



6-D

MEMORANDUM

TOWN OF PONCE INLET, PLANNING AND DEVELOPMENT DEPARTMENT
The Town of Ponce Inlet staff shall be professional, caring and fair in delivering community excellence while ensuring Ponce Inlet citizens obtain the greatest value for their tax dollar.

To: Jeaneen C. Witt, Town Manager
From: Amy Zengotita, Parks/Rec & Museum Educator
Date: September 9, 2016
Subject: TIIFT Lease/Management Plan Update for Green Mound State Archaeological Site

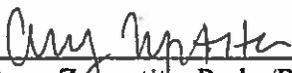
MEETING DATE: September 22, 2016

History:

In 2003, the Town entered into a 50-year lease agreement with the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida for the property known as the Green Mound State Archaeological Site, which is surrounded by the Ponce Preserve, for the purpose of protecting the site and including it in the management of the Preserve. As a condition of the lease agreement, a Management Plan was created and approved by the Town Council and the Trustees in 2004. The attached update, as required by the Lease Agreement, is the first since the original Management Plan was approved.

Discussion:

Staff requests approval of the updated Management Plan, to be forwarded to the Florida Division of State Lands for review and approval.



Amy Zengotita, Parks/Rec & Museum Educator

9/9/16

Date

Attachments:

1. Updated 2016 Management Plan
2. Original 2004 Management Plan, including Lease



Updated 2016 Mgmt Plan

Conservation Management Plan

This management plan form is intended for Board of Trustees leases and subleases of conservation properties that are 160 acres or less. It is intended to address the requirements of Chapter 253.034, 259.032 and rule 18-2.021. Attachments to, or expansion of this form are welcome, if the space provided below is not sufficient. Please answer all of the items below and number all attachments and reference them in the appropriate location below. You are under no obligation to use this form. Any plan format is acceptable, provided it includes all of the appropriate items from the above mentioned statutes and rule. This form is available in electronic format upon request. For additional information pertaining to management plans, please visit the Division of State Lands Stewardship page on the web at <http://www.dep.state.fl.us/lands/stewardship.htm>.

A. General Information

1. Common Name of the Property: Green Mound State Archaeological Site
2. Lease Number: 4416
3. Acres: 17.14 (2.67 uplands and 14.47 wetlands)
4. Managing Agency: Town of Ponce Inlet

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 property includes 2.67 acres of upland which are home to Coastal Strand, Maritime Hammock and Shell Midden communities. The 14.47 acres of wetlands consist of Salt Marsh and Mangrove Swamp communities. The property is surrounded by the Town-owned Ponce Preserve, a 41-acre passive park that runs from the Atlantic Ocean beach to the Halifax River. Both sites are managed together by the Town, with nature trails meandering through the Preserve and on the south, west and north sides of the Green Mound property.

6. Attach a map showing the location and boundaries of the property including:
 - a) The location and type of structures or improvements currently on the property.
 - b) The location and type of proposed improvements. Appendix 1
7. Attach a map showing the proximity of this managed area to other conservation areas within 10 miles. Appendix 2
8. Please attach a legal description of the property. Appendix 3
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 property boundaries for the Green Mound Archaeological Site are depicted on Appendix I. South Peninsula Drive is a paved road that runs through the property, separating the uplands and wetlands areas, and there is an old chain link fence along the eastern boundary of the property. The Mound was subjected to shell mining from 1922 to 1929, with about one-third of the Mound mined during that time. The 41 acres surrounding the site was purchased by the Town of Ponce Inlet through a Florida Communities Trust grant, and is used as a passive park. There are no structures or easements on the property, nor any other setback lines that would affect the proposed use of the property. The only current improvements are nature trails to the south, west and north of the Mound. The Coastal Strand and Maritime Hammock to the east of the Mound remains untouched and provides protection from illegal access to the top of the Mound. The Mangrove Swamp and Salt Marsh can be viewed from the elevated boardwalk to the south of the property or via non-motorized boat through a small creek in the middle of the wetland area. The known invasive plants are limited to Brazilian Peppers, which have been removed by the Town's Public Works staff. Recurring invasives will also be removed.

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

The soil in the coastal strand and eastern portion of the maritime hammock lies is Palm-Beach-Urbanland-Paola The soil in the coastal strand and eastern portion of the maritime hammock lies is Palm-Beach-Urbanland-Paola complex, 0 to 8 percent slope soils (Appendix VI). This soil series is composed of Palm Beach and Paola soils. These soils are excessively well drained with a water table typically below 72 inches and usually below 120 inches (USDA 1980).

The majority of the maritime hammock is Paola fine sand, 0 to 8 percent (Appendix VI). This soil is excessively drained on high, broad sandhills. The soils are light gray fine sand and black organic matter about six inches thick. The subsoil is light gray and white fine sand to 26 inches, and yellow fine sand beneath. The water table is typically below 72 inches (USDA 1980).

11. Is the property adjacent to an aquatic preserve or designated area of critical state concern? YES ___ NO x

If YES, please identify:

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

13. Do any agency-specific statute requirements or legislative/executive directives constrain the use of the property? (These restrictions can frequently be found in the lease) YES NO

If YES, please identify

Only Chapter 267, Florida Statutes (Appendix III), which is administered by the Division of Historical Resources in coordination with the Town of Ponce Inlet, the lessee for the property. The Division of Historical Resources prepared "Management Procedures for Archaeological and Historical Sites and Properties on State-owned or -controlled Lands" will provide guidance for agency compliance with Chapter 267, Florida Statutes. The Division of Historical Resources, Bureau of Historic Preservation compliance review staff reviewed and approved the text in the original management plan.

14. Are there any reservations or encumbrances on the property?
YES NO

If YES, please identify:

B. Natural and Cultural Resources

15. Are there any archeological or historical sites on this property? YES NO
If YES,

A) How do you plan to locate, protect and preserve these resources?

Archaeological investigations were completed in 1948 and 2001 and indicate that the Mound was constructed and used during the St. Johns I and II periods. The Town has budgeted for identification signs for the mound on the main roadway. In addition, the Town plans to work with Florida Public Archeology Network and Florida Division of Historical Resources to determine what interpretation would be appropriate for the site to ensure its protection, which could include additional educational signage and ADA accessibility.

B) Please describe the actions the agency plans to take to locate and identify unknown Resources such as surveys of unknown archeological or historical sites.

This site has undergone extensive study in the past. It is not believed to contain any unidentified or unrecorded cultural resource.

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

YES _____ NO x If YES,

A) Please Identify:

B) Have these buildings been evaluated by a historian or historic architect to determine their historical and/or architectural significance. If YES, please identify both the building(s) and the evaluators(s):

C) Please state whether any such buildings are listed in the Florida Master Site File, National Register of Historic Places or a local register of historic places and identify such buildings.

By law, the managing agency must consult with the Division of Historical Resources with regard to any proposed land clearing or ground disturbing activities or with regard to any proposed rehabilitation, restoration or demolition of structures 50 or more years old. Please contact the Division of Historical Resources if you would like to obtain information on archeological/historical sites.

Division of Historical Resources
Florida Department of State
R.A. Gray Building, MS-8
Tallahassee, Florida 32399
(850) 245-6312

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

The site includes five natural resources listed in the Florida Natural Area Inventory: Coastal Strand; Maritime Hammock; Shell Mound; Salt Marsh; and Mangrove Swamp. The Coastal Strand, Maritime Hammock and Shell Mound are ranked "S2" (imperiled) in the FNAI.

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

YES NO

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

Manatee (*Trichechus manatus*) and Wood Stork (*Mycteria Americana*) have been sighted on the subject site. They are both federally listed as "Endangered." The following are designated by the State of Florida as species of special concern: gopher tortoise (*Gopherus polyphemus*), Little Blue Heron (*Egretta caerulea*), Snowy Egret (*Egretta thula*), White Ibis (*Eudocimus albus*), and Brown Pelican (*Pelecanus occidentalis*). These species are protected by the limited access to the wetland areas of the site. The Town has no plans for any development in this area, which will protect the species known to habitate in that area.

If you would like further information regarding natural resources or endangered species please contact the Florida Natural Areas Inventory (FNAI).

Florida Natural Areas Inventory
1018 Thomasville Road, Suite 200-C
Tallahassee, Florida 32303
(850) 224-8207

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".

The western portion of the property is Salt Marsh and Mangrove Swamp with one small creek and a mosquito ditch running through it. The Halifax River lies directly west of the property. Spruce Creek, an Outstanding Florida Waterway, is within one mile of 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 NO

If YES, Please identify and provide locations of these resources on a map.

Appendix

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

YES NO If YES, please describe:

As listed in the baseline environmental survey of this site and the surrounding Ponce Preserve, fish and marine species in the marsh area of the site includes: Blue Crab (*Callinectes sapidus*), Bluefish (*Pomatomus saltatrix*), Brown Shrimp (*Penaeus aztecus*), Clam (*Mercenaris campechiensis*), Common Snook (*Centropomus undecimalis*), Coquina (*Donax variabilis*), Dolphin (*Tursiops truncatus*), Eastern Oyster (*Crassostrea virginica*), Fiddler Crab (*Uca pugilator*), Florida Stone Crab (*Menippe adina*), Gulf Flounder (*Paralichthys albigutta*), Horseshoe Crab (*Limulus polyphemus*), Lady Fish (*Elops saurus*), Mangrove Crab (*Scylla serrata*), Mosquito Fish (*Gambusia affinis*), Mullet (*Mugil caphalus*), Pinfish

C. 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 property was acquired to protect and preserve the Green Mound. The site will be used as a passive park in conjunction with the Town-owned Ponce Preserve, which surrounds this site and was acquired through Florida Communities Trust grants in 1994 and 2004. The primary authority is Chapter 267, Florida Statutes (Florida's Historical Resources Act), which among other things declares Florida's historic preservation policy [267.061(1)(a)], and establishes the historic preservation responsibilities of the Division of Historical Resources [267.061(3)].

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

The desired outcome is to maintain public access to the vicinity of historic Green Mound while protecting it from being damaged or destroyed by excessive foot traffic. The Town intends to consider and research potential grants for additional ADA access to the site after conferring with the State Department of Historic Resources.

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.

Single Multiple use/s is/are:

Historic preservation/education

25. Were multiple uses considered but not adopted? YES NO

If YES, please describe why:

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

There is little potential use of private land managers to restore or manage this site, as the Town has dedicated staff members to oversee any management and maintenance needs of this property.

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

There is little potential for this property to generate revenues to enhance its management given its small size and location adjacent to the Town-owned Ponce Preserve, which is open to the public at no charge.

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

The Town intends to maintain the current and recent past use of this property as part of the passive park surrounding this land. There are no known unauthorized uses on this property.

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

30. Should any parcels of land within or adjacent to the property be purchased because they are essential to management of the property? YES _____ NO

If YES, please attach a map of this area. Appendix

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

YES _____ NO If YES, please attach a map of this area.

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

The current use a a passive park provides access to the site which is consistent with the purpose for which this property was acquired.

D. 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 Town of Ponce Inlet is the sole agency managing this property.

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 are currently no problems on this property with conservation of soil and water resources. Nature trails on the property are resurfaced annually with natural materials on an as-needed basis to prevent problems with erosion. Trails in the upland portion are only accessible by foot traffic and not subject to contamination. The waters in the Salt Marsh are accessible only during high tide and only by non-motorized watercraft, and are therefore not subject to contamination.

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

There are no adjacent land uses that conflict or will conflict with the use of this property.

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

The Town's Public Works staff works to control invasive, non-native plants by removing them when noticed during their daily trips through the site.

37. Was there any public or local government involvement / participation in the development of this plan? YES NO If YES, please describe:

The leasing of this property was discussed by both the Parks, Recreation and Tree Advisory Board and the Planning Commission during public meetings shortly after the acquisition of the last parcel of the surrounding Ponce Preserve.

38. If an arthropod control plan has been established for this property, please include it as an attachment. (Attachment N/A) If one does not exist, provide a statement as to what arrangement exists between the local mosquito control district and the managing agency.

There is no established arthropod control plan for this property. The property is within the Volusia County Mosquito District. The District has an Integrated Pest Management Program and uses a rotating schedule of both ground and air spraying. Requests can also be submitted to the district as the need is determined.

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.

| Core Objectives | Measure | Timeframe 2 yrs = Short Term 10 yrs = Long Term | Expenses and Manpower Budget |
|---|---|---|--|
| 1 | Habitat restoration and improvement (Description): | | |
| | N/A | | |
| Prescribe burn _____ acres per year | _____ acres burned per year | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Maintain _____ acres per year within target fire return interval. | _____ acres within fire return interval target | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Conduct habitat/natural community improvement on _____ acres | _____ acres with restoration underway | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Conduct habitat/natural community restoration activities on _____ acres. | _____ acres restored | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Conduct timber harvest for the purposes of habitat restoration on _____ acres | _____ acres harvested | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |

| | | | |
|---|--|---|--|
| 2 Public Access and recreational opportunities (Description): | | | |
| The property is open from dawn to dusk every day. Several programs are offered each year on the Green Mound and its surrounding environment: bird watch walks by the Halifax River Audubon Society; Mangrove program by the Volusia/Flagler Sierra Club; a home-school class about the Timucuan co-taught with Lyonia Preserve; Christmas Bird Count by Audubon; a natural areas tour by the local chapter of Florida Native Plant Society; a class on Green Mound and Timucuan; and ECHO Ranger programs on the natives. Ponce | | | |
| Maintain public access and recreational opportunities to allow for a recreational carrying capacity of _____ visitors per day | _____ visitor opportunities/day | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Develop additional public access and recreational opportunities to allow for a carrying capacity of _____ visitors/day | _____ visitor opportunities/day | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Continue to provide ¹⁰ _____ interpretive/education programs | ¹⁰ _____ interpretive/education programs | Within 2 yrs <u>x</u> Within 10 yrs ____ | Expense \$ _____ Personnel \$ <u>1,500.00</u> |
| Develop <u>4</u> new interpretive/education programs | <u>4</u> _____ interpretive/education programs | Within 2 yrs <u>x</u> Within 10 yrs ____ | Expense \$ _____ Personnel \$ <u>600.00</u> |
| 3 Hydrological preservation and restoration (Description): | | | |
| N/A | | | |
| Conduct or obtain a site assessment/study to identify potential hydrology restoration needs | Assessment conducted? Y__ N__ | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Restore natural hydrologic condition and functions to _____ acres on site | _____ acres for which hydrologic restoration is underway (planning, grant writing, earth moving, etc.) | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |

| | | | | |
|---|---|---|---|--|
| | | _____ acres for which natural hydrologic conditions and function are restored | Within 2 yrs _____ Within 10 yrs _____ | Expense \$ _____ Personnel \$ _____ |
| 4 | <u>Sustainable forest management (Description):</u> N/A | | | |
| | Prepare & implement a silviculture management plan including reforestation, harvesting, prescribed burning, restoration, and timber stand improvement activities and goals. | Silviculture management plan complete? Y ___ N ___ _____ acres treated | Within 2 yrs _____ Within 10 yrs _____ | Expense \$ _____ Personnel \$ _____ |
| | Develop and implement a process for conducting stand descriptions and forest inventory including a GIS database containing forest stands, roads & other attributes (including but not limited to: threatened & endangered species, archeological resources, exotic species locations, historical areas) | Complete GIS database and re-inventory all attributes every 3-5 years or as needed. | Within 2 yrs _____ Within 10 yrs _____ | Expense \$ _____ Personnel \$ _____ |
| | | _____ acres of forest inventoried annually | Within 2 yrs _____ Within 10 yrs _____ | Expense \$ _____ Personnel \$ _____ |
| 5 | <u>Exotic and invasive species maintenance and control (Description):</u> Annual control of invasive Brazilian Peppers is not currently scheduled, as the removal of these invasives is done routinely when identified on the site. No separate control measures are needed, as invasive species have been found to be few and far between on this particular property. | | | |

| | | | |
|--|--|---|--|
| Annually treat _____ acres of EPPC Category I and Category II invasive exotic plant species. | _____ acres treated | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Implement control measures on _____ exotic and nuisance animal species | _____ nuisance and exotic species for which control measures are implemented | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| 6 Capital facilities and infrastructure | | | |
| Description- | | | |
| There are no capital facilities nor infrastructure currently on the site. The Town intends to consider and research potential grants for additional ADA access to the site. | | | |
| To maintain _____ facilities, _____ miles of roads, and _____ miles of trails existing on site (as applicable) | _____ facilities, _____ miles roads, _____ miles trails maintained | Within 2 yrs <u>x</u> Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| To construct _____ facilities, _____ miles of roads, and _____ miles of trails (as applicable) | _____ facilities, _____ miles roads, _____ miles trails constructed | Within 2 yrs ____ Within 10 yrs <u>x</u> | Expense \$ _____ Personnel \$ _____ |
| To improve or repair _____ facilities, _____ miles of roads, and _____ miles of trails existing on site (as applicable) | _____ facilities, _____ miles roads, _____ miles trails improved or repaired | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| 7 Cultural and historical resources | | | |
| Description- | | | |
| The cultural resource on this site is included in the Master Site File and remains in good condition. There is no recurring expense and any updates would be included in the cost of the Museum Educator's salary. | | | |
| Ensure all known sites are recorded in the FL Division of Historical Resources Master Site file | _____ of recorded sites | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |
| Monitor _____ recorded sites and send updates to DHR Master Site file as needed | _____ of sites monitored | Within 2 yrs ____ Within 10 yrs ____ | Expense \$ _____ Personnel \$ _____ |

| | | | | |
|---|---|--|---------------------------------------|--|
| | Bring ___ of ___ recorded sites/cultural resources into good condition | ___ of sites in good condition | Within 2 yrs ___ Within 10 yrs ___ | Expense \$ _____ Personnel \$ _____ |
| 8 | Impaired species habitat maintenance, enhancement, restoration, or population restoration. | | | |
| | Description- | | | |
| | The majority of the property is maintained in its natural state and remains in good condition. Therefore, other than maintenance of dead trees and/or vegetation, no enhancement, restoration or population restoration is anticipated. A baseline of imperiled species is included in the Environmental Survey done on this and the surround Ponce Preserve. | | | |
| | Develop baseline imperiled species occurrence inventory list | Baseline imperiled species occurrence inventory list complete Y ___ x ___ N ___ | Within 2 yrs ___ Within 10 yrs ___ | Expense \$ _____ Personnel \$ _____ |
| | Develop monitoring protocols for ___ selected imperiled species | ___ imperiled species for which monitoring protocols are developed | Within 2 yrs ___ Within 10 yrs ___ | Expense \$ _____ Personnel \$ _____ |
| | Implement monitoring protocols for ___ imperiled species | ___ species for which monitoring is ongoing | Within 2 yrs ___ Within 10 yrs ___ | Expense \$ _____ Personnel \$ _____ |
| | [If applicable, provide additional measurable objective(s) for new or ongoing species-specific management activities for each of the priority species such as population augmentation, translocations, nest box projects, etc.] | Examples: Project-specific quantity, ___ of nest boxes, # of individuals introduced or trans-located, etc. | Within 2 yrs ___ Within 10 yrs ___ | Expense \$ _____ Personnel \$ _____ |

40. Costs

| Activity | Yearly Estimated Cost | | |
|----------------------------|-----------------------|-----------------------|---|
| | Priority Cost | Other Management Cost | Cost Effective Methods |
| <u>Resource Management</u> | | | All management costs are included in and funded by the Town's General Fund. |
| <u>Administration</u> | | | All Administrative costs are included in staff salaries. |
| <u>Support</u> | N/A | | |

| | | | |
|------------------------------------|---------------------------------|--|--|
| | | | |
| <u>Capital Improvements</u> | \$100,000 (proposed for future) | | The Town will pursue grants where available. |
| <u>Recreation Visitor Services</u> | N/A | | |
| <u>Law Enforcement Activities</u> | N/A | | The Town's Police Department patrols this property as part of its daily routine. |

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 NO

42. Please provide the following contact information below:

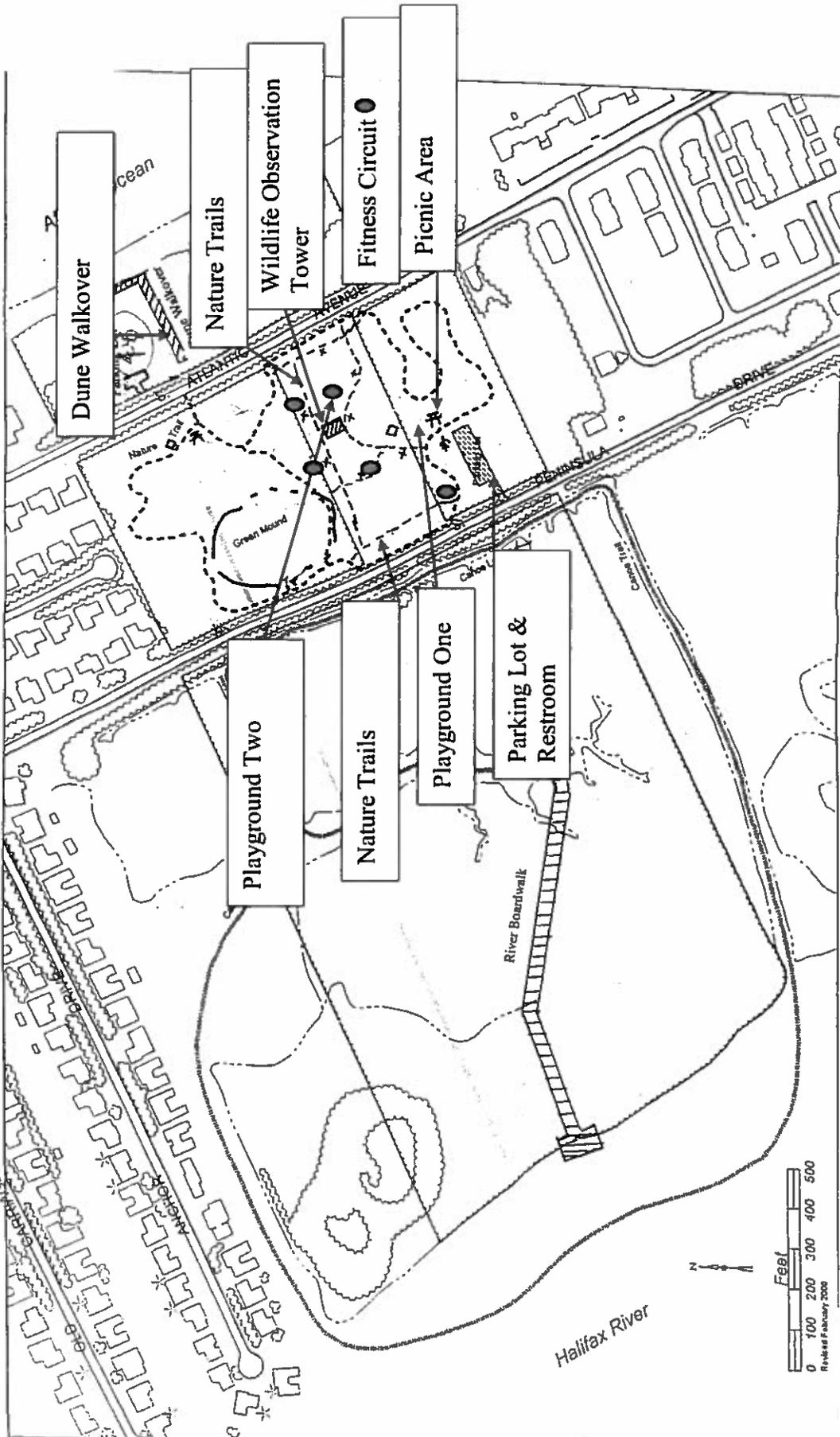
| | |
|------------------|--|
| Name: | Jeaneen Witt, Town Manager |
| Managing Agency: | Town of Ponce Inlet |
| Address: | 4300 S. Atlantic Avenue Ponce Inlet, FL 32127 |
| Phone: | 386-236-2150 |
| Email Address: | jwitt@ponce-inlet.org |

Date Management Plan Prepared: 9/9/2016

Please send this completed form to:

avis.lockett@dep.state.fl.us. Or to:

Division of State Lands
D.E.P. M.S. 140
3900 Commonwealth Blvd.
Tallahassee Fl. 32399-3000
850-245-4562



Appendix 1

Appendix 2

Conservation Areas with 10 Miles of Property



☆ Project Site

1 Doris Leeper Spruce Creek Preserve (Volusia County)

2 South Tomoka Wildlife Area (State of Florida)

3 Long Leaf Pine Preserve (Volusia County)

Appendix 3

Legal Description

A portion of the northerly 1125 feet of land lying south of a line drawn parallel and distant 3125 feet measured southerly along the Atlantic Ocean beach from the south line of Curlew Street, as shown by Plat 2, Wilbur-by-the-Sea, said land being bounded on the east by the Atlantic Ocean and on the west by the Halifax River, being a portion of Lots 1 and 2, Section 13, Township 16 South, Range 33 East, Volusia County, Florida.

**VOLUSIA COUNTY, FLORIDA
MANAGEMENT PLAN
(Lease Number 4416)**

I. General Information

Textual information in the management plan is supported by maps and/or aerial photographs and copies of legal documents, where appropriate.

A. Common name of property:

Green Mound Archaeological Site (8Vo90)

B. Brief site history (part ownership and uses)

The site was subjected to shell mining from 1922 to 1929, with one-third of the Mound mined at that time. It was again opened for mining between 1946 and 1948 before being purchased by a private group interested in preserving the site. On October 1, 1952, the property was transferred to the State of Florida in order to preserve the Mound as a historical site.

C. General Location (including map).

The Green Mound (8Vo90) is located in the Town of Ponce Inlet, Volusia County, approximately ten miles south of the City of Daytona Beach. This 17.14 acre site is situated between the Atlantic Ocean and the Halifax River, approximately four miles south of Dunlawton Avenue (County Road 421).

D. Project boundaries and existing man-made structures. Refer reader to a boundary map which shows project boundaries, existing structures or improvements, and easements, adjacent land uses (within 500 feet, access roads, regulatory lines, C.C.C.L. and other setback lines).

The property boundaries for the Green Mound Archaeological Site are depicted on Appendix I. South Peninsula Drive is a paved road that runs through the property, separating the uplands and wetlands areas. There is an old chain link fence along the north, east and south boundaries of the property.

The land adjacent to the site was purchased by the Town of Ponce Inlet through a Florida Communities Trust grant, and will be used as a passive park. There are no structures or easements on the property, nor any other setback lines that would affect the proposed use of the property.

E. Legal description of property (include the submerged and upland acreage).

A portion of the northerly 1125 feet of land lying south of a line drawn parallel and distant 3125 feet measured southerly along the Atlantic Ocean beach from the south line of Curlew Street, as shown by Plat 2, Wilbur-by-the-Sea, said land being bounded on the east by the Atlantic Ocean and on the west by the Halifax River, being a portion of Lots 1 and 2, Section 13, Township 16 South, Range 33 East, Volusia County, Florida.

Being more particularly described as follows:

The southerly 400 feet of the northerly 570 feet of the above described property lying westerly of a line parallel to and distant 200 feet westerly from the westerly line of Ocean Shore Boulevard, an 80 foot street as now laid out.

F. Length of Waterfront (saltwater and freshwater).

Approximately 396 linear feet of the property borders the Halifax River.

G. Access points to the property.

Access to the property is currently available from South Peninsula Drive. Access will also be provided through the Ponce Preserve from Atlantic Avenue to the east and from Peninsula Drive to the south of the Mound site.

H. Development constraints which would influence management options (e.g., property size, shape or location, susceptibility to flooding, deed restrictions).

There are no development constraints that would constrain the intended use of the property as an historic preservation park. The property size is manageable and contains the key site area needed for site function interpretation. The tract is located at the center of a publicly owned passive park, in a well-drained setting not susceptible to flooding. There are no deed restrictions that would affect the intended use of the property as an historic preservation park.

I. Geographic significance (importance of site's location relative to nearby major population centers; transportation routes; state and nationally designated recreation trails and commercial recreation areas. Distance from local, state and federal parks and conservation areas should be indicated.)

The site is located in the Town of Ponce Inlet, approximately ten miles south of the City of Daytona Beach, and eighty miles northeast of the City of Orlando. It sits at the center of the town-owned and managed Ponce Preserve, a passive park bordered by the Atlantic Ocean on the east and the Halifax River on the west.

Volusia County's bus transportation system, Votran, provides access to the property along Atlantic Avenue.

There are no state or federally designated trails within five miles. However, Volusia County's "World's Most Famous Beach" multi-use trail runs along the eastern border of the Ponce Preserve site. Additionally, the Town's bike/ped trails link to the designated County trails which run adjacent to the site on both the east and west.

The Ponce deLeon Lighthouse, which is on the National Register of Historic Places, is approximately three miles south of the Green Mound, as is the State-owned Lighthouse Point Park.

- J. Degree of title interest held by the Board of Trustees of the Internal Improvement Trust Fund, including outstanding title reservations, encumbrances, leases and restrictive covenants (refer reader to appendices for copies of appropriate documents, e.g. lease, sublease easements and deeds.)

The property is owned by the State of Florida, and leased to the Town of Ponce Inlet (Appendix II).

- K. Land acquisition program (LWCF, CARL, SOC, EEL), if any under which the property was acquired, including a statement of the purpose for which the property was acquired.

None

- L. Proposed single use or multiple use management for the property, including other managing agencies, and the statutory authority for such use. (See definitions of "single" and "Multiple use" in Chapter 18-4, FAC).

The property is designated for single use (historic preservation park) and managed by the Town of Ponce Inlet. The statutory authority for such use is contained in Section 187.201(18) and (25), Florida Statutes and Section 267.061, Florida Statutes.

- M. Statement as to whether property is within or adjacent to an aquatic preserve or designated area of critical state concern or an area under study for such designation.

The property is not within, adjacent to, or otherwise near any aquatic preserve or designated area of critical state concern, or any area under study for such consideration.

II. Management Authorities and Constraints:

- A. State and local authorities, e.g., site specific statutory authority, and municipal or county ordinances. Include appropriate documents in appendix to plan.

The primary authority is Chapter 267, Florida Statutes (Florida's Historical Resources Act), which among other things declares Florida's historic preservation policy [267.061(1)(a)], and establishes the historic preservation responsibilities of the Division of Historical Resources [267.061(3)]. (Appendix III)

- B. Legislative and executive constraints which affect development and management of the site, e.g. resolutions (include the documents in appendix to plan).

Only Chapter 267, Florida Statutes (Appendix III), which is administered by the Division of Historical Resources in coordination with the Town of Ponce Inlet, the lessee for the property. The Division of Historical Resources prepared "Management Procedures for Archaeological and Historical Sites and Properties on State-owned or -controlled Lands" (see Appendix IV) will provide guidance for agency compliance with Chapter 267, Florida Statutes. The Division of Historical

Resources, Bureau of Historic Preservation compliance review staff has reviewed and approved the proposed text in this management plan (see Appendix V). Budget allocations affect the development and management of any publicly managed property.

III. Resource Base:

A. Natural Resources

1. Topography (describe relief, land forms, etc.)

The Green Mound Archaeological Site is situated in a Maritime Hammock habitat, with Coastal Strand habitat running north/south along the eastern border. The western portion is wetlands adjacent to the Halifax River. The elevation runs from sea level along the wetlands to approximately 30 feet above sea level at the top of the Mound itself.

2. Soil types (use USDA maps when available) identify major characteristics

The soil in the coastal strand and eastern portion of the maritime hammock lies is Palm-Beach-Urbanland-Paola complex, 0 to 8 percent slope soils (Appendix VI). This soil series is composed of Palm Beach and Paola soils. These soils are excessively well drained with a water table typically below 72 inches and usually below 120 inches (USDA 1980).

The majority of the maritime hammock is Paola fine sand, 0 to 8 percent (Appendix VI). This soil is excessively drained on high, broad sandhills. The soils are light gray fine sand and black organic matter about six inches thick. The subsoil is light gray and white fine sand to 26 inches, and yellow fine sand beneath. The water table is typically below 72 inches (USDA 1980).

3. Water resources (including state water quality classification of freshwater and saltwater bodies and wells, note overall quality of specific resources and their sustainability for recreational use.) Indicate designation if any, Outstanding Florida Waters.

The Halifax River lies directly west of the property, and Spruce Creek, an Outstanding Florida Waterway, is within one mile of the property.

4. Agricultural/timber and mineral resource rights (status of legal interest, e.g. who has title to such rights)

The State of Florida owns all resources on the site.

5. Unique natural features, such as: coral reefs; first, second or third magnitude springs; rapids; caverns; large sinkholes; and, rivers and streams, especially state or nationally designated wild and scenic rivers.

The site is located between the Atlantic Ocean and the Halifax River, and includes 14.47 acres of pristine salt marsh.

6. Plant communities (identify main communities and their dominant species, include map).

*The upland portion of the property is a Maritime Hammock habitat. The canopy of the Hammock is dominated by sand live oak (*Quercus geminata*) and myrtle oak (*Quercus myrtifolia*). The dominant vegetation in the lower stratum of this system include yaupon holly (*Ilex vomitoria*), deerberry (*Vaccinium stamineum*), marlberry (*Ardisia escallonioides*), and saw palmetto (*Serenoa repens*).*

*The vegetation in the Tidal Marsh includes smooth cordgrass (*Spartina alterniflora*), saltgrass (*Distichlis spicata*) and black mangrove (*Avicennia germinans*).*

7. Fish and wildlife species and their habitat

*As listed in the recent baseline environmental survey of this site and the surrounding Ponce Preserve by Hartman & Associates, Inc., fish and marine species in the marsh area of the site includes: Blue Crab (*Callinectes sapidus*), Bluefish (*Pomatomus saltatrix*), Brown Shrimp (*Penaeus aztecus*), Clam (*Mercenaris campechiensis*), Common Snook (*Centropomus undecimalis*), Coquina (*Donax variabilis*), Dolphin (*Tursiops truncatus*), Eastern Oyster (*Crassostrea virginica*), Fiddler Crab (*Uca pugilator*), Florida Stone Crab (*Menippe adina*), Gulf Flounder (*Paralichthys albigutta*), Horseshoe Crab (*Limulus polyphemus*), Lady Fish (*Elops saurus*), Mangrove Crab (*Scylla serrata*), Mosquito Fish (*Gambusia affinis*), Mullet (*Mugil caphalus*), Pinfish (*Lagodon rhomboids*), Pink Shrimp (*Penaeus duorarum*), Sheepshead (*Archosargus probatocephalus*), Spotted Seatrout (*Cynoscion nebulosus*), Striped Mullet (*Mugil cephalus*), White Shrimp (*Penaeus setiferus*).*

*Birds listed include: American oystercatcher (*Haematopus palliatus*), Anhinga (*Anhinga anhinga*), Blue jay (*Cyanocitta cristata*), Boat-Tailed Grackle (*Quiscalus major*), Brown Pelican (*Pelecanus occidentalis*), Eastern Bluebird (*Sialia sialis*), Fish Crow (*Corvus ossifragus*), Great Blue Heron (*Ardea herodias*), Herring Gull (*Larus argentatus*), Killdeer (*Charadrius vociferus*), King Fisher (*Ceryle alcyon*), King Rail (*Rallus elegans*), Laughing Gull (*Larus atricilla*), Least Bittern (*Ixobrychus exilis*), Limpkin (*Aramus guarauna*), Little Blue Heron (*Egretta caerulea*), Loon (*Gavia immer*), Mocking Bird (*Mimus polyglottos*), Northern Cardinal (*Cardinalis cardinalis*), Osprey (*Pandion haliaetus*), Red-Winged Blackbird (*Agelaius phoeniceus*), Snowy Egret (*Egretta thula*), Turkey Vulture (*Cathartes aura*), White Ibis (*Eudocimus albus*), and Wood Stork (*Mycteria Americana*).*

*Additionally, the Maritime Hammock on this site and surrounding preserve provide habitat for the gopher tortoise (*Gopherus polyphemus*), diamondback rattlesnake (*Crotalus adamanteus*) and raccoon (*Procyon**

litor). Other wildlife listed are: carpenter ants (*Camponotus spp.*), dragonfly (*Anax sp.*), and paper wasp (*Polistes sp.*).

8. All state and federally designated (endangered or threatened species and species of special concern) plant and animal species and their habitat.

*The following are designated by the State of Florida as species of special concern: gopher tortoise (*Gopherus polyphemus*), Little Blue Heron (*Egretta caerulea*), Snowy Egret (*Egretta thula*), White Ibis (*Eudocimus albus*), Common Snook (*Centropomus undecimalis*), and Brown Pelican (*Pelecanus occidentalis*).*

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*The Wood Stork (*Mycteria Americana*) is designated as endangered on both the Florida and United States Fish & Wildlife Services lists.*

9. Resources on the property that are listed in the Florida Natural Areas Inventory (FNAI) (natural features, plant and wildlife species). [Provide FNAI with a property description and boundary maps and aerial photographs along with a request for FNAI to identify plant and wildlife species and natural features known or expected to be present in the management tract. Include FNAI response as appendix to plan.]

The Maritime Hammock is ranked "S3" in the FNAI. This is defined as "Rare or uncommon in state (on the order of 21 to 100 occurrences)."

*Twinberry (*Myrcianthes fragrans*), a common understory tree in the Maritime Hammock, is listed as C2 by the U.S. Fish and Wildlife Service (USFWS), meaning it is a candidate for federal listing, but further information is needed. Twinberry is a tropical species, typically growing in hammocks of South Florida and the West Indies. It reaches its northern limits in Volusia County.*

A request has been made for the FNAI to identify plant and wildlife species on the site. (Appendix VII)

10. Beaches and dunes, virgin timber stands, scenic vistas and environmentally sensitive areas such as swamps, marshes or other wetlands (describe them if you have them, otherwise say there are none on the site).

The property includes approximately 13.7 acres of wetlands. A recently environmental survey of this property and the adjacent town-owned property by Hartman & Associates, Inc. shows that the Marsh/Tidal creek system "provides high ecological function and is in excellent health."

11. Outstanding native landscapes containing relatively unaltered flora, fauna, and geological conditions.

With the exception of the mining of the Mound in the early 1900's, the entire property remains in a relatively unaltered condition. The Simpson's stopper, which is designated as threatened on Florida's Endangered Species,

Threatened Species and Species of Special Concern List, grows in abundance on the Green Mound and surrounding property.

B. Cultural Resources

1. Known or identified archaeological sites or features, historic structures or areas, landscapes, etc.

The property contains the Green Mound Archaeological Site, "the highest point of land for several miles" (Hawks 1871:124), which was featured on navigation charts and area maps (Griffin 1948). Archaeological investigations indicate that the Mound was constructed and used during the St. Johns I and II periods.

2. Proposed action planned to locate, identify and record presently unidentified/unrecorded cultural resources.

This site has undergone extensive study in the past. It is not believed to contain any unidentified or unrecorded cultural resource.

IV. Management Activities:

Information in this section should be supplemented by a final site plan. (This should show the number and type of proposed improvements in a finalized location on site.)

- A. A description of agency plans to locate, identify, protect, preserve, or otherwise use fragile, nonrenewable natural and cultural resources, including measures to provide for the conservation or soil and water resources and for the control and prevention of soil erosion.

At the Town of Ponce Inlet's request, a representative of the Department of State, Division of Historical Resources, Bureau of Archaeological Research has visited the site. In accordance with the Bureau's recommendations, the Town will develop a plan for the site which will include facilities to allow visitors to access the Mound while protecting its integrity and preventing further erosion. Interpretive programs will also be developed to educate visitors about the history of the site.

- B. Detailed description of existing facilities, and proposed uses. (Indicate approximate location on site plan.)

South Peninsula Drive is a paved residential road that runs through the property, dividing the Maritime Hammock and the Tidal Marsh, providing access to the property. There is a chain link fence along the north, east and south perimeters of the property. The fence has not been maintained and presents a liability in its current condition, and the Town believes it should be removed. There are no other structures or facilities on the property.

The Town proposes to develop a series of nature trails on this property which will link with the trails on the adjacent Ponce Preserve property. As previously

mentioned, if allowed by the State, a boardwalk will be constructed to allow access to the Green Mound. (Appendix VIII).

- C. An analysis of multiple-use potential of the parcel, including the potential of the parcel to generate revenues to enhance the management of the parcel. (This is required for properties larger than 1000 acres and optional for smaller tracts.)

The site is at the center of a town-owned property acquired through the Florida Communities Trust. It is not being considered as a revenue generating property, but rather as a historic preservation site and passive park.

- D. Alternative activities considered but not adopted as acceptable used for the property. Explain reasons for rejecting these activities. (If there have been no uses which were once proposed for the site but later scrapped, then say so.)

The only use this site has been considered for is historic preservation.

V. Management Responsibilities, Needs and Problems, Objectives, Policies and Procedures:

A. Responsibilities:

1. A description of the management responsibilities and how such responsibilities will be performed. (This should include a priority schedule for conducting management activities based on the purpose for which the property was acquired. It should also include cost estimates for conducting both priority and non-priority management activities that would enhance the property's natural and cultural resource and/or public recreation value, including cost effective methods for accomplishing those activities.)

There is presently an old chain-link fence along the north, east and south property lines of the property. The fence has not been maintained over the years, and is in very poor condition overall. To eliminate any hazards and to ensure the safety of visitors, the Town's first priority will be to remove the fence. It is not anticipated that the cost will exceed \$1,500.00.

There are two well-worn paths up the face of the Mound on the west and south side. The Town's next priority will be to develop the best method of stabilization, which will be done with assistance of the Division of Historical Resources. The cost involved in the stabilization process will depend on the method chosen.

A boardwalk or ramp will be constructed around the Mound to allow access while protecting and interpreting the site, again with the assistance of the Division of Historical Resources. The cost of the boardwalk, including the engineering, has been estimated at \$45,000, although the exact cost will not be determined until the best path is determined

An interpretive program on the historical and cultural significance of the site will be developed with the assistance of the Division of Historical Resources. Town staff will also be developing interpretive programs on the site's native habitats with the assistance of the Native Plant Society, Halifax River Audubon Society

and the Volusia-Flagler Group of the Sierra Club. Grants will be applied for to offset the costs of developing these programs.

The Town's volunteer Parks, Recreation and Tree Advisory Board has already begun the removal of exotic vegetation on the property. This work will be ongoing, as will the marking and clearing of nature trails by this Board and other volunteer groups, including the Sierra Club and the Friends of Ponce Preserve. There will be no cost associated with this work, as it will be done by volunteers.

Finally, the Town intends to nominate the Green Mound to the National Register of Historic Places. This will also be done by a volunteer member of the Parks, Recreation and Tree Advisory Board and town staff.

2. A detailed assessment of the impact of planned uses on the renewable and non-renewable resources of the property and a detailed description of the specific actions that will be taken to protect, enhance and conserve these resources and to mitigate damage caused by such uses.

All of the management actions planned for the property avoid or minimize ground disturbance. Any ground disturbing activities that must occur as part of the management of the property will be undertaken under the direction of a professional archaeologist, as recommended by the Florida Department of State, Division of Historical Resources, Bureau of Archaeological Research. Among the planned activities is the construction of a boardwalk or stairs to allow access to the Mound while protecting it from erosion.

3. An analysis of the potential use of private land managers to facilitate the restoration or management of the lands.

It is not anticipated that this site will be managed by private land managers. The surrounding Ponce Preserve will be managed by the Town of Ponce Inlet, and it is the town's intention to manage this site in concert with the Preserve.

B. Needs and Problems:

1. Discussion of past uses, including any unauthorized on-site uses of the property.

The Green Mound was mined during the 1920s and again in the 1940s. The mining was stopped when the property was acquired by a group of local citizens who turned the property over to the State for preservation. The land has remained in its current state since that time.

2. Carrying capacities for specific planned uses of the property.

The property will be used for historic preservation, education and as an extension of the adjacent passive park. While the entire site can hold a greater number of people at one time, it is anticipated that the largest group

on the Mound at any given time would be school children on field trips in groups ranging between thirty and forty.

Additionally, parking for the site, including the adjacent Ponce Preserve, will be limited to approximately twenty-five (25) spaces, thereby limiting the number of people on the entire site at any given time.

3. Determination as to whether any portion of the property should be declared surplus. Identify area on map.

None of the 17.14 acre site should be declared as surplus.

4. Identification of privately owned parcels within or adjacent to the park that should be acquired for their value in managing the property. Identify area on map.

As previously mentioned, the site is at the center of a passive park owned by the Town of Ponce Inlet. Therefore, no further acquisition will be necessary for the management of this property.

5. Identification of adjacent land used that conflict with the planned use of the property.

There are no conflicting adjacent land uses.

6. Other existing or potential threats to the property's future operation.

None are known or anticipated.

C. Objectives, Policies and Procedures:

Visitor services and public access

- a. Concessions and support services such as parking and rest rooms.

Parking to visit the site is presently a small area along the side of Peninsula Drive. Both parking and restroom facilities will be available on the adjacent Ponce Preserve site once that site is developed. No concessions are planned for the property.

- b. Camping (tent and/or trailer/RV)

There is no camping permitted on the property, nor is any planned.

- c. Fishing

Fishing presently occurs in the mosquito control ditches in the marsh. A boardwalk is planned in the adjacent Ponce Preserve that will allow access to the Halifax River for fishing.

- d. Boating (power and/or non-power)

The mosquito control ditches in the marsh area allow access only to non-power boats such as canoes or kayaks.

e. Interpretation of natural and/or cultural phenomena

The Green Mound itself has a rich history dating back to the St. Johns I period (500 B.C. to A.D. 800), and was occupied during the St. Johns II period (A.D. 800-1565). Interpretive programs will be developed with the help of the Florida Department of State, Division of Historical Resources, Bureau of Archaeological Research.

This site is home to a Maritime hammock community, which is rapidly vanishing in Florida. Interpretive signs will be developed regarding the importance of protecting this rare type of ecosystem.

f. Public access (hours of availability, measures to control after-hours access)

The site will be open to the public during daylight hours. However, there are no barriers restricting access at other times. At the present time vandalism is not a problem. Should it become one, the town will take measures to protect the site after-hours.

1. Resource restoration, preservation and management (This section of the plan should present a detailed assessment of potential adverse impacts of planned uses of the property on local resources.) Discuss remedial actions or mitigation proposed for the following:

a. Unique or sensitive resource areas (natural and cultural)

The planned use will have no adverse impact on the Green Mound Archaeological site. The property was acquired with the intention of preserving and interpreting the site.

b. Special use areas such as preserves, wilderness areas or archaeological sites

The planned use will have no adverse impact on the Green Mound Archaeological site. The property was acquired with the intention of preserving and interpreting the site.

c. Fish and wildlife

The planned use will have no adverse impact on the fish and wildlife present on the site. There are no known communities of feral animals on the property.

d. Vegetation

The planned use should have no adverse impact on the vegetation on the site. If any native vegetation should be removed to accommodate the

constructed access to the Mound, it will be replaced on-site with like vegetation.

There is no exotic or invasive vegetation known to exist on the site. However, should any species named on the Exotic Pest Council's List of Invasive Species be found on the property, they will be removed.

The location of the site on a barrier island and in the center of a populated area makes a controlled burn impractical.

e. Water resources (subject matter may include control or exotic species, restoration or endangered, threatened and non-designated native plants and animals, control burning, reforestation, draw downs of water bodies, controlled fluctuation of water levels, restocking, and control of public access).

The planned use will have no adverse impact on the water resources. There are no known exotic or invasive known to exist on the site, however, should any species named on the Exotic Pest Council's List of Invasive Species be found on the property, they will be removed.

2. Site and Visitor Protection:

a. Fencing or barricades

The fence currently running along the north, east and south property lines will be removed due to its unsafe condition. There will be no restrictive fencing installed to replace it.

b. On-site residence of staff

There will be no on-site staff on the site.

c. Staff or local law enforcement patrols

The Town of Ponce Inlet Police Department will make regular perimeter patrols of the area.

d. Other

N/A

3. Maintenance Responsibility (daily and long-term):

a. Primary agency

The Town of Ponce Inlet is the primary management agency for the property.

b. Other agencies

No other agencies are formally involved in the management of the property. The town may be assisted by citizen volunteers such as members of the Parks, Recreation and Tree Advisory Board and the Friends of Ponce Preserve in certain management responsibilities such as exotic removal and landscape maintenance.

VI Public Involvement in Plan Development:

Briefly describe the means by which public input in the planning of property in question was accomplished. Include a summary of comments and concerns expressed.

E. Advisory Board

The Town's Parks, Recreation and Tree Advisory Board has included discussion of this property in its regular meetings in conjunction with the planning for the adjacent Ponce Preserve property.

F. Public meetings

Meetings of the Parks, Recreation and Tree Advisory Board are open to the public.

G. Public surveys

None

H. Other

None

VII Indicate compliance with State and Local Comprehensive Plan:

- A. Provide documentation of compliance with the Local Government Comprehensive Plan has been approved by the Florida Department of Community Affairs. (Attach as appendix copies of local government correspondence indicating compliance.)

This plan is in compliance with the Town of Ponce Inlet's Comprehensive Plan, particularly with Chapter II, the Future Land Use Element (Appendix IX), which states that consideration of the historic and archaeological resources is "important in land use planning to ensure that they will be preserved." The plan also complies with Chapter VI, the Coastal Management/Conservation Element (Appendix X), specifically Goal I, which calls for the town to "Conserve, protect and restore coastal natural resources in order to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics."

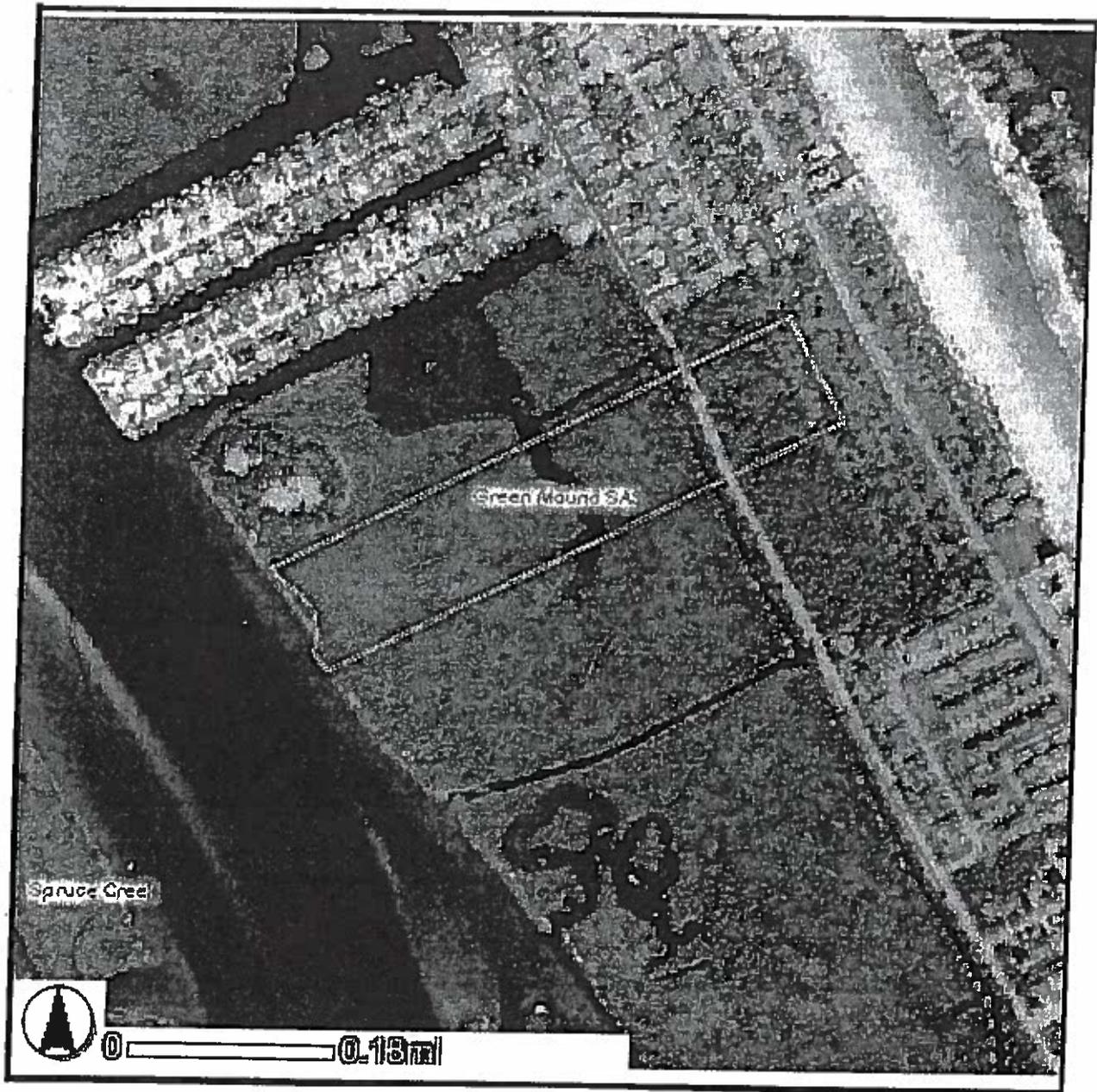
- B. Compliance with State Comprehensive Plan cited in Chapter 187, Florida Statutes.

This plan is in compliance with the State Comprehensive Plan, particularly with Section 187.201(10) (Appendix XI) pertaining to the natural systems and recreational lands goal to protect unique natural habitats and ecological systems, as well as

policies to conserve wetlands, marine life and wildlife to maintain their environmental and recreational values. The plan also complies with Section 187.201(19) (Appendix XII) in its entirety pertaining to cultural and historical resources.

This information is not required by Chapter 18-4, F.A.C., or Chapter 253, F.S., but at the request of the Governor and Cabinet.

Appendix I



Appendix 11

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

LEASE AGREEMENT
TOWN OF PONCE INLET

Lease No. 4416

THIS LEASE AGREEMENT, made and entered into this 24th day of April 2003, by and between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA hereinafter referred to as "LESSOR," and THE TOWN OF PONCE INLET, A FLORIDA MUNICIPALITY, 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, Department of Environmental Protection.
2. **DESCRIPTION OF PREMISES:** The property subject to this lease contains 3.21 acres, is situated in the County of Volusia, 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 50 years commencing on April 24, 2003, and ending on April 23, 2053, 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 subsection 18-2.021(4), Florida Administrative Code, within twelve months of the effective date of this lease. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands, 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 at least every five years. 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 in accordance with plans that are in accordance with the approved Management Plan or shall require the prior written approval of LESSOR as to purpose, location and design which approval shall not be unreasonably withheld. Further, no trees, other than non-native species, shall be removed or major land alterations done 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 coinsureds. 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, Department of Environmental Protection, Mail Station 130, 3900 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 Insurance Commissioner, 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: Department of Environmental Protection
Division of State Lands
Bureau of Public Land Administration, M. S. 130
3900 Commonwealth Boulevard,
Tallahassee, Florida 32399-3000

LESSEE: Town of Ponce Inlet
4680 South Peninsula Drive
Ponce Inlet, Florida 32127

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 Department of Environmental Protection, Division of State Land's 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, Department of Environmental Protection, Mail Station 130, 3900 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, 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 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, keeping the leased premises free of trash or litter, meeting all building and safety codes for the location situated, maintaining the planned improvements as set forth in the approved Management Plan and maintaining 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, reasonable wear and tear excepted; provided, however, that any removal, closure, etc, of the above improvements shall be acceptable when the proposed activity is consistent with the goals of conservation, protection, enhancement, or safety of the natural and historical resources within the leased premises and with the approved Management Plan.

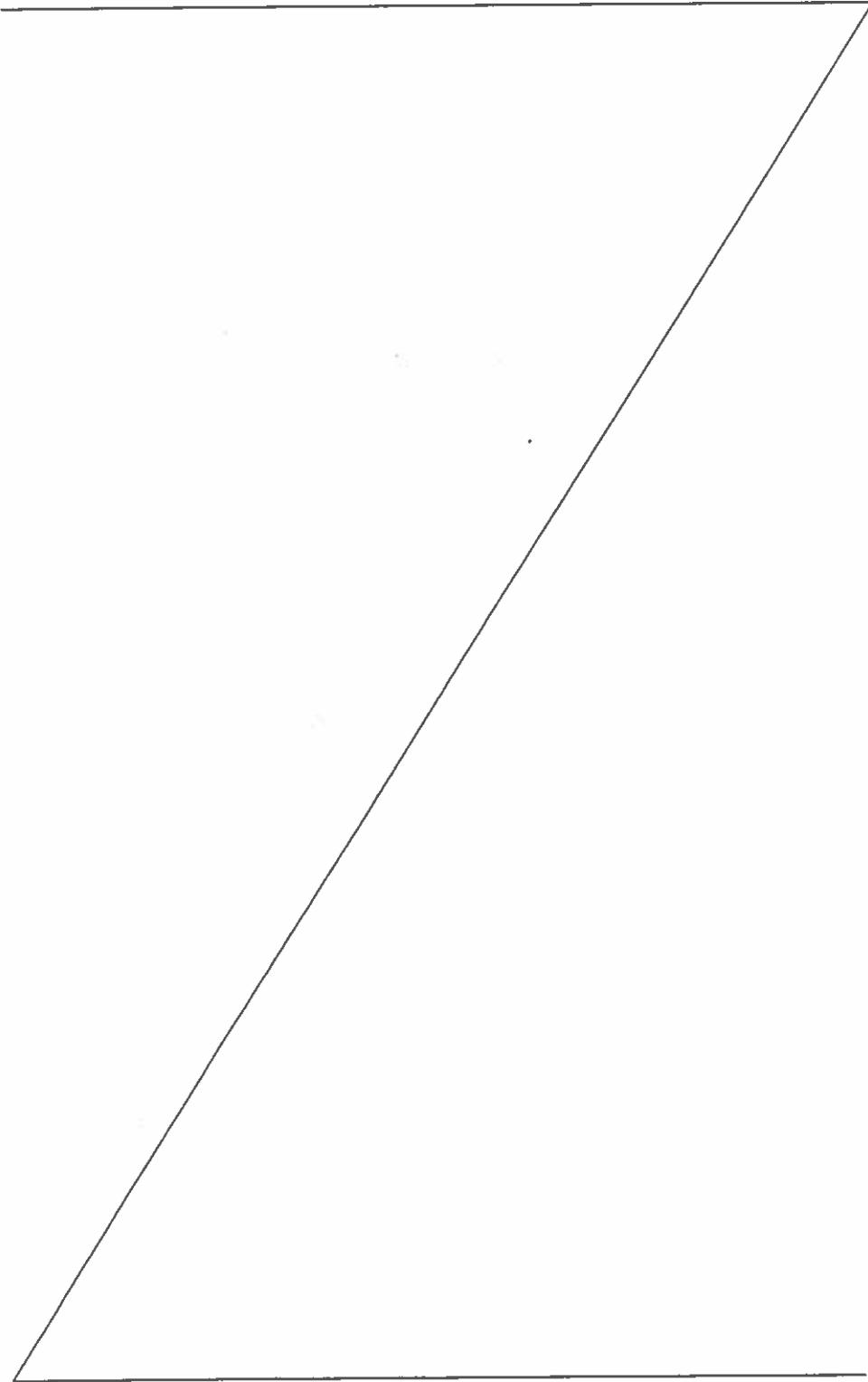
37. GOVERNING LAW: This lease shall be governed by and interpreted according to the laws of the State of Florida.

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. 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

Judy Woodward
Witness
Judy Woodward
Print/Type Witness Name
Ken Teal
Witness
Ken Teal
Print/Type Witness Name

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

"LESSOR"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 24 day of April 2003 by Gloria C. Nelson, as Operations and Management Consultant Manager, Bureau of Public Land Administration, Division of State Lands, 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.

Theresa M. Brady
Notary Public, State of Florida

Print/Type Notary Name

Commission Number:

Commission Expires:



Theresa M. Brady
Commission # DD061826
Expires Jan. 2, 2006
Bonded Thru
Atlantic Bonding Co., Inc.

Approved as to Form and Legality

By: David J. [Signature]
DEP Attorney

TOWN OF PONCE INLET, a Florida Municipality

By: Bernard J. Murphy
Bernard J. Murphy
Print/Type Name

Title: Town Manager

OFFICIAL SEAL

ATTEST: [Signature]
City Clerk

"LESSEE"

[Signature]
Witness
Suzanne S. Kowchan
Print/Type Name
Mary Sowers
Witness
MARY SOWERS
Print/Type Name

STATE OF FLORIDA
COUNTY OF Volusia

The foregoing instrument was acknowledged before me this 2nd day of April 2003, by Bernard J. Murphy, as Town Manager and Kassandra Esposito Blissett, as Town Clerk, respectively on behalf of the Town of Ponce Inlet, a Florida municipality. They are personally known to me or who have produced _____ as identification.

Margaret A. Richard
Notary Public, State of Florida
Margaret A. Richard
Type Notary Name



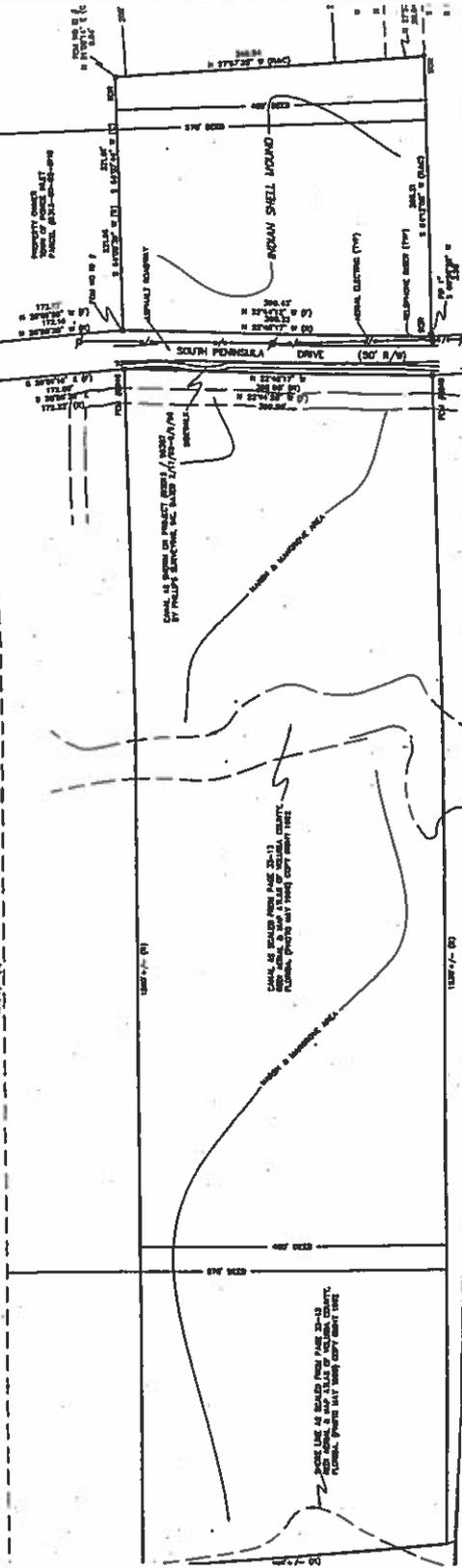
Commission Number: DD 140854
Commission Expires: August 11, 2006



LEGAL DESCRIPTION

A PORTION OF THE NORTHERLY 1125 FEET OF LAND LYING SOUTH OF A LINE DRAWN PARALLEL AND DISTANT 2125 FEET MEASURED SEPARATELY ALONG THE EAST AND WEST SIDES OF THE ROAD TO THE CENTERLINE OF THE ROAD, BEING A PORTION OF LOTS 1 AND 2, SECTION 13, TOWNSHIP 11 NORTH, RANGE 33 EAST, VOLUSIA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE SOUTHERLY 400 FEET OF THE NORTHERLY 575 FEET OF THE ABOVE DESCRIBED PARALLEL LINE BEING OF A LINE PARALLEL TO AND DISTANT 2125 FEET WEST FROM THE CENTERLINE OF OCEAN BEACH BOULEVARD, AN 80 FOOT STREET AS SHOWN ON THE L&P MAP.



Select figure: Figure Name: <Null>

- Course: N 27-57-32 W Distance: 349.54
- Course: S 64-05-38 W Distance: 331.96
- Course: S 22-45-17 E Distance: 399.22
- Course: N 64-12-08 E Distance: 368.21
- Course: N 27-57-34 W Distance: 50.04

Perimeter: 1488.97

Area: 139873.86
3.21 acres
Misccheck Closure - (Uses listed courses & COGO Units)
Error of Closure: 0.017
Precision 1: 89313.30

Appendix III

267.061 Historic properties; state policy, responsibilities.--

(1) STATE POLICY RELATIVE TO HISTORIC PROPERTIES.--

(a) The rich and unique heritage of historic properties in this state, representing more than 10,000 years of human presence, is an important legacy to be valued and conserved for present and future generations. The destruction of these nonrenewable historical resources will engender a significant loss to the state's quality of life, economy, and cultural environment. It is therefore declared to be state policy to:

1. Provide leadership in the preservation of the state's historic resources;
2. Administer state-owned or state-controlled historic resources in a spirit of stewardship and trusteeship;
3. Contribute to the preservation of non-state-owned historic resources and to give encouragement to organizations and individuals undertaking preservation by private means;
4. Foster conditions, using measures that include financial and technical assistance, for a harmonious coexistence of society and state historic resources;
5. Encourage the public and private preservation and utilization of elements of the state's historically built environment; and
6. Assist local governments to expand and accelerate their historic preservation programs and activities.

(b) It is further declared to be the public policy of the state that all treasure trove, artifacts, and such objects having intrinsic or historical and archaeological value which have been abandoned on state-owned lands or state-owned sovereignty submerged lands shall belong to the state with the title thereto vested in the Division of Historical Resources of the Department of State for the purposes of administration and protection.

(2) RESPONSIBILITIES OF STATE AGENCIES OF THE EXECUTIVE BRANCH.--

(a) Each state agency of the executive branch having direct or indirect jurisdiction over a proposed state or state-assisted undertaking shall, in accordance with state policy and prior to the approval of expenditure of any state funds on the undertaking, consider the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the National Register of Historic Places. Each such agency shall afford the division a reasonable opportunity to comment with regard to such an undertaking.

(b) Each state agency of the executive branch shall initiate measures in consultation with the division to assure that where, as a result of state action or assistance carried out by such agency, a historic property is to be demolished or substantially altered in a way which adversely affects the character, form, integrity, or other qualities which contribute to historical, architectural, or archaeological value of the property, timely steps are taken to determine that no feasible and prudent

alternative to the proposed demolition or alteration exists, and, where no such alternative is determined to exist, to assure that timely steps are taken either to avoid or mitigate the adverse effects, or to undertake an appropriate archaeological salvage excavation or other recovery action to document the property as it existed prior to demolition or alteration.

(c) In consultation with the division, each state agency of the executive branch shall establish a program to locate, inventory, and evaluate all historic properties under the agency's ownership or control that appear to qualify for the National Register. Each such agency shall exercise caution to assure that any such historic property is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly.

(d) Each state agency of the executive branch shall assume responsibility for the preservation of historic resources which are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for the purpose of carrying out agency responsibilities, the agency shall use, to the maximum extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with the preservation of such properties, the mission of the agency, and the professional standards established pursuant to s. 267.031(5)(k), any preservation actions necessary to carry out the intent of this paragraph.

(e) Each state agency of the executive branch, in seeking to acquire additional space through new construction or lease, shall give preference to the acquisition or use of historic properties when such acquisition or use is determined to be feasible and prudent compared with available alternatives. The acquisition or use of historic properties is considered feasible and prudent if the cost of purchase or lease, the cost of rehabilitation, remodeling, or altering the building to meet compliance standards and the agency's needs, and the projected costs of maintaining the building and providing utilities and other services is less than or equal to the same costs for available alternatives. The agency shall request the division to assist in determining if the acquisition or use of a historic property is feasible and prudent. Within 60 days after making a determination that additional space is needed, the agency shall request the division to assist in identifying buildings within the appropriate geographic area that are historic properties suitable for acquisition or lease by the agency, whether or not such properties are in need of repair, alteration, or addition.

(f) Consistent with the agency's mission and authority, all state agencies of the executive branch shall carry out agency programs and projects, including those under which any state assistance is provided, in a manner which is generally sensitive to the preservation of historic properties and shall give consideration to programs and projects which will further the purposes of this section.

(3) DEPARTMENT OF MANAGEMENT SERVICES.--The Department of Management Services, in consultation with the division, shall adopt rules for the renovation of historic properties which are owned or leased by the state. Such rules shall be based on national guidelines for historic renovation, including the standards and guidelines for rehabilitation adopted by the United States Secretary of the Interior.

History.--s. 6, ch. 67-50; ss. 10, 25, 35, ch. 69-106; s. 5, ch. 81-173; s. 19, ch. 83-216; s. 2, ch. 85-281; s. 47, ch. 86-163; s. 2, ch. 87-33; s. 1, ch. 88-351; s. 1, ch. 90-259; s. 243, ch. 91-224; s. 2, ch. 92-61; s. 197, ch. 92-279; s. 55, ch. 92-326; s. 3, ch. 94-190; s. 108, ch. 94-356; s. 854, ch. 95-148; s. 3, ch. 95-235; s. 9, ch. 96-418; s. 7, ch. 97-68; s. 4, ch. 2001-199.

Appendix IV



FLORIDA DEPARTMENT OF STATE
DIVISION OF HISTORICAL RESOURCES

MANAGEMENT PROCEDURES

FOR

ARCHAEOLOGICAL AND HISTORICAL SITES AND PROPERTIES
ON STATE - OWNED OR CONTROLLED LANDS

(revised August, 1995)

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

Director's Office
(850) 245-6300 • FAX: 245-6435

Archaeological Research
(850) 245-6444 • FAX: 245-6436

Historic Preservation
(850) 245-6333 • FAX: 245-6437

Historical Museums
(850) 245-6400 • FAX: 245-6433

Palm Beach Regional Office
(561) 279-1475 • FAX: 279-1476

St. Augustine Regional Office
(904) 825-5045 • FAX: 825-5044

Tampa Regional Office
(813) 272-3843 • FAX: 272-2340

**MANAGEMENT PROCEDURES FOR
ARCHAEOLOGICAL AND HISTORICAL SITES AND PROPERTIES
ON STATE - OWNED OR CONTROLLED LANDS
(revised August, 1995)**

A. GENERAL DISCUSSION

Archaeological and historic sites are defined collectively in 267.021(3), F.S., as "historic properties" or "historic resources". They have several essential characteristics which must be recognized in a management program.

- First of all, they are a finite and non-renewable resource. Once destroyed, presently existing resources, including buildings, other structures, shipwreck remains, archaeological sites and other objects of antiquity, cannot be renewed or revived. Today, sites in the State of Florida are being destroyed by all kinds of land development, inappropriate land management practices, erosion, looting, and to a minor extent even by well-intentioned professional scientific research (e.g., archaeological excavation). Measures must be taken to ensure that some of these resources will be preserved for future study and appreciation.
- Secondly, sites are unique because individually they represent the tangible remains of events which occurred at a specific time and place.
- Thirdly, while sites uniquely reflect localized events, these events and the origin of particular sites are related to conditions and events in other times and places. Sites can be understood properly only in relation to their natural surroundings and the activities of inhabitants of other sites. Managers must be aware of this "systemic" character of historic and archaeological sites. Also, it should be recognized that archaeological sites are time capsules for more than cultural history; they preserve traces of past biotic communities, climate, and other elements of the environment that may be of interest to other scientific disciplines.
- Finally, the significance of sites, particularly archaeological ones, derives not only from the individual artifacts within them, but also equally from the spatial arrangement of those artifacts in both horizontal and vertical planes. When archaeologists excavate, they recover, not merely objects, but also a record of the positions of these objects in relation to one another and their containing matrix (e.g., soil strata). Much information is sacrificed if the so-called "context" of archaeological objects is destroyed or not recovered, and this is what archaeologists are most concerned about when a site is threatened with destruction or damage. The artifacts themselves can be recovered even after a site is heavily disturbed, but the context - the vertical and horizontal relationships - cannot. Historic structures also contain a wealth of cultural (socio-economic) data which can be lost if historically sensitive maintenance, restoration or rehabilitation procedures are not implemented, or if they are demolished or extensively altered without appropriate documentation. Lastly, it should not be forgotten that historic structures often have associated potentially significant historic archaeological features which must be considered in land management decisions.

B. STATUTORY AUTHORITY

Chapter 253, Florida Statutes ("State Lands") directs the preparation of "single-use" or "multiple-use" land management plans for all state-owned lands and state-owned sovereignty submerged lands. In this document, 253.034(5), F.S., specifically requires that "all management plans, whether for single-use or multiple-use properties, shall specifically describe how the managing agency plans to identify, locate, protect and preserve, or otherwise use fragile non-renewable resources, such as archaeological and historic sites, as well as other fragile resources..."

Chapter 267, Florida Statutes is the primary historic preservation authority of the state. The importance of protecting and interpreting archaeological and historic sites is recognized in 267.061(1)(a), F.S.:

The rich and unique heritage of historic properties in this state, representing more than 10,000 years of human presence, is an important legacy to be valued and conserved for present and future generations. The destruction of these nonrenewable historic resources will engender a significant loss to the state's quality of life, economy, and cultural environment. It is therefore declared to be state policy to:

1. Provide leadership in the preservation of the state's historic resources; [and]
2. Administer state-owned or state-controlled historic resources in a spirit of stewardship and trusteeship;...

Responsibilities of the Division of Historical Resources in the Department of State pursuant to 267.061(3), F.S., include the following:

1. Cooperate with federal and state agencies, local governments, and private organizations and individuals to direct and conduct a comprehensive statewide survey of historic resources and to maintain an inventory of such responses.
2. Develop a comprehensive statewide historic preservation plan.
3. Identify and nominate eligible properties to the *National Register of Historic Places* and otherwise administer applications for listing properties in the National Register of Historic Places.
4. Cooperate with federal and state agencies, local governments, and organizations and individuals to ensure that historic resources are taken into consideration at all levels of planning and development.
5. Advise and assist, as appropriate, federal and state agencies and local governments in carrying out their historic preservation responsibilities and programs.
6. Carry out on behalf of the state the programs of the National Historic Preservation Act of 1966, as amended, and to establish, maintain, and administer a state historic preservation program meeting the requirements of an approved program and fulfilling the responsibilities of state historic preservation programs as provided in subsection 101(b) of that act.
7. Take such other actions necessary or appropriate to locate, acquire, protect, preserve, operate, interpret, and promote the location, acquisition, protection, preservation, operation, and interpretation of historic resources to foster an appreciation of Florida history and culture. Prior to the acquisition, preservation, interpretation, or operation of a historic property by a state agency, the Division shall be provided a reasonable opportunity to review and comment on the proposed undertaking and shall determine that there exists historic authenticity and a feasible means of providing for the preservation, interpretation and operation of such property.
8. Establish professional standards for the preservation, exclusive of acquisition, of historic resources in state ownership or control.
9. Establish guidelines for state agency responsibilities under subsection (2).

Responsibilities of other state agencies of the executive branch, pursuant to 267.061(2), F.S., include:

1. Each state agency of the executive branch having direct or indirect jurisdiction over a proposed state or state-assisted undertaking shall, in accordance with state policy and prior to the approval of expenditure of any state funds on the undertaking, consider the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the *National Register of Historic Places*. Each such agency shall afford the division a reasonable opportunity to comment with regard to such an undertaking.
2. Each state agency of the executive branch shall initiate measures in consultation with the division to assure that where, as a result of state action or assistance carried out by such agency, a historic property is to be demolished or substantially altered in a way which adversely affects the character, form, integrity, or other qualities which contribute to [the] historical, architectural, or archaeological value of the property, timely steps are taken to determine that no feasible and prudent alternative to the proposed demolition or alteration exists, and, where no such alternative is determined to exist, to assure that timely steps are taken either to avoid or mitigate the adverse effects, or to undertake an appropriate archaeological salvage excavation or other recovery action to document the property as it existed prior to demolition or alteration.

3. In consultation with the division [of Historical Resources], each state agency of the executive branch shall establish a program to locate, inventory, and evaluate all historic properties under the agency's ownership or control that appear to qualify for the National Register. Each such agency shall exercise caution to assure that any such historic property is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly.

4. Each state agency of the executive branch shall assume responsibility for the preservation of historic resources which are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for the purpose of carrying out agency responsibilities, the agency shall use, to the maximum extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with preservation of such properties, the mission of the agency, and the professional standards established pursuant to paragraph (3)(k), any preservation actions necessary to carry out the intent of this paragraph.

5. Each state agency of the executive branch, in seeking to acquire additional space through new construction or lease, shall give preference to the acquisition or use of historic properties when such acquisition or use is determined to be feasible and prudent compared with available alternatives. The acquisition or use of historic properties is considered feasible and prudent if the cost of purchase or lease, the cost of rehabilitation, remodeling, or altering the building to meet compliance standards and the agency's needs, and the projected costs of maintaining the building and providing utilities and other services is less than or equal to the same costs for available alternatives. The agency shall request the division to assist in determining if the acquisition or use of a historic property is feasible and prudent. Within 60 days after making a determination that additional space is needed, the agency shall request the division to assist in identifying buildings within the appropriate geographic area that are historic properties suitable for acquisition or lease by the agency, whether or not such properties are in need of repair, alteration, or addition.

6. Consistent with the agency's mission and authority, all state agencies of the executive branch shall carry out agency programs and projects, including those under which any state assistance is provided, in a manner which is generally sensitive to the preservation of historic properties and shall give consideration to programs and projects which will further the purposes of this section.

Section 267.12 authorizes the Division to establish procedures for the granting of research permits for archaeological and historic site survey or excavation on state-owned or controlled lands, while Section 267.13 establishes penalties for the conduct of such work without first obtaining written permission from the Division of Historical Resources. The Rules of the Department of State, Division of Historical Resources, for research permits for archaeological sites of significance are contained in Chapter 1A-32, F.A.C.

Another Florida Statute affecting land management decisions is Chapter 872, F.S. Section 872.02, F.S., pertains to marked grave sites, regardless of age. Many state-owned properties contain old family and other cemeteries with tombstones, crypts, etc. Section 872.05, F.S., pertains to unmarked human burial sites, including prehistoric and historic Indian burial sites. Unauthorized disturbance of both marked and unmarked human burial sites is a felony.

C. MANAGEMENT POLICY

The choice of a management policy for archaeological and historic sites within state-owned or controlled lands obviously depends upon a detailed evaluation of the characteristics and conditions of the individual sites and groups of sites within those tracts. This includes an interpretation of the significance (or potential significance) of these sites, in terms of social and political factors, as well as environmental factors. Furthermore, for historic structures architectural significance must be considered, as well as any associated historic landscapes.

Sites on privately owned lands are especially vulnerable to destruction, since often times the economic incentives for preservation are low compared to other uses of the land areas involved. Hence, sites in public ownership have a magnified importance, since they are the ones with the best chance of survival over the long run. This is particularly true of sites which are state-owned or controlled, where the basis of management is to provide for land uses that are minimally destructive of resource values.

It should be noted that while many archaeological and historical sites are already recorded within state-owned or controlled-lands, the majority of the uplands areas and nearly all of the inundated areas have not been surveyed to locate and assess the significance of such resources. The known sites are, thus, only an incomplete sample of the actual resources - i.e., the number, density, distribution, age, character and condition of archaeological and historic sites - on these tracts. Unfortunately, the lack of specific knowledge of the actual resources prevents formulation of any sort of detailed management or use plan involving decisions about the relative historic value of individual sites. For this reason, a generalized policy of conservation is recommended until the resources have been better addressed.

The generalized management policy recommended by the Division of Historical Resources includes the following:

1. State land managers shall coordinate all planned activities involving known archaeological or historic sites or potential site areas closely with the Division of Historical Resources in order to prevent any kind of disturbance to significant archaeological or historic sites that may exist on the tract. Under 267.061(1)(b), F.S., the Division of Historical Resources is vested with title to archaeological and historic resources abandoned on state lands and is responsible for administration and protection of such resources. The Division will cooperate with the land manager in the management of these resources. Furthermore, provisions of 267.061(2) and 267.13, F.S., combined with those in 267.061(3) and 253.034(4), F.S., require that other managing (or permitting) agencies coordinate their plans with the Division of Historical Resources at a sufficiently early stage to preclude inadvertent damage or destruction to known or potentially occurring, presently unknown archaeological and historic sites. The provisions pertaining to human burial sites must also be followed by state land managers when such remains are known or suspected to be present (see 872.02 and 872.05, F.S., and 1A-44, F.A.C.)
2. Since the actual resources are so poorly known, the potential impact of the managing agency's activities on historic archaeological sites may not be immediately apparent. Special field survey for such sites may be required to identify the potential endangerment as a result of particular management or permitting activities. The Division may perform surveys, as its resources permit, to aid the planning of other state agencies in their management activities, but outside archaeological consultants may have to be retained by the managing agency. This would be especially necessary in the cases of activities contemplating ground disturbance over large areas and unexpected occurrences. It should be noted, however, that in most instances Division staff's knowledge of known and expected site distribution is such that actual field surveys may not be necessary, and the project may be reviewed by submitting a project location map (preferably a 7.5 minute U.S.G.S. Quadrangle map or portion thereof) and project descriptive data, including detailed construction plans. To avoid delays, Division staff should be contacted to discuss specific project documentation review needs.
3. In the case of known significant sites, which may be affected by proposed project activities, the managing agency will generally be expected to alter proposed management or development plans, as necessary, or else make special provisions to minimize or mitigate damage to such sites.
4. If in the course of management activities, or as a result of development or the permitting of dredge activities (see 403.918(2)(6)a, F.S.), it is determined that valuable historic or archaeological sites will be damaged or destroyed, the Division reserves the right, pursuant to 267.061(1)(b), F.S., to require salvage measures to mitigate the destructive impact of such activities to such sites. Such salvage measures would be accomplished before the Division would grant permission for destruction of the affected site areas. The funding needed to implement salvage measures would be the responsibility of the managing agency planning the site destructive activity. Mitigation of historic structures at a minimum involves the preparation of measured drawings and documentary photographs. Mitigation of archaeological resources involves the excavation, analysis and reporting of the project findings and must be planned to occur sufficiently in advance to avoid project construction delays. If these services are to be contracted by the state agency, the selected consultant will need to obtain an Archaeological Research Permit from the Division of Historical Resources, Bureau of Archaeological Research (see 267.12, F.S. and Rules 1A-32 and 1A-46 F.A.C.).
5. For the near future, excavation of non-endangered (i.e., sites not being lost to erosion or development) archaeological sites is discouraged. There are many endangered sites in Florida (on both private and public lands) in need of excavation because of the threat of development or other factors. Those within state-owned or controlled lands should be left undisturbed for the present - with particular attention devoted to preventing site looting by "treasure hunters". On the

other hand, the archaeological and historic survey of these tracts is encouraged in order to build an inventory of the resources present, and to assess their scientific research potential and historic or architectural significance.

6. The cooperation of land managers in reporting sites to the Division that their field personnel may discover is encouraged. The Division will help inform field personnel from other resource managing agencies about the characteristics and appearance of sites. The Division has initiated a cultural resource management training program to help accomplish this. Upon request the Division will also provide to other agencies archaeological and historical summaries of the known and potentially occurring resources so that information may be incorporated into management plans and public awareness programs (See Management Implementation).
7. Any discovery of instances of looting or unauthorized destruction of sites must be reported to the agent for the Board of Trustees of the Internal Improvement Trust Fund and the Division so that appropriate action may be initiated. When human burial sites are involved, the provisions of 872.02 and 872.05, F. S. and Rule 1A-44, F.A.C., as applicable, must also be followed. Any state agent with law enforcement authority observing individuals or groups clearly and incontrovertibly vandalizing, looting or destroying archaeological or historic sites within state-owned or controlled lands without demonstrable permission from the Division will make arrests and detain those individuals or groups under the provisions of 267.13, 901.15, and 901.21, F.S., and related statutory authority pertaining to such illegal activities on state-owned or controlled lands. County Sheriffs' officers are urged to assist in efforts to stop and/or prevent site looting and destruction.

In addition to the above management policy for archaeological and historic sites on state-owned land, special attention shall be given to those properties listed in the *National Register of Historic Places* and other significant buildings. The Division recommends that the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Revised 1990) be followed for such sites.

The following general standards apply to all treatments undertaken on historically significant properties.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alterations of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. (see *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* [Revised 1990]).

Division of Historical Resources staff are available for technical assistance for any of the above listed topics. It is encouraged that such assistance be sought as early as possible in the project planning.

D. MANAGEMENT IMPLEMENTATION

As noted earlier, 253.034(4), F.S., states that "all management plans, whether for single-use or multiple-use properties, shall specifically describe how the managing agency plans to identify, locate, protect and preserve, or otherwise use fragile non-renewable resources, such as archaeological and historic sites..." The following guidelines should help to fulfill that requirement.

1. All land managing agencies should contact the Division and send U.S.G.S. 7.5 minute quadrangle maps outlining the boundaries of their various properties.
2. The Division will in turn identify site locations on those maps and provide descriptions for known archaeological and historical sites to the managing agency.
3. Further, the Division may also identify on the maps areas of high archaeological and historic site location probability within the subject tract. These are only probability zones, and sites may be found outside of these areas. Therefore, actual ground inspections of project areas may still be necessary.
4. The Division will send archaeological field recording forms and historic structure field recording forms to representatives of the agency to facilitate the recording of information on such resources.
5. Land managers will update information on recorded sites and properties.
6. Land managers will supply the Division with new information as it becomes available on previously unrecorded sites that their staff locate. The following details the kind of information the Division wishes to obtain for any new sites or structures which the land managers may report:

A. Historic Sites

- (1) Type of structure (dwelling, church, factory, etc.).
- (2) Known or estimated age or construction date for each structure and addition.
- (3) Location of building (identify location on a map of the property, and building placement, i.e., detached, row, etc.).
- (4) General Characteristics: (include photographs if possible) overall shape of plan (rectangle, "L" "T" "H" "U", etc.); number of stories; number of vertical divisions of bays; construction materials (brick, frame, stone, etc.); wall finish (kind of bond, coursing, shingle, etc.); roof shape.
- (5) Specific features including location, number and appearance of:
 - (a) Important decorative elements;
 - (b) Interior features contributing to the character of the building;

- (c) Number, type, and location of outbuildings, as well as date(s) of construction;
- (d) Notation if property has been moved;
- (e) Notation of known alterations to building.

B. Archaeological Sites

- (1) Site location (written narrative and mapped location).
 - (2) Cultural affiliation and period.
 - (3) Site type (midden, burial mound, artifact scatter, building rubble, etc.)
 - (4) Threats to site (deterioration, vandalism, etc.).
 - (5) Site size (acreage, square meters, etc.).
 - (6) Artifacts observed on ground surface (pottery, bone, glass, etc.).
 - (7) Description of surrounding environment.
7. No land disturbing activities should be undertaken in areas of known archaeological or historic sites or areas of high site probability without prior review by the Division early in the project planning.
8. Ground disturbing activities may proceed elsewhere but land managers should stop disturbance in the immediate vicinity of artifact finds and notify the Division if previously unknown archaeological or historic remains are uncovered. The provisions of Chapter 872, F.S., must be followed when human remains are encountered.
9. Excavation and collection of archaeological and historic sites on state lands without a permit from the Division is a violation of state law and shall be reported to a law enforcement officer. The use of metal detectors to search for historic artifacts shall be prohibited on state lands except when authorized in a 1A-32, F.A.C., research permit from the Division.
10. Interpretation and visitation which will increase public understanding and enjoyment of archaeological and historic sites without site destruction or vandalism is strongly encouraged.
11. Development of interpretive programs including trails, signage, kiosks, and exhibits is encouraged and should be coordinated with the Division.
12. Artifacts found or collected on state lands are by law the property of the Division. Land managers shall contact the Division whenever such material is found so that arrangements may be made for recording and conservation. This material, if taken to Tallahassee, can be returned for public display on a long term loan.

E. ADMINISTERING AGENCY

Questions relating to the treatment of archaeological and historic resources on state lands may be directed to:

Susan M. Harp
Historic Preservation Planner
Telephone (850) 245-6333
Suncom 205-6333
FAX (850) 245-6437

Compliance Review Section
Bureau of Historic Preservation
Division of Historical Resources
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Appendix V



FLORIDA DEPARTMENT OF STATE
Glenda E. Hood
Secretary of State
DIVISION OF HISTORICAL RESOURCES

April 20, 2004

Ms. Margi Richard
Planning Technician
Town of Ponce Inlet
4680 South Peninsula Drive
Ponce Inlet, Florida 32127

RE: Green Mound (8VO90) Land Management plan

Dear Ms. Richard:

I have completed my review of the draft Green Mound State Archaeological Site Management plan (Lease Number 4416). It is a well-written plan and the Town of Ponce Inlet is to be commended for its stewardship of this site.

I am returning your draft plan upon which I have noted a few minor corrections (enclosure). I have also included a copy of the recently completed report on that site and accompanying management recommendations prepared by Christine Newman and Patrick Gensler. Mr. Gensler was completing the enclosed cover letter to accompany that report when I visited his office as part of my review.

I have also enclosed a copy of "Green Mound: A Chronological Yardstick" (1948) by John W. Griffin. That document may still be used to prepare information to interpret the site for general visitors.

Again, I wish to commend you for the preparation of this management document. If you would provide us with a copy of the final document, we might in turn provide copies of it to other communities considering management of archaeological sites as public parks.

Sincerely,

A handwritten signature in cursive script that reads "Louis D. Tesar".

Louis D. Tesar
Archaeologist III

Enclosures (4)

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

Director's Office
(850) 245-6300 • FAX: 245-6435

Archaeological Research
(850) 245-6444 • FAX: 245-6436

Historic Preservation
(850) 245-6333 • FAX: 245-6437

Historical Museums
(850) 245-6400 • FAX: 245-6433

Palm Beach Regional Office
(561) 279-1475 • FAX: 279-1476

St. Augustine Regional Office
(904) 825-5045 • FAX: 825-5044

Tampa Regional Office
(813) 272-3843 • FAX: 272-2340

April 12, 2004

Margi Richard
Community Service Department
Town of Ponce Inlet
4680 S. Peninsula Drive
Ponce Inlet, Florida 32127

Dear Margi,

Enclosed please find two copies of *Status of the Green Mound, 8VO90, Volusia County, and Recommendations for Site Management Protection*. The report details our 2004 trip to the Green Mound and addresses the management needs for the archaeological site. In the report we tried to cover all the topics that you and I discussed while in the field, but if I have left any out, please let me know. It was a pleasure working with you and I look forward to hearing about the continuing progress of the Ponce Preserve. If I can provide additional information, do not hesitate to ask. Please express my thanks to the City Manager and all others involved in the protection and preservation of the Green Mound.

Sincerely,



For -

Christine Newman
CARL Archaeological Program
Bureau of Archaeological Research

**Status of the Green Mound, 8VO90, Volusia County, and
Recommendations for Site Management and Protection**

**Christine Newman and Patrick Gensler
CARL Archaeological Program
Bureau of Archaeological Research
March 2004**

On January 15, 2004, Christine Newman, CARL Archaeological Program, and Margi Richard, Town of Ponce Inlet Planning, visited the Green Mound (8VO90) archaeological site in Volusia County. The purpose of the trip was to assess the condition of the site and to discuss plans for its interpretation, visitor access, and additional management needs for the site and general area.

Site Background and General Information

The Green Mound, 8VO90, is located approximately three and one half miles north of Ponce de Leon Inlet along the eastern side of the Halifax River (Figure 1). Its height has been estimated at more than thirty feet, and it has long been recognized as a significant feature on both navigational charts and area maps (see Griffin 1948, Bullen and Sleight 1960 for further discussion). As early as 1871, the name Green Mound was used in *The Florida Gazetteer* to describe the "highest point of land for several miles . . ." (Hawks 1871:124). The first individual to document archaeological investigations at the site was botanist, John Small (Small 1924, 1929). In his publications he provided both lists of vegetation at the site and a brief description of the midden medium. Evidently, Small visited the Green Mound both prior to and after shell was removed for road construction or fill material (Bullen and Sleight 1960:4), describing the site as having been "shorn of its natural native growth" (Small 1929:109). Shell was mined sometime between 1922 and 1929, and by 1933, John Griffin estimated that one-third of the site had been mined (Griffin 1948:2). The site was again opened for shell mining in 1946, and the mining continued at the site until it was purchased by the Green Mound Historical Society, Inc. in 1948 (Griffin 1948:1-2, Bullen and Sleight 1960:5). The site was subsequently transferred to the Florida Park Service and is now leased to the Town of Ponce Inlet.

In addition to Small's work in 1922, excavations were conducted at the Green Mound in 1941 and 1946 by John Griffin and in 1958 by Ripley Bullen and Frederick Sleight. The data obtained from this work, and similar work in the general area, laid the foundation for the development of the temporal chronology for the St. Johns periods and for the East and Central Florida cultural area descriptions (see Griffin 1948, Bullen and Sleight 1960 for further discussion). In 2002, work at the site was conducted by SouthArc, Inc. at the request of the Town of Ponce Inlet. SouthArc, Inc. conducted a walkover, a canoe reconnaissance, and subsurface testing of the area around the mound and identified areas where ground disturbance should be avoided (Erbe, Dickinson, and Wayne 2002).

2004 Site Visit Observations

During the 2004 CARL visit to the Green Mound a large portion of the archaeological site was examined on foot. The existing foot trails leading around and up the mound were walked and examined for erosion. Access to the site's highest point was made from several different angles, both on and off existing trails. Areas to the north, south, east, and west of the main mound were examined and the site was viewed from vantage points along South Atlantic Avenue and South Peninsula Drive. A portion of the chain link fence that runs along the eastern side of the site was visually surveyed.

As a result of this visit, and in consultation with Margi Richard, several recommendations are offered. It is believed that these will allow for more appropriate public access to the site, increased site protection and preservation, better interpretation of the site's prehistoric inhabitants, and an increased awareness of the historical and cultural significance of the Green Mound.

Recommendations

The Town of Ponce Inlet should be commended for undertaking the development of Ponce Preserve in a manner that will preserve, protect, and interpret the Green Mound archaeological site. The town recognizes the site's importance to understanding prehistoric habitation in this region of the state and is aware of the potential the tract holds for interpreting this to the public. Because of the site's significance and the potential for this Preserve to be an important educational and recreational destination in the State, it is recommended that the Town proceed slowly in developing their plan for the Ponce Preserve. The town can benefit from past experiences of many federal, state and local agencies that manage similar properties. A list of selected parks with interpreted archaeological sites in Florida can be found in Table 1. It is suggested that these parks, and others deemed appropriate, be contacted and perhaps visited by Volusia County personnel prior to any formalization of Preserve plans.

The investigation of grant opportunities for funding the development of the Preserve is encouraged. Many projects involving the restoration of archaeological sites, the development of historic preservation education projects, and the planning and production of exhibits on Florida history have benefited from grant programs such as those administered by the Division of Historical Resources. It is likely that the Ponce Preserve could benefit as well.

Erosion is a primary and immediate concern at the Green Mound. One cause is the uncontrolled pedestrian traffic at the site. In several spots foot traffic on the trails has caused deep cuts or furrows into the archaeological deposit and has destabilized the site (see Figures 2 and 3). Continued foot traffic in these areas will cause more damage. It is recommended that management solutions used at similar archaeological sites with the same problem be implemented at the Green Mound. These include the stabilization of the furrows along the existing trail using sandbags and fill material. This, combined with the construction of a staircase and ramp over the eroding pedestrian trails, will allow

continued access to the site but will help prevent future damage. There are several methods of staircase and ramp construction that can be used that will have limited impact on the archaeological deposits. Many state and county parks have researched the issue, and it is recommended that they be contacted. It is likely that they will share their experiences, funding sources, construction plans, and will be willing to offer suggestions for solving problems encountered.

A second cause of site erosion at the Green Mound is unauthorized digging and looting. Most of the vandalism has occurred at the top of the mound and does not appear to be the result of any organized group or individual, but rather a reflection of chance opportunities. It is suggested that these areas be stabilized using sandbags and/or fill that is markedly different from the surrounding matrix. The eroded areas should be clearly marked on a site map prior to the stabilization process. Vegetation can be planted in the fill to cover the area, and, thus, discourage continued digging. It has been shown that sites that show signs of neglect are at high risk for vandalism, while sites that appear cared for and well maintained are less likely to experience unauthorized digging (Department of State 2000:14). Since unauthorized digging does not appear to be a serious problem at the site, this limited restoration should discourage any additional damage.

As noted, deliberate site vandalism does not appear to be a problem at the site. This is often the case when sites are visited frequently by the public. Well-visited, well-maintained, and clearly interpreted archaeological sites are seldom vandalized. If signs of vandalism, such as unauthorized digging, are observed, local law enforcement should be contacted immediately.

It is recommended that the fence surrounding the originally purchased parcel be removed. The fence is in disrepair and does not provide any additional protection to the site, but rather, it distracts from the overall appearance of the site. Care should be taken during its removal to minimize further disturbance of the ground, and should preferably involve removing the remaining posts and chain-link by hand.

While on site, non-native plant removal was discussed. If this is to be accomplished, it is recommended that it be done by hand with as little soil disturbance as possible. If large vegetation is to be removed, it should be cut at ground surface rather than uprooted. Planting native vegetation should be done with as little ground disturbance as possible. It is recommended that plant type and placement be chosen with regard to site protection. Plants, such as cacti and other prickly species, can be used to block unauthorized trails and prevent access to areas under stabilization.

Because of the site's significance and potential to aid in the interpretation of the area's prehistory and history to the public, it is suggested that the Town of Ponce Inlet move forward slowly with plans for the development of the site. Plans may include cleaning and stabilizing the 1960 excavation profile wall. This, combined with a ramp and viewing platform, would allow visitors to see the stratigraphic levels of the site, which represent the different episodes of its prehistoric occupation. Reproductions of the

photographs taken during the 1960 excavations (Figures 4, 5, and 6) could be displayed in addition to text describing the artifacts and shells seen from the viewing platform. Artifacts or reproductions of material recovered from the early excavations, or from the 2002 work at the site, can be located and loaned to the city for display. Other plans may include an exhibit detailing botanist John K. Small's early twentieth century visit to the site, perhaps with a reproduction of the 1920s photograph of the Green Mound live oak (Figure 7), maybe the same live oak that grows on the site today. Land use changes of the area can be illustrated by reproducing early aerial photographs. The University of Florida Map Library is a repository for such materials, and the library staff is very helpful in securing copies.

Due to the site's significance on both the local and regional levels, consideration should be given to listing the Green Mound on the National Register of Historic Places. Listing on the National Register can help contribute to the site's preservation by giving the Green Mound recognition at the national level, and will qualify the site for federal historic preservation funding which could be used for future development and maintenance of the site. Further information on this subject can be found at the National Park Service's National Register of Historic Places website, and the State of Florida's Bureau of Historic Preservation website, which can be found at the following addresses.
<http://www.cr.nps.gov/nr/about.htm> and <http://dhr.dos.state.fl.us/bhp/>

The Green Mound is not only important as an archaeological site but also as a source of valuable scientific information to other disciplines of science. As John Griffin pointed out several years ago,

when the Green Mound is properly developed as a monument, the public in general will discover its value. They will find that the site tells a story of great interest; the story of the Florida Indian, how he lived, and how his way of life changed through time. And this story will be told on the site at which it happened [Griffin 1948:19].

The Town of Ponce Inlet should be touted for recognizing this vision and wanting to tell the story of the Green Mound.

Acknowledgements

Thanks are extended to Margi Richard for her suggestions and field assistance, and Mary Glowacki for her editorial review.

Literature Cited

Bullen, Ripley P. and Frederick W. Sleight

1960 Archaeological Investigations of Green Mound Florida. *The William L. Bryant Foundation, American Studies*, Report Number Two, Central Florida Museum, Orlando, Florida.

Department of State

2000 *Best Management Practices, An Owner's Guide to Protecting Archaeological Sites. Preserving and Protecting Florida's Archaeological Sites for Future Generations*. Florida Department of State. Tallahassee, Florida.

Erbe, Brian J, Martin F. Dickinson and Lucy B. Wayne

2002 Cultural Resources Survey and Assessment, Green Mound/Ponce Preserve, Volusia County, Florida. Prepared for the Town of Ponce Inlet. Ms on file, Florida Master Site File, Florida Bureau of Archaeological Research, Tallahassee, Florida.

Griffin, John W.

1948 Green Mound, A Chronological Yardstick. *The Florida Naturalist*, Vol XXII, No. 1, Tallahassee, Florida.

Hawks, J. M.

1871 *The Florida Gazeteer*. New Orleans, Louisiana.

Small, John K.

1924 The Land Where Spring Meets Autumn. *New York Botanical Garden Journal*. Vol 25, pp. 53-94. New York, New York.

1929 *From Eden to Sahara, Florida's Tragedy*. Lancaster, Pennsylvania.

Table 1. Selected Parks with Interpreted Archaeological Sites in Florida.

Crystal River State Archaeological State Park
3400 N. Museum Point
Crystal River, FL 32629
Phone (352) 795-3817

Emerson Point Park
End of 17th Street W, Snead Island
Palmetto, Florida
Phone (941) 748-4501

Mound Key
Koreshan State Historic Site
P.O. Box 7
Estero, FL 33928
Phone (239) 992-0311

Historic Spanish Point
337 North Tamiami Trail
Osprey, FL 34229
Phone (941) 966-5214

Indian Mound Park
Winson Avenue
Englewood, FL
Phone (941) 474-3065

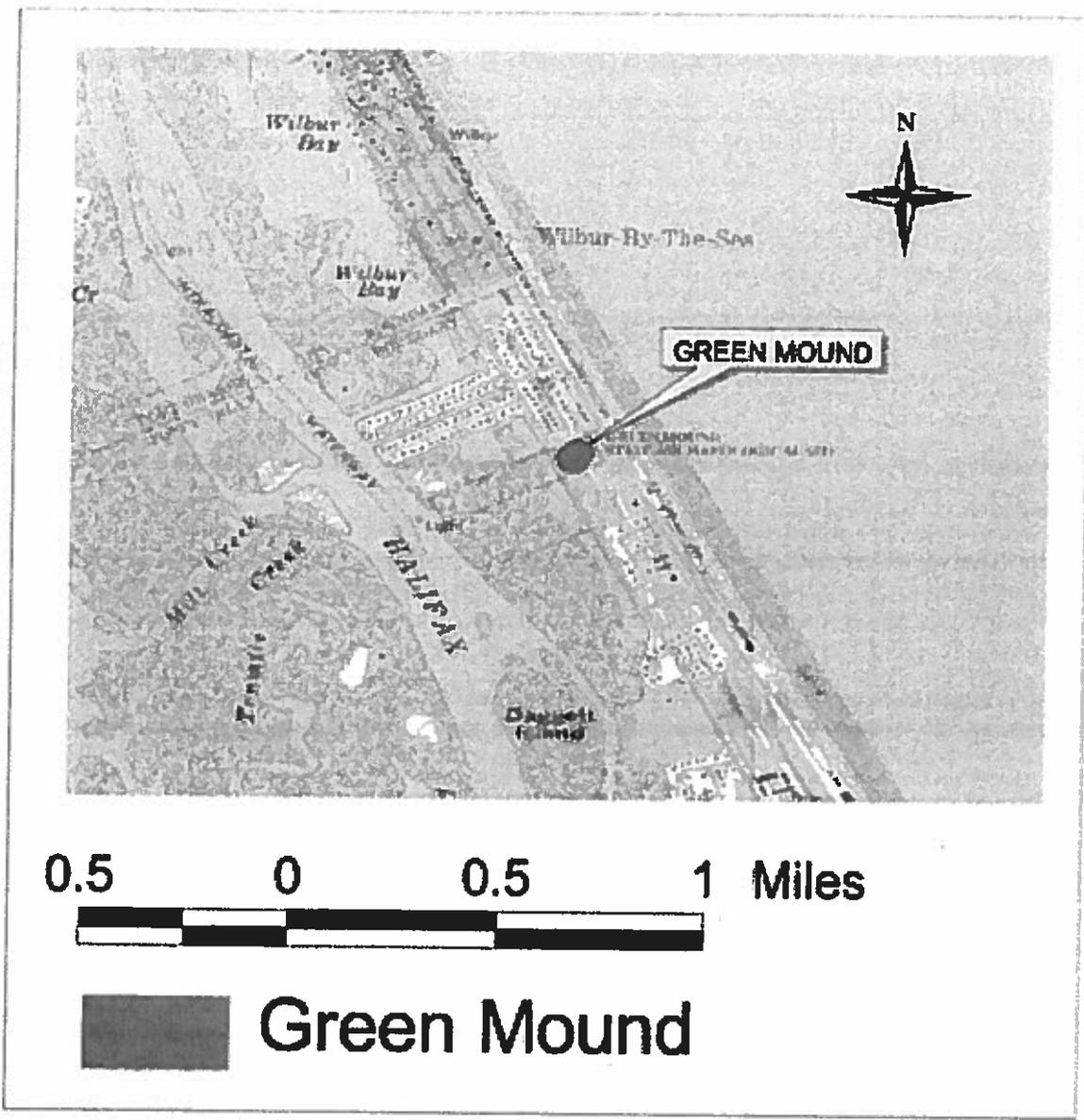


Figure 1. Location of Green Mound, New Smyrna Beach USGS Quadrangle map.

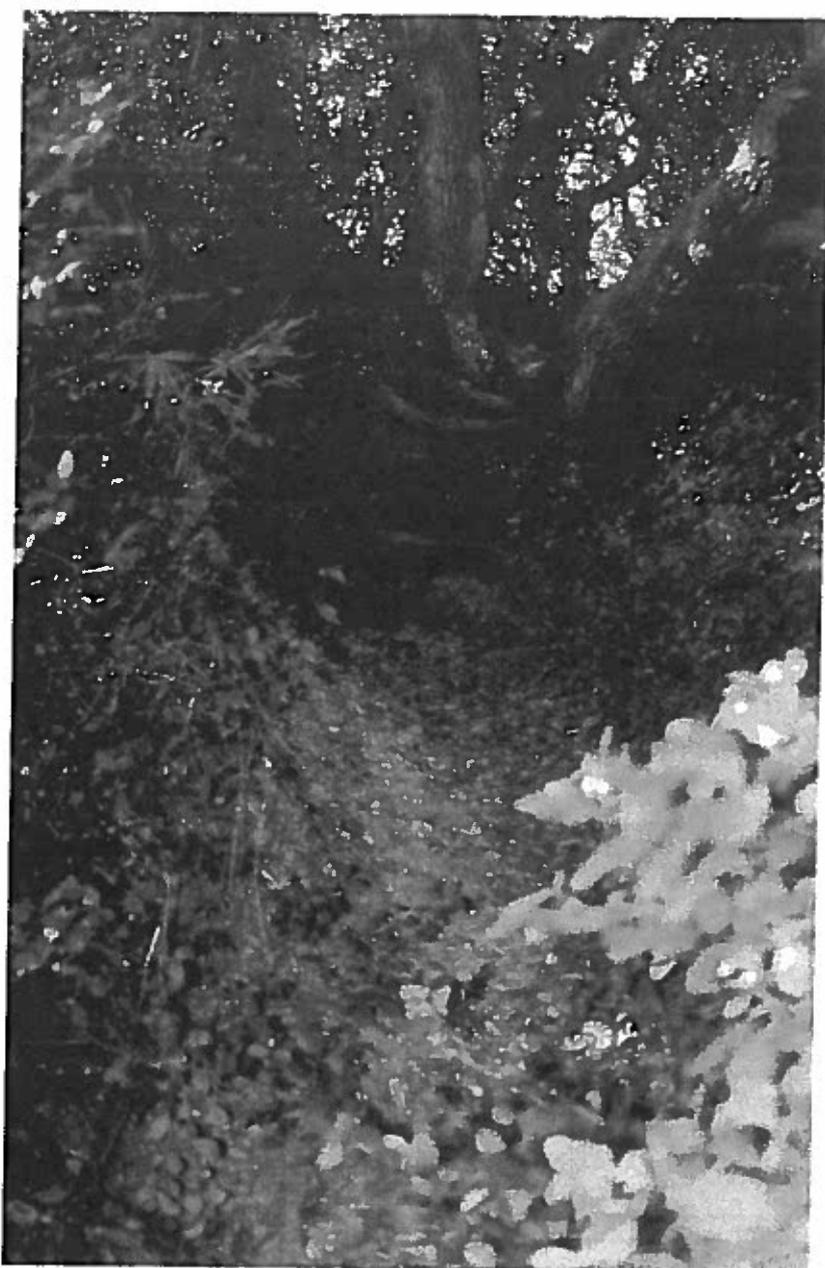


Figure 2. Green Mound 8VO90. Photograph taken during 2004 CARL visit. Note furrowing along walking trail.



Figure 3. Green Mound 8VO90. Photograph taken during 2004 CARL visit. Note furrowing along walking trail.

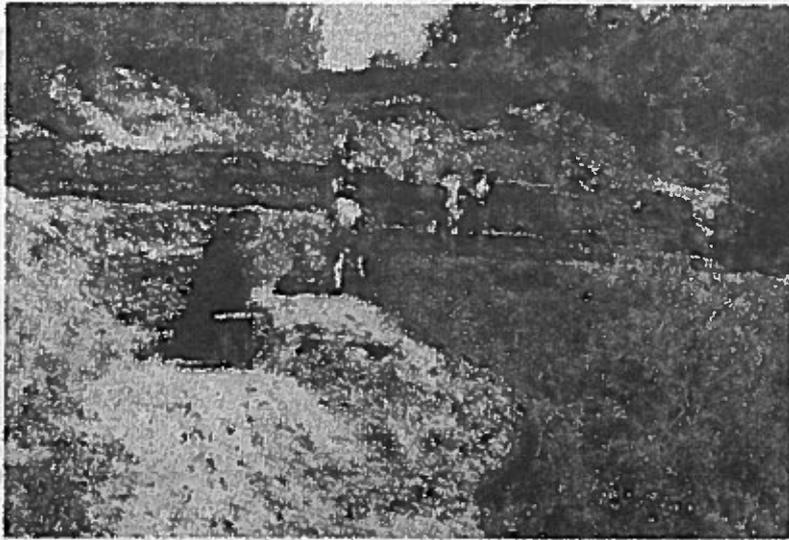


Plate III. Excavation in process—connecting profile from Test Ib to Test II.

Figure 4. From Bullen and Sleight, 1960, Plate III. Excavation in process- connecting profile from Test Ib to Test II.



Figure 5. From Bullen and Sleight, 1960, Plate I. View of Test Ib from near floor to base of midden. William J. Bryant examines the Test.



Plate VII. Excavating Test II (floor). Post holes to left, upper sand (builder's fill) to right. Ripley P. Bullen (left) and Frederick W. Sleight (center) examine post holes.

Figure 6. From Bullen and Sleight, 1960, Plate VII. Excavating Test II (floor). Post holes to left, upper sand (builder's fill) to right. Ripley P. Bullen (left) and Frederick W. Sleight (center) examine post holes.

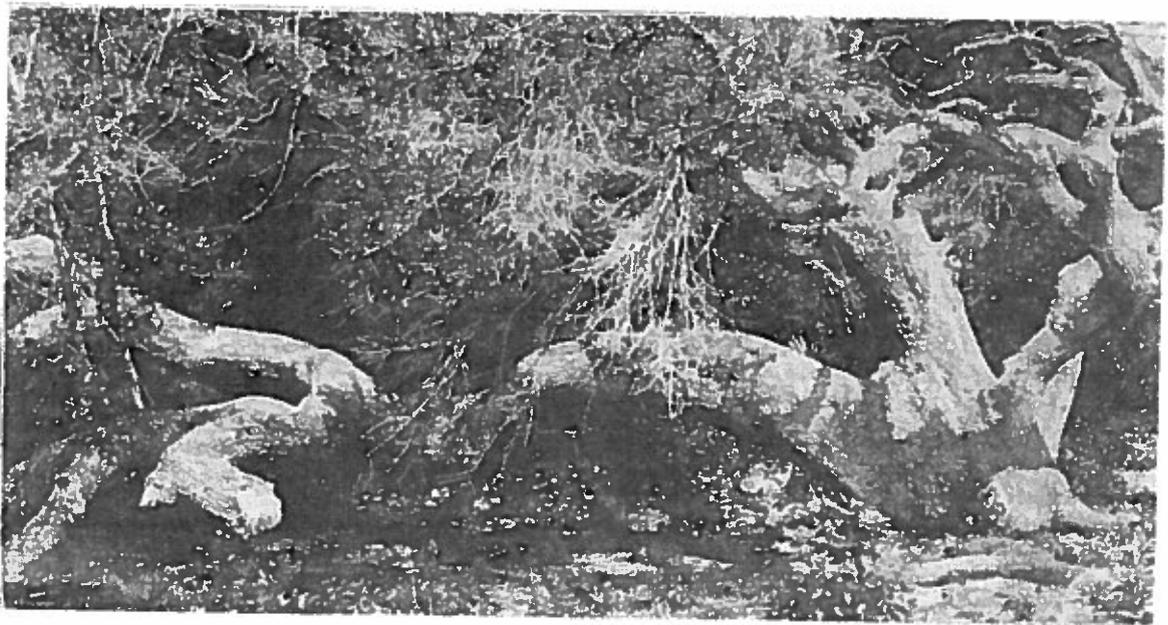
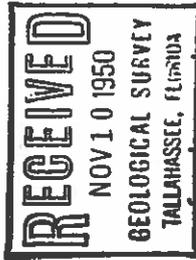


Figure 7. From Small, 1924:52. Green Mound - 8VO90

GREEN MOUND

A Chronological Yardstick

By JOHN W. GRIFFIN
Archaeologist, Florida Park Service



*At Gainesville
with Dr. Bellando*

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for
THE FLORIDA PARK SERVICE

Green Mound—A Chronological Yardstick

By JOHN W. GRIFFIN
Archaeologist, Florida Park Service

Seven miles south of Daytona Beach, between the Atlantic Ocean and the mangrove studded Halifax River, lies Green Mound, one of the last of the once numerous large shell heaps of the region. This vast pile of shell, the remnant of many Indian meals, has been partially removed, and recently faced complete destruction. Through the interest of citizens of Daytona Beach, the surviving portion now stands as a monument of the past.

The purchase of the mound by the Green Mound Historical Society, Inc., a non-profit organization established for the purpose of preserving the site, has ensured that at least this site will be held for posterity. Although the purchasers of Green Mound realized its significance, many will ask why this, or any other shell heap, should be preserved. I shall attempt to point out in this paper that the shell heaps of Florida, properly studied, can provide us with a wealth of valuable scientific information in the fields of zoology, botany and ecology, as well as with information on the history of man.

Historical Notes

Since a complete search of documentary sources has not been attempted, we cannot say when Green Mound was first noted by the White Man. It may well be that one of the Timucua Indian villages shown on a Spanish map of 1605 refers to this site. As will be shown later, the top portions of the mound are of the correct time period for this to be true. Pottery from the top levels of Green Mound is identical with that from the known Timucua village of Nocoroco, in Tomoka State Park, which was visited by Mexia, the maker of the 1605 map referred to above.

We do know that by 1871 the site had its present name. It is of interest to note a description of that date, contained in Hawks' *Florida Gazetteer*:
" . . . A stake marks a dull way across to Purdie's Mound, or Green Mound. This is a pile of oyster shells thirty feet or more high on the western border of the sand hills, where doubtless was once the bank of the river which has now been crowded off, westerly half a mile by the

24670

VO910

2 Green Mound—A Chronological Yardstick

marsh. Across this marsh Mr. Purdie had a canal dug to admit his boat to the foot of the mound; where he intended making extensive improvements; but with the failure of the mill his plans changed, and Green Mound is still in the market. This is the highest point of land for several miles, and a palmetto tree standing near the summit is a land-mark both on land and on the sea."

The information concerning the canal to the mound is of interest, inasmuch as evidences of it exist today, and save for this document might have been interpreted as part of the aboriginal construction connected with the mound.



The standing face of the southern half of Green Mound. Centuries of Indian occupation are represented in its depth. —Photo by Grenell.

In 1915 Green Mound was still undisturbed, according to a list of the shell heaps of the area compiled by Amos W. Butler, who described it as site, and his description at that time would lead one to believe it was still relatively undisturbed. "Sometime between 1922 and 1929 Green Mound was "shorn of its natural native beauty," according to one of Small's publications. When the writer first saw the site, about 1933, almost one-third of the site had been destroyed for the shell it contained, but at that time the destruction had ceased and the site was fenced and posted by the owner. The mound remained in this condition until 1946, when it was again opened for the sale of shell. A considerable area was removed before the mound was purchased by the group which holds it at present.

Green Mound—A Chronological Yardstick

John K. Small dug a small hole in the mound in 1922 and made some observations on its contents. A test of the site by the writer in 1941, and further tests by the Florida Park Service in 1946, comprise the sum of the systematic excavations at the site, upon which our archaeological interpretation must rest.

Shell Heaps and Floral Associations

Apart from the purely archaeological values involved, the shell heaps of Florida are interesting from other points of view, one of which is that of the floral associations. John K. Small repeatedly stressed the unique plant habitat formed by the shell heaps. Concerning the shell heaps of the Daytona region, Small says:



View of a portion of Green Mound, showing superimposed strata. The dark streaks are occupation levels. —Photo by Grenell.

"The presence of a kitchen-midden is indicated by the plant growth. These dunes are naturally covered with a scrubby growth of shrubs and small trees, but wherever there is a shell-midden, we find dense hammock, usually so dense that herbaceous and shrubby growth is sparse. The most interesting phenomena connected with the vegetation are the tropical elements there represented."

At another point he says:

"These Florida shell-middens are extremely interesting from several standpoints. Their floristics should be made a systematic study by some one, for they support a more or less specialized vegetation. They are artificial objects or habitats and are fast disappearing, their flora being destroyed along with their disintegration. . . . The great shell-heaps between Daytona and New Smyrna are fast being leveled, and with the process the rare wild-pepper plant (*Peperomia cumulicola*) is disappearing."

Some of the plants to which Small referred are listed below, this list on the shell heaps of the Halifax River region.¹ The heliotrope vine (*Tournefortia poliochros*) was discovered by Small on Green Mound in 1922, and was the first noted occurrence of this plant on the North American mainland.

Peperomia cumulicola, wild pepper. *Tournefortia poliochros*, heliotrope vine.
Psychotria undata, wild-coffee. *Chiococca alba*, snowberry.
Epidendrum tamponense, tree orchid. *Epidendrum conopseum*, tree orchid.
Eugenia simpsoni, spice tree. *Capitulum baccatum*, red-pepper.
Ardisia ecallonoides, marlberry. *Rapanea guianensis*, myrsine.
Zanthoxylum jagara, wild-lime. *Schoepfia chrysophyloides*, whitewood.

Enough has been said to indicate that the botanist, as well as the archaeologist, has an interest in the preservation of some of our shell heaps. Green Mound itself has had most of the original vegetation removed, but development of the site as a monument should certainly include the reintroduction of plant species known to have grown there, as listed by Small.

A Chronological Yardstick

Reference to the photograph of the exposed face of Green Mound which accompanies this article shows many superimposed levels of shell, sand, and humus. Lenses of different kinds of shells occur, representing gathering activities of the Indians at different times. Mixed in with these various levels are the bones of the animals which were also part of the Indian diet, broken pieces of pottery, and other evidences of human occupation, such as fire areas and an occasional artifact.

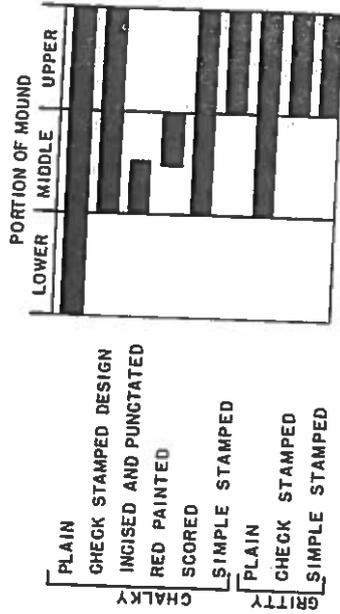
Naturally, the earliest materials are at the bottom of the mound, while the latest are on top, with various levels intermediate in time lying between. By collecting materials from these various levels, keeping them carefully separated, and later analyzing them, it is possible to discover different

¹—Some of Small's names have been changed to conform to the International Code. The writer wishes to thank Miss Lillian Arnold of the Herbarium of the University of Florida, Gainesville, for checking the nomenclature of plants.

kinds of pottery and tools in use at different periods in the past. This was done for Green Mound in the excavations of 1941 and 1946, although it should be stressed that the work which has been done is preliminary and needs to be supplemented.

Two different pottery wares were found, the predominant kind is chalky to the touch, while the other has a gritty feel due to the inclusion of sand in the clay from which the pottery was made. The various kinds of decorations were also studied, and this combined with the chalky or gritty nature of the pottery yielded nine kinds or types of pottery from this site.²

A drawing has been prepared to show in diagrammatic form the distribution of these types from the top to the bottom of the mound. For purposes of the present paper, this distribution is simplified into three more or less equal sections of the mound face, rather than by each of the many levels present in the mound.



It will be noted from this visual presentation that various types of pottery occur at different levels in the mound; that some are earlier and some are later. We can consider three main periods as represented in the mound. The first period is characterized by chalky plain pottery, and

²—The present paper does not give a detailed description of this pottery. A technical report of the pottery sequence with type descriptions will appear elsewhere.

no other kind. This type continues throughout the history of the mound, but in the middle period five additional types occur, two of which do not last beyond this period. The third and last period is marked by three new types, in addition to the four which carried over from earlier times.

This process of analysis, repeated in many sites, gives the archaeologist a framework within which to work; it gives him a chronological yardstick against which to compare other sites with a smaller time range, and enables him to place sites in their proper chronological position.

From other work that has been done, we can delimit the time range of Green Mound. Plain chalky pottery appears at about 800 A. D. This range is represented at Green Mound. Check stamped chalky pottery appears in northeast Florida about 1200 A. D. This is the beginning date for our middle period at Green Mound. Certain of the types found in the upper levels of Green Mound are known to have been in use in historic times. A site near Daytona Beach which is known to have been a Timucua Indian village in 1605 has pottery like that of the top levels of Green Mound. We would probably be safe in estimating that, at the very latest, Green Mound was not occupied after 1700 A. D. This gives us a maximum time range of 900 years, from 800 to 1700, for the formation and occupation of Green Mound.

It will be noted that this period of time is far less than is frequently attributed to such a shell heap. Scientists of considerable repute in other fields, as well as laymen, have very often over-estimated the time involved in the accumulation of the large shell heaps of Florida.

Animals in the Shell Heaps

It should be obvious that the time periods which the archaeologist is able to define might be useful to other scientists. It is possible, for example, to examine the fauna present in these various levels, and thus study the distributions of species in times more recent than most geological data, and more remote than most historical documents.

The most common animal remains in the shell heaps are, of course, the shells themselves. Twenty-five species of marine shells have been noted from Green Mound. All of these species are present in the area today. The vast bulk of Green Mound is made up of the shells of the common oyster, but rather large pockets of the little coquina, *Donax variabilis*, are not infrequent. Since the occurrence of the coquina on the beaches is irregular, we may assume that when they were available they were used because of the ease of procurement. When the coquina was not available in quantity, the Indians fell back on the oyster beds of the Halifax River.

Although the shells at Green Mound do not indicate conditions different from today, other shell heaps tell another story. An early shell heap near Ormond, dating from the approximate 500-750 A. D. time range, is made up almost entirely of the coquina, with oysters virtually absent. Oyster bars are present immediately off the site at the present time, and we are led to conclude that conditions have changed in the Halifax River since 500-750 A. D., and that oysters were not present near Ormond at that time. If the river was fresh water at this time, oysters would not have grown in it. This would assume that the sea level has been rising in relatively recent times to make the Halifax River brackish at present. This, in turn, is consistent with evidence gathered by Dr. John H. Davis, Jr., in his studies on the growth of mangrove muck in southwest Florida. Dr. Davis concluded that he had evidence of the rise of sea level in relatively recent times.

The above illustration of the difference in composition of the early shell heap at Ormond and Green Mound clearly indicates how the study of archaeological sites can be of value to the biologist, geologist and ecologist. The bones of birds, fish and mammals found in the shell heaps, when more adequately studied, will provide new data. The early shell heap at Ormond, mentioned above, provides a case in point. Toward the end of the last century the bones of the Great Auk were found in this deposit, marking the farthest south record of the distribution of this now extinct bird. At the time of the discovery of these bones it was impossible to estimate the age of the site, but to day we can assign the approximate dates 500-750 A. D. to this site, and to the auk bones which it contained.

Careful studies of the fauna associated with the various archaeological periods cannot but increase our knowledge of historical biology and ecology. The shell heaps are therefore of interest to scientific workers in those fields.

Summary

Green Mound, one of the last of the once-numerous shell heaps of Florida, has been preserved. The citizens of Daytona Beach who formed the corporation to buy and hold the mound are responsible for this act, and are to be congratulated on their far-sighted policy. Developed as a monument, Green Mound will provide an attraction of scientific and scenic worth.

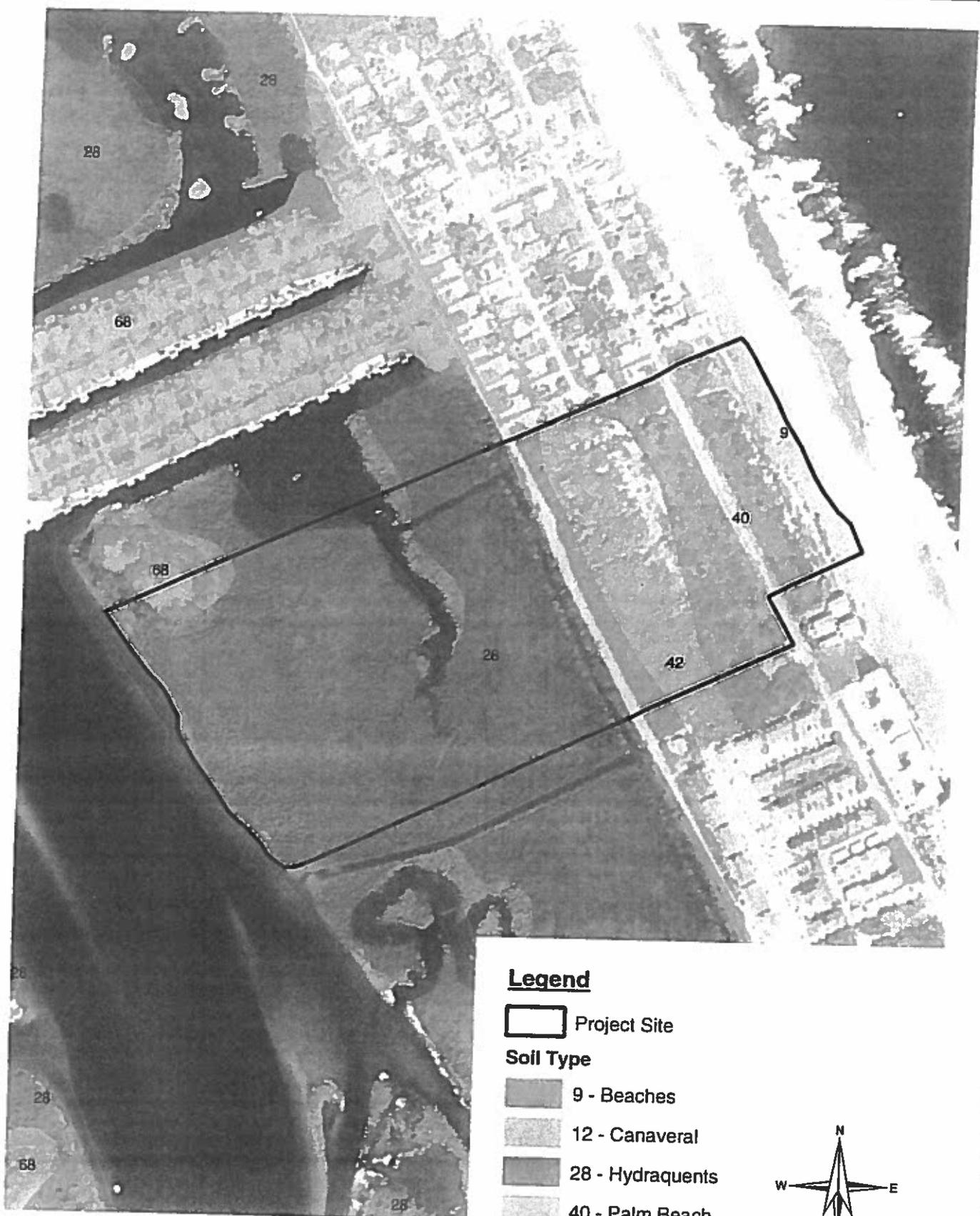
This paper has attempted to show that mounds such as Green Mound are of interest and importance to a broader public than that merely interested in archaeology. Such a site has significance as a historic landmark; it has significance to many different sciences. The person interested in botany will find the floral complex associated with the shell heaps of great interest and workers in the various fields of biology will find that the shell heaps contain information of interest to them. Archaeologists

know the value of such sites to their studies; without shell heaps such as Green Mound the sequence of prehistoric cultures would be much more difficult to unravel.

When Green Mound is properly developed as a monument, the public in general will discover its value. They will find that the site tells a story of great interest; the story of the Florida Indian, how he lived, and how his way of life changed through time. And this story will be told on the site at which it happened.

19

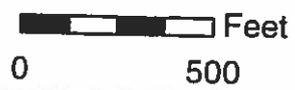
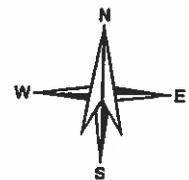
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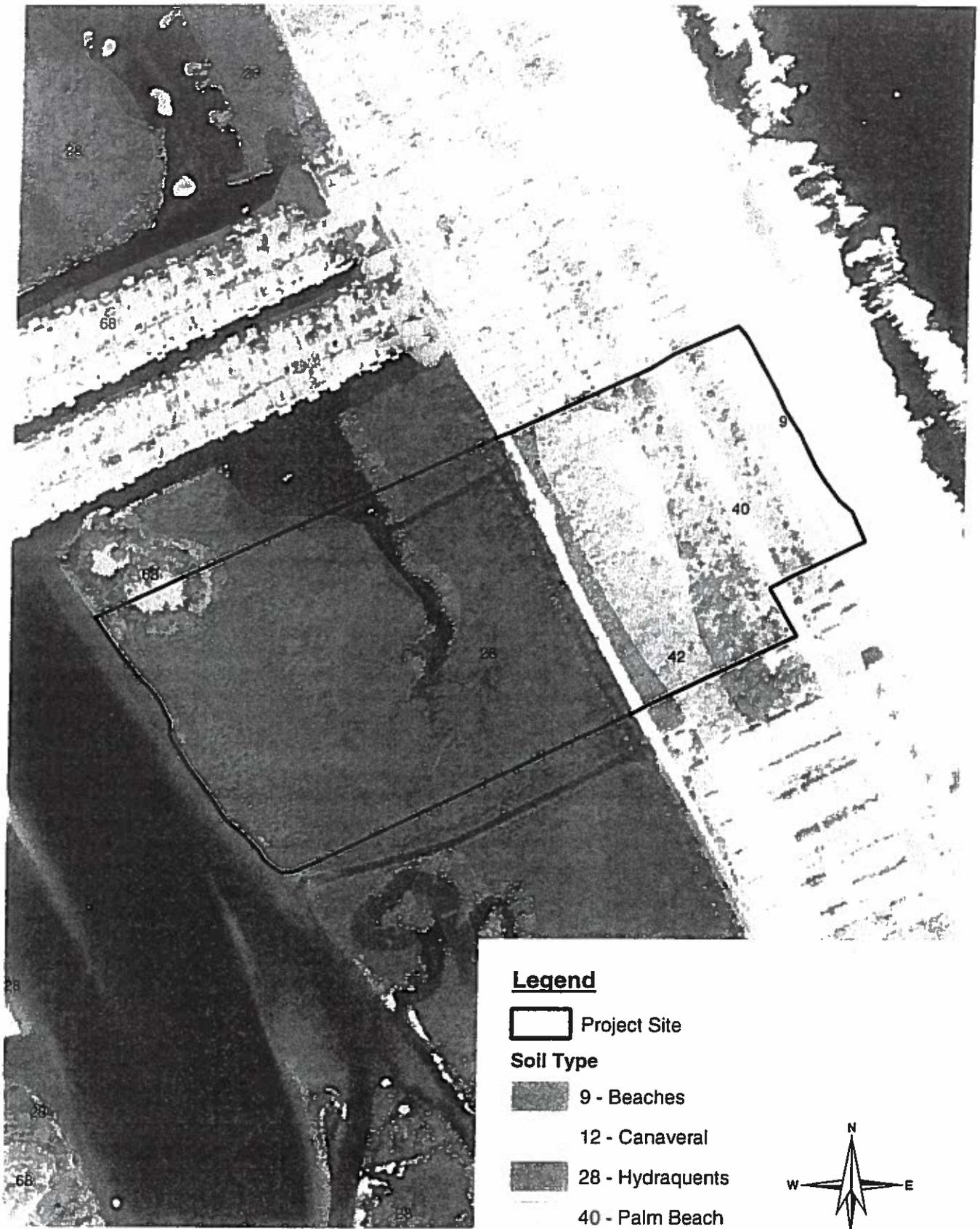


Source:
Volusia County Soil Survey

Legend

-  Project Site
- Soil Type**
-  9 - Beaches
-  12 - Canaveral
-  28 - Hydraquents
-  40 - Palm Beach
-  42 - Paola
-  68 - Turnbull





Source:
Volusia County Soil Survey

Legend

 Project Site

Soil Type

 9 - Beaches

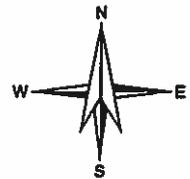
12 - Canaveral

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April 15, 2004

Margi Richard
Planning Technician
Town of Ponce Inlet
4680 South Peninsula Drive
Ponce Inlet, FL 32127

Dear Ms. Richard:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project: Green Mound Archaeological Site
Date Received: April 2, 2004
Location: Township 16 S, Range 33 E, Section 13
Volusia County

Element Occurrences

A search of our maps and database indicates that currently we have several Element Occurrences mapped within the vicinity of the study area (see enclosed map and 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.

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates the precision of the element occurrence location, defined as second (within about 300 feet of the point), minute (within about one mile), or general (within about 5 miles). 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 that may no longer be extant.

Potential Natural Areas

Portions of the site appear to be located on or near Potential Natural Areas (PNA). These PNA are priority 5 and may include the following community types: mesic flatwoods, cypress domes, depression marsh, hydric hammock, floodplain swamp, estuarine wetlands or oak hammock.

Potential Natural Areas are lands that appear to be relatively intact areas of natural vegetation based on aerial photography, as determined by FNAI scientists. Please see the enclosed explanation sheet for more information. PNAs are not a regulatory designation; they are intended for conservation planning purposes. The maps show a revised version of the PNAs, based on 1995 land use land cover data from the water management districts.



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Potential Habitat for Rare Species

Portions of the site appear to be located on or near Potential Habitat for Rare Species. This potential habitat is associated with a known occurrence in the vicinity of: wood stork (*Mycteria americana*), Atlantic salt marsh snake (*Nerodia clarkii taeniata*), bald eagle (*Haliaeetus leucocephalus*), green turtle (*Chelonia mydas*), Kemp's ridley (*Lepidochelys kempii*), loggerhead (*Caretta caretta*), piping plover (*Charadrius melodus*) and sand-dune spurge (*Chamaesyce cumulicola*).

FNAI Potential Habitat for Rare Species indicates areas, which based on landcover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Potential habitat layers have been developed for approximately 250 of the most rare species tracked by the Inventory, including all federally listed species.

Potential Habitat is not a regulatory designation, and should not be confused with "critical habitat", which is an official designation made by the U.S. Fish and Wildlife Service. Information on critical habitats can be found in the Code of Federal Regulations, 50 CFR 17.95, which lists all critical habitats that have been designated. The Code of Federal Regulations can be accessed through the following website: "www.access.gpo.gov/nara/cfr/cfr-table-search.html".

The Inventory always recommends that a site-specific survey be conducted to determine the current presence or absence of rare, threatened, or endangered species. Surveys should be conducted by persons familiar with Florida's flora and fauna. For your convenience, a summary of the elements recorded for Volusia County is enclosed.

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. FNAI data may not be resold for profit.

Note on Invasive Exotics

Florida Natural Areas Inventory is developing a map-linked database of invasive exotics in Florida conservation lands. The goal of this effort is to produce a statewide picture of the invasive plants in our natural areas and to assist in management decisions on a broad scale. Information on the extent of invasive exotics in your parks and preserves is most welcome. For more information on how you can contribute to this database, contact Kathy Burks at KBurks@fnai.org.

Margi Richard
4/15/2004
Page 3 of 3

Thank you for your use of FNAI services. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

Edwin A. Abbey

Edwin A. Abbey
Environmental Reviewer

encl

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FLORIDA
NATURAL AREAS
INVENTORY

Element Occurrences

Precision:
second minute general

- Animals
- Plants
- Communities
- Other

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

FL Fish & Wildlife Cons. Comm.
Breeding Bird Atlas Project 1986-91
center point of 10 sq mi survey block

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

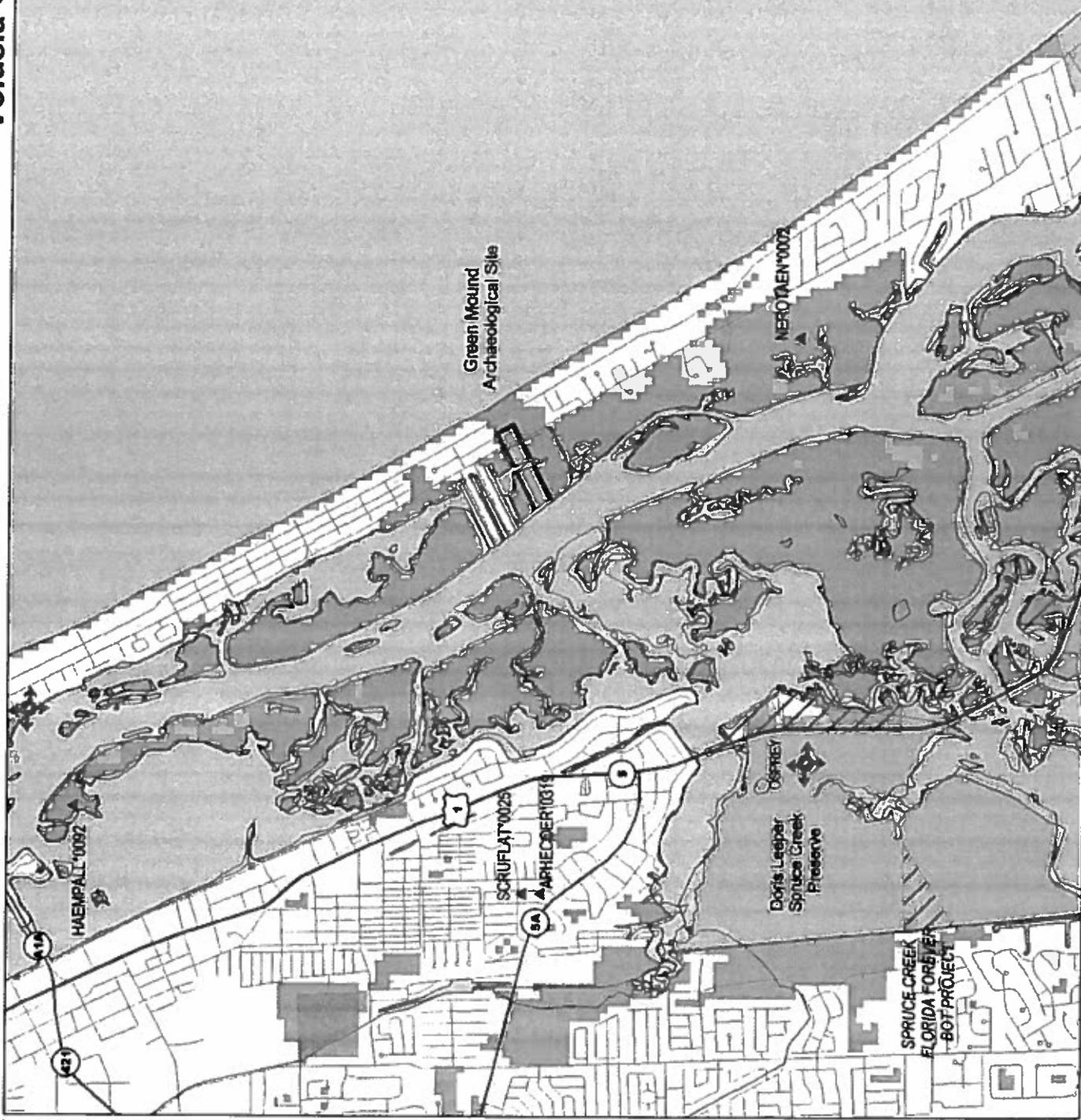
Land Acquisition Projects

- Florida Forever
- Board of Trustees Projects

Non-Managed Natural Areas

- FNAI Potential Habitat for Rare Species
- FNAI Potential Natural Areas

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Water



Map produced by EAA
Date Source: 11/03
NOTE: Map should not be interpreted without accompanying documents.

Florida Natural Areas Inventory Potential Natural Areas (PNA) Data Layer

POTENTIAL NATURAL AREAS (PNA)

The Potential Natural Areas data layer indicates, throughout the State of Florida, lands that are in private ownership and are not managed or listed for conservation purposes that are possible examples of good quality natural communities. These areas were determined from FNAI's scientific staff vegetative interpretation of 1988-1993 FDOT aerial photographs and from input received during Regional Ecological Workshops held for each regional planning council. These workshops were attended by experts familiar with natural areas in the region. Element occurrences in the FNAI database may or may not be present on these sites. In order to be classified as a Potential Natural Area (with the exception of internal rank PNA-5) the natural communities identified through aerial photographs must meet the following criteria:

1. Must be a minimum of 500 acres. *Exceptions:* sandhill, min. 320 acres; scrub, min. 80 acres; pine rockland, min. 20 acres; dry prairie, min. 320 acres; *or* any example of coastal rock barren, upland glade, coastal dune lake, spring-run stream or terrestrial cave.
2. Must contain at least one of the following:
 - a. One or more high quality examples of FNAI state ranked S3 or above natural communities.
 - b. An outstanding example of any FNAI tracked natural community.

Potential Natural Areas have been assigned ranks of PNA-1 through PNA-4 mostly based on size and perceived quality and type of natural community present. The areas included in internal rank PNA-5 (former ACI Category C) are exceptions to the above criteria. These areas were identified through the same process of aerial photographic interpretation and regional workshops as the PNA 1 through 4 ranked sites, but do not meet the standard criteria. These PNA 5 areas are considered lower priority for conservation than areas ranked PNA 1- 4, but nonetheless are believed to be ecologically viable tracts of land representative of Florida's natural ecosystems.



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FLORIDA NATURAL AREAS INVENTORY

Florida Scrub-Jay Survey and Breeding Bird Atlas Data Layers

In addition to our element occurrence database of rare species and natural community locations, the Inventory has additional data layers that have been provided by state and federal agencies.

Florida Scrub-Jay Survey - U.S. Fish and Wildlife Service

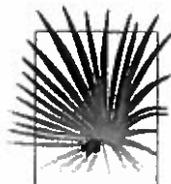
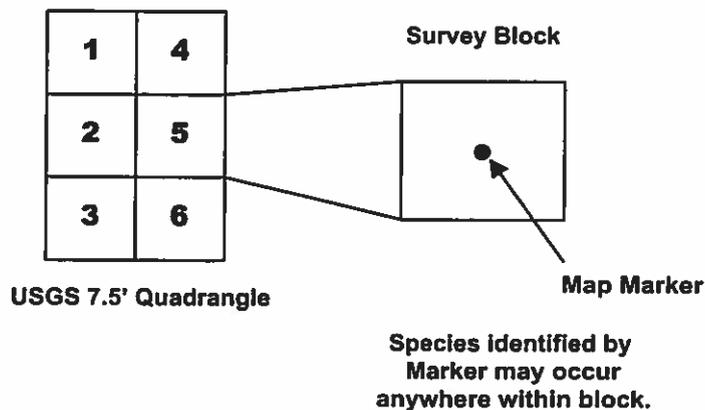
This survey was conducted by staff and associates of the Archbold Biological Station from 1992 to 1996. An attempt was made to record all scrub-jay (*Aphelocoma coerulescens*) groups, although most federal lands were not officially surveyed.

Each map point represents one or more groups.

Florida Breeding Bird Atlas Project - Florida Game and Fresh Water Fish Commission (now Florida Fish and Wildlife Conservation Commission)

This study was conducted from 1986 to 1991, (final report, *An Atlas of Florida's Breeding Birds* by Kale, Pranty, Stith, and Biggs, Nongame Wildlife Program, Florida Game and Fresh Water Fish Commission). The study divided the state into "blocks", with each block representing one-sixth of a U.S. Geological Survey 7.5 minute topographic quadrangle map. Several categories of breeding activity were recorded by observers.

Each map point is located at the center of a block, and represents species listed as Possible or Probable Breeders within the surrounding block (approximately 10 square miles in area).



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January 2004

Volusia County Summary

Page 1

Rare Species and Natural Communities Documented or Reported

| Scientific Name | Common Name | Global Rank | State Rank | Federal Status | State Status |
|---------------------------------------|---------------------------------|-------------|------------|----------------|--------------|
| <u>FISH</u> | | | | | |
| <i>Acipenser brevirostrum</i> | Shortnose Sturgeon | G3 | S1 | LE | LE |
| <i>Agonostomus monticola</i> | Mountain Mullet | G5 | S3 | N | N |
| <i>Ameiurus brunneus</i> | Snail Bullhead | G4 | S3 | N | N |
| <i>Petromyzon marinus</i> | Sea Lamprey | G5 | SNA | N | N |
| <i>Pteranotropsis welaka</i> | Bluenose Shiner | G3G4 | S4 | N | LS |
| <u>AMPHIBIANS</u> | | | | | |
| <i>Notophthalmus perstriatus</i> | Striped Newt | G2G3 | S2S3 | N | N |
| <i>Rana capito</i> | Gopher Frog | G3 | S3 | N | LS |
| <u>REPTILES</u> | | | | | |
| <i>Alligator mississippiensis</i> | American Alligator | G5 | S4 | T(S/A) | LS |
| <i>Caretta caretta</i> | Loggerhead | G3 | S3 | LT | LT |
| <i>Chelonia mydas</i> | Green Turtle | G3 | S2 | LE | LE |
| <i>Clemmys guttata</i> | Spotted Turtle | G5 | S3? | N | N |
| <i>Crotalus adamanteus</i> | Eastern Diamondback Rattlesnake | G4 | S3 | N | N |
| <i>Dermochelys coriacea</i> | Leatherback | G2 | S2 | LE | LE |
| <i>Drymarchon couperi</i> | Eastern Indigo Snake | G3 | S3 | N | LT |
| <i>Gopherus polyphemus</i> | Gopher Tortoise | G3 | S3 | N | LS |
| <i>Lepidochelys kempii</i> | Kemp's Ridley | G1 | S1 | LE | LE |
| <i>Nerodia clarkii taeniata</i> | Atlantic Salt Marsh Snake | G4T1 | S1 | LT | LT |
| <i>Pituophis melanoleucus mugitus</i> | Florida Pine Snake | G4T3? | S3 | N | LS |
| <u>BIRDS</u> | | | | | |
| <i>Accipiter cooperii</i> | Cooper's Hawk | G5 | S3 | N | N |
| <i>Aimophila aestivalis</i> | Bachman's Sparrow | G3 | S3 | N | N |
| <i>Ajaja ajaja</i> | Roseate Spoonbill | G5 | S2 | N | LS |
| <i>Aphelocoma coerulescens</i> | Florida Scrub-jay | G2 | S2 | LT | LT |
| <i>Aramus guarana</i> | Limpkin | G5 | S3 | N | LS |
| <i>Ardea alba</i> | Great Egret | G5 | S4 | N | N |
| <i>Buteo brachyurus</i> | Short-tailed Hawk | G4G5 | S1 | N | N |
| <i>Caracara cheriway</i> | Crested Caracara | G5 | S2 | LT | LT |
| <i>Charadrius melodus</i> | Piping Plover | G3 | S2 | LT | LT |
| <i>Dendroica discolor paludicola</i> | Florida Prairie Warbler | G5T3 | S3 | N | N |
| <i>Egretta caerulea</i> | Little Blue Heron | G5 | S4 | N | LS |
| <i>Egretta rufescens</i> | Reddish Egret | G4 | S2 | N | LS |
| <i>Egretta thula</i> | Snowy Egret | G5 | S3 | N | LS |
| <i>Egretta tricolor</i> | Tricolored Heron | G5 | S4 | N | LS |
| <i>Elanoides forficatus</i> | Swallow-tailed Kite | G5 | S2 | N | N |
| <i>Elanus leucurus</i> | White-tailed Kite | G5 | S1 | N | N |
| <i>Eudocimus albus</i> | White Ibis | G5 | S4 | N | LS |
| <i>Falco columbarius</i> | Merlin | G5 | S2 | N | N |
| <i>Falco peregrinus</i> | Peregrine Falcon | G4 | S2 | N | LE |
| <i>Falco sparverius paulus</i> | Southeastern American Kestrel | G5T4 | S3 | N | LT |
| <i>Grus canadensis pratensis</i> | Florida Sandhill Crane | G5T2T3 | S2S3 | N | LT |
| <i>Haematopus palliatus</i> | American Oystercatcher | G5 | S2 | N | LS |
| <i>Haliaeetus leucocephalus</i> | Bald Eagle | G4 | S3 | LT | LT |
| <i>Ixobrychus exilis</i> | Least Bittern | G5 | S4 | N | N |
| <i>Laterallus jamaicensis</i> | Black Rail | G4 | S2 | N | N |
| <i>Mycteria americana</i> | Wood Stork | G4 | S2 | LE | LE |
| <i>Nyctanassa violacea</i> | Yellow-crowned Night-heron | G5 | S3 | N | N |
| <i>Nycticorax nycticorax</i> | Black-crowned Night-heron | G5 | S3 | N | N |

| Scientific Name | Common Name | Global Rank | State Rank | Federal Status | State Status |
|---|--------------------------------|-------------|------------|----------------|--------------|
| <u>BIRDS</u> | | | | | |
| <i>Pandion haliaetus</i> | Osprey | G5 | S3S4 | N | LS* |
| <i>Pelecanus occidentalis</i> | Brown Pelican | G4 | S3 | N | LS |
| <i>Picoides borealis</i> | Red-cockaded Woodpecker | G3 | S2 | LE | LS |
| <i>Picoides villosus</i> | Hairy Woodpecker | G5 | S3 | N | N |
| <i>Plegadis falcinellus</i> | Glossy Ibis | G5 | S3 | N | N |
| <i>Rynchops niger</i> | Black Skimmer | G5 | S3 | N | LS |
| <i>Sterna antillarum</i> | Least Tern | G4 | S3 | N | LT |
| <i>Sterna caspia</i> | Caspian Tern | G5 | S2 | N | N |
| <i>Sterna maxima</i> | Royal Tern | G5 | S3 | N | N |
| <i>Sterna sandvicensis</i> | Sandwich Tern | G5 | S2 | N | N |
| <i>Vireo altiloquus</i> | Black-whiskered Vireo | G5 | S3 | N | N |
| <u>MAMMALS</u> | | | | | |
| <i>Corynorhinus rafinesquii</i> | Rafinesque's Big-eared Bat | G3G4 | S2 | N | N |
| <i>Eubalaena glacialis</i> | Black Right Whale | G1 | S1 | LE | LE |
| <i>Mustela frenata olivacea</i> | Southeastern Weasel | G5T4 | S3? | N | N |
| <i>Mustela frenata peninsularis</i> | Florida Long-tailed Weasel | G5T3 | S3 | N | N |
| <i>Neofiber alleni</i> | Round-tailed Muskrat | G3 | S3 | N | N |
| <i>Peromyscus polionotus decoloratus</i> | Pallid Beach Mouse | G5TX | SX | N | N |
| <i>Peromyscus polionotus niveiventris</i> | Southeastern Beach Mouse | G5T1 | S1 | LT | LT |
| <i>Podomys floridanus</i> | Florida Mouse | G3 | S3 | N | LS |
| <i>Sciurus niger shermani</i> | Sherman's Fox Squirrel | G5T3 | S3 | N | LS |
| <i>Trichechus manatus</i> | Manatee | G2 | S2 | LE | LE |
| <i>Ursus americanus floridanus</i> | Florida Black Bear | G5T2 | S2 | N | LT* |
| <u>INVERTEBRATES</u> | | | | | |
| <i>Aphaestracon asthenes</i> | Blue Spring Hydrobe | G1 | S1 | N | N |
| <i>Cincinnatia monroensis</i> | Enterprise Siltsnail | G1 | S1 | N | N |
| <i>Cincinnatia parva</i> | Blue Spring Siltsnail | GX | S1 | N | N |
| <u>PLANTS</u> | | | | | |
| <i>Acrostichum aureum</i> | Golden Leather Fern | G5 | S3 | N | LT |
| <i>Adiantum tenerum</i> | Brittle Maidenhair Fern | G5 | S3 | N | LE |
| <i>Amyris balsamifera</i> | Balsam Torchwood | G4 | SX | N | N |
| <i>Asplenium auritum</i> | Auricled Spleenwort | G5 | S2 | N | LE |
| <i>Asplenium serratum</i> | American Bird's Nest Fern | G4 | S1 | N | LE |
| <i>Calamintha ashei</i> | Ashe's Savory | G3 | S3 | N | LT |
| <i>Centrosema arenicola</i> | Sand Butterfly Pea | G2Q | S2 | N | LE |
| <i>Chamaesyce cumulicola</i> | Sand-dune Spurge | G2 | S2 | N | LE |
| <i>Coelorachis tuberculosa</i> | Piedmont Jointgrass | G3 | S3 | N | LT |
| <i>Conradina grandiflora</i> | Large-flowered Rosemary | G3 | S3 | N | LT |
| <i>Cucurbita okeechobeensis</i> | Okeechobee Gourd | G1 | S1 | LE | LE |
| <i>Deeringothamnus rugelii</i> | Rugel's Pawpaw | G1 | S1 | LE | LE |
| <i>Glandularia maritima</i> | Coastal Vervain | G3 | S3 | N | LE |
| <i>Glandularia tampensis</i> | Tampa Vervain | G2 | S2 | N | LE |
| <i>Harrisia simpsonii</i> | Simpson's Prickly Apple | G2 | S2 | N | LE |
| <i>Hartwrightia floridana</i> | Hartwrightia | G2 | S2 | N | LT |
| <i>Helianthus carnosus</i> | Lake-side Sunflower | G1G2 | S1S2 | N | LE |
| <i>Illicium parviflorum</i> | Star Anise | G2 | S2 | N | LE |
| <i>Lantana depressa var. floridana</i> | Atlantic Coast Florida Lantana | G2T1 | S1 | N | LE |
| <i>Lechea cernua</i> | Nodding Pinweed | G3 | S3 | N | LT |
| <i>Lechea divaricata</i> | Pine Pinweed | G2 | S2 | N | LE |
| <i>Matelea floridana</i> | Florida Spiny-pod | G2 | S2 | N | LE |
| <i>Minuartia godfreyi</i> | Godfrey's Sandwort | G1 | S1 | N | LE |
| <i>Monotropsis reynoldsiae</i> | Pigmy Pipes | G1Q | S1 | N | LE |
| <i>Myriophyllum laxum</i> | Piedmont Water-milfoil | G3 | S3 | N | N |
| <i>Nemastylis floridana</i> | Celestial Lily | G2 | S2 | N | LE |
| <i>Nolina atopocarpa</i> | Florida Beargrass | G3 | S3 | N | LT |
| <i>Ophioglossum palmarum</i> | Hand Fern | G4 | S2 | N | LE |
| <i>Pavonia spinifex</i> | Yellow Hibiscus | G4G5 | S2 | N | N |
| <i>Pectuma plumula</i> | Plume Polypody | G5 | S2 | N | LE |

Rare Species and Natural Communities Documented or Reported

| Scientific Name | Common Name | Global Rank | State Rank | Federal Status | State Status |
|-----------------------------------|--------------------------|-------------|------------|----------------|--------------|
| <u>PLANTS</u> | | | | | |
| <i>Pectuma pilodon</i> | Swamp Plume Polypody | G5? | S2 | N | LE |
| <i>Peperomia humilis</i> | Terrestrial Peperomia | G5 | S2 | N | LE |
| <i>Pteroglossaspis ecristata</i> | Giant Orchid | G2 | S2 | N | LT |
| <i>Schwalbea americana</i> | Chaffseed | G2 | S1 | LE | LE |
| <i>Verbesina heterophylla</i> | Variable-leaf Crownbeard | G2 | S2 | N | N |
| <i>Zephyranthes simpsonii</i> | Rain Lily | G2G3 | S2S3 | N | LT |
| <u>NATURAL COMMUNITIES</u> | | | | | |
| Basin marsh | | G4 | S4 | N | N |
| Basin swamp | | G4 | S3 | N | N |
| Baygall | | G4 | S4 | N | N |
| Beach dune | | G3 | S2 | N | N |
| Blackwater stream | | G4 | S3 | N | N |
| Bog | | G2 | S1 | N | N |
| Coastal grassland | | G3 | S2 | N | N |
| Coastal strand | | G3 | S2 | N | N |
| Depression marsh | | G4 | S4 | N | N |
| Estuarine tidal marsh | | G5 | S4 | N | N |
| Floodplain marsh | | G3? | S2 | N | N |
| Floodplain swamp | | G4 | S4 | N | N |
| Hydric hammock | | G4 | S4 | N | N |
| Maritime hammock | | G3 | S2 | N | N |
| Mesic flatwoods | | G4 | S4 | N | N |
| Sandhill | | G3 | S2 | N | N |
| Sandhill upland lake | | G3 | S2 | N | N |
| Scrub | | G2 | S2 | N | N |
| Scrubby flatwoods | | G3 | S3 | N | N |
| Shell mound | | G2 | S2 | N | N |
| Slope forest | | G3 | S2 | N | N |
| Spring-run stream | | G2 | S2 | N | N |
| Upland mixed forest | | G4 | S4 | N | N |
| Wet flatwoods | | G4 | S4 | N | N |
| Xeric hammock | | G3 | S3 | N | N |
| <u>OTHER ELEMENTS</u> | | | | | |
| Bird rookery | | GNR | SNR | N | N |
| Geological feature | | GNR | SNR | N | N |
| Manatee aggregation site | | GNR | SNR | N | N |

Total count:

Number of tracked elements: 135

Number of distinct occurrences: 409



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GLOBAL AND STATE RANKS

Florida Natural Areas Inventory (FNAI) defines an element as any rare or exemplary component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. FNAI assigns two ranks to each element found in Florida: the **global rank**, which is based on an element's worldwide status, and the **state rank**, which is based on the status of the element within Florida. Element ranks are based on many factors, including estimated number of occurrences, estimated abundance (for species and populations) or area (for natural communities), estimated number of adequately protected occurrences, range, threats, and ecological fragility.

GLOBAL RANK DEFINITIONS

- 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 human 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 human 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 Occurred historically throughout its range, but has not been observed for many years.
- GX Believed to be extinct throughout range.
- GXC Extirpated from the wild but still known from captivity or cultivation.
- G#? Rank uncertain (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 subgroup; T# has same definition as G#.
- G#Q Ranked as species but there is some question as to whether it is a valid species.
- G#T#Q Same as above, but validity as subspecies or variety is questioned.
- GU Global rank unknown; due to lack of information, no rank or range can be assigned.
- G? Temporarily not ranked.

STATE RANK DEFINITIONS

State ranks (S#) follow the same system and have the same definitions as global ranks, except they apply only to Florida, with the following additions:

- SA Accidental in Florida and not part of the established biota.
- SE Exotic species established in Florida (may be native elsewhere in North America).
- SX Believed to be extirpated from state.



Florida Resources
and Environmental
Analysis Center

Institute for Science
and Public Affairs

The Florida State University

FEDERAL AND STATE LEGAL STATUSES

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

FEDERAL LEGAL STATUS

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.

- LE Endangered: species in danger of extinction throughout all or a significant portion of its range.
- LT Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
- E(S/A) Endangered 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.
- T(S/A) Threatened due to similarity of appearance (see above).
- PE Proposed for listing as Endangered species.
- PT Proposed for listing as Threatened species.
- 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.
- XN Non-essential experimental population.
- MC Not currently listed, but of management concern to USFWS.
- N Not currently listed, nor currently being considered for listing as Endangered or Threatened.

FLORIDA LEGAL STATUSES

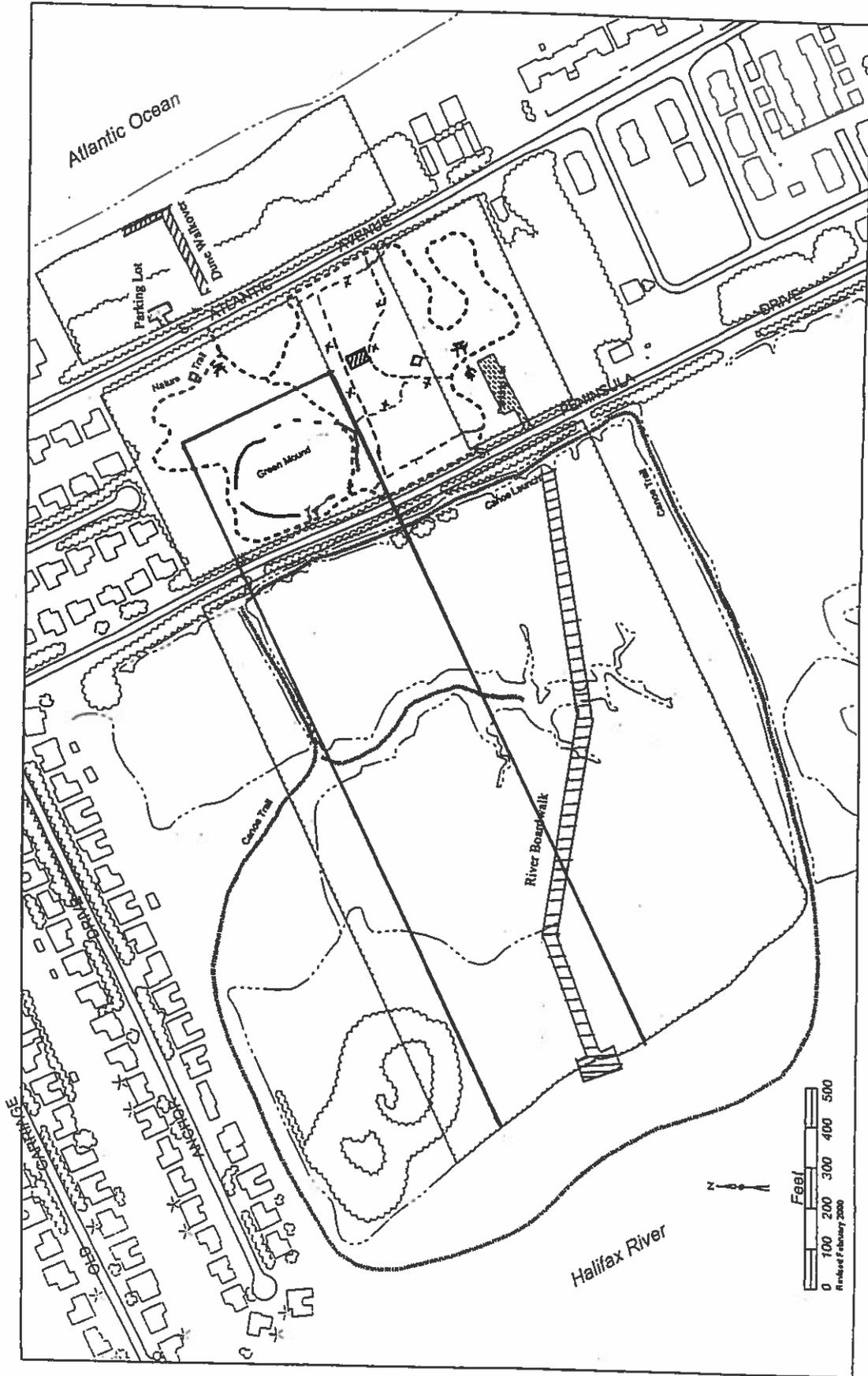
Animals: Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

- LE Endangered: species, subspecies, or isolated population so few or depleted in number or so restricted in range that it is in imminent danger of extinction.
- LT Threatened: species, subspecies, or isolated population facing a very high risk of extinction in the future.
- LS Species of Special Concern is a species, subspecies, or isolated population which is facing a moderate risk of extinction in the future.
- PE Proposed for listing as Endangered.
- PT Proposed for listing as Threatened.
- PS Proposed for listing as Species of Special Concern.
- 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.

- LE 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.
- LT 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.
- PE Proposed for listing as Endangered.
- PT Proposed for listing as Threatened.
- N Not currently listed, nor currently being considered for listing.

Appendix VIII



Generalized Site Development Plan

Appendix IX

very poor level of service; however, construction of a new four-lane, high-rise bridge is now under way. Upon completion of this project, the roadway is expected to provide an acceptable level of service for the existing and projected population of Ponce Inlet and other areas within the travel shed of the bridge.

One other road segment is expected to fail to provide adequate level of service for the projected population unless improved. That segment -- South Atlantic Avenue between Dunlawton Avenue and the north Town limits -- is programmed by the County to be four-laned in 1995.

Historical and Archaeological Resources

The locations of significant historical and archaeological sites and structures are shown on the existing land use map. Consideration of these resources is important in land use planning to ensure that they will be preserved and that future development of the surrounding areas will not detract from the significant characteristics of these resources.

Contaminated Areas

In Ponce Inlet, one area of possible ground contamination has been identified. It is the area of a recently abandoned package wastewater treatment plant. A settling pond used in the treatment process at this site has been drained and filled with soil material.

A second concern is the existing marinas where boat maintenance activities, particularly the use of anti-fouling bottom paints, present another potential source of health-threatening contaminants.

Building Height Restrictions

By referendum in November 1983, the voters of the Town overwhelmingly approved a Charter Amendment limiting building construction to a height of 35 feet. Ordinance 84-11 implements this Charter provision on all properties of the Town except those properties which, at the time of adoption of the Ordinance, were already developed or zoned to permit a greater height.

Blighted Areas and Incompatible Uses

There are no existing blighted areas in Ponce Inlet, nor are there any existing uses which would by their characteristics seriously limit the development potential of adjacent areas. Arguably, the existing marine-oriented commercial areas might be considered an exception. Current development regulations do ensure buffering of these uses. However, additional buffering requirements for future development should be considered.

ASSESSMENT OF FUTURE ACREAGE REQUIREMENTS

This section identifies future acreage requirements for each land use category. An explanation is given below of the methodology and assumptions used to project acreage requirements for each category. The resulting acreage numbers are summarized in Table II-4.

Residential Development. The Housing Element projects a need for 645 new housing units between 1986 and 1995, and 1085 units between 1996 and 2010. For the purposes of determining future acreage requirements, these projected housing units are allocated to five different residential categories representing a range of densities. There are three single family residential categories -- low, medium-low, and medium density -- and two multi-family categories -- medium-high and high density. The estimated average densities for the low, medium-low and medium density categories are 2.8, 3.4 and 4.0 dwelling units per acre (du/a), respectively. For the multi-family categories, the estimated average densities are 10 du/a and 25 du/a, respectively.

The allocation of housing units to density categories over the periods 1986-1995 and 1996-2010 are shown in Table II-3. Also shown in Table II-3 are the numbers of acres needed to accommodate the projected housing units. These acreage figures were derived by dividing the projected numbers of housing units by the estimated average densities reported above. As indicated there, a total of 160 acres will need to be developed to accommodate the number of new housing units projected for the period 1986-2010. For the period 1996-2010, 271 additional acres will have to be

Appendix X

Recognizing that wetlands are productive ecosystems which provide fish and wildlife habitat, the state and federal governments have enacted strong protective measures. The Town, also, recognizes the need to preserve wetlands. Therefore, the Plan proposes no land uses in wetland areas except "open space" uses which will not adversely affect the natural resources and systems. Additionally, the Town is considering enactment of wetlands protection regulations which will provide further protection. However, wetland protection alone will not ensure the continuing viability of the wetlands ecosystem. Wetlands must be managed as part of a complete natural system including adjacent uplands. Essential linkages exist between wetlands and adjacent uplands which must be maintained. Many animal species require uplands for nesting and wetlands for feeding. Uplands provide many important function in maintaining the water quality in adjacent estuaries including filtering pollutants from stormwater run-off and regulating the rate of run-off (thereby maintaining an optimum salinity gradient).

The coastal scrub areas adjacent to the wetlands are prized by developers due primarily to their proximity to the Atlantic Ocean beaches and the Halifax River. Development of these areas will require the removal of much of the vegetative cover and some alteration of the natural grades. However, the relatively low overall density and intensity of development proposed by the Town will minimize this loss. In addition, the Town has enacted development regulations which prohibit unnecessary removal of the vegetation and alteration of the natural grades, and encourage cluster development to preserve areas of natural vegetation in certain zoning districts.

EFFECT OF BEACHFRONT DEVELOPMENT AND BEACH DRIVING ON SEA TURTLE NESTING

The ocean beach within Ponce Inlet is generally recognized as an important nesting area for sea turtles. During the months of May through October, adult females deposit their eggs in the soft sand at the base of the easterly-most dune, usually at night around the full moon. The bright artificial lighting from nearby development may discourage these turtles from nesting. In order to encourage nesting, artificial lighting should be kept to a minimum and shielded so as not to illuminate the beach. Seawalls and other dune armoring structures may also discourage or prevent turtles from nesting. Although seawalls already exist along most of the Town's shoreline, they are located far enough back from the ocean that dunes remain or have redeveloped along their faces, allowing nesting to occur.

Upon hatching, the baby turtles must make their way across the beach to the water. Normally, hatchings occur after dark when the moon is full. Driving is not permitted on the beach from one-half hour after sunset to one-half hour before sunrise. Thus, beach driving poses little threat to the hatchlings. Artificial lighting, however, is again a concern. The hatchlings, which are guided to the water by the full moon, can become disoriented if bright artificial lighting is present.

Volusia County has enacted a "minimum standards" ordinance (Ordinance 88-15) which promotes sea turtle nesting by restricting artificial lighting along the beaches. The Town will comply with these minimum standards.

GOALS, OBJECTIVES AND POLICIES

Goal 1. Conserve, protect, and restore coastal natural resources in order to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics: and preserve and expand opportunities for the general public to use and enjoy the ocean beaches, the Halifax River, and other natural resource areas with significant recreational potential.

Objective 1.1. Maintain or increase the current acreage of Saltmarsh and Mangrove Swamp and other wetland habitat located within Ponce Inlet.

Policy 1.1.1. The Town shall review existing state, federal and local wetlands regulations to determine what wetlands are not already adequately protected. Where additional protection of wetland areas is required, the Town shall consider enacting appropriate regulations and management techniques to preserve such areas, including transfer of development rights, mitigation, purchase of development rights, conservation easements, etc.

Policy 1.1.2. The Town shall monitor development in wetland areas to ensure that existing local, state and federal wetland preservation requirements are strictly enforced.

Policy 1.1.3. The Town may allow removal or destruction of existing wetland vegetation only when it is necessary to promote a greater public interest and no practical alternative is available. Such lost wetland areas will be replaced by high quality created wetlands at a ratio of 1:1.5 or greater.

Objective 1.2. Preserve intact a minimum of fifteen percent (15%) of the existing acreage of Coastal Strand vegetative community within the Town limits.

Policy 1.2.1. The Town shall encourage land developers and subdividers to preserve on-site Coastal Strand vegetation through the use of dedication of environmental easements, and other creative techniques.

Policy 1.2.2. The Town shall promote a pattern of interconnected Coastal Strand vegetation preserves among adjacent development projects through informal negotiations with developers/owners and, where necessary, public purchase.

Policy 1.2.3. The Town shall revise its land development regulations as necessary to require developers and subdividers to preserve natural buffers between dissimilar land uses, along collector roads, and adjacent to wetlands.

Objective 1.3. No use or development shall be permitted that will degrade the quality of surface waters in and around the Town.

Policy 1.3.1. The Town shall require all new development to retain urban stormwater run-off on-site to be percolated into the groundwater aquifer, or to remove all harmful pollutants before discharge into any surface water body.

Policy 1.3.2. The Town shall require the preservation of natural upland vegetative buffers adjacent to wetland areas and surface water bodies.

Policy 1.3.3. In order to minimize the discharge of sediments and other pollutants into surface waters during construction phases, the Town shall require all developers to utilize "best management practices" as outlined in the BMP Manual prepared by the Volusia Council of Governments under a 208 Water Quality grant.¹

Policy 1.3.4. The Town shall require owners of existing and proposed marinas within the Town to insure pollution control.

¹"Best Management Practices for the Construction Industry to Control Water Pollution in Volusia County, Florida", Volusia Council of Governments, 1980.

Objective 1.4. Maintain the existing characteristics of the groundwater aquifer, particularly with regard to the quantity and quality of water now found there.

Policy 1.4.1. The Town shall continue to require new development to retain stormwater run-off on-site for eventual percolation into the groundwater aquifer.

Policy 1.4.2. The Town shall promote preservation and replanting of natural vegetation in all development projects in an effort to curb the use of non-native, poorly adapted vegetation which requires excessive irrigation.

Appendix XI

STATE COMPREHENSIVE PLAN, SECTION 187.201, FLORIDA STATUTES

(10) NATURAL SYSTEMS AND RECREATIONAL LANDS.--

(a) *Goal.*--Florida shall protect and acquire unique natural habitats and ecological systems, such as wetlands, tropical hardwood hammocks, palm hammocks, and virgin longleaf pine forests, and restore degraded natural systems to a functional condition.

(b) *Policies.*--

1. Conserve forests, wetlands, fish, marine life, and wildlife to maintain their environmental, economic, aesthetic, and recreational values.
2. Acquire, retain, manage, and inventory public lands to provide recreation, conservation, and related public benefits.
3. Prohibit the destruction of endangered species and protect their habitats.
4. Establish an integrated regulatory program to assure the survival of endangered and threatened species within the state.
5. Promote the use of agricultural practices which are compatible with the protection of wildlife and natural systems.
6. Encourage multiple use of forest resources, where appropriate, to provide for timber production, recreation, wildlife habitat, watershed protection, erosion control, and maintenance of water quality.
7. Protect and restore the ecological functions of wetlands systems to ensure their long-term environmental, economic, and recreational value.
8. Promote restoration of the Everglades system and of the hydrological and ecological functions of degraded or substantially disrupted surface waters.
9. Develop and implement a comprehensive planning, management, and acquisition program to ensure the integrity of Florida's river systems.
10. Emphasize the acquisition and maintenance of ecologically intact systems in all land and water planning, management, and regulation.
11. Expand state and local efforts to provide recreational opportunities to urban areas, including the development of activity-based parks.
12. Protect and expand park systems throughout the state.
13. Encourage the use of public and private financial and other resources for the development of recreational opportunities at the state and local levels.

Appendix XII

STATE COMPREHENSIVE PLAN, SECTION 187.201, FLORIDA STATUTES

(19) CULTURAL AND HISTORICAL RESOURCES.--

(a) *Goal.*--By 1995, Florida shall increase access to its historical and cultural resources and programs and encourage the development of cultural programs of national excellence.

(b) *Policies.*--

1. Promote and provide access throughout the state to performing arts, visual arts, and historic preservation and appreciation programs at a level commensurate with the state's economic development.
2. Develop a strategy for the construction of arts facilities based on an assessment which ranks regional and statewide capabilities and needs.
3. Ensure the identification, evaluation, and protection of archaeological folk heritage and historic resources properties of the state's diverse ethnic population.
4. Stimulate increased private sector participation and support for historical and cultural programs.
5. Encourage the rehabilitation and sensitive, adaptive use of historic properties through technical assistance and economic incentive programs.
6. Ensure that historic resources are taken into consideration in the planning of all capital programs and projects at all levels of government and that such programs and projects are carried out in a manner which recognizes the preservation of historic resources.