information regarding potential turbidity levels that will occur during the proposed dredging. Please see the enclosed Bureau memorandum and contact Ms. Roxane Dow at (850) 922-7852 or roxane.dow@dep.state.fl.us for further information.

ST. JOHNS RIVER WMD - ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

The proposed project appears to be under the permitting jurisdiction of FDEP, pursuant to the Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., Between St. Johns River Water Management District and Department of Environmental Protection (section II.A.1.m.).

Florida Fish and Wildlife Conservation Commission

Commissioners
Rodney Barreto
Chairman
Miami

Richard A. Corbett
Vice Chairman
Tampa

Kathy Barco
Jacksonville

Ronald M. Bergeron
Fort Lauderdale

Dwight Stephenson
Delray Beach

Kenneth W. Wright
Winter Park

Brian S. Yablonski
Tallahassee

Executive Staff
Nick Wiley
Executive Director

Greg Holder
Assistant Executive Director

Karen Ventimiglia
Deputy Chief of Staff

Office of Planning and Policy Coordination
Nancy Linehan
Director
(850) 487-3794
(850) 410-5265 FAX
(850) 410-5272
(850) 922-5679 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: (850) 488-4676

Hearing/speech impaired:
(800) 955-8771 (T)
(800) 955-8770 (V)

MyFWC.com

April 15, 2010

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APR 16 2010

DEP Office of Intergovt'l Programs

Ms. Lauren Milligan, Clearinghouse Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Boulevard, Mail Station 47
Tallahassee, FL 32399-3000

Re: SAI #FL201003115145C, Draft Environmental Assessment, Indian River Reach I and II Maintenance Dredging, Indian River County

Dear Ms. Milligan:

The Florida Fish and Wildlife Conservation Commission (FWC) has coordinated agency review of the Federal Intracoastal Waterway Indian River Reach I and a Portion of Reach II Maintenance Dredging project, and provides the following comments and recommendations in accordance with the Coastal Zone Management Act/Florida Coastal Management Program and the National Environmental Policy Act (NEPA).

The proposed work consists of performing maintenance dredging of the federally authorized Intracoastal Waterway in the Indian River Reach I and Portion of Reach II (in the vicinity of Sebastian Inlet), Indian River County, Florida. Dredging is proposed to eliminate navigation problems created by shoaling, to the typical federal channel dimensions of125 feet wide, 12 feet deep with a two foot allowable over depth at mean low low water (MLLW). This segment was dredged to the present project depth in 1957. There has been no maintenance dredging since that time. Approximately 430,000 cubic yards of material will be dredged using either a clamshell or hydraulic cutterhead dredge to perform the proposed work. The dredged material will be placed in the constructed upland area designated as DMMA IR-2.

The proposed channel dredging would take place within the known range of Johnson's seagrass (Halophila johnsonii). The draft Environmental Assessment (EA) states that work will be conducted in accordance with the conditions of the 2001 NMFS Biological Opinion, and that pre- and post-construction seagrass surveys shall be performed. If the surveys show that the dredging has impacted seagrass outside of the Federal channel, then appropriate mitigation will be proposed and implemented. In addition, the draft EA proposes to implement protective measures for sea turtles, manatees, smalltooth sawfish (Pristis pectinata) and migratory birds during all dredging activities to avoid impacts to these species.

The Sebastian Inlet area and the areas in which the dredging is proposed are highly used by manatees. We recommend that experienced personnel be designated as responsible for observing for manatees and sea turtles during all dredging operations, including the transport of dredged material. In addition, we recommend that proposed mitigation plans be developed during the permitting process in the event seagrass is accidentally impacted during dredging operations. Based on the information that we have at this time and if the suggested recommendations above are implemented, we do not find this project inconsistent with Chapters 370 or 379, Florida Statutes, as included under the Florida Coastal Management Program.

If you or your staff would like to coordinate further on the recommendations contained in this letter, please contact me at 850-410-5272 or email me at maryann.poole@MyFWC.com, and I will be glad to help make the necessary arrangements. If your staff has any technical questions regarding our comments, please contact Ms. Anne Richards at Anne.Richards@myfwc.com for questions concerning manatees and Mr. Ron Mezich at Ron.Mezich@myfw.com for marine habitat related issues.

Sincerely,

Traci Wallace for Mary Ann Poole

Mary Ann Poole
Commenting Program Administrator

map/ar/rm
ENV 1-3-2
Indian River Reach I and II_2705_041510
cc: Jason Spinning, COE, Jacksonville

Memorandum

Florida Department of Environmental Protection

TO: Lisa Kelley, Ombudsman and External Affairs Coordinator
Central District, Ombudsman's Office

FROM: Nicole Martin, Environmental Specialist
Central District, Environmental Resource Permitting

DATE: April 12, 2010

SUBJECT: Department of the Army, Jacksonville District Corps of Engineers - Draft EA, Maintenance Dredging the Intracoastal Waterway Reach I and II near the Sebastian Inlet, with Placement in DMMA IR-2 - Indian River County, Florida.
SAI # FL201003115145C

The U.S. Army Corps of Engineers (USACOE) submitted an application to the DEP Central District Office on December 11, 2009 (filed under Department of the Army 05-298754-001) for an Exemption to maintenance dredge a portion of the ICWW in a small portion of Brevard but mostly within Indian River County. Based on the information provided in the draft EA, it appears that the area is approximately the same as that in the referenced application.

Here are our comments after review of that application:

1. Please have all drawings signed by a professional engineer. [Section V.C. Interagency Agreement for Civil Work Projects, DEP and USACOE, Jacksonville District]

2. To ensure that the DEP has all the correct project information, please complete and provide Section A of the Environmental Resource Permit (ERP) application.

3. It is unclear from the information provided how much, if not the entire area, of the ICWW shown as the project area is to be dredged. Please provide a plan view drawing that clearly shows the proposed dredge area using hatch marks or please make a notation that all the ICWW within the project boundaries is to be dredged. Include the total cubic yards of material to be removed.

4. It is unclear if the scale on the drawings is accurate. Please include the dimensions of the dredge area on the drawings.

5. Please provide cross section typical drawings. Include the mean high water (MHW) elevation from NGVD, MLW elevation from NGVD, the bottom elevation as it currently exists, the proposed bottom elevation and the width of the dredge area.

Please note, the pipeline laid from the maintenance dredge site to the disposal site was not addressed in the above application and that would require a permit.

If this is not the same project, below are some questions that DEP staff may have:

1. Some portions of the project are located within Outstanding Florida Waters.

   A variance to Rule 62-302.700(1), *F.A.C.*, which states that no degradation of water quality, other than that allowed in Rule 62-4.242(2)(3), *F.A.C.*, is permitted in Outstanding Florida Waters and Outstanding Natural Resource Waters, respectively, may be required. Pursuant to s. 62-110.104(1), *F.A.C.*, the petition shall include:

   a) The petitioner's name and signature;
   b) Citation of the specific statute or rule from which the variance is sought;
   c) Facts showing that a variance should be granted for one of the reasons set forth in section s. 403.201(1)(a-c), *F.S.*;
   d) The time period for which the variance is sought, including the reasons and facts supporting the time period;
   e) The requirements that the petitioner can meet, including the date or time when the requirements will be met;
   f) The steps or measures that the petitioner is taking to meet the requirement from which is the variance is sought.

   If the request is pursuant to s. 403.201(1)(b), *F.S.*, it shall include a schedule of when compliance will be achieved; and the social, economic, and environmental impacts on both the petitioner and residents of the area and the state if the variance is granted or denied. Finally, the petition must demonstrate that any hardship asserted, as a basis of the need for a variance, is peculiar to the affected property, is not self-imposed, and that the granting of a variance will be consistent with the general intent and purpose of underlying statute.

   A fee is required for a variance.

2. Clearly describe the location and size of the temporary mixing zone requested.

3. Detailed timeline for all proposed work to be completed.

4. Once the Department has determined that the project is permittable and the applicant has provided reasonable assurance that the project can meet the applicable rules, the mitigation plan will be reviewed to determine if it meets Rule 62-345, *F.A.C.*

5. A sovereignty submerged lands easement will be required for the placement of a pipeline.

6. Please revise **all** drawings to include the mean high and mean low water levels.

7. The project may need a Hydrographic Review.

8. It appears that (at least a portion) of the project is located within the Indian River-Malabar to Vero Beach Aquatic Preserve and Outstanding Florida Waters (OFW), and therefore your project must be shown to be clearly in the public interest. Please demonstrate that your project is clearly in the public interest.

9. Pursuant to Rule 18-21.004(2)(c), *F.A.C.*, "The Department of Environmental Protection biological assessments and reports by other agencies with related statutory, management, or regulatory authority may be considered in evaluating specific requests to use sovereignty lands. Any such reports sent to the department in a timely manner shall be considered."

10. The project must meet the requirements of Section 12.2.7 of the St. Johns River Water Management District's *Applicant's Handbook for the Management and Storage of Surface Waters.*

11. The project must meet the requirements of Section 12.2.5 of the St. Johns River Water Management District's *Applicant's Handbook for the Management and Storage of Surface Waters.*

Memorandum

Florida Department of Environmental Protection

TO: Suzanne E. Ray, Office of Intergovernmental Programs

FROM: Roxane R. Dow, Bureau of Beaches and Coastal Systems

DATE: April 13, 2010

SUBJECT: Department of the Army, Jacksonville District Corps of Engineers – Draft EA, Maintenance Dredging the Intracoastal Waterway Reach I and II near the Sebastian Inlet, with Placement in DMMA IR-2 – Indian River County, Florida.
SAI # FL201003115145C

The U.S. Army Corps of Engineers (Corps) proposes to maintenance dredge Reaches I and II of the Indian River portion of the Intracoastal Waterway (IWW). The material would be placed in Dredged Material Management Area (DMMA) IR-2. The proposed work would restore full navigational depth to the congressionally approved navigation project.

The material to be dredged is not beach-compatible, is to be placed in an upland disposal site, and appears to be eligible for the maintenance dredging exemption in Section 403.813 (1)(f), *Florida Statutes*. The Central District Office would make that decision. The project will also be reviewed pursuant to the Interagency Coordination Agreement for Civil Works Projects between the Corps and FDEP (http://www.dep.state.fl.us/water/wetlands/erp/corps_op_ag.htm).

We note that, while a suction-cutter head dredge would most likely be used for this project, the Corps will not restrict the type of dredging equipment in its solicitation for bidders. Other types of dredges would produce more turbidity than a suction-cutter head. The Corps should propose a description of a reasonable variance based upon possible dredging scenarios, as the project is located in the Indian River-Malabar to Vero Beach Aquatic Preserve, an Outstanding Florida Water. The Bureau's Coastal Engineering Section offers the following guidance:

> In order to evaluate project impacts, please submit an analysis of turbidity levels that would occur during the proposed dredging work. The analysis must demonstrate the necessity and justification for variances from water quality standards during dredging operations.

When using the analytic methods to predict turbidity, please describe them in detail specific to this project. Specifically incorporate the reference for the analytical method used in your determination, commenting on the history and reliability of its use in successfully predicting turbidity.

When using modeling to predict turbidity, please identify the model assumptions/limitations, the model parameters, the parameter default values or the acceptable ranges of the parameter values, and the selected parameter values; and please provide engineering analysis including model calibration and validation and parameter sensitivity testing.

For either of the two engineering approaches (modeling and analytic methods), all data used in the engineering analysis should be identified and explained; all references, methods, procedures, or equations employed to conduct the engineering analysis should also be cited or explained; and the input data and output data/results should be discussed and presented.

Finally, we note that the Coastal Zone Management Consistency finding is incomplete when it comes to the description of Chapter 161, *Florida Statutes*. The Beach and Shore Preservation Act is far more than the coastal construction permit program, encompassing the entire process of planning for and managing Florida's sandy beaches and inlets, as well as the joint coastal permitting program. This proposed project is consistent, however, as it does not impact the sandy beach at all.

Thank you for the opportunity to comment. Please contact me if you have any questions.

cc: Steve MacLeod
Jenny Cheng
Paden Woodruff
Bob Brantly

FLORIDA DEPARTMENT OF STATE
Kurt S. Browning
Secretary of State
DIVISION OF HISTORICAL RESOURCES

RECEIVED
APR 19 2010
DEP Office of
Intergovt'l Programs

Ms. Lauren Milligan
Florida State Clearing House
3900 Commonwealth Boulevard, MS-47
Tallahassee, Florida 32399-3000

April 14, 2010

Re: DHR Project File No. 2010-01489/ Received by DHR: March 15, 2010
Project Description: Intracoastal Waterway Indian River Reach 1 and Reach 2 Maintenance Dredge
SAI No.: FL201003115145C
County: Indian River

Dear Ms. Milligan:

Our office received and reviewed the above referenced project application in accordance with Section 106 of the National Historic Preservation and the National Environmental Policy Acts as amended, to assess possible adverse impacts to cultural resources (any prehistoric or historic district, site, building, structure, or object) listed, or eligible for listing, in the National Register of Historic Places.

Our office concurs with the USACE's recommendation for a submerged cultural resource survey. The resultant survey report must conform to the specification set forth in Chapter 1A-46, *Florida Administrative Code,* and be forwarded to this agency in order to complete the reviewing process for this proposed project and its impacts.

If you have any questions concerning our comments, please contact Michael Hart, Historic Sites Specialist, by phone at 850.245.6333, or by electronic mail at mrhart@dos.state.fl.us. Your continued interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

Laura A. Kammerer
Deputy State Historic Preservation Officer
For Review and Compliance

Pc: Robert Riddell/ Jacksonville District Corps of Engineers

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

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

FEB 27 2014

Mr. David Bernhart
NOAA Fisheries Service
Southeast Regional Office
263 13th Avenue South
Saint Petersburg, Florida 33701

Dear Mr. Bernhart,

I am rescinding the informal consultation request sent to your office on 20 December 2013 for the Maintenance Dredging of the Intracoastal Waterway (IWW) in Indian River County, Florida.

The U.S. Army Corps of Engineers (Corps), Jacksonville District is proposing to conduct maintenance dredging of Reach I and a portion of Reach II of the IWW, in Indian River County, Florida. The proposed limits of dredging are within the IWW channel between Cuts IR-1 south through Cut IR-7 (from Sebastian Inlet southward approximately 8 miles to just south of the Wabasso Bridge, see attachment 1). The estimated shoaling volume to be removed from the IWW is approximately 430,000 cy. Dredging to remove shoaling within the IWW channel will occur to a depth of -12 feet mllw (+ 2 foot overdepth) and the dredged material will be placed in the previously constructed Dredged Material Management Area (DMMA) IR-2. This segment of the IWW has not been maintained since initial construction in 1957. Dredging of the IWW is typically performed with a hydraulic cutterhead pipeline dredge.

The Corps has determined that the project's proposed maintenance dredging will have "No effect" on Johnson's seagrass (*Halophila johnsonii)* or its critical habitat. This determination is a modification of an effect determination made on 20 December 2013 and is made due to the reasons discussed in the paragraph below. However, we commit to implementing the conditions of the 1998 South Atlantic Division Regional Biological Opinion in order to minimize impacts to sea turtles in the water and the smalltooth sawfish.

Our earlier determination did not fully account for the impacts of the 2011 phytoplankton superbloom to seagrass coverage in this section of the Indian River Lagoon. In addition, recent discussions with the St. Johns River Water Management District and the DEP field inspection on 19 September 2013 further corroborate our revised determination for this project. Despite the lack of seagrass within the project footprint, the Corps will require the dredge contractor to inspect for seagrass prior to each anchor drop and during pipeline placement in order to insure that no impacts to seagrass occur.

Sincerely,

Eric P. Summa
Chief, Environmental Branch

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

REPLY TO
ATTENTION OF

09 SEP 2013

Planning and Policy Division
Environmental Branch

Mr.Robert Bendus
Division of Historical Resources
State Historic Preservation Officer
500 South Bronough Street
Tallahassee, Florida 32399-0250

Dear Mr. Bendus:

The U.S. Army Corps of Engineers (Corps), Jacksonville District is proposing to maintenance dredge Reach 1 and a portion of Reach 2 (from Sebastian Inlet 8 miles south to the Wabasso Bridge) of the Intracoastal Waterway (IWW) in Indian River County for channel maintenance. Dredged material will be placed in the IR2 Dredged Materials Management Area (DMMA)(Figure 1).

In 2010, the Jacksonville District contracted PCI to conduct a submerged cultural resources survey of the entire IWW in Indian River County (23 miles) resulting in the report "*Historic Assessment, Remote Sensing Survey, and Diver Identification of Five Potentially Significant Magnetic and/or Geomorphic Targets of the Intracoastal Waterway, Indian River County, Florida*" (DHR Project File Nos. 2010-01489 and 2010-01570, THPO 005584)). Five anomalies (four sidescan and one magnetic) were recommended for diver investigation and were subsequently found to be non-significant modern watercraft. Three of the sub-bottom anomalies located within Reach 1 and 2 were negative for evidence of cultural remains.

The IR2 DMMA was subjected to a phase I cultural resources survey in 2002 (New South Associates, Inc.) Three archeological sites (8IR849, 8IR998, and 8IR999) were recorded in the vicinity but were not in the final project footprint and will not be impacted. In a letter dated April 18, 2002 (DHR No. 2002-02266) the SHPO concurred with the Corp's determination that the IR-2 DMMA would have no effect to historic properties.

The Corps has determined no historic properties affected for the maintenance dredging of Reaches 1 and 2 of the IWW in Indian River County. I request your concurrence on my determination. If there are any questions, please contact Ms. Wendy Weaver at 904-232-2137 or e-mail at wendy.weaver@usace.army.mil.

Sincerely,

for Eric P. Summa
Chief, Environmental Branch

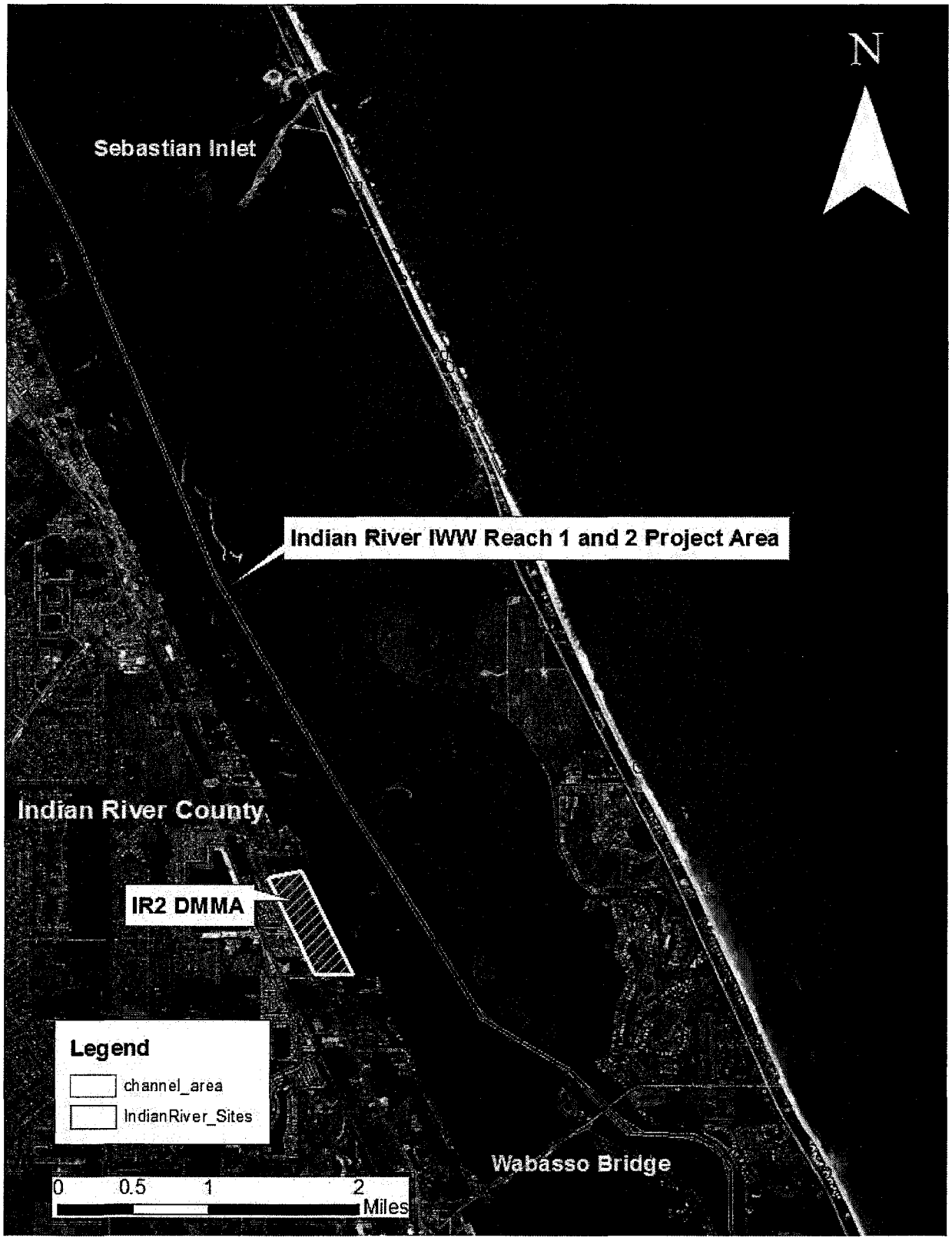

Figure 1. Indian River IWW Reach 1 and 2 channel maintenance and IR2 DMMA project areas.

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

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

09 SEP 2013

Mr. Paul Backhouse
Seminole Tribe of Florida
Tribal Historic Preservation Office
30290 Josie Billie Highway
PMP 1004
Clewiston, FL 33440

Dear Mr. Backhouse:

The U.S. Army Corps of Engineers (Corps), Jacksonville District is proposing to maintenance dredge Reach 1 and a portion of Reach 2 (from Sebastian Inlet 8 miles south to the Wabasso Bridge) of the Intracoastal Waterway (IWW) in Indian River County for channel maintenance. Dredged material will be placed in the IR2 Dredged Materials Management Area (DMMA)(Figure 1).

In 2010, the Jacksonville District contracted PCI to conduct a submerged cultural resources survey of the entire IWW in Indian River County (23 miles) resulting in the report "*Historic Assessment, Remote Sensing Survey, and Diver Identification of Five Potentially Significant Magnetic and/or Geomorphic Targets of the Intracoastal Waterway, Indian River County, Florida*" (DHR Project File Nos. 2010-01489 and 2010-01570, THPO 005584)). Five anomalies (four sidescan and one magnetic) were recommended for diver investigation and were subsequently found to be non-significant modern watercraft. Three of the sub-bottom anomalies located within Reach 1 and 2 were negative for evidence of cultural remains.

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The Corps has determined no historic properties affected for the maintenance dredging of Reaches 1 and 2 of the IWW in Indian River County. I request your comments on my determination. If there are any questions, please contact Ms. Wendy Weaver at 904-232-2137 or e-mail at wendy.weaver@usace.army.mil.

Sincerely,

for Eric P. Summa
Chief, Environmental Branch

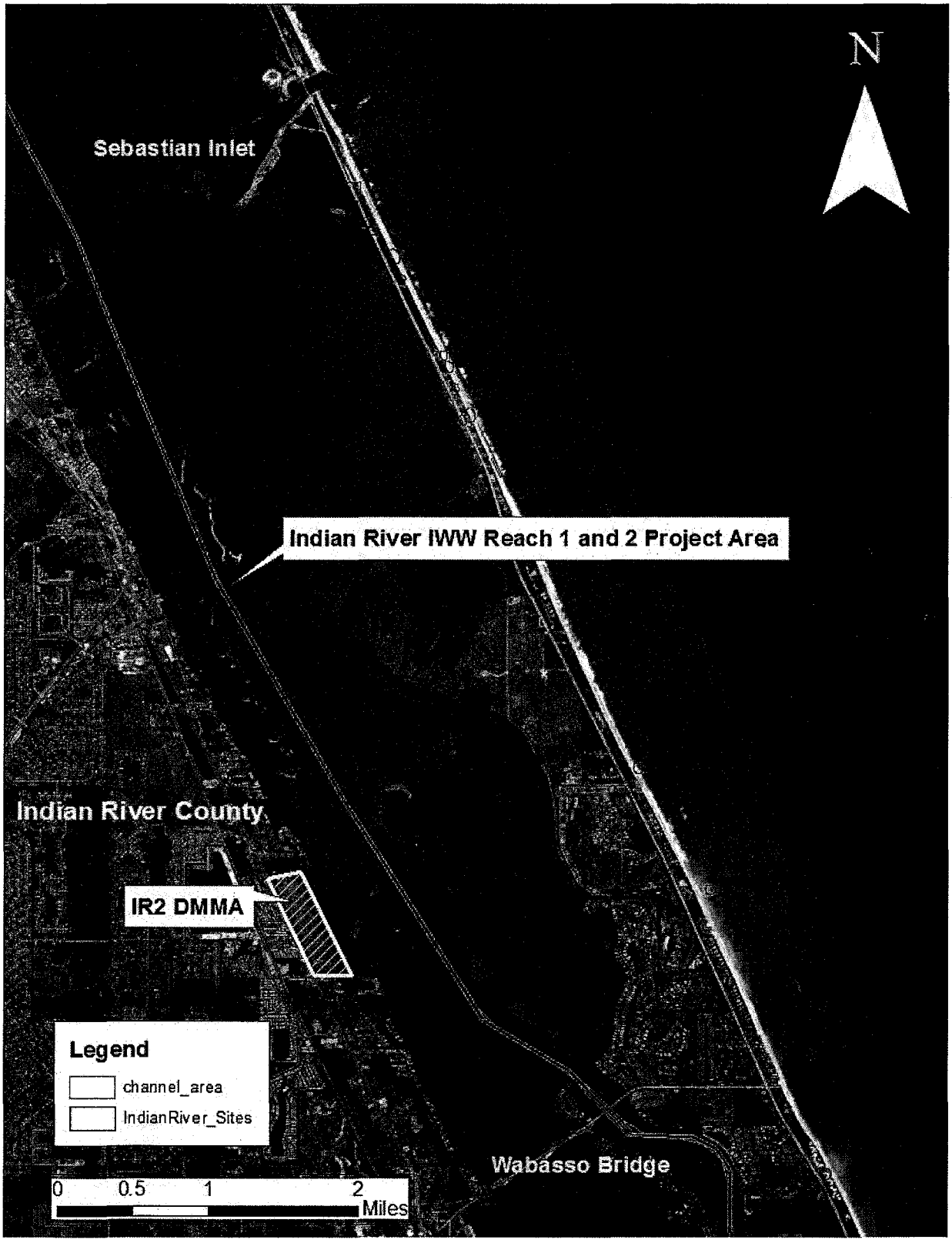

Figure 1. Indian River IWW Reach 1 and 2 channel maintenance and IR2 DMMA project areas.

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

REPLY TO
ATTENTION OF

09 SEP 2013

Planning and Policy Division
Environmental Branch

Mr. Fred Dayhoff, Tribal Representative
NAGPRA, Section 106
Miccosukee Tribe of Indians of Florida
Post Office Box 440021
Tamiami Station
Miami, Florida 33144

Dear Mr. Dayhoff:

The U.S. Army Corps of Engineers (Corps), Jacksonville District is proposing to maintenance dredge Reach 1 and a portion of Reach 2 (from Sebastian Inlet 8 miles south to the Wabasso Bridge) of the Intracoastal Waterway (IWW) in Indian River County for channel maintenance. Dredged material will be placed in the IR2 Dredged Materials Management Area (DMMA)(Figure 1).

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The IR2 DMMA was subjected to a phase I cultural resources survey in 2002 (New South Associates, Inc.) Three archeological sites (8IR849, 8IR998, and 8IR999) were recorded in the vicinity but were not in the final project footprint and will not be impacted. In a letter dated April 18, 2002 (DHR No. 2002-02266) the SHPO concurred with the Corp's determination that the IR-2 DMMA would have no effect to historic properties.

The Corps has determined no historic properties affected for the maintenance dredging of Reaches 1 and 2 of the IWW in Indian River County. I request your comments on my determination. If there are any questions, please contact Ms. Wendy Weaver at 904-232-2137 or e-mail at wendy.weaver@usace.army.mil.

The Corps has determined no historic properties affected for the maintenance dredging of Reaches 1 and 2 of the IWW in Indian River County. I request your comments on my determination. If there are any questions, please contact Ms. Wendy Weaver at 904-232-2137 or e-mail at wendy.weaver@usace.army.mil.

Sincerely,

for Eric P. Summa
Chief, Environmental Branch

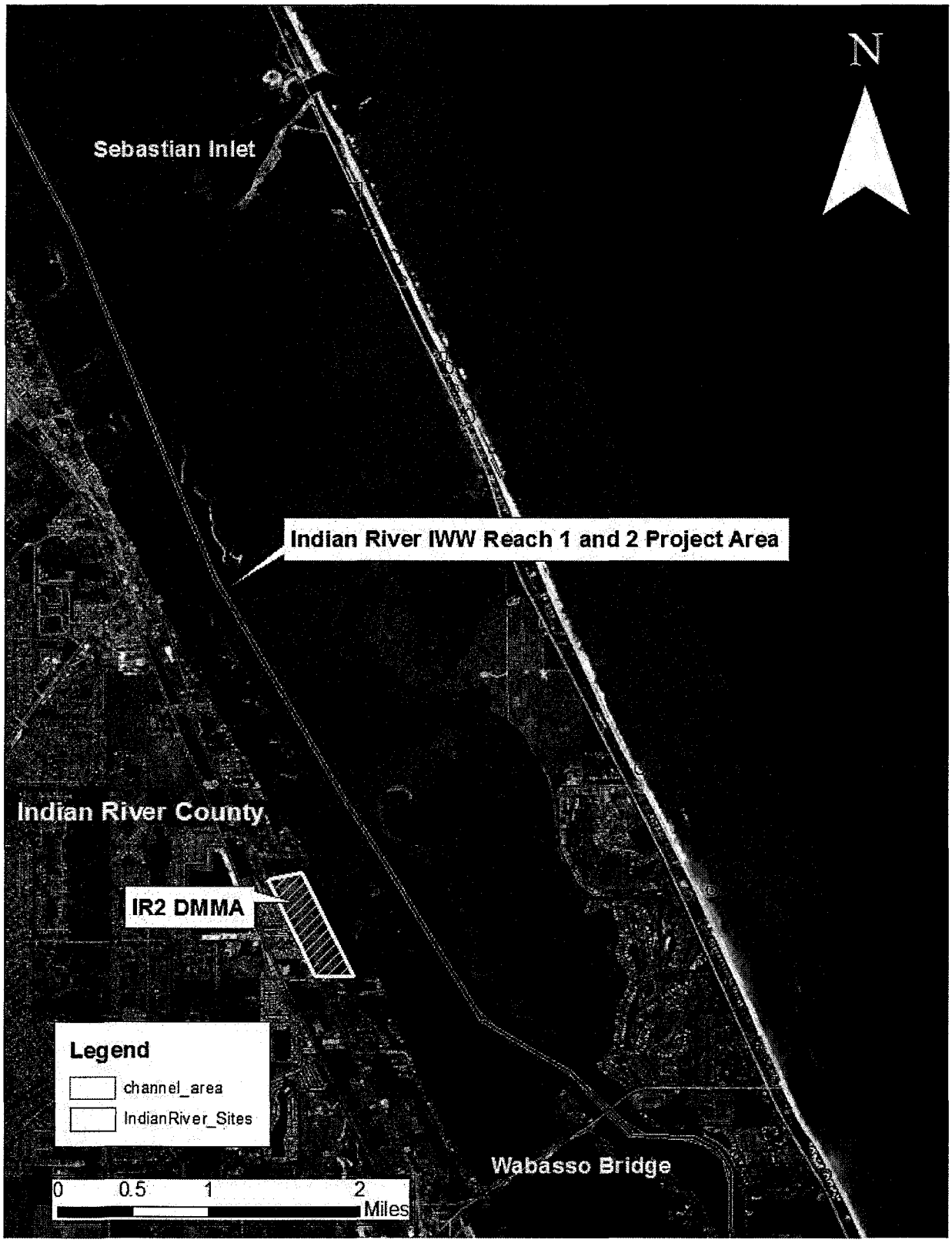


Figure 1. Indian River IWW Reach 1 and 2 channel maintenance and IR2 DMMA project areas.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOUTHEAST DISTRICT BRANCH OFFICE
337 N US HIGHWAY 1, SUITE 307
FORT PIERCE, FL 34950-4255
(772) 467-5500

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

January 23, 2014

U.S. Army Corp of Engineers
c/o Eric P. Summa
P.O. Box 4970
Jacksonville, FL 32232-0018
Sent via e-mail: eric.p.summa@usace.army.mil

Re: File No.: 31-0273920-007
File Name: ACOE FIND IR2 DMMA

Dear Mr. Summa:

On November 26, 2013, we received your application, and on January 8, 2014, the application was complete for an exemption to conduct a maintenance dredge of approximately 200,000 cu. yds. of spoil material (125 ft. wide by 42,715 ln. ft.) within the Intracoastal Waterway (ICWW), specifically within the "Indian River Reach 1" (extending from Sebastian Inlet south to Wabasso) to a maximum depth of minus 12 ft. mean low water plus 2 ft. of allowable over-depth. The dredge material shall be transported via a temporary 18 inch diameter pipeline between the channel and final placement of the material at the upland Dredge Material Management Area IR2 DMMA, including mixing zones and return water for water quality. The pipeline shall be routed from the ICWW via a previously identified corridor measuring 2,230 ft. x 50 ft. plus a 50 ft. buffer over submerged lands and 10 ft. x 50 ft. corridor over wetlands to the DMMA. The pipeline shall float on the surface or lay on the bottom and shall not require dredging or filling within the pipeline route. The project is located in the Indian River, Indian River-Malabar to Vero Beach Aquatic Preserve, Outstanding Florida Water, Class III Waters, adjacent to 10470 U.S. Highway 1 (Section 17/31, Township 31/39 South, Range 39/17 East), in Indian River County and a portion in Brevard County (27° 47' 01.60"/27° 46' 46.66" North Latitude; 80° 26' 51.00"/80° 26' 51.18" West Longitude).

Your request has been reviewed to determine whether it meets the requirements for any of three kinds of authorization that may be necessary for work in wetlands or waters of the United States. The kinds of authorization are (1) regulatory authorization, (2) proprietary authorization (related to state-owned submerged lands), and (3) federal authorization. The authority for review and the outcomes of the reviews are listed below. Please read each section carefully. Your project **may not** have qualified for all three forms of authorization. If your project did not qualify for one or more of the authorizations, refer to the specific section dealing with that authorization for advice on how to obtain it.

1. **Regulatory Review. – VERIFIED**

Based on the information submitted, the Department has verified that the maintenance dredge activity as proposed is exempt under Chapter 62-330.051(7)(a), Florida Administrative Code, from the need to obtain a regulatory permit under part IV of Chapter 373 of the Florida Statutes.

Based on the information submitted, the Department has determined that the temporary placement of an 18 inch diameter dredge material transport pipeline through the channel, submerged lands and wetlands into the upland Dredge Material Management Area IR2 DMMA is exempt, under section 373.406(6) of the Florida Statutes, from the need to obtain a regulatory permit under part IV of chapter 373 of the Florida Statutes. This determination is made because the activity, in consideration of its type, size, nature, location, use, and operation, is expected to have only minimal or insignificant individual or cumulative adverse impacts on the water resources.

This exemption verification is based on the information you provided the Department and the statutes and rules in effect when the information was submitted. This verification will expire after one year, and will not be valid at any other time if site conditions materially change, the project design is modified, or the statutes or rules governing the exempt activity are amended. However, the activity may still be conducted without further notification to or verification from the Department after the one-year expiration of this verification, provided: 1) the project design does not change; 2) site conditions do not materially change; and 3) there are no changes to the statutes or rules governing the exempt activity. In the event you need to re-verify the exempt status for the activity after the one-year expiration of this verification, a new application and verification fee will be required. Any substantial modifications to the project design should be submitted to the Department for review, as changes may result in a permit being required. Conditions of compliance with the regulatory exemption are contained in Attachment A.

2. Proprietary Review. – GRANTED

The Department acts as staff to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) and issues certain authorizations for the use of sovereign submerged lands. The Department has the authority to review activities on sovereign submerged lands under chapters 253 and 258 of the Florida Statutes, and chapters 18-20 and 18-21 of the Florida Administrative Code.

The activity appears to be located on sovereign submerged lands owned by the Board of Trustees. The activity is not exempt from the need to obtain the applicable proprietary authorization. As staff to the Board of Trustees, the Department has reviewed the activity described above, and has determined that the activity qualifies for an automatic consent of use by rule under rule 18-21.005(1)(b) and section 253.77 of the Florida Statutes to construct and use the activity on the specified sovereign submerged lands, as long as the work performed is located within the boundaries as described herein and is consistent with the terms and conditions herein. No further application is required for this consent of use. **Pursuant to Section 18-21.011(3)(c), F.A.C., severance fees have not been collected, as the material is being placed on public property and used for public purposes.**

General Conditions for State-Owned Submerged Land Authorizations:

(a) Authorizations are valid only for the specified activity or use. Any unauthorized deviation from the specified activity or use and the conditions for undertaking that activity or use shall constitute a violation. Violation of the authorization shall result in suspension or revocation of the grantee's use of the sovereignty submerged land unless cured to the satisfaction of the Board.

(b) Authorizations convey no title to sovereignty submerged land or water column, nor do they constitute recognition or acknowledgment of any other person's title to such land or water.

(c) Authorizations may be modified, suspended or revoked in accordance with their terms or the remedies provided in Sections 253.04 and 258.46, F.S., or Chapter 18-14, F.A.C.

(d) Structures or activities shall be constructed and used to avoid or minimize adverse impacts to sovereignty submerged lands and resources.

(e) Construction, use, or operation of the structure or activity shall not adversely affect any species which is endangered, threatened or of special concern, as listed in Rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C.

(f) Structures or activities shall not unreasonably interfere with riparian rights. When a court of competent jurisdiction determines that riparian rights have been unlawfully affected, the structure or activity shall be modified in accordance with the court's decision.

(g) Structures or activities shall not create a navigational hazard.

(h) Structures shall be maintained in a functional condition and shall be repaired or removed if they become dilapidated to such an extent that they are no longer functional. This shall not be construed to prohibit the repair or replacement subject to the provisions of Rule 18-21.005, F.A.C., within one year, of a structure damaged in a discrete event such as a storm, flood, accident, or fire.

(i) Structures or activities shall be constructed, operated, and maintained solely for water dependent purposes, or for non-water dependent activities authorized under paragraph 18-21.004(1)(f), F.A.C., or any other applicable law.

3. SPGP Review – APPROVED

Your proposed activity as outlined on your application and attached drawings qualifies for Federal authorization pursuant to the State Programmatic General Permit IV-R1, and a **SEPARATE permit** or authorization **will not be required** from the Corps. Please note that the Federal authorization expires on July 25, 2016. You, as permittee, are required to adhere to all General Conditions and Special conditions that may apply to your project." A copy of the SPGP IV-R1 with all terms and conditions and the General Conditions may be found at http://www.saj.usace.army.mil/Divisions/Regulatory/sourcebook.htm.

Authority for review - an agreement with the USACOE entitled "Coordination Agreement Between the U. S. Army Corps of Engineers (Jacksonville District) and the Florida Department of Environmental Protection, or Duly Authorized Designee, State Programmatic General Permit", Section 10 of the Rivers and Harbor Act of 1899, and Section 404 of the Clean Water Act.

Additional Information

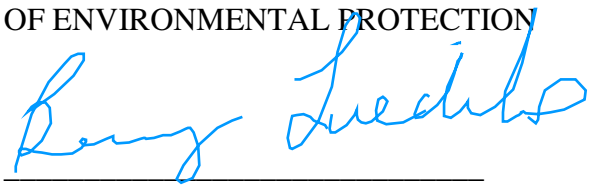
This letter does not relieve you from the responsibility of obtaining other federal, state, or local authorizations that may be required for the activity.

Please retain this letter. The activities may be inspected by authorized state personnel in the future to insure compliance with appropriate statutes and administrative codes. If the activities are not in compliance, you may be subject to penalties under Chapter 373, F.S., and Chapter 18-14, F.A.C.

If you have any questions, please contact Cindy Lott at (772) 467-5560 or by email at cynthia.lott@dep.state.fl.us. When referring to your project, please use the FDEP file name and number listed above.

Executed in Palm Beach County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Benny Luedike
Environmental Manager
Submerged Lands and Environmental
Resource Program

Enclosures:
Notice of Rights
Attachment A- Specific Exemption Rule
Attachment B- Newspaper Publication
Special Conditions for use of the SPGP Conditions
Project Drawings

Copies furnished to:
USACOE- Jacksonville, Geoffrey.M.Klug@usace.army.mil

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to 120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

1-23-14

Clerk Date

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rule 28-106.201, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, any email address, any facsimile number, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who has asked the Department for notice of agency action may file a petition within 14 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the

appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when the order is filed with the Clerk of the Department.

Judicial Review

Any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Attachment A

Chapter 62-330.051 Exempt Activities.
The activities meeting the limitations and restrictions below are exempt from permitting. However, if located in, on, or over state-owned submerged lands, they are subject to a separate authorization under Chapters 253 and 258, F.S., and Chapters 18-18, 18-20, and 18-21, F.A.C., as applicable.

(7) Maintenance and Restoration —

(a) Maintenance dredging under Section 403.813(1)(f), F.S.

And

Chapter 373.406 Exemptions.—The following exemptions shall apply:
(6) Any district or the department may exempt from regulation under this part those activities that the district or department determines will have only minimal or insignificant individual or cumulative adverse impacts on the water resources of the district. The district and the department are authorized to determine, on a case-by-case basis, whether a specific activity comes within this exemption. Requests to qualify for this exemption shall be submitted in writing to the district or department, and such activities shall not be commenced without a written determination from the district or department confirming that the activity qualifies for the exemption.

Attachment B **File No.: 31-0273920-007**

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF DETERMINATION OF EXEMPTION

The Department of Environmental Protection gives notice that the project to conduct a maintenance dredge of approximately 200,000 cu. yds. of spoil material (125 ft. wide by 42,715 ln. ft.) within the Intracoastal Waterway (ICWW), specifically within the "Indian River Reach 1" (extending from Sebastian Inlet south to Wabasso) to a maximum depth of minus 12 ft. mean low water plus 2 ft. of allowable over-depth. The dredge material shall be transported via a temporary 18 inch diameter pipeline between the channel and final placement of the material at the upland Dredge Material Management Area IR2 DMMA, including mixing zones and return water for water quality. The pipeline shall be routed from the ICWW via a previously identified corridor measuring 2,230 ft. x 50 ft. plus a 50 ft. buffer over submerged lands and 10 ft. x 50 ft. corridor over wetlands to the DMMA. The pipeline shall float on the surface or lay on the bottom and shall not require dredging or filling within the pipeline route. The project is located in the Indian River, Indian River-Malabar to Vero Beach Aquatic Preserve, Outstanding Florida Water, Class III Waters, adjacent to 10470 U.S. Highway 1(Section 17/31, Township 31/39 South, Range 39/17 East), in Indian River County and a portion in Brevard County (27° 47' 01.60"/27° 46' 46.66" North Latitude, 80° 26' 51.00"/80° 26' 51.18" West Longitude).

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Mediation is not available.

If a timely and sufficient petition for an administrative hearing is filed, other persons whose substantial interests will be affected by the outcome of the administrative process have the right to petition to intervene in the proceeding. Intervention will be permitted only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

In accordance with rule 62-110.106(3), F.A.C., petitions for an administrative hearing must be filed within 21 days of publication of the notice or receipt of written notice, whichever occurs first. Under rule 62-110.106(4) of the Florida Administrative Code, a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000 prior to the applicable deadline. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon. Upon motion by the requesting party showing that the failure to file a request for an extension of time before the deadline was the result of excusable neglect, the Department may also grant the requested extension of time.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition for an administrative hearing within the appropriate time period shall constitute a waiver of that right.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Under sections 120.569(2)(c) and (d) of the Florida Statutes, a petition for administrative hearing shall be dismissed by the agency if the petition does not substantially comply with the above requirements or is untimely filed.

Complete copies of all documents relating to this determination of exemption are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, at the Southeast District office, 400 North Congress Avenue, 3rd Floor, West Palm Beach, Florida 33401.

SPECIAL CONDITIONS FOR USE OF THE SPGP IV-Rl

1. The District Engineer reserves the right to require that any request for authorization under this general permit be evaluated as an Individual Permit. Conformance with the terms and conditions of the SPGP IV-Rl does not automatically guarantee authorization.

2. No activity is authorized under the SPGP IV-Rl which may impact a federally listed threatened or endangered species or a species proposed for such designation, or its designated critical habitat.

3. On a case-by-case basis the Corps may impose additional special conditions which are deemed necessary to minimize adverse environmental impacts.

4. Failure to comply with all conditions of the Federal authorizations under the SPGP IV- Rl would constitute a violation of the Federal authorization.

5. The SPGP IV-Rl is not applicable in the geographical boundaries of: Monroe County; the Timucuan Ecological and Historical Preserve (Duval County); the St. Mary's River, from its headwaters to its confluence with the Bells River; the Wekiva River from its confluence with the St. Johns River to Wekiwa Springs, Rock Springs Run from its headwaters at Rock Springs to the confluence with the Wekiwa Springs Run, Black Water Creek from the outflow from Lake Norris to the confluence with the Wekiva River; canals at Garfield Point including Queens Cove (St. Lucie County); the Loxahatchee River from Riverbend Park downstream to Jonathan Dickinson State Park; the St. Lucie Impoundment (Martin County); all areas regulated under the Lake Okeechobee and Okeechobee Waterway Shoreline Management Plan, located between St. Lucie Lock (Martin County) and W.P. Franklin Lock (Lee County); American Crocodile designated critical habitat (Miami-Dade and Monroe Counties); Johnson's seagrass designated critical habitat (southeast Florida); piping plover designated critical habitat (throughout Florida); acroporid coral designated critical habitat (southeast Florida); Anastasia Island, Southeastern, Perdido Key, Choctawhatchee, or St. Andrews beach mice habitat (Florida east coast and panhandle coasts); the Biscayne Bay National Park Protection Zone (Miami-Dade County); Harbor Isles (Pinellas County); the Faka Union Canal (Collier County); the Florida panther consultation area (Southwest Florida), the Tampa Bypass Canal (Hillsborough County); canals in the Kings Bay/Crystal River/Homosassa/Salt River system (Citrus County); Lake Miccosukee (Jefferson County).

6. No structure or work shall adversely affect or disturb properties listed in the National Register of Historic Places or those eligible for inclusion in the National Register. Prior to the start of work, the Applicant/Permittee or other party on the Applicant's/Permittee's behalf shall conduct a search of known historical properties by contracting a professional archaeologist, contacting the Florida Master Site File at 850-245-6440 or SiteFile@dos.state.fl.us. The Applicant/Permittee can also research sites in the National Register Information System (NRIS). Information can be found at http://www.cr.nps.gov/nr/research/.

   If, during the initial ground disturbing activities and construction work, there are archaeological/cultural materials unearthed (which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the permittee shall immediately stop all work in the vicinity and notify the Compliance and Review staff of the State Historic Preservation Office at 850-245-6333 and the Corps Regulatory Project Manager to assess the significance of the discovery and devise appropriate actions, including salvage operations. Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7.

   In the unlikely event that human remains are identified, they will be treated in accordance with Section 872.05, Florida Statutes; all work in the vicinity shall immediately cease and the local law authority, the State Archaeologist (850-245-6444), and the Corps Regulatory Project Manager shall immediately be

notified. Such activity shall not resume unless specifically authorized by the State Archaeologist and the Corps.

7. No work shall be authorized under the SPGP IV-Rl which proposes the use of prefabricated modules for habitat creation, restoration, or enhancement.

8. No activity shall be authorized under the SPGP IV-Rl which by its size or location may adversely impact water quality, fish and wildlife habitat, wetlands, or emergent or submerged aquatic vegetation. Where aquatic vegetation is present adverse impacts to aquatic vegetation from construction of piling-supported structures may be avoided/minimized by adherence to, or employing alternative construction techniques that provide a higher level of protection than, the protective criteria in the joint U.S. Army Corps of Engineers'/National Marine Fisheries Service's "Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat U.S. Army Corps of Engineers/National Marine Fisheries Service August 2001." (See http://www.saj.usace.army.mil/Divisions/Regulatorv/sourcebook.htm) Unless otherwise specifically approved by the National Marine Fisheries Service, where aquatic vegetation is present, piling-supported structures authorized under the SPGP IV-R1 must comply with, or provide a higher level of protection than, the criteria contained in the referenced construction guidelines. Additionally, because of concerns about adverse impacts to the endangered Johnson's seagrass *(Halophila johnsonii),* piling-supported structures in the lagoon (as well as canal) systems on Florida's east coast from Sebastian Inlet (Brevard County) south to and including central Biscayne Bay (Miami-Dade County) must also comply with, or provide a higher level of protection than, the criteria contained in the construction guidelines titled "Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's seagrass *(Halophila johnsonii)* National Marine Fisheries Service/U.S. Army Corps of Engineers - February 2002." (See http://vvww.saj.usace.army.mil/Divisions/Regulatorv/sourcebook.htm) *Note: Both of the Construction Guidelines may be subject to revision at any time. It is our intention that the most recent version of this technical tool will be utilized during the evaluation of each Department of the Army permit application.*

9. Prior to issuance of authorization, the dichotomous key titled "The Corps of Engineers, Jacksonville District, and the State of Florida Effect Determination Key for the Manatee in Florida," dated March 2011, will be used to determine potential manatee impacts. All projects determined to be "may affect" and certain multi-slip facilities determined to be "may affect, not likely to adversely affect" will be sent to the Corps for consultation with the U.S. Fish and Wildlife Service in accordance with the Endangered Species Act. *Note: The manatee key may be subject to revision at any time. It is our intention that the most recent version of this technical tool will be utilized during the evaluation of each Department of the Army permit application. The current version can be found on the Jacksonville District Regulatory Home Page at:* http://www.saj.usace.army.mil/Divisions/Regulatory/sourcebook.htm

10. For projects in waters accessible to sea turtles, Small tooth sawfish, Gulf sturgeon, or Shortnose sturgeon, the permittee will utilize the "Sea Turtle and Small tooth Sawfish Construction Conditions" (see http://www.saj.usace.army.mil/Divisions/Regulatorv/sourcebook.htm) and any added requirements, as appropriate for the proposed activity. *Note: These conditions may be subject to revision at any time. It is our intention that the most recent version of these conditions will be utilized during the evaluation of the permit application.*

11. With respect to bald eagles, the permittee should refer to the U.S. Fish and Wildlife Service's "National Bald Eagle Management Guidelines," dated May 2007 (see http://www.fws.gov/northflorida/BaldEagles/bald-eagles.htm) for guidance and clearance. *Note: The preceding should be considered an interim condition, after which, new rules may be promulgated. It is the Corps' intention that the most recently approved version of these conditions or ensuing rules will be utilized during the evaluation of permit applications under this general permit.*

12. For projects authorized under this SPGP IV-Rl in navigable waters of the U.S., the permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

13. The SPGP IV-R1 will be valid for five years from the date of issuance unless suspended or revoked by issuance of a public notice by the District Engineer. The Corps, in conjunction with the Federal resource agencies, will conduct periodic reviews to ensure that continuation of the pem1it during the five-year authorization period is not contrary to the public interest. If revocation occurs, all future applications for activities covered by the SPGP IV-R1 will be evaluated by the Corps.

14. If the SPGP IV-R1 expires or is revoked prior to completion of the authorized work, authorization of activities which have commenced or are under contract to commence in reliance upon the SPGP IV-Rl will remain in effect provided the activity is completed within 12 months of the date the SPGP IV-R1 expired or was revoked.

15. The General conditions attached hereto are made a part of this permit and must be attached to all authorizations processed under this permit.

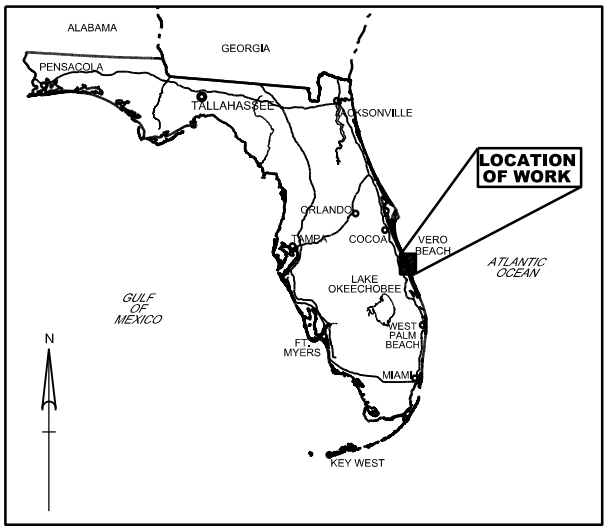
BY AUTHORITY OF THE SECRETARY OF THE ARMY:

for Alfred A. Pantano, Jr.
Colonel, U.S. Army
District Engineer

MAINTENANCE DREDGING - INTRACOASTAL WATERWAY JACKSONVILLE TO MIAMI, VICINITY OF INDIAN RIVER, FLORIDA

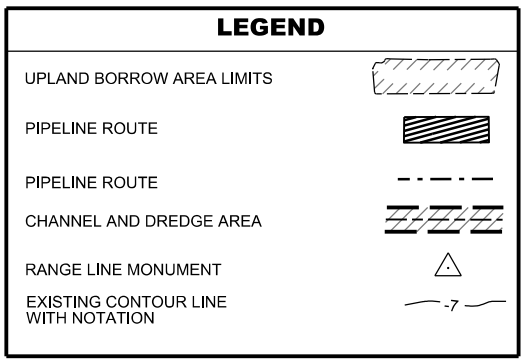
INDEX TO DRAWINGS

PLATE	TITLE
PL-01	GENERAL NOTES, INDEX TO DRAWINGS, LEGEND AND LOCATION MAP
PL-02	PROJECT VICINITY MAP
PL-03	DREDGE MATERIAL MANAGEMENT AREA OVERALL PLAN
PL-04	PIPELINE CORRIDOR PLAN



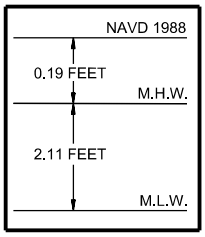
PROJECT LOCATION
N.T.S.

LEGEND



ABBREVIATIONS:

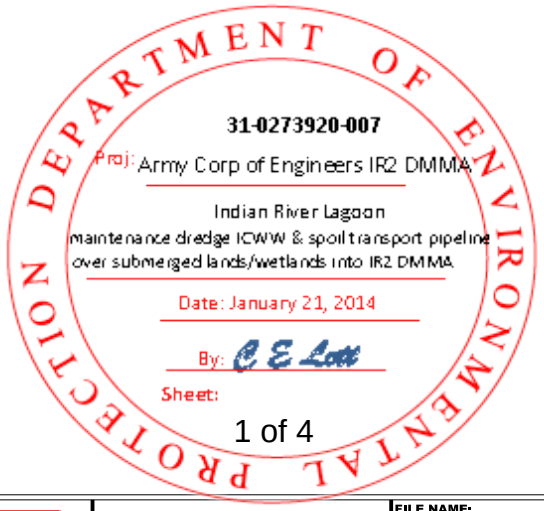
DMMA. = DREDGE MATERIAL MANAGEMENT AREA
DWG. = DRAWING
EL. = ELEVATION
FT. = FOOT/FEET
HWY. = HIGHWAY
MHW. = MEAN HIGH WATER
MLW. = MEAN LOW WATER
MLLW. = MEAN LOWER LOW WATER
NAVD88. = NORTH AMERICAN VERTICAL DATUM OF 1988
NTS. = NOT TO SCALE
TYP. = TYPICAL



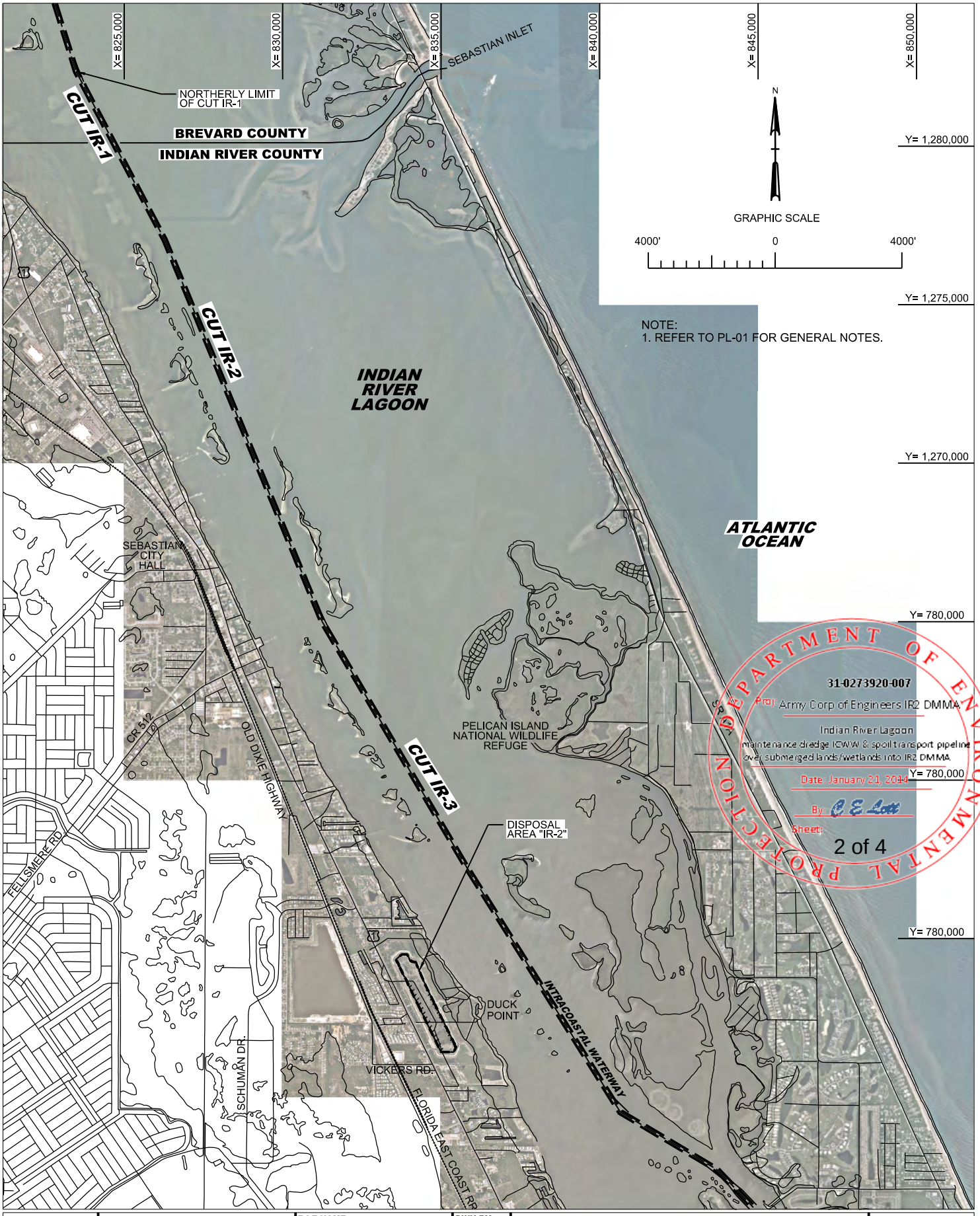
RELATIONSHIP BETWEEN NAVD 1988, NOAA MEAN HIGH WATER AND NOAA MEAN LOW WATER (1983-2001 TIDAL EPOCH) AS PUBLISHED AT NOAA TIDE GAUGE "SEBASTIAN INLET, FL" (8722004)

GENERAL NOTES:

1. THIS PROJECT WAS DESIGNED BY THE JACKSONVILLE DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152.
2. ALL PLANIMETRIC LAND FEATURES DEPICTED ON THESE PLATES ARE FOR INFORMATION ONLY AND WERE NOT PHYSICALLY LOCATED BY SURVEY UNLESS OTHERWISE INDICATED. NOT ALL EXISTING STRUCTURES ARE INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL SUCH FEATURES THAT HE/SHE DETERMINES ARE NECESSARY FOR OR AFFECT THE PERFORMANCE OF CONSTRUCTION OF THIS PROJECT.
3. THE AERIAL PHOTOGRAPHY SHOWN ON THESE PLATES IS FOR GENERAL INFORMATION ONLY AND NOT TO BE USED FOR MEASUREMENTS.
4. INDIAN RIVER - MALABAR TO VERO AQUATIC PRESERVE ENCOMPASSES ENTIRE PROJECT AREA. LIMITS NOT SHOWN ON PLATES.
5. NO CONSTRUCTION EQUIPMENT IS ALLOWED TO DISTURB PREVIOUSLY CONSTRUCTION MITIGATION AREA ADJACENT TO DMMA IR-2



US Army Corps of Engineers Jacksonville District	**WQC PERMIT PLATE** (NOT FOR CONSTRUCTION)	**FILE NAME:** IWWINRV14-PL-01.dgn	**DWN BY:** J.D.B.	MAINTENANCE DREDGING - INTRACOASTAL WATERWAY JACKSONVILLE TO MIAMI, VICINITY OF INDIAN RIVER, FLORIDA	**PLATE:** PL-01
	DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	**DATED:** APRIL 2013	**DSN BY:** J.D.B.	**WATER QUALITY CERTIFICATION PERMIT PLATES**	
		SCALE: AS SHOWN	**CKD BY:** S.R.C.	**GENERAL NOTES, ABBREVIATIONS, INDEX TO DRAWINGS, LEGEND AND LOCATION MAP**	OF 4



US Army Corps of Engineers Jacksonville District

WQC PERMIT PLATE
(NOT FOR CONSTRUCTION)

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

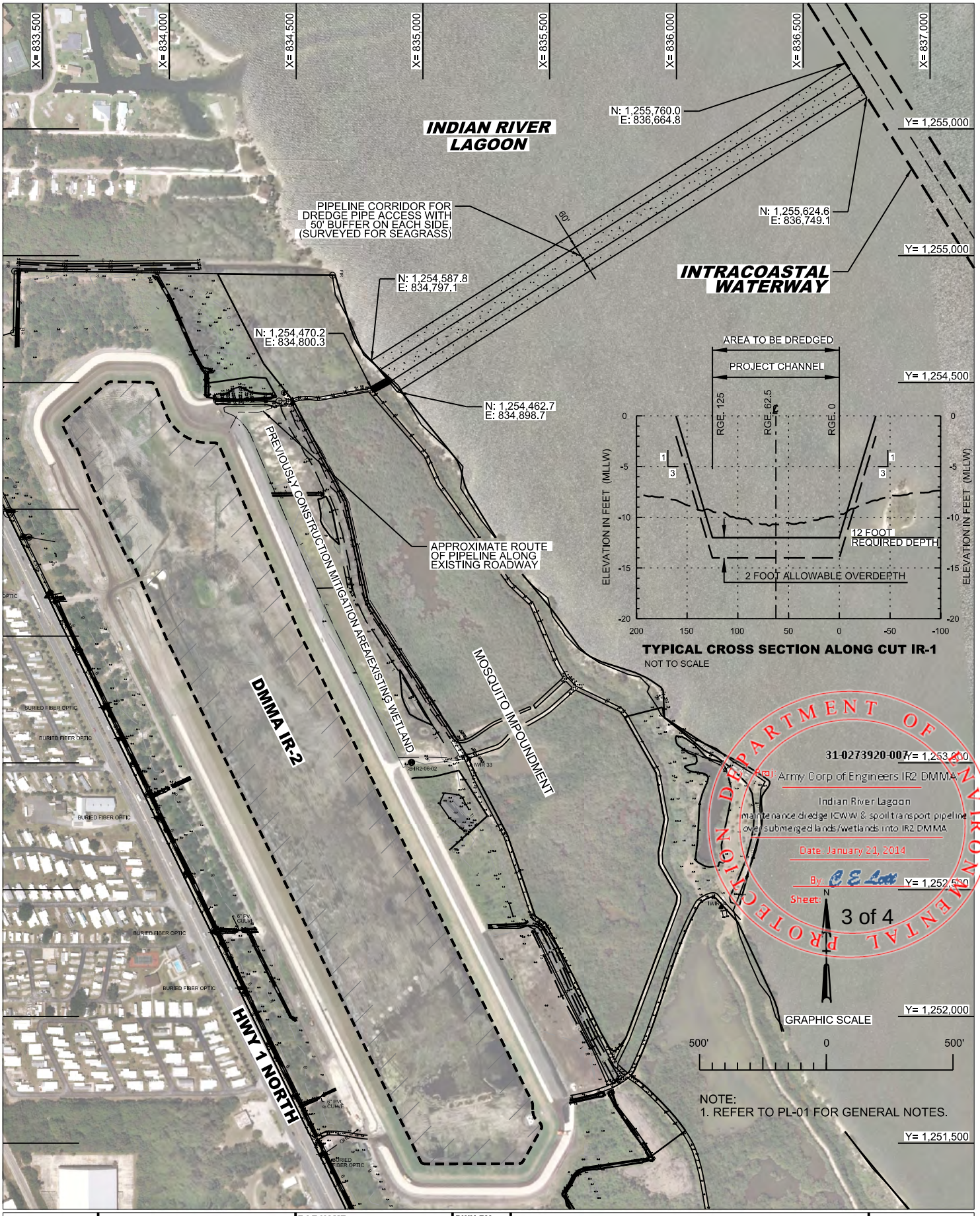
FILE NAME: IWWINRV14-PL-02.dgn	DWN BY: J.D.B.
DATED: APRIL 2013	DSN BY: J.D.B.
SCALE: AS SHOWN	CKD BY: S.R.C.

MAINTENANCE DREDGING - INTRACOASTAL WATERWAY
JACKSONVILLE TO MIAMI, VICINITY OF INDIAN RIVER, FLORIDA

WATER QUALITY CERTIFICATION PERMIT PLATES

VICINITY MAP

PLATE:
PL-02
OF 4



US Army Corps of Engineers Jacksonville District

WQC PERMIT PLATE
(NOT FOR CONSTRUCTION)

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

FILE NAME: IWWINRV14-PL-03.dgn	DWN BY: J.D.B.
DATED: APRIL 2013	DSN BY: J.D.B.
SCALE: AS SHOWN	CKD BY: S.R.C.

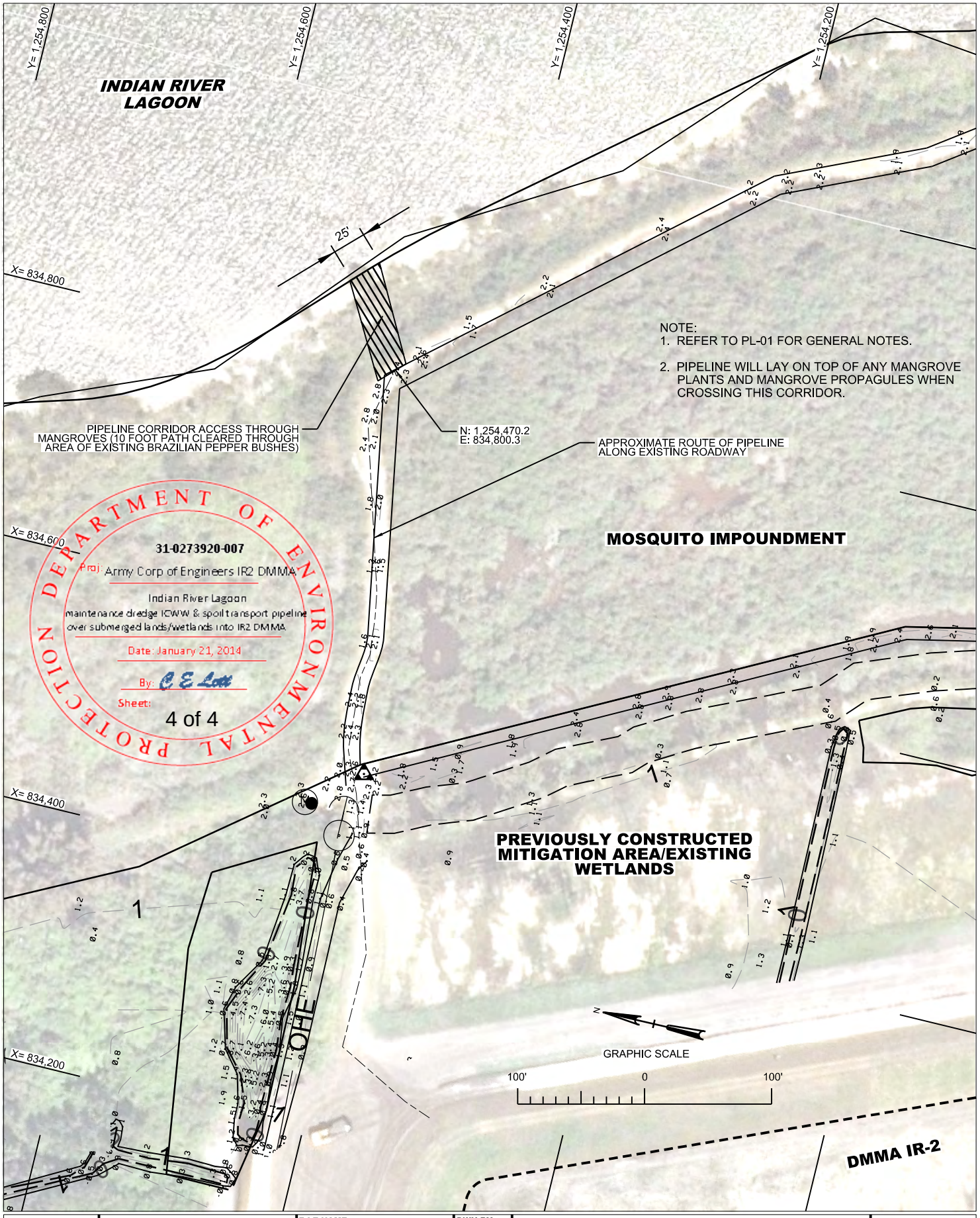
MAINTENANCE DREDGING - INTRACOASTAL WATERWAY
JACKSONVILLE TO MIAMI, VICINITY OF INDIAN RIVER, FLORIDA

WATER QUALITY CERTIFICATION PERMIT PLATES

DREDGE MATERIAL MANAGEMENT AREA OVERALL PLAN

PLATE: PL-03

OF 4



US Army Corps of Engineers Jacksonville District	**WQC PERMIT PLATE** (NOT FOR CONSTRUCTION) DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT, CORPS OF ENGINEERS JACKSONVILLE, FLORIDA	FILE NAME: IWWINRV14-PL-04.dgn DATED: APRIL 2013 SCALE: AS SHOWN	DWN BY: J.D.B. DSN BY: J.D.B. CKD BY: S.R.C.	MAINTENANCE DREDGING - INTRACOASTAL WATERWAY JACKSONVILLE TO MIAMI, VICINITY OF INDIAN RIVER, FLORIDA **WATER QUALITY CERTIFICATION PERMIT PLATES** **PIPELINE CORRIDOR PLAN**	**PLATE: PL-04** OF 4

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

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

Mr. Larry Williams
U. S. Fish & Wildlife Service
South Florida Ecological Services Office
1339 20th Street
Vero Beach, FL 32960

Dear Mr. Williams,

I am requesting informal consultation pursuant to Section 7 of the Endangered Species Act for the Maintenance Dredging of the Intracoastal Waterway (IWW) in Indian River County, Florida.

The U.S. Army Corps of Engineers (Corps), Jacksonville District, is proposing to conduct periodic maintenance dredging of the Indian River County, Florida portion of the IWW in the vicinity of Sebastian Inlet. This would include IWW Cuts IR-1 through IR-7 which extend from Sebastian Inlet southward approximately 8 miles to just south of the Wabasso Bridge (see Figure 1, Project Map). Dredged material would be placed in the previously constructed Dredged Material Management Area (DMMA) IR-2 located about 5.5 miles south of the Brevard/Indian River County line (about 1.6 miles north of Wabasso).

The preferred alternative consists of dredging the shoaled areas of the IWW channel to the authorized depth of 12 feet MLLW, with an allowable overdepth of 2 feet. The shoaling quantity to be dredged is approximately 430,000cy of fine, silty material and dredging would occur approximately every 5 to 10 years. It is most likely that a hydraulic cutterhead pipeline dredge would be used to complete this work which would take approximately 4-6 months.

s has determined that the proposed project may
endangered West Indian (Florida) manatee
made this determination based on
ıditions for in-water work in our plans and
e project will not affect designated critical habitat

U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, Florida 32960
772-562-3909 Fax 772-562-4288

FWS Log No. 2014-CPA-0065

The proposed action is not likely to adversely affect resources protected by the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et. seq.).

This fulfills the requirements of section 7 of the Act and further action is not required. If modifications are made to the project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

Victoria C. Foster
Larry Williams, State Supervisor

05/22/14
Date

USFWS SFESO Concurrence Justification Form

Worksheet must be completed with Supervisor Approval Prior to sending concurrence.

Project Name: IWW Dredging Reach 1	**FWS Fed Activity #:** 04EF2000-2014-CPA-0065
Project Location: IWW Cuts IR-1 to IR-7, Indian River County, Florida	**Lead Agency #:** NA (Corps civil works)
File Location: L:\Trust Resources\Coastal Construction Consultations\County Indian River\IWW Reach 1 Maintenance Dredging (2014-CPA-0065)	**Biologist:** Jeff Howe

Was GIS Check performed: ✓ **Yes** **Date:** 02/06/2014 ☐ **No** **If No, Why?** (please give a brief explanation of why GIS was not needed below).

The Corps is proposing to conduct periodic maintenance dredging of IWW Cuts IR-1 through IR-7 extending from Sebastian Inlet south approximately 8 miles to just south of the Wabasso bridge. Dredge material will be placed in the previously constructed Dredged Material Management Area IR-2 located approximately 1.6 miles north of Wabasso.

The project is located in an Important Manatee Area.

Species Present in Project Area and Determination made by Action Agency

Species	Determination	Species	Determination
West Indian manatee	MANLAA		

Justification for Concurrence (sticker recommended)

West Indian Manatee:

To reduce direct construction related effects to the manatee, the Corps will incorporate the Standard Manatee Conditions for In-water Work (Florida Fish and Wildlife Conservation Commission 2011) as a condition for carrying out the proposed project.

In addition, the following precautionary measures will be implemented.

1. The use of a clamshell dredge will be prohibited at night year round.
2. Only backhoe/excavator dredging activities will be permitted to take place 24 hours per day, except between November 15 and March 31, during which time these dredging activities will only be permitted during daylight hours.
3. Hydraulic dredging (cutter suction, hopper) activities will be permitted to take place 24 hours per day throughout the year.

Supervisor Questions/Notes

Jeffrey C. Howe	14 May 2014	Victoria A. Foster	05/22/14
Biologist Signature	**Date**	**Supervisor Signature**	**Date**