

PAHOKEE RESTORATION  
CONTINUING AUTHORITIES PROGRAM  
SECTION 1135 PROJECT  
FINAL INTEGRATED FEASIBILITY STUDY AND ENVIRONMENTAL  
ASSESSMENT

**APPENDIX E**  
**Pertinent Correspondence**



**US Army Corps  
of Engineers**  
Jacksonville District

**From:** [Stahl, Chris](#)  
**To:** [Donofrio, Kristen L CIV USARMY CESAJ \(US\)](#)  
**Cc:** [State Clearinghouse](#); [Barfield, Natalie](#); [Trisha Stone](#); "[FWC Conservation Planning Services](#)"  
**Subject:** [Non-DoD Source] State\_Clearance\_Letter\_For\_FL201802028249C\_Draft Integrated Feasibility Report/Environmental Assessment (IFR/EA) for the Pahokee Restoration Section 1135 CAP Project Located in Lake Okeechobee Near Pahokee, Palm Beach County  
**Date:** Monday, April 2, 2018 3:49:34 PM  
**Attachments:** [03-14-2018 Pahokee CAP IFR and EA Clearinghouse Memo.pdf](#)  
[2017-6015B-106-USACE-Pahokee.pdf](#)  
[Pahokee Restoration Section 1135 Draft IFR-EA 35497\\_030218.pdf](#)  
[#8249C Pahokee Restoration - SFWMD Comments 2-27-18.pdf](#)

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April 2, 2018

Kristen Scheler  
US Army Corps of Engineers  
P.O. BOX 4970  
Jacksonville, Florida 32232

RE: Department of the Army, Jacksonville District Corps of Engineers - Draft Integrated Feasibility Report/Environmental Assessment (IFR/EA) for the Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project Located in Lake Okeechobee Near Pahokee, Palm Beach County, Florida  
SAI # FL201802028249C

Dear Kristen:

Florida State Clearinghouse staff has reviewed the proposal under the following authorities: Presidential Executive Order 12372; § 403.061(42), 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 Department of Environmental Protection, South Florida Water Management District, Florida Department of State-Division of Historical Resources and the Florida Fish and Wildlife Conservation Commission have reviewed the proposed action and independently submitted comments. These have been attached to this letter and are incorporated hereto.

Based on the information submitted and minimal project impacts, the state has no objections to the subject project and, therefore, it is consistent with the Florida Coastal Management Program (FCMP). The state's final concurrence of the project's consistency with the FCMP will be determined during any environmental permitting processes, in accordance with Section 373.428, Florida Statutes.

Thank you for the opportunity to review the proposed plan. If you have any questions or need further assistance, please don't hesitate to contact me at (850) 717-9076.

Sincerely,

*Chris Stahl*

Chris Stahl, Coordinator  
Florida State Clearinghouse  
Florida Department of Environmental Protection  
2600 Blair Stone Road, M.S. 47  
Tallahassee, FL 32399-2400  
ph. (850) 717-9076  
[State.Clearinghouse@dep.state.fl.us](mailto:State.Clearinghouse@dep.state.fl.us)





DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

FEB 01 2018

Chris Stahl  
Coordinator  
Florida State Clearinghouse  
Florida Department of Environmental Protection  
2600 Blair Stone Road, M.S. 47  
Tallahassee, FL 32399

Dear Mr. Stahl:

Pursuant to the National Environmental Policy Act and the U.S. Army Corps of Engineers (Corps) Regulation (33 CFR 230.11), this letter constitutes the Notice of Availability of the Draft Integrated Feasibility Report/Environmental Assessment (IFR/EA) and Federal Consistency Determination (FCD) for the Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project located in Pahokee, Palm Beach County, Florida.

The following objectives have been developed for the Pahokee CAP Project based on problems, opportunities, goals, and federal and state objectives and regulations:

- Reduce the effects of wind during tropical storms and storm events in order to shelter a portion of the shoreline in lower Lake Okeechobee;
- Create an area suitable for vegetation, with associated habitat, of at least 1 acre;
- Create habitat for fisheries and birds within 5 years;
- Maintain or improve ecotourism; and
- Improve natural lake bottom conditions in the project or adjacent area within 5 years.

Restoration activities include the construction of two structures within Lake Okeechobee: a low profile island and a high profile island. The low profile island will be constructed at an elevation of 11.0-feet (ft.) North American Vertical Datum 1988 (NAVD 88). The high profile island includes construction of a terraced island with a lower elevation of 11.0-ft. NAVD 88 and a higher elevation of 13.0-ft NAVD 88. Both islands will consist of an interior mix of sand and finer silt sediment, surrounded by a sand berm for stability. The outer slopes will be armored with riprap.

The Draft IFR/EA, Proposed Finding of No Significant Impact, and associated appendices are available for your review on the Jacksonville District's Environmental planning website, under Palm Beach County:

<http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/>

The Corps has determined that the proposed federal action is consistent to the maximum extent practicable with the enforceable policies of Florida's Coastal Zone Management Program. The Corps respectfully requests a letter of concurrence with the FCD determination within 60 days of the date of this letter for the Pahokee CAP Project.

Questions or comments can be submitted to Kristen Scheler at the letterhead address, or via email to [Kristen.L.Scheler@usace.army.mil](mailto:Kristen.L.Scheler@usace.army.mil) within 60 days from the date of this Notice of Availability. Ms. Scheler may also be reached by telephone at 904-232-2918.

Sincerely,



Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch

**FLORIDA COASTAL ZONE MANAGEMENT PROGRAM  
FEDERAL CONSISTENCY EVALUATION PROCEDURES**

**PAHOKEE RESTORATION  
SECTION 1135 CONTINUING AUTHORITIES PROGRAM (CAP) PROJECT  
PAHOKEE, PALM BEACH COUNTY, FLORIDA**

1. Chapter 161, Beach and Shore Preservation. The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes.

RESPONSE: The proposed plans and information will be submitted to the State in compliance with this chapter.

2. Chapters 186 and 187, State and Regional Planning. These chapters establish the State Comprehensive Plan which sets goals that articulate a strategic vision of the State's future. Its purpose is to define in a broad sense, goals, and policies that provide decision-makers directions for the future and provide long-range guidance for an orderly social, economic and physical growth.

RESPONSE: The proposed project will be coordinated with Federal, State and local agencies during the planning process. The project meets the primary goal of the State Comprehensive Plan through preservation and protection of the shorefront development and infrastructure.

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 will not affect the public peace, health and safety. Therefore, this project would be consistent with the efforts of Division of Emergency Management.

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

RESPONSE: The proposed project will be coordinated with Federal, State and local agencies during the planning process. All proposed work will avoid or minimize impacts to resources within submerged state lands. Appropriate protective measures will be implemented where necessary. The proposed project will 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: No land acquisition is proposed in this project.

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: There are no state parks or preserves that occur within or along the project area.

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

RESPONSE: On December 22, 2017, in accordance with Section 106 of the NHPA, as amended, and its implementing regulations (36 CFR Part 800), USACE consulted with the State Historic Preservation Office (SHPO) and appropriate federally-recognized tribes regarding the need for a submerged cultural resources survey of the potential project areas. Consultation is ongoing with the Florida SHPO and appropriate Federally-recognized tribes, and will be concluded prior to project implementation.

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: One objective of the study is to maintain or improve eco-tourism. The proposed project may result in improved eco-tourism. Therefore, the project is consistent with the goals of this chapter.

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

RESPONSE: No public transportation systems will be affected 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 project will be constructed in Lake Okeechobee, a freshwater system. The project will not have any effect on anadromous fish or other saltwater or estuarine species.

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

RESPONSE: Implementation of the proposed project will reduce the effects of wind during storm events and provide protection to a portion of the shoreline in lower Lake Okeechobee. In addition, construction of the eco-islands will create habitat for fisheries, flora, and fauna as well as improve natural lake bottom conditions in the project area. The project is consistent with the goals of this chapter.

12. Chapter 373, Water Resources. This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

RESPONSE: This project does not involve water resources as described by this chapter.

13. Chapter 376, Pollutant Spill Prevention and Control. This chapter regulates the transfer, storage, and transportation of pollutants and the cleanup of pollutant discharges.

RESPONSE: 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 and therefore, this chapter does not apply.

15. Chapter 380, Environmental Land and Water Management. This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development.

RESPONSE: The proposed project may have positive long term regional impacts due to the creation of flora and fauna habitat and improved water quality from the creation of the eco-islands. The project is consistent with the goals of this chapter.

16. Chapter 388, Arthropod Control. This chapter provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the state.

RESPONSE: The project will not further the propagation of mosquitoes or other pest arthropods.

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

RESPONSE: Environmental protection measures will be implemented to ensure that no lasting adverse effects on water quality, air quality, or other environmental resources will occur. Coordination with the Florida Department of Environmental Protection will occur prior to construction. The project complies with the intent of this chapter.

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

RESPONSE: The proposed project is not expected to occur near or on agricultural lands; therefore, this chapter does not apply.



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

FEB 01 2018

Palm Beach County Libraries  
Loula V. York Branch  
525 Bacom Point Road  
Pahokee, FL 33476

Dear Librarian:

Enclosed is a copy of the Draft Integrated Feasibility Report/Environmental Assessment (IFR/EA) for the Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project located in Pahokee, Palm Beach County, Florida. The following objectives have been developed for the Pahokee CAP Project based on problems, opportunities, goals, and Federal and state objectives and regulations:

- Reduce the effects of wind during tropical storms and storm events in order to shelter a portion of the shoreline in lower Lake Okeechobee;
- Create an area suitable for vegetation, with associated habitat, of at least 1 acre;
- Create habitat for fisheries and birds within 5 years;
- Maintain or improve ecotourism; and
- Improve natural lake bottom conditions in the project or adjacent area within 5 years.

Restoration activities include the construction of two structures: a low profile island and a high profile island. The low profile island will be constructed at an elevation of 11.0-foot (ft.) North American Vertical Datum 1988 (NAVD 88). The high profile island includes construction of a terraced island with a lower elevation of 11.0-ft. NAVD 88 and a higher elevation of 13.0-ft NAVD 88. Both islands will consist of an interior mix of sand and finer silt sediment, surrounded by a sand berm for stability. The outer slopes will be armored with riprap.

The proposed project would occur within the Lake Okeechobee area that resides in Palm Beach County, Florida. This Draft IFR/EA and associated documents are being provided for public review pursuant to the National Environmental Policy Act and the U.S. Army Corps of Engineers (Corps) regulations at 33 CFR 230.11. We request that you make the copy available for public viewing in the reference section of your library for a period of 60 days, after which the copy of the report may be disposed.

Thank you for your assistance in this matter. If you have any questions or need further information, please contact Kristen Scheler at 904-232-2918.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gina Paduano Ralph', written in a cursive style.

Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch

Encl



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

FEB 01 2018

To Whom It May Concern:

Pursuant to the National Environmental Policy Act and the U.S. Army Corps of Engineers (Corps) Regulation (33 CFR 230.11), this letter constitutes the Notice of Availability of the Draft Integrated Feasibility Report/Environmental Assessment (IFR/EA) for the Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project located in Pahokee, Palm Beach County, Florida.

The following objectives have been developed for the Pahokee CAP Project based on problems, opportunities, goals, and federal and state objectives and regulations:

- Reduce the effects of wind during tropical storms and storm events in order to shelter a portion of the shoreline in lower Lake Okeechobee;
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The Draft IFR/EA, Proposed Finding of No Significant Impact, and associated appendices are available for your review on the Jacksonville District's Environmental planning website, under Palm Beach County:

<http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/>

A hard copy of the report is also available at the following library:

Palm Beach County Library  
Loula V. York Branch  
525 Bacom Point Road  
Pahokee, FL 33476

Questions or comments can be submitted to Kristen Scheler at the letterhead address, or via email to [Kristen.L.Scheler@usace.army.mil](mailto:Kristen.L.Scheler@usace.army.mil) within 30 days from the date of this Notice of Availability. Ms. Scheler may also be reached by telephone at 904-232-2918.

Sincerely,



Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

JAN 26 2018

Roxanna Hinzman  
Field Supervisor  
South Florida Ecological Services Field Office  
U.S. Fish and Wildlife Service  
1339 20<sup>th</sup> Street  
Vero Beach, FL 32960

Dear Ms. Hinzman:

In order to comply with Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Army Corps of Engineers, Jacksonville District (Corps), respectfully requests a letter of concurrence from the U.S. Fish and Wildlife Service (USFWS) for the Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project located in Pahokee, Palm Beach County, Florida.

The Pahokee Restoration project is an environmental restoration project under Section 1135 of CAP. Restoration activities include the construction of two structures: a low profile island and a high profile island.

Corps has determined that the proposed project will have no effect to the Everglade snail kite (*Rostrhamus sociabilis plumbeus*), Florida bonneted bat (*Eumops floridanus*), Northern crested caracara (*Caracara cheriway*), Wood stork (*Mycteria americana*) or Okeechobee gourd (*Cucurbita okeechobeensis* ssp. *okeechobeensis*).

Corps has determined that the proposed project may affect, but is not likely to adversely affect the Eastern indigo snake (*Drymarchon corais couperi*), Florida panther (*Puma (=felis) concolor coryi*) or West Indian (Florida) manatee (*Trichechus manatus latirostris*).

Included with this letter is additional information describing the project background, project location and proposed action, listed species under USFWS jurisdiction, potential effects to listed species, and efforts to eliminate/avoid impacts?

Corps respectfully requests that USFWS provide a letter of concurrence with our may affect determinations within 30 days of the receipt of this letter. If you have any questions, or need additional information, please contact Kristen Scheler by email [Kristen.L.Scheler@usace.army.mil](mailto:Kristen.L.Scheler@usace.army.mil) or telephone 904-232-2918. Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gina Paduano Ralph', written in a cursive style.

Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch

Encl

## **Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project**

In order to comply with Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Army Corps of Engineers (USACE), Jacksonville District, respectfully requests a letter of concurrence within 30 days of the date of this letter from the U.S. Fish and Wildlife Service (USFWS) on the Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project.

Pursuant to this request, USACE is providing the following information:

- Description of the Project Background;
- Description of the Project Location and Proposed Action;
- Listed Species Under USFWS Jurisdiction;
- Potential Effects to Listed Species and Efforts to Eliminate/Avoid Impacts; and
- Effect Determination.

### **Description of the Project Background**

Herbert Hoover Dike (HHD), which surrounds Lake Okeechobee, has altered the historic ecosystem of the shoreline in the project area. Before HHD was constructed, the southeastern shore of Lake Okeechobee contained a gentle slope into deeper waters, resulting in a shallow area along the shoreline. This shallow area provided the optimum depth to support littoral zone vegetation and served as a natural breakwater, allowing vegetation to take root. The vegetation provided foraging and breeding habitat for aquatic and terrestrial species. The natural wind and wave break also minimized sediment re-suspension. Construction of HHD resulted in a shoreline with scarce vegetation and a deeper shoreline more susceptible to intense wind and wave energy that is not suitable for the re-establishment of vegetation. As a result, the southeast shore where Pahokee is located is now characterized by a steep slope into deep water, sparse upland and aquatic vegetation, no littoral zone or animal habitat, and turbid water.

The following objectives were developed for the Pahokee Restoration Project based on problems, opportunities, goals, and Federal and state objectives and regulations:

- Reduce the effects of wind during tropical storms and storm events in order to shelter a portion of the shoreline in lower Lake Okeechobee;
- Create an area suitable for vegetation, with associated habitat, of at least 1 acre;
- Create habitat for fisheries and birds within 5 years;
- Maintain or improve ecotourism;
- Improve natural lake bottom conditions in the project or adjacent area within 5 years.

### **Description of the Project Location and Proposed Action**

The Pahokee Project will be located in Lake Okeechobee near Pahokee in Palm Beach County, Florida (see **Figure 1** and **Figure 2**).

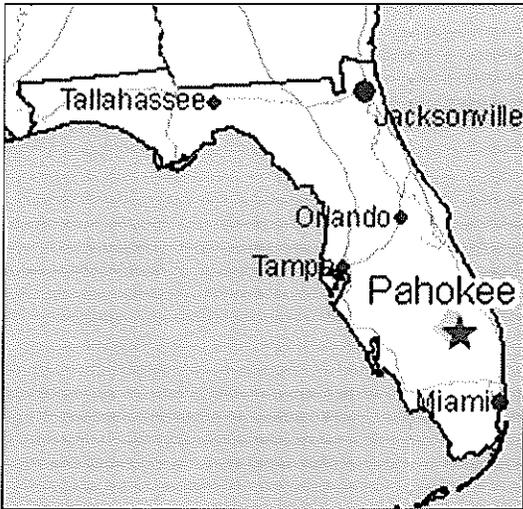


Figure 1. Project location, vicinity (Pahokee, Palm Beach County, Florida).



Figure 2. Project location, zoomed (Pahokee, Palm Beach County, Florida).

The Recommended Plan consists of the construction of two structures: a low profile island and a high profile island. The low profile island will be constructed at an elevation of 11.0-feet (ft) North Atlantic Vertical Datum of 1988 (NAVD88). The high profile island includes construction of a terraced island with a lower elevation of 11.0-ft NAVD88 and a higher elevation of 13.0-ft NAVD88. Both islands will consist of an interior mix of sand and finer silt sediment, surrounded by a sand berm for stability. The outer slopes will be armored with riprap (see Figure 3).

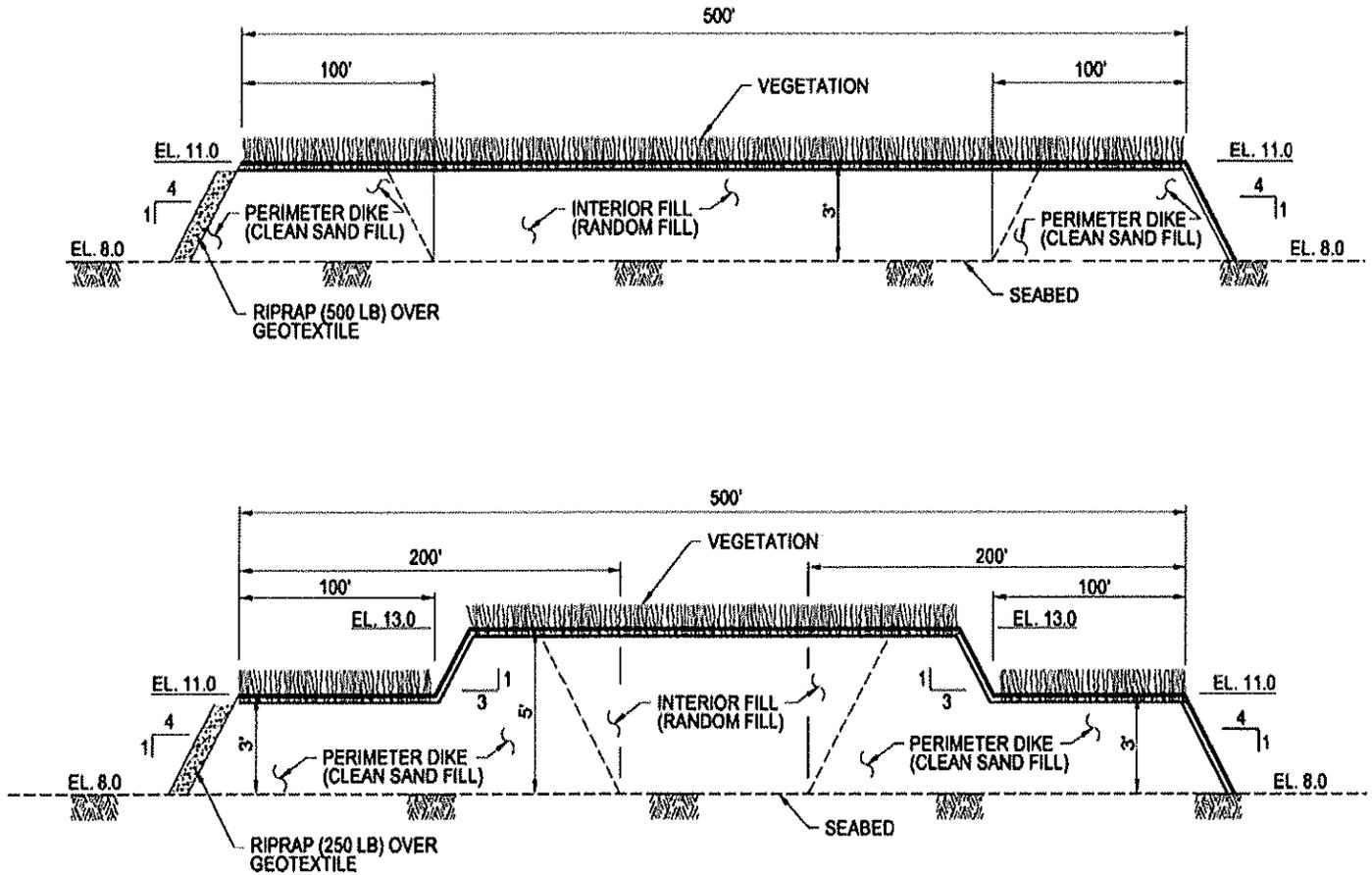


Figure 3. Profiles of the Recommended Plan's low and high profile islands.

### Listed Species Under USFWS Jurisdiction

Listed species and designated critical habitat which may occur in the vicinity of the proposed work and are under the jurisdiction of the USFWS include the following:

**Table 1. Status of USFWS threatened and endangered species within the project vicinity and USACE's affect determination.**

Common Name	Scientific Name	Status	May Affect	No Effect
<b>Mammals</b>				
Florida panther	<i>Puma (=felis) concolor coryi</i>	E	✓	
West Indian (Florida) manatee	<i>Trichechus manatus latirostris</i>	T	✓	
Florida bonneted bat	<i>Eumops floridanus</i>	E		✓
<b>Birds</b>				
Everglade snail kite	<i>Rostrhamus sociabilis plumbeus</i>	E		✓
Audubon's crested caracara	<i>Polyborus plancus audubonii</i>	T		✓
Wood stork	<i>Mycteria americana</i>	T		✓
<b>Reptiles</b>				
Eastern indigo snake	<i>Drymarchon corais couperi</i>	T	✓	
<b>Plants</b>				
Okeechobee gourd	<i>Cucurbita okeechobeensis</i> ssp. <i>okeechobeensis</i>	E		✓

T = Threatened                      E = Endangered

**Table 2. Status of USFWS designated critical habitat within the project vicinity and USACE's affect determination.**

Designated Critical Habitat	Status	May Affect	No Effect
Everglade snail kite; Florida population	Final		✓
West Indian (Florida) manatee; Entire population	Final		✓

### Potential Effects to Listed Species and Efforts to Eliminate/Avoid Impacts:

#### “No Effect” Determinations

##### Everglade snail kite (*Rostrhamus sociabilis plumbeus*)

The Everglade snail kite is listed as an endangered species by both the USFWS and the state of Florida. Although previously located in freshwater marshes over a considerable area of peninsular Florida, the range of the snail kite is now limited to several impoundments on the headwaters of the St. John's River, the southwest side of Lake Okeechobee, the eastern and southern portions of Water Conservation Areas (WCAs) 1, 2A, and 3, the southern portion of WCA 2B, the western edge of WCA 3B, and the northern portion of ENP. The snail kite inhabits relatively open freshwater marshes that support adequate populations of apple snail (*Pomacea* sp.), upon which it feeds almost exclusively. Favorable areas consist of extensive shallow, open water such as sloughs and flats, vegetated by sawgrass (*Cladium jamaicense*) and spike rush. The areas are often interspersed with tree islands or small groups of scattered shrubs and trees that serve as perching and nesting sites. The water level must be sufficiently stable to prevent

loss of the food supply through drying out of the surface. The project is not located in or near Everglade snail kite critical habitat, which was designated on August 11, 1977 and consists of the western littoral marsh on Lake Okeechobee (Figure 4). Critical habitat is vulnerable to lake water levels that can impact vegetation important for the production of apple snails.

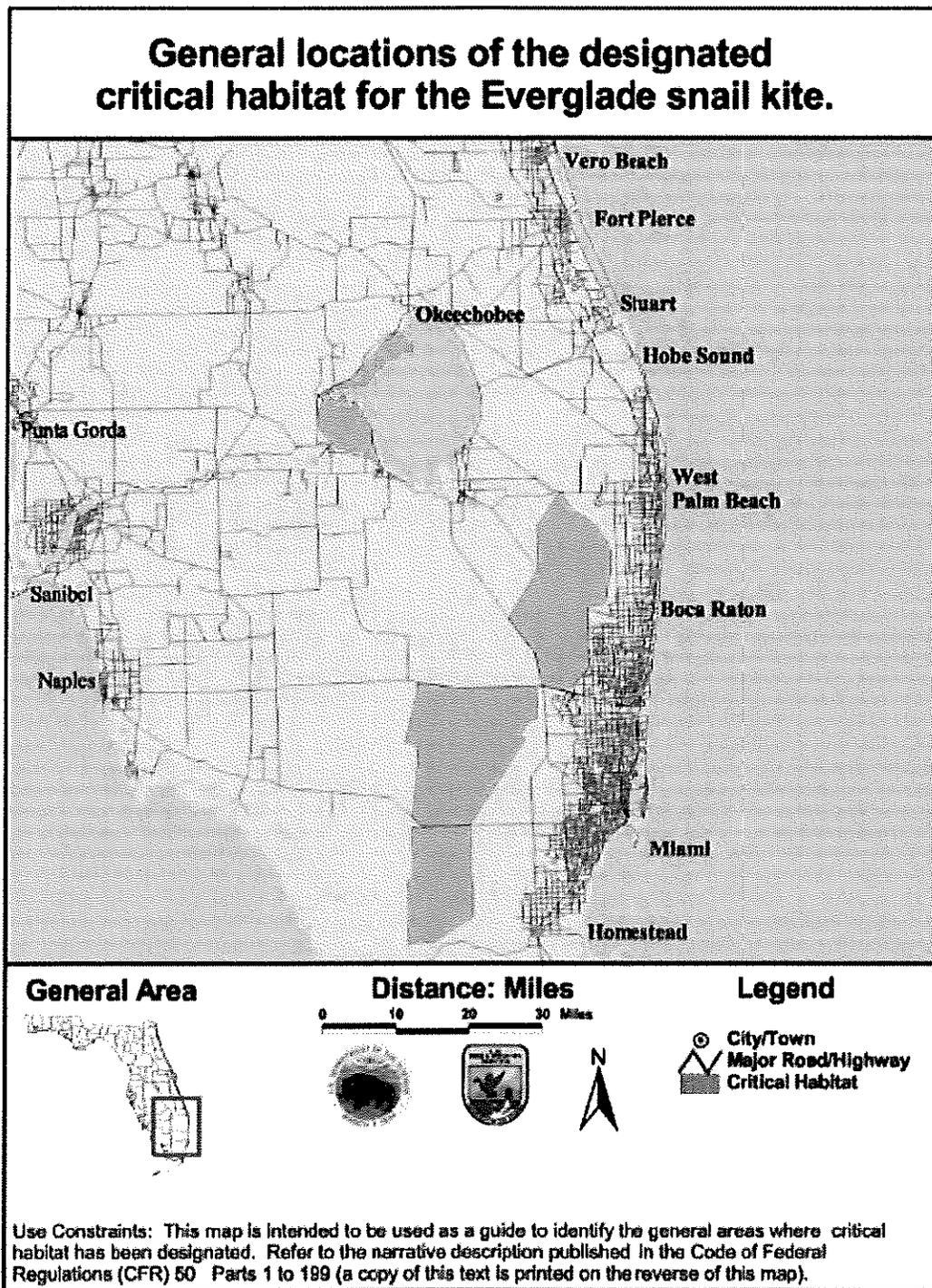


Figure 4. Snail kite designated critical habitat.

The Recommended Plan consists of in-water construction, sand mining, and transit from the sand mine to the project site. It is unlikely that these activities would affect the Everglade snail kite; however, construction of the Recommended Plan may benefit the Everglade snail kite critical habitat. Snail kite nesting locations were documented between 2002-2012 (**Figure 5**). Several sites were documented just south of the proposed project area. The Pahokee eco-islands will result in the creation of foraging, perching, and nesting sites that could be used by the Everglade snail kite.

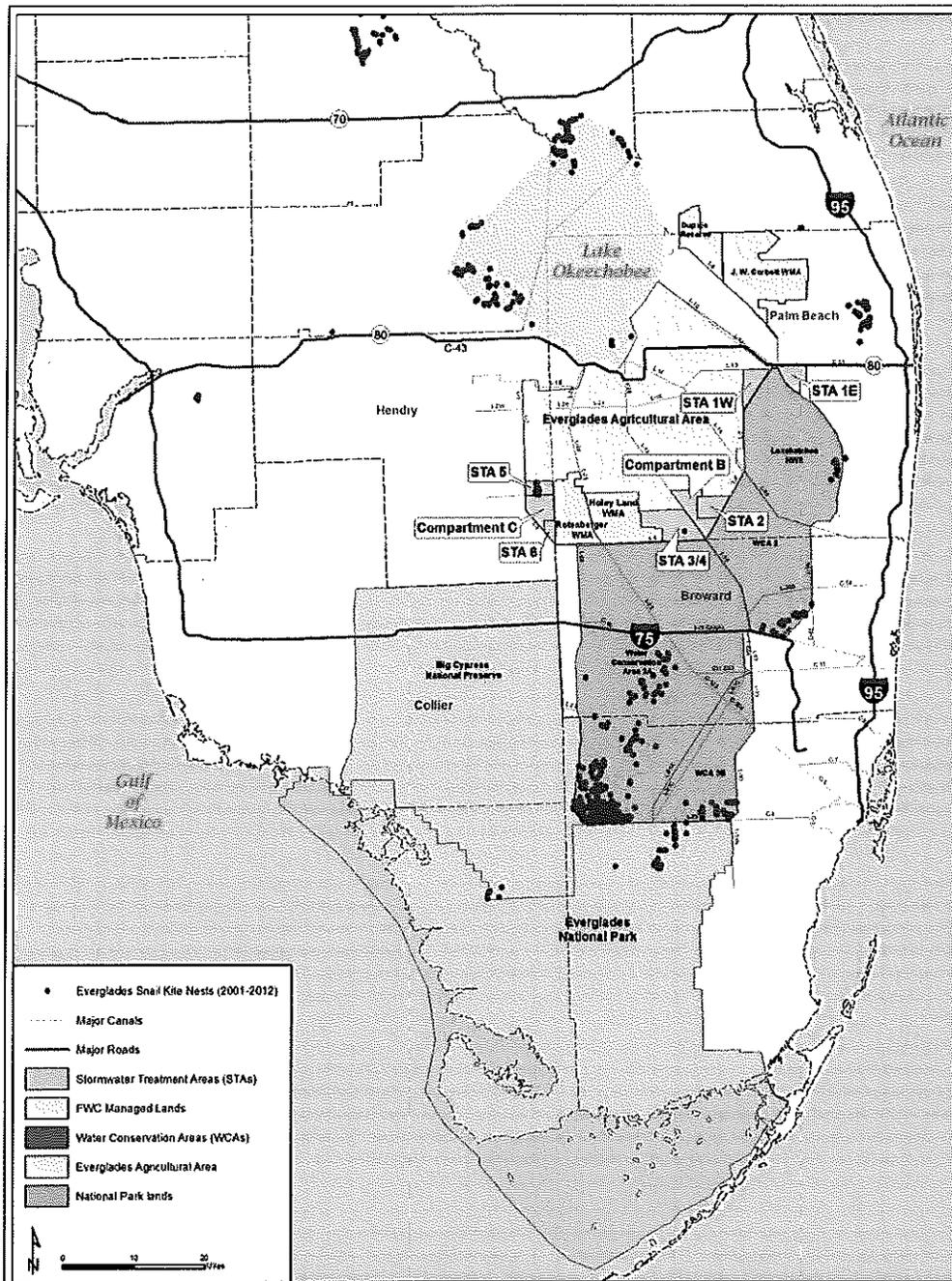


Figure 5. Snail kite nesting locations 2002-2012.

#### Florida bonneted bat (*Eumops floridanus*)

The Florida bonneted bat is Florida's largest bat, weighing approximately 1.1 to 2.0 ounces, with a 19 to 21 inch wingspan, and a body length of 5.1 to 6.5 inches. The species has dark brown fur and large broad ears that join together and slant forward over the eyes. Relatively little is known regarding the ecology and habitat requirements of this species. The diet of the Florida bonneted bat primarily consists of flying insects. In general, bats will forage over ponds, streams, and wetlands, and require roosting habitat for daytime roosting, protection from predators, and rearing of young (FWC 2011). Florida bonneted bats roost in tree cavities, rocky outcrops, and dead palm fronds. In residential communities, the bats roost in Spanish tile roofs, but have also been found in attics, rock or brick chimneys, and fireplaces of old buildings (FWC 2011). Colonies are small, with the largest reported as just a few dozen individuals. The bat is a nocturnal insectivore and relies upon echolocation to navigate and detect prey.

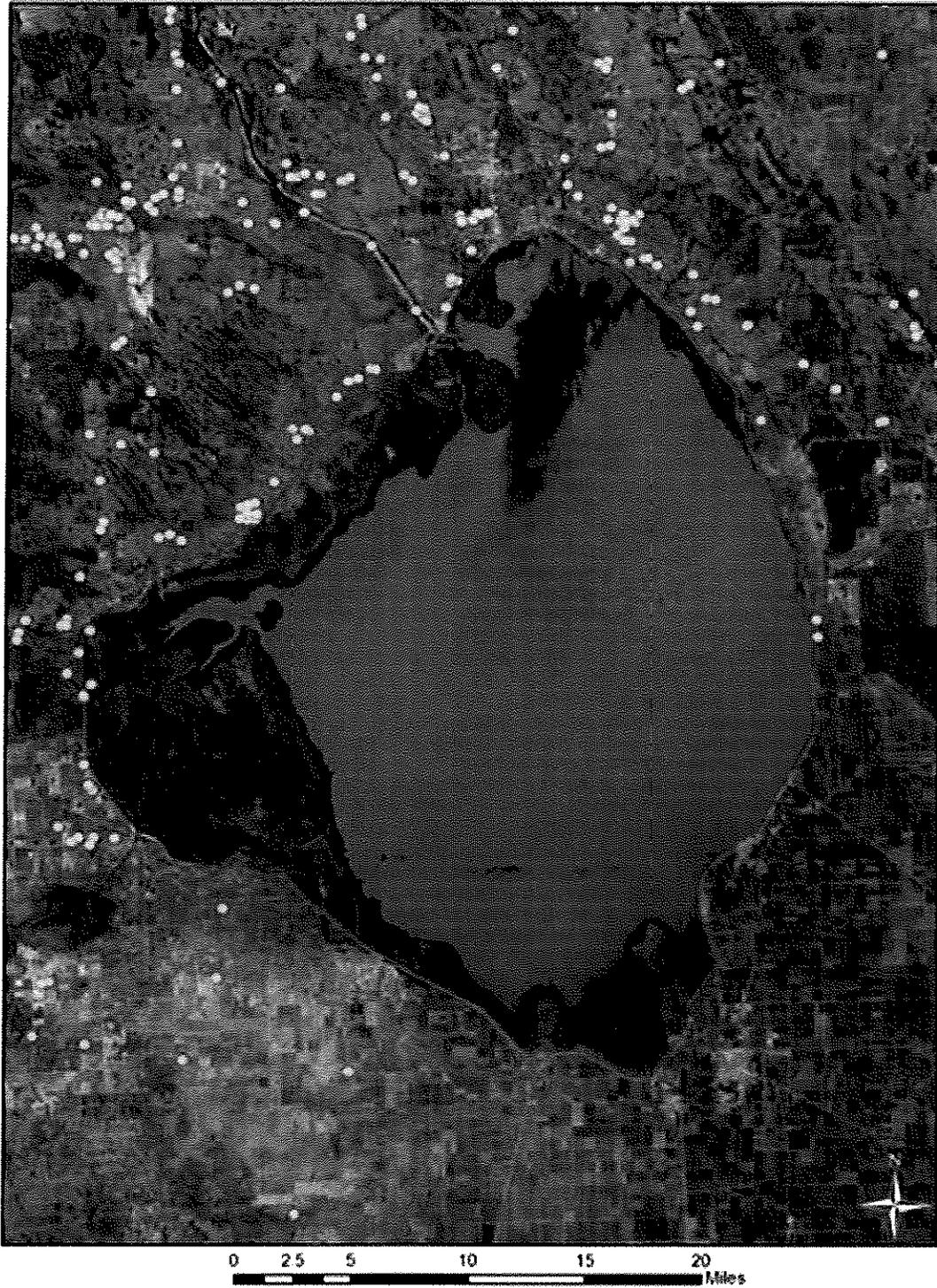
The Recommended Plan consists of in-water construction, sand mining, and transit from the sand mine to the project site. It is unlikely that these activities would affect the Florida bonneted bat; however, construction of the Recommended Plan may result in the creation of insect foraging opportunities due to improved vegetation habitat.

#### Audubon's crested caracara (*Polyborus plancus audubonii*)

The caracara is a long-lived, unique raptor scavenger in the family Falconidae that occurs in the south-central region of the state of Florida. The Florida population commonly occurs in the dry or wet prairie areas, preferably nesting in cabbage palms (*Sabal palmetto*) surrounded by low ground cover and low amounts of tall or shrubby vegetation. Monitoring suggests there are three specific congregation areas in south-central Florida, however, the particular habitat values of these areas have not been evaluated. Breeding behavior is relatively unknown, but most reproductive activity occurs in the winter dry season. Caracaras are one of the first of Florida's raptors to begin nesting, laying two to three eggs as early as late September through April.

The caracara is an opportunistic feeder, eating carrion as well as live prey items such as insects, invertebrates, fish, small reptiles and amphibians, and small mammals. Hunting takes place from perches or while in flight. Caracaras also attack or harass other avian species to steal their food. While the greatest abundance is located north and west of Lake Okeechobee, Audubon's crested caracara have been documented to nest near the lake but not near the project site and not inside the lake (see **Figure 6**).

**Caracara nests and observations**



**Figure 6. Caracara nests around Lake Okeechobee.**

The Recommended Plan consists of in-water construction, sand mining, and transit from the sand mine to the project site. It is unlikely that these activities would affect the caracara.

Wood stork (*Mycteria americana*)

Wood storks (*Mycteria americana*) can grow up to 50 inches tall with a wingspan of up to 65 inches. Mainly white in color, the wood stork has an unfeathered head and neck that are dark gray in color. The wood stork is a colonial species and nests in large rookeries, primarily in cypress or mangrove swamps located in South Florida in the Everglades. Wood storks have a particularly unique feeding technique and require high concentrations of prey more so than other wading birds. Feeding occurs in flocks in freshwater marshes, narrow tidal creeks, or flooded tidal pools with the diet consisting mainly of small fish from 1-6 inches long and in water that is 6-10 inches deep. Depressions in marshes or swamps where fish become concentrated are particularly preferred feeding sites. This species status was upgraded from endangered to threatened under the ESA on June 30, 2014. No critical habitat has been designated for the wood stork; therefore, none will be affected. Additionally, no nesting or foraging sites have been identified in or around the project vicinity (see **Figure 7**).

The Recommended Plan consists of in-water construction, sand mining, and transit from the sand mine to the project site. It is unlikely that these activities would affect the wood stork; however, construction of the Recommended Plan may benefit the species through the creation of habitat that could be used by the wood stork for foraging, perching, and/or nesting sites.



Wood Stork Nesting Sites

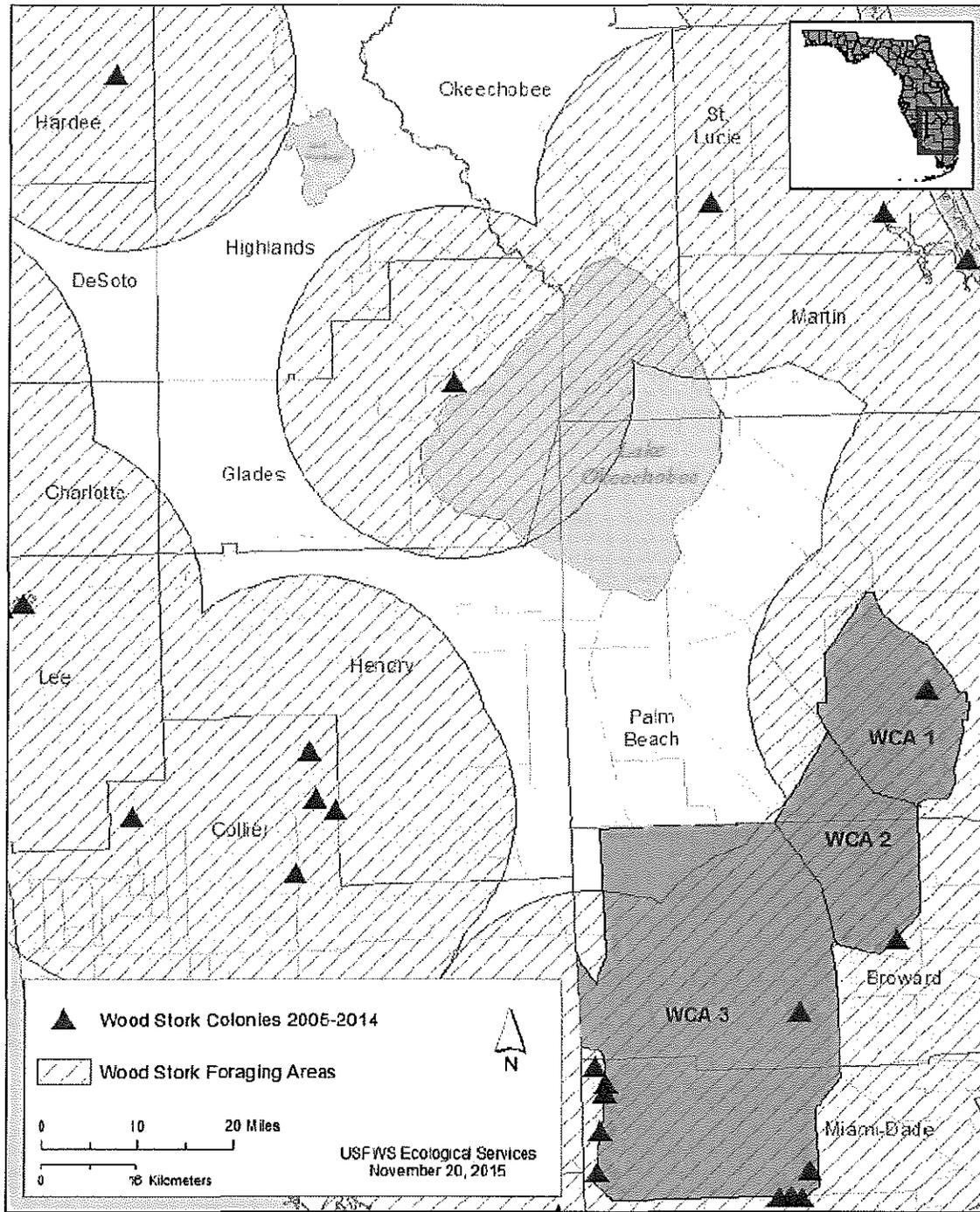


Figure 7. Wood stork nesting sites and foraging areas around Lake Okeechobee.

Okeechobee gourd (*Cucurbita okeechobeensis* ssp. *okeechobeensis*)

The endangered Okeechobee gourd is a climbing annual or perennial vine possessing heart to kidney-shaped leaf blades. The cream-colored flowers are bell-shaped and the light green gourd is globular or slightly oblong. The Okeechobee gourd was locally common in the extensive pond apple forests that once grew south of Lake Okeechobee. Historically, the Okeechobee gourd was found on the southern shore of Lake Okeechobee in Palm Beach County and in the Everglades. The conversion of the pond apple forested swamps and marshes for agricultural purposes as well as water-level regulation within Lake Okeechobee have been the principal causes of the reduction in both range and number of the Okeechobee gourd. Walters and Decker-Walters (1991) concluded fluctuations in lake level are necessary to maintain viable healthy populations. High lake levels facilitate dispersal and inundate and destroy aggressive weeds in local habitats. As lake levels decrease, the cleared open habitats allow the quickly germinating Okeechobee gourd seeds to sprout and begin climbing before they have to compete with other pioneer species. Similarly, artificially disturbed sites can provide suitable habitat in some circumstances.

The Recommended Plan consists of in-water construction, sand mining, and transit from the sand mine to the project site. It is unlikely that these activities would affect Okeechobee gourd in the vicinity; however, construction of the Recommended Plan will result in the creation of favorable habitat that could be used by the Okeechobee gourd.

**Potential Effects to Listed Species and Efforts to Eliminate/Avoid Impacts:  
“May Affect” Determinations**

Eastern indigo snake (*Drymarchon corais couperi*)

The Eastern indigo snake is the largest non-venomous snake in North America, reaching lengths of up to 2.6 meters. The snakes are glossy black with iridescent blue highlights that are visible in natural light except for a red or cream color on the chin, throat, and sometimes cheeks. The Eastern indigo snake was listed as endangered in 1978. No areas have been specifically designated or identified as critical habitat, however, the species is generally active and lives in a variety of habitats throughout Florida. In South Florida, the Eastern indigo snake is thought to be widely distributed. Eastern indigo snakes need relatively large areas of undeveloped land to maintain their population and is especially vulnerable to habitat fragmentation that makes travel between suitable habitats difficult. As habitats become fragmented by roads, Eastern indigo snakes become increasingly vulnerable to highway mortality as they travel through their large territories (Schaefer and Junkin 1990). Given their preference for upland habitats, Eastern indigo snakes are not commonly found in great numbers in wetland complexes. Within the range of the gopher tortoise, tortoise burrows are favorite refugia for Eastern indigo snakes. They are also known to use burrows made by cotton rats and land crabs, hollows at bases of trees and stumps, ground litter, trash piles, and rock piles lining banks of canals and pipes or culverts.

Although eco-island construction activities will occur in-water, mining of the sand and transit from the sand mine to the project site may occur in areas where Eastern indigo snakes may be present. The species may be affected by vehicular access to and from

the sand mine and project site as well as in the staging in the area. Applicable standard protective measures will be taken during construction activities and transit to ensure the safety of snakes that may be in the vicinity (see Attachment 1).

Florida panther (*Puma (=felis) concolor coryi*)

The Florida panther, also known as cougar, mountain lion, puma, and catamount, was once the most widely distributed mammal (other than humans) in North and South America. Habitat loss has driven the Florida panther into a small area, where the few remaining animals are highly inbred, causing such genetic flaws as heart defects and sterility. One of 30 cougar subspecies, the Florida panther is tawny brown on the back and pale gray underneath, with white flecks on the head, neck and shoulder. Male panthers weigh up to 130 pounds and females reach 70 pounds. Preferred habitat consists of cypress swamps and pine and hardwood hammock forests. The main diet of the Florida panther consists of white-tailed deer, sometimes wild hog, rabbit, raccoon, armadillo, and birds. Florida panthers are solitary, territorial, and often travel at night. The main survival threats to the Florida panther include habitat loss due to human development and population growth, collision with vehicles, parasites, feline distemper, feline alicivirus (an upper respiratory infection), and other diseases (USFWS 1999).

The project area is located outside of the Florida panther primary, secondary, and dispersal zones (**Figure 8**). In addition, based on telemetry data from 2002-2012, panthers do not appear to be using or transiting in or around the project area (**Figure 9**).



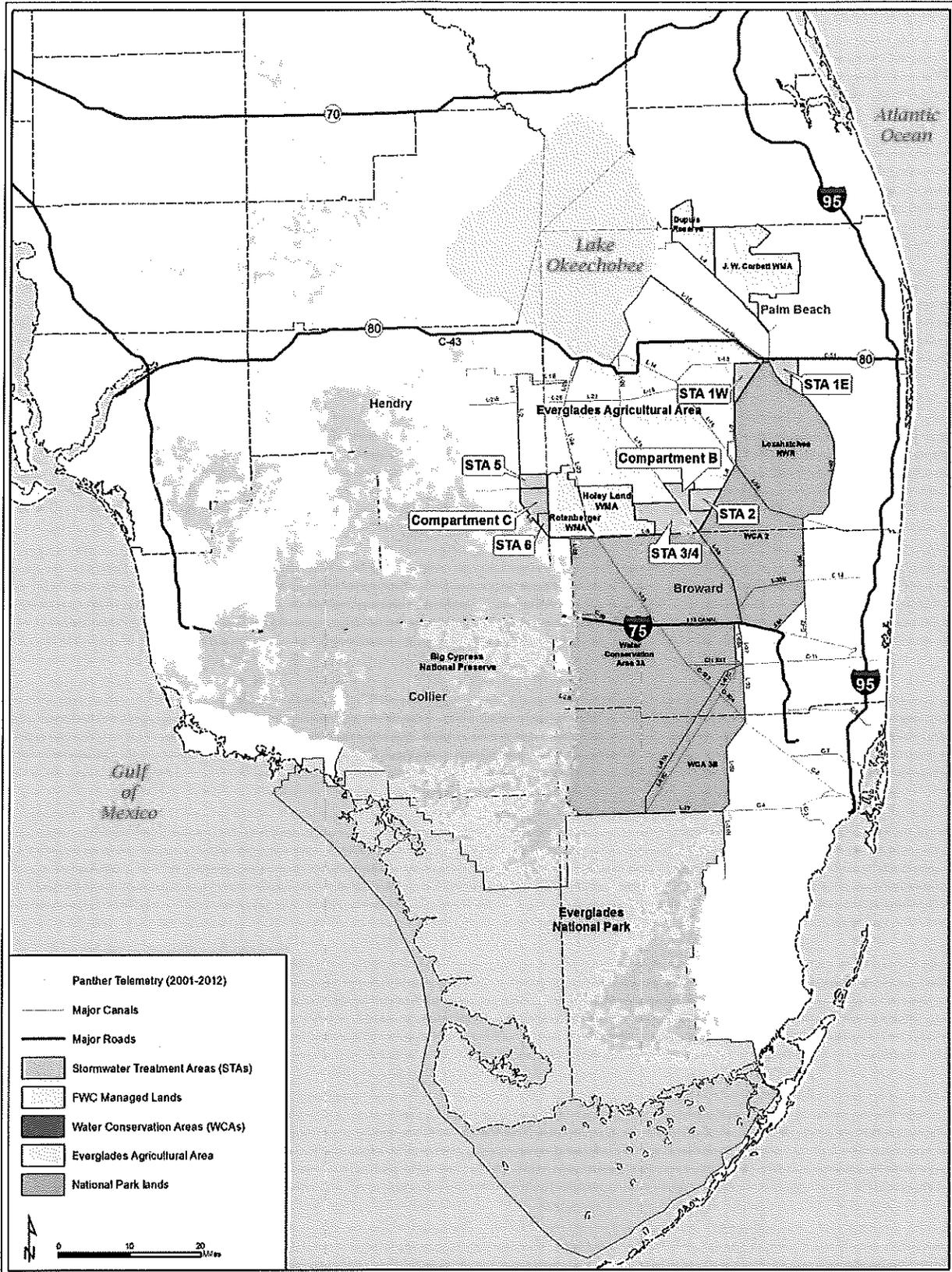


Figure 9. Florida panther telemetry data from 2002 - 2012.

Although eco-island construction activities will occur in-water, mining of the sand and transit from the sand mine to the project site may occur in areas where Florida panthers may be present. The following measures will be included in the plans and specifications and will be taken during construction activities and transit between the sand mine and project site to ensure the safety of Florida panthers that may be in the vicinity:

a. If a female Florida panther or Texas cougar is suspected of denning within 1km (or approximately 3000 feet) of construction activities, construction activities within 1 km of the den site will be suspended for the two-month denning period, or until denning is complete.

b. The Contractor agrees to immediately notify the Project Manager upon locating a dead, injured, or sick Florida panther specimen. Care should be taken in handling sick or injured specimens to ensure effective treatment and care, or in the handling of dead specimens to preserve biological material in the best possible state for later analysis as to the cause of death. In conjunction with the care of sick or injured Florida panthers or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by USFWS Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

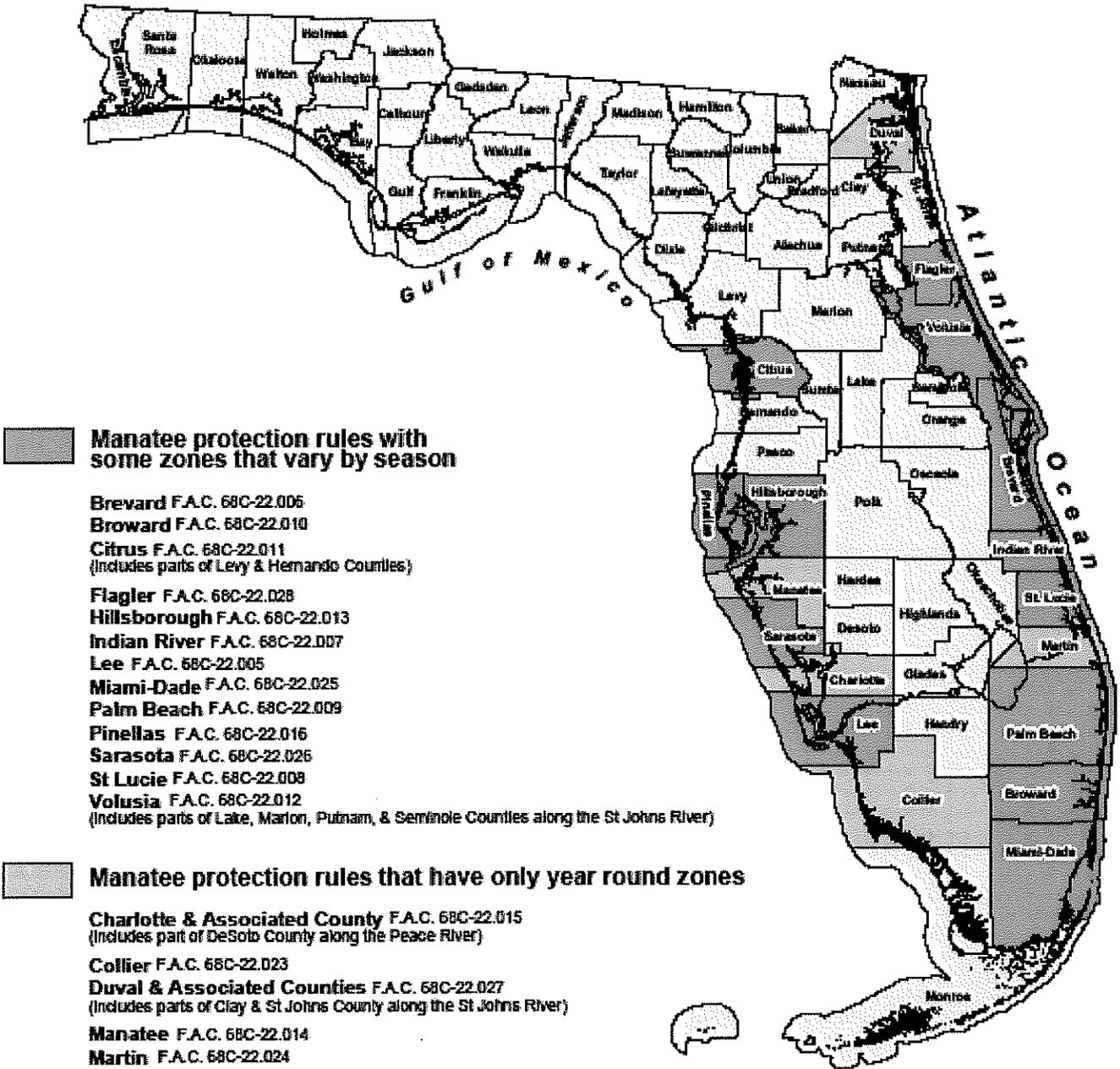
West Indian (Florida) manatee (*Trichechus manatus latirostris*)

The Florida manatee is a subspecies of the West Indian manatee (*Trichechus manatus*) and can be found throughout the southeastern United States. The manatee is a large, plant-eating aquatic mammal that move between freshwater and saltwater environments. They can be found in shallow coastal waters, rivers, and springs. Adult manatees are approximately 10 feet long, weighing between 800 – 1200 pounds, and consume approximately 4-9% of their body weight each day. Although manatees feed underwater, they frequently rest just below the water surface with only the snout above water. Warm weather sightings are most common in Florida and coastal Georgia. They will once again return to warmer waters when the water temperature is too cold (Hartman 1979; Stith et al. 2006). Florida manatees live in freshwater, brackish, and marine habitats, and can move freely between salinity extremes. Manatees were listed as endangered throughout its range for both the Florida and Antillean subspecies (*Trichechus manatus latirostris* and *Trichechus manatus manatus*) in 1967 (32 FR 4001). In May 2017, the USFWS reclassified the manatee from endangered to threatened.

Federal law, specifically the Marine Mammal Protection Act of 1972 and the 1973 ESA protects manatees. Critical habitat is defined under the ESA as specific areas within and/or outside a geographical area that are occupied by a species at the time of listing, that contain physical or biological features essential to the conservation of the species and therefore require special management considerations or protection for the benefit of the species. Although critical habitat for the Florida manatee was described in 1976 in 50 CFR 17.95 for Florida, the project area is not within USFWS designated critical habitat for this species (**Figure 10**). It is however located in a FWC Manatee Protection Zone (**Figure 11**).



# Florida Counties with FWC Manatee Protection Zones

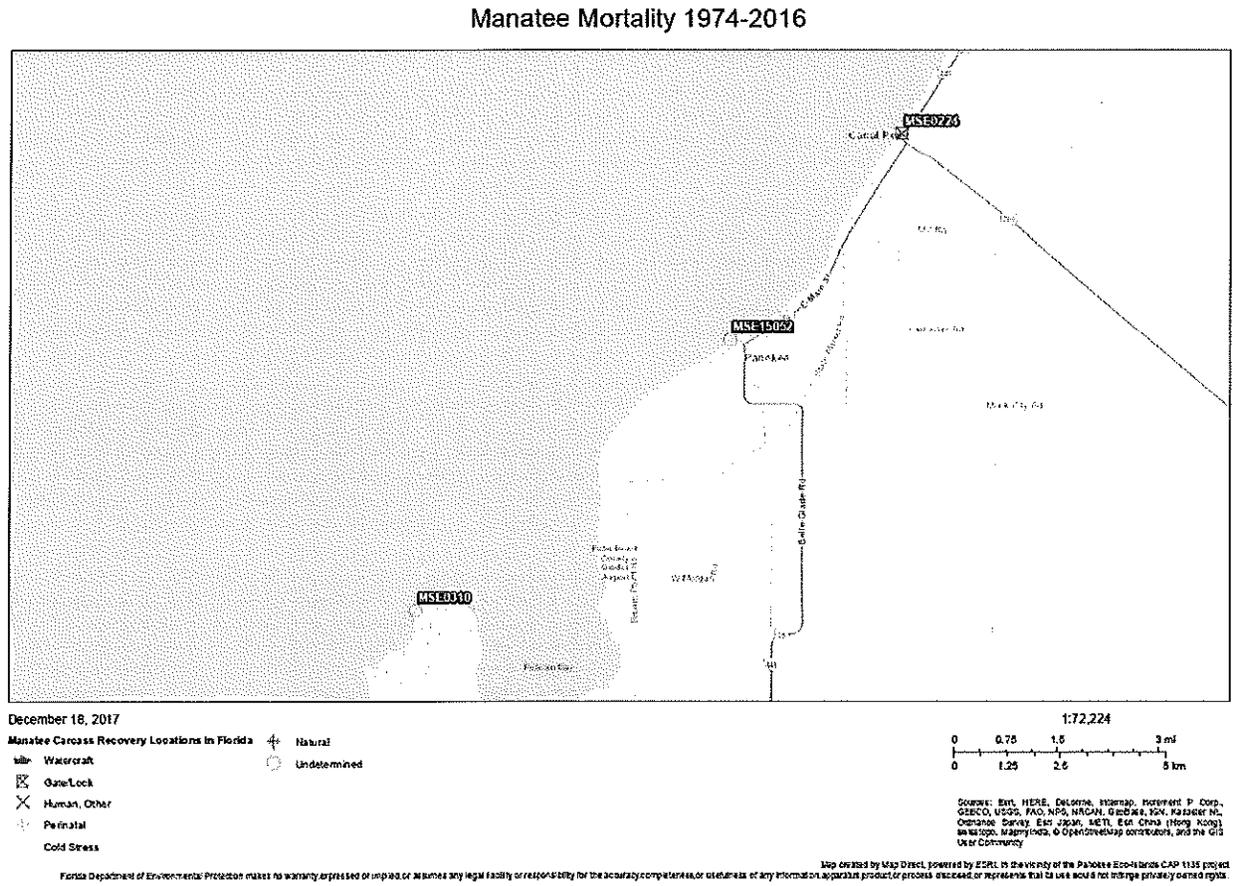


**Florida Fish and Wildlife  
Conservation Commission**  
 Division of Habitat and Species Conservation  
 Imperiled Species Management Section  
 MyFWC.com  
 820 South Meridian Street - M55A  
 Tallahassee, Florida 32399-1800  
 (850) 922-4330



Figure 11. Florida counties with FWC Manatee Protection Zones.

Mortality data for the Florida manatee are available from 1974-2014, through the Florida Fish and Wildlife Research Institute (FWRI 2014). Mortality data in the project vicinity reported the occurrence and cause of three manatee deaths between 1974 and 2016 (Figure 12) (FWRI 2017). One death (MSE0224) was reported in April 2002 and the cause listed was human related due to a flood gate/canal lock. The other two deaths, MSE15052 and MSE0310, were reported in October 2015 and February 2003 respectively. The cause of these deaths were undetermined due to the extent of decomposition.



**Figure 12. Manatee mortality in the vicinity of Pahokee.**

In-water construction will occur within areas where manatees may be present, however, applicable standard protective measures will be taken during in-water construction activities to ensure the safety of manatees that may be in the project vicinity (see Attachment 2).

**Effect Determination**

*May Affect, Not Likely to Adversely Affect*

Components of construction activity for the Pahokee eco-islands will occur within areas where Florida manatees, Eastern indigo snakes, and/or Florida panthers could be present; however, by utilizing the 2011 Standard Manatee Conditions for In-Water Work, the 2013 Standard Protection Measures for the Eastern Indigo Snake, and protection

measures listed previously in this analysis, the potential effects to these species can be minimized. Therefore, USACE has determined that the proposed project may affect, but is not likely to adversely affect, Florida manatees, Eastern indigo snakes, and Florida panthers.

*No Effect*

Due to the unlikelihood of the following species being present in or around the proposed project site, sand mines, or transit route from the sand mine to the project site, the project will have no effect on the Everglade snail kite, Florida bonneted bat, northern crested caracara, wood stork, and the Okeechobee gourd. Everglade snail kite designated critical habitat and Florida manatee designated critical habitat do not exist within the project site or sand mining transit route, therefore, USACE has determined construction activities associated with this project will have no negative effect to USFWS designated critical habitat.

*Benefits*

Construction of the Recommended Plan will result in two eco-islands in Lake Okeechobee that will provide protection to the nearby shoreline. The eco-islands will be planted with spike rush, bulrush, and pond apples, which will result in long-term, positive benefits to foraging and perching habitat for numerous avian species. Additionally, favorable habitat will be created that could be used by the Okeechobee gourd.

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Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project

ATTACHMENT 1:

Standard Protection Measures for the Eastern Indigo Snake (2013)

**STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE**  
**U.S. Fish and Wildlife Service**  
**August 12, 2013**

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: [jaxregs@fws.gov](mailto:jaxregs@fws.gov); South Florida Field Office: [verobeach@fws.gov](mailto:verobeach@fws.gov); Panama City Field Office: [panamacity@fws.gov](mailto:panamacity@fws.gov)). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or “approval” from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

**POSTER INFORMATION**

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11” x 17” or larger paper and laminated, is attached):

**DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

**SIMILAR SNAKES:** The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

**LIFE HISTORY:** The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

**PROTECTION UNDER FEDERAL AND STATE LAW:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

**IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

**IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

**Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:**

**North Florida Field Office – (904) 731-3336**

**Panama City Field Office – (850) 769-0552**

**South Florida Field Office – (772) 562-3909**

## **PRE-CONSTRUCTION ACTIVITIES**

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.

2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.

3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

## **DURING CONSTRUCTION ACTIVITIES**

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).

2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.

3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

## **POST CONSTRUCTION ACTIVITIES**

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.

Pahokee Restoration Section 1135 Continuing Authorities Program (CAP) Project

ATTACHMENT 2:

Manatee Standard Conditions for In-Water Work (2011)

## STANDARD MANATEE CONDITIONS FOR IN-WATER WORK 2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at [ImperiledSpecies@myFWC.com](mailto:ImperiledSpecies@myFWC.com)
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at [MyFWC.com/manatee](http://MyFWC.com/manatee). Questions concerning these signs can be sent to the email address listed above.



## FLORIDA DEPARTMENT *of* STATE

**RICK SCOTT**  
Governor

**KEN DETZNER**  
Secretary of State

Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch  
Jacksonville District Corps of Engineers  
701 San Marco Boulevard  
Jacksonville, Florida 32207-8175

March 2, 2018

RE: DHR Project File No.: 2017-6015, Received by DHR: February 7, 2017  
Project: *Draft Integrated Feasibility Report/ Environmental Assessment (IFR/EA) For the Pahoee Restoration Section 1135 Continuing Authorities Program (CAP), Lake Okeechobee, Palm Beach County*

Dr. Ralph:

Thank you for providing our office with an opportunity to review the Draft IFR/EA for this undertaking. The document states that there are few recorded cultural resources within one mile of the project area. Although this is the case, there is limited survey data within or near the project area. The 2011 Boyer Survey (Florida Master Site File No.: 19282) surveyed an area southwest of this project area and may be helpful to consult to determine the appropriate measures necessary to identify cultural resources in the Area of Potential Effect for this undertaking.

As noted in your letter, we will consult further with USACE as the project develops to satisfy the Section 106 review requirements. We look forward to working with USACE to ensure that the project avoids, minimizes, or, if necessary, mitigates potential adverse effects to historic properties.

If you have any questions, please contact me by email at [Jason.Aldridge@dos.myflorida.com](mailto:Jason.Aldridge@dos.myflorida.com), or by telephone at 850-245-6344.

Sincerely,

A handwritten signature in blue ink that reads "Jason Aldridge" with "For" written below it.

Timothy A. Parsons, Ph.D.  
Director, Division of Historical Resources  
and State Historic Preservation Officer



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

DEC 22 2017

Mr. Theodore Isham  
Historic Preservation Officer  
Seminole Nation of Oklahoma  
PO Box 1498  
Wewoka, Ok 74884

Re: Pahokee Restoration Continuing Authorities Project, Palm Beach County, Florida

Dear Mr. Isham:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is currently developing an Integrated Feasibility Report and Environmental Assessment to assess potential environmental effects of the Pahokee Restoration Project. The project was authorized for improving the quality of the environment under the Continuing Authorities Program Section 1135. The recommended plan includes the construction of a low profile island and high profile island in two potential project areas containing a submerged rock spine adjacent to the shoreline within Lake Okeechobee (Figure 1). The low profile island will be constructed at a maximum North American Vertical Datum of 1988 (NAVD 88) elevation of 11 feet, and the high profile island will be terraced with a lower elevation at 11 feet NAVD 88 and a higher elevation at 13 feet NAVD 88. Both islands will be constructed of a mix of sand and fine silt sediment in the center, surrounded by sand berm for stability. The lakeward slope of each island will be armored with riprap for additional protection against erosion. The profile of both islands is shown in Figure 2. The project will provide vegetation and habitat for birds and aquatic species, reduce wave and wind energy in the lakebed between the island and shoreline, and improve localized water quality through enhanced vegetative nutrient absorption and reduced silt turbidity in the lake system.

A literature and records review of the Florida Master Site File indicate that the two proposed project areas have a moderate potential for identifying significant submerged cultural resources. As the project is currently within the feasibility phase, detailed designs or a final construction footprint have not been developed. Once the recommended plan is approved and funding is secured, detailed project plans and specific areas of potential effects will be subject to a cultural resources survey to guarantee avoidance, minimization, or mitigation of adverse effects to historic properties.

Therefore, consultation and coordination with your office will continue and be concluded during the Design and Implementation phase of Pahokee Restoration project. In consideration of the Corps' Trust responsibilities to the Seminole Nation of Oklahoma, further consultation will be conducted pursuant to the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (54 USC 300101) (NHPA) and its implementing regulations (36 CFR 800) once an area of potential effects has been identified. No construction will occur until all legal requirements have been met, including consultation under Section 106 of the NHPA and NEPA. If there are any questions, please contact Mr. Marc Tiemann by phone at 904-232-1557 or by email at Marc.A.Tiemann@usace.army.mil.

Sincerely,



*for:*

Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch

Encl

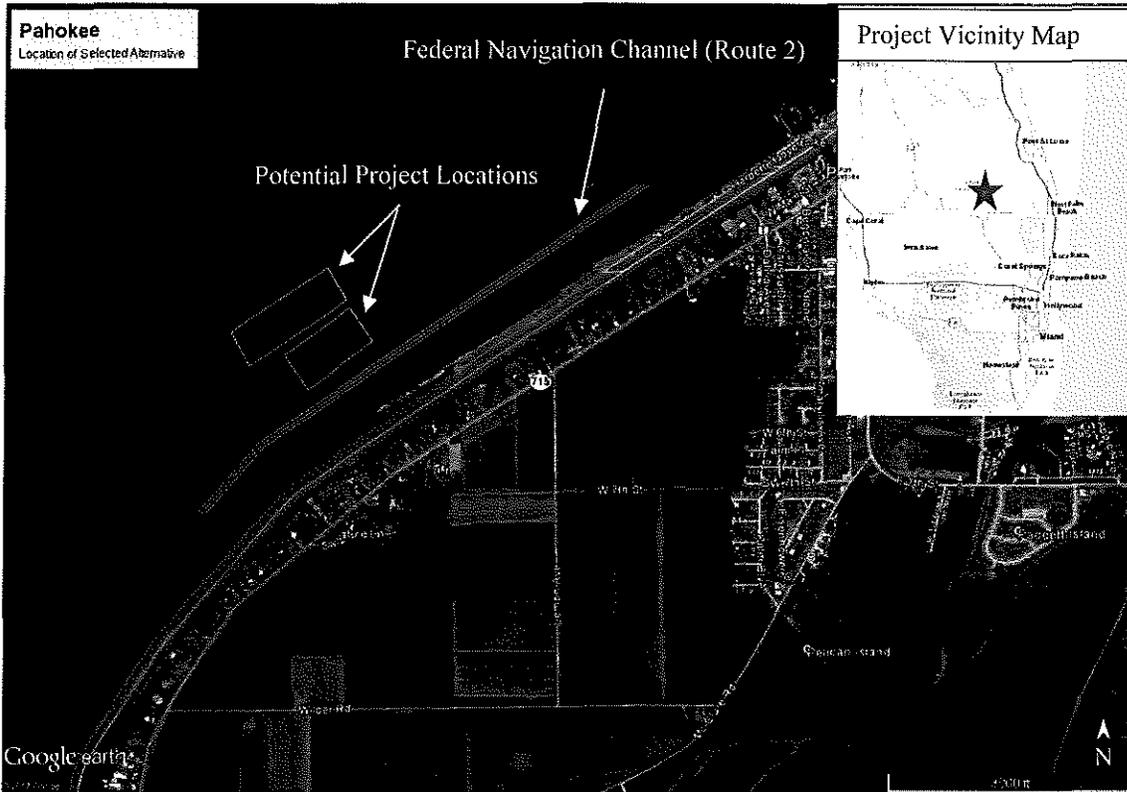


Figure 1. Pahokee Restoration Continuing Authorities Project

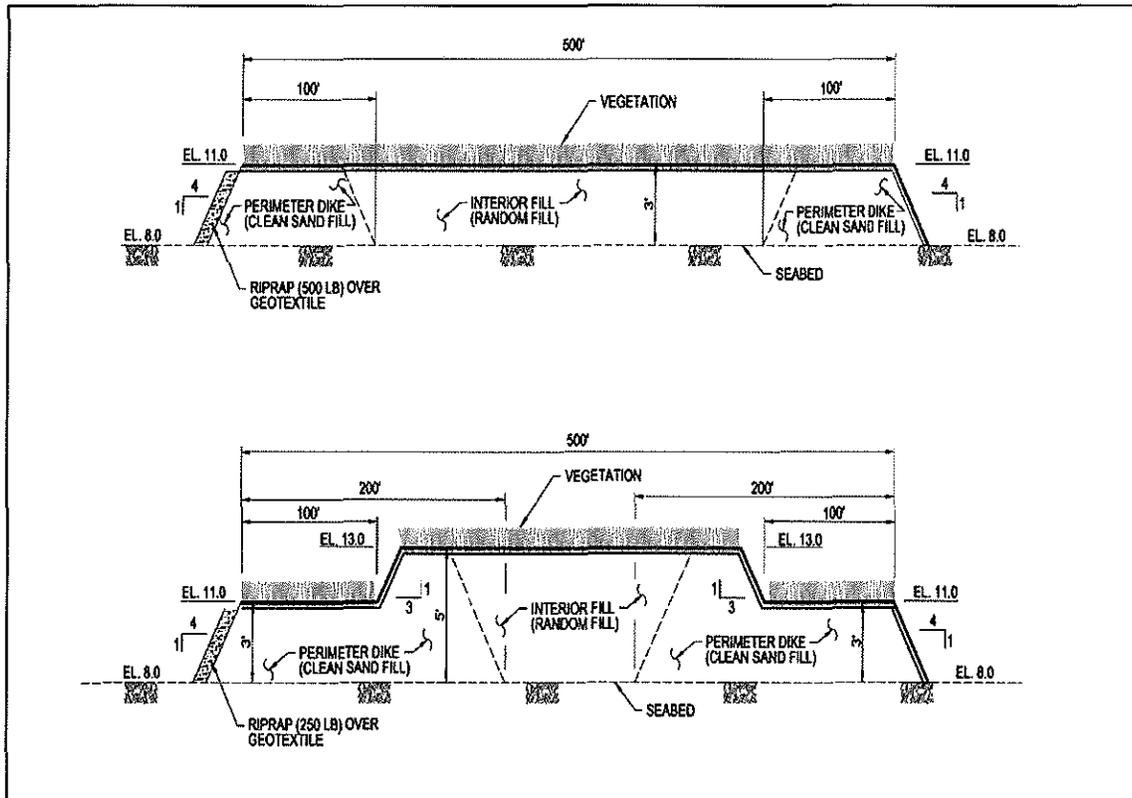


Figure 2. Profiles of Islands for Recommended Plan



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

DEC 22 2017

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

Re: Pahokee Restoration Continuing Authorities Project, Palm Beach County, Florida

Dear Dr. Backhouse:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is currently developing an Integrated Feasibility Report and Environmental Assessment to assess potential environmental effects of the Pahokee Restoration Project. The project was authorized for improving the quality of the environment under the Continuing Authorities Program Section 1135. The recommended plan includes the construction of a low profile island and high profile island in two potential project areas containing a submerged rock spine adjacent to the shoreline within Lake Okeechobee (Figure 1). The low profile island will be constructed at a maximum North American Vertical Datum of 1988 (NAVD 88) elevation of 11 feet, and the high profile island will be terraced with a lower elevation at 11 feet NAVD 88 and a higher elevation at 13 feet NAVD 88. Both islands will be constructed of a mix of sand and fine silt sediment in the center, surrounded by sand berm for stability. The lakeward slope of each island will be armored with riprap for additional protection against erosion. The profile of both islands is shown in Figure 2. The project will provide vegetation and habitat for birds and aquatic species, reduce wave and wind energy in the lakebed between the island and shoreline, and improve localized water quality through enhanced vegetative nutrient absorption and reduced silt turbidity in the lake system.

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Therefore, consultation and coordination with your office will continue and be concluded during the Design and Implementation phase of Pahokee Restoration project. In consideration of the Corps' Trust responsibilities to the Seminole Tribe of Florida, Florida, further consultation will be conducted pursuant to the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (54 USC 300101) (NHPA) and its implementing regulations (36 CFR 800) once an area of potential effects has been identified. No construction will occur until all legal requirements have been met, including consultation under Section 106 of the NHPA and NEPA. If there are any questions, please contact Mr. Marc Tiemann by phone at 904-232-1557 or by email at [Marc.A.Tiemann@usace.army.mil](mailto:Marc.A.Tiemann@usace.army.mil).

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Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch

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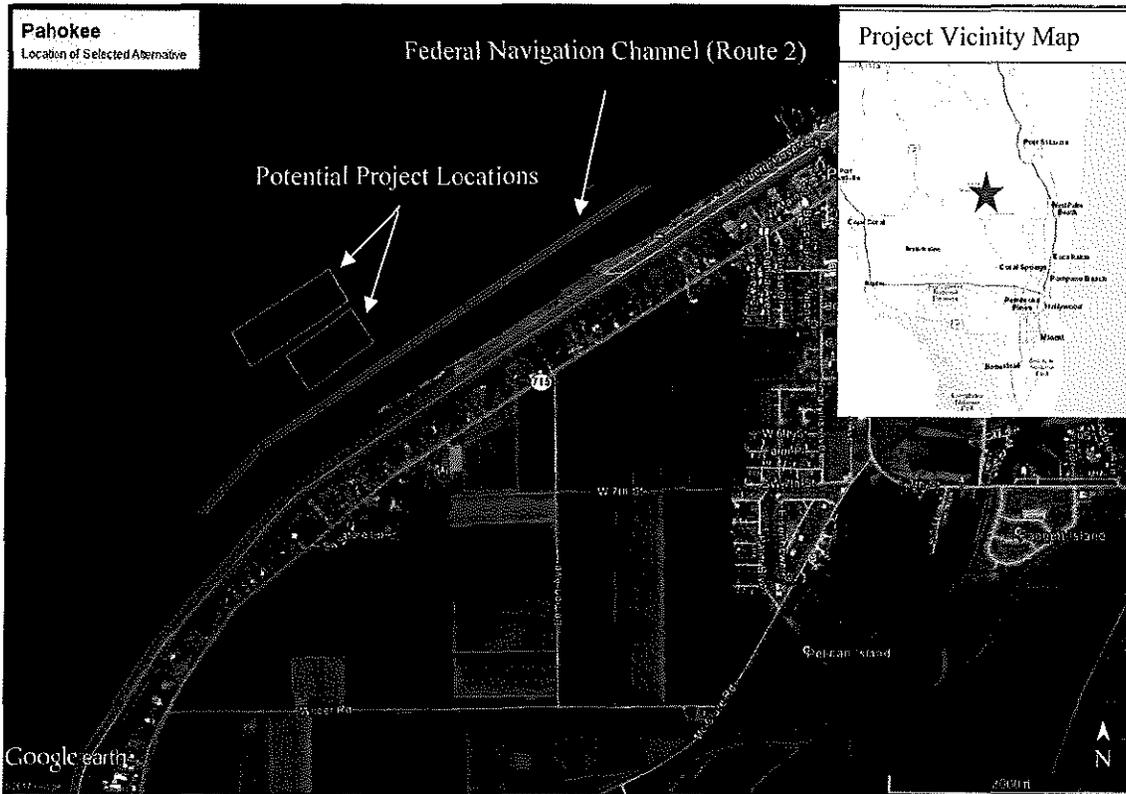


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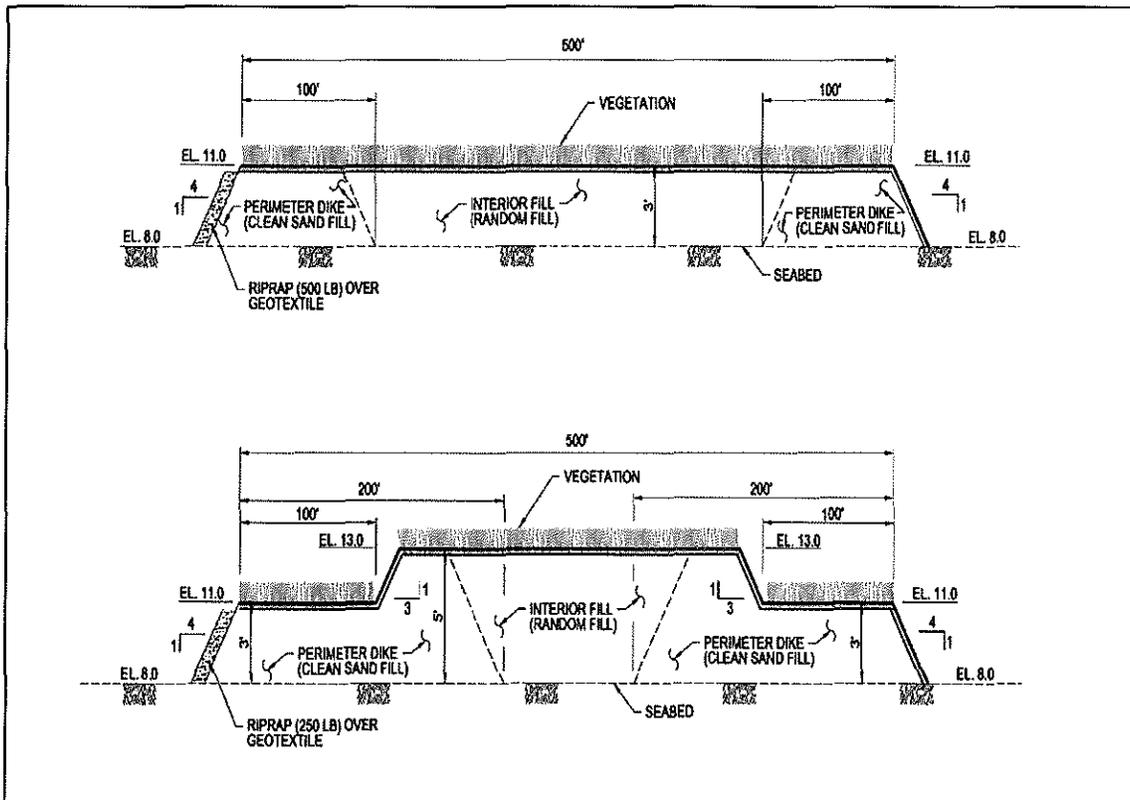


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DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

DEC 22 2017

Tim Parsons, Ph.D.  
Division of Historical Resources  
State Historic Preservation Officer  
500 South Bronough Street  
Tallahassee, Florida 32399-0250

Re: Pahokee Restoration Continuing Authorities Project, Palm Beach County, Florida

Dear Dr. Parsons:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is currently developing an Integrated Feasibility Report and Environmental Assessment to assess potential environmental effects of the Pahokee Restoration Project, Palm Beach County, Florida. The project was authorized for improving the quality of the environment under the Continuing Authorities Program Section 1135. The recommended plan includes the construction of a low profile island and high profile island in two potential project areas containing a submerged rock spine adjacent to the shoreline within Lake Okeechobee (Figure 1). The low profile island will be constructed at a maximum North American Vertical Datum of 1988 (NAVD 88) elevation of 11 feet, and the high profile island will be terraced with a lower elevation at 11 feet NAVD 88 and a higher elevation at 13 feet NAVD 88. Both islands will be constructed of a mix of sand and fine silt sediment in the center, surrounded by sand berm for stability. The lakeward slope of each island will be armored with riprap for additional protection against erosion. The profile of both islands is shown in Figure 2. The project will provide vegetation and habitat for birds and aquatic species, reduce wave and wind energy in the lakebed between the island and shoreline, and improve localized water quality through enhanced vegetative nutrient absorption and reduced silt turbidity in the lake system.

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Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch

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JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

DEC 22 2017

Mr. Fred Dayhoff, Tribal Representative  
NAGPRA, Section 106  
Miccosukee Tribe of Indians of Florida  
HC 61  
SR68  
Ochopee, Florida 34141

Re: Pahokee Restoration Continuing Authorities Project, Palm Beach County, Florida

Dear Mr. Dayhoff:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is currently developing an Integrated Feasibility Report and Environmental Assessment to assess potential environmental effects of the Pahokee Restoration Project, Palm Beach County, Florida. The project was authorized for improving the quality of the environment under the Continuing Authorities Program Section 1135. The recommended plan includes the construction of a low profile island and high profile island in two potential project areas containing a submerged rock spine adjacent to the shoreline within Lake Okeechobee (Figure 1). The low profile island will be constructed at a maximum North American Vertical Datum of 1988 (NAVD 88) elevation of 11 feet, and the high profile island will be terraced with a lower elevation at 11 feet NAVD 88 and a higher elevation at 13 feet NAVD 88. Both islands will be constructed of a mix of sand and fine silt sediment in the center, surrounded by sand berm for stability. The lakeward slope of each island will be armored with riprap for additional protection against erosion. The profile of both islands is shown in Figure 2. The project will provide vegetation and habitat for birds and aquatic species, reduce wave and wind energy in the lakebed between the island and shoreline, and improve localized water quality through enhanced vegetative nutrient absorption and reduced silt turbidity in the lake system.

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Therefore, consultation and coordination with your office will continue and be concluded during the Design and Implementation phase of Pahokee Restoration project. In consideration of the Corps' Trust responsibilities to the Miccosukee Tribe of Indians of Florida, further consultation will be conducted pursuant to the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (54 USC 300101) (NHPA) and its implementing regulations (36 CFR 800) once an area of potential effects has been identified. No construction will occur until all legal requirements have been met, including consultation under Section 106 of the NHPA and NEPA. If there are any questions, please contact Mr. Marc Tiemann by phone at 904-232-1557 or by email at [Marc.A.Tiemann@usace.army.mil](mailto:Marc.A.Tiemann@usace.army.mil).

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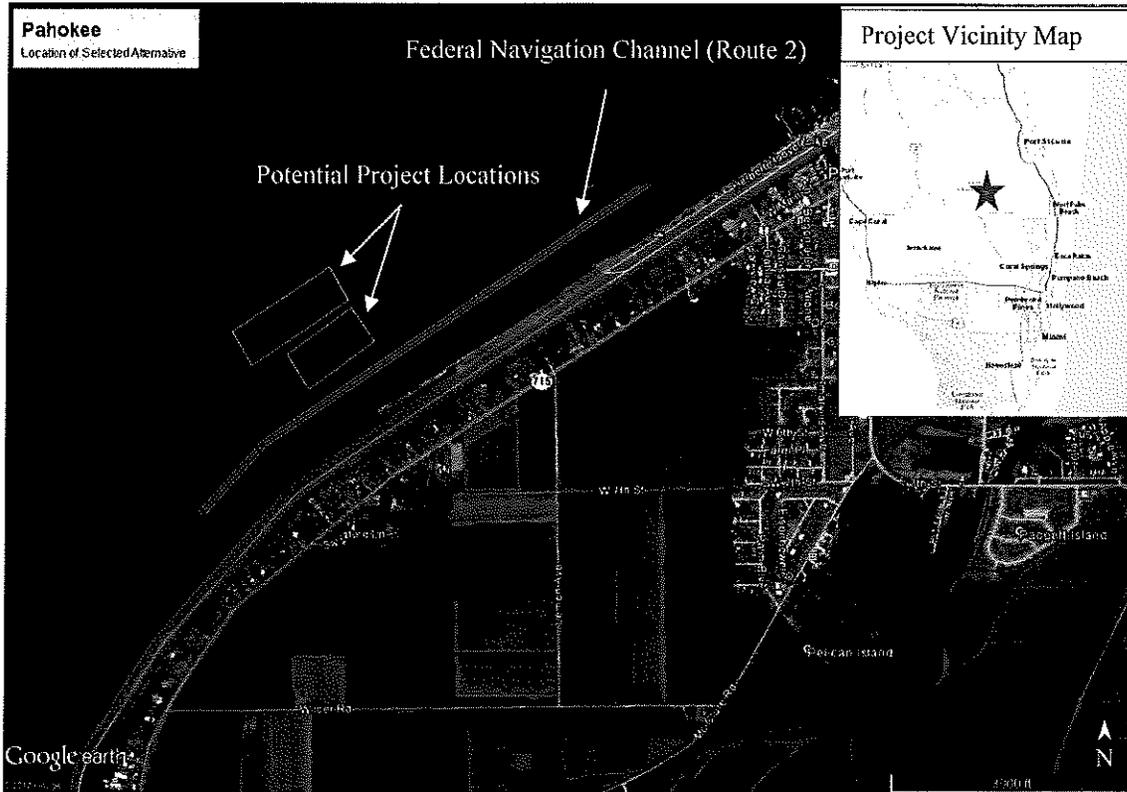


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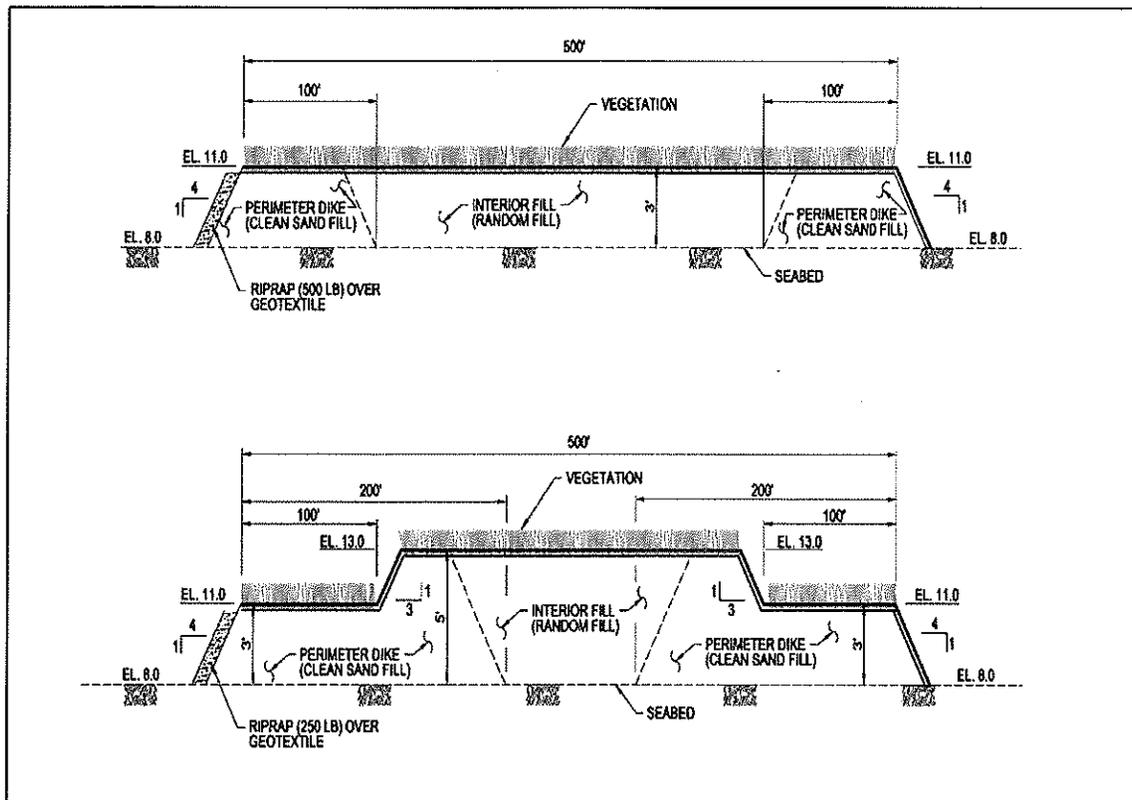


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