Lee County Board Of County Commissioners
Agenda Item Summary

Blue Sheet No. 20051171

1. ACTION REQUESTED/PURPOSE:

Approve the Caloosahatchee Creeks Preserve (CCP) Restoration Plan.

2. WHAT ACTION ACCOMPLISHES:

Approving of the CCP Restoration Plan establishes guidelines for restoration and management activities at CCP.

3. MANAGEMENT RECOMMENDATION: Approve the plan so Land Stewardship staff can begin implementation.

4. Departmental Category: 11 C11A		**5. Meeting Date:** 09-06-2005
6. Agenda:	**7. Requirement/Purpose:** *(specify)*	**8. Request Initiated:**
X **Consent**	___ **Statute**	**Commissioner**
___ **Administrative**	___ **Ordinance**	**Department** Parks & Recreation
___ **Appeals**	___ **Admin. Code**	**Division**
___ **Public**	X **Other**	**By: John Yarbrough, Director**
___ **Walk-On**		John Yarbrough

9. Background:

A Restoration Plan is necessary for restoration and management of this Preserve because it was not included in the original Florida Communities Trust Land Management Plan. The CLASAC (Conservation Lands Acquisition and Stewardship Advisory Committee) unanimously passed a motion on Aug. 11, 2005 accepting the Caloosahatchee Creeks Preserve Restoration Plan.

10. Review for Scheduling:

Department Director	Purchasing or Contracts	Human Resources	Other	County Attorney	Budget Services				County Manager/P.W. Director
					Analyst	Risk	Grants	Mgr.	
8/18-05				8/22/05	8/22/05	8/22/05	8/23/05	8/23/05	

11. Commission Action:

___ **Approved**
___ **Deferred**
___ **Denied**
___ **Other**

RECEIVED BY COUNTY ADMIN
8-22-05
11:35
COUNTY ADMIN FORWARDED TO:
8/25/05
8/30/05

CO. ATTY. FORWARDED TO:
Co. Mgr.
8-22-05

Caloosahatchee Creeks Preserve

Restoration Plan

Prepared by the Land Stewardship Section

Lee County Parks and Recreation

Approved by the Lee County Board of County Commissioners: ?-??-2005

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LIST OF EXHIBITS

I. Introduction

The Caloosahatchee Creeks Preserve (CCP) was acquired as seven parcels, all through the Conservation 20/20 Program (C20/20) for a total cost of just over $8.0 million. As stated in the CCP Management Plan, "Matching grant funding from Florida Communities Trust (FCT) was used to offset acquisition costs for CCP and the management plan was developed to ensure that the Preserve would be developed and managed in accordance with the Grant Award Agreement (FCT Project #01-031-FF1) and in furtherance of the purpose of the grant application and of the C20/20 Program." The total amount awarded from FCT Florida Forever was $3,243,132.50 and C20/20 has already received 40% of the FCT funds for management needs. Refer to the initial CCP Management Plan (Florida Environmental, Inc., October 2002) for additional information.

The CCP Management Plan (CCPMP) was written following FCT guidelines and only covered Site #108, which is just over 85% of the Preserve's land. The five-year update will need to incorporate all parcels into the Lee County Parks and Recreation (LCPR) Land Stewardship Plan's (LSP) format. Although preliminary details for trails and facilities (Master Site Plan) are located in the CCPMP, a comprehensive Management Action Plan (MAP) is not. In addition to a MAP, this restoration plan includes several relevant maps that briefly identify background information for all CCP parcels.

Currently, the Preserve totals 1,290 acres and is located in north-central Lee County, lying east & west of I-75, south of Bayshore Road and north of the Caloosahatchee River (Figure 1). The major plant communities of the Preserve were mapped using the Florida Land Use, Cover and Forms Classification System (FLUCCS). CCP plant communities include palmetto prairies, improved pasture, pine flatwoods, tropical hardwood forest, cabbage palm, live oak, sand live oak, upland scrub, hardwood-conifer mix, mangrove swamp, mixed forested wetlands, freshwater marshes, saltwater marshes, stream & lake swamps, exotic wetland hardwoods, embayment openings, abandoned grove, Brazilian pepper, transmission lines, borrow and spoil areas.

Land stewardship challenges for this Preserve are varied and multifaceted. Hydrologic improvement projects may include filling or plugging drainage canals and ditches, retrofitting Lee County Electric Cooperative (LCEC) roadways, creating littoral shelves along spoil embankments adjacent to the Caloosahatchee River, and/or incorporating weir structures. Issues involving encroachment from adjacent neighbors, illegal dumping and access need to be resolved.

The wildlife and overall ecosystem will benefit from enhanced, viable and functioning plant communities through invasive non-native plant removal, improved wetland hydroperiods and flow ways, and restoration of an essential fire return interval with prescribed fire management. Several listed flora and

fauna species populate and utilize the Preserve to varying degrees, such as golden leather fern (*Acrostichum aureum*), common wild pine (*Tillandsia fasciculata*), American alligator (*Alligator mississippiensis*), wood stork (*Mycteria americana*), and West Indian manatee (*Trichechus manatus*).

Additional stewardship activities will involve non-native animal control, various monitoring protocols, archaeological assessment survey, debris removal, cattle removal, boundary security, and environmental testing (surface and ground water and soil testing). Public access and educational opportunities will be provided through facilities including a parking area, canoe/kayak launch, picnic area, informational kiosks and trail system, which will consist of a series of boardwalks and observation decks to support the protection of the restored natural resources.

II. Location and Site Description

CCP is located in north central Lee County, within Sections 21-23, 26-29, 32-33, 35, Township 43 South, Range 25 East. CCP is located in North Ft. Myers on the northern shoreline of the Caloosahatchee River. Several freshwater tributaries such as Daughtrey's, Chapel Branch, Bayshore, Pop Ash, Stroud, and Palm Creeks flow through the Preserve and then into the Caloosahatchee River (Figure 1).

CCP is divided into four areas and totals 1,290 acres as featured in the 2002 aerial photograph (Figure 2). LCEC power line easements pass through approximately 1.75 miles of the Preserve. Four (4) of seven (7) parcels share adjacent boundaries with neighborhoods, businesses, and roadways scattered in between. Table 1 provides some of the parcels' acquisition information.

Table 1: CCP Acquisition Information

Site #	PA Acres	Acquisition $	Date Acquired	Comment
82	52.40	$650,000.00	2/23/00	
108	1115.00	$6,400,000.00	12/29/00	exchange parcels (~14 acres)
124	12.48	$210,000.00	3/15/02	
174	19.78	$78,500.00	8/19/02	
175	9.31	$200,000.00	7/5/02	
188	80.00	$495,000.00	7/1/02	~ 69 actual acres *
225	1.21	$13,500.00	2/2/04	Incorporated into MU 108-16
TOTALS	**1290.14**	**$8,047,000.00**		

Note: * Acreage difference between Property Appraisers (PA) office and acreage based on ArcView GIS mapping calculations.

Figure 1: Location Map

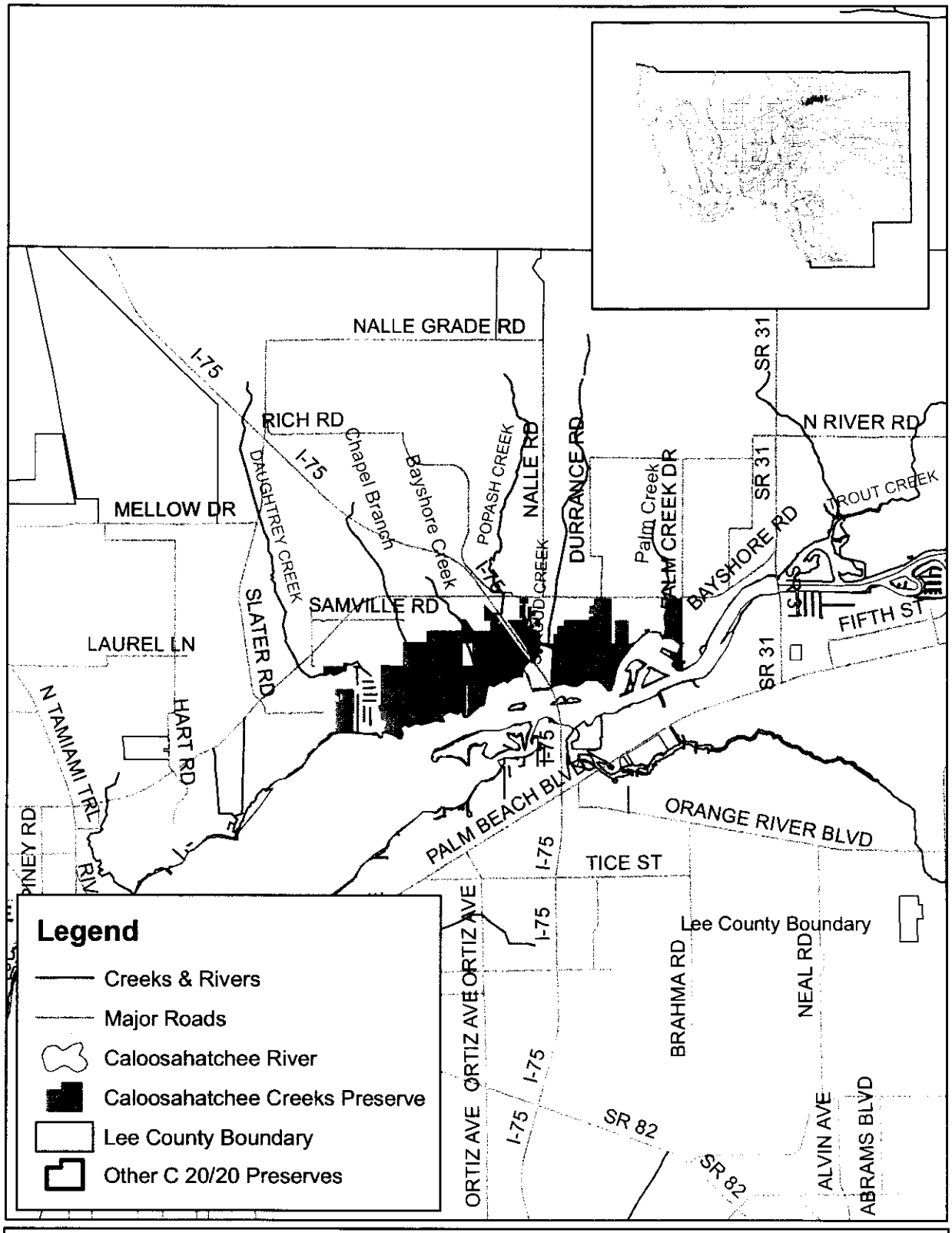
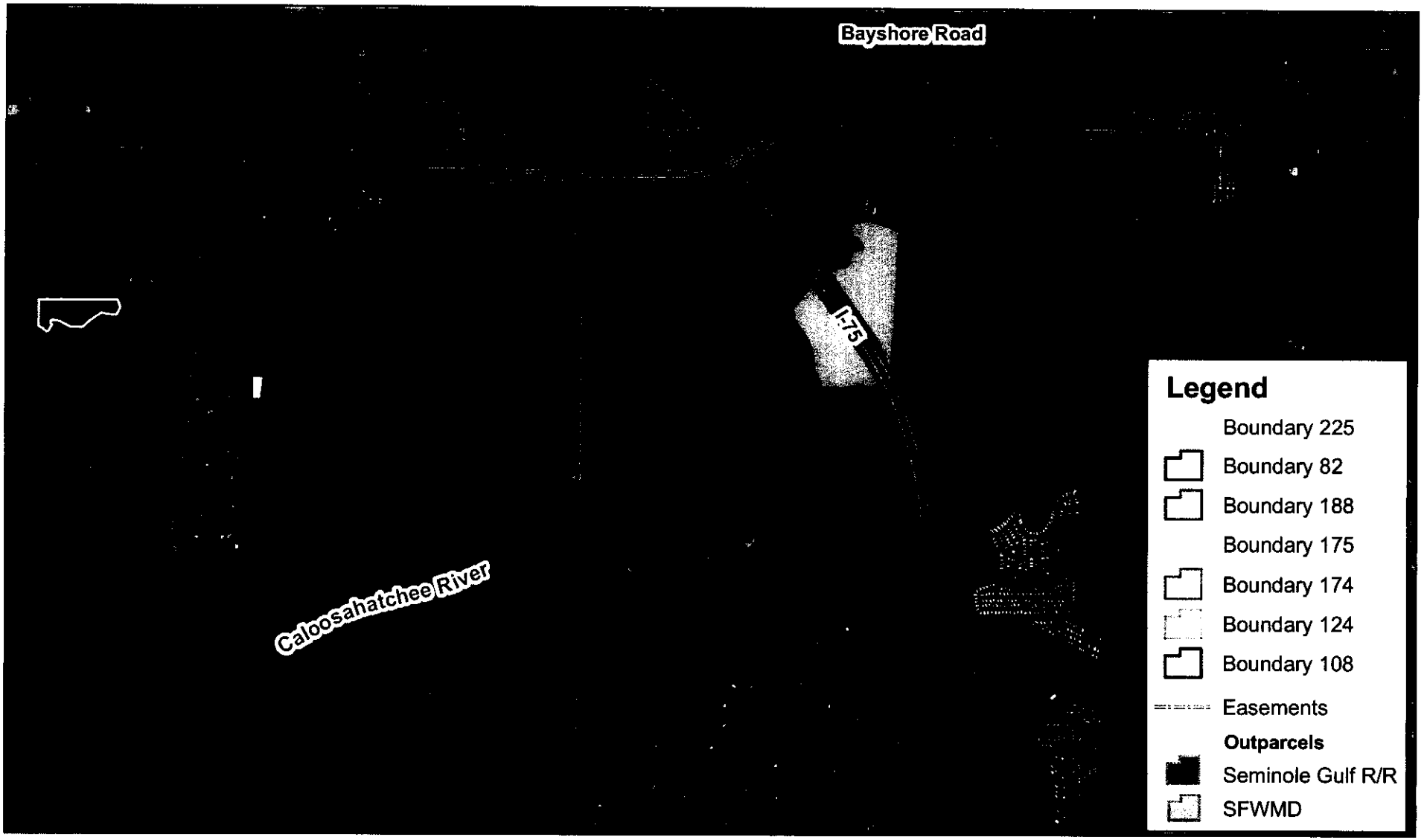


Figure 2: 2002 Aerial Photograph



Caloosahatchee Creeks Preserve

0 0.25 0.5 1 1.5 Miles

S:\esri\C2020 ArcView\Caloosahatchee Creeks Preserve\ Restoration Plan\2002_aerial.mxd

Map Prepared On: 06/23/05 by sfurnari@leegov.com

This is not a survey. Land Stewardship Staff has prepared this map for informational and planning purposes

III. Management Action Plan

A. Management Unit Descriptions

Caloosahatchee Creeks Preserve is a consolidation of several detached parcels that are within 1 mile of the larger nearby parcel, Site #108. To enhance coordination for the stewardship activities at CCP, the major parcels are grouped into Management Units and then are further sub-categorized into smaller units (where appropriate). These Management Units (MUs) are delineated based on existing trails, man-made infrastructures and/or impacts and natural habitat features. CCP has been divided into thirty-one (31) MUs to better organize and achieve management goals and strategies (see Figure 3).

- Management Unit 82-1, 3.98 acres

This unit consists of pine flatwoods and mixed wetland hardwoods. Donald Road runs along the southern boundary and Bonita Boulevard runs along the eastern boundaries, with exception of the two houses. The property to the north and west is presently undeveloped. Brazilian pepper (*Schinus terebinthifolius*) occurs primarily along the roadway's edge.

- Management Unit 82-2, 16.7 acres

This unit consists of mainly pine flatwoods and mixed wetland hardwoods. The northern boundary runs just south of Winston Road, behind a row of houses. The western boundary runs along Bonita Blvd., with exception of the two houses. A housing development is to the east of this unit and MU 82-3 is to the south. Evidence of a wild fire that occurred in this unit, before Lee County acquired it, is still present. In 2003, a wild fire occurred on the west side of this unit. The Florida Division of Forestry responded to both fires and put in plow lines to extinguish the fire. Subsequently, LCPR installed a fire line around the unit where adjacent houses could be at risk. Several snags are present in the unit, due to both wild fires. Some melaleuca (*Melaleuca quinquenervia*) regrowth has occurred where the Department of Corrections crew previously worked. Brazilian pepper, strawberry guava (*Psiduim cattleianum*), and Caesar's weed (*Urena lobata*) are also present. One active gopher tortoise burrow was discovered on this unit. Depending on future encroachment issues, portions of this MU may need to be fenced with allowances for continued neighborhood public access.

- Management Unit 82-3, 30.78 acres

This unit is partially wetland forested mixed, exotic wetland hardwoods, and saltwater marsh that has been disturbed by mosquito ditching, and a small portion of an embayment. Brazilian pepper is heavy along the north and the berms associated with the mosquito ditch. The southern boundary of this unit is the Caloosahatchee River, the eastern is presently undeveloped and to the west are a few homes.

- Management Unit 108-1, 109.16 acres

This unit was used as a spoil area when the Caloosahatchee River was dredged

in the early 1960's. Half of the unit is wetland and half is upland. In the center of the wetland area are two areas of freshwater marshes. In 2004, most the upland area was cleared of Brazilian pepper by the Brontosaurus heavy equipment. This unit is bordered by ditches on all sides and land owned by South Florida Water Management District (SFWMD) to the west, to the north is MU 108-3, and MU 108-4, to the east is MU 108-2 and the south is the Caloosahatchee River.

- Management Unit 108-2, 91.64 acres

This unit was also used as a spoil area when the Caloosahatchee River was dredged in the early 1960's. Half of the unit is wetland and half is upland, with the wetland portion being freshwater marsh. In the spring of 2005, most of the upland area was cleared of Brazilian pepper by an excavator equipment. Most of the resulting vegetation piles have been burned. This unit is bordered by ditches on 3 sides with MU 108-1 to the west, to the north is MU 108-4, the goat farmer's property and MU 174-2, and to the east and south is the Caloosahatchee River.

- Management Unit 108-3, 41.12 acres

This unit is bordered by power lines to the north, a private residence to the west, MU 108-1 to the south and MU 108-4 to the east. It consists of palmetto prairie, pine flatwoods, cabbage palm, cattail freshwater marsh and a small area of Brazilian pepper. Part of the recreational trail will be in this unit.

- Management Unit 108-4, 51.59 acres

Power lines and MU 108-5 border this unit to the north, the goat farmer's property to the east, MU 108-1 and 2 to the south and MU 108-3 to the west. It consists of tropical hardwoods, improved pasture, wetland forested mix, cabbage palm disturbed, freshwater marsh with a small area of cabbage palm in the middle. Part of the recreational trail will be on this unit.

- Management Unit 108-5, 30.29 acres

Bayshore Road borders this unit to the north, private property to the east and west and MU 108-4 to the south. McSpadden Road is a dirt road that leads south from Bayshore Road, runs through this unit and to the goat farmer's property and house. This unit consists of pine flatwoods and improved pasture. The public access parking and picnic area will be on the improved pasture and is where the eastern trail system begins (referred to as CCP East Park).

- Management Unit 108-6, 30.34 acres

Interstate 75 borders this unit to the west, undeveloped land to the north, a housing development to the east and MU 108-7. Brazilian pepper, pine flatwoods, hardwood-coniferous mixed, saltwater marsh, streams and waterways, cabbage palm, and a spoil area – wetland make up all the different plant communities in this unit. There is a power line that cuts through the north portion.

- Management Unit 108-7, 7.92 acres

This small unit is surrounded by ditches and is all upland spoil area. I-75 is along the west side and SFWMD property to the east and south.

- Management Unit 108-8, 9.61 acres

This unit is a mirror image of MU 108-7. It is all upland spoil area with ditches on all side, I-75 to the east, and SFWMD property to the south.

- Management Unit 108-9, 13.93 acres

This unit is bordered by natural navigable waterway on all sides, except where I-75 runs along the east boundary. This unit consists of cabbage palm and saltwater marsh.

- Management Unit 108-10, 146.86 acres

This unit is bordered by power lines to the north, the railroad tracks to the west, the Caloosahatchee River to the south and a navigable waterway to the east. It consists of Brazilian pepper, sand live oak, cabbage palm, streams and waterways, freshwater marsh, saltwater marsh, and spoil areas - both upland and wetland. A portion of the western trail will be on this unit.

- Management Unit 108-11, 5.56 acres

This unit is bordered by private property on all sides, except for the power lines and the rest of the Preserve is to the south. It consists of improved pasture, cabbage palm, Brazilian pepper exotic hardwoods with a borrow area in the middle.

- Management Unit 108-12, 7.18 acres

This unit is bordered by power lines to the north, railroad tracks to the west, railroad owned property to the south and MU 108-10 to the east. It consists of cabbage palm and saltwater marsh.

- Management Unit 108-13, 40.47 acres

The railroad tracks to the west, a navigable waterway to the east and the Caloosahatchee River to the south border this unit. The entire unit is saltwater marsh.

- Management Unit 108-14, 90.22 acres

Power lines to the north, railroad tracks to the east, a natural waterway to the west and the Caloosahatchee River to the south border this unit. It consists of cabbage palm, sand live oak, freshwater and saltwater marshes.

- Management Unit 108-15, 191.47 acres

Power lines and mobile homes to the north, neighborhoods and MU 108-16 to the west, MU 108-14 to the east and the Caloosahatchee River to the south border this unit. It consists of palmetto prairie, pine flatwoods, Brazilian pepper, cabbage palm, sand live oak, wetland forested mix, and freshwater and saltwater marshes.

- Management Unit 108-16, 92.65 acres

This unit is bordered by a residential neighborhood to the north, Daughtrey's Creek to the west, MU108-15 to the east and MU 108-17 and 18 to the south. This unit integrated the smallest acquisition parcel, Site #225, to simplify fusion of

boundaries. This unit has four freshwater marshes and two saltwater marshes, some pine flatwoods, cabbage palm, and sand live oak.

- Management Unit 108-17, 32.67 acres

This unit has a man-made ditch on the north, east and west side. There is a natural waterway on the east side, as well, and the Caloosahatchee River is to the south. Some of this unit was used as a spoil area and has a very high elevation with exposed oyster shells and fossilized objects. Two fossilized horse teeth have already been found. A recorded archaeological site is located within this unit. The remainder is saltwater marsh.

- Management Unit 108-18, 31.62 acres

This unit is bordered by a portion of Daughtrey's Creek on the west, MU 108-16 to the North, a man-made ditch to the east, and the Caloosahatchee River to the south. The entire unit is saltwater marsh.

- Management Unit 108-19, 33.77 acres

This unit is bordered by portions of Daughtrey's Creek on all sides except to the south, which is the bordered by the Caloosahatchee River. The entire unit is saltwater marsh.

- Management Unit 108-20, 2.22 acres

This unit is a small mangrove island that contains Brazilian pepper and wetland hardwoods. Based on historical aerials, it appears that this area may have been connected to the mainland (MU 108-2), but is now an island.

- Management Unit 108-21, 13.62 acres

This unit is a compilation of the detached residential lots within the East Lake Colony subdivision. The lots range from less than ¼ acre to three acres. These lots will need to be surveyed and kept mowed until they can be exchanged for more appropriate adjacent environmentally sensitive lands.

- Management Unit 124-1, 13.22 acres

This unit is west of I-75 and south of Bayshore Road. McDowell Drive runs along the west side. This unit has been extremely disturbed hydrologically and has improved pasture. The canal was straightened and now the entire unit is infested with invasive exotic plants, such as large eucalyptus trees (*Eucalyptus spp.*), Brazilian pepper, melaleuca, rosary pea (*Abrus precatorius*), Caesar's weed, earleaf acacia (*Acacia auriculiformis*) and many others. At one time the unit was used to grow exotic palm trees and some are still present and may be sold with funding used to purchase additional native plants for restored areas. Several of these desired exotic palms were stolen from the property and the incident reported to Lee County authorities. Since this is a highly disturbed area, a parking area and canoe launch will be constructed for public access and resource based recreation (referred to as CCP West Park). In addition, picnic tables, a trail to an observation deck (in MU 108-10), and other amenities will be constructed. Pop Ash Creek cuts through the eastern side of the unit and leads to the Caloosahatchee River.

- Management Unit 174-1, 14.08 acres

This unit is surrounded by development on 3 sides, to the west is a goat farmer, to the north and east are trailer parks, and MU 174-2 is to the south. The plant communities are abandoned citrus grove, wax myrtle-willow, live oak, and cabbage palm. Gopher tortoises (*Gopherus polyphemus*) are established. Freshwater runs through the northern trailer park and into a borrow pit. From the borrow pit, the once meandering creek was straightened and deepened that eventually leads to another man-made ditch in MU 108-2. The furrows from the old grove funnel the water from the Preserve into the altered creek. Brazilian pepper is growing along the creek, as well as some air potato (*Dioscorea bulbifera*) and Old World climbing fern (*Lygodium microphyllum*). On the west side of the creek, there is an old concrete shed and dump area that was inadequately cleaned up prior to acquisition. Some old beehive boxes were left as well as remnants of fencing that will be removed.

- Management Unit 174-2, 6.01 acres

This unit has the same boundaries as MU 174-1, except to the south is MU 108-2. This unit is exotic wetland hardwoods with mainly Brazilian pepper and leather fern (*Acrostichum danaeifolium*).

- Management Unit 175-1, 9.31 acres

This management unit consists of plant communities of mainly pine mesic-oak along with stream and lake swamps. Daughtrey's Creek runs along the southern and eastern boundary. To the north is the Daughtrey's Creek Development and to the west is a church. Limited exotics are present in this unit, however air potato is flourishing. Old World climbing fern has been noted on the western boundary and melaleuca, earleaf acacia and Brazilian pepper are sparsely scattered throughout the unit. Encroachment is an ongoing problem along the northern boundary of this unit. A detailed boundary survey will be performed and perimeter fence installed to allow for continued passive neighborhood access.

- Management Unit 188-1, 31.81acres

This unit consists of pine flatwoods, wetland forested mix, upland scrub, pine and hardwoods. The man-altered Palm Creek runs through the west side of the unit and electrical transmission lines run along the east and south boundaries. Bayshore Road runs along the north boundary and to the west of the unit is a housing development.

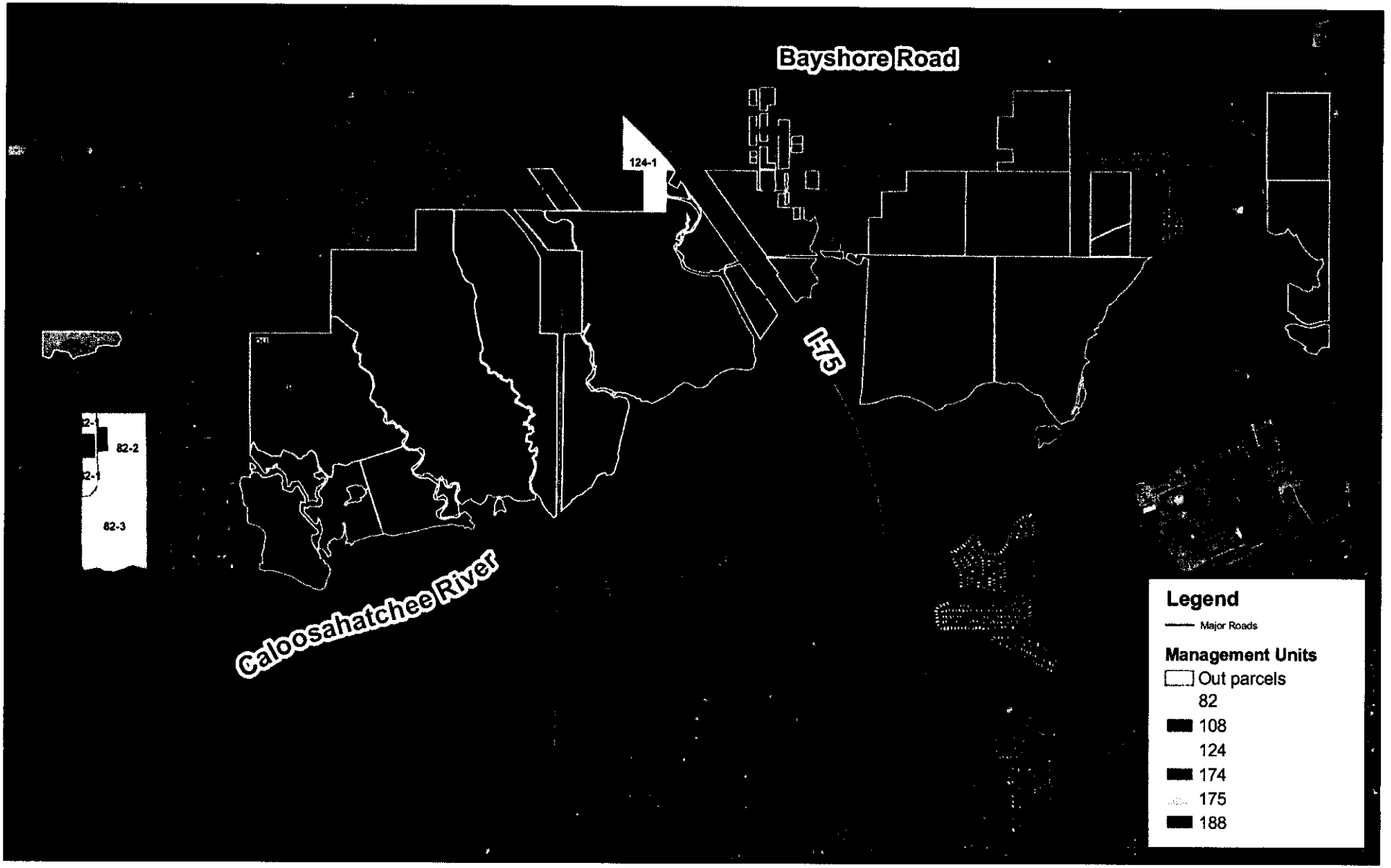
- Management Unit 188-2, 32.72acres

This unit is mainly exotic wetland hardwoods with an area in the north portion of wetland forested mix and cabbage palm. The Caloosahatchee River borders the unit to the south, a housing development is to the west and property owned by Florida Power and Light border the unit to the east.

- Management Unit 188-3, 5.18 acres

This unit is a peninsula that sticks out into the Caloosahatchee River and is vegetated by exotic wetland hardwoods.

Figure 3: Management Units Map



B. Goals and Strategies

Restoration and preservation activities at Caloosahatchee Creeks Preserve (CCP) will focus on the following goals and strategies:

Natural Resource Management

- ✓ Exotic plant control and maintenance
- ✓ Hydrologic restoration
- ✓ Habitat restoration and creation
- ✓ Prescribed fire management
- ✓ Mechanical brush reduction
- ✓ Monitor and protect listed species
- ✓ Photo point installation and monitoring
- ✓ Supplemental soil & surface/ground water testing
- ✓ Targeted exotic animal removal
- ✓ Annual Stewardship Report for FCT grant award
- ✓ Update CCPMP (create LSP)

Outside Consultants

- ✓ Environmental/engineering
- ✓ Facilities design & construction
- ✓ Boundary re-survey & stake

Overall Protection

- ✓ Debris removal and prevention of dumping
- ✓ Boundary fence installation and repair
- ✓ Boundary sign installation
- ✓ Archaeological coordination with DHR
- ✓ Removal of cattle
- ✓ Exchange and disposition of detached residential parcels
- ✓ Change zoning categories

Public Use

- ✓ Facilities construction
- ✓ Educational sign installation

Volunteers

- ✓ Work with volunteer group(s)

The following is a description of how each of these goals will be implemented, the success criteria used to measure accomplishments of each goal and a projected timetable outlining which units each activity will take place.

Natural Resource Management

Exotic plant control and maintenance

The dominant invasive non-native (commonly referred to as exotic) plants at CCP are Brazilian pepper and Australian pine (*Casuarina equisetifolia*). The Florida Exotic Pest Plant Council's List of Invasive Species will be consulted in determining the invasive exotic plants that are to be controlled within each Management Unit. Forty-one (41) invasive exotic plants have been identified on the Preserve (Table 2). The goal is to completely remove/control these plants and other targeted invasive exotic species, followed with semi-annual or as needed treatments of resprouts and new seedlings. This goal will be implemented through a Management Unit basis, where each unit will be brought to a maintenance level, defined as less than 5% invasive exotic plant coverage.

Table 2: Invasive Non-native Plant Species Observed on CCP

Common Name	*Scientific Name*	Coverage	Location	FLEPPC
Air potato	*Dioscorea bulbifera*	< 1 acre	175-1, 174-1	I
Australian pine	*Casuarina equisetifolia*	< 15 acres	108-1, 108-2, 108-10	I
Bishopwood	*Bischofia javanica*	< 1 acre	108-11, 188-2	I
Bowstring hemp	*Sansevieria hyacinthoides*	< 1 acre	174-1	II
Brazilian pepper	*Schinus terebinthifolius*	< 700 acres	All CCP	I
Caesar's weed	*Urena lobata*	< 17 acres	All CCP	I
Candlestick plant	*Senna alata*	< 1 acres	108-5, 108-4	
Carrotwood	*Cupaniopsis anacardioides*	< 1 acre	108-2, 188-1	I
Castor bean	*Ricinus communis*	< .5 acre	108-1	II
Chinaberry	*Melia azedarach*	< 1 acre	108-4	I
Chinese tallow tree	*Sapium sebiferum*	3 acres	108-16	I
Climbing cassia	*Senna pendula*	3 acres	108-1, 108-4, 108-10, 124	I
Cogon grass	*Imperata cylindrica*	1 acre	174-1, 188-1	I
Common guava	*Psidium guajava*	3 acres	188-2	I
Ear tree	*Enterolobium spp.*	< 1 acre	124-1	
Earleaf acacia	*Acacia auriculiformis*	< 3 acres	124-1, 175-1, 174-1	I
Eucalyptus	*Eucalyptus spp.*	1 acre	124-1	
Guinea grass	*Panicum maximum*	< 1 acre	174-1	II
Hairy indigo	*Indigofera hirsute*	< 1 acre	108-4	
Java plum	*Syzygium cumini*	< 1 acre	108-16, 82-2	I
Lantana	*Lantana camara*	< 1 acre	108-1, 108-2	I
Lead tree	*Leucaena leucocephala*	< 1 acre	108-5	II
Life plant	*Kalanchoe pinnata*	< 1 acre	174-1	II
Melaleuca	*Melaleuca quinquenervia*	< 5 acres	175-1, 108, 124-1, 82-2	I
Natal grass	*Rhynchelytrum repens*	< 3 acres	108-17	I
Old World climbing fern	*Lygodium microphyllum*	< .25 acre	108-10,108-16,174-1&2,175-1	I
Rattlebox	*Sesbania punicea*	< 2 acres	108-1, 188-2	II
Rosary pea	*Abrus precatorius*	< 1 acre	108-11, 124, 174-1, 175-1	I
Senegal date palm	*Phoenix reclinata*	< 1 acre	124-1, 108-2	II

Sylvester palm	*Phoenix sylvestris*	< 1 acre	124-1	
Shoebutton ardisa	*Ardisia elliptica*	5 acres	108-3, 108-4	I
Strawberry guava	*Psidium cattleianum*	3 acres	82-1&2, 108-3, 188-2	I
Surinam-cherry	*Eugenia uniflora*	< 1 acre	108-4	I
Torpedo grass	*Panicum repens*	< 5 acres	188-1	I
Tropical soda apple	*Solanum viarum*	< 2 acres	108-3 & 4	I
Umbrella plant	*Cyperus involucratus*	< 1 acre	124-1	II
Washingtonia palm	*Washingtonia robusta*	< 1 acre	108-2, 108-11	II
Wedelia	*Sphagneticola trilobata*	< 1 acre	82-2	II
Wetland nightshade (aquatic soda apple)	*Solanum tampicense*	< 5 acres	188-3, 174-2	I
Wild balsam pear	*Momordica charantia*	< 10 acres	108-1	
Wild taro	*Colocasia esculenta*	<1 acre	188-3	I

Prior to each invasive exotic plant control project at CCP, a Prescription Form (located in the Land Stewardship Operations Manual (LSOM)) will be filled out by Land Stewardship staff, reviewed by the contractor(s) and filed appropriately. All contractors involved in these projects will be required to fill out the Daily Report Control Form (located in the LSOM) and filed appropriately by staff.

- **Uplands with light to moderate infestations:**

  In areas where invasive plants are sporadic and below 50% of the vegetation cover, hand removal will be utilized for control. Specific methodology will depend on stem size, plant type and season, but generally the stem will be cut near the ground and the stump will be sprayed with appropriate herbicide, or a foliar application made to the entire plant. Hand pulling will be utilized when possible with appropriate species in order to minimize herbicide use. Some locations may receive basal bark treatment. Cut stems may be piled to facilitate future potential burning, chipping or removal from site. No replanting will be needed due to significant presence of native vegetation and the native seed bank.

- **Uplands with moderate to heavy infestations:**

  In areas where the exotics occur as monotypic stands or are higher than 50% of the vegetation cover the use of heavy equipment will be utilized in appropriate habitats and during suitable season. Heavy equipment will be chosen so that soil disturbance and compaction are minimized. In areas along ditches where the hydric soils may not be conducive for heavy equipment, hand crews will be used to cut down and remove these plants. The Brontosaurus machinery mulches vegetation in place. Some areas may utilize an excavator, which will pull up the tree/stump (including roots). Tree debris will then either be pile burned, incinerated in a burn box or mulched. Most Australian pines will be cut and pile burned. For follow-up treatment of these areas, application of an appropriate herbicide

mixture to the foliage of any resprouts or seedlings will be made. Land Stewardship staff will evaluate replanting on a case-by-case basis.

- **Wetlands with heavy infestations:**

  At suitable locations, lightweight equipment may be utilized during dry, winter periods or hand crews will need to hike in on foot and either foliar, girdle, or cut-stump treat the exotics with the appropriate herbicide. Follow-up treatments will need to be conducted on at least an annual basis and may eventually decrease to every two years. Where feasible or necessary, biomass may be removed from sites to be piled and burned and/or mulched.

- **Wetlands with light to moderate infestations:**

  Hand crews will need to hike in and either foliar, girdle, basal bark, or cut-stump treat the exotics with the appropriate herbicide. Follow-up treatments will need to be done on an annual basis and may eventually decrease to every 2 years. Where feasible or necessary, biomass may be removed from wetland sites to be piled and burned and/or mulched.

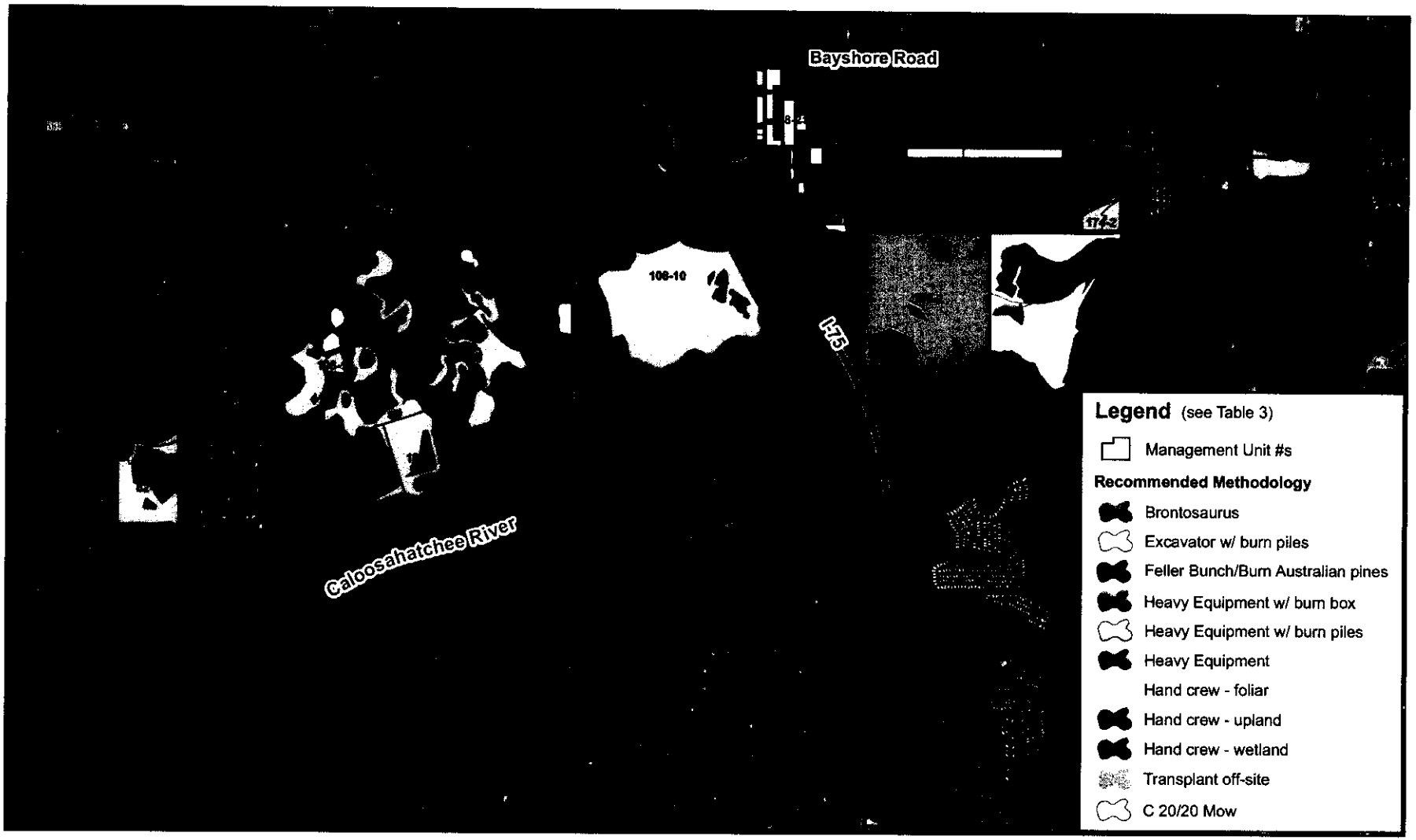
Table 3 identifies recommended invasive non-native (exotic) plant removal methods, associated acreages within the Preserve, and estimated removal costs. Figure 4 is the corresponding preliminary map illustrating the locations to receive the various recommended exotic plant removal methodologies.

Table 3: Invasive Non-native Plant Removal Methods

Removal Method	Acres	Cost/AC *	TOTAL Cost	Comment
Brontosaurus	90	$1800/ac	$162,000.00	
Excavator w/ burn piles	52	$2000/ac	$104,000.00	
Feller Bunch & Burn Australian pines	14	$1500/ac	$21,000.00	
Equipment w/ burn piles	194	$2000/ac	$388,000.00	Excavator or other type equipment
Equipment w/ burn box	57	$2000/ac	$114,000.00	Near I-75
Equipment	53	$1700/ac	$90,100.00	
Hand crew - foliar	15	$500/ac	$7,500.00	
Hand crew - upland	369	$900/ac	$332,100.00	
Hand crew - wetland	352	$1300/ac	$457,600.00	
Transplant off-site	1	$0.00 #	-	Non-native palms
TOTAL	**1197**		**$1,676,300.00**	

Note: * Cost estimates will vary with on site-specific variables.
Letters have been sent to 5 SW FL contractors. A contractor will be selected to pay C20/20 for desired exotic palms that are not on the FL EPPC Invasive Species List. Funds received will be used for purchasing and planting native plants at restored sites.

Figure 4: Invasive Non-native Plant Removal Methods



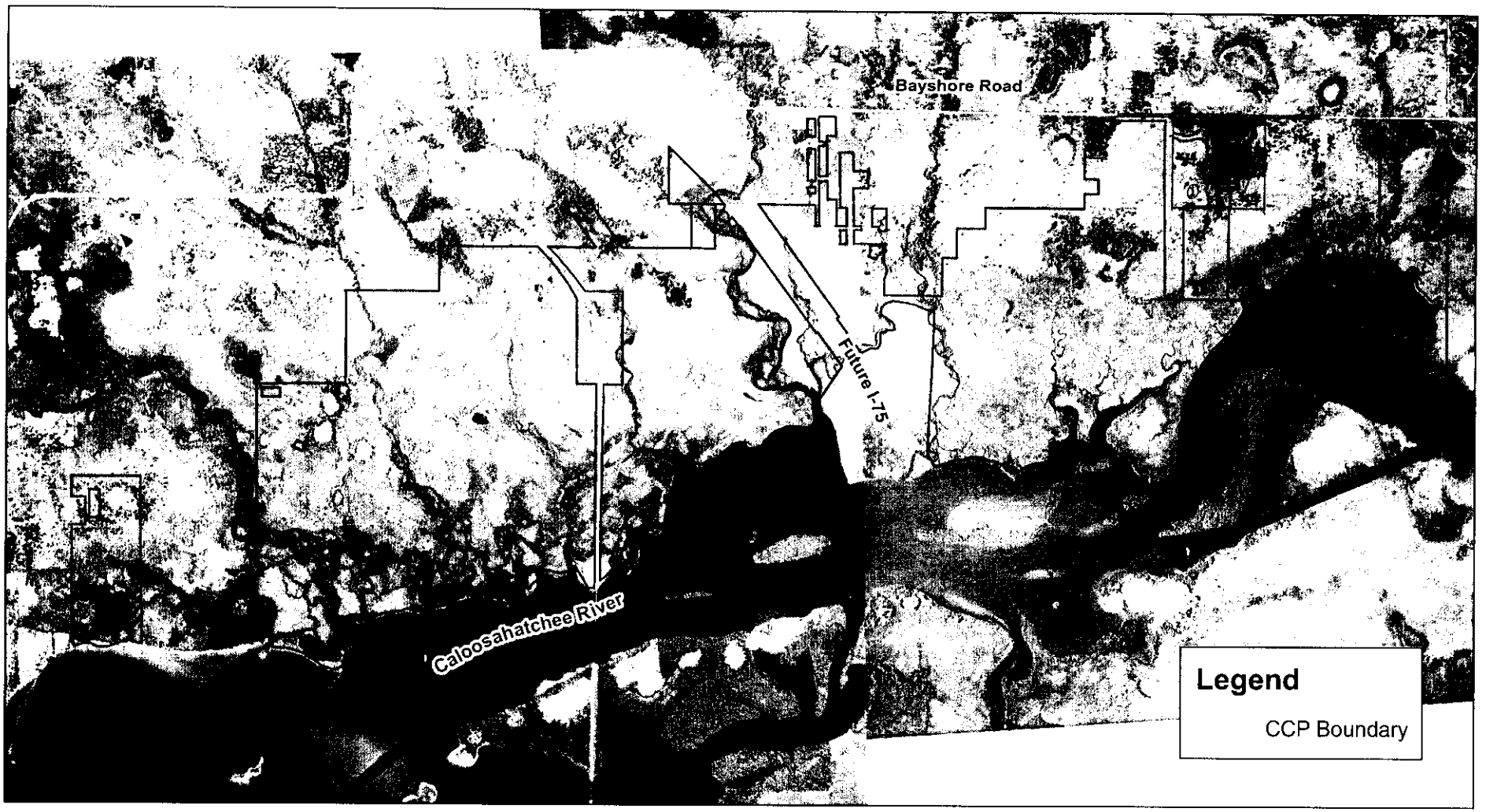
Hydrologic Restoration

Land Stewardship staff has begun preliminary coordination with SFWMD and Lee County Natural Resources representatives for hydrological restoration needs at CCP. Eventually, an engineering consultant will need to be contracted to provide specific proposals for restoration methodologies on the various ditches, canals and berms that may affect water flow on adjacent properties. After funding has been secured, restoration proposals will be provided to SFWMD staff to determine the feasibility of each project and to determine which permits will be required. All permits will be obtained before beginning on-site activities. Figure 5 provides a historical aerial view from 1944 before many of these man-made impacts where performed (I-75, river dredging operation, mosquito ditches, power lines, neighborhoods and roadways). Figure 6 compares the region's watersheds from 1960 and 2000. Note that watersheds no longer cover all areas of CCP, while other un-named 1960 watersheds no longer exist.

Spoil soils (see Figure 7, Caloosa Fine Sands) may be removed to enhance and/or recreate functioning ecosystems at some hydrological restoration sites (mainly Site 108). The soil types map was generated from efforts performed by the Soil Conservation Service (renamed Natural Resources Conservation Service) and documented within the Soil Survey of Lee County, Florida (Henderson, 1984). The subsequent Habitat Restoration section contains additional conceptual information interrelated to hydrological restoration needs. Staff expect that most hydrological restored areas may require some native plantings.

In general, to accomplish hydrological restoration projects, exotic vegetation will first be removed from the berms along the ditches. This will be accomplished with a combination of hand crews and mechanical equipment using the appropriate herbicide. This work must be completed when the water table is low enough to minimize rutting by heavy equipment. The backfilling of ditches/canals shall not include vegetation particularly in the bottom of the ditch to prevent "piping." An example of this type of restoration may be best accomplished at MU 82-3's mosquito ditches. At a minimum, staff recommends planting this restored site with cordgrass (*Spartina bakeri*) to inhibit soil erosion and turbidity from flowing into the Caloosahatchee River. At MU 174's northern edge, the LCEC roadway could use a larger diameter concrete culvert to replace the existing failing culverts. Figure 8 illustrates existing wetlands, hydrologic impact features and prioritized locations recommended for future hydrological restoration measures.

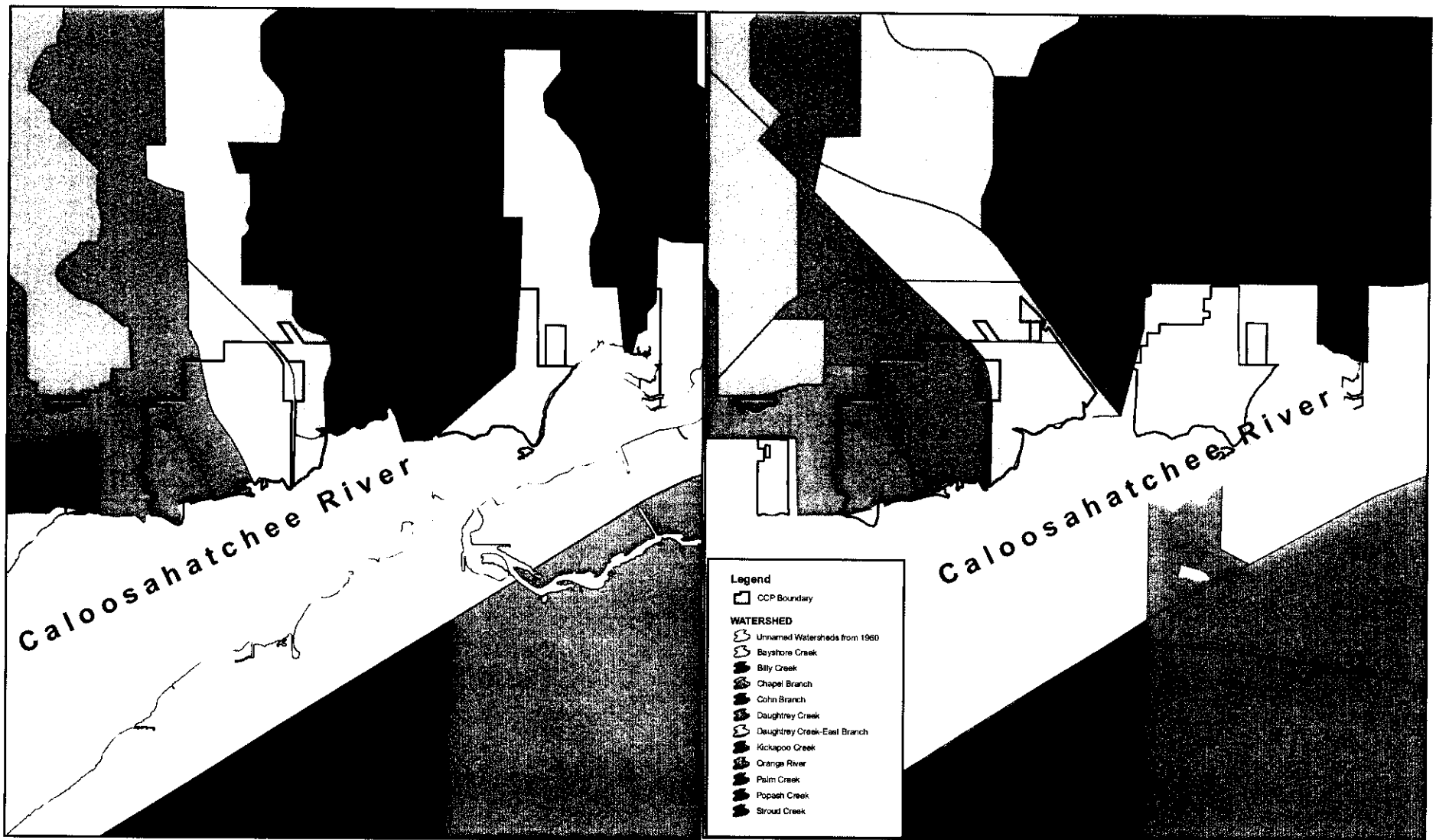
Figure 5: Historical Aerial from 1944



Caloosahatchee Creeks Preserve

0 0.35 0.7 1.4 2.1 Miles

Figure 6: Watersheds: 1960 & 2000



Caloosahatchee Creeks Preserve

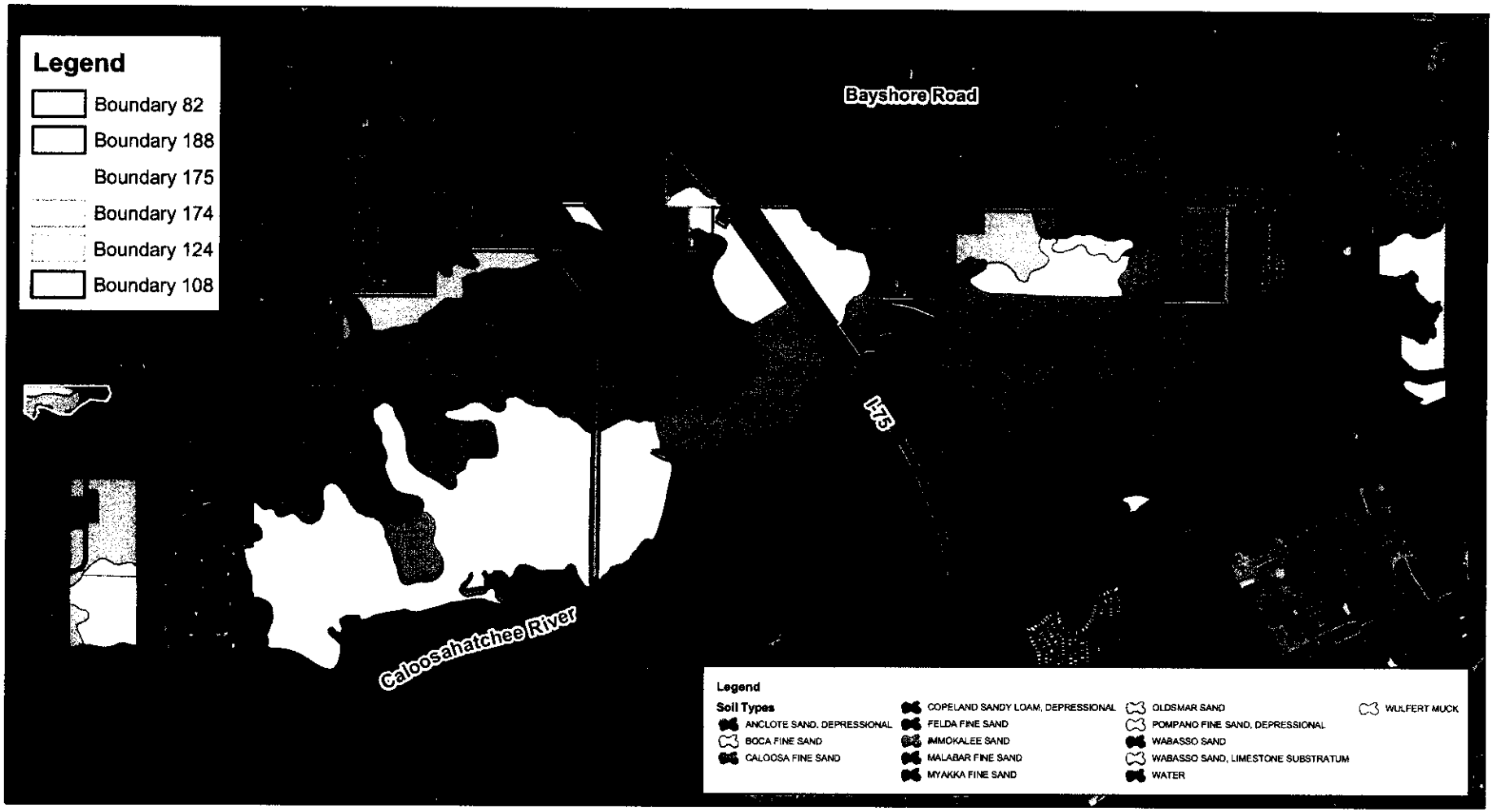
0 0.45 0.9 1.8 2.7 Miles

S:\esri\C2020 ArcView\Caloosahatchee Creeks Preserve\Restoration Plan\watershed 1960 2000.mxd

Map Prepared On: 06/15/05 by sfurman@leegov.com

This is not a survey. Land Stewardship Staff has prepared this map for informational and planning purposes

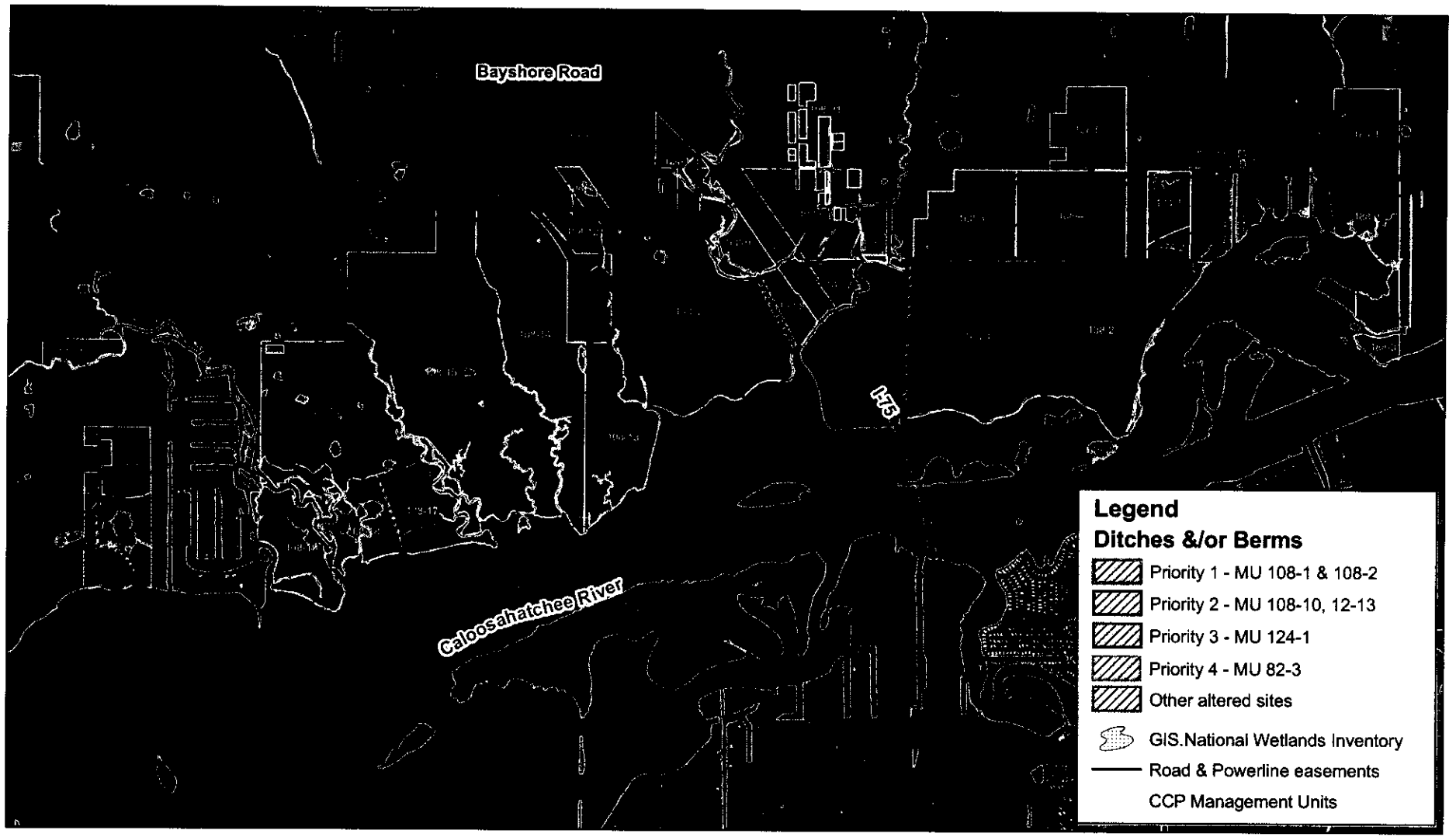
Figure 7: Soil Types



Caloosahatchee Creeks Preserve

0 0.3 0.6 1.2 1.8 2.4 Miles

Figure 8: Wetlands & Hydrological Impacts



Habitat Restoration

Although there are a few improved pasture locations on the Preserve (i.e. 108-5, 108-10, 108-11, 108-12, & 124-1), some have already undergone succession to native and/or exotic plants. All locations will receive exotic plant control treatment. Some locations will support future public facilities (parking, picnicking and other amenities) and the remainders are along power line easements. While CCP doesn't contain fallow agricultural fields, there are several locations that have been impacted by past dredging operations of the Caloosahatchee River during the 1960's. Another site (MU 174) contains an abandoned orange grove bisected by a man-altered creek with a borrow pit-pond on the northern edge. Consequently, extensive habitat restoration projects may occur within MUs that contain FLUCCS codes of 224, 743-UPL and 743-WET. Figure 9 identifies FLUCCS codes of current plant communities on the Preserve.

- **Removal of furrow rows**

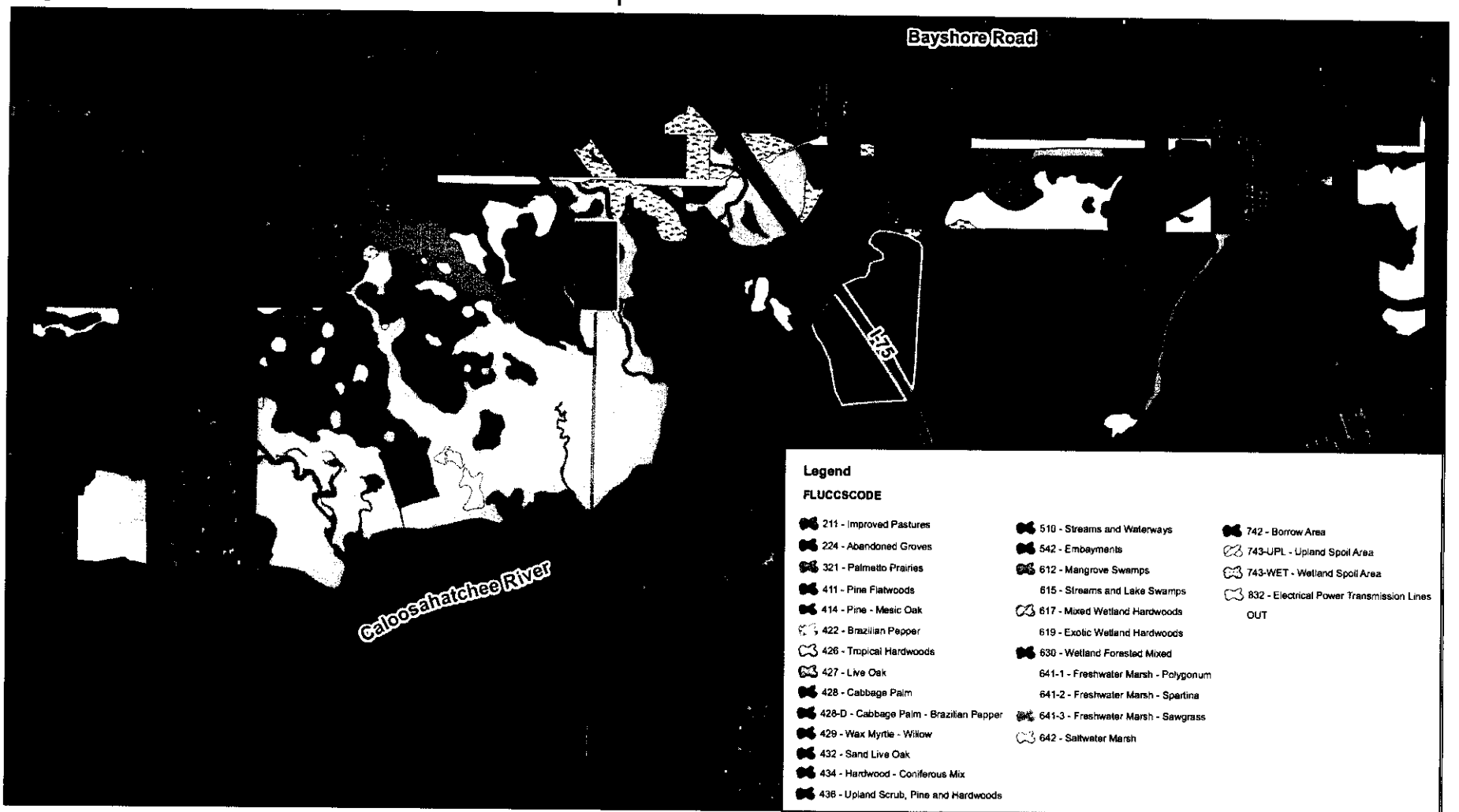
Furrow rows in the abandoned citrus grove of MU 174-1 will be regraded by intermittently leveling the elevated soils. This should allow a mosaic pattern of water to pool, then percolate into ground water instead of allowing several "streams" of water to flow with sediments into the man-altered creek.

- **Creation of uplands & wetlands**

In coordination with several of hydrological restoration sites, some habitat restoration sites could remove spoil soils (previously identified as Caloosa Fine Sands) to enhance and/or create functioning ecosystems. Dependent on acceptable spoil soil characteristics, spoil removed may be sold to area developers with funds used for native plantings. Primarily, this could be along the banks of the river to establish sloping littoral shelves (MUs 108-1, 108-2 & 108-10) and replanting with native plants. Potentially, weir structure(s) could be utilized to capture water to re-hydrate some wetland areas while assisting with the maintenance of exotic plants. At a later date, these would be removed to permit natural tidal fluctuations.

Other upland (inland) spoil areas will be replanted with native species, if needed, after ample time has been given for native plant recruitment. Planting is only projected to occur in portions of MU 108-1.

Figure 9: Plant Communities FLUCCS Map



Prescribed fire management

A prescribed fire program will be implemented to closely mimic the natural fire regimes for each of the different plant communities to increase plant diversity and insure that canopies remain open. Once restoration projects are completed in Management Units that contain fire dependent habitats, a prescribed fire management program will be implemented after the creation of appropriate fire lines/breaks. The timing of prescribed burning will be influenced by seasonal rain and wind patterns. The Conservation 20/20 Burn Team Coordinator is coordinating with the DOF and FWC to develop a C20/20-wide Fire Management Plan (FMP) that will apply to all preserves. See Figure 10 for map of areas with existing or recommended fire breaks/lines along most perimeter boundary lines. The map provides information for line widths, lengths and status (existing (E), need improvement (I), and new (N)). As a precautionary measure, in case of wildfires, lines adjacent to residential neighborhoods should be installed as soon as feasible. Once the FMP is created and the location of interior burn units is determined, additional fire lines may need to be established. Approval from the Division of Historical Resources (DHR) will be needed prior to the installation of any new fire lines since the work will involve soil disturbance within Archaeological Sensitivity Zone 2.

Mechanical brush reduction

Before a prescribed fire is conducted in pine flatwoods or other fire dependent communities of the Preserve, fuel loads may need to be reduced. Pines and/or invading oaks may need to be thinned mechanically in overgrown areas to achieve desired results and to prevent crown fires or intense fires from occurring. See Figure 11 for a map showing areas likely to require mechanical brush reduction activities.

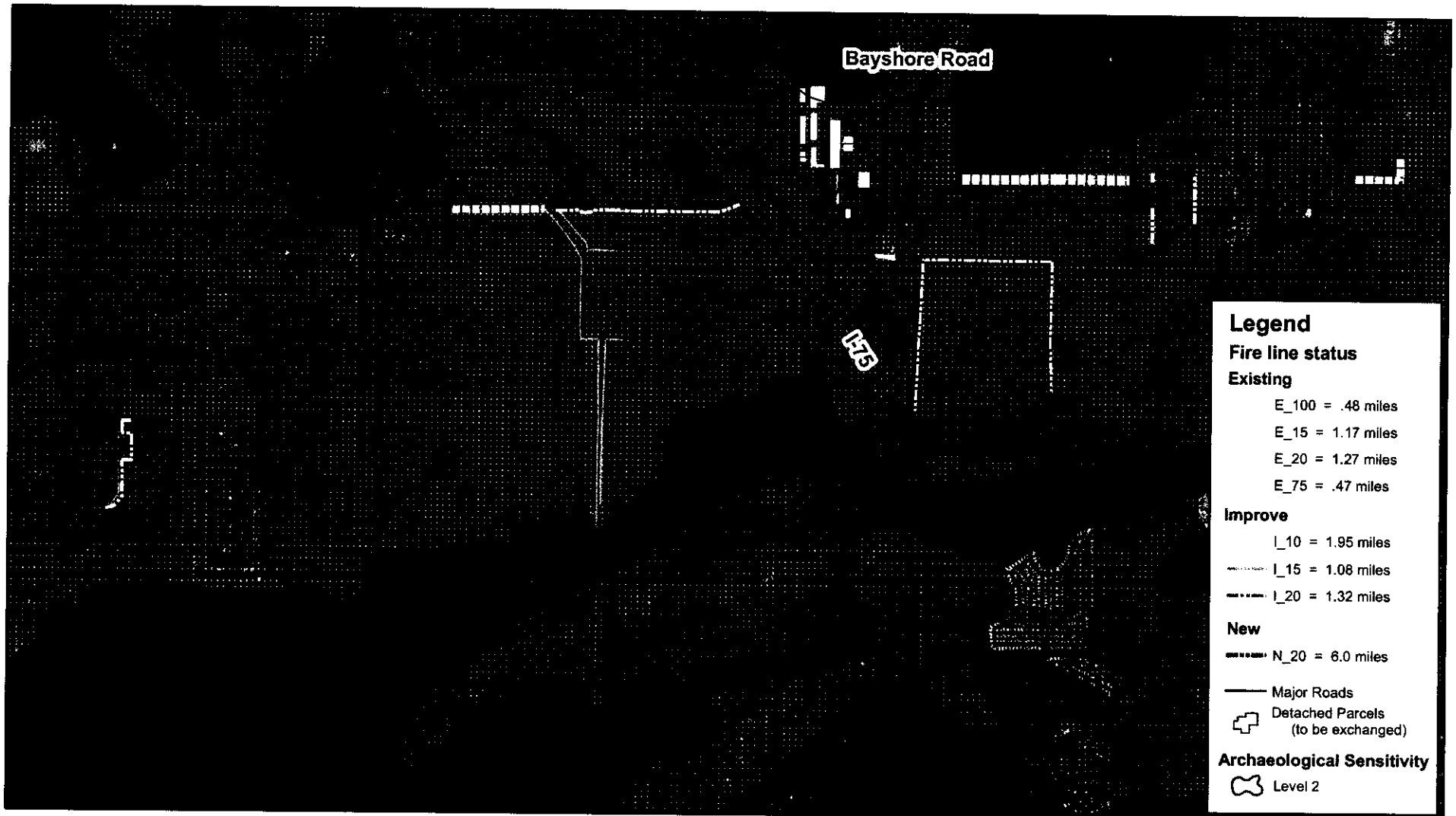
Monitor and protect listed species

As discussed in the CCPMP, several listed species have been documented on the Preserve. The Preserve will be managed in a manner that protects and enhances habitat for listed wildlife species that utilize or could potentially utilize the Preserve, including the gopher tortoises, tricolored herons (*Egretta tricolor*), and alligators. For the most part, these species will benefit from restoration activities, such as hydrologic improvements and the removal/control of invasive non-native plants. During restoration activities, efforts will be made to minimize any negative impact to listed species. Specific examples of this will utilize heavy equipment in the cooler months near gopher tortoise burrows when tortoises are less active and avoid or relocate listed plant species found on the Preserve.

CCP is part of a countywide quarterly site inspection program conducted for all Conservation 20/20 Preserves. A copy of the general site inspection form is available in the LSOM, although more site-specific forms have been created.

These inspections allow staff to monitor for any impacts and/or changes to each preserve and includes lists of all animal sightings and new plant species that are found. If, during these inspections, staff finds FNAI listed species, they will be reported using the appropriate forms located in the CCPMP.

Figure 10: Existing & Recommended Fire Lines/Breaks



Caloosahatchee Creeks Preserve

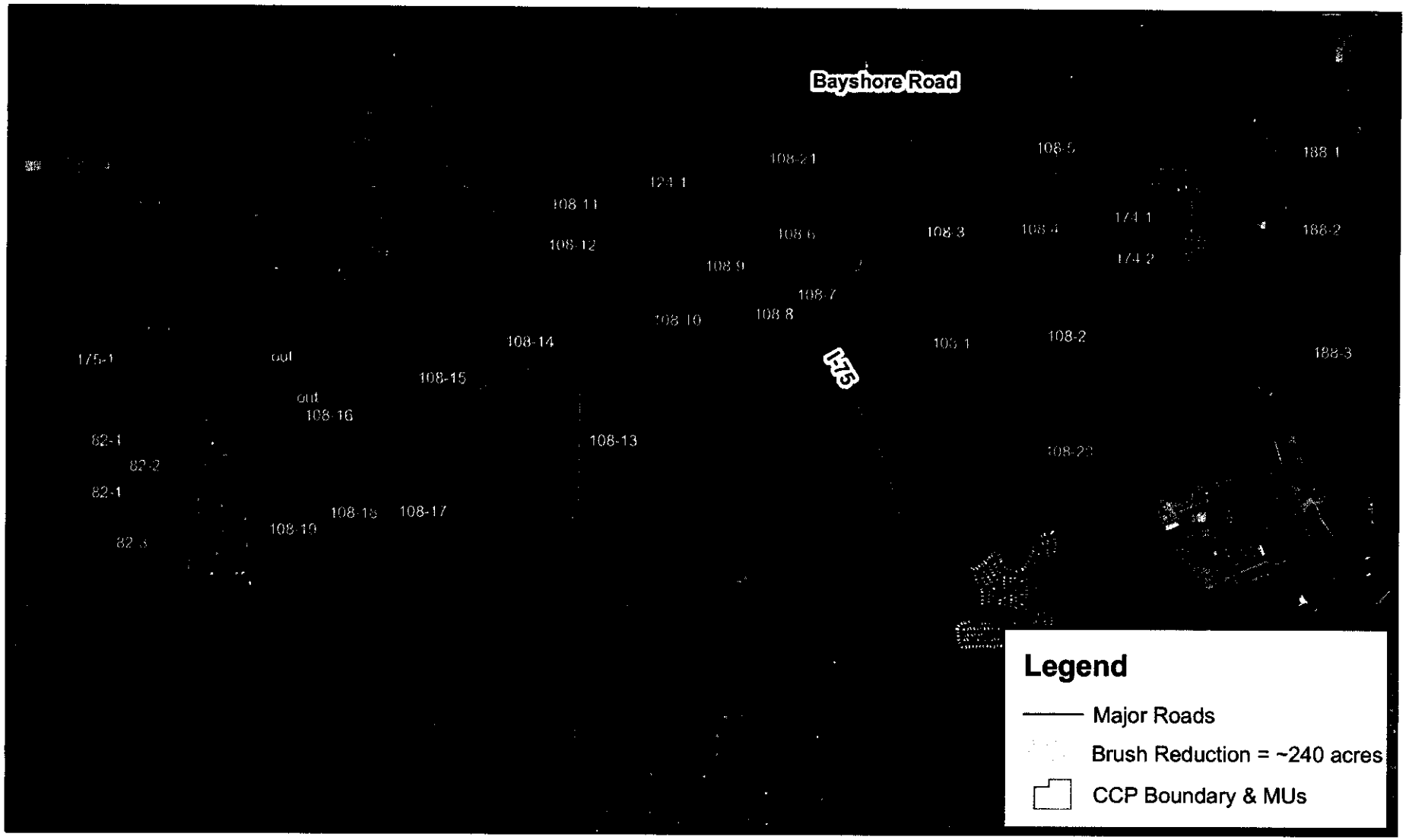
0 0.4 0.8 1.6 2.4 Miles

S:\esri\C2020 ArcView\Caloosahatchee Creeks Preserve\ Restoration Plan\Rx_fire.mxd

Map Prepared on: 03/08/05, by sfurnari@leegov.com

This is not a survey. Land Stewardship Staff has prepared this map for informational and planning purposes

Figure 11: Potential Mechanical Brush Reduction Areas



Caloosahatchee Creeks Preserve

0 0.375 0.75 1.5 2.25 Miles

S:\esri\C2020 ArcView\Caloosahatchee Creeks Preserve\Restoration Plan\brush_reduction.mxd

Map Prepared on: 03/17/05, by sfurnari@leegov.com

This is not a survey. Land Stewardship Staff has prepared this map for informational and planning purposes.

Photo point installation

A minimum of six (6) photo points (PPs) will be established (Figure 12). Two (2) were already created for the FCT grant. Most PPs will be created at restoration project sites before work begins. A pre-restoration photo will be taken, followed by post restoration photos. Additional follow-up restoration photos will be taken during the growing season for 5 years from completion of the project to document transformations. Photos will be taken as needed from then on or the PPs removed. PPs will be installed in these MUs for the following objectives:

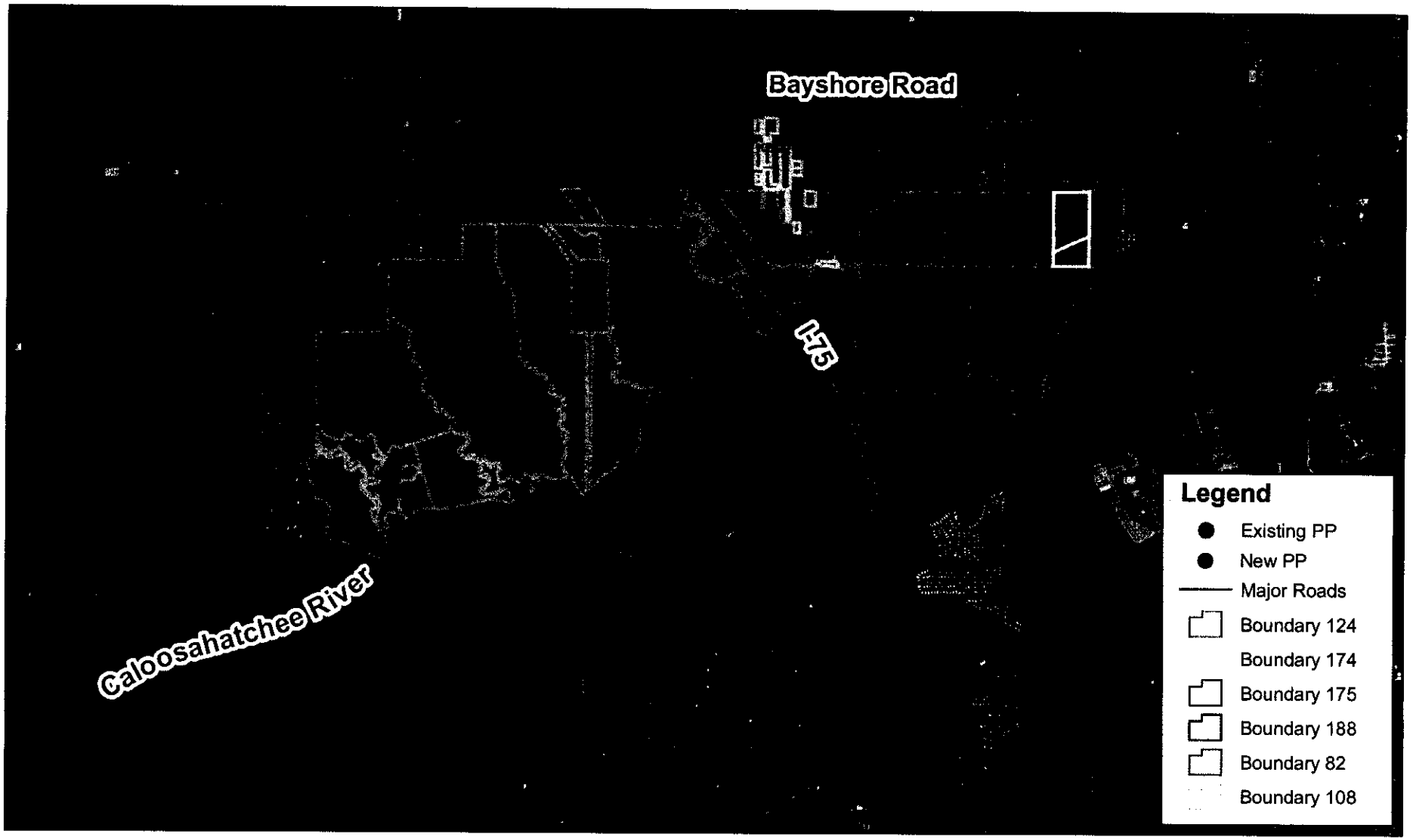
- ✓ **Unit 82-3** – Monitor exotic plant removal and hydrological restoration of mosquito ditches.
- ✓ **Unit 174-1** – Within abandoned orange grove: to monitor removal of furrow rows/habitat restoration efforts.
- ✓ **Unit 108-1 (existing) –** Comparison between exotic plant removal equipment techniques and native vegetation recruitment.
- ✓ **Unit 108-2** – Comparison between exotic plant removal equipment techniques and native vegetation recruitment.
- ✓ **Unit 108-4 (existing)** – Exotic plant removal efforts.
- ✓ **Unit 188-1** – Removal of exotic plants, installation of perimeter fire line, reduction of overgrown vegetation and removal of ladder fuels from slash pines (*Pinus elliottii*).

Ground/surface water and soil testing

The environmental consultant identified a couple of buried debris sites during the preliminary Phase I environmental site assessment evaluation for MU 174-1. One of the sites included several empty 55-gallon oil drums and three (3) broken vehicle batteries. Although the items were subsequently removed, they recommended additional groundwater and soil testing.

Within this same unit, an unnamed stream travels south through a mobile home and recreational vehicle park and empties into the borrow pit. The borrow pit contains a large amount of algae, so staff recommends water quality testing to ensure that pollutants are not entering the Preserve or the Caloosahatchee River. If the Lee County Environmental Lab is unable to perform testing for this C20/20 project site, then Land Stewardship staff will coordinate with an environmental testing firm to perform supplemental testing.

Figure 12: Photo Point Stations



Targeted exotic animal removal

- Feral hogs

Currently the only acceptable method of feral hog (*Sus scrofa*) removal on Conservation 20/20 Preserves is trapping. An active hog-trapping program has been implemented at other C20/20 Preserves and will be included at selected CCP locations in the near future. Removing all hogs is an unreasonable goal; therefore a removal program will need to be continuous on a long-term basis. During quarterly site inspections, staff will determine the location with the greatest need for trapping.

- Exotic amphibians and reptiles

Staff will investigate feasibility to control exotic amphibians (i.e. Cuban treefrog (*Osteopilus septentrionalis*) and brown anole (*Anolis sagrei*)) on the Preserve. If practical, a methodology will be implemented.

- Peacocks and other wayward critters

On several occasions, a neighbor's peacocks (*Pavo spp.*) have trespassed onto C20/20 property and attacked contractors' vehicles. Although the owner has informed staff that we could "shoot them," this is not an appropriate control measure. An innovative means of removal will need to be adopted. Peacocks are not within the Lee County Animal Services directives.

Annual Stewardship Report

As part of complying with the Florida Communities Trust grant contract for CCP (see CCPMP & FCT Project #01-031-FF1), a Land Stewardship staff member is responsible for preparing an Annual Stewardship Report. The Annual Stewardship Report is due on January 30th of each year, which evaluates the implementation of the Management Plan. Land Stewardship staff will seek FCT's approval for any proposed modification to the Management Plan and/or prior to undertaking any site alterations or physical improvements that are not addressed in the approved CCP Management Plan.

Update CCPMP (create LSP)

The initial CCPMP was produced by a consultant using the FCT's management plan format and only comprised of information for Site #108, approximately 85% of the Preserve. The five-year update for the CCPMP is due October 2007 and will incorporate all parcels and use the adopted Lee County Parks and Recreation Land Stewardship Plan's format.

Outside Consultants

Environmental/engineering

Environmental and/or engineering consultants will need to be hired to perform all or most aspects for the hydrological restoration projects. Land Stewardship staff has already met with Lee County Natural Resources and SFWMD representatives to discuss possible hydrological restoration projects for CCP. A supplementary meeting is being scheduled to discuss future funding opportunities.

Facilities construction

A consulting firm was hired to develop design plans, apply for appropriate permits, oversee construction of public facilities and install additional items listed within the CCPMP's Site Development, Improvements & Access section.

Boundary re-survey & stake

There are a couple of locations at CCP that are experiencing encroachment issues from adjacent neighbors and will benefit from properly marked boundaries. County boundary lines need to be established before any type of work can begin in areas that lack clear boundaries. If C20/20 staff are not able to locate a sufficient level of boundary survey markers, a surveyor may need to be hired to install additional/replacement markers at unconfirmed perimeter boundary locations.

Overall Protection

Debris removal and Prevention of dumping

Debris removal will be an ongoing project at CCP. During quarterly site inspections, small objects that are encountered will be removed. Existing debris is present in several Management Units that will need to be removed with heavy equipment and/or a dump truck. If necessary, additional debris clean-ups will be organized with the Parks and Recreation Land Stewardship staff and volunteers.

Land Stewardship staff recognizes that new debris may be dumped in the Preserve periodically. Illegally dumped debris will be dealt with accordingly.

Boundary fence installation and repair

Currently, most of the Preserve is fenced to prevent activities such as dumping and use of motorized vehicles on the Preserve. Some of the existing fencing is in disrepair and will be repaired on a prioritized schedule and when time permits. As restoration takes place, fence repairs will be made. Additional boundary fencing and signage will be added as necessary to further protect areas of the Preserve. New fencing projects include, but are not limited to:

- Fencing MU 175-1, northern and western boundaries, will need to occur after possible "restitution" work is completed from a neighbor that illegally removed vegetation and brought in fill dirt to elevate a low-lying, seasonally hydric area.
- MUs 82-1 & 82-2 may require perimeter fencing, if additional encroachment/dumping become problematic.
- MU 108-16, northern and western boundaries. MU 108-10, northern line between MUs 108-11 & 124-1, to prevent neighbors and/or cattlemen from accessing the Preserve.

Boundary sign installation

Boundary signs will be installed to further protect the Preserve. Missing or damaged signs will be replaced. Signs will be placed every 300-500' and the lettering size of the word "BOUNDARY" will be 2 inches, to make our boundary posting legally enforceable.

Removal of cattle

An active cattle lease remains in Management Unit 108-10 & 108-12 of the Preserve, which primarily consists of improved pasture along a LCEC right-of-way easement. Although the FCT Grant Agreement didn't specify removal of cattle, this will need to be done before activities for the western trail system can be performed before opening to the public. Moreover, a representative with Seminole Gulf Railway has relayed to Land Stewardship staff that cattle have gotten loose on many occasions on the railroad and along Bayshore Road creating a hazardous situation for the public, trains, and cattle. Staff recommends that once the lease expires in September 2005; it not be renewed. A notice of termination will be sent to the cattleman.

Exchange and disposition of detached residential parcels

Land Stewardship staff has already coordinated with County Lands staff concerning the identification and probable disposition of ~14 acres of detached parcels (surplus) within the residential East Lake Colony subdivision. One parcel, at the end of Tarpon Way, is currently under contention with an adjacent waterfront homeowner that built a dock and ramp on C20/20 property. The

disposition of any of these parcels would be "conditional" in that we still maintain legal access to adjacent areas of the Preserve. The Tarpon Way access would be important to keep if we acquire ownership and management of the bordering SFWMD property. As a condition of the FCT grant, County Lands staff is looking for adjacent environmentally sensitive parcels to acquire in exchange for removing the detached residential parcels from the CCP boundary. These residential parcels may then be disposed of.

Change zoning category

CCP's Future Land Use category has already been changed to "Conservation Lands." After the exchange for more suitable lands and disposition of residential parcels is complete, staff will coordinate with Lee County Planning Division representatives to reclassify the assortment of zoning categories to "Environmentally Critical."

Public Use

Facilities construction

- There will be two facilities created for public use at MU 124-1 and MU 108-5. Both will include pervious parking areas, hiking trails, boardwalks, observation decks, and informational kiosks. Additional amenities such as picnic tables, bike racks, composting toilets, and wildlife resistant trash receptacles will be located in the vicinity of the entrances parking areas. The western access will include an additional amenity for a canoe/kayak launch. See CCPMP for the original Master Site Plan map and the two existing facilities grants for additional detailed information.
    - ✓ Land and Water Conservation Fund grant (West Park) to be completed by December 2007.
    - ✓ Recreational Trails Program grant (East Park) to be completed by February 2007.

- Neighborhood access has already been allowed at MU 175-1 & MU 82-2. After fencing is installed, access points and signage will need to be incorporated for continued resource-based neighborhood use.

Educational sign installation

At the entrance to both public use facilities, a Preserve sign (minimum size of 4' x 6') will be installed that welcomes visitors to the Preserve, shows the shape of the Preserve, trail maps and lists the general rules of the Preserve. Other interpretative signs along the trail will list some of the plants and animals found on the Preserve. Depending on the location, the signs will either identify Florida Communities Trust, Land and Water Conservation Fund, and/or Recreational

Trails Program, as partners in the funding of land acquisition or the public facilities projects.

Habitat restoration signs will be posted along the trails to educate visitors about land stewardship activities that have occurred to assist restoration of the ecosystem. Likewise, these signs will give acknowledgment to restoration-funding partners such as SFWMD, USFWS, Bureau of Invasive Plant Management, Department of Corrections, and other future cooperative agencies and organizations.

Volunteers

Work with volunteer group(s)

The LSOM identifies the Land Stewardship Volunteer Program's mission statement as:

> *To aid in the management and preservation of Lee County resource-based public parks and preserves and to provide volunteers with rewarding experiences in nature.*

Staff will work with a volunteer group(s) for CCP to assist with the many diverse stewardship activities that will be associated with this Preserve such as trail maintenance, wildlife monitoring, and other land stewardship projects. One enthusiastic kayaking neighbor has already expressed an interest in becoming a volunteer group member. In addition, several neighbors that petitioned the C 20/20 Program to acquire adjacent conservation lands should be encouraged to form local volunteer groups to help maintain nearby CCP lands.

The following "Prioritized Projected Timetable for Implementation" is based on obtaining necessary funding for numerous land stewardship projects. Implementation of these goals may be delayed due to changes in staff, extreme weather conditions or a change in priorities on properties managed by Lee County.

IV. Prioritized Projected Timetable for Implementation

Prioritized Projected Timetable for Implementation of the Management Action Plan (March 2005 – December 2009)

Natural Resource Management																				
Exotic Plants																				
Initial Exotic Plant Control	108-1&2			108-1&2, 20	108-3-5	174-1, 188-1		124-1, 108-10	108-11&12	174-2, 188-2&3		82-3, 175-1	82-1&2, 108-16-19			108-13-15	108-6&7			108-8&9
Supplemental Plantings							108-1													
Hydrology																				
Hydrologic Restoration – LCEC Roads																	174-1			
Hydrologic Restoration – Other Ditches & Berms								108-1&2				108 – 10,12-13	124, 82-3			188-1&2	174-1			Others in 108 →
Habitat Restoration – Furrow Grove																				
Regrade grove rows					174-1															
Habitat Restoration - Creation of UPL & WETL																				
Remove spoil soils & create littoral shelves									108-1&2				108-10							
Plantings										108-1&2				82-3, 108-10						
Fire																				
Prescribed Fire Management				Plan complete				108-5	188-1			108-3	108-10			174-1, 82-1&2	108-16			108-14-15
Create fire breaks					X	→														
Mechanical Brush Reduction							X	→												
Maintenance (On-going/Annual)																				
Follow Up exotic plant treatment								108-1&2, 20	108-3-5	174-1, 188-1		124-1, 108-10, 1, 2, 20	108-11,12,3-5	174-1&2, 188-1-3		82-3, 175-1, 124,108-10,1,2,20	82-1&2, 108-16-19,11,12, 3-5	174-1&2, 188-1-3		108-13-15,10,1,2, 20, 82-3, 175, 124
Exotic animal removal								X												
Supplemental soil & surface water testing				174-1																
Quarterly site inspections	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Flora & fauna monitoring	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Photo point monitoring surveys			Install 108-2 & 174-1, 108-1 & 4		Install 188-1		108 1,2,4 174-1		188-1	Install 82-3	108 1,2,4 174-1	188-1		82-3	108 1,2,4 174-1		188-1	82-3	108 1,2,4 174-1	188-1

Annual Stewardship Report				X				X				X				X				X
Update CCPMP (create LSP)											X									
Outside Consultants																				
Environmental Consultant					108 E				108 W	124, 82			188, 174			Others in 108				
Permitting						108 E				108 W	124, 82			188, 174			108			
Boundary re-survey & stake		175		X																
Overall Protection																				
Debris removal – General	On-going	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Improvements on fencing & gates					X															
Boundary sign installation					X															
Archaeological coord. w/ DHR				X																
Cattle removal			End lease																	
Exchange and disposition of residential parcels										X										
Change zoning categories													X							
Public Use																				
Creation of Public Access & Parking							EP 108-5	→	WP 124-1	→										
Create trail								108-3&4	124-1, 108-10											
Boardwalk installation								EP	→		WP	→								
Educational sign installation									EP			WP								
Installation of additional items									EP			WP								
Volunteers																				
Work with Volunteer group(s)												X								

Key:

Numbers correspond to Management Units and details on each management activity are found in the Management Action Plan.

EP – East Park WP – West Park

Timetable based on obtaining necessary funding for numerous land stewardship projects. Implementation of these goals may be delayed due to changes in staff, extreme weather conditions or a change in priorities on properties managed by Lee County.

V. Financial Considerations

There is a management fund established in perpetuity for all Conservation 20/20 Preserves. Monies from this fund will be available for all aspects of designing and constructing the public use facilities, as well as for planned restoration projects and management in perpetuity at CCP. Grants have already been obtained for public use facilities from the Land and Water Conservation Fund (sponsored by National Park Service) and the Florida Department of Environmental Protection (DEP) Recreational Trails Program. Additional sources of funding from a Capital Improvement Project, the Florida Recreation Development Assistance Program (FRDAP) and/or other grants should be sought.

In addition, FCT reimbursement funds may be utilized for the creation of public facilities, habitat restoration and other land stewardship activities. Restoration funds have been obtained from SFWMD and Partners for Wildlife (U. S. Fish and Wildlife Service-USFWS). Additional monies will be supplemented through pursuing appropriate grants or other sources of funding, such as but not limited to; grants from DEP Bureau of Invasive Plant Management, SFWMD, West Coast Inland Navigation District, and local government sponsored mitigation projects.

VI. Projected Costs and Funding Sources

Structures & Improvements

West Park - Pop Ash Creek		
Item	Possible Funding Sources	Estimated Cost
Hire Consultant for Design and Permitting of Facilities	Conservation 20/20, Land and Water Conservation Fund, Lee Co. Parks & Recreation, and other appropriate grants.	$30,950
Wildlife Observation Area		$10,000
Crushed Shell at Parking (24' x 50' w/ 9P + 1HC)		$7,500
6 Picnic Tables		$840
Clearing for New Trail		$6,500
1430' of Mulched Trail		in house
1090' of Boardwalk		$275,000
Restroom Facilities (Clivus Multrum composting)		$50,000
4 Wildlife Resistant Trash Bins		$1,200
Canoe/kayak Launch		$52,000
Bike Rack		$300
4 Interpretive Signs		$16,000
12 Trail Markers		$2,400
4 Waterway Markers		$2,400
Main Entrance (grass lot, parking stops, post and rail fence and automatic gates)		$19,800
		$474,890

East Park - Stroud Creek		
Item	Possible Funding Sources	Estimated Cost
Consultant for D and P of Facilities	Conservation 20/20, Recreational Trails Program, Lee Co. Parks & Recreation, Lee Co. Tourist Dev. Council, and other appropriate grants.	included in WP fees
Wildlife Observation Area		$10,000
Crushed Shell at Parking (24' x 100' w/ 9P + 1 HC)		$15,000
8 Picnic Tables w/ 40 x 40 shelter		$13,000
Clearing for New Trail		$12,000
4440' of Mulched Trail		in house
3010' of Boardwalk		$752,000
Restroom (Clivus Multrum composting)		$15,000
Wildlife Resistant Trash Bins		$1,200
Bike Rack		$300
4 Interpretive Signs		$16,000
12 Trail Markers		$2,400
Main Entrance (grass lot, parking stops, post and rail fence and automatic gates)		$19,800
		$856,700

Resource Enhancement & Protection

Item	Possible Funding Sources	Estimated Cost
Initial Invasive Exotic Plant Removal on Natural Areas	Conservation 20/20, SFWMD, USFWS, DEP - Bureau of Invasive Plant Management, West Coast Inland Navigation District, Tourist Development Council, and/or mitigation projects.	$1,676,300
Hydrological & Habitat Restoration Projects		$850,000
Mechanical Brush Reduction		$24,000
Fence Repairs		$15,000
Survey Boundary		$16,500
Fence Installation (15,000lft)		$80,000
Removal of Large Trash		$4,400
Removal of Interior Fencing		$1,000
Fire Break Construction		$45,000
Archaeological Resource Protection		$8,500
		$2,720,700

Other Signage

Item	Possible Funding Sources	Estimated Cost
Boundary Signs	Conservation 20/20	$2,500
Closed Trail Signs		$1,000
		$3,500

TOTAL COST ESTIMATE $4,055,790

Site Management & Maintenance

Item	Possible Funding Sources	Estimated Cost
Exotic Plant Control	Conservation 20/20 and/or DEP - Bureau of Invasive Plant Management	$75,000 per year
Prescribed Fire Regime	Conservation 20/20 and/or Lee County Parks & Recreation	in house
Trail Maintenance		$10,000 per year
Repairs From Vandalism of Facilities		$5,000 per year

Yearly Maintenance Estimate **$90,000**

All costs are rough estimates based on information currently available and are subject to change. Every effort will be made to not exceed this budget by more than 10%.