CANAVERAL HARBOR, FLORIDA

Integrated Section 203 Navigation Study Report
&
Final Environmental Assessment

Environmental Appendix
(sub-part of Volume 1)

October 2012
(last revised September 2012)

US Army Corps of Engineers ®

PORT CANAVERAL

ENVIRONMENTAL APPENDIX

Section 404(b)1 Evaluation

CZMA Consistency Determination

Scoping Documents and Correspondence

Draft EA Public Workshop Documents and Comments

Environmental Baseline Report

Protected Species Report

Essential Fish Habitat Report

Section 7 Consultation Documents

Sea Turtle Foraging Report

Cultural Resource Reports and Correspondence

Draft Fish and Wildlife Coordination Act Report

Farmland Protection Policy Act Coordination

September 2012

Section 404(b)(1) Evaluation Report
Canaveral Harbor Section 203 Feasibility Study
Brevard County, Florida

I. PROJECT DESCRIPTION:

1. a. Location. Canaveral Harbor is located in Brevard County on the Atlantic coast of Florida.

b. Authority and Purpose. The Canaveral Port Authority decided to conduct a feasibility study of potential navigation improvements under the authority granted by Section 203 of WRDA 1986. Section 203 states (in part) that "*A non-Federal interest may on its own undertake a feasibility study of a proposed harbor or inland harbor project and submit it to the Secretary [of the Army].*" Corps of Engineers guidance for implementation of Section 203 is contained in Engineering Regulation (ER) 1165-2-122, Studies of Harbor or Inland Harbor Projects by Non-Federal Interests, 26 August 1991 (Attachment 1).

A Section 107 Initial Appraisal Letter Report was prepared by the Jacksonville District, U.S. Army Corps of Engineers in February 2002 documenting the economic feasibility of improving the west turning basin through construction of a cutoff and widening. Since the time of the Initial Appraisal it has been proposed that the existing Federal navigation channel be widened from 400 feet to 500 feet and also widen the widener in the approach channel. The purpose of the Section 203 study is to determine whether a Federal interest exists in implementing these proposed improvements.

c. General Description.

The following narrative describes the Canaveral Harbor preferred alternative project features relative to existing conditions and progressing from the Atlantic Ocean entrance channel to the West Basin. Canaveral Harbor channels are comprised of the outer, middle, and inner reaches, the middle turning basin and west access channels, and the west turning basin. The outer reach is oriented on roughly a northwest-southeast alignment. The remainder of the channels is oriented on a generally east-west alignment. Various cut(s) comprise the outer, middle, and inner reaches as described below.

- Outer Reach, Cut 1A: Existing dimensions are 44-ft project depth by 400 ft wide by 11,000 ft long. New dimensions would increase the project depth to 47 ft. Current USACE quarterly condition surveys indicate that the existing water depth at the end of the project and up to 200 ft beyond the end of the project is 47 ft.

- Outer Reach, Cut1B: Existing dimensions are 44-ft project depth by 400 ft wide by 5,500 ft long. New dimensions would increase the project depth to 47 ft.

- Outer Reach, Cut 1: Existing dimensions are 44-ft project depth by 400 ft wide by 12,500 ft long. New dimensions would increase the project depth to 47 ft only for

the 5,300-ft long portion of Cut 1 that is seaward of buoys 7/8 (Station 0+00 to Station 53+00). Project depth for the remaining 7,200-ft of Cut 1, from buoys 7/8 to the apex of the channel turn, would increase to 46 ft.

- US Navy Turn Widener: Existing dimensions are 44-ft project depth by 7.7 acres (triangular shaped area) bounded by outer and middle reaches to the north and northeast and the civil turn widener to the southwest. New dimensions would increase the project depth to 46 ft.

- Civil Turn Widener: Existing dimensions are 41-ft project depth by 15.6 acres (irregular shaped area) bounded to the north and northeast by the middle reach and the US Navy turn widener. New dimensions would increase the project depth to 46 ft.

- New 203 Turn Widener: New dimensions are 46-ft project depth by 23.1 acres (irregular shaped area) bounded to the north and northeast by the civil turn widener and Cut 1 of the outer reach.

- Middle Reach: The middle reach extends from the apex of the channel turn westward to the western boundary of the Trident access channel. Existing dimensions are 44-ft project depth by 400 ft wide by 5,658 ft long. New dimensions would increase the project depth to 46 ft and the project width from 400 ft to 500 ft, providing a 100-ft widener of 2,282 ft in length along the north side of the channel for the portion of the middle reach that is inside of the north jetty. The eastern terminus of the 100-ft widener transitions from the existing to the new northern channel boundary over a plan distance of 500 ft. This portion of the project requires that the western "Surge Warning" notification sign structure be relocated northward 100 ft.

- Trident Access Channel and Trident Basin: With exclusive use by US Navy, the Trident Access channel connects the middle reach to the trident basin. Existing dimensions are 44- and 41-ft project depth by irregular shaped areas for the access channel and the basin, respectively. Existing dimensions to remain except as affected by the new 100-ft north side channel widener at the entrance to the Trident access channel.

- Inner Reach, Cut 2 and Cut 3: Existing dimensions are 40-ft project depth by 400 ft wide by 3,344 ft long. New dimensions would increase the project depth to 44 ft and the project width from 400 to 500 ft, providing a 100-ft widener along the entire length of the reach on the north side of the channel. The rip-rap protected shoreline and berm between the middle and trident basins will be relocated northward to accommodate the 100-ft northside channel widener.

- Middle Turning Basin: The middle turning basin has shared use by commercial and military activities. The federal project area encompasses 92.4 acres with project depths of 35 ft in the north and east portions of the basin used exclusively

by the military and 39 ft in the remainder of the basin supporting commercial vessel traffic. Because of the somewhat limited room afforded by the present 39-ft federal project boundaries toward the northwest portion of the basin, CPA maintains an irregular shaped central portion of the basin to 39 ft. This provides additional area for maneuvering cargo vessels to and from the North Cargo Pier 1 and ro-ro ramp and enlarges the available area for turning displacement vessels on arrival or departure. The existing 39-ft federal project provides a turning circle diameter of 1200 ft. The new project dimensions for commercial purposes encompass 68.9 acres with a project depth of 43 ft yielding a turning circle diameter on the order of 1422 ft. Approximately 1.9 acres of the new 43-ft project area completes the western end of the north side channel widener in the area adjacent to the inner reach and the US Navy's Poseidon Wharf. As in the inner reach, the rip-rap protected north side shoreline will be relocated northward to accommodate the north side channel widening. The US Navy's mooring dolphin, located east of Poseidon Wharf and no longer used, sits within 25 ft of the new channel boundary and will be removed to eliminate a potential hazard to navigation.

- West Access Channel (east of Station 260+00): Existing dimensions are 39-ft project depth by 400 ft wide by 1,840 ft long. New dimensions would increase the project depth to 43 ft and increase the project width from 400 to 500 ft, providing 100 ft of widening along the entire length of the channel by redefining the northern channel boundary 12 ft north of the existing northern boundary, and widening the channel by 88 ft along the south side and into the barge canal.

- West Turning Basin and West Access Channel, Cut A (west of Station 260+00): The West turning basin has exclusive use by commercial activities and the Coast Guard. The Existing federal basin and Cut A of the west access channel take up 78.6 acres with a project depth of 31 ft as federally maintained and 35 ft as maintained by the CPA. The CPA has also maintained a triangular shaped 35-ft project area adjacent to the northeast shoreline at the entrance to the west turning basin and at the request of the pilots, performed new work dredging beyond present project limits at this location since 2003 to facilitate cruise vessel access to and from the basin and cruise berths. The Existing federal project basin provides a turning circle diameter of 1400 ft. The preferred alternative, comprising 141 acres, will expand the federal project limits in the northern and western portions as needed to support cruise ship access to present and planned terminals and will enlarge the entrance to the west basin providing a new turning circle diameter of 1725 ft. The turning circle and entrance widening will be created by dredging beyond the present federal and CPA project boundaries to the northeast and to the south within the barge canal. Approximately 18.5 acres of existing bank, shoreline, and uplands adjacent to the CPA 35-ft project boundary and 6.9 acres within the existing barge canal will be dredged to the new project depth of 35 ft.

The preferred alternative will result in dredging or excavation of 4,271,000 million cubic yards of sand, silts, and clays of which all but 455,000 cubic yards is identified for

uplands or offshore disposal. The 455,000 cubic yards designated as upland excavation and will be disposed upland for beneficial reuse. The upland excavated material comes from the West Turning Basin corner cut-off and the northside widener from existing grade down to elevation -13 MLLW. The geotechnical investigations show that sands suitable for reuse are generally located at and above elevation -13 feet (MLLW). Although these sands do not appear to be suitable for direct placement on the beach, they can be stockpiled on land for beneficial reuse as construction fill material. Excavated material below -13 feet MLLW is generally not suitable for reuse and would be disposed in the offshore disposal site. In the event that suitable material is found below -13 feet MLLW, it would be placed in the authorized nearshore disposal area.

d. General Description of Dredged or Fill Material. Predominately a combination of sand, silt, and clay.

e. Description of the Proposed Disposal Sites. All material will be placed in the authorized Canaveral ODMDS, an upland disposal site, or in the authorized nearshore disposal area.

f. Description of Disposal Methods. The material will be dredged with either hydraulic or clamshell dredges and placed on barges for disposal at the Canaveral ODMDS or nearshore disposal area.

II. FACTUAL DETERMINATIONS:

a. Physical Substrate Determinations.

(1). Substrate Elevations The existing depths are between approximately -31 feet and –44 feet.

(2). Sediment Type. Sand, silt, and clay.

(3). Fill Material Movement. No movement is expected at the disposal site.

(4). Physical Effect on Benthos. No effect on benthos.

(5). Other Effects. No other effects.

b. Water Circulation, Fluctuation and Salinity Determinations. Water fluctuation, circulation and salinity will not be adversely affected.

c. Suspended Particle/Turbidity Determinations.

(1). Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Sites. Except for minor disturbances at the disposal site, little or no turbidity is expected during construction and State water quality and turbidity standards will be met unless a mixing zone exemption is required.

(2). Effects (Degree and Duration) on Chemical and Physical Values

(a). Light Penetration. No difference in light penetration is expected in the vicinity of construction activities.

(b). Dissolved Oxygen. Dissolved oxygen (DO) levels should be unaffected by disposal activities.

(c). Toxic Metals and Organics. No toxic metals or organics are known to occur at the sites.

(d). Pathogens. Not applicable.

(e). Aesthetics. The presence of equipment during dredging activities will be aesthetically displeasing; however, upon completion of these activities all equipment will be removed. Therefore, there will be no long-term adverse aesthetic impacts.

d. Contaminant Determinations. No sources of pollutants or contaminants have been identified within the construction or disposal areas.

e. Aquatic Ecosystem and Organism Determinations.

(1). Effects on Plankton. No adverse impacts expected.

(2). Effect on Benthos. No adverse impacts expected.

(3). Effect on Nekton. No adverse impacts expected.

(4). Effect on the Aquatic Food Web. No significant adverse impacts expected.

(5). Effects on Special Aquatic Sites.

(a). Sanctuaries or Refuges. No adverse impacts expected.

(b). Wetlands. No wetlands would be affected.

(c). Mud Flats. No adverse impacts expected.

(d). Vegetated Shallows. No adverse impacts expected.

(e). Reefs. No adverse impacts expected.

(f). Threatened and Endangered Species. Threatened or endangered species will not be affected by disposal of the dredged materials. Appropriate manatee and sea turtle protection measures will be implemented during dredging and disposal operations.

(g). Other Wildlife. Adverse impacts to other wildlife will not occur due to disposal of the dredged materials.

f. Proposed Disposal Site Determinations.

(1). Mixing Zone Determination. Not applicable.

(2). Determination of Compliance with Applicable Water Quality Standards. State water quality certification will be obtained for the work and applicable state water quality standards will be met during construction. An exemption may be required during placement of dredged materials in the seagrass mitigation area.

(3). Potential Effects on Human Use Characteristics. No adverse impacts expected.

(a). Municipal or Private Water Supply. No effect.

(b). Recreational and Commercial Fisheries. No adverse impacts expected.

(c). Water Related Recreation. No impacts expected.

(d). Aesthetics. The presence of construction equipment during the construction period will be unsightly; however, upon completion of construction the equipment will be removed and there will be no long-term adverse aesthetic impacts.

(e). Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites and Similar Preserves. No adverse impacts expected.

g. Determination of Cumulative Effects on the Aquatic Ecosystem. No adverse impacts expected.

h. Determination of Secondary Effects on the Aquatic Ecosystem. No adverse impacts expected.

PORT CANAVERAL SECTION 203 FEASIBILITY STUDY
FLORIDA COASTAL ZONE CONSISTENCY PROGRAM
FEDERAL CONSISTENCY EVALUATION PROCEDURE

1. Chapter 161, Beach and Shore Protection. 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.

Consistency Statement: The purpose of the proposed action is to improve and maintain safe navigation in Canaveral Harbor, Brevard County, Florida. Studies were conducted that determined the project would not adversely affect the existing natural shoreline.

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 long-range guidance for orderly social, economic and physical growth.

Consistency Statement: The work has been coordinated with the State without objection.

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

Consistency Statement: The proposed project would increase safety of ships leaving and entering the harbor.

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

Consistency Statement: No seagrass beds, reef communities, or wetlands are located within the project area. The proposed activity will be coordinated with the State and appropriate State permits will be obtained. The proposed action will be consistent with the intent of this chapter.

5. Chapters 253, 259, 260 and 375, Land Acquisition. These chapters authorize the State to acquire land to protect environmentally sensitive areas.

Consistency Statement: As the property is already in public ownership, these chapters do not apply.

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

Consistency Statement: The proposed action will not impact any State managed parks or preserves.

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

Consistency Statement: The proposed action was coordinated with the State Historic Preservation Officer (SHPO) and is consistent with the intent of this chapter.

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

Consistency Statement: The proposed improvements and maintenance are consistent with the goals of this chapter.

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

Consistency Statement: The proposed action will not adversely affect public transportation.

10. Chapter 370, Living Saltwater 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 of fisheries products; to secure and maintain statistical records of the catch of each such species; and to conduct scientific, economic and other studies and research.

Consistency Statement: Marine resources will only be temporarily impacted during construction and dredging. Foraging sea turtles will likely utilize other foraging habitat within Canaveral Harbor in the short-term. This project is consistent with this chapter.

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, educational, aesthetic and economic benefits.

Consistency Statement; The work in the port will be have no significant effect on freshwater aquatic life or wild animal life.

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

Consistency Statement: This work does not involve water resources as described in this chapter.

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

Consistency Statement: This work does not involve the transportation or discharge of pollutants. Conditions will be placed in the contract to handle inadvertent spills of pollutants such as vehicle fuels. The proposed action will comply with this chapter.

14. Chapter 377, Oil and Gas Exploration and Production. This chapter authorizes the regulation of all phases of exploration, drilling and production of oil, gas and other petroleum resources.

Consistency Statement: The proposed action does not involve the exploration, drilling or production of oil, gas or other petroleum products; 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 of large-scale development.

Consistency Statement: The proposed action is consistent with the intent of this chapter.

16. Chapter 388, Arthropod Control. This chapter provides for a comprehensive approach for abatement or suppression of mosquitoes and other arthropod pests within the State.

Consistency Statement: The proposed action will be consistent with the goals of this chapter.

17. Chapter 404, Environmental Control. This chapter authorizes the regulation of pollution of the air and waters of the State by the Department of Environmental Protection.

Consistency Statement: Appropriate State permits will be obtained for this project. The project is not expected to violate any State air or water pollution standards.

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

Consistency Statement: The proposed action is not located near agricultural lands; therefore, this chapter does not apply.

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

May 9, 2007

Mr. Paul E. Stodola
Planning Division, Jacksonville District
U.S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, FL 32232-0019

RE: Department of the Army, Jacksonville District Corps of Engineers – Scoping Notice – Draft Environmental Impact Statement for the Port Canaveral Navigation Improvements Section 203 Feasibility Study – Cape Canaveral, Brevard County, Florida.
SAI # FL200703223171C

Dear Mr. Stodola:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16, U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4231, 4331-4335, 4341-4347, as amended, has coordinated a review of the subject scoping notice.

The Florida Department of Environmental Protection (DEP) advises that port terminal/ berth construction and new dredging and dredged material disposal activities will require issuance of an environmental resource permit or joint coastal permit by the DEP Bureau of Beaches and Coastal Systems. Please contact Mr. Marty Seeling at (850) 414-7728 for further assistance and permitting information.

The Florida Department of State (DOS) notes that a large coquina and shell midden, the NOTU Site (8BR1641), is located within the boundaries of the project area depicted on the enclosed location map. PBS&J, Inc. conducted an archaeological resource assessment of this area to delineate the site's boundaries and assess its potential for inclusion in the *National Register of Historic Places*. The resultant report concludes that Site 8BR1641 contains both intact and disturbed portions with two distinct areas of intact cultural deposits in Areas A and B. Areas A and B are thus eligible for listing in the *National Register* and staff recommends that a 10-and-20 meter buffer be established to protect both areas from disturbance. Please refer to the enclosed DOS letter and maps for additional information.

Based on the information contained in the scoping notice and the enclosed state agency comments, the state has determined that, at this stage, the proposed activities are consistent with the Florida Coastal Management Program (FCMP). The concerns identified by our reviewing agencies must be addressed prior to project implementation. The state's continued concurrence with the project will be based, in part, on the adequate resolution of issues identified during this and subsequent reviews. The state's final review of the project's consistency with the FCMP will be conducted during the environmental permitting stage.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please contact Ms. Lauren P. Milligan at (850) 245-2170.

Yours sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/lm
Enclosures

cc: Barbara Bess, DEP, Central District
Laura Kammerer, DOS

Scoping Documents and Correspondence

practicable alternative pursuant to the 404(b)(1) Guidelines (40 CFR 230.12).

FOR FURTHER INFORMATION CONTACT: Questions or comments concerning the Final EIS/EIR should be directed to Ms. Susan A. Meyer, Senior Project Manager, Regulatory Branch, U.S. Army Corps of Engineers, Los Angeles District, P.O. Box 532711, 915 Wilshire Boulevard, Los Angeles, CA 90053–2325, (808) 438–2137. Alternatively, comments can be submitted electronically to: *susan.a.meyer@usace.army.mil.*

SUPPLEMENTARY INFORMATION: Paper copies of the Final EIS/EIR will be made available to the public for review at the following libraries: Norman F. Feldheym Central Library (San Bernardino, California), Hesperia Branch Library (Hesperia, California), and the Rancho Cucamonga Public Library (Rancho Cucamonga, California). A CD copy of the document may be obtained by contacting Ms. Meyer in writing at the address or email above. Interested parties are invited to provide their comments on the Final EIS/EIR, which will become a part of the official record and will be considered in the final decision. Written comments must be received on or before April 16, 2007 and should be submitted to the contact listed above. A Record of Decision (ROD) will be issued by the Corps no earlier than 30 days after the Notice of Receipt for the Final EIS/EIR is published in the **Federal Register**. As a cooperating agency, the USFS intends to adopt the Final EIS/EIR and issue its own ROD in support of the issuance of a USFS special use permit.

Dated: March 7, 2007.

David J. Castanon,

Chief, Regulatory Branch.

[FR Doc. E7–4823 Filed 3–15–07; 8:45 am]

BILLING CODE 3710–KF–P

DEPARTMENT OF THE DEFENSE

Department of the Army; Corps of Engineers

Intent To Prepare a Draft Environmental Impact Statement for the Port Canaveral Navigation Improvements Section 203 Feasibility Study Located in Brevard County, FL

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of intent.

SUMMARY: The U.S. Army Corps of Engineers (Corps), Jacksonville District intends to prepare a Draft Environmental Impact Statement (DEIS) for the Port Canaveral Improvements Section 203 Feasibility Study. The study is being conducted by the Canaveral Port Authority under authority granted by section 203 of Water Resources Development Act (WRDA) 1986.

ADDRESSES: U.S. Army Corps of Engineers, Planning Division, Environmental Branch, P.O. 4970, Jacksonville, FL, 32232–0019.

FOR FURTHER INFORMATION CONTACT: Mr. Paul Stodola, by e-mail *Paul.E.Stodola@saj02.usace.army.mil* or by telephone at (904) 232–3271.

SUPPLEMENTARY INFORMATION:

a. Proposed Action. Canaveral Port Authority has elected to conduct a feasibility study of potential improvements under the authority granted by section 203 of WRDA 1986. Section 203 states (in part) that "A non-Federal interest may on its own undertake a feasibility study of a proposed harbor or inland harbor project and submit it to the Secretary of the Army." Corps of Engineers guidance for implementation of Section 203 is contained in Engineering Regulation (ER) 1165–2–122, August 26, 1991.

b. Objectives. The objectives of the Port Canaveral Navigation Improvements feasibility study are to prepare a Section 203 Study Report that fully complies with all Federal laws and regulations applicable to navigation project General Investigation feasibility studies, and to enable the Assistant Secretary of the Army to make appropriate recommendations to Congress regarding authorization of the Federal navigation improvements project for Port Canaveral.

c. Study Purpose and Need for Action. The purpose of the study is to evaluate modification to the Federal project for improvements to the navigational channels, the west turning basin, and wideners at the port, all of which would result in an increase in the efficiency of cargo vessels and cruise ships using the port. The study will identify and evaluate alternatives that will (2) reduce future congestion at Port Canaveral; (2) accommodate anticipated future growth in vessel traffic; (3) improve the efficiency of operations for cruise ships and cargo vessels within the Port complex; (4) allow for use of the Port by larger, more efficient, cruise ships and cargo vessels; and (5) allow for development of additional terminals/berths without encroaching on the West Turning Basin.

The total Federal project includes, a 41-foot-deep entrance channel and maintenance of the 44-foot-deep Navy Channel in the 41-foot channel reach; a 40-foot deep and 400-foot-wide inner channel; depths of 35 and 39 feet in the middle turning basin; a channel 39 feet deep and 400 feet wide from the middle turning basin west, 1,800 feet, hence a channel 31 feet deep and 400 feet wide to the west turning basin also 31 feet deep; a channel 39 feet deep and 350 feet wide from the middle turning basin and channel north to the end of Berth 4; relocation of the perimeter dike about 4,000 feet westward and extension of the harbor westward; a south entrance jetty 1,100 feet long and an entrance jetty 1,150 long; a barge dock 90 feet wide and 600 feet long west of the harbor dike; and a barge canal 12 feet by 125 feet from the middle turning basin tot he Atlantic Intracoastal Waterway.

The without project condition is for continuation of the same channel depths and dimensions, with maintenance dredging as needed to maintain current authorized depths. Without proposed project improvements the port will continue to experience the following three major problems which greatly impact port operations, safety, and economic viability.

1. The size of cruise ships calling at Port Canaveral is constrained by channel and turning basin dimensions. The potential for future cruise ship terminal expansion cannot be fully exploited under existing channel and turning basin dimensions and configurations. In addition, the increasingly larger cruise ships calling at Port Canaveral are beginning to encroach on the existing west turning basin. Also, passage of large cruise ships through the narrow ship channel causes surges at cargo piers, which result in cargo vessels having to stop loading and unloading activities while the cruise ships pass.

2. The size of cargo vessels calling at Port Canaveral is constrained by existing channel dimensions and configuration. Larger, more efficient vessels could be used for bulk items such as aggregates and cement if channels were improved.

3. Congestion at cargo berths reduces the effectiveness and efficiency of cargo vessels and landside facilities. Given the rapid growth in commodity movements at Port Canaveral, in the very near future a significant proportion of cargo vessels calling at Port Canaveral will have to wait offshore for a berth to become available. Some of these vessels will likely divert to an alternative port, and incur increased transportation costs, if channels are not improved. In addition, landside facilities will stand idle as vessels wait offshore for an available berth.

d. Alternatives. The proposed alternative navigation improvements at

Port Canaveral include making no further improvements to the project (no action alternative), deepening ocean access and interior channels to accommodate larger vessels; deepening the turning circles in the west and middle turning basins to accommodate larger vessels; increasing the diameter of the west turning basin to accommodate new larger cruise ships; deepening the widener to accommodate larger cruise ships; and widening interior channels to accommodate larger cruise ships.

e. Issues. The Environmental Impact Statement (EIS) will consider impacts on marine resources, protected species, water quality, fish and wildlife resources, cultural resources, essential fish habitat, socio-economics resources, coastal processes, aesthetics and recreation, and other impacts identified through scoping, public involvement, and agency coordination.

f. Scoping Process. Based on early coordination, the local sponsor determined that an EIS was needed. Scoping meetings were held by the local sponsor with Federal agencies. Additional agency meetings will be held in the coming months. All parties are invited to participate in the scoping process by identifying any additional concerns on issues, studies needed, alternatives, procedures, and other matters related to the scoping process. At this time, there are no plans for a public scoping meeting.

g. Public Involvement. We invite the participation of affected Federal, state and local agencies, affected Indian tribes, and other interested private organizations and parties.

h. Coordination. The proposed action is being coordinated with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, with the FWS under the Fish and Wildlife Coordination Act, and with the State Historic Preservation Officer.

i. Other Environmental Review and Consultation. The proposed action would involve evaluation for compliance with guidelines pursuant to Section 404(b) of the Clean Water Act; application (to the State of Florida) for Water Quality Certification pursuant to Section 401 of the Clean Water Act; certification of state lands, easements, and rights of way; Essential Fish Habitat with National Marine Fisheries Service; and determination of Coastal Zone Management Act consistency.

j. Agency Role. The non-Federal sponsor (Canaveral Port Authority) will provide extensive information and assistance on the resources to be impacted, mitigation measures, and alternatives. The corps will provide coordination of the EIS process.

k. DEIS Preparation. It is estimated that the DEIS will be available to the public on or about January 2008.

Dated: March 7, 2007.

Stuart J. Appelbaum,

Chief, Planning Division.

[FR Doc. 07–1278 Filed 3–15–07; 8:45 am]

BILLING CODE 3710–AJ–M

END

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Intent To Prepare an Environmental Impact Statement for the Proposed Placer Vineyards Project, Corps Permit Application Number 199900737

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of intent.

SUMMARY: The Placer Vineyards Specific Plan Property Group proposes to construct a mixed-use master planned community with residential, employment, commercial, open space, recreational and public/quasi-public land uses. The Plan provides for 14,132 homes in a variety of housing types, styles, and densities. At full Plan build-out, projected to occur over a 20- to 30-year time period, Placer Vineyards will have a population of approximately 33,000 people, 42 acres of employment centers, 140 acres of retail commercial centers and approximately 930 acres of new parks and open space. This project, as proposed, would result in impacts to approximately 102.7 acres of waters of the United States, including 8.5 acres of temporary impacts to water and wetlands.

DATES: Two scoping meetings will be held on March 28, 2007. The first meeting will be conducted from 3 p.m. to 5 p.m., and the second will be conducted from 6 p.m. to 8 p.m.

ADDRESSES: The meetings will be held at the Placer County Community Development Resource Center, Planning Commission Hearing Room, 3091 County Center Drive (corner of Bell Road and Richardson), Auburn, CA 95603.

FOR FURTHER INFORMATION CONTACT: Questions about the proposed action and the Draft Environmental Impact Statement can be answered by Tom Cavanaugh, (916) 557–5261, e-mail: *thomas.j.cavanaugh@usace.army.mil.*

SUPPLEMENTARY INFORMATION: The applicants have applied for a Department of the Army permit under Section 404 of the Clean Water Act to construct a large-scale mixed-use development project. As part of the Section 404(b)(1) application process, the development of an Environmental Impact Statement (EIS) is required. No project alternatives have been defined to date. The proposed project and the alternatives to its proposed size, design and location will be developed through the EIS process.

Although wetland delineations have been conducted for each of the participating properties, some have not yet been verified. Based upon the best currently available information, approximately 156.1 acres of waters of the United States have been delineated within the participating properties. Of the 156.1 acres mapped on site, the applicants propose to result in impacts to approximately 61.3 acres of waters of the United States and to avoid approximately 60.1 acres of waters of the United States for construction of the project (not including infrastructure). For development of the infrastructure elements, the applicants propose to affect an estimated 41.4 acres of waters of the United States. Thus, the combined total proposed impacts to waters of the United States for all elements of this comprehensive permit application would affect 102.7 acres.

The Placer Vineyards Plan Area is bounded on the north by Baseline Road, on the south by the Sacramento/Placer County line, on the west by the Sutter/Placer County line and Pleasant Grove Road, and on the east by Dry Creek and Walerga Road. East to west, the Specific Plan area spans approximately 6 miles. North to south, at its widest point, it spans approximately 2 miles.

The Corps' public involvement program includes several opportunities to provide oral and written comments. Affected Federal, state, local agencies, Indian tribes and other interested private organizations and parties are invited to participate. Significant issues to be analyzed in depth in the EIS include, loss of waters to the United States, including vernal pools and other wetlands; cultural resources; threatened and endangered species; surface water and groundwater; water quality; socio-economic effects, and aesthetics.

The Corps will initiate formal consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service under Section 7 of the Endangered Species Act for two federally threatened and endangered species that may be affected by this project. In addition, the Corps will be consulting with the State Historic Preservation Officer under Section 106 of the National Historic Preservation Act regarding potential impacts to sites

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

REPLY TO
ATTENTION OF
Planning Division
Environmental Branch

MAR 2 1 2007

TO ALL INTERESTED PARTIES:

The U.S. Army Corps of Engineers (Corps), Jacksonville District, and the Canaveral Port Authority will host a scoping meeting to seek public comment on the development of Port Canaveral Navigation Improvements. This meeting will be held at the following time and place:

DATE:	April 4, 2007
TIME:	3:00 P.M.
PLACE:	Commission Room of the Canaveral Port Authority 445 Challenger Road Cape Canaveral, Florida

This meeting will focus on the area within and adjacent to Port Canaveral in Brevard County, Florida (please see enclosed map).

The scoping meeting will feature a presentation by Corps and Port Canaveral staff on project efforts to date, preliminary alternatives under consideration, environmental impacts, and project schedule. Federal and state natural resource agencies have also been informed of the meeting. An opportunity to ask questions and make comments will be given after the presentation.

In order that we may hear as many comments as possible during the meeting, we will provide a comment sheet for your use. You may wish to use this to write down your questions and submit them after or during the meeting. In the event that you can not attend the meeting, you are encouraged to send your written comments to the letterhead address, Attn. Mr. Paul Stodola. The enclosed Notice of Intent to prepare a Draft Environmental Impact Statement will provide you with additional information on the proposed action.

If you would like additional information, please contact Mr. Paul Stodola at phone number 904-232-3271, or email at Paul.E.Stodola@saj02.usace.army.mil.

Sincerely,

Stuart J. Appelbaum
Chief, Planning Division

Enclosures

COMMANDER (OAN)
SEVENTH COAST GUARD DISTRICT
909 SE 1ST AVENUE
BRICKNELL PLAZA FEDERAL BLDG
MIAMI FL 33131-3050

REGIONAL DIRECTOR
U S FISH & WILDLIFE SERVICE
1875 CENTURY BLVD
ATLANTA GA 30345-3301

FIELD SUPERVISOR
U S FISH & WILDLIFE SERVICE
6620 SOUTHPOINT DRIVE SOUTH
SUITE 310
JACKSONVILLE FL 32216-0912

NATIONAL MARINE FISHERIES SERVICE
CHIEF PROTECTED SPECIES BRANCH
263 13TH AVE. S.
ST. PETERSBURG FL 33701

MR GEORGE GETSINGER
NATIONAL MARINE FISHERIES SERVICE
C/O GTM NERR
9741 OCEAN SHORE BLVD.
ST. AUGUSTINE FL 32080-8618

REGIONAL DIRECTOR
FEMA INSURANCE & MITIGATION DIV
3003 CHAMBLEE-TUCKER ROAD
ATLANTA GA 30341

SOUTHERN REGION FORESTER
U S FOREST SERVICE
1720 PEACHTREE ROAD NW
ATLANTA GA 30309-2405

REGIONAL ADMINISTRATOR
US ENVIR PROTECTION AGENCY
ENVIRONMENTAL POLICY SECTION
61 FORSYTH STREET
ATLANTA GA 30303-3104

HOUSING AND URBAN DEVELOPMENT
REGIONAL ENVIRONMENTAL OFFICER
75 SRING STREET SW ROOM 600-C
ATLANTA GA 30303-3309
(2 CYS)

U S DEPT OF AGRICULTURE-NRCS
TAVARES SERVICE CENTER
1725 DAVID WALKER DRIVE
TAVARES FL 32778-4954

FLORIDA DEPT OF ENV PROTECTION
BUREAU OF SURVEY & MAPPING, DIV OF ST LANDS
MAIL STATION 105
3900 COMMONWEALTH BLVD
TALLAHASSEE FL 32399-3000

DR JANET S MATTHEWS
DIVISION OF HISTORICAL RES - SHPO
500 SOUTH BRONOUGH STREET
TALLAHASSEE FL 32399-0250

MS LAUREN MILLIGAN
FLORIDA STATE CLEARINGHOUSE
FL DEPT OF ENVIRONMENTAL PROTECTION
3900 COMMONWEALTH BLVD MS 47
TALLAHASSEE FL 32399-3000
(**16 CYS**)

MS LYNN GRIFFIN
FLORIDA COASTAL MANAGEMENT PROGRAM
FL DEPT OF ENVIRONMENTAL PROTECTION
3900 COMMONWEALTH BLVD
MAIL STATION 47
TALLAHASSEE FL 32399-3000

MR BRADLEY J HARTMAN
FL FISH & WILDLIFE CONSERV COMM
DIRECTOR OFFICE OF ENV SERVICES
620 SOUTH MERIDIAN STREET
TALLAHASSEE FL 32399-1600

EAST CENTRAL FLORIDA REGIONAL
PLANNING COUNCIL
631 NORTH WYMORE ROAD
SUITE 100
MAITLAND FL 32751

MR WILLIAM STEELE
SEMINOLE TRIBE OF FLORIDA
AH THA THI KI MUSEUM
HC 61, BOX 31A
CLEWISTION FL 33440

MR PACE WILBUR
NATIONAL MARINE FISHERIES SERVICE
219 FORT JOHNSON ROAD
CHARLESTON SC 29412-9110

MR FRED DAYHOFF
MICCOSUKEE TRIBE OF FLORIDA
ATTENTION STEVE TERRY,
POST OFFICE BOX 440021
TAMIAMI STATION
MIAMI FL 33144

CANAVERAL NATIONAL SEASHORE
NATIONAL PARKS SERVICE
SUPERINTENDENT'S OFFICE
308 JULIA STREET
TITUSVILLE FL 32796-3521

U S FISH & WILDLIFE SERVICE
MR RON HIGHT
MERRITT ISLAND & PELICAN ISLAND
NATIONAL WILDLIFE REFUGES
P O BOX 6504
TITUSVILLE FL 32782

U S GEOLOGICAL SURVEY
FLORIDA INTEGRATED SCIENCE CENTER
WATER & RESTORATION STUDIES
FEDERAL RESERVE BANK BLDG
9100 NW 36TH STREET SUITE 107
MIAMI FL 33178

COMMANDER, 45TH SPACE WING
PATRICK AIR FORCE BASE
45 CES/CE
1224 JUPITER STREET
PATRICK AFB FL 32925-3343

NASA ENVIRONMENTAL MANAGEMENT
MR MARIO BUSACCA
MAIL CODE TA-C3
KENNEDY SPACE CENTER FL 32899

ATLANTIC OCEANOGRAPHIC &
METEOROLOGICAL LABORATORY OF NOAA
DR PETER ORTNER
DIRECTOR OF OCEAN CHEMISTRY DIVISION
4301 RICKENBACKER CAUSEWAY
MIAMI FL 33149

FL FISH & WILDLIFE CONSERV COMMISSION
FLORIDA WILDLIFE RESEARCH INSTITUTE
BUREAU CHIEF
100 8TH AVENUE SW
ST PETERSBURG FL 33701

FL FISH & WILDLIFE CONSERV COMMISSION
FLORIDA MARINE RESEARCH INSTITUTE
MR RICH PAPERNO
1220 PROSPECT AVE #285
MELBOURNE FL 32901

FL FISH & WILDLIFE CONSERV COMMISSION
MR STEVE LAU
255-154TH AVENUE
VERO BEACH FL 32968

FL DEPARTMENT OF TRANSPORTATION
DIRECTOR DIVISION OF PLANNING & PROD
719 S WOODLAND BLVD
DELAND FL 32720

FL INLAND NAVIGATION DISTRICT
MR DAVID ROACH, EXECUTIVE DIRECTOR
1314 MARCINSKI ROAD
JUPITER FL 33477-9498

FL DEPT OF ENVIRONMENTAL PROTECTION
ST SEBASTIAN BUFFER PRESERVE
1000 BUFFER PRESERVE DRIVE
FELLSMERE FL 32948

MS DONNA WIETING
US DEPARTMENT OF COMMERCE
HCHB SP ROOM 6117
14TH & CONSTITUTION AV NW
WASHINGTON DC 20230
(5 CYS)

ISAAK WALTON LEAGUE
P O BOX 97
ESTERO FL 33928

ST JOHNS RIVER WATER MGMT DIST
P O BOX 1429
PALATKA FL 32178-1428

FL REGIONAL FIELD OFFICE
SIERRA CLUB FLORIDA OFFICE
475 CENTRAL AVENUE SUITE M-1
ST PETERSBURG FL 33701

SOUTH FLORIDA REGIONAL OFFICE
SIERRA CLUB FLORIDA OFFICE
2700 SW 3RD AVENUE SUITE 2F
MIAMI FL 33129

SAVE THE MANATEE CLUB
500 N MAITLAND AVENUE
MAITLAND FL 32751

CARIBBEAN CONSERVATION CORPORATION
P O BOX 2866
GAINESVILLE FL 32602

AUDUBON OF FLORIDA
444 BRICKELL AVE SUITE 850
MIAMI FL 33131

FLORIDA WILDLIFE FEDERATION
P O BOX 6870
TALLAHASSEE FL 32314-6870

PEGGY BUSACCA
BREVARD COUNTY ADMINISTRATOR
2725 JUDGE FRAN JAMIESON WAY
VIERA FL 32940

TRUMAN SCARBOROUGH, CHAIR
BREVARD COUNTY COMMISSION
400 SOUTH STREET SUITE 1A
TITUSVILLE FL 32780

RON JONES, DIRECTOR
STORMWATER UTILITY
BREVARD COUNTY
2725 JUDGE FRAN JAMIESON WAY
VIERA FL 32940

ERNIE BROWN, DIRECTOR
NATURAL RESOURCES MANAGEMENT OFFICE
BREVARD COUNTY
2725 JUDGE FRAN JAMIESON WAY
VIERA FL 32940

REGIONAL ADMINISTRATOR
NAT MARINE FISHERIES SERV, HABITAT CONS
263 13TH AVE. S.
ST. PETERSBURG FL 33701

MR STEVE KOKKINAKIF, USDC
1315 EAST-WEST HIGHWAY
BLDG SFMC3 ROOM 15723
SILVER SPRINGS MD 20910

MS LYNN GRIFFIN
FLORIDA COASTAL MANAGEMENT PROGRAM
3900 COMMONWEALTH BOULEVARD
MAIL STATION 47
TALLAHASSEE FL 32399-3000

FL DEPT OF TRANSPORTATION
605 SUWANNEE STREET
TALLAHASSEE FL 32399-0450

HONORABLE MEL MARTINEZ
UNITED STATES SENATOR
1650 PRUDENTIAL DRIVE, SUITE 220
JACKSONVILLE FL 32207

HONORABLE BILL NELSON
UNITED STATES SENATOR
1301 RIVERPLACE BOULEVARD SUITE 2218
JACKSONVILLE FL 32207

MR ALEXANDER STONE
AMERICAN LITTORAL SOCIETY (BHNI)
2809 BIRD AVENUE PMB 162
MIAMI FL 33133

FLORIDA WILDLIFE FEDERATION
PO BOX 6870
TALLAHASSEE FL 32314-6870

NATIONAL WILDLIFE FEDERATION
1330 WEST PEACHTREE STREET SUITE 475
ATLANTA GA 30309

NATURE CONSERVANCY
FLORIDA CHAPTER
222 S WESTMONTE DR SUITE 300
ALTAMONTE SPRINGS FL 32714-4269

REEFKEEPER INTERNATIONAL
P.O. BOX 1316
MIDDLETON MD 21769

MR MICHAEL GERHARDT
DREDGING CONTRACTORS OF AMERICA
503 D STREET NW, 1st FLR.
WASHINGTON DC 20001

MR BILL HANSON
GREAT LAKES DREDGE AND DOCK COMPANY, LLC
2122 YORK ROAD
OAK BROOK IL 60523

CANAVERAL PORT AUTHORITY
P.O. BOX 267
CAPE CANAVERAL FL 32920

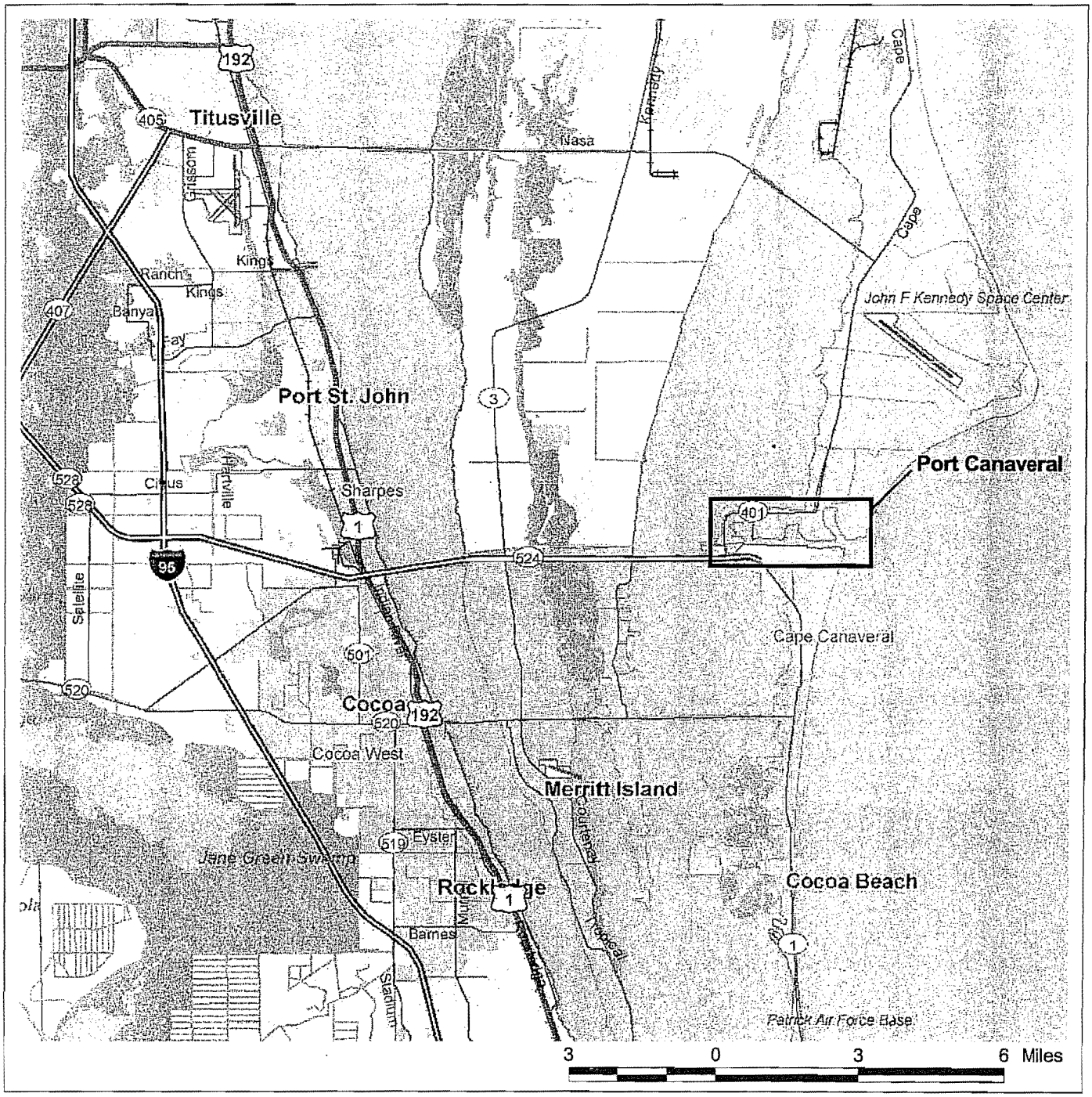
DIAL CORDY
490 OSCEOLA AVENUE
JACKSONVILLE BEACH FL 32250

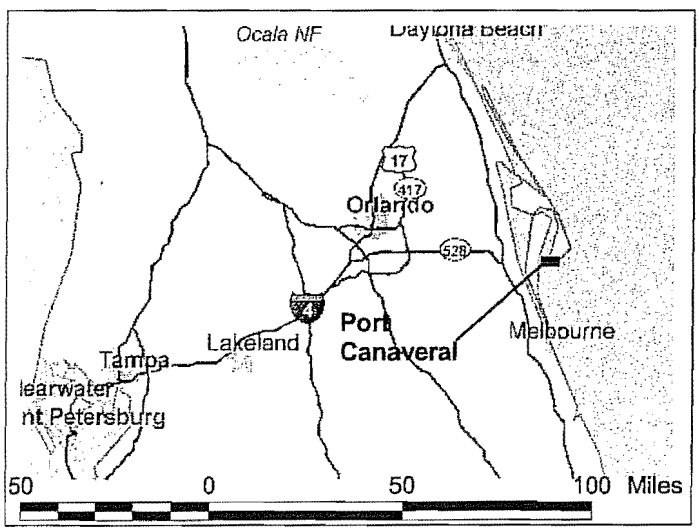
HONORABLE MIKE HARIDOPOLOS
1360 SARNO ROAD
SUITE C
MELBOURNE FL 32935

HONORABLE BOB ALLEN
321 MAGNOLIA AVENUE
MERRITT ISLAND FL 32952

HONORABLE DAVE WELDON
2725 JUDGE FRAN JAMIESON WAY BUILDING C
MELBOURNE FL 32940

CITY COUNCIL
CITY HALL ANNEX
111 POLK AVENUE
CAPE CANAVERAL FL 32920





Location Map	
Port Canaveral Environmental Baseline Report	
Scale: 1 inch = 3 miles	Drawn By: MR
Date: April 2006	Approved By: LS
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J05-850
	Figure 1

FLORIDA TODAY
PUBLISHED IN BREVARD COUNTY

Published Daily

STATE OF FLORIDA
COUNTY OF BREVARD

Before the undersigned authority personally appeared **MAUREEN MALECHUK** who on oath says that she is **LEGAL ADVERTISING CLERK** of the **FLORIDA TODAY**, a newspaper published in Brevard County, Florida; that the attached copy of advertising being a **LEGAL NOTICE** **(AD#843827-$141.75)** in the matter of **CANAVERAL PORT AUTHORITY** The Court **MEETING NOTICE** was published in the **FLORIDA TODAY** in the issues of **APRIL 2, 2007**

affiant further says that the said **FLORIDA TODAY** is a newspaper in said Brevard County, Florida, and that the said newspaper has heretofore been continuously published in said Brevard County, Florida, regularly as stated above, and has been entered as periodicals matter at the post office in **MELBOURNE** in said Brevard County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Maureen Malechuk
(Signature of Affiant)

Sworn to and subscribed before this **2ND DAY OF APRIL, 2007**

Linda L. Braud
(Signature of Notary Public)

LINDA L. BRAUD
(Name of Notary Typed, Printed or Stamped)

Personally Known _____ or Produced Identification _____
Type Identification Produced _____

AD#843827-4/2,2007

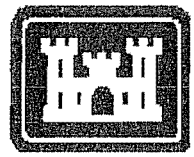
U.S. ARMY CORPS OF ENGINEERS AND CANAVERAL PORT AUTHORITY
CANAVERAL PORT AUTHORITY
NAVIGATION IMPROVEMENTS
DRAFT ENVIRONMENTAL IMPACT STATEMENT
BREVARD COUNTY, FLORIDA
SCOPING MEETING
APRIL 4, 2007

The U.S. Army Corps of Engineers (Corps) and Canaveral Port Authority (Port), intend to prepare a Draft Environmental Impact Statement (EIS) to address the potential impacts associated with the construction of proposed navigation improvements within Port Canaveral in Brevard County, Florida. The EIS will be used as a basis for the selection of a preferred alternative and to ensure compliance with the National Environmental Policy Act (NEPA).

The Corps invites full public participation to promote open communication on the issues surrounding the proposal. All Federal, State, and local agencies, and other persons or organizations that have an interest are urged to participate in the NEPA scoping process. A public meeting will be held to help identify significant issues and to receive public input and comment. The scoping meeting will be held on April 4, 2007 at the Commission Room of the Canaveral Port Authority, in Brevard County, Florida beginning at 3pm. If you will be attending the meeting and require a sign language interpreter, please contact the Corps.

Commission Room of the
Canaveral Port Authority
445 Challenger Road
Cape Canaveral, Florida

Questions or written comments about the proposed action and the EIS should be addressed to Mr. Paul Stodola, U.S. Army Corps of Engineers, Planning Division, Environmental Branch, P.O. 4970 Jacksonville, FL 32232-0019, phone (904) 232-3271, e-mail Paul.E.Stodola@sal02.usace.army.mil. Comments should be received by May 4, 2007.



U.S. ARMY CORPS OF ENGINEERS AND CANAVERAL PORT AUTHORITY

PORT CANAVERAL NAVIGATION IMPROVEMENTS
DRAFT ENVIRONMENTAL IMPACT STATEMENT
BREVARD COUNTY, FLORIDA

APRIL 4, 2007

SCOPING MEETING ATTENDANCE RECORD

Name	Residence Address	State	ZIP
Lee Swain - Dial Cordy & Assoc	Jax Beach	FL	32250
Mark Howell - DC+A	Jax Beach	FL	32250
Raymond Cox	West Palm Beach	FL	33410
Linda Batz / Citizen Hill	Merritt Island	FL	32953
PAUL STODOLA	JAX	FL	32656
RICK DURHAM	MERRITT ISL	FL	32952
Jeannie Adams CPA	Cape Canaveral	FL	32920
Shannon Roberts City of Cape Canaveral	Cape Canaveral	FL	32920
Gregory McGILL	NOTU Cape Canaveral	FL	32920
Josh Hoops	NOTU Cape Canaveral	FL	32920
LARRY WEBER	Merritt Island	FL	32952
John Milo	Jacksonville	FL	32225
Paula Berntson	Merritt Island	FL	32952
Rocky Sandeke	Cape Canaveral	FL	32920
Robin Sobrino	Brevard County		

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

May 9, 2007

Mr. Paul E. Stodola
Planning Division, Jacksonville District
U.S. Army Corps of Engineers
P. O. Box 4970
Jacksonville, FL 32232-0019

RE: Department of the Army, Jacksonville District Corps of Engineers – Scoping Notice – Draft Environmental Impact Statement for the Port Canaveral Navigation Improvements Section 203 Feasibility Study – Cape Canaveral, Brevard County, Florida.
SAI # FL200703223171C

Dear Mr. Stodola:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16, U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4231, 4331-4335, 4341-4347, as amended, has coordinated a review of the subject scoping notice.

The Florida Department of Environmental Protection (DEP) advises that port terminal/ berth construction and new dredging and dredged material disposal activities will require issuance of an environmental resource permit or joint coastal permit by the DEP Bureau of Beaches and Coastal Systems. Please contact Mr. Marty Seeling at (850) 414-7728 for further assistance and permitting information.

The Florida Department of State (DOS) notes that a large coquina and shell midden, the NOTU Site (8BR1641), is located within the boundaries of the project area depicted on the enclosed location map. PBS&J, Inc. conducted an archaeological resource assessment of this area to delineate the site's boundaries and assess its potential for inclusion in the *National Register of Historic Places*. The resultant report concludes that Site 8BR1641 contains both intact and disturbed portions with two distinct areas of intact cultural deposits in Areas A and B. Areas A and B are thus eligible for listing in the *National Register* and staff recommends that a 10-and-20 meter buffer be established to protect both areas from disturbance. Please refer to the enclosed DOS letter and maps for additional information.

Based on the information contained in the scoping notice and the enclosed state agency comments, the state has determined that, at this stage, the proposed activities are consistent with the Florida Coastal Management Program (FCMP). The concerns identified by our reviewing agencies must be addressed prior to project implementation. The state's continued concurrence with the project will be based, in part, on the adequate resolution of issues identified during this and subsequent reviews. The state's final review of the project's consistency with the FCMP will be conducted during the environmental permitting stage.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please contact Ms. Lauren P. Milligan at (850) 245-2170.

Yours sincerely,

Sally B. Mann

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/lm
Enclosures

cc: Barbara Bess, DEP, Central District
Laura Kammerer, DOS

Project Information	
Project:	FL200703223171C
Comments Due:	04/23/2007
Letter Due:	05/10/2007
Description:	DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT CORPS OF ENGINEERS - SCOPING NOTICE - DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PORT CANAVERAL NAVIGATION IMPROVEMENTS SECTION 203 FEASIBILITY STUDY - CAPE CANAVERAL, BREVARD COUNTY, FLORIDA.
Keywords:	ACOE - PORT CANAVERAL NAVIGATION IMPROVEMENTS FEASIBILITY STUDY - BREVARD CO.
CFDA #:	12.107

Agency Comments:

ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Please note that port berth construction and new dredging and disposal activities will require issuance of an environmental resource permit or joint coastal permit by the DEP Bureau of Beaches and Coastal Systems. Please contact Mr. Marty Seeling at (850) 414-7728 for further assistance and permitting information.
FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
No Comments Received
STATE - FLORIDA DEPARTMENT OF STATE
The DOS notes that a large coquina and shell midden, the NOTU Site (8BR1641), is located within the boundaries of the project are depicted on the location map. PBS&J, Inc. conducted an archaeological resource assessment of this area to delineate the Site's boundaries and assess its potential for inclusion in the National Register of Historic Places. The resultant report concludes that Site 8BR1641 contains both intact and disturbed portions with two distinct areas of intact cultural deposits in Areas A & B. Areas A & B are thus eligible for listing in the National Register and staff recommends that a 10-and-20 meter buffer be established to protect both areas from disturbance.
TRANSPORTATION - FLORIDA DEPARTMENT OF TRANSPORTATION
No Comment
ST. JOHNS RIVER WMD - ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
According to the operating agreement between SJRWMD and the Florida Department of Environmental Protection (FDEP) concerning regulation under part IV of Chapter 373, F.S., FDEP will review port projects such as this. Item (5)n lists "seaports and adjacent seaport related development where the applicant or owner is the port authority" as the responsibility of FDEP. Sufficient information was not provided to determine the extent of potential impacts to wetlands and surface waters. It is expected that the project will be exceed thresholds and will require an Environmental Resource Permit (ERP) from FDEP. The FDEP contact, Lisa Prather, may be reached at (407) 894-7555 or lisa.prather@dep.state.fl.us.
E. CENTRAL FL RPC - EAST CENTRAL FLORIDA REGIONAL PLANNING COUNCIL
Released Without Comment
BREVARD -

For more information or to submit comments, please contact the Clearinghouse Office at:

3900 COMMONWEALTH BOULEVARD, M.S. 47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

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

RECEIVED
MAY 0 8 2007
OIP / OLGA

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

May 4, 2007

RE: DHR No. 2007-2087/ Date Received by DHR: March 26, 2007
SAI No. FL200703223171C/ Jacksonville District Corps of Engineers
Scoping Notice – Draft Environmental Impact Statement for the Port Canaveral Navigation Improvements Section 203 Feasibility Study – Cape Canaveral, Brevard County, Florida

Dear Ms. Milligan:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act,* as amended, 36 *C.F.R.,* Part 800*: Protection of Historic Properties*, and the *National Environmental Policy Act* of 1969, as amended. The State Historic Preservation Officer is to advise and assist federal agencies when identifying historic properties, listed, or eligible for listing, in the *National Register of Historic Places* (National Register), assessing the project's effects, and considering alternatives to avoid or minimize adverse effects.

We reviewed the Florida Master Site File (FMSF) inventory and our records for information to define issues and concerns to be addressed in the referenced Draft Environmental Impact Statement (DEIS). We observe that a large coquina and shell midden, the NOTU Site (8BR1641), occurs within the boundaries of the project area depicted on the attached Location Map (Figure 1). We further note that in June 2006, Post, Buckley, Schuh & Jernigan, Inc. (PBS&J) conducted an archaeological resource assessment of this area to delineate the Site's boundaries and assess its potential for inclusion in the National Register.

In the resultant report, *A Phase I Cultural Resources Assessment and Management Plan of the NOTU Site, 8BR1641*(FMSF No. 11311), PBS&J concludes that Site 8BR1641 contains both intact and disturbed portions. Two distinct areas of intact cultural deposits are present within this site, the southern portion (Area A), and a northern portion (Area B). It is the opinion of PBS&J, that Areas A and B of Site 8BR1641 are eligible for listing in the National Register. It is also the opinion of PBS&J that a "10-and-20-meter buffer is established for Areas A and B" to protect

both portions from soil-disturbing activity, and that several small areas of disturbance and lightly scattered artifacts do not meet the criteria for inclusion in the National Register.

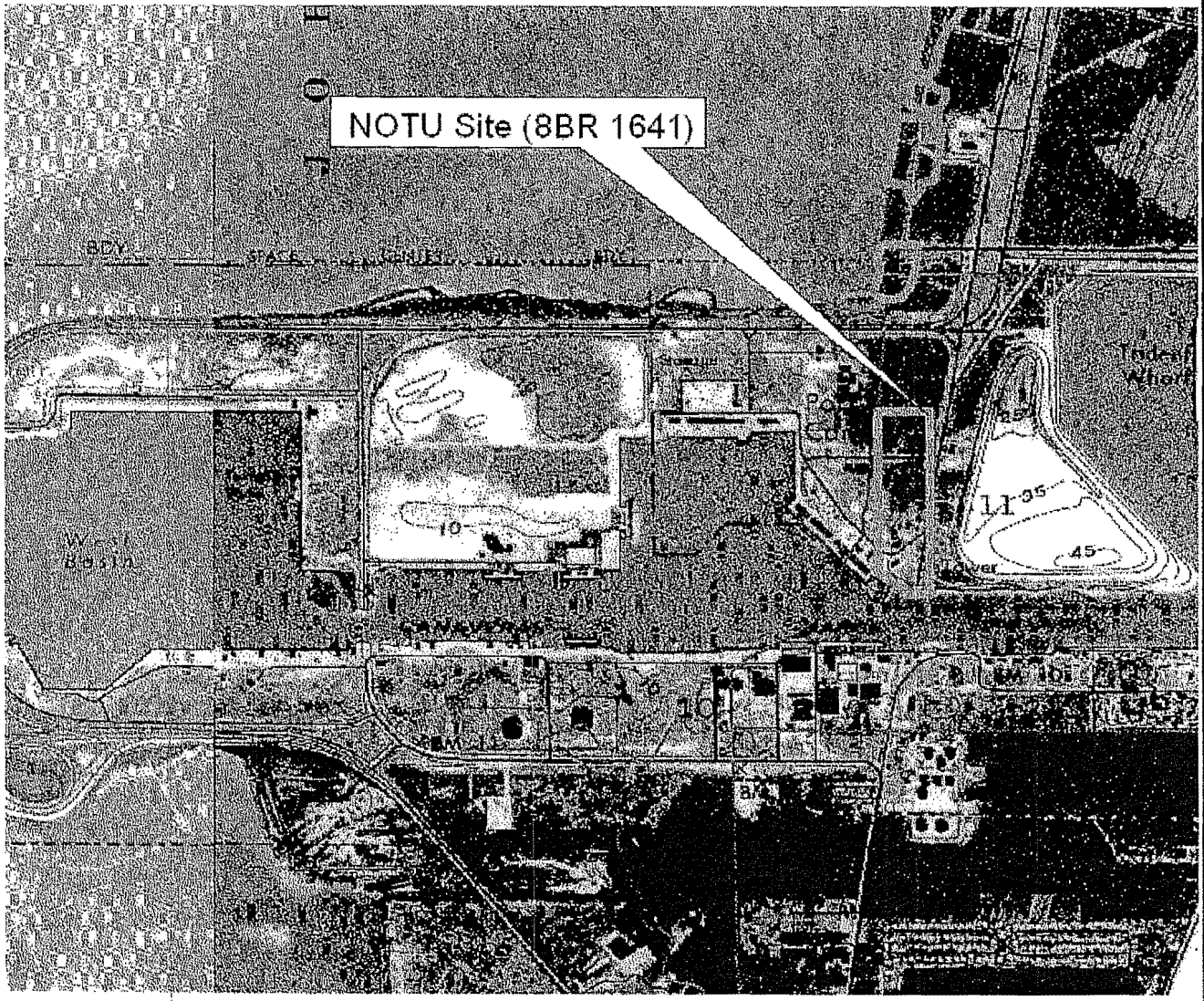
We concur with the conclusions and recommendations of PBS&J. Therefore, it is the opinion of this office that the referenced Draft Environmental Impact Statement address our recommendation that a protective buffer zone of at least 10-and-20 meters be established around Areas A and B of Sites 8BR1641 to ensure avoidance of these archaeologically sensitive areas by any soil-disturbing activities.

If there are any questions concerning our comments, please contact Janice Maddox, Historic Preservationist, by electronic mail at jmaddox@dos.state.fl.us, or by phone at (850) 245-6333. Thank you for your interest in protecting Florida's historic properties.

Sincerely,

Frederick P. Gaske

Frederick P. Gaske, Director, and
State Historic Preservation Officer



500 0 500 1000 1500 Meters

Compliance Review Section
DHR No.: 2007-2087
SAI No.: 20073223171C
Scoping Notice - Draft Environmental Impact Statement for the Port Canaveral Navigation Improvements Section 203 Feasibility Study

Map Legend

- Brevard County Sites
- STR
- USGS Cape Canaveral

WARNING! The locations of the archaeological site, historic structures, unmarked human burials, cemeteries, and other cultural features depicted on this map are for resource managment and law enforcement purposes. It is a felony to excavate, or to remove, deface, destroy, or otherwise alter any archaeological site or specimen located upon any state owned and controlled lands, without the permission of the Division of Historical Resources (see Section 267.13, Florida Statutes). State law protects human burial sites on all lands regardless of ownership. It is a felony to knowingly and willfully disturb, destroy, remove, vandalize or damage marked or unmarked human burial sites or to remove grave goods or other objects placed at grave sites (see Sections 872.02 and 872.05, Florida Statutes).

Florida Department of State
Division of Historical Resources
Bureau of Historic Preservation
Compliance Review Section
500 South Bronough Street
Tallahassee, Florida 32399-0250
(850) 245-6333

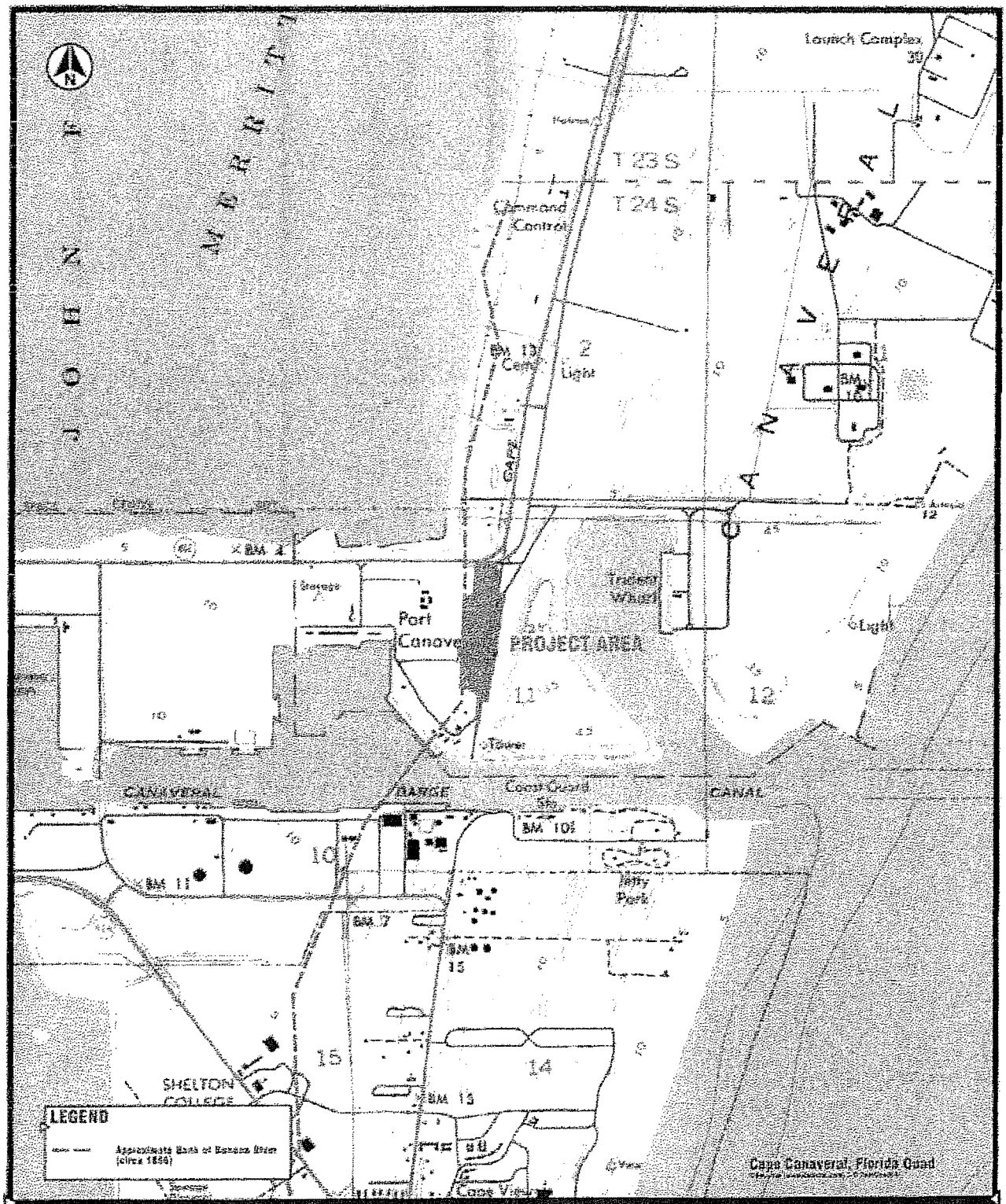
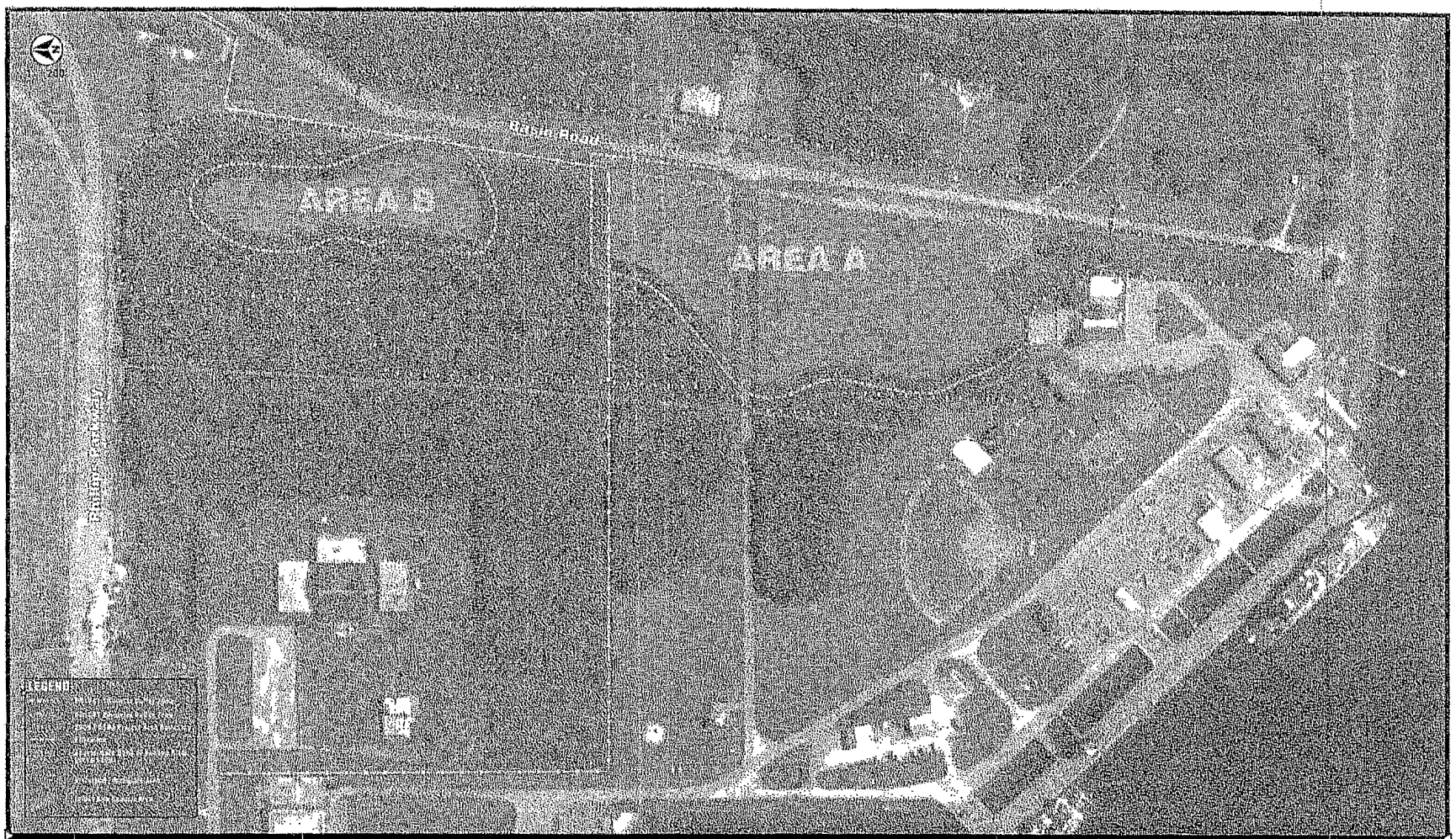


Figure 2 Project Area

Appendix A Survey and Excavation Locations



Appendix C Management Buffer Zones

Draft EA Public Meeting Documents and Comments

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

APR 10 2012

To Whom It May Concern:

Pursuant to the National Environmental Policy Act and U.S. Army Corps of Engineers (Corps) Regulation (33 CFR 230.11), this letter constitutes the Notice of Availability of the Integrated Section 203 Report and Draft Environmental Assessment (EA) for improvements to the existing Federal navigation project at Port Canaveral, Brevard County, Florida. The recommended plan includes both widening and deepening various portions of the harbor. Enclosed is the draft Finding of No Significant Impact (FONSI).

This draft report is available on the Corps, Jacksonville District website at the following address for your review:

http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/DocsNotices_OnLine_BrevardCo.htm.

At this time, we are inviting agencies, interest groups, and the public to provide input on the proposed alternatives and to identify significant resource concerns. Your comments will be incorporated during the preparation of the final EA. Comments should be addressed to the USACE at the following address:

U.S. Army Corps of Engineers
Jacksonville District
Attention: Jason Spinning (CESAJ-PD-EC)
Post Office Box 4970
Jacksonville, FL 32232-0019

Please provide written comments within 60 days of the date of this letter.

In addition, Corps will hold a public workshop to offer further opportunity for comment. Please join us at:

Monday, May 14, 2012 at 6:00 p.m.
Canaveral Port Authority
445 Challenger Road, Commission Room
Cape Canaveral, Florida 32920

If you have any questions or comments, please contact either Jason Spinning (904-232-1231 or Jason.J.Spinning@usace.army.mil) or Paul Stodola (904-232-3271 or Paul.E.Stodola@usace.army.mil).

Sincerely,

Eric P. Summa
Chief, Environmental Branch

Enclosure

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

FINDING OF NO SIGNIFICANT IMPACT

INTEGRATED SECTION 203 NAVIGATION STUDY REPORT & ENVIRONMENTAL ASSESSMENT

CANAVERAL HARBOR, BREVARD COUNTY, FLORIDA

I have reviewed the Environmental Assessment (EA) for the proposed action. 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 (EIS). Reasons for this conclusion are in summary:

a) The proposed work includes deepening and widening the channels, wideners, and turning basins at Canaveral Harbor. Although eight acres of man-made uplands will be lost as a result of this project, these resources are not considered to be significant and mitigation is not appropriate. No wetland habitats will be affected by the proposed action. Impacts to marine resources include loss of benthic organisms at the dredge sites and the removal of one acre of algal community associated with the existing riprap. These impacts are anticipated to be temporary in nature.

b) This work would be conducted in accordance with the draft U.S. Fish and Wildlife Coordination Act Report of September 2007, which is pending final approval by the Department of the Interior.

c) The proposed action will be in compliance with the Endangered Species Act (ESA), the Coastal Barrier Resources Act, and the Fish and Wildlife Coordination Act. Measures to prevent or minimize impacts to sea turtles will be implemented during project construction, in accordance with consultations with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). The proposed action will not jeopardize the continued existence of any threatened or endangered species, or adversely modify any designated "critical habitat." The Corps determined that the proposed action may affect, but is not likely to adversely affect sea turtles, the Eastern indigo snake, and the West Indian manatee. Consultation with USFWS and NMFS pursuant to Section 7 of the ESA will be completed prior to project construction.

d) The State provided concurrence with the Federal Consistency Determination (CD) (Appendix B of the EA) on 9 May 2007finding the action to be consistent with the Florida Coastal Management Program (FCMP). The State may issue an additional concurrence with the project's consistency with the FCMP during the environmental permitting stage of the project. The Corps will obtain an environmental resource permit or joint coastal permit from the Florida Department of Environmental Protection to comply with Section 401 of the Clean Water Act of 1972 prior to project construction.

e) Consultations with the State Historic Preservation Officer (SHPO) indicate that the project will not impact any sites of cultural or historical significance.

f) Measures to eliminate, reduce, or avoid potential impacts to environmental and cultural resources include the following: (1) turbidity monitoring will be conducted during construction to ensure turbidity levels comply with State water quality standards; (2) the standard Eastern indigo snake protection measures will be followed if any indigo snakes are present; (3) the standard manatee protection measures will be followed; (4) the Jacksonville District's Migratory Bird Protection Policy would be followed if any migratory birds are encountered.

g) The draft FONSI will be coordinated with the public and agencies with a 60-day comment period pursuant to 40 CFR 1501.4(e) and 1508.13. Any resulting comments or concerns will be addressed in the Final EA and/or this FONSI.

The point of contact for this finding is Paul Stodola at 904-232-3271 or Paul.E.Stodola@usace.army.mil. An electronic copy of the draft EA can be accessed from the Jacksonville District Environmental Documents website at:

http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/DocsNotices_OnLine_BrevardCo.htm

_____ _____

Ballard C. Barker
LTC, U.S. Army
Acting Commander

Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

6/9/2012

U.S. Army Corps of Engineers
Jacksonville District
Attn: Jason Spinning, (CESAJ-PD-EC)
Post Office Box 4970
Jacksonville, Florida 32232-0019

Subject: EPA's Comments on the Integrated Section 203 Report and Draft Environmental Assessment (EA) and Finding of No Significant Impact (FNSI) for improvements to the existing Federal Navigation Project at Port Canaveral, Brevard County, Florida

Dear Mr. Spinning:

The U.S. Environmental Protection Agency (EPA) is responding to Mr. Eric Summa's April 10, 2012, letter inviting agencies, interest groups, and the public to review and comment on the above referenced draft EA for the proposed action, a plan to widen and deepen Port Canaveral's harbor.

Background

The EA describes Port Canaveral (the Port) as a multiple-use facility composed of cruise ship berths, cargo berths, U.S. Navy, U.S. Coast Guard, and Military Sealift Command (MSC) berths. The Canaveral Port Authority (CPA) is the owner of all cruise terminal and cargo berth facilities. The Corps, the Navy, and the CPA conduct the harbor's maintenance dredging.

Proposed Action

The EA defines the proposed action as Canaveral Port Authority (CPA)'s feasibility study to deepen and widen Port Canaveral's channels and turning basins. CPA's recommended preferred alternative is to widen the main ship channel from 400 feet to 500 feet, expand the West Turning Basin turning circle from 1,400 feet to 1,725 feet, and deepen twelve identified channel segments. The West Turning Basin is used by commercial traffic, cruise ships, and the U.S. Coast Guard.

Purpose and Need

EPA understands the existing channel capacity is inadequate to accommodate recent and anticipated future growth in both cruise and cargo vessel size and traffic

contributing to port congestion and inefficiencies in operations of all ships within the Port.

According to the EA, Port Canaveral ranked as the 3rd busiest cruise port with over twice the passengers as the 4th busiest, New York in 2010. Currently, large cruise ship operations are constrained by the Port's existing channel width and by the close proximity to moored cargo ships, naval vessels, and the day-trip ships berthing at the south side cruise terminals. In 2010, the CPA invested $32 million into upgrading and expanding the cruise terminal to service the new, larger Disney cruise ship vessels.

The EA indicates the largest cargo vessels coincide with those commodities having the greatest projected growth. Petroleum tankers are projected to be the largest cargo vessels calling at the Port's Seaport Canaveral Terminal, with sizes up to 100,000 plus dead weight tonnage. The existing channel depth forces large cargo vessels to either light-load or wait for the rising tide in order to transit the existing navigation channel.

EPA Comments

EPA recommends the final EA address the following four identified issues, which are unaddressed in the draft EA.

Federal Register Notice of proposed Environmental Impact Statement (EIS)

The Corps published an *Intent to Prepare a Draft EIS for the Port Canaveral Navigation Improvements Section 203 Feasibility Study Located in Brevard County, FL.*[1] In this Notice, the Corps indicated an EIS was necessary.[2] The final EA/FNSI should clarify why there was a change in the level of NEPA documentation.

Update the Sediment Evaluation Study

EPA disagrees with the draft EA's (Section 2.6.1) finding the 2005 sediment evaluation of the harbor as the most recent. The final EA/FNSI should discuss the results of the 2010 comprehensive sediment evaluation of the entire harbor.

Dredged Material Testing

The draft EA[3] indicates the Section 103 Evaluation will be conducted during the pre-construction engineering and design phase. EPA encourages starting this evaluation at the earliest possible phase with the allocation of one year, at a minimum, for testing and evaluation of the material. All sampling should be done to the proposed project depth consistent with the EPA Region 4 - USACE SAD Southeast Regional Implementation Manual.

---

[1] See: https://www.federalregister.gov/articles/2007/03/16/07-1278/intent-to-prepare-a-draft-environmental-impact-statement-for-the-port-canaveral-navigation#p-21

[2] 72 FR 12598, 12599 (March 16, 2007).

[3] Section 2.6.1

Canaveral Harbor Ocean Dredged Material Disposal Site (ODMDS)

According to the 2012 Site Management and Monitoring Plan (SMMP), which is not discussed in the draft EA, the 10 year projected capacity should not exceed half the estimated remaining site capacity. The draft EA indicates the ten-year projected volume (9.75 million cy) including the proposed action and its associated additional maintenance dredging exceeds half of the remaining estimated capacity (18.4 million cubic yards (cy)). Consequently the 2012 SMMP requires an assessment of the proposed action's impacts upon the ODMDS' capacity requirements.

Similarly the ports of Port Everglades, Miami, and Naval Station Mayport analyzed their prospective impacts on their designated ODMDS capacity associated with their proposed harbor-improvement actions. This assessment, at a minimum, should include modeling of the disposal mound using the Corps' MDFATE or MPFATE model and analyzing the resulting site capacity decrease. This assessment should be coordinated with both the Corps and EPA prior to initiation. The final EA/FNSI should reflect the capacity assessment results in Section 6.7.3.1 of the final EA along with a discussion the February 2012 Canaveral ODMDS SMMP.

Pipelines and Utility Infrastructure

The EA does not address whether the proposed harbor deepening may affect any existing pipelines or utility infrastructure in the harbor. EPA is aware the Corps has pipeline and other utility crossing in waterways burial guidance.[4] Compliance with this guidance may have resulted in utility infrastructure within the depth range proposed for dredging. Because the EA does not appear to indicate this issue has been investigated and appropriately addressed, the final EA should address and discuss it.

EPA appreciates the opportunity to review and comment on the draft EA/FNSI for the proposed action. For further discussion of EPA's dredged material and ODMDS comments, please contact Christopher McArthur at 404/562-9391 (mcarthur.christopher@epa.gov). Regarding the remaining EPA comments, please contact me at 404/562-9611 (mueller.heinz@epa.gov), or Beth Walls of my staff, at 404/562-8309 (walls.beth@epa.gov).

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Cc: Christopher McArthur, Region 4 EPA's ODMDS program

[4] http://dnr.louisiana.gov/assets/OCM/CoastItNotes/COEPipelineBurialRequirements.pdf

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC
PRESERVATION OFFICE

SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM

30290 JOSIE BILLIE HWY
PMB 1004
CLEWISTON, FL 33440

PHONE: (863) 983-6549
FAX: (863) 902-1117

Jason Spinning
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

THPO#: 009850

May 9, 2012

Subject: Assessment of Effects for the Notice of Availability of the Integrated Section 203 Report and Draft Environmental Assessment for the Port Canaveral Navigation Project in Brevard County, Florida

Dear Mr. Spinning,

The Seminole Tribe of Florida's Tribal Historic Preservation Office (STOF-THPO) has received the public notice provided by the Corps of Engineers concerning the aforementioned project. The STOF-THPO has no objection to your proposal at this time. However, the STOF-THPO requests to be notified if cultural resources which are potentially ancestral or historically relevant to the Seminole Tribe of Florida are discovered at any point during the proposed project. We thank you for the opportunity to review the information that has been sent to date regarding this project. Please reference *THPO-009850* for any related issues.

We look forward to working with you in the future.

Sincerely,

Paul N. Backhouse, Ph.D.
Acting Tribal Historic Preservation Officer
Seminole Tribe of Florida

Direct routine inquiries to:
Anne Mullins
Compliance Review Supervisor
annemullins@semtribe.com

ETY:am:pb

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
(727) 824-5317; FAX (727) 824-5300
http://sero.nmfs.noaa.gov/

June 13, 2012 F/SER47:GG/pw

(Sent via Electronic Mail)

Colonel Alfred Pantano, Commander
Jacksonville District, Corps of Engineers
Regulatory Division, North Permits Branch
P.O. Box 4970
Jacksonville, Florida 32232-0019

Attention: Jason Spinning

Dear Colonel Pantano:

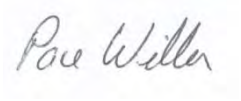
NOAA's National Marine Fisheries Service (NMFS) reviewed the Notice of Availability (dated April 10, 2012), Integrated Section 203 Report and Draft Environmental Assessment (dated March 2012), and draft Finding of No Significant Impact (attached to the Notice of Availability) for proposed improvements to the federal navigation project at Port Canaveral, Brevard County. In November 2011, the Jacksonville District provided NMFS with an essential fish habitat (EFH) assessment dated March 2008 for the project. The proposed work consists of widening from 400 feet to 500 feet the main ship channel from the harbor entrance inland to the West Turning Basin and West Access Channel. In addition to widening, deepening of the federal channel and expansion of turning basins is proposed for several reaches. The dredged material would be placed in the Canaveral Ocean Dredged Material Disposal Site (ODMDS). The Jacksonville District's initial determination is the proposed expansion of Port Canaveral would not have a substantial adverse impact on EFH or federally managed fisheries. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, we concur with the Jacksonville District's determination and offer the following comments and recommendations pursuant to authorities of the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

The EFH assessment adequately describes EFH and federally managed fishery species in the project area. No impacts to seagrass or coral are proposed and the impacts to hardbottom would be limited to replacement of riprap. The sediments that would be dredged are mostly sand, dredging operations would use best management practices to maintain compliance with State Water Quality Standards, and disposal at the Canaveral ODMDS would be in accordance with the site's approved management plan. Dredging is expected to require seven months and is scheduled for mid-October 2012 through mid-May 2013. While the Jacksonville District has not committed to using a particular type of dredge, the District notes only clamshell dredges have been used for the port's federal project for many years, except when emergency conditions are present, in which case a hopper dredge has been used.

Based on the information provided, NMFS concludes the project would not adversely impact EFH and no EFH conservation recommendations are provided. NMFS may provide EFH conservation recommendations in the future based on new information or changes in the project design that show adverse impacts would occur to EFH or federally managed fishery species.

Thank you for providing the opportunity to comment on this project. Please direct related questions or comments to the attention of Mr. George Getsinger, at our St Augustine Office. He can be reached at 9741 Ocean Shore Blvd, St. Augustine, Florida 32080, (904) 461-8674, or by email at George.Getsinger@noaa.gov.

Sincerely,



/ for

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc:

CESAJ, Paul.E.Stodola@usace.army.mil
CESAJ, Jason.J.Spinning@usace.army.mil
CESAJ, Aubree.G.Hershorin@usace.army.mi
EPA, Eric.H.Hughes@usace.army.mil
FWS, John_Milio@fws.gov
SAFMC, Roger.Pugliese@safmc.net
FDEP, Martin.Seeling@dep.state.fl.us
F/SER4, David.Dale@noaa.gov
F/SER47, George.Getsinger@noaa.gov

United States Department of the Interior
U. S. FISH AND WILDLIFE SERVICE
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:
FWS Log Nos. 41910-2012-I-0102/2012-CPA-0009

June 29, 2012

Mr. Eric Summa, Chief
Planning Division, Environmental Branch
Department of the Army
Jacksonville District Corps of Engineers
PO Box 4970
Jacksonville, Florida 32232-0019
(Attn: Aubree Hershorin)

Re: Review of Biological Assessment (BA): Port Canaveral Navigation Improvements Project, Brevard County, Florida

Dear Mr. Summa:

Our office has reviewed subject BA originally submitted submitted by the U.S. Army Corps of Engineers, Jacksonville District (USACE), on October 22, 2007, and resubmitted on April 14, 2011 as part of the Port Canaveral, Florida Integrated Section 203 Navigation Study Report and Draft Environmental Assessment. The proposed project involves a number of actions including the deepening and widening of the harbor entrance and exit channel, the main harbor channel waterway, and the Middle and West Turning Basins through dredging and excavation of adjacent uplands. All dredged material will be transported to the nearest Offshore Dredged Material Disposal Site located south of Port Canaveral. Excavated material will be stored and used on-site, and/or taken off-site for disposal or use as appropriate. We provide the following comments in accordance with section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*), and Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*).

Endangered Species Act

The proposed work occurs within the range of the West Indian (Florida) manatee (*Trichechus manatus latirostris*), and Eastern indigo snake (*Drymarchon corais couperi*). It is adjacent to beaches and dunes supporting nesting and hatchling loggerhead (*Carretta caretta*), green (*Chelonia mydas*), leatherback (*Dermochelys coriacea*), Kemp's ridley (*Lepidochelys kempii*), and hawksbill (*Eretmochelys imbricata*) sea turtles, and the southeastern beach mouse (*Peromyscus polionotus nivieventris*).

The USACE made determinations of effect for the manatee and Eastern indigo snake. The USACE determined that by including the Standard Manatee Conditions for In-water Work, and the Standard Protection Measures for the Eastern Indigo Snake, the proposed deep draft

navigation improvements were not likely to adversely affect these species. No determinations of effect were made for nesting and hatchling sea turtles or the southeastern beach mouse.

We concur with the determination of effects for the Eastern indigo snake, and USACE's agreement to incorporate the standard protection measures into the project plans and specifications for terrestrial impacts associated with the proposed work. The measures can be viewed at our office website, http://www.northflorida.fws.gov. A copy of these measures is enclosed (enclosure 1).

We do not agree that the standard manatee conditions alone are sufficient to reduce the probability of adverse effects to manatees from clamshell dredging to insignificant or discountable levels. Manatees regularly occur within Port Canaveral, and are abundant there during spring, summer, and fall. Significantly fewer animals generally have been recorded during winter months, though their frequency of occurrence is greater during winters with above average temperatures. They readily use the Canaveral Lock to transit between the Port and water bodies west of the lock. They have been observed in the immediate vicinity of a clamshell dredge with its bucket in an aerial position and dripping water. This occurrence may be the result of their often observed behavior of orienting to similar inputs. Animals have been observed drinking freshwater from such sources, so the sound of dripping water appears to be a cue that attracts animals. There has been one documented instance of a manatee mortality resulting from mechanical dredging. The incident occurred within the Miami River in 2011 from work that was not a USACE civil works project. The specific circumstance of that mortality has not been determined.

The historic dredging, both new and maintenance, that has occurred within Port Canaveral has been accomplished primarily by mechanical means, and more specifically by clamshell dredge. As a result of the recognition of the risk this operation poses to manatees, the most recent maintenance dredging of Port Canaveral conducted by the USACE that included nighttime clamshell dredging contained specific conditions intended to address the potential impacts from that work to manatees. In addition, similar conditions were included in both USACE and Florida Department of Environmental Protection (DEP) permits to allow CPA to conduct clamshell dredging in support of a redesign and new construction of multiple berthing structures within the Port's West Turning Basin.

The proposed navigation improvements call for the dredging/excavation of over 3 million cubic yards of material. Given the likelihood of the use of mechanical dredging for this work twenty-four hours a day, seven days a week until completion, it is our view that the following protective conditions need to be applied to this work in order to reduce the probability of take of a manatee to insignificant or discountable levels.

1. All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation (75 feet during nighttime operations). Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation (75 feet during nighttime operations), or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation (75 feet during nighttime operations). Animals must not be herded away or harassed into leaving. Any collision with or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife

Service (FWS) in Jacksonville (1-904-731-3336) and to FWC at ImperiledSpecies@myFWC.com. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities.

2. To reduce the risk of a vessel crushing a manatee, the Permittee shall install and maintain the proposed wharf fenders to provide sufficient standoff space of at least four (4) feet under maximum designed compression. Fenders or buoys providing a minimum standoff space of at least four (4) feet under maximum designed compression shall also be utilized between two vessels that are moored together such as, but not limited to, the mooring of the scow and dredge barges.
3. During clamshell operations, the dredge operator shall gravity-release the clamshell bucket only at the water's surface, and only after confirmation that there are no manatees within the 50-foot safety distance during the day or the 75- foot distance during nighttime operations. The observers shall notify the dredge operator if manatees enter within the designated safety distances.
4. During daylight hours, at least one person shall be designated as a protected marine animal observer when in-water work is being performed. During nighttime hours, at least two people shall be designated as protected marine animal observers. Designated observers shall have appropriate qualifications and observation experience. Appropriate experience shall be demonstrated by a minimum of 100 hours of documented experience as an approved FWS or FWC observer that has monitored marine animals and their behaviors in association with in-water construction projects. No later than 15 calendar days prior to the commencement of each dredging event, the Permittee shall ensure that the names, contact information, and experience has been submitted to the FWS at jaxregs@fws.gov. The protected marine animal observer must be on site during all in-water construction activities and shall advise personnel to cease operation upon sighting a manatee within 50 feet of any in-water construction activity (75 feet for nighttime operations).
5. All observers shall maintain a daily log that details sightings, collisions, or injuries to protected marine animals, as well as project specific information such as work itinerary, weather, work shutdowns, observer shift changes, etc. In regard to manatee behavior, the observers shall also log time of observation, estimated distance of manatees from the dredge, type of behavior (such as passing through, pausing in the vicinity of the project, interacting with the dredge, scows, tugs, etc., attracted to running or dripping water), detection method (i.e., unaided visual, infrared, light intensification equipment, etc) and whether the dredge is operating at the time of observation. A final report for each dredging event, summarizing all activities noted in the daily observer logs, an assessment and documentation (via photo or digital imagery) of effectiveness of any new technology implemented for observation (such as infrared) and new protocols, the location and name of project, and the dates and times of work shall be submitted within 30 days following project completion. The final report shall be submitted to the FWS at jaxregs@fws.gov
6. From March 1 through November 30, all project lighting east of the port locks shall be limited to the immediate area of active construction only and shall be the minimal lighting necessary to comply with U.S. Coast Guard, USACE and/or OSHA requirements. In order to better observe manatees during nighttime clamshell operations, the Contractor shall use shielded lights to illuminate the water surface for 75 feet around the hoist line (cable attached to bucket). These lights shall be shielded and/or positioned such that they are not visible from any sea turtle nesting beaches

immediately north and south of Port Canaveral. The light intensity shall be a minimum of 54 lux (5 foot candles) at the water surface throughout this illuminated area including the edge. The Contractor shall also have a handheld spotlight with a minimum of 10,000,000 candle power available to better observe manatees outside of this illuminated area. The Contractor shall measure the size of the illuminated area, intensity of the specified illumination, and assess its direct visibility from adjacent beaches, prior to commencement of the project. Prior to commencement of work, USACE shall provide to the FWS at jaxregs@fws.gov written verification from the contractor that the lighting described above conforms to the required specifications. No night-time operations shall commence or continue if one or more of these lighting parameters do not comply with the required specifications.

7. If the dedicated observers determine that detection of manatees during certain weather conditions (i.e., fog, rain, wind, etc.) is not possible, and if other optional technologies, e.g., infrared and/or light intensification equipment, cannot be effectively used to compensate for the loss of visual detection during certain weather (i.e., fog, rain, wind, etc.), then dredging operations shall cease until weather conditions improve and detection is again possible. The observers shall report any issues of non-compliance with the special operating measures to the Permittee and record these instances on their logs.
8. At least 48 hours prior to the commencement of each dredging event, the Permittee shall ensure that notification is sent to the FWS indicating the actual start date and the expected completion date to the FWS at jaxregs@fws.gov.
9. Blasting is prohibited. If no other alternative exists, consultation must be reinitiated

Based on the inclusion of these conditions in the project plans and specifications, we concur that the proposed work is not likely to adversely affect the manatee.

Due to the challenge of observing manatees at night with the unaided eye, additional technologies are available that may, under certain circumstances, enhance an observer's ability to sight manatees during nighttime dredging. As a result, we also request that the USACE, in accordance with Section 7(a)(1) of the Act, include a non-binding Conservation Recommendation to have available night vision technology with infrared light intensification during nighttime clamshell or mechanical dredging as a supplement direct observations. The observers shall, prior to commencement of work, be given operational information and time using the equipment to gain experience with the chosen type(s) of technology. In addition, due to the recent increase in watercraft-related, manatee mortalities in Port Canaveral, we further request the USACE to include a second non-binding Conservation Recommendation to have the Canaveral Port Authority coordinate a review and update of its current Port Protection Plan for the manatee, with our agency and the Florida Fish and Wildlife Conservation Commission with the goal of completing this update no later than March 1, 2013.

The USACE did not include nesting or hatchling sea turtles or the southeastern beach mouse in its biological assessment. Sea turtles nest on beaches immediately north and south of Port Canaveral. The lighting associated with a nighttime clamshell dredge operation has the potential, if directly visible from adjacent beaches, to disorient nesting and hatchling sea turtles. In addition, studies on the Santa Rosa beach mouse in the Florida panhandle have shown how direct lighting can impact beach mouse activity and predation. There are beach mice present

within the dune habitat immediately north of Port Canaveral. Indirect lighting that creates or adds to an existing light glow can have impacts on sea turtles similar to direct lighting. Proposed operation of the dredge within the easternmost section of the port, and westernmost section of the port access channel, has the greatest potential to result in adverse effects to these species. The conditions above afford the extent of protections that in our view is needed to reduce the probability of take of nesting and hatchling sea turtles, as well as the southeastern beach mouse, to insignificant or discountable levels

The USACE has agreed to incorporate these additional conditions into its project plans and specifications, and has determined that by doing so, the proposed project is not likely to adversely affect nesting or hatchling sea turtles or the southeastern beach mouse. We concur with that determination.

Due to the recent and proposed increases in infrastructure and navigation improvements at Port Canaveral, we also request that the USACE include a non-binding Conservation Recommendation to have the Canaveral Port Authority coordinate a review and update of its current Exterior Light Management and Security Awareness Plan for nesting and hatchling sea turtles, with the goal of completing this update by March 1, 2013.

Although this does not represent a biological opinion as described in section 7 of the Act, it does fulfill the requirements of the Act and no further action is required. If modifications are made to the project; if the responsible party fails to comply with the conditions agreed to in the project plans and specifications; if additional information involving potential effects to listed species becomes available; or if unauthorized take of manatee occurs, consultation will be reinitiated.

Fish and Wildlife Coordination Act

We have reviewed the proposed work for impacts to other Federal Trust and natural resources. The proposed dredging will convert some shallow water habitat to deep water, and result in the loss of some disturbed uplands adjacent to the West Turning Basin. We expect that the widening through dredging will be accomplished in a way that will retain some shallow water habitat through gradual sloping that is intended to minimize the rate of sedimentation into the Port Canaveral navigation channel. Likewise, the area at the mouth of the West Turning Basin planned for a combination excavation and dredging is expected to result in the maintenance of shallow sub-littoral habitat. Such sites provide the potential for growth of submerged aquatic vegetation. The hardened shoreline can facilitate the colonization of attached algae, benthic micro and macro invertebrates, and also serve to attract epifauna.

As a result, it is our view that the proposed project will have minor, temporary effects on natural resources, and no significant, long-term effects to other Federal Trust and natural resources will occur. We therefore have no objection to this work.

If you have any questions regarding this response, please contact Mr. John Milio of my staff at the address on the letterhead, by e-mail at john_milio@fws.gov, or by calling 904-731-3098.

Sincerely,

David L. Hankla
Field Supervisor

Encl as:

cc:
Carol Knox/Dr. Robbin Trindell
Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Imperiled Species Management Section
620 South Meridian Street
Tallahassee, Florida 32399

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

1. An eastern indigo snake protection/education plan shall be developed by the applicant or requestor for all construction personnel to follow. The plan shall be provided to the Service for review and approval at least 30 days prior to any clearing activities. The educational materials for the plan may consist of a combination of posters, videos, pamphlets, and lectures (*e.g.*, an observer trained to identify eastern indigo snakes could use the protection/education plan to instruct construction personnel before any clearing activities occur). Informational signs should be posted throughout the construction site and contain the following information:

    a. a description of the eastern indigo snake, its habits, and protection under Federal Law;
    b. instructions not to injure, harm, harass or kill this species;
    c. directions to cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site on its own before resuming clearing; and,
    d. telephone numbers of pertinent agencies to be contacted if a dead eastern indigo snake is encountered. The dead specimen should be thoroughly soaked in water, then frozen.

2. Only an individual who has been either authorized by a section 10(a)(1)(A) permit issued by the Service, or designated as an agent of the State of Florida by the Florida Fish and Wildlife Conservation Commission for such activities, is permitted to come in contact with or relocate an eastern indigo snake.

3. If necessary, eastern indigo snakes shall be held in captivity only long enough to transport them to a release site; at no time shall two snakes be kept in the same container during transportation.

4. An eastern indigo snake monitoring report must be submitted to the appropriate Florida Field Office within 60 days of the conclusion of clearing phases. The report should be submitted whether or not eastern indigo snakes are observed. The report should contain the following information:

    a. any sightings of eastern indigo snakes;
    b. summaries of any relocated snakes if relocation was approved for the project (*e.g.*, locations of where and when they were found and relocated);
    c. other obligations required by the Florida Fish and Wildlife Conservation Commission, as stipulated in the permit.

DEPARTMENT OF THE AIR FORCE
45th SPACE WING (AFSPC)

JUN 28 2012

MEMORANDUM FOR US ARMY CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
ATTN: MR. JASON SPINNING (CESAJ-PD-EC)

FROM: 45 SW/CC
1201 Edward H. White II St.
Patrick AFB FL 32925-3299

SUBJECT: Review of Integrated Section 203 Report/EA (your memo, 10 Apr 12)

1. We appreciate the opportunity to formally review the Integrated Section 203 Report and Draft Environmental Assessment (EA) on improvements to the existing Federal Navigation Project at Port Canaveral, FL. Since last summer, we have been working closely with the Canaveral Port Authority (CPA) and your representatives to work issues, initiate government approval processes and provide informal comments relating to this project. Attached are the 45th Space Wing's formal comments to the current 203 Report/EA.

2. We look forward to our continued partnership as this channel widening project moves ahead. Our point of contact for any questions is Mr. Scott Cook, 45 SW/XPE, DSN 854-2377, Scott.Cook@patrick.af.mil.

ANTHONY J. COTTON
Brigadier General, USAF
Commander

Attachment:
45 SW Comments

cc:
45 MSG/CC
45 SW/XP
Canaveral Port Authority

Attachment -- 45th Space Wing Comments to 203 Study for Channel Widening Project

ORG	Page #	Para #	Line #	Comments
45 SW	General			**Comment:** Add in the appropriate location, "A plan will be created by the CPA and/or US Army Corps of Engineers to address how vessel movements in and out of the middle turning basin will be achieved during construction. The 45 SW will request Explosive Site Plan (ESP) approval from the Department of Defense Explosives Safety Board (DDESB) as required to account for any changes in configuration to the channel adjacent to Air Force Property." **Rationale:** Safety and ensuring no impacts to DoD ops
45 SW	General			**Comment:** We are still finalizing a new property boundary survey so the acreage calculations in the report may not be accurate but that can be worked/updated as part of the formal request for use of AF property after funding for the project has been approved. **Rationale:** Current surveys will drive update to report
45 SW	Main Report, p 6-51 Real Estate Plan, p. 4	Para 6.7.3.2. Para 2.2.3		**Comment:** Modify the study/EA language to indicate that "while the USACE upland containment site on the USAF property may be the preferred site for spoil disposal, the USAF has not agreed to use of that area for that purpose and would have to further evaluate that option in light of other competing interests for that same disposal area as well as test results on the composition of the spoil to be disposed of." **Rationale:** Clarification--caveat
45 SW	Engineering Annex; pgs. 56-57	Para 1.8.2. Middle Turning Basin sub-para		**Comment:** Add the following to end of the paragraph, "Work performed near under-channel communications lines, and related communications manholes will require careful coordination with the 45th Space Wing and AT&T to avoid service interruptions. This channel widening project will bear the cost to mitigate, replace, or relocate any impacted federal structure, utilities, or communications infrastructure. **Rationale:** Wing won't be responsible for bearing cost of funding impacts due to project
45 SW	Engineering Annex; pgs. 56-57	Para 1.8.2. Middle Turning Basin sub-para		**Comment:** This same portion of the report does mention the need to comply with the shoreline setback distance required by USAF regulations to the existing Bldg 1064 and the CPA previously produced site sketch showing how that setback distance could be achieved. Since then our regulations have been changed and now require an 86 foot set-back (versus 85 feet as shown in the previous CPA-provided site sketch), measured from the building to the mean high-water mark **Rationale:** Updated requirement

ENVIRONMENTAL ASSESMENT-SPECIFIC COMMENTS				
ORG	**Page #**	**Para #**	**Line #**	**Comments**
45 SW	1-10	Sec 1.5		**Comment:** The NEPA specific sections are noted with an asterisk. Recommend Chap 5 "Formulation and Evaluation of Alternative Plans" and Chap 8 "Public Involvement, Review, and Consultation" be marked with asterisks as well. **Rationale:** These sections contain NEPA specific information by providing the rationale for selection of alternatives and compliance with public scoping/consultation requirements.
45 SW	Chap 1 & 2	Fig 1-1/ 2-1 and Fig 1-2/ 2-2		**Comment:** The referenced figures are duplicative. **Rationale:** Edit
45 SW	2-4	Sec 2.1.5		**Comment:** The water quality discussion is based on information that is now 6 yrs old, although the section reports that ongoing water quality monitoring is being performed. Recommend updating section to reflect current condition, particularly since that information is presumably available. **Rationale:** NEPA analysis should utilize current available data.
45 SW	2-47	Sec 2.6.1		**Comment:** There is a statement in this section, "Concentrations of metals in the samples were typical of coastal waters, although some concentrations were above those of reference stations (Anamar 2005)" Please indicate the significance of this statement: for example, that regulatory standards were exceeded. **Rationale:** Clarification of statement
45 SW	Chap 5	Sec 5.1.3 and 5.2		**Comment:** Planning Objectives and Plan Formulation Criteria are presented in the referenced sections. Which criteria were used to select the preferred alternative? **Rationale:** Clarification
45 SW	6-5+	Fig 6-1 to 6-3		**Comment:** The legend identifying the alternatives on the figures do not match the names of the alternatives in the text. Recommend not using terms "Plan A" or "Plan B" because the text refers to Plan 1 and Plan 2. Please rectify on the figures which widening plan is Plan 1 and which is Plan 2. **Rationale:** Clarification and edit
45 SW	6-43	Sec 6.7.1		**Comment:** Recommend providing an explanation that the "Recommended Plan" referred to in Sec 6 is equivalent to the "Preferred Alternative" in Sec 7. This provides a link between the formulation of alternatives in Sec 6 and the final alternatives selected to be carried forward for analysis in Sec 7. **Rationale:** Clarification

45 SW	7-7 and 7-12	Sec 7.2.8.2 and 7.2.14.2		**Comment:** Mitigation measures are generally referred to in the text for potential construction effects to sea turtle hatchlings and to offset turbidity. Please specify the specific mitigation measures. **Rationale:** Clarification
45 SW	7-13	Sec 7.2.16.1		**Comment:** There is a statement in this section, "Brevard County is *not* classified by EPA as an attainment/maintenance area..." Should this read "Brevard County is classified by EPA as an attainment/maintenance area..." **Rationale:** Correction
45 SW	7-24	Sec 7.2.35.4		**Comment:** There is a reference to "Section 10 consultation" having been initiated in accordance with the NHPA. Shouldn't this be Sec 106? **Rationale:** Edit
45 SW	General			**Comment:** Recommend chart or table listing permits, licenses, and authorizations that need to be obtained to accomplish the project to ensure compliance with 40 CFR 1502.25 **Rationale:** Clarification
45 SW	General			**Comment:** Occupational safety and health impacts have not been assessed in accordance with 32 CFR 989.27 **Rationale:** Completeness
45 SW	General			**Comment:** Please delete references in the document to the US Air Force being a cooperating agency. **Rationale:** The US Air Force intends to participate in this planning process as a stakeholder.
45 SW	FONSI			**Comment:** The Proposed Action is not specifically defined in the FONSI. Please define the proposed action. **Rationale:** Clarification

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Sector Jacksonville

4200 Ocean Street
Atlantic Beach, FL 32233-2416
Phone: (904) 564-7549
FAX: (904) 564-7651

16670
June 21, 2012

U.S. Army Corps of Engineers
Jacksonville District
Attn: Jason Spinning (CESAJ-PD-EC)
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Spinning:

Under the Coast Guard's statutory authority provided by the Ports and Waterways Safety Act of 1972, as amended by the Port and Tanker Safety Act of 1978, 33 U.S.C. § 1223, *et seq.*, among other authorities, in an effort to promote navigation, vessel safety, and protection of the marine environment, I have completed a review of the Integrated Section 203 Navigation Study Report and Draft Environmental Assessment (the report) submitted by your office on April 10, 2012. My comments are based on an objective assessment of the project as a whole as it relates to navigation and environmental impact.

Based upon the latest review of the project documents, the Coast Guard's formal comments are as follows:

a. Impact to Federal Aids to Navigation

Table 6-35, Volume I of the report reflects that $2.75M for Aids to Navigation is to be "provided and funded by the United States Coast Guard". Given the current federal fiscal environment, it is difficult to predict the Coast Guard's resource availability to begin work related to this project. All plans should be forwarded to Coast Guard District Seven Waterways Management Division for comprehensive review and determination of existing and proposed ATON, current cost estimating, construction planning, environmental review, funding determination and consideration for adding two proposed outbound range structures. The Coast Guard reserves the right to final approval under the authority outlined above.

b. Coast Guard Base Canaveral Property

Table 6-3, Volume I of the report reflects a future North Cargo Pier (NCP) 7, which would require the relocation of Coast Guard Station Port Canaveral. In an e-mail dated 24 June 2011, between Port Canaveral CEO Stan Payne and Mr. Michael Lesinski of the Coast Guard's Civil Engineering Unit Miami; Mr. Payne noted that the cost of relocating Coast Guard Station Port Canaveral would clearly outweigh the benefits. As a matter of closure the report should explicitly state that none of the report's findings are predicated on the relocation of Coast Guard Station Port Canaveral.

If you have any questions, my point of contact is Lieutenant Steve Elliott who may be reached at (321) 784-6781.

Sincerely,

T. G. ALLAN, JR.
Captain, U. S. Coast Guard
Captain of the Port
Jacksonville, Florida

Copy: Canaveral Port Authority
US Air Force, 45th Space Wing
Commanding Officer, Naval Ordnance Test Unit Port Canaveral
Canaveral Pilots Association
Commander, Coast Guard District Seven (dl), (dp), (dpw)
Commander, Coast Guard Civil Engineering Unit Miami
Supervisor, Coast Guard Marine Safety Detachment Port Canaveral
Commanding Officer, Coast Guard Station Port Canaveral

Florida Department of Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

June 19, 2012

Dr. Aubree G. Hershorin, Biologist
Planning and Policy Division
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, FL 32232-0019

RE: Department of the Army, Jacksonville District Corps of Engineers
Canaveral Harbor Integrated Section 203 Navigation Study Report and Draft Environmental Assessment – Cape Canaveral, Brevard County, Florida.
SAI # FL201204206200C (Reference Previous SAI # FL200703223171C)

Dear Dr. Hershorin:

The Florida State Clearinghouse has coordinated a review of the Draft Environmental Assessment (EA) under the following authorities: Presidential Executive Order 12372; § 403.061(42), *Florida Statutes* (*F.S.*); 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) has provided a number of comments and recommended conservation measures related to potentially affected state- and federally listed fish and wildlife resources. The following revisions to the Final EA are recommended:

- Update the North Atlantic Right Whale sightings, vessel collision incidents and disposal ship transit timing and number data.
- Add the FWC's suggested conservation measures for right whales to address potential impacts.
- Update and clarify the Florida manatee mortality data, maps and discussion.
- Modify references to the Brevard County Manatee Protection Plan, as suggested.
- Update the Port Canaveral lock facility manatee sighting and mortality data.
- Include the revised, edited 2012 *Standard Manatee and Marine Turtle Construction Conditions for In-Water Work* and U.S. Fish and Wildlife Service's new manatee protection measures.
- Follow the FWC *Gopher Tortoise Permitting Guidelines* (Revised November 2011) to avoid, minimize and mitigate the potential impacts of construction activities.

Please refer to the enclosed FWC letter and contact Ms. Mary Duncan at (850) 922-4330 or Mary.Duncan@MyFWC.com for further information.

The Florida Department of Environmental Protection (DEP) states that its Central District Office in Orlando should be contacted for permitting construction of any new or modified docks and any upland construction projects requiring stormwater management. Widening or deepening of the navigation channels or turning basins would be permitted through the DEP's Bureau of Beaches and Coastal Systems (BBCS). BBCS staff notes that because the proposed dredging project will take place primarily within the port, the entrance channel improvements will not affect the current sand-bypassing protocol to benefit down-drift beaches. Although the project lies outside the Banana River Aquatic Preserve and Merritt Island National Wildlife Refuge, if the restricted mixing zone extends into the boundaries of those Outstanding Florida Waters, the project will be subject to anti-degradation permitting requirements of Rule 62-4.242, *Florida Administrative Code*. Please contact Ms. Kimberly Eisele in the Central District Office at (407) 897-2950 or Ms. Roxane Dow in the BBCS at (850) 922-7852 for additional information and assistance.

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 federal activity is consistent with the Florida Coastal Management Program (FCMP). To ensure the project's continued consistency with the FCMP, the concerns identified by 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 the 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 in accordance with Section 373.428, *F. S*.

Thank you for the opportunity to review the draft EA. 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: Lu Burson, DEP Central District
Roxane Dow, DEP BBCS
Becky Prado, DEP CAMA
Scott Sanders, FWC

Project Information	
Project:	FL201204206200C
Comments Due:	06/01/2012
Letter Due:	06/19/2012
Description:	DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT CORPS OF ENGINEERS - CANAVERAL HARBOR INTEGRATED SECTION 203 NAVIGATION STUDY REPORT AND DRAFT ENVIRONMENTAL ASSESSMENT - CAPE CANAVERAL, BREVARD COUNTY, FLORIDA.
Keywords:	ACOE - CANAVERAL HARBOR SECTION 203 NAVIGATION STUDY REPORT/DEA - BREVARD CO.
CFDA #:	12.107

Agency Comments:

ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

The DEP states that its Central District Office in Orlando should be contacted for permitting construction of any new or modified docks and any upland construction projects requiring stormwater management. Widening or deepening of the navigation channels or turning basins would be permitted through the DEP's Bureau of Beaches and Coastal Systems (BBCS). BBCS staff notes that because the proposed dredging project will take place primarily within the port, the entrance channel improvements will not affect the current sand-bypassing protocol to benefit down-drift beaches. Although the project lies outside the Banana River Aquatic Preserve and Merritt Island National Wildlife Refuge, if the restricted mixing zone extends into the boundaries of those Outstanding Florida Waters, the project will be subject to anti-degradation permitting requirements of Rule 62-4.242, F.A.C. Please contact Ms. Kimberly Eisele in the Central District Office at (407) 897-2950 or Ms. Roxane Dow in the BBCS at (850) 922-7852 for additional information and assistance.

STATE - FLORIDA DEPARTMENT OF STATE

No Comment/Consistent

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

The project appears to be under the ERP permitting jurisdiction of the Florida Department of Environmental Protection, 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.n.). According to the agreement, DEP has jurisdiction on seaports and adjacent seaports related development where the applicant or property owner is a port authority. If there are any questions, please contact Ms. Susan Moor, Supervising Regulatory Scientist, in the Palm Bay Service Center at (321) 676-6626 or smoor@sjrwmd.com.

FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

The FWC has provided a number of comments and recommended conservation measures related to potentially affected state- and federally listed fish and wildlife resources. The following revisions to the Final EA are recommended: update the North Atlantic right whale sighting, right whale-vessel collision incidents and disposal ship transit timing and number data; add the suggested conservation measures for right whales to address potential impacts; update and clarify the Florida manatee mortality data, maps and discussion; modify references to the Brevard County Manatee Protection Plan; update the Port Canaveral lock facility manatee sighting and mortality data; include the revised 2012 Standard Manatee and Marine Turtle Construction Conditions for In-Water Work and U.S. Fish and Wildlife Service's new manatee protection measures; and follow the FWC Gopher Tortoise Permitting Guidelines (Revised November 2011) to avoid, minimize and mitigate the potential impacts of construction activities.

E. CENTRAL FL RPC - EAST CENTRAL FLORIDA REGIONAL PLANNING COUNCIL

The East Central Florida Regional Planning Council has received notice of the Canaveral Harbor Integrated Section 203 Navigation Study Report and Draft Environmental Assessment. Council staff has not identified any significant or adverse effects to regional resources or facilities, nor have any extra-jurisdictional impacts been identified that would adversely affect neighboring jurisdictions. Multiple biodiversity hot spots appear to be within the project site as represented in the Natural Resources of Regional Significance (NRORS) datasets identified in the agency's Strategic Regional Policy Plan (ECF 2060 Plan). It is recommended that proper environmental impact studies and wildlife mitigation plans are implemented prior to project construction. The proposed project is found to be consistent with the goals, policies, and objectives of the East Central Florida Regional Planning Council.

BREVARD -

Florida Fish and Wildlife Conservation Commission

Commissioners
Kathy Barco
Chairman
Jacksonville

Kenneth W. Wright
Vice Chairman
Winter Park

Ronald M. Bergeron
Fort Lauderdale

Richard A. Corbett
Tampa

Aliese P. "Liesa" Priddy
Immokalee

Charles W. Roberts III
Tallahassee

Brian S. Yablonski
Tallahassee

Executive Staff
Nick Wiley
Executive Director

Greg Holder
Assistant Executive Director

Karen Ventimiglia
Chief of Staff

Office of the
Executive Director
Nick Wiley
Executive Director

(850) 487-3796
(850) 921-5786 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

June 15, 2012

Ms. Lauren P. Milligan
Department of Environmental Protection
Florida State Clearinghouse
3900 Commonwealth Boulevard, M.S. 47
Tallahassee, FL 32399-3000
Lauren.Milligan@dep.state.fl.us

RE: SAI #FL201204206200C, Canaveral Harbor Integrated Section 203 Navigation Study Report and Draft Environmental Assessment, Department of the Army, Jacksonville District Corps of Engineers, Cape Canaveral, Brevard County

Dear Ms. Milligan:

Florida Fish and Wildlife Conservation Commission (FWC) staff has reviewed the Canaveral Harbor Integrated Section 203 Navigation Study Report and the Draft Environmental Assessment (DEA) in accordance with the National Environmental Policy Act and the Coastal Zone Management Act/Florida Coastal Management Program (CZMA/FCMP). This review constitutes our preliminary assessment of the above-referenced U.S. Army Corps of Engineers (USACE) project to identify additional information that may be needed to offset potential fish and wildlife impacts associated with the project. In this regard, we provide the following comments and recommendations for your consideration.

Project Description

The Canaveral Port Authority (CPA), under the authority granted by Section 203 of the Water Resources Development Act, has conducted a feasibility study for deepening and widening the channels, wideners and turning basins at Port Canaveral to accommodate cruise ship fleets and to allow passage of deeper draft cargo vessels within the Port. As part of their review, the Jacksonville District U.S. Army Corps of Engineers (Corps) submitted an Integrated Section 203 Navigation Study Report and Draft Environmental Assessment for agency and public review and comment.

The recommended actions include widening the main ship channel from 400 feet to 500 feet, expanding the West Turning Basin from 1,400 feet to 1,725 feet, and deepening fourteen channel segments [Outer Reach Cuts 1, 1A and 1B, US NAVY turn Widener, Civil Turn Widener, New 203 Turn Widener, Middle Reach, Trident Access Channel and Trident Basin, Inner Reach, Cuts 2 and 3, Middle Turning Basin, West Access Channel (east of Station 260+00), West Turning Basin, and West Access Channel (west of Station 260+00)].

The construction timeframe is estimated to be 400 days or approximately 14 months and involves both marine and upland environments. The dredging operation will consist of clamshell bucket dredge(s) and bottom dumping scows for Canaveral Ocean Dredged Material Disposal Site (ODMDS) disposal. The preferred alternative includes the dredging or excavation of an estimated 4,271,000 cubic yards of material of which

3,110,057 cubic yards will be dredged from the existing and proposed navigational channel. All but 455,000 cubic yards is identified for uplands or offshore disposal. If suitable material is found below -13 feet Mean Lower Low Water (MLLW), it would be placed in an authorized nearshore disposal area.

Potentially Affected Resources and Recommended Conservation Measures

Work associated with the Port expansion, including upland excavation, marine dredging, vessel operations and offshore placement activities, has the potential to adversely affect state and federally protected fish and wildlife resources; however, the potential adverse impacts associated with this work should be adequately offset with additional, appropriate conservation measures.

Based on FWC's review, we offer the comments on the Draft EA as well as recommended additional conservation measures related to potentially affected state- and federally listed fish and wildlife resources:

North Atlantic Right Whale

Page 2-68 of the draft EA includes right whale sighting data for "Offshore surveys flown off the coast of Florida and southeastern Georgia from 1996 to 2001...". This information appears outdated and corresponds to sightings at more than 30 nautical miles offshore, which is not relevant for the project at Port Canaveral. Aerial surveys have been conducted near Port Canaveral since 2001 and these surveys are available from the North Atlantic Right Whale Consortium (http://www.narwc.org). We recommend updating right whale sighting data, as appropriate for this area, in the Final EA.

Page 2-68 also includes the statement "there have been few incidences of right whale-ship incidents along the Florida Atlantic coast, with none being reported as far south as Brevard County." This statement should be corrected to reflect that there have been three reported whale-vessel incidents involving five different vessels directly off Port Canaveral (unpublished data, see FWRI data attached).

Information related to the anticipated number of disposal transits to the ODMDS, and the timing of the transits is missing in the DEA but is a critical consideration in reducing the risks of potential impacts from these transits to North Atlantic Right Whales; therefore, we request additional information regarding transit timing and numbers be included in the Final EA for later review.

The DEA states (on Page 2-68) that the Port has participated and supported the Right Whale Monitoring program for many years; however, the measures to avoid, minimize and mitigate this project's effect on right whales were not included in Section 7.3 (page 7-28). At a minimum, we recommend that the following conservation measures for North Atlantic Right Whales be included to address potential impacts.

North Atlantic Right Whale protection precautions to be followed from December 1 to March 31 shall include:

- A dedicated observer shall be posted to spot right whales. Additionally, all personnel on all support vessels (vessels associated with dredging and dredge spoil deposition in the off-shore dredge management disposal site) shall observe for right whales in the southeastern critical habitat area. The southeastern critical habitat area extends from 31°15'N to 30°15'N out 15 miles offshore and from 30°15'N to 28°00'N out 5 miles offshore. If a whale is seen by the dedicated whale observer or support vessel personnel during daylight hours, the vessel operator shall take necessary precautions to avoid whales;

- Daily updates of whale sightings during this portion of the year are maintained by the National Marine Fisheries Service (NMFS) and should be obtained by contacting NMFS at se.rw.sightings@NOAA.gov. Such sighting update requests should include one valid return email address capable of receiving emails with sighting alerts;

- If whales have been spotted within 15 nautical miles (nm) of the vessel's path within the previous 24 hours, the dredge and support vessels shall slow to 5 knots or less when transiting between areas during evening hours or when there is limited visibility due to fog or sea states of greater than Beaufort 3 (unless weather and sea conditions dictate greater speeds for safe navigation);

- If the Early Warning System (EWS) surveys have not been flown within the previous 24 hours, the dredge and support vessels should slow to 5 knots or less when transiting between areas during evening hours or when there is limited visibility due to fog or sea states of greater than Beaufort 3 (unless weather and sea conditions dictate greater speeds for safe navigation);

- All dredge and support vessel operators shall be familiar with, and adhere to, the federal right whale minimum approach regulation, as defined in 50 CFR 224.103(c).

Florida manatee

A discussion of manatee data for Brevard County and in the vicinity of the Port was provided on Page 2-65 of the DEA. We recommend updating manatee mortality data, which is available online from FWC at http://myfwc.com/research/gis/data-maps/marine/. We also suggest that the maps included in the DEA match the data discussions in the text (the draft EA shows mortality data through 2005 but the text appears to be through 2007).

Section 2.6.8 includes a statement that "Brevard County also has one of the highest manatee mortality rates in the state, due to the high concentration of manatees combined with the popularity of recreational boating along the eastern coast of Florida (Figure 2-11), although the proportion of fatalities caused by watercraft is low." This statement is inaccurate and confusing, and should be revised. A more accurate statement could simply read "Brevard County also has one of the highest manatee mortality rates in the state." Figure 2-11 of the DEA refers to sea turtle nesting. This figure should be revised to Figure 2-13 and referenced later in the paragraph when discussing the specific data and/or re-organized to avoid confusion. The sentence referring to FWRI 2007 data

should read "Between 1974 and 2007, 1191 manatees deaths have been reported, 265 of which were from watercraft-related death". We also suggest revising earlier statements related to the proportion of fatalities caused by watercraft to state that the percentage is approximately 22%, which is average (not low as presently indicated). We also suggest not separating years 2008 and 2009 from the rest of the dataset and combining the data as one discussion, or alternatively, remove this data. In addition, the 2008 discussion of watercraft-related deaths found on Page 2-65 of the DEA should read 10, not 11 and the total in the vicinity of the Port should also read 43, not 44. The DEA reports that 15 deaths were attributed to "collisions with recreational watercraft." The term "recreational" should be stricken from that statement since at least five reported deaths have occurred from crushing between large vessels and seawalls/docks, and at least one death occurred from a strike with a large propeller, which is more indicative of a larger-than-recreational watercraft/vessel fatality.

The map on page 2-66 of the DEA is more representative of the statewide synoptic aerial survey dataset as it depicts "Manatee Aerial Survey (1991 – 2004)". We recommend amending this map to specify the aerial survey dates, as well as obtaining more recent data from the website mentioned above. There should also be a discussion of the dataset in the text. The synoptic aerial survey data set only represents annual winter surveys performed during the coldest time of the year, but is the least likely time manatees will be present in the Port. A two-year distributional aerial survey study was performed in Brevard County from 1997-1999, which depicts the year-round use of manatees in Brevard County as well as the Port. We highly recommend that the Final EA include this data in order to accurately represent manatee use in the Port area. This dataset is available from FWC by request by contacting ImperiledSpecies@myfwc.com.

Page 2-67 includes a discussion of the Port's Manatee Protection Plan and Brevard County's Manatee Protection Plan (MPP). While the Port has been very proactive in manatee protection and conservation measures have been in place for a long time, the County's plan was not based on the Port's Plan. The measures in the Port's plan are not typically applicable to the rest of the county and there are also conservation measures in the County's MPP that are unique from the Port's conservation measures; therefore, FWC suggests removing reference as to the basis for the County's MPP being that of the Port plan.

Page 2-67 also includes a discussion of Port Canaveral's lock facility and describes manatee sighting data and mortality as a result of the lock. We recommend updating this information which appears to be outdated. As of 2011, there have been a total of 18 deaths associated with this structure, with the most recent occurring June 2011.

Chapter 6.1 discusses the integration of environmental operating principles and states that the "Port has also adopted new manatee protection measures at the recommendation of the U.S. Fish and Wildlife Service". However, these new protection measures were not included in the DEA. The Port, USACE, FWC and the U.S. Fish and Wildlife Service (FWS) have been collaborating on drafting experimental observation techniques and measures in an attempt to increase nighttime observations of manatees and sea turtles during dredging operations. While these techniques are not yet known to be successful, we want to encourage future experimentation to improve monitoring. Many of these measures were included in the FWS's Review of the Biological Assessment dated May

31, 2012. The FWS's concurrence that the proposed work is *not likely to adversely affect* the manatee is also based on the inclusion of these conditions. The FWC concurs with the FWS's opinion concerning the need for these additional measures (see comments below in 7.2.8.2 discussion).

Page 6-48 includes the following statement: "Hydraulic and clamshell dredging are the methods of choice for economic and environmental concerns and are not known to "take" manatees or sea turtles when standards for operations and observance are employed as well as any additional protection measures stipulated by the FWS and/or NMFS under Section 7 ESA consultation." This statement is incorrect and should be edited to state that the potential for "take" is reduced with protective measures, not that "take" is not known to occur. There is at least one documented death of a manatee by clamshell dredge and observers were present (2011, MSE1157). In addition, anecdotal data during clamshell dredging operations indicate that turtles have been scooped up by a bucket. While it is not known whether these incidences result in death for the animal, it is still considered "take".

Chapters 7.2.8.2 and 7.3 discuss environmental consequences, including protected species and measures to avoid, minimize and mitigate environmental effects. Both of these sections state that the standard manatee construction conditions will be used during dredging and include the standard language. However, both versions of the standard conditions are out of date, with one section leaving out the important hotline number and the other section including a hotline number that is no longer in service. The standard manatee construction conditions were revised by the USACE Regulatory Division in 2011 and FWC edited these measures in 2012 to include marine turtles (attached). We recommend that the 2012 measures be included in the EA and followed during construction of the project. We also recommend that the additional conservation measures outlined in the FWS review dated May 31, 2012 be included in the EA and followed during the project.

Gopher Tortoise

According to the 2006 Environmental Baseline Report (Revised September 14, 2011), gopher tortoise (*Gopherus polyphemus*, State-Threatened) burrows were observed in or near the study area at Port Canaveral. We recommend that the applicant refer to the FWC Gopher Tortoise Permitting Guidelines (Revised November 2011; attached) for additional information and permitting guidance prior to construction activities in gopher tortoise habitat. Specific guidance includes methods to avoid permitting as well as options and state requirements to minimize, mitigate and permit the potential impacts. If a gopher tortoise relocation permit is necessary, then species associated with gopher tortoise burrows (i.e., commensals) are afforded protection under 16 U.S.C. 1531 et. seq., Section 379.2291, F.S., or 68A-27.004, F.A.C. and should also be relocated in accordance with the applicable guidelines for that species.

Summary

We find the Canaveral Harbor Integrated Section 203 Navigation Study Report and Draft Environmental Assessment consistent with our authorities under Florida's Coastal Zone Management Program. As additional project information is developed or becomes available, the FWC may have additional comments regarding appropriate conservation measures. Because details and adequate offsetting measures are still forthcoming, FWC's final recommendations and CZMA consistency determination will be provided during the environmental permitting process. However, if the applicant incorporates the above recommendations, it would facilitate our review of the project and accelerate the future permitting process.

We appreciate the opportunity to review the Draft EA. If further assistance or consultation is needed, please do not hesitate to contact Ms. Jane Chabre at 850-410-5367 or by email at FWCConservationPlanningServices@MyFWC.com. If your staff has any specific questions regarding the comments contained in this letter, please contact Mary Duncan at (850) 922-4330 or by email at Mary.Duncan@myfwc.com.

Sincerely,

Scott Sanders, Director
Office of Conservation Planning Services

ss/bg/mpd
ENV 1-3-2
Canaveral Harbor Integrated Section 203_16191_061512

Enclosures: FWC Gopher Tortoise Permitting Guidelines
2012 Manatee and Marine Turtle Conditions for In-water Work
FWRI spreadsheet of Right Whale incidents (WVIs off Port Canaveral.xls)

cc: Mr. John Milio, USFWS Jacksonville John_Milio@fws.gov
Mr. Stuart Santos, USACE Jacksonville Stuart.L.Santos@usace.army.mil
Mr. Paul Stodola, USACE Jacksonville Paul.E.Stodola@usace.army.mil
Mr. Eric Summa, USACE Jacksonville Eric.P.Summa@usace.army.mil
Ms. Carol Noble, Canaveral Port Authority cnoble@portcanaveral.com

STANDARD MANATEE AND MARINE TURTLE
CONSTRUCTION CONDITIONS FOR IN-WATER WORK
March 2012

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

a. All personnel associated with the project shall be instructed about the presence of marine turtles, manatees and manatee speed zones, and the need to avoid collisions with (and injury to) these protected marine species. 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 and marine turtles cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee or marine turtle movement.

d. All on-site project personnel are responsible for observing water-related activities for the presence of marine turtles and manatee(s). All in-water operations, including vessels, must be shutdown if a marine turtle or manatee comes within 50 feet of the operation. Activities will not resume until the animal(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the animal(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 marine turtle or manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922, and to FWC at ImperiledSpecies@myFWC.com. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service (for north Florida, Jacksonville 1-904-731-3336 or for south Florida Vero Beach 1-772-562-3909).

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. Questions concerning these signs can be sent to the email address listed above.

g. Lighting on offshore or onshore equipment including dredge, crew boats, and all ancillary vessels shall be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the water's surface and visibility from adjacent marine turtle nesting beaches while meeting all Coast Guard, EM 385-1-1, and OSHA requirements. Light intensity of all fixtures on the vessels shall be reduced to the minimum standard required by OSHA for General Construction areas, in order not to misdirect marine turtles. Lights used to survey nearshore or inlet waters for manatees and sea turtles shall be mounted as low as possible and aimed to minimize visibility from adjacent nesting beaches. Shields shall be affixed to the light housing and be large enough to block light from all lamps from being transmitted outside the construction area.

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:

Wildlife Alert:

1-888-404-FWCC(3922)

cell *FWC or #FWC

GOPHER TORTOISE PERMITTING GUIDELINES

Gopherus polyphemus

April 2008
(Revised November 2011)

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
620 South Meridian Street
Tallahassee, Florida 32399-1600

Insert: Permitting Guidelines Revisions History

September 2008

Authorized Gopher Tortoise Agent requirements were revised (pages 10 - 13).

March 12, 2009

Revisions to the following sections have been made: definition of "gopher tortoise habitat" added to the glossary; Table 1, Mitigation Contributions, clarified, options for payment revised to delay acceptance of letters of credit; Recipient Site Permits; Appendix 3; Appendix 4; 100% surveying (various sections); 10 or Fewer Burrows permits criteria addressed in new Appendix 11; clarification of permit duration criteria; revision to when proof of local government approval is required; Improved Methods for Baseline Vegetation Sampling and Follow-up Monitoring on Recipient Sites in Appendix 7; Revised Indigo Snake handling and relocation guidance consistent with the U.S. Fish & Wildlife Service.

April 14, 2009

Revisions to the following sections have been made: clarification on permitting phased projects in Permit Duration; clarification on when FWC can provide notice to the permittee to do an on-site inspection of a 100% survey prior capture activities, and what the procedure is if more burrows are discovered Burrow Surveys on Development Sites and in Appendix 4; clarification on when the 100-mile north/south relocation would be waived under Holding and Transport; clarification on permit duration for 5-year permits.

Upon approval of the revision to these guidelines, all guidelines will be implemented with the exception of Settlement permits. Guidelines in this document that address the issuance of Settlement permits (Permit for Authorized Relocation Post-Settlement of Law Enforcement Cases) are shaded because proposed revisions are still in draft form and full stakeholder input has not yet been solicited. Until the Settlement permit has been approved, the "after-the-fact" permit process continues to be in effect.

June 2010

Revisions to the following sections have been made: added clarification on impacts that occur within 25 feet of a burrow; added mitigation contributions for Temporary Exclusion permit; replaced "Settlement" permit with "Disturbed Site" permit; revised marking scheme; added "Authorized Agent" permit activity for "trainer;" included the option for the on-site relocation of tortoises whose burrows compromise existing structures; revised financial assurance requirements; added Appendix 13: "Criteria for Gopher Tortoise Recipient Sites to Qualify as Research Sites."

June 2011

Revised the monitoring and reporting requirements for long-term protected recipient sites; added new criteria for the relocation of gopher tortoises from public projects to contiguous public conservation lands; added pre-application opportunity for potential recipient sites; added new definitions in the glossary, updated Florida Rule numbers, and editorial and punctuation revisions on pages 11, 12, 16, 24, 25, 40, 41, 42, and 53.

November 2011

Added Appendix 12: "Guidelines for Restocking Public Conservation Lands;" revised criteria and mitigation associated with the Disturbed Site permit; updated FWC contact information; clarified that the $200 mitigation only applies to a project one time; clarified about listing assistants to authorized agents on after action reports; editorial and punctuation revisions on pages ii, ix, 1, 11, 13, 16, 17, 21, 23 and 40.

TABLE OF CONTENTS

LIST OF TABLES

GLOSSARY

abandoned burrow – burrow appears unused and dilapidated. The entrance is partially or completely collapsed, and the burrow is partially or completely filled with leaves or soil. Recent rains, or recent activity by livestock or humans, do not appear to be the primary reason for burrow collapse. There are no trails into the burrow that might indicate that a tortoise recently passed through the leaf litter or that a small tortoise is using a dilapidated, adult burrow.

active burrow – burrow is in good repair, has the classic half-moon shaped entrance, and appears to be in use by a tortoise. These burrows generally have tortoise tracks or plastron scrapes clearly visible on the burrow floor or on the mound. The burrow floor often contains loose soil caused by tortoise activity. The burrow mound is usually clear of vegetation, and it may contain recently excavated soil. For burrow surveys and tortoise density determination, active burrows are combined with inactive burrows to create the *potentially occupied* classification.

asters – plants in the sunflower family.

baseline density – the estimated density (tortoises per acre) of resident gopher tortoises on a recipient site before relocated tortoises are released.

belt transect – a long, thin plot of specific or variable length and width. Burrows are counted within each transect to provide an estimate of the number of burrows, and tortoises, on a given site.

bucket trap – a plastic bucket (generally five gallons or 19 liters, but may be larger or smaller depending on burrow size) that is sunk directly in front of a burrow opening and covered with paper or cloth and soil (for camouflage) to create a pitfall trap for a gopher tortoise. Bucket traps may capture tortoises leaving or entering a burrow.

caliper – a device used to measure straight-line distance between two points of an object or animal. In this case, a caliper with two long metal "jaws" is used to measure the length of the top (carapace) and bottom (plastron) shells of gopher tortoises; this caliper was designed to measure the diameter of trees and can be obtained from forestry supply companies.

canopy cover – layer of vegetation extending above head height, usually composed of tree branches.

carapace – the top (upper) shell of a tortoise.

carrying capacity – the maximum number of individuals of a species that an area can support, given the amount and quality of food, water, and cover.

clinical signs – veterinary term referring to visible signs or symptoms of disease, illness, or lack of well-being in animals. Nasal discharge is a clinical sign that may be observed when tortoises have upper respiratory tract disease (URTD).

commensal – living in a relationship in which one animal derives food, refuge, or other benefits from another animal without hurting or helping it. The gopher frog, eastern indigo snake, Florida pine snake, and Florida mouse are listed commensal species of the gopher tortoise.

compromised burrow – gopher tortoise burrow that compromises the integrity or utility of an existing structure (e.g., under a propane tank), or the safety of the resident gopher tortoise (e.g., burrows in a grass parking lot, dirt driveway, etc.).

conjunctiva – the mucous membrane that covers the exposed portion of the eyeball and the inner surface of the eye.

conservation easement – a voluntary legal agreement between a landowner and a land trust or government agency that limits the type or amount of development on the landowner's property, thus protecting the land's conservation value while retaining private ownership.

contiguous public conservation land relocation- one type of on-site relocation where a public project occurs within ½ mile to public conservation lands and where the native population of tortoises can remain intact. Public projects and public conservation lands are considered contiguous if two or more upland communities occur within a distance of 2,640 feet (1/2 mile), and there is no physical obstacle [e.g., paved road open to the public (i.e., greater than 2 lanes, curb and gutter or other physical barriers, or a speed limit >30mph), railroad bed, impenetrable fence, river, and lake] that prevents tortoise movement to other upland areas within the relocation/restocking site.

correction factor – also known as a burrow occupancy rate; the percentage of gopher tortoise burrows on a particular site that are occupied at a given time (tortoises generally use more than one burrow over time).

densitometer – a forestry device used to determine canopy cover for a given area.

depth to the seasonal high water table (DWT) – a soil suitability criterion referring to a saturated zone in the soil. Values provided in the Natural Resources Conservation Service (NRCS) website database are representative values (neither the highest nor lowest) for a particular soil type. The average value of the depth to the seasonal high water table range that is provided for each soil type in the NRCS database should be used when determining whether a soil type meets the acceptable or desirable soils criteria.

disturbed site (area)- a site where disturbance to the ground or vegetation has occurred.

donor site – the property, usually a development, from which tortoises are removed during relocations.

enclosure – a temporary, specified area of a recipient site that is surrounded by approved fencing or hay/pine straw bales to initially contain relocated tortoises and to help them acclimate to their new surroundings. See "soft release."

endemic – exclusively native to a particular geographic area.

final stocking rate – the density of tortoises that can be relocated to a recipient site after considering the baseline density of the resident population. The final stocking rate is calculated by determining the maximum stocking rate (also known as the site evaluation stocking rate) and subtracting the baseline density.

filter fabric fencing – see "silt fencing."

forage – plant material, such as grasses, legumes, and other flowering plants, eaten by grazing animals.

global positioning system (GPS) – a satellite-based navigational system; the receiver provides latitude and longitude data for specific applications (in this case, burrow locations).

gopher tortoise habitat – gopher tortoises use a variety of generally upland habitats including, but not restricted to, sandhill, scrub, xeric hammock, mixed hardwood-pine, pine flatwoods, dry prairies, coastal grasslands and dunes, and disturbed habitats (e.g., old fields, pastures).

ground cover – herbaceous plants and the lowest shrubs occupying an area: a generic term used to describe the mat of plants found on the forest floor.

herbaceous –nonwoody plants, generally green and leafy in appearance and texture.

impact - for the purposes of these Permitting Guidelines, unless otherwise noted as a "positive impact," an impact includes any act or outcome as defined in Rule 68A-27.003 F.A.C., that may adversely affect any gopher tortoise or gopher tortoise burrow.

inactive burrow – burrow is in good repair, but does not show recent tortoise use. The lack of tortoise activity may be due to weather or season. These burrows have the classic half-moon shaped entrance, but the soil on the burrow floor is usually hard-packed, as is the burrow mound. There are no tortoise tracks or recently excavated soil, either on the burrow floor or on the mound. The burrow mound may have vegetation growing on it or be partially covered with fallen leaves. For burrow surveys and tortoise density determination, inactive burrows are combined with active burrows to create the *potentially occupied* classification.

infrastructure – structural elements that provide the framework supporting a development (e.g., roads, bridges, water resources, wastewater management, electric power transmission, and telecommunications).

legumes – plants in the bean family.

live trap – a mesh wire cage trap, either homemade or commercially available (e.g., Havahart) that is set directly in front of a burrow to capture the resident tortoise.

local government approval – a permit, agreement, development order, or other authorization issued or granted in writing by the local city or county government having jurisdiction over the property.

long-term protection (habitat) – either privately or publicly owned lands placed under a perpetual (i.e., endless duration) conservation easement.

mesic (habitat) – having a moderate or well-balanced supply of moisture.

midstory – the middle layer, generally 3-9 feet in height, of trees and shrubs (in a multi-layered forest) shaded by taller trees.

mitigation contribution – compensation, usually either in the form of monetary contributions or protected habitat donations, to offset the ill effects of human-related land change (e.g., development) on gopher tortoise populations.

mycoplasma – an infectious agent (bacterium) that has been associated with upper respiratory tract disease in gopher tortoises.

nares – external openings of the nostrils.

off-site recipient area – an area that does not lie within the same boundaries (as defined in the legal description or as identified by the county parcel identification number) of the development area from which tortoises are to be removed and that may be under either the same or different ownership.

on-site recipient area – an area that is located within the same boundaries (as defined in the legal description or as identified by the county parcel identification number) of the development area from which tortoises are to be removed and that is under the same ownership as the development area or contiguous to public conservation lands.

PIT tags – passive integrated transponder (PIT) tags are small microchips (about the size of a grain of rice) that are injected into a tortoise's hind leg using a hand-held applicator. A hand-held scanner reads the tag's electromagnetic code and displays the tag's number. PIT tags provide an alternative method for permanently and uniquely marking individual tortoises.

plastron – the bottom (lower) shell of a tortoise.

plat – a map of land made by a surveyor showing boundary lines, buildings, and other improvements on the land.

population – a group of individuals of the same species that occur in a defined area at the same time and regularly interact or interbreed.

potential tortoise habitat – those land cover types and soil associations that are known to support the life history requirements of the gopher tortoise. These habitats include, but are not limited to, sandhill, scrub, scrubby flatwoods, pine flatwoods, dry prairie, coastal strand, xeric hammock, mixed pine-hardwoods, and disturbed habitats on suitably drained soils.

potentially occupied burrow – this classification combines the active and inactive categories and, therefore, includes burrows with obvious signs of use and those with minimal or no obvious sign of use. A potentially occupied burrow is in good repair and has the classic half-moon shaped entrance. These burrows may have tortoise tracks or plastron scrapes clearly visible on the burrow floor or on the mound, or may have subtle or no tortoise sign. The lack of observable tortoise signs may be due to weather or season. The burrow floor may contain loose soil caused by tortoise activity, or it may be hard packed. The burrow mound may or may not have vegetation growing on it, and it may be partially covered by fallen leaves.

prescribed fire – a planned fire applied within a particular land area under the right weather conditions to accomplish specific, well-defined management objectives.

public conservation lands – publicly owned lands that are currently managed for conservation and are designated as conservation lands by Chapter 253.034, Florida Statutes, purchased for conservation purposes using funds from bonds or other monies dedicated specifically for conservation lands acquisition (e.g., Florida Forever, Preservation 2000, local bond initiatives, etc.), or afforded protection under federal law.

public project – a project on publicly owned land or land on which the government agency or entity has an easement and in which the public agency or entity is the applicant and subsequent permittee. Examples include public roads, schools, and government facilities.

recipient site – the property where relocated tortoises are released.

recommendation – preferred protocol or technique that permit applicants or permittees should follow, but that is not required (i.e., other viable methods are allowed). In the context of these guidelines, a recommendation is generally indicated by use of the verbs "should" or "may."

relocation – deliberately moving wild gopher tortoises.

requirement – action or protocol that must be followed before FWC will issue a permit. A requirement also includes actions that must be undertaken to avoid violating FWC permit conditions and rules. In the text of these guidelines, a requirement is generally indicated by use of the verbs "must" or "shall," or if an action is prohibited, by use of "do not."

rescue relocation – deliberately moving individuals or groups of tortoises to areas that are typically unprotected and may be relatively small, disturbed, or inadequately managed to support long-term population viability. Rescue relocation is conducted primarily to remove wild gopher tortoises from human-caused harm.

responsible relocation – deliberately moving wild gopher tortoises into protected, managed, suitable habitat where their future survival and population viability are very likely. Restocking to such sites where tortoise populations have been severely depleted is a form of responsible relocation; however, tortoises may also be responsibly relocated to sites with resident tortoises where the carrying capacity has been increased through habitat management to provide sufficient forage for additional tortoises.

restocking – deliberately moving wild gopher tortoises into protected, managed, suitable habitat where resident densities are extremely low and where the tortoises' future survival and long-term population viability are very likely.

restocking site – an area of protected, managed, suitable habitat where gopher tortoise populations have been severely depleted or eliminated.

roller chopping – a forestry method for preparing sites for planting pine trees; also used as a land management tool to reduce the height and density of understory vegetation. A bulldozer pulls a heavy cylindrical drum with cutting blades that chop vegetation.

scute – a bony external plate or scale, as on the shell of a tortoise.

seropositive – positive blood test indicating an immune response (exposure) to the bacteria that cause upper respiratory tract disease in gopher tortoises.

shaded – reducing or eliminating sunlight and excessive heat when using bucket traps or live traps or when transporting tortoises. Shade may be provided by man-made materials (e.g., plywood, plastic, cloth) or by vegetation (noting that vegetation dries with time and may fail to provide proper shade for more than a few days).

short-term protection (habitat) – either privately or publicly owned lands that have some enforceable protection commitment, but those commitments do not meet the definition of "long-term protection" or "public conservation lands."

shrub – a woody or herbaceous plant smaller in height than a tree and approximately 3 to 6 feet above the ground, often formed by a number of vertical or semi-upright branches or stems arising close to the ground.

silt fencing (Belton Industries, #935) – a durable type of silt fencing (36 in x 75 ft; pre-assembled, double-stapled, with oak stakes) that has been field-tested as an enclosure material for gopher tortoises. The manufacturer is Belton Industries, PO Box 127, Belton, SC; 800-845-8743; www.beltonindustries.com/silt.html. Distributors include

Pallen Enterprises, Conyers, GA (770-922-1812) and Certified Slings, Ft. Myers, FL (239-334-1343).

silt fencing (filter fabric) – temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched. There are two types: 1) the silt fence is a temporary linear filter barrier constructed of synthetic filter fabric, posts, and, depending upon the strength of the fabric used, wire fence for support; 2) the filter barrier is constructed of stakes and burlap or synthetic filter fabric. These types of silt fencing are useful for temporary exclusion, but are generally not durable enough for six month-enclosures on recipient sites.

silviculture – the art and science of establishing and growing healthy, high-quality forests to meet human needs.

site evaluation stocking rate (maximum stocking rate) – the maximum allowable density on a particular recipient site, determined by evaluating habitat conditions such as canopy cover, soils, etc. Generally, maximum stocking rates range from two to four tortoises per acre.

site fidelity – remaining within a particular area.

soft release (relocation) – those releases where relocated animals are contained in a temporary enclosure at the recipient site for some period of time before being allowed to roam freely; this differs from hard releases where animals are turned loose without any period to acclimate to their new surroundings.

Strategic Habitat Conservation Area – an area not within existing publicly owned conservation lands that FWC has identified as needing protection to meet minimum conservation goals and provide greater security for rare native plants, animals, and habitats.

take – taking, attempting to take, pursuing, hunting, molesting, capturing, or killing any wildlife or freshwater fish, or their nests or eggs, by any means, whether or not such actions result in obtaining possession of such wildlife or freshwater fish or their nests or eggs.

understory – the lowest vegetative layer in a forest, consisting of woody and herbaceous growth less than 3 feet in height.

unprotected site (relocation) – lands that do not have any enforceable protection commitments or use restrictions that would prevent them from being modified and made unsuitable for tortoises.

upland (habitat) – high, generally dry lands that are not wetlands (water).

upper respiratory tract disease (URTD) – a disease that occurs in gopher tortoises, where infected individuals may show a discharge from the nasal passages or eyes, swelling of

the eyelids or area around the eyes, or reddened third eyelid. These so-called clinical signs (i.e., symptoms) come and go over time.

viable population – a stable, self-sustaining population with a high likelihood (e.g., more than 95%) of surviving for a long-term period (e.g., 100 years).

xeric (habitat) – very dry, in this case due to soil factors.

I. INTRODUCTION

The following gopher tortoise (*Gopherus polyphemus*) permitting guidelines have been produced by the Florida Fish and Wildlife Conservation Commission (FWC), with input from stakeholders, to provide a comprehensive overview of FWC's gopher tortoise permitting system. The new gopher tortoise permitting system has been developed as one tool in accomplishing the goals and objectives set forth in FWC's *Gopher Tortoise Management Plan*, approved in September 2007.

The overall goal of the management plan is to restore and maintain secure, viable populations of gopher tortoises throughout the species' current range in Florida. Objectives under this goal include the following: 1) improving gopher tortoise carrying capacity on lands with existing or potential gopher tortoise habitat; 2) increasing the amount of protected gopher tortoise habitat; 3) restocking gopher tortoises to protected and managed areas; and 4) decreasing gopher tortoise mortality on lands proposed for development.

This permit system has been designed to help accomplish all four of these objectives by providing incentives to landowners to manage their habitat for gopher tortoises, tortoise commensals, and other native wildlife species; providing incentives to responsibly relocate and restock tortoises to protected, managed lands rather than unprotected sites; providing a new permitting system that does not allow entombment of tortoises; and providing a permitting system with regulation and enforcement sufficient to ensure compliance with FWC guidelines and rules.

The *Gopher Tortoise Permitting Guidelines* is a document that may be edited and updated as needed in the future. Proposed changes to these guidelines will be reviewed annually by an FWC standing team and a public stakeholder advisory group. All changes will require approval from the FWC Executive Director. The FWC Executive Director will also coordinate with the FWC Chairman to determine when changes to these guidelines are substantive and warrant full review by the FWC Commissioners.

These guidelines do not address technical details or aspects of the permit application process associated with the gopher tortoise permitting website. The online permitting system allows individuals to register and submit permit applications, electronically submit required mitigation, and receive official communications including permits from FWC. It also allows the public to search for and view permit applications and issued permits. Additional information, instructions and frequently asked questions on the online permitting system is available at MyFWC.com/GopherTortoise.

These guidelines include specific requirements and recommendations for various elements of the gopher tortoise permitting system. *Requirements* include actions or protocols that must be followed before FWC will issue a permit. They also include actions that must be undertaken to avoid violating FWC permit conditions and rules. The terms "shall" or "must" in this document denote guideline requirements. *Recommendations* include preferred protocols or techniques that applicants or permittees should follow, but that are not required (i.e., other viable methods are allowed). The terms "should" and "may" in this document denote guideline recommendations.

These guidelines are intended to be a single source for all policy and protocols associated with FWC's gopher tortoise permitting system. As such, they are written primarily for an audience seeking such in-depth knowledge. Other publications and online materials have been developed to address the informational needs of groups that do not require an in-depth understanding of the entire system.

II. DETERMINING IF A PERMIT IS REQUIRED

Rules and Policies Protecting Tortoises and Their Burrows

Rules protecting gopher tortoises and their burrows, and the Gopher Tortoise Enforcement Policy, are found in Appendix 1.

Activities That Do Not Require a Permit

Agricultural, silvicultural, and wildlife management activities that impact gopher tortoises or gopher tortoise burrows do not require a permit if they are conducted in accordance with the Gopher Tortoise Enforcement Policy (Appendix 1), which is a part of these guidelines. These activities include tilling, planting, harvesting, prescribed burning, mowing, disking, roller chopping, and tree cutting. For additional guidance on activities that do not require a permit, refer to the *Gopher Tortoise Enforcement Policy* in Appendix 1.

Linear utility and highway right-of-way vegetation maintenance activities that may impact gopher tortoises or gopher tortoise burrows do not require a permit. These activities include mowing and tree cutting.

Routine yard and vegetation maintenance and landscaping activities that do not harm gopher tortoises or collapse tortoise burrows do not require a permit.

Note: Agricultural, silvicultural, wildlife management, and linear utility and highway right-of-way vegetation maintenance activities have not been shown to routinely result in significant gopher tortoise deaths (i.e., beyond the infrequent, accidental death of individual tortoises). Therefore, FWC will investigate reports of the death of significant numbers of tortoises to determine if these deaths resulted from activities that did not constitute bona fide agricultural, silvicultural, wildlife management, or linear utility and highway right-of-way vegetation maintenance activities. The FWC may pursue such activities as a violation of Rule 68A-27.003, Florida Administrative Code (F.A.C.), which is included in Appendix 1.

Note: Activities that are intended to prepare land for development are not considered bona fide agricultural, silvicultural, and wildlife management, linear utility, or highway right-of-way vegetation maintenance activities. A permit is required for land development activities (including site preparation for such activities) that result in impacts to gopher tortoises or their burrows. See Site Preparation Activities for Development below.

A FWC permit is not required if development activity on a project site avoids impacts to tortoise burrows by 25 feet in all directions from the mouth of all burrows. Development activity must not harm gopher tortoises nor violate rules protecting them. Leaving a 50-foot diameter (25-foot radius) circle of habitat around each burrow (e.g., undisturbed "islands" or "crop circles") and developing the rest of a project site does not qualify and requires a permit to ensure that gopher tortoises are not harmed. Examples of other violations noted in the past by FWC include but are not limited to killing or injuring a tortoise, harassing a tortoise by blocking access to its burrow, and altering gopher tortoise habitat to such an extent that resident tortoises are taken (see Glossary and Site Preparation Activities for Development, below).

Activities That Require a Permit

A permit is required for any activity not covered in the section above, that causes a take, harassment, molestation, damage, or destruction to gopher tortoises or their burrows (see Rule 68A-27.003, F.A.C., in Appendix 1.) Activities that can lead to rule violations include, but are not limited to, clearing, grading, paving, bulldozing, digging, building construction, and site preparation for development.

Examples of actions that are rule violations include the following:

1) killing or causing direct harm to gopher tortoises
2) collapsing gopher tortoise burrow entrances or other parts of tortoise burrows without a permit
3) blocking, covering, or filling in gopher tortoise burrow entrances without a permit
4) placing harmful substances or devices inside gopher tortoise burrows
5) penning or restricting gopher tortoises into small areas for more than 72 hours without a permit
6) altering gopher tortoise habitat to such an extent that resident tortoises are taken (see Glossary) by such activities
7) excluding tortoises from their burrows without a permit
8) relocating or possessing tortoises without a permit

Site Preparation Activities for Development

A permit is required for any site preparation activity conducted as a precursor to development that disturbs vegetation or the ground which impacts gopher tortoises or their burrows at the time of or as a result of development. To conduct these activities without a permit is a violation of Rule 68A-27.003, F.A.C. (see examples 1-8, above).

Site preparation activities such as hand trimming vegetation and other minor determinations of suitability of property for development do not require a permit. These low-impact activities are allowed without a permit if they do not harm gopher tortoise burrows, harm gopher tortoises, or disturb the ground or vegetation so that accurate tortoise burrow surveys or FWC site checks cannot be conducted. FWC law enforcement will respond to reports of take, harassment,

molestation, damage, or destruction of gopher tortoises or their burrows and investigate any potential criminal violations.

On sites where tortoises are present and burrows (active or inactive) are present, most site preparation activities require a permit. These activities include building construction, bulldozing, paving, clearing, or grading. If work has started without the proper permit, work shall stop on-site until a relocation permit has been obtained and all gopher tortoises have been relocated. If work has begun before a relocation permit is issued or before gopher tortoise relocation is complete, all prior permits may be voided and a Disturbed Site permit may be required.

Permit applications must include tortoise surveys of the entire development, not just infrastructure components. Permits will not be issued solely for proposed infrastructure (e.g., roads and utilities) that are part of a larger common development plan, project, plat, or subdivision. Issued permits must address all burrows to be impacted on the entire project, development, plat, or subdivision site plan (the development footprint). For example, if the entire development footprint impacts more than 10 burrows, such sites will not be eligible (i.e., meet the criteria) for issuance of a 10 or Fewer Burrows permit, even if the infrastructure itself impacts 10 or fewer burrows.

Applicants submitting permit applications for projects with site plans that include lots or space for residential, industrial, institutional, commercial, or other development must consider all burrows within such areas to be impacted by the development footprint. Only those tortoises residing in burrows that are located within either designated preserves or other areas that will not be impacted by any activity associated with the ultimate build-out of the proposed development site do not have to be relocated. Large projects that are subdivided into development phases where each phase is approved by the local government under a separate development order may be permitted separately, but only one 10 or Fewer Burrows permit will be issued per multi-phased project.

If site preparation activities occur before a gopher tortoise relocation permit is issued, then a Disturbed Site permit may be required. The Disturbed Site permit process may result in the denial of an existing permit application or revocation of an issued gopher tortoise relocation permit (see Section IV).

In disturbed site cases, an FWC law enforcement investigation will be conducted to determine if gopher tortoises or gopher tortoise burrows have been impacted. Regardless of the outcome of investigations, the permit application review process will not resume until any gopher tortoises potentially buried in disturbed portions of the project site are given adequate time to dig out (a minimum of 28 days, comparable to that required during tortoise trapping efforts; however, longer periods may be warranted during cold weather when tortoise movement is typically slower).

III. PERMITTING GUIDELINES

The FWC uses a multi-tiered approach to permitting actions involving gopher tortoises. These permits are divided into three main types: 1) Authorized Agent permits, which authorize persons to trap, transport, and release tortoises; 2) Site-specific relocation permits, which authorize trapping and relocation of tortoises either within the boundaries of the area being impacted (on-site) or from the area being impacted to a permitted recipient site (off-site); and 3) Recipient Site permits, which authorize the use of designated sites meeting specific criteria as recipient areas for tortoises. Emergency Take permits, Disturbed Site permits, and Burrow or Structure Protection permits are three additional permit types, only issued under unusual circumstances. The types of permits are illustrated by the flow chart in Appendix 2, FWC Gopher Tortoise Permitting System Process Map.

Entombment of tortoises is not allowed under the conditions of any permit, with the exception of Emergency Take permits. Emergency Take permits are available only in extreme circumstances where there is an immediate danger to public health and safety or in direct response to an official declaration of emergency by the Governor or local government authority. Local emergency situations that do not rise to the level of an official declaration should be handled by coordinating with FWC's Division of Law Enforcement and seeking assistance in determining steps that must be taken in order to avoid additional take or endangerment of gopher tortoises.

Mitigation Contributions

A mitigation contribution is required for all relocation permits. A flat mitigation contribution from each applicant applies to the first 10 burrows (up to 5 tortoises for conservation permits) impacted on each project site. This flat mitigation contribution of $200 is only applied one time for each project site. Additional mitigation for sites supporting more than 10 tortoise burrows is required. Mitigation contributions are assessed by determining the estimated number of tortoises impacted (the number of potentially occupied tortoise burrows to be impacted, divided by 2). A variable scale for additional contributions is based on the overall conservation value of the action being permitted and the estimated number of gopher tortoises being impacted by the project. Preferred conservation actions, such as responsibly relocating tortoises to long-term protected lands, require a lower contribution per tortoise than relocations to short-term protected or unprotected lands or relocations associated with Disturbed Site permits. All mitigation contributions support gopher tortoise conservation actions as specified in the FWC-approved Gopher Tortoise Management Plan.

Other costs may be incurred by applicants obtaining permits or conducting activities related to gopher tortoises. Examples of such costs include fees paid to consultants, fees paid for on-site preparation for gopher tortoise related activities, fees paid to owners of recipient areas, and fees associated with establishing conservation easements. These fees are not paid to FWC nor controlled by FWC.

All mitigation contributions must be submitted to FWC as specified in these guidelines. Gopher tortoise mitigation contributions for a 10 or Fewer Burrows permit, Authorized Agent permit, Recipient Site permit, Temporary Exclusion permit, Burrow or Structure Protection permit, or

Disturbed Site permit must be submitted to FWC before the final permit will be issued. Mitigation contributions for Conservation permits representing 100% of the estimated total amount due will be submitted prior to issuance of the permit. Online submission of mitigation contributions is provided in order to expedite permit processing and issuance. FWC will continue to explore alternative methods of payment, such as letters of credit and performance bonds, in the future.

If the actual number of gopher tortoises relocated is less than the number estimated, a refund of any excess funds paid will be made to the permittee. Permittees seeking a refund must submit a refund request form to FWC within 60 days of the date that the final after action report is approved. Disturbed Site permits follow a different refund process (see Section IV). If an issued gopher tortoise relocation permit is used to attempt to capture a gopher tortoise(s) but no gopher tortoise is captured, the minimum mitigation amount required to obtain that type of relocation permit (e.g., $200 for 10 or Fewer Burrows permits or Conservation permits, or $100 for Temporary Exclusion permits with tortoises excluded for two months or less) will not be refunded to the permittee because the issued permit authorized both the capture of gopher tortoises, and the damage, collapse or covering of gopher tortoise burrow(s).

If the number of tortoises encountered during relocation exceeds the number permitted, then the permittee or agent must stop all attempts to capture any gopher tortoise in excess of the permitted number, and call the FWC Gopher Tortoise Permit Coordinator as soon as possible. The permittee or agent must submit an application to amend the relocation permit, submit the associated mitigation contribution for additional tortoises, and be in possession of the issued amended permit before attempting to capture or relocate any gopher tortoise in excess of the original number permitted.

Juvenile tortoises that are less than 130 mm [5 inches] carapace length must be included on the burrow surveys and permitted for relocation. However, refunds will be provided by the FWC for relocated juvenile tortoises that are less than 130 mm carapace length after the final after action report is submitted and approved, and a refund request form is submitted by the permittee or his/her agent. Gopher tortoise eggs and nests are not included when calculating the mitigation contribution. All eggs and juvenile tortoises must be relocated.

Emergency Take permit mitigation contributions will be handled on a case-by-case basis, in accordance with the facts and circumstances of each permit incident. In cases where the number of burrows impacted can be accurately determined because of pre-existing on-site surveys, mitigation contributions will be calculated by multiplying this number by 0.5. This adjusted number will be used to calculate mitigation contributions as prescribed in Table 1. In cases where the total number of burrows impacted cannot be accurately estimated from prior surveys, mitigation contributions will be based on actual documented burrow evidence. Such evidence may include, but is not limited to, exit holes from old burrows, partial remains of burrows, and the density of gopher tortoise burrows (per acre) that occur within surrounding areas that contain similar vegetation and soil characteristics.

When an Emergency Take permit includes requirements for trapping or excavating burrows within an area that has been disturbed by clearing, grading, disking or other ground disturbance

activities, no refunds will be made if the actual number of tortoises relocated is less than the number estimated, since gopher tortoises may have left the area during the disturbance.

The FWC realizes that all sites are unique and that circumstances influencing gopher tortoise populations are dynamic. For that reason, the initial permitting mitigation contribution is based on estimates from site surveys and a general application of a statewide correction factor. Estimating the total amount due is accomplished by calculating the number of potentially occupied burrows (based on surveys of not less than 15% of the project site areas where potential gopher tortoise habitat is found), dividing by 2, and then applying the mitigation contribution amounts shown for the various permit types described in Table 1.

The mitigation contribution amounts will be adjusted over time to keep pace with inflation. Tying these changes to the Consumer Price Index will ensure mitigation contributions are adjusted relative to actual price increases or decreases. The FWC will use the "All Urban Consumers Price Index" (CPI-U), which is a reflection of the highest percentage of the population, and the CPI-U for the Southeast region. Information on the Consumer Price Index is available online at www.bls.gov/cpi.

In subsequent years, mitigation contributions will change by an amount equal to the annual CPI-U for the Southeast region, and will be based on changes during the CPU calendar year (January 1– December 31). However, the minimum threshold for mitigation is set at the contribution levels outlined in the original approved version of the Gopher Tortoise Permitting Guidelines (April 2008). Adjustments to the contribution amount will take effect on March 1 of each year because the CPI for the previous year is usually not available until mid-February. The contribution will be calculated based on the date that a completed application is received by FWC. Mitigation contribution amounts will be published at MyFWC.com/GopherTortoise and sent out to all permittees.

Table 1. Permit Type and Corresponding Mitigation Contribution

PERMIT TYPE	MITIGATION CONTRIBUTION
Authorized Agent	$500 (one-time contribution)
Recipient Site	$500 per site (one-time contribution)
10 or Fewer Burrows *Tortoises are relocated on-site or off-site**	$200
Conservation *>10 burrows relocated to **long-term protected** area, to **public conservation lands**, or **from public projects to contiguous public conservation land***	$200 for first group of 10 burrows (up to five gopher tortoises) $300 each additional tortoise
Conservation *>10 burrows relocated to **short-term protected** area*	$200 for first group of 10 burrows (up to five gopher tortoises) $3,000 each additional tortoise
Conservation *Tortoises relocated to **unprotected** area*	$3,000 per tortoise
Temporary Exclusion *Exclusions for longer than 6 months must apply for a Conservation permit*	$100 per tortoise (exclusions <2 months) $200 per tortoise (exclusions 2 to 4 months) $300 per tortoise (exclusions 4 to 6 months)
Burrow or Structure Protection *On-site relocation only*	$25 for up to 2 burrows
Emergency Take	$4,000 per tortoise
Disturbed Site *See Section IV. Disturbed Site Permits for more information*	$500 additional per tortoise added to the standard mitigation for 10 or Fewer Burrows permits and Temporary Exclusion permits (exclusions 4-6 months only) $1,500 additional per tortoise added to the standard mitigation for a Conservation permit

*Gopher tortoises relocated off-site under a 10 or Fewer Burrows permit cannot be relocated to an unprotected recipient site.

Documentation for Permit Applications and Issuance

In accordance with the requirements of Rules 68A-27.007 and 68A-27.003 (F.A.C.), a permit for a gopher tortoise capture/relocation/release activity must be secured from FWC before initiating any relocation work. Required information for applications is outlined in Appendix 3, Informational Needs for Relocation Permit Applications and Recipient Site Permit Applications. Checklists are provided at MyFWC.com/GopherTortoise to assist applicants with the required information for each permit type.

As of April 2009, most permits can be applied for online at MyFWC.com/GopherTortoise. The online permitting system allows individuals to register, submit permit applications, electronically submit required mitigation, and receive official communications including permits from FWC. Paper applications are also available, but applicants are encouraged to apply online to expedite the review process. Additional information, instructions and frequently asked questions regarding the online permitting system are available online at MyFWC.com/GopherTortoise.

Paper applications are available online at MyFWC.com/GopherTortoise or from the Gopher Tortoise Permit Coordinator, Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Mail Station 2A, Tallahassee, FL 32399-1600; (850)921-1031; (850)488-5297 fax. For those opting to submit paper applications, the complete application should be submitted to the Gopher Tortoise Permit Coordinator at the above address at least 90 days prior to the time needed, although most applications will be processed in 45 days or less. Timely issuance of permits is dependent on receipt of required documentation.

Demonstration of need for a permit will require submittal of a development plan or proof of local government approval for the activity proposed (in the form of preliminary or final subdivision plat, or master planned unit development approval; Development of Regional Impact [DRI] development order; or authorization to commence clearing, grading, or construction activities). The actual capture and relocation authorized by the permit shall be conditioned upon the permittee submitting proof of local government approvals for clearing, grading or construction activities (if required at the local government level) to the FWC prior to commencing capture and relocation activities. Local governments may have requirements that an applicant demonstrate that FWC permits have been issued, or even that FWC permit requirements have been met, before issuing their final local government approval. The FWC will provide letters of intent or special conditions to permits, if necessary, that can be used to demonstrate agency concurrence with a proposed project. However, permits are not issued to move tortoises off a property where no construction activity is planned.

Permit Duration, Permit Posting, and Post-Relocation Reporting

The duration of each type of permit will be indicated on the permit. Authorized Agent permits are valid for a two-year period and may be renewed without additional payment in two-year increments. Recipient Site permits with long-term protection do not expire, but will be subject to reporting requirements within the special conditions. Permits for short-term protected recipient sites and unprotected recipient sites may be renewed every two years, but will require no additional mitigation contribution. Relocation permits for 10 or Fewer Burrows and Burrow or Structure Protection Permits will be valid for six months from the date of issuance and may be amended by the permittee to extend the permit duration for up to 6 months if relocation activities have not been completed. Conservation and Temporary Exclusion permits will be valid for either 12 months or 60 months and may be amended by the permittee to extend the permit duration for up to 12 months if relocation activities have not been completed. Emergency Take permits and Disturbed Site permits will be handled on a case-by-case basis, considering the circumstances of the development and the conditions present. Any request for permit renewal or amendments shall be submitted at least 45 days prior to the expiration date of the existing permit.

Permit amendments are issued based on the permitting guidelines and specific permit conditions in effect at the time the complete application for a permit amendment is received by the FWC.

Phased projects, those projects with development phases based on geographic areas, may be permitted in one permit or in phases. Permits issued for individual phases will have conditions that specify the gopher tortoise conservation activities that must be conducted for those specifically permitted stages or phases of development. Refer to Appendix 3 for information needed for permit applications.

Either the original permit or a complete copy must be clearly posted at the affected site at all times while engaged in the permitted gopher tortoise relocation activities.

Within 30 days of release of the relocated tortoises, the permittee, or authorized agent if applicable, shall submit a report detailing the capture/relocation actions to FWC's Gopher Tortoise Permit Coordinator via FWC's permitting portal at MyFWC.com/GopherTortoise.

Burrow Surveys on the Development Site

A burrow survey covering a minimum of 15% of the potential gopher tortoise habitat to be impacted by development activities (including staging areas for heavy equipment) is required in order to apply for a relocation permit. These 15% surveys must be conducted no more than 90 days before an application is submitted to FWC. Burrow survey methods are outlined in Appendix 4, Methods for Burrow Surveys on Development (Donor) and Recipient Sites. Additional survey requirements for Disturbed Site permit applications are also listed in Appendix 4.

No more than 90 days prior to, and *no fewer* than 72 hours before (excluding weekends and holidays) commencing gopher tortoise capture and relocation activities, the authorized agent shall: 1) complete the 100% gopher tortoise survey of the donor site and burrow location map; and 2) deliver to the FWC the 100% survey and burrow location map. If FWC determines that an on-site survey inspection is necessary prior to commencing capture activities, FWC will provide notification to the permittee or authorized agent within 48 hours (excluding weekends and holidays) of receipt of the 100% survey and burrow location map.

All surveys completed by authorized agents are subject to field verification by FWC. If FWC determines from the on-site survey inspection that the number of gopher tortoise burrows on site causes the total to exceed the number authorized for capture and relocation under the existing gopher tortoise permit, the permittee must apply for an amendment and obtain a permit for the additional burrows from FWC before initiating any capture and relocation activities for the additional burrows.

Site preparation for development (such as land clearing) may commence on the project site, or for phases of the project site, for which gopher tortoise capture and relocation activities have been completed (see Section II for details.)

Capture, Handling, and Transport of Relocated Tortoises

Capture Methods: Tortoises must not be trapped, captured, or transported off project (donor) sites until local authorization for clearing, grading, or construction has been issued. Tortoises may be captured via bucket traps, live traps, hand capture outside burrows, and excavation by hand shovel or backhoe. To prevent impalement of tortoises during backhoe excavation, the backhoe bucket must have a flat plate rather than teeth (long prongs). Use of a pulling rod with a blunted tip to prevent injury to a tortoise will be allowed when the authorized gopher tortoise agent is permitted to utilize this method as authorized in the relocation permit. Only agents permitted to use this method of capture are authorized to capture tortoises using a modified pulling rod.

If bucket or live traps are used, the traps must be shaded, they must be checked at least once per day (preferably twice per day—once in the morning and once in the late afternoon), and they must remain in place for at least 28 consecutive days or until the resident tortoise is captured, whichever occurs first. In cases where traps are set during colder months in northern Florida (November – March) and no tortoise is captured after 28 consecutive days, burrows must be excavated to determine if they are occupied. Drainage holes must be drilled into the bottom and lower sides of bucket traps and must be sufficient in size and number to prevent rainwater from accumulating in the bucket. Bucket traps and live traps are not effective in capturing tortoises during cold weather, particularly in northern Florida (north of State Road 50), because tortoises may remain inactive for extended periods of time. Therefore, bucket traps are not recommended from November through March in northern Florida. In cases where traps are set and no tortoise is captured during winter months in northern Florida, burrows must be excavated to determine if they are occupied. If the 28-day trapping period has passed without a capture and property boundary constraints make excavation impossible, FWC should be contacted to discuss alternatives.

Burrow scoping is not an acceptable method of confirming vacancy or determining occupancy rates because not all potentially occupied burrows can be successfully scoped due to curves or obstructions. However, burrow scopes may be used to enhance capture success for tortoises and their commensals. Capturing a tortoise outside a burrow is not sufficient reason to assume the burrow is vacant. Although all burrows on the donor site must be flagged or otherwise marked, only potentially occupied burrows must be trapped or excavated (see Appendix 4).

All relocated tortoises must be individually marked, measured, and weighed (see exceptions in Appendix 11). Techniques for measuring shells and for uniquely marking individual tortoises (i.e., assigning them a permanent identification number) are provided in Appendix 5.

If gopher tortoise eggs are encountered, the following procedure should be followed:

1) place sand from around the eggs into a container;
2) remove soil from around the eggs carefully (eggs are fragile, please handle with care);
3) use a pencil to place a small “x” on top of each egg;
4) make an egg-sized depression with your finger in the sand in the container;

5) place each egg in a depression with "x" facing up;
6) make note of approximate depth of nest in original burrow location, and;
7) at the recipient site, locate an existing burrow apron or other sandy area in an open, sunlit area and excavate to the approximate depth of original nest, place eggs "x" up in the new nest in approximately the same orientation as they were originally located, and mark the new nest with a ring of fencing or flagging.

Any injury or fatality associated with the capture or relocation of gopher tortoises must be reported to the FWC Gopher Tortoise Permit Coordinator within two days.

Cold and hot weather handling: During the colder months, tortoises shall only be relocated when the low temperature at the recipient site is forecasted by the National Weather Service (www.nws.noaa.gov) to be above 50˚ Fahrenheit for three consecutive days after release (including the day of relocation). This three-day window of milder overnight temperatures is required to allow the relocated tortoises to settle into the recipient site and to reduce the chance of cold-related stress or mortality.

Because most tortoise relocations occur during the warmer months, overheating is a more common concern. During summer months, releases should not be made during the hottest part of the day at sites where shade is limited. Heat stress on gopher tortoises being captured and transported for relocation can be reduced or eliminated by assuring that captured tortoises and those tortoises being transported for release are continually in shaded or climate controlled conditions.

Holding and Transport: Gopher tortoises must be held in shaded conditions and in individual containers that are large enough to allow the tortoise to turn around. To help prevent dehydration, especially during times of drought, tortoises should be soaked for 20-30 minutes in just enough water to cover the container bottom and to allow the tortoise to easily drink. Moist soil may be used to cover the bottom of the bin. It is appropriate to use soil from the burrow depths during backhoe excavation. Hay, straw, or shredded paper are other acceptable materials to place in the bin.

Gopher tortoises must not be held more than 72 hours after capture—and preferably not more than 24 hours. Tortoises should be transported within covered, well-ventilated areas of vehicles (not in open trucks) and should be kept at moderate temperatures (i.e., 70-85˚ Fahrenheit).

Recipient areas may be situated any distance east or west of the donor site, but no more than 100 miles north or south of the donor site unless no such recipient site is available. Some recipient sites conducting research can accept tortoises from any location in the state and may be exempt from the 100-mile limit.

Relocated gopher tortoises should be released on the recipient site near existing abandoned burrows or excavated starter burrows. Starter burrows should be excavated to approximately two feet in length at an approximate 45° angle to the ground.

Health Considerations (including testing for mycoplasmal upper respiratory tract disease [URTD] and accommodation of symptomatic/seropositive tortoises): Most health variables are poorly known for wild gopher tortoises, and even veterinarians with advanced training in animal health can have difficulty detecting subtle clues that a tortoise is ill. Authorized agents may refer to Appendix 6 for detailed outlines of cursory health evaluations, clinical signs and symptoms, and a simple disinfection protocol to help prevent spread of pathogens. Although detailed health exams are not required, authorized agents should observe each tortoise for obvious clinical signs such as nasal discharge. Hands and equipment should be disinfected between handling tortoises within a donor site, but all equipment, particularly bins and bucket traps, must be disinfected between uses on different donor sites. Blood tests to detect exposure to the pathogen that causes mycoplasmal URTD are no longer mandated. However, in cases where recipient site owners require mycoplasmal URTD testing before relocation, Appendix 6 contains information on collection and handling of samples. Appendix 6 also provides guidance for the accommodation of symptomatic tortoises (i.e., those individuals that show signs of illness, especially respiratory disease) and those that test positive for mycoplasmal URTD or other diseases.

IV. TYPES OF PERMITS

Authorized Gopher Tortoise Agent Permit

Note: Authorized agents included under this type of permit are not authorized agents of FWC, but rather individuals authorized to handle gopher tortoises. These permits are not issued for scientific collection or research on gopher tortoises.

This permit authorizes the permittee, referred to as an authorized agent, to undertake those activities specified by the permit, including surveying, trapping, marking, transporting, relocating tortoises and tortoise commensals (e.g., gopher frog, pine snake, Florida mouse). The specific activities that an authorized agent is granted permission to perform will be listed on the permit. Authorized Agent permits also allow assistants to work under the authorized agent's supervision if these assistants are registered with the FWC. The permit must be carried at all times by the agent and assistants when conducting permit-related activities. Authorized Agent permits will not allow relocation of tortoises except when accompanied by a 10 or Fewer Burrows permit, a Conservation permit, a Temporary Exclusion permit, a Burrow or Structure Protection permit, or a Disturbed Site permit for a specific project.

Authorized agents must be well-qualified to perform the gopher tortoise conservation actions for which they are requesting permission. Agents will likely be the first point of contact for citizens when they are advised that gopher tortoises are protected. Agents must accurately represent FWC policies, guidelines, and rules to their clients and to the general public. As a benefit of receiving this permit, agents will have access to a streamlined online permitting process for certain gopher tortoise permit approvals.

This permit is conditional so that it can be withdrawn, suspended, revoked, or not renewed for just cause, as determined by FWC. In cases where agents or their assistants violate FWC rules, policies, or guidelines concerning gopher tortoises; engage in unethical or illegal behavior;

falsify gopher tortoise permit applications or monitoring reports; or violate conditions of any gopher tortoise permit, the agent permit may be immediately suspended pending an investigation. Substantiated violations will result in appropriate action, up to and including revocation, at FWC's discretion. Any person whose Authorized Agent permit is revoked will be ineligible for any gopher tortoise related permits for some period of time, depending on the severity of the violation.

Requirements for Authorized Gopher Tortoise Agents

Individual people may submit an application to FWC in order to be authorized to perform different activities related to gopher tortoise conservation. Not all agents will have the interest and the required expertise to perform all activities listed below. Each agent permit will clearly state what the agent is allowed to do and will be conditioned accordingly. Agent permits are authorizations to the agents and the assistants under their supervision to conduct the activities specified. The agent permits do not allow capture, possession, or transport of gopher tortoises unless a relocation permit specific to the development project or activity impacting gopher tortoises or their burrows has also been issued. All experience submitted in support of the application for an Authorized Gopher Tortoise Agent permit must have been from actions conducted in compliance with the FWC gopher tortoise permitting guidelines and standards.

Gopher tortoise surveys:
Applicant must have completed either 1) at least 120 hours conducting gopher tortoise surveys over the past year, or 2) a cumulative total of 480 hours conducting gopher tortoise surveys.

Completion of an FWC-approved training course module in gopher tortoise surveying may be substituted for the experience requirements.

Gopher tortoise capture using bucket trapping *or* live trapping *or* hand shovel excavation:
Applicant must have captured, with no gopher tortoise injuries or mortality, either: 1) an average of 10 gopher tortoises per year by a single method over a four-year period, or 2) a cumulative total of 40 gopher tortoises captured by a single method. Applicants are to list experience for each method separately in the agent permit application, as applicable.

Completion of an FWC-approved training course module in gopher tortoise capture methods may be substituted for the experience requirements.

Gopher tortoise capture using a modified pulling rod:
The applicant must have captured**,** with no gopher tortoise injuries or mortality, an average of 10 gopher tortoises per year over a four-year period by safely using a modified pulling rod. Applicants must include references to the permits under which the claimed experience was earned.

Certification of additional agents beyond those who meet these criteria will be considered only after further evaluation of this technique by FWC in April 2010.

Note: Not all tortoises can be captured by pulling. Therefore, pulling cannot be used as a method for verifying that a burrow is unoccupied. Pulling may be used only in combination with trapping or backhoe/hand excavation to assure that every tortoise is relocated from a designated donor site.

Completion of a training course will not be accepted in lieu of the experience requirements listed.

Transport, marking, and release of gopher tortoises:
The applicant must have completed, with no gopher tortoise injuries or mortality, either: 1) an average of 10 gopher tortoises per year transported, marked, and released over a four-year period, or 2) a cumulative total of 40 gopher tortoises transported, marked, and released. These activities are considered together as one skill in the agent permit application.

Completion of an FWC-approved training course module in gopher tortoise transport, marking, and release methods may be substituted for the experience requirements.

Collection of blood samples:
The applicant must have completed, under the direct supervision of a qualified veterinarian or other appropriately authorized person, the successful collection of 10 blood samples from gopher tortoises.

Completion of a training course will not be accepted in lieu of the experience listed.

Supervision of gopher tortoise burrow excavations using mechanical equipment:
The applicant must demonstrate with no gopher tortoise injuries or mortality, either: 1) on-site experience of supervising at least 50 gopher tortoise burrow excavations, with the successful extraction of at least 20 gopher tortoises (include references to the permits under which those occurred), or 2) on-site experience under the supervision of another Authorized Gopher Tortoise Agent who was directing backhoe operators in the excavation of at least 50 gopher tortoise burrows, with the successful extraction of at least 20 gopher tortoises, with the applicant actively participating in the recovery of gopher tortoises from the excavated burrows (include references to the permits under which those occurred).

Completion of an FWC-approved training course module in this activity, combined with experience directing backhoe excavation of 30 gopher tortoise burrows with successful extraction of at least 12 gopher tortoises, may be substituted for the full experience requirements above. Burrows mechanically excavated during the approved course in which the applicant actively directed excavation efforts without instructor input can count toward the excavation experience requirement; however, excavation must be conducted under the direct on-site supervision of an Authorized Gopher Tortoise Agent permitted in this technique.

It is the agent's responsibility to select operators of mechanical excavating equipment that are appropriately experienced and to direct their activity in a way that minimizes threats to gopher tortoises, commensal species, and persons assisting with the excavation. The authorized agent must be on-site at all times while mechanical excavation is being performed.

Authorization to train:
Authorized gopher tortoise agents may be authorized to train others in the activities and techniques associated with trapping, handling, and relocating tortoises with completion of a FWC-approved training course. Applicants must specify which courses and sections they will be teaching and provide a letter from the approved training entity verifying employment or agreement to train.

Application Criteria

All applications for the Authorized Agent permit must be from an individual, and the appropriate mitigation contribution as established in these guidelines must be paid before issuance of the permit. Applicants for this permit must provide standard contact information, satisfactory proof of knowledge, and specific gopher tortoise related experience in support of each of the activities they are requesting a permit to conduct. Applicants must list permit numbers under which experience was obtained for each skill listed in their application. For surveys, the applicant may list properties (and the associated gopher tortoise habitat acreages) surveyed, purpose of surveys, and documentation of completion and submittal of survey results where experience was acquired but no FWC permit applications were submitted, instead of listing permit numbers (since permits are not always obtained after surveying efforts). Applicants must swear and affirm that they have committed no wildlife violations in Florida, the information submitted in the application and supporting documents is complete and accurate, any false statement may result in criminal penalties, and agree to abide by all applicable state, federal, and local laws.

Professional certification by any industry body or trade group established for this purpose (gopher tortoise agent authorizations) in the future and approved by FWC may also be provided as supplementary documentation of knowledge and experience.

Note: Approval of courses for certification of gopher tortoise agents shall be at the discretion of the FWC Executive Director or his delegate.

Grounds for Suspension, Revocation or Nonrenewal of Agent Permit

Agents are responsible at all times for their own actions and for the actions of any other person assisting them with their permitted activities. The following will be considered by FWC as grounds for suspension, revocation, or nonrenewal of the permit issued to an agent:

- violations of gopher tortoise related rules, guidelines, or permit conditions
- surveys not conducted in adherence with guidelines
- significant numbers of burrows missed on surveys
- falsification of data submitted to FWC
- failure to appropriately supervise and direct persons assisting them

Assistants to Authorized Agents

An authorized agent may be assisted by additional persons. These assistants will be under the

supervision of the authorized agent and must adhere to all rules, guidelines, and permit conditions when conducting activities relating to gopher tortoises. They must carry a letter from the agent designating them as an assistant and a copy of the authorized agent's permit with them at all times while engaged in activities related to the permit. Such assistants must be directly supervised on-site by the authorized agent during blood collection and/or mechanical excavation of burrows, or they themselves must be an authorized gopher tortoise agent permitted to conduct these activities. In order for an assistant to gain credit for experience to meet qualification requirements for an Authorized Agent permit, the assistant must be listed in the relocation permit after action report within the online permit system. Assistants are not authorized to conduct any gopher tortoise related actions without approval of the authorized agent.

Relocation Permits for Properties with 10 or Fewer Burrows

This type of permit is available when 10 or fewer burrows (and the number of tortoises occupying those burrows) will be impacted on a development site. Application requirements, recipient site criteria, and tortoise handling procedures differ somewhat for this permit type (see Appendix 11.). In cases of phased developments, this permit may be obtained only once for any development on a single identified parcel or within a project under a common plan of development, platting, or subdivision/project name, whichever is largest. As part of the 10 or Fewer Burrows permit application process, the permit applicant must complete the required e-Learning (available online at MyFWC.com/GopherTortoise) or the approved equivalent written training, if the applicant is not an authorized gopher tortoise agent.

Most typical activities associated with residential lawn and landscape maintenance do not require a permit, provided they do not collapse gopher tortoise burrows or harm gopher tortoises. Activities that do require a permit are listed in Section II, Determining If a Permit Is Required. Contacting an authorized agent or FWC before implementing any construction or major habitat modifications is advised.

Consultants who are not Authorized Gopher Tortoise Agents may apply on behalf of property owners for 10 or Fewer Burrows permits when all tortoises will be relocated on-site. The consultant must complete a Registered Agent profile within the online permitting system and complete the e-Learning curriculum. Once submitted, this automatically issued status allows a Registered Agent to apply on behalf of the property owner for permits that do not otherwise require the use of an Authorized Gopher Tortoise Agent. Only property owners can be listed as permittees. Relocation activities for Registered Agents are limited to on-site relocation only using bucket trapping, hand shovel excavation, and live trapping to capture the gopher tortoises. The Registered Agent is not a permit, nor does it provide any authorizations not included in a separately issued 10 or Fewer Burrows permit. (Authorized Gopher Tortoise Agents may conduct activities specified by their permit and do not need to apply to become Registered Agents.)

10 or Fewer Burrows Permit with On-Site Relocation

This permit authorizes landowners or other individuals who have completed FWC online e-Learning to capture gopher tortoises (via bucket trapping, hand-shovel excavation, or live

trapping) and to relocate tortoises to an on-site location within the property boundaries of the development specified in the application. [**Note:** Only an authorized agent permitted to supervise burrow excavations may capture or attempt to capture gopher tortoises using a backhoe.] On-site recipient area criteria can be found in Appendix 11. Landowners may obtain the assistance of an authorized gopher tortoise agent for on-site relocations (as described in *Authorized Gopher Tortoise Agent* above).

Release of tortoises must be accomplished in such a way as to preclude tortoises from returning to their burrows. This permit type requires the temporary installation of filter fabric (silt fencing) or other comparable fencing (buried at least eight inches deep) along the outer edge of the construction right-of-way to block tortoise re-entry into the area of disturbance on the project site during construction activities. This temporary exclusion fencing must be removed following completion of construction activities. Penning is allowed only under this permit type, and only under specified circumstances (see Appendix 11).

10 or Fewer Burrows Permit with Off-Site Relocation

This permit authorizes gopher tortoises to be relocated off the development property to a permitted recipient area (a long-term protected site or a short-term protected site). An authorized agent must perform this relocation on behalf of the permittee. Authorized agents must have their own permit from FWC for working with gopher tortoises and may assist the landowner or developer in obtaining all permit approvals for this type of action.

Conservation Permit

Conservation permits for relocation of tortoises on-site or off-site will be issued when more than 10 burrows will be impacted on a development site and for subsequent activity on properties undergoing development of phased projects when a 10 or Fewer Burrows permit has been previously issued.

This permit authorizes gopher tortoises to be relocated either on-site or off-site of the development property. The permittee must have an authorized gopher tortoise agent perform this relocation. Authorized agents must have their own permit from FWC that authorizes them to conduct the activities required to relocate the gopher tortoises, and they may assist the landowner or developer in obtaining all permit approvals for this type of action.

One of the four objectives of the *Gopher Tortoise Management Plan* is to increase the acres of permanently protected gopher tortoise habitat by providing incentives to landowners who protect habitat under perpetual conservation easements. These protected acres of habitat provide a net conservation benefit and assurance for long term protection and management of the species. Restocking lands where populations have been depleted is another important objective which will also help to reach the Plan's goal. Therefore, mitigation contributions for gopher tortoise relocation are scaled based on the length of assurance for protection and management of the species at recipient sites.

The mitigation contribution for Conservation permits is determined by the level and duration of habitat protection and management provided by the recipient site to sustain gopher tortoises. Conservation permits issued for gopher tortoises relocated to a long-term protected recipient site or from public projects to contiguous public conservation lands will require a $200 mitigation contribution for the first group of ten burrows (up to five tortoises) and a $300 mitigation contribution per tortoise thereafter. If the tortoises are being moved to a short-term recipient site, a $200 mitigation contribution will be required for the first group of ten burrows (up to five tortoises), and a $3,000 mitigation contribution will be required per tortoise thereafter. Gopher tortoises that are relocated to an unprotected recipient site will require a $3,000 mitigation contribution per tortoise (see Table 1).

Conservation permits that involve on-site relocation to undeveloped areas that provide suitable tortoise habitat but that are not protected or do not meet the size criteria for a permitted recipient site will require a $3,000 mitigation contribution for each tortoise. Final stocking density is limited to of two per acre (including tortoises already on-site) within the designated recipient area. On-site relocation to an area that provides habitat protection equivalent to the requirements for a short-term protected recipient site will require $200 for the first 5 tortoises and an additional $3000 for each tortoise relocated on site.

On-site relocation may be authorized to areas that meet the criteria for a long-term protected recipient site, or when tortoises are relocated from public projects to contiguous public conservation lands. A separate long-term protected recipient site permit must be obtained before gopher tortoises are relocated to the on-site area (see Recipient Site Permits below). However, if gopher tortoises are relocated from public projects to contiguous public conservation lands, the recipient site must meet the criteria specified below and be authorized as an on-site recipient site unit under the issued Conservation permit. Mitigation contributions for tortoises relocated to these on-site areas under this permit option qualify for the lower mitigation amount included in Table 1.

Relocating gopher tortoises from public projects to contiguous public conservation lands

The FWC recognizes that keeping tortoises within their native population is an important measure in conserving tortoises. This type of on-site relocation permit option encourages contiguous relocation within public lands by reducing mitigation costs and streamlining the process, thereby facilitating enhanced conservation for tortoises. Under this permit option, gopher tortoises can be retained within their native population instead of being moved off-site or to an on-site short-term or unprotected recipient site.

The intent of this permit option to relocate gopher tortoises from public projects to contiguous public conservation lands is to:

1) Encourage relocation of gopher tortoises from public project sites that are contiguous to public conservation lands;
2) Maintain local gopher tortoise populations, and their genetic and breeding integrity;
3) Minimize stress and other negative impacts to individual gopher tortoises;
4) Minimize the potential for disease transmission to new areas; and

5) Align with and complement existing gopher tortoise relocation options.

The key component to achieving this intent is to limit contiguous relocations to public conservation lands that gopher tortoises could reasonably access naturally and on their own.

This relocation option is intended for public projects where the donor site is contiguous to public conservation lands (see definition) and there is no physical obstacle [e.g., paved road open to the public (i.e., greater than 2 lanes, curb and gutter or other physical barriers, or a speed limit >30mph), railroad bed, impenetrable fence, river, and lake] that would prevent tortoise movement to the recipient site or other upland areas within the relocation/restocking site.

Donor and recipient site parcels or lands that are owned by the same public entity but not part of the contiguous landscape, or donor sites located more than one half mile from the temporary enclosure area within the designated recipient site, will not be considered contiguous under this option. However, this permit option can be used if the contiguous habitat or land is owned by more than one entity, provided that a letter of acceptance is submitted from the recipient site landowner. If linear right-of-way project sites do not meet the definition of contiguous, or do meet the definition of contiguous but donor site tortoise burrow(s) are located more than one-half mile from the temporary enclosure within the designated recipient site, a Conservation permit for off-site relocation must be obtained.

Projects must meet the following criteria for relocating gopher tortoises from public projects to contiguous public conservation lands:

A. To receive a FWC Conservation permit for relocation to contiguous public conservations lands, donor sites must meet the following criteria.
    - The donor site must be contiguous to the public conservation land recipient site.
    - If the recipient site is contiguous but owned by a separate public entity, signed permission from the recipient site landowner must be submitted.
    - Mitigation for tortoises relocated under this Conservation permit option is $200 for the first group of 10 burrows (up to 5 tortoises) and $300 for each additional tortoise.
    - The location of the recipient site temporary enclosure must not be located more than one-half mile from the burrow(s) on the donor site.
B. The recipient site must be contiguous to the donor site and meet the following criteria.
    - Recipient sites must be designated as public conservation lands (see definition) or public lands protected by a minimum 50-year conservation easement (with FWC included as a grantee). For lands where title is held by the State of Florida, the land lease shall be amended to include a recipient site management commitment, and be renewed so the lease is valid for at least 50 years.
    - The public conservation lands recipient site must be a minimum of 40 acres and meet the *acceptable* or *desirable* criteria outlined in Table 2 of these guidelines. Smaller sites in highly developed counties, particularly in southern Florida, will be evaluated on a case-by-case basis, and will be allowed if they are instrumental in retaining the local tortoise resource and can be appropriately managed to perpetuate the relocated population.

- A habitat management plan that includes recipient site requirements that has been approved by the FWC (or a management agreement between the managing agency and FWC), and proof of financial assurance in the form of a general appropriation or allocation approved by a public governing body for management, or equal to that of a long-term protected recipient site (see Appendix 3) must be submitted.
- Monitoring reports that conform to the monitoring requirements described in Appendix 7 of the Gopher Tortoise Permitting Guidelines shall be submitted at the intervals specified for either the duration required for a long-term protected recipient site or 50 years, whichever is shorter.
- The location of the recipient site temporary enclosure must not be located more than one-half mile from the tortoise burrow(s) on the donor site.
- A contiguous recipient site may be utilized for more than one Conservation permit that meets the criteria for this permit option, but the number of tortoises relocated to the site shall not exceed the final site evaluation stocking density.
- The recipient site maximum allowable gopher tortoise density (see Appendix 4) shall not exceed 50% of the maximum stocking density.

Exceptions to some of these criteria may be considered by FWC if the proposed contiguous relocation meets most, but possibly not every requirement outlined in the above criteria, and alternative mitigation activities are also implemented. Examples of alternative mitigation activities that may be considered include: temporarily enclosing tortoises (soft release) for 12 months instead of the minimum of 6 months; permanent fencing that prevents tortoises from entering roadways to reduce the risk of mortality; reduced speed limits adjacent to recipient sites and installation of wildlife crossing signs; or, a combination of these examples or other proposed alternatives that are consistent with and support the intent of these guidelines.

Note: Other options for on-site relocation (short-term or unprotected site) are available if a property does not meet the criteria outlined above for this "contiguous public conservation lands" option.

FWC will review this permit option in two years (from the date of approval) to evaluate if it is still needed and is helping to achieve the management plan goals for the gopher tortoise.

Recipient Site Permits

Criteria for Relocation of Gopher Tortoises to Recipient Sites

The overall conservation goal of the *Gopher Tortoise Management Plan* is "to restore and maintain secure, viable populations throughout the species' current range in Florida." Property owners play a significant role in helping Florida achieve this goal by providing the highest level of security for the gopher tortoise and its habitat on permitted recipient sites. Elements that are integral to meeting this objective include appropriate habitat management, population monitoring, legal protection, and long-term financial assurance provided by the landowner. Not all recipient sites afford relocated gopher tortoises with the same level of protection, however

some sites do provide conservation value by restocking tortoises to managed lands where populations have been depleted, furthering research efforts, preventing the loss of tortoises on development sites, helping to retain local or regional tortoise resources and potentially contributing to the habitat preservation objective if such sites receive long-term protection in the future.

The *Gopher Tortoise Management Plan* contains a series of measurable objectives and conservation actions which include restocking gopher tortoises to protected, managed, suitable habitats where they no longer occur or where densities are low. A team of public conservation land managers has developed guidance regarding the restocking of gopher tortoises on public conservation lands (see Appendix 12). This team includes representatives from the Florida Department of Environmental Protection Florida Park Service, Florida Department of Agriculture and Consumer Services Florida Forest Service, the five Water Management Districts, Florida Communities Trust, and Florida Fish and Wildlife Conservation Commission. Likewise, some of the future research goals outlined in the Gopher Tortoise Management Plan may require the use of sites that receive displaced tortoises to carry out research projects and consequently be designation of research recipient sites. The criteria for research recipient sites are outlined in Appendix 13 and are intended to provide further clarity as to how the agency will implement conservation actions specified in the Plan.

To receive a FWC recipient site permit, candidate properties must meet site suitability criteria for size, soil, and habitat. Site suitability criteria vary according to the level of conservation value provided by the recipient site.

Landowners who meet the basic criteria in these guidelines are encouraged to contact the FWC Gopher Tortoise Permit Coordinator to schedule a pre-application site visit. A preliminary site visit allows FWC staff to evaluate the suitability of the habitat on proposed site. Staff may provide information on habitat management assistance or other measures that may be undertaken prior to completing an application for a FWC recipient site permit. The pre-application site visit can help identify and address potential issues in advance, so the permit application can be processed more efficiently.

A. Conservation Easements or Other Protection: The conservation value of a permitted project and the required mitigation contribution is determined by the level of protection afforded to the relocated gopher tortoise at the recipient site. Four levels of conservation have been defined:

- **Long-term Protected Recipient Sites**: These privately or publicly owned recipient sites must be protected by a perpetual easement that conforms to the standard format available from FWC (see Appendix 8). Conservation easements that were previously granted by landowners to other regulatory, governmental, or conservation entities may be acceptable to FWC if their conditions and restrictions provide habitat protection and management requirements for gopher tortoises and their habitats that are comparable to those contained within FWC's standard easement. However, those easements would need to be modified to designate FWC as a co-grantee.
- **Recipient Sites for Restocking Public Conservation Lands**: These recipient sites consist of publicly owned lands that are currently managed for conservation and are

either designated as conservation lands by Chapter 253.034, Florida Statutes; purchased for conservation purposes using funds from bonds or other monies dedicated specifically for conservation lands acquisition (e.g., Florida Forever, Preservation 2000, local bond initiatives, etc.); or afforded protection under federal law. These publicly owned lands must provide suitable gopher tortoise habitat and must be actively managed under an approved habitat management plan. The land managing agency and FWC must establish either a Memorandum of Understanding (MOU) or an easement that conforms to the standard format available from FWC. Additionally, existing land leases, covenants, and management plans may need to be amended to provide adequate assurance of management. See Appendix 12 for specific details and requirements for restocking public lands.

- **Short-term Protected Recipient Sites:** These recipient sites have some enforceable protection commitment, but those commitments do not meet the definition of "long-term."
- **Unprotected Recipient Sites**: These recipient sites provide relocated gopher tortoises protection for at least two years.

B. **Size**: Perimeter boundaries of recipient sites should ideally be configured in the form of a block, circle, or similar shape. Uplands are considered contiguous if two or more upland communities occur within a distance of 1,000 feet, and there is no physical obstacle (e.g., paved road open to the public, railroad bed, impenetrable fence, river, lake) to prevent tortoise movement to other upland areas within the recipient site. For administrative purposes, FWC will evaluate and authorize use of up to 1,000 acre portions of recipient sites in phases; however, only a one-time mitigation contribution of $500 will be required for permitting a recipient site.

- **Long-term Protected Recipient Sites:** Recipient sites must contain a minimum of 40 acres of contiguous suitable upland tortoise habitat that meet the criteria for soil and vegetation. Smaller sites in highly developed counties, particularly in southern Florida, will be evaluated on a case-by-case basis, and will be allowed if they are instrumental in retaining the local tortoise resource and can be appropriately managed to perpetuate the relocated population. Sites containing greater than 200 acres of contiguous suitable upland habitat will satisfy the size threshold for *Desirable* criteria and may be eligible for an additional 0.5 tortoise per acre increase in the site evaluation maximum allowable tortoise density (see below).
- **Recipient Sites for Restocking Public Conservation Lands:** Recipient sites must contain a minimum of 40 acres of contiguous suitable upland tortoise habitat that meet the criteria for soil and vegetation. Smaller sites in highly developed counties, particularly in southern Florida, will be evaluated on a case-by-case basis, and will be allowed if they are instrumental in retaining the local tortoise resource and can be appropriately managed to perpetuate the relocated population. Sites containing greater than 200 acres of contiguous suitable upland habitat will satisfy the size threshold for *Desirable* criteria and may be eligible for a 0.5 tortoise per acre increase in the site evaluation maximum allowable tortoise density.
- **Short-term Protected Recipient Sites:** Sites must contain a minimum of 25 acres of contiguous suitable upland tortoise habitat that meet the criteria for soil and vegetation.

- **Unprotected Recipient Sites:** Sites must contain a minimum of 25 acres of contiguous suitable upland tortoise habitat that meet the criteria for soil and vegetation.

C. **Soils**: Soils that meet *acceptable* criteria are moderately well-drained to excessively drained, with an average depth to the seasonal high water table (DWT) value of 45 centimeters (1.5 feet) or greater. For sites in flatwoods, land cover maps should be overlain on soils maps to help differentiate hydric areas from more mesic or xeric areas; site visits by FWC may also be required. Poorly drained soils with an average depth to the seasonal high water table (DWT) greater than 31 centimeters (one foot) may meet the *Acceptable* criteria, provided that the proposed site contains augmentation features or is drained by ditches, etc. In these select cases, there must be evidence of past or current use by tortoises. Additionally, stocking densities cannot exceed two per acre on these soil types. Long-term protected recipient sites with an average depth to the seasonal high (DWT) of 130 centimeters (4.3 feet) or greater meet the *Desirable* criteria threshold and may be eligible for a 0.5 tortoise per acre increase in the site evaluation maximum allowable tortoise density. Site-specific soil information can be obtained by referring to the Natural Resources Conservation Service (NRCS) Web Soil Survey (www.soils.usda.gov) for the appropriate county.

D. **Vegetation Features**: Sites with *Acceptable* habitat features are those that contain both of the following: average herbaceous cover of at least 30% and average canopy cover of 60% or less. Woody vegetation should not comprise more than an average of 20% of the herbaceous ground cover. Long-term protected recipient sites and public conservation lands recipient sites for restocking with average herbaceous cover greater than 50% and average canopy cover less than 40% meet the *Desirable* criteria threshold and may be eligible for a 0.5 tortoise per acre increase in the site evaluation maximum allowable tortoise density. Herbaceous cover (low-growing, soft-stemmed plants) should include broadleaf grasses and, preferably, grass-like asters (sunflower family) and legumes (bean family). Vegetation survey methods are outlined in Appendix 7.

E. **Enhanced Conservation Value**: Proposed long-term protected recipient sites and recipient sites for restocking public conservation lands may be awarded a 0.5 tortoise per acre increase in the site evaluation maximum allowable tortoise density if FWC determines that the site has enhanced conservation value by any of the following: 1) adjacency to existing public or private conservation lands that together provide >200 acres of contiguous suitable upland gopher tortoise habitat that satisfy the threshold for *Desirable* criteria; 2) the site boundaries are 100% within a designated Strategic Habitat Conservation Area; or 3) at least 75% of the recipient site is vegetated with one or more of the following native upland plant communities: sandhill, scrubby flatwoods, or dry prairies (Table 2).

F. **Baseline Densities**: Survey techniques to determine the existing (baseline) tortoise population density are provided in Appendix 4. Supporting information should include potential reasons for low tortoise densities (e.g., past harvest; previous, but now rectified, inadequate habitat management). The burrow survey used to generate this estimate must be performed no more than 90 days before the date the permit application is submitted. A map showing the site boundaries, transect locations, locations of all documented tortoise

burrows, and corresponding tortoise densities will serve as the baseline for future monitoring efforts.

G. **Site Evaluation Stocking Rate**: The site evaluation stocking rate is defined as the maximum allowable gopher tortoise density as determined by the scoring process depicted in Table 2, *Acceptable and Desirable Criteria Thresholds for Recipient Site Characteristics*. A site that meets all three *Acceptable* criteria will be assigned an evaluation stocking rate of two tortoises per acre. Evaluation stocking rates for long-term protected recipient sites recipient sites for restocking public conservation lands may increase in increments of 0.5 individual per acre for each *Desirable* criterion that is met, up to a maximum of two additional individuals (four per acre total).

H. **Determination of Final Stocking Rate**: The final stocking rate for a recipient site equals the site evaluation stocking rate minus the baseline density, i.e., final stocking rate = (site evaluation stocking rate) - (baseline density). For all calculations involving stocking rate, consider only tortoises greater than or equal to 130 mm (5 inches) in carapace length. Eggs and juvenile tortoises less than 130 mm are not considered in these calculations because of their low survivorship and minimal effect on the recipient site forage base. Recipient sites for restocking public conservation lands shall be stocked at no more than 50% of the site evaluation stocking rate

When assigning the baseline density and calculating the final stocking rates, applicants submitting permit requests for sites that have been previously approved by FWC and used as a recipient site for tortoise standard relocation and/or incidental take permits shall include the number of resident tortoises reported for the site when it was originally approved and all tortoises released at the site under previously issued FWC permits (or authorized for release when no post-relocation reports have been sent to FWC).

I. **Enclosure Methods**: Restraint of tortoises inside an enclosure at the recipient site for a minimum period of six months is required for all relocations as a condition of the relocation permit. This process is called "soft release." Recent studies have indicated that site fidelity is enhanced by temporarily enclosing tortoises. Because there is still insufficient scientific knowledge regarding tortoise carrying capacity, tortoise response to relocation, post-relocation site fidelity, social interactions between relocated and resident tortoises, and possible disease transmission through relocations, FWC is establishing experimental guidelines at this time to initiate relocation within temporary enclosures and to evaluate the effects. As additional information becomes available, these guidelines may be modified to ensure that they achieve the management plan objectives. The following guidelines include enclosure methods and procedures proven to be effective.
    - All tortoises relocated to any recipient site (including unprotected recipient sites) shall be released into a temporary enclosure as described below and retained within the enclosure for a period of not less than six months and no more than twelve months. However, there is no maximum enclosure time limit for recipient sites that are permanently fenced in their entirety and that are stocked at a density equal to the approved final stocking density for the site.
    - Applicants with special circumstances may apply to be released from this

requirement. Special circumstances include the following: recipient sites with natural or artificial boundaries to restrain most tortoises (e.g., islands, coastlines, major rivers or large lakes, existing fencing that prevents the passage of all tortoises released at the site).

- Tortoises shall be released into temporary fenced enclosures at no more than 1.5 times the approved overall final stocking density for the site. However, the maximum number of gopher tortoises approved by FWC for release into the entire recipient site parcel shall not be exceeded. Enclosures within recipient sites with varying approved stocking rates may be stocked at 1.5 times the approved density for the area in which the enclosure is located. If an enclosure encompasses an area with varying approved stocking rates, then the enclosure's approved gopher tortoise density will be proportional to the number of acres in each approved stocking rate area. For example, if a 40-acre recipient site initially containing no gopher tortoises includes a 15-acre enclosure encompassing five acres that are approved for a final density of two gopher tortoises per acre and ten acres that are approved for a final density of three gopher tortoises per acre, then the enclosure can receive up to 60 gopher tortoises 1.5 [(5 x 2) + (10 x 3)].
- Temporary enclosures may be of any material that prevents the passage of tortoises of all sizes released to the site. Recommended and cost-effective materials include Belton Industries #935 pre-assembled silt fence (a more durable type of silt fence; see Glossary for purchasing information) and hay or pine straw bales.
- With the exception of hay or pine straw bales, temporary fencing must be buried at least eight inches into the ground to prevent tortoises pushing beneath the enclosure and must be at least two feet high and of sufficient robustness to prevent tortoises pushing or climbing over.
- Temporary fencing must be regularly monitored and maintained to repair damage and maintain the integrity of the temporary enclosure.
- Tortoises observed above ground and tortoise burrow numbers and activity status within the temporary enclosures shall be monitored weekly for the first month and monthly thereafter to document any problems with relocated tortoises (e.g., illness, mortality, evidence of human poaching, emigration). The FWC permitting office must be contacted if decreases in tortoise numbers are documented.

J. **Management Plan:** Gopher tortoise habitat requires active management. A detailed management plan mirroring the length of protection is a vital part of gopher tortoise conservation efforts on all FWC-permitted recipient sites. Management plan requirements are outlined in Appendix 3.

Table 2. *Acceptable* and *Desirable* Criteria Thresholds for Recipient Sites

SITE CHARACTERISTIC	ACCEPTABLE CRITERIA	DESIRABLE CRITERIA
Size	> 40 acres	> 200 acres
Soil	> 45 cm DWT, with land cover verification for flatwoods sites >31 cm (select cases)	>130 cm DWT
Habitat	> 30% herb cover < 60% canopy cover	>50% herb cover <40% canopy cover
Enhanced Conservation Value		Adjacent to protected land, or in Strategic Habitat Conservation Area, or ≥75% native upland community (maximum of 0.5 per acre)
Maximum Allowable Gopher Tortoise Density	Two per acre (requires all above criteria be satisfied)	0.5 per acre for each site characteristic that is satisfied, up to a maximum of two additional (four per acre maximum)

Temporary Exclusion Permit for Major Linear Utility Corridors

This type of on-site relocation conservation permit is specifically reserved for the installation or maintenance of major linear utility transmission lines (e.g., major natural gas or electric transmission lines). This permit applies to situations that require the temporary exclusion of tortoises from the utility construction corridor and where habitats within the corridor will be restored to provide suitable habitat for tortoises following completion of the utility installation. These permits require the temporary installation of filter fabric (silt fencing) or other comparable fencing (buried at least eight inches into the ground) along the outer edge of the construction right-of-way to block tortoise re-entry into the corridor during construction activities. Such fencing is only required along those portions of the construction corridor where tortoises are documented and are to be relocated from the construction area. The FWC will also consider other proposed options of keeping gopher tortoises out of harm's way in the immediate area of construction on these types of projects.

Temporary exclusion permits authorize the capture of tortoises from within the utility corridor right-of-way project area and their immediate release on the other side of the temporary fencing into adjacent suitable habitat. Tortoises must be released outside the project corridor in close proximity relative to where each tortoise was captured. The gopher tortoise density after

relocation within the designated recipient area shall not exceed either three tortoises per acre, or 1.5 times the existing gopher tortoise density within the recipient area, whichever is greater. This does not authorize placement of tortoises on properties not under control of the permittee. The permittee must obtain written approval from the adjacent landowner granting permission to the permittee to release the tortoises on the landowner's property. The temporary fencing must be removed following completion of the utility project and after the habitat has been restored. Tortoises can then naturally reoccupy restored habitat within the utility corridor.

Gopher tortoises may be released into an on-site enclosure in conformance with the FWC enclosure requirements. Enclosures shall not be located on the opposite side of barriers which deter tortoises from returning to the location where they were originally captured. Enclosure fencing shall be removed before expiration of the permitted maximum temporary exclusion time period or upon project completion, whichever comes first. The final gopher tortoise density within the enclosure shall not exceed three gopher tortoises per acre.

The application information requirements for this permit are the same as for conservation permits with on-site relocation of the affected tortoises. This permit is not intended, and will not be issued, for the installation of local utility service lines that are being installed as a precursor to development or to facilitate the development of the adjacent or surrounding area (e.g., infrastructure for specific development projects, planned subdivisions, or multiple projects or subdivisions). Permit applications for those projects must address impacts to all tortoises and tortoise burrows contained within the entire planned project development boundaries. For major linear utility corridor projects that include the construction of permanent structures used to service or maintain the installed utilities (e.g., gas compressor stations, water wells, pumping stations) do not qualify for a Temporary Exclusion permit and must be permitted separately to permanently relocate gopher tortoises.

Burrow or Structure Protection Permit

Burrow or Structure Protection permits are available when the integrity or utility of an existing structure is jeopardized by one or two burrows and therefore poses a public safety concern (e.g., burrow under a propane tank), or if the safety of the resident tortoise is compromised (e.g., burrows in a grass parking lot, dirt driveway, etc.). Application requirements and tortoise capture and handling procedures are similar to those for 10 or Fewer Burrows permits (See Appendix 11); however, tortoises relocated under a Burrow or Structure Protection permit shall only be relocated on-site. This type of permit may only be issued once a year for a contiguous property under the same ownership. As part of the application process, the applicant must complete the required online training (available at MyFWC.com/GopherTortoise) or the approved equivalent written training, unless the relocation activities are conducted by an Authorized Gopher Tortoise Agent.

In most cases, it is best to live with tortoises and their burrows. Relocations are stressful for gopher tortoises. The process takes time, money, and physical labor. Typical activities associated with residential lawn and landscape maintenance do not require a permit, provided the activities do not collapse gopher tortoise burrows or harm gopher tortoises. Activities that

require a permit are listed in Section II, Determining If a Permit Is Required. Visit MyFWC.com/GopherTortoise or contact FWC for more information on living with gopher tortoises.

On-Site Relocation under the Burrow or Structure Protection permit

This permit authorizes landowners or other individuals who have completed FWC online training to capture gopher tortoises (via bucket trapping, hand-shovel excavation, or live trapping) and to relocate tortoises to an on-site location within the property boundaries specified in the application. [**Note:** Only an authorized agent whose permit authorizes the supervision of burrow excavations using mechanical equipment may capture or attempt to capture gopher tortoises using a backhoe.] On-site recipient area criteria follow the same criteria as the 10 or Fewer Burrows permits and can be found in Appendix 11. Landowners may obtain the assistance of an authorized gopher tortoise agent for on-site relocations, as described under *Authorized Gopher Tortoise Agent Permit* above.

Release of tortoises must be accomplished in such a way as to preclude tortoises from returning to their burrows. Penning is not allowed under the Burrow or Structure Protection permit. These permits may require permanent or temporary fencing in an appropriate configuration to exclude tortoises from returning to the compromised burrow. Collapsing or filling those burrows is required upon capture and relocation of the resident tortoises. If fencing is necessary, a brief explanation should be provided in the application addressing why and what methods will be used to restrict tortoise access.

Tortoises cannot be relocated off-site under a Burrow or Structure Protection permit. If adequate suitable gopher tortoise habitat is not available on-site and tortoises must be moved off-site, applicants may qualify for a 10 or Fewer Burrows permit.

Emergency Take without Relocation Permit

This permit will be issued only under limited and specific circumstances, in cases where there is an immediate danger to the public's health and/or safety or in direct response to an official declaration of a state of emergency by the Governor of Florida or a local governmental entity. Applications submitted for this permit must include all information that is required from any other applicant seeking a conservation permit, along with a copy of the official declaration of a state of emergency. This permit process may be handled after the fact or at least after construction activities have already started. It is preferred that contact with FWC should be made as soon as possible to minimize adverse impacts to gopher tortoises and their burrows.

This section does not cover what should happen when a local emergency requiring immediate action to protect human safety and welfare, property, and wildlife and its habitat occurs. Because it is not possible to anticipate every circumstance (*e.g.,* a local oil spill along a highway that contaminates soil adjacent to a gopher tortoise burrow), the best solution would be for anyone encountering an emergency to contact FWC as soon as possible and to request assistance in determining the best course of action to take.

Disturbed Site Permit

Criteria for Relocation of Gopher Tortoises from Disturbed Sites

The Disturbed Site permit may be required in situations where premature disturbance to the vegetation or ground has occurred before gopher tortoise burrow surveys are complete or before gopher tortoise capture and relocation activities have been completed. This permit provides an option for mitigation and relocation of tortoises within disturbed portions of the project area. These permits are not punitive and may or may not be issued in association with FWC law enforcement investigations, but will not be issued until all associated FWC law enforcement investigations have been completed. Survey, capture, and relocation activities must be conducted by an Authorized Gopher Tortoise Agent.

Disturbed Site permits are issued when ***all four criteria*** below are met:

- Evidence of site disturbance to the ground or vegetation must be present on the site and within suitable gopher tortoise habitat
- Site disturbance either prevents:
    - Complete and accurate tortoise burrow surveys from being conducted (15% and 100% surveys as described in FWC guidelines), or;
    - FWC staff from conducting on-site inspections to verify 15% or 100% survey results prior to site disturbance commencing.
- Any one of the following applies:
    - Impact is to any part of the project area with documentation of gopher tortoises burrows on site (e.g., a past, valid, tortoise burrow survey of the disturbed area exists, showing burrows were present; physical evidence that burrows were present; or photographs), or;
    - Evidence of tortoise burrows is visible within the disturbed area, on the property where disturbance occurred, or is within close proximity on adjacent properties, or;
    - Evidence of impact to any tortoise or tortoise burrow.
- Disturbance to the project site has occurred within the past 18 months.

The criteria above may be met before a tortoise permit application has been received by FWC, during the permit application process, or after a permit has been issued, depending on when disturbance activities occur.

If the project site meets all criteria before 100% burrow survey reports and maps are submitted to FWC, or before the 72-hour waiting period after which such reports have been received by FWC, or before the completion of gopher tortoise capture and relocation activities, then active relocation permits or permit applications will be revoked or denied so that a Disturbed Site permit application may be submitted.

In cases where only a portion of the project site is prematurely disturbed and all relocation activities will not be covered under a Disturbed Site permit, another relocation permit (e.g.,

Conservation permit) will be issued for the remainder of the property. This only applies when discrete and contiguous, undisturbed areas of the project site can be identified.

Disturbed sites require different burrow survey protocols for estimating numbers of tortoises present and calculating mitigation contributions. Refer to Appendix 4 for details.

Mitigation Contributions, Refunds, and Recipient Site Requirements

All mitigation contributions must be submitted before Disturbed Site permits are issued. Mitigation contributions for Disturbed Sites are higher than for other relocation permits to mitigate for tortoises which may be buried underground or have left the project site in response to disturbance activities and cannot be relocated. FWC may provide a refund for each tortoise successfully captured and relocated as described for each permit type. Refunds for mitigation are not provided if no tortoises are relocated.

Areas within the project site that were not disturbed will be covered in a separate conservation or temporary exclusion permit. Reduced mitigation for relocation permits for the first five tortoises (10 burrows) will only be allotted for one of the two permits associated with the project. The disturbed site permit and other associated permit will be applied for concurrently.

All project sites qualify for one of three disturbed site permit types: "10 or Fewer Burrows," "Conservation," or "Temporary Exclusion." The entire project site is considered when determining the permit category, including any undisturbed areas (which are permitted separately). For example, a project site with 10 burrows inside disturbed areas and three burrows outside disturbed area (i.e., a total of 13 burrows) would qualify for a Disturbed Site Conservation permit. In this case, a Disturbed Site Conservation permit would authorize gopher tortoise relocation for the disturbed areas and a separate Conservation permit would authorize gopher tortoise relocation for the undisturbed portion of the project site. Temporary Exclusion Disturbed Site permits only cover the disturbed portion of the project site.

Disturbed Site 10 or Fewer Burrows Permit

The mitigation contribution for this permit follows the standard 10 or Fewer Burrows permit (outlined in Table 1.) with an additional $500 required for each tortoise estimated within the disturbed area. FWC may provide a refund of $500 for each tortoise successfully captured and relocated. In instances where additional tortoises greater than the original permitted number are found, a permit amendment must be requested (with additional mitigation) and received prior to continuing relocation activities.

Disturbed Site Conservation Permit

The mitigation contribution for this permit follows that of the standard Conservation permit (outlined in Table 1.) with an additional $1,500 required for each tortoise estimated within the disturbed area. FWC may provide a refund of $1,500 for each tortoise successfully captured and relocated. In instances where additional tortoises are captured greater than the original permitted

number, a permit amendment must be requested (with additional mitigation) and received before additional tortoises are relocated.

Disturbed Site Temporary Exclusion Permit for Major Linear Utility Corridors

The mitigation contribution for this permit follows that of the Temporary Exclusion permit for exclusions of 4-6 months (outlined in Table 1.), with an additional $500 required for each tortoise estimated within the disturbed area. FWC may provide a refund of $500 for each tortoise successfully captured and relocated. In instances where additional tortoises are captured greater than the original permitted number, a permit amendment must be requested (with additional mitigation) and received before additional tortoises are relocated.

Due Process for Gopher Tortoise Permit Applicants

The FWC adheres to the time requirements specified in Chapter 120, Florida Statutes, for processing permit applications. Upon submittal of an application, FWC staff will respond within 30 days requesting any additional information from the applicant. Upon receipt of all information necessary to complete an application, FWC staff will prepare and issue a permit within 90 days (but attempt to accomplish this within 45 days). Any person has a right to challenge the action of FWC on a given permit application. Each permittee is provided an "Election of Rights" form with the issued permit that conveys instructions for filing an informal or a formal hearing request.

Any non-permitted person who believes that their substantial interests would be affected by the action taken by FWC on a gopher tortoise permit application may also petition the agency for a hearing. For information on how to submit such a request, please contact: The Office of General Counsel, Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, Florida 32399-1600.

Deviations from permitting requirements shall be granted only when the person subject to the requirements demonstrates a substantial hardship not intended by these guidelines and which violates principles of fairness. The person must also demonstrate the goals of the underlying Gopher Tortoise Management Plan will be or have been achieved by other means. For purposes of considering granting a deviation, "substantial hardship" means a demonstrated economic, technological, legal, or other type of hardship to the person requesting the deviation. For purposes of considering granting a deviation, "principles of fairness" are violated when the literal application of rules or guidelines affects a particular person in a manner significantly different from the way it affects other similarly situated persons.

V. HANDLING OF COMMENSAL SPECIES DURING RELOCATIONS

As the keystone species of Florida's uplands, the gopher tortoise provides refuge to some 350-400 other species. These commensal species may be intimately tied to tortoise burrows or may be occasional visitors, but the underground microhabitats serve as multi-purpose retreats that are

used for feeding, resting, reproduction, and protection from temperature extremes, moisture loss, and predators. Threats to commensal species are similar in nature to those faced by the gopher tortoise and have been addressed in the Gopher Tortoise Management Plan. One of the objectives outlined in the Management Plan is to promote the responsible, humane relocation of burrow commensals encountered during relocation efforts. An added benefit is the likely increase in biodiversity when commensals are released with the tortoises on recipient sites. The guidelines in Appendix 9 have been created to provide guidance for authorized agents who capture commensal species during gopher tortoise relocations. Emphasis is placed on four listed species, with the understanding that these species have habitat needs that generally go beyond those of the gopher tortoise and will, therefore, need to be considered during relocations.

APPENDICES

Appendix 1. Rules and Policies Protecting Gopher Tortoises and Their Burrows

RULE:

68A-27.003 Designation of Endangered Species; Prohibitions.

(1)(d)3. The gopher tortoise (*Gopherus polyphemus*) is hereby declared to be threatened, and shall be afforded the protective provisions specified in this subsection. No person shall take, attempt to take, pursue, hunt, harass, capture, possess, sell or transport any gopher tortoise or parts thereof or their eggs, or molest, damage, or destroy gopher tortoise burrows, except as authorized by Commission permit or when complying with Commission approved guidelines for specific actions which may impact gopher tortoises and their burrows. A gopher tortoise burrow is a tunnel with a cross-section that closely approximates the shape of a gopher tortoise. Permits will be issued based upon whether issuance would further management plan goals and objectives.

Gopher Tortoise Enforcement Policy

Florida Fish and Wildlife Conservation Commission
620 South Meridian Street, Tallahassee, FL 32399

POLICY☒; POSITION☐; GUIDELINE☐.

TITLE: **Gopher Tortoise enforcement**

APPROVAL AUTHORITY: OFFICE OF EXECUTIVE DIRECTOR

DATE:

GENERAL POLICY STATEMENT

Agricultural, Silvicultrual, and Wildlife management activities

This policy is for the purpose of enforcement of Chapter 68A-27 relating to Gopher tortoises with respect to agricultural and silvicultural activities or activities intended to improve native wildlife habitat. The adoption of the Gopher Tortoise Burrow rule does not expand pre-existing gopher tortoise regulatory prohibitions or change existing policy or practice with respect to agricultural and silvicultural activities.

An illegal take of a gopher tortoise burrow includes, but is not limited to, damaging, collapsing or covering a gopher tortoise burrow from land clearing, bulldozing, grading, paving, or building construction associated with land development, without a permit issued under Chapter 68A, Florida Administrative Code.

Gopher tortoise or gopher tortoise burrow permits are not required to conduct agricultural activities, silvicultural activities, or activities intended to improve native wildlife habitat. Such activities include, but are not limited to, tilling, planting, mowing, harvesting, prescribed burning, mowing, disking, roller-chopping, and tree-cutting.

Burrow prohibition

The prohibitions related to gopher tortoise burrows will not be applied when a landowner can demonstrate that those burrows are no longer used by gopher tortoises by conducting a gopher tortoise survey in accordance with FWC guidelines.

As stated in Chapter 68A-27 "gopher tortoise burrow" is defined as a tunnel in the ground with a cross-section that closely approximates the shape of a gopher tortoise.

Solely for the purpose of this policy, the presence of one or more of the following characteristics indicates that gopher tortoises or gopher tortoise burrows may be present:

(a) Ground surrounding a burrow entrance shows evidence of gopher tortoise activity including but not limited to presence of a gopher tortoise; gopher tortoise eggs or egg shell fragments; impressions from the bottom shell of the tortoise;

3/6/2008 1 of 2

foot-prints or tracks left by tortoises; scat; obvious feeding trails radiating out and extending into surrounding vegetation);
(b) Sand mound from the burrow excavation apparent at the burrow entrance;
(c) Located in well-drained to moderately well-drained, sandy soils;
(d) Located in sandhill, scrub, coastal dunes, flatwoods, dry prairie, dry hammock communities, or any disturbed version of these plant communities (such as, but not limited to, pastures, old fields, yards, power line corridors, roadsides);
(e) Other burrows with the shape defined above, and with one or more of the characteristics described in (a)-(d) above, located on the site or in proximity on adjacent property.

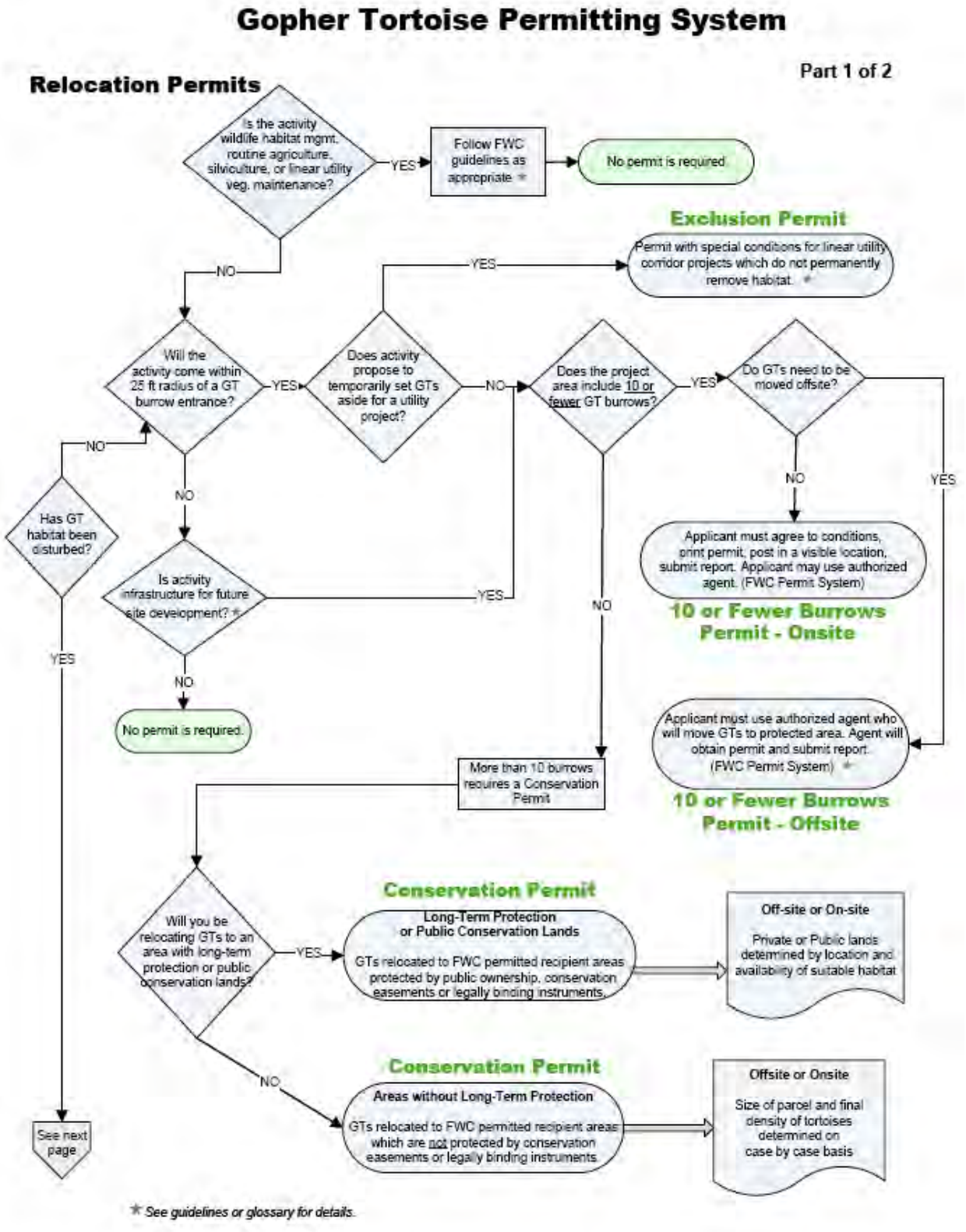
This policy will remain in effect until replaced with policy or rule.

Signature on file

Kenneth Haddad, Executive Director

3/6/08
date

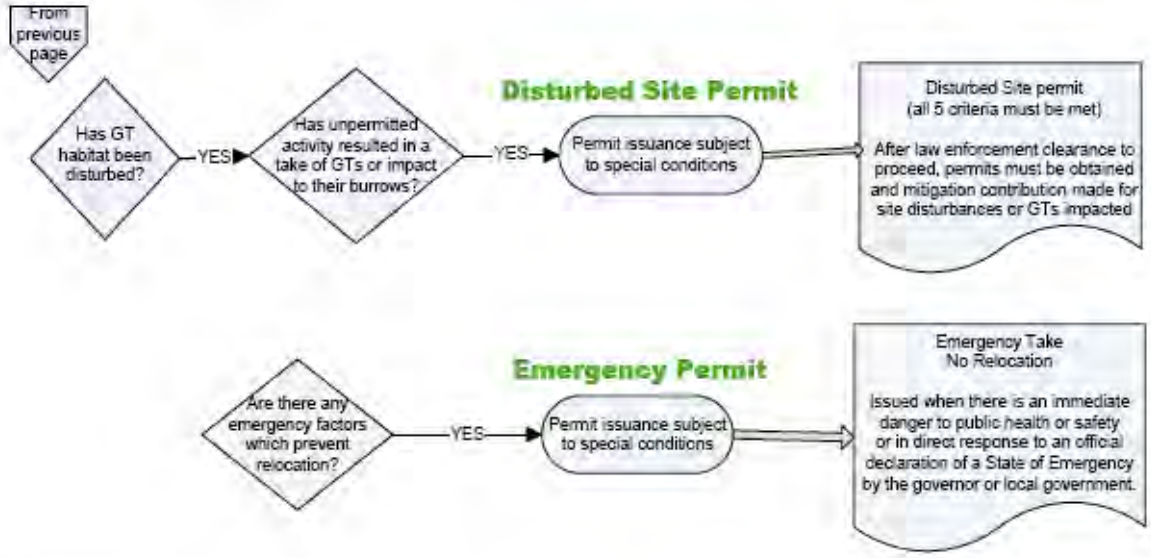
Appendix 2. FWC Gopher Tortoise Permitting System Process Map



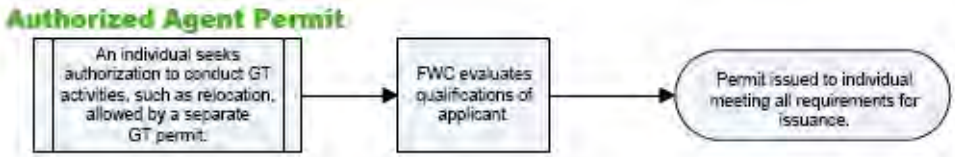
Gopher Tortoise Permitting System

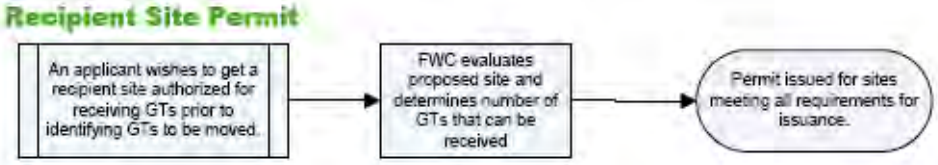
Part 2 of 2

Special Permits



Authorizing Permits





February 2010

Appendix 3. Information Needed for Relocation Permit Applications and Recipient Site Permit Applications

Although each permit type has additional specific information that will be required on application forms either online or in hard copy, this appendix outlines the primary information that FWC staff will need to process applications for relocation permits and recipient site permits.

General information needed for relocation permits and recipient site permits:

1. Name and contact information of the authorized agent that will be performing the gopher tortoise activities. Mailing and physical addresses are needed, as well as phone and facsimile numbers and e-mail addresses.

2. Certification: Applicant must certify by signature that the information and supporting documents submitted are complete and accurate.

3. Name and all contact information for the property owner (for development sites, also provide the developer's name and contact information if different from that of the property owner).

4. Location map and directions to the site**:** Must provide sufficient detail (e.g., identify all adjacent roads, water bodies, and other major physical landmarks) to allow vehicular access for FWC inspection. All maps submitted during the application process should be in an 8.5x11-inch or 8.5x14-inch in format.

5. Most current digital orthoquad or equivalent one-meter resolution aerial photograph of the site**:** Scale of 1 inch = 800 feet or less.

6. Parcel identification**:** Provide latitude/longitude coordinates; section/township/range; parcel identification number (PID), which can be obtained from the county property appraiser's office; and deed showing proof of ownership. For development sites, also provide the name of the project; for recipient sites, provide the name of the property (if applicable). For temporary exclusion permit applications for major utility corridors, PIDs are not required, and latitude/longitude coordinates must be provided for only the beginning and end points of the utility corridor.

7. Habitat types**:** Provide a table listing existing land uses (i.e., vegetation community types) by acres (along with corresponding land cover maps) for the entire project and for all potential tortoise habitats to be impacted. For temporary exclusion permit applications, completion of the land use table is optional, but the land cover map must be provided. For recipient site applications, provide this habitat information (and maps) for the entire property and for the specific phase or parcel within the property proposed for relocation/restocking. For each community type on recipient sites, describe the condition, characteristics, land use history, and other factors that may influence tortoise habitat quality and/or manageability. Accepted sources for land use classifications are as follows:

- Florida Department of Transportation (DOT)–Florida Land Use, Cover and Forms Classification System (FLUCFCS); or
-
- FWC Center for Biogeographic Spatial Assessment-LANDSAT (i.e., satellite imagery).

8. Soils**:** In tabular form, provide a list of soil types, average depth to the seasonal high water table (DWT), and acreage for each soil found within the entire project and potential tortoise habitat to be impacted (development sites) and within the specific phase or parcel of the property proposed as a recipient site; also provide corresponding soils maps. The accepted source for soil type classification is the Natural Resources Conservation Service (NRCS) Web Soil Survey database that can be accessed at: www.soils.usda.gov. For temporary exclusion permit applications, completion of the soils table is optional, but soils maps must be provided.

9. Current gopher tortoise population size and density (tortoises per acre)**:** Provide a map depicting current locations of tortoise burrows and indicate burrow activity (potentially occupied vs. abandoned, see Glossary and Appendix 4). Burrow survey methods are outlined in Appendix 4. Show all transects, as well as observed burrows and their activity status, overlain on the map of potential tortoise habitat.

Additional information required for relocation permits:

1. Provide the proposed start date for the development.

2. Indicate whether tortoises are proposed to be relocated on-site or off-site, and provide the necessary location and contact information for the designated off-site recipient area, if known. You may use the online recipient site locator mapping tool (MyFWC.com/GopherTortoise) to find available recipient sites or contact FWC. All applicants must provide proof of reserved capacity at a recipient site(s) to accommodate all gopher tortoises to be relocated from the entire permitted donor site, with the reservations maintained for the duration of the issued permit.

3. If the relocation is to occur on-site, provide all the necessary information needed for recipient sites (size of on-site preserve, location within the project, habitat types, soils, proposed stocking density, etc.). On-site recipient areas may have site-specific requirements imposed as part of the permit to reduce potential harm to tortoises. For temporary exclusion permit applications, completion of the habitat types/land use table and the soils table are not required, but the land use and soils maps must be provided.

4. For temporary exclusion permits (major utility corridors), indicate the location of the exclusion fencing on the habitat map.

Additional information required for recipient site permits:

1. Calculated stocking rate: As described in the criteria for recipient sites, provide both the number of additional tortoises requested for release on the site and the final, post-relocation tortoise density that would result. To calculate current tortoise population size, baseline density, and stocking rate, consider only tortoises greater than or equal to 130 mm (5 inches) in carapace

length. Eggs and juvenile tortoises are not considered in these calculations because of their low survivorship and minimal effect on the recipient site forage base.

2. Enclosures: Requirements for using enclosures to temporarily contain the tortoises within the recipient area are described in the guidelines under Recipient Site permits. Provide information on enclosure(s) size, location, enclosure materials, and proposed tortoise density within enclosures (noting that maximum density within enclosures cannot exceed 1.5 times the final stocking density for the recipient site). Show proposed enclosure locations on a map of the site.

3. Draft conservation easement: Should conform to the standard format available from FWC (as found in Appendix 8); any changes to the standard must be provided with all proposed additions underlined and all proposed deletions indicated by a strike-through. Should include a survey and legal description, title search/commitment, and draft site management plan (described below).

4. Site management plan: Site management plans shall contain the following: both qualitative and quantitative baseline information that describes existing conditions; goals of future management actions; description of invasive exotic infestations and proposed control program; list and timeline for implementing management activities; quantifiable desired future conditions for canopy cover and herbaceous ground cover; schedule and methods for conducting tortoise population monitoring and habitat monitoring; remedial actions if proposed activities do not achieve desired results; estimate of annual management budget for the site. Below is a list of the major habitat management elements that are required as part of the application package.

    - *Base map*: Indicate property boundaries, land use cover types, management units, and baseline density transect locations with corresponding density values.
    - *Tree canopy management activities/timelines:* Describe practices and treatment intervals that will be used to maintain canopy cover at 60% or less.
    - *Ground cover management activities/timelines:* Describe practices and treatment intervals that will be used to maintain herbaceous ground cover at 30% or more; if applicable, include treatment practices for problematic exotic plants. Refer to Florida Exotic Pest Plant Council (www.fleppc.org) for a list of species.
    - *Compatibility of proposed land uses:* Describe what types of land uses are proposed for the site and how activities related to these land uses would be conducted to foster the open canopy and herbaceous ground cover noted above, while not adversely affecting the ability of gopher tortoises to excavate and maintain their burrows or to otherwise inhabit and utilize the site.
    - *Other habitat enhancement proposed:* Describe proactive measures that could enhance tortoise site fidelity, e.g., berms, spoil piles, forage plantings, fencing.
    - *Tortoise population and habitat monitoring*: Recipient site operators are required to submit a summary of the habitat management conducted and the results of habitat monitoring and tortoise density surveys in a report to FWC every three years; guidelines regarding survey methods, and a template for the report, will be provided.
    - *Financial assurance of management*: The purpose of the financial assurance instrument is to ensure that adequate funds will be generated and provided for the long-term management of gopher tortoise habitat within the recipient site. When FWC issues a permit for activities that impact species, the permittee may be required, as part of the

mitigation, to protect property and habitat. Typically, the permit will require permittees or their successors to actively manage the property in a way that will enhance or maintain the property.

The applicant must provide FWC with information about which instrument will be used by the permittee to ensure that funding will be available for the management of the mitigation property for the duration specified in the permit. Below are examples of commonly used assurance options:

- trust agreement
- deposit of cash or cash equivalent into an escrow account
- performance bond
- irrevocable letter of credit
- certificate of professional liability insurance
- general appropriation or allocation approved by a public governing body (e.g., Florida Legislature) for habitat management (public conservation lands only)

.

Each of these options provides different levels of assurance to FWC and relative burden on the permittee. Other forms of financial assurance of management may not be well-suited for ensuring adequate funding of perpetual management (e.g., audited financial statement), but may still be appropriate as an interim guarantee in conjunction with another option (suitable only six months maximum from permit issuance).

If a recipient site applicant elects to use a trust agreement or escrow account option to satisfy the financial assurance requirement, either of the options described below will be considered by FWC.

1) Establish a habitat management fund endowment that is fully funded when the recipient site is established. The per-acre endowment required for recipient sites would be determined on a case-by-case basis and based on the annual cost per-acre required to manage the site (e.g., a 200-acre site requiring $20/acre per year for management would require an endowment of $500/acre, or $100,000 total). The endowment would be maintained within an interest-bearing account that generates 4% per year. The interest generated by the account would be used to conduct the required habitat management; the principal is not spent.

2) Establish a base endowment initially, with additional funds added to that endowment as each relocated gopher tortoise is received at the recipient site. The base endowment should at least be equal to the amount of money required to implement one complete cycle of habitat management within the permitted phase(s) of the recipient site (e.g., burn or roller chop the permitted recipient site). Additional funds must be added incrementally to the base endowment, as each relocated gopher tortoise is received at the recipient site, so that the habitat management endowment is fully funded by the time all gopher tortoises that have been authorized for relocation to the recipient site have been received. The specific

dollar amount that must be added to the endowment for each relocated gopher tortoise depends on a number of factors, such as:

- the dollar amount needed to fund the total habitat management endowment;
- the number of gopher tortoises authorized for relocation to the recipient site; and,
- whether only interest generated by the financial assurance account will be used to fund ongoing habitat management, or if additional deposited principal funds will be used to fund ongoing habitat management.

Appendix 4. Methods for Burrow Surveys on Development (Donor) and Recipient Sites

Development (donor) Site Surveys

A burrow survey covering a minimum of 15% of the potential gopher tortoise habitat to be impacted by development activities (including staging areas for heavy equipment) is required in order to apply for a relocation permit (10 or Fewer Burrows permits require a 100% survey up-front, see Appendix 11). These surveys must take place no more than 90 days prior to submitting an application. Because gopher tortoises and their burrows are protected from development activities by Florida law, regulatory compliance requires a comprehensive, 100% burrow survey of all potential tortoise habitat proposed for development. These 100% surveys must be conducted no more than 90 days prior to, and no fewer than 72 hours before (excluding weekends and holidays) commencing gopher tortoise capture and relocation activities. To effectively locate all potentially occupied tortoise burrows and provide FWC staff the opportunity to check such surveys, 100% surveys and the burrow location map must be received by FWC at least seventy-two (72) hours (excluding weekends and holidays) before gopher tortoise capture and relocation activities begin. All gopher tortoise burrows must be marked with flagging tape. (See details presented below for burrow marking and survey methodology.) Site preparation for development (such as land clearing) may commence on the project site, or for phases of the project site, for which gopher tortoise capture and relocation activities have been completed (see Site Preparation Activities for Development, in Section II, for details). Site preparation which occurs prematurely may require issuance of a Disturbed Site permit (see p. 28).

Recipient Site Surveys

A minimum of 15% of potential gopher tortoise habitat must be surveyed on recipient sites that are proposed to receive relocated tortoises. This survey must be designed to assess all soil types and vegetative communities that are potential gopher tortoise habitat. The primary purpose of the recipient site survey is to obtain a density estimate of existing number of gopher tortoises per acre so that a biologically appropriate determination can be made regarding the number of relocated tortoises that can be added to the site. This value is the baseline density. The baseline density is subtracted from the maximum allowable gopher tortoise density (see Table 2), and the result is the final stocking rate for that particular recipient site.

All surveys completed by authorized agents are subject to field verification by FWC. If FWC determines that the submitted survey results provide an inaccurate estimation of the resident gopher tortoise population, either additional surveys or a re-survey may be required. If the number of gopher tortoise burrows identified on site exceeds the number authorized for capture and relocation under the existing gopher tortoise permit, the permittee must apply for an amendment and obtain an amended permit for the additional burrows from FWC before the initiating any gopher tortoise capture and relocation activities for the additional burrows.

Documentation and reporting results from development and recipient site surveys:

1. Land Cover Map: Provide an up-to-date aerial photograph of the development site or recipient site and identify all land cover types. (See acceptable types of land use classifications in Appendix

3.) All maps, including the aerial photograph, should be at a scale of one inch equals 800 feet or less. List all land cover types and associated acreage either on the map or on an accompanying table.

2. Soils Map: Attach a Natural Resources Conservation Service (NRCS) Web Soil Survey map depicting each soil type and the average depth to the seasonal high water table (DWT) value for each soil type within the project site.

3. Gopher Tortoise Habitat Map: Provide a map that delineates potential tortoise habitat on the project site or recipient site and provide an acreage estimate by land cover type.

4. Burrow Location Map: Plot and label the location of each burrow observed during the burrow survey. Attach a table that shows the burrow label, activity class (see below), and associated global positioning system (GPS) coordinates.

Gopher Tortoise Burrow Activity Classification

Potentially Occupied Burrow: This classification combines the active and inactive categories and, therefore, includes burrows with obvious sign of use and those with minimal or no obvious sign of use. A potentially occupied burrow is in good repair, with the classic half-moon shaped entrance. These burrows may have tortoise tracks or plastron scrapes clearly visible on the burrow floor or on the mound, or they may have subtle or no tortoise sign. The lack of observable tortoise sign may be due to weather or season. The burrow floor may contain loose soil caused by tortoise activity or it may be hard-packed. The burrow mound may or may not have vegetation growing on it, and it may be partially covered by fallen leaves. Potentially occupied burrows must be recorded on burrow location maps and used to calculate gopher tortoise densities.

Abandoned Burrow: An abandoned burrow appears unused and dilapidated. The entrance is partially or completely collapsed, and the burrow is partially or completely filled with leaves or soil. Recent rains, or recent activity by livestock or humans, do not appear to be the primary reason for burrow collapse. There are no trails into the burrow that might indicate that a tortoise recently passed through the leaf litter or that a small tortoise is using a dilapidated adult burrow. Abandoned burrows must be recorded on burrow location maps but **not** included in tortoise density calculations.

Burrows that are < 130 mm (5 inches) in width shall be recorded on burrow location maps. Potentially occupied of this size must be permitted and shall be included in tortoise density calculations. Mitigation contributions are required for burrows and tortoises in this size class found on donor sites. Refunds will be provided by the FWC for relocated juvenile tortoises (less than 130 mm carapace length) after a refund request form is submitted by the permittee or its agent and the permit's final after action report is approved by the FWC. These juvenile gopher tortoises must be relocated to the approved recipient site but they are not counted against a recipient site's remaining capacity to receive gopher tortoises after the final after action report for a permit is submitted and it is approved by the FWC.

Burrow Survey Methods (Minimum of 15%)

1. Using evenly spaced belt transects, distribute these transects across all potential tortoise habitat within the designated donor or recipient site to provide at least 15% coverage. This initial step is a map exercise (see illustration below), and transect locations should be indicated on the gopher tortoise habitat map.

2. Maximum dimensions for each individual transect are 250 meters (820 feet) long and 16 meters (52 feet) wide. The area covered by this size transect is approximately one acre (0.4 hectare). In areas with heavy cover, the width of each transect must be reduced to allow for 100% detection of burrows within the transect, and the total area covered by the transect must be recalculated to adjust for the reduced width.

3. One or multiple observers may conduct these burrow surveys. When multiple observers are used, sufficient distance must exist between observers to ensure that transects do not overlap. It is essential that observers focus solely on searching for burrows. They should not be performing vegetation sampling (i.e., on recipient sites) concurrently or conducting other activities.

4. Provide GPS coordinates for all burrows observed within, or partially within, the boundaries of each transect. GPS data taken with sub-meter accuracy in Decimal Degrees using the data settings of North American Datum of 1983 (NAD83 feet) Albers/High Accuracy Reference Network (HARN) is preferred, but not required. Burrows shall be marked with flagging tape indicating the burrow's label and activity class. This will assist field verification of surveys by FWC. The burrow label, status, GPS coordinates, accuracy of data and projection the coordinates shall be recorded and reported to FWC so that the burrow can be identified later.

5. For each transect, report the raw data in a table (transect dimensions, number of burrows by activity class, number of burrows by size class, and burrow density per acre). For the donor or recipient site, report the average tortoise density using the following calculation:

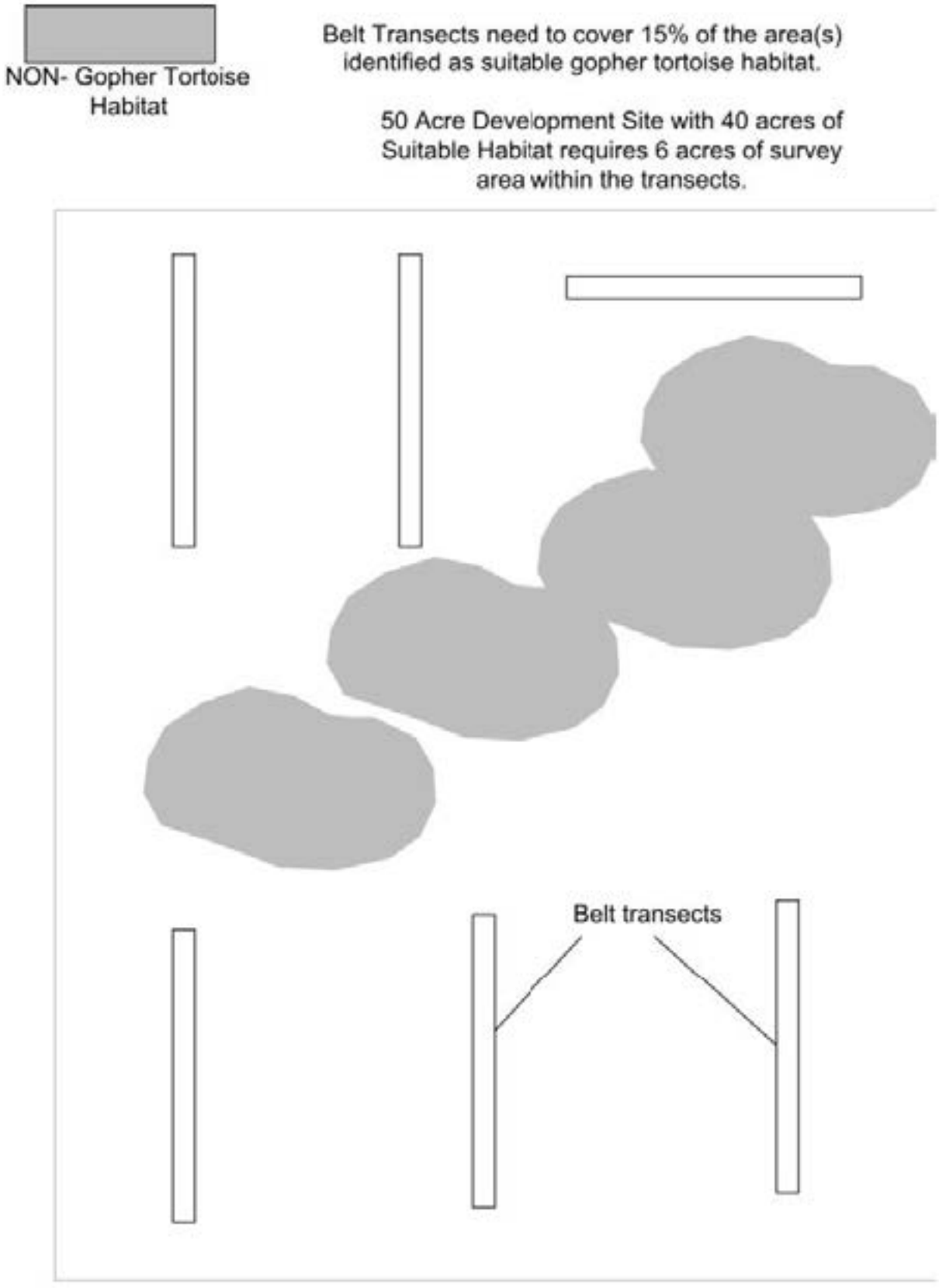
   $$\frac{\text{(Total Potentially Occupied Burrows)}}{\text{(Total Acres within Survey Area)}} \times (0.50) = \text{Tortoises / Acre}$$

   Estimating the Gopher Tortoise Population within a Donor Site:
   Tortoises/Acre multiplied by the Number of Acres of Potentially Occupied Gopher Tortoise Habitat = Estimated Number of Tortoises Present

   Calculating the Gopher Tortoise Stocking Density for a Recipient Site:
   Site Evaluation Maximum Allowable Gopher Tortoise Density minus the Baseline Density = Final Stocking Rate

   Calculating the Number of Gopher Tortoises that can be released within a Recipient Site:
   Final Stocking Rate multiplied by the number of Acres of Gopher Tortoise Habitat = Number of Gopher Tortoises Allowed to Be Released

Example of burrow survey using belt transects:



Burrow Survey Methods (100%)

1. All potential gopher tortoise habitat that will be impacted by development activities must be searched for burrows. The recommended approach is to systematically search the entire impact zone by traveling parallel transects spaced appropriately for the habitat conditions (i.e., the length may be consistent or vary with the shape of the site, but the width should allow 100% detection of burrows). The search can be conducted by one or more observers. Transect edges should be marked with flagging to ensure complete coverage. In open habitat, such as mowed pasture or natural sandhill, transects should be spaced no more than 10 meters (33 feet) apart. In thicker habitat, such as flatwoods and scrub, transects should be spaced as close as five meters (16 feet) apart. Patches of extremely thick habitat, such as saw palmetto or blackberry patches, should be searched more intensely, with spacing at approximately one meter (three feet) or less.

2. All burrows observed (i.e., potentially occupied and abandoned) should be marked with flagging tape that indicates the burrow's label and activity class. This will assist field verification of survey by FWC. The burrow label, status, and GPS coordinates should be recorded and reported to FWC so that the burrow can be identified later.

Surveys Conducted in Application for a Disturbed Site Permit

In cases of an application for a Disturbed Site permit, a modified survey protocol is required. It is necessary to estimate both the number of tortoises within the disturbed area and (if applicable) the number of tortoises outside the disturbed area which are still within the boundaries of the project site.
Once site disturbances within the project area cease, a minimum 28-day waiting period (this may be longer depending on temperature and season) is required before tortoise burrow surveys are conducted within disturbed areas. This gives tortoises time to dig out of collapsed burrows. Following this waiting period, 100% burrow surveys must be conducted throughout the disturbed area to provide an estimated number of tortoises present. All burrows receive the conversion factor of 0.5 (50% burrow occupancy rate).

These new 100% survey results must then be compared to one of the following surveys/options:

1. An “older, acceptable survey” of the disturbed area (surveys must not be more than one year old from the time new 100% surveys are completed, and must have been conducted in accordance with survey protocols in this document).
2. A 15% survey of remaining undisturbed tortoise habitat within the project site that is similar to the disturbed area (see survey methodology below). Survey area must be large enough to represent 15% of the total acreage of the project site.
3. A 15% survey adjacent to the project site (must be similar habitat to the project site and large enough to represent 15% of the total acreage of the project site).
4. If survey methods above cannot be conducted for some reason, the applicant shall estimate tortoise numbers within the disturbed area using a standard density of 2 gopher tortoises/acre with a minimum population estimate of 1 tortoise.

Results of the 100% survey within the disturbed area are compared with results from one of the four options above. The method which estimates the highest number of tortoises within the disturbed area will be used to calculate up-front mitigation costs for Disturbed Site permits.

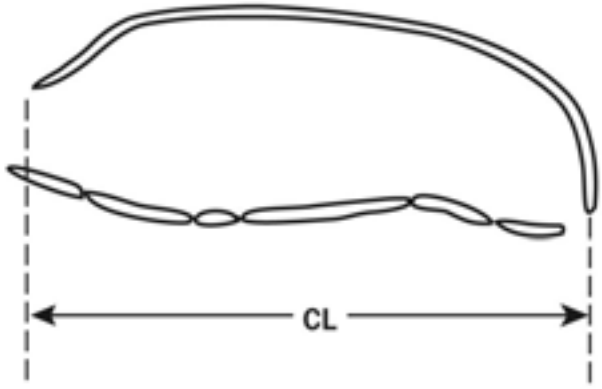
An estimate of the total number of tortoises for the entire project area must also be calculated. In some cases, the disturbed area already covers the entire project site. In other cases, undisturbed habitat remains within the project site. If a 15% survey has already been conducted (option 2 above), then this survey can be used to estimate the number of tortoises outside the disturbed area. In other cases, a 15% survey must be conducted which is large enough to represent at least 15% of the remaining acreage of undisturbed suitable gopher tortoise habitat left on-site.

.

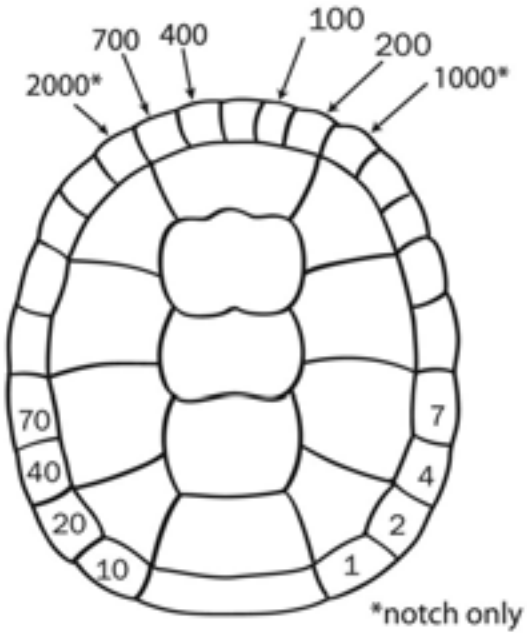
Appendix 5. Marking and Measuring Gopher Tortoises during Relocations

Marking: Tortoises must be permanently and uniquely marked by drilling holes in, or using a triangular file to notch, one or a combination of the eight rearmost marginal scutes (the four right ones and the four left ones) and the two right and left front marginal scutes. Each scute is assigned a numerical value, as illustrated below. The scheme is additive; e.g., tortoise #14 would require the drilling of the first scute left of the rear marginal and the third scute right of the rear marginal. For indicating numbers 1000-3999, notch (**do not drill**) the third marginal(s) to the right and left of the front central scute (nuchal), as shown in the figure below. For numbers >3999, contact FWC. The size of the drill bit or triangular file should be relative to the size of the tortoise, but no more than 25% the width of the marginal scute. Drilling or notching should be carefully undertaken to avoid injury to the limbs or head. Also, holes should be drilled closer to the marginal edge (without breaking through the edge) rather than higher up on the scute. PIT (Passive Integrated Transponder) tags may be used as an alternative to drilling or notching marginal scutes. These microchips are about the size of a grain of rice and are injected into a tortoise's hind leg using a hand-held applicator. A hand-held scanner reads the tag's electromagnetic code and displays the tag's number.

Measuring: Straight-line carapace length (CL) must be recorded in millimeters. (See below.) Forestry tree calipers are useful for measuring the carapace. Tortoise weight (in grams) should also be recorded.



Carapace length



Carapace
(upper shell)

Appendix 6. Health Considerations for Gopher Tortoises during Relocations

Making Decisions Regarding Relocations and Tortoise Health Assessments

Although relocation removes individual tortoises from harm on sites proposed for development, the transport of tortoises to new areas carries with it an inherent risk of exposure to infectious diseases for both recipient and donor populations. Determining the degree of risk and, therefore, the need for assessing tortoise health involves consideration of the following: the conservation value of the recipient site; whether tortoises exist within, or adjacent to, the recipient site; and the overall goals of the relocation. (See Table 1, below). Relocations to sites with high conservation value and established or adjacent populations, for example, carry a greater risk of adversely affecting these priority populations and, therefore, would generally warrant a correspondingly greater scrutiny of the relocated tortoises. Health assessments include physical examinations and the collection of biological samples (e.g., blood) for diagnostic tests. Currently, the only available blood test for a known gopher tortoise disease involves blood sampling for mycoplasmal upper respiratory tract disease (URTD; see below); however, even this well-documented test only indicates whether a tortoise has been exposed to the disease-causing organism; it does not provide information on whether the tortoise currently *has* the disease.

Table 1. Recipient Population Conditions, Goals, Disease Issues, and Suggested Health Assessment Needs

Recipient Population	Established or Adjacent Populations	Goals	Disease an Issue?	Health Assessment Needs
Highest conservation value (relatively large sites with long-term protection and management)	Yes	Healthy populations; minimize risks to adjacent/ existing populations	Yes–can impact both recipient and donor populations	Maximum on both donor and recipient populations. Monitor for success.
Highest conservation value	No	Healthy populations	Yes–due to established conservation goal	Maximum. Monitor for success.
Moderate conservation value (smaller protected sites or large sites with non-perpetual easements)	Yes	Healthy populations; minimize risks to adjacent/ existing populations	Yes–can impact both recipient and donor populations	Moderate, or based on land manager's guidelines and risk to adjacent populations.
Moderate conservation value	No	Site specific	Questionable–depends on goals and site	Based on land manager's guidelines.

			specifics	Monitor for success.
Minimal conservation value (sites with no long-term protection; may also be relatively small)	Yes	Humane or rescue relocation. Minimize risks to adjacent/ existing populations	Yes–can impact recipient and/or adjacent populations	Moderate or based on land manager's guidelines and risk to adjacent populations.
Minimal conservation value	No	Humane or rescue relocation.	No	Low. Based on land manager's guidelines.

Cursory Health Evaluations

Knowledge of normal gopher tortoise behavior and appearance is necessary when conducting health examinations. If biological samples are going to be collected, appropriate training by (or assistance from) a veterinarian or other person with extensive experience working with tortoises and collecting such specimens is required. The basic components of a physical exam include an overall assessment of the posture/behavior of the tortoise and an examination of the eyes, nostrils, skin, muscle mass, and shell. Shell measurements are not only important in determining the maturity of individual tortoises (e.g., juvenile, subadult, adult male or female) but, especially when correlated with weight, can also be helpful in assessing the overall body condition. The following are components of a cursory physical examination:

1. Overall posture/behavior: As noted above, some knowledge of tortoise behavior is necessary to discern between normal/abnormal.
   a. Alert and responsive or quiet but responsive–these two categories identify behavioral characteristics of normal tortoises. Alert/responsive tortoises paddle their forelimbs (front legs) when held, attempt to escape, and repeatedly retract into shell when handled. Quiet/responsive tortoises are shy and tend to remain withdrawn into their shell when being handled, but they have normal strength.
   b. Depressed and lethargic–these animals may hang forelimbs limp when lifted, may have poor muscle mass, are weak, and do not resist gentle tugging on their limbs.
   c. Walking/moving–normally/abnormally.
   d. Breathing sounds (normal, congestion, distress)–tortoises may normally create a very faint, high-pitched whistle when expelling air out of their nostrils. Wet or gurgling sounds associated with congestion are abnormal.

2. Examine eyes. May need a flashlight or, in some cases, magnification to examine.
   a. Clarity of eye (i.e., is cornea or lens clear or cloudy? Is there any discoloration?); position of eye within orbit *(*i.e., is eye bulging or sunken into orbit?)
   b. Discharges–clear/watery or cloudy; characterize as mild, moderate, or severe.

c. Examine eyelids, conjunctiva (the mucous membrane that covers the exposed portion of the eyeball and the inner surface of the eye), and area around eyes–look for swelling, redness, or traumatic wounds (e.g., lacerations). Characterize severity as mild, moderate, or severe.

3. Examine nares (nostril openings).
   a. Discharges–clear/watery or cloudy/thick; describe color of discharge and characterize as mild, moderate, or severe. Note if dirt/material is obstructing nostrils.
   b. Erosion or irregular shape of the nares (evidence of long-term discharge).

4. Examine shell (scutes and seams between scutes).
   a. Flaking, discoloration, defects/erosions, soft areas, fractures, chew marks.
   b. Note the distribution and severity of lesions.
   c. Photographs and drawings are extremely useful.
   d. Measure carapace (top shell) and record tortoise weight. Note whether tortoise has urinated/defecated, as this waste elimination may significantly affect body weight.

5. Examine skin and muscles
   a. Excessive flaking, discoloration of the skin, wounds, scars, or evidence of prior injuries.
   b. Evaluate muscle mass on head and limbs to look for muscle loss (i.e., wasting away of muscles). Note whether the head has "old man appearance": sunken eyes; skin drawn tightly over skull).
   c. Check to make sure the limbs are symmetric, look for swollen areas or malformations, and check toenails for symmetrical wear patterns.
   d. Note the presence of external parasites (e.g., ticks) and number (< or > 10).

Note: Although determining the health of an individual tortoise at a particular moment in time can be difficult (i.e., certain clinical signs or "symptoms" may come and go), there are some tell-tale signs that authorized agents can watch for: nasal discharge; severely eroded nares; "old man appearance" (eyes sunken, skin drawn tightly over skull); eyes/eyelids severely swollen or reddened, with discharge; poor muscle mass and emaciated (abnormally thin) appearance. Options for accommodating individuals that appear ill, or that test positive for mycoplasmal URTD, are indicated below.

Disinfection Protocol

Caution must be taken during relocations and whenever handling gopher tortoises to ensure that authorized agents do not contribute to the spread of pathogens (germs). It is recommended that hands and equipment be disinfected between handling individual tortoises. Cleaning and disinfecting bins, traps, and other equipment between uses on donor (development) sites is required to reduce the chance of cross-contamination between populations.

Disinfection Solution: 1:20 dilution of 5% household bleach in water. A stronger 1:10 dilution of 5% household bleach in water is recommended for equipment that is particularly dirty (i.e., stained with soil or feces).

Solutions should be stored in dark bins or in opaque bottles and should be made fresh regularly (e.g., weekly, depending on storage conditions). Bleach should be purchased in small bottles or dispensed into small bottles to minimize deterioration from opening/closing the lid.

Disinfecting Equipment: Remove dirt and feces by rinsing with water (e.g., from gallon jugs) or by brushing with paper towels. Spray equipment (including drill bits and files) liberally with the bleach solution and allow to dry. Between donor sites, thoroughly scrub bins and buckets with detergent and water before spraying with the bleach solution.

Disinfecting Hands: A pump-applicator, plastic bottle of 60% ethyl alcohol is an efficient way to disinfect hands between handling tortoises; smaller pocket-size bottles of hand sanitizers are also useful in the field. If hands are extremely dirty, rinse with water before using the alcohol sanitizer.

Testing for Mycoplasmal Upper Respiratory Tract Disease (URTD)

Authorized agents or other individuals wishing to collect blood or other samples for mycoplasmal URTD tests shall be appropriately trained by a veterinarian or other person experienced in such sample collection/handling for tortoises, and they shall sign an affidavit provided by FWC stating they have been so trained. The FWC blood collecting protocol and associated affidavit can be downloaded from MyFWC.com/GopherTortoise (click on Permits and then Permitting Guidelines to locate the necessary documents regarding URTD testing). The signed affidavit, in addition to their permit, authorizes the following:

1. Blanket authorization to capture, hold, and draw blood from gopher tortoises as needed for collecting blood samples. Tortoises may be held up to 24 hours, but shall not be held for more than 72 hours, as stipulated in the FWC permitting guidelines.

2. Blood samples must be identified by the applicant's name, county, and project name. Testing will be conducted by the Mycoplasma Testing Lab, University of Florida, Department of Pathobiology, 1600 South West Archer Road - BSB 350, Gainesville, FL 32610. The Lab may be contacted at (352)294-4068, extension 3986. The applicant is responsible for all fees and costs associated with testing.

3. Test results will be provided by the testing facility to FWC and the applicant.

It should be noted that there is currently no known cure for mycoplasmal URTD, making recovery of truly infected tortoises an unlikely scenario. Recipient site owners/managers reserve the right to request mycoplasmal URTD testing or other diagnostic tests that become available for URTD or other diseases and to refuse any, or all, tortoises from populations that have seropositive and/or symptomatic individuals. Such decisions will depend on the goals and priority of the recipient site (see table above) and, thus, will reflect the level of risk involved in allowing introduction of potentially ill or infected tortoises. In those cases where several clinically ill tortoises, or tortoises that test positive for URTD or other diseases, are encountered, consultation with FWC and wildlife veterinarians will be necessary to determine how best to accommodate such populations.

Protocol for Accommodating Gopher Tortoises that Appear Ill

- Authorized agents capturing gopher tortoises at donor sites must isolate tortoises with obvious health abnormalities as outlined in this Appendix (e.g., markedly lethargic; "old man appearance": sunken eyes, skin drawn tightly over skull; abnormally thin limbs with poor muscle mass; nasal discharge; eyes severely swollen and reddened, with discharge).
- Contact a local rehabilitation facility and transport the tortoise to the facility. A list of participating wildlife rehabilitators is provided by FWC. These facilities do not charge for assessment and treatment. Also report any ill tortoises to the FWC regional gopher tortoise conservation biologist and the contact for the targeted recipient site. Tortoises may also be treated at the Zoological Medicine Service at the University of Florida (UF) Veterinary Medical Center in Gainesville, but this service will incur a cost.
- If an ill tortoise dies (from causes not directly related to excavation or trapping) or if recently dead tortoises are found on the donor site, place the tortoise on ice (do not freeze) and notify the FWC regional gopher tortoise conservation biologist. If representatives for either the donor site or recipient site want to pursue the reason for tortoise mortality, they may deliver dead tortoises to the Pathology Service at the University of Florida Veterinary Medical Center in Gainesville for a postmortem evaluation. This service will incur a cost.

It is not necessary to interrupt capture efforts when ill tortoises are observed; these individuals can be isolated until the end of the burrow excavation or trapping for that day. Because some clinical signs of disease (e.g., nasal discharge) may appear and then disappear over time, it is helpful to photograph observed abnormalities with a digital camera.

Rehabilitation facilities or the UF Veterinary Medical Center will triage tortoises and either treat or euthanize. If the targeted recipient site refuses these tortoises post-treatment, such individuals will be accommodated as waif tortoises and either placed in captivity or in specifically designated waif sites.

Appendix 7. Methods for Baseline Vegetation Sampling and Follow-up Monitoring on Recipient Sites

Vegetation Surveys

The vegetation sampling method described below can be performed using 250-meter-long belt transects as are used to estimate tortoise density on recipient sites. Vegetation sampling shall occur at a minimum of 30% of the belt transects and be distributed across areas providing suitable gopher tortoise habitat. The beginning and end of each transect shall be permanently marked in one of two ways:

1) Use rebar, T-posts or other fire resistant material at least six feet high. These posts should either be painted with high visibility paint or the posts should be covered with painted PVC pipes to increase visibility and to provide the option for removal during prescribed burn; or

2) Use a GPS instrument capable of sub-meter accuracy to take latitude and longitude coordinates at the beginning and end of each transect. GPS data collected in decimal degrees using data type DATUM NAD83 feet Harn Albers is preferred. The data must specify the collection method (i.e., the projection and coordinates) as not all GPS instruments automatically attach a projection file with the data. The data collected must be reported to the FWC

Vegetation surveys and gopher tortoise surveys may be conducted simultaneously by multiple people, or an individual may perform each survey separately. However, at least 30% of the gopher tortoise transects shall be used as vegetation transects. For example, a 15% tortoise survey of a proposed 200-acre recipient site would require thirty 16-meter by 250-meter belt transects (each transect covering approximately one acre). Thirty percent of the transects, or 9 transects total, would be selected for vegetation sampling. Those transects selected for vegetation sampling should be located so there is representative coverage across the site. Each transect selected for vegetation sampling would have four stations associated with the 0-, 75-, 150-, and 225-meter points along the transect.

Canopy Cover–At 75-meter intervals along a transect (i.e., at the 0-, 75-, 150-, and 225-meter points along the transect), walk 15 meters perpendicular to each side of the transect line (a total of 30 meters). Every 1.5 meters (10 samples on each side), look through a densitometer (manufactured by Geographic Resource Solutions) with cross hairs and held directly overhead. Canopy vegetation is defined as woody stemmed plants three meters or greater in height. If there is canopy at the center point of the cross hairs, count that measurement as a plus. If there is no canopy cover, count that measurement as a zero. For 20 measurements, total the pluses, divide by 20, and multiply by 100 to obtain percent canopy cover at the station.

Shrub Cover–At each 75-meter interval along the transect line, walk 15 meters perpendicular to each side of the transect line (a total of 30 meters). Every 1.5 meters, hold arms outstretched approximately 1.5 meters off the ground. If the arms strike shrub plants (shrubs can be woody plants, semi-woody plants, vines, forbs, dwarf trees, tree seedlings, canes, and palms that are approximately 1.5 meters off the ground), count that measurement as a plus. If the arms strike nothing, count that measurement as a zero. For the 20 total measurements total the pluses, divide by 20 and multiply by 100. This provides an estimate of the percent shrub cover at the station.

Herbaceous Ground Cover–At each 75-meter interval along the transect line establish an herbaceous cover sampling station. Each sampling station shall be at a known location and marked on a map. Provide GPS location coordinates and general observational directions (e.g., between wetlands 1 and 2 and approximately 50 yards from large live oak, which is located 275º from sampling station). Extra sampling stations shall be used if critical habitat changes are occurring between the 75-meter intervals.

To estimate the relative percent cover of herbaceous species in each sampling station, use a 0.25 square meter (2.7 square feet) quadrate. The quadrate can be easily made using PVC pipe. Estimates are to be based on seven cover classes: less than 1%, 1-5%, 6-29%, 30-59%, 60-75%, 76-95%, 96-100%. Record cover class for each of the following: bare ground; debris; broadleaf grasses and grass-like vegetation (e.g., sedges, rushes); wiregrass; and any forbs, vines, saw palmetto, or woody vegetation that are < 3 feet in height. If possible, identify species of exotic vegetation known to be problematic for tortoises, *e.g.*, cogongrass (*Imperata cylindrica*). Also note the total height of the herbaceous vegetation.

Photographic Stations

Photographs shall be taken at each sampling station and shall display the general setting of the transect and herbaceous vegetation being sampled. Therefore, three photographs will be required at each sampling station: (1) a clear photograph of the vegetation inside the quadrate, (2) a photograph of the main belt transect, facing forward, and (3) a photograph of the main belt transect, facing rearward.

Monitoring and reporting requirements

The intent of long-term monitoring and reporting requirements on recipient sites is to ensure adequate and appropriate management continues and the gopher tortoise population is sustained and viable for the long term as specified in the Gopher Tortoise Management Plan.

Monitoring and reporting requirements may be reduced over time, in both frequency and scope, for landowners who have successfully met habitat management and reporting requirements. Reports are required from the landowner of a permitted long-term protected recipient site every 3 years for the first 15 years (Phase 1). If the landowner has met monitoring and reporting requirements during the first 15 years, the monitoring and reporting requirement is then reduced to every 5 years for the next 10 years (Phase 2). Following 25 years of successfully meeting all monitoring, habitat management and reporting requirements, reports will then be required every ten years with reduced monitoring and reporting requirements. Monitoring and reporting requirements during each phase are outlined in Table 1 below.

Recipient sites that do not successfully meet monitoring, habitat management and reporting requirements will be required to restart the monitoring and reporting requirements at the beginning of Phase 1. A report format (under development) will be provided by FWC to ensure that all required information is provided for each phase. Before the reports are deemed sufficient by FWC, a gopher tortoise regional conservation biologist will visit the recipient site to verify the survey(s) and report. Additional information may be requested after the site visit.

Habitat management shall continue as prescribed in the site habitat management plan for the life of the permit. Site visits will be conducted by FWC staff on an annual basis. Reports shall be submitted no later than 90 days following the completion of the baseline survey or follow-up monitoring surveys.

Reports for baseline vegetation surveys and follow-up monitoring shall include a brief narrative explaining the property location, size, ownership, authorized agent, and Florida Fish and Wildlife Conservation Commission (FWC) Recipient Site permit number(s). This introductory information shall be followed by the qualitative and quantitative data and an overall description of the present conditions within the recipient site. Vegetative transect maps, gopher tortoise transect maps, aerial images, land use maps, and soil maps are required. Spreadsheets (tabular form) that include the percent coverage of the vegetation at each sampling station are required.

Table 1. Phased recipient site monitoring and reporting requirements.

Reporting Phase	Years	Narrative including a qualitative assessment of vegetation and tortoise population	Habitat management summary*	Recent aerial images with property boundaries	Photographic stations	15% tortoise survey and transect maps with GPS coordinates	Quantitative vegetation survey and transect maps
Phase 1	1-15	X	X	X	X	X	X
Phase 2	16-25	X	X	X	X	X	
Phase 3	26-life of permit	X	X	X	X		

*Includes description and timeline of habitat management activities conducted and planned future management activities.

For monitoring reports, any changes of the land use and soil conditions shall be explained. A chronology (timeline) of the habitat management activities conducted since submittal of the previous baseline or monitoring report shall be provided. Major changes in vegetation (*e.g.*, due to forestry clearing, habitat degradation from absence of fire) shall be noted. Additionally, changes to any land management plans or other legal documents shall be attached and described in the report. If applicable, a narrative of any problems, remediation, or exceptional environmental changes that are improving the gopher tortoise habitat shall be reported (note locations). A timeline of habitat management activities proposed to occur over the next three-year monitoring period shall also be provided.

Appendix 8. Draft FWC Conservation Easement

[NOTE TO PREPARERS: PLEASE USE "TRACK CHANGES' WHEN YOU REVISE THIS FORM FOR SUMMITAL TO FWC. IF YOU DO NOT USE "TRACK CHANGES" FWC REVIEW OF THE FORM MAY BE SIGNIFICANTLY SLOWED.]

This instrument prepared by:

After recording please return the document to Grantee:
Florida Fish and Wildlife Conservation Commission
ATTN: Gopher Tortoise Permit Coordinator
620 South Meridian Street
Tallahassee, Florida 32399-1600

CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this _____ day of _____ 200_ by _____ , a Florida corporation whose mailing address is _____ , ("Grantor") to the Florida Fish and Wildlife Conservation Commission, an agency of the State of Florida, with its principal office at 620 South Meridian Street, Tallahassee, FL 32399-1600 ("Grantee").

The parties agree as follows:

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in _____ County, Florida, hereinafter referred to as the "Property", more specifically described in Exhibit A attached hereto and incorporated herein by this reference; and

WHEREAS, the property possesses natural, scenic, open space, wildlife preservation and conservation values (collectively, "conservation values") of great importance to Grantor, the people of _____ County, and the people of the State of Florida; and

WHEREAS, the specific conservation values of the Property are documented as part of the Habitat Management Plan pertaining to the Property, dated _____ ("Plan"), part of which is entitled the "Baseline Documentation". A copy of the Plan is attached hereto as Exhibit B, and incorporated herein by reference. The Baseline Documentation is an accurate representation of the Property at the time of this grant and is intended to serve as an objective information baseline for monitoring compliance with the terms of this grant; and

WHEREAS, Grantor intends that the conservation values of the Property be preserved and maintained by the continuation of land use patterns, including, without limitation, those relating to ___ [e.g., farming, ranching, or timber production] existing at the time of this grant, that do not significantly impair or interfere with those values; and

WHEREAS, Grantor further intends, as owner of the Property, to convey to Grantee the right to preserve and protect the conservation values of the Property in perpetuity; and

WHEREAS, Grantee is a state public agency, part of whose mission is the conservation, preservation, protection or enhancement of lands such as the Property; and

WHEREAS, the Grantor, in consideration of the issuance by the Grantee of Permit No. _____ issued by the Grantee on _____ ("Permit") in favor of the Grantor for the incidental take of listed wildlife species, is required to grant and secure the enforcement of a perpetual conservation easement pertaining to the Property.

NOW THEREFORE, consistent with the issuance of the Permit, Grantor hereby grants, creates, and establishes a perpetual conservation easement upon the Property described in Exhibit A, which shall run with the land and be binding upon the Grantor, its heirs, successors and assigns, and remain in full force and effect forever.

1. Purpose. The purpose of this Conservation Easement is to ensure that the Property or part thereof as described in this Conservation Easement shall be protected forever and used as conservation areas, consistent with the Habitat Management Plan ("Plan"). The parties intend that this Conservation Easement will confine the use of the Property to such uses as are consistent with the purpose of this Conservation Easement.

2. Rights of Grantee. To accomplish the purpose of this Conservation Easement the following rights are conveyed to Grantee:

a. To preserve and protect the conservation values of the Property as defined in this Conservation Easement;

b. To enter upon the Property at reasonable times and upon reasonable notice to the Grantor in order to engage in activities consistent with this Conservation Easement, to monitor Grantor's compliance with this Conservation Easement, and to otherwise enforce the terms of this Conservation Easement; provided that Grantee shall not unreasonably interfere with Grantor's use and quiet enjoyment of the Property; and

c. To prevent any activity on or use of the Property that is inconsistent with the purpose of this Conservation Easement, and to require the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use.

3. Grantor's Reserved Rights. Grantor reserves to itself, its heirs, successors or assigns all rights as owner of the Property including the right to engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Conservation Easement.

4. Prohibited Uses. Unless expressly authorized in accordance with the Plan (Exhibit B), the following are prohibited activities on the Property:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities or other structures on or above the ground.

b. Dumping or placing of soil or other substance or material as landfill or dumping of trash, waste, or unsightly or offensive materials.

c. Removal or destruction of trees, shrubs, or other vegetation.

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock or other material substance in such manner as to affect the surface.

e. Surface use except for purposes that permit the land or water areas to remain in their existing natural condition.

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation.

g. Act or uses detrimental to such retention of land or water areas in their existing natural condition.

h. Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or culture significance.

i. Alteration of the Property except in compliance with the Plan.

5. No Public Access. No right of access by the general public to any portion of the Property is conveyed by this Conservation Easement.

6. Expenses; Taxes. Grantor retains all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Property, including the maintenance of adequate comprehensive general liability insurance coverage. Such responsibilities and costs shall include those associated with the management activities discussed in the Plan. Grantor shall keep the Property free of any liens arising out of any work performed for, materials furnished to, or obligations incurred by Grantor. Grantor shall pay before delinquency all taxes, assessments, fee, and charges of whatever description levied on or assessed against the Property by competent authority, and shall furnish Grantee with satisfactory evidence of payment upon request.

7. Costs of Enforcement. Any costs incurred by Grantee in enforcing the terms of this easement against Grantor, including, without limitation, costs of suit and attorney's fees, and any costs of restoration necessitated by Grantor's violation of the terms of this Easement, shall be borne by Grantor.

8. Liability. Grantor and its successors shall hold harmless, indemnify and defend Grantee from and against all liabilities, penalties, costs, losses, damages, expenses causes of action, claims, demands or judgments, including attorneys fees, arising from or in any way connected with: 1) injury to or the death of any person, or physical damage to any property, resulting from any act, omission, condition, or other matter related to or occurring on or about the Property, regardless of cause, 2) costs and liabilities of any kind related to the ownership, operation, upkeep and maintenance of the Property, including but not limited to the maintenance of adequate comprehensive general liability coverage, payment of taxes, and keeping the Property free of liens; and 3) the existence or administration of this Conservation Easement.

9. Remedies. If Grantee determines that Grantor or successors are in violation of the terms of this Conservation Easement, it may take any of the following actions, after 30 day written notice to Grantor or successors to correct the violation: 1) Grantee may itself correct the violation, including but not limited to restoration of any portion of the Property affected to the condition that existed prior to the violation, and demand payment from Grantor for all costs associated with such action; 2) Grantee may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Conservation Easement, for specific performance, to temporarily or permanently enjoin the violation, recover damages for violation of this Conservation Easement, including but not limited to the costs of restoration, and any other damages permitted by law. In any enforcement action Grantee shall not be required to prove either actual damages or the inadequacy of otherwise available remedies. Grantee's remedies shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity. As part of the consideration for this Conservation Easement, the parties hereby waive trial by jury in any action brought by either party pertaining to any matter whatsoever arising out of or in any way connected with this Conservation Easement.

10. Waiver. Grantor intends that enforcement of the terms and provisions of the Conservation Easement and the Plan shall by at the discretion of Grantee and that any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, its heirs, successors, personal representatives or assigns shall not be deemed or construed to be a waiver of Grantee's rights hereunder in the event of a subsequent breach. Grantor hereby waives any defense of laches, estoppel, or prescription.

11. Assignment. Grantee agrees that it will hold this Conservation Easement exclusively for conservation purposes and that it will not assign its rights and obligations under this Conservation Easement except to another organization qualified to hold such interests under the applicable state and federal laws and committed to holding this Conservation Easement exclusively for conservation purposes. Not later than thirty (30) days after recordation in the Public records of _____ County, Florida of an instrument transferring the title to the property, which is the subject of this easement, Grantor agrees to give written notice to Grantee of such transfer.

12. Severability. If any provision of this Conservation Easement or the application thereof to any person or circumstance is found to be invalid, the remainder of the provisions of this Conservation Easement, and the application of such provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

13. Notices; References. All notices, consents approvals or other communications hereunder shall be in writing and shall be deemed properly given as of the second business day after mailing if sent by United State certified mail, return receipt requested, or by overnight mail service (e.g., FedEx, UPS), addressed to the appropriate party or successor-in-interest, at the address above set forth or such new addresses as either party may in writing deliver to the other. References in this Conservation Easement to the Grantor or Grantee include their successors-in-interest.

14. Venue; Waiver of Jury Trial. This Conservation Easement has been delivered in the State of Florida and shall be construed in accordance with the laws of Florida. As part of the consideration for this Conservation Easement, the parties hereby waive trial by jury in any action or proceeding brought by any party against any other party pertaining to any matter whatsoever arising out of or in any way connected with this Conservation Easement.

15. Amendment. This Conservation Easement may be amended, altered, released or revoked only by written agreement between the parties hereto, their successors or assigns.

16. Subordination of Liens. Grantor agrees that if the Property is subject to a mortgage lien or any other form of lien or security pertaining to the Property, Grantor shall provide recorded or recordable documentation to verify that such lien or security interest is subordinate to this Conservation Easement.

17. Recording. This Easement shall be recorded in the same manner as any other instrument asserting title to real property.

TO HAVE AND TO HOLD unto grantee, its respective successors and assigns forever. The covenants, terms, conditions, restrictions and purposes imposed with this easement shall not only be binding upon Grantor but also its agents, personal representatives, heirs, assigns and all other successors to it in interest and shall continue as a servitude running in perpetuity with the Property.

IN WITNESS WHEREOF Grantor has set its hand on the day and year first above written.

Signed, sealed and delivered
In our presence as witnesses:

_____
[Corporate name]

_____ By: _____

Name: _____ Name: _____

Title: _____

_____

Name: _____

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 200_ by _____, the _____ of, a Florida corporation, on behalf of the corporation. The above-named individual is personally known to me or produced _____ as identification.

_____
Notary Public State of Florida
Commission No:
Commission expires:

GRANTEE'S ACCEPTANCE

The Florida Fish and Wildlife Conservation Commission hereby accepts the foregoing Conservation Easement.

FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION

By: _____
Title:_____
Date:_____

Approved as to form and legal sufficiency:

_____
FWC Attorney

Appendix 9. Handling of Commensal Species during Relocations

INTRODUCTION

Commensals are species of animals that live within gopher tortoise burrows, deriving food, refuge, or other benefits from the burrow environment. Threats to commensal species are similar in nature to those faced by the gopher tortoise and have been addressed in the *Gopher Tortoise Management Plan*. These guidelines have been created to provide guidance for authorized agents who capture commensal species during gopher tortoise relocations. Authorized agents conducting activities under gopher tortoise permits are encouraged to minimize the mortality of commensal species and, where possible, to relocate commensals with the tortoises.

RULES PROTECTING COMMENSAL SPECIES

Florida Gopher Frog (*Rana capito*)

The Florida gopher frog is listed as a Species of Special Concern (Rule 68A-27.005, F.A.C.) by the Florida Fish and Wildlife Conservation Commission (FWC). It is illegal to take gopher frogs or their eggs without a permit issued by the FWC Executive Director (Rule 68A-27.007, F.A.C.). The gopher frog is also considered a Species of Concern (SOC) by the U.S. Fish and Wildlife Service (USFWS). The SOC designation is an informal term indicating some degree of concern for the future of the species, but does not impart any U.S. Endangered Species Act protection.

Florida Mouse (*Podomys floridana*)

The Florida mouse is listed as a Species of Special Concern (Rule 68A-27.005, F.A.C.) by FWC. It is illegal to take Florida mice or their nests without a permit issued by the FWC Executive Director (Rule 68A-27.007, F.A.C.). The Florida mouse is also considered a Species of Concern (SOC) by USFWS. The SOC designation is an informal term indicating some degree of concern for the future of the species, but does not impart any U.S. Endangered Species Act protection.

Eastern Indigo Snake (*Drymarchon couperi* [= *Drymarchon corais couperi*])

The eastern indigo snake is listed as a Threatened Species (Rule 68A-27.003, F.A.C.) in Florida by FWC. It is illegal to take indigo snakes or their eggs without a permit issued by the FWC Executive Director (Rule 68A-27.007, F.A.C.). The indigo snake has also been classified as a Threatened Species by USFWS since 1978. The Federal Threatened Species designation is a formal term indicating a moderately high level of protection provided by the U.S. Endangered Species Act. For federally listed species like the indigo snake, federal permits are required to capture, handle, or relocate individuals; therefore, authorized agents should coordinate with USFWS.

Florida Pine Snake (*Pituophis melanoleucus mugitus*)

The Florida pine snake is listed as a Species of Special Concern (Rule 68A-27.005, F.A.C.) in Florida by FWC. It is illegal to take pine snakes or their eggs without a permit issued by the FWC Executive Director (Rule 68A-27.007, F.A.C.), but individuals may possess one Florida pine snake without a permit (Rule 68A-25.002[10]).

SPECIES-SPECIFIC GUIDELINES: IDENTIFICATION, HABITAT NEEDS, AND FIELD ENCOUNTERS

Florida Gopher Frog

The Florida gopher frog is a stout-bodied frog with short legs, a large head and mouth, and prominent eyes that are slightly larger than the ear drums. The gopher frog's background color and belly are typically light gray. A series of irregular dark spots form rows along the back and side, and the limbs are distinctly striped. A raised ridge (dorsolateral fold) that is yellow or orange colored runs down each side of the back from head to groin.

The species' distribution corresponds to that of the gopher tortoise; however, unlike the gopher tortoise, the gopher frog appears to be absent from most coastal islands and dunes. This species occurs primarily in native, xeric upland habitats, particularly scrub and sandhill associations. The Florida gopher frog is extremely dependent upon gopher tortoise burrows, more so than the other listed commensals noted in these guidelines. In addition to its dependence on gopher tortoise burrows as an adult, the gopher frog tadpole only lives in isolated wetlands. These temporary water bodies generally have no fish and may have smaller populations of predatory invertebrates than permanent wetlands.

Relocation:
Gopher frogs are most commonly encountered during tortoise capture, either in bucket traps or during burrow excavation. They can also be trapped by drift fences and buckets or funnel traps set to intercept their seasonal breeding migrations to temporary or seasonal ponds and during breeding at those ponds. Frogs may be secured in plastic containers (one frog per container) with a quantity of moist soil from the burrow. Containers with frogs can be kept under the same conditions as gopher tortoises for transport. Agents who undertake tortoise relocations in central and south Florida should be aware of two exotic amphibians (Cuban tree frog and cane or marine toad) that may be confused with gopher frogs. These exotic species should not be relocated.

Gopher frogs should only be released directly into the mouth of existing tortoise burrows and only when such burrows are located on a recipient site that has temporary or fish-free ponds within 1 km (0.6 mi) distance and without significant barriers to frog movement (e.g., no roads). Several frogs may be released into one burrow.

Florida Mouse

The Florida mouse is distinguished from other rodents by the following: light reddish-tan color; comparatively large eyes, ears, and hind feet; long tail; presence of five instead of six well-developed plantar tubercles on the soles of the hind feet; fragile tail sheath that may slough off during handling; and a distinct, skunk-like odor.

The Florida mouse is endemic to Florida and is restricted largely to the northern two-thirds of the peninsula, where it typically occupies fire-maintained, xeric vegetative communities on deep, well-drained soils. The biology of the Florida mouse is closely tied to the gopher tortoise, whose burrows are used as nesting sites and refuges during dispersal. Florida mice are most common in sandhill, scrub, and scrubby flatwoods, but other xeric upland habitats may be used. These habitats are characterized by the presence of acorn-producing oak trees, especially scrub oaks and other species considered to be in the "white" oak group. The ground cover is usually interspersed with patches of bare sand, but a diverse assemblage of grasses and forbs is typically present. An open tree canopy typically composed of longleaf or other pines, may be present.

Relocation:
Florida mice can be captured alive in Sherman live traps baited with sunflower seeds and set in or near the gopher burrow entrance. Mice can also be opportunistically captured by hand during burrow excavation. Mice can be retained in Sherman traps for 24 hours, as long as they are carefully protected from extremes of heat and cold. Mice should be released at the mouth of gopher tortoise burrows at the relocation site. To maximize translocation success, mice should be released into active burrows of adult gopher tortoises. Florida mice should be released only within their known range.

Suitable habitats at the recipient site should primarily be limited to sandhill, scrub, or scrubby flatwoods. A tree layer, typically composed of longleaf or other pines, may be present; percent canopy cover should not exceed 30%. A shrub layer dominated by scrub oaks, other oaks, or other shrubby species (e.g., palmetto) should be present. The shrub layer should be discontinuous, typically 1-3 m (3-10 ft) high and with 30-70% coverage. A diverse ground cover assemblage of grasses and forbs should be present and interspersed with conspicuous patches of bare ground. Active and inactive gopher tortoise burrows should be present. The minimum size of suitable habitat patches for Florida mice probably should be 25 ha (62 acres); bigger is better. Isolated sites supporting suitable xeric upland habitat should be connected by less suitable (degraded) xeric upland or mesic habitats (native or reclaimed) considered capable of supporting tortoises. Because the maximum dispersal distance for Florida mice is not well known, suitable patches of xeric upland habitat probably should not be separated by more than 1-2 km (0.5-1 mi) to maximize the probability that Florida mice would be able to move successfully among patches.

Eastern Indigo Snake

The eastern indigo snake is a large, nonvenomous snake found throughout Florida. Its color is uniformly lustrous black except for reddish to cream coloring on the chin and throat.

Many indigo snakes in northern Florida are completely black with the exception of a white patch in the center of the throat. The indigo snake is most commonly confused with the black racer (*Coluber constrictor*), which is a duller black color, has a white chin and throat (or brown in the central Panhandle), and is smaller and thinner.

In northern Florida, eastern indigo snakes are intimately tied to gopher tortoise burrows that protect them from extreme temperatures and moisture loss. In the milder climates of central and southern Florida, especially in habitats where tortoises are not present, they rely on a wide variety of other shelters, including hollow tree root channels and logs, burrows of rodents and armadillos (*Dasypus novemcintus*), and limestone solution holes. Because indigo snakes have relatively large home ranges (hundreds of acres) and use a variety of upland and wetland habitats, large diverse recipient sites will best provide for their needs.

Encountering Indigo Snakes:
Indigo snakes may be encountered during site surveys, excavation of gopher tortoise burrows, or capture of tortoises. Snakes must be allowed to vacate the work area before conducting additional burrow excavation or other site manipulation in the vicinity. Site work may commence only after the Authorized Agent (or a registered assistant) observes the snake vacating the area. Indigo snakes may not be handled for any purpose without specific state and federal permitting authorizations.

Florida Pine Snake

The Florida pine snake is a large, nonvenomous snake with dark brown to reddish blotches on a gray to sandy-colored background. The scales on the upper part of the body are strongly keeled (ridged). The head and snout are distinctly cone-shaped and adapted for burrowing.

The species is restricted to xeric habitats in the Atlantic and Gulf coastal plains. In Florida, its historic distribution included most of the state north of Lake Okeechobee and coastal ridges to the south. Florida pine snakes spend much of their time underground, often burrowing into the tunnels of pocket gophers (*Geomys pinetis*) and other rodent prey.

Relocation:
Like indigo snakes, pine snakes may be encountered during site surveys, excavation of gopher tortoise burrows, or capture of tortoises. Snakes may be secured by gentle application of snake tongs, a stick, or other device. Unlike indigo snakes, pine snakes will often bite when captured or handled. Secured snakes should be enclosed in a cloth bag such as a pillow case or similar ‘snake bag’ constructed for the purpose. Alternatively, for those not wishing to handle snakes directly, snakes may be picked up with a rake or stick and dropped into a plastic garbage can with a secure lid. Snakes in bags can be placed in the same type container used for a gopher tortoise (without the gopher tortoise) and maintained under the same conditions as the tortoises until release. Snakes should be released with gopher tortoises and will make their own way to suitable cover.

Nonlisted Burrow Commensals

The gopher tortoise is considered to be a keystone species, one whose burrows serve as a shelter from stressful environmental conditions (e.g., cold, heat, fire, dryness), as a site for feeding or reproductive activities, or as a permanent microhabitat for some 350-400 other species. Although FWC does not require nonlisted burrow associates to be relocated, these species, if encountered, may be relocated with the gopher tortoises. This practice has important positive implications for gopher tortoises and all the listed burrow associates. For example, cave crickets (*Ceuthophilus* sp) and other burrow-dwelling invertebrates are important prey of gopher frogs and Florida mice. Few or no data exist regarding relocation effectiveness or success for these nonlisted commensals. However, by relocating the entire suite of burrow associates, the biodiversity of recipient sites will likely be enhanced.

Relocation:
Material from the bottom of a gopher tortoise burrow, including specimens of invertebrate commensals and their larvae, may be transported in any suitable container and deposited at the relocation site. In addition, burrow soil used in tortoise relocation containers may be deposited at the recipient site.

Appendix 10. FWC Gopher Tortoise Contact Information

Florida Fish and Wildlife Conservation Commission
DIVISION OF HABITAT AND SPECIES CONSERVATION
GOPHER TORTOISE CONTACT INFORMATION

For inquiries related to the Gopher Tortoise Management Plan, please contact:

Gopher Tortoise Management Plan Coordinator
Division of Habitat and Species Conservation
Species Conservation Planning Section
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street (Mail Station 2A)
Tallahassee, Florida 32399-1600
921-1019Fax: (850)921-1847

For specific inquiries related to gopher tortoise permitting requirements and status, please contact:

Gopher Tortoise Permit Coordinator
Division of Habitat and Species Conservation
Species Conservation Planning Section
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street (Mail Station 2A)
Tallahassee, Florida 32399-1600
(850)921-1031; Fax: (850)488-5297
MyFWC.com/GopherTortoise

Appendix 11. Modified Application Requirements, Recipient Site Criteria, and Handling Procedures for 10 or Fewer Burrows and Burrow or Structure Protection Permits

The 10 or Fewer Burrows permit is available when fewer than 10 burrows or tortoises will be impacted on a development site. These permits are intended to provide a streamlined, less expensive, and faster option for applicants impacting smaller numbers of tortoises when the gopher tortoises are relocated to suitable on-site and off-site recipient areas. Therefore, the amount of information required for applications is reduced. Applications may be checked by FWC staff, and additional information may be required in situations where submitted information is not clear or does not appear to meet criteria for this permit type.

Such permits usually are issued for smaller properties (such as single-family residential lots), but larger properties may also meet the criteria for this permit when development activities are minimal or only small numbers of burrows are present on the property.

Burrow or Structure Protection permits are available when the integrity or utility of an existing structure is jeopardized by one or two burrows and therefore poses a public safety concern (e.g., burrow under a propane tank), or if the safety of the resident tortoise is compromised (e.g., burrows in a grass parking lot, dirt driveway, etc.).

Gopher Tortoise Burrow Surveys

In order for applicants to determine if they meet the criteria for the 10 or Fewer Burrows permit, 100% surveys must be conducted over the entire development footprint and submitted as part of the permit application (rather than after issuance of the permit). The 15% survey protocol for donor sites (Appendix 4) does not apply to this permit type. Survey maps listed in Appendix 4 are recommended but not required for these permit applications, unless specifically requested by FWC staff reviewing such applications. Surveys are not required for applications to relocate tortoises for Burrow or Structure Protection permits.

On-site Recipient Site Criteria

On-site recipient areas under 10 or Fewer Burrows or Burrow or Structure Protection permits do not require separate FWC recipient site permits. Therefore, requirements under permitted long-term protected recipient sites and short-term protected or unprotected recipient sites do not apply. However, recipient sites must be suitable set-aside areas that are not disturbed by construction activities and provide a safe environment that excludes (through temporary fencing or other means) tortoises from development areas until such development activities have been completed or from the area where the compromised burrow(s) is located. Gopher tortoises need access to the following: 1) sufficient areas of forage (herbaceous and low-growing plants including native broadleaf grasses, legumes [bean/pea family], asters, blackberries and other fruits, prickly pear cactus, and a variety of other non-native grasses, except cogon grass); 2)

sandy, well-drained, open (uncanopied), sunny sites for burrows and basking; 3) protection from dogs, cats, other exotic predators, human harassment, and busy roads**.** Such general conditions must remain after development, outside the built footprint on the site. Small sites typically have gopher tortoises that normally "roam" between adjoining neighboring parcels to forage or burrow, so this should be considered as well. The herbaceous vegetation must be maintained (mowing, burning, etc.), and pesticides/herbicides should not be used in the recipient area. If the recipient area does not appear to meet these requirements, please contact FWC staff or an authorized agent to discuss conservation options that may be available.

Stocking criteria (maximum of four per acre, Table 2) do not apply. Under 10 or Fewer Burrows permits, higher on-site recipient area densities are allowed; up to five tortoises may be moved into pens for up to 10 days.

Temporary Penning of Tortoises to Exclude Them from Development Activities

For the purpose of excluding tortoises from the development footprint (for on-site relocations only), tortoises may be penned for up to 10 days, only while bucket traps or other tortoise trapping activities are in progress. Once trapping activities are complete or 10 days have passed, whichever occurs sooner, penned tortoises must be released and effectively excluded from the development footprint using temporary fencing or other means.

Pens must provide partial (but not full) shade, forage, and water. Pens must not be smaller than 100 square feet; larger pens are recommended. Sites that cannot accommodate a recipient area pen of this minimum size or larger will require the applicant to relocate tortoises off-site.

Pens should be constructed ahead of time, so tortoises may be placed in pens as soon as they are captured. Silt fence barriers should be installed around the perimeter of the construction area after all tortoises have been trapped. The silt fence should be buried 8 inches into the ground so tortoises cannot crawl under it. Land clearing should occur immediately after all tortoises are relocated out of harm's way. Tortoises trapped and released before clearing has begun may find their way back to the construction site and be injured or entombed there. Tortoises have a strong homing instinct and will try to return to their burrows if there are not barriers that discourage them from doing so.

Tortoises captured under Burrow or Structure Protection permits must be relocated to the permitted on-site recipient area immediately after capture. Penning is not allowed under this permit type.

Habitat Maps, Soil Map, and Calculated Maximum Allowable Density for Donor and Recipient Sites

Habitat maps, soil maps, and calculated stocking rate (Appendix 3) are not required for this permit application unless gopher tortoises will be relocated to an off-site recipient area or this information is specifically requested by FWC staff reviewing such applications.

Vegetation Sampling on Recipient Areas

Vegetation sampling is not required for on-site relocations under this permit type. Vegetation sampling is required for all off-site recipient areas (see Appendix 7).

Marking and Measuring Gopher Tortoises

When conducting on-site relocations, marking and measuring tortoises is not required. Marking tortoises is required for off-site relocations to permitted recipient sites (see Appendix 5).

Health Considerations

Health evaluations are encouraged for any relocation, but are not required for on-site relocations under this permit type. Off-site relocation requirements are identical to other off-site relocation permits (see Appendix 6).

Appendix 12. Gopher Tortoise Restocking Guidelines for Publicly Owned Conservation Lands (created November 2011)

I. PURPOSE

The original version of the Gopher Tortoise Permitting Guidelines approved in April 2008 did not specifically address restocking public conservation lands. The purpose of the following restocking guidelines is to help bring consistency to the restocking and augmentation of gopher tortoise *(Gopherus polyphemus)* populations on public conservation lands owned, purchased, or managed with funding provided by the State of Florida (including the Water Management Districts and local governments). A team of public conservation land managers representing the Florida Department of Environmental Protection Florida Park Service, Florida Department of Agriculture and Consumer Services Florida Forest Service, the five Water Management Districts, Florida Communities Trust, and Florida Fish and Wildlife Conservation Commission developed these guidelines, in partnership with the Gopher Tortoise Technical Assistance Group, to further the public trust of conserving, restoring, and managing Florida's public lands.

The participants who drafted these guidelines, recognize that the success of gopher tortoise conservation depends both on public and private lands participation. These guidelines do not intend to create unfair competition with privately-owned long-term protected recipient sites, but serve as designated restocking sites to further the third goal of the Gopher Tortoise Management Plan, to restore and maintain secure viable populations of gopher tortoises throughout Florida. Long-term Protected Restocking Sites will be stocked at a lower density (≤2/acre) than Long-term Protected Recipient Sites (≤4/acre) so that tortoises can expand naturally over time. Public conservation lands established as Long-term Protected Recipient Sites under a perpetual conservation easement qualify for the full site evaluation stocking rate.

Lands under local government ownership and those owned by the State of Florida may chose to become a Long-term Protected Recipient Site for receiving relocated tortoises from development sites. These lands may meet the criteria for a long-term protected recipient site (see Permitting Guidelines) and be eligible for a final site evaluation rate of four tortoises per acre. Lands that are designated by the managing entity for restocking (i.e., where tortoises are depleted or no longer exist) must meet the criteria for restocking public conservation lands outlined in these guidelines. For purposes of the Gopher Tortoise Management Plan and Permitting Guidelines, restocking is defined as deliberately moving wild gopher tortoises into protected, managed, suitable habitat where resident densities are extremely low and where the restocked tortoises' future survival and long-term population viability are very likely. We refer to a designated site that meets the criteria for restocking as a recipient or restocking site and is an area of protected, managed, suitable habitat where gopher tortoise populations have been severely depleted or eliminated.

Restocking gopher tortoises to restore severely depleted populations is the preferred population management tool identified in the Gopher Tortoise Management Plan, just as prescribed fire is the premier habitat management tool. Restocking allows for the relocated tortoises to naturally expand into well-managed habitat. Restocking of other imperiled species is generally

undertaken with surplus individuals from protected populations. Restocking is a form of responsible relocation; however, tortoises may also be responsibly relocated to sites with resident tortoises where the carrying capacity has been increased through habitat management to provide sufficient forage for additional tortoises. The restocking strategy outlined in the Gopher Tortoise Management Plan is to relocate gopher tortoises to sites that can benefit from the restoration of this keystone species. The focus will be on establishing viable populations on protected, well-managed lands.

The intent of these Restocking Guidelines is to ensure that restocking of public lands is consistent with the goals and objectives for which the land was acquired and to provide a high conservation value for gopher tortoises in Florida. Furthermore, restocking efforts should be compatible with the uses described in the agency-approved land management plan (e.g., Acquisition and Restoration Council [ARC] approved management plans).

Florida Forever Act

Section 259.105, Florida Statutes, The Florida Forever Act ("Act") as amended by Chapter 2008-229, Laws of Florida, Section 13, directs that "public lands, both existing and to be acquired, identified by the lead land managing agency, in consultation with the Florida Fish and Wildlife Conservation Commission for animals or the Department of Agriculture and Consumer Services for plants, as habitat or potentially restorable habitat for imperiled species, be restored, enhanced, managed, and repopulated as habitat for such species to advance the goals and objectives of imperiled species management consistent with the purposes for which such lands are acquired without restricting other uses identified in the management plan."

Further, Section 259.105, Florida Statutes, the Act states: "As part of the state's role, all state lands that have imperiled species habitat shall include as a consideration in management plan development the restoration, enhancement, management, and repopulation of such habitats. In addition, the lead land managing agency of such state lands may use fees received from public or private entities for projects to offset adverse impacts to imperiled species or their habitat in order to restore, enhance, manage, repopulate, or acquire land and to implement land management plans developed under s. 253.034 or a land management prospectus developed and implemented under this chapter. Such fees shall be deposited into a foundation or fund created by each land management agency under 1s. 372.0215, s. 589.012, or s. 259.032(11) (d), to be used solely to restore, manage, enhance, repopulate, or acquire imperiled species habitat."

II. CRITERIA FOR RECIPIENT SITE SELECTION

Site Specific Restocking and Augmentation Plan

Each gopher tortoise restocking or augmentation project on public conservation lands must have a site-specific plan including the duration of the restocking activity ("restocking plan") that will be followed while conducting the project. The FWC will assess this restocking plan during the permit process to determine if restocking is appropriate for the specified site. The restocking plan shall document: what caused the lack of gopher tortoises on the site; what has been done to overcome the threat that caused the lack of gopher tortoises; site selection analysis (see below);

the restocking process; and post-restocking management, monitoring and reporting. These site-specific restocking plans must be kept on file by the managing agency and should be used as a tool to communicate the details of a project to future managers of the land.

Site Selection Analysis

Specific criteria to consider for selecting potential recipient sites are in the Permitting Guidelines (Recipient Site Permits). Additional protocol and considerations for selecting a site for restocking are included in *Protocol for Assessing Gopher Tortoise Densities on FWC Lands Identified as Potential Restocking Sites* (Appendix 7) of the Gopher Tortoise Management Plan.

Management Considerations

Maintain Natural Communities: The primary means to maintain or restore robust tortoise populations on public conservation lands is to restore or maintain natural communities that provide suitable gopher tortoise habitat in optimal condition. This requires the maintenance or restoration of natural processes including frequent fire, natural hydrology, and control of invasive exotic species (plant and animal). The best sites for restocking are those where natural communities are in the maintenance phase of management. Tortoises use a number of ruderal communities (e.g., abandoned agricultural fields, farm field borders, utility rights-of-way, roadsides, canopy gaps, and bare ground created in forests or pine plantations following thinning or harvest with ongoing or past disturbances). These ruderal communities may be suitable for restocking under certain circumstances; however, it is preferred that tortoises be relocated to appropriate natural communities.

Use Frequent Prescribed Fire: Natural tortoise populations occur in habitat that is fire-maintained. Fire return intervals vary based on natural community and site conditions and must be addressed in the site-specific restocking plan. It is generally accepted that sandhill, pine flatwoods, and dry prairie should be burned on one-year to three-year rotations while scrub, scrubby flatwoods, and coastal strand burn on longer fire return intervals. Fire at recipient sites needs to occur at appropriate intervals to maintain a diverse groundcover, and the restocking plan must address how this will be accomplished. Fire improves the condition of these natural communities by killing non fire-adapted plants, recycling nutrients, clearing out dead and diseased vegetation, promoting plant flowering and fruit production, and fostering new plant growth. The optimal benefits of fire for gopher tortoises are realized when applying prescribed burns in a manner that mimics the natural lightning fire season in early spring.

Natural Systems Management/Other Imperiled Species Considerations: Appropriate management of natural communities will generally benefit most imperiled species populations, including gopher tortoises. Natural systems management across the landscape often negates the need for single species management. In rare cases, conflicting management strategies between imperiled species can exist. For example, management of Florida scrub-jay habitat may require longer fire return intervals or less complete (mosaic) burns than would be desired to produce ideal habitat for gopher tortoises. Appropriate management activities should take into account all imperiled species that may be present.

Ruderal or Disturbed Lands Restoration

Desired Future Condition: To the extent feasible (and excepting infrastructure improvements such as limited roads, buildings, hiking and equestrian trails, camp sites, etc.), the desired future condition for the majority of ruderal and disturbed lands on public conservation lands is restoration to the natural communities that historically occurred on each site. Gopher tortoise restocking and augmentation can be an important part of community restoration since gopher tortoises are a keystone species that provide refuge and nesting habitat for a large number of other species.

Protect Tortoises During Restoration: If tortoises are restocked on ruderal lands that will be restored to their natural condition, all due care must be taken to ensure that tortoises and their burrows are protected, per the Permitting Guidelines. Plans to address this must be in the restocking plan.

Ensure Adequate Forage During Restoration: Tortoises should not be deprived of adequate forage during habitat restoration. If tortoises reside on pastures being restored to native groundcover, restoration must be done in a manner that ensures tortoises have adequate forage.

Compatibility of Uses

Restocking tortoises is not allowed within developed public use areas of management units, or within approved or proposed sites for facilities development (e.g., campgrounds, structures, parking lots).

Habitat Condition

Restocking of tortoises may be undertaken on public conservation lands if the habitat is in suitable condition to support them. During the recipient site permitting process, FWC evaluates proposed recipient sites to determine their suitability and the maximum number of tortoises that can be relocated to each site. Site suitability criteria are divided into two classes, *Acceptable* (minimum acceptable standards) and *Desirable* (highly desirable features).

Desirable conditions for tortoises in most suitable natural communities in Florida include canopy cover of no more than 40% and native herbaceous groundcover at 50% cover or greater. Acceptable conditions for tortoises in most suitable natural communities in Florida include canopy cover of no more than 60% and native herbaceous groundcover at 30% cover or greater. Refer to the Permitting Guidelines, Table 2. *Acceptable and Desirable Criteria Thresholds for Recipient Site Characteristics* for additional criteria used to evaluate recipient sites.

Gopher tortoise recipient sites should be of the same or similar habitat type as the donor site (e.g., tortoises should be relocated from a Sandhill site to a Sandhill site). In general, tortoises should not be introduced onto ruderal lands that did not originally support tortoise habitat (e.g., Hydric Hammock converted to pasture).

Recipient Site Surveys

Tortoise populations in potential recipient sites on public conservation lands must be surveyed to determine whether or not restocking or augmentation is warranted. Public land agencies may

utilize their own staff if they have the appropriate training and experience to conduct surveys and are Authorized Agents, or they may contract with Authorized Gopher Tortoise Agents from the private sector. The required survey protocol is outlined in Gopher Tortoise Permitting Guidelines (Appendix 4). Staff of public conservation lands may decide that surveying more than the required minimum (15% of the potential recipient site) is warranted based on the goals and objectives of the restocking effort.

Population Densities

Tortoise population densities vary considerably between various habitat types and over time. The goal on public conservation lands is to maintain tortoise populations within natural habitat-specific ranges and to allow natural population fluctuation within those ranges.

Restocking must not be used to attempt to create or maintain population levels at a constant maximum or super-abundance. For this purpose, restocking shall occur at only 50% of the site specific maximum allowable density.

Typically, only areas with suitable habitat conditions and low tortoise densities for designated habitat types shall be considered as potential restocking sites on public conservation lands. Additionally, tortoises should not be stocked into a patch of habitat that is adjacent to or contiguous with a patch that has a moderate to high tortoise density. Exceptions are allowable in special circumstances such as when a donor site is immediately adjacent to a management unit recipient site.

Stocking Rates for Restocked Areas

The section, *Types of Permits, Recipient Site Permits* of the Permitting Guidelines, include stocking rates for recipient sites. The Permitting Guidelines Table 2 establishes maximum allowable tortoise restocking rates (Site Evaluation Stocking Rate) for recipient sites having site characteristics that meet "acceptable" or "desirable" criteria. The formula for determining an allowable stocking rate for restocking public conservation lands is different from that outlined for other recipient site permits in Appendix 4. The final stocking rate = (site evaluation stocking rate x 50%) – baseline density for a maximum site density of two tortoises per acre (see Guidelines, Appendix 4). This will allow the population to expand naturally.

The FWC will base the final stocking rate assigned to a management unit on local conditions and objectives. Decisions should be guided by a strategy of establishing stocking rates well below maximum carrying capacity or site evaluation stocking rate, and allowing tortoise populations to expand naturally over time. The maximum allowed site evaluation stocking rate in the Permitting Guidelines is two tortoises per acre for *Acceptable* criteria and four tortoises per acre for *Desirable* criteria. However, for restocking public conservation lands, the number of tortoises per acre shall not exceed 50% of the site evaluation stocking rate. One potential strategy for restocking public conservation lands may be to establish a relatively small recipient area within a larger block of suitable habitat that contains a low density of gopher tortoises. This strategy will allow the maximum allowable gopher tortoise density of the recipient block to be clustered in the smaller recipient area as a means to restock the entire block. Agencies may

employ different strategies that are more efficient with their management purposes; however, FWC will always consider the larger block of suitable habitat as the restocking unit to be permitted.

Stocking rates for ruderal lands (e.g., pasture) should be assigned conservatively and should not exceed the final stocking density of the current habitat or of the natural habitat to which it may be restored. Stocking rates for ruderal lands slated for restoration should consider all necessary restoration treatments and the final community composition and structure. At no time should tortoise densities exceed the capacity of the limiting factors of the habitat community.

III. STANDARD PROCEDURES DURING RESTOCKING, AND HANDLING WITHIN A RESTOCKING SITE

Restocking within a Management Unit

Relocation of tortoises within a public conservation management unit during construction of facilities or for other reasons requires a permit and must be in accordance with the Gopher Tortoise Permitting Guidelines (see *Determining if a Permit is Required*, *Activities Which Require a Permit*). Permitting requirements depend on the number of burrows to be impacted. A permit for "10 or Fewer Burrows" is required if 10 or fewer burrows are to be impacted. A "Conservation Permit" is required if more than 10 gopher tortoise burrows are to be impacted (Permitting Guidelines, Section IV, *Types of Permits*). Mitigation requirements per gopher tortoise are summarized in Table 1 in the Permitting Guidelines.

"Routine" Handling

For the most part, tortoises should be left alone and not handled on public conservation lands unless these actions are associated with a permitted monitoring or development-related relocation project. This does not mean that staff should avoid taking common sense actions to save tortoises under imminent threat, such as moving a tortoise a few feet to remove it from a busy section of road within a management unit. Gopher tortoises should *not* be relocated to other sections of a management unit without an FWC permit.

Minimizing Disease Spread

Animals showing clinical signs of disease are not permitted to be relocated except to FWC-permitted recipient sites and shall not be accepted onto public conservation lands. Health screening for tortoise relocation (or rejection for relocation) onto a management unit will be guided by these Permitting Guidelines (see Appendix 6) and the managing agency's policy.

Decisions on how stringent the public land managing agencies should be in efforts to limit introduction of novel diseases or strains of diseases (such as requiring blood samples for URTD testing) should be made on a case-by-case basis by the recipient site manager, using existing knowledge of disease strains within a management unit's (or adjacent conservation land's) existing population.

Maintaining Donor Site Demographic Conditions

If warranted by the approved stocking rate, it is required that entire colonies (juvenile through adults) be relocated together into the same management unit or recipient site. When donor populations are too large and require more than one recipient site, a representative subsample that reflects the demographic condition, including sex and age ratio, of the donor site should be selected for relocation to each recipient site. Benefits of this approach include less stress on the animals and increased site fidelity.

Relocation Distances

To minimize stress to animals and conserve local genetic stock, it is preferred that relocated tortoises be moved from a donor site that is in close proximity to the recipient site (e.g., less than 100 miles). To the degree feasible, select suitable donor sites to conserve known genetic assemblages of tortoises in the state (using the best available data).

Commensal Species

Many other species depend on gopher tortoises and their burrows. Therefore, consideration should be given to relocating commensal species from donor populations, especially if tortoises have been extirpated (or nearly so) from the recipient site. Decisions to relocate commensals along with "their" tortoises will be made on a case-by-case basis, with recommendations and justifications discussed in the associated site-specific restocking plan. Federal and state law protects various commensal species and provides species-specific guidelines that should be followed when relocating these species to public conservation lands. Commensal species must not be relocated outside their known natural historic ranges or into management units where the species in question is already abundant. Additional information can be found in Appendix 9 of the Permitting Guidelines. Indigo snakes and other federally-listed species may not be relocated without obtaining federal authorization.

IV. CONSIDERATIONS FOR RECIPIENT AND RESTOCKING SITE MANAGEMENT

Permitting Requirements

A permit from FWC is required to move or receive gopher tortoises for purposes of restocking. Long-term Protected Restocking Sites must meet the criteria outlined in the Gopher Tortoise Permitting Guidelines (April 2008, as amended). Sites proposed as restocking sites must apply for and obtain a Long-term Protected Restocking Site permit. Requirements for this permit are similar to a long-term recipient site permit; but may contain slight differences that are specific to publicly-owned land. Long-term Protected Restocking Sites shall be stocked at no more than 50% of the site evaluation stocking rate. Public conservation lands established as regular recipient sites and under a perpetual conservation easement qualify for the full site evaluation stocking rate. See the Permitting Guidelines for additional requirements and criteria.

Protection of Land

Public conservation lands designated as restocking sites must be protected by one of the following: a permanent FWC conservation easement; a modification of an existing conservation easement with FWC as the grantee; or, a revised land lease that includes standard language to

ensure management and protection of land for gopher tortoises (i.e., Board of Trustee's lands). The revised land lease must also include language for an automatic renewal clause to continue the agency's commitment to manage the property for gopher tortoises, remedies if the habitat is not managed appropriately including actions to be taken, and reference to the Acquisition and Restoration Council's-approved management plan for the specific site designated for restocking. These details, including the specific requirements for financial assurances (below), will be outlined in a Memorandum of Understanding (MOU) between the lead managing agency and FWC, and include a timeframe when the revisions to the plan and lease must be completed. The length of the MOU will be consistent with the length of the land lease. FWC-accepted MOU template language is under development and will be provided.

Financial assurances

Financial assurance requirements for public conservation lands are consistent with those requirements outlined in the Gopher Tortoise Permitting Guidelines (April 2008, as amended). The purpose of creating a financial assurance is to establish a fund that helps to ensure that the property to which the gopher tortoises are moved to for restocking are managed appropriately into the future, should other funding sources no longer be available. Interest generated from the endowment or trust, once fully established, can be used to enhance site management activities; however the principle may not be spent. The amount required to establish the required principal in the endowment will be based on management costs submitted using the template provided in Worksheet 1 below. This is consistent with the current financial assurance requirements for all Long-term Protected Recipient Sites. Expenditure of those funds should be limited to the properties that generated them, or to enhance or restore other gopher tortoise habitat. Public agencies may establish a trust/endowment held by a 3rd party such as a Citizens Support Organization (CSO) or other non-profit organization.

Gopher Tortoise Cost Accounting

For public conservation lands, Gopher Tortoise Cost Accounting (See Gopher Tortoise Cost Accounting template below) must be used and submitted as part of the restocking plan. This accounting method will be used to determine any fee amount the land managing agency may charge to receive tortoises from donor site projects.

Mitigation Contributions

Mitigation contributions are required for all gopher tortoise permits. Mitigation amounts will be commensurate with those outlined in Table 1 of the Gopher Tortoise Permitting Guidelines.

Site Evaluation Stocking Rate

Long-term Protected Restocking Sites shall be stocked at no more than 50% of the site evaluation stocking rate. Public conservation lands established as regular Long-term Protected Recipient Sites and under a perpetual conservation easement qualify for the full site evaluation stocking rate.

Guidance on Ground Disturbing Activities

Permits are not required for bona fide agricultural, silvicultural, and wildlife management activities. For more information about these and other activities that do not require a permit, see

Section II., Determining if a Permit is Required, of the Gopher Tortoise Permitting Guidelines. However, the goal on public conservation lands should be that negative impacts to tortoises and their burrows are minimized during restoration and management. If management activities are found to create negative impacts to tortoises or burrows, the activity should be stopped and reassessed to determine how to reduce or eliminate the impacts.

Protect Tortoises When Using Heavy Equipment:
When mechanically treating vegetation or harvesting timber with heavy equipment in occupied tortoise habitat, the tortoises and their burrows must be protected to the extent feasible (e.g., by flagging and avoiding burrow entrances). Ideally, heavy equipment use should be scheduled during cooler months (November through March) to minimize direct impacts to tortoises that are active above ground, but these activities may be performed in other months as necessary.

Avoid Using Heavy Equipment in Tortoise Concentrations:
Gopher tortoises are not randomly distributed on the landscape. Many gopher tortoise populations tend to have clumps of higher densities. Avoid or minimize roller-chopping or use of heavy equipment in areas with high burrow concentrations. An exception would be when no other reasonable alternative is available to achieve vegetation management goals (e.g., reduction of unnaturally dominant saw palmetto).

Protect Tortoises When Mowing:
In general, when mowing vegetation in natural areas occupied by tortoises, blades or cutters should be set no lower than 18 inches above the ground to avoid injury to tortoises. Mowing of turf grass on road shoulders in tortoise habitat should be kept to a minimum width, and close attention is required to avoid injuring tortoises or damaging their burrows.

Monitoring and Reporting

Recipient site managers are required to submit a summary to FWC of habitat management conducted, and the results of habitat monitoring and tortoise population surveys (see Appendix 7). Monitoring techniques will be outlined in the site-specific restocking plan and should follow guidelines and recommendations in the Gopher Tortoise Permitting Guidelines and the Gopher Tortoise Management Plan.

Gopher Tortoise Cost Accounting

WORKSHEET 1. Categories of long-term, ongoing land management costs

Upland Activities	Cost/Acre	Cost/Acre/Year	Assumptions/Frequency
Burning	$	$	
Fencing	$	$	
Firelines	$	$	
Security	$	$	
Vegetation management	$	$	
Roads	$	$	
Administrative	$	$	
Invasive Plant & Animal Management	$	$	
Monitoring and reporting	$	$	
Vegetation monitoring	$	$	
Equipment (If not already included in other costs above)	$	$	
Payment in Lieu of Taxes ("PILT" as applicable)	$	$	
Other (as specified by the land managing agency)	$	$	
Total		$	

Annual Cost Figuring a % split uplands to wetlands $
Endowment required figuring a 4% return on investment $

WORKSHEET 2. Long-term *and* one-time costs compiled (example)

Acres		Total
Land management endowment/acre (*long-term/ongoing costs carried over from Worksheet 1*)	$	$
Easement value/acre	$	$
Temporary enclosures	$	$
Other fencing	$	$
Authorized agent permit	$	$
Recipient/restocking site permit (incl. permit app prep)	$	$
Mark, transport, release or GTs (either by consultant or agency)	$	$
Loss of opportunity (silvicultural, recreation, etc.)	$	$
Administrative	$	$
Per acre total cost	$	$
Total	$	$
Land managing agency fee per tortoise considering 2 gopher tortoises per acre	$	$

Appendix 13. Criteria for Gopher Tortoise Recipient Sites to Qualify as Research Sites (created November 2009)

The FWC has historically issued Scientific Collecting permits through the Protected Species Permit Coordinator for research projects. The gopher tortoise permitting program has similarly allowed approved recipient sites to be used solely as research recipient sites for tortoises relocated from developments. Research recipient sites were not specifically addressed in the Gopher Tortoise Management Plan ("Plan") or in the original version of the Gopher Tortoise Permitting Guidelines ("Permitting Guidelines"). This document outlines the criteria and process for research projects obtaining Research Recipient Site permits and Scientific Collecting permits for the relocation of gopher tortoises displaced by development.

The Research Recipient Site permit option is available when a previous or concurrent Scientific Collection permit has been issued for research that requires relocations to an unpermitted recipient area.

Criteria for Issuance of a Gopher Tortoise Research Recipient Site Permit

- Gopher Tortoise Research Recipient Site permits will only be issued to sites specified as part of a research project permitted under a previously issued or concurrently issued Scientific Collecting permit.
- Recipient Site permit applications will be required for Research Recipient Site permits and will subsequently be entered into the online permitting system by FWC staff.
- Research recipient sites should meet acceptable size and habitat criteria for recipient sites protected by a perpetual conservation easement; however, certain criteria may be waived according to the research needs outlined in the Scientific Collecting permit application. Appropriate documentation (e.g., soils and habitat maps) is required unless the research design demonstrates the need to waive such criteria. Like all other recipient site permit applications, a site habitat management plan is required (Permitting Guidelines, Appendix 3) and must be submitted as part of the permit application, (e.g., specific requirements regarding property size or conservation easements).
- The number of tortoises relocated to research recipient sites will be limited to the final stocking densities outlined in the Permitting Guidelines for recipient sites. Final stocking densities exceeding the two-per-acre standard (with 0.5 per acre for each site characteristic that is satisfied, up to a maximum of two additional) will be considered only if the applicant can demonstrate in the research proposal that the scientific design of the research depends on an increased density. If an increased final stocking density is permitted under the Scientific Collecting permit, FWC staff may require that tortoises be relocated upon completion of the project to achieve a sustainable final stocking density, or the permittee may be required to provide additional adjacent acreage for tortoise dispersal upon completion of the research project.
- As for other recipient site permit applications, a $500 mitigation contribution will be required for this permit.
- As with other recipient sites, an Authorized Gopher Tortoise Agent is required to perform initial surveys and monitoring associated with Research Recipient Site permits.

- The Research Recipient Site permit does not authorize an individual to conduct research. This permit authorizes the landowner to accept relocated tortoises for scientific purposes. Multiple research projects (each with separate or the same Scientific Collecting permit) may be allowed on a single research recipient site.
- Landowners accepting tortoises under the Research Recipient Site permit will be required to submit monitoring reports of management activities for recipient sites, as outlined in the Permitting Guidelines.
- Only gopher tortoises that are designated as part of a permitted research project will be accepted to a research recipient site.
- When the permitted research is concluded, or the Scientific Collecting permit has expired or becomes invalid, the research status is no longer afforded to the recipient site. If the landowner wishes to continue to receive gopher tortoises and has capacity to receive additional tortoises following the conclusion of the research project, the property owner must apply for, and receive, a new Recipient Site permit prior to accepting any additional tortoises.

Requirements for Scientific Collecting Permits that involve Research Recipient Sites

Any Scientific Collecting permit application submitted for research involving a Research Site permit must demonstrate that the proposed research project coincides with the needs identified in the list of research topics in the Plan, or that the research project otherwise contributes to the broader management plan goals and objectives. The FWC has the discretion to limit the number of research recipient sites for a particular study topic.

- Funding sources for research project(s) must be secured prior to issuance of a Scientific Collecting permit authorizing receipt of relocated gopher tortoises.
- A letter will be required from the landowner that acknowledges and allows this research on the specified property.
- Applicants for a Scientific Collecting permit involving the use of gopher tortoises relocated from development sites will be required to submit a copy of either the application for the Research Recipient Site permit or a letter of intent from the landowner to apply for the Research Recipient Site permit.
- Applicants for a Scientific Collecting permit involving research recipient sites will be required to submit a summary of the proposed relocations for each designated unit.
- Individuals working with relocated gopher tortoises under a Scientific Collecting permit will be required to submit progress reports to FWC over the course of the project. Upon completion of the research project, a final report must be submitted to FWC along with any publications resulting from the permitted research.
- Gopher tortoises cannot be relocated to a research recipient site until both a Scientific Collecting permit and a Research Recipient Site permit have been issued by FWC.

Process of Issuance of a Research Recipient Site Permit

Generally, the initiation of a research project begins with the submission of a Scientific Collecting permit application to the Protected Species Permit Coordinator. Because of the

additional coordination required to issue a concurrent Scientific Collecting permit and Research Recipient Site permit, the applicant for the Scientific Collecting permit may be advised to submit a waiver of the statutory application processing time requirements as part of a request for additional information (RAI).

- The owner of the potential research recipient site submits an application to the Gopher Tortoise Permitting Coordinator's office.
- FWC staff will ensure that the applications for both permit types meet all regulatory requirements and Plan research goals during the review period.
- If the Research Recipient Site permit is issued, the regional Gopher Tortoise Conservation Biologist will enter the site information into the online permitting system.

Issuance of a Research Recipient Site permit (or associated Scientific Collecting permit) does not imply that FWC will be providing any funds to support gopher tortoise research conducted at that site.

Mitigation Contributions for Relocations to Research Recipient Sites

The FWC recognizes the conservation value of new scientific findings regarding the management and relocation of gopher tortoises. The value of the research may be considered in determining the mitigation contributions for displaced tortoises relocated to a gopher tortoise research recipient site. The mitigation contributions associated with these sites may follow the mitigation structures of recipient sites with conservation easements or other enhanced conservation value to encourage, or at least not financially hinder, relocations to research recipient sites.

Brevard
SCH - CORPS - NEPA
2012 - 1814

COUNTY: BREVARD

DATE: 4/20/2012
COMMENTS DUE DATE: 6/1/2012
CLEARANCE DUE DATE: 6/19/2012
SAI#: FL201204206200C
REFER TO: FL200703223171C

MESSAGE:

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNIT	RPCS & LOC GOVS
ENVIRONMENTAL PROTECTION	ST. JOHNS RIVER WMD		
FISH and WILDLIFE COMMISSION			
X STATE			

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- _ **Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.**
- X **Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.**
- _ **Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.**
- _ **Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.**

Project Description:

DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT CORPS OF ENGINEERS - CANAVERAL HARBOR INTEGRATED SECTION 203 NAVIGATION STUDY REPORT AND DRAFT ENVIRONMENTAL ASSESSMENT - CAPE CANAVERAL, BREVARD COUNTY, FLORIDA.

To: Florida State Clearinghouse

AGENCY CONTACT AND COORDINATOR (SCH)
3900 COMMONWEALTH BOULEVARD MS-47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

EO. 12372/NEPA

- ☑ No Comment
- ☐ Comment Attached
- ☐ Not Applicable

Federal Consistency

- ☑ No Comment/Consistent
- ☐ Consistent/Comments Attached
- ☐ Inconsistent/Comments Attached
- ☐ Not Applicable

From:

Division/Bureau: Historical Resources

Reviewer: Michael Hart Laura A. Kammerer Deputy SHPO

Date: 5/9/12 5-10-2012

RECEIVED
MAY 14 2012
DEP Office of
Intergovt'l Programs

RECEIVED
2012 APR 24 P 1:36
BUREAU OF
HISTORIC PRESERVATION

List of Public and Agency Comments on Draft Feasibility Report and Draft EA with Response/Action

Organization/ Agency	Last Name	First Name	Mailing Address	Town	State	Zip		Medium		Comment	Draft Response
							Dated	Email	Letter		
United States Environmental Protection Agency	Mueller	Heinz	Region 4 Atlanta Federal Center 61 Forsyth Street	Atlanta	GA	30303-8960	9-Jun-12		X	The Corps published an Intent to Prepare a Draft EIS for the Port Canaveral Navigation Improvements Section 203 Feasibility Study Located in Brevard County, FL. In this notice, the Corps indicated an EIS was necessary. The final EA/FNSI should clarify why there was a change in the level of NEPA documentation.	Concur. Explanation has been added to Section 8.3.
										EPA disagrees with the draft EA's (Section 2.6.1) finding that the 2005 sediment evaluation of the harbor as the most recent. The final EA/FNSI should discuss the results of the 2010 comprehensive sediment testing of the entire harbor.	Concur. Information has been updated in this Section.
										The draft EA indicates the Section 103 Evaluation will be conducted during the pre-construction engineering and design phase. EPA encourages starting this evaluation at the earliest possible phase with the allocation of one year, at a minimum, for testing and evaluation of the material.	Concur. Study is underway.
										According to the 2012 Site Management and Monitoring Plan (SMMP), which is not discussed in the draft EA, the 10 year projected capacity should not exceed half the estimated remaining site capacity. The draft EA indicates the ten-year projected volume (9.75 million cy) including the proposed action and its associated additional maintenance dredging exceeds half of the remaining estimated capacity (18.4 million cy). Consequently, the 2012 SMMP requires an assessment of the proposed action's impacts upon the ODMDS' capacity requirements.	The recommended plan estimates an initial new work placement of 3.1 MCY in the ODMDS. This volume has been addressed in the approved February 2012 Canaveral Harbor ODMDS SMMP Table 4 Capacity Estimate Based on Existing Bathymetry and a Minimum Allowance Depth of -40 feet (MLLW). The SMMP states "Until the capacity of the ODMDS has been determined utilizing USACE approved models, use of the ODMDS should not exceed half the estimated remaining site capacity (9.2 million cubic yards). This will allow sufficient time for a more detailed assessment of the site capacity, implementation of management options, or environmental studies for site expansion to be conducted if necessary without adversely impacting maintenance dredging at the Port. Based on the current estimates, exceedence of this volume is not anticipated. Should the approval of any project case the exceedence of this value, an analysis of the remaining capacity of the ODMDS will have to be conducted by the USACE or permit applicant, as the case may be, prior to approval of ocean disposal of the project. The analysis should demonstrate that more than half the remaining capacity will not be consumed within the next 10 years from the date of the analysis." The 3.1 MCY new works dredging placement has been included on the existing In Situ capacity analysis. The estimate of the annual maintenance dredging volumes of the civil and military portions of the harbor would exceed half of the remaining estimated ODMDS site capacity by approximately 3%. Recently constructed structural improvements to the harbor jetties along with the recent installation of a sand trap and projected alternative beneficial uses of dredged material are expected to support a further downward trend in annual disposal volumes in the ODMDS. It is recommended that the requested disposal mound modeling be deferred until after initial placement of the new work material to ensure in situ conditions are established for the material placed. If required at a future date, impacts on the site's capacity could be assessed through management alternatives, evaluation of capacity based on bathymetric surveys, or through an assessment using the Corps' MDFATE or MPFATE modeling.
										The EA does not address whether the proposed harbor deepening may affect any existing pipelines or utility infrastructure in the harbor. EPA is aware the Corps has pipeline and other utility crossing in waterways burial guidance. Compliance with this guidance may have resulted in utility infrastucture within the depth range proposed for dredging. Because the EA does not appear to indicate this issue has been investigated and appropriately addressed, the final EA should address and discuss it.	The utilities information is included in the Engineering Appendix Section 6.3 - Impacts to Existing Utilities provides a listing of all existing pipeline and utility infrastructure conduits in the vicinity of the project. All of the plan alternatives evaluated were determined to have no impact or require any remedial relocation actions for these existing features.

List of Public and Agency Comments on Draft Feasibility Report and Draft EA with Response/Action

Organization/ Agency	Last Name	First Name	Mailing Address	Town	State	Zip		Medium		Comment	Draft Response
							Dated	Email	Letter		
Seminole Tribe of Florida Tribal Historic Preservation Office	Backhouse	Paul	30290 Josie Billie HWY	Cleiston	FL	33440	9-May-12		X	No objection. Please notify the Seminole Tribe if cultural resources which are potentially ancestral or historically relevant to the Seminole Tribe of Florida are discovered.	Noted. No action required.
NOAA National Marine Fisheries Service	Fay	Virginia	263 13th Avenue South	St Peterst	FL	33701-5505	6/13/2012		X	Based on the information provided, NMFS concludes the project would not adversely impact EFH and no EFH conservation recommendations are provided.	Noted. No action required.
NOAA National Marine Fisheries Service	Crabtree	Roy	263 13th Avenue South	St Peterst	FL	33701-5505	5/14/2012		X	Determined that the project may affect, but is not likely to advesely affect, sea turtles, smalltooth sawfish, or the North Atlantic right whale.	Noted. Recommendations provided in the letter were incorporated into Section 7.2.8 of the report.
US Fish and Wildlife Service	Hankla	David	7915 Baymeadows Way, Suite 200	Jacksonv ille	FL	32256-7517	6/29/2012		X	Concur with determination effects and protection measures for the Eastern indigo snake.	Noted. Standard protection measures will be incorporated into the project plans and specifications.
										Do not agree that the standard manatee conditions alone are sufficient to reduce probability of adverse effects to manatees from clamshell dredging to insignificant and discountable levels. FWS proposes additional protection measures (provided) should be applied to this work to reduce the probability of take of a manatee to insignificant or discountable	Noted. The additional protection measures will be implented during the construction phase. These measures were incorporated into Section 7.2.8 of the report.
										Provides a non-binding Conservation Recommendation that night vision technology be available with infrared light intensification during nighttime clamshell dredging.	Noted. The recommendation will be considered during the construction phase.
										Concurs with the Corps' incorporation of light reduction measures into its project plans to reduce potential impoacts to nesting or hatchling sea turtles or the southeastern beach	Noted. No action required.
										Believe that the project will have minor, temporary effects on natural resources, and no significant, long-term effects to other Federal Trust and natural resources will occur. FWS has no objection to this work based upon their review of the project pursuant to the Fish and Wildlife Coordination Act.	Noted. No action required.
US Coast Guard	Allan, Jr.	T.G.	4200 Ocean Street	Atlantic Beach	FL	32223-2416	6/21/2012		X	Impacts to Federal Aids to Navigation. Table 6-35, Volume I of the report reflects that $2.75M for Aids to Navigation is to be "provided and funded by the United States Coast Guard." Given the current federal fiscal environment, it is difficult to predict the Coast Guard's resource availability to begin work related to this project. All plans should be forwarded to Coast Guard District Seven Waterways Management Division for comprehensive review and determination of existing and proposed ATON, current cost estimating, construction planning, environmental review, funding determination and consideration for adding two proposed outbound range structures. The Coast Guard reserves the right to final approval under the Ports and Waterways Safety Act of 1972, as amended by the Port and Tanker Safety Act of 1978.	Noted. Footnote #2 to table 6-35 has been revised as follows: 2 Plans for proposed Aids to Navigation will be forwarded to Coast Guard District Seven Waterways Management Division for comprehensive review and determination
										Coast Guard Base Canaveral Property: Table 6-3, Volume I of the report reflects a future North Cargo Pier (NCP) 7, which would require the relocation of Coast Guard Station Port Canaveral. In an e-mail dated 24 June 20 11, between Port Canaveral CEO Stan Payne and Mr. Michael Lesinski of the Coast Guard's Civil Engineering Unit Miami; Mr. Payne noted that the cost of relocating Coast Guard Station Port Canaveral would clearly outweigh the benefits. As a matter of closure the report should explicitly state that none of the report's findings are predicated on the relocation of Coast Guard Station Port Canaveral.	Concur. The following text has been added to section 6.7.5 Recommended Plan: “Neither the Recommended Plan, nor any of the evaluated alternatives, requires the relocation of Coast Guard Station Port Canaveral.” In addition, drawings have been revised to not show changes to Coast Guard Station Port Canaveral.

List of Public and Agency Comments on Draft Feasibility Report and Draft EA with Response/Action

Organization/ Agency	Last Name	First Name	Mailing Address	Town	State	Zip		Medium		Comment	Draft Response
							Dated	Email	Letter		
Department of the Air Force, 45th Space Wing (AFSPC)	Cotton	General Ant	45 SW/CC 1201 Edward H. White II St.	Patrick AFB	FL	32925-3299	6/28/2012		X	Add in the appropriate location, "A plan will be created by the CPA and/or US Army Corps of Engineers to address how vessel movements in and out of the middle turning basin will be achieved during construction. The 45 SW will request Explosive Site Plan (ESP) approval from the Department of Defense Explosives Safety Board (DDESB) as required to account for any changes in configuration to the channel adjacent to Air Force Property."	Concur. Recommended text added to section 6.7.2 Recommended Plan Construction.
										We are still finalizing a new property boundary survey so the acreage calculations in the report may not be accurate but that can be worked/updated as part of the formal request for use of AF property after funding for the project has been approved	Concur. The following text has been added as a footnote to "approximately 8 acres" found in section 6.7.5 Recommended Real Estate Considerations: 'Final acreage will be determined by a new property boundary survey, which will be a part of the formal request for Air Force property. The 8 acres used in this analysis may be a slightly high estimate."
										Modify the study/EA language to indicate that "while the USACE upland containment site on the USAF property may be the preferred site for spoil disposal, the USAF has not agreed to use of that area for that purpose and would have to further evaluate that option in light of other competing interests for that same disposal area as well as test results on the composition of the spoil to be disposed of."	Action Taken: The text in section 6.7.3 Dredged and Upland Material Management Plan has been revised to include the following: "The remaining 354,069 CY from existing grade down to elevation -13 MLLW is designated for disposal in the adjacent upland disposal site, pending forma Air Force approval for use of that area for material placement. Air Force approval would be based on an evaluation of competing interests and on test results on the composition of the spoils to be placed."
										Engineering Annex, pgs. 56-57; Para 1.8.2 Middle Turning Basin sub-para: Add the following to end of the paragraph, "Work performed near under-channel communications lines, and related communications manholes will require careful coordination with the 45th Space Wing and AT&T to avoid service interruptions. This channel widening project will bear the cost to mitigate, replace, or relocate any impacted federal structure, utilities, or communications infrastructure.	Concur. Change made as requested.
Department of the Air Force, 45th Space Wing (AFSPC) (Cont.)	Cotton	General Ant	45 SW/CC 1201 Edward H. White II St.	Patrick AFB	FL	32925-3299	6/28/2012		X	Engineering Annex, pgs. 56-57; Para 1.8.2 Middle Turning Basin sub-para: This same portion of the report does mention the need to comply with the shoreline setback distance required by USAF regulations to the existing Bldg 1064 and the CPA previously produced site sketch showing how that setback distance could be achieved. Since then our regulations have been changed and now require an 86 foot set-back (versus 85 feet as shown in the previous CPA-provided site sketch), measured from the building to the mean high-water mark	Concur. Change made as requested.
										The NEPA specific sections are noted with an asterisk. Recommend Chap 5 "Formulation and Evaluation of Alternative Plans" and Chap 8 "Public Involvement, Review, and Consultation" be marked with asterisks as well.	Concur. Change made to the Table of Contents as requested.
										Chap 1 & 2, Fig 1-1/ 2-1 and Fig 1-2/ 2-2: The referenced figures are duplicative.	No action taken. Concur that figures are duplicative, but they have been requested by previous reviewers.
										Page 2-4, Sec 2.1.5: The water quality discussion is based on information that is now 6 yrs old, although the section reports that ongoing water quality monitoring is being performed. Recommend updating section to reflect current condition, particularly since that information is presumably available.	Concur. The information has been updated.

List of Public and Agency Comments on Draft Feasibility Report and Draft EA with Response/Action

Organization/ Agency	Last Name	First Name	Mailing Address	Town	State	Zip		Medium		Comment	Draft Response
							Dated	Email	Letter		
										Page 2-47, Sec 2.6.1: There is a statement in this section, "Concentrations of metals in the samples were typical of coastal waters, although some concentrations were above those of reference stations (Anamar 2005)" Please indicate the significance of this statement: for example, that regulatory standards were exceeded.	Concur. The information has been updated to include results of more recent surveys conducted in 2009-2010, and additional explanation has been included.
										Chap 5, Sec 5.1.3 and 5.2: Planning Objectives and Plan Formulation Criteria are presented in the referenced sections. Which criteria were used to select the preferred alternative?	No action required. The objectives identified in Table 5-2 were used as a preliminary screening of measures. The measures, which meet the objectives, were then combined into alternatives; therefore all of the alternatives meet the criteria listed in Table 5-2. The final selection of a preferred alternative was based on the contribution to national economic development (NED) see Table 6-24 and on the Summary of Accounts evaluation (section 6.6).
										Page 6-5+, Fig 6-1 to 6-3: The legend identifying the alternatives on the figures do not match the names of the alternatives in the text. Recommend not using terms "Plan A" or "Plan B" because the text refers to Plan 1 and Plan 2. Please rectify on the figures which widening plan is Plan 1 and which is Plan 2.	Concur. Changes made as requested.
										Page 6-43, Sec 6.7.1: Recommend providing an explanation that the "Recommended Plan" referred to in Sec 6 is equivalent to the "Preferred Alternative" in Sec 7. This provides a link between the formulation of alternatives in Sec 6 and the final alternatives selected to be carried forward for analysis in Sec 7.	Concur. The following text has been added to section 6.7 Recommended Plan: "The Recommended plan is identified as the Preferred Alternative in Section 7: Environmental Consequences."
										Page 7-7 and 7-12, Sec 7.2.8.2 and 7.2.14.2: Mitigation measures are generally referred to in the text for potential construction effects to sea turtle hatchlings and to offset turbidity. Please specify the specific mitigation measures.	Concur. Mitigative measures recommended in the USFWS' June 29, 2012 ESA concurrence letter were incorporated into Section 7.2.8 of the report. Additional measures related to water quality will be identified during the FDEP permitting phase.
										Page 7-13, Sec 7.2.16.1: There is a statement in this section, "Brevard County is *not* classified by EPA as an attainment/maintenance area…" Should this read "Brevard County is classified by EPA as an attainment/maintenance area…"	Concur. The text has been corrected.
										Page 7-24, Sec 7.2.35.4: There is a reference to "Section 10 consultation" having been initiated in accordance with the NHPA. Shouldn't this be Sec 106?	Concur. The text has been corrected.
										General comment: Recommend chart or table listing permits, licenses, and authorizations that need to be obtained to accomplish the project to ensure compliance with 40 CFR 1502.25	Do not concur. The permits, licenses, and authorizations have already been identified in Section 7 of the document.
										General comment: Occupational safety and health impacts have not been assessed in accordance with 32 CFR 989.27	Concur. Section 7.4 was added and indicates that the project will comply with the Corps' occupational health and safety requirements.
										General comment: Please delete references in the document to the US Air Force being a cooperating agency.	Concur. These references have been deleted.
										FONSI: The Proposed Action is not specifically defined in the FONSI. Please define the proposed action.	Concur. The Proposed Action will be described in greater detail in the Final FONSI.

List of Public and Agency Comments on Draft Feasibility Report and Draft EA with Response/Action

Organization/ Agency	Last Name	First Name	Mailing Address	Town	State	Zip		Medium		Comment	Draft Response
							Dated	Email	Letter		
Florida Department of Environmental Protection	Mann	Sally	3900 Commonwealth Blvd.	Tallahass	FL	32399-3000	19-Jun-12		X	FDEP (Environmental Protection): The Central District Office of DEP in Orlando should be contacted for any new or modified docks and any upland construction projects requiring stormwater management. Widening and deepening would be permitted through DEP's Bureau of Beaches and Shores.	Noted. The Corps will contact the appropriate office of FDEP during permitting.
St. Johns River Water Management District										ST. JOHNS RIVER WATER MANAGEMENT DISTRICT: The project falls under the jurisdiction of DEP.	Noted. The Corps will contact the appropriate office of FDEP during permitting.
East Central Florida Regional Planning Council										EAST CENTRAL FLORIDA REGIONAL PLANNING COUNCIL: The proposed project is found to be consistent with the goals, policies, and objectives of the East Central Florida Regional Planning Council	Noted.
FDEP Clearinghouse										FDEP CLEARINGHOUSE: At this stage, the proposed project is consistent with the Federal Coastal Management Program.	Noted. No action required.
Florida Fish and Wildlife Conservation Commission	Sanders	Scott	620 South Meridian Street	Tallahass	FL	32399-1600	6/15/2012		X	Page 2-68 of the draft EA includes right whale sighting data for "Offshore surveys flown off the coast of Florida and southeastern Georgia from 1996 to 2001…". This information appears outdated and corresponds to sightings at more than 30 nautical miles offshore, which is not relevant for the project at Port Canaveral. Aerial surveys have been conducted near Port Canaveral since 2001 and these surveys are available from the North Atlantic Right Whale Consortium (http://www.narwc.org). We recommend updating right whale sighting data, as appropriate for this area, in the Final EA.	Concur. The information in this section was modified regarding the aerial surveys, and references to the surveys further offshore were removed from the document.
										Page 2-68 also includes the statement "there have been few incidences of right whale-ship incidents along the Florida Atlantic coast, with none of them being reported as far south as Brevard County." This statement should be corrected to reflect that there have been three reported whale-vessel incidents involving five different vessels directly off Port Canaveral (unpublished data, see FWRI attached).	Concur. The changes have been made as requested.
										Information related to the anticipated number of disposal transits to the ODMDS, and the timing of the transits is missing in the DEA but is a critical consideration in reducing the risks of potential impacts from these transits to the North American Right Whales; therefore, we request additional information regarding transit timing and numbers be included in the Final EA for later review.	Concur. This information has been included in the Final EA as requested.
										The DEA states (on page 2-68) that the Port has participated and supported the Right Whale Monitoring program for many years, however, the measures to avoid, minimize and mitigate this project's effect on right whales were not included in Section 7.3 (page 7-28). At a minimum, we recommend that the following conservation measures for North Atlantic Right Whales be included to address potential impacts.	The Corps will comply with North Atlantic right whale protection measures as identified in the Section 7 NMFS May 14, 2012, consultation letter, including the federal speed zone rule (73 FR 60173, October 2008).
										A discussion of manatee data for Brevard County and in the vicinity of the Port was provided on page 2-65 of the DEA. We recommend updating the manatee mortality data. We also suggest that the maps included in the DEA match the data discussions in the text.	Concur. The mortality data in Section 2.6.8 has been updated. The figure showing manatee sightings and mortality was removed for clarity.

List of Public and Agency Comments on Draft Feasibility Report and Draft EA with Response/Action

Organization/ Agency	Last Name	First Name	Mailing Address	Town	State	Zip		Medium		Comment	Draft Response
							Dated	Email	Letter		
										Section 2.6.8 includes a statement that "Brevard County also has one of the highest manatee mortality rates in the state, due to high concentration of manatees combined with the popularity of recreational boating along the eastern coast of Florida (Figure 2-11), although the proportion of fatalities caused by watercraft is low." This statement is inaccurate and confusing, and should be revised. A more accurate statement could simply read "Brevard County also has one of the highest mortality rates in the state."	Concur. The changes have been made as requested.
										Figure 2-11 of the DEA refers to sea turtle nesting. This figure should be revised to Figure 2-13 and referenced later in the paragraph when discussing the specific data and/or re-organized to avoid confusion.	Concur. The changes have been made as requested.
										The sentence referring to FWRI 2007 data should read "Between 1974 and 2007, 1191 manatee deaths have been reported, 265 of which were from watercraft-related death." We alo suggest revising the ealier statements related to the proportion of fatalities caused by watercraft to state that since the percentage is approximately 22%, which is average (not low as presently indicated). We also recommend not separating years 2008 and 2009 from the rest of the dataset and combining the data as one discussion, or alternatively, remove this data. In addition, the 2008 data discussion of watercraft-related deaths found on Page 2-65 of the DEA should read 10, not 11 and the total in the vicinity of the Port should also read 43, not 44.	Concur. The changes have been made to Section 2.6.8 as requested.
Florida Fish and Wildlife Conservation Commission	Sanders	Scott	620 South Meridian Street	Tallahass	FL	32399-1600	6/15/2012		X	The DEA reports that 15 deaths were attributed "collisions with recreational watercraft." The term "recreational" should be stricken from that statement since at least five reported deaths have occurred from crushing between large vessels and seawalls/docks, and at least one death occurred from a strike with a large propeller, which is more indicative of larger-than recreational watercraft/vessel fatality.	Concur. The change have been made as requested.
										The map on 2-66 of the DEA is more representative of the staewide synoptic aerial survey dataset as it depicts "Manatee Aerial Survey (1991-2004)". We recommend amending this map to specify the aerial survey dates, as well as obtaining more recent data from the website mentioned. There should also be a discussion of the dataset in the text. We highly recommend that the Final EA include this data to accurately represent manatee use in the Port area.	Because of the potential for confusion of this figure and because it did not contribute to the analysis, the figure was removed from the Final EA.
										Page 2-67 includes a discussion of the Port's Manatee Protection Plan and Brevard County's Manatee Protection Plan (MPP). While the Port has been very proactive in manatee protection and conservation measures have been in place for a long timme, the County's plan was not based on the Port's plan. The measures in the Port's plan are not typically applicable to the rest of the County and there are also conservation measures in the County's MPP that are uniquie from the Port's conservation measures; therefore, FWC suggests removing reference as to the basis for the County's MPP being that of the Port plan.	Concur. The change have been made as requested.
										Page 2-67 also includes a discussion of Port Canaveral's lock facility, and describes manatee sighting data and mortality as a result of the lock. We recommend updating this information…	Concur. The data were updated as requested.

List of Public and Agency Comments on Draft Feasibility Report and Draft EA with Response/Action

Organization/ Agency	Last Name	First Name	Mailing Address	Town	State	Zip		Medium		Comment	Draft Response
							Dated	Email	Letter		
										Chapter 6.1 discusses the integration of environmental operating principles and states that the "Port has also adopted new manatee protection measures at the recommendation of the U.S. Fish and Wildlife Service". However, these new protection measures were not included in the DEA.	Concur. The new manatee protection measures have been included in the Final EA.
										Page 6-48 includes the following statement: "Hydraulic and clameshell dredging are the methods of choice for economic and environmental concerns and are not known to "take" manatees or sea turtles when standards for operations and observvance are employed as well as any protection measures stipulated by the FWS and/or NMFS under Section 7 ESA comsultation." This statement is incorrect and should be edited to state that the potential for "take" is reduced with protective measures, not that "take" is not known to occur.	Concur. The changes have been made as requested.
										Chapters 7.2.8.2 and 7.3 discuss environmental consequenses, including protected species and measures to avoid, minimize, and mitigate environmental effects. Both of these sections state that the standard manatee construction conditions will be used during dredging and include the standard language. Hoever, both versions of the standard conditions are out of date..... We recommend that the 2012 measures be included in the EA and followed during coinstruction of the project. We also recommend that the additional conservation measures outlined in the FWS review dated May 31, 2012 be included in the EA and followed during the project.	Concur. The new 2012 manatee protection measures and measures outlined in the USFWS' June 29, 2012 concurrence letter have been included in the Final EA.
										If a gopher tortoise relocation permit is necessary, then species associated with gopher tortoise burrows (i.e., commensals) and afforded protection under 16 U.S.C. 1531 et. Seq., Section 379.2291. F.S., or 68A-27.004. F.A.C. should also be relocated in accordance with the applicable guidelines for that species.	Concur. A gopher tortoise relocation permit will be obtained should any gopher tortoise burrows be impacted by the project.

Environmental Baseline Report
Port Canaveral Navigation Improvements
Port Canaveral FL

Prepared for
Canaveral Port Authority
200 George J. King Boulevard
Cape Canaveral, FL 32920

by
Dial Cordy and Associates Inc.
490 Osceola Ave
Jacksonville Beach, Florida 32250
904.241.8821

July 7, 2006
Revised September 14, 2011

TABLE OF CONTENTS

LIST OF FIGURES

Page

LIST OF TABLES

Page

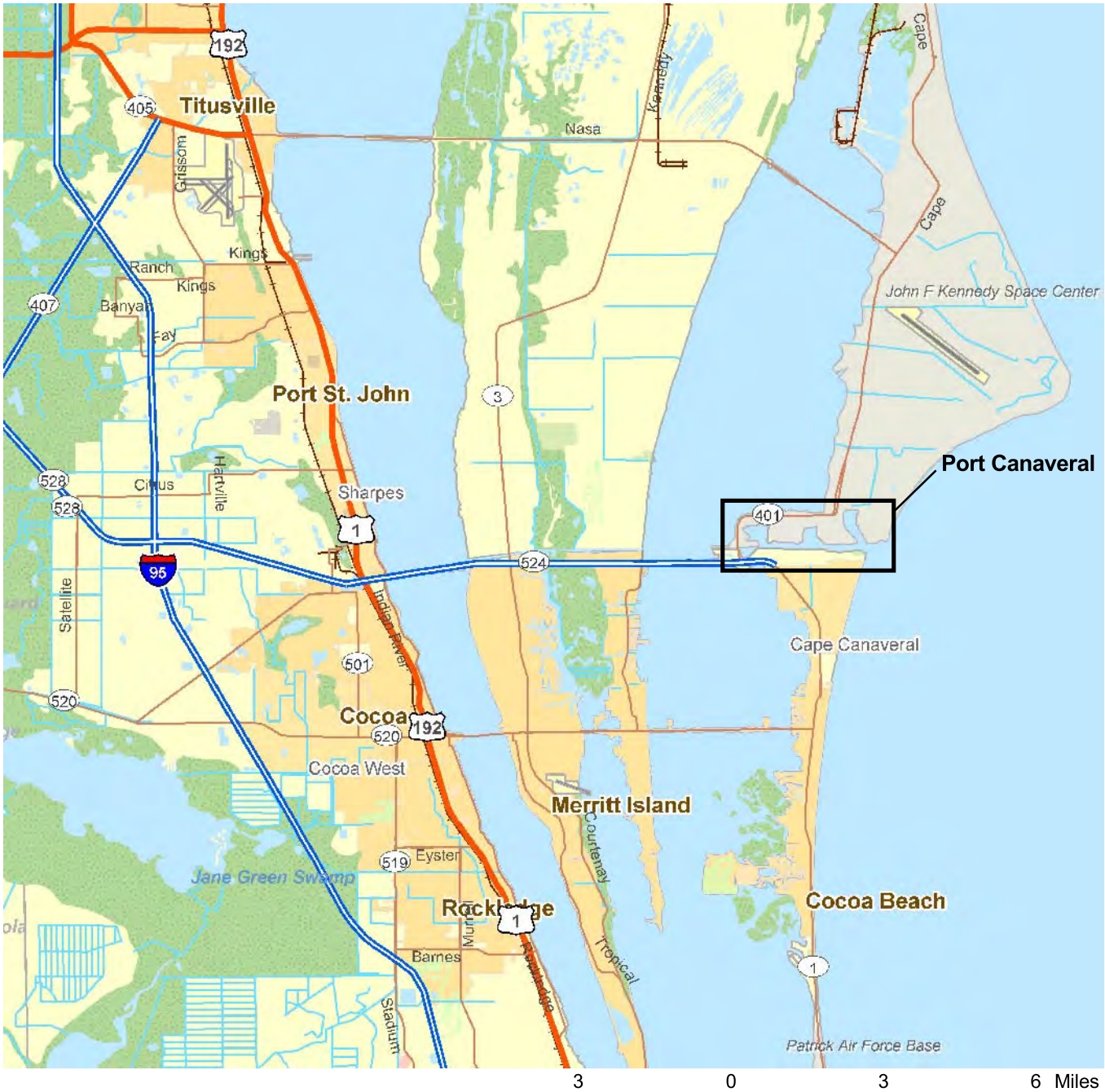
1.0 INTRODUCTION

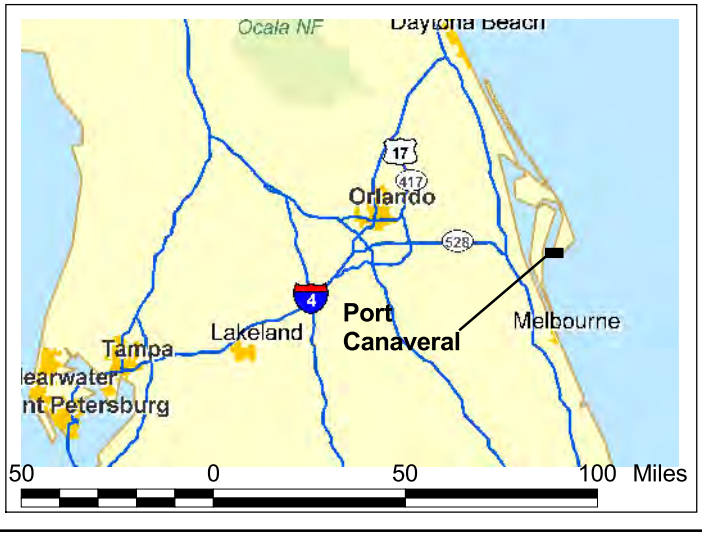
1.1 Project Purpose

The Canaveral Port Authority (CPA) is currently conducting a feasibility study of potential navigation improvements under the authority granted under Section 203 of the Water Resources Development Act (WRDA), 1986. The study is in response to problems and issues identified by the CPA and Canaveral Pilots Association with regard to ship maneuvering within the existing federal project. This report was prepared to describe the existing environmental conditions within the proposed project study area and to assist in identifying any environmental constraints that require consideration in the planning process.

1.2 Study Area Location

Port Canaveral is located in Brevard County on the east coast of Florida, approximately nine miles north of Cocoa Beach (Figure 1). The main port is orientated in an east – west direction, extending from the Atlantic coast to the Banana River. The port is bounded to the north by the Cape Canaveral Air Force Station (CCAFS) and the Banana River, and bounded to the south by the City of Cape Canaveral. The harbor consists of three turning basins (Figure 2). Starting from the east they are: the Trident Turning Basin (TTB), the Middle Turning Basin (MTB), and the West Turning Basin (WTB). The basins are connected by a channel (East Access Channel and West Access Channel) that forms the south boundary of each basin. Within this channel, a Federally maintained Barge Canal extends from the south side of the MTB, through the Banana River, across Merritt Island, and connects with the Intracoastal Waterway (ICWW) system in the Indian River. Where the Barge Canal enters the Banana River, a 600-foot long Corps of Engineers' lock (Canaveral Lock) separates the tidal harbor from the almost non-tidal river.





Location ap	
Port Canaveral Environmental Baseline Report	
Scale: 1 inch = 3 miles	Drawn By: R
Date: April 2006	Approved By: S
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J05-850
	Figure 1

0.5 0 0.5 1 Miles

ud rea

Port Cana era Environment seline Rep rt

Sca e: 1 inch = .5 mile	Drawn MR
D te: ril 20 6	ro ed S
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J 0
	Figure 2

2.0 AFFECTED ENVIRONMENT

2.1 Sediments

Sediments with the Port have been extensively characterized in recent years. The most recent study (Anamar 2005) evaluated sediments within the west turning basin and entrance channel for disposal at the offshore dredged material disposal site (ODMDS). Sediments are comprised mainly of sand or silt/clay, with small amounts of gravel present. Concentrations of metals in the samples were typical of coastal waters, although some concentrations were above those of reference stations. A few polyaromatic hydrocarbons (PAH) were detected, but all of the sediment chemical characteristics were below the Threshold Effects Level (TEL) and Effects Range Low (ERL). These thresholds represent levels at which adverse effects to biological organisms may occur. A Tier III analysis using the ADDAMS model was performed, which determined that the sediments were suitable for offshore disposal.

2.2 Surface Water

Surface water resources within the study area consist of marine and estuarine systems. The inshore waters are classified by the State of Florida as Class II Waters. Aquatic preserves are designated as Class II waters, and includes the Banana River Aquatic Preserve and the Merritt Island National Wildlife Refuge. Class II waters are suitable for shellfish harvesting in addition to uses approved under Class III waters designation (recreation and propagation of fish and wildlife resources).

2.3 Hazardous, Toxic, and Radioactive Waste

A Section 230 Feasibility Study - HTRW Assessment was conducted by CH2M Hill (2006) in conformance with the scope and limitations of ASTM Practice E 1527 and ER-1165-2-132. The findings and conclusions provided below reflect existing HTRW conditions based on a HTRW database search, aerial photography, reviews of available records, site inspections and interviews. These findings and conclusions are of existing conditions as they were identified at this time.

A site inspection was performed on or in the immediate vicinity of the three project areas identified for navigation improvements at Port Canaveral. Two of the three areas (WTB and NC) are located within Canaveral Harbor and the third area (ECT) is located approximately one mile offshore. The hazardous and toxic waste evaluation revealed that the majority of the area is predominantly developed having construction and activities associated with marine and port facilities, including cruise terminals, marine maintenance, public parks, marine cargo

transfers and a military installation. The HTRW database search included the entire area and indicated that overall, that a relatively small portion of the proposed project area may have been impacted, to some extent, with hazardous and toxic waste. Most of these reported properties are located on the uplands portion of the northeast side of the WTB and West Access Channel and on the south side of the Inner Reach portion of the channel, up-gradient to two of the three areas (WTB and NC). No propertied were reported in the vicinity of the ECT. The most common type of HTRW, hydrocarbons, was reported in the EDR database and located along the southern portion of the Harbor.

The database also revealed several locations of Small Quantity Generators (SQG). Most of these SQG sites are reported to be in compliance with reported requirements. The site inspection revealed the presence of a location in the northeast section of the WTB that appears to be not in compliance with regulatory rules in regards to the operations conducted. There is another site reported by personnel from the Brevard County Environmental Protection Division suggests that a release of chlorinated solvents has occurred in the location that is leased to and operated by Mid-Florida Freezer on the south side of the Harbor. Contamination from the sites located on the perimeter of the proposed project may be migrating into the project area.

West Turning Basin

A site inspection was conducted on 20 December 2005. The HTRW database review of the existing conditions indicated the site to be free of hazardous and toxic materials and waste. However, during the site inspection indicated the presence of hazardous materials and waste in one area: the Beyel Brothers, Inc. property located at the southeastern edge of the WTB uplands. Most of the items observed were those used in connection with marine vessel repair and painting, and marine scrap (e.g., cranes, shipping containers, etc.). According to the lease agreement with CPA, these activities were not allowed on the property. An intrusive soil and groundwater study is recommended for the Beyel Brothers property to evaluate whether the soil and groundwater have been impacted by operations performed there. Upon evaluation and possible remediation of the Beyel Brothers leased property, these sites may be used for the project purposes.

Coastal Fuels, located on the south side of the Harbor, had a release of petroleum product via a location in their pipeline to the docks. Soil was excavated, during which the laboratory analytical results indicated the presence of chlorinated solvents, which are not typically found in petroleum impacted soils. The source of the chlorinated solvents is likely from past activities at another facility leased from CPA. The extent of impact in 2004 (last groundwater sampling event) suggests the size of the plume is slightly smaller, although temporal effects in the groundwater concentrations in and inferred plume size can occur. Currently, the majority of the plume is being monitored. An air-sparge remediation system is being designed and a risk assessment to establish clean-up criteria is being performed for an area in the vicinity of a weir adjacent to the Harbor. Past sampling of surface water and sediments in the Harbor indicates that no chlorinated solvents or petroleum constituents were reported as exceeding comparative clean-up criteria. A large bulkhead is present at the water's edge that may

impede the migration of the chlorinated solvents and petroleum constituents into the Harbor. The potential of HTRW risks at this site is considered moderate.

North Side of Channel (Inner and Middle Reaches)
A site inspection of the land adjacent to NC was performed on 20 December 2005, as the NC area is located completely underwater. The HTRW database review of the existing condition found the site to be free of hazardous and toxic materials and waste. The property surrounding the proposed project is a mix of commercial shipping, marine port activities, and a military installation. Please see the previous section for a discussion of releases on the south side of the Harbor, which is considered to be adjacent property. The potential of HTRW risks at this site is considered low.

Entrance Channel Turn
This area is located approximately one-mile offshore in the Atlantic Ocean. A site visit was not performed as it is in about 41 feet of water. None of the sites listed in the HTRW database review are located within the search distances. The potential of HTRW risk at this area is considered low.

2.4 Upland Communities

Natural upland communities within the study area are limited. There are a few isolated areas containing mixed hardwoods and conifers (FLUCFS 4340) including slash pine (*Pinus elliottii*), scrub oaks (*Quercus spp*.), Australian pine (*Casurina equisetifolia*), Brazilian pepper (*Schinus terebenthifolius*), and cabbage palm (*Sabal palmetto*) within the study area. Areas of herbaceous rangeland (FLUCFS 3100) and shrub rangeland (FLUCFS 3200) are more common and may be occasionally inundated by water, but not enough to lead to hydric soils. They contain typical coastal grasses, sedges, rushes, and herbaceous species such as *Panicum* spp., natal grasses, clovers, and wire grass (*Aristida stricta*). Saw palmetto (*Serenoa repens*) is also found scattered throughout this vegetative community.

Upland communities not considered natural communities make up the vast majority of the study area. These land use categories include those lad uses normally associated with port facilities such as industrial and spoil disposal areas. Figure 3 provides a map showing land cover according to the Florida Land Use, Cover, and Forms System (FLUCFS), and Table 1 provides a list and description of natural upland and wetland land cover for the study area.

Wildlife found within port boundaries in the study area are typical species found in heavily developed Florida coastline. Mammals include raccoons (*Procyon lotor*), domestic and feral cats (*Felis cattus*), and mice (*Mus musculus*). Migratory bird species including warblers and sparrows, typically roost in forested areas along the coast, particularly near to open water.

Brevard County FLUCCS (SJRWMD)

0.5 0 0.5 1 Miles

CCS ap	
Port Canaveral Environmental Baseline Report	
Scale: 1 inch = 0.5 mile	Drawn By R
Date: ril 006	roved By
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J05-850
	Figure 3

Table 1 Natural Upland and Wetland Communities

	Category	Description
Natural Upland Communities	3100	Herbaceous Rangeland
	3200	Scrub and Brushland
	4340	Mixed Hardwood-Conifer
Natural Wetland Communities	6120	Mangrove Swamp
	6300	Mixed Wetland Forest
	6420	Saltwater Marsh
	6460	Treeless Hydric Savanna

2.5 Wetlands

Wetland habitats within the study area are limited primarily to the western perimeter adjacent to the ICWW (Figure 3; Table 1). These wetlands are either mangrove swamps and vegetated with white and black mangroves, and Brazilian pepper, or saltwater marsh habitat vegetated with cordgrass (*Spartina alternifolia*), needlerush (*Juncus roemerianus*), saltgrass (*Distichlis spicata*), and other salt-tolerant species. Treeless hydric savannah occurs south of the port facilities and is dominated by wiregrass and cutthroat grass (*Paspalum abscissum*).

2.6 Marine Habitat

2.6.1 Beach and Dune Habitat

The high-energy beach is a challenging environment for animal and plant life. Species diversity is typically low, although species adapted to sandy beaches may be highly abundant. Typical beach fauna in the proposed project area includes the mole crab (*Emerita talpoida*), surf clam (*Donax variabilis*) and ghost crab (*Ocypode quadrata*). These and other beach infauna provide forage for a wide variety of shorebirds such as plovers (*Charadrius spp*.), willets (*Catoptrophorous semipalmatus*), and ruddy turnstones *(Arenaria interpres*). Drift algae and sargassum stranded on the beach may support large numbers of insects and other invertebrate life. As elevation increases, conditions become less severe for the establishment of plant life. Tendrils of various plants extend down the beach, notably the beach morning glory *Ipomoea pes-capre*. As the dune crest is approached, other salt tolerant plants are found such as sea oats (*Uniola paniculata*), sea rocket (*Cakile sp.)* and beach elder (*Iva imbricata*). Sparsely vegetated beaches are preferred nesting habitat for the least tern (*Sterna antillarum*), listed as a threatened species by the Florida Fish and Wildlife Conservation Commission. The sea oat zone high on the dune provides habitat for another threatened species, the

southeastern beach mouse (*Peromyscus polionotus niveiventris*). Beaches in Brevard County also provide nesting habitat for sea turtles.

2.6.2 Nearshore Reef

Continental Shelf Associates previously identified a well-developed line of rock outcroppings running approximately 10 miles from Patrick Air Force Base (R-59) south to Paradise Beach Park (R-110). The rock had low relief at the northern and southern ends, with well defined ledges of 2-3 feet of vertical relief in the middle between R-78 and R-93 (USACE 1996). The rock outcrops are comprised of lithified coquina rock of the Pleistocene Anastasia Formation (Olsen 1989). The coquina rock provides a substrate for the sabellariid polychaete worm *Phragmatopoma lapidosa*. These sabellariid worm reefs provide important functions of dissipating and absorbing wave energy, thus, giving the shoreline some protection against erosion, and providing habitat for marine organisms. In the nearshore area off Brevard County, worm rock ranges from large, dense patches to small, isolated patches along the sides of rock ledges. It was estimated that worm rock composes approximately 5-10 percent of the 32 acres of rock outcrop in the nearshore area of Brevard County.

The rock and worm rock reefs provide habitat for a number of crustaceans, fish, macroalgae, sponges, and other invertebrates. The most recent comprehensive study of the nearshore habitat along Brevard County was conducted by Continental Shelf Associates (1989) and provides detailed species list.

2.6.3 Sand Bottom

Unvegetated sand bottom occurs along most of the nearshore area not occupied by worm rock reef habitat. Substrate is predominately made up of medium to fine grain sands and may include a variety of benthic organisms including annelids, bivalves, and gastropods such as pinaeid shrimp (*Panaeus setiferus*), box crabs (*Hepatus epheliticus*), and seastars (*Luidia clathrata*).

2.6.4 Seagrass

No seagrass has been identified within the harbor or entrance channel, and it is unlikely that it occurs. However, the waters west of the port in the Banana River State Aquatic Preserve support large areas of and small, isolated patches of seagrass adjacent to upland islands or other physical structures (Figure 4).

Indian River Lagoon Seagrass (FDEP/FMRI, 1999)
Patchy Seagrass Coverage
Dense Seagrass Coverage

0.5 0 0.5 1 Miles

tud rea eagrass Coverage

Port Canaveral Environmental Baseline Report

Scale: 1 inch = 0.5 mile	Drawn By MR
Date: pril 2006	pprovedBy S
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J05-850
	Figure 4

2.6.5 Inshore Marine Habitat within Port Canaveral

The harbor in Port Canaveral provides an important resource to marine species, particularly sea turtles and manatees. The harbor serves as an access point for the West Indian manatee to traverse from the Atlantic coastal waters to the Banana River, which provides foraging and sanctuary for the species.

The riprap along the channel walls on the northern boundary of the Port provides excellent foraging habitat for juvenile sea turtles. The 980 meters of riprap located between the middle and east turning basins, in particular, appears to be heavily used for foraging. In surveys conducted in late August 2005 and February 2006, 200 and 111 individuals, respectively, were observed foraging along this portion of the harbor. The highest number of juvenile sea turtles observed at any other location during these surveys was 9 at a 266 meter stretch of riprap along the south side of the channel at Jetty Park. One of the unusual features of the riprap between the middle and east turning basins is the diverse algal community on the riprap. A study is currently underway to characterize the algal makeup of the harbor.

2.7 Essential Fish Habitat

The South Atlantic Fisheries Management Council (SAFMC) (1998) has designated seagrass, nearshore hardbottom, and offshore reef areas within the study area as EFH. The nearshore bottom and offshore reef habitats of Central Florida have also been designated as Essential Fish Habitat-Habitat Areas of Particular Concern (EFH-HAPC) (SAFMC, 1998). As many as 60 corals can occur off the coast of Florida (SAFMC, 1998) and all of these fall under the protection of the management plan.

Essential Fish Habitat in the Study Area

Marine Areas	Live/Hard Bottom
	Coral and Coral Reef
	Sargassum
	Artificial Reef
	Water Column

Source: South Atlantic Fisheries Management Council, 1998

Managed species that commonly inhabit the study area include pink shrimp (*Penaeus duorarum*), and spiny lobster (*Panularis argus*). These shellfish utilize both the inshore and offshore habitats within the study area. Members of the 73 species Snapper-Grouper Complex include sailors choice (*Haemulon parra*), gray snapper (*Lutjanus griseus*), mahogany snapper (*Lutjanus mahogoni*), and porkfish (*Anisotremus virginicus*). These species utilize the inshore habitats of Indian River Lagoon as juveniles and sub-adults and as

adults utilize the hardbottom and reef communities offshore. Other important species that utilize the inshore and nearshore areas of Brevard County include the red drum (*Sciaenops ocellatus*) and the snook (*Centropomis undecimalis*). In the offshore habitats, the number of species within the Snapper-Grouper Complex that may be encountered increases. Coastal migratory pelagic species also commonly utilize the offshore area adjacent to the study area. In particular, the king mackerel (*Scomberomorus cava*lla), and the Spanish mackerel (*Scomberomorus maculatus*) are the most common.

2.8 Protected Species

The Florida Natural Areas Inventory (FNAI) Species Summary for Brevard County was obtained to review the listed fauna that could potentially occur within this geographic region. In addition to the FNAI, existing reports from Cape Canaveral Air Force Station (CCAFS) and Port Canaveral (Port) were reviewed for potential protected species that may occur within the study area. Five terrestrial species were identified that could potentially occur within upland portion of the study area. These species include the gopher tortoise (*Gopherus polyphemus*), Florida scrub jay (*Aphelocoma coerulescens*), eastern indigo snake (*Drymarchon corais couperi*), and the southeastern beach mouse (*Peromyscus polionotus niviventris*). The bald eagle (*Haliaeetus leucocephalus*) is no longer a listed specie but is protected under the Bald and Golden Eagle Protection Act. In addition to the terrestrial species, three sea turtle species were identified as potentially utilizing terrestrial beach habitats within the study area. These species include the loggerhead (*Caretta caretta*), leatherback (*Dermochelys coriacea*), and green sea turtles (*Chelonia mydas*). The beaches and spoil areas may also be utilized by nesting and foraging shorebirds including the least tern (*Sterna antillarum*) and piping plover (*Charadrius melodus)*.

The nearshore and inshore waters within the study area are frequented by protected marine mammals including the West Indian Manatee (*Trichechus manatus*) and the North Atlantic right whale (*Eubalanus glacialis*).

2.8.1 Sea Turtles

Five species of sea turtle are found in the waters offshore of Brevard County, and of these, three have been documented as nesting on County beaches (Figure 5). The loggerhead (*Caretta caretta*) is responsible for the vast majority of the nesting, although data suggest increasing numbers of green (*Chelonia mydas*) and leatherback turtles (*Dermochelys coriacea*) nesting statewide. The green sea turtle and leatherback sea turtle are both listed under the U.S. Endangered Species Act, 1973 and Chapter 370, F.S. the loggerhead turtle is listed as a threatened species. The hawksbill turtle (*Eretmochelys mydas*) and Kemp's ridley turtle (*Lepidochelys kempii*) are two additional sea turtle species that potentially are found in the area but are not known to nest on Brevard County beaches.

Documented Sea Turtle Strandings
Sea Turtle Observations
Sea Turtle Nesting Beach

0.5 0 0.5 1 Miles

Protected ecies ap ea urtles	
Port Canaveral Environmental Baseline Report	
Scale: inc 5 mile	Drawn By R
Date: ril 6	roved By S
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	5-50
	Figure 5

Sea turtles use the habitats offshore of Brevard County to different degrees during different stages of their life cycle. During the summer months hatchlings utilize this habitat as a corridor to deeper waters farther off the coast. Juvenile and sub-adult turtles use the offshore habitats as a foraging area and to travel to inshore areas, while adult turtles are present year round with seasonally high abundances during the breeding season.

Loggerhead Sea Turtle

Loggerheads nest in the southeastern U.S. from April through September, with peak nesting occurring in June and July (National Marine Fisheries Service [NMFS] and United States Fish and Wildlife Service [USFWS], 1991a). The highest density of loggerhead nesting occurs from Canaveral National Seashore in Volusia County south to John U. Lloyd State Recreation Area in Broward County. Nesting may reach densities of over 600 nests per kilometer. Nesting along the northern beaches is substantially lower than nesting in the southern portions of the County. Between 1988 and 2010, County-wide loggerhead nesting ranged from a low of 13,181 in 1988 to a high of 34,596 in 1998 (Table 2). There were 25,741 documented loggerhead nests in 2010.

Table 2 Sea Turtle Nesting Data for Brevard County, 1988-2010

Year	Green Turtle Nests	Leatherback Turtle Nests	Loggerhead Turtle Nests
1988	134	0	13181
1989	246	1	19589
1990	841	0	27673
1991	214	3	28279
1992	1232	2	25555
1993	116	1	20600
1994	1720	5	28029
1995	171	4	31653
1996	1351	16	28742
1997	259	11	25221
1998	2764	30	34596
1999	125	43	34134
2000	3907	22	32910
2001	193	61	26198
2002	4316	18	23492
2003	705	68	22994
2004	1494	25	15678
2005	4878	68	19339
2006	2051	16	18089
2007	5743	105	14829
2008	4169	33	21242
2009	1697	70	17194
2010	5940	77	25741

Hatchlings emerge primarily at night and swim offshore in a "frenzy" until they arrive at offshore weed and debris lines (Carr 1986) (Wyneken and Salmon 1992). Post hatchling turtles from the Florida coast enter currents of the North Atlantic Gyre, eventually returning to the western Atlantic coastal waters (Bowen, et al. 1993). Adult loggerhead turtles in South Florida utilize foraging grounds in the Caribbean basin, the Gulf of Mexico, and along the U.S. east coast (Meylan et al., 1983). Abundances of adult loggerhead turtles in Florida waters increase during the nesting season (Magnuson et al., 1990).

Green Sea Turtle

Green turtle nesting occurs along southeastern Florida beaches from Volusia County through Broward County, but at much lower densities than loggerheads (Meylan, et al. 1995). Densities range from 1-5 per kilometer on most beaches, with higher densities of 13-30 nests per kilometer on the beaches within the major nesting zone in south Brevard County and Palm Beach County (Erhart and Witherington 1986). Brevard County accounts for approximately 40 percent of green turtle nesting in Florida. Green turtle nesting data for Brevard County are shown in Table 2. In 2010, green turtle nesting reached a period of record (1988-2010) high of 5,940 nests.

Green turtles show a similar life history pattern as loggerheads, but they leave the pelagic phase and enter developmental habitats at a considerably smaller size, about 20-25 cm carapace length (Magnuson et al., 1990). Typical developmental habitats are shallow, protected waters where seagrasses are prevalent (Carr et al., 1978), but green turtles are commonly found in reef habitats where algae is present (Ehrhart et al., 1996) (Coyne, 1994). Green turtles nesting in Florida have a minimum size of 83.2 cm carapace length, but they appear to leave Florida developmental habitats by about 60-65 cm carapace length (Witherington and Ehrhart, 1989), perhaps migrating to the southeastern Caribbean. Brevard County contains two significant developmental habitats for green turtles, the Indian River Lagoon and the nearshore reef system (Ehrhart et al. 1996). Dietary needs of juvenile turtles along with seasonal abundances of seagrasses and algae within the area may be factors influencing the habitat use of juvenile turtles within the area. As adults, offshore habitat utilization would be greatest during the nesting period.

Green sea turtles leave the early pelagic life stage and enter benthic foraging areas at about 20-25 cm carapace length. During this time they shift from an omnivorous diet to a more herbivorous diet. Juvenile green turtles feed primarily on seagrasses and algae during this life stage. In Florida, these turtles feed primarily on a diet of seagrasses such as *H. wrightii*, *S. filiforme*, and red and green algae (Lutz and Musick, 1997). The seasonal abundances of algal species offshore may limit the offshore foraging areas in the winter months. Nelson (1988) noted a great seasonal reduction in algal species richness (56 summer vs. 16 winter) on the nearshore reefs at Sebastian Inlet.

Leatherback Sea Turtle

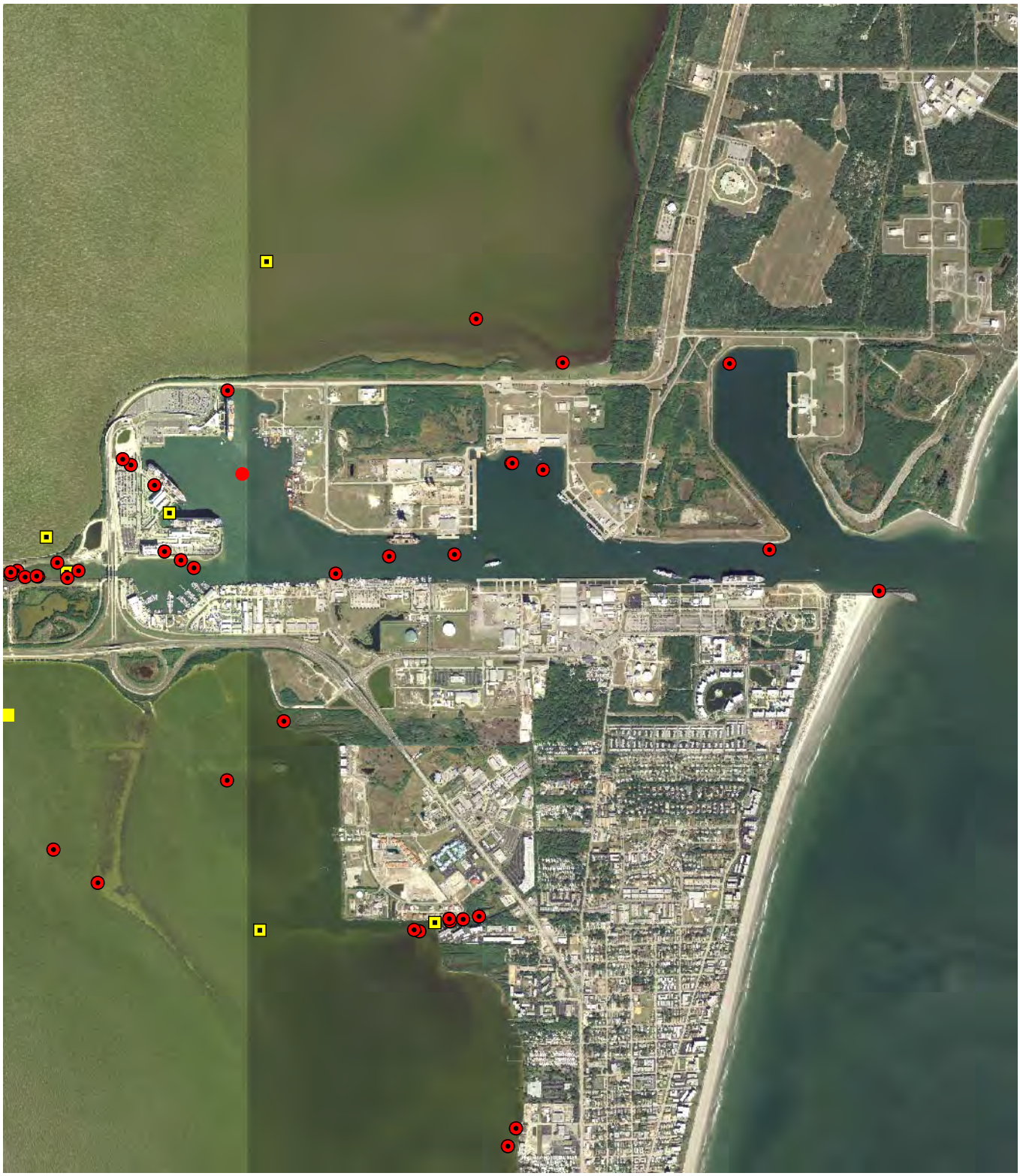
Leatherback turtles occur worldwide in pelagic waters from the tropics to near the Arctic and Antarctic Circles. Nesting is primarily on the Pacific coast of Mexico and the Caribbean coast of South America, with some continental U.S. nesting in Florida. The majority of leatherback nesting activity is located within St. Lucie, Martin and Palm Beach counties (Meylan et al., 1995). Nesting data provided by FWC, however, show at least some nesting occurring in Brevard County, with 77 leatherback nests documented in 2010 (Table 2). Leatherback turtles are virtually unknown from the inshore waters of Brevard County and only are known to frequent the area during nesting periods.

2.8.2 West Indian Manatee

The West Indian Manatee (*Trichechus manatus*) is protected under the both the Endangered Species Act and the Marine Mammal Protection Act and is also listed as protected under Florida State law. The manatee is generally restricted in range to the Georgia coast southward around the Florida peninsula. Manatees frequently inhabit shallow areas where seagrasses are present and are commonly found in protected lagoons and freshwater systems. Manatees occasionally use open ocean passages to travel between favored habitats (Hartman, 1979). Manatees migrate seasonally, particularly on the east coast of Florida. During the summer months manatees utilize habitats all along the coast. During winter, when water temperatures drop, manatees use warm water refuges such as springs or warm water discharges at power plants.

Brevard County is one of the most utilized areas in Florida by manatees due to the presence of a warm water refuge and abundant foraging opportunities. Within Brevard County, manatees frequently use waters within or near the study area including the Banana River and Intracoastal Waterway, especially during the spring and fall (Figure 6).

Brevard County also has one of the highest manatee mortality rates in the state and it due to the high concentration of manatees combined with the popularity of recreational boating along the eastern coast of Florida. In 2009, the FWC reported 107 manatee deaths in Brevard County (the State total was 429), with 7 caused by watercraft injury and 2 from flood gate/locks. In 2008, Brevard County had 72 deaths (out of 337 for the State), with watercraft injury responsible for 10 of the deaths. In 2003, the Brevard County Board of County Commissioners approved a Manatee Protection Plan to identify and implement measures to provide protection for the manatee.



Documented Manatee Mortality (1974 - 2005)
Manatee Aerial Survey (1991 - 2004)

0.5 0 0.5 1 Miles

Protected ecies ap anatees	
Port Canaveral Environmental Baseline Report	
Scale: 1 inch = .5 mile	Drawn By R
Date: ril 6	roved By S
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J 0
	Figure 6

2.8.3 Right Whale

The North Atlantic right whale has been listed as endangered under the Endangered Species Act (ESA) since 1972. The western stock of the North Atlantic right whale population ranges from wintering and calving grounds in the coastal waters of the southeastern United States to summer feeding and nursery grounds in New England waters and northward to the Bay of Fundy and the Scotian Shelf. Offshore surveys flown off the coast of Florida and southeastern Georgia from 1996 to 2001 had three sightings in 1996, one in 1997, 13 in 1998, six in 1999, 11 in 2000, and six in 2001. The western North Atlantic population size was estimated to be 291 individuals in 1998 (NMFS 2005).

The North Atlantic right whale primarily occurs in coastal or shelf waters. Five areas of "high use" were identified in the Recovery Plan and include coastal Florida and Georgia, from the Sebastian Inlet, Florida to the Altamaha River, Georgia, and includes the nearshore waters off Port Canaveral. This area was designated as critical habitat in 1994. Known wintering occurs along the southeastern U.S. coast, where calving occurs from December through March.

Ship collisions and fishing gear entanglements are the most common anthropogenic causes of mortality in the western North Atlantic right whale. Other potential threats include habitat degradation, noise, contamination, underwater bombing activities, climate and ecosystem change, and commercial exploitation (NMFS 2005).

The greatest known current cause of right whale mortality in the western North Atlantic is collision with ships (NMFS 2005). Of the 45 confirmed deaths of right whales between 1970 and 1999, 16 are known to have been caused by ship strikes and two additional collisions were determined to be possibly fatal (Knowlton and Kraus 2001). In the period between 1999 and 2003, 18 verified right whale mortalities occurred, of which five were due to ship strikes (Cole, *et al* 2005).

2.8.4 Southeastern Beach Mouse

The southeastern beach mouse (*Peromyscus polionotus neveiventris*) is listed as a threatened species at both the Federal and State levels. Beach mice primarily use coastal dune communities comprised of sea oats (*Uniola paniculata*), for habitat. Grasslands and open sandy areas in the fore-dune area may also be utilized (Humphrey, 1992). This subspecies was originally endemic to coastal dunes along the Florida coast from Ponce Inlet in Volusia County to Hollywood Beach, Broward County. Decline in beach mouse populations has been attributed to loss of habitat due to coastal development and beach erosion. Southeastern beach mice were recently identified at CCAFS north of Port Canaveral (Dynamac 2002).

2.8.5 Scrub Jay

The scrub jay (*Aphelocoma coerulescens*) is listed as threatened at both the State and Federal levels. The scrub jay is endemic to Florida's xeric oak scrub and scrubby pine habitat, maintaining territories approximately 22 acres in size. Only a small amount (approximately 16 acres) exists north of the Port within the study area, scrub jays are not known to utilize the area. A recent survey by Dial Cordy (2006) did not result in any scrub jay observations in the study area. The nearest known populations of scrub jays are located west of the Port on Merritt Island.

2.8.6 Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is no longer a listed species at either the State and Federal levels but is still protected under the Bald and Golden Eagle Protection Act. The breeding range of the bald eagle is associated with aquatic habitats (coastal areas, river, lakes, and reservoirs) with forested shorelines or cliffs in North America. Throughout their range, they select large, super-canopy roost trees that are open and accessible, mostly conifers. They winter primarily in coastal estuaries and river systems

No bald eagle nests are located within the study area, and no appropriate habitat for nesting was observed during the recent investigation by Dial Cordy and Associates. According to the FWC bald eagle website, the nearest known bald eagle nest locations are west of the Banana River Aquatic Preserve.

2.8.7 Least Tern

The least tern (*Sterna antillarum*) is a small member of the gull family (Laridae). The least tern is listed by Florida as a threatened species and is protected federally under the Migratory Bird Treaty Act. Least terns breed along the east coast of the United States from Massachusetts to Florida, with the Florida populations returning each year in April. The breeding season lasts through the summer. Least terns traditionally choose open sandy substrates to form breeding colonies. Least terns forage along coastal areas feeding on small fishes, as well as some crustaceans and insects. Within Brevard County least terns are known to nest on sandbars and spoil areas along the coastal area.

2.8.8 Piping Plover

The piping plover (*Charadrius melodus*)is a state and federally listed threatened species. Piping plovers are a migratory shore bird that also is protected under the Migratory Bird Treaty Act. Piping plovers migrate to the Florida coast in September and are found through March (USFWS, 1995). Piping plovers nest on open sand, gravel, or shell-covered beaches above the high tide line and are often found on the accreting ends of barrier islands and along

coastal inlets (USFWS, 1995). Foraging areas include intertidal beaches, mudflats, sandflats, lagoons, and salt marshes, where they feed on invertebrates such as marine worms, insect larvae, crustaceans, and mollusks. Within Brevard County piping plovers have been observed along the beach areas within the County.

2.8.9 Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is listed as a species of special concern (SSC) by the State. It is a large, terrestrial turtle and utilizes many sandy, well-drained habitat including dunes, scrub, and pine flatwoods, although the gopher tortoise has been noted to occupy poorly drained habitat in Brevard County.

Habitat within the study area suitable for gopher tortoise utilization is limited to areas north of the harbor within the CCAFS. A recent survey conducted by Dial Cordy and Associates identified burrows on the CCAFS between the middle and eastern turning basins.

2.9 Coastal Barrier Resources

Congress passed the Coastal Barrier Resources Act (COBRA) in 1982 to address problems caused by coastal barrier development. This Act defined a list of undeveloped coastal barriers along the Atlantic and Gulf coasts. Designated coastal barrier resources have been identified within the project work area as shown in Figure 7. COBRA resources within the study area include the Canaveral National Seashore, the Merritt Island National Wildlife Refuge, and the Banana River State Aquatic Preserve.

Coastal Barrier Resource (USFWS, COBRA)
Aquatic Preserves \ Protected Areas
BANANA RIVER AQUATIC PRESERVE
MERRITT ISLAND NATIONAL WILDLIFE REFUGE

10 0 10 20 Miles

Coastal Barrier Resources tem COBRA	
Port Canaveral Environmental Baseline Report	
Scale: inc 0 miles	rawn By R
Date: pril 2006	Approved By LS
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J05-850
	Figure 7

3.0 LITERATURE CITED AND CONSULTED

Anamar Environmental Consulting, Inc. 2005. Final Report for Canaveral Harbor 103 Evaluation – Deepening Work West Turning Basin Entrance Widening, Corner Cut-off and CT 6 & 7 Dredging.

Bowen, B., J.C. Avise, J.I. Richardson, A.B. Meylan, D. Margaritoulis, and S.R. Hopkins-Murphy. 1993. Population structure of loggerhead turtles (Caretta caretta) in the northwestern Atlantic Ocean and Mediterranean Sea. Conservation Biology 7 (4):834-844.

Carr, A.F., M.H. Carr, and A.B. Meylan. 1978. The ecology and migrations of sea turtles. The western Caribbean green turtle colony. Bull. Amer. Mus. Nat. Hist. 162(1): 1-46.

Carr, A. 1986. Rips, FADS, and little loggerheads. Bioscience. 36:92-100.

CH2M Hill 2006. Section 203 Feasibility Study Hazardous, Toxic and Radioactive Waste (HTRW) Assessment. Port Canaveral, Brevard County, Florida.

Cole, T.V.N., D.L. Hartley, R.L. Merrick. 2005. Mortality and serious injury determinations for large whale stocks along the eastern seaboard of the Unites States, 1999-2003. U.S. Dep. Commer., Northeast Fish Sci. Cent. Ref. Doc. 05-08. 18pp.

Continental Shelf Associates, Inc. 1989. Environmental Impact Assessment for Beach Restoration. Brevard County, Florida.

Coyne, M. 1994. Feeding ecology of subadult green turtles in south Texas waters. MS Thesis, Texas A&M University. 76pp.

Dynamac Corporation. 2002. Environmental Site Survey in the Vicinity of the North Jetty at Canaveral Harbor, Brevard County, Florida.

Ehrhart, L.M., W.E. Redfoot, and D.A. Bagley. 1996. A study of the population ecology of in-water marine turtle populations on the east central coast of Florida. Comprehensive Final Report to NOAA. NMFS. 164 pp.

Erhart, L.M. and B.E. Witherington. 1986. Human and natural causes of marine turtle nest and hatchling mortality and their relationship to hatchling production on an important Florida nesting beach. Final Report No. GFC-84-018. Submitted to: Florida Game and Fresh Water Fish Commission, Tallahassee, Florida. 140 pp.

Ehrhart, L.M. 1979. A survey of marine turtle nesting at Kennedy Space Center, Cape Canaveral Air Force Station, North Brevard County, Florida, 1-122. Unpublished report to the Division of Marine Fisheries, St. Petersburg, Florida, Florida Department of Natural Resources.

Florida Marine Research Institute (FMRI). 2006. Sea Turtle Nesting Data for Southeast Florida. Website accessed 17 May 2006: http://floridamarine.org/features/view_article.asp?id=7630.

Hirth, H.F. 1971. Synopsis of biological data on the green sea turtle, Chelonia mydas. FAO Fisheries Synopsis No. 85: 1-77.

Humphrey, S.R. (Ed.). 1992. Rare and endangered biota of Florida: mammals.

Knowlton, A.R. and S.D. Kraus. 2001. Mortality and serious injury of the northern right whales (Eubalaena glacialis) in the western North Atlantic Ocean. The Journal of Cetacean Research and Management Special Issue 2:193-208.

Magnuson, et al. (National Research Council). 1990. Decline of the Sea Turtles: Causes and Prevention. National Academy Press, Washington D.C.

Meylan, A.B., K.A. Bjorndal, and B.J. Turner. 1983. Sea turtles nesting at Melbourne Beach, Florida. II. Post-nesting movements of Caretta caretta. Biological Conservation 26:79-90.

Meylan, A., B. Schroeder, and A. Mosier. 1995. Sea turtle nesting activity in the state of Florida. Fla. Mar. Res. Publ. 52:1-51.

Musick, J.A. and C.J. Limpus. 1997. Habitat utilization and migration in juvenile sea turtles. Pp. 137-164 In: Lutz, P.L., and J.A. Musick, eds., The Biology of Sea Turtles. CRC Press, New York. 432 pp.

National Marine Fisheries Service (2005) Recovery Plan for the North Atlantic Right Whale (Eubalaena glacialis) Prepared by National Marine Fisheries Service, Silver Spring, Maryland.

National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 1991. Recovery plan for U.S. population of loggerhead turtle. National Marine Fisheries Service, Washington, D.C. 64 pp.

National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 1992. Recovery Plan for Kemp's Ridley Sea Turtle (Lepidochelys kempii). National Marine Fisheries Service, Washington, D.C. 40pp.

National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 1993. Recovery Plan for Hawksbill Turtles in the U.S. Caribbean, Atlantic and Gulf of Mexico. National Marine Fisheries Service, Washington, D.C. 52pp.

National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). 1995. Status Reviews for Sea Turtles Listed under the Endangered Species Act of 1973. National Marine Fisheries Service, Silver Spring, Maryland.

Nelson, W.G. 1988. Sebastian Inlet rock outcrop reefs biological inventory study. Technical Report to Sebastian Inlet Commission. 86 pp.

South Atlantic Fisheries Management Council. 1998. Final habitat plan for the South Atlantic region. SAFMC Charleston, South Carolina. 457 pp.

U.S. Army Corps of Engineers. 1996. Final Environmental Impact Statement, Brevard County, Florida Shore Protection Project Review Study. U.S. Army Corps of Engineers, Jacksonville District. Jacksonville, FL.

U.S. Fish and Wildlife Service. 1995. Piping Plover (Charadrius melodus), Atlantic Coast populations, revised recovery plan. USFWS, Hadley, Massachusetts. 245 pp.

Witherington, B.E. and L.M. Ehrhart. 1989. Status and reproductive characteristics of green turtles (Chelonia mydas) nesting in Florida. Proc. 2nd Western Atlantic turtle symposium. 351-352.

Wyneken, J. and M. Salmon. 1992. Frenzy and post frenzy swimming activity in loggerhead, green, and leatherback hatchling sea turtles. Copeia (2): 478-484.

Port Canaveral Protected Species Report
Brevard County, Florida

March 2006
Revised September 2011

Prepared for:
Canaveral Port Authority
200 George J. King Blvd.
Cape Canaveral, FL 32920

Prepared by:
Dial Cordy and Associates Inc.
490 Osceola Ave.
Jacksonville Beach, FL 32250

DC&A Project No. 05-850

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

I. INTRODUCTION

Dial Cordy and Associates Inc. (DC&A) was contracted to investigate the potential of protected wildlife species and associated habitats that may be present along the northern section of the Port Canaveral Port Expansion Project (Project), Port Canaveral, Florida. The Project site is located along the southern boundary of Cape Canaveral Air Force Station (CCAFS) and the northern portion of the Port of Cape Canaveral (Figure 1). As part of this investigation, natural habitats within the Project site were reviewed for their potential to provide the appropriate community required for listed wildlife species. The purpose of the current investigation is to determine the presence of listed species and their habitat within the boundaries of the Project.

II. METHODOLOGY

A. Pre-Field Investigation Database Search

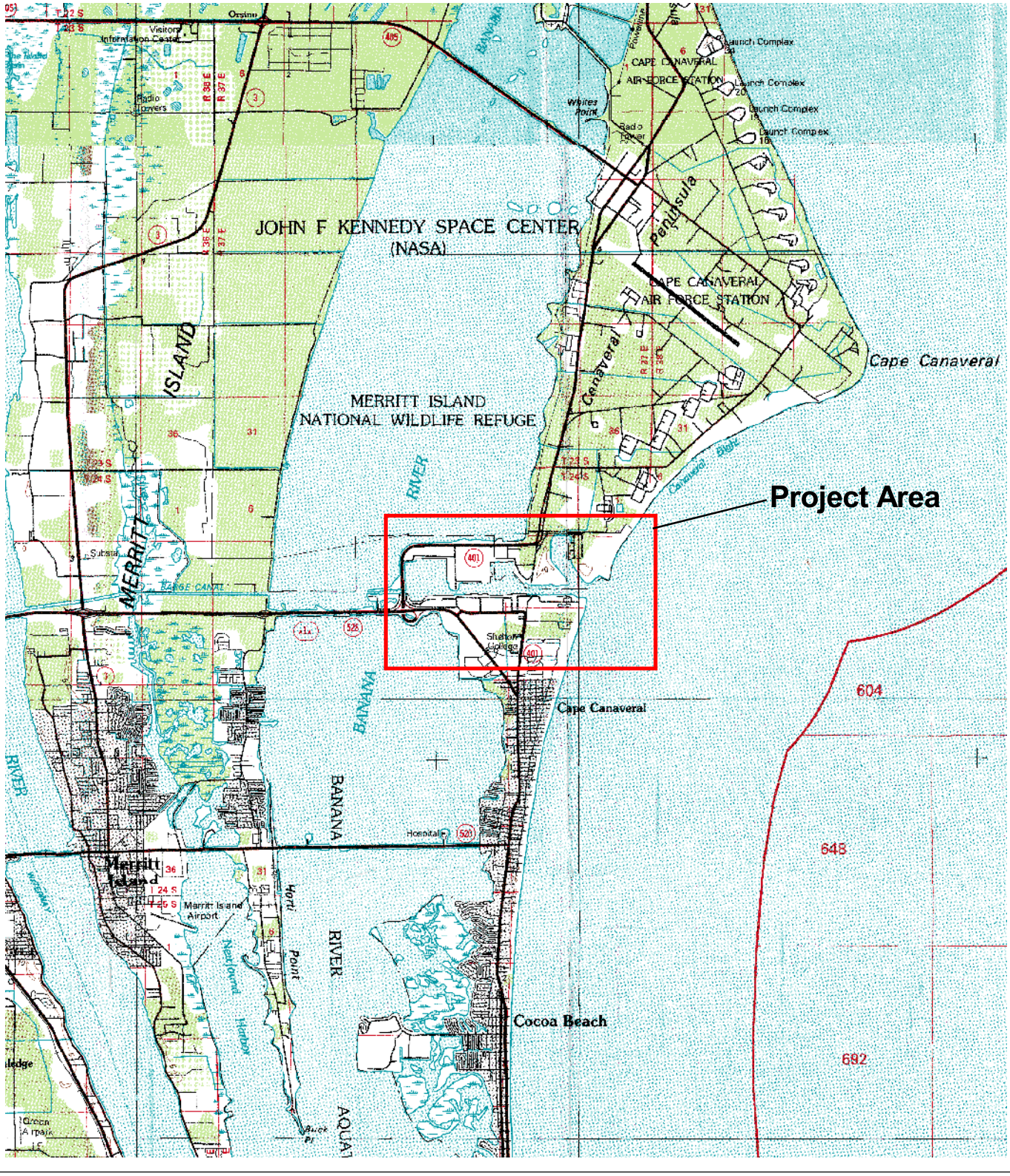
Dial Cordy and Associates Inc. conducted a wildlife pre-field investigation, to identify any threatened, endangered, or species of special concern which might inhabit the Project area. Prior to conducting the field work associated with the wildlife surveys, a Florida Natural Areas Inventory (FNAI) Species Summary for Brevard County was obtained to review the listed fauna that could potentially occur within this geographic region (Appendix A). In addition to the FNAI, existing reports from Cape Canaveral Air Force Station (CCAFS) and Port Canaveral (Port) were reviewed for potential protected species that may occur within the Project area. Four terrestrial species were identified that could potentially occur within the Project area. These species include the gopher tortoise (*Gopherus polyphemus*), Florida scrub jay (*Aphelocoma coerulescens*), eastern indigo snake (*Drymarchon corais couperi*), bald eagle (*Haliaeetus leucocephalus*), and the southeastern beach mouse (*Peromyscus polionotus niviventris*). In addition to the terrestrial species, three marine species were identified as potentially utilizing terrestrial beach habitats within the Project area. These species include the loggerhead (*Caretta caretta*), leatherback (*Dermochelys coriacea*), and green sea turtles (*Chelonia mydas*). The protected species and their listing status are provided in Table 1.

Table 1 Protective Status of the Targeted Listed Wildlife Species That May Occur Within the Port Canaveral Expansion Project Area, Brevard County, Florida.

Species	*State Listing**	*Federal Listing*
Gopher Tortoise	T	N
Florida Scrub Jay	T	T
Southeastern Beach Mouse	T	T
Eastern Indigo Snake	T	T
Bald Eagle	N	N

Source: Florida's Endangered Species, Threatened Species and Species of Special Concern, Official Lists. FGFWFC 1997.

* E=Endangered, SSC=Species of Special Concern, T=Threatened, and N=Not Listed



2 0 2 4 Miles

ocation ap	
Port Canaveral Expansion	
Scale: 1 inch = 2 miles	Drawn By: R
Date: December 2005	Approved By: H
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J05-850
	Figure 1

The three sea turtles also utilize the rock outcrops within the harbor for foraging. A separate study is being conducted to determine the extent of this utilization. The West Indian manatee (*Trichechus manatus latirostris*) is also known to occur in waters of Brevard County including Port Canaveral and to utilize the Port waters for passage from the Atlantic Ocean to the Banana River.

B. Field Survey

Habitat types were classified according to the Florida Land Use and Cover Classification System (FLUCCS) in order to assess what communities were available for the listed species. Both wandering and fixed transect methodologies were used to conduct terrestrial wildlife surveys within suitable habitats along the northern boundary of the Project area. This included habitats within both the Port and CCAFS. The terrestrial listed wildlife species were targeted using visual and audible cues. When any listed species was observed, the location was noted using DGPS. Along with field visits, reported data were used to provide additional information on species that occur within vicinity of the Project area.

III. RESULTS

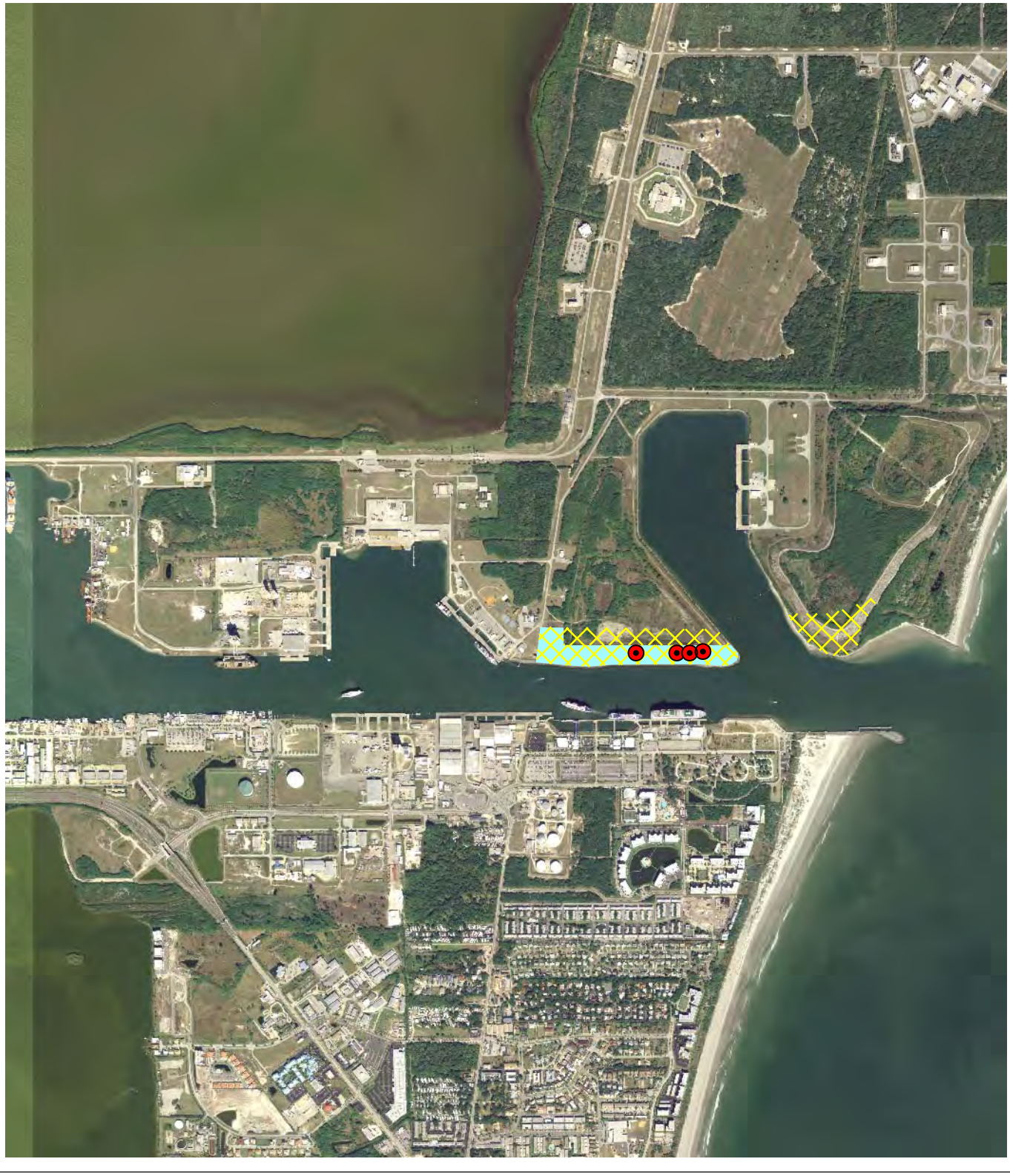
Five listed species were specifically targeted during the on-site survey visits; gopher tortoise, scrub jay, eastern indigo snake, bald eagle, and southeastern beach mouse. The survey area consisted of the northern water limits of the Port and extended a distance 500 feet landward of that sea/land boundary. During the on-site survey, evidence of one listed species, the gopher tortoise, was observed. All other accounts of listed species within the Project area were derived from reported data. Five FLUCCS habitat types were identified and recorded to identify potential areas for the listed species.

A. Protected Species Survey

Gopher Tortoise

Pedestrian transects were conducted on September 14, 2005 to identify any gopher tortoise burrows. Gopher tortoise surveys were conducted within the Project areas that contained suitable habitat. Suitable habitat consists of shrub and brushland (FLUCCS 320), and spoil habitats (FLUCCS 743). These areas accounted for approximately 43 acres within the Project area, of which approximately 50% was surveyed. Within that area, a total of four gopher tortoise burrows were identified (Figure 2). All four burrows were identified as active and all burrows were located on the slope of the spoil area berm.

In order to estimate the gopher tortoise population within the Project area, the number of occupied burrows (active plus inactive) must be multiplied by the standard conversion factor (scf) of 0.614. The scf is derived from the Wildlife Methodology Guidelines (FGFWFC 1988). That yields a total of 2.5 gopher tortoises within the 22 acres surveyed. Dividing the



Gopher Tortoise Borrow Location
Gopher Tortoise Survey
Suitable Gopher Tortoise Habitat
Surveyed Area

2000 0 2000 4000 Feet

Surve n Suitab oph r ortoise ab at

Port Canaveral Expansion

Scal 1 nc = 2,0 fe t	rawn R
Dat r 20 5	pprove H
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J0 -85
	Figure 2

total number of gopher tortoises per the area surveyed yields a density of 0.11 gopher tortoises per acre surveyed. This would yield an estimated total of 4.7 gopher tortoises for the 43 acres of suitable habitat in the Project area.

Florida Scrub Jay

While some suitable habitat was identified (FLUCCS 322, Coastal Scrub) on-site, the Florida scrub jay was not observed or heard within the Project area. However, there are known Florida scrub jay populations that occur within CCAFS.

Southeastern Beach Mouse

The southeastern beach mouse was not observed during the on-site visit. However, a survey conducted in April 2002 associated with the North Jetty Sand-Tightening Project resulted in 23 beach mouse captures on the CCAFS (Dynamac 2002). The area surveyed included areas along the northern boundary of the channel. This species is known to inhabit vegetative communities such as the ones identified within the Project area. These habitats include FLUCCS 320 and coastal scrub/non-vegetated shoreline (FLUCCS 322/652).

Eastern Indigo Snake

The eastern indigo snake utilizes gopher tortoise burrows and may be found where burrows exist. Pedestrian transects were conducted on September 14, 2005 to identify any gopher tortoise burrows within the Project areas that contained suitable habitat. Suitable habitat consists of shrub and brushland (FLUCCS 320), and spoil habitats (FLUCCS 743). These areas accounted for approximately 43 acres within the Project area, of which approximately 50% was surveyed. Within that area, a total of four gopher tortoise burrows were identified. All four burrows were identified as active and all burrows were located on the slope of the spoil area berm. No indigo snakes were identified, but previous trapping studies conducted on the Kennedy Space Center west of the Banana River and north of the Port identified a large number of individual indigo snakes (Dynamac 2003).

Bald Eagle

No bald eagles or nests were identified in the survey. No appropriate habitat for nesting was identified. A database search of FWC bald eagle nest locator website (http: //wld.fwc.state.fl.us/eagle/eaglenests/) indicated that the nearest known nests are located west of the Banana River.

B. Project Area Habitats

Five Florida Land Use Cover and Forms Classification System (FLUCCS) habitat types were identified within the Project area: military/open land (FLUCCS 173/190), shrub and brushland (FLUCCS 320), coastal scrub/non-vegetated shoreline (FLUCCS 322/652), spoil area (FLUCCS 743) and port facilities (FLUCCS 815) (Figure 3). The vegetative structure for each habitat type is described in the following section. All the habitats identified were uplands, no wetlands were observed within the Project boundary.

Port Canaveral FLUCCS

173/190 - Military/Open land (43.1 ac.)
320 - Shrub and Brushland (27.1 ac.)
322 - Coastal Scrub (16.6 ac.)
743 - Spoil Areas (14.8 ac.)
815 - Port Facilities (78.2 ac.)

2000 0 2000 4000 Feet

FL CCS ap	
Port Canaveral Expansion	
Scal inc t	Drawn
Date r 5	Approve H
DIAL CORDY AND ASSOCIATES INC Environmental Consultants	J05-850
	Figure 3

Military-Open Land - FLUCCS 173/190

This military/open land habitat type was identified on the east-central portion of the Project area and consists of approximately 43 acres (Figure 3). Military buildings, docks, roadways, and operation centers comprise the majority of the developed areas of this military community. Areas surrounding the military components within the project area consist of planted grasses and ornamental shrubs that are maintained regularly.

Shrub and Brushland - FLUCCS 320

Brazilian pepper (*Schinus terebinthifolius*), cabbage palm (*Sabal palmetto*), and live oak (*Quercus virginiana*) comprise the canopy trees within this community type and covers approximately 27 acres of the Project area (Figure 3). The herbaceous layer consists of vegetation such as bahiagrass (*Paspalum notatum*) and beggars-lice (*Desmodium spp*). This community type is interspersed between the rip-rap and spoil area.

Coastal Scrub/Non-Vegetated Shoreline - FLUCCS 322/652

This community type is characterized by the open, non-vegetated beach and continues to the vegetation located at the primary dune which extends landward toward the military/open land and spoil area communities (Figure 3). This community covers approximately 17 acres within the Project boundaries. Herbaceous species occurring within this FLUCCS community include beach morning glory (*Ipomoea pescaprae)*, sea oats (*Uniola paniculata*), and camphorweed (*Heterotheca subaxillaris*). Woody vegetation within the coastal scrub habitat consists predominately of wax myrtle (*Myrica cerifera*) and red cedar (*Juniperus silicicola*).

Spoil Area - FLUCCS 743

Spoil areas are located on CCAFS property and consist of dredged material dumped from previous Port dredging operations (Figure 3). The berms are approximately 100 feet in height and surround the area utilized for spoil material deposition. The berm consists of herbaceous vegetation such as bahiagrass and desmodium with the interior spoil area consisting of bare sandy areas, wax myrtle, and prickly-pear (*Opuntia stricta*) and comprises approximately 15 acres.

Port Facilities - FLUCCS 815

This category designates the area as a part of Port Canaveral (Figure 3). This community, which covers approximately 78 acres, consists of buildings, asphalt space for various Port activities, and open space. Vegetation within this habitat is similar to FLUCCS 173/190, consisting predominately of planted grass and ornamental shrubs that are regularly maintained through mowing.

IV. SUMMARY

The gopher tortoise was the only listed species observed during the on-site survey. Although several other listed species are known to occur at the CCAFS including portions of the Project area, none were observed. The Project has the potential to impact habitat of the southeastern beach mouse, eastern indigo snake, and the gopher tortoise.

V. LITERATURE CITED

Dynamac Corporation. 2002. Environmental Site Survey in the Vicinity of the North Jetty at Canaveral Harbor, Brevard County, Florida. Final Report.

Florida Natural Areas Inventory. 2005. (http://www.fnai.org/bioticssearch.cfm)

Florida Game and Freshwater Fish Commission. 1988. Wildlife Methodology Guidelines for Section 18.D of the Application for Development Approval.

Florida Game and Freshwater Fish Commission. 1997. Florida's Endangered Species, Threatened Species and Species of Special Concern, Official Lists.

APPENDIX A

Florida Natural Area Inventory
Brevard County, Florida

BREVARD COUNTY

134 Total Elements Found
Last Updated: June 2011

Key

Scientific Name is linked to the FNAI Online Field Guides when available.

- links to **NatureServe Explorer**, an online encyclopedia of more than 55,000 plants, animals, and natural communities in North America, compiled by the **NatureServe** network of natural heritage programs, of which the Florida Natural Areas Inventory is a member.

- links to a species distribution map (**Adobe SVG viewer** required). If your browser does not support Adobe SVG, try this **link**

New Search

SEARCH RESULTS

NOTE: This is not a comprehensive list of all species and natural communities occurring in the location searched. Only element occurrences documented in the FNAI database are included.

Plants and Lichens

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Argusia gnaphalodes	Sea Lavender	G4	S3	N	LE
Calamovilfa curtissii	Curtiss' Sandgrass	G3	S3	N	LT
Centrosema arenicola	Sand Butterfly Pea	G2Q	S2	N	LE
Chamaesyce cumulicola	Sand-dune Spurge	G2	S2	N	LE
Conradina grandiflora	Large-flowered Rosemary	G3	S3	N	LT
Dennstaedtia bipinnata	Hay Scented Fern	G4	S1	N	LE
Dicerandra thinicola	Titusville Balm	G1Q	S1	N	LE
Glandularia maritima	Coastal Vervain	G3	S3	N	LE
Glandularia tampensis	Tampa Vervain	G2	S2	N	LE
Halophila johnsonii	Johnson's Seagrass	G2	S2	LT	N
Harrisia simpsonii	Simpson's Prickly Apple	G2	S2	N	LE

Lantana depressa var. floridana	Atlantic Coast Florida Lantana	G2T1	S1	N	LE
Lechea cernua	Nodding Pinweed	G3	S3	N	LT
Lechea divaricata	Pine Pinweed	G2	S2	N	LE
Nemastylis floridana	Celestial Lily	G2	S2	N	LE
Nolina atopocarpa	Florida Beargrass	G3	S3	N	LT
Ophioglossum palmatum	Hand Fern	G4	S2	N	LE
Pavonia spinifex	Yellow Hibiscus	G4G5	S2	N	N
Peperomia humilis	Terrestrial Peperomia	G5	S2	N	LE
Pteroglossaspis ecristata	Giant Orchid	G2G3	S2	N	LT
Tephrosia angustissima var. curtissii	Coastal Hoary-pea	G1T1	S1	N	LE
Zephyranthes simpsonii	Redmargin Zephyrlily	G2G3	S2S3	N	LT

Bivalves (Clams and Mussels)

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Villosa amygdala	Florida Rainbow	G3	S3	N	N

Gastropods (Snails and Allies)

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Praticolella bakeri	Ridge Scrubsnail	G2G3	S2S3	N	N

Spiders

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Sphodros abboti	Blue Purse-web Spider	G4G5	S4	N	N

Grasshoppers and Allies

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Melanoplus indicifer	East Coast Scrub Grasshopper	G1G2	S1S2	N	N

Beetles

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Aethecerinus hornii	Horn's Aethecerinus Long-Horned Beetle	G2G4	S2S4	N	N
Aphodius aegrotus	Small Pocket Gopher Aphodius Beetle	GNR	S3?	N	N
Aphodius laevigatus	Large Pocket Gopher Aphodius Beetle	G3?	S3?	N	N
Ataenius wenzelii	An Ataenius Beetle	G3G5	S2S3	N	N
Diplotaxis rufa	Red Diplotaxis Beetle	G2	S2	N	N
Haroldiataenius saramari	Sand Pine Scrub Ataenius Beetle	G3G4	S3S4	N	N
Hypotrichia spissipes	Florida Hypotrichia Scarab Beetle	G3G4	S3S4	N	N
Peltotrupes profundus	Florida Deepdigger Scarab Beetle	G3	S3	N	N
Phyllophaga elizoria	Elizoria June Beetle	G2G3	S2S3	N	N
Phyllophaga elongata	Elongate June Beetle	G2G4	S2S4	N	N
Selonodon floridensis	Florida Cebrionid Beetle	G2G3	S2S3	N	N

Butterflies and Moths

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Appias drusilla	Florida White	G5	S2S3	N	N
Atrytonopsis loammi	Loammi Skipper	G1	S1	N	N
Callophrys gryneus sweadneri	Florida Olive Hairstreak	G5T2	S2	N	N
Euphyes berryi	Berry's Skipper	G2G3	S1S2	N	N
Euphyes dukesi calhouni	Calhoun's Skipper	G3T2T3	S1	N	N

Ants, Bees and Wasps

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Colletes titusensis	A Cellophane bee	G1G2	S1S2	N	N

Fish

EXPLANATION

Scientific Name	Common Name	Global	State	Federal	State

		Rank	Rank	Status	Status
Acipenser oxyrinchus oxyrinchus	Atlantic Sturgeon	G3T3	S1	C	SSC
Bairdiella sanctaeluciae	Striped Croaker	G5	S2	SC	N
Ctenogobius pseudofasciatus	Slashcheek Goby	G3G5	S1	N	N
Gobiomorus dormitor	Bigmouth Sleeper	G4	S2	N	N
Microphis brachyurus	Opossum Pipefish	G4G5	S2	SC	N
Rivulus marmoratus	Mangrove Rivulus	G3	S3	SC	SSC

Amphibians

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Rana capito	Gopher Frog	G3	S3	N	SSC

Reptiles

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Alligator mississippiensis	American Alligator	G5	S4	SAT	FT(S/A)
Caretta caretta	Loggerhead	G3	S3	LT	FT
Chelonia mydas	Green Turtle	G3	S2	LE	FE
Crotalus adamanteus	Eastern Diamondback Rattlesnake	G4	S3	N	N
Dermochelys coriacea	Leatherback	G2	S2	LE	FE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	FT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	ST
Lampropeltis calligaster	Mole Snake	G5	S2S3	N	N
Lampropeltis getula	Common Kingsnake	G5	S2S3	N	N
Lepidochelys kempii	Kemp's Ridley	G1	S1	LE	FE
Pituophis melanoleucus mugitus	Florida Pine Snake	G4T3	S3	N	SSC
Sceloporus woodi	Florida Scrub Lizard	G3	S3	N	N

Birds

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Aphelocoma coerulescens	Florida Scrub-jay	G2	S2	LT	FT
Aramus guarauna	Limpkin	G5	S3	N	SSC
Ardea alba	Great Egret	G5	S4	N	N
Ardea herodias occidentalis	Great White Heron	G5T2	S2	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	SSC
Buteo brachyurus	Short-tailed Hawk	G4G5	S1	N	N
Caracara cheriway	Crested Caracara	G5	S2	LT	FT
Charadrius melodus	Piping Plover	G3	S2	LT	FT
Dendroica discolor paludicola	Florida Prairie Warbler	G5T3	S3	N	N
Egretta caerulea	Little Blue Heron	G5	S4	N	SSC
Egretta rufescens	Reddish Egret	G4	S2	N	SSC
Egretta thula	Snowy Egret	G5	S3	N	SSC
Egretta tricolor	Tricolored Heron	G5	S4	N	SSC
Elanoides forficatus	Swallow-tailed Kite	G5	S2	N	N
Elanus leucurus	White-tailed Kite	G5	S1	N	N
Eudocimus albus	White Ibis	G5	S4	N	SSC
Falco columbarius	Merlin	G5	S2	N	N
Falco peregrinus	Peregrine Falcon	G4	S2	N	N
Falco sparverius paulus	Southeastern American Kestrel	G5T4	S3	N	ST
Fregata magnificens	Magnificent Frigatebird	G5	S1	N	N
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Haematopus palliatus	American Oystercatcher	G5	S2	N	SSC
Haliaeetus leucocephalus	Bald Eagle	G5	S3	N	N
Hydroprogne caspia	Caspian Tern	G5	S2	N	N

Ixobrychus exilis	Least Bittern	G5	S4	N	N
Laterallus jamaicensis	Black Rail	G4	S2	N	N
Mycteria americana	Wood Stork	G4	S2	LE	FE
Nyctanassa violacea	Yellow-crowned Night-heron	G5	S3	N	N
Nycticorax nycticorax	Black-crowned Night-heron	G5	S3	N	N
Pandion haliaetus	Osprey	G5	S3S4	N	SSC*
Pelecanus occidentalis	Brown Pelican	G4	S3	N	SSC
Peucaea aestivalis	Bachman's Sparrow	G3	S3	N	N
Picoides borealis	Red-cockaded Woodpecker	G3	S2	LE	FE
Picoides villosus	Hairy Woodpecker	G5	S3	N	N
Platalea ajaja	Roseate Spoonbill	G5	S2	N	SSC
Plegadis falcinellus	Glossy Ibis	G5	S3	N	N
Recurvirostra americana	American Avocet	G5	S2	N	N
Rynchops niger	Black Skimmer	G5	S3	N	SSC
Sternula antillarum	Least Tern	G4	S3	N	ST
Thalasseus maximus	Royal Tern	G5	S3	N	N
Thalasseus sandvicensis	Sandwich Tern	G5	S2	N	N
Vireo altiloquus	Black-whiskered Vireo	G5	S3	N	N

Mammals

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Eubalaena glacialis	North Atlantic Right Whale	G1	S1	LE	FE
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Peromyscus polionotus niveiventris	Southeastern Beach Mouse	G5T1	S1	LT	FT

Podomys floridanus	Florida Mouse	G3	S3	N	SSC
Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	SSC
Trichechus manatus	Manatee	G2	S2	LE	FE
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	ST*

Natural Communities

DESCRIPTION

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Basin swamp		G4	S3	N	N
Beach dune		G3	S2	N	N
Coastal grassland		G3	S2	N	N
Coastal interdunal swale		G3	S2	N	N
Coastal strand		G3	S2	N	N
Depression marsh		G4	S4	N	N
Dome swamp		G4	S4	N	N
Estuarine seagrass bed		G3	S2	N	N
Floodplain marsh		G3	S3	N	N
Hydric hammock		G4	S4	N	N
Mangrove swamp		G5	S4	N	N
Maritime hammock		G3	S2	N	N
Mesic flatwoods		G4	S4	N	N
Mesic hammock		G3	S3?	N	N
Salt marsh		G5	S4	N	N
Scrub		G2	S2	N	N
Scrubby flatwoods		G2	S2?	N	N
Shell mound		G2	S2	N	N
Xeric hammock		G3	S3	N	N

Other Elements

EXPLANATION

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status
Bird Rookery		GNR	SNR	N	N
Manatee Aggregation Site		GNR	SNR	N	N

New Search