Yellow River Marsh Preserve State Park

Approved
Unit Management Plan

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Recreation and Parks
August 2022

FLORIDA DEPARTMENT OF Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

August 15, 2022

Mr. Brian Fugate
Division of Recreation and Parks
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 525
Tallahassee, Florida 32399-3000

RE: Yellow River Marsh Preserve State Park – Lease No. 4306

Dear Mr. Fugate,

On **August 12, 2022**, the Acquisition and Restoration Council (ARC) recommended approval of the **Yellow River Marsh Preserve State Park** management plan. Therefore, Division of State Lands, Office of Environmental Services (OES), acting as agent for the Board of Trustees of the Internal Improvement Trust Fund, hereby approves the **Yellow River Marsh Preserve State Park** management plan. The next management plan update is due August 12, 2032.

Pursuant to s. 253.034(5)(a), F.S., each management plan is required to "describe both short-term and long-term management goals and include measurable objectives to achieve those goals. Short-term goals shall be achievable within a 2-year planning period, and long-term goals shall be achievable within a 10-year planning period." Upon completion of short-term goals, please submit a signed letter identifying categories, goals, and results with attached methodology to the Division of State Lands, Office of Environmental Services.

Pursuant to s. 259.032(8)(g), F.S., by July 1 of each year, each governmental agency and each private entity designated to manage lands shall report to the Secretary of Environmental Protection, via the Division of State Lands, on the progress of funding, staffing, and resource management of every project for which the agency or entity is responsible.

Pursuant to s. 259.032, F.S., and Chapter 18-2.021, F.A.C., management plans for areas less than 160 acres may be handled in accordance with the negative response process. This process requires small management plans and management plan amendments be submitted to the Division of State Lands for review, and the Acquisition and Restoration Council (ARC) for public notification. The Division of State Lands will approve these plans or plan amendments submitted for review through delegated authority unless three

or more ARC members request the division place the item on a future council meeting agenda for review. To create better efficiency, improve customer service, and assist members of the ARC, the Division of State Lands will notice negative response items on Thursdays except for weeks that have State or Federal holidays that fall on Thursday or Friday. The Division of State Lands will contact you on the appropriate Friday to inform you if the item is approved via delegated authority or if it will be placed on a future ARC agenda by request of the ARC members.

Pursuant to s. 259.036(2), F.S., management areas that exceed 1,000 acres in size, shall be scheduled for a land management review at least every 5 years.

Conditional approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities. Pursuant to the conditions of your lease, please forward copies of all permits to this office upon issuance.

Sincerely,

Deborah Burr Digitally signed by Deborah Burr Date: 2022.08.16 14:18:48 -04'00'

Deborah Burr
Office of Environmental Services
Division of State Lands

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Park History

Yellow River Marsh Preserve State Park was initially acquired on June 12, 2000 as part of the Garcon Ecosystem Florida Forever project with funds from the Conservation and Recreational Lands (CARL) program. The park is currently 976.55 acres.

Park Significance

The preserve protects one of Florida's last remaining tracts of wet prairie, including the largest community of pitcher plants in the state. It also contains over 200 species of vascular plants, among which are five state listed species including one of the largest populations of the white topped pitcher plant. The preserve plays a significant role in protecting surface water quality and serves as a buffer to prevent low quality water from reaching the bays. Management focus will be to provide an aesthetically pleasing natural experience for visitors through passive recreation and interpretation of wet prairie importance.

YELLOW RIVER MARSH PRESERVE STATE PARK
Unit Management Plan
Executive Summary
Park Interpretive Themes

Central Park Theme

Endlessly fascinating and increasingly rare, Yellow River Marsh Preserve State Park's signature pitcher plants are the perfect symbol for the disappearing wet prairie that thrives within the park's borders.

Primary Interpretive Themes

Unique Adaptations — The park's specific natural conditions have resulted in uniquely adapted and increasingly rare plant and animal species that cannot be found anywhere else in the world.

Disappearing Wetlands — Wetland habitats provide vital services such as flood protection, natural water filtration, and homes for diverse wildlife but are threatened by dredging and development.

Natural Cycles — The park's wet prairie is a highly diverse ecosystem, dependent on a delicate cycle of fire and flooding.

YELLOW RIVER MARSH PRESERVE STATE PARK
Unit Management Plan
Executive Summary
Park Quick Facts
Natural Community Composition

- **Agency**: Department of Environmental Protection - Division of Recreation and Parks
- **Acreage :** 976.55
- **Location:** Santa Rosa County
- **Lease Management Agreement Number(s):** 4306
- **Use:** Single
- **Responsibility:** Public Outdoor Recreation and Conservation
- **Sublease:** None
- **Encumbrances:** See Appendix 1 for details
- **Public Involvement:** See Appendix 2 for details
- **Optimum Boundary:** Approximately 3,606 acres

Natural Communities	Acreage	Percentage
Blackwater Stream	2.15	<1%
Wet Flatwoods	357.04	36.56%
Dome Swamp	11.04	1.13%
Shrub Bog	14.88	1.52%
Alluvial Forest	8.13	<1%
Mesic Flatwoods	39.62	4.05%
Wet Prairie	514.09	52.64%
Estuarine Unconsolidated Substrate	0.89	<1%
Borrow Area	1.50	<1%
Developed	2.88	<1%
Successional Hardwood Forest	24.37	2.50%
Total Acreage	**976.55**	**100%**

YELLOW RIVER MARSH PRESERVE STATE PARK
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Executive Summary
Park Accomplishments: 2008 — 2021
Ten-Year Planning Period Objectives

Previous Accomplishments

Since the 2008 Unit Management Plan the park has made significant accomplishments in terms of resource management and continued protection of the park. The park completed a shoreline stabilization project to protect park property, installed fire lines in 7 management zones, installed interpretive signage at the trailhead, and surveyed and documented flatwoods salamander.

Future Objectives

Moving forward throughout the next 10 years of this Unit Management Plan, the park plans to continue resource management efforts by assessing the hydrological restoration needs, restoring function to 879 acres of wet prairie and wet flatwoods, and conducting prescribed fire on 922 acres. To improve visitor use, the park will be will be making additions to 1 use area and expanding the trail network.

YELLOW RIVER MARSH PRESERVE STATE PARK
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Management Goals & Objectives
Hydrological & Natural Communities

Objective: Assess hydrological restoration needs and restore natural hydrological function to 879 acres of wet prairie, wet flatwoods, dome swamp, and dome strand communities.

To restore hydrological function to these natural communities, a parkwide hydrological restoration plan will be developed as well as installing culverts, low water crossings, and better firebreaks to allow for better access to sensitive management areas.

Objective: Complete a floral and fauna survey to update the plant and animal list and apply prescribed fire to 922 acres.

To restore and improve the natural communities, steps include completing a comprehensive survey of the flora and fauna at the park and updating the species lists for the park. Additional steps include developing and implementing the annual burn plan by burning between 263-461 acres annually as well as any applicable mechanical treatment needed to thin the area and make it safer for the application of fire.

YELLOW RIVER MARSH PRESERVE STATE PARK
Unit Management Plan
Executive Summary
Management Goals & Objectives
Imperiled & Exotic Species

Imperiled Species Management

Goal: Maintain, improve, or restore imperiled species populations in the park.

Objective: Update imperiled species occurrence inventory lists and *monitor and document 6 plant and animal species in the park.*

Develop monitoring protocols and conduct surveys for the flatwoods salamander, white topped pitcher plant, panhandle lily, yellow fringeless orchid, and parrot pitcher plant.

Exotic Species Management

Goal: Remove exotic and invasive species and conduct needed maintenance.

Objective: *Annually treat 10 acres of exotic plant species in the park and implement control measures on exotic animals in the park.*

Implement annual work plan by treating exotic plants and conducting surveys for feral pigs.

YELLOW RIVER MARSH PRESERVE STATE PARK
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Management Goals & Objectives
Recreational Use & Infrastructure

Recreation and Facilities Management

Goal: Develop and maintain use areas and support infrastructure

Objective: Improve 1 use area and construct 1 new use area and 3 miles of trails.

To improve and expand visitor use at the park, plans include the improvements below:

Main Day Use Area

- Add Observation Platform

Trails

- Add Nature Trail
- Add Interpretive Signage

Trailhead Improvements

- Expand Parking
- Add Interpretive Kiosk
- Add Small Picnic Shelter
- Add Vault Restroom

Introduction

Yellow River Marsh Preserve State Park is located in Santa Rosa County approximately 10 miles South of Milton (see Vicinity Map). Access to the park is from Garcon Point Road (State Road 191) along Dickerson City Road (see Reference Map). The Vicinity Map also reflects significant land and water resources existing near the park.

Yellow River Marsh Preserve State Park was initially acquired in 2000 as part of the Florida Forever Garcon Ecosystem Project using funds from the Conservation and Recreational Lands Program (CARL). Currently, the park comprises 976.55 acres. The Board of Trustees of the Internal Improvement Trust Fund (Trustees) hold fee simple title to the park and on February 2, 2002, the Trustees leased (Lease Number 4306) the property to DRP under a 50-year lease. The current lease will expire on February 19, 2052.

Yellow River Marsh Preserve State Park is designated single-use to provide public outdoor recreation and conservation. There are no legislative or executive directives that constrain the use of this property (see Appendix 1). A legal description of the park property can be made available upon request to the Department of Environmental Protection.

Purpose and Significance of the Park

The purpose of Yellow River Marsh Preserve State Park is to provide visitors with the opportunity to experience one of the most abundant and diverse assemblages of carnivorous plants found anywhere in Florida. Management focus will be to provide an aesthetically pleasing natural experience for visitors through passive recreation and to promote the importance of the wet prairies.

Park Significance

- The preserve protects one of Florida's last remaining tracts of wet prairie, including the largest community of pitcher plants in the state.

- The preserve contains over 200 species of vascular plants, among which are five state listed species including one of the largest populations of the white topped pitcher plant.

- The preserve plays a significant role in protecting surface water quality and serves as a buffer to prevent low quality surface water from reaching the bays.

Yellow River Marsh Preserve State Park is classified as a Preserve in the DRP's unit classification system. In the management of a State Preserve, preservation and enhancement of natural conditions is all important. Resource considerations are given priority over user considerations and development is restricted to the minimum necessary for ensuring its protection and maintenance, limited access, user safety and convenience, and appropriate interpretation. Permitted uses are primarily of a passive nature, related to the aesthetic, educational and recreational enjoyment of the preserve, although other compatible uses are permitted in limited amounts. Program emphasis is placed on interpretation of the natural and cultural attributes of the preserve.

Park Interpretation

Interpretation is a mission-based communication process that forges emotional and intellectual connections between the interests of the audience and meanings inherent in the resource. Interpretive themes are the key concepts for communicating the meanings inherent in a Florida State Park. A central park theme is a short, dynamic interpretive statement that reflects the significance of a park by highlighting distinctive features and essential visitor experiences. In addition to a central park theme, each park has primary interpretive themes. These themes serve as a starting point for park staff to plan interpretive content by outlining the main stories of the park's natural and cultural resources. Further interpretive planning can branch off from these themes but should ultimately help reinforce the main interpretive messages of the park.

Central Park Theme

Endlessly fascinating and increasingly rare, Yellow River Marsh Preserve State Park's signature pitcher plants are the perfect symbol for the disappearing wet prairie that thrives within the park's borders.

Primary Interpretive Themes

Unique adaptations
The park's specific natural conditions have resulted in uniquely adapted and increasing rare plant and animal species that cannot be found anywhere else in the world.

Disappearing wetlands
Wetland habitats provide vital services such as flood protection, natural water filtration and homes for diverse wildlife but are threatened by dredging and development.

Natural cycles
The park's wet prairie is a highly diverse ecosystem, dependent on a delicate cycle of fire and flooding.

Interpretive Application

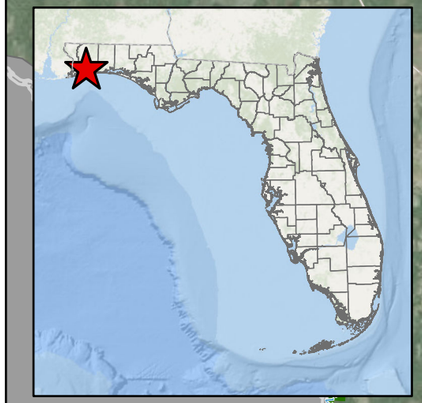
Interpretation is a DRP priority for the inherent value of visitor engagement and as a tool for promoting stewardship and conservation. Interpretation also plays an important role in achieving many other park management objectives.

Non-Personal Interpretation
Interpretive elements which do not require a person to deliver a message (signs, exhibits, brochures, kiosks, etc.).

Personal Interpretation
One person or persons providing interpretation to another person or persons. It can be planned or impromptu.

Purpose and Scope of the Plan

This plan serves as the basic statement of policy and direction for the management of Yellow River Marsh Preserve State Park as a unit of Florida's state park system. It identifies the goals, objectives, actions and criteria or standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to



Molino
Spring Hill
Crestview
Milligan
Galliver
Holt
Blackwater River State Forest
Blackwater River State Park
Big Coldwater Creek
Blackwater River
Point Baker
Blackwater Heritage State Trail
Roeville
Pond Creek
Escambia River
Yellow River Water Management Area
Shoal River
Harold
Lower Escambia River Water Management Area
Blackwater River Water Management Area
90
Cantonment
29
Roy L. Hyatt Environmental Center
Gonzalez
Pace
Ward Basin
SANTA ROSA
OKALOOSA
Styx River
Perdido River Water Management Area
Garcon Peninsula Mitigation Bank
Pensacola Bay Mitigation Bank
Avalon Beach
90A
Beulah
Ensley
Ferry Pass
Yniestra
Yellow River Marsh Aquatic Preserve
Betty And Crawford Rainwater Perdido River Nature Preserve
International Paper Company Conservation Easements
Yellow River Marsh Preserve State Park
Escribano Point Wildlife Management Area
Bellview
Brent
Garcon Point Water Management Area
Muddy Ford
Holley
Bayou Marcus Wetland
West Pensacola
Lillian
Perdido Bay/crown Pointe Preserve
98
Pensacola
98B
Wright
Eglin Air Force Base
East Bay River
Wynnehaven Beach
Hurlburt Field
Fort Walton Beach
Jones Swamp Wetland Preserve And Escambia County Southwest Greenway
Tarkiln Bayou Preserve State Park
Woodlawn Beach
Oriole Beach
ESCAMBIA
SANTA ROSA
Navarre Beach Park
Shoreline Park South
Gulf Breeze
Pensacola Beach
Seaglades
Gulf Beach Heights
Big Lagoon State Park
Fort Pickens State Park Aquatic Preserve
Perdido Key State Park
Live Oak Creek
Turtle Creek

- Interstate
- US Highways
- State Routes
- County
- Park Boundary

Conservation Lands

- State Managed Lands
- Local Managed Lands
- Private Managed Lands
- Federal Managed Lands
- Other State Parks
- Aquatic Preserves

YELLOW RIVER MARSH PRESERVE STATE PARK
Vicinity Map

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Sources: ESRI; Florida Department of Environmental Protection
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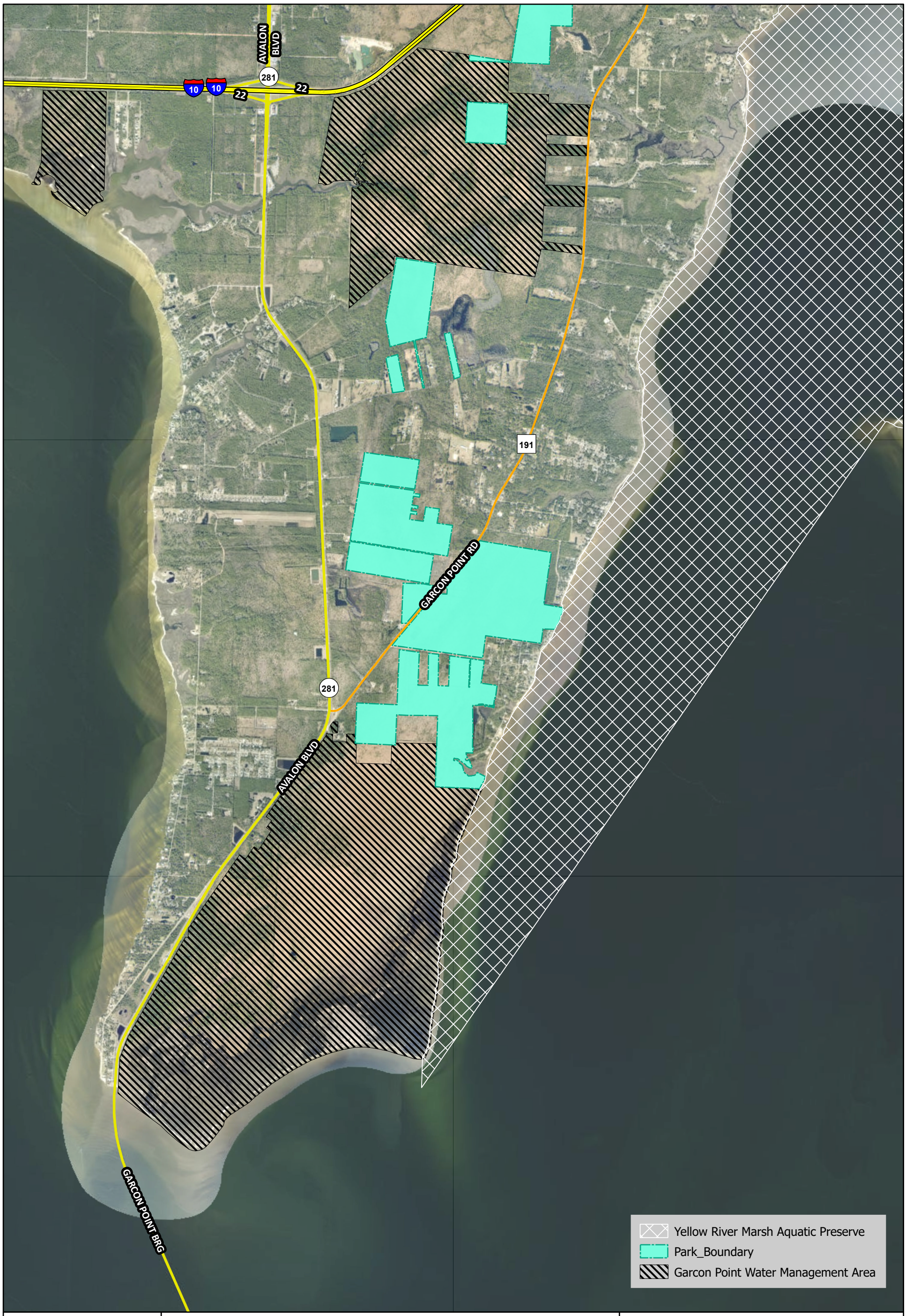

YELLOW RIVER MARSH PRESERVE STATE PARK
Reference

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Sources: ESRI; Florida Department of Environmental Protection
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meet management objectives and provide balanced public utilization. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and is intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the 2008 approved plan.

The plan consists of three interrelated components: the Resource Management Component, the Land Use Component and the Implementation Component. The Resource Management Component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management needs and issues are identified, and measurable management objectives are established for each of the park's management goals and resource types. This component provides guidance on the application of such measures as prescribed burning, exotic species removal, imperiled species management, cultural resource management and restoration of natural conditions.

The Land Use Component is the recreational resource allocation plan for the park. Based on considerations such as access, population, adjacent land uses, the natural and cultural resources of the park, and current public uses and existing development, measurable objectives are set to achieve the desired allocation of the physical space of the park. These objectives identify use areas and propose the types of facilities and programs as well as the volume of public use to be provided.

The Implementation Component consolidates the measurable objectives and actions for each of the park's management goals. An implementation schedule and cost estimates are included for each objective and action. Included in this table are (1) measures that will be used to evaluate the DRP's implementation progress, (2) timeframes for completing actions and objectives and (3) estimated costs to complete each action and objective.

All development and resource alteration proposed in this plan is subject to the granting of appropriate permits, easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state or federal agencies. [The following statement applies only to coastal parks: This plan is also intended to meet the requirements for beach and shore preservation, as defined in Chapter 161, Florida Statutes, and Chapters 62B-33, 62B-36 and 62R-49, Florida Administrative Code.
In accordance with 253.034(5) F.S., the potential of the park to accommodate secondary management purposes was analyzed. These secondary purposes were considered within the context of the DRP's statutory responsibilities and the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, visitation and visitor experiences. For this park, it was determined that no secondary purposes could be accommodated in a manner that would not interfere with the primary purpose of resource-based outdoor recreation and conservation.

DRP has determined that uses such as, water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) would not be consistent with this plan or the management purposes of the park.

DRP may provide the services and facilities outlined in this plan either with its own funds and staff or through an outsourcing contract. Private contractors may provide assistance with natural resource management and restoration activities, or a concessionaire may provide services to park visitors in order to enhance the visitor experience. For example, a concessionaire could be authorized to sell merchandise and food and to rent recreational equipment for use in the park. A concessionaire may also be authorized to provide specialized services, such as interpretive tours, or overnight accommodations when the required capital investment exceeds that which DRP can elect to incur. Decisions regarding outsourcing, contracting with the private sector, the use of concessionaires, etc. are made on a case-by-case basis in accordance with the policies set forth in DRP's Operations Manual (OM).

Management Program Overview

Management Authority and Responsibility

In accordance with Chapter 258, Florida Statutes and Chapter 62D-2, Florida Administrative Code, the Division of Recreation and Parks (DRP) is charged with the responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state which will be accessible to all of the people, and of such character as to emblemize the state's natural values; conserve these natural values for all time; administer the development, use and maintenance of these lands and render such public service in so doing, in such a manner as to enable the people of Florida and visitors to enjoy these values without depleting them; to contribute materially to the development of a strong mental, moral, and physical fiber in the people; to provide for perpetual preservation of historic sites and memorials of statewide significance and interpretation of their history to the people; to contribute to the tourist appeal of Florida.

The Board of Trustees of the Internal Improvement Trust Fund (Trustees) has granted management authority of certain sovereign submerged lands to the DRP under Management Agreement MA 68-086 (as amended January 19, 1988). The management area includes a 400-foot zone from the edge of mean high water where a park boundary borders sovereign submerged lands fronting beaches, bays, estuarine areas, rivers or streams. Where emergent wetland vegetation exists, the zone extends waterward 400 feet beyond the vegetation. The agreement is intended to provide additional protection to resources of the park and nearshore areas and to provide authority to manage activities that could adversely affect public recreational uses.

Many operating procedures are standardized system-wide and are set by internal direction. These procedures are outlined in the OM that covers such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, public use regulations, resource management, law enforcement, protection, safety and maintenance.

Park Management Goals

The following park goals express DRP's long-term intent in managing the state park:

- Provide administrative support for all park functions.
- Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.
- Restore and maintain the natural communities/habitats of the park.
- Maintain, improve or restore imperiled species populations and habitats in the park.
- Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.
- Protect, preserve and maintain the cultural resources of the park.
- Provide public access and recreational opportunities in the park.
- Develop and maintain the capital facilities and infrastructure necessary to meet the goals and objectives of this management plan.

Management Coordination

The park is managed in accordance with all applicable laws and administrative rules. Agencies having a major or direct role in the management of the park are discussed in this plan.

The Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS), assists DRP staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FWC) assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish and other aquatic life existing within the park. In addition, the FWC aids DRP with wildlife management programs, including imperiled species management. The Florida Department of State (FDOS), Division of Historical Resources (DHR) assists staff to ensure protection of archaeological and historical sites. The Florida Department of Environmental Protection (DEP), Florida Coastal Office (FCO) aids staff in aquatic preserves management programs. The DEP, Bureau of Beaches and Coastal Systems aids staff in planning and construction activities seaward of the Coastal Construction Control Line (CCCL). In addition, the Bureau of Beaches and Coastal Systems aid the staff in the development of erosion control projects.

Public Participation

DRP provided an opportunity for public input by conducting a public workshop and an Advisory Group meeting to present the draft management plan to the public. The meeting was held on April 18, 2022, respectively. Meeting notices were published in the Florida Administrative Register, on 4/5/22, VOL 48/ISSUE 66, included on the Department Internet Calendar, posted in clear view at the park, and promoted locally. The purpose of the Advisory Group meeting is to provide the Advisory Group members an opportunity to discuss the draft management plan (see Appendix 2).

Other Designations

Yellow River Marsh Preserve State Park is not within an Area of Critical State Concern as defined in Section 380.05, Florida Statutes, and it is not presently under study for such designation. The park is a component of the Florida Greenways and Trails System, administered by the Department's Office of Greenways and Trails.

All waters within the park have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302, Florida Administrative Code. Surface waters in this park are also classified as Class II waters by the Department. This park is adjacent to the Yellow River Marsh Aquatic Preserve as designated under the Florida Aquatic Preserve Act of 1975 (Section 258.35, Florida Statutes).

Resource Management Component

Introduction

The Florida Department of Environmental Protection (DEP), Division of Recreation and Parks (DRP) in accordance with Chapter 258, Florida Statutes, has implemented resource management programs for preserving for all time the representative examples of natural and cultural resources of statewide significance under its administration. This component of the unit plan describes the natural and cultural resources of the park and identifies the methods that will be used to manage them. Management measures expressed in this plan are consistent with the DEP's overall mission in ecosystem management.

DRP's philosophy of resource management is natural systems management. Primary emphasis is placed on restoring and maintaining, to the degree possible, the natural processes that shaped the structure, function, and species composition of Florida's diverse natural communities as they occurred in the original domain.

Single species management for imperiled species is appropriate in state parks when the maintenance, recovery, or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality, or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes, and should not imperil other native species or seriously compromise park values.

DRP's management goal for cultural resources is to preserve sites and objects that represent Florida's cultural periods, significant historic events, or persons. This goal often entails active measures to stabilize, reconstruct, or restore resources, or to rehabilitate them for appropriate public use.

Because park units are often components of larger ecosystems, their proper management can be affected by conditions and events that occur beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program that assesses resource conditions, evaluates management activities, and refines management actions, and reviews local comprehensive plans and development permit applications for park/ecosystem impacts.

The entire park is divided into management zones that delineate areas on the ground that are used to reference management activities (see Management Zones Map). The shape and size of each zone may be based on natural community type, burn zone, and the location of existing roads and natural fire breaks.

Natural Resources

Topography

The Yellow River Marsh Preserve State Park is in Florida's Coastal Lowlands within the Northern Zone of the state. More specifically, it is in the Gulf Coastal Lowlands, adjacent to Northern Highlands. Coast parallel features characterize the Gulf Coastal Lowlands, indicating a close control of their shape and form by marine forces. Some of the landforms include ancient coastal features and includes beach ridge plains, ancient shorelines and marine terraces. The terrain at Yellow River Marsh Preserve State Park is generally flat to very gently sloping and featureless.

The major drainage systems in the area are the Yellow, Blackwater and Escambia Rivers, which flow south through the Pensacola Bay before emptying into the Gulf of Mexico near Pensacola. The entire state park is on the Garcon Peninsula: a relatively sandy, poorly drained landmass separating Escambia and East Bays. Land surface elevations vary from mean sea level (msl) along East Bay to approximately 20 feet above msl further inland on the northern portions of the preserve. Limited relief and very little slope characterize topography within the preserve. Alterations to the topography of the preserve include fire plow scars, unimproved roads and ditching.

Geology

Santa Rosa County lies within the East Gulf Coastal Plain, a broad belt consisting of unconsolidated sands, silts and clay. The Yellow River Marsh Preserve State Park is found in the Coastal Lowlands, a low-lying area consisting of flat, weakly dissected alluvial plains and active coastlines. The largest unbroken terrace area in westernmost Florida is the Garcon Peninsula, covering 27 square miles. This low-lying area consists of wet prairies, flatwoods and mixed hardwood swamps. The floodplain wetlands are seasonally flooded habitats with alluvial sand or peat substrates. Quaternary geology and sediments of the Citronelle Formation that blanket the Gulf Coastal Lowlands are typically Pliocene-Pleistocene sandy clay residuum that is moderately well drained to very poorly drained.

Soils

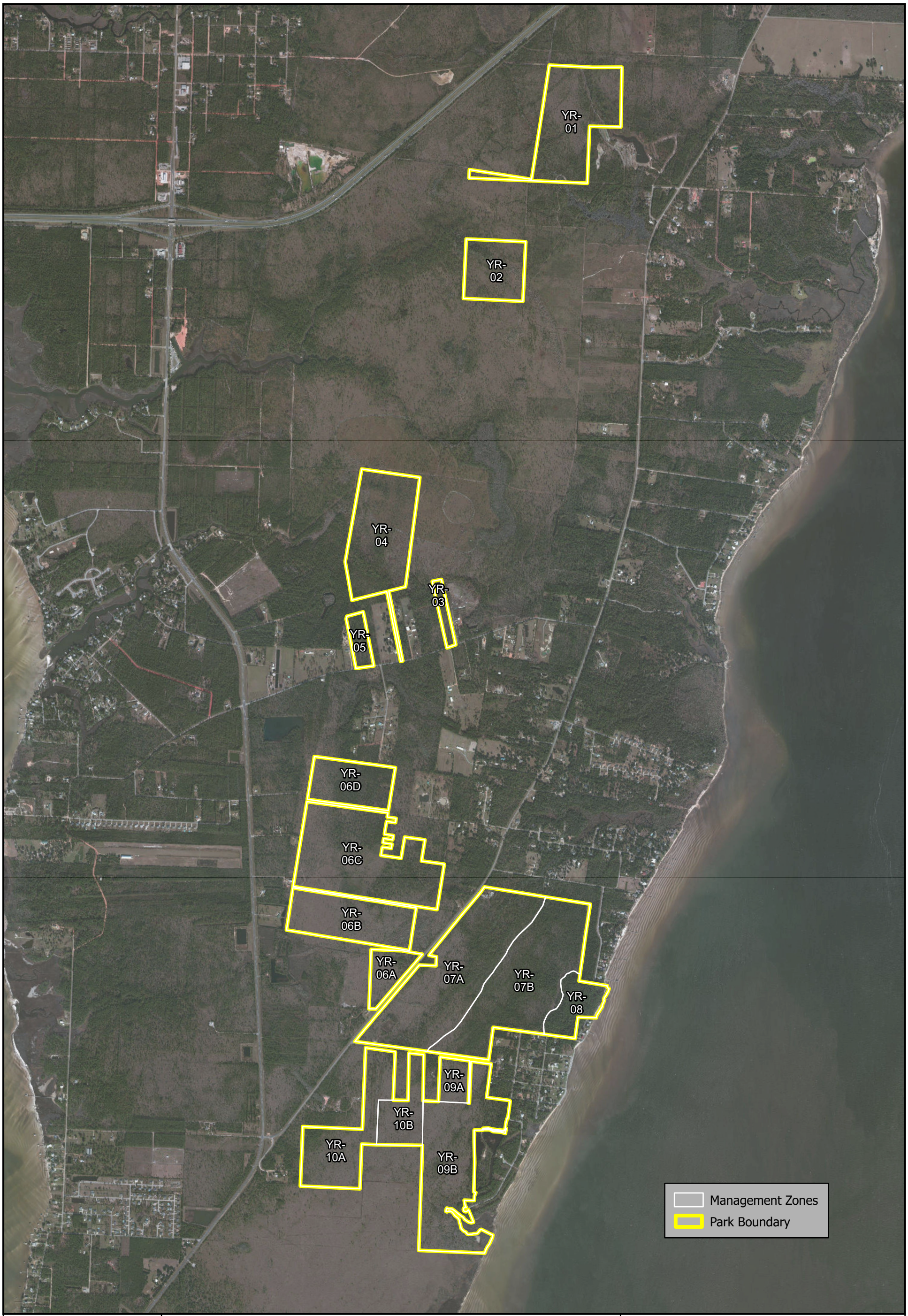
Generally, the preserve consists of a variety of soils that are moderately to poorly drained, sandy and loamy throughout. Detailed soil descriptions are contained in Addendum 4. These include: Albany loamy sand, Garcon loamy fine sand, Lynchburg fine sandy loam, Mulat loamy fine sand, Pactolus loamy sand, Rains fine loamy sand and Rutledge loamy sand (NRCS 1980; see Soils Map). The majority of soil types which are found on the park exhibit wetland characteristics. The scant historical records indicate that most of the preserve has experienced some ground disturbing activity including agriculture and silviculture, fire suppression and ditching. However, these activities have been absent for many years and re-vegetation of the area has minimized the effects of erosion. Hydrologic restoration will address many of the soil-related conservation issues. Natural community restoration techniques such as prescribed fire will help provide for the conservation of soil resources. A living shoreline was completed in 2013, where reef components were installed to protect the park's shoreline from erosion issues.

Minerals

No commercially valuable minerals are known to occur on the property

Hydrology

Northwest Florida has larger drainage basins and a greater stream density than any other region of Florida (Fernald and Purdum, 1998). The rivers in this area have few man-made structures to modify their channels or control their rates of flow. Variations in local flow are determined by rainfall and its resultant runoff or by groundwater discharge into the stream channel. Several of the largest and most productive estuaries in the state are in northwest Florida including Pensacola Bay. The Yellow River Marsh Preserve State Park is situated entirely on a low, flat peninsula: the Garcon Peninsula, a prominent land mass that divides the Pensacola Bay system into Escambia Bay to the west and Blackwater Bay and East Bay to the east.



YELLOW RIVER MARSH PRESERVE STATE PARK
Management Zones

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Sources: ESRI; Florida Department of Environmental Protection
This graphical representation is provided for informational purposes and should not be considered authoritative for navigational, engineering, legal, and other uses.

1 - Albany loamy sand, 0 to 5 percent slopes
4 - Bohicket and handsboro soils
16 - Garcon loamy fine sand
18 - Johns fine sandy loam
24 - Leon sand, 0 to 2 percent slopes
27 - Lynchburg fine sandy loam
29 - Mulat loamy fine sand
32 - Orangeburg sandy loam, 5 to 8 percent slopes
34 - Pactolus loamy sand, 0 to 5 percent slopes
37 - Rains fine sandy loam
40 - Rutlege loamy sand
51 - Meadowbrook fine sand, 0 to 2 percent slopes
52 - Goldhead fine sand
99 - Water
100 - Waters of the Gulf of Mexico
Park Boundary

YELLOW RIVER MARSH PRESERVE STATE PARK
Soils

N

0 0.5 1 Miles

User: Jones_AE
Folder: G:\PARKS\Yellow River Marsh Preserve State Park\Projects\UMP\Soils\
Sources: ESRI; Florida Department of Environmental Protection
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Three major watersheds influence these bays. The Escambia River flows into Escambia Bay and the Blackwater and Yellow Rivers flow into East Bay. Both the Escambia and Yellow Rivers originate in Alabama. The Pensacola Bay system functions as an important nursery for significant estuarine and marine fisheries. The alarming decrease in water quality, however, threatens many commercial and recreational important species. Escambia Bay is considered one of the most highly stressed bays of the system (Lewis M.A. et al. 2016). It receives the highest level of point and non-point discharges, as well as pollutant loading from the Escambia-Conecuh River system. The upper portion of the bay is noted as undergoing eutrophication. Conversely, the Blackwater and East Bays remain the most unaffected from anthropogenic degradation, and parts of these bays may still be considered near pristine. However, growth in Santa Rosa County is beginning to threaten these bays with increased storm water runoff, gray water and septic tank effluent, and increases from wastewater treatment plant discharges. The Blackwater and East Bays are lower energy systems than the Escambia and Pensacola Bays because of lower river input and lesser tidal influence. This increases the potential of water and sediment quality degradation from the negative impacts associated with increased growth and development in the area.

There are numerous bayous of varying size along the shoreline of the Pensacola Bay system. Although all the bayous in the system have been impacted to some extent by human activities, many are still biologically productive. Since bayous have a smaller surface area and are narrower than the open bays, there is a reduction in the tidal exchange and mixing of the upper and lower layers of water caused by thermal and density gradients. This decreased wave energy and physical movement of water is conducive to the growth of extensive marsh vegetation, providing estuarine habitat. This lack of significant circulation, however, causes many bayous to act as sinks for large amounts of surface runoff. This indicates that the future impacts of storm water runoff will have its greatest effect at these points. The bayous of the Garcon Peninsula, due to their important role in the biological health of the bay system, warrant special protection from current and future impacts of pollution.

The preserve also plays a minor role in recharging of the underlying Coastal Lowlands aquifer system, sand and gravel aquifer consisting of semi-consolidated soils bedded with silt, clay and minor carbonate rocks. However, most of the surface water drains directly into the surrounding bays due to the poorly drained soils. Given the flat to very gently sloping nature of the topography, runoff is slow. Due to the relatively low permeable surficial soils found over much of the state park and the lack of relief, internal drainage is also slow. The flatness and the existing land cover allow for the storage of excess rainfall on the land surface. The principal routes of water removal from the preserve are evaporation, transpiration and runoff. Internal drainage is probably less significant. This combination of soils and hydrologic factors result in a condition where the water table is at or near the surface for much of the time. Frequently, water ponds above ground surface in shallow depressions and ditches. This condition of a high water table occurs in both the wet prairies and the estuarine tidal marsh. It provides one of the necessary conditions for these biological communities to exist. Many of the plants found here are adapted to and require a wet environment. The occurrence of the high water table and the associated plant communities constitutes an increasingly rare, natural hydrologic environment. Throughout the state, these types of environments have been degraded through dredge and fill activities. In times of high rainfall, water stands at land surface and slowly moves by sheet flow and through the existing bayous to the surrounding waters. Given the undisturbed land cover, this storm water runoff is of relatively high quality. However, some past attempts have been made to alter surficial

flow for either agriculture or development. In addition, several wildfires have occurred within the past 30 years that required firebreaks. Silviculture, development and fire suppression all contribute to the hydrological alteration of the preserve. Surveys should be conducted to locate all of the ditches for future management restoration.

Hydrological Management

Goal: Protect water quality and quantity in the park, restore hydrology to the extent feasible and maintain the restored condition.

Florida's native habitats are precisely adapted to natural drainage patterns and seasonal water level fluctuations. Variations in these factors frequently determine the types of natural communities that occur on a particular site. Even minor changes to natural hydrology can result in the loss of plant and animal species from a landscape. Restoring state park lands to original natural conditions often depends on returning natural hydrological processes and conditions to the park. This can be done by filling ditches, removing obstructions to surface water sheet flow, installing culverts or low-water crossings on roads, and installing fire lines that limit the amount of hydrological damage.

Objective A: Assess the park's hydrological restoration needs.

Action 1	Comprehensive park-wide hydrological assessment.
Action 2	Develop hydrological restoration plan
Action 3	Pursue funding for a Marsh Master 2LX vehicle with cutting attachments and fire suppression equipment

A complete assessment of the park's hydrology can only be conducted by a thorough engineering survey. Large hydrological disruptions are obvious in the park. Hydrological disruptions, such as ditching, fire plow scars, fire lines, and jeep trails are present at the park. The location of these disruptions should be documented. Disruptions can then be assessed to determine restoration needs.

Pursue funds to purchase a Marsh Master 2LX vehicle with cutting attachments and fire suppression equipment. This machine is critical for maintaining existing fire lines while limiting the amount of further hydrological damage to the park. Wet prairies are very sensitive hydrologically. Use of equipment that is not suitable for the wet environments causes damage to these habitats and does not enable sufficient support for prescribed fire and suppressing wildfires, which have historically been active at the park.

Objective B: Restore natural hydrological conditions and functions to approximately 897 acres of wet prairie, wet flatwoods, and dome swamp and shrub bog natural communities.

Action 1	Install culverts to improve hydrology and management zone access.
Action 2	Install extended low water crossings / firebreaks.

Install 5 culverts to improve hydrology and access to the management zones in the park. The order of importance for the placement of these culverts are in order of YR-06A, YR-06B, YR-06C, YR-10B, YR-09A. Additional culverts will be needed to fully access the management zones effectively, but these are the most important access points.

Enhance fire lines in the management areas by installing geotextile fabric and schedule A gray lime rock. These upgraded fire lines will significantly reduce the current damage done by the present fire lines to the hydrology of the state park and offer more effective access for prescribed fire and suppression of wildfires that pose risks to surrounding human developments. The installation of these fire lines should be placed strategically to limit the effect on the fragile ecotones present between the wet prairie, mesic flatwoods, dome swamp, and dome strand communities. In order of the most important placement of these fire lines are YR-06C, YR-06B, YR-06A, YR-07A, YR-07B, YR-09, and YR-10. All of the management zones should utilize geotextile fabric, but the previously mentioned zones would be of the greatest importance to protect the natural communities.

- YR-06A require 4,125 linear feet of updated fire lines.
- YR-06B, C, and D require 15,309 linear feet of updated fire lines. The best approach for these zones would be to install fire lines around the perimeter and avoid building fire lines in the interior of the zones. This would limit the amount of hydrological damage and allow these zones to be burned at the same time.
- YR-07A require 11,688 linear feet of updated fire lines.
- YR-07B require 9,292 linear feet of updated fire lines.
- YR-09 require 2,542 linear feet of updated fire lines.
- YR-10 require 9,340 linear feet of updated fire lines.

Natural Communities

This section of the management plan describes and assesses each of the natural communities found in the state park. It also describes the desired future condition of each natural community and identifies the actions that will be required to bring the community to its desired future condition.

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors such as climate, geology, soil, hydrology, and fire frequency generally determine the species composition of an area, and that areas that are similar with respect to those factors will tend to have natural communities with similar species compositions. Obvious differences in species composition can occur, however, despite similar physical conditions. In other instances, physical factors are substantially different, yet the species compositions are quite similar. For example, coastal strand and scrub--two communities with similar species compositions--generally have quite different climatic environments, and these necessitate different management programs. Some physical influences may vary from FNAI's descriptions for certain natural communities in this plan.

At the point in time when the park's natural communities have reached their desired future condition, they are considered to be in a maintenance status and share certain basic characteristics and management requirements. These include the maintenance of the optimal fire return intervals for fire dependent communities, the maintenance control of non-native plant and animal species, the maintenance of natural hydrological functions (including historic water flows and water quality), the maintenance of proper vegetative structure that represents the natural diversity of the community, the maintenance of healthy populations of plant and wildlife species (including those that are imperiled or endemic), and the maintenance of intact ecotones between natural communities across the landscape.

Alluvial Forest

Desired Future Condition: Alluvial forests are hardwood forests found in river floodplains on ridges or slight elevations above floodplain swamp and are flooded for one to four months of the year during the growing season. Typical overstory trees may include overcup oak (*Quercus lyrata*), swamp laurel oak (*Q. laurifolia*), water hickory (*Carya aquatica*), American elm (*Ulmus Americana*), and red maple (*Acer rubrum*). Understory species may include swamp dogwood (*Cornus foemina*), willow species (*Salix* spp.), and American hornbeam (*Carpinus caroliniana*). Presence of groundcover will be variable. Species such as netted chain fern (*Woodwardia areolata*) and other shade tolerant herbaceous species may be present.

Description and assessment: Alluvial forest is only found in Zone YR-2 at Yellow River Marsh, this seasonally flooded heavily shaded area consists of a hardwood overstory of oaks and Red Bay trees and an understory of fern intermixed with grasses, Cypress is also found in this community. The alluvial forest is surrounded by wet prairie made up of wiregrass with a pine overstory. The condition of the floodplain forest is good.

General management measures: The uplands surrounding the Alluvial Forest found at Yellow River Marsh experience routine prescribed fire, fire is conducted under conditions where conditions are unfavorable for ignition in the natural community thus limiting the impact of fire. The fire regime should mimic the neighboring natural communities, and for Yellow River Marsh Preserve State Park, the fire regime should be every three to five years. Hydrological alterations due to plow scars and fire lines should be restored where possible. Further hydrological disruptions should be avoided especially when installing fire lines or low water crossings. Mosquitoes and other arthropods are important for many species at the park, including bats and frogs. Herpetofauna and avian species also depend on these domes and are sensitive to pesticides and herbicides. Neither herbicide or pesticides should be used without an exotics and arthropod control plan.

Borrow

Desired future condition: Borrow areas in Yellow River Marsh Preserve State Park should be surveyed for amphibians and other wildlife to determine what species utilize the habitats. If a rich assemblage of wildlife is documented the borrow areas should be optimized to support the use of the areas. Options such as increasing cypress around the edges of the borrow areas should be considered, along with other opportunities to support species with specific habitat needs. If it is found that these areas are not biodiverse, then the borrow areas should be converted back to a wet prairie community. Any restoration of borrow areas should only occur after the proper surveys are concluded.

Description and assessment: Borrow areas consist of two pits totaling 1.9 acres. One pit is located on Dickerson City Road and is bordered by pitcherplants and a healthy stand of bald cypress to the north. This shallow pit is usually dry during the winter months and periods of extreme drought. However, during the wet summer season waterfowl, amphibians and insects frequent the shallow waters. The other pit is found in YR-06D on the eastern end of the property, where a dense understory and slash pine canopy is present.

General management measures: Flatwoods salamanders have been known to breed in borrow pits. A dip net survey should be done over multiple years to make sure that no

Natural Communities - in Acres

- AF- Alluvial Forest - 8.13
- BST - Blackwater Stream - 2.15
- DS - Dome Swamp - 11.04
- EUS - Estuarine Unconsolidated Substrate - 0.89
- MF - Mesic Flatwoods - 39.62
- SHB - Shrub Bog - 14.88
- WF - Wet Flatwoods - 357.04
- WP - Wet Prairie - 514.09
- BA - Borrow Area - 1.50
- DV - Developed - 2.88
- SHF - Successional Hardwood Forest - 24.37

YELLOW RIVER MARSH PRESERVE STATE PARK
Natural Communities - Existing Conditions

N

0 0.5 1

Miles

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Sources: ESRI; Florida Department of Environmental Protection
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Flatwood Salamanders are using this sub optimal habitat for breeding. With increased prescribed fire activity in YR-7A surrounding the larger pit, the possibility for Flatwood Salamanders will increase. If the intention is to improve this site as a potential breeding pond for Flatwoods Salamanders, then further ditching and or other hydrological alterations should be avoided. A general amphibian survey should also be conducted in the borrow pits. If no imperiled species are utilizing the borrow pits and it is found the habitat does not support a rich diversity of amphibians and other wildlife the borrow pits should be converted into a wet prairie natural community.

Blackwater Stream

Desired Future Condition: Characterized as perennial or intermittent watercourses originating in lowlands where extensive wetlands with organic soils collect rainfall and runoff, discharging it slowly to the stream. The stained waters are laden with tannins, particulates, and dissolved organic matter derived from drainage through adjacent swamps resulting in sandy bottoms overlain by organic matter. Emergent and floating vegetation (including golden club, smartweed, grasses and sedges) may occur but is often limited by steep banks and dramatic seasonal fluctuations in water levels. Desired conditions include minimizing disturbance and preserving adjacent natural communities.

Description and assessment: Blackwater Stream community at Yellow River Marsh Preserve State Park can be found in zone YR-7A. A subtle topography change directs this stream between two low ridges as it drains off to the south eventually disappearing entirely into the surrounding Wet Flatwoods community. The stream is lined with a mixture of Red Bay trees and Southern Magnolia, the leaves of which contribute to the tannic brown color. During periods of drought the stream will almost dry completely.

General management measures: The uplands surrounding the Blackwater Stream found at Yellow River Marsh should experience routine prescribed fire. The fire regime should mimic the neighboring natural communities, and for Yellow River Marsh Preserve State Park, the fire regime should be every three to five years.

Hydrological alterations due to plow scars and fire lines should be restored where possible. Further hydrological disruptions should be avoided especially when installing fire lines or low water crossings. Mosquitoes and other arthropods are important for many species at the park, including bats and frogs. Herpetofauna and avian species also depend on these domes and are sensitive to pesticides and herbicides. Neither herbicide or pesticides should be used without an exotics and arthropod control plan.

Developed

Desired future conditions: The developed areas within the park will be managed to minimize the effect of the developed areas on adjacent natural areas.

Description and assessment: These areas consist of gravel drives, unpaved parking lots and an office building with an adjoining maintenance area. This building serves as offices for FWC staff. A pole barn used for parking equipment was placed behind the building in an enclosed equipment storage area. This equipment storage area was enclosed with a chain link fence for security purposes in 2005.

General management measures: The developed areas within the park will be managed to minimize the effect of the developed areas on adjacent natural areas.

Dome Swamp

Desired future condition: Dome swamps are isolated, forested, depression wetlands occurring within a fire maintained matrix, such as wet flatwoods and wet prairies. The characteristic dome appearance is created by smaller trees that grow on the outer edge, where there is shallower water and less peat, and the larger trees that grow in the interior. Bald cypress (T*axodium distichum var. distichum*) should typically dominate, but black gum (*Nyssa sylvatica biflora*) may also form a pure stand or occur as a co-dominant. Other sub-canopy species can include red maple (*Acer rubrum*), dahoon holly (*Ilex cassine*), myrtle holly (*Ilex myrtifolia*), swamp bay (*Persea palustris)* and sweetbay (*Magnolia virginiana*). Shrubs can be absent to moderate (a function of fire frequency) and can include Virginia willow (*Itea viginica*), fetterbush (*Lyonia lucida)*, buttonbush (*Cephalanthus occidentalis*), wax myrtle (*Myrica cerifera)* and titi (*Cyrilla racemiflora)*. A herbaceous component can range from absent to dense and include ferns, maidencane (*Panicum hemitomon)*, swamp sawgrass (*Cladium mariscoides)*, sedges, and sphagnum moss. Vines and epiphytes will commonly be found.

Maintaining the appropriate hydrology and fire frequency is critical for preserving the structure and species composition of the community. Dome swamps should be allowed to burn on the same frequency as the adjacent fire type community, allowing fires to naturally burn across ecotones. Fires should be appropriately planned to avoid high severity fuel consumption within the dome swamp. Cypress have somewhat fire-resistant bark and are tolerant of light surface fires. Of concern is when a hot fire invades into muck fuels found in these communities. A catastrophic muck fire may damage the dome swamp and transform it into a pond or wet prairie. The normal fire cycle may be as short as three to five years and can be as long as 100 to 150 years. Dome swamps provide important habitat for many species, including breeding habitat for amphibians and habitat for wading birds. Of interest at this park is the potential breeding habitat provided by this natural community for the Flatwoods Salamander.

Description and assessment: The dome swamps at the park are found within the wet flatwoods and wet prairie natural community matrix. They are composed mainly of bald cypress and myrtle-leaved holly. The dome swamps at this park have a more herbaceous ecotone. St. John's wort, fetterbush, wax myrtle, myrtle-leaved holly and meadow beauty are also found in these dome swamps. Hydrological disruption has occurred due to fire lines, and plow lines. Despite the previously mentioned alterations, the dome swamps are in fair condition. In the western sections of management zones YR-06C, YR-06D cypress stringers can be found between the wet prairie and wet flatwood matrix. These cypress stringers are associated closely with Curtis's sandgrass, Myrtle-leaved holly, St. John's Wort, and pitcher plants.

General management measures: Dome swamps should be allowed to burn when the adjacent communities burn. The fire regime should mimic the neighboring natural communities, and for Yellow River Marsh Preserve State Park, the fire regime should be every three to five years. Hydrological alterations due to plow scars and fire lines should be restored where possible. Further hydrological disruptions should be avoided especially when installing fire lines. Mosquitoes and other arthropods are important for many species at the park, including bats and frogs. Herpetofauna and avian species also depend on these domes and are sensitive to pesticides and herbicides. Neither herbicide or pesticides should be used without an exotics and arthropod control plan.

Estuarine Unconsolidated Substrate

Desired future condition: Estuarine Unconsolidated Substrates are generally characterized as low energy, relatively open areas of subtidal, intertidal, and supratidal zones which consist of expansive unvegetated areas composed of shell, mud, and/or sand. This natural community extends itself from the low tide line along the bayshore landward across the sparsely vegetated sediment to where it grades into adjacent communities. Sparse vegetation may be colonizing at the edges of this community depending on the amount of time since the last tropical storm. The vegetation type depends on the adjacent community and the level of salt water overwash. At low tide, much of the shoreline should consist of tidal flats of exposed sand and mud. This community should support a large population of infaunal organisms as well as a variety of transient planktonic and pelagic organisms (e.g., tube worms, sand dollars, mollusks, isopods, amphipods, burrowing shrimp, and an assortment of crabs) and should support a variety of foraging wading birds and shorebirds. Organic marine debris, including seaweed and driftwood, should form a wrack line on the shore.

Description and assessment: The estuarine unconsolidated substrate community consists of a small portion of the park that has private residences adjacent to the north and south. Tropical storms in the past heavily eroded this area leaving exposed tree stumps. A living shoreline project occurred in 2012-2013. The project successfully installed reef components that provides habitat for oyster recruitment and protects the shoreline from erosion. A bed of shoal weed (*Halodule wrightii)* exists in between the reef components, that is in good condition. Exposed tidal flats are important for foraging shorebirds. Wading birds and gulls also forage along the exposed flats, feeding on shellfish and other macroinvertebrates. Overall, the community is in good condition, due to the installation of the living shoreline project, which protects the area.

General management measures: Manmade non-organic, nonbiodegradable debris should be cleaned off the bayshore as much as is feasible after tropical storms to prevent entanglements, ingestion and pollution. Exotic plants and animals should be controlled as needed. The reef components should be monitored once annually, and a photo point should be taken to document changes to the community over time.

Mesic Flatwoods

Desired Future Condition: Mesic flatwoods is characterized by an open canopy of tall pines typically longleaf pine (*Pinus palustris*) and/or south Florida slash pine *Pinus elliottii*), depending on the region of the state and a dense, low ground layer of low shrubs, grasses and forbes. Saw palmetto (*Serenoa repens*) will generally be present but not overly dominant. Other shrub species may include gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), runner oak (*Quercus elliottii*), dwarf live oak (*Quercus minima*), shiny blueberry (*Vaccinium myrsinites*), and dwarf huckleberry (*Gaylussacia dumosa*). The herbaceous layer is primarily grasses, including wiregrass (*Aristida stricta* var. *beyrichiana*), dropseeds (*Sporobolus curtissii, S. floridanus*), panicgrasses (*Dicanthelium* spp.), and broomsedge (*Andropogon* spp.). This community has minimal topographic relief and the soils contain a hardpan layer within a few feet of the surface which impedes percolation. Due to these factors, water can saturate the sandy surface soils for extended periods during the wet season but lengthy droughts also commonly occur during the dry season. The Optimal Fire Return Interval is 1-3 years.

Description and assessment: The mesic flatwood communities are found in management zones YR-3, 4, and 5. A thick ground cover of wiregrass and gallberry is present. Slash pine and a dense understory of gallberry and wax myrtle is present in wetter portions.

General management measures: Prescribed fire should be applied to this community every 1-3 years. Prescribed fire is effective at naturally thinning slash pine, gallberry, and wax myrtle, but fire intensity should be heightened by switching burns to the growing season. Staff will continue to control invasive exotic plant species in or adjacent to developed areas of the park. Defensible space will be maintained around all structures in areas managed with prescribed fire or at risk of wildfires.

With the reintroduction of fire and a continued prescribed burn program, the mesic flatwoods should return to desired future condition. Re-introduction of fire in YR-3, 4, and 5 which have been fire suppressed in the past must be undertaken carefully to prevent tree crown consumption and duff smoldering, which can lead to tree mortality in older trees (Varner et al. 2005). Once fire has been reintroduced, it will take many years of careful burning before this community will return to maintenance condition. The hydrology of this community has been severely damaged. The hydrology of the unit is very sensitive to fire lines and plowing, where natural sheet flow is easily impacted. It is of great importance to re-introduce fire into these ecosystems to maintain biodiversity, but great care must be taken to prevent any further disruption to hydrology. Careful consideration should be given to the type, location, creation, and maintenance of fire lines. Until fire can safely be reintroduced to these zones, they should be mechanically treated or mowed to reduce fuel loading.

Shrub Bog

Desired future condition: Shrub bog consists of dense stands of broadleaved evergreen shrubs, vines and short trees. The characteristic shrubs that are found in this community in Yellow River Marsh Preserve State Park are titi (*Cyrilla racemiflora*), gallberry (*Ilex glabra*), wax myrtle (*Myrica cerifera*) and laurel greenbrier (*Smilax laurifolia*). Slash pine is also found throughout the shrub bog community. Herbaceous cover is sparse and patchy, and are only found in sunny openings. Wiregrass and pitcher plants can be found in these open areas. Shrub bogs are found on borders of wet flatwood, dome swamp, and wet prairie communities. The shrub bogs that are present in Yellow River Marsh Preserve State Park are the result of fire exclusion, which allowed wet flatwoods and wet prairie communities to succeed to a shrub bog community type. The shrub bog community is not the desired future condition in Yellow River Marsh Preserve State Park. With mechanical treatments and the introduction of fire into shrub bog communities the community will transition to the desired future condition of wet flatwoods or wet prairie.

Description and assessment: Shrub bogs have resulted due to the lack of fire in management zones YR-01, 03, 04, and 05. The shrub bog community consists mainly of dense stands of titi, with little herbaceous ground cover. The shrub bog community represents wet prairie or wet flatwood community types in poor condition. The shrub bog present in YR-1 should be a wet flatwoods community. The shrub bog that is present in YR-3, 4, and 5 should be a wet prairie community type.

General management measures: The shrub bog communities in management zones YR-03, 04, and 05 should receive a mechanical treatment to remove the canopy cover that is present in these zones to help transition the shrub bog community into a wet prairie community. The shrub bog community that is found in management zone YR-01 should

be managed by allowing fire to move through the community to decrease the density of titi and allow a wet flatwoods community type to succeed in the shrub bogs place. Growing season burns protect adjacent natural communities from the encroachment of shrub bogs into the other communities.

Successional Hardwood Forest

Desired Future Condition: Successional hardwood forest is considered an altered landcover type that consists of a closed-canopied forest of fast growing hardwoods such as laurel oak (*Quercus hemisphaerica*), water oak (*Quercus nigra*), sweetgum (*Liquidambar styraciflua*), and remnant pines. The successional hardwood forest community is the result of fire suppression, which has allowed this community type to succeed from the wet flatwoods community type. The desired future condition of the successional hardwood forest is for it to be a wet flatwoods community type.

Description and assessment: Successional hardwood forest is found in management zone YR-08 in Yellow River Marsh Preserve State Park. This area consists of a closed canopy of a mixture of slash pine, laurel oak and sweetgum. Fire has been excluded for many years and the zone is currently unburnable due to heavy fuel loading. A catastrophic fire will result if fire gets in this zone and will most likely damage the housing community that borders this area. There is a closed canopy present, with a very dense understory. The native herbaceous groundcover is very low, as the duff layer has become very thick. In addition, hurricane storm debris can also be found in YR-08. The storm debris consists of materials such as wooden railings and other dock components, and fallen trees, which compounds the problems with controlling the intensity of fire in this zone.

General management measures: Mechanical removal of trees and shrubs should occur in in YR-08, along with removing storm debris that is found in this zone, before fire can be used as a management strategy. In addition, park staff should coordinate with the Florida Forest Service's Urban Mitigation Team, in order to identify perimeter portions of zone YR-08, where gyro-trac mechanical reduction of fuels would safeguard adjacent structures or at least create more defensible space in the event of a wildfire.

Wet Flatwoods

Desired future condition: Dominant pines should be longleaf pine (*Pinus palustris)* and slash pine (*Pinus elliottii)*. Bald cypress (*Taxodium ascendens*) may be present. The canopy will be open, with pines being widely scattered with varying age classes. Native herbaceous cover is at least 80 percent. Pitcherplants (*Sarracenia psittacina*, *S. leucophylla* and *S. purpurea*) and other plants such as terrestrial orchids may be present and abundant in some areas. Common shrubs will include fetterbush (*Lyonia lucida*), large gallberry (*Ilex coriacea)*, titi (*Cyrilla racemiflora*), and wax myrtle (*Myrica cerifera*). The Optimal Fire Return Interval for this community is 2-4 years.

Description and assessment: The wet flatwood communities are found in management zones YR-01, 06B, 06C, 06D, 07A, 07B, and 10. A thick ground cover of wiregrass and sedges is present, with dense clumps of white-topped pitcher plants spread throughout these zones. Slash pine is becoming dense in YR-07A and YR-07B, and a dense understory of gallberry and wax myrtle is present. In zones YR-06C, 06D slash pine is becoming dense on the eastern portion of the zones. These conditions have led to a decrease in wiregrass and white-top pitcher plants density in these zones.

In zones YR-06C/D slash pine is becoming dense causing there to be a closed canopy, in the eastern portion of these zones. In addition, the understory of gallberry and wax myrtle can also be dense in the eastern portion. These conditions have decreased the amount of graminaceous and herbaceous cover. Pitcher plants are still present in low densities in these areas. The slash pine and understory should be thinned to allow for the recovery of the wet prairie community that should exist in these zones. Growing season burns will help keep the pine density controlled.

General management measures: Prescribed fire should be applied to this community every 2-4 years. Prescribed fire is effective at naturally thinning slash pine, gallberry, and wax myrtle, but fire intensity should be heightened by switching burns to the growing season. Staff will continue to control invasive exotic plant species in or adjacent to developed areas of the park. Defensible space will be maintained around all structures in areas managed with prescribed fire or at risk of wildfires.

With the reintroduction of fire and a continued prescribed burn program, the wet flatwoods should return to desired future condition. Re-introduction of fire in YR-06C, 06D, 07A, and 07B which have been fire suppressed in the past must be undertaken carefully to prevent tree crown consumption and duff smoldering, which can lead to tree mortality in older trees (Varner et al. 2005). Once fire has been reintroduced, it will take many years of careful burning before this community will return to maintenance condition. The hydrology of this community has been severely damaged. The hydrology in wet prairie and wet flatwoods is very sensitive to fire lines and plowing, where natural sheet flow is easily impacted. It is of great importance to re-introduce fire into these ecosystems to maintain biodiversity, but great care must be taken to prevent any further disruption to hydrology. Careful consideration should be given to the type, location, creation, and maintenance of fire lines. In addition, a hydrological study should be carried out to determine, the most effective placement of fire lines, and determine the areas where hydrological damage has been done, and if it is possible to restore hydrological functions in these areas.

In YR-10 there are five acres of dense slash pine in the southwestern portion of this zone. The slash pine may have resulted from a past silviculture operation. It is recommended that this area be thinned to limit the impact of this dense stand on wet prairie/wet flatwoods habitat. Due to the saturated soils present in this area it is not recommended to use heavy machinery, that can get stuck, and cause rutting further disturbing the hydrology. The thinning and removal of slash pine should be carried out by hand to prevent damage to the wet prairie habitat. Improving the existing fire lines utilizing a geotextile fabric with a schedule A lime rock base would allow for greater access to this zone, while limiting hydrological damage. The upgraded fire lines would allow for a more efficient and less harmful way to access the timber and facilitate removal.

Wet Prairie

Desired future condition: Trees will be few or absent. Groundcover will be dense and exceptionally species-rich. Dominant species will be wiregrass (*Aristida stricta* var. *beyrichiana*) and/or sedges (*Carex* spp.). Pitcherplants (*Sarracenia* spp.), sundews, butterworts, and terrestrial orchids are present and abundant in some areas. Sphagnum moss should be present to help seeds germinate and acidify the soil. Wet prairies are herbaceous communities that are supported by low nutrient and saturated soils found in low, slight depressions within a matrix of flatwood communities. Fire plays an essential

supporting role in keeping this community nutrient poor by helping to prevent encroachment of woody plants. The poverty of nutrients available to plants is the primary key to maintaining the rare plants that symbolize this community. Frequent fire in the adjacent areas keeps ground litter at a minimum and reduces the pulse of nutrients created by fire from reaching the wet prairie leaving the sandy soils nutrient poor. The surface hydrology helps to further leach nutrients from the soils and maintains saturation which both compacts soil and creates anoxic conditions that keep nutrients from becoming available to more competitive plant species thus helping to prevent woody plant encroachment. Generally, wet prairies are slightly lower in elevation than the neighboring flatwoods community receiving surface water sheet flow, keeping it saturated much of the year. Trees and shrubs will be few or absent. The fire regime should mimic the regime of neighboring wet flatwood community and should be included in the same burn zones with these neighboring communities. Hydrological regime should be intact, providing constant seepage to the natural community.

Description and assessment: The wet prairie at the park contains a diversity of herbaceous bog species, including Tracy's sundew (*Drosera tracei*), bladderworts (*Utricularia* spp.), white-top pitcher plants (*Sarracenia leucophylla*), and rose pogonia orchid (*Pogonia ophigolossoides*). The wet prairie conditions range from poor to good condition in the state park. This is due to the lack of fire in some areas resulting in a high density of shrubs and slash pine in some areas of wet prairie. Zones YR-03, 04, 05, 07A/07B and the eastern portion of YR-06C/06D represent wet prairie in poor condition. Few herbaceous species can be found persisting in these areas due to fire exclusion and the dense understory and canopy present. The rich diversity of species characteristic of this natural community, including carnivorous plants, has been reduced in these zones. The western portion of YR-06B/06C/06D have good wet prairie habitat present. A matrix of wet flatwoods and dome swamp communities are succeeding the wet prairie community in portions of YR-06D. Zones YR-02, YR-09 and YR-10 also contain wet prairie in good condition, due to recent burns. Hydrology has been interrupted by the installation of fire lines and plow scars in all zones in the state park, disrupting the natural sheet flow that is critical for maintaining healthy wet prairie natural community.

General management measures: A frequent fire regime of burning every two to three years and proper hydrological regime are important processes for this diverse herbaceous natural community. Wet prairies with soft saturated soil are sensitive to soil disturbance from vehicles and equipment used on fire lines. Firebreaks should be designed to prevent hydrological disruption. Some fire lines in the park are already short-circuiting water and causing erosion. These should be addressed and proper crossings that allow hydrological connections, such as low water crossings, should be installed. Wet prairies should not be isolated from neighboring natural communities. Fire lines should not be installed along the ecotones between wet prairies and their neighboring communities to allow fire to spread into both communities. Herbicide use should be avoided in these natural communities. If needed, herbicides should only be used with extreme caution in these natural communities as many of the plant species are sensitive to overspray, drift and root transfer.

Natural Communities Management

Goal: Restore and maintain the natural communities/habitats of the park.

As discussed above, DRP practices natural systems management. In most cases, this entails returning fire to its natural role in fire-dependent natural communities. Other

methods to implement this goal include large-scale restoration projects as well as smaller scale natural communities' improvements. Following are the natural community management objectives and actions recommended for the state park.

Objective A: Complete a comprehensive floral and faunal survey and create/update the park's baseline plant and animal list.

Action 1 Conduct general plant surveys.
Action 2 Conduct general insect and animal surveys.

It is recommended that a Park Service Specialist for Yellow River Marsh Preserve State Park be opened and filled. This position is critical to accomplish all goals set in this unit management plan. Currently there are no full-time staff at the park. The PSS position would focus on using equipment to maintain and improve existing fire lines, operate equipment to mechanically remove shrubbery and trees, and conduct general plant and wildlife surveys. In addition, the position would assist in detecting and treating exotic plants and animals. A full-time position at Yellow River Marsh Preserve State Park would also be important in identifying optimum conditions and strategies in implementing prescribed fire plans for the complexity that is present.

Prescribed Fire Management: Prescribed fire is used to mimic natural lightning set fires, which are one of the primary natural forces that shaped Florida's ecosystem. Prescribed burning increases the abundance and health of many wildlife species. A large number of Florida's imperiled species of plants and animals are dependent on periodic fire for their continued existence. Fire-dependent natural communities gradually accumulate flammable vegetation; therefore, prescribed fire reduces wildfire hazards by reducing these wild land fuels. All prescribed burns in the Florida state park system are conducted with authorization from the FDACS, Florida Forest Service (FFS). Wildfire suppression activities in the park are coordinated with the FFS.

Park staff will coordinate with the district burn coordinator to identify yearly burn objectives. Once zones have been selected, burn prescriptions will be completed and reviewed by the end of the calendar year. All primary and secondary (contingency) fire lines for the planned burn zones will be completed by the end of the calendar year as well. In most cases, resource management roads are used as primary firebreaks and provide for a mineral soil component to the fire line. Burn plans and prescriptions will detail the extent that fire breaks may need to be widened by removing vegetation or disking. Segments of existing or well-established fire lines that require light disking shall be prepared well prior to burning. If disking is required, it is recommended that only the outer edge of the fire line be disked, in order to preserve vehicular access along the remaining majority of the fire line. Prior planning for any new fire lines must be coordinated through DHR and DRP's Bureau of Natural and Cultural Resources (BNCR). Park staff will communicate with the district burn coordinator, and regional fire managers, in order to gather additional burn crew and equipment needed to conduct burns. Park staff will be responsible for tracking weather conditions throughout the burn season, and identifying potential burn windows based on weather forecasts. All fire suppression equipment will be routinely inspected and operationally tested. Any necessary maintenance/repairs will be accomplished or facilitated by park staff, or if necessary, coordinated with the district burn coordinator. Accurate and complete rainfall data will be maintained on-site, in order to track the local drought index and plan prescribed fire activities.

The park is partitioned into burn zones, and burn prescriptions are implemented on the prescribed burn cycle for each zone (see Management Zones Map). The park's burn plan is updated annually because fire management is a dynamic process. To provide adaptive responses to changing conditions, fire management requires careful planning based on annual and very specific burn objectives. Each annual burn plan is developed to support and implement the broader objectives and actions outlined in this ten-year management plan. In order to track fire management activities, DRP maintains a statewide burn database. The database allows staff to track various aspects of each park's fire management program including individual burn zone histories and fire return intervals, staff training/ experience, backlog, if burn objectives have been met, etc. The database is also used for annual burn planning which allows DRP to document fire management goals and objectives on an annual basis. Each quarter the database is updated and reports are produced that track progress towards meeting annual burn objectives.

Objective B: Within 10 years, have 922 acres of the park maintained within the optimum fire return interval.

Action 1 Develop and update annual burn plan.
Action 2 Manage fire communities by burning between 263-461 acres annually.
Action 3 Conduct mechanical removal treatments of dense understory and trees in applicable zones using a Gyro-Track GT25 or comparable vehicle.

Table 1 contains a list of all fire-dependent natural communities found within the park, their associated acreage and optimal fire return interval, and the annual average target for acres to be burned.

Table 1: Prescribed Fire Management

Natural Community	**Acres**	**Optimal Fire Return Interval (Years)**
Mesic Flatwoods	40	1-3
Wet Flatwoods	357	1-3
Dome Swamp	11	3-5
Wet Prairie	514	2-3
Annual Target Acreage	**263-461**	

Yellow River Marsh Preserve State Park contains some of the last remaining examples of expansive wet prairie natural communities along the Gulf Coastal Plain. The high biodiversity found in this park relies on frequent fires and an undisturbed hydrology. Residential development on the Garcon Point Peninsula has been extensive. This development has impacted the natural sheet flow of water through this low-lying wetland area, and built-up fuel loads due to the suppression of fire. Compounding these problems are the complexities involved in building and maintaining fire lines and operating traditional equipment in the saturated soil environment found in the state park. Traditional fire suppression equipment in low-lying wetlands often gets stuck, posing threats to the operators, and limiting the ability to contain a fire. In addition, the urban interface surrounding the state park is at high risk of damage, as any wind driven fire can escape quickly in a very short time, and become uncontainable due to the heavy fuel loads in and surrounding the park. Given these issues, a prescribed fire program at Yellow River Marsh Preserve State Park needs to be carried out with great caution and

planning to limit impacts to property, human life, and further damage to the sensitive ecosystem present in the state park.

The best option for a successful prescribed fire program at Yellow River Marsh Preserve State Park involves updating all the fire lines. The fire lines should utilize a geotextile material with a schedule A grey lime rock as the base. This type of fire line would significantly reduce the impacts to the natural hydrology of the park. The current fire lines in the park have disrupted the natural hydrology and still does not allow easy access to manage the prescribed fire program that is required to restore the communities in the state park to maintenance condition.

The next best option, if before mentioned fire lines are not installed is to purchase non-traditional fire equipment, such as a Marsh Master 2LX with cutting equipment and a fire suppression system. The use of a Marsh Master is crucial to accomplishing prescribed fire goals effectively, while limiting the impacts to this hydrologically sensitive ecosystem. A Marsh Master would allow access to areas to be able to control prescribed burning operations and limit escapes that can easily occur while burning inside the state park. In addition, the equipment would be able to maintain the fire lines inside the park, while limiting the amount of damage.

It is recommended that a Gyro-Trac GT25 is used to initiate mechanical reduction treatments in areas that have built-up heavy fuel loads. Specific zones that are in need of this treatment are YR-08, 07A/B, 03, 04, and 05.

It is also critical that a full-time operator or Park Service Specialist position be occupied at the state park. This position would allow for a continuous presence at the park to fulfill all the goals set forth in this plan. No current full-time staff exists at the park.

Following is a description and recommendations for each management zone at Yellow River Marsh Preserve State Park.

YR-01: There is no public right-of-way access to burn this zone. In dry years a "jeep trail" is the only way to access the zone. This access point crosses wet prairie and cypress strand wetlands, and use of this access point further damages the hydrology of the surrounding area. Acquisition of adjacent lands to the east and south are needed to access and create fire lines to burn this zone. In coordination with the Northwest Florida Water Management District (NWFWMD), zone YR-01 is currently in a burn rotation.

YR-02: This zone is surrounded by NWFWMD property. This zone is burned along with NWFWMD property as aerial burns are conducted. It is recommended to continue to coordinate and assist NWFWMD so this zone is included with the surrounding property burns.

YR-03: This is a small isolated partial, that is near private residences. This zone has built up a heavy fuel load and it is recommended to use mechanical fuel reduction treatments as an alternative to burning. A Gyro-Trac GT25 is necessary to be able to effectively thin the fuel load present. Installation of a culvert is also necessary to allow access to this zone and limit impacts on the hydrology.

YR-04: This zone borders a NWFWMD fire managed block to the north. The majority of the zone's perimeter runs through wet prairie. The boundaries of this zone needs to be surveyed to determine the feasibility of creating fire lines that would effectively isolate

this zone for prescribed burning. Heavy fuel loads have built up in the zone and will require a Gyro-Trac GT25 to thin the area. Additionally, a Marsh Master would be needed to maintain the fire line. It is recommended that this zone be maintained through mechanical removal treatments, rather than prescribed fire at this point, until detailed surveys be conducted to determine the best plan of action to install new fire lines. Installation of a culvert is also necessary to allow access to this zone and limit impacts on the hydrology.

YR-05: This is a small isolated partial, that is near private residences. This zone has built up a heavy fuel load and it is recommended to use mechanical fuel reduction treatments as an alternative to burning. A Gyro-Trac GT25 is necessary to be able to effectively thin the fuel load present. Installation of a culvert is also necessary to allow access to this zone and limit impacts to the hydrology.

YR-06A: The boundaries of this zone have installed fire lines present. If possible the existing fire lines should be updated utilizing geotextile materials with a schedule A lime rock as the base. If this is not feasible the second best option would be to purchase a Marsh Master. The Marsh Master would allow greater access, and limit the amount of damage to the natural communities in this zone. The fire lines should be maintained using a Marsh Master with a mowing attachment in order to minimize impacts to the wet prairie surface hydrology. There is a private residence located directly south of this zone. This zone was last burned in 2016 and in a prescribed burn rotation. Installation of a culvert is also necessary to allow access to this zone and limit impacts to the hydrology.

YR-06B: Fire lines have been installed surrounding this zone. If possible, the existing fire lines should be updated utilizing geotextile materials with a schedule A lime rock as the base. There are three private residences on the western portion of this zone. This zone should continue to be burned. The fire lines should be maintained using a Marsh Master with a mowing attachment in order to minimize impacts to the wet prairie surface hydrology and limit effects on the surrounding dome swamp and strand natural communities. Reticulated Flatwoods Salamander larvae have been documented near this zone. Continued prescribed burning will open up more open canopy, increase herbaceous groundcover, and increase the overall habitat for Flatwood Salamanders, pitcher plants, and other imperiled plant species. Using prescribed fire after January and avoiding putting fire on the ground between October and December is critical to avoid fire directly impacting migrating adults. Installation of a culvert is also necessary to allow access to this zone and limit impacts on the hydrology.

YR-06C: Fire lines have been installed surrounding this zone, the existing fire lines should be updated utilizing geotextile materials with a schedule A lime rock as the base. If the fire lines are not updated the current fire lines should be maintained using a Marsh Master with a mowing attachment to minimize impacts to the wet prairie and wet flatwoods ecotone surface hydrology. This area most likely provides habitat for adult Reticulated Flatwood Salamanders and continued burning is necessary to improve the health of this community to help in the recovery efforts for the Flatwoods salamander. In addition, a high density of pitcher plants is found in this zone and continued burning will help these and other imperiled species. There are four private residences to the east and three residences to the west that border this zone. Installation of a culvert is also necessary to allow access to this zone and limit impacts to the hydrology.

YR-06D: Fire lines have been installed surrounding this zone, if possible, the existing fire lines should be updated utilizing geotextile materials with a schedule A lime rock as the

base. Fire lines should be maintained using a Marsh Master with a mowing attachment to minimize impacts to the wet prairie and wet flatwoods ecotone surface hydrology. In addition, a very dense and lush herbaceous cover with shallow water present and open canopy cypress and slash pine matrix is present in the western portion of this zone. This area may be an important for Reticulated Flatwoods Salamanders as this habitat consists of conditions that could be used as breeding habitat. There is also very little shrubbery in the western portion, and dense concentrations of pitcher plants. The eastern portion of this zone contains dense areas of slash pine, where two private residences are located next to the park boundary. It is critical that a Marsh Master is used to protect these residences from an escaped fire. The surrounding areas to the north of this zone have a dense canopy of slash pine with a thick understory of shrubs. A fire could escape easily in the northeastern portion of this zone. It may be beneficial to use mechanical treatment on the northeastern portion of this zone to decrease the density of understory and slash pine to limit the chance of a fire escape, and to also open habitat for a greater concentration of herbaceous ground cover. It was also observed that a large concentration of trash has built up near the fire road on private property at the northeastern boundary. This trash should be addressed to limit potential problems associated with fire. Installation of a culvert is also necessary to allow access to this zone and limit impacts on the hydrology.

YR-07A/07B: A wide mowed fire line has been created around these zones. Fire lines should be maintained using a Marsh Master with a mowing attachment to minimize impacts to the wet prairie, if the fire lines are not updated using geotextile material with a schedule A lime rock base. YR-07A/07B mostly contains wet prairie habitat, but due to fire suppression it is succeeding to a wet flatwoods community with a thick understory of shrubs, in the eastern portions. These zones were burned in 2017, and should be continued to be burned. Potential mechanical treatments to thin the understory and density of slash pine should be considered to open up more area for the recruitment of a dense herbaceous cover. Pitcher plants are found throughout this zone, but as the density of slash pine and understory increase the herbaceous cover declines causing there to be lower numbers of pitcher plants. A housing development borders zone YR-07A in the southeastern corner. Housing developments are also present near the northern and eastern boundaries of YR-07B. In addition, there is an office complex utilized by FWC in the northwestern corner of YR-07B. The area east of YR-07A/B is YR-08 which contains a very dense canopied are of successional hardwood forest. It is critical that zones YR-07A/B be burned regularly and thinned to isolate YR-08. Installation of culverts is also necessary to allow access to these zones and would limit impacts to the hydrology in these zones.

YR-08: No fire should be allowed into YR-08. If fire gets into this zone there is a high risk of the fire becoming catastrophic and uncontainable. The housing community that exists next to the eastern portion of this zone is at high risk of being damaged if fire gets into YR-08. In addition, this zone may cause spot overs into the surrounding areas. This area needs to be treated mechanically to reduce the extremely heavy fuel loads present in this zone. In addition, there is storm debris present in the zone and the debris needs to be removed. For management zone YR-08 it is not recommended to use fire as a management strategy. It is recommended to burn zones YR-07A and YR-07B to isolate YR-08. In addition, park staff should coordinate with the Florida Forest Service's Urban Mitigation Team, in order to identify perimeter portions of zone YR-08, where gyro-trac mechanical reduction of fuels would safeguard adjacent structures or at least create more defensible space in the event of a wildfire.

YR-09A/09B: These zones contain wet prairie that is in good condition. A wide fire line is present along the eastern, southern and western portions, with Dickerson City Road serving as the fire break to the north. This zone was last burned in 2015 and should continue to be burned. If the fire lines are not updated using geotextile material with a schedule A lime rock base, a Marsh Master would be necessary to maintain fire lines and allow greater access to the area during prescribed fires. Installation of culverts is also necessary to allow access to these zones and would limit impacts to the hydrology in this zone.

YR-10A and B: This zone contains wet prairie that is in good condition. The area was last burned in 2015 and wide fire lines surround the zone, with Dickerson city Road serving as the fire break to the north. There are two private residences to the southwest of the zone. There is a portion of the zone that contains five acres of wet flatwoods. This area should be thinned mechanically to open up more habitat for herbaceous ground cover. If the fire lines are not updated using geotextile material with a schedule A lime rock base, a Marsh Master would be necessary to maintain fire lines and allow greater access to the area during prescribed fires. Installation of culverts is also necessary to allow access to these zones and would limit impacts to the hydrology in this zone.

Imperiled Species

Imperiled species are those that are tracked by FNAI as critically imperiled (G1, S1) or imperiled (G2, S2) or listed by the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC), or the Florida Department of Agriculture and Consumer Services (FDACS) as endangered, threatened or of special concern.

The preserve contains over 200 species of vascular plants. Among these are five state listed species, including one of the largest populations of the white-topped pitcher plant (*Sarracenia leucophylla*) in Florida. Once found throughout its range in the Southeast, now the white-topped pitcher plant may be totally extirpated from Georgia, or represented by only one small population. There are only a few populations in Mississippi, and it occurs only in two or three counties on the Alabama border. It has been estimated that the Florida panhandle now accounts for 80 percent or more of the known number of populations and individuals of white-topped pitcher plants range wide. The greatest concentration of white-topped pitcher plants on the lower coastal terraces anywhere in its range is the Garcon Peninsula. On private lands, it continues to be threatened by conversion of its open wet prairie habitat to slash pine plantations, and by fire suppression, ditching, draining, and land clearing associated with near coastal suburban and commercial development. In general, pitcherplants are very susceptible to ditching and draining of their poorly drained wet habitat, and have very poor transplant or relocation success due to their exacting hydrological and soil requirements.

Another carnivorous plant, Chapman's butterwort (*Pinguicula planifolia*), has an even more restricted range than that of the white-top pitcher plant. Outside of the Florida panhandle, it is known only from four Alabama counties and one Mississippi County. It is restricted to the wetter areas of open of open wet savannahs, shallow dome swamps and the boggy ecotones between these two communities. The habitat requirements of this species are very exacting, and any disturbance of the soil surface or alteration to the hydrology would impact the populations. Its presence has not yet been documented.

FNAI reports that Curtiss' sandgrass (*Calamovilfa curtissii*) occurs primarily in the Wet Prairies/Cypress landscape around the outer edges of herbaceous ecotones just above

the cypress domes where it is often the dominant groundcover grass forming large clumps. Curtiss' sandgrass can be found in dense pockets on the western side of YR-06B, 06C, 06D, and they are in close association with the Myrtle-leaved holly in these areas. This perennial grass is endemic to Florida and has never been found outside of the state. It is only known to occur in two disjunct regions of the state, the western Florida panhandle and the northeast Florida coast. Developmental pressures and associated impacts along Florida's east coast have almost extirpated Curtiss' sandgrass in this area. The Garcon Peninsula has the largest population of this species anywhere within its limited range. Being a long-lived, presumably slow growing perennial of relatively specialized habitats, it would likely reestablish slowly or not at all after land clearing, and would probably respond poorly to transplanting.

The Panhandle Lily (*Lilium iridollae*) is endangered in Florida and is a perennial herb with stems four to six feet long, with yellowish-orange petals speckled with small brown spots. The flowers are curved backwards and the leaves on the stem are whorled mid-stem, whereas the leaves near the bottom of the stem are alternate. This striking plant is endemic to the western Florida panhandle and flowers from late July to mid-August at the Yellow River Marsh Preserve State Park. This plant is sensitive to disruptions in hydrology, and fire breaks should be avoided being placed in ecotones of wet prairie, wet flatwoods, and dome swamps.

The Yellow Fringeless Orchid (*Platanthera integra*) is a perineal herb and is listed in Florida as endangered. This medium sized orchid grows to be 18 to 27 inches tall and has yellow to orange flowers that are compact and have a spur-like nectary with slight scalloping on the margins. The Yellow Fringless Orchid is an obligate wetland species and flowers from July to September. This species requires frequent fire in its wet prairie habitat, that allows for it to be free from canopy cover from shrubbery or trees.

The Reticulated flatwoods salamander (*Ambystoma bishopi*) is federally and state listed as an endangered species. Optimal habitat for adult flatwoods salamanders is open, wet/mesic longleaf and slash pine flatwoods with an herbaceous ground cover typically dominated by wiregrass or dropseed and a diverse assemblage of forbs (Palis 1996). Flatwood salamanders can tolerate a shrub dominated understory or a co-dominate understory occupied by shrubs and grasses as long as the shrubbery is low in stature, due to periodic fire. Breeding habitat for the flatwood salamander is typically less than five acres of shallow isolated wetlands that dries annually (FWC 2006). Ideal breeding sites have an open overstory and support herbaceous vegetation throughout the basin, or around the perimeter, where an extensive graminaceous ecotone exists. Breeding sites include dome swamps, wet prairies, hydric hammock, mixed hardwood-pine forest, and shrub swamps (Means 2008). Due to its dependence on isolated wetlands in a landscape that has already been fragmented, it is apparent that the flatwoods salamander population range-wide, is highly discontinuous and could be defined as "severely fragmented." There is also increasing pressure from the loss and degradation of pine flatwoods and wet prairies due to development for silviculture and agriculture practices. Since salamanders use these habitats to reproduce, they have been regarded as indicator species for the health of the wetlands.
Flatwood salamanders have been documented migrating 1,100 meters from a breeding area (Means 2008). A salamander travelling this distance is most likely very rare. It is thought that an average migration distance is closer to 300-500 meters. A breeding population of this species has been documented within the Yellow River Marsh Preserve State Park boundaries by FNAI and FWC. Portions of the preserve are designated as Critical Habitat for the flatwoods salamander. Management zone YR-06B, 06C, and 06D

contains potential breeding habitat and adult habitat. This area should be burned every three years and no more than five years should pass between burns to limit encroachment of hardwoods and dense shrubbery. Fires should occur after January, and should never occur between October through December, due to the potential direct impacts of fire on adult movements. Dip net surveys should be done every year to determine if the habitat is being used by the species. In addition, surveys should be carried out to find all potential breeding areas in the state park. Plowlines and other disruptions to hydrology have been shown to be detrimental to flatwood salamander habitat, which may disrupt the natural hydroperiod. Potential effects are shortening the hydroperiod, disrupting the spread of fire, and allowing predatory fish to invade (FWC 2006, Means 2008). Hydrological disruptions should be documented in critical habitat of this species, and if possible the hydrology should be restored to a natural condition.

Preserve staff should follow the, "Management Recommendation for The Flatwoods Salamander on Garcon Point Water Management Area and Yellow River Marsh Preserve State Park" (FWC 2006) when accessing and directing resource management projects in their habitat. In addition, park staff should consider the findings found in, "Evaluating methods to restore amphibian habitat in fire-suppressed pine flatwoods wetlands" (Gorman et. al., 2013).

Designated animal species include other reptiles, several mammals, birds of prey, neotropical migrants, and waterfowl. This list will be amended, as efforts to complete a more accurate and complete inventory of biota progress.

Wading birds depend on healthy wetlands and vegetated areas for resting, foraging and breeding. The little blue heron (*Egretta caerulea),* snowy egret (*E. thula*), tricolored heron (*E. tricolor*), and white ibis (*Eudocimus albus*) have been identified as species in need of protection by the Florida Fish and Wildlife Conservation Commission (Boughton R., et al., 2013). The little blue heron and the tricolored heron are state listed as threatened species. Wading birds forage in shallow brackish and freshwater sites that are found in the Yellow River Marsh Preserve State Park and surrounding Garcon Point area. Wading birds generally require a variety of wetland sites in order to accommodate the annual variation in rainfall, and flexibility to such conditions has been documented by use of alternative nesting and foraging sites during particularly wet or dry years (Boughton R., et al., 2013). Yellow River Marsh Preserve State Park provides habitat for these wading birds and the management of this park is important to help support the recovery and stabilization of these species' populations. Continued burning, the thinning of slash pine and dense understory, and the restoration of the hydrology in the state park is important for providing habitat for wading birds.

Table 2 contains a list of all known imperiled species within the park and identifies their status as defined by various entities. It also identifies the types of management actions that are currently being taken and identifies the current level of monitoring effort.

Monitoring Level:

Tier 1.	Non-Targeted Observation/Documentation: includes documentation of species presence through casual/passive observation during routine park activities (i.e. not conducting species-specific searches). Documentation may be in the form of Wildlife Observation Forms, or other district specific methods used to communicate observations.
Tier 2.	Targeted Presence/Absence: includes monitoring methods/activities that are specifically intended to document presence/absence of a particular species or suite of species.
Tier 3.	Population Estimate/Index: an approximation of the true population size or population index based on a widely accepted method of sampling.

Tier 4. Population Census: A complete count of an entire population with demographic analysis, including mortality, reproduction, emigration, and immigration.

Tier 5. Other: may include habitat assessments for a particular species or suite of species or any other specific methods used as indicators to gather information about a particular

Table 2: Imperiled Species Inventory						
Common and Scientific Name	**Imperiled Species Status**				**Management Actions**	**Monitoring Level**
	FWC	**USFWS**	**FDACS**	**FNAI**		
PLANTS						
Pine-woods bluestem *Andropogon arctatus*	LT	N	LT	G3,S3	1,2,4,7	Tier 1
Curtiss' sandgrass *Calamovilfa curtissii*	LT	N	LT	G3,S3	1,2,4,7	Tier 2
Pine Lily *Lilium catesbaei*	N	N	LT	N	1,2,4,7	Tier 1
Panhandle lily *Lilium iridollae*	LE	N	LE	G2,S2	1,2,4,7	Tier 2
Yellow fringeless orchid *Platanthera integra*	LE	N	LE	G3G4,S3	1,2,4,7	Tier 1
White-top pitcherplant *Sarracenia leucophylla*	N	N	LE	N	1,2,4,7	Tier 2
Parrot pitcherplant *Sarracenia psittacina*	N	N	LT	N	1,2,4,7	Tier 1
Sweet pitcherplant *Sarracenia rubra*	LT	N	LT	G4,S3	1,2,4,7	Tier 1
FISH						
Saltmarsh topminnow *Fundulus jenkisi*	ST	N		G3,S2	1,2,4,7	Tier 1
REPTILES						
Reticulated flatwoods salamander *Ambystoma bishopi*	FE	LE		G2,S2	1,2,4,7	Tier 2
American alligator *Alligator mississippiensis*	FT(S/A)	SAT		G5,S4	1,2,4,7	Tier 1
BIRDS						
Little blue heron *Egretta caerulea*	ST	N		G5,S4	1,2,4,7	Tier 1
Tricolored heron *Egretta tricolor*	ST	N		G5,S4	1,2,4,7	Tier 1

Management Actions:

1. Prescribed Fire
2. Exotic Plant Removal
3. Population Translocation/Augmentation/Restocking
4. Hydrological Maintenance/Restoration
5. Nest Boxes/Artificial Cavities
6. Hardwood Removal
7. Mechanical Treatment
8. Predator Control
9. Erosion Control
10. Protection from visitor impacts (establish buffers)/law enforcement

11. Decoys (shorebirds)
12. Vegetation planting
13. Outreach and Education
14. Other

Imperiled Species Management

Goal: Maintain, improve or restore imperiled species populations and habitats in the park.

The DRP strives to maintain and restore viable populations of imperiled plant and animal species primarily by implementing effective management of natural systems. Single species management is appropriate in state parks when the maintenance, recovery or restoration of a species or population is complicated due to constraints associated with long-term restoration efforts, unnaturally high mortality or insufficient habitat. Single species management should be compatible with the maintenance and restoration of natural processes and should not imperil other native species or park values.

In the preparation of this management plan, DRP staff consulted with staff of the FWC's Imperiled Species Management or that agency's Regional Biologist and other appropriate federal, state and local agencies for assistance in developing imperiled animal species management objectives and actions. Likewise, for imperiled plant species, DRP staff consulted with FDACS. Data collected by the USFWS, FWC, FDACS and FNAI as part of their ongoing research and monitoring programs will be reviewed by park staff periodically to inform management of decisions related to imperiled species.

Ongoing inventory and monitoring of imperiled species in the state park system is necessary to meet the DRP's mission. Long-term monitoring is also essential to ensure the effectiveness of resource management programs. Monitoring efforts must be prioritized so that the data collected provides information that can be used to improve or confirm the effectiveness of management actions on conservation priorities. Monitoring intensity must at least be at a level that provides the minimum data needed to make informed decisions to meet conservation goals. Not all imperiled species require intensive monitoring efforts on a regular interval. Priority must be given to those species that can provide valuable data to guide adaptive management practices.

Objective A: Develop/Update baseline imperiled species occurrence inventory lists for plants and animals.

Action 1 Conduct comprehensive plant and animal surveys.

Comprehensive surveys should be conducted at the park to determine presence and location of listed plant and animal species. The park has not been fully surveyed for herptofauna and insects. If funding is available, surveys for herptofauna and insects should be conducted. Some of this survey work may be conducted by district biologists in partnership with FWC and others.

Objective B: Monitor and document one selected imperiled animal species in the park.

Action 1 Conduct larval surveys for Flatwoods Salamander in the park.
Action 2 Survey the park and locate suitable breeding habitat for the Flatwoods Salamander.

Action 3 Prepare a recovery plan for the Reticulated Flatwoods at Yellow River Marsh Preserve State Park.

Adult Flatwood Salamanders migrate at night to ephemeral breeding wetlands from October to January during rain events. Eggs are deposited in moist soils and may be deposited in water (Ashton 1992, Bishop et al. 2006). The larval period lasts 11-18 weeks from hatching to metamorphosis (Palis 1995). Migrating adults can be captured in funnel or pitfall traps positioned next to drift fences around the perimeter of breeding wetlands (Palis 1997, Safer 2001). Because of relative inefficiency and difficulty surveying for Flatwoods Salamanders by these methods, most presence-absence surveys focus on larval sampling by dipnet (Bishop et al. 2006). Surveyors typically use 4-mm mesh dipnets. It is recommended to use dipnet surveys to access the presence of larvae from February to early April. However, surveying in all months of the larval period may be beneficial, and weather patterns may dictate appropriate times. It is also recommended to survey at least two separate times several weeks apart during the larval period to optimize the chances of documenting larval presence (Bishop et al. 2006).

Ideal breeding sites have an open over-story and support herbaceous vegetation throughout the basin, or around the perimeter, where an extensive graminaceous ecotone exists. Breeding sites include cypress swamps, wet prairies, hydric hammock, mixed hardwood-pine forest, and shrub swamps with shallow water depths (Means 2008). Potential breeding areas may be present in YR-06B, YR-06C, and YR-06D. These areas should be surveyed along with the barrow pits even though occupancy is probably low in barrow pit sites. Other management zones should also be surveyed to determine if other breeding sites are likely in other areas of Yellow River Marsh Preserve State Park. Preparing a recovery plan for the Reticulated Flatwoods at Yellow River Marsh Preserve State Park should include staff from FWC, USFWS and NWWMD. The areas in the state park and surrounding WMA should be surveyed for current conditions of documented breeding sites for the Reticulated flatwoods salamander, and new breeding sites should be surveyed for. The recovery plan should take into account publicly owned property at Garcon point. Strategies for connecting populations should be investigated, threats identified, and strategies should be developed to limit current and future threats for this endangered species.

Objective C: Monitor and document five selected imperiled plant species in the park.

Action 1 Develop monitoring protocols for the White-topped Pitcher Plant, Panhandle Lily, Yellow fringeless orchid, Parrot pitcherplant, and Sweet pitcherplant.

Action 2 Implement monitoring protocols for the imperiled plant species.

White-topped pitcher plant, Panhandle lily, Yellow fringeless orchid, Parrot pitcherplant, and Sweet pitcherplant should be documented and mapped using ARCGIS so the overall presence of these species can be documented and overall health of the population can be monitored over time. Little information is known about the abundance of these species at Yellow River Marsh Preserve State Park. White-topped pitcher plants are abundant in some areas of the park, and are found throughout the management zones, but no GPS information or abundance data has been collected. While conducting surveys, wiregrass and herbaceous ground cover density should be documented. In addition, this will allow park staff to document areas where overgrowth of shrubbery or canopy cover has

impacted areas and mechanical removal or prescribed fire can be introduced to allow these imperiled plant species to recover.

Exotic and Nuisance Species

Exotic species are plants or animals not native to Florida. Invasive exotic species are able to out-compete, displace or destroy native species and their habitats, often because they have been released from the natural controls of their native range, such as diseases, predatory insects, etc. If left unchecked, invasive exotic plants and animals alter the character, productivity, and conservation values of the natural areas they invade.

Surveys conducted by biologists with CAMA, NWFWMD, and DEP staff have revealed a moderate level of infestation of invasive non-native species. Few exotic animals have been recorded, while eight invasive plant species have been documented. The Chinese tallow tree (*Sapium sebiferum*) has been recorded throughout the state park. This plant is of concern because the species can cause large-scale ecosystem modification by replacing native vegetation, reducing water quality, and can spread rapidly. Basal bark treatment, or a variation of cutting the tree and applying chemicals is the most effective control method for this species, but great care should be taken to avoid damaging non-target species, especially when present in wet prairie communities. If in an area where water is present, Garlon-3A should be used, which is less harmful to aquatic systems. Zones YR-06B, YR-06C, and YR-06D should be monitored frequently to limit the effect of Chinese tallow invasion in the wet prairie community. These zones may be important areas for the recovery of the Flatwoods Salamander, and use of chemical herbicides should be used with great caution. It would be preferable to be able to hand pull seedlings, before the plants get large enough to require chemical and cutting procedures to kill the plants.

Torpedo grass was documented on the boundaries of the park off Dickerson City Road, and in zone YR-08 and is becoming dense in areas. Treatment should be conducted in these areas to limit the invasion of this exotic further into the park.

The zones most effected by invasive plants are YR-07A and YR-07B. Prescribed fire should be used to control these areas in general, but a dedicated treatment plan should be implemented after burns to maintain control of the spread of the exotic plants found in these zones. Cogon grass is another invasive that is of concern that is difficult to control and it is found in YR-07B. After fire is applied to YR-07B a survey soon after should occur to locate and treat cogon grass.

Further surveys of the preserve will be needed to update the current list of exotic infestations at Yellow River Marsh Preserve State Park. Of particular concern is zone YR-01. There is no right-of-way access to this zone, which makes treatment difficult in this area. This area may be affected by an infestation of Japanese climbing fern that occurs adjacent to the north of this zone. If additional invasive non-native species are located or current ones persist, then preserve staff will coordinate with DEP Bureau of Invasive Plant Management to establish an exotic species operational plan for the preserve.

Special care will be taken when bringing in any foreign material such as fill for restoration projects that may contain contaminants. In addition, equipment that is brought from other parks should be decontaminated before use on the state park property. A team of Ameri-core workers is present at Big Lagoon State Park, which is

near Yellow River Marsh Preserve State Park. This team should be utilized to help control exotic species at Yellow River Marsh Preserve State Park.

Few non-native or nuisance species have been recorded at Yellow River Marsh State Park. One species of concern are feral pigs. Continued monitoring of the presence of this species should be continued. However, the presence of feral pigs is very rare. In addition, landowners adjacent to park property on Dickerson City Road have observed Florida Black Bear presence. The bear most likely came from Eglin Air Force Base. No damage has occurred from the bears presence. DEP staff should educate the adjacent landowners of strategies to limit bears presence and the proper procedures involved in limiting the risk to damage to property and people.

Table 3 contains a list of the Florida Exotic Pest Plant Council (FLEPPC) Category I and II invasive, exotic plant species found within the park (FLEPPC, 2011). The table also identifies relative distribution for each species and the management zones in which they are known to occur. An explanation of the codes is provided following the table. For an inventory of all exotic species found within the park, see Addendum 3.

Table 3: Inventory of FLEPPC Category I and II Exotic Plant Species

Common and Scientific Name	FLEPPC Category	Distribution	Management Zone (s)
PLANTS			
Cogon grass Imperata cylindrica	I	2	YR-07B
Chinese privet *Ligustrum sinense*	I	2	YR-07B
Japanese honeysuckle *Ligustrum sinense*	I	2	YR-07B
Japanese climbing fern *Lygodium japonicum*	I	2	YR-01, YR-07A
Torpedo grass *Panicum repens*	I	3	YR-08
Chinese tallow tree *Sapium sebiferum*	I	1	YR-01
		2	YR-03, YR-06B, YR-06C,YR-06D, YR-07A,YR-08, YR-10
Purple sesban *Sesbania punicea*	II	2	YR-08
Chinese wisteria *Wisteria sinensis*	II	2	YR-07B

Distribution Categories:

0 No current infestation: All known sites have been treated and no plants are currently evident.
1 Single plant or clump: One individual plant or one small clump of a single species.
2 Scattered plants or clumps: Multiple individual plants or small clumps of a single species scattered within the gross area infested.
3 Scattered dense patches: Dense patches of a single species scattered within the gross area infested.
4 Dominant cover: Multiple plants or clumps of a single species that occupy a majority of the gross area infested.
5 Dense monoculture: Generally, a dense stand of a single dominant species that not only occupies more than a majority of the gross area infested, but also covers/excludes other plants.

6 Linearly scattered: Plants or clumps of a single species generally scattered along a linear feature, such as a road, trail, property line, ditch, ridge, slough, etc. within the gross area infested.

Exotic Species Management

Goal: Remove exotic and invasive plants and animals from the park and conduct needed maintenance control.

The DRP actively removes invasive exotic species from state parks, with priority being given to those causing the ecological damage. Removal techniques may include mechanical treatment, herbicides or biocontrol agents.

Objective A: Annually treat all acres of exotic plant species in the park.

Action 1 Annually develop/update exotic plant management work plan.
Action 2 Implement annual work plan by treating ten acres in park, annually, and continuing maintenance and follow-up treatments, as needed.

The park has a low number of infested acres. The Chinese tallow tree, torpedo grass, and cogon grass presence is of the most concern. The park should be surveyed for the presence of these species and other potential exotic species. Infested areas will be checked annually and treated with herbicides as necessary until the areas are in maintenance condition. Maintenance condition describes a formerly active infestation that has been treated to the extent that any plants remaining are manageable with existing staff and resources, the total area is stable or declining, mature reproducing individuals are absent, and the species poses no significant threat to listed plants or animals. Thus, the actual treated zone may reduce in area over time though the entire extent would need to be inspected indefinitely. An important exception is that instances in which the exotic plants are well mixed with native vegetation would need an accompanying restoration program to plant natives in the formerly infested area. This circumstance may occur when a hand removal or careful herbicide wicking program would not be effective. The reason for this caveat is that since herbicide application in this situation may result in significant non-target damage, the resulting area would be denuded of live vegetation and highly vulnerable to re-infestation by the exotic plant species. Such removal of native vegetation may lead to the necessity of perpetual treatment and subsequent loss of native plant species from that area. A restoration effort to replant the area with native vegetation appropriate for that habitat following treatment would be intended to preempt potential exotic growth into the open space.

Objective B: Implement control measures on feral pigs and other exotic animal species in the park.

Action 1 Conduct surveys for the presence of feral pigs.
Action 2 Work with adjacent private residences to educate about the Florida Black Bear.

The presence of exotic animal species in the park is considered low. However, there is no full-time staff based at the park. This may result in an underestimated abundance of exotic animal species in the park. Of concern for this park is feral pig presence. Documentation of their presence is low, but continued monitoring is warranted.

Florida Black Bear has been documented near the private residences surrounding the park. Educating the public is important to minimize the conflicts that can arise with the

bears presence. Encourage the use of bear proof garbage receptacles if bear problems occur and add bear country signage in appropriate areas of the park may be necessary.

Special Natural Features

The Yellow River Marsh Preserve State Park provides visitors with one of the most abundant and diverse assemblage of carnivorous plants found anywhere in Florida. The most notable are the pitcher plants. Management focus will be to provide an aesthetically pleasing natural experience for visitors through passive recreation and to promote the importance of the wet prairies.

Cultural Resources

This section addresses the cultural resources present in the park that may include archaeological sites, historic buildings and structures, cultural landscapes, and collections. The Florida Department of State (FDOS) maintains the master inventory of such resources through the Florida Master Site File (FMSF). State law requires that all state agencies locate, inventory and evaluate cultural resources that appear to be eligible for listing in the National Register of Historic Places. Addendum 7 contains the FDOS, Division of Historical Resources (DHR) management procedures for archaeological and historic sites and properties on state-owned or controlled properties; the criteria used for evaluating eligibility for listing in the National Register of Historic Places, and the Secretary of Interior's definitions for the various preservation treatments (restoration, rehabilitation, stabilization, and preservation). For the purposes of this plan, significant archaeological site, significant structure, and significant landscape means those cultural resources listed or eligible for listing in the National Register of Historic Places. The terms archaeological site, historic structure, or historic landscape refer to all resources that will become 50 years old during the term of this plan.

Condition Assessment

Evaluating the condition of cultural resources is accomplished using a three-part evaluation scale, expressed as good, fair, and poor. These terms describe the present condition, rather than comparing what exists to the ideal condition.

Good describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear.

A fair assessment is usually a cause for concern. Poor describes an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly.

A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action is needed to reestablish physical stability.

Level of Significance

Applying the criteria for listing in the National Register of Historic Places involves the use of contexts as well as an evaluation of integrity of the site. A cultural resource's significance derives from its historical, architectural, ethnographic or archaeological

context. Evaluation of cultural resources will result in a designation of NRL (National Register or National Landmark Listed or located in an NR district), NR (National Register eligible), NE (not evaluated), or NS (not significant) as indicated in the table at the end of this section. There are no criteria for use in determining the significance of collections or archival material. Usually, significance of a collection is based on what or whom it may represent. For instance, a collection of furniture from a single family and a particular era in connection with a significant historic site would be considered highly significant. In the same way, a high quality collection of artifacts from a significant archaeological site would be of important significance. A large herbarium collected from a specific park over many decades could be valuable to resource management efforts. Archival records are most significant as a research source. Any records depicting critical events in the park's history, including construction and resource management efforts, would all be significant.

Prehistoric and Historic Archaeological Sites

Desired future condition: All significant archaeological sites within the park that represent Florida's cultural periods, historic events, or persons are preserved in good condition in perpetuity, protected from physical threats and interpreted to the public.

Description: A review of FMSF data indicate that four previous cultural resource surveys have been completed partially or fully within the Yellow River Marsh Preserve State Park and that the park contains one recorded archaeological site. Site, SR00853 is a low-density artifact scatter site with temporally and culturally unspecified prehistoric and historic material. The FMSF indicates that this site has not been evaluated for NRHP-listing and does not contain human remains. The scatter site will require further testing to determine its significance. Site SR00853 most likely represents a turpentine camp. The remnants of the turpentine camp occurs along the shore of East Bay where old growth slash pine exist. Cat-faced trees have been observed in this area associated with past turpentine harvesting practices. The V-scars were used to collect turpentine and resin that were placed in barrels and loaded onto boats for distant markets.

Condition Assessment: A more detailed survey should be done to locate and document the condition and significance of this site. Currently, site SR00853 is thought to be covered by water in the bay and is most likely in poor condition due to its location and the level of disturbance due to past storm events, and development in the surrounding area, which caused major erosion issues.

General Management Measures: A detailed survey of archeological sites has not occurred in the park and should be undertaken to find and protect potential unknown sites at Yellow River Marsh Preserve State Park. In addition, the exact location of site SR00853 should be determined, to make sure any preservation procedures possible are initiated. A living shoreline project occurred in 2012-2013. The project successfully installed reef components that provides habitat for oyster recruitment and protects the shoreline area from erosion. This project will limit the impacts of erosion in the area of SR00853.

Historic Structures

There are no historical structures present in the Yellow River Marsh Preserve State Park.

Collections

There are no collections present in the Yellow River Marsh Preserve State Park.
Table 4 contains the name, reference number, culture or period, and brief description of all the cultural sites within the park that are listed in the Florida Master Site File. The table also summarizes each site's level of significance, existing condition and recommended management treatment.

Table 4. Cultural Sites Listed in the Florida Master Site File

Site Name and FMSF #	Culture/Period	Description	Significance	Condition	Treatment
SR00853	Historic/Unspecified	Archaeological Site	NE	P	N/A

Significance

NRL	National Register listed
NR	National Register eligible
NE	not evaluated
NS	not significant

Condition

G	Good
F	Fair
P	Poor
NA	Not accessible
NE	Not evaluated

Recommended Treatment

RS	Restoration
RH	Rehabilitation
ST	Stabilization
P	Preservation
R	Removal
N/A	Not applicable

Cultural Resource Management

Cultural resources are individually unique, and collectively, very challenging for the public land manager whose goal is to preserve and protect them in perpetuity. The DRP will implement the following goals, objectives, and actions, as funding becomes available, to preserve the cultural resources found in the park

Goal: Protect, preserve, and maintain the cultural resources of the park.

All activities related to land clearing, ground disturbing activities, major repairs or additions to historic structures listed or eligible for listing in the National Register of Historic Places must be submitted to the DHR for review and comment prior to undertaking the proposed project. Recommendations may include concurrence with the project as submitted, pre-testing of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effect. Any demolition or substantial alteration to any historic structure must be submitted to the DHR for consultation and the DRP must demonstrate that there is no feasible alternative to removal and must provide a strategy for documentation or salvage of the resource. Florida law further requires that DRP consider the reuse of historic buildings in the park in lieu of new construction and must undertake a cost comparison of new development versus rehabilitation of a building before electing to construct a new or replacement building. This comparison must be accomplished with the assistance of the DHR.

Objective A: Assess and evaluate one of one recorded cultural resources in the park.

Action 1 Complete assessment/evaluation of archaeological site SR00853.

Site SR00853 is thought to be completely covered by the bay east of YR-08. A survey should be completed in this area to locate any evidence of the presence of historical artifacts.

Objective B: Compile reliable documentation for all recorded historic and archaeological resources.

Action 1 Ensure all known sites are recorded or updated in the Florida Master Site File.

Action 2 Using the information complied in the report "Archaeological Resource Sensitivity Modeling in Florida State Parks District 1: The Northwest Florida Region" an investigation of the areas listed should be investigated to determine if other cultural resource sites exist within Yellow River Marsh Preserve State Park.

Yellow River Marsh Preserve State Park is in areas associated with Spanish Land Grants. The Garcon peninsula is named after Antonio Garzon who was awarded the land in the 1780s by the Spanish government for the services that he provided as an Indian interpreter for the Spanish in Pensacola. For over thirty years, Antonio and his wife, Maria, a Creek Indian, cultivated produce and raised cattle on the peninsula. There is evidence of turpentine harvesting activities occurring in the past in areas of the park. Little else is known about other cultural resources existing in this park. There was a dump site that was investigated near the current location of the FWC office. This area was determined to have no historical artifacts after a survey was completed. A predictive model for high, medium and low probability area of sensitivity was completed concerning areas within the park. The management zones that should be focused on are YR-06B, YR-04, YR-05, YR-07B, YR-01, YR-07A, and YR-10.

Special Management Considerations

Coastal/Beach Management

The DRP manages over 100 miles of sandy beach, which represents one-eighth of Florida's total sandy beach shoreline. Approximately one-quarter of Florida's state parks are beach-oriented parks and account for more than 60 percent of statewide park visitation. The management and maintenance of beaches and their associated systems and processes is complicated by the presence of inlets and various structures (jetties, groins, breakwaters) all along the coast. As a result, beach restoration and nourishment have become increasingly necessary and costly procedures for protecting valuable infrastructure. Beach and inlet management practices affect beaches for long distances on either side of a particular project. DRP staff needs to be aware of and participate in the planning, design and implementation of these projects to ensure that park resources and recreational use are adequately considered and protected.

There is 200 feet of shoreline in the Yellow River Marsh Preserve State Park. This shoreline area is bordered by home developments on either side. This development caused major erosion issues in the park. In response to the erosion issues DEP worked with CAMA and NOAA to install a living shoreline project. The project was very successful. The erosion issues have been mitigated successfully with the instalment of reef components that allow for recruitment of oysters and break up the wave action that the occurs on the shoreline. The living shoreline project will continue to be monitored.

The current status of the structures is in excellent condition and successful recruitment has been documented of oysters.

Objective: Continue to assist federal, state and local agencies with active monitoring of erosion and accretion cycles and assessment of beach and shoreline conditions following natural disasters.

Action 1 Develop a photo point protocol to document changes to the living shoreline project and shoreline area.

On August 2nd, 2017 a photo point was established on the shoreline. This point will be photographed annually and after major storm events. This will allow documentation of the erosion and accretion cycles through time, and monitor the condition of the living shoreline project that is active in this area.

Objective: Continue to partner with federal, state and local agencies to fund, design, permit, improve and maintain coastal and beach management programs consistent with the mission of the Division.

Action 1 Remove debris deposited in YR-08 from storm activity.

Due to a major storm event debris including; dock material, railings, other wood associated with homes, and fallen trees was deposited in YR-08. The removal of debris and decreasing the fuel load will protect this management zone and surrounding housing developments from the threat of fire.

Arthropod Control Plan

All DRP lands are designated as "environmentally sensitive and biologically highly productive" in accordance with Ch. 388 and Ch. 388.4111 Florida Statutes. If a local mosquito control district proposes a treatment plan, the DRP works with the local mosquito control district to achieve consensus. Treatment methods including larviciding and ground adulticiding (truck spraying in public use areas) are typically allowed. Aerial adulticiding can be allowed through an agreed upon control plan. The DRP does not authorize new physical alterations of marshes through ditching or water control structures. Mosquito control plans temporarily may be set aside under declared threats to public or animal health, or during a Governor's Emergency Proclamation.

Currently Yellow River Marsh Preserve State Park does not have an Arthropod Control Plan. It is recommended that a plan be developed for this park, that addresses the needs to protect the sensitive species found in this park that are sensitive to chemicals that are used for controlling insects.

Sea Level Rise

Potential sea level rise is now under study and will be addressed by Florida's residents and governments in the future. The DRP will stay current on existing research and predictive models, in coordination with other DEP programs and federal, state, and local agencies. The DRP will continue to observe and document the changes that occur to the park's shoreline, natural features, imperiled species populations, and cultural resources. This ongoing data collection and analysis will inform the Division's adaptive management response to future conditions, including the effects of sea level rise, as they develop.

LAND USE COMPONENT

Land use planning and park development decisions for the state park system are based on the dual responsibilities of the DRP. These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors. These dual responsibilities inform all recreational and infrastructure development considerations. Balancing equitable access to recreational facilities and preservation of Florida's resources is the main priority when developing recreation and land use proposals.

The general planning and land use planning process begins with an analysis of the natural and cultural resources of the unit, proceeds through the creation of a conceptual land use plan, and culminates in the actual design and construction of park facilities. Input to the plan is provided by experts in environmental sciences, cultural resources, park operation, and management. Additional input is received through public meetings and advisory groups with key stakeholders. With this approach, the DRP's objective is to provide high-quality facilities for resource-based recreation throughout the state with a high level of sensitivity to the natural and cultural resources at each park.

This component of the management plan includes an inventory and brief description of the existing recreational uses, facilities, and special conditions on use. Specific areas within the park that will be given special protection are also identified. The Land Use Component then summarizes the Conceptual Land Use Plan (CLUP) for the park and identifies large-scale repair and renovation projects, new building and infrastructure projects, and new recreational amenities that are recommended to be implemented over the next ten-year planning period. Any adjacent lands that should be pursued for acquisition are identified as a part of the park's Optimum Boundary.

Existing Use of Adjacent Lands

Yellow River Marsh Preserve State Park is comprised of 976.55 acres and is located within Santa Rosa County near the cities of Milton, Pace, Bagdad, and Pensacola. Due to the discontinuous nature of the parcels that make up the park, each parcel interfaces with different land uses. All of the parcels of the park are located within the Garcon Point Planning Area. The Garcon Point Planning area encompasses the areas south of Milton and Interstate 10 that extend onto the Garcon Point Peninsula. The major land uses within this area include Vacant 31%, Silviculture 20%, Publicly Owned Land 15%, and Low Density Residential 9%. The remaining lands have use designations of Commercial, Industrial, Utilities, and Water (Santa Rosa County, 2018).

Planned Use of Adjacent Lands

The Future Land Use Designations outlined in Santa Rosa County's 2040 Comprehensive Plan provide parcel designations for properties that are adjacent to Yellow River Marsh Preserve State Park. The lands adjacent to the park are designated as Agriculture Rural Residential, Garcon Point Rural Residential, Conservation/Recreation, Single Family Residential, with small areas of land designated as Residential and Commercial (Santa Rosa County, 2018).

Assessment of Use

All legal boundaries, significant natural features, structures, facilities, roads and trails existing in the unit are delineated on the base map (see Base Map). Specific uses made of the unit are briefly described in the following sections.

Past Uses

Portions of the park have been used in the past for cattle grazing operations and turpentine harvesting practices. Additionally, it is believed that the Garcon Peninsula was used as a home site for Native American populations as well as a site of the early settlements for the Spanish.

Future Land Use and Zoning

The DRP works with local governments to establish designations that provide both consistency between comprehensive plans and zoning codes and permit typical state park uses and facilities necessary for the provision of resource-based recreation.

Given that the park is spread out amongst numerous parcels that are not all contiguous, the various parcels have future land use zoning as conservation and recreation. There are additional zonings that surround the parcels. The northernmost parcels of the park near management zones YR-01 and YR-02 are surrounded by a future land use designation of conservation and recreation. As you move further south towards management zones YR-03, YR-04, and YR-05 the future land use designation turns to Garcon Point Rural Residential and Garcon Point Single Family Residential zones. The remaining parcels centered around the Dickerson city road have a mix of future land use designations that include conservation and recreation, garcon point rural residential, agriculture rural residential, commercial, and garcon point single family residential. There are no expected conflicts between the future land use or zoning designations and typical state park land uses.

Current Recreational Use and Visitor Programs

The existing parking lot and short nature trail off of Dickerson City Road provides the only public access point for the park. The nature trail provides visitors with the opportunity to walk, hike, bird, and view wildlife. The remainder of the park is treated as a protected zone to provide habitat for pitcher plants throughout the wet prairies.

Yellow River Marsh Preserve State Park recorded 10,255 visitors in FY 2020/2021. By DRP estimates, the FY 2020/2021 visitors contributed $2.56 million in direct economic impact, the equivalent of adding 36 jobs to the local economy (FDEP 2021).

Other Uses

The Florida Fish and Wildlife Conservation Commission staff occupy an office building on the park’s property that is used as a research lab.

YELLOW RIVER MARSH PRESERVE STATE PARK
Base Map

N

0 100 200 Feet

User: Jones_AE
Folder: G:\PARKS\Yellow River Marsh Preserve State Park\Projects\UMP\Basemap\
Sources: ESRI; Florida Department of Environmental Protection
This graphical representation is provided for informational purposes and should not be considered authoritative for navigational, engineering, legal, and other uses.

Protected Zones

A protected zone is an area of high sensitivity or outstanding character from which most types of development are excluded as a protective measure. Generally, facilities requiring extensive land alteration or resulting in intensive resource use, such as parking lots, camping areas, shops or maintenance areas, are not permitted in protected zones. Facilities with minimal resource impacts, such as trails, interpretive signs and boardwalks are generally allowed. All decisions involving the use of protected zones are made on a case-by-case basis after careful site planning and analysis.

At Yellow River Marsh Preserve State Park all wetlands and floodplain as well as known imperiled species habitat have been designated as protected zones. The park's current protected zone is delineated on the Conceptual Land Use Plan.

Existing Facilities

Yellow River Marsh Preserve State Park has minimal facilities to accommodate visitors. The park has a small parking area off of Dickerson City Road that provides access to a short trail to view the area on. In addition to the recreation facilities the park has a support area which includes an office building and shop area that is used by FWC as a research lab. (see Base Map)

Recreation Facilities	Support Facilities
Small Parking Area	Office Building
Trail (0.11 mi)	Metal Storage Building (2)
	Pole Barn

Conceptual Land Use Plan

The following narrative represents the current conceptual land use proposal for this park. The conceptual land use plan is the long-term, optimal development plan for the park, based on current conditions and knowledge of the park's resources, landscape and social setting. The conceptual land use plan is modified or amended, as new information becomes available regarding the park's natural and cultural resources or trends in recreational uses, in order to adapt to changing conditions. Additionally, the acquisition of new parkland may provide opportunities for alternative or expanded land uses. The DRP develops a detailed development plan for the park and a site plan for specific facilities based on this conceptual land use plan, as funding becomes available.

During the development of the conceptual land use plan, the DRP assessed the potential impact of proposed uses or development on the park resources and applied that analysis to determine the future physical plan of the park as well as the scale and character of proposed development. Potential resource impacts are also identified and assessed as part of the site planning process once funding is available for facility development. At that stage, design elements and design constraints are investigated in greater detail. Municipal sewer connections, advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal.

Creation of impervious surfaces is minimized to the greatest extent feasible in order to limit the need for stormwater management systems, and all facilities are designed and constructed using best management practices to limit and avoid resource impacts. Federal, state and local permit and regulatory requirements are addressed during facility development. This includes the design of all new park facilities consistent with the universal access requirements of the Americans with Disabilities Act (ADA). After new facilities are constructed, park staff monitors conditions to ensure that impacts remain within acceptable levels.

Public Access and Recreational Opportunities

Goal: Provide public access and recreational opportunities in the park.

The existing recreational activities and programs of this state park are appropriate to the natural and cultural resources contained in the park and should be continued. New and improved activities and programs are also recommended and discussed below.

Objective: Maintain the park's current recreational use.

A short nature trail from the parking area on Dickerson City Road offers recreational opportunities to visitors of the park. Recreational opportunities at the park are limited to Wildlife Viewing, Hiking, and Birding at this time.

Objective: Expand the park's recreational use.

Improvements to the trailhead on Dickerson City Road will provide expanded parking, a restroom, a small picnic pavilion, and interpretive kiosks to visitors while allowing additional use of the property. Additional recreational opportunities will include an expanded trail network showcasing the outstanding pitcher plant habitat as well as connecting to the Garcon Point WMA trail network to the south of the park. An observation platform near East Bay will also provide visitors with an expansive view of East Bay and the diverse habitats surrounding the area.

Objective: Continue to provide interpretive programs.

Yellow River Marsh Preserve State Park currently offers 2 programs to the public and/or school groups upon request. One of these programs is a guided pitcher plant walk that takes visitors through natural communities rich with pitcher plants. This program runs from the parking area off of Dickerson City Road to a borrow pond within the park. The other program that is offered by the park is a guided living shoreline walks upon request from school or environmental groups. This program allows the interpretive opportunity of the importance of living shorelines on coastal systems and takes visitors on a route along Blackwater Bay. The final program is offsite programs in the community to increase awareness of the importance of prescribed fire.

Objective: Develop 0 new interpretive programs.

Currently the limited staffing at the park and the remoteness of the property does not allow for additional programs to be offered.

Capital Facilities and Infrastructure

Goal: Develop and maintain use areas and support infrastructure.

The primary management goal of Yellow River Marsh Preserve State Park is to preserve and protect one of Florida's last remaining tracts of wet prairie. In accordance with the state acquisition of the property and management as a preserve, existing facilities and infrastructure are relatively sparse. The unique natural resources of the park should be interpreted more to allow visitors the opportunity to appreciate and value the importance that the preserve and surrounding aquatic preserves play in protecting and preserving the water quality of the Pensacola Bay System.

The existing facilities of this state park are appropriate to the natural and cultural resources contained in the park and should be maintained. New construction, as discussed further below, is recommended to improve the quality and safety of the recreational opportunities, to improve the protection of park resources, and to streamline the efficiency of park operations. The following is a summary of improved and new facilities needed to implement the conceptual land use plan for Yellow River Marsh Preserve State Park:

Objective A: Maintain all use area and support facilities in the park.

All capital facilities, trails and roads within the park will be kept in proper condition through the daily or regular work of park staff and/or contracted help.

Objective B: Improve 1 use areas.

Major repair projects for park facilities may be accomplished within the ten-year term of this management plan, if funding is made available. These include the modification of existing park facilities to bring them into compliance with the Americans with Disabilities Act (a top priority for all facilities maintained by DRP). The following discussion of other recommended improvements and repairs are organized by use area within the park.

<u>Trailhead Improvements</u>
The existing public access off of Dickerson City Road is the only access point for the preserve. This area currently consists of a stabilized parking area that can accommodate a maximum of 6 vehicles. This area should be expanded and improved to serve as the trailhead for additional future trail system additions. Improvements recommended for this area include: an interpretive kiosk, small picnic shelter, a vault restroom, and parking for up to 12 cars.

Objective C: Develop 1 new use area and 3 miles of trails.

<u>Main Day Use Area</u>
A small observation platform is recommended at an appropriate location along the current trail near the trailhead. This observation platform will provide visitors with an impressive view of open/wet prairie as well as the flora and fauna that occupy the property.

Trails
A nature trail is proposed that would provide visitors with access to the wet prairie communities, the variety of carnivorous plants, mesic flatwoods, and the shoreline of East Bay. The trail should have interpretive signage along the trail that provides information about the preserve's unique resources and the importance of the use of prescribed fire as a management tool for the preserve.

Visitor Use Management

The DRP manages visitor use to sustain the quality of park resources and the visitor experience, consistent with the purposes of the park. The dynamic nature of visitor use requires a deliberate and adaptive approach to managing resource impacts from recreational activity.

To manage visitor use, the DRP will rely on a variety of management tools and strategies, potentially including modes of access and limits on the number of people within certain areas of the park. Achieving balance between resource protection and public access is fundamental to the provision of resource-based recreation and interpretation. The premise of a visitor use management strategy is to protect the park's significant natural and cultural resources. A strategy may include site-specific indicators and thresholds selected to monitor resource conditions and visitor experience. By monitoring conditions over time and clearly documenting when conditions become problematic, the DRP can implement actions to prevent unacceptable resource conditions.

Levels of visitation, patterns of recreational use, and varieties of available recreational activities are routinely monitored parkwide. Indicators have shown that this park is operating sustainably for its resources and offers high quality experiences for its visitors.

Resource indicators to be considered during this planning period include:

- Alterations of natural hydrological flow

Quality of visitor experience indicators to be considered include:

- Unauthorized trail development

Thresholds are defined as the minimally acceptable conditions for each indicator and represent the point at which resource impacts will require a change in management strategy. Thresholds are assigned based on the desired resource conditions, the data on existing conditions, relevant research studies, management experience, and current visitor use patterns. It is important to note that identified thresholds still represent acceptable resource conditions and not degraded or impaired conditions. Management actions may also be taken prior to reaching the thresholds.

Specific thresholds for resource conditions and experiential quality have not yet been established for the park. As monitoring continues, collected data may be used to determine baseline and desired conditions, thereby establishing thresholds.

CLUP Proposals
Proposed Trails
Park_Boundary
Garcon Point Water Management Area

Interpretive Kiosk
Picnic Shelter
Restroom
Expanded Parking
Additional Trails
Observation Platform

YELLOW RIVER MARSH PRESERVE STATE PARK
Conceptual Land Use Map

N

0 1 2 Miles

User: Allbritton_J
Folder: E:\GIS\Planning\Yellow River Marsh Preserve State Park\CLUP\
Sources: ESRI; Florida Department of Environmental Protection

Optimum Boundary

The optimum boundary map reflects lands considered desirable for direct management by the DRP as part of the state park. These parcels may include public or privately owned land that would improve the continuity of existing parklands, provide the most efficient boundary configuration, improve access to the park, provide additional natural and cultural resource protection or allow for future expansion of recreational activities. Parklands that are potentially surplus to the management needs of DRP are also identified. As additional needs are identified through park use, development, and research, and as land use changes on adjacent property, modification of the park's optimum boundary may be necessary.

Identification of parcels on the optimum boundary map is intended solely for planning purposes. It is not to be used in connection with any regulatory purposes. Any party or governmental entity should not use a property's identification on the optimum boundary map to reduce or restrict the lawful rights of private landowners. Identification on the map does not empower or suggest that any government entity should impose additional or more restrictive environmental land use or zoning regulations. Identification should not be used as the basis for permit denial or the imposition of permit conditions.

Florida Forever Projects

The Garcon Ecosystem Florida Forever Project sits directly on a peninsula jutting into the north end of Pensacola Bay that is covered with wet grassy prairies, dotted with carnivorous pitcher plants as well as other rare plants, and are some of the best pitcher-plant prairies left in Florida. The Garcon Ecosystem project will protect these prairies, thereby helping these ecosystems' rare plant and animal inhabitants to survive, maintaining Pensacola Bay's water quality, and allowing the public to learn about and enjoy this unique natural environment. Natural communities within this project are in good to excellent condition and include wet prairie, estuarine tidal marsh, and wet flatwoods. The prairie community is species-rich and includes orchids and insectivorous plants such as pitcher plants, sundews, butterworts, and bladderworts. Especially significant is the large population of state endangered white-topped pitcher plants, and the globally imperiled panhandle lily. The tracts are also habitat for the flatwoods salamander, a candidate for federal listing. Four cultural sites are known from the project. The sensitive prairies are threatened by ditching, plant collecting and residential development. Development pressure will increase when the bridge across Pensacola Bay is completed.

Identified Optimum Boundary Parcels

The current optimum boundary for the park consists of 431 parcels that total approximately 3,466 acres to be added to the park. The parcels are divided between numerous parcels both large and small. Of these parcels, 409 totaling approximately 3,326 acres are within the Garcon Ecosystem Florida Forever Project. The properties will benefit the Division by providing direct access to several landlocked Yellow River Marsh Preserve State Park parcels on the western side of Garcon Point Road as well as paved road access for prescribed fire

activities and equipment. In addition, one of the subject parcels near the current day use parking area has an active Flatwoods Salamander breeding pond. Currently DRP has a Fireline through the middle of this pond to protect the subject area from possible DRP prescribed burn escapes. If this property were acquired, DRP would have management over the entire pond and could remove the fire line and restore the pond. Additionally, the bigger picture for this optimum boundary is to create a corridor of conservation lands that provides enhanced access for wildlife.

There are two areas within the optimum boundary that are plotted out for development. The first area is to the Northwest of the main park area along Interstate 10 and Avalon Boulevard. This area is approximately 108 acres and is plotted out for 139 developed parcels. The second area is to the Southeast of the main park area between a newly acquired piece of property and East Bay. This area is approximately 66 acres and is plotted out for 71 developed parcels. Undeveloped parcels within these two areas would further protect park resources and allow for potential increases in water quality for the area.

YELLOW RIVER MARSH PRESERVE STATE PARK
Optimum Boundary

Yellow River Marsh Preserve State Park
Optimum Boundary

N

0 0.5 1 Miles

User: Jones_AE
Folder: G:\PARKS\Yellow River Marsh Preserve State Park\Projects\UMP\Optimum_Boundary\
Sources: ESRI; Florida Department of Environmental Protection
This graphical representation is provided for informational purposes and should not be considered authoritative for navigational, engineering, legal, and other uses.

IMPLEMENTATION COMPONENT

The resource management and land use components of this management plan provide a thorough inventory of the park's natural, cultural and recreational resources. They outline the park's management needs and problems and recommend both short and long-term objectives and actions to meet those needs. The implementation component addresses the administrative goal for the park and reports on the Division of Recreation and Parks (DRP) progress toward achieving resource management, operational and capital improvement goals and objectives since approval of the previous management plan for this park. This component also compiles the management goals, objectives and actions expressed in the separate parts of this management plan for easy review. Estimated costs for the ten-year period are provided for each action and objective, and the costs are summarized under categories of land management activities.

Management Progress

Since the approval of the last management plan for Yellow River Marsh Preserve State Park in 2008, significant work has been accomplished and progress made towards meeting the DRP's management objectives for the park. These accomplishments fall within four of the five general categories that encompass the mission of the park and the DRP.

Acquisition

- The acquisition of the Brown and Springer parcels in 2021 added 138.48 acres to the park's management.

Resource Management

Natural Resources

- Conducted Flatwoods Salamander surveys
- Obtained shoreline stabilization grant with RCP staff in 2008
- Wildfire and fireline stabilization work with Florida Forest Service and NWFWMD
- Prepped fire lines and burned zones 1, 2, 7A, 7B, 9, and 10 with partners
- Fenced and gated sections of park boundary
- Cleared overgrown boundary segments with Gyro-track
- Completed shoreline stabilization grant project in 2012-2014
- Added over ¾ mile of mulched fire lines
- Disked and mulched firelines in 6 additional zones
- Conducted 3 prescribed fires in 2014-2016
- Surveyed and documented Flatwoods Salamander in park
- Added certified prescribed fire manager to staff

Recreation and Visitor Services

- Replaced trailhead counter for reporting attendance
- Installed interpretive signage/kiosk on Dickerson nature trail.

Park Facilities

- Installed 1500 feet of perimeter fencing with gates to prevent OHV access

Management Plan Implementation

This management plan is written for a timeframe of ten years, as required by Section 253.034 Florida Statutes. The Ten-Year Implementation Schedule and Cost Estimates (Table 7) summarizes the management goals, objectives and actions that are recommended for implementation over this period, and beyond. Measures are identified for assessing progress toward completing each objective and action. A time frame for completing each objective and action is provided. Preliminary cost estimates for each action are provided and the estimated total costs to complete each objective are computed. Finally, all costs are consolidated under the following five standard land management categories: Resource Management, Administration and Support, Capital Improvements, Recreation Visitor Services and Law Enforcement.

Many of the actions identified in the plan can be implemented using existing staff and funding. However, a number of continuing activities and new activities with measurable quantity targets and projected completion dates are identified that cannot be completed during the life of this plan unless additional resources for these purposes are provided. The plan's recommended actions, time frames and cost estimates will guide the DRP's planning and budgeting activities over the period of this plan. It must be noted that these recommendations are based on the information that exists at the time the plan was prepared. A high degree of adaptability and flexibility must be built into this process to ensure that the DRP can adjust to changes in the availability of funds, improved understanding of the park's natural and cultural resources, and changes in statewide land management issues, priorities and policies.

Statewide priorities for all aspects of land management are evaluated each year as part of the process for developing the DRP's annual legislative budget requests. When preparing these annual requests, the DRP considers the needs and priorities of the entire state park system and the projected availability of funding from all sources during the upcoming fiscal year. In addition to annual legislative appropriations, the DRP pursues supplemental sources of funds and staff resources wherever possible, including grants, volunteers and partnerships with other entities. The DRP's ability to accomplish the specific actions identified in the plan will be determined largely by the availability of funds and staff for these purposes, which may vary from year to year. Consequently, the target schedules and estimated costs identified in Table 7 may need to be adjusted during the ten-year management planning cycle.

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Goal I: Provide administrative support for all park functions.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Continue day-to-day administrative support at current levels.**	Administrative support ongoing	**C**	**$31,131**
Objective B	**Expand administrative support as new lands are acquired, new facilities are developed, or as other needs arise.**	Administrative support expanded	**C**	**$170,356**
Goal II: Protect water quality and quantity in the park, restore hydrology to the extent feasible, and maintain the restored condition.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Conduct/obtain an assessment of the park's hydrological needs.**	Assessment conducted	**LT**	**$242,600**
Action 1	Comprehensive park wide hydrological assessment.	Assessnment conducted	LT	$51,000
Action 2	Develop hydrological restoration plan.	Plan Developed	ST	$1,600
Action 3	Pursue funding for a Marsh Master 2LX vehicle with cutting attachements and fire suppression equipment.	Amount of Funding	ST	$190,000
Objective B	**Restore natural hydrological conditions and function to approximately 879 acres of wet prairie, wet flatwoods, dome swamp, and dome strand natural communities.**	# Acres restored or with restoration underway	**UFN**	**$265,000**
Action 1	Install culverts to improve hydrology and access to the management zones in the park.	# Culverts installed	ST or LT	$40,000
Action 2	Install extended low water crossings/firebreaks.	# Crossings/Breaks installed	ST or LT UFN	$225,000
Goal III: Restore and maintain the natural communities/habitats of the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Complete a comprehensive floral and faunal survery and create/update the park's baseline plants and animals list.**	# Surveys conducted	**LT**	**$16,000**
Action 1	Conduct general plant surveys.	Survey completed	C	$8,000
Action 2	Conduct general insect and animal surveys.	Survey completed	ST or LT	$8,000
Objective B	**Within 10 years, have 922 acres of the park maintained within the optimum fire return interval.**	# Acres burned	**ST or LT**	**$683,107**
Action 1	Develop and update annual burn plan.	Plan developed/updated	ST	$1,600

* 2015 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Action 2	Manage fire communities by burning between 263-461 acres annually.	# Acres burned	LT	$100,000
Action 3	Conduct mechanical removal treatment of dense understory and trees in applicable zones using a Gyrotrack GT25 or comparable vehicle.	Amount removed	C	$460,000
Goal IV: Maintain, improve or restore imperiled species populations and habitats in the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Develop/Update baseline imperiled species occurrence inventory lists for plants and animals.**	List developed/updated	**C**	**$8,000**
Action 1	Conduct comprehensive plant and animal surveys.	Survey completed		$8,000
Objective B	**Monitor and document 1 selected imperiled animal species in the park.**	# Species monitored	**C**	**$11,600**
Action 1	Conduct larval surveys for Flatwoods Salamander in the park.	# Surveys conducted	C	$5,000
Action 2	Survey the park and locate suitable breeding habitat for the Flatwoods Salamander.	# Surveys conducted	C	$5,000
Action 3	Prepare a recovery plan for the Reticulated Flatwoods Salamander at the park.	# Plans produced	C	$1,600
Objective C	**Monitor and document 5 selected imperiled plant species in the park.**	# Species monitored	**C**	**$5,600**
Action 1	Develop monitoring protocols for the White-topped Pitcher Plant, Panhandle Lily, Yellow Fringless Orchid, Parrot Pitcher Plant, and Sweet Pitcher Plant.	# Protocols developed	C	$1,600
Action 2	Implement monitoring protocols for the imperiled plant species listed in Action 1.	# Species monitored	C	$4,000
Goal V: Remove exotic and invasive plants and animals from the park and conduct needed maintenance-control.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Annually treat all acres of exotic plant species in the park.**	# Acres treated	**C**	**$22,000**
Action 1	Annually develop/update exotic plant management work plan.	Plan developed/updated	C	$2,000
Action 2	Implement annual work plan by treating 10 acres in park, annually, and continuing maintenance and follow-up treatments, as needed.	Plan implemented		$20,000
Objective B	**Implement control measures on feral pigs and other exotic animal species in the park.**	# Species for which control measures	**C**	**$4,600**
Action 1	Conduct surveys for the presence of feral pigs.	# Surveys conducted	C	$3,000
Action 2	Work with adjacent private residences to educate abiyt the Florida Black Bear.	# of outreach attempts	C	$1,600

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UFN = currently unfunded need

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Goal VI: Protect, preserve and maintain the cultural resources of the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Assess and evaluate 1 of 1 recorded cultural resources in the park.**	Documentation complete	**LT**	**$1,500**
Action 1	Complete assessment/evaluation of archaeological site SR00853.	Assessments complete	LT, ST	$1,500
Objective B	**Compile reliable documentation for all recorded historic and archaeological sites.**	Documentation complete	**LT**	**$2,200**
Action 1	Ensure all known sites are recorded or updated in the Florida Master Site File.	# Sites recorded or updated	ST	$600
Action 2	Using the information complied in the report "Archaeological Resource Sensitivity Modeling in Florida State Parks District 1: the Northwest Florida Region" an investigation of the areas listed should be investigated to determine if other cultural resource sites exist within the park.	Investigation completed	ST	$1,600
Goal VII: Provide public access and recreational opportunities in the park.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Maintain the park's current recreational use.**	# Recreation/visitor	**C**	**$20,754**
Objective B	**Expand the park's recreational use.**	# Recreation/visitor	**ST or LT**	**$113,570**
Objective C	**Continue to provide interpretive programs.**	# Interpretive/education programs	**C**	**$15,000**
Goal VIII: Develop and maintain use areas and support facilities.		**Measure**	**Planning Period**	**Estimated Manpower and Expense Cost* (10-years)**
Objective A	**Maintain all use areas and support facilities in the park.**	Facilities maintained	**C**	**$41,508**
Objective B	**Improve 1 Use Area.**	# of Facilities	**LT**	**$62,337**
Objective C	**Develop 1 New Use Area and 3 miles of Trails**	Facilities maintained	**LT**	**$347,645**

* 2015 Dollars
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UFN = currently unfunded need

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.				
Objective D	**Continue to implemet the park's transitional plan to ensure facilities are accessible in accordance with the Americans with Disabilities Act of 1990.**	Plan implemented	**ST or LT**	**$50,000**
Objective E	**Expand maintenance activities as existing facilities are improved and new facilities are developed.**	Facilities maintained	**C**	**$227,141**

* 2015 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

NOTE: THE DIVISION'S ABILITY TO COMPLETE THE OBJECTIVES OUTLINED BY THE MANAGEMENT PLAN IS CONTINGENT ON THE AVAILABILITY OF FUNDING AND OTHER RESOURCES FOR THESE PURPOSES.

Summary of Estimated Costs

Management Categories		Total Estimated Manpower and Expense Cost* (10-years)
Resource Management		**$1,140,700**
Administration and Support		**$201,487**
Capital Improvements		**$728,631**
Recreation Visitor Services		**$149,324**
Law Enforcement Activities	Note: Law enforcement activities in Florida State Parks are conducted by the FWC Division of Law Enforcement and by local law enforcement agencies.	

* 2015 Dollars
ST = actions within 2 years
LT = actions within 10 years
C = long term or short term actions that are continuous or cyclical
UFN = currently unfunded need

Addendum 1—Acquisition History

Yellow River Marsh Preserve State Park Acquisition History

Land Acquisition History Report	
Park Name	Yellow River Marsh Preserve State Park
County	Santa Rosa
Trustees Lease Number	Lease No. 4306
Current Park Acreage	976.55

Management Lease & Amendments

Lease Number	Date Leased or Amended	Initial Lessor	Initial Lessee	Current Term	Expiration Date
Parent Lease No. 4306	2/20/2002	The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida	Florida Department of Environmental Protection, Office of Coaral and Aquatic Managed Areas	50 years	2/19/2052
Lease No. 4306 Amendment 1	8/8/2002	The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida	Florida Department of Environmental Protection, Office of Coaral and Aquatic Managed Areas	50 years	2/19/2052
Assignment of Lease	12/5/2003	Florida Department of Environmental Protection, Office of Coaral and Aquatic Managed Areas	Florida Department of Environmental Protection, Division of Recreation and Parks	50 years	2/19/2052
Lease No. 4306 Amendment 2	11/28/2007	The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida	Florida Department of Environmental Protection, Division of Recreation and Parks	50 years	2/19/2052
Lease No. 4306 Amendment 3	6/29/2021	The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida	Florida Department of Environmental Protection, Division of Recreation and Parks	50 years	2/19/2052
Lease No. 4306 Amendment 4	9/29/2021	The Board of Trustees of the Internal Improvement Trust Fund of the State of Florida	Florida Department of Environmental Protection, Division of Recreation and Parks	50 years	2/19/2052

Acquisition History

Parcel DM-ID	Date Acquired and Funding Source	Grantor	Grantee	Acreage	Instrument Type
DM-ID 312798	2/21/2000 CARL	Angel T Viri	Trustees	8.31	Warranty Deed
DM-ID 312198	6/12/2000 CARL	Pea Ridge LLC	Trustees	226.55	Warranty Deed
DM-ID 312199	8/12/2000 CARL	Dorothy Hanson & Joanne Crawford	Trustees	108.40	Warranty Deed
DM-ID 313239	8/18/2000 CARL	Clayton & Kathy Peacock	Trustees	3.57	Warranty Deed
DM-ID 311421	8/19/2000 CARL	Elsie Hulion	Trustees	7.17	Warranty Deed
DM-ID 312764	8/21/2000 CARL	Elizabeth Johnson	Trustees	0.44	Warranty Deed
DM-ID 309175	10/2/2000 CARL	Charles & Vivian Moretll & Jacquelyn G	Trustees	0.44	Warranty Deed
DM-ID 313238	10/10/2000 CARL	Perdido Key Inc.	Trustees	10.96	Warranty Deed
DM-ID 326758	11/24/2000 CARL	J.D. Presley & L.Presley in Memory	Trustees	84.40	Warranty Deed
DM-ID 312200	11/28/2000 CARL	Chryssie Tavrides & Betsy Chacharon	Trustees	0.44	Warranty Deed
DM-ID 339489	12/29/2000 CARL	Odebrecht Construction Company	Trustees	59.98	Warranty Deed

Yellow River Marsh Preserve State Park Acquisition History

DM-ID 326757	1/2/2001 CARL	Clayton & Kathy Peacock	Trustees	14.73	Warranty Deed
DM-ID 350592	1/15/2001 CARL	W. Neil Swain et all	Trustees	162.34	Warranty Deed
DM-ID 342290	2/5/2001 CARL	Carmelite Monastery	Trustees	4.95	Warranty Deed
DM-ID 309174	2/27/2001 CARL	Lee Noble, The Huntigton Nat'l Bank	Trustees	28.15	Warranty Deed
DM-ID 312797	11/2/2001 CARL	Trawick et all	Trustees	56.15	Warranty Deed
DM-ID 312894	6/25/2002 CARL	Will & Wanda Brown	Trustees	40.28	Warranty Deed
DM-ID 350004	6/10/2007 Mitigation	Woodland Ventures of Pensacola	Trustees	20.42	Warranty Deed
DM-ID 383348	2/16/2021 Florida Forever	Thomas Springer	Trustees	30.71	Warranty Deed
DM-ID 383349	2/16/2021 Florida Forever	Brown family partnership, Herrick, Kampe, and Campbell	Trustees	107.77	Warranty Deed

Addendum 2—Advisory Group Members and Report

Heather Lindsey
Mayor
City of Milton

Robert Cole
Commissioner
Santa Rosa County BOCC

Jason Tritt
Santa Rosa Soil and Water

Beth Fugate
Manager
Yellow River Aquatic Preserve

Marshall Shaw
Park Manager
Yellow River Marsh State Park

Shelly Wayte
OPL Senior Forester
Florida Forest Service

To Whom It May Concern
Santa Rosa County Environmental

Billy Sermons
Regional Director
FFWCC

Craig Duval
Regional Commander
FFWCC Law Enforcement

Phillip Manor
Biologist
FFWCC Habitat

George Roberts
Chair
Northwest Florida WMD

Jason O'Donoughue
Archaeologist
Division Historical Resources

Arnold & Laura Pennell
Adjacent Property Owner

Michael Stin
Adjacent Property Owner

Jesse Strickland
Adjacent Property Owner

Grant Gelhardt
Chair
Sierra Club

Kimberly Bremner
President
Florida Native Plant

Helen Wigersma
Florida Trail Association

Tammy Simmons
Parks Coordinator
Santa Rosa County Parks

To Whom It May Concern
Santa Rosa County TDC

The Advisory Group Public Meeting for the draft plan of Yellow River Marsh Preserve State Park was held on April 18, 2022 in Milton, Florida at the Blackwater Heritage State Trail Visitor Center.

To begin the meeting, Mr. Allbritton welcomed attendees to the public advisory group meeting for the draft unit management plan for Yellow River Marsh Preserve State Park. Additional DRP staff present at the meeting included: Steve Cutshaw, Sasha Craft, Brian Fugate, Marshall Shaw, Daryl Hatfield, and Gerard Greco.

After the open house, Mr. Allbritton began the presentation. Mr. Allbritton provided background information on the park including available recreation opportunities, visitation statistics from the 2020/2021 fiscal year, and acquisition information.

Additional information presented included natural communities, imperiled species, exotic species, cultural resources, and the purpose of the park. Next, the resource management objectives for the next 10 years were presented along with the Conceptual Land Use Plan map which laid out all proposed developments and improvements to the park use areas.

Mr. Allbritton concluded the presentation by explaining the next steps of the planning process consisting of a two week comment period ending on May 2, 2022 after which the plan would be submitted to the Division of State Lands and the Acquisition and Restoration Council.

Following the conclusion of the presentation, Mr. Allbritton invited participants to ask questions to DRP staff who were stationed around the room at various map stations to ask any additional questions they might have had regarding the draft plan.

Summary of Public and Advisory Group Comments

Jacob Hullett asked if there was a priority list with costs associated for the various objectives proposed throughout the plan. Mr. Allbritton showed Mr. Hullett the Implementation Spreadsheet and explained the differences between the short term, long term, and continuous goals as they were listed in the plan. After discussing the objective priorities and costs, Mr. Hullett provided Mr. Allbritton and Mr. Hatfield with his business card and offered help with volunteer efforts and promoting them within the City of Milton.

Kimberley Bremner asked for clarification on the locations of the Comceptual Land Use Proposals. Marshall Shaw explained the proposals and locations to Ms. Bremner and answered her additional follow up questions about trail development, park operations, and volunteer opportunities at the park for the Florida Native Plant Society to be involved in.

Marshall Shaw and Daryl Hatfield explained the Optimum Boundary map and the significance of the parcels to Ms. Bremner and Mr. Hullett.

Written Public and Advisory Group Comments

Shelly Wayte with the Florida Forest Service provided written comments on the Draft Unit Management Plan for Yellow River Marsh Preserve State Park.

Staff Recommendations

Edits will be made to the sections of the Unit Management Plan as necessary based on the comments that are received during the comment period.

Notes on Composition of the Advisory Group

Florida Statutes Chapter 259.032 Paragraph 10(b) establishes a requirement that all state land management plans for properties greater than 160 acres will be reviewed by an advisory group:
"Individual management plans required by s. 253.034(5), for parcels over 160 acres, shall be developed with input from an advisory group. Members of this advisory group shall include, at a minimum, representatives of the lead land managing agency, co-managing entities, local private property owners, the appropriate soil and water conservation district, a local conservation organization, and a local elected official."
Advisory groups that are composed in compliance with these requirements complete the review of State park management plans. Additional members may be appointed to the groups, such as a representative of the park's Citizen Support Organization (if one exists), representatives of the recreational activities that exist in or are planned for the park, or representatives of any agency with an ownership interest in the property. Special issues or conditions that require a broader representation for adequate review of the management plan may require the appointment of additional members. The DRP's intent in making these appointments is to create a group that represents a balanced cross-section of the park's stakeholders. Decisions on appointments are made on a case-by-case basis by Division of

Addendum 3—References Cited

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Addendum 4—Soil Descriptions

1 - Albany loamy sand, 0 to 5 percent slopes - This somewhat poorly drained, nearly level to gently sloping soil is on low upland ridges, slopes are smooth to concave. Area of this soil range mostly from 10 to 50 acres in size, but some areas are as small as 5 acres. Typically, the surface layer is very dark gray loamy sand about 5 inches thick. The subsurface layer is loamy sand. The upper 12 inches to the subsurface layer is brown; the next 8 inches is light olive brown with brownish gray, yellowish brown, and pale brown mottles; and the lower 22 inches is yellowish brown with strong brown mottles. The upper 5 inches of the subsoil is yellowish brown sandy loam with strong brown and light brownish gray mottles; the next 15 inches is mottled light gray, yellowish brown, brownish yellow, pale brown, strong brown, light reddish brown, and red sandy loam and the lower 13 inches is mottles yellowish brown, brownish yellow, white, strong brown, red and pale red sandy loam. Included with this soil in mapping are small areas of Bonifay, Fuquay, Lakeland, Pactolus, and Troup soils. Also included are a very few small areas where slopes are 5 to 8 percent and few small areas of soils that are similar to Albany soils but that have a sand surface layer. Inclusions make up less than 15 percent of any mapped area. In this Albany soil the water table is at a depth of 12 to 30 inches for 1 to 4 moths during most years. Available water capacity is moderately low to low, and natural fertility is low. Permeability is rapid in the sandy layers and moderate in the subsoil. Runoff is slow, and the erosion hazard is slight. The natural vegetation consists of longleaf and slash pine and various oaks. The under story is mainly gallberry, wax myrtle, and wiregrass. Most areas of this soil remain in woodland.

16 - Garcon loamy fine sand, less than 2 percent slopes - This somewhat poorly drained, nearly level soil is on broad low positions in the Flatwoods. Slopes are less than 2 percent. Areas of this soil range mostly from 10 to 100 acres in size. Typically, the surface layer is loamy fine sand about 8 inches thick; the upper 4 inches is very dark gray, and the lower 4 inches is dark grayish brown, The subsurface layer is loamy fine sand; the upper 12 inches is yellowish brown, and the lower 11 inches is brownish yellow with light brownish gray and yellowish brown mottles. The upper 8 inches of the subsoil is yellowish brown fine sandy loam the next 12 inches is gray fine sandy loam with reddish brown and red mottles; and the lower 7 inches is mottled gray, pale brown, strong brown, and yellowish brown loamy fine sand. The underlying sandy material extends to a depth of 80 inches; the upper 11 inches is gray fine sand with yellowish brown, strong brown, and light reddish-brown mottles, and the lower 11 inches is yellowish red fine sand with light brownish gray, yellowish brown, red and strong brown mottles. Included with this soil in mapping are small areas of Albany, Mulat, and Pactolus soils. Also included within this area are a few small areas of soils that are similar to Garcon soils but have a loamy sand and fine sand surface layer. Inclusions make up less the 15 percent of any mapped area. In the Garcon soil the water table is at a depth of 20 to 40 inches for 4 to 6 months during most years. Available water capacity is medium above a depth of about 8 inches, low between depth of 8 to 31 inches, medium between depths of 31 and 51 inches, and low below a depth of 51 inches. Natural fertility is low.

Permeability is rapid above a depth of about 31 inches, moderate between depths of 31 and 51 inches, and rapid below a depth of 51 inches. The natural vegetation consists of longleaf and slash pine and various oaks. The under story is mainly gallberry, grassleaf goldenaster, running oak, palmetto, and wiregrass.

24 – Leon sand, 0-2 percent slopes- Soils of the Leon series are sandy and siliceous. The soils are nearly level and are poorly drained. Leon sands are formed in thick beds of acidic sandy marine sediment in conditions that accumulate an organic pan. Flatwoods typically occur in these conditions. Leon soils are near Kureb, Lakeland, Pactolus, and Rutlege soils. Gently sloping to sloping Kureb soils are in broad areas and are excessively drained. Lakeland soils are level to gently sloping and are excessively drained. Pactolus soils are level to gently sloping and are moderately to poorly drained. Rutlege soils are in low flat depressions and ponded areas and are poorly drained. Leon soils between 0 to 2 inches contain very dark gray sand with weak fine granular structure, have many fine and medium roots and is very strongly acidic. From 2 to 16 inches the soil is grayish brown sand, single grained and loose structure with many fine and medium roots and is very strongly acidic. Between 16 to 21 inches the soils are dark reddish-brown sand and has a weak medium subangular blocky structure, with many fine and few medium roots and is very strongly acidic. Between 21 to 25 inches the sand is dark brown, has a weak fine granular structure with few fine roots and is strongly acidic. Between 25 to 32 inches the sand is brown with weak fine granular structure, few fine roots and is strongly acidic. Between 32 to 44 inches the sand is pale brown has a single grained structure, with few fine roots and is strongly acidic. Between 44 to 56 inches the sand is light brownish gray single grained and is very strongly acidic. Between 56 to 80 inches the sand is white with a single grained loose structure and very strongly acidic. The vegetation found utilizing these soils consists of longleaf pine, slash pine, water oak, myrtle, with a thick undergrowth of sawpalmetto, running oak, fetterbush and other lyionia, gallberry, wax myrtle, goldenrod, ligustrina, dog fennel, chalky bluestem, lowbush blueberry, creeping bluestem and pineland threeawn (wiregrass). In depressions, the vegetation is dominated by brackenfern, smooth sumac and swamp cyrilla are common. Vegetation in the tidal marshes includes bushy seaoxeye, marshhay cordgrass, seashore saltgrass, batis, and smooth cordgrass.

27 - Lynchburg fine sandy loam- less than 2 percent slopes - This somewhat poorly drained, nearly level soil is along narrow drainage ways, around depressions, and on low flats between small streams. Slopes are less than 2 percent. Areas of this soil range mostly from 10 to more than 100 acres in size, but a few areas are as small as 5 acres. Typically, the surface layer is very dark gray fine sandy loam about 4 inches thick. The subsurface layer is light yellowish-brown loam about 5 inches thick. The upper 8 inches of the subsoil is light yellowish brown loam with yellowish brown and gray mottles; the next 8 inches is light yellowish brown loam with gray, red, and strong brown mottles; the next 35 inches is sandy clay loam mottled in shades of gray, yellow, brown, and red; and the lower 20 inches is clay loam mottled in shades of gray, yellow brown, and red. Included with this soil in mapping are small areas of Albany, Angie Variant,

Dothan Escambia, Kalmia, and Rains soils. Also included are a few areas of soil that are similar to Lynchburg soils, but hat have a surface layer more than 20 inches thick, that are sandy clay or clay below a depth of 40 inches, or that have a very dark gray or black surface layer more than 8 inches thick. Also included are small areas of poorly drained soils in and along narrow steam bottomlands and drainage ways and a few small areas where slopes are 2 to 5 percent. Inclusions make up less than 17 percent of any mapped area. In this Lynchburg soil the water table is at a depth of less than 12 inches for 1 to 3 months during spring and winter in most years. Available water capacity is medium. Natural fertility is low. Permeability is moderate above a depth of about 25 inches and moderately slow below a depth of about 25 inches. Internal drainage is moderately slow to slow and response to artificial drainage is moderately slow. The natural vegetation consists of longleaf and slash pine, sweet gum, blackgum, and various oaks. The under story is mainly native grasses and low growing shrubs such as gallberry and water-tolerant plants. Wiregrass is the most common native grass. Most areas of this soil remain in woodland.

29 - Mulat loamy fine sand - This poorly drained, nearly level soil is in low-lying areas and in the flatwoods of the lower Coastal Plain. Slopes are less than 1 percent. Areas of this soil range mostly from 10 to more than 100 acres in size. Typically, the surface layer is black loamy fine sand about 4 inches thick. The upper 6 inches of the subsurface layer is dark gray loamy fine sand with brown and very dark gray mottles, the next 7 inches is grayish brown fine sand with dark yellowish brown and brown mottles, and the lower 10 inches is light brownish gray sand with yellowish brown and brown mottles. The upper 7 inches of the subsoil is gray fine sandy loam with yellowish brown and grayish brown mottles, and the lower 15 inches is gray fine sandy loam with yellowish brown and dark gray mottles. The underlying material extends to a depth of 80 inches; the upper 8 inches is pinkish gray sand with light brownish gray mottles, the next 14 inches is light brownish gray sand with pinkish gray mottles, and the lower 9 inches is gray fine sand with dark gray mottles. Included with this soil in mapping are small areas of Garcon, Lynchburg, Pactolus, Rains, and Rutledge soils. Also included are a few small areas of soils that are similar to Mulat soils but that have a loamy sand and fine sand surface layer. Inclusions make up less than 15 percent of any mapped area. In this Mulat soil the water table is above a depth of 10 inches for 6 to 8 months during most of the years and varies between the depths of 10 and 30 inches during drought periods. The soils are pounded or have water above the soil surface for less than 1 month during the wettest season. Surface and internal drainage are slow under natural conditions. This soil has medium available water capacity above a depth of about 10 inches, low between depths of 10 and 27 inches, medium between depths of 27 and 49 inches, and low below a depth of 49 inches. Permeability is rapid above a depth off about 27 inches, moderately slow between depths of 27 and 49 inches, and rapid below a depth of 49 inches. The natural vegetation consists of bald cypress,

pitcher plant, gallberry, and wiregrass. Most areas of this soil remain in natural vegetation.
The soils in this map unit are in capability subclass VIIw. Basinger and Holopaw soils are in woodland group 2W. Samsula soil has not been assigned to a woodland group. This soils in this map unit are in the Freshwater Marshes and Ponds range.

32 – Orangeburg sandy loam, 5 to 8 percent slopes- The soils are nearly level to strongly sloping and well drained. Orangeburg sandy loam formed in thick beds of loamy marine deposits. Orangeburg soils are near Dothan, Fuquay, Lucy, and Red Bay soils. Dothan soils have a yellowish brown subsoil that contains 5 percent plinthite, above a depth of 60 inches. Fuquay soils are yellowish brown, are more than 5 percent plinthite and more than 20 inches thick. Red Bay soils are dark reddish brown. Dark brown sandy loam with a weak medium granular structure, with many fine roots and are strongly acidic are between 0 to 8 inches. Between 8 to 14 inches brown sandy loam with a weak medium granular structure with fine roots that are common and are strongly acidic. Between 14 to 25 inches the sandy clay loam is red with a weak medium subangular blocky structure, with few fine roots and is strongly acidic. Between 25 to 47 inches the sandy clay loam is dark red with a moderate to medium subangular blocky structure, with few fine roots and is strongly acidic. Sandy clay loam that is dark red is found between 47 to 73 inches and is strongly acidic. Vegetation that is found in these soils mostly consists of longleaf pine, shortleaf pine, loblolly pine, various oaks, hickory and dogwood.

34 - Pactolus loamy sand, 0 to 5 percent slopes - This moderately well drained to somewhat poorly drained, nearly level to gently sloping soil is on low positions in the uplands. Slopes are smooth to concave. Areas of this soil range mostly from 10 to more than 200 acres in size, but some areas are as small 5 acres. Typically, the surface layer is very dark gray loamy sand about 5 inches thick. The subsurface layer is dark grayish brown loamy sand about 3 inches thick with very dark gray streaks along root channels. The underlying material is sand to a depth of more than 80 inches. The upper 9 inches is light yellowish brown with dark grayish brown streaks along root channels; the next 13 inches is brownish yellow with yellowish brown and light gray mottles; the next 22 inches is coarsely mottled in shades of yellow, brown, and gray; and the lower 28 inches is white with yellow and very pale brown mottles. Included with this soil in mapping are small areas of Albany, Bonifay, Lakeland, Leon, Rutledge, and Troup soils. Also included are a few small area of poorly drained soils that have a light colored surface layer and gray mottles above a depth of 20 inches and a few areas of soils that are similar to Pactolus soils but that are 5 to 10 percent slit plus clay between depths of 10 and 40 inches. Also included are a very few small areas where sloped are 5 to 8 percent. Inclusions make up less than 15 percent of any mapped area. In this Pactolus soil the high water table is at a depth of 18 to 30 inches for 2 to 4 months during most years. Available water capacity, natural

fertility, and organic matter content are low. Permeability is rapid. Runoff is slow, and the erosion hazard is slight. The natural vegetation consists of longleaf and slash pine, dogwood, and various oaks. The under story is mainly gallberry, wax myrtle, hackberry, and wiregrass. Most areas of this soil remain in woodland.

37 - Rains fine sand - This poorly drained, nearly level soil is in low-lying positions on the Coastal Plain on low flatwoods, low hammocks, and sloughs. Slopes are less than 2 percent. Areas of this soil range for 5 to 40 acres in size. Typically, the surface layer is very dark gray fine sandy loam 5 inches thick over moderately to slowly permeable loamy and clayey layers. The subsoil is dark gray sandy loam 4 inches thick. The natural vegetation consists of longleaf and slash pine, sweet gum, blackgum, and various oaks. The under story is mainly native grasses and low growing shrubs such as gallberry and water-tolerant plants. Wiregrass is the most common native grass. Most areas of this soil remain in woodland. Included with these soils in mapping are small areas of Angie Varian, Escambia, and Lynchburg soils. Also included are a few small areas of soils that are similar to Rains soils but that have a thick black surface layer high inorganic matter, have a loamy find sand or sandy loam surface layer, or have a clay loam to clay subsoil. Inclusions make up less than 15 percent of any mapped areas. In this Rains soil the water table is at a depth of less than 10 inches or is above the surface for 2 to 6 months in most years. Available water capacity is moderate. Natural fertility is low. Permeability is moderately rapid above a depth of 5 inches and moderate below this depth. Internal drainage is moderately slow to slow and response to artificial drainage is moderately slow. Runoff is slow. The natural vegetation consists of blackgum and scattered cypress and longleaf pine. The under story consists of gallberry, wiregrass, and water-tolerant grasses and shrubs. Most areas remain in natural vegetation. The root zone is limited by a seasonal high water table that is at or slightly above the surface in wet seasons. The available water capacity averages moderate in the root zone. Natural fertility is low. Internal drainage is slow but response to artificial drainage is moderate to rapid. The hazard of erosion is slight. A well aerated root zone is limited by a seasonal high water table in wet seasons. The available water capacity is low to moderate in the root zone. The internal drainage is slow and response to artificial drainage is moderately slow. In normal years these soils have a seasonal high water table at a depth of 6 inches or less for 2 to 6 months. In other months the water table is usually below this depth. During periods of high rainfall the water table may be above the surface for periods of brief duration.

40 - Rutledge loamy sand - This very poorly drained nearly level soil is along small stream bottoms, in pounded areas, and on low upland flats. Slopes are less than 2 percent. Areas of this soil range mostly from 20 to 60 acres in size, but a few areas are larger than 100 acres and some are as small as 5 acres. Typically, the surface layer is black loamy sand about 12 inches thick. The subsurface layer is very dark gray loamy sand about 9 inches thick. Below this is gray sand that extends to a depth of more than 60 inches. Included with this soil in mapping are

small areas of Pactolus, Pinckney, Leon, Donovan, and Palace soils. Also included are areas of somewhat poorly drained to poorly drained sandy soils that have a thin black or very dark gray surface layer less than 10 inches thick and a few small areas of soils that have a mixed or stratified sandy loam or sandy clay loam subsoil. Also included are a few areas of soils that are similar to Rutledge soils but that have a sand surface layer. Inclusions make up less than 18 percent of any mapped area. In this Rutledge soil the water table is at or near the surface for long periods. Many areas are pounded in wet seasons. Available water capacity is moderate to high in the root zone. Natural fertility is moderate. Permeability is rapid throughout. Runoff is very slow or pounded. Internal drainage is slow but response to artificial drainage is rapid. The natural vegetation consists of titi, blackgum, scattered slash and longleaf pine, and silver leaf bay. The under story is mainly native grasses and low growing shrubs, primarily gallberry, wax myrtle, and pitcher plant. Most areas of this soil remain in natural vegetation.

51 – Meadowbrook fine sand- The Meadowbrook series consists of very deep, poorly drained to very poorly drained, moderately slowly permeable soils on flats and small stream flood plains. They formed in thick beds of sandy and loamy marine sediments. Slopes range from 0 to 5 percent. Between 0 to 7 inches the sand is very dark gray, extremely acidic, with a weak fine granular structure with many fine roots, and few medium and large roots. Between 7 to 35 inches the sand is gray with a single grained structure and is strongly acid. Between 35 to 42 inches the sand is gray, single grained and loose with iron being depleted and is moderately acidic. Between 42 to 70 inches sandy loam is gray with a weak medium granular structure, with some areas of iron accumulation and is moderately acidic. Between 70 to 80 inches sandy loam is dark gray and has a weak medium subangular blocky structure with few fine masses of iron accumulation and is strongly acid. The water table is within 12 inches of the surface for long periods, mainly after heavy rains from late summer to spring. Depressions are covered with water for 6 to 9 months in most years. Vegetation includes mixed stands of slash pine, loblolly pine, and longleaf pine with live, laurel, and water oaks, blackgum, sweetgum, red maple and cypress in wetter areas. The understory consists dominantly of gallberry, wax myrtle, wiregrass, pitcher plants, and bracken fern.

52 – Goldhead fine sands- The Goldhead series consists of poorly drained and very poorly drained soils on broad areas of the flatwoods and in depressions. They formed in thick beds of stratified unconsolidated loamy and sandy marine sediments. Slopes range from 0 to 5 percent. Between 0 to 6 inches the sand is fine and black with a weak fine granular structure with many fine and medium roots and is strongly acid. Between 6 to 12 inches the sand is dark gray and fine with a single grained loose structure with few fine and medium roots and is slightly acid. Between 12 to 38 inches the sand is fine and grayish brown with a single grained loose structure and is slightly acidic. Between 38 to 45 inches a

sandy clay loam that light brownish gray is found with a weak medium subangular blocky structure. Soft masses of iron accumulation is present. Between 45 to 51 inches fine sandy loam is gray has weak medium granular structure with masses of iron and manganese accumulation; mildly alkaline. Between 51 to 71 inches; the fine sand is gray has a single grained loose structure and is mildly alkaline. Between 71 to 80 inches the fine sand is gray with a single grained loose structure and is mildly alkaline. Runoff is slow and permeability is rapid in the surface and subsurface horizons and moderate to moderately slow in the subsoil. A water table is within 12 inches of the surface for long periods from late summer to spring. Depressions are covered with water for 6 to 9 months in most years. Species of plants that are found in these soils are pecies are slash, loblolly, and longleaf pine, and blackgum with cypress occurring in the wettest places. The understory consists dominantly of inkberry, wax myrtle, pineland threeawn, pitcher plants, and bracken fern.

Addendum 5—Plant and Animal List

Yellow River Marsh Preserve State Park-Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

LICHENS

Evans' reindeer lichen ..... *Cladina evansii*
Cup lichen..... *Cladonia leporina*

PTERIDOPHYTES

Foxtail club-moss.....*Lycopodiella alopecuroides*
Southern clubmoss.....*Lycopodiella appressa*
Lacy bracken .....*Pteridium aquilinum caudatum*

GYMNOSPERMS

Slash pine .....*Pinus elliottii*
Longleaf pine .....*Pinus palustris*

ANGIOSPERMS

Monocots

Yellow colicroot..... *Aletris lutea*
Pine-woods bluestem ..... *Andropogon arctatus*.....WP,WF,MEF
Broomsedge bluestem..... *Andropogon virginicus*
Bushy bluestem ..... *Andropogon glomeratus*
Splitbeard bluestem..... *Andropogon ternarius*
Purple silkyscale..... *Anthaenantia rufa*
Green silkyscale..... *Anthaenantia villosa*
Wiregrass ..... *Aristida stricta*
Mohr's threeawn ..... *Aristida mohrii*
Longleaf threeawn..... *Aristida palustris*
Arrowfeather threeawn..... *Aristida purpurascens*
Chapman threeawn ..... *Aristida simpliciflora*
Switchcane..... *Arundinaria gigantea*
Common carpetgrass ..... *Axonopus fissifolius*
Capillary hairsedge..... *Bulbostylis ciliatifolia*
Curtiss' sandgrass ..... *Calamovilfa curtissii*.....WP,DS, WF, MF
Swamp sawgrass ..... *Cladium mariscoides*
Beaked panicum ..... *Coleataenia anceps*
Whitemouth dayflower ..... *Commelina erecta*
Toothache grass..... *Ctenium aromaticum*
Pinebarren flatsedge ..... *Cyperus ovatus*
Needleleaf witchgrass..... *Dichanthelium aciculare*
Cypress witchgrass..... *Dichanthelium dichotomum*
Ravenel's rosette grass..... *Dichanthelium ravenelii*

Yellow River Marsh Preserve State Park-Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Roundseed witchgrass	*Dichanthelium sphaerocarpon*	
Tapered witchgrass	*Dichanthelium acuminatum*	
Elliott's lovegrass	*Eragrostis elliottii*	
Bearded skeletongrass	*Gymnopogon ambiguous*	
Shoal weed	*Halodule wrightii*	
Fringed yellow stargrass	*Hypoxis juncea*	
Shore rush	*Juncus marginatus*	
Lesser creeping rush	*Juncus repens*	
Whitehead bogbutton	*Lachnocaulon anceps*	
Carolina redroot	*Lachnanthes caroliana*	
Pine lily	*Lilium catesbaei*	DS,WP,WF
Panhandle lily	*Lilium iridollae*	DS,WP,WF
Cutover muhly	*Muhlenbergia capillaris trichopodes*	
Maidencane	*Panicum hemitomon*	
Warty panicgrass	*Panicum verrucosum*	
Switchgrass	*Panicum virgatum*	
Early paspalum	*Paspalum praecox*	
Thin paspalum	*Paspalum setaceum*	
Chapman’s butterwort	*Pinguicula planifolia*	
Gray’s beaksedge	*Rhynchospora grayi*	
Sandyfield beaksedge	*Rhynchospora megalocarpa*	
Sugarcane plumgrass	*Saccharum giganteum*	
Slender bluestem	*Schizachyrium tenerum*	
Fringed nutrush	*Scleria ciliata*	
Tall nutgrass	*Scleria triglomerata*	
Saw palmetto	*Serenoa repens*	
Earleaf greenbrier	*Smilax auriculata*	
Saw greenbrier	*Smilax bona*	
Cat greenbrier	*Smilax glauca*	
Laurel greenbrier	*Smilax laurifolia*	
Wild sarsaparilla	*Smilax pumila*	
Yellow Indiangrass	*Sorghastrum nutans*	
Lopsided Indiangrass	*Sorghastrum secundum*	
Pineywoods dropseed	*Sporobolus junceus*	
Carolina yelloweyed grass	*Xyris caroliniana*	
Karl’s yelloweyed grass	*Xyris louisianica*	
Adam's needle	*Yucca filamentosa*	
Dicots		
Red maple	*Acer rubrum*	
Beach false foxglove	*Agalinis fasciculata*	
Virginia snakeroot	*Aristolochia serpentaria*	
Whorled milkweed	*Asclepias verticillata*	
Coastalplain honeycombhead	*Balduina angustifolia*	
Oneflower honeycombhead	*Balduina uniflora*	
Gopherweed	*Baptisia lanceolata*	

Yellow River Marsh Preserve State Park-Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Soft greeneyes	*Berlandiera pumila*	
Pineland rayless goldenrod	*Bigelowia nudata*	
American beautyberry	*Callicarpa americana*	
Vanillaleaf	*Carphephorus odoratissimus*	
Hairy chaffhead	*Carphephorus paniculatus*	
Scrub wild olive	*Cartrema americanum*	
Chinquapin	*Castanea pumila*	
Redroot	*Ceanothus americanus*	
Partridge pea	*Chamaecrista fasciculate*	
Pineland daisy	*Chaptalia tomentosa*	
Bush goldenrod	*Chrysoma pauciflosculosa*	
Cottony goldenstar	*Chrysopsis gossypina cruiseana*	
Coastal sweet pepperbush	*Clethra alnifolia*	
Black titi	*Cliftonia monophylla*	
Tread-softly	*Cnidoscolus stimulosus*	
False rosemary	*Conradina canescens*	
Canadian horseweed	*Conyza canadensis*	
Texas tickseed	*Coreopsis linifolia*	
Pursh's rattlebox	*Crotalaria purshii*	
Rabbit bells	*Crotalaria rotundifolia*	
Silver croton	*Croton argyranthemus*	
Titi	*Cyrilla racemiflora*	
Summer farewell	*Dalea pinnata*	
Hairy smalleaf ticktrefoil	*Desmodium ciliare*	
Pinebarren tricktrefoil	*Desmodium strictum*	
Rough buttonwood	*Diodia teres*	
Common persimmon	*Diospyros virginiana*	
Dwarf sundew	*Drosera brevifolia*	
Tracy's sundew	*Drosera tracyi*	
False daisy	*Eclipta prostrata*	
Devil's grandmother	*Elephantopus tomentosus*	
Early whitetop fleabane	*Erigeron vernus*	
Flattened pipewort	*Eriocaulon compressum*	
Ten angle pipewort	*Eriocaulon decangulare*	
Dogtongue wild buckwheat	*Eriogonum tomentosum*	
Swamp doghobble	*Eubotrys racemosus*	
White thoroughwort	*Eupatorium album*	
Yankeeweed	*Eupatorium compositifolium*	
Justiceweed	*Eupatorium leucolepis*	
Mohr's thoroughwort	*Eupatorium mohrii*	
Rough boneset	*Eupatorium pilosum*	
Summer spurge	*Euphorbia discoidalis*	
Greater Florida spurge	*Euphorbia floridana*	
Slender flattop goldenrod	*Euthamia caroliniana*	
Erect milkpea	*Galactia erecta*	
Dwarf huckleberry	*Gaylussacia dumosa*	

Yellow River Marsh Preserve State Park-Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Blue huckleberry	*Gaylussacia frondosa tomentosa*	
Woolly huckleberry	*Gaylussacia mosieri*	
Yellow jessamine	*Gelsemium sempervirens*	
Gopher apple	*Geobalanus oblongifolius*	
Swamp sunflower	*Helianthus angustifolius*	
Variableleaf sunflower	*Helianthus heterophyllus*	
Stiff sunflower	*Helianthus radula*	
Queen-devil	*Hieracium gronovii*	
Innocence roundleaf blueflower	*Houstonia procumbens*	
St. Peter's-wort	*Hypericum crux-andreae*	
Bedstraw St. Johnswort	*Hypericum galioides*	
Pineweeds	*Hypericum gentianoides*	
St. Andrew's cross	*Hypericum hypericoides*	
Atlantic St. Johnswort	*Hypericum tenuifolium*	
Carolina holly	*Ilex ambigua*	
Dahoon holly	*Ilex cassine*	
Large gallberry	*Ilex coriacea*	
Inkberry	*Ilex glabra*	
Myrtle dahoon	*Ilex cassine myrtifolia*	
Scrub holly	*Ilex opaca*	
Yaupon	*Ilex vomitoria*	
Florida anise	*Illicium floridanum*	
Wicky hairy laurel	*Kalmia hirsuta*	
Thymeleaf pinweed	*Lechea minor*	
Pineland pinweed	*Lechea sessiliflora*	
Dusty clover	*Lespedeza capitata*	
Creeping lespedeza	*Lespedeza repens*	
Pinkscale gayfeather	*Liatris elegans*	
Slender gayfeather	*Liatris gracilis*	
Piedmont gayfeather	*Liatris pauciflora secunda*	
Dense gayfeather	*Liatris spicata*	
Shortleaf gayfeather	*Liatris tenuifolia*	
Florida yellow flax	*Linum floridanum*	
Sweetgum	*Liquidambar styraciflua*	
Shortleaf lobelia	*Lobelia brevifolia*	
Golden crest	*Lophiola aurea*	
Savannah primrosewillow	*Ludwigia virgata*	
Skyblue lupine	*Lupinus diffusus*	
Fetterbush	*Lyonia lucida*	
Southern magnolia	*Magnolia grandiflora*	
Sweetbay	*Magnolia virginiana*	
Grassleaf Barbara's buttons	*Marshallia graminifolia*	
Sensitive brier	*Mimosa quadrivalvis angustata*	
Swamp hornpod	*Mitreola sessilifolia*	
Wax myrtle	*Morella cerifera*	
Odorless bayberry	*Morella inodora*	

Yellow River Marsh Preserve State Park-Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Red mullberry	*Morus rubra*	
Evergreen bayberry	*Morella caroliniensis*	
Pricklypear	*Opuntia humifusa*	
Pineland nailwort	*Paronychia patula*	
Red bay	*Persea borbonia*	
Swamp bay	*Persea palustris*	
Walter's groundcherry	*Physalis walteri*	
American pokeweed	*Phytolacca Americana*	
Chapman's butterwort	*Pinguicula planifolia*	
Pineland silkgrass	*Pityopsis aspera*	
Narrowleaf silkgrass	*Pityopsis graminifolia*	
Yellow fringeless orchid	*Platanthera integra*	
Drumheads	*Polygala cruciata*	
Candyroot	*Polygala nana*	
Low pinebarren milkwort	*Polygala ramosa*	
Tall jointweed	*Polygonella gracilis*	
Rustweed	*Polypremum procumbens*	
Rabbit tobacco	*Pseudognaphalium obtusifolium*	
Arkansas oak	*Quercus arkansana*	
Chapman's oak	*Quercus chapmanii*	
Laurel oak	*Quercus laurifolia*	
Bluejack oak	*Quercus incana*	
Dwarf live oak	*Quercus minima*	
Myrtle oak	*Quercus myrtifolia*	
Water oak	*Quercus nigra*	
Willow oak	*Quercus phellos*	
Running oak	*Quercus pumila*	
Virginia live oak	*Quercus virginiana*	
Savannah meadowbeauty	*Rhexia alifanus*	
Yellow meadowbeauty	*Rhexia lutea*	
Pale meadowbeauty	*Rhexia mariana*	
Fringed meadowbeauty	*Rhexia petiolata*	
Winged sumac	*Rhus copallinum*	
Royal snoutbean	*Rhynchosia cytisoides*	
Dollarleaf	*Rhynchosia reniformis*	
Shortleaf rosegentian	*Sabatia brevifolia*	
Trumpet-leaf pitcherplant	*Sarracenia flava*	
White-top pitcherplant	*Sarracenia leucophylla*	DS,WP,WF
Parrot pitcherplant	*Sarracenia psittacina*	DS,WP,WF
Gulf purple pitcherplant	*Sarracenia rosea*	
Sweet pitcherplant	*Sarracenia rubra gulfensis*	DS,WP,WF
Helmet skullcap	*Scutellaria integrifolia*	
Yaupon blacksenna	*Seymeria cassioides*	
Kidneyleaf rosinweed	*Silphium compositum*	
Sweet goldenrod	*Solidago odora*	
Wand goldenrod	*Solidago stricta*	

Yellow River Marsh Preserve State Park-Plants

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Shaggy hedgehyssop	*Sophronanthe pilosa*	
Queens delight	*Stillingia sylvatica*	
Pineland scalypink	*Stipulicida setacea*	
Coastalplain dawnflower	*Stylisma patens*	
Sidebeak pencilflower	*Stylosanthes biflora*	
Scarf hoarypea	*Tephrosia chrysophylla*	
Gout's rue	*Tephrosia virginiana*	
Spiked hoarypea	*Tephrosia spicata*	
Hairyflower spiderwort	*Tradescantia hirsutiflora*	
Small's noseburn	*Tragia smallii*	
Wavyleaf noseburn	*Tragia urens*	
Needleleaf noseburn	*Tragia urticifolia*	
Chinese tallow*	*Triadica sebifera*	
Narrowleaf bluecurls	*Trichostema setaceum*	
Sparkleberry	*Vaccinium arboretum*	
Highbush blueberry	*Vaccinium corymbosum*	
Darrow's blueberry	*Vaccinium darrowii*	
Shiny blueberry	*Vaccinium myrsinites*	
Deerberry	*Vaccinium stamineum*	
Tall ironweed	*Vernonia angustifolia*	
Primroseleaf violet	*Viola primulifolia*	
Early blue violet	*Viola palmata*	
Muscadine	*Vitis rotundifolia*	
Tall ironweed	*Vernonia angustifolia*	
Primroseleaf violet	*Viola primulifolia*	
Early blue violet	*Viola palmata*	
Muscadine	*Vitis rotundifoli*	

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

LEPIDOPTERA

Gulf fritillary	*Agraulis vanillae*
Delaware skipper	*Anatrytone logan*
Great purple hairstreak	*Atlides halesus*
Pipevine swallowtail	*Battus philenor*
Monarch	*Danaus plexippus*
Horace's duskywing	*Erynnis horatius*
Berry's skipper	*Euphyes berryi*
Palamedes swallowtail	*Papilio palamedes*
Cloudless sulpher	*Phoebis sennae*
Sleepy orange	*Eurema nicippe*
Dion skipper	*Euphyes dion*
Palaktka skipper	*Euphyes pilatka*
Fiery skipper	*Hylephila phyleus*
Common buckeye	*Junonia coenia*
Eufala skipper	*Lerodea eufala*
Swarthy skipper	*Nastra lherminier*
Twin-spot skipper	*Oligoria maculata*
Ocola skipper	*Panoquina ocola*
Crossline skipper	*Polites origenes*
Tawny-edged skipper	*Polites themistocles*
Whirlabout	*Polites vibex*
Long-tailed skipper	*Urbanus proteus*
Painted lady	*Vanessa cardui*

FISH

Saltmarsh topminnow	*Fundulus jenkisi*	SM

AMPHIBIANS

Frogs and Toads

Northern cricket frog	*Acris crepitans crepitans*
Oak toad	*Anaxyrus quercicus*
Southern toad	*Anaxyrus terrestris*
Eastern narrow-mouthed toad	*Gastrophryne carolinensis*
Pine barren treefrog	*Hyla andersonii*
Bird-voiced treefrog	*Hyla avivoca*
Cope's gray treefrog	*Hyla chrysoscelis*
Green treefrog	*Hyla cinerea*
Pine woods treefrog	*Hyla femoralis*
Barking treefrog	*Hyla gratiosa*
Squirrel treefrog	*Hyla squirella*
Bullfrog	*Lithobates catesbeianus*
Bronze frog	*Lithobates clamitans*

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Pig frog	*Lithobates grylio*	
River frog	*Lithobates heckscheri*	
Southern leopard frog	*Lithobates sphenocephalus*	
Northern spring peeper	*Pseudacris crucifer*	
Southern chorus frog	*Pseudacris nigrita*	
Ornate chorus frog	*Pseudacris ornata*	
Eastern spadefoot toad	*Scaphiopus holbrookii*	
Salamanders		
Reticulated Flatwoods salamander	*Ambystoma bishopi*	DS,MEF,WP,WF
Marbled salamander	*Ambystoma opacum*	
Two-toed amphiuma	*Amphiuma means*	
Eastern tiger salamander	*Ambystoma tigrinum*	
Southern two-line salamander	*Eurycea cirrigera*	
Three-lined salamander	*Eurycea guttolineata*	
Dwarf salamander	*Eurycea quadridigitata*	
Gulf coast mud salamander	*Pseudotriton montanus flavissimus*	
Southern red salamander	*Pseudotriton ruber vioscai*	
Southeastern slimy salamander	*Plethodon grobmani*	
Eastern lesser siren	*Siren intermedia*	
REPTILES		
Crocodilians		
American alligator	*Alligator mississippiensis*	MTC
Turtles		
Common snapping turtle	*Chelydra serpentine*	
Eastern chicken turtle	*Deirochelys reticularia*	
River cooter	*Pseudemys concinna*	
Florida cooter	*Pseudemys floridana*	
Eastern box turtle	*Terrapene carolina*	
Yellow-bellied slider	*Trachemys scripta scripta*	
Lizards		
Green anole	*Anolis carolinensis*	
Southern coal skink	*Plestiodon anthracinus pluvialis*	
Northern mole skink	*Plestiodon egregius similis*	
Five-lined skink	*Plestiodon fasciatus*	
Southeastern five-lined skink	*Plestiodon inexpectatus*	
Eastern glass lizard	*Ophisaurus ventralis*	
Southern fence lizard	*Sceloporus undulatus*	
Ground skink	*Scincella lateralis*	

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)

Snakes

Cottonmouth	*Agkistrodon piscivorus*
Northern scarlet snake	*Cemophora coccinea coccinea*
Southern black racer	*Coluber constrictor Priapus*
Eastern diamondback rattlesnake	*Crotalus adamanteus*
Southern ring-necked snake	*Diadophis punctatus punctatus*
Eastern mud snake	*Farancia abacura abacura*
Eastern kingsnake	*Lampropeltis getula getula*
Scarlet kingsnake	*Lampropeltis elapsoides*
Eastern coachwhip	*Masticophis flagellum flagellum*
Eastern coral snake	*Micrurus fulvius*
Banded water snake	*Nerodia fasciata fasciata*
Yellow-bellied water snake	*Nerodia erythrogaster flavigaster*
Midland water sanke	*Nerodia sipedon pleuralis*
Brown water snake	*Nerodia taxispilota*
Rough green snake	*Opheodrys aestivus aestivus*
Corn snake	*Pantherophis guttatus*
Gray rat snake	*Pantherophis spiloides*
Gulf crayfish snake	*Regina rigida sinicola*
Dusky pigmy rattlesnake	*Sistrurus miliarius barbouri*
Eastern ribbon snake	*Thamnophis sauritus sauritus*
Eastern garter snake	*Thamnophis sirtalis sirtalis*
Rough earth snake	*Virginia striatula*
Smooth earth sanke	*Virginia valeriae valeriae*

BIRDS

Grebes and Loons

Common loon	*Gavia immer*
Pied-billed Grebe	*Podilymbus podiceps*
Horned grebe	*Podiceps auritus*

Cormorants, and Anhingas

Anhinga	*Anhinga anhinga*
Double-crested Cormorant	*Phalocrocorax auritus*

Pelicans, Frigatebirds, and Gannets

Magnificent frigatebird	*Fregata magnificens*
Northern gannet	*Morus bassanus*
American white pelican	*Pelecanus erythrorhynchos*
Brown pelican	*Pelecanus occidentalis*

Herons, Ibis, and Allies

Great Egret	*Ardea alba*
Great Blue Heron	*Ardea herodias*
American bittern	*Botaurus lentiginosus*

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Cattle Egret	*Bubulcus ibis*	
Green Heron	*Butorides virescens*	
Little Blue Heron	*Egretta caerulea*	MTC
Reddish egret	*Egretta rufescens*	MTC
Snowy egret	*Egretta thula*	
Tricolored heron	*Egretta tricolor*	MTC
Least bittern	*Ixobrychus exilis*	
Yellow-crowned night-heron	*Nyctanassa violacea*	
Black-crowned night-heron	*Nycticorax nycticorax*	
Waterfowl		
Wood duck	*Aix sponsa*	
Northern pintail	*Anas acuta*	
American wigeon	*Anas americana*	
Northern shoveler	*Anas clypeata*	
Blue-winged teal	*Anas discors*	
Mallard	*Anas platyrhynchos*	
Gadwall	*Anas strepera*	
Ring-necked duck	*Aythya collaris*	
Bufflehead	*Bucephala albeola*	
Hooded merganser	*Lophodytes cucullatus*	
Red-breasted merganser	*Mergus serrator*	
Common merganser	*Mergus merganser*	
Rails, Gallinules, and Allies		
American coot	*Fulica Americana*	
Common moorhen	*Gallinula galeata*	
Sora	*Porzana carolina*	
Purple gallinule	*Porphyrio martinicus*	
Clapper rail	*Rallus crepitans*	
King rail	*Rallus elegans*	
Virginia rail	*Rallus limicola*	
Shorebirds		
Spotted sandpiper	*Actitis macularius*	
Sanderling	*Calidris alba*	
Dunlin	*Calidris alpine*	
Western sandpiper	*Calidris mauri*	
Least sandpiper	*Calidris minutilla*	
Semipalmated plover	*Charadrius semipalmatus*	
Killdeer	*Charadrius vociferous*	
Black-necked stilt	*Himantopus mexicanus*	
Short-billed dowitcher	*Limnodromus griseus*	
Marbled godwit	*Limosa fedoa*	
Whimbrel	*Numenius phaeopus*	
Black-bellied plover	*Pluvialis squatarola*	

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
American woodcock	*Scolopax minor*	
Greater yellowlegs	*Tringa melanoleuca*	
Willet	*Tringa semipalmata*	
Gulls		
Bonaparte's gull	*Chroicocephalus philadelphia*	
Herring gull	*Larus argentatus*	
Ring-billed gull	*Larus delawarensis*	
Laughing gull	*Leucophaeus atricilla*	
Terns		
Caspian tern	*Hydroprogne caspia*	MTC
Black skimmer	*Rynchops niger*	MTC
Least tern	*Sterna antillarum*	MTC
Forster's tern	*Sterna forsteri*	
Common tern	*Sterna hirundo*	
Royal tern	*Thalasseus maximus*	
Sandwich tern	*Thalasseus sandvicensis*	MTC
Hawks, Eagles, Falcons, and Allies		
Cooper's hawk	*Accipiter cooperii*	
Sharp-shinned hawk	*Accipiter striatus*	
Red-tailed hawk	*Buteo jamaicensis*	
Red-shouldered hawk	*Buteo lineatus*	
Broad-winged hawk	*Buteo platypterus*	
Northern harrier	*Circus cyaneus*	
Merlin	*Falco columbarius*	
Peregrine falcon	*Falco peregrinus*	
American kestrel	*Falco sparverius*	
Bald eagle	*Haliaeetus leucocephalus*	
Osprey	*Pandion haliaetus*	
Vultures		
Turkey Vulture	*Cathartes aura*	
Black Vulture	*Coragyps atratus*	
Turkey and Quail		
Northern bobwhite	*Colinus virginianus*	
Wild turkey	*Meleagris gallopavo*	
Doves		
Rock pigeon*	*Columba livia*	
Common ground-dove	*Columbina passerina*	
Eurasian collard-dove*	*Streptopelia decaocto*	
White-winged dove	*Zenaida asiatica*	
Mourning dove	*Zenaida macroura*	

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Cukoos		
Yellow-billed cuckoo	*Coccyzus americanus*	
Owls		
Great horned owl	*Bubo virginianus*	
Eastern screech owl	*Megascops asio*	
Goatsuckers		
Chuck-will's-willow	*Caprimulgus carolinensis*	
Common nighthawk	*Chordeiles minor*	
Swifts		
Chimney swift	*Chaetura pelagica*	
Hummingbirds		
Ruby-throated hummingbird	*Archilochus colubris*	
Kingfishers		
Belted kingfisher	*Megaceryle alcyon*	
Woodpeckers		
Northern flicker	*Colaptes auratus*	
Pileated woodpecker	*Dryocopus pileatus*	
Red-bellied woodpecker	*Melanerpes carolinus*	
Red-headed woodpecker	*Melanerpes erythrocephalus*	
Downy woodpecker	*Picoides pubescens*	
Hairy woodpecker	*Picoides villosus*	
Yellow-bellied sapsucker	*Sphyrapicus varius*	
Flycatchers		
Eastern wood-pewee	*Contopus virens*	
Least flycatcher	*Empidonax minimus*	
Great crested flycatcher	*Myiarchus crinitus*	
Eastern phoebe	*Sayornis phoebe*	
Gray kingbird	*Tyrannus dominicensis*	
Eastern kingbird	*Tyrannus tyrannus*	
Shrikes		
Loggerhead shrike	*Lanius ludovicianus*	
Vireos		
White-eyed vireo	*Vireo griseus*	
Red-eyed vireo	*Vireo olivaceus*	
Blue-headed vireo	*Vireo solitarius*	

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Jays and Crows		
American crow	*Corvus brachyrhynchos*	
Fish crow	*Corvus ossifragus*	
Blue jay	*Cyanocitta cristata*	
Swallows		
Barn swallow	*Hirundo rustica*	
Cliff swallow	*Petrochelidon pyrrhonota*	
Purple martin	*Progne subis*	
Bank swallow	*Riparia riparia*	
Northern rough-winged swallow	*Stelgidopteryx serripennis*	
Tree swallow	*Tachycineta bicolor*	
Titmice		
Tufted titmouse	*Baeolophus bicolor*	
Carolina chickadee	*Poecile carolinensis*	
Nuthatches		
Red-breasted nuthatch	*Sitta canadensis*	
Brown-headed nuthatch	*Sitta pusilla*	
Wrens		
Marsh wren	*Cistothorus palustris*	
Carolina wren	*Thryothorus ludovicianus*	
House wren	*Troglodytes aedon*	
Gnatcatchers and Kinglets		
Blue-gray Gnatcatcher	*Polioptila caerulea*	
Ruby-crowned kinglet	*Regulus calendula*	
Golden-crowned kinglet	*Regulus satrapa*	
Thrushes		
Veery	*Catharus fuscescens*	
Hermit thrush	*Catharus guttatus*	
Swainson's thrush	*Catharus ustulatus*	
Wood thrush	*Hylocichla mustelina*	
Eastern bluebird	*Sialia sialis*	
American robin	*Turdus migratorius*	
Thrashers		
Gray catbird	*Dumetella carolinensis*	
Northern mockingbird	*Mimus polyglottos*	
Brown thrasher	*Toxostoma rufum*	
Starlings		

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
European starling*	*Sturnus vulgaris*	
Wagtails and pipits		
American pipit	*Anthus rubescens*	
Waxwings		
Cedar Waxwing	*Bombycilla cedrorum*	
Warblers		
Common yellowthroat	*Geothlypis trichas*	
Worm-eating warbler	*Helmitheros vermivorum*	
Tennessee warbler	*Leiothlypis peregrina*	
Swainson's warbler	*Limnothlypis swainsonii*	
Black-and-white warbler	*Mniotilta varia*	
Orange-crowned warbler	*Oreothlypis celata*	
Prothonotary warbler	*Protonotaria citrea*	
Ovenbird	*Seiurus aurocapilla*	
Northern parula	*Setophaga americana*	
Bay-breasted warbler	*Setophaga castanea*	
Hooded warbler	*Setophaga citrina*	
Yellow-rumped warbler	*Setophaga coronata*	
Magnolia warbler	*Setophaga magnolia*	
Palm warbler	*Setophaga palmarum*	
Chestnut-sided warbler	*Setophaga pensylvanica*	
Yellow warbler	*Setophaga petechia*	
Pine warbler	*Setophaga pinus*	
American redstart	*Setophaga ruticilla*	
Blackpoll warbler	*Setophaga striata*	
Sparrows		
Nelson's sparrow	*Ammodramus nelsoni*	
Song sparrow	*Melospiza melodia*	
Lincoln's sparrow	*Melospiza lincolnii*	
Swamp sparrow	*Melospiza georgiana*	
House sparrow*	*Passer domesticus*	
Savannah sparrow	*Passerculus sandwichensis*	
Eastern towhee	*Pipilo erythrophthalmus*	
Chipping sparrow	*Spizella passerina*	
Field sparrow	*Spizella pusilla*	
White-throated sparrow	*Zonotrichia albicollis*	
White-crowned sparrow	*Zonotrichia leucophrys*	
Meadowlarks,Blackbirds and Orioles		
Red-winged blackbird	*Agelaius phoeniceus*	
Baltimore oriole	*Icterus galbula*	
Orchard oriole	*Icterus spurius*	

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Brown-headed cowbird*	*Molothrus ater*	
Common grackle	*Quiscalus quiscula*	
Boat-tailed grackle	*Quiscalus major*	
Eastern meadowlark	*Sturnella magna*	
Cardinals,Grosbeaks,and Buntings		
Northern cardinal	*Cardinalis cardinalis*	
Blue grosbeak	*Passerina caerulea*	
Indigo Bunting	*Passerina cyanea*	
Rose-breasted grosbeak	*Pheucticus ludovicianus*	
Summer tanager	*Piranga rubra*	
Scarlet tanager	*Piranga olivacea*	
Finches		
House finch	*Haemorhous mexicanus*	
Pine siskin	*Spinus pinus*	
American goldfinch	*Spinus tristis*	
MAMMALS		
Didelphids		
Opossum	*Didelphis virginiana*	
Moles		
Eastern mole	*Scalopus aquaticus*	
Bats		
Big brown bat	*Eptesicus fuscus*	
Lagomorphs		
Marsh rabbit	*Sylvilagus palustris*	
Rodents		
North American beaver	*Castor canadensis*	
Cotton mouse	*Peromyscus gossypinus*	
Gray squirrel	*Sciurus carolinensis*	
Hispid cotton rat	*Sigmodon hispidus*	
Carnivores		
Coyote*	*Canis latrans*	
Bobcat	*Lynx rufus*	
Striped skunk	*Mephitis mephitis*	
Raccoon	*Procyon lotor*	
Gray fox	*Urocyon cinereoargenteus*	
Florida black bear	*Ursus americanus floridanus*	

Yellow River Marsh Preserve State Park-Animals

Common Name	*Scientific Name*	Primary Habitat Codes (for imperiled species)
Artiodactyls		
White-tailed deer	*Odocoileus virginianus*	

TERRESTRIAL

Beach Dune ..... BD
Coastal Berm ..... CB
Coastal Grassland ..... CG
Coastal Strand ..... CS
Dry Prairie ..... DP
Keys Cactus Barren ..... KCB
Limestone Outcrop ..... LO
Maritime Hammock ..... MAH
Mesic Flatwoods ..... MF
Mesic Hammock ..... MEH
Pine Rockland ..... PR
Rockland Hammock ..... RH
Sandhill ..... SH
Scrub ..... SC
Scrubby Flatwoods ..... SCF
Shell Mound ..... SHM
Sinkhole ..... SK
Slope Forest ..... SPF
Upland Glade ..... UG
Upland Hardwood Forest ..... UHF
Upland Mixed Woodland ..... UMW
Upland Pine ..... UP
Wet Flatwoods ..... WF
Xeric Hammock ..... XH

PALUSTRINE

Alluvial Forest ..... AF
Basin Marsh ..... BM
Basin Swamp ..... BS
Baygall ..... BG
Bottomland Forest ..... BF
Coastal Interdunal Swale ..... CIS
Depression Marsh ..... DM
Dome Swamp ..... DS
Floodplain Marsh ..... FM
Floodplain Swamp ..... FS
Glades Marsh ..... GM
Hydric Hammock ..... HH
Keys Tidal Rock Barren ..... KTRB
Mangrove Swamp ..... MS
Marl Prairie ..... MP
Salt Marsh ..... SAM
Seepage Slope ..... SSL
Shrub Bog ..... SHB
Slough ..... SLO
Slough Marsh ..... SLM
Strand Swamp ..... STS

Wet Prairie ..... WP

LACUSTRINE

Clastic Upland Lake ..... CULK
Coastal Dune Lake ..... CDLK
Coastal Rockland Lake ..... CRLK
Flatwoods/Prairie ..... FPLK
Marsh Lake ..... MLK
River Floodplain Lake ..... RFLK
Sandhill Upland Lake ..... SULK
Sinkhole Lake ..... SKLK
Swamp Lake ..... SWLK

RIVERINE

Alluvial Stream ..... AST
Blackwater Stream ..... BST
Seepage Stream ..... SST
Spring-run Stream ..... SRST

SUBTERRANEAN

Aquatic Cave ..... ACV
Terrestrial Cave ..... TCV

ESTUARINE

Algal Bed ..... EAB
Composite Substrate ..... ECPS
Consolidated Substrate ..... ECNS
Coral Reef ..... ECR
Mollusk Reef ..... EMR
Octocoral Bed ..... EOB
Seagrass Bed ..... ESGB
Sponge Bed ..... ESPB
Unconsolidated Substrate ..... EUS
Worm Reef ..... EWR

MARINE

Algal Bed ..... MAB
Composite Substrate..... MCPS
Consolidated Substrate ..... MCNS
Coral Reef..... MCR
Mollusk Reef..... MMR
Octocoral Bed ..... MOB
Seagrass Bed ..... MSGB
Sponge Bed..... MSPB
Unconsolidated Substrate ..... MUS
Worm Reef..... MWR

ALTERED LANDCOVER TYPES

Abandoned field ..... ABF
Abandoned pasture..... ABP
Agriculture ..... AG
Artificial lake ..... AL
Canal/ditch ..... CD
Clearcut pine plantation ..... CPP
Clearing..... CL
Developed..... DV
Impoundment/artificial pond ..... IAP
Invasive exotic monoculture..... IEM
Pasture - improved..... PI
Pasture - semi-improved ..... PSI
Pine plantation..... PP
Road ..... RD
Spoil area ..... SA
Successional hardwood forest..... SHF
Utility corridor ..... UC

MISCELLANEOUS

Many Types of Communities..... MTC
Overflying ..... OF

Addendum 6—Imperiled Species Ranking Definitions

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

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

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Fish and Wildlife Conservation Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

FNAI 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 fabricated factor.

G2 ..... Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.

G3 ..... Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.

G4 ..... apparently secure globally (may be rare in parts of range)

G5 ..... demonstrably secure globally

GH ..... of historical occurrence throughout its range may be rediscovered (e.g., ivory-billed woodpecker)

GX ..... believed to be extinct throughout range

GXC ..... extirpated from the wild but still known from captivity or cultivation

G#? ..... Tentative rank (e.g.,G2?)

G#G# ..... range of rank; insufficient data to assign specific global rank (e.g., G2G3)

G#T# ..... rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)

G#Q ..... rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)

G#T#Q.....same as above, but validity as subspecies or variety is questioned.
GU.....due to lack of information, no rank or range can be assigned (e.g., GUT2).
G? .....Not yet ranked (temporary)
S1 .....Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2 .....Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
S3 .....Either very rare or local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
S4 .....apparently secure in Florida (may be rare in parts of range)
S5 .....demonstrably secure in Florida
SH.....of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
SX .....believed to be extinct throughout range
SA .....accidental in Florida, i.e., not part of the established biota
SE .....an exotic species established in Florida may be native elsewhere in North America
SN.....regularly occurring but widely and unreliably distributed; sites for conservation hard to determine
SU.....due to lack of information, no rank or range can be assigned (e.g., SUT2).
S?.....Not yet ranked (temporary)
N .....Not currently listed, nor currently being considered for listing, by state or federal agencies.

LEGAL STATUS

FEDERAL

(Listed by the U. S. Fish and Wildlife Service - USFWS)

LE.....Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species that is in danger of extinction throughout all or a significant portion of its range.

PE.....Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.

LT.....Listed as Threatened Species. Defined as any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range.

PT.....Proposed for listing as Threatened Species.

C .....Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.

E(S/A).....Endangered due to similarity of appearance.

T(S/A).....Threatened due to similarity of appearance.

EXPE, XE.....Experimental essential population. A species listed as experimental and essential.

EXPN, XN....Experimental non-essential population. A species listed as experimental and non-essential. Experimental, nonessential populations of endangered species are treated as threatened species on public land, for consultation purposes.

STATE

ANIMALS ..(Listed by the Florida Fish and Wildlife Conservation Commission - FWC)

FE.....Federally-designated Endangered

FT.....Federally-designated Threatened

FXN .....Federally-designated Threatened Nonessential Experimental Population

FT(S/A) .....Federally-designated Threatened species due to similarity of appearance

ST ..... Listed as Threatened Species by the FWC. Defined as a species, subspecies, or isolated population, which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat, is decreasing in area at a rapid rate and therefore is destined or very likely to become an endangered species within the near future.

SSC ..... Listed as Species of Special Concern by the FWC. Defined as a population which warrants special protection, recognition or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance or substantial human exploitation that, in the near future, may result in its becoming a threatened species.

PLANTS .... (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)

LE..... Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state 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, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973,as amended.

LT..... Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as 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 such number as to cause them to be endangered.

Addendum 7—Cultural Information

These procedures apply to state agencies, local governments, and non-profits that manage state-owned properties.

A. General Discussion

Historic resources are both archaeological sites and historic structures. Per Chapter 267, Florida Statutes, '*Historic property' or 'historic resource' means any prehistoric district, site, building, object, or other real or personal property of historical, architectural, or archaeological value, and folklife resources. These properties or resources may include, but are not limited to, monuments, memorials, Indian habitations, ceremonial sites, abandoned settlements, sunken or abandoned ships, engineering works, treasure trove, artifacts, or other objects with intrinsic historical or archaeological value, or any part thereof, relating to the history, government, and culture of the state."*

B. Agency Responsibilities

Per State Policy relative to historic properties, state agencies of the executive branch must allow the Division of Historical Resources (Division) the opportunity to comment on any undertakings, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the project, permit, grant, etc.

State agencies shall preserve the historic resources which are owned or controlled by the agency.

Regarding proposed demolition or substantial alterations of historic properties, consultation with the Division must occur, and alternatives to demolition must be considered.

State agencies must consult with Division to establish a program to location, inventory and evaluate all historic properties under ownership or controlled by the agency.

C. Statutory Authority

Statutory Authority and more in depth information can be found at:
http://www.flheritage.com/preservation/compliance/guidelines.cfm

D. Management Implementation

Even though the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual. Specific information regarding individual projects must be submitted to the Division for review and recommendations.

Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include, but are not limited to: approval of the project as

submitted, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration, or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case by case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should make preparations for locating and evaluating historic resources, both archaeological sites and historic structures.

E. Minimum Review Documentation Requirements

In order to have a proposed project reviewed by the Division, certain information must be submitted for comments and recommendations. The minimum review documentation requirements can be found at: http://www.flheritage.com/preservation/compliance/docs/minimum_review_documentation_requirements.pdf .

* * *

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

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

StateLandsCompliance@dos.myflorida.com

Phone: (850) 245-6333
Toll Free: (800) 847-7278
Fax: (850) 245-6435

The criteria to be used for evaluating eligibility for listing in the National Register of Historic Places are as follows:

1) Districts, sites, buildings, structures, and objects may be considered to have significance in American history, architecture, archaeology, engineering, and/or culture if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- **a)** are associated with events that have made a significant contribution to the broad patterns of our history; and/or
- **b)** are associated with the lives of persons significant in our past; and/or
- **c)** embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
- **d)** have yielded, or may be likely to yield, information important in prehistory or history.

2) Ordinarily cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years shall not be considered eligible for the *National Register*. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

- **a)** a religious property deriving its primary significance from architectural or artistic distinction or historical importance; or
- **b)** a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- **c)** a birthplace or grave of an historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or
- **d)** a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, distinctive design features, or association with historic events; ora reconstructed building, when it is accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and no other building or structure with the same association has survived; or a property primarily commemorative in intent, if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- **e)** a property achieving significance within the past 50 years, if it is of exceptional importance.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations and additions while preserving those portions or features that convey its historical, cultural or architectural values.

Stabilization is defined as the act or process of applying measures designed to reestablish a weather resistant enclosure and the structural stability of an unsafe or deteriorated property while maintaining the essential form as it exists at present.

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

Addendum 8—Local Government Comprehensive Plan Compliance

SANTA ROSA COUNTY
DEVELOPMENT SERVICES – Planning & Zoning

6051 Old Bagdad Highway, Suite 202| Milton, Florida 32583

SHAWN WARD, AICP
Planning Director
shawnw@santarosa.fl.gov

April 14, 2022

Joel Allbritton
Florida Department of Environmental Protection
Division of Recreation and Parks/Office of Park Planning Park Planner

Reference: Yellow River Marsh Preserve State Park - Santa Rosa County Comprehensive Plan Compliance Review

Mr. Allbritton,

The Yellow River Marsh Preserve State Park Unit Management Plan is consistent with the county's adopted comprehensive plan as approved by the Florida Department of Economic Opportunities in 2017.

The Comprehensive Plan identifies the Garcon Point Protection Area: The Garcon Point Protection Area was established to recognize the unique environmental characteristics of the area. This area contains the Garcon Point Rural Residential and Garcon Point Single Family Residential Future Land Use Map categories which contain requirements unique to the protection area. The Land Development Code also contains provisions and requirements unique to the Garcon Point Protection Area.

Any future development will be required to meet the requirements of the Santa Rosa County Land Development Code.

If we can provide any additional information or assistance, please don't hesitate to contact us.

Sincerely,

Shawn Ward, AICP
Planning and Zoning Director
850-981-7082
Shawnw@santarosa.fl.gov