



County of Volusia

GROWTH AND RESOURCE MANAGEMENT DEPARTMENT

Land Acquisition and Management Division

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www.volusia.org

July 22, 2003

Mr. Edward Eckstein
Florida Communities Trust
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100

Re: Catholic Diocese Tract
FCT Project #02-003-FF2

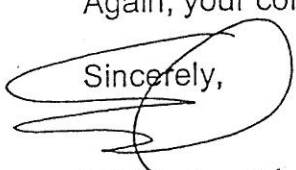
Dear Ed,

Enclosed is a copy of the approved Management Plan (dated 7-22-03) for the above referenced project.

This document is a mirror of the immediately preceding submission reviewed by your office except it has been edited for the purposes of removing text previously proposed for deletion (strikethrough) and incorporating text previously proposed for addition (underscored).

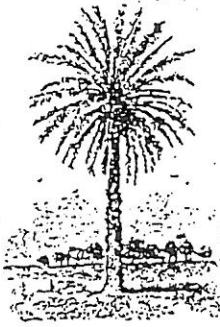
Again, your continued cooperation and assistance is appreciated.

Sincerely,


Ed Isenhour
Planner III

Enclosure

c: William Gardner, Land Acquisition Manager



Florida Communities Trust

July 15, 2003

William C. Gardner, Land Acquisition Director
Growth and Resource Management Department
Volusia County
123 West Indiana Avenue
DeLand, Florida 32720

RE: Management Plan
FCT #02-003-FF2
Catholic Diocese Tract

Dear Mr. Gardner:

Thank you for submitting your revisions to the draft management plan to the Florida Communities Trust (FCT). We have reviewed the revised plan and found it adequately addresses the issues identified by staff and have approved the revised plan. Please incorporate all additions and deletions into a final document and provide one complete copy for our records, appropriately tabbed in a three-ring binder.

Now that land management is the focus of this project, it may be appropriate to designate a new local government key contact who has direct responsibility for site management and the annual stewardship report. If another key contact is designated, please notify FCT of the change, in writing, as soon as possible.

Thank you for responding to our recommendations in a timely manner. If you have any questions concerning this matter, please contact Edward Eckstein at (850) 922-1705.

Sincerely,

Janice Browning
Executive Director

JB/ee

RECEIVED

JUL 18 2003

LAND ACQUISITION
AND MANAGEMENT

***CATHOLIC DIOCESE TRACT
MANAGEMENT PLAN***

**FLORIDA COMMUNITIES TRUST
(PROJECT #02-003-FF2)**

**COUNTY OF VOLUSIA
DIVISION OF LAND ACQUISITION AND MANAGEMENT**

July 22, 2003

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INTRODUCTION

Project Name and Location

This project, designated as the "Catholic Diocese Tract", is located on the St. Johns River in the south-central portion of Volusia County (Figure 1).

Encompassing approximately 150 acres, this rectangular shaped area is located approximately three miles east of the community of Osteen, at the southern terminus of Guise Road (Figure 2).

Florida Communities Trust Assistance and Purpose of Management Plan

The County acquired the project area with the assistance of a grant (#02-003-FF2) awarded by the Florida Communities Trust, through the Florida Forever program.

The purpose of this Management Plan is to ensure that the project will be developed in accordance with the Grant Award Agreement and in furtherance of the purpose of the grant application.

Previous Use(s) of Project Area

Prior to acquisition by the County, the project area was owned by the Catholic Diocese of Orlando. A passive ethic of stewardship characterized use and management of the property during this prior ownership. Use of the property has been limited to passive recreational activities such as primitive camping. As a result, the project area has not been extensively altered and is largely in a natural condition.

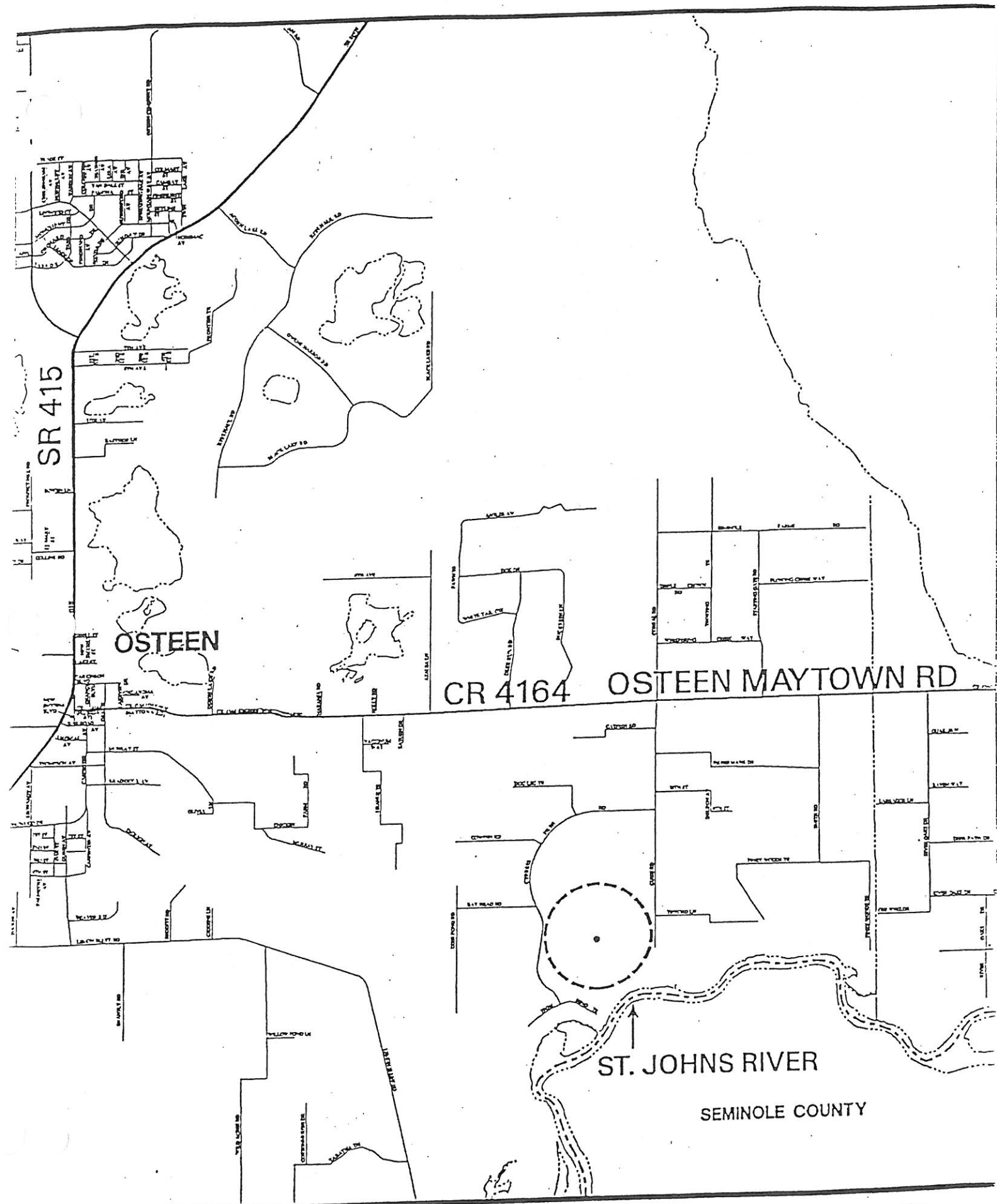
The most significant alteration of the natural condition of the property occurred several decades ago when a small area, located adjacent to the St. Johns River in the southeastern portion of the property, was excavated. Since cessation of this activity, natural processes have begun to reclaim this area.

Overview of Natural Resources

The project area is predominantly in a natural condition. The site has not been actively logged or managed for silviculture or other agricultural pursuits. The natural communities characterizing this riverfront site consists of scrubby flatwoods, mesic flatwoods, xeric hammock, floodplain swamp, dome swamp, wet prairie, and blackwater stream. Most of the natural areas are in fair condition, but habitat value has decreased due to fire suppression. With the exception of an area of bahia grass, non-native or invasive species have not been observed on the project area.

A bald eagle nest may be located on the project area. A gopher tortoise and several apparently active burrows have been observed on the project area. Other protected animal species that may be present include gopher frog, american alligator, eastern

indigo snake, swallow-tailed kite, southeastern american kestrel, florida sandhill crane, and sherman's fox squirrel. The scrubby flatwoods of the project site may also serve as habitat for a nearby population of scrub jays. Green fly orchid, a listed species, has been observed on the property. Other listed plants that may be present include rugel's pawpaw and hartwrightia.



CATHOLIC DIOCESE

Prepared by Volusia County Growth & Resource Management Dept

 **PROJECT LOCATION**



SCALE: 1" = 3000'

Owner: Thomas J. Grady
Bishop of Diocese of Orlando
9216-00-00-0040

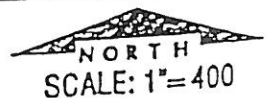
GUISE ROAD

TIFFORD LANE

Owner: Thomas J. Grady
Bishop of Diocese of Orlando
9221-00-00-0020

IRON BEND TR

CATHOLIC DIOCESE PARCEL SITE



PROJECT PURPOSE

Purposes for Acquisition

Acquisition of this riverfront property facilitates the protection and enhancement of the site's varied natural resources. On a single site, it will be possible for the visitor to experience a broad spectrum of natural resources. The recreational uses and facilities proposed by this project provide the public with opportunities to experience and enjoy a resource of national significance, the St. Johns River. Collectively, these attributes result in a project of unique and outstanding benefit to the community.

Overview of Proposed Management and Use

The project will be managed only for the conservation, protection and enhancement of natural resources, and for public outdoor recreation that is compatible with the conservation, protection and enhancement of the site.

In recognition of the project area location and unique attributes, the majority of the property is proposed to remain in a natural condition and be managed accordingly. Proposed recreational uses primarily consist of several lower-intensity resource-based activities. These uses include trails, primitive camping areas, canoe launch, boardwalk / wildlife observation platform, and picnic area. Active uses proposed for the area consist of a small playground / open play area, and fitness trail.

Proposed natural resource restoration and enhancement activities include the use of prescribed fire, replacement of bahia grass adjacent to the old canal with native vegetation, and remediation of an existing drainage ditch paralleling the eastern boundary of the property for the purpose of trapping sediment and impurities prior to discharge.

Prioritization of Key Management Objectives

The project area will be managed for multiple uses/purposes. The key management objectives, itemized below in descending order of priority, are;

- Protect and restore, as appropriate, natural resources,
- Provide the public with environmentally compatible recreational opportunities,
- Promote the establishment and preservation of greenways, and
- Protect any identified archaeological and cultural resources.

Relationship to Comprehensive Plan

Acquisition of the project area and management, as provided by this document, furthers numerous goal, objective, and policy statements of the County's Comprehensive Plan. Key statements from the Comprehensive Plan (cross-referenced to the management objectives identified in the preceding section) include:

Protect and restore, as appropriate, natural resources: Goal 12.2, Objectives 12.2.1, 12.2.2 and 12.2.4. Policies 1.2.2.9, 12.2.1.6, 12.1.2.7, 12.2.2.9, and 12.2.4.4,

Provide the public with environmentally compatible recreational opportunities -- Goals 13.1 and 13.2. Objectives 13.1.3 and 13.1.5. Policies 1.1.4.8, 13.1.3.1 and 13.2.4.4

Promote the establishment and preservation of greenways – Future Land Use category of Natural Resource Management Area (NRMA). Objective 13.2.3. Policies 12.2.2.4, 13.1.4.7 and 13.2.3.4.

Protect any identified archaeological and cultural resources – Objective 17.4.1. Policy 17.4.1.1.

The Future Land Use Map of the County's Comprehensive Plan will be amended to assign the future land use category of "Conservation" (included within the NRMA) or another appropriate public lands designation to the project area no later than one year after acquisition. The assigned future land use category will acknowledge and further public ownership, management, and use of the project site. The zoning classification assigned to the project area will be subsequently changed, as necessary, to accommodate the intended uses.

Literature and Advertising

All literature and advertising for the project site will include a statement that the site was acquired with the assistance of a grant awarded by the Florida Communities Trust for the conservation and enjoyment by the public (including the provision of resource-based recreational opportunities) of the site's natural resources.

SITE DEVELOPMENT AND IMPROVEMENT

Existing Physical Improvements and Use(s) of Project Area

The project area is presently undeveloped. The prior owner employed a passive ethic of land use and management. During this time, stewardship of the property essentially consisted of low intensity recreational activities, such as primitive camping, which did not include the construction of structures or site alteration. As a result, the project area has not been extensively altered and is largely in a natural condition.

The existing improvements of the project area are depicted by Figure 3. A few woods roads traverse the southern portion of the project area. The most significant alteration of the natural condition of the property occurred several decades ago when a small area, located adjacent to the St. Johns River in the southeastern portion of the property, was excavated. Since cessation of this activity, natural processes have begun to reclaim this area.

Overview of Proposed Physical Improvements

A mixture of low-intensity uses are proposed by this project. The proposed uses for the project area are consistent with the application for funding assistance approved by the Florida Communities Trust. The minimal physical improvements proposed for the project are generally described below and depicted by the Conceptual Site Plan (Figure 4).

Day Use Area --- This area, encompassing approximately ten acres, will include uses primarily for leisure use by the daily visitor. The following facilities/uses are to be sited in this area;

Boardwalk / Wildlife Observation Platform-- A short boardwalk / wildlife observation area, encompassing approximately 400 square feet, will be established adjacent to the river. This facility will be sited over land as an elevated structure. The facility may also afford the visitor an opportunity for fishing.

Playground --- Facilities within the playground area, encompassing approximately 5,500 square feet, may include a swing set, slide, and climbing apparatus.

Picnic Area --- This area, encompassing approximately five acres, will include up to four picnic shelters (with a total of approximately sixteen tables) and up to approximately fourteen outside tables / grills.

Open Play Area --- This area, of up to approximately one acre in size, will be sited at a locale that necessitates the minimum amount of site alteration.

Nature / Fitness Trail — A trail of at least one-quarter of a mile in length. This use will include a series of stations designed to accommodate the novice or conditioned individual. Each station will consist of a cluster of exercise structures and descriptive information. The composition, number, and spacing of stations will be determined through the detailed site planning process.

Canoe Landing — An area for the launching and removal of canoes is to be established in the southeastern quadrant of the project area. This facility is to be sited in reasonably close proximity of the supporting parking area (typically 100-200 feet distant) to facilitate the loading/unloading of canoes and at an appropriate locale that will maximize use of the previously excavated canal area. The landing may include a small pier, dock, or similar facility to assist in the loading and unloading of canoes. Due to seasonal and periodic fluctuation of the water level of the St. Johns River, this recreational feature may be intermittently closed or subjected to limited use.

Miscellaneous --- A restroom, with shower, will be located in this area. A bicycle rack will also be provided. Although the project is located in a rural area, this rack should support joint use of the project area by users of the regional trail to be located a short distance away.

Primitive Camping (individuals) — Up to three areas of primitive camping for individuals may be designated across the project. Each area will include one or more campsites. However, camping in these areas is intended to be of low density. Primitive campsites will typically consist of a tent platform, picnic table, grill, and fire ring.

Group Camping — A single area, encompassing approximately three acres, is to be established for primitive camping by a group. This area may include communal facilities such as a small, open, pavilion and picnic area.

Nature Trail — A trail, primarily traversing the northern and central portions of the project area, intended to exhibit a mixture of natural communities. It is envisioned that this trail will be at least three-quarters of a mile. However, the actual length will be determined during on-site layout. Trails are to be located so as to incorporate existing vegetation and other site features (e.g. topography) as a visual buffer, as appropriate, between project uses and an adjoining property line (excluding the riverfront).

Off-Street Parking Areas — Two off-street parking areas, encompassing a total of approximately three acres, are proposed. One parking area, is to be sited adjacent to the day use area and canoe launch facility. A second area of parking is to be located adjacent to the proposed group camping area.

Drainage Remediation Area -- This project provides the opportunity to correct a potential source of pollution to the St. Johns River by creating a small stormwater treatment facility (creation of a wetland area or the use of other appropriate means) designed for the purpose of trapping sediment and impurities transported

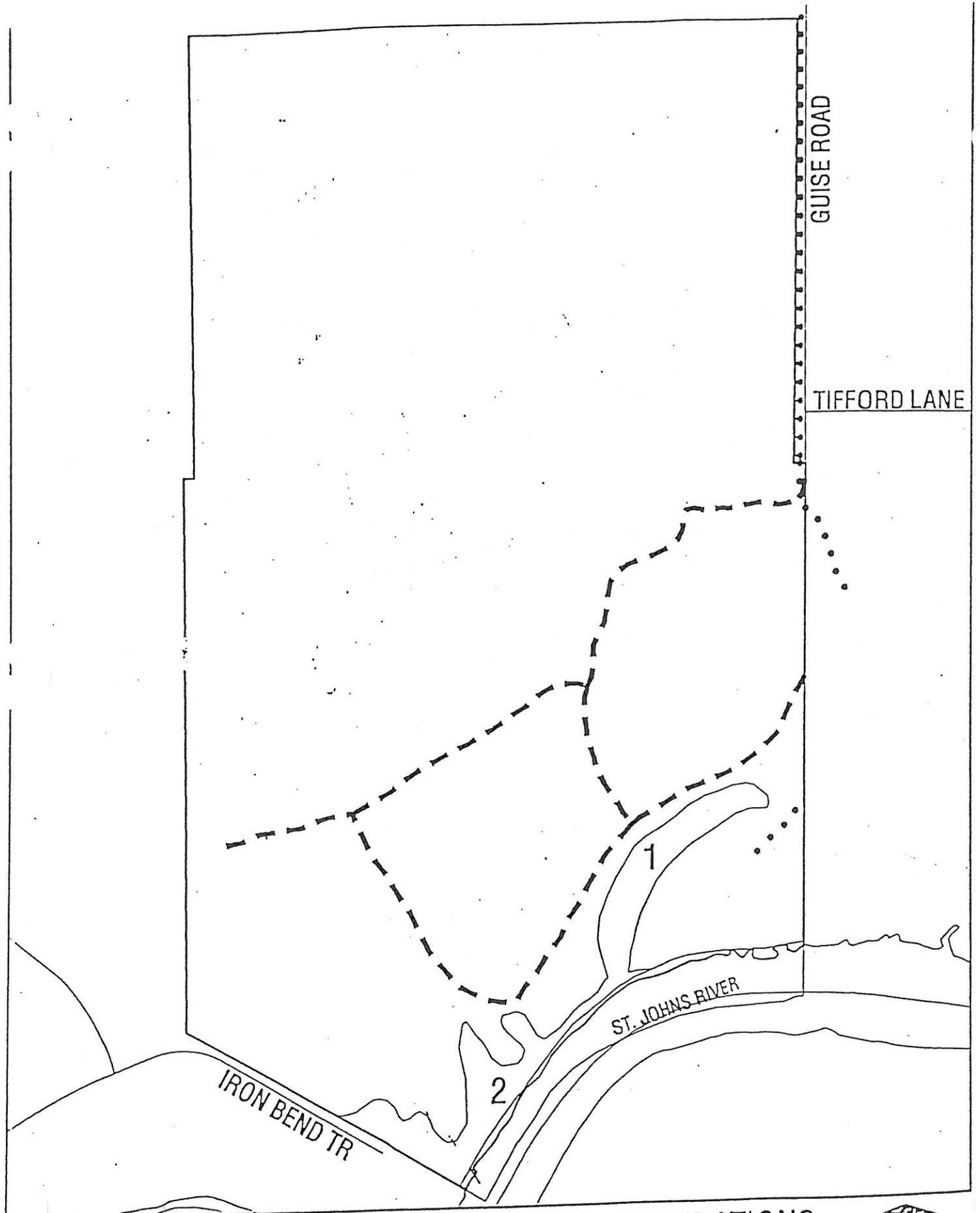
by an existing ditch. The drainage mediation area, encompassing approximately one acre, is to be located adjacent to eastern property boundary. These ponds typically incorporate plantings of upland and wetland vegetation and offer the possibility of passive recreational use.

Trash receptacles will be placed at appropriate locales, e.g. within day use and off-street parking areas, on the project site.

These proposed physical improvements are compatible with the environmental considerations of the project area. Each of these uses will be designed to incorporate, to the maximum extent practical, existing features. These uses will also be located, to the maximum extent practical, in areas where disturbance to existing conditions and vegetation can be minimized. Extra diligence will be required when siting and constructing uses adjacent to the river to ensure that the integrity of the shoreline is maintained. The few roads (entrance and internal) associated with this project will coincide, to the maximum extent practical, with existing roads.

Detailed surveys for the presence of listed plant and animal species on the project area will be completed prior to design and construction of the proposed physical improvements. Modifications to the location and size of one or more proposed physical improvements will be made, as necessary, to ensure protection of an identified listed species.

Any proposed modification of this Management Plan and/or undertaking any site alterations or physical improvements that are not addressed in the approved Management Plan requires prior review and approval by the Florida Communities Trust.



EXISTING PHYSICAL IMPROVEMENTS AND ALTERATIONS

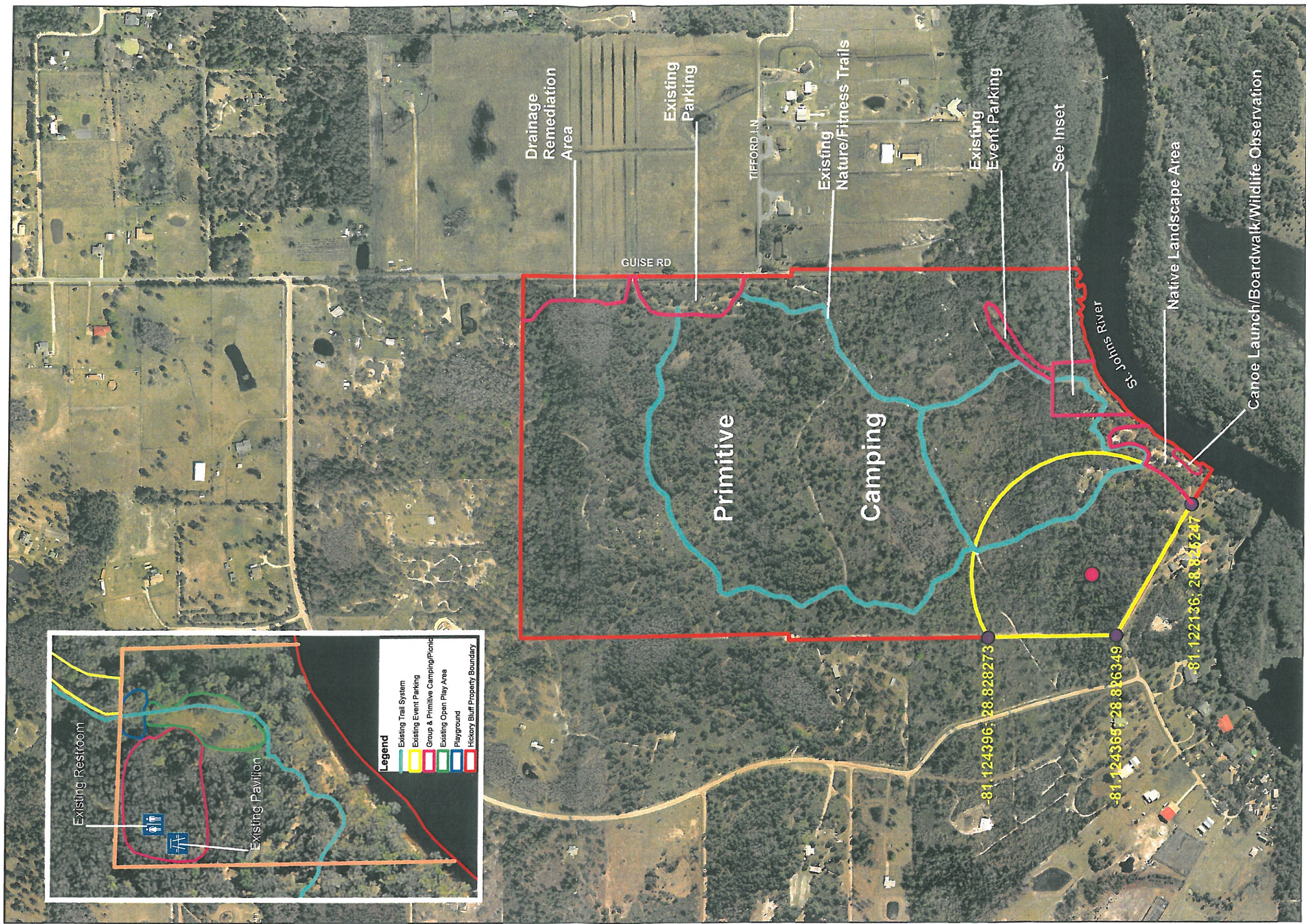
Prepared by: Volusia County Growth and Resource Management

- 1 - CANAL AREA
- 2 - CLEARED AREA
- WOODS ROADS
- • DRAINAGE DITCH

NORTH
SCALE: 1"= 400

FIGURE 3

Hickory Bluff Conceptual Plan



Landscaping

The need for landscaping will be minimal since no major structures or site alterations are proposed by the project. Additionally, the proposed physical improvements will be designed to maximize the use of existing vegetation and will be located in areas where disturbance to existing conditions and vegetation can be minimized. The off-street parking areas are most likely the developed portions of the project that will need to be supplemented by landscaping (Figure 4). Other minimal landscaping may be installed in conjunction with the development of the playground area (including restroom facility), park entrance sign, etc.

Landscaping will also be installed within a previously disturbed area adjacent to the St. Johns River, encompassing approximately four acres (Figure 4).

The requirement for and quantity of landscaping will be determined by detailed site evaluation / design and the applicable County requirements. The landscaping will be installed as mandated by the appropriate County permit, which is typically prior to issuance of the final development order.

Landscaping will incorporate, to the fullest extent practical, native vegetation that is endemic to the adjacent plant community. Landscaping will be installed concurrent with overall site development.

Wetland Buffers

The following minimum wetland buffer areas are to be established for development of the site;

- 10 feet between a paved trail and wetland areas, and
- 25 feet between the facilities proposed for the site (i.e. restroom, camping area, off-street parking, playground, and picnic areas) and wetland areas.

Should the County's land development regulations mandate a greater buffer, then the greater buffer width shall be used.

Signage

A permanent sign, measuring at least two feet by three feet, shall be placed at the vehicular entrance to the project site. In addition to other information that may be displayed, this sign shall also include the following, or very similar, language -- "funding for the acquisition of this site was provided by the Florida Communities Trust and the County of Volusia". This sign shall also identify the year the project was acquired and include the FCT logo.

In addition to specialized signage such as educational / interpretative and special use (see the Educational, Archaeological, Cultural, Historical, and Trails sections of this Management Plan), signs may be placed for purposes such as public safety, access control, delineating rules and responsibilities of use, and resource protection.

Vehicular Access and Parking

Vehicular access to the project will be via an entrance from Guise Road (Figure 4). It is envisioned that the entrance road will be of a stabilized, non-paved, surface.

Off-street parking areas, encompassing a total of approximately three acres, are proposed. These areas will, to the extent possible, utilize pervious material. Vehicles will be contained within the designated off-street parking areas by the use of fencing, wheel stops, or other appropriate means. On street parking is not proposed by this project.

The actual size, configuration, and number of vehicles to be accommodated by the parking areas will be determined through detailed site planning and the County's permitting process. County Ordinance mandates a minimum number of off-street parking spaces to be provided for uses proposed by the project.

Stormwater

Stormwater facilities will be provided for off-street parking and other developed areas, as required by County ordinance. Required stormwater facilities shall be designed, to the fullest extent possible, to provide wildlife habitat. In furtherance of this requirement, stormwater facilities will be landscaped with vegetation endemic to the area.

The required stormwater uses on the site will not be fenced and shall include shallow slopes.

Additionally, the proposed drainage mediation area will typically incorporate plantings of upland and wetland vegetation and offer the possibility of passive recreational use.

The St. Johns River Water Management District will be consulted when designing stormwater uses of the project site so as to ensure said uses will protect and/or improve the water quality of the St. Johns River to the extent feasible.

Hazard Mitigation

Referring to Figure 5, a significant portion of the project area is located within the area of 100 year flood.

This concern is ameliorated to a significant degree since no major structures or site alterations are proposed by the project. The small proposed restroom will be located outside of the 100-year floodplain.

Detailed design and development of the project area will be performed in a manner consistent with County requirements. As part of its Code of Ordinances, the County has adopted regulations addressing flood hazard management. The purpose and intent of these requirements is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions. These regulations include provisions to; restrict or prohibit uses which are dangerous to health, safety and property

due to water or erosion hazards, require that uses vulnerable to floods (including facilities which serve such uses) be protected against flood damage at the time of initial construction, and control the alteration and protection of natural floodplains.

Permits

Permits will be required from several agencies/jurisdictions prior to development / restoration of the project area. The following list generally identifies major permits that may be necessary and the issuing agency/jurisdiction. However, each agency / jurisdiction will be consulted prior the preparation of detailed site planning to ascertain a complete inventory of required permits:

County of Volusia -- Building Permit(s), Stormwater Management Permit, Tree Removal Permit, Use Permit (Driveways, etc), Wetland, Certificate to Excavate (per Historic Preservation Ordinance, if resources identified on project area)

St. Johns River Water Management District -- Environmental Resource Permit

State of Florida / Department of Agriculture and Consumer Services / Division of Forestry -- Prescribed Burn Permit

State of Florida / Department of Environmental Protection

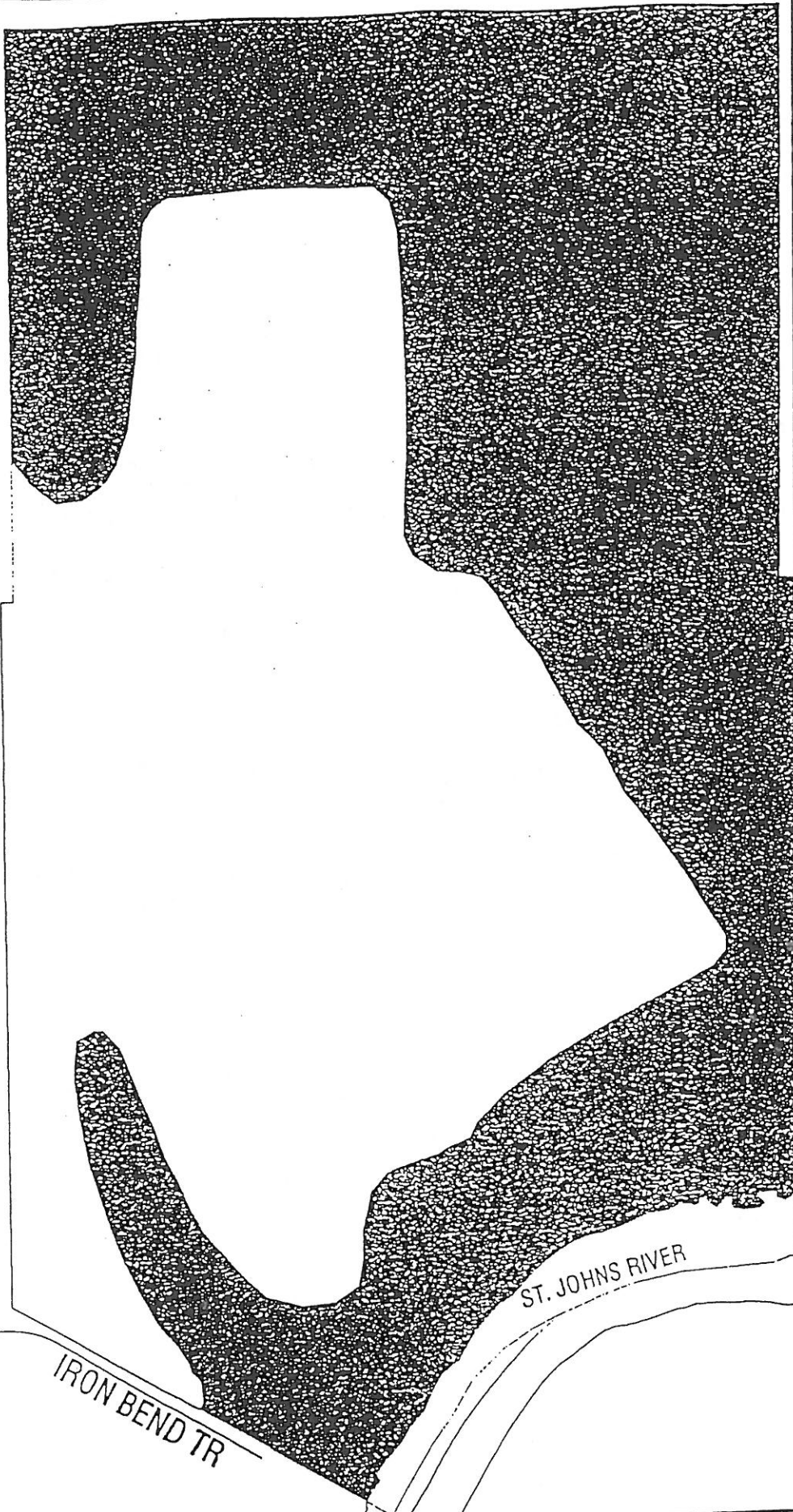
State of Florida / Department of State / Division of Historical Resources -- (applicable if archaeological / historical resources located on site)

Site plan approval by the County will be required prior to the commencement of site alteration/construction. Development Orders issued by the County require that all necessary permits be secured prior to initiation of construction activities.

Easements, Concessions and Leases

No easements, concessions, or leases are proposed for the project site. However in the eventuality that easements, concessions, or leases are considered in the future, the County will provide the FCT 60 day prior written notice and information regarding the lease of any interest, the operation of any concession, any sale or option, any management contracts for the project site, and any use of the project site by any person other than in such person's capacity as a member of the general public. No document shall be executed by the County without receiving prior review and written approval by the FCT.

Although no existing easements, concessions, or leases are found on the project area, a portion of the area is underlain by an antiquated subdivision. This subdivision includes platted, but unopened, streets and alleys dedicated to the public. In order to facilitate the efficient development and use of the property, it will be necessary that the portion of the platted subdivision underlying the project area be vacated.



GUISE ROAD

TIFFORD LANE

ST. JOHNS RIVER

IRON BEND TR

100 YEAR FLOOD PLAIN

Prepared by Volusia County Growth and Resource Management



AREA OF 100 YEAR FLOOD



SCALE: 1"=400

FIGURE 5

NATURAL RESOURCES

Natural Communities

As previously noted, the project area is predominantly in a natural condition. Less than ten acres of the project may be characterized as disturbed lands. This disturbed area consists of the abandoned canal located in the extreme southeastern corner of the project area and portions of the project area adjacent to the shoreline of the St. Johns River that may have been partially cleared to accommodate low-impact recreational uses. A few abbreviated "woods roads" are also located on the project.

Several natural communities, using the Florida Natural Areas Inventory system of classification, have been identified as being located on the project site (Figure 6). This information was developed using the countywide vegetation mapping series prepared by the County's Growth and Resource Management Department and preliminary site evaluation. The countywide vegetation mapping is based upon the Florida Land Use Cover and Forms Classification System (FLUCFCS) of the Florida Department of Transportation. The coverage of natural communities may be subject to modification upon subsequent detailed assessment undertaken as part of the management and development of the project.

Each of the identified communities is presently in fair to good condition, but habitat value has decreased due to previous fire suppression. The effects of fire suppression include the development of dense understory, such as in the flatwoods, and encroachment into the community by species from the adjoining areas, such as in the wet prairie areas.

Mesic Flatwoods --This community occurs on nearly level, moderately to poorly drained terrain. The interval between the occurrence of natural fires within this community is typically from one (1) to eight (8) years. . As with other flatwoods communities, suppression of fire will promote succession to a hardwood community. However, fires that are either too frequent or too hot may result in the transformation of this community to Dry Prairie.

Within the property, this community is characterized by an overstory of slash pine (*Pinus elliotii*). Isolated examples of longleaf pine (*Pinus palustris*) and water oak (*Quercus nigra*) may be found. Dense thickets of saw palmetto (*Serenoa repens*) dominate the understory..Other species present include dahoon holly (*Ilex cassine*), gallberry (*Ilex glabra*), several species of lyonia (*Lyonia spp.*), greenbair (*Smilax auriculata*), wiregrass (*Aristida spp.*), and yellow star grass (*Aletris lutea*).

This community encompasses approximately 66 acres of the project area.

Xeric Hammock -- This community develops on sites that have been protected from fire for an extended period, typically exceeding thirty years. However, when an uncontrolled fire occurs within the community it is often catastrophic and may cause the community to revert to another type. Preservation of the integrity of this community requires protection from fire and intensive development.

Two variations of this community are found on the project area. Adjacent to the river, this community is characterized by a canopy of mature live oak (*Quercus virginiana*) with a sparse and open understory that includes dahoon holly (*Ilex cassine*), pignut hickory (*Carya glabra*), southern magnolia (*Magnolia grandiflora*), saw palmetto (*Serenoa repens*), pawpaw (*Asimina spp.*), and shoestring fern (*Vittaria lineata*). Landward of this area of live oak is a dense, scrubby, low canopy band of sand live oak (*Quercus geminata*). The correspondingly dense understory in this area is dominated by saw palmetto (*Serenoa repens*). Other species present include rusty lyonia (*Lyonia ferruginea*) and resurrection fern (*Pleopeltis polypodioides var. michauxiana*).

This rare community encompasses approximately 26 acres of the project area.

Scrubby Flatwoods – This community is characterized by an open canopy of scattered pines with a sparse shrubby understory and areas of barren sand. Longleaf pine (*Pinus palustris*) and slash pine (*Pinus elliotii*) are the dominant canopy species present. Other species present include sand pine (*Pinus clausa*), saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), myrtle oak (*Quercus myrtifolia*), tarflower (*Bejaria racemosa*), and scattered wiregrass (*Aristida spp.*). Scrubby Flatwoods is essentially a Mesic Flatwoods community with a scrub understory. However, the natural cycle of fire in the community can be longer, typically from 8 to 25 years.

This community encompasses approximately 23 acres of the project area.

Wet Prairie – This community may be characterized as consisting of a sparse to dense ground cover of grasses and herbs found on low, nearly flat, poorly drained terrain. Within the project area, wet prairie typically occurs on the project in the transitional area between flatwoods and cypress dome communities. However, small examples of this treeless area are scattered across the northern portion of the project area. Species present include yellow hatpin (*Syngonanthus flavidulus*), wild bachelor's button --- also known as candyroot --- (*Polygala nana*), pink sundew (*Drosera capillaris*), and sphagnum moss (*Sphagnum spp.*).

Hydrology and fire are important determinants of this community. The hydroperiod of this seasonally inundated community may be brief. Typically, the natural fire cycle is from two (2) to four (4) years. The integrity of areas experiencing longer fire intervals may be subject to deterioration by invasive species. The history of fire suppression on the project area has apparently contributed a decline in the health and integrity of the community as areas are experiencing by species from the adjoining area (e.g. slash pine) and invasion by other species such as broomsedge (*Andropogon virginicus*). The integrity of several smaller occurrences of this community have also disrupted by existing trails and woods roads.

This community, encompassing approximately 13 acres of the project area, has been designated as "imperiled" at the State level.

Dome Swamp -- This community is present as isolated occurrences intermingled among the Mesic Flatwoods and Scrubby Flatwoods in the northern portion of the project area. Fires within the surrounding community typically impinge upon the margins of the dome swamp. However, fire occurrence within the interior of the dome swamp is less frequent, typically from thirty (30) to over one hundred (100) years between events.

This community is dominated by small to medium sized pond cypress (*Taxodium ascendens*). Other species present include loblolly bay (*Gordonia lasianthus*), and cinnamon fern (*Osmunda cinnamomea*).

This community encompasses approximately 10 acres of the project area.

Floodplain Swamp -- This community occurs in flooded soils within river floodplains. This community is dominated by southern bald cypress (*Taxodium distichum*). Other species present include black willow (*Salix caroliniana*), sweetgum (*Liquidambar styraciflua*), cabbage palm (*Sabal palmetto*), and shoestring fern (*Vittaria lineata*). Due to the hydrological regime a very sparse understory is present, especially adjacent to the river.

Alteration of the hydroperiod can adversely impact plants within the community that depend upon the natural fluctuations in the water level for survival and reproduction. Marks on trees adjacent to the river suggest that the water level in this area periodically fluctuates by several feet.

This community encompasses approximately 7 acres of the project area.

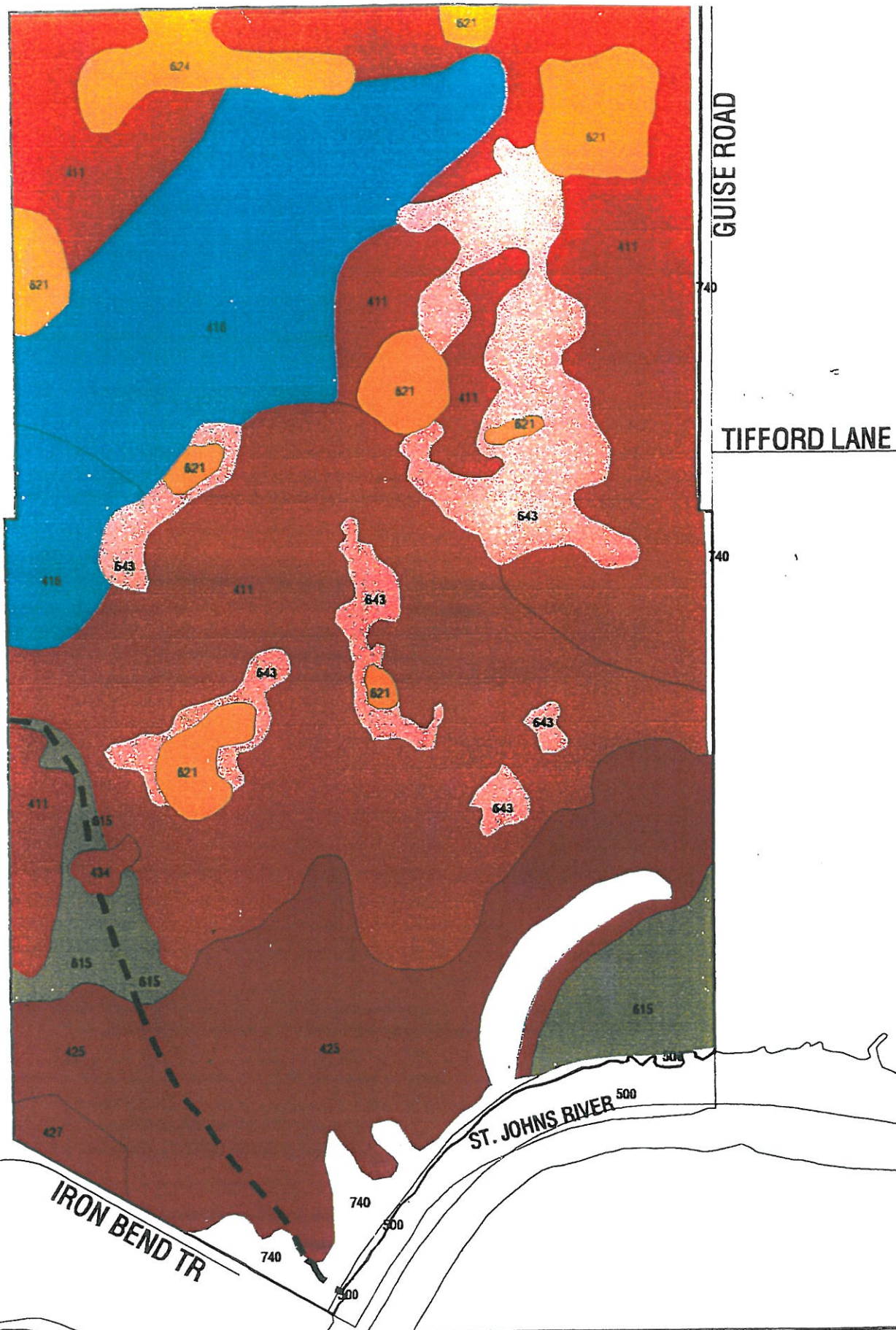
Blackwater Stream -- Blackwater streams are perennial or intermittent seasonal watercourses. A narrow, abbreviated, blackwater stream traverses the southwestern portion of the project area and discharges into the St. Johns River. This watercourse appears to be natural and not a historic drainage feature.

Typical of the project site, this stream and the immediate environs have been minimally altered. Species found in the heavily forested area paralleling this watercourse include sweetgum (*Liquidambar styraciflua*), cabbage palm (*Sabal palmetto*), persimmon (*Diospyros virginiana*), carolina ash (*Fraxinus caroliniana*), water oak (*Quercus nigra*), and saw palmetto (*Serenoa repens*).

Very few of these watercourses within the state have escaped major disturbance or alteration. This community has been classified by the Florida Natural Areas Inventory as "imperiled".

Management Strategies

- Manage communities so as to perpetuate natural conditions. This includes, where appropriate, prescribed fire or other mechanical practices (if fire is impractical). Within areas of use/development this may include activities such as, but not limited to, selective harvesting and replanting with appropriate species.
- To the extent practical, manage inter-related communities on the project area in a holistic manner. For example, isolated cypress domes may be managed using the same regimen as the surrounding community.
- Avoid, or where impractical minimize, impacts to imperiled communities. This may include actions such as, but not limited to, directing use / development (with the possible exceptions of trails or similar access) away from these areas, using natural buffers, and ensuring that development / use of an adjacent area or inter-related community does not adversely affect (i.e. erosion) an imperiled community.



VEGETATIVE COMMUNITIES

Prepared by: Volusia County Growth and Resource Management

- | | | | |
|--|--|---|---|
| DISTURBED LAND | FLOODPLAIN SWAMP | SCRUBBY FLATWOODS | WET PRAIRIE |
| XERIC HAMMOCK | DOME SWAMP | MESIC FLATWOODS | BLACKWATER STREAM |


 NORTH
 SCALE: 1"=400

FIGURE 6

Listed Animal Species

A detailed survey for listed species has not been performed. Casual inspection of the project has revealed the presence of gopher tortoise (*Gopherus polyphemus*), including several apparently active burrows.

Information provided by the Florida Fish and Wildlife Conservation Commission (FWCC) indicates that a bald eagle (*Haliaeetus leucocephalus*) nest may be located on or near the project area. Other protected animal species that may be present include gopher frog (*Rana areolata*), american alligator (*Alligator mississippiensis*), eastern indigo snake (*Drymarchon corais*), swallow-tailed kite (*Elanoides forficatus*), southeastern american kestrel (*Falco sparverius*), florida sandhill crane (*Grus canadensis*), and sherman's fox squirrel (*Sciurus niger*). The scrubby flatwoods of the project site may also serve as habitat for a nearby population of scrub jays (*Aphelocoma coerulescens coerulescens*).

The project is not within a Strategic Habitat Conservation Area, as identified by the FWCC.

Management Strategies

- Complete a comprehensive survey of the project site for the presence of any listed species (see Inventory of Natural Communities section) prior to design and construction of the proposed physical improvements.
- Modify location and size of proposed physical improvements, if necessary, to ensure protection of an identified listed species.
- Adopt or adapt natural resource management practices, if necessary, to ensure protection of an identified listed species.
- Prior to design and construction of the proposed physical improvements, solicit comments from the FWWC on the Management Plan and any recommended revisions to the document.
- Prescribed burning of the project area shall be conducted in a manner to enhance, where possible, habitat for scrub jays.

Listed Plant Species

A detailed survey for listed species has not been performed. However, causal observation has noted the presence of green fly orchid (*Epidendrum conopseum*). Other listed plants that may be present include rugel's pawpaw (*Deeringothamnus rugelii*) and florida hartwrightia (*Hartwrightia floridana*).

Management Strategies

- Complete a comprehensive survey of the project site for the presence of any listed species (see Inventory of Natural Communities section) prior to design and construction of the proposed physical improvements.

- Modify location and size of proposed physical improvements, if necessary, to ensure protection of an identified listed species.
- Adopt or adapt natural resource management practices, if necessary, to ensure protection of an identified listed species.

Inventory of Natural Communities

As previously noted, comprehensive, detailed surveys of the natural communities of the project area have not been performed. Consequently, surveys will be undertaken and completed prior to detailed design and development of the project.

The occurrence of any listed species on the project area will be reported to the Florida Natural Areas Inventory using the appropriate form (Appendix B).

Subsequent to completing inventories of the natural communities, the project area will be monitored, at a minimum, of once every five years for the presence of any heretofore undiscovered listed species. Should any new species be found, use and / or management of the project maybe adjusted, as necessary, to protect the identified species.

Topographic Features and Soils

Topographic relief across this property, located in the St. Johns River Valley physiographic region, is minimal. The property gently slopes from the northwestern quadrant toward the St. Johns River. Although elevations range from less than 5 feet to slightly over 20 feet, the majority of the property is between 15 and slightly over 20 feet in elevation. The sharpest gradation in elevation, ranging from 15 feet to less than 5 feet, is found adjacent to the shore of the river and along the streambed located in the extreme southwestern corner of the property.

This nearly level property is characterized by poorly drained soils. Although several soils occur on the property (Figure 7), the following soils are predominant.

Electra fine sand, 0 to 5 percent slopes – This somewhat poorly drained soil has a medium potential for community development. The major limitation is wetness.

Myakka fine sand – This poorly drained soil has a low to medium potential for community development. The seasonal high water table is at or near the surface.

Pomona fine sand -- This poorly drained soil has a low potential for community development. The major limitations are excessive wetness and the moderately permeable subsoil.

Pomona fine sand, depressional -- This poorly drained soil has a very low potential for community development. The major limitations are excessive

wetness, the moderately permeable subsoil, and the high risk of corrosion to uncoated concrete and steel.

The remaining soils present over the property, itemized below, typically occur as smaller isolated areas.

Bassinger fine sand, depressional -- This poorly drained soil has a low potential for community development. The major limitations are the high water table, which may be above the surface for several months, and the lack of suitable drainage outlets.

Bluff sandy clay loam -- This very poorly drained, frequently flooded, soil is on low terraces bordering the St. Johns River. The potential is very low for community development. The major limitations are flooding, excessive wetness, slow permeability, and high shrink-swell potential.

Cassia fine sand -- This nearly level to gently sloping sandy, somewhat poorly drained, soil occurs in the higher elevations of the property. The potential is medium for community development.

Farmton fine sand -- This poorly drained soil has a low potential for community development. The major limitations are excessive wetness, lack of good drainage outlets, and a high risk of corrosion to uncoated steel and concrete. The seasonal high water table is at the soil surface.

Immokalee sand -- This poorly drained soil has a low to medium potential for community development. The major limitation is the high water table, which may be near the surface for portions of the year.

Smyrna fine sand -- This poorly drained soil has a low to medium potential for community development. The major limitation is the seasonal high water table, which may be at or near the surface.

Water Resources and Quality

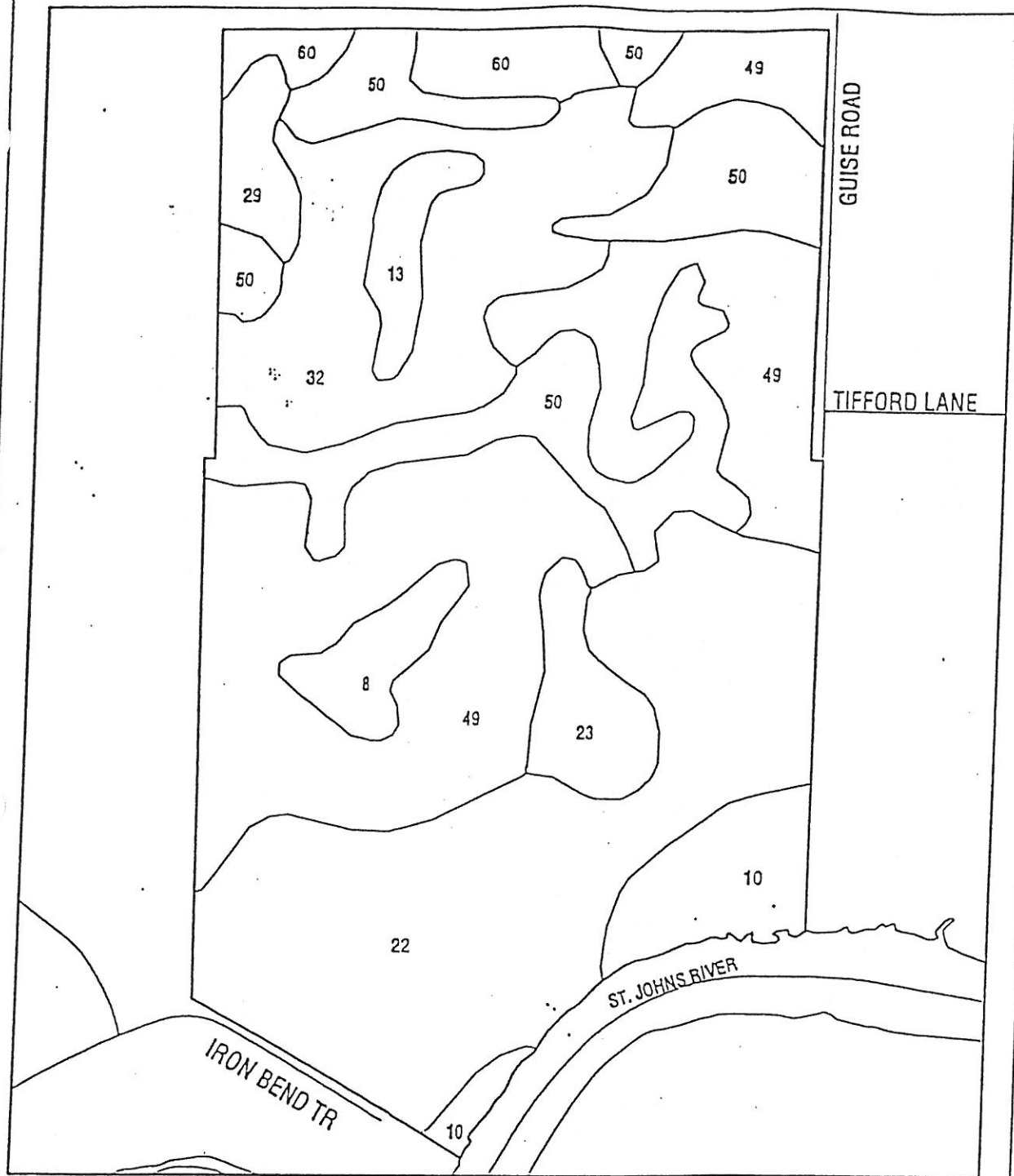
The project area includes over one-quarter of a mile of shoreline along the St. Johns River. This natural shoreline includes small bluffs and generally flat areas. The topographic relief of the property is such that surface water, such as occurring from a rainstorm, is transmitted toward the river. The water quality of the river in the vicinity of the project site is generally fair to good. Water level within the St. Johns River may fluctuate by several feet. This variation exerts an influence upon the associated natural communities, tributaries, and other water features (e.g. canal area).

A narrow, abbreviated, blackwater stream traverses the southwestern portion of the project area and discharges into the St. Johns River. This watercourse appears to be natural and not a historic drainage feature. Water quality information for this watercourse is not available. However, the water quality of the stream is directly related to the condition of the adjacent lands and headwaters area.

A drainage ditch parallels the eastern border of and partially crosses the project site. This ditch transports stormwater collected from land uses to the north of the project and the adjacent street (Guise Road). The ditch does not appear to have a detrimental effect on the property. However, upstream impacts such as soil erosion into the ditch could negatively impact the floodplain swamp located on the project area. Stormwater transported by this ditch eventually reaches the St. Johns River. Remediation of this drainage way will include use of a portion of the project area for placement of a stormwater treatment facility, creation of a wetland area, or the establishment of other appropriate means designed for the purpose of trapping sediment and impurities transported by the ditch prior to discharge. The remediation area, encompassing up to approximately one acre, is to be located adjacent to eastern property boundary (Figure 4). This activity will further the County's watershed management program. This program requires certain activities to meet criteria for water quality improvement , including identifying major outfalls into State waters.

Management Strategies

- All watercraft access to the St. Johns River from the project will be limited to the canoe landing.
- No provision shall be made on the project site for the launching or docking of motorized watercraft.
- The project shall be designed and developed using techniques to preclude, or minimize if impractical, the discharge of sediment into either the St. Johns River or the site's blackwater stream.
- The project shall be designed and developed using techniques to preclude, or minimize if impractical, disruption of the integrity of the immediate shoreline of the St. Johns River. The site's blackwater stream shall be protected through use limitations and buffering.
- Use of the project shall be regularly monitored for practices that are resulting in erosion or other detrimental impacts and/or activities. In the event that such detrimental impacts and/or activities are discovered, the proper corrective actions shall be taken.



SOILS

Prepared by: Volusia County Growth and Resource Management



Soil Number	Soil Name	Hydric?
8	Bassinger fine sand, depressional	Yes
10	Bluff sandy clay loam	Yes
13	Cassia fine sand	No
22	Electra fine sand	No
23	Farnton fine sand	No
29	Immokalee fine sand	No
32	Myakka fine sand	No
49	Pomona fine sand	No
50	Pomona fine sand, depressional	Yes
60	Smyrna fine sand	No

FIGURE 7

Trail Network

The "Volusia Trails Plan" includes a proposed riding and hiking trail corridor that bisects the south-central portion of the county (Figure 8). This trail corridor is a component of a recreational trail that will link the southeastern and southwestern portions of the county. This trail corridor also provides connections to other trails within the County's proposed network of recreational trails and to the trails of adjoining counties. The project area and this trail corridor, located approximately one-half mile to the north, are linked by a paved, very lightly traveled, local street (Guise Road). This trail corridor represents the core of a trails proposal submitted by the East Central Florida Regional Planning Council, in cooperation with Volusia and Brevard counties, to the Florida Office of Greenways and Trails (OGT). The regional trail represented by this petition will extend from the municipality of Titusville, located in northern Brevard County, to the unincorporated community of Enterprise, located in southwestern Volusia County -- a distance of over 30 miles. The Florida Greenways and Trails Council, in 2001, funded this trails initiative. Subsequently, OGT has begun the acquisition process for the trail corridor. This project will complement the "Volusia Trails Plan" by providing the trail user with an additional destination / recreational experience. The parking and camping to be located on the project area will provide additional access to this regionally significant trail.

Management Strategies

- Subsequent to completion of the regional trail, place signs at appropriate locales within the project site to direct and educate visitors of this additional experience.
- Subsequent to completion of the regional trail, request that the County's Division of Leisure Services (manager of the trail) place signs at appropriate locales direct and educate trail users of this adjacent riverfront project.

Greenways

Acquisition of the project area by the public, in conjunction with the limited, low-intensity uses proposed, will preserve and enhance the continuity of a greenway along the St. Johns River.

Acquisition of this riverfront property complements the efforts of Seminole County and the St. Johns River Water Management District to protect lands along the waterway (Figure 9). The Water Management District owns over 7,000 acres of riverfront lands. This public land, the "Lake Monroe Conservation Area", includes several miles of the shoreline of Lake Monroe and the St. Johns River. The County of Seminole owns several hundred acres situated directly across the St. Johns River from the project area.

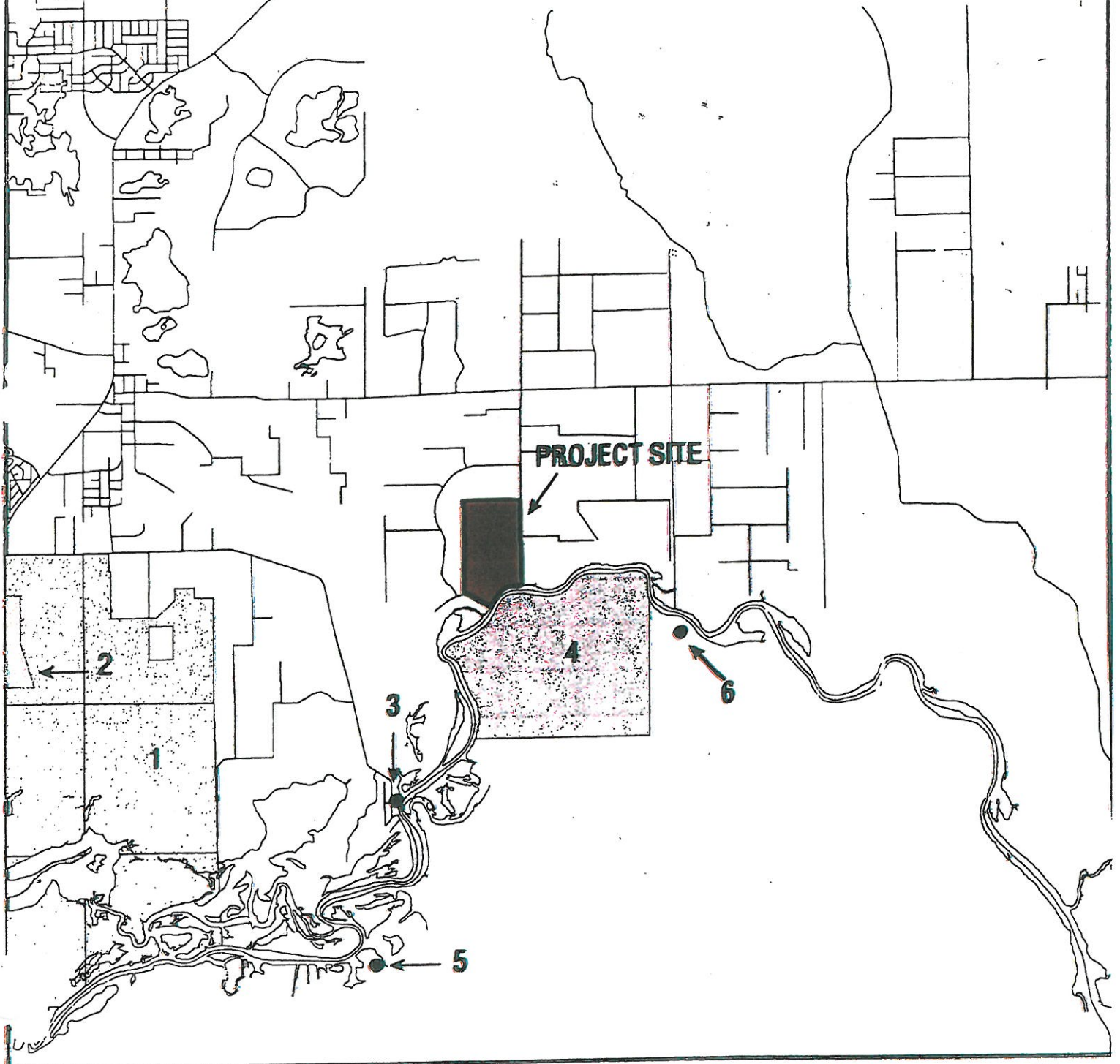
This project also furthers previous acquisition efforts of Volusia County in the general St. Johns River corridor. The County owns approximately 270 acres, adjoining the District's property. This property, Beck Ranch, has been classified as an ecological/nature park. A small County boat ramp is located on the St. Johns River to the west of the project area.

A greenway along the St. Johns River has been established by Volusia County's Comprehensive Plan. A portion the shoreline of this watercourse, including adjacent properties, has been assigned the future land use category of "Environmental Systems Corridor" by the Comprehensive Plan. The future land use category of "Environmental Systems Corridor" (ESC) consists of important ecological corridors comprised of environmentally sensitive and ecologically significant lands. These ESC lands are also encompassed by the future land use designation of "Natural Resource Management Area" (NRMA). The NRMA incorporates expanses of relatively uninterrupted environmentally sensitive areas that need to be managed as part of a system.

Management Strategies

- Periodically consult with staff from the St. Johns River Water Management District and the County of Seminole to identify and address, if need be, any shared concerns regarding management and use of properties in the St. Johns River corridor.

- 1 Lake Monroe Conservation Area (SJRWMD)
- 2 Beck Ranch (Volusia County)
- 3 Lemon Bluff Boat Ramp (Volusia County)
- 4 Conservation Land (Seminole County)
- 5 Mullet Lake Park (Seminole County)
- 6 Camerson Wright Park (Seminole County)



PUBLIC CONSERVATION LAND WITHIN 3 MILE RADIUS

Prepared by: Volusia County Growth and Resource Management

NORTH
SCALE: 1" = 500'

FIGURE 9

RESOURCE ENHANCEMENT

The project area has been minimally altered/ disturbed by previous activities of man. An abandoned canal, located along the edge of the floodplain swamp situated in the southeastern corner of the property, represents the most significant disturbance of the site. With the exception of an area of bahia grass, non-native or invasive species have not been observed on the project area.

Upland Restoration

The existing condition of the project area precludes the necessity for large-scale upland restoration efforts.

The most significant effort will be the landscaping with native, endemic, vegetation within the previously disturbed area adjacent to the St. Johns River, encompassing approximately four acres, that has been used for passive recreational and other pursuits. Landscaping will incorporate, to the fullest extent practical, native vegetation that is endemic to the adjacent plant community.

Wetland Restoration

The existing condition of the project area precludes the necessity for large-scale wetland restoration efforts. Implementation of a proper regime of prescribed burning and the relocation of existing roads that may traverse the smaller wetland areas will represent the most significant "restorative" efforts.

The integrity of the existing wetland areas on the project will be monitored. If necessary in the future, additional restorative actions will be undertaken.

Invasive Exotic Plants

With the exception of an area of bahia grass (*Paspalum notatum*), non-native or invasive species have not been observed on the project area. This area of bahia grass is located along portions of the banks of an old canal, dug in the 1960's, located in the southeastern corner of the project area. The canal area, representing approximately 2 acres, has stabilized and is not actively maintained or used. The bahia grass located at the edges of the canal and adjacent areas will be removed and replaced with native vegetation appropriate to the adjacent community(ies). Examples of vegetation that may be planted include; live oak (*Quercus virginiana*), dahoon holly (*Ilex cassine*), pignut hickory (*Carya glabra*), southern magnolia (*Magnolia grandiflora*), saw palmetto (*Serenoa repens*), and lyonnia (*Lyonia spp.*). Eradication of the existing bahia grass and replanting with native vegetation will occur as part of site development activities.

The balance of the property will be monitored, at a minimum, annually for invasion by exotic species. The Exotic Pest Plant Council's list of Florida's Most Invasive Species will be used as a reference to identify invasive exotics on the project site (see Appendix C). If found to be on the site, invasive exotics will be promptly removed using the

appropriate techniques (e.g. mechanical, chemical, etc). If necessary, affected areas will be replanted with native vegetation that is endemic to the adjacent plant community.

Prescribed Burn Plan

Periodic fire is an integral element in maintaining the long-term health of several natural communities of the project area. As such, the use of fire (or alternative mechanical means if prescribed burning is not feasible) will be the principle tool for management of the natural resources of the project area. While most of the natural areas are in fair condition, habitat value has decreased due to fire suppression. Absence of fire has also resulted in the expansion of various shrubs, including saw palmettos, into areas that were probably dominated by wiregrass and other herbaceous plants.

Accordingly, a program of prescribed burning will be developed and implemented for the project site. Prescribed burns may be initially scheduled more frequently than otherwise associated with a particular natural community. These burns may also be of an intensity that is not typically associated with the community. These concerns will be evaluated and addressed in detail as part of developing a detailed prescribed burning program. This program will also include provisions for educating surrounding residents of the benefits and need for prescribed burning. As part of the prescribed burning program, a general, conceptual, burn plan, to be coordinated as appropriate with the Division of Forestry (DOF), will be prepared for the project. The program will be prepared prior to the anticipated initiation of prescribed burning on the property in the winter of 2004.

Prescribed burning of the project area shall be conducted in a manner to enhance, where possible, habitat for scrub jays.

Permit for an individual prescribed burn will be obtained from the DOF, consistent with State rules. A request for this permit will include any required information describing the proposed burn area, equipment and protective measures, etc. Because of the many variables involved in the timing of a prescribed burn, it is impossible to prepare a meaningful, detailed, burn plan for the project prior to shortly before conducting the intended activity. However, several guiding concepts can be drawn at this time. While the need and specific locations for fire breaks will be addressed in the detailed the prescribed burning plan, it is certainly anticipated that firebreaks will be established along project perimeters to protect adjoining uses and internally to protect project uses. Factors such as size, location, condition, and type will be used to determine the necessity of constructing internal fire breaks between natural communities/habitats. . For the purposes of fire management, a holistic view may be taken of an area or portion of the project. For example, an internal fire line may not be constructed around a small wetland situated amid a flatwoods area. Rather, the wetlands and flatwoods may be viewed as a system and subject to the same fire regimen. Where possible, fire breaks will incorporate features such as trails, internal roads, etc.

Feral Animal Program

Although the animals have not been seen, scattered evidence (e.g. rooting) of feral hogs has been noted on the project. Occurrences (existing or potential) of other species of feral animals have not been observed on the project area.

The project area will be monitored during the course of routine maintenance and management activities for the presence of hogs and other feral animals. Any feral animals found on the property shall be removed.

Water Quality

This project provides the opportunity to correct a potential source of pollution to the St. Johns River. A drainage ditch parallels the eastern border of and partially crosses the project site. This ditch transports stormwater collected from land uses to the north of the project and the adjacent street (Guise Road). The ditch does not appear to have a detrimental effect on the property. However, upstream impacts such as soil erosion into the ditch could negatively impact the floodplain swamp located on the project area. Stormwater transported by this ditch eventually reaches the St. Johns River.

Remediation of this drainage way will include use of a portion of the project area for placement of a stormwater treatment facility, creation of a wetland area, or the establishment of other appropriate means designed for the purpose of trapping sediment and impurities transported by the ditch prior to discharge. The remediation area, encompassing up to approximately one acre, is to be located adjacent to eastern property boundary (Figure 4).

This activity will further the County's watershed management program. This program requires certain activities to meet criteria for water quality improvement, including identifying major outfalls into State waters.

ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL RESOURCE PROTECTION

Although no archaeological, cultural, or historical resources have been formally identified (either locally or by the State's Master Site File) as occurring on the project area, the project is within an area that the County has identified as "archaeologically sensitive".

The homestead of early settlers, the Marshall family, may have been sited on the property. This family settled along the St. Johns River, east of the present day community of Osteen, shortly after conclusion of the Civil War. There are no readily visible remnants of this homestead, which may include several gravesites, on the property. However, at least on present day descendant of the family suggests that the homestead may have been sited on the project area. This is collaborated by the presence of an U. S. Coastal and Geodetic Service survey monument located on the project area that is designated as "Marshall".

Management Strategies

- In order to ascertain the presence of any archaeological, cultural, or historical resources, a detailed survey will be conducted prior to development of the project. This survey will be comprehensive in nature and will comply with Florida Division of Historical Resources guidelines and procedures. All survey reports and related data will be submitted to the Florida Division of Historical Resources.
- Identified resources will be evaluated for significance using the criteria established for eligibility for listing on the National Register of Historic Places and criteria contained in Chapter 62, Article III, Volusia County Code of Ordinances (local historic site designation). If a site is deemed eligible for listing through either program efforts will be made to nominate the site for designation.
- Any site deemed significant, as per the resources survey, will fall under the scrutiny of established historic preservation review procedures if adversely impacted by any park development proposal. The adverse impact of the proposal will be mitigated with avoidance of impact being the preferred alternative.
- The County of Volusia will prohibit the unauthorized collection of artifacts or disturbance of significant resources located on the project area. Signs will be posted at appropriate locales within project area to inform visitors of the prohibition on disturbance of the site and the removal of artifacts. In addition, resources will be monitored for unauthorized disturbance. All planned archaeological excavations involving identified archaeological sites will be closely coordinated with the Florida Division of Historical Resources. The collection of artifacts or disturbance of sites will be prohibited, unless prior authorization has been obtained from the Florida Division of Historical Resources.
- For significant resources located in areas of public access and use, an interpretive plan will be developed. This plan will contain at a minimum:

adequate research to provide context and explain the significance of the resource; a strategy outlining issues for sustainable public access and possible use of the resource; and recommendations for installation of interpretive infrastructure such as signs, kiosks and the like.

- Management of archaeological and historic resources will comply with the provisions of Chapter 267.061 (2)(a) and (b), Florida Statutes.

EDUCATIONAL

Signage

Interpretive signage shall be provided at appropriate locales for the purposes of educating visitors about the natural environments (including the St. Johns River) and any identified archaeological, cultural, or historical resources of the project site.

COORDINATED MANAGEMENT

American Heritage River Program

In recognition of its ecological, historic, economic, and cultural significance, the St. Johns River has been designated by the Federal government as an "American Heritage River".

Acquisition of the project area supports and furthers this initiative. Accordingly, prior to design and development of the project area, the County will inform the Federally assigned "Navigator" of the public's acquisition of this property. The County will also cooperate, to the fullest extent possible, with integration of the project area into plans or efforts (e.g. educational, greenways, and trails) that may be developed in the future for the river through the auspices of the office of the "Navigator".

Florida Fish and Wildlife Conservation Commission

Prior to design and construction of the proposed physical improvements, solicit comments from the FWCC on the Management Plan and any recommended revisions to the document.

Florida Division of Forestry

Accordingly, a program of prescribed burning will be developed and implemented for the project site. This program will include provisions for educating surrounding residents of the benefits and need for prescribed burning. As part of the prescribed burning program, a general, conceptual, burn plan, to be coordinated as appropriate with the Division of Forestry (DOF), will be prepared for the project. The program will be prepared prior to the anticipated initiation of prescribed burning on the property in the winter of 2004.

St. Johns River Water Management District and Seminole County

Acquisition of this riverfront property complements the efforts of Seminole County and the St. Johns River Water Management District to protect lands along the waterway.

The sizable natural area located across the St. Johns River from the project site, owned by the County of Seminole, is part of a buffer area for the County's landfill. This area of open space is not actively managed. No public recreational uses/structures are

presently on the property adjacent to the river. The County presently allows hunting, through a lease with a private club, on this property. The presence of adjacent publicly-owned areas of open space in close proximity to one another serve to compliment each property, further the integrity of the shoreline of the St. Johns River, and provide additional potential habitat for species that may use both properties. Information regarding the project site will be forwarded to Seminole County. As part of this information, notice will be given that Volusia County staff is willing to work cooperatively to address any existing issues or concerns of common interests (e.g. species that may be using the respective properties).

Additionally, staff from the District will be periodically consulted to identify and address, if need be, any shared concerns regarding management and use of properties in the St. Johns River corridor.

MANAGEMENT NEEDS

Maintenance and Management Responsibilities

The County's Department of Resource and Growth Management will be the principal County office responsible for maintenance and management of the project area.

The portion of the project area to be developed for resource-based recreational use will be overseen by staff from the Division of Leisure Services and the Division of Land Acquisition and Management. Natural resource management activities will be conducted under the auspices of the Division of Land Acquisition and Management.

Security

County personnel, from the Department of Growth and Resource Management, will inspect the project area on a regular basis. Assistance from the Sheriff's Office will be requested, as needed.

Fencing of project area boundaries is not proposed. A gate will be installed at the driveway/entrance to the project.

Staffing and Maintenance Needs

Routine natural resource management will be performed using existing staff from the Division of Land Acquisition and Management. It is anticipated that resource surveys will be accomplished using existing staff and/or trained volunteers. The project will not necessitate the addition of staff to the Division of Land Acquisition and Management.

Given the limited quantity of low intensity of uses proposed by the project, it is anticipated that the need for daily maintenance (e.g. trash collection, site clean-up, etc.) may be correspondingly minimal. However, the natural beauty of the site and access to the river may combine to draw visitors on a regular basis. Currently, Leisure Services staff is completely allocated to other parks. Any additional staff that may be required to maintain/operate the project site will be added after the park is open full time to the public. Based upon experience, Leisure Services has estimated that the project will annually necessitate one and one-half man-years for maintenance/operations. This labor may include contracted services. This level of staffing is comparable to other similar parks.

PRELIMINARY COST ESTIMATES AND POTENTIAL FUNDING SOURCES

Preliminary cost estimates for implementation of this management plan are presented below. Subsequent to the initiation of detailed site planning, budgetary, and other as yet unknown / unforeseen issues, these estimates may be adjusted in the future.

Estimated Site Improvement Costs

Day Use Area	
Nature / Fitness Trail	\$10,000
Canoe Landing	\$20,000
Boardwalk / Wildlife Observation (\$150/foot)	\$20,000
Picnic Area	\$40,000
Restroom	\$125,000
Playground	\$45,000
Open Play Area	\$5,000
Landscaping	\$30,000
Bicycle Rack	\$1,000
Nature Trail	\$10,000
Primitive Camping Sites	\$5,000
Group Camping Area	\$5,000
Entrance and Internal Roads	\$15,000
Off-Street Parking Areas	\$20,000
Miscellaneous (gate / signage, etc.)	\$15,000
Project Stormwater	\$50,000
Drainage Remediation Area	\$450,000

Other Estimated Management Costs

Wildlife Survey	N/A *
Plant Survey	N/A *
Archaeological / Historical Survey	\$20,000
Prescribed Burning	\$20/acre

* Task to be performed in-house or with trained volunteers

Potential Sources of Funding

In addition to the County's General Fund, monies for the development and management of the project site may be derived from several sources including; Florida Inland Navigation District, Volusia County's "Forever" and "E.C.H.O." programs, and the Florida Recreation Development Assistance Program.

PRIORITY IMPLEMENTATION SCHEDULES

Exhibit 1. Projected Schedule for Site Planning and Construction (excl. Drainage Remediation Area)

ACTIVITY	BEGIN	END
Formal Site Design	February, 2006	September, 2006
Permitting	August, 2006	September, 2006
Construction	January, 2007	September, 2007

The above schedule represents a goal that is to be striven for attainment. Formal site design for the project will be undertaken in a holistic manner. However, due to budgetary, staffing, or other reasons, this project may be permitted and developed in phases.

The timing and components of any individual phase, if instituted, cannot be determined at this time. However, it may reasonably be expected that uses requiring comparably minimal financial or personnel commitments for construction and upkeep (i.e. trails, primitive camping, limited parking, etc) will be established first. Approaching the project in this manner would have the benefit of opening the property to the public without the delay of having to await a "full" project before opening the property. If developed in phases or as "interim uses", uses will be located so as to maximize incorporation in the completed formal design for the site.

Exhibit 2. Projected Schedule for Drainage Remediation Engineering and Construction

ACTIVITY	BEGIN	END
Design & Engineering	January, 2006	January, 2007
Construction	June, 2007	December, 2007

The engineering and creation of this proposed use will be the responsibility of the County's Department of Public Works. However, the location for this use will be integrated within the overall site plan developed for project area.

Exhibit 3. Projected Schedule of Resource Management and Enhancement Activities

ACTIVITY	BEGIN	END
Listed Species Surveys (plant and animal)	September, 2005	January, 2006
Archaeological / Historical Survey	August, 2005	January, 2006
Drafting of Prescribed Burning Program	October, 2003	December, 2003
Coordination with Fish & Wildlife Conservation Commission	August, 2005	On-going
Implementation of Prescribed Burning Program	January, 2004	On-going
Monitoring for Exotic Species	September, 2003	On-going
Monitoring for Feral Animals	September, 2003	On-going
Monitoring for Listed Species (plant and animal)	February, 2006	On-going

MONITORING AND REPORTING OF THE MANAGEMENT PLAN

As the recipient of the grant award, it is the County's responsibility to prepare and submit an Annual Stewardship Report to the Florida Communities Trust. This report, due on January 30th of each year, is an evaluation of the implementation of this Management Plan.

Any proposed modification of this Management Plan and/or undertaking any site alterations or physical improvements that are not addressed in the approved Management Plan requires prior review and approval by the Florida Communities Trust.

FIGURE 8



PREPARED BY VOLUSIA COUNTY GROWTH MANAGEMENT SERVICES, OCTOBER 1999