

DRAFT

DuPuis Management Area General
Management Plan
(2026 through 2036)

Land Stewardship Section
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Table of Contents

1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION.....	1
2.1	Acquisition Purpose and Significance of the Area	3
2.2	Legal Requirements of Management	3
2.3	General Management Plan Development.....	4
3.	MANAGEMENT AREA GOALS AND OBJECTIVES	5
	<i>Goal 1: Manage natural communities and modified habitats to protect and enhance floral and faunal resources</i>	<i>5</i>
	<i>Goal 2: Maintain, improve, or restore listed species populations and habitats.....</i>	<i>6</i>
	<i>Goal 3: Manage invasive species to minimize their negative impacts on natural communities.....</i>	<i>6</i>
	<i>Goal 4: Protect and enhance the hydrological and ecological functions of wetland communities.....</i>	<i>7</i>
	<i>Goal 5: Provide nature-based public use opportunities</i>	<i>7</i>
	<i>Goal 6: Maintain and improve facilities and infrastructure.....</i>	<i>8</i>
	<i>Goal 7: Protect existing cultural resources.....</i>	<i>8</i>
4.	SITE HISTORY	9
5.	RESOURCE DESCRIPTION AND ASSESSMENT	16
5.1	Infrastructure	16
5.2	Physiograph.....	16
5.3	Vegetation	30
5.4	Wildlife	33
5.5	Cultural Resources.....	34
5.6	Mitigation.....	35
5.7	Potential Additions.....	35
6.	PUBLIC USE.....	37
7.	NATURAL RESOURCE MANAGEMENT	39
7.1	Fire.....	39
7.2	Control of Nuisance and Invasive Plant Species	43
7.3	Mechanical Vegetation Control.....	47
7.4	Wildlife Management.....	48
7.5	Hydrologic and Habitat Restoration	51
7.6	Research and Monitoring	55
8.	ADMINISTRATION	62
8.1	Planning and Budgeting.....	62
8.2	Personnel and Equipment	67
8.3	Volunteers	67
8.4	Contractual Management	67
9.	MANAGEMENT REVIEW	69
	REFERENCES	70

Figures

Figure 1. Overlay of the DuPuis MA boundary on a section of Mackay and Blake’s 1839 Florida Seat of War map.	11
Figure 2. Palm Beach Post report highlighting the preservation of the DuPuis Reserve.	13
Figure 3. Plant community classifications within the DuPuis MA.	30
Figure 4. Flowchart illustrating the process for determining fire condition class.	59
Figure 5. Flowchart illustrating the process for determining invasive plant condition class.	61
Figure 6. Example of invasive characteristics of target species used to assign condition class.	61
Figure 7. FY26 DuPuis invasive plant treatment plan.....	65
Figure 8. FY26 DuPuis invasive plant treatment Strategy.	66

Maps

Map 1. DuPuis MA location map.....	2
Map 2. Historical aerial mosaic including 1938 (left) and 1949 (right) imagery.	14
Map 3. 1940 historical aerial imagery.	15
Map 4. Topographic Map Mosaic of the DuPuis MA (1970–1971).	17
Map 5. DuPuis MA regional elevations.	18
Map 6. DuPuis MA major geomorphic features.	19
Map 7. DuPuis MA NRCS soil classifications.	23
Map 8. DuPuis MA NSLP soil classifications.	24
Map 9. DuPuis MA Basin watersheds and sub-watersheds.	26
Map 10. <i>DuPuis MA Regional hydrography.</i>	28
Map 11. DuPuis MA internal flow directions.	29
Map 12. Distribution of natural communities and altered landcover in the DuPuis MA.	31
Map 13. DuPuis MA vicinity map.	36
Map 14. DuPuis MA Reserve public use amenities.	38
Map 15. DuPuis MA fire history.	40
Map 16. DuPuis MA fire management units.	42
Map 17. DuPuis MA chemical history.	45
Map 18. Distribution of RCW trees and cluster sites in the DuPuis MA.....	50
Map 19. As-built for the 2023 culvert replacement project.	53
Map 20. DuPuis hydrologic restoration features: Existing conditions and planned improvements.	54
Map 21. DuPuis MA fire condition class.....	58
Map 22. DuPuis MA chemical condition class.....	60

Tables

Table 1. Listed plant species associated with the DuPuis MA and current status.	32
Table 2. Listed wildlife species utilizing the DuPuis MA & current status.	33
Table 3. Land Stewardship Section Invasive Species Priority List and Targeting Sequence.	44
Table 4. DuPuis MA FY2026 budget and anticipated expenditures through FY2031.....	63
Table 5. Summary of the DuPuis MA treatment program funding needs and shortfalls.....	64

Appendices

APPENDIX A. DuPuis MA Area History	A-1
APPENDIX B. DuPuis MA Natural Communities.....	B-1
APPENDIX C. DuPuis MA Species List.....	C-1
APPENDIX D. DuPuis WEA Hunting Brochure	D-1

ABBREVIATIONS

CARL	Conservation and Recreation Lands
District	South Florida Water Management District
FDEP	Florida Department of Environmental Protection
FDHR	Florida Division of Historical Resources
FE	Federally-designated Endangered
FFS	Florida Forest Service
FISC	Florida Invasive Species Council
FNAI	Florida Natural Areas Inventory
Ft	Feet
FT	Federally-designated Threatened
FT(S/A)	Federally-designated Threatened because of similarity of appearance
FXN	Federally-designated Threatened Nonessential Experimental Population
FY	Fiscal Year
FWC	Florida Fish and Wildlife Conservation Commission
NAVD	North American Vertical Datum
NGVD	National Geodetic Vertical Datum
mi	Miles
PSGHA	Public Small Game Hunting Area
SE	State-designated Endangered
ST	State-designated Threatened
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

1. EXECUTIVE SUMMARY

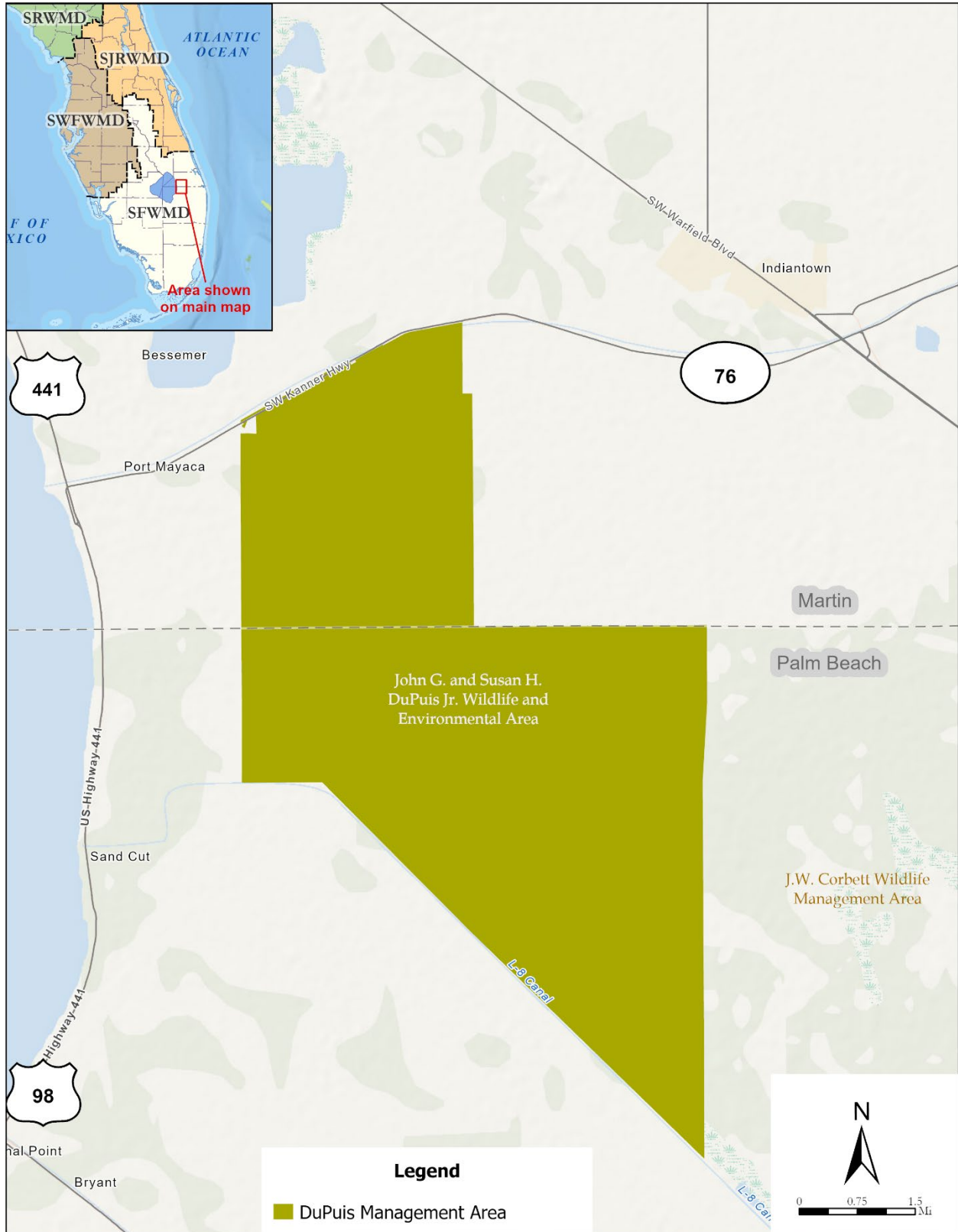
In 1981, the Florida Legislature established the Water Management Lands Trust Fund, which allowed water management districts to acquire environmentally sensitive lands for water management, water supply, and the conservation and protection of water resources through the Save Our Rivers (SOR) program. The South Florida Water Management District (District) used these funds to acquire the John G. and Susan H. DuPuis, Jr. properties. In total, the District acquired approximately 21,971 acres in fee title and manages them as the DuPuis Management Area (MA).

Pursuant to Section 373.1391, Florida Statutes, the District is responsible for managing land acquired under the SOR program. This General Management Plan (GMP) guides the management of the DuPuis MA through the 10-year period of 2026-2036 and was peer-reviewed by external professionals, as directed by section 373.591, Florida Statutes, and approved by the District's Governing Board. Goals identified for the next ten years include managing natural communities and modified habitats to protect and enhance water, floral, and faunal resources; providing resource-based public use opportunities; maintaining area infrastructure; and providing security and resource protection.

2. INTRODUCTION

DuPuis MA lies in southwest Martin and northwest Palm Beach counties, south of State Road 76 and between Beeline Highway (SR 710) and US 441 (**Map 1**). It is approximately two miles east of Port Mayaca and Lake Okeechobee, and 40 miles northwest of West Palm Beach. The property is bordered to the north by the St. Lucie (C-44) Canal and by agricultural fields in Martin County. In Palm Beach County, it is bordered by the J. W. Corbett Wildlife Management Area to the east and by the L-8 Canal and tie-back levee to the south and west, where they adjoin the Everglades Agricultural Area.

At the time of acquisition, the DuPuis MA property operated as a cattle ranch and served primarily as a recreational estate for the DuPuis family. Portions of the land had been cultivated for crops such as sugarcane and citrus under earlier ownership. The property experienced multiple land-use modifications over time, the most recent undertaken by John G. DuPuis, Jr., to support his cattle operation. In addition to raising cattle, sheep, and goats, he maintained a 37.5-acre citrus orchard that produced approximately 26 citrus varieties as a leisure activity. The site's natural hydrology was altered through the construction of drainage swales and ditches designed to reduce wetlands and expand grazing areas to support these agricultural uses. Groundcover vegetation was modified by the introduction of pasture grasses, and invasive species subsequently became established across the property. Since its acquisition, the District has implemented restoration measures, including wetland rehydration, reintroduction of prescribed fire, and invasive vegetation management, to support long-term habitat management.



Map 1. DuPuis MA location map.

2.1 Acquisition Purpose and Significance of the Area

In 1986, the District acquired the DuPuis Reserve property, then known as the White Belt Ranch, from Mrs. Susan H. DuPuis, widow of John G. DuPuis, Jr., and the trust of John G. DuPuis, Jr., for watershed protection and public recreation.

The Land Acquisition Selection Committee for the Conservation and Recreation Lands (CARL) acquisition program identified the property's value based on its capacity to protect habitat for endangered and threatened species, conserve unique or relatively scarce biological systems, preserve significant archaeological or historical sites, and support designation and use as a Wildlife Management Area. These considerations collectively underscored the property's importance for long-term conservation and public resource management.

The southern boundary of the DuPuis MA includes the L-8 Marsh, which was historically the northernmost extent of the Everglades marsh. The DuPuis MA is contiguous with the J. W. Corbett Wildlife Management Area (WMA) and, together with the John C. and Mariana Jones/Hungryland Wildlife and Environmental Area (Hungryland WEA) to the west, form the western corridor of the historic flowway that extended north along the eastern edge of the Osceola Plain to St. Lucie County. This corridor historically supported seasonal flows that linked the Everglades to the St. Johns River system. Although now transected by roads, the DuPuis MA, J. W. Corbett WMA, and Hungryland WEA remain hydrologically connected and collectively create one of the largest ecotones between the remaining pine flatwoods in southeast Florida and the sawgrass marshes of the Everglades. The acquisition of the DuPuis MA has protected natural systems that provide habitat for a diverse assemblage of wildlife, including threatened and endangered species. These systems also supply clean water to the L-8 canal and contribute to the watersheds of Hungryland Slough and the Loxahatchee River.

2.2 Legal Requirements of Management

The DuPuis Reserve property was purchased with funds from the SOR land acquisition program to protect lands that have important water resource values through acquisition, restoration, and management for environmental benefits. The SOR program was one of several programs funded through the 1981 Water Management Lands Trust Fund legislation (section 373.59, Florida Statutes (1981)) using documentary stamp tax revenue. The SOR program was eventually replaced by the 1999 Florida Forever Act, which consolidated the legislative directives of SOR and Preservation 2000, a program enacted in 1990 to provide additional funding for land acquisition. Lands acquired with funds from the trust are required to satisfy the requirements outlined in section 373.1391, Florida Statutes.

Section 373.1391, Florida Statutes, requires the District to balance resource conservation and public recreational use. This legislation reinforces the Water Management Lands Trust Fund requirements by directing the District to utilize lands titled to the District for public recreation purposes to the extent possible while considering the environmental sensitivity and suitability of those lands for recreation.

Public use on District lands is also governed by Chapter 40E-7, Florida Administrative Code (Rules 40E-7.511-539, Florida Administrative Code), which regulates public access to District land and use of said lands. As the steward, the Land Stewardship Section is responsible for protecting, enhancing, restoring, and preserving District lands for the beneficial use and enjoyment of existing and future generations.

To support the statutory directives in section 373.1391, the District has partnered with the Florida Fish and Wildlife Commission (FWC) to establish certain District properties as Wildlife Management Areas (WMA), Wildlife and Environmental Areas (WEA), Public Small Game Hunting Areas (PSGHA), or Miscellaneous Areas through their authority under Chapter 379, Florida Statutes. This partnership allows the FWC to promulgate rules under Chapter 68, Administrative Code, in coordination with the District, to regulate public use on these properties.

The determination of compatible public uses on District lands is based on the following criteria:

- Consistency with acquisition purposes, including protecting natural ecosystems.
- Restrictions, such as easements, leases, reservations, adjacent land ownership, or conditions of the purchase agreement.
- Existing infrastructure and facilities, including fences, gates, signage, access, trails, campsites, etc.
- Available funding.
- Limitations on use resulting from endangered species and sensitive natural or archeological resources.
- Public health, safety, and welfare.

2.3 General Management Plan Development

General Management Plans (GMPs) for the District are developed for selected areas established as management areas to guide management over a 10-year period. When the plans are updated, staff review the previous plan, identify accomplishments, and develop new goals and objectives for the coming ten years. These updated goals and objectives are based on District priorities, public input through meetings of the Recreation Forum and other venues, and current best management practices. This process is also designed to meet State requirements for management plans (section 259.032, Florida Statutes) on areas leased from the State of Florida. The draft plan is provided to the management review team specified in section 373.591, Florida Statutes, and comments from this multi-agency and stakeholder management review team are included in the updated plan.

Resource management and public use activities implemented by the District in management areas include:

- Prescribed fire to mimic the natural fire frequency in fire-dependent habitats.

- Vegetation management, such as shredding and/or mowing to control invasive woody shrubs and eliminate hazardous fire fuels.
- Wildlife management, including surveys and habitat management.
- Nuisance and invasive vegetation control.
- Monitoring the health of the natural communities and the impact of management practices on them.
- Hydrologic restoration of wetlands to establish optimal flows and hydroperiods.
- Providing public use facilities that support compatible uses such as hunting, boating, hiking, fishing, birding, canoeing, camping, nature appreciation, geocaching, and biking.
- Utilizing volunteers and user group organizations to support the public use program.
- Providing security and hunting opportunities through partnership with FWC.
- Providing educational programs through partnerships with external educational organizations.
- Leveraging staff time through contracts with the private sector when appropriate.

This GMP serves as the basic statement of management intent and consolidates relevant information about DuPuis MA to guide management actions for the 2026 to 2036 period. This includes land management goals and objectives, past and present land uses, resource data, restoration and management needs, public use programs, and administrative duties.

3. MANAGEMENT AREA GOALS AND OBJECTIVES

Management of Wildlife and Habitats

Goal 1: Manage natural communities and modified habitats to protect and enhance floral and faunal resources

Objectives:

- Continue to utilize prescribed fire to maintain all fire-dependent management units within their appropriate fire return intervals.
- Evaluate the need for additional cabbage palm removal.
- Utilize mechanical vegetation treatment to reduce cabbage palm encroachment into the flatwood community.
- Continue to minimize hazardous fuel along firelines to reduce spot-over potential.

Goal 2: Maintain, improve, or restore listed species populations and habitats.

Objectives:

- Enhance vegetation communities to increase habitat use by threatened and endangered species.
- Increase herbaceous cover in pine communities to improve foraging habitats.
- Collaborate with FWC to improve wildlife habitats and protect existing red-cockaded woodpecker cavity trees.
- Identify suitable areas within adjacent management units for future cavity-tree expansion.
- Collaborate with FWC to support stable, interconnected red-cockaded woodpecker (RCW) populations across the DuPuis and Corbett Management Areas.
- Continue ongoing wildlife monitoring to document species use and evaluate habitat conditions across the management area.

Nuisance and Invasive Species Management

Goal 3: Manage invasive species to minimize their negative impacts on natural communities.

Objectives:

- Continue to control nuisance and invasive species to maintain the management units in maintenance condition (Condition Class 1) and systematically improve remaining areas.
- Continue to target invasive species infestations in identified areas as they become priorities to achieve maintenance levels.
- Continue to apply chemical vegetation treatments to reduce cabbage palm encroachment within flatwoods communities.
- Implement appropriate control measures for cogon grass and other non-native grass species within select RCW clusters.
- Collaborate with the Vegetation Management Section to develop strategies that limit the spread of invasive grasses and improve the effectiveness of treatment methods.
- Conduct Early Detection Rapid Response (EDRR) treatments as needed.
- Seek additional funding through the FWC Upland Invasive Plant Management Program to expand invasive species treatment within the management area.
- Continue hunting pressure on wild hog population as an ongoing control measure.

Hydrological Management

Goal 4: Protect and enhance the hydrological and ecological functions of wetland communities

Objectives:

- Maintain an appropriate hydroperiod through maintenance and modification of area water control structures as needed.
- Continue to implement restoration projects to reflood the marshes and sloughs and restore their natural hydroperiods to improve habitat conditions and feeding areas for wading birds.
- Continue to maintain and enhance natural hydrological functions by installing ditch plugs and maintaining or replacing culverts, as appropriate.
- Assess seepage patterns by estimating volume, direction, and areas of influence to better understand impacts on the hydrology of the wetlands.
- Identify and recommend feasible "stop/minimize" actions to reduce or minimize reliance on the two pumps operating near the management area.

Public access and Recreational opportunities

Goal 5: Provide nature-based public use opportunities

Objectives:

- Improve recreational facilities by replacing bathrooms, boardwalks, and kiosks, and repairing the fishing pier.
- Maintain compatible public use opportunities such as hunting, camping, fishing, hiking, biking, equestrian, and wildlife viewing.
- Continue to coordinate with the Florida Trail Association on the Florida National Scenic Trail through the management area.
- Provide resource protection through partnerships with local and state law enforcement.
- Continue to implement the public use program through coordination with FWC, local partners, adjacent landowners, volunteers, and recreation user groups.
- Continue to participate in the District's Public Recreational Forum to support stakeholder engagement.
- Provide interpretive and educational information using brochures, signage, and kiosks at public use amenities.

Operation and Maintenance of Capital Facilities and Infrastructure

Goal 6: Maintain and improve facilities and infrastructure

Objectives:

- Continue to maintain the firelines and service roads within the management area.
- Maintain public-use facilities and infrastructure such as signs, primitive camping areas, boat ramps, and structures through a coordinated effort involving District staff, volunteers, and private contractors.
- Maintain and secure the Management Area boundary using signage, fences, and fireline maintenance.
- Ensure all facilities and infrastructure assets are accurately identified, mapped, and maintained within the geospatial data system.
- Develop comprehensive asset management and capital improvement plans for all infrastructure and facility assets to support proactive and strategic management.
- Secure needed funds to implement facilities and infrastructure maintenance and replacement plans.

Cultural Resource Management

Goal 7: Protect existing cultural resources

Objectives:

- Ensure all known sites are recorded in the Florida Division of Historical Resources Master Site file.
- Continue to monitor, protect, and preserve all known/identified sites.
- Coordinate with the Florida Division of Historical Resources (FDHR) to assess the need to conduct additional cultural resource surveys.
- Ensure at least one member of staff has attended the FDHR cultural resource training program.

4. SITE HISTORY

The DuPuis Reserve property has a long history of human use, with notable Indigenous occupation beginning after about 500 B.C. Around this time, Florida's earlier Archaic traditions developed into distinct regional cultures, including the Glades Tradition, where people shaped their daily lives around local conditions and still traded with communities elsewhere in Florida. Unique upland habitats within the surrounding wetlands provided essential dry ground for camps and villages, making the DuPuis landscape suitable for Pre-Columbian settlement. Archaeological evidence indicates long-term Indigenous presence in the area, with cultural affiliations identifiable through changing pottery styles and other material indicators. Archaeological evidence from the DuPuis Reserve property reflects this broader cultural sequence, spanning multiple Glades periods. Archaeological evidence from DuPuis dating to the Glades era also indicates the presence of peoples culturally linked to the St. Johns River-area Mayaca, who appear to have been pushed southward by repeated attacks from northern tribes allied with the British. Much later, during the Seminole Indian War of 1835, Seminole groups sought refuge in the DuPuis–Corbett area, but food quickly became scarce, and survival proved difficult. Hundreds of starving Seminoles were eventually captured under a flag of truce and sent to Oklahoma, leading to the area becoming known as “The Hungryland” (DuBois 1981; Hutchinson and Paige 1998).

During the late 19th century, small Seminole camps and trading posts began to appear throughout South Florida, including near present-day Indiantown (Weisman, 1999; Covington, 1993). By 1898, local settler Joe Bowers established a trading post where he exchanged manufactured goods for animal hides and other products. That same year, Francis and Annie Platt started a cattle operation nearby, naming the small town “Annie” after Mrs. Platt.

Regional development began to accelerate around the turn of the century. A post office was established in Annie in 1902, with Francis Platt serving as postmaster (Tebeau, 1971). Annie would later become Indiantown in 1917. In 1902, the Southern States Land and Timber Company, an investment group based in New Orleans, purchased about two million acres near Lake Okeechobee from the State of Florida for 50 cents per acre (Tebeau, 1971). The acquisition included most of what is now western Palm Beach and Martin Counties, and nearly all of the DuPuis Reserve property, except the low-lying areas along the L-8 Canal. The company began harvesting old-growth pine shortly after the purchase, using a sawmill located on Lake Okeechobee, where logs could be transported by boat. However, the lack of a railroad system in the area limited the scale of their milling operations. During its period of ownership, the Southern States Land and Timber Company actively developed and marketed its holdings. Under long-term leadership of George Bensen, who managed operations from West Palm Beach for nearly five decades, the company helped shape early regional development by promoting Everglades drainage, pioneering sugarcane cultivation, constructing roads and trails, opening land to ranching, and introducing the first purebred cattle to Martin County.

Transportation infrastructure expanded significantly in the early twentieth century. In 1919, construction of a county road connecting Stuart and Lake Okeechobee was approved. The State of Florida later assumed responsibility for the road in 1931, realigned it, and designated it as State Road 76, and later renamed Kanner Highway in honor of legislator A. O. Kanner, who championed

the project. Meanwhile, Conners Highway was constructed in 1925, linking Okeechobee City, Canal Point, and West Palm Beach; it later became part of Highways 441 and 98. Railroads also reshaped the region. The Florida East Coast Railway reached Okeechobee in 1915 and, in 1925, extended a line to Canal Point to transport agricultural products from the Everglades (Tebeau, 1971). Although this line passed near the DuPuis Reserve property, it does not appear to have supported logging operations there based on the absence of sidings or mill structures in aerial imagery from that period. At the same time, the Land Company of Florida, under the leadership of S. Davies Warfield, extended the Seaboard Air Line Railway's main line from Coleman to West Palm Beach, reaching Indiantown in 1924. Warfield laid out the street grid, later known as Warfield Boulevard, to support the anticipated residential and commercial center for the railroad's southern headquarters. After his death in 1927 and the collapse of the Florida land boom, the development plan was abandoned in 1930. The state assumed responsibility for Warfield Boulevard in 1931, designating it State Road 710.

Roads in and around the region were extremely limited. Around 1902-1903, Platt and his sons built a wagon road connecting Annie to Stuart, known as the Stuart-Annie Road. Although some form of access route must have existed for the Southern States Land and Timber Company to transport logged pine to Lake Okeechobee, the extended dirt road connecting Stuart-Annie to the lake, which would eventually evolve into today's State Road 76 (Kanner Highway), did not appear on road maps until the early 1920s. Existing trails were generally described as simple wagon paths that followed naturally higher ground with minimal clearing and no evidence of constructed roadbeds.

Among the earliest established travel corridors in the region was Colonel Taylor's route, a historic path depicted on Mackay and Blake's Florida Seat of War map (**Figure 1**). When the map is overlaid with later aerial photographs, the alignment clearly crosses Southern States Land and Timber Company holdings, and an overlay of the modern boundary shows that the trail crosses through what is now the DuPuis MA. Other historic maps depict a patrol route connecting Taylor's route to General Eustis' route, which also would have traversed the present-day DuPuis.

One of the most prominent route, the Hungryland Trail, entered DuPuis from the northwest, curved south and southeast through pine flatwoods, and exited near Big Mound, where it continued as the Big Mound Trail toward Loxahatchee Groves. These routes appear on 1920s road maps and remain visible in 1938 and 1940s aerials along the alignment of today's DuPuis Grade. A secondary unnamed trail branched from the Hungryland Trail near Big Mound, turning northwest and then northeast toward Indiantown; it is traceable through the 1940, 1957, and 1965 aerial series. These trails appear to predate the 1915 construction of the St. Lucie Canal and were likely partly created or maintained by residents of the Big Mound area to access nearby population centers. The construction of the St. Lucie Canal, the realignment of SR 76, and later ditching, particularly the Cooter Creek system, gradually severed the Hungryland Trail, leading to the abandonment of many segments. The remaining segments of these trails now form portions of the modern land management road, the equestrian trail, and a segment of the Florida Trail.



Figure 1. Overlay of the DuPuis MA boundary on a section of Mackay and Blake's 1839 Florida Seat of War map.

By the late 1930s, land within what would become the DuPuis MA was held by a patchwork of owners, including Chase National Bank, Glades Land Corporation, the State Board of Education, and the Southern States Land and Timber Company (Dolph & Co., 1937; Hutchinson & Paige, 1998). The first major consolidation began in 1944, when Canal Point rancher Robert Chastain acquired more than 20,000 acres from the Southern States Land and Timber Company, which was actively selling its inholding. Chastain continued assembling key tracts through 1949, securing access along SR 76, the future site of the land management office, and most of the southern sections of the reserve (Hutchinson & Paige, 1998). By 1948-1949, aerial imagery shows the early development of ranch infrastructure, including an expanded ranch house, initial farm fields, a graded public entrance along Jim Lake Grade/DuPuis Grade, a spur road to Mound House, and multiple ditch systems designed to drain flatwoods and wet prairies (USDA, 1948; USDA, 1949).

In 1955, Chastain sold most of the western portion of the property to White Belt Dairy Farms, led by Dr. John G. DuPuis and, later, his son, who continued to expand agricultural use. White Belt acquired additional lands south of the L-8 Canal, developed new watering holes and firebreaks, and constructed perimeter canals that altered earlier trails. Through the 1960s and early 1970s, both White Belt and landowner George Caulkins undertook rapid development, including

extensive ditching for pasture improvement and citrus preparation, construction of new ranch buildings, excavation of ponds, and relocation of the main entrance. In 1972, a series of coordinated land exchanges among Caulkins, U.S. Sugar, and White Belt unified the entire reserve under DuPuis family ownership for the first time.

Dr. John G. DuPuis was a pioneer physician, educator, and botanist who arrived in Miami in 1898 and established both a medical practice and a drugstore in the early settlement of Lemon City (Dade Heritage Trust, n.d.). He treated Miami residents during the 1899 yellow fever outbreak, and local and oral histories describe him as one of the few white physicians trusted by the Seminole people (Florida Memory, n.d.). His belief that sanitary, fresh milk was essential to public health led him to establish one of the first dairies in South Florida and, eventually, one of the largest in Dade County: White Belt Dairy Farms, Inc. (Miami-Dade County Historic Preservation Office, 1984). Dr. DuPuis' agricultural expansion began in 1905 with his purchase of Dutch Belted cattle, reportedly acquired from the Barnum & Bailey Circus, which strengthened and diversified his dairy operation. This acquisition set the stage for later agricultural growth and ultimately led the family to begin purchasing lands in Palm Beach and Martin Counties decades later (Hutchinson & Paige, 1998).

Because much of the land-use operations relied on draining the land, the drainage networks played a central role in shaping land use within DuPuis, beginning with Chastain's early systems constructed in the 1940s and continuing through DuPuis-era modifications in the 1950s–1980s. As drainage became increasingly central to ranch operations, several ditch systems were developed. The Office Ditch system routed water northwest toward the St. Lucie Canal through a natural creek and a nearby culvert. The Chastain Ditch system connected wetlands across roughly three miles to the south and 1.5 miles to the west, directing water to its outfall east of the reserve. South of these, the Cooter Creek Ditch system extended nearly four miles toward a slough that drains toward the Everglades, and it was later tied directly into the L-8 Canal through mid-1960s culverts, which significantly accelerated drainage. On the west side, the Osceola Ditch system linked the property to the early L-8 stub (L-8 North Tieback) canal, providing another major outlet. By 1957, a perimeter ditch along the northwest border routed water from the Port Mayaca cemetery to the St. Lucie Canal, effectively eliminating the older Hungryland Trail connection to SR 76, which by then functioned primarily as an internal ranch road (USDA, 1957; Wheeler, 2000). By 1965, a newly built Bamboo Ditch system on the southwestern side of the reserve intercepted groundwater in the transitional flatwoods-to-muck zone, severing wetland hydrology in the southwestern portion of the reserve to improve pasture conditions. The southern portion of the Hungryland Trail was also cut off by the construction of the Bamboo system. The most extensive modification came in 1972, when White Belt Dairy Farms constructed a three-mile parallel ditch along the L-8 Canal and extended it northward along the eastern boundary. These drainage features not only influenced ranch operations but also established the modern hydrologic framework later seen on 1970s-1980s aeri

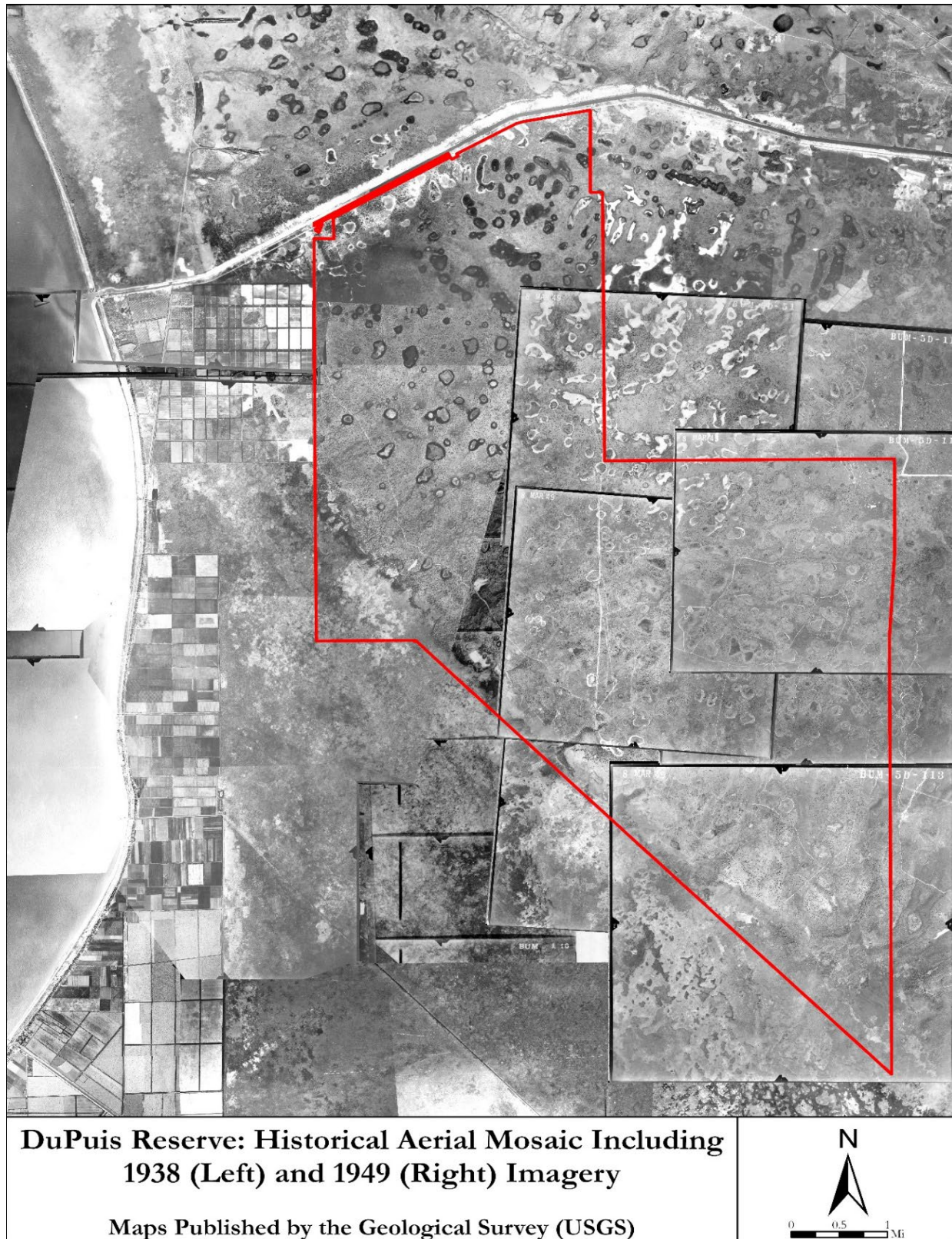
Infrastructure improvements continued through the late 1970s and 1980s, including construction of a major high-voltage transmission line along the eastern boundary and a second line west of the reserve. After the death of John G. DuPuis Jr. in 1984, The Nature Conservancy

secured a purchase agreement that enabled the South Florida Water Management District (SFWMD) to acquire the property in 1986 under the Save Our Rivers program. Initial restoration efforts began soon after, followed by a management period under the Florida Division of Forestry in the 1990s, during which new grades, entrances, and prescribed burns were established. SFWMD resumed primary management in 1996, continuing restoration work and removing aging agricultural structures and groves.

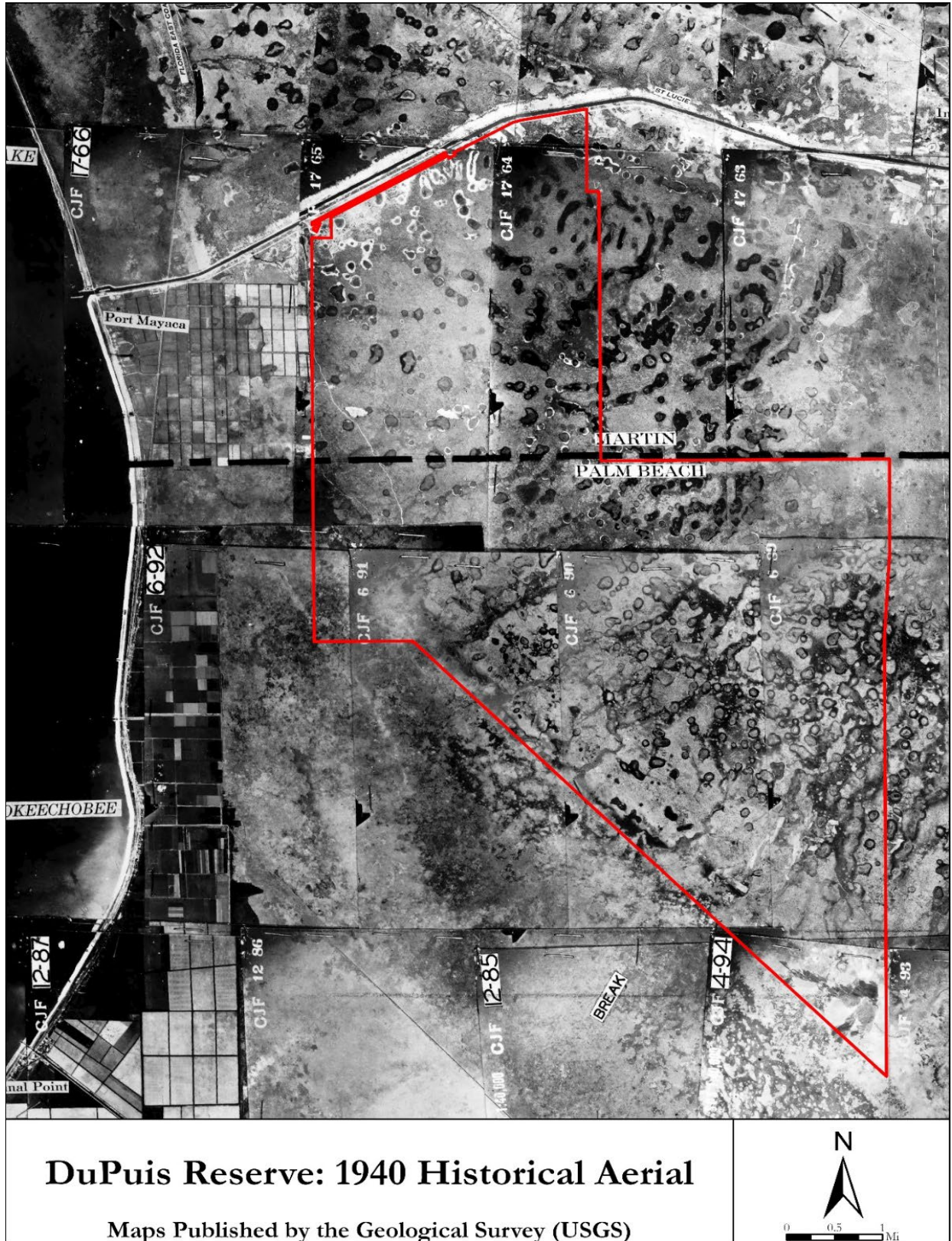
This sale “represents the fulfillment of a dream for my late husband and I. The land should be preserved and belong to the public,” said Susan DuPuis.



Figure 2. Palm Beach Post report highlighting the preservation of the DuPuis Reserve.



Map 2. Historical aerial mosaic including 1938 (left) and 1949 (right) imagery.



Map 3. 1940 historical aerial imagery.

5. RESOURCE DESCRIPTION AND ASSESSMENT

5.1 Infrastructure

The DuPuis MA includes a land management office, a maintenance facility, and three housing lots with two buildings, all supporting land management operations. The land management team maintains approximately 63 miles of firelines and 22 miles of service roads through activities such as mowing, tilling, culvert replacement, and road improvements. Perimeter fencing is maintained annually, with repairs or replacements conducted as needed.

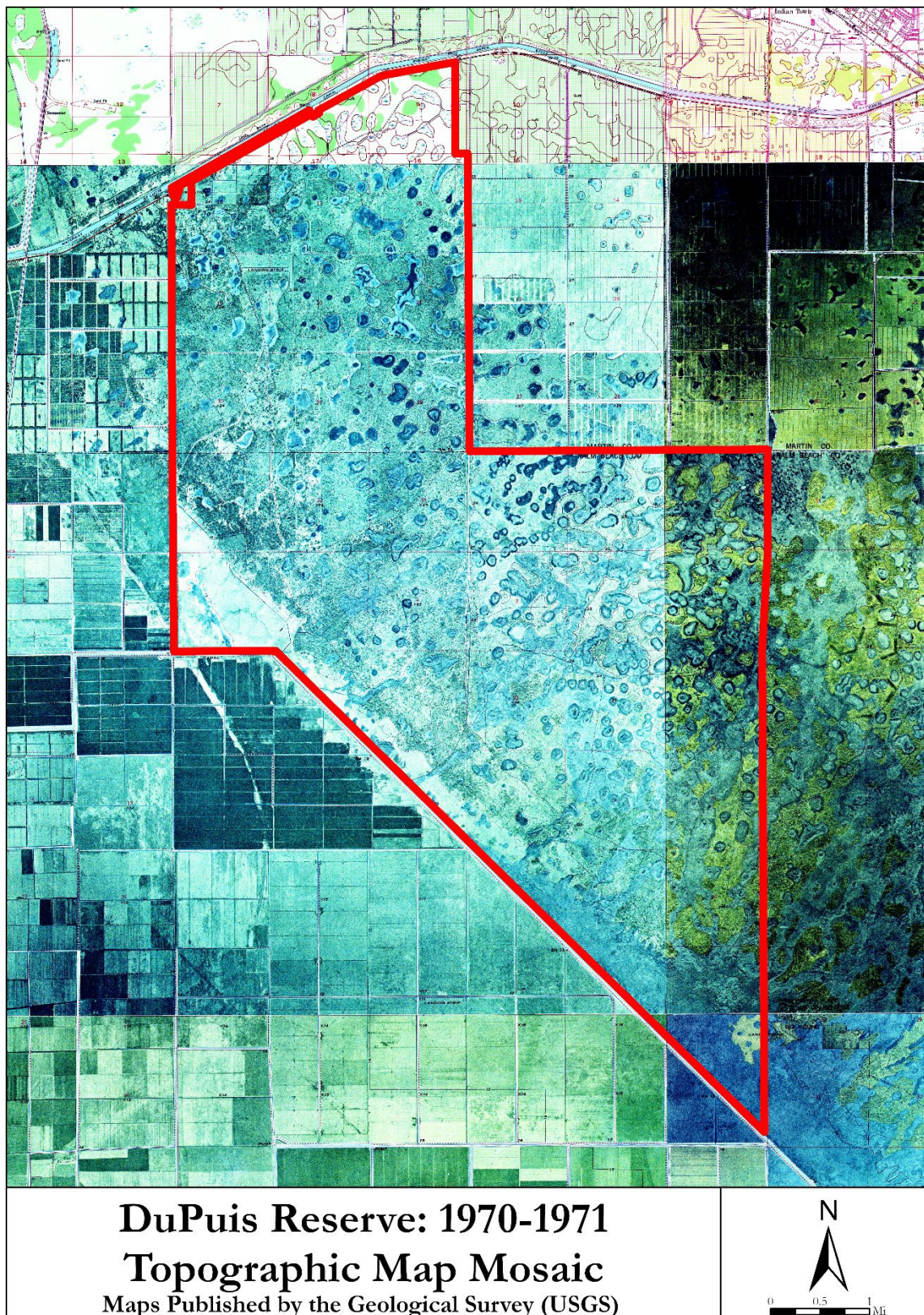
The team also manages the recreational facilities within the management area, supported by contracts and dedicated volunteers. These facilities include three primitive campsites; an equestrian and trailer camping area equipped with picnic tables, fire rings, a waste-dump station, and a restroom; and a primitive group camp and family campsite, both equipped with picnic tables, fire rings, and two primitive restrooms. All facilities require regular upkeep. Additional recreational infrastructure includes a fishing pier, several fishing ponds and picnic areas, four parking areas, more than 38 miles of equestrian trails, over 13 miles of hiking trails, and more than 11 miles of the Florida National Scenic Trail (FNST).

5.2 Physiograph

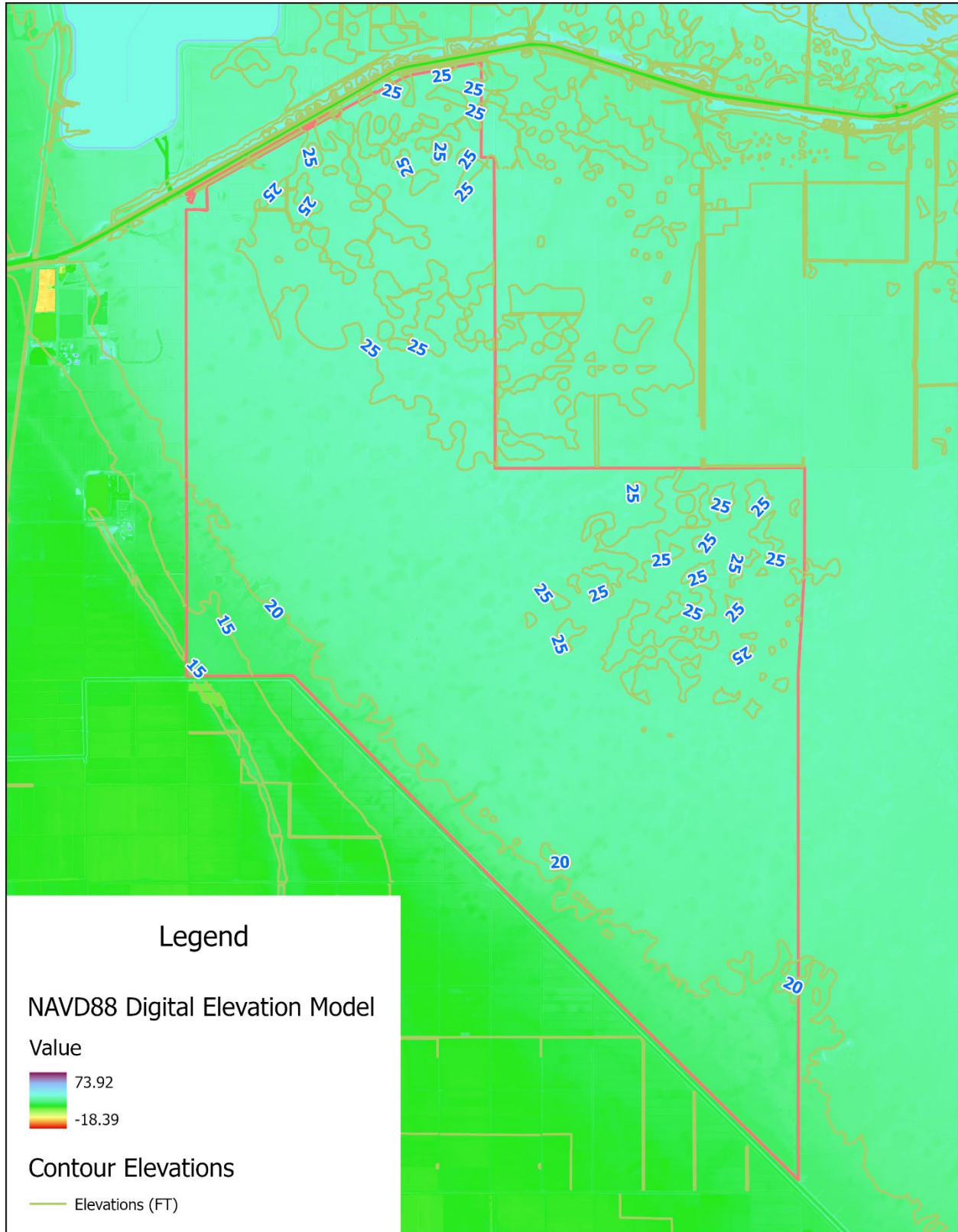
Topography

The natural topography of the Florida Southeastern Coast basin (**Maps 4 - 5**) is generally flat and slopes gently to the south-southeast. Surface elevations typically range from about 20 to 25 feet (ft) above mean sea level (MSL). Except for the higher elevations along the coastal and beach ridges, elevations decrease from approximately 25 ft near Lake Okeechobee to sea level along the southern coastline, where extensive mangrove and coastal glade areas occupy the lowest terrain and are regularly inundated.

Within the DuPuis MA, relief is low, and surface elevations generally range from 23 to 25 ft, declining gradually from northeast to southwest. Overland sheetflow moves south-southwest through a connected series of wetlands. The greatest elevation change occurs in the L-8 Marsh along the southern boundary, where elevations drop from about 20 ft at the treeline to below 15 ft near the canal levee. North and northeast of the treeline, elevations gradually rise to 24–25 ft.



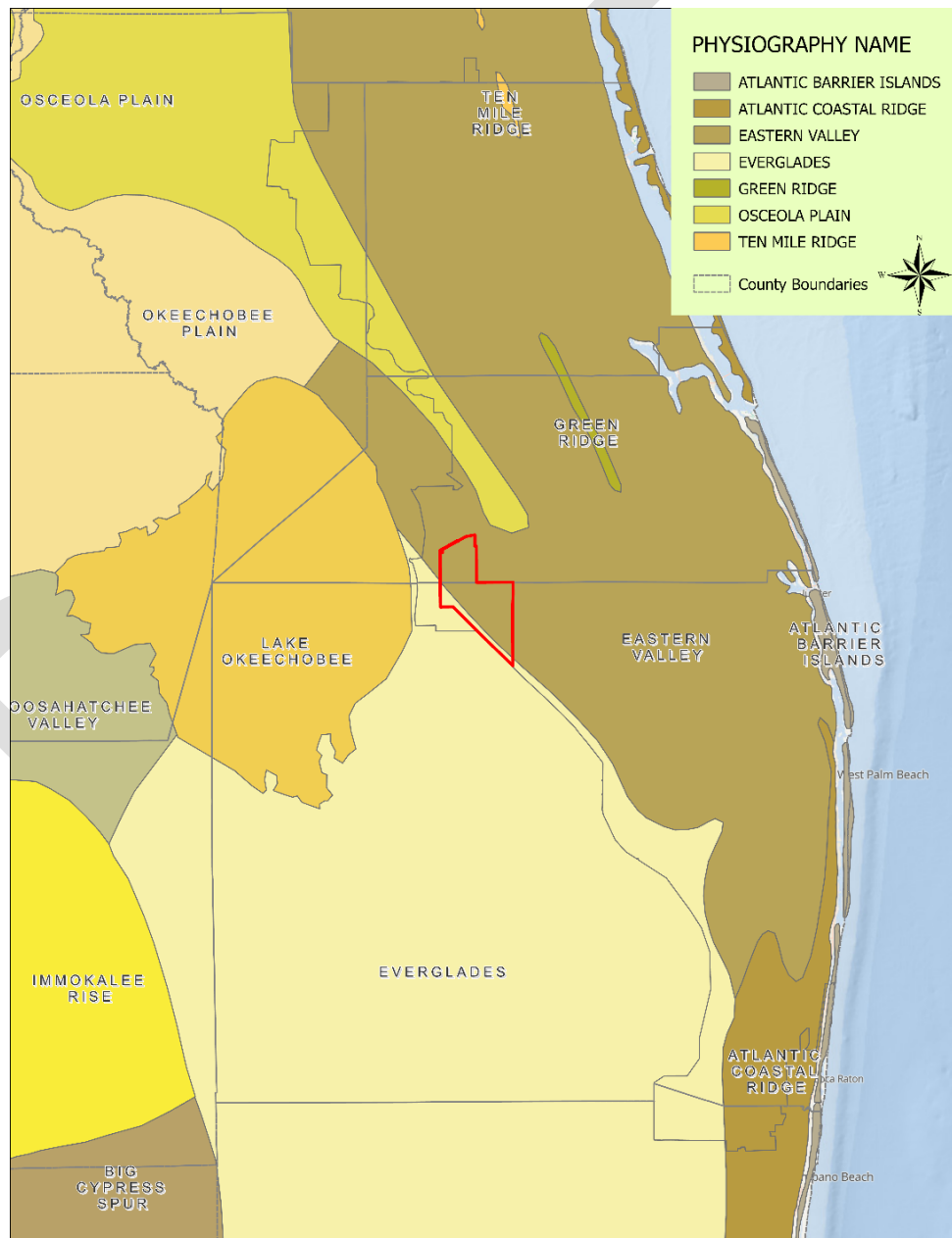
Map 4. Topographic Map Mosaic of the DuPuis MA (1970–1971).



Map 5. DuPuis MA regional elevations.

Geology

The Florida Southeast Coast Basin is situated within the Coastal Lowlands of the Coastal Plain physiographic province of the eastern United States. The Coastal Lowlands physiography includes several geomorphic features: Atlantic Coastal Ridge, Big Cypress Spur, Big Cypress Swamp, Caloosahatchee Valley, De Soto Plain, Eastern Valley, Everglades, Gulf Coastal Lowlands, Immokalee Rise, Mangrove and Coastal Glades, Osceola Plain, Sandy Flatlands, and Southwestern Slope. The Florida Southeast Coast Basin spans the Eastern Valley, Osceola Plain, Everglades, and the Atlantic Coastal Ridge physiographic regions. The DuPuis MA lies predominantly within the Eastern Valley, with its southern boundary extending into the Everglades (**Map 6**).



The Everglades extends southward from Lake Okeechobee and Loxahatchee Slough to the mouth of Shark River Slough at Florida Bay. Its gentle southward slope averages less than 2 inches per mile, with elevations declining from about 14 feet above MSL near Lake Okeechobee to sea level at Florida Bay. Much of the Everglades is underlain by peat and muck soil that formed in a shallow, poorly drained basin under long-term flooding conditions. Beneath these organic deposits lies the Fort Thompson Formation, composed of interbedded sand, shell, and limestone, and the regional bedrock is almost entirely limestone. In the southern Everglades, higher-elevation marshes flanking Shark River Slough are characterized by calcitic marl soils produced by algal mats, along with exposed limestone surfaces containing karst features. Prior to development, the Everglades was seasonally inundated, and water moved slowly southward across this low-gradient landscape.

The Eastern Valley forms a gentle slope between the Everglades and the Atlantic Coastal Ridge and contains scattered depressions across its surface. It is composed primarily of Pamlico sands deposited during the Pleistocene. In many areas, these surficial sands overlie hard, sandy, shelly limestone or marl. Where present, soils above this layer consist mainly of marine, organic-rich sands also deposited during the Pleistocene. Marine deposits in Martin and Palm Beach Counties range from about 100 to 150 ft thick. Much of the Eastern Valley has been extensively drained to support agricultural and urban development. Prior to canal construction and drainage, water moved slowly through the valley via multiple sloughs flowing toward the St. Lucie River, the Loxahatchee River, and the Everglades.

Two principal aquifer systems underlie the Florida Southeast Coast Basin: the surficial aquifer system and the Floridan aquifer system. The surficial aquifer system is a shallow, nonartesian unit that extends roughly 80 to 180 feet (ft) below land surface and consists of permeable Pamlico Sand, Anastasia Formation limestone, shell beds, and Caloosahatchee marl. Beneath the surficial system lies the Floridan aquifer system, a deep artesian aquifer typically separated from the surficial system by a confining unit of clay, silt, and marl. This intermediate aquifer system or confining unit is present only in parts of St. Lucie and Martin Counties and is absent in most of the basin, including Palm Beach County. Where present, it consists of relatively impermeable phosphatic clays, silts, and limestones of the Hawthorn Group. The top of this unit lies about 80 ft below MSL in northwestern St. Lucie County and deepens to more than 200 ft below MSL in southeastern Martin County; thickness ranges from less than 300 ft in northern St. Lucie County to more than 600 ft in the southern part of the basin.

The Floridan aquifer system is more than 2,700 ft thick and consists primarily of limestone of the lower Hawthorn Group, St. Marks, Suwannee, Avon Park, and Ocala formations. The top of the Floridan aquifer is about 300 ft below MSL in the northwest part of the basin and dips to more than 900 ft below MSL in southeastern Martin County.

Recharge to the surficial aquifer system is derived mainly from rainfall, supplemented by groundwater inflow from the Everglades toward the coast. The Floridan aquifer system receives most of its recharge from central and northern Florida. Groundwater flow in both aquifer systems is generally from north to south and southeast toward the coastline.

Climate

Much like the rest of south Florida, the Florida Southeast Coast Basin experiences a humid subtropical climate with wet and dry seasons of nearly equal length. The area receives an average of about 55 inches of rainfall per year, though annual totals vary considerably. Most precipitation occurs during the wet season from June through October, which accounts for approximately 71 percent of the annual rainfall. During the dry season, El Niño conditions can produce above-average rainfall, particularly from November through January.

Soils

A soil map encompassing the DuPuis MA (**Maps 7**) was compiled using Martin and Palm Beach County soil survey data from the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS).

The DuPuis MA contains a variety of soil types, many characteristics of wetland communities. In the Martin County portion of the property, nearly level and poorly drained Riviera, Pineda, and Malabar sands dominate; these soils have very slow percolation rates. Waveland sand, more common along the western side of the property, contains a weakly cemented hardpan at a depth of roughly 30-50 inches, resulting in a perched water table during the wet season. Riviera and Florida fine sand, depressional, are the primary soils underlying the marsh communities. Tequesta muck is a very poorly drained, nearly level soil occurring mainly in depressions near the Palm Beach-Martin County line.

Tequesta, Okeelanta, and Sanibel muck are the dominant soils in the Palm Beach County portion of the Reserve, particularly where Everglades-related communities occur. Okeelanta is a very poorly drained organic soil derived from a willow-sawgrass association, while Tequesta represents a peaty muck typically more associated with broadleaves. Sanibel muck, which contains a thin organic surface layer, occurs in transition zones between sandy flatwoods and Everglades-related organic soils and appears to represent wet prairie bordering the L-8 Marsh.

Basinger and Myakka sands, depressional, and Anclote fine sand are nearly level, very poorly drained soils that typically underlie cypress-dominated communities. Immokalee fine sand is also common in the transition between the flatwoods and L-8 Marsh wetlands; these soils are largely perched systems underlain by a weakly developed hardpan. Toward the eastern boundary of the Reserve, Pineda, Pinellas, and Riviera sands form the dominant soils underlying the cypress strand system. Their slow permeability promotes sheetflow across the landscape rather than downward percolation into the surficial aquifer. Riviera sand, depressional, one of the most common soils on the property, is frequently found within cypress domes that experience prolonged hydroperiods. Information about soils is updated by NRCS periodically and available through the NRCS Web Soil Survey.

Weathering, erosion, climatic conditions, vegetation effects, and topographical locations of resident soils have resulted in numerous differences in soil characteristics. The Natural Soil Landscape Positions (NSLP) classification system groups South Florida soils into 12 categories based on hydrology and soil morphology that reflect the area's local relative topography,

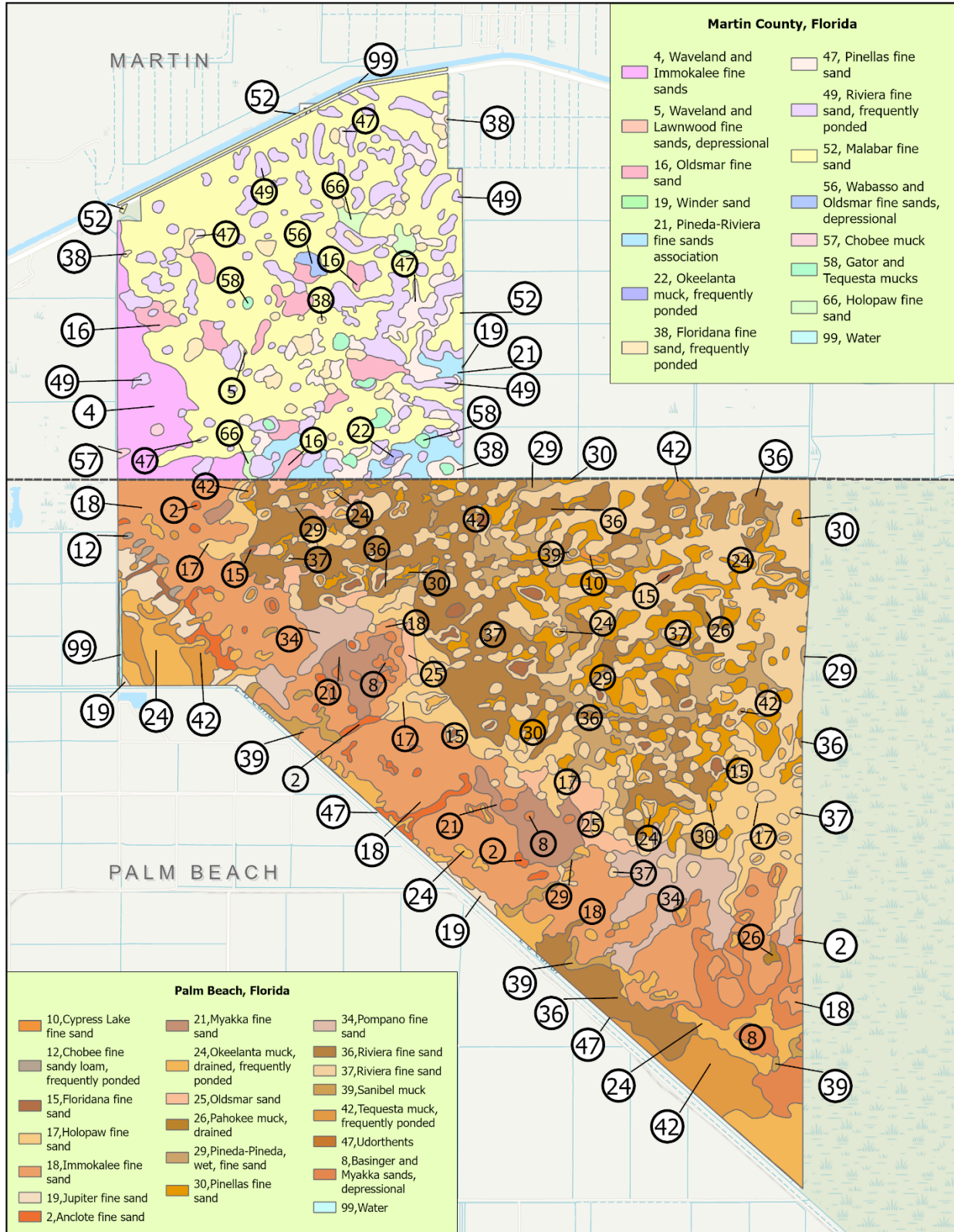
hydrology, and vegetation (Zahina et al. 2001). The soils within the DuPuis MA are classified into seven distinct soil categories: Everglades peat, flats soils, muck depressions, and sand depressions (**Map 8**). The soil classification database provides a complete description of soil classification, vegetation associations, and map and data files of NSLP (Zahina et al., 2001).

Soil Contamination and Excavation Sites

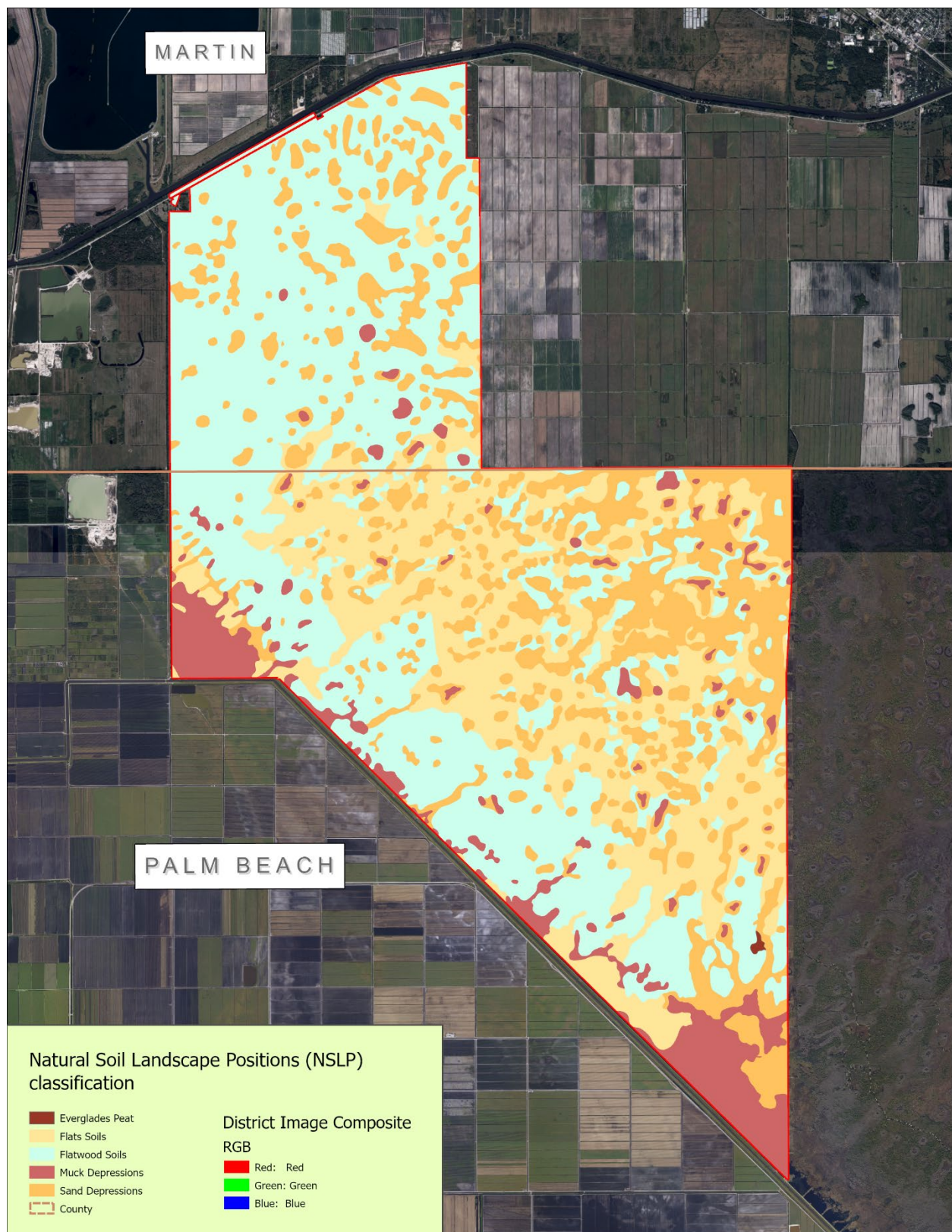
A cattle dipping area that was located at the present Gate 3 equestrian area was removed by the District in the late 1980's. This chemical treatment area was one of the 3,200 cattle dipping vats constructed statewide between 1906 and 1961 for a tick fever eradication program that was mandated by state law. At these locations, soils became polluted with insecticides as cattle were either led through in-ground dipping vats or sprayed in holding pens. Shortly after acquisition, the District began appropriate corrective actions to remediate soil contamination associated with the cattle dipping vat.

A cattle-dipping area was located at the present Gate 3 equestrian site and was removed and soil remediated in the late 1980s. This dipping vat was one of approximately 3,200 constructed statewide between 1906 and 1961 as part of a mandated tick-fever eradication program. At these facilities, soils were frequently contaminated by insecticides used on cattle as they were led through in-ground vats or sprayed in holding pens. Shortly after acquiring the property, the District initiated corrective actions to remediate soil contamination associated with the dipping vat.

During acquisition, five additional soil contamination sites on the property were identified. These areas had historically been used for petroleum or chemical storage and equipment maintenance. As the first part of a two-phase remediation plan, the District analyzed the contaminated soils to establish site-specific, risk-based action levels. The second phase involved determining the necessary corrective measures for each site. The Florida Department of Environmental Protection (FDEP) Waste Cleanup Section supported decisions regarding land-use classification and remediation methods. In the early 1990s, a remediation plan was developed and implemented for all five sites. A final site rehabilitation was issued by FDEP in June 2001, completing the District's remediation activities.



Map 7. DuPuis MA NRCS soil classifications.



Map 8. DuPuis MA NSLP soil classifications.

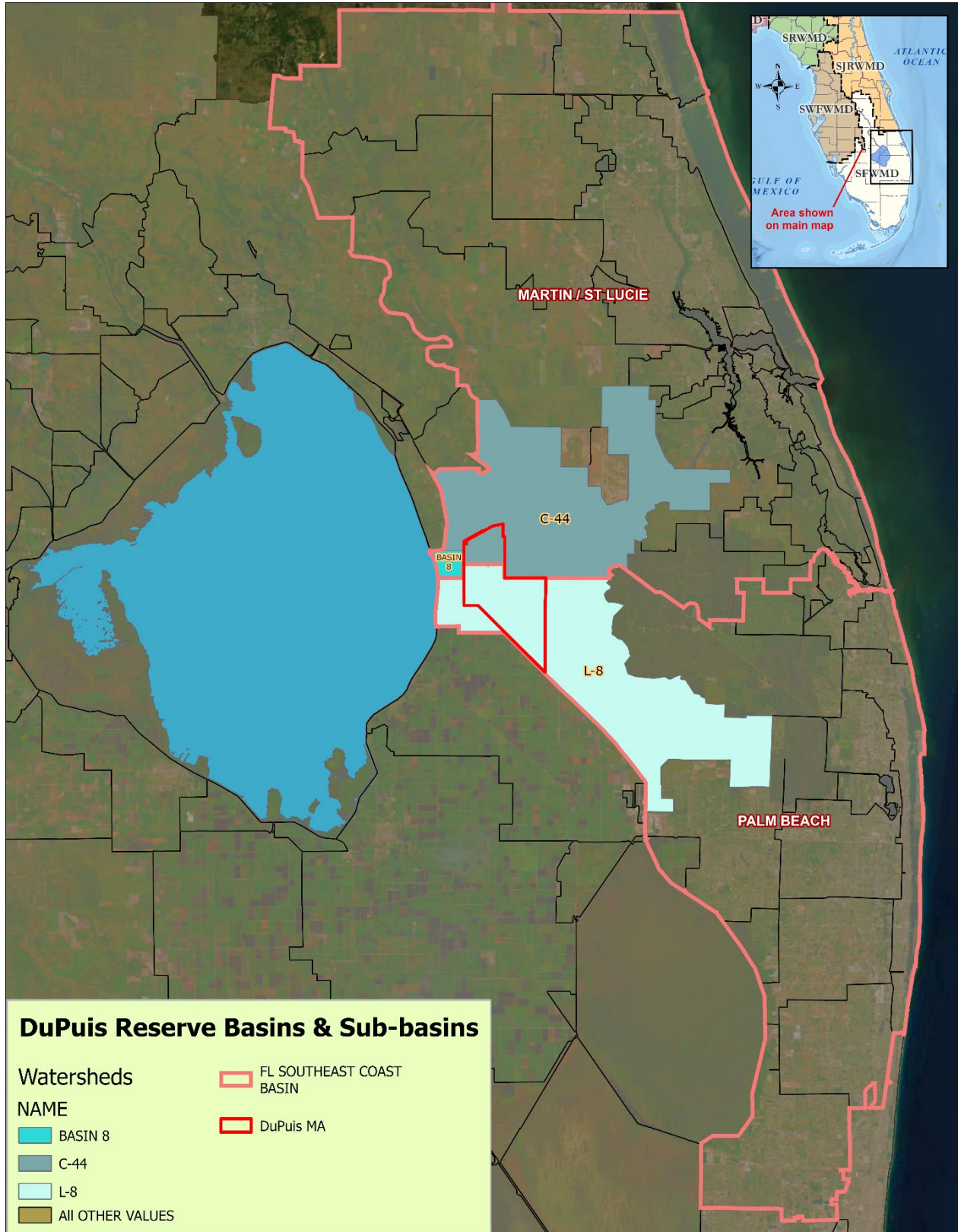
Hydrology

The DuPuis MA is located within the FL Southeastern Coast Drainage Basin, which is divided into the Upper East Coast Basin and the Lower East Coast Basin for water-supply purposes. The basin contains multiple sub-basins that are often referred to interchangeably as basins. The FL Southeastern Coast Basin is generally characterized by rivers, canals, coastal ridges, remnant Everglades wetlands, and coastal swamps and bays. Before agricultural development and canal construction, drainage in this region occurred through a slow, gradual flow of water moving through multiple sloughs toward the St. Lucie River, the Loxahatchee River, and the Everglades. Most of the DuPuis MA lies within the Lower East Coast Basin in the L-8 sub-basin, while approximately seven square miles in southwestern Martin County fall within the Upper East Coast Basin in the C-44 sub-basin (**Map 9**).

The C-44 sub-basin does not contribute much to drainage in the DuPuis MA and primarily serves as an outfall for the northern portion of the management area. Most of the management area drains to the L-8 Canal in the L-8 Basin.

The L-8 Basin encompasses approximately 160 square miles, most of which is located in northern Palm Beach County, with about three square miles in southwestern Martin County. The DuPuis MA and the J. W. Corbett Wildlife Management Area make up most of its drainage area. A smaller area south of the M Canal includes the Indian Trail Improvement District (ITID) service area, along with some agricultural and rural lands. Regional flow within the L-8 sub-basin is complex. Inflows to the L-8 Canal originate from Lake Okeechobee, the DuPuis MA, J. W. Corbett, the L-8 FEB, and the ITID. The upstream water source for the L-8 Basin is Lake Okeechobee, via structure S-271. During rain events, water also flows into the L-8 Canal from adjacent agricultural and natural lands, including the DuPuis MA and J. W. Corbett. Throughout the sub-basin, water is directed into the L-8 Canal for both drainage and water-use withdrawals, such as agricultural irrigation and public water supply via the City of West Palm Beach's Control 2 Pump Station and the M Canal. Excess water from the L-8 sub-basin can be routed either to Lake Okeechobee or to the structure, S-5A complex, at the northern edge of the Everglades Protection Area, where it can be diverted into WCA-1 or diverted for water supply.

The hydrology of the DuPuis MA primarily depends on annual rainfall (Maps 10 - 11). In the Martin County portion of the reserve, pine flatwoods typically occur at elevations near 25 ft, gradually decreasing to 23-24 ft toward the western boundary. Depression marshes range 20-23 ft, and cypress dome centers represent the lowest elevations (about 20-21 ft). In the Palm Beach County portion, pine flatwoods range 24-25 ft, while marshes, cypress domes, and strands lie between 20 and 23 ft. Elevations decline to the southwest toward the L-8 Marsh, where elevations range from approximately 15 to 19 ft. During the rainy season, surface water gradually rises within the management area and eventually sheetflows in a south-southwest direction toward the L-8 Marsh, ultimately discharging into the L-8 Canal through control structures.

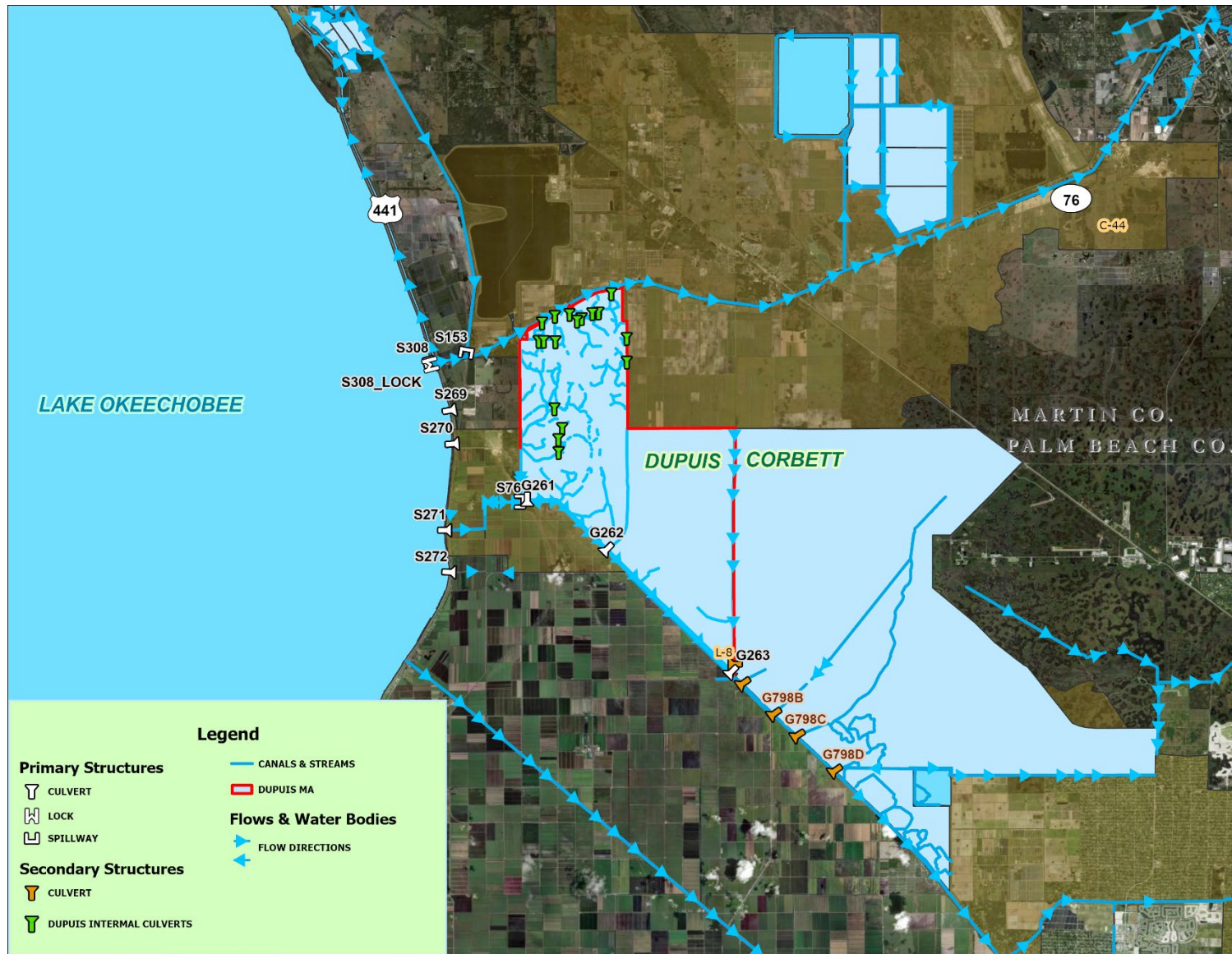


Map 9. DuPuis MA Basin watersheds and sub-watersheds.

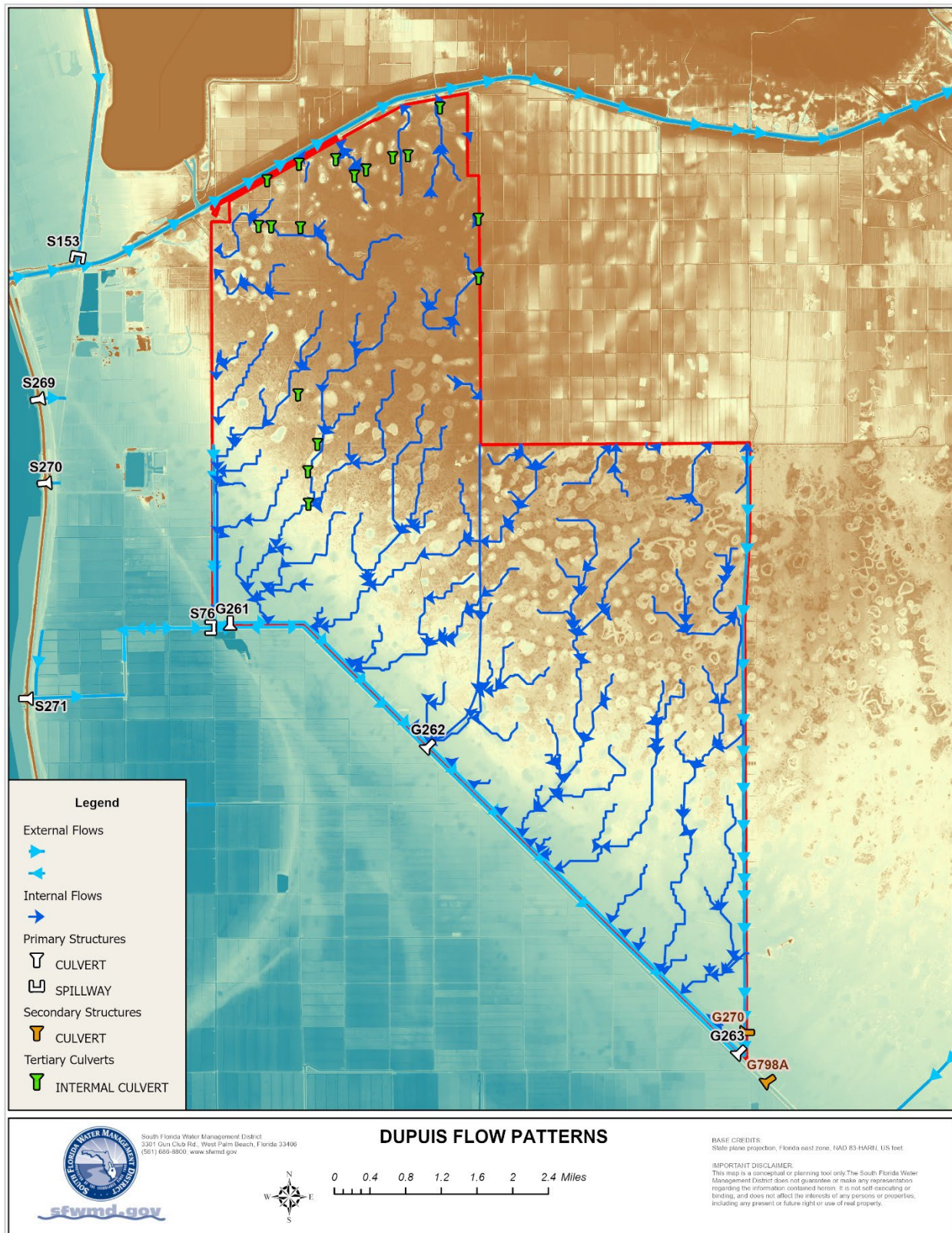
Over the years, several drainage improvements in and around the DuPuis MA have had major impacts on regional hydrology. In the 1920s, the St. Lucie Canal was dredged parallel to the property's northern boundary, severing historic inflows from the north and increasing offsite discharge. In the early 1950s, construction of the L-8 Canal along the southern boundary further increased offsite discharge and facilitated drainage of the land. By the 1970s, a canal and elevated road along the eastern boundary blocked historic inflows from the J. W. Corbett area. Additionally, during ranch development, an extensive network of interior canals and ditches was constructed, significantly decreasing surface water retention and increasing discharge from the site.

Although historical aerial imagery indicates that upstream flow from the C-44 sub-basin into the DuPuis MA would have been minimal, due to the original river/tributary system that existed to the north prior to construction of the St. Lucie Canal, the excavation of the canal substantially altered the hydrology of the northern portion of the management area. The wetlands on the north side lie at approximately 25 ft above sea level, while the canal is generally maintained at or below Lake Okeechobee's typical elevation of about 15 ft. This created a groundwater gradient that lowered the water table by roughly ten feet at the canal, with diminishing effects farther from it. By the 1940s, aerial photographs already showed changes in hydroperiods within three-quarters of a mile of the canal.

Efforts to restore hydrology have been ongoing since the 1990s to address these diminished groundwater conditions. These efforts include construction of a levee adjacent to the L-8 Canal, installation of control structures, and placement of several ditch plugs. The levee is at an elevation of 23 ft NGVD and discharges into the L-8 Canal through three control structures set at a control elevation of 19 ft NGVD. This design allows surface water to discharge during peak flood conditions, helping supply the L-8 sub-basin and reducing the drawdown effect of the L-8 Canal on the L-8 marsh in the dry season. An additional structure on the southeastern boundary of the management area, consisting of four 72-inch culverts with 96-inch flashboard risers, was added to restore a portion of the historical flow between J. W. Corbett and the management area.



Map 10. DuPuis MA Regional hydrography.



Map 11. DuPuis MA internal flow directions.

5.3 Vegetation

The DuPuis MA is characterized by extensive pine flatwoods, depressional marshes, and cypress swamps, which provide critical habitat for a diverse array of flora and fauna, contributing to the region’s ecological integrity.

Seven distinct natural community types exist within the DuPuis MA (**Maps 12; Figure 3**). The District groups natural community types based on the descriptions in the Florida Natural Areas Inventory (FNAI) Classification system (FNAI, 2010) and the Florida Land Cover Classification System (Kawula & Redner, 2018).

Detailed descriptions of both natural communities and altered landcover types are provided in Appendix B.

Percent Coverage of Plant Communities in DuPuis MA

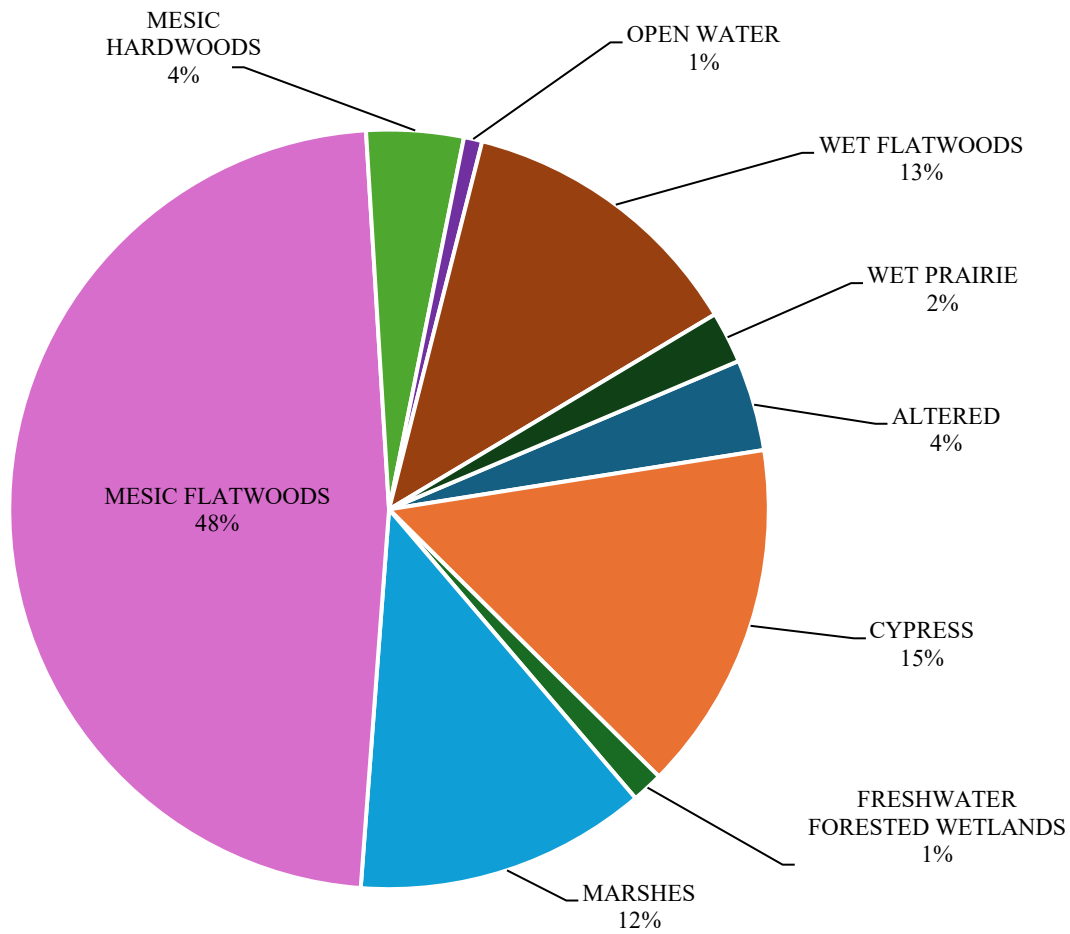
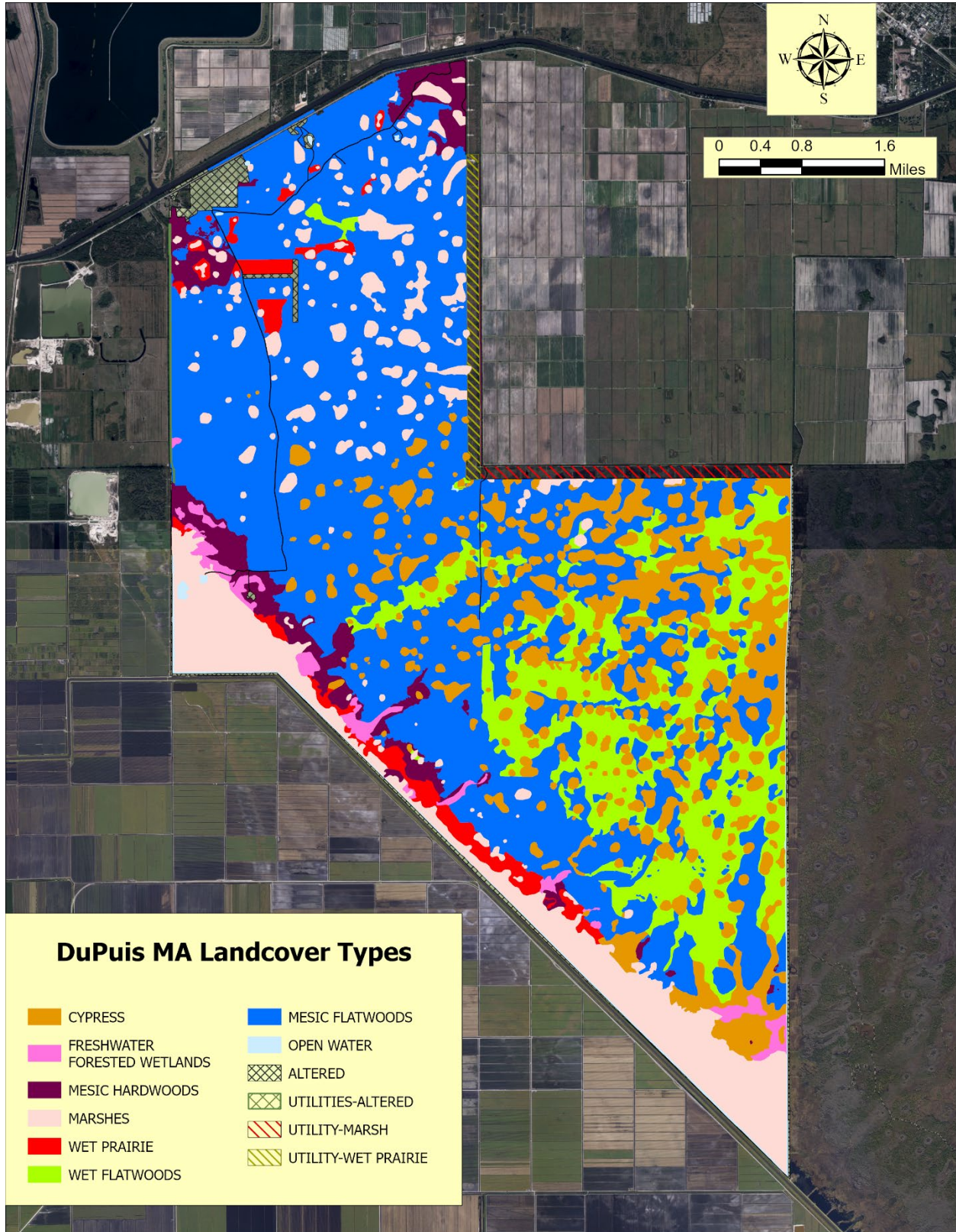


Figure 3. Plant community classifications within the DuPuis MA.



Map 12. Distribution of natural communities and altered landcover in the DuPuis MA.

Listed Species

Listed species include those plants and animals identified as rare, threatened, or endangered by the U.S. Fish and Wildlife Service (FWS), FWC, and the Florida Department of Agriculture and Consumer Services. The DuPuis MA supports natural habitats for several state-listed endangered or threatened plant species. **Table 1** lists the plant species found within the management area.

Table 1. Listed plant species associated with the DuPuis MA and current status.^a

Common Name	Scientific Name	Status
Blue-Flowered Butterwort	<i>Pinguicula caerulea</i>	ST
Cardinal Wild-Pine	<i>Tillandsia fasciculata</i>	SE
Catesby's Lily	<i>Lilium catesbaei</i>	ST
Celestial Lily	<i>Nemastylis floridana</i>	ST
Giant sword fern	<i>Nephrolepis biserrata</i>	ST
Giant Wild-Pine	<i>Tillandsia utriculata</i>	ST
Hand fern	<i>Ophioglossum palmatum</i>	SE
Manyflowered Grasspink	<i>Calopogon multiflorus</i>	ST
Pinepink Orchid	<i>Bletia purpurea</i>	ST
Reflexed Wild-Pine	<i>Tillandsia balbisiana</i>	ST
Rose Pogonia	<i>Pogonia ophioglossoides</i>	ST
Satinleaf	<i>Chrysophyllum oliviforme</i>	ST
Snowy Orchid	<i>Platanthera nivea</i>	ST
Threadroot Orchid	<i>Dendrophylax porrectus</i>	ST
Toothed Maiden Fern	<i>Thelypteris serrata</i>	SE
Twisted Wild-Pine	<i>Tillandsia flexuosa</i>	ST

Nuisance and Invasive Plant Species

South Florida's subtropical climate provides an excellent growth environment for the rapid spread of nuisance and invasive plants that can cause extensive alterations to the natural ecosystems. Nuisance and invasive plant infestations can result in partial or total displacement of native plants, loss of wildlife habitat, and the degradation of public use areas. Environmental changes caused by extensive hydroperiod alterations have been a major factor in the nuisance and invasive plant colonization within the DuPuis MA. Without proper land management, nuisance and invasive plant expansion will continue to displace our native plants, reduce wildlife utilization, and degrade public use areas. The District is committed to reducing the proliferation of invasive species to protect its management areas' ecological values (SFWMD, 2020).

5.4 Wildlife

The plant communities within the management area provide habitat for a wide variety of species, including birds, amphibians, reptiles, and mammals. Initial wildlife inventories were conducted between 1987 and 1989, and the list is updated periodically to incorporate new observations and taxonomic revisions. The most recent version is provided in **Appendix C**.

In addition to supporting resident species, the management area is used by wildlife dispersing from nearby populations and by migratory species that move through during seasonal migrations. Some species also use the area opportunistically for foraging away from their primary roosting or breeding sites.

The DuPuis MA falls within the geographic priority wetland zones identified in several major conservation plans, including the North American Waterbird Conservation Plan (NAWCP), the North American Waterfowl Management Plan (NAWMP), and the Partners in Flight North American Landbird Conservation Plan (PIF). The area provides important foraging, nesting, and roosting habitat for numerous waterbird species, contributing to NAWCP objectives. It offers critical foraging habitat for migrating and wintering waterfowl, as well as breeding and nesting habitat for wood ducks and mottled ducks, supporting NAWMP goals. Additionally, the management area supports nesting and foraging habitat for a range of wetland-associated landbirds, including thirteen PIF Species of Continental Importance.

Rare, Threatened and Endangered Listed Species

The DuPuis MA supports a variety of federally protected wildlife species. Several federally listed wildlife species have been observed in the management area, including one (1) listed as endangered, three (3) as threatened, and one (1) as threatened due to similarity of appearance. The area also supports six (6) species designated as state threatened. A list of these species is included in **Table 2**.

Table 2. Listed wildlife species utilizing the DuPuis MA & current status.^a

Common Name	Scientific Name	Status
Birds		
Crested Caracara	<i>Caracara cheriway</i>	FT
Everglades Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	FE
Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	ST
Little Blue Heron	<i>Egretta caerulea</i>	ST
Red-cockaded Woodpecker	<i>Picoides borealis</i>	FT
Roseate Spoonbill	<i>Platalea ajaja</i>	ST
Southeastern American Kestrel	<i>Falco sparverius paulus</i>	ST

Table 2 Continue. Listed wildlife species utilizing the DuPuis MA & current status.

Common Name	Scientific Name	Status
Tricolored Heron	<i>Egretta tricolor</i>	ST
Herpetofauna		
American Alligator	<i>Alligator mississippiensis</i>	FT(S/A)
Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	FT
Gopher Tortoise	<i>Gopherus polyphemus</i>	ST

a. Key to abbreviations: Species listed by the State of Florida as Federally-designated Endangered (FE), Federally-designated Threatened (FT), and Federally-designated Threatened because of similarity of appearance [FT(S/A)].

5.5 Cultural Resources

Thirteen archaeological sites within the DuPuis MA are registered in the Florida Master Site File (FMSF). Native American occupations at these locations date to approximately 500 B.C. and span the Glades I Late through Glades *IIIb/IIIc* periods, associated with the Belle Glade culture. Cultural affiliation is identified through diagnostic ceramic types such as Belle Glade Plain, St. Johns Plain, and sand-tempered plain, which reflect regional traditions emerging after 500 B.C. Artifacts found with Glades-era pottery, including shark teeth, shell tools, sea turtle remains, and chert, also indicate exchange networks reaching coastal and central Florida. During the Seminole War (1835), Seminole groups used the DuPuis MA and adjacent high ground as refuge; severe hardship experienced in the area contributed to the name “Hungryland.”

Archaeological sites within the management area are primarily located along the southern boundary near sloughs that historically drained toward the Everglades. The Glades period in this region is characterized by circular and linear earthworks. Three sites within the management area are significant prehistoric earthworks eligible for the National Register of Historic Places (NRHP) share this characteristic, and two sites are highly sensitive prehistoric burial mounds. Investigations at four of the earliest documented sites revealed substantial cultural resources consistent with patterns known from the eastern Lake Okeechobee area.

One site is an important example of a circle-ditch earthwork with an associated habitation area. Although circle-ditch sites are geographically widespread, only sixteen are known in southern Florida, many of which have been destroyed. These earthworks generally date to ca. 1000 B.C.–A.D. 200, but evidence from this site suggests a broader temporal range, possibly extending into the late Archaic and Florida Transitional periods. Artifacts observed include sand-tempered plain, Belle Glade Plain, and St. Johns Plain sherds; shark-tooth and bone tools; chert flakes; and a Hernando-type chert biface. Stratigraphy indicates two distinct occupations.

Another site contains extensive black-earth midden deposits, vertically and horizontally, covering at least 57,352 sq ft, and includes known burial mounds. Two occupation layers were documented: the lower contains chert flakes (absent in the upper), while both contain similar

ceramic assemblages dominated by sand-tempered plain sherds with low frequencies of Belle Glade Plain and St. Johns Plain. The presence of a Miami Incised sherd (a Glades *Ila* marker, ca. A.D. 750–900) and the limited occurrence of Belle Glade Plain suggest occupation primarily between A.D. 500 and 1100. Despite surface disturbance from a road and former structures, the subsurface preservation remains excellent, with intact occupation layers.

A third site contains a high conical mound with outlying crescent-shaped earthworks. The site remains exceptionally well preserved, with fairly intact earthen berms and minimal evidence of prior digging. Indications that it is a burial mound with Spanish contact-period materials further enhance its significance. Most comparable sites dating to this period have been heavily damaged or destroyed.

A fourth site consists of two linear earthworks terminating at a small sand mound partly encircled by a crescent-shaped earthwork. Additional features include attendant mounds and a thin midden on a large crescent-shaped hammock. Although the arrangement is characteristic of sites in the Lake Okeechobee area, heavy disturbance from historical cattle and sheep grazing, modern road construction, and agricultural modifications has compromised the site's integrity. The disturbance, combined with the relatively thin midden, indicates the site no longer retains sufficient integrity to be considered a significant resource.

Management of known archaeological sites within the DuPuis MA prioritizes preserving site integrity and preventing ground-disturbing activities. Vegetation management and prescribed burning are planned and conducted to avoid impacts on cultural resources.

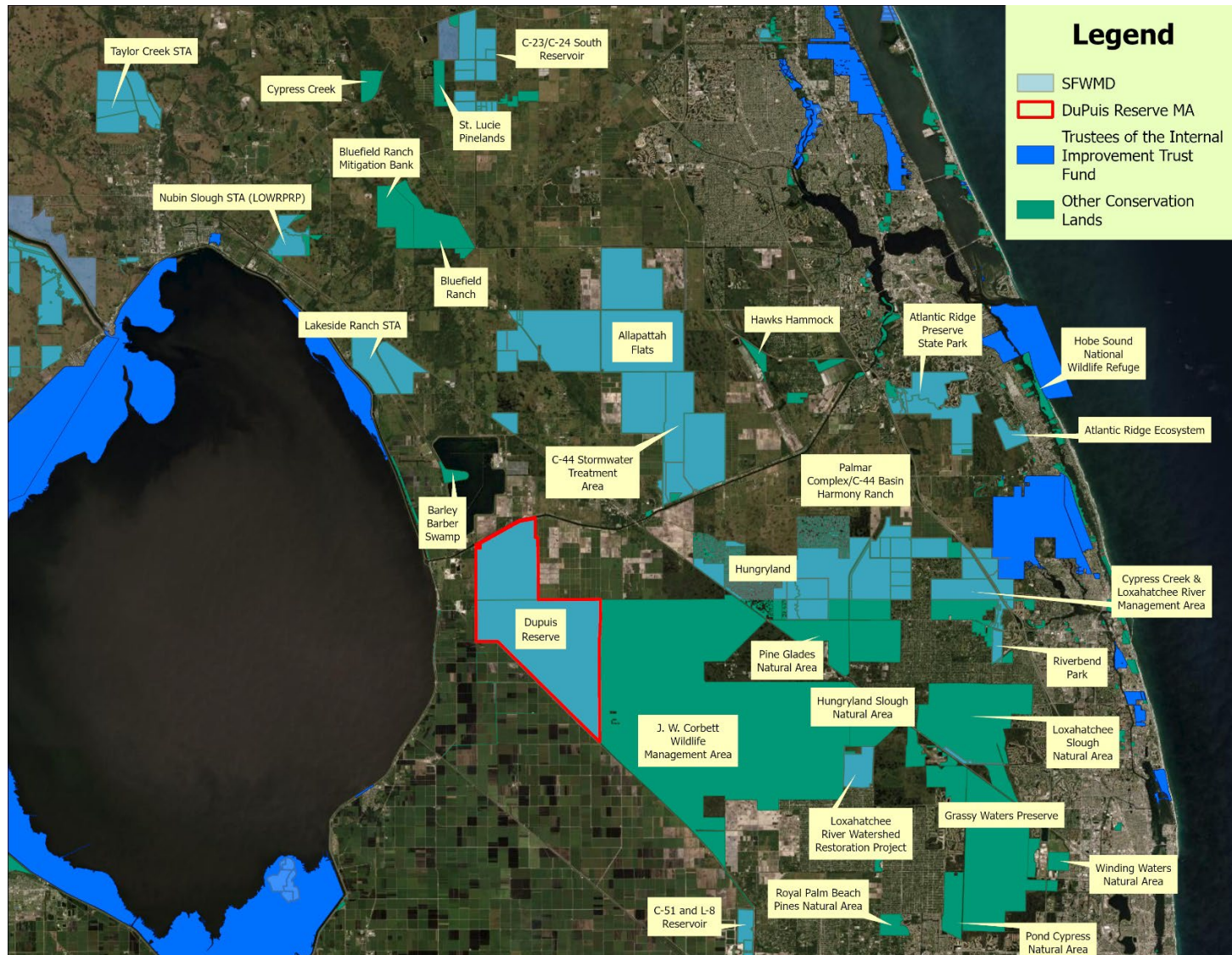
5.6 Mitigation

The District utilized available funds from mitigation payments made by Florida Power & Light Company (FPL) to support land management activities within the DuPuis MA. As part of regulatory mitigation for wetland impacts associated with FPL's Levee Midway 500-kV Transmission Line project, FPL funded the restoration of approximately 850 acres of wetlands within the L-8 Marsh. The L-8 berm construction and hydrologic improvements for the marsh restoration were completed in accordance with Department of Environmental Regulation (now FDEP) Permit No. 43 & 502142156 and U.S. Army Corps of Engineers Permit No. 199200851 (IP-RP). See the Hydrologic and Habitat Restoration section below for additional details.

5.7 Potential Additions

The District acquires land through donations, mitigation, and direct purchase. Acquisition of the DuPuis MA protected 35 sections of wetland and upland habitats, expanded the conservation corridor established by the J.W. Corbett WEA, and enhanced regional water quality. Although no additional acquisitions are required to support current land management activities, purchases from willing adjacent landowners would further improve water quality in the region.

DuPuis Management Area General Management Plan 2026 – 2036
South Florida Water Management District, Land Stewardship Section



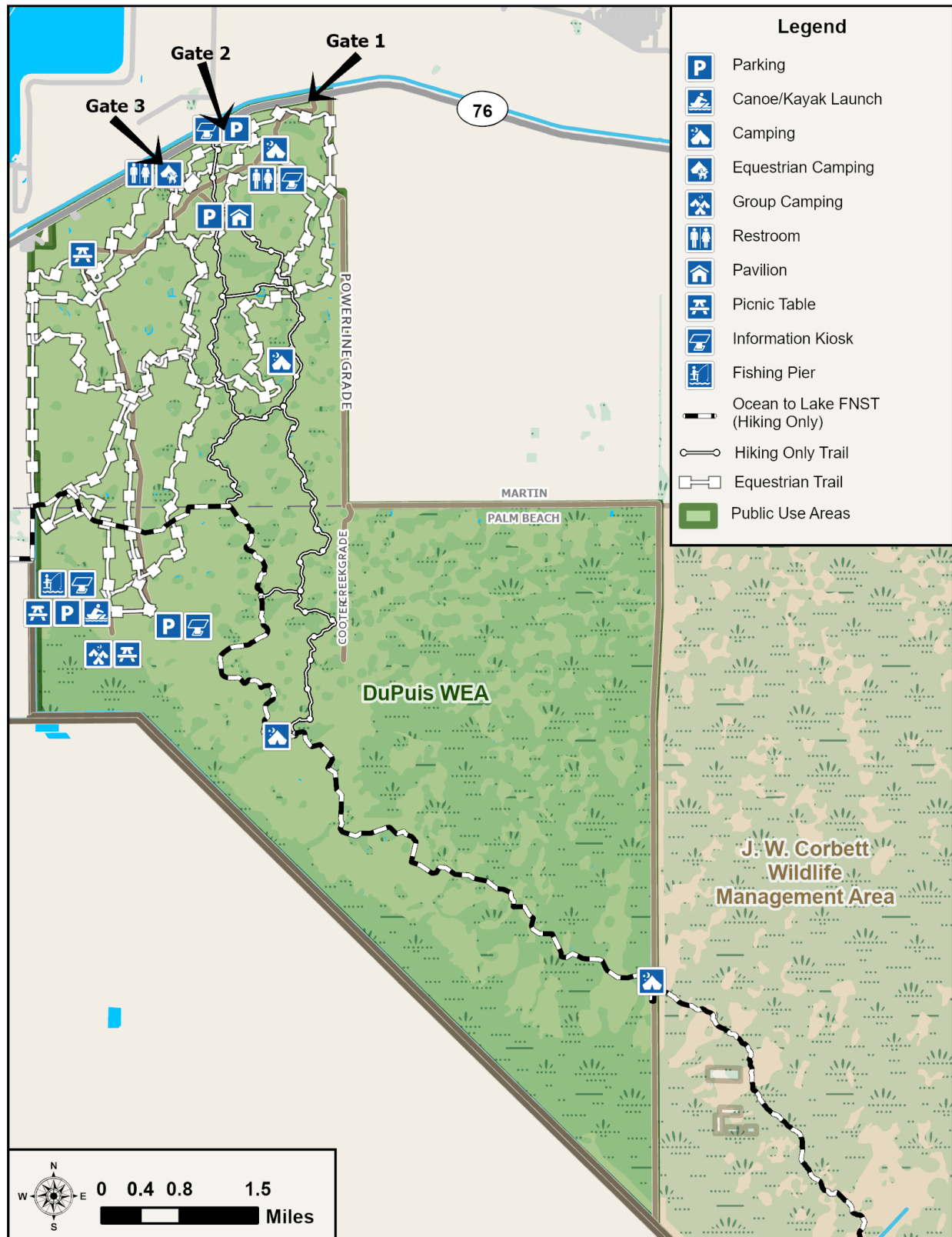
6. PUBLIC USE

The District encourages public use of management areas for appropriate natural resource-based activities. District lands are generally available for public use, except in instances where the public use would be incompatible with the purposes for which these lands were acquired, there is no legal public access, or where construction activities prohibit public entry. Public input into the management of these areas is solicited at the District's quarterly Recreational Forum Meetings. In coordination with partnering agencies, adjustments to public use opportunities are made on an ongoing basis through the Recreational Forum Meetings and rulemaking, if necessary. This plan describes the scope of public use opportunities available or planned as of the date of the management plan. Compatible recreational activities on District lands typically include hiking, biking, hunting, fishing, frogging, horseback riding, canoeing, geocaching, boating, primitive camping, environmental education, wildlife viewing, nature photography, natural history study, and flora and fauna identification. These activities are designed to maximize the diversity and variety of recreational options available while ensuring the necessary resource protection measures are in place. This approach helps to maintain conservation values and ensures long-term benefits for the public.

The DuPuis MA is designated as a Public Use Area (PUA) to provide the public with recreational access. It is also designated by FWC as a Wildlife and Environmental Area (WEA). The management area is accessible from State Road 76 and offers a variety of public recreation opportunities, including hiking, biking, horseback riding, hunting, fishing, canoeing, and camping. Gate 1 is the primary entrance, providing vehicular access to the campgrounds, pavilion, picnic areas, and fishing pier. Gate 2 is the main access point for the hiking trailhead, and Gate 3 provides entry to the equestrian center and the RV and trailer camping area. Visitors can enjoy 13.6 miles of hiking and biking trails and 38.5 miles of equestrian trails. Additionally, 38.5 miles of the Florida National Scenic Trail's Ocean to Lake Hiking Trail pass through the management area, linking recreational opportunities within the DuPuis MA, J.W. Corbett WEA, Palm Beach County Natural Areas, and Jonathan Dickinson State Park.

Three designated campgrounds are located in the management area, along with three primitive camping sites situated along the trail system. The District offers a free Special Use License that allows the public to use recreation opportunities, including equestrian camping and tent and RV/trailer camping, within the DuPuis MA. Limited recreational fishing opportunities are also available. Recreational amenities within the DuPuis MA are illustrated in **Map 14**. Additional information, including maps and Special Use License details, is available in the District's recreation guide, on the District's website, and on the Florida Trail Association's website.

The District partners with FWC to manage game species and public hunting opportunities on District lands designated as WMAs, WEAs, PSGHAs, and PUAs. These designations allow FWC to utilize biologists and law enforcement staff to assist in the management of wildlife on District lands and to enforce wildlife and public use rules for resource protection. These designations also allow the FWC to establish hunting seasons and promulgate laws regulating public activities in these areas. A hunting brochure (**Appendix D**) outlining the regulations for hunting and additional information is available online.



7. NATURAL RESOURCE MANAGEMENT

To keep native plant communities healthy and productive, District land managers take appropriate actions to compensate for the loss of natural processes. Several land management practices are utilized to preserve the ecological health and function of the management areas. These practices include prescribed burning fire-dependent plant communities with fire return intervals that mimic natural fire regimes; controlling invasive vegetation through the selective use of herbicides and biological control agents; restoring the physical structure of plant communities and biological diversity through mechanical vegetation management, including mowing, chopping and shredding; and implementing hydrologic restoration activities where the natural hydrology has been altered through ditches, canals, and other surface water drainage features.

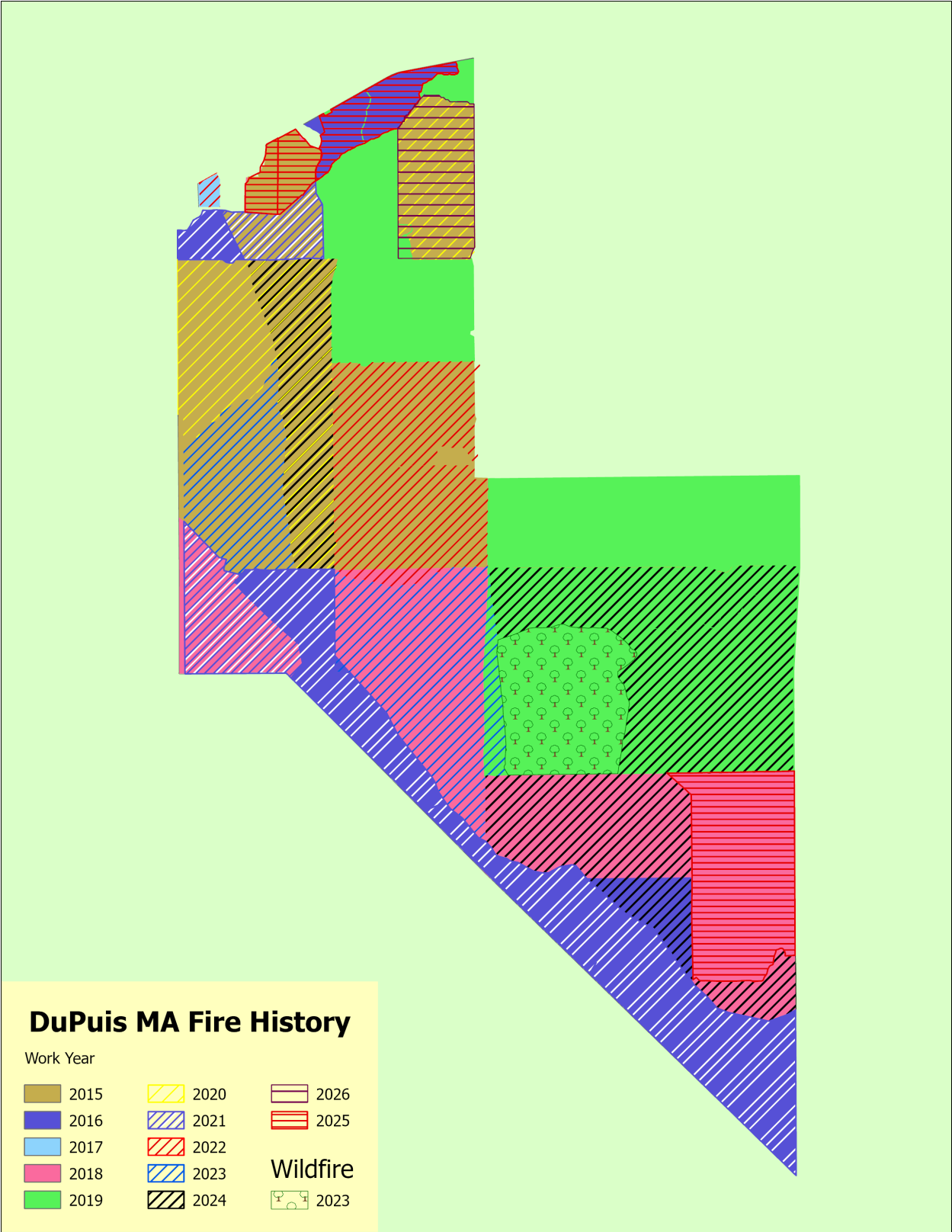
7.1 Fire

Fire has shaped the distribution of plants in Florida's ecosystems. Historically, wildfires reduced fuel loads in natural communities. Due to habitat fragmentation and human suppression efforts, these fires no longer occur with historical frequency or extent, resulting in alteration to the natural community structure and function in fire-dependent communities. Most plant communities in Florida are adapted to periodic fires and rely on them to maintain their vegetative characteristics and biodiversity. Land Managers use prescribed burning to reduce hazardous buildup of vegetative fuel load, maintain plant species diversity, enhance wildlife habitat, and encourage restoration of native plant communities. Land Stewardship recognizes the importance of fire as a management tool and has integrated prescribed fire into its land management strategy.

Fire History

Limited fire history exists for the DuPuis MA prior to District acquisition in 1986, and conditions before the mid-1950s are largely unknown. However, grazing practices in the region suggest that native rangelands were likely burned regularly to improve forage. From 1955, when the previous owners acquired the property, until about 1980, annual winter burns were conducted throughout the pinelands, except for pasture areas. Between the late 1950s and the 1970s, the improved pastures on the western portion and in the area that now comprises the L-8 Marsh were not burned. Winter burning continued on most of the eastern portion of the property, east of Cooter Creek Grade, between 1980 and 1986, and these fires were typically low-intensity, slow-moving grass fires.

The District initiated its prescribed fire program in 1989, with the primary goal of reducing hazardous understory fuel loads, particularly overgrown saw palmetto, resulting from past overdrainage and inconsistent burning practices. Since its implementation, a systematic burn rotation has been established for fire-dependent communities, thereby restoring the natural fire regime within the management area (**Map 15**).



Map 15. DuPuis MA fire history.

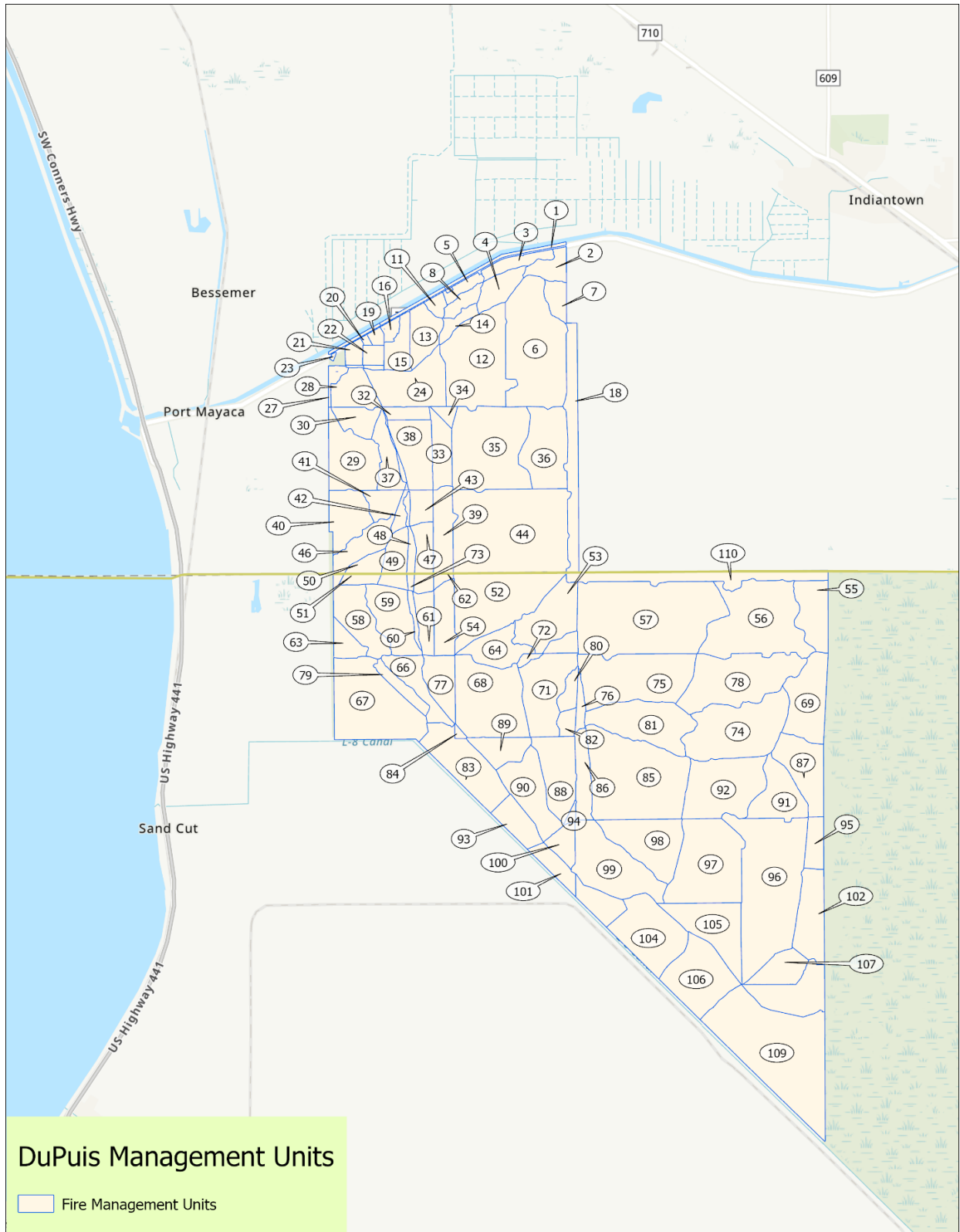
Prescribed Fire Planning

The fire management program for the DuPuis MA includes wildfire prevention, detection and suppression, and prescribed burning. Prescribed burn standards and procedures are outlined in the Land Stewardship's Wildlands Fire Manual, which serves as the centralized reference for fire management on District lands. The manual establishes the procedures necessary to ensure compliance with statutory requirements of Chapter 590, Florida Statutes, Chapter 5I-2, Florida Administrative Code, and Chapter 62-256, Florida Administrative Code.

To implement these actions effectively, the management area is divided into management units for prescribed fire application (**Map 16**). Existing roads and trails, disked firelines, and, where feasible, natural firebreaks such as wetlands and ecotones define the boundaries of these units. Smoke-management requirements and limited resources present ongoing challenges to sustaining a robust fire program for the DuPuis MA; however, maintaining low fuel loads remains essential to reducing the risk of destructive wildfires.

Prescribed fire is applied within these units with different management objectives tailored to plant community needs, wildlife utilization, and species-level requirements. Prescriptions for these burns specify environmental conditions, return frequency, and ignition techniques to create mosaic burns that do not remove all vegetation while redefining the boundaries of embedded plant communities that are not fire-dependent, such as hammocks or swamps. A healthy fauna in South Florida is integrally tied to fire return intervals, seasonality, and intensities. Frequent fire tends to favor understory vegetation that provides essential forage and mobility for wildlife. Although high-intensity winter burns give the appearance of removing more fuels from the landscape, spring and summer burns achieve a more effective reduction of fuel and are preferred from a wildlife management and ecological perspective. Spring growing-season burns provide a mosaic effect, allowing the retention of cover and foraging opportunities for wildlife that winter burns may temporarily eliminate. Late-spring and summer burns help control the spread of hardwoods. Because prolonged dry periods make it increasingly difficult to conduct safe, successful spring burns, land managers utilize less intensive summer burns to achieve management goals. Summer burns reduce the likelihood of spot fires and escapes because of the amount of green vegetation and high relative humidity. Burning in late summer and early fall also helps replicate historical fire patterns that occurred in many habitats during occasional lightning strikes. While spring and summer burns may result in isolated nest losses, affected species (e.g., quail, Turkey, etc.) typically re-nest, and the resulting habitat conditions offer a better food source for fledged young.

Prescribed fire has been the primary tool shaping and maintaining the desired community structure within the fire-dependent natural communities of the DuPuis MA. Its application reinforces the open conditions characteristic of pine flatwoods and helps reduce woody species encroachment in the wetlands. Strategic fire applications also stimulate the regrowth of native grasses and forbs that compete with pasture grass (e.g., bahiagrass, etc.) within former pasture areas. These post-fire flushes of herbaceous vegetation also provide essential forage and cover for wildlife that depend on open, grassy structure, including ground-nesting birds and small mammals. These ecological responses collectively highlight the crucial importance of prescribed fire in maintaining the health, resilience, and biodiversity of the natural communities within the management area.



Map 16. DuPuis MA fire management units.

Additionally, meeting the prescribed fire goals and objectives for each fire-maintained community is largely dependent on weather conditions, personnel, and statewide emergency situations such as wildfires, hurricanes, and other natural disaster responses. Ideally, burn crews would consist of 6-8 or more individuals. While the District Land Stewardship employees successfully conduct most prescribed burns, some prescribed burns require outside assistance to ensure they are conducted in a safe and effective manner. The DuPuis MA receives assistance from FWC, Martin County Ecosystem Restoration & Management, different divisions of the District and regions of Land Stewardship, and trained volunteers.

Wildfire Suppression

Lightning-induced wildfires are common across Florida. The Florida Forest Service (FFS) is responsible for preventing, detecting, and suppressing wildfires in Florida (§590.01, Florida Statutes). Maintaining fire-dependent habitats through frequent prescribed burns is the primary way the District limits the negative impacts of wildfires and enhances the FFS ability to respond effectively to wildfire events. When a wildfire is detected, the land manager immediately notifies FFS while the Land Stewardship staff responds and, if appropriate, begins fire suppression efforts. Upon arrival, FFS takes command of the fire while the District continues to provide logistical and situational support as needed.

The FFS Okeechobee District and Everglades District are responsible for wildfire response within the DuPuis MA.

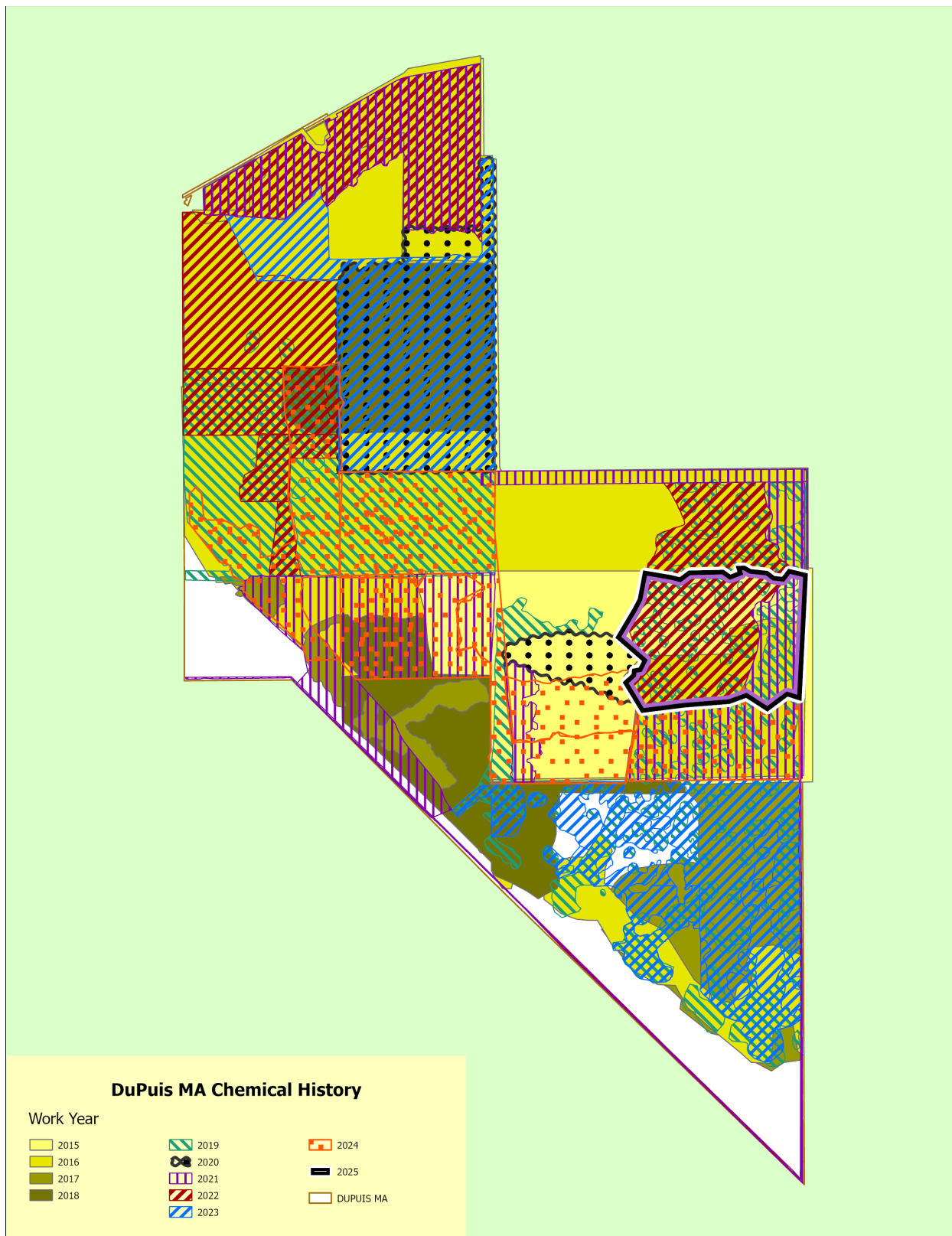
7.2 Control of Nuisance and Invasive Plant Species

The District's vegetation management program utilizes an Integrated Pest Management strategy to maintain nuisance and invasive plant populations at the lowest feasible level. Integrated Pest Management is an ecosystem-based strategy that focuses on the long-term prevention of pests or their damage through the combination of management techniques, including prescribed fire, herbicide application, mechanical treatment, biological control, and physical removal. The selection of control measures is dependent upon species type, environmental factors, and the natural communities impacted.

Invasive plant control funding represents the largest item in the Land Stewardship Program's annual budget. Land managers have developed specific management area treatment strategies that optimize invasive plant control efforts. Although Category I and II species on the Florida Invasive Species Council (FISC) list threaten the function and ecological stability of natural communities, achieving maintenance on all species identified on these lists is currently not feasible with existing budgetary resources. The primary goal of the Land Stewardship's invasive plant management program is to control the spread of 30 priority invasive species (**Table 3**), in addition to area-specific priority species based on early detection/rapid response and locally significant impacts or potential for impacts.

Table 3. Land Stewardship Section Invasive Species Priority List and Targeting Sequence.

Scientific Name	Common Name	FISC Category
<i>Melaleuca quinquenervia</i>	Melaleuca, Paper Bark	I
<i>Casuarina equisetifolia</i>	Australian-Pine, Beach Sheoak	I
<i>Casuarina glauca</i>	Suckering Australian-Pine, Gray Sheoak	I
<i>Casuarina cunninghamiana</i>	River Sheoak, Australian-Pine	I
<i>Lygodium japonicum</i>	Japanese Climbing Fern	I
<i>Lygodium microphyllum</i>	Old World Climbing Fern	I
<i>Schinus terebinthifolia</i>	Brazilian Pepper	I
<i>Imperata cylindrica</i>	Cogon Grass	I
<i>Rhodomyrtus tomentosa</i>	Downy Rose-Myrtle	I
<i>Ardisia elliptica</i>	Shoebuttan Ardisia	I
<i>Ardisia crenata</i>	Coral Ardisia, Scratchthroat	I
<i>Dioscorea bulbifera</i>	Air potato	I
<i>Solanum tampicense</i>	Wetland Nightshade, Aquatic Soda Apple	I
<i>Solanum viarum</i>	Tropical Soda Apple	I
<i>Syzygium cumini</i>	Jambolan-Plum, Java Plum	I
<i>Acacia auriculiformis</i>	Earleaf Acacia	I
<i>Cupaniopsis anacardioides</i>	Carrotwood	I
<i>Schefflera actinophylla</i>	Schefflera, Australian Umbrella Tree; Octopus Tree	I
<i>Bischofia javanica</i>	Bishopwood	I
<i>Triadica sebifera</i>	Popcorn Tree, Chinese Tallow Tree	I
<i>Leucaena leucocephala</i>	Lead Tree	II
<i>Albizia julibrissin</i>	Mimosa, Silk Tree	I
<i>Mimosa pigra</i>	Catclaw Mimosa	I
<i>Dioscorea alata</i>	Winged Yam	I
<i>Senna pendula</i> var. <i>glabrata</i>	Christmas Senna Climbing Cassia, Christmas Cassia	I
<i>Solanum diphyllum</i>	Twoleaf Nightshade	II
<i>Albizia lebeck</i>	Woman's Tongue	I
<i>Colocasia esculenta</i>	Wild Taro	I
<i>Mikania micrantha</i>	Mile-A-Minute Vine	II
<i>Abrus precatorius</i>	Rosary Pea	I



Map 17. DuPuis MA chemical history.

Currently, Old World climbing fern (*Lygodium spp.*), cogon grass (*Imperata cylindrica*), Brazilian pepper (*Schinus terebinthifolius*), and shoebutton ardisia (*Ardisia elliptica*) are the most prolific invasive species targeted in the DuPuis MA. Old World climbing fern and cogon grass remain the most widespread invasive species throughout the management area despite many years of systematic treatment. Shoebutton ardisia, often forming dense monocultures in the subcanopy, is primarily concentrated in the southern portion of the management area, particularly within the L-8 Marsh and adjacent management units, but scattered Shoebutton have recently been observed north of these known infestations. Because of its tendency to spread, shoebutton ardisia continues to be systematically targeted to limit further expansion. Brazilian pepper seedlings are common across the property, with dense clusters found along remnant ditch banks and the perimeter of the management area.

Other opportunistic woody species, including java-plum (*Syzygium cumini*), carrotwood (*Cupaniopsis anacardioides*), and earleaf acacia (*Acacia auriculiformis*), are present at low levels and are removed when encountered to prevent future establishment. Melaleuca (*Melaleuca quinquenervia*) is more common but has been nearly eradicated across most of the management area. Current occurrences are typically scattered sprouts originating from dormant seed banks, with only occasional mature trees observed. These seedlings are systematically treated to prevent reinfestation, and the locations of mature trees are mapped for follow-up treatment.

A small, disturbed area in the northwest corner contains air potato (*Dioscorea bulbifera*), but its coverage is minimal and does not currently pose a significant management concern. Tropical nutrush (*Scleria microcarpa*), a relatively new species in the DuPuis MA, has been added to the EDRR list due to its rapid spread across the marsh communities. Since this species is an annual plant, treatments must be timed before seed production to be effective. Management efforts, therefore, focus on mapping occurrences and targeting resprouts before they set seed.

Several additional nuisance and invasive species affect the management area, including include *Sclerias spp.*, torpedograss (*Panicum repens*), rosary pea (*Abrus precatorius*), paragrass (*Urochloa mutica*), napiergrass (*Cenchrus purpureus*), smutgrass (*Sporobolus indicus*), bahiagrass (*Paspalum notatum*), West Indian marsh grass (*Hymenachne amplexicaulis*), primrose willow (*Ludwigia spp.*). These species are not systematically targeted due to budget limitations. Rosary pea, although generally low in coverage, is widespread and interspersed with native vines, making treatment inefficient. Pasture grasses such as paragrass, napiergrass, smutgrass, and bahiagrass, remain interspersed within the native groundcover but have declined substantially as native herbaceous species have reestablished following hydrologic improvements. Management of pasture grasses primarily relies on mowing to limit seed production in open areas and prescribed fire where they occur with desirable native grasses.

Torpedograss and West Indian marsh grass remain persistent across roads, firelines, marshes, prairies, and interconnected ditches. Although West Indian marsh grass is less widespread than torpedograss, it remains prominent in some cypress domes and remnant ditches. Initial torpedograss invasions were observed in several rehydrated wetlands, and the species is now widespread across the management area. Previous control efforts for both species have been costly and largely ineffective at reducing their distribution. Despite their persistence, neither species appears to be expanding, particularly in areas with longer hydroperiods. This trend suggests that

continued efforts to enhance hydroperiods across the management area may support long-term suppression of these nuisance and invasive species.

Nuisance and invasive species treatment is primarily conducted by herbicide applicators contracted through the District's Vegetation Management Section. Supplemental efforts by District staff are also conducted on small or sporadically distributed infestations. Treatment areas are scheduled based on the severity of nuisance and invasive plant infestation, time since the last treatment, property access, groundwater conditions, avian nesting seasons, and public use. All treatments follow best management practices for herbicides and use the best available science. EDRR species are primarily managed by land management staff. Treatment dates, locations, and species treated are recorded in a GIS database, and all herbicide use is recorded in the District's nuisance and invasive plant control database.

Land managers also collaborate with the United States Department of Agriculture (USDA) – Agricultural Research Service (ARS) to introduce biological control agents on District lands, helping to reduce the proliferation of invasive pest plants. Federally approved biological control agents that have been introduced or have migrated onto District lands include the melaleuca weevil (*Oxyops vitiosa*), water hyacinth planthopper (*Megamelus scutellaris*), water hyacinth weevils (*Neochetina spp.*), the Brazilian pepper thrips (*Pseudophilothrips ichini*), the Old World climbing fern white lygodium moth (*Austromusotima camptozonale*), brown *Lygodium* moth (*Neomusotima conspurcatalis*), and eriophyid mite (*Floracarus perrepae*).

In the DuPuis MA, land managers collaborated with ARS to release biological control agents aimed at Old World climbing fern. In 2023, the brown *Lygodium* moth and eriophyid mite were introduced in the northeastern part of the management area, on the east side of Cooter Creek Grade.

7.3 Mechanical Vegetation Control

Prescribed fire is the preferred method for managing vegetation in fire-maintained habitats in South Florida due to its cost-effectiveness and environmental benefits. In areas where prescribed fire cannot be used, such as in urban interface zones, or when other constraints prohibit the use of prescribed fire, mechanical vegetation control offers an alternative way to reduce vegetation coverage and fuel loads. Mechanical vegetation control can reduce woody plant growth and increase plant species diversity through the use of mowing, chopping, and shredding. Selective forest thinning may also be used to improve the natural environmental characteristics of certain habitats.

Effective management of the DuPuis MA required a mix of mechanical and prescribed fire treatments to address decades of ecological imbalance. Past fire suppression and hydrologic alterations contributed to unusually dense stands of slash pine, making them more vulnerable to disease and pine beetle infestations that spread extensively across the region during the 1990s. As a result, numerous trees within the DuPuis MA were affected. To address this infestation, slash pines were harvested across more than 1,900 acres of flatwoods between 1999 and 2007, with an additional 500 acres selectively thinned to help reestablish natural stand densities. During the same period, dense cabbage palm stands were also reduced to limit their encroachment into historically coniferous habitats.

Over the past decade, mechanical treatments have continued to focus on selectively thinning cabbage palm to restore vegetation structure in pine and cypress communities and to manage understory brush species so prescribed fire can be safely and effectively applied. Since low-intensity fires often produce patchy burns, mechanical treatments are also used in fire shadows after a burn to reorganize fuel loads where prescribed burns do not achieve desired ecological outcomes. Additionally, mechanical treatment plays an important role in reducing fuel height along management unit boundaries, minimizing the risk of fire escape, and protecting RCW cavity trees. Mechanical vegetation control will remain an essential management tool to complement prescribed fire and sustain healthy, resilient upland and wetland communities within the Reserve.

Timber Management

Harvesting timber is another form of mechanical vegetation control. If the District determines that the ecological needs of an area require the timber stand to be thinned, a harvest may be designed for that purpose. However, many listed species depend upon mature pine trees for their survival, so often it is the smaller trees that are targeted. These trees tend not to have the marketability of larger trees, resulting in limited opportunities for commercial harvesting.

Timber harvesting was conducted after the property's acquisition to thin dense stands of pine and cabbage palm. Additional commercial timber operations are no longer compatible with the management goals for the DuPuis MA. With the increased efficiency of prescribed fire, combined with low-impact selective mechanical treatments, prescribed fire has become the primary tool for managing overgrown forest conditions. In addition, no marketable pine stands remain within the management area.

Grazing

The District uses cattle grazing to manage nuisance and invasive pasture grasses. This tool is most effective as an interim management tool for managing vegetation on project lands before the water resource project goes into construction. Some management lands include former ranchlands that have a mixture of native range and improved pasture. Cattle grazing is allowed on these properties to minimize the need for physical manipulation and manage the vegetation coverage until funding is secured to restore the native community.

Cattle grazing is not compatible with the management goals for the DuPuis MA.

7.4 Wildlife Management

Wildlife management on the DuPuis MA relies on active habitat management that addresses the needs of all species present. The Land Stewardship program accomplishes this by implementing management strategies that benefit multiple species and habitats while addressing the specific needs of individual species. These strategies include:

- Conducting land management activities that maintain and enhance native wildlife habitats, including prescribed fire and nuisance and invasive plant control;

- Conducting specific management activities that support protected species;
- Following management guidelines for listed species protection as determined by the South Florida Multi-Species Recovery Plan, Volume 1 (U.S. Fish and Wildlife Service (USFWS) 1999), as well as the Florida's Imperiled Species Management Plan (FWC 2016); and
- Maintaining lists of confirmed and potential wildlife species.

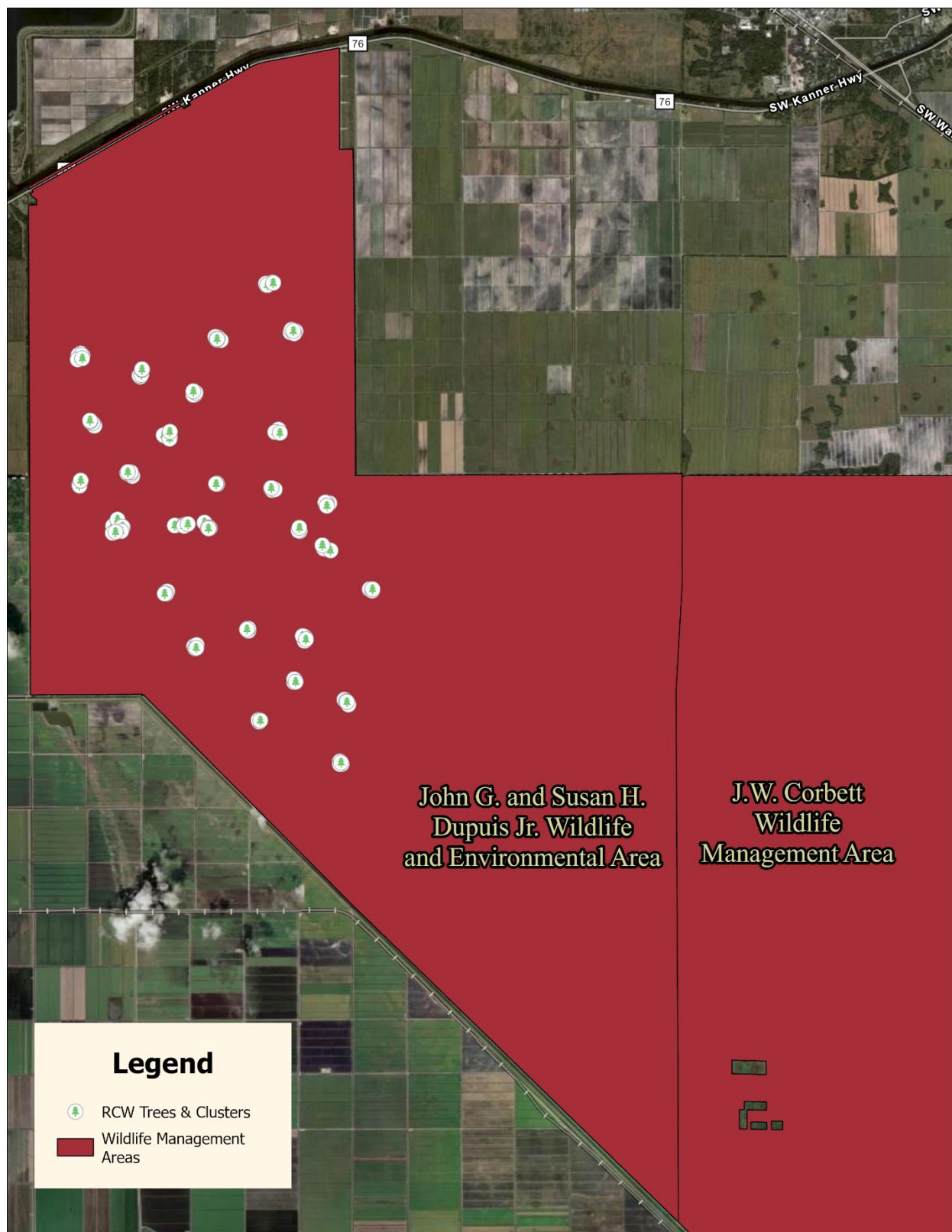
The primary management focus is on restoring and maintaining the natural processes that shape the structure of the natural communities within the management area. By implementing integrated management strategies to restore natural functions such as fire rotation, the species composition in the vegetation communities has improved significantly. This improvement has increased foraging and nesting habitats in the area for species such as Everglade snail kite, Southern bald eagle (*Haliaeetus leucocephalus*), RCW, white-tailed deer (*Odocoileus virginianus*), and Osceola wild turkey (*Meleagris gallopavo osceola*).

Although wildlife management is generally not conducted at a species-specific level, the red-cockaded woodpecker (RCW) is a notable exception within the DuPuis MA. Degradation of the flatwoods community led to the decline of what was once a sizeable RCW colony, and after the last active cavity was destroyed by wildfire in 1989, the species ceased to use the area. Following extensive habitat restoration efforts, FWC reintroduced RCWs into the remaining old-growth slash pine in 2006. Artificial cavities were installed in suitable trees to support reestablishment, and species-specific management was initiated to promote population recovery.

Species-specific management activities for RCWs include installing and maintaining artificial cavities, translocating birds from donor sites, managing vegetation around cavity trees, and monitoring the colony's health and habitat conditions. These efforts are closely integrated with broader land management activities to maintain the ecological conditions required for RCW persistence within the management area. Community-level restoration, combined with species-specific management, ensures that the DuPuis MA continues to support a diverse and thriving wildlife community while enhancing long-term ecological resilience.

Nuisance and Invasive Animal Species

Invasive wildlife species harm native wildlife and can negatively impact native vegetation or seriously interfere with management objectives. Some of the species of concern are Nile monitor (*Varanus niloticus*), purple swamphen (*Porphyrio porphyrio*), feral hog (*Sus scrofa*), pythons (*Python spp.*), tegu (*Salvator merianae*), and spiny iguana (*Ctenosaura similis*). The District coordinates with FWC to reduce the invasive species populations through trapping and public hunts, where hunting is allowed. The results of population control efforts are monitored by periodic site evaluations.



Map 18. Distribution of RCW trees and cluster sites in the DuPuis MA.

Feral hogs (*Sus scrofa*) are the primary invasive animal issue in the DuPuis MA. Feral hogs have significant impacts on natural communities and land management operations. Their disruption of soil and vegetation through rooting alters natural communities and can be especially damaging in sensitive habitats that are slow to recover. Rooting interferes with land management objectives by reducing the horizontal spread of prescribed fires and by creating disturbed areas that are more susceptible to invasive plant establishment. Rooting can also impact hiking trails, reptile populations, and ground-nesting birds. The hog populations in the DuPuis MA are managed through the public hunting program administered by FWC.

The Island Apple snail (*Pomacea maculata*) is widely reported throughout Florida and is not being targeted for geographic containment. Research shows that native apple snail (Florida apple snail, *Pomacea paludosa*) populations have drastically declined. The island apple snail is a highly fecund, fast-growing species that has likely become a permanent part of the Kissimmee River floodplain. Historically, the Florida apple snail has been the main prey for the federally endangered snail kite. As native snail numbers have decreased, snail kites now rely almost entirely on the non-native island apple snail for foraging throughout the state. Because the island apple snail functions as the main food source for snail kites in the region, it is expected to persist without specific management actions to support snail kite populations.

The ambrosia beetle (*Xyleborus glabratus*) is a wood-boring beetle native to Asia that infects trees with Laurel Wilt disease, a disease caused by the fungus *Raffaelea lauricola*. This deadly fungal disease affects trees in the *Lauraceae* family, such as red bay (*Persea borbonia*) and swamp bay (*Persea palustris*). Discovered in Florida in 2010, the fungus has since spread across the state through various native and nonnative ambrosia beetles and has been found in every county. Currently, neither the ambrosia beetles nor the Laurel Wilt fungus is targeted for geographic containment due to the lack of effective control methods for the pest or the disease in natural areas.

Other invasive wildlife sightings in the region, such as the Green Iguana (*Iguana iguana*) and Cuban Treefrog (*Osteopilus septentrionalis*), are not currently being targeted for geographic containment. Management of these species is limited due to factors like a lack of effective control tools, insufficient resources, and limited risk assessment data.

7.5 Hydrologic and Habitat Restoration

Restoration efforts within the DuPuis MA began shortly after the property was acquired and have continued for more than three decades. One of the first major initiatives focused on restoring upland communities on the western portion of the property. In the mid-1990s, the District implemented an extensive prescribed-burning program to restore upland structure and function. Because decades of fire suppression had allowed heavy shrub encroachment and reduced herbaceous fuel, land managers supplemented burning with mechanical thinning and targeted tree harvesting. These treatments opened the mid-canopy layer, enhanced groundcover vegetation, and helped limit the spread of pine bark beetles.

An early environmental assessment also identified wetland and hydroperiod restoration as primary management goals, noting that extensive over-drainage had occurred due to a network of swales and canals that redirected water north to the St. Lucie Canal and south to the L-8 Canal. In

response, a three-phase restoration project was developed to rehydrate interior wetlands and restore 2,341 acres of historic Everglades marsh (L-8 Marsh).

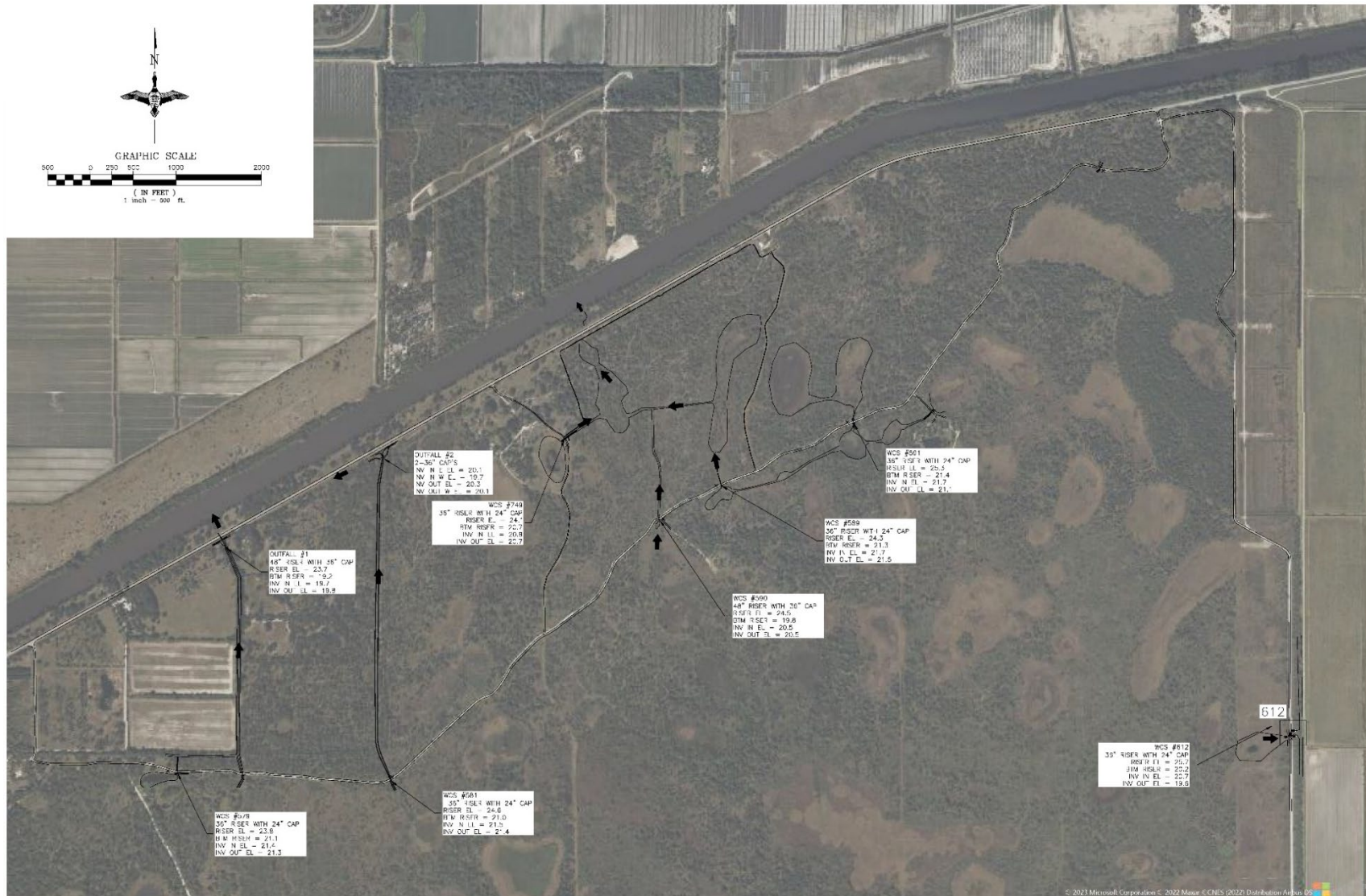
The first wetland-restoration phase occurred in 1990 and 1991, when 40 earthen ditch plugs were installed in strategic interior ditches to re-establish sheetflow and rehydrate isolated wetlands. Approximately 4,000 acres of wetlands were enhanced as a result. Follow-up monitoring showed that native wetland plants recolonized many areas where upland species had become established; however, the restored hydrology also facilitated the spread of exotic wetland species such as torpedo grass, requiring continued invasive plant management.

The second phase focused on restoring the L-8 Marsh along the southern boundary of the property. In the mid-1990s, an eight-mile levee was constructed to separate the management area from the L-8 Canal and the Everglades Agricultural Area. Built to an elevation of 23 ft NGVD, the levee allows water to be retained on the property and discharged through three associated water control structures, which are set at 19.0 ft NGVD. These structures became operational in December 1996. This phase restored approximately 850 acres of the marsh and was funded through District mitigation resources.

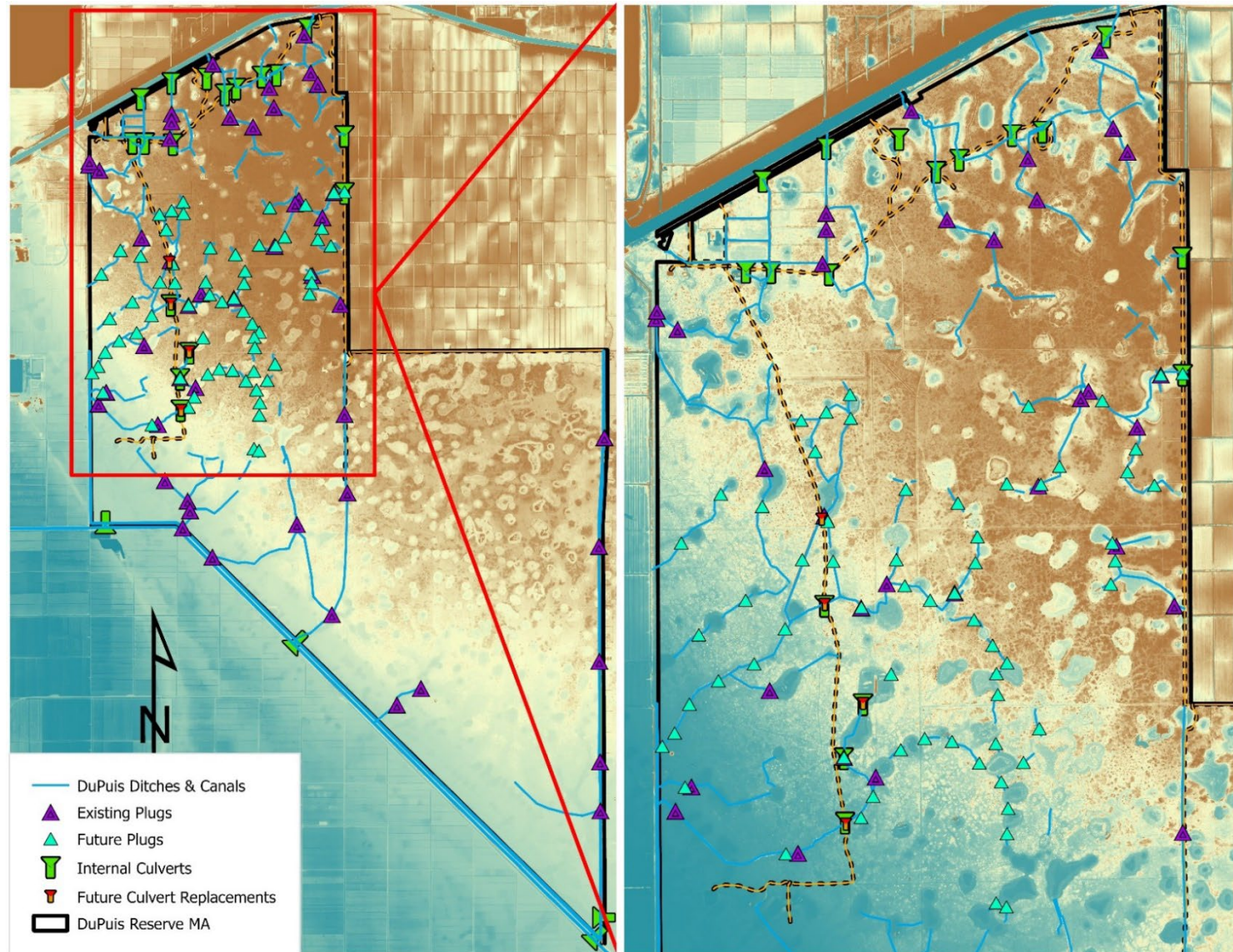
The third phase re-established hydrologic connectivity between the L-8 Marsh and similar habitat within the adjacent J.W. Corbett Wildlife Management Area. In 1992, two sections of the roadway dividing the properties were degraded and stabilized with geo-web swales to reopen historic flow pathways. Additional improvements followed in 2001 with the installation of six culverts equipped with adjustable flashboard risers to increase flow between DuPuis and Corbett. By this time, more than 6,500 acres of wetlands within the DuPuis MA had been enhanced through ditch plugging, levee improvements, and hydrologic reconnection.

Wetland enhancement continued into the 2010s. Around 2016, the Land Stewardship Section began planning for additional ditch plugs and culvert replacements on the northern portion of the property, replacing older culverts with flashboard risers to improve water-level control. During this period, outfall structures along the L-8 Canal were also replaced. In 2022, the District partnered with Ducks Unlimited, Inc. to upgrade infrastructure originally installed by the previous landowners. Improvements included larger-capacity pipes and new risers at key hydrologic locations. In 2023, seven culverts with flashboard risers and two outfall structures were replaced.

During the current management plan period, the District will continue working with Ducks Unlimited to complete the installation of approximately 68 additional ditch plugs and replace remaining culverts within the northern and central-east section of the property. This enhancement project is expected to improve water delivery, extend hydroperiods in the northern wetlands, and support prescribed fire operations by improving access to natural communities that are currently difficult to reach during burns.



Map 19. As-built for the 2023 culvert replacement project.



Map 20. DuPuis hydrologic restoration features: Existing conditions and planned improvements.

7.6 Research and Monitoring

Wildlife Monitoring

An FWC wildlife biologist position is funded by the District and assigned to the DuPuis MA to conduct wildlife monitoring and manage the public hunting program. Data collected from long-term monitoring surveys are analyzed and may be incorporated into statewide studies and reports. These data help guide management decisions, evaluate habitat conditions, and track population trends of key species within the DuPuis MA. Since the last management plan update, several wildlife monitoring programs, originally designed and implemented between 1994 and 2006, have remained active and will continue throughout the 2026-2036 management period.

Wading Bird

Since around 1996, monthly wading bird surveys have been conducted on the DuPuis MA. The 23-mile monitoring route runs through the management area along the Powerline Grade and L-8 levee, with GPS-marked stations every 0.10 mile. The route starts at the western boundary, moves south along the L-8 levee, and then heads north along the Powerline Grade. Surveys take place within three to four hours after sunrise. During these surveys, all observed wading birds are identified at the species level, counted, and assigned to the nearest station.

Red-cockaded Woodpecker

RCWs in the DuPuis MA have been routinely monitored since their reintroduction in 2006. All cavity trees are inspected annually to assess condition and RCW use. Insert boxes are installed or replaced as needed. During the breeding season, all active clusters are surveyed to document group composition and identify individual birds. Nests are monitored throughout the season, and all chicks are banded and followed through fledging.

Eagle

Although bald eagles are no longer listed, all known nests at the DuPuis MA, are monitored once or twice a month beginning in January and continuing until chicks fledge or activity ceases. Observations are conducted from the ground and all nesting behavior is recorded. The findings are reported to Audubon's EagleWatch program.

Northern bobwhite

Northern bobwhite spring call-count surveys have been conducted at Dupuis since 1996. Three 6-mile transects with stations at 0.5-mile intervals are located on the western, northern, and eastern portions of the management area. Beginning the last week of April, each transect is surveyed weekly for 3–4 weeks, with monitoring beginning at sunrise. During an 8-minute listening period at each station, the number of calls and the number of individual quail detected are recorded.

Breeding Bird Survey

The USFWS administers the national Breeding Bird Survey (BBS), which includes a designated 25-mile route in DuPuis MA. The route consists of 50 stops at 0.5-mile intervals. Beginning at sunrise, all birds seen or heard are recorded during a 3-minute count at each stop. The DuPuis route is surveyed each June, and all data are submitted to the USFWS BBS program.

White-tailed Deer

White-tailed deer monitoring has been conducted on the DuPuis MA since 1994 to gather data on herd composition and population trends. Early monitoring involved roadside spotlight surveys. From 1999 to 2019, helicopter surveys were conducted to estimate population indices, sex ratios, and fawn recruitment. Beginning in 2022, trail cameras replaced aerial surveys. Each June, FWC deploys 40 trail cameras at predetermined sites along firebreaks and trails in a rough grid pattern. Locations were selected based on animal sign and accessibility. Deer data are analyzed by statisticians in the FWC deer program to estimate population density and herd structure.

Bat Houses

Four bat houses located near the DuPuis land management office are monitored regularly for bat activity. Observations contribute to ongoing assessment of roost use and bat presence within the management area.

DuPuis MA Condition Class

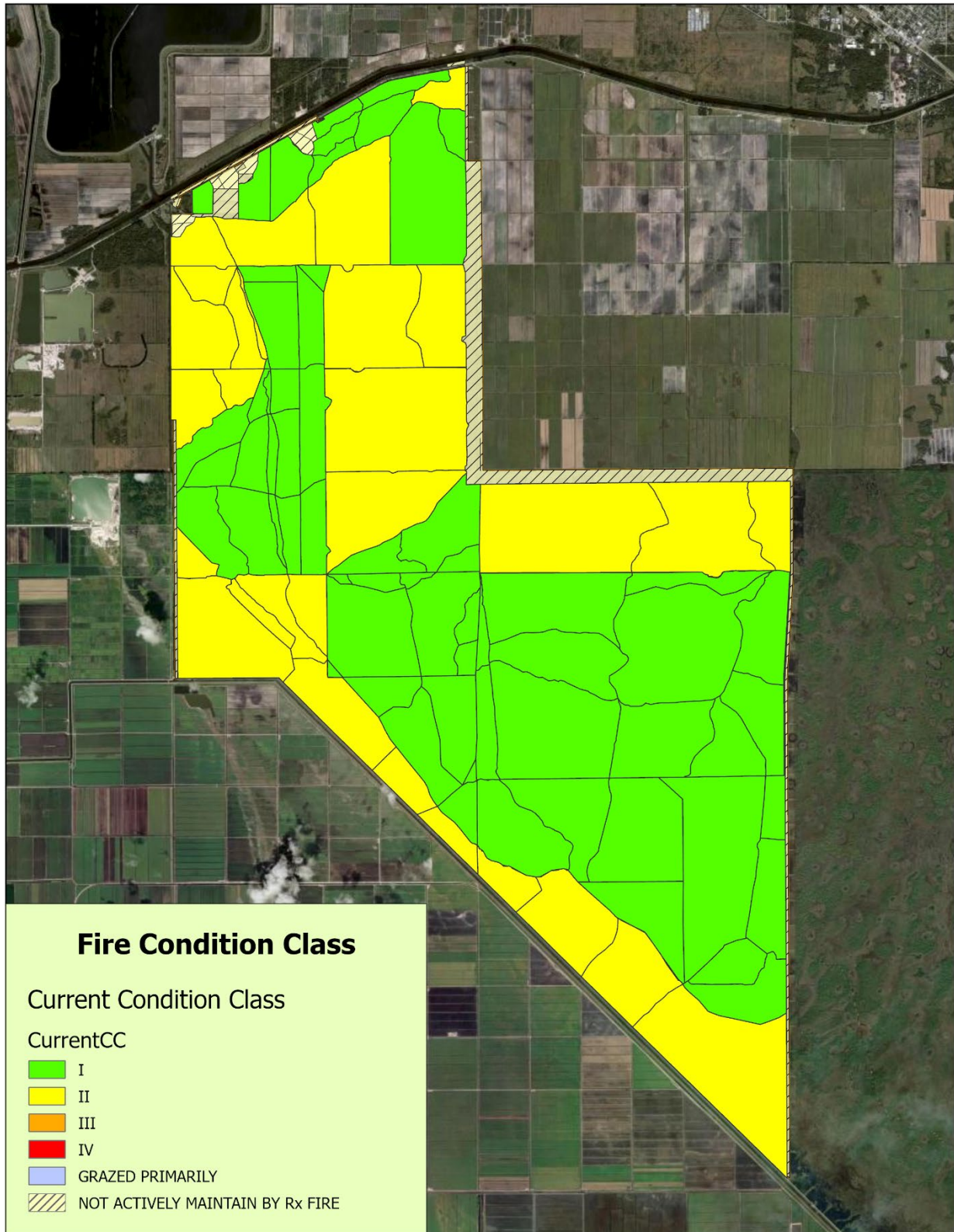
The primary objective of the Land Stewardship Section's monitoring activities is to assess and document the effects of land management actions, such as the application of fire and herbicides. Land Stewardship managers evaluate habitat conditions and vegetation structures to identify gradual, desirable, or undesirable changes associated with invasive species, prescribed burns, and other factors such as hydrological shifts. During land management activities and routine site assessments, these land managers monitor the natural communities in the DuPuis MA for invasive species. They assess burn units before and after prescribed burns to observe the vegetation's response to fire, thereby enhancing their understanding of how variables such as weather, fuel accumulation, seasonal changes, and water levels interact to influence the targeted vegetation structures. Monitoring observations are documented using condition class assessment tools developed by the District.

Fire Condition Class

The District developed a GIS-based program called “physical condition class” to monitor the status of plant communities based on the time since a physical treatment occurred. Although physical treatments can be mechanical or through cattle grazing, the main tool used by the District is fire due to the natural benefits fire provides. The District uses the physical condition class to prioritize and plan the application of prescribed fire on individual management units.

Management units are delineated by prescribed fire boundaries, and the condition of each unit is classified based on fire history and the desired fire-return frequency, following FNAI recommendations for the primary fire-dependent communities in each unit (**Map 19**). Most plant communities in South Florida require fire every 4 years or less to remain healthy and productive, so this is the default return frequency assigned to each management unit. If a management unit has burned within its assigned interval, it is classified as Condition Class 1. Units that exceed the return interval but by less than twice that period are classified as Condition Class 2. Condition Class 3 includes units that have gone more than two but fewer than three intervals without fire. Condition Class 4 includes fire-dependent units that have not burned for more than three recommended intervals or more than 12 years in most of the fire-dependent units within the management area. Fire-excluded habitats, where fire is generally confined to the periphery, are identified as not actively maintained by fire. This process is depicted in **Figure 4**.

Although the default fire-return frequency in the condition class reflects prevailing plant communities, individual management units often contain a mosaic of habitats adapted to more variable fire intervals. Most fire-dependent communities in the DuPuis MA are managed on a 4-year fire-return frequency. Depressional marshes commonly burn along with the surrounding fire-dependent communities; however, burning the L-8 marsh requires careful planning and wet soils to prevent muck fires. Willow stands and floating vegetation are typically unaffected by fire, while surrounding broadleaf marsh and prairie communities carry the burn. Cypress domes and strand swamps are also burned when the soil is saturated. These cypress systems are burned along with adjacent fire-dependent communities, but unlike typical situations, where fire would extinguish at the edges, specific ignition techniques used in the DuPuis MA allow fire to penetrate much of the cypress interior. This approach helps maintain an open mid-story, enhances herbaceous diversity, reduces hardwood encroachment, and increases resilience to catastrophic wildfire. Hammocks and other freshwater forested wetlands are generally fire-intolerant, and high humidity usually inhibits fire spread. These communities are burned with the adjacent fire-dependent areas, but fire is usually confined to the edges.



Map 21. DuPuis MA fire condition class.

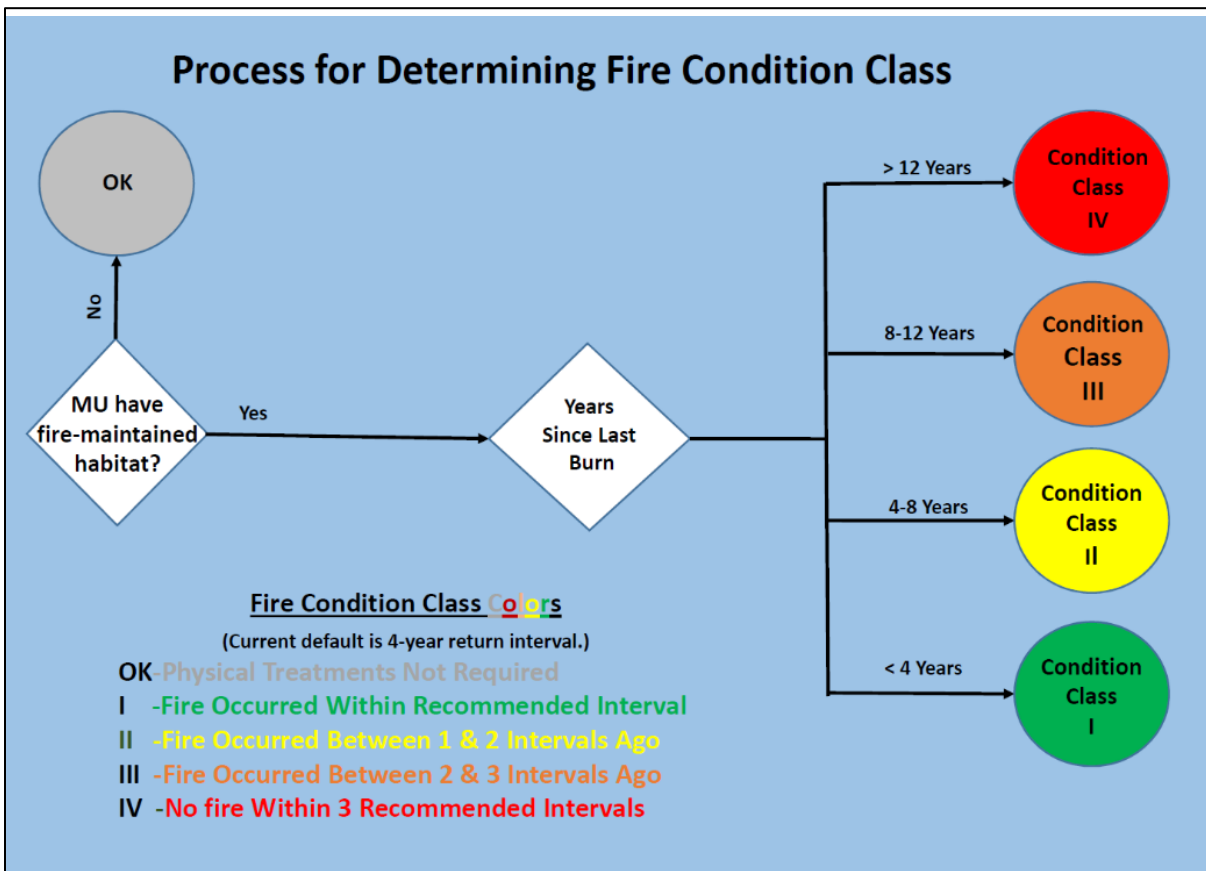
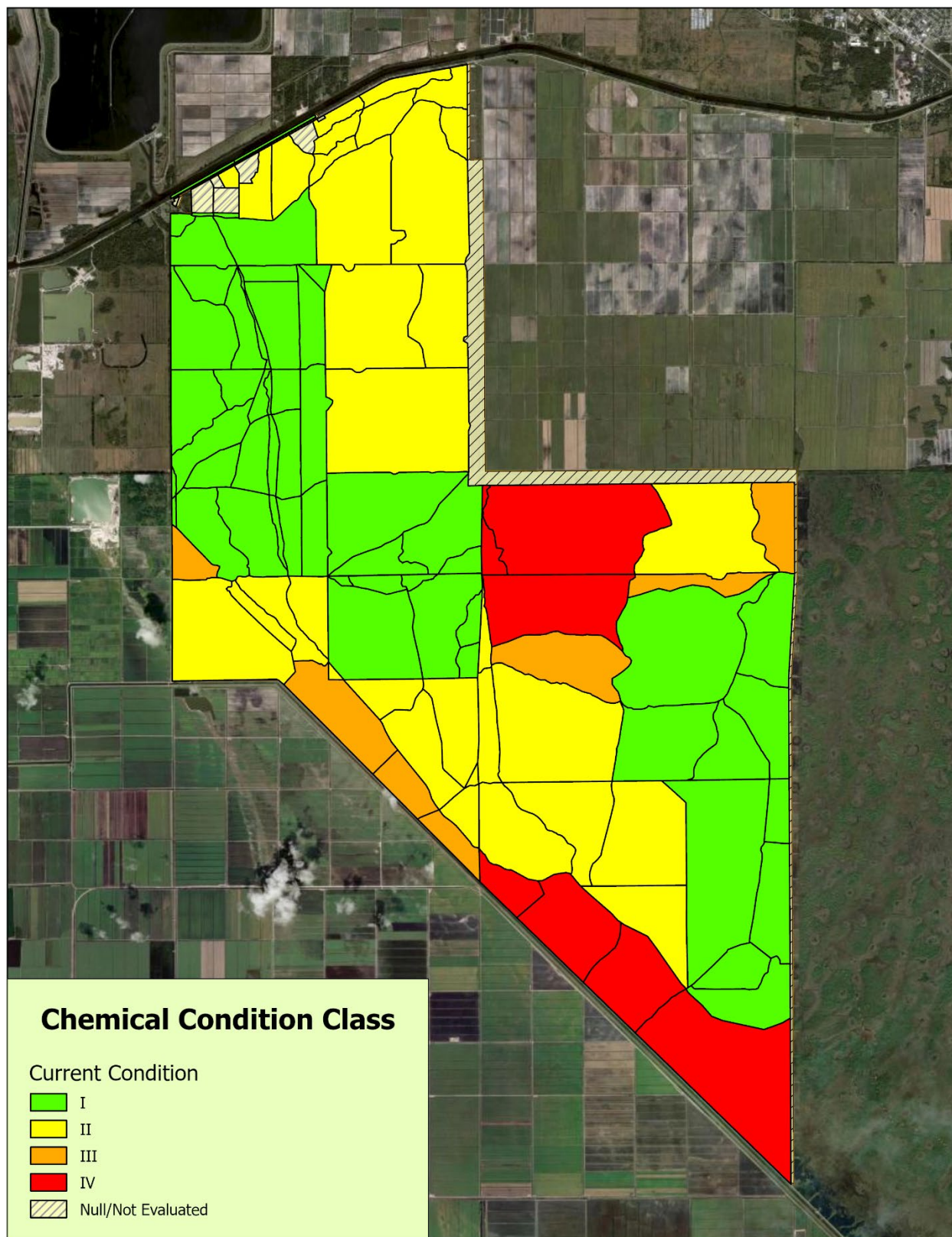


Figure 4. Flowchart illustrating the process for determining fire condition class.

Nuisance and Invasive Plant Condition Class

The District developed a GIS-based program called “invasive plant condition class” to monitor the status of plant communities based on the population status of prominent nuisance and invasive plant species. The District uses the invasive plant condition class to develop a strategy for treating the DuPuis MA. The strategy prioritizes periodic treatments in management units once maintenance is achieved to keep the unit in maintenance status for specific species, expanding efforts to other areas or species only when available resources are sufficient to achieve and retain maintenance status.

The prevalence of invasive plants within management units is estimated and assigned a condition class value (**Map 22**). Each management unit is given an invasive plant condition class based on the maturity of the population of the primarily targeted species (**Figures 5 - 6**). Annual work plans are developed to minimize the ecological impacts of these invasive species in a cost-effective manner while minimizing the use of herbicides where practical.



Map 22. DuPuis MA chemical condition class.

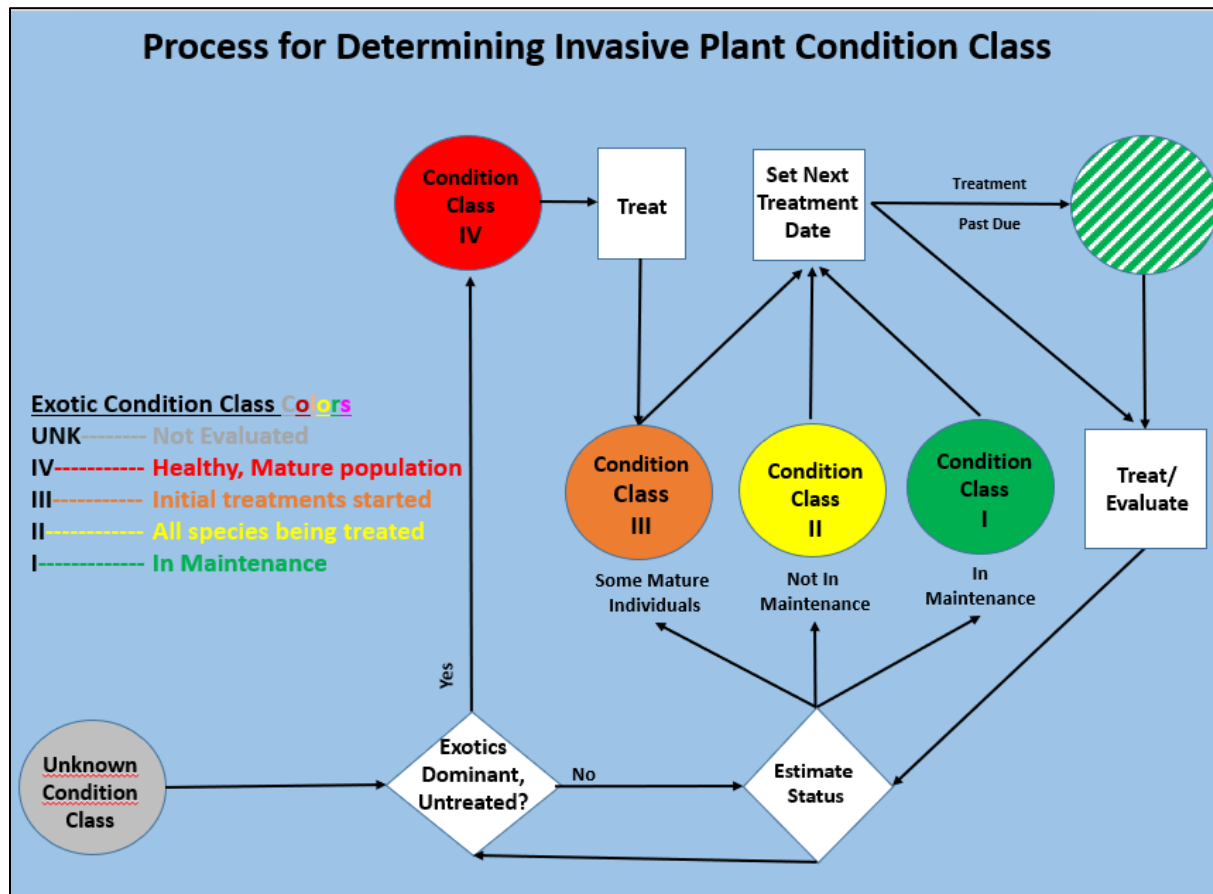


Figure 5. Flowchart illustrating the process for determining invasive plant condition class.

➤ Woody vegetation (Melaleuca-Earleaf Acacia-Chinese Tallow-Brazilian Pepper-Ardisia-Senna-Downy Rose Myrtle-Carrotwood-Silk Tree-Mimosa Pigra-Schefflera-Java Plum-Lead Tree-Woman's Tongue)	
➤	IV--Tall, dense, mature, many throughout landscape
➤	III--Most mature dead, some regrowth/sprouting/isolated misses, many seedlings/suckers
➤	II--All or nearly all mature dead, little regrowth, some seedlings
➤	I----Occasional seedlings or young plants
➤ Vines (Lygodium-Air Potato-Winged Yam-Rosary Pea-Mile-A-Minute Vine)	
➤	IV---Heavy blanket covering trees/bushes, dense, some throughout area
➤	III---Most trellises dead, lots of sprouting/young plants, some clean areas
➤	II---Trellises < 10' high, young plants tending towards "hot spots"
➤	I-----Limited trellising, mostly young plants in isolated "hot spots"
➤ Cogon Grass-Taro	
➤	IV—Solid, Dense, Mature Stands
➤	III---Main portion mostly dead, regrowth along edges and some internally
➤	II---Outlying regrowth and isolated clumps
➤	I-----Occasional dispersed clumps of fresh growth
➤ Tropical Soda Apple	
➤	IV---Thick & tall
➤	III---Most dead in main concentrations, frequent outliers
➤	II---Widely separated plants
➤	I-----Occasional seedling plants

Figure 6. Example of invasive characteristics of target species used to assign condition class.

8. ADMINISTRATION

Administration of District lands is directed through the Land Stewardship Section within the Land Resources Bureau. Policy decisions, planning and budgeting, procurement of personnel and equipment, contract administration, and program development issues are administrative tasks coordinated through the Land Stewardship Section. Input is provided by regional land managers located over the 16-county area. Regional land managers handle regular administrative duties from their field locations to ensure quick response to local concerns and management issues. Administrative activities for DuPuis MA will be handled through the District's field office at the Okeechobee Field Station and the District's headquarters in West Palm Beach.

8.1 Planning and Budgeting

Planning is a major component of the Land Stewardship Section and is critical to maintaining proper program focus, direction, and coordination with other agencies. This document forms the framework for prioritizing and creating targeted plans for the activities to be conducted within the appropriated budget for the next 10 years.

The principal sources of funding for land management operations on the DuPuis MA include lease revenue, ad valorem tax revenue, and special grants. Overall funding availability determines management activities. Budget distribution among the District's five land management regions is based on a programmatic prioritization of management activities. Operational funds are distributed to accomplish the management objectives of each management area most effectively. The continued operation and maintenance of the DuPuis MA include costs to cover staffing, ongoing land management expenses, and capital refurbishment/replacement of aging infrastructure. Current conditions and anticipated serviceability determine capital infrastructure needs. Priorities for capital refurbishment/replacement are made on a District-wide basis. Utilities and operational expenses include supplies, electric service, business travel, and safety equipment. Public use costs include maintenance costs for public use facilities. Base-level funding needs may increase in the future in response to increasing operational expenses, including fuel costs, contracted nuisance and invasive plant control needs, equipment and infrastructure repairs, and increasing public expectations. Specific projects on which to spend these funds are prioritized annually to address each management goal. The Fiscal Year 2026 (FY2026; October 1, 2025 – September 30, 2026) budget for the DuPuis MA and projected expenditures through FY2031 are outlined in **Table 4**.

Table 4. DuPuis MA FY2026 budget and anticipated expenditures through FY2031.

Management Activities	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
Resource Management						
Mechanical Vegetation Mgmt.						
Chemical Vegetation Mgmt.	\$515,000	\$515,000	\$365,000	\$365,000	\$365,000	\$365,000
Prescribed Burning/Site Prep						
Solid Waste/Debris Removal	\$9,976	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Habitat Restoration						
Law Enforcement/Enhanced Patrol	\$14,000	\$14,500	\$15,000	\$15,500	\$16,000	\$16,500
Capital Improvements						
Facilities & infrastructure improvements	\$319,380	\$1,579,000	\$5,000	\$5,000	\$5,000	\$5,000
Fencing/Signage	\$5,262					
Rec. Facilities Maint.	\$195,894	\$156,200	\$156,200	\$156,200	\$156,200	\$156,200
Support & Administration						
Infrastructure Maint.		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Prescribed Burn PPE	3,000	3,000	3,000	3,000	3,000	3,000
Contingent Staffing						
Vehicle Replacement						
Vehicle Fuel & Maint.						
Equipment Replacement						
Equipment Fuel & Maint.	\$10,000	\$10,000	10,000	10,000	10,000	10,000
Small Tools & Equipment	\$10,000	\$10,000	10,000	10,000	10,000	10,000
Total *	\$1,082,512	\$2,302,700	\$579,200	\$579,700	\$580,200	\$580,700

Land managers use an invasive plant control strategy as a planning tool to develop annual work plans and guide long-term nuisance and invasive plant management. For the DuPuis MA, the strategy (**Figures 7–8**) outlines how program funds were allocated in FY 2026 and provides the framework for achieving long-term control across all management units. Using current and projected condition classes, the strategy distributes anticipated funding over several years, prioritizing treatments that keep units in maintenance condition and then expanding efforts into units that can feasibly be moved into maintenance. This structured approach focuses resources on the most cost-effective treatments and supports long-term reductions in herbicide use by maintaining nuisance and invasive plant populations at low levels.

While this strategy provides a clear path toward achieving and maintaining maintenance conditions across all management units, progress is constrained by limited annual funding and uncertainty in the availability of future grant opportunities. These financial constraints slow the pace at which units can transition into maintenance conditions. However, with continued planning, targeted treatment, and sustained support, the long-term goal of comprehensive nuisance and invasive plant control across the DuPuis MA remains achievable. **Table 5** summarizes the current funding needs and associated shortfalls that, if addressed, would enable full implementation of the invasive plant control strategy.

Table 5. Summary of the DuPuis MA treatment program funding needs and shortfalls.

Invasive Treatment Needs	Cost / Funding Level
Annual Funding Needed to Maintain Current Treatments	\$610,720
Unfunded Cost for Initial Treatment Completion	\$6,159,250
Additional Annual Maintenance Needed After Initial Treatments	\$264,400
Current Annual Budget (Reliable Funding)	\$365,000
Recent Grant Funding (Current & Next Fiscal Year)	\$150,000
Annual Maintenance Budget Shortfall	\$245,720
Total Initial Treatment Funding Gap	\$6,159,250

Similarly, strategies prioritizing equipment and infrastructure replacement (including fencing, public use facilities, administrative structures, and hydrologic components), areas for prescribed fire, and public use needs are also updated annually. These strategies and budgets are developed in concert with District-wide operational priorities and budgetary cycles and prioritized across all areas managed by the Land Stewardship Section.

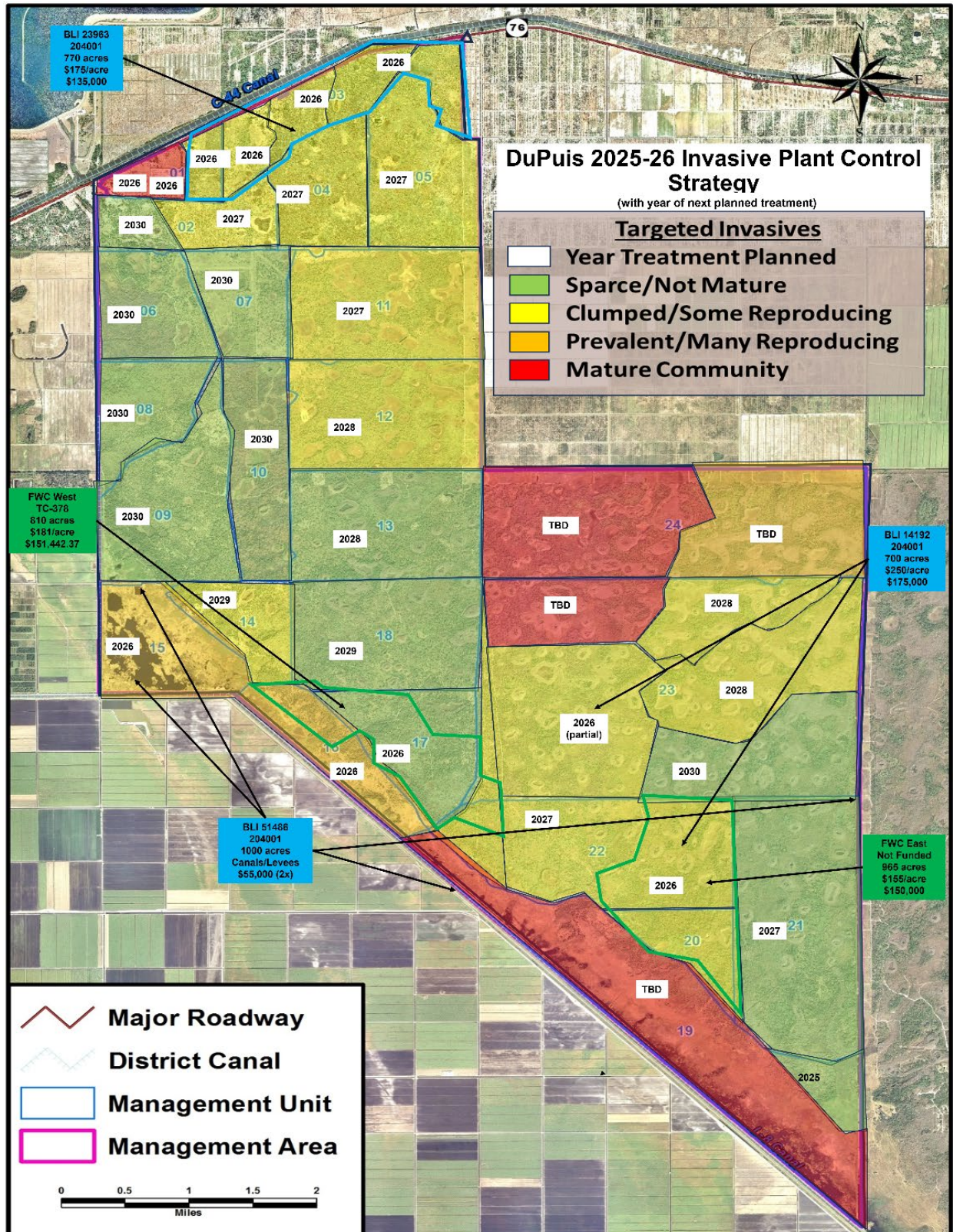


Figure 7. FY26 DuPuis invasive plant treatment plan.

DuPuis 2025-26 Invasive Plant Control Strategy

➤ What have we done so far?

- In 2012 the property was nearly in maintenance.
- Without FWC funding in 2017-2020 Units 23 & 24 were no longer treated.
- Increased funding in 2021 allowed a restart of treatments in eastern Units 23 & 24.
- Burning the western half of Unit 23 in 2024 allowed restarting treatments there.
- Delays in treatments to the rainy season in FY 24 & 25 set back treatments.
- The west half of Unit 24 & northwest portion of 23 await additional funds for treatment.

➤ What are the main species we are targeting?

- Lygodium, Schinus, Imperata, Melaleuca, Ardisia

➤ What costly species are not being treated

- Scleria, torpedo grass, rosary pea, para grass, napier grass, smut grass, bahia, wedellia, West Indian marsh grass, primrose willow

➤ What are we doing this year?

- Treating recently-burned eastern & southern areas
- In southwestern Dupuis, hammock areas will target Ardisia but include other species.
- Dupuis eastern canals will be treated for floating vegetation via land/airboat.
- Cogon grass may be treated in-house in recently burned & treated areas (units 7 & 10).

➤ Where are we going?

- Incorporate fire into treatments 9-24 months prior to treatments.
- Continue efforts to burn.
 - \$250/acre unburned maintenance.
 - \$120/acre burned maintenance.
- Keep exotics at maintenance levels in the western half of Dupuis.
- Move eastern half of Dupuis into maintenance through fire & chemical treatments.
- Transition from landscape-level treatments to targeted treatments of known invasive concentrations when appropriate.
- Only treat entire blocks when invasives reach sufficient coverages throughout block

➤ What do we have to be careful of? Challenges to treatment?

- Water levels
- Access
- \$\$\$\$\$

Figure 8. FY26 DuPuis invasive plant treatment Strategy.

8.2 Personnel and Equipment

The Land Stewardship Section is separated into five geographic regions. Each region is assigned a Science Supervisor (Land Manager), one to three Land Management Technicians, and, based on the need in some areas, a Land Management Assistant, Scientist III, and/or Scientist IV position. A Section Leader provides direct oversight and supervision for the land managers. Additional leadership and assistance come from the Land Stewardship Section Administrator, Land Stewardship Senior Scientist, Wildlife and Public Use Section, Vegetation Management Section, and other support personnel from the District's headquarters in West Palm Beach and the Field Stations. Management of the DuPuis MA property is the primary responsibility of the East Coast Region's Science Supervisor, one Scientist 4, one Senior Land Management Assistant, one Land Management Assistant II, and one Heavy Equipment Operator.

Staff have access to tools, supplies, four-wheel drive vehicles, fire suppression trucks, all-terrain vehicles, swamp buggies, airboats, and other heavy equipment. This equipment is maintained through the Okeechobee Field Station. Equipment from the other regions, as well as leased equipment, are also available if needed.

8.3 Volunteers

Section 373.1391, Florida Statutes, encourages the District to use volunteers for land stewardship and other services. The District recognizes the merits of volunteerism and welcomes participation in activities appropriate for public involvement. The Land Stewardship Section offers a variety of volunteer opportunities for individuals and groups. These opportunities include creating and maintaining public use trails, maintaining public use facilities and amenities, leading field interpretations and guided tours, organizing cleanups of trails and waterways, conducting invasive plant sweeps, and assisting with District-sponsored public events such as Earth Day and Public Lands Day.

In Fiscal Year 2025, District Lands benefited from 17,076 volunteer hours, valued at \$538,508 at Florida's average volunteer service rate of \$33 per hour. The volunteer efforts are supported by dedicated individuals and organizations, including the DuPuis MA Camp hosts, the Florida Trail Association, the Florida Horseman's Club, and the Palm City Farms Trail Association. These groups assist with maintaining campsites, hiking trails, signage, and various other projects.

8.4 Contractual Management

Effective operation and management of District properties require the services and cooperation of private organizations, other governmental agencies, and volunteers. Contractual management is established through a management agreement jointly executed by the District and the contracting entity, which outlines the responsibilities of each party. In addition to the contractual services for the DuPuis MA, the District has established agreements to facilitate efficient management and protection of its resources, including the following:

Enhanced Patrol Agreement

The District contracts with local law enforcement to provide enhanced patrol services throughout the District. Currently, the District has a contract with Martin County for enhanced law enforcement support at the DuPuis MA. The District's resource protection coordinator schedules patrols with input from the Management Area's land manager.

FWC Agreement

The District has a cooperative agreement with FWC to regulate public use for managing and protecting wildlife and aquatic life on specific District lands. (Multi-Site agreement No. 4600000961). This agreement funds operational expenses for overseeing and regulating public use activities at the DuPuis MA. The current agreement funds the salaries and operational expenses of two full-time wildlife biologists whose services are directed towards monitoring wildlife populations, managing public use activities, and performing land management functions on the DuPuis WEA.

9. MANAGEMENT REVIEW

SPACE HOLDER

DRAFT

REFERENCES

- Budny, M. L. and B. W. Benscoter. 2016. *Shrub Encroachment Increases Transpiration Water Loss from a Subtropical Wetland*. Wetlands 36: 631–638. Society of Wetland Scientists, Middleton, WI.
- Clem, S. E. and Duever, M.J. 2019. *Hydrologic changes over 60 years (1959-2019) in an old-growth bald cypress swamp on a rapidly developing landscape*. Wetland Science & Practice. Society of Wetland Scientists, Middleton, WI.
- Cox, J., R. Kautz, M. MacLaughlin, and T. Gilbert. 1994. *Closing the Gaps In Florida's Wildlife Habitat Conservation System*. Office of Environmental Services, Florida Game and Freshwater Fish Water Commission.
- Florida Department of Agriculture and Consumer Services. 2003. *Notes on Florida's Endangered and Threatened Plants*. Division of Plant Industry. Gainesville, FL.
- Florida Fish and Wildlife Conservation Commission. 2019. Florida's Wildlife Legacy Initiative: Florida's State Wildlife Action Plan. Tallahassee, Florida.
- Florida Fish and Wildlife Conservation Commission. 2016. Florida's Imperiled Species Management Plan. Tallahassee, Florida.
- Florida Natural Areas Inventory. 2010. Guide to the Natural Communities of Florida. Tallahassee, Florida.
- Florida Invasive Species Council. 2026. *List of Invasive Species, Electronic version, 2026*. Available online at <https://www.floridainvasives.org/plant-list/>
- South Florida Water Management District. 2022. *Physical Features and Water Resources of the South Florida Water Management District*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. 2020. *Strategic Plan, 2021–2026*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. 2012. *Restoration Strategies Regional Water Quality Plan*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. (n.d.). *South Florida Environmental Report (SFER), Electronic version*. Available at <https://www.sfwmd.gov/science-data/scientific-publications-sfer>.
- State of Florida. (n.d). Florida Master Site File. Department of State, Division of Historical Resources, Tallahassee, FL.
- USDA Natural Resources Conservation Service Web Soil Survey. 2026. *Custom Soil Resource Report for Martin County, Florida, and Palm Beach County, Florida*. Available at <https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soils/getting-started-with-web-soil-survey>.

- USDA Natural Resources Conservation Service. 1981. *Soil Survey of Martin County, Florida*. Washington, D.C.
- USDA Natural Resources Conservation Service. 1978. *Soil Survey of Palm Beach County, Florida*. Washington, D.C.
- U.S. Army Corps of Engineers and U.S. Department of Interior. 2020. *Comprehensive Everglades Restoration Plan, Central and Southern Florida Project, 2015-2020 Report to Congress*. United States Army Corps of Engineers, Jacksonville, FL, and United States Department of the Interior, Washington, DC. Available at https://www.eenews.net/assets/2020/12/28/document_gw_03.pdf.
- U.S. Army Corps of Engineers and South Florida Water Management District. 1999. *Central and Southern Florida Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement*. United States Army Corps of Engineers, Jacksonville District, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.
- U.S. Army Corps of Engineers. 1991. *Central and Southern Florida Project, Environmental Restoration of the Kissimmee River, Florida: Final Integrated Feasibility Report and Environmental Impact Statement*. US Army Corps of Engineers, Jacksonville, FL. Available at <https://www.sfwmd.gov/document/csf-final-integrated-feasibility-report-and-environmental-impact-statement-environmental>.
- U.S. Fish and Wildlife Service. (1999). *South Florida multi-species recovery plan: a species plan, an ecosystem approach*. Atlanta, GA: Region 4.
- U.S. Fish and Wildlife Service. 1998. *Multi-Species Recovery Plan for the Threatened and Endangered Species of South Florida, Volume 1: The Species*. Technical/Agency Draft. U.S. Fish and Wildlife Service. Publications Unit, Shepherdstown, West Virginia.
- Wade, D., J. Ewel, and R. Hofstetter. 1980. *Fire in South Florida Ecosystems*. Gen. Tech. Rep. SE-17. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station.
- White, W. A. 1970. *The Geomorphology of the Florida Peninsula*. FL. Department of Natural Resources Geological Bulletin No. 51. Designers Press, Tallahassee, FL. Available at <https://ufdc.ufl.edu/UF00000149/00001>
- Zahina, J., K. Liudahl, T. Liebermann, K. Saari, J. Krenz, and V. Mullen. 2001. *Soil classification database: categorization of county soil survey data within the SFWMD including natural soils landscape position*. South Florida Water Management District, West Palm Beach. FL. Available at https://www.sfwmd.gov/sites/default/files/documents/ws_6_soils.pdf.

DuPuis Management Area General
Management Plan
(2026 through 2036)

Land Stewardship Section
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Table of Contents

1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION.....	1
2.1	Acquisition Purpose and Significance of the Area	3
2.2	Legal Requirements of Management	3
2.3	General Management Plan Development.....	4
3.	MANAGEMENT AREA GOALS AND OBJECTIVES	5
	<i>Goal 1: Manage natural communities and modified habitats to protect and enhance floral and faunal resources</i>	<i>5</i>
	<i>Goal 2: Maintain, improve, or restore listed species populations and habitats.....</i>	<i>6</i>
	<i>Goal 3: Manage invasive species to minimize their negative impacts on natural communities.....</i>	<i>6</i>
	<i>Goal 4: Protect and enhance the hydrological and ecological functions of wetland communities.....</i>	<i>7</i>
	<i>Goal 5: Provide nature-based public use opportunities</i>	<i>7</i>
	<i>Goal 6: Maintain and improve facilities and infrastructure.....</i>	<i>8</i>
	<i>Goal 7: Protect existing cultural resources.....</i>	<i>8</i>
4.	SITE HISTORY	9
5.	RESOURCE DESCRIPTION AND ASSESSMENT	16
5.1	Infrastructure	16
5.2	Physiograph.....	16
5.3	Vegetation	30
5.4	Wildlife	33
5.5	Cultural Resources.....	34
5.6	Mitigation.....	35
5.7	Potential Additions.....	35
6.	PUBLIC USE.....	37
7.	NATURAL RESOURCE MANAGEMENT	39
7.1	Fire.....	39
7.2	Control of Nuisance and Invasive Plant Species	43
7.3	Mechanical Vegetation Control.....	47
7.4	Wildlife Management.....	48
7.5	Hydrologic and Habitat Restoration	51
7.6	Research and Monitoring	55
8.	ADMINISTRATION	62
8.1	Planning and Budgeting.....	62
8.2	Personnel and Equipment	67
8.3	Volunteers	67
8.4	Contractual Management	67
9.	MANAGEMENT REVIEW	69
	REFERENCES	70

Figures

Figure 1. Overlay of the DuPuis MA boundary on a section of Mackay and Blake’s 1839 Florida Seat of War map.	11
Figure 2. Palm Beach Post report highlighting the preservation of the DuPuis Reserve.	13
Figure 3. Plant community classifications within the DuPuis MA.	30
Figure 4. Flowchart illustrating the process for determining fire condition class.	59
Figure 5. Flowchart illustrating the process for determining invasive plant condition class.	61
Figure 6. Example of invasive characteristics of target species used to assign condition class.	61
Figure 7. FY26 DuPuis invasive plant treatment plan.....	65
Figure 8. FY26 DuPuis invasive plant treatment Strategy.	66

Maps

Map 1. DuPuis MA location map.....	2
Map 2. Historical aerial mosaic including 1938 (left) and 1949 (right) imagery.	14
Map 3. 1940 historical aerial imagery.	15
Map 4. Topographic Map Mosaic of the DuPuis MA (1970–1971).	17
Map 5. DuPuis MA regional elevations.	18
Map 6. DuPuis MA major geomorphic features.	19
Map 7. DuPuis MA NRCS soil classifications.	23
Map 8. DuPuis MA NSLP soil classifications.	24
Map 9. DuPuis MA Basin watersheds and sub-watersheds.	26
Map 10. <i>DuPuis MA Regional hydrography.</i>	28
Map 11. DuPuis MA internal flow directions.	29
Map 12. Distribution of natural communities and altered landcover in the DuPuis MA.	31
Map 13. DuPuis MA vicinity map.	36
Map 14. DuPuis MA Reserve public use amenities.	38
Map 15. DuPuis MA fire history.	40
Map 16. DuPuis MA fire management units.	42
Map 17. DuPuis MA chemical history.	45
Map 18. Distribution of RCW trees and cluster sites in the DuPuis MA.....	50
Map 19. As-built for the 2023 culvert replacement project.	53
Map 20. DuPuis hydrologic restoration features: Existing conditions and planned improvements.	54
Map 21. DuPuis MA fire condition class.....	58
Map 22. DuPuis MA chemical condition class.....	60

Tables

Table 1. Listed plant species associated with the DuPuis MA and current status.	32
Table 2. Listed wildlife species utilizing the DuPuis MA & current status.	33
Table 3. Land Stewardship Section Invasive Species Priority List and Targeting Sequence.	44
Table 4. DuPuis MA FY2026 budget and anticipated expenditures through FY2031.....	63
Table 5. Summary of the DuPuis MA treatment program funding needs and shortfalls.....	64

Appendices

APPENDIX A. DuPuis MA Area History	A-1
APPENDIX B. DuPuis MA Natural Communities.....	B-1
APPENDIX C. DuPuis MA Species List.....	C-1
APPENDIX D. DuPuis WEA Hunting Brochure	D-1

ABBREVIATIONS

CARL	Conservation and Recreation Lands
District	South Florida Water Management District
FDEP	Florida Department of Environmental Protection
FDHR	Florida Division of Historical Resources
FE	Federally-designated Endangered
FFS	Florida Forest Service
FISC	Florida Invasive Species Council
FNAI	Florida Natural Areas Inventory
Ft	Feet
FT	Federally-designated Threatened
FT(S/A)	Federally-designated Threatened because of similarity of appearance
FXN	Federally-designated Threatened Nonessential Experimental Population
FY	Fiscal Year
FWC	Florida Fish and Wildlife Conservation Commission
NAVD	North American Vertical Datum
NGVD	National Geodetic Vertical Datum
mi	Miles
PSGHA	Public Small Game Hunting Area
SE	State-designated Endangered
ST	State-designated Threatened
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

1. EXECUTIVE SUMMARY

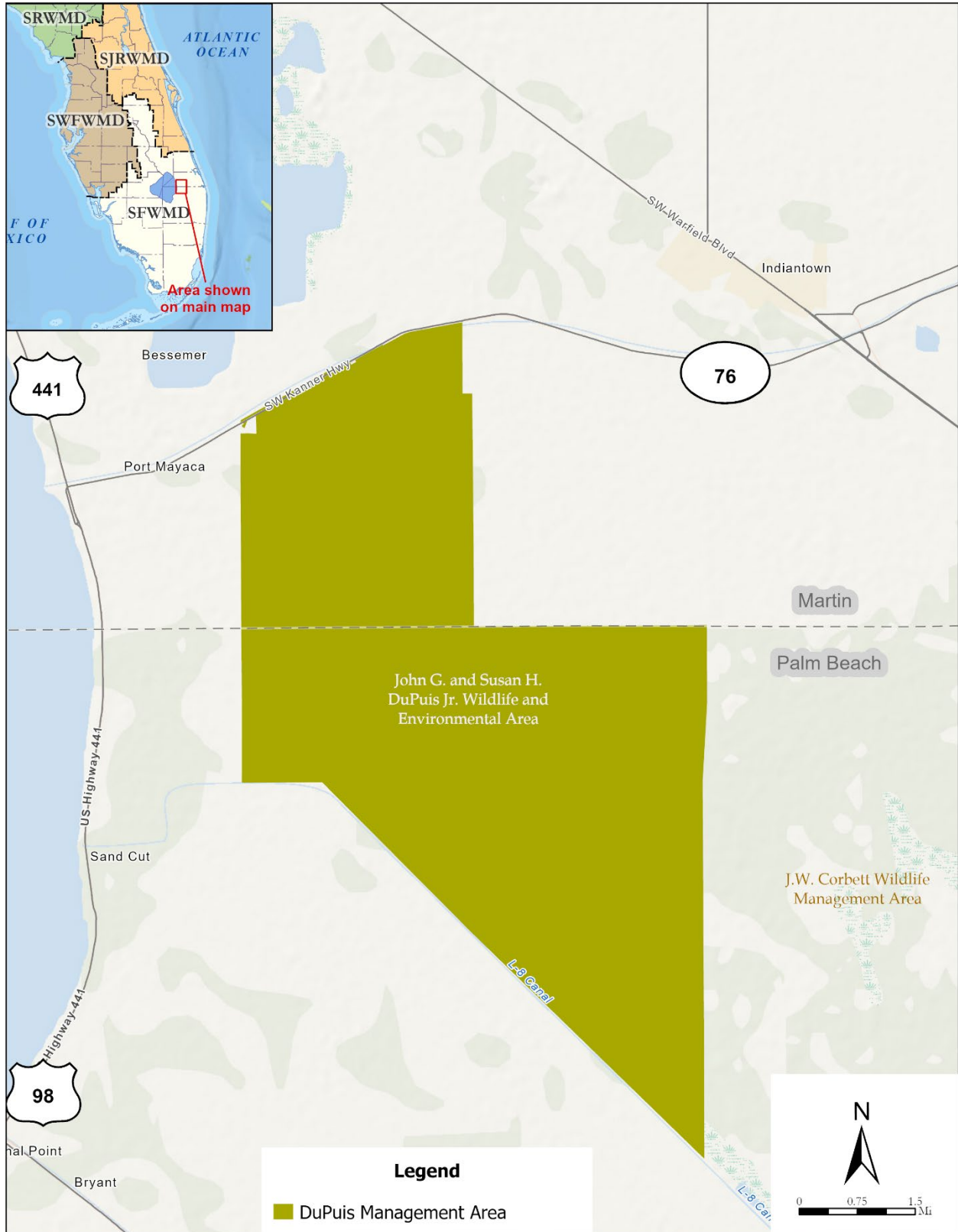
In 1981, the Florida Legislature established the Water Management Lands Trust Fund, which allowed water management districts to acquire environmentally sensitive lands for water management, water supply, and the conservation and protection of water resources through the Save Our Rivers (SOR) program. The South Florida Water Management District (District) used these funds to acquire the John G. and Susan H. DuPuis, Jr. properties. In total, the District acquired approximately 21,971 acres in fee title and manages them as the DuPuis Management Area (MA).

Pursuant to Section 373.1391, Florida Statutes, the District is responsible for managing land acquired under the SOR program. This General Management Plan (GMP) guides the management of the DuPuis MA through the 10-year period of 2026-2036 and was peer-reviewed by external professionals, as directed by section 373.591, Florida Statutes, and approved by the District's Governing Board. Goals identified for the next ten years include managing natural communities and modified habitats to protect and enhance water, floral, and faunal resources; providing resource-based public use opportunities; maintaining area infrastructure; and providing security and resource protection.

2. INTRODUCTION

DuPuis MA lies in southwest Martin and northwest Palm Beach counties, south of State Road 76 and between Beeline Highway (SR 710) and US 441 (**Map 1**). It is approximately two miles east of Port Mayaca and Lake Okeechobee, and 40 miles northwest of West Palm Beach. The property is bordered to the north by the St. Lucie (C-44) Canal and by agricultural fields in Martin County. In Palm Beach County, it is bordered by the J. W. Corbett Wildlife Management Area to the east and by the L-8 Canal and tie-back levee to the south and west, where they adjoin the Everglades Agricultural Area.

At the time of acquisition, the DuPuis MA property operated as a cattle ranch and served primarily as a recreational estate for the DuPuis family. Portions of the land had been cultivated for crops such as sugarcane and citrus under earlier ownership. The property experienced multiple land-use modifications over time, the most recent undertaken by John G. DuPuis, Jr., to support his cattle operation. In addition to raising cattle, sheep, and goats, he maintained a 37.5-acre citrus orchard that produced approximately 26 citrus varieties as a leisure activity. The site's natural hydrology was altered through the construction of drainage swales and ditches designed to reduce wetlands and expand grazing areas to support these agricultural uses. Groundcover vegetation was modified by the introduction of pasture grasses, and invasive species subsequently became established across the property. Since its acquisition, the District has implemented restoration measures, including wetland rehydration, reintroduction of prescribed fire, and invasive vegetation management, to support long-term habitat management.



Map 1. DuPuis MA location map.

2.1 Acquisition Purpose and Significance of the Area

In 1986, the District acquired the DuPuis Reserve property, then known as the White Belt Ranch, from Mrs. Susan H. DuPuis, widow of John G. DuPuis, Jr., and the trust of John G. DuPuis, Jr., for watershed protection and public recreation.

The Land Acquisition Selection Committee for the Conservation and Recreation Lands (CARL) acquisition program identified the property's value based on its capacity to protect habitat for endangered and threatened species, conserve unique or relatively scarce biological systems, preserve significant archaeological or historical sites, and support designation and use as a Wildlife Management Area. These considerations collectively underscored the property's importance for long-term conservation and public resource management.

The southern boundary of the DuPuis MA includes the L-8 Marsh, which was historically the northernmost extent of the Everglades marsh. The DuPuis MA is contiguous with the J. W. Corbett Wildlife Management Area (WMA) and, together with the John C. and Mariana Jones/Hungryland Wildlife and Environmental Area (Hungryland WEA) to the west, form the western corridor of the historic flowway that extended north along the eastern edge of the Osceola Plain to St. Lucie County. This corridor historically supported seasonal flows that linked the Everglades to the St. Johns River system. Although now transected by roads, the DuPuis MA, J. W. Corbett WMA, and Hungryland WEA remain hydrologically connected and collectively create one of the largest ecotones between the remaining pine flatwoods in southeast Florida and the sawgrass marshes of the Everglades. The acquisition of the DuPuis MA has protected natural systems that provide habitat for a diverse assemblage of wildlife, including threatened and endangered species. These systems also supply clean water to the L-8 canal and contribute to the watersheds of Hungryland Slough and the Loxahatchee River.

2.2 Legal Requirements of Management

The DuPuis Reserve property was purchased with funds from the SOR land acquisition program to protect lands that have important water resource values through acquisition, restoration, and management for environmental benefits. The SOR program was one of several programs funded through the 1981 Water Management Lands Trust Fund legislation (section 373.59, Florida Statutes (1981)) using documentary stamp tax revenue. The SOR program was eventually replaced by the 1999 Florida Forever Act, which consolidated the legislative directives of SOR and Preservation 2000, a program enacted in 1990 to provide additional funding for land acquisition. Lands acquired with funds from the trust are required to satisfy the requirements outlined in section 373.1391, Florida Statutes.

Section 373.1391, Florida Statutes, requires the District to balance resource conservation and public recreational use. This legislation reinforces the Water Management Lands Trust Fund requirements by directing the District to utilize lands titled to the District for public recreation purposes to the extent possible while considering the environmental sensitivity and suitability of those lands for recreation.

Public use on District lands is also governed by Chapter 40E-7, Florida Administrative Code (Rules 40E-7.511-539, Florida Administrative Code), which regulates public access to District land and use of said lands. As the steward, the Land Stewardship Section is responsible for protecting, enhancing, restoring, and preserving District lands for the beneficial use and enjoyment of existing and future generations.

To support the statutory directives in section 373.1391, the District has partnered with the Florida Fish and Wildlife Commission (FWC) to establish certain District properties as Wildlife Management Areas (WMA), Wildlife and Environmental Areas (WEA), Public Small Game Hunting Areas (PSGHA), or Miscellaneous Areas through their authority under Chapter 379, Florida Statutes. This partnership allows the FWC to promulgate rules under Chapter 68, Administrative Code, in coordination with the District, to regulate public use on these properties.

The determination of compatible public uses on District lands is based on the following criteria:

- Consistency with acquisition purposes, including protecting natural ecosystems.
- Restrictions, such as easements, leases, reservations, adjacent land ownership, or conditions of the purchase agreement.
- Existing infrastructure and facilities, including fences, gates, signage, access, trails, campsites, etc.
- Available funding.
- Limitations on use resulting from endangered species and sensitive natural or archeological resources.
- Public health, safety, and welfare.

2.3 General Management Plan Development

General Management Plans (GMPs) for the District are developed for selected areas established as management areas to guide management over a 10-year period. When the plans are updated, staff review the previous plan, identify accomplishments, and develop new goals and objectives for the coming ten years. These updated goals and objectives are based on District priorities, public input through meetings of the Recreation Forum and other venues, and current best management practices. This process is also designed to meet State requirements for management plans (section 259.032, Florida Statutes) on areas leased from the State of Florida. The draft plan is provided to the management review team specified in section 373.591, Florida Statutes, and comments from this multi-agency and stakeholder management review team are included in the updated plan.

Resource management and public use activities implemented by the District in management areas include:

- Prescribed fire to mimic the natural fire frequency in fire-dependent habitats.

- Vegetation management, such as shredding and/or mowing to control invasive woody shrubs and eliminate hazardous fire fuels.
- Wildlife management, including surveys and habitat management.
- Nuisance and invasive vegetation control.
- Monitoring the health of the natural communities and the impact of management practices on them.
- Hydrologic restoration of wetlands to establish optimal flows and hydroperiods.
- Providing public use facilities that support compatible uses such as hunting, boating, hiking, fishing, birding, canoeing, camping, nature appreciation, geocaching, and biking.
- Utilizing volunteers and user group organizations to support the public use program.
- Providing security and hunting opportunities through partnership with FWC.
- Providing educational programs through partnerships with external educational organizations.
- Leveraging staff time through contracts with the private sector when appropriate.

This GMP serves as the basic statement of management intent and consolidates relevant information about DuPuis MA to guide management actions for the 2026 to 2036 period. This includes land management goals and objectives, past and present land uses, resource data, restoration and management needs, public use programs, and administrative duties.

3. MANAGEMENT AREA GOALS AND OBJECTIVES

Management of Wildlife and Habitats

Goal 1: Manage natural communities and modified habitats to protect and enhance floral and faunal resources

Objectives:

- Continue to utilize prescribed fire to maintain all fire-dependent management units within their appropriate fire return intervals.
- Evaluate the need for additional cabbage palm removal.
- Utilize mechanical vegetation treatment to reduce cabbage palm encroachment into the flatwood community.
- Continue to minimize hazardous fuel along firelines to reduce spot-over potential.

Goal 2: Maintain, improve, or restore listed species populations and habitats.

Objectives:

- Enhance vegetation communities to increase habitat use by threatened and endangered species.
- Increase herbaceous cover in pine communities to improve foraging habitats.
- Collaborate with FWC to improve wildlife habitats and protect existing red-cockaded woodpecker cavity trees.
- Identify suitable areas within adjacent management units for future cavity-tree expansion.
- Collaborate with FWC to support stable, interconnected red-cockaded woodpecker (RCW) populations across the DuPuis and Corbett Management Areas.
- Continue ongoing wildlife monitoring to document species use and evaluate habitat conditions across the management area.

Nuisance and Invasive Species Management

Goal 3: Manage invasive species to minimize their negative impacts on natural communities.

Objectives:

- Continue to control nuisance and invasive species to maintain the management units in maintenance condition (Condition Class 1) and systematically improve remaining areas.
- Continue to target invasive species infestations in identified areas as they become priorities to achieve maintenance levels.
- Continue to apply chemical vegetation treatments to reduce cabbage palm encroachment within flatwoods communities.
- Implement appropriate control measures for cogon grass and other non-native grass species within select RCW clusters.
- Collaborate with the Vegetation Management Section to develop strategies that limit the spread of invasive grasses and improve the effectiveness of treatment methods.
- Conduct Early Detection Rapid Response (EDRR) treatments as needed.
- Seek additional funding through the FWC Upland Invasive Plant Management Program to expand invasive species treatment within the management area.
- Continue hunting pressure on wild hog population as an ongoing control measure.

Hydrological Management

Goal 4: Protect and enhance the hydrological and ecological functions of wetland communities

Objectives:

- Maintain an appropriate hydroperiod through maintenance and modification of area water control structures as needed.
- Continue to implement restoration projects to reflood the marshes and sloughs and restore their natural hydroperiods to improve habitat conditions and feeding areas for wading birds.
- Continue to maintain and enhance natural hydrological functions by installing ditch plugs and maintaining or replacing culverts, as appropriate.
- Assess seepage patterns by estimating volume, direction, and areas of influence to better understand impacts on the hydrology of the wetlands.
- Identify and recommend feasible "stop/minimize" actions to reduce or minimize reliance on the two pumps operating near the management area.

Public access and Recreational opportunities

Goal 5: Provide nature-based public use opportunities

Objectives:

- Improve recreational facilities by replacing bathrooms, boardwalks, and kiosks, and repairing the fishing pier.
- Maintain compatible public use opportunities such as hunting, camping, fishing, hiking, biking, equestrian, and wildlife viewing.
- Continue to coordinate with the Florida Trail Association on the Florida National Scenic Trail through the management area.
- Provide resource protection through partnerships with local and state law enforcement.
- Continue to implement the public use program through coordination with FWC, local partners, adjacent landowners, volunteers, and recreation user groups.
- Continue to participate in the District's Public Recreational Forum to support stakeholder engagement.
- Provide interpretive and educational information using brochures, signage, and kiosks at public use amenities.

Operation and Maintenance of Capital Facilities and Infrastructure

Goal 6: Maintain and improve facilities and infrastructure

Objectives:

- Continue to maintain the firelines and service roads within the management area.
- Maintain public-use facilities and infrastructure such as signs, primitive camping areas, boat ramps, and structures through a coordinated effort involving District staff, volunteers, and private contractors.
- Maintain and secure the Management Area boundary using signage, fences, and fireline maintenance.
- Ensure all facilities and infrastructure assets are accurately identified, mapped, and maintained within the geospatial data system.
- Develop comprehensive asset management and capital improvement plans for all infrastructure and facility assets to support proactive and strategic management.
- Secure needed funds to implement facilities and infrastructure maintenance and replacement plans.

Cultural Resource Management

Goal 7: Protect existing cultural resources

Objectives:

- Ensure all known sites are recorded in the Florida Division of Historical Resources Master Site file.
- Continue to monitor, protect, and preserve all known/identified sites.
- Coordinate with the Florida Division of Historical Resources (FDHR) to assess the need to conduct additional cultural resource surveys.
- Ensure at least one member of staff has attended the FDHR cultural resource training program.

4. SITE HISTORY

The DuPuis Reserve property has a long history of human use, with notable Indigenous occupation beginning after about 500 B.C. Around this time, Florida's earlier Archaic traditions developed into distinct regional cultures, including the Glades Tradition, where people shaped their daily lives around local conditions and still traded with communities elsewhere in Florida. Unique upland habitats within the surrounding wetlands provided essential dry ground for camps and villages, making the DuPuis landscape suitable for Pre-Columbian settlement. Archaeological evidence indicates long-term Indigenous presence in the area, with cultural affiliations identifiable through changing pottery styles and other material indicators. Archaeological evidence from the DuPuis Reserve property reflects this broader cultural sequence, spanning multiple Glades periods. Archaeological evidence from DuPuis dating to the Glades era also indicates the presence of peoples culturally linked to the St. Johns River-area Mayaca, who appear to have been pushed southward by repeated attacks from northern tribes allied with the British. Much later, during the Seminole Indian War of 1835, Seminole groups sought refuge in the DuPuis–Corbett area, but food quickly became scarce, and survival proved difficult. Hundreds of starving Seminoles were eventually captured under a flag of truce and sent to Oklahoma, leading to the area becoming known as “The Hungryland” (DuBois 1981; Hutchinson and Paige 1998).

During the late 19th century, small Seminole camps and trading posts began to appear throughout South Florida, including near present-day Indiantown (Weisman, 1999; Covington, 1993). By 1898, local settler Joe Bowers established a trading post where he exchanged manufactured goods for animal hides and other products. That same year, Francis and Annie Platt started a cattle operation nearby, naming the small town “Annie” after Mrs. Platt.

Regional development began to accelerate around the turn of the century. A post office was established in Annie in 1902, with Francis Platt serving as postmaster (Tebeau, 1971). Annie would later become Indiantown in 1917. In 1902, the Southern States Land and Timber Company, an investment group based in New Orleans, purchased about two million acres near Lake Okeechobee from the State of Florida for 50 cents per acre (Tebeau, 1971). The acquisition included most of what is now western Palm Beach and Martin Counties, and nearly all of the DuPuis Reserve property, except the low-lying areas along the L-8 Canal. The company began harvesting old-growth pine shortly after the purchase, using a sawmill located on Lake Okeechobee, where logs could be transported by boat. However, the lack of a railroad system in the area limited the scale of their milling operations. During its period of ownership, the Southern States Land and Timber Company actively developed and marketed its holdings. Under long-term leadership of George Bensen, who managed operations from West Palm Beach for nearly five decades, the company helped shape early regional development by promoting Everglades drainage, pioneering sugarcane cultivation, constructing roads and trails, opening land to ranching, and introducing the first purebred cattle to Martin County.

Transportation infrastructure expanded significantly in the early twentieth century. In 1919, construction of a county road connecting Stuart and Lake Okeechobee was approved. The State of Florida later assumed responsibility for the road in 1931, realigned it, and designated it as State Road 76, and later renamed Kanner Highway in honor of legislator A. O. Kanner, who championed

the project. Meanwhile, Conners Highway was constructed in 1925, linking Okeechobee City, Canal Point, and West Palm Beach; it later became part of Highways 441 and 98. Railroads also reshaped the region. The Florida East Coast Railway reached Okeechobee in 1915 and, in 1925, extended a line to Canal Point to transport agricultural products from the Everglades (Tebeau, 1971). Although this line passed near the DuPuis Reserve property, it does not appear to have supported logging operations there based on the absence of sidings or mill structures in aerial imagery from that period. At the same time, the Land Company of Florida, under the leadership of S. Davies Warfield, extended the Seaboard Air Line Railway's main line from Coleman to West Palm Beach, reaching Indiantown in 1924. Warfield laid out the street grid, later known as Warfield Boulevard, to support the anticipated residential and commercial center for the railroad's southern headquarters. After his death in 1927 and the collapse of the Florida land boom, the development plan was abandoned in 1930. The state assumed responsibility for Warfield Boulevard in 1931, designating it State Road 710.

Roads in and around the region were extremely limited. Around 1902-1903, Platt and his sons built a wagon road connecting Annie to Stuart, known as the Stuart-Annie Road. Although some form of access route must have existed for the Southern States Land and Timber Company to transport logged pine to Lake Okeechobee, the extended dirt road connecting Stuart-Annie to the lake, which would eventually evolve into today's State Road 76 (Kanner Highway), did not appear on road maps until the early 1920s. Existing trails were generally described as simple wagon paths that followed naturally higher ground with minimal clearing and no evidence of constructed roadbeds.

Among the earliest established travel corridors in the region was Colonel Taylor's route, a historic path depicted on Mackay and Blake's Florida Seat of War map (**Figure 1**). When the map is overlaid with later aerial photographs, the alignment clearly crosses Southern States Land and Timber Company holdings, and an overlay of the modern boundary shows that the trail crosses through what is now the DuPuis MA. Other historic maps depict a patrol route connecting Taylor's route to General Eustis' route, which also would have traversed the present-day DuPuis.

One of the most prominent route, the Hungryland Trail, entered DuPuis from the northwest, curved south and southeast through pine flatwoods, and exited near Big Mound, where it continued as the Big Mound Trail toward Loxahatchee Groves. These routes appear on 1920s road maps and remain visible in 1938 and 1940s aerials along the alignment of today's DuPuis Grade. A secondary unnamed trail branched from the Hungryland Trail near Big Mound, turning northwest and then northeast toward Indiantown; it is traceable through the 1940, 1957, and 1965 aerial series. These trails appear to predate the 1915 construction of the St. Lucie Canal and were likely partly created or maintained by residents of the Big Mound area to access nearby population centers. The construction of the St. Lucie Canal, the realignment of SR 76, and later ditching, particularly the Cooter Creek system, gradually severed the Hungryland Trail, leading to the abandonment of many segments. The remaining segments of these trails now form portions of the modern land management road, the equestrian trail, and a segment of the Florida Trail.



Figure 1. Overlay of the DuPuis MA boundary on a section of Mackay and Blake’s 1839 Florida Seat of War map.

By the late 1930s, land within what would become the DuPuis MA was held by a patchwork of owners, including Chase National Bank, Glades Land Corporation, the State Board of Education, and the Southern States Land and Timber Company (Dolph & Co., 1937; Hutchinson & Paige, 1998). The first major consolidation began in 1944, when Canal Point rancher Robert Chastain acquired more than 20,000 acres from the Southern States Land and Timber Company, which was actively selling its inholding. Chastain continued assembling key tracts through 1949, securing access along SR 76, the future site of the land management office, and most of the southern sections of the reserve (Hutchinson & Paige, 1998). By 1948-1949, aerial imagery shows the early development of ranch infrastructure, including an expanded ranch house, initial farm fields, a graded public entrance along Jim Lake Grade/DuPuis Grade, a spur road to Mound House, and multiple ditch systems designed to drain flatwoods and wet prairies (USDA, 1948; USDA, 1949).

In 1955, Chastain sold most of the western portion of the property to White Belt Dairy Farms, led by Dr. John G. DuPuis and, later, his son, who continued to expand agricultural use. White Belt acquired additional lands south of the L-8 Canal, developed new watering holes and firebreaks, and constructed perimeter canals that altered earlier trails. Through the 1960s and early 1970s, both White Belt and landowner George Caulkins undertook rapid development, including

extensive ditching for pasture improvement and citrus preparation, construction of new ranch buildings, excavation of ponds, and relocation of the main entrance. In 1972, a series of coordinated land exchanges among Caulkins, U.S. Sugar, and White Belt unified the entire reserve under DuPuis family ownership for the first time.

Dr. John G. DuPuis was a pioneer physician, educator, and botanist who arrived in Miami in 1898 and established both a medical practice and a drugstore in the early settlement of Lemon City (Dade Heritage Trust, n.d.). He treated Miami residents during the 1899 yellow fever outbreak, and local and oral histories describe him as one of the few white physicians trusted by the Seminole people (Florida Memory, n.d.). His belief that sanitary, fresh milk was essential to public health led him to establish one of the first dairies in South Florida and, eventually, one of the largest in Dade County: White Belt Dairy Farms, Inc. (Miami-Dade County Historic Preservation Office, 1984). Dr. DuPuis' agricultural expansion began in 1905 with his purchase of Dutch Belted cattle, reportedly acquired from the Barnum & Bailey Circus, which strengthened and diversified his dairy operation. This acquisition set the stage for later agricultural growth and ultimately led the family to begin purchasing lands in Palm Beach and Martin Counties decades later (Hutchinson & Paige, 1998).

Because much of the land-use operations relied on draining the land, the drainage networks played a central role in shaping land use within DuPuis, beginning with Chastain's early systems constructed in the 1940s and continuing through DuPuis-era modifications in the 1950s–1980s. As drainage became increasingly central to ranch operations, several ditch systems were developed. The Office Ditch system routed water northwest toward the St. Lucie Canal through a natural creek and a nearby culvert. The Chastain Ditch system connected wetlands across roughly three miles to the south and 1.5 miles to the west, directing water to its outfall east of the reserve. South of these, the Cooter Creek Ditch system extended nearly four miles toward a slough that drains toward the Everglades, and it was later tied directly into the L-8 Canal through mid-1960s culverts, which significantly accelerated drainage. On the west side, the Osceola Ditch system linked the property to the early L-8 stub (L-8 North Tieback) canal, providing another major outlet. By 1957, a perimeter ditch along the northwest border routed water from the Port Mayaca cemetery to the St. Lucie Canal, effectively eliminating the older Hungryland Trail connection to SR 76, which by then functioned primarily as an internal ranch road (USDA, 1957; Wheeler, 2000). By 1965, a newly built Bamboo Ditch system on the southwestern side of the reserve intercepted groundwater in the transitional flatwoods-to-muck zone, severing wetland hydrology in the southwestern portion of the reserve to improve pasture conditions. The southern portion of the Hungryland Trail was also cut off by the construction of the Bamboo system. The most extensive modification came in 1972, when White Belt Dairy Farms constructed a three-mile parallel ditch along the L-8 Canal and extended it northward along the eastern boundary. These drainage features not only influenced ranch operations but also established the modern hydrologic framework later seen on 1970s-1980s aeri

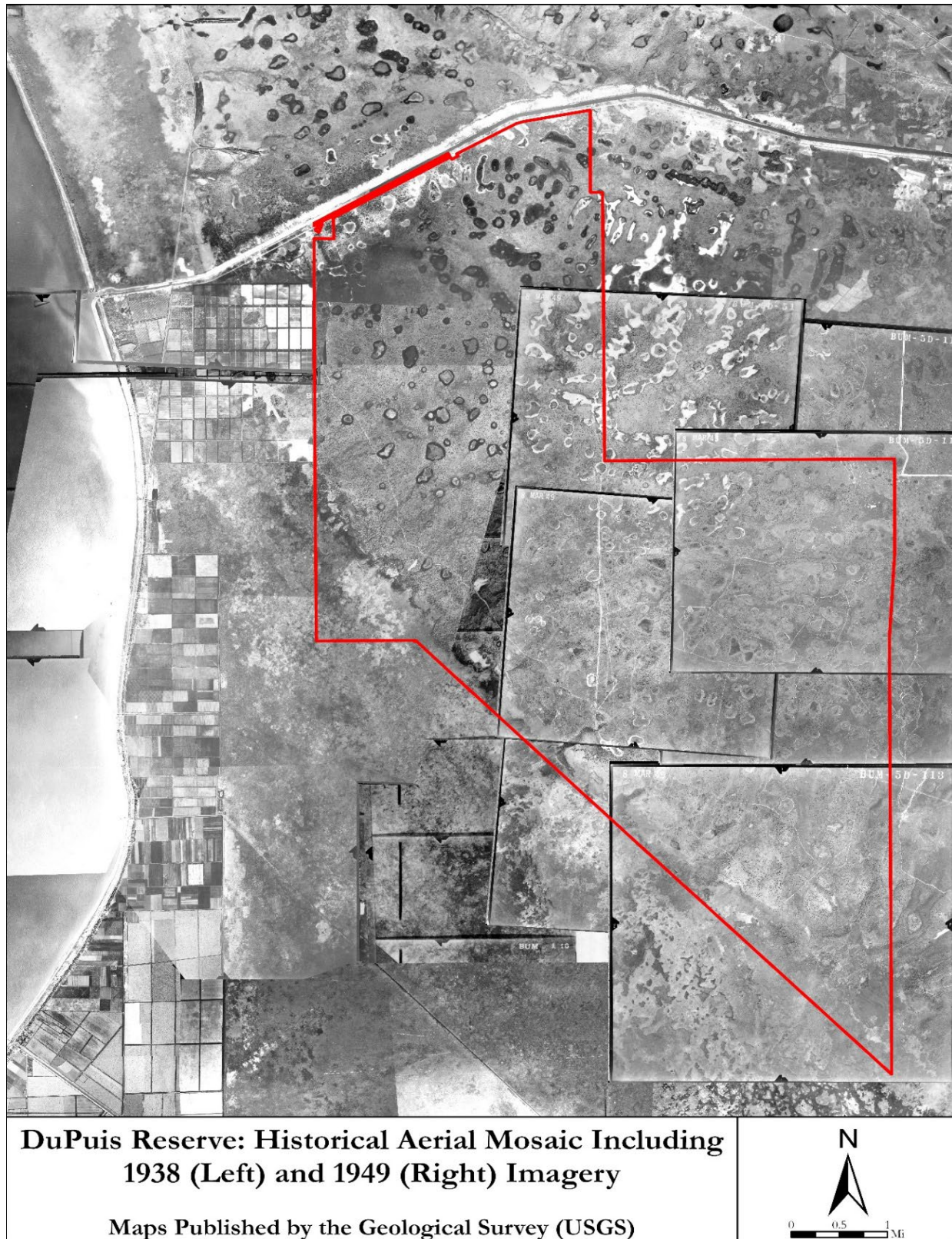
Infrastructure improvements continued through the late 1970s and 1980s, including construction of a major high-voltage transmission line along the eastern boundary and a second line west of the reserve. After the death of John G. DuPuis Jr. in 1984, The Nature Conservancy

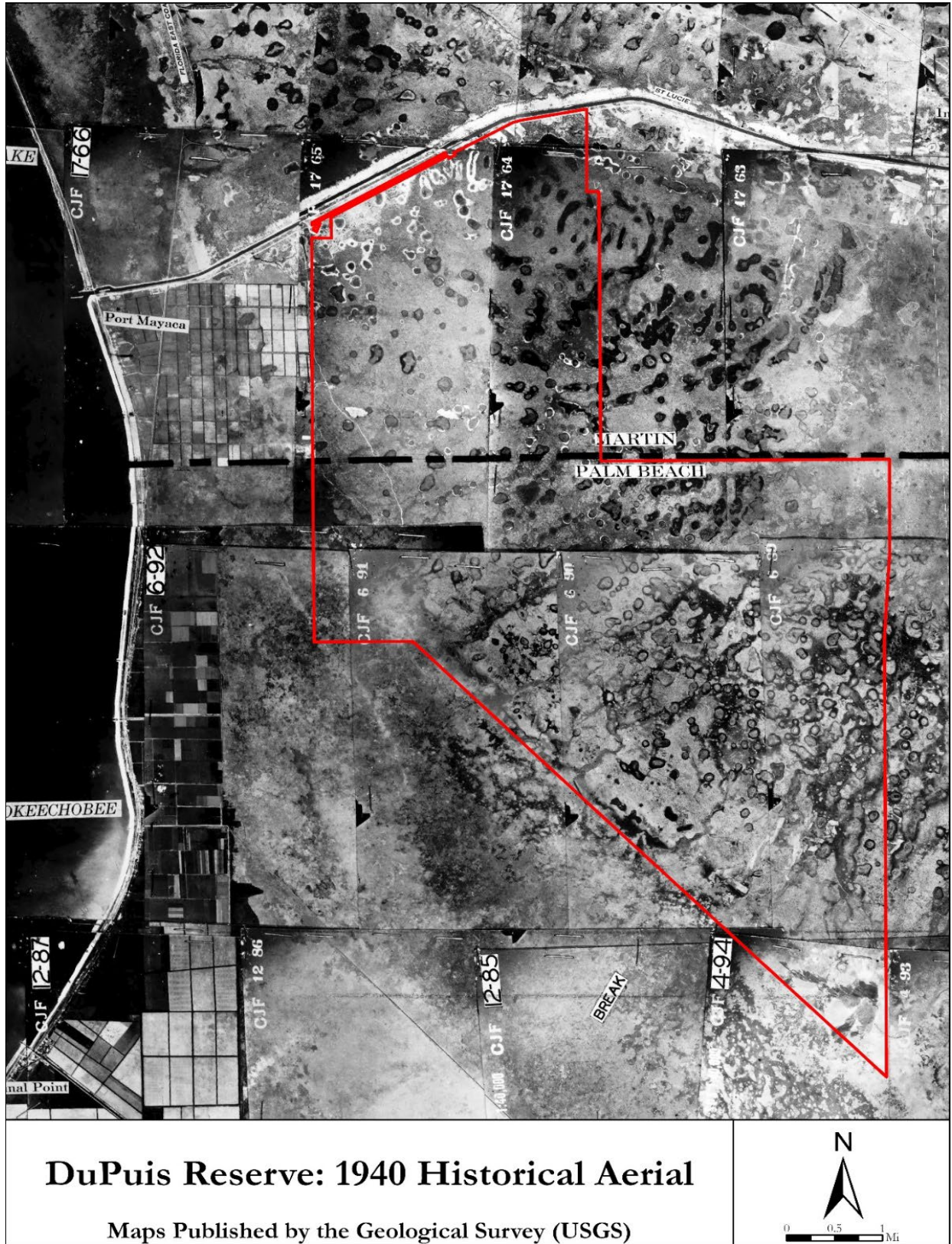
secured a purchase agreement that enabled the South Florida Water Management District (SFWMD) to acquire the property in 1986 under the Save Our Rivers program. Initial restoration efforts began soon after, followed by a management period under the Florida Division of Forestry in the 1990s, during which new grades, entrances, and prescribed burns were established. SFWMD resumed primary management in 1996, continuing restoration work and removing aging agricultural structures and groves.

This sale “represents the fulfillment of a dream for my late husband and I. The land should be preserved and belong to the public,” said Susan DuPuis.



Figure 2. Palm Beach Post report highlighting the preservation of the DuPuis Reserve.





Map 3. 1940 historical aerial imagery.

5. RESOURCE DESCRIPTION AND ASSESSMENT

5.1 Infrastructure

The DuPuis MA includes a land management office, a maintenance facility, and three housing lots with two buildings, all supporting land management operations. The land management team maintains approximately 63 miles of firelines and 22 miles of service roads through activities such as mowing, tilling, culvert replacement, and road improvements. Perimeter fencing is maintained annually, with repairs or replacements conducted as needed.

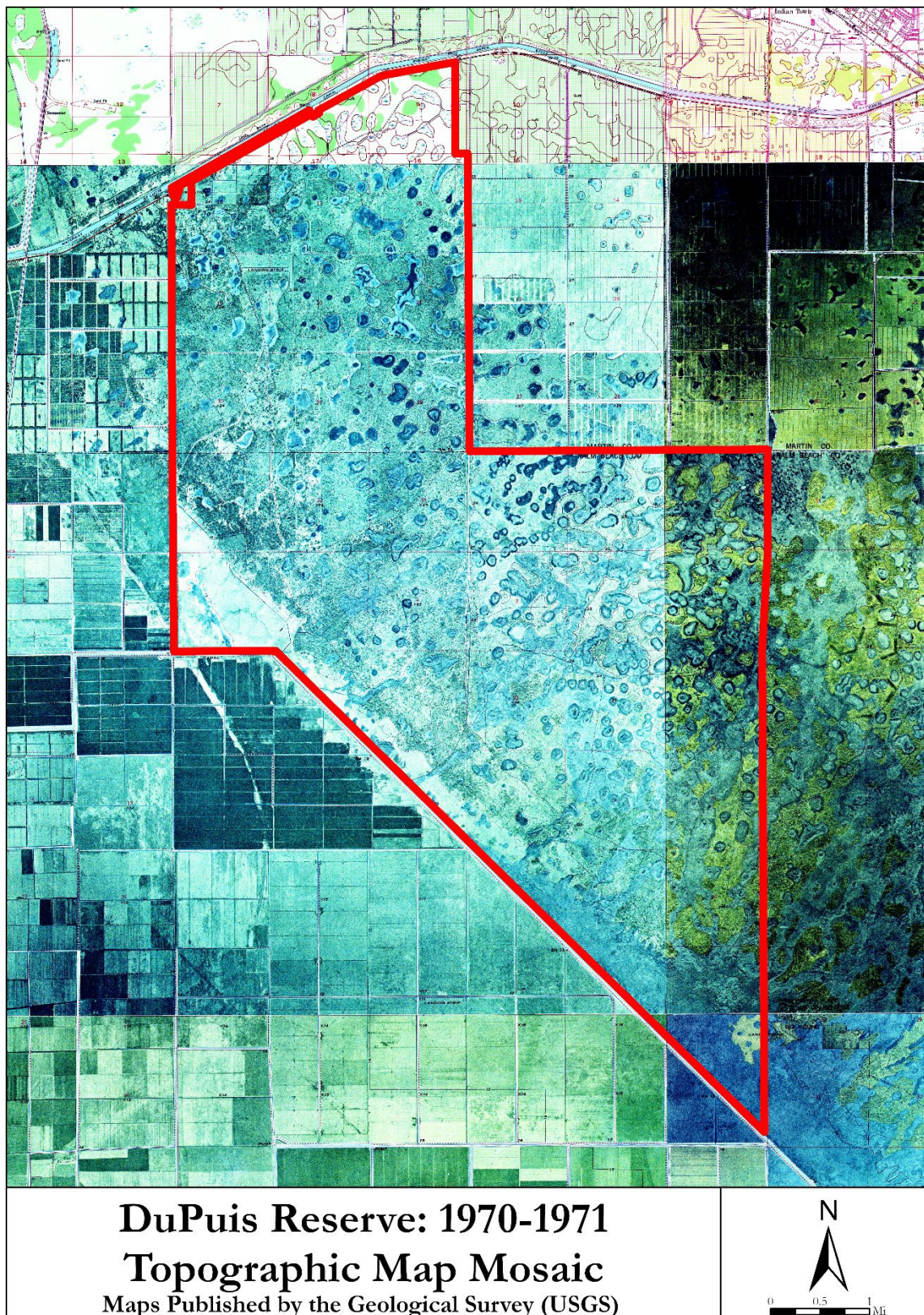
The team also manages the recreational facilities within the management area, supported by contracts and dedicated volunteers. These facilities include three primitive campsites; an equestrian and trailer camping area equipped with picnic tables, fire rings, a waste-dump station, and a restroom; and a primitive group camp and family campsite, both equipped with picnic tables, fire rings, and two primitive restrooms. All facilities require regular upkeep. Additional recreational infrastructure includes a fishing pier, several fishing ponds and picnic areas, four parking areas, more than 38 miles of equestrian trails, over 13 miles of hiking trails, and more than 11 miles of the Florida National Scenic Trail (FNST).

5.2 Physiograph

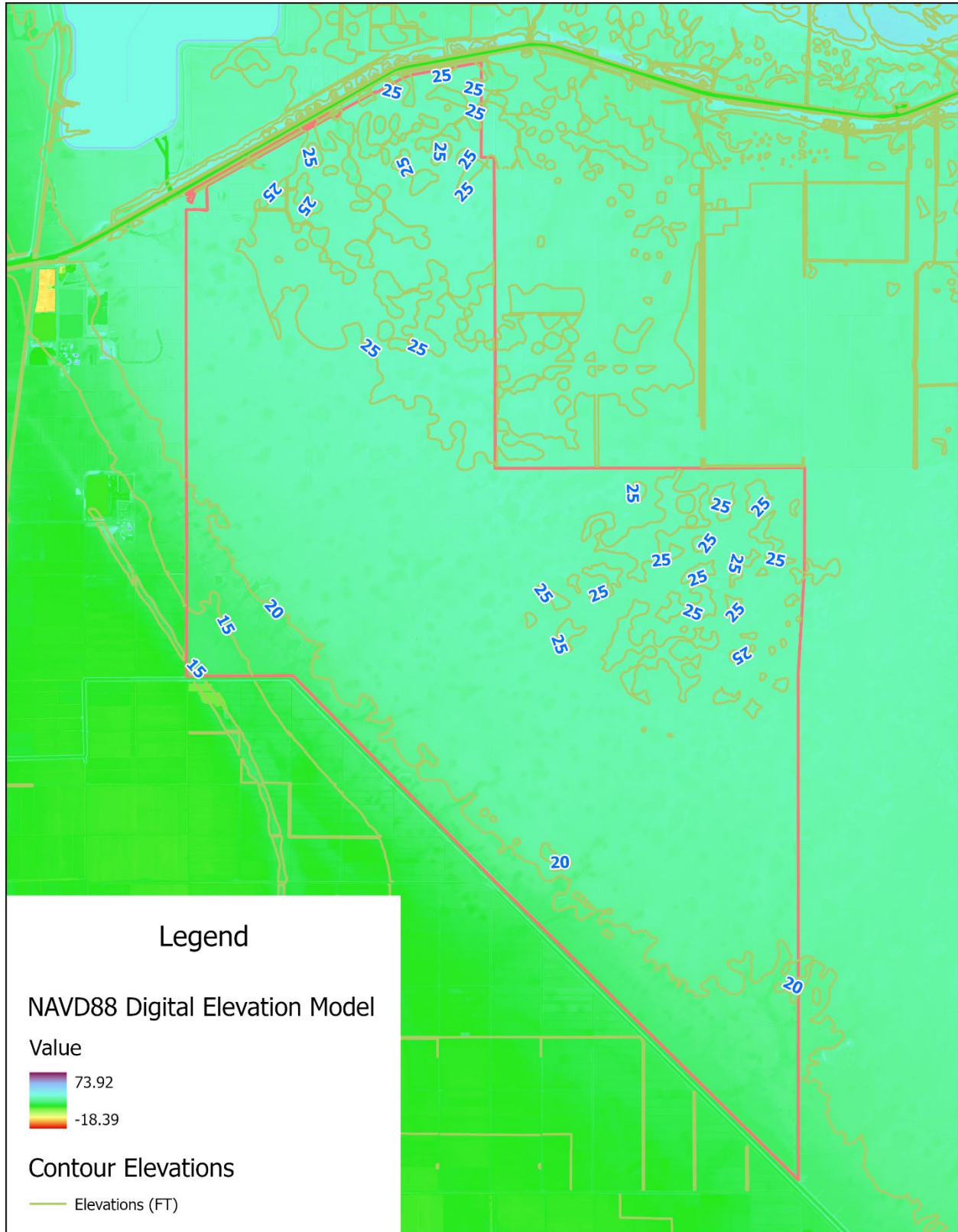
Topography

The natural topography of the Florida Southeastern Coast basin (**Maps 4 - 5**) is generally flat and slopes gently to the south-southeast. Surface elevations typically range from about 20 to 25 feet (ft) above mean sea level (MSL). Except for the higher elevations along the coastal and beach ridges, elevations decrease from approximately 25 ft near Lake Okeechobee to sea level along the southern coastline, where extensive mangrove and coastal glade areas occupy the lowest terrain and are regularly inundated.

Within the DuPuis MA, relief is low, and surface elevations generally range from 23 to 25 ft, declining gradually from northeast to southwest. Overland sheetflow moves south-southwest through a connected series of wetlands. The greatest elevation change occurs in the L-8 Marsh along the southern boundary, where elevations drop from about 20 ft at the treeline to below 15 ft near the canal levee. North and northeast of the treeline, elevations gradually rise to 24–25 ft.



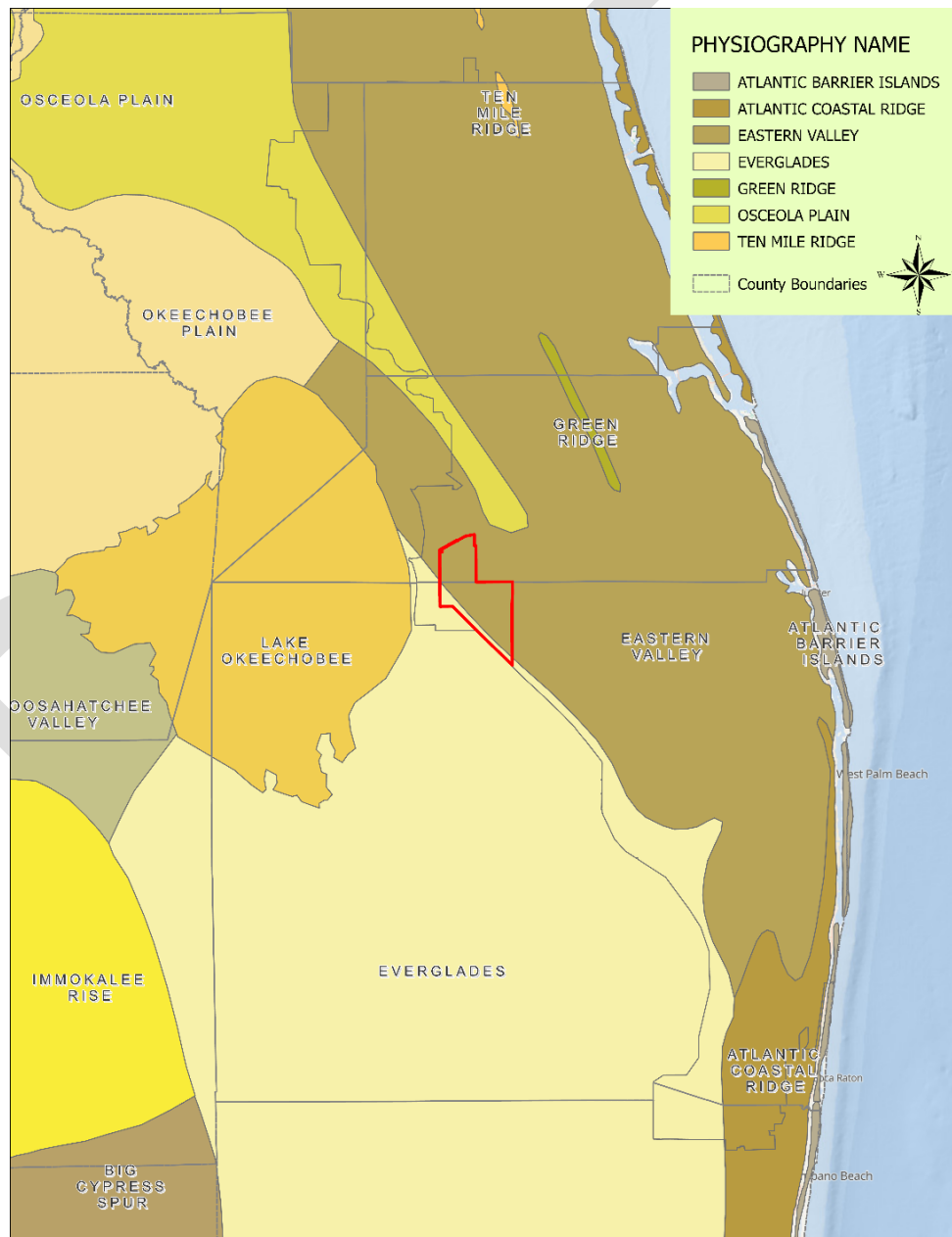
Map 4. Topographic Map Mosaic of the DuPuis MA (1970–1971).



Map 5. DuPuis MA regional elevations.

Geology

The Florida Southeast Coast Basin is situated within the Coastal Lowlands of the Coastal Plain physiographic province of the eastern United States. The Coastal Lowlands physiography includes several geomorphic features: Atlantic Coastal Ridge, Big Cypress Spur, Big Cypress Swamp, Caloosahatchee Valley, De Soto Plain, Eastern Valley, Everglades, Gulf Coastal Lowlands, Immokalee Rise, Mangrove and Coastal Glades, Osceola Plain, Sandy Flatlands, and Southwestern Slope. The Florida Southeast Coast Basin spans the Eastern Valley, Osceola Plain, Everglades, and the Atlantic Coastal Ridge physiographic regions. The DuPuis MA lies predominantly within the Eastern Valley, with its southern boundary extending into the Everglades (**Map 6**).



The Everglades extends southward from Lake Okeechobee and Loxahatchee Slough to the mouth of Shark River Slough at Florida Bay. Its gentle southward slope averages less than 2 inches per mile, with elevations declining from about 14 feet above MSL near Lake Okeechobee to sea level at Florida Bay. Much of the Everglades is underlain by peat and muck soil that formed in a shallow, poorly drained basin under long-term flooding conditions. Beneath these organic deposits lies the Fort Thompson Formation, composed of interbedded sand, shell, and limestone, and the regional bedrock is almost entirely limestone. In the southern Everglades, higher-elevation marshes flanking Shark River Slough are characterized by calcitic marl soils produced by algal mats, along with exposed limestone surfaces containing karst features. Prior to development, the Everglades was seasonally inundated, and water moved slowly southward across this low-gradient landscape.

The Eastern Valley forms a gentle slope between the Everglades and the Atlantic Coastal Ridge and contains scattered depressions across its surface. It is composed primarily of Pamlico sands deposited during the Pleistocene. In many areas, these surficial sands overlie hard, sandy, shelly limestone or marl. Where present, soils above this layer consist mainly of marine, organic-rich sands also deposited during the Pleistocene. Marine deposits in Martin and Palm Beach Counties range from about 100 to 150 ft thick. Much of the Eastern Valley has been extensively drained to support agricultural and urban development. Prior to canal construction and drainage, water moved slowly through the valley via multiple sloughs flowing toward the St. Lucie River, the Loxahatchee River, and the Everglades.

Two principal aquifer systems underlie the Florida Southeast Coast Basin: the surficial aquifer system and the Floridan aquifer system. The surficial aquifer system is a shallow, nonartesian unit that extends roughly 80 to 180 feet (ft) below land surface and consists of permeable Pamlico Sand, Anastasia Formation limestone, shell beds, and Caloosahatchee marl. Beneath the surficial system lies the Floridan aquifer system, a deep artesian aquifer typically separated from the surficial system by a confining unit of clay, silt, and marl. This intermediate aquifer system or confining unit is present only in parts of St. Lucie and Martin Counties and is absent in most of the basin, including Palm Beach County. Where present, it consists of relatively impermeable phosphatic clays, silts, and limestones of the Hawthorn Group. The top of this unit lies about 80 ft below MSL in northwestern St. Lucie County and deepens to more than 200 ft below MSL in southeastern Martin County; thickness ranges from less than 300 ft in northern St. Lucie County to more than 600 ft in the southern part of the basin.

The Floridan aquifer system is more than 2,700 ft thick and consists primarily of limestone of the lower Hawthorn Group, St. Marks, Suwannee, Avon Park, and Ocala formations. The top of the Floridan aquifer is about 300 ft below MSL in the northwest part of the basin and dips to more than 900 ft below MSL in southeastern Martin County.

Recharge to the surficial aquifer system is derived mainly from rainfall, supplemented by groundwater inflow from the Everglades toward the coast. The Floridan aquifer system receives most of its recharge from central and northern Florida. Groundwater flow in both aquifer systems is generally from north to south and southeast toward the coastline.

Climate

Much like the rest of south Florida, the Florida Southeast Coast Basin experiences a humid subtropical climate with wet and dry seasons of nearly equal length. The area receives an average of about 55 inches of rainfall per year, though annual totals vary considerably. Most precipitation occurs during the wet season from June through October, which accounts for approximately 71 percent of the annual rainfall. During the dry season, El Niño conditions can produce above-average rainfall, particularly from November through January.

Soils

A soil map encompassing the DuPuis MA (**Maps 7**) was compiled using Martin and Palm Beach County soil survey data from the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS).

The DuPuis MA contains a variety of soil types, many characteristics of wetland communities. In the Martin County portion of the property, nearly level and poorly drained Riviera, Pineda, and Malabar sands dominate; these soils have very slow percolation rates. Waveland sand, more common along the western side of the property, contains a weakly cemented hardpan at a depth of roughly 30-50 inches, resulting in a perched water table during the wet season. Riviera and Florida fine sand, depressional, are the primary soils underlying the marsh communities. Tequesta muck is a very poorly drained, nearly level soil occurring mainly in depressions near the Palm Beach-Martin County line.

Tequesta, Okeelanta, and Sanibel muck are the dominant soils in the Palm Beach County portion of the Reserve, particularly where Everglades-related communities occur. Okeelanta is a very poorly drained organic soil derived from a willow-sawgrass association, while Tequesta represents a peaty muck typically more associated with broadleaves. Sanibel muck, which contains a thin organic surface layer, occurs in transition zones between sandy flatwoods and Everglades-related organic soils and appears to represent wet prairie bordering the L-8 Marsh.

Basinger and Myakka sands, depressional, and Anclote fine sand are nearly level, very poorly drained soils that typically underlie cypress-dominated communities. Immokalee fine sand is also common in the transition between the flatwoods and L-8 Marsh wetlands; these soils are largely perched systems underlain by a weakly developed hardpan. Toward the eastern boundary of the Reserve, Pineda, Pinellas, and Riviera sands form the dominant soils underlying the cypress strand system. Their slow permeability promotes sheetflow across the landscape rather than downward percolation into the surficial aquifer. Riviera sand, depressional, one of the most common soils on the property, is frequently found within cypress domes that experience prolonged hydroperiods. Information about soils is updated by NRCS periodically and available through the NRCS Web Soil Survey.

Weathering, erosion, climatic conditions, vegetation effects, and topographical locations of resident soils have resulted in numerous differences in soil characteristics. The Natural Soil Landscape Positions (NSLP) classification system groups South Florida soils into 12 categories based on hydrology and soil morphology that reflect the area's local relative topography,

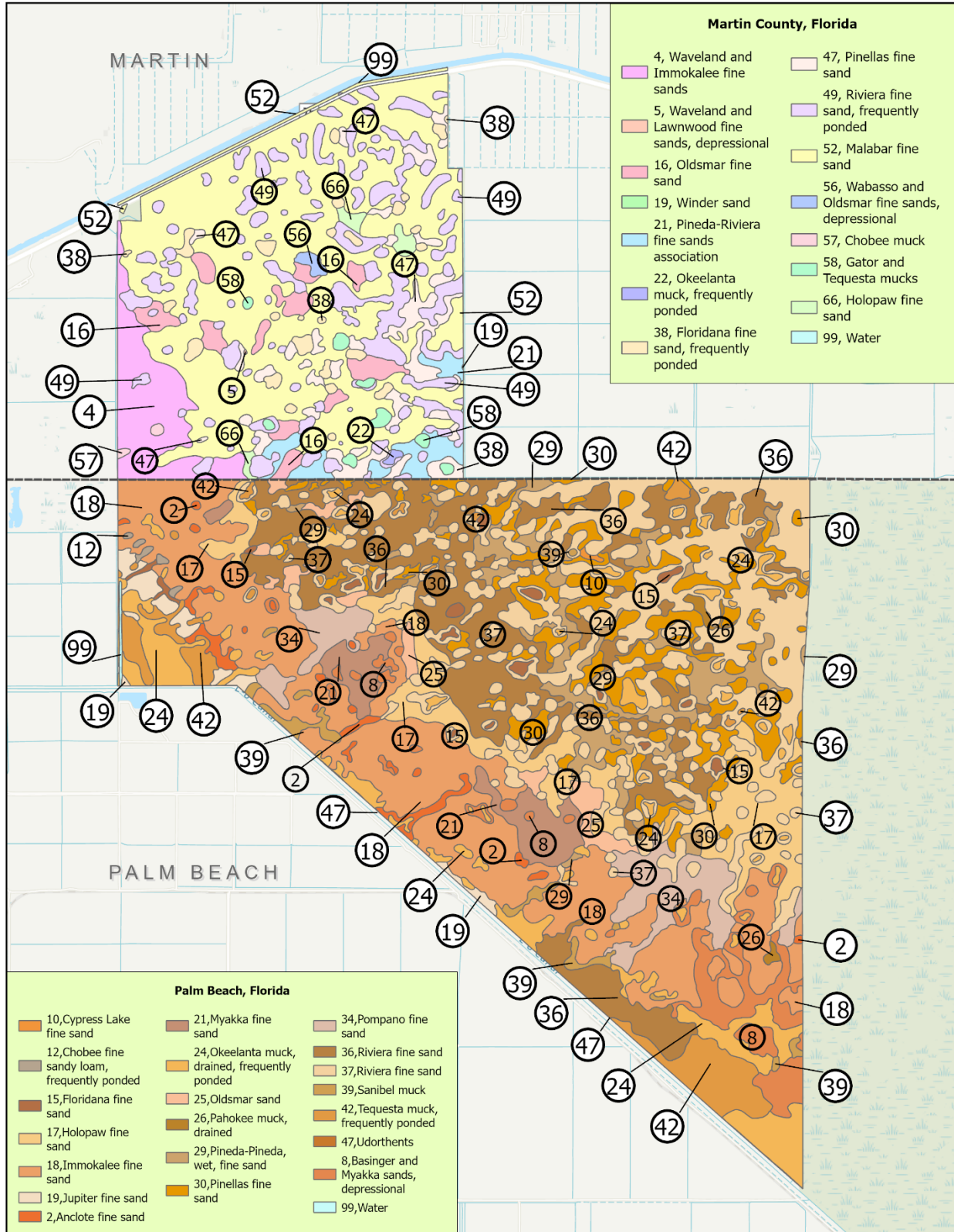
hydrology, and vegetation (Zahina et al. 2001). The soils within the DuPuis MA are classified into seven distinct soil categories: Everglades peat, flats soils, muck depressions, and sand depressions (**Map 8**). The soil classification database provides a complete description of soil classification, vegetation associations, and map and data files of NSLP (Zahina et al., 2001).

Soil Contamination and Excavation Sites

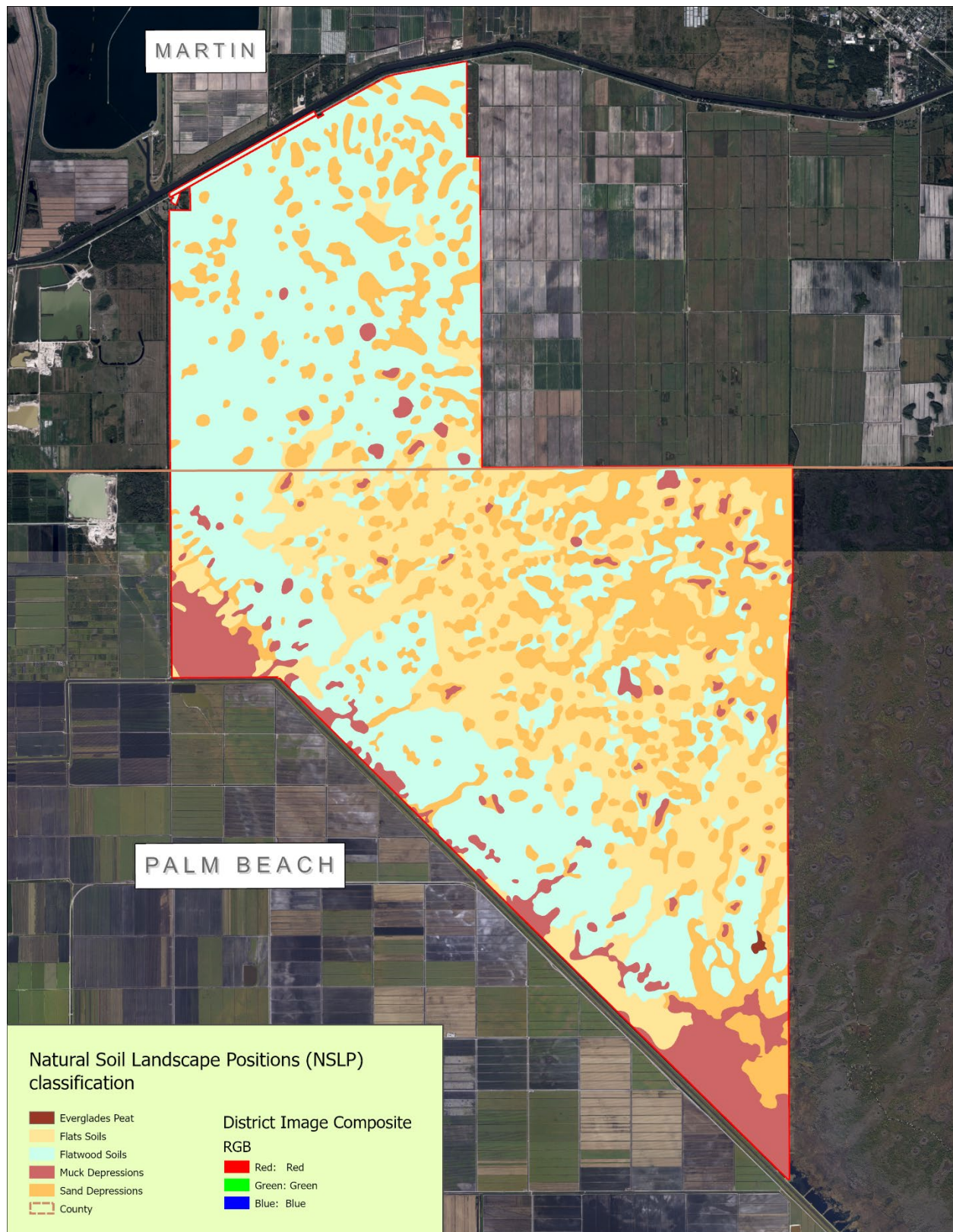
A cattle dipping area that was located at the present Gate 3 equestrian area was removed by the District in the late 1980's. This chemical treatment area was one of the 3,200 cattle dipping vats constructed statewide between 1906 and 1961 for a tick fever eradication program that was mandated by state law. At these locations, soils became polluted with insecticides as cattle were either led through in-ground dipping vats or sprayed in holding pens. Shortly after acquisition, the District began appropriate corrective actions to remediate soil contamination associated with the cattle dipping vat.

A cattle-dipping area was located at the present Gate 3 equestrian site and was removed and soil remediated in the late 1980s. This dipping vat was one of approximately 3,200 constructed statewide between 1906 and 1961 as part of a mandated tick-fever eradication program. At these facilities, soils were frequently contaminated by insecticides used on cattle as they were led through in-ground vats or sprayed in holding pens. Shortly after acquiring the property, the District initiated corrective actions to remediate soil contamination associated with the dipping vat.

During acquisition, five additional soil contamination sites on the property were identified. These areas had historically been used for petroleum or chemical storage and equipment maintenance. As the first part of a two-phase remediation plan, the District analyzed the contaminated soils to establish site-specific, risk-based action levels. The second phase involved determining the necessary corrective measures for each site. The Florida Department of Environmental Protection (FDEP) Waste Cleanup Section supported decisions regarding land-use classification and remediation methods. In the early 1990s, a remediation plan was developed and implemented for all five sites. A final site rehabilitation was issued by FDEP in June 2001, completing the District's remediation activities.



Map 7. DuPuis MA NRCS soil classifications.



Map 8. DuPuis MA NSLP soil classifications.

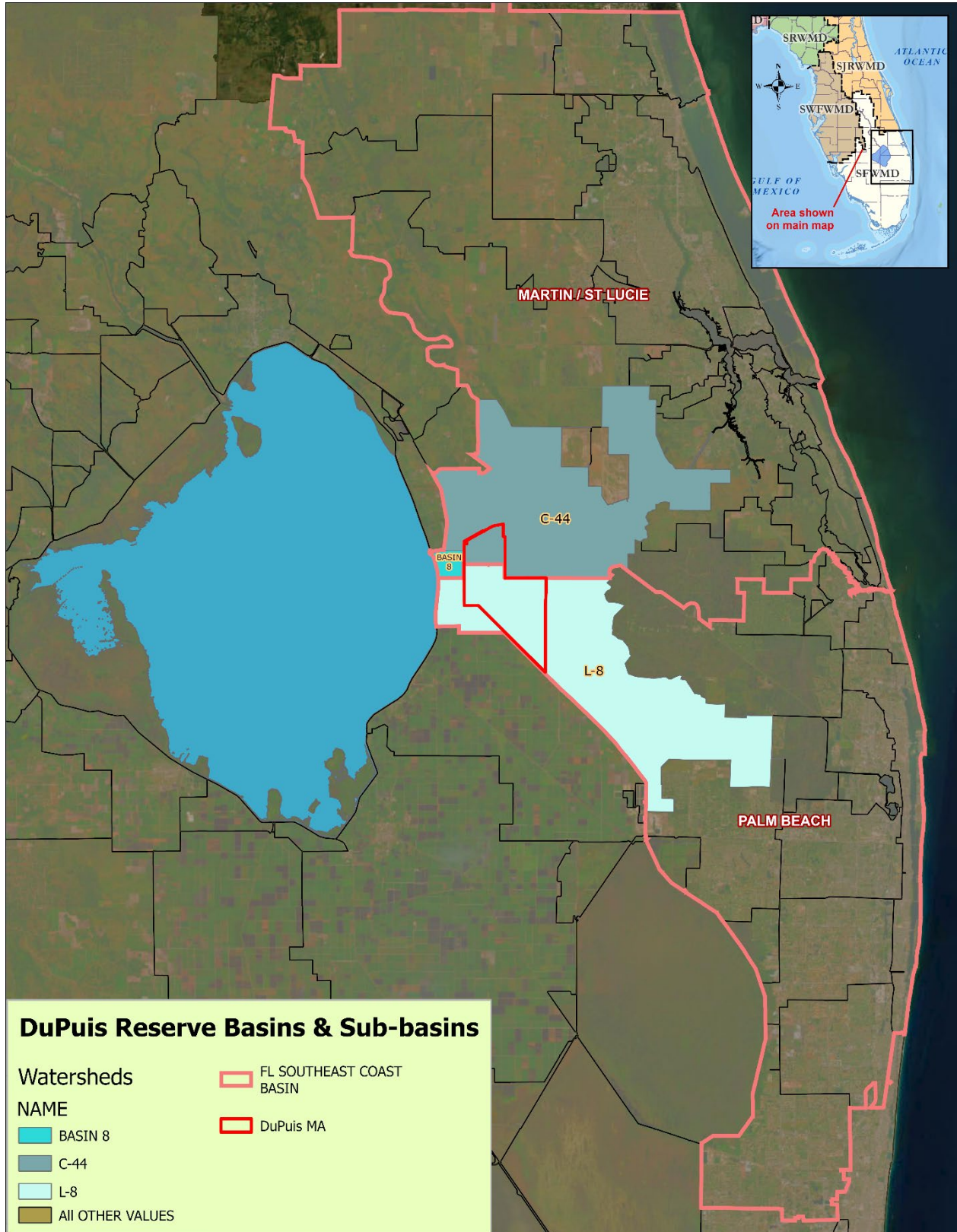
Hydrology

The DuPuis MA is located within the FL Southeastern Coast Drainage Basin, which is divided into the Upper East Coast Basin and the Lower East Coast Basin for water-supply purposes. The basin contains multiple sub-basins that are often referred to interchangeably as basins. The FL Southeastern Coast Basin is generally characterized by rivers, canals, coastal ridges, remnant Everglades wetlands, and coastal swamps and bays. Before agricultural development and canal construction, drainage in this region occurred through a slow, gradual flow of water moving through multiple sloughs toward the St. Lucie River, the Loxahatchee River, and the Everglades. Most of the DuPuis MA lies within the Lower East Coast Basin in the L-8 sub-basin, while approximately seven square miles in southwestern Martin County fall within the Upper East Coast Basin in the C-44 sub-basin (**Map 9**).

The C-44 sub-basin does not contribute much to drainage in the DuPuis MA and primarily serves as an outfall for the northern portion of the management area. Most of the management area drains to the L-8 Canal in the L-8 Basin.

The L-8 Basin encompasses approximately 160 square miles, most of which is located in northern Palm Beach County, with about three square miles in southwestern Martin County. The DuPuis MA and the J. W. Corbett Wildlife Management Area make up most of its drainage area. A smaller area south of the M Canal includes the Indian Trail Improvement District (ITID) service area, along with some agricultural and rural lands. Regional flow within the L-8 sub-basin is complex. Inflows to the L-8 Canal originate from Lake Okeechobee, the DuPuis MA, J. W. Corbett, the L-8 FEB, and the ITID. The upstream water source for the L-8 Basin is Lake Okeechobee, via structure S-271. During rain events, water also flows into the L-8 Canal from adjacent agricultural and natural lands, including the DuPuis MA and J. W. Corbett. Throughout the sub-basin, water is directed into the L-8 Canal for both drainage and water-use withdrawals, such as agricultural irrigation and public water supply via the City of West Palm Beach's Control 2 Pump Station and the M Canal. Excess water from the L-8 sub-basin can be routed either to Lake Okeechobee or to the structure, S-5A complex, at the northern edge of the Everglades Protection Area, where it can be diverted into WCA-1 or diverted for water supply.

The hydrology of the DuPuis MA primarily depends on annual rainfall (Maps 10 - 11). In the Martin County portion of the reserve, pine flatwoods typically occur at elevations near 25 ft, gradually decreasing to 23-24 ft toward the western boundary. Depression marshes range 20-23 ft, and cypress dome centers represent the lowest elevations (about 20-21 ft). In the Palm Beach County portion, pine flatwoods range 24-25 ft, while marshes, cypress domes, and strands lie between 20 and 23 ft. Elevations decline to the southwest toward the L-8 Marsh, where elevations range from approximately 15 to 19 ft. During the rainy season, surface water gradually rises within the management area and eventually sheetflows in a south-southwest direction toward the L-8 Marsh, ultimately discharging into the L-8 Canal through control structures.

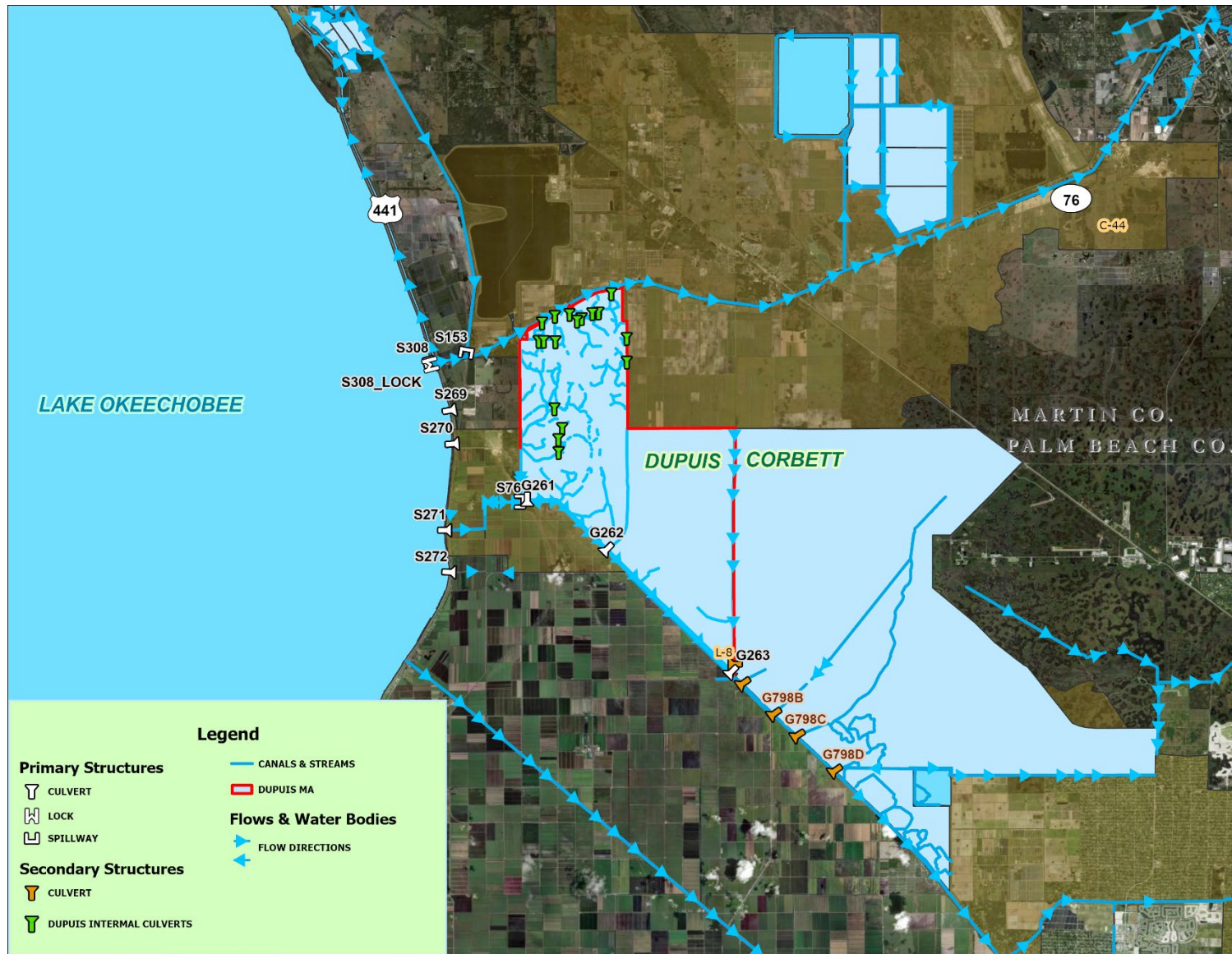


Map 9. DuPuis MA Basin watersheds and sub-watersheds.

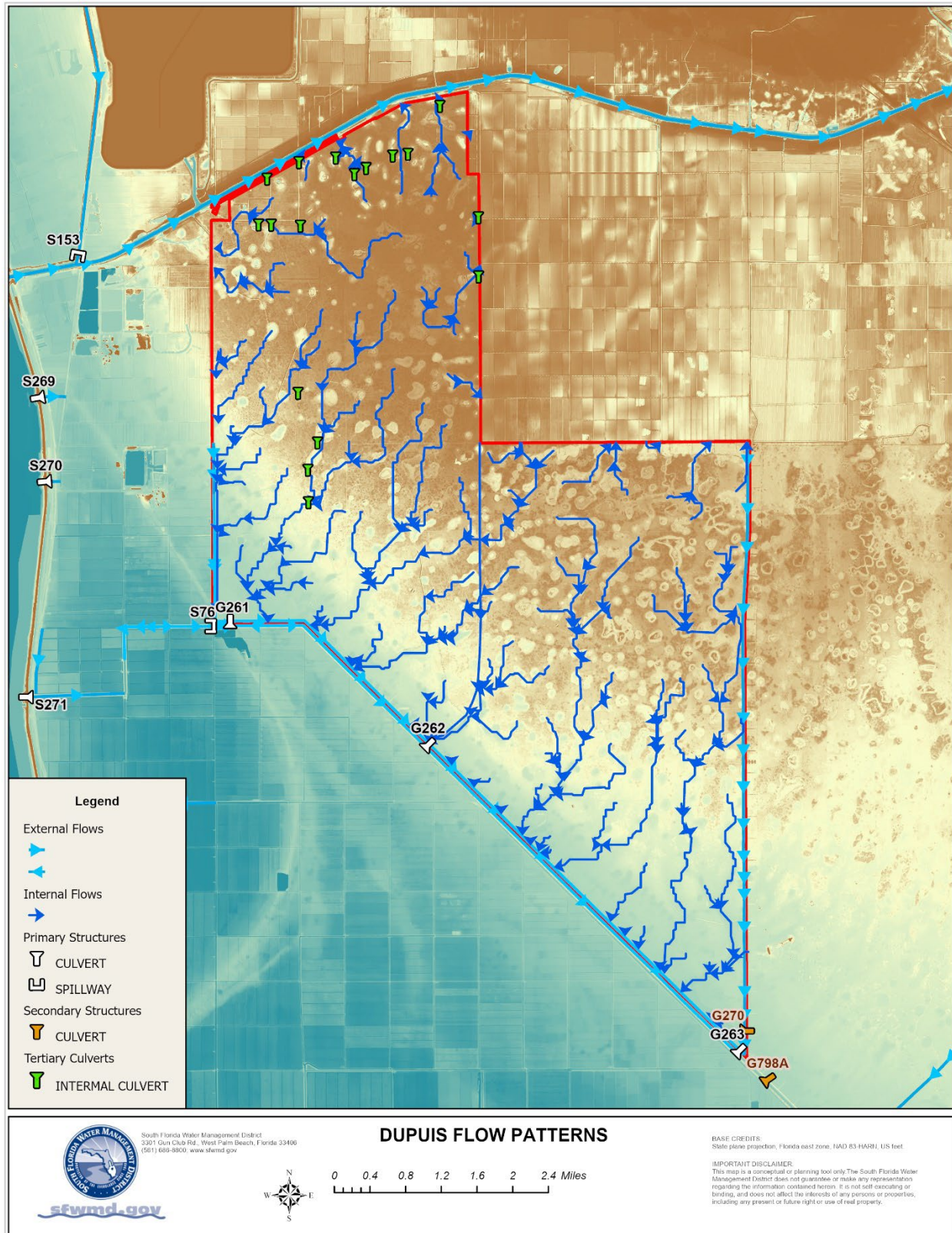
Over the years, several drainage improvements in and around the DuPuis MA have had major impacts on regional hydrology. In the 1920s, the St. Lucie Canal was dredged parallel to the property's northern boundary, severing historic inflows from the north and increasing offsite discharge. In the early 1950s, construction of the L-8 Canal along the southern boundary further increased offsite discharge and facilitated drainage of the land. By the 1970s, a canal and elevated road along the eastern boundary blocked historic inflows from the J. W. Corbett area. Additionally, during ranch development, an extensive network of interior canals and ditches was constructed, significantly decreasing surface water retention and increasing discharge from the site.

Although historical aerial imagery indicates that upstream flow from the C-44 sub-basin into the DuPuis MA would have been minimal, due to the original river/tributary system that existed to the north prior to construction of the St. Lucie Canal, the excavation of the canal substantially altered the hydrology of the northern portion of the management area. The wetlands on the north side lie at approximately 25 ft above sea level, while the canal is generally maintained at or below Lake Okeechobee's typical elevation of about 15 ft. This created a groundwater gradient that lowered the water table by roughly ten feet at the canal, with diminishing effects farther from it. By the 1940s, aerial photographs already showed changes in hydroperiods within three-quarters of a mile of the canal.

Efforts to restore hydrology have been ongoing since the 1990s to address these diminished groundwater conditions. These efforts include construction of a levee adjacent to the L-8 Canal, installation of control structures, and placement of several ditch plugs. The levee is at an elevation of 23 ft NGVD and discharges into the L-8 Canal through three control structures set at a control elevation of 19 ft NGVD. This design allows surface water to discharge during peak flood conditions, helping supply the L-8 sub-basin and reducing the drawdown effect of the L-8 Canal on the L-8 marsh in the dry season. An additional structure on the southeastern boundary of the management area, consisting of four 72-inch culverts with 96-inch flashboard risers, was added to restore a portion of the historical flow between J. W. Corbett and the management area.



Map 10. DuPuis MA Regional hydrography.



5.3 Vegetation

The DuPuis MA is characterized by extensive pine flatwoods, depressional marshes, and cypress swamps, which provide critical habitat for a diverse array of flora and fauna, contributing to the region’s ecological integrity.

Seven distinct natural community types exist within the DuPuis MA (**Maps 12; Figure 3**). The District groups natural community types based on the descriptions in the Florida Natural Areas Inventory (FNAI) Classification system (FNAI, 2010) and the Florida Land Cover Classification System (Kawula & Redner, 2018).

Detailed descriptions of both natural communities and altered landcover types are provided in Appendix B.

Percent Coverage of Plant Communities in DuPuis MA

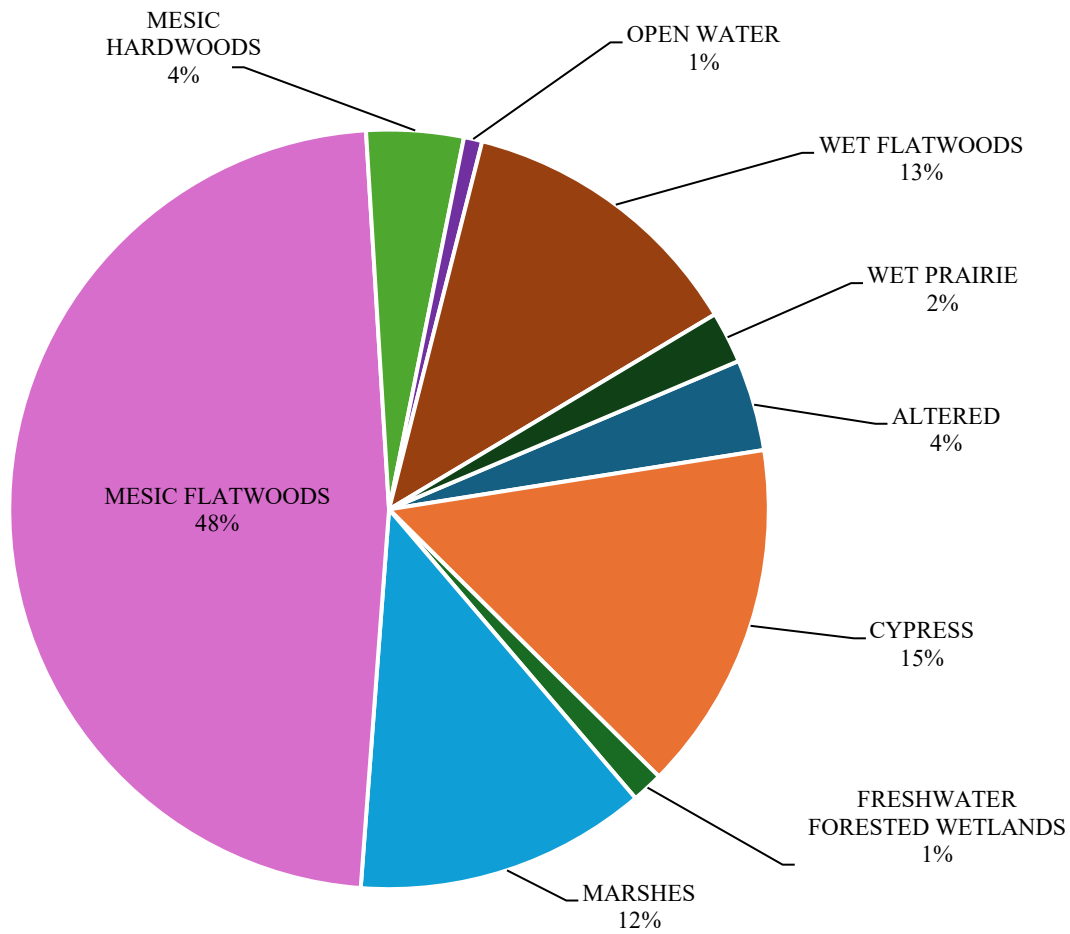
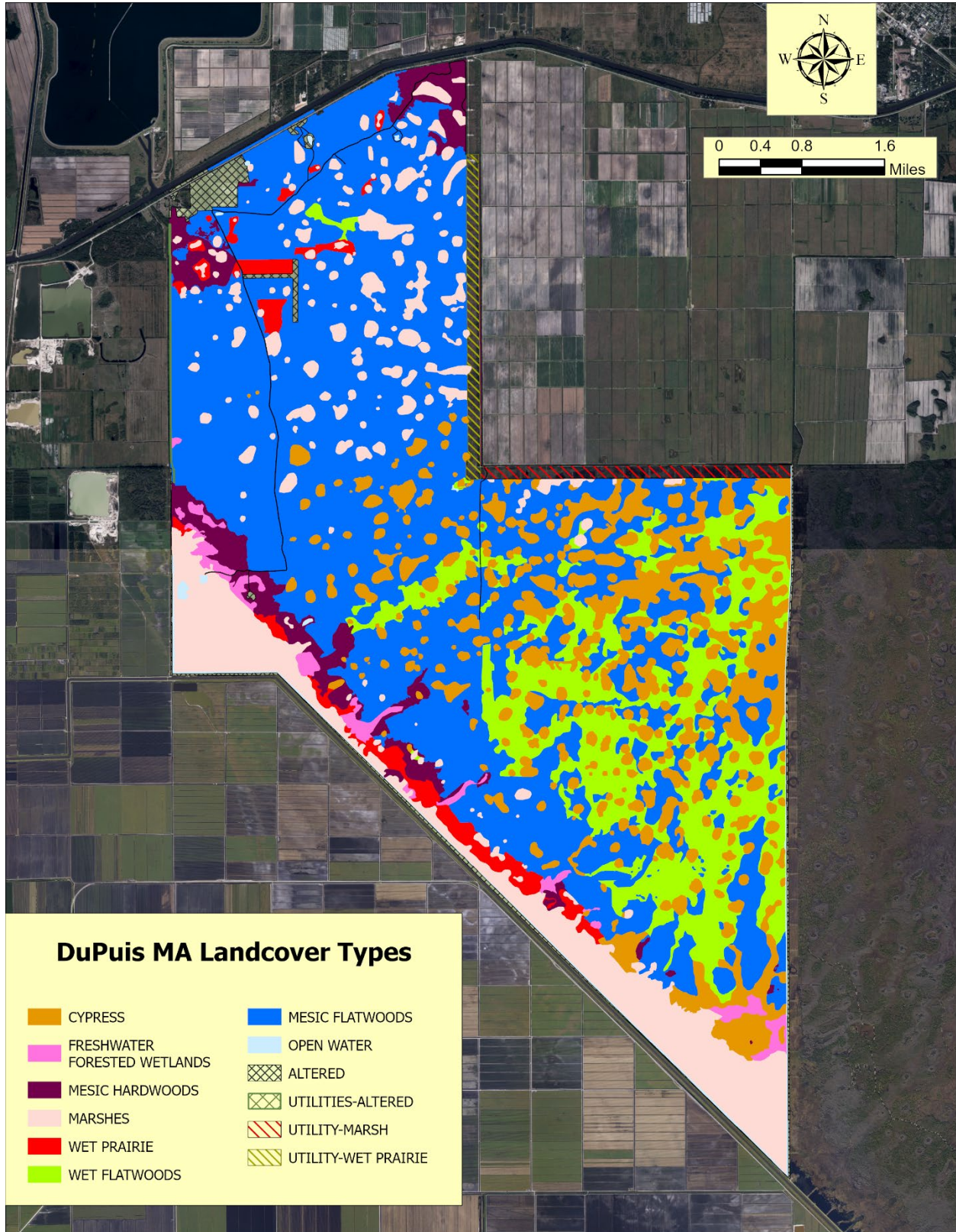


Figure 3. Plant community classifications within the DuPuis MA.



Map 12. Distribution of natural communities and altered landcover in the DuPuis MA.

Listed Species

Listed species include those plants and animals identified as rare, threatened, or endangered by the U.S. Fish and Wildlife Service (FWS), FWC, and the Florida Department of Agriculture and Consumer Services. The DuPuis MA supports natural habitats for several state-listed endangered or threatened plant species. **Table 1** lists the plant species found within the management area.

Table 1. Listed plant species associated with the DuPuis MA and current status.^a

Common Name	Scientific Name	Status
Blue-Flowered Butterwort	<i>Pinguicula caerulea</i>	ST
Cardinal Wild-Pine	<i>Tillandsia fasciculata</i>	SE
Catesby's Lily	<i>Lilium catesbaei</i>	ST
Celestial Lily	<i>Nemastylis floridana</i>	ST
Giant sword fern	<i>Nephrolepis biserrata</i>	ST
Giant Wild-Pine	<i>Tillandsia utriculata</i>	ST
Hand fern	<i>Ophioglossum palmatum</i>	SE
Manyflowered Grasspink	<i>Calopogon multiflorus</i>	ST
Pinepink Orchid	<i>Bletia purpurea</i>	ST
Reflexed Wild-Pine	<i>Tillandsia balbisiana</i>	ST
Rose Pogonia	<i>Pogonia ophioglossoides</i>	ST
Satinleaf	<i>Chrysophyllum oliviforme</i>	ST
Snowy Orchid	<i>Platanthera nivea</i>	ST
Threadroot Orchid	<i>Dendrophylax porrectus</i>	ST
Toothed Maiden Fern	<i>Thelypteris serrata</i>	SE
Twisted Wild-Pine	<i>Tillandsia flexuosa</i>	ST

Nuisance and Invasive Plant Species

South Florida's subtropical climate provides an excellent growth environment for the rapid spread of nuisance and invasive plants that can cause extensive alterations to the natural ecosystems. Nuisance and invasive plant infestations can result in partial or total displacement of native plants, loss of wildlife habitat, and the degradation of public use areas. Environmental changes caused by extensive hydroperiod alterations have been a major factor in the nuisance and invasive plant colonization within the DuPuis MA. Without proper land management, nuisance and invasive plant expansion will continue to displace our native plants, reduce wildlife utilization, and degrade public use areas. The District is committed to reducing the proliferation of invasive species to protect its management areas' ecological values (SFWMD, 2020).

5.4 Wildlife

The plant communities within the management area provide habitat for a wide variety of species, including birds, amphibians, reptiles, and mammals. Initial wildlife inventories were conducted between 1987 and 1989, and the list is updated periodically to incorporate new observations and taxonomic revisions. The most recent version is provided in **Appendix C**.

In addition to supporting resident species, the management area is used by wildlife dispersing from nearby populations and by migratory species that move through during seasonal migrations. Some species also use the area opportunistically for foraging away from their primary roosting or breeding sites.

The DuPuis MA falls within the geographic priority wetland zones identified in several major conservation plans, including the North American Waterbird Conservation Plan (NAWCP), the North American Waterfowl Management Plan (NAWMP), and the Partners in Flight North American Landbird Conservation Plan (PIF). The area provides important foraging, nesting, and roosting habitat for numerous waterbird species, contributing to NAWCP objectives. It offers critical foraging habitat for migrating and wintering waterfowl, as well as breeding and nesting habitat for wood ducks and mottled ducks, supporting NAWMP goals. Additionally, the management area supports nesting and foraging habitat for a range of wetland-associated landbirds, including thirteen PIF Species of Continental Importance.

Rare, Threatened and Endangered Listed Species

The DuPuis MA supports a variety of federally protected wildlife species. Several federally listed wildlife species have been observed in the management area, including one (1) listed as endangered, three (3) as threatened, and one (1) as threatened due to similarity of appearance. The area also supports six (6) species designated as state threatened. A list of these species is included in **Table 2**.

Table 2. Listed wildlife species utilizing the DuPuis MA & current status.^a

Common Name	Scientific Name	Status
Birds		
Crested Caracara	<i>Caracara cheriway</i>	FT
Everglades Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	FE
Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	ST
Little Blue Heron	<i>Egretta caerulea</i>	ST
Red-cockaded Woodpecker	<i>Picoides borealis</i>	FT
Roseate Spoonbill	<i>Platalea ajaja</i>	ST
Southeastern American Kestrel	<i>Falco sparverius paulus</i>	ST

Table 2 Continue. Listed wildlife species utilizing the DuPuis MA & current status.

Common Name	Scientific Name	Status
Tricolored Heron	<i>Egretta tricolor</i>	ST
Herpetofauna		
American Alligator	<i>Alligator mississippiensis</i>	FT(S/A)
Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	FT
Gopher Tortoise	<i>Gopherus polyphemus</i>	ST

a. Key to abbreviations: Species listed by the State of Florida as Federally-designated Endangered (FE), Federally-designated Threatened (FT), and Federally-designated Threatened because of similarity of appearance [FT(S/A)].

5.5 Cultural Resources

Thirteen archaeological sites within the DuPuis MA are registered in the Florida Master Site File (FMSF). Native American occupations at these locations date to approximately 500 B.C. and span the Glades I Late through Glades *IIIb/IIIc* periods, associated with the Belle Glade culture. Cultural affiliation is identified through diagnostic ceramic types such as Belle Glade Plain, St. Johns Plain, and sand-tempered plain, which reflect regional traditions emerging after 500 B.C. Artifacts found with Glades-era pottery, including shark teeth, shell tools, sea turtle remains, and chert, also indicate exchange networks reaching coastal and central Florida. During the Seminole War (1835), Seminole groups used the DuPuis MA and adjacent high ground as refuge; severe hardship experienced in the area contributed to the name “Hungryland.”

Archaeological sites within the management area are primarily located along the southern boundary near sloughs that historically drained toward the Everglades. The Glades period in this region is characterized by circular and linear earthworks. Three sites within the management area are significant prehistoric earthworks eligible for the National Register of Historic Places (NRHP) share this characteristic, and two sites are highly sensitive prehistoric burial mounds. Investigations at four of the earliest documented sites revealed substantial cultural resources consistent with patterns known from the eastern Lake Okeechobee area.

One site is an important example of a circle-ditch earthwork with an associated habitation area. Although circle-ditch sites are geographically widespread, only sixteen are known in southern Florida, many of which have been destroyed. These earthworks generally date to ca. 1000 B.C.–A.D. 200, but evidence from this site suggests a broader temporal range, possibly extending into the late Archaic and Florida Transitional periods. Artifacts observed include sand-tempered plain, Belle Glade Plain, and St. Johns Plain sherds; shark-tooth and bone tools; chert flakes; and a Hernando-type chert biface. Stratigraphy indicates two distinct occupations.

Another site contains extensive black-earth midden deposits, vertically and horizontally, covering at least 57,352 sq ft, and includes known burial mounds. Two occupation layers were documented: the lower contains chert flakes (absent in the upper), while both contain similar

ceramic assemblages dominated by sand-tempered plain sherds with low frequencies of Belle Glade Plain and St. Johns Plain. The presence of a Miami Incised sherd (a Glades *Ila* marker, ca. A.D. 750–900) and the limited occurrence of Belle Glade Plain suggest occupation primarily between A.D. 500 and 1100. Despite surface disturbance from a road and former structures, the subsurface preservation remains excellent, with intact occupation layers.

A third site contains a high conical mound with outlying crescent-shaped earthworks. The site remains exceptionally well preserved, with fairly intact earthen berms and minimal evidence of prior digging. Indications that it is a burial mound with Spanish contact-period materials further enhance its significance. Most comparable sites dating to this period have been heavily damaged or destroyed.

A fourth site consists of two linear earthworks terminating at a small sand mound partly encircled by a crescent-shaped earthwork. Additional features include attendant mounds and a thin midden on a large crescent-shaped hammock. Although the arrangement is characteristic of sites in the Lake Okeechobee area, heavy disturbance from historical cattle and sheep grazing, modern road construction, and agricultural modifications has compromised the site's integrity. The disturbance, combined with the relatively thin midden, indicates the site no longer retains sufficient integrity to be considered a significant resource.

Management of known archaeological sites within the DuPuis MA prioritizes preserving site integrity and preventing ground-disturbing activities. Vegetation management and prescribed burning are planned and conducted to avoid impacts on cultural resources.

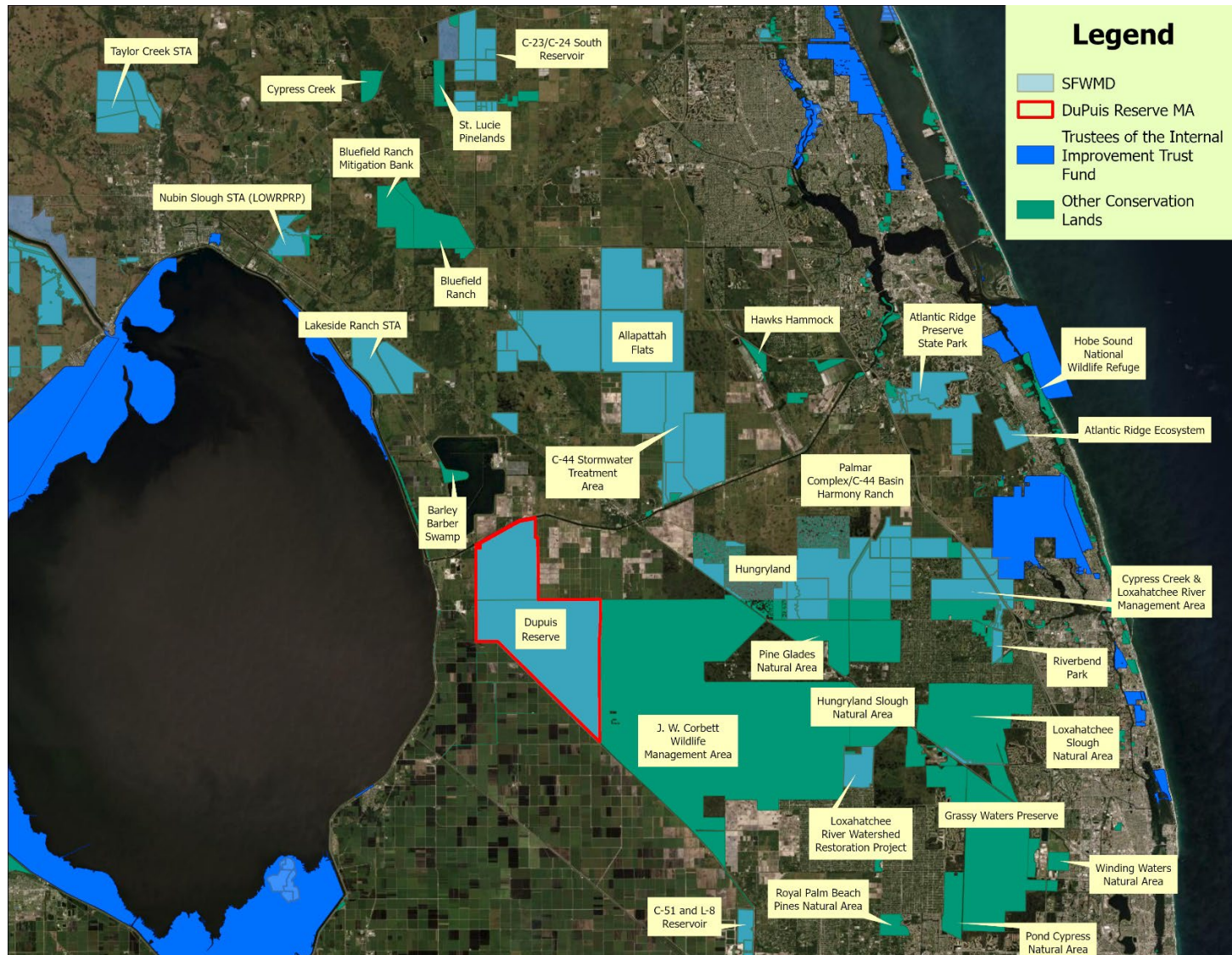
5.6 Mitigation

The District utilized available funds from mitigation payments made by Florida Power & Light Company (FPL) to support land management activities within the DuPuis MA. As part of regulatory mitigation for wetland impacts associated with FPL's Levee Midway 500-kV Transmission Line project, FPL funded the restoration of approximately 850 acres of wetlands within the L-8 Marsh. The L-8 berm construction and hydrologic improvements for the marsh restoration were completed in accordance with Department of Environmental Regulation (now FDEP) Permit No. 43 & 502142156 and U.S. Army Corps of Engineers Permit No. 199200851 (IP-RP). See the Hydrologic and Habitat Restoration section below for additional details.

5.7 Potential Additions

The District acquires land through donations, mitigation, and direct purchase. Acquisition of the DuPuis MA protected 35 sections of wetland and upland habitats, expanded the conservation corridor established by the J.W. Corbett WEA, and enhanced regional water quality. Although no additional acquisitions are required to support current land management activities, purchases from willing adjacent landowners would further improve water quality in the region.

DuPuis Management Area General Management Plan 2026 – 2036
South Florida Water Management District, Land Stewardship Section



Map 13. DuPuis MA vicinity map.

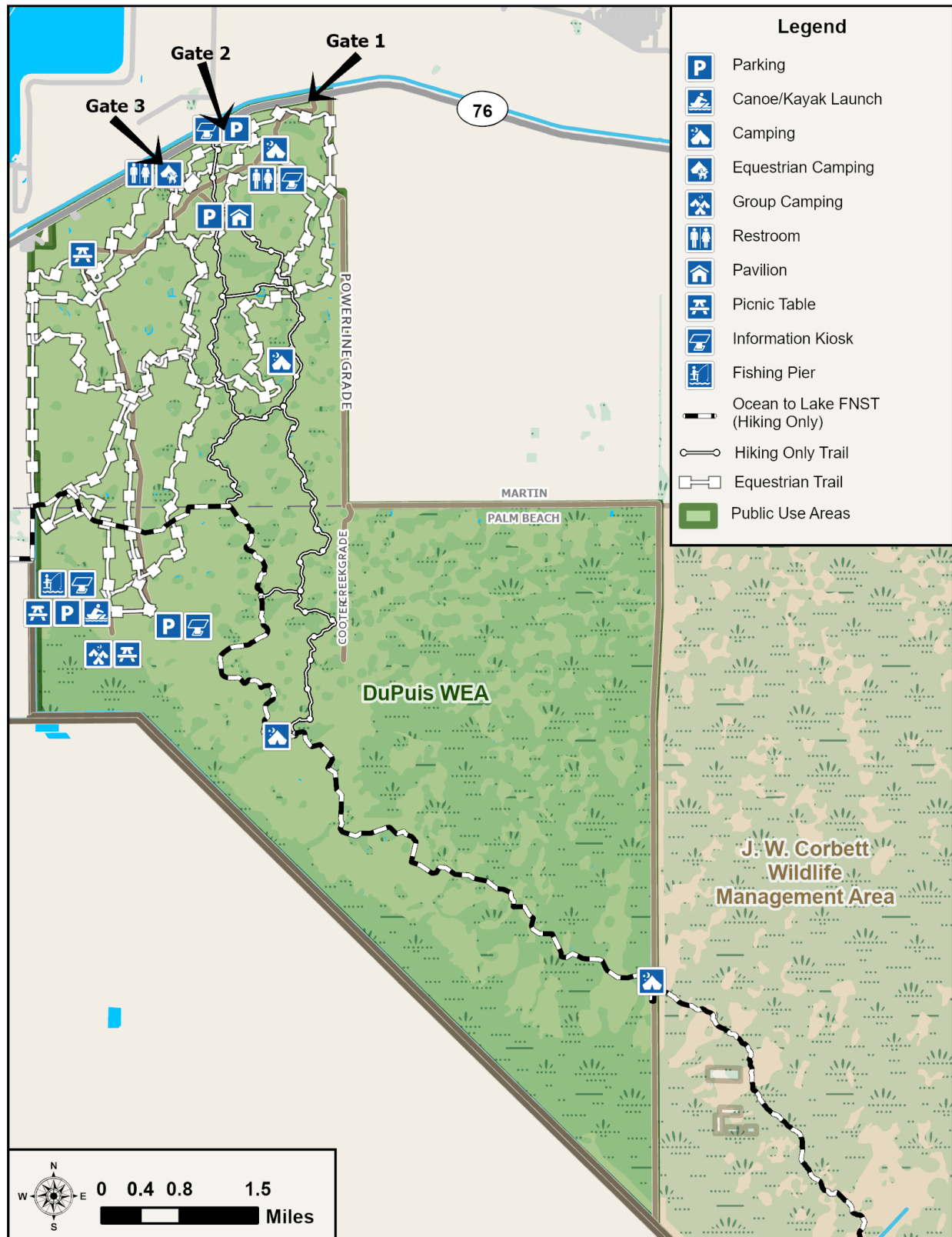
6. PUBLIC USE

The District encourages public use of management areas for appropriate natural resource-based activities. District lands are generally available for public use, except in instances where the public use would be incompatible with the purposes for which these lands were acquired, there is no legal public access, or where construction activities prohibit public entry. Public input into the management of these areas is solicited at the District's quarterly Recreational Forum Meetings. In coordination with partnering agencies, adjustments to public use opportunities are made on an ongoing basis through the Recreational Forum Meetings and rulemaking, if necessary. This plan describes the scope of public use opportunities available or planned as of the date of the management plan. Compatible recreational activities on District lands typically include hiking, biking, hunting, fishing, frogging, horseback riding, canoeing, geocaching, boating, primitive camping, environmental education, wildlife viewing, nature photography, natural history study, and flora and fauna identification. These activities are designed to maximize the diversity and variety of recreational options available while ensuring the necessary resource protection measures are in place. This approach helps to maintain conservation values and ensures long-term benefits for the public.

The DuPuis MA is designated as a Public Use Area (PUA) to provide the public with recreational access. It is also designated by FWC as a Wildlife and Environmental Area (WEA). The management area is accessible from State Road 76 and offers a variety of public recreation opportunities, including hiking, biking, horseback riding, hunting, fishing, canoeing, and camping. Gate 1 is the primary entrance, providing vehicular access to the campgrounds, pavilion, picnic areas, and fishing pier. Gate 2 is the main access point for the hiking trailhead, and Gate 3 provides entry to the equestrian center and the RV and trailer camping area. Visitors can enjoy 13.6 miles of hiking and biking trails and 38.5 miles of equestrian trails. Additionally, 38.5 miles of the Florida National Scenic Trail's Ocean to Lake Hiking Trail pass through the management area, linking recreational opportunities within the DuPuis MA, J.W. Corbett WEA, Palm Beach County Natural Areas, and Jonathan Dickinson State Park.

Three designated campgrounds are located in the management area, along with three primitive camping sites situated along the trail system. The District offers a free Special Use License that allows the public to use recreation opportunities, including equestrian camping and tent and RV/trailer camping, within the DuPuis MA. Limited recreational fishing opportunities are also available. Recreational amenities within the DuPuis MA are illustrated in **Map 14**. Additional information, including maps and Special Use License details, is available in the District's recreation guide, on the District's website, and on the Florida Trail Association's website.

The District partners with FWC to manage game species and public hunting opportunities on District lands designated as WMAs, WEAs, PSGHAs, and PUAs. These designations allow FWC to utilize biologists and law enforcement staff to assist in the management of wildlife on District lands and to enforce wildlife and public use rules for resource protection. These designations also allow the FWC to establish hunting seasons and promulgate laws regulating public activities in these areas. A hunting brochure (**Appendix D**) outlining the regulations for hunting and additional information is available online.



7. NATURAL RESOURCE MANAGEMENT

To keep native plant communities healthy and productive, District land managers take appropriate actions to compensate for the loss of natural processes. Several land management practices are utilized to preserve the ecological health and function of the management areas. These practices include prescribed burning fire-dependent plant communities with fire return intervals that mimic natural fire regimes; controlling invasive vegetation through the selective use of herbicides and biological control agents; restoring the physical structure of plant communities and biological diversity through mechanical vegetation management, including mowing, chopping and shredding; and implementing hydrologic restoration activities where the natural hydrology has been altered through ditches, canals, and other surface water drainage features.

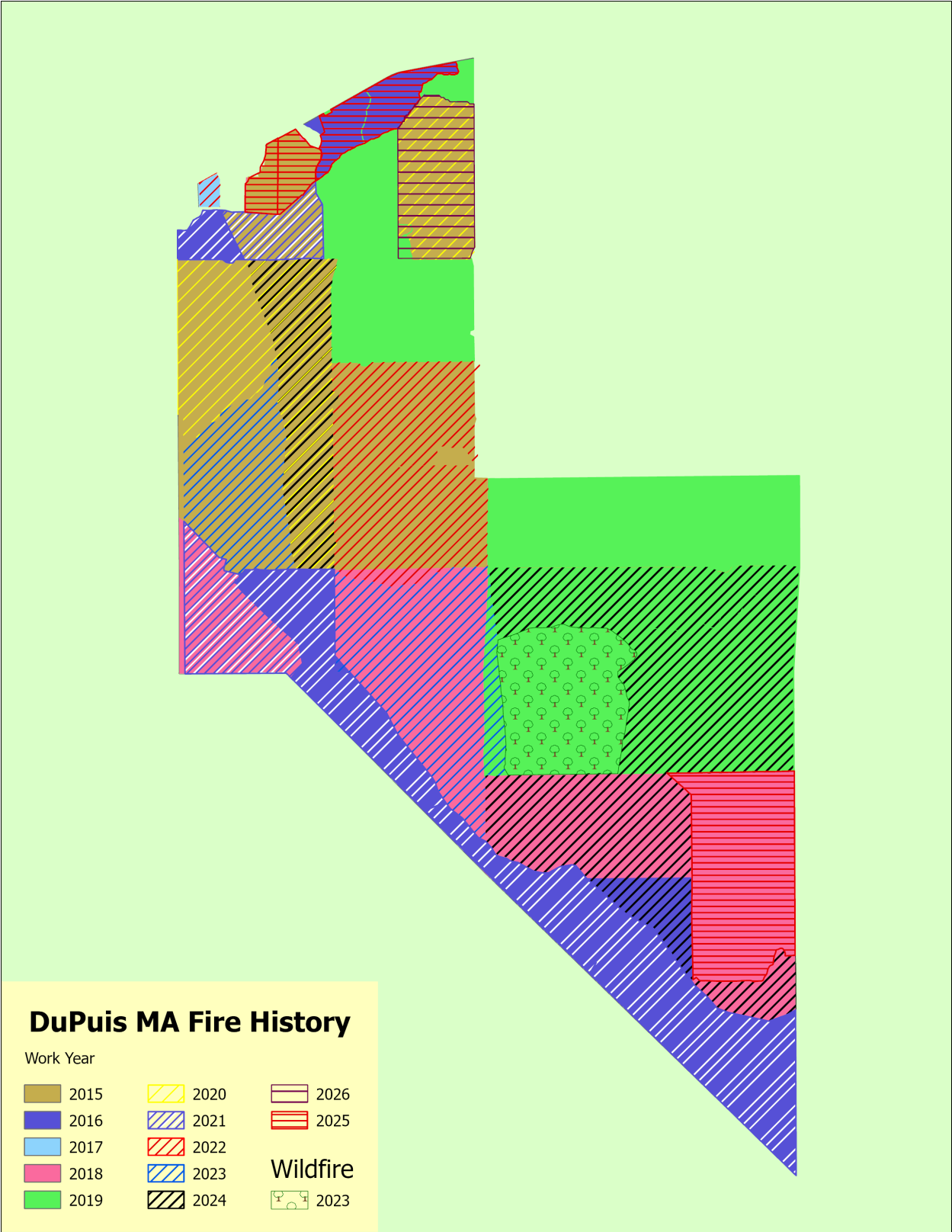
7.1 Fire

Fire has shaped the distribution of plants in Florida's ecosystems. Historically, wildfires reduced fuel loads in natural communities. Due to habitat fragmentation and human suppression efforts, these fires no longer occur with historical frequency or extent, resulting in alteration to the natural community structure and function in fire-dependent communities. Most plant communities in Florida are adapted to periodic fires and rely on them to maintain their vegetative characteristics and biodiversity. Land Managers use prescribed burning to reduce hazardous buildup of vegetative fuel load, maintain plant species diversity, enhance wildlife habitat, and encourage restoration of native plant communities. Land Stewardship recognizes the importance of fire as a management tool and has integrated prescribed fire into its land management strategy.

Fire History

Limited fire history exists for the DuPuis MA prior to District acquisition in 1986, and conditions before the mid-1950s are largely unknown. However, grazing practices in the region suggest that native rangelands were likely burned regularly to improve forage. From 1955, when the previous owners acquired the property, until about 1980, annual winter burns were conducted throughout the pinelands, except for pasture areas. Between the late 1950s and the 1970s, the improved pastures on the western portion and in the area that now comprises the L-8 Marsh were not burned. Winter burning continued on most of the eastern portion of the property, east of Cooter Creek Grade, between 1980 and 1986, and these fires were typically low-intensity, slow-moving grass fires.

The District initiated its prescribed fire program in 1989, with the primary goal of reducing hazardous understory fuel loads, particularly overgrown saw palmetto, resulting from past overdrainage and inconsistent burning practices. Since its implementation, a systematic burn rotation has been established for fire-dependent communities, thereby restoring the natural fire regime within the management area (**Map 15**).



Map 15. DuPuis MA fire history.

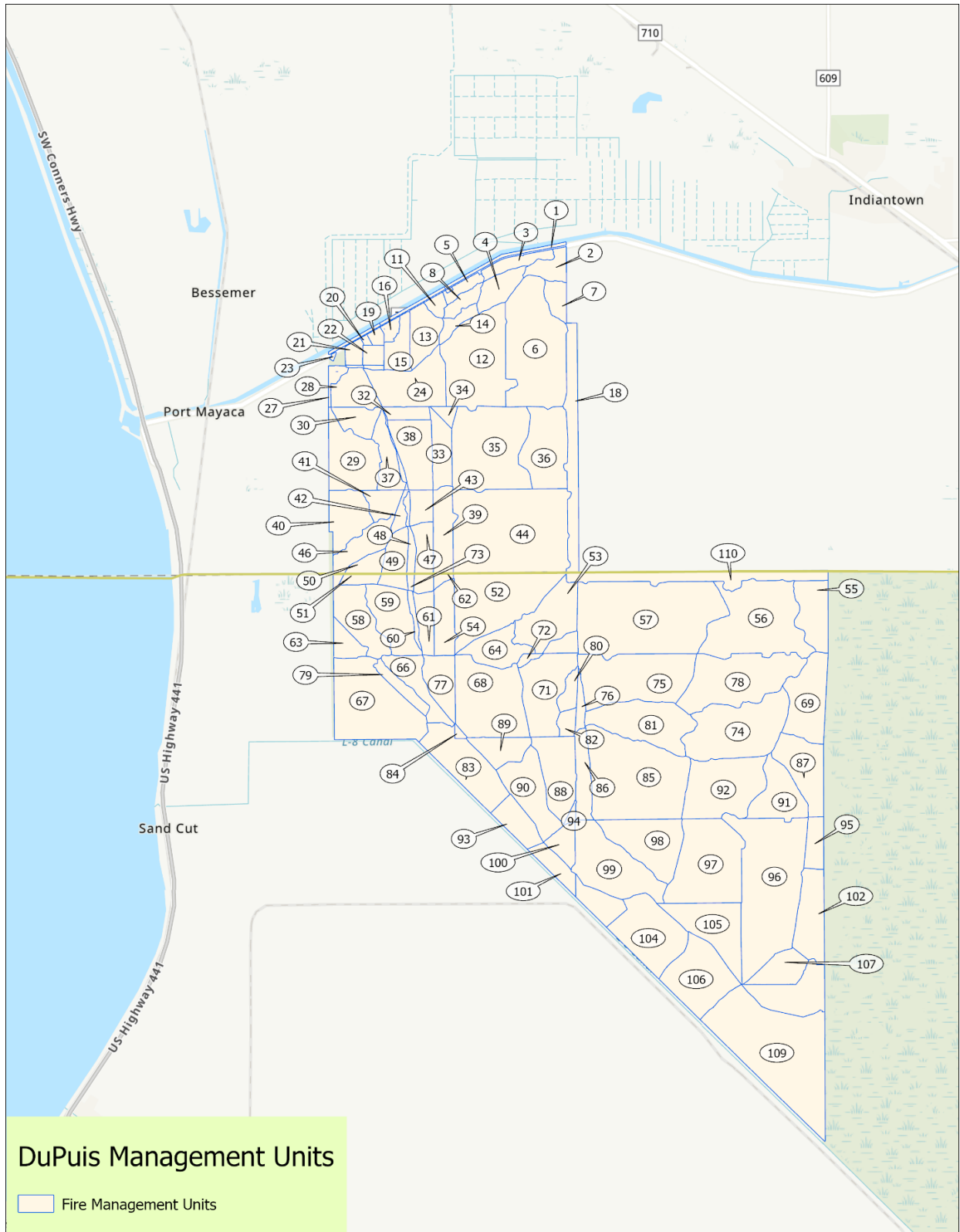
Prescribed Fire Planning

The fire management program for the DuPuis MA includes wildfire prevention, detection and suppression, and prescribed burning. Prescribed burn standards and procedures are outlined in the Land Stewardship's Wildlands Fire Manual, which serves as the centralized reference for fire management on District lands. The manual establishes the procedures necessary to ensure compliance with statutory requirements of Chapter 590, Florida Statutes, Chapter 5I-2, Florida Administrative Code, and Chapter 62-256, Florida Administrative Code.

To implement these actions effectively, the management area is divided into management units for prescribed fire application (**Map 16**). Existing roads and trails, disked firelines, and, where feasible, natural firebreaks such as wetlands and ecotones define the boundaries of these units. Smoke-management requirements and limited resources present ongoing challenges to sustaining a robust fire program for the DuPuis MA; however, maintaining low fuel loads remains essential to reducing the risk of destructive wildfires.

Prescribed fire is applied within these units with different management objectives tailored to plant community needs, wildlife utilization, and species-level requirements. Prescriptions for these burns specify environmental conditions, return frequency, and ignition techniques to create mosaic burns that do not remove all vegetation while redefining the boundaries of embedded plant communities that are not fire-dependent, such as hammocks or swamps. A healthy fauna in South Florida is integrally tied to fire return intervals, seasonality, and intensities. Frequent fire tends to favor understory vegetation that provides essential forage and mobility for wildlife. Although high-intensity winter burns give the appearance of removing more fuels from the landscape, spring and summer burns achieve a more effective reduction of fuel and are preferred from a wildlife management and ecological perspective. Spring growing-season burns provide a mosaic effect, allowing the retention of cover and foraging opportunities for wildlife that winter burns may temporarily eliminate. Late-spring and summer burns help control the spread of hardwoods. Because prolonged dry periods make it increasingly difficult to conduct safe, successful spring burns, land managers utilize less intensive summer burns to achieve management goals. Summer burns reduce the likelihood of spot fires and escapes because of the amount of green vegetation and high relative humidity. Burning in late summer and early fall also helps replicate historical fire patterns that occurred in many habitats during occasional lightning strikes. While spring and summer burns may result in isolated nest losses, affected species (e.g., quail, Turkey, etc.) typically re-nest, and the resulting habitat conditions offer a better food source for fledged young.

Prescribed fire has been the primary tool shaping and maintaining the desired community structure within the fire-dependent natural communities of the DuPuis MA. Its application reinforces the open conditions characteristic of pine flatwoods and helps reduce woody species encroachment in the wetlands. Strategic fire applications also stimulate the regrowth of native grasses and forbs that compete with pasture grass (e.g., bahiagrass, etc.) within former pasture areas. These post-fire flushes of herbaceous vegetation also provide essential forage and cover for wildlife that depend on open, grassy structure, including ground-nesting birds and small mammals. These ecological responses collectively highlight the crucial importance of prescribed fire in maintaining the health, resilience, and biodiversity of the natural communities within the management area.



Map 16. DuPuis MA fire management units.

Additionally, meeting the prescribed fire goals and objectives for each fire-maintained community is largely dependent on weather conditions, personnel, and statewide emergency situations such as wildfires, hurricanes, and other natural disaster responses. Ideally, burn crews would consist of 6-8 or more individuals. While the District Land Stewardship employees successfully conduct most prescribed burns, some prescribed burns require outside assistance to ensure they are conducted in a safe and effective manner. The DuPuis MA receives assistance from FWC, Martin County Ecosystem Restoration & Management, different divisions of the District and regions of Land Stewardship, and trained volunteers.

Wildfire Suppression

Lightning-induced wildfires are common across Florida. The Florida Forest Service (FFS) is responsible for preventing, detecting, and suppressing wildfires in Florida (§590.01, Florida Statutes). Maintaining fire-dependent habitats through frequent prescribed burns is the primary way the District limits the negative impacts of wildfires and enhances the FFS ability to respond effectively to wildfire events. When a wildfire is detected, the land manager immediately notifies FFS while the Land Stewardship staff responds and, if appropriate, begins fire suppression efforts. Upon arrival, FFS takes command of the fire while the District continues to provide logistical and situational support as needed.

The FFS Okeechobee District and Everglades District are responsible for wildfire response within the DuPuis MA.

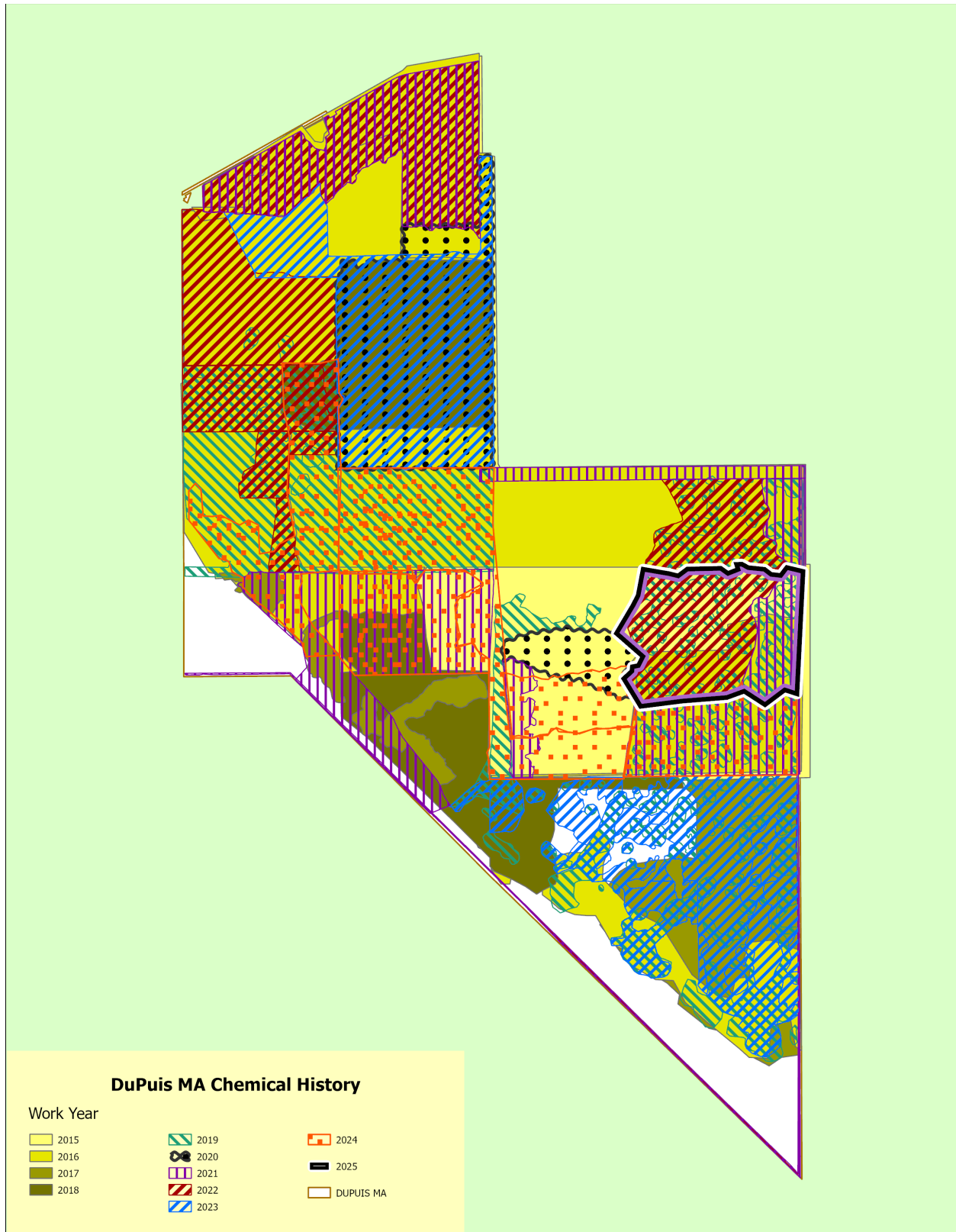
7.2 Control of Nuisance and Invasive Plant Species

The District's vegetation management program utilizes an Integrated Pest Management strategy to maintain nuisance and invasive plant populations at the lowest feasible level. Integrated Pest Management is an ecosystem-based strategy that focuses on the long-term prevention of pests or their damage through the combination of management techniques, including prescribed fire, herbicide application, mechanical treatment, biological control, and physical removal. The selection of control measures is dependent upon species type, environmental factors, and the natural communities impacted.

Invasive plant control funding represents the largest item in the Land Stewardship Program's annual budget. Land managers have developed specific management area treatment strategies that optimize invasive plant control efforts. Although Category I and II species on the Florida Invasive Species Council (FISC) list threaten the function and ecological stability of natural communities, achieving maintenance on all species identified on these lists is currently not feasible with existing budgetary resources. The primary goal of the Land Stewardship's invasive plant management program is to control the spread of 30 priority invasive species (**Table 3**), in addition to area-specific priority species based on early detection/rapid response and locally significant impacts or potential for impacts.

Table 3. Land Stewardship Section Invasive Species Priority List and Targeting Sequence.

Scientific Name	Common Name	FISC Category
<i>Melaleuca quinquenervia</i>	Melaleuca, Paper Bark	I
<i>Casuarina equisetifolia</i>	Australian-Pine, Beach Sheoak	I
<i>Casuarina glauca</i>	Suckering Australian-Pine, Gray Sheoak	I
<i>Casuarina cunninghamiana</i>	River Sheoak, Australian-Pine	I
<i>Lygodium japonicum</i>	Japanese Climbing Fern	I
<i>Lygodium microphyllum</i>	Old World Climbing Fern	I
<i>Schinus terebinthifolia</i>	Brazilian Pepper	I
<i>Imperata cylindrica</i>	Cogon Grass	I
<i>Rhodomyrtus tomentosa</i>	Downy Rose-Myrtle	I
<i>Ardisia elliptica</i>	Shoebutton Ardisia	I
<i>Ardisia crenata</i>	Coral Ardisia, Scratchthroat	I
<i>Dioscorea bulbifera</i>	Air potato	I
<i>Solanum tampicense</i>	Wetland Nightshade, Aquatic Soda Apple	I
<i>Solanum viarum</i>	Tropical Soda Apple	I
<i>Syzygium cumini</i>	Jambolan-Plum, Java Plum	I
<i>Acacia auriculiformis</i>	Earleaf Acacia	I
<i>Cupaniopsis anacardioides</i>	Carrotwood	I
<i>Schefflera actinophylla</i>	Schefflera, Australian Umbrella Tree; Octopus Tree	I
<i>Bischofia javanica</i>	Bishopwood	I
<i>Triadica sebifera</i>	Popcorn Tree, Chinese Tallow Tree	I
<i>Leucaena leucocephala</i>	Lead Tree	II
<i>Albizia julibrissin</i>	Mimosa, Silk Tree	I
<i>Mimosa pigra</i>	Catclaw Mimosa	I
<i>Dioscorea alata</i>	Winged Yam	I
<i>Senna pendula</i> var. <i>glabrata</i>	Christmas Senna Climbing Cassia, Christmas Cassia	I
<i>Solanum diphyllum</i>	Twoleaf Nightshade	II
<i>Albizia lebbbeck</i>	Woman's Tongue	I
<i>Colocasia esculenta</i>	Wild Taro	I
<i>Mikania micrantha</i>	Mile-A-Minute Vine	II
<i>Abrus precatorius</i>	Rosary Pea	I



Map 17. DuPuis MA chemical history.

Currently, Old World climbing fern (*Lygodium spp.*), cogon grass (*Imperata cylindrica*), Brazilian pepper (*Schinus terebinthifolius*), and shoebutton ardisia (*Ardisia elliptica*) are the most prolific invasive species targeted in the DuPuis MA. Old World climbing fern and cogon grass remain the most widespread invasive species throughout the management area despite many years of systematic treatment. Shoebutton ardisia, often forming dense monocultures in the subcanopy, is primarily concentrated in the southern portion of the management area, particularly within the L-8 Marsh and adjacent management units, but scattered Shoebutton have recently been observed north of these known infestations. Because of its tendency to spread, shoebutton ardisia continues to be systematically targeted to limit further expansion. Brazilian pepper seedlings are common across the property, with dense clusters found along remnant ditch banks and the perimeter of the management area.

Other opportunistic woody species, including java-plum (*Syzygium cumini*), carrotwood (*Cupaniopsis anacardioides*), and earleaf acacia (*Acacia auriculiformis*), are present at low levels and are removed when encountered to prevent future establishment. Melaleuca (*Melaleuca quinquenervia*) is more common but has been nearly eradicated across most of the management area. Current occurrences are typically scattered sprouts originating from dormant seed banks, with only occasional mature trees observed. These seedlings are systematically treated to prevent reinfestation, and the locations of mature trees are mapped for follow-up treatment.

A small, disturbed area in the northwest corner contains air potato (*Dioscorea bulbifera*), but its coverage is minimal and does not currently pose a significant management concern. Tropical nutrush (*Scleria microcarpa*), a relatively new species in the DuPuis MA, has been added to the EDRR list due to its rapid spread across the marsh communities. Since this species is an annual plant, treatments must be timed before seed production to be effective. Management efforts, therefore, focus on mapping occurrences and targeting resprouts before they set seed.

Several additional nuisance and invasive species affect the management area, including include *Sclerias spp.*, torpedograss (*Panicum repens*), rosary pea (*Abrus precatorius*), paragrass (*Urochloa mutica*), napiergrass (*Cenchrus purpureus*), smutgrass (*Sporobolus indicus*), bahiagrass (*Paspalum notatum*), West Indian marsh grass (*Hymenachne amplexicaulis*), primrose willow (*Ludwigia spp.*). These species are not systematically targeted due to budget limitations. Rosary pea, although generally low in coverage, is widespread and interspersed with native vines, making treatment inefficient. Pasture grasses such as paragrass, napiergrass, smutgrass, and bahiagrass, remain interspersed within the native groundcover but have declined substantially as native herbaceous species have reestablished following hydrologic improvements. Management of pasture grasses primarily relies on mowing to limit seed production in open areas and prescribed fire where they occur with desirable native grasses.

Torpedograss and West Indian marsh grass remain persistent across roads, firelines, marshes, prairies, and interconnected ditches. Although West Indian marsh grass is less widespread than torpedograss, it remains prominent in some cypress domes and remnant ditches. Initial torpedograss invasions were observed in several rehydrated wetlands, and the species is now widespread across the management area. Previous control efforts for both species have been costly and largely ineffective at reducing their distribution. Despite their persistence, neither species appears to be expanding, particularly in areas with longer hydroperiods. This trend suggests that

continued efforts to enhance hydroperiods across the management area may support long-term suppression of these nuisance and invasive species.

Nuisance and invasive species treatment is primarily conducted by herbicide applicators contracted through the District's Vegetation Management Section. Supplemental efforts by District staff are also conducted on small or sporadically distributed infestations. Treatment areas are scheduled based on the severity of nuisance and invasive plant infestation, time since the last treatment, property access, groundwater conditions, avian nesting seasons, and public use. All treatments follow best management practices for herbicides and use the best available science. EDRR species are primarily managed by land management staff. Treatment dates, locations, and species treated are recorded in a GIS database, and all herbicide use is recorded in the District's nuisance and invasive plant control database.

Land managers also collaborate with the United States Department of Agriculture (USDA) – Agricultural Research Service (ARS) to introduce biological control agents on District lands, helping to reduce the proliferation of invasive pest plants. Federally approved biological control agents that have been introduced or have migrated onto District lands include the melaleuca weevil (*Oxyops vitiosa*), water hyacinth planthopper (*Megamelus scutellaris*), water hyacinth weevils (*Neochetina spp.*), the Brazilian pepper thrips (*Pseudophilothrips ichini*), the Old World climbing fern white lygodium moth (*Austromusotima camptozonale*), brown *Lygodium* moth (*Neomusotima conspurcatalis*), and eriophyid mite (*Floracarus perrepae*).

In the DuPuis MA, land managers collaborated with ARS to release biological control agents aimed at Old World climbing fern. In 2023, the brown *Lygodium* moth and eriophyid mite were introduced in the northeastern part of the management area, on the east side of Cooter Creek Grade.

7.3 Mechanical Vegetation Control

Prescribed fire is the preferred method for managing vegetation in fire-maintained habitats in South Florida due to its cost-effectiveness and environmental benefits. In areas where prescribed fire cannot be used, such as in urban interface zones, or when other constraints prohibit the use of prescribed fire, mechanical vegetation control offers an alternative way to reduce vegetation coverage and fuel loads. Mechanical vegetation control can reduce woody plant growth and increase plant species diversity through the use of mowing, chopping, and shredding. Selective forest thinning may also be used to improve the natural environmental characteristics of certain habitats.

Effective management of the DuPuis MA required a mix of mechanical and prescribed fire treatments to address decades of ecological imbalance. Past fire suppression and hydrologic alterations contributed to unusually dense stands of slash pine, making them more vulnerable to disease and pine beetle infestations that spread extensively across the region during the 1990s. As a result, numerous trees within the DuPuis MA were affected. To address this infestation, slash pines were harvested across more than 1,900 acres of flatwoods between 1999 and 2007, with an additional 500 acres selectively thinned to help reestablish natural stand densities. During the same period, dense cabbage palm stands were also reduced to limit their encroachment into historically coniferous habitats.

Over the past decade, mechanical treatments have continued to focus on selectively thinning cabbage palm to restore vegetation structure in pine and cypress communities and to manage understory brush species so prescribed fire can be safely and effectively applied. Since low-intensity fires often produce patchy burns, mechanical treatments are also used in fire shadows after a burn to reorganize fuel loads where prescribed burns do not achieve desired ecological outcomes. Additionally, mechanical treatment plays an important role in reducing fuel height along management unit boundaries, minimizing the risk of fire escape, and protecting RCW cavity trees. Mechanical vegetation control will remain an essential management tool to complement prescribed fire and sustain healthy, resilient upland and wetland communities within the Reserve.

Timber Management

Harvesting timber is another form of mechanical vegetation control. If the District determines that the ecological needs of an area require the timber stand to be thinned, a harvest may be designed for that purpose. However, many listed species depend upon mature pine trees for their survival, so often it is the smaller trees that are targeted. These trees tend not to have the marketability of larger trees, resulting in limited opportunities for commercial harvesting.

Timber harvesting was conducted after the property's acquisition to thin dense stands of pine and cabbage palm. Additional commercial timber operations are no longer compatible with the management goals for the DuPuis MA. With the increased efficiency of prescribed fire, combined with low-impact selective mechanical treatments, prescribed fire has become the primary tool for managing overgrown forest conditions. In addition, no marketable pine stands remain within the management area.

Grazing

The District uses cattle grazing to manage nuisance and invasive pasture grasses. This tool is most effective as an interim management tool for managing vegetation on project lands before the water resource project goes into construction. Some management lands include former ranchlands that have a mixture of native range and improved pasture. Cattle grazing is allowed on these properties to minimize the need for physical manipulation and manage the vegetation coverage until funding is secured to restore the native community.

Cattle grazing is not compatible with the management goals for the DuPuis MA.

7.4 Wildlife Management

Wildlife management on the DuPuis MA relies on active habitat management that addresses the needs of all species present. The Land Stewardship program accomplishes this by implementing management strategies that benefit multiple species and habitats while addressing the specific needs of individual species. These strategies include:

- Conducting land management activities that maintain and enhance native wildlife habitats, including prescribed fire and nuisance and invasive plant control;

- Conducting specific management activities that support protected species;
- Following management guidelines for listed species protection as determined by the South Florida Multi-Species Recovery Plan, Volume 1 (U.S. Fish and Wildlife Service (USFWS) 1999), as well as the Florida's Imperiled Species Management Plan (FWC 2016); and
- Maintaining lists of confirmed and potential wildlife species.

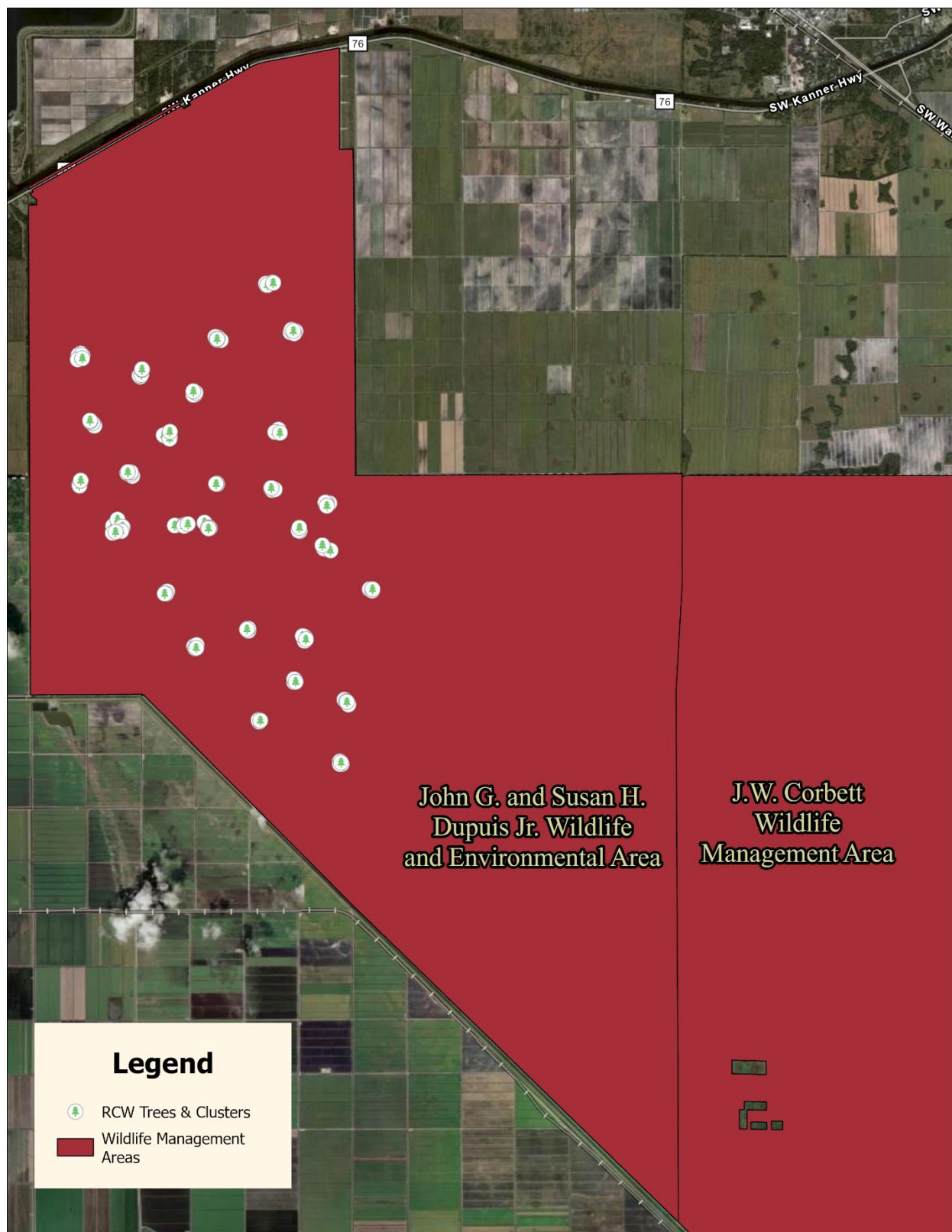
The primary management focus is on restoring and maintaining the natural processes that shape the structure of the natural communities within the management area. By implementing integrated management strategies to restore natural functions such as fire rotation, the species composition in the vegetation communities has improved significantly. This improvement has increased foraging and nesting habitats in the area for species such as Everglade snail kite, Southern bald eagle (*Haliaeetus leucocephalus*), RCW, white-tailed deer (*Odocoileus virginianus*), and Osceola wild turkey (*Meleagris gallopavo osceola*).

Although wildlife management is generally not conducted at a species-specific level, the red-cockaded woodpecker (RCW) is a notable exception within the DuPuis MA. Degradation of the flatwoods community led to the decline of what was once a sizeable RCW colony, and after the last active cavity was destroyed by wildfire in 1989, the species ceased to use the area. Following extensive habitat restoration efforts, FWC reintroduced RCWs into the remaining old-growth slash pine in 2006. Artificial cavities were installed in suitable trees to support reestablishment, and species-specific management was initiated to promote population recovery.

Species-specific management activities for RCWs include installing and maintaining artificial cavities, translocating birds from donor sites, managing vegetation around cavity trees, and monitoring the colony's health and habitat conditions. These efforts are closely integrated with broader land management activities to maintain the ecological conditions required for RCW persistence within the management area. Community-level restoration, combined with species-specific management, ensures that the DuPuis MA continues to support a diverse and thriving wildlife community while enhancing long-term ecological resilience.

Nuisance and Invasive Animal Species

Invasive wildlife species harm native wildlife and can negatively impact native vegetation or seriously interfere with management objectives. Some of the species of concern are Nile monitor (*Varanus niloticus*), purple swamphen (*Porphyrio porphyrio*), feral hog (*Sus scrofa*), pythons (*Python spp.*), tegu (*Salvator merianae*), and spiny iguana (*Ctenosaura similis*). The District coordinates with FWC to reduce the invasive species populations through trapping and public hunts, where hunting is allowed. The results of population control efforts are monitored by periodic site evaluations.



Map 18. Distribution of RCW trees and cluster sites in the DuPuis MA.

Feral hogs (*Sus scrofa*) are the primary invasive animal issue in the DuPuis MA. Feral hogs have significant impacts on natural communities and land management operations. Their disruption of soil and vegetation through rooting alters natural communities and can be especially damaging in sensitive habitats that are slow to recover. Rooting interferes with land management objectives by reducing the horizontal spread of prescribed fires and by creating disturbed areas that are more susceptible to invasive plant establishment. Rooting can also impact hiking trails, reptile populations, and ground-nesting birds. The hog populations in the DuPuis MA are managed through the public hunting program administered by FWC.

The Island Apple snail (*Pomacea maculata*) is widely reported throughout Florida and is not being targeted for geographic containment. Research shows that native apple snail (Florida apple snail, *Pomacea paludosa*) populations have drastically declined. The island apple snail is a highly fecund, fast-growing species that has likely become a permanent part of the Kissimmee River floodplain. Historically, the Florida apple snail has been the main prey for the federally endangered snail kite. As native snail numbers have decreased, snail kites now rely almost entirely on the non-native island apple snail for foraging throughout the state. Because the island apple snail functions as the main food source for snail kites in the region, it is expected to persist without specific management actions to support snail kite populations.

The ambrosia beetle (*Xyleborus glabratus*) is a wood-boring beetle native to Asia that infects trees with Laurel Wilt disease, a disease caused by the fungus *Raffaelea lauricola*. This deadly fungal disease affects trees in the *Lauraceae* family, such as red bay (*Persea borbonia*) and swamp bay (*Persea palustris*). Discovered in Florida in 2010, the fungus has since spread across the state through various native and nonnative ambrosia beetles and has been found in every county. Currently, neither the ambrosia beetles nor the Laurel Wilt fungus is targeted for geographic containment due to the lack of effective control methods for the pest or the disease in natural areas.

Other invasive wildlife sightings in the region, such as the Green Iguana (*Iguana iguana*) and Cuban Treefrog (*Osteopilus septentrionalis*), are not currently being targeted for geographic containment. Management of these species is limited due to factors like a lack of effective control tools, insufficient resources, and limited risk assessment data.

7.5 Hydrologic and Habitat Restoration

Restoration efforts within the DuPuis MA began shortly after the property was acquired and have continued for more than three decades. One of the first major initiatives focused on restoring upland communities on the western portion of the property. In the mid-1990s, the District implemented an extensive prescribed-burning program to restore upland structure and function. Because decades of fire suppression had allowed heavy shrub encroachment and reduced herbaceous fuel, land managers supplemented burning with mechanical thinning and targeted tree harvesting. These treatments opened the mid-canopy layer, enhanced groundcover vegetation, and helped limit the spread of pine bark beetles.

An early environmental assessment also identified wetland and hydroperiod restoration as primary management goals, noting that extensive over-drainage had occurred due to a network of swales and canals that redirected water north to the St. Lucie Canal and south to the L-8 Canal. In

response, a three-phase restoration project was developed to rehydrate interior wetlands and restore 2,341 acres of historic Everglades marsh (L-8 Marsh).

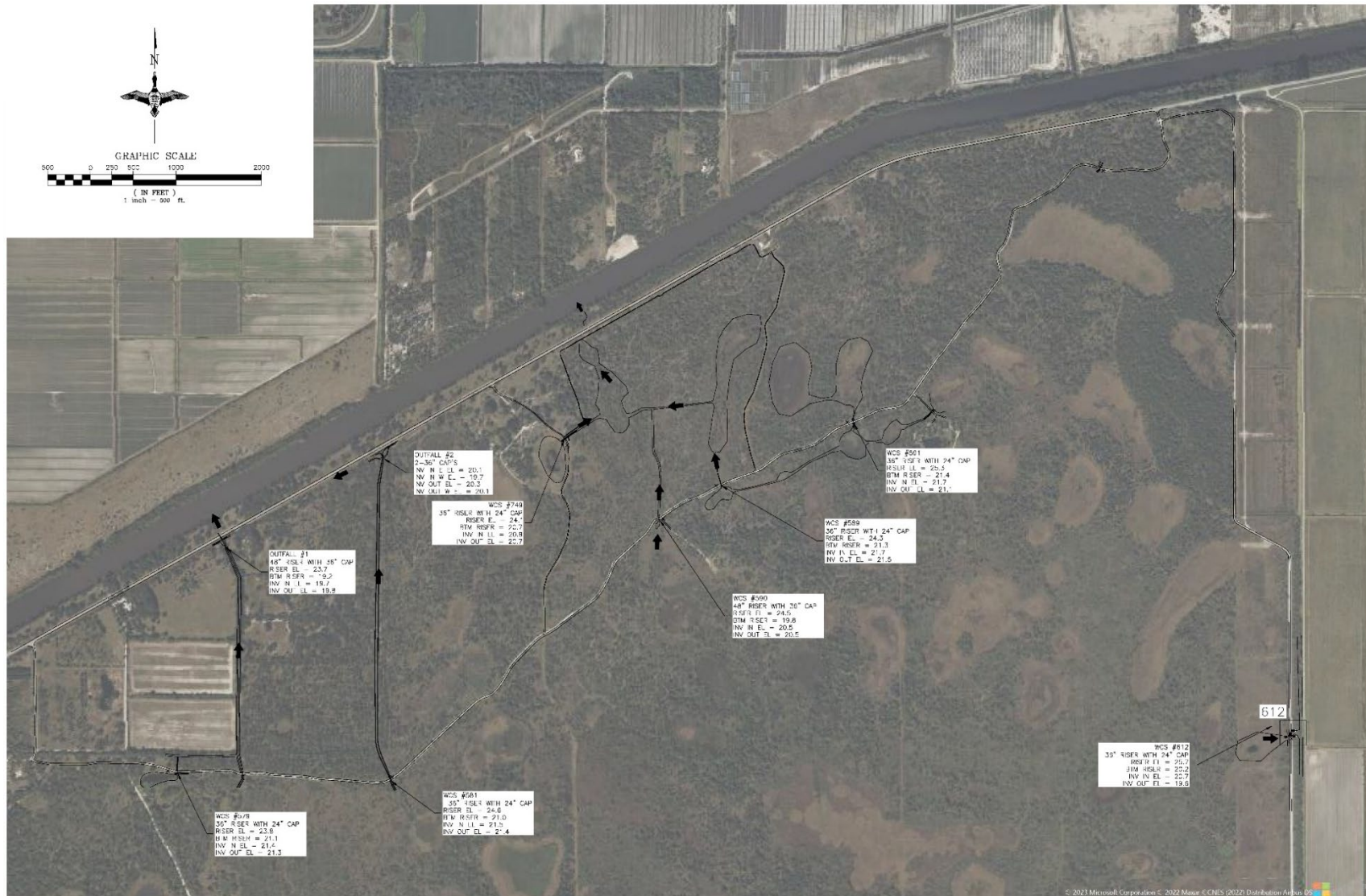
The first wetland-restoration phase occurred in 1990 and 1991, when 40 earthen ditch plugs were installed in strategic interior ditches to re-establish sheetflow and rehydrate isolated wetlands. Approximately 4,000 acres of wetlands were enhanced as a result. Follow-up monitoring showed that native wetland plants recolonized many areas where upland species had become established; however, the restored hydrology also facilitated the spread of exotic wetland species such as torpedo grass, requiring continued invasive plant management.

The second phase focused on restoring the L-8 Marsh along the southern boundary of the property. In the mid-1990s, an eight-mile levee was constructed to separate the management area from the L-8 Canal and the Everglades Agricultural Area. Built to an elevation of 23 ft NGVD, the levee allows water to be retained on the property and discharged through three associated water control structures, which are set at 19.0 ft NGVD. These structures became operational in December 1996. This phase restored approximately 850 acres of the marsh and was funded through District mitigation resources.

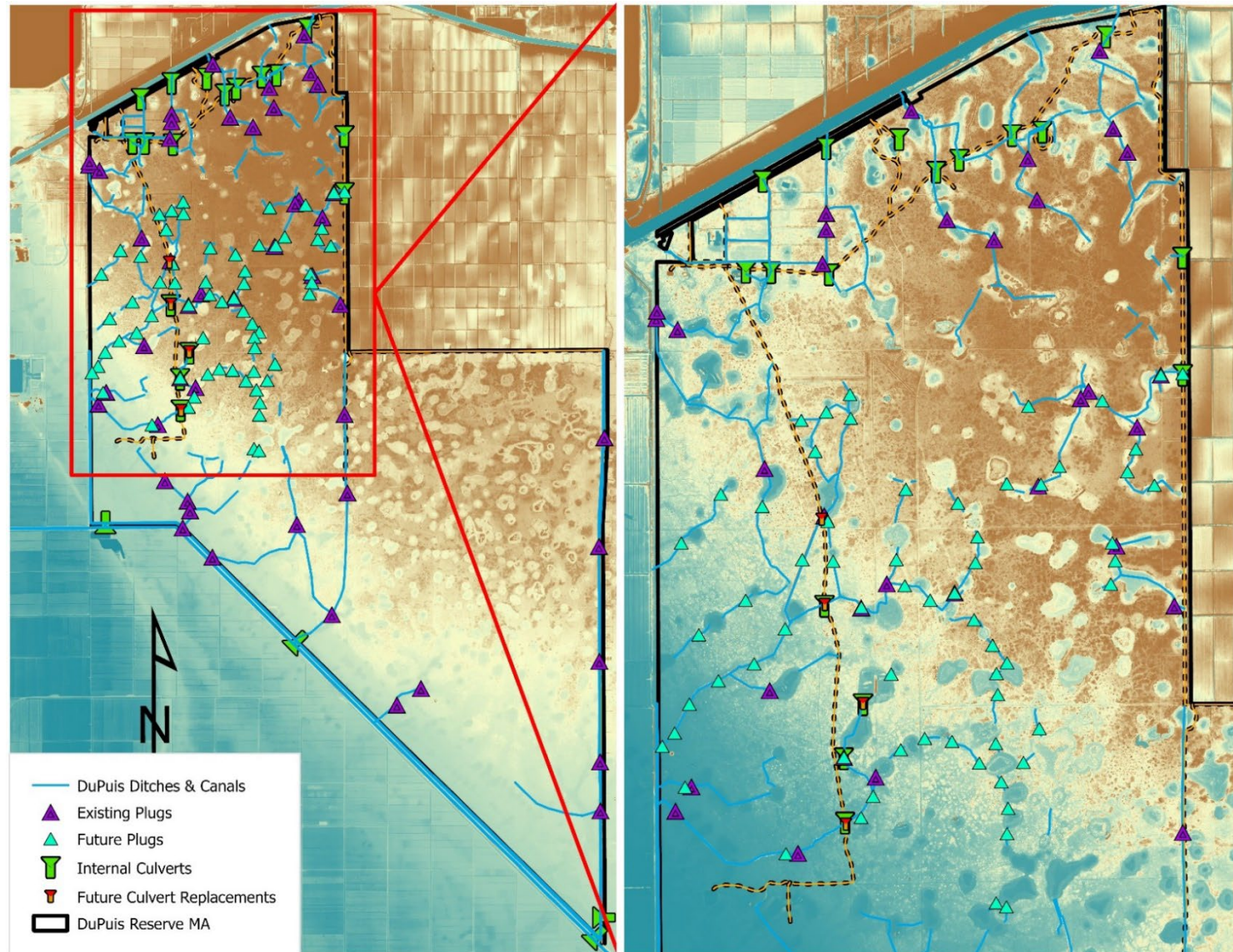
The third phase re-established hydrologic connectivity between the L-8 Marsh and similar habitat within the adjacent J.W. Corbett Wildlife Management Area. In 1992, two sections of the roadway dividing the properties were degraded and stabilized with geo-web swales to reopen historic flow pathways. Additional improvements followed in 2001 with the installation of six culverts equipped with adjustable flashboard risers to increase flow between DuPuis and Corbett. By this time, more than 6,500 acres of wetlands within the DuPuis MA had been enhanced through ditch plugging, levee improvements, and hydrologic reconnection.

Wetland enhancement continued into the 2010s. Around 2016, the Land Stewardship Section began planning for additional ditch plugs and culvert replacements on the northern portion of the property, replacing older culverts with flashboard risers to improve water-level control. During this period, outfall structures along the L-8 Canal were also replaced. In 2022, the District partnered with Ducks Unlimited, Inc. to upgrade infrastructure originally installed by the previous landowners. Improvements included larger-capacity pipes and new risers at key hydrologic locations. In 2023, seven culverts with flashboard risers and two outfall structures were replaced.

During the current management plan period, the District will continue working with Ducks Unlimited to complete the installation of approximately 68 additional ditch plugs and replace remaining culverts within the northern and central-east section of the property. This enhancement project is expected to improve water delivery, extend hydroperiods in the northern wetlands, and support prescribed fire operations by improving access to natural communities that are currently difficult to reach during burns.



Map 19. As-built for the 2023 culvert replacement project.



Map 20. DuPuis hydrologic restoration features: Existing conditions and planned improvements.

7.6 Research and Monitoring

Wildlife Monitoring

An FWC wildlife biologist position is funded by the District and assigned to the DuPuis MA to conduct wildlife monitoring and manage the public hunting program. Data collected from long-term monitoring surveys are analyzed and may be incorporated into statewide studies and reports. These data help guide management decisions, evaluate habitat conditions, and track population trends of key species within the DuPuis MA. Since the last management plan update, several wildlife monitoring programs, originally designed and implemented between 1994 and 2006, have remained active and will continue throughout the 2026-2036 management period.

Wading Bird

Since around 1996, monthly wading bird surveys have been conducted on the DuPuis MA. The 23-mile monitoring route runs through the management area along the Powerline Grade and L-8 levee, with GPS-marked stations every 0.10 mile. The route starts at the western boundary, moves south along the L-8 levee, and then heads north along the Powerline Grade. Surveys take place within three to four hours after sunrise. During these surveys, all observed wading birds are identified at the species level, counted, and assigned to the nearest station.

Red-cockaded Woodpecker

RCWs in the DuPuis MA have been routinely monitored since their reintroduction in 2006. All cavity trees are inspected annually to assess condition and RCW use. Insert boxes are installed or replaced as needed. During the breeding season, all active clusters are surveyed to document group composition and identify individual birds. Nests are monitored throughout the season, and all chicks are banded and followed through fledging.

Eagle

Although bald eagles are no longer listed, all known nests at the DuPuis MA, are monitored once or twice a month beginning in January and continuing until chicks fledge or activity ceases. Observations are conducted from the ground and all nesting behavior is recorded. The findings are reported to Audubon's EagleWatch program.

Northern bobwhite

Northern bobwhite spring call-count surveys have been conducted at Dupuis since 1996. Three 6-mile transects with stations at 0.5-mile intervals are located on the western, northern, and eastern portions of the management area. Beginning the last week of April, each transect is surveyed weekly for 3–4 weeks, with monitoring beginning at sunrise. During an 8-minute listening period at each station, the number of calls and the number of individual quail detected are recorded.

Breeding Bird Survey

The USFWS administers the national Breeding Bird Survey (BBS), which includes a designated 25-mile route in DuPuis MA. The route consists of 50 stops at 0.5-mile intervals. Beginning at sunrise, all birds seen or heard are recorded during a 3-minute count at each stop. The DuPuis route is surveyed each June, and all data are submitted to the USFWS BBS program.

White-tailed Deer

White-tailed deer monitoring has been conducted on the DuPuis MA since 1994 to gather data on herd composition and population trends. Early monitoring involved roadside spotlight surveys. From 1999 to 2019, helicopter surveys were conducted to estimate population indices, sex ratios, and fawn recruitment. Beginning in 2022, trail cameras replaced aerial surveys. Each June, FWC deploys 40 trail cameras at predetermined sites along firebreaks and trails in a rough grid pattern. Locations were selected based on animal sign and accessibility. Deer data are analyzed by statisticians in the FWC deer program to estimate population density and herd structure.

Bat Houses

Four bat houses located near the DuPuis land management office are monitored regularly for bat activity. Observations contribute to ongoing assessment of roost use and bat presence within the management area.

DuPuis MA Condition Class

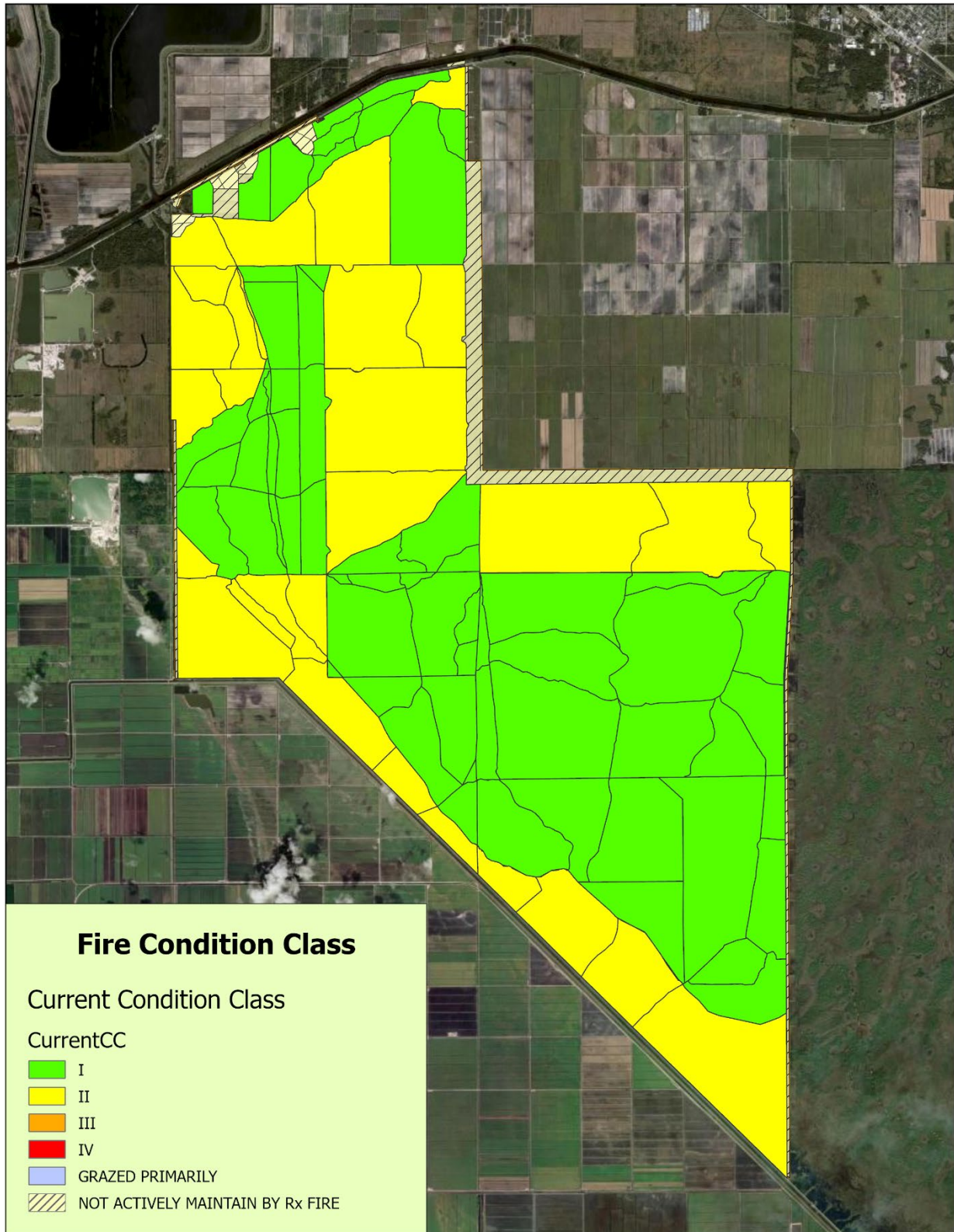
The primary objective of the Land Stewardship Section's monitoring activities is to assess and document the effects of land management actions, such as the application of fire and herbicides. Land Stewardship managers evaluate habitat conditions and vegetation structures to identify gradual, desirable, or undesirable changes associated with invasive species, prescribed burns, and other factors such as hydrological shifts. During land management activities and routine site assessments, these land managers monitor the natural communities in the DuPuis MA for invasive species. They assess burn units before and after prescribed burns to observe the vegetation's response to fire, thereby enhancing their understanding of how variables such as weather, fuel accumulation, seasonal changes, and water levels interact to influence the targeted vegetation structures. Monitoring observations are documented using condition class assessment tools developed by the District.

Fire Condition Class

The District developed a GIS-based program called “physical condition class” to monitor the status of plant communities based on the time since a physical treatment occurred. Although physical treatments can be mechanical or through cattle grazing, the main tool used by the District is fire due to the natural benefits fire provides. The District uses the physical condition class to prioritize and plan the application of prescribed fire on individual management units.

Management units are delineated by prescribed fire boundaries, and the condition of each unit is classified based on fire history and the desired fire-return frequency, following FNAI recommendations for the primary fire-dependent communities in each unit (**Map 19**). Most plant communities in South Florida require fire every 4 years or less to remain healthy and productive, so this is the default return frequency assigned to each management unit. If a management unit has burned within its assigned interval, it is classified as Condition Class 1. Units that exceed the return interval but by less than twice that period are classified as Condition Class 2. Condition Class 3 includes units that have gone more than two but fewer than three intervals without fire. Condition Class 4 includes fire-dependent units that have not burned for more than three recommended intervals or more than 12 years in most of the fire-dependent units within the management area. Fire-excluded habitats, where fire is generally confined to the periphery, are identified as not actively maintained by fire. This process is depicted in **Figure 4**.

Although the default fire-return frequency in the condition class reflects prevailing plant communities, individual management units often contain a mosaic of habitats adapted to more variable fire intervals. Most fire-dependent communities in the DuPuis MA are managed on a 4-year fire-return frequency. Depressional marshes commonly burn along with the surrounding fire-dependent communities; however, burning the L-8 marsh requires careful planning and wet soils to prevent muck fires. Willow stands and floating vegetation are typically unaffected by fire, while surrounding broadleaf marsh and prairie communities carry the burn. Cypress domes and strand swamps are also burned when the soil is saturated. These cypress systems are burned along with adjacent fire-dependent communities, but unlike typical situations, where fire would extinguish at the edges, specific ignition techniques used in the DuPuis MA allow fire to penetrate much of the cypress interior. This approach helps maintain an open mid-story, enhances herbaceous diversity, reduces hardwood encroachment, and increases resilience to catastrophic wildfire. Hammocks and other freshwater forested wetlands are generally fire-intolerant, and high humidity usually inhibits fire spread. These communities are burned with the adjacent fire-dependent areas, but fire is usually confined to the edges.



Map 21. DuPuis MA fire condition class.

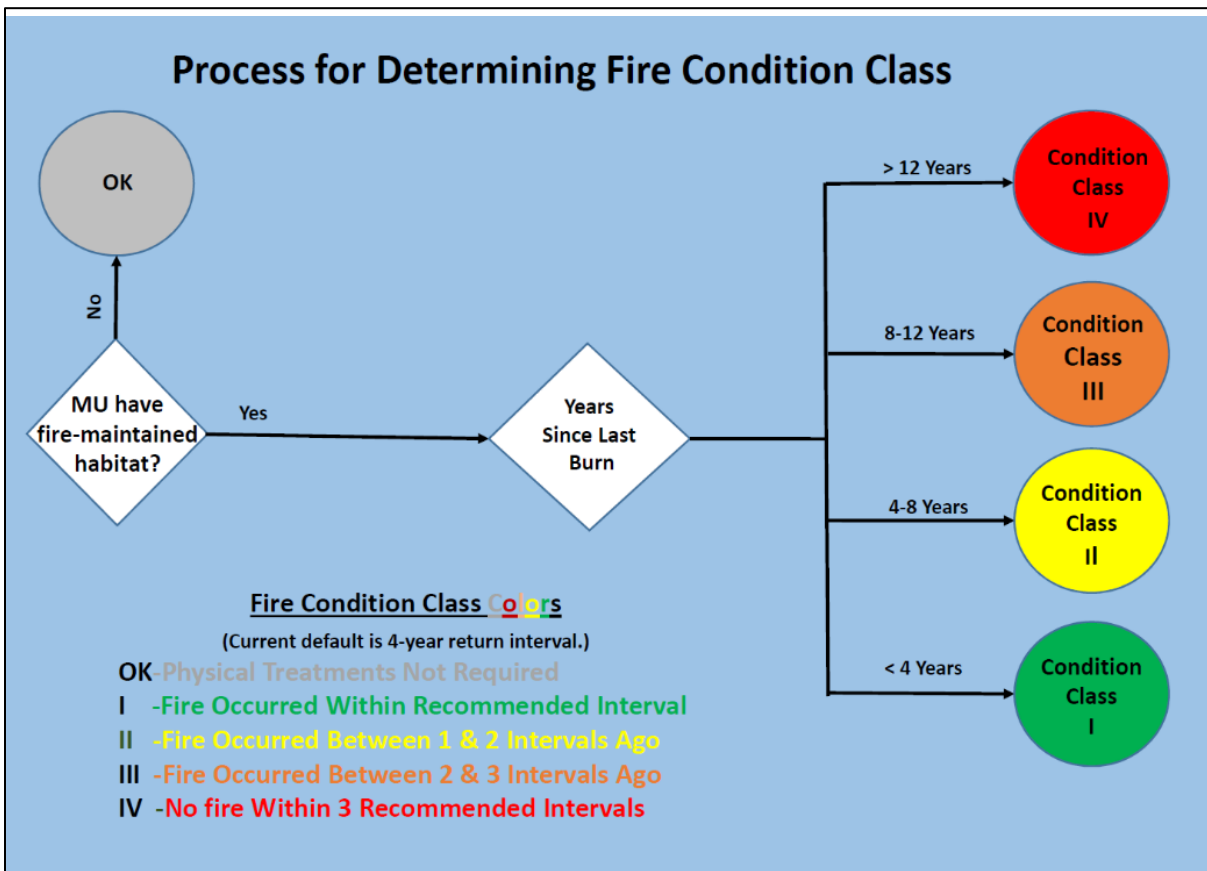
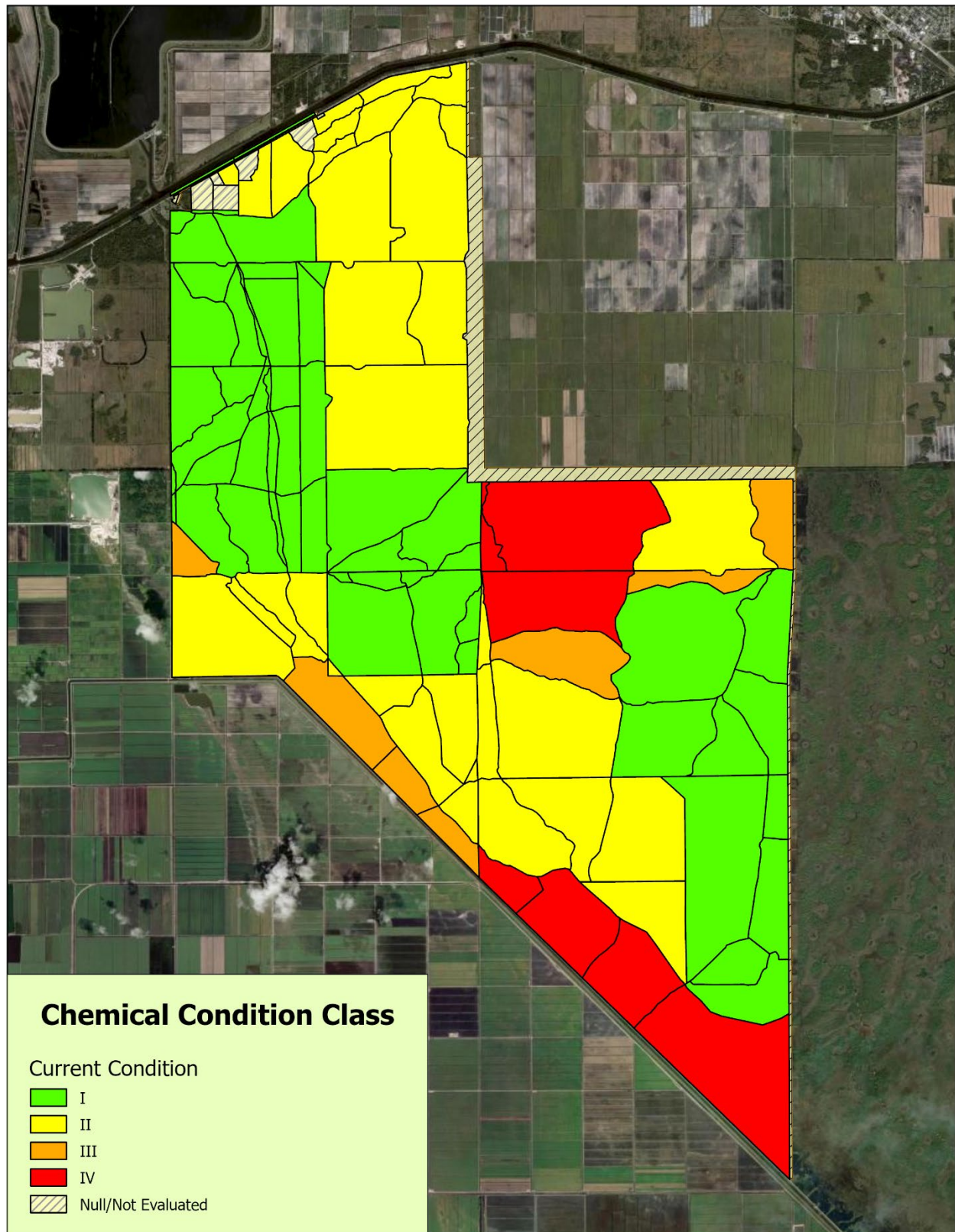


Figure 4. Flowchart illustrating the process for determining fire condition class.

Nuisance and Invasive Plant Condition Class

The District developed a GIS-based program called “invasive plant condition class” to monitor the status of plant communities based on the population status of prominent nuisance and invasive plant species. The District uses the invasive plant condition class to develop a strategy for treating the DuPuis MA. The strategy prioritizes periodic treatments in management units once maintenance is achieved to keep the unit in maintenance status for specific species, expanding efforts to other areas or species only when available resources are sufficient to achieve and retain maintenance status.

The prevalence of invasive plants within management units is estimated and assigned a condition class value (**Map 22**). Each management unit is given an invasive plant condition class based on the maturity of the population of the primarily targeted species (**Figures 5 - 6**). Annual work plans are developed to minimize the ecological impacts of these invasive species in a cost-effective manner while minimizing the use of herbicides where practical.



Map 22. DuPuis MA chemical condition class.

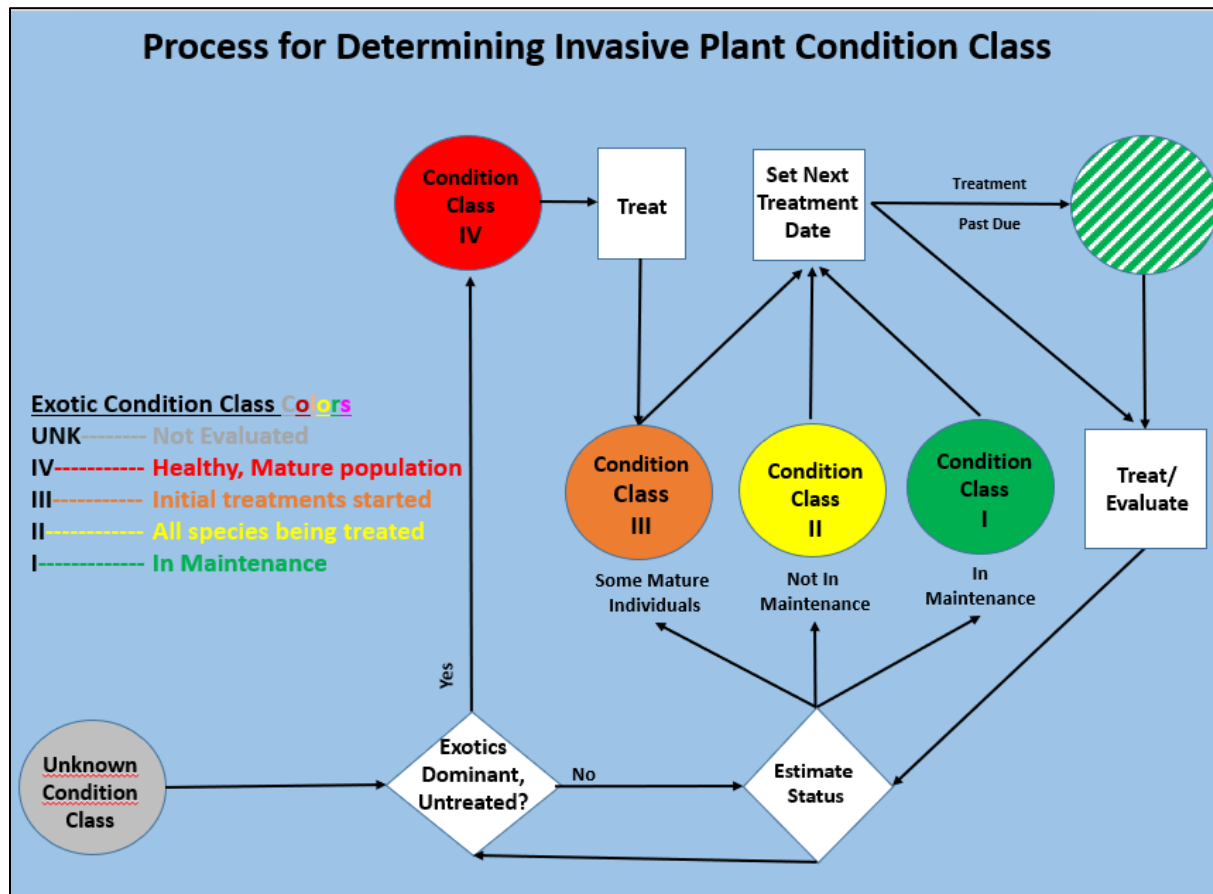


Figure 5. Flowchart illustrating the process for determining invasive plant condition class.

➤ Woody vegetation (Melaleuca-Earleaf Acacia-Chinese Tallow-Brazilian Pepper-Ardisia-Senna-Downy Rose Myrtle-Carrotwood-Silk Tree-Mimosa Pigra-Schefflera-Java Plum-Lead Tree-Woman's Tongue)	
➤	IV--Tall, dense, mature, many throughout landscape
➤	III--Most mature dead, some regrowth/sprouting/isolated misses, many seedlings/suckers
➤	II--All or nearly all mature dead, little regrowth, some seedlings
➤	I----Occasional seedlings or young plants
➤ Vines (Lygodium-Air Potato-Winged Yam-Rosary Pea-Mile-A-Minute Vine)	
➤	IV---Heavy blanket covering trees/bushes, dense, some throughout area
➤	III---Most trellises dead, lots of sprouting/young plants, some clean areas
➤	II---Trellises < 10' high, young plants tending towards "hot spots"
➤	I-----Limited trellising, mostly young plants in isolated "hot spots"
➤ Cogon Grass-Taro	
➤	IV—Solid, Dense, Mature Stands
➤	III---Main portion mostly dead, regrowth along edges and some internally
➤	II----Outlying regrowth and isolated clumps
➤	I-----Occasional dispersed clumps of fresh growth
➤ Tropical Soda Apple	
➤	IV---Thick & tall
➤	III---Most dead in main concentrations, frequent outliers
➤	II---Widely separated plants
➤	I-----Occasional seedling plants

Figure 6. Example of invasive characteristics of target species used to assign condition class.

8. ADMINISTRATION

Administration of District lands is directed through the Land Stewardship Section within the Land Resources Bureau. Policy decisions, planning and budgeting, procurement of personnel and equipment, contract administration, and program development issues are administrative tasks coordinated through the Land Stewardship Section. Input is provided by regional land managers located over the 16-county area. Regional land managers handle regular administrative duties from their field locations to ensure quick response to local concerns and management issues. Administrative activities for DuPuis MA will be handled through the District's field office at the Okeechobee Field Station and the District's headquarters in West Palm Beach.

8.1 Planning and Budgeting

Planning is a major component of the Land Stewardship Section and is critical to maintaining proper program focus, direction, and coordination with other agencies. This document forms the framework for prioritizing and creating targeted plans for the activities to be conducted within the appropriated budget for the next 10 years.

The principal sources of funding for land management operations on the DuPuis MA include lease revenue, ad valorem tax revenue, and special grants. Overall funding availability determines management activities. Budget distribution among the District's five land management regions is based on a programmatic prioritization of management activities. Operational funds are distributed to accomplish the management objectives of each management area most effectively. The continued operation and maintenance of the DuPuis MA include costs to cover staffing, ongoing land management expenses, and capital refurbishment/replacement of aging infrastructure. Current conditions and anticipated serviceability determine capital infrastructure needs. Priorities for capital refurbishment/replacement are made on a District-wide basis. Utilities and operational expenses include supplies, electric service, business travel, and safety equipment. Public use costs include maintenance costs for public use facilities. Base-level funding needs may increase in the future in response to increasing operational expenses, including fuel costs, contracted nuisance and invasive plant control needs, equipment and infrastructure repairs, and increasing public expectations. Specific projects on which to spend these funds are prioritized annually to address each management goal. The Fiscal Year 2026 (FY2026; October 1, 2025 – September 30, 2026) budget for the DuPuis MA and projected expenditures through FY2031 are outlined in **Table 4**.

Table 4. DuPuis MA FY2026 budget and anticipated expenditures through FY2031.

Management Activities	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
Resource Management						
Mechanical Vegetation Mgmt.						
Chemical Vegetation Mgmt.	\$515,000	\$515,000	\$365,000	\$365,000	\$365,000	\$365,000
Prescribed Burning/Site Prep						
Solid Waste/Debris Removal	\$9,976	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Habitat Restoration						
Law Enforcement/Enhanced Patrol	\$14,000	\$14,500	\$15,000	\$15,500	\$16,000	\$16,500
Capital Improvements						
Facilities & infrastructure improvements	\$319,380	\$1,579,000	\$5,000	\$5,000	\$5,000	\$5,000
Fencing/Signage	\$5,262					
Rec. Facilities Maint.	\$195,894	\$156,200	\$156,200	\$156,200	\$156,200	\$156,200
Support & Administration						
Infrastructure Maint.		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Prescribed Burn PPE	3,000	3,000	3,000	3,000	3,000	3,000
Contingent Staffing						
Vehicle Replacement						
Vehicle Fuel & Maint.						
Equipment Replacement						
Equipment Fuel & Maint.	\$10,000	\$10,000	10,000	10,000	10,000	10,000
Small Tools & Equipment	\$10,000	\$10,000	10,000	10,000	10,000	10,000
Total *	\$1,082,512	\$2,302,700	\$579,200	\$579,700	\$580,200	\$580,700

Land managers use an invasive plant control strategy as a planning tool to develop annual work plans and guide long-term nuisance and invasive plant management. For the DuPuis MA, the strategy (**Figures 7–8**) outlines how program funds were allocated in FY 2026 and provides the framework for achieving long-term control across all management units. Using current and projected condition classes, the strategy distributes anticipated funding over several years, prioritizing treatments that keep units in maintenance condition and then expanding efforts into units that can feasibly be moved into maintenance. This structured approach focuses resources on the most cost-effective treatments and supports long-term reductions in herbicide use by maintaining nuisance and invasive plant populations at low levels.

While this strategy provides a clear path toward achieving and maintaining maintenance conditions across all management units, progress is constrained by limited annual funding and uncertainty in the availability of future grant opportunities. These financial constraints slow the pace at which units can transition into maintenance conditions. However, with continued planning, targeted treatment, and sustained support, the long-term goal of comprehensive nuisance and invasive plant control across the DuPuis MA remains achievable. **Table 5** summarizes the current funding needs and associated shortfalls that, if addressed, would enable full implementation of the invasive plant control strategy.

Table 5. Summary of the DuPuis MA treatment program funding needs and shortfalls.

Invasive Treatment Needs	Cost / Funding Level
Annual Funding Needed to Maintain Current Treatments	\$610,720
Unfunded Cost for Initial Treatment Completion	\$6,159,250
Additional Annual Maintenance Needed After Initial Treatments	\$264,400
Current Annual Budget (Reliable Funding)	\$365,000
Recent Grant Funding (Current & Next Fiscal Year)	\$150,000
Annual Maintenance Budget Shortfall	\$245,720
Total Initial Treatment Funding Gap	\$6,159,250

Similarly, strategies prioritizing equipment and infrastructure replacement (including fencing, public use facilities, administrative structures, and hydrologic components), areas for prescribed fire, and public use needs are also updated annually. These strategies and budgets are developed in concert with District-wide operational priorities and budgetary cycles and prioritized across all areas managed by the Land Stewardship Section.

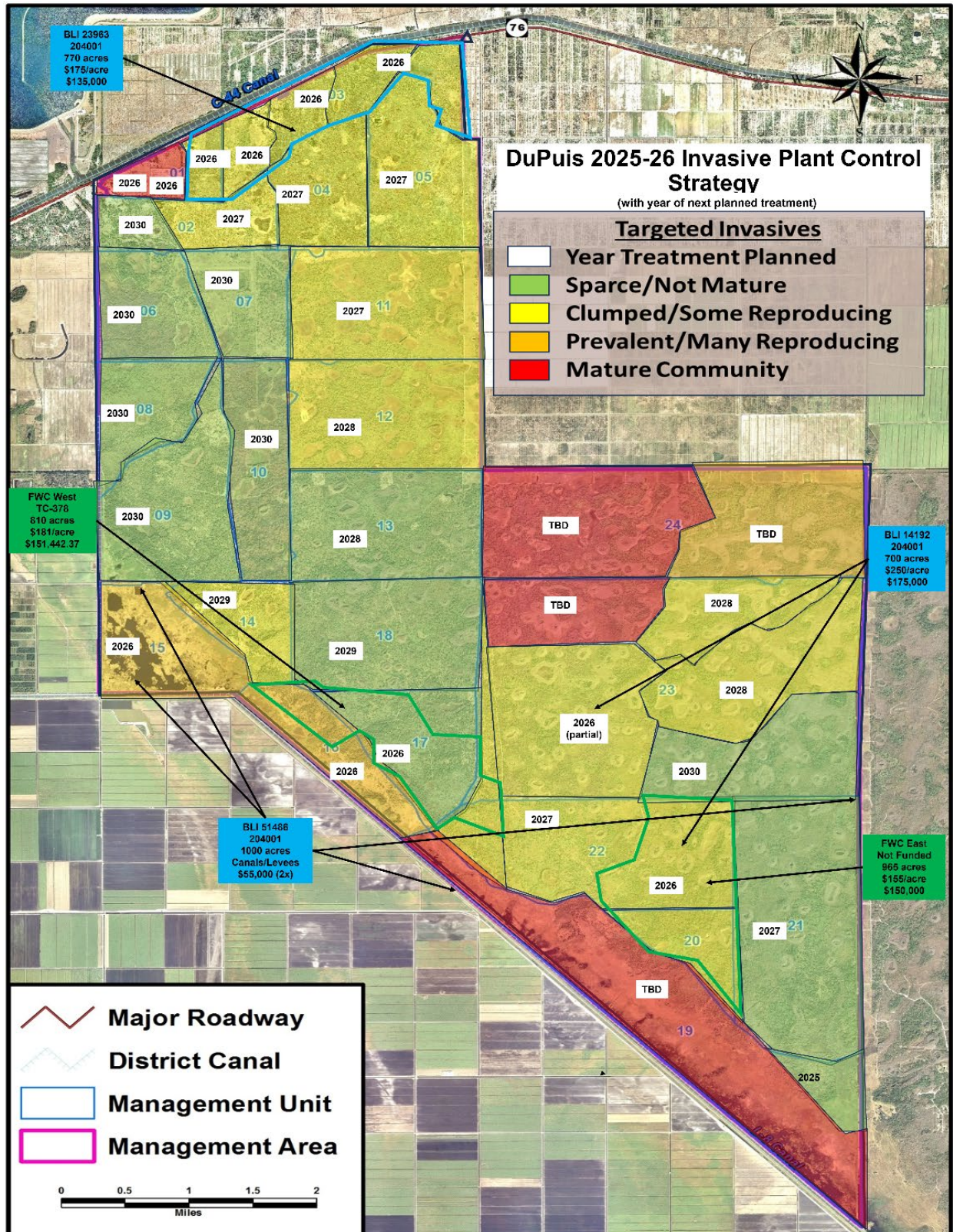


Figure 7. FY26 DuPuis invasive plant treatment plan.

DuPuis 2025-26 Invasive Plant Control Strategy

➤ What have we done so far?

- In 2012 the property was nearly in maintenance.
- Without FWC funding in 2017-2020 Units 23 & 24 were no longer treated.
- Increased funding in 2021 allowed a restart of treatments in eastern Units 23 & 24.
- Burning the western half of Unit 23 in 2024 allowed restarting treatments there.
- Delays in treatments to the rainy season in FY 24 & 25 set back treatments.
- The west half of Unit 24 & northwest portion of 23 await additional funds for treatment.

➤ What are the main species we are targeting?

- Lygodium, Schinus, Imperata, Melaleuca, Ardisia

➤ What costly species are not being treated

- Scleria, torpedo grass, rosary pea, para grass, napier grass, smut grass, bahia, wedellia, West Indian marsh grass, primrose willow

➤ What are we doing this year?

- Treating recently-burned eastern & southern areas
- In southwestern Dupuis, hammock areas will target Ardisia but include other species.
- Dupuis eastern canals will be treated for floating vegetation via land/airboat.
- Cogon grass may be treated in-house in recently burned & treated areas (units 7 & 10).

➤ Where are we going?

- Incorporate fire into treatments 9-24 months prior to treatments.
- Continue efforts to burn.
 - \$250/acre unburned maintenance.
 - \$120/acre burned maintenance.
- Keep exotics at maintenance levels in the western half of Dupuis.
- Move eastern half of Dupuis into maintenance through fire & chemical treatments.
- Transition from landscape-level treatments to targeted treatments of known invasive concentrations when appropriate.
- Only treat entire blocks when invasives reach sufficient coverages throughout block

➤ What do we have to be careful of? Challenges to treatment?

- Water levels
- Access
- \$\$\$\$\$

Figure 8. FY26 DuPuis invasive plant treatment Strategy.

8.2 Personnel and Equipment

The Land Stewardship Section is separated into five geographic regions. Each region is assigned a Science Supervisor (Land Manager), one to three Land Management Technicians, and, based on the need in some areas, a Land Management Assistant, Scientist III, and/or Scientist IV position. A Section Leader provides direct oversight and supervision for the land managers. Additional leadership and assistance come from the Land Stewardship Section Administrator, Land Stewardship Senior Scientist, Wildlife and Public Use Section, Vegetation Management Section, and other support personnel from the District's headquarters in West Palm Beach and the Field Stations. Management of the DuPuis MA property is the primary responsibility of the East Coast Region's Science Supervisor, one Scientist 4, one Senior Land Management Assistant, one Land Management Assistant II, and one Heavy Equipment Operator.

Staff have access to tools, supplies, four-wheel drive vehicles, fire suppression trucks, all-terrain vehicles, swamp buggies, airboats, and other heavy equipment. This equipment is maintained through the Okeechobee Field Station. Equipment from the other regions, as well as leased equipment, are also available if needed.

8.3 Volunteers

Section 373.1391, Florida Statutes, encourages the District to use volunteers for land stewardship and other services. The District recognizes the merits of volunteerism and welcomes participation in activities appropriate for public involvement. The Land Stewardship Section offers a variety of volunteer opportunities for individuals and groups. These opportunities include creating and maintaining public use trails, maintaining public use facilities and amenities, leading field interpretations and guided tours, organizing cleanups of trails and waterways, conducting invasive plant sweeps, and assisting with District-sponsored public events such as Earth Day and Public Lands Day.

In Fiscal Year 2025, District Lands benefited from 17,076 volunteer hours, valued at \$538,508 at Florida's average volunteer service rate of \$33 per hour. The volunteer efforts are supported by dedicated individuals and organizations, including the DuPuis MA Camp hosts, the Florida Trail Association, the Florida Horseman's Club, and the Palm City Farms Trail Association. These groups assist with maintaining campsites, hiking trails, signage, and various other projects.

8.4 Contractual Management

Effective operation and management of District properties require the services and cooperation of private organizations, other governmental agencies, and volunteers. Contractual management is established through a management agreement jointly executed by the District and the contracting entity, which outlines the responsibilities of each party. In addition to the contractual services for the DuPuis MA, the District has established agreements to facilitate efficient management and protection of its resources, including the following:

Enhanced Patrol Agreement

The District contracts with local law enforcement to provide enhanced patrol services throughout the District. Currently, the District has a contract with Martin County for enhanced law enforcement support at the DuPuis MA. The District's resource protection coordinator schedules patrols with input from the Management Area's land manager.

FWC Agreement

The District has a cooperative agreement with FWC to regulate public use for managing and protecting wildlife and aquatic life on specific District lands. (Multi-Site agreement No. 4600000961). This agreement funds operational expenses for overseeing and regulating public use activities at the DuPuis MA. The current agreement funds the salaries and operational expenses of two full-time wildlife biologists whose services are directed towards monitoring wildlife populations, managing public use activities, and performing land management functions on the DuPuis WEA.

9. MANAGEMENT REVIEW

SPACE HOLDER

DRAFT

REFERENCES

- Budny, M. L. and B. W. Benscoter. 2016. *Shrub Encroachment Increases Transpiration Water Loss from a Subtropical Wetland*. Wetlands 36: 631–638. Society of Wetland Scientists, Middleton, WI.
- Clem, S. E. and Duever, M.J. 2019. *Hydrologic changes over 60 years (1959-2019) in an old-growth bald cypress swamp on a rapidly developing landscape*. Wetland Science & Practice. Society of Wetland Scientists, Middleton, WI.
- Cox, J., R. Kautz, M. MacLaughlin, and T. Gilbert. 1994. *Closing the Gaps In Florida's Wildlife Habitat Conservation System*. Office of Environmental Services, Florida Game and Freshwater Fish Water Commission.
- Florida Department of Agriculture and Consumer Services. 2003. *Notes on Florida's Endangered and Threatened Plants*. Division of Plant Industry. Gainesville, FL.
- Florida Fish and Wildlife Conservation Commission. 2019. Florida's Wildlife Legacy Initiative: Florida's State Wildlife Action Plan. Tallahassee, Florida.
- Florida Fish and Wildlife Conservation Commission. 2016. Florida's Imperiled Species Management Plan. Tallahassee, Florida.
- Florida Natural Areas Inventory. 2010. Guide to the Natural Communities of Florida. Tallahassee, Florida.
- Florida Invasive Species Council. 2026. *List of Invasive Species, Electronic version, 2026*. Available online at <https://www.floridainvasives.org/plant-list/>
- South Florida Water Management District. 2022. *Physical Features and Water Resources of the South Florida Water Management District*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. 2020. *Strategic Plan, 2021–2026*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. 2012. *Restoration Strategies Regional Water Quality Plan*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. (n.d.). *South Florida Environmental Report (SFER), Electronic version*. Available at <https://www.sfwmd.gov/science-data/scientific-publications-sfer>.
- State of Florida. (n.d). Florida Master Site File. Department of State, Division of Historical Resources, Tallahassee, FL.
- USDA Natural Resources Conservation Service Web Soil Survey. 2026. *Custom Soil Resource Report for Martin County, Florida, and Palm Beach County, Florida*. Available at <https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soils/getting-started-with-web-soil-survey>.

- USDA Natural Resources Conservation Service. 1981. *Soil Survey of Martin County, Florida*. Washington, D.C.
- USDA Natural Resources Conservation Service. 1978. *Soil Survey of Palm Beach County, Florida*. Washington, D.C.
- U.S. Army Corps of Engineers and U.S. Department of Interior. 2020. *Comprehensive Everglades Restoration Plan, Central and Southern Florida Project, 2015-2020 Report to Congress*. United States Army Corps of Engineers, Jacksonville, FL, and United States Department of the Interior, Washington, DC. Available at https://www.eenews.net/assets/2020/12/28/document_gw_03.pdf.
- U.S. Army Corps of Engineers and South Florida Water Management District. 1999. *Central and Southern Florida Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement*. United States Army Corps of Engineers, Jacksonville District, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.
- U.S. Army Corps of Engineers. 1991. *Central and Southern Florida Project, Environmental Restoration of the Kissimmee River, Florida: Final Integrated Feasibility Report and Environmental Impact Statement*. US Army Corps of Engineers, Jacksonville, FL. Available at <https://www.sfwmd.gov/document/csf-final-integrated-feasibility-report-and-environmental-impact-statement-environmental>.
- U.S. Fish and Wildlife Service. (1999). *South Florida multi-species recovery plan: a species plan, an ecosystem approach*. Atlanta, GA: Region 4.
- U.S. Fish and Wildlife Service. 1998. *Multi-Species Recovery Plan for the Threatened and Endangered Species of South Florida, Volume 1: The Species*. Technical/Agency Draft. U.S. Fish and Wildlife Service. Publications Unit, Shepherdstown, West Virginia.
- Wade, D., J. Ewel, and R. Hofstetter. 1980. *Fire in South Florida Ecosystems*. Gen. Tech. Rep. SE-17. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station.
- White, W. A. 1970. *The Geomorphology of the Florida Peninsula*. FL. Department of Natural Resources Geological Bulletin No. 51. Designers Press, Tallahassee, FL. Available at <https://ufdc.ufl.edu/UF00000149/00001>
- Zahina, J., K. Liudahl, T. Liebermann, K. Saari, J. Krenz, and V. Mullen. 2001. *Soil classification database: categorization of county soil survey data within the SFWMD including natural soils landscape position*. South Florida Water Management District, West Palm Beach. FL. Available at https://www.sfwmd.gov/sites/default/files/documents/ws_6_soils.pdf.

DuPuis Management Area General
Management Plan
(2026 through 2036)

Land Stewardship Section
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

Table of Contents

1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION.....	1
2.1	Acquisition Purpose and Significance of the Area	3
2.2	Legal Requirements of Management	3
2.3	General Management Plan Development.....	4
3.	MANAGEMENT AREA GOALS AND OBJECTIVES	5
	<i>Goal 1: Manage natural communities and modified habitats to protect and enhance floral and faunal resources</i>	<i>5</i>
	<i>Goal 2: Maintain, improve, or restore listed species populations and habitats.....</i>	<i>6</i>
	<i>Goal 3: Manage invasive species to minimize their negative impacts on natural communities.....</i>	<i>6</i>
	<i>Goal 4: Protect and enhance the hydrological and ecological functions of wetland communities.....</i>	<i>7</i>
	<i>Goal 5: Provide nature-based public use opportunities</i>	<i>7</i>
	<i>Goal 6: Maintain and improve facilities and infrastructure.....</i>	<i>8</i>
	<i>Goal 7: Protect existing cultural resources.....</i>	<i>8</i>
4.	SITE HISTORY	9
5.	RESOURCE DESCRIPTION AND ASSESSMENT	16
5.1	Infrastructure	16
5.2	Physiograph.....	16
5.3	Vegetation	30
5.4	Wildlife	33
5.5	Cultural Resources.....	34
5.6	Mitigation.....	35
5.7	Potential Additions.....	35
6.	PUBLIC USE.....	37
7.	NATURAL RESOURCE MANAGEMENT	39
7.1	Fire.....	39
7.2	Control of Nuisance and Invasive Plant Species	43
7.3	Mechanical Vegetation Control.....	47
7.4	Wildlife Management.....	48
7.5	Hydrologic and Habitat Restoration	51
7.6	Research and Monitoring	55
8.	ADMINISTRATION	62
8.1	Planning and Budgeting.....	62
8.2	Personnel and Equipment	67
8.3	Volunteers	67
8.4	Contractual Management	67
9.	MANAGEMENT REVIEW	69
	REFERENCES	70

Figures

Figure 1. Overlay of the DuPuis MA boundary on a section of Mackay and Blake’s 1839 Florida Seat of War map.	11
Figure 2. Palm Beach Post report highlighting the preservation of the DuPuis Reserve.	13
Figure 3. Plant community classifications within the DuPuis MA.	30
Figure 4. Flowchart illustrating the process for determining fire condition class.	59
Figure 5. Flowchart illustrating the process for determining invasive plant condition class.	61
Figure 6. Example of invasive characteristics of target species used to assign condition class.	61
Figure 7. FY26 DuPuis invasive plant treatment plan.....	65
Figure 8. FY26 DuPuis invasive plant treatment Strategy.	66

Maps

Map 1. DuPuis MA location map.....	2
Map 2. Historical aerial mosaic including 1938 (left) and 1949 (right) imagery.	14
Map 3. 1940 historical aerial imagery.	15
Map 4. Topographic Map Mosaic of the DuPuis MA (1970–1971).	17
Map 5. DuPuis MA regional elevations.	18
Map 6. DuPuis MA major geomorphic features.	19
Map 7. DuPuis MA NRCS soil classifications.	23
Map 8. DuPuis MA NSLP soil classifications.	24
Map 9. DuPuis MA Basin watersheds and sub-watersheds.	26
Map 10. <i>DuPuis MA Regional hydrography.</i>	28
Map 11. DuPuis MA internal flow directions.	29
Map 12. Distribution of natural communities and altered landcover in the DuPuis MA.	31
Map 13. DuPuis MA vicinity map.	36
Map 14. DuPuis MA Reserve public use amenities.	38
Map 15. DuPuis MA fire history.	40
Map 16. DuPuis MA fire management units.	42
Map 17. DuPuis MA chemical history.	45
Map 18. Distribution of RCW trees and cluster sites in the DuPuis MA.....	50
Map 19. As-built for the 2023 culvert replacement project.	53
Map 20. DuPuis hydrologic restoration features: Existing conditions and planned improvements.	54
Map 21. DuPuis MA fire condition class.....	58
Map 22. DuPuis MA chemical condition class.....	60

Tables

Table 1. Listed plant species associated with the DuPuis MA and current status.	32
Table 2. Listed wildlife species utilizing the DuPuis MA & current status.	33
Table 3. Land Stewardship Section Invasive Species Priority List and Targeting Sequence.	44
Table 4. DuPuis MA FY2026 budget and anticipated expenditures through FY2031.....	63
Table 5. Summary of the DuPuis MA treatment program funding needs and shortfalls.....	64

Appendices

APPENDIX A. DuPuis MA Area History	A-1
APPENDIX B. DuPuis MA Natural Communities.....	B-1
APPENDIX C. DuPuis MA Species List.....	C-1
APPENDIX D. DuPuis WEA Hunting Brochure	D-1

ABBREVIATIONS

CARL	Conservation and Recreation Lands
District	South Florida Water Management District
FDEP	Florida Department of Environmental Protection
FDHR	Florida Division of Historical Resources
FE	Federally-designated Endangered
FFS	Florida Forest Service
FISC	Florida Invasive Species Council
FNAI	Florida Natural Areas Inventory
Ft	Feet
FT	Federally-designated Threatened
FT(S/A)	Federally-designated Threatened because of similarity of appearance
FXN	Federally-designated Threatened Nonessential Experimental Population
FY	Fiscal Year
FWC	Florida Fish and Wildlife Conservation Commission
NAVD	North American Vertical Datum
NGVD	National Geodetic Vertical Datum
mi	Miles
PSGHA	Public Small Game Hunting Area
SE	State-designated Endangered
ST	State-designated Threatened
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

1. EXECUTIVE SUMMARY

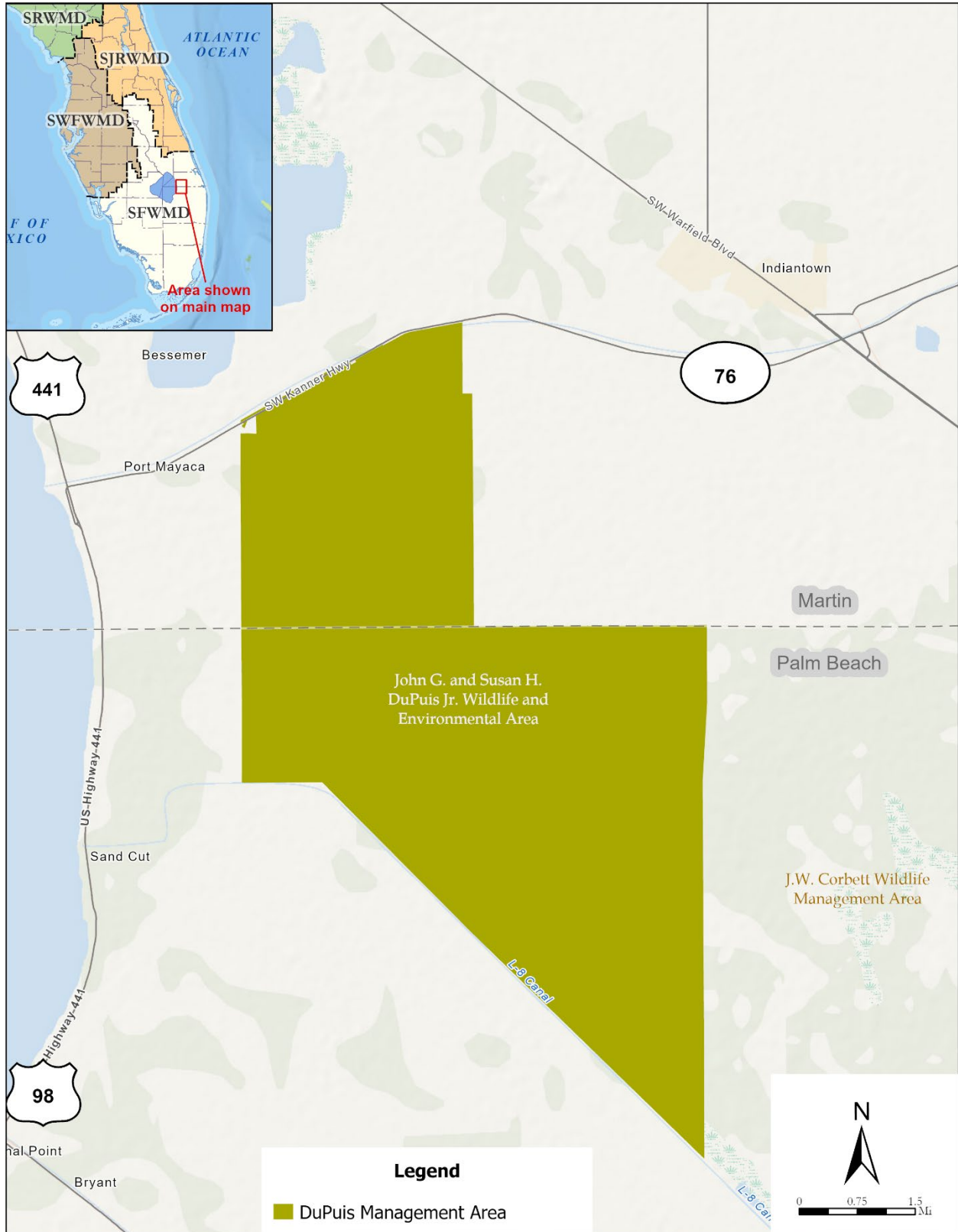
In 1981, the Florida Legislature established the Water Management Lands Trust Fund, which allowed water management districts to acquire environmentally sensitive lands for water management, water supply, and the conservation and protection of water resources through the Save Our Rivers (SOR) program. The South Florida Water Management District (District) used these funds to acquire the John G. and Susan H. DuPuis, Jr. properties. In total, the District acquired approximately 21,971 acres in fee title and manages them as the DuPuis Management Area (MA).

Pursuant to Section 373.1391, Florida Statutes, the District is responsible for managing land acquired under the SOR program. This General Management Plan (GMP) guides the management of the DuPuis MA through the 10-year period of 2026-2036 and was peer-reviewed by external professionals, as directed by section 373.591, Florida Statutes, and approved by the District's Governing Board. Goals identified for the next ten years include managing natural communities and modified habitats to protect and enhance water, floral, and faunal resources; providing resource-based public use opportunities; maintaining area infrastructure; and providing security and resource protection.

2. INTRODUCTION

DuPuis MA lies in southwest Martin and northwest Palm Beach counties, south of State Road 76 and between Beeline Highway (SR 710) and US 441 (**Map 1**). It is approximately two miles east of Port Mayaca and Lake Okeechobee, and 40 miles northwest of West Palm Beach. The property is bordered to the north by the St. Lucie (C-44) Canal and by agricultural fields in Martin County. In Palm Beach County, it is bordered by the J. W. Corbett Wildlife Management Area to the east and by the L-8 Canal and tie-back levee to the south and west, where they adjoin the Everglades Agricultural Area.

At the time of acquisition, the DuPuis MA property operated as a cattle ranch and served primarily as a recreational estate for the DuPuis family. Portions of the land had been cultivated for crops such as sugarcane and citrus under earlier ownership. The property experienced multiple land-use modifications over time, the most recent undertaken by John G. DuPuis, Jr., to support his cattle operation. In addition to raising cattle, sheep, and goats, he maintained a 37.5-acre citrus orchard that produced approximately 26 citrus varieties as a leisure activity. The site's natural hydrology was altered through the construction of drainage swales and ditches designed to reduce wetlands and expand grazing areas to support these agricultural uses. Groundcover vegetation was modified by the introduction of pasture grasses, and invasive species subsequently became established across the property. Since its acquisition, the District has implemented restoration measures, including wetland rehydration, reintroduction of prescribed fire, and invasive vegetation management, to support long-term habitat management.



Map 1. DuPuis MA location map.

2.1 Acquisition Purpose and Significance of the Area

In 1986, the District acquired the DuPuis Reserve property, then known as the White Belt Ranch, from Mrs. Susan H. DuPuis, widow of John G. DuPuis, Jr., and the trust of John G. DuPuis, Jr., for watershed protection and public recreation.

The Land Acquisition Selection Committee for the Conservation and Recreation Lands (CARL) acquisition program identified the property's value based on its capacity to protect habitat for endangered and threatened species, conserve unique or relatively scarce biological systems, preserve significant archaeological or historical sites, and support designation and use as a Wildlife Management Area. These considerations collectively underscored the property's importance for long-term conservation and public resource management.

The southern boundary of the DuPuis MA includes the L-8 Marsh, which was historically the northernmost extent of the Everglades marsh. The DuPuis MA is contiguous with the J. W. Corbett Wildlife Management Area (WMA) and, together with the John C. and Mariana Jones/Hungryland Wildlife and Environmental Area (Hungryland WEA) to the west, form the western corridor of the historic flowway that extended north along the eastern edge of the Osceola Plain to St. Lucie County. This corridor historically supported seasonal flows that linked the Everglades to the St. Johns River system. Although now transected by roads, the DuPuis MA, J. W. Corbett WMA, and Hungryland WEA remain hydrologically connected and collectively create one of the largest ecotones between the remaining pine flatwoods in southeast Florida and the sawgrass marshes of the Everglades. The acquisition of the DuPuis MA has protected natural systems that provide habitat for a diverse assemblage of wildlife, including threatened and endangered species. These systems also supply clean water to the L-8 canal and contribute to the watersheds of Hungryland Slough and the Loxahatchee River.

2.2 Legal Requirements of Management

The DuPuis Reserve property was purchased with funds from the SOR land acquisition program to protect lands that have important water resource values through acquisition, restoration, and management for environmental benefits. The SOR program was one of several programs funded through the 1981 Water Management Lands Trust Fund legislation (section 373.59, Florida Statutes (1981)) using documentary stamp tax revenue. The SOR program was eventually replaced by the 1999 Florida Forever Act, which consolidated the legislative directives of SOR and Preservation 2000, a program enacted in 1990 to provide additional funding for land acquisition. Lands acquired with funds from the trust are required to satisfy the requirements outlined in section 373.1391, Florida Statutes.

Section 373.1391, Florida Statutes, requires the District to balance resource conservation and public recreational use. This legislation reinforces the Water Management Lands Trust Fund requirements by directing the District to utilize lands titled to the District for public recreation purposes to the extent possible while considering the environmental sensitivity and suitability of those lands for recreation.

Public use on District lands is also governed by Chapter 40E-7, Florida Administrative Code (Rules 40E-7.511-539, Florida Administrative Code), which regulates public access to District land and use of said lands. As the steward, the Land Stewardship Section is responsible for protecting, enhancing, restoring, and preserving District lands for the beneficial use and enjoyment of existing and future generations.

To support the statutory directives in section 373.1391, the District has partnered with the Florida Fish and Wildlife Commission (FWC) to establish certain District properties as Wildlife Management Areas (WMA), Wildlife and Environmental Areas (WEA), Public Small Game Hunting Areas (PSGHA), or Miscellaneous Areas through their authority under Chapter 379, Florida Statutes. This partnership allows the FWC to promulgate rules under Chapter 68, Administrative Code, in coordination with the District, to regulate public use on these properties.

The determination of compatible public uses on District lands is based on the following criteria:

- Consistency with acquisition purposes, including protecting natural ecosystems.
- Restrictions, such as easements, leases, reservations, adjacent land ownership, or conditions of the purchase agreement.
- Existing infrastructure and facilities, including fences, gates, signage, access, trails, campsites, etc.
- Available funding.
- Limitations on use resulting from endangered species and sensitive natural or archeological resources.
- Public health, safety, and welfare.

2.3 General Management Plan Development

General Management Plans (GMPs) for the District are developed for selected areas established as management areas to guide management over a 10-year period. When the plans are updated, staff review the previous plan, identify accomplishments, and develop new goals and objectives for the coming ten years. These updated goals and objectives are based on District priorities, public input through meetings of the Recreation Forum and other venues, and current best management practices. This process is also designed to meet State requirements for management plans (section 259.032, Florida Statutes) on areas leased from the State of Florida. The draft plan is provided to the management review team specified in section 373.591, Florida Statutes, and comments from this multi-agency and stakeholder management review team are included in the updated plan.

Resource management and public use activities implemented by the District in management areas include:

- Prescribed fire to mimic the natural fire frequency in fire-dependent habitats.

- Vegetation management, such as shredding and/or mowing to control invasive woody shrubs and eliminate hazardous fire fuels.
- Wildlife management, including surveys and habitat management.
- Nuisance and invasive vegetation control.
- Monitoring the health of the natural communities and the impact of management practices on them.
- Hydrologic restoration of wetlands to establish optimal flows and hydroperiods.
- Providing public use facilities that support compatible uses such as hunting, boating, hiking, fishing, birding, canoeing, camping, nature appreciation, geocaching, and biking.
- Utilizing volunteers and user group organizations to support the public use program.
- Providing security and hunting opportunities through partnership with FWC.
- Providing educational programs through partnerships with external educational organizations.
- Leveraging staff time through contracts with the private sector when appropriate.

This GMP serves as the basic statement of management intent and consolidates relevant information about DuPuis MA to guide management actions for the 2026 to 2036 period. This includes land management goals and objectives, past and present land uses, resource data, restoration and management needs, public use programs, and administrative duties.

3. MANAGEMENT AREA GOALS AND OBJECTIVES

Management of Wildlife and Habitats

Goal 1: Manage natural communities and modified habitats to protect and enhance floral and faunal resources

Objectives:

- Continue to utilize prescribed fire to maintain all fire-dependent management units within their appropriate fire return intervals.
- Evaluate the need for additional cabbage palm removal.
- Utilize mechanical vegetation treatment to reduce cabbage palm encroachment into the flatwood community.
- Continue to minimize hazardous fuel along firelines to reduce spot-over potential.

Goal 2: Maintain, improve, or restore listed species populations and habitats.

Objectives:

- Enhance vegetation communities to increase habitat use by threatened and endangered species.
- Increase herbaceous cover in pine communities to improve foraging habitats.
- Collaborate with FWC to improve wildlife habitats and protect existing red-cockaded woodpecker cavity trees.
- Identify suitable areas within adjacent management units for future cavity-tree expansion.
- Collaborate with FWC to support stable, interconnected red-cockaded woodpecker (RCW) populations across the DuPuis and Corbett Management Areas.
- Continue ongoing wildlife monitoring to document species use and evaluate habitat conditions across the management area.

Nuisance and Invasive Species Management

Goal 3: Manage invasive species to minimize their negative impacts on natural communities.

Objectives:

- Continue to control nuisance and invasive species to maintain the management units in maintenance condition (Condition Class 1) and systematically improve remaining areas.
- Continue to target invasive species infestations in identified areas as they become priorities to achieve maintenance levels.
- Continue to apply chemical vegetation treatments to reduce cabbage palm encroachment within flatwoods communities.
- Implement appropriate control measures for cogon grass and other non-native grass species within select RCW clusters.
- Collaborate with the Vegetation Management Section to develop strategies that limit the spread of invasive grasses and improve the effectiveness of treatment methods.
- Conduct Early Detection Rapid Response (EDRR) treatments as needed.
- Seek additional funding through the FWC Upland Invasive Plant Management Program to expand invasive species treatment within the management area.
- Continue hunting pressure on wild hog population as an ongoing control measure.

Hydrological Management

Goal 4: Protect and enhance the hydrological and ecological functions of wetland communities

Objectives:

- Maintain an appropriate hydroperiod through maintenance and modification of area water control structures as needed.
- Continue to implement restoration projects to reflood the marshes and sloughs and restore their natural hydroperiods to improve habitat conditions and feeding areas for wading birds.
- Continue to maintain and enhance natural hydrological functions by installing ditch plugs and maintaining or replacing culverts, as appropriate.
- Assess seepage patterns by estimating volume, direction, and areas of influence to better understand impacts on the hydrology of the wetlands.
- Identify and recommend feasible "stop/minimize" actions to reduce or minimize reliance on the two pumps operating near the management area.

Public access and Recreational opportunities

Goal 5: Provide nature-based public use opportunities

Objectives:

- Improve recreational facilities by replacing bathrooms, boardwalks, and kiosks, and repairing the fishing pier.
- Maintain compatible public use opportunities such as hunting, camping, fishing, hiking, biking, equestrian, and wildlife viewing.
- Continue to coordinate with the Florida Trail Association on the Florida National Scenic Trail through the management area.
- Provide resource protection through partnerships with local and state law enforcement.
- Continue to implement the public use program through coordination with FWC, local partners, adjacent landowners, volunteers, and recreation user groups.
- Continue to participate in the District's Public Recreational Forum to support stakeholder engagement.
- Provide interpretive and educational information using brochures, signage, and kiosks at public use amenities.

Operation and Maintenance of Capital Facilities and Infrastructure

Goal 6: Maintain and improve facilities and infrastructure

Objectives:

- Continue to maintain the firelines and service roads within the management area.
- Maintain public-use facilities and infrastructure such as signs, primitive camping areas, boat ramps, and structures through a coordinated effort involving District staff, volunteers, and private contractors.
- Maintain and secure the Management Area boundary using signage, fences, and fireline maintenance.
- Ensure all facilities and infrastructure assets are accurately identified, mapped, and maintained within the geospatial data system.
- Develop comprehensive asset management and capital improvement plans for all infrastructure and facility assets to support proactive and strategic management.
- Secure needed funds to implement facilities and infrastructure maintenance and replacement plans.

Cultural Resource Management

Goal 7: Protect existing cultural resources

Objectives:

- Ensure all known sites are recorded in the Florida Division of Historical Resources Master Site file.
- Continue to monitor, protect, and preserve all known/identified sites.
- Coordinate with the Florida Division of Historical Resources (FDHR) to assess the need to conduct additional cultural resource surveys.
- Ensure at least one member of staff has attended the FDHR cultural resource training program.

4. SITE HISTORY

The DuPuis Reserve property has a long history of human use, with notable Indigenous occupation beginning after about 500 B.C. Around this time, Florida's earlier Archaic traditions developed into distinct regional cultures, including the Glades Tradition, where people shaped their daily lives around local conditions and still traded with communities elsewhere in Florida. Unique upland habitats within the surrounding wetlands provided essential dry ground for camps and villages, making the DuPuis landscape suitable for Pre-Columbian settlement. Archaeological evidence indicates long-term Indigenous presence in the area, with cultural affiliations identifiable through changing pottery styles and other material indicators. Archaeological evidence from the DuPuis Reserve property reflects this broader cultural sequence, spanning multiple Glades periods. Archaeological evidence from DuPuis dating to the Glades era also indicates the presence of peoples culturally linked to the St. Johns River-area Mayaca, who appear to have been pushed southward by repeated attacks from northern tribes allied with the British. Much later, during the Seminole Indian War of 1835, Seminole groups sought refuge in the DuPuis–Corbett area, but food quickly became scarce, and survival proved difficult. Hundreds of starving Seminoles were eventually captured under a flag of truce and sent to Oklahoma, leading to the area becoming known as “The Hungryland” (DuBois 1981; Hutchinson and Paige 1998).

During the late 19th century, small Seminole camps and trading posts began to appear throughout South Florida, including near present-day Indiantown (Weisman, 1999; Covington, 1993). By 1898, local settler Joe Bowers established a trading post where he exchanged manufactured goods for animal hides and other products. That same year, Francis and Annie Platt started a cattle operation nearby, naming the small town “Annie” after Mrs. Platt.

Regional development began to accelerate around the turn of the century. A post office was established in Annie in 1902, with Francis Platt serving as postmaster (Tebeau, 1971). Annie would later become Indiantown in 1917. In 1902, the Southern States Land and Timber Company, an investment group based in New Orleans, purchased about two million acres near Lake Okeechobee from the State of Florida for 50 cents per acre (Tebeau, 1971). The acquisition included most of what is now western Palm Beach and Martin Counties, and nearly all of the DuPuis Reserve property, except the low-lying areas along the L-8 Canal. The company began harvesting old-growth pine shortly after the purchase, using a sawmill located on Lake Okeechobee, where logs could be transported by boat. However, the lack of a railroad system in the area limited the scale of their milling operations. During its period of ownership, the Southern States Land and Timber Company actively developed and marketed its holdings. Under long-term leadership of George Bensen, who managed operations from West Palm Beach for nearly five decades, the company helped shape early regional development by promoting Everglades drainage, pioneering sugarcane cultivation, constructing roads and trails, opening land to ranching, and introducing the first purebred cattle to Martin County.

Transportation infrastructure expanded significantly in the early twentieth century. In 1919, construction of a county road connecting Stuart and Lake Okeechobee was approved. The State of Florida later assumed responsibility for the road in 1931, realigned it, and designated it as State Road 76, and later renamed Kanner Highway in honor of legislator A. O. Kanner, who championed

the project. Meanwhile, Conners Highway was constructed in 1925, linking Okeechobee City, Canal Point, and West Palm Beach; it later became part of Highways 441 and 98. Railroads also reshaped the region. The Florida East Coast Railway reached Okeechobee in 1915 and, in 1925, extended a line to Canal Point to transport agricultural products from the Everglades (Tebeau, 1971). Although this line passed near the DuPuis Reserve property, it does not appear to have supported logging operations there based on the absence of sidings or mill structures in aerial imagery from that period. At the same time, the Land Company of Florida, under the leadership of S. Davies Warfield, extended the Seaboard Air Line Railway's main line from Coleman to West Palm Beach, reaching Indiantown in 1924. Warfield laid out the street grid, later known as Warfield Boulevard, to support the anticipated residential and commercial center for the railroad's southern headquarters. After his death in 1927 and the collapse of the Florida land boom, the development plan was abandoned in 1930. The state assumed responsibility for Warfield Boulevard in 1931, designating it State Road 710.

Roads in and around the region were extremely limited. Around 1902-1903, Platt and his sons built a wagon road connecting Annie to Stuart, known as the Stuart-Annie Road. Although some form of access route must have existed for the Southern States Land and Timber Company to transport logged pine to Lake Okeechobee, the extended dirt road connecting Stuart-Annie to the lake, which would eventually evolve into today's State Road 76 (Kanner Highway), did not appear on road maps until the early 1920s. Existing trails were generally described as simple wagon paths that followed naturally higher ground with minimal clearing and no evidence of constructed roadbeds.

Among the earliest established travel corridors in the region was Colonel Taylor's route, a historic path depicted on Mackay and Blake's Florida Seat of War map (**Figure 1**). When the map is overlaid with later aerial photographs, the alignment clearly crosses Southern States Land and Timber Company holdings, and an overlay of the modern boundary shows that the trail crosses through what is now the DuPuis MA. Other historic maps depict a patrol route connecting Taylor's route to General Eustis' route, which also would have traversed the present-day DuPuis.

One of the most prominent route, the Hungryland Trail, entered DuPuis from the northwest, curved south and southeast through pine flatwoods, and exited near Big Mound, where it continued as the Big Mound Trail toward Loxahatchee Groves. These routes appear on 1920s road maps and remain visible in 1938 and 1940s aerials along the alignment of today's DuPuis Grade. A secondary unnamed trail branched from the Hungryland Trail near Big Mound, turning northwest and then northeast toward Indiantown; it is traceable through the 1940, 1957, and 1965 aerial series. These trails appear to predate the 1915 construction of the St. Lucie Canal and were likely partly created or maintained by residents of the Big Mound area to access nearby population centers. The construction of the St. Lucie Canal, the realignment of SR 76, and later ditching, particularly the Cooter Creek system, gradually severed the Hungryland Trail, leading to the abandonment of many segments. The remaining segments of these trails now form portions of the modern land management road, the equestrian trail, and a segment of the Florida Trail.



Figure 1. Overlay of the DuPuis MA boundary on a section of Mackay and Blake’s 1839 Florida Seat of War map.

By the late 1930s, land within what would become the DuPuis MA was held by a patchwork of owners, including Chase National Bank, Glades Land Corporation, the State Board of Education, and the Southern States Land and Timber Company (Dolph & Co., 1937; Hutchinson & Paige, 1998). The first major consolidation began in 1944, when Canal Point rancher Robert Chastain acquired more than 20,000 acres from the Southern States Land and Timber Company, which was actively selling its inholding. Chastain continued assembling key tracts through 1949, securing access along SR 76, the future site of the land management office, and most of the southern sections of the reserve (Hutchinson & Paige, 1998). By 1948-1949, aerial imagery shows the early development of ranch infrastructure, including an expanded ranch house, initial farm fields, a graded public entrance along Jim Lake Grade/DuPuis Grade, a spur road to Mound House, and multiple ditch systems designed to drain flatwoods and wet prairies (USDA, 1948; USDA, 1949).

In 1955, Chastain sold most of the western portion of the property to White Belt Dairy Farms, led by Dr. John G. DuPuis and, later, his son, who continued to expand agricultural use. White Belt acquired additional lands south of the L-8 Canal, developed new watering holes and firebreaks, and constructed perimeter canals that altered earlier trails. Through the 1960s and early 1970s, both White Belt and landowner George Caulkins undertook rapid development, including

extensive ditching for pasture improvement and citrus preparation, construction of new ranch buildings, excavation of ponds, and relocation of the main entrance. In 1972, a series of coordinated land exchanges among Caulkins, U.S. Sugar, and White Belt unified the entire reserve under DuPuis family ownership for the first time.

Dr. John G. DuPuis was a pioneer physician, educator, and botanist who arrived in Miami in 1898 and established both a medical practice and a drugstore in the early settlement of Lemon City (Dade Heritage Trust, n.d.). He treated Miami residents during the 1899 yellow fever outbreak, and local and oral histories describe him as one of the few white physicians trusted by the Seminole people (Florida Memory, n.d.). His belief that sanitary, fresh milk was essential to public health led him to establish one of the first dairies in South Florida and, eventually, one of the largest in Dade County: White Belt Dairy Farms, Inc. (Miami-Dade County Historic Preservation Office, 1984). Dr. DuPuis' agricultural expansion began in 1905 with his purchase of Dutch Belted cattle, reportedly acquired from the Barnum & Bailey Circus, which strengthened and diversified his dairy operation. This acquisition set the stage for later agricultural growth and ultimately led the family to begin purchasing lands in Palm Beach and Martin Counties decades later (Hutchinson & Paige, 1998).

Because much of the land-use operations relied on draining the land, the drainage networks played a central role in shaping land use within DuPuis, beginning with Chastain's early systems constructed in the 1940s and continuing through DuPuis-era modifications in the 1950s–1980s. As drainage became increasingly central to ranch operations, several ditch systems were developed. The Office Ditch system routed water northwest toward the St. Lucie Canal through a natural creek and a nearby culvert. The Chastain Ditch system connected wetlands across roughly three miles to the south and 1.5 miles to the west, directing water to its outfall east of the reserve. South of these, the Cooter Creek Ditch system extended nearly four miles toward a slough that drains toward the Everglades, and it was later tied directly into the L-8 Canal through mid-1960s culverts, which significantly accelerated drainage. On the west side, the Osceola Ditch system linked the property to the early L-8 stub (L-8 North Tieback) canal, providing another major outlet. By 1957, a perimeter ditch along the northwest border routed water from the Port Mayaca cemetery to the St. Lucie Canal, effectively eliminating the older Hungryland Trail connection to SR 76, which by then functioned primarily as an internal ranch road (USDA, 1957; Wheeler, 2000). By 1965, a newly built Bamboo Ditch system on the southwestern side of the reserve intercepted groundwater in the transitional flatwoods-to-muck zone, severing wetland hydrology in the southwestern portion of the reserve to improve pasture conditions. The southern portion of the Hungryland Trail was also cut off by the construction of the Bamboo system. The most extensive modification came in 1972, when White Belt Dairy Farms constructed a three-mile parallel ditch along the L-8 Canal and extended it northward along the eastern boundary. These drainage features not only influenced ranch operations but also established the modern hydrologic framework later seen on 1970s-1980s aeri

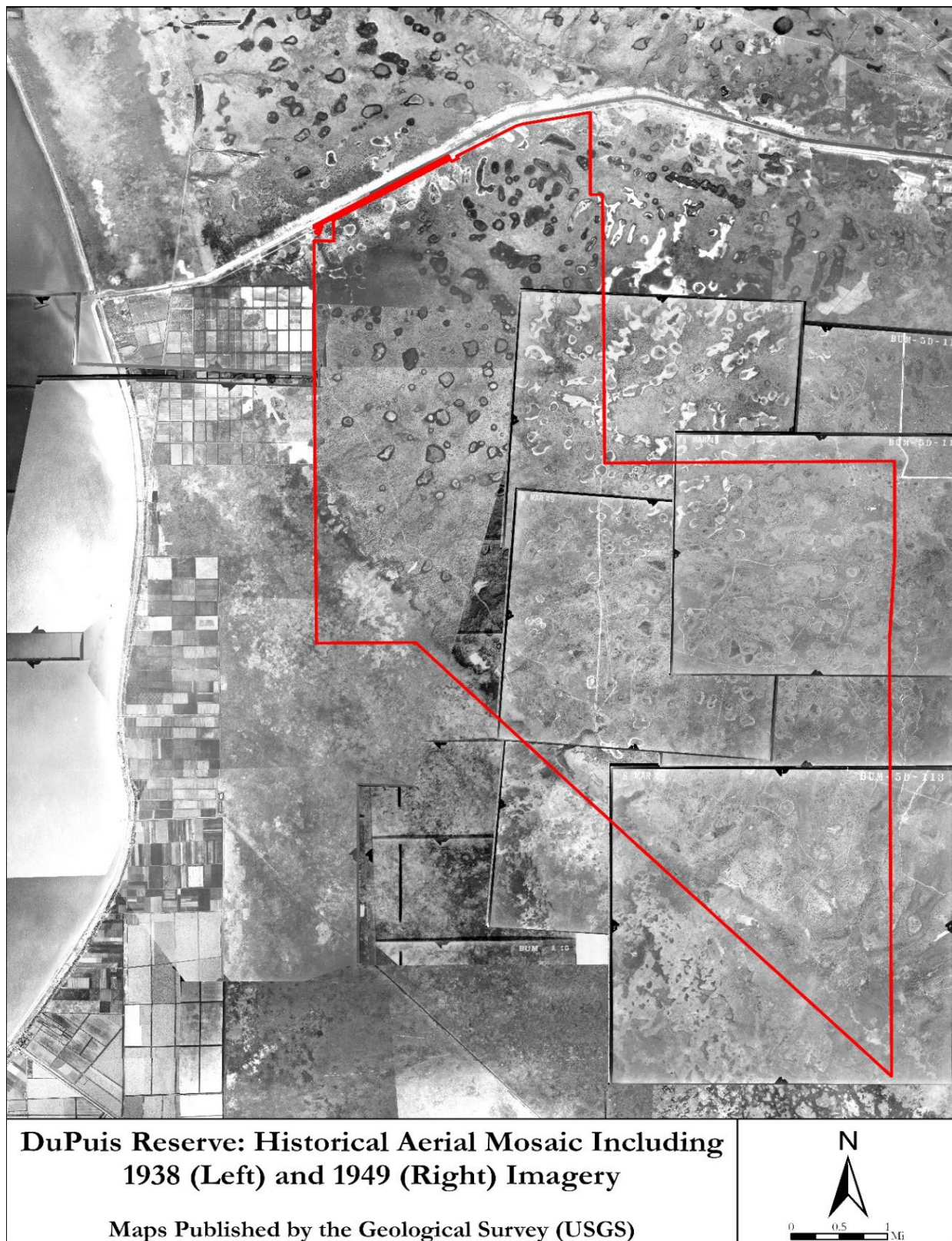
Infrastructure improvements continued through the late 1970s and 1980s, including construction of a major high-voltage transmission line along the eastern boundary and a second line west of the reserve. After the death of John G. DuPuis Jr. in 1984, The Nature Conservancy

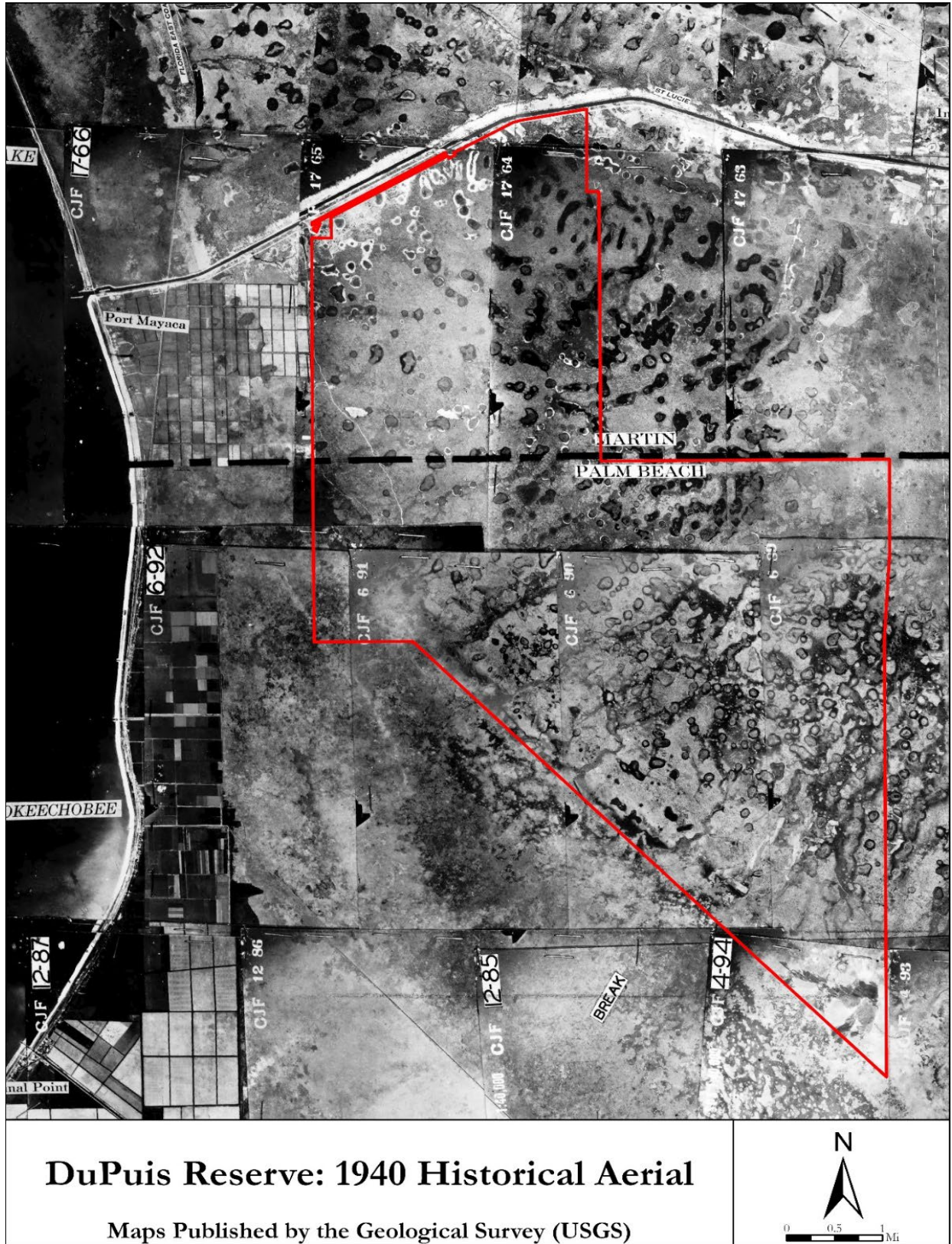
secured a purchase agreement that enabled the South Florida Water Management District (SFWMD) to acquire the property in 1986 under the Save Our Rivers program. Initial restoration efforts began soon after, followed by a management period under the Florida Division of Forestry in the 1990s, during which new grades, entrances, and prescribed burns were established. SFWMD resumed primary management in 1996, continuing restoration work and removing aging agricultural structures and groves.

This sale “represents the fulfillment of a dream for my late husband and I. The land should be preserved and belong to the public,” said Susan DuPuis.



Figure 2. Palm Beach Post report highlighting the preservation of the DuPuis Reserve.





Map 3. 1940 historical aerial imagery.

5. RESOURCE DESCRIPTION AND ASSESSMENT

5.1 Infrastructure

The DuPuis MA includes a land management office, a maintenance facility, and three housing lots with two buildings, all supporting land management operations. The land management team maintains approximately 63 miles of firelines and 22 miles of service roads through activities such as mowing, tilling, culvert replacement, and road improvements. Perimeter fencing is maintained annually, with repairs or replacements conducted as needed.

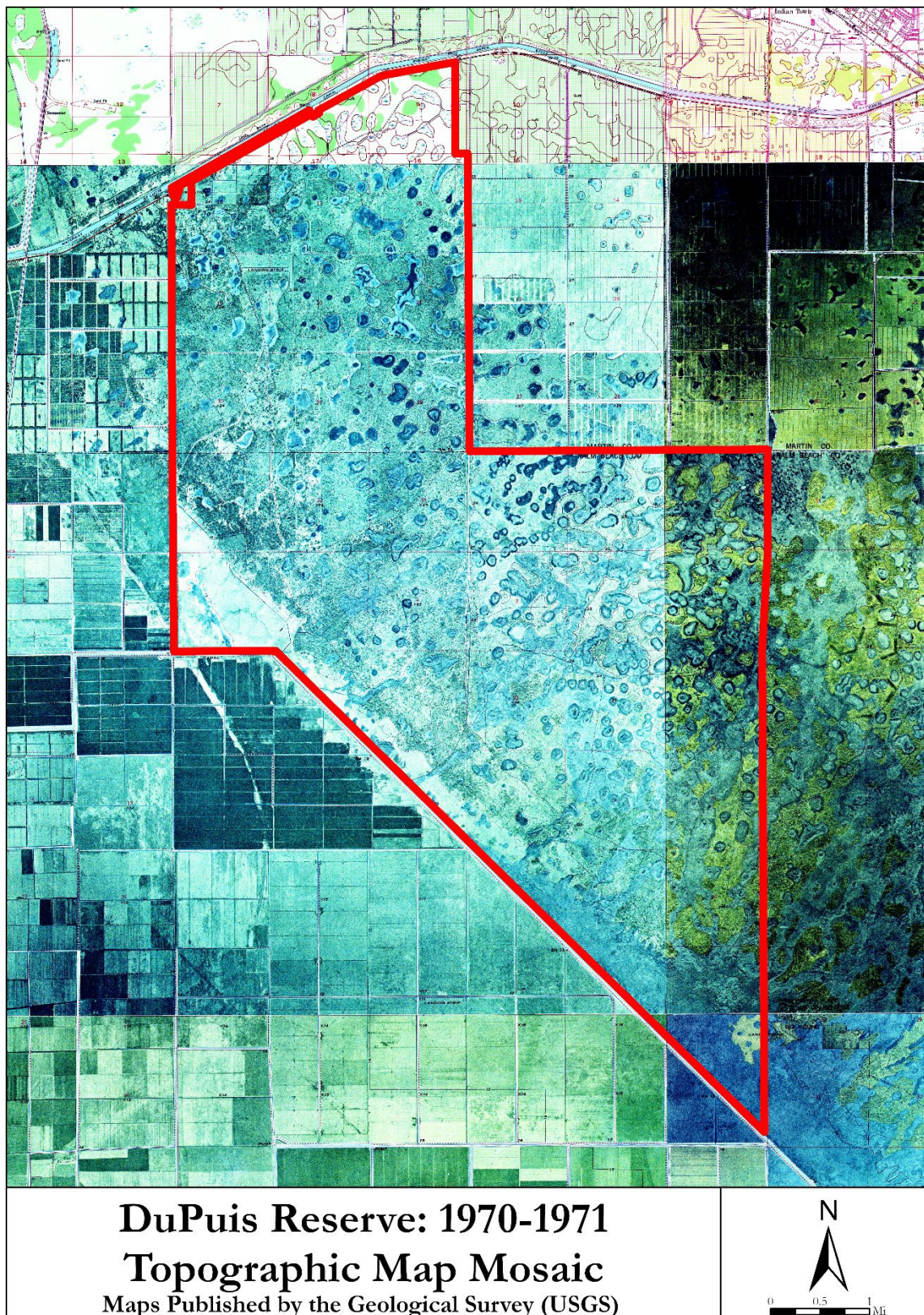
The team also manages the recreational facilities within the management area, supported by contracts and dedicated volunteers. These facilities include three primitive campsites; an equestrian and trailer camping area equipped with picnic tables, fire rings, a waste-dump station, and a restroom; and a primitive group camp and family campsite, both equipped with picnic tables, fire rings, and two primitive restrooms. All facilities require regular upkeep. Additional recreational infrastructure includes a fishing pier, several fishing ponds and picnic areas, four parking areas, more than 38 miles of equestrian trails, over 13 miles of hiking trails, and more than 11 miles of the Florida National Scenic Trail (FNST).

5.2 Physiograph

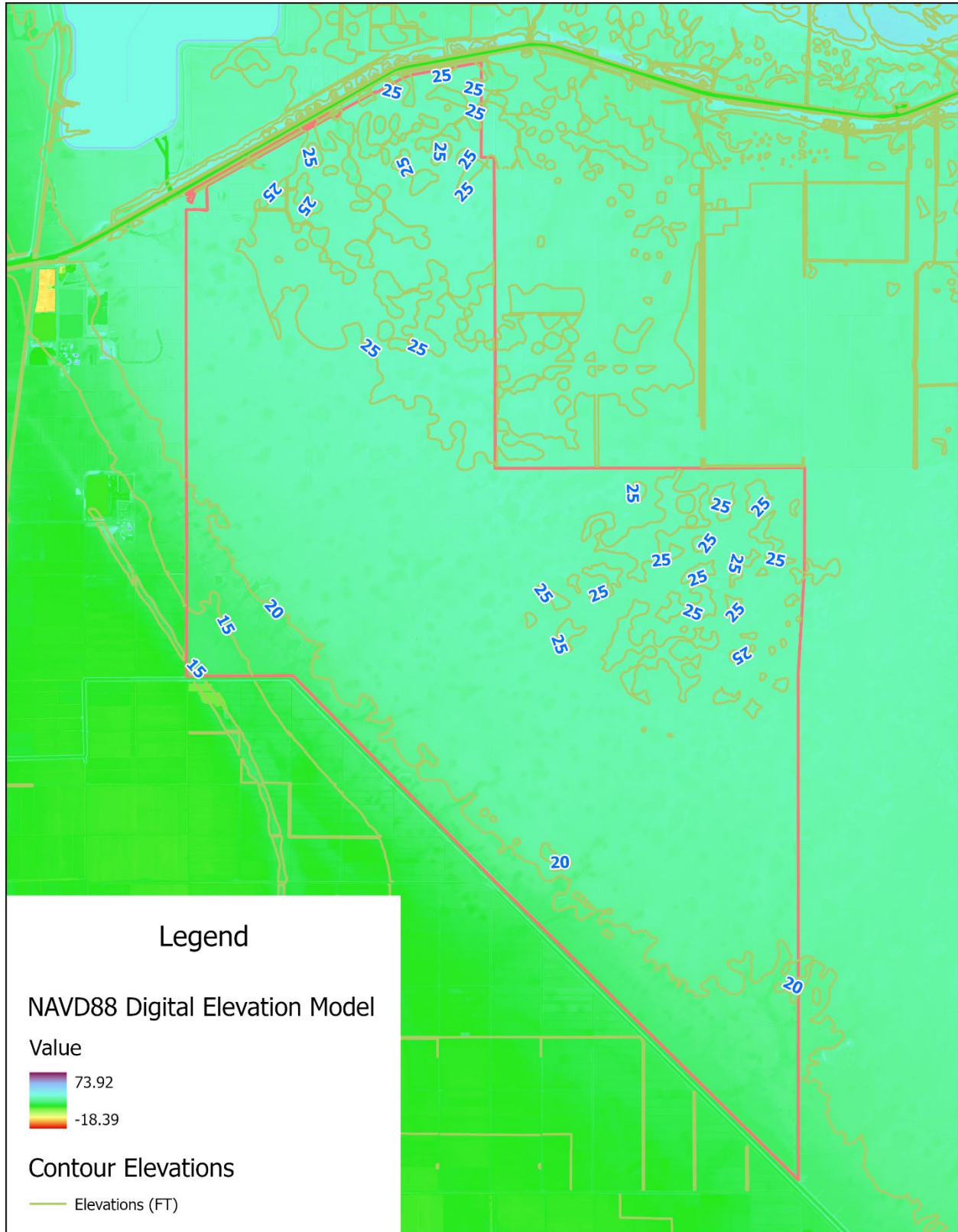
Topography

The natural topography of the Florida Southeastern Coast basin (**Maps 4 - 5**) is generally flat and slopes gently to the south-southeast. Surface elevations typically range from about 20 to 25 feet (ft) above mean sea level (MSL). Except for the higher elevations along the coastal and beach ridges, elevations decrease from approximately 25 ft near Lake Okeechobee to sea level along the southern coastline, where extensive mangrove and coastal glade areas occupy the lowest terrain and are regularly inundated.

Within the DuPuis MA, relief is low, and surface elevations generally range from 23 to 25 ft, declining gradually from northeast to southwest. Overland sheetflow moves south-southwest through a connected series of wetlands. The greatest elevation change occurs in the L-8 Marsh along the southern boundary, where elevations drop from about 20 ft at the treeline to below 15 ft near the canal levee. North and northeast of the treeline, elevations gradually rise to 24–25 ft.



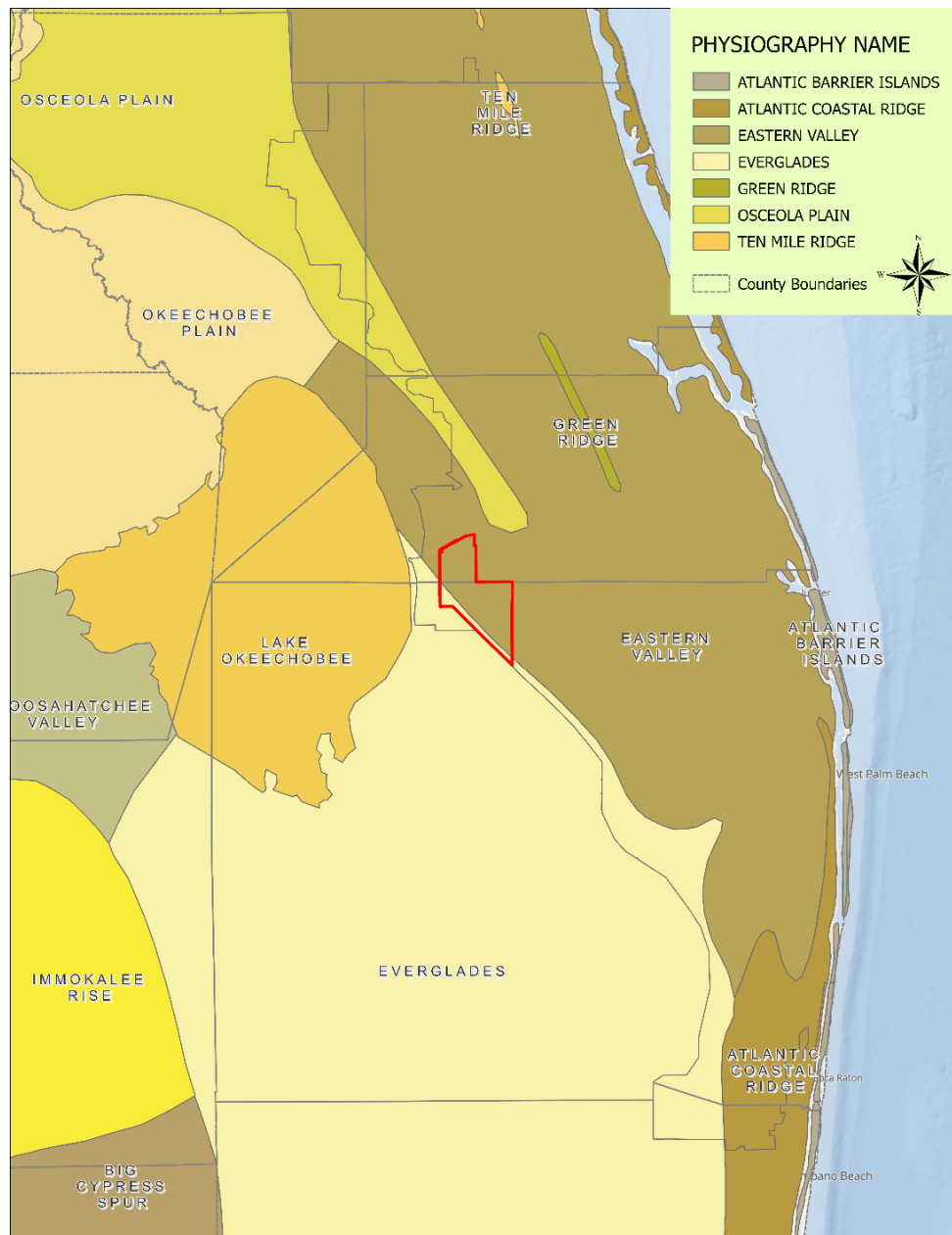
Map 4. Topographic Map Mosaic of the DuPuis MA (1970–1971).



Map 5. DuPuis MA regional elevations.

Geology

The Florida Southeast Coast Basin is situated within the Coastal Lowlands of the Coastal Plain physiographic province of the eastern United States. The Coastal Lowlands physiography includes several geomorphic features: Atlantic Coastal Ridge, Big Cypress Spur, Big Cypress Swamp, Caloosahatchee Valley, De Soto Plain, Eastern Valley, Everglades, Gulf Coastal Lowlands, Immokalee Rise, Mangrove and Coastal Glades, Osceola Plain, Sandy Flatlands, and Southwestern Slope. The Florida Southeast Coast Basin spans the Eastern Valley, Osceola Plain, Everglades, and the Atlantic Coastal Ridge physiographic regions. The DuPuis MA lies predominantly within the Eastern Valley, with its southern boundary extending into the Everglades (**Map 6**).



The Everglades extends southward from Lake Okeechobee and Loxahatchee Slough to the mouth of Shark River Slough at Florida Bay. Its gentle southward slope averages less than 2 inches per mile, with elevations declining from about 14 feet above MSL near Lake Okeechobee to sea level at Florida Bay. Much of the Everglades is underlain by peat and muck soil that formed in a shallow, poorly drained basin under long-term flooding conditions. Beneath these organic deposits lies the Fort Thompson Formation, composed of interbedded sand, shell, and limestone, and the regional bedrock is almost entirely limestone. In the southern Everglades, higher-elevation marshes flanking Shark River Slough are characterized by calcitic marl soils produced by algal mats, along with exposed limestone surfaces containing karst features. Prior to development, the Everglades was seasonally inundated, and water moved slowly southward across this low-gradient landscape.

The Eastern Valley forms a gentle slope between the Everglades and the Atlantic Coastal Ridge and contains scattered depressions across its surface. It is composed primarily of Pamlico sands deposited during the Pleistocene. In many areas, these surficial sands overlie hard, sandy, shelly limestone or marl. Where present, soils above this layer consist mainly of marine, organic-rich sands also deposited during the Pleistocene. Marine deposits in Martin and Palm Beach Counties range from about 100 to 150 ft thick. Much of the Eastern Valley has been extensively drained to support agricultural and urban development. Prior to canal construction and drainage, water moved slowly through the valley via multiple sloughs flowing toward the St. Lucie River, the Loxahatchee River, and the Everglades.

Two principal aquifer systems underlie the Florida Southeast Coast Basin: the surficial aquifer system and the Floridan aquifer system. The surficial aquifer system is a shallow, nonartesian unit that extends roughly 80 to 180 feet (ft) below land surface and consists of permeable Pamlico Sand, Anastasia Formation limestone, shell beds, and Caloosahatchee marl. Beneath the surficial system lies the Floridan aquifer system, a deep artesian aquifer typically separated from the surficial system by a confining unit of clay, silt, and marl. This intermediate aquifer system or confining unit is present only in parts of St. Lucie and Martin Counties and is absent in most of the basin, including Palm Beach County. Where present, it consists of relatively impermeable phosphatic clays, silts, and limestones of the Hawthorn Group. The top of this unit lies about 80 ft below MSL in northwestern St. Lucie County and deepens to more than 200 ft below MSL in southeastern Martin County; thickness ranges from less than 300 ft in northern St. Lucie County to more than 600 ft in the southern part of the basin.

The Floridan aquifer system is more than 2,700 ft thick and consists primarily of limestone of the lower Hawthorn Group, St. Marks, Suwannee, Avon Park, and Ocala formations. The top of the Floridan aquifer is about 300 ft below MSL in the northwest part of the basin and dips to more than 900 ft below MSL in southeastern Martin County.

Recharge to the surficial aquifer system is derived mainly from rainfall, supplemented by groundwater inflow from the Everglades toward the coast. The Floridan aquifer system receives most of its recharge from central and northern Florida. Groundwater flow in both aquifer systems is generally from north to south and southeast toward the coastline.

Climate

Much like the rest of south Florida, the Florida Southeast Coast Basin experiences a humid subtropical climate with wet and dry seasons of nearly equal length. The area receives an average of about 55 inches of rainfall per year, though annual totals vary considerably. Most precipitation occurs during the wet season from June through October, which accounts for approximately 71 percent of the annual rainfall. During the dry season, El Niño conditions can produce above-average rainfall, particularly from November through January.

Soils

A soil map encompassing the DuPuis MA (**Maps 7**) was compiled using Martin and Palm Beach County soil survey data from the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS).

The DuPuis MA contains a variety of soil types, many characteristics of wetland communities. In the Martin County portion of the property, nearly level and poorly drained Riviera, Pineda, and Malabar sands dominate; these soils have very slow percolation rates. Waveland sand, more common along the western side of the property, contains a weakly cemented hardpan at a depth of roughly 30-50 inches, resulting in a perched water table during the wet season. Riviera and Florida fine sand, depressional, are the primary soils underlying the marsh communities. Tequesta muck is a very poorly drained, nearly level soil occurring mainly in depressions near the Palm Beach-Martin County line.

Tequesta, Okeelanta, and Sanibel muck are the dominant soils in the Palm Beach County portion of the Reserve, particularly where Everglades-related communities occur. Okeelanta is a very poorly drained organic soil derived from a willow-sawgrass association, while Tequesta represents a peaty muck typically more associated with broadleaves. Sanibel muck, which contains a thin organic surface layer, occurs in transition zones between sandy flatwoods and Everglades-related organic soils and appears to represent wet prairie bordering the L-8 Marsh.

Basinger and Myakka sands, depressional, and Anclote fine sand are nearly level, very poorly drained soils that typically underlie cypress-dominated communities. Immokalee fine sand is also common in the transition between the flatwoods and L-8 Marsh wetlands; these soils are largely perched systems underlain by a weakly developed hardpan. Toward the eastern boundary of the Reserve, Pineda, Pinellas, and Riviera sands form the dominant soils underlying the cypress strand system. Their slow permeability promotes sheetflow across the landscape rather than downward percolation into the surficial aquifer. Riviera sand, depressional, one of the most common soils on the property, is frequently found within cypress domes that experience prolonged hydroperiods. Information about soils is updated by NRCS periodically and available through the NRCS Web Soil Survey.

Weathering, erosion, climatic conditions, vegetation effects, and topographical locations of resident soils have resulted in numerous differences in soil characteristics. The Natural Soil Landscape Positions (NSLP) classification system groups South Florida soils into 12 categories based on hydrology and soil morphology that reflect the area's local relative topography,

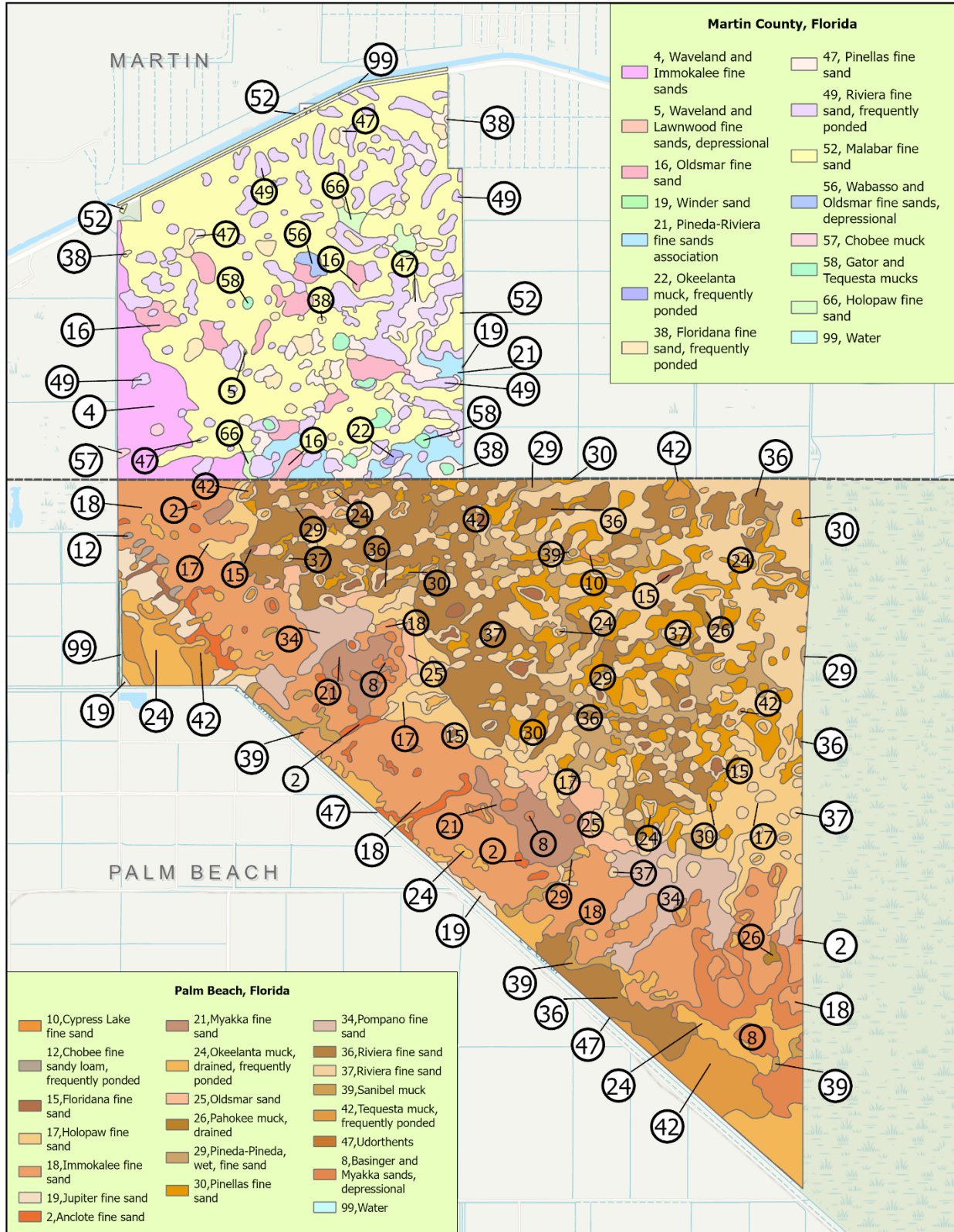
hydrology, and vegetation (Zahina et al. 2001). The soils within the DuPuis MA are classified into seven distinct soil categories: Everglades peat, flats soils, muck depressions, and sand depressions (**Map 8**). The soil classification database provides a complete description of soil classification, vegetation associations, and map and data files of NSLP (Zahina et al., 2001).

Soil Contamination and Excavation Sites

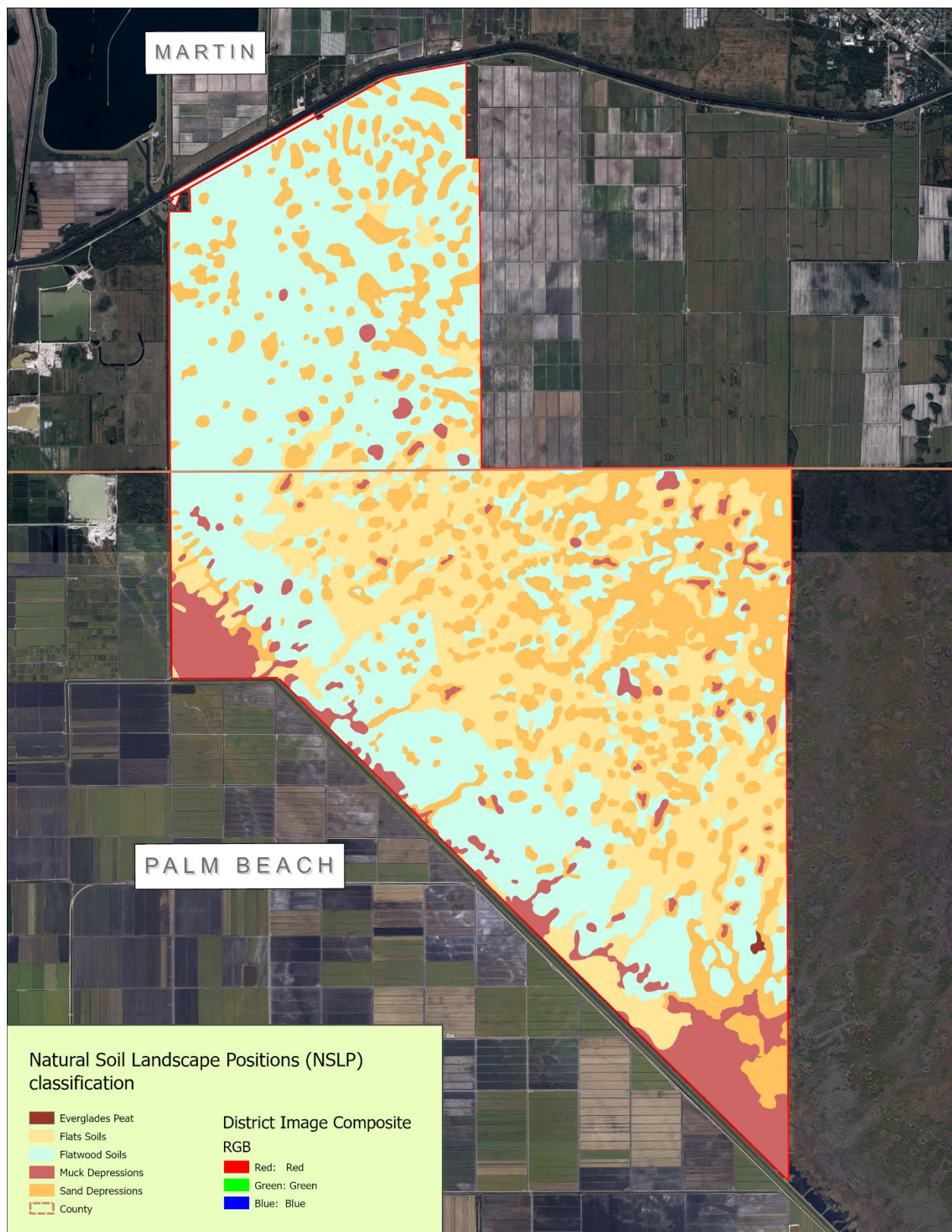
A cattle dipping area that was located at the present Gate 3 equestrian area was removed by the District in the late 1980's. This chemical treatment area was one of the 3,200 cattle dipping vats constructed statewide between 1906 and 1961 for a tick fever eradication program that was mandated by state law. At these locations, soils became polluted with insecticides as cattle were either led through in-ground dipping vats or sprayed in holding pens. Shortly after acquisition, the District began appropriate corrective actions to remediate soil contamination associated with the cattle dipping vat.

A cattle-dipping area was located at the present Gate 3 equestrian site and was removed and soil remediated in the late 1980s. This dipping vat was one of approximately 3,200 constructed statewide between 1906 and 1961 as part of a mandated tick-fever eradication program. At these facilities, soils were frequently contaminated by insecticides used on cattle as they were led through in-ground vats or sprayed in holding pens. Shortly after acquiring the property, the District initiated corrective actions to remediate soil contamination associated with the dipping vat.

During acquisition, five additional soil contamination sites on the property were identified. These areas had historically been used for petroleum or chemical storage and equipment maintenance. As the first part of a two-phase remediation plan, the District analyzed the contaminated soils to establish site-specific, risk-based action levels. The second phase involved determining the necessary corrective measures for each site. The Florida Department of Environmental Protection (FDEP) Waste Cleanup Section supported decisions regarding land-use classification and remediation methods. In the early 1990s, a remediation plan was developed and implemented for all five sites. A final site rehabilitation was issued by FDEP in June 2001, completing the District's remediation activities.



Map 7. DuPuis MA NRCS soil classifications.



Map 8. DuPuis MA NSLP soil classifications.

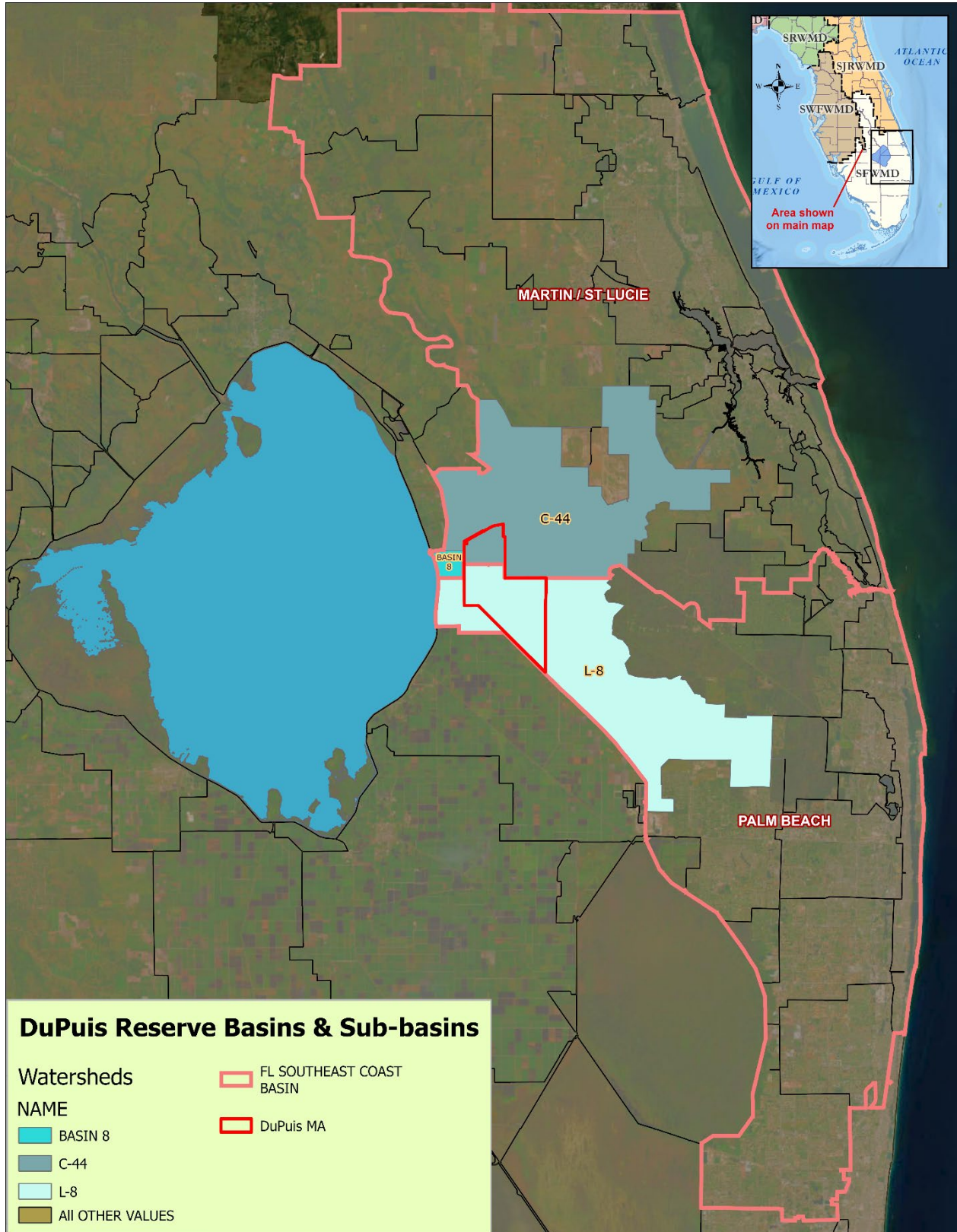
Hydrology

The DuPuis MA is located within the FL Southeastern Coast Drainage Basin, which is divided into the Upper East Coast Basin and the Lower East Coast Basin for water-supply purposes. The basin contains multiple sub-basins that are often referred to interchangeably as basins. The FL Southeastern Coast Basin is generally characterized by rivers, canals, coastal ridges, remnant Everglades wetlands, and coastal swamps and bays. Before agricultural development and canal construction, drainage in this region occurred through a slow, gradual flow of water moving through multiple sloughs toward the St. Lucie River, the Loxahatchee River, and the Everglades. Most of the DuPuis MA lies within the Lower East Coast Basin in the L-8 sub-basin, while approximately seven square miles in southwestern Martin County fall within the Upper East Coast Basin in the C-44 sub-basin (**Map 9**).

The C-44 sub-basin does not contribute much to drainage in the DuPuis MA and primarily serves as an outfall for the northern portion of the management area. Most of the management area drains to the L-8 Canal in the L-8 Basin.

The L-8 Basin encompasses approximately 160 square miles, most of which is located in northern Palm Beach County, with about three square miles in southwestern Martin County. The DuPuis MA and the J. W. Corbett Wildlife Management Area make up most of its drainage area. A smaller area south of the M Canal includes the Indian Trail Improvement District (ITID) service area, along with some agricultural and rural lands. Regional flow within the L-8 sub-basin is complex. Inflows to the L-8 Canal originate from Lake Okeechobee, the DuPuis MA, J. W. Corbett, the L-8 FEB, and the ITID. The upstream water source for the L-8 Basin is Lake Okeechobee, via structure S-271. During rain events, water also flows into the L-8 Canal from adjacent agricultural and natural lands, including the DuPuis MA and J. W. Corbett. Throughout the sub-basin, water is directed into the L-8 Canal for both drainage and water-use withdrawals, such as agricultural irrigation and public water supply via the City of West Palm Beach's Control 2 Pump Station and the M Canal. Excess water from the L-8 sub-basin can be routed either to Lake Okeechobee or to the structure, S-5A complex, at the northern edge of the Everglades Protection Area, where it can be diverted into WCA-1 or diverted for water supply.

The hydrology of the DuPuis MA primarily depends on annual rainfall (Maps 10 - 11). In the Martin County portion of the reserve, pine flatwoods typically occur at elevations near 25 ft, gradually decreasing to 23-24 ft toward the western boundary. Depression marshes range 20-23 ft, and cypress dome centers represent the lowest elevations (about 20-21 ft). In the Palm Beach County portion, pine flatwoods range 24-25 ft, while marshes, cypress domes, and strands lie between 20 and 23 ft. Elevations decline to the southwest toward the L-8 Marsh, where elevations range from approximately 15 to 19 ft. During the rainy season, surface water gradually rises within the management area and eventually sheetflows in a south-southwest direction toward the L-8 Marsh, ultimately discharging into the L-8 Canal through control structures.

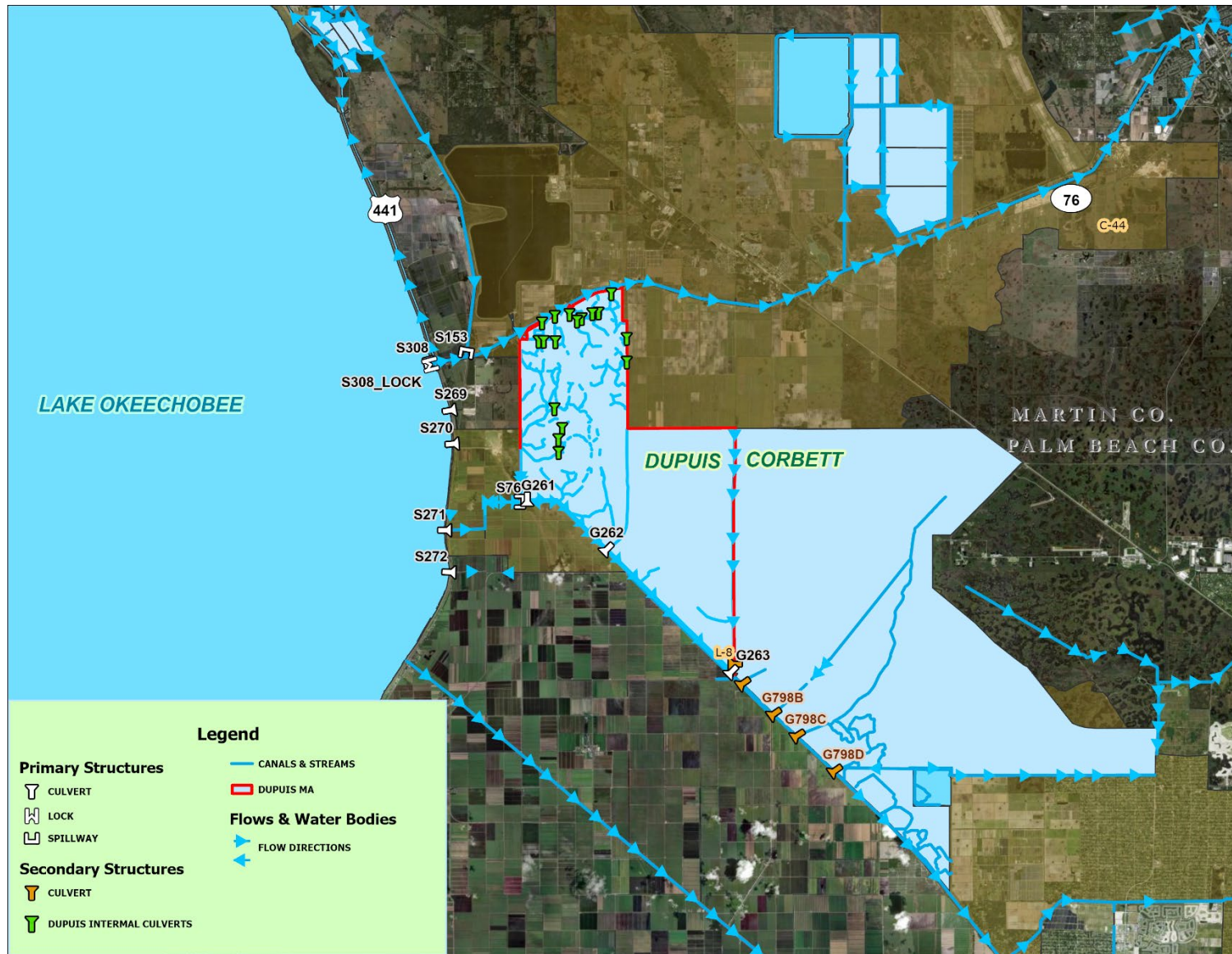


Map 9. DuPuis MA Basin watersheds and sub-watersheds.

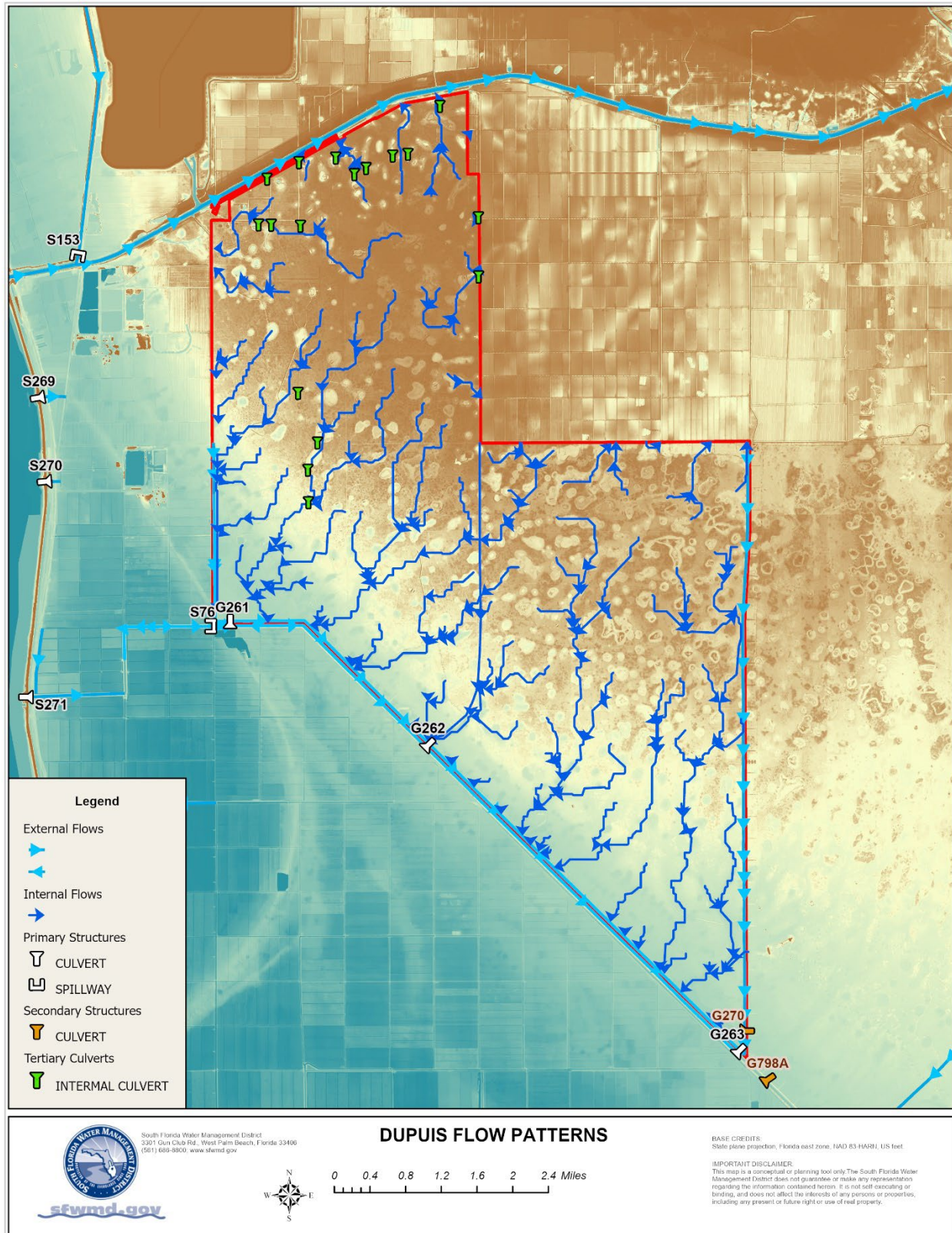
Over the years, several drainage improvements in and around the DuPuis MA have had major impacts on regional hydrology. In the 1920s, the St. Lucie Canal was dredged parallel to the property's northern boundary, severing historic inflows from the north and increasing offsite discharge. In the early 1950s, construction of the L-8 Canal along the southern boundary further increased offsite discharge and facilitated drainage of the land. By the 1970s, a canal and elevated road along the eastern boundary blocked historic inflows from the J. W. Corbett area. Additionally, during ranch development, an extensive network of interior canals and ditches was constructed, significantly decreasing surface water retention and increasing discharge from the site.

Although historical aerial imagery indicates that upstream flow from the C-44 sub-basin into the DuPuis MA would have been minimal, due to the original river/tributary system that existed to the north prior to construction of the St. Lucie Canal, the excavation of the canal substantially altered the hydrology of the northern portion of the management area. The wetlands on the north side lie at approximately 25 ft above sea level, while the canal is generally maintained at or below Lake Okeechobee's typical elevation of about 15 ft. This created a groundwater gradient that lowered the water table by roughly ten feet at the canal, with diminishing effects farther from it. By the 1940s, aerial photographs already showed changes in hydroperiods within three-quarters of a mile of the canal.

Efforts to restore hydrology have been ongoing since the 1990s to address these diminished groundwater conditions. These efforts include construction of a levee adjacent to the L-8 Canal, installation of control structures, and placement of several ditch plugs. The levee is at an elevation of 23 ft NGVD and discharges into the L-8 Canal through three control structures set at a control elevation of 19 ft NGVD. This design allows surface water to discharge during peak flood conditions, helping supply the L-8 sub-basin and reducing the drawdown effect of the L-8 Canal on the L-8 marsh in the dry season. An additional structure on the southeastern boundary of the management area, consisting of four 72-inch culverts with 96-inch flashboard risers, was added to restore a portion of the historical flow between J. W. Corbett and the management area.



Map 10. DuPuis MA Regional hydrography.



Map 11. DuPuis MA internal flow directions.

5.3 Vegetation

The DuPuis MA is characterized by extensive pine flatwoods, depressional marshes, and cypress swamps, which provide critical habitat for a diverse array of flora and fauna, contributing to the region’s ecological integrity.

Seven distinct natural community types exist within the DuPuis MA (**Maps 12; Figure 3**). The District groups natural community types based on the descriptions in the Florida Natural Areas Inventory (FNAI) Classification system (FNAI, 2010) and the Florida Land Cover Classification System (Kawula & Redner, 2018).

Detailed descriptions of both natural communities and altered landcover types are provided in Appendix B.

Percent Coverage of Plant Communities in DuPuis MA

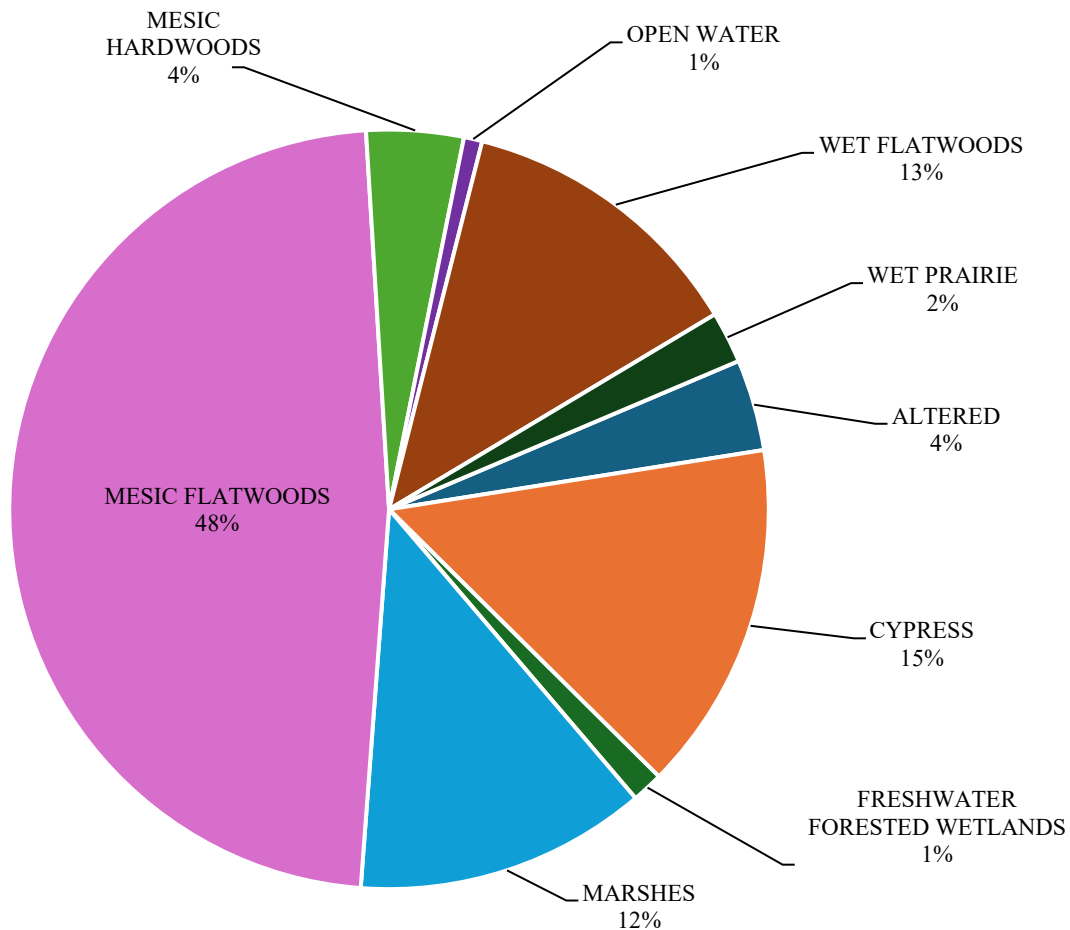
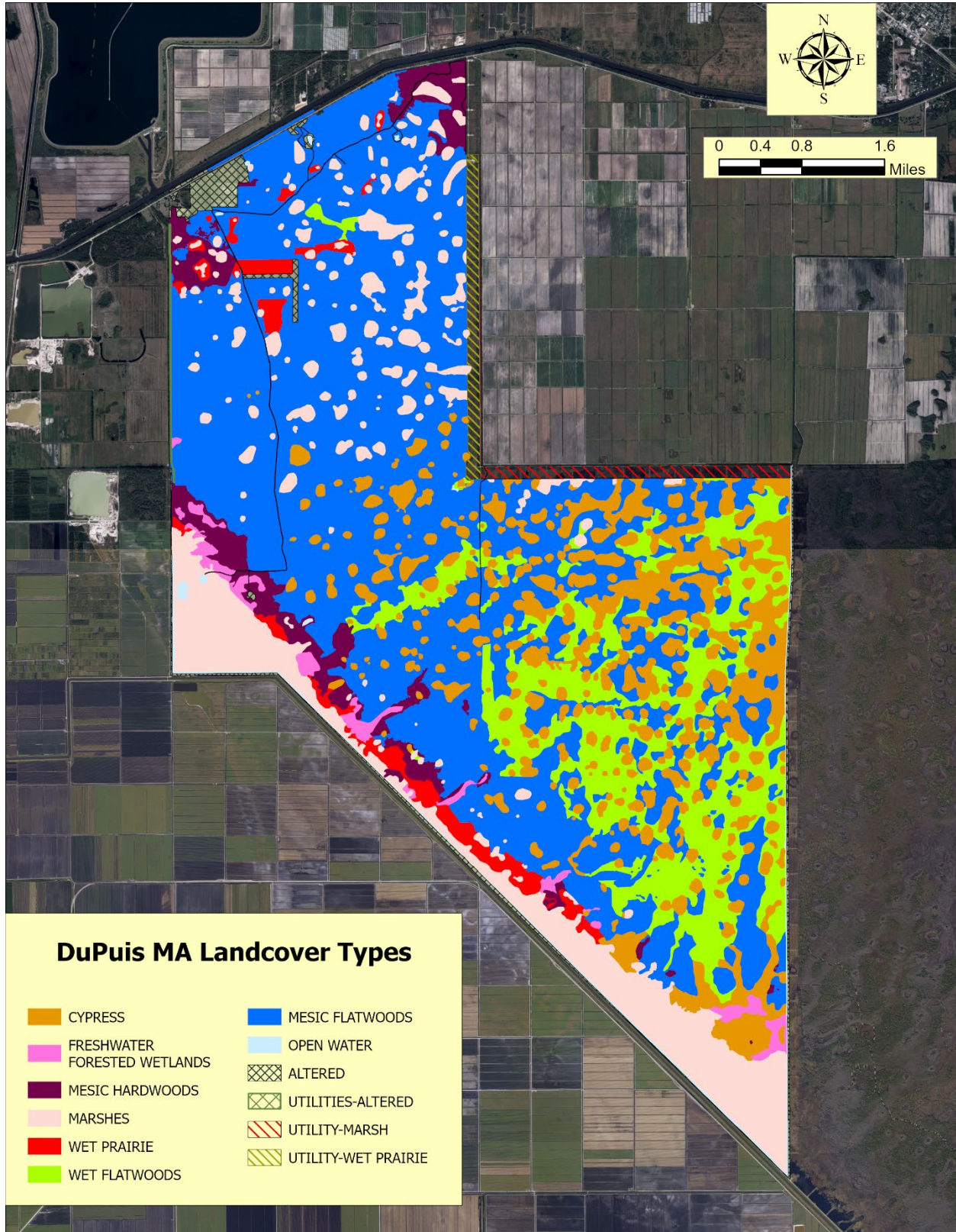


Figure 3. Plant community classifications within the DuPuis MA.



Map 12. Distribution of natural communities and altered landcover in the DuPuis MA.

Listed Species

Listed species include those plants and animals identified as rare, threatened, or endangered by the U.S. Fish and Wildlife Service (FWS), FWC, and the Florida Department of Agriculture and Consumer Services. The DuPuis MA supports natural habitats for several state-listed endangered or threatened plant species. **Table 1** lists the plant species found within the management area.

Table 1. Listed plant species associated with the DuPuis MA and current status.^a

Common Name	Scientific Name	Status
Blue-Flowered Butterwort	<i>Pinguicula caerulea</i>	ST
Cardinal Wild-Pine	<i>Tillandsia fasciculata</i>	SE
Catesby's Lily	<i>Lilium catesbaei</i>	ST
Celestial Lily	<i>Nemastylis floridana</i>	ST
Giant sword fern	<i>Nephrolepis biserrata</i>	ST
Giant Wild-Pine	<i>Tillandsia utriculata</i>	ST
Hand fern	<i>Ophioglossum palmatum</i>	SE
Manyflowered Grasspink	<i>Calopogon multiflorus</i>	ST
Pinepink Orchid	<i>Bletia purpurea</i>	ST
Reflexed Wild-Pine	<i>Tillandsia balbisiana</i>	ST
Rose Pogonia	<i>Pogonia ophioglossoides</i>	ST
Satinleaf	<i>Chrysophyllum oliviforme</i>	ST
Snowy Orchid	<i>Platanthera nivea</i>	ST
Threadroot Orchid	<i>Dendrophylax porrectus</i>	ST
Toothed Maiden Fern	<i>Thelypteris serrata</i>	SE
Twisted Wild-Pine	<i>Tillandsia flexuosa</i>	ST

Nuisance and Invasive Plant Species

South Florida's subtropical climate provides an excellent growth environment for the rapid spread of nuisance and invasive plants that can cause extensive alterations to the natural ecosystems. Nuisance and invasive plant infestations can result in partial or total displacement of native plants, loss of wildlife habitat, and the degradation of public use areas. Environmental changes caused by extensive hydroperiod alterations have been a major factor in the nuisance and invasive plant colonization within the DuPuis MA. Without proper land management, nuisance and invasive plant expansion will continue to displace our native plants, reduce wildlife utilization, and degrade public use areas. The District is committed to reducing the proliferation of invasive species to protect its management areas' ecological values (SFWMD, 2020).

5.4 Wildlife

The plant communities within the management area provide habitat for a wide variety of species, including birds, amphibians, reptiles, and mammals. Initial wildlife inventories were conducted between 1987 and 1989, and the list is updated periodically to incorporate new observations and taxonomic revisions. The most recent version is provided in **Appendix C**.

In addition to supporting resident species, the management area is used by wildlife dispersing from nearby populations and by migratory species that move through during seasonal migrations. Some species also use the area opportunistically for foraging away from their primary roosting or breeding sites.

The DuPuis MA falls within the geographic priority wetland zones identified in several major conservation plans, including the North American Waterbird Conservation Plan (NAWCP), the North American Waterfowl Management Plan (NAWMP), and the Partners in Flight North American Landbird Conservation Plan (PIF). The area provides important foraging, nesting, and roosting habitat for numerous waterbird species, contributing to NAWCP objectives. It offers critical foraging habitat for migrating and wintering waterfowl, as well as breeding and nesting habitat for wood ducks and mottled ducks, supporting NAWMP goals. Additionally, the management area supports nesting and foraging habitat for a range of wetland-associated landbirds, including thirteen PIF Species of Continental Importance.

Rare, Threatened and Endangered Listed Species

The DuPuis MA supports a variety of federally protected wildlife species. Several federally listed wildlife species have been observed in the management area, including one (1) listed as endangered, three (3) as threatened, and one (1) as threatened due to similarity of appearance. The area also supports six (6) species designated as state threatened. A list of these species is included in **Table 2**.

Table 2. Listed wildlife species utilizing the DuPuis MA & current status.^a

Common Name	Scientific Name	Status
Birds		
Crested Caracara	<i>Caracara cheriway</i>	FT
Everglades Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	FE
Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	ST
Little Blue Heron	<i>Egretta caerulea</i>	ST
Red-cockaded Woodpecker	<i>Picoides borealis</i>	FT
Roseate Spoonbill	<i>Platalea ajaja</i>	ST
Southeastern American Kestrel	<i>Falco sparverius paulus</i>	ST

Table 2 Continue. Listed wildlife species utilizing the DuPuis MA & current status.

Common Name	Scientific Name	Status
Tricolored Heron	<i>Egretta tricolor</i>	ST
Herpetofauna		
American Alligator	<i>Alligator mississippiensis</i>	FT(S/A)
Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	FT
Gopher Tortoise	<i>Gopherus polyphemus</i>	ST

a. Key to abbreviations: Species listed by the State of Florida as Federally-designated Endangered (FE), Federally-designated Threatened (FT), and Federally-designated Threatened because of similarity of appearance [FT(S/A)].

5.5 Cultural Resources

Thirteen archaeological sites within the DuPuis MA are registered in the Florida Master Site File (FMSF). Native American occupations at these locations date to approximately 500 B.C. and span the Glades I Late through Glades *IIIb/IIIc* periods, associated with the Belle Glade culture. Cultural affiliation is identified through diagnostic ceramic types such as Belle Glade Plain, St. Johns Plain, and sand-tempered plain, which reflect regional traditions emerging after 500 B.C. Artifacts found with Glades-era pottery, including shark teeth, shell tools, sea turtle remains, and chert, also indicate exchange networks reaching coastal and central Florida. During the Seminole War (1835), Seminole groups used the DuPuis MA and adjacent high ground as refuge; severe hardship experienced in the area contributed to the name “Hungryland.”

Archaeological sites within the management area are primarily located along the southern boundary near sloughs that historically drained toward the Everglades. The Glades period in this region is characterized by circular and linear earthworks. Three sites within the management area are significant prehistoric earthworks eligible for the National Register of Historic Places (NRHP) share this characteristic, and two sites are highly sensitive prehistoric burial mounds. Investigations at four of the earliest documented sites revealed substantial cultural resources consistent with patterns known from the eastern Lake Okeechobee area.

One site is an important example of a circle-ditch earthwork with an associated habitation area. Although circle-ditch sites are geographically widespread, only sixteen are known in southern Florida, many of which have been destroyed. These earthworks generally date to ca. 1000 B.C.–A.D. 200, but evidence from this site suggests a broader temporal range, possibly extending into the late Archaic and Florida Transitional periods. Artifacts observed include sand-tempered plain, Belle Glade Plain, and St. Johns Plain sherds; shark-tooth and bone tools; chert flakes; and a Hernando-type chert biface. Stratigraphy indicates two distinct occupations.

Another site contains extensive black-earth midden deposits, vertically and horizontally, covering at least 57,352 sq ft, and includes known burial mounds. Two occupation layers were documented: the lower contains chert flakes (absent in the upper), while both contain similar

ceramic assemblages dominated by sand-tempered plain sherds with low frequencies of Belle Glade Plain and St. Johns Plain. The presence of a Miami Incised sherd (a Glades *Ila* marker, ca. A.D. 750–900) and the limited occurrence of Belle Glade Plain suggest occupation primarily between A.D. 500 and 1100. Despite surface disturbance from a road and former structures, the subsurface preservation remains excellent, with intact occupation layers.

A third site contains a high conical mound with outlying crescent-shaped earthworks. The site remains exceptionally well preserved, with fairly intact earthen berms and minimal evidence of prior digging. Indications that it is a burial mound with Spanish contact-period materials further enhance its significance. Most comparable sites dating to this period have been heavily damaged or destroyed.

A fourth site consists of two linear earthworks terminating at a small sand mound partly encircled by a crescent-shaped earthwork. Additional features include attendant mounds and a thin midden on a large crescent-shaped hammock. Although the arrangement is characteristic of sites in the Lake Okeechobee area, heavy disturbance from historical cattle and sheep grazing, modern road construction, and agricultural modifications has compromised the site's integrity. The disturbance, combined with the relatively thin midden, indicates the site no longer retains sufficient integrity to be considered a significant resource.

Management of known archaeological sites within the DuPuis MA prioritizes preserving site integrity and preventing ground-disturbing activities. Vegetation management and prescribed burning are planned and conducted to avoid impacts on cultural resources.

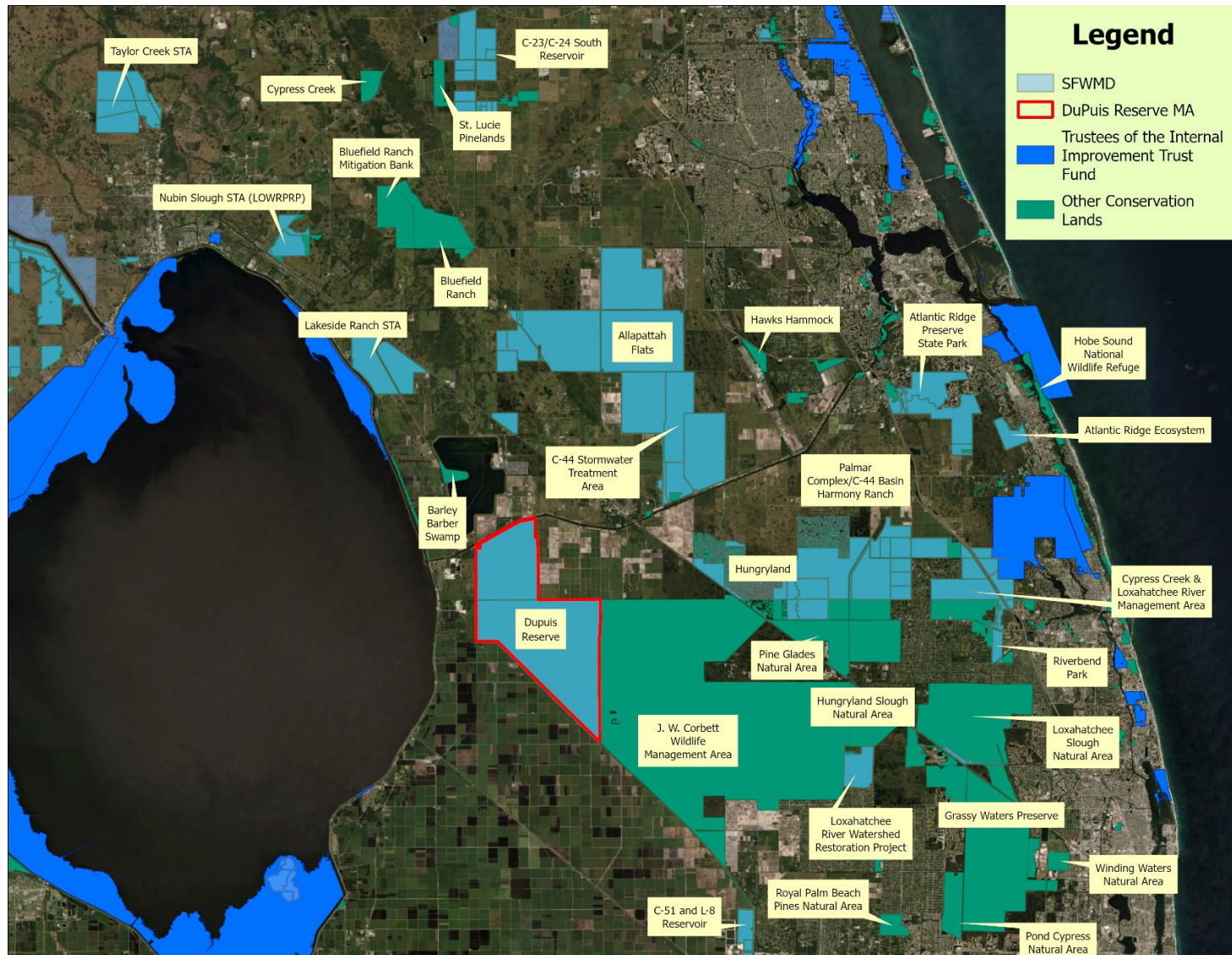
5.6 Mitigation

The District utilized available funds from mitigation payments made by Florida Power & Light Company (FPL) to support land management activities within the DuPuis MA. As part of regulatory mitigation for wetland impacts associated with FPL's Levee Midway 500-kV Transmission Line project, FPL funded the restoration of approximately 850 acres of wetlands within the L-8 Marsh. The L-8 berm construction and hydrologic improvements for the marsh restoration were completed in accordance with Department of Environmental Regulation (now FDEP) Permit No. 43 & 502142156 and U.S. Army Corps of Engineers Permit No. 199200851 (IP-RP). See the Hydrologic and Habitat Restoration section below for additional details.

5.7 Potential Additions

The District acquires land through donations, mitigation, and direct purchase. Acquisition of the DuPuis MA protected 35 sections of wetland and upland habitats, expanded the conservation corridor established by the J.W. Corbett WEA, and enhanced regional water quality. Although no additional acquisitions are required to support current land management activities, purchases from willing adjacent landowners would further improve water quality in the region.

DuPuis Management Area General Management Plan 2026 – 2036
South Florida Water Management District, Land Stewardship Section



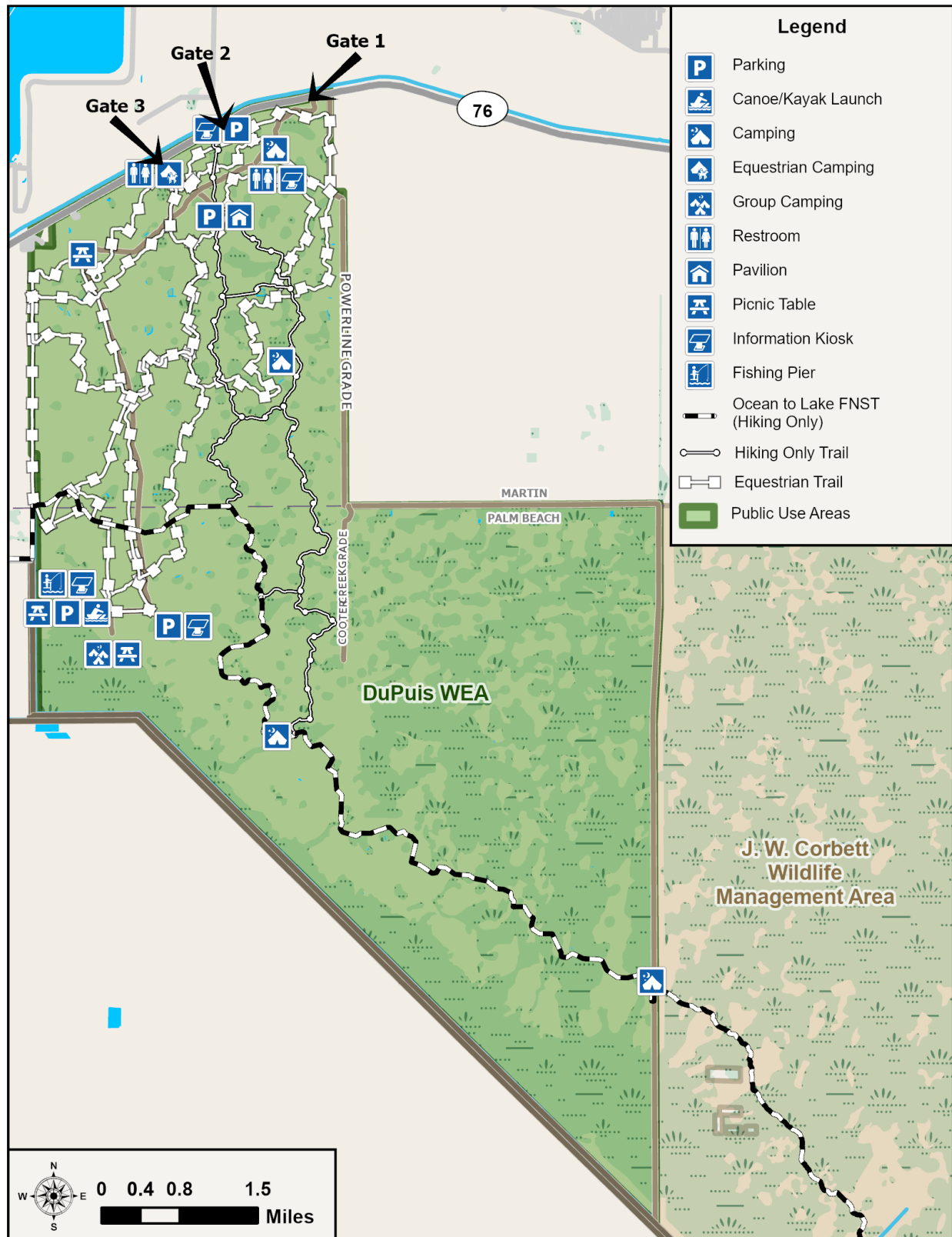
6. PUBLIC USE

The District encourages public use of management areas for appropriate natural resource-based activities. District lands are generally available for public use, except in instances where the public use would be incompatible with the purposes for which these lands were acquired, there is no legal public access, or where construction activities prohibit public entry. Public input into the management of these areas is solicited at the District's quarterly Recreational Forum Meetings. In coordination with partnering agencies, adjustments to public use opportunities are made on an ongoing basis through the Recreational Forum Meetings and rulemaking, if necessary. This plan describes the scope of public use opportunities available or planned as of the date of the management plan. Compatible recreational activities on District lands typically include hiking, biking, hunting, fishing, frogging, horseback riding, canoeing, geocaching, boating, primitive camping, environmental education, wildlife viewing, nature photography, natural history study, and flora and fauna identification. These activities are designed to maximize the diversity and variety of recreational options available while ensuring the necessary resource protection measures are in place. This approach helps to maintain conservation values and ensures long-term benefits for the public.

The DuPuis MA is designated as a Public Use Area (PUA) to provide the public with recreational access. It is also designated by FWC as a Wildlife and Environmental Area (WEA). The management area is accessible from State Road 76 and offers a variety of public recreation opportunities, including hiking, biking, horseback riding, hunting, fishing, canoeing, and camping. Gate 1 is the primary entrance, providing vehicular access to the campgrounds, pavilion, picnic areas, and fishing pier. Gate 2 is the main access point for the hiking trailhead, and Gate 3 provides entry to the equestrian center and the RV and trailer camping area. Visitors can enjoy 13.6 miles of hiking and biking trails and 38.5 miles of equestrian trails. Additionally, 38.5 miles of the Florida National Scenic Trail's Ocean to Lake Hiking Trail pass through the management area, linking recreational opportunities within the DuPuis MA, J.W. Corbett WEA, Palm Beach County Natural Areas, and Jonathan Dickinson State Park.

Three designated campgrounds are located in the management area, along with three primitive camping sites situated along the trail system. The District offers a free Special Use License that allows the public to use recreation opportunities, including equestrian camping and tent and RV/trailer camping, within the DuPuis MA. Limited recreational fishing opportunities are also available. Recreational amenities within the DuPuis MA are illustrated in **Map 14**. Additional information, including maps and Special Use License details, is available in the District's recreation guide, on the District's website, and on the Florida Trail Association's website.

The District partners with FWC to manage game species and public hunting opportunities on District lands designated as WMAs, WEAs, PSGHAs, and PUAs. These designations allow FWC to utilize biologists and law enforcement staff to assist in the management of wildlife on District lands and to enforce wildlife and public use rules for resource protection. These designations also allow the FWC to establish hunting seasons and promulgate laws regulating public activities in these areas. A hunting brochure (**Appendix D**) outlining the regulations for hunting and additional information is available online.



7. NATURAL RESOURCE MANAGEMENT

To keep native plant communities healthy and productive, District land managers take appropriate actions to compensate for the loss of natural processes. Several land management practices are utilized to preserve the ecological health and function of the management areas. These practices include prescribed burning fire-dependent plant communities with fire return intervals that mimic natural fire regimes; controlling invasive vegetation through the selective use of herbicides and biological control agents; restoring the physical structure of plant communities and biological diversity through mechanical vegetation management, including mowing, chopping and shredding; and implementing hydrologic restoration activities where the natural hydrology has been altered through ditches, canals, and other surface water drainage features.

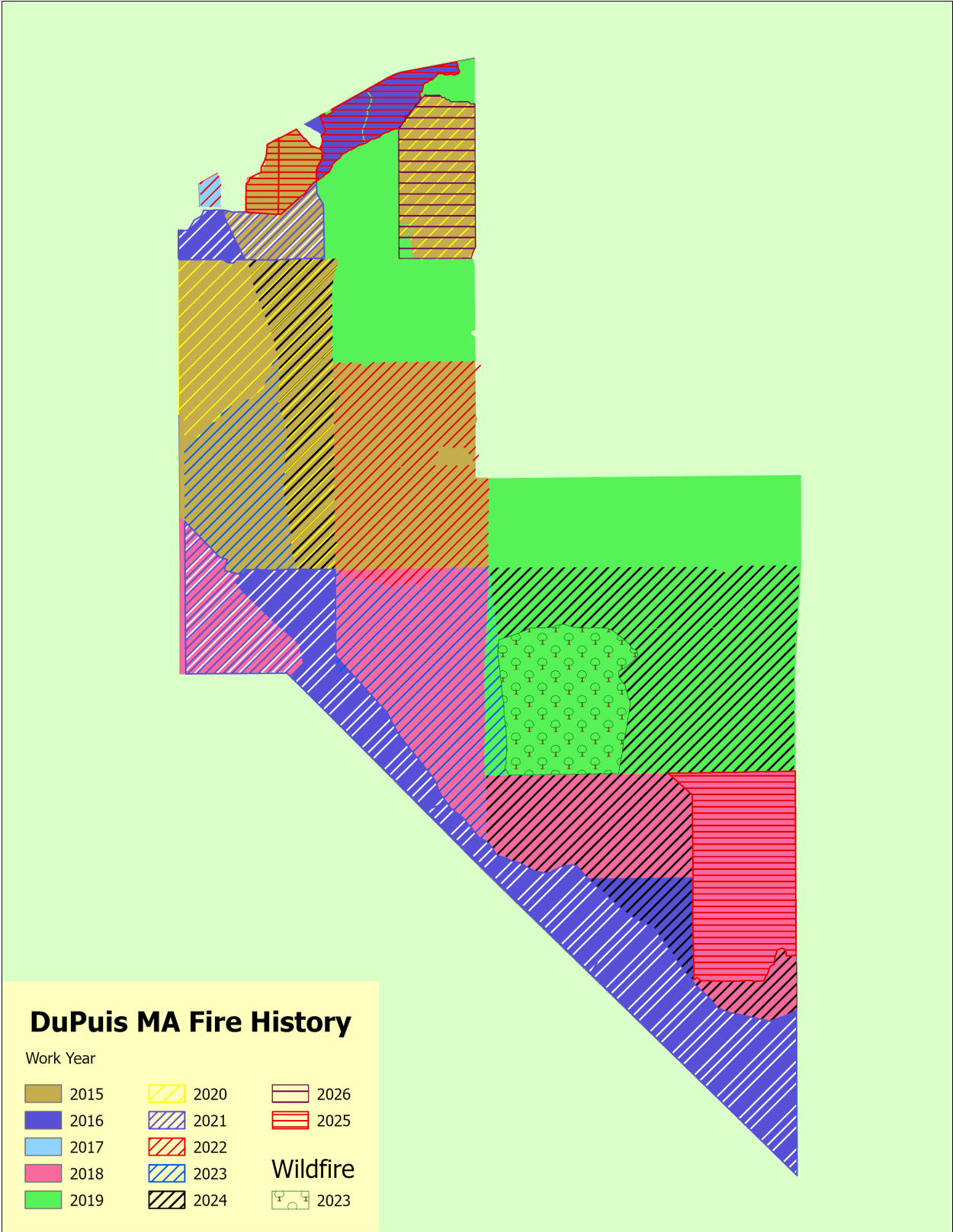
7.1 Fire

Fire has shaped the distribution of plants in Florida's ecosystems. Historically, wildfires reduced fuel loads in natural communities. Due to habitat fragmentation and human suppression efforts, these fires no longer occur with historical frequency or extent, resulting in alteration to the natural community structure and function in fire-dependent communities. Most plant communities in Florida are adapted to periodic fires and rely on them to maintain their vegetative characteristics and biodiversity. Land Managers use prescribed burning to reduce hazardous buildup of vegetative fuel load, maintain plant species diversity, enhance wildlife habitat, and encourage restoration of native plant communities. Land Stewardship recognizes the importance of fire as a management tool and has integrated prescribed fire into its land management strategy.

Fire History

Limited fire history exists for the DuPuis MA prior to District acquisition in 1986, and conditions before the mid-1950s are largely unknown. However, grazing practices in the region suggest that native rangelands were likely burned regularly to improve forage. From 1955, when the previous owners acquired the property, until about 1980, annual winter burns were conducted throughout the pinelands, except for pasture areas. Between the late 1950s and the 1970s, the improved pastures on the western portion and in the area that now comprises the L-8 Marsh were not burned. Winter burning continued on most of the eastern portion of the property, east of Cooter Creek Grade, between 1980 and 1986, and these fires were typically low-intensity, slow-moving grass fires.

The District initiated its prescribed fire program in 1989, with the primary goal of reducing hazardous understory fuel loads, particularly overgrown saw palmetto, resulting from past overdrainage and inconsistent burning practices. Since its implementation, a systematic burn rotation has been established for fire-dependent communities, thereby restoring the natural fire regime within the management area (**Map 15**).



Map 15. DuPuis MA fire history.

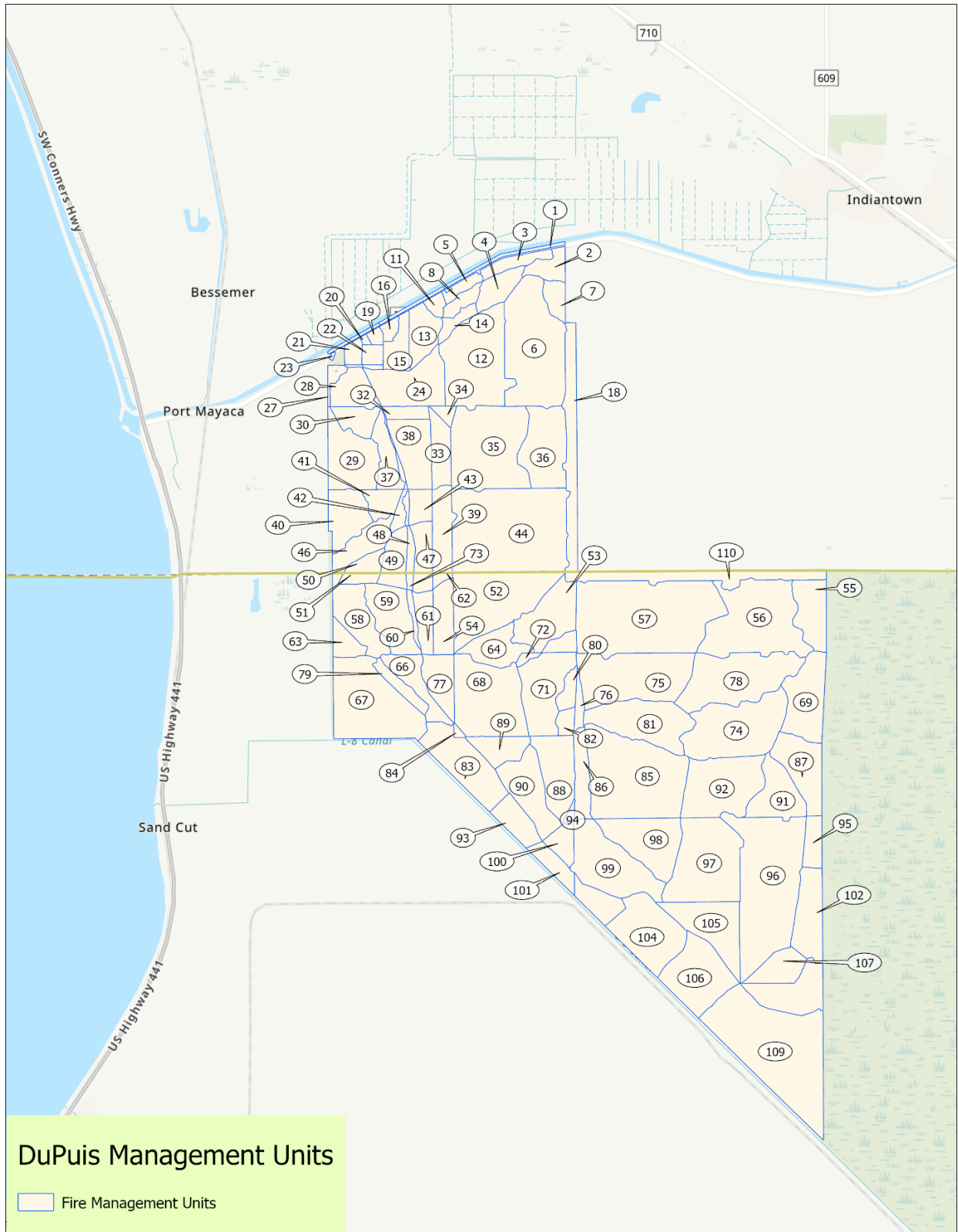
Prescribed Fire Planning

The fire management program for the DuPuis MA includes wildfire prevention, detection and suppression, and prescribed burning. Prescribed burn standards and procedures are outlined in the Land Stewardship's Wildlands Fire Manual, which serves as the centralized reference for fire management on District lands. The manual establishes the procedures necessary to ensure compliance with statutory requirements of Chapter 590, Florida Statutes, Chapter 51-2, Florida Administrative Code, and Chapter 62-256, Florida Administrative Code.

To implement these actions effectively, the management area is divided into management units for prescribed fire application (**Map 16**). Existing roads and trails, disked firelines, and, where feasible, natural firebreaks such as wetlands and ecotones define the boundaries of these units. Smoke-management requirements and limited resources present ongoing challenges to sustaining a robust fire program for the DuPuis MA; however, maintaining low fuel loads remains essential to reducing the risk of destructive wildfires.

Prescribed fire is applied within these units with different management objectives tailored to plant community needs, wildlife utilization, and species-level requirements. Prescriptions for these burns specify environmental conditions, return frequency, and ignition techniques to create mosaic burns that do not remove all vegetation while redefining the boundaries of embedded plant communities that are not fire-dependent, such as hammocks or swamps. A healthy fauna in South Florida is integrally tied to fire return intervals, seasonality, and intensities. Frequent fire tends to favor understory vegetation that provides essential forage and mobility for wildlife. Although high-intensity winter burns give the appearance of removing more fuels from the landscape, spring and summer burns achieve a more effective reduction of fuel and are preferred from a wildlife management and ecological perspective. Spring growing-season burns provide a mosaic effect, allowing the retention of cover and foraging opportunities for wildlife that winter burns may temporarily eliminate. Late-spring and summer burns help control the spread of hardwoods. Because prolonged dry periods make it increasingly difficult to conduct safe, successful spring burns, land managers utilize less intensive summer burns to achieve management goals. Summer burns reduce the likelihood of spot fires and escapes because of the amount of green vegetation and high relative humidity. Burning in late summer and early fall also helps replicate historical fire patterns that occurred in many habitats during occasional lightning strikes. While spring and summer burns may result in isolated nest losses, affected species (e.g., quail, Turkey, etc.) typically re-nest, and the resulting habitat conditions offer a better food source for fledged young.

Prescribed fire has been the primary tool shaping and maintaining the desired community structure within the fire-dependent natural communities of the DuPuis MA. Its application reinforces the open conditions characteristic of pine flatwoods and helps reduce woody species encroachment in the wetlands. Strategic fire applications also stimulate the regrowth of native grasses and forbs that compete with pasture grass (e.g., bahiagrass, etc.) within former pasture areas. These post-fire flushes of herbaceous vegetation also provide essential forage and cover for wildlife that depend on open, grassy structure, including ground-nesting birds and small mammals. These ecological responses collectively highlight the crucial importance of prescribed fire in maintaining the health, resilience, and biodiversity of the natural communities within the management area.



Map 16. DuPuis MA fire management units.

Additionally, meeting the prescribed fire goals and objectives for each fire-maintained community is largely dependent on weather conditions, personnel, and statewide emergency situations such as wildfires, hurricanes, and other natural disaster responses. Ideally, burn crews would consist of 6-8 or more individuals. While the District Land Stewardship employees successfully conduct most prescribed burns, some prescribed burns require outside assistance to ensure they are conducted in a safe and effective manner. The DuPuis MA receives assistance from FWC, Martin County Ecosystem Restoration & Management, different divisions of the District and regions of Land Stewardship, and trained volunteers.

Wildfire Suppression

Lightning-induced wildfires are common across Florida. The Florida Forest Service (FFS) is responsible for preventing, detecting, and suppressing wildfires in Florida (§590.01, Florida Statutes). Maintaining fire-dependent habitats through frequent prescribed burns is the primary way the District limits the negative impacts of wildfires and enhances the FFS ability to respond effectively to wildfire events. When a wildfire is detected, the land manager immediately notifies FFS while the Land Stewardship staff responds and, if appropriate, begins fire suppression efforts. Upon arrival, FFS takes command of the fire while the District continues to provide logistical and situational support as needed.

The FFS Okeechobee District and Everglades District are responsible for wildfire response within the DuPuis MA.

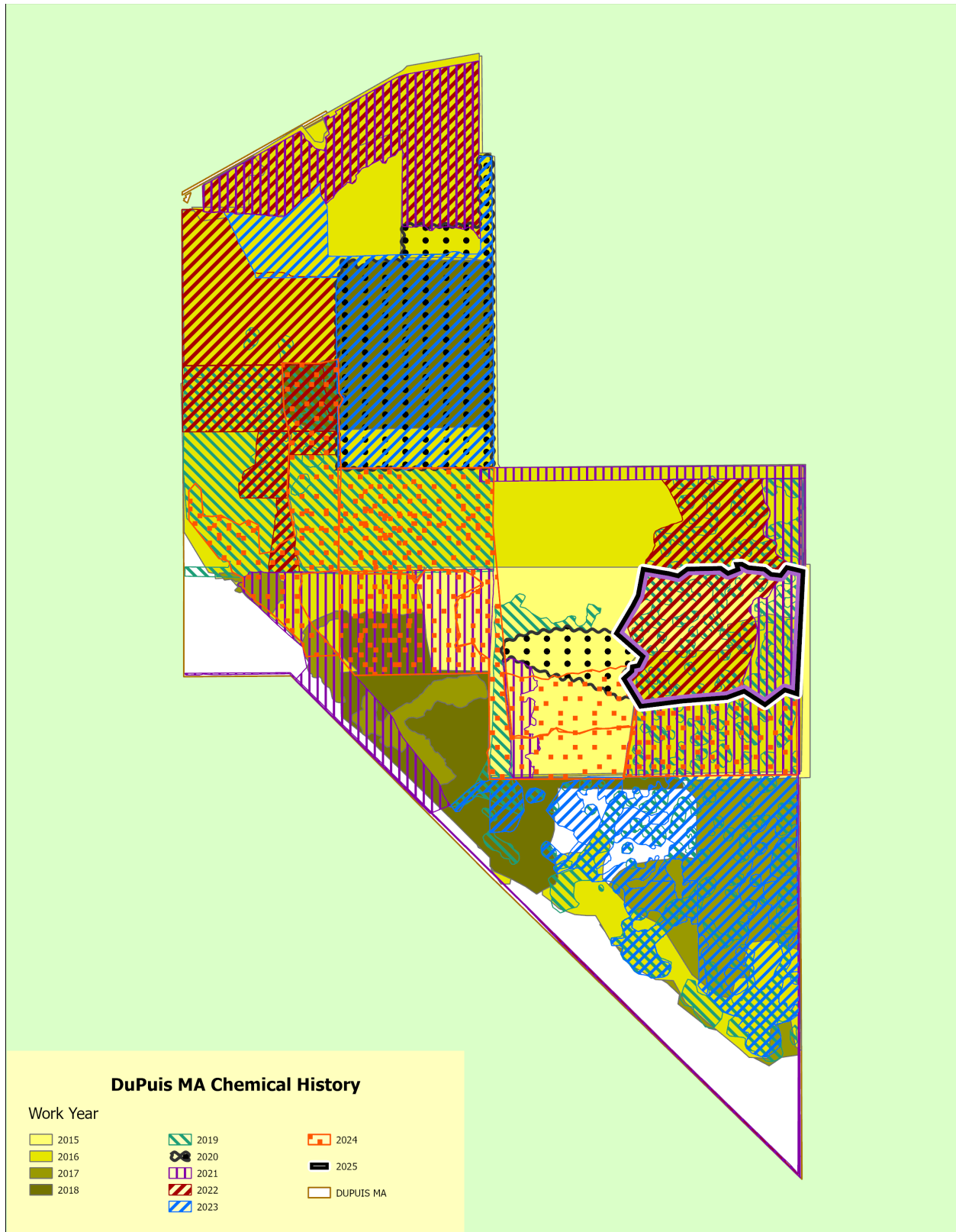
7.2 Control of Nuisance and Invasive Plant Species

The District's vegetation management program utilizes an Integrated Pest Management strategy to maintain nuisance and invasive plant populations at the lowest feasible level. Integrated Pest Management is an ecosystem-based strategy that focuses on the long-term prevention of pests or their damage through the combination of management techniques, including prescribed fire, herbicide application, mechanical treatment, biological control, and physical removal. The selection of control measures is dependent upon species type, environmental factors, and the natural communities impacted.

Invasive plant control funding represents the largest item in the Land Stewardship Program's annual budget. Land managers have developed specific management area treatment strategies that optimize invasive plant control efforts. Although Category I and II species on the Florida Invasive Species Council (FISC) list threaten the function and ecological stability of natural communities, achieving maintenance on all species identified on these lists is currently not feasible with existing budgetary resources. The primary goal of the Land Stewardship's invasive plant management program is to control the spread of 30 priority invasive species (**Table 3**), in addition to area-specific priority species based on early detection/rapid response and locally significant impacts or potential for impacts.

Table 3. Land Stewardship Section Invasive Species Priority List and Targeting Sequence.

Scientific Name	Common Name	FISC Category
<i>Melaleuca quinquenervia</i>	Melaleuca, Paper Bark	I
<i>Casuarina equisetifolia</i>	Australian-Pine, Beach Sheoak	I
<i>Casuarina glauca</i>	Suckering Australian-Pine, Gray Sheoak	I
<i>Casuarina cunninghamiana</i>	River Sheoak, Australian-Pine	I
<i>Lygodium japonicum</i>	Japanese Climbing Fern	I
<i>Lygodium microphyllum</i>	Old World Climbing Fern	I
<i>Schinus terebinthifolia</i>	Brazilian Pepper	I
<i>Imperata cylindrica</i>	Cogon Grass	I
<i>Rhodomyrtus tomentosa</i>	Downy Rose-Myrtle	I
<i>Ardisia elliptica</i>	Shoebuttton Ardisia	I
<i>Ardisia crenata</i>	Coral Ardisia, Scratchthroat	I
<i>Dioscorea bulbifera</i>	Air potato	I
<i>Solanum tampicense</i>	Wetland Nightshade, Aquatic Soda Apple	I
<i>Solanum viarum</i>	Tropical Soda Apple	I
<i>Syzygium cumini</i>	Jambolan-Plum, Java Plum	I
<i>Acacia auriculiformis</i>	Earleaf Acacia	I
<i>Cupaniopsis anacardioides</i>	Carrotwood	I
<i>Schefflera actinophylla</i>	Schefflera, Australian Umbrella Tree; Octopus Tree	I
<i>Bischofia javanica</i>	Bishopwood	I
<i>Triadica sebifera</i>	Popcorn Tree, Chinese Tallow Tree	I
<i>Leucaena leucocephala</i>	Lead Tree	II
<i>Albizia julibrissin</i>	Mimosa, Silk Tree	I
<i>Mimosa pigra</i>	Catclaw Mimosa	I
<i>Dioscorea alata</i>	Winged Yam	I
<i>Senna pendula</i> var. <i>glabrata</i>	Christmas Senna Climbing Cassia, Christmas Cassia	I
<i>Solanum diphyllum</i>	Twoleaf Nightshade	II
<i>Albizia lebbbeck</i>	Woman's Tongue	I
<i>Colocasia esculenta</i>	Wild Taro	I
<i>Mikania micrantha</i>	Mile-A-Minute Vine	II
<i>Abrus precatorius</i>	Rosary Pea	I



Map 17. DuPuis MA chemical history.

Currently, Old World climbing fern (*Lygodium spp.*), cogon grass (*Imperata cylindrica*), Brazilian pepper (*Schinus terebinthifolius*), and shoebutton ardisia (*Ardisia elliptica*) are the most prolific invasive species targeted in the DuPuis MA. Old World climbing fern and cogon grass remain the most widespread invasive species throughout the management area despite many years of systematic treatment. Shoebutton ardisia, often forming dense monocultures in the subcanopy, is primarily concentrated in the southern portion of the management area, particularly within the L-8 Marsh and adjacent management units, but scattered Shoebutton have recently been observed north of these known infestations. Because of its tendency to spread, shoebutton ardisia continues to be systematically targeted to limit further expansion. Brazilian pepper seedlings are common across the property, with dense clusters found along remnant ditch banks and the perimeter of the management area.

Other opportunistic woody species, including java-plum (*Syzygium cumini*), carrotwood (*Cupaniopsis anacardioides*), and earleaf acacia (*Acacia auriculiformis*), are present at low levels and are removed when encountered to prevent future establishment. Melaleuca (*Melaleuca quinquenervia*) is more common but has been nearly eradicated across most of the management area. Current occurrences are typically scattered sprouts originating from dormant seed banks, with only occasional mature trees observed. These seedlings are systematically treated to prevent reinfestation, and the locations of mature trees are mapped for follow-up treatment.

A small, disturbed area in the northwest corner contains air potato (*Dioscorea bulbifera*), but its coverage is minimal and does not currently pose a significant management concern. Tropical nutrush (*Scleria microcarpa*), a relatively new species in the DuPuis MA, has been added to the EDRR list due to its rapid spread across the marsh communities. Since this species is an annual plant, treatments must be timed before seed production to be effective. Management efforts, therefore, focus on mapping occurrences and targeting resprouts before they set seed.

Several additional nuisance and invasive species affect the management area, including include *Sclerias spp.*, torpedograss (*Panicum repens*), rosary pea (*Abrus precatorius*), paragrass (*Urochloa mutica*), napiergrass (*Cenchrus purpureus*), smutgrass (*Sporobolus indicus*), bahiagrass (*Paspalum notatum*), West Indian marsh grass (*Hymenachne amplexicaulis*), primrose willow (*Ludwigia spp.*). These species are not systematically targeted due to budget limitations. Rosary pea, although generally low in coverage, is widespread and interspersed with native vines, making treatment inefficient. Pasture grasses such as paragrass, napiergrass, smutgrass, and bahiagrass, remain interspersed within the native groundcover but have declined substantially as native herbaceous species have reestablished following hydrologic improvements. Management of pasture grasses primarily relies on mowing to limit seed production in open areas and prescribed fire where they occur with desirable native grasses.

Torpedograss and West Indian marsh grass remain persistent across roads, firelines, marshes, prairies, and interconnected ditches. Although West Indian marsh grass is less widespread than torpedograss, it remains prominent in some cypress domes and remnant ditches. Initial torpedograss invasions were observed in several rehydrated wetlands, and the species is now widespread across the management area. Previous control efforts for both species have been costly and largely ineffective at reducing their distribution. Despite their persistence, neither species appears to be expanding, particularly in areas with longer hydroperiods. This trend suggests that

continued efforts to enhance hydroperiods across the management area may support long-term suppression of these nuisance and invasive species.

Nuisance and invasive species treatment is primarily conducted by herbicide applicators contracted through the District's Vegetation Management Section. Supplemental efforts by District staff are also conducted on small or sporadically distributed infestations. Treatment areas are scheduled based on the severity of nuisance and invasive plant infestation, time since the last treatment, property access, groundwater conditions, avian nesting seasons, and public use. All treatments follow best management practices for herbicides and use the best available science. EDRR species are primarily managed by land management staff. Treatment dates, locations, and species treated are recorded in a GIS database, and all herbicide use is recorded in the District's nuisance and invasive plant control database.

Land managers also collaborate with the United States Department of Agriculture (USDA) – Agricultural Research Service (ARS) to introduce biological control agents on District lands, helping to reduce the proliferation of invasive pest plants. Federally approved biological control agents that have been introduced or have migrated onto District lands include the melaleuca weevil (*Oxyops vitiosa*), water hyacinth planthopper (*Megamelus scutellaris*), water hyacinth weevils (*Neochetina spp.*), the Brazilian pepper thrips (*Pseudophilothrips ichini*), the Old World climbing fern white lygodium moth (*Austromusotima camptozonale*), brown *Lygodium* moth (*Neomusotima conspurcatalis*), and eriophyid mite (*Floracarus perrepae*).

In the DuPuis MA, land managers collaborated with ARS to release biological control agents aimed at Old World climbing fern. In 2023, the brown *Lygodium* moth and eriophyid mite were introduced in the northeastern part of the management area, on the east side of Cooter Creek Grade.

7.3 Mechanical Vegetation Control

Prescribed fire is the preferred method for managing vegetation in fire-maintained habitats in South Florida due to its cost-effectiveness and environmental benefits. In areas where prescribed fire cannot be used, such as in urban interface zones, or when other constraints prohibit the use of prescribed fire, mechanical vegetation control offers an alternative way to reduce vegetation coverage and fuel loads. Mechanical vegetation control can reduce woody plant growth and increase plant species diversity through the use of mowing, chopping, and shredding. Selective forest thinning may also be used to improve the natural environmental characteristics of certain habitats.

Effective management of the DuPuis MA required a mix of mechanical and prescribed fire treatments to address decades of ecological imbalance. Past fire suppression and hydrologic alterations contributed to unusually dense stands of slash pine, making them more vulnerable to disease and pine beetle infestations that spread extensively across the region during the 1990s. As a result, numerous trees within the DuPuis MA were affected. To address this infestation, slash pines were harvested across more than 1,900 acres of flatwoods between 1999 and 2007, with an additional 500 acres selectively thinned to help reestablish natural stand densities. During the same period, dense cabbage palm stands were also reduced to limit their encroachment into historically coniferous habitats.

Over the past decade, mechanical treatments have continued to focus on selectively thinning cabbage palm to restore vegetation structure in pine and cypress communities and to manage understory brush species so prescribed fire can be safely and effectively applied. Since low-intensity fires often produce patchy burns, mechanical treatments are also used in fire shadows after a burn to reorganize fuel loads where prescribed burns do not achieve desired ecological outcomes. Additionally, mechanical treatment plays an important role in reducing fuel height along management unit boundaries, minimizing the risk of fire escape, and protecting RCW cavity trees. Mechanical vegetation control will remain an essential management tool to complement prescribed fire and sustain healthy, resilient upland and wetland communities within the Reserve.

Timber Management

Harvesting timber is another form of mechanical vegetation control. If the District determines that the ecological needs of an area require the timber stand to be thinned, a harvest may be designed for that purpose. However, many listed species depend upon mature pine trees for their survival, so often it is the smaller trees that are targeted. These trees tend not to have the marketability of larger trees, resulting in limited opportunities for commercial harvesting.

Timber harvesting was conducted after the property's acquisition to thin dense stands of pine and cabbage palm. Additional commercial timber operations are no longer compatible with the management goals for the DuPuis MA. With the increased efficiency of prescribed fire, combined with low-impact selective mechanical treatments, prescribed fire has become the primary tool for managing overgrown forest conditions. In addition, no marketable pine stands remain within the management area.

Grazing

The District uses cattle grazing to manage nuisance and invasive pasture grasses. This tool is most effective as an interim management tool for managing vegetation on project lands before the water resource project goes into construction. Some management lands include former ranchlands that have a mixture of native range and improved pasture. Cattle grazing is allowed on these properties to minimize the need for physical manipulation and manage the vegetation coverage until funding is secured to restore the native community.

Cattle grazing is not compatible with the management goals for the DuPuis MA.

7.4 Wildlife Management

Wildlife management on the DuPuis MA relies on active habitat management that addresses the needs of all species present. The Land Stewardship program accomplishes this by implementing management strategies that benefit multiple species and habitats while addressing the specific needs of individual species. These strategies include:

- Conducting land management activities that maintain and enhance native wildlife habitats, including prescribed fire and nuisance and invasive plant control;

- Conducting specific management activities that support protected species;
- Following management guidelines for listed species protection as determined by the South Florida Multi-Species Recovery Plan, Volume 1 (U.S. Fish and Wildlife Service (USFWS) 1999), as well as the Florida's Imperiled Species Management Plan (FWC 2016); and
- Maintaining lists of confirmed and potential wildlife species.

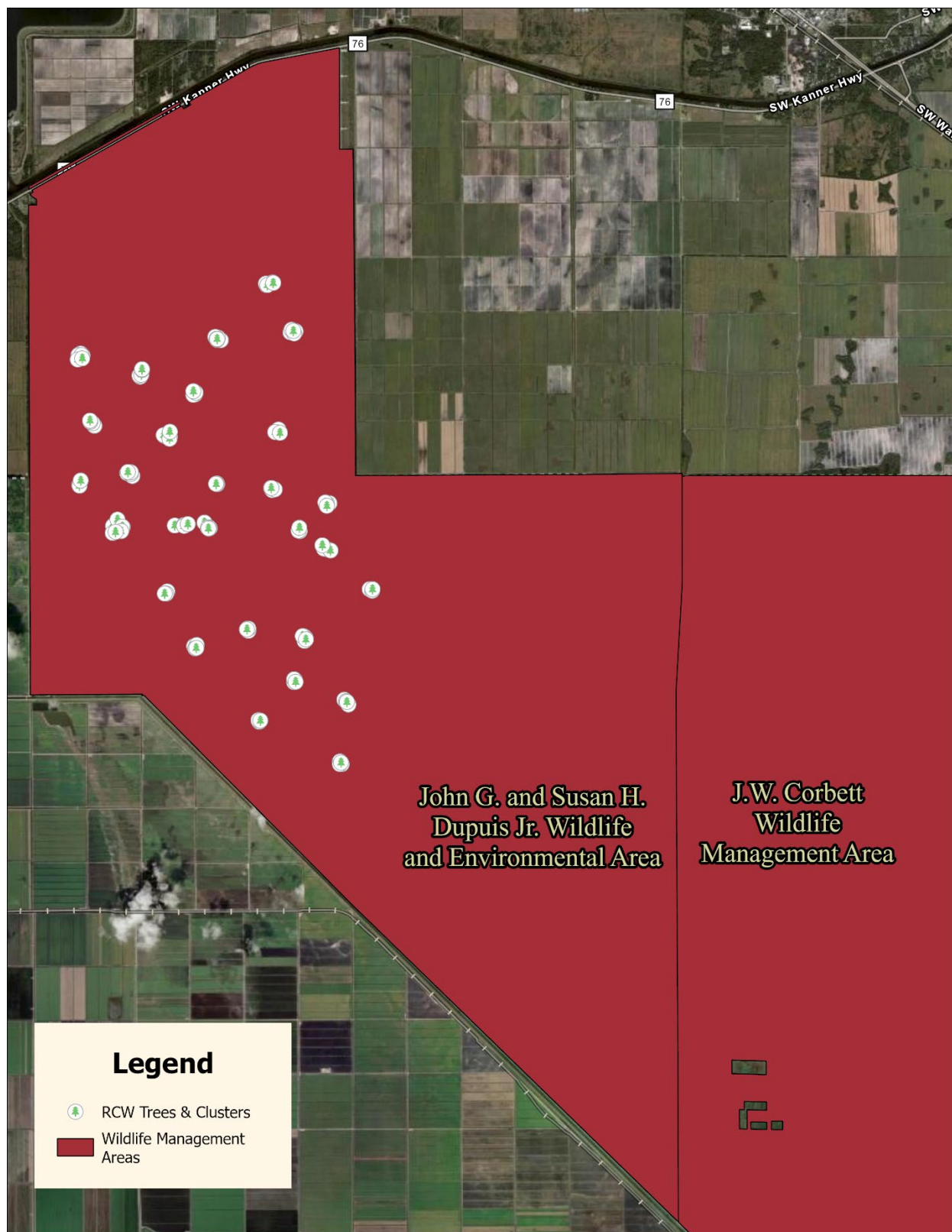
The primary management focus is on restoring and maintaining the natural processes that shape the structure of the natural communities within the management area. By implementing integrated management strategies to restore natural functions such as fire rotation, the species composition in the vegetation communities has improved significantly. This improvement has increased foraging and nesting habitats in the area for species such as Everglade snail kite, Southern bald eagle (*Haliaeetus leucocephalus*), RCW, white-tailed deer (*Odocoileus virginianus*), and Osceola wild turkey (*Meleagris gallopavo osceola*).

Although wildlife management is generally not conducted at a species-specific level, the red-cockaded woodpecker (RCW) is a notable exception within the DuPuis MA. Degradation of the flatwoods community led to the decline of what was once a sizeable RCW colony, and after the last active cavity was destroyed by wildfire in 1989, the species ceased to use the area. Following extensive habitat restoration efforts, FWC reintroduced RCWs into the remaining old-growth slash pine in 2006. Artificial cavities were installed in suitable trees to support reestablishment, and species-specific management was initiated to promote population recovery.

Species-specific management activities for RCWs include installing and maintaining artificial cavities, translocating birds from donor sites, managing vegetation around cavity trees, and monitoring the colony's health and habitat conditions. These efforts are closely integrated with broader land management activities to maintain the ecological conditions required for RCW persistence within the management area. Community-level restoration, combined with species-specific management, ensures that the DuPuis MA continues to support a diverse and thriving wildlife community while enhancing long-term ecological resilience.

Nuisance and Invasive Animal Species

Invasive wildlife species harm native wildlife and can negatively impact native vegetation or seriously interfere with management objectives. Some of the species of concern are Nile monitor (*Varanus niloticus*), purple swamphen (*Porphyrio porphyrio*), feral hog (*Sus scrofa*), pythons (*Python spp.*), tegu (*Salvator merianae*), and spiny iguana (*Ctenosaura similis*). The District coordinates with FWC to reduce the invasive species populations through trapping and public hunts, where hunting is allowed. The results of population control efforts are monitored by periodic site evaluations.



Map 18. Distribution of RCW trees and cluster sites in the DuPuis MA.

Feral hogs (*Sus scrofa*) are the primary invasive animal issue in the DuPuis MA. Feral hogs have significant impacts on natural communities and land management operations. Their disruption of soil and vegetation through rooting alters natural communities and can be especially damaging in sensitive habitats that are slow to recover. Rooting interferes with land management objectives by reducing the horizontal spread of prescribed fires and by creating disturbed areas that are more susceptible to invasive plant establishment. Rooting can also impact hiking trails, reptile populations, and ground-nesting birds. The hog populations in the DuPuis MA are managed through the public hunting program administered by FWC.

The Island Apple snail (*Pomacea maculata*) is widely reported throughout Florida and is not being targeted for geographic containment. Research shows that native apple snail (Florida apple snail, *Pomacea paludosa*) populations have drastically declined. The island apple snail is a highly fecund, fast-growing species that has likely become a permanent part of the Kissimmee River floodplain. Historically, the Florida apple snail has been the main prey for the federally endangered snail kite. As native snail numbers have decreased, snail kites now rely almost entirely on the non-native island apple snail for foraging throughout the state. Because the island apple snail functions as the main food source for snail kites in the region, it is expected to persist without specific management actions to support snail kite populations.

The ambrosia beetle (*Xyleborus glabratus*) is a wood-boring beetle native to Asia that infects trees with Laurel Wilt disease, a disease caused by the fungus *Raffaelea lauricola*. This deadly fungal disease affects trees in the *Lauraceae* family, such as red bay (*Persea borbonia*) and swamp bay (*Persea palustris*). Discovered in Florida in 2010, the fungus has since spread across the state through various native and nonnative ambrosia beetles and has been found in every county. Currently, neither the ambrosia beetles nor the Laurel Wilt fungus is targeted for geographic containment due to the lack of effective control methods for the pest or the disease in natural areas.

Other invasive wildlife sightings in the region, such as the Green Iguana (*Iguana iguana*) and Cuban Treefrog (*Osteopilus septentrionalis*), are not currently being targeted for geographic containment. Management of these species is limited due to factors like a lack of effective control tools, insufficient resources, and limited risk assessment data.

7.5 Hydrologic and Habitat Restoration

Restoration efforts within the DuPuis MA began shortly after the property was acquired and have continued for more than three decades. One of the first major initiatives focused on restoring upland communities on the western portion of the property. In the mid-1990s, the District implemented an extensive prescribed-burning program to restore upland structure and function. Because decades of fire suppression had allowed heavy shrub encroachment and reduced herbaceous fuel, land managers supplemented burning with mechanical thinning and targeted tree harvesting. These treatments opened the mid-canopy layer, enhanced groundcover vegetation, and helped limit the spread of pine bark beetles.

An early environmental assessment also identified wetland and hydroperiod restoration as primary management goals, noting that extensive over-drainage had occurred due to a network of swales and canals that redirected water north to the St. Lucie Canal and south to the L-8 Canal. In

response, a three-phase restoration project was developed to rehydrate interior wetlands and restore 2,341 acres of historic Everglades marsh (L-8 Marsh).

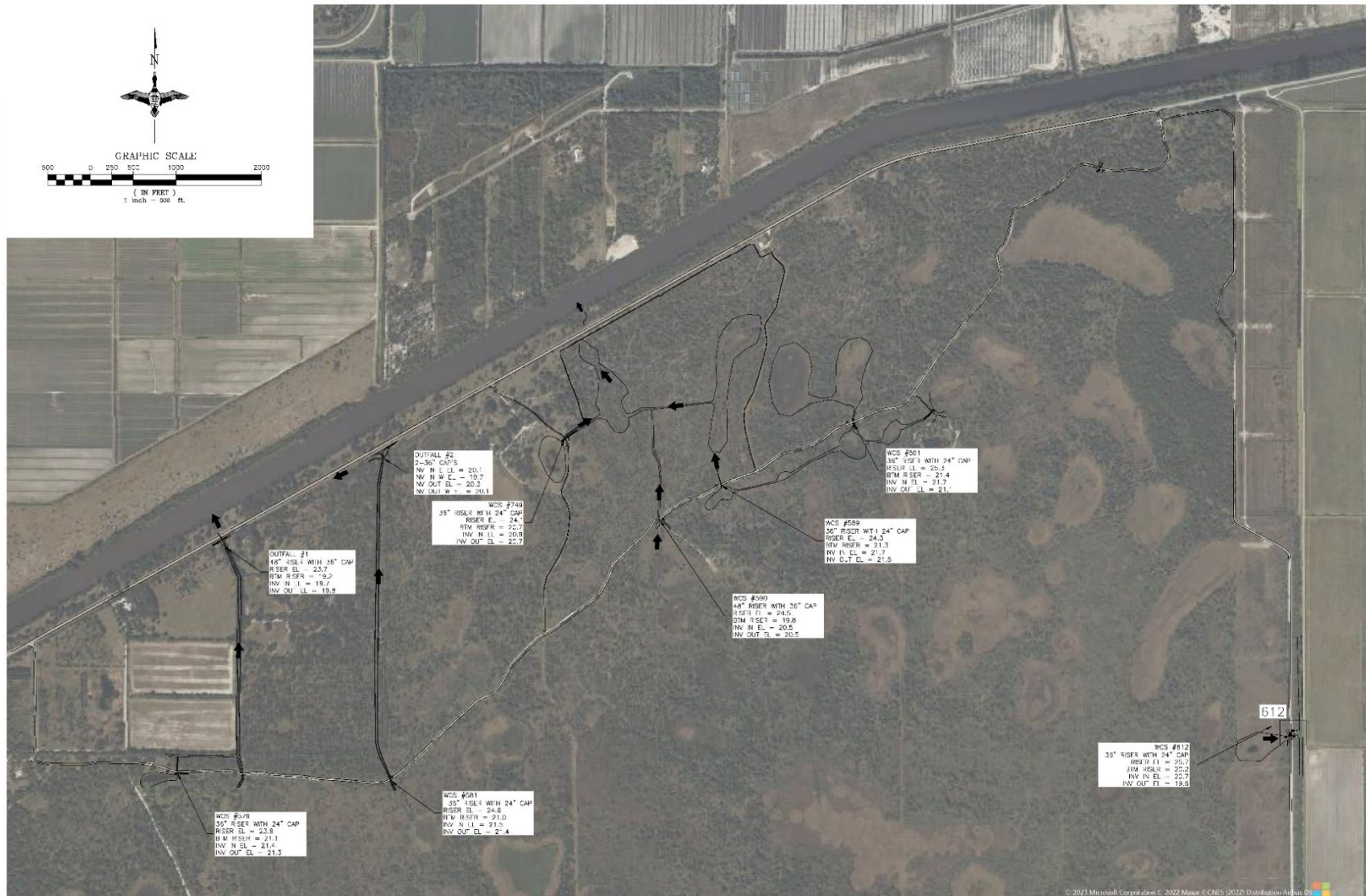
The first wetland-restoration phase occurred in 1990 and 1991, when 40 earthen ditch plugs were installed in strategic interior ditches to re-establish sheetflow and rehydrate isolated wetlands. Approximately 4,000 acres of wetlands were enhanced as a result. Follow-up monitoring showed that native wetland plants recolonized many areas where upland species had become established; however, the restored hydrology also facilitated the spread of exotic wetland species such as torpedo grass, requiring continued invasive plant management.

The second phase focused on restoring the L-8 Marsh along the southern boundary of the property. In the mid-1990s, an eight-mile levee was constructed to separate the management area from the L-8 Canal and the Everglades Agricultural Area. Built to an elevation of 23 ft NGVD, the levee allows water to be retained on the property and discharged through three associated water control structures, which are set at 19.0 ft NGVD. These structures became operational in December 1996. This phase restored approximately 850 acres of the marsh and was funded through District mitigation resources.

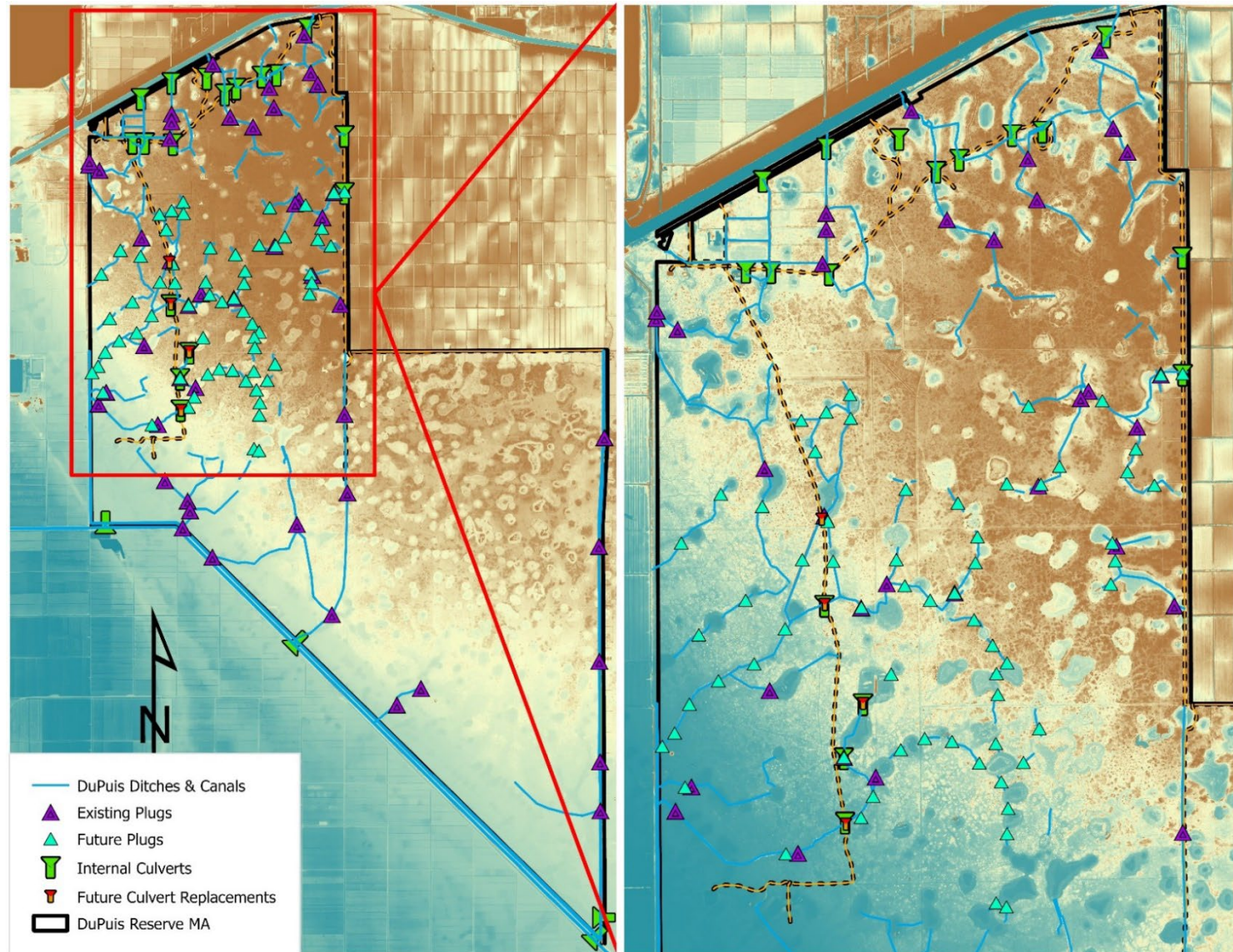
The third phase re-established hydrologic connectivity between the L-8 Marsh and similar habitat within the adjacent J.W. Corbett Wildlife Management Area. In 1992, two sections of the roadway dividing the properties were degraded and stabilized with geo-web swales to reopen historic flow pathways. Additional improvements followed in 2001 with the installation of six culverts equipped with adjustable flashboard risers to increase flow between DuPuis and Corbett. By this time, more than 6,500 acres of wetlands within the DuPuis MA had been enhanced through ditch plugging, levee improvements, and hydrologic reconnection.

Wetland enhancement continued into the 2010s. Around 2016, the Land Stewardship Section began planning for additional ditch plugs and culvert replacements on the northern portion of the property, replacing older culverts with flashboard risers to improve water-level control. During this period, outfall structures along the L-8 Canal were also replaced. In 2022, the District partnered with Ducks Unlimited, Inc. to upgrade infrastructure originally installed by the previous landowners. Improvements included larger-capacity pipes and new risers at key hydrologic locations. In 2023, seven culverts with flashboard risers and two outfall structures were replaced.

During the current management plan period, the District will continue working with Ducks Unlimited to complete the installation of approximately 68 additional ditch plugs and replace remaining culverts within the northern and central-east section of the property. This enhancement project is expected to improve water delivery, extend hydroperiods in the northern wetlands, and support prescribed fire operations by improving access to natural communities that are currently difficult to reach during burns.



Map 19. As-built for the 2023 culvert replacement project.



Map 20. DuPuis hydrologic restoration features: Existing conditions and planned improvements.

7.6 Research and Monitoring

Wildlife Monitoring

An FWC wildlife biologist position is funded by the District and assigned to the DuPuis MA to conduct wildlife monitoring and manage the public hunting program. Data collected from long-term monitoring surveys are analyzed and may be incorporated into statewide studies and reports. These data help guide management decisions, evaluate habitat conditions, and track population trends of key species within the DuPuis MA. Since the last management plan update, several wildlife monitoring programs, originally designed and implemented between 1994 and 2006, have remained active and will continue throughout the 2026-2036 management period.

Wading Bird

Since around 1996, monthly wading bird surveys have been conducted on the DuPuis MA. The 23-mile monitoring route runs through the management area along the Powerline Grade and L-8 levee, with GPS-marked stations every 0.10 mile. The route starts at the western boundary, moves south along the L-8 levee, and then heads north along the Powerline Grade. Surveys take place within three to four hours after sunrise. During these surveys, all observed wading birds are identified at the species level, counted, and assigned to the nearest station.

Red-cockaded Woodpecker

RCWs in the DuPuis MA have been routinely monitored since their reintroduction in 2006. All cavity trees are inspected annually to assess condition and RCW use. Insert boxes are installed or replaced as needed. During the breeding season, all active clusters are surveyed to document group composition and identify individual birds. Nests are monitored throughout the season, and all chicks are banded and followed through fledging.

Eagle

Although bald eagles are no longer listed, all known nests at the DuPuis MA, are monitored once or twice a month beginning in January and continuing until chicks fledge or activity ceases. Observations are conducted from the ground and all nesting behavior is recorded. The findings are reported to Audubon's EagleWatch program.

Northern bobwhite

Northern bobwhite spring call-count surveys have been conducted at Dupuis since 1996. Three 6-mile transects with stations at 0.5-mile intervals are located on the western, northern, and eastern portions of the management area. Beginning the last week of April, each transect is surveyed weekly for 3–4 weeks, with monitoring beginning at sunrise. During an 8-minute listening period at each station, the number of calls and the number of individual quail detected are recorded.

Breeding Bird Survey

The USFWS administers the national Breeding Bird Survey (BBS), which includes a designated 25-mile route in DuPuis MA. The route consists of 50 stops at 0.5-mile intervals. Beginning at sunrise, all birds seen or heard are recorded during a 3-minute count at each stop. The DuPuis route is surveyed each June, and all data are submitted to the USFWS BBS program.

White-tailed Deer

White-tailed deer monitoring has been conducted on the DuPuis MA since 1994 to gather data on herd composition and population trends. Early monitoring involved roadside spotlight surveys. From 1999 to 2019, helicopter surveys were conducted to estimate population indices, sex ratios, and fawn recruitment. Beginning in 2022, trail cameras replaced aerial surveys. Each June, FWC deploys 40 trail cameras at predetermined sites along firebreaks and trails in a rough grid pattern. Locations were selected based on animal sign and accessibility. Deer data are analyzed by statisticians in the FWC deer program to estimate population density and herd structure.

Bat Houses

Four bat houses located near the DuPuis land management office are monitored regularly for bat activity. Observations contribute to ongoing assessment of roost use and bat presence within the management area.

DuPuis MA Condition Class

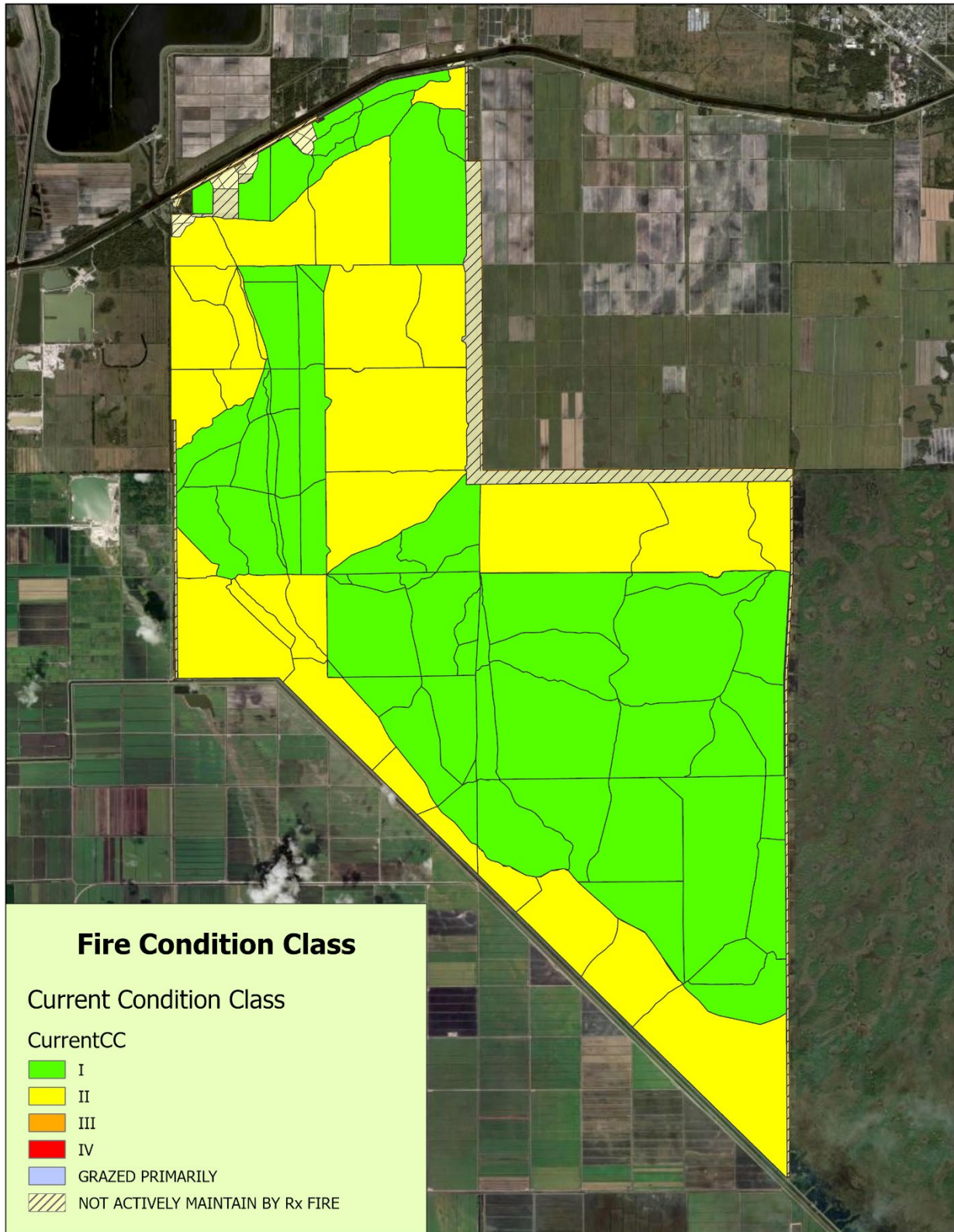
The primary objective of the Land Stewardship Section's monitoring activities is to assess and document the effects of land management actions, such as the application of fire and herbicides. Land Stewardship managers evaluate habitat conditions and vegetation structures to identify gradual, desirable, or undesirable changes associated with invasive species, prescribed burns, and other factors such as hydrological shifts. During land management activities and routine site assessments, these land managers monitor the natural communities in the DuPuis MA for invasive species. They assess burn units before and after prescribed burns to observe the vegetation's response to fire, thereby enhancing their understanding of how variables such as weather, fuel accumulation, seasonal changes, and water levels interact to influence the targeted vegetation structures. Monitoring observations are documented using condition class assessment tools developed by the District.

Fire Condition Class

The District developed a GIS-based program called “physical condition class” to monitor the status of plant communities based on the time since a physical treatment occurred. Although physical treatments can be mechanical or through cattle grazing, the main tool used by the District is fire due to the natural benefits fire provides. The District uses the physical condition class to prioritize and plan the application of prescribed fire on individual management units.

Management units are delineated by prescribed fire boundaries, and the condition of each unit is classified based on fire history and the desired fire-return frequency, following FNAI recommendations for the primary fire-dependent communities in each unit (**Map 19**). Most plant communities in South Florida require fire every 4 years or less to remain healthy and productive, so this is the default return frequency assigned to each management unit. If a management unit has burned within its assigned interval, it is classified as Condition Class 1. Units that exceed the return interval but by less than twice that period are classified as Condition Class 2. Condition Class 3 includes units that have gone more than two but fewer than three intervals without fire. Condition Class 4 includes fire-dependent units that have not burned for more than three recommended intervals or more than 12 years in most of the fire-dependent units within the management area. Fire-excluded habitats, where fire is generally confined to the periphery, are identified as not actively maintained by fire. This process is depicted in **Figure 4**.

Although the default fire-return frequency in the condition class reflects prevailing plant communities, individual management units often contain a mosaic of habitats adapted to more variable fire intervals. Most fire-dependent communities in the DuPuis MA are managed on a 4-year fire-return frequency. Depressional marshes commonly burn along with the surrounding fire-dependent communities; however, burning the L-8 marsh requires careful planning and wet soils to prevent muck fires. Willow stands and floating vegetation are typically unaffected by fire, while surrounding broadleaf marsh and prairie communities carry the burn. Cypress domes and strand swamps are also burned when the soil is saturated. These cypress systems are burned along with adjacent fire-dependent communities, but unlike typical situations, where fire would extinguish at the edges, specific ignition techniques used in the DuPuis MA allow fire to penetrate much of the cypress interior. This approach helps maintain an open mid-story, enhances herbaceous diversity, reduces hardwood encroachment, and increases resilience to catastrophic wildfire. Hammocks and other freshwater forested wetlands are generally fire-intolerant, and high humidity usually inhibits fire spread. These communities are burned with the adjacent fire-dependent areas, but fire is usually confined to the edges.



Map 21. DuPuis MA fire condition class.

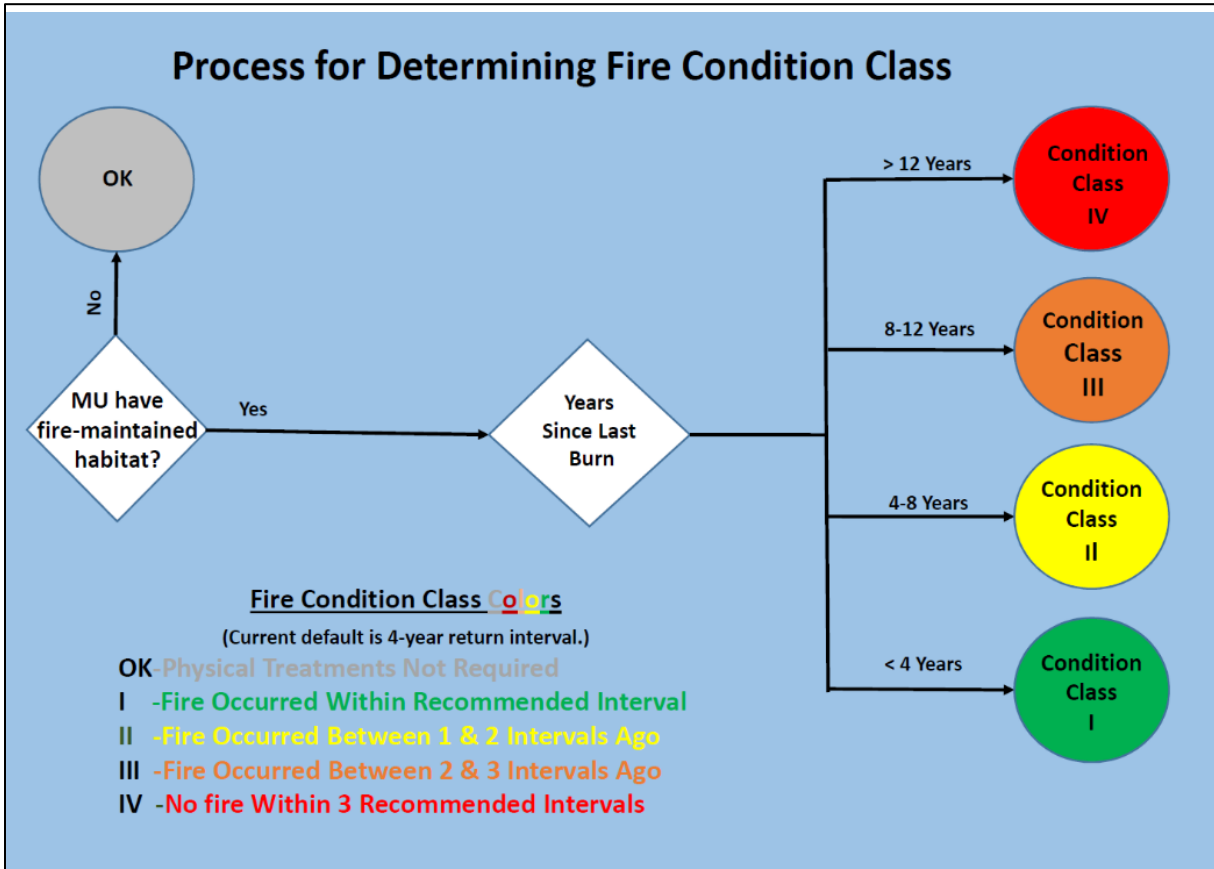
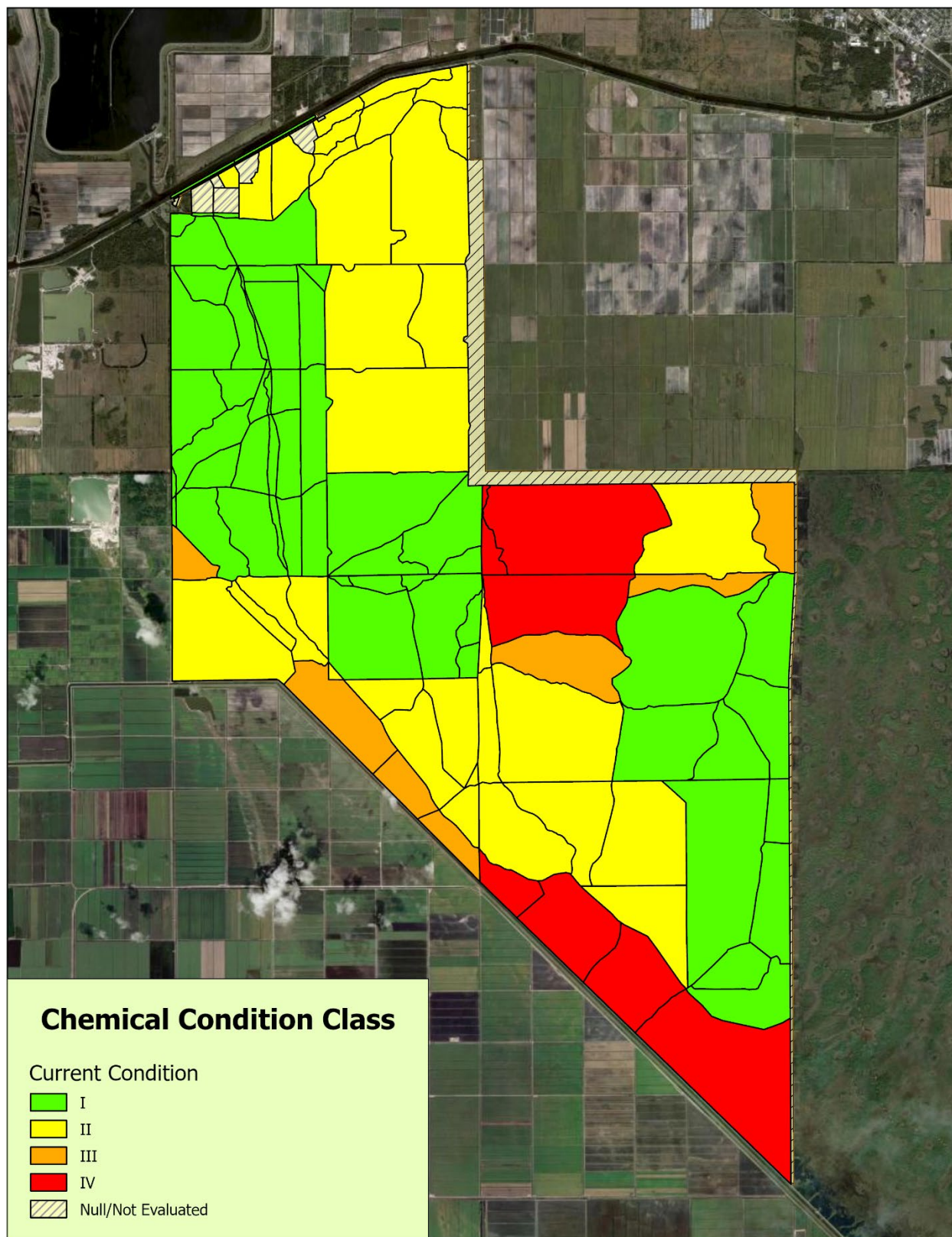


Figure 4. Flowchart illustrating the process for determining fire condition class.

Nuisance and Invasive Plant Condition Class

The District developed a GIS-based program called “invasive plant condition class” to monitor the status of plant communities based on the population status of prominent nuisance and invasive plant species. The District uses the invasive plant condition class to develop a strategy for treating the DuPuis MA. The strategy prioritizes periodic treatments in management units once maintenance is achieved to keep the unit in maintenance status for specific species, expanding efforts to other areas or species only when available resources are sufficient to achieve and retain maintenance status.

The prevalence of invasive plants within management units is estimated and assigned a condition class value (**Map 22**). Each management unit is given an invasive plant condition class based on the maturity of the population of the primarily targeted species (**Figures 5 - 6**). Annual work plans are developed to minimize the ecological impacts of these invasive species in a cost-effective manner while minimizing the use of herbicides where practical.



Map 22. DuPuis MA chemical condition class.

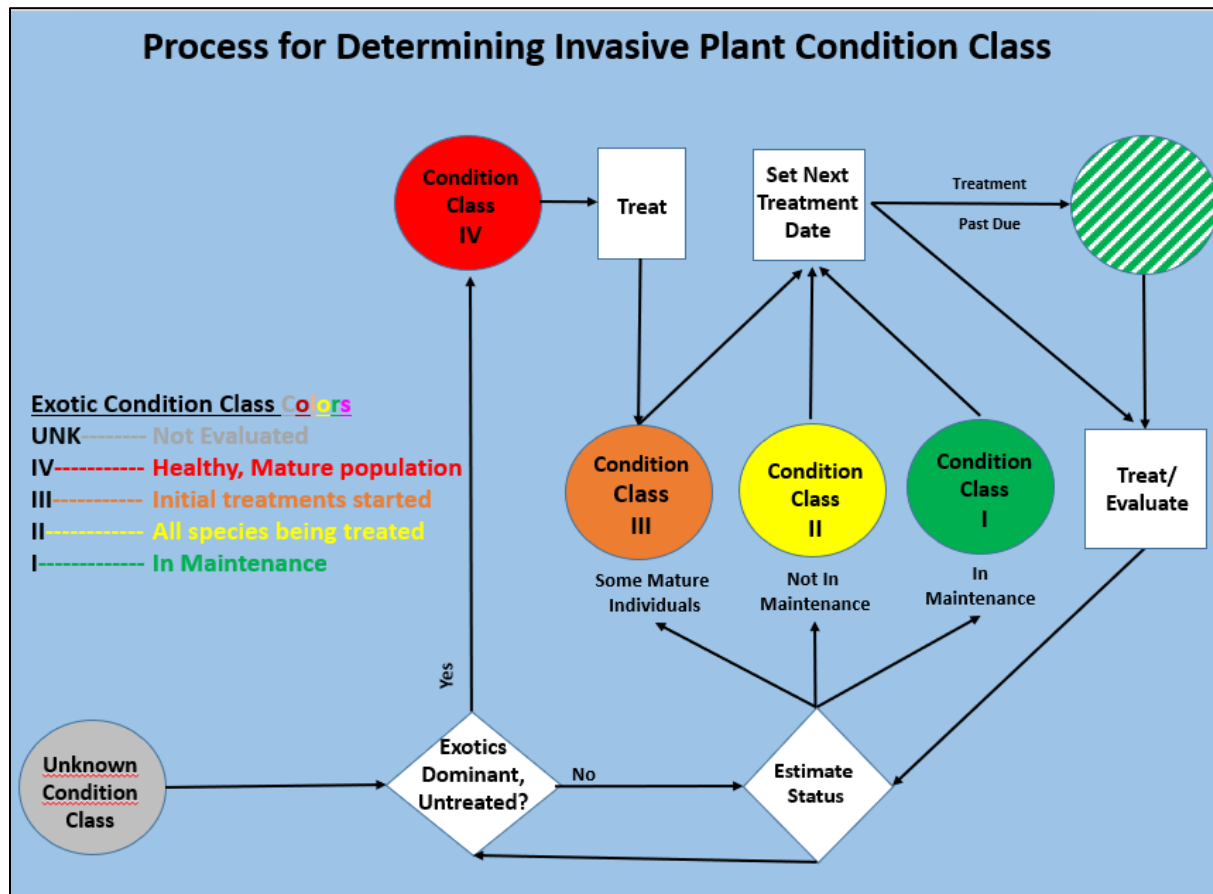


Figure 5. Flowchart illustrating the process for determining invasive plant condition class.

➤ Woody vegetation (Melaleuca-Earleaf Acacia-Chinese Tallow-Brazilian Pepper-Ardisia-Senna-Downy Rose Myrtle-Carrotwood-Silk Tree-Mimosa Pigra-Schefflera-Java Plum-Lead Tree-Woman's Tongue)	
➤	IV--Tall, dense, mature, many throughout landscape
➤	III--Most mature dead, some regrowth/sprouting/isolated misses, many seedlings/suckers
➤	II--All or nearly all mature dead, little regrowth, some seedlings
➤	I----Occasional seedlings or young plants
➤ Vines (Lygodium-Air Potato-Winged Yam-Rosary Pea-Mile-A-Minute Vine)	
➤	IV---Heavy blanket covering trees/bushes, dense, some throughout area
➤	III---Most trellises dead, lots of sprouting/young plants, some clean areas
➤	II---Trellises < 10' high, young plants tending towards "hot spots"
➤	I-----Limited trellising, mostly young plants in isolated "hot spots"
➤ Cogon Grass-Taro	
➤	IV—Solid, Dense, Mature Stands
➤	III---Main portion mostly dead, regrowth along edges and some internally
➤	II---Outlying regrowth and isolated clumps
➤	I-----Occasional dispersed clumps of fresh growth
➤ Tropical Soda Apple	
➤	IV---Thick & tall
➤	III---Most dead in main concentrations, frequent outliers
➤	II---Widely separated plants
➤	I-----Occasional seedling plants

Figure 6. Example of invasive characteristics of target species used to assign condition class.

8. ADMINISTRATION

Administration of District lands is directed through the Land Stewardship Section within the Land Resources Bureau. Policy decisions, planning and budgeting, procurement of personnel and equipment, contract administration, and program development issues are administrative tasks coordinated through the Land Stewardship Section. Input is provided by regional land managers located over the 16-county area. Regional land managers handle regular administrative duties from their field locations to ensure quick response to local concerns and management issues. Administrative activities for DuPuis MA will be handled through the District's field office at the Okeechobee Field Station and the District's headquarters in West Palm Beach.

8.1 Planning and Budgeting

Planning is a major component of the Land Stewardship Section and is critical to maintaining proper program focus, direction, and coordination with other agencies. This document forms the framework for prioritizing and creating targeted plans for the activities to be conducted within the appropriated budget for the next 10 years.

The principal sources of funding for land management operations on the DuPuis MA include lease revenue, ad valorem tax revenue, and special grants. Overall funding availability determines management activities. Budget distribution among the District's five land management regions is based on a programmatic prioritization of management activities. Operational funds are distributed to accomplish the management objectives of each management area most effectively. The continued operation and maintenance of the DuPuis MA include costs to cover staffing, ongoing land management expenses, and capital refurbishment/replacement of aging infrastructure. Current conditions and anticipated serviceability determine capital infrastructure needs. Priorities for capital refurbishment/replacement are made on a District-wide basis. Utilities and operational expenses include supplies, electric service, business travel, and safety equipment. Public use costs include maintenance costs for public use facilities. Base-level funding needs may increase in the future in response to increasing operational expenses, including fuel costs, contracted nuisance and invasive plant control needs, equipment and infrastructure repairs, and increasing public expectations. Specific projects on which to spend these funds are prioritized annually to address each management goal. The Fiscal Year 2026 (FY2026; October 1, 2025 – September 30, 2026) budget for the DuPuis MA and projected expenditures through FY2031 are outlined in **Table 4**.

Table 4. DuPuis MA FY2026 budget and anticipated expenditures through FY2031.

Management Activities	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
Resource Management						
Mechanical Vegetation Mgmt.						
Chemical Vegetation Mgmt.	\$515,000	\$515,000	\$365,000	\$365,000	\$365,000	\$365,000
Prescribed Burning/Site Prep						
Solid Waste/Debris Removal	\$9,976	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Habitat Restoration						
Law Enforcement/Enhanced Patrol	\$14,000	\$14,500	\$15,000	\$15,500	\$16,000	\$16,500
Capital Improvements						
Facilities & infrastructure improvements	\$319,380	\$1,579,000	\$5,000	\$5,000	\$5,000	\$5,000
Fencing/Signage	\$5,262					
Rec. Facilities Maint.	\$195,894	\$156,200	\$156,200	\$156,200	\$156,200	\$156,200
Support & Administration						
Infrastructure Maint.		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Prescribed Burn PPE	3,000	3,000	3,000	3,000	3,000	3,000
Contingent Staffing						
Vehicle Replacement						
Vehicle Fuel & Maint.						
Equipment Replacement						
Equipment Fuel & Maint.	\$10,000	\$10,000	10,000	10,000	10,000	10,000
Small Tools & Equipment	\$10,000	\$10,000	10,000	10,000	10,000	10,000
Total *	\$1,082,512	\$2,302,700	\$579,200	\$579,700	\$580,200	\$580,700

Land managers use an invasive plant control strategy as a planning tool to develop annual work plans and guide long-term nuisance and invasive plant management. For the DuPuis MA, the strategy (**Figures 7–8**) outlines how program funds were allocated in FY 2026 and provides the framework for achieving long-term control across all management units. Using current and projected condition classes, the strategy distributes anticipated funding over several years, prioritizing treatments that keep units in maintenance condition and then expanding efforts into units that can feasibly be moved into maintenance. This structured approach focuses resources on the most cost-effective treatments and supports long-term reductions in herbicide use by maintaining nuisance and invasive plant populations at low levels.

While this strategy provides a clear path toward achieving and maintaining maintenance conditions across all management units, progress is constrained by limited annual funding and uncertainty in the availability of future grant opportunities. These financial constraints slow the pace at which units can transition into maintenance conditions. However, with continued planning, targeted treatment, and sustained support, the long-term goal of comprehensive nuisance and invasive plant control across the DuPuis MA remains achievable. **Table 5** summarizes the current funding needs and associated shortfalls that, if addressed, would enable full implementation of the invasive plant control strategy.

Table 5. Summary of the DuPuis MA treatment program funding needs and shortfalls.

Invasive Treatment Needs	Cost / Funding Level
Annual Funding Needed to Maintain Current Treatments	\$610,720
Unfunded Cost for Initial Treatment Completion	\$6,159,250
Additional Annual Maintenance Needed After Initial Treatments	\$264,400
Current Annual Budget (Reliable Funding)	\$365,000
Recent Grant Funding (Current & Next Fiscal Year)	\$150,000
Annual Maintenance Budget Shortfall	\$245,720
Total Initial Treatment Funding Gap	\$6,159,250

Similarly, strategies prioritizing equipment and infrastructure replacement (including fencing, public use facilities, administrative structures, and hydrologic components), areas for prescribed fire, and public use needs are also updated annually. These strategies and budgets are developed in concert with District-wide operational priorities and budgetary cycles and prioritized across all areas managed by the Land Stewardship Section.

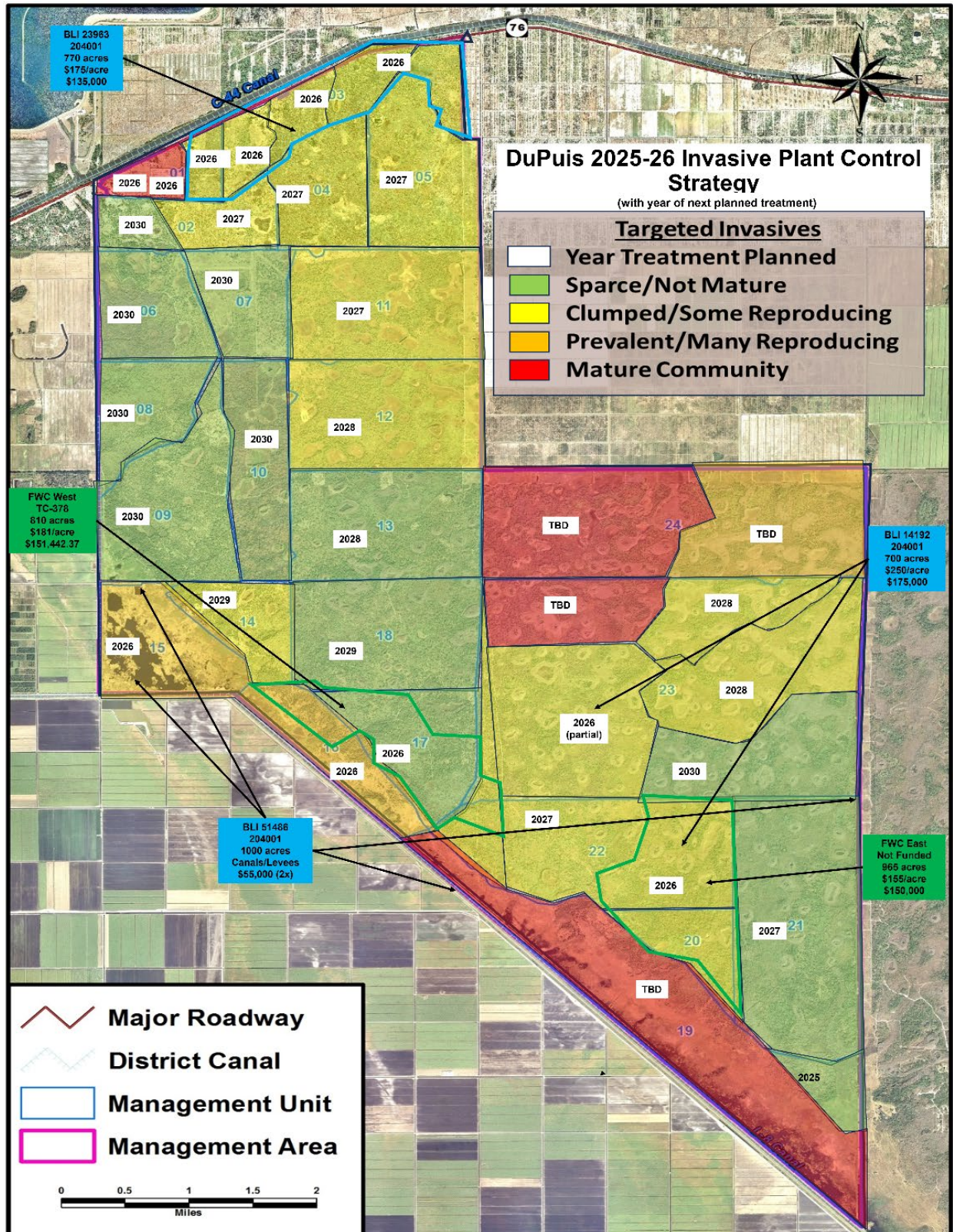


Figure 7. FY26 DuPuis invasive plant treatment plan.

DuPuis 2025-26 Invasive Plant Control Strategy

➤ What have we done so far?

- In 2012 the property was nearly in maintenance.
- Without FWC funding in 2017-2020 Units 23 & 24 were no longer treated.
- Increased funding in 2021 allowed a restart of treatments in eastern Units 23 & 24.
- Burning the western half of Unit 23 in 2024 allowed restarting treatments there.
- Delays in treatments to the rainy season in FY 24 & 25 set back treatments.
- The west half of Unit 24 & northwest portion of 23 await additional funds for treatment.

➤ What are the main species we are targeting?

- Lygodium, Schinus, Imperata, Melaleuca, Ardisia

➤ What costly species are not being treated

- Scleria, torpedo grass, rosary pea, para grass, napier grass, smut grass, bahia, wedellia, West Indian marsh grass, primrose willow

➤ What are we doing this year?

- Treating recently-burned eastern & southern areas
- In southwestern Dupuis, hammock areas will target Ardisia but include other species.
- Dupuis eastern canals will be treated for floating vegetation via land/airboat.
- Cogon grass may be treated in-house in recently burned & treated areas (units 7 & 10).

➤ Where are we going?

- Incorporate fire into treatments 9-24 months prior to treatments.
- Continue efforts to burn.
 - \$250/acre unburned maintenance.
 - \$120/acre burned maintenance.
- Keep exotics at maintenance levels in the western half of Dupuis.
- Move eastern half of Dupuis into maintenance through fire & chemical treatments.
- Transition from landscape-level treatments to targeted treatments of known invasive concentrations when appropriate.
- Only treat entire blocks when invasives reach sufficient coverages throughout block

➤ What do we have to be careful of? Challenges to treatment?

- Water levels
- Access
- \$\$\$\$\$

Figure 8. FY26 DuPuis invasive plant treatment Strategy.

8.2 Personnel and Equipment

The Land Stewardship Section is separated into five geographic regions. Each region is assigned a Science Supervisor (Land Manager), one to three Land Management Technicians, and, based on the need in some areas, a Land Management Assistant, Scientist III, and/or Scientist IV position. A Section Leader provides direct oversight and supervision for the land managers. Additional leadership and assistance come from the Land Stewardship Section Administrator, Land Stewardship Senior Scientist, Wildlife and Public Use Section, Vegetation Management Section, and other support personnel from the District's headquarters in West Palm Beach and the Field Stations. Management of the DuPuis MA property is the primary responsibility of the East Coast Region's Science Supervisor, one Scientist 4, one Senior Land Management Assistant, one Land Management Assistant II, and one Heavy Equipment Operator.

Staff have access to tools, supplies, four-wheel drive vehicles, fire suppression trucks, all-terrain vehicles, swamp buggies, airboats, and other heavy equipment. This equipment is maintained through the Okeechobee Field Station. Equipment from the other regions, as well as leased equipment, are also available if needed.

8.3 Volunteers

Section 373.1391, Florida Statutes, encourages the District to use volunteers for land stewardship and other services. The District recognizes the merits of volunteerism and welcomes participation in activities appropriate for public involvement. The Land Stewardship Section offers a variety of volunteer opportunities for individuals and groups. These opportunities include creating and maintaining public use trails, maintaining public use facilities and amenities, leading field interpretations and guided tours, organizing cleanups of trails and waterways, conducting invasive plant sweeps, and assisting with District-sponsored public events such as Earth Day and Public Lands Day.

In Fiscal Year 2025, District Lands benefited from 17,076 volunteer hours, valued at \$538,508 at Florida's average volunteer service rate of \$33 per hour. The volunteer efforts are supported by dedicated individuals and organizations, including the DuPuis MA Camp hosts, the Florida Trail Association, the Florida Horseman's Club, and the Palm City Farms Trail Association. These groups assist with maintaining campsites, hiking trails, signage, and various other projects.

8.4 Contractual Management

Effective operation and management of District properties require the services and cooperation of private organizations, other governmental agencies, and volunteers. Contractual management is established through a management agreement jointly executed by the District and the contracting entity, which outlines the responsibilities of each party. In addition to the contractual services for the DuPuis MA, the District has established agreements to facilitate efficient management and protection of its resources, including the following:

Enhanced Patrol Agreement

The District contracts with local law enforcement to provide enhanced patrol services throughout the District. Currently, the District has a contract with Martin County for enhanced law enforcement support at the DuPuis MA. The District's resource protection coordinator schedules patrols with input from the Management Area's land manager.

FWC Agreement

The District has a cooperative agreement with FWC to regulate public use for managing and protecting wildlife and aquatic life on specific District lands. (Multi-Site agreement No. 4600000961). This agreement funds operational expenses for overseeing and regulating public use activities at the DuPuis MA. The current agreement funds the salaries and operational expenses of two full-time wildlife biologists whose services are directed towards monitoring wildlife populations, managing public use activities, and performing land management functions on the DuPuis WEA.

9. MANAGEMENT REVIEW

SPACE HOLDER

REFERENCES

- Budny, M. L. and B. W. Benscoter. 2016. *Shrub Encroachment Increases Transpiration Water Loss from a Subtropical Wetland*. Wetlands 36: 631–638. Society of Wetland Scientists, Middleton, WI.
- Clem, S. E. and Duever, M.J. 2019. *Hydrologic changes over 60 years (1959-2019) in an old-growth bald cypress swamp on a rapidly developing landscape*. Wetland Science & Practice. Society of Wetland Scientists, Middleton, WI.
- Cox, J., R. Kautz, M. MacLaughlin, and T. Gilbert. 1994. *Closing the Gaps In Florida's Wildlife Habitat Conservation System*. Office of Environmental Services, Florida Game and Freshwater Fish Water Commission.
- Florida Department of Agriculture and Consumer Services. 2003. *Notes on Florida's Endangered and Threatened Plants*. Division of Plant Industry. Gainesville, FL.
- Florida Fish and Wildlife Conservation Commission. 2019. Florida's Wildlife Legacy Initiative: Florida's State Wildlife Action Plan. Tallahassee, Florida.
- Florida Fish and Wildlife Conservation Commission. 2016. Florida's Imperiled Species Management Plan. Tallahassee, Florida.
- Florida Natural Areas Inventory. 2010. Guide to the Natural Communities of Florida. Tallahassee, Florida.
- Florida Invasive Species Council. 2026. *List of Invasive Species, Electronic version, 2026*. Available online at <https://www.floridainvasives.org/plant-list/>
- South Florida Water Management District. 2022. *Physical Features and Water Resources of the South Florida Water Management District*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. 2020. *Strategic Plan, 2021–2026*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. 2012. *Restoration Strategies Regional Water Quality Plan*. South Florida Water Management District, West Palm Beach, FL.
- South Florida Water Management District. (n.d.). *South Florida Environmental Report (SFER), Electronic version*. Available at <https://www.sfwmd.gov/science-data/scientific-publications-sfer>.
- State of Florida. (n.d). Florida Master Site File. Department of State, Division of Historical Resources, Tallahassee, FL.
- USDA Natural Resources Conservation Service Web Soil Survey. 2026. *Custom Soil Resource Report for Martin County, Florida, and Palm Beach County, Florida*. Available at <https://www.nrcs.usda.gov/conservation-basics/natural-resource-concerns/soils/getting-started-with-web-soil-survey>.

- USDA Natural Resources Conservation Service. 1981. *Soil Survey of Martin County, Florida*. Washington, D.C.
- USDA Natural Resources Conservation Service. 1978. *Soil Survey of Palm Beach County, Florida*. Washington, D.C.
- U.S. Army Corps of Engineers and U.S. Department of Interior. 2020. *Comprehensive Everglades Restoration Plan, Central and Southern Florida Project, 2015-2020 Report to Congress*. United States Army Corps of Engineers, Jacksonville, FL, and United States Department of the Interior, Washington, DC. Available at https://www.eenews.net/assets/2020/12/28/document_gw_03.pdf.
- U.S. Army Corps of Engineers and South Florida Water Management District. 1999. *Central and Southern Florida Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement*. United States Army Corps of Engineers, Jacksonville District, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.
- U.S. Army Corps of Engineers. 1991. *Central and Southern Florida Project, Environmental Restoration of the Kissimmee River, Florida: Final Integrated Feasibility Report and Environmental Impact Statement*. US Army Corps of Engineers, Jacksonville, FL. Available at <https://www.sfwmd.gov/document/csf-final-integrated-feasibility-report-and-environmental-impact-statement-environmental>.
- U.S. Fish and Wildlife Service. (1999). *South Florida multi-species recovery plan: a species plan, an ecosystem approach*. Atlanta, GA: Region 4.
- U.S. Fish and Wildlife Service. 1998. *Multi-Species Recovery Plan for the Threatened and Endangered Species of South Florida, Volume 1: The Species*. Technical/Agency Draft. U.S. Fish and Wildlife Service. Publications Unit, Shepherdstown, West Virginia.
- Wade, D., J. Ewel, and R. Hofstetter. 1980. *Fire in South Florida Ecosystems*. Gen. Tech. Rep. SE-17. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station.
- White, W. A. 1970. *The Geomorphology of the Florida Peninsula*. FL. Department of Natural Resources Geological Bulletin No. 51. Designers Press, Tallahassee, FL. Available at <https://ufdc.ufl.edu/UF00000149/00001>
- Zahina, J., K. Liudahl, T. Liebermann, K. Saari, J. Krenz, and V. Mullen. 2001. *Soil classification database: categorization of county soil survey data within the SFWMD including natural soils landscape position*. South Florida Water Management District, West Palm Beach. FL. Available at https://www.sfwmd.gov/sites/default/files/documents/ws_6_soils.pdf.

Appendix A

DuPuis Area History

PREHISTORIC OVERVIEW

Within the interior wetlands of South Florida are small, palm-studded elevations that rise like islands from the surrounding expanse of sawgrass. These elevated hammocks provided the dry ground necessary for Precolumbian settlements, and numerous archaeological sites left by Florida's Native inhabitants remain evident on them today. Cultural affiliation in these sites is most often identified through specific pottery designs and manufacturing techniques. Before 500 B.C., two major cultural traditions, the Paleoindian and Archaic, were common throughout the state. Beginning around 500 B.C., distinctive cultural traits become recognizable as belonging to particular cultural periods or traditions, often correlated with particular environmental conditions or geographic regions.

Paleoindian (ca. 12,000 B.C. - 7,500 B.C.)

The earliest evidence of human occupation in Florida dates to around 12,000 years ago and is termed the Paleoindian Period. It is characterized by a fisher-hunter-gatherer population. Evidence from several sites indicates that Paleoindians hunted now-extinct Pleistocene megafauna (e.g., mammoth, bison) as well as species common today. They also fished and gathered wild plants and shellfish. The environmental conditions during Paleoindian times were different from the present day, as many of today's lakes, rivers, and estuaries had not yet developed, and freshwater sources were often limited to springs and sinkholes. Many Paleoindian sites are found around these water sources in areas of karstic, tertiary limestone formations. Our knowledge of the period is primarily limited to stone tools and the byproducts of stone tool production. While most Paleoindian sites are recorded in northern Florida, two important sites are found in Sarasota County. The Little Salt Spring and Warm Mineral Springs sites have provided a good deal of information about Paleoindians in southern Florida.

Archaic (ca. 7,500 B.C. - 500 B.C.)

The climatic and environmental changes that took place at the close of the Pleistocene epoch brought with them changes in the types and distribution of game animals available to prehistoric hunters. During the late Archaic Period, the Everglades and associated aquatic systems of southern Florida developed. Adapting to their new environment, the Archaic peoples became increasingly adapted to a much broader range of plant and animal sources for survival. Archaic peoples began to exploit a wider range of food sources, including smaller game, fish, mollusks and nuts, and became increasingly more sedentary than their predecessors. The tool kit used by these people became more varied and complex over time.

The Archaic epoch is traditionally divided into three periods – Early, Middle and Late – based upon stylistic changes in tools and the eventual presence of fiber-tempered pottery. Early Archaic period artifact assemblage suggests the early Archaic peoples initially shared similar lifestyles as the Paleoindians but adjusted to new environmental conditions since they were less constrained by water availability than in the Paleoindian period. Adapting to new conditions meant the Early Archaic peoples could hunt and collect from old Paleoindians and new site locations. It is surmised that the changes in their social organization and settlement patterns resulted in more efficient exploration of food resources and gave rise to more specialized tools. As Early Archaic cultures adjusted to new environmental conditions, they began to transition from the lanceolate projectile points from the Paleoindian period to a variety of stemmed tools. The Early Archaic cultures can be viewed as a population changing from nomadic Paleoindian subsistence pattern to the more settled coastal and riverine-associated regimes of the middle Archaic period.

During the Middle Archaic period, the vegetation community gradually changed, with oaks in some regions giving way to pines and mixed forests. The environmental conditions in certain locations were becoming increasingly drier and hotter, reducing the viability of upland habitats that supported the people's dependency on mast, deer, turkey, and other resources. Meanwhile, riverine habitat appeared to have improved as increased runoff from desiccated uplands enhanced the food potential along major rivers. The Middle Archaic artifact assemblage is characterized by several varieties of stemmed, broad-blade projectile points. It is surmised that if the Middle Archaic peoples were performing similar activities as Early Archaic peoples, they had to use a greater variety of tools. The implication is that the increase in seasonal sedentism led to them acquiring more specialized tools. Some tools were not easily transported in large numbers.

Early and Middle Archaic period sites in southwest Florida are relatively rare. The Bay West Site (8CR200) in Collier County provides one of the richest sources of Middle Archaic period traditions in this area of Florida. It is a mortuary site located in a cypress pond. The pond's peat preserved human remains, wooden tools and posts, botanical remains, antlers, lithics, and shells (Beriault et al., 1981).

The earliest pottery, known as Orange, is a marker for the Late Archaic. Its diagnostic feature is a fibrous material used in the temper. The fiber was burned away during the firing process, leaving distinctive hollow areas visible on the vessel surface. The pottery appears at sites in Florida around 4,000 years ago. Late Archaic sites in southwest Florida that contain fiber tempered pottery include Marco Island, Horr's Island, and Cape Haze. These sites also possessed aceramic cultural material below Orange phase deposits, suggesting their occupation may have extended as far back as the Middle Archaic period (Dickel and Carr, 1991).

Post-500 B.C. Regional Cultures

By about 500 B.C., the introduction of ceramics and increased sedentism among aboriginal peoples made distinct regional cultures possible to develop. These cultures were highly adapted to distinctive ecological niches and could be distinguished archaeologically by differences in site location, subsistence strategies, belief systems, and ceramic types, among other differences.

Glades Region

Archaeologically, the DuPuis Reserve property (DuPuis) lies within the cultural area traditionally recognized as the Glades culture region the Glades culture region (**Figure 1**). The Glades region encompasses the entire southern Florida peninsula, extending northward along the Atlantic coast to Indian River County, and incorporates the extensive mangrove swamps, estuaries, and coastal marshlands that formerly bordered both coasts of South Florida.

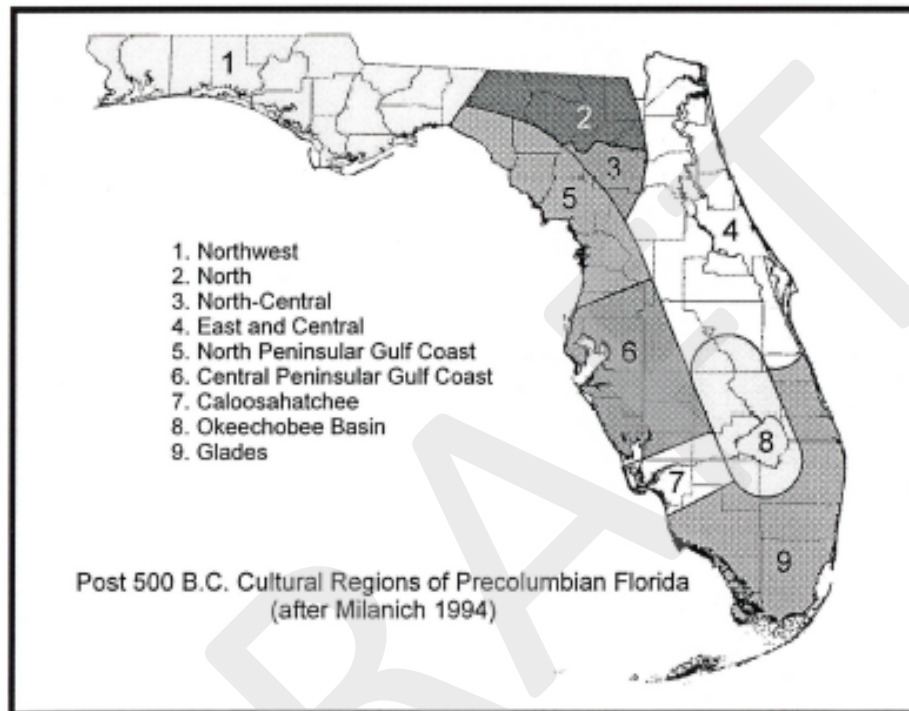


Figure 1. Map depicting the Post 500 B.C. Culture Region of Florida (after Milanich 1994).

The Glades region is characterized by sand-tempered ceramic vessels, most commonly bowls with incurving walls and rims formed using the coiling method. Decorative motifs typically include linear and curvilinear incisions and rim ticking. The pottery type Glades Tooled, which appears late in the Precolumbian period, exhibits elaborated lip treatments that may be pinched into a pie-crust edge, folded, or dowel-impressed. The bodies of carinated bowls are usually undecorated and often extremely shallow. As is typical in southern Florida, shells and bones were widely used as raw materials for tools, including picks, hammers, adzes, celts, gouges, chisels, awls, knives, scrapers, cups, and dippers fashioned from *Busycon*, *Pleuroploca*, and *Strombus* shells.

Changes in pottery styles through time allow archaeologists to divide the Glades ceramic tradition into a series of temporal periods, with diagnostic decorative motifs forming the basis of this chronology. This sequence is summarized in **Table 1**.

Table 1. Glades Region Ceramic Chronology.

Period	Dates	Distinguishing ceramics
Glades IIb/IIc	A.D. 1400 -1513	Almost no decorated ceramics; Glades Tooled rims. ^a
Glades IIIa	A.D. 1200 -1400	Appearance of Surfside Incised (parallel incised lines below lip); some lip-grooving; St. Johns Check Stamped and Safety Harbor sherds found in this and subsequent periods.
Glades IIc	A.D. 1100 -1200	Almost no decorated ceramics; some grooved lips; Plantation Pinched (lines of finger-pinched indentations below lip on rim).
Glades IIb	A.D. 900 -1100	Key Largo Incised still majority decorated type; some incision on rims and some lip grooving; Matecumbe Incised appears (cross-hatched incisions below lip on rim); more incurving bowls.
Glades IIa	A.D. 750 - 900	Appearance of Key Largo Incised (loops or arches incised below lip); Opa Locka Incised (half-circles or arches incised below lip in vertical rows with open sides down); Miami Incised (diagonal parallel incised rims below lip on rim).
Glades I late	A.D. 500 -750	Appearance of decorated pottery (less than 10 percent of ceramics at sites); Sanibel Incised (ticking to form running lines of inverted Vs below lip); Cane Patch Incised (incised looping line with stab-and-drag punctuations, below lip); Fort Drum Incised (vertical or diagonal ticking on lip or rim); Fort Drum Punctated (punctuations around vessel below lip).
Glades I early	500 B.C.- A.D. 500	First appearance of sand-tempered pottery (Glades Plain or undecorated Glades Gritty Ware - both types subsumed under plain, sand-tempered, not separated as to type; no decoration.

a. Glades Tooled may appear slightly earlier in time, in period IIIA or the A.D. 1400 date for the beginning of period IIIB maybe earlier. (Archaeology of Precolumbian Florida).

Along the coasts, especially in estuarine settings, the most common archaeological sites are marine-shell and earth middens. Earth middens, often dark and organically rich, predominate in some areas, while shell middens are more typical in others. Overall, archaeological site density in the Glades region is highest along the coasts and largest where rivers drain interior wetlands. The primary sources of animal protein included shellfish, marine and freshwater fish, and reptiles. Many middens represent long-term village deposits accumulated over generations; others reflect seasonal campsites focused on hunting, fishing, and resource gathering. In both coastal and inland sites, burials have been documented within village and campsite middens.

A variety of wooden implements, similar to those recovered from the Key Marco site on Florida's southwest coast, have also been documented in the Glades region. Many of these items are found incidentally during construction activities, such as boat-slip excavation and canal dredging. The shell, bone, and wooden tool and weapon assemblages within the Glades region are diverse and comparable to those known from northern Florida.

The Glades Area is further characterized by circular and linear earthwork sites and a strong

economic reliance on freshwater resources. Evidence of exchange with other Florida cultural groups appears in the form of shark teeth, marine shell tools, and marine faunal remains found in inland contexts. During the period of European contact, salvaged materials from wrecked Spanish vessels also moved inland and were incorporated into burials within sand mounds (Luer 1994).

Within DuPuis archaeological sites contain materials dating from the Glades I Late through Glades IIIb/IIIc periods, including a circular earthwork site consistent with settlement and activity patterns characteristic of these phases.

HISTORICAL OVERVIEW

Colonial Period

The earliest written account of the Indigenous peoples living around the region now encompassing the DuPuis Reserve property comes from Hernando d'Escalante Fontaneda, a Spanish shipwreck survivor who was captured by the Calusa around 1545 and lived among south Florida tribes for nearly seventeen years before being rescued by French commander Jean Ribault. Fontaneda later wrote a memoir describing the people and landscape of 16th-century south Florida, which was preserved in a translation by True (1944). In his account, he identifies a group called the Mayaimi, who occupied the lands surrounding the north and east sides of “Lake of Mayaimi” now Lake Okeechobee (Figure 2). He notes that the Mayaimi maintained a principal town, *Guacata*, likely located near present-day Pahokee, along with multiple smaller settlements around the lakeshore (Hann, 1991). Archaeological evidence suggests that the Mayaimi and related groups were among the final Indigenous inhabitants to use burial and habitation sites in the DuPuis area.

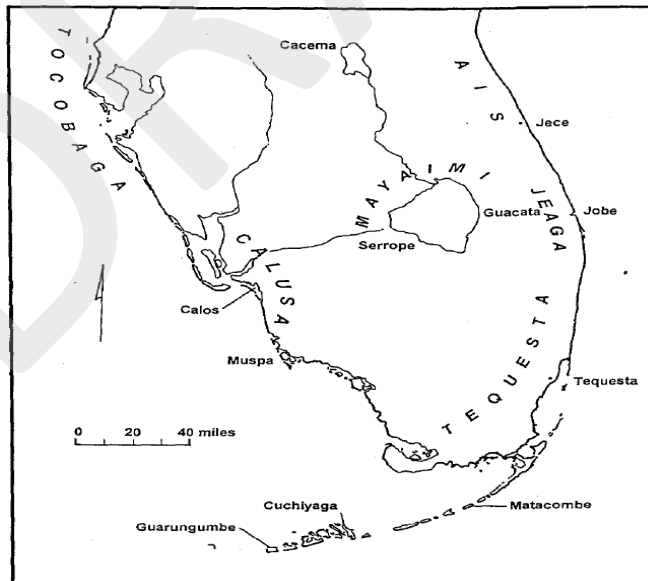


Figure 2. Indigenous groups of south Florida in the sixteenth century. Adapted from Hann (1991). Source: Native Land Digital, “Mayaimi Territory.”

The population of the Mayaimi declined rapidly in the early 18th century as they suffered catastrophic losses from European-borne diseases, slave raids originating from the British colonies

Figure 3. Map depicting the southward migration of the Creek and Seminole into Florida. Numbered locations represent modern Seminole communities: (1) Brighton; (2) Dania; (3–4) Big Cypress (federal and state reserves); (5) Tamiami Trail.

First Seminole War (1817–1818)

The First Seminole War caused the displacement of Seminole communities from northern Florida, leading to a contested agreement that restricted them to a reservation in the interior of central and south Florida. After a severe drought and subsequent famine in 1825, many Seminoles returned to their earlier homelands, reigniting conflicts with white settlers. Tensions escalated further after the Indian Removal Act of 1830 authorized the federal government to move Native peoples to Indian Territory, now Oklahoma. Although some Seminoles reluctantly agreed to removal, they were unhappy with the poor quality of the land and their forced proximity to traditional Creek adversaries. Many others refused to leave, increasing conflicts among Seminole groups, white settlers, and federal military forces (Mahon, 1985; Covington, 1993).

Second Seminole War (1835–1842)

The Second Seminole War began in late 1835 when Seminole fighters ambushed a column of U.S. soldiers under Major Francis L. Dade and conducted a series of attacks on plantations along Florida's east coast. In response, the Army burned Seminole villages, destroyed crops, and sought to undermine resistance by capturing Seminole families and returning escaped slaves to their enslavers (Mahon, 1985). During the early stages of the fighting, the Seminoles and their allies frequently outnumbered federal forces, and the war went poorly for the United States.

By late 1837, most Seminoles had withdrawn into southern Florida, where they continued to rely on guerrilla tactics, avoiding direct assaults on forts and instead engaging in small attacks that inflicted steady casualties. Seeking to force the Seminoles out of central Florida, Major General Thomas S. Jesup organized four military columns to drive the Seminoles southward into the Everglades. General Abraham Eustis advanced from the St. Johns River area; Colonel Zachary Taylor moved down the central peninsula between the Kissimmee and Peace rivers; General Joseph M. Hernández led another column down the east coast with support from a small naval personnel who operated along the Indian River Lagoon; and a combined Army–Navy detachment under Lieutenant Levin Powell patrolled the lower East Coast and Jupiter Inlet area (Missall & Missall, 2004; Mahon, 1985). Fort Pierce served as the base for operations, while the naval unit surveyed the surrounding waterways.

Colonel Taylor's column advanced south along the eastern shore of Lake Okeechobee, where troops constructed Fort McRae near the mouth of what is now the St. Lucie Canal (Mahon, 1967). The small enclosure, made of cabbage palm trunks, served briefly as a supply depot before being abandoned (Mahon, 1967). The site's location is supported by an 1838 U.S. War Department map and by Seminole War-era rifles unearthed during later canal construction. On December 25, 1837, Colonel Taylor's column engaged a large Seminole force on the lake's northeast shore. The Battle of Okeechobee forced the Seminoles to withdraw but resulted in heavy casualties among Taylor's column (Mahon, 1985).

After the battle of Okeechobee, Jesup's and Eustis's columns united at Fort Lloyd and pushed southeast into what is now northwestern Martin County, where they met Taylor's column (Mahon, 1967). Lieutenant Powell's detachment also saw significant action along the Loxahatchee during these operations (Mahon, 1967). Major General Jesup and General Eustis combined forces and

moved toward the Loxahatchee River to engage the Seminoles after learning of Lieutenant Powell's defeat on January 15, 1838 (Mahon, 1967). Continuing their pursuit, Major General Jesup and General Eustis moved toward the Loxahatchee River, engaging Seminole fighters in a larger battle on January 24, 1838 (Mahon, 1967). The Second Battle of the Loxahatchee ended with the Seminole forces retreating into the Everglades, enabling the U.S. Army to declare a tactical victory and establish a permanent military presence in the area (Mahon, 1967).



Figure 4. Section of Mackay and Blake's 1939 Florida Seat of War map representing the authors' reconstruction of the 1839 military route from the Second Seminole War.

After the battles of Okeechobee and the Loxahatchee, displaced Seminoles sought refuge in the area known as Hungryland, an area that would include today's Hungryland, Corbett, and DuPuis. Game quickly depleted, wild plant foods were scarce, and there was no opportunity to plant crops. Hundreds of starving Seminoles were eventually captured under a flag of truce and sent to Oklahoma, leading to the area becoming known as "The Hungryland" (DuBois, 1981; Hutchinson and Paige, 1998). Facing starvation, many Seminoles accepted Jesup's invitation to camp about a mile from Fort Jupiter under a flag of truce while he sought permission for them to remain in Florida (Missall & Missall, 2004). When Washington officials denied the request, General Jesup ordered troops to quietly surround the camp and seize the Seminoles. More than 500 were transported from Jupiter to Indian Territory (Sprague, 1848). In 1842, the Army declared the Second Seminole War over, and an uneasy peace followed between settlers, military authorities, and the remaining Seminoles.

Third Seminole War (1855–1858)

Tensions flared again in 1855 when the Army began harassing the Seminoles, pushing them into Seminole territory again, leading to two more years of conflict known as the Third Seminole War. During this time, a new Fort McRae was built as a military base in the region (Missall & Missall, 2004). In 1858, the well-known Seminole's main chief, Billy Bowlegs, agreed to relocate with many of his followers to Indian Territory. As the Civil War approached, the Army stopped efforts to pursue the roughly three hundred Seminoles who remained in the peninsula. With the war ending, the network of small wooden forts, including Fort McRae, was abandoned and quickly fell into decay and wildfire (Mahon, 1985). The Seminole Wars became one of the longest and most costly conflicts between the United States and any Native American nation, with some historians describing them as the nation's longest and among its most expensive native Indian conflicts (Missall & Missall, 2004; Mahon, 1985). After the Third Seminole War ended in 1858, the remaining Seminoles gradually emerged from their remote refuges deep within the Everglades and Big Cypress regions.

Late 19th and 20th - Century Settlement



Figure 5. Captain Francis Asbury Hendry (center, standing) with Seminole Indians. 1870 (circa).

During the late 19th century, small Seminole camps and trading posts began to appear throughout South Florida, including near present-day Indiantown (Weisman, 1999; Covington, 1993). By 1898, local settler Joe Bowers established a trading post where he exchanged manufactured goods for animal hides and other products. He later planted citrus and developed what became known as Bowers Groves. That same year, Francis and Annie Platt started a cattle operation nearby, naming the small town “Annie” after Mrs. Platt. Transportation and development accelerated in the early 20th century. A post office was granted in 1902, with Francis Platt serving as postmaster (Tebeau, 1971). Around 1902–1903, Platt and his sons cut a wagon road connecting Annie to Stuart, known at the time as the Stuart–Annie Road, which eventually evolved into today’s State Road (SR) 76 (Kanner Highway). The town kept the name Annie until 1917, when it was renamed Indiantown after the post office was officially renamed Indiantown (Tebeau, 1971).



Photograph of Joe Bowers

In 1902, the Southern States Land and Timber Company, a New Orleans–based investment group, purchased roughly two million acres around Lake Okeechobee from the State of Florida for 50 cents per acre (Tebeau, 1971). The acquisition included most of what is now western Palm Beach and Martin Counties and nearly all of the DuPuis Reserve property, except the low-lying areas along the L-8 Canal. Although the company began harvesting old-growth pine, the lack of railroad access forced sawmills to operate on Lake Okeechobee, where logs could be moved by boat. Public services were minimal; no public schools existed in the area at that time. By around 1911, the Indiantown area finally had enough white children, then a requirement for receiving state education funding, to open a public school (McIver, 1998). Three local families enrolled children, including two listed as railroad engineers, even though rail service would not reach the area until the 1920s.

In 1914, the U.S. Army Corps of Engineers proposed a cross-state canal linking the St. Lucie River on Florida's east coast with the Caloosahatchee River on the west, with Lake Okeechobee as the central connection (USACE, 1930). Local leaders strongly supported the project. Although the canal carried several official names, including the Okeechobee Waterway, this account uses the name used locally at the time: the St. Lucie Canal. A dredging contract was signed on February 19, 1915, and excavation began on May 28, starting at the lake. Historical maps and early engineering reports indicate that the canal's western end followed a pre-existing natural stream that once entered Lake Okeechobee. Seminole War-era military maps show a small river near this location, and Will (1984) identified several abandoned tributaries or "dead rivers" around the lake, including one sometimes referred to in local oral history as the "Mayaca River." This name reflects the Indigenous Mayaca people historically associated with the region. No trace of such a watercourse survives today, but the canal's winding western and eastern segments mirror natural stream paths, in contrast to its straight, engineered mid-section.



Figure 6. 1924 Photograph of the St Lucie Canal Dredging.

Excavation spoil was largely placed along the canal's northern bank. Aerial photographs from 1940 show little spoil along the canal's westernmost section until the boundary of DuPuis, possibly because material near the lake was reused for early road or rail construction (Florida Geological Survey, 1940). A *dipper* dredge made the first cut, followed by the *Northwood* suction dredge, which remained active through 1916. A dam failure that year confirms that work was ongoing (Stuart News, 1916). Local reporting noted the first flow of water from Lake Okeechobee to the

St. Lucie River on June 13, 1923. The canal was widened in the mid-1930s and declared complete on March 22, 1937 (USACE, 1937). New locks installed in 1940 removed an island near the canal's western end, though aerial images from that year still show the island and fresh spoil deposits. After the catastrophic 1928 hurricane, which overtopped the inadequate lake levee and caused thousands of deaths, the federal response included construction of the Herbert Hoover Dike and further widening of both the St. Lucie Canal and the Caloosahatchee River to increase the lake's discharge capacity (National Weather Service, 2018). Another widening contract was awarded on June 11, 1948. Corps documents typically reference a final canal width of 200 feet at the top, 160 feet at the bottom, and a depth of 8–12 feet (USACE, 1950).

The St. Lucie Canal was commercially used, but reached its peak during World War II, when barges and small vessels used it to avoid German U-boats patrolling offshore. After the war, commercial traffic declined and recreation became the primary use. Construction of the canal significantly altered the hydrology of the northern portion of DuPuis. The canal was maintained at or below Lake Okeechobee's typical elevation of approximately 15 feet, while historic wetlands in the northern reserve sat around 25 feet. This created a steep groundwater gradient, lowering the water table by roughly 10 feet near the canal, with diminishing effects farther away. By 1940, aerial photographs show wetlands within three-quarters of a mile of the canal drying and experiencing shortened hydroperiods (Florida Geological Survey, 1940). This decline in groundwater condition continues to impact hydrology today.

In 1919, a \$120,000 bond was approved to finance a county road connecting Stuart and Lake Okeechobee. This road, initially a dirt road connecting Stuart-Annie to Lake Okeechobee, located just south of the newly constructed St. Lucie Canal, appears on a 1923 map. By 1926, it was labeled the Stuart–Annie Highway (Hutchinson & Paige, 1998). The road likely became unsafe after the canal's 1930s widening, prompting the State of Florida to assume responsibility for it in 1931 and designate it as State Road 76. A new alignment farther south, today's road, was constructed in the late 1930s through the efforts of legislator A. O. Kanner, and after his death in 1976, it was renamed Kanner Highway (Hutchinson & Paige, 1998). Both the original and relocated roads are visible in 1940 aerial photographs.

During this period, the Southern States Land and Timber Company actively developed and marketed its holdings, selling a large tract to the St. Lucie Land Company in 1904 (Hutchinson & Paige, 1998). Under the long-term leadership of George Bensel, who managed operations from West Palm Beach for nearly five decades, the company helped shape the region's early development by promoting Everglades drainage, pioneering sugarcane cultivation, constructing roads and trails, opening land to ranching, and introducing the first purebred cattle to Martin County. By 1920, the company had established the Southern States Ranch north of the St. Lucie Canal in Section 13, which appears on a 1921 road map (Carr & McFadden, 1921). Aerial photographs from the 1940s still showed ranch buildings and cleared pasture, even as the older road declined in use and was replaced by a newer route leading south to the canal and west toward Kanner Highway.

Early aerial photographs show several trails crossing Southern States Land and Timber Company property, though it is unclear who constructed them. These trails appear to have been simple wagon paths that followed naturally higher ground with minimal clearing and no evidence

contributed to its abandonment. The agricultural settlement at Big Mound, platted into 40-acre tracts in the 1920s, may have played a role in creating or maintaining several of these trails for local access.

In 1923, William “Fingy” Conners purchased extensive land around Lake Okeechobee and began constructing a toll road to improve access to the region. Beginning at Twenty Mile Bend, the road followed the West Palm Beach Canal northwest to Canal Point and then continued north to Okeechobee City. Completed in 1925 at a reported cost of \$1.8 million, Conners Highway was widely regarded as an engineering accomplishment of its time (Hutchinson & Paige, 1998). The toll averaged three cents per mile and generated approximately \$2,000 per day in revenue. The route, located about two miles west of DuPuis along the lakeshore, corresponds to the present-day U.S. Highway 441 and 98 and is still known locally as Conners Highway Figure 8. After Conners’ death in 1929, Palm Beach County acquired the road, removed the toll, and transferred it to the State Road Department (Kleinberg, 2003; Hutchinson & Paige, 1998).

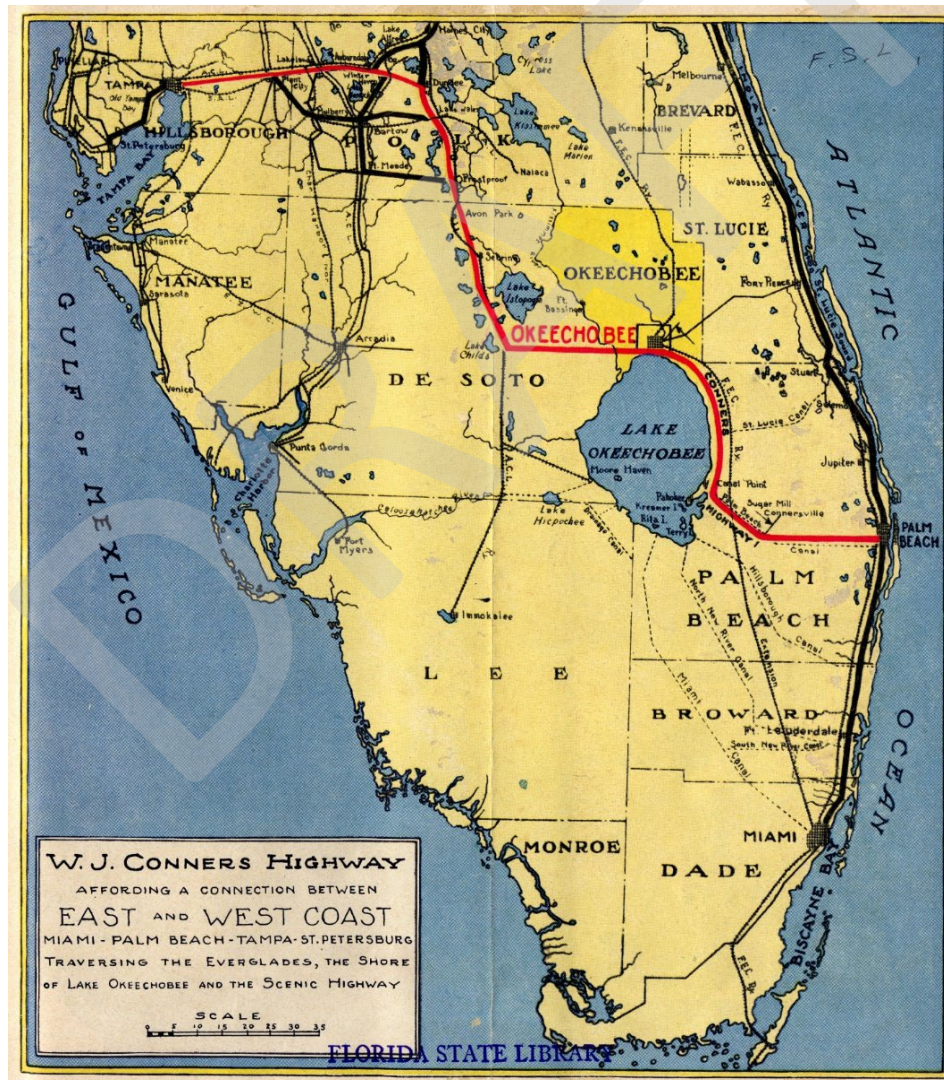


Figure 8. Map of the W.J. Conners Highway and connecting roads, ca. 1924.

Railroad expansion also reshaped the region during this period. The Florida East Coast Railway reached Okeechobee in 1915 and later extended lines to Canal Point (1925) and Belle Glade (1928) to move agricultural products from the Everglades (Tebeau, 1971). Although this line passed near DuPuis, no sidings or sawmill structures appear on 1940 aerials, suggesting it did not support logging operations there. At the same time, the Seaboard Air Line Railway extended its main line from Coleman to West Palm Beach, reaching Indiantown in 1924. Under the leadership of S. Davies Warfield, the Land Company of Florida purchased 100,000 acres from the Southern States Land and Timber Company that same year and envisioned Indiantown as the railroad's southern headquarters, complete with a passenger station, roundhouse, housing, streets, a school, and the Seminole Inn (Hutchinson & Paige, 1998). Warfield directed the construction of the Seaboard extension through Indiantown and laid out the grid of streets that became Warfield Boulevard to support the planned residential and commercial area. Following his death in 1927 and the collapse of the Florida land boom, the Land Company of Florida abandoned its development plans in 1930, though the street layout remains a core feature of the town. The state assumed responsibility for Warfield Boulevard the following year, designating it State Road 710. The older graded road between Indiantown and Okeechobee gradually fell into disuse, leaving only a short segment for grove access along the St. Lucie Canal.

Indiantown became the primary center for local logging because it housed the nearest sawmills and rail loading points. Cut pine from surrounding lands was brought to Indiantown for milling and shipment north, but DuPuis, located about six miles east, appears to have been a lower-priority harvest area (Hutchinson & Paige, 1998). Evidence suggests that logging within the reserve was sporadic, likely focusing on easily accessible pine stands during the 1930s and possibly continuing into the early 1940s. Timber would have been trucked out along the corridor that later became Kanner Highway. The 1940 aerial photographs show scattered pine cover within the reserve rather than the extensive clearcut patterns visible in other heavily logged areas of Palm Beach County (USDA, 1940), supporting the interpretation of limited, opportunistic harvesting rather than a coordinated timber operation.

In 1925, the Phipps family purchased roughly 6,500 acres from William "Fingy" Conners, including about five miles of Lake Okeechobee frontage and the four-mile western boundary of DuPuis (Hutchinson & Paige, 1998). Although envisioned briefly as the site of a grand new city, Port Mayaca developed instead into an agricultural enterprise after the Phipps family formed Bessemer Properties in 1927. The company laid out 20-acre citrus blocks, planted Australian pine windbreaks, and adopted pump-drainage technology to control grove water levels, becoming one of the first in the region to do so. By 1940, aerial photographs show the Port Mayaca agricultural headquarters along Kanner Highway, with a water tower, large packing or equipment buildings, and rows of worker housing near the Florida East Coast Railroad tracks (USDA, 1940). Bessemer later platted the Osceola Groves subdivision in the mid-1940s on lands west of Section 31, although the subdivision never thrived; the perimeter roads appear in 1948 aerials, but few lots sold and no homes were built (USDA, 1948).

The Port Mayaca Cemetery, located at the northwest corner of DuPuis, was reportedly established in the early 1920s and became the burial site for approximately 1,600 victims of the devastating 1928 Lake Okeechobee hurricane (Hutchinson & Paige, 1998; National Weather Service, 2018). The site occupies one of the few areas of stable, non-muck soil near the lake and

has since served as the principal cemetery for communities throughout the Glades region.

Regional political boundaries were also shifting during this period. Martin County was created on May 19, 1925, carved from the northern portion of Palm Beach County following disputes over the county's distribution of road bond funds (Hutchinson & Paige, 1998; Tebeau, 1971). Stuart became the county seat, while Seaboard Air Line Railway interests briefly promoted Indiantown for that role until the death of S. Davies Warfield in 1927. Limited development occurred near DuPuis through the 1930s aside from widening of the St. Lucie Canal and construction of the new alignment for SR 76. A 1937 Dolph's land ownership atlas shows a patchwork of ownerships within the reserve, including Chase National Bank, the Glades Land Corporation, the State Board of Education, and reduced holdings by the Southern States Land and Timber Company, which had sold and later repurchased acreage during the Depression (Dolph & Co., 1937). The 1940 aerials also reveal agricultural clearings, pothole farming scars, farm furrows, and early infrastructure around the future reserve entrance, offering the first comprehensive picture of pre-acquisition land use in DuPuis (USDA, 1940; USGS, 1971).

By the 1930s, activity near DuPuis was limited aside from canal works and road realignments. A 1937 Dolph land-ownership atlas shows a patchwork in the reserve area: Chase National Bank held most of the northern two miles, Glades Land Corporation owned tracts along the southern edge, the State Board of Education held Section 15, and Southern States Land and Timber Company retained only about six sections in the east-central portion. The Big Mound area appears subdivided into 40-acre parcels. During the Depression, Southern States sold much of its holding, then reacquired properties for delinquent taxes and later consolidated ownership (Hutchinson & Paige, 1998; Dolph & Co., 1937).

Beginning in 1944, Robert Chastain, a rancher based in Canal Point, assembled most of what would become DuPuis through a series of large acquisitions. These included 20,439 acres purchased from the Southern States Land and Timber Company in November 1944, about 610 acres containing the current DuPuis land management office and old farm field areas from Malcolm and Beatrice Chace in 1946, providing him direct access to SR 76, Section 15 from the State Board of Education later that same year, and the southern tracts owned by U.S. Sugar in 1949 (Hutchinson & Paige, 1998). Through these purchases, Chastain acquired most of the four sections in the northeast corner of the reserve, nearly the entire southern boundary, and five sections of muck land south of the present-day L-8 Canal. After his final acquisition, Chastain owned all of the reserve except for three sections in the southern tip.

By the end of 1948, Chastain had constructed most of the basic ranch infrastructure. Aerial photographs from this period show an expanded ranch house, early farm fields near the future office site, and construction of the main public entrance road, now known as Jim Lake Grade and DuPuis Grade, along with a spur to the DuPuis Mound House area. Four major ditch systems are also visible in aerial imagery. The "Office" ditch system drained northwest toward the St. Lucie Canal via a small creek in the reserve's northwest corner, with a second outfall about a quarter mile east of the office site. The northeastern "Chastain" ditch system linked wetlands for roughly three miles south and 1.5 miles west of its main outfall just east of the reserve. South of this, the Cooter Creek ditch extended about four miles to a slough draining toward the Everglades. On the west side, the "Osceola" ditch system connected the reserve to the early L-8 stub canal or L-8

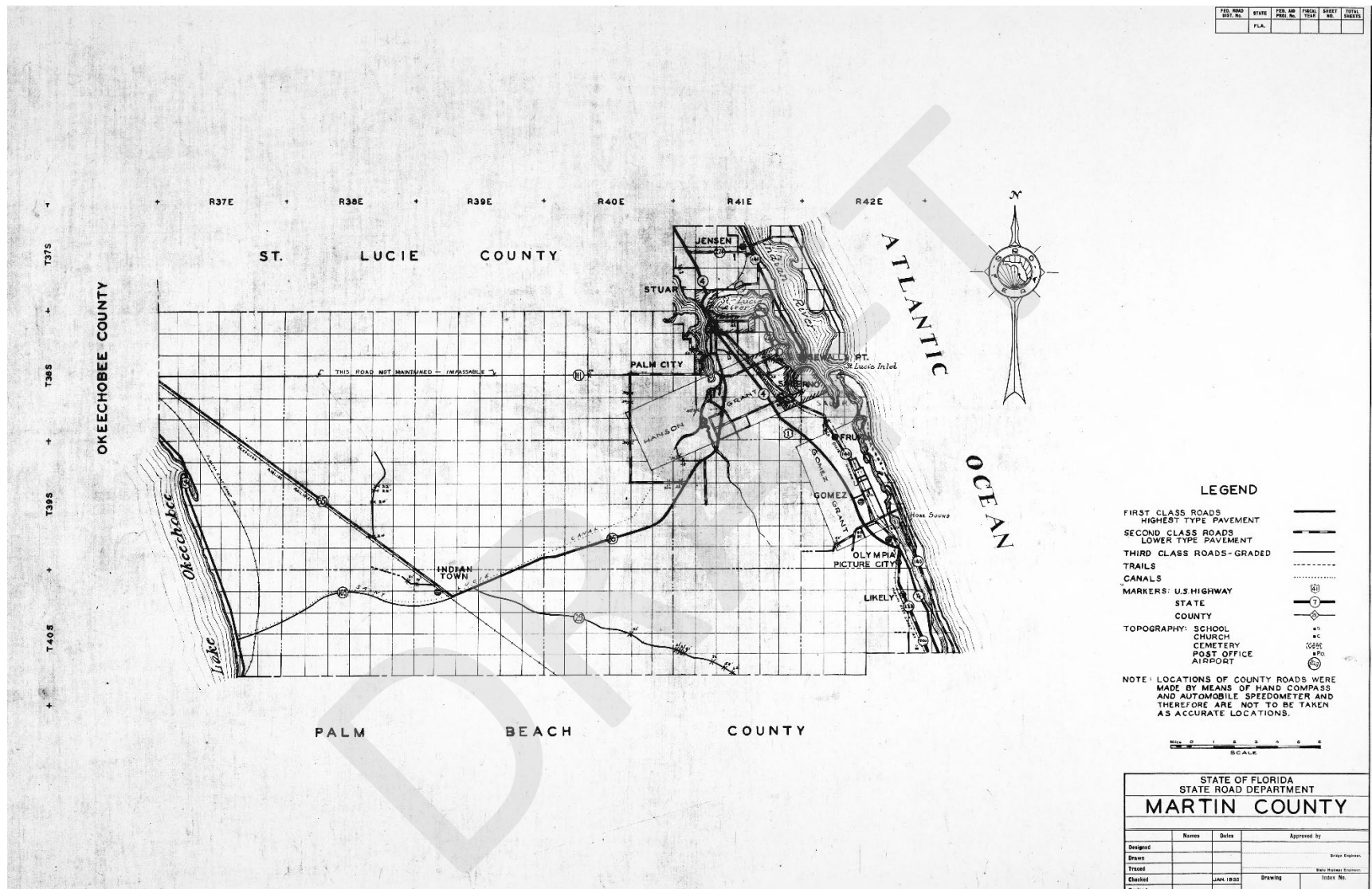
North Tieback Canal (USDA, 1948; USDA, 1949). In the early 1950s, additional drainage improvements and land changes occurred. The L-8 Canal was constructed through the Bessemer properties in 1953 and extended along the eastern boundary of DuPuis in 1954, lowering local water levels and creating new opportunities for drainage along the southern margin through a series of culverts installed at regular intervals (USDA, 1957). By this same period, Bessemer's groves were sold to Ben Hill Griffin, Inc., who developed new citrus groves north of the St. Lucie Canal (Hutchinson & Paige, 1998).

Dr. John G. DuPuis was a pioneer physician, educator, and botanist who arrived in Miami in 1898 and established both a medical practice and a drugstore in the early settlement of Lemon City (Dade Heritage Trust, n.d.). He treated Miami residents during the 1899 yellow fever outbreak, and local and oral histories describe him as one of the few white physicians trusted by the Seminole people (Florida Memory, n.d.). His belief that clean, fresh milk was essential to public health led him to establish one of the first dairies in South Florida and, eventually, one of the largest in Dade County: White Belt Dairy Farms, Inc. (Miami-Dade County Historic Preservation Office, 1984). Dr. DuPuis' agricultural expansion began in 1905 with his purchase of Dutch Belted cattle, reportedly acquired from the Barnum & Bailey Circus, which strengthened and diversified his dairy operation. This acquisition set the stage for later agricultural growth and ultimately led the family to begin purchasing lands in Palm Beach and Martin Counties decades later (Hutchinson & Paige, 1998).

White Belt also acquired six sections below L-8, including two reaching Lake Okeechobee (Hutchinson & Paige, 1998). The 1957 aerials show new firebreaks along section lines, two additional cattle watering holes, bridges across L-8 at the southwest corner and the end of a causeway, and a long linear clearing near an L-8 culvert (likely a graded corridor rather than a finished landing strip). A small spur road leads to a hammock with narrow, parallel brick foundations near the water, dated to pre-1955 by Wheeler (2000) and likely related to boat or airboat tie-down rather than habitation. A new perimeter canal along the west border connects the Port Mayaca cemetery to the St. Lucie Canal and effectively eliminates the older Hungryland Trail connection to SR 76, which by then functioned primarily as an internal ranch road (USDA, 1957; Wheeler, 2000).

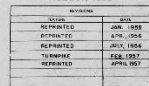
Control of White Belt Dairy Farms and the DuPuis tract passed to John G. DuPuis, Jr. in late 1957. Early aerial photographs from this period show his first improvements, including fruit tree plantings in the trapezoidal field west of the ranchhouse and around the office complex (USDA, 1957). In that same year, the Southern States Land and Timber Company sold land along the southeastern edge of the reserve to the State for the creation of the J. W. Corbett Wildlife Management Area, although the Big Mound tract was excluded and remained privately owned until the 1980s (Hutchinson & Paige, 1998).

DuPuis Management Area General Management Plan 2026 – 2036
South Florida Water Management District, Land Stewardship Section



Map 1. 1935 General highway map of Martin County.

Map 2. 1953 General highway map of Martin County.





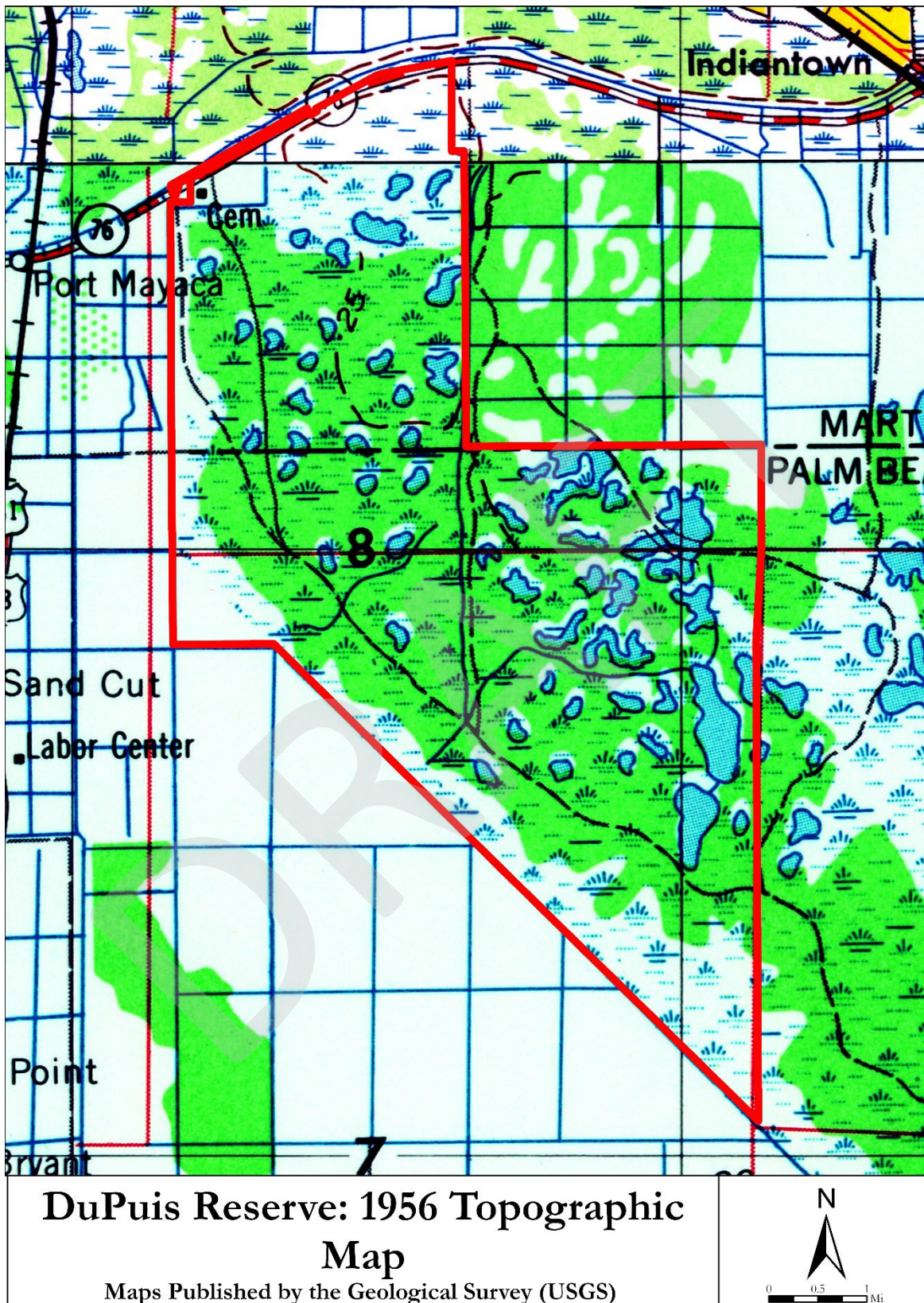
Map 3. Historical aerial mosaic including 1938 (left) and 1949 (right) imagery.



Map 4. 1940 historical aerial imagery.



Map 5. Historical Aerial Mosaic Including 1952 (Martin Co.) and 1957 (Palm Beach Co.) Imagery.



Map 6. 1956 Topographic Map of the DuPuis.

By 1965, development on DuPuis-controlled lands was limited, except in the southwest corner, where the newly constructed Bamboo ditch system first appeared on aerial photographs (USDA, 1965). This system ran through the transitional zone between pine flatwoods and Everglades muck soils, presumably intended to intercept surface and groundwater flows that would otherwise keep the muck too wet for pasture. Its southern leg connected older, pre-1957 ditches to the L-8 Canal, while the newly built northern leg drained northwest into the L-8 stub canal. Other spur ditches extended northward for additional drainage. Construction of these features severed the Hungryland Trail, accelerating its decline west of DuPuis Grade. The Cooter Creek Canal was extended to an L-8 culvert, and erosional channels at other culverts indicate substantial water outflow from the reserve into the L-8 system during this period (USDA, 1965). During this time, the southern three sections of DuPuis remained under U.S. Sugar ownership, and numerous vehicle tracks visible near the L-8 Canal suggest hunting access. Agricultural clearings also remained visible in the Big Mound area (USDA, 1965).

Meanwhile, George Caulkins began major development on the eastern side of Dupuis. In January 1964, he purchased nine sections along the eastern edge of Chastain's lands, and after Robert Chastain's death later that year, Caulkins acquired another nine-plus sections in March 1965 (Hutchinson & Paige, 1998). While Chastain had left most of the Palm Beach County portion undeveloped, 1965 aerials show Caulkins actively ditching and draining the first five sections south of State Road 76 in preparation for citrus groves (USDA, 1965). He did not extend citrus development farther south, likely due to drainage or irrigation limitations. A small agricultural clearing in Section 36, probably pothole farming by an employee, appears on the same aerials.

Between 1965 and 1970, development accelerated on White Belt lands. Soil survey aerials from 1970 and 1972 show numerous new cattle watering holes in the Palm Beach County portion, the disappearance of the L-8 bridge at the causeway, excavation of the eastern pond at Mound House, and construction of several new ranch buildings, possibly including the early sheep-shearing structures (USDA, 1970; USDA, 1972). A new South Fork ditch system was added, with one fork flowing to the Cooter Creek ditch and the other to the L-8 Canal. Additional changes include disturbed wetland edges in Section 34, creation of the T-shaped landing strip, newly dug ponds and ditches in the Martin County portion, expansion of the maintenance compound, and relocation of the main entrance to its current position west of the ranchhouse (USGS, 1971; USDA, 1972).

White Belt Dairy Farms had entered into a stumpage agreement with the Heyden Newport Chemical Corporation in 1961 to remove lighter pine stumps from the western portion of the reserve. Because slash pine stumps typically require at least twenty years to decay enough for resin extraction, this indicates that logging in that area occurred before 1940. When White Belt and George Caulkins exchanged quitclaim deeds in 1967 to resolve a boundary issue, the stumpage agreement had to be released from the acreage transferred to Caulkins. No similar agreement existed on Caulkins-owned tracts, suggesting that the eastern portions of the reserve may never have been logged.

In 1972, a complex series of land transactions brought the reserve into its modern configuration as a unified DuPuis property. In two sales, Caulkins transferred most of his undeveloped lands south of the citrus groves to U.S. Sugar, which then sold them to White Belt Dairy Farms

(Hutchinson & Paige, 1998). U.S. Sugar also sold the southernmost three sections of the reserve to John G. DuPuis, Jr., while White Belt's muck lands south of the L-8 Canal went to U.S. Sugar, likely as part of a land swap. Caulkins then conveyed the remaining 2.5 sections south of the groves to White Belt, completing DuPuis family ownership of the entire reserve. White Belt quickly developed the wetter eastern portion by constructing a three-mile parallel ditch along the L-8 Canal, extending it northward along the eastern boundary, creating new raised roads, establishing a Limpo grass nursery, and excavating additional cattle watering holes (USDA, 1972). Many roads and tree plantings visible in 1980s aerials are likely to date to this final phase of intensive development.

A major north-south high-voltage transmission line was built along the reserve's eastern boundary in the late 1970s or early 1980s. The corridor carries three sets of lines side by side. For its first seven miles, the line runs just east of the reserve within the Corbett WMA, then turns west along the DuPuis' northern edge beneath the former citrus groves. It then turns north and runs inside the reserve for about three miles before crossing into the grove area for the final mile to the St. Lucie Canal. All woody vegetation beneath the lines was cleared and remains suppressed today. Towers were installed on raised beds spaced roughly every quarter-mile, with several pits beneath the corridor likely providing the fill. A second high-voltage line was added just west of the reserve in the early 1990s, connecting a single row of towers to the newly built Martin Power Plant.

Little activity occurred on the reserve in the early 1980s, likely due to John G. DuPuis Jr.'s declining health. He died in 1984, and ownership passed to his widow, Susan DuPuis. In 1986, The Nature Conservancy secured a purchase agreement with the DuPuis trust and Mrs. Susan Dupuis, which enabled the South Florida Water Management District to acquire the property through the Save Our Rivers program in December 1986.

Conservancy buys 35 square miles to save wetlands

By JOHN OPEL
Palm Beach Post Staff Writer

WEST PALM BEACH — Agreement to purchase the White Belt Ranch — 35 square miles that are home to the Florida panther and other endangered wildlife in western Palm Beach and Martin counties — for \$23 million was announced Friday by The Nature Conservancy.

The sprawling ranch, largely pristine wetlands, is destined to become part of the Save Our Rivers program, a state plan that protects natural watersheds.

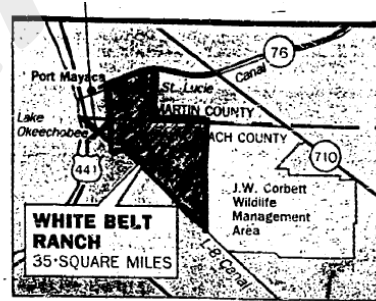
Florida Conservancy Chairman Dick Weinstein of Palm Beach said the South Florida Water Management District, which manages Save Our Rivers in South Florida, will be given an option to purchase the parcel. The Conservancy is a national, non-profit organization that works to purchase and preserve for the public environmentally sensitive lands when federal and state efforts to buy such areas bog down.

"Benefits from public ownership of White Belt Ranch are enormous," Weinstein said. "There is nothing like it remaining in South Florida."

White Belt Ranch has been in the pioneer DuPuis family for four generations and is being sold by Susan DuPuis of Miami and a trust established by her late husband, John G. DuPuis Jr.

John Wodarska, executive director of the WMD, said the district was "working closely with the family to assure that it is preserved" in a natural state as the family intended.

"It's part of our life," said Robert Mayer, grand-



son of Susan DuPuis.

The sale, he added, is "a very difficult thing to see happening."

But with the pressure of development and expansion of agricultural activities on all sides, "it (the sale) was the thing to do," Mayer said. "There's no other piece of land left like it in Florida. If the state lost this, they would have lost it forever."

Mrs. DuPuis was quoted as saying that the sale "represents the fulfillment of a dream of my late husband and I. The land should be preserved and belong to the public."

The DuPuis family history stretches back to the 1880s when Dr. John G. DuPuis, a pioneer physician, educator and botanist arrived in Miami. He and his wife established one of the first dairies in South Florida when they purchased the Dutch royal white belt cattle from the Barnum & Bailey Circus in 1905.

Weinstein said it was a "bargain sale" for the 21,900 acres. He said the property was valued at \$27.5 million in 1985 and, at \$23 million, "represents a

Please see WETLANDS/9A

Figure 9. Palm Beach Post report highlighting the preservation of DuPuis.

Aside from the expansion of the land management office building, few changes occurred between 1984 and 1986. From acquisition until 1990, the District managed the DuPuis area jointly with the Florida Game and Fresh Water Fish Commission, now the Florida Fish and Wildlife Conservation Commission (FWC). During this time, initial resource management, restoration activities, and public use programs were started. In 1990, the Florida Division of Forestry (DOF), now Florida Forest Service (FFS), assumed lead management responsibility for the property, designating it as the DuPuis Reserve State Forest on a 5-year contract with the Commission and the District as cooperative managers. DOF rebuilt the DuPuis and Jim Lake Grades using shellrock from a borrow pit in the southwest corner and created a new entrance road in the northeast. Prescribed burning began in 1990, but heavy fuel loads led to several hot burns that, combined with low rainfall, stressed slash pines and made them susceptible to bark beetle infestations. Selective logging in 1992 did not stop the outbreak, which ultimately resulted in nearly 900 acres being logged in 1995–1996. DOF could not secure long-term funding and returned management to SFWMD in 1996. The extension of the 5-year contract was contingent upon the Florida Legislature authorizing the funds for the DOF to continue management beyond the contract's expiration. As a result of the legislature not appropriating the required funding, the contract with the DOF expired. Following a competitive management bid process, SFWMD retained responsibility for non-hunting management functions, and a cooperative management agreement was established between the District and the Fish and Wildlife Conservation Commission for hunting operations. This cooperative agreement was rolled into a District-wide multi-site cooperative agreement with the FWC in 2007. The ranch house south of the land management office, the oldest structure on the property, was demolished in the 1990s, and its foundation was recently removed for a new shell rock parking area. The fruit orchards near the office were no longer maintained and gradually died out. The citrus grove was removed to help contain citrus canker.

Reference Cited

- Associated Map Company. (1926). *Map of Martin County, Florida* [Map]. The Associated Map Company.
- Carr, R. S., & Beriault, J. G. (1984). Prehistoric man in southern Florida. In P. J. Gleason (Ed.), *Environments of South Florida: Present and past II* (pp. 1–14). Miami Geological Society.
- Carr, R. S., Dickel, D., & Masson, M. (1995). Archaeological investigations at the Ortona Earthworks and mounds. *The Florida Anthropologist*, 48(4), 227–263.
- Carr & McFadden. (1921). *Road map of Palm Beach County, Florida* [Map]. Carr & McFadden.
- Covington, J. W. (1993). *The Seminoles of Florida*. University Press of Florida.
- Dade Heritage Trust. (n.d.). *Lemon City pioneer history* [Historical summary]. Dade Heritage Trust Archives.
- DuBois, B. W. (1981). *The history of the Loxahatchee River*. Jupiter Inlet Lighthouse Museum.
- Farnsworth, S. (2003). *Historical perspective - DuPuis Reserve property*. Unpublished report.
- Florida Memory. (n.d.). *Dr. John G. DuPuis photograph collection and biographical notes* [Archival materials]. State Archives of Florida.
- Goggin, J. M., & Sommer, F. H. (1949). *Excavations on Upper Matecumbe Key, Florida* (Publications in Anthropology No. 41). Yale University Press.
- Hann, J. H. (1991). *Missions to the Calusa*. University Press of Florida.
- H. C. Fugate Engineering Company. (1923). *Map of Palm Beach County, Florida* [Map].
- Hutchinson, J., & Paige, E. K. (1998). *History of Martin County*. Historical Society of Martin County.
- Hutchinson, J., & Paige, E. K. (1998). *A historical overview of the DuPuis Reserve*. South Florida Water Management District.
- Kleinberg, E. (2003). *Lake Okeechobee: Troubled waters*. The History Press.
- Luer, G. M. (1989). *Calusa canals in southwestern Florida: Routes of tribute and exchange*. *The Florida Anthropologist*, 42(2), 89–130.
- Luer, G. M. (1994). *A third ceremonial tablet from the Goodnow Mound, Highlands County, Florida*. *The Florida Anthropologist*, 47(2), 180–188.
- Mackay, R., & Blake, W. (1939). *Florida seat of war in Seminole Wars, 1835–1842* [Map]. Florida Geological Survey.
- Mahon, J. K. (1967). *History of the Second Seminole War, 1835–1842*. University Press of Florida.
- Mahon, J. K. (1985). *History of the Second Seminole War, 1835–1842*. University Press of Florida.

Mackay, J. (1839). *Mackay & Blake's Florida seat of war, 1839* [Map]. State Archives of Florida. <https://www.floridamemory.com/items/show/323226>

McIver, S. (1998). *History of Indiantown and the Lake Okeechobee region*. Martin County Historical Society.

McNicoll, R. E. (1941). *The United States Army in Florida, 1821–1841*. Florida Historical Society.

Miami-Dade County Historic Preservation Office. (1984). White Belt Dairy Farms historical designation report.

Milanich, J. T. (1994). *Archaeology of Precolumbian Florida*. University Press of Florida.

Missall, J., & Missall, M. L. (2004). *The Seminole Wars: America's longest Indian conflict*. University Press of Florida.

National Weather Service. (2018). *The 1928 Okeechobee hurricane: Historical analysis and impacts*. NOAA.

PBCPA. (1965). *Aerial survey of Palm Beach County* [Aerial photographs]. Palm Beach County Property Appraiser.

Prucha, F. P. (1984). *The great father: The United States government and the American Indians*. University of Nebraska Press.

Robison, J., & Andrews, M. (1995). *Flashbacks: The story of Central Florida's past*. The Orange County Historical Society and The Orlando Sentinel.

Sprague, J. T. (1848). *The origin, progress, and conclusion of the Florida War*. D. Appleton & Company.

Stirling, M. W. (1935). *Smithsonian archaeological projects conducted under the Federal Emergency Relief Administration, 1933–1934*. Annual Report of the Board of Regents of the Smithsonian Institution, 371–400.

Stirling, M. W. (1936). *Florida cultural affiliations in relation to adjacent areas*. In *Essays in anthropology* (pp. 351–357). University of California.

State of Florida. (1935). *General highway map of Martin County*. Martin County.

State of Florida. (1957). *General highway map of Martin County*. Martin County.

Stuart News. (1916). *Dam failure on St. Lucie Canal halts dredging operations*.

Tebeau, C. W. (1971). *A history of Florida*. University of Miami Press.

U.S. Army Corps of Engineers. (1930). *Report on the Okeechobee Waterway*. U.S. Government Printing Office.

U.S. Army Corps of Engineers. (1937). *Completion report: St. Lucie Canal widening*. USACE Jacksonville District.

U.S. Army Corps of Engineers. (1950). *Design specifications of the Okeechobee Waterway*. USACE Technical Report Series.

U.S. Geological Survey. (1938). *Aerial photographs of Martin and Palm Beach Counties* [Photographic dataset].

U.S. Geological Survey. (1940). *Aerial photographs of Martin and Palm Beach Counties* [Photographic dataset].

U.S. Geological Survey. (1949). *Aerial photographs of Martin and Palm Beach Counties* [Photographic dataset].

U.S. Geological Survey. (1952). *Aerial photographs of Martin Counties* [Aerial photographs].

U.S. Geological Survey. (1957). *Aerial photographs of Palm Beach Counties* [Aerial photographs].

U.S. Geological Survey. (1956). *Indiantown quadrangle, Florida* [Topographic map].

U.S. Geological Survey. (1971). *Indiantown quadrangle, Florida* [Topographic map].

Will, L. (1984). *A pioneer son at Seminole Lake*. Great Outdoors Publishing.

Appendix B.

DuPuis MA Natural Communities

The DuPuis MA comprises 10 distinct natural communities and several altered landcover types, based on a combination of vegetation, landscape position, and hydrology (FNAI 2010). These communities are managed through achieving and maintaining optimal fire return intervals for fire-dependent communities, control of invasive plant and animal species, maintenance of natural hydrological functions, maintenance of proper vegetative structure that represents the natural diversity of the community, maintenance of healthy populations of plant and wildlife species (including those that are imperiled or endemic), and maintenance of intact ecotones between natural communities across the landscape.

The natural communities within the DuPuis MA were historically impacted by agricultural practices and other land use activities. Over decades, targeted management efforts such as manipulating vegetation structure, facilitating natural recruitment, and restoring hydrology have led to substantial ecological recovery and the successful restoration of key ecosystem functions. These communities now exhibit strong indicators of recovery, including the dominance of native plant species, reduced invasive cover, reestablished hydroperiods, improved vegetation structure, increased wildlife utilization, and the return of natural fire regimes. While no longer pristine, these systems are not classified as altered land cover types, as they can function as resilient, sustainable habitats that are consistent with Florida's natural ecological patterns and overall align with FNAI's descriptions of natural communities.

The natural communities and other landcover types identified on the DuPuis MA are classified as follows:

- Altered Landcovers
- Cypress
 - Dome Swamp
 - Strand Swamp
- Freshwater Forested Wetland
- Marshes
 - Depression Marsh
 - Slough Marsh
- Mesic Flatwoods
- Mesic Hammock
- Wet Flatwoods
- Wet Prairie
 - Wet Prairie
 - Marl Prairie

Community Description and Assessment

NATURAL LANDCOVER TYPES

FRESHWATER FORESTED WETLANDS (1%)

The freshwater forested wetlands within the DuPuis MA encompass approximately 294 acres and are subclassified as mixed hardwood-coniferous swamps.

Mixed hardwood-coniferous swamps are seasonally or semi-permanently flooded or saturated forested wetlands characterized by a diverse canopy composed of both broadleaf deciduous hardwoods and needle-leaved conifers. These wetlands typically occur in low-lying areas such as floodplains, depressions, or along the rivers and streams, where hydrologic conditions fluctuate seasonally. The canopy is often a mosaic of species, with dominant hardwoods including red maple, black gum, and laurel oak (*Quercus laurifolia*), interspersed with conifers such as bald cypress and slash pine. The midstory may include species like swamp bay (*Persea palustris*), dahoon holly (*Ilex cassine*), and wax myrtle (*Morella cerifera*), while the understory and groundcover layers support a mix of ferns, sedges, rushes, lizard's tail, false nettle, and smartweeds (*Polygonum spp.*).

The mixed hardwood-coniferous swamps in the DuPuis MA were classified under the broader category of freshwater forested wetlands due to the predominance of hardwood species in their canopy composition and overall structure. This classification reflects the ecological distinctiveness of these hardwood-dominated systems and helps differentiate them from cypress-dominated wetlands, which exhibit different successional dynamics.

In the DuPuis MA, mixed hardwood-coniferous swamps are dominated by red maple and cabbage palm (*Sabal palmetto*), with cypress occurring inconspicuously throughout the matrix. Additional canopy and midstory species include Carolina willow (*Salix caroliniana*), buttonbush (*Cephalanthus occidentalis*), pop ash (*Fraxinus caroliniana*), laurel oak, dahoon holly, red bay (*Persea borbonia*), swamp bay, wax myrtle, and common persimmon (*Diospyros virginiana*). Groundcover in these swamps is typically sparse and often overgrown with vines. Ferns occur intermittently throughout the understory, including lizard's tail (*Saururus cernuus*), Boston fern (*Nephrolepis exaltata*), royal fern (*Osmunda spectabilis*), netted chain fern (*Woodwardia areolata*), cinnamon fern (*Osmundastrum cinnamomeum*), and bracken fern (*Pteridium aquilinum*). Common vines include poison ivy (*Toxicodendron radicans*), pepper vine (*Nekemias arborea*), and Virginia creeper (*Parthenocissus quinquefolia*).

Mixed hardwood-coniferous swamps are not fire-dependent and rarely burn due to their limited herbaceous groundcover and persistently moist soils. During the dry season, fires from surrounding fire-maintained communities may spread into the grassy edges, but they are typically extinguished before penetrating deeply into the interior. Mixed hardwood-coniferous swamps in the DuPuis MA have the desired vegetation structure. The objectives for managing the vegetation in this community include treating the nuisance and invasive species to maintain its condition.

WET PRAIRIE (2%)

Two prairie community types exist within in the DuPuis MA: Wet Prairie and Marl Prairie.

Wet prairie

Wet prairies are herbaceous communities characterized by a diverse mixture of showy flowering plants interspersed with short shrubs. They are among the most botanically diverse ecosystems in the United States. Wet prairies occur on continuously saturated soils positioned between lower-lying depression marshes, shrub bogs, or dome swamps and slightly higher wet or mesic flatwoods and dry prairie. Statewide and globally, wet prairies are ranked as the second-most endangered natural community (G2/S2).

Within the DuPuis MA, the wet prairie community encompasses approximately 482 acres. Prior to District acquisition, these areas were heavily affected by intensive cattle grazing and pasture conversion. During pasture conversion, non-native species, including bahia grass (*Paspalum notatum*) and smutgrass (*Sporobolus indicus*), were introduced, substantially shifting the composition of native vegetation. Since acquisition, reduced grazing pressure and hydrologic restoration have supported natural recruitment of native species; however, pasture grasses still remain prominent within this relatively limited habitat. Hog rooting significantly hinders the recruitment of native vegetation in prairie ecosystems, and previous soil disturbances, including furrowing, still influence natural vegetation recovery.

Common wet prairie vegetation in the DuPuis MA include Carolina willow, wax myrtle, St. John's wort (*Hypericum* spp.), Swamp rosemallow (*Muenchhusia grandiflora*), Marsh mallow (*Kosteletzkya pentacarpos*), primrosewillow (*Ludwigia* spp.), meadowbeauty (*Rhexia* spp.), maidencane (*Hymenachne hemitomon*), sand cordgrass (*Spartina bakeri*), plaintain (*Plantago* spp.), milkworts (*Senega* spp.), blue maidencane (*Amphicarpum muehlenbergianum*), beakrush (*Rhynchospora* spp.), umbrellasedges (*Fuirena* spp.), beggarticks (*Bidens* sp.), yellow-eyed grass (*Xyris* spp.), pineland daisy (*Chaptalia tomentosa*), tickseed (*Coreopsis* spp.), gayfeather (*Liatris* spp.), butterwort (*Pinguicula* spp.), crab grass (*Digitaria* spp.), bahia grass, smutgrass, and nutrush (*Scleria* spp.).

Wet prairies are fire-dependent ecosystems, and without regular fire they can become overgrown with dense shrubs that alter the vegetation structure. In the DuPuis MA, hydrologic changes have contributed to the development of shrub-dominated pockets within herbaceous communities, including wet prairies and marshes. Willow pockets are particularly common and now provide valuable wildlife habitat, forming part of the mosaic structure desired for these communities. The wet prairie communities have not yet achieved the desired overall structure. The management objective for wet prairies in the DuPuis MA is to promote structural and ecological diversity that supports optimal wildlife use. This includes fostering a diverse mix of herbaceous species, maintaining subshrub densities, and limiting shrub densities to scattered pockets. Primary management actions include prescribed fire and control of invasive and nuisance plant species.

Marl prairie

Marl prairies, a closely related community type, are sparsely vegetated, graminoid-dominated prairies that develop on flatlands with marl over limestone substrates. These seasonally inundated prairies can support over 100 plant species, including gulf hairawn muhly (*Muhlenbergia sericea*), spreading beaksedge (*Rhynchospora divergens*), Florida little bluestem (*Schizachyrium rhizomatum*), black bogrush (*Schoenus nigricans*), Elliott's lovegrass (*Eragrostis elliottii*), sand cordgrass, and sawgrass (*Cladium jamaicense*). Stunted pond cypress (*Taxodium ascendens*) is often present. Marl prairie is distinguished from calcareous and acidic wet prairie by its calcareous marl substrate, lack of sandy soils, and absence of wiregrass (*Aristida stricta*). Due to their restricted range, relatively few populations (often fewer than 80), and widespread declines, marl prairies are ranked as vulnerable (G3/S3).

Habitats consistent with marl prairie communities occur within the strand swamp system and are further described in the strand swamp section, where they are identified as dwarf cypress–dominated marl prairie or “cypress savanna.”

MESIC HAMMOCK (4%)

Mesic hammocks are hardwood-dominated communities encompassing approximately 909 acres of the DuPuis MA.

Mesic hammocks are characterized by a dense, evergreen hardwood canopy dominated by live oak (*Quercus virginiana*) and cabbage palm, along with a shrubby understory. The mature canopy trees support a variety of epiphytes, including listed species. Unlike hydric hammocks, mesic hammocks lack wetland trees such as sweetbay (*Magnolia virginiana*) and swamp tupelo (*Nyssa sylvatica* var. *biflora*). Mesic hammocks are ranked globally and statewide as vulnerable (G3/S3?) due to restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors, although additional research is required to determine a definitive statewide classification for this community.

In the DuPuis MA, the mesic hammocks communities are dominated by live oak and cabbage palm, as is typical of this habitat type. Because these communities developed through pine succession, slash pine remains a prominent component of the canopy. Other scattered canopy vegetation includes laurel oak, hackberry (*Celtis laevigata*), Myrtle oak (*Quercus myrtifolia*), common persimmon, and red mulberry (*Morus rubra*). The midstory consists of dispersed shrub pockets containing saw palmetto (*Serenoa repens*), Dwarf live oak (*Quercus minima*), American beautyberry (*Callicarpa americana*), gallberry (*Ilex glabra*), wild coffee (*Psychotria nervosa*), hog plum (*Ximenia americana*), saltbush (*Baccharis halimifolia*), myrsine (*Myrsine cubana*), and shoebutton ardisia (*Ardisia elliptica*). Groundcover vegetation is generally sparse or absent, but where present may include caesarweed (*Urena lobata*), occasional ferns, broomsedge (*Andropogon* spp.), dog fennel (*Eupatorium* spp.), and other ruderal species.

Mesic hammocks can tolerate occasional ground fires; however, the presence of live oaks generally limits fuel accumulation in the understory. As a result, these hammocks typically burn only when fire spreads from adjacent habitats, and fires often extinguish naturally where fuel is

insufficient. The mesic hardwood communities are largely established, and hardwood continues to encroach on nearby pine and prairie communities. The primary management objective for mesic hammock communities in the DuPuis MA is to control nuisance and invasive species to maintain desired conditions, while continuing to apply prescribed fire in the surrounding areas to reduce hardwood encroachment and limit further expansion into adjacent communities.

MARSHES (12%)

Within the DuPuis MA, marsh communities cover approximately 2,723 acres and are largely classified as depressional marshes. Along the southern boundary of the management area lies a slough marsh that historically formed part of the northern extent of the Everglades.

Depression Marsh

Depression marshes are characterized as shallow depressions in the sand substrate with herbaceous vegetation, often in concentric bands. They frequently form an outer rim around swamp communities, are seasonally inundated, and often burn with the surrounding landscape. Depression marshes form concentric zones or bands of vegetation that develop according to hydroperiod length and flooding depth. The outer band is typically occupied by species such as longleaf threeawn (*Aristida palustris*), beaksedges (*Rhynchospora microcarpa*, *R. cephalantha*, *R. tracyi*, *R. filifolia*, etc.), Elliott's yellow-eyed grass (*Xyris elliotii*), myrtleleaf St. John's wort (*Hypericum myrtifolium*), and patches of blue maidencane (*Amphicarpum muehlenbergianum*) or sand cordgrass (*Spartina bakeri*). The middle band supports species such as peelbark St. John's wort (*Hypericum fasciculatum*), corkwood (*Stillingia aquatica*) fringed yellow-eyed grass (*Xyris fimbriata*), pipeworts (*Eriocaulon compressum* and *E. decangulare*), narrowfruit horned beaksedge (*Rhynchospora inundata*), and Baldwin's spikerush (*Eleocharis baldwinii*). The innermost band is occupied by species such as maidencane, pickerelweed (*Pontederia cordata*), bulltongue arrowhead (*Sagittaria lancifolia*), or sawgrass (*Cladium jamaicense*), and floating-leaved plants, such as white waterlily (*Nymphaea odorata*). Depression marshes are ranked as apparently secure in their range globally and statewide (G4/S4).

In the DuPuis MA, typical vegetation in depression marshes includes pickerelweed, arrowhead, alligator flag, smartweed (*Persicaria* spp.), southern blue flag (*Iris hexagona*), lizard's tail, maidencane, cutgrass (*Leersia hexandra*), aster (*Symphyotrichum* spp.), white waterlily, sawgrass. Beakrush, spikerush, St. John's Wort spp., sawgrass, yellow-eyed grass, marsh pink (*Sabatia* spp.), camphorweed (*Pluchea* spp.), chain fern (*Woodwardia* spp.), Boston fern, swamp fern (*Telmatoblechnum serrulatum*), Swamp rosemallow (*Muehlenhusia grandiflora*), torpedo grass (*Panicum repens*), nutrush, West Indian marshgrass (*Hymenachne amplexicaulis*), primrose willow, corkwood, wax myrtle, buttonbush, and Carolina willow.

Slough marsh

Slough marshes are primarily herbaceous communities dominated by grasses, sedges, and emergent herbs. They typically occur in narrow to broad shallow channels with intermittently

flowing water across flat sandy landscapes. Vegetation composition depends on depth and hydroperiod, resulting in distinct zonation patterns. Drier marsh zones are frequently dominated by sand cordgrass (*Spartina bakeri*), Southern elderberry (*Sambucus nigra*), longleaf threeawn (*Aristida palustris*), beakrush (*Rhynchospora* spp.), Elliott's yellow-eyed grass (*Xyris elliotii*), narrowfruit horned beaksedge (*Rhynchospora inundata*), and blue maidencane. Frequently flooded zones are often dominated by species such as arrowhead (*Sagittaria lancifolia*), pickerelweed (*Pontederia cordata*), alligator flag (*Thalia geniculata*), maidencane (*Panicum hemitomon*), sawgrass (*Cladium jamaicense*), and cattails (*Typha* spp.).

In the DuPuis MA, the slough marsh community represents the last remaining remnant of that historic northern Everglades reach. Vegetation is generally similar to that of depression marshes but includes a greater abundance of broadleaf emergents and floating aquatic plants. The prominent species include marshmallow (*Kosteletzkya virginica*), bulrush (*Scirpus* spp.), Lindenleaf and rosemallow (*Sabdariffa furcellata*), flatsedge (*Cyperus* spp.), alligator flag, maidencane, smartweed, sawgrass, white waterlily, and cattail. Floating vegetation includes yellow pondlily (*Nuphar advena*), bladderwort, water-lettuce (*Pistia stratiotes*), Water spangles (*Salvinia minima*), and common duckweed (*Lemna minor*). Shrub pockets, often composed of wax myrtle, saltbush, primrose willow, and willow, are also commonly scattered throughout the slough. Several upland islands, mostly composed of hammocks, are also interspersed within the slough marsh.

Marsh communities generally require periodic fire to maintain their vegetation structure and ecological function. Herbaceous-dominated marshes typically need burning every three to five years, while shrub-dominated areas tend to burn less frequently, on a three- to ten-year cycle. Fire promotes habitat heterogeneity, maintains an open herbaceous structure, and enhances foraging opportunities for a wide range of waterbird species. Without fire, marshes accumulate peat, gradually raising the ground surface. This change in elevation reduces water storage capacity and can shift the community toward a hardwood swamp. In the absence of fire or under shortened hydroperiods, these systems are also susceptible to encroachment by woody species such as wax myrtle, saltbush, and various invasive shrubs.

In the DuPuis MA, marsh communities are burned on a four-year rotation, which helps maintain the grasses, sedges, and broadleaf emergent structure. These marshes were historically grazed intensively, and the removal of grazing pressure, combined with hydrologic improvements, has facilitated natural recruitment of native vegetation throughout the depression and slough marshes. However, remnant pasture grasses such as smutgrass, Bermuda grass (*Cynodon dactylon*), and pangola grass (*Digitaria pentzii*) remain common in the slough marshes, while torpedograss is most prominent in the depression marshes. Both depression and slough marshes are actively treated for Old World climbing fern (*Lygodium microphyllum*) and other nuisance species, but they are not currently managed for herbaceous invasives such as torpedograss and pasture grasses. The primary land management objective for these communities is to maintain an open marsh structure by using prescribed fire to control shrub encroachment and promote the natural recruitment of native grasses and sedges.

WET FLATWOODS (12%)

Wet flatwoods are characterized as pine forests with a sparse midstory and a dense groundcover of hydrophytic grasses, herbs, and low shrubs. The density of shrubs and herbaceous vegetation can vary significantly in wet flatwoods, with shrubs dominating where fire has been suppressed for a long period or where winter burns predominate. Wet flatwoods are ranked as apparently secure in their range globally and statewide (G4/S4).

In the DuPuis MA, wet flatwoods communities encompass approximately 2,740 acres. These flatwoods are dominated by Florida slash pine, interspersed with cypress and scattered cabbage palm. Less prominent canopy species, including laurel oak, swamp bay, dahoon holly, and red maple, are scattered across the landscape. The understory is typically open with a diverse groundcover, particularly on the east side of the property. Common shrubs, found either scattered or in clusters, include wax myrtle, sweet gallberry, buttonbush, saltbush, willow, and primrose willow. Groundcover vegetation is diverse and includes knotroot foxtail (*Setaria parviflora*), red top Panicum (*Coleataenia rigidula*), Florida little bluestem (*Schizachyrium rhizomatum*), yellow-eyed grass, Elliott's lovegrass, swamp fern, Sawgrass, maidencane, blue maidencane, witchgrass, shrubby false buttonweed, St. John's wort spp., marsh fleabanes, swamp lily, redroot (*Lachnanthes caroliniana*), pickerelweed, meadowbeauty (*Rhexia* spp.), milkworts, Beaksedge spp., and umbrellasedge spp.

Prescribed fire considerations for wet flatwoods are generally similar to those for mesic flatwoods. In the absence of frequent fire, these communities tend to accumulate dense shrubby undergrowth, which can alter vegetation structure and ecological function. The desired structure is a relatively open pine-cypress canopy with sparsely scattered cabbage palms and shrubs, supported by a grass-dominated groundcover. Management objectives for wet flatwoods vegetation in the DuPuis MA include treating nuisance and invasive species to maintain these areas in maintenance condition and applying prescribed fire to limit shrub encroachment in the understory and sustain the fire-adapted community structure.

CYPRESS (15%)

Cypress/tupelo wetlands are frequently flooded wetlands dominated by cypress or tupelo (black gum) species. In the DuPuis MA, tupelo is generally absent, and the community is dominated by bald cypress. This cypress-dominated wetland type covers 3,278 acres and includes a mix of floodplain and dome swamp conditions.

Strand Swamp

Strand swamps are shallow, forested linear depressions or channels dominated by bald cypress (*Taxodium distichum*), with pond cypress (*Taxodium ascendens*) more common in smaller strands or shallow margins. Their distinctive rounded profile is created by smaller cypress trees along the edges grading into larger individuals toward the interior. The woody understory typically includes red maple (*Acer rubrum*), pond apple (*Annona glabra*), swamp laurel oak, swamp bay, cabbage palm, strangler fig (*Ficus aurea*), sweetbay, Carolina willow, wax myrtle, myrsine, and

buttonbush. Strand swamps are ranked as the second-most endangered natural community statewide and globally (G2/S2).

In the DuPuis MA, strand swamps appear in two distinct expressions. The predominant expression features a mature, cypress-dominated canopy with groundcover composed largely of sawgrass and ferns, reflecting the characteristic vegetation structure of strand swamps. Within the larger strand swamp matrix, a less prominent expression is dwarf pond cypress–dominated marl prairies. These marl prairie communities differ from typical marl prairie primarily in their higher cypress density, yet their groundcover remains consistent with the characteristic marl prairie composition. This vegetation type is more recently referred to as cypress savanna. Both strand swamp and marl prairie/cypress savanna communities in the DuPuis MA support diverse epiphyte populations, including listed orchid species. These marl prairie communities are mapped as strand swamp rather than wet prairie to reflect their distinct vegetation structure, most notably the substantially higher cypress cover, which aligns them more closely with strand swamp ecological processes and habitat characteristics.

In the DuPuis MA, strand swamps are concentrated on the east side of the property, intersperse with wet flatwoods. The canopy is dominated by mature cypress, with scattered cabbage palms and peripheral slash pines. Pond apple often occurs in deeper zones. The midstory typically includes buttonbush, swamp bay, red maple, willow, cocoplum, and wax myrtle. Groundcover varies from sawgrass in wetter sections to swamp ferns and includes bladderwort, swamp lily (*Crinum americanum*), arrowhead (*Sagittaria lancifolia*), lizard's tail, strap fern, sword fern (*Nephrolepis exaltata*), swamp fern, shrubby false buttonweed (*Borreria verticillata*), witchgrass (*Dichanthelium spp.*), maidencane, marsh fleabanes, St. John's wort spp., sawgrass, cinnamon fern, swamp fern, giant leather fern (*Acrostichum danaeifolium*), firebush (*Hamelia patens*), milkweed (*Asclepias spp.*), and various rushes and sedges.

The marl prairie/cypress savanna communities in the DuPuis MA consist of open-canopy dwarf cypress stands that occupy a larger proportion of the community than is typical of marl prairie. Limestone substrates are present beneath a thin sand layer but are generally not exposed. The midstory is absent, and groundcover is dominated by beakrush, *Panicum spp.*, bog buttons, yellow-eyed grass, bladderwort, corkwood, butterwort (*Pinguicula spp.*), Elliott's lovegrass, marsh pink (*Sabatia spp.*), hatpins (*Syngonanthus flavidulus*), and St. John's wort spp.

Dome Swamp

Dome swamps are isolated, forested, depressional wetlands within fire-maintained communities. They are typically circular in shape and exhibit a domed profile, with taller trees in the center and shorter vegetation along the edges. Shrub cover ranges from sparse to moderate but is often absent in areas with frequent fire. Dome swamps are ranked as apparently secure both globally and statewide (G4/S4), although they may be rare in certain parts of their range, particularly at the periphery.

In the DuPuis MA, dome swamps are scattered across the southern portion of the property. These domes are characterized by a canopy dominated by bald cypress, with centers typically supporting alligator flag, floating heart (*Nymphoides aquatica*), willow, and buttonbush.

Transitional zones along the dome edges support dahoon holly, and occasional slash pine. Common midstory vegetation includes pond apple (*Annona glabra*), wax myrtle, cabbage palm, swamp bay, and red maple. Groundcover is generally a mixture of ferns, rushes, and sedges, along with other species such as pickerelweed, maidencane, bladderwort, smartweed (*Persicaria* spp.), St. John's wort spp, and marsh fleabane.

Periodic fire is essential for maintaining the cypress component of the cypress systems in the DuPuis MA and preventing hardwood invasions. Some strand swamps develop dense sawgrass understories, making them difficult to access. In the DuPuis MA, aerial ignition conducted under moist conditions has proven to be the most effective method for achieving adequate understory coverage in the swamps. Because burns in wetland systems naturally produce patchy results, prescribed fire in the cypress tends to create a mosaic of groundcover conditions, ranging from open areas to dense pockets. Fire frequency in these cypress communities typically averages around four years.

Prescribed fire is typically applied to dome swamps with the surrounding communities when the soil is saturated. Under these conditions, fires may burn through the outer portions and slowly move to the center or extinguish before reaching the center. In strand swamps, the center maintains higher moisture levels due to longer hydroperiods and may require multiple fire rotations to burn.

The cypress systems in the DuPuis MA are mature and exhibit the structural characteristics typical of these natural communities. Management objectives are to preserve the integrity of the cypress canopy by using prescribed fire to limit hardwood encroachment and influence groundcover structure and treating nuisance and invasive species to achieve and maintain desired ecological conditions.

MESIC FLATWOODS (48%)

Mesic flatwoods are characterized by an open-canopy forest of widely spaced pine trees with a dense understory of herbs and shrubs. These communities occur on poorly drained soils that are seasonally saturated during the wet season but rarely inundated for extended periods. In northern and central Florida, longleaf pine (*Pinus palustris*) is typically present or dominant, while in southern Florida, slash pine (*Pinus elliotii*) is more common. The shrub layer often includes saw palmetto, gallberry, coastalplain staggerbush, fetterbush, dwarf live oak, runner oak, shiny blueberry, Darrow's blueberry (*Vaccinium darrowii*), and dwarf huckleberry. The herbaceous layer is predominantly grasses, including wiregrass, dropseed (*Sporobolus* spp.), panicgrass (*Dichanthelium* spp.), and broomsedges (*Andropogon* spp.), and various showy forbs. Mesic flatwoods are ranked as apparently secure in their range globally and statewide (G4/S4).

In the DuPuis MA, the mesic flatwoods community is the largest natural community, encompassing approximately 10,511 acres. These flatwoods are dominated by slash pine, with scattered pockets of cabbage palm, common persimmon, and live oak in the canopy. The midstory is generally absent due to the regular application of prescribed fire. The understory is dense with low shrubs and groundcover vegetation. The shrub layer is dominated by saw palmetto, saltbush, gallberry (*Ilex glabra*), runner oak, fetterbush (*Lyonia lucida*), Rusty Lyonia (*Lyonia fruticose*), and

shiny blueberry. Other common species include myrsine (*Myrsine cubana*), beautyberry (*Callicarpa americana*), queen's delight (*Stillingia sylvatica*), wax myrtle, dwarf huckleberry (*Gaylussacia dumosa*), and netted pawpaw (*Asimina reticulata*). The groundcover consists of a diverse mix of herbs, grasses, and ferns, including St. John's wort, tarflower (*Bejaria racemosa*), blackroot (*Pterocaulon pycnostachyum*), chalky bluestem (*Andropogon virginicus*), Creeping Bluestem (*Schizachyrium stoloniferum*), South Florida Bluestem (*Schizachyrium rhizomatum*), wiregrass (*Aristida stricta*), blue maidencane (*Amphicarpum muehlenbergianum*), Threeawn (*Aristida* spp.), toothache grass (*Ctenium aromaticum*), Switch grass (*Panicum virgatum*), lopsided indiangrass (*Sorghastrum secundum*), Spanish needles (*Bidens bipinnata*), beaksedges (*Rhynchospora* spp.), carpet grass, goldenrod (*Solidago* spp.), wild pennyroyal (*Piloblephis rigida*), bog buttons (*Lachnocaulon anceps*), crabgrass (*Digitaria* spp.), snowy orchid (*Platanthera nivea*), zephyrlily (*Zephyranthes simpsonii*), dog fennel, ragweed (*Ambrosia artemisiifolia*), cogongrass, caesarweed, yellow-eyed grass (*Xyris* spp.), and various other wildflowers, ferns, vines and ruderal species.

Mesic flatwoods in the DuPuis MA provide important habitat for red-cockaded woodpeckers (*Dryobates borealis*), which occur both within the management area and in the adjacent wildlife management area. The desired vegetation structure for this community consists of a pine-dominated canopy with an understory of low shrubs, grasses, and forbs. The canopy structure has been achieved across most mesic flatwoods; however, some areas exhibit higher-than-desired levels of cabbage palm and oak cover. These increases are indicative of past drainage alterations and their ongoing influence on the community. The understory condition also varies due to the site's alterations. Nuisance species such as torpedograss, pangola grass, napier grass, and smutgrass are present but generally confined to localized areas of disturbance. Torpedograss is mostly restricted to trails and firelines, while napier grass and smutgrass are interspersed within the groundcover and tend to dominate in areas where saw palmetto and the native groundcover species have not fully re-established. Management objectives for the mesic flatwoods include treating nuisance and invasive species to maintain these areas in a stable maintenance condition, applying prescribed fire to control shrub density and sustain the fire-adapted community structure, selectively thinning cabbage palms to support effective fire application and maintain desired canopy conditions, and utilizing growing-season burns to promote and maintain robust native grass coverage.

OTHER LANDCOVER TYPES

OPEN WATER (0.8%)

The open water areas within the DuPuis MA comprise approximately 172 acres of small waterbodies, including conveyance ditches, small artificial (cattle) ponds and borrow lakes. Depending on depth and slope, these waterbodies usually have an open-water zone with occasional floating and submerged aquatic plants. Typically, the open water areas in the DuPuis MA do not require direct management.

ALTERED LANDCOVERS (4%)

Altered land cover types within the DuPuis MA encompass approximately 854 acres where natural vegetation has been significantly modified. These areas include a dove field, unrestored agricultural and pasture lands, spoil banks, roads, powerlines, berms, ditches, and open spaces containing various infrastructure such as recreational campgrounds, parking areas, an equestrian center, maintenance shop, office complex, staff residences and RV pads.

These sites are generally open, with scattered oaks and cabbage palms and an understory dominated by pasture grasses and opportunistic species such as bahia grass, Bermuda grass (*Cynodon dactylon*), rustweed (*Polypremum procumbens*), flatsedge (*Cyperus* spp.), napier grass (*Pennisetum purpureum*), Guinea grass (*Urochloa maxima*), cogongrass, torpedograss, smutgrass, dog fennel, ragweed (*Ambrosia artemisiifolia*), common reed (*Phragmites australis*), carpetgrass, and crabgrass. Management of these altered areas includes periodic mowing, prescribed burning, and targeted invasive-species treatments conducted in coordination with the management of surrounding natural communities.

Due to the past land use, manmade linear features such as plugged ditches, berms, and degraded spoil piles are dispersed throughout the natural community landscape. While these features may still be visible in aerial imagery, small in scale and well-integrated into the surrounding natural communities. As a result, they were mapped as part of the adjacent natural systems and are not included in the total for the altered landcover types.

REFERENCES

- Duever, M. J., J. E. Carlson, L. A. Riopelle, L.H. Gunderson, and L. C. Duever. 1976. *Ecosystem analyses at Corkscrew Swamp*. In HT Odum, KC Ewel, JW Ordway & MK Johnson (eds.), Cypress wetlands for water management, recycling and conservation (pp. 707-737). Third annual report to National Science Foundation and The Rockefeller Foundation. Center for Wetlands, University of Florida, Gainesville, FL.
- Florida Natural Areas Inventory (FNAI). 2010. *Guide to the natural communities of Florida: 2010 edition*. Florida Natural Areas Inventory, Tallahassee, FL Available online at. https://www.fnai.org/PDF/FNAI-Natural-Community-Classification-Guide-2010_20150218.pdf as of June 2021.
- Kawula, R. and J. Redner. 2018. *Florida Land Cover Classification System*. Center for Spatial Analysis Fish and Wildlife Research Institute. Florida Fish and Wildlife Conservation Commission, Tallahassee, FL. Available online at. <https://myfwc.com/media/20455/land-cover-classification-revision-2018.pdf> as of June 2021.
- Myers, J. and J. Ewel. 1990. *Ecosystems of Florida*. University of Central Florida Press. University Presses of Florida, Orlando, FL.
- U.S. Fish and Wildlife Service. 1999. *Florida Scrub Including Scrubby Flatwoods and Scrubby High Pine*. South Florida multi-species recovery plan. Atlanta, Georgia. 2172 pp.
- Wade, D., J. Ewel, and R. Hofstetter. 1980. *Fire in South Florida Ecosystems*. United States Department of Agriculture Forest Service, Southeast Forest Experiment Station, Gen. Tech. Rep., No. SE-17. 125pp. Asheville, NC.

Appendix C. Species List

Table 1. List of plants on the DuPuis Reserve MA and status.^a

Scientific Name	Common Name	Listing Status
<i>Abildgaardia ovata</i>	Flatspike sedge	
<i>Acacia auriculiformis</i>	Earleaf acacia	Non-native
<i>Acalypha gracilens</i>	Slender threeseed mercury	
<i>Acer rubrum</i>	Red maple	
<i>Acrostichum danaeifolium</i>	Giant leather fern	
<i>Aeschynomene americana</i>	Shyleaf	
<i>Agalinis linifolia</i>	Flaxleaf false foxglove	
<i>Agalinis purpurea</i>	Purple false foxglove	
<i>Agalinis maritima</i>	Saltmarsh false foxglove	
<i>Agave sisalana</i>	Sisal hemp	Non-native
<i>Ageratina jucunda</i>	Hammock snakeroot	
<i>Ageratum conyzoides</i>	Tropical whiteweed	Non-native
<i>Albizia lebbek</i>	Woman's tongue	Non-native
<i>Aletris lutea</i>	Yellow Colic root	
<i>Allamanda cathartica</i>	Golden trumpet	Non-native
<i>Alternanthera philoxeroides</i>	Alligatorweed	Non-native
<i>Alternanthera sessilis</i>	Sessile joyweed	
<i>Alysicarpus vaginalis</i>	White moneywort	Non-native
<i>Ambrosia artemisiifolia</i>	Ragweed	
<i>Ammannia latifolia</i>	Pink redstem	
<i>Amorpha fruticosa</i>	Bastard indigo bush	
<i>Amphicarpum muhlenbergianum</i>	Blue maidencane	
<i>Andropogon glomeratus</i>	Purple bluestem	
<i>Andropogon gyrans</i>	Elliott's bluestem	
<i>Andropogon longiberbis</i>	Hairy bluestem	
<i>Andropogon ternarius</i>	Splitbeard bluestem	
<i>Andropogon virginicus</i>	Broomsedge bluestem	
<i>Andropogon virginicus var. glaucus</i>	Chalky bluestem	
<i>Annona glabra</i>	Pond apple	
<i>Antigonon leptopus</i>	Coralvine	Non-native
<i>Apios americana</i>	Groundnut	
<i>Apteria aphylla</i>	Nodding nixie	
<i>Araucaria heterophylla</i>	Northfolk island pine	Non-native
<i>Ardisia elliptica</i>	Shoebutton ardisia	Non-native
<i>Argemone mexicana</i>	Mexican poppy	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	
<i>Aristida palustris</i>	Longleaf threeawn	
<i>Aristida patula</i>	Tall threeawn	Endemic
<i>Aristida rhizomophora</i>	Florida threeawn	Endemic
<i>Aristida spiciformis</i>	Bottlebrush threeawn	
<i>Aristida stricta</i> var. <i>beyrichiana</i>	Wiregrass	
<i>Arnoglossum ovatum</i>	Ovateleaf indian plantain	
<i>Asclepias curassavica</i>	Scarlet milkweed	Non-native
<i>Asclepias incarnata</i>	Swamp milkweed	
<i>Asclepias lanceolata</i>	Fewflower milkweed	
<i>Asclepias longifolia</i>	Longleaf milkweed	
<i>Asclepias pedicellata</i>	Savannah milkweed	
<i>Asclepias tuberosa</i>	Butterflyweed; Butterfly milkweed	
<i>Asclepias verticillata</i>	Whorled milkweed	
<i>Asclepias viridis</i>	Green antelopehorn	
<i>Asimina reticulata</i>	Netted pawpaw	
<i>Asparagus aethiopicus</i>	Sprenger's asparagus	Non-native
<i>Asparagus setaceus</i>	Common Asparagus-fern	Non-native
<i>Axonopus compressus</i>	Tropical carpetgrass	
<i>Axonopus fissifolius</i>	Common carpetgrass	
<i>Axonopus furcatus</i>	Big carpetgrass	
<i>Azolla caroliniana</i>	Carolina mosquito fern	
<i>Baccharis glomeruliflora</i>	Silverling	
<i>Baccharis halimifolia</i>	Groundsel tree; Saltbush; Sea myrtle	
<i>Bacopa caroliniana</i>	Lemon bacopa	
<i>Bacopa innominata</i>	Tropical waterhyssop	
<i>Bacopa monnieri</i>	Bacopa, Herb-of-Grace	
<i>Balduina angustifolia</i>	Coastalplain honeycomb head	
<i>Bambusa vulgaris</i>	Bamboo	Non-native
<i>Bartonia verna</i>	White screwstem	
<i>bartowense</i>	Hairy fall panicgrass	
<i>Bauhinia variegata</i>	Orchid tree	Non-native
<i>Bejaria racemosa</i>	Tarflower	
<i>Bidens alba</i> var. <i>radiata</i>	Beggarticks	
<i>Bidens laevis</i>	Smooth beggarticks	
<i>Bidens mitis</i>	Smallfruit beggarticks	
<i>Bigelowia nudata</i>	Pineland rayless goldenrod	
<i>Bletia purpurea</i>	Pinepink orchid	
<i>Boehmeria cylindrica</i>	False nettle; Bog hemp	ST
<i>Boerhavia diffusa</i>	Wineflower	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Borreria remota</i>	Woodland false buttonweed	
<i>Borreria verticillata</i>	Shrubby false buttonweed	Non-native
<i>Brassica juncea</i>	Leaf mustard	Non-native
<i>Buchnera americana</i>	American bluehearts	
<i>Bulbostylis barbata</i>	Bearded hairsedge	
<i>Bulbostylis ciliatifolia</i>	Capillary hairsedge	
<i>Bulbostylis stenophylla</i>	Sandy field hairsedge	
<i>Burmanna biflora</i>	Bluethread	
<i>Burmanna capitata</i>	Southern bluethread	
<i>Bursera simaruba</i>	Gumbo-limbo	
<i>Callicarpa americana</i>	Beauty berry	
<i>Calopogon barbatus</i>	Bearded grasspink	
<i>Calopogon multiflorus</i>	Manyflowered grasspink	ST
<i>Calopogon tuberosus</i>	Tuberous grasspink	
<i>Calystegia sepium</i>	Hedge false bindweed	
<i>Campyloneurum phyllitidis</i>	Strap fern	
<i>Canna flaccida</i>	Bandana-of-the-Everglades	
<i>Carex glaucescens</i>	Clustered sedge	
<i>Carex longii</i>	Long's sedge	
<i>Carex lupulina</i>	Hop sedge	
<i>Carex vexans</i>	Florida hammock sedge	
<i>Carica papaya</i>	Papaya	
<i>Carphephorus carnosus</i>	Pineland chaffhead	
<i>Carphephorus corymbosus</i>	Florida paintbrush	
<i>Carphephorus odoratissimus</i>	Vanillaleaf	
<i>Carphephorus paniculatus</i>	Hairy chaffhead	
<i>Cassytha filiformis</i>	Love vine	
<i>Casuarina glauca</i>	Gray sheoak	Non-native
<i>Catharanthus roseus</i>	Madagascar periwinkle	Non-native
<i>Celtis laevigata</i>	Sugarberry; Hackberry	
<i>Cenchrus echinatus</i>	Souther sandbur	
<i>Cenchrus incertus</i>	Coastal sandbur	
<i>Centella asiatica</i>	Coinwort	
<i>Centrosema virginianum</i>	Butterfly pea	
<i>Cephalanthus occidentalis</i>	Buttonbush	
<i>Ceratophyllum demersum</i>	Coontail	
<i>Ceratopteris thalictroides</i>	Watersprite	
<i>Chamaecrista fasciculata</i>	Partridge pea	
<i>Chamaecrista nictitans</i>	Sensitive pea	
<i>Chaptalia tomentosa</i>	Pineland daisy	
<i>Chromolaena odorata</i>	Jack-in-the-bush	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Chrysobalanus icaco</i>	Cocoplum	
<i>Chrysophyllum oliviforme</i>	Satinleaf	ST
<i>Chrysopsis scabrella</i>	Coastalplain goldenaster	
<i>Cicuta maculata</i>	Spotted water hemlock	
<i>Cirsium horridulum</i>	Thistle	
<i>Cirsium nuttallii</i>	Nuttall's thistle	
<i>Cissus verticillata</i>	Seasonvine	
<i>Citrus aurantium</i>	Sour orange	Non-native
<i>Citrus limon</i>	Lemon	Non-native
<i>Citrus medica</i>	Citron	Non-native
<i>Citrus sinensis</i>	Sweet orange	Non-native
<u><i>Citrus X Paradisi</i></u>	Grapefruit	Non-native
<i>Cladium jamaicense</i>	Sawgrass	
<i>Clematis baldwinii</i>	Pine hyacinth	
<i>Cnidoscolus stimulosus</i>	Finger-rot	
<i>Coleataenia anceps</i>	Beaked panicum	
<i>Coleataenia longifolia</i>	Longleaf Panicum	
<i>Coleataenia rigidula</i>	Red top Panicum	
<i>Coelorachis rugosa</i>	Wrinkled jointtail grass	
<i>Coleataenia tenera</i>	Bluejoint panicum	
<i>Colocasia esculenta</i>	Wild taro	Non-native
<i>Commelina diffusa</i>	Common dayflower	
<i>Commelina erecta</i>	Whitemouth dayflower	
<i>Conoclinium coelestinum</i>	Blue mistflower	
<i>Coreopsis floridana</i>	Florida tickseed	endemic
<i>Coreopsis gladiata</i>	Tickseed	
<i>Coreopsis leavenworthii</i>	Leavenworth's tickseed	
<i>Crataegus crus-galli</i>	Cockspur hawthorn	
<i>Crinum americanum</i>	Swamp lily	
<i>Crotalaria incana</i>	Shakeshake	
<i>Crotalaria lanceolata</i>	Lanceleaf rattlebox	
<i>Crotalaria pumila</i>	Low rattlebox	
<i>Crotalaria retusa</i>	Rattleweed	
<i>Crotalaria rotundifolia</i>	Rabbitbells	
<i>Crotalaria spectabilis</i>	Showy rattlebox	
<i>Croton glandulosus</i>	Vente conmigo	
<i>Croton linearis</i>	Pineland croton	
<i>Ctenium aromaticum</i>	Toothache grass	
<i>Cupaniopsis anacardioides</i>	Carrotwood	Non-native
<i>Cuphea carthagenensis</i>	Colombian waxweed	Non-native
<i>Cuthbertia ornata</i>	Florida scrub roseling	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Cynodon dactylon</i>	Bermuda grass	Non-native
<i>Cyperus articulatus</i>	Jointed flatsedge	
<i>Cyperus compressus</i>	Poorland flatsedge	
<i>Cyperus croceus</i>	Baldwin's flatsedge	
<i>Cyperus difformis</i>	Variable flatsedge	
<i>Cyperus distinctus</i>	Swamp flatsedge	
<i>Cyperus esculentus</i>	Chufa flatsedge	
<i>Cyperus flavescent</i>	Yellow flatsedge	
<i>Cyperus haspan</i>	Haspan flatsedge	
<i>Cyperus lanceolatus</i>	Epiphytic flatsedge	
<i>Cyperus lecontei</i>	Leconte's flatsedge	
<i>Cyperus ligularis</i>	Swamp flatsedge	
<i>Cyperus odoratus</i>	Fragrant flatsedge	
<i>Cyperus polystachyos</i>	Many-spiked Flatsedge	
<i>Cyperus pumilus</i>	Low flatsedge	
<i>Cyperus retrorsus</i>	Pinebarren flatsedge	
<i>Cyperus surinamensis</i>	Tropical flatsedge	
<i>Dactyloctenium aegyptium</i>	Durban crowfootgrass	Non-native
<i>Dalbergia sissoo</i>	Indian rosewood	
<i>Dalea pinnata</i>	Summer farewell	ST
<i>Dendrophylax porrectus</i>	Threadroot orchid	
<i>Desmodium incanum</i>	Ticktrefoil	
<i>Desmodium triflorum</i>	Threeflower ticktrefoil	
<i>Dichanthelium aciculare</i>	Needleleaf witchgrass	
<i>Dichanthelium commutatum</i>	Variable witchgrass	
<i>Dichanthelium dichotomum</i>	Cypress witchgrass	
<i>Dichanthelium ensifolium</i>	Dwarf cypress witchgrass	
<i>Dichanthelium erectifolium</i>	Erectleaf witchgrass	
<i>Dichanthelium laxiflorum</i>	Openflower witchgrass	
<i>Dichanthelium scabriusculum</i>	Wooly witchgrass	
<i>Dichondra carolinensis</i>	Carolina ponysfoot	
<i>Digitaria ciliaris</i>	Southern crabgrass	
<i>Digitaria floridana</i>	Florida crabgrass	
<i>Digitaria horizontalis</i>	Jamaican crabgrass	
<i>Digitaria longiflora</i>	Indian crabgrass	
<i>Digitaria pentzii</i>	Pangola grass	Non-native
<i>Digitaria villosa</i>	Slender crabgrass	
<i>Diodia teres</i>	Poor joe	
<i>Diodia virginiana</i>	Virginia buttonweed	
<i>Dioscorea bulbifera</i>	Air-potato	Non-native
<i>Diospyros virginiana</i>	Common persimmon	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Drosera brevifolia</i>	Dwarf sundew	
<i>Drosera capillaris</i>	Pink sundew	
<i>Drymaria cordata</i>	Drymary	
<i>Dyschoriste angusta</i>	Pineland twinflower	
<i>Dysphania ambrosioides</i>	Pigweed; Mexican tea	Non-native
<i>Echinochloa colona</i>	Jungle rice	
<i>Echinochloa crusgalli</i>	Barnyard grass	
<i>Echinochloa walteri</i>	Coast cockspur	
<i>Eichhornia crassipes</i>	Water hyacinth	
<i>Eleocharis atropurpurea</i>	Purple spikerush	
<i>Eleocharis baldwinii</i>	Baldwin's spikerush	
<i>Eleocharis geniculata</i>	Canada spikerush	
<i>Eleocharis interstincta</i>	Knotted spikerush	
<i>Eleocharis nigrescens</i>	Black spikerush	
<i>Eleocharis vivipara</i>	Spikerush	
<i>Elephantopus elatus</i>	Tall elephants foot	
<i>Eleusine indica</i>	Goose grass	
<i>Emilia fosbergii</i>	Florida tasselflower	
<i>Emilia sonchifolia</i>	Lilac tasselflower	
<i>Encyclia tampensis</i>	Florida butterfly orchid	
<i>Eragrostis atrovirens</i>	Thalia lovegrass	
<i>Eragrostis ciliaris</i>	Gophertail lovegrass	
<i>Eragrostis elliotti</i>	Elliott's lovegrass	
<i>Eragrostis hypnoides</i>	Teal lovegrass	
<i>Eragrostis pectinacea</i>	Tufted lovegrass	
<i>Eragrostis spectabilis</i>	Purple lovegrass	
<i>Eragrostis virginica</i>	Coastal lovegrass	
<i>Erechtites hieracifolia</i>	Fireweed	
<i>Eremochloa ophiuroides</i>	Centipede grass	
<i>Erigeron quercifolius</i>	Oakleaf fleabane	
<i>Erigeron vernus</i>	Early whitetop fleabane	
<i>Erigeron canadensis</i>	Canadian horseweed	
<i>Eriocaulon compressum</i>	Flattened pipewort	
<i>Eriocaulon decangulare</i>	Hatpins	
<i>Eriocaulon ravenelii</i>	Rarenel's pipewort	
<i>Eriochloa michauxii</i>	Michaux's cupgrass	
<i>Eriogonum tomentosum</i>	Dogtongue wild buckwheat	
<i>Eryngium aquaticum</i>	Button snakeroot	
<i>Eryngium baldwinii</i>	Baldwin's eryngo	
<i>Eryngium yuccifolium</i>	Button rattlesnakemaster	
<i>Eucalyptus sp.</i>	Eucalyptus	Non-native

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Eugenia uniflora</i>	Surinam cherry	Non-native
<i>Eulophia alta</i>	Wild coco	
<i>Eupatorium capillifolium</i>	Dog-fennel	
<i>Eupatorium leptophyllum</i>	False fennel	
<i>Eupatorium mikanioides</i>	Semaphore thoroughwort	
<i>Eupatorium mohrii</i>	Mohr's thoroughwort	
<i>Euphorbia polyphylla</i>	Lesser florida spurge	
<i>Euphorbia hirta</i>	Pillpod sandmat	
<i>Euphorbia hypericifolia</i>	Graceful sandmat	
<i>Euphorbia maculata</i>	Spotted sandmat	
<i>Euphorbia prostrata</i>	Prostrate sandmat	
<i>Eustachys glauca</i>	Saltmarsh fingergrass	
<i>Eustachys petraea</i>	Pinewoods fingergrass	
<i>Eustachys floridana</i> Chapm.	Twospike fingergrass	
<i>Euthamia grominifolia</i>	Flat-topped Goldenrod	
<i>Ficus aurea</i>	Strangler fig	
<i>Ficus microcarpa</i>	Indian laurel	Non-native
<i>Fimbristylis dichotoma</i>	Forked fimbry	
<i>Fimbristylis puberula</i>	Hairy fimbry	
<i>Fimbristylis schoenoides</i>	Ditch fimbry	
<i>Fimbristylis autumnalis</i>	Slender fimbry	
<i>Flaveria linearis</i>	Narrowleaf yellowtops	
<i>Fraxinus caroliniana</i>	Pop ash	
<i>Froelichia floridana</i>	Cottonweed	
<i>Fuirena breviseta</i>	Saltmarsh umbrellasedge	
<i>Fuirena pumila</i>	Dwarf umbrellasedge	
<i>Fuirena scirpoidea</i>	Southern umbrellasedge	
<i>Fuirena squarrosa</i>	Hairy umbrellasedge	
<i>Funastrum clausum</i>	White twinevine	
<i>Galactia elliottii</i>	Elliott's milkpea	
<i>Galactia regularis</i>	Eastern milkpea	
<i>Galactia volubilis</i>	Downy milkpea	
<i>Galium hispidulum</i>	Bluntleaf bedstraw	
<i>Galium obtusum</i>	Bedstraw	
<i>Galium tinctorium</i>	Stiff marsh bedstraw	
<i>Galium uniflorum</i>	Oneflower bedstraw	
<i>Gaura angustifolia</i>	Southern beeblossom	
<i>Gaylussacia dumosa</i>	Dwarf huckleberry	
<i>Geobalanus oblongifolius</i>	Gopher apple	
<i>Gnaphalium falcatum</i>	Narrowleaf purple everlasting	
<i>Gnaphalium obtusifolium</i>	Sweet everlasting; Rabbit tobacco	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Gnaphalium pennsylvanicum</i>	Pennsylvania everlasting	
<i>Gnaphalium purpureum</i>	Spoonleaf purple everlasting	
<i>Gomphrena serrata</i>	Prostrate globe amaranth; Arrasa con todo	
<i>Gratiola hispida</i>	Rough hedgehyssop	
<i>Gratiola pilosa</i>	Hedge hyssop	
<i>Gratiola ramosa</i>	Branched hedgehyssop	
<i>Habenaria quinqueseta</i>	Longhorn false reinorchid	
<i>Habenaria repens</i>	Waterspider false reinorchid	
<i>Hamelia patens</i>	Firebush	
<i>Hedyotis corymbosa</i>	Flatop mille graines	
<i>Hedyotis uniflora</i>	Clustered mille graines	
<i>Helenium pinnatifidum</i>	Southeastern sneezeweed	
<i>Helianthemum corymbosum</i>	Pinebarren frostweed	
<i>Helianthemum nashii</i>	Florida scrub frostweed	
<i>Heliotropium angiospermum</i>	Scorpion's tail	
<i>Heliotropium polyphyllum</i>	Pineland heliotrope	
<i>Heterotheca subaxillaris</i>	Camphorweed	
<i>Hieracium gronovii</i>	Queen-devil	
<i>Hieracium megacephalon</i>	Coastalplain hawkweed	
<i>Hydrilla verticillata</i>	Waterthyme	
<i>Hydrocotyle umbellata</i>	Manyflower marshpennywort	
<i>Hydrocotyle verticillata</i>	Whorled pennywort	
<i>Hydrolea corymbosa</i>	Skyflower	
<i>Hymenachne hemitomon</i>	Maidencane	
<i>Hymenocallis palmeri</i>	Alligator lily	
<i>Hypericum cistifolium</i>	Roundpod st.john's-wort	
<i>Hypericum fasciculatum</i>	Sandweed; Peelbark St. John's-wort	
<i>Hypericum hypericoides</i>	St. Andrew's-cross	
<i>Hypericum mutilum</i>	Dwarf St. John's-wort	
<i>Hypericum tetrapetalum</i>	Four petal St. John's-wort	
<i>Hypericum tenuifolium</i>	Atlantic St. John'- wort	
<i>Hypericum virginicum</i>	Virginia Marsh St. John's-wort	
<i>Hypoxis juncea</i>	Fringed yellow stargrass	
<i>Hypoxis wrightii</i>	Bristleseed yellow stargrass	
<i>Hyptis alata</i>	Musky mint	
<i>Hyptis verticillata</i>	John charles	
<i>Ilex cassine</i>	Dahoon holly	
<i>Ilex glabra</i>	Gallberry	
<i>Imperata cylindrica</i>	Cogon grass	Non-native
<i>Indigofera hirsuta</i>	Hairy indigo	Non-native

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Ipomoea alba</i>	Moonflower	
<i>Ipomoea indica</i>	Oceanblue Morning-glory	
<i>Ipomoea sagittata</i>	Saltmarsh morning-glory	
<i>Iresine diffusa</i>	Juba's bush	
<i>Iris hexagona</i> var. <i>savannarum</i>	Southern blue flag	
<i>Itea virginica</i>	Virginia willow	
<i>Iva microcephala</i>	Piedmont marshelder	
<i>Juncus effusus</i> subsp. <i>sodutus</i>	Soft rush	
<i>Juncus marginatus</i>	Shore rush	
<i>Juncus megacephalus</i>	Bighead rush	
<i>Juncus polycephalus</i>	Many-headed Rush	
<i>Juncus repens</i>	Lesser creeping rush	
<i>Juncus scirpoides</i>	Needlepod rush	
<i>Juniperus virginiana</i>	Red cedar	
<i>Justica crassifolia</i>	Water willow	
<i>Kalanchoe pinnata</i>	Cathedral bells	
<i>Kelloggloa verrucosa</i>	Warty panicum	
<i>Kosteletzkya pentacarpos</i>	Marsh mallow	
<i>Kyllinga brevifolia</i>	Shortleaf spikesedge	
<i>Lachnanthes caroliniana</i>	Redroot	
<i>Lachnocaulon engleri</i>	Engler's bogbutton	
<i>Lachnocaulon minus</i>	Small's bogbutton	
<i>Lactuca graminifolia</i>	Grassleaf lettuce	
<i>Lantana strigocamara</i>	Lantana	Non-native
<i>Lechea divaricata</i>	Drysand pinweed	
<i>Lechea torreyi</i>	Piedmont pinweed	
<i>Leersia hexandra</i>	Southern cutgrass	
<i>Lemna valdiviana</i>	Valdivia duckweed	
<i>Lepidium virginicum</i>	Virginia pepperweed	
<i>Leucaena leucocephala</i>	White leadtree	Non-native
<i>Liatris chapmanii</i>	Chapman's gayfeather	
<i>Liatris garberi</i>	Garber's gayfeather	
<i>Liatris gracilis</i>	Slender gayfeather	
<i>Liatris spicata</i>	Dense gayfeather	
<i>Liatris tenuifolia</i>	Shortleaf gayfeather	
<i>Lilium catesbaei</i>	Catesby's lily	ST
<i>Limnobia spongia</i>	Frog's bit	
<i>Limnophila sessiliflora</i>	Asian marshweed	
<i>Linaria canadensis</i>	Canada toad flax	
<i>Linaria floridana</i>	Apalachicola toad flax	
<i>Lindernia anagallidea</i>	Yellowseed false pimpernel	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Lindernia crustacea</i>	Malaysian false pimpernel	
<i>Lindernia grandiflora</i>	Savannah false pimpernel	
<i>Linum medium</i> var. <i>texanum</i>	Stiff yellow flax	
<i>Lobelia feayana</i>	Bay lobelia	
<i>Lobelia glandulosa</i>	Glade lobelia	
<i>Lobelia paludosa</i>	White lobelia	
<i>Ludwigia alternifolia</i>	Seedbox	
<i>Ludwigia arcuata</i>	Piedmont primrose willow	
<i>Ludwigia curtissii</i>	Curtiss' primrose willow	
<i>Ludwigia erecta</i>	Yerba de jicotea	
<i>Ludwigia lanceolata</i>	Lanceleaf primrose willow	
<i>Ludwigia leptocarpa</i>	Anglestem primrose willow	
<i>Ludwigia linifolia</i>	Southeastern primrose willow	
<i>Ludwigia maritima</i>	Seaside primrose willow	
<i>Ludwigia octovalvis</i>	Mexican primrose willow	
<i>Ludwigia palustris</i>	Marsh seedbox	
<i>Ludwigia peruviana</i>	Peruvian primrose willow	
<i>Ludwigia pilosa</i>	Hairy primrose willow	
<i>Ludwigia repens</i>	Creeping primrose willow	
<i>Ludwigia suffruticosa</i>	Shrubby primrose willow	
<i>Ludwigia virgata</i>	Savannah primrose willow	
<i>Lupinus diffusus</i>	Sky blue lupine	
<i>Lycopersicon esculentum</i>	Garden tomato	
<i>Lycopodiella appressa</i>	Southern club-moss	
<i>Lycopodiella cernua</i>	Nodding club-moss	
<i>Lycopus rubellus</i>	Taperleaf waterhorehound	
<i>Lygodesmia aphylla</i>	Rose-rush	
<i>Lygodium microphyllum</i>	Old world climbing fern	
<i>Lyonia fruticosa</i>	Rusty lyonia, coastalplain staggerbush	
<i>Lyonia lucida</i>	Fetterbush	
<i>Lythrum alatum</i>	Winged loosestrife	
<i>Lythrum flagellare</i>	Florida loosestrife	
<i>Macroptilium lathyroides</i>	Wild bushbean	
<i>Magnolia virginiana</i>	Sweetbay	
<i>Mangifera indica</i>	Mango	
<i>Marshallia tenuifolia</i>	Grassleaf barbara's buttons	
<i>Mecardonia acuminata</i>	Axilflower	
<i>Melaleuca quinquenervia</i>	Melaleuca; Punktree	Non-native
<i>Melanthera nivea</i>	Snow squarestem	
<i>Melia azedarach</i>	Chinaberry tree	Non-native
<i>Melilotus indicus</i>	Indian sweetclover	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Melinis minutiflora</i>	Molasses grass	
<i>Melinis repens</i>	Rose natal grass	Non-native
<i>Melothria pendula</i>	Creeping cucumber	
<i>Melilotus albus</i>	White sweetclover	Non-native
<i>Melilotus indicus</i>	Indian sweetclover	
<i>Melinis minutiflora</i>	Molasses grass	
<i>Melinis repens</i>	Rose natal grass	Non-native
<i>Melothria pendula</i>	Creeping cucumber	
<i>Micranthemum glomeratum</i>	Manatee mudflower	
<i>Mikania cordifolia</i>	Florida keys hempvine	
<i>Mikania scandens</i>	Climbing hempvine	
<i>Mitreola petiolata</i>	Lax hornpod	
<i>Mitreola sessilifolia</i>	Swamp hornpod	
<i>Mollugo verticillata</i>	Indian chickweed	
<i>Momordica charantia</i>	Balsam-pear	Non-native
<i>Morella cerifera</i>	Wax myrtle	
<i>Morus rubra</i>	Red mulberry	
<i>Muenchhusia grandiflora</i>	Swamp rosemallow	
<i>Muhlenbergia capillaris</i>	Hair-awn Muhly	
<i>Murdannia nudiflora</i>	Nakedstem dewflower	
<i>Myrsine cubana</i>	Myrsine	
<i>Nekemias arborea</i>	Pepper vine	
<i>Nemastylis floridana</i>	Celestial lily	ST
<i>Nemastylus floridana</i>	Celestial-lily	
<i>Nephrolepis biserrata</i>	Giant sword fern	ST
<i>Nephrolepis cordifolia</i>	Tuberous sword fern	Non-native
<i>Nephrolepis exaltata</i>	Sword fern; Wild Boston fern	
<i>Nephrolepis multiflora</i>	Asian sword fern	Non-native
<i>Nuphar advena</i>	Spatterdock; Yellow pondlily	
<i>Nymphaea odorata</i>	American white waterlily	
<i>Nymphoides aquatica</i>	Big floatingheart	
<i>Oenothera laciniata</i>	Cut-leaf Evening-primrose	
<i>Ophioglossum palmatum</i>	Hand fern	SE
<i>Oplismenus hirtellus</i>	Woods grass	
<i>Opuntia ficus-indica</i>	Exotic Prickly-pear	
<i>Opuntia humifusa</i>	Prickley-pear	
<i>Osmunda cinnamomea</i>	Cinnamom fern	
<i>Osmunda regalis</i>	Royal fern	
<i>Oxalis corniculata</i>	Lady's sorrel	
<i>Oxalis debilis</i> var. <i>corymbosa</i>	Violet Wood-sorrel	
<i>Oxypolis filiformis</i>	Water dropwort	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Panicum dichotomiflorum</i>	Fall panicgrass	
<i>Panicum repens</i>	Torpedo grass	Non-native
<i>Panicum virgatum</i>	Switch grass	
<i>Parietaria floridana</i>	Florida pellitory	
<i>Parkinsonia aculeata</i>	Mexican palo verde	Non-native
<i>Parthenium hysterophorus</i>	Santa maria feverfew	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	
<i>Paspalidium geminatum</i>	Egyptian paspalidium	
<i>Paspalum blodgettii</i>	Coral paspalum	
<i>Paspalum boscianum</i>	Bull crowngrass	
<i>Paspalum caespitosum</i>	Blue crowngrass	
<i>Paspalum conjugatum</i>	Sour paspalum	
<i>Paspalum dilatatum</i>	Dallis grass	
<i>Paspalum dissectum</i>	Mudbank paspalum	
<i>Paspalum floridanum</i>	Florida paspalum	
<i>Paspalum laeve</i>	Field paspalum	
<i>Paspalum monostachyum</i>	Gulfdume paspalum	
<i>Paspalum notatum</i>	Bahia grass	Non-native
<i>Paspalum plicatulum</i>	Brownseed paspalum	
<i>Paspalum praecox</i>	Early paspalum	
<i>Paspalum repens</i>	Water paspalum	
<i>Paspalum setaceum</i>	Thin paspalum	
<i>Paspalum vaginatum</i>	Seashore paspalum	
<i>Paspalum urvillei</i>	Vasey grass	Non-native
<i>Passiflora suberosa</i>	Corksystem passionflower	
<i>Pectis prostrata</i>	Spreading cinchweed	
<i>Peltandra virginica</i>	Greed arum	
<i>Pennisetum purpureum</i>	Elephant grass; napier grass	
<i>Persea americana</i>	Avocado	Non-native
<i>Persea borbonia</i>	Red bay	
<i>Persea palustris</i>	Swamp bay	
<i>Persicaria glabra</i>	Denseflower knotweed	
<i>Persicaria hydropiperoides</i>	Swamp Smartweed; Mild waterpepper	
<i>Persicaria punctata</i>	Dotted smartweed	
<i>Phlebodium aureum</i>	Golden polybody	
<i>Phoenix reclinata</i>	Senegal date palm	Non-native
<i>Phragmites australis</i>	Common reed	Non-native
<i>Phyla nodiflora</i>	Frog-fruit	
<i>Phyllanthus abnormis</i>	Drummond's Leaf-flower	
<i>Phyllanthus amarus</i>	Gale-of-wind; Carry-me-seed	
<i>Phyllanthus tenellus</i>	Mascarene Island Leaf-flower	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Physalis angulata</i>	Cutleaf groundcherry	
<i>Physalis arenicola</i>	Cypresshead groundcherry	
<i>Physalis pubescens</i>	Husk tomato	
<i>Phytolacca americana</i>	Pokeberry	
<i>Pilea microphylla</i>	Artillery plant	
<i>Piloblephis rigida</i>	Wild pennyroyal	
<i>Pinguicula caerulea</i>	Blue-flowered Butterwort	ST
<i>Pinguicula lutea</i>	Yellow-flowered Butterwort	ST
<i>Pinguicula pumila</i>	Small butterwort	
<i>Pinus ellioti</i>	Slash pine	
<i>Piriqueta caroliniana</i>	Pitted stripeseed	
<i>Pistia stratiotes</i>	Water-lettuce	
<i>Pityopsis graminifolia</i>	Narrowleaf silkgrass	
<i>Plantago lanceolata</i>	Lance-leaf Plantain	
<i>Plantago major</i>	Large plantain	
<i>Plantago virginica</i>	Virginia plantain	
<i>Platanthera nivea</i>	Snowy orchid	ST
<i>Pleopeltis michauxiana</i>	Resurrection fern	
<i>Pluchea baccharis</i>	Rosy camphorweed	
<i>Pluchea foetida</i>	Stinking camphorweed	
<i>Pluchea odorata</i>	Sweetscent	
<i>Pogonia ophioglossoides</i>	Rose pogonia	ST
<i>Poinsettia cyathophora</i>	Paintedleaf	
<i>Poinsettia heterophylla</i>	Fiddler's spurge	
<i>Polanisia tenuifolia</i>	Slenderleaf chlammyweed	
<i>Polypremum procumbens</i>	Rustweed	
<i>Pontederia cordata</i>	Pickernelweed	
<i>Portulaca oleracea</i>	Purslane	
<i>Portulaca pilosa</i>	Pink purslane	
<i>Proserpinaca palustris</i>	Marsh mermaidweed	
<i>Proserpinaca pectinata</i>	Combleaf mermaidweed	
<i>Psidium cattleianum</i>	Strawberry guava	Non-native
<i>Psidium guajava</i>	Common guava	Non-native
<i>Psilotum nudum</i>	Whisk-fern	
<i>Psychotria nervosa</i>	Wild coffee	
<i>Psychotria tenuifolia</i>	Shortleaf wild coffee	
<i>Pteridium aquilinum</i> var. <i>caudatum</i>	Bracken fern	
<i>Pteris tripartita</i>	Giant brake	
<i>Pteris vittata</i>	Chinese ladder brake	
<i>Pterocaulon pycnostachyum</i>	Blackroot	
<i>Pteroglossaspis ecristata</i>	Giant orchid	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Ptilimnium capillaceum</i>	Mock bishop weed	
<i>Pyrostegia venusta</i>	Flamevine	Non-native
<i>Quercus laurifolia</i>	Laurel oak	
<i>Quercus minima</i>	Dwarf live oak	
<i>Quercus myrtifolia</i>	Myrtle oak	
<i>Quercus virginiana</i>	Live oak	
<i>Randia aculeata</i>	White indigoberry	
<i>Rhexia cubensis</i>	West indian meadowbeauty	
<i>Rhexia mariana</i>	Pale meadowbeauty	
<i>Rhexia nashii</i>	Meadowbeauty	
<i>Rhexia nuttallii</i>	Nuttall's meadowbeauty	
<i>Rhus copallinum</i>	Winged sumac	
<i>Rhynchosia minima</i>	Least snoutbean	
<i>Rhynchospora breviseta</i>	Shortbristle beaksedge	
<i>Rhynchospora caduca</i>	Anglestem beaksedge	
<i>Rhynchospora cephalantha</i>	Bunched beaksedge	
<i>Rhynchospora chapmanii</i>	Chapman's beaksedge	
<i>Rhynchospora ciliaris</i>	Fringed beaksedge	
<i>Rhynchospora corniculata</i>	Short-bristle Horned Beaksedge	
<i>Rhynchospora divergens</i>	Spreading beaksedge	
<i>Rhynchospora fascicularis</i>	Fascicled beaksedge	
<i>Rhynchospora filifolia</i>	Threadleaf beaksedge	
<i>Rhynchospora globularis</i>	Grass-like beaked-rush	
<i>Rhynchospora intermedia</i>	Pinebarren beaksedge	
<i>Rhynchospora inundata</i>	Narrowfruit horned beaksedge	
<i>Rhynchospora microcarpa</i>	Southern beaksedge	
<i>Rhynchospora miliacea</i>	Millet beaksedge	
<i>Rhynchospora odorata</i>	Fragrant beaksedge	
<i>Rhynchospora plumosa</i>	Plumed beaksedge	
<i>Rhynchospora rariflora</i>	Fewflower beaksedge	
<i>Rhynchospora stenophylla</i>	Narrow-leaf Beaksedge	
<i>Rhynchospora tracyi</i>	Tracy's Beaked-rush	
<i>Rhynchospora colorata</i>	White-tops	
<i>Rhynchospora latifolia</i>	Giant White-tops	
<i>Rhynchospora nitens</i>	Short-beaked Baldrush	
<i>Richardia brasiliensis</i>	Tropical Mexican-clover	
<i>Richardia grandiflora</i>	Large Flower Mexican-clover	
<i>Richardia scabra</i>	Rough Mexican-clover	
<i>Rivina humilis</i>	Rougeplant	
<i>Rotala ramosior</i>	Toothcup	
<i>Rubus trivialis</i>	Southern dewberry	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Rudbeckia hirta</i>	Black-eyed Susan	
<i>Ruellia caroliniensis</i>	Ruellia	
<i>Ruellia blechum</i>	Browne's blechum	Non-native
<i>Rumex verticillatus</i>	Swamp dock	
<i>Sabal palmetto</i>	Cabbage palm	
<i>Sabatia decandra</i>	Marsh pink; Bartram's rosegentian	
<i>Sabatia calycina</i>	Slender Marsh pink	
<i>Sabatia grandiflora</i>	Large-flower Rosegentian	
<i>Sabatia stellaris</i>	Rose-of-Plymouth	
<i>Sabdariffa furcellata</i>	Lindenleaf rosemallow	
<i>Saccharum giganteum</i>	Sugarcane plumegrass	
<i>Sacciolepis indica</i>	Indian cupscale	
<i>Sacciolepis striata</i>	American cupscale	
<i>Sagittaria lancifolia</i>	Arrowhead	
<i>Salix caroliniana</i>	Coastal plain willow	
<i>Salvia riparia</i>	River sage	
<i>Salvinia minima</i>	Water spangles	Non-native
<i>Sambucus nigra</i>	Southern elderberry	
<i>Samolus ebracteatus</i>	Water pimpernel; Limewater brookweed	
<i>Saururus cernuus</i>	Lizard's tail	
<i>Samolus valerandi</i>	Pineland pimpernel; Seaside brookweed	
<i>Schinus terebinthifolia</i>	Brazilian pepper	Non-native
<i>Schizachyrium stoloniferum</i>	Creeping bluestem	
<i>Schizachyrium rhizomatum</i>	South florida bluestem	
<i>Schoenocaulon dubium</i>	Florida feathershank	
<i>Schoenolirion albiflorum</i>	Sunnybells	
<i>Schoenus nigricans</i>	Black bogrush	
<i>Schoepfia schreberi</i>	Graytwig	
<i>Scirpus pungens</i>	Three-square Bulrush	
<i>Scleria baldwinii</i>	Balwin's nutrush	
<i>Scleria georgiana</i>	Slenderfruit nutrush	
<i>Scleria reticularis</i>	Netted nutrush	
<i>Scleria triglomerata</i>	Whip nutrush	
<i>Scleria verticillata</i>	Low nutrush	
<i>Scoparia dulcis</i>	Sweetbroom	
<i>Scutellaria integrifolia</i>	Rough skullcap	
<i>Senecio glabellus</i>	Golden ragwort	
<i>Senega baldwinii</i>	White bachelor button	
<i>Senega cruciata</i>	Drumheads	
<i>Senega cymosa</i>	Tall pinebarren milkwort	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Senega grandiflora</i>	Candyweed	
<i>Senega incarnata</i>	Procession flower	
<i>Senega lutea</i>	Yellow milkwort	
<i>Senega nana</i>	Candyroot	
<i>Senega ramosa</i>	Milkwort	
<i>Senega rugelii</i>	Bachelor button	
<i>Senega setacea</i>	Coastalplain milkwort	
<i>Senna ligustrina</i>	Privet wild sensitive plant	
<i>Senna obtusifolia</i>	Coffeeweed, sicklepod	
<i>Senna occidentalis</i>	Septicweed	Non-native
<i>Serenoa repens</i>	Saw palmetto	
<i>Sesbania herbacea</i>	Danglepod	
<i>Sesbania vesicaria</i>	Bladderpod	
<i>Setaria parviflora</i>	Knotroot foxtail; yellow bristlegrass	
<i>Sida cordifolia</i>	Llima	Non-native
<i>Sida rhombifolia</i>	Cuban jute	
<i>Sida ulmifolia</i>	Common wireweed	
<i>Sideroxylon reclinatum</i>	Florida bully	
<i>Sisyrinchium atlanticum</i>	Blue-eyed-grass	
<i>Smilax auriculata</i>	Earleaf greenbrier	
<i>Smilax bona-nox</i>	Saw greenbrier	
<i>Smilax laurifolia</i>	Laurel greenbrier	
<i>Solanum americanum</i>	Common nightshade	
<i>Solanum diphyllum</i>	Twoleaf nightshade	Non-native
<i>Solanum erianthum</i>	Potato-tree	
<i>Solanum seaforthianum</i>	Climbing nightshade	Non-native
<i>Solanum torvum</i>	Turkeyberry	Non-native
<i>Solanum viarum</i>	Tropical soda apple	Non-native
<i>Solidago fistulosa</i>	Pinebarren goldenrod	
<i>Solidago odora</i> var. <i>chapmanii</i>	Chapman's goldenrod	
<i>Solidago stricta</i>	Narrow-leaved Goldenrod	
<i>Sonchus asper</i>	Spiney sowthistle	Non-native
<i>Sonchus oleraceus</i>	Common sowthistle	Non-native
<i>Sorghastrum secundum</i>	Lopsided indiagrass	
<i>Spartina bakeri</i>	Sand cordgrass	
<i>Sphagneticola trilobata</i>	Creeping oxeye	
<i>Spiranthes longilabris</i>	Longlip Lady's-tresses	Non-native
<i>Spiranthes odorata</i>	Fragrant Lady's-tresses	
<i>Spiranthes praecox</i>	Greenvein Lady's-tresses	
<i>Spiranthes torta</i>	Southern Lady's-tresses	
<i>Spiranthes vernalis</i>	Spring Lady's-tresses	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Sporobolus domingensis</i>	Coral dropseed	
<i>Sporobolus indicus</i>	Smutgrass	Non-native
<i>Sporobolus junceus</i>	Pineywoods dropseed	
<i>Stachytarpheta jamaicensis</i>	Blue porterweed	
<i>Steinchisma hians</i>	Gaping panicum	
<i>Stenotaphrum secundatum</i>	St. Augustine grass	
<i>Stillingia aquatica</i>	Corkwood; Water toothleaf	
<i>Stillingia sylvatica</i>	Queen's delight	
<i>Stipulicida setacea</i>	Pineland scaleypink	
<i>strigosum</i> var. <i>glabrescens</i>	Roughhair witchgrass	
<i>Symphotrichum adnatum</i>	Scaleleaf aster	
<i>Symphotrichum bahamense</i>	Bahaman aster	
<i>Symphotrichum carolinianum</i>	Climbing aster	
<i>Symphotrichum dumosum</i>	Rice button aster	
<i>Syngonanthus flavidulus</i>	Yellow hatpins	
<i>Syzygium cumini</i>	Java-plum	Non-native
<i>Syzygium jambos</i>	Rose Apple, malabar Plum	Non-native
<i>Taxodium ascendens</i>	Pond cypress	
<i>Taxodium distichum</i>	Bald cypress	
<i>Tecoma stans</i>	Yellow elder	Non-native
<i>Telmatoblechnum serrulatum</i>	Swamp fern	
<i>Teucrium canadense</i>	Wood sage	
<i>Thalia geniculata</i>	Fire flag	
<i>Thelypteris dentata</i>	Downy maiden fern	
<i>Thelypteris interrupta</i>	Hottentot fern	
<i>Thelypteris kunthii</i>	Widespread maiden fern	
<i>Thelypteris palustris</i> var. <i>pubescens</i>	Marsh fern	
<i>Thelypteris serrata</i>	Toothed maiden fern	SE
<i>Thunbergia alata</i>	Blackeyed susan vine	Non-native
<i>Tillandsia balbisiana</i>	Reflexed Wild-pine	ST
<i>Tillandsia fasciculata</i>	Cardinal Wild-pine	SE
<i>Tillandsia flexuosa</i>	Twisted Wild-pine	ST
<i>Tillandsia paucifolia</i>	Potbelliedwild-pine	
<i>Tillandsia recurvata</i>	Ball-moss	
<i>Tillandsia setacea</i>	Thin-leavedwild-pine	
<i>Tillandsia usneoides</i>	Spanish moss	
<i>Tillandsia utriculata</i>	Giant Wild-pine	ST
<i>Toxicodendron radicans</i>	Poison oak	
<i>Tradescantia spathacea</i>	Oysterplant	
<i>Tradescantia zebrina</i>	Inchplant	
<i>Trema micranthum</i>	Nettle tree	Non-native
<i>Trichostema dichotomum</i>	Forked bluecurls	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Tridax procumbens</i>	Brittleweed	
<i>Trifolium repens</i>	White clover	
<i>Tripsacum dactyloides</i>	Eastern gamagrass	
<i>Triumfetta semitriloba</i>	Sacramento burrbark	Non-native
<i>Typha domingensis</i>	Southern cattail	
<i>Typha latifolia</i>	Common cattail	
<i>Urena lobata</i>	Caesarweed	
<i>Urochloa mutica</i>	Paragrass	Non-native
<i>Urochloa distachyos</i>	Signalgrass	Non-native
<i>Utricularia cornuta</i>	Horned bladderwort	
<i>Utricularia foliosa</i>	Leafy bladderwort	
<i>Utricularia inflata</i>	Humped bladderwort	
<i>Utricularia juncea</i>	Southern bladderwort	
<i>Utricularia purpurea</i>	Eastern purple bladderwort	
<i>Utricularia resupinata</i>	Small purple bladderwort	
<i>Utricularia simulans</i>	Fringed bladderwort	
<i>Utricularia subulata</i>	Zig-zag Bladderwort	
<i>Vaccinium myrsinites</i>	Shiney blueberry	
<i>Verbena scabra</i>	Harsh verbena	
<i>Verbesina virginica</i>	Frostweed	
<i>Vernonia blodgettii</i> Small	Florida ironweed	
<i>Vernonia cinerea</i>	Little ironweed	
<i>Vernonia gigantea</i>	Giant ironweed	
<i>Viburnum obovatum</i>	Walter's viburnum	
<i>Vicia acutifolia</i>	Fourleaf vetch	
<i>Vigna luteola</i>	Hairy-pod cowpea	
<i>Viola lanceolata</i>	Long-leaf Violet	
<i>Vitex trifolia</i>	Simpleleaf chaste tree	
<i>Vitis aestivalis</i>	Summer grape	
<i>Vitis rotundifolia</i>	Muscadine	
<i>Vitis shuttleworthii</i>	Calloose grape	
<i>Vittaria lineata</i>	Shoestring fern	
<i>Waltheria indica</i>	Sleepy morning	
<i>Woodwardia areolata</i>	Netted chain fern	
<i>Woodwardia virginica</i>	Virginia chain fern	
<i>Xanthosoma sagittifolium</i>	Arrowleaf elephantear	
<i>Ximenia americana</i>	Tallow wood, hog plum	
<i>Xyris ambigua</i>	Coastalplain yellow-eyed grass	
<i>Xyris baldwiniana</i>	Baldwin's yellow-eyed grass	
<i>Xyris brevifolia</i>	Shortleaf yellow-eyed grass	
<i>Xyris caroliniana</i>	Carolina yellow-eyed grass	
<i>Xyris elliottii</i>	Elliott's yellow-eyed grass	

Table 1 (Continued). List of plants on the DuPuis Reserve MA and status.

Scientific Name	Common Name	Listing Status
<i>Xyris flabelliformis</i>	Savannah yellow-eyed grass	
<i>Xyris jupicai</i>	Richard's yellow-eyed grass	
<i>Youngia japonica</i>	Rocketweed	
<i>Zanthoxylum clava-herculis</i>	Hercules' club	
<i>Zephyranthes simpsonii</i>	Simpson's zephyr-lily	ST
<i>Zeuxine strateumatica</i>	Lawn orchid	

a. Key to abbreviations: Species listed by the State of Florida State-designated Threatened (ST) and State-designated Endangered (SE).

Table 2. List of birds utilizing the DuPuis Reserve MA and status.^a

Common Name	Scientific Name	Status
American Bittern	<i>Botaurus lentiginosus</i>	
American Coot	<i>Fulica americana</i>	
American Goldfinch	<i>Carduelis tristis</i>	
American Redstart	<i>Setophaga ruticilla</i>	
American Robin	<i>Turdus migratorius</i>	
American White Pelican	<i>Pelecanus erythrorhynchos</i>	
American Woodcock	<i>Scolopax minor</i>	
Anhinga	<i>Anhinga anhinga</i>	
Bachman's sparrow	<i>Peucaea aestivalis</i>	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	
Barn Owl	<i>Tyto alba</i>	
Barn Swallow	<i>Hirundo rustica</i>	
Barred Owl	<i>Strix varia</i>	
Belted Kingfisher	<i>Ceryle alcyon</i>	
Black Vulture	<i>Coragyps atratus</i>	
Black-and-White Warbler	<i>Mniotilta varia</i>	
Black-bellied Whistling Duck	<i>Dendrocygna autumnalis</i>	
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	
Black-necked Stilt	<i>Himantopus mexicanus</i>	
Blackpoll Warbler	<i>Setophaga striata</i>	
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	
Black-throated Green Warbler	<i>Setophaga virens</i>	
Blue Jay	<i>Cyanocitta cristata</i>	
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	
Blue-headed Vireo	<i>Vireo solitarius</i>	
Blue-winged Teal	<i>Anas discors</i>	
Boat-tailed Grackle	<i>Quiscalus major</i>	
Brown Thrasher	<i>Toxostoma rufum</i>	
Brown-headed Cowbird	<i>Molothrus ater</i>	
Brown-headed Nuthatch	<i>Sitta pusilla</i>	
Cape May Warbler	<i>Setophaga tigrina</i>	
Carolina Wren	<i>Thryothorus ludovicianus</i>	
Cattle Egret	<i>Bubulcus ibis</i>	
Cedar Waxwing	<i>Bombycilla cedrorum</i>	

Table 2 (Continued). List of birds utilizing the DuPuis Reserve MA and status.

Common Name	Scientific Name	Status
Chimney Swift	<i>Chaetura pelagica</i>	
Chipping Sparrow	<i>Spizella passerina</i>	
Chuck-will's-widow	<i>Caprimulgus carolinensis</i>	
Common Gallinule	<i>Gallinula galeata</i>	
Common Grackle	<i>Quiscalus quiscula</i>	
Common Ground Dove	<i>Columbina passerina</i>	
Common Nighthawk	<i>Chordeiles minor</i>	
Common Yellowthroat	<i>Geothlypis trichas</i>	
Cooper's Hawk	<i>Accipiter cooperii</i>	
Crested Caracara	<i>Caracara cheriway</i>	FT
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	
Downy Woodpecker	<i>Picoides pubescens</i>	
Eastern Bluebird	<i>Sialis sialis</i>	
Eastern Kingbird	<i>Tyrannus tyrannus</i>	
Eastern Meadowlark	<i>Sturnella magna</i>	
Eastern Phoebe	<i>Saynoris phoebe</i>	
Eastern Screech Owl	<i>Otus asio</i>	
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	
Eastern Wood Pewee	<i>Contopus virens</i>	
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	Non-native
European Starling	<i>Sturnus vulgaris</i>	Non-native
Everglades Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	FE
Field Sparrow	<i>Spizella pusilla</i>	
Fish Crow	<i>Corvus ossifragus</i>	
Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	ST
Glossy Ibis	<i>Plegadis falcinellus</i>	
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	
Gray Catbird	<i>Dumetella carolinensis</i>	
Gray-headed Swampphen	<i>Porphyrio poliocephalus</i>	Non-native
Great Blue Heron	<i>Ardea herodias</i>	
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	
Great Egret	<i>Ardea alba</i>	

Table 2 (Continued). List of birds utilizing the DuPuis Reserve MA and status.

Common Name	Scientific Name	Status
Great Horned Owl	<i>Bubo virginianus</i>	
Great White Heron	<i>Ardea herodias occidentalis</i>	
Greater Yellowlegs	<i>Tringa melanoleuca</i>	
Green Heron	<i>Butorides virescens</i>	
Hairy Woodpecker	<i>Leuconotopicus villosus</i>	
Hermit Thrush	<i>Cathaus guttatus</i>	
Hooded Warbler	<i>Setophaga citrina</i>	
House Wren	<i>Troglodytes aedon</i>	
Indigo Bunting	<i>Passerina cyanea</i>	
Killdeer	<i>Charadrius vociferus</i>	
Least Bittern	<i>Ixobrychus exilis</i>	
Least Flycatcher	<i>Empidonax minimus</i>	
Limpkin	<i>Aramus guarauna</i>	
Little Blue Heron	<i>Egretta caerulea</i>	ST
Loggerhead Shrike	<i>Lanius ludovicianus</i>	
Louisiana Waterthrush	<i>Parkesia motacilla</i>	
Merlin	<i>Falco columbarius</i>	
Mottled Duck	<i>Anas fulvigula</i>	
Mourning Dove	<i>Zenaida macroura</i>	
Northern Bobwhite	<i>Colinus virginianus</i>	
Northern Cardinal	<i>Cardinalis cardinalis</i>	
Northern Flicker	<i>Colaptes auratus</i>	
Northern Harrier	<i>Circus cyaneus</i>	
Northern Mockingbird	<i>Mimus polyglottos</i>	
Northern Parula	<i>Setophaga americana</i>	
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	
Orange-crowned Warbler	<i>Leiothlypis celata</i>	
Osprey	<i>Pandion haliaetus</i>	
Ovenbird	<i>Seiurus aurocapillus</i>	
Painted Bunting	<i>Passerina ciris</i>	
Palm Warbler	<i>Setophaga palmarum</i>	
Peacock	<i>Pavo cristatus</i>	Non-native
Peregrine Falcon	<i>Falco peregrinus</i>	
Pied-billed Grebe	<i>Podilymbus podiceps</i>	
Pileated Woodpecker	<i>Dryocopus pileatus</i>	

Table 2 (Continued). List of birds utilizing the DuPuis Reserve MA and status.

Common Name	Scientific Name	Status
Pine Warbler	<i>Setophaga pinus</i>	
Prairie Warbler	<i>Setophaga discolor</i>	
Purple Gallinule	<i>Porphyryla martinica</i>	
Purple Martin	<i>Progne subis</i>	
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	
Red-cockaded Woodpecker	<i>Picoides borealis</i>	FT
Red-eyed Vireo	<i>Vireo olivaceus</i>	
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	
Red-shouldered Hawk	<i>Buteo lineatus</i>	
Red-tailed Hawk	<i>Buteo jamaicensis</i>	
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	
Ring-necked Duck	<i>Aythya collaris</i>	
Rock Dove	<i>Columba livia</i>	Non-native
Roseate Spoonbill	<i>Platalea ajaja</i>	ST
Royal Tern	<i>Thalassrus maximus</i>	
Ruby-crowned Kinglet	<i>Regulus calendula</i>	
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	
Savannah Sparrow	<i>Passerculus sandwichensis</i>	
Sedge Wren	<i>Cistothorus platensis</i>	
Sharp-shinned Hawk	<i>Accipiter striatus</i>	
Short-tailed Hawk	<i>Buteo brachyurus</i>	
Snowy Egret	<i>Egretta thula</i>	
Sora	<i>Porzana carolina</i>	
Southeastern American Kestrel	<i>Falco sparverius paulus</i>	ST
Summer Tanager	<i>Piranga rubra</i>	
Swallow-tailed Kite	<i>Elanoides forficatus</i>	
Tree Swallow	<i>Tachycineta bicolor</i>	
Tricolored Heron	<i>Egretta tricolor</i>	ST
Tufted Titmouse	<i>Baeolophus bicolor</i>	
Turkey Vulture	<i>Cathartes aura</i>	
White Ibis	<i>Eudocimus albus</i>	
White-eyed Vireo	<i>Vireo griseus</i>	
White-winged Dove	<i>Zenaida asiatica</i>	
Wild Turkey	<i>Meleagris gallopavo</i>	

Table 2 (Continued). List of birds utilizing the DuPuis Reserve MA and status.

Common Name	Scientific Name	Status
Wilson's Snipe	<i>Gallinago delicata</i>	
Wood Duck	<i>Aix sponsa</i>	
Wood Stork	<i>Mycteria americana</i>	
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	
Yellow-rumped Warbler	<i>Setophaga coronata</i>	
Yellow-throated Warbler	<i>Setophaga dominica</i>	

a. Key to abbreviations: Species listed as Federally-designated Endangered (FE) and Federally-designated Threatened (FT).

Table 3. List of reptiles and amphibians on the DuPuis Reserve MA and status.^a

Common Name	Scientific Name	Status
AMPHIBIANS		
American Bullfrog	<i>Lithobates catesbeianus</i>	
Barking Treefrog	<i>Hyla gratiosa</i>	
Cuban Treefrog	<i>Osteopilus septentrionalis</i>	Non-native
Eastern Narrowmouth Toad	<i>Gastrophryne carolinensis</i>	
Florida Cricket Frog	<i>Acris gryllus dorsalis</i>	
Greater Siren	<i>Siren lacertina</i>	
Green Treefrog	<i>Hyla cinerea</i>	
Greenhouse Frog	<i>Eleutherodactylus planirostris</i>	Non-native
Oak Toad	<i>Anaxyrus quericus</i>	
Pig Frog	<i>Lithobates grylio</i>	
Pine Woods Treefrog	<i>Hyla femoralis</i>	
Southern Leopard Frog	<i>Lithobates sphenocephalus</i>	
Southern Toad	<i>Anaxyrus terrestris</i>	
Squirrel Treefrog	<i>Hyla squirella</i>	
Two-toed Amphiuma	<i>Amphiuma means</i>	
REPTILES		
African Redhead Agama	<i>Agama agama</i>	Non-native
American Alligator	<i>Alligator mississippiensis</i>	FT(S/A)
Brown Anole	<i>Anolis sagrei</i>	Non-native
Brown Basalisk	<i>Basiliscus vittatus</i>	Non-native
Dusky Pygmy Rattlesnake	<i>Sistrurus miliarius barbouri</i>	
Eastern Coachwhip	<i>Masticophis flagellum flagellum</i>	
Eastern Corn Snake	<i>Pantherophis guttatus</i>	
Eastern Diamondback Rattlesnake	<i>Crotalus adamanteus</i>	
Eastern Garter Snake	<i>Thamnophis sirtalis sirtalis</i>	
Eastern Glass Lizard	<i>Ophisaurus ventralis</i>	
Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	FT
Eastern Rat Snake	<i>Pantherophis alleghaniensis</i>	
Florida Box Turtle	<i>Terrapene carolina bauri</i>	
Florida Cottonmouth	<i>Agkistrodon piscivorus conanti</i>	
Florida Green Water Snake	<i>Nerodia floridana</i>	
Florida Redbelly Cooter	<i>Pseudemys nelsoni</i>	
Florida Snapping Turtle	<i>Chelydra serpentina osceola</i>	
Florida Softshell Turtle	<i>Apalone ferox</i>	
Gopher Tortoise	<i>Gopherus polyphemus</i>	ST
Green Anole	<i>Anolis carolinensis</i>	
Green Iguana	<i>Iguana iguana</i>	Non-native
Northern Curlytail Lizard	<i>Leiocephalus carinatus armouri</i>	Non-native

Table 3 (Continued). List of reptiles and amphibians on the DuPuis Reserve MA and status.

Common Name	Scientific Name	Status
Peninsula Cooter	<i>Pseudemys floridana peninsularis</i>	
Peninsula Ribbon Snake	<i>Thamnophis sauritus sackenii</i>	
Pine Woods Snake	<i>Rhadinaea flavilata</i>	
Southern Black Racer	<i>Coluber constrictor priapus</i>	
Southern Ringneck Snake	<i>Diadophis punctatus punctatus</i>	
Striped Mud Turtle	<i>Kinosternon bauri</i>	

a. Key to abbreviations: Species listed as Federally-designated Threatened because of similarity of appearance [FT(S/A)] and FXN Federally-designated Threatened Nonessential Experimental Population.

Table 4. List of mammals utilizing the DuPuis Reserve MA and status.

Common Name	Scientific Name	Status
Big Brown Bat	<i>Eptesicus fuscus</i>	
Black Rat	<i>Rattus rattus</i>	Non-native
Bobcat	<i>Lynx rufus</i>	
Brazilian Free-tailed Bat	<i>Tadarida brasiliensis</i>	
Cotton Mouse	<i>Peromyscus gossypinus</i>	
Coyote	<i>Canis latrans</i>	
Eastern Cottontail	<i>Sylvilagus floridanus</i>	
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	
Eastern Harvest Mouse	<i>Reithrodontomys humulis</i>	
Evening Bat	<i>Nycticeius humeralis</i>	
Gray Fox	<i>Urocyon cinereoargenteus</i>	
Hispid Cotton Rat	<i>Sigmodon hispidus</i>	
House Mouse	<i>Mus musculus</i>	Non-native
Least Shrew	<i>Cryptotis parva</i>	
Marsh Rabbit	<i>Sylvilagus palustris</i>	
Marsh Rice Rat	<i>Oryzomys palustris</i>	
Nine-banded Armadillo	<i>Dasypus novemcinctus</i>	
North American River Otter	<i>Lontra canadensis</i>	
Northern Yellow Bat	<i>Lasiurus intermedius</i>	
Norway Rat	<i>Rattus norvegicus</i>	Non-native
Raccoon	<i>Procyon lotor</i>	
Round-tailed Muskrat	<i>Neofiber alleni</i>	
Round-tailed Muskrat	<i>Neofiber alleni</i>	
Seminole Bat	<i>Lasiurus seminolus</i>	
Short-tailed Shrew	<i>Blarina carolinensis</i>	
Southern Flying Squirrel	<i>Glaucomys volans</i>	
Southern Fox Squirrel	<i>Sciurus niger niger</i>	
Tri-colored Bat	<i>Perimyotis subflavus</i>	
Virginia Opossum	<i>Didelphis virginiana</i>	
Whitetail Deer	<i>Odocoileus virginianus</i>	
Wild Boar	<i>Sus scrofa</i>	Non-native

Table 5. List of fish found in the DuPuis Reserve MA and status.

Common Name	Scientific Name	Status
Black Crappie	<i>Pomoxis nigromaculatus</i>	
Blue Tilapia	<i>Oreochromis aureus</i>	
Bluefin Killfish	<i>Lucania goodei</i>	
Bluegill	<i>Lepomis macrochirus</i>	
Brook Silverside	<i>Labidesthes sicculus</i>	
Brown Bullhead	<i>Ameiurus nebulosus</i>	
Brown Hoplo	<i>Hoplosternum littorale</i>	Non-native
Everglades Pygmy Sunfish	<i>Elassoma evergladei</i>	
Flagfish	<i>Jordanella floridae</i>	
Florida Gar	<i>Lepisosteus platyrhincus</i>	
Golden Shiner	<i>Notemigonus crysoleucas</i>	
Golden Topminnow	<i>Fundulus chrysotus</i>	
Lake Chubsucker	<i>Erimyzon sucetta</i>	
Largemouth Bass	<i>Micropterus salmoides</i>	
Mayan Cichlid	<i>Mayaheros urophthalmus</i>	Non-native
Mosquito Fish	<i>Gambusia affinis</i>	
Nile Tilapia	<i>Oreochromis niloticus</i>	Non-native
Oscar	<i>Astronotus ocellatus</i>	Non-native
Redear sunfish	<i>Lepomis microlophus</i>	
Spotted Sunfish	<i>Lepomis punctatus</i>	
Spotted Tilapia	<i>Pelmatolapia mariae</i>	Non-native
Walking Catfish	<i>Clarias batrachus</i>	Non-native
Warmouth	<i>Lepomis gulosus</i>	



Florida Fish and Wildlife
Conservation Commission

myfwc.com



South Florida Water
Management District

sfwmd.gov

DuPuis

Wildlife and Environmental Area

Regulations Summary and Area Map
July 01, 2026 - June 30, 2027

2026-
2027

Hunting
Season

This brochure is designed to provide the public with information and a summary of regulations pertaining to hunting and other recreational use on the John G. and Susan H. DuPuis, Jr. Wildlife and Environmental Area. **Regulations that are new or differ substantially from last year are shown in bold print.** WEA regulations differ from area to area and often do not follow statewide regulations. Area users should familiarize themselves with all regulations in this brochure prior to hunting the area. For exact wording of the wildlife laws and regulations, see the Florida Fish and Wildlife Conservation Commission's wildlife code, on file with the Secretary of State and state libraries. This brochure, the Florida Hunting Regulations handbook, and quota permit worksheets should provide the information necessary for you to plan your hunting activities. These publications are available at MyFWC.com.

Persons using wildlife and environmental areas are required to have appropriate licenses, permits, and stamps. The following persons are exempt from all license and permit requirements (except for quota permits when listed as "no exemptions," recreational use permits, antlerless deer permits and the Migratory Bird Hunting and Conservation Stamp [federal duck stamp], if applicable): Florida residents who are 65 years of age or older; residents who possess a Florida Resident Disabled Person Hunting and Fishing Certificate; residents in the U.S. Armed Forces, not stationed in Florida, while home on leave for 30 days or less, upon submission of orders; and children under 16 years of age. Children under 16 years of age also are exempt from the federal duck stamp. Anyone born on or after June 1, 1975 and 16 years of age or older must have passed a Commission-approved hunter-safety course prior to being issued a hunting license, except the Hunter Safety Mentoring exemption allows anyone to purchase a hunting license and hunt under the supervision of a licensed hunter, 21 years of age or older.

Youth and mentor license holders are required to be accompanied by a supervisor during any hunt. A youth hunter (less than 16 years of age) must be supervised by a person at least 18 years of age. A mentor license holder must be supervised by a licensed hunter at least 21 years of age. Unless exempt, only those supervisors with proper licenses and permits may hunt.

Licenses and permits may be purchased from county tax collectors, license agents, by telephone at 888-486-8356, or at GoOutdoorsFlorida.com. A no-cost Migratory Bird Permit is available when purchasing a hunting license. Any waterfowl hunter 16 years of age or older must possess a federal duck stamp (available where hunting licenses are sold, at most post offices, or at www.duckstamp.com).

Quota Permit Information:

Archery - 75, no-cost, quota permits (no exemptions) for each of 3 hunts.
Muzzleloading Gun - 75, no-cost, quota permits (no exemptions) for each of 3 hunts.
General Gun Mobility-Impaired - 25, no-cost, quota permits (no exemptions).
General Gun - 75, no-cost, quota permits (no exemptions) for each of 2 hunts.
Youth Turkey - 25, no-cost, quota permits (no exemptions).
Spring Turkey - 35, no-cost, quota permits (no exemptions) for each of 3 hunts.

Permit applications: Hunters must submit electronic applications for quota and special-opportunity permits and quota preference points at GoOutdoorsFlorida.com. Quota hunt worksheets, application periods, deadlines, instructions, and a summary of recent quota hunt rule changes are available at MyFWC.com. Quota application periods occur throughout the year beginning April 1; please refer to the hunting handbook or MyFWC.com for specific dates. Worksheets will be available about 2 weeks prior to each application period.

Guest hunters: For each non-transferable quota permit issued through GoOutdoorsFlorida.com, a quota permit holder (host) may take a guest hunter by obtaining a guest permit. A guest hunter must possess a completed guest permit while hunting except the following persons may be a guest hunter without a guest permit: a youth under 16 years of age, a youth supervisor, a mentor license holder, or a mentor license supervisor. A host may only bring 1 guest hunter at a time and may only use 1 guest permit per day. The following persons are not considered to be guest hunters: other quota permit holders, non-hunters, and exempt hunters (on areas and during seasons that allow exemptions). The guest hunter and host must enter and exit the area together and must share a street-legal vehicle while hunting on the area; ATVs may be ridden independently during the mobility-impaired season. The guest hunter may hunt only while the host is on the area. Refer to the quota hunt worksheets for additional information.

Youth and mentor license holders: If a youth or mentor supervisor is hunting during any hunt for which quota permits are issued, at least 1 person in the party must possess a quota permit.

Assistant for permanently disabled hunters: **Hunters who possess a valid Alternative Mobility Permit, Mobility-Impaired Certification Card, or Persons with Disabilities Hunting and Fishing License** may be accompanied by a guest hunter as specified above, and an assistant who may participate in the hunt (no license required on mobility-impaired hunts), but the assistant may not harvest wildlife.

Transfer of permits: Quota and guest permits are not transferable. A positive form of identification is required when using a non-transferable permit, except for a youth under 16 years of age. The sale or purchase of any quota permit or guest permit is prohibited.

General Area Regulations:

All general laws and regulations relating to wildlife and fish shall apply unless specifically exempted for this area. Hunting or the taking of wildlife or fish on this area shall be allowed only during the open seasons and in accordance with the following regulations:

1. Any person hunting deer or accompanying another person hunting deer shall wear at least 500 square inches of daylight fluorescent-orange material as an outer garment, above the waistline. These provisions are not required when hunting with a bow and arrow during archery season.
2. Taking of spotted fawn, swimming deer, or roasted turkey is prohibited.
3. It is illegal to hunt over bait or place any bait or other food for wildlife on this area.
4. Driving a metal object into any tree, or hunting from a tree into which a metal object has been driven, is prohibited.
5. No person shall cut, damage, or remove any natural, man-made, or cultural resource without written authorization of the landowner or primary land manager.
6. Taking or attempting to take any game with the aid of live decoys, recorded game calls or sounds, set guns, artificial light, net, trap, snare, drug, or poison is prohibited. Recorded calls and sounds can be used to hunt furbearers, wild hog, and crows.
7. The wanton and willful waste of wildlife is prohibited.
8. Hunting, fishing, or trapping is prohibited on any portion of the area posted as closed to those activities.
9. People, dogs, vehicles, and other recreational equipment are prohibited in areas posted as "Closed to Public Access" by FWC administrative action.
10. Taking or herding wildlife from any motorized vehicle, aircraft, or boat which is under power is prohibited, until power and movement from that power, has ceased.
11. Most game may be hunted from ½ hour before sunrise until ½ hour after sunset (see exceptions under each season).
12. The release of any animal is prohibited, except by permit from FWC or written authorization of the landowner or primary land manager.
13. The skull plate with any attached antler, if applicable, shall remain with any harvested deer. The head and beard, if applicable, shall remain with any harvested turkey. See the Florida Hunting Regulations handbook for details.
14. The planting or introduction of any non-native plant is prohibited, without written authorization from the landowner or primary land manager.
15. Wild hog may not be transported alive.
16. A hunting license is not required to hunt wild hog.
17. Littering is prohibited.
18. It is unlawful to set fire to any forest, grass, or woodland. Fires are prohibited except at designated areas.
19. A Law Enforcement Officer may search any camp, vehicle, or boat in accordance with law.
20. The possession or consumption of intoxicating beverages is prohibited.
21. Planting of trees, shrubs, or other vegetation is prohibited without written authorization from the landowner or the Commission.
22. An annual hunting license is required for all nonresidents to hunt **game and furbearers**.

Public Access and Vehicles:

1. Open to public recreational access year-round.
2. Persons shall enter and exit the area at a designated entrance. Hunting and general public access is allowed at Gate 1, hiking/biking access is allowed through Gate 2, and persons using the equestrian area shall enter and exit the area via Gate 3.
3. Vehicle access (unless otherwise specified) is only allowed through Gate 1, and vehicles may be operated only on named roads and in designated parking areas (including power pads along Powerline Grade), except during the general gun mobility-impaired season when all-terrain vehicles (ATVs) may be used off roads, and except for individuals who qualify for AMP permits. For more information visit the [ADA for Hunters web page](#). All other roads are closed to vehicular traffic.
4. Parked vehicles may not obstruct a road, gate, or firelane.
5. No motor vehicle shall be operated in areas designated as closed to vehicular traffic.
6. The use of airboats, ATVs, swamp buggies, tracked vehicles, and unlicensed and unregistered motorcycles is prohibited, except ATVs may be used during the general gun mobility-impaired season.
7. The use of any vessel powered by an internal combustion engine is prohibited during all quota hunts.
8. Horses may be used only on designated horse trails and named or numbered roads.
9. A marked footpath called the Ocean to Lake Trail traverses the area. Through-hikers may enter and exit the area via the Ocean to Lake Trail throughout the year.
10. Class 1 electric bicycles may be operated according to rules for traditional, non-motorized bicycles. All other electric bicycles may be operated only on named or numbered roads open to motorized vehicles. For more information visit MyFWC.com/ebike.

Personal Property:

1. All **unattended** treestands, elevated shooting platforms, trail cameras, and ground blinds must be permanently labeled in a legible and conspicuous manner with the user's Go Outdoors Florida customer identification number. FWC and cooperator staff may remove any of these items if they are not properly labeled.
2. **Authorized hunting equipment, defined as:** treestands, elevated shooting platforms, **and unattended ground blinds** may only be taken onto the area after 8 a.m. the day before the opening of any hunt and must be removed by 6 p.m. one day after the end of every hunt.
3. The FWC is not responsible for protection of personal property and will not be liable for theft of or damage to personal property.

Hunters, Check Stations, and Harvest Reporting:

1. Hunters must enter and exit the area via Gate 1. When check stations are staffed, all hunters must check in at the check station upon entering and check out upon leaving the area and check all harvested game.
2. When check stations are staffed, no deer or turkey shall be dismembered until being checked at the check station.
3. In addition to checking all game at an area check station, hunters must log each harvested deer or turkey prior to moving it from the

point of recovery and report any harvested deer or turkey they harvest within 24 hours of recovery. See Florida Hunting Regulations handbook or MyFWC.com for deer and turkey harvest reporting instructions.

4. During the mobility-impaired season, hunters are requested not to drive vehicles from ½ hour before sunrise to 9 a.m. and from 4 p.m. to ½ hour after sunset.

Guns:

1. Hunting at night with a gun is prohibited.
2. Hunting with firearms, airguns, or crossbows (except by disabled crossbow permit) is prohibited in the Archery-only Area (see map).
3. Muzzleloading guns used for taking deer must be .30 caliber or larger, if firing a single bullet, or be 20 gauge or larger if firing 2 or more balls.
4. Hunting deer with rimfire or non-expanding, full metal jacket (military ball) ammunition is prohibited.
5. Hunting wildlife (other than migratory birds) with airguns is allowed. See Florida Hunting Regulations handbook for details.
6. Hunting deer with airguns is prohibited, except pre-charged pneumatic (PCP) airguns propelling a bolt, arrow, or bullet .30 caliber or larger are allowed.
7. Hunting turkey with airguns is prohibited, except PCP airguns propelling a bolt or arrow are allowed.
8. Children under the age of 16 hunting with a firearm or airgun must be in the presence of a supervising adult.
9. No person shall discharge a firearm or have a loaded firearm in hand while under the influence of alcohol or drugs.
10. For hunting non-migratory game, only shotguns, rifles, muzzleloading guns, pistols, airguns, bows, or crossbows may be used.
11. For hunting migratory game, only centerfire and muzzleloading shotguns, bows, or crossbows may be used. Shotguns must be 10 gauge or smaller and incapable of holding more than 3 shells in the magazine and chamber combined.
12. Hunting with full-automatic firearms, centerfire semi-automatic rifles having a magazine capable of holding more than 5 rounds, explosive or drug-injecting devices, or set guns is prohibited.
13. The discharge of a firearm outside of periods open to hunting or in areas closed to hunting is prohibited per s.790.15 FS.

Dogs:

1. Hunting with dogs is prohibited, except bird dogs or retrievers may be used to hunt migratory birds during migratory bird seasons; and any dog may be used during small game season to hunt gray squirrel, migratory birds in season, quail, rabbits, and non-protected birds.
2. No person shall allow any dog to pursue or molest any wildlife during any period in which the taking of wildlife by the use of dogs is prohibited.
3. Dogs on leashes may be used for trailing wounded game.
4. Dogs are allowed during periods or in areas closed to hunting with dogs, but must be kept under physical restraint at all times.

Camping:

1. Camping is prohibited except at designated campsites. Camping at the Equestrian, Family, and Group campsites is allowed only by Special Use License (SUL) from the South Florida Water Management District (SFWMD). To apply and receive an SUL by email, visit www.sfwmd.gov/sul. To receive an SUL by U.S. Mail, contact SFWMD at 1-866-433-6312 (allow 7-10 business days). No SUL is required for hikers camping at designated campsites on hiking trails.
2. No person shall bring building materials onto the area or erect permanent or semi-permanent structures.
3. Only tents are allowed at the primitive campsites. Only tents and pop-up campers are allowed at the Family and Group campgrounds. Only tents, trailers, or self-propelled camping vehicles are allowed at the Equestrian campground.
4. Quiet hours are from 11 p.m. to 7 a.m. when loud music, barking dogs, or any other activity causing excessive noise is prohibited in camping areas. Generators are prohibited during quiet hours in the equestrian campground and at all times in other campgrounds.
5. Pets must be physically restrained and under control within camping areas.

Bag and Possession Limits: A guest hunter must share the host's bag limit for deer, turkey, and quail, except when these bag limits are specified as per person. The host is responsible for violations that exceed the bag limit. No person shall exceed the statewide bag limits.

1. Deer - No person shall exceed statewide bag limits.
 - A. Area limits -
Archery season - 1 antlered or antlerless deer per quota permit.
Muzzleloading gun and general gun seasons - 1 antlered deer per quota permit.
General gun mobility-impaired - 1 antlered and 1 antlerless deer per quota permit, but only mobility-impaired certified hunters may harvest an antlerless deer.
 - B. Statewide limits - Annual limit 5 deer (only 2 of which may be antlerless), daily limit 2, possession limit 4.
 - C. As part of the statewide annual deer limit, youth less than 16 years of age may harvest 1 deer annually not meeting antler point requirements but having at least 1 antler 5 inches or more in length.
2. Turkey - No person shall exceed statewide bag limits.
 - A. Area limits - 1 per youth turkey or spring turkey quota permit.
 - B. Statewide limits - Spring season limit 2, daily limit 2, possession limit 2.
3. Wild hog - No bag limits or size restrictions.
4. Gray squirrel and rabbits - Daily limit 12 per person, possession limit 24 for each.
5. Quail - Daily limit 12, possession limit 24.
6. Armadillo, beaver, coyote, nutria, opossum, raccoon, and skunk - No bag limits.
7. Bobcat - Possession limit 1 unless in possession of a trapping license.
8. Otter - Prohibited.
9. Migratory birds - See Florida Hunting Regulations handbook.
10. Non-native reptiles - No bag limits.
11. Non-protected birds (African and Eurasian collared-doves, common pigeon, Egyptian goose, house sparrow, and common starling) - No bag limits.

12. Non-native game species – No bag limits.

Archery Season:

September 11-13, 18-20, 25-27

Permit, Stamp, and License Requirements - Quota permit, hunting license (**an annual hunting license is required for nonresidents to hunt game and furbearers**), management area permit, archery permit, deer permit (if hunting deer), migratory bird permit (if hunting migratory birds), and state waterfowl permit and federal duck stamp (if hunting waterfowl).

Legal to Hunt - Antlered deer having at least one antler with three or more points (each point being one inch or more in length) OR a main beam of 10 inches or more in length, antlerless deer (which includes does and bucks with antlers less than 5 inches in length, but does not include spotted fawns), wild hog, gray squirrel, quail, rabbits, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria, migratory birds in season, and non-protected birds. **Take of other non-native wildlife is limited to species generally classified as game.**

Regulations Unique to Archery Season - Only archery equipment may be used for hunting, except that centerfire and muzzleloading shotguns are allowed for hunting migratory birds and non-protected birds. Hunting with crossbows, airbows, or bows equipped with a draw-lock device is prohibited (except by Persons With Disabilities Crossbow Permit).

Muzzleloading Gun Season:

October 9-11, 16-18, 23-25

Permit, Stamp, and License Requirements - Quota permit, hunting license (**an annual hunting license is required for nonresidents to hunt game and furbearers**), management area permit, muzzleloading gun permit, deer permit (if hunting deer), and migratory bird permit (if hunting migratory birds).

Legal to Hunt - Antlered deer having at least one antler with three or more points (each point being one inch or more in length) OR a main beam of 10 inches or more in length, wild hog, gray squirrel, quail, rabbits, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria, migratory birds in season, and non-protected birds. **Take of other non-native wildlife is limited to species generally classified as game.**

Regulations Unique to Muzzleloading Gun Season -

1. Hunting with archery equipment or guns other than muzzleloading guns is prohibited, except centerfire shotguns are allowed for hunting migratory birds and non-protected birds (except in the Archery-only Area).
2. In the Archery-only Area, only bows may be used for hunting, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons With Disabilities Crossbow Permit. All other regulations for the muzzleloading gun season apply, including the requirement of a muzzleloading gun permit.

General Gun Mobility-Impaired Season:

October 31 - November 1

Permit, Stamp, and License Requirements - Quota permit, hunting license (**an annual hunting license is required for nonresidents to hunt game and furbearers**), management area permit, deer permit (if hunting deer), and migratory bird permit (if hunting migratory birds).

Legal to Hunt - Antlered deer having at least one antler with three or more points (each point being one inch or more in length) OR a main beam of 10 inches or more in length, antlerless deer (which includes does and bucks with antlers less than 5 inches in length, but does not include spotted fawns), wild hog, gray squirrel, rabbits, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria, migratory birds in season, and non-protected birds. **Take of other non-native wildlife is limited to species generally classified as game.**

Regulations Unique to General Gun Mobility-Impaired Season -

1. Mobility-impaired hunters may be accompanied by a guest hunter and another person who may assist the hunter in a non-hunting capacity; the assistant is exempt from all license, permit, and stamp requirements.
2. In the Archery-only Area, only bows may be used for hunting, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons With Disabilities Crossbow Permit. All other regulations for the general gun mobility-impaired season apply.

General Gun Season:

November 6-8, 13-15

Permit, Stamp, and License Requirements - Quota permit, hunting license (**an annual hunting license is required for nonresidents to hunt game and furbearers**), management area permit, deer permit (if hunting deer), and migratory bird permit (if hunting migratory birds), and state waterfowl permit and federal duck stamp (if hunting waterfowl).

Legal to Hunt - Antlered deer having at least one antler with three or more points (each point being one inch or more in length) OR a main beam of 10 inches or more in length, wild hog, quail, gray squirrel, rabbits, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria, quail, migratory birds in season, and non-protected birds. **Take of other non-native wildlife is limited to species generally classified as game.**

Regulations Unique to General Gun Season - In the Archery-only Area, only bows may be used for hunting, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons With Disabilities Crossbow Permit. All other regulations for the general gun season apply.

Wild Hog-Still Season:

2026 hunt dates : April 11-19 (wild hog only), May 9-17 (wild hog only), November 17-19, December 1-3

2027 hunt dates: April 10-18 (wild hog only), May 8-16 (wild hog only)

Permit, Stamp, and License Requirements - Management area permit. All applicable licenses and permits are also required when hunting any species other than wild hog during the November and December hunts.

Legal to Hunt - During the November and December hunts, in addition to wild hog, gray squirrel, quail, rabbits, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria, migratory birds in season, and non-protected birds may be hunted. Bobcat may be hunted from December 1 through March 1. Only wild hog may be hunted during the April and May hunts.

Regulations Unique to Wild Hog-Still Season -

1. Hunters must enter/exit via Gate 1.
2. Only centerfire and muzzleloading shotguns, rifles, pistols, airguns, bows, or crossbows may be used for hunting wild hog.
3. In the Archery-only Area, only bows may be used for hunting, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons With Disabilities Crossbow Permit. All other regulations for the wild hog-still season apply.

Small Game Season:

December 5 - January 24

Permit, Stamp, and License Requirements - Hunting license (**an annual hunting license is required for nonresidents to hunt game and furbearers**), management area permit, migratory bird permit (if hunting migratory birds), state waterfowl permit and federal duck stamp (if hunting waterfowl), and military license or ID (if harvesting waterfowl during the Veterans and Active Military Waterfowl Hunt days).

Legal to Hunt - Wild hog, gray squirrel, quail, rabbits, raccoon, opossum, armadillo, beaver, bobcat, coyote, skunk, nutria, migratory birds in season, and non-protected birds. **Take of other non-native wildlife is limited to species generally classified as game.**

Regulations Unique to Small Game Season -

1. Hunting with dogs is allowed for gray squirrel, migratory birds in season, non-protected birds, quail, and rabbits only.
2. Only centerfire and muzzleloading shotguns, airguns, bows, and crossbows may be used for hunting.
3. Hunters must enter/exit via Gate 1.
4. In the Archery-only Area, only bows may be used for hunting, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons With Disabilities Crossbow Permit. All other regulations for the small game apply.

Trapping:

Prohibited.

Spring Turkey Season:

Youth Turkey: February 26 - March 1

Spring Turkey: March 9-11, 19-21, 26-28

Permit, Stamp, and License Requirements - Quota permit, hunting license (**an annual hunting license is required for nonresidents to hunt wild turkeys**), management area permit, and wild turkey permit.

Legal to Hunt - Gobbler or bearded turkey.

Regulations Unique to Spring Turkey Season -

1. Legal shooting hours are ½ hour before sunrise until sunset.
2. Hunting other animals is prohibited.
3. Only bows, crossbows, PCP airguns propelling a bolt or arrow, and centerfire and muzzleloading shotguns using #2 or smaller shot size may be used for hunting.
4. In the Archery-only Area, only bows may be used for hunting, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons With Disabilities Crossbow Permit. All other regulations for the spring turkey season apply.
5. During the youth turkey hunt, only youth under 16 years of age may hunt and must be under the direct physical supervision of an adult not younger than 18 years of age. Adults with required licenses and permits for taking wild turkeys may participate when in the presence of a youth, but may not harvest a wild turkey.

Migratory Bird Season:

Migratory game birds and crows may be hunted during their respective statewide seasons. [See migratory game bird hunting regulations.](#)

Permit, Stamp, and License Requirements - Hunting license (**an annual hunting license is required for nonresidents to hunt migratory game birds and non-native game birds**), management area permit, migratory bird permit, state waterfowl permit and federal duck stamp (if hunting waterfowl), and military license or ID (if harvesting waterfowl during the Veterans and Active Military Waterfowl Hunt days).

Legal to Hunt - [See migratory bird season dates, bag limits, and regulations.](#) Non-protected birds **and non-native game birds** may also be taken.

Regulations Unique to Migratory Bird Seasons - All Migratory Bird Regulations shall apply.

1. Hunting ducks, geese, or coot with lead shot is prohibited.
2. Centerfire and muzzleloading shotguns are allowed for hunting migratory birds during established area seasons when migratory birds are legal to hunt
3. Bird dogs and retrievers are allowed for hunting migratory birds in season.
4. Shooting hours for migratory birds are ½ hour before sunrise until sunset.
5. Non-hunting assistants with required licenses and permits may actively participate in Veterans and Active Military Waterfowl Hunting Days, provided they may not harvest wildlife.
6. Adults with required licenses and permits may actively participate in Youth Waterfowl Hunting Days, provided they may not harvest wildlife.
7. In the Archery-only Area, only bows may be used for hunting, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons with Disabilities Crossbow Permit. All other regulations for the migratory bird seasons apply.

Fishing:

Permit, Stamp, and License Requirements - Fishing license.

Legal to Take - See Florida Freshwater Fishing Regulations Summary.

Regulations Unique to Fishing - All General Freshwater Fishing Regulations shall apply. Frogging is prohibited.

Non-Native Reptiles:

Allowed year round.

Permit, Stamp, and License Requirements - None.

Legal to Take - Non-native reptiles including, but not limited to, Conditional and Prohibited reptiles such as the Argentine black and white tegu, green iguana, and Burmese python. Note: Conditional and Prohibited reptiles shall not be removed from the area alive.

Regulations unique to removal of non-native reptiles -

1. Non-native reptiles may be taken by methods other than firearms year-round.
2. Firearms (as allowed by season) may be used to take non-native reptiles only during open hunting seasons summarized in this brochure.

3. In the Archery-only Area, only hand tools and bows may be used for taking non-native reptiles, except crossbows, airbows, and bows equipped with a draw-lock device are allowed by Persons With Disabilities Crossbow Permit. All other regulations for the take of non-native reptiles apply.
4. Conditional and Prohibited reptiles shall not be removed from the area alive.
5. Shooting hours are ½ hour before sunrise until ½ hour after sunset.
6. Please report take and sightings of non-native reptiles at 888-IVE-GOT1 (888-483-4681) or online at IveGot1.org.
7. Taking non-native reptiles with dogs is prohibited.

General Information:

1. Information for persons with disabilities can be found at MyFWC.com/ADA.
2. If you have any questions about this material, please call the FWC at 561-625-5122 (TDD 800-955-8771).
3. Please report the location of any sick or extremely skinny deer to the Chronic Wasting Disease hotline, toll free at 866-293-9282.

South Florida Water Management District Rules and Information:

This land was acquired under the Save Our Rivers (SOR) Program. The purpose of SOR is to conserve and protect unique and irreplaceable lands, restore areas to their original condition as much as possible, and allow controlled multiple recreational and educational uses consistent with this purpose.

Cooperation Requested:

*If you see law violators or suspicious activities, contact your nearest Commission regional office or call 888-404-FWCC (*FWC or #FWC may also be used depending on your phone service provider). You may qualify for a cash reward from the Wildlife Alert Reward Association.*

The FWC receives financial assistance from the Department of the Interior (DOI), U.S. Fish and Wildlife Service. The DOI prohibits discrimination on the basis of race, color, national origin, age, sex, or disability. If you believe that you have been discriminated against in any program, activity, or facility, or you need more information, please contact the FWC at: FWC, Office of Human Resources, 620 S Meridian St., Tallahassee, FL 32399, (850) 488-6411, or write to: Office of Diversity, Inclusion & Civil Rights, Department of the Interior, 1849 C Street, NW, Washington, D.C. 20240.

