A Conceptual Management Plan

for

FRED C. BABCOCK-CECIL M. WEBB

WILDLIFE MANAGEMENT AREA

2003 - 2008

Charlotte and Lee Counties, Florida

Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, Florida
32399-1600

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

August 19, 2003

Mr. Hugh Boyter
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, FL 32399-1600

Re: Fred C. Babcock – Cecil M. Webb Wildlife Management Area
Lease Number: # 4095

Dear Mr. Boyter:

On **August 15, 2003**, the Acquisition and Restoration Council recommended approval of the Land Management Plan for **Fred C. Babcock – Cecil M. Webb Wildlife Management Area**. Therefore, the Office of Environmental Services, acting as agent for the Board of Trustees of the Internal Improvement Trust Fund approves this plan. Pursuant to Section 253.034 and 259.032, Florida Statutes, and Chapter 18-2, Florida Administrative Code the plan's five-year update will be due on **August 15, 2013**.

Approval of this land management plan does not waive the authority or jurisdiction of any governmental entity that may have an interest in this project. Implementation of any upland activities proposed by this management plan may require a permit or other authorization from federal and state agencies having regulatory jurisdiction over those particular activities.

Sincerely,

Delmas T. Barber

Delmas T. Barber, OMC Manager
Office of Environmental Services
Division of State Lands

A Conceptual Management Plan

For

Fred C. Babcock-Cecil M. Webb

Wildlife Management Area

Charlotte County, Florida

Owned by: Board of Trustees and Florida Fish and Wildlife Conservation Commission

Managed by: Florida Fish and Wildlife Conservation Commission

July 2003

Approved

Frank Montalbano III, Director
Division of Wildlife

LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Land Agency: Fish and Wildlife Conservation Commission (FWC)
Common Name of Property: Wildlife Management Area
Location: County, Florida

Acreage Total: 75,260

Acreage Breakdown:	**Land Cover Classification**	**Acreage**
Natural Communities	Dry Prairie	29,351 (39%)
	Pineland	19,568 (26%)
	Mixed Pine/Hardwood	31 (0.0%)
	Hardwood Hammock	1,505 (2%)
	Wet Prairie/Freshwater Marsh	13,547 (18%)
	Cypress Swamp	1,146 (1%)
	Open water	2,258 (3%)
Disturbed Areas	Grasslands (disturbed)	3,736 (5%)
	Shrub and brush	2,412 (3%)
	Barren land	1,706 (2%)

Lease/Management Agreement No.: 4095

Use: Single _____
Multiple X

Management Responsibilities:

Agency	Responsibilities
FWC	LEAD, SUBLESSEE (Wildlife management, resource protection, law enforcement)

Designated Land Use: Wildlife Management Area
Sublease (s): None on Trustee's land; Boy Scout Camp, water treatment plant (City of Punta Gorda), water well field (DOC).
Contract(s): Northern bobwhite population study
Encumbrances: None
Type Acquisition: Federal Aid in Wildlife Restoration Act (Pittman - Robertson) , CARL, Preservation 2000 Inholdings and Additions, Florida Forever
Unique Features: Natural: Extensive South Florida pine flatwoods
Archaeological/Historical One heavily disturbed site; low probability of significant unrecorded sites
Management Needs: Continued inventory of fish, wildlife, and plant species; management of natural communities; recreation management
Acquisition Needs/Acreage: Florida Forever Charlotte Harbor Flatwoods project; Babcock Ranch
Surplus Lands/Acreage: None
Public Involvement: Management Advisory Group consensus building meeting, and Public Hearing

DO NOT WRITE BELOW THIS LINE (FOR DIVISION OF STATE LANDS USE ONLY)

ARC Approval Date _____ BTIITF Approval Date: _____
Comments: _____

18-2.021 Land Management Advisory Council.	
(4) Management Plans. Plans submitted to the division for council review under the requirements of Section 253.034 F.S. should contain where applicable to the management of resources the following:	
1. The common name of the property.	1
2. A map showing the location and boundaries of the property plus any structures or improvements to the property.	2
3. The legal description and acreage of the property.	55
4. The degree of title interest held by the Board, including reservations and encumbrances such as leases.	5
5. The land acquisition program (e.g., C. A. R. L., E. E. L., Save Our Coast), if any, under which the property was acquired.	1, 4
6. The designated single use or multiple use management for the property, including other managing agencies.	4
7. Proximity of property to other significant State, local, or federal land or water resources.	3, 6
8. A statement as to whether the property is within an aquatic preserve or a designated area of critical State concern or an area under study for such designation.	27
9. The location and description of known and reasonably identifiable renewable and non-renewable resources of the property including, but not limited to, the following:	---
A. Brief description of soil types, using U. S. D. A. maps when available;	9-11
B. Archaeological and historical resources;	28
C. Water resources including the water quality classification for each water body and the identification of any such water body that is designated as an Outstanding Florida Waters;	27
D. Fish and wildlife and their habitat;	15-25
E. State and federally listed endangered or threatened species and their habitat;	25
F. Beaches and dunes;	28
G. Swamps, marshes and other wetlands;	15, 27
H. Mineral resources, such as oil, gas and phosphate;	27
I. Unique natural features, such as coral reefs, natural springs, caverns, large sinkholes, virgin timber stands, scenic vistas, and natural rivers and streams; and	NA
J. Outstanding native landscapes containing relatively unaltered flora, fauna, and geological conditions.	28

10. A description of actions the agency plans, to locate and identify unknown resources such as surveys of unknown archaeological and historical resources.	28-84
11. The identification of resources on the property that are listed in the Natural Area Inventory.	138
12. A description of past uses, including any unauthorized uses of the property.	28
13. A detailed description of existing and planned use(s) of the property.	28-53
14. A description of alternative or multiple uses of the property considered by the managing agency and an explanation of why such uses were not adopted.	30
15. A detailed assessment of the impact of planned uses on the renewable and non-renewable resources of the property and a detailed description of the specific actions that will be taken to protect, enhance and conserve these resources and to mitigate damage caused by such uses.	28-53
16. A description of management needs and problems for the property.	43
17. Identification of adjacent land uses that conflict with the planned use of the property, if any.	45
18. A description of legislative or executive directives that constrain the use of such property.	4
19. A finding regarding whether each planned use complies with the State Lands Management Plan adopted by the Trustees on March 17, 1981, and incorporated herein by reference, particularly whether such uses represent "balanced public utilization", specific agency statutory authority, and other legislative or executive constraints. A copy of the plan may be obtained by writing to the Department of Environmental Protection, Division of State Lands, Bureau of Land Management Services, 3900 Commonwealth Boulevard, Mail Station 130, Tallahassee, Florida 32399-3000.	29
20. An assessment as to whether the property, or any portion, should be declared surplus.	30
21. Identification of other parcels of land within or immediately adjacent to the property that should be purchased because they are essential to management of the property.	7-8
22. A description of the management responsibilities of each agency and how such responsibilities will be coordinated, including a provision that requires that the managing agency consult with the Division of Archives, History and Records Management before taking actions that may adversely affect	53

archaeological or historic resources.	
23. A statement concerning the extent of public involvement and local government participation in the development of the plan, if any, including a summary of comments and concerns expressed.	9, 74
Additional Requirements—Per Trustees	
24. Letter of Compliance of the management plan with the Local Government Comprehensive Plan.	52
253.034 State-Owned Lands; Uses. —	
(5) Each entity managing conservation lands shall submit to the Division of State Lands a land management plan at least every 5 years in a form and manner prescribed by rule by the board.	
25. All management plans, whether for single-use or multiple-use properties, shall specifically describe how the managing entity plans to identify, locate, protect and preserve, or otherwise use fragile nonrenewable resources, such as archaeological and historic sites, as well as other fragile resources, including endangered plant and animal species.	28-53
26. Provide for the conservation of soil and water resources and for the control and prevention of soil erosion.	53
27. Land management plans submitted by an entity shall include reference to appropriate statutory authority for such use or uses and shall conform to the appropriate policies and guidelines of the state land management plan.	4, 29
28. All land management plans for parcels larger than 1,000 acres shall contain an analysis of the multiple-use potential of the parcel, which analysis shall include the potential of the parcel to generate revenues to enhance the management of the parcel.	30
29. Additionally, the land management plan shall contain an analysis of the potential use of private land managers to facilitate the restoration or management of these lands.	52
253.036 Forest Management. —	
30. For parcels larger than 1,000 acres the lead agency shall prepare the analysis, which shall contain a component or section prepared by a qualified professional forester which assesses the feasibility of managing timber resources on the	160

parcel for resource conservation and revenue generation purposes through a stewardship ethic that embraces sustainable forest management practices if the lead management agency determines that the timber resource management is not in conflict with the primary management objectives of the parcel.	

259.032 Conservation And Recreation Lands Trust Fund; Purpose. —	
(10)(a) State, regional, or local governmental agencies or private entities designated to manage lands under this section shall develop and adopt, with the approval of the board of trustees, an individual management plan for each project designed to conserve and protect such lands and their associated natural resources. Private sector involvement in management plan development may be used to expedite the planning process. Individual management plans shall conform to the appropriate policies and guidelines of the state land management plan and shall include, but not be limited to:	
31. Individual management plans required by s. 253.034(5), for parcels over 160 acres, shall be developed with input from an advisory group.	9, 74
32. The advisory group shall conduct at least one public hearing within the county in which the parcel or project is located.	9, 74
33. Notice of such public hearing shall be posted on the parcel or project designated for management, advertised in a paper of general circulation, and announced at a scheduled meeting of the local governing body before the actual public hearing.	9, 74
34. The management prospectus required pursuant to paragraph (9)(d) shall be available to the public for a period of 30 days prior to the public hearing.	9, 74
35. Individual management plans shall conform to the appropriate policies and guidelines of the state land management plan and shall include, but not be limited to:	---
A. A statement of the purpose for which the lands were acquired, the projected use or uses as defined in s. 253.034, and the statutory authority for such use or uses.	29
B. Key management activities necessary to preserve and protect natural resources and restore habitat, and for controlling the spread of nonnative plants and animals, and for prescribed fire and other appropriate resource management activities.	38-49
C. A specific description of how the managing agency plans to identify, locate, protect, and preserve, or otherwise use fragile, nonrenewable natural and cultural resources.	28-53
D. A priority schedule for conducting management activities,	38-43

based on the purposes for which the lands were acquired.	
E. A cost estimate for conducting priority management activities, to include recommendations for cost-effective methods of accomplishing those activities.	49-51
F. A cost estimate for conducting other management activities which would enhance the natural resource value or public recreation value for which the lands were acquired. The cost estimate shall include recommendations for cost-effective methods of accomplishing those activities.	49-51
40. A determination of the public uses and public access that would be consistent with the purposes for which the lands were acquired.	29
259.036 Management Review Teams.—	
41. The managing agency shall consider the findings and recommendations of the land management review team in finalizing the required 5-year update of its management plan.	53, 129

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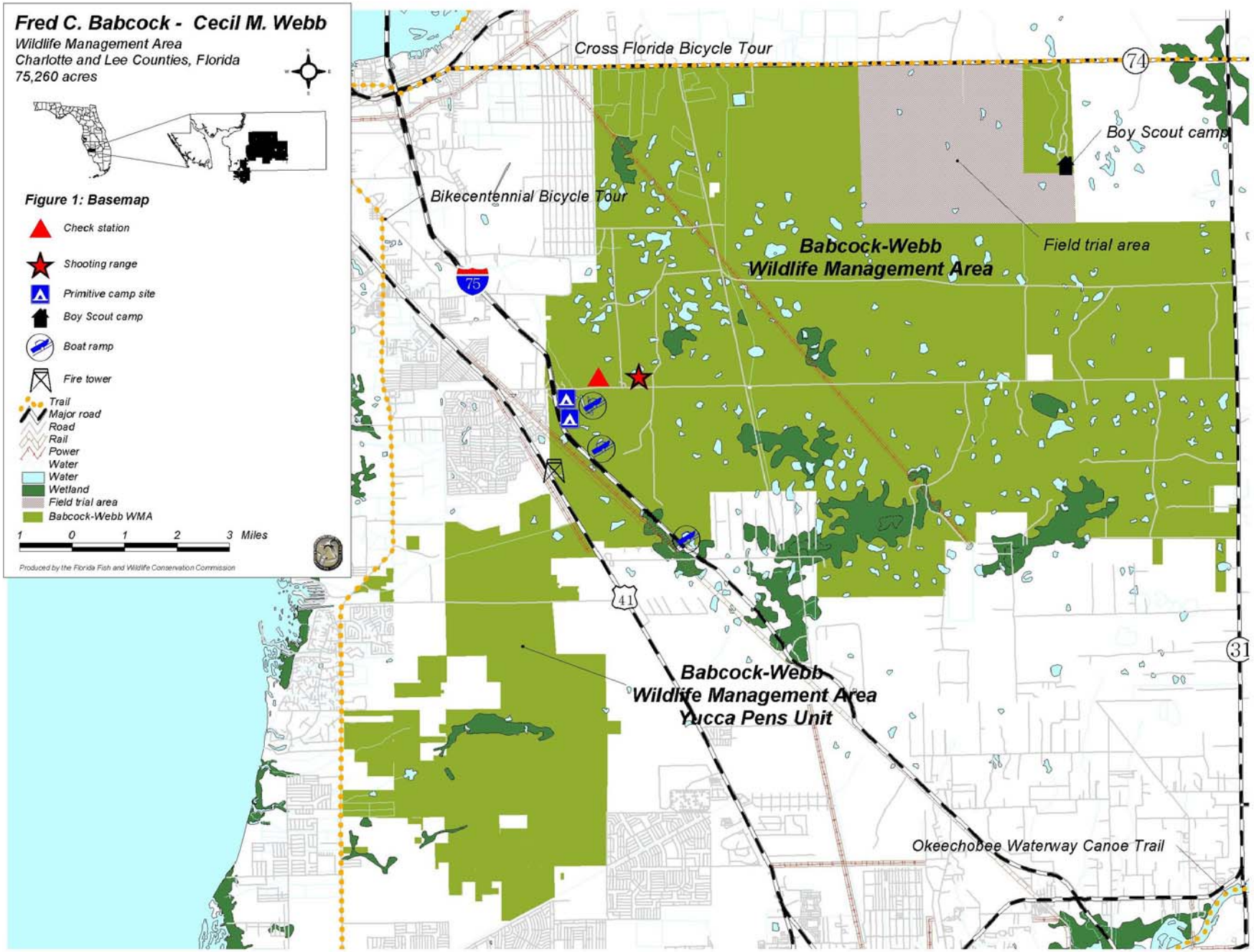
I. GENERAL INFORMATION

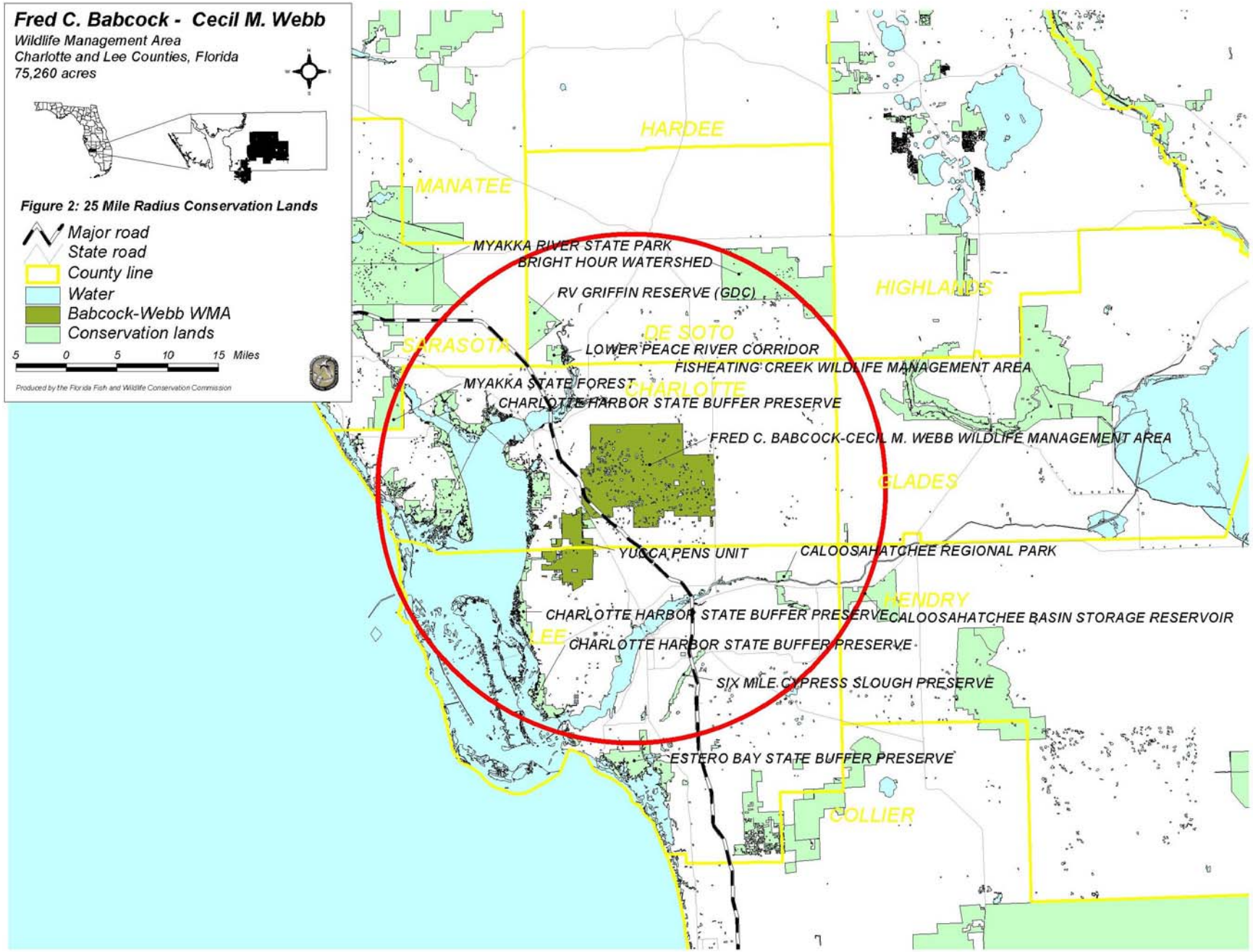
The following management plan is submitted for review to the Board of Trustees of the Internal Improvement Trust Fund (Trustees) of the State of Florida, through the Department of Environmental Protection (DEP), Division of State Lands (DSL), in compliance with paragraph 7 of Lease No. 4095 (Appendix A) and pursuant to Chapters 253 and 259, Florida Statutes (F.S.), and Chapters 18-2 and 18-4, Florida Administrative Code (F.A.C.). Format and content were drafted in accordance with Acquisition and Restoration Council requirements for management plans and the model plan outline provided by the staff of DSL.

A. Land Acquisition

1. Location: Fred C. Babcock - Cecil M. Webb Wildlife Management Area (BWWMA) is located five miles southeast of Punta Gorda in Charlotte County, 20 miles from Fort Myers to the south, 15 miles from Cape Coral to the southwest, 24 miles from Arcadia to the north, and 30 miles from Palmdale to the east. It comprises 75,260 acres, and extends approximately nine miles from north to south and 13 miles from east to west. The portion of the BWWMA to which the Trustees hold title, described hereinafter as the Yucca Pens Unit (14,781 acres), is located in south Charlotte and north Lee Counties, approximately 15 miles northwest of Fort Myers. Burnt Store Road and Marina are to the west, with the Cape Coral city limits forming the southern boundary. Punta Gorda is eight miles to the north. The Yucca Pens Unit will comprise 18,608 acres if all of the CARL project acquisitions are completed, and will extend approximately eight miles from north to south and five miles east to west (Figure 1). The Charlotte Harbor State Buffer Preserve is 1-3 miles west, and Myakka River State Park is 25 miles northwest of the BWWMA (Figure 2).

2. Purchase: During the late 1930's, the Florida Game and Fresh Water Fish Commission (GFC), the predecessor agency of the present Florida Fish and Wildlife Conservation Commission (FWC), became interested in the purchase of land for wildlife


Fred C. Babcock - Cecil M. Webb
Wildlife Management Area
Charlotte and Lee Counties, Florida
75,260 acres
Figure 1: Basemap
Check station
Shooting range
Primitive camp site
Boy Scout camp
Boat ramp
Fire tower
Trail
Major road
Road
Rail
Power
Water
Water
Wetland
Field trial area
Babcock-Webb WMA
1 0 1 2 3 Miles
Produced by the Florida Fish and Wildlife Conservation Commission
Cross Florida Bicycle Tour
Bikecentennial Bicycle Tour
Boy Scout camp
Field trial area
Babcock-Webb
Wildlife Management Area
Babcock-Webb
Wildlife Management Area
Yucca Pens Unit
Okeechobee Waterway Canoe Trail
75
41
74
31


Fred C. Babcock - Cecil M. Webb
Wildlife Management Area
Charlotte and Lee Counties, Florida
75,260 acres
Figure 2: 25 Mile Radius Conservation Lands
Major road
State road
County line
Water
Babcock-Webb WMA
Conservation lands
5 0 5 10 15 Miles
Produced by the Florida Fish and Wildlife Conservation Commission
HARDEE
MANATEE
MYAKKA RIVER STATE PARK
BRIGHT HOUR WATERSHED
RV GRIFFIN RESERVE (GDC)
HIGHLANDS
DE SOTO
SARASOTA
LOWER PEACE RIVER CORRIDOR
FISHEATING CREEK WILDLIFE MANAGEMENT AREA
MYAKKA STATE FOREST
CHARLOTTE
CHARLOTTE HARBOR STATE BUFFER PRESERVE
FRED C. BABCOCK-CECIL M. WEBB WILDLIFE MANAGEMENT AREA
GLADES
YUCCA PENS UNIT
CALOOSAHATCHEE REGIONAL PARK
HENDRY
CHARLOTTE HARBOR STATE BUFFER PRESERVE
CALOOSAHATCHEE BASIN STORAGE RESERVOIR
LEE
CHARLOTTE HARBOR STATE BUFFER PRESERVE
SIX MILE CYPRESS SLOUGH PRESERVE
ESTERO BAY STATE BUFFER PRESERVE
COLLIER

management purposes. Following several years of investigation, on July 29, 1941 the GFC took official action approving the purchase of lands in Charlotte County. These lands were purchased under the auspices of the Pittman-Robertson Federal Aid in Wildlife Restoration Act. The area was named in honor of Cecil M. Webb, who served as a Commissioner from 1948 to 1953. In 1995, the management area's name was changed to the Fred C. Babcock - Cecil M. Webb Wildlife Management Area to recognize Fred C. Babcock for the initial sale of 19,200 acres.

In December 1989, Elliot Kampert, Charlotte County's environmental planner proposed the purchase of 9,900 acres of flatwood forest and wetlands straddling the Charlotte-Lee County line. The Land Acquisition Advisory Council voted in July of 1991 to include the site in the list of environmentally sensitive tracts under the Conservation and Recreation Lands (CARL) program. Following investigation by the CARL staff, the property known as the Charlotte Harbor Flatwoods was committed for purchase with options and subsequently acquired by DSL on December 27, 1995. When initial acquisition efforts were completed, five and three-quarters sections were purchased from Ronald and Edward Ansin of Charlotte County. On May 1, 1996, the property was leased to the Commission. The Commission established the property as part of the BWWMA. As of November 2002, the Yucca Pens Unit totals approximately 13,243 acres. The Yucca Pens Unit will comprise 18,608 acres if all of the CARL project acquisitions are completed.

3. Management Authority: The FWC is the designated lead managing agency by the DEP's DSL, with the Division of Forestry (DOF) a designated cooperating agency on lands for which the Trustees hold title. The FWC is responsible for operation of BWWMA as a Wildlife Management Area, and a number of other responsibilities, as a provision of the lease agreement (Appendix A) with the Trustees relating to the portions of the area where the Trustees hold title. Further management authority derives from Article IV, Section 9 of the Florida Constitution as well as the guidance and directives of Chapters 372, 253, 259, 327, 370, 403, 870, 373, 375, 378, 487, and 597 of the Florida Statutes. These laws provide the authority for FWC with regard to protection and management of the State's fish and wildlife resources.

4. Management Directives: The 50-year Trustees' lease agreement directs FWC to "manage the leased premises only for the conservation and protection of natural and historical resources and resource-based, public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 253.023(11), FS..." The lease agreement further directs FWC to "implement applicable Best Management Practices for all activities under this lease in compliance with paragraph 18-2.004(1)(d), FAC, which have been selected, developed, or approved ….. for the protection and enhancement of the leased premises."

5. Title Interest and Encumbrances: The FWC is the sole title-holder for the lands purchased beginning in 1941 under the auspices of the Pittman-Robertson Federal Aid in Wildlife Restoration Act. However, the lands acquired in the Yucca Pen Unit are owned in fee-simple title by the Trustees.

In 1968, the Commission leased 1,280 acres of the field trial grounds to the Boy Scouts of America for a scout camp. Since that time, the Scouts have invested approximately $3.2 million in facilities and developments for the camp. In the early 1970's, Senator Frank Mann approached the agency regarding the feasibility of placing a public television tower on Babcock-Webb. The site required a 10-acre parcel and was placed on Hwy. 31 in BWWMA's southeastern corner. In 1980, the Commission granted a 45-year lease to the City of Punta Gorda for a waste water disposal facility on an 884-acre improved pasture in the area's northwest corner. Also, in 1990, the Department of Corrections (DOC) approached the Commission about a water supply for their new prison, the Charlotte Correctional Institute. Originally, the Commission allowed DOC to install five wells on the area. After well flow rate tests were conducted, four more wells were added to meet the required 300,000 gallons per day. In exchange for the water wells, DOC agreed to provide three riser-board and screw-gate structures along Seaboard Grade to slow water drainage to the west and mitigate any changes in the ground water due to the well pumping. An additional two structures were installed on Tram Grade. All structures installed by DOC followed the hydrological restoration plan developed by Johnson

Engineering.

B. Proximity to Other Public Properties

Several important conservation lands are within a 25-mile radius of BWWMA (Figure 2). Table 1 provides a listing of these areas.

Table 1. Conservation lands in proximity to BWWMA

Area Name	Managing Agency
Myakka River State Park	DEP
Bright Hour Watershed	SWFWMD
RV Griffin Reserve	SWFWMD
Lower Peace River Corridor	SWFWMD
Fisheating Creek Wildlife Management Area	FWC
Caloosahatchee Regional Park	Lee County Parks and Recreation
Caloosahatchee Basin Storage Reservoir	SFWMD
Charlotte Harbor State Buffer Preserve	DEP
Six Mile Cypress Slough Preserve	Lee County Parks and Recreation
Estero Bay State Buffer Preserve	DEP

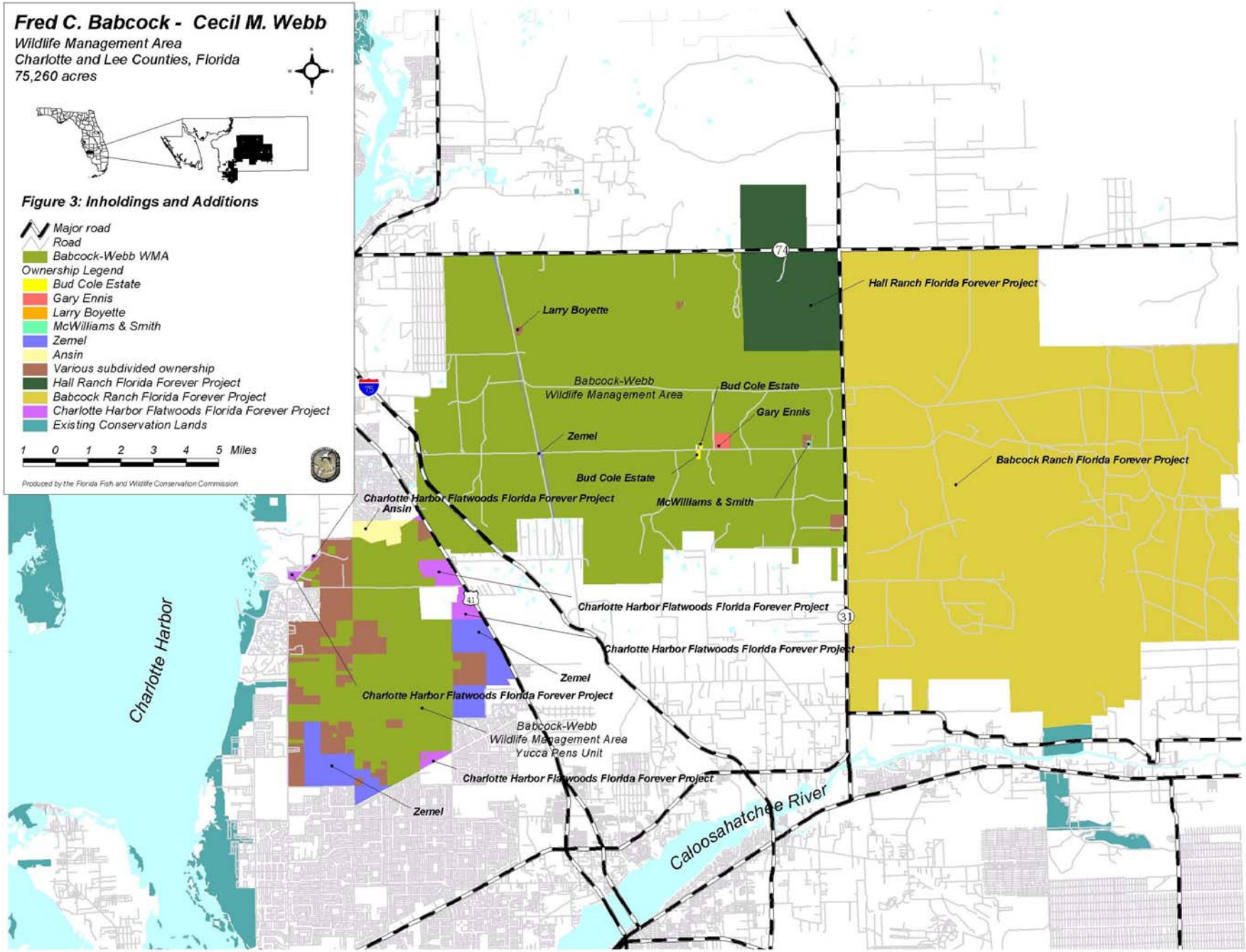
DEP – Department of Environmental Protection
SWFWMD – Southwest Florida Water Management District
SFWMD - South Florida Water Management District

C. Prospective Land Acquisitions

A number of properties have been identified for acquisition under the auspices of the agency's Inholdings and Additions Program. These properties have been nominated to further protect the wildlife and other resources of the property, to lessen conflicts caused by housing development within an area where prescribed burning is required for resource management, to achieve an optimum and regular property boundary, and to provide critical habitat connectivity for the BWWMA and other public wildlife habitat lands. No portion of the acquired properties should be considered or declared surplus. Figure 3 identifies the lands that have been nominated for acquisition. Table 2 lists these nominated lands and provides acreage estimates.

Table 2. Potential additions and inholdings within BWWMA, Charlotte County Florida

Landowner	Acres
Larry Boyette	3
McWilliams and Smith	21
Bud Cole Estate	41
Gary Ennis	66
Ansin	622
Zemel	3,636
Various subdivided parcels	6,466
Total	**10,855**
2002 Florida Forever Project	*Remaining Acres*
Hall Ranch	*8,520*
Babcock Ranch	*91,361*
Charlotte Harbor Flatwoods	*5,838*


Fred C. Babcock - Cecil M. Webb
Wildlife Management Area
Charlotte and Lee Counties, Florida
75,260 acres
Figure 3: Inholdings and Additions
Major road
Road
Babcock-Webb WMA
Ownership Legend
Bud Cole Estate
Gary Ennis
Larry Boyette
McWilliams & Smith
Zemel
Ansin
Various subdivided ownership
Hall Ranch Florida Forever Project
Babcock Ranch Florida Forever Project
Charlotte Harbor Flatwoods Florida Forever Project
Existing Conservation Lands
1 0 1 2 3 4 5 Miles
Produced by the Florida Fish and Wildlife Conservation Commission
Larry Boyette
Hall Ranch Florida Forever Project
Babcock-Webb
Wildlife Management Area
Bud Cole Estate
Gary Ennis
Zemel
Bud Cole Estate
McWilliams & Smith
Babcock Ranch Florida Forever Project
Charlotte Harbor Flatwoods Florida Forever Project
Ansin
Charlotte Harbor
Charlotte Harbor Flatwoods Florida Forever Project
Charlotte Harbor Flatwoods Florida Forever Project
Zemel
Charlotte Harbor Flatwoods Florida Forever Project
Babcock-Webb
Wildlife Management Area
Yucca Pens Unit
Charlotte Harbor Flatwoods Florida Forever Project
Zemel
Caloosahatchee River
74
75
41
31

D. Public Involvement

The FWC conducted a Management Advisory Group (MAG) meeting in Punta Gorda, Florida on June 12, 2002, to obtain input from both public and private stakeholders regarding management of BWWMA. Results of this meeting were used by FWC personnel in the development of goals, objectives and strategies for this conceptual management plan. A summary of issues and opportunities raised by the MAG, as well as a listing of participants, is included as Appendix B. Further, a public hearing, as required by Ch. 259.032(10), F.S., was held on July 8, 2002, at the Charlotte County Commission Chambers, Port Charlotte, Florida. The report of that hearing is also contained in Appendix B.

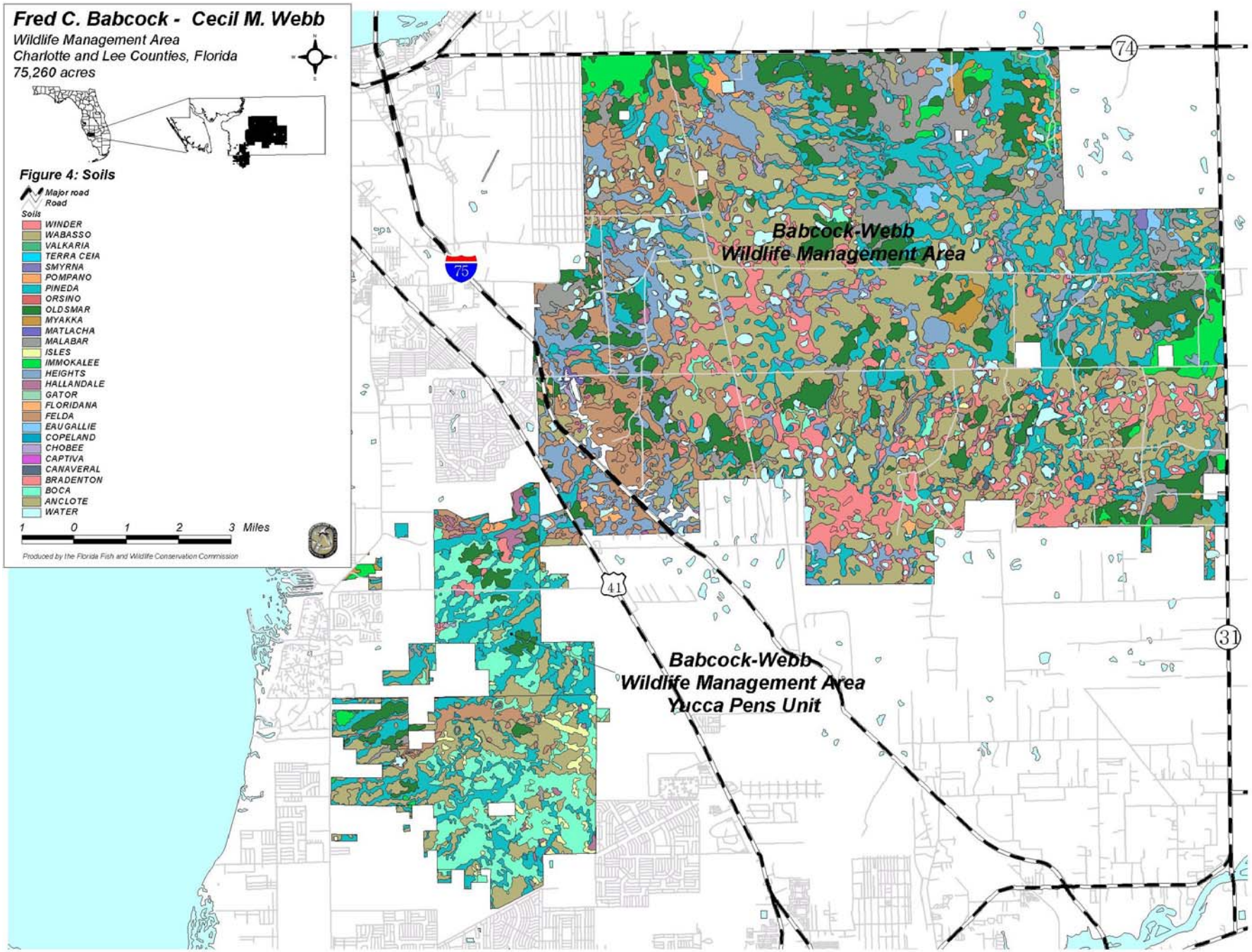
II. NATURAL AND CULTURAL RESOURCES

A. Physiography

1. Topography: While the BWWMA appears to be flat, it is actually composed of slightly rolling ridges rising from 22 to 41 feet in elevation above mean sea level. The drainage of the area is through interconnecting sloughs that eventually lead to the perimeter of the area. Water depths in the ponds and sloughs may range from a few inches to 7 feet deep.

2. Soils: The BWWMA is underlain with sedimentary deposits composed principally of limestone, marls, and calcareous sandstones. None of these deposits are older than the Miocene epoch of the Cenozoic era. Marine sands deposited by a number of ancient seas during the Ice Age, or Pleistocene epoch, overlie the calcareous strata. Fluctuations in the level of these ancient seas, caused by the periodic melting and formation of continual ice caps, are responsible for much of the gentle topography and poor soils of South Florida. Deposits from these seas formed these rather distinct terraces occurring at varying elevations. The three principal terraces and their approximate elevations are: Silver Bluff - 8 to 10 feet; Pamlico - 25 to 35 feet; Wicomica - 100 feet. The Pamlico terrace is found on the BWWMA (Loveless 1954).

There are 27 different soil types that occur on the BWWMA (Figure 4). They are acid,


Fred C. Babcock - Cecil M. Webb
Wildlife Management Area
Charlotte and Lee Counties, Florida
75,260 acres
Figure 4: Soils
Major road
Road
Soils
WINDER
WABASSO
VALKARIA
TERRA CEIA
SMYRNA
POMPANO
PINEDA
ORSINO
OLDSMAR
MYAKKA
MATLACHA
MALABAR
ISLES
IMMOKALEE
HEIGHTS
HALLANDALE
GATOR
FLORIDANA
FELDA
EAUGALLIE
COPELAND
CHOBEE
CAPTIVA
CANAVERAL
BRADENTON
BOCA
ANCLOTE
WATER
1 0 1 2 3 Miles
Produced by the Florida Fish and Wildlife Conservation Commission
Babcock-Webb
Wildlife Management Area
Babcock-Webb
Wildlife Management Area
Yucca Pens Unit
74
75
41
31

poorly drained sandy soils with a clay hardpan at various depths below the surface. Below the clay hardpan is an undulating layer of marl and coral rock. In some low areas, a layer of highly organic muck has accumulated.

The clay substratum has a profound influence on sub-surface drainage. Not only does this stratum tend to prevent water from seeping into the ground after the overlying sand is saturated, but it interferes with the capillary passage of water from below the stratum into the topsoil during dry periods. The result is that such soils are excessively wet during rainy periods and excessively dry during periods of drought.

The BWWMA soils are principally Leon, Sunniland, Immokalee, Keri, Pomello, Felda, Charlotte, Broward and Arzell fine sands or loamy fine sands. Most of these are half-bog soils or groundwater podzols. The Leon and Immokalee fine sands alone possess a distinct B & C horizon in their profile, the other soils being simply sands resting upon a rock or marl substratum. In addition to the ground water podzols (Leon, Pomello and Immokalee) and half-bog soils, unclassified, undifferentiated soil materials occur in the low depressed areas and temporary ponds.

There are four general soils patterns or associations contained within the WMA boundaries, the primary association being Wabbasso-Pineda-Boca, comprising about 85% of the total soils. The four general soil associations present on the area include:

a. Wabbasso-Pineda-Boca - Nearly level, poorly drained, deep and moderately deep, sandy soils; some have sandy, organic-stained subsoil underlain by a loamy subsoil and some have just a loamy subsoil.

b. Heights-Felda-Oldsmar - Nearly level, poorly drained, deep, sandy soils; some have a loamy subsoil and some have a sandy, organic-stained subsoil underlain by a loamy subsoil.

c. Malabar-Oldsmar-Immokalee - Nearly level, poorly drained deep, sandy soils; some have a loamy subsoil, some have a sandy, organic-stained subsoil underlain by a loamy subsoil, and some have just a sandy, organic-stained subsoil.

d. Oldsmar-Myakka - Nearly level, poorly drained, deep sandy soils; some have a sandy, organic-stained subsoil underlain by a loamy subsoil and some have just a sandy, organic subsoil.

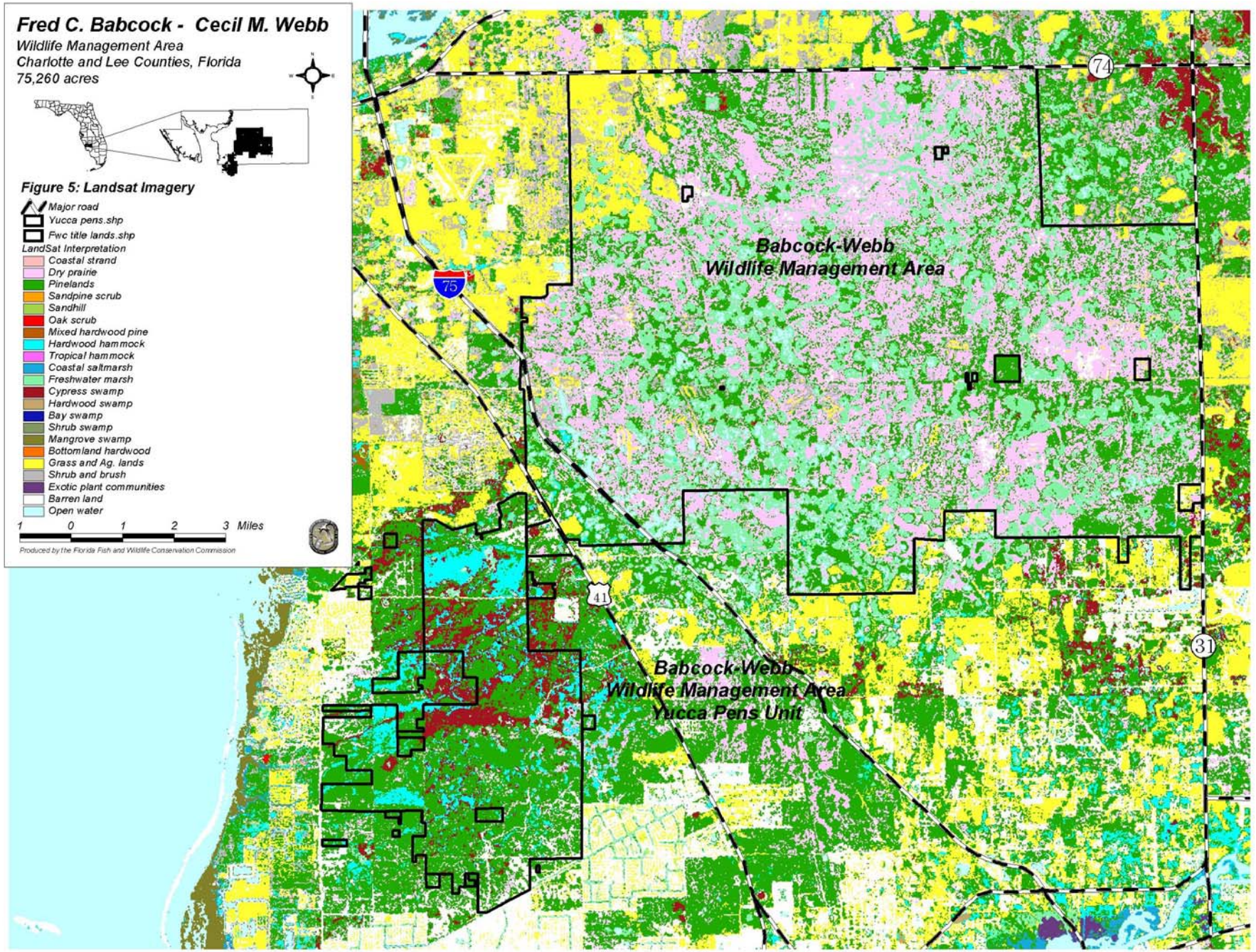
3. Climate: The BWWMA is located in southwest Florida's Charlotte and Lee Counties, and thus is located in the warm, subtropical portion of the state. In Charlotte County, where the majority of BWWMA is located, the average annual temperature is 74.8 degrees Fahrenheit. The average summer temperature is 81.6 degrees in July, and winter temperature averages 64.0 in January. Rainfall averages 49.5 inches annually with average monthly precipitation ranging from two to nine inches. The wet season normally extends from July through September, while winter is the normal dry season.

B. Vegetation

Data used to produced a map delineating the major natural community types found on the BWWMA were developed using multiple data sources that include, but were not limited to: Landsat satellite imagery (Figure 5), Southwest Florida Water Management District's 1995 Florida Land Use Cover and Forms Classifications System (FLUCCS), 1995 Digital Ortho-photographs, 1991 black and white aerial photographs (1:25,000 scale), Florida Natural Areas Inventory (FNAI) data on Element Occurrences, Potential Natural Areas and Areas of Conservation Interest. These data are not always based on comprehensive or site-specific field surveys, and no additional fieldwork was conducted for purposes of producing this map. The descriptions of the natural community types found on BWWMA have been adapted, with permission, from the FNAI 's Guide to the Natural Communities of Florida.

Natural Community Descriptions

Dry Prairie: Dry prairies are vast, treeless plains, often intermediate between wet grassy areas and the forested uplands. Scattered bayheads, cypress (*Taxodium disticum*) ponds, or cabbage palm (*Sabal palmetto*) hammocks often occur in prairie areas. The largest areas of dry prairie occur north and west of Lake Okeechobee. These are herbaceous and low shrub communities that are seldom flooded. Prairies are similar to the south Florida slash pine (*Pinus elliottii* var. *densa*) flatwoods except that no pines are present. This community is dominated by many species of grasses such as wiregrass (*Aristida* spp.), broomsedge (*Andropogon spp*.), and carpet grasses


Fred C. Babcock - Cecil M. Webb
Wildlife Management Area
Charlotte and Lee Counties, Florida
75,260 acres
Figure 5: Landsat Imagery
Major road
Yucca pens.shp
Fwc title lands.shp
LandSat Interpretation
Coastal strand
Dry prairie
Pinelands
Sandpine scrub
Sandhill
Oak scrub
Mixed hardwood pine
Hardwood hammock
Tropical hammock
Coastal saltmarsh
Freshwater marsh
Cypress swamp
Hardwood swamp
Bay swamp
Shrub swamp
Mangrove swamp
Bottomland hardwood
Grass and Ag. lands
Shrub and brush
Exotic plant communities
Barren land
Open water
1 0 1 2 3 Miles
Produced by the Florida Fish and Wildlife Conservation Commission
Babcock-Webb
Wildlife Management Area
Babcock-Webb
Wildlife Management Area
Yucca Pens Unit
74
75
41
31

(*Anoxopus furcatus*). Palmettos (*Serenoa repens*) are the most common shrubby plant over large areas, with fetterbush (*Lyonia lucida*), staggerbush (*Lyonia ferruginea*), gallberry (*Ilex glabra*) and blueberry (*Vaccinium spp.*) common in places. A number of sedges and herbs are also found on the wet prairies.

Pine Flatwoods: Pine flatwoods are characterized by one or more species of pine as the dominant tree species, and occur on level areas. The soils of flatwoods are sandy with a moderate amount of organic matter in the top few centimeters, and an organic hardpan 0.3 to 1.0 m (1-3 ft.) beneath the surface. This hardpan reduces rainfall percolation, reduces the upward movement of water, and impedes root penetration during droughts.

South Florida slash pine flatwoods are found on poorly drained soils. This community is made up of open stands of pine with an understory of saw palmetto, wiregrass, broomsedge, staggerbush, dwarf wax myrtle (*Myrica cerifera*), gallberry, Florida beggar weed (*Desmodium lineatum*), partridge-pea (*Cassia chamaecrista*), milk pea (*Galactia* spp.), queen's delight (*Stillingia sylvatica*) and runner oak (*Quercus pumila*).

Two rare and endangered plant species are also found in this habitat type. A significant population of Florida beargrass (*Nolina atopocarpa*) is found in the Yucca Pens Unit. In addition, a 1999 survey performed by FNAI found that HWMA contains one of the largest known populations of beautiful (squirrel-tail) paw-paw (*Derringothamnus pulchellus*) in Florida, and is one of only six populations having over 500 individuals.

Fire and water are the two main determinants of flatwoods ecology. Slash pine flatwoods are subject to the least moisture stress of the three flatwoods types and have the highest species diversity. Fire is instrumental in reducing competition and maintaining high species diversity.

Hammocks: Cabbage palm hammocks generally occur in low-lying soils with marl or limestone outcroppings. The elevation of these hammocks is frequently slightly higher than the surrounding slash pine flatwoods. They are characterized by more or less closed stands of cabbage palm with other trees and vines including slash pine, Florida elm (*Ulmus floridana*), greenbriar (*Smilax spp*.) poison ivy (*Toxicodendron radicans*), red maple (*Acer rubrum*), live oak (*Quercus virginiana*) and water oak (*Quercus nigra*). In more open stands of cabbage palm,

various herbs and grasses, notably broad-leafed carpet grass, cover the ground.

Bayheads are found almost exclusively in shallow, temporary ponds where they are somewhat protected from fire by the zone of sparse vegetation typical of such ponds. Bayheads are characterized by a dense growth of red bay (*Persea borbonia*), sweet bay (*Magnolia virginiana*), wax myrtle and dahoon holly (*Ilex cassine*).

Cypress Strands: Cypress strands are generally associated with Yucca Pen Creek. The overstory consists principally of pond cypress (*Taxodium ascendens*), but also includes cabbage palm and swampbay (*Persea palustris*). Canopy trees also contain a variety of bromeliads including quill-leaf (Tillandsia fasciculata) and ball-moss (*Tillandsia recurvata*). Sparse midstory and groundcover vegetation includes myrsine (Myrsine guianensis), dahoon holly (*I. cassine*), wax myrtle, royal fern *(Osmunda regalis*), marsh fern (*Thelypteris spp*.), swamp fern (*Blechnum serrulatum*), and pond apple (*Annona glabra*).

Freshwater Marshes: Freshwater marshes are herbaceous plant communities occurring on sites where the soil is usually saturated or covered with surface water for one or more months during the growing season. These hydrophytic communities are herbaceous, treeless areas of various types. The most common type is the sawgrass (*Cladium jamaicense*) marsh. These retain water year-round and are found on muck soils. Characteristic plants are sawgrass, pond cypress, pickerel weed (*Pontederia cordata*), fire flag (*Thalia geniculata*), maidencane (*Panicum hemitomon*), buttonbush (*Cephalanthus occidentalis*), smartweed *(Polygonum punctatum*) and spike rush (*Eleocharis spp.*).

Shallower water and more abundant grasses, usually fewer tall emergents, such as bulrushes, than marshes, characterize wet prairies. Wet prairies are mainly herbaceous communities on low, seasonally-flooded transitional areas between freshwater marshes and pine flatwoods. Typically, they are grassy meadows with a few scattered saw palmetto and an occasional stunted southern slash pine. Dominant plants are wiregrass, slough grass, broomsedge, and beak rush *(Rhynchospora spp.*).

C. Fish and Wildlife

1. Resident Fauna: A wide variety of wildlife common to the south Florida flatwoods is found on the BWWMA. Rabbits (*Sylvilagus floridanus*), gray squirrels (*Sciurus carolinensis*), raccoons (*Procyon lotor*), opossums (*Didelphis virginiana*), skunks (*Mephitis mephitis* and *Spilogale putorius*) and armadillos (*Dasypus novemcinctu*s) are legal game and occur in fair numbers. Bobcat (*Felis rufus*) and otter (*Lutra canadensis*) are also common. Doves (*Zenaida macroura*) commonly nest on the area during the summer and are supplemented, often in large numbers, by birds from the northern states during the winter months. Woodcock (*Scolopax minor*) and common snipe (*Gallinago gallinago*) also frequent the area throughout the winter, with snipe populations dependent on water levels in the ponds and sloughs. Bullfrogs (*Rana grylio*) are common. Coyotes (*Canis latrans*) have been observed on the area and tracks have been found on rare occasions.

The Northern bobwhite (*Colinus virginianus*) continues to be an important game species on the area and has been the subject of considerable research and management on BWWMA. The quail subspecies, *C. v. floridanus* occurring on the area is slightly smaller than the eastern bobwhite, *C. v. virginianus.* BWWMA is close to the southern limit of the continental range of the Northern bobwhite.

On BWWMA, quail populations fluctuate dramatically, primarily because of rainfall. During the period 1941-53, the population index on the area ranged from 9,000 birds in the fall of 1946 to a low of 1,000 birds in the autumn of 1948 (Frye 1954a). As a result of intensive management, the quail population index reached a peak of nearly 34,000 birds in 1976-77. The average annual quail harvest from 1952-1980 was 4,433 birds. After the 1980-81 hunting season, the quail harvest started on a downward trend and has not recovered. The average annual harvest from 1981-2002 was less than 2,500.

Changes in management and adjacent land use since 1980 may also have played roles in the overall population decline. In 1980, changes in the burning regime from an annual burn to two-year rotation burns preceded the rapid drop of the quail population. Development outside the area has increased dramatically since 1980.

The FWC is currently conducting a contracted population dynamics study of the Northern bobwhite on BWWMA to determine effects of varying harvest rates. Results from this study will be used to develop management strategies to assist in the reestablishment of Northern

bobwhite populations to historical levels.

BWWMA also has a population of Red-cockaded woodpeckers (*Picoides borealis*), a species Federally listed as endangered, and listed as Threatened by the State of Florida. FWC continues to monitor and survey this important avian species, and has developed specific objectives for the management of the species (Section V.). Furthermore, FWC is developing a Red-cockaded woodpecker management plan for BWWMA. Final review and agency approval of the Red-cockaded woodpecker management plan for BWWMA is expected by December 2003.

The white-tailed deer (*Odocoileus virginiana*) densities have historically been low on BWWMA. Deer population indices indicate that deer density has increased during the period from 1986 to 2002. Deer condition indexes have remained constant in the good to excellent range. Feral hogs (*Sus scrofa*) are present on the area and are managed through recreational hunting. Wild turkeys (*Meleagris gallopavo*) are occasionally seen from Tuckers Grade south throughout the year, but primarily during the spring and summer months. Only one turkey has been harvested on Babcock-Webb during the past 53 years. Currently there is no hunting season for wild turkeys.

Currently, the area receives approximately 1,500 man-days per year of fishing pressure. Fishing opportunity is provided primarily in five shell-pit ponds totaling 13 acres and in the 395-acre Webb Lake. Additional fishing opportunities are provided in the seasonal ponds and canals located on the area.

The natural ponds and sloughs found on the area, together with the artificially created bodies of water, constitute habitat for a fair population of largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), and redear sunfish (*Lepomis microlophus*). Seminole killifish (*Fundulus seminolis*), threadfin shad (*Dorosoma petenense*), and mosquitofish (*Gambusia affinis*) are the dominant forage fishes.

Tables 3 – 6 list the common and scientific names of wildlife species either know or expected to occur on BWWMA. Listed species of wildlife on BWWMA are found in Table 7. The known FNAI wildlife element occurrences for BWWMA are mapped in Figure 5. The FNAI Species and Natural Community Summary for Charlotte County is found in Appendix I.

Table 3. Avian species on BWWMA.

Common name	Scientific name
Pied-billed grebe	*Podilymbus podiceps*
Double-crested cormorant	*Phalacrocorax auritus*
Anhinga	*Anhinga anhinga*
American bittern	*Botaurus lentiginosus*
Least bittern	*Ixobrychus exilis*
Great blue heron	*Ardea herodias*
Great egret	*Casmerodius albus*
Cattle egret	*Bubulcus ibis*
Green-backed heron	*Butorides striatus*
Black-crowned night heron	*Nycticorax nycticorax*
Yellow- crowned night heron	*Nycticorax violacea*
White ibis	*Eudocimus albus*
Glossy ibis	*Plegadis falcinellus*
Mottled duck	*Anas fulvigula*
Northern pintail	*Anas acuta*
Blue-winged teal	*Anas discors*
Northern shoveler	*Anas clypeata*
Lesser scaup	*Aythya affinis*
Ring-necked duck	*Aythya collaris*
Wood duck	*Aix sponsa*
Red-breasted merganser	*Mergus serrator*
Hooded merganser	*Lophodytes cucullatus*
Snow geese	*Chen carolinensis*
Black vulture	*Coragyps atratus*
Turkey vulture	*Cathartes aura*
Southeastern American kestrel	*Falco sparverius paulus*
Cooper's hawk	*Accipiter cooperii*
Sharp-shinned hawk	*Accipiter striatus*
Red-shouldered hawk	*Buteo lineatus*
Broad-winged hawk	*Buteo platypterus*
Short-tailed hawk	*Buteo brachyurus*
Red-tailed hawk	*Buteo jamaicensis*
Northern harrier	*Circus cyaneus*
American swallow-tailed kite	*Elanoides forficatus*
Osprey	*Pandion haliaetus*
Northern bobwhite	*Colinus virginianus*
Wild turkey	*Meleagris gallopavo*

Table 3 continued.

Common name	Scientific name
Virginia rail	*Rallus limicola*
Sora	*Porzana carolina*
King rail	*Rallus elegans*
American coot	*Fulica Americana*
Common moorhen	*Gallinula chloropus*
Purple gallinule	*Porphyrula martinica*
Killdeer	*Charadrius vociferus*
American woodcock	*Scolopax minor*
Common snipe	*Gallinago gallinago*
Black-necked stilt	*Himanoptis mexicanus*
Greater yellowlegs	*Tringa melanoleuca*
Lesser yellowlegs	*Tringa flavipes*
Spotted sandpiper	*Actitis macularia*
Solitary sandpiper	*Tringa solitaria*
Least sandpiper	*Calidris minutilla*
Short-billed dowitcher	*Limnodromus griseus*
Laughing gull	*Larus atricilla*
Ring-billed gull	*Larus delawarensis*
Least tern	*Sterna antillarum*
Caspian tern	*Sterna caspia*
Royal tern	*Sterna maxima*
Mourning dove	*Zenaida macroura*
Common ground dove	*Columbina passerina*
Smooth-billed ani	*Crotophaga ani*
Great horned owl	*Bubo virginianus*
Barred owl	*Strix varia*
Eastern screech owl	*Otus asio*
Burrowing owl	*Athene cunicularia*
Common nighthawk	*Chordeiles minor*
Chuck-will's-widow	*Caprimulgus carolinensis*
Chimney swift	*Chaetura pelagica*
Ruby-throated hummingbird	*Archilochus colubris*
Belted kingfisher	*Ceryle alcyon*
Red-bellied woodpecker	*Melanerpes carolinus*
Red headed woodpecker	*Melanerpes erythrocephalus*
Yellow-bellied sapsucker	*Sphyrapicus varius*
Downy woodpecker	*Picoides pubescens*

Table 3 continued.

Common name	Scientific name
Hairy woodpecker	*Picoides villosus*
Red-cockaded woodpecker	*Picoides borealis*
Northern flicker	*Colaptes auratus*
Pileated woodpecker	*Dryocopus pileatus*
Eastern phoebe	*Sayornis phoebe*
Great crested flycatcher	*Myiarchus crinitus*
Eastern kingbird	*Tyrannus tyrannus*
Least flycatcher	*Empidonax minimus*
Barn swallow	*Hirundo rustica*
Purple martin	*Progne subis*
Tree swallow	*Tachycineta bicolor*
Blue jay	*Cyanocitta cristata*
American crow	*Corvus brachyrhynchos*
Fish crow	*Corvus ossifragus*
Tufted titmouse	*Parus bicolor*
Brown-headed nuthatch	*Sitta pusilla*
House wren	*Troglodytes aedon*
Carolina wren	*Thryothorus ludovicianus*
Blue-gray gnatcatcher	*Polioptila caerulea*
Eastern bluebird	*Sialia sialis*
American robin	*Turdus migratorius*
Swainson's thrush	*Catharus guttatus*
Gray catbird	*Dumetella carolinensis*
Northern mockingbird	*Mimus polyglottos*
Brown thrasher	*Toxostoma rufum*
Cedar waxwing	*Bombycilla cedrorum*
Loggerhead shrike	*Lanius ludovicianus*
European starling	*Sturnus vulgaris*
White-eyed vireo	*Vireo griseus*
Solitary vireo	*Vireo solitarius*
Blue-winged warbler	*Vermivora pinus*
Orange-crowned warbler	*Vermivora celata*
Northern parula	*Parula americana*
Yellow warbler	*Dendroica petechia*
Cape may warbler	*Dendroica tigrina*
Black-throated blue warbler	*Dendroica caerulescens*
Yellow-rumped warbler	*Dendroica coronata*

Table 3. continued.

Common name	Scientific name

Chestnut-sided warbler	*Dendroica pensylvanica*
Black-throated green warbler	*Dendroica virens*
Yellow-throated warbler	*Dendroica dominica*
Pine warbler	*Dendroica pinus*
Prairie warbler	*Dendroica discolor*
Palm warbler	*Dendroica palmarum*
Blackpoll warbler	*Dendroica striata*
Black-and-white warbler	*Mniotilta varia*
American redstart	*Setophaga ruticilla*
Worm-eating warbler	*Helmitheros vermivorus*
Swainson's warbler	*Limnothlypis swainsonii*
Kentucky warbler	*Oporornis formosus*
Common yellowthroat	*Geothlypis trichas*
Yellow-breasted chat	*Icteria virens*
Ovenbird	*Seiurus aurocapillus*
Northern waterthrush	*Seiurus noveboracensis*
Louisiana waterthrush	*Seiurus motacilla*
Summer tanager	*Piranga rubra*
Northern cardinal	*Cardinalis cardinalis*
Painted bunting	*Passerina ciris*
Rufous-sided towhee	*Pipilo erythrophthalmus*
Bachman's sparrow	*Aimophila aestivalis*
Chipping sparrow	*Spizella passerina*
Vesper sparrow	*Pooecetes gramineus*
Lark sparrow	*Chondestes grammacus*
Savannah sparrow	*Passerculus sandwichensis*
Grasshopper sparrow	*Ammodramus savannarum*
Song sparrow	*Melospiza melodia*
American goldfinch	*Carduelis tristis*
Red-winged blackbird	*Agelaius phoeniceus*
Eastern meadowlark	*Sturnella magna*
Rusty blackbird	*Euphagus carolinus*
Boat-tailed grackle	*Quiscalus major*
Common grackle	*Quiscalus quiscula*
Brown-headed cowbird	*Molothrus ater*
Bobolink	*Dolichonyx oryzivorus*

Table 4. Amphibian and reptile species observed or expected to occur on BWWMA.

Common name	Scientific name

Eastern glass lizard	*Ophisaurus ventralis*
Eastern slender glass lizard	*Ophisaurus attenuatus longicaudus*
Brown anole	*Anolis sagrei*
Carolina anole	*Anolis carolinensis*
Southeastern five-lined skink	*Eumeces inexpectatus*
Ground skink	*Scincella lateralis*
Six-lined racerunner	*Cnemidophorus sexlineatus*
Scarlet snake	*Cemophora coccinea*
Southern black racer	*Coluber constrictor priapus*
Southern ring-necked snake	*Diadophis punctatus punctatus*
Red rat snake	*Elaphe guttata guttata*
Yellow rat snake	*Elaphe obsoleta quadrivittata*
Eastern hognose snake	*Heterodon platyrhinos*
Florida kingsnake	*Lampropeltis getula floridana*
Eastern coachwhip snake	*Masticophis flagellum flagellum*
Florida green water snake	*Nerodia cyclopion floridana*
Florida banded water snake	*Nerodia fasciata pictiventris*
Rough green snake	*Opheodrys aestivus*
Black swamp snake	*Seminatrix pygaea*
Florida brown snake	*Storeria dekayi*
Peninsula ribbon snake	*Thamnophis sauritus sirtalis*
Eastern garter snake	*Thamnophis sirtalis sirtalis*
Eastern coral snake	*Micrurus fulvius*
Florida cottonmouth	*Agkistrodon piscivorus conanti*
Eastern diamondback rattlesnake	*Crotalus adamanteus*
Dusky pygmy rattlesnake	*Sistrurus miliarius barbouri*
Florida snapping turtle	*Chelydra serpentina*
Florida red-bellied turtle	*Pseudemys nelsoni*
Florida chicken turtle	*Deirochelys reticularia chrysea*
Florida box turtle	*Terrapene carolina bauri*
Florida mud turtle	*Kinosternon subrubrum steindachneri*
Striped mud turtle	*Kinosternon baurii palmarum*
Stinkpot turtle	*Sternotherus odoratus*
Florida soft-shelled turtle	*Apalone ferox*
Oak toad	*Bufo quercicus*
Southern toad	*Bufo terrestris*
Southern cricket frog	*Acris gryllus dorsalis*
Green tree frog	*Hyla cinerea*
Pine woods treefrog	*Hyla femoralis*

Table 4. continued.

Common name	Scientific name

Barking treefrog	*Hyla gratiosa*
Squirrel treefrog	*Hyla squirella*
Little grass frog	*Pseudacris ocularis*
Southern chorus frog	*Pseudacris nigrita*
Eastern narrow-mouthed toad	*Gastrophryne carolinensis*
Pig frog	*Rana grylio*
Southern leopard frog	*Rana utricularia*
Two-toed amphiuma	*Amphiuma means*
Peninsular newt	*Notophthalmus viridescens piaro*

Table 5. Mammalian species observed on BWWMA.

Common name	Scientific name
Virginia opossum	*Didelphis virginiana*
Southern short-tailed shrew	*Blarina carolinensis*
Least shrew	*Cryptotis parva*
Eastern pipistrelle bat	*Pipistrellus subflavus*
Big brown bat	*Eptesicus fuscus*
Seminole bat	*Lasiurus seminolus*
Evening bat	*Nycticeius humeralis*
Brazilian free-tailed bat	*Tadarida brasiliensis*
Nine-banded armadillo	*Dasypus novemcinctus*
Eastern cottontail	*Sylvilagus floridanus*
Marsh rabbit	*Sylvilagus palustris*
Gray squirrel	*Sciurus carolinensis*
Marsh rice rat	*Oryzomys palustris*
Florida cotton mouse	*Peromyscus gossypinus palmarius*
Hispid cotton rat	*Sigmodon hispidus*
Gray fox	*Urocyon cinereoargenteus*
Red fox	*Vulpes vulpes*
Raccoon	*Procyon lotor*
River otter	*Lutra canadensis*

Table 5. continued.

Common name	Scientific name

Striped skunk	*Mephitis mephitis*
Long-tailed weasel	*Mustela frenata*
Spotted skunk	*Spilogale putorius*
Bobcat	*Felis rufus*
White-tailed deer	*Odocoileus virginiana*
Feral hog	*Sus scrofa*

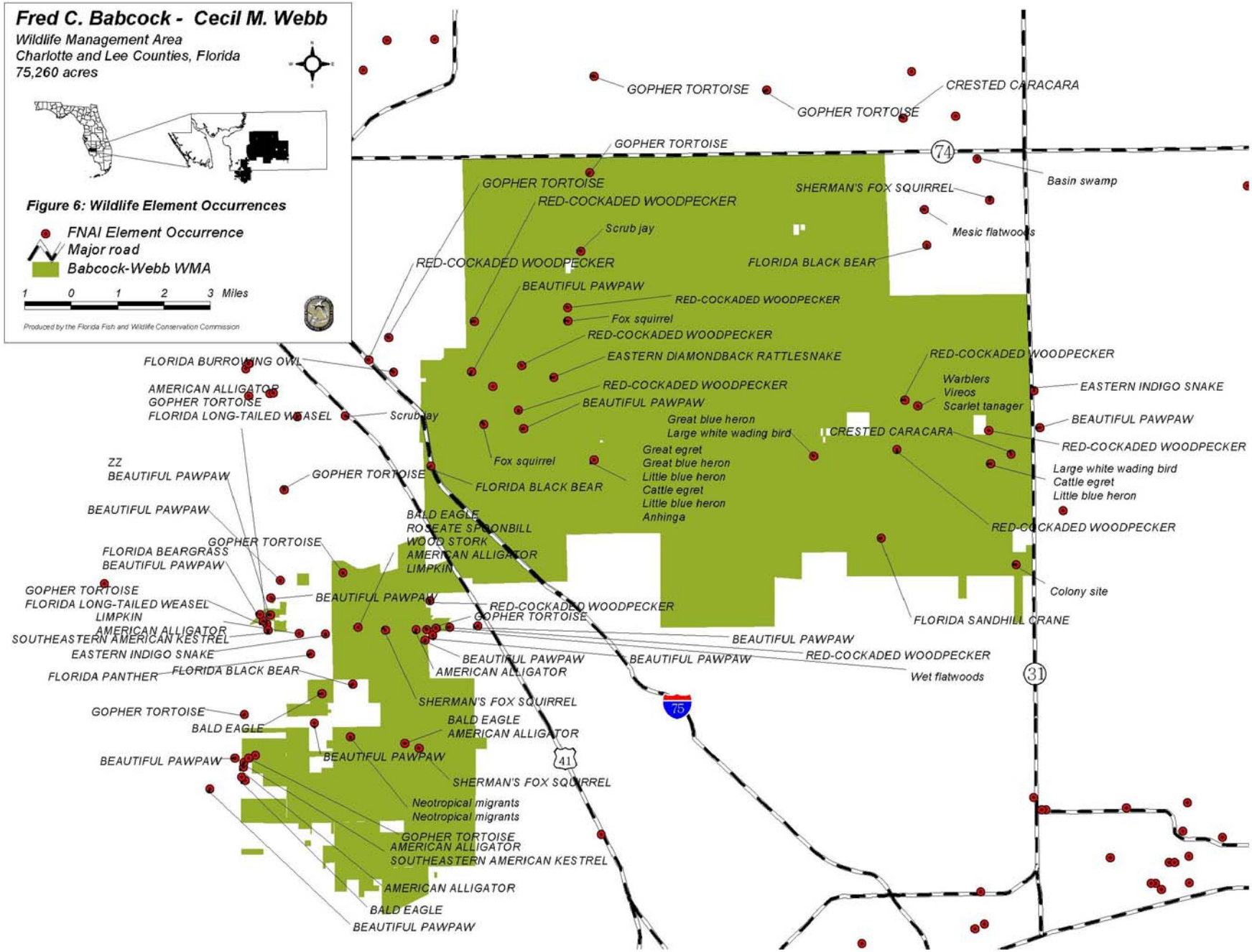
Table 6. Fish species either observed or expected to occur BWMA.

Common name	Scientific name
Common snook	*Centropomus undecimalis*
Florida gar	*Lepisosteus platyrhincus*
Golden shiner	*Notemigonus crysoleucas*
Taillight shiner	*Notropis maculatus*
Yellow bullhead	*Ictalurus natalis*
Brown bullhead	*Ictalurus nebulosus*
Golden topminnow	*Fundulus chrysotus*
Marsh killifish	*Fundulus confluentus*
Mosquitofish	*Gambusia affinis*
Least killifish	*Heterandria formosa*
Seminole killifish	*Fundulus seminolis*
Sailfin molly	*Poecilia latipinna*
Brook silverside	*Labidesthes sicculus*
Bluespotted sunfish	*Enneacanthus gloriosus*
Warmouth	*Lepomis gulosus*
Bluegill	*Lepomis macrochirus*
Dollar sunfish	*Lepomis marginatus*
Redear sunfish	*Lepomis microlophus*
Spotted sunfish	*Lepomis punctatus*
Largemouth bass	*Micropterus salmoides*
Swamp darter	*Etheostoma fusiforme*
Fat sleeper	*Dormitator maculatus*
Flagfish	*Jordanella floridae*
Threadfin shad	*Dorosoma petenense*

2. Endangered, Threatened and Species of Special Concern

Table 7. List of threatened (T), endangered (E), and species of special concern (SSC) that occur within or in the vicinity of BWWMA.

Common name	Scientific name	Protection Status State	Federal
Peregrine falcon	*Falco peregrinus*	E	T
Bald eagle	*Haliaeetus leucocephalus*	T	E
Wood stork	*Mycteria americana*	E	E
Red-cockaded woodpecker	*Picoides borealis*	T	E
Crested caracara	*Caracara plancus*	T	T
Florida sandhill crane	*Grus canadensis pratensis*	T	-
Southeastern American kestrel	*Falco sparverius paulus*	T	-
Roseate spoonbill	*Ajaia ajaja*	SSC	-
Limpkin	*Aramus guarauna*	SSC	-
Little blue heron	*Egretta caerulea*	SSC	-
Snowy egret	*Egretta thula*	SSC	-
Tricolored heron	*Egretta tricolor*	SSC	-
Gopher tortoise	*Gopherus polyphemus*	SSC	-
Eastern indigo snake	*Drymarchon corais couperi*	T	T
American alligator	*Alligator mississippiensis*	SSC	T
Florida black bear	*Ursus americanus floridanus*	T	-
Everglades mink	*Mustela vison evergladensis*	T	-
Sherman's fox squirrel	*Sciurus niger shermani*	SSC	-
Florida mastiff bat	*Eumops glaucinus floridanus*	E	-


Fred C. Babcock - Cecil M. Webb
Wildlife Management Area
Charlotte and Lee Counties, Florida
75,260 acres
Figure 6: Wildlife Element Occurrences
FNAI Element Occurrence
Major road
Babcock-Webb WMA
1 0 1 2 3 Miles
Produced by the Florida Fish and Wildlife Conservation Commission
GOPHER TORTOISE
CRESTED CARACARA
GOPHER TORTOISE
GOPHER TORTOISE
74
GOPHER TORTOISE
SHERMAN'S FOX SQUIRREL
Basin swamp
RED-COCKADED WOODPECKER
Scrub jay
Mesic flatwoods
RED-COCKADED WOODPECKER
FLORIDA BLACK BEAR
BEAUTIFUL PAWPAW
RED-COCKADED WOODPECKER
Fox squirrel
RED-COCKADED WOODPECKER
EASTERN DIAMONDBACK RATTLESNAKE
RED-COCKADED WOODPECKER
FLORIDA BURROWING OWL
Warblers
Vireos
Scarlet tanager
EASTERN INDIGO SNAKE
AMERICAN ALLIGATOR
GOPHER TORTOISE
FLORIDA LONG-TAILED WEASEL
Scrub jay
RED-COCKADED WOODPECKER
BEAUTIFUL PAWPAW
BEAUTIFUL PAWPAW
Great blue heron
Large white wading bird
CRESTED CARACARA
RED-COCKADED WOODPECKER
Great egret
Great blue heron
Little blue heron
Cattle egret
Little blue heron
Anhinga
Fox squirrel
Large white wading bird
Cattle egret
Little blue heron
ZZ
BEAUTIFUL PAWPAW
GOPHER TORTOISE
FLORIDA BLACK BEAR
BEAUTIFUL PAWPAW
BALD EAGLE
ROSEATE SPOONBILL
WOOD STORK
AMERICAN ALLIGATOR
LIMPKIN
RED-COCKADED WOODPECKER
GOPHER TORTOISE
FLORIDA BEARGRASS
BEAUTIFUL PAWPAW
Colony site
GOPHER TORTOISE
FLORIDA LONG-TAILED WEASEL
LIMPKIN
AMERICAN ALLIGATOR
SOUTHEASTERN AMERICAN KESTREL
EASTERN INDIGO SNAKE
FLORIDA PANTHER
FLORIDA BLACK BEAR
BEAUTIFUL PAWPAW
RED-COCKADED WOODPECKER
GOPHER TORTOISE
FLORIDA SANDHILL CRANE
BEAUTIFUL PAWPAW
BEAUTIFUL PAWPAW
AMERICAN ALLIGATOR
BEAUTIFUL PAWPAW
RED-COCKADED WOODPECKER
Wet flatwoods
31
SHERMAN'S FOX SQUIRREL
75
GOPHER TORTOISE
BALD EAGLE
BALD EAGLE
AMERICAN ALLIGATOR
41
BEAUTIFUL PAWPAW
BEAUTIFUL PAWPAW
SHERMAN'S FOX SQUIRREL
Neotropical migrants
Neotropical migrants
GOPHER TORTOISE
AMERICAN ALLIGATOR
SOUTHEASTERN AMERICAN KESTREL
AMERICAN ALLIGATOR
BALD EAGLE
BEAUTIFUL PAWPAW

D. Forest, Mineral, Scenic and Water Resources

1. Forest resources: Section 253.036, Florida Statutes requires that plans for 1,000+-acre parcels contain an analysis of multiple-use potential, to include a professional forester's assessment of the resource conservation and revenue-producing potentials of the tract's forests (Appendix K). FWC considers sustainable forest management consistent with the purposes for acquisition of this property, and when silvicultural practices necessary for wildlife habitat or ecosystem management objectives are deemed appropriate, personnel from the DOF's Forest Management Bureau will be consulted.

2. Mineral Resources: There are no known mineral resources on BWWMA.

3. Scenic Resources: Scenic resources include an extensive example of a relatively large and pristine South Florida flatwoods ecosystem. This ecosystem comprises a pine flatwoods and wetlands complex, including wet prairie and marsh areas, as well as cypress sloughs and domes.

4. Water Resources: Water resources on the area consist primarily of seasonal ponds, marshes and depressions, excavated ponds and Webb Lake. These areas provide scenic value because they are part of the hydric pine and South Florida pine-palmetto flatwoods. There are two springs located on the area, however, both occur in areas that have been excavated. There are several springs located in the northern part of Webb Lake. The other spring is located east of Seaboard Grade and north of Tuckers Grade next to a set of water tower pilings. The tower was used to fill steam engines during the timber harvest in the 1920's and 1930's. DEP considers all waters on the BWWMA Class III waters. No water resources within BWWMA are classified as Outstanding Florida Waters, or an aquatic preserve, and are not under study for such designation.

Freshwater marshes, sloughs and seasonal ponds comprise 35 to 40 percent of BWWMA. During the summer wet season, water often floods a majority of the remaining area. However, this flooding is for a short period of time. In addition to these natural bodies of water there are

five ponds totaling 13 acres, and a 395-acre lake that were artificially constructed.

E. Beaches and Dunes

No portion of the BWWMA contains beaches or dunes.

F. Native Landscapes

The BWWMA provides representation of a South Florida flatwoods ecosystem.

G. Cultural, Archaeological and Historic Resources

A letter from DHR indicating known, identified features and suggested actions necessary to discover unknown resources is contained in Appendix D. Management activities on the area will be planned to minimize any disturbance to sites with a potential for archaeological site presence. Procedures outlined by DHR (Appendix D) will be followed to preserve such sites. The FWC will continue to consult with the previous landowner and DHR in an attempt to locate other features on the area, and will contact professionals from DHR for assistance prior to any ground-disturbing activity on the area.

III. USAGE OF THE PROPERTY

A. Previous Use and Development

Prior to its purchase by the Commission, BWWMA was used primarily for its range and timber resources. Around 1920 homesteaders were given 40 to 80 acre tracts by the U.S. Government. These settlers farmed and raised livestock. During the late 1920's and 1930's, the timber was clearcut from the area. Railroads were built to haul the timber to the sawmills. Logging camps were built at various places. These railroad grades are used today as main roads throughout the area. Much of the timber cut from this area was shipped to Africa for use in the diamond mines. Pine timber in this area has a high rosin content making it very resistant to rot.

Cattle were allowed to graze and roam freely over the open range. Cattlemen, hunters and others burned the range where they felt it was needed. In the center of the area was a large

holding pen where cattle being driven to Fort Myers and Punta Gorda were held overnight. These cattle were eventually shipped to Cuba.

Also prior to purchase by the Commission, the U.S. Army used 16,000 acres as a bombing and strafing range. Bomb craters and machine gun targets are still in evidence.

B. Purposes for Acquisition of the Property

The majority of the land within BWWMA was acquired in 1941 for wildlife management and public hunting under the auspices of Federal Aid in Wildlife Restoration Act (Pittman – Robertson). The acreage referred to as the Yucca Pens Unit was purchased by the State through the P- 2000 Program.. According to the 1997 CARL Annual Report, the Yucca Pens portion of the BWWMA will be "....designated for use as a wildlife management area....Public uses will include hiking, environmental education and hunting."

C. Assessment of the Impact of Planned Uses

1. Public uses: On lands the FWC owns or manages it is the policy of the agency, as expressed in the Agency Strategic Plan, to provide a diversity of recreational opportunities which are fish and wildlife oriented, and which do not adversely impact the long-term well being of fish and wildlife populations or habitats. Such opportunities are developed based upon public interests, usually as expressed during public involvement efforts of the agency (Appendix B). Uses planned for BWWMA comply with the Conceptual State Lands Management Plan, and represent "balanced public utilization".

2. Determination of Public Uses that are Consistent with Acquisition Purposes: FWC manages the area for public resource-based outdoor recreation including, but not limited to, hunting, fishing and wildlife viewing. All uses are consistent with the types of activities encouraged by the Conceptual State Lands Management Plan.

D. Acreage that should be declared surplus

No portion of BWWMA should be declared surplus.

E. Proposed Single- or Multiple-Use Management

FWC intends to continue to manage BWWMA as a multiple use property within the guidelines of the Federal Aid in Wildlife Restoration Act (Pittman/Robertson) and Preservation 2000 land acquisition programs, and advocates the specific uses described above. In order to accomplish the array of resource management and public use objectives advocated by the agency, FWC has developed goals and objectives (Section V.) for the area in order to state the specific intentions of the agency as guided by the FWC Agency Strategic Plan, 1999 - 2004 (Appendix E). These goals and objectives also demonstrate agency intent to comply with the various purposes for land acquisition, as well as the desires of various user constituencies as the agency understands them.

F. Analysis of Multiple-use Potential

The following actions or activities have been considered under the multiple-use concept as possible uses to be allowed on the BWWMA. "Approved" uses are deemed to be in concert with the purposes for state acquisition, with the Conceptual State Lands Management Plan, and with the FWC agency mission, goals and objectives as expressed in the Agency Strategic Plan and Priorities documents. "Conditional" means the use may be acceptable, but will be allowed only if approved through a process other than the plan development and approval process. "Rejected" means the item is not in concert with one or more of these various forms of decision-making guidance:

Analysis of Multiple-use Potential

	Approved	Conditional	Rejected
• Protection of endangered and threatened species	U		
• Ecosystem maintenance	U		
• Soil and water conservation	U		
• Hunting	U		
• Fishing	U		
• Wildlife observation	U		
• Hiking	U		
• Bicycling	U		
• Horseback riding	U		
• Target shooting	U		
• Timber harvest	U		
• Cattle grazing	U		
• Camping	U		
• Apiaries	U		
• Linear facilities		U	
• Off road vehicle use	U		
• Environmental education	U		
• Citriculture or other agriculture		U	
• Preservation of archeological and historical sites	U		
• Other uses as determined on an individual basis		U	

IV. ACCOMPLISHED OBJECTIVES FROM THE BWWMA 1997-2002 CONCEPTUAL MANAGEMENT PLAN

Resource Management Goals and Objectives:	Percent and date accomplished
Goal 1: Manage for healthy and productive wildlife and plant communities.	
Objective 1: Maintain game populations which are self- sustaining and harvested on an optimum sustainable yield basis. (ongoing)	75 % Ongoing
COMMENTS: Deer populations have increased and stabilized through the period. Quail population indices have decreased and regulation changes and a research project were approved to determine possible causes. Harvest rates of dove, snipe, rabbit and squirrels have all increased during the reporting period.	
Objective 2: Protect, maintain and increase, where feasible, threatened and endangered species. (ongoing)	80 % Ongoing
COMMENTS: Red-cockaded woodpeckers have remained stable and a research project has been instituted to determine productivity, mortality and needs in management. Beautiful paw-paw has been located in more locations during this reporting period.	
Objective 3: Maintain at present levels and increase, where feasible, nongame wildlife populations. (ongoing)	90 % Ongoing
COMMENTS: Nongame wildlife population indices have has increased as determined by call and sight survey routes.	
Objective 4: Manage plant communities to increase their carrying capacity for wildlife. (ongoing)	90 % Ongoing
COMMENTS: Plant communities are being managed to provide early successional habitat.	
Objective 5: Eradicate and prevent the reintroduction and spread of exotic plants. (ongoing)	75% Ongoing

	Percent and date accomplished
COMMENTS: Melaleuca, downy rose myrtle, cogan's grass, Brazilian pepper tropical soda apple are being actively treated and are only requiring maintenance treatments on BWWMA. These same species are in the third year of treatment on the Yucca Pens Unit. Treatment zones are showing significant decreases in species abundance.	
Objective 6: Identify activities that can disrupt wildlife and destroy natural resources. (short)	100%
COMMENTS: All activites which do not meet the guidelines set by ARC and the Conceptual State Lands Management Plan have been minimized or eliminated.	
Objective 7: Close unneeded roads and trails and allow to revegetate. (medium)	100%
COMMENTS: All unneeded roads have been closed in the area.	
Objective 8: Identify a central location for ingress and egress . (short)	100%
COMMENTS: Central entrance locations have been established.	
Objective 9: Manage resources consistent with scientific data. (ongoing)	100%
COMMENTS: Current management utilizes the newest methodologies. A quail management research project is currently being conducted to determine problems and solutions with regard to the quail population.	
Objective 10: Manage all resources (wildlife, vegetation, etc.) using sound management techniques. (medium)	100% Ongoing
COMMENTS: Whenever possible, management decisions are made using techniques that have been scientifically proven.	

Objective 11: Identify and understand the sensitiv
the area. (medium)

COMMENTS: Sensitive resources are identified a
decisions are made that will least impact these are

Objective 12: Survey or inventory all resources (w
vegetation, etc.). (medium)

COMMENTS: Vegetation surveys have been cond
the BWWMA. Avian surveys have been conducted
area.

Goal 2: Provide public hunting, fishing and other com
activities.

Objective 1: Provide a combined total of 600 hunt
user occasions per day during the hunting season.

COMMENTS: Six hundred plus man-days of hunt
pressure are provided on opening season periods.

Objective 2: Provide 250 user occasions per day o
closed to hunting for nature-based recreational opp
than hunting. (ongoing)

COMMENTS: On days when no hunting season is
least 250 user-days are available on a daily basis
based recreational activities.

Objective 3: Determine a day use fee that would e
(short)

COMMENTS: The day use fee was implemented i
been successful in facilitating occasional and one-
and affordable access to the area.

Objective 4: Develop interpretive nature trails in s
areas. (medium)

COMMENTS: Interpretive nature trails are curre
developed in conjunction with other nature-based
programs.

	Percent and date accomplished
Objective 5: Develop a user survey to identify and quantify user groups. (medium)	90% Ongoing
COMMENTS: The user survey is in the final months of a 14 month project to identify and quantify user groups.	

Goal 3: Manage all natural resources in an efficient, productive manner which is compatible with wildlife management practices.

Objective 1: Manage the hydroperiod in a manner as close as feasible to natural regimes for optimum benefit to wildlife. (ongoing)	80% Ongoing
COMMENTS: Through the utilization of engineered hydrological restoration structures, water leaving the area has been staged to reestablish natural water regimes.	
Objective 2: Manage the timber resource for optimum benefit to wildlife. (ongoing)	50% Ongoing
COMMENTS: Timber management is progressing to promote thinning operations in dense pine stands to create openings and reduce pine canopy closure.	
Objective 3: Manage the range resource for optimum wildlife benefit with frequent fire, roller chopping, cattle grazing, etc. (ongoing)	95% Ongoing
COMMENTS: Approximately 40,000 – 60,000 acres are burned annually, and 1,300 acres are roller chopped annually. Three cattle leases are established on the area; cattle currently graze 52,000 acres.	
Objective 4: Educate neighbors on fire management. (ongoing)	80% Ongoing
COMMENTS: There are few neighbors currently along the boundary, but in cooperation with DOF, we actively pursue all opportunities to be involved with promoting the use of fire.	

	Percent and date accomplished
Goal 4: Manage real estate in a manner which is productive but still maintains the integrity and purpose of the area.	
Objective 1: Acquire approximately 375.5 acres of inholdings on BWWMA. (long)	25% Ongoing
COMMENTS: Currently the State has purchased only 35 acres of inholdings in the BWWMA.	
Objective 2: Utilize lands or other resources of the Commission-owned portion of the area, such as range forage (cattle grazing), limerock or timber, that will have no detrimental effect, or that will benefit wildlife, to generate revenues for future management of the area. (ongoing)	95% Ongoing
COMMENTS: The lands are currently utilized for cattle grazing, timber harvest, palmetto berry harvest and apiary leases.	
Objective 3: Improve area funding through appropriate use of revenue-generating commercial uses (selective timber harvest, apiaries, selective palmetto berry harvest, etc.). (ongoing)	100% Ongoing
COMMENTS: Funds generated from these activities generally go directly to the FWC account. These revenues supplement other limited sources of management revenues.	
Objective 4: Purchase additional properties adjacent to existing area to prevent further loss and development of hydric pine flatwoods ecosystem. (long)	5% Ongoing
COMMENTS: Three properties have been purchased along the Yucca Pens Unit boundary totaling 380 acres.	
Objective 5: Protect area from incompatible uses and avoid development of projects (e.g. pipelines) that would adversely affect aesthetics and continuity of the area. (ongoing)	100% Ongoing
COMMENTS: A pipeline was proposed to travel adjacent to Hwy. 31 within the BWWMA in 1997. The pipeline location was moved to the east side of Hwy. 31 and off of State land.	

	Percent and date accomplished
Goal 5: Provide protection of listed species.	
Objective 1: Conduct surveys of sites known to contain species that are legally protected. (medium)	75% Ongoing
COMMENTS: Initial surveys have been conducted for beautiful paw-paw and other species. FNAI will provide more detailed surveys by the end of 2004.	
Objective 2: Use sound management techniques to manipulate habitats required by listed species. (ongoing)	100% Ongoing
COMMENTS: Current management practices take into consideration listed species needs and requirements such as opening dense palmetto stands through roller chopping and identifying paw-paw locations the following years.	
Goal 6: Restore natural hydrology and the connection with Charlotte Harbor.	
Objective 1: Coordinate with the Florida DOT to maintain the watershed's connection with the harbor. (ongoing)	0% Ongoing
COMMENTS: No projects have been planned or started by FLDOT to change the current situation.	
Goal 7: Identify and protect archaeological, historical, and cultural resources.	
Objective 1: Map existing known archaeological sites within the management area. (medium)	100% Ongoing
COMMENTS: Known archaeological sites on the area have been plotted, i.e. charcoal pits.	
Objective 2: Keep the location of undisturbed sites as proprietary information. (ongoing)	100% Ongoing
COMMENTS: Sites not easily found have been kept as proprietary information.	

	Percent and date accomplished
Objective 3: When conducting restoration activities, request assistance from the DHR to prevent the disturbance of archaeological sites. (ongoing)	100% Ongoing

COMMENTS: No restoration activities have been conducted in areas with known sites. Restoration activities in other areas have not produced any indication of archaeological artifacts.

V. RESOURCE MANAGEMENT GOALS AND OBJECTIVES

The following goals and objectives have been developed specifically for the BWWMA. They represent ideas of FWC personnel in charge of managing and protecting the area, as well as those of cooperative managers, user groups and other stakeholders outside the FWC. The agency further believes them to be consistent with the various forms of guidance provided to managers. Target dates for completion of objectives represent the end of the calendar year, and collectively provide the priority schedule for accomplishing management actions on the area, as required by Florida Statutes. "Ongoing" objectives are long-term, continuing objectives, and are thus presented first since they contribute to the basis for the management program of the area. Certain objectives are identified as addressing the findings of the Management Review Team during their last review of the area.

Goal 1: Manage for healthy and productive wildlife and plant communities.

Objective 1. Continue to collect wildlife species data during periodic surveys (**ongoing**).

Objective 2. Using GPS and GIS technologies, locate and map red-cockaded woodpecker colonies, nest trees; collect baseline data and monitor population productivity and distribution (**ongoing**). *This addresses checklist finding 2 of the 2002 Land Management Review.*

Objective 3. Using management techniques including prescribed fire, cattle grazing, mechanical and chemical treatments, continue to maintain natural plant communities and the associated wildlife species (**ongoing**).

Objective 4. Continue to monitor annual eagle nest productivity (**ongoing**). *This addresses checklist finding 2 of the 2002 Land Management Review.*

Objective 5. To improve wildlife habitat, conduct selective thinning operations in high-density pine stands (**ongoing**).

Objective 6. Contract to annually plant 240 acres of bare root pine seedlings on previously disturbed areas (**ongoing**).

Objective 7. Continue to utilize prescribe fire, mechanical and chemical treatments to improve the food and cover components of habitat for Northern bobwhite quail (**ongoing**).

Objective 8. Continue vegetative monitoring activities begun in 1972, by sampling existing vegetation transects, photoplots, and point-step locations once over the next five years (**ongoing**).

Objective 9. **By 2003**, develop a species management plan for red-cockaded woodpeckers.

Objective 10. Contract with FNAI to complete mapping the natural communities and survey rare and endangered plants **by 2004**. *This addresses checklist finding 2 of the 2002 Land Management Review.*

Objective 11. Using the results of plant community survey and mapping efforts, develop quantifiable vegetation management objectives **by 2005**.

Objective 12. Contract to complete a herpetological inventory **by 2006.** *This addresses checklist finding 2 of the 2002 Land Management Review.*

Goal 2: Monitor and control exotic and invasive plant species.

Objective 1. Using aerial and ground applications, chemically treat 1,800 acres of exotic plants including melaleuca, Brazilian pepper, tropical soda apple, cogongrass and downy rose myrtle, and continue to annually monitor, and treat, any new occurrences (**ongoing**).

Goal 3: Where feasible, restore and maintain the hydrology to natural conditions.

Objective 1. Continue to work with the county and state government agencies to restore historical sheetflow to the area (**ongoing**). *This addresses checklist finding 5 of the 2002 Land Management Review.*

Objective 2. Continue to monitor water levels at restoration areas (**ongoing**). *This addresses checklist finding 6 of the 2002 Land Management Review.*

Objective 3. In cooperation with SFWMD and USGS, continue to monitor water quality at five monitoring stations on the area (**ongoing**). *This addresses checklist finding 6 of the 2002 Land Management Review.*

Objective 4. Continue to collect rainfall data from the Lee County's Babcock-Webb weather station (**ongoing**). *This addresses checklist finding 6 of the 2002 Land Management Review.*

Objective 5. Repair or replace nine water control structures **by 2006**. *This addresses checklist finding 5 of the 2002 Land Management Review.*

Objective 6. Contract to complete a hydrology study of the Yucca Pens Unit **by 2008**. *This addresses checklist finding 5 of the 2002 Land Management Review.*

Goal 4: Monitor and maintain game species populations harvested by hunters and anglers on an optimum sustainable yield basis.

Objective 1. Continue to conduct annual spotlight surveys of white-tailed deer (**ongoing**).

Objective 2. Continue to collect and analyze biological data from harvested animals (**ongoing**).

Objective 3. Continue to conduct annual breeding season call counts for Northern bobwhite (**ongoing**).

Objective 4. Continue to conduct coyote and bobcat scent station surveys annually (**ongoing**).

Objective 5. Continue to intensively manage game fisheries in Ponds 1 - 3 and Webb Lake using aerators, fish feeders, stocking and limited harvests (**ongoing**).

Objective 6. Conduct a Northern bobwhite quail population and productivity study (**ongoing**).

Goal 5: Provide diverse outdoor recreational opportunities compatible with the management of the natural and cultural resources.

Objective 1. In the BWWMA main area, continue to provide archery, general gun and small game hunting seasons (**ongoing**).

Objective 2. In the Yucca Pens Unit, continue to provide general gun, small game and muzzleloading gun game hunting seasons (**ongoing**).

Objective 3. Continue to provide wildlife viewing opportunities by maintaining at least 390 acres of wildlife openings/food plots (**ongoing**).

Objective 4. Continue to provide angling opportunities on various ponds and lakes existing throughout the area (**ongoing**).

Objective 5. Continue to provide and maintain at least five picnic shelters along the shore of Webb Lake (**ongoing**).

Objective 6. Continue to maintain the 102-acre dove field (**ongoing**).

Objective 7. Continue to maintain the field trial clubhouse (**ongoing**).

Objective 8. Continue to maintain three boat ramps on Webb Lake and one fishing pier/boat ramp on Pond 2 (**ongoing**).

Objective 9. Continue to administer a lease to the Boy Scouts of America, Inc. for their use in environmental education, firearms instruction and safety, archery, canoeing, survival skills and swimming (**ongoing**). *This addresses checklist finding 8 of the 2002 Land Management Review.*

Objective 10. Continue to maintain 41 elevated primitive campsites at Webb Lake (**ongoing**).

Objective 11. To facilitate access to BWWMA, continue to maintain existing designated roads in all-weather travel condition (**ongoing**).

Objective 12. To increase public access in the Yucca Pens Unit during the hunting seasons, designate a limited number of existing roads for approved hunting vehicle use **by 2003.**

Objective 13. Build a new 100-yard, ten position target shooting range to the existing facility location **by 2004**.

Objective 14. Expand and improve the existing range facility to continue to provide a safe target shooting environment **by 2004**.

Objective 15. Investigate the need and feasibility of contracting the operation of the target shooting range to a concessionaire **by 2005**.

Objective 16. Develop and publish interpretive brochures **by 2006**. *This addresses checklist finding 10 of the 2002 Land Management Review.*

Objective 17. Develop a self-guided driving tour **by 2006**. *This addresses checklist finding 10 of the 2002 Land Management Review.*

Objective 18. To enhance equestrian recreational opportunities, renovate the existing 40-horse stall stable located at the field trial facility **by 2007**.

Objective 19. Develop 90 new campsites adjacent to the current campground **by 2007**.

Objective 20. Develop 15 miles of all-purpose trails **by 2007**.

Objective 21. Provide two vaulted toilets at the campground and one vaulted toilet at the target shooting range **by 2007**. *This addresses checklist finding 11 of the 2002 Land Management Review.*

Objective 22. Renovate and expand existing field trial clubhouse restroom facilities to be ADA compliant **by 2008**.

Goal 6: Assure an optimum boundary for BWWMA by continuing to identify and pursue acquisition needs.

Objective 1. To minimize fragmentation of the area, continue to identify strategic parcels for acquisition (**ongoing**). *This addresses checklist finding 7 of the 2002 Land Management Review.*

Objective 2. Maintain a GIS shapefile, acreage, and other necessary data to facilitate nominations for the FWC Inholdings and Additions Program **(ongoing)**. *This addresses checklist finding 7 of the 2002 Land Management Review.*

Objective 3. Continue to encourage the Boy Scouts of America, Inc. to acquire adjacent, comparable land to mitigate for the loss of BWWMA land due to their lease agreement with FWC (**ongoing**). *This addresses checklist finding 7 of the 2002 Land Management Review.*

Goal 7: Manage and protect cultural resources of the BWWMA.

Objective 1. Post signage advising the public of protection provided to cultural resources by Chapter 267, F. S. **by 2003.** *This addresses checklist finding 3 of the 2002 Land Management Review.*

Objective 2. Contact DHR to arrange for a survey to identify cultural resources on the area **by 2004**. *This addresses checklist finding 3 of the 2002 Land Management Review.*

Goal 8. Develop facilities and infrastructure to facilitate the management of the area.

Objective 1. To facilitate access to BWWMA, continue to maintain existing designated roads in all-weather travel condition (**ongoing**).

Objective 2. Renovate the current check station **by 2005**.

Objective 3. Build a new check station at the entrance of the Yucca Pens Unit **by 2008**.

Objective 4. Build a new 9,000 sq. ft shop/office facility west of the current shop/office on Tucker Grade **by 2008**.

Goal 9. Provide for revenue-generating activities other than hunting and fishing.

Objective 1. Continue to collect a day-use fee for area utilization (**ongoing**).

Objective 2. Continue to contract for cattle grazing on BWWMA (**ongoing**).

Objective 3. Continue to provide apiary contracts on BWWMA (**ongoing**).

Objective 4. To improve wildlife habitat, conduct selective thinning operations in high density pine stands (**ongoing**).

Objective 5. Continue to administer a palmetto berry harvest contract through **2005**.

VI. RESOURCE MANAGEMENT PROBLEMS AND STRATEGIES

Problem A: Illegal entry to the property continues to be a concern.

Strategy: Work with local and agency law enforcement to provide increased law enforcement presence.

Strategy: Repair and maintain boundary fences and signage.

Strategy: Continue to identify and acquire strategic parcels to minimize area fragmentation and facilitate increased security.

Problem B: Historic sheetflow to the south has been significantly impeded due to development and diking, resulting in abnormally high water levels that cause degradation to the native upland habitat.

Strategy: Work with the county and state government agencies to restore historical sheetflow to the area.

Strategy: Contract to complete a hydrology study of the Yucca Pens Unit.

Problem C: Approximately 5,000 acres of historic South Florida pine flatwoods were clearcut in the 1930's and have not recovered to a natural state due to the lack of seed trees.

Strategy: Contract to annually plant 240 acres of pine seedlings on this disturbed area.

Problem D: Emergency communication at the target shooting range is lacking.

Strategy: Investigate the feasibility of contracting the operation of the target shooting range to a concessionaire to supervise range operations.

Problem E: Existing office, shop, and equipment storage facilities are inadequate for the level of staffing and for the protection of area equipment. There is over $400,000.00 worth of equipment stored out in the weather. The 800 square foot shop was built in 1971 and is too small to place equipment in for repairs or storage. The 576 square foot office was built in 1965 and houses 5 full time employees.

Strategy: Contract out construction of a new office/shop/equipment storage facility that will meet the needs of area staff. FWC presently has a shop and office prototype that has been used several times on other areas. Develop a 9,000 square foot office shop complex on a previously disturbed site near the present office.

Problem F: Campground does not contain enough campsites for all users during the general gun season.

Strategy: Develop 90 new campsites adjacent to the current campground on a previously disturbed site.

Problem G: Harvest levels of Northern bobwhite are at the lowest levels since the area was established.

Strategy: Contract to investigate the effects of hunting pressure on the productivity of the population, and recommend management strategies to maintain bobwhite population levels at a sustainable level.

Strategy: To maintain the support of quail hunters, an annual progress report will be prepared and distributed to all interested persons. It shall be emphasized that this is a progress report only and may not be conclusive.

Problem H. Residential development is surrounding the management area. With this development, increased complaints about fire, smoke, nuisance wildlife, hunting and gunfire can be expected.

Strategy: Work with the Charlotte and Lee County zoning boards to have an attachment to each building permit alerting the owners building on their property to these potential problems. The attachment would be passed on to subsequent buyers.

Strategy: Take an active role in educating the public about the role of fire in managing the area. This could be done with public talks as well as brochures. This could also be achieved though the print and television media before and during the burning season.

Strategy: Take an active role through the media to explain the role that hunters have played in the acquisition and management of the area.

Strategy: Continue to utilize grinding machines to reduce fuel hazards along the boundary and along old interior roads to reduce and/or eliminate the chances of fire escaping the area.

Problem I: There is pressure by a diverse group of outdoor users to utilize the area. This may result in conflicts among user groups.

Strategy: Space user groups both temporally and spatially.

Problem J: Due to human disturbance on certain areas, habitat conditions are not optimal for wildlife species.

Strategy: Contract with FNAI to identify historic vegetative community types in order to restore habitats to the proper plant community composition.

Strategy: Contract with FNAI to identify current vegetative community types and to provide accurate maps of community composition on the BWWMA.

Strategy: Develop quantifiable vegetative management objectives for the BWWMA in order to ultimately achieve a desired future condition for the area's natural communities.

VII. MANAGEMENT ACTIVITIES AND INTENT

A. Vegetation

Vegetation is managed to maintain the historic abundance, diversity and distribution of

native pine flatwoods plant communities. This involves skillful management of water and fire regimes to simulate the natural hydroperiod and the continued, regular influence of fire. Exotic plant species are to be eradicated or controlled. Specialized mechanical vegetative manipulation techniques may be selectively employed to help control succession to woody species whenever water control or fire are found to be inadequate or ineffective. Snags are protected to benefit cavity-nesting species.

Whenever possible, existing firebreaks such as roads and trails, as well as natural firebreaks such as wetlands, are to be used to define burning compartments. Disk harrows, mowing and foam lines are to be used as necessary to minimize the disturbance created by fire plows.

Historically, water level fluctuations throughout wet and dry seasons were instrumental in forming and maintaining the composition of the area's vegetation. Consequently, a large part of the task of managing the area's vegetation involves maintenance of proper seasonal water levels. An aggressive prescribed fire program is conducted during dormant and growing seasons to maintain a short fire return interval. Exotic vegetation, especially melaleuca, cogan grass, downy rose myrtle, and Brazilian Pepper, are eradicated or controlled through appropriate combinations of mechanical and chemical removal. Selective "patch mowing" and rollerchopping may also be conducted in overgrown agricultural fields, and in areas of thick palmetto not controlled by fire.

Cattle grazing will also be used to manage plant succession and maintain wildlife habitat diversity. Stocking rates will not exceed the recommendations of NRCS grazing specialists. Exotic species will be closely monitored to avoid their spread and propagation. The effects of grazing on the plant and animal communities will be continuously monitored. Information gained through monitoring efforts will be used to modify future stocking rates.

The FWC is proposing to adopt an objective-based approach to habitat management on Trustees-owned lands where the FWC is designated lead manager. This approach will include delineation of management units, determination of management objectives for those units, and regular plant community monitoring. The first step in this process will be to prepare plant community type maps for each managed area. Plant communities will be type-mapped in accordance with FNAI classifications. Type-mapping will be accomplished by means of

contracted services, in accordance with a methodology developed jointly by FNAI and FWC.

Concurrent with managed area type-mapping FWC staff will develop standard operating procedures, describing methodologies for random selection of sampling points, for determining sampling intensity, and for describing sampling methodologies for attributes associated with area management objectives.

After an area has been type-mapped, management units will be delineated. Management unit delineation will take into account plant community type, existing and proposed infrastructure, and other management considerations. Habitat management objectives will be developed for each management unit. Management units with similar characteristics may have the same management objectives. Management objectives will be associated with one or more plant community attributes and their value ranges. These objectives will be aimed at achieving preferred habitat conditions for specified plant or animal species.

Plant community monitoring will involve sampling for variables associated with particular management objectives on an area. Initial sampling would provide FWC staff with baseline data indicating the vegetative condition specified in the management objective. The method for post-treatment sampling will depend upon the nature of the variables specified by the management objective. For example, a variable such as basal area might not require as frequent sampling as mid-story height or species richness. Plant community sampling will be done in accordance with methods outlined in the Bureau of Wildlife Management's Standard Operating Procedures Manual.

B. Wildlife

The intent of wildlife management is to maintain and enhance populations of indigenous species present on the area. Wildlife composition and abundance is a function of environmental systems, particularly of plant communities. The FWC intends to manage wildlife by managing plant communities through the aforementioned strategies. Natural hydroperiod and fire regimes are simulated to provide high-quality natural habitats. Inventories, surveys, population trends and parameters of physiological condition are monitored in selected species, particularly those that are threatened, endangered or hunted. Game populations are harvested on a sustained yield basis. Wild hogs are managed utilizing hunter harvest to minimize impacts on native vegetation,

cultural resources, and other wildlife populations (*this addresses checklist finding 2 of the 2002 Land Management Review 4*). Through regulation of public use, incompatible disturbance and/or over-harvest will be avoided.

Northern bobwhite is the premier game species on BWWMA, and therefore an emphasis will be placed on providing quality habitat for this upland species. Prescribed fire, food plots, mechanical and chemical treatments will be used to provide quality cover and food components of bobwhite habitat. In addition, a five-year research project scheduled to begin in July 2002 will investigate the effects of hunting pressure on the productivity of the population, and recommend management strategies to maintain bobwhite population levels at a sustainable level.

C. Fisheries

Fisheries resources will be maintained on the BWWMA, and it is FWC's intent to expand fishing opportunities when possible and compatible with other management objectives. Webb Lake and marl ponds 1 – 3 are intensively managed for optimum recreational utilization of sportfish. Management efforts on two other marl ponds will be limited to periodic renovation. The FWC Division of Fisheries manages pond 2 as a high-quality bluegill/red-eared sunfish pond. These ponds remain open year-round and are subject to specific fishing regulations. There are many other fishing opportunities in the management area in naturally occurring seasonal ponds. These ponds will be managed under their natural hydrologic cycles.

D. Recreation

The BWWMA is intended to be an area available for a variety of nature-based recreational opportunities. These include, but are not limited to, fishing, hunting, camping, bird watching, horseback riding, hiking, target shooting, and nature study. Inasmuch as possible, these activities are managed to provide uncrowded, quality outdoor experiences. Efforts are made to identify incompatibilities among user groups and to resolve them through spatial and/or temporal separation of conflicting uses. The target shooting range has been modified to operate in a safe manner. Recreational uses are limited to those activities that are consistent with the goals of environmental conservation and user balance.

E. Environmental Education

FWC intends to develop a self-guided interpretive driving tour of BWWMA. Also, various interpretive signage and publications will be developed and distributed throughout the area. Furthermore, FWC administers a lease to the Boy Scouts of America, Inc. for their use in environmental education, firearms instruction and safety, archery, canoeing, survival skills and swimming.

F. Cost estimates and funding sources for conducting management activities

The Fiscal Year 2002 – 2003 operational plan, showing cost estimates and categories of expenditures may be found in Appendix F. Funds needed to protect and manage the property, and to fully implement the recommended program, are derived primarily from the CARL Trust Fund, and from State Legislative appropriations. Private conservation organizations, however, may be cooperators with the agency for funding of specific projects. Alternative funding sources, such as monies available through mitigation, will be sought to supplement existing funding.

The following represents the actual and unmet budgetary needs for managing the lands and resources of the BWWMA. This budget was developed using data developed by FWC and other cooperating entities, and is based on actual costs for land management activities, equipment purchase and maintenance, and for development of fixed capital facilities. The budget below, although exceeding what FWC has been receiving through the appropriations process, is consistent with the direction taken by current operational planning for the BWWMA (Appendix F). Budget categories are those currently recognized by FWC and the Land Management Uniform Cost Accounting Council. More information on these budget categories can be found in Appendix F.

Babcock-Webb WMA Conceptual Management Plan Budget
FY 2003-2004

Resource Management	
Exotic Species Control	$200,000.00
Prescribed Burning	$135,000.00
Cultural Resource Management	$2,000.00
Timber Management	$3,000.00
Hydrological Management	$47,500.00
Other	$490,820.10
Subtotal	**$878,320.10**
Administration	
General administration	**$1,500.00**
Support	
Land Management Planning	$51,586.60
Land Management Reviews	$3,000.00
Training/Staff Development	$5,000.00
Vehical Purchase	$233,303.00
Vehicle Operation and Maintenance	$80,000.00
Other	$2,300.00
Subtotal	**$375,189.60**
Capital Improvements	
New Facility Construction	$1,161,725.00
Facility Maintenance	$586,818.74
Subtotal	**$1,748,543.74**
Visitor Services/Recreation	
Info./Education/Operations	**$98,062.70**
Law Enforcement	
Resource protection	**$46,039.00**
Total	**$3,147,655.14**

Priority schedule:
Immediate (annual)
Intermediate (3-4 years)
Other (5+ years)

Babcock-Webb WMA Conceptual Management Plan Budget

2003-2008 five-year projection

Resource Management	
Exotic Species Control	$1,061,827.16
Prescribed Burning	$716,733.33
Cultural Resource Management	$2,000.00
Timber Management	$15,927.41
Hydrological Management	$252,183.95
Other	$2,605,830.57
Subtotal	**$4,654,502.42**
Administration	
General administration	**$7,963.70**
Support	
Land Management Planning	$273,880.27
Land Management Reviews	$3,000.00
Training/Staff Development	$5,000.00
Vehical Purchase	$233,303.00
Vehicle Operation and Maintenance	$424,730.86
Other	$12,211.01
Subtotal	**$952,125.14**
Capital Improvements	
New Facility Construction	$1,161,725.00
Facility Maintenance	$3,115,500.38
Subtotal	**$4,277,225.38**
Visitor Services/Recreation	
Info./Education/Operations	**$520,628.19**
Law Enforcement	
Resource protection	**$244,427.30**
Total	**$10,656,872.14**

Priority schedule:
Immediate (annual)
Intermediate (3-4 years)
Other (5+ years)

E. Analysis of Potential for Contracting Restoration and Management Activities by Private Vendors

The following management and restoration activities have been considered for outsourcing to private entities. It has been determined that items selected as "approved" below are those that FWC either does not have in-house expertise to accomplish, or which can be done at less cost by an outside provider of services. "Conditional" items are those that could be done either by an outside provider or by the agency at virtually the same cost or with the same level of competence. Those items selected as "rejected" represent those for which FWC has in-house expertise, and/or which the agency has found it can accomplish at less expense than through contracting with outside sources:

	Approved	Conditional	Rejected
• Road development and maintenance		U	
• Dike and levee maintenance		U	
• Prescribed burning		U	
• Vegetation inventories	U		
• Timber harvest activities		U	
• Public contact and educational facilities development		U	
• Exotic species control		U	

F. Compliance with State, Federal, and Local Government Requirements

The operational functions of FWC personnel are governed by the agency's Internal Management Policies and Procedures (IMPP) Manual. This IMPP Manual provides internal guidance regarding many subjects affecting the responsibilities of agency personnel, including personnel management, safety issues, uniforms and personal appearance, training, as well as accounting, purchasing and budgetary procedures.

When public facilities are developed on areas managed by FWC, every effort is made to comply with Public Law 101-336, the Americans with Disabilities Act. As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions (e.g., where handicap access is structurally impractical, or where providing such access would change the fundamental character of the facility being

provided).

Uses planned for the BWWMA are in compliance with the Conceptual State Lands Management Plan and its requirement for "balanced public utilization," and are in compliance with the mission of the FWC as described in its Agency Strategic Plan (Appendix E). Such uses also comply with the authorities of the FWC as derived from Article IV, Section 9 of the Florida Constitution as well as the guidance and directives of Chapters 372, 253, 259, 327, 370, 403, 870, 373, 375, 378, 487, and 597 of the Florida Statutes. The FWC has received a letter from Charlotte and Lee Counties indicating County review of this CMP for compliance with the local government comprehensive plan (Appendix G).

G. Cooperating Agencies' Responsibilities

DOF is a designated cooperating agency on the Yucca Pens Unit, and assists FWC in prescribed burning and tree thinning or harvest operations where needed. The SWFWMD and the SFWMD assists FWC in monitoring and managing water resources.

H. Land Management Review

A Land Management Review of BWWMA was conducted on January 23, 2002,and a response report was issued by FWC. The review and FWC response can be found in Appendix H. Pursuant to Florida Statute Chapter 259.036, the FWC has considered the recommendations of the Land Management Review report and incorporated its suggestions into the development of the Goals and Objectives (Section V.) and Problems and Strategies (Section VI.), and Management Intent (Section VII.) of this plan.

I. Soil and Water Resource Conservation

Soil disturbing activities will be confined to areas that have the least likelihood of experiencing erosion problems (e.g., steepest slopes and streamside management zones). Soil disturbing activities will follow landform contours to the extent practicable. On areas that have been disturbed prior to state acquisition, an assessment will be made to determine if soil erosion is occurring, and, if so, appropriate measures will be implemented to stop or control the effects of this erosion.

IX. APPENDICES

Appendix A

Lease Agreement and Legal Description

SAL8103

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT
TRUST FUND OF THE STATE OF FLORIDA

LEASE AGREEMENT

FRED C. BABCOCK/CECIL M. WEBB
WILDLIFE MANAGEMENT AREA

Lease Number 4095

This lease is made and entered into this 16th day of April 19 96, between the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, hereinafter referred to as "LESSOR", and the FLORIDA GAME AND FRESH WATER FISH COMMISSION, hereinafter referred to as "LESSEE".

WITNESSETH:

WHEREAS, the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA holds title to certain lands and property being utilized by the State of Florida for public purposes; and

WHEREAS, the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA is authorized in Section 253.03, Florida Statutes, to enter into leases for the use, benefit and possession of public lands by State agencies which may properly use and possess them for the benefit of the people of the State of Florida.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter contained, LESSOR leases the below described premises to LESSEE subject to the following terms and conditions:

1. DELEGATIONS OF AUTHORITY: LESSOR'S responsibilities and obligations herein shall be exercised by the Division of State Lands, Department of Environmental Protection.

2. DESCRIPTION OF PREMISES: The property subject to this lease, is situated in the County of Charlotte, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".

3. TERM: The term of this lease shall be for a period of fifty (50) years, commencing on April 26, 1996 and ending on April 25 2046, unless sooner terminated pursuant to the provisions of this lease.

4. PURPOSE: LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and resource based public outdoor recreation which is compatible with the conservation and protection of these public lands, as set forth in subsection 253.023(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 7 of this lease.

5. QUIET ENJOYMENT AND RIGHT OF USE: LESSEE shall have the right of ingress and egress to, from and upon the leased premises for all purposes necessary to the full quiet enjoyment by said LESSEE of the rights conveyed herein.

6. UNAUTHORIZED USE: LESSEE shall, through its agents and employees, prevent the unauthorized use of the leased premises or any use thereof not in conformance with this lease.

7. MANAGEMENT PLAN: LESSEE shall prepare and submit a Management Plan for the leased premises, in accordance with Section 253.034, Florida Statutes, and Chapters 18-2 and 18-4, Florida Administrative Code, within 12 months of the effective date of this lease. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR at least every five (5) years. LESSEE shall not use or alter the leased premises except as

provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

8. RIGHT OF INSPECTION: LESSOR or its duly authorized agents shall have the right at any and all times to inspect the leased premises and the works and operations thereon of LESSEE, in any matter pertaining to this lease.

9. INSURANCE REQUIREMENTS: LESSEE shall procure and maintain adequate fire and extended risk insurance coverage for any improvements or structures located on the leased premises in amounts not less than the full insurable replacement value of such improvements by preparing and delivering to the Division of Risk Management, Department of Insurance, a completed Florida Fire Insurance Trust Fund Coverage Request Form immediately upon erection of any structures as allowed by paragraph 4 of this lease. A copy of said form and immediate notification in writing of any erection or removal of structures or other improvements on the leased premises and any changes affecting the value of the improvements shall be submitted to the following: Bureau of Land Management Services, Division of State Lands, Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station 130, Tallahassee, Florida 32399.

10. LIABILITY: LESSEE shall assist in the investigation of injury or damage claims either for or against LESSOR or the State of Florida pertaining to LESSEE'S respective areas of responsibility under this lease or arising out of LESSEE'S respective management programs or activities and shall contact LESSOR regarding the legal action deemed appropriate to remedy such damage or claims. LESSEE is responsible for all personal injury and property damage attributable to the negligent acts or omissions of LESSEE and its officers, employees, and agents.

11. ARCHAEOLOGICAL AND HISTORIC SITES: Execution of this lease in no way affects any of the parties' obligations pursuant

to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Section 253.034, Florida Statutes, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

12. EASEMENTS: All easements including, but not limited to, utility easements are expressly prohibited without the prior written approval of LESSOR. Any easement not approved in writing by LESSOR shall be void and without legal effect.

13. SUBLEASES: This lease is for the purposes specified herein and subleases of any nature are prohibited, without the prior written approval of LESSOR. Any sublease not approved in writing by LESSOR shall be void and without legal effect.

14. SURRENDER OF PREMISES: Upon termination or expiration of this lease LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, written notification shall be made to the Bureau of Land Management Services, Division of State Lands, Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station 130, Tallahassee, Florida 32399, at least six (6) months prior to the release of all or any part of the leased premises. Notification shall include a legal description, this lease number and an explanation of the release. The release shall only be valid if approved by LESSOR through execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon expiration or termination of this lease, all improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain

any improvements upon termination of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises, a representative of the Division of State Lands shall perform an on-site inspection and the keys to any buildings on the leased premises shall be turned over to the Division. If the leased premises and improvements located thereon do not meet all conditions set forth in paragraphs 17 and 20 herein, LESSEE shall pay all costs necessary to meet the prescribed conditions.

15. BEST MANAGEMENT PRACTICES: LESSEE shall implement applicable Best Management Practices for all activities conducted under this lease in compliance with paragraph 18-2.004(1)(d), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, LESSEE or other land managing agencies for the protection and enhancement of the leased premises.

16. PUBLIC LANDS ARTHROPOD CONTROL PLAN: LESSEE shall identify and subsequently designate to the respective arthropod control district or districts within one year of the effective date of this lease all of the environmentally sensitive and biologically highly productive lands contained within the leased premises, in accordance with Section 388.4111, Florida Statutes and Chapter 5E-13, Florida Administrative Code, for the purpose of obtaining a public lands arthropod control plan for such lands.

17. UTILITY FEES: LESSEE shall be responsible for the payment of all charges for the furnishing of gas, electricity, water and other public utilities to the leased premises and for having all utilities turned off when the leased premises are surrendered.

18. ASSIGNMENT: This lease shall not be assigned in whole or in part without the prior written consent of LESSOR. Any assignment made either in whole or in part without the prior written consent of LESSOR shall be void and without legal effect.

19. PLACEMENT AND REMOVAL OF IMPROVEMENTS: All buildings, structures, improvements, and signs shall be constructed at the expense of LESSEE in accordance with plans prepared by

professional designers and shall require the prior written approval of LESSOR as to purpose location, and design. Further, no trees, other than non-native species, shall be removed or major land alterations done without the prior written approval of LESSOR. Removable equipment and removable improvements placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE upon termination of this lease.

20. MAINTENANCE OF IMPROVEMENTS: LESSEE shall maintain the real property contained within the leased premises and any improvements located thereon, in a state of good condition, working order and repair including, but not limited to, keeping the leased premises free of trash or litter, maintaining all planned improvements as set forth in the approved Management Plan, meeting all building and safety codes in the location situated and maintaining any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be at the date of this lease; provided, however, that any removal, closure, etc., of the above improvements shall be acceptable when the proposed activity is consistent with the goals of conservation, protection, and enhancement of the natural and historical resources within the leased premises and with the approved Management Plan.

21. ENTIRE UNDERSTANDING: This lease sets forth the entire understanding between the parties and shall only be amended with the prior written approval of LESSOR.

22. BREACH OF COVENANTS, TERMS, OR CONDITIONS: Should LESSEE breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to LESSEE to remedy such breach within sixty (60) days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within sixty (60) days of receipt of written notice, LESSOR may either terminate this lease and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises or

maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

23. NO WAIVER OF BREACH: The failure of LESSOR to insist in any one or more instances upon strict performance of any one or more of the covenants, terms and conditions of this lease shall not be construed as a waiver of such covenants, terms and conditions, but the same shall continue in full force and effect, and no waiver of LESSOR of any one of the provisions hereof shall in any event be deemed to have been made unless the waiver is set forth in writing, signed by LESSOR.

24. PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES: Fee title to the leased premises is held by LESSOR. LESSEE shall not do or permit anything which purports to create a lien or encumbrance of any nature against the real property contained in the leased premises including, but not limited to, mortgages or construction liens against the leased premises or against any interest of LESSOR therein.

25. CONDITIONS AND COVENANTS: All of the provisions of this lease shall be deemed covenants running with the land included in the leased premises, and construed to be "conditions" as well as "covenants" as though the words specifically expressing or imparting covenants and conditions were used in each separate provision.

26. DAMAGE TO THE PREMISES: (A) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (B) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances

adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Satutes and the rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE's failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE's such failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE's obligations set forth in this paragraph shall survive the termination or expiration of this lease. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE's activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable agencies.

27. PAYMENT OF TAXES AND ASSESSMENTS: LESSEE shall assume full responsibility for and shall pay all liabilities that accrue to the leased premises or to the improvements thereon, including any and all drainage and special assessments or taxes of every kind and all mechanic's or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises.

28. RIGHT OF AUDIT: LESSEE shall make available to LESSOR all financial and other records relating to this lease and LESSOR shall have the right to audit such records at any reasonable time. This right shall be continuous until this lease expires or is terminated. This lease may be terminated by LESSOR should LESSEE fail to allow public access to all documents, papers, letters or other materials made or received in conjunction with this lease, pursuant to Chapter 119, Florida Statutes.

29. NON-DISCRIMINATION: LESSEE shall not discriminate against any individual because of that individual's race, color, religion, sex, national origin, age, handicap, or marital status with respect to any activity occurring within the leased premises or upon lands adjacent to and used as an adjunct of the leased premises.

30. COMPLIANCE WITH LAWS: LESSEE agrees that this lease is contingent upon and subject to LESSEE obtaining all applicable permits and complying with all applicable permits, regulations, ordinances, rules, and laws of the State of Florida or the United States or of any political subdivision or agency of either.

31. TIME: Time is expressly declared to be of the essence of this lease.

32. GOVERNING LAW: This lease shall be governed by and interpreted according to the laws of the State of Florida.

33. SECTION CAPTIONS: Articles, subsections and other captions contained in this lease are for reference purposes only and are in no way intended to describe, interpret, define or limit the scope, extent or intent of this lease or any provisions thereof.

34. ADMINISTRATIVE FEE: LESSEE shall pay LESSOR an annual administrative fee of $300.00. The initial annual administrative fee shall be payable within 30 days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

IN WITNESS WHEREOF, the parties have caused this lease to be executed on the day and year first above written.

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA

Witness

Print/Type Witness Name

Witness

Print/Type Witness Name

By: _____ (SEAL)
DANIEL T. CRABB, CHIEF,
BUREAU OF LAND MANAGEMENT
SERVICES, DIVISION OF STATE
LANDS, DEPARTMENT OF
ENVIRONMENTAL PROTECTION

"LESSOR"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 1st day of May 1996, by Daniel T. Crabb, as Chief, Bureau of Land Management Services, Division of State Lands, Florida Department of Environmental Protection, acting as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. He is personally known to me.

(SEAL)

GLORIA H. MADDOX
MY COMMISSION EXPIRES SEPTEMBER 25, 1998
#CC 409433
NOTARY PUBLIC, STATE OF FLORIDA

Notary Public, State of Florida

Print/Type Notary Name

Commission Number:

Commission Expires:

Approved as to Form and Legality

By: _____
DEP Attorney

FLORIDA GAME AND FRESH
WATER FISH COMMISSION

Witness

R.M. Wright
Print/Type Witness Name

Witness

Rosemary Mara
Print/Type Witness Name

By: Victor Heller for AHF (SEAL)

Victor J. Heller
Print/Type Name

Title: Assist. Exec. Director

"LESSEE"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this 25th day of March, 1996, by Victor J. Heller, as Asst. Executive Director, Florida Game and Fresh Water Fish Commission. He/~~she~~ is personally known to me ~~or produced~~ _____ ~~as identification.~~

Jimmie C. Bevis
Notary Public, State of Florida

(SEAL)

JIMMIE C. BEVIS
Print/Type Notary Name

Commission Number: CC 338592

Commission Expires: December 28, 1997

JIMMIE C. BEVIS
MY COMMISSION EXPIRES
DECEMBER 28, 1997
CC 338592
Bonded thru
Tro Fain Insurance
NOTARY PUBLIC, STATE OF FLORIDA

...ed Please Return To:
Bruce F. Iden
Milledge, Iden & Held
7100 Ponce de Leon Blvd., Suite 600
Miami, Florida 33134

SPACE BELOW FOR RECORDER'S USE

IMAGED
SG

WARRANTY DEED
(STATUTORY FORM - SECTION 689.02, F.S.)

THIS INDENTURE, made this 16th day of MAY, A.D. 199 5, between RONALD H. ANSIN and EDMUND N. ANSIN, as tenants-in-common, of the County of Dade in the State of Florida, grantor, and the BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA, whose post office address is c/o Florida Department of Environmental Protection, Division of State Lands, 3900 Commonwealth Boulevard, Mail Station 115, Tallahassee, FL 32399-3000, grantee,

(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and their heirs, legal representatives, successors and assigns. "Grantor" and "grantee" are used for singular and plural, as the context requires and the use of any gender shall include all genders.)

WITNESSETH: That the said grantor, for and in consideration of the sum of Ten Dollars and other good and valuable considerations, to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said grantee, and grantee's successors and assigns forever, the following described land situate, lying and being in Charlotte County, Florida, to-wit:

See Exhibit "A" attached hereto and by reference made a part hereof, together with all riparian and littoral rights appertaining thereto.

Property Appraiser's Parcel Identification Number: 0072634-000000-3; 0072694-000000-0 0072697-000000-7; 0072706-000000-6; 0072708-000000-4; 0072822-000000-5
This conveyance is subject to easements, restrictions, limitations and conditions of record if any now exist, but any such interests that may have been terminated are not hereby re-imposed.

This property is not the homestead property of the grantor, nor contiguous to homestead property, as such homestead is defined under Florida law.

AND the said grantor does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF the grantor has hereunto set grantor's hand and seal, the day and year first above written.

Signed, sealed and delivered in the presence of:

(SIGNATURE OF FIRST WITNESS AS TO FIRST GRANTOR)
BRUCE D. LAWRENCE
(PRINTED, TYPED OR STAMPED NAME OF FIRST WITNESS)

(SIGNATURE OF SECOND WITNESS AS TO FIRST GRANTOR)
Anthony Corell
(PRINTED, TYPED OR STAMPED NAME OF SECOND WITNESS)

RONALD H. ANSIN
P.O. Box 610727
Miami, Florida 33261-0227

(SIGNATURE OF FIRST WITNESS AS TO SECOND GRANTOR)
MARION L. SINGLETARY
(PRINTED, TYPED OR STAMPED NAME OF FIRST WITNESS)

(SIGNATURE OF SECOND WITNESS AS TO SECOND GRANTOR)
Elaine Kraden
(PRINTED, TYPED OR STAMPED NAME OF SECOND WITNESS)

EDMUND N. ANSIN
P.O. Box 610727
Miami, Florida 33261-0227

Recorded 05/19/95 ... Charlotte County
Clerk of the Circuit Court
Barbara T. Scott

NO. 40945
EXHIBIT A
PAGE 12 OF 14

STATE OF Massachusetts)
COUNTY OF Worcester)

The foregoing instrument was acknowledged before me this 12th day of May, 1995, by RONALD H. ANSIN. Such person (Notary Public must check applicable box):

[✓] is personally known to me.
[ ] produced a current driver license.
[ ] produced _____ as identification.

(NOTARY PUBLIC SEAL)

Sandra Ann Craig
Notary Public

SANDRA ANN CRAIG
(Printed, Typed or Stamped Name of Notary Public)

Commission No.: _____

My Commission Expires: _____

STATE OF FLORIDA)
COUNTY OF DADE)

The foregoing instrument was acknowledged before me this 9th day of May, 1995, by EDMUND N. ANSIN. Such person (Notary Public must check applicable box):

[✓] is personally known to me.
[ ] produced a current driver license.
[ ] produced _____ as identification.

(NOTARY PUBLIC SEAL)

OFFICIAL NOTARY SEAL
MARION L SINGLETARY
COMMISSION NUMBER
CC305873
MY COMMISSION EXP.
SEPT 14,1997

Marion L. Singletary
Notary Public

MARION L. SINGLETARY
(Printed, Typed or Stamped Name of Notary Public)

Commission No.: _____

My Commission Expires: _____

WARRANTY DEED
REVISED 1/96/M

NO. 40945
EXHIBIT A
PAGE 13 OF 14

DESCRIPTION

ALL OF SECTION 15 LESS THE WEST 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 15, TOWNSHIP 42 SOUTH, RANGE 23 EAST, AND LESS ALL THAT PORTION LYING NORTHERLY OF THE FOLLOWING DESCRIBED LINE:

BEGIN AT THE SOUTHEAST CORNER OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SAID SECTION 15; THENCE RUN ALONG A LINE WHICH PARALLELS AND LIES SOUTHERLY OF EXISTING FARM FIELDS FOR THE FOLLOWING COURSES; S 00° 59' 18" W FOR 1.50 FEET; S 59° 23' 43" E FOR 1964.91 FEET; N 75° 45' 08" E FOR 613.35 FEET; AND N 74° 47' 20" E FOR 1885.85 FEET TO THE EAST LINE OF SECTION 15 AND POINT OF TERMINATION OF THE LINE, ALL IN TOWNSHIP 42 SOUTH, RANGE 23 EAST, CHARLOTTE COUNTY, FLORIDA.

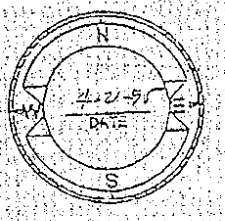
SECTION 22, LESS THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4, TOWNSHIP 42 SOUTH, RANGE 23 EAST, CHARLOTTE COUNTY, FLORIDA.

ALL OF SECTION 23, TOWNSHIP 42 SOUTH, RANGE 23 EAST, CHARLOTTE COUNTY, FLORIDA.

SECTION 26, LESS THE NORTH 60 FEET FOR PUBLIC ROAD; TOWNSHIP 42 SOUTH, RANGE 23 EAST, CHARLOTTE COUNTY, FLORIDA.

SECTION 27, LESS THE NORTH 60 FEET FOR PUBLIC ROAD, TOWNSHIP 42 SOUTH, RANGE 23 EAST, CHARLOTTE COUNTY, FLORIDA.

SECTION 35, TOWNSHIP 42 SOUTH, RANGE 23 EAST, CHARLOTTE COUNTY, FLORIDA.



NO. 40945
EXHIBIT A
PAGE 14 OF 14

TOTAL P.04

Establishment Order No: WMA I 97-18 **Fred C. Babcock / Cecil M. Webb Type I Wildlife Management Area**

The Game and Fresh Water Fish Commission of the State of Florida, under Section 9, Article IV of the Florida Constitution, and the rules and regulations of the Commission, has reestablished the Fred C. Babcock/Cecil M. Webb Type I Wildlife Management Area in Charlotte County, Florida, with the following described area:

T 41 S, R 25 E - the West 300 feet of Sections 3, 10 and 15; the South 300 feet of Section 15, 14, and 13; Sections 4-9, and Sections 16-36.

T 41 S, R 24 E - Sections 1-36.

T 41 S, R 23 E - Section 25, LESS AND EXCEPT that portion North and West of Highway 768, Section 36 and that portion of Section 35 East of the I-75 right-of-way.

T 42 S, R 25 E - Sections 1-12, Section 13, LESS the Northeast ¼, Sections 14-16, Section 17, LESS the South ½, Section 18, Section 19, LESS the East ½, the East ½ of the Northwest ¼, the West ½ of the Northeast ¼ and the West ½ of the Southeast ¼.

T 42 S, R 24 E - Sections 1-14, and Sections 17 and 18.

T 42 S, R 23 E - Section 1, all of Section 12 Northeast of Highway 41, and all of Section 13 Northeast of Highway 41.

LESS AND EXCEPT any private, state or federal right-of-way of record within T 41 S, R 23, 24 and 25 E, T 42 S, R 23, 24 and 25 E.

All of Section 15 LESS the West 1/2 of the Northwest 1/4 of said Section 15, Township 42 South, Range 23 East, and LESS all that portion lying Northerly of the following described line:

Begin at the Southeast corner of the West 1/2 of the Northwest 1/4 of said Section 15; thence run along a line which parallels and lies Southerly of existing farm fields for the following courses: S 00° 59' 18" W for 1.50 feet; S 59° 23' 43" E for 1,964.91 feet; N 75° 45' 08" E for 613.35 feet; and N 74° 47' 20" E for 1,885.85 feet to the East line of Section 15 and Point of Termination of the line, all in Township 42 South, Range 23 East, Charlotte County, Florida.

Section 22, LESS the Southwest 1/4 of the Southeast 1/4, Township 42 South, Range 23

East, Charlotte County, Florida.

All of Section 23, Township 42 South, Range 23 East, Charlotte County, Florida.

Section 26, LESS the North 60 feet for Public Road, Township 42 South, Range 23 East, Charlotte County, Florida.

Section 27, LESS the North 60 feet for Public Road, Township 42 South, Range 23 East, Charlotte County, Florida.

Section 35, Township 42 South, Range 23 East, Charlotte County, Florida.

Jenkins Parcel:

The West half of the West Thirty Acres of the Southwest quarter of the Southeast quarter of Section 32, Township 41 South, Range 25 East, Charlotte County, Florida.

Ansin Parcel:

A parcel of land lying in Section 14, Township 42 South, Range 23 East, Charlotte County, Florida, which parcel is more particularly described as follows:

Beginning at the Southwest corner of Section 14, Township 42 South, Range 23 East, run N 03° 03' 43" W along the West line of Section 14 for 1302.67 feet to a point; thence departing said West line of Section 14 running through Section 14 the following courses and distances: N 79° 18' 40" E for 420.82 feet; S 18° 23' 31" E for 242.35 feet; S 03° 04' 58" E for 187.28 feet and S 00° 52' 03" W for 182.27 feet to the center of a 100 foot wide drainage easement as recorded in Official Records Book 10, page 471 of the Charlotte County Records; thence continue along the centerline of said easement N 75° 12' 10" E for 103.86 feet; thence departing said centerline and continuing through Section 14 the following courses and distances: N 00° 52' 03" E for 157.68 feet; N 03° 04' 58" W for 204.17 feet; N 18° 23' 31" W for 242.26 feet; N 78° 27' 29" E for 637.33 feet; N 77° 01' 19" E for 1377.97 feet; N 03° 28' 29" W for 1028.93 feet; N 31° 59' 09" E for 303.05 feet, 13° 25' 07" W for 1272.73 feet; N 67° 17' 15" E for 594.97 feet; N 57° 32' 01" E for 588.34 feet; N 59° 03' 42" E for 400.12 feet; N 56° 27' 30" E for 528.08 feet to the North line of said Section 14; thence run S 88° 52' 37" E along said North line of Section 14 for 992.63 feet to the Northeast corner of Section 14; thence depart said North line of Section 14 and run S 00° 12' 05" W along the East line of said Section 14 for 5439.96 feet to the Southeast corner of Section 14; thence run N 89° 19' 04" W along the South line of Section 14 for 5015.37 feet to the Point of Beginning.

Nolan Parcel:

That portion of the Northeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 20, Township 42 South, Range 23 East, in Charlotte County, Florida, lying Easterly of State Road No. 765 (Burnt Store Road), more particularly described as follows:

Begin at the 10-acre corner at the Southeast corner of the Northeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of said Section 20; thence run S 89° 29' 46" W, along the 10-acre line, 507.38 feet to a point on the Easterly right-of-way boundary of State Road No. 765; thence run N 44° 56' 23" E, parallel with and 48 feet from the centerline of said road, 729.14 feet; thence S 00° 51' 39" W, 511.72 feet to the Point of Beginning.

First Florida

Parcel One:

All of the Northwest quarter of the Southeast quarter lying Southeasterly of the Southeast right-of-way (ROW) line of Country Road 765, and Northwesterly of the Northwest line of said County Road 765, also known as Burnt Store Road, all being in Section 20, Township 42 South, Range 23 East, Charlotte County, Florida.

AND

Parcel Two:

A parcel of land located in that part of the Southwest quarter of Section 20, Township 42 South, Range 23 East, Charlotte County, Florida, lying Southeast of the ROW line of Burnt Store Road, as presently located, being more specifically described as follows:

From the Southeast corner of the Southwest quarter of said Section 20, bear North 01° 07' 19" East, along the East line of the Southwest quarter of said Section 20, a distance of 1153.28 feet to the intersection thereof with the Northerly ROW line of "Clark Canal" and the Point of Beginning of the herein described parcel of land; thence continue North 01° 07' 19" East, a distance of 1291.90 feet to the Southeasterly ROW line of County Road 765; thence South 45° 14' 49" West, along said Southeast line of Burnt Store Road, a distance of 2054.91 feet to the intersection thereof with the Northerly ROW of the aforesaid "Clark Canal"; thence North 76° 17' 48" East, a distance of 924.90 feet; thence South 83° 11' 05" East, a distance of 539.23 feet to the Point of Beginning.

All lands comprising approximately 69,727 acres, and posted as a Type I Wildlife Management Area.

Authority: Section 9, Article IV, Florida Constitution

History: WMA I 83-8, WMA I 92-6, WMA I 95-1, WMA I 96-21, WMA I 97-18

Effective Date: July 11, 1997

GIVEN UNDER MY HAND AND SEAL OF THE GAME AND FRESH WATER FISH COMMISSION OF THE STATE OF FLORIDA, THIS 11th DAY OF July, 1997.

Allan L. Egbert Ph.D.
Executive Director

g:\share\orders\i97-18.wpd

Appendix B

Public Ivolvement

Babcock-Webb WMA

Management Advisory Group

Consensus Meeting Results

June 12, 2002, Punta Gorda, Florida

The intent of convening a consensus meeting is to involve a diverse group of stakeholders in assisting the Fish and Wildlife Conservation Commission (FWC) in development of a rational management concept for lands within the agency's managed area system. The Commission does this by asking spokespersons for these stakeholders to participate in a half-day meeting to provide ideas about how the lands should be protected and managed.

The Babcock-Webb WMA consensus meeting was held on the morning of June 12, 2002 at the Punta Gorda Public Library in Punta Gorda, Florida. The ideas found below represent the most important stakeholder considerations, with priority determined by vote, for consideration in the 2002 – 2007 Conceptual Management Plan (CMP) for the Babcock-Webb WMA.

The ideas below were provided by members of the Babcock-Webb WMA Management Advisory Group (stakeholders), and represent a valuable source of information to be used by biologists, planners, administrators and others during the development of the CMP. Upon approval by FWC and the Governor & Cabinet, the Babcock-Webb WMA CMP will guide the activities of Commission personnel over the five-year duration of the plan, and will also help meet agency, state and federal planning requirements.

Numbers to the left of **bold-faced "one-liner" ideas** listed below represent the total number of votes, and the cumulative score of each idea. A lower score indicates higher importance since each voter's most important idea (recorded on card #1) received a score of 1, and the fifth most important idea (recorded on card #5) received a score of 5. Cumulative scores are used to break ties when two or more ideas have the same number of votes. Ideas not receiving any votes are listed, but carry no judgment with regard to priority. Statements in parentheses following the bold-faced ideas represent a synopsis of the clarifying discussion of one-liner ideas, as inscribed by the FWC recorder at the meeting. As indicated above, the ideas below are presented in priority order:

# of Votes	Score	Rank	
[12]	[24]	1.	Continue Best Management Practices for wildlife, hydrology, forestry, and cattle grazing; make sure Babcock-Webb managers have the ability to do these things. (Self-explanatory.)
[9]	[23]	2.	Restore quail population, improve food and cover components of habitat for quail, control fire ants and predators of small game. (Quail are the premier game species on BWWMA and focus should remain on quail

management.)

[9]	[35]	3.	Provide year-round public access, ethical use and enjoyment, proactively manage to prevent visitor use conflicts while maintaining current multiple user considerations and safety. (If we see problem areas, proactively address them.)
[8]	[23]	4.	Maintain strong hunting and fishing traditions. (Self-explanatory.)
[7]	[21]	5.	Improve gun range: increase number of shooting positions, and involve target shooters in range regulation development. (Self-explanatory.)
[6]	[21]	6.	Control exotic and invasive plant and animal species; this does not include hogs, which should be managed as a game species. (Self-explanatory.)
[5]	[12]	7.	Work with Water Management Districts, D.O.T., and Charlotte and Lee counties to better manage sheetflow. (Hydrology patterns have been altered and need to be restored to natural conditions.)
[4]	[12]	8.	Continue to provide an uncrowded outdoor experience. (Don't screw up a good thing, don't over-fish, keep rustic.)
[4]	[14]	9.	Maintain an aggressive prescribed burn program that includes educating the public. (Self-explanatory.)
[4]	[16]	10.	Maintain proper habitat and control wildlife harvest. (Increase wildlife population through proper habitat management and don't over-harvest game species.)
[3]	[8]	11.	Establish hydrological guidelines to maintain natural communities and prevent the area from becoming a reservoir. (Don't let the water resource needs of the surrounding area dictate the hydrology.)
[3]	[9]	12.	Establish a put and take quail hunt area in the 41 section. (Allow hunters to release and hunt pen-raised quail in the area between I-75 and Hwy 41.)
[3]	[12]	13.	Work with local government and others to restore and maintain east-west wildlife corridors. (Acquire new lands

and restore habitat in existing connecting wildlife corridors.)

[2] [3] 14. Purchase buffer around area (lot by lot, acre by acre) to allow hunting in future times; continue acquisitions to increase connectivity. (More lands are needed for hunting and other recreation, and to decrease fragmentation of the area.)

[2] [4] 15. Increase law enforcement presence, establish enforceable regulations, and provide emergency communications at the shooting range. (There is a need for supervision of the range and some kind of communication in the event of an emergency.)

[2] [5] 16. Extend archery season to nine days and establish a muzzle-loading season. (BWWMA is the only public hunt area in Lee, Charlotte and Sarasota counties, and presently offers only limited hunting season opportunities.)

[2] [8] 18. Two items of equal rank.

A. Increase equestrian opportunities. (Expand equestrian access to include all of BWWMA.).

B. Establish a sound quail research program to help determine how to restore the quail population. (Self-explanatory.)

[2] [9] 19. Synchronize BWWMA hunting season dates with Corbett WMA dates. (Currently, hunting seasons on these WMAs open one week apart, thus increasing the hunting pressure on opening weekend by allowing hunters to hunt the first weekend on BWWMA, and the next weekend on Corbett WMA.)

[1] [1] 20. Improve horse stall facilities. (Self-explanatory.)

[1] [2] 21. Continue cattle grazing. (Cattle grazing contracts provide a significant amount of revenue, and grazing is a good management tool.)

[1] [3] 22. Increase revenues from uses other than hunting. (Charge fees to all user groups, not just hunters.)

[1] [4] 23. Two items of equal rank.

A. Create an ORV recreation area in the 41 Section. (This section is hard to manage and currently is underutilized; ORV use in this area would alleviate pressure from other areas.)

B. Establish a trust fund from private companies or individuals for use locally. (A local trust fund for use on projects at BWWMA would provide additional funding.)

[1] [5] 24. Improve ORV access to Yucca Pens by increasing the number of designated roads/trails, etc. (Firebreaks and other disturbed linear features already exist and could be utilized as designated ORV roads and trails.)

The following item received no votes. This idea represents valuable input to be considered in the development of the Babcock-Webb WMA CMP, but carries no rank with regard to the priority perceptions of the Management Advisory Group:

As needed, plant vegetative buffers. (As development increases buffer zones will need to be created around BWWMA.)

Babcock-Webb WMA
MAG Meeting Participants

Name	**Affiliation**
Active participants	
Barbara Jean Powell	Everglades Coordinating Council
Mike Kemmerer	FWC Biologist
Ron Snee	Target shooting range advocate
Clark Keller	Charlotte County Audubon Society
Charles Sperow	Anglers
Rob Brown	Associated Field Trial Clubs of Florida
Douglas Voltolina	Division of Forestry
Augustin Saavedra	South Florida Trail Riders
Robert Andreu	South West Florida Outdoorsmen Association
Adam Cummings	Charlotte County Commissioner
Arnie Sarlo	Babcock Florida, Inc
Tim Eckert	NRCS
Nigel Morris	Quail Unlimited
Invited but unable to attend	
Lt. Darryl Amerson	FWC Division of Law Enforcement
Supportive participants	
Larry Campbell	FWC Regional Biologist
Jimmy Conner	FWC District Biologist
Cardinal Collins	FWC Hunter Education, Assistant Coordinator
Ben Kroner	South Florida Trail Riders
Raymond Keen	National Wild Turkey Federation
FWC Planning personnel	
David Alden	Meeting facilitator
Keith Singleton	Recorder

The Florida Fish and Wildlife Conservation Commission

PUBLIC HEARING

for the

Fred C. Babcock - Cecil M. Webb Wildlife Management Area

Located in Charlotte County, Florida

7:00 P.M. Monday, July 8, 2002
Charlotte County Commission Chambers
Charlotte County Administration Center
18500 Murdock Circle, Port Charlotte, FL 33948

PURPOSE: To receive public comments regarding considerations for the FWC's five-year Conceptual Management Plan for the **Fred C. Babcock-Cecil M. Webb Wildlife Management Area**.

These hearings are designed exclusively for discussion of the draft Conceptual Management Plan. *Participants in this hearing should understand that the purpose for this hearing does not include the opportunity to discuss public use and/or hunting regulations for the Fred C. Babcock-Cecil M. Webb Wildlife Management Area. There is a separate public process for this purpose.*

*A **Management Prospectus** for the Fred C. Babcock-Cecil M. Webb Wildlife Management Area is available upon request from the Florida Fish and Wildlife Conservation Commission, Land Management Planning Section, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850) 922-8777*

PUBLIC HEARING REPORT

for the
Babcock-Webb Wildlife Management Area (WMA)
Draft Conceptual Management Plan (CMP)
held by the
Babcock-Webb WMA Management Advisory Group (MAG)

July 8, 2002 – Charlotte County Commission Chambers – Port Charlotte, Florida

This hearing had been advertised in one or more local newspapers, announced at a Charlotte County Commission meeting, and advertised in the Florida Administrative Weekly, in compliance with Chapter 259.032 (10), Florida.Statutes. Eight persons signed attendance sheets. No one signed speaker cards or gave public testimony. Assistance with advertising and conducting the hearing was provided by the administrative, planning and management staff of the Florida Fish and Wildlife Conservation Commission (FWC).

Mr. Bob Andreu, representing Florida Outdoorsman, opened the meeting at 7:00 PM, indicating that he was a spokesperson for the Babcock-Webb MAG, filling in for Mr. Nigel Morris of Quail Unlimited who had agreed to be the host speaker, but had been unavoidably prevented from attending due to an injury. He further indicated the MAG's priority ideas and considerations had been utilized by FWC staff in preparation of a draft set of goals, objectives, problem statements, strategies and management intent language for the Babcock-Webb CMP. Mr. Andreu stated that the MAG was serving as hosts for the hearing, but that the MAG members would be relying upon the FWC staff to present the specific information regarding the plan. He then introduced Mr. David Alden, Planner for the FWC WMA system, who presented some introductory information regarding the planning process, the opportunities for public involvement, and the agenda for the evening. Mr. Alden also asked the other MAG members present to introduce themselves and to give their various affiliations. He then introduced Mr. Larry Campbell, Mr. Mike Kemmerer and other FWC staff members in attendance.

Following the introductions, Mr. Alden asked if there were any questions regarding the planning process, or the legal arrangements surrounding the acquisition and management of the Babcock-Webb property. There were no questions.

Mr. Alden then turned the podium over to Babcock-Webb WMA Biologist, Mr. Mike Kemmerer, to present the draft CMP elements. Mr. Kemmerer presented the general management intent language from the plan in several categories including vegetation, wildlife, fisheries, hydrology, recreation and interpretation. He then presented the specific goals and objectives for the WMA, indicating the management and protection efforts planned for the area over the next 5 years, and providing the dates for completion of those activities. Following this, he stated a number of problems identified by FWC staff, along with the strategies the agency intends to pursue to solve those problems (these strategies were also reflected in the objectives under the goals in the previous section).

Following the presentation Mr. Alden asked if there were any questions regarding the

presentation of the CMP elements. Two questions were answered by Mr. Kemmerer dealing with water management issues on the south end of the WMA, and the Boy Scout Camp presence on the WMA After these questions were answered, Mr. Alden asked if anyone wished to give public testimony, since no one had turned in speaker cards. No one indicated an interest in speaking.

Mr. Alden thanked those in attendance for their participation. The public hearing was adjourned at 7:35 PM.

Appendix C

Red-cockaded woodpecker Management Plan

(Available upon completion)

Appendix D

Archaeological and Historic resources on BWWMA and Guidelines for the Management of Archaeological and Historic resources

FLORIDA DEPARTMENT OF STATE
Sandra B. Mortham
Secretary of State
DIVISION OF HISTORICAL RESOURCES
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Director's Office
(904) 488-1480

Telecopier Number (FAX)
(904) 488-3353

April 11, 1996

Mr. Francis M. Utsey III
Florida Game and Fresh Water Fish Commission
29200 Tuckers Grade
Punta Gorda, Florida 33955

In Reply Refer To:
Susan M. Harp
Historic Preservation Planner
(904) 487-2333
Project File No. 961226B

RE: Request for Land Management Plan Information
Fred C. Babcock/Cecil M. Webb Wildlife Management Area
Charlotte and Lee Counties, Florida

Dear Mr. Utsey:

In accordance with this agency's responsibilities under Section 253.034(4), Florida Statutes, we have reviewed the information in the Florida Master Site File to determine whether any historic properties are recorded in the referenced management area, and also to determine the potential for such resources which are presently unrecorded to be located within it.

Our review indicates that there was one archaeological site recorded in the subject tract. This site, a small ceramic artifact scatter, was destroyed during the 1970s as a result of the excavation of a borrow pit. Additional small sites, such as lithic or artifact scatters may be present, as this management area has never been subjected to an archaeological resource assessment survey. However, it is the opinion of this agency that there is a low probability of significant, unrecorded sites being located in this tract.

Fortuitous finds may occur within this management area and our agency should be immediately notified if archaeological or historic remains are encountered. Ground disturbing activities in the immediate vicinity of artifact finds should also be halted until the area can be investigated. However, historic property considerations will otherwise not be an issue in the management of this property.

We have enclosed for your use a copy of Management Procedures for Archaeological and Historic Sites and Properties on State-Owned or Controlled Lands. This document should be referenced where appropriate in your land management plan, and attached to it.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's archaeological and historic resources is appreciated.

Sincerely,

Laura A. Kammerer

for George W. Percy, Director
Division of Historical Resources

GWP/Hsh
Enclosure (1)
cc: Hank Vinson, DEP

MANAGEMENT PROCEDURES FOR ARCHAEOLOGICAL AND HISTORICAL SITES AND PROPERTIES ON STATE - OWNED OR CONTROLLED LANDS
(revised August, 1995)

A. GENERAL DISCUSSION

Archaeological and historic sites are defined collectively in 267.021(3), F.S., as "historic properties" or "historic resources". They have several essential characteristics which must be recognized in a management program.

First of all, they are a finite and non-renewable resource. Once destroyed, presently existing resources, including buildings, other structures, shipwreck remains, archaeological sites and other objects of antiquity, cannot be renewed or revived. Today, sites in the State of Florida are being destroyed by all kinds of land development, inappropriate land management practices, erosion, looting, and to a minor extent even by well-intentioned professional scientific research (e.g., archaeological excavation). Measures must be taken to ensure that some of these resources will be preserved for future study and appreciation.

Secondly, sites are unique because individually they represent the tangible remains of events which occurred at a specific time and place.

Thirdly, while sites uniquely reflect localized events, these events and the origin of particular sites are related to conditions and events in other times and places. Sites can be understood properly only in relation to their natural surroundings and the activities of inhabitants of other sites. Managers must be aware of this "systemic" character of historic and archaeological sites. Also, it should be recognized that archaeological sites are time capsules for more than cultural history; they preserve traces of past biotic communities, climate, and other elements of the environment that may be of interest to other scientific disciplines.

Finally, the significance of sites, particularly archaeological ones, derives not only from the individual artifacts within them, but equally from the spatial arrangement of those artifacts in both horizontal and vertical planes. When archaeologists excavate, they recover, not merely objects, but also a record of the positions of these objects in relation to one another and their containing matrix (e.g., soil strata). Much information is sacrificed if the so-called "context" of archaeological objects is destroyed or not recovered, and this is what archaeologists are most concerned about when a site is threatened with destruction or damage. The artifacts themselves can be recovered even after a site is heavily disturbed, but the context - the vertical and horizontal relationships - cannot. Historic structures also contain a wealth of cultural (socio-economic) data which can be lost if historically sensitive maintenance, restoration or rehabilitation procedures are not implemented, or if they are demolished or extensively altered without appropriate documentation. Lastly, it should not be forgotten that historic structures

often have associated potentially significant historic archaeological features which must be considered in land management decisions.

B. STATUTORY AUTHORITY

Chapter 253, Florida Statutes ("State Lands") directs the preparation of "single-use" or "multiple-use" land management plans for all state-owned lands and state-owned sovereignty submerged lands. In this document, 253.034(4), F.S., specifically requires that "all management plans, whether for single-use or multiple-use properties, shall specifically describe how the managing agency plans to identify, locate, protect and preserve, or otherwise use fragile non-renewable resources, such as archaeological and historic sites, as well as other fragile resources..."

Chapter 267, Florida Statutes is the primary historic preservation authority of the state. The importance of protecting and interpreting archaeological and historic sites is recognized in 267.061(1)(a), F.S.:

> The rich and unique heritage of historic properties in this state, representing more than 10,000 years of human presence, is an important legacy to be valued and conserved for present and future generations. The destruction of these nonrenewable historic resources will engender a significant loss to the state's quality of life, economy, and cultural environment. It is therefore declared to be state policy to:
>
> 1. Provide leadership in the preservation of the state's historic resources; and
>
> 2. Administer state-owned or state-controlled historic resources in a spirit of stewardship and trusteeship;...

Responsibilities of the Division of Historical Resources in the Department of State pursuant to 267.061(3), F.S., include the following:

1. Cooperate with federal and state agencies, local governments, and private organizations and individuals to direct and conduct a comprehensive statewide survey of historic resources and to maintain an inventory of such responses.

2. Develop a comprehensive statewide historic preservation plan.

3. Identify and nominate eligible properties to the National Register of Historic Places and otherwise administer applications for listing properties in the National Register of Historic Places.

4. Cooperate with federal and state agencies, local governments, and organizations and individuals to ensure that historic resources are taken into consideration at all

levels of planning and development.

5. Advise and assist, as appropriate, federal and state agencies and local governments in carrying out their historic preservation responsibilities and programs.

6. Carry out on behalf of the state the programs of the National Historic Preservation Act of 1966, as amended, and to establish, maintain, and administer a state historic preservation program meeting the requirements of an approved program and fulfilling the responsibilities of state historic preservation programs as provided in subsection 101(b) of that act.

7. Take such other actions necessary or appropriate to locate, acquire, protect, preserve, operate, interpret, and promote the location, acquisition, protection, preservation, operation, and interpretation of historic resources to foster an appreciation of Florida history and culture. Prior to the acquisition, preservation, interpretation, or operation of a historic property by a state agency, the Division shall be provided a reasonable opportunity to review and comment on the proposed undertaking and shall determine that there exists historic authenticity and a feasible means of providing for the preservation, interpretation and operation of such property.

8. Establish professional standards for the preservation, exclusive of acquisition, of historic resources in state ownership or control.

9. Establish guidelines for state agency responsibilities under subsection (2).

Responsibilities of other state agencies of the executive branch, pursuant to 267.061(2), F.S., include:

1. Each state agency of the executive branch having direct or indirect jurisdiction over a proposed state or state-assisted undertaking shall, in accordance with state policy and prior to the approval of expenditure of any state funds on the undertaking, consider the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the National Register of Historic Places. Each such agency shall afford the division a reasonable opportunity to comment with regard to such an undertaking.

2. Each state agency of the executive branch shallinitiate measures in consultation with the division to assure that where, as a result of state action or assistance carried out by such agency, a historic property is to be demolished or substantially altered in a way which adversely affects the character, form, integrity, or other qualities which contribute to [the] historical, architectural, or archaeological value

of the property, timely steps are taken to determine that no feasible and prudent alternative to the proposed demolition or alteration exists, and, where no such alternative is determined to exist, to assure that timely steps are taken either to avoid or mitigate the adverse effects, or to undertake an appropriate archaeological salvage excavation or other recovery action to document the property as it existed prior to demolition or alteration.

3. In consultation with the division [of Historical Resources], each state agency of the executive branch shall establish a program to locate, inventory, and evaluate all historic properties under the agency's ownership or control that appear to qualify for the National Register. Each such agency shall exercise caution to assure that any such historic property is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly.

4. Each state agency of the executive branch shall assume responsibility for the preservation of historic resources which are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for the purpose of carrying out agency responsibilities, the agency shall use, to the maximum extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with preservation of such properties, the mission of the agency, and the professional standards established pursuant to paragraph (3)(k), any preservation actions necessary to carry out the intent of this paragraph.

5. Each state agency of the executive branch, in seeking to acquire additional space through new construction or lease, shall give preference to the acquisition or use of historic properties when such acquisition or use is determined to be feasible and prudent compared with available alternatives. The acquisition or use of historic properties is considered feasible and prudent if the cost of purchase or lease, the cost of rehabilitation, remodeling, or altering the building to meet compliance standards and the agency's needs, and the projected costs of maintaining the building and providing utilities and other services is less than or equal to the same costs for available alternatives. The agency shall request the division to assist in determining if the acquisition or use of a historic property is feasible and prudent. Within 60 days after making a determination that additional space is needed, the agency shall request the division to assist in identifying buildings within the appropriate geographic area that are historic properties suitable for acquisition or lease by the agency, whether or not such properties are in need of repair, alteration, or addition.

6. Consistent with the agency's mission and authority, all state agencies of the executive branch shall carry out agency programs and projects, including those under which any state assistance is provided, in a manner which is generally sensitive to the preservation of historic properties and shall give consideration to programs and projects which will further the purposes of this section.

Section 267.12 authorizes the Division to establish procedures for the granting of research permits for archaeological and historic site survey or excavation on state-owned or controlled lands, while Section 267.13 establishes penalties for the conduct of such work without first obtaining written permission from the Division of Historical Resources. The Rules of the Department of State, Division of Historical Resources, for research permits for archaeological sites of significance are contained in Chapter 1A-32, F.A.C.

Another Florida Statute affecting land management decisions is Chapter 872, F.S. Section 872.02, F.S., pertains to marked grave sites, regardless of age. Many state-owned properties contain old family and other cemeteries with tombstones, crypts, etc. Section 872.05, F.S., pertains to unmarked human burial sites, including prehistoric and historic Indian burial sites. Unauthorized disturbance of both marked and unmarked human burial sites is a felony.

C. MANAGEMENT POLICY

The choice of a management policy for archaeological and historic sites within state-owned or controlled lands obviously depends upon a detailed evaluation of the characteristics and conditions of the individual sites and groups of sites within those tracts. This includes an interpretation of the significance (or potential significance) of these sites, in terms of social and political factors, as well as environmental factors. Furthermore, for historic structures architectural significance must be considered, as well as any associated historic landscapes.

Sites on privately owned lands are especially vulnerable to destruction, since often times the economic incentives for preservation are low compared to other uses of the land areas involved. Hence, sites in public ownership have a magnified importance, since they are the ones with the best chance of survival over the long run. This is particularly true of sites which are state-owned or controlled, where the basis of management is to provide for land uses that are minimally destructive of resource values.

It should be noted that while many archaeological and historical sites are already recorded within state-owned or controlled-lands, the majority of the uplands areas and nearly all of the inundated areas have not been surveyed to locate and assess the significance of such resources. The known sites are, thus, only an incomplete sample of the actual resources - i.e., the number, density, distribution, age, character and condition of archaeological and historic sites - on these tracts. Unfortunately, the lack of specific knowledge of the actual resources prevents formulation of any sort of detailed management or use plan involving decisions about the relative historic value of individual sites. For this reason, a generalized policy of conservation is recommended until the resources have been better addressed.

The generalized management policy recommended by the Division of Historical Resources includes the following:

1. State land managers shall coordinate all planned activities involving known

archaeological or historic sites or potential site areas closely with the Division of Historical Resources in order to prevent any kind of disturbance to significant archaeological or historic sites that may exist on the tract. Under 267.061(1)(b), F.S., the Division of Historical Resources is vested with title to archaeological and historic resources abandoned on state lands and is responsible for administration and protection of such resources. The Division will cooperate with the land manager in the management of these resources. Furthermore, provisions of 267.061(2) and 267.13, F.S., combined with those in 267.061(3) and 253.034(4), F.S., require that other managing (or permitting) agencies coordinate their plans with the Division of Historical Resources at a sufficiently early stage to preclude inadvertent damage or destruction to known or potentially occurring, presently unknown archaeological and historic sites. The provisions pertaining to human burial sites must also be followed by state land managers when such remains are known or suspected to be present (see 872.02 and 872.05, F.S., and 1A-44, F.A.C.)

2. Since the actual resources are so poorly known, the potential impact of the managing agency's activities on historic archaeological sites may not be immediately apparent. Special field survey for such sites may be required to identify the potential endangerment as a result of particular management or permitting activities. The Division may perform surveys, as its resources permit, to aid the planning of other state agencies in their management activities, but outside archaeological consultants may have to be retained by the managing agency. This would be especially necessary in the cases of activities contemplating ground disturbance over large areas and unexpected occurrences. It should be noted, however, that in most instances Division staff's knowledge of known and expected site distribution is such that actual field surveys may not be necessary, and the project may be reviewed by submitting a project location map (preferably a 7.5 minute U.S.G.S. Quadrangle map or portion thereof) and project descriptive data, including detailed construction plans. To avoid delays, Division staff should be contacted to discuss specific project documentation review needs.

3. In the case of known significant sites, which may be affected by proposed project activities, the managing agency will generally be expected to alter proposed management or development plans, as necessary, or else make special provisions to minimize or mitigate damage to such sites.

4. If in the course of management activities, or as a result of development or the permitting of dredge activities (see 403.918(2)(6)a, F.S.), it is determined that valuable historic or archaeological sites will be damaged or destroyed, the Division reserves the right, pursuant to 267.061(1)(b), F.S., to require salvage measures to mitigate the destructive impact of such activities to such sites. Such salvage measures would be accomplished before the Division would grant permission for destruction of the affected site areas. The funding needed to

implement salvage measures would be the responsibility of the managing agency planning the site destructive activity. Mitigation of historic structures at a minimum involves the preparation of measured drawings and documentary photographs. Mitigation of archaeological resources involves the excavation, analysis and reporting of the project findings and must be planned to occur sufficiently in advance to avoid project construction delays. If these services are to be contracted by the state agency, the selected consultant will need to obtain an Archaeological Research Permit from the Division of Historical Resources, Bureau of Archaeological Research (see 267.12, F.S. and Rules 1A-32 and 1A-46 F.A.C.).

5. For the near future, excavation of non-endangered (i.e., sites not being lost to erosion or development) archaeological sites is discouraged. There are many endangered sites in Florida (on both private and public lands) in need of excavation because of the threat of development or other factors. Those within state-owned or controlled lands should be left undisturbed for the present - with particular attention devoted to preventing site looting by "treasure hunters". On the other hand, the archaeological and historic survey of these tracts is encouraged in order to build an inventory of the resources present, and to assess their scientific research potential and historic or architectural significance.

6. The cooperation of land managers in reporting sites to the Division that their field personnel may discover is encouraged. The Division will help inform field personnel from other resource managing agencies about the characteristics and appearance of sites. The Division has initiated a cultural resource management training program to help accomplish this. Upon request the Division will also provide to other agencies archaeological and historical summaries of the known and potentially occurring resources so that information may be incorporated into management plans and public awareness programs (See Management Implementation).

7. Any discovery of instances of looting or unauthorized destruction of sites must be reported to the agent for the Board of Trustees of the Internal Improvement Trust Fund and the Division so that appropriate action may be initiated. When human burial sites are involved, the provisions of 872.02 and 872.05, F. S. and Rule 1A-44, F.A.C., as applicable, must also be followed. Any state agent with law enforcement authority observing individuals or groups clearly and incontrovertibly vandalizing, looting or destroying archaeological or historic sites within state-owned or controlled lands without demonstrable permission from the Division will make arrests and detain those individuals or groups under the provisions of 267.13, 901.15, and 901.21, F.S., and related statutory authority pertaining to such illegal activities on state-owned or controlled lands. County Sheriffs' officers are urged to assist in efforts to stop and/or prevent site looting and destruction.

In addition to the above management policy for archaeological and historic sites on state-owned land, special attention shall be given to those properties listed in the National Register of Historic Places and other significant buildings. The Division recommends that the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Revised 1990) be followed for such sites.

The following general standards apply to all treatments undertaken on historically significant properties.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alterations of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy

materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired. (see Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings [Revised 1990]).

Division of Historical Resources staff are available for technical assistance for any of the above listed topics. It is encouraged that such assistance be sought as early as possible in the project planning.

D. MANAGEMENT IMPLEMENTATION

As noted earlier, 253.034(4), F.S., states that "all management plans, whether for single-use or multiple-use properties, shall specifically describe how the managing agency plans to identify, locate, protect and preserve, or otherwise use fragile non-renewable resources, such as archaeological and historic sites..." The following guidelines should help to fulfill that requirement.

1. All land managing agencies should contact the Division and send U.S.G.S. 7.5 minute quadrangle maps outlining the boundaries of their various properties.

2. The Division will in turn identify site locations on those maps and provide descriptions for known archaeological and historical sites to the managing agency.

3. Further, the Division may also identify on the maps areas of high archaeological and historic site location probability within the subject tract. These are only probability zones, and sites may be found outside of these areas. Therefore, actual ground inspections of project areas may still be necessary.

4. The Division will send archaeological field recording forms and historic structure field recording forms to representatives of the agency to facilitate the recording of information on such resources.

5. Land managers will update information on recorded sites and properties.

6. Land managers will supply the Division with new information as it becomes available on previously unrecorded sites that their staff locate. The following details the kind of information the Division wishes to obtain for any new sites or

structures which the land managers may report:

A. Historic Sites

(1) Type of structure (dwelling, church, factory, etc.).

(2) Known or estimated age or construction date for each structure and addition.

(3) Location of building (identify location on a map of the property, and building placement, i.e., detached, row, etc.).

(4) General Characteristics: (include photographs if possible) overall shape of plan (rectangle, "L" "T" "H" "U", etc.); number of stories; number of vertical divisions of bays; construction materials (brick, frame, stone, etc.); wall finish (kind of bond, coursing, shingle, etc.); roof shape.

(5) Specific features including location, number and appearance of:
(a) Important decorative elements;
(b) Interior features contributing to the character of the building;
(c) Number, type, and location of outbuildings, as well as date(s) of construction;
(d) Notation if property has been moved;
(e) Notation of known alterations to building.

B. Archaeological Sites

(1) Site location (written narrative and mapped location).
(2) Cultural affiliation and period.
(3) Site type (midden, burial mound, artifact scatter, building rubble, etc.).
(4) Threats to site (deterioration, vandalism, etc.).
(5) Site size (acreage, square meters, etc.).
(6) Artifacts observed on ground surface (pottery, bone, glass, etc.).
(7) Description of surrounding environment.

7. No land disturbing activities should be undertaken in areas of known archaeological or historic sites or areas of high site probability without prior review by the Division early in the project planning.

8. Ground disturbing activities may proceed elsewhere, but land managers should stop disturbance in the immediate vicinity of artifact finds and notify the Division if previously unknown archaeological or historic remains are uncovered. The provisions of Chapter 872, F.S., must be followed when human remains are encountered.

9. Excavation and collection of archaeological and historic sites on state lands without a

permit from the Division is a violation of state law and shall be reported to a law enforcement officer. The use of metal detectors to search for historic artifacts shall be prohibited on state lands except when authorized in a 1A-32, F.A.C., research permit from the Division.

10. Interpretation and visitation which will increase public understanding and enjoyment of archaeological and historic sites without site destruction or vandalism is strongly encouraged.

11. Development of interpretive programs including trails, signage, kiosks, and exhibits is encouraged and should be coordinated with the Division.

12. Artifacts found or collected on state lands are by law the property of the Division. Land managers shall contact the Division whenever such material is found so that arrangements may be made for recording and conservation. This material, if taken to Tallahassee, can be returned for public display on a long-term loan.

E. ADMINISTERING AGENCY

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

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

Contact Person: Susan M. Harp
Historic Preservation Planner
Telephone (904) 487-2333
Suncom 277-2333
FAX (904) 922-0496

Appendix E

FWC Strategic Plan

Final

AGENCY STRATEGIC PLAN

FOR THE

FLORIDA GAME AND FRESH WATER FISH COMMISSION

FY 1999-2000 THROUGH FY 2003-2004

SUBMITTED TO THE EXECUTIVE OFFICE OF THE GOVERNOR

November 1998

THE FLORIDA GAME AND FRESH WATER FISH COMMISSION

Mr. Thomas B. Kibler, Chairman

Mr. James L. "Jamie" Adams
Vice-Chairman

Ms. Julie K. Morris
Member

Mrs. Gilbert W. Humphrey
Member

Dr. Quinton L. Hedgepeth
Member

THE MISSION OF THE FLORIDA
GAME AND FRESH WATER FISH COMMISSION

To manage fish and wildlife for the benefit of people and the long-term welfare of the resource.

EXECUTIVE SUMMARY

The Florida Game and Fresh Water Fish Commission has authority for the State's wildlife and freshwater fish.

The Commission's Strategic Issue for FY 1999-00 through FY 2003-04 is:

Fishing, Hunting and Wildlife Viewing

Over 65 percent of Floridians actively pursue freshwater fishing, hunting and wildlife viewing. In addition to the recreational benefits to participants, these activities generate a total annual economic benefit to Florida of $5.8 billion. The Commission seeks to increase participation in freshwater fishing and hunting, and improve services offered to wildlife viewers.

A majority of the state's wildlife and the habitats upon which they depend is in private ownership. Prudent management of these lands is critical to the future of fish and wildlife. To this end, private landowners are important partners with government in fish and wildlife management, and important customers of GFC services.

Both the Commission and Floridians benefit from direct involvement by citizens in the agency's programs. The Commission seeks to increase its community involvement in efforts that further fish and wildlife conservation.

There are no major changes to strategic issues from the previous year's Agency Strategic Plan (ASP).

INTRODUCTION

The Florida Game and Fresh Water Fish Commission has authority for the State's wildlife and freshwater fish. In effecting the authority, the Commission oversees over 800 species of fish and wildlife in the State's 37 million acres which benefit over 14 million Floridians and 40 million tourists who actively pursue wildlife-related recreation.

EXPLANATION OF THE AGENCY STRATEGIC PLAN FORMAT

This Agency Strategic Plan (ASP) is presented as a Strategic Issue. This Strategic Issue is the area on which the Commission will focus during FY 1999-00 through FY 2003-04. The Commission uses this document to guide development of its Legislative Budget Request, and internal operational plans prepared annually for each agency work unit. Twice each year work units prepare a report to the Executive Director on progress toward ASP accomplishment as a result of their work unit.

Following the Issue, Trends and Conditions Analyses, Objectives, and Strategies are presented. Endnotes appear after the Issue showing literature and references used by agency staff to prepare the ASP. An Appendix (A) is included that links our Strategic Issue with the State Comprehensive Plan's goals and policies for which we are responsible. Another Appendix (B) presents the relationship between the Strategic Issue and Florida Benchmarks. Appendix (C) presents the Commission's organizational structure. Appendix (D) enumerates the Commission's authority and responsibility as specified in the Constitution, Statutes and Executive Orders. Appendix (E) defines terms used in this ASP, Appendix (F) presents an ASP Cross Reference Matrix, while Appendix (G) shows any relationships between new constitutional and/or statutory authority and the ASP.

Priority Issue #1: Fishing, Hunting and Wildlife Viewing

Goal 1: **Increase Participation and Satisfaction Levels for Participants in Fishing, Hunting, and Wildlife Viewing.**

Indicator	Baseline Data FY 1995-96	Current Data FY 1996-97
The number of licensed resident freshwater anglers	487,229	479,247

Objective 1:

Increase the number of licensed resident freshwater anglers 10 percent over FY 1996-97 levels of 479,247 by FY 2003-04. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
2%	4%	6%	8%	10%

Objective 2:

Through FY 2003-04, maintain or exceed the fishing satisfaction level of resident freshwater anglers at the FY 1996-97 level of 75 percent. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
75%	75%	75%	75%	75%

Objective 3:

Increase the number of licensed nonresident freshwater anglers 10 percent over FY 1996-97 levels of 136,680 by FY 2002-03 and maintain this increased level. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
4%	6%	8%	10%	10%

Strategies:

1.1 Assess fishing-related rules so as to encourage participation and compliance.

1.2 Develop and implement fishing regulations that improve fish populations.

1.3 Improve public access to fishing waters, e.g. increase bank-fishing opportunities, including access to South Florida canals.

1.4 Develop additional areas where fishing is exceptional by entering into agreements with private landowners for public access to private waters.

1.5 Expand the "Becoming an Outdoors Woman" program and maintain the "Outdoor Adventure" programs to introduce more people to outdoor activities.

1.6 Implement recent Legislative changes to the licensing system that make it easier to buy a fishing license.

1.7 Develop and implement a marketing plan for providing fishing opportunities for first-time anglers and to regain anglers who have dropped-out.

1.8 Improve the quality of fishing (the number and size of catchable fish) so as to encourage a return to fishing by those who have dropped-out.

1.9 Increase the hours of fishing effort on waters currently under management in urban areas, and bring additional urban waters under management.

1.10 Conduct a large-scale fishing celebration to inform anglers of Florida's freshwater fishing opportunities.

1.11 Promote fishing licenses and fishing opportunities via consumer-directed advertising and consumer incentives in partnership with third parties.

1.12 Improve security at recreational facilities such as public boat ramps and WMA campgrounds.

1.13 Enhance public relations about fishing.

1.14 Contact and assist tax collectors and license subagents to facilitate ease in license purchasing by the public.

1.15 Reduce conflict between anglers and recreational boaters.

1.16 Improve public knowledge about where to go fishing and where the fishing is good.

1.17 Promote, communicate and educate the public about fishing opportunities and regulations.

1.18 Be more positive in our dealings with the public.

1.19 Enhance information resource management capabilities.

Objective 4:

Increase the number of licensed resident hunters 5 percent over FY 1996-97 levels of 168,408 by FY 2002-03. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
1%	2%	3%	4%	5%

Objective 5:

Increase the hunting satisfaction level of hunters by 10 percent over FY 1993-94 levels of 73% by FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
2%	4%	6%	8%	10%

Indicators:

- number of resident hunting licenses sold as compared to previous year's sales.

- level of satisfaction with their hunting experience among hunters as compared to previous years.

Strategies:

2.1 Increase small game and dove hunting by improving opportunities on existing wildlife management areas and providing additional opportunities on new areas, especially close to urban areas.

2.2 Improve access to wildlife management areas, e.g. improve existing roads and improve parking areas.

2.3 Promote hunting licenses and hunting opportunities via consumer-directed advertising and consumer incentives in partnership with third parties.

2.4 Provide additional quality hunting areas.

2.5 Expand the "Becoming an Outdoors Woman" program and maintain the "Outdoor Adventure" programs to introduce more people to outdoor activities.

2.6 Promote, communicate and educate the public about hunting opportunities and regulations.

2.7 Be more positive in our dealings with the public.

2.8 Enhance information resource management capabilities.

Objective 6:

Increase the number of wildlife viewers over 1996 levels of 2.849 million through FY 2002-03. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
1%	2%	3%	4%	5%

Objective 7:

Through FY 2002-03, maintain wildlife viewer satisfaction at the 1993 level of 92 percent. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
92%	92%	92%	92%	92%

Strategies:

3.1 Develop and implement a marketing plan for wildlife viewing opportunities on wildlife management areas and other public lands and waters.

3.2 Conduct a statewide watchable wildlife conference each year.

3.3 Develop mutually-agreed upon site-selection criteria for establishing wildlife viewing on GFC managed lands.

3.4 Select areas and create interpretive plans to make them "viewer friendly" (e.g., increase ease of access, publicize how and where to go, develop bird lists and area brochures for viewers).

3.5 Promote wildlife-viewing-related projects and activities, such as the "Wings Over Florida" certificate program, Florida Wildlife Viewing Guide, Project Bunting, local songbird festivals, etc.

3.6 Communicate, through the media, nongame and watchable wildlife opportunities as indicated in operational plans and the agency-wide watchable wildlife plan.

3.7 Promote wildlife viewing on private lands, in rural communities, and on other properties not managed by the GFC.

3.8 Establish partnerships with public and private entities, including nature tour operators, to further wildlife viewing throughout Florida.

3.9 Collaborate with the nature tour industry to establish guidelines for ethical wildlife viewing.

3.10 Educate the public regarding the relationship between humans, wildlife and their habitats through a variety of approaches, such as festivals, seminars, workshops and self-guided tours.

3.11 Stimulate local economies and/or GFC financial status through wildlife watching programming and activities.

3.12 Maintain a formal outreach program directed at the private sector to promote wildlife-related recreation.

3.13 Enhance information resource management capabilities.

Objective 8:

Increase the number of participants enrolled in achievement programs by 10 percent over FY 1996-97 levels of 3463 by FY 2000-01 and maintain this level through FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
9%	10%	10%	10%	10%

Objective 9:

Increase the number of outreach participants through clinics and derbies by 25 percent over FY 1996-97 levels of 8154 by FY 2000-01 and maintain this increased level through FY 2003-04. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
15%	25%	25%	25%	25%

Strategies:

4.1 Market Fisheries and Wildlife outreach activities to target markets.

4.2 Enhance information resource management capabilities.

Goal 2: **Increase Outdoor Recreational Opportunities.**

Baseline Data Current Data

Indicator	FY 1995-96	FY 1996-97
The number of acres of publicly-owned lands managed by the GFC	3,511,769	3,637,887

Objective 10:

Increase the number of water bodies and acres managed by the GFC to improve fishing by 5% and 2%, respectively, over FY 1996-97 levels of 119/738,653 by FY 1999-00 and maintain this increased level through FY 2003-04. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
5%/2%	5%/2%	5%/2%	5%/2%	5%/2%

Objective 11:

Increase the number of fishing access points established and maintained by 20% over the average of FY 1993-94, 94-95 and 95-96 of 35 by FY 1999-00 and maintain this increased level through FY 2003-04. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
20%	20%	20%	20%	20%

Objective 12:

Increase the number of acres of publicly-owned lands managed by the GFC for wildlife-related outdoor recreation by 5% over FY 1995-96 levels of 3,511,000 by FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
2%	2%	3%	4%	5%

Objective 13:

Restore the number of acres of privately-owned lands leased by the GFC for wildlife-related outdoor recreation to FY 1995-96 levels of 856,800 by FY 2002-03 and maintain this restored level through FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
-3%	-2%	-1%	0%	0%

Objective 14:

Maintain the percent of acreage under GFC management control that is available to the public for wildlife-related outdoor recreation at FY 1995-96 levels of 99.9% through FY 2002-03. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
99.9%	99.9%	99.9%	99.9%	99.9%

Goal 3: **Protect and Conserve Natural Habitats and Fish and Wildlife Populations.**

Indicator	Baseline Data FY 1995-96	Current Data FY 1996-97
The conservation status of 80 wildlife species listed as endangered, threatened or species concern	29.62	29.62

Objective 15:

Maintain the conservation status of 63 game species at FY 1995-96 levels of 16.44 through FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
0%	0%	0%	0%	0%

Objective 16:

Maintain the conservation status of 389 nongame wildlife species at FY 1995-96 levels of 13.21 through FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
0%	0%	0%	0%	0%

Objective 17:

Maintain the conservation status of 80 wildlife species listed as endangered, threatened or species of special concern at FY 1995-96 levels of 29.62 through FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
0%	0%	0%	0%	0%

Objective 18:

Increase the number and acreage of water bodies undergoing habitat rehabilitation planning by 87% and 12%, respectively, over the 5-year average of FY 1991-92 through FY 1995-96 of 8/37,900 by FY 1999-00 and maintain this increased level through FY 2003-04. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
87%/12%	87%/12%	87%/12%	87%/12%	87%/12%

Objective 19:

Increase the number and acreage of water bodies where habitat rehabilitation has been completed by 50% and 82%, respectively, over the 5-year average of FY 1991-92 through FY 1995-96 of 4/11,000 and maintain this increased level through FY 2003-04. (Fisheries Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
50%/82%	50%/82%	50%/82%	50%/82%	50%/82%

Objective 20:

Increase the acreage managed by GFC for wildlife habitat by 4% over FY 1995-96 levels of 4,368,600 and maintain this increased level through FY 2003-04. (Wildlife Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
4%	4%	4%	4%	4%

Strategies:

5.1 Increase GFC use of proactive, non-regulatory approaches to fish and wildlife conservation.

5.2 Continue to implement the Private Lands Initiative through cooperation with other state agencies under a signed Memorandum of Understanding.

5.3 Increase landowner participation in the Forest Stewardship Program.

5.4 Seek to prevent dog hunter/landowner conflicts first through improved identification and management of problem areas. Failing that, employ regulatory means to prevent the conflicts.

5.5 Continue enhanced trespass enforcement to landowners in fish and game protection.

5.6 Promote, communicate and educate the public on issues or programs related to private property owners.

5.7 Eliminate unnecessary rules and assess the impact on private property of new proposed rules.

5.8 Be more positive in our dealings with people.

5.9 Assist private landowners in the promotion, management and interpretation of wildlife-related activities appropriate for their properties.

5.10 Develop and test a "property owner service program" that explains what services we do and do not provide.

5.11 Enhance information resource management capabilities.

Goal 4: **Improve Public Safety in the Outdoor Environment.**

Indicator	Baseline Data FY 1992-96	Current Data FY 1996-97
The number of boating accidents	226	177

Objective 21:

Decrease from FY 1996-97 levels the number of boating accidents from 226 to 210 and maintain this decreased level through FY 2003-04. (Law Enforcement Program).

Objective 22:

Decrease from FY 1996-97 levels of 26 the number of boating fatalities and maintain this decreased level through FY 2003-04. (Law Enforcement Program).

Objective 23:

Decrease from FY 1996-97 levels of 136 the number of boating injuries and maintain this decreased level through FY 2003-04. (Law Enforcement Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
210	210	210	210	210
26	26	26	26	26
136	136	136	136	136

Objective 24:

Maintain at FY 1996-97 levels the number of hunting accidents at 23 through FY 2003-04. (Law Enforcement Program).

Objective 25:

Maintain at FY 1996-97 levels the number of persons causing hunting accidents who attended or graduated from hunter education courses at 7 through FY 2003-04. (Law Enforcement Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
23	23	23	23	23
7	7	7	7	7

Goal 5: **Reduce Regulation Violations and Other Careless and Abusive Acts.**

Indicator	Baseline Data FY 1995-96	Current Data FY 1996-97
The total number of Violations	29,237	29,130

Objective 26:

Increase the number of land, water and air hours spent in preventive patrol by 5% over CY 1996 levels of 592,823 by FY 2002-03 and maintain this increased level through FY 2003-04. (Law Enforcement Program).

Projection Table

FY 1999-00	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
2%	3%	4%	5%	5%

Strategies:

6.1 Concentrate boating safety efforts on water bodies that have heavy boating traffic.

6.2 Continue boating safety education efforts designed to improve safe boating behavior.

6.3 Expand loaner life vest program to additional areas of the state.

6.4 Continue hunter safety education efforts designed to improve safe hunting behavior.

6.5 Keep authorized positions filled with quality employees.

6.6 Improve the status of our vehicle fleet so as to minimize employee down-time.

6.7 Enhance information resource management capabilities.

Appendix F

Operational Plan and Budget

Land Management Uniform Cost Accounting Council and FWC Activity Code Groupings

Resource Management

Exotic Species Control

211 Exotic plant control (mechanical)
212 Exotic plant control (chemical)

Prescribed Burning

206 Prescribed burning C growing season (April 1 to September 30)
207 Prescribed burning C dormant season (October 1 to March 31)
208 Firebreaks

Cultural Resource Management

201 Cultural resource management

Timber Management

202 Timber management

Hydrological Management

216 Dams, dikes, levees
217 Canals
218 Water level management
194 Lake restoration

Other

185 GIS
186 Biometrics
200 RESOURCE MANAGEMENT
203 Tree and shrub planting
282 Herbaceous seeding
283 Clearings
289 Native vegetation management (mechanical)
290 Native vegetation management (chemical)
221 Animal surveys
228 Inland aerial surveys
235 Vegetation and plant surveys
250 MONITORING AND ASSESSMENTS
252 Biomedical monitoring
263 Nest box monitoring
264 Population demographics
295 Biological data collection, analysis, and reporting
275 Permits and authorizations
276 Commission rule development and review
277 Relocation
278 CITES tags
281 Technical assistance
284 Feeding/watering
285 Nest structures
286 Population control
287 Stocking enhancements/population augmentation
288 Nuisance animal complaints
293 Mortality investigations
294 Program coordination and implementation C inter- and intra-agency coordination and program implementation at the section, bureau, or division level

Administration

Central Office/Headquarters

100 ADMINISTRATION C administrative tasks, including preparation of forms, word processing, photocopying, filing, and other clerical/secretarial duties.

104 Budget/purchasing/accounting

Districts/Regions

See Location code

Units/Projects

See Location code

Support

Land Management Planning

103 Meetings C includes workshops, conferences, staff, and other meetings.

204 Resource planning

Land Management Reviews

101 Project inspection C field inspections of projects.

Training/Staff Development

150 PERSONNEL MANAGEMENT C recruitment, hiring, training, counseling, and supervising.

Vehicle Purchase

Vehicle Operation and Maintenance

923 FEM C vehicles/equipment

Other

140 REPORT WRITING/EDITING/MANUSCRIPT PREPARATION

141 Grant applications

180 SYSTEMS ADMINISTRATION AND MANAGEMENT

182 Data management

184 Metadata development and management

187 IT

188 Web development

721 Geospatial analysis techniques

191 Stamp design coordination

226 Human dimensions surveys

Capitol Improvements

New Facility Construction

910 New facility construction C buildings/structures

912 New construction C roads/bridges

913 New construction C trails

914 New construction C fences

Facility Maintenance

920 Facility and equipment maintenance (FEM) C buildings/structures

921 FEM C utilities

922 FEM C custodial functions

925 FEM C boating access

926 FEM C roads/bridges

927 FEM C trails

928 FEM C fences

Visitor Services/Recreation

Information/Education Programs

145 Technical bulletin

Operations

311 Boundary signs
312 Informational signs
320 Outreach and education C attending or developing educational or informational materials or events for the public
327 Becoming an Outdoor Woman C enhancement
331 Wings Over Florida
341 Public use administration (hunting)
342 Public use administration (non-hunting)
350 Customer service support C disseminating written or verbal information or assistance to the public
700 STUDIES
740 EVALUATIONS AND ASSESSMENTS
750 URTD assessment

Law Enforcement

FY 2002-03
Project 7202 - FRED C. BABCOCK/CECIL M. WEBB

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
Species 9200 - All wildlife							
Activity - 103	Meetings						
	12.00	$1,920.00	$56.40	$100.00	$2,076.40	0	Attend workshops, conferences, and meetings (EXP-100-$50)(EXP-400-$50).
Activity - 104	Budget/purchasing/accounting						
	4.00	$640.00	$18.80	$0.00	$658.80	0	Prepare and administer annual budgets.
Activity - 150	Personnel management						
	2.00	$320.00	$9.40	$0.00	$329.40	0	Hire OPS personnel to manage check stations. Employee supervision and counseling.
Activity - 203	Tree and shrub planting						
	5.00	$800.00	$23.50	$700.00	$1,523.50	2700	Fertilize and monitor 2,700 oak trees and survey survival success (EXP-100-$100)(EXP-400-$600).
Activity - 204	Resource planning						
	278.00	$44,480.00	$1,306.60	$2,800.00	$48,586.60	0	Conduct various resource planning activities required to operate the area (EXP-100-$600)(EXP-400-$1,400).
Activity - 206	Prescribed burning - growing season						
	30.00	$4,800.00	$141.00	$500.00	$5,441.00	1000	Control burn approximately 1,000 acres (EXP-100-

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
							$500).
Activity - 207	Prescribed burning - dormant season						
	160.00	$25,600.00	$752.00	$18,300.00	$44,652.00	40000	Control burn approximately 40,000 acres (EXP-400-$3,300)(RSC-340-$15,000).
Activity - 208	Firebreaks						
	57.00	$9,120.00	$267.90	$18,500.00	$27,887.90	162	Maintain approximately 162 miles of firelines (EXP-100-$5,500)(EXP-400-$3,000)(ENH-340-$10,000).
Activity - 212	Exotic plant control (chemical)						
	66.00	$10,560.00	$310.20	$98,000.00	$108,870.20	1000	Systematic spraying of exotic plants (EXP-100-$500)(EXP-400-$2,500)(RSC-340-$5,000). Ground and aerial exotic treatment on 1,000 acres (INT-889-$90,000).
Activity - 218	Water level management						
	4.00	$640.00	$18.80	$0.00	$658.80	16	Monitor and coordinate water level manipulation in 395 acre Webb Lake and 15 water control structures.
Activity - 235	Vegetation and plant surveys						
	4.00	$640.00	$18.80	$200.00	$858.80	5	Monitor 5 photo plots and establish new photo plots (EXP-100-$100)(EXP-400-$100).
Activity - 289	Native vegetation management (mechanical)						

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
	32.00	$5,120.00	$150.40	$47,000.00	$52,270.40	2000	Roller chop approximately 2,000 acres of dense palmetto-gallberry (ENH-340-$30,000)(ENH-228-$15,000)(RSC-340-$2,000).
Activity - 311	Boundary signs						
	0.00	$0.00	$0.00	$300.00	$300.00	0	Purchase boundary signs for newly aquired property (EXP-100-$300).
Activity - 312	Informational signs						
	16.00	$2,560.00	$75.20	$3,000.00	$5,635.20	20	Replace and maintain area entrance signs and major road signs (EXP-100-$200)(EXP-400-$200). Purchase signs for quail zone boundaries (RSC-340-$2,600).
Activity - 320	Outreach and education						
	20.00	$3,200.00	$94.00	$72,800.00	$76,094.00	1	Develop and maintain nature trails, visitor center, nature viewing towers, etc. (EXP-400-$300)(ENH-340-$62,500)(ENH-340-$10,000).
Activity - 342	Public use administration (non-hunting)						
	40.00	$6,400.00	$188.00	$0.00	$6,588.00	0	Process and deposit daily use fees. Maintain Webb shooting range.
Activity - 920	FEM -- buildings/structures						
	30.00	$4,800.00	$141.00	$100,000.00	$104,941.00	9	Maintain and repair residences, shop, check station, office

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
							complex, clubhouse, and other area structures (EXP-400-$3,000). Shop repair (ENH-340-$15,000). Horse stable repair (ENH-340-$75,000)(RSC-340-$7,000).
Activity - 922	FEM -- custodial functions						
	21.00	$3,360.00	$98.70	$2,000.00	$5,458.70	2	Maintain 2 campgrounds and conduct other custodial functions as required (EXP-400-$2,000).
Activity - 923	FEM -- vehicles/equipment						
	50.00	$8,000.00	$235.00	$14,486.20	$22,721.20	15	Repair and maintain vehicles and equipment (EXP-100-$2,086.20)(EXP-400-$3,500) (RSC-340-$8,000).
Activity - 926	FEM -- roads/bridges						
	35.00	$5,600.00	$164.50	$198,000.00	$203,764.50	34	Repair and maintain 28.5 miles of shell road (EXP-100-$1,500)(EXP-400-$1,500)(RSC-340-$15,000)(ENH-340-$50,000)(INT-889-$50,000). Repair 5.5 miles of Webb Lake Road (ENH-340-$80,000).
Activity - 928	FEM -- fences						
	22.00	$3,520.00	$103.40	$160,000.00	$163,623.40	112.5	Monitor and repair 112.5 miles of fencing (ENH-340-$160,000).

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
Species 9200 Total	888.00	$142,080.00	$4,173.60	$736,686.20	$882,939.80		
Species 9210 - Game wildlife							
Activity - 182	Data management						
	4.00	$640.00	$18.80	$50.00	$708.80	0	Data entry of biological data. Spotlight survey, quail call count and hunt season data analysis (EXP-100-$25)(EXP-400-$25).
Activity - 221	Animal surveys						
	22.00	$3,520.00	$103.40	$100.00	$3,723.40	10	Conduct deer and hog spotlight surveys (EXP-100-$50)(EXP-400-$50).
Activity - 295	Biological data collection, analysis, and reporting						
	15.00	$2,400.00	$70.50	$8,900.00	$11,370.50	65	Collection of biological data during the 65-day hunting season (EXP-100-$100)(EXP-400-$200). Hire check station operators (RSC-228-$1,100)(RSC-340-$7,500).
Activity - 341	Public use administration (hunting)						
	15.00	$2,400.00	$70.50	$3,275.00	$5,745.50	4	Administrative paperwork and setup of hunter check station (EXP-100-$75)(EXP-400-$200). Rent portable toilets and dumpster (RSC-340-$3,000).
Species 9210 Total	56.00	$8,960.00	$263.20	$12,325.00	$21,548.20		

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
Species 9218 - Quail							
Activity - 221	Animal surveys						
	60.00	$9,600.00	$282.00	$260,550.00	$270,432.00	6	Conduct quail surveys on 6 study areas (EXP-100-$50)(EXP-400-$500). Purchase swamp buggy (ENH-340-$60,000). Conduct quail study (ENH-340-$200,000).
Activity - 282	Herbaceous seeding						
	73.00	$11,680.00	$343.10	$50,572.20	$62,595.30	315	Prepare, fertilizer, and plant 315 acres of quail food plots in cooperation with Quail Unlimited and the Associated Field Trial Clubs of Florida (EXP-400-$572.20)(ENH-340-$50,000).
Species 9218 Total	133.00	$21,280.00	$625.10	$311,122.20	$333,027.30		
Species 9295 - Red-cockaded woodpecker							
Activity - 221	Animal surveys						
	1.00	$160.00	$4.70	$35,000.00	$35,164.70	0	Hire OPS to conduct surveys for red-cockaded woodpeckers (ENH-340-$35,000).
Species 9295 Total	1.00	$160.00	$4.70	$35,000.00	$35,164.70		
Project 7202	1,078.00	$172,480.00	$5,066.60	$1,095,133.40	$1,272,680.00		

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
Total							

ORG - Category Breakdown

ORG	Category	Total
77302010100	040000	$12,336.20
77302010100	100228	$1,100.00
77302010400	040000	$24,097.20
77302010400	100340	$65,100.00
77302090100	100228	$15,000.00
77302090200	103889	$140,000.00
77302090400	100340	$837,500.00

Babcock-Webb WMA Conceptual Management Plan Budget

CMP Budget	
Resource Management	**CMP budget**
Exotic Species Control	$200,000.00
Prescribed Burning	$135,000.00
Cultural Resource Management	$2,000.00
Timber Management	$3,000.00
Hydrological Management	$47,500.00
Other	$490,820.10
Subtotal	**$878,320.10**
Administration	
General administration	**$1,500.00**
Support	
Land Management Planning	$51,586.60
Land Management Reviews	$3,000.00
Training/Staff Development	$5,000.00
Vehical Purchase	$233,303.00
Vehicle Operation and Maintenance	$80,000.00
Other	$2,300.00
Subtotal	**$375,189.60**
Capital Improvements	
New Facility Construction	$1,611,725.00
Facilty Maintenance	$586,818.74
Subtotal	**$2,198,543.74**
Visitor Services/Recreation	
Info./Education/Operations	**$98,062.70**
Law Enforcement	
Resource protection	**$0.00**
Total	**$3,551,616.14**
Priority schedule:	
Immediate (annual)	
Intermediate (3-4 years)	
Other (5+ years)	

	Operational Plan					
Operational Plan	**Activity Code**	**Amount**	**Activity Code**	**Amount**
$200,000.00	100	0.00	277	0.00
$135,000.00	101	3,000.00	278	0.00
$2,000.00	103	3,000.00	281	1,000.00
$3,000.00	104	1,500.00	282	70,000.00
$47,500.00	140	500.00	283	0.00
$490,820.10	141	0.00	284	0.00
$878,320.10	145	0.00	285	0.00
	150	5,000.00	286	0.00
	180	0.00	287	0.00
$1,500.00	182	1,800.00	288	500.00
	184	0.00	289	60,000.00
	185	3,000.00	290	0.00
$51,586.60	186	0.00	293	0.00
$3,000.00	187	0.00	294	0.00
$5,000.00	188	0.00	295	15,000.00
	191	0.00	311	1,000.00
$80,000.00	194	0.00	312	5,635.20
$2,300.00	200	0.00	320	76,094.00
$141,886.60	201	2,000.00	327	0.00
	202	3,000.00	331	0.00
	203	10,000.00	341	5,745.50
$0.00	204	48,586.60	342	6,588.00
$393,399.70	206	20,000.00	350	3,000.00
$393,399.70	207	60,000.00	700	0.00
	208	55,000.00	721	0.00
	211	0.00	740	0.00
$98,062.70	212	200,000.00	750	0.00
	216	15,000.00	910	0.00
	217	0.00	912	0.00
	218	32,500.00	913	0.00
	221	309,320.10	914	0.00
$1,513,169.10	226	0.00	920	104,941.00
	228	0.00	921	5,000.00
	235	20,000.00	922	5,458.70
	250	0.00	923	80,000.00
	252	0.00	925	1,000.00
	263	0.00	926	250,000.00
	264	0.00	927	2,000.00
	275	1,000.00	928	25,000.00
	276	1,000.00	**Total**	**$1,513,169.10**

Needs-based Assessment	
Resource Management	**Amount**
Burning	$193,361.69
Exotics	$207,089.19
Planting	$453,225.50
Surveys	$11,150.00
Repl. Equip.	$41,056.27
Mgt. T.A.	0.00
Resource protection	0.00
Equip.	$233,303.00
Hydrologic R	$12,000.00
Subtotal	**1,151,185.65**
Visitor Services/Recreation	
Rd/Trl Dev.	$743,490.38
Fac. Maint.	$193,419.04
Bldg. maint.	$38,700.00
Fence/Gate maint.	$25,586.25
Signage	$201.84
Res. maint.	$24,510.00
Rd./Trl. maint.	$193,419.04
Fence/Gate Dev.	$511,725.00
Subtotal	**1,731,051.55**
Capitol Improvements	
Bld. Dev.	$450,000.00
Fac. Dev.	$650,000.00
Subtotal	**1,100,000.00**
Total	**3,982,237.20**

Appendix G

County Comprehensive Plan Review and Approval

(Available upon request)

Insert County Letter

Appendix H

Land Management Review

Land Management Review of Fred C. Babcock – Cecil M. Webb WMA
Charlotte County (Lease No. 4095): January 23, 2002

Prepared by Division of State Lands Staff

William Howell, OMC Manager
Ginny Morris, Administrative Assistant

For
The Fred C. Babcock – Cecil M. Webb Wildlife Management Area Review Team

DRAFT February 11, 2002

Land Manager:	FWCC
Area:	65,770 Acres
County:	Charlotte County
Mngt. Plan Revised:	8/27/1997
Mngt. Plan Update Due:	8/27/2002

Management Review Team Members

Agency Represented	Team member Appointed	Team member In attendance
DEP/DRP	Bobby Hattaway	Bobby Hattaway
DEP South Florida District	Gordon Romeis	Gordon Romeis
DACS/DOF	Bill Korn	Bill Korn
FWCC	Victor Echaves	Victor Echaves
Soil and Water Conservation	Tim Eckert	
County Commission	Joan Bertinelli	Joan Bertinelli
Conservation Organization	Brenda Bossman	Brenda Bossman
Private Land Manager	Kathi Roder-Gibson	
Babcock Ranch Rep. (non-voting)	Arnie Sarlo	Arnie Sarlo

Process for Implementing Regional Management Review Teams

Legislative Intent and Guidance:

Chapter 259.036, F. S. was enacted in 1997 to determine whether conservation, preservation, and recreation lands owned by the state Board of Trustees of the Internal Improvement Trust Fund (Board) are being managed properly. It directs the Department of Environmental Protection (DEP) to establish land management review teams to evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions, and archaeological features. The teams also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan. If a land management plan has not been adopted, the review shall consider the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices are in compliance with the management policy statement and management prospectus for that property. If the land management review team determines that reviewed lands are not being managed for the purposes for which they were acquired or in compliance with the adopted land management plan, management policy statement, or management prospectus, DEP shall provide the review findings to the Board, and the managing agency must report to the Board its reasons for managing the lands as it has. A report of the review findings are given to the managing agency under review, the Acquisition and Restoration Council, and to the Division of State Lands. Also, DEP shall report the annual review findings of its land management review teams to the Board no later than the second board meeting in October of each year.

Review Site

The management review of Babcock-Webb Management Area considered approximately 65,770 acres in Charlotte County that are managed by the Fish and Wildlife Conservation Commission. The team evaluated the extent to which current management actions are sufficient, whether the land is being managed for the purpose for which it was acquired, and whether actual management practices, including public access, are in compliance with the management plan. The Fish and Wildlife Conservation Commission revised the management plan on August 27, 1997, and the management plan update is due on August 27, 2002.

Review Team Determination

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

After completing the checklist, team members were asked to answer "yes" or "no" to this question. All team members agreed that Babcock-Webb Wildlife Management Area is being managed for the purpose for which it was acquired.

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

After completing the checklist, team members were asked to answer "yes" or "no" to this question. All team members agreed that actual management practices, including public access, were in compliance with the management plan for this site.

Commendations to the Managing Agency

1. The team commends the manager and staff for their outstanding efforts to establish partnerships with the Water Management District, cattle lessees, prisons and field trial user groups to accomplish management of this site. (Vote: 6+, 0-)

2. The team commends the manager and staff for their outstanding efforts to band and monitor red cockaded woodpecker populations. (Vote: 6+, 0-)

Exceptional Management Actions

The following items received high scores on the review team checklist (see attachment 1), which indicates that management actions exceeded expectations

1. Natural Communities: Dry Prairie
2. Natural Communities: Freshwater Marsh/Wet Prairie
3. Prescribed Fire: Acres Being Burned
4. Prescribed Fire: Frequency of Burns
5. Prescribed Fire: Quality of Burns
6. Wildlife Habitat
7. Pine Restoration in Prairies
8. Monitoring of Groundwater

Recommendations and Checklist Findings

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

Checklist findings

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

1. Natural Communities: Protection and Maintenance:
Dry Prairie (*p*)
Pine Flatwoods (p)
Hardwood Hammocks (p)
Cypress Strand/Swamps (p)
Freshwater Marsh/Wet Prairie (p)

Manager's Response: Area-specific plant community information will be addressed in the management plan update.

2. Protection and Preservation of Listed Animal and Plant Species (*p)*

Manager's Response: Survey and management methodologies and results pertaining to listed animal and plant species will be provided in the management plan update.

3. Cultural Resources Survey and Protection (p)(f)

Managers Response: Two conflicting letters from Historical Resources guided the review team to request a historical resource survey be conducted on both areas (Babcock/Webb and Yucca Pens). The management plan update will include information pertaining to cultural resource identification and protection.

4 Problem Non-Native Animals (hogs)(p)

Managers Response: Consistent with other FWC-managed areas, feral hog populations are controlled by means of public hunting.

5. Hydrological Impediments and Connections to Receiving Water bodies (p)

Managers Response: The management plan update will include current information regarding hydrologic restoration activities, including a project with SWFWMD, SFWMD, and Charlotte and Lee counties designed to reduce water impoundments south of the management area, thereby alleviating above-normal water levels on the area during the rainy season.

6. Surface water Quality monitoring (p)

Managers Response: The management plan update will include current information regarding USGS and SFWMD sampling of ground water and surface water on the management area.

7. Inholdings /Additions Within the Boundaries of the Managed Area. (p)

Managers Response: The management plan update will include a current map of inholding and additions identified for acquisition.

8. Environmental Educational/Outreach. (p)(f)

Managers Response: The management plan update will include environmental education and outreach goals for the next five-year period.

9. Survey of boundaries. (f)

Managers Response: The review team was concerned about isolated parcels outside the Yucca Pens main core area not being posted due to incomplete surveys. We understand that the Division of State Lands (DSL) is not surveying and marking the boundaries of individual lots purchased within an acquisition boundary while acquisition in the project is ongoing. We believe boundary surveys are an acquisition-related cost and are the responsibility of the Division of State Lands.

10. Expansion of Interpretive Facilities and Signs (f)

Managers Response: The management plan update will include interpretive facility and signage goals for the next five-year period.

11. Inadequate Sanitary Facilities.

Managers Response: Sanitary facilities are currently provided during the hunting seasons. The management plan update will include objectives for determining the need for additional sanitary facilities during and outside of hunting season.

Management Review Determinations
Enclosed are the management review determination sheets, from the review checklists, for each of the members of the review team.

ATTACHMENT I

PLAN REVIEW		1	2	3	4	5	6	Average
Dry Prairie	I.A.1	1	1	1	0	0	0	0.5
Pine Flatwoods	I.A.2	1	1	1	0	0	0	0.5
Hardwood Hammocks	I.A.3	1	1		0	0	0	0.4
Cypress Strand/Swamp	I.A.4	1	1	0	0	0	0	0.3
Freshwater Marsh/ Wet Prairie	I.A.5	1	1	1	0	0	0	0.5
Animals	I.B.1	1	1	1	0	1	1	0.8
Plants	I.B.2	0	0	1	0	0	1	0.3
Survey	II.A	0	0	1	0	0	1	0.3
Protection and Preservation	II.B	0	0	1	0	0	1	0.3
Area Being Burned	III.A.1	1	1	1	0	1	0	0.7
Frequency	III.A.2	1	1	1	0	1	0	0.7
Quality	III.A.3	1	1	1	0	1	0	0.7
Hydrological Restoration	III.B.1		0	1	1	0	1	0.6
Pine Restoration in Parries	III.B.3		1	1	1	1	1	1.0
Wildlife Habitat	III.C.1	1	1	1	1	1	1	1.0
Hunting/ Fishing Quality	III.C.2	1	1	1	1	1	1	1.0
Animals	III.D.1	0	1		0	0	1	0.4
Plants	III.D.2	0	1		0	1	1	0.6
Roads/Culverts	III.E.1a	1	1	1	1	1	0	0.8
Hydro connection with Charlotte Harbor	III.E.1c	1	0	1	1	0	0	0.5
Canals/Dikes/Water Control Struct.	III.E.1d	1	1	1	1	1	1	1.0
Quality	III.E.2a	1	0	1	1	0	0	0.5
Quantity	III.E.2b	1	0	1	1	0	0	0.5
Quality	III.E.3a	1	0	1	1	0	0	0.5
Quantity	III.E.3b	1	0	1	1	0	1	0.7
Boundary Survey	III.F.1	1	0		1	1	1	0.8
Gates & Fencing	III.F.2	1	1		1	1	1	1.0
Signage	III.F.3	1	1		1	1	1	1.0
Law Enforcement Presence	III.F.4	1	0		1	1	1	0.8
Expanding Development	III.G.1a	1	1	1	1	0	1	0.8
Inholdings / Additions	III.G.2	1	0	0	0	0	1	0.3
Silvaculture	III.H.1	1	1	1	1	0	1	0.8
Grazing	III.H.2	1	0	1	1	1	1	0.8
Roads	IV.1.A	1	1	1	1	1	1	1.0
Parking	IV.1.b	1	1	1	1	0	0	0.7
Water Access	IV.1.c	1	1	1	0	1	0	0.7
Recreational Opportunities	IV.2	1	1	1	1	1	1	1.0
Interpretive Facilities and Signs	IV.3	1	0	1	1	0	1	0.7
Environmental Education/Outreach	IV.4	0	0	1	1	0	1	0.5

Fishing	VI.A.1	1	1	1	1	1	1	1.0
Hunting	VI.A.2	1	1	1	1	1	1	1.0
Horseback Riding	VI.A.3	1	1	1	1	1	1	1.0
Camping	VI.A.4	1	1	1	1	1	1	1.0
Nature Study	VI.A.5	1	0	1	1	1	1	0.8
Bird Watching	VI.A.6	1	0	1	1	1	1	0.8
Hiking	VI.A.7	1	1	1	1	1	1	1.0
Bicycling	VI.A.8	1	1	1	1	1	1	1.0
Grazing	VI.A.9	1	1	1	1		1	1.0
Silvaculture	VI.B.1	1	1	1	1	0	1	0.8
Gun Range	VI.B.2	1		1	1	1	1	1.0

FIELD REVIEWS		**1**	**2**	**3**	**4**	**5**	**6**	**Average**
Dry Prairie	I.A.1	4	4	5	4	4	4	4.2
Pine Flatwoods	I.A.2	4	4	4	4	3	4	3.8
Hardwood Hammocks	I.A.3	3	3	5	3	3	4	3.5
Cypress Strand/Swamp	I.A.4	3	3	3	2	3	4	3.0
Freshwater Marsh/ Wet Prairie	I.A.5	4		5	4	3	4	4.0
Animals	I.B.1	4	4	4	4	3	4	3.8
Plants	I.B.2	2	2	4	3	2	4	2.8
Survey	II.A	2	1	4	2	2	3	2.3
Protection and Preservation	II.B	2	1	5	3	3	4	3.0
Area Being Burned	III.A.1	5	4	5	5	4	5	4.6
Frequency	III.A.2	5	5	5	5	4	4	4.6
Quality	III.A.3	5	5	5	4	4	4	4.5
Hydrological Restoration	III.B.1		2	4	4	4	4	3.0
Pine Restoration in Parries	III.B.3	3	4	5	3	4	5	4.0
Wildlife Habitat	III.C.1	4	3	5	4	4	4	4.0
Hunting/ Fishing Quality	III.C.2	4	3	5	4	4	5	4.0
Animals	III.D.1	3	3	4	3	3	3	3.1
Plants	III.D.2	3	4	3	4	4	4	3.6
Roads/Culverts	III.E.1a	3	3	4		3	4	3.4
Hydro connection with Charlotte Harbor	III.E.1c	3	2	3		3	3	2.8
Canals/Dikes/Water Control Struct.	III.E.1d	3	3	4		3	4	3.4
Quality	III.E.2a	3	3	5	3	3	4	4.2
Quantity	III.E.2b	3	3	5	3	3	4	3.5
Quality	III.E.3a	3	3	5	3	3	4	3.5
Quantity	III.E.3b	3	3	5	3	3	4	3.5
Boundary Survey	III.F.1	2	1	3	3	3	3	2.5
Gates & Fencing	III.F.2	3	3	4	3	3	4	3.3
Signage	III.F.3	3	3	4	3	3	4	3.3
Law Enforcement Presence	III.F.4	3	2	5	4	4	4	3.6
Expanding Development	III.G.1a	3	3	4	3	3	3	3.1
Inholdings / Additions	III.G.2		3	2	4	3		3.0
Silvaculture	III.H.1	3	3	3	2	2	4	2.8

Grazing	III.H.2	3	3	4	4	4	4	3.6
Roads	IV.1.A	3	3	4	4	3	3	3.3
Parking	IV.1.b	3	3	4	3	3	3	3.1
Water Access	IV.1.c	3	3	4	3	3	4	3.3
Recreational Opportunities	IV.2	3	3	4	4	3	4	3.5
Interpretive Facilities and Signs	IV.3	2	1	33	2	1	3	2.0
Environmental Education/Outreach	IV.4	2	1	4	3	1	3	2.3
Waste Disposal	V.1.a	3	3	3	3	3	4	3.1
Sanitary Facilities	V.1.b	2	2	3	3	2	3	2.5
Buildings	V.2.a	3	3	3	3	3	3	3.0
Equipment	V.2.b	3	3	3	4	4	4	3.5
Staff	V.3	2	3	3	3	3	4	3.0
Funding	V.4	3	2	3	4	4	4	3.3

Appendix I

FNAI Species and Natural Community Summary for Charlotte County
and Wildlife Element Occurrence Data for BWWMA

FLORIDA NATURAL AREAS INVENTORY

1018 Thomasville Road, Suite 200-C · Tallahassee, Florida 32303 · (904) 224-8207

March 3, 1997

Hugh Boyter
Bureau of Wildlife Management
Division of Wildlife, GFC
620 South Meridian
Tallahassee, Fl 32399-1600

Dear Hugh:

By virtue of this letter we are agreeing that it is unneccesary for your office to request FNAI element data for each management plan you prepare if the following condition is met.

> An update of the Florida Natural Areas Inventory's Biological Conservation Database will be performed on a quarterly basis.

Our database manager, Lance Peterson, will provide the appropriate FGFWFC staff with the updated Biological Conservation Database and your staff will assure that it is incorporated into all management plans. Hopefully, this new procedure will eliminate wasted time and effort at both organizations. Mr. Peterson told me he has provided FGFWFC personnel a database update within the last few weeks so this procedure can begin immediately.

Sincerely,

Gary Knight

Gary Knight, Director
Florida Natural Areas Inventory

cc: Lance Peterson, FNAI
MAF/FGFWFC/general/agreemnt.gfc

Species and Natural Community Summary for Charlotte County

Fish Amphibians Reptiles Birds Mammals Invertebrates Plants Natural Communities Other

Explanations and Definitions: Global/State Rank, Federal/State Status Occurrence Status

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	Occurrence Status
FISH						
Acipenser oxyrinchus desotoi	Gulf sturgeon	G3T2	S2	LT	LS	C
AMPHIBIANS						
Rana capito	gopher frog	G4	S3	N	LS	P
REPTILES						
Alligator mississippiensis	American alligator	G5	S4	T(S/A)	LS	C
Caretta caretta	loggerhead	G3	S3	LT	LT	C
Chelonia mydas	green turtle	G3	S2	LE	LE	N
Crotalus adamanteus	eastern diamondback rattlesnake	G5	S3	N	N	C
Dermochelys coriacea	leatherback	G3	S2	LE	LE	N
Drymarchon corais couperi	eastern indigo snake	G4T3	S3	LT	LT	C
Gopherus polyphemus	gopher tortoise	G3	S3	N	LS	C

Lepidochelys kempii	Kemp's ridley	G1	S1	LE	LE	P
Pituophis melanoleucus mugitus	Florida pine snake	G5T3?	S3	N	LS	C
BIRDS						
Accipiter cooperii	Cooper's hawk	G4	S3?	N	N	P
Aimophila aestivalis	Bachman's sparrow	G3	S3	N	N	P
Ajaia ajaja	roseate spoonbill	G5	S2S3	N	LS	C
Aphelocoma coerulescens	Florida scrub-jay	G3	S3	LT	LT	C
Aramus guarauna	limpkin	G5	S3	N	LS	C
Ardea alba	great egret	G5	S4	N	N	C
Ardea herodias occidentalis	great white heron	G5T2	S2	N	N	P
Buteo brachyurus	short-tailed hawk	G4?	S3	N	N	P
Caracara plancus	crested caracara	G5	S2	LT	LT	C
Charadrius alexandrinus	snowy plover	G4	S2	N	LT	C
Charadrius melodus	piping plover	G3	S2	LT	LT	C
Coccyzus minor	mangrove cuckoo	G5	S3	N	N	P
Dendroica discolor paludicola	Florida prairie warbler	G5T3	S3	N	N	P
Egretta caerulea	little blue heron	G5	S4	N	LS	C
Egretta thula	snowy egret	G5	S4	N	LS	C
Egretta tricolor	tricolored heron	G5	S4	N	LS	C
Elanoides forficatus	swallow-tailed kite	G4	S2S3	N	N	P
Eudocimus albus	white ibis	G5	S4	N	LS	C
Falco columbarius	merlin	G5	SU	N	N	P
Falco peregrinus	peregrine falcon	G4	S2	LE	LE	P

Falco sparverius paulus	southeastern American kestrel	G5T3T4	S3?	N	LT	C
Fregata magnificens	magnificent frigatebird	G5	S1	N	N	P
Grus canadensis pratensis	Florida sandhill crane	G5T2T3	S2S3	N	LT	C
Haematopus palliatus	American oystercatcher	G5	S3	N	LS	P
Haliaeetus leucocephalus	bald eagle	G4	S3	LT	LT	C
Ixobrychus exilis	least bittern	G5	S4	N	N	C
Laterallus jamaicensis	black rail	G4	S3?	N	N	P
Mycteria americana	wood stork	G4	S2	LE	LE	C
Nyctanassa violacea	yellow-crowned night-heron	G5	S3?	N	N	P
Nycticorax nycticorax	black-crowned night-heron	G5	S3?	N	N	P
Pandion haliaetus	osprey	G5	S3S4	N	LS**	C
Pelecanus occidentalis	brown pelican	G4	S3	N	LS	C
Picoides borealis	red-cockaded woodpecker	G3	S2	LE	LT	C
Picoides villosus	hairy woodpecker	G5	S3?	N	N	P
Plegadis falcinellus	glossy ibis	G5	S2	N	N	P
Rallus longirostris scottii	Florida clapper rail	G5T3?	S3?	N	N	P
Rynchops niger	black skimmer	G5	S3	N	LS	P
Speotyto cunicularia floridana	Florida burrowing owl	G4T3	S3	N	LS	C
Sterna antillarum	least tern	G4	S3	N	LT	P
Sterna caspia	Caspian tern	G5	S2?	N	N	P
Sterna maxima	royal tern	G5	S3	N	N	P
Sterna sandvicensis	sandwich tern	G5	S2	N	N	P
Vireo altiloquus	black-whiskered vireo	G5	S3	N	N	P

MAMMALS						
Eumops glaucinus floridanus	Florida mastiff bat	G5T1	S1	N	LE	C
Felis concolor coryi	Florida panther	G5T1	S1	LE	LE	C
Mustela frenata peninsulae	Florida long-tailed weasel	G5T3	S3?	N	N	C
Mustela vison mink pop 1	southern mink, (s. Florida pop.)	G5T2	S2	N	LT**	C
Neofiber alleni	round-tailed muskrat	G3	S3	N	N	P
Sciurus niger shermani	Sherman's fox squirrel	G5T2	S2	N	LS	C
Trichechus manatus	manatee	G2?	S2?	LE	LE	C
Ursus americanus floridanus	Florida black bear	G5T2	S2	C	LT**	C
VASCULAR PLANTS						
Acrostichum aureum	golden leather fern	G5	S3	N	LE	C
Asclepias curtissii	Curtiss' milkweed	G3	S3	N	LE	R
Deeringothamnus pulchellus	beautiful pawpaw	G1	S1	LE	LE	C
Glandularia tampensis	Tampa vervain	G1	S1	N	LE	R
Gossypium hirsutum	wild cotton	G4G5	S3?	N	LE	C
Harrisia aboriginum	aboriginal prickly apple	G2Q	S2	N	LE	C
Helianthus debilis ssp *vestitus*	hairy beach sunflower	G5T2	S2	N	N	C
Linum carteri var *smallii*	Carter's large-flowered flax	G2T2	S2	N	LE	R
Nolina atopocarpa	Florida beargrass	G3	S3	N	LT	C
Nymphaea jamesoniana	sleeping beauty waterlily	G5	S2S3	N	N	C
Spiranthes torta	southern ladies'-tresses	G3G4	S1	N	LE	C
Stillingia sylvatica ssp *tenuis*	queen's delight	G4G5T2	S2	N	N	C

Tillandsia flexuosa	banded wild-pine	G4	S3	N	LE	C
Vernonia blodgettii	Blodgett's ironweed	G3	S3	N	N	C
Zephyranthes simpsonii	rain lily	G2G3	S2S3	N	LT	C
NATURAL COMMUNITIES						
Basin Swamp		G4?	S3	N	N	C
Beach Dune		G4?	S2	N	N	C
Coastal Grassland		G3	S2	N	N	C
Coastal Strand		G3?	S2	N	N	C
Dry Prairie		G2	S2	N	N	C
Estuarine Tidal Marsh		G4	S4	N	N	C
Estuarine Tidal Swamp		G3	S3	N	N	C
Maritime Hammock		G4	S2	N	N	C
Mesic Flatwoods		G?	S4	N	N	C
Scrubby Flatwoods		G3	S3	N	N	C
Scrub		G2	S2	N	N	C
Shell Mound		G3	S2	N	N	C
Wet Flatwoods		G?	S4?	N	N	C
Xeric Hammock		G?	S3	N	N	C
OTHER						
Bird rookery				N	N	C

** See Rank and Status Explanations and Definitions, Special Animal Listings - Federal and State Status

County Occurrence Status

Vertebrates and Invertebrates:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base.

P = (Potential) Occurrence status derived from a reported occurrence for the county or the occurrence lies within the published range of the taxon.

N = (Nesting) For sea turtles only; occurrence status derived from documented nesting occurrences.

Plants, Natural Communities, and Other:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base or from a herbarium specimen.

R = (Reported) Occurrence status derived from published reports.

Table 1. FNAI element occurrences on or adjacent to the Babcock / Webb WMA, Yucca Pens Unit, and Charlotte Harbor Flatwoods CARL Project.

Scientific name	Common name	Eocode
ALLIGATOR MISSISSIPPIENSIS	AMERICAN ALLIGATOR	ARABA01010*072*FL
ALLIGATOR MISSISSIPPIENSIS	AMERICAN ALLIGATOR	ARABA01010*067*FL
ALLIGATOR MISSISSIPPIENSIS	AMERICAN ALLIGATOR	ARABA01010*069*FL
ALLIGATOR MISSISSIPPIENSIS	AMERICAN ALLIGATOR	ARABA01010*070*FL
ALLIGATOR MISSISSIPPIENSIS	AMERICAN ALLIGATOR	ARABA01010*068*FL
ALLIGATOR MISSISSIPPIENSIS	AMERICAN ALLIGATOR	ARABA01010*071*FL
ARAMUS GUARAUNA	LIMPKIN	ABNMJ01010*009*FL
ARAMUS GUARAUNA	LIMPKIN	ABNMJ01010*008*FL
BIRD ROOKERY	BIRD ROOKERY	ORKER00000*051*FL
BIRD ROOKERY	BIRD ROOKERY	ORKER00000*049*FL
CARACARA PLANCUS	CRESTED CARACARA	ABNKD02010*006*FL
CARACARA PLANCUS	CRESTED CARACARA	ABNKD02010*008*FL
CASMERODIUS ALBUS	GREAT EGRET	ABNGA05010*093*FL
CASMERODIUS ALBUS	GREAT EGRET	ABNGA05010*095*FL
CROTALUS ADAMANTEUS	EASTERN DIAMONDBACK RATTLESNAKE	ARADE02010*214*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*023*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*024*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*009*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*010*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*008*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*012*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*013*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*016*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*015*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*007*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*011*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*014*FL
DEERINGOTHAMNUS PULCHELLUS	BEAUTIFUL PAWPAW	PDANN03010*002*FL
DRYMARCHON CORAIS COUPERI	EASTERN INDIGO SNAKE	ARADB11011*402*FL
DRYMARCHON CORAIS COUPERI	EASTERN INDIGO SNAKE	ARADB11011*116*FL
EGRETTA CAERULEA	LITTLE BLUE HERON	ABNGA06040*182*FL
EGRETTA THULA	SNOWY EGRET	ABNGA06030*046*FL
EGRETTA TRICOLOR	TRICOLORED HERON	ABNGA06050*052*FL
EGRETTA TRICOLOR	TRICOLORED HERON	ABNGA06050*053*FL
FALCO SPARVERIUS PAULUS	SOUTHEASTERN AMERICAN KESTREL	ABNKD06022*056*FL
FALCO SPARVERIUS PAULUS	SOUTHEASTERN AMERICAN KESTREL	ABNKD06022*055*FL
FELIS CONCOLOR CORYI	FLORIDA PANTHER	AMAJH01021*011*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*189*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*658*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*191*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*193*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*190*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*659*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*654*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*657*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*656*FL
GOPHERUS POLYPHEMUS	GOPHER TORTOISE	ARAAF01030*655*FL
GRUS CANADENSIS PRATENSIS	FLORIDA SANDHILL CRANE	ABNMK01012*012*FL
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	ABNKC10010*738*FL
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	ABNKC10010*598*FL
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	ABNKC10010*235*FL
HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	ABNKC10010*599*FL
MESIC FLATWOODS	MESIC FLATWOODS	CTE0000000*039*FL
MUSTELA FRENATA PENINSULAE	FLORIDA LONG-TAILED WEASEL	AMAJF02033*008*FL
MYCTERIA AMERICANA	WOOD STORK	ABNGF02010*069*FL
NOLINA ATOPOCARPA	FLORIDA BEAR-GRASS	PMAGA08020*164*FL
NOLINA ATOPOCARPA	FLORIDA BEAR-GRASS	PMAGA08020*147*FL

NYMPHAEA JAMESONIANA	SLEEPING-BEAUTY WATER-LILY	PDNYM05070*004*FL
PELECANUS OCCIDENTALIS	BROWN PELICAN	ABNFC01020*106*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*211*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*020*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*022*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*023*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*021*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*016*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*019*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*018*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*017*FL
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	ABNYF07060*210*FL
SCIURUS NIGER SHERMANI	SHERMAN'S FOX SQUIRREL	AMAFB07043*063*FL
SCIURUS NIGER SHERMANI	SHERMAN'S FOX SQUIRREL	AMAFB07043*064*FL
SCIURUS NIGER SHERMANI	SHERMAN'S FOX SQUIRREL	AMAFB07043*062*FL
SPEOTYTO CUNICULARIA FLORIDANA	FLORIDA BURROWING OWL	ABNSB10011*005*FL
TRICHECHUS MANATUS	MANATEE	AMAKA01010*021*FL
URSUS AMERICANUS FLORIDANUS	FLORIDA BLACK BEAR	AMAJB01011*064*FL
URSUS AMERICANUS FLORIDANUS	FLORIDA BLACK BEAR	AMAJB01011*015*FL
URSUS AMERICANUS FLORIDANUS	FLORIDA BLACK BEAR	AMAJB01011*013*FL

Appendix J

Fire Management Plan

FRED C. BABCOCK/CECIL M. WEBB WILDLIFE MANAGEMENT AREA FIRE MANAGEMENT PLAN

September 2002 Draft

1. INTRODUCTION
Fred C. Babcock/ Cecil M. Webb Wildlife Management Area

The Fred C. Babcock/Cecil Webb Wildlife Management Area (BWWMA) is a 102 square mile area (65,775 acres) located in Charlotte County. The elevation ranges from 22 – 41 feet above sea level. The area is made up of south Florida pine flatwoods interspersed with primarily seasonal ponds. There are three threatened or endangered species on the area, which require early successional habitat for survival. The historic uses of the area have included settlement, hunting, and cattle grazing.

The BWWMA was purchased utilizing P-R monies for the creation of a hunting area in southwest Florida (**Figure 1**). Management of the BCWMA has focused on managing bobwhite quail through maintaining early successional habitat. Plant, vertebrate, and invertebrate species occurrences are closely related to habitat structure and fire history. Prescribed fire will be used extensively to create conditions necessary for survival and perpetuation of all common and rare species and to reduce fuel loads in order to reduce the risk of wildfires to adjacent properties. This plan outlines burn objectives, burn preparations, and personnel and equipment that will be used to safely and effectively achieve land management objectives via prescribed fire on the. WMA.

Yucca Pens Unit

The Yucca Pens Unit (YPU) of the Fred C. Babcock/Cecil Webb Wildlife Management Area is a 13,243 acre area located in Charlotte and Lee Counties. The elevation ranges from 9 – 24 feet above sea level. The area is made up of south Florida pine flatwoods interspersed with primarily seasonal ponds and occasional cypress strands. There are three threatened or endangered species also occurring on this area, which require early successional habitat for survival. The historic uses and fire are similar to the BWWMA.

The YPU is being purchased with monies from State Lands (under several programs such as CARL, P-2000, etc.) for preserving the largest remaining tract of South Florida pine flatwoods area in southwest Florida (**Figure 1**). Prescribed fire will be used extensively to create conditions necessary for survival and perpetuation of all common and rare species and to reduce fuel loads in order to reduce the risk of wildfires to adjacent properties. This plan outlines burn objectives, burn preparations, and personnel and equipment that will be used to safely and effectively achieve land management objectives via prescribed fire on the BCWMA.

Fire Management Goals:

- Protect and maintain rare species.
There are three species of record on the BWWMA and YPU that are state and/or federally listed. Protection of these species is part of preserving the vegetative composition of these two areas. Research has shown that fire is important for maintaining these species. The BWWMA has been maintained on several fire regimes over the years, but is currently under an annual burn rotation. The YPU has not been burned under a regular prescription. Fire management in recent history has primarily been from hunters lighting fires and lightening strikes.

- Manage fuel loads to reduce the risk of wildfire to neighboring properties.
All areas after being burned will be treated with prescribed fire annually to maintain early succession and reduce wildfire occurrence. Problem areas with large palmettos will be treated with roller chopping to reduce fuel height, fire intensity and fuel loads.

- Utilize intra-agency participation on Rx burning.
Participation with Law Enforcement helicopter pilots will be necessary when aerial ignition is required.

2. BACKGROUND
Description of Area:

The BWWMA is located in the center of Charlotte County. The 102 square mile area is approximately 13 miles wide and 9 miles deep. Four highways surround the area: I-75, U.S. 41, S.R. 74 and S.R. 31. The area is located 5 miles southwest of Punta Gorda and 15 miles north of Ft. Myers.

The YPU is located in Charlotte and Lee County. The area has an irregular boundary situated in the area west of U.S. 41 and east of Burnt Store Road. Zemel Road traverses the northern part of the area, two miles south of the northern boundary. Burnt Store Marina is located east of the area, which is the largest marina in this portion of the state. Cape Coral forms the southern boundary, Ft. Myers is located 6 miles southwest, and Punta Gorda is located 8 miles to the north.

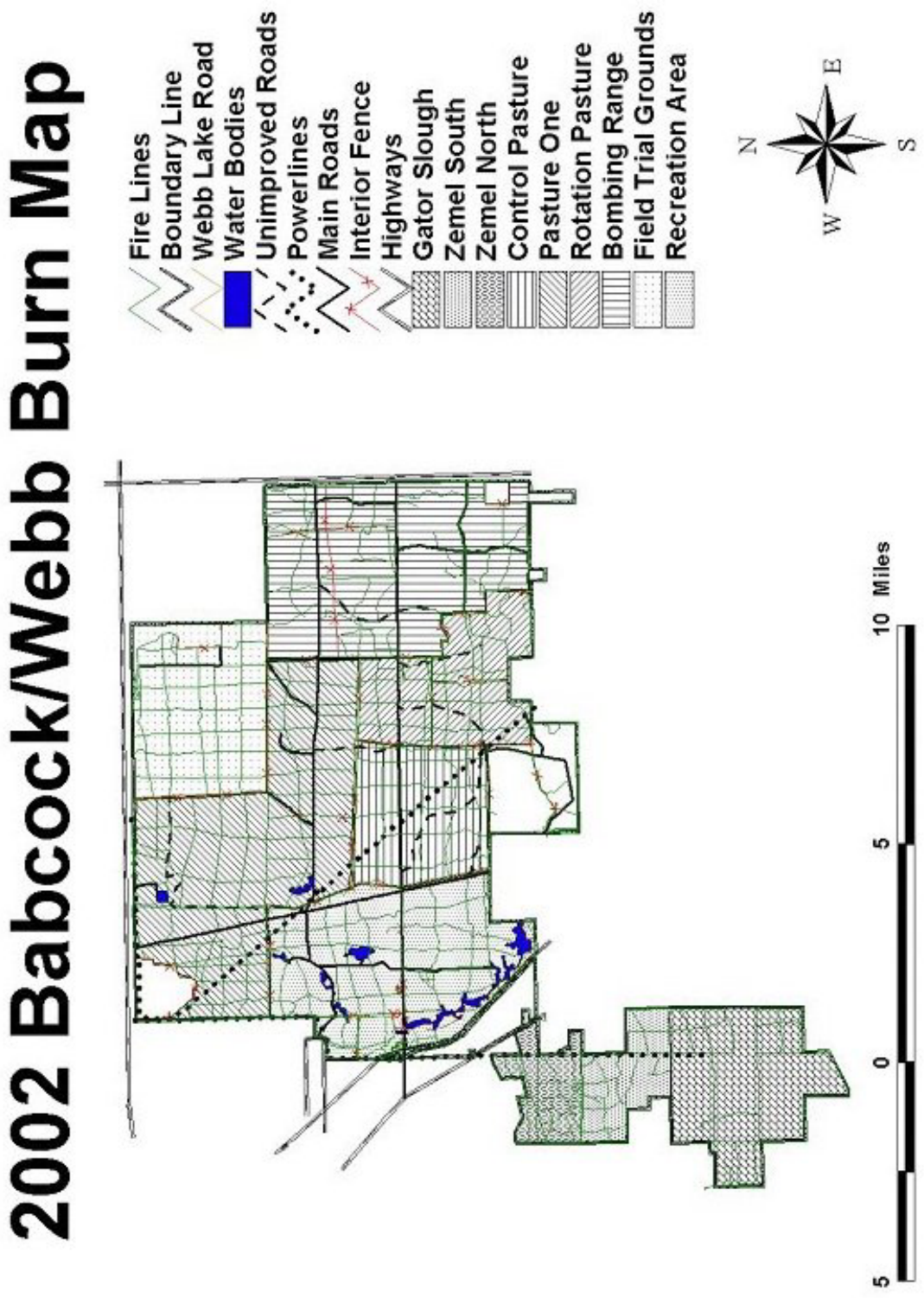


Figure 1. Fred C. Babcock/Cecil M. Webb and Yucca Pens Unit fire line and burn unit map.

Biological communities:
The BWWMA and the YPU are the largest remaining tracts of South Florida slash pine habitat in Southwest Florida. These two areas combined comprise 79,018 acres. Both areas are similar in habitat being comprised primarily of pine-palmetto flatwoods with interspersed ponds. The ponds vary from seasonal to permanent. Most of the ponds are seasonal. The YPU has pond cypress and bald cypress (*Taxodium ascendens* and *distichum,* respectively) strands that are not present on the BWWMA.

Approximately 40% of the area is comprised of freshwater marshes, sloughs and seasonal ponds, 25% is pine flatwoods, 28% dry prairies, 5% hammocks and 2% cypress strands. Freshwater marshes are dominated by saw grass (*Cladium jamaicense*), pickeral weed (*Pontederia cordata*), fire flag (*Thalia geniculata*) and buttonbush (*Cephalanthus occidentalis*). Pine flatwoods are dominated by south Florida slash pine (*Pinus elliottii var. densa*), saw palmetto (*Serenoa repens*), wiregrass (*Aristida spp*.), and slough grass (*Scleria reticularis*). Dry praries are dominated by wiregrass, saw palmetto, broomsedge (*Andropogon spp*.), gallberry (*Ilex glabra*) and blueberry (*Vaccinium spp*.). Hammocks are dominated by live oak (*Quercus virginianus*), south Florida slash pine, green briar (*Smilax spp*.), and poison ivy (*Rhus radicans*). Cypress strands on the YPU are dominated by pond cypress and bald cypress. More detailed descriptions of vegetation types are located in the Conceptual Management Plan for the WMA.

Fire History:
The south Florida pine flatwoods ecosystem is a frequent fire maintained ecosystem. The natural fire regime has been estimated range from 1-7 years, with most fires occurring in the earlier periods. The frequent fire regime must be maintained for many of the species to be maintained. Fire has been an integral part of this area for centuries whether from lightening strikes, Indians, ranchers, or hunters.

The BWWMA has been managed with annual fire for the past decade and treated with frequent fire since 1958. The YPU has received fire treatment infrequently through the years, but when it has received fire it was with detrimental results to pine trees. Approximately 2,000 acres of the YPU is currently in annual to frequent fire rotation.

Both areas are divided into burn blocks by disked lines. These lines are disked annually to reduce the chance of fire escape and prevent vegetation build-up. Blocks on the BWWMA are approximately 160 acres, while the YPU blocks vary from 50 – 150 acres.

3. DETERMINING UNITS TO BURN
Determining when, and how often to burn a particular unit is based on a number of factors. The most important goal of the prescribed burning program on the WMA is to increase or maintain wildlife populations of both game and listed species. Indicators of appropriate habitat conditions for these species (vegetation height, percent open space, etc) will be used to determine when a unit is in need of fire treatment. The BWWMA managers will rely on previous area vegetative documentation and resulting species occurrence to provide guidelines for management. For example, correlations between annual and three year rotation burns on the area have shown bobwhite quail to be five times greater for spring calling males in the annual burn as opposed to the three year burn. Three years of frequent fire in the three-year rotation area resulted in similar calling rates. As the vegetation height increases, the quail population starts to decrease. When the wiregrass is beyond about 0.2-0.3 meters in height, quail are usually either just "hanging on" or are temporarily extirpated from the site (until it burns again). Using vegetation height as an indicator will be used more often than any other indicator because measurements can be quickly gathered from many points in a particular unit.

The following fire return intervals will be considered as a guideline for fire planning, with in-field measurements of vegetation height being the final word on whether a unit will be burned or not.

Dominant vegetation within unit:	General FRI (for planning purposes) :	Vegetation Height - burn if taller than:	Vegetation being monitored for veg height:

Flatwoods	1-4 years	0.2-0.3 m	wiregrass

Besides fire frequency, it is also necessary to track some measure of fire complexity, or fire intensity. A mosaic of fire intensity is almost "built-it" to many units because most units are a mosaic of many vegetation types that naturally burn with different intensities and at different intervals. For example, units containing heavy palmetto growth and gallberry burn with greater fire intensity at a longer interval while a wiregrass and scattered palmetto will burn with less intensity and shorter interval. This would tend to provide a better mosaic of fire intensity, since some areas within a unit might not have enough fuel to carry a fire. Of course it would be impractical to set fire to large areas if only a small portion would burn. In those cases, WMA managers will make the decision to burn or not burn based on other factors for that particular unit.

Other factors to consider when determining the fire return interval for a particular unit are: the unit's proximity to housing, exotic species populations in the unit, disturbed areas, research and restoration projects, and the location of the unit in respect to other units. Any one of these factors could provide a rational for changing the fire return interval.

4. IMPLEMENTATION

Most of the WMA is subdivided into units by plowed lines (Figure 1). These activities have created more firebreaks than necessary in some areas. In most cases, the existing breaks are all that is needed to define burn units, however a limited number of new firebreaks may be necessary. Natural wetlands also act as firebreaks in some areas, however this is minimal given that most tracts are primarily uplands. Units range in size from less than 10 acres to over 600. See appendix for a sample burn unit prescription to show information required for each unit.

Mechanical preparation:

1. Snags within falling distance of the firebreak are felled, sometimes on both sides of the firebreak. While this disturbs some native species that use snags, the flammability of snags makes it too much of a safety risk to allow them to stand.

2. Firelanes are disked if there is enough vegetation growing in them to carry a fire. Perimeter firebreaks may be disked not only as prep for prescribed fire activities but also to help stop a fire in the event of an emergency. Perimeter breaks are usually 1-2 passes wide, interior breaks usually only one pass.

Equipment:

Currently the BWWMA and YPU have the following equipment for fire management:
1 - 500 gal pumper unit on an F450 4x4
1 - 300 gal pumper unit on an F550 4x4
1 - 100 gal pumper unit on a trailer
4 - 35 gallon fire torch units – truck mounted
3 - ATV mounted fire torch units – 8 gallon
1 - 3 pt disk harrow
3 - 10' disk harrows – clevis mounted
2 - hand-held radios
1 - transport with tractor and fire plow
5 - 4x4 pick-up trucks (two F150, two F250, one Dodge 2500, all with mobile radios and winches)
4 - ATV's
4 – tractors (Ford TW-15 and 6610 and John Deere 8120 and 6420)

Required Personal Protective Equipment:
Nomex (or equivalent) jacket, Hardhat, Gloves, Boots

Season of Burn:

Due to the complex nature of the WMA, the light build-up of fuels on one area and heavier fuels on the other, burns will be conducted whenever the opportunity presents itself during the dormant season and early growing season. When necessary, critical habitat areas, such as adjacent to cypress strands will be during the growing season wet period.

Day of Burn:
Since the morning of a burn is so hectic, a checklist is useful for making sure everything is ready. The weather forecast is obtained from DOF (by phone or internet), authorization is received from DOF, equipment is readied, and site maps are printed out. Once the entire crew is at the burn site, a briefing takes place to explain the burn, possible problem areas, safety zones, expected fire behavior, lighting patterns and expected weather. Prescribed burning will primarily be conducted during daylight hours. Fires will be set as early as possible during the day and be extinguished before sunset. See appendix for a sample checklist.

Permits and Notifications:
A burning permit will be obtained from DOF.

Firing Techniques:
A variety of firing techniques will be used depending on fuel type and desired fire intensity. To achieve the desired results, high fire intensity will be prescribed in the flatwoods where it can be done safely. This will require flank or head fires. Back fires will be used during some of the initial burns on flatwood sites to reduce the fuel loading while minimizing damage to the overstory. After the initial burns, a variety of firing techniques will be used to create a mosaic of vegetation types in different stages of growth.

Smoke Management:
Smoke management is a primary concern on the BWWMA and YPU due to the proximity of smoke sensitive areas, including airports, major roads, hospital, and residential areas. Several measures will be taken to minimize the impact of smoke. Prescribed burning will be conducted only when weather conditions are favorable to reduce the impact of smoke (i.e.: slightly unstable atmosphere, favorable wind direction and wind speeds, mixing height of >1,700 feet). Due to the abundance of residences in close proximity to areas that will be burned, additional measures will need to be taken to mitigate for the impacts of smoke. Public education will continue to serve as a valuable tool to engender public support for fire and reduce smoke sensitivity of neighbors. Other mitigation measures will be developed as necessary.

Fire Reports:

A fire report is generated after each prescribed fire in order to document the activities of the day and to note any unusual happenings. See appendix for a sample fire report, filled in to show the typical information required.

Monitoring:
Monitoring is required to make sure the goals of the fire program are being met. Monitoring of vegetation height and percent bare ground help in determining when to plan the next burn. Photo points are taken at documented locations to record the change in vegetation structure over time. Post-fire aerials are taken to provide a snapshot of the overall fire intensity.

BURN UNIT PRESCRIPTION

Babcock/Webb Wildlife Management Area
Florida Fish and Wildlife Conservation Commission
29200 Tucker Grade
Punta Gorda, FL 33955
941-575-5768 (local office)
1-800-282-8002 (Lakeland dispatch)

Burn Unit	tract name and unit number, i.e., Apthorpe 3	**Landowner No.**	9675	**No.**	issued by DOF, morning of burn
Acres	number of acres that may be burned under the authorization	**STR Location**	section, township, and range unit(s) is in	**Last Burn**	year of last burn (put down best guess if unknown)

Boundary Description	Include information on width of firebreaks, fuel in break, vegetation height next to edge, any previous treatments, need for additional prep
Veg. Type/Structure	veg height and thickness (especially if previously disturbed), note gaps that may not burn and differences in structure (if any) from veg type to veg type within unit
Burn Objectives	objectives of burn, for example, "Topkill 70% scrub vegetation to maintain scrub for listed species" or "remove >50% fuel from site to reduce wildfire hazard to adjoining properties"
Site Prep.	list any site prep still needed before burn can be conducted
Pre-Burn Notifications (provide phone number)	provide phone numbers for emergency contacts, including neighbors, DOF, Florida Highway Patrol
	high fuel areas, areas where firebreak is narrow, areas where flashy fuels exist downwind of unit, areas where vehicle access is limited, uncut snags, houses
Smoke Sensitive Areas	well-traveled roads, housing that could be affected during and after burn
Lighting Pattern	general lighting pattern based on expected wind
Equipment needed	list of trucks, tractors, ATV's, and personnel required
Contingencies	what to do when things go wrong, listed based on direction of spot-over, additional phone contacts, descriptions of downwind firebreaks, when to call for backup

WEATHER PARAMETERS			
Surface Wind Direction	list wind directions down to 45 degree increments (N, NE, E...)	**Dispersion Index**	acceptable range
	acceptable range at eye-level	**Max. Temp.**	max. temperature allowed
Direction	list transport wind directions, also to 45 degree increments	**RH**	acceptable range
Transport Wind Speed	acceptable range	**Min. Days Since Rain**	self-explanatory
	self-explanatory	**Drought Index**	acceptable range

Prepared By (include title)	Name of person who wrote this prescription			
Fire Manager's Certification No.	self-explanatory	**Fire Manager's FFWCC Radio Code**	self-explanatory	
Signature	self-explanatory		**Date Prepared**	self-explanatory

Other Comments: self-explanatory

BURN DAY CHECKLIST

DATE:_____
BURN UNIT:_____

PRE-BRIEFING

1. Assemble past and current weather conditions

2. DOF forecast attached?

3. Obtain Permit (1-941-751-7629 (Bradenton) or 239-694-5579 (Lee)). Landowner number: 9675.

Rx burner number	
Mike Kemmerer	19870419
John Barlow	19870418
Frank Lewis	19952610
Rob Hawsey	20023156
Cason Pope	20013064

Permit number:_____

4. Call DOF in Bradenton or Fort Myers (SEE ABOVE) – inform them if there is a possibility of smoke on roads

5. Call Charlotte or Lee County Sheriff Dispatch (639-2101 OR 239-477-1200) – inform them if there is a possibility of smoke on roads

6. Other emergency phone numbers:

7. Set up Photo Points for site.

BRIEFING

1. Predicted weather

2. Equipment (radios, vehicles (gas, drinking water, pumps, hand tools, water)

3. PPE (Nomex, hard hat, boots, gloves, etc.) – always on unless specified

5. Burn objectives and strategies, listed species considerations

6. Burn maps, key locations, fuel arrangement, communications

7. Crew Assignments, holding crew areas of responsibility, lighting pattern

8. Hazards in and around unit

9. Access

10. Safety reminders (tools, wind shifts, snags, work from black, safety zones and escape routes)

11. Remaining site preparation:

12. Contingencies

13. Questions / Other:

BABCOCK/WEBB WMA FIRE REPORT		SITE NAME	self-explanatory			FIRE DATE	self-explanatory
		DOF AUTHORIZATION NUMBER		self-explanatory		REPORT BY	self-explanatory
(S)	self-explanatory	TRACT(S)	tract name, if any	ANGE (S/T/R)			self-explanatory
CAUSE OF FIRE	Prescribed/wildfire/prescribed and escaped, etc.			ACRES (HECTARES)	self-explanatory		
CREW ASSIGNMENTS		CREW ONE	crew members names and equipment they were using		CREW TWO	crew members names and equipment they were using	
CREW THREE	crew members names and equipment they were using		R	crew members names and equipment they were using			
FORECAST WEATHER (NWS)		M TEMP	high temp forecast for that day		RH	low RH forecast for that day	
20 ft WIND SPEED	wind speed forecast	WIND DIRECTION	wind direction forecast for that day		DISPERSION INDEX	dispersion forecast for that day	
RAIN CHANCE	percent rain forecast	MIXING HEIGHT	mixing height forecast for that day		T WINDS	transport wind speed and direction for that day	
CONDITIONS		DROUGHT INDEX	KBDI for that day		SINCE LAST RAIN	# days since rain	
FOG	fog that day or next	MOISTURE IN DUFF	general moisture conditions				

OBSERVED WEATHER		MAXIMUM TEMP	actual high temp for that day	MINIMUM RH	actual low RH for that day
MAXIMUM RECORDED WIND SPEED	highest recorded wind gust	WIND DIRECTION (NOTE SHIFTS)	general wind direction, noting shifts		
SS	average cloudiness for the day	WEATHER PARAMETERS OUT OF PRESCRIPTION DURING COURSE OF BURN	note any parameters out of prescription during the day		

LIGHTING SUMMARY (Provide detail, including point locations, test fire, fire behavior, fuel types, patchiness, problems, etc.)
Summary of the burn, usually 3-4 paragraphs, that describe the ignition pattern, weather throughout the day, fire behavior, locations of crews during the day, and any problems.

PROBLEMS (include time and location)		CAUSE OF SPOT FIRES	number of spot fires	SNAGS	note any problems with snags
EQUIPMENT	note vehicle problems/failures		smoke problems	FIREBREAKS	problems with firebreaks
RESTRICTING MOVEMENT OF EQUIPMENT	access problems			OTHER	

MOP-UP (how complete, how long did it take, etc.)	Short description of mop-up activities.
EFFECTIVENESS OF PRE-BURN PREP (and what to change next time)	Short description of the pre-burn prep and whether or not it was effective, and what to change next time.
INTERAGENCY INTERACTION	Mention any assistance by other agencies
INTERACTION	Mention any neighbor interactions
WHAT TO IMPROVE ON	Suggestions for how to burn this unit the next time, and other general suggestions
UNUSUAL HAPPENINGS AND OTHER COMMENTS	Record any unusual happenings

Appendix K

Timber Assessment

TIMBER ASSESSMENT

FRED C. BABCOCK/CECIL M. WEBB

WILDLIFE MANAGEMENT AREA

PREPARED BY
BUTCH MALLETT
SENIOR FORESTER, OTHER STATE LANDS REGION 3
DIVISION OF FORESTRY
JUNE 2002

PURPOSE

This document is intended to fulfill the timber assessment requirement for Fred C. Babcock/Cecil M. Webb Wildlife Management Area (B/W WMA) as required by Section 1. Section 253.036, Florida Statutes. The goal of this *Timber Assessment* is to evaluate the potential and feasibility of managing timber resources for conservation and revenue generation purposes.

BACKGROUND

The original 19 sections of Babcock/Webb WMA were purchased by the state in 1941. Additional land was bought through the years until the current 65,770 acres were reached. These later purchases include the 10,835-acre Yucca Pens Unit that lies west of U. S. Highway 41 and east of Burnt Store Road. Quail and deer hunting, along with some fishing in man-made borrow pits, have been the primary uses of the B/W tract since the state acquired the property.

GOALS AND OBJECTIVES

The primary management objective for B/W WMA is to restore where necessary and maintain a healthy South Florida flatwoods ecosystem.

WILDLIFE MANAGEMENT

GAME SPECIES

Annual winter prescribed burning has been used extensively on B/W WMA. These burns favor the production of bobwhite quail (*Colinus virginianus*) and white-tailed deer (*Odocoileus virginianus*). Through the years, Babcock/Webb WMA has become a popular quail-hunting location.

Prescribed burning produces nutritious forage for deer. Fire also encourages seeds, buds, and

insects that turkeys (*Meleagris gallopavo osceola*) utilize. However, there is a lack of winter mast that limits their numbers. To increase acorn and other hard mast availability, planting and protection from prescribed burns of hardwoods tree species is now underway.

NON-GAME SPECIES

A premier "indicator species" with regards to the health of mesic pine flatwoods is the Red-cockaded woodpecker (*Picoides borealis*) (RCW). Management activities that maintain viable populations of RCW's will also benefit other native flora and fauna. At present, Babcock/Webb WMA has approximately 25 active RCW clusters. Of these, around 20 fledge young birds each year.

Healthy flatwoods communities are characterized by open, uneven-aged pine stands that allow a considerable amount of sunlight to reach the forest floor. (Pines 60+ years old are required for RCW cavity excavation.) Ground cover is a diverse mixture of grasses, herbaceous plants, and dried pine needles that foster frequent lightning season fires. Saw palmettos are scattered and low growing.

TIMBER MANAGEMENT

Timber management is an effective tool used to restore and maintain healthy ecosystems. Pine trees are removed to allow more sunlight to reach the forest floor or provide access for machinery to control unwanted vegetation. Seedlings are planted or natural regeneration encouraged where stands are too thin or young trees lacking. A side-effect of these management practices is quite often marketable, revenue-producing tree products.

The only species of commercially valuable tree observed on B/W WMA was South Florida slash pine (*Pinus elliotti var. densa*) (SFSP). However, Longleaf pine (*Pinus palustris*) (LLP) has been observed growing on slightly drier sites on nearby state lands. Longleaf was likely a component of these flatwoods ecosystems at some time in the past.

Large expanses of nothing but old or young trees do not function like healthy flatwoods ecosystems. Old growth trees are necessary to provide cavity sites for RCW's. But, having nothing but old trees in a stand is dangerous. As pine trees grow older, they become less vigorous and more likely to succumb to insects, disease, or other stresses. Waiting until a stand of old trees starts to die before being concerned about regeneration is asking for major ecosystem disruption. Slash pine has a life expectancy of about 100 years. To insure a steady supply of pine trees old enough to function as RCW cavity trees, some long-term planning and management is required. Stands should contain a mixture of all age classes.

GENERAL TIMBER MANAGEMENT GUIDELINES

A useful measurement of tree stocking and density is its Basal Area per acre (BA). Basal Area is the cross sectional area (in square feet) of a tree measured four and one-half feet

above the ground. (The diameter of individual trees measured at this height is referred to as its diameter breast height or DBH.) Fully stocked pine stands have enough trees per acre of a size large enough to utilize the growing space without causing over-crowding.

South Florida slash pine stands with 70 to 100 square feet of BA are considered fully stocked. It requires more, smaller diameter trees than it does larger diameter trees to equal one square foot of basal area. (For example: It takes 357 evenly spaced, six-inch diameter breast height trees to equal 70 sq. ft. BA. Whereas, only 89 twelve-inch DBH trees per acre equal the same 70 sq. ft. BA.)

Basal Area can be roughly correlated to crown coverage and therefore needle-cast. About 40 to 60 sq. ft. BA should provide sufficient needle-cast to carry prescribed fire and adequate sunlight for native grasses to be maintained.

To create uneven aged pine stands, group selection openings are sometimes cut during thinning activities. These openings allow young trees to become established by seed fall from nearby trees or by planting seedlings. Since SFSP or LLP seedlings require direct sunlight to grow, all trees within the opening must be removed. However, openings can be as small as one-half acre. For natural regeneration, the ideal width of the openings is about two to three chains. To prevent saplings growing in these openings from becoming barriers to RCW flight patterns, group selections should not exceed five acres in size.

Combined acreage of all openings cut within a stand during each thinning is kept to no more than five to ten percent of the total stand acreage. Since each stand only gets thinned every ten-plus years, over-harvesting of old-growth trees is avoided and a steady supply of young trees is ensured. In other words, after six ten-year cutting cycles at least 40 % of a stand would have 60+ year-old trees and 60% would range from seedlings to 50 year-old trees. Group selection openings in pure stands of South Florida slash are an excellent place to induce species diversity by planting Longleaf pine seedlings.

Planting activities, group selection openings, palmetto control measures, and natural regeneration in thin stands will produce young tree stands of various sizes. A well stocked stand of young pine trees will usually require the removal of weak, diseased, and some over crowded trees beginning by the age of 15 to 20 years. By this time, the crowns have grown together and ground cover begins to get shaded out. Harvesting a portion of the timber maintains healthy pine growth and provides sunlight to the forest floor. Trees removed in the thinning process can be sold to generate revenue to be used in other land management projects. Likely markets for early thinnings from pine stands currently include pulpwood, fence posts and landscape mulch.

Due to shading effects, trees grown in tight spacing produce fewer and smaller lower limbs. The shedding of the lower limbs makes them more desirable for fence posts and later, more valuable products. Planting at least 400 seedlings per acre also helps insure the marketability of the pine trees and increases future management options.

The need for second and later thinnings will depend on how low the BA was taken in the first thin and successive growth rate. If the BA is reduced to 50 to 70 sq. ft. in the first cut, another harvest will probably be needed in ten to fifteen years. Trees removed from the second and succeeding operations produce ever more valuable products and therefore more money. Current market conditions have some second thinning products worth at least five times as much as the original wood that was cut. Third thinning trees can be worth twice as much as the second thin. All of this revenue can be generated and still have a stand of pine trees and a healthy ecosystem.

In current or potential RCW clusters a Basal Area per acre of at least 40 square feet of 60+ year old pine trees should be maintained. These stands should also include a mixture of younger age classes up to about 60 sq. ft. BA. Nearby stands should be managed with an eye toward becoming Red-cockaded woodpecker foraging zones and future cluster sites. Raising stocking levels of pine trees in the thousands of acres of severely under-stocked stands will increase future options for land managers as well as RCW's.

EXISTING TIMBER RESOURCES

B/W UNIT - Babcock/Webb Wildlife Management Area is a large tract of land. Identifying individual stands and defining exact acres requiring a specific management practice is beyond the scope of this assessment. A more detailed Timber Stand Description is needed to properly plan long-term timber management activities. The following are general descriptions and management recommendations. A prime objective on this tract is to maintain a healthy ground cover of grasses and forbs. Adequate sunlight must reach the ground to achieve this goal. From a timber management standpoint, this means that in general pine-stocking levels need to be maintained in the 40 to 60 sq. ft. BA range.

Plantations – There are several existing pine plantations on the north end of the property. Those near the Boy Scout camp have not been thinned and have BA of over 100 sq. ft. One of the western-most stands had a hot fire that killed some timber.

Recommendations – Stands not previously thinned should be cut back to 60 to 70 sq. ft. BA during the first thinning. Do this by removing first the diseased, deformed, suppressed, and over crowded trees. Leave trees should be healthy, vigorous, and well spaced. Although, occasionally leaving clusters of 2 to 4 trees with well-developed crowns will give the stand a more natural appearance.

Removing too many trees in the first cut can promote blow-down during high wind events. Waiting until a second thinning to further reduce the stocking, allows the trees to develop a stronger root system. The next thinning of these stands should be undertaken when the BA exceeds 90 sq. ft. In the second harvest, the basal area can be reduced to the usual 40 to 60 sq. ft. per acre range.

The fire-thinned stand should be thinned to approximately 40 sq. ft. BA as above. Due to

the limited volumes available for removal, coordinate the harvest to coincide with nearby stands with more timber being harvested.

Natural – Basal areas of natural South Florida slash pine stands throughout B/W WMA vary from 0 to over 120 sq. ft. per acre. Stand ages are mostly mixed with a limited number of trees over 60 years. Regeneration under 10 to 15 years of age is even more rare, especially in areas of annual prescribed burns.

Recommendations –

BA < 10 - These areas have insufficient pine trees to regenerate themselves. Control the saw palmetto through the use of roller drum choppers and fire. Plant South Florida slash pine as described under Artificial Regeneration section below. To increase species diversity, some drier sites on B/W might be considered suitable for planting of longleaf pine seedlings.

Many factors affect the need for and timing of future thinnings. These include initial planting density, number of trees surviving to merchantable size, crown closure (ground cover shading), and loss of crown. As soon as the trees achieve crown closure, thin the stand to 50 to 70 sq. ft. BA by removing first the weak, diseased, and suppressed trees. At the same time, enough of the co-dominant trees should be removed to reach the proper spacing.

The thinning process is repeated every time the stand approaches 100 sq. ft. BA or ground cover begins to be shaded out. Thinning to as low as 40 sq. ft. BA with re-treatment at 80 to 100 sq. ft. to insure open, grassy stands is reasonable in second or subsequent harvests.

10 to 30 BA – These stands may or may not have enough seed trees to regenerate themselves. Though for certain, any further loss of mature trees could preclude a healthy future. Stands with these marginally low basal areas should be included in the regeneration plan. See natural and artificial sections regeneration below.

40 to 70 BA – These stands have an adequate number of pine trees to utilize the growing space without over crowding. No harvests are necessary in these stands unless thinning is required to allow access for roller drum chopping of palmettos. If chopping is needed, follow spacing recommendations as described in the Natural Regeneration section. In large stands with little regeneration, some group selection openings may be cut to promote seedling establishment.

80 BA & UP – Pine stands with levels of stocking are probably beginning to shade out the ground cover. These stands should be thinned to 40 to 60 sq. ft. BA. If chopping for palmetto control is needed, follow spacing recommendations as described in the Natural Regeneration section. Group selection openings should be scattered throughout these

stands to promote seedling establishment.

Implementation of recommended timber management practices should begin within the next fiscal year. Pine stands with BA of over 100 sq. ft. and a heavy saw palmetto understory should be the first to be treated. As much as 500 acres per year of such stands could be thinned for the next few years without getting too far ahead of a stand description generated management plan. Revenues generated from sale of these thinnings can be used to pay for habitat restoration, pine reestablishment, and the comprehensive timber stand description/management plan.

YUCCA PENS UNIT – A drive through and examination of aerial photographs of the area, revealed very little pine timber on this tract. Almost all of the large trees were removed sometime prior to the state acquiring the property. There are a few areas with some sapling-sized pine regeneration. These appeared to be all South Florida slash pine. Yucca Pens is heavily overgrown with scrubby oak species and saw palmetto.

Recommendation – Thin hardwoods and reduce palmettos through prescribed fire, herbicide, roller-drum chopping, or a combination of these treatments. Then plant bare-root or containerized SFSP as described in Artificial Regeneration section below. Again, some of the drier sites might be suitable for planting of Longleaf pine seedlings.

Salvage Sales - On occasion, small volumes of wood may need to be removed due to fire, windstorm, insect or other damage. The decision whether or not to harvest the affected timber will depend on the threat to the surrounding stands, risk of collateral ecological damage, and the volume/value of the trees involved. For example, small, isolated lightning-strike beetle kills are a natural part of a healthy ecosystem and normally would not be cut. However, if a drought caused the insect infestation to spread, the infected trees and a buffer zone might have to be removed.

REGENERATION

NATURAL (ONLY USED WITH MATURE, CONE BEARING TREES)

10 to 30 BA Control saw palmetto height and density. This can be accomplished by burning the stand in late winter or early spring to remove most of the fronds. Then roller drum chop the palmettos prior to the summer rainy season with a chopper heavy enough to sever their stems (probably a medium or heavy, single or tandem, but not offset). A second burn in the summer after the chopping is complete would be beneficial if a fire will carry.

If for any reason an adequate number of young seedlings are not established by the second summer following the initial chopping, burn the stand again prior to end of the rainy season. This will allow some grasses to re-grow enough to protect the seeds and fragile seedlings.

Once 1,000 or more seedlings per acre are established and growing, withhold fire from the stand for at two to three years. Timing of reintroduction of prescribed fire into regenerated stands will depend on seedling height growth and fuel loads. Generally, 400 or more trees per acre should be at least head-high in light fuels before the stand is burned. With short trees and heavier fuels, the first burn might have to be accomplished at night to prevent excessive scorch and mortality. If fuels are light and fire frequent enough, these stands can probably be returned to the normal rotation following the first post-establishment burn.

30 to 50 BA Again control saw palmetto as above. These stands may require thinning alone or in combination with group selection cuts to allow the roller choppers to treat the palmettos without killing remnant pine trees. Spacing between leave trees or clusters of leave trees should be at least 20 to 30 feet to give room for the tractor and chopper to operate. Group selection openings should be at least two chains wide to allow adequate sunlight for sapling growth. Follow the fire regime as described above.

> 50 BA These stands need reforestation treatment only where saw palmetto must be controlled or additional age classes are desired (i.e. insufficient number of trees younger than ten years old). Where palmetto control is a priority, thin pines to 30 to 40 sq. ft. per acre (at least 20 to 30 feet between leave trees or clusters if chopping is required). Scatter group selection openings throughout the stand. Roller chop the stand, evaluate success and implement fire regime as above. If palmetto is not a problem, skip the chopping, then evaluate success and burn as above.

ARTIFICIAL –

Hand Planting – Hand planting of either bare-root or containerized SFSP seedlings is one option for reestablishment in areas where an inadequate number of seed trees exists. Bare-root trees are planted in the winter. Tubelings can be planted in winter or summer, thereby extending the planting season. Recommendations for planting of Longleaf pine

seedlings are basically the same as for South Florida slash pine.

Plant approximately 600 seedlings per acre at varying spacing, but averaging 6' X 12" overall. Due to the increased likelihood of survival and higher cost of containerized seedlings, as few as 400 seedlings per acre can be planted.

A word of caution about hand planted tubelings. To ensure survival of relatively high price containerized stock, some form of herbicidal control may be necessary. Competition from grasses for soil moisture during hot, dry weather can cause severe losses of young seedlings. Applying a contact herbicide such as Roundup either in 2' wide strips or in spots can control these grasses. The herbicide should be applied far enough in advance of planting time so the grasses have time to "brown up" and indicate where to plant the seedlings.

Machine Planting – Meander planting bare-root or containerized SFSP seedlings at an average spacing of 6' X 12' yields about 600 trees per acre. It is more difficult to vary the spacing and make the planting look random with machine planting. This is due primarily to the inability of tree planters to make sharp turns and still pack the soil around the seedlings roots. Tight turns are also hard on the planter's bearings. The desired effect can be obtained by gradually curving the planting rows and varying the distance between and within the rows. Another way to create the random look is to locate the planting rows twice as far apart as normal (averaging approximately 24'). Then, plant a second set of rows at some angle approaching 90 degrees to the first set of rows spaced about the same distance apart.

Again competition for soil moisture during dry weather can cause heavy losses of seedlings and waste of planting costs. Where grass is thick, it is best to either herbicide strips as described above or use a combination planter/scalper to plant the seedlings. The scalper should be set to no more than 2 to 3 inches deep and 18 to 24 inches wide. These settings will minimize soil disturbance and maintain continuity of fuels for future prescribed burns, but the seedlings will have a decent chance of survival.

Direct Seeding – Direct seeding of SFSP can be used to simulate more natural densities and distribution. However, an adequate seedbed must still be prepared by roller-drum chopping of heavy saw palmettos and burning of leaf litter to expose bare mineral soil. Even with these measures in place, managers can not be assured of an adequate crop of seedlings. It is recommended that direct seeding only be used when excess, low cost seed is used.

Seed should be treated with repellant prior to being broadcast for prevention of animal predation. Then they should be spread at the rate of ¼ to 1/2 lbs. per acre using a tractor-mounted spreader or aerially. Seed should be spread in the late fall or early winter. Assess survival after the first summer. If less than 200 to 300 seedlings per acre are living, burn the stand and re-seed or plant seedlings. Protect seedlings from fire until

they reach a height of four feet in light fuels or ten feet in heavier fuels. The first prescribed burn after establishment should be conducted at night.

MISCELLANEOUS FOREST PRODUCTS

Palmetto Berries – Extracts from saw palmetto berries are used as herbal treatment for human health problems. The berries are also utilized by wildlife as a food source. However, in most years the plants produce more fruit than can be consumed by the native fauna. This is probably due to the fact that palmettos are currently more prevalent than they were historically. Likewise, since picking is such strenuous, backbreaking work, only plants with large numbers of berries are harvested. Those with just a few are left untouched. This practice leaves a substantial number of the fruits for wildlife food.

Seasonal harvesting of palmetto berries provides income for local farm laborers as well as B/W WMA. It also might help somewhat reduce the number seedling saw palmettos that land managers will have to try to figure out how to get rid of in the future.

Pine Cones – Seed from native South Florida slash pine is needed to help restore flatwoods ecosystems throughout the lower half of the state. Babcock/Webb WMA's open pine stands with low ground cover are ideal for collecting pine cones. The seed obtained by collection activities may not generate any revenue, but they can be invaluable in restoration of cutover portions of B/W WMA and other state lands in the region.

PRESCRIBED FIRE

Lightning induced fires are natural to Florida mesic flatwoods communities. Prior to European settlement, they occurred at regular intervals of one to five years. Without fire, native habitats would probably have turned into densely shaded hardwood hammocks. Introduction of effective fire suppression in the mid-1900's, resulted in thick stands of saw-palmetto and subsequent loss of other grassy and herbaceous ground covers. Use of prescribed fire is essential to the maintenance of open healthy, pine-dominated ecosystems.

Saw-palmetto heights have been kept to a minimum due to the frequent winter burns. However, their density does not appear to have been reduced.

As desirable as burning is, caution must be exercised when reintroducing fire into these systems. Survival of expensive, newly established seedlings depends on timing and careful execution of burns. To prevent damage to delicate root systems and avoid smoky duff fires, be sure that there is adequate moisture in any organic matter thicker than approximately one inch. In stands with heavy duff layers, try to burn no more than one inch of duff at a time on approximately two to three-year intervals. At least the first burn should be at nighttime, during the dormant season after the seedlings have reached six feet or more in height and there is enough needle litter to carry the fire. If ground fuels are not too heavy, succeeding burns can be switched to the growing season.

ACCESS

Babcock/Webb WMA has an extensive network of roads that can be used for forest management purposes. However, many of them may require reinforcement with rock or shell to support the heavy trucks used in timber operations. It would be beneficial to establish a few primary roads for access to quadrants of the tract. This work will also benefit other activities including hunting access and prescribed burning. It also will reduce wear and tear on FWC trucks and reduce travel time across the area.

The Yucca Pens unit has very limited road access. The soils are very dry and sandy which makes heavy vehicle traffic almost impossible. There is virtually no timber that will need any thinning in the foreseeable future. However, eventually some system of main and feeder roads will have to be developed. These roads can also be used as firebreaks and for other management purposes.

SUMMARY

In rapidly urbanizing areas of the state, public lands are often the only refuges for native plant and animal communities. Restoring and maintaining these ecosystems is an important function of land managers. Saleable timber is a byproduct of good ecosystem management. Timber harvests can be carefully designed to protect water quality and create openings in the tree canopy allowing sunlight to reach the forest floor. These clearings and their ecotones are favorite spots used by wildlife for feeding, resting, mating, nesting and rearing of offspring. The added sunlight allows new pine seedlings to become established in their native ecosystems and grow to replace trees killed by lightning, insects or disease. In all restoration scenarios, the exact methods and final results will be guided by the best available ecological information to conserve biodiversity of the affected habitats.

Mechanical equipment, used in timber harvests, helps reduce dense understory vegetation such as saw palmetto, gallberry and invasive plants. Thinning of dense timber stands also allows a tractor pulled roller-drum chopper to reduce the understory vegetation. This fuel reduction makes the introduction of prescribed fire easier, safer and more effective. The ability to maintain a frequent burning schedule is essential to keeping healthy ground cover.

Likely purchasers of forest products from B/W WMA include a fence post company, a chip-n-saw/post mill in Sumter County, a few small sawmills, several landscape mulch plants, and a railroad siding yard that operate nearby. In addition, there is rumored to be a new sawmill opening nearby that will utilize timber from the cattle ranches and other nearby undeveloped lands.

Babcock/Webb WMA is located 200 or more miles from most of the pulpwood markets. The cost of hauling the trees to large, north Florida mills has a tendency to keep timber prices down and reduce interest in timber offered for sale. Therefore, successful timber sales may require timing to match the market. For example, recent dry weather across most of Florida has made it

easy to harvest sites that are normally too wet. This (along with other economic factors) has depressed wood prices all around Florida. But, when north Florida woodlands are inundated with water and south Florida is dry, loggers tend to drive long distances to obtain wood from drier land. These circumstances allow local land managers to take advantage of the opportunity to sell timber that otherwise might be hard to sell. The secret to timing the markets is to be flexible about when stands need to be cut and keeping up with market factors throughout the state.

Money generated through sales of timber products can relieve the burden on taxpayers for much needed management activities.