



Draft Land Management Plan for McKissack Beach and Marsh

Completed by the Apalachee Regional Planning Council on Behalf of The City of Carrabelle



This report funded in part, through a grant agreement from the Florida Department of Environmental Protection. The views, statements, findings, conclusions and recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the State of Florida or any of its subagencies.

General Information

1. Common Name of the Property:

McKissack Beach and Marsh, McKissack Beach

2. Lease Number:

4579

3. Acres:

261 (GIS Derived)

4. Managing Agency:

City of Carrabelle

5. Provide an executive summary/description of this property that includes a brief description of the resources, uses and proposed uses, outstanding features etc.

This management plan for McKissack Beach and Marsh describes the setting, natural resources, and the intended management for the property. This management is guided by the purpose and intended use of the land described in the land acquisition process, which is for the conservation and protection of natural and historic resources, and for resource based public outdoor activities and education associated with the conservation and protection of public lands.

McKissack Beach is comprised of approximately 42 acres of beach and dune system, and McKissack Marsh approximately 219 acres of salt marsh and tidal flats. The goal of this management plan is to conserve and protect the natural and cultural resources at McKissack Beach and Marsh.

6. Attach a map showing the location and boundaries of the property including:

a) The location and structures or improvements currently on the property

b) The location and type of proposed improvements. Appendix A

7. Attach a map showing the proximity of this managed area to other conservation areas within 10 miles. Appendix A

8. Please attach a legal description of the property. Appendix B

9. Provide a physical description of the land including a quantitative data description of the land which includes an inventory of forest and other natural resource, exotic and invasive plants, hydrologic features, infrastructure including recreational facilities, and other significant land, cultural or historical features.

The McKissack Beach lease is comprised of two distinct habitat types. The first is a beach and dune system, with dune scrub uplands that comprise approximately 42 acres. The beach and dune system are adjacent to the Carrabelle River, a major sand source in the area. As a result, this beach is one of the few

accretionary areas in the panhandle. Species found throughout include sea oats, cordgrass, railroad vine, beach morning glory, Godfrey's blazing star, palmetto, beach rosemary, sand pine, and others.

The remaining approximately 219 acres consist of wetlands that are comprised primarily of black needle rush. As the Carrabelle River turns south, Postun Bayou forms, making its way south before meeting the Carrabelle river again. This helps to feed Boggy Jordan Bayou. Both bayous have tidal creeks that inundate the marsh at high tides.

Off the east point of McKissack beach is an important mudflat. It serves as forage ground for a variety of birds including willet, American oystercatcher, black skimmers, heron, snowy plover, piping plover, red knot, and least tern.

Natural resource data on the land is available from Florida Natural Areas Inventory (FNAI), Florida Fish and Wildlife Commission (FWC), Florida Department of Environmental Protection (FDEP) and Audubon Florida. An updated, ground level, species and habitat survey would help in verifying habitat types and species present, including exotics. See Appendix C for a more robust list of species occurrences and likely occurrences.

There are limited physical improvements currently at the property. The biggest improvement that has been made to the property over the years is the grading of Gulf Beach drive and placement of crushed lime rock road base to form a parking area. This parking area is prone to flooding and standing water pools after rains. Mono-post structures help prevent driving over the dunes. There is interpretive signage on the seaward side of the dunes that provide an overview of some of the habitat and species that frequent McKissack Beach. FWC signage is also present that is meant to prevent driving through the dune system. There is a wide dune walkthrough at the terminus of Gulf Beach Drive. Ongoing discussions are being held to determine whether it would be best to continue this practice, or if funds were available, to install a dune walkover at the location.

Any improvements that might be made to the property would be done so in a way that is low-impact to native flora and fauna, as well as minimizes impacts to cultural resources that might be present.

10. A brief description of soil types, attaching USDA maps when available.

There are 8 soil types found within the boundary of McKissack Beach and Marsh. The four primary units are Bohickett and Tisonia soils (77.6%), Corolla sand (8.5%), unconsolidated Beaches (5.7%), and Mandarin fine sand (2%). Other types include Duckston sand (0.5%), Leon sand (0.4%), Resota fine sand (0.3%) and Udorthents (0%).

The portion of McKissack beach from Mean High Water and encompassing the beach berm to the dune line is composed of unconsolidated loose fine sands and broken shell. The dune system is comprised of Corolla sand Mandarin fine sands. Corolla soil supports dune and upland vegetation and is flat to sloping (0-5%), somewhat poorly drained. Mandarin fine sand supports upland vegetation and is flat to sloping (0-3%), somewhat poorly drained soil.

Bohickett and Tisonia soils are very poorly drained, nearly level soils in gulf coast tidal and estuarine marshes. They have a water table at or above the surface and are flooded daily by high tides. The top layer of Bohickett soil is very dark silty clay and beneath it is black silty clay. Tisonia soils are very dark grayish brown mucky peat at the surface, over dark grayish brown muck. The next layer is dark gray clay, and

below that is gray loamy sand stratified with dark gray sandy clay loam. Bohicket soils primarily support black needle rush, marsh hay cordgrass, and smooth cordgrass. A small portion of the edges of the marshes are bordered by Leon sand and Duckston sand. These are poor drained and occasionally flooded. See Appendix D for soil maps.

11. Is the property adjacent to an aquatic preserve or designated area of critical state concern?

No.

12. Was the property acquired by a conservation land acquisition program? If YES, please identify.

The land was acquired by Warranty Deed by the Board of Trustees of the Internal Improvement Trust Fund. It was deeded from McKissack Properties, Inc. to TIITF for the release of TIITF lands on Timber Island.

13. Do any agency-specific statute requirements or legislative/executive directives constrain the use of the property?

No.

14. Are there any reservations or encumbrances on the property?

There are none according to the Florida State Owned Lands and Records Information System.

A. Natural and Cultural Resources

15. Are there any archeological or historical sites on this property?

No. The Florida Department of State, through the Division of Historical Resources oversees the preservation of cultural and historical sites. No historical or cultural sites have been discovered on the property location, but any suggested improvements to the property will be coordinated with the Division of Historical Resources to ensure no sensitive site will be impacted by improvements to the property.

16. Are there any buildings on the property that are fifty or more years old?

No.

17. Please identify natural resources on the property that are listed in the Florida Natural Areas Inventory.

See Appendix C for the full FNAI report.

18. Are there any imperiled natural communities, unique natural features, or any State and federally listed endangered or threatened plant or animal species on site?

Yes.

If YES, please provide a specific description of how you plan to identify, locate, protect and preserve these species.

The beach and dune system and salt marsh that comprise the McKissack Beach and Marsh are supportive of a variety of plant and animal species. Three federally listed threatened animal species have been documented at or near the site, including red knot (*Calidris canutus rufa*), loggerhead sea turtle (*Caretta caretta*), and piping plover (*Charadrius melodus*). State threatened animal species include the snowy plover (*Charadrius nivosus*), little blue heron (*Egretta caerulea*), American oystercatcher (*Haematopus palliatus*), and least tern (*Sternula antillarum*). Three plants, the state endangered Godfrey's blazing star (*Liatris provincialis*) and state threatened Gulf Coast lupine (*Lupinus westianus*) and large-leaved jointweed (*Polygonella macrophylla*) have been documented at or near the site.

The marine turtle permit holder, operating under the authority of FWC, will continue to monitor the beach and document nesting activities, and mark the areas to help secure nests. Data on sea turtle nesting activity is submitted annually to FWC's statewide database. In turn, this data contributes to long-term monitoring of turtle populations and influences land management activities on nesting beaches. Audubon Florida, FWC, and volunteer bird stewards actively monitor nesting and foraging shorebirds along McKissack Beach both in the breeding and non-breeding seasons. FWC is responsible for the marking of shorebird nests and installs flagging material to help keep foot traffic off the nests. Awareness and protection of both sea turtle and shorebird nests is currently fostered through hosted sea turtle nest evaluations and bird walks. Beach and dune habitat can be better preserved by having a detailed natural communities and species survey. With this in place, and future improvements could rely on that data to make informed decisions about how development might progress. Limited improvements such as interpretive signage would also make visitors aware of the valuable habitat and encourage responsible use. Examples of how these might look are included in Appendix J. It is important to note that due to the nature of the coastal environment, extreme natural changes can occur to the landscape which affect flora and fauna.

19. Please identify the water resources including swamps, marshes or other wetlands, on the property including the water quality classification for each water body and if the water body has been designated "Outstanding Florida Waters."

Approximately 219 acres of salt marsh is present on the McKissack property. Running through the marsh are various tidal creeks. Potsun Bayou encompasses the northern part of the property and Boggy Jordan Bayou on the western side of the property. Dickerman Cut and the Carrabelle River are east of the property. The area opens up to St. George Sound and the Gulf of Mexico, classified as Class 2. There are no Outstanding Florida Waters present on or near the property.

20. Are any known mineral resources, such as oil, gas and phosphates, or any unique natural features, such as coral reefs, beaches, dunes, natural springs, caverns, large sinkholes, virgin timber stands, scenic vistas, and natural rivers and streams, and outstanding native landscapes containing relatively unaltered flora, fauna, and geological features on site?

Yes. There is a beach and dune system, although it is somewhat disturbed. Within the marsh area, there are a number of natural streams. See Appendix F.

21. Are there fish or wildlife resources (both game and non-game) on the property?

Yes, please see Appendix C for a list of documented, likely, and potential occurrences on and around the property. Further surveys would help to verify existing data.

B. Use of the Property

22. Please provide a statement of the purpose for which the lands were acquired, the projected use or uses as defined in Chapter 253.034, Florida Statutes, and the statutory authority you have for such uses.

The lands were leased to the City of Carrabelle for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation and protection of these lands, as set forth in subsection 259.032(11).

23. Please state the desired outcome for this property, and key management activities necessary to achieve the desired outcome, including public access.

The McKissack Beach and Marsh continue to be maintained in its native state. Current techniques including listed species monitoring, invasive species management, dune revegetation and erosion reduction, marine debris removal, and prescribed fire will continue to be used to restore natural communities and original ecosystem functions. It is essential to conserve and protect the natural and any cultural resources on the property. Any development of the property will be done so carefully, with specific attention directed at detecting and preserving native species and landscaping, and cultural and historical resources. Public visitation, environmental education, and scientific research are encouraged if such activities are consistent with protection of natural and cultural resources. The portion of the property that receives the most use is the sandy beach. It is a popular amenity to both locals and visitors from outside the area, and could be managed to better accommodate both user groups (beach rules, awareness of local wildlife present) towards the conservation and public access end goal. Desired outcomes for the property include: restoration of natural communities; supporting native species; improved water quality by reducing runoff; stabilization of the beach and dune system and related vegetation.

24. Please state the single or multiple uses currently made of the property and if the property is single use, please provide an analysis of its potential for multiple-use.

Currently, the property has one use, conservation and protection of natural and historical resources on the property and resource based public outdoor activities and education, which are compatible with conservation and protection. The City of Carrabelle is the primary manager of the land. FWC has jurisdiction over threatened and endangered plant and animal species. FDEP is the permitting entity for allowable activities within wetlands, beaches, and adjacent submerged lands. The Florida Forest Service will be contacted in the event of a wildfire or prescribed burning as needed. The harvesting of tress on the leased lands is not considered an appropriate use, considering the sensitivity of the lands.

25. Were multiple uses considered but not adopted?

The lands are currently single use. Considering the property's natural and cultural resources, aesthetic values, and visitor experiences, there are no other secondary purposes which would not interfere with the primary purposes of the property.

26. Please provide an analysis of the potential use of private land managers to facilitate the restoration or management of these lands.

Using a private land manager would benefit management of the property by ensuring the protection of natural and historical resources. A private land manager would be able to help identify native and exotic species and develop a plan to either remove or protect as necessary. The hiring of a land manager is not expected and would be contingent on funding.

27. Please provide an analysis of the potential of the property to generate revenues to enhance the management of the property.

There are few opportunities to generate revenues to enhance the management of the property. This stems from the lease area being marsh, and beach and dune system, neither of which lend themselves readily to improved development or commerce. On certain portions of the property, recreation activities such as kayaking, fishing, and traditional low impact beach activities are present. It is unclear if these activities could support revenues that would enhance the management of the property. Techniques such as donations, promotional events, and similar measures could be employed on a case-by-case basis as a means of supplementing management funding.

28. Describe the projected, current and recent past uses of the property, and any unauthorized uses, if known.

Historically and currently, the property has been used as a recreational resource. The area around the property has been used primarily for recreational and commercial seafood and shellfish harvesting. Portions of the property, specifically the terminus of Gulf Beach Drive, on the beach portion of the property, has been used for launching and retrieving small watercraft. This is a historic, unauthorized use. Other unauthorized uses observed occasionally on the property include beach driving by motorized vehicles, bonfires (small warming fires by fishermen are allowed in October, November and December), and pets off leash.

29. Do the planned uses impact renewable and non-renewable resources on the property?

No.

If YES, please describe what specific activities will be taken to protect or enhance and conserve those resources and to compensate/mitigate the damage that is caused by the impacting use.

While the planned uses on the property have relatively little impact on the resources at the property, some of the non-prescribed uses do have the potential to impact the property. The biggest use impacting the property is beach driving, both on the dunes and on the beach. Sea turtles are known to nest at the location, and continued access to the beach prohibits dune formation at the entrance of the property. To curtail this passively, more interpretive signage could be posted at the site that detail impacts to dunes, vegetation, and turtles. Physically, appropriate barriers could be installed around designated parking areas and access paths to direct vehicular and foot traffic, and therefore mitigate impacts dunes, sensitive

vegetation, and listed species nesting sites. Additionally, drainage improvements could be considered with any parking lot improvements, contingent on funding.

30. Should any parcels of land within or adjacent to the property be purchased because they are essential to management of the property?

No.

31. Are there any portions of this property no longer needed for your use?

No. All of the lands within the McKissack Beach and Marsh are suitable for and necessary for the stated management objectives and none should be considered or declared surplus.

32. Please describe what public uses and public access that would be consistent with the purpose for which this property was acquired.

The lands were leased to the City of Carrabelle for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation and protection. Passive and active recreation including hiking, wildlife viewing, boating, and fishing are uses that would be consistent with the purpose for which the property was acquired. The public use and access represent balanced public utilization on the property.

There are two access points to Carrabelle beach and marsh. It can be accessed via the Franklin County maintained Carrabelle Beach Park, which includes restrooms and a paved parking lot. It can also be accessed at the end of Gulf Beach Drive. Any future parking or access improvements related to Gulf beach Drive will be grant driven and will seek public input on designs.

C. Management Activities

33. If more than one agency manages this property, describe the management responsibilities of each agency and how such responsibilities will be coordinated.

The City of Carrabelle is the primary manager of the land. FWC has jurisdiction over threatened and endangered plant and animal species. FDEP is the permitting entity for allowable activities within wetlands, beaches, and adjacent submerged lands. The Florida Forest Service will be contacted in the event of a wildfire or prescribed burning as needed, see Appendix H. The harvesting of trees on the leased lands is not considered an appropriate use, considering the sensitivity of the lands. The Florida Department of State, through the Division of Historical Resources oversees the preservation of cultural and historical sites. No historical or cultural sites have been discovered on the property location, but any suggested improvements to the property will be coordinated with the Division of Historical Resources to ensure no sensitive site will be impacted by improvements to the property. For emergency contacts, see Appendix I.

34. Please discuss management needs and problems on the property including conservation of soil and water resources and control and prevention of soil erosion and water and soil contamination.

The primary management need and problem for the property pertains to the entrance to the property at the end of Gulf Beach Drive. The entrance is a fragmented dune that is susceptible to erosion during periods of heavy rainfall. The lack of parking facilities and associated stormwater control facility coupled with using the entrance to trailer boats to the water (historic use) has led to erosion issues. Posted demarcating boundaries of the lease could also be helpful in curbing motor vehicle traffic to the site. *Additional public workshops will be utilized to determine what might be done to address this issue. See appendix G for public participation notes.* At this time, no restroom facilities are needed for or planned for the property due to facilities being available directly adjacent to the site at the Carrabelle Beach. Any improvements will depend on the ability to obtain funding.

35. Identify adjacent land uses that will conflict with the planned use of this property, if any.

The surrounding land uses are not very intensive. Directly north of the beach property is the McKissack subdivision. These are single family residential homes. It is not anticipated that the planned use conflicts with the property. To the east of the marsh are lands zoned commercial. Currently this area is vacant, and considering the nature of the marsh, little impact would result to the property. To the west lies Carrabelle Beach, a public low-impact recreation site managed by Franklin County. This land use would not conflict with the planned use of the property.

The management plan is being developed in compliance with the local comprehensive plan.

36. Please describe measures used to prevent/control invasive, non-native plants.

A survey of the natural communities will need to be conducted on the property in order to determine baseline conditions. Once this is done, management techniques can be assessed. These could include physical removal or chemical applications to invasive, non-native plants. Prescribed fire could also be utilized in invasive control, see Appendix H.

37. Was there any public or local government involvement / participation in the development of this plan? YES, If YES, please describe:

There were several efforts undertaken so that community input for the project could be gathered and vetted. The first involved direct, one-on-one phone interviews with local residents and active members of the community about some of their concerns associated with the management of the property. This provided insight into breaking down individuals into group membership. The identified groups were interviewed in person on December 9, 2019 at the Franklin County, Carrabelle Library. These directed meetings helped to develop the first draft of the McKissack Beach Land Management Plan as well as ideas for who to select for the steering committee. Two additional public meetings were held on January 16 and on February 10, 2020, to present the plan and take feedback. A Steering Committee meeting took place before the public meeting on February 10, 2020, at 3 PM, at Carrabelle City Hall. The committee was comprised by: Brenda La Paz, City of Carrabelle; Clint Davis, Florida Forest Service; Diane Alix, Florida Fish and Wildlife Conservation Commission; John Walls, local resident; Mark Curenton, County Soil Conservation District (unable to attend); Caitlin Snyder, Apalachicola National Estuarine Research Reserve (unable to attend). Please see appendix G for meeting summaries.

38. If an arthropod control plan has been established for this property, please include it as an attachment. If one does not exist, provide a statement as to what arrangement exists between the local

mosquito control district and the managing agency. See Chapter 388.4111 regarding mosquito control on public lands.

No arthropod control plan exists for this property. The Franklin County Mosquito Control periodically manages the areas adjacent to McKissack Beach.

39. Management Goals – The following 8 goals may not all be applicable to your site. Write N/A where appropriate. Also, please add as many goals, objectives, and measures as you wish.

1. Habitat restoration and improvement:

Goal: Allow the land to be maintained in its current state or enhanced (LT).

Measurable Objective: Increased species occurrences, flora and fauna.

Policy: Continue to utilize law enforcement to enforce state and local laws.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

Goal: Where feasible, allow for cost-effect restoration and protection improvements for natural communities and listed species (LT).

Measurable Objective: Specific project improvement numbers such as number of sea oats planted and natural dune evolution.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal. This goal could be supplemented by volunteer groups and donations.

2. Public access and recreational opportunities:

Goal: Ensure continued sustainable public access to McKissack Beach (LT).

Measurable Objective: Maintain access point(s) along the property.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

Goal: Conserve dune habitat while allowing for public access to the beach (LT).

Measurable Objective: Develop plans for a dune walkover or designated walking path at the terminus of Gulf Beach Drive.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

Goal: Improve public access and safety through facilities and stormwater management at main property entrance (LT).

Measurable Objective: Complete a parking improvement project at Gulf Beach Drive with appropriate stormwater planning.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

3. Hydrological preservation and restoration:

Goal: Improve water quality through stormwater and flood management at main property entrance (LT).

Measurable Objective: Complete a parking improvement project at the southern end of Gulf Beach Drive with appropriate stormwater planning.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

4. Sustainable forest management:

Goal: Develop an agreement with the Florida Forest Service for the management of forest resources (ST).

Measurable Objective: Number of agreements in place.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

5. Exotic and Invasive species maintenance and control:

Goal: Survey and develop a control plan for invasive and/or exotic species at McKissack Beach (LT).

Measurable Objective: Number and location of exotic and invasive species determined.

Measurable Objective: Reduce and maintain exotic and invasive species.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal. Costs can be offset by encouraging volunteer exotic and invasive species removal.

6. Capital facilities and infrastructure: N/A

7. Cultural and historical resources description:

Goal: Preserve cultural and historical resources (LT).

Measurable Objective: Any cultural or historical resources discovered at the site will be reported to the Department of State division of Historical resources.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

8. Imperiled species habitat maintenance, enhancement, restoration, or population restoration:

Goal: Ensure that habitat valuable to imperiled species is maintained in its current state (LT).

Measurable Objective: Amount of habitat type gained or lost.

Measurable Objective: Disturbance activities reduced on imperiled species habitat (vehicular driving, pets off leash, bonfires, debris/trash).

Measurable Objective: Prescribed fire agreements/acres burned.

Cost: Currently there is no budget associated with this goal, but the city will pursue grants as they become available to accomplish this goal.

40. Costs

Resource management: N/A

Administration: N/A

Support: N/A

Capital Improvements: N/A

Recreation Visitor Services: N/A

Law Enforcement Activities: N/A

41. A finding regarding whether each planned use conforms to the appropriate policies and guidelines of the State Lands Management Plan is required. The Plan can be found at <http://www.dep.state.fl.us/lands/oes/slmp.pdf>, by writing to the State of Florida Department of Environmental Protection, Division of State Lands, Office of Environmental Services, 3900 Commonwealth Boulevard, Mail Station 140, Tallahassee, Florida 32399-3000, or by calling (850) 245-2784. Does this plan conform to the State Lands Management Plan?

Yes

42. Please provide the following

Name: Courtney Dempsey

Managing Agency: City of Carrabelle

Address: 1206 Hwy 98 E, Carrabelle, FL 32322

Phone: (850) 697-2727

Email Address: citycbel@fairpoint.net

Appendix A

Location Maps

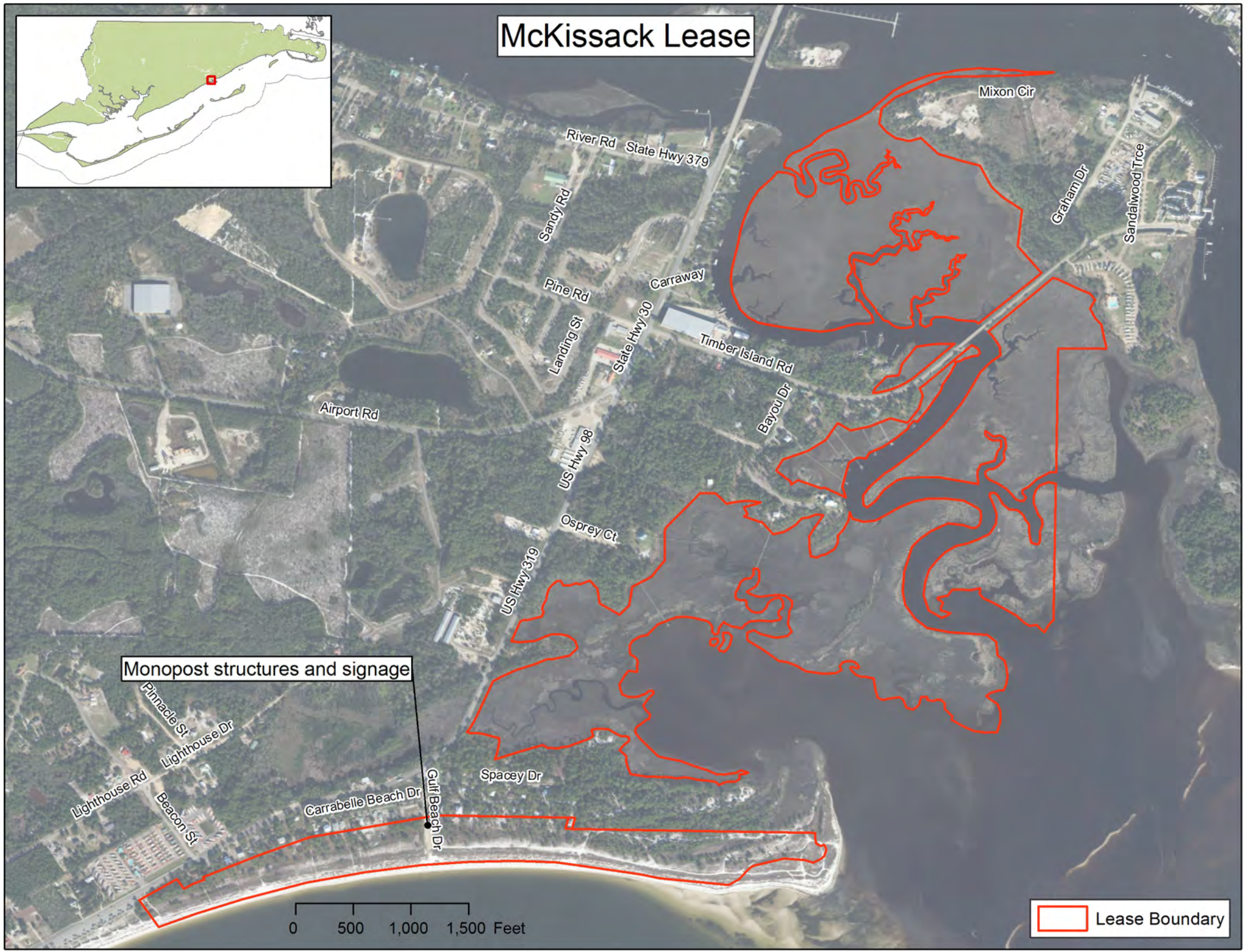


McKissack Lease

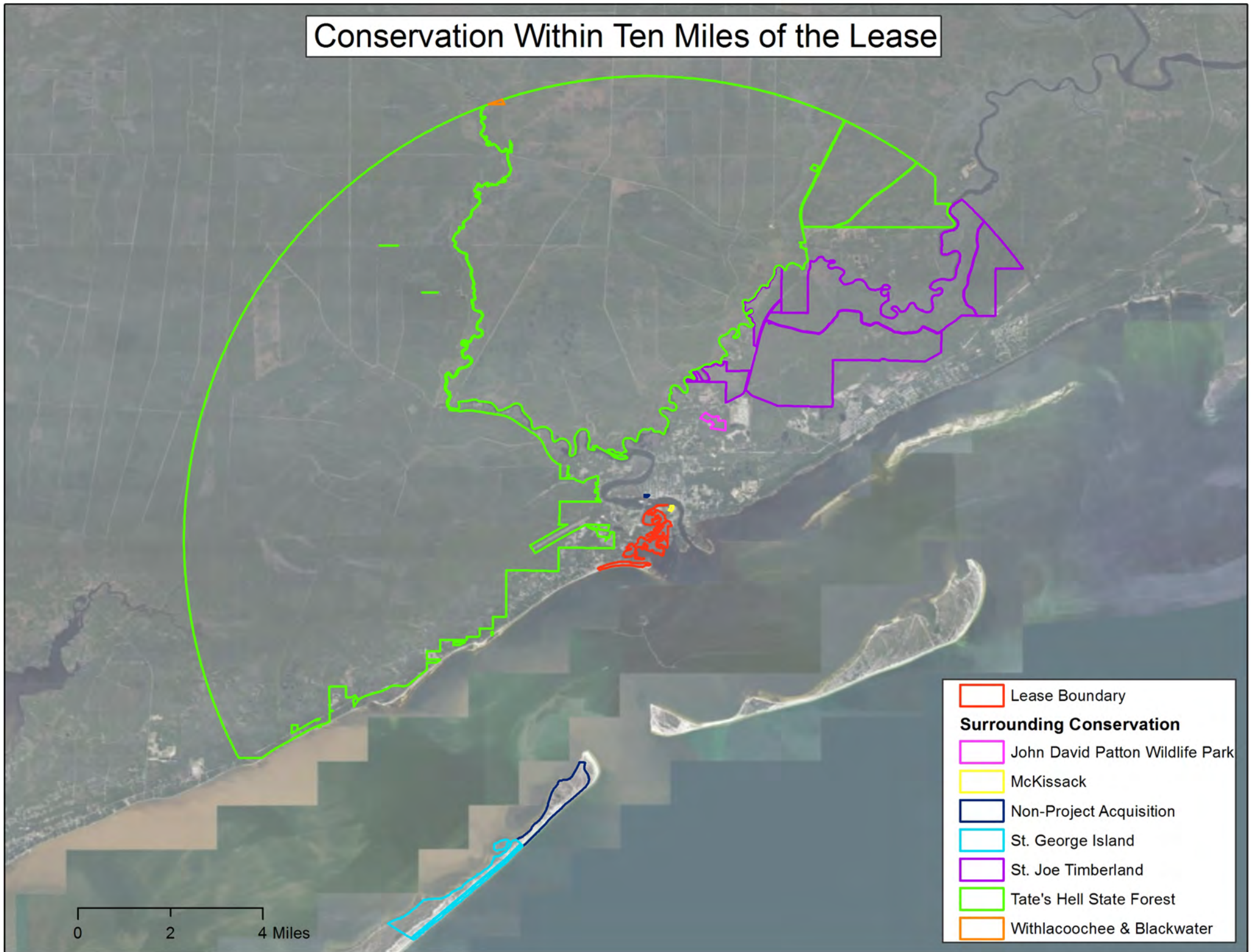
Monopost structures and signage

Lease Boundary

0 500 1,000 1,500 Feet



Conservation Within Ten Miles of the Lease



Appendix B
Legal Description

BOARD OF TRUSTEES OF THE INTERNAL
IMPROVEMENT TRUST FUND OF THE
STATE OF FLORIDA

LEASE AGREEMENT

Lease No. 4579

THIS LEASE AGREEMENT, made and entered into this 29th day of August 2008, by and between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA hereinafter referred to as "LESSOR," and CITY OF CARRABELLE, FLORIDA, hereinafter referred to as "LESSEE."

LESSOR, for and in consideration of mutual covenants and agreements hereinafter contained, does hereby lease to said LESSEE, the lands described in paragraph 2 below, together with the improvements thereon, and subject to the following terms and conditions:

1. DELEGATIONS OF AUTHORITY: LESSOR'S responsibilities and obligations herein shall be exercised by the Division of State Lands, State of Florida Department of Environmental Protection.
2. DESCRIPTION OF PREMISES: The property subject to this lease contains 372.56 acres, is situated in the County of Franklin, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".
3. TERM: The term of this lease shall be for a period of fifty years commencing on 29 August 2008, and ending on 28 August 2058 unless sooner terminated pursuant to the provisions of this lease.
4. PURPOSE: LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation and protection of these public lands, as set forth in subsection 259.032(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 8 of this lease.
5. QUIET ENJOYMENT AND RIGHT OF USE: LESSEE shall have the right of ingress and egress to, from and upon the leased premises for all purposes necessary to the full quiet enjoyment by said LESSEE of the rights conveyed herein.

6. UNAUTHORIZED USE: LESSEE shall, through its agents and employees, prevent the unauthorized use of the leased premises or any use thereof not in conformity with this lease.

7. ASSIGNMENT: This lease shall not be assigned in whole or in part without the prior written consent of LESSOR, which consent shall not be unreasonably withheld. Any assignment made either in whole or in part without the prior written consent of LESSOR shall be void and without legal effect.

8. MANAGEMENT PLAN: LESSEE shall prepare and submit a Management Plan for the leased premises in accordance with Section 253.034, Florida Statutes and subsection 18-2.021(4), Florida Administrative Code. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands, State of Florida Department of Environmental Protection. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved.

LESSEE shall provide LESSOR with an opportunity to participate in all phases of preparing and developing the Management Plan for the leased premises. The Management Plan shall be submitted to LESSOR in draft form for review and comments within ten months of the effective date of this lease. LESSEE shall give LESSOR reasonable notice of the application for and receipt of any state, federal or local permits as well as any public hearings or meetings relating to the development or use of the leased premises. LESSEE shall not proceed with development of said leased premises including, but not limited to, funding, permit applications, design or building contracts until the Management Plan required herein has been submitted and approved. Any financial commitments made by LESSEE which are not in compliance with the terms of this lease shall be done at LESSEE'S own risk. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR. LESSEE shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written

approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

9. EASEMENTS: All easements including, but not limited to, utility easements are expressly prohibited without the prior written approval of LESSOR. Any easement not approved in writing by LESSOR shall be void and without legal effect.

10. SUBLEASES: This lease is for the purposes specified herein and subleases of any nature are prohibited without the prior written approval of LESSOR, which approval shall not be unreasonably withheld. Any sublease not approved in writing by LESSOR shall be void and without legal effect.

11. RIGHT OF INSPECTION: LESSOR or its duly authorized agents, representatives or employees shall have the right to reasonably inspect the leased premises and the works and operations of LESSEE in any matter pertaining to this lease.

12. PLACEMENT AND REMOVAL OF IMPROVEMENTS: All buildings, structures and improvements shall be constructed at the expense of LESSEE in accordance with plans prepared by professional designers and shall require the prior written approval of LESSOR as to purpose, location and design. Further, no trees, other than non-native species, shall be removed or major land alterations done by LESSEE without the prior written approval of LESSOR. Removable equipment and removable improvements placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE before or upon termination of this lease.

13. INSURANCE REQUIREMENTS: During the term of this lease LESSEE shall procure and maintain policies of fire, extended risk, and liability insurance coverage. The extended risk and fire insurance coverage shall be in an amount equal to the full insurable replacement value of any improvements or fixtures located on the leased premises. The liability insurance coverage shall be in amounts not less than \$100,000 per person and \$200,000 per incident or occurrence for personal injury, death, and property damage on the leased premises. Such policies of insurance shall name LESSOR, the State of Florida

and LESSEE as additional insureds. LESSEE shall submit written evidence of having procured all insurance policies required herein prior to the effective date of this lease and shall submit annually thereafter, written evidence of maintaining such insurance to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. LESSEE shall purchase all policies of insurance from a financially-responsible insurer duly authorized to do business in the State of Florida. Any certificate of self-insurance shall be issued or approved by the Chief Financial Officer, State of Florida. The certificate of self-insurance shall provide for casualty and liability coverage. LESSEE shall immediately notify LESSOR and the insurer of any erection or removal of any building or other improvement on the leased premises and any changes affecting the value of any improvements and shall request the insurer to make adequate changes in the coverage to reflect the changes in value. LESSEE shall be financially responsible for any loss due to failure to obtain adequate insurance coverage, and the failure to maintain such policies or certificate in the amounts set forth shall constitute a breach of this lease.

14. LIABILITY: Each party is responsible for all personal injury and property damage attributable to the negligent acts or omissions of that party and the officers, employees and agents thereof. Nothing herein shall be construed as an indemnity or a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims.

15. PAYMENT OF TAXES AND ASSESSMENTS: LESSEE shall assume full responsibility for and shall pay all taxes, assessments, liens or other similar liabilities that accrue to the leased premises or to the improvements thereon arising after this lease commences including any and all ad valorem taxes and drainage and special assessments or personal property taxes of every kind and all construction or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises subsequent to the effective date of this lease. In no event shall the LESSEE be held liable for such liabilities which arose prior to the effective date of this lease.

16. NO WAIVER OF BREACH: The failure of LESSOR to insist in any one or more instances upon strict performance of any one or more of the covenants, terms and conditions of this lease shall not be construed as a waiver of such covenants, terms or conditions, but the same shall continue in full force and effect, and no waiver of LESSOR of any of the provisions hereof shall in any event be deemed to have been made unless the waiver is set forth in writing, signed by LESSOR.
17. TIME: Time is expressly declared to be of the essence of this lease.
18. NON-DISCRIMINATION: LESSEE shall not discriminate against any individual because of that individual's race, color, religion, sex, national origin, age, handicap, or marital status with respect to any activity occurring within the leased premises or upon lands adjacent to and used as an adjunct of the leased premises.
19. UTILITY FEES: LESSEE shall be responsible for the payment of all charges for the furnishing of gas, electricity, water and other public utilities to the leased premises and for having the utilities turned off when the leased premises are surrendered.
20. MINERAL RIGHTS: This lease does not cover petroleum or petroleum products or minerals and does not give the right to LESSEE to drill for or develop the same.
21. RIGHT OF AUDIT: LESSEE shall make available to LESSOR all financial and other records relating to this lease, and LESSOR shall have the right to audit such records at any reasonable time during the term of this lease. This right shall be continuous until this lease expires or is terminated. This lease may be terminated by LESSOR should LESSEE fail to allow public access to all documents, papers, letters or other materials made or received in conjunction with this lease, pursuant to the provisions of Chapter 119, Florida Statutes.
22. CONDITION OF PREMISES: LESSOR assumes no liability or obligation to LESSEE with reference to the conditions of the leased premises. The leased premises herein are leased by LESSOR to LESSEE in an "as is" condition, with LESSOR assuming no responsibility for the care, repair, maintenance or improvement of the leased premises for the benefit of LESSEE.

23. COMPLIANCE WITH LAWS: LESSEE agrees that this lease is contingent upon and subject to LESSEE obtaining all applicable permits and complying with all applicable permits, regulations, ordinances, rules, and laws of the State of Florida or the United States or of any political subdivision or agency of either.

24. NOTICE: All notices given under this lease shall be in writing and shall be served by certified mail including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing. LESSOR and LESSEE hereby designate their address as follows:

LESSOR: State of Florida Department of Environmental Protection
Division of State Lands
Bureau of Public Land Administration
3800 Commonwealth Boulevard, M. S. 130
Tallahassee, Florida 32399-3000

LESSEE: City of Carrabelle
Post Office Box 569
Carrabelle, Florida 32322-0569
(850) 697-3618

25. BREACH OF COVENANTS, TERMS, OR CONDITIONS: Should LESSEE breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to LESSEE to remedy such breach within sixty days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within sixty days of receipt of written notice, LESSOR may either terminate this lease and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises and attorneys' fees or maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

26. DAMAGE TO THE PREMISES: (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants, or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the

leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE's failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE's such failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or expiration of this lease. This paragraph shall not be construed as a limitation upon LESSEE'S obligations as set forth in paragraph 14 of this lease, nor upon any other obligations or responsibilities of LESSEE as set forth herein. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement,

treatment, release or discharge of any contaminant, LESSEE shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies. This paragraph shall not be deemed to apply to any conditions existing prior to the effective date of this lease.

27. ENVIRONMENTAL AUDIT: At LESSOR'S discretion, LESSEE shall provide LESSOR with a current Phase I environmental site assessment conducted in accordance with the State of Florida Department of Environmental Protection, Division of State Lands' standards prior to termination of this lease, and if necessary a Phase II environmental site assessment.

28. SURRENDER OF PREMISES: Upon termination or expiration of this lease, LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, LESSEE shall give written notification to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of any or all of the leased premises. Notification shall include a legal description, this lease number, and an explanation of the release. The release shall only be valid if approved by LESSOR through the execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon termination or expiration of this lease, all permanent/capital improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain any improvements upon termination of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises a representative of the Division of State Lands, State of Florida Department of Environmental Protection, shall perform an on-site inspection and the keys to any building on the leased premises shall be turned over to the division.

29. BEST MANAGEMENT PRACTICES: LESSEE shall implement applicable Best Management Practices for all activities conducted under this lease in

compliance with paragraph 18-2.018(2) (h), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, LESSEE or other land managing agencies for the protection and enhancement of the leased premises.

30. PUBLIC LANDS ARTHROPOD CONTROL PLAN: LESSEE shall identify and subsequently designate to the respective arthropod control district or districts within one year of the effective date of this lease all of the environmentally sensitive and biologically highly productive lands contained within the leased premises, in accordance with Section 388.4111, Florida Statutes and Chapter 5E-13, Florida Administrative Code, for the purpose of obtaining a public lands arthropod control plan for such lands.

31. PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES: Fee title to the leased premises is held by LESSOR. LESSEE shall not do or permit anything to be done which purports to create a lien or encumbrance of any nature against the real property contained in the leased premises including, but not limited to, mortgages or construction liens against the leased premises or against any interest of LESSOR therein.

32. PARTIAL INVALIDITY: If any term, covenant, condition or provision of this lease shall be ruled by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

33. ARCHAEOLOGICAL AND HISTORIC SITES: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Chapter 18-2 Florida Administrative Code, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

34. SOVEREIGNTY SUBMERGED LANDS: This lease does not authorize the use of any lands located waterward of the mean or ordinary high water line of any

lake, river, stream, creek, bay, estuary, or other water body or the waters or the air space thereabove.

35. ENTIRE UNDERSTANDING: This lease sets forth the entire understanding between the parties and shall only be amended with the prior written approval of LESSOR.

36. MAINTENANCE OF IMPROVEMENTS: LESSEE shall maintain the real property contained within the leased premises and the improvements located thereon, in a state of good condition, working order and repair including, but not limited to, removing all trash or litter, maintaining all planned improvements as set forth in the approved Management Plan, and meeting all building and safety codes. LESSEE shall maintain any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease.

37. GOVERNING LAW: This lease shall be governed by and interpreted according to the laws of the State of Florida.

38. SIGNS: LESSEE shall ensure that the area is identified as being publicly owned and operated as a public facility in all signs, literature and advertising. If federal grants or funds are used by LESSEE for any project on the leased premises LESSEE shall erect signs identifying the leased premises as a federally assisted project.

39. SECTION CAPTIONS: Articles, subsections and other captions contained in this lease are for reference purposes only and are in no way intended to describe, interpret, define or limit the scope, extent or intent of this lease or any provisions thereof.

40. ADMINISTRATIVE FEE: LESSEE shall pay LESSOR an annual administrative fee of \$300 pursuant to subsection 18-2.021(8), Florida Administrative Code. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

IN WITNESS WHEREOF, the parties have caused this lease to be executed on the day and year first above written.

BOARD OF TRUSTEES OF THE INTERNAL
IMPROVEMENT TRUST FUND OF THE
STATE OF FLORIDA

Robert Smith
Witness
Robert J Smith
Print/Type Witness Name
Judy Woodward
Witness
Judy Woodward
Print/Type Witness Name

By: Gloria C. Barber (SEAL)
GLORIA C. BARBER, OPERATIONS
AND MANAGEMENT CONSULTANT
MANAGER, BUREAU OF PUBLIC
LAND ADMINISTRATION, DIVISION
OF STATE LANDS, STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

"LESSOR"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 29th day of August 2008, by Gloria C. Barber, as Operations and Management Consultant Manager, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida, who is personally known to me or who has produced _____ as identification.

Sylvia S. Roberts
Notary Public, State of Florida

Print/Type Notary Name

Commission Number:

Commission Expires:



Approved as to Form and Legality

By: [Signature]
DEP Attorney

By:

By: [Signature]

William W. Messer

Print/Type Name

Title: WIKI

(OFFICIAL SEAL)

"LESSEE"

The foregoing instrument was acknowledged before me this 28th day of August, 2008, by Wilburn Messer, as Mayor and _____, as _____, respectively on behalf of the City of Carrabelle. They are personally known to me or who have produced _____ as identification.

A circular notary seal for a Notary Public in the State of Florida. The seal features a central illustration of the Florida State Capitol building. The words "NOTARY PUBLIC" are arched across the top, and "STATE OF FLORIDA" is arched across the bottom. Two five-pointed stars are positioned on the left and right sides of the seal.

COURTNEY DEMPSEY
Commission DD 627938
Expires November 9, 2008
Bonded thru Troy Fair Insurance 800-386-7819

as identification.
Christina Demsey
 Notary Public, State of Florida
Christina Demsey
 Type Notary Name

Commission Number: DD 627938

Commission Expires: 11/9/2003

EXHIBIT "A"

LEGAL DESCRIPTION OF THE LEASED PREMISES

WARRANTY DEED

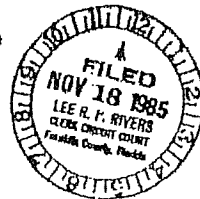
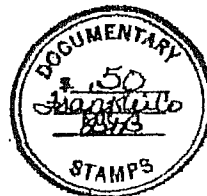
Recorded O.K. 228 Page 111
Franklin County, Florida

THIS WARRANTY DEED made this 18th day of November, 1985,
by McKISSACK PROPERTIES, INC., 6430 Sunset Boulevard, Suite 1200,
Hollywood, California 90028, Grantor, to THE BOARD OF TRUSTEES
OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA,
whose address is 3900 Commonwealth Boulevard, Tallahassee,
Florida 32303, Grantee:

WITNESSETH: That the Grantor, for and in consideration of
the sum of Ten Dollars (\$10.00) and other valuable
considerations, receipt of which is hereby acknowledged, grants,
bargains, sells, aliens, remises, releases, conveys and confirms
unto the Grantee, all that certain land situate in Franklin
County, Florida, viz:

9,20,
9,30-
75-
4W ✓
All that property owned by McKissack
Properties, Inc. lying seaward of the most
landward extent of the saltwater marsh line
of Postum Bayou and Boggy Jordan Bayou in
Sections 19, 20 and 30, Township 7 South,
Range 4 West, Franklin County, Florida,
containing approximately 330.00 acres, more
or less. Such description shall include all
lands and islands rising above the mean high
water line within the area described above.
Such description is less and except that
portion of property within the existing state
road right-of-way.

The above-described property is not the
homestead of Grantors within the meaning of
Florida law and Grantor's spouse has no
interest in the property requiring joinder
herein.



TOGETHER with all the tenements, hereditaments and
appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in fee simple forever.

AND the Grantor hereby covenants with said Grantees that the
Grantor is lawfully seized of said land in fee simple; that the
Grantor has good right and lawful authority to sell and convey
said land; that the Grantor hereby fully warrants the title to
said land and will defend the same against the lawful claims of
all persons whomsoever; and that said land is free from all

EXHIBIT "A"

LEGAL DESCRIPTION OF THE LEASED PREMISES

encumbrances, except taxes accruing subsequent to December 31, 1984.

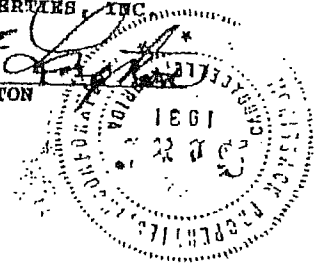
Recorded O.R. 228 Page 112
Franklin County, Florida

IN WITNESS WHEREOF, the said Grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered
in our presence:

Debra St. Louis
Della Marshall
As to

McKISSACK PROPERTIES, INC.
Audie E. Langston
AUDIE E. LANGSTON
Secretary



STATE OF FLORIDA
COUNTY OF LEON

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared AUDIE E. LANGSTON to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid, this 18th day of Nov., 1985.

Kenia Rouse
Notary Public
State of Florida at Large

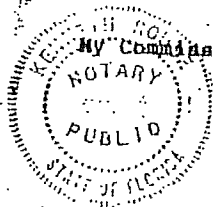


EXHIBIT "A"

LEGAL DESCRIPTION OF THE LEASED PREMISES

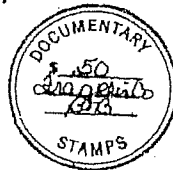
WARRANTY DEED

THIS WARRANTY DEED made this 18th day of ~~October~~ ^{November}, 1985,
by McKISSACK PROPERTIES, INC., 6430 Sunset Boulevard, Suite 1200,
Hollywood, California 90028, Grantor, to THE BOARD OF TRUSTEES
OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA,
whose address is 3900 Commonwealth Boulevard, Tallahassee,
Florida 32303, Grantee:

Recorded O.B. 228 Page 108
Franklin County, Florida

WITNESSETH: That the Grantor, for and in consideration of
the sum of Ten Dollars (\$10.00) and other valuable
considerations, receipt of which is hereby acknowledged, grants,
bargains, sells, aliens, remises, releases, conveys and confirms
unto the Grantee, all that certain land situate in Franklin
County, Florida, viz:

Begin at a concrete monument marking the
Southwest corner of McKissack Beach
Subdivision, a subdivision as per map or plat
thereof recorded in the Public Records of
Franklin County, Florida, and thence run
South 78 degrees 49 minutes West 974.50 feet,
thence run South 67 degrees 50 minutes 26
seconds West 430.42 feet to an iron pipe,
thence run South 65 degrees 48 minutes 01
seconds West 450.51 feet to an iron pipe,
thence run South 27 degrees 12 minutes 10
seconds East 23.34 feet to an iron pipe,
thence run South 65 degrees 49 minutes 10
seconds West 100.09 feet to an iron pipe,
thence run South 57 degrees 28 minutes 10
seconds West 74.53 feet, thence run North 32
degrees 31 minutes 50 seconds West 100.00
feet to the Southeasterly right-of-way
boundary of U.S. Highway No. 98, thence run
South 57 degrees 21 minutes 52 seconds West
along said right-of-way boundary 339.82 feet,
thence run South 32 degrees 34 minutes 32
seconds East 274.00 feet to the approximate
mean high water line of St. George Sound,
thence run along said approximate mean high
water line as follows: North 68 degrees 09
minutes 37 seconds East 315.07 feet, thence
North 70 degrees 29 minutes 47 seconds East
359.71 feet, thence North 73 degrees 08
minutes 13 seconds East 509.11 feet, thence
North 78 degrees 28 minutes 55 seconds East
457.43 feet, thence North 81 degrees 52
minutes 47 seconds East 419.28 feet, thence
North 85 degrees 12 minutes 45 seconds East
344.03 feet, thence North 88 degrees 34
minutes 56 seconds East 379.47 feet, thence



next
page
↓

EXHIBIT "A"

LEGAL DESCRIPTION OF THE LEASED PREMISES

Recorded O.R. 228 Page 109
Franklin County, Florida

South 87 degrees 42 minutes 42 seconds East
311.80 feet, thence South 80 degrees 32
minutes 20 seconds East 421.97 feet, thence
South 80 degrees 43 minutes 12 seconds East
218.92 feet, thence South 76 degrees 48
minutes 29 seconds East 150.55 feet, thence
South 83 degrees 46 minutes 44 seconds East
522.15 feet, thence North 58 degrees 56
minutes 59 seconds East 94.04 feet, thence
North 38 degrees 08 minutes 57 seconds East
113.68 feet, thence North 49 degrees 28
minutes 43 seconds East 43.49 feet, thence
North 74 degrees 54 minutes 33 seconds East
243.16 feet, thence South 84 degrees 42
minutes 44 seconds East 163.24 feet, thence
South 69 degrees 33 minutes 37 seconds East
60.11 feet, thence North 61 degrees 14
minutes 49 seconds East 66.67 feet, thence
North 45 degrees 41 minutes 43 seconds East
38.89 feet, thence North 16 degrees 32
minutes 05 seconds East 52.92 feet, thence
North 17 degrees 11 minutes 38 seconds West
41.71 feet, thence North 62 degrees 34
minutes 01 seconds West 11.63 feet, thence
South 60 degrees 19 minutes 37 seconds West
22.56 feet, thence North 61 degrees 45
minutes 48 seconds West 25.88 feet, thence
North 45 degrees 46 minutes 13 seconds West
15.68 feet, thence North 12 degrees 17
minutes 11 seconds West 46.06 feet, thence
North 00 degrees 30 minutes 35 seconds East
46.98 feet, thence leaving said approximate
mean high water line run North 88 degrees 57
minutes 30 seconds West 1838.61 feet, thence
run North 13 degrees 02 minutes 30 seconds
East 100.00 feet to a concrete monument on
the southerly boundary of said McKissack
Beach Subdivision, thence run North 88
degrees 58 minutes 55 seconds West along said
southerly boundary 1049.87 feet to the POINT
OF BEGINNING containing 42.56 acres, more or
less, situate, lying and being in Section 30,
Township 7 South, Range 4 West, and Section
25, Township 7 South, Range 5 West, Franklin
County, Florida.

Containing 42.56 acres.

The above-described property is not the
homestead of Grantors within the meaning of
Florida law and Grantors' spouses have no
interest in the property requiring their
joinder herein.

TOGETHER with all the tenements, hereditaments and
appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in fee simple forever.

AND the Grantor hereby covenants with said Grantees that the
Grantor is lawfully seized of said land in fee simple; that the
Grantor has good right and lawful authority to sell and convey

EXHIBIT "A"

LEGAL DESCRIPTION OF THE LEASED PREMISES

said land; that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free from all encumbrances, except taxes accruing subsequent to December 31, 1984.

Recorded O.A. 228 Page 110
Franklin County, Florida

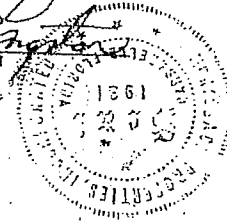
IN WITNESS WHEREOF, the said Grantor has signed and sealed these presents the day and year first above written.

Signed, sealed and delivered
in our presence:

Randy V. Simeon
Della Marshall
As to

McKISSACK PROPERTIES, INC.

Audie E. Langston
AUDIE E. LANGSTON
Secretary

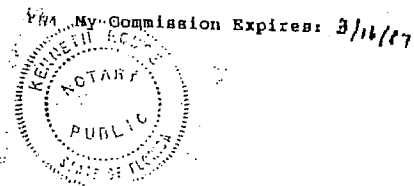


STATE OF FLORIDA
COUNTY OF LEON

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared AUDIE E. LANGSTON to me known to be the person described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid, this 18th day of Nov., 1985.

Kenneth E. Brown
Notary Public
State of Florida at Large



Appendix C
FNAI Report



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

September 11, 2019

Josh Adams
Apalachee Regional Planning Council
2507 Callaway Road, Suite 200
Tallahassee, FL 32303

Dear Mr. Adams,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). At your request we have produced the following report for your project area.

The purpose of this Standard Data Report is to provide objective scientific information on natural resources located in the vicinity of a site of interest, in order to inform those involved in project planning and evaluation. This Report makes no determination of the suitability of a proposed project for this location, or the potential impacts of the project on natural resources in the area.

Project: Carrabelle Beach Land Management Plan

Date Received: 09/06/19

Location: Franklin County

Based on the information available, this site appears to be located in a significant region of natural areas and habitat for several rare species.

Element Occurrences

A search of our maps and database indicates that we currently have several element occurrences mapped in the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

Federally Listed Species

Our data indicate federally listed species are present on or very near this site, specifically *Caretta caretta* and *Charadrius melodus* (see enclosed map and tables for details). This statement should not be interpreted as a legal determination of presence or absence of federally listed species on a property.

The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.



Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

*Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection*

Tracking Florida's Biodiversity

pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.

Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.

FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.

FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.

The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.

CLIP

The enclosed map shows natural resource conservation priorities based on the Critical Lands and Waters Identification Project. CLIP is based on many of the same natural resource data developed for the Florida Forever Conservation Needs Assessment, but provides an overall picture of conservation priorities across different resource categories, including biodiversity, landscapes, surface waters, and aggregated CLIP priorities (that combine the individual resource categories). CLIP is also based primarily on remote sensed data and is not intended to be the definitive authority on natural resources on a site.

For more information on CLIP, visit <http://www.fnai.org/clip.cfm>.

Managed Areas

Portions of the site appear to be located within the McKissack Beach, managed by the City of Carrabelle.

The Managed Areas data layer shows public and privately managed conservation lands throughout the state. Federal, state, local, and privately managed conservation lands are included.

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit www.fnai.org/trackinglist.cfm for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. **The maps contain sensitive environmental information, please do not distribute or publish without prior consent from FNAI.** FNAI data may not be resold for profit.

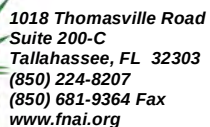
Thank you for your use of FNAI services. If I can be of further assistance, please contact me at (850) 224-8207 or at kbrinegar@fnai.fsu.edu.

Sincerely,

Kerri Brinegar

Kerri Brinegar
GIS / Data Services

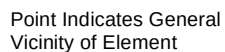
Encl



FLORIDA
Natural Areas
INVENTORY

Element Occurrences

- Animals
- Plants
- Communities
- Other
- Data Sensitive



- 
- U.S. Fish & Wildlife Service
-
- Scrub Jay Survey 1992-96

Conservation Lands

- 



Land Acquisition Projects

- 
- Florida Forever
-
- Board of Trustees Projects

-  FNAI Rare Species Habitat
 FNAI Biodiversity Matrix Square Mile Units

 County Boundary
 Roads
 Water

NOTE

This map contains environmentally sensitive information. Please do not distribute or publish without prior consent from FNAI. Map should not be interpreted without accompanying documents.

Carrabelle Beach Land Management Plan

Site boundaries are approximate.

Franklin County



A horizontal number line is shown with tick marks at 0, 0.5, 1, and 2. The word "Miles" is at the right end. The segment between 0.5 and 1 is shaded gray.

Map produced by KAB
9/11/2019

Carrabelle Beach Land Management Plan

Site boundaries are approximate.

Franklin County



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CLIP v4.0 Resource Priorities

Biodiversity Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Landscape Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

Surface Water Resource Category

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

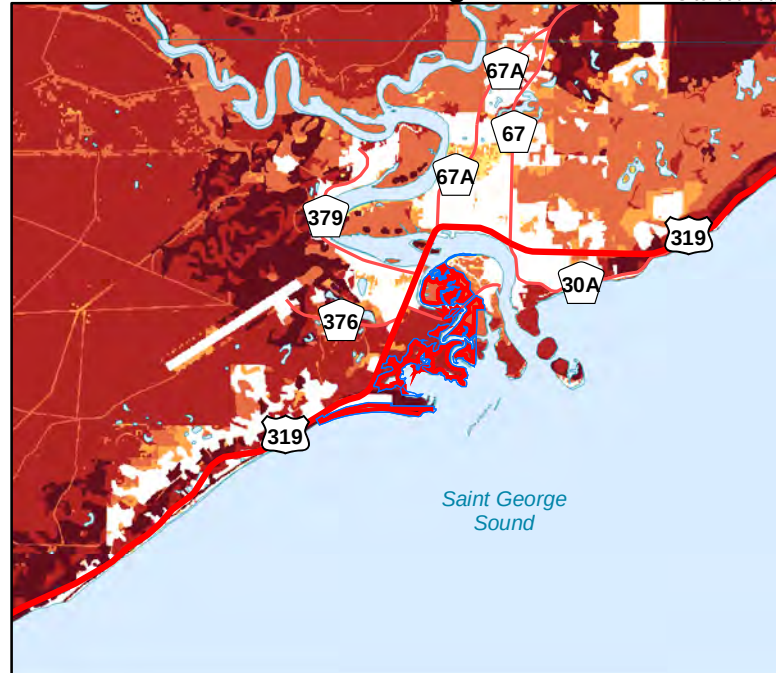
Aggregated CLIP Priorities

- Priority 1 - highest
- Priority 2
- Priority 3
- Priority 4
- Priority 5

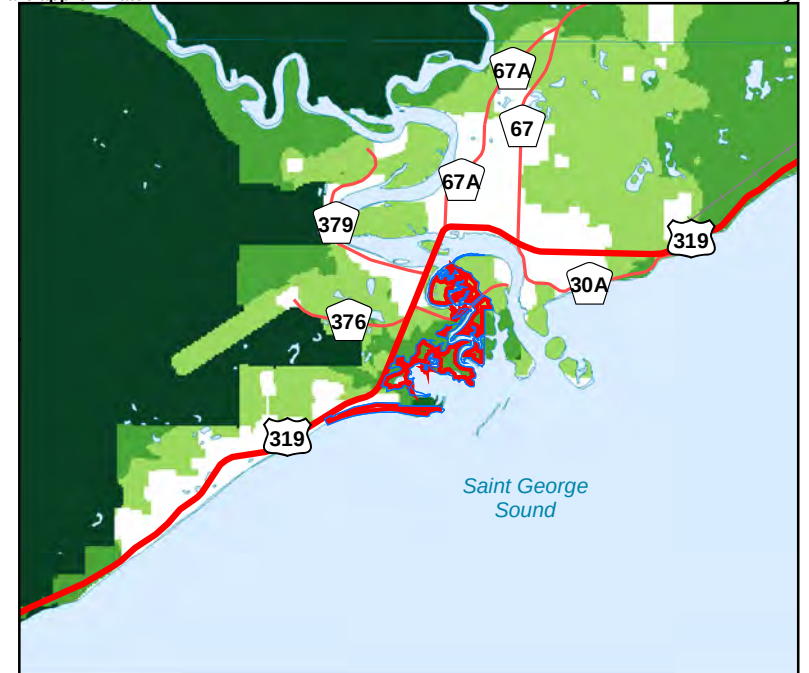
Site Boundary

Map should not be interpreted without accompanying documents.

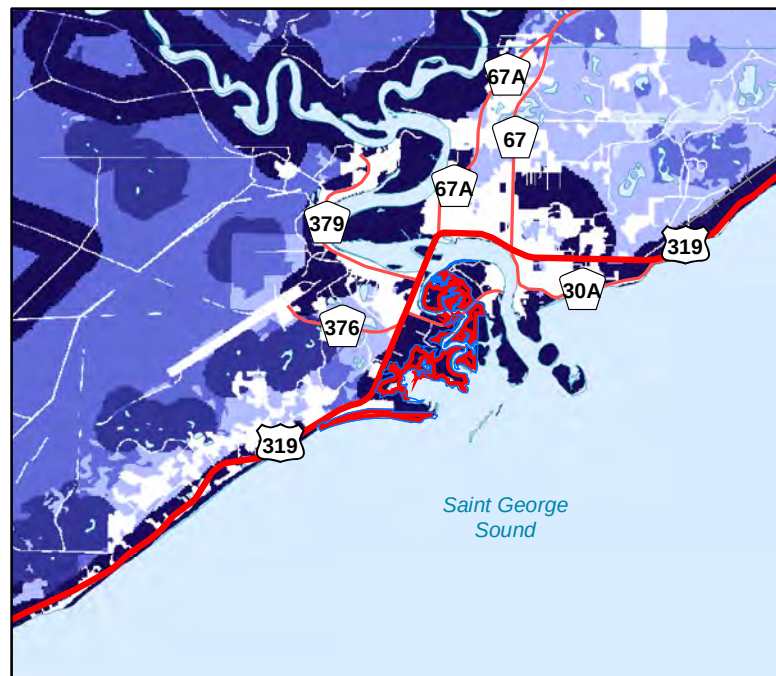
Critical Lands and Waters Identification Project (CLIP) is a cooperative effort between the FSU Florida Natural Areas Inventory, UF Center for Landscape Conservation Planning, and FL Fish & Wildlife Conservation Commission, with additional funding from FL Dept of Environmental Protection and US Fish & Wildlife Service.



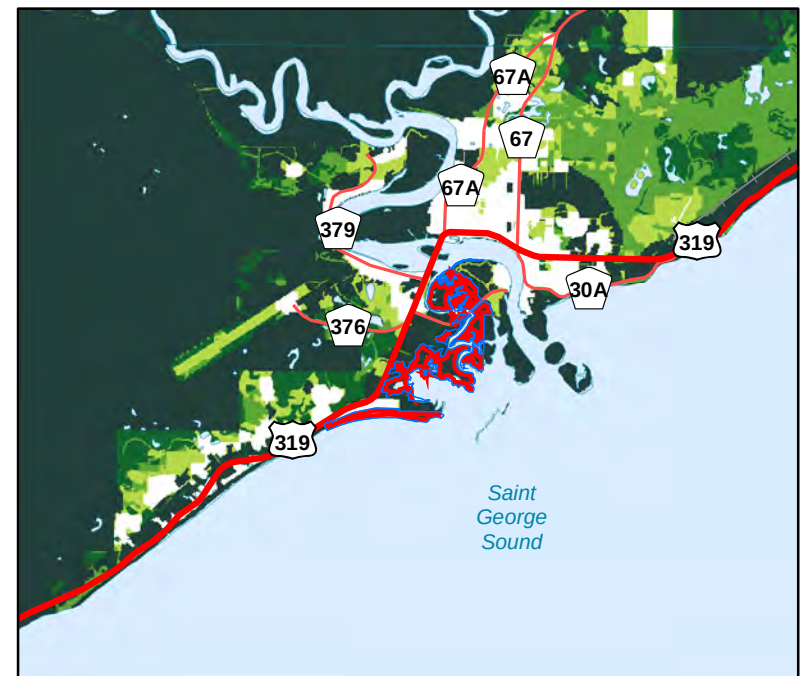
CLIP Biodiversity Resource Priorities



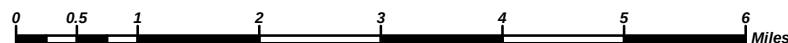
CLIP Landscape Resource Priorities



CLIP Surface Water Resource Priorities



CLIP Aggregated Resource Priorities



Map produced by KAB
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FNAI ELEMENT OCCURRENCE REPORT on or near

Carrabelle Beach Land Management Plan



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
CARECARE*27	<i>Caretta caretta</i>	Loggerhead Sea Turtle	G3	S3	T	FT	2015	Gulf Coast beaches and dunes, many of which are on barrier islands. Many of the beaches are within conservation lands, although others are adjacent to developed areas.	Nesting beaches of Florida Panhandle genetic subunit (A11SHA01FLUS). 2008–2012: annual density = 0.13 to 10.73 nests per km, highest in Apalachicola River delta region (U13FWC01FLUS, A14LAM01FLUS). See Additional Topics for more specific data.
CHARMELO*27	<i>Charadrius melodus</i>	Piping Plover	G3	S2	T	FT	1991	MAINLAND BEACH WITH LOW DUNES VEGETATED WITH SEA OATS, ADJACENT TO SPARTINA MARSH AT MOUTH OF CARABELLE RIVER.	WINTERING SITE: 1991 PIPING PLOVER WINTER CENSUS (U92FWS01FL) FOUND 3 BIRDS IN 1.0 MILE SURVEY. 1988-01-12: 3 BIRDS OBSERVED FORAGING ALONG SANDFLATS WITH OTHER SHOREBIRD SPECIES.
CHARNIVO*19	<i>Charadrius nivosus</i>	Snowy Plover	G3	S1	N	ST	1988-01-12	1988-01-12: mainland beach with low dunes vegetated with sea oats, adjacent to Spartina marsh at mouth of Carrabelle River (U88NIC01FLUS).	1988-01-12: 2 birds seen roosting on upper beach with other shorebirds species (U88NIC01FLUS).
DS*22941	<i>Data Sensitive Element</i>	Data Sensitive	G2	S2	N	N	1975-02-23	Data Sensitive	Data Sensitive
DS*27405	<i>Data Sensitive Element</i>	Data Sensitive	G2	S2	N	N	1988 pre	Data Sensitive	Data Sensitive
EGRECAER*387	<i>Egretta caerulea</i>	Little Blue Heron	G5	S4	N	ST	1988-05-20	Shrub swamp	1988/05/20: J.A. Gore, GFC, observation. "Total" = B (includes SNEG, LBHE). 1989: No birds present.
EGRETHUL*191	<i>Egretta thula</i>	Snowy Egret	G5	S3	N	N	1988-05-20	Lowland forest or swamp	1988/05/20: J.A. Gore, GFC. "Total" = B (includes SNEG, LBHE). No birds present in 1989.
HAEMPALL*31	<i>Haematopus palliatus</i>	American Oystercatcher	G5	S2	N	ST	1993	No general description given	1988: 08/23 7 birds;08/29 9;09/19 9;09/30 5;10/04 5;10/09 5;10/21 1. 1993: G.L. Sprandel, GFC - NGWP Winter Shorebird Survey - 1/17 6 loafing; 2/20 - 2 feeding; 3/07 - 3 feeding; 3/21 - 4 feeding; 4/10 - 1 loafing; 5/30 - 2 loafing and flying; 6/12 - 1 feeding; 7/31 - 12 loafing; 8/14 - 2 feeding; 8/28 - 13 feeding; 9/05 - 1 feeding; 9/25 - 1 feeding and flying; 10/02 - 5 feeding (standing in a circle all facing out). 1990: D. McNair - 4/08 - 1 feeding.
HALILEUC*1114	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2002	2005-07-12: Source does not provide a description.	Nest status: Active, 2002; Not active, 2003; Unknown status or not assessed, 2001, 2000, 1999;(U03FWC01FLUS)



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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
HELICUCU*2	<i>Helianthus debilis ssp. cucumerifolius</i>	cucumberleaf dune sunflower	G5T5	S3	N	N	1981 pre	No general description given	No EO data given
LIATPROV*22	<i>Liatris provincialis</i>	Godfrey's blazing star	G2	S2	N	E	1993-09-16	Sand pine scrub with only scattered sand pines.	About 20 plants in fruit along the road edge north of U.S. 98. Due to their being past prime condition, identification should be checked. U93MUE01: 25 plants also seen just east of Carrabelle Lighthouse itself under mature sandpine.
LIATPROV*23	<i>Liatris provincialis</i>	Godfrey's blazing star	G2	S2	N	E	2012-10-11	Sand pine scrub with only scattered sand pines.	2012-10-11: 22 plants seen at 6 different points (F14JEN01FLUS). 1992-10-30: Numerous plants in fruit in open areas between "islands of" sand pine scrub. Due to their being past prime condition, identification should be checked. 1993: scattered along eastern side of road to Carrabelle Flight Strip.
LUPIWEST*30	<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T	1982-04-15	DISTURBED SAND PINE SCRUB.	CA 100 MATURE PLANTS, MANY SMALL SEEDLINGS
NEOFALLE*14	<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N	1942-09-09	No general description given	FSM SPECIMENS: ONE SPECIMEN (#12806) COLLECTED 1942-09-09, BY H.B. SHERMAN.
NEROCLAR*10	<i>Nerodia clarkii clarkii</i>	Gulf Salt Marsh Snake	G4T3	S2	N	N	1973-07-26	No general description given	1973-07-26: two FSM specimens (UF-38471, 38475), collected by H.I. Kochman and H. Herzog (S73KOCMFLUS).
NEROCLAR*24	<i>Nerodia clarkii clarkii</i>	Gulf Salt Marsh Snake	G4T3	S2	N	N	1973-11-29	No general description given	1973-11-29: specimen collected (TT-614) by J.M Stevenson (S73STETTFLUS).
POLYMACR*61	<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T	1992-10-30	2007-10-24: some natural oak scrub still exists (F07FNA07FLUS). 1992-10-30: Dense oak scrub with scattered low sand pines on low ridge north of U.S.98 (PNDJOH01FLUS).	2007-10-24: no plants seen - searched from road (F07FNA07FLUS). 1992-10-30: One plant in flower in open area in dense oak scrub. Red-flowered form (PNDJOH01FLUS).
POLYMACR*62	<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T	1992-10-30	2007-10-24: some natural oak scrub still exists (F07FNA07FLUS). 1992-10-30: Lot cleared in midst of dense oak scrub with scattered low sand pine near the Gulf coastline (PNDJOH01FLUS).	2007-10-24: no plants seen in driving slowly by on US 98 (F07FNA07FLUS). 1992-10-30: Three plants in flower: one in open area near stilt platform; 2 in scrub along U.S. 98. Red-flowered form (PNDJOH01FLUS).



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Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
POLYMACR*63	<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T	1992-10-30	1992-10-30: Sand pine scrub. plants on low dune ridge about 50 yds inland from road (U.S. 98).	2007-10-24: no plants seen from road - area all developed except for one tiny patch of scrub left in vicinity (PNDJOH01FLUS; F07FNA07FLUS). 1992-10-30: About 8 plants in flower on second dune ridge about 50 yds inland from U.S. 98. Portion of stand where sand pines appear to have been cut. Red-flowered form (PNDBUR06FLUS).
SANDHILL*167	Sandhill		G3	S2	N	N	1998-10-28	1998-10-28: Sandhill invaded by or, in some areas, planted to, sand pines (F98JOH08FLUS).	1998-10-28: Dense canopy of young sand pine 10-15 feet tall with scattered understory of young turkey oak and tufts of wiregrass. Patches of <i>Serenoa repens</i> with <i>Conradina canescens</i> and <i>Calamintha coccinea</i> in openings. Soil is mapped at Resota fine sand (F98JOH08FLUS).
SCRUB****991	Scrub		G2	S2	N	N	1998-10-28	sand pine scrub	1998-10-28: Dense young sand pine forest over a 100% cover of evergreen shrubs on west side of road. Soil is mapped as Resota fine sand (F98JOH08FLUS).
SCRUB****997	Scrub		G2	S2	N	N	1998-11-06	1998-11-06: Small patch of sand pine/oak scrub on Resota sand grading to possible sandhill and flatwoods (F98JOH09FLUS).	1998-11-06: Few tall (20-ft) sand pines (<i>Pinus clausa</i>) with scattered clumps of young pine (7 ft). Cover of oak (<i>Quercus myrtifolia</i> , <i>Q. geminata</i> , <i>Q. chapmanii</i>) understory varies from open (on east) to closed (on west). To west the oak understory is interspersed with open areas containing wiregrass and scattered turkey oaks (<i>Quercus laevis</i>). Ground lichens (<i>Cladonia evansii</i> , <i>C. subtenueis</i>) are abundant in openings. Soil mapped as Resota fine sand (F98JOH09FLUS).
STERANTI*145	<i>Sternula antillarum</i>	Least Tern	G4	S3	N	ST	1990-06-02	Not sure if the island is natural or dredge spoil.	1990: 06/02 - D.B. McNair observed 20 adults and 10 nests; estimate of adults and nests made from top of bridge that crosses high over the island; 05/13 - D.B. McNair reports 30-40 adults visiting probable nest site (U97GFC02FLUS). 1988/05/13: J.A. Gore, GFC, observed 18 nests (U97GFC02FLUS).



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FNAI ELEMENT OCCURRENCE REPORT on or near Carrabelle Beach Land Management Plan



Map Label	Scientific Name	Common Name	Global State Federal State Observation				Date	Description	EO Comments
			Rank	Rank	Status	Listing			
STERANTI*153	<i>Sternula antillarum</i>	Least Tern	G4	S3	N	ST	1990-06-03	Unconsolidated substrate	1990/06/03: D.B. McNair, at least 8 least tern nests with eggs present and 35-40 adult birds on narrow stretch of beach; foot and ORV traffic threaten this nesting area (U97GFC02FLUS).



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Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
Matrix Unit ID: 11260					
Documented					
<i>Liatris provincialis</i>	Godfrey's blazing star	G2	S2	N	E
Scrub		G2	S2	N	N
Likely					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Caretta caretta</i>	Loggerhead Sea Turtle	G3	S3	T	FT
<i>Charadrius melodus</i>	Piping Plover	G3	S2	T	FT
<i>Charadrius nivosus</i>	Snowy Plover	G3	S1	N	ST
<i>Haematopus palliatus</i>	American Oystercatcher	G5	S2	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
Sandhill upland lake		G3	S2	N	N
<i>Sternula antillarum</i>	Least Tern	G4	S3	N	ST
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
Potential					
<i>Ambystoma cingulatum</i>	Frosted Flatwoods Salamander	G2	S1S2	T	FT
<i>Ammospiza maritima peninsulæ</i>	Scott's Seaside Sparrow	G4T3Q	S3	N	ST
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Chelonia mydas</i>	Green Sea Turtle	G3	S2S3	T	FT
<i>Cistothorus palustris marianae</i>	Marian's Marsh Wren	G5T3	S3	N	ST
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle	G2	S2	E	FE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	T	FT
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Egretta caerulea</i>	Little Blue Heron	G5	S4	N	ST
<i>Egretta thula</i>	Snowy Egret	G5	S3	N	N
<i>Euphorbia telephoides</i>	telephus spurge	G1	S1	T	E
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Helianthus debilis</i> ssp. <i>cucumerifolius</i>	cucumberleaf dune sunflower	G5T5	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Justicia crassifolia</i>	thick-leaved water-willow	G3	S3	N	E
<i>Lampropeltis getula</i>	Common Kingsnake	G5	S2S3	N	N
<i>Lampropeltis meansi</i>	Eastern Apalachicola Lowlands Kings	G2	S2	N	N
<i>Leitneria floridana</i>	corkwood	G3	S3	N	T
<i>Linum westii</i>	West's flax	G1	S1	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Lythrum curtissii</i>	Curtiss' loosestrife	G1	S1	N	E
<i>Macbridea alba</i>	white birds-in-a-nest	G2	S2	T	E
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Nerodia clarkii clarkii</i>	Gulf Salt Marsh Snake	G4T3	S2	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Nyssa ursina</i>	bog tupelo	G3	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N

Definitions: Documented - Rare species and natural communities documented on or near this site.

Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.

Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.

Potential - This site lies within the known or predicted range of the species listed.



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Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Phoebanthus tenuifolius</i>	narrow-leaved phoebanthus	G3	S3	N	T
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Rallus longirostris scottii</i>	Florida Clapper Rail	G5T3?	S3?	N	N
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Ruellia noctiflora</i>	nightflowering wild petunia	G3?	S2	N	E
<i>Scutellaria floridana</i>	Florida skullcap	G2	S2	T	E
<i>Tiedemannia filiformis ssp. greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Trichechus manatus</i>	West Indian Manatee	G2	S2	T	FT
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T
Matrix Unit ID: 11333					
Documented					
<i>Liatris provincialis</i>	Godfrey's blazing star	G2	S2	N	E
Likely					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Caretta caretta</i>	Loggerhead Sea Turtle	G3	S3	T	FT
<i>Charadrius melodus</i>	Piping Plover	G3	S2	T	FT
<i>Charadrius nivosus</i>	Snowy Plover	G3	S1	N	ST
<i>Haematopus palliatus</i>	American Oystercatcher	G5	S2	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Sternula antillarum</i>	Least Tern	G4	S3	N	ST
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N
Potential					
<i>Ameiurus serracanthus</i>	Spotted Bullhead	G3	S3	N	N
<i>Ammospiza maritima peninsulæ</i>	Scott's Seaside Sparrow	G4T3Q	S3	N	ST
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Chelonia mydas</i>	Green Sea Turtle	G3	S2S3	T	FT
<i>Cistothorus palustris marianae</i>	Marian's Marsh Wren	G5T3	S3	N	ST
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle	G2	S2	E	FE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	T	FT
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Gentiana pennelliana</i>	wiregrass gentian	G3	S3	N	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Helianthus debilis ssp. cucumerifolius</i>	cucumberleaf dune sunflower	G5T5	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Justicia crassifolia</i>	thick-leaved water-willow	G3	S3	N	E
<i>Lampropeltis getula</i>	Common Kingsnake	G5	S2S3	N	N
<i>Lampropeltis meansi</i>	Eastern Apalachicola Lowlands Kings	G2	S2	N	N
<i>Leitneria floridana</i>	corkwood	G3	S3	N	T
<i>Linum westii</i>	West's flax	G1	S1	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Lythrum curtissii</i>	Curtiss' loosestrife	G1	S1	N	E

Definitions: Documented - Rare species and natural communities documented on or near this site.

Documented-Historic - Rare species and natural communities documented, but not observed/reported within the last twenty years.

Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.

Potential - This site lies within the known or predicted range of the species listed.



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
(850) 224-8207
(850) 681-9364 Fax

Florida Natural Areas Inventory

Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Neovison vison halilimnetes</i>	Gulf Salt Marsh Mink	G5T2	S2	N	N
<i>Nerodia clarkii clarkii</i>	Gulf Salt Marsh Snake	G4T3	S2	N	N
<i>Nolina atopocarpa</i>	Florida beargrass	G3	S3	N	T
<i>Nyssa ursina</i>	bog tupelo	G3	S3	N	N
<i>Peucaea aestivalis</i>	Bachman's Sparrow	G3	S3	N	N
<i>Phoebanthus tenuifolius</i>	narrow-leaved phoebanthus	G3	S3	N	T
<i>Physostegia godfreyi</i>	Apalachicola dragon-head	G3	S3	N	T
<i>Pinguicula ionantha</i>	Godfrey's butterwort	G2	S2	T	E
<i>Platanthera integra</i>	yellow fringeless orchid	G3G4	S3	N	E
<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
<i>Rallus longirostris scottii</i>	Florida Clapper Rail	G5T3?	S3?	N	N
<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
<i>Rhododendron austrinum</i>	Florida flame azalea	G3	S3	N	E
<i>Ruellia noctiflora</i>	nightflowering wild petunia	G3?	S2	N	E
<i>Scutellaria floridana</i>	Florida skullcap	G2	S2	T	E
<i>Tiedemannia filiformis ssp. greenmanii</i>	giant water cowbane	G3	S3	N	E
<i>Trichechus manatus</i>	West Indian Manatee	G2	S2	T	FT
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Matrix Unit ID: 11334

Documented

<i>Polygonella macrophylla</i>	large-leaved jointweed	G3	S3	N	T
--------------------------------	------------------------	----	----	---	---

Likely

<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2T3	S2?	T	FT
<i>Haematopus palliatus</i>	American Oystercatcher	G5	S2	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Sternula antillarum</i>	Least Tern	G4	S3	N	ST
<i>Ursus americanus floridanus</i>	Florida Black Bear	G5T4	S4	N	N

Potential

<i>Ambystoma cingulatum</i>	Frosted Flatwoods Salamander	G2	S1S2	T	FT
<i>Ameiurus serracanthus</i>	Spotted Bullhead	G3	S3	N	N
<i>Ammospiza maritima peninsulae</i>	Scott's Seaside Sparrow	G4T3Q	S3	N	ST
<i>Andropogon arctatus</i>	pinewoods bluestem	G3	S3	N	T
<i>Asclepias viridula</i>	southern milkweed	G2	S2	N	T
<i>Calopogon multiflorus</i>	many-flowered grass-pink	G2G3	S2S3	N	T
<i>Cistothorus palustris marianae</i>	Marian's Marsh Wren	G5T3	S3	N	ST
<i>Dermochelys coriacea</i>	Leatherback Sea Turtle	G2	S2	E	FE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	T	FT
<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	E	FE
<i>Euphorbia telephioides</i>	telephus spurge	G1	S1	T	E
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	C	ST
<i>Helianthus debilis ssp. cucumerifolius</i>	cucumberleaf dune sunflower	G5T5	S3	N	N
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2S3	N	N
<i>Justicia crassifolia</i>	thick-leaved water-willow	G3	S3	N	E
<i>Lampropeltis getula</i>	Common Kingsnake	G5	S2S3	N	N

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Potential - This site lies within the known or predicted range of the species listed.

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Lampropeltis meansi</i>	Eastern Apalachicola Lowlands Kingsnake	G2	S2	N	N
<i>Leitneria floridana</i>	corkwood	G3	S3	N	T
<i>Liatris provincialis</i>	Godfrey's blazing star	G2	S2	N	E
<i>Linum westii</i>	West's flax	G1	S1	N	E
<i>Lupinus westianus</i>	Gulf Coast lupine	G3T3	S3	N	T
<i>Lythrum curtissii</i>	Curtiss' loosestrife	G1	S1	N	E
<i>Macbridea alba</i>	white birds-in-a-nest	G2	S2	T	E
<i>Macranthera flammea</i>	hummingbird flower	G3	S2	N	E
<i>Neofiber alleni</i>	Round-tailed Muskrat	G3	S3	N	N
<i>Neovison vison halimnetes</i>	Gulf Salt Marsh Mink	G5T2	S2	N	N
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<i>Rhexia parviflora</i>	small-flowered meadowbeauty	G2	S2	N	E
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<i>Trichechus manatus</i>	West Indian Manatee	G2	S2	T	FT
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	G3	S3	N	T

Definitions: Documented - Rare species and natural communities documented on or near this site.
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 Likely - Rare species and natural communities likely to occur on this site based on suitable habitat and/or known occurrences in the vicinity.
 Potential - This site lies within the known or predicted range of the species listed.

Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

FNAI GLOBAL ELEMENT RANK

- G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** = Apparently secure globally (may be rare in parts of range).
- G5** = Demonstrably secure globally.
- GH** = Of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker).
- GX** = Believed to be extinct throughout range.
- GXC** = Extirpated from the wild but still known from captivity or cultivation.
- G#?** = Tentative rank (e.g., G2?).
- G#G#** = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T#** = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q** = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q** = Same as above, but validity as subspecies or variety is questioned.
- GU** = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA** = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR** = Element not yet ranked (temporary).
- GNRTNR** = Neither the element nor the taxonomic subgroup has yet been ranked.

FNAI STATE ELEMENT RANK

- S1** = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2** = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3** = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4** = Apparently secure in Florida (may be rare in parts of range).
- S5** = Demonstrably secure in Florida.
- SH** = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., ivory-billed woodpecker).
- SX** = Believed to be extirpated throughout Florida.
- SU** = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA** = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR** = Element not yet ranked (temporary).

FEDERAL LEGAL STATUS

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

C = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

E = Endangered: species in danger of extinction throughout all or a significant portion of its range.

E, T = Species currently listed endangered in a portion of its range but only listed as threatened in other areas

E, PDL = Species currently listed endangered but has been proposed for delisting.

E, PT = Species currently listed endangered but has been proposed for listing as threatened.

E, XN = Species currently listed endangered but tracked population is a non-essential experimental population.

T = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

PE = Species proposed for listing as endangered

PS = Partial status: some but not all of the species' infraspecific taxa have federal

PT = Species proposed for listing as threatened

SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

SC = Not currently listed, but considered a "species of concern" to USFWS.

STATE LEGAL STATUS

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

C = Candidate for listing at the Federal level by the U. S. Fish and Wildlife Service

FE = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

FT = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

FXN = Federal listed as an experimental population in Florida

FT(S/A) = Federal Threatened due to similarity of appearance

ST = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

SSC = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)

N = Not currently listed, nor currently being considered for listing.

Plants: Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, 5B-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

E = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.

T = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

N = Not currently listed, nor currently being considered for listing.

Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

A = Excellent estimated viability
A? = Possibly excellent estimated viability
AB = Excellent or good estimated viability
AC = Excellent, good, or fair estimated viability
B = Good estimated viability
B? = Possibly good estimated viability
BC = Good or fair estimated viability
BD = Good, fair, or poor estimated viability
C = Fair estimated viability
C? = Possibly fair estimated viability
CD = Fair or poor estimated viability
D = Poor estimated viability
D? = Possibly poor estimated viability
E = Verified extant (viability not assessed)
F = Failed to find
H = Historical
NR = Not ranked, a placeholder when an EO is not (yet) ranked.
U = Unrankable
X = Extirpated

*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

H? = Possibly historical
F? = Possibly failed to find
X? = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

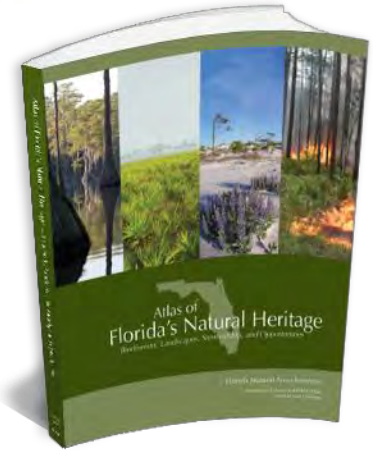
The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).



Atlas of Florida's Natural Heritage

Biodiversity, Landscapes, Stewardship, and Opportunities

The Florida Natural Areas Inventory is pleased to announce the publication of the ***Atlas of Florida's Natural Heritage: Biodiversity, Landscapes, Stewardship, and Opportunities***. This high-quality, full-color *Atlas* is sure to become a standard reference for anyone involved in the conservation, management, study, or enjoyment of Florida's rich natural resources. We hope the *Atlas* will inspire, educate, and raise awareness of and interest in biodiversity and conservation issues.



Learn more about the Atlas, view sample pages and order your copy today at:
<https://www.fnai.org/atlas.cfm>

Follow our blog – *FNAI News & Notes*:

<http://fnai.blogspot.com/>

and



Salinas, Eva

From: Josh Adams <JAdams@theapc.com>
Sent: Tuesday, February 25, 2020 2:41 PM
To: Requests, GIS
Subject: McKissack Beach species and habitat records
Attachments: McKissack_Lease.dbf; McKissack_Lease.prj; McKissack_Lease.sbn; McKissack_Lease.sbx; McKissack_Lease.shp; McKissack_Lease.shp.xml; McKissack_Lease.shx

Follow Up Flag: Follow up
Flag Status: Flagged

[EXTERNAL SENDER] Use Caution opening links or attachments

Good afternoon,

Dylan Haase gave me you contact info. I need some help gathering some species and habitat records at McKissack Beach. I have attached the location boundary shapefile. Please let me know if you need anything else!

Josh Adams

Regional Planner | Environmental
Apalachee Regional Planning Council
2507 Callaway Road, Suite 200
Tallahassee, FL 32303
Office: (850) 488-6211 ext. 104
Cell: (813) 763-3437





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Hearing/speech-impaired:
800-955-8771 (T)
800-955-8770 (V)
MyFWC.com/Research

February 27, 2020

Josh Adams
Regional Planner | Environmental
Apalachee Regional Planning Council
Tallahassee, FL

Dear Josh Adams:

This letter is in response to your request for listed species occurrence records and critical habitats for your project (McKissack Beach) located in Franklin County, Florida. Records from The Florida Fish and Wildlife Conservation Commission's database indicate that listed species occurrence data and critical habitats are located within the project area. Records of Florida black bear, American oystercatcher, least tern, piping plover, and Rufa red knot were found on, or within a 1-mile distance of, the property. SHCAs were found for Scott's seaside sparrow, gulf salt marsh snake, and Cooper's hawk within a 1-mile distance of, the property. Enclosed are 8.5 x 11 maps prioritized SHCA's, species richness, priority wetlands for listed species, and land cover for the project site and surrounding area.

This letter and attachments should not be considered as a review or an assessment of the impact upon threatened or endangered species of the project site. It provides FWC's most current data regarding the location of listed species and their associated habitats.

Our SHCA recommendations are intended to be used as a guide. Land development and ownership in Florida is ever-changing and priority areas identified as SHCA might already have been significantly altered due to development or acquired into public ownership. Onsite surveys, literature reviews, and coordination with FWC biologists remain essential steps in documenting the presence or absence of rare and imperiled species and habitats within the project area.

Our fish and wildlife location data represents only those occurrences recorded by FWC staff and other affiliated researchers. It is important to understand that our database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species, such as gopher tortoises, are not entered into our database on a site-specific basis.

Therefore, one should not assume that an absence of occurrences in our database indicates that species of significance do not occur in the area.

The Florida Natural Areas Inventory (FNAI) maintains a separate database of listed plant and wildlife species, please contact FNAI directly for specific information on the location of element occurrences within the project area.

Because FNAI is funded to provide information to public agencies only, you may be required to pay a fee for this information. County-wide listed species information can be located at their website (<http://www.fnai.org>).

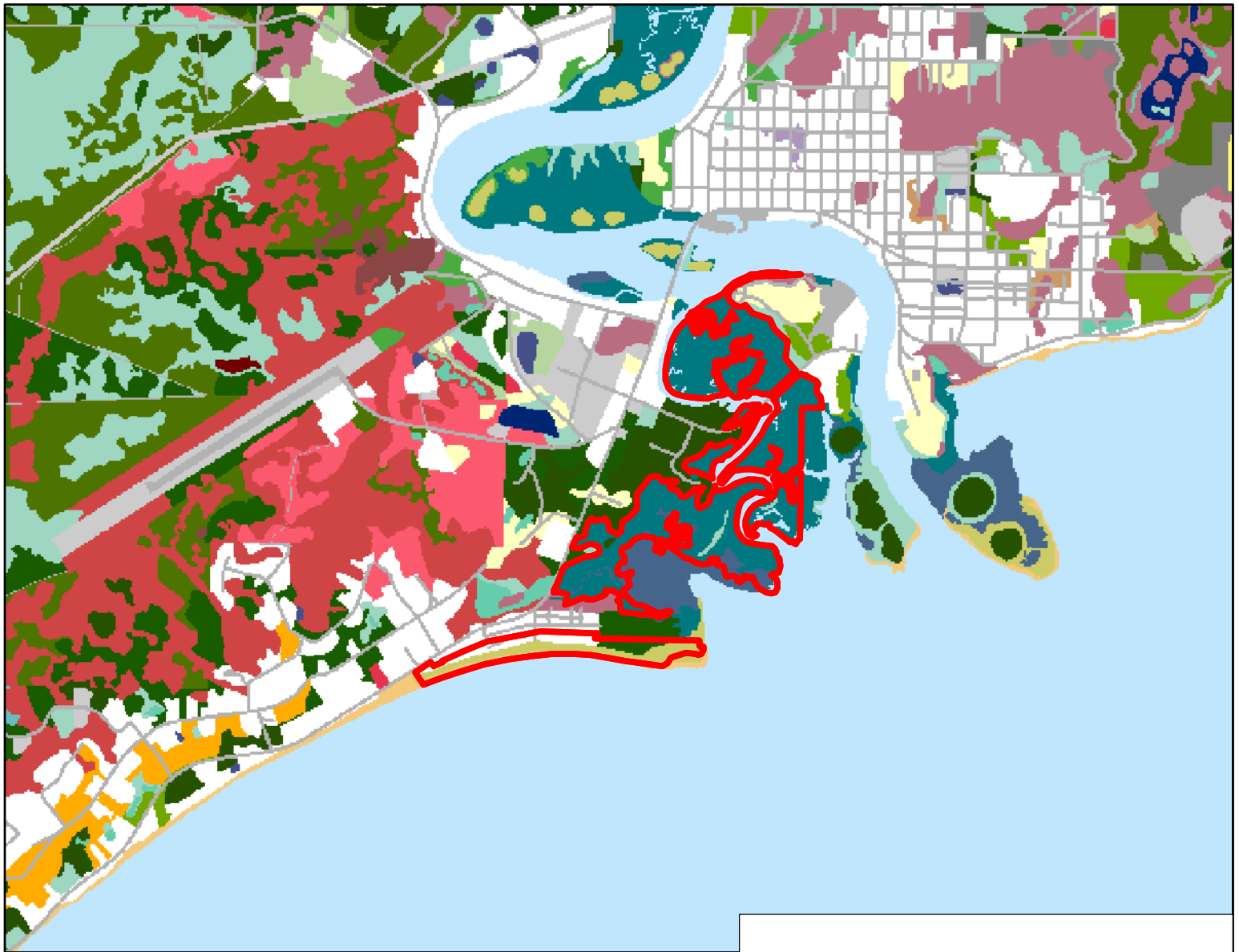
Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or gisrequests@myfwc.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eva Salinas', with a stylized flourish at the end.

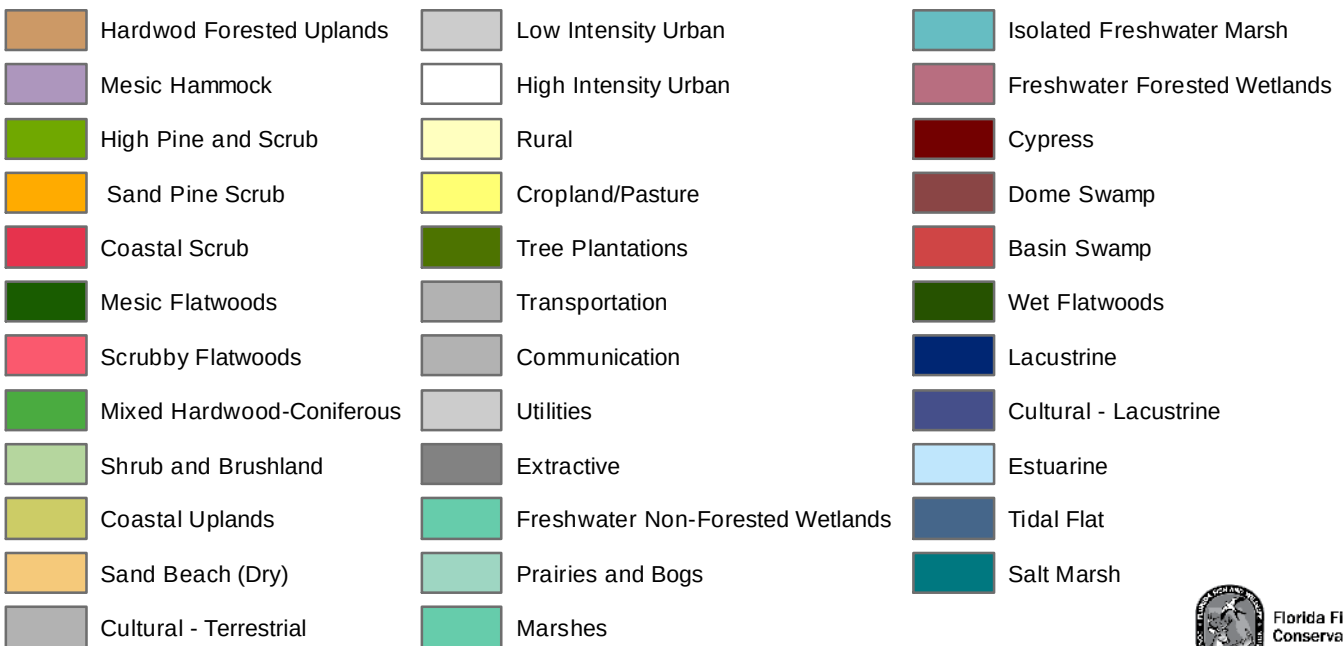
Eva Salinas
Research Assistant

ES
2020_6406
Enclosures

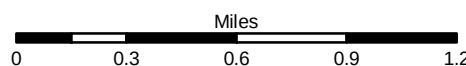


McKissack Beach

Cooperative Land Cover -- State Classes



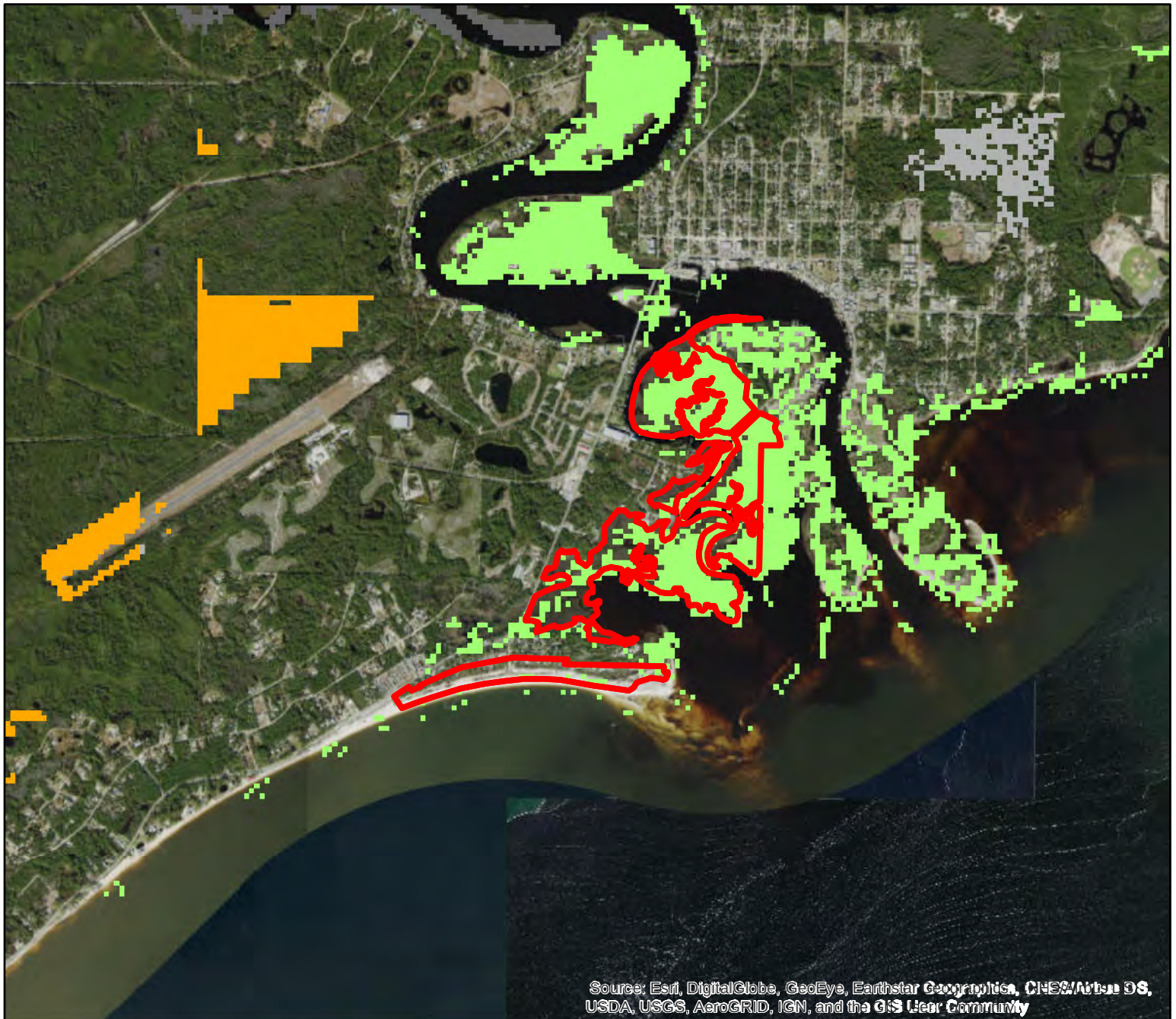
Approximate site boundary



Florida Fish and Wildlife
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FWC ID: 2020_6406 Feb 27, 2020



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

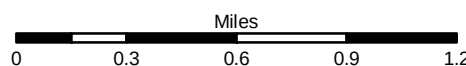
McKissack Beach

The prioritized SHCA map identifies 5 classes of SHCA based upon Heritage ranking criteria developed by The Nature Conservancy, the Natural Heritage Program Network, and the Florida Natural Areas Inventory. There are 2 possible ranks used to prioritize a species' SHCA: 1) the global rank based on a species worldwide status, and 2) the state rank based upon the species status in Florida. The state and global ranks are based upon many factors such as known occurrence locations, estimated abundance, range, amount of habitat currently protected, perceived levels of threats towards the species, and ecological fragility.

Prioritized SHCA's

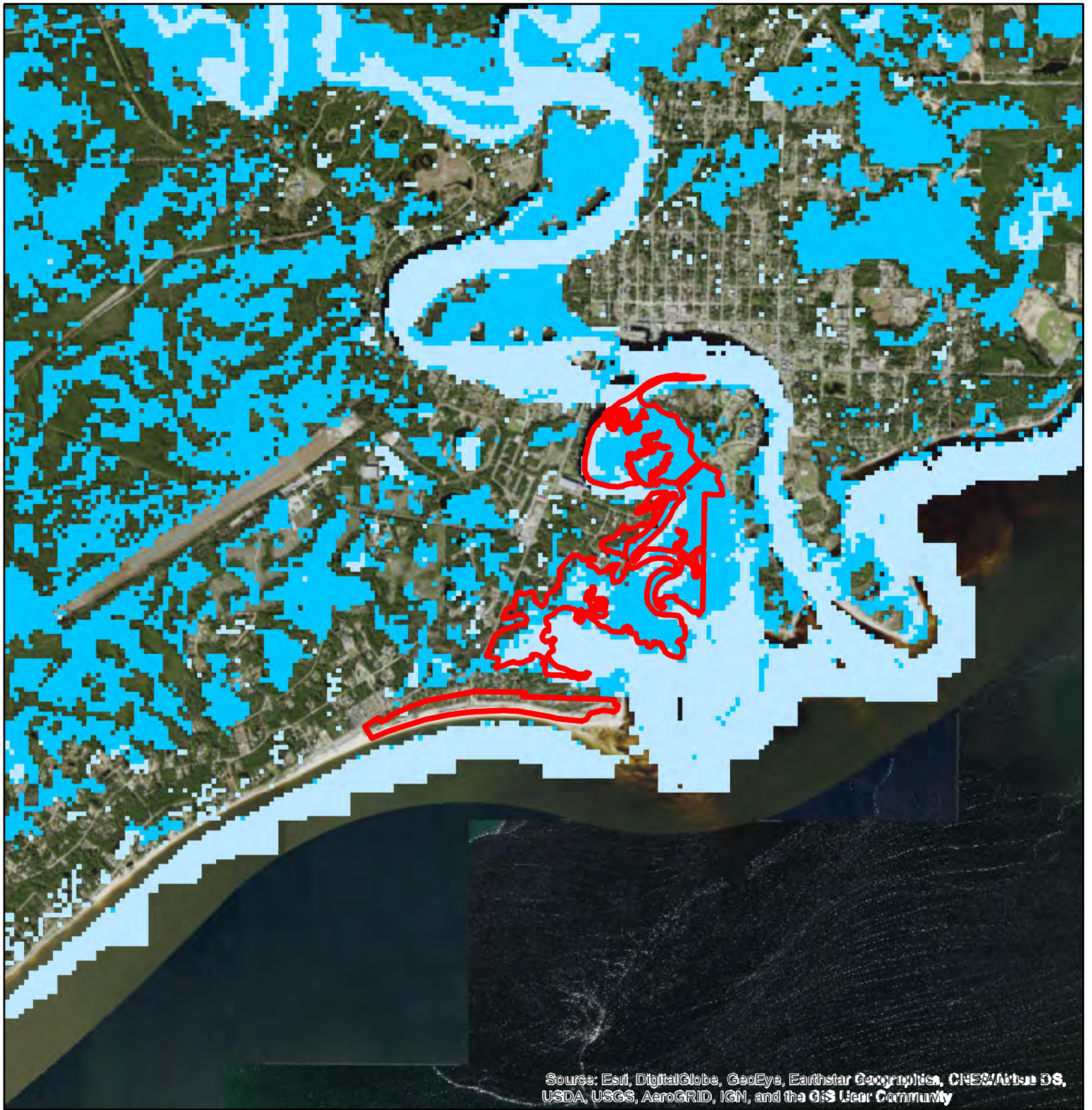


Approximate site boundary



Florida Fish and Wildlife
Conservation Commission
MyFWC.com

FWC ID: 2020_6406 Feb 27, 2020



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

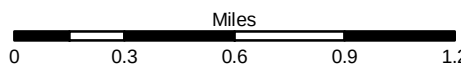
McKissack Beach

Priority Wetlands

- 1-3 Species, Wetlands habitat
- 4-6 Species, Wetlands habitat
- 7-9 Species, Wetlands habitat
- 10-11 Species, Wetlands habitat

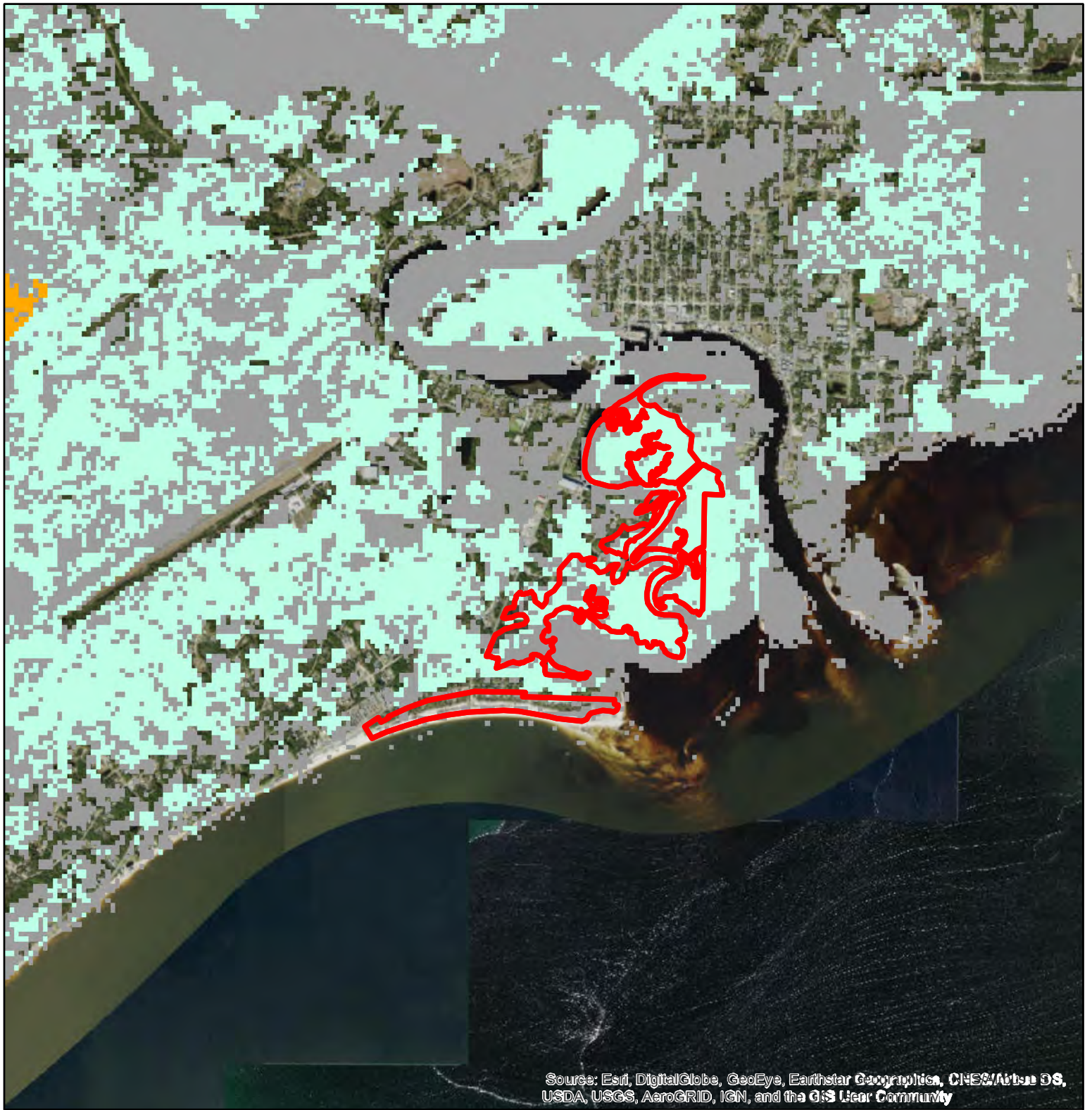


Approximate site boundary



Florida Fish and Wildlife
Conservation Commission
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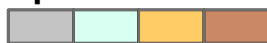
FWC ID: 2020_6406 Feb 27, 2020



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

McKissack Beach

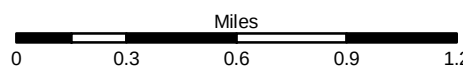
Species Richness



1-3 4-6 7-9 10-13



Approximate site boundary



Florida Fish and Wildlife
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Species Common Name	Scientific Name	Taxa Group	Listing Status	Year Last Updated	Model type	Notes	Species distribution models using the CLC	Species distribution models using Veg 2003	SHCA	Models Prior to Veg 2003	Spp Loc	Range	spp dist
Cooper's hawk	<i>Accipiter cooperii</i>	Bird		2016	Affinity	R. Kawula	WHCNIF2016	WHCNIF2009	YES	HN2000			
Bachman's sparrow	<i>Aimophila aestivalis</i>	Bird		2007	Affinity	M. Endries/M. Barrett; R. Kawula		Other_spp_veg03					
Louisiana seaside sparrow	<i>Ammodramus maritimus fisheri</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Wakulla seaside sparrow	<i>Ammodramus maritimus juncicola</i>	Bird	ST	2016	Affinity	R. Kawula In progress.		WHCNIF2009	YES	GAPS94		YES	
Macgillivray's seaside sparrow	<i>Ammodramus maritimus macgillivrayi</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Cape Sable seaside sparrow	<i>Ammodramus maritimus mirabilis</i>	Bird	FE	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_to_GAPS94		GAPS94			
Scott's seaside sparrow	<i>Ammodramus maritimus peninsulæ</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Florida grasshopper sparrow	<i>Ammodramus savaannarum floridanus</i>	Bird	FE	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Mottled duck	<i>Anas fulvigula</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Florida sandhill crane	<i>Antigone canadensis pratensis</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula; R. Butryn	WHCNIF2016	WHCNIF2009		GAPS94			
Florida scrub-jay	<i>Aphelocoma coerulescens</i>	Bird	FT	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Limpkin	<i>Aramus guarana</i>	Bird		2014	Predictive	J. Beerens	_Potential Habitat/WHCNIF2016	WHCNIF2009		GAPS94			
Great egret	<i>Ardea alba</i>	Bird		2016	Affinity		WHCNIF2016	WHCNIF2009		GAPS94			
Florida burrowing owl	<i>Athene cunicularia floridana</i>	Bird	ST	2014	Predictive	J. Beerens	_Potential Habitat/WHCNIF2016	WHCNIF2009	YES	GAPS94			
Short-tailed hawk	<i>Buteo brachyurus</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Swainson's hawk	<i>Buteo swainsoni</i>	Bird		2000	Affinity	J. Cox				HN2000			
Red knot	<i>Calidris canutus rufa</i>	Bird	FT								YES		
Ivory-billed woodpecker	<i>Campephilus principalis</i>	Bird	FE										
Piping plover	<i>Charadrius melodus</i>	Bird	FT	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_to_GAPS94		GAPS94	YES		
Snowy plover	<i>Charadrius nivosus</i>	Bird	ST	2014	Predictive	M. Barrett	_Potential Habitat/WHCNIF2016	WHCNIF2009	YES	GAPS94	YES		
Wilson's plover	<i>Charadrius wilsonia</i>	Bird		1994	Affinity					GAPS94	YES		
Worthington's marsh wren	<i>Cistothorus palustris griseus</i>	Bird	ST	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000		HN2000			
Marian's marsh wren	<i>Cistothorus palustris marianæ</i>	Bird	ST	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000		HN2000		YES	
Mangrove cuckoo	<i>Coccyzus minor</i>	Bird		2016	Affinity	M. Endries/M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Northern bobwhite	<i>Colinus virginianus</i>	Bird		2007	Affinity	M. Endries/M. Barrett; R. Kawula		Other_spp_veg03					
Little blue heron	<i>Egretta caerulea</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94	YES		
Reddish egret	<i>Egretta rufescens</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94	YES		
Snowy egret	<i>Egretta thula</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94	YES		
Tricolored heron	<i>Egretta tricolor</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Swallow-tailed kite	<i>Elanoides forficatus</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
White ibis	<i>Eudocimus albus</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Southeastern American kestrel	<i>Falco sparverius paulus</i>	Bird	ST	2016	Affinity	R. Kawula - Predictive model in progress	WHCNIF2016	WHCNIF2009		GAPS94	YES		
Whooping crane	<i>Grus americana</i>	Bird											
American oystercatcher	<i>Haematopus palliatus</i>	Bird	ST	2014	Predictive	J. Beerens	_Potential Habitat	Updates_to_GAPS94		GAPS94	YES		YES
Bald eagle (s. FL)	<i>Haliaeetus leucocephalus</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Least Bittern	<i>Ixobrychus exilis</i>	Bird		2000	Affinity					HN2000			
Black rail	<i>Laterallus jamaicensis</i>	Bird		2016	Predictive	B. Bankovich	_Potential Habitat			HN2000			
Wild turkey	<i>Meleagris gallopavo spp.</i>	Bird		2016	Fuzzy logic	R. Butryn	_Potential Habitat			GAPS94			
Wood stork	<i>Mycteria americana</i>	Bird	FT	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Eskimo curlew	<i>Numenius borealis</i>	Bird	FE										
Yellow-crowned night heron	<i>Nyctanassa violacea</i>	Bird		2000	Affinity	J. Cox				HN2000			
Black-crowned night heron	<i>Nycticorax nycticorax</i>	Bird		2000	Affinity	J. Cox				HN2000			
Osprey (Monroe county)	<i>Pandion haliaetus</i>	Bird		2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000		HN2000			
Louisiana waterthrush	<i>Parus motacilla</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		HN2000			
Painted bunting	<i>Passerina ciris</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		HN2000			
White-crowned pigeon	<i>Patagioenas leucocephala</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Brown pelican	<i>Pelecanus occidentalis</i>	Bird		2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000		HN2000	YES		
Red-cockaded woodpecker	<i>Picoides borealis</i>	Bird	FE	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94	YES		
Hairy woodpecker	<i>Picoides villosus</i>	Bird		2000	Affinity	J. Cox				HN2000			
Roseate spoonbill	<i>Platalea ajaja</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Glossy ibis	<i>Plegadis falcinellus</i>	Bird		2000	Affinity	J. Cox				HN2000			
Audubon's crested caracara	<i>Polyborus plancus audubonii</i>	Bird	FT	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Snail kite	<i>Rastrhamus sociabilis</i>	Bird	FE	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAPS94			
Black skimmer	<i>Rynchops niger</i>	Bird	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009				YES	
Florida prairie warbler	<i>Setophaga discolor paludicola</i>	Bird		2000	Affinity	J. Cox				HN2000			
Stoddard's yellow-throated Warbler	<i>Setophaga dominica stoddardi</i>	Bird		2000	Affinity	J. Cox				HN2000			
Kirtland's warbler	<i>Setophaga kirtlandi</i>	Bird	FE										
Cuban yellow warbler	<i>Setophaga petechia gundlachi</i>	Bird		2000	Affinity	J. Cox				HN2000			
White-breasted nuthatch	<i>Sitta carolinensis</i>	Bird		2000	Affinity	J. Cox				HN2000			
Brown-headed nuthatch	<i>Sitta pusilla</i>	Bird		2007	Affinity	M. Endries/M. Barrett; R. Kawula							
Roseate tern	<i>Sterna dougallii dougallii</i>	Bird	FT	2007	Affinity			Other_spp_veg03			YES		
Least tern	<i>Sterna antillarum</i>	Bird	ST	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000			YES		
Bachman's warbler	<i>Vermivora bachmani</i>	Bird	FE										
Black-whiskered vireo	<i>Vireo altiloquus</i>	Bird		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAPS94			
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	Fish	FE										
Gulf sturgeon	<i>Acipenser oxyrinchus desotoi</i>	Fish	FT	2013	Predictive	M. Barrett					YES		
Atlantic sturgeon	<i>Acipenser oxyrinchus oxyrinchus</i>	Fish	FE				not on datalib						
Mountain mullet	<i>Agonostomus manticola</i>	Fish		2013	Predictive	M. Barrett							
Alabama shad	<i>Alosa alabamæ</i>	Fish		2013	Predictive	M. Barrett		AquaticSpeciesModels_			YES		
Snail bullhead	<i>Ameiurus brunneus</i>	Fish		2013	Predictive	M. Barrett		not on datalib					
Spotted bullhead	<i>Ameiurus serraanthus</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber		AquaticSpeciesModels_					
American eel	<i>Anguilla rostrata</i>	Fish									YES		
Alligator gar	<i>Atractosteus spatula</i>	Fish		2013/2017	Predictive / Home Range	M. Barrett; A. Webber					YES		
Crystal darter	<i>Crystallaria asprella</i>	Fish	ST			A. Webber - 2016 - too few data for robust predictive model					YES		
Bluestripe shiner	<i>Cyprinella callitaenia</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber		AquaticSpeciesModels_					
Lake Eustis pupfish	<i>Cyprinodon variegatus hubbsi</i>	Fish											
Nassau grouper	<i>Epinephelus striatus</i>	Fish	FT										
Harlequin darter	<i>Etheostoma histrio</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber		AquaticSpeciesModels_			YES		
Okaloosa darter	<i>Etheostoma okaloosae</i>	Fish	FT	2013/2017	Predictive	M. Barrett; A. Webber		AquaticSpeciesModels_			YES		
Southern tessellated darter	<i>Etheostoma almidestri maculaticeps</i>	Fish	ST										
Goldstripe darter	<i>Etheostoma panvipine</i>	Fish		2017	Predictive	A. Webber		AquaticSpeciesModels_					
Cypress darter	<i>Etheostoma proeliare</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber		AquaticSpeciesModels_					
Speckled darter	<i>Etheostoma stigmaeum</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber		AquaticSpeciesModels_					
Lowland (Southern starhead) topminnow	<i>Fundulus blainæ</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber		AquaticSpeciesModels_					

Saltmarsh topminnow	<i>Fundulus jenkinsi</i>	Fish	ST	2017	Predictive	A. Webber; M. Barrett	not on databil				YES
Cypress minnow	<i>Hybognathus hoyi</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Mangrove rivulus	<i>Kryptolebias marmoratus</i>	Fish									
Striped shiner	<i>Luxilus chrysocephalus</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Bandfin shiner	<i>Luxilus zonistilus</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Florida/Speckled chub	<i>Macrhybopsis n. sp. cf. aestivalis</i>	Fish		2017	Predictive	A. Webber	AquaticSpeciesModels_				
Giant manta ray	<i>Manta birostris</i>	Fish	FT								
Key silverside	<i>Menidia conchorum</i>	Fish	ST								
Shoal bass	<i>Micropterus cataractae</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				YES
Suwannee bass	<i>Micropterus notius</i>	Fish		2013	Predictive	M. Barrett	not on databil				
Gulf striped bass	<i>Morone saxatilis</i>	Fish									YES
Greyfin redborse	<i>Moaxotoma n. sp. cf. poecilurum</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Bluehead chub	<i>Nocomis leptocephalus</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Rough shiner	<i>Notropis baileyi</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Ironcolor shiner	<i>Notropis chalybaeus</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Blackmouth shiner	<i>Notropis melanostomus</i>	Fish	ST	2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				YES
Southern logperch	<i>Percina austroperca</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Saddleback darter	<i>Percina vigil</i>	Fish		2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				
Smalltooth sawfish	<i>Pristis pectinate</i>	Fish	FE								
Bluenose shiner	<i>Pteronotropsis welaka</i>	Fish	ST	2013/2017	Predictive	M. Barrett; A. Webber	AquaticSpeciesModels_				YES
Eastern mudminnow	<i>Umbra pygmaea</i>	Fish		2013	Predictive	M. Barrett	_Potential Habitat				
Reticulated flatwoods salamander	<i>Ambystoma bishopi</i>	Herp/Amphibian	FE	2015	Predictive	R. Kawula	_Potential Habitat/WHCNIF2016	WHCNIF2009		HN2000	YES
Frosted flatwoods salamander	<i>Ambystoma cingulatum</i>	Herp/Amphibian	FT	2015	Predictive	R. Kawula	_Potential Habitat/WHCNIF2016	WHCNIF2009		HN2000	YES
Eastern tiger salamander	<i>Ambystoma tigrinum</i>	Herp/Amphibian		2015	Predictive	J. Bock	_Potential Habitat			HN2000	YES
Seal salamander	<i>Desmognathus monticola</i>	Herp/Amphibian		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	HN2000	
Georgia blind salamander	<i>Eurycea wallacei</i>	Herp/Amphibian	ST	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000			YES
Pine barrens treefrog	<i>Hyla andersonii</i>	Herp/Amphibian		2014	Predictive	J. Beerens	_Potential Habitat/WHCNIF2016	WHCNIF2009	YES	GAP594	YES
Gopher frog	<i>Lithobates capito</i>	Herp/Amphibian		2014	Predictive	J. Beerens	_Potential Habitat	Updates_HN2000		HN2000	YES
Florida bog frog	<i>Lithobates okaloosae</i>	Herp/Amphibian	ST	2014	Predictive	M. Barrett	_Potential Habitat/WHCNIF2016	WHCNIF2009		GAP594	YES
Striped newt	<i>Notaphthalmus perstriatus</i>	Herp/Amphibian		2014	Predictive	M. Barrett	_Potential Habitat/WHCNIF2016	WHCNIF2009	YES	HN2000	
Ornate chorus frog	<i>Pseudacris ornata</i>	Herp/Amphibian									YES
Southern copperhead	<i>Agkistrodon contortrix contortrix</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
American alligator	<i>Alligator mississippiensis</i>	Herp/Reptile	FT(S/A)	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000		HN2000	
Loggerhead sea turtle	<i>Caretta caretta</i>	Herp/Reptile	FT	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Other_spp_veg03			YES
Green sea turtle	<i>Chelonia mydas</i>	Herp/Reptile	FT	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Other_spp_veg03			YES
Spotted turtle	<i>Clemmys guttata</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
American crocodile	<i>Crocodylus acutus</i>	Herp/Reptile	FT	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAP594	
Eastern diamondback rattlesnake	<i>Crotalus adamanteus</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Leatherback sea turtle	<i>Dermochelys coriacea</i>	Herp/Reptile	FE	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Other_spp_veg03			YES
Key ringneck snake	<i>Diadophis punctatus acricus</i>	Herp/Reptile	ST	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000			
Eastern indigo snake	<i>Drymarchon couperi</i>	Herp/Reptile	FT	2015	Predictive	J. Bock	_Potential Habitat	Updates_HN2000		HN2000	YES
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Herp/Reptile	FE	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC				
Gopher tortoise	<i>Gopherus polyphemus</i>	Herp/Reptile	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		GAP594	YES
Barbour's map turtle	<i>Graptemys barbouri</i>	Herp/Reptile	ST	2007	Affinity	J. Bock - predictive model initiated		Updates_HN2000		HN2000	YES
Escambia map turtle	<i>Graptemys ernsti</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Southern hog-nosed snake	<i>Heterodon simus</i>	Herp/Reptile		2016	Predictive	R. Butryn	_Potential Habitat				
Striped mud turtle (lower Keys pop.)	<i>Kinosternon baurii</i>	Herp/Reptile		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009			
Mole kingsnake	<i>Lampropeltis calligaster rhombomaculata</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Short-tailed snake	<i>Lampropeltis extenuata</i>	Herp/Reptile	ST	2014	Predictive	R. Butryn	_Potential Habitat	Updates_HN2000		HN2000	
Eastern kingsnake	<i>Lampropeltis getula</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Kemp's ridley sea turtle	<i>Lepidochelys kempi</i>	Herp/Reptile	FE	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Other_spp_veg03			YES
Apalachicola alligator snapping turtle	<i>Macrochelys apalachicola</i>	Herp/Reptile				R. Kawula - predictive model initiated				YES	
Suwannee alligator snapping turtle	<i>Macrochelys suwanniensis</i>	Herp/Reptile	ST			R. Kawula - predictive model initiated					
Alligator snapping turtle	<i>Macrochelys teminkii</i>	Herp/Reptile		2007	Affinity			Updates_HN2000		HN2000	YES
Carolina diamondback terrapin	<i>Malaclemys terrapin centrata</i>	Herp/Reptile		2000	Affinity					HN2000	
Ornate diamondback terrapin	<i>Malaclemys terrapin macrospilota</i>	Herp/Reptile		2000	Affinity					HN2000	
Mississippi diamondback terrapin	<i>Malaclemys terrapin pileata</i>	Herp/Reptile		2000	Affinity					HN2000	
Mangrove terrapin	<i>Malaclemys terrapin rhizophororum</i>	Herp/Reptile		2000	Affinity					HN2000	
Diamondback terrapin	<i>Malaclemys terrapin spp.</i>	Herp/Reptile									YES
Florida east coast terrapin	<i>Malaclemys terrapin tequesta</i>	Herp/Reptile		2000	Affinity					HN2000	
Gulf salt marsh snake	<i>Nerodia clarkii clarkii</i>	Herp/Reptile		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAP594	
Mangrove saltmarsh watersnake	<i>Nerodia clarkii compressicauda</i>	Herp/Reptile		2000	Affinity					HN2000	
Atlantic salt marsh snake	<i>Nerodia clarkii taeniata</i>	Herp/Reptile	FT	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES	GAP594	
Red rat (corn) snake	<i>Pantherophis guttatus</i>	Herp/Reptile		2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000			
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>	Herp/Reptile	ST	2016	Predictive	R. Butryn; also Veg03 update	_Potential Habitat	Updates_HN2000		HN2000	YES
Southern coal skink	<i>Plestiodon anthracinus pluvialis</i>	Herp/Reptile		2000	Affinity					HN2000	
Florida Keys mole skink	<i>Plestiodon egregius egregius</i>	Herp/Reptile	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009			
Cedar Key mole skink	<i>Plestiodon egregius insularis</i>	Herp/Reptile		2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		HN2000	
Bluetail mole skink	<i>Plestiodon egregius lividus</i>	Herp/Reptile	FT	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000		HN2000	
Peninsula mole skink	<i>Plestiodon egregius onocrepis</i>	Herp/Reptile		2000	Affinity					HN2000	
Sand skink	<i>Plestiodon reynoldsi</i>	Herp/Reptile	FT	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009	YES		
Suwannee cooter	<i>Pseudemys suwanniensis</i>	Herp/Reptile		2007	Affinity	M. Endries/M. Barrett; R. Kawula		Updates_HN2000		HN2000	
Gulf hammock dwarf siren	<i>Pseudobranchius striatus lustricolus</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Florida scrub lizard	<i>Sceloporus woodi</i>	Herp/Reptile		1994	Affinity	J. Cox				GAP594	
Many-lined salamander	<i>Stereochilus marginatus</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Florida brown snake	<i>Storeria victa</i>	Herp/Reptile	ST	2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000			
Rim rock crowned snake	<i>Tantilla oolitica</i>	Herp/Reptile	ST	2016	Affinity	M. Barrett; R. Kawula	WHCNIF2016	WHCNIF2009		HN2000	
Central Florida crowned snake	<i>Tantilla relicta neilli</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Coastal dunes crowned snake	<i>Tantilla relicta palmita</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Peninsula crowned snake	<i>Tantilla relicta relicta</i>	Herp/Reptile		2000	Affinity	J. Cox				HN2000	
Peninsula ribbon snake	<i>Thamnophis sauritus sackenii</i>	Herp/Reptile		2018	Affinity	M. Endries/M. Barrett; R. Kawula	SppModels_CLC	Updates_HN2000			
Staghorn coral	<i>Acropora cervicornis</i>	Invert/Coral	FT	2014	Predictive	K. Wirt	not on databil				
Elkhorn coral	<i>Acropora palmata</i>	Invert/Coral	FT	2014	Predictive	K. Wirt	not on databil				
Pillar coral	<i>Dendrogyra cylindricus</i>	Invert/Coral	FT								
Rough cactus coral	<i>Mycetophyllia ferox</i>	Invert/Coral	FT								
Lobed star coral	<i>Orbicella annularis</i>	Invert/Coral	FT								
Mountainous star coral	<i>Orbicella faveolata</i>	Invert/Coral	FT								

[illegible]

West Indian manatee	<i>Trichechus manatus latirostris</i>	Mammal	FT	2016 Affinity / Range	M. Barrett - 2016 multi-level Range map	WHCNI2016	WHCNI2009	YES	GAPS94	YES
Florida black bear	<i>Ursus americanus floridanus</i>	Mammal								

Appendix D

Soil Maps



United States
Department of
Agriculture

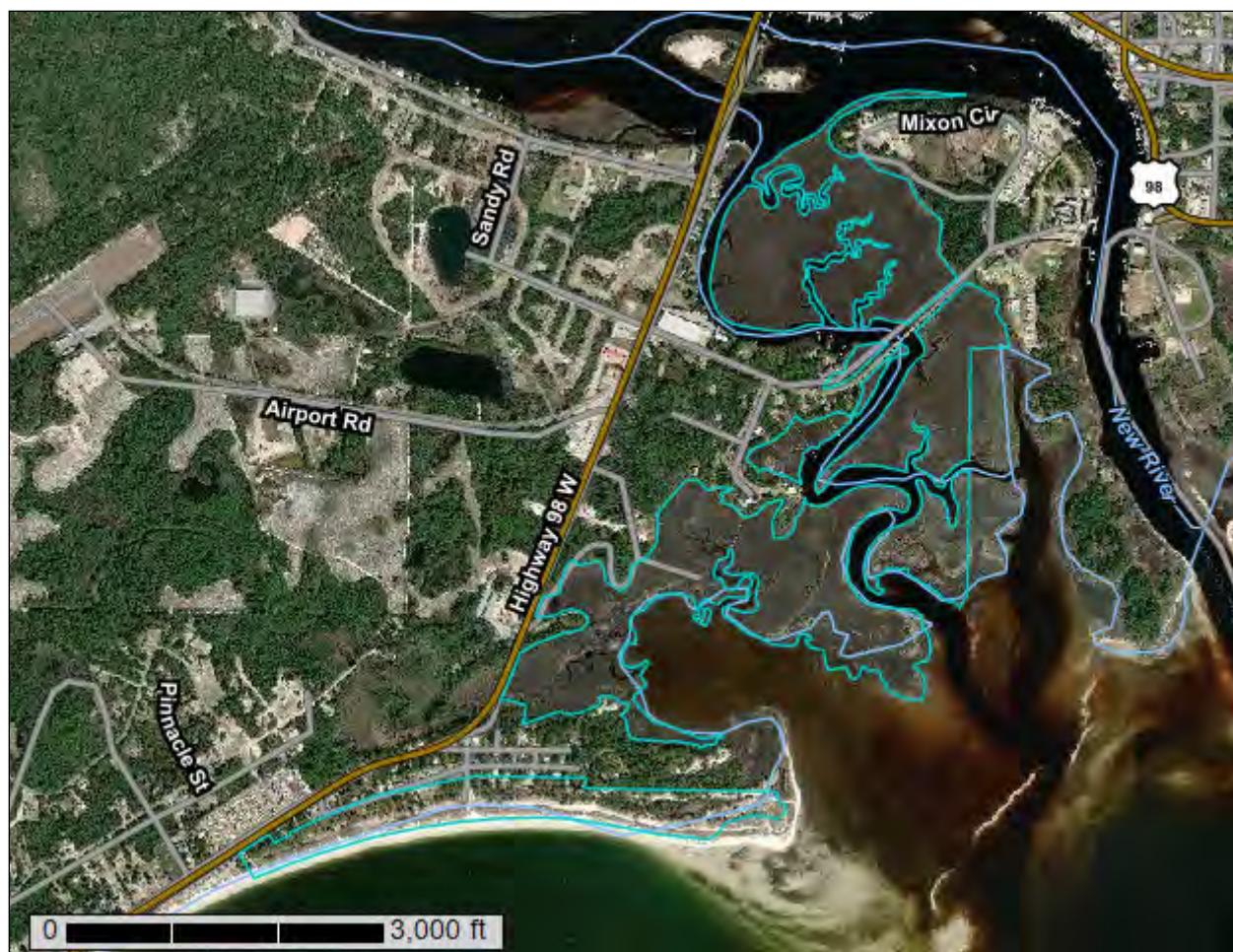
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Franklin County, Florida**

McKissack_Lease



September 11, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Franklin County, Florida

Survey Area Data: Version 15, Sep 6, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 30, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Beaches	14.9	5.7%
4	Dirego and Bayvi soils, tidal	0.0	0.0%
7	Bohicket and Tisonia soils, tidal	202.6	77.6%
10	Corolla sand, 0 to 5 percent slopes	22.1	8.5%
22	Leon sand, 0 to 2 percent slopes	1.2	0.4%
24	Mandarin fine sand, 0 to 2 percent slopes	5.1	2.0%
26	Duckston sand, occasionally flooded	1.2	0.5%
29	Resota fine sand, 0 to 5 percent slopes	0.7	0.3%
48	Udorthents, nearly level	0.1	0.0%
99	Water	3.1	1.2%
100	Waters of the Gulf of Mexico	10.1	3.9%
Totals for Area of Interest		261.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the

scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Franklin County, Florida

3—Beaches

Map Unit Setting

National map unit symbol: 1110t
Elevation: 0 to 20 feet
Mean annual precipitation: 53 to 61 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Beaches: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Beaches

Setting

Landform: Beaches on marine terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear

Properties and qualities

Slope: 1 to 2 percent
Natural drainage class: Poorly drained
Runoff class: Very high
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Forage suitability group: Forage suitability group not assigned (G152AA999FL)
Hydric soil rating: Unranked

Minor Components

Corolla

Percent of map unit: 5 percent
Landform: Flats on dunes on marine terraces on coastal plains
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Duckston

Percent of map unit: 3 percent
Landform: Flats on marine terraces, depressions on marine terraces, swales on marine terraces
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Hurricane

Percent of map unit: 2 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

4—Dirego and Bayvi soils, tidal

Map Unit Setting

National map unit symbol: 11115
Mean annual precipitation: 53 to 61 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Dirego and similar soils: 50 percent
Bayvi and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dirego

Setting

Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa - 0 to 35 inches: muck
Cg - 35 to 72 inches: fine sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Salinity, maximum in profile: Strongly saline (16.0 to 32.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 55.0
Available water storage in profile: Very high (about 14.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A/D
Forage suitability group: Forage suitability group not assigned (G152AA999FL)
Hydric soil rating: Yes

Description of Bayvi

Setting

Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A1 - 0 to 8 inches: mucky sand
A2 - 8 to 26 inches: sand
Cg3 - 26 to 80 inches: sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Salinity, maximum in profile: Slightly saline to strongly saline (4.0 to 32.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 70.0
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: A/D
Forage suitability group: Forage suitability group not assigned (G152AA999FL)
Hydric soil rating: Yes

Minor Components

Maurepas

Percent of map unit: 10 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

7—Bohicket and Tisonia soils, tidal

Map Unit Setting

National map unit symbol: 1111k

Elevation: 0 feet

Mean annual precipitation: 53 to 61 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 290 to 320 days

Farmland classification: Not prime farmland

Map Unit Composition

Bohicket and similar soils: 45 percent

Tisonia and similar soils: 40 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bohicket

Setting

Landform: Tidal marshes on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Concave

Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 23 inches: silty clay

Cg - 23 to 80 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 32.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 40.0

Available water storage in profile: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

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Forage suitability group: Forage suitability group not assigned (G152AA999FL)

Hydric soil rating: Yes

Description of Tisonia

Setting

Landform: Tidal marshes on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Organic material over clayey alluvium

Typical profile

Oe - 0 to 4 inches: mucky peat

Oa - 4 to 26 inches: muck

Cg - 26 to 66 inches: clay

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Salinity, maximum in profile: Strongly saline (16.0 to 32.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 35.0

Available water storage in profile: Very high (about 13.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Forage suitability group: Forage suitability group not assigned (G152AA999FL)

Hydric soil rating: Yes

Minor Components

Dirego

Percent of map unit: 5 percent

Landform: Tidal marshes on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Maurepas

Percent of map unit: 5 percent

Landform: Tidal marshes on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: Yes

Chowan

Percent of map unit: 3 percent

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Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Brickyard

Percent of map unit: 2 percent
Landform: Flood plains on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

10—Corolla sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 11I04
Elevation: 0 to 20 feet
Mean annual precipitation: 53 to 61 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Corolla and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Corolla

Setting

Landform: Rises on dunes on marine terraces on coastal plains
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: sand
C/Ab - 6 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)
Depth to water table: About 18 to 36 inches

Custom Soil Resource Report

Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 20.0
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G152AA131FL)
Hydric soil rating: No

Minor Components

Beaches

Percent of map unit: 3 percent
Landform: Beaches on marine terraces
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: Unranked

Newhan

Percent of map unit: 3 percent
Landform: Dunes on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Duckston

Percent of map unit: 2 percent
Landform: Flats on marine terraces, depressions on marine terraces, swales on marine terraces
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Hurricane

Percent of map unit: 2 percent
Landform: Flats on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Mandarin

Percent of map unit: 2 percent
Landform: Flats on marine terraces, rises on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

22—Leon sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2rz0s
Elevation: 0 to 300 feet
Mean annual precipitation: 60 to 69 inches
Mean annual air temperature: 63 to 72 degrees F
Frost-free period: 252 to 306 days
Farmland classification: Not prime farmland

Map Unit Composition

Leon and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Leon

Setting

Landform: Flatwoods, marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 5 inches: sand
E - 5 to 18 inches: sand
Bh - 18 to 26 inches: sand
E' - 26 to 65 inches: sand
B'h - 65 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 2 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D

Custom Soil Resource Report

Forage suitability group: sandy soils on flats of mesic or hydric lowlands
(G133AA141FL)
Other vegetative classification: North Florida Flatwoods (R152AY004FL)
Hydric soil rating: No

Minor Components

Leon, hydric

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: Yes

Pottsburg

Percent of map unit: 4 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Hurricane

Percent of map unit: 4 percent
Landform: Flats on marine terraces, rises on marine terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Mandarin

Percent of map unit: 3 percent
Landform: Rises on marine terraces, flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Pickney

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Other vegetative classification: North Florida Flatwoods (R152AY004FL)
Hydric soil rating: Yes

Rutlege

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Other vegetative classification: North Florida Flatwoods (R152AY004FL)
Hydric soil rating: Yes

24—Mandarin fine sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ttkv

Elevation: 0 to 100 feet

Mean annual precipitation: 59 to 67 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 223 to 253 days

Farmland classification: Not prime farmland

Map Unit Composition

Mandarin and similar soils: 92 percent

Minor components: 8 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mandarin

Setting

Landform: Flats on marine terraces, rises on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: fine sand

E - 6 to 24 inches: fine sand

Bh - 24 to 32 inches: fine sand

C - 32 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: About 18 to 42 inches

Frequency of flooding: None

Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 4.0

Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Custom Soil Resource Report

Forage suitability group: Sandy soils on rises and knolls of mesic uplands
(G152AA131FL)
Hydric soil rating: No

Minor Components

Ortega

Percent of map unit: 5 percent
Landform: Ridges, knolls, marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Chaires

Percent of map unit: 3 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

26—Duckston sand, occasionally flooded

Map Unit Setting

National map unit symbol: 11l0p
Elevation: 0 to 450 feet
Mean annual precipitation: 53 to 61 inches
Mean annual air temperature: 64 to 72 degrees F
Frost-free period: 290 to 320 days
Farmland classification: Not prime farmland

Map Unit Composition

Duckston and similar soils: 89 percent
Minor components: 11 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Duckston

Setting

Landform: Flats on marine terraces, depressions on marine terraces, swales on marine terraces
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: sand
Cg - 4 to 80 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very high (19.98 to 50.02 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 20.0
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G152AA145FL)
Hydric soil rating: Yes

Minor Components

Corolla

Percent of map unit: 3 percent
Landform: Rises on dunes on marine terraces on coastal plains
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Bayvi

Percent of map unit: 3 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

Rutlege

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scranton

Percent of map unit: 2 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear

Hydric soil rating: No

29—Resota fine sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttl8
Elevation: 10 to 40 feet
Mean annual precipitation: 61 to 69 inches
Mean annual air temperature: 63 to 70 degrees F
Frost-free period: 252 to 282 days
Farmland classification: Not prime farmland

Map Unit Composition

Resota and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Resota

Setting

Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy marine deposits

Typical profile

A - 0 to 4 inches: fine sand
E - 4 to 19 inches: fine sand
Bw - 19 to 42 inches: fine sand
C - 42 to 80 inches: fine sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 to 50.00 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Custom Soil Resource Report

Hydrologic Soil Group: A

Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands
(G152AA121FL)

Hydric soil rating: No

Minor Components

Ortega

Percent of map unit: 4 percent

Landform: Ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Mandarin

Percent of map unit: 3 percent

Landform: Flats on marine terraces, rises on marine terraces

Landform position (three-dimensional): Talf

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Kureb

Percent of map unit: 3 percent

Landform: Dunes on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

48—Udorthents, nearly level

Map Unit Setting

National map unit symbol: 11l1g

Elevation: 0 feet

Mean annual precipitation: 53 to 61 inches

Mean annual air temperature: 64 to 72 degrees F

Frost-free period: 290 to 320 days

Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Landform: Marine terraces

Landform position (three-dimensional): Interfluve

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mine spoil or earthy fill

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very low
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None

Minor Components

Bohicket

Percent of map unit: 5 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Dirego

Percent of map unit: 5 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Bayvi

Percent of map unit: 5 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

Tisonia

Percent of map unit: 5 percent
Landform: Tidal marshes on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

99—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

100—Waters of the Gulf of Mexico

Map Unit Composition

Gulf of mexico: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

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Custom Soil Resource Report

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Appendix E
Historic and Cultural Resources



This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333 for project review information.

September 4, 2019



Josh Adams

Apalachee Regional Planning Council
2507 Callaway Rd., Suite 200
Tallahassee, FL 32303
Phone: 850.488.6211 x104
Email: JAdams@theaprc.com

In response to your inquiry of September 4, 2019, the Florida Master Site File lists no previously recorded archaeological sites, one resource group and no historic structures found within the **McKissack Beach** located in Franklin County as shown on the corresponding map.

When interpreting the results of our search, please consider the following information:

- **This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.**
- **Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.**
- **While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.**
- **Federal, state and local laws require formal environmental review for most projects. This search DOES NOT constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333.**

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Sincerely,

Cody VanderPloeg
Archaeological Data Analyst
Florida Master Site File
Cody.VanderPloeg@dos.myflorida.com

Cultural Resource Search

Franklin County



0 0.0750.15 0.3 0.45 0.6
 Miles

September 2019



AR=0
SS=0
CM=0
RG=1
BR=0
Total=1

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
FR00900	RG	CAMP GORDON JOHNSTON		Archaeological District	Eligible	

Appendix F
Physical Resource Map

Physical Resources



Carrabelle River

Black Needle
Rush Marsh

Postun
Bayou

Boggy Jordan
Bayou

Dune Scrub

Mud Flat

Dune System

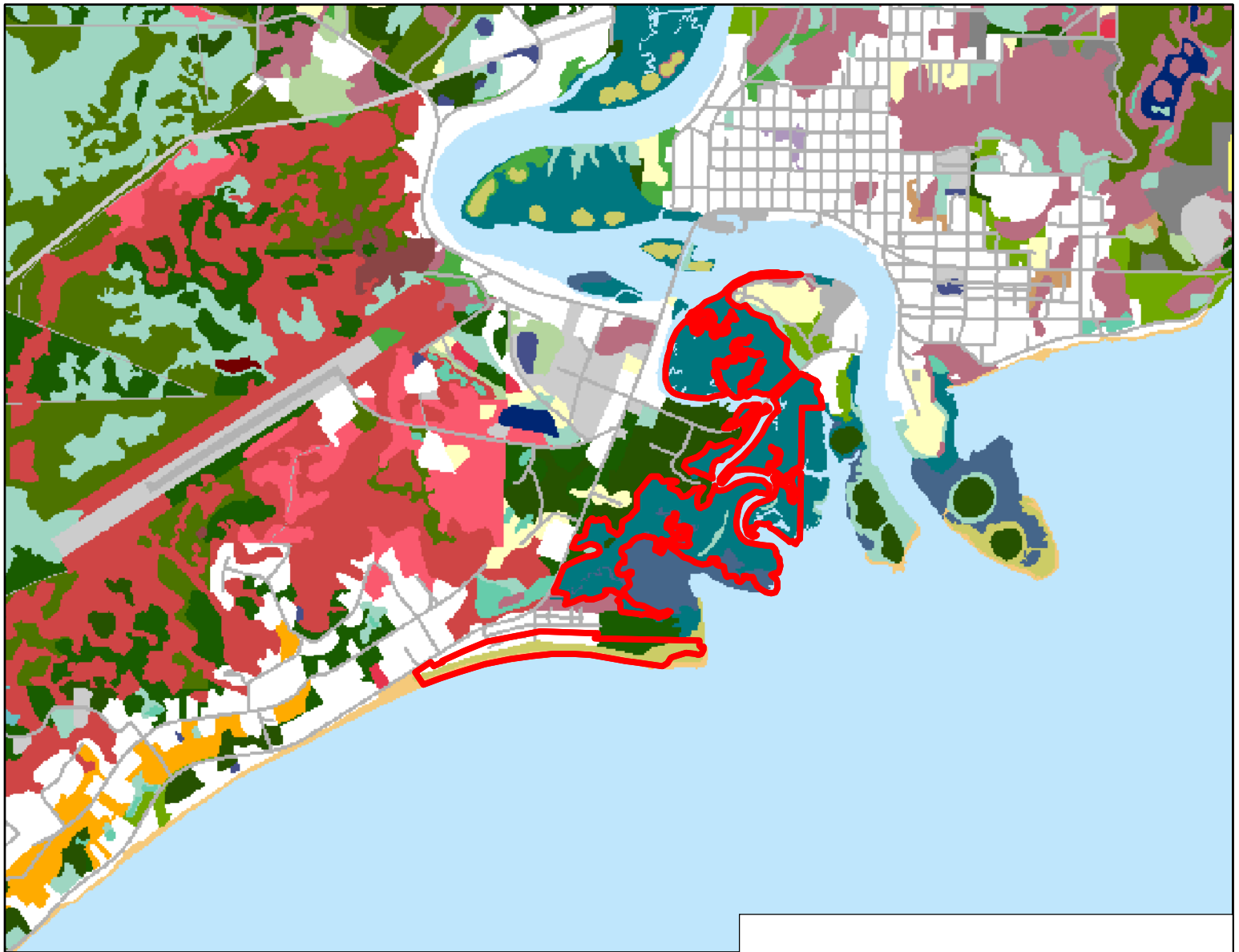
Sandy Beach

St. George Sound & Gulf of Mexico

0 750 1,500 Feet

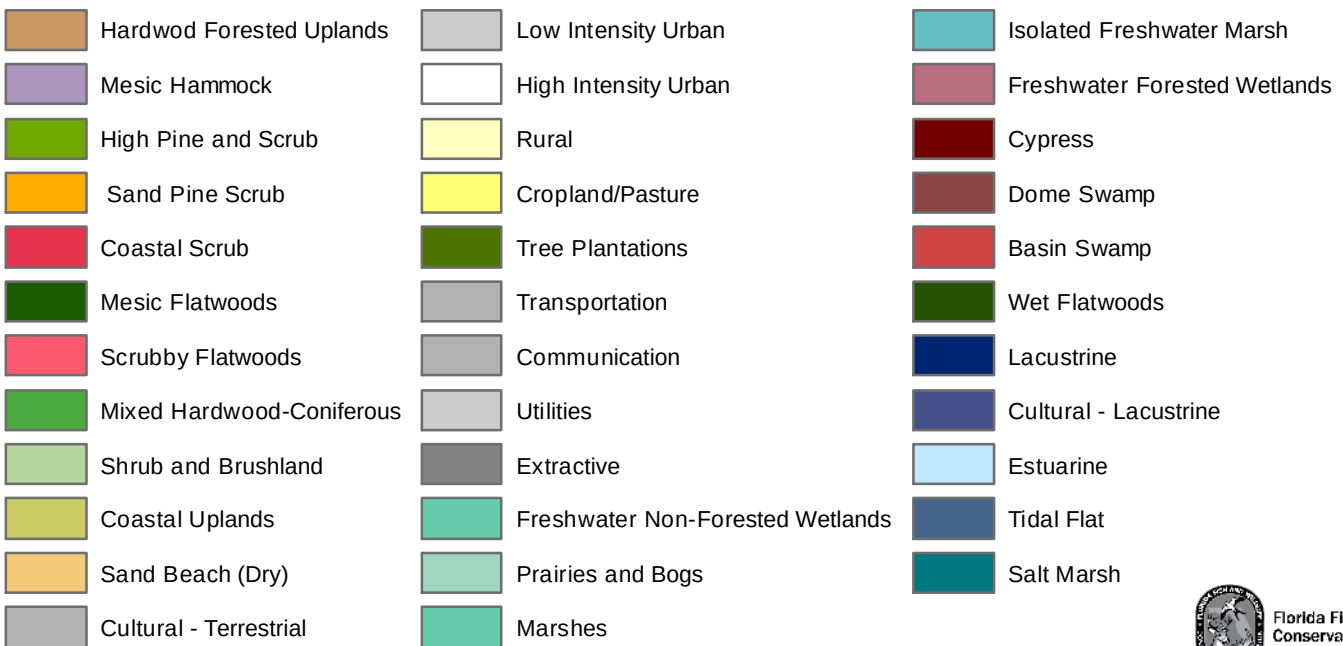
Lease Boundary



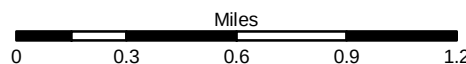


McKissack Beach

Cooperative Land Cover -- State Classes



Approximate site boundary



Florida Fish and Wildlife
Conservation Commission
MyFWC.com



Appendix G
Public Participation

McKissack Beach and Marsh Land Management Plan January 16, 2020 Public Workshop Report

Overview

This is a report on the McKissack Beach and Marsh Land Management Plan public workshop held January 16, 2020 at the Carrabelle City Hall. Approximately 20 people attended. The workshop discussed the future use and management of the land, which is leased by the City of Carrabelle from the Florida Department of Environmental Protection (FDEP). The workshop objectives, agenda and guidelines are in Appendix A.

The draft Land Management Plan being prepared by the Apalachee Regional Planning Council was distributed prior to the workshop and is available at http://theaprc.com/wp-content/uploads/2020/01/McKissack_LMP_01172020.pdf. Additional questions or comments regarding any part of the plan can be sent to Josh Adams at jadams@theaprc.com or by mail to ARPC, 2507 Callaway Road, Suite 200, Tallahassee, FL 32303

Opening

Carrabelle Mayor Brenda La Paz welcome everyone to City Hall. The facilitator, Tom Taylor, presented the workshop agenda and guidelines (See Appendix A). The participants introduced themselves and shared why McKissack Beach is important to them.

Background

Josh Adams, a planner with the **Apalachee Regional Planning Council** presented a map of the area (Appendix B) and described current soil, species and habitat conditions and past and current human uses. He also explained the governmental entities, their responsibilities and the land management planning and operations process.

Issues and Options

The facilitator presented an overview of draft issues and options and captured comments and suggestions in each issue area. To the degree possible the participants sought consensus on how to address each issue. The notes from this discussion in Appendix C.

Closing

The facilitator provided a summary of workshop activities, results and next steps and asked the participants for concluding comments that can be found in Appendix D

Appendix A

McKissack Beach and Marsh Land Management Plan Public Workshop

**January 16, 2020
Carrabelle City hall**

Workshop Objectives

- To understand the area's history and current conditions
- To describe the agency responsibilities
- To identify the communities hopes and visions for the future
- To explore critical issues and options to address them
- To determine needed next steps to develop an acceptable land management plan

Workshop Agenda

6:00 Opening

Welcome and meeting purpose – Mayor La Paz
Workshop agenda and guidelines – Tom Taylor
Introduction of participants

6:10 Background

Description of the map boundaries, current conditions, uses and related connections
Governmental entities and their responsibilities
The land management planning and operations process

6:45 Issues and Options

Present an overview of draft issues and options
Capture comments and suggestions in each issue area

7:40 Next Steps

Requests for information, research and problem-solving
Public workshop 2 on February 10, 6:00 pm + calls and written comments.

7:50 Closing

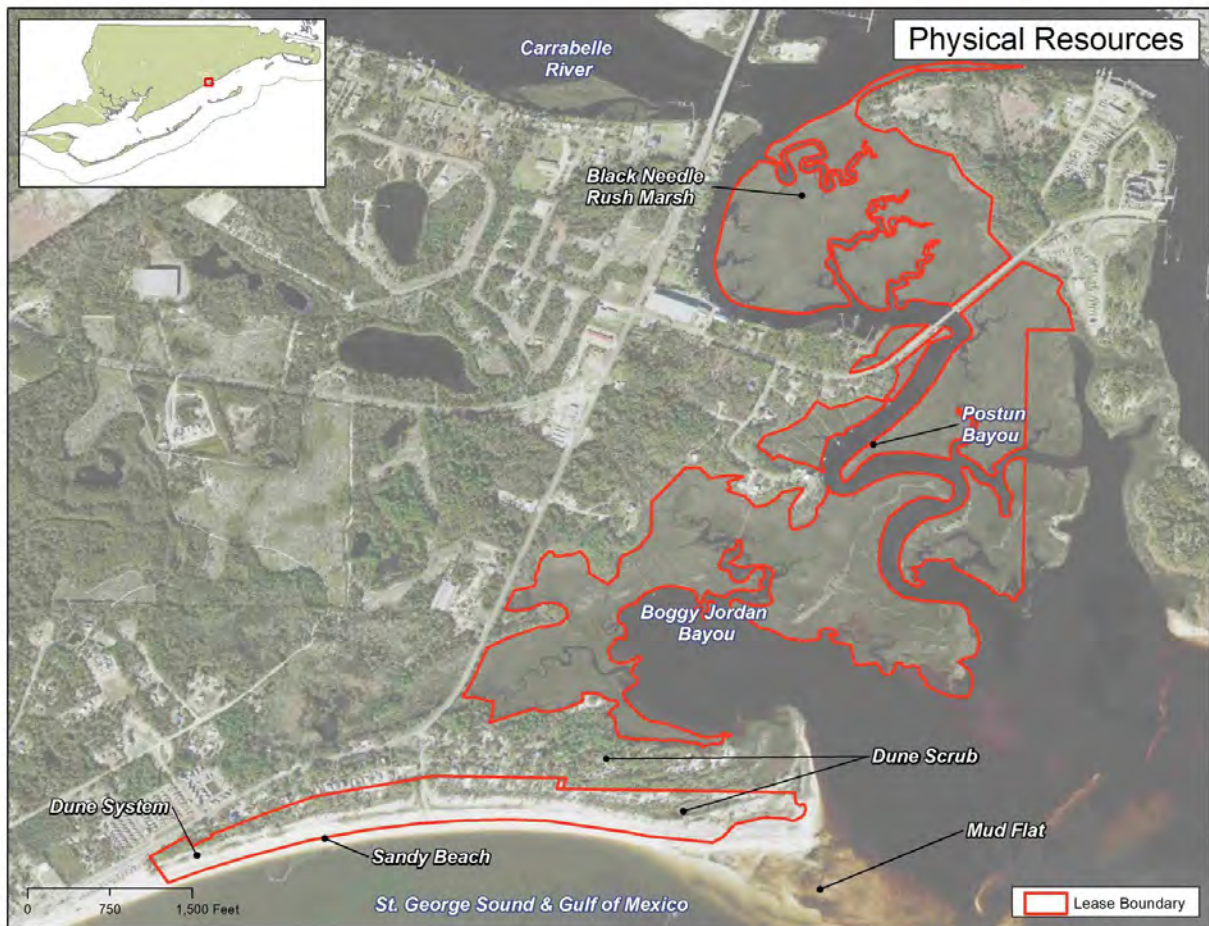
Summary of workshop activities, results and next steps
Concluding comments from participants, the City and ARPC

8:00 Adjourn

Meeting Guidelines

1. Recognize that everyone has a piece of the truth and we learn by listening
2. Be focused and concise - balance participation
3. Identify concerns or questions and verify assumptions
4. Recognize the key values and desired outcomes
4. Suggest solutions and needed next steps
5. Seek consensus, where possible
6. Express and acknowledge differing views - no attacks or stereotyping
7. Make sure recording is accurate

Appendix B



Appendix C

Land Management Plan Issues and Options

The (#s) refer to the sections in the draft plan.

The draft issues and options discussed are outlined.

The comments and tentative conclusions are bulleted and *italicized*.

1. Parking and beach access at the end of Gulf Beach Drive (23, 32)

- a. Prohibit future removal of sand from the cut.
- b. Build a boardwalk over the dunes.
- c. Remove clay and shells to restore the parking area to a natural state.
- d. Eliminate or allow parking on state land.
- e. Resurface the parking area with elevated, porous materials.
- f. Install and maintain signs and barriers to reduce driving on the beach and dunes.
- g. Do nothing

Comments and tentative conclusions

- *Do not expand the current parking lot. Cap parking at about 8-12 parking places. The planners will design the layout for safe parking, entering and exiting. The parking be narrowed to the degree possible where it has been expanded to the east in recent years. It is noted that some abutting property owners would prefer elimination of the parking lot and recognize that this is a traditional local parking area.*
- *Address the pollution that flows out into the bay through the cut. Determine if some of it is from dogs.*
- *Remove clay hardpan and install porous a parking surface.*
- *Consider developing access and parking at Franklin Street.*
- *Consider creating free parking permits for Franklin County residents. Enforcement can be a costly and cause complaints.*
- *Let nature take its course on the cut. Don't continue digging it out or fill it in.*
- *Build a dune walkover. Consider an on-grade walkover. See FEDEP guidelines: https://floridadep.gov/sites/default/files/Beach%20and%20Dune%20Walkover%20Guidelines_0.pdf*

2. Listed endangered or threatened plant or animal species (18)

- a. Identify and restrict people and pet access to areas of endangered and threatened plants and birds (nesting and feeding).
- b. Educate area users about the species and protection practices.
- c. Do nothing.

Comments and tentative conclusions

- *Add the red knot, piping plovers, etc. to the bird list.*
- *There need to be restricted areas*
- *Audubon, FWC and community volunteers can coordinate identifying and posting areas.*
- *Most people comply. There are only a few are a problem people. The FWC is doing better at enforcement.*
- *Protect the mudflats at the point. These are critical for wading birds. Keep people out of this area.*

3. Beach and dune ecosystems (20)

- a. Install wind fences.
- b. Erect no driving signs.
- c. Encourage residents to report problems.
- d. Do nothing.

Comments and tentative conclusions

- *[See parking area comments above]*
- *Post leash and waste pick-up notices. Enforcement important for birds, turtles, and people who have their dogs on a leash.*
- *Franklin Co. Animal Control enforces violations. Call 911 for dog bites.*
- *There are just a few bad actors who need education and enforcement.*
- *Take smart phone photos of the owners.*
- *Trust mother nature rather than use dune restoration techniques.*
- *Encourage the garden club to plant sea oats in non-bird areas.*
- *Have designated paths to the beach and do not enter areas.*
- *Encourage walking on beaches not dunes.*

4. Marsh ecosystem (20)

- a. Restrict access.
- b. Do nothing.

Comments and tentative conclusions

- *Keep it natural.*
- *Considerate signage for no boating.*

5. Public access and use of the beach (23, 32)?

- a. Designate areas for beach fishing and swimming?
- b. Close areas at certain times for nesting birds, turtles, etc.
- c. Require dogs be on leashes on the beach or near nesting areas, etc.

Comments and tentative conclusions

- *Have guidelines for where and how to fish.*

6. Management and maintenance responsibilities (City, County, Fish and Wildlife Commission, volunteers or a private entity manage the property) (26)

- a. Litter, signage, enforcement, removal, etc.
- b. Illegal and inappropriate public use signage, enforcement, etc.
- c. Make and maintain parking, signage, environmental and other improvements.
- d. Minimize cost to the City and taxpayers.

Comments and tentative conclusions

- *Franklin County is responsible for road maintenance, animal control and law enforcement.*
- *The City of Carrabelle is responsible for developing and monitoring the land management plan.*
- *The FL Fish and Wildlife Commission is responsible for protecting turtles, birds and other species.*
- *Volunteers help with user education and monitoring activities.*

7. Generate revenues to enhance the management of the property. (27)

- a. Donation box?
- b. Fundraising events?

Comments and tentative conclusions

- *If you have a donation box it would have to be protected.*

8. Other management goals. (39) (Build the eco-tourism economy)

- a. Promote and support appropriate birding and other nature-based experiences.
- b. Promote and support sea kayaking (not in the marshes).
- c. Support the bike path on Hwy 98.

Comments and tentative conclusions

- *The bike path is approved. No bikes, motorcycles or horses are allowed on the beach.*
- *Have bird walks, art and photography tours and classes.*
- *Work with green guides. It will take person power.*
- *Have programs for school children and train them to be guides.*
- *Have the hotels and restaurants offer discounts and eco-packages.*

9. Other Issues?

- *PROTECTION of the beach and marsh environment.*
- *We need to address people that drive out to lovers' point. They shoot guns, build fires, drink, drive 4-wheelers on the dunes and beach and more*
- *It is hard to protect. Consider what could stop vehicles, use concrete posts, etc.*
- *Provide information on the available grants and sources.*

Appendix D

Concluding Comments

- *PROTECTION is what is most important.*
- *What does the City want? The city wants the area protected without costs to the city and taxpayers. We want grants for restoration and protection. We don't want to limit public access.*
- *No campground.*
- *No bathrooms*
- *No driving on the beach*
- *Control fires (A small warming fire for fishermen is allowed by the County, which is not appropriate on state land.*
- *The county enforces driving on the beach. It is permissible on McKissack Beach [?]. It can be addressed in the plan and an appeal by the City and residents can be made to the County to change the ordinance.*
- *Have the city provide a website to report problems and get information on who to call. Have information on the Carrabelle Insider.*
- *Josh Adams and Tom Taylor thanked everyone for the valuable input and helpful suggestions and announced that the next workshop will be on February 10.*

mtg 1

MCKISSACK BEACH LAND MANAGEMENT PLAN PUBLIC MEETING



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McKissack Beach and Marsh Land Management Plan Steering Committee Meeting Notes

February 10, 2020, 3-5:00 PM
Carrabelle City hall

Overview of Meeting Notes

The notes are underlined in the agenda packet below. The sign in sheet is on the last page. There are also comments and suggestions regarding the draft Land Management Plan, LMP from this meeting and the public workshop in a separate file. The notes do not capture everything or exactly what was said.

Meeting Objectives

- To provide an overview of the property and planning process
- To clarify the role of the Steering Committee
- To review, get input and seek consensus on changes to the draft LMP
- To determine needed next steps to develop an acceptable, sustainable LMP

Meeting Agenda

3:00 Opening

Welcome – Mayor La Paz

Meeting purpose, agenda and guidelines – Tom Taylor

Introduction of participants

3:10 Overview – Josh Adams

Describe the map boundaries and current uses and conditions

1st public workshop, 1-16-20, report sent out and used to revise the LMP

Steering Committee Meeting today from 3-5, input to be shared soon.

Input from this afternoon and tonight will be used to further refine the plan.

3:15 Steering Committee Role **SEE NOTES ON PAGES 2 AND 3**

Description of the FDEP LMP requirements – Josh Adams

Refine and seek consensus on Committee roles

Protocols for LMP development and adoption

Protocols for routine management decision making

Protocols for responding to complaints and emergencies (dog shootings, etc.)

3:45 Land Management Plan Review - For each component: **SEE NOTES IN**

1. Josh Adams will highlight changes in response to public and agency input

2. We will rate the acceptability of the changes and address any public concerns

3. Participants can offer other suggestions for the LMP

General Information, A. 1-14

Natural and Cultural Resources, B. 15-21

Use of Property, C. 22-32

Management Activities, D. 33-42, especially 39, Management Goals

4:45 Closing

Summary of workshop activities, results and next steps

Concluding comments from participants, the City and ARPC

4:50 Adjourn

Draft Steering Committee Procedures

Steering Meeting Guidelines

1. Recognize that everyone has a piece of the truth and we learn by listening
2. Be focused and concise - balance participation
3. Identify concerns or questions and verify assumptions
4. Recognize the key values and desired outcomes
4. Suggest solutions and needed next steps
5. Seek consensus, where possible
6. Express and acknowledge differing views - no attacks or stereotyping
7. Make sure recording is accurate

Steering Committee Roles

1. Provide comments and seek consensus on proposed LMP, amendments and updates.
2. Coordinate ongoing management responsibilities, as needed.
3. Coordinate responses to complaints and emergencies, as needed.

Protocols for LMP Development and Adoption

1. Public workshop to get input on issues and options to be consider in the LMP
2. Preparation of a draft LMP - ARPC
3. Steering Committee provides comments and meet seek consensus on draft LMP
4. Public workshop to further refine the plan.
5. The draft will be published for final comment.
6. The Carrabelle City Council will revise, approve and forward the LMP to FDEP State Lands
7. FDEP will review the LMP and make a recommendation to the Governor and Cabinet.
8. The Governor and Cabinet will review and approve the LMP.
9. This decision may be challenged by filing for an Administrative Hearing.

Protocols for routine management decision making

1. Agencies will perform their functions as delineated in the LMP and made most decisions independently. The leads are:
 - a. Civil and criminal law enforcement – Sheriff's Office with Police, FWC
 - b. Environmental regulation – FDEP
 - c. Environmental enforcement – FWC with Sheriff's Office
 - d. Parking lot maintenance – County? City with grant funds
 - e. Kiosk and sign maintenance – FWC with volunteers, Seek grants for funds
 - f. Restoration, prescribed burns and exotic control – FDACS FL Forest Service with volunteers (FS and FWC will draft language for the LMP)
2. When interagency coordination is needed, responsible representatives will communicate, and determine roles, timelines, resource responsibilities, etc. – Carrabelle (Courtney City Administrator) with ANRR and other agencies
3. Agencies will share periodic reports on activities, grant applications, issues, etc. with all Steering Committee members. – Carrabelle with ANRR
4. If there are conflicting agency policies and procedures, Local agency staff will support negotiations, by appropriate agency administrators.
5. Any two Steering Committee members may call a meeting of the Steering Committee if there is an issue the members cannot resolve directly.
6. Consider a friends group to raise funds, sponsor projects and recruit volunteers.

Protocols for responding to complaints and emergencies (e.g. dog shootings)

1. When possible, the responsible agency or agencies should handle the situation. 911 dispatcher refers calls to the appropriate agency.
2. Responsible agencies should be as transparent as legally possible to inform neighbors, beach users and the public of relevant laws, regulations, responses, options, etc.
3. As needed, agencies should coordinate responses.
4. Any two Steering Committee members may call a meeting of the Steering Committee if there is an issue the members cannot resolve directly. This meeting will be open to the public and may include public participation in determining and coordinating a response.

steering committee 2/10/20

MCKISSACK BEACH LAND MANAGEMENT PLAN PUBLIC MEETING



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unable to attend:

→ Caitlin Snyder DIP/ANER

→ Mark Currington County Soil Conservation District

McKissack Beach and Marsh Land Management Plan Public Workshop

February 10, 2020

Carrabelle City hall

Overview of Meeting Notes

The notes are underlined in the agenda packet below. There are also comments and suggestions regarding the draft Land Management Plan, LMP, from this meeting and the earlier Steering Committee meeting, in a separate file. The notes do not capture everything or exactly what was said. The sign-in sheets are in Appendix C

Workshop Objectives

- To provide an overview of the property and planning process
- To review, get input and seek consensus on changes to the draft LMP
- To determine needed next steps to develop an acceptable, sustainable LMP

Workshop Agenda

6:00 Opening

Welcome – Mayor La Paz

Workshop purpose, agenda and guidelines – Tom Taylor

Introduction of participants

Note: There were a number of people at this meeting who wanted to talk about the dog that was shot on the beach over the weekend. The notes from this discussion are in Appendix A.

6:10 Overview – Josh Adams

Describe the map boundaries and current uses and conditions (Appendix C)

1st public workshop, 1-16-20, report sent out and used to revise the LMP

Steering Committee Meeting today from 3-5, input to be shared soon.

Input from this afternoon and tonight will be used to further refine the plan.

The draft will be published for final comment.

The Carrabelle City Council will revise, approve and forward the LMP to FDEP.

6:25 Land Management Plan Review - For each component:

1. Josh Adams will highlight changes in response to public and agency input

2. We will rate the acceptability of the changes and address any public concerns

3. Participants can offer other suggestions for the LMP

General Information, A. 1-14

Natural and Cultural Resources, B. 15-21

Use of Property, C. 22-32

Management Activities, D. 33-42, especially 39, Management Goals

7:50 Closing

Summary of workshop activities, results and next steps

Concluding comments from participants, the City and ARPC

8:00 Adjourn

Meeting Guidelines

1. Recognize that everyone has a piece of the truth and we learn by listening
2. Be focused and concise - balance participation
3. Identify concerns or questions and verify assumptions
4. Recognize the key values and desired outcomes
4. Suggest solutions and needed next steps
5. Seek consensus, where possible
6. Express and acknowledge differing views - no attacks or stereotyping
7. Make sure recording is accurate

Appendix A - Dog Incident Discussion Notes

The facilitator went over the meeting guidelines and ask the group to state their concerns to be written down and then to consider possible solutions for a total of 15 minutes, before returning to the scheduled workshop on the LMP.

Concerns

1. Mr. Smith was walking his dog on a leash, no one there, so he let him off the leash. Another Mr. Smith came out and was attacked and shot the dog.
2. There is a history of not using leashes on this beach. Will there be a sign?
3. There are signs.
4. The first hit on google indicates that the Franklin Co ordinance says owners must have direct control, which could be voice control. This has been updated but doesn't come up.
5. The newer ordinance says the dog has to be on a leash.
6. What about a dog swimming?
7. We should be able to let them off the leash in the water.
8. Call law enforcement rather than approaching the dog owner.
9. It applies to all beaches in the County.
10. Voice control is OK if training the dog. All of the County and Carrabelle require direct connection to a leash.
11. I was attacked by a vicious dog. The owner was a ½ mile away.
12. I don't want guns on the beach.
13. This is a safety issue for people and birds.

Possible Solutions

1. Have a designated dog beach. We want to be dog friendly place.
2. Hold dog owners responsible and issue fines.
3. Have a dog park in town on one of the many empty lots.
4. Have the RV park remind people about the leash law.
5. Don't allow firearms on the beach.

The facilitator pointed out that the LMP does not address leash and gun ordinances and laws and encouraged those concerned about this contact their elected officials.

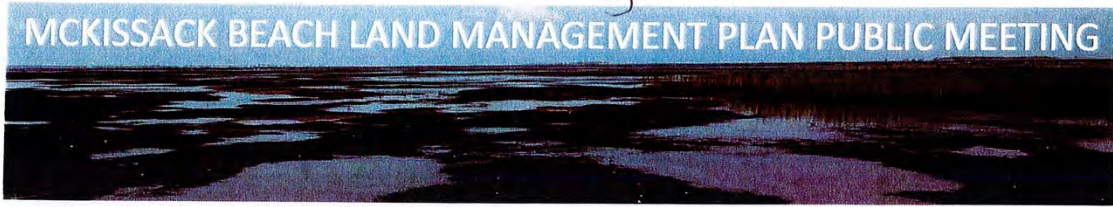
The rest of the workshop solicited comments and suggestions for the McKissack Beach and Marsh Land Management Plan, which can be found in a separate file.

Appendix B



Appendix C – Sign-In Sheet

mtg 2



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MCKISSACK BEACH LAND MANAGEMENT PLAN PUBLIC MEETING



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Appendix H

Forest Management

I. Forest Management Practices

A. Prescribed Fire

Forest management practices on McKissack Beach and Marsh are important in the restoration and maintenance of forest ecosystems and provide a variety of socio-economic benefits to Floridians. Management practices on McKissack Beach will be limited to a prescribed fire program throughout the marsh area, avoiding the beach and upland system. Prescribed fires are an excellent tool in controlling exotic species and promoting native vegetation growth.

The City of Carrabelle will partner with the Florida Forest Service (FFS) and Florida Fish and Wildlife Conservation Commission (FWC) to carry out prescribed fires. FFS utilizes a fire management program on state forests that includes wildfire prevention, detection and suppression, and prescribed burning. This program is the responsibility of FFS's Tallahassee Forestry Center and is detailed in the Five-Year Prescribed Burning Management Plan. Emphasis will be placed on prescribed burning, wildfire prevention, and education to help reduce wildfire occurrence on the forest.

There are no records that indicate the use of prescribed fire at the site. A fire history will be developed as they occur.

According to FNAI, prescribed fire burning in tidal marshes can help provide forage and decrease fuel loading. Careful consideration must be taken when burning marsh as to not adversely affect rare birds or other dependent species. Sections of the marsh must be left unburnt to allow for species habitat. Meeting prescribed fire goals will be largely dependent on weather conditions, available personnel, and statewide emergency situations such as wildfires, hurricanes, and other natural disaster response and relief.

1. Fire Management

The use of prescribed fire in the management of timber, wildlife, and ecological resources on McKissack Beach and Marsh is necessary in fulfilling the goals and objectives stated in this plan including: enhancing and restoring native plant communities, managing protected species, , recreation, historical, and other resource values. The fire management plan and its objectives shall reflect and incorporate these multiple-resource objectives.

- a. **Prescribed Fire:** Prescribed fire is the most important land management tool, both ecologically and economically, for managing vegetation and natural communities, and perpetuating existing wildlife populations in Florida. Records and staff experience should be combined with the FNAI inventory and assessment (2019) to identify areas that may require mechanical/chemical treatments in conjunction with prescribed fire to restore a more natural vegetative structure.
- b. **Burn Unit Plans:** Each prescribed fire will be conducted in accordance with FFS regulations and state law (Rule Chapter 5I-2 F.A.C., Chapter 590 F.S.) and have a burn unit plan (or prescription). Each prescription will contain, at a minimum, the information, as required by Section 590.125(3), F.S., needed to complete the FFS Prescribed Burn Plan Form FDACS 11461.

Consideration should be given to rotating burn units between dormant and growing season burns over time. Fire return intervals for a burn unit are recommended to fall within the natural, historic range for the dominant natural community or communities within a given burn unit.

Based upon available species survey data, burn units within a prescription that have listed wildlife species shall explicitly state their presence and any restrictions or requirements relative to prescribed burning in proximity to these species or habitats. These may include time of year, pre-burn preparation, fire return intervals, and other burn parameters.

B. Wildfires, Prevention, Fire / Prescribed Fire Strategies

FFS has three (3) paramount considerations regarding wildfires, and these are listed in priority order:

- 1) Protection of human lives
- 2) Protection of improvements
- 3) Protection of natural resources

All procedures regarding wildfire will follow the State Forest Handbook and the THSF Fire Management Plan.

1. Suppression Strategies

If a wildfire occurs on McKissack Beach and Marsh there are two (2) alternative suppression strategies as defined below:

- a. **Contain** is defined as a suppression strategy where a fire is restricted to a certain area by using existing natural or constructed barriers that stop the fires spread under the prevailing and forecasted weather until it is out. This strategy allows the use of environmentally sensitive tactics based on fuels, fire behavior, and

weather conditions that keep a wildfire from burning a large area or for a long duration.

- b. Control** is defined as a suppression strategy where aggressive suppression tactics are used to establish firelines around a fire to halt its spread and to extinguish all hotspots. This alternative is used whenever there is a threat to human life, property, private lands, and/or critical natural or cultural resources. This strategy should also be used when the total district fire load dictates that crews not be involved with individual fires for any longer than absolutely necessary.

Appropriate suppression action will be that which provides for the most reasonable probability of minimizing fire suppression cost and critical resource damage, consistent with probable fire behavior, total fire load, potential resource and environmental impacts, safety, and smoke management considerations. The Incident Command System (ICS) will be used for all suppression actions.

2. Smoke Management

Caution will be exercised to prevent a public safety or health hazard from the smoke of any prescribed burn or wildfire. Prescribed burns must pass the smoke screening procedure and be conducted by a certified burner. If smoke threatens to cause a safety hazard, then direct immediate suppression action will be taken.

3. Fire Breaks and Firelines

A system of permanent fire breaks will be developed and maintained around and within the boundaries of McKissack Beach and Marsh to guard against fires escaping from and entering the forest. Such fire breaks will consist of natural barriers, roads, trails, permanent grass strips and where appropriate, well maintained harrowed lines. Most of the breaks will come in the form of the natural outline of the marsh, where it meets the water. All pre-suppression fire breaks will meet the established Silvicultural Best Management Practices (BMP) criteria.

During wildfire suppression, the use of water and foam, permanent fire breaks, natural barriers and existing roads and trails for firelines can be used when human life safety, property, and resource considerations allow. Plowed and/or bulldozed lines will be used for initial installation of firelines in heavy fuels and in cases where it's considered necessary to protect life, property, or resources and/or to minimize threats to firefighters. Plow and bulldozed lines will be rehabilitated and BMPs implemented as soon as practical after the fire is suppressed.

4. Sensitive Areas

The City of Carrabelle has on file Environmentally Sensitive Area Map that identifies protected sites such as critical wetlands and archaeological and historical sites known to occur on the site. The City of Carrabelle personnel are aware of these areas in the event of a wildfire. Special precautions will be followed when prescribed burning in

sensitive areas on McKissack Beach Marsh. Fire staff will avoid unnecessary fireline construction.

5. Adjacent Neighbor Contacts

Adjacent neighbors will be contacted by telephone or email with potential sites and dates of anticipated prescribed burns.

6. Post-Burn Evaluations

A post-burn evaluation will be conducted after prescribed burns. A historical fire record for all fires and prescribed burns will be maintained. These records are intended to provide data for future management decisions.

Appendix I
Emergency Contacts

McKissack Beach Emergency Contacts

Note: The Franklin County Sheriff's Department functions for as central dispatch for all Franklin County residents.

Non-emergency Franklin County Sheriff Department: 850-670-8500

For wildlife law violations: 888-404-FWCC (888-404-3922).

For incidences involving domestic animal infractions on McKissack Beach, call Franklin County Animal Control at (850) 670-4733.

Non-Emergency: Contact City Hall at (850) 697-2727.

911: The closest law enforcement officer, City of Carrabelle, Franklin County Sherriff's office, or Florida Fish and Wildlife Officer will respond.

Appendix J
Beach Access and Signage

As part of the public input received, conceptual designs for beach access, parking lot, and interpretive signage were discussed. While no options were explicitly decided, there were a few recommendations that came from those discussions. As funds become available, input will be sought for design options.

Beach access:

The options for accessing the beach at Gulf Beach Drive include using elevated walkover structures, textile mats, or no improvement. The use of an elevated walkover would allow dune growth and migration, by allowing the sand to shift and accumulate under the structure. Permitting and construction costs vary by the design but could be between \$8,000 and \$15,000 depending on design. Pushback for dune walkovers were focused on detracting from the aesthetics of the natural area, especially switchback designs. Two options, Figures A and B, are shown below. Both are compatible with the Americans with Disabilities Act (ADA). The other issue is the upfront cost required for construction, and that if they were to be damaged because of a storm, costs would be incurred to repair or replace the structure. In terms of an intact dune system, elevated crossovers offer the most foot traffic reduction, by virtue of eliminating ground access, and therefore the greatest potential to improve dunes.



Figure A: Dune walkover style I.



Figure B: Dune walkover style II.

The use of textile mats is another option. They are considerably cheaper, at about \$7 per square foot, and have the added benefit of being removed or adjusted as needed; in the face of a threatening storm they can be rolled-up and stored safely, or if it were to become buried, dug-out and placed atop of accreting sand. Since they are situated directly on the ground, they preempt the establishment of vegetation, but are aesthetically less invasive. Figure C shows an example located at Bald Point State Park.

The no-improvement option is the least expensive, though does nothing to help address dune accretion or improved access to the beach. However, recently placed monopost structures, and not launching boats at the terminus of Gulf Beach Drive, have the potential to reduce the width of the dune cut.



Figure C: Mobi-Mat®, retrieved from FDEP

Parking Lot:

The current parking lot at the terminus of south beach drive consists of a sand and crushed limerock. The grade is inconsistent, has potholes, and is prone to flooding. There is no stormwater system in place, and runoff collects on the current site and runs to the beach through the cut in the dune. This issue also plays a role in the continued breach of the dune line. Parking area improvements would be limited to pervious materials, with stormwater needing to be addressed. The area could also benefit from more clearly demarcated parking spaces. The current level of use would not be expanded. See Figures D and E for two types of layouts. Figure F shows a rendering of a straight dune walkover and improved parking and G shows a switchback dune walkover with improved parking.

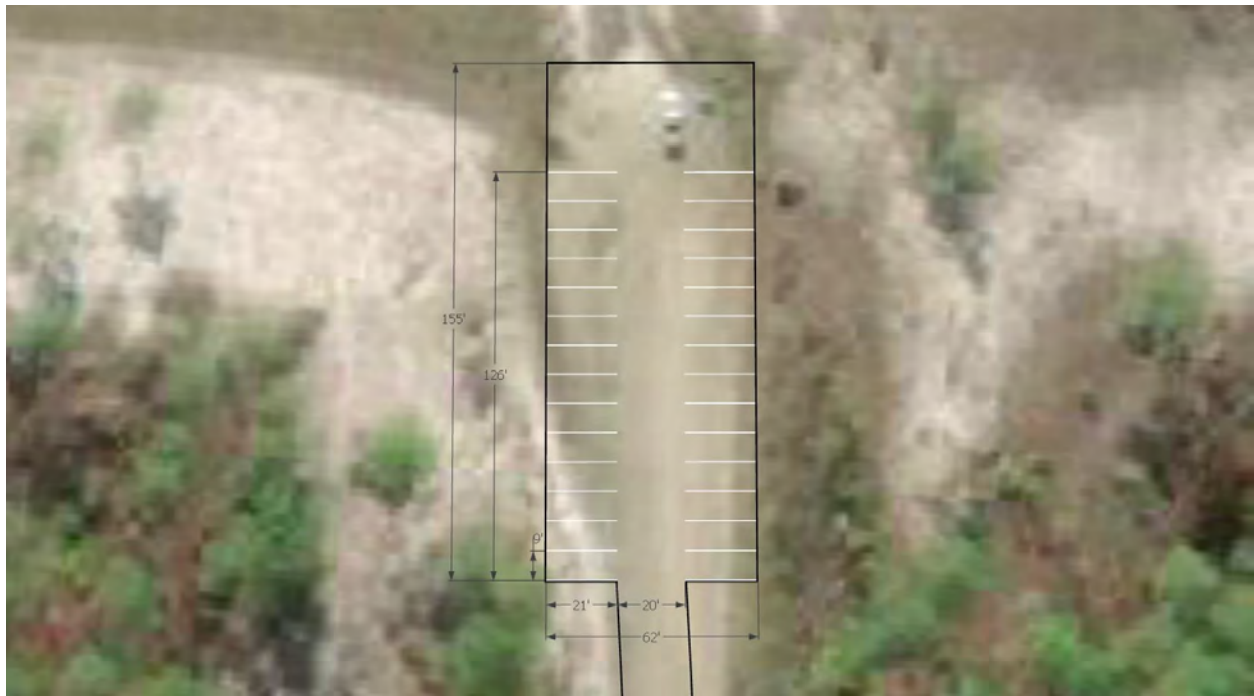


Figure D: Layout I. with 90-degree parking

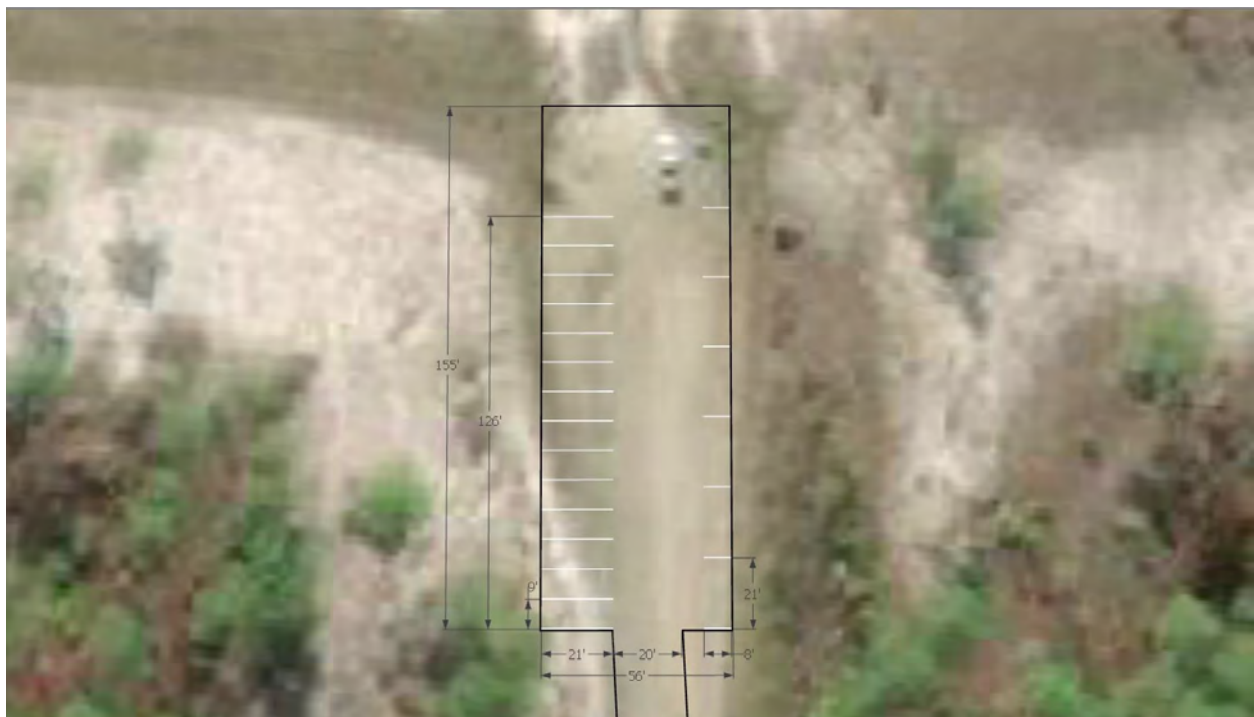


Figure E: Layout II. with 90-degree parking and parallel parking



Figure F: Layout II. with linear dune walkover



Figure G: Layout II. with switchback dune walkover

Signage:

There are a few options that exist for interpretive signage and rest spots. These consist of informative signs that educate visitors about the unique features found at McKissack beach and practices to follow while viewing wildlife. Figure H shows an example of covered signage and figure I shows an example of uncovered signage and an example of pavilion



Figure H: Covered interpretive signage



Figure I: Interpretive trail signage and pavilion