

Sea Turtle Conservation and Coastal Park Management in Florida



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Project Goals

- Improve understanding of sea turtle protections in state, county and municipal coastal park management plans.
- Evaluate and compare management plans across four regions of Florida.
- Provide recommendations to improve park management planning for the protection of nesting sea turtles.



Key Assumption

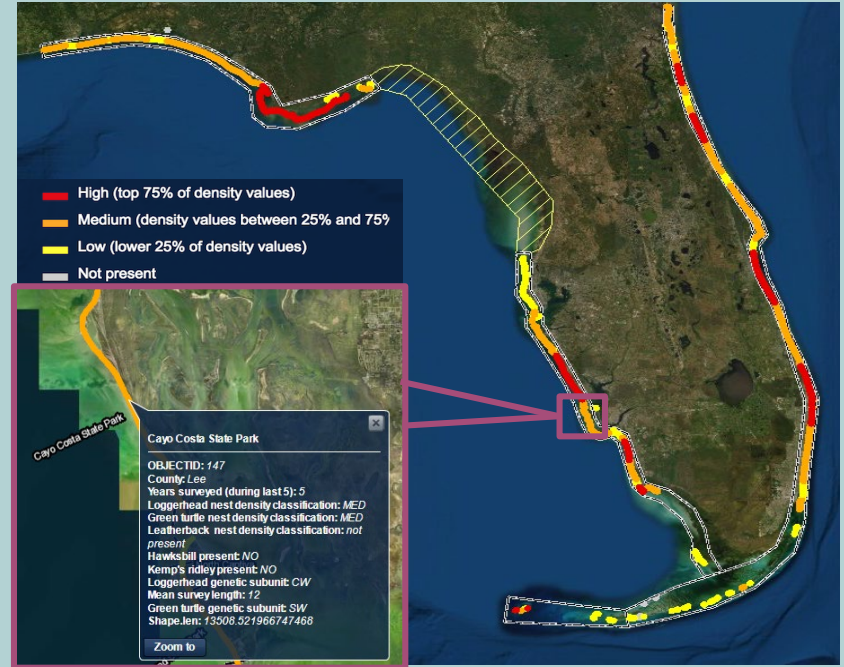
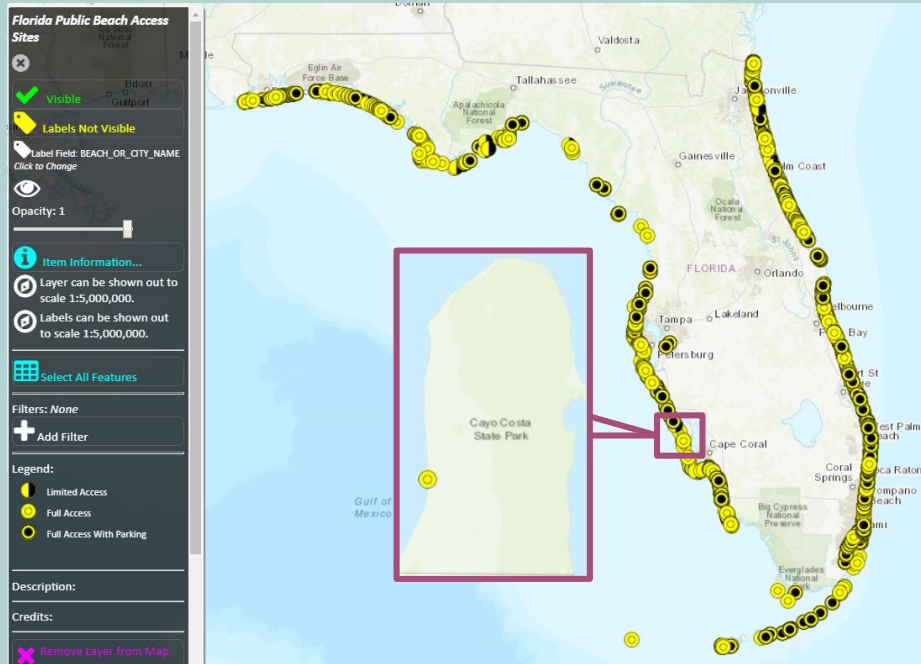
- **Management planning drives management priorities: funding and other resource protection activities follow management priorities.**

Caveats

- Does not include federal parks and federal, state, local (county and municipal) or privately-owned coastal conservation lands other than parks
- Based entirely on a “desk review” of publicly available state and local coastal park management plans.
- Does not consider management activities that are not referenced in a plan.
- Management plan updates in process may not be reflected in this review.

Identifying the Study Area

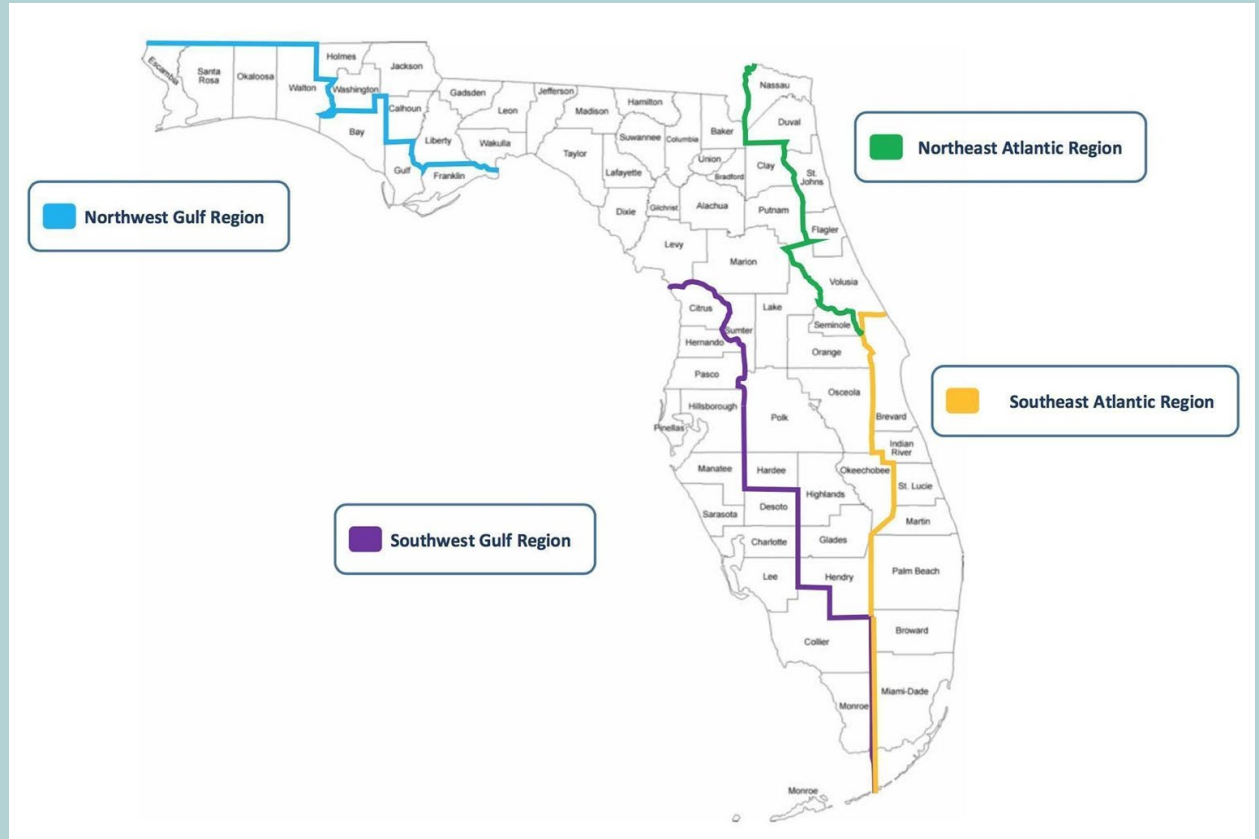
Cataloged all state and local parks containing sandy beaches in Florida using FDEP's Coastal Access Guide Map.



Cross-referenced FWRI's Statewide Atlas of Sea Turtle Nesting Occurrence and Density to identify state and local parks with sea turtle nesting activity.

Identifying the Study Area

- Categorized these parks into four regions to facilitate analysis
- Regional lines drawn using FDEP's Beach and Coastal Systems regional map as a reference



Resulting Study Area

Northwest Gulf Region

- **10 State Parks** with sea turtle nesting habitat
- **3 County Parks** with sea turtle nesting habitat
- **18 Municipal Parks** with sea turtle nesting habitat

Southwest Gulf Region

- **11 State Parks** with sea turtle nesting habitat
- **28 County Parks** with sea turtle nesting habitat
- **15 Municipal Parks** with sea turtle nesting habitat

Northeast Atlantic Region

- **8 State Parks** with sea turtle nesting habitat
- **8 County Parks** with sea turtle nesting habitat
- **7 Municipal Parks** with sea turtle nesting habitat

Southeast Atlantic Region

- **12 State Parks** with sea turtle nesting habitat
- **24 County Parks** with sea turtle nesting habitat
- **34 Municipal Parks** with sea turtle nesting habitat

Statutory Planning Mandate for State Parks



- Management Plans **must** be developed for all State-Owned “**Conservation Lands**” (F.S. 253.034(5))
- Each Conservation Land Manager **must submit** a Management Plan to the Division of State Lands
 - 1) once every **10 years**,
 - 2) whenever **substantive management changes** are made, or
 - 3) within 1 year of the addition of “**significant new lands**” (F.S. 253.034(5))

Statutory Planning Mandate for State Parks



- Elements that must be included in each state management plan include:
 - Description of land and natural resources
 - Schedule of management activities & measurable goals relating to:
 - Habitat and resource management
 - Public access and recreation
 - A summary budget for the scheduled land management activities (F.S. 253,034; 259.032)

Local Park Management Planning

- Local management planning mandates vary widely
- Some local managers state that they rely on non-park specific “management overlays” such as:
 - Habitat Conservation Plans
 - Strategic Beach Management Plans
 - Comprehensive Plans and Local Ordinances
- Note: These overlays are an inadequate substitute for park-specific management plans.



State & Local Land Acquisition Programs



State Land Acquisition Programs

- Management plans must be developed for conservation lands acquired with funding from Florida Forever (F.A.C. 62-818.011)

Local Land Acquisition Programs

- Some impose management planning requirements for conservation lands acquired using program funds
 - E.g. Lee County- Conservation 20/20 Stewardship Operations Manual

Management Planning Documents



- Management Plans for all State Parks in Florida are published on FDEP's Website
- Management planning documents for county and local parks were substantially more difficult to locate - or were non-existent
- Contacted county and local park managers and affiliated staff directly to request plans

Criteria for Effective Sea Turtle Management

- Informed by:
 - Consultation - sea turtle management experts
 - Literature review- technical reports, peer-reviewed scientific articles, and government management documents



Criteria

- Administration
- General Management (monitoring, etc.)
- Predation Control
- Lighting
- Beach Activities
- Educational Programs & Signage
- Coastal Resiliency

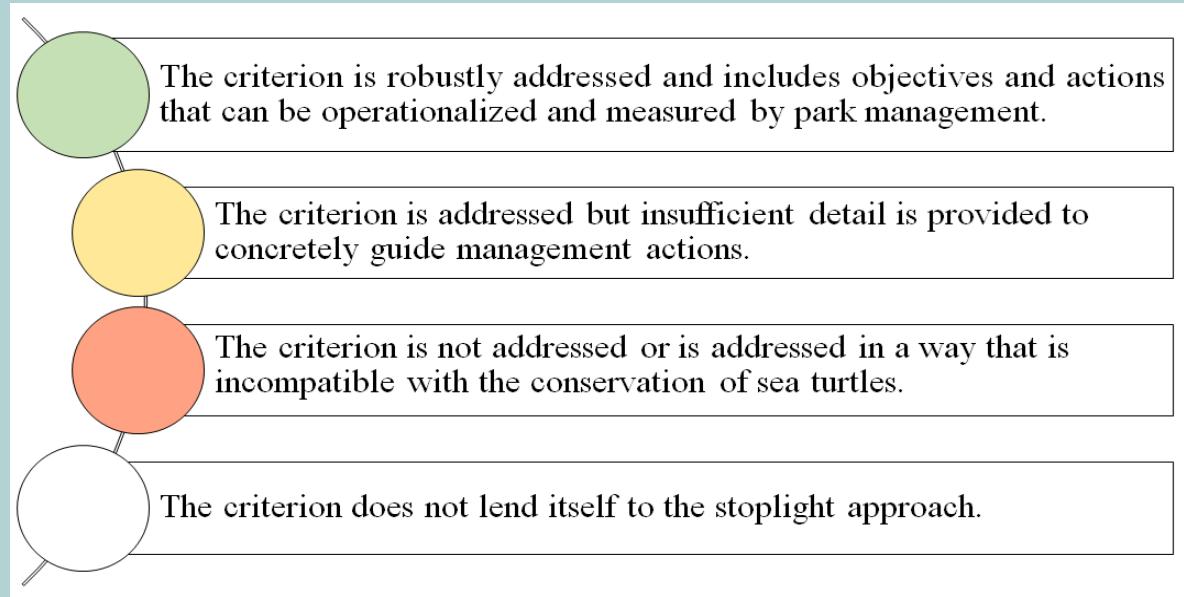
Sub-Criteria

- Management Plan updated
- Created by state funding
- Linear miles of beach
- Nesting density
- Critically eroding
- Etc.

- Special events
- Beach driving
- Beach raking
- Concessionaires
- Pets
- Etc.

Analysis of Management Planning Documents

- Analyzed each management planning document using criteria matrix, indicating:
 - 1) whether each criterion was addressed, and 2) the extent to which it was addressed
- Degree of compliance with each criterion was indicated using a color-coded “stoplight approach”



Criteria categories and sub-categories displayed in a “criteria matrix.”

Name		Type of Park	County	Administration						
* indicates index nesting beach				Management Plan + Year Last Updated	Created by State Funding	Linear Miles of Beach	Nesting Density (H/M/L)	Advisory Committee	Eroding/Critically Eroding	Additional Management Overlays (e.g. Aquatic Preserve)
Avalon State Park*	<input checked="" type="checkbox"/>	State	St. Lucie	Y; 2014	Y, Save Our Coast program, Preservation 2000 & Conservation and Recreation Lands programs (p. 1)	1.3 miles (p. 2)	Not explicitly stated in plan. According to FWCC Nesting Atlas, L for loggerhead, M for green and leatherback	Y (p. A2-1)	N, At this time, Avalon State Park has no major soil conservation issues. Earlier beach dune erosion due to years of unlawful operation of	Adjacent to Indian River Lagoon Aquatic Preserve (p. 10)

Name		Sea Turtle Management								
* indicates index nesting beach		Addressed in Management Plan	Plan references Florida Marine Turtle Conservation Handbook	Nest Survey/Monitoring (e.g. Counting, Species ID)	Biologist on Staff	Nest Productivity Assessments	Nest Relocation Permitted	Stranding activities permitted	Addresses impacts of increasing carrying capacity	Addresses External Impacts (e.g. surrounding landowners)
Avalon State Park*	<input checked="" type="checkbox"/>	Y, addressed throughout, particularly p. 23 & p. 40	Not addressed	Y, During the nesting season, park staff conducts daily surveys of the beach recording the previous night's activities including number of crawls, false crawls, species identification and number of nests (p. 26)	Not addressed, though FWC regional biologist on advisory group (p. A2-1)	Not addressed	Not addressed	Y, participate in the state's marine turtle stranding and salvage program that collects data on stranded, injured or dead marine turtles (p. 39)	Y, During the development of the conceptual land use plan, the DRP assessed the potential impacts of proposed uses or development on the park resources and applied that analysis to decisions for the future (p. 39)	Y, A review of proposed comprehensive plan amendments in St. Lucie and Indian River counties showed no substantial development projects impacting the park. (p. 10)

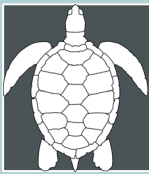
Findings: State Parks

Criteria most lacking across state parks (scoring below 50% statewide):

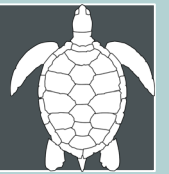
Criterion	NW Gulf	SW Gulf	NE Atlantic	SE Atlantic	Statewide
Addresses dehooking protocol or other fishing rules/education	0%	0%	12.5%	0%	3%
Provides safeguards where concessionaires allowed	0%	12.5%	0%	8.3%	5%
Addresses beach raking	30%	22%	0%	16.6%	18%
Provides safeguards where special events allowed	60%	20%	14%	0%	24%
Addresses potential impacts of coastal armoring where armoring addressed	25%	0%	42.9%	2.5%	28.57%

Findings: Local Parks

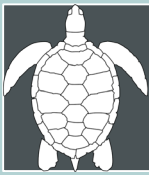
Management Planning Document	County Parks	Municipal Parks
Individual Park Management Plan	9	4
Comprehensive Plan	10	12
Strategic Beach Management Plan	25	13
City Beachfront Management Plan	1	8
County coastal management program summary planning doc	1	3
No Plan	7	19



Conclusions Coastal State Parks

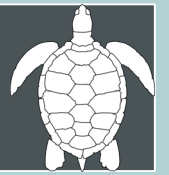


- Based on available data, 34% of management plans for coastal state parks with sea turtle nesting habitat have not been updated within the required 10-year time frame.
 - Caveat: Some of these could have been submitted to State Acquisition and Review Council (ARC) for review.

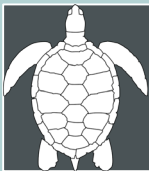


Conclusions

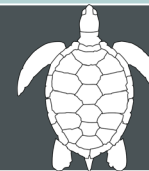
Coastal State Parks



- Coastal parks vary in the extent to which they meet this study's criteria for sea turtle protection in their management plans.
 - **Caveat 1: This variation is on paper.** Managers may be implementing the criteria even in the absence of a plan directive, or based on system-wide direction from Tallahassee.
 - **Caveat 2:** Due to biophysical or other site-specific factors, some criteria **may not have relevance** to a specific park (but were still scored).



Recommendations Coastal State Parks



- Management planning processes for coastal state parks should incorporate consideration of the criteria for effective sea turtle management presented in this study.
- DEP could consider adopting a **system-wide protocol** for the management of sea turtles
 - This should then be incorporated by reference into individual park plans as they are updated.
 - The protocol should be developed with stakeholder input, and subject to periodic review.

Department of Environmental Protection
Division of Recreation and Parks

Resource Management Standard

Shorebird and Seabird Management

Final 2014

**System-wide
Protocol**

Outline of this Standard

- 1. Purpose
- 2. Definitions
- 3. Background
- 4. Establishing Monitoring Priorities
- 5. Protection and Management Procedures
- 6. Monitoring/Survey Procedures for Beach-nesting
- 7. Monitoring/Survey Procedures for Non-breeding
- 8. References
- Addendum 1 State Park Level Ranking for Shorebird Monitoring
- Addendum 2 Non-breeding Shorebird Monitoring Forms

Department of Environmental Protection
Division of Recreation and Parks

Resource Management Standard

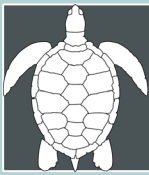
Fire Management

August, 2016

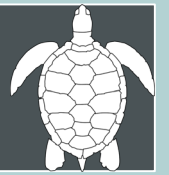
1. Purpose

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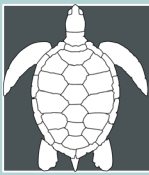
1. Purpose	3
2. Division Fire Philosophy	3
A. Why We Burn.....	3
B. Major Benefits of Fire Program.....	3
C. Fire Type Communities and Fire Return Intervals.....	4
D. Desired Future Conditions by Fire-Type Community.....	6
3. Legal Requirements	9



Recommendations State Coastal Parks

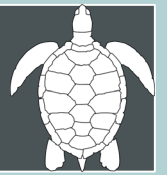


- ARC review of any coastal park management plans in the pipeline should be accelerated.
- FDEP should seek legislative support for greater resources to address the backlog in state park management planning.
- Given the pace of both anthropogenic and natural coastal change consideration should be given to reducing the planning timeframe for management plan updates from 10 years to 5 or 7 years.

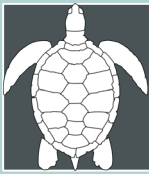


Conclusions

County and Municipal Coastal Parks

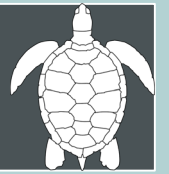


- There is no central repository for local park management plans and obtaining them is challenging at best.
- Local coastal parks vary widely in the extent to which they engage in management planning, and management planning policies and processes.

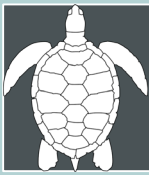


Conclusions

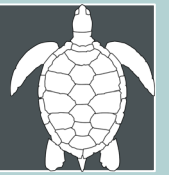
County and Municipal Coastal Parks



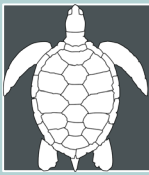
- Referendum-based local land acquisition programs reviewed for this study tend to have the most comprehensive management planning processes among local parks.
- Even when considered together, regulatory overlays (e.g., HCPs, CCCL-derived lighting restrictions, beach nourishment permit conditions, other state or regulatory programs) are an inadequate substitute for park-specific management plans.



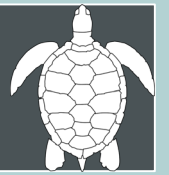
Recommendations County and Municipal Parks



- All local and county parks should have individualized management plans (though small, proximate parks with similar characteristics could be grouped into a single plan).
- Local land acquisition programs should incorporate management planning requirements into referendum language.



Recommendations County and Municipal Parks



- State funding for acquisition, capital improvements and/or management of local and county coastal parks, should be conditioned on assurance that there is a management plan and planning process in place.
- Local officials should seek legislative support for the State to provide technical assistance to local governments to develop or enhance management plans and planning process (especially where ARC review is required).

Thank you!



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