

APPENDIX 4.
Land Management Review Responses, 2006 and 2010

**Land Management Review of
Weedon Island Preserve
Lease No. 3985 & 3376
January 12, 2006**

Prepared by Division of State Lands Staff

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For

Weedon Island Preserve

Final

April 21, 2006

| | |
|---------------------|-----------------|
| Land Manager: | Pinellas County |
| Area: | 3,164 acres |
| County: | Pinellas |
| Mgmt. Plan Revised: | 4/25/2002 |
| Mgmt. Plan Due: | 4/25/2012 |

Management Review Team Members

| Agency Represented | Team member Appointed | Team member In attendance |
|-----------------------|-----------------------|---------------------------|
| DOF | Bill Korn | Bill Korn |
| DEP (Tampa) | Ted Murray | Ted Murray |
| Defenders of Wildlife | Laurie Macdonald | Laurie Macdonald |
| Land Owner | Ray Wonderlich III | Ray Wonderlich III |
| FPS | Sally Braem | Sally Braem |
| FWC | Paul Hansen | Paul Hansen |
| County | Keith Thompson | Keith Thompson |

Process for Implementing Regional Management Review Teams

Legislative Intent and Guidance:

Chapter 259.036, F. S. was enacted in 1997 to determine whether conservation, preservation, and recreation lands owned by the state Board of Trustees of the Internal Improvement Trust Fund (Board) are being managed properly. It directs the Department of Environmental Protection (DEP) to establish land management review teams to evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions, and archaeological features. The teams also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan. If a land management plan has not been adopted, the review shall consider the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices are in compliance with the management policy statement and management prospectus for that property. If the land management review team determines that reviewed lands are not being managed for the purposes for which they were acquired or in compliance with the adopted land management plan, management policy statement, or management prospectus, DEP shall provide the review findings to the Board, and the managing agency must report to the Board its reasons for managing the lands as it has. A report of the review team findings are given to the managing agency under review, the Acquisition and Restoration Council, and the Governor and Cabinet.

Review Site

The management review of Weedon Island Preserve considered approximately 3,164 acres in Pinellas County that is managed by Pinellas County. The team evaluated the extent to which current management actions are sufficient, whether the land is being managed for the purpose for which it was acquired, and whether actual management

practices, including public access, are in compliance with the management plan. The management plan update is due on April 25, 2012.

Review Team Determination

Is the land being managed for the purpose for which it was acquired?

After completing the checklist, team members were asked to answer "yes" or "no" to this question. All team members agreed Weedon Island Preserve is being managed for the purpose for which it was acquired.

Are actual management practices, including public access, in compliance with the management plan?

After completing the checklist, team members were asked to answer "yes" or "no" to this question. All team members agreed Weedon Island Preserve is in compliance with the management plan.

Commendations to the Managing Agency

1. The team commends the county staff for the quality and quantity of the diversity of their educational programs. (VOTE 7+, 0-)
2. The team commends the County for promoting and protecting the cultural and archeological resources as well as the natural resources on the property. (VOTE: 7+, 0-)
3. The team commends the County for making great strides forward in restoring the natural communities on the preserve, although much remains to be done. (VOTE 7+, 0-)
4. The team commends the County staff for completing the botanical surveys. (VOTE 7+, 0-)

Exceptional Management Actions

The following items received high scores on the review team checklist (see attachments), which indicates that management actions exceeded expectations.

Exceptional management actions:

- Management of xeric hammock, coastal berm, tidal marsh, and salt tern.
- Protection and preservation of the cultural resources.
- Control of invasive plants and animals.
- Management of roads and culverts.

- Gates and fencing, boundary survey, signage and law enforcement presence.
- Public access including roads, parking, recreational facilities and interpretive signs.
- Environmental education and outreach programs.
- Waste disposal, sanitary facilities and equipment.
- Management of visitor impacts.

Recommendations and Checklist Findings

The management plan must include responses to the recommendations and checklist items that are identified below.

Recommendations

The following recommendations resulted from a discussion and vote of review team members.

1. The team recommends that baseline surveys be done for the springs water quality and quantity. (VOTE: 7+, 0-)

Manager's Response: We appreciate the value of a baseline survey of the hydrologic effects of the springs, and we will include as a goal in the plan a study of the springs' water quality and quantity. This groundwater study likely will need to be completed through outside expertise, either through partnerships or by contracts. However, it should be noted that the springs are on the property that is leased to the County by Progress Energy Florida, Inc., and that this parcel is not under the State purview.

2. The team recommends that baseline surveys be completed for the flora and fauna of the preserve. (VOTE: 7+, 0-)

Manager's Response: We agree that a more detailed list of all taxonomic groups needs to be completed throughout the preserve. A basic understanding of the flora and fauna in the preserve does exist: there are a number of surveys that have been completed and ongoing studies that, unfortunately, were not presented to the review team. These studies and surveys are done through partnerships with various groups or through specific contracts.

A list of these surveys and ongoing studies over the past five years include:

- Annual Spring and Summer Butterfly counts, Pinellas County ELD and volunteers, ongoing;
- Weekly Bird Surveys, Audubon volunteers, ongoing;
- Gopher tortoise surveys following prescribed fire events, Pinellas County ELD, ongoing;
- Floral and Faunal Inventory of Weedon Island and other Pinellas County Preserves, Steven P. Christman, 2003, includes surveys of herpetofauna and flora;

- Vascular Plant Survey and Assessments of the Major Habitat Types Found in Weedon Island Preserve South, Pinellas County, Florida, Annie Schmidt (Pinellas County ELD), 2005;
- The Effects of Saltern Restoration at Weedon Island Preserve, Dave Sumpter, Preserving the Environment Through Ecological Research (PEER). Inc., ongoing, includes floral and avian, surveys and aquatic invertebrate and fish sampling;
- Extra-floral Nectaries and Herbivore Exclusion by Ants on *Crotalaria pallida* (Fabaceae), Laura Altfeld and Dr. Rebecca Forkner (University of South Florida), ongoing, includes surveys of insects;
- and the USGS Tampa Bay Project: an integrated science approach for studying the interrelations between geological, biological, chemical, and hydrological components of estuarine systems (mosquito ditches), and the impact of natural and anthropogenic change to all components of estuarine systems. Tom Smith (USGS), ongoing. Sampling includes vegetation transects in the mangrove forests, sediment cores for chemistry and history, fish sampling, surface and groundwater quality and quantity, and baseline maps and bathymetry.

These inventories will all be included in the update of the management plan. In addition, we incidentally collect information concerning the diversity and abundance of many taxonomic groups. We do recognize that there is more work to be done with taxonomic surveys, and will continue to develop more comprehensive lists as time and money permit.

3. The team recommends that an on site fire manager position be established in order to implement a more aggressive and consistent burn program. (VOTE: 7+, 0-)

Manager's Response: We agree that the fire program has fallen behind in the past few years. The restructure of the Division left staff lacking in the land management section of the division. The current south county land manager does not have a burn background or certification. The Division has requested additional staff. If the County Commission approves this request the Division will better be able to fulfill the needs of fire management at Weedon Island Preserve.

At present, the burning and its related planning are performed by the north county land manager. The north county land manager works with the mid and south county land managers to determine burn units and regimes.

No burns occurred at WIP in December 2001 through March 2005. The current south county land manager started in December of 2002. In early 2005, the South County and north county land managers met to look at the WIP burn program. At this time the old units and fire schedules were reviewed. Two of the larger old units were often burned in smaller sub-units. The old records made it difficult to track when these sub-units were burned. The units were broken into official smaller units in 2005 and are now tracked in a computer file. The burning resumed in April 2005.

There are a total of 127 acres of uplands that fall under State ownership. They are broken into 15 burn units. This includes 10 units on WIP proper, 3 on Ross Island and 2 on Google Island. Without regard to ownership, there are a total of 19 burn units on all

the uplands within the preserve. By burning an average of 4-5 units annually the units will fall under an average 4-5 year rotation. Depending on the habitat some units will fall under a longer fire regime and others a shorter one.

4. The team recommends that a historic vegetative community's map be developed to help establish the desired future conditions for community types. This should include wetland communities such as salt terns. (VOTE: 7+, 0-)

Manager's Response: We recognize that habitats change over time and that the historical perspective is critical in developing future management and restoration decisions. We are partnering with the USGS and other experts to map historic vegetative communities and acknowledge that this task should be completed. Our goal is to restore historic vegetative communities to

5. The team recommends the county staff prepare an invasive exotic plant control plan that includes mapping and control strategies. (VOTE: 7+, 0-)

Manager's Response: Mapping of the vegetative communities was completed in November 2005. We acknowledge a more detailed map of the invasive exotic vegetation must be completed as well. The current strategy is to remove exotics within each of the burn units. We recognize that more extensive mapping of exotics and acres treated should be recorded in support of management efforts. It is our goal to complete a detailed map of the exotics and prepare a plan for control. With additional staff this can be accomplished in a reasonable timeframe. With no additional staff this will have to be done through additional partnerships and volunteers and will take much longer to complete.

6. The team recommends that commercial signage within the preserve be prohibited in the future. (VOTE: 6+, 1-)

Manager's Response: We acknowledge the team's concern and thank them for their recommendation. The current sign has been installed for directional purposes. We will take this recommendation under advisement and propose to install a sign similar to the signs directing visitors into the preserve. These signs are used throughout Pinellas County as directional signs into all preserves.

Checklist findings

The following items received low scores on the review team checklist (see Attachment 1), which indicates that management actions, in the field, were insufficient (f) or that the issue was not sufficiently addressed in the management plan (p). These items need to be further addressed in the management plan update.

1. Discussion in the management plan to address the management issues related to the maritime hammock, shell mound, tidal marsh, coastal berm, salt tern and seagrass/mollusk reef communities.(p)

Manager's Response: This will be addressed in the next plan in much more detail. In the interim we will continue to conduct surveys of the communities and produce detailed maps to provide the information necessary to make management decisions. This will be accomplished through additional staff, partnerships or volunteers.

2. Discussion in the management plan of the management needed to protection gopher tortoises.(p)

Manager's Response: Current protection through management includes our Preserve Ordinance that prohibits removal, introduction or harassment of any wildlife in the preserve.

Enforcement of this ordinance is done through a contract with the Pinellas County Sheriff's office.

Other efforts include prescribe fire to improve and increase gopher tortoise habitat. Upon the completion of each burn unit each burrow will be located, mapped, measured and evaluated for occupancy. Over time such information will provide a more detailed understanding of the number and distribution of the tortoises at the preserve, and ultimately support our efforts to protect this species.

We agree more detailed discussion needs to be included in the plan, and all of the above efforts will be incorporated in the updated version.

3. Discussion in the management plan of the amount of area being burned and the frequency of the prescribed fire.(f)

Manager's Response: As previously discussed, no burns occurred at WIP in December 2001 through March 2005. In early 2005, the South County and north county land managers met to look at the WIP burn program. At this time the old units and fire schedules were reviewed. Two of the larger old units were often burned in smaller sub-units. The old records made it difficult to track when these sub-units were burned. The units were broken into official smaller units in 2005 and are now tracked in a computer file. The burning resumed in April 2005.

There are a total of 127 acres of uplands that fall under State ownership. They are broken into 15 burn units. This includes 10 units on WIP proper, 3 on Ross Island and 2 on Googe Island. Without regard to ownership, there are a total of 19 burn units on all the uplands within the preserve. By burning an average of 4-5 units annually the units will fall under an average 4-5 year rotation. Depending on the habitat some units will fall under a longer fire regime and others a shorter one.

The new plan will discuss each of these new units and their specific burn regime. In the existing plan under prescribed burning there is a paragraph discussing sandhill. This should have been scrub that is succeeding to xeric hammock. This will be addressed in the new plan.

4. Discussion in the management plan of the hydrologic/geologic function

ditches.(f)

Manager's Response: We have a partnership with the USGS in their 3 year study of the hydrologic, geologic and biologic functions of the mosquito ditches. The study area includes the mosquito ditches within Terra Ceia Aquatic Preserve, Mobbly Bayou Wilderness Preserve and Weedon Island Preserve. From these studies predictive models will be available to managers within the Tampa Bay region to evaluate the function of the ditches. This partnership with USGS provides us with the necessary predictive tools to propose restoration and management that is based on sound science. This will all be included in the management plan.

5. Discussion in the management plan of the need to monitor ground water quantity/quality (p.f) and surface water quantity/quality. (p)

Manager's Response: Monitoring of ground water quality is particularly challenging to achieve, and therefore often is addressed on a regional basis. There is no indication that Weedon Island is particularly unique that it requires special program for surface and groundwater monitoring beyond regional efforts. However, we will continue to seek and rely on outside expertise to study the hydrology of the preserve, as well as monitor the groundwater quality and quantity of the springs that are within the Progress Energy leased property.

Monitoring of the surface waters of Tampa Bay that surround Weedon Island has been done through Hillsborough County and Pinellas County's surface water monitoring programs. These programs have reported that the waters surrounding Weedon Island are not considered impaired. Treatment of the impervious surface throughout the preserve has been applied in accordance with State standards as well as through additional treatment via filtration through the mangrove swamps.

We recognize that hydrology should be covered more thoroughly in the management plan. The surface water quality data exists and will be discussed in more detail. Regional groundwater will be included as well.

6. Discussion in management plan of the expanding development in the adjacent property concerns.(p)

Manager's Response: We believe there is no longer a development problem in the Weedon Island watershed due to build-out in Pinellas County. We do recognize, however, that there is a redevelopment problem. We actively promote partnerships with owners of larger parcels to encourage best management ecosystem practices. We also have numerous programs offered through our Cultural and Natural History Education Center that educate homeowners, businesses and contractors on best management ecosystem practices and sustainability. These outreach and educational aspects of our program will be included in more detail in the management plan.

7. Discussion in the management plan of water resources including ditching, hydro-period alteration, and water level alteration.(p.f)

Manager's Response: As addressed above for Checklist Findings 4 and 5, we acknowledge that this needs to be addressed more thoroughly in the management plan.

Our partnership with the USGS Tampa Bay Project will provide the data that can be used and water resource monitoring staff of Pinellas County will provide the data to support our efforts.

8. Discussion in the management plan for the need of additional staff and Funding.(f)

Manager's Response: The need for additional staff was requested in the FY 06 budget and was denied. This additional staff has been requested once again in the FY 07 budget. We will continue to request additional staff until we have sufficient staff to fulfill our management plan requirements.

Prior to Environmental Lands Division assuming management responsibilities, the preserve staff structure included a manager, assistant manager, craft worker, spray technician, ranger and three park maintenance workers. The current staff includes a senior environmental specialist land manager, environmental specialist intern, park supervisor, craft worker, three park maintenance workers. This staff is responsible for multiple preserves and management areas, therefore spending less time at Weedon Island. The reorganization did, however, bring access to the Division's staff of research ecologists and environmental educators to assist with various aspects of providing sound land management.

We are currently identifying new restoration projects and infrastructure project in the capital budget. This budget is funded primarily by the Penny for Pinellas tax. The vote to renew to Penny for 2011 to 2020 is scheduled for November 2007. Outside funding sources will be used to help defray costs on each project. Once these projects are funded, additional staff will be critical to oversee each project.

9. Discussion in the management plan of issues related to invasive animals and plants.(p)

Manager's Response: We will continue our aggressive exotic removal program. It is our goal map and complete surveys to develop a plan to manage invasive animals and plants. Our main focus will be on the aggressive invasive species. We will continue to track and manage the less aggressive species that have little impact to our natural systems. We acknowledge that a detailed discussion of the issues related to invasive animal and plant management plan is needed and will be included in the plan.

10. Discussion in the management plan of issues related to a growing population and potential visitor impacts.(p)

Manager's Response: An electronic counter records the total number of vehicles that enter the preserve each month. The State guidelines for carrying capacity is the number of parking spaces available 119 for Weedon Island X's 2 people per car. Since we do not actually count the number of people who are in the preserve, we actively observe the number of parking spaces occupied. The preserve would be closed once every parking space is occupied. The Education Center is also providing more events to educate the growing population about environmental issues.

Team Member's Comments

Natural Communities: protection and maintenance: (I.A)

- More specific management objectives in the plan for each community type. The habitat types need better mapping. Need fire in scrubby flatwoods. Need spring run designation.
- Communities are described, but management and protection are not adequately addressed.
- More fire is needed in margins of xeric hammocks. Much more consistent and shorter burn interval is needed in pyrogenic communities. Prescribed fire program needs to get more aggressive in maintaining burn intervals, especially in all scrubby flatwoods. Place emphasis on burning scrubby sites next to interpretive center. Mowing in advance of burning may be required. Better natural community mapping is needed and consider adding shell mound to FNAI mapping. Much of this is currently typed as maritime hammock. Initiate burning in scrubby flatwoods on Ross Island. Mapping is needed to define location and health of seagrass and mollusk reef. Tidal swamps are largely impacted by mosquito ditching in the 1960's and, except for recent project on 80 acres, there's been to the restoration. In fact early photos (1927) indicate most of this area originally was salt tern, unconsolidated substrate and salt marsh. Historical natural community mapping is recommended. Need to address two spring runs in management plan, mapping and include required management actions to protect them. Brazilian peppers on shell mounds needs to be controlled.
- Map needs to be corrected. Management plan with Progress Energy needs to be developed and implemented. Note burn management more completely and considerations for burning in or near shell mounds. Shorter intervals between burnings.

Listed Species: protection and preservation (I.B1, I.B.2)

- Need updated lists. Need better plan for managing for listed species. Need more fire in gopher tortoise habitat.
- Briefly mentions 3 species of 18 known to occur or with potential to occur – animals. The listed species section mentions 7 species known to occur while the monitoring section is not species specific. More emphases could be placed on management activities for individual species of concern.
- Expand on protection and management of listed species.
- Good work to monitor gopher tortoise burrows. Good recent efforts by student staff members to survey property for plants. Three new listed species found, however golberia could not be located. Management plan needs to do a more thorough discussion of listed species population.

Cultural Resources: (II.A; II.B)

- Good history in plan, however little or no specifics on cultural resource management in plan.
- Additional information provided on-site illustrates adequate survey and protection is in place.
- Licensed archeologist on staff as well as volunteer archeological site monitors. Excellent work by USF (Weisman) to complete a comprehensive archeological/cultural site survey. These old and new sites will be submitted to DHR site file.

Prescribed Fire (Natural Community Maintenance): (III.A)

- Burn more and do photo point documentation.
- Lack of staff and reorganization have caused these burn units to fall behind.
- This property needs an onsite burn manager to take responsibility for burn prescriptions and supervising all preserve burns. This seems to be a critical need. Management plan needs to provide more details. Need to better define specific return intervals for each natural community. Evaluate specific goals for each community (eg. Palmetto height, percent of bare ground) to assist in determining fire intervals.

Restoration of Disturbed Natural Communities: (III.B)

- Some preliminary work has been completed at Ross and Googe Islands. Funding/mitigation dollars are necessary to increase accomplishments in restoration of mosquito ditches.

Non-native Invasive and Problem Species: (III.D)

- Need to improve exotic species management. Considerable amount of exotic plants in certain areas. Need more personnel in exotic removal.
- Exotics – good start, keep going.
- Current staffing and funding inhibit amount of time and money spent on identifying and tracking specific areas.
- Continual effort is needed here. Great accomplishments over the years, however, Brazilian pepper, lead tree, etc. continue to proliferate, especially in remote areas away from visitor center. Extra resources and funding is essential to reach a true maintenance condition. An exotic removal/control operational plan is needed that pulls together the population boundaries, control strategies, etc.
- Although a great deal of progress has been made, more detail in how they are addressing problems and what needs to be done for all the invasives.

Hydrologic/Geologic Function (III.E)

- Need to address restoration of mosquito ditches in plan.
- Until \$ is found, the ditches will continue to alter the communities.
- The very complicated issue of restoration of mosquito ditches is not addressed in sufficient detail in the plan. It requires much more thorough background and goals once your research and assessment is completed.
- Springs need to be studied.
- Water quality and flow need to be documented for the two springs.

Resource Protection (III.F)

- Excellent local law enforcement support through a very expensive contract. Excellent signage/buoys in bay to protect seagrass beds.

Adjacent Property Concerns: (III.G)

- Need to address mosquito ditches.
- Management plan includes no section on desired acquisitions or optimum management boundary.
- Need to include section on inholdings.

Public Access and Education: (IV.1; IV.2; IV.3; IV.4)

- Excellent facility, many recreational opportunities.
- Outstanding visitor center.
- Great variety of interpretive hiking trails, visitor/archeological center, kayak trails. Wonderful interpretive programs for all ages.
- Camping capacity controlled largely by parking and they have the ability to close the park. This should be stated in the plan along with an explanation of need to comply with carrying capacity for visitor experience and resource protection. Get rid of the commercial sign in the park.

Management Resources: (V.2. V.3; V.4)

- Need sanitary facility at the camp site.
- Excellent facilities.
- Need more office space and shop equipment storage.
- Need more office space, resource center, this place is much too small, land manager is housed in the educational center, should be in an office.
- Need more office space, resource center and a maintenance shop.
- Need more staff and funding for canal management and exotic plant control.
- Need staff and funding.
- Need funding for education, research and resource management.
- More funding for staff or outsourcing is necessary to eradicate exotic plants. A fire manager on site is needed. An onsite botanist/zoologist is needed.

Exceptional Management Actions

- Very well managed Cultural Resource Management Program. Visitor facilities are well maintained. Overall well managed even though the park is given limited resources.
- Depth, diversity and magnitude of education program. Exotic control.
- Management overall has maintained and continues to restore natural communities. Archeological sites are surveyed and appear to be well protected.
- Exotic invasives management has greatly improved the preserve although much remains to do to complete the restoration. Environmental education center. Have done an excellent job of promoting and protecting both the historical/archeological along with natural attributes of the preserve.

Areas of insufficient management

- Need to increase burn frequency of prescribed fire.
- Need to increase exotic plant control efforts.
- Great achievements in recent years related to archeological/interpretive centers and nature trails. Burning has fallen behind, however, and exotic plant removal needs a financial shot in the arm to achieve maintenance condition.

Recommendations for Improving Management of this Site:

- Wonderful job getting better all the time in over 30 years of coming here. Could work on getting rid of more invasive plants.
- Needs baseline surveys on water quality and quantity and also needs vertebrate and plant survey.
- Need more staff Biologists to help with Exotic removal and management of the natural communities and research for restoration.

| PLAN REVIEW | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | AVERAGE |
|---|----------|---|---|---|---|---|---|---|---------|
| Natural Communities (I.A) | | | | | | | | | |
| Xeric Hammock (85 acres) | I.A.1 | 0 | 1 | | 1 | 1 | 1 | 1 | 0.83 |
| Maritime Hammock (72) | I.A.2 | 0 | 0 | | 1 | 1 | 0 | 1 | 0.50 |
| Shell Mound | I.A.3 | 0 | 0 | | 0 | 1 | 0 | 0 | 0.17 |
| Scrubby Flatwoods (79) | I.A.4 | 0 | 1 | | 1 | 1 | 1 | 0 | 0.67 |
| Coastal Berm (11) | I.A.5 | 0 | 0 | | 1 | 1 | 0 | 1 | 0.50 |
| Tidal Swamp (2610) | I.A.6 | 0 | 0 | | 1 | 1 | 1 | 1 | 0.67 |
| Tidal Marsh (15) | I.A.7 | 0 | 0 | | 0 | 1 | 0 | 1 | 0.33 |
| Salt Tern (6) | I.A.8 | 0 | 0 | | 1 | 1 | 0 | 0 | 0.33 |
| Fresh Water Pond (4.5) | I.A.9 | 0 | 0 | | 1 | 1 | 0 | 1 | 0.50 |
| Seagrass/Mollusk Reef | I.A.10 | 0 | 0 | | 0 | 1 | 0 | 1 | 0.33 |
| Spring Run | I.A.11 | 0 | 1 | | 1 | 1 | 1 | 0 | 0.67 |
| Listed species: Protection & Preservation (I.B) | | | | | | | | | |
| Animals | | | | | | | | | |
| Gopher Tortoise | I.B.1a | 0 | 0 | | 0 | 1 | 0 | 0 | 0.17 |
| Plants | | | | | | | | | |
| Cultural Resources (Archeological & Historic sites) (II.A,II.B) | | | | | | | | | |
| Survey | II.A | 0 | 1 | | 1 | | 1 | 1 | 0.80 |
| Protection & Preservation | II.B | 0 | 1 | | 1 | | 1 | 1 | 0.80 |
| Resource Management, Prescribed Fire (III.A) | | | | | | | | | |
| Area being burned | III.A.1 | 1 | 1 | | 1 | | 0 | 0 | 0.60 |
| Frequency | III.A.2 | 1 | 1 | | 1 | | 0 | 0 | 0.60 |
| Quality | III.A.3 | 1 | 1 | | 1 | | 0 | 0 | 0.60 |
| Restoration of Ruderal Areas (III.B) | | | | | | | | | |
| Salt Tern | III.B.1 | 1 | 1 | | 1 | 1 | 1 | | 1.00 |
| Ross & Googe | III.B.2 | 0 | 1 | | 1 | 1 | 1 | | 0.80 |
| Non-Invasive & Problem Species (III.D) | | | | | | | | | |
| Animals | III.D.1 | 0 | 1 | | 0 | 1 | 1 | 0 | 0.50 |
| Plants | III.D.2 | 1 | 1 | | 0 | 1 | 0 | 0 | 0.50 |
| Hydrologic/Geologic function Hydro-Alteration (III.E.1) | | | | | | | | | |
| Roads/Culverts | III.E.1a | 0 | 1 | | | 1 | 1 | | 0.75 |
| Ditches | III.E.1b | 0 | 1 | | 1 | | 0 | | 0.50 |
| Ground Water Monitoring (III.E.2) | | | | | | | | | |
| Quality | III.E.2a | 0 | 0 | | 0 | 0 | 1 | 0 | 0.17 |

| | | | | | | | | | |
|---|----------|---|---|---|---|---|---|---|------|
| Quantity | III.E.2b | 0 | 0 | | 0 | 0 | 1 | 0 | 0.17 |
| Surface Water Monitoring (III.E.3) | | | | | | | | | |
| Quality | III.E.3a | 0 | 0 | | 0 | 1 | 0 | 1 | 0.33 |
| Quantity | III.E.3b | 0 | 0 | | 0 | 1 | 0 | 1 | 0.33 |
| Resource Protection (III.F) | | | | | | | | | |
| Boundary Survey | III.F.1 | 0 | 0 | | 1 | 1 | 1 | 1 | 0.67 |
| Gates & Fencing | III.F.2 | 1 | 1 | | 1 | 1 | 1 | 1 | 1.00 |
| Signage | III.F.3 | 1 | 1 | | 1 | 1 | 1 | 1 | 1.00 |
| Law Enforcement Presence | III.F.4 | 1 | 1 | | 1 | 1 | 1 | 1 | 1.00 |
| Adjacent Property Concerns (III.G) | | | | | | | | | |
| Land Use | | | | | | | | | |
| Expanding Development | III.G.1a | 0 | 0 | | 1 | 0 | 1 | | 0.40 |
| Water Resources | | | | | | | | | |
| Hydro-period Alteration | III.G.2a | 0 | 0 | | | 0 | 1 | | 0.25 |
| Water Level Alteration | III.G.2b | 0 | 0 | | | 0 | 1 | | 0.25 |
| Inholdings/additions | III.G.2c | 0 | 0 | | 0 | | 0 | 0 | 0.00 |
| Public Access & Education (IV) | | | | | | | | | |
| Public Access | | | | | | | | | |
| Roads | IV.1.a | 1 | 1 | | 1 | 1 | 1 | 1 | 1.00 |
| Parking | IV.1.b | 1 | 1 | | 1 | 1 | 1 | 1 | 1.00 |
| Recreational Opportunities | IV.2 | 1 | 1 | | 1 | 1 | 1 | 1 | 1.00 |
| Management of Visitor Impacts | IV.3 | 1 | 1 | | 0 | 1 | 0 | 0 | 0.50 |
| Interpretive facilities and signs | IV.4 | 1 | 1 | | 1 | 1 | 1 | 1 | 1.00 |
| Environmental education/outreach | IV.5 | 1 | 1 | | 1 | 0 | 1 | 1 | 0.83 |
| Managed Area Uses | | | | | | | | | |
| Existing Uses | | | | | | | | | |
| Recreational Trails | VI.A.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Fishing | VI.A.2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Boating | VI.A.3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Nature Study | VI.A.4 | | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Cultural & Environmental Interpretive Education Group | VI.A.5 | | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Camping (Primitive Group) | VI.A.6 | | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Canoeing | VI.A.7 | | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Bicycling | VI.A.8 | | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Geo Caching | VI.A.9 | | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Uses Proposed in the Management Plan | | | | | | | | | |
| Trail | VI.B.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Environmental Center | VI.B.2 | 1 | 1 | 1 | | 1 | 1 | 1 | 1.00 |

| | | | | | | | | | |
|--------------|--------|---|---|---|--|---|---|---|------|
| Canoe trail | VI.B 3 | 1 | 1 | 1 | | 1 | 1 | 1 | 1.00 |
| Canoe Launch | VI.B.4 | 1 | 1 | 1 | | 1 | 1 | 1 | 1.00 |

[illegible]

| | | | | | | | | | |
|---|----------|---|---|---|---|---|---|---|------|
| Roads/culverts | III.E.1a | 3 | X | 3 | 5 | 5 | 3 | | 3.80 |
| Ditches | III.E.1b | 2 | X | 2 | 4 | | 1 | | 2.25 |
| Ground Water Monitoring (III.E.2) | | | | | | | | | |
| Quality | III.E.2a | 3 | X | 2 | 1 | 1 | 3 | 2 | 2.00 |
| Quantity | III.E.2b | 3 | X | 2 | 1 | 1 | 3 | 2 | 2.00 |
| Surface Water Monitoring (III.E.3) | | | | | | | | | |
| Quality | III.E.3a | 3 | 3 | 3 | 4 | 5 | 2 | 4 | 3.43 |
| Quantity | III.E.3b | 3 | 3 | 3 | 4 | 5 | 2 | 4 | 3.43 |
| Resource Protection (III.F) | | | | | | | | | |
| Boundary Survey | III.F.1 | 3 | 4 | 4 | 5 | 5 | 3 | 5 | 4.14 |
| Gates & Fencing | III.F.2 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4.57 |
| Signage | III.F.3 | 4 | 5 | 4 | 5 | 5 | 4 | 4 | 4.43 |
| Law Enforcement Presence | III.F.4 | 4 | 5 | 3 | 5 | 5 | 5 | | 4.50 |
| Adjacent Property Concerns (III.G) | | | | | | | | | |
| Land Use | | | | | | | | | |
| Expanding Development | III.G.1a | 3 | 3 | 3 | 5 | 3 | 3 | 3 | 3.29 |
| Water Resources | | | | | | | | | |
| Hydro-period Alteration | III.G.2a | 3 | 3 | | | 1 | 3 | 2 | 2.40 |
| Water Level Alteration | III.G.2b | 3 | 3 | | | 1 | 2 | 2 | 2.20 |
| Inholdings/additions | III.G.2c | 3 | 3 | | | | 2 | 2 | 2.50 |
| Public Access & Education | | | | | | | | | |
| Public Access | | | | | | | | | |
| Roads | IV.1.a | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4.57 |
| Parking | IV.1.b | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4.57 |
| Recreational Opportunities | IV.2 | 4 | 5 | 5 | | 5 | 4 | 5 | 4.67 |
| Mgmt. of Visitor Impacts | IV.3 | 4 | 5 | 4 | | 5 | 4 | 4 | 4.33 |
| Interpretive facilities & signs | IV.4 | 5 | 5 | 4 | | 5 | 4 | 5 | 4.67 |
| Environmental educational/outreach | IV.5 | 4 | 5 | 4 | | 5 | 5 | | 4.60 |
| Management Resources | | | | | | | | | |
| Maintenance | | | | | | | | | |
| Waste disposal | V.1.a | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4.57 |
| Sanitary facilities | V.1.b | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4.57 |
| Infrastructure | | | | | | | | | |
| Buildings | V.2.a | 3 | 5 | 2 | 2 | 3 | 3 | 2 | 2.86 |
| Equipment | V.2.b | 4 | 4 | 2 | 5 | 5 | 3 | 4 | 3.86 |
| Staff | V.3 | 3 | 1 | 4 | 2 | 1 | 2 | 2 | 2.14 |
| Funding | V.4 | 3 | 1 | 3 | 2 | 1 | 2 | 2 | 2.00 |

Name of Site: Weedon Island Preserve

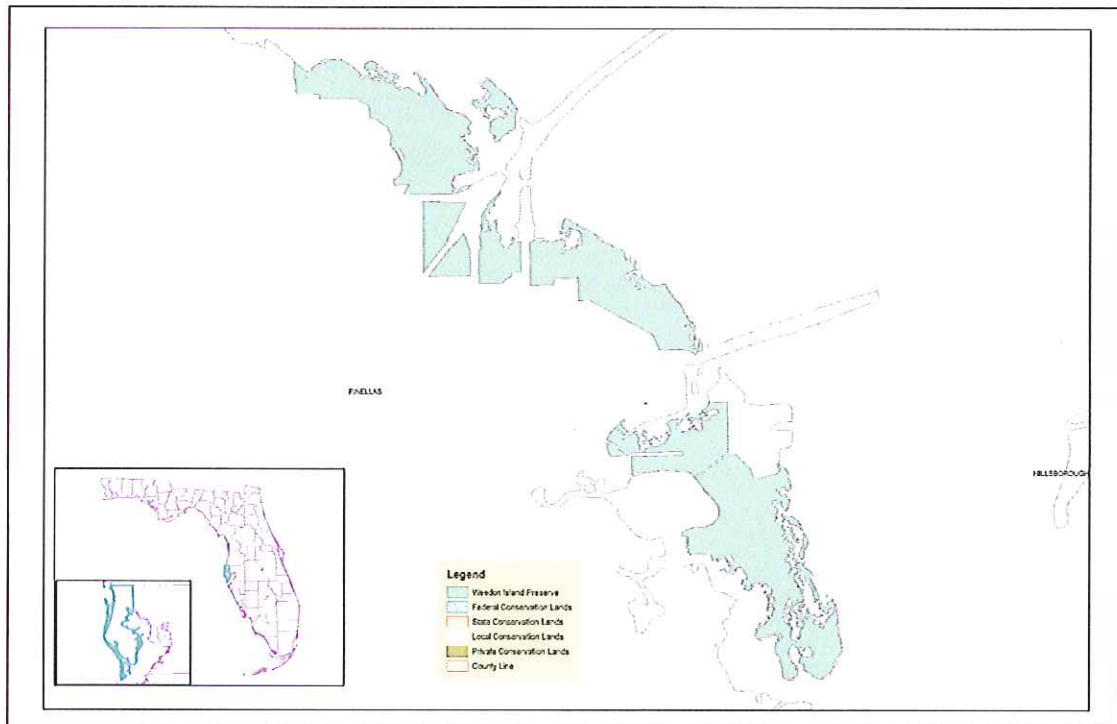
County: Pinellas County

Managed by: Pinellas County

Acres: 2,700 Acres
Area Reviewed: Entire Tract

Review Date: 9/13/2010

Management Plan Approval Date: 4/25/2002



Review Team Determination

Managed in accordance with
acquisition purpose? Yes = 6, No = 0



Management practices, including public access,
in compliance with the management plan? Yes = 6, No = 0



| Categories | Management Plan Review | Field Review |
|--|---------------------------|-----------------|
| Natural Communities | 0.85 | 3.44 |
| Listed Species | 0.72 | 3.68 |
| Natural Resource Survey | 0.68 | 3.01 |
| Cultural Resources | 1.00 | 4.58 |
| Prescribed Fire | 0.51 | 2.67 |
| Restoration | 0.75 | 3.52 |
| Exotic Species | 0.80 | 3.94 |
| Hydrology | 0.83 | 3.38 |
| Surface Water Monitoring | 0.50 | 3.40 |
| Resource Protection | 0.83 | 3.46 |
| Adjacent Property Concerns | 0.13 | 3.30 |
| Public Access & Education | 0.90 | 4.39 |
| Management Resources | N/A | 4.83 |
| Managed Area Uses | 0.83 | N/A |
| Buildings, Equipment, Staff & Funding | N/A | 2.83 |

Consensus Commendations to the Managing Agency

The following commendations resulted from discussion and vote of the review team members.

1. The team commends the Pinellas County staff on the high quality environmental education center at Weedon Island Preserve. (VOTE: 6+, 0-)



2. The team commends the staff for reinstituting a prescribed fire program on the property. (VOTE: 6+, 0-)



3. The team commends the staff for the extensive invasive exotic species removal program under often difficult situations, given the remoteness of the sites. (VOTE: 6+, 0-)



4. The team commends the staff for the overall understanding of their cultural and historic sites and their proactive efforts to continue survey and monitoring work. (VOTE: 6+, 0-)



Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of review team members. The management plan must include responses to the recommendations identified below.

1. The team recommends that when the management plan is updated, more specific site information that includes accurate FNAI maps and descriptions as well as up to date listed species lists, flora and fauna actually occurring on the property, and targets for habitat restoration and prescribed fire goals be included. (VOTE: 6+, 0-)



Managing Agency Response: We agree that the 2002 Management Plan flora and fauna species lists and goals for habitat restoration and prescribed fire were vague and lacked specific detail. The most up to date flora and fauna lists and habitat will be provided in the updated plan. The plan will also include future habitat restoration projects as well as goals for prescribed burning throughout the Preserve.

2. The team recommends that continued efforts be made to increase prescribed fire frequencies in the upland habitats. (VOTE: 6+, 0-)



Managing Agency Response: We will continue to make prescribed fire a priority for managing the fire-adapted communities in the Preserve as determined by available resources. The development of fire management goals for appropriate communities will be included in the updated plan.

3. The team recommends that more effort be made to continue monitoring practices for better adaptive management to support and guide resource management decisions (VOTE: 6+, 0-)



Managing Agency Response: We agree that monitoring is an important tool for guiding resource management decisions. Our monitoring efforts will focus on supporting the basic resource management prescribed burns, exotic and invasive species control, and public use and safety as available resources allow.

4. The team acknowledges the importance of the County maintaining the high level of integration of science, resource management and educational outreach that have characterized the success of the Weedon Island Preserve, and recommends that it be sustained. (VOTE: 6+, 0-)



Managing Agency Response: We will present approaches that promote the integration of science, resource management and educational outreach in the updated plan.

Field Review Checklist Findings

The following items received high scores on the review team checklist, which indicates that management actions exceeded expectations.

- Natural Communities, regarding maritime hammock, shell mound, coastal berm, tidal marsh and seagrass/mollusk reef.
- Listed Species, regarding gopher tortoise and plant inventory.
- Natural Resource Survey, regarding listed species or habitat monitoring and other non-game species or habitat monitoring.
- Cultural Resources, regarding cultural resource survey, protection and preservation.
- Restoration of Ruderal Areas, regarding salt tern.
- Non-Native, Invasive & Problem Species, regarding prevention and control of plants, animals, and pests/pathogens.
- Hydrologic/Geologic Function, regarding roads/culverts.
- Resource Protection, regarding signage and law enforcement presence.
- Adjacent Property Concerns, regarding expanding development and inholdings/additions.
- Public Access & Education, regarding roads, parking, kayak/canoe access, wildlife, invasive species, habitat management activities, interpretive facilities and signs, recreational opportunities and management of visitor impacts.
- Management Resources, regarding waste disposal, sanitary facilities, buildings, and equipment.

Items Requiring Improvement Actions in the Management Plan

The following items received low scores on the review team checklist, which indicates that the text noted in the Management Plan Review does not sufficiently address this issue (less than .5 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The management plan must include responses to the checklist items identified below:

1. Discussion in the management plan regarding Natural Communities, specifically Seagrass/Mollusk Reef.

Managing Agency Response: We will discuss the natural communities including all available information on the seagrass and mollusk reef in the resource management portion of the plan update.

2. Discussion in the management plan regarding Natural Resource Survey, specifically Sport Fish or Habitat Monitoring, Other Non-game Species or Habitat Monitoring.

Managing Agency Response: We will include any available information on these monitoring efforts in the resource management portion of the plan update. We will include data from resources such as the Florida Fish and Wildlife Conservation Commission's Fish and Wild Research Institute.

3. Discussion in the management plan regarding Resource Management, specifically Area Being Burned and Quality.

Managing Agency Response: Fire Management goals for fire-adapted natural plant communities will be discussed in the resource management portion of the plan update.

4. Discussion in the management plan regarding Non-Native, Invasive & Problem Species, specifically Control of Pests/Pathogens.

Managing Agency Response: This will be discussed in the plan update. We will provide details of our exotic and invasive species control efforts and how we control the spread of pests/pathogens.

5. Discussion in the management plan regarding Surface Water Monitoring, specifically Quality.

Managing Agency Response: We will discuss water quality data from the Pinellas County Environmental Sciences Watershed Management Division and the Tampa Bay Estuary Program in the plan update.

6. Discussion in the management plan regarding Resource Protection, specifically Boundary Survey.

Managing Agency Response: We will discuss in the updated plan our policies related to boundary surveys and fencing.

7. Discussion in the management plan regarding Adjacent Property Concerns, specifically Expanding Development, Inholdings/Additions, Potential Surplus Land Determination, and Surplus Land Identified.

Managing Agency Response: We will include in the plan update a discussion of any problems or concerns with the adjacent properties. We will review available information determine the potential for additions of adjacent properties or surplus of existing properties.

8. Discussion in the management plan regarding Public Access & Education, specifically Management of Visitor Impacts.

Managing Agency Response: We will discuss the various elements of public access impacts and how our educational programs focus on acceptable behavior and public uses through programs such as interpretive signage, hike guides, educational programs and volunteer training.

9. Discussion in the management plan regarding Managed Area Uses specifically Geocaching.

Managing Agency Response: We will discuss our policy pertaining to geocaching as a public use element in the plan update.

| PLAN REVIEW | | 1 | 2 | 3 | 4 | 5 | 6 | AVERAGE |
|-----------------------------|-------|---|---|---|---|---|---|---------|
| Natural Communities (I.A) | | | | | | | | |
| Xeric Hammock | I.A.1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.83 |
| Maritime Hammock | I.A.2 | 1 | 1 | 1 | 1 | 1 | 0 | 0.83 |
| Shell Mound | I.A.3 | 0 | 1 | 1 | 1 | 1 | 0 | 0.67 |
| Scrubby Flatwoods | I.A.4 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Coastal Berm | I.A.5 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Tidal Swamp | I.A.6 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Tidal Marsh | I.A.7 | 1 | 1 | 1 | 1 | 1 | | 1.00 |

| | | | | | | | | |
|---|-----------|---|---|---|---|---|---|------|
| Salt Tern | I.A.8 | 1 | 1 | 1 | 1 | 1 | 0 | 0.83 |
| Seagrass/Mollusk Reef | I.A.9 | 0 | 1 | 1 | 0 | 1 | 0 | 0.50 |
| Listed species:Protection & Preservation (I.B) | | | | | | | | |
| Animal Inventory | I.B.1 | 1 | 1 | 1 | 0 | 1 | 0 | 0.67 |
| Gopher Tortoise | I.B.1.a | 1 | 1 | 1 | 0 | 1 | 1 | 0.83 |
| Plant Inventory | I.B.2 | 1 | 1 | 1 | 0 | 1 | 0 | 0.67 |
| Natural Resources Survey/Management Resources (I.C) | | | | | | | | |
| Sport fish or habitat monitoring | I.C.1 | 0 | 1 | 0 | 0 | 1 | 1 | 0.50 |
| Listed species or habitat monitoring | I.C.2 | 1 | 1 | 1 | 0 | 1 | 1 | 0.83 |
| Other non-game species or habitat monitoring | I.C.3 | 1 | 0 | 0 | 0 | 1 | 0 | 0.33 |
| Fire effects monitoring | I.C.4 | 0 | 1 | 1 | 1 | 1 | 1 | 0.83 |
| Other habitat management effects monitoring | I.C.5 | 0 | 1 | 1 | | 1 | 0 | 0.60 |
| Invasive species survey / monitoring | I.C.6 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Cultural Resources (Archeological & Historic sites) (II.A,II.B) | | | | | | | | |
| Cultural Res. Survey | II.A | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Protection and preservation | II.B | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Resource Management, Prescribed Fire (III.A) | | | | | | | | |
| Area Being Burned (no. acres) | III.A.1 | 0 | 0 | 1 | 0 | 1 | 0 | 0.33 |
| Frequency | III.A.2 | 1 | 1 | 1 | 1 | | 0 | 0.80 |
| Quality | III.A.3 | 0 | 1 | 1 | 0 | | 0 | 0.40 |
| Restoration of Ruderal Areas (III.B) | | | | | | | | |
| Salt Tern | III.B.1 | 1 | 1 | 1 | 0 | 1 | 1 | 0.83 |
| Tidal Marsh | III.B.2 | 1 | 1 | 1 | 0 | 1 | 0 | 0.67 |
| Non-Native, Invasive & Problem Species (III.E) | | | | | | | | |
| Prevention | | | | | | | | |
| prevention - plants | III.E.1.a | 1 | 1 | 1 | 0 | 1 | 1 | 0.83 |
| prevention - animals | III.E.1.b | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| prevention - pests/pathogens | III.E.1.c | 0 | 1 | 1 | | 1 | 1 | 0.80 |
| Control | | | | | | | | |
| control - plants | III.E.2.a | 1 | 1 | 1 | 0 | 1 | 1 | 0.83 |
| control - animals | III.E.2.b | 1 | 1 | 1 | 0 | 1 | 1 | 0.83 |
| control - pest/pathogens | III.E.2.c | 0 | 1 | 1 | 0 | 1 | 0 | 0.50 |
| Hydrologic/Geologic function Hydro-Alteration (III.F.1) | | | | | | | | |
| Roads/culverts | III.F.1.a | 1 | 0 | | | | 1 | 0.67 |
| Ditches | III.F.1.b | 1 | 1 | 1 | | | 1 | 1.00 |
| Surface Water Monitoring (III.F.3) | | | | | | | | |
| Surface water quality | III.F.3.a | 1 | 1 | | | 0 | 0 | 0.50 |
| Resource Protection (III.G) | | | | | | | | |

| | | | | | | | | |
|---|-----------|---|---|---|---|---|---|------|
| Boundary survey | III.G.1 | 1 | 1 | 1 | 0 | 0 | 0 | 0.50 |
| Gates & fencing | III.G.2 | 1 | 1 | 1 | 1 | 0 | 1 | 0.83 |
| Signage | III.G.3 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Law enforcement presence | III.G.4 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Adjacent Property Concerns (III.H) | | | | | | | | |
| Land Use | | | | | | | | |
| Expanding development | III.H.1.a | 0 | 1 | 1 | 1 | 0 | 0 | 0.50 |
| Inholdings/additions | III.H.2 | 0 | 0 | 0 | 0 | | 0 | 0.00 |
| Discussion of Potential Surplus Land Determination | III.H.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Surplus Lands Identified? | III.H.4 | 0 | 0 | 0 | | 0 | 0 | 0.00 |
| Public Access & Education | | | | | | | | |
| Public Access | | | | | | | | |
| Roads | IV.1.a | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Parking | IV.1.b | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Kayak/Canoe Access | IV.1.c | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Environmental Education & Outreach | | | | | | | | |
| Wildlife | IV.2.a | 1 | 1 | 1 | | | 0 | 0.75 |
| Invasive Species | IV.2.b | 1 | 1 | 1 | | | 0 | 0.75 |
| Habitat Management Activities | IV.2.c | 1 | 1 | 1 | | | 1 | 1.00 |
| Cultural Interpretation | IV.2.d | 1 | 1 | 1 | | | 1 | 1.00 |
| Interpretive facilities and signs | IV.3 | 1 | 1 | 1 | | | 1 | 1.00 |
| Recreational Opportunities | IV.4 | 1 | 1 | 1 | | | 1 | 1.00 |
| Management of Visitor Impacts | IV.5 | 0 | 1 | 1 | | | 0 | 0.50 |
| Managed Area Uses | | | | | | | | |
| Existing Uses | | | | | | | | |
| Recreational Trails | VI.A.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Fishing | VI.A.2 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Boating | VI.A.3 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Nature Study | VI.A.4 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Cultural & Environmental Interpretive Education Group | VI.A.5 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Camping (Primitive Group) | VI.A.6 | 1 | 1 | 1 | 0 | 0 | 1 | 0.67 |
| Canoeing | VI.A.7 | 1 | 1 | 1 | 1 | 1 | 1 | 1.00 |
| Bicycling | VI.A.8 | 1 | 1 | 1 | 1 | 0 | 1 | 0.83 |
| Geocaching | VI.A.9 | 0 | 0 | 0 | | 0 | 0 | 0.00 |
| Proposed Uses | | | | | | | | |
| Environmental Center | VI.B.1 | 1 | 1 | 1 | | 0 | 1 | 0.80 |
| Canoe Trail | VI.B.2 | 1 | 1 | 1 | | 0 | 1 | 0.80 |
| Canoe Launch | VI.B.3 | 1 | 1 | 1 | | 0 | 1 | 0.80 |

Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 2.5 score on average). Please note that overall good scores do not preclude specific recommendations by the review team

requiring remediation. The management plan must include responses to the checklist items identified below:

1. Discussion regarding the deficiencies relating to natural resource survey, specifically fire effects monitoring, with documentation in the management plan.

Managing Agency Response: Natural resource surveys and monitoring efforts will be discussed in the updated plan in relation to staffing reductions.

2. Increased resource management activities related to prescribed fire, specifically the frequency at which burns are completed, with documentation in the management plan.

Managing Agency Response: The frequency at which burns can be completed as dictated by available staff and resources as well as environmental constraints will be discussed in the plan update.

3. Hydrologic/Geologic function, specifically ditches, with documentation in the management plan.

Managing Agency Response: The USGS study of the hydrologic function of the mosquito ditches will be included and discussed in the plan update.

4. Discussion of the deficiencies in Management Resources, specifically staff and funding, with documentation in the management plan.

Managing Agency Response: We will describe and discuss the budget and staffing changes that have occurred in the update to the plan.

| FIELD REVIEW | | 1 | 2 | 3 | 4 | 5 | 6 | AVERAGE |
|---|---------|---|---|---|---|---|---|---------|
| Natural Communities (I.A) | | | | | | | | |
| Xeric Hammock | I.A.1 | 2 | 3 | 3 | 3 | 3 | 3 | 2.83 |
| Maritime Hammock | I.A.2 | X | X | 4 | 3 | 3 | 4 | 3.50 |
| Shell Mound | I.A.3 | 5 | X | X | 3 | 3 | 3 | 3.50 |
| Scrubby Flatwoods | I.A.4 | 2 | 3 | 4 | 2 | 3 | 2 | 2.67 |
| Coastal Berm | I.A.5 | 5 | 3 | 5 | 5 | 3 | 3 | 4.00 |
| Tidal Swamp | I.A.6 | 4 | 3 | 3 | 3 | 3 | 3 | 3.17 |
| Tidal Marsh | I.A.7 | 5 | 4 | 3 | X | 3 | 3 | 3.60 |
| Salt Tern | I.A.8 | 5 | 3 | 3 | 4 | 3 | 2 | 3.33 |
| Seagrass/Mollusk Reef | I.A.9 | 5 | 4 | 5 | 5 | 3 | 4 | 4.33 |
| Listed species:Protection & Preservation (I.B) | | | | | | | | |
| Animal Inventory | I.B.1 | 4 | 2 | 3 | X | 4 | 3 | 3.20 |
| Gopher Tortoise | I.B.1.a | 5 | 4 | 4 | 4 | 4 | 4 | 4.17 |
| Plant Inventory | I.B.2 | 4 | 4 | 4 | 3 | 4 | 3 | 3.67 |
| Natural Resources Survey/Management Resources (I.C) | | | | | | | | |
| Sport fish or habitat monitoring | I.C.1 | 3 | 1 | 3 | X | 4 | 3 | 2.80 |
| Listed species or habitat monitoring | I.C.2 | 4 | 2 | 4 | 4 | 4 | 3 | 3.50 |
| Other non-game species or habitat monitoring | I.C.3 | 4 | X | 3 | X | 4 | 3 | 3.50 |
| Fire effects monitoring | I.C.4 | 3 | X | 2 | X | | 2 | 2.33 |
| Other habitat management effects monitoring | I.C.5 | 3 | X | 3 | X | | 2 | 2.67 |

| | | | | | | | | |
|---|-----------|---|---|---|---|---|---|------|
| Invasive species survey / monitoring | I.C.6 | 3 | 4 | 4 | | | 2 | 3.25 |
| Cultural Resources (Archeological & Historic sites) (II.A,II.B) | | | | | | | | |
| Cultural Res. Survey | II.A | 4 | 3 | 5 | 5 | 5 | 5 | 4.50 |
| Protection and preservation | II.B | 5 | 4 | 5 | 5 | 5 | 4 | 4.67 |
| Resource Management, Prescribed Fire (III.A) | | | | | | | | |
| Area Being Burned (no. acres) | III.A.1 | 2 | 1 | 4 | 3 | 4 | 3 | 2.83 |
| Frequency | III.A.2 | 2 | 3 | 3 | 3 | 2 | 2 | 2.50 |
| Quality | III.A.3 | 2 | 3 | 3 | 3 | 3 | 2 | 2.67 |
| Restoration of Ruderal Areas (III.B) | | | | | | | | |
| Salt Tern | III.B.1 | 4 | 4 | 4 | 5 | 4 | 2 | 3.83 |
| Tidal Marsh | III.B.2 | 3 | 3 | X | 4 | 4 | 2 | 3.20 |
| Non-Native, Invasive & Problem Species (III.E) | | | | | | | | |
| Prevention | | | | | | | | |
| prevention - plants | III.E.1.a | 3 | 4 | 4 | 4 | 4 | 3 | 3.67 |
| prevention - animals | III.E.1.b | 4 | 4 | 4 | 4 | 4 | 3 | 3.83 |
| prevention - pests/pathogens | III.E.1.c | 5 | 4 | 4 | 4 | 4 | 3 | 4.00 |
| Control | | | | | | | | |
| control - plants | III.E.2.a | 4 | 4 | 4 | 5 | 4 | 3 | 4.00 |
| control - animals | III.E.2.b | 4 | 4 | 4 | 5 | 4 | 3 | 4.00 |
| control - pest/pathogens | III.E.2.c | 5 | 4 | 4 | 5 | 4 | 3 | 4.17 |
| Hydrologic/Geologic function Hydro-Alteration (III.E.1) | | | | | | | | |
| Roads/culverts | III.F.1.a | 5 | 5 | | 5 | X | 4 | 4.75 |
| Ditches | III.F.1.b | 1 | 3 | 2 | X | X | 2 | 2.00 |
| Surface Water Monitoring (III.E.3) | | | | | | | | |
| Surface water quality | III.F.3.a | 3 | 2 | X | 5 | 4 | 3 | 3.40 |
| Resource Protection (III.F) | | | | | | | | |
| Boundary survey | III.G.1 | 2 | 3 | 4 | 2 | 4 | 2 | 2.83 |
| Gates & fencing | III.G.2 | 4 | 3 | 4 | 1 | 4 | 3 | 3.17 |
| Signage | III.G.3 | 5 | 2 | 5 | 1 | 4 | 4 | 3.50 |
| Law enforcement presence | III.G.4 | 5 | 4 | 4 | 5 | 4 | 4 | 4.33 |
| Adjacent Property Concerns (III.G) | | | | | | | | |
| Land Use | | | | | | | | |
| Expanding development | III.H.1.a | X | 3 | 4 | 5 | 3 | 3 | 3.60 |
| Inholdings/additions | III.H.2 | X | X | | | | 3 | 3.00 |
| Public Access & Education | | | | | | | | |
| Public Access | | | | | | | | |
| Roads | IV.1.a | 5 | 4 | 5 | 5 | 4 | 3 | 4.33 |
| Parking | IV.1.b | 5 | 2 | 5 | 5 | 4 | 4 | 4.17 |
| Kayak/Canoe Access | IV.1.c | 5 | 4 | 5 | 5 | 4 | 4 | 4.50 |
| Environmental Education & Outreach | | | | | | | | |
| Wildlife | IV.2.a | 5 | 3 | 5 | 5 | 5 | 3 | 4.33 |
| Invasive Species | IV.2.b | 5 | 3 | 5 | 5 | 5 | 3 | 4.33 |

| | | | | | | | | |
|-----------------------------------|--------|---|---|---|---|---|---|------|
| Habitat Management Activities | IV.2.c | 5 | 3 | 5 | 5 | 5 | 3 | 4.33 |
| Interpretive facilities and signs | IV.3 | 5 | 3 | 5 | 5 | 5 | 5 | 4.67 |
| Recreational Opportunities | IV.4 | 5 | 4 | 5 | 5 | 5 | 4 | 4.67 |
| Management of Visitor Impacts | IV.5 | 4 | 4 | 4 | X | 5 | 4 | 4.20 |
| Management Resources | | | | | | | | |
| Maintenance | | | | | | | | |
| Waste disposal | V.1.a | 5 | 5 | 5 | 5 | 5 | 4 | 4.83 |
| Sanitary facilities | V.1.b | 5 | 5 | 5 | 5 | 5 | 4 | 4.83 |
| Infrastructure | | | | | | | | |
| Buildings | V.2.a | 5 | 5 | 5 | 5 | 5 | 2 | 4.50 |
| Equipment | V.2.b | 5 | 5 | 4 | 5 | 5 | 3 | 4.50 |
| Staff | V.3 | 1 | 1 | 2 | 1 | 1 | 1 | 1.17 |
| Funding | V.4 | 1 | 1 | 2 | 1 | 1 | 1 | 1.17 |

Pinellas County Resource Manager and Key Staff Present:

- Pam Leasure
- Phyllis Kolianos
- Steve Harper

APPENDIX :

The following comments represent individual comments, and may not represent the consensus of the land management review team.

I.A. Natural Communities

- New plan due in 2012.
- Remove freshwater pond and spring run- not on state lands.
- Recommend mapping and monitoring of seagrass/mollusk reefs. Not clear on the targeted maintenance condition of uplands habitats.
- Financial constraints play a huge role in the ability to bring habitats to maintenance condition. Anthropogenic effects make it difficult to determine natural communities. Much of the area is culturally sensitive- hard to manage (i.e. rollerchopping).
- Incorporate fire into mechanical treatments/ inventory shell mounds and incorporate GIS overlay/ ID acreage of habitat types and fire units. Mapping and monitoring for seagrasses is needed/ habitat descriptions should be more site specific.
- There has been an increase in the amount of burning and mechanical treatment of overgrown vegetation since the last management plan review. Continued efforts are needed however to establish fire maintenance conditions in upland habitats. Suggest goals for vegetative structure (palmetto heights, densities) be established for scrubby and mesic flatwoods to get a handle on post fire recovery rates and determine the most appropriate fire return interval. Also suggest focus on burning be on sites where previous burning and mechanical treatments have been initiated to achieve and maintain fire maintenance conditions. Initiate restoration, fuel reduction burns than as a second priority, as time and burn condition allow. Suggest using rollerchopper for hardwood/palmetto reduction in flatwoods to reduce cost of this restoration activity where cultural site (shell mound) mapping that overlays the natural communities and burn zones. Suggest further refinement of the xeric hammock acreage to determine appropriate community typing and the appropriate strategies for management, including whether fire should be a component. Good efforts to initiate restoration of a small pot holed section by shell mound. Management plan needs an improved FNAI mapping with sufficient detail to determine areas to be fire maintained and/or needing restoration work.

I.B. Listed Species

- Need to separate those listed species that occur here versus potentially occurring species here. Be sure least tern and golden aster work is incorporated into next management plan.
- No sufficient discussion in plan for imperiled species.
- Management plan needs to be updated for recently discovered listed plants. Good job of monitoring gopher tortoise population. Remove expected to occur category of listed species from the plan. A lot of effort recently to establish population of golden aster at two scattered on 1/10 acre sites.

I.C. Natural Resources Survey/Management Resources

- Make sure monitoring continues or pick up with volunteers/ citizen science groups. Invasive species map/ train volunteers. Invasive ID to manually pull whenever see per early detection-rapid response.
- Some incidental observations of birds are done each week. Additional work is needed to determine goals for upland habitat structure and occasional monitoring of vegetative conditions and responses subsequent to burning. Continued effort is needed to continue and update invasive plant survey work since the 2007 FNAI work.

II.A.B. Cultural Resources

- Excellent outreach and incorporation, interactive displays. Coordinate with DHR in the next plan.
- Great interpretation to/for the public.
- Inventory and GPS shell mounds and create GIS layer/ need much more GPS and GIS work and surveying on cultural resources. Develop and conduct yearly monitoring of sites.
- Excellent interpretive, cutting edge educational museum. More work is needed to update many of master file listed sites and create a GIS layer to display this information and help direct field

activity. Suggest a specific monitoring protocol be established for periodic site visits (once a year) and appropriate documentation.

III.A. Prescribed Fire

- Need to be more specific on acreage and frequency. Frequency of burning needs to be upped including growing season components.
- Management plan needs to identify an appropriate fire return interval. As mentioned earlier, good recent efforts to reintroduce fire on the property. More effort is needed to increase frequency and institute a growing season component.

III.B. Restoration

- Data and modeling has been accomplished for tidal marshes.
- Get results of studies from USG5 5 year study so you can move forward selectively on filling ditches for restoration of tidal marsh. Obtain monitoring and restoration data for restoration products.
- Good effort to study process and benefits of removing mosquito ditching, however no restoration work has been done in the last five years to remove mosquito ditches.

III.E. Non-native, Invasive & Problem Species

- Monitoring for pine and bay pests/pathogens.
- Improved efforts to treat upland invasive exotic plants, however significant population of Brazilian pepper still exists in tidal swamp. Additional effort is needed to survey and treat carrot wood and cogon grass. New access to a county crew will help in the treatment scheduling. Maintain records of population land treatments in GIS layer.

III.F. Hydrologic/Geologic Function

- Impaired Do, Chl-a, bacteria (303D).

III.G. Resource Protection

- Need survey of gateway tract.
- Survey needed on gateway tract.
- More property boundary survey work is needed on the gateway property. Decent remote cameras have helped document illegal access.

III.H. Adjacent Property Concern

- Take effort to have more communication with neighbors regarding restoration efforts/ define potential future acquisition and/or surplus lands.
- Recently had management lease amended to include the greenways property.

IV. Public Access and Education

- Limited parking controls carrying capacity.
- Great interpretive signs associated with the museum and adjacent nature trails. Some of the signage is dated and/or inaccurate with what you're seeing (burning vs. not burning sites).

V. Infrastructure/ Management Resources

- The lack of funding is a travesty.
- Funding and staff should be focused on monitoring and management of environmental lands. Management staff should be onsite.
- Recent staff reductions has dropped county land management staff personnel from 35 to 6 or 7- who will be augmented with other existing park maintenance/monitoring crews. However, all this will leave just one off-site land manager who will also have responsibilities for additional county park lands. This will leave no day to day onsite responsible management presence for a heavily visited property, which is a formula for failure, especially with now four or five different county managers having management responsibilities, coordination and accountability, will be very problematic.

VI. Managed Area Uses

- State in plan what is or isn't appropriate. Gateway tract, launch and track should be implemented.