2023-2033

# EVERGLADES COMPLEX OF WILDLIFE MANAGEMENT AREAS

## TEN-YEAR MANAGEMENT PLAN



BROWARD, PALM BEACH, AND MIAMI-DADE COUNTIES, FLORIDA

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**
620 SOUTH MERIDIAN STREET
TALLAHASSEE, FL 32399-1600

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# A Management Plan
# for the
# Everglades Complex of Wildlife Management Areas

Broward, Palm Beach, and Miami-Dade Counties, Florida

Owned by the Board of Trustees of the Internal Improvement Trust Fund and the South Florida Water Management District

Managed by the Florida Fish and Wildlife Conservation Commission and the South Florida Water Management District

February 2023

Approved Melissa Tucker

Digitally signed by Melissa Tucker
Date: 2023.03.16 17:50:09 -04'00'

Melissa Tucker, Director
Division of Habitat and Species Conservation

## LAND MANAGEMENT PLAN EXECUTIVE SUMMARY

Lead Agency: Florida Fish and Wildlife Conservation Commission (FWC)
Common Name of Property: Everglades Complex of Wildlife Management Areas
Location: Broward, Palm Beach, and Miami-Dade counties, Florida
Acreage Total: 736,881 acres
Acreage Breakdown:

| Land Cover Classification | Acres | Percent of Total Area |
|---|---|---|
| Artificial pond | 6.78 | <0.1% |
| Canal/ditch | 2,833.67 | 0.4% |
| Developed | 199.26 | <0.1% |
| Glades Marsh | 679,933.58 | 92.9% |
| Prairie Hammock | 12,352.01 | 1.7% |
| Restoration Glades | 1,675.82 | 0.2% |
| Road | 7,275.53 | 1% |
| Spoil Area | 1,582.63 | 0.2% |
| Strand Swamp | 2,433.29 | 0.3% |
| Successional Hydric Shrubland/Forest | 21,203.01 | 2.9% |
| Utility corridor | 2,378 | 0.3% |

*GIS-calculated acreage for land cover classification varies slightly from actual total acreage.
Lease/Management Agreement No.: Lease No's. 4842 (HWMA), 4841 (RWMA), 3793 (EWMA), and 4779 (EWMA), as well as Cooperative Agreement No. 4600004530 (Appendices 11.1 and 11.2)
Use: Single ___ Multiple X
Management Agency: FWC
Management Responsibilities: LEAD, LESSEE (Wildlife Management Area, resource protection, law enforcement)
Designated Land Use: Wildlife Management Area
Sublease (s): None
Encumbrances List: Owners of some private inholdings have retained mineral rights.
Type Acquisition: The Swamp and Overflowed Lands Act of 1850, the Big Cypress Conservation Act, the Save Our Rivers program, Environmentally Endangered Lands program, the Preservation 2000 program, and the Florida Forever Program.
Unique Features: Natural: Natural communities include glades marsh, prairie hammock, restoration glades, and strand swamp.
Archaeological/Historical: 139 archeological sites, seven historical structures, four historical bridges, and 24 resource groups.
Management Needs: Habitat restoration and improvement; public access and recreational opportunities; hydrological preservation and restoration; invasive species maintenance and control; imperiled species habitat maintenance, enhancement, and restoration.
Acquisition Needs/Acreage: 293,735 acres FWC Additions and Inholdings list (Figure 13); 64,809 acres remaining in the Panther Glades Florida Forever Project; 217,679 acres remaining in the Save Our Everglades Florida Forever Project; 82,995 acres remaining in the Devil's Garden Florida Forever Project; and 307 acres remain in the Dade County Archipelago Florida Forever Project (Figure 8).
Surplus Lands/Acreage: None.
Public Involvement: Management Advisory Group consensus building meeting and Public Hearing (Appendices 11.3 and 11.4).

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

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

# Land Management Plan Compliance Checklist

**Required for State-owned conservation lands over 160 acres**

## Section A: Acquisition Information Items

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 1 | The common name of the property. | 18-2.018 & 18-2.021 | 1 |
| 2 | The land acquisition program, if any, under which the property was acquired. | 18-2.018 & 18-2.021 | 12 |
| 3 | Degree of title interest held by the Board, including reservations and encumbrances such as leases. | 18-2.021 | 13, 14 |
| 4 | The legal description and acreage of the property. | 18-2.018 & 18-2.021 | 13 |
| 5 | A map showing the approximate location and boundaries of the property, and the location of any structures or improvements to the property. | 18-2.018 & 18-2.021 | 6-10, 49, 84 |
| 6 | An assessment as to whether the property, or any portion, should be declared surplus. *Provide Information regarding assessment and analysis in the plan, and provide corresponding map.* | 18-2.021 | 53 |
| 7 | Identification of other parcels of land within or immediately adjacent to the property that should be purchased because they are essential to management of the property. *Please clearly indicate parcels on a map.* | 18-2.021 | 73 |
| 8 | Identification of adjacent land uses that conflict with the planned use of the property, if any. | 18-2.021 | 50 |
| 9 | A statement of the purpose for which the lands were acquired, the projected use or uses as defined in 253.034 and the statutory authority for such use or uses. | 259.032(10) | 12 |
| 10 | Proximity of property to other significant State, local or federal land or water resources. | 18-2.021 | 2-5, 9, 10 |

## Section B: Use Items

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 11 | The designated single use or multiple use management for the property, including use by other managing entities. | 18-2.018 & 18-2.021 | 46-48, 51-53 |
| 12 | A description of past and existing uses, including any unauthorized uses of the property. | 18-2.018 & 18-2.021 | 45, 46 |
| 13 | A description of alternative or multiple uses of the property considered by the lessee and a statement detailing why such uses were not adopted. | 18-2.018 | 46-48, 51-53 |
| 14 | A description of the management responsibilities of each entity involved in the property's management and how such responsibilities will be coordinated. | 18-2.018 | 13, 74 |
| 15 | Include a provision that requires that the managing agency consult with the Division of Historical Resources, Department of State before taking actions that may adversely affect archeological or historical resources. | 18-2.021 | 67 |
| 16 | Analysis/description of other managing agencies and private land managers, if any, which could facilitate the restoration or management of the land. | 18-2.021 | 68-74 |
| 17 | A determination of the public uses and public access that would be consistent with the purposes for which the lands were acquired. | 259.032(10) | 46-48, 51, 52 |
| 18 | A finding regarding whether each planned use complies with the 1981 State Lands Management Plan, particularly whether such uses represent "balanced public utilization," specific agency | 18-2.021 | 93, 94 |

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| | statutory authority and any other legislative or executive directives that constrain the use of such property. | | |
| 19 | Letter of compliance from the local government stating that the LMP is in compliance with the Local Government Comprehensive Plan. | BOT requirement | Appendices 11.19, 11.20, 11.21 |
| 20 | An assessment of the impact of planned uses on the renewable and non-renewable resources of the property, including soil and water resources, and a detailed description of the specific actions that will be taken to protect, enhance and conserve these resources and to compensate/mitigate damage caused by such uses, including a description of how the manager plans to control and prevent soil erosion and soil or water contamination. | 18-2.018 & 18-2.021 | 15-51, 53-67 |
| 21 | *For managed areas larger than 1,000 acres, an analysis of the multiple-use potential of the property which shall include the potential of the property to generate revenues to enhance the management of the property provided that no lease, easement, or license for such revenue-generating use shall be entered into if the granting of such lease, easement or license would adversely affect the tax exemption of the interest on any revenue bonds issued to fund the acquisition of the affected lands from gross income for federal income tax purposes, pursuant to Internal Revenue Service regulations. | 18-2.021 & 253.036 | 46-53 |
| 22 | If the lead managing agency determines that timber resource management is not in conflict with the primary management objectives of the managed area, a component or section, prepared by a qualified professional forester, that assesses the feasibility of managing timber resources pursuant to section 253.036, F.S. | 18-021 | 40 |
| 23 | A statement regarding incompatible use in reference to Ch. 253.034(10). | 253.034(10) | 52, 53 |

*The following taken from 253.034(10) is not a land management plan requirement; however, it should be considered when developing a land management plan: The following additional uses of conservation lands acquired pursuant to the Florida Forever program and other state-funded conservation land purchase programs shall be authorized, upon a finding by the Board of Trustees, if they meet the criteria specified in paragraphs (a)-(e): water resource development projects, water supply development projects, storm-water management projects, linear facilities and sustainable agriculture and forestry. Such additional uses are authorized where: (a) Not inconsistent with the management plan for such lands; (b) Compatible with the natural ecosystem and resource values of such lands; (c) The proposed use is appropriately located on such lands and where due consideration is given to the use of other available lands; (d) The using entity reasonably compensates the titleholder for such use based upon an appropriate measure of value; and (e) The use is consistent with the public interest.

## Section C: Public Involvement Items

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 24 | A statement concerning the extent of public involvement and local government participation in the development of the plan, if any. | 18-2.021 | 14, Appendices 11.3, 11.4 |
| 25 | The management prospectus required pursuant to paragraph (9)(d) shall be available to the public for a period of 30 days prior to the public hearing. | 259.032(10) | |
| 26 | LMPs and LMP updates for parcels over 160 acres shall be developed with input from an advisory group who must conduct at least one public hearing within the county in which the parcel or project is located. *Include the advisory group members and their affiliations, as well as the date and location of the advisory group meeting.* | 259.032(10) | 14, Appendices 11.3, 11.4 |
| 27 | Summary of comments and concerns expressed by the advisory group for parcels over 160 acres | 18-2.021 | Appendix 11.4 |
| 28 | During plan development, at least one public hearing shall be held in each affected county. Notice of such public hearing shall be posted on the parcel or project designated for management, advertised in a paper of general circulation, and announced at a scheduled meeting of the local governing body before the actual | 253.034(5) & 259.032(10) | Appendix 11.3 |

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| | public hearing. *Include a copy of each County's advertisements and announcements (meeting minutes will suffice to indicate an announcement) in the management plan.* | | |
| 29 | The manager shall consider the findings and recommendations of the land management review team in finalizing the required 10-year update of its management plan. *Include manager's replies to the team's findings and recommendations.* | 259.036 | 53, 54, Appendix 11.7 |
| 30 | Summary of comments and concerns expressed by the management review team, if required by Section 259.036, F.S. | 18-2.021 | Appendix 11.7 |
| 31 | If manager is not in agreement with the management review team's findings and recommendations in finalizing the required 10-year update of its management plan, the managing agency should explain why they disagree with the findings or recommendations. | 259.036 | Appendix 11.7 |

## Section D: Natural Resources

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 32 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding soil types. *Use brief descriptions and include USDA maps when available.* | 18-2.021 | 15, 17, Appendix 11.6 |
| 33 | Insert FNAI based natural community maps when available. | ARC consensus | 28 |
| 34 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding outstanding native landscapes containing relatively unaltered flora, fauna and geological conditions. | 18-2.021 | 19-27 |
| 35 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding unique natural features and/or resources including but not limited to virgin timber stands, scenic vistas, natural rivers and streams, coral reefs, natural springs, caverns and large sinkholes. | 18-2.018 & 18-2.021 | 38-45 |
| 36 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding beaches and dunes. | 18-2.021 | 40 |
| 37 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding mineral resources, such as oil, gas and phosphate, etc. | 18-2.018 & 18-2.021 | 40 |
| 38 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding fish and wildlife, both game and non-game, and their habitat. | 18-2.018 & 18-2.021 | 35-37, Appendix 11.5 |
| 39 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding State and Federally listed endangered or threatened species and their habitat. | 18-2.021 | 35, 38 |
| 40 | The identification or resources on the property that are listed in the Natural Areas Inventory. *Include letter from FNAI or consultant where appropriate.* | 18-2.021 | 38, Appendix 11.9 |
| 41 | Specific description of how the managing agency plans to identify, locate, protect and preserve or otherwise use fragile, nonrenewable natural and cultural resources. | 259.032(10) | 53-89 |
| 42 | **Habitat Restoration and Improvement** | 259.032(10) & 253.034(5) | |
| 42-A. | Describe management needs, problems and a desired outcome and the key management activities necessary to achieve the enhancement, protection and preservation of restored habitats and enhance the natural, historical, and archeological resources and their values for which the lands were acquired. | ↓ | 53-89 |

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 42-B. | Provide a detailed description of both short (2-year planning period) and long-term (10-year planning period) management goals, and a priority schedule based on the purposes for which the lands were acquired and include a timeline for completion. | ↓ | 79-89 |
| 42-C. | The associated measurable objectives to achieve the goals. | ↓ | 79-89 |
| 42-D. | The related activities that are to be performed to meet the land management objectives and their associated measures. *Include fire management plans - they can be in plan body or an appendix.* | ↓ | 53-89, Appendices 11.12, 11.13 |
| 42-E. | A detailed expense and manpower budget in order to provide a management tool that facilitates development of performance measures, including recommendations for cost-effective methods of accomplishing those activities. | | 89-92 |
| 43 | ***Quantitative data description of the land regarding an inventory of forest and other natural resources and associated acreage. *See footnote.* | 253.034(5) | 19-28, 40 |
| 44 | **Sustainable Forest Management, including implementation of prescribed fire management** | 18-2.021, 253.034(5) & 259.032(10) ↓ | |
| 44-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 56-59, 79, 82, Appendix 11.12 |
| 44-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | ↓ | 79, 82 |
| 44-C. | Measurable objectives (see requirement for #42-C). | ↓ | 79, 82 |
| 44-D. | Related activities (see requirement for #42-D). | ↓ | 56-59, 79, 82, Appendix 11.12 |
| 44-E. | Budgets (see requirement for #42-E). | | 89-92 |
| 45 | **Imperiled species, habitat maintenance, enhancement, restoration, or population restoration** | 259.032(10) & 253.034(5) | |
| 45-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 53-62, 79, Appendix 11.13 |
| 45-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | ↓ | 79 |
| 45-C. | Measurable objectives (see requirement for #42-C). | ↓ | 79 |
| 45-D. | Related activities (see requirement for #42-D). | ↓ | 53-62, 79, Appendix 11.13 |
| 45-E. | Budgets (see requirement for #42-E). | | 89-92 |
| 45-F | Assess the feasibility of managing the lands > 40 contiguous acres as a recipient site for gopher tortoises consistent with rules of the Fish and Wildlife Conservation Commission, as prepared by the agency or cooperatively with a Fish and Wildlife Conservation Commission wildlife biologist. | 259.105 | 36 |
| 45-G | Economic feasibility of establishing a gopher tortoise recipient site, including the initial cost, recurring management costs and the revenue projections. | 259.105 | 36 |
| 46 | ***Quantitative data description of the land regarding an inventory of exotic and invasive plants and associated acreage. *See footnote.* | 253.034(5) | 62-65 |
| 47 | Place the Arthropod Control Plan in an appendix. If one does not exist, provide a statement as to what arrangement exists between the local mosquito control district and the management unit. | BOT requirement via lease language | Appendix 11.18 |
| 48 | **Exotic and invasive species maintenance and control** | 259.032(10) & 253.034(5) | |
| 48-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 62-65, 80, 81 |
| 48-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | ↓ | 80, 81 |
| 48-C. | Measurable objectives (see requirement for #42-C). | ↓ | 80, 81 |

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 48-D. | Related activities (see requirement for #42-D). | ↓ | 62-65, 80, 81 |
| 48-E. | Budgets (see requirement for #42-E). | | 89-92 |

## Section E: Water Resources

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 49 | A statement as to whether the property is within and/or adjacent to an aquatic preserve or a designated area of critical state concern or an area under study for such designation. *If yes, provide a list of the appropriate managing agencies that have been notified of the proposed plan.* | 18-2.018 & 18-2.021 | 2 |
| 50 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding water resources, including water classification for each water body and the identification of any such water body that is designated as an Outstanding Florida Water under Rule 62-302.700, F.A.C. | 18-2.021 | 38, 39 |
| 51 | Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding swamps, marshes and other wetlands. | 18-2.021 | 19-28 |
| 52 | ***Quantitative description of the land regarding an inventory of hydrological features and associated acreage. *See footnote.* | 253.034(5) | 19-27 |
| 53 | Hydrological Preservation and Restoration | 259.032(10) & 253.034(5) | |
| 53-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 66, 67, 82 |
| 53-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | ↓ | 82 |
| 53-C. | Measurable objectives (see requirement for #42-C). | ↓ | 82 |
| 53-D. | Related activities (see requirement for #42-D). | ↓ | 66, 67, 82 |
| 53-E. | Budgets (see requirement for #42-E). | | 89-92 |

## Section F: Historical, Archeological and Cultural Resources

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 54 | **Location and description of known and reasonably identifiable renewable and non-renewable resources of the property regarding archeological and historical resources. *Include maps of all cultural resources except Native American sites, unless such sites are major points of interest that are open to public visitation.* | 18-2.018, 18-2.021 & per DHR's request | 40-45, 67, 82, 83 |
| 55 | ***Quantitative data description of the land regarding an inventory of significant land, cultural or historical features and associated acreage. | 253.034(5) | 40-45, 67 |
| 56 | A description of actions the agency plans to take to locate and identify unknown resources such as surveys of unknown archeological and historical resources. | 18-2.021 | 82, 83 |
| 57 | **Cultural and Historical Resources** | 259.032(10) & 253.034(5) | |
| 57-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 67, 82, 83 |
| 57-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | ↓ | 82,83 |
| 57-C. | Measurable objectives (see requirement for #42-C). | ↓ | 82, 93 |

| | | | |
|---|---|---|---|
| 57-D. | Related activities (see requirement for #42-D). | ↓ | 67, 82, 83 |
| 57-E. | Budgets (see requirement for #42-E). | | 89-92 |

**While maps of Native American sites should not be included in the body of the management plan, the DSL urges each managing agency to provide such information to the Division of Historical Resources for inclusion in their proprietary database. This information should be available for access to new managers to assist them in developing, implementing and coordinating their management activities.

## Section G: Facilities (Infrastructure, Access, Recreation)

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 58 | ***Quantitative data description of the land regarding an inventory of infrastructure and associated acreage. *See footnote.* | 253.034(5) | 40-45 |
| 59 | **Capital Facilities and Infrastructure** | 259.032(10) & 253.034(5) | |
| 59-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 67, 68, 81-83 |
| 59-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | ↓ | 81-83 |
| 59-C. | Measurable objectives (see requirement for #42-C). | ↓ | 81-83 |
| 59-D. | Related activities (see requirement for #42-D). | ↓ | 46-49, 67, 68, 81-83 |
| 59-E. | Budgets (see requirement for #42-E). | | 89-92 |
| 60 | *** Quantitative data description of the land regarding an inventory of recreational facilities and associated acreage. | 253.034(5) | 46-49, 81-83 |
| 61 | **Public Access and Recreational Opportunities** | 259.032(10) & 253.034(5) | |
| 61-A. | Management needs, problems and a desired outcome (see requirement for # 42-A). | ↓ | 65, 66, 81 |
| 61-B. | Detailed description of both short and long-term management goals (see requirement for # 42-B). | ↓ | 81 |
| 61-C. | Measurable objectives (see requirement for #42-C). | ↓ | 81 |
| 61-D. | Related activities (see requirement for #42-D). | ↓ | 47, 4865, 66, 81 |
| 61-E. | Budgets (see requirement for #42-E). | | 89-92 |

## Section H: Other/ Managing Agency Tools

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| 62 | Place this LMP Compliance Checklist at the front of the plan. | ARC and managing agency consensus | iii-ix |
| 63 | Place the Executive Summary at the front of the LMP. Include a physical description of the land. | ARC and 253.034(5) | iii |
| 64 | If this LMP is a 10-year update, note the accomplishments since the drafting of the last LMP set forth in an organized (categories or bullets) format. | ARC consensus | 53-68 |
| 65 | Key management activities necessary to achieve the desired outcomes regarding other appropriate resource management. | 259.032(10) | 53-77 |
| 66 | Summary budget for the scheduled land management activities of the LMP including any potential fees anticipated from public or private entities for projects to offset adverse impacts to imperiled species or such habitat, which fees shall be used to restore, manage, enhance, repopulate, or acquire imperiled species habitat for lands that have or are anticipated to have imperiled species or such habitat onsite. The summary budget shall be prepared in such a manner that it facilitates computing an aggregate of land management costs for all state-managed lands using the categories described in s. 259.037(3) which are | 253.034(5) | 89-92, Appendix 11.17 |

| Item # | Requirement | Statute/Rule | Page Numbers and/or Appendix |
|---|---|---|---|
| | resource management, administration, support, capital improvements, recreation visitor services, law enforcement activities. | | |
| 67 | Cost estimate for conducting other management activities which would enhance the natural resource value or public recreation value for which the lands were acquired, include recommendations for cost-effective methods in accomplishing those activities. | 259.032(10) | 89-92, Appendix 11.17 |
| 68 | A statement of gross income generated, net income and expenses. | 18-2.018 | 89-92, Appendix 11.17 |

*** = The referenced inventories shall be of such detail that objective measures and benchmarks can be established for each tract of land and monitored during the lifetime of the plan. All quantitative data collected shall be aggregated, standardized, collected, and presented in an electronic format to allow for uniform management reporting and analysis. The information collected by the DEP pursuant to s. 253.0325(2) shall be available to the land manager and his or her assignee.

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## Acronym Key

| | |
|---|---|
| ADA | Americans with Disabilities Act |
| ARC | Acquisition and Restoration Council |
| BCNP | Big Cypress National Park |
| BEBR | Bureau of Economic and Business Research |
| C&SF | Central and South Florida Project for Flood Control and Other Purposes |
| CARL | Conservation and Recreation Lands Program |
| CCT | Current control technologies |
| COE | U.S. Army Corps of Engineers |
| DACS | Department of Agriculture and Consumer Services |
| DEP | Florida Department of Environmental Protection |
| DFC | Desired future conditions |
| DHR | Division of Historical Resources |
| DSL | Division of State Lands |
| ECWMA | Everglades Complex of Wildlife Management Areas |
| EEL | Environmentally Endangered Lands |
| EWMA | Everglades and Francis S. Taylor Wildlife Management Area |
| FAC | Florida Administrative Code |
| FDOT | Florida Department of Transportation |
| FFS | Florida Forest Service |
| FISC | Florida Invasive Species Council |
| FLAM | Florida Landscape Assessment Model |
| FMSF | Florida Master Site File |
| FNAI | Florida Natural Areas Inventory |
| FS | Florida Statute(s) |
| FWC | Florida Fish and Wildlife Conservation Commission |
| FWRI | Fish and Wildlife Research Institute |
| GFC | Florida Game and Freshwater Fish Commission |
| GIS | Geographic Information Systems |
| GPS | Geographic Positioning System |
| GRASI | Gulf Regional Airspace Initiative |
| HWMA | Holey Land Wildlife Management Area |
| IMPP | Internal Management Policies and Procedures |
| IPCC | Intergovernmental Panel on Climate Change |
| IWHRS | Integrated Wildlife Habitat Ranking System |
| LAP | Landowner Assistance Program |
| LMR | Land Management Review |
| MAG | Management Advisory Group |
| NPS | National Park Service |
| NRCS | Natural Resources Conservation Service |

| | |
|---|---|
| NWR | National Wildlife Refuge |
| OBVM | Objective-Based Vegetation Management |
| OFW | Outstanding Florida Waters |
| ORV | Off-Road Vehicle |
| PASO | Public Access Services Office |
| RWMA | Rotenberger Wildlife Management Area |
| SFWMD | South Florida Water Management District |
| SOR | Save Our Rivers |
| STA | Stormwater Treatment Area |
| UF | University of Florida |
| USAF | United States Air Force |
| USFS | United States Forest Service |
| USFWS | United States Fish and Wildlife Service |
| WCA | Water Conservation Area |
| WCPR | Wildlife Conservation Prioritization and Recovery |
| WEA | Wildlife and Environmental Area |
| WMA | Wildlife Management Area |

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# 1 Introduction and General Information

The Everglades Complex of Wildlife Management Areas (ECWMA) is comprised of three Wildlife Management Areas: the Everglades and Francis S. Taylor Wildlife Management Area (EWMA), the Holey Land Wildlife Management Area (HWMA), and the Rotenberger Wildlife Management Area (RWMA). The ECWMA conserves a total of 736,881 acres of public conservation land within Broward, Miami-Dade, and Palm Beach counties, and is characterized by a vast landscape of glades marsh and prairie hammock. It is part of the internationally recognized greater Everglades ecosystem, which currently covers approximately two million acres. The Everglades is the largest wetland and subtropical wilderness in the United States; it contains the largest mangrove ecosystem in the western hemisphere, the largest continuous stand of sawgrass prairie, and the most significant breeding ground for wading birds in North America. The ECWMA is managed by the FWC to conserve the important natural communities that provide habitat for a wide range of imperiled and common wildlife species, as well as providing fish and wildlife-based public outdoor recreation including hunting, fishing, wildlife viewing, biking, boating, and hiking. The ECWMA conserves critically important elements of the Everglades ecosystem and provides essential habitat for the wildlife species that inhabit the area. A great diversity of wildlife is supported on the area, including the American alligator (*Alligator mississippiensis*), Florida panther (*Puma concolor coryi*), Everglade snail kite (*Rostrhamus sociabilis plumbeus*), and Audubon's crested caracara (*Caracara cheriway*). Several locally important plants are also found on the area, including the Florida royal palm (*Roystonea regia*), banded wild-pine (*Tillandsia flexuosa*), chiggery grapes (*Tournefortia hirsutissima*), and Balbis' airplant (*Tillandsia balbisiana*). Although some species have been documented specifically on the EWMA, the HWMA, or the RWMA, the ECWMA has the potential to accommodate all species described in this Management Plan.

This Management Plan serves as the basic statement of policy and direction for the management of the ECWMA and has been developed to guide each aspect of the ECWMA's resource and operational management for the ten-year planning period. It provides information including the past usage, conservation acquisition history, and descriptions of the natural and cultural resources found on the ECWMA. Furthermore, it identifies the FWC's management intent, goals, and objectives, as well as identifies challenges and potential solutions.

This Management Plan is submitted for review to the Acquisition and Restoration Council (ARC) acting on behalf of the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) of the State of Florida through the Florida Department of Environmental Protection's (DEP) - Division of State Lands (DSL), in compliance with Chapters 253 and 259, Florida Statutes (F.S.), and Chapters 18-2 and 18-4, Florida Administrative Code (F.A.C.). Format and content were drafted in accordance with ARC requirements for management plans and the model plan outline provided by the staff of the DSL. Terms (Appendix 11.8) used in this Management Plan describing management activities conform to those developed for the Land Management Uniform Accounting Council Biennial Land Management Operational Report.

## 1.1 Location

The ECWMA is in Southeastern Florida and encompasses 736,881 acres (Figures 1 and 2). The ECWMA lies in all or parts of (Figure 3):

- Various Sections of Broward County, in Townships 47 – 51 South, and Ranges 35 – 40 East
- Various Sections of Dade County, in Townships 52 – 54 South, and Ranges 35 – 39 East
- Various Sections of Palm Beach County, in Townships 46 and 47 South, and Ranges 35 – 40 East

The ECWMA is approximately 15 miles west of Miami, ten miles west of Ft. Lauderdale, and ten miles southwest of Boca Raton, located in Broward (EWMA), Miami-Dade (EWMA), and Palm Beach counties. The HWMA and the RWMA are in southwestern Palm Beach County, north of Water Conservation Area 3 (WCA 3) and are divided by the Miami Canal; the HWMA is east-adjacent to the RWMA and on the northern boundary of the EWMA.

The ECWMA is not located within a designated Area of Critical State Concern.

### 1.1.1 Proximity to other Public Conservation Lands

The ECWMA is part of an extensive network of conservation lands, including lands managed by the Miccosukee Tribe of Indians of Florida; the Seminole Tribe of Florida; the South Florida Water Management District (SFWMD); the DEP; Broward, Miami-Dade, and Palm Beach counties; several federal agencies; and various cities, towns, and universities. Federal properties adjacent to the ECWMA include Big Cypress National Park (BCNP) to the west, Everglades National Park to the south, and Arthur R. Marshall Loxahatchee National Wildlife Refuge to the northeast. The ECWMA borders several lands managed by the SFWMD, including multiple Stormwater Treatment Areas (STAs). Several Florida Forever projects (Figures 4 and 5) are also located in the vicinity of the area.

Tables 1 and 2 list the Florida Forever projects and conservation lands within a ten-mile radius of the ECWMA, including lands managed by public, tribal, and private entities that conserve cultural and natural resources within this region of Florida.

Most of the conservation lands listed in Table 2 are owned in full fee by a public entity. However, some of these areas fall within a less-than-fee ownership classification where the land is owned and being managed by a private landowner while a public agency or not-for-profit organization holds a conservation easement on the land.

**Table 1. Florida Forever Projects within a 10-mile Vicinity**

| Project Name | Geographic Information System (GIS) Acres |
|---|---|
| Dade County Archipelago | 307 |
| Devil's Garden | 82,995 |
| Panther Glades | 64,809 |
| Save Our Everglades | 217,680 |

**Table 2. Conservation Lands within a 10-mile Vicinity**

| State of Florida | Managing Agency |
|---|---|
| Arthur R. Marshall Loxahatchee National Wildlife Refuge | USFWS |
| Big Cypress National Preserve | NPS |
| Everglades National Park | NPS |
| Wetlands Reserve Program Easement #186 | USDA-NRCS |
| **Water Management District** | **Managing Agency** |
| 8.5 Square Mile Area | SFWMD |
| Bird Drive Research Area | SFWMD |
| Deer Fence Canal | SFWMD |
| East Coast Buffer | SFWMD |
| Everglades Agricultural Area | SFWMD |
| Fran Reich Preserve | SFWMD |
| Miccosukee Indian Water Conservation Area | SFWMD |
| River of Grass | SFWMD |
| Stormwater Treatment Area | SFWMD |
| **County/City** | **Managing Agency** |
| Coconut Creek Maple Swamp Natural Area | Broward County |
| Easterlin Regional Park | Broward County |
| Fern Forest Nature Center | Broward County |
| Helene Klein Pineland Preserve | Broward County |
| Herman and Dorothy Shooster Preserve | Broward County |
| Hillsborough Pineland Natural Area | Broward County |
| Long Key Natural Area and Nature Center | Broward County |
| North Folk Blueway | Broward County |
| Northwest 39th Avenue Park | Broward County |
| Pine Island Ridge Natural Area | Broward County |
| Saw Palmetto Natural Area | Broward County |
| Secret Woods Buffer and Nature Center | Broward County |
| Tall Cypress Natural Area | Broward County |
| Tradewinds Regional Park | Broward County |
| Tree Tops Regional Park | Broward County |
| West Creek Pineland Natural Area | Broward County |
| William J. Kelly Rookery | Broward County |
| Woodmont Natural Area | Broward County |
| 74th St. Passive Park Preserve | City of Coconut Creek |
| Banyan Trails Parcel F Preserve | City of Coconut Creek |
| Copans Road Preserve | City of Coconut Creek |
| Cypress Lake Preserve | City of Coconut Creek |
| Cypress Park Preserve | City of Coconut Creek |
| Cypress Walk Preserve | City of Coconut Creek |
| Recreation Complex Preserve | City of Coconut Creek |
| Sabal Pines Park Preserve | City of Coconut Creek |

| | |
|---|---|
| Township Estates Park Preserve | City of Coconut Creek |
| Veterans Park Preserve | City of Coconut Creek |
| Wiles Road Cypress Dome Preserve | City of Coconut Creek |
| Windmill Park Preserve | City of Coconut Creek |
| Winston Nature Park Preserve | City of Coconut Creek |
| Cypress Gateway Preserve | City of Coral Springs |
| Fern Glen Park | City of Coral Springs |
| Kiwanis Park Natural Area | City of Coral Springs |
| Pine Flats Preserve | City of Coral Springs |
| Red Lichen Sanctuary | City of Coral Springs |
| Sandy Ridge Sanctuary | City of Coral Springs |
| Sherwood Forest Park | City of Coral Springs |
| Whispering Woods – Parcel B | City of Coral Springs |
| Woodside Estates Park | City of Coral Springs |
| Cypress Creek Sand Pine Preserve | City of Fort Lauderdale |
| Gopher Tortoise Preserve | City of Fort Lauderdale |
| Mills Pond Conservation Area | City of Fort Lauderdale |
| Warbler Wetland Natural Area | City of Fort Lauderdale |
| Cypress Preserve Conservation Park | City of Lauderdale Lakes |
| Hampton Pines Park | City of North Lauderdale |
| Lakeside Sand Pine Preserve | City of Oakland Park |
| Country's Point Park | City of Parkland |
| Doris Davis Formal Wilderness Preserve | City of Parkland |
| Holmberg Road Natural Area | City of Parkland |
| Parkland Greenway | City of Parkland |
| Ternbridge Preserve | City of Parkland |
| Terramark Park Natural Area | City of Parkland |
| Winners Circle Park | City of Parkland |
| Chapel Trail Nature Preserve | City of Pembroke Pines |
| West Pines Soccer Park and Nature Preserve | City of Pembroke Pines |
| East Tropical Way Park | City of Plantation |
| Plantation Park East Trailhead | City of Plantation |
| Plantation Preserve Linear Park | City of Plantation |
| Volunteer Park Addition | City of Plantation |
| Sawgrass Sanctuary | City of Sunrise |
| Preservation Park | City of Tamarac |
| Swim Central Park Addition | City of Tamarac |
| Water's Edge Park | City of Tamarac |
| Camp Matecumbe | Miami-Dade County |
| Kendall Indian Hammocks Park | Miami-Dade County |
| Milton E. Thompson Park | Miami-Dade County |
| Trail Glades Range | Miami-Dade County |
| Tree Island Park | Miami-Dade County |
| South County Regional Park | Palm Beach County |
| Davie Wetlands Park | Town of Davie |

| | |
|---|---|
| Calusa Corners State Park | Town of Southwest Ranches |
| County Estates Open Space and Fishing Hole Park | Town of Southwest Ranches |
| Frontier Trails Park and Rookery | Town of Southwest Ranches |
| Rolling Oaks Park | Town of Southwest Ranches |
| Southwest Meadows Sanctuary | Town of Southwest Ranches |
| Sunshine Ranches Park | Town of Southwest Ranches |

| **Private/Public Conservation Organization** | **Managing Agency** |
|---|---|
| Florida International University Nature Preserve | Florida International University |

| **Acronym Key** | **Agency Name** |
|---|---|
| **DEP** | Florida Department of Environmental Protection |
| **DRP** | Division of Recreation and Parks |
| **NPS** | National Parks Service |
| **USDA-NRCS** | U.S. Department of Agriculture, Natural Resources Conservation Service |
| **SFWMD** | South Florida Water Management District |
| **USFWS** | U.S. Department of Interior, Fish and Wildlife Service |

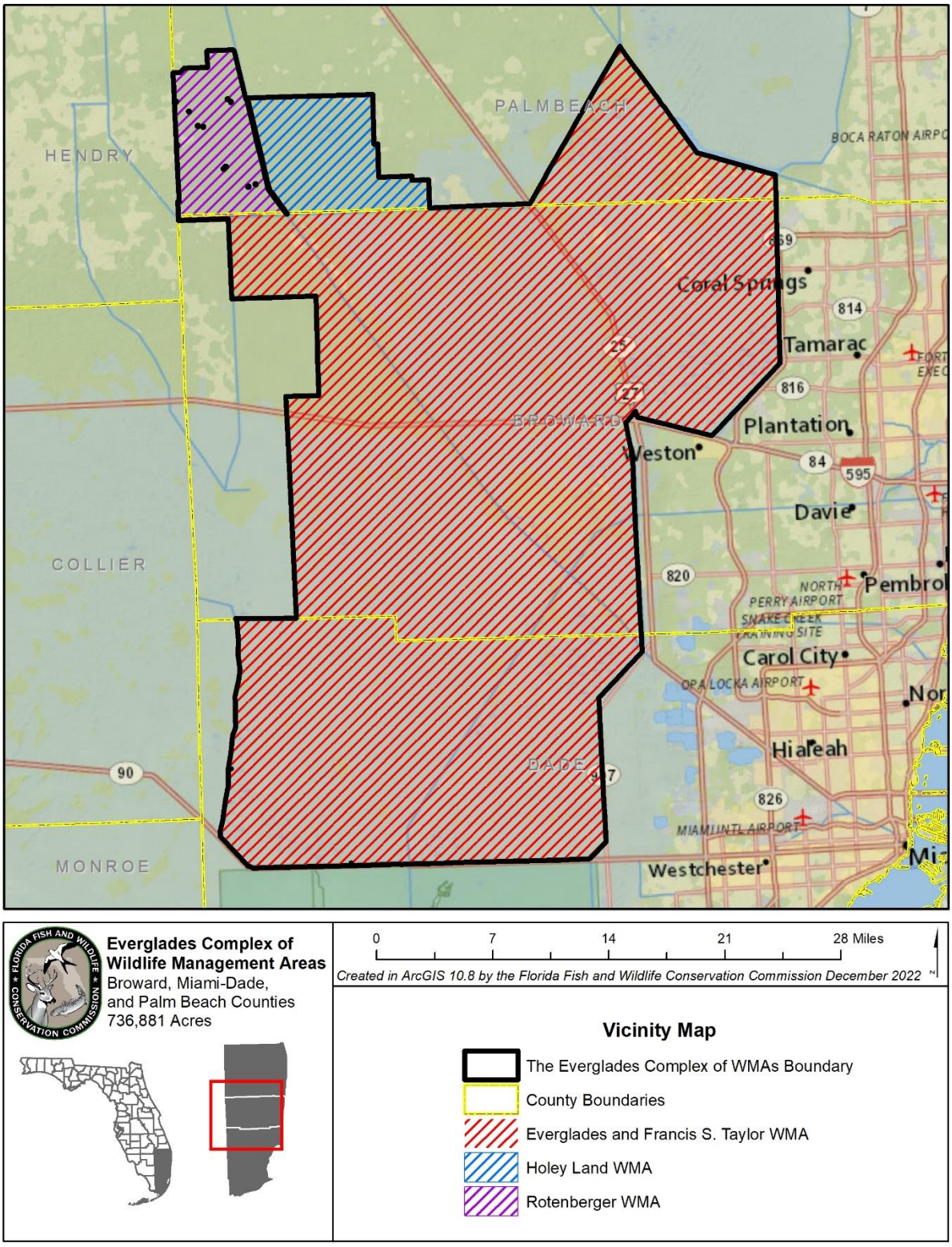



**Figure 1. Vicinity Map of the ECWMA**

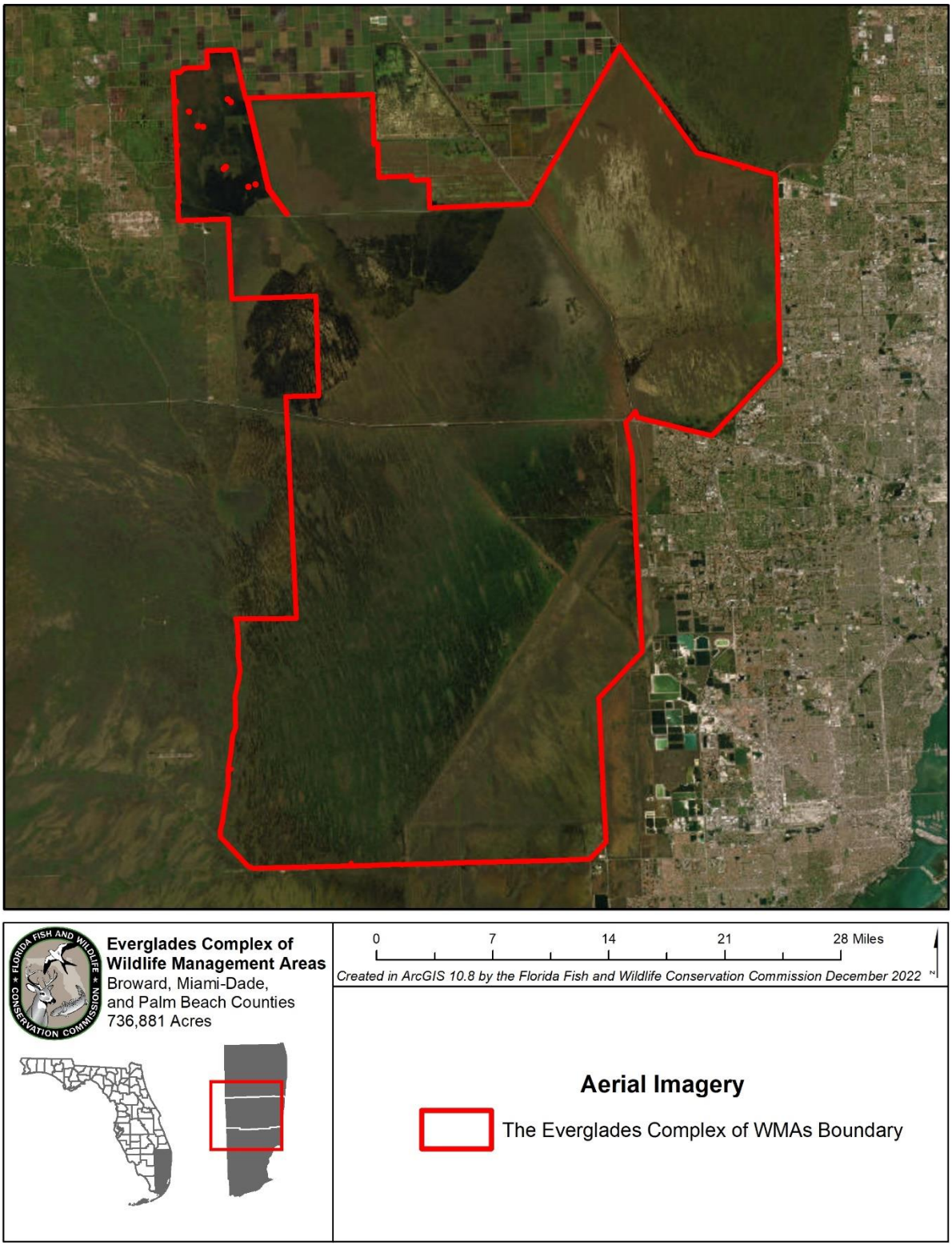



**Figure 2. Aerial Imagery of the ECWMA**

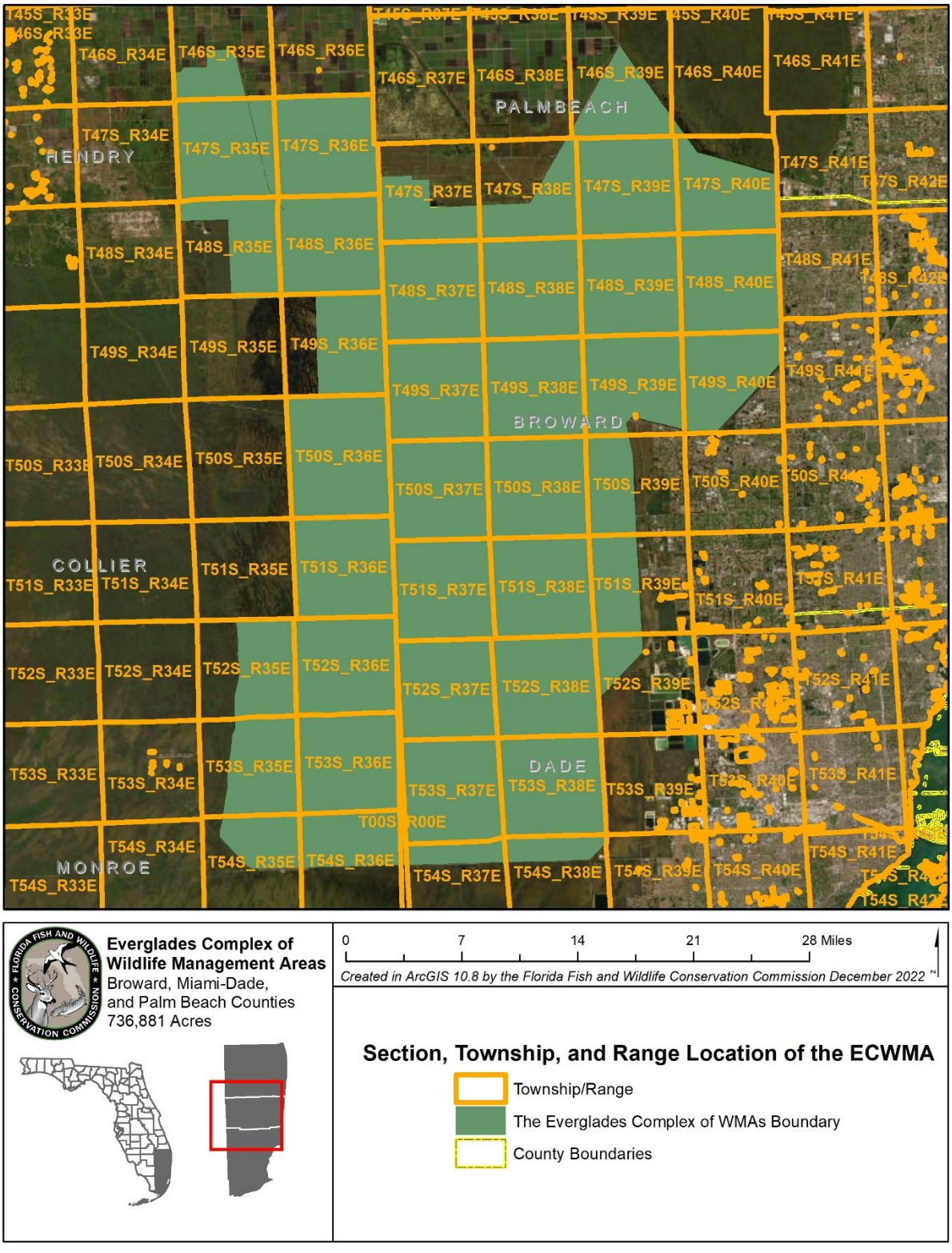



**Figure 3. Section, Township, and Range Location of the ECWMA**

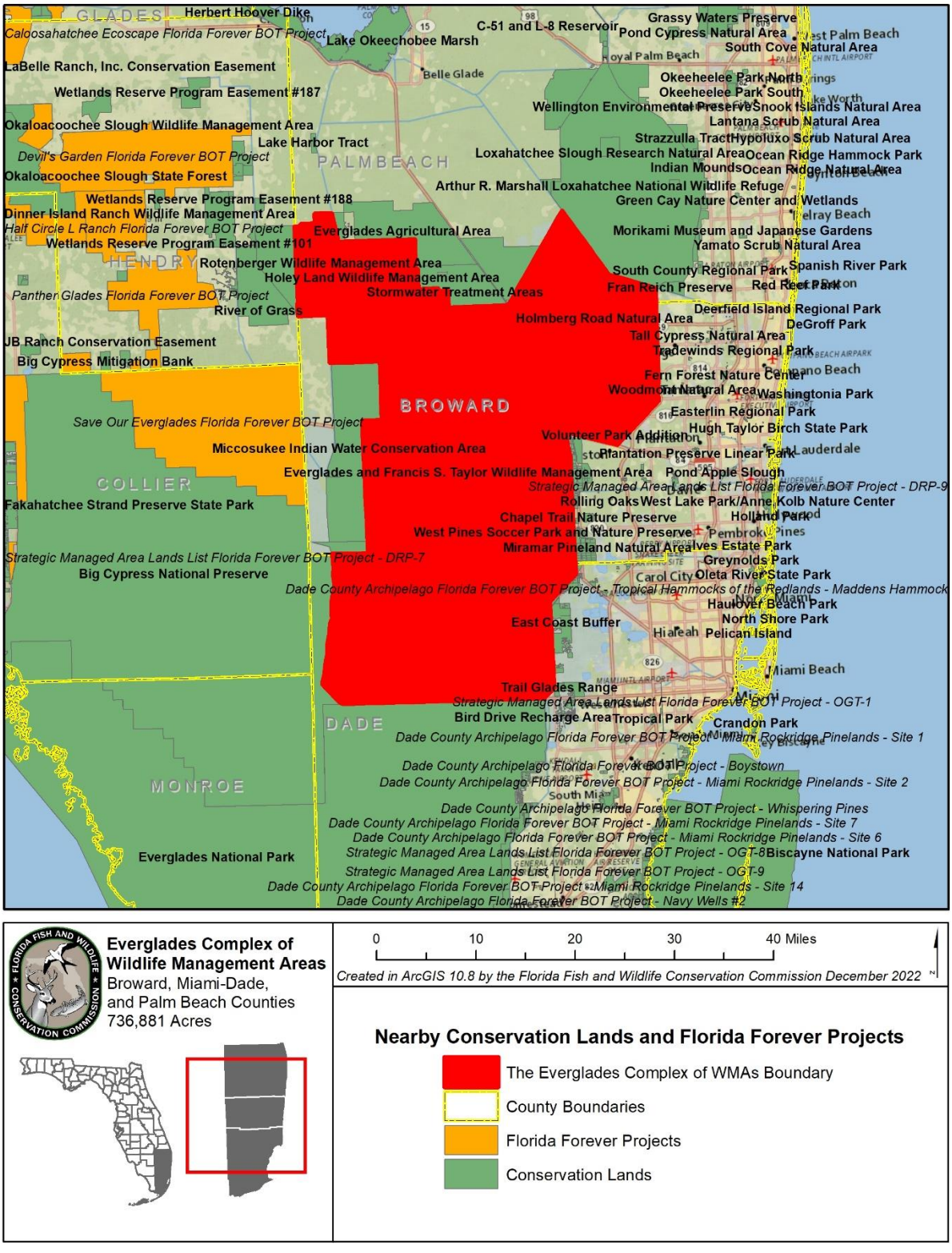
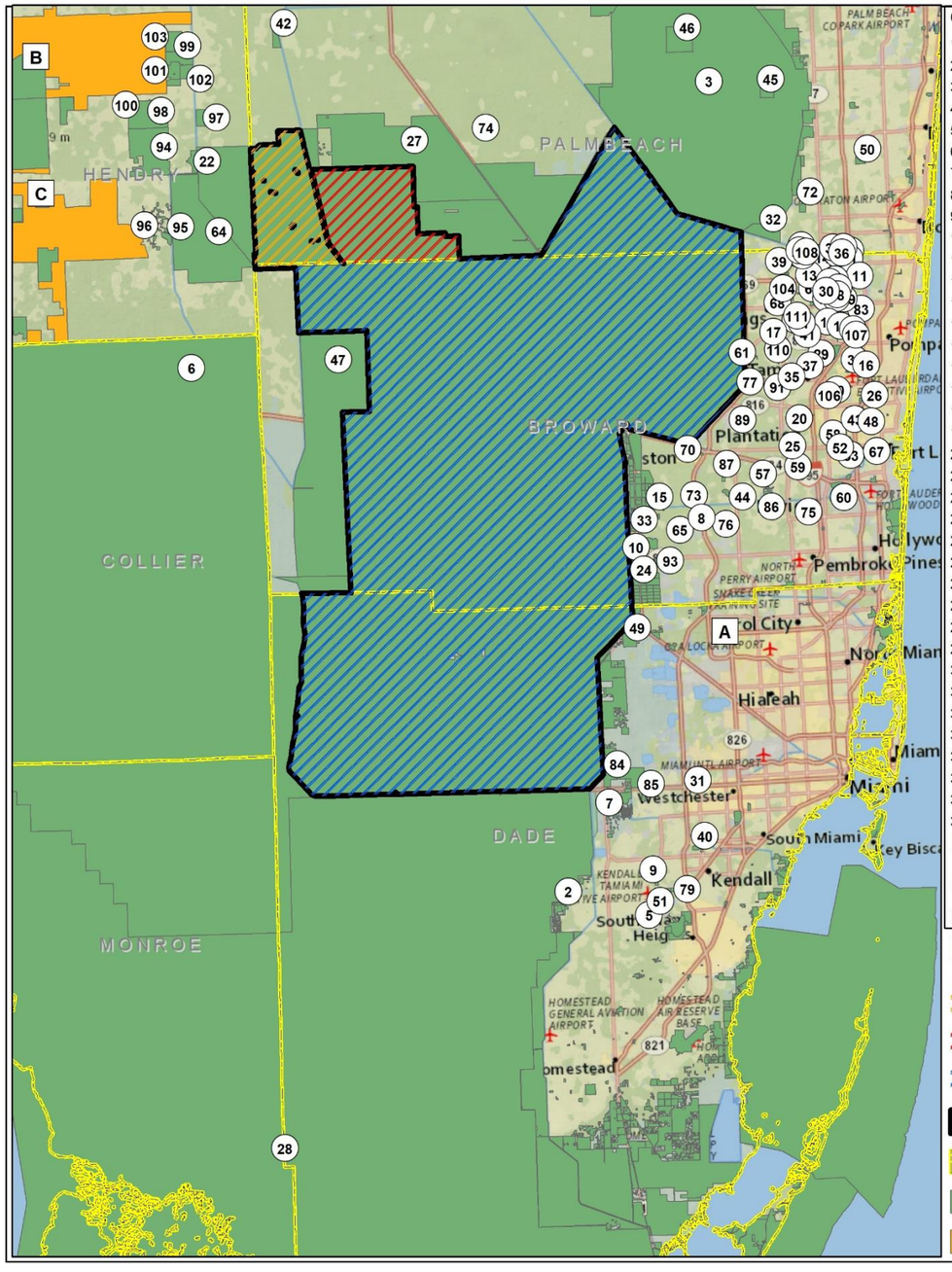



**Figure 4. Nearby Conservation Lands and Florida Forever Projects**




**Conservation Lands Within 10 miles of the ECWMA**

1) 74th Street Passive Park Preserve
2) 8.5 Square Mile Area
3) Arthur R. Marshall Loxahatchee National Wildlife Refuge
4) Banyan Trails Parcel F Preserve
5) Big and Little George Hammocks
6) Big Cypress National Preserve
7) Bird Drive Recharge Area
8) Calusa Corners Park
9) Camp Matecumbe
10) Chapel Trail Nature Preserve
11) Coconut Creek Maple Swamp Natural Area
12) Copans Road Preserve
13) Coral Creek Park
14) Country's Point Park
15) Country Estates Open Space and Fishing Hole Park
16) Cypress Creek Sand Pine Preserve
17) Cypress Gateway Preserve
18) Cypress Lake Preserve (City of Coconut Creek)
19) Cypress Park Preserve
20) Cypress Preserve Conservation Park
21) Cypress Walk Preserve
22) Davie Wetlands Park
23) Deer Fence Canal
24) Doris Davis Forman Wilderness Preserve
25) East Coast Buffer
26) East Tropical Way Park
27) Easterlin Regional Park
28) Everglades Agricultural Area
29) Everglades National Park
30) FIU Nature Preserve
31) Fern Forest Nature Center
32) Fern Glen Park
33) Fran Reich Preserve
34) Frontier Trails Park and Rookery
35) Gopher Tortoise Preserve (Broward County)
36) Hampton Pines Park
37) Helene Klein Pineland Preserve
38) Herman and Dorothy Shooster Preserve
39) Hillsboro Pineland Natural Area
40) Holmberg Road Natural Area
41) Kendall Indian Hammocks Park
42) Kiwanis Park Natural Area
43) Lake Harbor Tract
44) Lakeside Sand Pine Preserve
45) Long Key Natural Area and Nature Center
46) Loxahatchee Slough Public Use Natural Area
47) Loxahatchee Slough Research Natural Area
48) Miccosukee Indian Water Conservation Area
49) Mills Pond Conservation Area
50) Milton E. Thompson Park
51) Morikami Museum and Japanese Gardens
52) Nixon Smiley Pineland Preserve
53) North Fork Blueway
54) North Fork Riverwalk
55) Northwest 39th Avenue Park
56) Parkland Greenway
57) Pine Flats Preserve
58) Pine Island Ridge Natural Area
59) Plantation Park East Trailhead
60) Plantation Preserve Linear Park
61) Pond Apple Slough
62) Preservation Park
63) Recreation Complex Preserve
64) Red Lichen Sanctuary
65) River of Grass
66) Rolling Oaks Park
67) Sabal Pines Park Preserve
68) Sailboat Bend Preserve
69) Sandy Ridge Sanctuary
70) Saw Palmetto Natural Area
71) Sawgrass Sanctuary
72) Sherwood Forest Park
73) South County Regional Park
74) Southwest Meadows Sanctuary
75) Stormwater Treatment Areas
76) Sunny Lake Bird Sanctuary
77) Sunshine Ranches Park
78) Swim Central Park Addition
79) Tall Cypress Natural Area
80) Tamiami #8 (Nixon Smiley Addition) Pineland
81) Ternbridge Preserve
82) Terramar Park Natural Area
83) Township Estates Park Preserve
84) Tradewinds Regional Park
85) Trail Glades Range
86) Tree Island Park
87) Tree Tops Regional Park
88) Veterans Park Preserve
89) Volunteer Park Addition
90) Warbler Wetland Natural Area
91) Water's Edge Park
92) West Creek Pineland Natural Area
93) West Pines Soccer Park and Nature Preserve
94) Wetlands Reserve Program Easement #101
95) Wetlands Reserve Program Easement #150
96) Wetlands Reserve Program Easement #151
97) Wetlands Reserve Program Easement #186
98) Wetlands Reserve Program Easement #188
99) Wetlands Reserve Program Easement #191
100) Wetlands Reserve Program Easement #192
101) Wetlands Reserve Program Easement #197
102) Wetlands Reserve Program Easement #204
103) Wetlands Reserve Program Easement #205
104) Whispering Woods - Parcel B
105) Wiles Road Cypress Dome Preserve
106) William J. Kelly Rookery
107) Windmill Park Preserve
108) Winners Circle Park
109) Winston Park Nature Center Preserve
110) Woodmont Natural Area
111) Woodside Estates Park

**Florida Forever Projects within 10 miles of ECWMA**

A) Dade County Archipelago Florida Forever BOT Projects
B) Devil's Garden Florida Forever BOT Project
C) Panther Glades Florida Forever BOT Project
D) Save Our Everglades Florida Forever BOT Project

**Legend**

- Rotenberger WMA
- Holey Land WMA
- Everglades and Francis S. Taylor WMA
- Everglades Complex of WMAs Boundary
- County
- Conservation Lands
- Flroida Forever Projects

N

**Everglades Complex of Wildlife Management Areas**
Broward, Palm Beach, and Miami-Dade Counties
736,881 Acres

0 5 10 20 Miles

*Created in ArcGIS 10.7 by the Florida Fish and Wildlife Conservation Commission December 2022*



**Figure 5. Conservation Lands and Florida Forever Projects within a 10-mile Vicinity**

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## 1.2 Acquisition

### 1.2.1 Acquisition History

The State of Florida acquired the title to much of the original public lands encompassed within the ECWMA under the federal Swamp and Overflowed Lands Act of 1850, prior to the creation of the Trustees of the Internal Improvement Trust Fund. The Swamp and Overflowed Lands Act put over 20 million acres of swamp and overflowed lands into state ownership. When Florida passed the Internal Improvement Act in 1855, public lands in the Everglades were conveyed at low cost, or in some cases zero cost, to parties interested in developing the area, which encouraged purchasers to drain the waters from these lands.

The acquisition of the EWMA was a lengthy process. In 1911, the Central and Southern Florida Water Management District, now known as the SFWMD, began acquiring the EWMA lands via donations and other funding mechanisms. While the majority of the land managed within the EWMA is in public ownership, there are several remaining private inholdings that are managed under the multiple agreements detailed in Section 1.2.

In 1968, the Board of Trustees acquired most of the HWMA under a 20-million-dollar bond program used to acquire outdoor recreation lands. In 2013, about 540 acres was acquired as Murphy Act Lands.

In 1980, the acquisition of the RWMA began. This acquisition process entailed many small, individually purchased parcels, and was initially funded by the Environmentally Endangered Lands program (EEL) and the Conservation and Recreation Lands (CARL) program. In 1999, acquisitions of the RWMA inholdings proceeded under the Preservation 2000 program.

### 1.2.2 Purpose for Acquisition of the Property

The ECWMA, composed of several large Water Conservation Areas (WCA), was acquired to provide flood protection to the adjacent agricultural and urban areas and to serve as a fresh water source for the Gold Coast. Other important considerations for acquisition included management of the area to benefit fish and wildlife and providing outdoor public recreation. In 1983, Governor Bob Graham initiated the “Save Our Everglades” program to improve environmental conditions in the Everglades ecosystem through hydrologic restoration. The ECWMA lands that are cooperatively managed with the SFWMD are part of the Comprehensive Everglades Restoration Plan (CERP) and the Save Our Rivers program (SOR).

The SOR legislation calls for the management and maintenance of the lands acquired with SOR funds in an “environmentally acceptable manner, and to the extent practicable, in such a way as to restore and protect their natural state and condition.” Three of the initiatives of the SOR program directly affected the management of the ECWMA: (1) Initiative three required hydrologic restoration of the Holey Land and Rotenberger Tracts; (2) Initiative four required the FWC to manage the ECWMA deer herd at a level that could survive moderate flooding conditions; and (3) Initiative five incorporated hydrological improvements in the conversion of State Road 84 to Interstate 75. This legislation encourages the use of SOR lands for public outdoor recreational activities compatible with the primary goal of environmental protection and enhancement.

In continuation of these previous actions regarding acquisition and restoration within the Everglades ecosystem, the Florida Legislature passed the “Everglades Forever Act” in 1994. This legislation states: “The Legislature finds that the Everglades ecological system not only contributes to South Florida’s water supply, flood control, and recreation, but serves as the habitat for diverse species of wildlife and plant life. The system is unique in the world and one of Florida’s great treasures. The Everglades ecological system is endangered as a result of adverse changes in water quality, and in the quantity, distribution, and timing of flows, and therefore, must be restored and protected.” (Chapter 373.4592(1)(a), F.S.)

Collectively, the Save Our Everglades program, the Everglades Forever Act, along with Chapters 259 and 253, F.S., as outlined above, set forth the purposes for which lands within the ECWMA are to be restored and managed. Furthermore, the ECWMA is managed by the FWC for the purpose of operating a WMA, providing ecological diversity, providing managed habitat for both common and imperiled wildlife, and for providing the public with fish and wildlife-based recreational opportunities.

## 1.3 Title Interest and Management Authority

A majority of the ECWMA is owned by the Board of Trustees, although the SFWMD owns title to some of the lands within the WCAs located in the EWMA. The FWC has lead management authority of the HWMA and the RWMA and shares a cooperative management authority of the EWMA with the SFWMD. The Miccosukee Tribe of Florida, who has been granted a perpetual lease for approximately 189,000 acres within the WCA 3A portion of EWMA, uses the land for traditional purposes such as tribal religious purposes, and subsistence hunting and fishing. The ECWMA is lead-managed by the FWC under four leases and one Use Agreement.

In 1968, the DEP granted the FWC management authority over the HWMA. In 2011 and 1998, the HWMA lease was amended, adding a little over 4,000 acres to the original lease. This land was already state-owned within the original purchase of the HWMA but was not accounted for on the leases granting the FWC management authority. In 2013, the lease was amended a third time, adding 540 acres. As of 2021, this lease was released under Lease No. 4842, which covers all land leased under previous leases and lease amendments.

In 1980, the DEP entered a lease with the FWC granting management authority over the RWMA and a portion of the EWMA. As the many small inholdings were acquired on the RWMA, they were amended to the parent lease. By 2021, this lease had been amended 26 times and partially released four times; all previous leases and lease amendments were released under Lease No. 4841.

In 1952, the FWC and the Central and South Florida Water Management District, now known as the SFWMD, entered into Cooperative Agreement No. 4600004530 for the management of the EWMA. This agreement was renewed in 2022 by the FWC and the SFWMD, granting the FWC continued management authority.

In 1982, the Board of Trustees, the FWC, the SFWMD, and the Miccosukee Tribe of Indians entered Lease No. 3793 for approximately 189,000 acres within the WCA 3A portion of the EWMA for the Miccosukee Tribe of Indians, ensuring that the Tribe and their descendants have

the continued use of their traditional homeland. This lease grants FWC general supervision of fish and wildlife management within this area under the authority of Section 253.03, F.S. Further, the lease grants the SFWMD responsibility for flood control and water resource management under the authority of Chapter 373, F.S.

In 2017, Use Agreement U-0435 was entered into by the Board of Trustees and the FWC, granting the FWC management authority over the EWMA. In 2016, the Board of Trustees entered into Lease No. 4779 with the FWC, granting management authority over an additional 459 acres within the EWMA.

The FWC management authority derives from Article IV, Section 9 of the Florida Constitution as well as the guidance and directives of Chapters 253, 259, 327, 370, 372, 375, 378, 379, 403, 487, 597, and 870 of the F.S. These laws establish the authority of the FWC regarding protection and management of the State's fish and wildlife resources.

### 1.3.1 Encumbrances

The properties managed by the FWC within the ECWMA are also subject to existing easements, rights-of-way, and other outstanding mineral rights. In 1951, the SFWMD purchased an easement on the EWMA, granting them the right to use the land as needed for flood control, reclamation, conservation, and all other allied purposes across all properties within the EWMA boundary (Appendix 11.2). Owners of some private inholdings have retained mineral rights. An underground oil pipeline currently crosses WCA 3, north of Alligator Alley, from east to west. Additionally, there are lands within the RWMA and the EWMA that have outstanding private mineral reservations.

## 1.4 Public Involvement

The FWC conducted a Management Advisory Group (MAG) meeting in Broward County, Florida on September 14th, 2022, to obtain input from both public and private stakeholders regarding management of the ECWMA. Results of this meeting were used by the FWC to develop management goals and objectives for inclusion in this Management Plan. A summary of issues and opportunities raised by the MAG, as well as a listing of participants, is included as Appendix 11.4. Furthermore, as required by Chapter 259.032(10), F.S., a public hearing was held in Broward County on October 25th, 2022, and in Palm Beach County on October 26th, 2022, to solicit input and comments from the public regarding the upcoming update to the Management Plan. A Management Prospectus was made available to the public 30 days prior to the hearing. The report of that hearing is also contained in Appendix 11.3. A website is also maintained for receipt of public input at https://myfwc.com/conservation/management-plans/develop-mps/. Further testimony and input are received at a public hearing held by ARC. Input received from all public involvement efforts will be considered in the development of the upcoming update to the Management Plan.

## 1.5 Planning Philosophy

The FWC's planning philosophy focuses on producing conservation outcomes that align with the needs of an ever-changing world. The FWC emphasizes consensus-building from the beginning of the planning process to engage, understand, and incorporate the ideas of the various

interests, user groups, and communities that it serves. To achieve this holistic management approach, the FWC convenes a MAG meeting which engages stakeholders from various user groups at the beginning of the FWC's planning process, and a public hearing in which the public can provide formal testimony. The FWC also engages field staff, as well as other FWC staff expertise and other agency experts, in developing Management Plans, thereby facilitating development of meaningful management intent language. Further management planning input is also received through Land Management Reviews (LMR) conducted every five years. LMRs include both a review of the current management plan and a field review of the area conducted by a diverse team of land management auditors, providing the FWC with important information and guidance (Section 4.1).

Furthermore, the FWC maintains transparency and accountability throughout the development and implementation of the Management Plan by following a "living document" concept which links each plan with the previous plan by reporting on the objectives, management activities, and projects accomplished over the last planning timeframe (see Section 4).[1] The Management Plan serves as the guiding framework to implement an adaptive management process and content will be evaluated throughout the planning period to achieve comprehensive conservation goals (Section 4.2). As needed, amendments to Management Plans are presented to the DSL and ARC for review and consideration.

# 2 Natural and Cultural Resources

## 2.1 Physiography

### 2.1.1 Topography and Geologic Formations

Florida has a storied geological history. The State of Florida is a part of the Florida platform that extends into the Atlantic Ocean and extends over 100 miles into the Gulf of Mexico. During the Paleozoic and Mesozoic ages, volcanic and sedimentary rock formed to create the base layer of what is now Florida. Due to rifting and tectonic shift, North America broke away from Pangea and during this time the panhandle of Florida was underwater. Due to the waterway separating Florida from the rest of the United States, sediments eroding from the Appalachian Mountains kept Florida waters clear. This also created a limestone layer that, due to karstification, created the intricate aquifer and cave system in Florida. The final stage that brought Florida into the geologic condition represented today was the northern movement of the continent and receding water levels. This event also created the panhandle of Florida which is characterized by siliciclastic sediments created by the erosion of previously deposited rocks. Through these changes, Florida has a mosaic of geologic formations and soil types.

Florida is part of the Coastal Plain physiographic province which stretches from Cape Cod to the Mexican border. The Coastal Plain is divided into six physiographic sections, and Florida lies between two of these sections: the Floridian section, which encompasses most of peninsular Florida, and the East Gulf Plain section, which encompasses the panhandle of Florida. Additionally, there are a total of ten physiographic divisions within Florida. The ECWMA is in the Everglades District, a region that contains approximately equal amounts of shelly sediments of

Plio-Pleistocene age and Miami Limestone formations.[2] The shelly sediments are molluskbearing sediments and contain some of the most diverse fossil faunas in the world; they consist of fossiliferous sands and carbonates. Lithologically these sediments are complex, varying from unconsolidated, variably calcareous and fossiliferous quartz sand to well indurated, sandy, fossiliferous limestones (both marine and freshwater). The Miami Limestone formations are characterized by highly porous and permeable oolitic and brozoan limestone, and beds of quartz, which together form much of the Biscayne Aquifer within the surficial aquifer system. Fossils are commonly present, and include mollusks, bryzoans, and corals. Specifically, on the ECWMA, the maximum elevation ranges from 5 to 20 feet above mean sea level.[3]

### 2.1.2 Soils

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) data were used to identify the ECWMA soil series and soil depth to water table (Figures 6 and 7). The map units described in the soil survey of the ECWMA are distributed as shown in Figure 6. Analyses of depth to water table for map units occurring within the ECWMA are provided in Figure 7. The NRCS defines a soil map unit as: “a collection of soil areas or non-soil areas (miscellaneous areas) delineated in a soil survey.” Soil map units may contain multiple soil components, which are given names that are unique identifiers. Appendix 11.6 lists the names and official map unit descriptions of areas delineated on the detailed soil maps in a soil survey or by miscellaneous areas in the survey area as determined by the NRCS. Analysis of depth to water table for map units occurring within the ECWMA are also provided in Appendix 11.6. Soils found within the ECWMA are generally peaty mucks; these are level, poorly drained organic soils that are underlain by marl and/or limestone. The most common soil type found at the ECWMA is Shark Valley muck which makes up approximately 37% of the area. Other prominent soil types on the area are Mack’s Camp muck (26%), Cooper Town muck (13%), and Buffalo Tiger muck (11%). Less prominent soils include Gator muck, Hallandale fine sand, Jupiter and Plantation soils, Margate sand, Okeelanta muck, Plantation muck, and Udorthents.

### 2.1.3 Climate

In the ECWMA, moderate climates occur in Broward, Palm Beach, and Miami-Dade counties. The ECWMA is characterized by long, warm, summers and mild winters. The average daily winter temperature over the last ten years has been 71˚F, with an average minimum temperature of approximately 68˚F. The average daily summer temperature is 82˚F with an average maximum temperature of approximately 83˚F. Over the last ten years, the ECWMA also has received an average annual rainfall of 61 inches with the majority occurring in the summer season. The wet season for the ECWMA is May through October, with the dry season occurring throughout the remaining months of the year.[5]

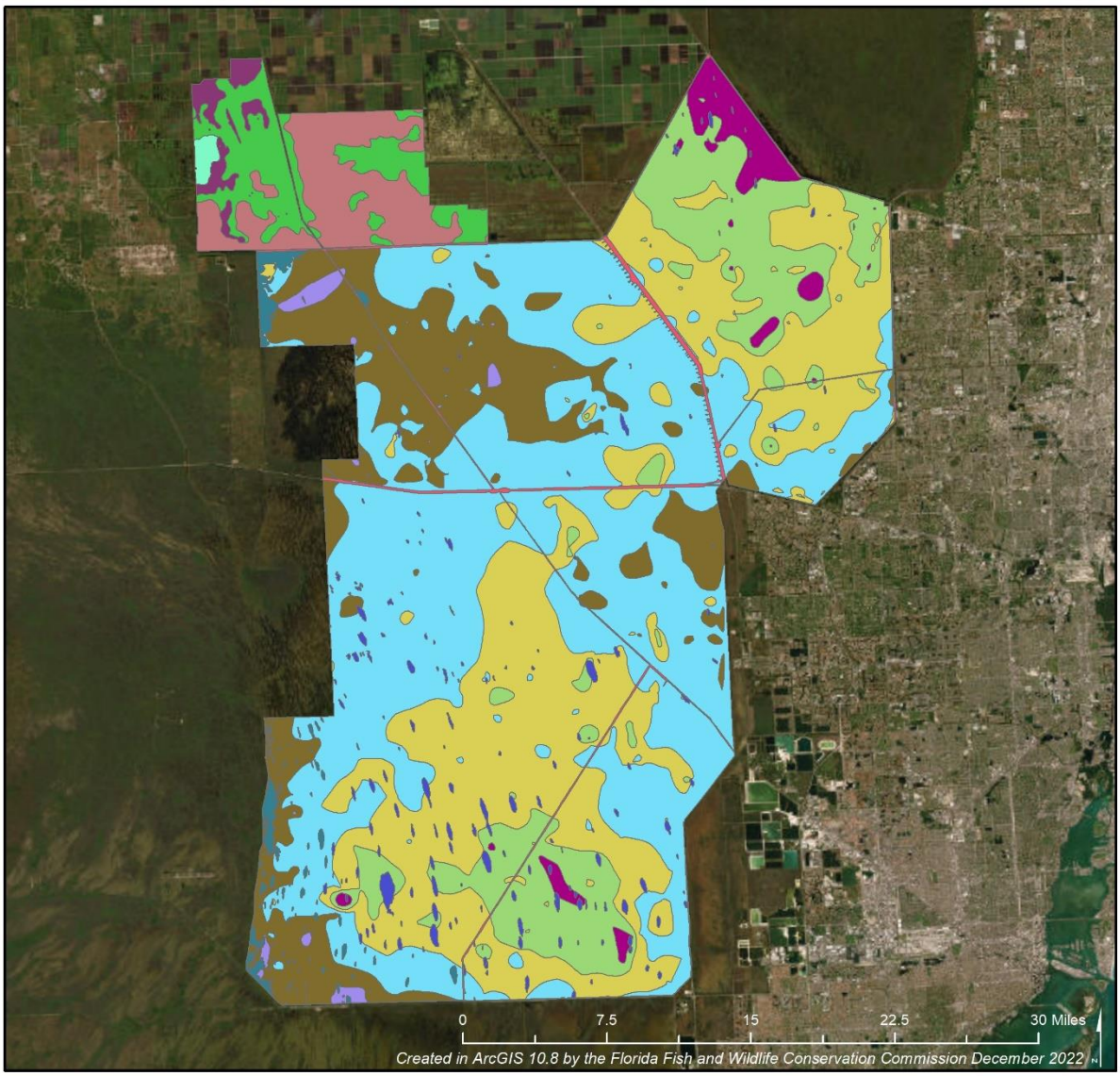



**Figure 6. Soil Types Found on the ECWMA**

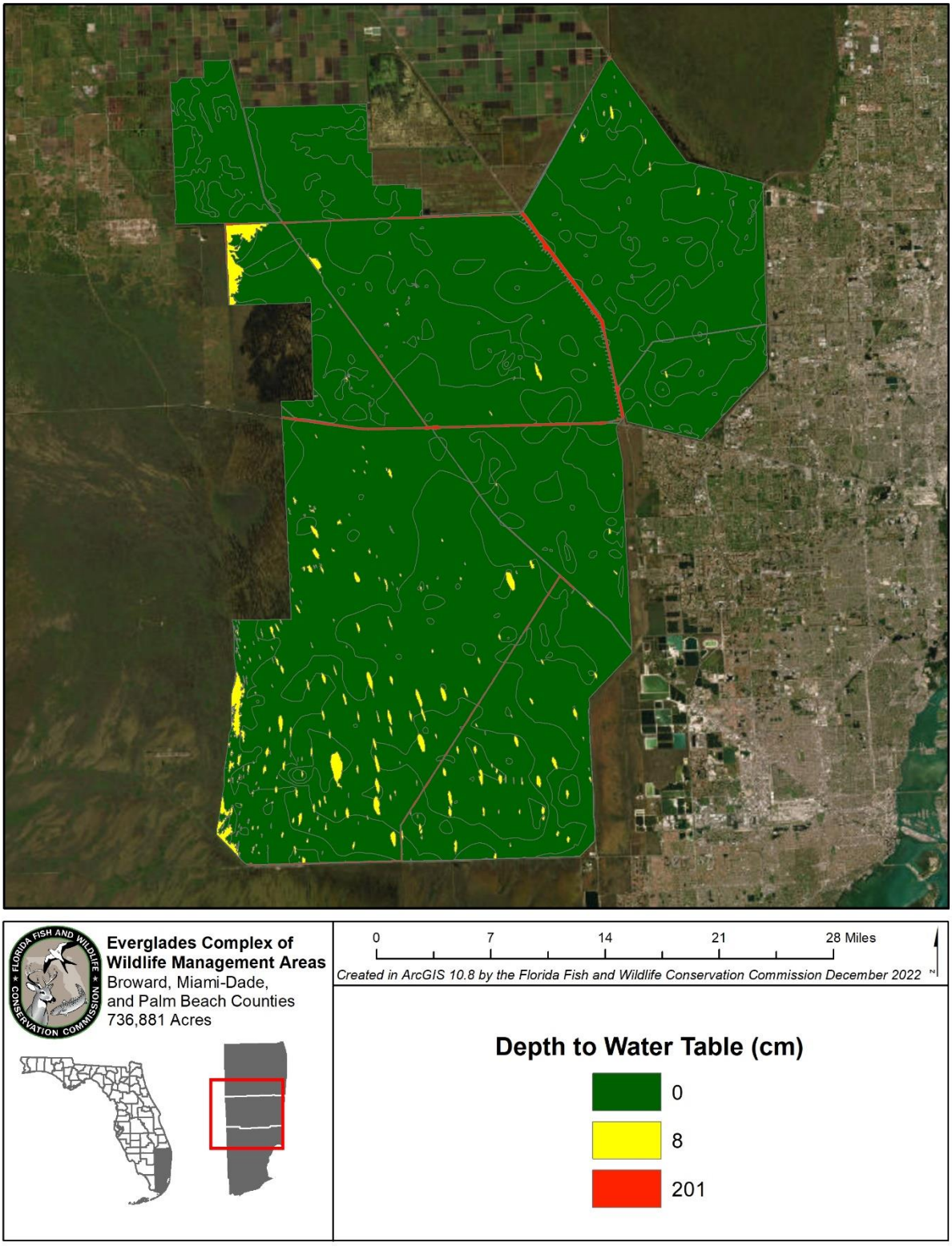



**Figure 7. Depth to Water Table on the ECWMA**

## 2.2 Vegetation

The FWC manages the lands in the ECWMA system using a proactive natural community-focused approach. As applied by the FWC, natural resource management starts by classifying lands into distinct natural communities. The FWC then conducts management activities to maintain or enhance each community's structure and function. Land management that has a positive influence on natural community conditions benefits species occurring in these habitats.

Through the services of the Florida Natural Areas Inventory (FNAI), the FWC has mapped the current natural and altered communities of the ECWMA and documented 11 natural and altered community types (Table 3, and Figure 8). The FNAI natural community acreage is not exactly consistent with lease acreage.

Additionally, plant species found on the ECWMA have been documented and recorded by either FWC staff or contractors (Appendix 11.5). Currently, 20 imperiled plant species and 43 non-native and invasive plant species have been documented as occurring on the area (Tables 4-5).

**Table 3. Natural and Altered Community Types on the ECWMA**

| Community Type | GIS Acres | Percentage |
|---|---|---|
| Artificial pond | 6.78 | <0.1% |
| Canal/ditch | 2,833.67 | 0.4% |
| Developed | 199.26 | <0.1% |
| Glades Marsh | 679,933.58 | 92.9% |
| Prairie Hammock | 12,352.01 | 1.7% |
| Restoration Glades | 1,675.82 | 0.2% |
| Road | 7,275.53 | 1% |
| Spoil area | 1,582.63 | 0.2% |
| Strand Swamp | 2,433.29 | 0.3% |
| Successional Hydric Shrubland/Forest | 21,203.01 | 2.9% |
| Utility corridor | 2,378.33 | 0.3% |

### 2.2.1 FNAI Natural Community Descriptions

The primary natural communities found within the ECWMA are successional hydric shrubland/forest, prairie hammock, and glades marsh. Although some of the species described have been observed on the EWMA, the HWMA, or the RWMA individually, the ECWMA has the potential to accommodate all species mentioned in this Management Plan. The FNAI natural and altered community descriptions for the ECWMA are as follows:

#### Natural Community descriptions

**Glades Marsh (679,933.58 acres, 92.87%)**

Glades marshes, also known as sawgrass marshes, of the ECWMA are broad, flat marshes that are permanently saturated and inundated for at least 180 days a year. Within the complex, they are situated in broad shallow channels with flowing water and characterized by emergent grasses, sedges, and herbs up to ten feet tall, and are typically dominated by Jamaica sawgrass

(*Cladium jamaicense*). Glades marsh soils are peat, unless removed by severe fire and are generally located over linear depressions in the underlying limestone.

Natural fire return intervals in the Everglades range from three to ten years with much variability depending on seasonal and long-term weather patterns. Fire plays an important role in reducing woody encroachment, and peat accumulation. Fire during extreme low water/drought conditions can produce muck fires that can lower the peat and potentially convert the glades marsh to slough. This phenomenon is tempered by a stable and consistent hydroperiod. Muck fires burn down to water levels, thus creating a constant balance between fire removing peat and water allowing peat to accumulate. In areas of disturbance and/or fire suppression on the ECWMA, shrubs are generally more frequent and will sometimes occur quite abundantly, displacing the dominant Jamaica sawgrass.

Disturbances to the ECWMA glades marsh include hydrologic disturbance, invasive species, and ORV trails made by airboats, swamp buggies, and all-terrain vehicles. Hydrological disturbances create myriad problems for natural diversity as well as management. The natural hydrology of glades marsh on the ECWMA has been heavily disturbed by artificial drainages, levees, and manipulated water levels. All of these disrupt natural sheet flow and hydroperiod. These alterations create abnormally dry conditions south of levees and abnormally wet conditions north of levees, adjacent to canals, and areas where water is pumped into compartments. Abnormally dry areas experience woody encroachment by Carolina willow (*Salix caroliniana*), common buttonbush (*Cephalanthus occidentalis*), and wax myrtle (*Myrica cerifera*), and create unfavorable conditions for prescribed burning because of woody encroachment and the danger of muck fires. Lack of prescribed burning exacerbates these unfavorable conditions. Abnormally wet areas experience conversion of glades marsh to slough, conversion of marginally elevated tree islands to Carolina willow dominated glades marsh and create unfavorable conditions for prescribed burning by reducing fuel and creating patchy fuel loads. Tree islands lost by either increased water levels or wildfires are typically replaced by broadleaf cattail (*Typha latifolia*) dominated glades marsh. Glades marshes are also disturbed by invasive species, including Melaleuca (*Melaleuca quinquenervia*), torpedo grass (*Panicum repens*), para grass (*Brachiaria mutica*), West Indian marsh grass (*Hymenachne amplexicaulis*), Old-world climbing fern (*Lygodium microphyllum*), and Wright's nutrush (*Scleria lacustris*), which displace native species, reduce native herbaceous fuel loads, and affect fuel continuity. Additionally, airboat or buggy/track trails create water channels that allow invasive species to establish and spread, as well as disrupt natural hydroperiod and sheet flow. These trails can act as conduits channeling water out of the sheet flow evolved glades marsh system.

In areas of the ECWMA with shortened hydroperiods and/or soil disturbance, Brazilian pepper (*Schinus terebinthifolia*) can establish and create significant disturbance levels. Hydrologic levels of the HWMA are much drier than the west neighboring RWMA. The effect of reduced water levels is evident in the often weedy and shrubby plant composition. Restoring water levels and hydroperiods to historic conditions should be the primary focus for land managers to achieve a healthier natural community. This altered hydrology has allowed shrub encroachment to occur over much of the landscape. These conditions also increase the probability of muck fires and establishment of invasive species.

Shrubs and trees seen in glades marsh on the ECWMA include pond apple (Annona glabra), cocoplum (*Chrysobalanus icaco*), Dahoon holly (*Ilex cassine*), sweetbay (*Magnolia virginiana*), swamp bay (*Persea palustris*), Carolina willow, red maple (*Acer rubrum*), common buttonbush, wax myrtle, saltbush (*Baccharis halimifolia*) and bald cypress (*Taxodium distichum*). The RWMA and the HWMA have more occurrences of woody vegetation present in glades marsh than the EWMA.

Herbaceous species present on the ECWMA glades marsh include lemon bacopa (*Bacopa caroliniana*), swamp fern (*Blechnum serrulatum*), Jamaica sawgrass, string lily (*Crinum Americanum*), coast cockspur (*Echinochloa walteri*), Gulf Coast spikerush (*Eleocharis cellulosa*), pineland waterwillow (*Justicia angusta*), spiny waternymph (*Najas marina*), yellow pondlily (*Nuphar lutea*), American white waterlily (*Nymphaea odorata*), big floatingheart (*Nymphoides aquatica*), maidencane (*Panicum hemitomon*), common reed (*Phragmites australis*), Illinois pondweed (*Potamogeton illinoensis*), marsh mermaidweed (*Proserpinaca palustris*), grassy arrowhead (*Sagittaria graminea*), Chapman's arrowhead (*Sagittaria graminea* var. *chapmanii*), royal fern (*Osmunda regalis*), leafy bladderwort (*Utricularia foliosa*), broomsedge bluestem (*Andropogon virginicus*), blue mistflower (*Conoclinium coelestinum*), roughhair witchgrass (*Dichanthelium strigosum* var. *glabrescens*), comb-leaf mermaidweed (*Proserpinaca pectinata*), common arrowhead (*Sagittaria latifolia*), false nettle (*Boehmeria cylindrica*), oakleaf fleabane (*Erigeron quercifolius*), dollarweed (*Hydrocotyle umbellata*), butterweed (*Packera glabella*), lizard's tail (*Saururus cernuus*), woodsage (*Teucrium scorodonia*), Virginia chain fern (*Woodwardia virginica*), stiff marsh bedstraw (*Galium tinctorium*), mock bishopsweed (*Ptilimnium capillaceum*), starrush whitetop (*Rhynchospora colorata*), bulltongue arrowhead (*Sagittaria lancifolia*), giant leather fern (*Acrostichum danaeifolium*), herb-of-grace (*Bacopa monnieri*), beaksedge (*Rhychospora* sp.), southern cattail (*Typha domingensis*), pickerelweed (*Pontederia cordata*), spadeleaf (*Centella asiatica*), Virginia buttonweed (*Diodia virginiana*), primrosewillow (*Ludwigia* sp.), swamp rosemallow (*Hibiscus grandiflorus*), green arrow arum (*Peltandra virginica*), camphorweed (*Pluchea* sp.), dotted smartweed (*Persicaria punctata*), sugarcane plumegrass (*Saccharum giganteum*), and marsh fern (*Thelypteris palustris* var. *pubescens*). Epiphytes are generally infrequent or absent but can occur when pond cypress is present on the EWMA, including northern needleleaf (*Tillandsia balbisiana*) and ballmoss (*Tillandsia recurvata*). Vines that are present on the ECWMA glades marsh include climbing aster (*Symphyotrichum carolinianum*), white twinevine (*Funastrum clausum*) and climbing hempvine (*Mikania scandens*).

**Prairie Hammock (12,352.01 acres, 1.69%)**

Prairie hammocks, commonly known as tree islands, are isolated areas of woody vegetation surrounded by the herbaceous dominated wetlands slough and/or glades marsh. This community occurs on slight rises in relatively flat terrain. Soils generally consist of organic peat overlying calcareous marls or limestone. Prairie hammocks often consist of a head on their northern extreme and grade into a long tail to their southern tip and occur on slight rises in the underlying limestone or on thicker deposits of peat. Islands that develop in areas where limestone is closer to the surface tend to harbor a greater diversity of plant species while islands occurring on thicker peat deposits are generally low in species diversity.

Invasion by non-native species poses the greatest threat to this community. Invasive non-native species found on prairie hammocks include Old-world climbing fern and Brazilian pepper. Brazilian pepper is the most frequently observed species. It has the potential to completely dominate this community if left untreated. Efforts should be taken to restore prairie hammocks that have been identified as containing this species. Old-world climbing fern is often found in relatively small, manageable populations. Efforts to control this species should have a high success rate due to its limited occurrence and population size. Invasive non-native herbaceous species found on the complex include Browne's blechum (*Blechum pyramidatum*), balsampear (*Momordica charantia*), napier grass (*Pinnesetum purpureum*), giant brake fern (*Pteris tripartita*), water spangles (*Salvinia minima*), St. Augustine grass (*Stenotaphrum secundatum*), lawn orchid (*Zeuxine strateumatica*), Cretan brake (*Pteris cretica*), caesarweed (*Urena lobata*), septicweed (*Senna occidentalis*), and spadeleaf. Other invasive species found on prairie hammocks include bottlebrush (*Callistemon viminale*), Indian laurel (*Ficus microcarpa*), sea hibiscus (*Hibiscus tiliaceus*), Javanese bishopwood (*Bischofia javanica*), papaya (*Carica papaya*), bitter orange (*Citrus aurantium*), Java plum (*Syzygium cumini*), day-flowering jessamine (*Cestrum diurnum*), pony tail palm (*Nolina* sp.), strawberry guava (*Psidium cattleianum*), guava (*Psidium guajava*), lantana (*Lantana camara*), octopus tree (*Schefflera actinophylla*), and Peruvian primrose willow (*Ludwigia peruviana*).

Prairie hammocks may flood during extreme high water. Prolonged floods, droughts, and wildfires have destroyed many prairie hammock tree islands on the ECWMA; non-native plants had invaded others. In the past, natural patterns of water flow and storage were altered on the ECWMA and over half of the historic tree islands have disappeared due to hydrological changes. For example, in the more northern portions, over-draining of the marsh in the 1970s facilitated the occurrence of intense and frequent wildfires that not only devastated the natural vegetation present on some prairie hammock tree islands, but also burned away layers of organic soil. In contrast, pooled water in the more southern portion of the EWMA increased hydroperiods and flooding, resulting in tree island changes and loss in the southern portion of WCA 3A. Marsh communities were encroached by woody vegetation in portions of the area, and hydrological changes transitioned some plant communities from wet prairie or sawgrass to slough. The altered plant species composition of the area complicates the return to the desired fire management regime. Site-specific combinations of prescribed fire, mechanical and chemical vegetation control, and restoration of natural hydroperiods will help restore the area to historic natural communities.

Prairie hammocks would naturally experience frequent fires ignited during lightning storms in late spring and early summer and spreading from the surrounding glades marsh/slough. There is great variability in species composition among prairie hammocks and this variability can be attributed to differences in relative elevation, depth of limestone from surface, fire frequency in area, and hydrologic regime of the conservation area. Many prairie hammocks subtypes have been disturbed by invasive species and clearing of land to be used as camps.

Restoration projects are conducted on tree islands (prairie hammock communities) across the ECWMA. Specific tree island restoration projects include invasive plant control, native tree and shrub plantings, maintenance of planted tree and shrubs, and prescribed burning on areas

surrounding the tree islands. These projects help restore native plant diversity and improve wildlife habitat. The previously farmed properties within the RWMA are considered “restoration glades marsh” as defined by FNAI; restoration activities here include treating invasive plant species and removing old fencing materials. Recent restoration projects on the RWMA include two projects at the site where a drill pad was previously located: the removal of road and hydrological restoration of half an acre of marsh; and native tree and shrub plantings to the old drill pad to create upland habitat for wildlife. In the HWMA, marsh habitats that have been encroached by woody vegetation have been mechanically treated to restore native sawgrass and benefit wildlife.

For this area, prairie hammocks are classified into two subtypes: tree island and willowhead. This subcategory was created to differentiate between true tree island communities and Carolina willow dominated clumps that lack a substantial rise in elevation above the surrounding community. Tree islands are usually above the water level and at least parts of them, typically the head, are dry for part of the year, and so far, are only found on the EWMA. Willowheads are not elevated above the surrounding landscape, are inundated for most of the year and are found throughout the complex. Willowheads can even form in small depressions caused by fire reducing the peat depth, alligator activity, and various other forms of disturbance. Tree islands vary greatly in species composition because of depth to limestone, fire history, and past disturbances. Willowheads may accumulate more organic deposits and eventually succeed into a more typical prairie hammock situation.

The tree island subtype of prairie hammock consists of a canopy of red maple, pond apple, hackberry (*Celtis laevigata*), strangler fig (*Ficus aurea*), Dahoon holly, sweetbay, swamp bay, cabbage palm (*Sabal palmetto*), Carolina willow, gumbo limbo (*Bursera simaruba*), live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), pop ash (*Fraxinus caroliniana*), Florida royal palm (*Roystonea regia*), soapwort (*Saponaria officinalis*), pigeon plum (*Coccoloba diversifolia*), and pond cypress. The tropical species gumbo-limbo and pigeon plum are found in the southern and typically the westernmost portions of the area, where limestone is at or near the surface. The western portion of the property also contains tree islands that contain a pond cypress canopy. Canopy species found in willowheads include Carolina willow, found throughout the complex, pond apple on the EWMA, and red maple on the RWMA.

Shrub species found in the ECWMA prairie hammocks include cocoplum, satinleaf (*Chrysophyllum oliviforme*), white stopper (*Eugenia axillaris*), Simpson’s stopper (*Myrcianthes fragrans*), firebush (*Hamelia patens*), gallberry (*Ilex glabra*), myrsine (*Rapanea punctata*), rouge (*Rivina humilis*), wild coffee (*Psychotria nervosa*), saltbush, elderberry (*Sambucus nigra*), common buttonbush, wax myrtle, and wild lime (*Zanthoxylum fagara*).The tropical species coco plum, satinleaf, white stopper, and wild lime are restricted to the islands on the western edge of the property where limestone is at or near the surface. Willowheads consist mostly of red maple, pond apple, common buttonbush, wax myrtle, and elderberry.

Herbaceous species found on the complex’s prairie hammocks include, alligator weed (*Alternanthera philoxeroides*), amaranth (*Amaranthus* sp.), ragweed (*Ambrosia* sp.), bushy bluestem (*Andropogon glomeratus*), groundnut (*Apios americana*), false nettle, fanpetals (*Sida*

sp.), coralbean (*Erythrina herbacea*) hedge false bindweed (*Calystegia sepium* subsp. *limnophila*), bandana-of-the-Everglades (*Canna flaccida*), sedges (*Carex* sp.), thistles (*Cirsium* sp.), Jamaica sawgrass, whitemouth dayflower (*Commelina erecta*), string lily, sixangle foldwing (*Dicliptera sexangularis*), Virginia buttonweed, coast cockspur, spikerushes (*Eleocharis* spp.), American burnweed (*Erechtites hieraciifolius*), tenangle pipewort (*Eriocaulon decangulare*), saltmarsh fingergrass (*Eustachys glauca*), pineland heliotrope (*Heliotropium polyphyllum*), clustered bushmint (*Hyptis alata*), morning glory (*Ipomoea* sp.), Carolina redroot (*Lachnanthes caroliana*), southern cutgrass (*Leersia hexandra*), duckweed (*Lemna* sp.), snow squarestem (*Melanthera nivea*), spiny waternymph, spatterdock (*Nuphar advena*), yellow pondlily, American white waterlily, big floatingheart, water cowbane (*Oxypolis filiformis*), butterweed, maidencane, panic grasses (*Panicum* spp.), crowngrass (*Paspalum* sp.), common reed, turkey tangle frogfruit (*Phyla nodiflora*), spurge (*Poinsettia* sp.), dotted smartweed, bracken fern (*Pteridium aquilinum*), dock (*Rumex* sp.), threadleaf arrowhead (*Sagittaria filiformis*), grassy arrowhead, Spanish sage (*Salvia hispanica*), river sage (*Salvia misella*), littlewoman (*Salvia serotina*), pineland pimpernel (*Samolus valerandi* subsp. *parviflorus*), nightshade (*Solanum* sp.), sand cordgrass (*Spartina bakeri*), woodsage, alligatorflag (*Thalia geniculata*), hottentot fern (*Thelypteris interrupta*), eastern gamagrass (*Tripsacum dactyloides*), southern cattail, crownbeard (*Verbesina* sp.), fourleaf vetch (*Vicia acutifolia*), giant leather fern, flatsedge (*Cyperus* sp.), dollarweed, creeping primrosewillow (*Ludwigia repens*), cinnamon fern (*Osmunda cinnamomea*), royal fern, pickerelweed, spotted water hemlock (*Cicuta maculata*), Willdenow's fern (*Selaginella willdenowii*), maiden fern (*Thelypteris* sp.), swamp fern, Nuttall's thistle (*Cirsium nuttallii*), capeweed (*Arctotheca calendula*), blue mistflower, American burnweed, stiff marsh bedstraw, swamp dock (*Rumex verticillatus*), Virginia chain fern, sugarcane plumegrass, goldenrods (*Solidago* spp.), oakleaf fleabane, burrmarigold (*Bidens laevis*), knotweed (*Polygonum* sp.), mock bishopsweed, bulltongue arrowhead, beggarticks (*Bidens alba* var. *radiata*), sword fern (*Nephrolepis exaltata*), American pokeweed (*Phytolacca americana*), rosy camphorweed (*Pluchea rosea*), vervain (*Verbena* sp.), broomsedge bluestem, Florida pellitory (*Parietaria floridana*), starrush whitetop, lizard's tail, southern shield fern (*Thelypteris kunthii*), marsh fern, green arrow arum, whorled marshpennywort (*Hydrocotyle verticillata*), herb-of-grace, yankeeweed (*Eupatorium compositifolium*), and swamp rosemallow.

Epiphytes found within the ECWMA prairie hammocks include whisk fern (*Psilotum nudum*), reflexed wild-pine, common wild pine (*Tillandsia fasciculata*), ballmoss, southern needleleaf (*Tillandsia setacea*), and Spanish moss (*Tillandsia usneoides*), stiff-leaved wild pine (*Tillandsia fasciulata* var. *densispica*), resurrection fern (*Pleopeltis polypodioides* var. *michauxiana*), golden polypody (*Phlebodium aureum*), and other airplant species (*Tillandsia* sp.). Many of the airplants occur in the prairie hammocks found along the western edge of the property where pond cypress is present in the canopy.

Vines present in the ECWMA prairie hammocks include possum grape (*Cissus verticillata*), saw greenbrier (*Smilax bona-nox*), summer grape (*Vitis aestivalis*), muscadine (*Vitis rotundifolia*), calloose grape (*Vitis shuttleworthii*), laurel greenbrier (*Smilax laurifolia*), eastern poison ivy (*Toxicodendron radicans*), climbing aster, climbing hempvine, white twinevine, creeping cucumber (*Melothria pendula*), peppervine (*Ampelopsis arborea*), Virginia creeper

(*Parthenocissus quinquefolia*), corkystem passionflower (*Passiflora suberosa*) chiggery-grapes (*Heliotropium verdcourtii*), and hoopvine (*Trichostigma octandrum*).

**Strand Swamp (2,433.29 acres, 0.33%)**
Strand swamps are irregular, forested wetlands that occur in areas where the underlying limestone is at or near the surface of the substrate. On the EWMA, strand swamps are restricted to the western edge of the boundary in WCA 3A South. As one progresses from east to west, the tree islands typically change from willowheads to classic bayheads, into bald cypress dominated tree islands and then into strand swamps. It appears that the limestone provides better growing conditions for bald cypress to proliferate. With a decrease in the depth to limestone, cypress dominated tree islands slowly become more numerous to the west. The landscape surrounding these islands also changes from a glades marsh/slough dominated matrix into a dwarf cypress community and finally into a cypress strand swamp. Although strand swamp areas have the same formation characteristics as tree islands, they are classified differently because of landscape context. Typically tree island-like areas located within strand swamps blend to form a community that reduces fire frequency, removes much of the graminoid vegetation, and reduces light penetration.

Bald cypress is the dominant canopy species. Subcanopy species include pond apple, strangler fig, Dahoon holly, sweetbay, and swamp bay. Shrubs are the dominant understory vegetation and include common buttonbush, coco plum, wax myrtle, myrsine, Carolina willow, and bald cypress.

Herbaceous species include giant leather fern, alligator weed, amaranth, lemon bacopa, toothed midsorus fern (*Blechnum serrulatum*), false nettle, Gulf Coast spikerush, tenangle pipewort, creeping primrose-willow, snow squarestem, climbing hempvine, yellow pondlily, royal fern, maidencane, Florida pellitory, green arrow arum, pickerelweed, water spangles, white twinevine, hottentot fern, southern shield fern, southern cattail, and leafy bladderwort. Epiphytes are common and include northern needleleaf, common wild pine, ballmoss, southern needleleaf, and Spanish moss. Vines are common and include Virginia creeper, peppervine, laurel greenbrier, and climbing aster.

## Altered Community Descriptions

**Artificial Pond (6.78 acres, <0.1%)**
Artificial ponds include water retention ponds, cattle ponds, etc. There are four artificial ponds on the ECWMA: two ponds are adjacent to each other in the southeast corner of the HWMA; one is along the Everglades Parkway (I-75) within the area that is Florida Department of Transportation (FDOT) Mile Marker 35 Rest Area; and the last is found on the eastern border of the EWMA, just south of Holiday Park.

**Canal/Ditch (2,833.67 acres, 0.39%)**
Canals/ditches are artificial linear drainage ways. Many canals are spread throughout the ECWMA. Separating the HWMA from the RWMA and running through the EWMA is the Miami Canal. There are canals along the borders of all three WMAs, as well as ones separating the WCAs within the EWMA; one of these is the I-75 canal, running along where I-75 cuts across

the EWMA. Both WCA 3A South and WCA 3B within the EWMA have other canals spread throughout.

**Developed (199.26 acres, 0.03%)**
Boat ramps, parking lots, camping areas, recreational sites, and botanical and ornamental gardens occur on the complex. SFWMD infrastructure also occurs throughout the area. Boat ramps with parking areas occur throughout the ECWMA, including 17 on the EWMA, three on the HWMA, and three on the RWMA. Along I-75 within the EWMA is the FDOT Mile Marker 35 Rest Area, a rest stop with informational kiosks and panels available, as well as a nearby observation tower. Holiday Park, an airboat tour company, can be found on the east side of the EWMA.

**Spoil Area (1,582.63 acres, 0.22%)**
Spoil areas are sites where dredge or spoil material is deposited. These areas may or may not be re-colonized by vegetation. Spoil areas are found throughout the EWMA, primarily surrounding levees, canals, and the roads.

**Successional Hydric Shrubland/Forest (21,203.04 acres, 2.90%)**
Shrubland, or closed-canopied forest, occupies disturbed areas and is dominated by fast growing hydrophilic hardwoods such as titi (*Cyrilla racemiflora*), black titi (*Cliftonia monophylla*), sweet gallberry (*Ilex coriacea*), sweet gum, red maple, water oak *(Quercus nigra),* swamp laurel oak*,* wax myrtle, blackberry *(Rubus argutus),* and groundsel tree.

Weedy vines such as smilax (*Smilax* spp.) and muscadine, and invasive plants including Peruvian primrose willow and Brazilian pepper may be common in the subcanopy and shrub layers. These shrubland/forests may invade herbaceous habitats (i.e., wet prairie, wet flatwoods, seepage slope, depression marsh, basin marsh, floodplain marsh) due to lengthy fire-suppression and/or hydrological alterations or forested wetlands (dome swamp, basin swamp, strand swamp) that have been cleared and are not succeeding to swamp but to highly disturbed shrubland or forest dominated by hydrophilic hardwoods. Successional hydric shrubland/forests are often shrub thickets with few of the characteristic herbaceous or canopy (e.g. *Taxodium*) species from the former community remaining. They can resemble naturally occurring shrub bogs and can be distinguished from them by occurring in areas of historically herbaceous communities, where fire suppression and/or hydrological alterations have taken place or in former forested swamps that have been logged or undergone severe hydroperiod disruptions. Although some shifts in community type may be better described with a natural community designation, the use of “successional hydric shrubland/forest” is suitable to label areas that are known to be highly disturbed and altered, and where restoration efforts of hydrology restoration and/or re-introduction of fire would be particularly beneficial.

**Road (7,275.53 acres, 0.99%)**
Roads are areas that are paved or unpaved and intended for vehicular traffic. Airboat trails are included in the unpaved or intended for vehicular traffic. Major roads cut through the EWMA, including I-75 and Highway 27, however most travel done throughout the EWMA must be done via airboat.

**Utility Corridor (2,378.33 acres, 0.33%)**

Utility corridors include electric, gas, and telephone right-of-ways. Utility corridors are located along the south border of the RWMA and the HWMA; these can also be found in the northeast section of the EWMA, separating WCA 2A from WCA 3A North, along Highway 27.

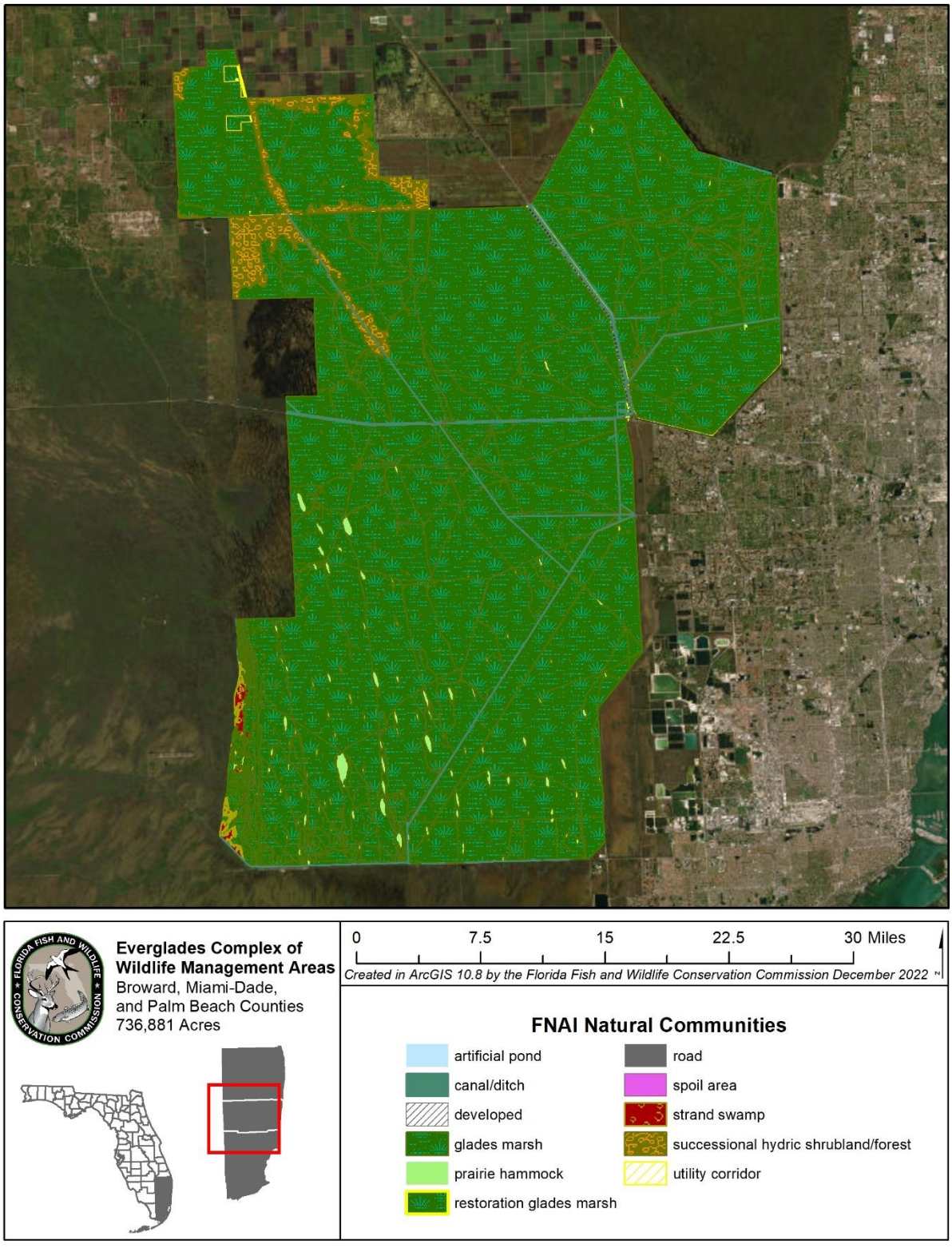



**Figure 8. FNAI Natural and Altered Communities on the ECWMA**

### 2.2.2 Imperiled Plants

For the purposes of this Management Plan, the term “imperiled species” as it relates to plants refers to plant species that the Department of Agriculture and Consumer Services (DACS) or the United States Fish and Wildlife Service (USFWS) designated as endangered or threatened. This designation is commonly known as “listed species,” and all names and status determinations were derived from Florida’s Regulated Plant Index Rule (5B-40.0055 F.A.C.) that is maintained by DACS.

The FWC conducted an imperiled plant survey in 2022 on the ECWMA and identified 18 imperiled plant species, of which eight are state Endangered and seven are state Threatened (Table 4). The protections afforded plants that occur on conservation lands, in conjunction with management actions including invasive plant removal and prescribed fire, will continue to maintain and enhance habitat for these and other imperiled plants. As such, these species should persist under planned management on the ECWMA.

In addition to the imperiled plants, three plants state listed as Commercially Exploited, are known to occur on the ECWMA (Table 4). They are the butterfly orchid (*Encyclia tempensis*), royal fern and cinnamon fern. The FWC will continue to monitor the known occurrences of these species and report any illegal collection to the appropriate authorities.

**Table 4. Imperiled Plant Species Known to Occur at the ECWMA**

| Scientific Name | Common Name | Status |
|---|---|---|
| *Acoelorraphe wrightii* | Everglades palm | ST |
| *Acrostichum aureum* | Golden leather fern | ST |
| *Aeschynomene pratensis* | Meadow jointvech | SE |
| *Chrysophyllum oliviforme* | Satin-leaf | ST |
| *Encyclia tampensis* | Butterfly orchid | CE |
| *Myrcianthes fragrans* | Simpson’s stopper | ST |
| *Nephrolepis biserrate* | Giant sword fern | ST |
| *Osmunda cinnamomea* | Cinnamon fern | CE |
| *Osmunda regalis* | Royal fern | CE |
| *Passiflora pallens* | Pineland passionvine | SE |
| *Pleopeltis astrolepis* | Star-scaled fern | SE |
| *Roystonea elata* | Florida royal palm | SE |
| *Swietenia mahagoni* | West Indian mahogany | ST |
| *Tillandsia balbisiana* | Inflated and reflexed wild-pine | ST |
| *Tillandsia fasciculata* | Common wild-pine | SE |
| *Tillandsia flexuosa* | Twisted or banded air-plant | ST |
| *Tillandsia utriculate* | Giant wild-pine | SE |
| *Tillandsia valenzuelana* | Soft-leaved wild-pine | ST |
| *Tournefortia hirsutissima* | Chiggery-grapes | SE |
| *Trichostigma octandrum* | Hoop vine | SE |

| Acronym | Status |
|---|---|
| CE | Commercially Exploited |
| SE | State Endangered |
| ST | State Threatened |

It is possible other imperiled species occur on the ECWMA, and if encountered, FWC staff will document these occurrences. Florida's imperiled species are adapted to natural communities and should continue to benefit from the FWC's ongoing and planned management to maintain and enhance natural community structure and function. Under the FWC's management, these species have a higher probability of persistence than in the absence of this management. However, while habitat management provides overall benefits to a host of species reliant upon these natural communities, imperiled species sometimes require specific attention.

Everglades Palm (*Acoelorraphe wrightii*) - Everglades palm is a clump or colony forming slender, spiny-stemmed tropical palm that prefers bayheads, coastal berms, hydric hammocks, prairie hammocks, and edges of hydric hammocks. This species does not require fire, but it is tolerant of occasional fires. Habitat alteration, which may include forestry, negatively affects this species; therefore, it is important to protect areas with known occurrences. Flowering, which occurs from March to May (may continue until November), is the best time for conducting surveys or verifying species identity.

Golden Leather Fern (*Acrostichum aureum*) - Golden leather fern is a large understory fern that prefers full sun to dense shaded areas in basin marshes, floodplain marshes, mangrove swamps, rockland hammocks, salt marshes, and sinkholes. This species is sensitive to fire, but some of its preferred habitats occasionally burn during periods of drought. Hydrological disturbances and habitat alteration negatively affect this species; therefore, staff should maintain and restore the natural hydrology where practicable and protect known areas with known occurrences. Golden leather fern is identifiable throughout the year.

Meadow Jointvetch (*Aeschynomene pratensis*) - Meadow jointvetch is a perennial herb with robust, erect stems that prefers dome swamps, glades marshes, marl prairies, prairie hammocks, sloughs, and strand swamps. This species does not require fire, but the ECWMA staff should allow fire to naturally enter and extinguish within its habitats when feasible. Hydrological disturbances and habitat alteration negatively affect this species; therefore, ECWMA staff should maintain and restore the natural hydrology where practicable and protect known areas with known occurrences. Flowering and fruiting, which occurs throughout the year, are the best time for conducting surveys or verifying species identity.

Satin-leaf (*Chrysophyllum oliviforme*) - Satin-leaf is an evergreen shrub or small tree that prefers coquina, coral, sandy, and shelly soils in hydric hammocks, maritime hammocks, mesic hammocks, prairie hammocks, and rockland hammocks. This species is not fire tolerant, but its habitats occasionally burn during drought conditions. Hydrological disturbances negatively affect this species; therefore, FWC staff should maintain and restore the natural hydrology where practicable. The coppery undersides of this species leaves are diagnostic all year, and June to November is the best time for conducting flower surveys.

Butterfly Orchid (*Encyclia tampensis*) - Butterfly orchid is epiphytic on many different trees, and prefers moist to wet areas in depression marshes, glades marshes, rockland hammocks, sloughs, strand swamps, tidal swamps, and wet flatwoods. It may occur in dome swamps, floodplain swamps, hydric hammocks, and mesic hammocks. This species does not require fire, but the ECWMA staff should allow fire to naturally enter and extinguish within its habitats when feasible. Illegal collecting negatively affects this species; therefore, it is important to protect known occurrences and make sure not to negatively influence areas with known occurrences. While plants are identifiable all year by their well-developed pseudobulbs, surveys for flowers can occur during peak flowering, which occurs May to September, and surveys for fruits can occur throughout the year.

Simpson's Stopper (*Myrcianthes fragrans*) - Simpson's stopper is an evergreen multi-stemmed shrub or small tree with reddish to light brown bark that prefers hydric hammocks (including the variant coastal hydric hammock), mesic hammocks, prairie hammocks, and rockland hammocks. This species occasionally occurs in dome swamps, floodplain swamps, and wet flatwoods. This species is not a fire-adapted species. While fires may reach the edge of hammocks, saturated soils and humid conditions within the hammocks typically limit the extent of a burn. However, periodic burns in adjoining communities can reduce woody encroachment and lessen the likelihood of fires spreading into hammocks. Soil and hydrologic disturbance negatively affect this species; therefore, maintain and restore the natural hydrology where practicable, and avoid using heavy machinery in wetlands with known occurrences of this species. The best time for conducting surveys or verifying species identity is during flowering, which occurs throughout the year with the heaviest blooming occurring from February to June.

Giant Sword Fern (*Nephrolepis biserrata*) - Giant sword fern is a terrestrial or less commonly epiphytic or epipetric fern forming tufts of 3-5 fronds. This species prefers dome swamps, hydric hammocks, prairie hammocks, and rockland hammocks. Giant sword fern is non-fire adapted, but some of its preferred habitats occasionally burn because of fire entering from adjacent fire-maintained communities. Habitat alteration, which may include forestry, negatively affects this species; therefore, protect areas with known occurrences. Giant sword fern is identifiable throughout the year.

Cinnamon Fern (*Osmunda cinnamomea*) and Royal Fern (*O. regalis*) - These ferns, state commercially exploited, are terrestrial ferns that occur in many natural communities in Florida, both wet and dry. While these species grow in many communities that FWC typically does not actively manage, if conducting management activities near known occurrences, efforts should be made to protect known occurrences from chemical and mechanical treatments. These species do not require fire. However, some of the natural communities in which these species occur are fire adapted, and these ferns resprout after fire. Illegal collecting and hydrological disturbances negatively affect these species; therefore, it is important to protect areas with known occurrences, and FWC staff should maintain and restore the natural hydrology where practicable. As fronds are present year-round, these species can be identified throughout the year.

Pineland Passionvine (*Passiflora pallens*) - Pineland passionvine is a perennial vine that grows along the ground or on other vegetation. This species prefers baygalls, coastal berms, rockland hammocks, strand swamps, and wet flatwoods. Pineland passionvine does not require fire, and it typically prefers non-pyrogenic habitats. However, some of its preferred habitats occasionally burn during periods of drought so the ECWMA staff should allow fire to naturally enter and extinguish within its habitats when feasible. Habitat degradation and invasive species negatively affect this species; therefore, FWC staff should protect this species' habitat from alteration, and treat invasive plant infestations taking extra precautions to protect this species during herbicide treatments. Flowering, which occurs throughout the year, is the best time for conducting surveys or verifying species identity.

Star-Scaled Fern (*Pleopeltis astrolepis*) - Star-scaled fern is an epiphytic, epipetric or rarely terrestrial fern that grows on the trunk or branches of trees and occasionally on mossy rocks. This species prefers moist areas in dome swamps, hydric hammocks, prairie hammocks, and rockland hammocks. Star-scaled fern is non-fire adapted, but some of its preferred habitats occasionally burn because of fire entering from adjacent fire-maintained communities. Habitat alteration, which may include forestry, negatively affects this species; therefore, areas with known occurrences should be protected. Star-scaled ferns are identifiable throughout the year.

Florida Royal Palm (*Roystonea elata*) - Florida royal palm is a long-lived perennial palm tree that prefers coastal berms, mesic hammocks, prairie hammocks, rockland hammocks, shell mounds, and strand swamps. Florida royal palm is non-fire adapted, however some of its preferred habitats occasionally burn during periods of drought, so the ECWMA staff should allow fire to naturally enter and extinguish within its habitats when feasible. Habitat alteration, which may include forestry, negatively affects this species; therefore, areas with known occurrences should be protected. The best time for conducting surveys or verifying species identity is during flowering, which occurs from January to July, or fruiting, which occurs from April to October.

West Indian Mahogany (*Swietenia mahagoni*) - West Indian mahogany is a semi-deciduous monoecious tree that prefers moist but well-drained areas in coastal berms, maritime hammocks, and rockland hammocks. The specific fire requirements are unknown for this species. However, some of its preferred habitats occasionally burn during periods of drought so staff should allow fire to naturally enter and extinguish within its habitats when feasible. Illegal collecting and habitat alteration negatively affect this species; therefore, staff should protect known occurrences and make sure not to negatively influence areas with known occurrences. The best time for conducting surveys or verifying species identity is during flowering, which occurs from May to June.

Inflated and Reflexed Wildpine (*Tillandsia balbisiana*), Common Wild-pine (*T. fasciculata*), Twisted or Banded Air-plant (*T. flexuosa*), and Giant Wild-pine (*T. utriculata*) - Airplants occur in many natural communities in Florida, both wet and dry. Most airplants are primarily epiphytes (plants that grow harmlessly upon another plant and derive its moisture and nutrients from the air, rain, and sometimes from debris accumulating around it) that grow on stumps, tree trunks, and branches. However, large individuals may fall to the ground and successfully continue to

live. While many airplants grow in communities that FWC typically does not actively manage, if conducting management activities near known occurrences, efforts should be made to protect the plant and host plant from fire, chemicals, and mechanical treatments. When an individual plant occurs in a fire-maintained habitat, prior to conducting a prescribed fire, to the extent practicable, FWC staff takes appropriate actions to protect known occurrences. Airplants are experiencing massive population losses due to the Mexican bromeliad weevil (*Metamasius callizona*), an invasive pest, making the protection and management of these plants from other threats more critical. Flowering, which occurs throughout the year (majority of flowering occurs from early spring to early fall), is the best time for conducting surveys or verifying species identity.

Chiggery-Grapes (*Heliotropium verdicourtii*) - Chiggery-grapes is a woody vine, sprawling shrub, or small tree that prefers areas in baygalls, hydric hammocks, prairie hammocks, rockland hammocks, and strand swamps. This species is sensitive to fire, but some of its preferred habitats occasionally burn because of fire entering from adjacent fire-maintained communities. Habitat alteration, which may include forestry, negatively affects this species; therefore, areas with known occurrences should be protected. The best time for conducting surveys or verifying species identity is during flowering, which occurs from March to August.

Hoop Vine (*Trichostigma octandrum*) - Hoop vine is a glabrous perennial climbing shrub or vine that prefers moist areas in mesic hammocks and prairie hammocks. This species is non-fire adapted, but some of its preferred habitats occasionally burn because of fire entering from adjacent fire-maintained communities. Habitat alteration, which may include forestry, negatively affects this species; therefore, areas with known occurrences should be protected. Flowering and fruiting, which occurs from April to October, is the best time for conducting surveys or verifying species identity.

### 2.2.3 Invasive and Non-native Plants

FWC biologists and contractors have documented 43 non-native and invasive plant species (Table 5) on the ECWMA. Invasive species are species that (a) are non-native to a specified geographic area; (b) were introduced by humans (intentionally or unintentionally); and (c) do or can cause environmental, economic, or human harm. The FWC relies on the Florida Invasive Species Council (FISC) for the categorization of invasive plant species.

**Table 5. Non-native and Invasive Plant Species Observed on the ECWMA**

| Scientific Name | Common Name | FISC Category |
|---|---|---|
| *Acacia auriculiformus* | Earleaf acacia | I |
| *Alternanthera philoxeroides* | Alligator weed | II |
| *Bischofia javenica* | Javanese bishopwood | I |
| *Blechum pyramidatum* | Browne's blechum | II |
| *Casuarina equisetifolia* | Australian pine | I |
| *Cestrum diurnum* | Day jessamine | II |
| *Cocos nucifera* | Coconut palm | II |
| *Colocasia esculenta* | Wild taro | I |
| *Cupaniopsis anacardioides* | Carrotwood | I |
| *Dactyloctenium aegyptium* | Durban crawfootgrass | II |
| *Eichhornia crassipes* | Water hyacinth | I |

| | | |
|---|---|---|
| *Ficus microcarpa* | Laurel fig | I |
| *Flueggea virosa spp. Melanthesoides* | Simpleleaf bushweed | - |
| *Hydrilla verticillate* | Hydrilla | I |
| *Imperata cylindrica* | Cogongrass | I |
| *Lantana strigocamara* | Lantana, shrub verbena | I |
| *Ludwigia peruviana* | Peruvian primrosewillow | I |
| *Lygodium microphyllum* | Old-world climbing fern | I |
| *Melaleuca quinquenervia* | Melaleuca, Paperbark | I |
| *Melaleuca viminalis* | Bottlebrush, Weeping bottlebrush | II |
| *Melilotus albus* | White sweetclover | - |
| *Milinis repens* | Natal grass | I |
| *Momordica charantia* | Balsam pear, balsam apple | II |
| *Neyraudia reynaudiana* | Burma reed, Cane grass | I |
| *Panicum repens* | Torpedo grass | I |
| *Paspalum urvillei* | Vaseygrass | - |
| *Pennisetum purpureum* | Napier grass | I |
| *Pistia stratiotes* | Water-lettuce | I |
| *Psidium cattleianum* | Strawberry guava | I |
| *Psidium guajava* | Guava | I |
| *Pteris cretica* | Cretan brake | - |
| *Ricinus communis* | Castor bean | II |
| *Salvinia minima* | Water spangles | I |
| *Sansevieria hyacinthoides* | Bowstring hemp | II |
| *Schefflera actinophylla* | Schefflera, Octopus tree, Australian umbrella tree | I |
| *Schinus terebinthifolia* | Brazilian pepper | I |
| *Scleria lacustris* | Wright's nutrush | - |
| *Syagrus romanozoffiana* | Queen palm | II |
| *Syngonium podophyllum* | Arrowhead vine, American evergreen | I |
| *Syzygium cumuni* | Java plum | I |
| *Taliparititi tiliaceum* | Sea hibiscus | II |
| *Urena lobata* | Caesarweed | I |
| *Washingtonia robusta* | Washington fan palm | II |

## 2.3 Fish and Wildlife Resources

As described above, the ECWMA has a variety of natural communities and habitat types that support a wide array of imperiled and more common wildlife species. Active wildlife management practices make the ECWMA an excellent place to view wildlife. The ECWMA's upland glades marsh, prairie hammock, and other natural communities provide critical habitat for resident and migratory wildlife. The FWC maintains an inventory of fauna occurring on the ECWMA listed in Appendix 11.5, including mammals, birds, reptiles, amphibians, and invertebrates.

### 2.3.1 Imperiled Fish and Wildlife

For the purposes of this Management Plan, the term "Imperiled Species" refers to plant and animal species that are designated as Endangered, Threatened, or a Species of Special Concern by the FWC, or that are designated as Endangered or Threatened by the USFWS. This designation is also commonly known as "listed species." Table 6 outlines all imperiled fish and wildlife that have been observed on the ECWMA.

**Table 6. Imperiled Species Observed on the ECWMA**

| Common Name | Scientific Name | Status |
|---|---|---|
| Audubons crested caracara | *Caracara cheriway* | ST |
| Black rail | *Laterallus jamaicensis jamaicensis* | FT |
| Everglade snail kite | *Rostrhamus sociabilis plumbeus* | FE |
| Florida bonneted bat | *Eumops floridanus* | FE |
| Florida burrowing owl | *Athene cunicularia floridana* | ST |
| Florida panther | *Puma concolor coryi* | FT |
| Florida sandhill crane | *Grus canadensis pratensis* | ST |
| Little blue heron | *Egretta caerulea* | ST |
| Roseate spoonbill | *Platalea ajaja* | ST |
| Tricolored heron | *Egretta tricolor* | ST |
| Wood stork | *Mycteria americana* | FT |

| Acronym | Status |
|---|---|
| FT(S/A) | Federal Threatened due to Similarity of Appearance |
| FT | Federally Threatened |
| FE | Federally Endangered |
| ST | State Threatened |

At its November 2016, Commission meeting, the FWC approved Florida's Imperiled Species Management Plan (http://myfwc.com/wildlifehabitats/imperiled/plan/), which included changes to the listing status for many wildlife species. Subsequent rule changes (68A-27.003 and 68A-27.005 F.A.C.) have come into effect since the Imperiled Species Management Plan was approved and those changes have been incorporated into this Management Plan. All federally listed species that occur in Florida are included in Florida's Endangered and Threatened Species List (https://myfwc.com/media/1945/threatened-endangered-species.pdf) as federally-designated Endangered or federally-designated Threatened. Species that are not federally listed, but which have been identified by the FWC as being at some level of risk of extinction, are listed as state-designated Threatened. Additionally, the FWC continues to maintain a separate Species of Special Concern category. This category was reviewed as part of Florida's Imperiled Species Management Plan, with the majority of the species previously contained within the category either being removed from Florida's Endangered and Threatened Species List due to conservation success, or having their status changed to state-designated Threatened.

Due to extended periods of soil inundation, the ECWMA is not a suitable habitat for the gopher tortoise (*Gopherus polyphemus*) nor is it eligible as a recipient site for gopher tortoise relocation.

### 2.3.2 Invasive and Non-Native Wildlife Species

In addition to the species listed in Appendix 11.5, several invasive and non-native wildlife species have been documented on the ECWMA (Table 7). The FWC will continue to document any occurrences of invasive and non-native species found on the ECWMA. More information on monitoring and management of invasive and non-native wildlife can be found in Section 4.5 and Section 5.4.

**Table 7. Invasive and Non-native Species Observed on the ECWMA**

| Common Name | Scientific Name |
|---|---|
| Ball python | *Python regius* |
| Black spiny-tailed iguana | *Ctenosaura similis* |
| Black and white tegu | *Salvator marianae* |
| Brahminy blind snake | *Ramphotyphlops braminus* |
| Brown anole | *Anolis sagrei* |
| Brown basilisk | *Basiliscus vittatus* |
| Burmese python | *Python molorus bivitattus* |
| Cane toad | *Rhinella marina* |
| Cuban tree frog | *Osteopilus septentrionalis* |
| Egyptian goose | *Alopochen aegyptiaca* |
| Eurasian collared dove | *Streptopelia decaocto* |
| European starling | *Sturnus vulgaris* |
| Feral hog | *Sus scrofa* |
| Gray headed swamphen | *Porphyrio polocephalus* |
| Greenhouse frog | *Eleutherodactylus planirostris* |
| Green iguana | *Iguana iguana* |
| House sparrow | *Passer domesticus* |
| Island apple snail | *Pomacea maculate* |
| Knight anole | *Anolis equestris* |
| Mediterranean house gecko | *Hemidactylus turcicus* |
| Monk parakeet | *Myiopsitta monachus* |
| Muscovy duck | *Cairina moschata* |
| Nile monitor | *Varanus niloticus* |
| Northern curly-tailed lizard | *Leiocephalus carinatus* |
| Norway rat | *Rattus norvegicus* |
| Peters rock agama | *Agama picticuada* |
| Redbay ambrosia beetle | *Xyleborus glabratus* |
| Red-eared slider | *Trachemys scripta elegans* |
| Rock dove | *Columba livia* |
| Spectacled caiman | *Caiman crocdilus* |
| Tropical house gecko | *Hemidactylus mabouia* |
| White-winged dove | *Zenaida asiatica* |
| Yellow bellied slider | *Trachemys scripta scripta* |

### 2.3.3 FNAI Element Occurrences

A diversity of wildlife species is found on the ECWMA. The FNAI element occurrence records include 23 occurrences of wildlife species, multiple nesting sites and gator holes, malachite, and 13 plant species in the vicinity of the ECWMA. The FWC uses the FNAI Element Occurrences database to assist in identifying and recording resources on FWC managed areas. This

database also aided staff in the development of the species tables found in Appendix 11.5. As defined by FNAI, an “element” is any exemplary or rare component of the natural environment, such as a species, natural community, bird colony, spring, sinkhole, cave, or other ecological feature. An element occurrence is an area of land and/or water in which a species or natural community is, or was, present. FNAI assigns a rank to each “element” occurrence. This ranking system was developed by NatureServe and the Natural Heritage Program Network which assigns a global rank (element’s worldwide status) or state rank (status of element in Florida). The FNAI ranking system and definitions are located on the following website: https://www.fnai.org/PDFs/Rank_and_Status_Explanation.pdf. Appendix 11.9 contains a letter from FNAI authorizing the FWC to utilize their database for the purpose of identifying known plant and animal resources.

## 2.4 Water Resources

All surface waters of the State are classified by the DEP according to designated uses as described in Chapter 62-302.44 F.A.C. The surface waters of the ECWMA are designated as Class III and classified for fish consumption; recreation or limited recreation; as well as propagation and maintenance of a healthy, well-balanced population of fish and wildlife. Additionally, it is the policy of the DEP to afford the highest protection to Outstanding Florida Waters (OFW) and Outstanding National Resource Waters (Chapter 62-302.700 F.A.C.). The RWMA, HWMA, and portions of the EWMA, are designated as OFW. No degradation of water quality, other than that allowed in subsections Chapter 62-4.242(2) and (3) F.A.C., is permitted in these OFW, notwithstanding any other DEP rules that may allow water quality lowering. The ECWMA is not located within or adjacent to an aquatic preserve.

The ECWMA is an oligotrophic wetland, where relatively low concentrations of nutrients often have significant ecological impacts. Already, nitrogen and phosphorus from human activities in surrounding areas have caused adverse changes in vegetation, water quality, and community metabolism within the ECWMA ecosystem. Such changes cause nuisance species, including cattails, to overtake or eliminate native flora and fauna. Adequate timing, distribution, and flow of rainfall-quality water are necessary to maintain and perpetuate the ECWMA habitats and functional ecosystem. To preserve and improve the integrity of natural resources in the ECWMA, the FWC provides technical assistance and support to the U.S. Army Corps of Engineers (COE), the SFWMD, and other agencies in their efforts to improve the quantity and quality of water entering the ECWMA.

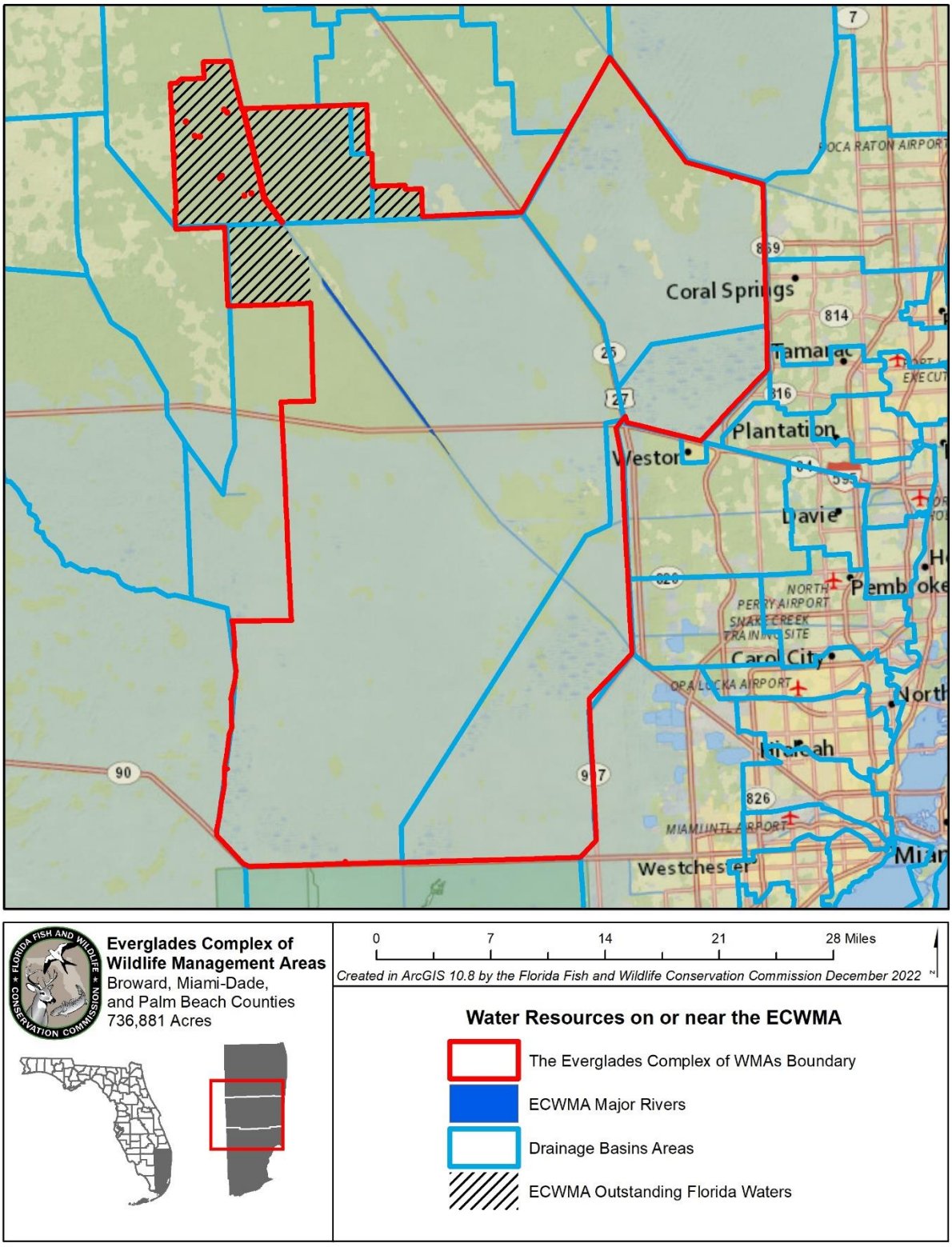



**Figure 9. Water Resources on or Near the ECWMA**

## 2.5 Forest Resources

There are no timber resources on the ECWMA.

## 2.6 Beaches and Dunes

The ECWMA does not contain any beaches or dunes.

## 2.7 Mineral Resources

The ECWMA is in the Everglades District of the Floridian and East Gulf Plain sections within the Coastal Plain, this is a district that contains approximately equal amounts of shelly sediments of Plio-Pleistocene age and Miami Limestone formations. The shelly sediments are mollusk bearing sediments and contain some of the most diverse fossil faunas in the world; it consists of fossiliferous sands and carbonates. Lithologically these sediments are complex, varying from unconsolidated, variably calcareous and fossiliferous quartz sand to well indurated, sandy, fossiliferous limestones (both marine and freshwater). The Miami Limestone formations are characterized by highly porous and permeable oolitic and brozoan limestone, and beds of quartz, which together form much of the Biscayne Aquifer within the surficial aquifer system. Fossils are commonly present, and include mollusks, bryzoans, and corals. Specifically, on the ECWMA, the maximum elevation ranges from five to 20 feet above mean sea level.

The properties managed by the FWC within the ECWMA are subject to existing easements, rights-of-way, and other outstanding mineral rights. Owners of some private inholdings have retained mineral rights. Much of the land purchased for the RWMA has private mineral reservations. Past mineral development included an oil well in the southern part of the area, which operated in the late 1950's or 1960's.

In 1987, Shell Western E & P Inc. ran a seismic test line across portions of the HWMA. No further mineral exploration or development has occurred in the HWMA.

Currently, an underground oil pipeline crosses WCA3 north of Alligator Alley, from east to west.

## 2.8 Cultural Resources

The Florida Master Site File (FMSF), maintained by the Florida Department of State's Division of Historical Resources (DHR), is the State of Florida's official inventory of cultural resources, archaeological and historical survey reports, and other manuscripts relevant to historic preservation in Florida. Categories of resources recorded at the FMSF include archaeological sites, historical structures, historical cemeteries, historical bridges, and historical resource groups (comprised of historic districts, landscapes, and linear features).

To date, the FMSF indicates that three previous cultural resource surveys have been conducted on the ECWMA. One hundred thirty-six archaeological sites, seven historical structures, four historical bridges, and 24 resource groups have been recorded on the EWMA (Table 8); three archeological sites have been recorded on the RWMA (Table 9). The L-4 Levees and Borrow Canal separates the RWMA from the EWMA, and the Miami Canal Resource Group separates the HWMA and RWMA; both are accounted for in Table 9. The L-5 Levees and Borrow Canal separates the HWMA from the EWMA and is included in Table 8. The FWC consults with the DHR to determine the necessary actions for resource inventory and preservation. All

identification, assessment, and preservation strategies are developed in consultation with the DHR.

**Table 8. Cultural Resources on the EMWA**

| FMSF No. | Resource Category | Resource Title | Acres | NRHP* Eligibility |
|---|---|---|---|---|
| BD00027 | Archaeological Site | State Road 25 | 5.49 | No |
| BD00042 | Archaeological Site | Red Bug | 2.54 | No |
| BD00045 | Archaeological Site | Hullys Hump | 4.51 | No |
| BD00049 | Archaeological Site | Cotton Mouth | 1.69 | No |
| BD01442 | Archaeological Site | Emfinger (BCSO 2-12) | 3.66 | No |
| BD02356 | Archaeological Site | Sawgrass Overpass Midden | 0.96 | No |
| BD02357 | Archaeological Site | FPL/EWMA 2B Midden | 0.80 | Yes |
| BD03226 | Resource Group | Pompano Canal | 77.43 | No |
| BD03279 | Resource Group | North New River Canal | 103.56 | Yes |
| BD03393 | Resource Group | Snake Creek Canal C-9 | N/A | No |
| BD04153 | Resource Group | South New River Canal | 56.07 | Yes |
| BD04512 | Resource Group | North New River and Hillsborough Canal | N/A | No |
| BD04566 | Resource Group | Mack's Fish Camp | 3.46 | Yes |
| BD04773 | Resource Group | Alligator Alley/Everglades Parkway | 151.23 | Yes |
| BD04836 | Archaeological Site | Levee 5 Tree Island 1 | 0.50 | Yes |
| BD04837 | Archaeological Site | Levee 5 Tree Island 2 | 0.52 | Yes |
| BD04838 | Archaeological Site | Levee 5 Tree Island 3 | 0.52 | Yes |
| BD04839 | Archaeological Site | Miami Canal barge | 0.09 | No |
| BD04840 | Resource Group | Miami Canal | 350.88 | Yes |
| BD04841 | Archaeological Site | Miami Canal/C-11 Extension | 0.51 | No |
| BD04974 | Archaeological Site | N/A | 0.46 | No |
| BD04975 | Archaeological Site | N/A | 1.07 | Yes |
| BD04976 | Archaeological Site | N/A | 0.27 | Yes |
| BD04977 | Archaeological Site | N/A | 45.92 | Yes |
| BD04978 | Archaeological Site | N/A | 0.37 | Yes |
| BD04979 | Archaeological Site | N/A | 0.21 | Yes |
| BD04980 | Archaeological Site | N/A | 3.42 | Yes |
| BD04981 | Archaeological Site | N/A | 0.72 | No |
| BD04982 | Archaeological Site | N/A | 0.16 | Yes |
| BD04984 | Historical Structures | S-9 | N/A | Yes |
| BD04985 | Historical Structures | S-9XN | N/A | No |
| BD04986 | Historical Bridge | S-9 access bridge | N/A | No |
| BD04987 | Resource Group | Dade-Broward Levee | 108.10 | No |
| BD04988 | Resource Group | Unnamed Canal | 7.02 | No |
| BD05092 | Historical Structures | S-8 Pump Station | N/A | No |
| BD05093 | Historical Bridge | Miami Canal Buggy Bridge | N/A | No |
| BD05094 | Historical Structures | S-8 Water Gage | N/A | No |
| BD05095 | Historical Structures | S-151 Gated Culvert | N/A | No |
| BD05096 | Resource Group | Mud Canal | 89.16 | No |

| | | | | |
|---|---|---|---|---|
| BD05097 | Resource Group | Miami Canal | 5,273.15 | No |
| BD05099 | Resource Group | L-5 Levees and Borrow Canal | 115.83 | No |
| BD05100 | Resource Group | L-67A Levee and Borrow Canal | 126.18 | No |
| BD06924 | Archaeological Site | WCA 2A Target 17 | 2.65 | No |
| BD06925 | Archaeological Site | WCA 2 Target 19 | 2.36 | No |
| BD06926 | Archaeological Site | WCA 2 Target 21 | 0.79 | No |
| BD06927 | Archaeological Site | WCA 2 Target 23 | 0.22 | No |
| BD06928 | Archaeological Site | WCA 2 Target 24 | 0.87 | No |
| BD06929 | Archaeological Site | WCA 2B Target 28 | 0.63 | No |
| BD06930 | Archaeological Site | WCA 2B Target 30 | 0.98 | No |
| BD07740 | Historical Bridge | FDOT Bridge No. 860030 | N/A | No |
| BD07741 | Historical Bridge | FDOT Bridge No. 860940 | N/A | No |
| BD07742 | Resource Group | US Highway 27 | N/A | No |
| DA00050 | Archaeological Site | LITTLE DOCTOR CAMP | 13.47 | No |
| DA00052 | Archaeological Site | JOHN POOLS CAMP | 6.48 | No |
| DA01043 | Archaeological Site | BEAL SMITH | 0.97 | No |
| DA01044 | Archaeological Site | RADIO | 1.24 | Yes |
| DA01045 | Archaeological Site | HOG | 1.43 | No |
| DA01046 | Archaeological Site | SUNKEN HAMMOCK | 1.61 | No |
| DA01067 | Archaeological Site | LEATHER FERN | 1.41 | No |
| DA01640 | Archaeological Site | CABBAGE PALM ISLAND | 1.72 | No |
| DA01641 | Archaeological Site | FICUS TREE | 1.33 | No |
| DA02142 | Archaeological Site | OLIVE JAR | 0.05 | No |
| DA02144 | Archaeological Site | LITTLE GEORGE ISLAND | 0.04 | No |
| DA02145 | Archaeological Site | WEST ROSS HAMMOCK | 3.04 | No |
| DA02146 | Archaeological Site | INDIAN WELL | 0.04 | No |
| DA02147 | Archaeological Site | N/A | 0.05 | No |
| DA02149 | Archaeological Site | N/A | 0.04 | No |
| DA02150 | Archaeological Site | N/A | 0.04 | No |
| DA02151 | Archaeological Site | N/A | 0.03 | No |
| DA02152 | Archaeological Site | N/A | 0.04 | No |
| DA02153 | Archaeological Site | N/A | 0.04 | No |
| DA02154 | Archaeological Site | N/A | 0.04 | No |
| DA02155 | Archaeological Site | N/A | 0.04 | No |
| DA02156 | Archaeological Site | N/A | 0.04 | No |
| DA02157 | Archaeological Site | N/A | 0.04 | No |
| DA02158 | Archaeological Site | N/A | 0.04 | No |
| DA02159 | Archaeological Site | N/A | 0.04 | No |
| DA02160 | Archaeological Site | N/A | 0.04 | No |
| DA02161 | Archaeological Site | N/A | 0.05 | No |
| DA02162 | Archaeological Site | N/A | 0.04 | No |
| DA02163 | Archaeological Site | N/A | 0.05 | No |
| DA02164 | Archaeological Site | N/A | 0.04 | No |
| DA02165 | Archaeological Site | N/A | 0.04 | No |

| | | | | |
|---|---|---|---|---|
| DA02166 | Archaeological Site | N/A | 0.05 | No |
| DA02167 | Archaeological Site | N/A | 0.04 | No |
| DA02168 | Archaeological Site | N/A | 0.04 | No |
| DA02169 | Archaeological Site | N/A | 5.36 | No |
| DA02170 | Archaeological Site | SAM WILLIE'S CAMP | 0.04 | No |
| DA02171 | Archaeological Site | N/A | 0.04 | No |
| DA02172 | Archaeological Site | N/A | 0.04 | No |
| DA02173 | Archaeological Site | N/A | 0.04 | No |
| DA02174 | Archaeological Site | N/A | 0.04 | No |
| DA02175 | Archaeological Site | N/A | 0.04 | No |
| DA02176 | Archaeological Site | JOHN BUCK SEMINOLE VILLAGE | 4.76 | No |
| DA02200 | Archaeological Site | N/A | 1.24 | No |
| DA02201 | Archaeological Site | N/A | 1.14 | No |
| DA02202 | Archaeological Site | N/A | 0.98 | No |
| DA02203 | Archaeological Site | N/A | 0.90 | No |
| DA02204 | Archaeological Site | N/A | 1.05 | No |
| DA02206 | Archaeological Site | N/A | 0.04 | No |
| DA02207 | Archaeological Site | N/A | 0.04 | No |
| DA02208 | Archaeological Site | N/A | 0.03 | No |
| DA02209 | Archaeological Site | N/A | 0.03 | No |
| DA02210 | Archaeological Site | N/A | 0.04 | No |
| DA02211 | Archaeological Site | N/A | 0.04 | No |
| DA02212 | Archaeological Site | N/A | 0.04 | No |
| DA02213 | Archaeological Site | N/A | 0.04 | No |
| DA02214 | Archaeological Site | N/A | 0.04 | No |
| DA02215 | Archaeological Site | N/A | 0.04 | No |
| DA02216 | Archaeological Site | N/A | 0.03 | No |
| DA02217 | Archaeological Site | N/A | 0.04 | No |
| DA02218 | Archaeological Site | N/A | 0.04 | No |
| DA02219 | Archaeological Site | N/A | 0.68 | No |
| DA02220 | Archaeological Site | N/A | 0.04 | No |
| DA02221 | Archaeological Site | N/A | 0.58 | Yes |
| DA02222 | Archaeological Site | N/A | 3.28 | Yes |
| DA02223 | Archaeological Site | N/A | 2.89 | Yes |
| DA02224 | Archaeological Site | N/A | 2.33 | Yes |
| DA02225 | Archaeological Site | N/A | 0.04 | No |
| DA02226 | Archaeological Site | N/A | 0.04 | No |
| DA02227 | Archaeological Site | N/A | 0.04 | No |
| DA02228 | Archaeological Site | N/A | 0.04 | No |
| DA02229 | Archaeological Site | N/A | 0.03 | No |
| DA02230 | Archaeological Site | N/A | 0.04 | No |
| DA02231 | Archaeological Site | STANLEY FRANKS CAMP | 0.05 | No |
| DA02232 | Archaeological Site | SMALL TOMMIE'S SEMINOLE VILLAGE | 0.04 | No |
| DA02233 | Archaeological Site | N/A | 0.04 | No |

| | | | | |
|---|---|---|---|---|
| DA02234 | Archaeological Site | JIMMIE TIGER'S FARM | 0.04 | No |
| DA02235 | Archaeological Site | MICCOSUKEE TRIBE ISLAND | 0.05 | No |
| DA02236 | Archaeological Site | TOMMY TIGER'S CAMP | 0.04 | No |
| DA02237 | Archaeological Site | PETE OSCEOLA'S FARM | 0.04 | No |
| DA02238 | Archaeological Site | N/A | 0.05 | No |
| DA02239 | Archaeological Site | N/A | 0.05 | No |
| DA02240 | Archaeological Site | JIMMY TOMMIE'S CAMP | 0.04 | No |
| DA02241 | Archaeological Site | N/A | 0.04 | No |
| DA02242 | Archaeological Site | N/A | 0.04 | No |
| DA02243 | Archaeological Site | N/A | 0.03 | No |
| DA02244 | Archaeological Site | N/A | 0.04 | No |
| DA02245 | Archaeological Site | N/A | 0.04 | No |
| DA02246 | Archaeological Site | SMALLPOX TOMMIE'S CAMP | 0.04 | No |
| DA02247 | Archaeological Site | BIG HAMMOCK | 0.04 | No |
| DA02248 | Archaeological Site | N/A | 0.04 | No |
| DA02249 | Archaeological Site | OLD BURYING GROUND | 0.04 | No |
| DA02250 | Archaeological Site | N/A | 0.04 | No |
| DA02251 | Archaeological Site | SMALLPOX TOMMIE'S OLD PLACE | 0.04 | No |
| DA02252 | Archaeological Site | N/A | 0.04 | No |
| DA02253 | Archaeological Site | N/A | 0.04 | No |
| DA02254 | Archaeological Site | N/A | 0.04 | No |
| DA02255 | Archaeological Site | N/A | 0.04 | No |
| DA02256 | Archaeological Site | N/A | 0.04 | No |
| DA02258 | Archaeological Site | JESSIE WILLIE'S CAMP | 0.04 | No |
| DA02259 | Archaeological Site | JACK CLAY HAMMOCK | 0.04 | No |
| DA02260 | Archaeological Site | N/A | 0.04 | No |
| DA02261 | Archaeological Site | N/A | 0.03 | No |
| DA06453 | Resource Group | TAMIAMI CANAL | 119.24 | Yes |
| DA06523 | Archaeological Site | CASAURINA HEAD | 2.73 | No |
| DA06524 | Archaeological Site | DEAD DEER ISLAND | 10.32 | No |
| DA06525 | Resource Group | MIAMI CANAL | 12.29 | Yes |
| DA11449 | Historical Structures | Duck Camp #2 | N/A | No |
| DA12826 | Resource Group | Blue Shanty Canal | 636.40 | No |
| DA12827 | Historical Structures | S-32 | N/A | Yes |
| DA12829 | Resource Group | Dade-Broward Levee | 30.06 | No |
| DA12830 | Archaeological Site | Site 8-1 | 0.38 | Yes |
| DA15327 | Resource Group | L-67A Canal | 2.52 | No |
| PB10343 | Resource Group | NORTH NEW RIVER CANAL | 2.01 | Yes |
| PB17102 | Resource Group | U.S. 27 | N/A | No |
| PB18567 | Archaeological Site | WCA 2A Target 16 | 1.26 | No |
| PB18568 | Archaeological Site | WCA 2A Target 20 | 0.50 | No |
| PB18569 | Archaeological Site | WCA 2A Target 25 | 0.35 | No |

**Table 9. Cultural Resources on the RWMA**

| FMSF No. | Resource Category | Resource Title | Acres | NRHP* Eligibility |
|---|---|---|---|---|
| BD05098 | Resource Group | L-4 Levees and Borrow Canal | 39.48 | No |
| PB00232 | Archaeological Site | WALL'S HEAD | 2.23 | No |
| PB09527 | Archaeological Site | HOLLY HUMP | 19.18 | No |
| PB09528 | Archaeological Site | BIRD NEST | 3.08 | No |
| PB13369 | Resource Group | Miami Canal Resource Group | N/A | Yes |

*National Register of Historic Places

## 2.9 Scenic Resources

The Everglades is one of Florida's most remarkable natural areas. On the ECWMA, you can find some of the Great Florida Birding and Wildlife Trail, where you can see native birds, butterflies, and more. On this "River of Grass," visitors are treated to extraordinary scenery within the vast landscape of sawgrass prairie, marshes, and tree islands that are distinctively unique to the Everglades. This ecosystem is internationally recognized as one of great diversity, and a rare ecological resource.

# 3 Uses of the Property

## 3.1 Previous Use and Development

The first Paleoindian inhabitants of Florida arrived at least 13,000 years ago. While these and subsequent native inhabitants of Florida were largely fisher-gatherer-hunters, subsequent cultures began to produce domesticated crops, such as maize, beans, squash, and other crops for a growing and increasingly sedentary population. For thousands of years before Europeans arrived, Native peoples, including the Calusa, the Jeaga, and the Tequesta Tribes, thrived in South Florida by hunting, fishing, and gathering of wild plants and shellfish. The forced removal of these cultures began shortly after the arrival of Europeans, either by the introduction of disease—to which the Native Americans had no resistance—or through outright conflict and enslavement. During and following the Seminole Wars, approximately 300 Seminoles took refuge in the Everglades and avoided removal to Indian Territory. Their descendants form the Seminole Tribe of Florida. In 1957, most of these people voted to establish an administrative entity called the Seminole Tribe of Florida and, in that same year, the U.S. Congress officially recognized them as an Indian Tribe. Those who chose to not become members of the newly formed Seminole Tribe either remained independent, or eventually joined together to form the Miccosukee Tribe of Indians of Florida.[4] In modern day Florida, both the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida are federally recognized tribes. Several other tribes have active petitions for federal recognition.

By the time Europeans arrived, the landscape of Florida had been shaped and modified by Native Americans for thousands of years. Along with novel agricultural practices, the Spanish, and later, the British and other settlers, brought cattle, hogs, horses, and other livestock to Florida. Social programs such as British agricultural land grants led to the proliferation of intensive agriculture throughout the state.

Agricultural practices such as rangeland cattle grazing quickly became crucial to the economy of the state, and Central Florida in particular, from the 16th through the 20th century. The influx of settlers and resulting intensification of agricultural practices led to additional landscape alteration, continuing a trend that had been occurring for centuries. This alteration was quickly outpaced by Florida's boom-and-bust economies of the 19th and 20th centuries. The ensuing widespread environmental modification and commercial and residential development would permanently transform the cultural and ecological landscape of the state.

In 1948, Congress authorized the Central and Southern Florida Project for Flood Control and Other Purposes (C&SF). This project included the construction of a substantial system of canals and levees in the Everglades ecosystem to provide flood control, water supply, preservation of fish and wildlife, and other environmental benefits to South Florida. The WCAs were constructed in the Everglades ecosystem as part of the C&SF. Construction of canals, levees, and water control structures began in 1949 and was completed in 1962. WCAs 2 and 3 are almost completely enclosed by a levee and canal system that is approximately 150 miles in length. The only portion of the area not completely enclosed by the levee system is WCA 3A, where a seven-mile section of the western border remains hydrologically connected to the BCNP. The C&SF significantly altered the region's hydrology. By the 1970s, the constructed C&SF canal system included over 1,800 miles of canals and levees and 200 water control structures. This immense system diverted an average of 1.7 billion gallons of water per day into the Atlantic Ocean and Gulf of Mexico.

Additional fragmentation of the watershed and habitat occurred with construction of U.S. Highway 27, which separates WCA 2 from WCA 3. Furthermore, U.S. Highway 41 (Tamiami Trail) borders WCA 3 and Interstate 75 bisects WCA 3. These roads in combination with the existing levee and water delivery system, have altered the natural hydroperiods and disrupted sheet flow throughout the management area. Continued development to the east of the management area will likely intensify environmental problems, such as habitat fragmentation. The area is used for flood retention during high rainfall years and as a reservoir for urban and agricultural use during dry years.

In 1994, the State passed the Everglades Forever Act to begin to improve these impacts and to address environmental concerns related to quality, quantity, and timing of water entering the Everglades. To date, the historic Everglades have been reduced to about half their original size. In response to this situation, the federal, state, regional, and local governments and the Miccosukee and Seminole Tribes are working together to continue to restore and maintain the vital conservation lands within the Everglades ecosystem.

## 3.2 Current Use of the Property

Currently, the ECWMA is managed for the conservation and protection of fish and wildlife habitat and fish and wildlife-based public outdoor recreation. A wide range of operational and resource management actions are conducted on the ECWMA each year including activities such as prescribed burning; wildlife habitat restoration and improvement; invasive species maintenance and control; road repairs and maintenance; imperiled and locally important species management, monitoring and protection; facilities and infrastructure maintenance and repair;

conservation acquisition and stewardship activities; cultural resources monitoring and protection; and research-related activities.

The ECWMA is being managed as a multiple-use conservation land. Multiple-use management strategies incorporate uses related to wildlife, fisheries, forest management, and natural resource-based public outdoor recreation that are compatible with the original purposes for the acquisition of the ECWMA. Current and anticipated resource uses of the property are diverse. Hunting continues to be a popular recreational activity on the ECWMA. The area also offers excellent opportunities for bird watching, especially for wading birds. The diversity of vegetation not only harbors a variety of bird species but also provides good opportunities for mammalian wildlife viewing. Other uses include camping, photography, biking, sightseeing, fishing, and geocaching. Due to the proximity of population centers in Broward, Palm Beach, and Miami-Dade counties, public use can be expected to increase as public awareness of opportunities increases.

### 3.2.1 Hunting

Currently, the ECWMA offers several hunting opportunities for white-tailed deer, feral hog, migratory and non-protected birds, and more. Non-native reptiles can also be removed in accordance with area regulations. Visitors who plan to hunt on the area should always consult the area's established regulations for seasons, bag limits, and general regulations before hunting on the area as these regulations change periodically. For more information on hunting opportunities at the ECWMA visit the following link: www.MyFWC.com/Hunting.

### 3.2.2 Fishing and Frogging

Fishing is authorized year-round at the ECWMA, with some restrictions. Visitors who plan to go fishing or frogging on the area should always consult the area's established general regulations before doing so on the area as these regulations are subject to change periodically.

### 3.2.3 Paddling and Boating

Watercraft, including airboats, are permitted on the ECWMA, although there are some restrictions on airboat use. Numerous boat ramps are available to the public; there is one available on the HWMA and five on the EWMA. Boat launches can be found on all three WMAs with two on the HWMA, four on the RWMA, and 13 on the EWMA. Visitors who plan to boat on the area should always consult the area's established general regulations before boating as these regulations are subject to change periodically.

### 3.2.4 Trails and Roads

There are no designated trails on the ECWMA; however, the levees within the area are often used as trails. There are 6.75 miles of roads managed by FWC available on the ECWMA; additional roads managed by partnering entities are available on the ECWMA. Along the roads passing through the WMAs, multiple facilities can be found. There are eight kiosks, two shelters, an observation tower on the EWMA, and a viewing platform on the RWMA.

### 3.2.5 Camping

Camping is permitted on most of the L-5 and Miami Canal Levees (HWMA and RWMA), the Manley Ditch, the Powerline Levees (RWMA), and throughout the entire EWMA unless posted

as closed to camping. The FWC recommends that visitors who plan to camp on the area consult the area's established general regulations before their stay as these regulations are subject to periodic change. Furthermore, historic hunt camps are dispersed throughout the EWMA, some of which are privately owned; however, these camps are managed by the FWC under Use Agreement U-0435 (Appendix 11.1).

### 3.2.6 Geocaching

Geocaching, also known as Geographic Positioning System (GPS) Stash Hunt and GeoStash, is a contemporary combination of orienteering and scavenger hunting generally utilizing a GPS receiver unit. Geocache websites routinely promote good stewardship. However, the potential exists for resource damage, user conflicts, or safety issues caused by inappropriately placed caches and/or links that do not provide adequate information about the area.

It is the policy of the FWC to allow placement of geocaches only in those locations that do not present the potential for resource damage, user conflicts, or threats to the safety of the activity participants. The placement of geocaches on the FWC-managed lands is governed by specific guidelines. These guidelines may be found on the following the FWC website: https://myfwc.com/license/public-land-use/geocaching/guidelines/ .

### 3.2.7 Bicycling

Bicycling opportunities are available on most levees within the area and is most popular along the L-67 and L-35 levees.

### 3.2.8 Equestrian

Horseback riding opportunities are available on most levees within the area, though this is not a popular or recommended activity at the ECWMA.

### 3.2.9 Hiking

Hiking opportunities are available on most levees within the area and is most popular along the L-67 and L-35 levees.

### 3.2.10 Environmental Education

Kiosks, interpretive signage, area brochures, and a web site are available to provide visitors with an enhanced understanding of the Everglades ecosystem and its ecological importance.

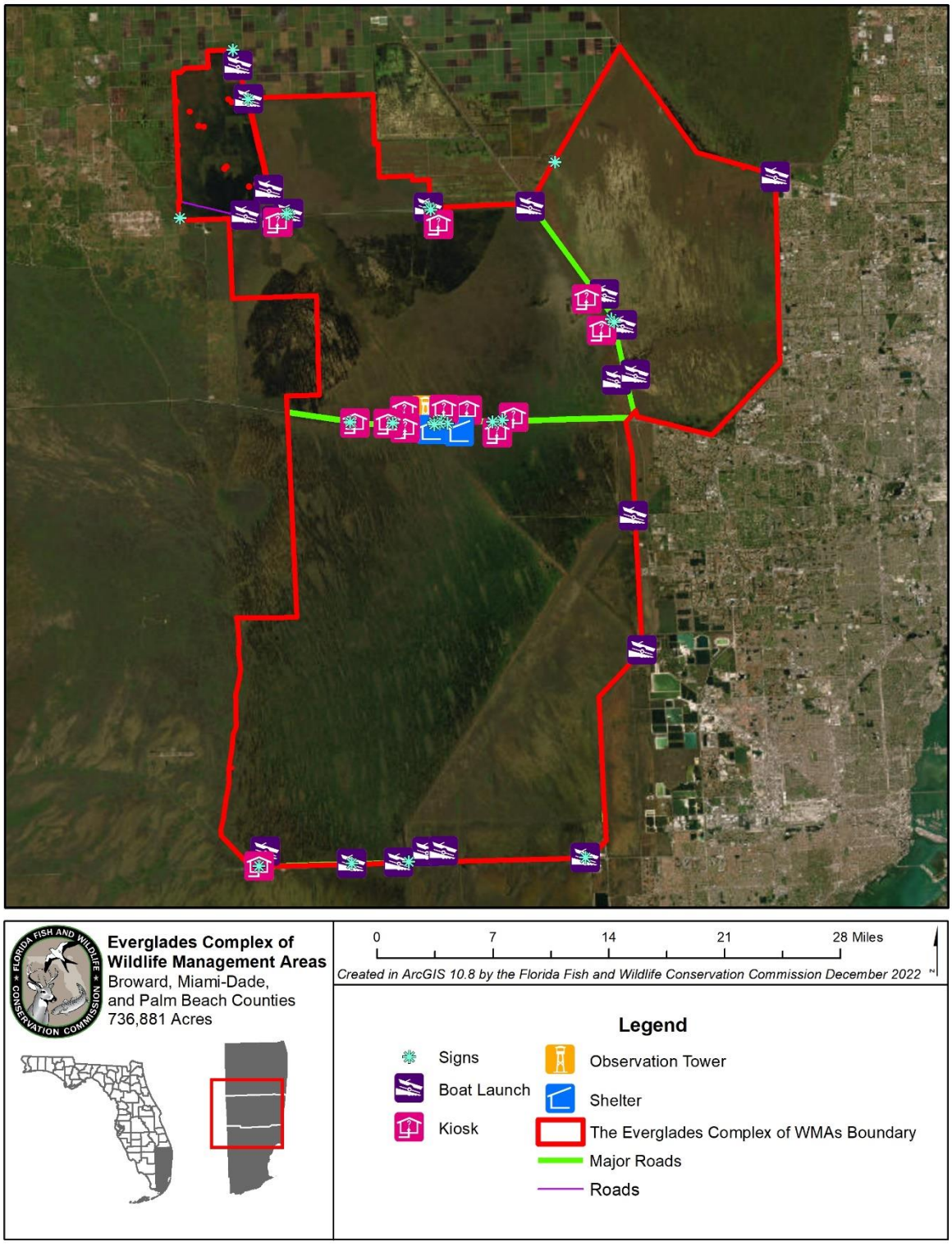



**Figure 10. ECWMA Facilities**

## 3.3 Adjacent Land Uses

Many of the sites adjacent to the ECWMA have historically been used for drainage, grazing, citrus, or other agricultural uses. Developments for these purposes have resulted in improved pastures, drainage ditches, levees, canals, and other such landform modifications. Adjacent zoning and land use classifications are slightly varied and include conservation areas, parks, preserves, and WCAs. WCAs are meant for conserving or protecting natural resources, and environmental quality or quantity of ground water or surface water; they are also used for floodplain and fisheries management, or protection of both vegetative communities and wildlife habitats.

The ECWMA is located among the most heavily developed counties in South Florida, supporting thriving housing, tourism, and agricultural industries. These three counties' Comprehensive Land Use Plans have varying, but similar zoning designations for the ECWMA lands, as follows:

Miami-Dade County

The 2021 U.S. Census estimates that there are 2,731,939 people living in Miami-Dade County. The Department of Economic Affairs, Bureau of Economic and Business Research's (BEBR) medium-range population projection indicates that in the year 2035, there will be 3,234,615 people living in Miami-Dade County. The BEBR population projections for the counties surrounding this county for the year 2035 are as follows: Monroe – 79,793, Collier – 477,771, Broward – 2,142,335.

The current zoning ordinance for the ECWMA within Miami-Dade County is Environmental Protection. According to Miami-Dade County's Comprehensive Plan, this designation allows for one unit per five acres. Miami-Dade County's future land use maps indicate that the ECWMA will continue to be designated and zoned as Environmental Protection. Lands immediately adjacent to the ECWMA are classified as open land, environmentally protected parks, parks and recreation, and low density residential.

Broward County

The 2021 U.S. Census estimates that there are 1,955,375 people living in Broward County. The Department of Economic Affairs, BEBR medium-range population projection indicates that in the year 2035, there will be 2,142,335 in Broward County. The BEBR population projections for the counties surrounding this county for the year 2035 are as follows: Collier – 477,771, Hendry – 45,554, Miami-Dade – 3,234,615, Palm Beach – 1,668,575.

The current zoning ordinance for the ECWMA within Broward County is Conservation-1 District. According to Broward County's Comprehensive Plan, this designation allows for one unit per acre. Broward County's future land use maps indicate that the ECWMA will continue to be designated and zoned as Conservation – Reserve Water Supply Areas. Lands immediately adjacent to the ECWMA are classified as Rural Residential, Community, Transportation, Irregular Residential, Commerce, Low (3) and (5) Residential, Agriculture, and Natural Reservations.

Palm Beach County

The 2021 U.S. Census estimates that there are 1,502,495 people living in Palm Beach County. The Department of Economic Affairs, BEBR medium-range population projection indicates that in the year 2035, there will be 1,668,575 people living in Palm Beach County. The BEBR population projections for the counties surrounding this county for the year 2035 are as follows: Broward – 2,142,300, Glades – 15,222, Hendry – 45,554, Okeechobee – 45,314, and Martin – 183,467.

The current zoning ordinance for the ECWMA within Palm Beach County is Conservation – Reserve Water Supply Areas. According to Palm Beach County's Comprehensive Plan, this designation allows for one unit per five to twenty acres. Palm Beach County's future land use maps indicate that the ECWMA will continue to be designated and zoned as Conservation – Reserve Water Supply Areas. Lands immediately adjacent to the ECWMA are classified as agriculture, storm water treatment, federal, and rural service areas.

## 3.4 Visitation, Economic Benefits, and Revenue-Generating Potential

Visitation and public use of the area for fish and wildlife-based public outdoor recreational opportunities is the primary source of economic benefits from the ECWMA, which contributes to the overall economy for the Southeast region of Florida. In Fiscal Year 2021-22, an estimated 863,225 people visited the ECWMA. Primarily, as a result of this visitation and use of the area, the FWC economic analysis estimates that the ECWMA generated an estimated annual economic impact of $168,665,532.75* for the State and the ECWMA Florida region. This estimated annual economic impact has aided in the support or creation of an estimated 1,718 jobs. *

Further revenue generating potential of the ECWMA will depend upon future uses described in this Management Plan. Additional revenue from environmental lands such as the ECWMA might include sales of various permits, recreational user fees, and ecotourism activities, if such projects could be feasibly developed. The annual area regulations can be consulted to clarify the necessary and required permits, fees, and regulations. Additionally, the long-term value of ecosystem services, including the protection of air and water quality functions, are considered to be significant to local and regional land and water resources, as well as human health.

**The above figures are based on expenditure data from the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation (USFWS) and 2006 IMPLAN economic models assembled by Southwick Associates and the USFWS. The results were updated to 2010 based on hunting and fishing license trends and inflation. The results were combined and weighted based on the numbers of hunters, anglers and wildlife viewers statewide. The results assume participants' expenditures and the results impacts are consistent throughout the state. Users applying these results to local situations should be aware that differences might exist between these statewide averages and the site in question and make adjustments if needed.*

## 3.5 Single or Multiple-use Management

As mentioned previously, the ECWMA will be managed under the multiple-use concept as a WMA. The ECWMA will provide fish and wildlife-based public outdoor recreation and

educational opportunities, while protecting the natural and cultural resources found on the area. Any natural and cultural resources of the ECWMA will be managed under the guidance of ARC, the Conceptual State Lands Management Plan, and as outlined in the original purposes for acquisition. A detailed assessment of the benefits and potential impacts of planned uses and activities on natural and cultural resources was an integral part of the development of the management activities and intent, goals, objectives, challenges, and strategies sections of this Management Plan.

### 3.5.1 Analysis of Multiple-use Potential

The following actions or activities have been considered under the multiple-use concept as possible uses to be allowed on the ECWMA. Uses classified as “Approved” are in accordance with the purposes for acquisition, as well as with the Conceptual State Lands Management Plan, and with the FWC agency mission, goals and objectives as expressed in the Agency Strategic Plan (Appendix 11.10). Uses classified as "Conditional" indicate that the use may be acceptable but will be allowed only if approved through a process other than the management plan development and approval process (e.g., special-use permitting, managed-area regulation and rule development). Uses classified as “Rejected” are not considered to be in accordance with the original purpose of acquisition or one or more of the various forms of guidance available for planning and management:

| | Approved | Conditional | Rejected |
|---|---|---|---|
| Apiaries | | ✓ | |
| Archery | | ✓ | |
| Astronomy | | ✓ | |
| Bicycling | ✓ | | |
| Cattle Grazing | | | ✓ |
| Citrus or other Agriculture | | | ✓ |
| Ecosystem services and maintenance | ✓ | | |
| Ecotourism | | ✓ | |
| Environmental Education | ✓ | | |
| First-responder training | | ✓ | |
| Fishing | | ✓ | |
| Geocaching | | ✓ | |
| Hiking | ✓ | | |
| Horseback riding | ✓ | | |
| Hunting | | ✓ | |
| Linear facilities | | ✓ | |
| Military training | | ✓ | |
| Preservation of cultural resources | ✓ | | |
| Primitive camping | | ✓ | |
| Protection of imperiled species | ✓ | | |
| Off-road vehicle use | | ✓ | |
| Shooting sports park | | | ✓ |
| Soil and water conservation | ✓ | | |
| Timber harvest | | | ✓ |
| Wildlife observation | ✓ | | |

### 3.5.2 Incompatible Uses and Linear Facilities

Consideration of incompatible uses and linear facilities on the ECWMA are made in accordance with the requirements of Section 253.034(10) F.S., and other applicable Florida constitution,

statute, rule, and policy requirements; and other provisions governing applications for proposed incompatible uses or linear facilities on state-owned conservation lands. Upon approval and implementation of this Management Plan, any proposed future uses that have been classified herein as Rejected, or other proposed future uses that are determined to be incompatible with the purposes of acquisition or other management authorizations and guidance, will be forwarded for review and approval consideration to the DEP-DSL, ARC, and the Board of Trustees prior to any incompatible use or linear facility being authorized on the ECWMA.

## 3.6 Acreage Recommended for Potential Surplus Review

On conservation lands where the FWC is the lead manager, the FWC evaluates and identifies recommended areas for a potential surplus designation by the DSL, ARC, and the Board of Trustees. This evaluation consists of GIS modeling and analysis, aerial photography interpretation, analysis of fish and wildlife resources, a review of resource and operational management needs, and a review of public access and recreational use of the area. Also, the FWC considers recommendations for surplus lands as they relate to Florida's "No Net Loss of Hunting Lands" legislation (Ch. 379.3001, F.S.), as well as surplus restrictions for lands acquired through the Federal Aid in Wildlife Restoration Act (Pittman-Robertson) or through other federal grant programs.

The evaluation of the ECWMA by the FWC has determined that all portions of the area are being managed and operated for the original purposes of acquisition and remain integral to the continued conservation of important fish and wildlife resources and continue to provide good fish and wildlife resource-based public outdoor recreational opportunities. Therefore, no portion of the ECWMA is recommended for potential surplus review.

# 4 Management Activities and Intent

The following section provides a description of agency plans to locate, identify, protect, preserve, or otherwise use fragile natural resources and nonrenewable cultural resources. In general, the FWC management intent for the ECWMA is to restore and maintain natural communities in a condition that sustains ecological processes and conserves biological diversity, especially fish and wildlife resources. In conjunction with this primary emphasis, it is FWC's intent to provide quality fish and wildlife-based public outdoor recreational opportunities on the ECWMA. The FWC will utilize the best available data, guidelines, natural resource management practices, and recreational management practices to achieve these outcomes in accordance with the original purposes for acquisition. Furthermore, as noted earlier, the management activities described in this section are in compliance with those of the Conceptual State Lands Management Plan.

## 4.1 Land Management Review

On-site reviews of conservation and recreation lands that exceed 1,000 acres and are titled in the name of the Board of Trustees are required every five years by Section 259.036, F.S. These reviews determine whether the lands are being managed for the purposes for which they were acquired and whether they are being managed in accordance with their land management plan adopted pursuant to Section 259.032, F.S. According to statute, the review team "shall evaluate

the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan."

The LMR of the ECWMA was completed in 2016. The LMR team found that the FWC was managing the area in accordance with the purposes of acquisition. The recommendations from the LMR team were considered and addressed in the development of this Management Plan, including development of management intent language, goals and objectives, and identification of management challenges and development of solution strategies.

## 4.2 Adaptive Management

Adaptive management is "learning by doing";[5] it is the adjustment or modification of conservation actions to achieve a desired conservation goal. In practice, adaptive management is a rigorous process that includes sound planning and experimental design with a systematic evaluation process that links monitoring to management.[5,6] Adaptive management requires flexibility for implementation, but should be fitted over a fundamentally sound, well-planned design.

An adaptive management process produces the strongest inference and most reliable results when experimental design components are incorporated into the monitoring process. Adaptive management is most rigorously applied in an active format when components of experimental design (i.e., controls, replication, and randomization) are included in the monitoring process.[5,6] Incorporating valid statistical analyses of results will further enhance the value of the adaptive management process. However, in some situations, rigorous experimental design procedures can be relaxed without invalidating monitoring results. In a passive format, adaptive management can involve applying a conservation action at a site, observing the results, and adjusting the action in the future if warranted. [5,6]

Proposed adaptive management, monitoring, and performance measures are developed through literature reviews and FWC staff meetings. Overall, a results-based approach is incorporated into the Management Plan, for which effective monitoring is an integral component. The FWC will monitor conservation actions, species, habitats, and major threats to the conservation of the natural and cultural resources of the ECWMA.

### 4.2.1 Monitoring

A well-developed monitoring protocol is also one of the principles required criteria for the management of the ECWMA. Monitoring and performance measures are important, but often overlooked elements of conservation planning. Monitoring provides the critical link between implementing conservation actions and revising management goals.

Monitoring is the systematic, repeated measurement of environmental characteristics to detect changes, and particularly trends, in those characteristics. Monitoring provides essential

feedback, the data needed to understand the costs, benefits, and effectiveness of planned conservation actions and the management projects undertaken to address them.[2]

For natural communities, the ECWMA staff contracted with FNAI to help establish a comparable vegetation monitoring program for tree islands. For imperiled and locally important fish and wildlife species, monitoring protocols are established through the FWC's Wildlife Conservation Prioritization and Recovery (WCPR, Section 4.4.1) program. FWC staff may monitor additional fish and wildlife species when deemed appropriate. Invasive plant and animal species (Section 4.5) are also monitored as needed and appropriate. Recreational uses are monitored through the FWC's Public Access Services Office (PASO), and work in conjunction with the establishment and adjustment of public access carrying capacities (Section 4.6.3). Cultural resources (Section 4.9) are monitored with guidance from the DHR.

### 4.2.2 Florida Landscape Assessment Model

The FWC has developed the Florida Landscape Assessment Model (FLAM) as a Geographic Information Systems (GIS)-based assessment tool that incorporates a wide variety of landscape and wildlife species data. The FLAM evaluates the Florida landscape based upon important natural resources and habitat needs of wildlife to identify ecologically significant lands in the state, and to assess the potential impacts of management and land use changes. The FLAM was developed to provide technical assistance to various local, regional, state, and federal agencies, and entities interested in wildlife needs and conservation in order to: (1) determine ways to avoid or minimize project impacts by evaluating alternative placements, alignments, and transportation corridors during early planning stages, (2) assess direct, secondary, and cumulative impacts to habitat and wildlife resources, and (3) identify appropriate parcels for public land acquisition for wetland and upland habitat mitigation purposes. The FLAM ranks habitat from a 0-10 with a rank of 10 being of greatest value. The FLAM (2021) indicates that the ECWMA has a very high mean wildlife value of 8.8.

### 4.2.3 Performance Measures

Performance measures include qualitative or quantitative measures used to provide an estimate or index of the characteristic of interest, and to chart the overall progress of conservation actions towards specific goals. Successful monitoring programs and their associated performance measures provide natural resource professionals with valuable feedback on the effectiveness of conservation actions and make it possible to implement a more flexible adaptive management approach. An adaptive management approach ultimately will be more efficient and effective when it tracks inputs, incorporates an effective monitoring program that integrates performance measures, and evaluates results against desired goals.

### 4.2.4 Implementation

The ECWMA Management Plan serves as the guiding framework to implement this adaptive management process. It serves as the underpinning for the integration of management programs (WCPR, PASO, Recreation Master Plans, etc.) to accomplish needed conservation actions that are planned to manage the natural resources of the ECWMA and resolve conservation threats to fish and wildlife and the habitats they occupy. Based on evaluations of

project results, the conservation actions are revised as necessary, and the adaptive management process is repeated.

## 4.3 Habitat Restoration and Improvement

On the ECWMA, the FWC will focus on managing for native habitat diversity, emphasizing maintenance of natural communities, and restoring of disturbed areas. The ECWMA has functioning natural communities including glades marsh, prairie hammock, and strand swamp that the FWC will continue to manage and protect. On any disturbed upland sites, the FWC intends to continue natural community restoration. Restoration may be achieved on disturbed areas by the re-introduction of fire, restoring historic hydrological conditions, and/or the use of mechanical or chemical forest management techniques as appropriate.

### 4.3.1 Objective-Based Vegetation Management (OBVM)

The FWC often uses a comprehensive resource management approach to improving FWC-managed areas. Restoring the form and function of Florida's natural communities is the foundation of the FWC's management philosophy. OBVM is a monitoring tool used by the FWC to monitor how specific vegetative attributes are responding to management. However, since the ECWMA does not have the natural communities monitored by the OBVM program, OBVM does not occur on the area. Instead, the FWC contracted with FNAI to help establish a comparable vegetation monitoring program for tree islands (prairie hammocks) in 2019 and 2020. Although tree islands comprise only 1.7% of the total acreage on the ECWMA, they are extremely important for wildlife due to the food, cover, and refuge that they provide; furthermore, tree islands contribute to the overall plant and animal diversity observed on the ECWMA.

To examine restoration efforts on tree islands, vegetation plots across 18 tree islands established during a study in 1999-2000 were re-sampled in 2019. Nine of these islands were sampled to confirm their status as suitable "reference" tree islands, and the other nine islands were "managed" islands, which are tree islands subject to restoration management activities. The goals from the first year included: 1) establish whether the nine reference tree islands had changed significantly in measured diversity and density of canopy species over the past 20 years; 2) using desired future conditions (DFC) set by the reference islands, determine what proportion of the nine managed islands were meeting those DFCs; 3) regardless of whether the managed islands meet DFCs, determine whether these islands had changed significantly in measured diversity over the past 20 years.

Results from 2019 determined the reference islands had a reduced diversity and density compared to measurements taken in 1999. Managed islands showed a significant increase in density, but not diversity, although the general trend seemed to be moving towards higher diversity on these islands. The 2019 results also informed changes to the sampling methodology for 2020. In 2020, reference tree islands were re-surveyed using the new methodology, and 20 new randomly chosen managed islands that represented various native planting efforts were added to the survey.

Results from the 2020 study gave more detailed metrics for conditions on each of the tree islands measured. Species richness, stem area, average stem diameter, and a measure of

canopy importance were all determined to be potentially useful measurements of canopy development and habitat quality. The reference islands had a significantly higher stem density median. However, when surveyors examined tail, fringe, and head vegetation separately, there was no difference in stem density between managed and reference islands. The only detectable difference was in species richness, which trends higher on managed islands. Sampling detected a marked decrease in non-native plant abundance over the past 20 years, presumably reflecting restoration efforts by the ECWMA staff. However, islands that still had a high cover of non-native plants, have strong indicators of disturbance as measured by species richness, stem area, average stem diameter, and canopy importance. As a result, FNAI recommended that DFCs should be set using the upper tier of the relevant measurements from both reference and managed islands. Re-sampling on a regular basis (every five years) should allow the FWC to track conditions and monitor progress on managed islands.

The ECWMA staff manages other natural communities including glades marsh, prairie hammock, and strand swamp. Primary management techniques used throughout the area include non-native plant removal and prescribed burning, as well as managed “let it burn” policies for beneficial wildfires. Prescribed fire reduces heavy fuel loading, controls invasive hardwoods, promotes fire dependent plant species, and enhances natural communities to benefit wildlife. Staff conduct prescribed burning during both growing and dormant seasons. Additionally, wildfires regularly burn large portions of the property.

### 4.3.2 Prescribed Fire and Fire Management

Periodic spring and summer fires occur in fire-adapted communities under natural conditions. Plant species composition reflects the frequency and intensity of these fires. The ECWMA differs from most FWC-managed areas in that almost all fire takes place in wetlands. The FWC employs a fire management regime to maintain or increase both species and habitat diversity and will continue a prescribed burning program on the ECWMA in accordance with natural community management objectives. As fire moves across a landscape, some areas carry fire better than others. Areas with higher fine fuel loads typically burn more evenly and with greater intensity. Wetland areas, which make up just under 93% of the ECWMA, typically will not carry fire as evenly, and usually burn at a lower intensity. Employing a burning program with different fire frequencies, intensities, and seasonality (dormant season vs. growing season) of prescribed burns creates habitat diversity and a mosaic of vegetation patterns. This mosaic landscape will have characteristics of both frequently and infrequently burned areas, benefiting the greatest suite of flora and fauna.

On some areas, prescribed burning is limited by the buildup of mid-story brush and a lack of pyrogenic groundcover fuels. When extensive, this condition creates unsuitable habitat for many wildlife species. Used in conjunction with prescribed fire, mechanical control of brush by roller chopping, mowing, and shredding, can reduce shading and encourage the grasses and forbs that best sustain prescribed fire. These can be valuable management tools that may enable the use of prescribed fires in areas heavily impacted by dense woody vegetation. However, if used extensively, roller chopping may damage the herbaceous ground cover. Therefore, the FWC will work to limit its use to situations where burning can only be accomplished by a mechanical

reduction of woody vegetation. When possible, existing firebreaks such as roads, trails, and canals, as well as natural breaks such as sloughs, will be used to define management units.

The transitional areas between two adjacent but different natural community types are known as ecotones. With the exception of wildfire suppression, mechanical soil disturbance in wetland ecotones will be avoided in order to protect habitats for important rare species that often occur between upland and wetland margins. Creation of firebreaks will be avoided in wetland margins unless necessary to defend the boundary of a managed area. When safe, marshes, swamps, and other wetlands are actively burned in order to maintain these habitats. With some exceptions, most fire managed natural communities are best maintained, or improved, with fire returns of four to five years, preferably during the spring and early summer months when appropriate.

In addition to the general prescribed fire management guidelines described above, an area-specific Prescribed Burn Plan has been developed and implemented for the ECWMA. This plan includes, but is not limited to, delineation of burn management units, descriptions of prescribed fire methodology, safety, and smoke management guidelines. As further outlined in the area's Prescribed Burn Plan, the FWC plans to continue to conduct prescribed burning on the area's fire adapted communities, with a goal to bring 57.38% of the area being maintained within the recommended fire return intervals during this planning period. The entirety of the ECWMA cannot be maintained with prescribed burns due to smoke impacts on adjacent landowners, residents, and nearby roads, as well as sensitive wildlife resources and areas of special concern. Challenges that continue to impact the implementation of prescribed fire on the area are described further in Section 6. The continuing benefits of prescribed fire on the area's wildlife habitats, along with other ongoing habitat restoration activities, that are being implemented on ECWMA are discussed in more detail below.

### 4.3.3 Habitat Restoration and Improvement Activities and Accomplishments

Significant habitat management activities have taken place within many of the natural and altered communities on the ECWMA over the course of the previous management period beginning in 2015. As stated previously, as many management units with fire-adapted natural communities as possible will continue to be treated with prescribed fires, most on a repeated basis as established within the Prescribed Burn Plan. This has aided in the improvement and restoration of native groundcover and wildlife habitat throughout the ECWMA. Below is a list of the primary habitat restoration and improvement activities that have occurred on the ECWMA since 2015.

- Prescribed Burn Plan updated in 2022.
- 8,000 acres of the area's fire adapted communities have been treated with prescribed fire per year.
- 40,000 acres on the ECWMA have been maintained per year within the five-year target fire return interval.
- A minimum of 2,200 acres have been chemically treated annually, including aerial cattail treatment.

- 200 acres of habitat and natural community restoration activities have been conducted annually, including tree island restoration, natural community restoration, or other upland habitat restoration.

Continuing habitat management activities on the ECWMA will focus on enhancing natural communities, maintaining recommended fire return intervals for fire adapted communities, treating and removing invasive plant species, and controlling vegetation through mowing and roller chopping as needed. Invasive species control is more extensively discussed in Section 5.4. Further specific habitat management and improvement objectives planned for the ECWMA are described in Section 5.

## 4.4 Fish and Wildlife Management, Enhancement, and Population Restoration

Across the ECWMA, the size and diversity of natural communities create a mosaic that supports a wide variety of fish and wildlife species, including imperiled, game, and non-game species. The FWC uses the term “locally important species” to encompass imperiled species, as well as a select group of common species, that occur on the area and can help guide management activities. By managing the area’s natural communities for locally important species, the area will benefit a host of other species that use these natural communities. To support this goal, the FWC emphasizes conservation, protection, and management of natural communities in order to protect and enhance populations of fish and wildlife found on the ECWMA. Natural communities vital to locally important species on the ECWMA include glades marsh, prairie hammock, and strand swamp. Restoration and improvement of any altered communities, in order to expand habitat on the ECWMA, is also emphasized.

To guide species management on FWC-managed lands, the FWC takes a proactive, science-based approach in conjunction with input from species experts and individuals with knowledge of the area. Management practices are designed to restore, enhance, or maintain natural communities with an emphasis on the needs of locally important species. Locally important species will be managed for optimum richness, diversity, and abundance. This will be further augmented by following approved Federal and FWC Species Recovery Plans, guidelines, and other scientific recommendations for these species. Guided by these recommendations, land management activities including prescribed burning and tree island restoration will further address locally important species requirements and habitat needs.

For locally important species population monitoring, the FWC takes a tiered approach. Using taxa inventory monitoring and opportunistic observations, the ECWMA staff identify which species occur on the ECWMA and track diversity through time. In addition, when appropriate, the ECWMA staff monitor specific species to track population status. Wildlife experts help to identify the best monitoring approach for the area to inform how management is influencing the populations. Using this tiered monitoring approach, the FWC will gather information about the species using the area and how select species are responding to management. Section 4.4.1 and Appendix 11.13 provide further information on FWC’s comprehensive species management strategy for all locally important wildlife and their respective habitats.

### 4.4.1 Locally Important Species: Wildlife Conservation Prioritization and Recovery

The FWC has identified the need to: 1) demonstrate optimal wildlife habitat conservation on FWC-managed lands; 2) develop science-based performance measures to evaluate management; 3) recover imperiled species; and 4) prevent future imperilment of declining wildlife species. To help meet these needs, the FWC uses a comprehensive resource management approach to maintain FWC-managed areas. Restoring the form and function of Florida's natural communities is the foundation of this management philosophy. The FWC monitors how specific vegetative parameters are responding to management and uses the WCPR program to ensure management is having the desired effect on wildlife.

The WCPR program helps assess locally important wildlife species' needs and opportunities, prioritize what the FWC does for locally important species, prescribe management actions to aid in species recovery, prescribe monitoring to allow evaluation of the species' response to management, and ensure the information is shared with others. To determine specific management and monitoring actions needed for each species, the FWC considers the species' status on the area; the current condition of the area's natural communities; the amount and spatial arrangement of the species' potential habitat on the area and adjacent lands; the species' response to management; and any local overriding factors (e.g., status of species in the region, local declines, or extirpations). The FWC staff then combine these assessments with area-specific management considerations to develop a Wildlife Management Strategy for the area (Appendix 11.13). Each area-specific Strategy prescribes management actions to achieve and identifies monitoring to verify progress towards meeting desired outcomes. By providing the FWC managers with information on actions they should undertake, the FWC intends for the Strategy to assure the presence and persistence of Florida's native wildlife.

Through the actions of this program, the FWC facilitates fulfilling the needs of locally important wildlife species on the ECWMA. In the long-term, by implementing the WCPR Strategies on FWC-managed lands and continuing to assess wildlife species' needs, the FWC will continue to play an integral role in aiding the recovery of locally important species and preventing the future imperilment of declining wildlife species.

### 4.4.2 Game Population

The FWC intends to manage game populations on a sustained-yield basis to assure healthy game populations and a high-quality recreational experience. In general, game wildlife populations will be managed to provide continued recreational sport hunting and wildlife viewing opportunities. However, some of the hunting opportunities may be regulated through a limited entry hunt program to ensure the persistence of viable game species populations, as well as hunter safety and satisfaction. The potential for conflicts among recreational activities and user groups will also be considered and continually monitored.

### 4.4.3 Nuisance Animal Species

The FWC also works to address nuisance animal behavior on the ECWMA. Non-native reptiles may be hunted year-round by methods other than firearms, with certain firearms permitted to use as allowed by season. Wild hog may be hunted during various seasons, by appropriate methods, with no bag limits or size restrictions. The FWC also has other non-native wildlife

programs that benefit the ECWMA, such as the Pet Amnesty Program, the Python Patrol Program, the Florida Python Challenge, the Python Action Team, and cooperation with the SFWMD on their Python Elimination Program. The FWC will continue to monitor impacts of nuisance animal behavior on the area and implement mitigation strategies as needed and appropriate.

### 4.4.4 Fish and Wildlife Management Activities and Accomplishments

During the previous planning period, the FWC conducted monitoring activities for seven locally important species on the ECWMA. Locally important species projects will continue to be implemented in accordance with the WCPR Strategy. In addition to locally important species activities, the FWC will continue to monitor and manage for game and nuisance animal species. Below is a list of activities and monitoring outcomes that have occurred since 2015 in order to further FWC's mission for managing fish and wildlife on the ECWMA.

- Crested caracara nesting has been observed on the HWMA and the RWMA. Since 2015, the ECWMA staff have conducted breeding territory and nesting surveys on the RWMA. Staff began surveys on the HWMA in 2020. As of 2022, the ECWMA staff have documented four nests (three in the RWMA, one in the HWMA). Crested caracaras are rare on the EWMA.
- In 2021, the ECWMA staff conducted black rail callback surveys in the EWMA, however no black rails were detected. The FWC staff did detect black rails opportunistically during 2021, and in previous years. In 2022, FWC staff detected one black rail during callback surveys, as well as multiple individuals opportunistically.
- The FWC staff frequently observe Everglade snail kite throughout the ECWMA. FWC and University of Florida (UF) staff have confirmed nesting on the RWMA and the EWMA but have not confirmed nesting on the HWMA. Except for 2016 and 2020, snail kites have nested every year on the EWMA since 2012. Snail kites nested on the RWMA from 2017-2019.
- Multiple wading bird species (white ibis, tricolored heron, little blue heron, wood stork, and roseate spoonbill) occur and nest throughout the ECWMA. The UF, Florida Atlantic University, and the SFWMD conduct annual aerial wading bird surveys on the EWMA. Two small colonies of little blue and tricolored herons were found on the HWMA in 2018, and FWC staff along with the SFWMD monitor these two colonies via ground surveys annually. In 2021, FWC staff began monitoring two colonies on the RWMA that had low numbers of nesting little blue herons with one colony having a tricolored heron nest. Since the last Strategy, SFWMD aerial surveys on the ECWMA have observed multiple nesting colonies of snowy egrets, tricolored herons, little blue herons, great blue herons, great egrets, wood storks, roseate spoonbills, white ibis, and black-crowned night herons.
- Since 2017, the ECWMA staff have been conducting bat acoustic surveys throughout the area. These acoustic surveys are targeted toward determining the distribution of the Florida bonneted bats, which was first detected in 2014. The ECWMA falls within the Florida bonneted bat consultation area and critical habitat area.

- White-tailed deer are a priority game species on the ECWMA and a focus of monitoring efforts. FWC staff conduct aerial deer surveys to monitor the population, and spotlight surveys and browse surveys during high water events to monitor the condition of deer and other terrestrial wildlife.

## 4.5 Invasive and Non-native Species Maintenance and Control

With non-native and invasive species populations continuing to grow in Florida, the FWC takes a proactive and comprehensive approach to the monitoring and management of invasive and non-native plants and animals, as well as pests and pathogens, on FWC managed areas. Non-native species are those species that do not originate from Florida. These species are often introduced because of deliberate or accidental human activities and are closely monitored by the FWC for potential future impacts. If a non-native species is found to cause or is likely to cause environmental or economic harm to humans, it is then classified as an invasive. On the ECWMA, the FWC has established a variety of control measures for the management of any found non-native or invasive plant and animal species as further outlined in Section 5.4 of this Management Plan.

### 4.5.1 Invasive Plant Species

The FWC will continue efforts to control the establishment and spread of FISC Category I or II plants on the ECWMA while using the most current control technologies (CCT) which may include mechanical, herbicide, and biological control. Treatments utilizing herbicides will comply with instructions found on the herbicide label and employ the Best Management Practices and CCT for their application. More information regarding herbicides used on FWC's lead managed areas can be found here: https://edis.ifas.ufl.edu/pdf%5CWG%5CWG20900.pdf

During the previous planning period several control activities have occurred (Section 4.5.2 and Section 4.5.3). FWC staff strive to either eradicate infestations or achieve maintenance rotation. Maintenance rotation is defined as having a given area/acreage with invasive species infestations reduced to a level where no ecological harm will occur by skipping any treatment for a period of one to several years, depending on the species. Maintenance rotation is not necessarily synonymous with eradication, which is usually impractical to achieve.

Maintenance rotation intervals for invasive plants vary greatly by species. Generally, woody species that form canopies will need a thorough initial treatment and a follow-up treatment the next growing season. Thereafter, the maintenance rotation treatment will need to follow seed germination and seedling/sapling regrowth patterns, with subsequent treatments being necessary every two- to ten-years, depending on initial infestation level, seed bank presence, and likely new dispersal into the area from neighboring populations of these species. Woody species that dominate the midstory will need a treatment regimen similar to those that form canopies, except the subsequent retreatment rotation would be every two to five years.

Herbaceous species that can affect the midstory and canopy, including vines, weak lianas, and climbing ferns need to be detected and treated as early as possible. These need to have an aggressive initial treatment, followed by yearly treatments, until the populations no longer affect the midstory. At this point, a two- to three-year rotation, with treatment as necessary, will keep these infestations in maintenance rotation.

Herbaceous and woody species that only dominate the groundcover can be particularly challenging. This group is diverse, and includes species such as tropical soda apple (*Solanum viarum*), smutgrass (*Sporobolus indicus*), caesarweed, cogon grass (*Imperata cylindrica*), and jungleflame (*Ixora coccinea*). The rotation intervals can vary from treatments once every two to three-years, to annual treatments, to as many as four treatments in a growing season depending on the species. For this reason, rotation intervals for these species should be developed in coordination with the FWC's Invasive Plant Management Section. Infestations requiring multiple treatments in a growing season should also be mapped individually, because their treatment plans may differ from the rest of the invasive plants in any given unit.

The FWC will continue to focus control and maintenance activities on areas identified as having invasive plant occurrences, as well as treating any new occurrences as they are identified through continued monitoring activities. Natural disasters such as tropical cyclones, flooding, wildfire, and drought can both negatively and positively impact maintenance rotation of an area and affected acreage should be re-surveyed following any of these events to reassess the maintenance state of the area.

The degree of maintenance effort for invasive plant occurrences often varies substantially by species, level of disturbance, environmental conditions, other land management activities such as timber harvesting, groundcover restoration, etc., and can also be affected by the status of ongoing eradication and control efforts. FWC staff will take special effort to treat invasive species in coordination with mechanical treatments and prescribed fire so optimal results are achieved. Treatment strategies for invasive plants will be adjusted over time as conditions change on the ECWMA. Conditions that may change include hydrological restoration, wildfire, and reintroduction of endangered plant/animal species.

Additionally, the FWC will continue efforts to control the introduction of invasive species, as well as pests and pathogens, on the ECWMA by requiring all personnel, both contracted and the FWC, to follow the FWC Decontamination Protocol.

FWC staff will continue to work closely with FWC's Invasive Plant Management Section for guidance and assistance on treatments and management of invasive species on the area. For areas on the ECWMA that require treatments for aquatic based invasive species, FWC staff will work closely with both FWC's Invasive Plant Management Section and FWC's Aquatic Habitat Conservation and Restoration Section for assistant and guidance on aquatic plant control.

### 4.5.2 Invasive and Non-native Fish and Wildlife Species

The FWC continues to work towards minimizing the adverse impacts of non-native and invasive fish and wildlife species in Florida. This task is accomplished through prevention, early detection, rapid response, control and management, and education and outreach. Early detection and rapid response are a critical defense against the establishment of invasive fish and wildlife. The FWC monitors and removes non-native species, responds to new invasions, and continues to assess the risk of species not yet present in our state. Rule 68-5, F.A.C., Federal Lacey Act, and certain F.S. govern the importation, possession, and use of non-native fish and wildlife. Rule 68-5, F.A.C., as identifies Conditional and Prohibited non-native species in Florida. More information on these regulations can be found here:

https://www.fws.gov/injuriouswildlife/ and https://www.flrules.org/gateway/chapterhome.asp?chapter=68-5. Conditional species (formerly referred to as restricted species) and Prohibited species are considered to be dangerous to Florida's native species and habitats or could pose threats to health and welfare of the people of Florida. The FWC relies on monitoring efforts and current science including risk determination, supplemental documentation, and research to identify possible invasive species. To further assist the FWC's effort on invasive fish and wildlife identification and removal, the FWC encourages the public to utilize the FWC's Exotic Species Hotline at 888-Ive-Got1 (483-4681) or to visit www.IveGot1.org to report observations of non-native species. More information on these public reporting options and other components of the Wildlife Impact Management Section's Non-native Fish and Wildlife Program can be found here: https://myfwc.com/wildlifehabitats/nonnatives/.

To address the presence of non-native and invasive fish and wildlife on the ECWMA, FWC staff will continue to work closely with FWC's Wildlife Impact Management Section for guidance and assistance. Control of invasive fish and wildlife on the ECWMA can also be accomplished through the assistance of private python removal contractors; more information on the private contractors utilized by the FWC can be found here: www.myfwc.com/python. The FWC also relies on public assistance and participation in the control of invasive fish and wildlife species. Executive order 17-11 authorizes the lethal take of non-native reptiles on 25 FWC-managed lands. Trappers and nuisance wildlife control operators can also apply for an eradication and control permit to assist in the capture of Prohibited non-native species on private and public lands including WMAs. More information on this permit process can be found here: https://myfwc.com/wildlifehabitats/nonnatives/rule-development/trappers/. Due to the growing concern related to the impacts of several non-native species, the FWC and partners take a proactive and coordinated approach towards the removal of non-native species.

An invasive animal species of concern throughout the state and on the ECWMA is the wild hog. These animals have high reproductive rates, and when populations reach high densities, wild hogs can significantly degrade natural communities through foraging activity (rooting). The FWC will consult with other regional natural resource managing agencies and private landowners to coordinate wild hog control measures as necessary. Wild hog populations are managed by hunts during the archery, small game, general gun, and muzzleloading gun seasons. Wild hog populations may also be managed by trapping, as necessary, to aid in minimizing the negative impacts caused by wild hog populations on the area.

### 4.5.3 Invasive and Non-native Activities and Accomplishments

Invasive plant species known to occur on the ECWMA include Table 5. During the previous planning period, FWC staff have worked to survey and control invasive and non-native plant and wildlife species found on the ECWMA. Below is a list of activities the FWC accomplished during the last planning period as well as activities that are still ongoing. Non-native and invasive species objectives and challenges for the ECWMA for the next ten years are further detailed in Sections 5-6.

- Approximately 7% of the ECWMA is infested (53,000 acres); however, 100% of the infested acreage is in the maintenance rotation.
- An estimated 3% of the ECMWA remains to be surveyed, monitored, and treated as appropriate, as guided by the FWC's Invasive Plant Management Section.

## 4.6 Public Access and Recreational Opportunities

To facilitate wildlife viewing recreational opportunities on the area, the FWC has continued to establish and maintain the Great Florida Birding Trail, kiosks, viewing platforms, and more. The FWC also offers additional opportunities to enhance public access and recreations through statewide programs. The FWC hosts annual events on WMAs throughout the State. Events are designed to help Florida residents and visitors discover some of Florida's best spots to see wildlife and enjoy the outdoors. For more information on the numerous recreation opportunities the FWC offers on all areas visit: https://myfwc.com/recreation/.

Planned public access, recreational, and educational opportunities on the area are detailed in Section 5.5. Ongoing public access and recreational opportunity management challenges are addressed in Section 6 below. In addition, the FWC will continue to implement activities in accordance with the ECWMA Recreation Master Plan (Appendix 11.14).

### 4.6.1 Americans with Disabilities Act

When public facilities are developed on areas managed by the FWC, every effort is made to comply with the Americans with Disabilities Act (ADA) (Public Law 101-336). As new facilities are developed, the universal access requirements of this law are followed in all cases except where the law allows reasonable exceptions. Recreation facilities in semi-primitive or primitive zones will be planned to be universally accessible to the degree possible except as allowed by the ADA[8] where:

1. Compliance will cause harm to historical resources, or significant natural features and their characteristics.
2. Compliance will substantially alter the nature of the setting and therefore the purpose of the facility.
3. Compliance would not be feasible due to terrain or prevailing construction practices.
4. Compliance would require construction methods or materials prohibited by federal or state statutes, or local regulations.

### 4.6.2 Recreation Assessment

The FWC has adopted a comprehensive approach to the planning and administration of fish and wildlife-based public outdoor recreational opportunities for the ECWMA. To accomplish this, the FWC has worked with recreational stakeholders and the public to develop a Recreation Assessment for the ECWMA that will be used to further design and develop appropriate infrastructure that will support the recreational use of the area by the public. This Recreation Assessment includes planning for parking, trail design, and area resource interpretation.

### 4.6.3 Public Access Carrying Capacity

Baseline carrying capacities for users on the FWC-managed lands are established by conducting a site-specific sensitivity analysis using available data for the site. The intent of the carrying capacity analysis is to minimize wildlife and habitat disturbance and provide the experience of being “immersed in nature” that visitors to the FWC-managed areas desire. Carrying capacities are just a first step; management of recreational use requires a means of monitoring visitor impacts. Responding to these impacts may require adjusting the carrying capacities as necessary. The carrying capacities generated through this process are used as a tool to help plan and develop public access, wildlife viewing, and recreation opportunities. Based on an analysis of the overall approved uses, supported public access user opportunities, and the anticipated proportional visitation levels of the various user groups, the FWC has determined that the ECWMA can currently support 5,857 visitors per day: 5,340 at the EWMA, 281 at the HWMA, and 236 at the RWMA. It is important to note that public access carrying capacities are not developed to serve as a goal for expanding the public use of a particular area to match the established carrying capacity. Rather, they are developed to establish maximum thresholds for public use of the respective area in order to protect the natural and cultural resources on the ECWMA and to ensure that visitors will have a high-quality visitor experience. The public access carrying capacity will be periodically reevaluated, and additional capacity may be contemplated.

### 4.6.4 Public Access and Recreational Activities and Accomplishments

During the previous ten-year planning period, the FWC completed several public access and recreational activities and accomplishments on the ECWMA, including:

- Provided and monitored the area’s websites, eight informational kiosks, one mural, three single panel kiosks, two day-use recreational facilities, one wildlife exhibit, an overlook, 27 boat ramps, and informational brochures for interpretation and education.
- Cooperated with other agencies, counties, stakeholders, and regional landowners to investigate regional recreational opportunities including linking hiking and multi-use trail systems between adjacent public areas.
- Developed a new viewing platform on the RWMA.

## 4.7 Hydrological Preservation and Restoration

The FWC will continue to cooperate with the other management agencies on hydrological assessments and water management for the ECWMA. This includes communicating and collaborating as needed with the SFWMD, the COE, and the DEP on water monitoring. The FWC will continue to cooperate with the DEP and the SFWMD to develop and implement any surface water quality and quantity monitoring protocols for the ECWMA. In this capacity, the FWC will primarily rely on the expertise of the SFWMD and the DEP to facilitate these monitoring activities as needed. If necessary, the FWC may independently conduct or contract for water resource monitoring on the ECWMA, as guided by the DEP and the SFWMD.

### 4.7.1 Hydrological Preservation and Restoration Activities and Accomplishments

During the previous ten-year planning period, the FWC completed several hydrological restoration and improvement activities on the ECWMA, including:

- Restored natural hydrologic condition and function to 0.6 acres of historical oil drilling road on the RWMA.
- Monitored tree islands during extreme water events on the area.

## 4.8 Forest Resource Management

During the previous ten-year planning period, the FWC consulted with the Florida Forest Service (FFS) regarding forest management activities as appropriate, and it was determined that there are no forest resources of commercial value located on the area. Therefore, the FWC and the FFS have jointly determined that a professional forest assessment for the ECWMA is unnecessary. However, the FWC will continue to manage tree islands for wildlife benefits and natural community restoration. Management activities, including the use of timber thinning and harvesting, may be utilized. The primary management technique for encouraging reforestation is protection of young trees and seedlings on various tree islands from damage. However, where natural regeneration is lacking, artificial reforestation may be implemented. Planting trees on these selected sites is used to increase the rate of reforestation and to ensure diversity. Forested wetlands are managed for stands with old growth characteristics. Snags will be protected to benefit cavity-nesting species.

## 4.9 Cultural Resources

A review of the FMSF indicates that 174 cultural resources have been recorded on the ECWMA (Section 2.8). Additionally, three previously conducted cultural resource surveys have been conducted within the area. In cooperation with the DHR, the FWC will continue to monitor and report on all recorded sites annually.

The FWC will consult with the DHR to determine the procedures necessary to identify, assess, and preserve any unrecorded or unevaluated cultural resources that may be present within the ECMWA. In addition, the FWC will ensure ECWMA staff has the latest DHR Archaeological Resource Management training. The FWC will follow the DHR's *Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties*, and, in accordance with Sections 267.061(2)(a,b), F.S., the FWC will consult with and allow the DHR a reasonable opportunity to comment prior to any undertaking that may impact historic properties. Furthermore, should any previously unidentified resources be located on the ECWMA, the FWC will prepare and submit all necessary documentation to the FMSF.

### 4.9.1 Cultural Resource Management Activities and Accomplishments

During the previous planning period no significant management activities or changes to the existing cultural resources on the area have occurred.

## 4.10 Capital Facilities and Infrastructure

The FWC's land management philosophy is designed to conserve the maximum amount of wildlife habitat while providing the minimal number of capital facilities and infrastructure necessary to effectively conduct operational and resource management activities and provide ample opportunities for fish and wildlife-based public outdoor recreation. For these reasons, planned capital facilities and infrastructure will focus on improving access, recreational potential, hydrology, or other resource and operational management objectives.

As described in Section 4.6 of this Management Plan, for any public facilities that are developed on areas managed by the FWC, every effort is made to comply with the ADA Act (Public Law 101-336). Maintenance and improvement activities of current and future capital facilities are further outlined in Section 5.9 and Figure 13.

### 4.10.1 Capital Facilities and Infrastructure Activities and Accomplishments

During the previous ten-year planning period, the FWC completed several capital facilities and infrastructure improvements on the ECWMA, including:

- Construction of one new viewing facility on the RWMA.
- Maintaining signage on the area.
- Improving, maintaining, or repairing, facilities mentioned above.

## 4.11 Land Conservation and Stewardship Partnerships

Landscape conservation is an approach that brings people together across geographies, sectors, and cultures to collaborate on connecting and conserving our diverse landscapes at a large scale – across public and private lands and regardless of political and jurisdictional boundaries. Landscape conservation can only be fully achieved by pooling together resources and connecting staff, partners, and stakeholders to collaborate on conservation at the larger landscape scale. The end goal is a resilient and adaptive landscape and economy that can support future generations of Florida.

Thriving landscapes and habitats produce a range of benefits such as protecting our water and air, mitigating climate change, and providing habitat for fish, wildlife, and plants. In addition, productive landscapes power local and regional economies by supporting sustainable activities including fishing, farming, ranching, forestry, recreation, and tourism. Maintaining these benefits as Florida is facing ever-increasing significant land and water issues is paramount. Population growth, habitat loss and fragmentation, land use changes, invasive species, water crises, and climate change can threaten Florida's future. To successfully manage these challenges for the long term, there is a growing need for conservation work to be done at a larger scale and with multiple partners that can pool their resources and incorporate best scientific practices.

### 4.11.1 FWC's Landscape Conservation Strategic Initiative

The FWC and its partners have a legacy of excellent conservation work, much of which has been done at a landscape scale. To ensure Florida's natural resources are conserved for future generations, the FWC has launched the Landscape Conservation Strategic Initiative (LCSI) to serve as a catalyst for implementing further forward-looking and strategic conservation measures. In September 2021, the FWC adopted an official Landscape Conservation Policy for the agency, defining a holistic conservation approach with supportive guidelines. The primary goal of the LCSI is to achieve conservation outcomes that are large-scale, long-lasting, and cost-effective, and to establish durable partnerships with government agencies, conservation organizations, private landowners, academic institutions, stakeholders, and other partners. This includes proactive, long-range planning that is multi-purpose and encompasses multiple stakeholders and jurisdictions. Additionally, using a variety of tools, FWC staff will prioritize actions that are within identified target conservation areas. These goals will be achieved through

the development and monitoring of clear, specific, and measurable indicators and targets that allow FWC staff to track conservation actions and assess landscape conservation outcomes.

### 4.11.2 Decision Support Tools

Florida Conservation Blueprint

The Florida Conservation Blueprint (Blueprint) is a spatial plan that identifies shared conservation priorities across Florida. The Blueprint was developed by the Peninsular Florida Landscape Conservation Cooperative for the cooperative, incorporation of strategies from a suite of partners. The Blueprint supports spatial conservation planning to inform conservation actions and investment. The Blueprint provides planners and managers across organizations the opportunity to align their efforts to protect fish and wildlife habitat, improve quality of life for people, and develop strong economies. The Florida Conservation Blueprint can be accessed from the Florida Conservation Planning Atlas. The FWC uses the Blueprint to help guide and prioritize landscape conservation actions and acquisition opportunities.

Other Decision Support Tools

There are additional data and tools that have been developed as decision support tools for identifying and prioritizing areas for conservation action as well as to guide resource (i.e., time, staff, and funding) allocation. These tools include, but are not limited to, FLAM (Section 4.4.2), Critical Lands and Water Identification Project, the Florida Ecological Greenways Network, FNAI element occurrences database, Simple Map Viewer, Fire Map Viewer, Florida Springs Dashboard, Climate Adaptation Explorer, and the Florida Ecological Report Cards. Tools and supporting data can be found at www.fnai.org or on the Florida Conservation Planning Atlas.

### 4.11.3 Conservation Stewardship and Partnership Opportunities

Private Lands Partnerships

The FWC recognizes the interconnected needs of protecting and enhancing private property values and rights and creating new markets and economies that support the conservation value of private working lands. Private landowners seeking assistance with habitat management will likely find it offered within the FWC Landowner Assistance Program (LAP). The FWC LAP program provides many opportunities for conservation minded landowners to obtain the assistance and advice of FWC staff and programs for improving land conservation practices on their lands. The LAP routinely conducts workshops for interested landowners to interact with FWC staff and learn how they may participate in the program. The FWC employs biologists who are available to provide wildlife-related assistance with land use planning and habitat management. In addition, the LAP works with landowners to enroll in the NRCS conservation cost-share programs in order to assist with implementation of wildlife friendly practices. There are many forms of assistance that include technical, financial, educational, and various forms of recognition that seek to award landowners who manage their wildlife habitat responsibly. At the time of the plan development, no specific land stewardship workshops had been conducted for there are no private landowners adjacent to the ECWMA. More information on the FWC's LAP program and online habitat management tools are available online at: http://myfwc.com/conservation/special-initiatives/lap/.

Landscape Conservation Partnerships

The FWC will continue to work with partners including government entities, private organizations, and academic institutions on collaborative landscape conservation efforts and acquisition opportunities. Potential partners for the ECWMA and surrounding areas include the SFWMD, the DACS- FFS, USFWS, Broward County, Palm Beach County, Miami-Dade County, the DEP, Conservation Florida, and other organizations and potential grant program opportunities. The FWC will continue to commit staff time and other resources to regularly providing information to partners regarding landscape conservation science, opportunities, and progress.

At the ECWMA, the FWC and the SFWMD frequently collaborate on several projects; this includes wading bird colony monitoring, invasive plant treatment, and invasive wildlife management programs. The UF is also regularly contracted for snail kite monitoring.

### 4.11.4 Land Acquisition

Using identified tools outlined previously, the FWC works to identify lands within or adjacent to FWC-managed areas that are important for the conservation of fish and wildlife, serve as a link or corridor to other publicly owned property, enhance the protection or management of the property, would create a more manageable boundary configuration, or have a high resource value that would otherwise be unprotected. Preservation of these lands can be accomplished through fee-simple or less-than-fee acquisition. The FWC works to pursue these opportunities through the FWC Additions and Inholdings Acquisition program, which supports the DEP/Board of Trustees acquisitions and additions of lands within the Florida Forever program, and through continued partnership with other agencies and private organizations on acquisition of identified lands.

Less-Than-Fee Acquisition

Less-than-fee acquisitions, also known as conservation easements, are voluntary agreements between a landowner and government agency or conservation organization that acquires certain rights to a landowner’s property for long-term conservation of the land, while the landowner still retains ownership of their property. The agreement is designed for landowners to continue to manage their land to maintain a working landscape in a manner that also enhances the conservation benefits provided by their land. These voluntary agreements to conserve land, support the goals of landscape conservation. Less-than-fee acquisition is not only a means of conserving land but is also a cost-effective means for governmental and non-governmental organizations to protect land, while also providing economic and tax benefits to the landowner and local economy.

Fee-Simple Acquisition

Fee-simple acquisition is the process of acquiring complete ownership of the land. Fee-simple acquisition can be accomplished through the State’s Florida Forever program or through grant programs and acquisition partnerships. The Florida Forever program is a land acquisition program with the purpose of conserving natural and cultural resources throughout the state. The DEP, as staff to the Board of Trustees or Governor and Cabinet, oversees the program. The

Florida Forever program replaced the Preservation 2000 program, and since these programs' inception, nearly three million acres have been conserved throughout the state.

FWC's Additions and Inholdings Acquisition Program

Per F.A.C. 18-2.021, the FWC identifies parcels located directly in or adjacent to the subject area which can be recommended for acquisition through the FWC Additions and Inholdings Acquisition program. Several properties, equaling approximately 1,313,256,099 acres, have been identified for recommended acquisition under the auspices of the FWC's Additions and Inholdings Acquisition program for the ECWMA (Figure 11). Consistent with Florida Forever program criteria, parcels on the list have been ranked High, Medium, or Low priority based on a score generated by a GIS-based resource evaluation model, along with technical input from FWC staff. The order of acquisition priority may be changed as necessary based on factors including available funding necessary to complete a particular acquisition project, changing development pressures, landowner willingness, funding partnerships, unique acquisition opportunities like bargain sales (less than 80% of appraised value), and donations.

The FWC Additions and Inholdings Acquisition List is updated through time, thus staying up to date for land ownerships, County parcel records, land conservation opportunities, and evolving management challenges. The FWC frequently analyzes, evaluates, and prioritizes its recommended conservation actions in a systematic, comprehensive, and consistent manner over time. The FWC often recommends fee acquisition of the lands on the FWC Additions and Inholdings Acquisition List for the ECWMA to optimize the conservation of fish and wildlife, public access and use, and overall resource and operational management of the area. However, as mentioned previously, the FWC may also pursue less-than-fee acquisition with adjacent landowners. Though it should be noted that landowner preference is often the key element in determining whether to pursue a fee or less-than-fee acquisition.

Parcels on the FWC Additions and Inholdings Acquisition List will be acquired if possible, according to their priority ranking for acquisition, as funding availability allows, and based on the landowner's willingness to sell their lands. Participation in any FWC acquisition is entirely voluntary and at the sole discretion of willing landowners. The FWC also continues to assist and support the DEP/Board of Trustees in the acquisition or recommend acquisition of the remaining lands within the Devil's Garden, Panther Glades, Save Our Everglades, and Dade County Archipelago projects as essential to the long-term conservation of wildlife and other elements important to the ecosystem function on the ECWMA.

Alternative Options

Along with the several land acquisition options described previously, alternative land protection methods are also available. The state accepts donations of land, life estate, and first-right-of-refusal. Life estate is an alternative that allows a landowner to reside on their property during their lifetime, however, ensures state ownership after passing. Additionally, there is also the option that a landowner could offer the state a first-right-of-refusal. After a first offer is denied by a landowner, the first-right-of-refusal option provides the state with a chance to purchase the land in the future. The state offers several alternative possibilities to obtaining the rights and/or ownership to land for conservation purposes, which furthers conversation-based goals and objectives for Florida's future.

### 4.11.5 Landscape Conservation Activities and Accomplishments

FWC staff have not acquired any acres since the previous management plan.

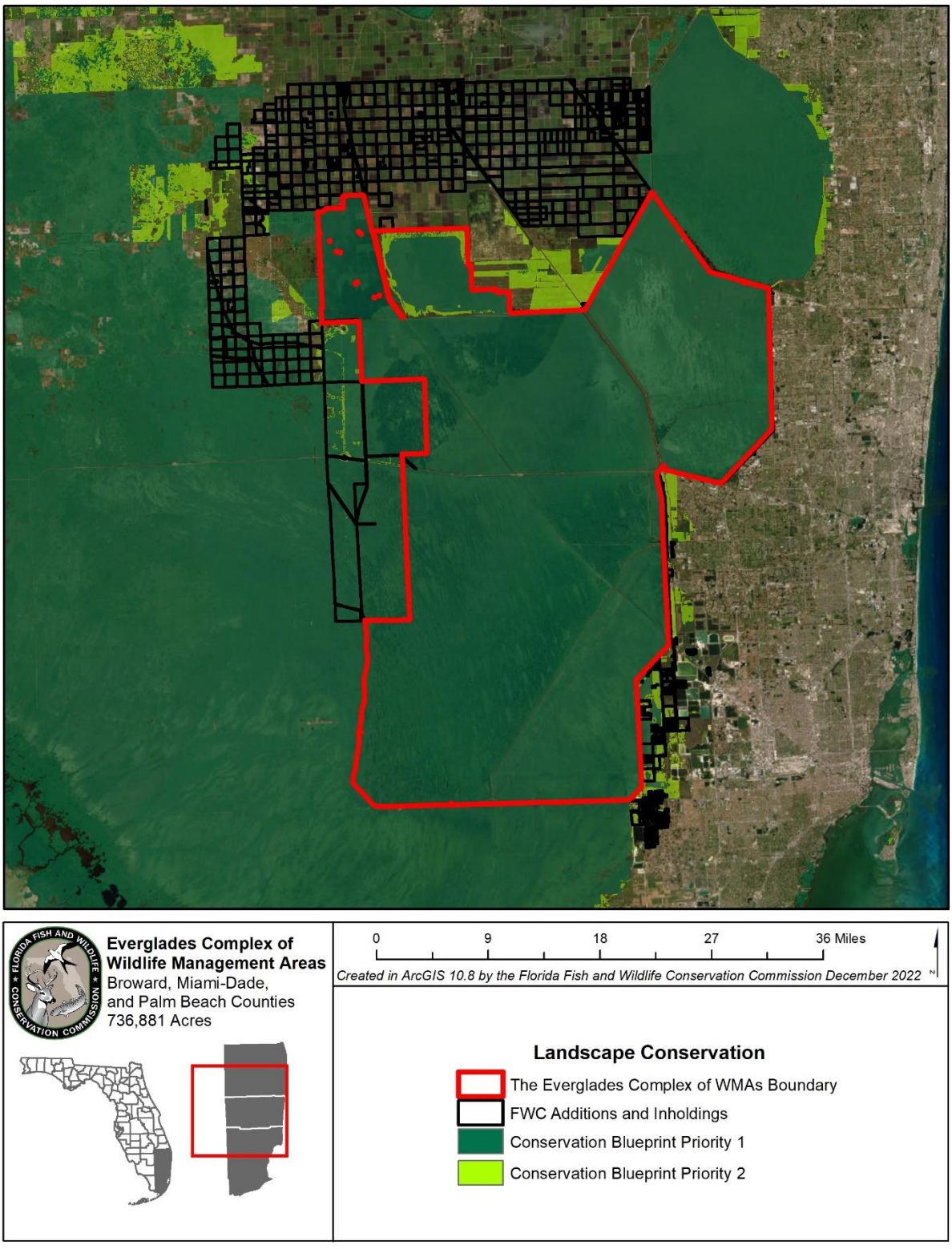



**Figure 11. The ECWMA Potential Additions and Inholdings**

## 4.12 Research Opportunities

The FWC intends to cooperate with researchers, universities, and others as feasible and appropriate. For the ECWMA, the FWC will continue to assess and identify research and environmental education partnership opportunities as appropriate. Research proposals involving the use of the area are evaluated on an individual basis. All research activities on the ECWMA must have prior approval by the FWC.

## 4.13 Cooperative Management and Special Uses

### 4.13.1 Cooperative Management

The FWC is responsible for the overall management and operation of the ECWMA as set forth in the lease agreements with the Board of Trustees, the Miccosukee Tribe of Indians, and the SFWMD. In keeping with the lease agreements, and in order to conduct management operations in the most effective and efficient manner, the FWC cooperates with other agencies to achieve management goals and objectives described in this Management Plan. These include cooperating with the DHR to ensure the requirements of the Management of Archaeological and Historical Resources document are followed with regard to any ground-disturbing activities. In addition, the FFS is a designated cooperating agency, and assists the FWC by providing technical assistance on forest resource management. Furthermore, the FWC cooperates with the FFS for fire response and management; the FFS is the lead authority for wildfire management. Also, the FWC cooperates and consults with the COE, the SFWMD, and the DEP for the monitoring and management of both ground and surface water resources and the overall management of the ECWMA.

### 4.13.2 First Responder and Military Training

First-responder (public governmental police department or agency fire and emergency medical service personnel) training and military training are conditionally allowed on the ECWMA. Such activities are considered allowable uses only when undertaken intermittently for short periods of time, and in a manner that does not impede the management and public use of the ECWMA and causes no measurable long-term impact to the natural resources of the area. Additionally, FWC staff must be notified and approve the training through issuance of a permit prior to any such training taking place on the ECWMA. Any first-responder or military training that is not low-impact, intermittent and occasional would require an amendment to the Management Plan, and therefore would require submission by the FWC to the DSL and ARC for consideration prior to authorization.

### 4.13.3 Apiaries

Currently, there are no apiaries operating on the ECWMA. However, use of apiaries is conditionally approved for the ECWMA; and is deemed to be consistent with purposes for acquisition; is in compliance with the Conceptual State Lands Management Plan; and is consistent with the FWC agency mission, goals, and objectives as expressed in the agency Strategic Plan document. The FWC Apiary Policy will be followed with regards to site location, management, and administration of apiaries.

## 4.14 Climate Change

Florida's unique ecology and topography make impacts from climate change particularly acute and likely to affect multiple economic, agricultural, environmental, and health sectors across the state. The impact of climate change on wildlife and habitat is already occurring, from eroding shorelines and coral bleaching to increases in forest fires, severe weather events, and saltwater intrusion into inland freshwater wetlands.

The Intergovernmental Panel on Climate Change (IPCC), a multi-national scientific body, reports that climate change is proceeding at a rate where there will be unavoidable impacts to humans, wildlife, and habitat. Given current levels of heat-trapping greenhouse gas emissions, shifts in local, regional, and national climate patterns including changes in precipitation, temperature, increased frequency, and intensity of extreme weather events, rising sea levels, tidal fluctuations, and ocean acidification are projected to accelerate. The average global temperature has increased in recent decades, and continued greenhouse gas emissions may result in projected global average increases of 2 –11.5° F by the end of the century.[10]

This apparent change in global climate is likely to disrupt natural processes; in some areas, climate change may cause significant degradation of ecosystems that provide services such as clean and abundant water, sustainable natural resources, protection from flooding, as well as hunting, fishing, and other recreational opportunities. Consequently, climate change is a challenge not only because of its direct effects, but also because of its potential to amplify the stress on ecosystems, habitats, and species from existing threats such as exponential increases in surface and ground water use, habitat loss due to increased urbanization, introduction of invasive species, and fire suppression.

Potential impacts that may be occurring as a result of climate change include: change in the timing of biological processes, such as flowering, breeding, hibernation, and migration; [11,12,13] more frequent invasions and outbreaks of invasive species;[14] and loss of habitat in coastal areas due to sea level rise.[15] Some species are projected to adjust to these conditions through ecological or evolutionary adaptation, whereas others are projected to exhibit range shifts as their distributions track changing climatic conditions. However, the highly developed Florida coastline and significant projected urban growth in the state in coming decades is likely to make it difficult or impossible for many species and habitats to shift their ranges in response to a changing climate. Those species that are unable to respond to changing climatic conditions are projected to go extinct. Some estimates suggest that as many as 20% - 30% of the species currently assessed by the IPCC are at risk of extinction within this century if global mean temperatures exceed increases of 2.7 – 4.5° F.[16] A number of ecosystems are projected to be affected at temperature increases well below these levels.

At this time, the effects of climate change on Florida's conservation lands are just beginning to be studied and are not yet well understood. The FWC has a program in place to increase our understanding of the impacts of climate change on Florida's natural resources and to develop strategies to help wildlife and habitats adapt to changing conditions. While it may not be possible for natural resource managers to prevent or reverse the impacts of climate change, management actions can increase the resilience of natural systems. For example, the FWC

follows a process that includes monitoring, evaluating, and determining what specific actions, if any, are recommended to ameliorate the projected impacts of climate change on fish and wildlife resources, native vegetation, and the possible spread of invasive species. Currently, the FWC is continuing its work on the development of future adaptation strategies. However, as noted above, the effects of climate change may become more frequent and severe within the time period covered by this Management Plan update.

For these reasons, there is a continuing need for increased information and research to enable adaptive management to cope with potential long-term climate change impacts. The most immediate actions that the FWC can take are to work with partners to gather the best scientific data possible for understanding natural processes in their current state, model possible impacts and subsequent changes from climate change, develop adaptive management strategies to enhance the resiliency of natural communities to adapt to climate change, and formulate criteria and monitoring for potential impacts when direct intervention may be necessary to protect a species. The FWC has conducted multiple species and habitat vulnerability assessments in recent years, and these models are important tools to help managers assess the severity of climate change impacts. As impacts from climate change continue to accelerate, the FWC will consider the need for updating or conducting additional vulnerability assessments to model the potential effects of climate change, especially sea level rise and storm events, on imperiled species and their habitats on FWC managed land.

Elements of climate change that may potentially affect the ECWMA include inundation and saltwater intrusion from sea level rise (Figure 12), more frequent and more potent storm events, alteration of vegetation reproductive cycles, and changes in the fire regime. The results of a Sea Level Affecting Marsh Model for the ECWMA shows habitats that may potentially be impacted. The low-lying coastal habitats, such as salt marsh and hardwood swamp natural communities are projected to face the most direct and dramatic impacts of climate change, particularly from a projected rising sea level and from the projected increased frequency and intensity of coastal storms.[17, 18, 19, 20] The effects of sea level rise in the recent past have been observed on the adjacent Everglades National Park; cabbage palms have been dying on coastal islands due to salinity increases. The potential loss of habitat may result in the loss of species using that habitat, including migrating and nesting birds. Storm events also cause considerable physical damage to native vegetation along vulnerable shorelines, impacting nesting habitat for sea life and shorebirds. The projected rise in sea levels may decrease the availability and abundance of prey for wading birds that forage in shallow waters on the expansive tidal flats of the Gulf Coast. Climate change may amplify and hasten these effects, potentially at rates that exceed the normal resiliency of plant communities to recover, shift, or adapt accordingly.[21, 22] Projected saltwater intrusion into the subsurface freshwater lens from potential sea level rise and saltwater inundation of surface freshwaters from storm surges may alter coastal ecosystems and freshwater marshes, possibly resulting in more salt-tolerant aquatic plant communities.

To address the potential impacts of climate change on the ECWMA, Goals and Objectives have been developed as a component of this Management Plan (Section 5.11). Depending on the recommendations of the adaptive management strategies described above, additional specific

goals and objectives to mitigate potential climate change impacts may be developed for the ECWMA Management Plan in the future.

## 4.15 Soil and Water Conservation

Soil disturbing activities will be confined to areas that have the least likelihood of experiencing erosion challenges. On areas that have been disturbed prior to acquisition, an assessment will be made to determine if soil erosion is occurring, and if so, appropriate measures will be implemented to stop or control the effects of this erosion. Water conservation is accomplished through hydrological restoration, management, and monitoring as described in Section 4.7.

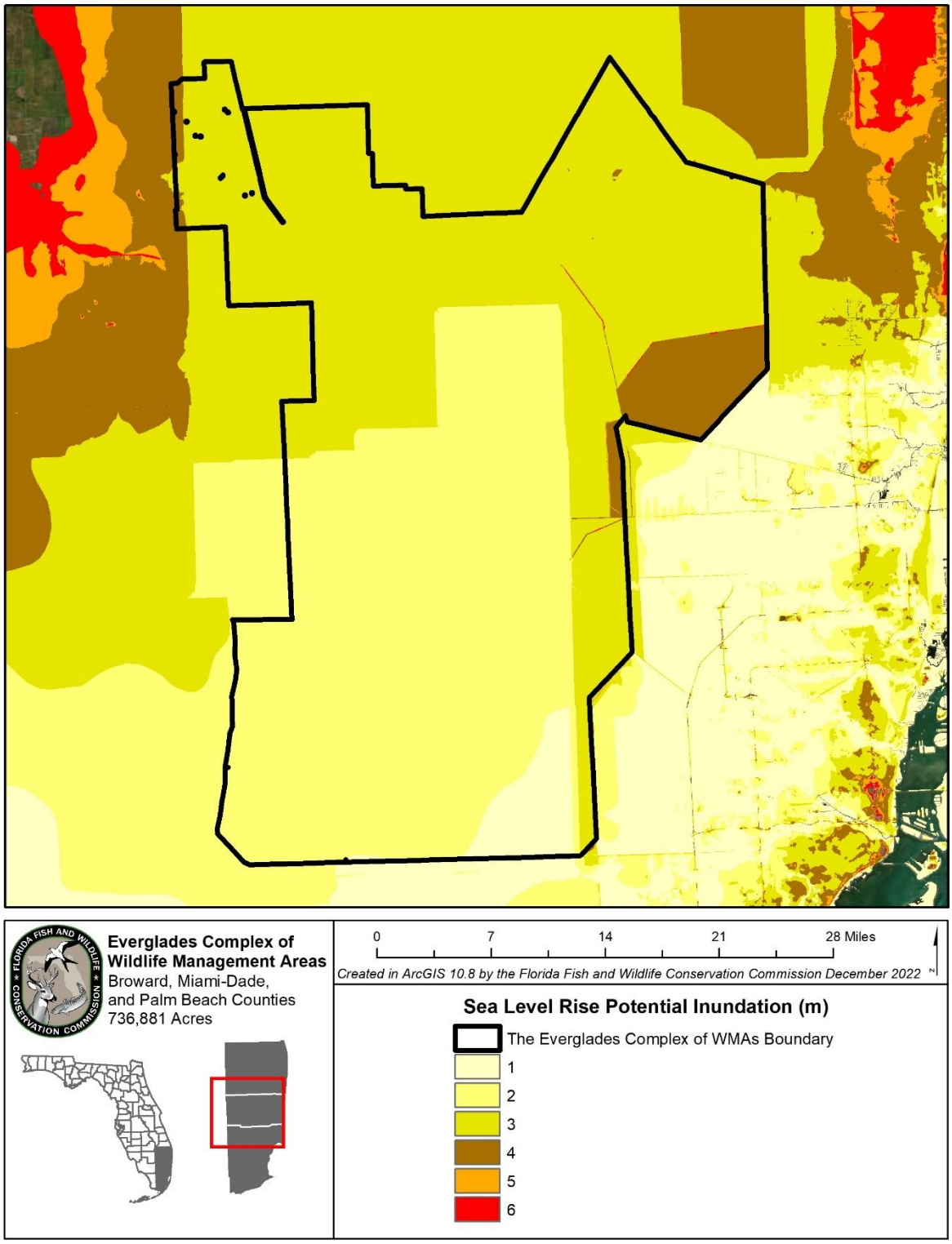



**Figure 12. Potential Inundation and Saltwater Intrusion from Sea Level Rise on the ECWMA**

# 5 Resource Management Goals and Objectives

The management goals described in this section are considered broad, enduring statements designed to guide the general direction of management actions to be conducted in order to achieve an overall desired future outcome for the ECWMA. The objectives listed within each management goal offer more specific management guidance and measures and are considered the necessary steps to be completed to accomplish the management goals. Many of the objectives listed have specific end-of-the-calendar-year target dates for completion and all of them are classified as having either short-term (less than two years) or long-term (up to ten years) timelines for completion.

## 5.1 Habitat Restoration and Improvement

**Goal: Improve extant habitat and restore disturbed areas.**

Short-term

1. Conduct mechanical treatment of encroaching woody vegetation on the HWMA.

Long-term

1. Continue to implement the Prescribed Burn Plan.
2. Continue to update the Prescribed Burn Plan, as necessary.
3. Cooperate with neighboring agencies or partners for implementing the Prescribed Burn Plan, as needed.
4. Cooperate and adapt to landscape-scale Everglades restoration projects, as feasible.
5. Contract for recertification of historic and current natural community mapping, as necessary.
6. Utilize vegetation monitoring to evaluate actively managed tree island communities and adjust management efforts to meet desired future conditions, as appropriate.
7. Continue to monitor areas of invasive native plant encroachment and expansion, as appropriate.
8. Continue to conduct habitat/natural community improvements, as necessary.
9. Continue to conduct habitat/natural community restoration activities, as necessary.

## 5.2 Imperiled Species Habitat Maintenance, Enhancement, Restoration, or Population Restoration

**Goal: Maintain, improve, or restore imperiled species populations and habitats.**

Long-term

1. Continue to implement the WCPR strategy by managing identified habitats and monitoring locally important species.
2. Continue to collect and record opportunistic wildlife species occurrence data.
3. Update the WCPR strategy by 2033.

## 5.3 Other Wildlife (Game and Non-game) Habitat Maintenance, Enhancement, Restoration, and Population Restoration.

**Goal: Monitor, maintain, improve, or restore game and non-game species populations and habitats.**

Short-term

1. Begin to conduct taxa inventory as guided by the WCPR Strategy.

Long-term

1. Continue to monitor game and non-game wildlife species, as identified in the WCPR strategy.
2. Continue to collect opportunistic wildlife occurrence data.
3. Continue to monitor wildlife use of upland habitats on the area.
4. Continue to maintain white-tailed deer populations at or below high-water carrying capacity on the area.
5. Continue to monitor wildlife populations during extreme water events on the area, as needed.
6. Continue to monitor fish populations within the area and in the surrounding canals, as appropriate.
7. Continue to monitor alligator populations on the area, as appropriate.
8. Continue to monitor fish assemblages, respond to range expansions for species of concern, and conduct additional monitoring in response to, or in anticipation of, Everglades restoration projects.
9. Continue to collect biological harvest data at check stations.

## 5.4 Invasive and Non-native Species Maintenance and Control

**Goal: Remove invasive and non-native plants and animals and conduct needed maintenance control.**

Short-term

1. Conduct invasive plant treatment on 4,000 acres of FISC Category I and II invasive plant species across the ECWMA.

Long-term

1. Monitor the ECWMA for the level of infestation of FISC Category I and Category II invasive plant species and treat as needed and appropriate (Table 5).
2. Conduct surveys and mapping of invasive and non-native plant species, as needed and appropriate.
3. Monitor and treat aquatic invasive plant species as needed.
4. Ensure that the ECWMA staff are familiar with the identification, reporting procedures, and control measures of high priority invasive and non-native wildlife species.

5. Continue to implement control measures on invasive and nuisance animal species as needed or appropriate.
6. Continue to participate in FWC outreach and education efforts regarding invasive and non-native animal species.
7. Explore the potential for a vehicle washing facility in cooperation with partnering agencies.

## 5.5 Public Access and Recreational Opportunities

**Goal: Provide public access and recreational opportunities.**

Short-term

1. Develop a Recreation Assessment.

Long-term

1. Develop and install directional wayfinding signage to recreation facilities.
2. Explore the feasibility of coordinating with the FDOT and other parties as needed to develop additional technological opportunities for interpretation and public engagement at kiosks and FDOT Mile Marker 35 Rest Area visitor's center.
3. Develop and install additional interpretive panels providing context to other conservation land in the area.
4. Develop signage to expand the reach of the wildlife exhibit at the FDOT Mile Marker 35 Rest Area visitor's center.
5. Update the Recreation Assessment if new acquisitions or other factors warrant.
6. Continue to include areas in statewide interpretive programming as needed.
7. Continue to provide and monitor day-use facilities, viewing platforms, and boat ramps.
8. Explore the possibility of a trail, boardwalk, and/or interpretive signage on the HWMA.
9. Maintain public access and recreational opportunities to allow for a recreational carrying capacity of 5,869 visitors per day.
10. Include the demographics of the area in designing and delivering conservation education programs and recreational opportunities to provide a welcoming and inclusive experience for the community.
11. Assess and improve ADA accessibility for recreation and conservation education programming as needed.
12. Continue to provide and monitor the area's specific websites, informational kiosks, and informational brochures for interpretation and education.
13. Explore partnerships and communications tools to expand the reach of the wildlife exhibit.
14. Continue to provide hunting opportunities for deer, small game, and migratory game birds, as appropriate.
15. Continue to provide paddling and boating opportunities on appropriate water bodies.
16. Continue to provide fishing opportunities on appropriate water bodies.
17. Cooperate with other agencies, Counties, stakeholders, and regional landowners to investigate regional recreational opportunities and implement as appropriate.

18. Continue to engage local community members and partners in volunteer and community-based conservation opportunities.
19. Develop new Regular Service Volunteer opportunities to meet the needs of the FWC and local communities.
20. Return information gathered through volunteer and community-based conservation programming to local communities to further connect neighboring stakeholders with the ECWMA.
21. Cross-promote the ECWMA with other regional public conservation lands, including Broward, Palm Beach, and Miami-Dade counties tourism boards.
22. Evaluate the potential for signage at the EWMA U.S. 27 East recreational site Pollinator Garden to direct users to nearby existing restroom facilities.

## 5.6 Hydrological Preservation and Restoration

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

Long-term

1. Based on the biological needs of wildlife and their habitats, continue to provide input to relevant partners for the development and refinement of hydroperiods and other hydrological parameters for the ECWMA.
2. Continue to maintain positive working relationships with, and provide ecological and technical recommendations to, appropriate water management agencies.
3. Continue to cooperate with partnering agencies for the monitoring of surface and ground water on the area as needed and appropriate.
4. Continue to monitor the condition of tree islands during extreme water events on the area.
5. Continue to cooperate with partners on Everglades Restoration projects throughout the area, including the Comprehensive Everglades Restoration Project, as feasible.
6. Maintain close coordination with FWC's Everglades Coordinator to support the implementation and planning of restoration projects, as feasible.

## 5.7 Forest Resource Management

**Goal: Manage timber resources to improve or restore natural communities for the benefit of wildlife.**

Long-term

1. Continue to consult with the FFS or a professional forestry consultant regarding forest management activities as appropriate.

## 5.8 Cultural Resources

**Goal: Protect, preserve, and maintain cultural resources.**

Long-term

1. Cooperate with the DHR in designing site plans for development of infrastructure.

2. Continue to follow the DHR's *Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties* for the management of cultural and historical resources.
3. Continue to monitor, protect, preserve, and report any changes on recorded sites on the ECWMA.
4. Ensure any newly identified sites are reported to the DHR for inclusion in the Florida Master Site File.
5. Coordinate with the DHR for Archeological Resource Management guidelines and FWC staff training.

## 5.9 Capital Facilities and Infrastructure

**Goal: Develop the capital facilities and infrastructure necessary to meet the goals and objectives of this Management Plan.**

Long-term

1. Monitor trails and infrastructure annually for visitor impacts.
2. Explore the potential for FWC staff housing opportunities and construct or purchase if feasible.
3. Explore the potential of office shop complex and construct or purchase if feasible.
4. Continue to improve, repair, or replace facilities and roads as needed.
5. Construct a trail, boardwalk, and/or interpretive signage on the HWMA if feasible.
6. Construct a vault toilet at the U.S. 27 East recreational site Pollinator Garden if feasible.

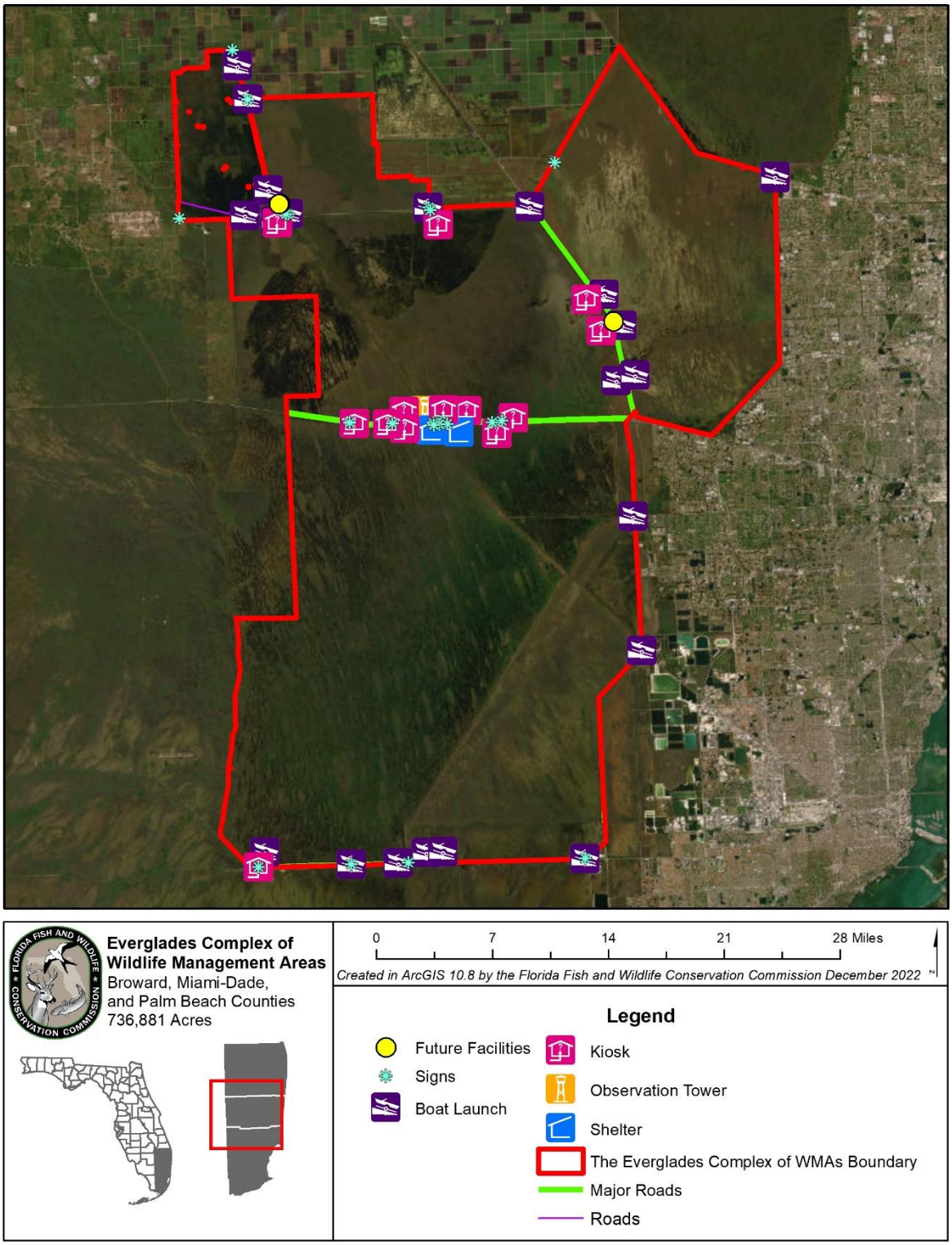



**Figure 13. Facilities Map with Future Project Locations on the ECWMA**

## 5.10 Land Conservation and Stewardship Partnerships

**Goal: Enhance fish and wildlife conservation, resource, and operational management through development of an optimal boundary.**

Long-term

1. Continue to identify and evaluate potential important wildlife habitat, landscape-scale linkages, wildlife corridors, and operational management needs for ECWMA as appropriate and necessary.
2. Continue to contact and inform adjoining private landowners about the FWC Landowners Assistance Program, and coordinate with public entities to pursue conservation stewardship partnerships.
3. Continue to evaluate and identify FWC inholdings and additions priority parcels for potential conservation acquisition and pursue acquisitions as funding allows.
4. Continue to maintain a GIS shapefile and other necessary data to facilitate nominations for the FWC landowner assistance and conservation acquisition programs.
5. Continue to identify potential non-governmental land stewardship organization partnerships and grant program opportunities.
6. Determine the efficacy of conducting a landowner assistance/conservation stewardship partnership workshop(s) and pursue as necessary and appropriate.
7. Continue to evaluate and determine if any portions of the ECWMA are no longer needed for conservation purposes, and therefore may be designated as surplus lands.

## 5.11 Climate Change Adaptation

**Goal: Develop appropriate adaptation strategies in response to current and future projected climate change effects and their potential impacts on natural resources, including fish and wildlife, and the operational management of ECWMA.**

Long-term

1. Coordinate with FWC-FWRI Climate Change Adaptation Initiative to identify potential impacts of projected climate change on fish and wildlife resources and operational management of ECWMA.
2. As appropriate, update the ECWMA Prescribed Burn Plan, WCPR Strategy, and Recreation Master Plan to incorporate new scientific information regarding projected climate change.
3. As science, technology, and climate policy evolve, educate natural resource management partners and the public about the agency's policies, programs and efforts to study, document and address potential climate change.

## 5.12 Cooperative Management, Special Uses, and Research Opportunities

**Goal: Provide access and use of the ECWMA to current cooperative managers and continue collaborative management and research efforts.**

Long-term

1. Continue to assess the need for and cooperate with researchers, universities, and others on research and environmental education partnership opportunities as appropriate.
2. Coordinate and cooperate with Department of Defense military branches to allow for training opportunities for military personnel and other initiatives as appropriate and compatible with the conservation of the ECWMA.

# 6 Resource Management Challenges and Strategies

The following section identifies and describes further management needs and challenges associated with the ECWMA and provides solution strategies that will address these challenges. These specific challenges may not be fully addressed in the broader goals and objectives section above and are thereby provided here.

**Challenge 1: Currently, the FWC aims to meet FWC law enforcement and management staff standards and needs.**

Strategy: Pursue funding for increased law enforcement staffing and additional private sector contract services.

Strategy: Agency staff levels will continue to be evaluated to determine if increased staffing or other alternatives can improve management needs.

Strategy: Pursue opportunities for additional Law Enforcement staff dedicated to the ECWMA.

Strategy: Explore potential volunteer resources for assisting with management.

Strategy: Explore the potential for requiring day use permits for recreational users.

**Challenge 2: Potential future development on adjacent lands can result in incompatible land uses thereby increasing management challenges for the area.**

Strategy: Cooperate and work with Broward, Palm Beach, and Miami-Dade counties to ensure land use and zoning designations adjacent to the ECWMA will continue to be compatible with the management of the area.

**Challenge 3: The ECWMA's proximity to major roadways and residential areas presents significant smoke management challenges during prescribed burning.**

Strategy: Use available tools and resources to minimize smoke impact and increase outreach for areas of potential impact.

Strategy: Cooperate with other agencies such as the Florida Highway Patrol, the FDOT, the FFS, and Palm Beach, Broward, and Miami-Dade counties' Sheriff's Offices as well as FWC Law Enforcement.

**Challenge 4: Unauthorized access, illegal dumping, littering, vandalism, poaching, and unauthorized ORV pose an increased threat for marsh and other fragile habitat.**

Strategy: Continue to provide area-wide security through FWC law enforcement patrols.

Strategy: Provide informational signs or explore other options to inform the public that ‘mudding’ and destructive ORV use is not allowed.

Strategy: Explore potential updates to rule language regarding ORV use.

**Challenge 5: There are inholdings within the ECWMA that could cause management challenges.**

Strategy: Explore conservation strategies for the inholdings, including, but not limited to, fee simple or less-than-fee acquisition to ensure long term conservation of the site.

Strategy: Maintain inholdings within the FWC Additions and Inholdings Acquisition List.

Strategy: Coordinate with existing landowners regarding management of invasive plant species.

**Challenge 6: Currently, invasive plant infestations exist at a level beyond the ability of the ECWMA staff to fully maintain.**

Strategy: Establish a treatment rotation and continue funding projects for contract treatments.

Strategy: Continue to coordinate with the SFWMD for treatments.

Strategy: Consider utilizing volunteers for invasive plant management activities.

**Challenge 7: Currently, there are activities occurring on the ECWMA including off-road vehicle use that have negative impacts on sensitive plant communities and water quality, degrade aesthetic qualities of the area, and damage wildlife species or their habitats.**

Strategy: Through media news outlets, postings at entrance kiosks, and/or signage, inform the public about these activities and their detrimental effects on the area.

Strategy: Improve compliance with applicable regulations through increased FWC law enforcement staffing and patrols of problem areas.

Strategy: Consider additional solutions to reduce negative impacts on the area.

**Challenge 8: Facility vandalism and dumping/littering that have negative impacts on sensitive plant communities and water quality, degrade aesthetic qualities of the area, and damage wildlife species or their habitats.**

Strategy: Coordinate with FWC law enforcement, Broward, Miami-Dade, and Palm Beach counties Sheriff’s Departments to assist with control of litter, dumping, and vandalism on the ECWMA.

Strategy: Through media news outlets, postings at entrance kiosks, and/or signage, inform the public about these activities and their detrimental effects on the area.

Strategy: Improve compliance with applicable regulations through increased FWC law enforcement staffing and patrols of problem areas.

**Challenge 9: Currently, there is insufficient staffing to adequately participate in the Everglades restoration planning process.**

Strategy: Continue to cooperate and coordinate with partnering agencies and other stakeholders to address and ameliorate as possible.

Strategy: Request additional funding for staffing.

**Challenge 10: The ECWMA staff recruitment and retention are significant issues that are impacting the adequate implementation of management goals.**

Strategy: Pursue and consider solutions such as cost of living adjustments, state employee housing, and increased salaries for ECWMA staff.

**Challenge 11: Currently, there is no equipment storage or housing facility on the ECWMA which increases the cost and limits the overall management capabilities of the area due to the required logistics and movement of equipment from one area to another.**

Strategy: Pursue location and funding to construct or purchase an equipment storage/shop/office facility and housing facility on or near the ECWMA.

**Challenge 12: Invasive plants from adjacent lands are spreading to the ECWMA.**

Strategy: Coordinate with the local Cooperative Invasive Species Management Area, FWC's Upland Invasive Plant Management staff, and FWC's LAP to work with adjacent landowners to control and manage invasive plants on adjacent properties.

Strategy: Coordinate with other governmental and private organizations to obtain resources to control and manage invasive species on adjacent properties.

**Challenge 13: Currently, there is no sufficient facility to allow contractors to wash their equipment prior to entering and leaving the area to prevent introduction of pests, pathogens, and invasive species onto the ECWMA and other areas.**

Strategy: Pursue funding to construct an equipment storage/shop/office facility on the ECWMA, including a well and vehicle/equipment washing facility.

**Challenge 14: Currently there are increased populations and associated impacts from invasive or nuisance wildlife species such as Burmese pythons and other conditional species, etc. These species are impacting the native ecology of the ECWMA.**

Strategy: Coordinate with FWC Wildlife Impact Management Section and other public agencies and stakeholders to develop and implement strategies to control or eradicate infestations.

Strategy: Continue to utilize volunteer efforts to maximize management activities.

**Challenge 15: Tree island degradation continues to occur on the ECWMA and impacts the native plant and animal communities of the area.**

Strategy: Continue to monitor conditions and adapt management actions to improve or restore impacted areas.

Strategy: Cooperate with other agencies to pursue monitoring and research alternative methods to reduce degradation and implement adaptive management techniques.

**Challenge 16: Currently there are altered communities within the ECWMA that cannot be restored until current efforts to implement Everglades restoration plans are completed.**

Strategy: Continue to cooperate and coordinate with partnering agencies and other stakeholders.

**Challenge 17: The ECWMA is part of a larger ecosystem over which the FWC has limited control, but within which the activities of others have a great effect on the managed areas.**

Strategy: Continue to maintain and establish rapport with landowners adjacent to the ECWMA; provide technical assistance and advice in order to assure the welfare of ecosystem components; and maintain working relationships with local representatives of governmental and regulatory agencies to increase cooperation on ongoing management issues to develop viable solutions.

**Challenge 18: Currently there is an insufficient amount of water and water control infrastructure to restore the natural hydroperiod within the HWMA.**

Strategy: Continue to cooperate and coordinate with partnering agencies and other stakeholders.

# 7 Cost Estimates and Funding Sources

The following represents the actual and unmet budgetary needs for managing the lands and resources of the ECWMA. This cost estimate was developed using data developed by the FWC and other cooperating entities and is based on actual costs for land management activities, equipment purchase and maintenance, and for development of fixed capital facilities. Funds needed to protect and manage the property and to fully implement the recommended program are derived primarily from the Land Acquisition Trust Fund and from State Legislative appropriations. However, private conservation organizations may be cooperators with the agency for funding of specific projects. Alternative funding sources, such as monies available through grants and potential project-specific mitigation, may be sought to supplement existing funding as needed.

The cost estimate below, although exceeding what the FWC typically receives through the appropriations process, is estimated to be what is necessary for optimal management and is consistent with the current and planned resource management and operation of the ECWMA.

Cost estimate categories are those currently recognized by the FWC and the Land Management Uniform Accounting Council. More information on these categories, as well as the Fiscal Year 2022 - 2023 operational plan showing detailed cost estimates by activity and categories of expenditures, may be found in Appendix 11.17.

| ***ECWMA Management Plan Cost Estimate*** | *Maximum expected one-year expenditure* |
|---|---|
| Resource Management | Expenditure |
| Invasive Species Control | $2,559,424 |
| Prescribed Burning | $261,635 |
| Cultural Resource Management | $5,024 |
| Timber Management | $0 |
| Hydrological Management | $98,994 |
| Vegetation Monitoring/Management | $643,077 |
| Wildlife Monitoring/Management | $162,326 |
| **Subtotal** | **$3,730,479** |
| | |
| Administration | |
| General administration | **$61,789** |
| | |
| Support | |
| Land Management Planning | $106,880 |
| Management Reviews | $0 |
| Training/Staff Development | $56,147 |
| Vehicle Purchase | $198,171 |
| Vehicle Operation and Maintenance | $123,476 |
| Other (Technical Reports, Data Management, etc.) | $26,596 |
| Internal Program Review | $8,866 |
| Technology and Data Management | $15,071 |
| **Subtotal** | **$1,084,368** |
| | |
| Capital Improvements | |
| New Facility Construction | $0 |
| Facility Maintenance | $747,519 |
| **Subtotal** | **$747,519** |
| | |
| Visitor Services/Recreation | |
| Info./Education/Operations | **$102,282** |
| | |
| Law Enforcement | |
| Resource protection | **$61,186** |
| | |
| Total | **$5,787,622** |

* Based on the characteristics and requirements of this area, 17 FTE positions would be optimal to fully manage this area. All land management funding is dependent upon annual legislative appropriations.

| ***ECWMA Management Plan Cost Estimate*** | *Ten-year projection* | | |
|---|---|---|---|
| *Resource Management* | Expenditure | Priority | Priority schedule: |
| ***Invasive Species Control*** | $22,487,375 | (1) | **(1) Immediate (annual)** |
| ***Prescribed Burning*** | $2,298,751 | (1) | *(2) Intermediate (3-4 years)* |
| ***Cultural Resource Management*** | $44,138 | (1) | (3) Other (5+ years) |
| ***Timber Management*** | $0 | (1) | |
| ***Hydrological Management*** | $869,774 | (1) | |
| ***Vegetation Monitoring/Management*** | $5,650,144 | (1) | |
| ***Wildlife Monitoring/Management*** | $1,426,211 | (1) | |
| ***Subtotal*** | **$32,776,392** | | |
| *Administration* | | | |
| ***General administration*** | **$542,884** | (1) | |
| *Support* | | | |
| ***Land Management Planning*** | $939,061 | (1) | |
| *Management Reviews* | $11,097 | (3) | |
| ***Training/Staff Development*** | $493,304 | (1) | |
| *Vehicle Purchase* | $1,932,531 | (2) | |
| ***Vehicle Operation and Maintenance*** | $1,084,872 | (1) | |
| ***Other (Technical Reports, Data Management, etc.)*** | $233,671 | (1) | |
| **Internal Program Review** | $77,891 | (1) | |
| **Technology and Data Management** | $132,413 | (1) | |
| ***Subtotal*** | **$4,904,855** | | |
| *Capital Improvements* | | | |
| *New Facility Construction* | $13,904,643 | (2) | |
| ***Facility Maintenance*** | $6,567,782 | (1) | |
| ***Subtotal*** | **$20,472,426** | | |
| *Visitor Services/Recreation* | | | |
| ***Info./Education/Operations*** | **$898,658** | (1) | |
| *Law Enforcement* | | | |
| ***Resource protection*** | **$537,585** | (1) | |
| ***Total*** | **$60,132,801** | * | |

* Based on the characteristics and requirements of this area, 17 FTE positions would be optimal to fully manage this area. All land management funding is dependent upon annual legislative appropriations.

# 8 Analysis of Potential for Contracting Private Vendors for Restoration and Management Activities

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

| | Approved | Conditional | Rejected |
|---|---|---|---|
| Dike and levee maintenance | | ✓ | |
| Invasive species control | | ✓ | |
| Mechanical vegetation treatment | | ✓ | |
| Public contact and educational facilities development | | ✓ | |
| Prescribed burning | | ✓ | |
| Timber harvest activities | | | ✓ |
| Vegetation inventories | | ✓ | |

# 9 Compliance with Federal, State, and Local Governmental Requirements

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

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

Uses planned for the ECWMA are in compliance with the Conceptual State Lands Management Plan and its requirement for “balanced public utilization,” and are in compliance with the mission of the FWC as described in its Agency Strategic Plan (Appendix 11.10). Such uses also comply with the authorities of the FWC as derived from Article IV, Section 9 of the Florida Constitution as well as the guidance and directives of Chapters 253, 259, 327, 370, 373, 375, 378, 379, 403, 487, 597, and 870, F.S.

The FWC has developed and utilizes an Arthropod Control Plan for the ECWMA in compliance with Chapter 388.4111, F.S. (Appendix 11.18) This plan is developed in cooperation with the

local ECWMA Counties arthropod control agencies. This plan is also in conformance with the Local Government Comprehensive Plan as approved and adopted for Palm Beach, Broward, and Miami-Dade counties, Florida, (Appendices 11.19, 11.20, and 11.21)

# 10 Endnotes

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# 11 Appendices

## 11.1 Lease Agreements

### 11.1.1 Lease 4842

This Lease was prepared by:
Jay Sircy,
Bureau of Public Land Administration
Division of State Lands
Department of Environmental Protection, MS 130
3900 Commonwealth Boulevard,
Tallahassee, Florida 32399-3000
AID#41194

OAL2
[34,545.05 acres +/-]

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

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**LEASE AGREEMENT**

**Lease Number 4842**

THIS LEASE AGREEMENT, made and entered into this 17th day of June 2021, by and between the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA** hereinafter referred to as "LESSOR," and the **FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION,** hereinafter referred to as "LESSEE."

LESSOR, for and in consideration of mutual covenants and agreements hereinafter contained, does hereby lease to said LESSEE, the lands described in paragraph 2 below, together with the improvements thereon, and subject to the following terms and conditions:

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

2. **DESCRIPTION OF PREMISES**: The property subject to this lease contains 34,545.05 acres (+/-), is situated in the County of Palm Beach, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".

3. **TERM**: The term of this lease shall be for a period of fifty years (50) commencing on June 17, 2021, and ending on June 16, 2071, unless sooner terminated pursuant to the provisions of this lease.

4. **PURPOSE**: LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation

and protection of these public lands, as set forth in subsection 259.032(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 8 of this lease.

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

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

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

8. **MANAGEMENT PLAN**: LESSEE shall prepare and submit a Management Plan for the leased premises in accordance with Section 253.034, Florida Statutes and subsection 18-2.021(4), Florida Administrative Code. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands, State of Florida Department of Environmental Protection. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. LESSEE shall provide LESSOR with an opportunity to participate in all phases of preparing and developing the Management Plan for the leased premises. The Management Plan shall be submitted to LESSOR in draft form for review and comments within ten months of the effective date of this lease. LESSEE shall give LESSOR reasonable notice of the application for and receipt of any state, federal or local permits as well as any public hearings or meetings relating to the development or use of the leased premises. LESSEE shall not proceed with development of said leased premises including, but not limited to, funding, permit applications, design or building contracts until the Management Plan required herein has been submitted and approved. Any financial commitments made by LESSEE which are not in compliance with the terms of this lease shall be done at LESSEE'S own risk. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR. LESSEE shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies

for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

9. **EASEMENTS**: All easements of any nature including, but not limited to, utility easements are required to be granted by LESSOR. LESSEE is not authorized to grant any easements of any nature and any easement granted by LESSEE shall be void and without legal effect.

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

11. **RIGHT OF INSPECTION**: LESSOR or its duly authorized agents, representatives or employees shall have the right to reasonably inspect the leased premises and the works and operations of LESSEE in any matter pertaining to this lease.

12. **PLACEMENT AND REMOVAL OF IMPROVEMENTS**: All buildings, structures and improvements shall be constructed at the expense of LESSEE in accordance with plans prepared by professional designers and shall require the prior written approval of LESSOR as to purpose, location and design. Further, no trees, other than non-native species, shall be removed or major land alterations done be LESSEE without the prior written approval of LESSOR. Removable equipment and removable improvements placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE before or upon termination of this lease.

13. **INSURANCE REQUIREMENTS**: During the term of this lease LESSEE shall procure and maintain policies of fire, extended risk, and liability insurance coverage. The extended risk and fire insurance coverage shall be in an amount equal to the full insurable replacement value of any improvements or fixtures located on the leased premises. The liability insurance coverage shall be in amounts not less than $200,000 per person and $300,000 per incident or occurrence for personal injury, death, and property damage on the leased premises. During the term of this lease, if Section 768.28, Florida Statutes, or its successor statute is subsequently amended to increase the amount of the liability coverages specified herein, LESSEE shall immediately obtain liability coverage for the increased amounts. Such policies of insurance shall name LESSOR and the State of Florida as additional insureds. LESSEE shall submit written evidence of having procured all insurance policies required herein prior to the effective date of this lease and shall submit annually thereafter, written evidence of maintaining such insurance policies to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. LESSEE shall purchase all policies of insurance from a financially-responsible insurer duly authorized to do business in the State of Florida. In lieu of

purchasing insurance, LESSEE may elect to self-insure these coverages. Any certificate of self-insurance shall be issued or approved by the Chief Financial Officer, State of Florida. The certificate of self-insurance shall provide for casualty and liability coverage. LESSEE shall immediately notify LESSOR and the insurer of any erection or removal of any building or other improvement on the leased premises and any changes affecting the value of any improvements and shall request the insurer to make adequate changes in the coverage to reflect the changes in value. LESSEE shall be financially responsible for any loss due to failure to obtain adequate insurance coverage and the failure to maintain such policies or certificate in the amounts set forth shall constitute a breach of this lease.

14. **LIABILITY**: LESSEE shall assist in the investigation of injury or damage claims either for or against LESSOR or the State of Florida pertaining to LESSEE'S respective areas of responsibility under this lease or arising out of LESSEE'S respective management programs or activities and shall contact LESSOR regarding the legal action deemed appropriate to remedy such damage or claims. LESSEE is responsible for, and, to the extent allowed by law, shall indemnify, protect, defend, save and hold harmless LESSOR and the State of Florida, its officers, agents and employees from any and all damages, claims, costs, expense, including attorney's fees, demands, lawsuits, causes of action or liability of any kind or nature arising out of all personal injury and property damage attributable to the negligent acts or omissions of LESSEE, and its officers, employees, and agents. Nothing herein shall be construed as a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims. In the event LESSEE subcontracts any part or all of the work performed in the leased premises, the LESSEE shall require each and every subcontractor to identify the LESSOR as an additional insured on all insurance policies required by the LESSEE. Any contract awarded by LESSEE for work in the leased premises shall include a provision whereby the LESSEE'S subcontractor agrees to indemnify, pay on behalf, and hold the LESSOR harmless for all injuries and damages arising in connection with the LESSEE'S subcontract.

15. **PAYMENT OF TAXES AND ASSESSMENTS**: LESSEE shall assume full responsibility for and shall pay all taxes, assessments, liens or other similar liabilities that accrue to the leased premises or to the improvements thereon arising after this lease commences including any and all ad valorem taxes and drainage and special assessments or personal property taxes of every kind and all construction or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises subsequent to the effective date of this lease. In no event shall the LESSEE be held liable for such liabilities which arose prior to the effective date of this lease.

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

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

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

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

20. **MINERAL RIGHTS**: This lease does not cover petroleum or petroleum products or minerals and does not give the right to LESSEE to drill for or develop the same.

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

22. **CONDITION OF PREMISES**: LESSOR assumes no liability or obligation to LESSEE with reference to the condition of the leased premises. The leased premises herein are leased by LESSOR to LESSEE in an "as is" condition, with LESSOR assuming no responsibility for the care, repair, maintenance or improvement of the leased premises for the benefit of LESSEE.

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

24. **NOTICE**: All notices given under this lease shall be in writing and shall be served by certified mail including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing. LESSOR and LESSEE hereby designate their address as follows:

LESSOR: Board of Trustees of the Internal Improvement Trust Fund of the State of Florida
c/o State of Florida Department of Environmental Protection
Division of State Lands
Bureau of Public Land Administration, MS 130
3800 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

LESSEE: Florida Fish and Wildlife Conservation Commission Attn:
HSC/WHM Section Leader
620 South Meridian Street
Tallahassee, Florida 32399-1600

25. **BREACH OF COVENANTS, TERMS, OR CONDITIONS**: Should LESSEE breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to LESSEE to remedy such breach within sixty days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within sixty days of receipt of written notice, LESSOR may either terminate this lease and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises or maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

26. **DAMAGE TO THE PREMISES**: (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants, or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE's failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE's such failure to comply, as may be necessary to

bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or expiration of this lease. This paragraph shall not be construed as a limitation upon LESSEE'S obligations as set forth in paragraph 14 of this lease, nor upon any other obligations or responsibilities of LESSEE as set forth herein. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies. This paragraph shall not be deemed to apply to any conditions existing prior to the effective date of this lease.

27. **ENVIRONMENTAL AUDIT**: At LESSOR'S discretion, LESSEE shall provide LESSOR with a current Phase I environmental site assessment conducted in accordance with the State of Florida Department of Environmental Protection, Division of State Lands' standards prior to termination of this lease, and if necessary a Phase II environmental site assessment.

28. **SURRENDER OF PREMISES**: Upon termination or expiration of this lease, LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, LESSEE shall give written notification to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection ("Division"), Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of any or all of the leased premises. Notification shall include a legal description, this lease number, and an explanation of the release. The release shall only be valid if approved by LESSOR through the execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon termination or expiration of this lease, all improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain any improvements upon termination or expiration of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises a representative of the Division shall perform an on-site inspection and the keys to any building on the leased premises shall be turned over to the Division.

29. **BEST MANAGEMENT PRACTICES**: LESSEE shall implement applicable Best Management Practices for all activities conducted under this lease in compliance with paragraph 18-2.018(2)(h), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, LESSEE or other land managing agencies for the protection and enhancement of the leased premises.

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

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

32. **PARTIAL INVALIDITY**: If any term, covenant, condition or provision of this lease shall be ruled by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

33. **ARCHAEOLOGICAL AND HISTORIC SITES**: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Chapter 18-2 Florida Administrative Code, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

34. **SOVEREIGNTY SUBMERGED LANDS**: This lease does not authorize the use of any lands located waterward of the mean or ordinary high water line of any lake, river, stream, creek, bay, estuary, or other water body or the waters or the air space thereabove.

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

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

WITNESSES:

Michele Stevens
Original Signature

Michele Stevens
Print/Type Name of Witness

Kathy C Griffin
Original Signature

Kathy C Griffin
Print/Type Name of Witness

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

(SEAL)

BY: _____

Brad Richardson, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida

**"LESSOR"**

**STATE OF FLORIDA**
**COUNTY OF LEON**

**The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization this 17th day of June, 2021, by Brad Richardson, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. He is personally known to me.**

APPROVED SUBJECT TO PROPER EXECUTION:

_____ 07-20-2020
DEP Attorney Date

Kathy C Griffin
Notary Public, State of Florida

Printed, Typed or Stamped Name

KATHY C. GRIFFIN
MY COMMISSION # GG 927461
EXPIRES: November 27, 2023
Bonded Thru Notary Public Underwriters

Commission Expires

Commission/Serial No.

36. **MAINTENANCE OF IMPROVEMENTS**: LESSEE shall maintain the real property contained within the leased premises and the improvements located thereon, in a state of good condition, working order and repair including, but not limited to, removing all trash or litter, maintaining all planned improvements as set forth in the approved Management Plan, and meeting all building and safety codes. LESSEE shall maintain any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease.

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

38. **SIGNS**: LESSEE shall ensure that the area is identified as being publicly owned and operated as a public facility in all signs, literature and advertising. If federal grants or funds are used by LESSEE for any project on the leased premises LESSEE shall erect signs identifying the leased premises as a federally assisted project.

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

40. **ADMINISTRATIVE FEE**: LESSEE shall pay LESSOR an annual administrative fee of $300 pursuant to subsection 18-2.021(8), Florida Administrative Code. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

41. **RIGHT OF TERMINATION**: Anything contained in this lease to the contrary notwithstanding, LESSOR shall have the right and option to terminate this lease, at will, for any reason whatsoever, by giving the LESSEE written notice of such election to terminate at least six (6) months prior to the effective date of such termination. LESSEE shall continue to honor its obligations under the lease until the effective date of the termination, including LESSEE's obligations concerning surrender of the leased premises.

[*Remainder of page intentionally left blank; Signature page follows*]

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

WITNESSES:

Michele Stevens
Original Signature

Michele Stevens
Print/Type Name of Witness

Kathy C Griffin
Original Signature

Kathy C Griffin
Print/Type Name of Witness

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

(SEAL)

BY: _____

Brad Richardson, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida

**"LESSOR"**

**STATE OF FLORIDA**
**COUNTY OF LEON**

**The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization this 17th day of June, 2021, by Brad Richardson, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. He is personally known to me.**

APPROVED SUBJECT TO PROPER EXECUTION:

_____ 07-20-2020
DEP Attorney Date

Kathy C Griffin
Notary Public, State of Florida

Printed, Typed or Stamped Name

KATHY C. GRIFFIN
MY COMMISSION # GG 927461
EXPIRES: November 27, 2023
Bonded Thru Notary Public Underwriters

Commission Expires

Commission/Serial No.

WITNESSES:

Rosa M. Guthrie
Original Signature

Rosa M. Guthrie
Print/Type Name of Witness

Johanna Poston
Original Signature

Johanna Poston
Print/Type Name of Witness

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

BY: D. B. Johnson (SEAL)
Eric Sutton, Executive Director
For

**"LESSEE"**

**STATE OF FLORIDA**
**COUNTY OF LEON**

The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization this 8 day of June, 2021, by ~~Eric Sutton, Executive Director~~ David B. Johnson, Deputy Division Director, for and on behalf of the Florida Fish and Wildlife Conservation Commission. He is personally known to me.

Rosa M. Guthrie
Notary Public, State of Florida

Rosa M. Guthrie
Printed, Typed or Stamped Name

My Commission Expires:

Commission/Serial No.:

ROSA M. GUTHRIE
MY COMMISSION # GG 296132
EXPIRES: February 27, 2023
Bonded Thru Notary Public Underwriters

# EXHIBIT A

All of Township 47 South, Range 36 East, Palm Beach County, Florida.

LESS and EXCEPT:
A portion of those lands described in Deed Book 1005, page 537 of the Public Records of Palm Beach County, Florida, described as follows:
A strip of land 100 feet in width being 50 feet in width on each side of the center line of the former proposed Okeechobee-Miami Extension as surveyed and located in Section 5, the West 1/2 of Section 8, the East 1/2 of the Southeast 1/4 of Section 7, Section 18, Section 19, and the West 1/2 of the Northwest 1/4 of Section 30, all in Township 47 South, Range 36 East, said center line intersecting the north boundary line of said Section 5, at a point thereon 1756.5 feet west of its Northeast corner, running thence on a course S 19° 17' W across the aforesaid Sections a distance of 24,158 feet more or less, to intersect the west line of said Section 30, at a point 1532 feet, more or less, south of its Northwest corner.
Also, the hereinafter described parcel of land in Section 5, Township 47 South, Range 36 East, to wit: A strip of land 100 feet in width by 2000 feet in length the easterly boundary line of which is a line parallel to and 50 feet westerly at right angles from the center line of said former proposed Okeechobee-Miami Extension, the northerly boundary of which is the north line of said Section 5, the southerly boundary of which is a line parallel to the north line of said Section 5.
Also, an additional parcel of land in Section 5, Township 47 South, Range 36 East, described as follows: Beginning at the southeast corner of the above described strip 100 feet wide, which point is 2000 feet southwesterly from the north line of said Section 5, and 50 feet westerly at right angles from the center line of said former proposed Extension; thence southerly parallel to said center line 400 feet; thence west parallel to said North section line, to a point 250 feet distant at right angles from said center line; thence northerly parallel to said center line 400 feet; thence east parallel to said north section line, to the place of beginning.

AND:

The South 1/2 and the South 1/2 of the North 1/2 of Section 16, Township 47 South, Range 37 East, Palm Beach County, Florida.

AND:

All of Sections 17 through 21, Township 47 South, Range 37 East, Palm Beach County, Florida.

AND:

All of Sections 1 through 5, Township 48 South, Range 36 East, Palm Beach County, Florida.

AND:

That part of Section 6, Township 48 South, Range 36 East, Palm Beach County, Florida, lying East of the Miami Canal.

AND:

The Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4; and the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4; and the West 1/2 of the Southeast 1/4 of the Northwest 1/4; and the Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4; and the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 1, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

That part of The Southeast 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida, lying East of the Miami Canal.

AND:

All of Section 1, Township 47 South, Range 35 East, Palm Beach County, Florida;
LESS and EXCEPT: The Northeast 1/4 of the Northeast 1/4 of the Northeast 1/4; and the Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4; and the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4; and the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4; and the Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4; and the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4; and the Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4; and the Southwest 1/4 of the Southwest 1/4 of the Southeast 1/4; and the Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4; and the Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of said Section 1, Township 47 South, Range 35 East, Palm Beach County, Florida.

BSM
BY SK

Date: 5.28.2019

AND:

All of those lands described in Official Records Book 5675, page 714 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A portion of those lands described in Official Records Book 5023, page 1374 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The South 1/2 of the Southwest 1/4 of the Southeast 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
All that part of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida lying East of the Easterly right of way line of the Miami Canal;

LESS the following:
The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of said Section 25;
The North 1/2 of the Southeast 1/4 of the Northeast 1/4 of said Section 25;
The East 1/2 of the Southwest 1/4 of the Northeast 1/4 of said Section 25;
The West 1/2 of the Southeast 1/4 of the Northwest 1/4 of said Section 25;
The Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of said Section 25;
The North 1/2 of the Northwest 1/4 of the Southeast 1/4 of said Section 25;
The East 1/2 of the Northeast 1/4 of the Southwest 1/4 of said Section 25;
The Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of said Section 25;
The Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of said Section 25.

AND:
The Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;

A portion of those lands described in Official Records Book 6173, page 66 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 1, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 1, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, LESS and EXCEPT that part thereof conveyed to Central and Southern Florida Flood Control District.

AND:

A portion of those lands described in Official Records Book 2403, page 299 of the Public Records of Palm Beach County, Florida, described as follows:

All that part of Section 2, Township 47 South, Range 35 East, Palm Beach County, Florida lying East of the Miami Canal;
AND:
That part of the Northeast 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida, lying East of the Miami Canal, said canal more particularly described in Deed Book 702, page 18, and LESS the right of way of Central and Southern Florida Flood Control District, said right of way more particularly described in Deed Book 1155, page 204, of the Public Records of Palm Beach County, Florida;
AND:
All of Section 12, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
All that part of Section 14, Township 47 South, Range 35 East, Palm Beach County, Florida lying East of the Miami Canal;
AND:
All that part of Section 23, Township 47 South, Range 35 East, Palm Beach County, Florida lying East of the Miami Canal;
AND:
All that part of Section 24, Township 47 South, Range 35 East, Palm Beach County, Florida lying East of the Miami Canal;
AND:
All that part of Section 36, Township 47 South, Range 35 East, Palm Beach County, Florida lying East of the Miami Canal.

AND:

All of those lands described in Official Records Book 5675, page 714 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A portion of those lands described in Official Records Book 5023, page 1374 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The South 1/2 of the Southwest 1/4 of the Southeast 1/4 of Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
All that part of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida lying East of the Easterly right of way line of the Miami Canal;

LESS the following:
The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of said Section 25;
The North 1/2 of the Southeast 1/4 of the Northeast 1/4 of said Section 25;
The East 1/2 of the Southwest 1/4 of the Northeast 1/4 of said Section 25;
The West 1/2 of the Southeast 1/4 of the Northwest 1/4 of said Section 25;
The Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of said Section 25;
The North 1/2 of the Northwest 1/4 of the Southeast 1/4 of said Section 25;
The East 1/2 of the Northeast 1/4 of the Southwest 1/4 of said Section 25;
The Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of said Section 25;
The Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of said Section 25.

AND:
The Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;

AND:
The Southeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida;
All of the above is LESS those lands conveyed to the Central and Southern Florida Flood Control District in Deed Book 1155, Page 198, Deed Book 1158, Page 556 and Deed Book 1163, Page 259.

AND:

A portion of those lands described in Official Records Book 3006, page 1996 of the Public Records of Palm Beach County, Florida, described as follows:

All Section 13, Township 47 South, Range 35 East, Palm Beach County, Florida;
LESS the following:
The Northeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of said Section 13;
The Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of said Section 13;
The Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of said Section 13;
The South 1/2 of the Southwest 1/4 of the Southeast 1/4 of said Section 13.

AND:

A portion of those lands described in Official Records Book 5763, page 959 of the Public Records of Palm Beach County, Florida, described as follows:

All that part of Section 1, Township 48 South, Range 35 East, Palm Beach County, Florida lying East of the Miami Canal.

BSM
BY SK

Date: 5.29.2019

That part of the following described parcel lying East of the Miami Canal:
A strip of land lying between Townships 47 and 48 South, in Ranges 35 and 36 East, Palm Beach County, Florida being a portion of those lands described in Gainesville Patent No. 137 dated April 29, 1903 and being described as follows:

A parcel of land bounded on the North by the South lines of Township 47 South, Range 35 East and Township 47 South, Range 36 East according to the State of Florida surveys thereof; bounded on the South by the North lines of Township 48 South, Range 35 East and Township 48 South, Range 36 East according to the State of Florida surveys thereof; bounded on the West by the line from the Northwest corner of Township 48 South, Range 35 East to the Southwest corner of Township 47 South, Range 35 East; and bounded on the East by the line from the Northeast corner of Township 48 South, Range 36 East to the Southeast corner of Township 47 South, Range 36 East.

AND:

All of Blocks 1, 2, 3 and 4 of that certain Hiatus of Township 47 South, Range 36/37 East, Palm Beach County, Florida.

BSM
BY SK

Date: 5.28.2019

Holey Land WMA | Exhibit C Page 1 of 1 | Restated Lease 2343

**Page 17 of 17 Lease No. 4842**

THIS PAGE AND ANY FOLLOWING PAGES ARE ATTACHED ONLY FOR STATE OF FLORIDA TRACKING PURPOSES AND FORM NO PART OF THE INSTRUMENT AND ARE NOT TO BE RELIED ON BY ANY PARTY.




1/7/2020 11:52 AM

### 11.1.2 Lease 4842

This Lease was prepared by:
Jay Sircy,
Bureau of Public Land Administration
Division of State Lands
Department of Environmental Protection, MS 130
3900 Commonwealth Boulevard,
Tallahassee, Florida 32399-3000
AID# 41193

OAL2
[44,292.03 acres +/-]

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

---

**LEASE AGREEMENT**

**Lease Number 4841**

THIS LEASE AGREEMENT, made and entered into this 17th day of June 2021, by and between the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA** hereinafter referred to as "LESSOR," and the **FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**, hereinafter referred to as "LESSEE."

LESSOR, for and in consideration of mutual covenants and agreements hereinafter contained, does hereby lease to said LESSEE, the lands described in paragraph 2 below, together with the improvements thereon, and subject to the following terms and conditions:

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

2. **DESCRIPTION OF PREMISES**: The property subject to this lease contains 44,292.03 acres (+/-), is situated in the County of Palm Beach, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".

3. **TERM**: The term of this lease shall be for a period of fifty years (50) commencing on June 17, 2021, and ending on June 16, 2071, unless sooner terminated pursuant to the provisions of this lease.

4. **PURPOSE**: LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation

and protection of these public lands, as set forth in subsection 259.032(11), Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 8 of this lease.

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

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

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

8. **MANAGEMENT PLAN**: LESSEE shall prepare and submit a Management Plan for the leased premises in accordance with Section 253.034, Florida Statutes and subsection 18-2.021(4), Florida Administrative Code. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands, State of Florida Department of Environmental Protection. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. LESSEE shall provide LESSOR with an opportunity to participate in all phases of preparing and developing the Management Plan for the leased premises. The Management Plan shall be submitted to LESSOR in draft form for review and comments within ten months of the effective date of this lease. LESSEE shall give LESSOR reasonable notice of the application for and receipt of any state, federal or local permits as well as any public hearings or meetings relating to the development or use of the leased premises. LESSEE shall not proceed with development of said leased premises including, but not limited to, funding, permit applications, design or building contracts until the Management Plan required herein has been submitted and approved. Any financial commitments made by LESSEE which are not in compliance with the terms of this lease shall be done at LESSEE'S own risk. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR. LESSEE shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies

for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

9. **EASEMENTS**: All easements of any nature including, but not limited to, utility easements are required to be granted by LESSOR. LESSEE is not authorized to grant any easements of any nature and any easement granted by LESSEE shall be void and without legal effect.

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

11. **RIGHT OF INSPECTION**: LESSOR or its duly authorized agents, representatives or employees shall have the right to reasonably inspect the leased premises and the works and operations of LESSEE in any matter pertaining to this lease.

12. **PLACEMENT AND REMOVAL OF IMPROVEMENTS**: All buildings, structures and improvements shall be constructed at the expense of LESSEE in accordance with plans prepared by professional designers and shall require the prior written approval of LESSOR as to purpose, location and design. Further, no trees, other than non-native species, shall be removed or major land alterations done be LESSEE without the prior written approval of LESSOR. Removable equipment and removable improvements placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE before or upon termination of this lease.

13. **INSURANCE REQUIREMENTS**: During the term of this lease LESSEE shall procure and maintain policies of fire, extended risk, and liability insurance coverage. The extended risk and fire insurance coverage shall be in an amount equal to the full insurable replacement value of any improvements or fixtures located on the leased premises. The liability insurance coverage shall be in amounts not less than $200,000 per person and $300,000 per incident or occurrence for personal injury, death, and property damage on the leased premises. During the term of this lease, if Section 768.28, Florida Statutes, or its successor statute is subsequently amended to increase the amount of the liability coverages specified herein, LESSEE shall immediately obtain liability coverage for the increased amounts. Such policies of insurance shall name LESSOR and the State of Florida as additional insureds. LESSEE shall submit written evidence of having procured all insurance policies required herein prior to the effective date of this lease and shall submit annually thereafter, written evidence of maintaining such insurance policies to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. LESSEE shall purchase all policies of insurance from a financially-responsible insurer duly authorized to do business in the State of Florida. In lieu of

purchasing insurance, LESSEE may elect to self-insure these coverages. Any certificate of self-insurance shall be issued or approved by the Chief Financial Officer, State of Florida. The certificate of self-insurance shall provide for casualty and liability coverage. LESSEE shall immediately notify LESSOR and the insurer of any erection or removal of any building or other improvement on the leased premises and any changes affecting the value of any improvements and shall request the insurer to make adequate changes in the coverage to reflect the changes in value. LESSEE shall be financially responsible for any loss due to failure to obtain adequate insurance coverage and the failure to maintain such policies or certificate in the amounts set forth shall constitute a breach of this lease.

14. **LIABILITY**: LESSEE shall assist in the investigation of injury or damage claims either for or against LESSOR or the State of Florida pertaining to LESSEE'S respective areas of responsibility under this lease or arising out of LESSEE'S respective management programs or activities and shall contact LESSOR regarding the legal action deemed appropriate to remedy such damage or claims. LESSEE is responsible for, and, to the extent allowed by law, shall indemnify, protect, defend, save and hold harmless LESSOR and the State of Florida, its officers, agents and employees from any and all damages, claims, costs, expense, including attorney's fees, demands, lawsuits, causes of action or liability of any kind or nature arising out of all personal injury and property damage attributable to the negligent acts or omissions of LESSEE, and its officers, employees, and agents. Nothing herein shall be construed as a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims. In the event LESSEE subcontracts any part or all of the work performed in the leased premises, the LESSEE shall require each and every subcontractor to identify the LESSOR as an additional insured on all insurance policies required by the LESSEE. Any contract awarded by LESSEE for work in the leased premises shall include a provision whereby the LESSEE'S subcontractor agrees to indemnify, pay on behalf, and hold the LESSOR harmless for all injuries and damages arising in connection with the LESSEE'S subcontract.

15. **PAYMENT OF TAXES AND ASSESSMENTS**: LESSEE shall assume full responsibility for and shall pay all taxes, assessments, liens or other similar liabilities that accrue to the leased premises or to the improvements thereon arising after this lease commences including any and all ad valorem taxes and drainage and special assessments or personal property taxes of every kind and all construction or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises subsequent to the effective date of this lease. In no event shall the LESSEE be held liable for such liabilities which arose prior to the effective date of this lease.

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

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

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

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

20. **MINERAL RIGHTS**: This lease does not cover petroleum or petroleum products or minerals and does not give the right to LESSEE to drill for or develop the same.

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

22. **CONDITION OF PREMISES**: LESSOR assumes no liability or obligation to LESSEE with reference to the condition of the leased premises. The leased premises herein are leased by LESSOR to LESSEE in an "as is" condition, with LESSOR assuming no responsibility for the care, repair, maintenance or improvement of the leased premises for the benefit of LESSEE.

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

24. **NOTICE**: All notices given under this lease shall be in writing and shall be served by certified mail including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing. LESSOR and LESSEE hereby designate their address as follows:

LESSOR: Board of Trustees of the Internal Improvement Trust Fund of the State of Florida
c/o State of Florida Department of Environmental Protection
Division of State Lands
Bureau of Public Land Administration, MS 130
3800 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

LESSEE: Florida Fish and Wildlife Conservation Commission
Attn: HSC/WHM Section Leader
620 South Meridian Street
Tallahassee, Florida 32399-1600

25. **BREACH OF COVENANTS, TERMS, OR CONDITIONS**: Should LESSEE breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to LESSEE to remedy such breach within sixty days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within sixty days of receipt of written notice, LESSOR may either terminate this lease and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises or maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

26. **DAMAGE TO THE PREMISES**: (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants, or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE's failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE's such failure to comply, as may be necessary to

bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or expiration of this lease. This paragraph shall not be construed as a limitation upon LESSEE'S obligations as set forth in paragraph 14 of this lease, nor upon any other obligations or responsibilities of LESSEE as set forth herein. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies. This paragraph shall not be deemed to apply to any conditions existing prior to the effective date of this lease.

27. **ENVIRONMENTAL AUDIT**: At LESSOR'S discretion, LESSEE shall provide LESSOR with a current Phase I environmental site assessment conducted in accordance with the State of Florida Department of Environmental Protection, Division of State Lands' standards prior to termination of this lease, and if necessary a Phase II environmental site assessment.

28. **SURRENDER OF PREMISES**: Upon termination or expiration of this lease, LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, LESSEE shall give written notification to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection ("Division"), Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of any or all of the leased premises. Notification shall include a legal description, this lease number, and an explanation of the release. The release shall only be valid if approved by LESSOR through the execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon termination or expiration of this lease, all improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain any improvements upon termination or expiration of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises a representative of the Division shall perform an on-site inspection and the keys to any building on the leased premises shall be turned over to the Division.

29. **BEST MANAGEMENT PRACTICES**: LESSEE shall implement applicable Best Management Practices for all activities conducted under this lease in compliance with paragraph 18-2.018(2)(h), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, LESSEE or other land managing agencies for the protection and enhancement of the leased premises.

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

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

32. **PARTIAL INVALIDITY**: If any term, covenant, condition or provision of this lease shall be ruled by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

33. **ARCHAEOLOGICAL AND HISTORIC SITES**: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Chapter 18-2 Florida Administrative Code, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

34. **SOVEREIGNTY SUBMERGED LANDS**: This lease does not authorize the use of any lands located waterward of the mean or ordinary high water line of any lake, river, stream, creek, bay, estuary, or other water body or the waters or the air space thereabove.

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

36. **MAINTENANCE OF IMPROVEMENTS**: LESSEE shall maintain the real property contained within the leased premises and the improvements located thereon, in a state of good condition, working order and repair including, but not limited to, removing all trash or litter, maintaining all planned improvements as set forth in the approved Management Plan, and meeting all building and safety codes. LESSEE shall maintain any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease.

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

38. **SIGNS**: LESSEE shall ensure that the area is identified as being publicly owned and operated as a public facility in all signs, literature and advertising. If federal grants or funds are used by LESSEE for any project on the leased premises LESSEE shall erect signs identifying the leased premises as a federally assisted project.

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

40. **ADMINISTRATIVE FEE**: LESSEE shall pay LESSOR an annual administrative fee of $300 pursuant to subsection 18-2.021(8), Florida Administrative Code. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

41. **RIGHT OF TERMINATION**: Anything contained in this lease to the contrary notwithstanding, LESSOR shall have the right and option to terminate this lease, at will, for any reason whatsoever, by giving the LESSEE written notice of such election to terminate at least six (6) months prior to the effective date of such termination. LESSEE shall continue to honor its obligations under the lease until the effective date of the termination, including LESSEE's obligations concerning surrender of the leased premises.

*[Remainder of page intentionally left blank; Signature page follows]*

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

WITNESSES:

Michele Stevens
Original Signature

Michele Stevens
Print/Type Name of Witness

Kathy C Griffin
Original Signature

Kathy C Griffin
Print/Type Name of Witness

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

(SEAL)

BY: _____

Brad Richardson, **Chief**, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida

**"LESSOR"**

**STATE OF FLORIDA**
**COUNTY OF LEON**

The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization this 17th day of June, 2021, by Brad Richardson, **Chief**, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. He is personally known to me.

APPROVED SUBJECT TO PROPER EXECUTION:

07-20-2020
DEP Attorney Date

Kathy C Griffin
Notary Public, State of Florida

**Printed, Typed or Stamped Name**

KATHY C. GRIFFIN
MY COMMISSION # GG 927461
EXPIRES: November 27, 2023
Bonded Thru Notary Public Underwriters

**My Commission Expires**

**Commission/Serial No.**

WITNESSES:

Rosa M. Guthrie
Original Signature

Rosa M. Guthrie
Print/Type Name of Witness

Johanna Poston
Original Signature

Johanna Poston
Print/Type Name of Witness

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

(SEAL)

BY: D B. Johnson
Eric Sutton, Executive Director
For

**"LESSEE"**

**STATE OF FLORIDA**
**COUNTY OF LEON**

The foregoing instrument was acknowledged before me by means of ✓ physical presence or ___ online notarization this 8 day of June, 2021 by ~~Eric Sutton, Executive Director,~~ for and on behalf of the Florida Fish and Wildlife Conservation Commission. He is personally known to me. David B. Johnson, Deputy Division D

Rosa M. Guthrie
Notary Public, State of Florida

Rosa M. Guthrie
Printed, Typed or Stamped Name

Commission Expires:

ROSA M. GUTHRIE
MY COMMISSION # GG 296132
EXPIRES: February 27, 2023
Bonded Thru Notary Public Underwriters

Commission/Serial No.

**EXHIBIT "A"**

## EXHIBIT B

A portion of those lands described in Official Records Book 2058, page 269 of the Public Records of Palm Beach County, Florida, described as follows:

All of Section 31, Township 46 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 2438, page 1604 of the Public Records of Palm Beach County, Florida, described as follows:

The South 1/2 of the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The East 1/2 of the Southwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 2438, page 1606 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
LESS:
The East 3/4 of the North 1/2 of the Northeast 1/4 of the Southwest 1/4,
The East 1/4 of the South 1/2 of the Northeast 1/4 of the Southwest 1/4, and
The East 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Southwest 1/4;
AND:
The Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Southwest 1/4; and the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
LESS:
The Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4;
AND:
The North 1/2 of the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:

The East 3/4 of the South 1/2 of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4; and the East 3/4 of the South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The East 1/4 of the North 1/2 of the Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4; and the West 1/4 of the North 1/2 of the Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Southeast 1/4; and the North 1/2 of the Northeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The West 1/2 of the Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The East 1/2 of the Northwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4; and the East 1/2 of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;

LESS:
The East 1/2 of the West 1/2 of the Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4; and
The West 1/2 of the Southwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4;

AND:
The North 1/2 of the Northwest 1/4 of the Southwest 1/4; and the Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The South 1/2 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
That part of the Northeast 1/4 of Section 11, Township 47 South, Range 35 East, lying West of the West right-of-way line of Miami Canal, Palm Beach County, Florida;
AND:
The South 1/2 of the Southeast 1/4 of the Northwest 1/4; and the East 1/2 of the Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:

The North 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4; and the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4; and the Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4; and the Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4; and the Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4; and Southwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southeast 1/4 of the Northeast 1/4 of the Northwest 1/4; and the North 1/2 of the South 1/2 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 2614, page 688 of the Public Records of Palm Beach County, Florida, described as follows:

The South 1/2 of the Southwest 1/4 of the Northwest 1/4, AND the South 1/2 of Section 9, Township 47 South, Range 35 East, Palm Beach County, Florida;

LESS:
The Northeast 1/4 of the Northeast 1/4 of the Southwest 1/4;
The Northwest 1/4 of the Northeast 1/4 of the Southeast 1/4;
The Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4;
The Southeast 1/4 of the Northeast 1/4 of the Southeast 1/4;
The South 1/2 of the Southeast 1/4 of the Southwest 1/4; and
The South 1/2 of the Southeast 1/4 of the Southeast 1/4.

AND:

All of those lands described in Official Records Book 4716, page 699 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 4716, page 700 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A portion of those lands described in Official Records Book 6160, page 576 of the Public Records of Palm Beach County, Florida, described as follows:

All of Section 16, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 6202, page 1390 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida;
LESS a 20-foot roadway easement and canal easement on the South and West edge thereof.

AND:

All of those lands described in Official Records Book 6596, page 8 of the Public Records of Palm Beach County, Florida, described as follows:

The West 1/2 of the Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4 and the East 1/2 of the Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 6625, page 1315 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 6625, page 1316 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 6735, page 1275 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 AND the North 1/2 of the Northwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 18, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 276 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northeast 1/4 and the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 280 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 284 of the Public Records of Palm Beach County, Florida, described as follows:

The West 1/2 of the Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 and the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 288 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 and the Southwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 292 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 296 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 300 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 6, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 308 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 6, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 312 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 and the Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 8, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 316 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 and the Southeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 8, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 320 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 8, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 324 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 8, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 332 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 18, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 336 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 18, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 340 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 18, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 348 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 352 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 356 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 360 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 364 of the Public Records of Palm Beach County, Florida, described as follows:

The South 3/4 of the East 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 368 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8490, page 372 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 28, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 28 of the Public Records of Palm Beach County, Florida, described as follows:

The South 1/2 of the Northeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 and the Southwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 32 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 40 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 44 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 48 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 56 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 60 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 6, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 64 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 6, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8533, page 68 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 6, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8537, page 1507 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8537, page 1508 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 8662, page 1832 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 9950, page 696 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10907, page 22 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10968, page 119 and Official Records Book 11014, page 1561 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 18, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10713, page 1571 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 28, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10892, page 1673 of the Public Records of Palm Beach County, Florida, described as follows:

The North 1/2 of the Southeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10881, page 1853 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10837, page 1885 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 33, Township 46 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10907, page 835 of the Public Records of Palm Beach County, Florida, described as follows:

The North 1/2 of the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11502, page 635 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 28, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11029, page 1574 of the Public Records of Palm Beach County, Florida, described as follows:

The West 1/2 of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10945, page 764 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11346, page 1697 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 6, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 10977, page 1485 of the Public Records of Palm Beach County, Florida, described as follows:

The West 1/2 of the Southwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 14123, page 1529 of the Public Records of Palm Beach County, Florida, described as follows:

The North 1/2 of the Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 and the South 1/2 of the Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11501, page 172 of the Public Records of Palm Beach County, Florida, described as follows:

The West 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11235, page 512 of the Public Records of Palm Beach County, Florida, described as follows:

That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 3213.05 feet along the West line of said Section 25; thence N 89° 48' 18" E, 201.75 feet to a Point of Beginning; thence N 01° 17' 55" W, 215.91 feet; thence N 89° 48' 18" E, 201.75 feet; thence S 01° 17' 55" E, 215.91 feet; thence S 89° 48' 18" W, 201.75 feet to the Point of Beginning.

AND:

All of those lands described in Official Records Book 11086, page 1252 of the Public Records of Palm Beach County, Florida, described as follows:

The East 1/2 of the Northwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11086, page 1541 of the Public Records of Palm Beach County, Florida, described as follows:

The Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11097, page 153 of the Public Records of Palm Beach County, Florida, described as follows:

The South 1/2 of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 8, Township 47 South, Range 35 East, Palm Beach County, Florida;
AND:
The North 1/2 of the South 1/2 of the South 1/2, lying West of the West right-of-way line of Miami Canal in Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11099, page 1969 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 20, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11113, page 1878 of the Public Records of Palm Beach County, Florida, described as follows:

That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 1319.44 feet along the West line of said Section 25; thence N 89° 48' 18" E, 658.31 feet to a Point of Beginning; thence N 01° 17' 55" W, 165.97 feet; thence N 89° 48' 18" E, 129.19 feet; thence S 01° 17' 55" E, 165.97 feet; thence S 89° 48' 18" W, 129.19 feet to the Point of Beginning.
AND:
That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 1319.44 feet along the West line of said Section 25; thence N 89° 48' 18" E, 526.38 feet to a Point of Beginning; thence N 01° 17' 55" W, 165.97 feet; thence N 89° 48' 18" E, 131.93 feet; thence S 01° 17' 55" E, 165.97 feet; thence S 89° 48' 18" W, 131.93 feet to the Point of Beginning.

AND:

All of those lands described in Official Records Book 11165, page 188 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 8, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11153, page 1171 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 18, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11501, page 175 of the Public Records of Palm Beach County, Florida, described as follows:

The Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11323, page 1498 of the Public Records of Palm Beach County, Florida, described as follows:

The Northwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in Official Records Book 11392, page 1356 of the Public Records of Palm Beach County, Florida, described as follows:

The Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 8, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

All of those lands described in the Stipulated Order of Taking and Final Judgment recorded in Official Records Book 13037, page 10 of the Public Records of Palm Beach County, Florida, described as follows:

The South 1/2 of the South 1/2 of the South 1/2 of Section 11, Township 47 South, Range 35 East, Palm Beach County, Florida, lying West of the Southwesterly Right-of-Way line of Miami Canal, said Right-of-Way line lying 250 feet Southwesterly of, parallel, contiguous, and as measured at right angles to the centerline of Miami Canal.

AND:

A portion of those lands described in the Stipulated Order of Taking recorded in Official Records Book 10770, page 1793 and the Stipulated Final Judgment recorded in Official Records Book 11268, page 1793 of the Public Records of Palm Beach County, Florida, described as follows:

Parcel 1265
The East 3/4 of the North 1/4 and the South 1/2 of the North 1/2 of Section 27, Township 46 South, Range 35 East, Palm Beach County, Florida;
Less and except the Rights-of-Way of the Miami Canal and Levee L-23.

LESS and EXCEPT that part of the above described parcel included in Trustees of Internal Improvement Trust Fund Deed Number 31122 for a parcel identified as: "Proposed Outlet Canal, Levee 23, Tract No. 49-101-026", described as follows:
A parcel of land situate in Sections 22, 26, 27 and 35, Township 46 South, Range 35 East, Palm Beach County, Florida, being more particularly described as follows:
A strip of land being 225.00 feet in width bounded on the North by the South line of a parcel of land described in a Quit Claim Deed, recorded in Official Records Book 11934, Page 1020, of said Palm Beach County, bounded on the East by the West line of South Florida Water Management District's Levee 23 as shown on Drawing number L-25-4, dated July 14, 1978, bounded on the West by a line 225.00 feet Westerly of and parallel to the said West line of Levee 23, and bounded on the South by the South line of said Section 35.
Together With:
A parcel of land situate in Section 2, Township 47 South, Range 35 East, Palm Beach County, Florida, being more particularly described as follows:
Commencing at the Northwest corner of said Section 2; thence N 89° 46' 06" E, along the North line of said Section 2, a distance of 1593.73 feet to a line 225.00 feet Westerly of and parallel to the said West line of Levee 23 and the POINT OF BEGINNING;
Thence continue N 89° 46' 06" E, along said North line of Section 2, a distance of 229.93 feet to the West line of said Levee 23; thence S 12° 06' 58" E, along the said West line, a distance of 497.65 feet; thence N 57° 06' 42" W, departing from said West line, a distance of 318.20 feet to said 225.00 feet parallel line; thence N 12° 06' 58" W along said parallel line, a distance of 320.00 feet to the North line of said Section 2 and the POINT OF BEGINNNING.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 12772, page 1719 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10904, page 1692 of said public records and being described as follows:

Parcel 1090
The Southwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 10944, page 110 and in the Order of Taking recorded in Official Records Book 10904, page 1692 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Notice of Lis Pendens for Case No. CL 98-10011AE recorded in Official Records Book 10744, page 1435 of said public records and being described as follows:

Parcel 1120

The Southeast 1/4 of the Southwest 1/4 of the Northeast 1/4 and the East 1/2 of the Southwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 12772, page 1719 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10904, page 1692 of said public records and being described as follows:

Parcel 1250
The Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 6, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 12772, page 1719 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10904, page 1692 of said public records and being described as follows:

Parcel 3011
The Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 18, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 12772, page 1719 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10904, page 1692 of said public records and being described as follows:

Parcel 5063
The Southeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 35, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12005, page 1416 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354728000001080
The Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12343, page 1239 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354728000001260
The Northeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 and the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11890, page 289 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354728000003082
The Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11583, page 24 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354728000005092
The Northwest 1/4 of the Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11570, page 1037 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354728000005150
The Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4 and the Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11245, page 973 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354728000007090
The Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Defendant Name and an erroneous Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 782 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000001260
The West 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 779 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000001320
The Northeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 and the Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11731, page 990 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000003020
The South 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11235, page 633 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000003130
The South 1/2 of the Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11768, page 620 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000003140
The North 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.
AND the North 1/2 of the Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11583, page 15 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000003240
The Northwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11237, page 112 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000003250
The Southeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 785 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000003390
The Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11190, page 193 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000005080
The South 1/2 of the Northwest 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 788 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10952, page 1057 of said public records and being described as follows:

Parcel 354735000005160
The East 1/2 of the Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land described in the Order of Taking recorded in Official Records Book 10960, page 435 and in the Tax Deed recorded in Official Records Book 8490, page 328 of the Public Records of Palm Beach County, Florida and being described as follows:

Parcel 354718000003200
The Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11716, page 1148 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354718000005070
The Northeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11283, page 173 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354718000007087
The Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land described in the Order of Taking recorded in Official Records Book 10960, page 435 and in the Tax Deed recorded in Official Records Book 8490, page 344 of the Public Records of Palm Beach County, Florida and being described as follows:

Parcel 354718000007150
The Northwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11272, page 718 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000001180
The Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land described in the Order of Taking recorded in Official Records Book 10960, page 435 and in the Tax Deed recorded in Official Records Book 11258, page 1203 of the Public Records of Palm Beach County, Florida and being described as follows:

Parcel 354720000001210
The Southwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11825, page 773 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000003170
The Northwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11332, page 1847 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000005130
The Northwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11321, page 438 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000005070
The West 1/2 of the Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12033, page 973 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000005173
The South 1/2 of the Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11272, page 724 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000005174
The Southeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11583, page 21 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000005180
The Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11602, page 1105 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354720000007280
The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11224, page 1561 of the Public Records of Palm Beach County, Florida; said parcel being erroneously described in the Order of Taking recorded in Official Records Book 10960, page 435 and more accurately described in Official Records Book 4343, page 793 of said public records, being described as follows:

Parcel 354725000003090
That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 3693.64 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 132.34 feet; thence N 89° 48' 18" E, 329.16 feet; thence S 01° 17' 55" E, 132.34 feet; thence S 89° 48' 18" W, 329.16 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11740, page 599 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354725000003110
That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 3693.64 feet along the West line of said Section 25; thence N 89° 48' 18" E, 329.16 feet to a Point of Beginning; thence continue N 01° 17' 55" W, 132.34 feet; thence N 89° 48' 18" E, 329.15 feet; thence S 01° 17' 55" E, 132.34 feet; thence S 89° 48' 18" W, 329.15 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 13196, page 798 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10960, page 435 of said public records and being described as follows:

Parcel 354725000007180
That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 1069.38 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 250.06 feet; thence N 89° 48' 18" E, 164.58 feet; thence S 01° 17' 55" E, 250.06 feet; thence S 89° 48' 18" W, 164.58 feet to the Point of Beginning.
AND:
That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 1069.38 feet along the West line of said Section 25; thence N 89° 48' 18" E, 164.58 feet to a Point of Beginning; thence N 01° 17' 55" W, 250.06 feet; thence N 89° 48' 18" E, 164.58 feet; thence S 01° 17' 55" E, 250.06 feet; thence S 89° 48' 18" W, 164.58 feet to the Point of Beginning.
AND:
That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 1069.38 feet along the West line of said Section 25; thence N 89° 48' 18" E, 329.16 feet to a Point of Beginning; thence N 01° 17' 55" W, 250.06 feet; thence N 89° 48' 18" E, 164.58 feet; thence S 01° 17' 55" E, 250.06 feet; thence S 89° 48' 18" W, 164.58 feet to the Point of Beginning.
AND:
That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 819.32 feet along the West line of said Section 25; thence N 89° 48' 18" E, 164.58 feet to the Point of Beginning; thence N 01° 17' 55" W, 250.06 feet; thence N 89° 48' 18" E, 164.58 feet; thence S 01° 17' 55" E, 250.06 feet; thence S 89° 48' 18" W, 164.58 feet to the Point of Beginning.
AND:

That portion of Section 25, Township 47 South, Range 35 East, Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 819.32 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 250.06 feet; thence N 89° 48' 18" E, 164.58 feet; thence S 01° 17' 55" E, 250.06 feet; thence S 89° 48' 18" W, 164.58 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11890, page 292 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000001400
The Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 791 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000003030
The South and West 20 feet of the Southwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 803 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000003080
The Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11686, page 361 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000003230
The Northeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 800 of the Public Records of Palm Beach County, Florida; said parcel being erroneously described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows (*as listed in the Property Detail data for this tax parcel on the Palm Beach County Property Appraiser's website*):

Parcel 354703000003310
The Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12269, page 120 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000003510
The Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11544, page 238 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000003520
The South 1/2 of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11512, page 1015 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000005260

The East 1/2 of the Northwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11222, page 526 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000005370
The South 1/2 of the Northeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 806 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000005380
The West 1/2 of the Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16054, page 797 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354703000007042
The East 1/2 of the Southeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12976, page 1147 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354704000001180

The Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11744, page 395 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354704000001210
The Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11229, page 1264 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354704000001490
The Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11793, page 1982 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354704000003150
The Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12397, page 1142 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354704000005100
The Northwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11581, page 435 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 10966, page 1100 of said public records and being described as follows:

Parcel 354704000005370
The Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.
AND:
The Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 13338, page 1309 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354703000001240
The Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 16255, page 1834 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354703000003340
The Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11593, page 532 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354703000007140
The West 1/2 of the Southwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11593, page 529 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354703000005010
The East 1/2 of the Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11605, page 1945 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354703000001250
The Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11771, page 1639 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354703000003121
The Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16154, page 79 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354704000003190
The Southwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11753, page 1004 of the Public Records of Palm Beach County, Florida;

said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354704000005110
The Southeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11628, page 530 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354704000005410
The Southeast 1/4 of the Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11758, page 1950 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354706000007060
The Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Southwest 1/4 of Section 6, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11758, page 1953 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354706000001190
The Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 6, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11565, page 1757 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354708000005050

The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 8, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16154, page 76 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354711000007030
The South 1/2 of the Northeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 11, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11195, page 1301 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354711000007120
The Northeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 11, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12770, page 528 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354718000005013
The East 1/2 of the Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11816, page 546 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11039, page 1966 of said public records and being described as follows:

Parcel 354718000001070
The Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11736, page 828 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354720000007200
The Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11313, page 1976 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354720000005300
The Southeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11761, page 1524 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354720000003091
The North 220 feet of the East 1/2 of the Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 and the North 220 feet of the West 1/2 of the Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4, less the East 256 feet thereof, of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11591, page 500 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354720000007110
The Southwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land described in the Order of Taking recorded in Official Records Book 11085, page 374 of Public Records of Palm Beach County, Florida and being described as follows:

Parcel 354725000003140
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 3825.98 feet along the West line of said Section 25, to a Point of Beginning; thence continue N 01° 17' 55" W, 132.34 feet; thence N 89° 48' 18" E, 329.16 feet; thence S 01° 17' 55" E, 132.34 feet; thence S 89° 48' 18" W, 329.16 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11681, page 82 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354725000007130
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 1319.44 feet along the West line of said Section 25, to a Point of Beginning; thence continue N 01° 17' 55" W, 165.97 feet; thence N 89° 48' 18" E, 262.52 feet; thence S 01° 17' 55" E, 165.97 feet; thence S 89° 48' 18" W, 262.52 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11736, page 1739 of the Public Records of Palm Beach County, Florida; said parcel being erroneously described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:
*Note: This parcel, as described in the Order of Taking (OT), overlaps 28 other parcels that were acquired by TIITF from other entities. The description of the parent tract recited in the OT has therefore been modified below to exclude 28 deeds from the Defendant describing the parcels that were subsequently conveyed to TIITF by others.*

Parcel 354725000007040
The West 1/2 of the Southwest 1/4 of the Northwest 1/4; the Northwest 1/4 of the Northwest 1/4 of the Southwest 1/4; and all that part of the Southeast 1/4 of the Southwest 1/4 of the Northwest 1/4; and the Northeast 1/4 of the Northwest 1/4 of the Southwest 1/4 lying West of the Southwest right-of-way of Miami Canal, of Section 25, Township 47 South, Range 35 East;
AND:
The West 1/2 of the Southwest 1/4 of the Southwest 1/4; and the Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4; and the Southwest 1/4 of the Northwest 1/4 of the Southwest 1/4; and all that part of the Southeast 1/4 of the Southwest 1/4; and the Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 lying West of the Southwest right-of-way of the Miami Canal, of Section 25, Township 47 South, Range 35 East;, lying and being in Palm Beach County, Florida;

LESS and EXCEPT those parcels described in the following deeds recorded in the Public Records of Palm Beach County, Florida:
Official Records Book 2925, page 1405,
Official Records Book 3004, page 0658,
Official Records Book 3004, page 0660,
Official Records Book 3289, page 0985,
Official Records Book 3303, page 0957,
Official Records Book 3303, page 0961,
Official Records Book 3303, page 1410,
Official Records Book 3307, page 0298,
Official Records Book 3595, page 0312,
Official Records Book 3739, page 1200,
Official Records Book 3830, page 0980,
Official Records Book 4343, page 0793,
Official Records Book 4343, page 0794,
Official Records Book 4576, page 1319,
Official Records Book 4733, page 0473,
Official Records Book 4733, page 0475,
Official Records Book 4733, page 0477,
Official Records Book 4820, page 0602,
Official Records Book 4820, page 0604,
Official Records Book 4913, page 0050,
Official Records Book 4913, page 0053,
Official Records Book 4913, page 0055,
Official Records Book 4913, page 0057,
Official Records Book 4913, page 0059,
Official Records Book 4913, page 0061,
Official Records Book 5189, page 1262,
Official Records Book 5189, page 1264, and
Official Records Book 5608, page 0951.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11736, page 831 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354725000003080
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 3213.05 feet along the West line of said Section 25; thence N 89° 48' 18" E, 403.50 feet to a Point of Beginning; thence N 01° 17' 55" W, 215.91 feet; thence N 89° 48' 18" E, 254.81 feet; thence S 01° 17' 55" E, 130.36 feet; thence N 89° 48' 18" E, 294.47 feet to the West right-of-way line of

Miami Canal; thence S 12° 06' 42" E, 87.42 feet along said canal right-of-way line; thence S 89° 48' 18" W, 565.68 feet to the Point of Beginning;
AND:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 2993.07 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 219.98 feet; thence N 89° 48' 18" E, 969.18 feet to the West right-of-way line of Miami Canal; thence S 12° 06' 42" E, 224.78 feet along said canal right-of-way line; thence S 89° 48' 18" W, 1011.36 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11736, page 1742 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354725000007050
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 2192.29 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 189.97 feet; thence N 89° 48' 18" E, 1128.40 feet to the West right-of-way line of Miami Canal; thence S 12° 06' 42" E, 194.12 feet along said canal right-of-way line; thence S 89° 48' 18" W, 1164.90 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12046, page 101 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354725000003130
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 3428.96 feet along the West line of said Section 25, to a Point of Beginning; thence continue N 01° 17' 55" W, 132.34 feet; thence N 89° 48' 18" E, 329.16 feet; thence S 01° 17' 55" E, 132.34 feet; thence S 89° 48' 18" W, 329.16 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11736, page 1736 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354728000001050
The Southwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land described in the Order of Taking recorded in Official Records Book 11085, page 374 of Public Records of Palm Beach County, Florida and being described as follows:

Parcel 354728000005160
The Southeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 28, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land described in the Order of Taking recorded in Official Records Book 11085, page 374 of Public Records of Palm Beach County, Florida and being described as follows:

Parcel 354629000003000
That portion of Section 29, Township 46 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
The Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 29, Township 46 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Final Judgment by Default recorded in Official Records Book 16157, page 678 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354735000001011
The Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11535, page 1117 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354735000005120
The South 1/2 of the Southeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11570, page 1034 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354735000007020
The East 1/2 of the Southwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11708, page 1880 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354735000003420
The Northeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11313, page 1980 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354735000003160
The North 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11235, page 630 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11085, page 374 of said public records and being described as follows:

Parcel 354735000003440
The Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A portion of three parcels of land described in the Stipulated Final Judgment recorded in Official Records Book 11472, page 1 and the Order of Taking recorded in Official Records Book 11078, page 537 of the Public Records of Palm Beach County, Florida, described as follows:

Parcel 354626000003010
All that part of Section 26, Township 46 South, Range 35 East, lying West of the West right-of-way line of Levee L-23 (Miami Canal), LESS, however the South 130 feet of that part of said Section 26, lying West of the West right-of-way line of Levee L-23 (Miami Canal), Palm Beach County, Florida;
AND:
Parcel 354627000005000
The South 1/2 of Section 27, Township 46 South, Range 35 East, Palm Beach County, Florida;
AND:
Parcel 354635000003010
That part of Section 35, Township 46 South, Range 35 East, lying West of the Miami River Canal, Palm Beach County, Florida;

LESS and EXCEPT that part of the above described parcels included in Trustees of Internal Improvement Trust Fund Deed Number 31122 for a parcel identified as: "Proposed Outlet Canal, Levee 23, Tract No. 49-101-026", described as follows:
A parcel of land situate in Sections 22, 26, 27 and 35, Township 46 South, Range 35 East, Palm Beach County, Florida, being more particularly described as follows:
A strip of land being 225.00 feet in width bounded on the North by the South line of a parcel of land described in a Quit Claim Deed, recorded in Official Records Book 11934, Page 1020, of said Palm Beach County, bounded on the East by the West line of South Florida Water Management District's Levee 23 as shown on Drawing number L-25-4, dated July 14, 1978, bounded on the West by a line 225.00 feet Westerly of and parallel to the said West line of Levee 23, and bounded on the South by the South line of said Section 35.
Together With:
A parcel of land situate in Section 2, Township 47 South, Range 35 East, Palm Beach County, Florida, being more particularly described as follows:
Commencing at the Northwest corner of said Section 2; thence N 89° 46' 06" E, along the North line of said Section 2, a distance of 1593.73 feet to a line 225.00 feet Westerly of and parallel to the said West line of Levee 23 and the POINT OF BEGINNING;
Thence continue N 89° 46' 06" E, along said North line of Section 2, a distance of 229.93 feet to the West line of said Levee 23; thence S 12° 06' 58" E, along the said West line, a distance of 497.65 feet; thence N 57° 06' 42" W, departing from said West line, a distance of 318.20 feet to said 225.00 feet parallel line; thence N 12° 06' 58" W along said parallel line, a distance of 320.00 feet to the North line of said Section 2 and the POINT OF BEGINNNING.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11371, page 418 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11078, page 537 of said public records and being described as follows:

Parcel 354627000001001

The Northwest 1/4 of the Northwest 1/4 of Section 27, Township 46 South, Range 35 East, Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11557, page 1449 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11078, page 537 of said public records and being described as follows:

Parcel 354629000007000
The Northwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 29, Township 46 South, Range 35 East, Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11908, page 1565 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354621000001010
The Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 21, Township 46 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11272, page 722 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354703000001310
The Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 12385, page 547 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354703000003500
The Southeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 AND the Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 16375, page 1820 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354703000003290
The Northeast 1/4 of the Northwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11700, page 1103 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354703000003350
The Southeast 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 3, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11662, page 945 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354704000001010
The Northwest 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Northeast 1/4, and the East 1/2 of the Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4, of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11663, page 1358 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354704000003260
The Northeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11566, page 770 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354704000007180
The Northeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 16110, page 854 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354704000003210
The Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11700, page 1100 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354704000005330
The Northeast 1/4 of the Northeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11701, page 1519 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354704000005060
The Northwest 1/4 of the Southeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11605, page 1951 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354718000007122
The Northwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11650, page 1658 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Amended Order of Taking recorded in Official Records Book 11174, page 1926 of said public records and being described as follows:

Parcel 354718000001021
The South 1/2 of the following property: the Southwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of the Northeast 1/4 of Section 18, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11902, page 723 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354720000005190
The Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11877, page 1439 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354720000003092
The South 220 feet of the East 1/2 of the Northwest 1/4 of the Southeast 1/4 of the Northwest 1/4 and the South 220 feet of the West 1/2 of the Northeast 1/4 of the Southeast 1/4 of the Northwest 1/4, less the East 256 feet thereof, of Section 20, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Defendant Name and an erroneous Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 15800, page 98 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354725000003070
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 2578.57 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 203.33 feet; thence N 89° 48' 18" E, 1051.85 feet to the West right-of-way line of Miami Canal; thence S 12° 06' 42" E, 207.77 feet along said canal right-of-way line; thence S 89° 48' 18" W, 1090.84 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 15800, page 102 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354725000003060
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 2781.90 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 211.17 feet; thence N 89° 48' 18" E, 1011.36 feet to the West right-of-way line of Miami Canal; thence S 12° 06' 42" E, 215.78 feet along said canal right-of-way line; thence S 89° 48' 18" W, 1051.85 feet to the Point of Beginning.

AND:

A parcel of land referred to by Defendant Name and an erroneous Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 15800, page 94 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354725000007100
That portion of Section 25, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida, described as follows:
Commencing at the Southwest corner of said Section 25, run N 01° 17' 55" W, 2382.26 feet along the West line of said Section 25 to a Point of Beginning; thence continue N 01° 17' 55" W, 196.31 feet; thence N 89° 48' 18" E, 1090.84 feet to the West right-of-way line of Miami Canal; thence S 12° 06' 42" E, 200.60 feet along said canal right-of-way line; thence S 89° 48' 18" W, 1128.48 feet to the Point of Beginning.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11272, page 720 of the Public Records of Palm Beach County, Florida;

said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354732000007080
The Northeast 1/4 of the Southwest 1/4 of the Northeast 1/4 of the Southwest 1/4 of Section 32, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11877, page 1442 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354735000007100
The Southeast 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

Two parcels of land described in the Stipulated Final Judgment recorded in Official Records Book 17127, page 110 and in the Order of Taking recorded in Official Records Book 11130, page 352 of the Public Records of Palm Beach County, Florida and being described as follows:

Parcel 354735000001000
The West 1/2 of the Southeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.
AND:
Parcel 354735000001350
The East 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

A parcel of land referred to by Defendant Name and an erroneous Parcel Number in the Stipulated Final Judgment recorded in Official Records Book 11705, page 1009 of the Public Records of Palm Beach County, Florida; said parcel being more fully described in the Order of Taking recorded in Official Records Book 11130, page 352 of said public records and being described as follows:

Parcel 354735000003430
The Northwest 1/4 of the Southwest 1/4 of the Southeast 1/4 of the Northwest 1/4 of Section 35, Township 47 South, Range 35 East, lying and being in Palm Beach County, Florida.

AND:

Seven parcels of land described in the Stipulated Final Judgment recorded in Official Records Book 11685, page 150 of the Public Records of Palm Beach County, Florida, and being described as follows:

Parcel 354703000005100
The Northwest 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, of Palm Beach County, Florida.
AND:
Parcel 354703000005430
The Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, of Palm Beach County, Florida.
AND:
Parcel 354704000005260
The Northwest 1/4 of the Northeast 1/4 of the Southeast 1/4 of the Southeast 1/4 of Section 4, Township 47 South, Range 35 East, of Palm Beach County, Florida.
AND:
Parcel 354728000001450
The Southeast 1/4 of the Southwest 1/4 of the Southwest 1/4 of the Northeast 1/4 of Section 28, Township 47 South, Range 35 East, of Palm Beach County, Florida.
AND:
Parcel 354704000001300
The North 1/2 of the Southwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 4, Township 47 South, Range 35 East, of Palm Beach County, Florida.
AND:
Parcel 354629000007010
The Southwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of Section 29, Township 46 South, Range 35 East, of Palm Beach County, Florida.
AND:
Parcel 354703000001040
The Southwest 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Northeast 1/4 of Section 3, Township 47 South, Range 35 East, of Palm Beach County, Florida.

AND:

A portion of those lands described in Official Records Book 7610, page 892 of the Public Records of Palm Beach County, Florida, described as follows:

That part of Section 22, Township 46 South, Range 35 East, Palm Beach County, Florida lying West of the Miami Canal;

LESS and EXCEPT that part of said Section 22 included in Trustees of Internal Improvement Trust Fund Deed Number 31122 for a parcel identified as: "Proposed Outlet Canal, Levee 23, Tract No. 49-101-026", described as follows:
A parcel of land situate in Sections 22, 26, 27 and 35, Township 46 South, Range 35 East, Palm Beach County, Florida, being more particularly described as follows:

A strip of land being 225.00 feet in width bounded on the North by the South line of a parcel of land described in a Quit Claim Deed, recorded in Official Records Book 11934, Page 1020, of said Palm Beach County, bounded on the East by the West line of South Florida Water Management District's Levee 23 as shown on Drawing number L-25-4, dated July 14, 1978, bounded on the West by a line 225.00 feet Westerly of and parallel to the said West line of Levee 23, and bounded on the South by the South line of said Section 35.

Together With:

A parcel of land situate in Section 2, Township 47 South, Range 35 East, Palm Beach County, Florida, being more particularly described as follows:

Commencing at the Northwest corner of said Section 2; thence N 89° 46' 06" E, along the North line of said Section 2, a distance of 1593.73 feet to a line 225.00 feet Westerly of and parallel to the said West line of Levee 23 and the POINT OF BEGINNING; Thence continue N 89° 46' 06" E, along said North line of Section 2, a distance of 229.93 feet to the West line of said Levee 23; thence S 12° 06' 58" E, along the said West line, a distance of 497.65 feet; thence N 57° 06' 42" W, departing from said West line, a distance of 318.20 feet to said 225.00 feet parallel line; thence N 12° 06' 58" W along said parallel line, a distance of 320.00 feet to the North line of said Section 2 and the POINT OF BEGINNNING.

Also LESS and EXCEPT that part of said Section 22 included in that parcel identified as "Parcel 5 – Tract No. 49-101-022" in Trustees of Internal Improvement Trust Fund Deed Number 29996, described as follows:

A parcel of land situate in Sections 21, 22, 28, 29 and 30, Township 46 South, Range 35 East, Palm Beach County, Florida, being more particularly described as follows:

Commence at a 1-1/2" iron pipe marking the Southwest corner of said Section 30, thence N 01° 11' 49" W, along the West line of said Section 30, said line also being the county line between Hendry and Palm Beach Counties and also the range line between Range 34 East and Range 35 East, a distance of 3981.58 feet to the POINT OF BEGINNING; thence, continue N 01° 11' 49" W, a distance of 497.27 feet to a point on Line A; thence, N 89° 48' 51" E, along said Line A, a distance of 1983.26 feet; thence, N 01° 11' 49" W, a distance of 662.77 feet; thence, N 89° 48' 51" E, a distance of 661.10 feet; thence, N 01° 11' 49" W, a distance of 662.77 feet to a point on the North line of said Section 30; thence N 89° 48' 51" E, along said North line, a distance of 2644.41 feet to the Northeast corner of said Section 30, said corner also being the Northwest corner of said Section 29; thence, N 89° 49' 08" E, along the North line of said Section 29, a distance of 5281.17 feet to the Northeast corner of said Section 29, said corner also being the Southwest corner of said Section 21; thence, N 01° 13' 32" W, along the West line of said Section 21, a distance of 5279.13 feet to the Northwest corner of said Section 21; thence N 89° 43' 48" E, along the North line of said Section 21, a distance of 5280.80 feet to the Northeast corner of said Section 21, said corner also being the Northwest corner of said Section 22; thence, N 89° 47' 23" E, along the North line of said Section 22, a distance of 4039.46 feet to a point on the West right-of-way line of South Florida Water Management District's Miami Canal; thence, S 11° 52' 01" E, along said West right-of-way line, a distance of 755.67 feet; thence, departing said West right-of-

way line, run N 64° 51' 05" W, a distance of 864.11 feet to a point on a line 370 feet South of, as measured a right angles to, and parallel with the North line of said Section 22; thence S 89° 47' 23" W, along said parallel line, a distance of 3411.29 feet to a point on the West line of said Section 22; thence along a line 370 feet south of, as measured at right angles to, and parallel with the North line of said Section 21, run S 89° 43' 48" W, a distance of 4724.89 feet; thence S 46° 36' 42" W, a distance of 24.08 feet to a point on a line 380 feet East of, as measured at right angle to, and parallel with the West line of said Section 21 and it's Southerly prolongation; thence, S 01° 13' 32" E, along said parallel line, a distance of 5170.23 feet; thence, S 89° 49' 08" W, along a line 400 feet South of, as measured at right angles to, and parallel with the North line of said Section 29 and its Easterly prolongation, a distance of 5679.84 feet to a point on the West line of said Section 29; thence, S 89° 48' 51" W, along a line 400 feet South of, as measured at right angles to, and parallel with the North line of said Section 30, a distance of 1741.30 feet; thence, S 67° 01' 28" W, a distance of 115.43 feet; thence, S 44° 14' 06" W, a distance of 1793.04 feet to a point on a line 400 feet South of, as measured at right angles to, and parallel with said Line A; thence S 89° 48' 51" W, along said parallel line, a distance of 2051.36 feet; thence, S 42° 59' 14" W, a distance of 133.27 feet to the POINT OF BEGINNING.

AND:

The South 130 feet of that part of Section 26, Township 46 South, Range 35 East, Palm Beach County, Florida lying West of the L-23 Canal right-of-way;

LESS and EXCEPT that part of said South 130 feet of Section 26 included in Trustees of Internal Improvement Trust Fund Deed Number 31122 for a parcel identified as: "Proposed Outlet Canal, Levee 23, Tract No. 49-101-026" as described above.

AND:

All of Section 28, Township 46 South, Range 35 East, Palm Beach County, Florida.

AND:

All of Section 30, Township 46 South, Range 35 East, Palm Beach County, Florida;

LESS and EXCEPT the Northwest 1/4 of the Northwest 1/4, the North 1/2 of the Northeast 1/4 of the Northwest 1/4 and the Southwest 1/4 of the Northeast 1/4 of the Northwest 1/4 of said Section 30 as described in Trustees of Internal Improvement Trust Fund Deed Number 25308;

Also LESS and EXCEPT that part of said Section 30 included in that parcel identified as "Parcel 5 – Tract No. 49-101-022" in Trustees of Internal Improvement Trust Fund Deed Number 29996 as described above.

AND:

All of Sections 32 and 34, Township 46 South, Range 35 East, Palm Beach County, Florida;

SUBJECT TO a perpetual easement for right of way over the North 130 feet of said Sections 32 and 34 as described in Trustees of Internal Improvement Trust Fund Deed Number 24033.

AND:

All of Sections 7, 19, 27 and 31, Township 47 South, Range 35 East, Palm Beach County, Florida.

AND:

That part of Section 6, Township 48 South, Range 36 East, Palm Beach County, Florida lying West of the Miami Canal.

AND:

A parcel of land described in Official Records Book 30567, page 846 of the Public Records of Palm Beach County, Florida, and being described as follows:

The Northeast 1/4 of the Northwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 6, Township 47 South, Range 35 East, of Palm Beach County, Florida.

AND:

That part of the following described parcel lying West of the Miami Canal:
A strip of land lying between Townships 47 and 48 South, in Ranges 35 and 36 East, Palm Beach County, Florida being a portion of those lands described in Gainesville Patent No. 137 dated April 29, 1903 and being described as follows:

A parcel of land bounded on the North by the South lines of Township 47 South, Range 35 East and Township 47 South, Range 36 East according to the State of Florida surveys thereof; bounded on the South by the North lines of Township 48 South, Range 35 East and Township 48 South, Range 36 East according to the State of Florida surveys thereof; bounded on the West by the line from the Northwest corner of Township 48 South, Range 35 East to the Southwest corner of Township 47 South, Range 35 East; and bounded on the East by the line from the Northeast corner of Township 48 South, Range 36 East to the Southeast corner of Township 47 South, Range 36 East.

AND:

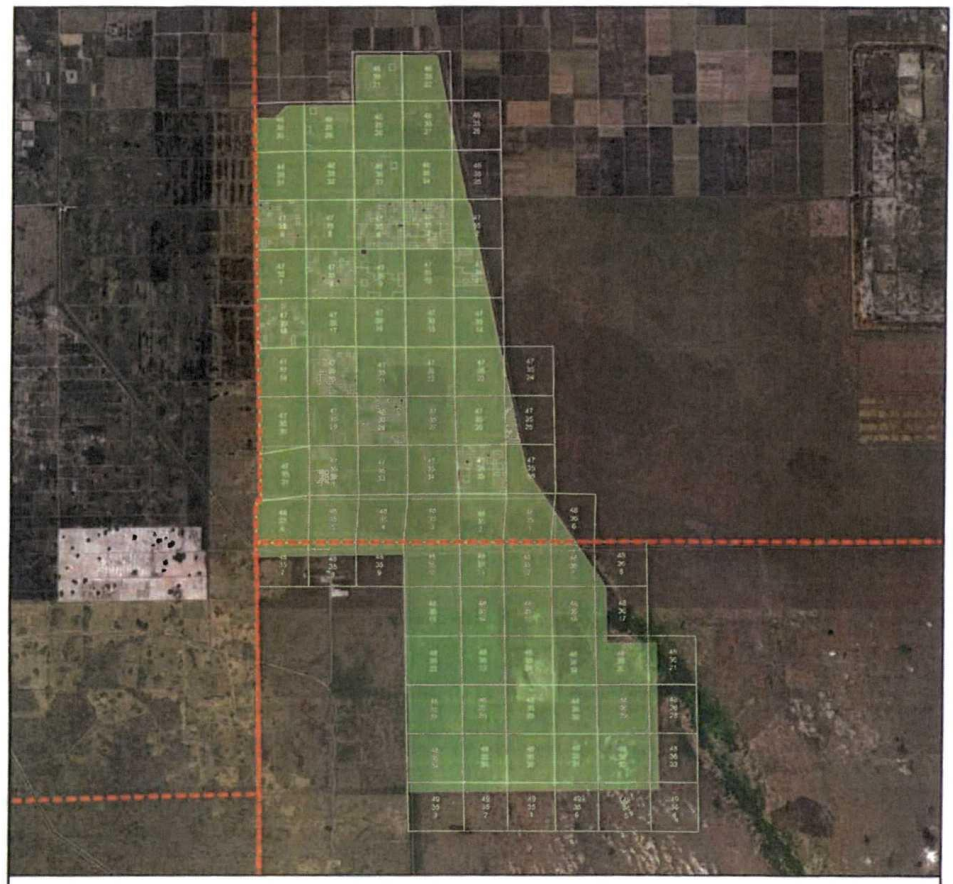
A parcel of land described in Official Records Book 11569, page 1446 of the Public Records of Palm Beach County, Florida, and being described as follows:

The North 1/2 of the Southeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Southeast 1/4 of Section 3, Township 47 South, Range 35 East, of Palm Beach County, Florida.

BSM
BY SK

Date: 7.25.2019

THIS PAGE AND ANY FOLLOWING PAGES ARE ATTACHED ONLY FOR STATE OF FLORIDA TRACKING PURPOSES AND FORM NO PART OF THE INSTRUMENT AND ARE NOT TO BE RELIED ON BY ANY PARTY.



### 11.1.3 Lease 4779

This Lease was prepared by:
Jay Sircy,
Bureau of Public Land Administration
Division of State Lands
Department of Environmental Protection, MS 130
3900 Commonwealth Boulevard,
Tallahassee, Florida 32399-3000
ACTION I.D. # 27415
OAL2
[ 459 acres]

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

**Everglades and Francis S. Taylor Wildlife Management Area**
**LEASE AGREEMENT**

**Lease Number 4779**

THIS LEASE AGREEMENT, made and entered into this 14th day of January 2016, by and between the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA** hereinafter referred to as "LESSOR," and the **FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION** hereinafter referred to as "LESSEE."

LESSOR, for and in consideration of mutual covenants and agreements hereinafter contained, does hereby lease to said LESSEE, the lands described in paragraph 2 below, together with the improvements thereon, and subject to the following terms and conditions:

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

2. **DESCRIPTION OF PREMISES**: The property subject to this lease contains 459 acres, is situated in the County of Broward, State of Florida and is more particularly described in Exhibit "A" attached hereto and hereinafter called the "leased premises".

3. **TERM**: The term of this lease shall be for a period of fifty years (50) commencing on JANUARY 14, 2016, and ending on JANUARY 13, 2066, unless sooner terminated pursuant to the provisions of this lease.

4. **PURPOSE**: LESSEE shall manage the leased premises only for the conservation and protection of natural and historical resources and for resource based public outdoor activities and education which are compatible with the conservation

and protection of these public lands, as set forth in subsection 259.032, Florida Statutes, along with other related uses necessary for the accomplishment of this purpose as designated in the Management Plan required by paragraph 8 of this lease.

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

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

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

8. **MANAGEMENT PLAN**: LESSEE shall prepare and submit a Management Plan for the leased premises in accordance with Section 253.034, Florida Statutes and subsection 18-2.021(4), Florida Administrative Code. The Management Plan shall be submitted to LESSOR for approval through the Division of State Lands, State of Florida Department of Environmental Protection. The leased premises shall not be developed or physically altered in any way other than what is necessary for security and maintenance of the leased premises without the prior written approval of LESSOR until the Management Plan is approved. LESSEE shall provide LESSOR with an opportunity to participate in all phases of preparing and developing the Management Plan for the leased premises. The Management Plan shall be submitted to LESSOR in draft form for review and comments within ten months of the effective date of this lease. LESSEE shall give LESSOR reasonable notice of the application for and receipt of any state, federal or local permits as well as any public hearings or meetings relating to the development or use of the leased premises. LESSEE shall not proceed with development of said leased premises including, but not limited to, funding, permit applications, design or building contracts until the Management Plan required herein has been submitted and approved. Any financial commitments made by LESSEE which are not in compliance with the terms of this lease shall be done at LESSEE'S own risk. The Management Plan shall emphasize the original management concept as approved by LESSOR at the time of acquisition which established the primary public purpose for which the leased premises were acquired. The approved Management Plan shall provide the basic guidance for all management activities and shall be reviewed jointly by LESSEE and LESSOR. LESSEE shall not use or alter the leased premises except as provided for in the approved Management Plan without the prior written approval of LESSOR. The Management Plan prepared under this lease shall identify management strategies

for exotic species, if present. The introduction of exotic species is prohibited, except when specifically authorized by the approved Management Plan.

9. **EASEMENTS**: All easements of any nature including, but not limited to, utility easements are required to be granted by LESSOR. LESSEE is not authorized to grant any easements of any nature and any easement granted by LESSEE shall be void and without legal effect.

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

11. **RIGHT OF INSPECTION**: LESSOR or its duly authorized agents, representatives or employees shall have the right to reasonably inspect the leased premises and the works and operations of LESSEE in any matter pertaining to this lease.

12. **PLACEMENT AND REMOVAL OF IMPROVEMENTS**: All buildings, structures and improvements shall be constructed at the expense of LESSEE in accordance with plans prepared by professional designers and shall require the prior written approval of LESSOR as to purpose, location and design. Further, no trees, other than non-native species, shall be removed or major land alterations done br LESSEE without the prior written approval of LESSOR. Removable equipment and removable improvements placed on the leased premises by LESSEE which do not become a permanent part of the leased premises will remain the property of LESSEE and may be removed by LESSEE before or upon termination of this lease.

13. **INSURANCE REQUIREMENTS**: During the term of this lease LESSEE shall procure and maintain policies of fire, extended risk, and liability insurance coverage. The extended risk and fire insurance coverage shall be in an amount equal to the full insurable replacement value of any improvements or fixtures located on the leased premises. The liability insurance coverage shall be in amounts not less than $200,000 per person and $300,000 per incident or occurrence for personal injury, death, and property damage on the leased premises. During the term of this lease, if Section 768.28, Florida Statutes, or its successor statute is subsequently amended to increase the amount of the liability coverages specified herein, LESSEE shall immediately obtain liability coverage for the increased amounts. Such policies of insurance shall name LESSOR and the State of Florida as additional insureds. LESSEE shall submit written evidence of having procured all insurance policies required herein prior to the effective date of this lease and shall submit annually thereafter, written evidence of maintaining such insurance policies to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. LESSEE shall purchase all

policies of insurance from a financially-responsible insurer duly authorized to do business in the State of Florida. Any certificate of self-insurance shall be issued or approved by the Chief Financial Officer, State of Florida. The certificate of self-insurance shall provide for casualty and liability coverage. LESSEE shall immediately notify LESSOR and the insurer of any erection or removal of any building or other improvement on the leased premises and any changes affecting the value of any improvements and shall request the insurer to make adequate changes in the coverage to reflect the changes in value. LESSEE shall be financially responsible for any loss due to failure to obtain adequate insurance coverage and the failure to maintain such policies or certificate in the amounts set forth shall constitute a breach of this lease.

14. **LIABILITY**: Nothing herein shall be construed as a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims. To the extent permitted by law, LESSEE agrees to indemnify, save, hold harmless and defend LESSOR, its officers, agents and employees, from all suits, judgments, personal injuries, loss, claims, damages, attorney's fees, costs, claims bills, or liability of any kind or nature arising, in whole or in part, directly, indirectly or proximately as a result of the negligent acts or omissions of LESSEE, it's officers, agents or employees. LESSEE hereby covenants and agrees to investigate all claims of every nature at its own expense. LESSEE shall contact LESSOR regarding the legal action deemed appropriate to remedy such damage or claims. LESSOR shall have the absolute right to choose its own legal counsel in connection with all matters indemnified for and defended against herein at LESSEE's expense.

15. **PAYMENT OF TAXES AND ASSESSMENTS**: LESSEE shall assume full responsibility for and shall pay all taxes, assessments, liens or other similar liabilities that accrue to the leased premises or to the improvements thereon arising after this lease commences including any and all ad valorem taxes and drainage and special assessments or personal property taxes of every kind and all construction or materialman's liens which may be hereafter lawfully assessed and levied against the leased premises subsequent to the effective date of this lease. In no event shall the LESSEE be held liable for such liabilities which arose prior to the effective date of this lease.

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

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

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

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

20. **MINERAL RIGHTS**: This lease does not cover petroleum or petroleum products or minerals and does not give the right to LESSEE to drill for or develop the same.

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

22. **CONDITION OF PREMISES**: LESSOR assumes no liability or obligation to LESSEE with reference to the condition of the leased premises. The leased premises herein are leased by LESSOR to LESSEE in an "as is" condition, with LESSOR assuming no responsibility for the care, repair, maintenance or improvement of the leased premises for the benefit of LESSEE.

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

24. **NOTICE**: All notices given under this lease shall be in writing and shall be served by certified mail including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing. LESSOR and LESSEE hereby designate their address as follows:

LESSOR: State of Florida Department of Environmental Protection
Division of State Lands
Bureau of Public Land Administration, MS 130
3800 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

LESSEE: Florid Fish & Wildlife Conservation Commission
HSC/WHM Section Leader
620 South Meridian Street
Tallahassee, Florida 32399

25. **BREACH OF COVENANTS, TERMS, OR CONDITIONS**: Should LESSEE breach any of the covenants, terms, or conditions of this lease, LESSOR shall give written notice to LESSEE to remedy such breach within sixty days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within sixty days of receipt of written notice, LESSOR may either terminate this lease and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises or maintain this lease in full force and effect and exercise all rights and remedies herein conferred upon LESSOR.

26. **DAMAGE TO THE PREMISES**: (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants, or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule, regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. In the event of LESSEE's failure to comply with this paragraph, LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE's such failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition

existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or expiration of this lease. This paragraph shall not be construed as a limitation upon LESSEE'S obligations as set forth in paragraph 14 of this lease, nor upon any other obligations or responsibilities of LESSEE as set forth herein. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall report such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies. This paragraph shall not be deemed to apply to any conditions existing prior to the effective date of this lease.

27. **ENVIRONMENTAL AUDIT**: At LESSOR'S discretion, LESSEE shall provide LESSOR with a current Phase I environmental site assessment conducted in accordance with the State of Florida Department of Environmental Protection, Division of State Lands' standards prior to termination of this lease, and if necessary a Phase II environmental site assessment.

28. **SURRENDER OF PREMISES**: Upon termination or expiration of this lease, LESSEE shall surrender the leased premises to LESSOR. In the event no further use of the leased premises or any part thereof is needed, LESSEE shall give written notification to the Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection ("Division"), Mail Station 130, 3800 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, at least six months prior to the release of any or all of the leased premises. Notification shall include a legal description, this lease number, and an explanation of the release. The release shall only be valid if approved by LESSOR through the execution of a release of lease instrument with the same formality as this lease. Upon release of all or any part of the leased premises or upon termination or expiration of this lease, all improvements, including both physical structures and modifications to the leased premises, shall become the property of LESSOR, unless LESSOR gives written notice to LESSEE to remove any or all such improvements at the expense of LESSEE. The decision to retain any improvements upon termination or expiration of this lease shall be at LESSOR'S sole discretion. Prior to surrender of all or any part of the leased premises a representative of the Division shall perform an on-site inspection and the keys to any building on the leased premises shall be turned over to the Division.

29. **BEST MANAGEMENT PRACTICES**: LESSEE shall implement applicable Best Management Practices for all activities conducted under this lease in compliance with paragraph 18-2.018(2)(h), Florida Administrative Code, which have been selected, developed, or approved by LESSOR, LESSEE or other land managing agencies for the protection and enhancement of the leased premises.

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

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

32. **PARTIAL INVALIDITY**: If any term, covenant, condition or provision of this lease shall be ruled by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

33. **ARCHAEOLOGICAL AND HISTORIC SITES**: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources. The Management Plan prepared pursuant to Chapter 18-2 Florida Administrative Code, shall be reviewed by the Division of Historical Resources to insure that adequate measures have been planned to locate, identify, protect and preserve the archaeological and historic sites and properties on the leased premises.

34. **SOVEREIGNTY SUBMERGED LANDS**: This lease does not authorize the use of any lands located waterward of the mean or ordinary high water line of any lake, river, stream, creek, bay, estuary, or other water body or the waters or the air space thereabove.

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

36. **MAINTENANCE OF IMPROVEMENTS**: LESSEE shall maintain the real property contained within the leased premises and the improvements located thereon, in a state of good condition, working order and repair including, but not limited to, removing all trash or litter, maintaining all planned improvements as set forth in the approved Management Plan, and meeting all building and safety codes. LESSEE shall maintain any and all existing roads, canals, ditches, culverts, risers and the like in as good condition as the same may be on the effective date of this lease.

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

38. **SIGNS**: LESSEE shall ensure that the area is identified as being publicly owned and operated as a public facility in all signs, literature and advertising. If federal grants or funds are used by LESSEE for any project on the leased premises LESSEE shall erect signs identifying the leased premises as a federally assisted project.

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

40. **ADMINISTRATIVE FEE**: LESSEE shall pay LESSOR an annual administrative fee of $300 pursuant to subsection 18-2.021(8), Florida Administrative Code. The initial annual administrative fee shall be payable within thirty days from the date of execution of this lease agreement and shall be prorated based on the number of months or fraction thereof remaining in the fiscal year of execution. For purposes of this lease agreement, the fiscal year shall be the period extending from July 1 to June 30. Each annual payment thereafter shall be due and payable on July 1 of each subsequent year.

41. **RIGHT OF TERMINATION**: Anything contained in this lease to the contrary notwithstanding, LESSOR shall have the right and option to terminate this lease, at will, for any reason whatsoever, by giving the LESSEE written notice of such election to terminate at least six (6) months prior to the effective date of such termination. LESSEE shall continue to honor its obligations under the lease until the effective date of the termination, including LESSEE's obligations concerning surrender of the leased premises.

42. **SPECIAL LEASE CONDITIONS**: The following special lease conditions shall apply to this lease: None

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

WITNESSES:

Dave Fewell
Original Signature

DAVE FEWELL
Print/Type Name of Witness

Kelley C Griffin
Original Signature

Kathy C Griffin
Print/Type Name of Witness

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

(SEAL)

BY: Cheryl C McCall

Cheryl C. McCall, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida

**"LESSOR"**

**STATE OF FLORIDA**
**COUNTY OF LEON**

The foregoing instrument was acknowledged before me this 14th day of JANUARY, 2016, by Cheryl C. McCall, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. She is personally known to me.

APPROVED SUBJECT TO PROPER EXECUTION:

11.24.15
DEP Attorney Date

David Lee Fewell
Notary Public, State of Florida

Printed, Typed or Stamped Name

My Commission Expires: ----------

Commission/Serial No.

DAVID LEE FEWELL
MY COMMISSION # FF 039635
EXPIRES: July 24, 2017
Bonded Thru Notary Public Underwriters

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

Witness

Lisa Zullo
Print/Type Witness Name

Witness

Linda Henderson
Print/Type Witness Name

By: _____ (SEAL)
Nick Wiley, Executive Director
for

**"LESSEE"**

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY
Commission Attorney

Eric Sutton for Nick Wiley

**STATE OF FLORIDA**
**COUNTY OF LEON**

The foregoing instrument was acknowledged before me this 6 day of January, 2016, by ~~Nick Wiley, ED~~ as Executive Director, on behalf of the Florida Fish and Wildlife Conservation Commission. He is personally known to me.

Notary Public, State of Florida

Emily Davis
Print/Type Notary Name

Commission Number:

Commission Expires:

EMILY DAVIS
Commission # FF 934878
Expires November 5, 2018
Bonded Thru Troy Fain Insurance 800-385-7019

EMILY DAVIS
Commission # FF 934878
Expires November 5, 2018
Bonded Thru Troy Fain Insurance 800-385-7019

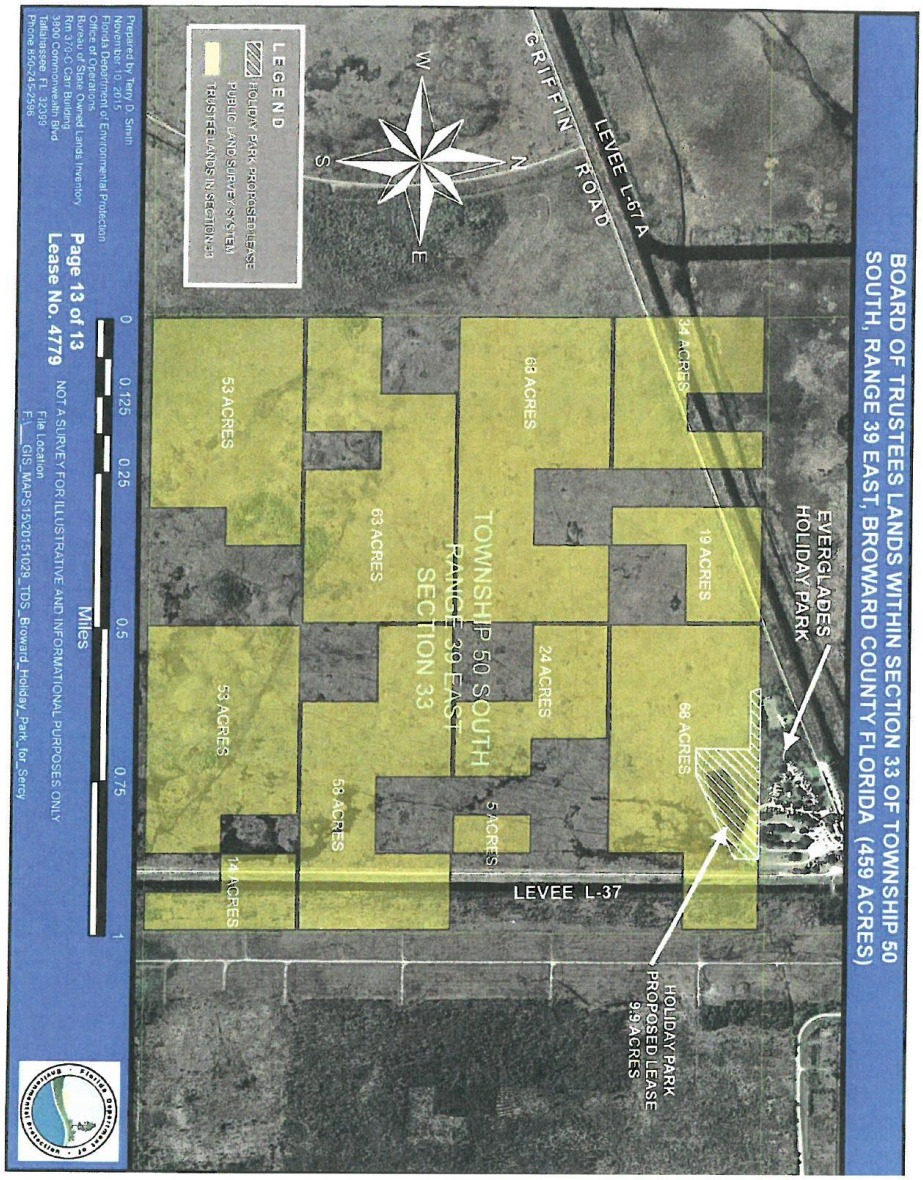
EXHIBIT "A

The following lands located in Broward County, Florida:

| Tracts (all inclusive) | Section | Township | Range |
|---|---|---|---|
| 1 to 11, 13, 15 to 20, 22, 25 to 30, 38 to 42, 45 to 56, 59, 60, 62, 65, 66, 69 to 78, 81 to 83, 85 to 88, 91 to 98, 100 to 104, 107 to 117, 121 to 126, 128 | 33 | 50 | 39 |

BSM

DATE November 10, 2015


BOARD OF TRUSTEES LANDS WITHIN SECTION 33 OF TOWNSHIP 50 SOUTH, RANGE 39 EAST, BROWARD COUNTY FLORIDA (459 ACRES)
EVERGLADES HOLIDAY PARK
GRIFFIN ROAD
LEVEE L-67 A
LEVEE L-37
HOLIDAY PARK PROPOSED LEASE 9.9 ACRES
TOWNSHIP 50 SOUTH RANGE 39 EAST SECTION 33
34 ACRES
68 ACRES
19 ACRES
68 ACRES
24 ACRES
5 ACRES
63 ACRES
58 ACRES
53 ACRES
53 ACRES
14 ACRES
LEGEND
HOLIDAY PARK PROPOSED LEASE
PUBLIC LAND SURVEY SYSTEM
TRUSTEE LANDS IN SECTION 33
N
S
E
W
0
0.125
0.25
0.5
0.75
1
Miles
Prepared by Terry D. Smith
November 10, 2015
Florida Department of Environmental Protection
Office of Operations
Bureau of State Owned Lands Inventory
Real Estate Services Section
3900 Commonwealth Blvd
Tallahassee FL 32399
Phone 850-245-2586
Page 13 of 13
Lease No. 4779
NOT A SURVEY FOR ILLUSTRATIVE AND INFORMATIONAL PURPOSES ONLY
File Location
F:___GIS_MAPS\20151028_TDS_Broward_Holiday_Park_for_Sergy

## 11.2 Easements and/or Other Agreements

### 11.2.1 Use Agreement No. U-0435

This Use Agreement was prepared by:
Christopher Crenshaw
Bureau of Public Land Administration
Division of State Lands
Department of Environmental Protection, MS 130
3900 Commonwealth Boulevard,
Tallahassee, Florida 32399-3000
AID# 32559

SAU1
[ 671,000 +/- acres]

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

**USE AGREEMENT**

**Use Agreement No. U-0435**

THIS USE AGREEMENT is hereby granted this 2nd day of August 2017, by the **BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA**, hereinafter referred to as the "GRANTOR", through its lawfully designated agent, the Division of State Lands, State of Florida Department of Environmental Protection to the **FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION,** hereinafter referred to as "GRANTEE".

WHEREAS, GRANTEE has an Acquisition and Restoration Council (ARC) approved Management Plan for the Everglades Complex of Wildlife Management areas effective 2015-2025; and

WHEREAS, GRANTEE desires to conduct management activities on state-owned uplands within the Everglades Complex Wildlife Management Areas pursuant to the ARC Approved Management Plan for the Everglades Complex of Wildlife Management areas, including specifically, but not limited to, the control of non-native species;

WITNESSETH:

That for the faithful and timely performance of and compliance with the terms and conditions stated herein, GRANTOR does hereby grant to GRANTEE, a use agreement on the state-owned lands described below, to wit:

(See Exhibit "A" Attached)

subject to the following terms and conditions:

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

2. **COMMENCEMENT**: This use agreement and consent shall commence on August 2, 2017 the effective date of this use agreement and shall be valid for a term of 5 years and shall end on August 1, 2022.

3. **EXTENT OF AGREEMENT**: This use agreement covers the use of state-owned uplands in the upland area more particularly described in Exhibit "A" attached hereto, only for GRANTEE'S management practices pursuant to the Land Management Plan for Everglades Complex Wildlife Management Areas (Management Plan) approved by ARC as Item 13 on the February 7, 2003 agenda, as updated by ARC on February 13, 2015 and incorporated herein by reference.

4. **USE OF PROPERTY AND UNDUE WASTE**: This use agreement shall be non-exclusive. GRANTOR, or its duly authorized agent, shall retain the right to enter the state land covered by this use agreement or engage in management activities not inconsistent with the use herein provided for and shall retain the right to grant compatible uses of the state land subject to this use agreement to third parties during the term of this use agreement.

GRANTEE shall not commit undue waste to the subject state-owned lands. Upon termination or expiration of this use agreement GRANTEE shall maintain or restore, as necessary, said state land to substantially the same condition as it was upon the effective date of this use agreement. GRANTEE shall not remove water from any source on state lands including, but not limited to, a water course, reservoir, spring, or well, without the prior written approval of the GRANTOR. GRANTEE shall clear, remove and pick up all debris including, but not limited to, mud containers, oil containers, papers, discarded tools and trash foreign to the work locations and dispose of the same in a satisfactory manner as to leave the work locations clean and free of any such debris. GRANTEE shall not dispose of any contaminants including, but not limited to, hazardous or toxic substances, chemicals or other agents produced or used in GRANTEE'S operations, on the state land covered by this use agreement or on any adjacent state land or in any manner not permitted by law.

Upon termination or expiration of this use agreement GRANTEE shall remove all facilities and related structures erected at GRANTEE'S expense.

If the lands described in Exhibit A are under lease to another agency GRANTEE shall obtain the consent of such agency prior to engaging in any use of the real property authorized herein.

5. **RIGHT OF INSPECTION**: GRANTOR, or its duly authorized agent, shall have the right at any and all times to inspect the works and operation of GRANTEE in any matter pertaining to this use agreement.

6. **PROPERTY RIGHTS**: GRANTEE agrees and it is hereby expressly stipulated that this use agreement and consent constitutes permissive use only and the placing of facilities and related structures upon public property pursuant to this use agreement shall not operate to create or vest any property right in said holder and shall not conflict with the conservation, protection and enhancement of said lands.

7. **LIABILITY**: GRANTEE shall assist in the investigation of injury or damage claims either for or against GRANTOR or the State of Florida pertaining to GRANTEE'S respective areas of responsibility under this easement or arising out of GRANTEE'S respective management programs or activities and shall contact GRANTOR regarding the legal action deemed appropriate to remedy such damage or claims. GRANTEE is responsible for all personal injury and property damage attributable to the negligent acts or omissions of GRANTEE, and its officers, employees, and agents. Nothing herein shall be construed as an indemnity or a waiver of sovereign immunity enjoyed by any party hereto, as provided in Section 768.28, Florida Statutes, as amended from time to time, or any other law providing limitations on claims.

8. **ASSIGNMENT**: This use agreement shall not be assigned in whole or in part without the prior written consent of GRANTOR. Any assignment made either in whole or in part without the prior written consent of GRANTOR shall be void and without legal effect.

9. **CUTTING OF TREES**: The cutting or removal of trees on the state land covered by this use agreement is prohibited, except as allowed by the Management Plan, and title to all portions of trees so felled or removed pursuant to the Management Plan shall be and remain in GRANTOR. All brush and refuse that is necessarily cut in the course of the GRANTEE'S operations shall be handled and disposed of in such a manner as to minimize the danger of fires, all in accordance with said regulations and the directions of the representative of GRANTOR. Trees subject to this provision shall be, except for cypress trees, three inches in diameter or greater in size at a height of forty-eight inches from the ground at the base of the tree. Cypress trees subject to this provision shall be any cypress tree of two inches in diameter or greater in size at a height of forty-eight inches from the ground at the base of the cypress tree. However, in no event shall the indiscriminate cutting down, running over or destruction of trees or vegetation of any size be allowed.

10. **TELEPHONE LINES, DITCHES AND FENCES**: All telephone lines, ditches, and fences located within or immediately outside the exterior boundaries of any state-owned lands shall be protected so far as possible in the conduct of GRANTEE'S operations, and, if damaged by reason of said operations, they shall be repaired immediately by and at the

expense of GRANTEE. The representative of GRANTOR may, when in his or her judgment it is necessary to avoid risk of damage by said operations, require GRANTEE to move any such telephone lines or fence from one location to an adjacent location without compensation.

11. **ROADS, TRAILS, FIRE LINES**: Roads, trails, and fire lines shall at all times be kept free of brush and debris resulting from GRANTEE'S operations hereunder. Any road, trail, or firebreak used by GRANTEE in connection with the permitted operations that is damaged (beyond what would be ordinary wear and tear without such use,) shall be repaired promptly by GRANTEE at its expense to its original conditions. GRANTEE shall not build any roads or trails without prior written approval of GRANTOR. If any live trees are damaged through carelessness or by fire caused by the employees or contractors of GRANTEE, GRANTEE shall fully compensate GRANTOR for the damage caused thereby.

12. **PREVENTION OF FIRES**: GRANTEE shall use every reasonable precaution including, but not limited to, State of Florida Department of Agriculture and Consumer Services, Florida Forest Service (FFS) standards for fire safety on State Forest lands, to prevent the occurrence of forest fires on state lands, except for prescribed burns pursuant with the Management Plan, and to promptly notify the nearest FFS office of any such occurrence. In the event a forest fire not pursuant with the Management Plan shall commence in the vicinity of GRANTEE'S operations during the period such operations are being conducted, or immediately thereafter, it shall be conclusively presumed that such fire occurred as a result of the operations of GRANTEE, unless the contrary is clearly demonstrated to the satisfaction of GRANTOR by GRANTEE, and GRANTEE hereby agrees to pay GRANTOR for any and all damage caused to state lands by such fire, including but not limited to, costs to suppress such fire; costs for the damage to the timber, trees or other forest products (whether standing, cut or fallen); and costs for the damage to any improvements or personal property thereon, caused by or as a result of such fire. GRANTEE shall, at its expense, replant, restock or reforest any area affected by reason of such fire to the satisfaction of GRANTOR.

13. **MINERAL RIGHTS**: This use agreement does not cover petroleum or petroleum products or minerals and does not give the right to GRANTEE to drill for or develop the same.

14. **BEST MANAGEMENT PRACTICES**: GRANTEE shall implement applicable Best Management Practices in compliance with paragraph 18-2.018(2)(h), Florida Administrative Code, for all of the activities conducted under this use agreement, which have been selected, developed, or approved by GRANTOR or other land managing agencies for the protection and enhancement of the state land covered by this use agreement.

15. **ARCHAEOLOGICAL AND HISTORIC SITES**: Execution of this use agreement in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the State of Florida Department of State, Division of Historical Resources.

16. **PROHIBITIONS AGAINST LIENS OR OTHER ENCUMBRANCES**: Fee title to the state land included in this use agreement is held by GRANTOR. GRANTEE shall not do or permit anything to be done which purports to create a lien or encumbrance of any nature against the real property vested in GRANTOR including, but not limited to, mortgages or construction liens against the real property covered by this use agreement or against any interest of GRANTOR therein.

17. **PARTIAL INVALIDITY**: If any term, covenant, condition or provision of this use agreement shall be ruled by a court of competent jurisdiction, to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

18. **BREACH OF COVENANTS, TERMS, OR CONDITIONS**: Should GRANTEE breach any of the covenants, terms, or conditions of this use agreement, GRANTOR shall give written notice to GRANTEE to remedy such breach within thirty days of such notice. In the event GRANTEE fails to remedy the breach the satisfaction of GRANTOR within thirty days of receipt of written notice, GRANTOR may either terminate this use agreement and recover from GRANTEE all damages GRANTOR may incur by reason of the breach, including, but not limited to, the cost of recovering the state land covered by this use agreement or maintain this use agreement in full force and effect and exercise all rights and remedies herein conferred upon GRANTOR.

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

20. **DUPLICATE ORIGINALS**: This use agreement is executed in duplicate originals each of which shall be considered an original for all purposes.

21. **ENTIRE UNDERSTANDING**: This use agreement sets forth the entire understanding between the parties and shall only be amended with the prior written approval of GRANTOR.

22. **TIME**: Time is expressly declared to be of the essence of this use agreement.

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

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

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

26. **GOVERNING LAW**: This use agreement shall be governed by and interpreted according to the laws of the State of Florida.

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

28. **TITLE DISCLAIMER**: GRANTOR does not warrant or guarantee any title, right or interest in or to the property described in Exhibit "A" attached hereto.

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

WITNESSES:

Dave Fewell
Original Signature

DAVE FEWELL
Print/Type Name of Witness

Terri D Gross
Original Signature

TERRI D. GROSS
Print/Type Name of Witness

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

(SEAL)

BY: Cheryl CMcCall

Cheryl C. McCall, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida

"GRANTOR"

**STATE OF FLORIDA**
**COUNTY OF LEON**

The foregoing instrument was acknowledged before me this 2ND day of August, 2017, by Cheryl C. McCall, Chief, Bureau of Public Land Administration, Division of State Lands, State of Florida Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. She is personally known to me.

APPROVED SUBJECT TO PROPER EXECUTION:

05-30-2017
DEP Attorney Date

David Lee Fewell
Notary Public, State of Florida

Printed, Typed or Stamped Name

My Commission Expires:

DAVID LEE FEWELL
MY COMMISSION # FF 039635
EXPIRES: July 24, 2017
Bonded Thru Notary Public Underwriters

Commission/Serial No.

WITNESSES:

Florida Fish and Wildlife Conservation Commission

(SEAL)

Lisa Zullo
Original Signature

BY: _____
Original Signature of Executing Authority

Lisa Zullo
Typed/Printed Name of Witness

for Nick Wiley
Typed/Printed Name of Executing Authority

Linda Henderson
Original Signature

Executive Director
Title of Executing Authority

Linda Henderson
Typed/Printed Name of Witness

"GRANTEE"

**STATE OF** Florida

**COUNTY OF** Leon

Eric Sutton as Assistant Executive Director

The foregoing instrument was acknowledged before me this 7 day of July, 20 17, by ~~Nick Wiley, as Executive Director,~~ for and on behalf of Florida Fish and Wildlife Conservation Commission. He ~~is~~ personally known to me or has produced _____ as identification.

_____
Notary Public, State of Florida

Emily Davis
Printed, Typed or Stamped Name

My Commission Expires:

11/5/18

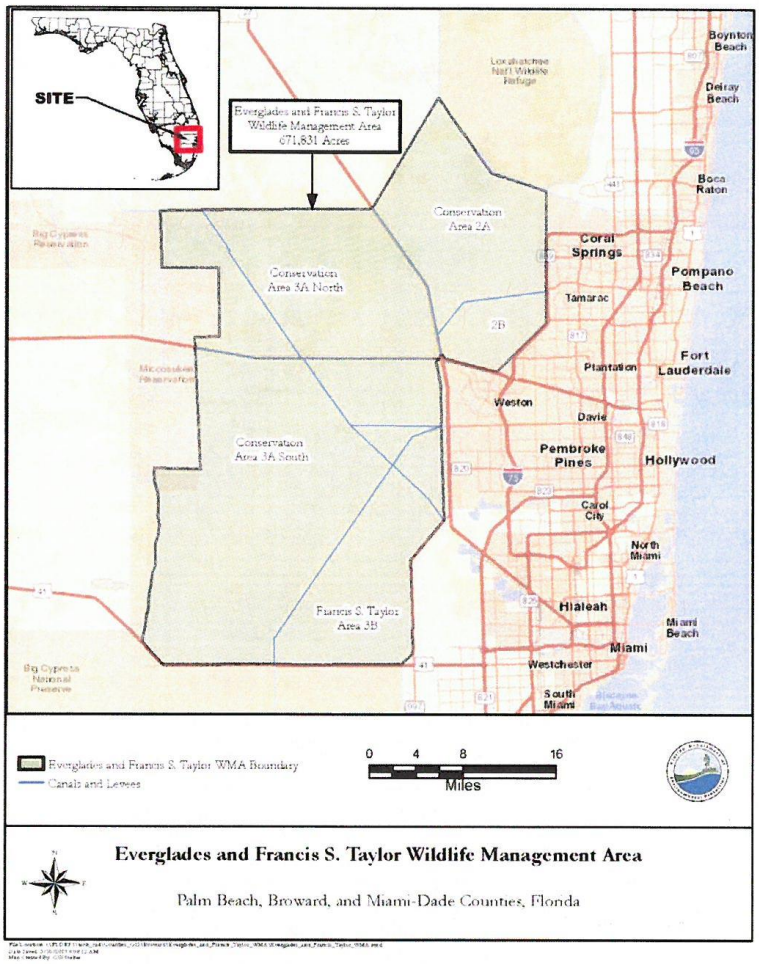
Commission/Serial No. FF 934878

EMILY DAVIS
Commission # FF 934878
Expires November 5, 2018
Bonded Thru Troy Fain Insurance 800-385-7019

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY
Commission Attorney

**Exhibit "A"**

All of the lands within the area known as the "Everglades and Francis S. Taylor Wildlife Management Area" that are owned by the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) and not exclusively encumbered by agreements between the Board of Trustees and other agencies, corporations, or individuals.



### 11.2.2 Agreement No. 460004180

ORIGINAL

**AMENDED AND RESTATED**

**MEMORANDUM OF UNDERSTANDING**

**BETWEEN THE**

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT,**

**DEPARTMENT OF ENVIRONMENTAL PROTE.CTION,**

**AND THE**

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

**THIS AMENDED AND RESTATED MEMORANDUM OF UNDERSTANDING ("AGREEMENT"),** is made and entered into this 15th day of January, 2020, by and between the **SOUTH FLORIDA WATER MANAGEMENT DISTRICT**, a government entity created by Chapter 373, Florida Statutes, with its principal office at 3301 Gun Club Road, West Palm Beach, Florida 33406, its successors and assigns **("DISTRICT"), the DIVISION OF STATE LANDS, DEPARTMENT OF ENVIRONMENTAL PROTECTION ("DEP")**, 3900 Commonwealth Boulevard, Tallahassee, FL 32399-3000, an agency of the State of Florida, and the **FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION ("COMMISSION")**, 620 South Meridian Street, Tallahassee, Florida 32399-1600, a constitutional commission of the State of Florida, hereinafter referred to collectively as "the Parties".

**WITNESSETH:**

**WHEREAS**, Section 253.03(7)(d), Florida Statute, provides for the **DISTRICT** and the **DEP** to execute leases (collectively, the "Original Leases" and individually, the "Original Lease") with owners of habitable structures built on or before May 1, 1999, on **DISTRICT** or state-owned lands in conservation areas 2 and 3; and

**WHEREAS**, the Original Leases provided for a twenty (20) year term effective January 1,

2000, and terminating on January 1, 2020 (the "Initial Term"); and

**WHEREAS**, pursuant to Section 253.03(7), Florida Statutes, **DEP** and **DISTRICT** may renew the Original Leases if the **DISTRICT** determines that the leased structures do not cause harm to the water or land resources (the "Renewed Leases").

**WHEREAS**, pursuant to Section 253.0(3)7(d), Florida Statutes, failure by a lessee under a Lease to comply with the conditions contained in that Lease shall result in the structure being deemed illegal and subject to removal; and

**WHEREAS**, the Parties wish to consolidate efforts to renew the Original Leases and monitor the Original Leases and Renewed Leases for compliance with lease terms and conditions in order to provide consistency in enforcement and conserve the Parties' resources (the Original Leases and Renewed Leases may be referred to herein as Leases collectively or Lease singularly), and

**WHEREAS**, the **DEP** has a compliance officer available for this effort; and

**WHEREAS**, the **DISTRICT** has airboat and helicopter transportation services available for this effort; and

**WHEREAS**, the **COMMISSION** has officers patrolling the areas in which the hunt camps are located in conservation areas 2 and 3; and

**WHEREAS**, the **DISTRICT** is a public corporation of the State of Florida, created by the Florida legislature and given those powers and responsibilities enumerated in Chapter 373, Florida Statutes, to include entering into contracts with public agencies, private corporations or other persons; and

**NOW, THEREFORE**, in consideration of the mutual benefits flowing from each to the others, the Parties do hereby agree as follows:

1. The **DEP** shall monitor and inspect the leased areas for compliance with Lease terms. including, but not limited to: (i) timely payment of rent; (ii) insurance requirements; (iii) prohibition

against alterations or improvements of structures; (iv) installation of toilet systems in accordance with the Leases; and (v) proper maintenance of the surrounding vegetation. The **DEP** shall promptly notify the **DISTRICT** if it becomes aware of any breach of a Lease by a lessee. The **DEP** shall inspect the leased areas at least once each calendar year and deliver a written report of each inspection to the **DISTRICT** within thirty (30) days after the inspection. A standard lease agreement is attached as Exhibit "A" and made an integral part of this **AGREEMENT**.

2. The **DISTRICT** shall provide a copy of each Lease and the file contents for each habitable structure to the **DEP** within thirty (30) days after the full execution of this **AGREEMENT**. The **DISTRICT** shall notice its lessees to make future rental payments to the **DEP**, and provide its lessees with **DEP's** remit address for such payments and certificates of insurance. **DEP** shall retain such rental payments as consideration for the performance of its duties and obligations set forth in this **AGREEMENT**. The **DISTRICT** shall provide, as available, airboat and helicopter transportation to and from the leased premises, to be coordinated through the **DISTRICT's** Project Manager identified in paragraph 7 of this **AGREEMENT**.

3. The **DEP** and **DISTRICT** shall provide the **COMMISSION** with the locations of the leased areas and copies of the respective Leases. The **COMMISSION** shall promptly notify the **DEP** and **DISTRICT** of any illegal activities or activities inconsistent with Lease terms and conditions observed by its officers.

4. **DEP** and **DISTRICT** agreed that **DEP** shall have full authority and sole discretion to take all necessary enforcement action on behalf of **DISTRICT** as its agent for all non-compliant leases, including, but not limited to, collection actions and the filing and maintaining of any necessary eviction actions on behalf of **DISTRICT**. **DEP** will use its best efforts to notify **DISTRICT** of any enforcement within a reasonable time. The Parties shall mutually agree on processes to address lessee non-compliance issues.

5. This **AGREEMENT** shall be effective upon the last date of execution by the Parties and continue until January 1, 2040, unless terminated in accordance with paragraph 9 or extended through a duly executed amendment.

6. The Parties agree that time is of the essence in the performance of each and every obligation under this **AGREEMENT**.

7. The Parties shall direct all technical matters arising in connection with the performance of this **AGREEMENT** to the attention of the following identified below.

| Project Manager | Contract/Administrative Contact |
|---|---|
| Bijaya Kattel<br>South Florida Water Management District<br>P.O. Box 24680<br>West Palm Beach, FL 33416-4680<br>(561) 682-8800 | Rachael Clark<br>South Florida Water Management District<br>P.O. Box 24680<br>West Palm Beach, FL 33416-4680<br>(561) 682-6381 |
| Director<br>Department of Environmental Protection<br>3900 Commonwealth Blvd., MS 130<br>Tallahassee, FL 32399-3000<br>(850) 245-2555 | Director<br>Department of Environmental Protection<br>3900 Commonwealth Blvd., MS 130<br>Tallahassee, FL 32399-3000<br>(850) 245-2555 |
| Florida Fish and Wildlife Conservation Commission<br>Tom Reinert<br>8635 Northlake Blvd.<br>West Palm Beach, FL<br>(561) 625-5130 | Florida Fish and Wildlife Conservation Commission<br>Donald Moore<br>8635 Northlake Blvd.<br>West Palm Beach, FL<br>(561) 625-5131 |

All formal notices between the Parties under this **AGREEMENT** shall be in writing and shall be deemed received if sent by certified mail, return receipt requested, to the respective addresses specified above for Contract/Administrative Contacts. The Parties shall also provide a copy of all notices to the Parties' Project Managers. All notices required by this **AGREEMENT** shall be considered delivered upon receipt. Should either party change its address, written notice of such new address shall promptly be sent to the other party. All correspondence to the **DISTRICT** under this

**AGREEMENT** shall reference the **DISTRICT**'s Contract Number specified on the cover/signature page of the **AGREEMENT**.

8. **DEP** and **DISTRICT** agree that **DEP** shall process, approve, and execute any applications for assignment of leases, including the authority to reject or deny the same. **DISTRICT** agrees that **DEP** may charge and retain for itself a reasonable processing fee for all assignment applications.

9. Each Party assumes any and all risks of personal injury, bodily injury and property damage attributable to the negligent acts or omissions of the Party and the officers, employees, servants, and agents thereof. Each Party represents that it is self-funded for Worker's compensation and liability insurance, covering at a minimum bodily injury, personal injury and property damage with protection being applicable to the Party's officers, employees, servants and agents while acting within the scope of their employment during performance under this **AGREEMENT**. The Parties further agree that nothing contained herein shall be construed or interpreted as (1) denying to either party any remedy or defense available to such party under the laws of the State of Florida, (2) the consent of the State of Florida or its agents and agencies to be sued, or (3) a waiver of sovereign immunity of the State of Florida beyond the waiver provided in Section 768.28, Florida Statutes.

10. Any Party may terminate this **AGREEMENT** with or without cause at any time for convenience upon sixty (60) calendar day's prior written notice to the other Parties. The performance of work under this **AGREEMENT** may be terminated by the Parties in accordance with this clause in whole, or from time to time in part, whenever any Party shall determine that such termination is in the best interest of the Party. Any such termination shall be effected by delivery to the other Parties of a Notice of Termination specifying the extent to which performance of work under this **AGREEMENT** is terminated, and the date upon which such termination becomes effective.

11. Each Party, its employees, subcontractors or assigns, shall comply with all applicable

federal, state, and local laws and regulations relating to the performance of this **AGREEMENT**.

12. The Parties hereby assure that no person shall be discriminated against on the grounds of race, color, creed, national origin, handicap, age, or sex, in any activity under this **AGREEMENT**. The Parties shall take all measures necessary to effectuate these assurances.

13. The laws of the State of Florida shall govern all aspects of this **AGREEMENT**. In the event it is necessary for any Party to initiate legal action regarding this **AGREEMENT**, venue shall be in the Fifteenth Judicial Circuit for claims under state law and in the Southern District of Florida for any claims which are justiciable in federal court.

14. The Parties shall allow public access to all project documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should a Party assert any exemptions to the requirements of Chapter 119 and related statutes, the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon the that Party.

15. It is the intent and understanding of the Parties that this **AGREEMENT** is solely for the benefit of the Parties. No person or entity other than the Parties shall have any rights or privileges under this **AGREEMENT** in any capacity whatsoever, either as third-party beneficiary or otherwise.

16. The Parties shall not assign, delegate, or otherwise transfer their rights and obligations as set forth in this **AGREEMENT** without the prior written consent of the other Parties. Any attempted assignment in violation of this provision shall be void.

17. The Parties assume no duty with regard to the supervision of the other Parties and the other Parties shall remain solely responsible for compliance with all safety requirements and for the safety of all persons and property at the site of contract performance.

18. Notwithstanding any provisions of this **AGREEMENT** to the contrary, the Parties shall not be held liable for any failure or delay in the performance of this **AGREEMENT** that arises from fires, floods, strikes, embargoes, acts of the public enemy, unusually severe weather, outbreak

of war, restraint of Government, riots, civil commotion, force majeure, act of God, or for any other cause of the same character which is unavoidable through the exercise of due care and beyond the control of the parties. Failure to perform shall be excused during the continuance of such circumstances, but this **AGREEMENT** shall otherwise remain in effect.

19. The Parties agree that in the event of a disaster declaration by the Governor, FWC is authorized to close the leased lands within Conservation Areas 2 and 3 to all public access for wildlife protection and public safety.

20. Failures or waivers to insist on strict performance of any covenant, condition, or provision of this **AGREEMENT** by the Parties, their successors and assigns shall not be deemed a waiver of any of its rights or remedies, nor shall it relieve the other Parties from performing any subsequent obligations strictly in accordance with the terms of this **AGREEMENT**. No waiver shall be effective unless in writing and signed by the Parties against whom enforcement is sought. Such waiver shall be limited to provisions of this **AGREEMENT** specifically referred to therein and shall not be deemed a waiver of any other provision. No waiver shall constitute a continuing waiver unless the writing states otherwise.

21. Should any term or provision of this **AGREEMENT** be held, to any extent, invalid or enforceable, as against any person, agency or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this **AGREEMENT**, to the extent that the **AGREEMENT** shall remain operable, enforceable and in full force and effect to the extent permitted by law.

22. This **AGREEMENT** is subject to the availability of funding by the Parties and does not obligate future appropriations for the obligations created herein.

23. This **AGREEMENT** may be amended only with the written approval of the Parties.

24. This **AGREEMENT** states the entire understanding and agreement between the

Parties and supersedes any and all written or oral representations, statements, negotiations, or agreements previously existing between the Parties with respect to the subject matter of this **AGREEMENT**. The Parties recognize that any representations, statements or negotiations made by the Parties' staff do not suffice to legally bind the Parties in a contractual relationship unless they have been reduced to writing and signed by authorized representatives. This **AGREEMENT** shall inure to the benefit of and shall be binding upon the Parties, their respective assigns, and successors in interest.

25. This **AGREEMENT** herby Amends, Restates and otherwise takes the place of that certain Memorandum of Understanding dated January 24th , 2006 (the "Prior MOU"), between the **DISTRICT, DEP** and the **COMMISSION** such that the terms and provisions stated herein shall control all rights, obligations and duties of the parties hereto and in the event of any conflict between the terms and provisions contained within the Prior MOU and this **AGREEMENT**, then the provisions set forth in this **AGREEMENT** shall control.

The Parties hereto have caused this **AGREEMENT** to be executed through their duly authorized signatories on the day and year last written below.

SFWMD Procurement Approved:
By: _____
Date: 1/9/2020

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**
By: Candida Heater
Name: Candida Heater
Director, Administrative Services Division
Date: January 15, 2020

APPROVED AS FORM OF LEGALITY:
By: _____
DEP Attorney

**DEPARTMENT OF ENVIRONMENTAL PROTECTION**
By: Callie DeHaven
Name: Callie DeHaven
Title: Director, Division of State Lands
Date: 3/4/2020

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

By: Thomas H. Eason

Name: Thomas H. Eason ASSISTANT EXECUTIVE DIRECTOR

Date: 2/17/2020

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY

Anthony Pinyoni
Commission Attorney

**EXHIBIT "A"**
**LEASE RENEWAL TEMPLATE**

HCL1

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
AMENDED RESTATED AND RENEWAL LEASE
HABITABLE STRUCTURES

Lease Number: _____

THIS LEASE, made and entered into by and between the South Florida Water Management District, a government entity created by Chapter 373, Florida Statutes, with its principal office at 3301 Gun Club Road, West Palm Beach, Florida 33406 and whose mailing address is Post Office Box 24680, West Palm Beach, Florida 33416-4680, its successors and assigns , pursuant to its authority set forth in Florida Statutes and the requirements of Section 253.03(7)(d), Florida Statutes, hereinafter referred to as "LESSOR," and [INSERT LESSEE'S NAME] their successors and assigns, hereinafter referred to as "LESSEE."

LESSOR, for and in consideration of the annual rental payment and mutual covenants and agreements hereinafter contained, does hereby lease to said LESSEE the lands described in paragraph 2 below, together with the improvements thereon, and subject to the following terms and conditions:

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

2. DESCRIPTION OF PREMISES: The property subject to this lease, is situated in the County of Broward, State of Florida and is more particularly described in Exhibit "A" and indicated on the map attached hereto as Exhibit "B", hereinafter referred to as the "leased premises". The parties hereto acknowledge and agree that the leased premises shall be limited to the footprint of the structure or structures as currently built and hereinafter defined, on that certain real property described in Exhibit "A" attached hereto and LESSEE shall have no right under this

lease to occupy or maintain any additional property located adjacent to the leased premises, except for reasonable access as described in paragraph 8 of this lease.

3. TITLE DISCLAIMER: LESSOR does not warrant or guarantee any title, right or interest in or to the leased premises.

4. TERM: This lease will effective on the date in which the last party hereto signs this lease (the "Commencement Date"), and expires at 11:59 p.m. on December 31, 2039. At the expiration of this lease, the Department of Environmental Protection, acting as agent for and on behalf of the LESSOR, shall have the right to require that LESSEE remove the structure, as hereinafter defined, for any reason, or renew the lease subject to LESSOR'S approval, within one hundred and eighty (180) days of said expiration/termination.

5. PURPOSE: LESSEE shall use the leased premises only for the operation of an existing habitable structure, which meets the requirements of Section 253.03(7)(d), Florida Statutes. For purposes of this lease, the term "structure" shall also include but not be limited to fences, boardwalks, docks, decks and ramps built prior to May 1, 1999, as shown in exhibit "A". No commercial activities shall be permitted on the leased premises and the existence or use of the structure shall in no way be allowed to impede the restoration of the Everglades.

6. RENTAL PAYMENT:. The annual rental will be TWO THOUSAND AND 00/100 DOLLARS ($2,000.00) plus applicable sales tax and will be adjusted each year after that based upon the Consumer Price Index (CPI). For each subsequent lease year, the lease payment shall be paid annually on or before January 1st (due date) until this lease terminates or expires. Lease payments shall be paid by certified or cashier's check, or through the Department of Environmental Protection payment website www.fldepportal.com/go/pay-invoices/.

7. DELINQUENT RENTAL PAYMENT: Pursuant to Section 253.03(7)(e), Florida Statutes, failure to pay the annual rent shall make the structure illegal and subject to removal. Should LESSEE fail to pay the annual payment of rental by the due date, and such failure continues for ten (10) calendar days from the date due, then such failure shall constitute a default by LESSEE. In the event of such default, LESSOR may, at its option, and in its sole and absolute discretion,

either terminate this lease or impose a late fee of $500.00. The parties agree this late fee represents a fair and reasonable estimate of the costs that LESSOR will incur by reason of LESSEE's late payment. The parties further agree the imposition or acceptance of such late fee by LESSOR does not constitute a waiver of LESSEE's default nor prevent LESSOR from thereafter exercising any of the other rights and remedies available to LESSOR under this lease, including the right to terminate this lease. If LESSOR imposes a late fee which goes unpaid by LESSEE, then LESSOR may still thereafter terminate this lease. Notwithstanding the provisions of paragraph 31 of this lease, and pursuant to Section 253.03(7)(e), Florida Statutes, failure to pay the annual rent when due shall allow LESSOR to immediately terminate this lease and require immediate removal of any structure without further notice, demand or opportunity to cure, and LESSEE expressly waives the notice provisions of Section 83.20, Florida Statutes.

8. QUIET ENJOYMENT AND RIGHT OF USE: LESSEE shall have the right of ingress and egress to, from and upon the leased premises for all purposes necessary to the full quiet enjoyment by said LESSEE of the rights conveyed herein, subject to any and all applicable rules and orders promulgated and issued by the Florida Fish and Wildlife Conservation Commission.

9. UNAUTHORIZED USE: LESSEE shall, through its agents and employees, prevent the unauthorized use of the leased premises or any use thereof not in conformance with this lease. If any unauthorized or non-conforming use is made of the leased premises, LESSOR shall have the right to terminate this lease pursuant to the provisions of paragraph 31 of this lease.

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

11. EASEMENTS: All easements including, but not limited to, utility easements are expressly prohibited.

12. SUBLEASES: This lease is for the purposes specified herein and subleases of any nature are prohibited. Any sublease shall be void and without legal effect.

13. RIGHT OF INSPECTION: LESSOR or its duly authorized agents, including but not limited to employees of the Division of State Lands, Department of Environmental Protection or its representatives or employees, shall have the right, upon reasonable notice to LESSEE, to inspect the leased premises and the works and operation thereon of LESSEE in any manner pertaining to this lease. The LESSEE has a responsibility to give the LESSOR access to the leased premises at all times. If access to the leases premises is locked to deny entry by vehicle, it is the LESSEE'S responsibility to provide a key or combination to the lock. LESSEE acknowledges if LESSEE fails to do so, LESSOR may cut the lock and LESSEE shall not have any claims for damages or otherwise against LESSOR as a result of the LESSOR cutting the lock. LESSEE's failure to cooperate with LESSOR and/or its duly authorized agents with respect to providing access to the leased premises for inspection shall constitute a breach of this lease by LESSEE and thereupon LESSOR shall have the right to terminate this lease.

14. EXOTIC PLANTS: LESSEE shall not plant or maintain any exotic plants on or adjacent to the leased premises. However, LESSEE, at LESSEE's sole cost and expense, may remove or cause to be removed any exotic plants existing on or adjacent to the leased premises within thirty (30) days after the execution date of this lease. After such thirty (30) day period, the parties hereto acknowledge and agree that the Florida Fish and Wildlife Conservation Commission, South Florida Water Management District or LESSOR shall have the right but not the obligation to remove, or cause to be removed, exotic plants placed or planted on or adjacent to the leased premises. Such "exotic plants" shall include any and all species listed on the Florida Exotic Pest Plant Council List of Invasive Species and shall hereinafter be referred to as "Exotic Plants". If the Florida Exotic Pest Plant Council ceases to maintain such List of Invasive Species or a similarly equivalent list, then "Exotic Plants" shall be defined in accordance with a substantially similar standard approved by LESSOR. Furthermore, the LESSEE shall avoid any positive action that would introduce Exotic Plants on any portion of the leased premises.

15. ALTERATIONS AND IMPROVEMENTS: LESSEE shall not add any portable or permanent improvements to the habitable structure, fences, boardwalks, docks, ramps, decks, or make any other change to the leased premises from the way it existed on May 1, 1999 (collectively, "Alterations"), except for the installation of a septic system as provided in paragraph 16 of this lease. LESSEE shall comply with all applicable building codes, and obtain all required permits, inspections and certifications as may be required by all governmental agencies having jurisdiction thereof for all necessary repairs to the habitable structures, fences, boardwalks, docks, ramps, and decks. Alterations to the structure, except for LESSEE's movable furniture and equipment, shall immediately become the LESSOR's property at the end of the term of this lease and shall remain on the leased premises without compensation to LESSEE, unless LESSOR pursuant to this paragraph requires LESSEE to remove the structure. Notwithstanding the foregoing, any such movable furniture and equipment otherwise belonging to LESSEE, but remaining on the leased premises beyond five (5) calendar days after the expiration or other termination of this lease shall also become the property of LESSOR.

At the expiration or termination of the lease term, LESSEE will surrender the leased premises in as good a state and condition as they were at the commencement of this lease, reasonable use and wear thereof excepted. Pursuant to Section 253.03(7)(d), Florida Statutes, upon the expiration or termination of the lease term, LESSOR shall have the right to require LESSEE to remove the structure. In the event that LESSOR notifies LESSEE that LESSOR will require the removal of the structure, then LESSEE, at LESSEE'S sole cost and expense, shall remove, or cause to be removed, the structure and all appurtenances, fixtures, remnants and evidence thereof, no later than ninety (90) days after the termination or expiration of this lease. In the event LESSEE fails to remove or cause the structure to be removed within such ninety (90) day period as provided hereinabove, LESSOR

shall have the right, but not the obligation, to remove the structure and all appurtenances, fixtures, remnants and evidence thereof and charge the cost of such removal to the LESSEE.

16. INSTALLATION OF SEPTIC SYSTEM: LESSEE, at its sole cost and expense, shall maintain a self-contained composting toilet system or self-contained chemical toilet system or other U.S. Coast Guard approved toilet system (the "System") on the leased premises. The System shall be of a type and capacity sufficient to service the structure located on the leased premises and LESSEE's use thereof as provided under this lease and shall be installed, maintained and operated in compliance with any and all applicable permits, regulations, ordinances, rules and laws of the State of Florida and the United States of America and any political subdivision and agency of either.

17. INSURANCE REQUIREMENTS: During the term of this lease LESSEE shall procure and maintain a policy for liability insurance coverage. The liability insurance coverage shall be in amounts not less than $200,000 per person and $300,000 per incident or occurrence for personal injury, death, and property damage on the leased premises. If the cost of the liability insurance coverage exceeds three times the current amount of $500.00 per year, both parties will reconsider such terms. Such policy of insurance shall name LESSEE, LESSOR and the State of Florida as co-insured's. LESSEE shall submit written evidence of having procured the insurance policy required herein prior to the effective date of this lease and shall submit annually thereafter, written evidence of maintaining such insurance policy to the Bureau of Public Land Administration, Division of State Lands, Department of Environmental Protection, Mail Station 100, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. LESSEE shall purchase a policy of insurance from a financially responsible insurer that is duly authorized to do business in the State of Florida. LESSEE shall immediately notify LESSOR and the insurer of any erection or removal of any building or other improvement on the leased premises and any changes affecting the value of any improvements and

shall request said insurer to make adequate changes in the coverage to reflect the changes in value. LESSEE shall be financially responsible for any loss due to failure to obtain adequate insurance coverage, and LESSEE'S failure to maintain such policy in the amounts set forth shall constitute a breach of this lease.

18. INDEMNITY: LESSEE hereby covenants and agrees to investigate all claims of every nature at its own expense, and to indemnify, protect, defend, save and hold harmless LESSOR and the State of Florida from any and all claims, actions, lawsuits and demands of any kind or nature arising out of this lease. The parties hereto acknowledge and agree that periodically throughout the term of this lease, the Florida Fish and Wildlife Conservation Commission and/or other state or local agencies, may conduct controlled burns within the Water Conservation Areas. LESSEE hereby indemnifies and holds harmless LESSOR from any and all claims, actions, lawsuits and demands of any kind or nature arising from or related to such controlled burns.

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

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

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

22. BINDING EFFECT AND INUREMENT: This lease shall be binding on and shall inure to the benefit of the heirs, executors, administrators and assigns of the parties hereto, but nothing contained in this paragraph shall be construed as a consent by LESSOR to any assignment of this lease or any interest therein by LESSEE.

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

24. VENUE PRIVILEGES: LESSOR and LESSEE agree that LESSOR has venue privilege as to any litigation arising from matters relating to this lease. Any such litigation between LESSOR and LESSEE shall be initiated and maintained only in Leon County, Florida.

25. UTILITY FEES: LESSOR shall not be responsible for the furnishing of any services of any kind to LESSEE during the term of this lease.

26. MINERAL RIGHTS: This lease does not cover petroleum or petroleum products or minerals and does not give the right to LESSEE to drill for or develop the same, and LESSOR specifically reserves the right to lease the leased premises for purposes of exploring and recovering oil and minerals by whatever means appropriate; provided, however, that LESSEE shall be fully compensated for any and all damages that might result to the leasehold interest of LESSEE by reason of such exploration and recovery operations.

27. CONDITION OF PREMISES: LESSOR assumes no liability or obligation to LESSEE with reference to the condition of the leased premises. The leased premises herein are leased by LESSOR to LESSEE in an as is condition, with LESSOR assuming no responsibility for the care, repair, maintenance or improvement of the leased premises for the benefit of LESSEE.

28. NOTICE: All notices given under this lease shall be in writing and shall be served by professional courier service, such as Fed Ex or USPS, including, but not limited to, notice of any violation served pursuant to Section 253.04, Florida Statutes, to the last address of the party to whom notice is to be given, as designated by such party in writing. If LESSEE fails to accept receipt after 3 attempts by professional courier to deliver notice to LESSEE, then such failure shall be deemed a material breach of this lease and LESSOR may at its option terminate this lease. LESSEE must notify LESSOR in writing of any change in address or phone numbers within 30 days. LESSOR and LESSEE hereby designate their address as follows:

LESSOR: Department of Environmental Protection
Division of State Lands
Bureau of Public Land Administration, M. S. 130
3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000

LESSEE: _____
_____
_____
_____

29. DAMAGE TO THE PREMISES: (a) LESSEE shall not do, or suffer to be done, in, on or upon the leased premises or as affecting said leased premises or adjacent properties, any act which may result in damage or depreciation of value to the leased premises or adjacent properties, or any part thereof. (b) LESSEE shall not generate, store, produce, place, treat, release or discharge any contaminants, pollutants or pollution, including, but not limited to, hazardous or toxic substances, chemicals or other agents on, into, or from the leased premises or any adjacent lands or waters in any manner not permitted by law. For the purposes of this lease, "hazardous substances" shall mean and include those elements or compounds defined in 42 USC Section 9601 or which are contained in the list of hazardous substances adopted by the United States Environmental Protection Agency (EPA) and the list of toxic pollutants designated by the United States Congress or the EPA or defined by any other federal, state or local statute, law, ordinance, code, rule,

regulation, order or decree regulating, relating to, or imposing liability or standards of conduct concerning any hazardous, toxic or dangerous waste, substance, material, pollutant or contaminant. "Pollutants" and "pollution" shall mean those products or substances defined in Chapters 376 and 403, Florida Statutes, and the rules promulgated thereunder, all as amended or updated from time to time. LESSEE shall maintain a System as defined in paragraph 16 or this lease, which shall not discharge nor permit others to discharge sewage effluent into any area within or surrounding the leased premises. In the event of LESSEE'S failure to comply with this paragraph, LESSOR may terminate this lease and LESSEE shall, at its sole cost and expense, promptly commence and diligently pursue any legally required closure, investigation, assessment, cleanup, decontamination, remediation, restoration and monitoring of (1) the leased premises, and (2) all off-site ground and surface waters and lands affected by LESSEE'S failure to comply, as may be necessary to bring the leased premises and affected off-site waters and lands into full compliance with all applicable federal, state or local statutes, laws, ordinances, codes, rules, regulations, orders and decrees, and to restore the damaged property to the condition existing immediately prior to the occurrence which caused the damage. LESSEE'S obligations set forth in this paragraph shall survive the termination or expiration of this lease. This paragraph shall not be construed as a limitation upon LESSEE'S obligations regarding indemnification set forth in paragraph 18 of this lease, nor upon any other obligations or responsibilities of LESSEE as set forth herein. Nothing herein shall relieve LESSEE of any responsibility or liability prescribed by law for fines, penalties and damages levied by governmental agencies, and the cost of cleaning up any contamination caused directly or indirectly by LESSEE'S activities or facilities. Upon discovery of a release of a hazardous substance or pollutant, or any other violation of local, state or federal law, ordinance, code, rule, regulation, order or decree relating to the generation, storage, production, placement, treatment, release or discharge of any contaminant, LESSEE shall report

such violation to all applicable governmental agencies having jurisdiction, and to LESSOR, all within the reporting periods of the applicable governmental agencies.

30. ENVIRONMENTAL AUDIT: At LESSOR'S discretion, LESSEE shall provide at LESSEES sole cost and expense to LESSOR a current Phase I environmental site assessment conducted in accordance with the Department of Environmental Protection, Division of State Lands' standards prior to termination of this lease, and if necessary a Phase II environmental site assessment.

31. BREACH OF COVENANTS, TERMS, OR CONDITIONS AND DEFAULT AND FORFEITURE: Should LESSEE breach any of the covenants, terms, or conditions of this lease, with the exception of rental payment that is addressed in paragraph 7, LESSOR shall give LESSEE written notice to remedy such breach within thirty days of such notice. In the event LESSEE fails to remedy the breach to the satisfaction of LESSOR within the time period specified, or if the LESSEE abandons the leased premises, then LESSOR may at its option, terminate this lease without further notice, and recover from LESSEE all damages LESSOR may incur by reason of the breach including, but not limited to, the cost of recovering the leased premises, the cost of removing the structure from the leased premises, attorneys' fees, and the amount by which the unpaid rent for the balance of the term exceeds the amount of such rental loss which LESSEE proves could be reasonably avoided. Should LESSEE, at any time during the term of this lease, suffer or permit to be filed against it an involuntary, or voluntary, petition in bankruptcy, or institute a composition or an arrangement proceeding under Chapter X or XI of the Chandler Act, or make any assignments for the benefit of its creditor; or should a receiver or trustee be appointed for LESSEE'S property because of LESSEE'S insolvency, and the said appointment is not vacated within thirty days thereafter, or should LESSEE'S leasehold interest be levied on and the lien thereof not discharged within thirty days after said levy has been made; or

should LESSEE fail promptly to make the necessary returns and reports required of it by state and federal law, or should LESSEE fail to promptly comply with all governmental regulations, both state and federal; or should LESSEE fail to comply with any of the terms and conditions of this lease and such failure shall jeopardizes the rights of LESSOR; then, in such event, and upon the happening of any of said events, LESSOR shall have the right, at its discretion, to consider the same a default on the part of LESSEE of the terms and provisions hereof, and, in the event of such default, LESSOR shall have the option of either declaring this lease terminated, without further notice, and the interest of LESSEE forfeited, or maintaining this lease in full force and effect and exercising all rights and remedies herein conferred upon LESSOR. The pendency of bankruptcy proceedings or arrangement proceedings to which LESSEE shall be a party shall not preclude LESSOR from exercising either option herein conferred upon LESSOR. In the event LESSEE, or the trustee or receiver of LESSEE'S property, shall seek an injunction against LESSOR'S exercise of either option herein conferred, such action on the part of LESSEE, his trustee or receiver, shall automatically terminate this lease as of the date of the making of such application, and in the event the Court shall enjoin LESSOR from exercising either option herein conferred, such injunction shall automatically terminate this lease. LESSEE expressly waives the service of notice requirements of section 83.20, Florida Statutes.

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

33. CONDITIONS AND COVENANTS: All of the provisions of this lease shall be deemed covenants running with the land included in the leased premises, and construed to be "conditions"

as well as "covenants" as though the words specifically expressing or imparting covenants and conditions were used in each separate provision.

34. PARTIAL INVALIDITY: If any term, covenant, condition or provision of this lease shall be ruled by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

35. ARCHAEOLOGICAL AND HISTORIC SITES: Execution of this lease in no way affects any of the parties' obligations pursuant to Chapter 267, Florida Statutes. The collection of artifacts or the disturbance of archaeological and historic sites on state-owned lands is prohibited unless prior authorization has been obtained from the Department of State, Division of Historical Resources.

36. SALES TAX: LESSEE shall be responsible for the payment of all required sales tax calculated on the rental payments of this lease as required by Section 212.031, Florida Statutes and shall submit such sales tax in addition to and along with the rental payments required by paragraph 6 of this lease, unless LESSEE provides written documentation verifying that the Department of Revenue has authorized LESSEE to pay the required sales tax by direct payment to the Department of Revenue or that the Department of Revenue has issued LESSEE an exemption for such sales tax payments.

37. SOVEREIGNTY SUBMERGED LANDS: This lease does not authorize the use of any lands located waterward of the mean or ordinary high-water line of any lake, river, stream, creek, bay, estuary, or other water body or air space there above.

38. CONVICTION OF FELONY: If LESSEE or any principal thereof is convicted of a felony during the term of this lease, such conviction shall constitute, at the option of LESSOR, grounds for termination of this lease.

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

40. MAINTENANCE OF THE IMPROVEMENTS: LESSEE shall maintain the real property contained within the leased premises and the structure located thereon in a state of good condition, working order and repair so that the structure remains habitable including, but not limited to, keeping the leased premises free of trash or litter. If the habitable structure becomes uninhabitable, this shall be grounds for the immediate termination of this lease by LESSOR, notwithstanding the provisions of paragraph 31 of this lease. For purposes of defining "habitable", a structure with an intact roof, walls and safe decking shall be considered habitable. If the structure is damaged by fire or other casualty, then LESSEE shall have one year from date of the fire or casualty to rebuild or repair the structure to substantially the same condition as existed before the damage, but only within the existing footprint described in Exhibit "A" and indicated on the map attached hereto as Exhibit "B. The burning or burying of trash or litter on the leased premises is strictly prohibited. All areas surrounding the structure must be kept in their natural state. In addition, any and all personal property, landscaping or improvements remaining outside the leased premises commencing thirty (30) days after the execution date of this lease shall become the property of LESSOR and subject to immediate removal

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

42. INTEREST IN STRUCTURE WITHIN LEASED PREMISES: During the term of this lease, the LESSEE shall maintain an ownership interest in the structure located within the leased premises and if such interest is conveyed to a third party without an assignment, previously approved in writing by LESSOR, to such third party of LESSEE'S interest in this lease, this lease

may be terminated at the sole option of the LESSOR. Prior to a sale and/or termination of the LESSEE'S interest in the structure, the LESSEE shall inform any potential buyer of the existence of this lease and all its terms and conditions and shall complete and execute any documents required by the LESSOR to affect an assignment and/or modification of this lease. Failure to do so will not relieve the LESSEE from responsibility for full compliance with the terms and conditions of this lease, which include, but are not limited to, payment of all fees and/or penalty assessments incurred prior to such act.

43. COMPLIANCE WITH FLORIDA LAWS: This lease shall be governed by and interpreted according to the laws of the State of Florida. In conjunction with the use of the leased premises, the LESSEE shall at all times comply with all Florida Statutes, local laws and ordinances and all administrative rules promulgated thereunder. Any unlawful activity which occurs on the leased premises or in conjunction with the use of the leased premises shall be grounds for the termination of this lease by the LESSOR. LESSEE agrees that this lease is contingent upon and subject to LESSEE obtaining all applicable permits and complying with all applicable permits, regulations, ordinances, rules, and laws of the State of Florida and the United States and of any political subdivision and agency of either.

44. WATER LEVELS: The LESSEE hereby waives any and all claims on the part of the LESSEE and agrees to indemnify and hold harmless LESSOR, the United States of America and the State of Florida from any and all claims, damages or losses or demands of any kind or nature, which may arise or be incident to regulation of water levels associated with the leased premises by the LESSOR, the South Florida Water Management District, and/or the U.S. Army Corps of Engineers. LESSOR will neither guarantee groundwater levels nor guarantee any level of flood protection.

45. WAIVER OF JURY TRIAL: LESSOR and LESSEE hereby waive trial by jury in any action or proceeding brought by either party against the other party pertaining to any matter whatsoever arising out of or in any way connected with this lease or LESSEE'S occupancy of the leased premises.

46. GENERATOR AND CATCH PAN: At no time should there be any signs of oil, gasoline, antifreeze, diesel fuel or any other hazardous materials leaching from the mechanical equipment. A catch pan must be used at all times and fully operational.

WITNESSES:

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

_____
Original Signature
(SEAL)

_____
Print/Type Name of Witness

BY: _____
Division Director, Division of State Lands,
Department of Environmental Protection,
for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida.

_____
Original Signature

_____
Print/Type Name of Witness

"LESSOR"

STATE OF FLORIDA
COUNTY OF LEON

The foregoing instrument was acknowledged before me this _____ day of _____, 20___ by _____ Division Director, Division of State Lands, Department of Environmental Protection, as agent for and on behalf of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. He is personally known to me.

APPROVED AS TO FORM AND LEGALITY:

_____
Notary Public, State of Florida

_____
DEP Attorney

_____
Printed, Typed or Stamped Name

My Commission Expires:

_____
Commission/Serial No._____

WITNESSES:

_____
Original Signature

_____
Name: _____

_____
Original Signature

_____
Name: _____

_____
Typed/Printed Name of Witness

"LESSEE"

_____
Original Signature

_____
Typed/Printed Name of Witness

STATE OF_____
COUNTY OF_____

The foregoing instrument was acknowledged before me this _____ day of _____, 20 by_____, who is (are) personally known to me or who has produced _____, as identification.

My Commission Expires:

_____

Commission/Serial No._____

_____
Notary Public, State of_____

_____
Printed, Typed or Stamped Name

(Corporate Seal)

DISTRICT:
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

ATTEST:

By: _____
Name: _____, Chairman

By: _____
Name: _____
Its: District Clerk/Secretary

Legal Form Approved
Office of Counsel

By: _____
SFWMD Atty.

STATE OF FLORIDA
COUNTY OF PALM BEACH

The foregoing instrument was acknowledged before me this ___ day of _____, 20___, by _____ and _____, Governing Board Chairman and District Clerk/Secretary, respectively, of the South Florida Water Management District, a governmental entity created by Chapter 373, Florida Statutes, on behalf of the entity, who are personally known to me.

_____
Notary Public
Print: _____
My Commission Expires:

COMMISSION:
FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION

ATTEST:

By: _____
Name: _____, Chairman

By: _____
Name:_____, Comm'n Clerk/Sec.

Legal Form Approved:

By: _____
FFWCC Atty.

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this _____ day of _____, 20___, by _____ and _____, as Chairman and Commission Clerk/Secretary, respectively, of the Florida Fish and Wildlife Conservation Commission, on behalf of the entity, who are personally known to me.

_____
Notary Public
Print: _____
My Commission Expires:

**EXHIBIT "A"**

Camp Name: _____

Location: _____ County: _____

Section-Township-Range: ____-___S-___E

GPS Coordinates: _____

**EXHIBIT "B"**
**MAP**

### 11.2.3 South Florida Water Management District Easement

THIS INDENTURE, Made and entered into this 26th day of January A. D. 1951, by and between W. T. PRICE and VANNIE E. PRICE, his wife, 3200 S. W. 27th Avenue, Miami, Dade County, Florida, as parties of the first part, and CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, a body corporate created by the Acts of the Florida Legislature of 1949, with its principal office in West Palm Beach, Palm Beach County, Florida, party of the second part;

W I T N E S S E T H

That for and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt of which is hereby acknowledged and confessed, W. T. PRICE and VANNIE E. PRICE, his wife, parties of the first part, does hereby bargain, sell, grant and convey to the CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, party of the second part, its successors or assigns, the right, privilege, use and easement in and to the lands hereinafter described for any and all purposes necessary to the construction, maintenance and operation of any project in the interest of flood control, reclamation, conservation and allied purposes now or that may hereafter be conducted by the grantee herein, its successors or assigns, including the right to permanently or intermittently flood all or any part of the area covered hereby as a result of the said construction, maintenance, or operation, in carrying out the purposes and intents of the statutes of the State of Florida relating to CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT presently existing or that may be enacted in the future pertaining thereto. Any part or the whole thereof of the right, privilege, use and easement herein granted may be assigned for the public purposes contemplated herein by the grantee at its own option and sound discretion without approval of the grantors herein.

Such right, privilege, use and easement is given in and to the following described lands, situate, lying and being in the County of Dade State of Florida, to-wit:

All of Sections 19, 20, 21, 22 and 23 in Township 52 South, Range 37 East; and

All of Section 24, less the S½ of SE¼ and less the NE¼ of SE¼ in Township 52 South, Range 37 East; and

All of Sections 23 and 24 in Township 52 South, Range 38 East; and

Tracts 65 to 128, inclusive, according to the plat of Everglades Land Company's Subdivision, in Section 29, Township 52 South, Range 38 East, as recorded in Plat Book 2, Page 1, Dade County, Florida, public records; and

Tracts 65 to 128, inclusive, according to the plat of Everglades Land Company's Subdivision, in Section 30, Township 52 South, Range 38 East, as recorded in Plat Book 2, Page 1, Dade County, Florida, public records; and

Tracts 1 to 65, inclusive, and Tracts 67 to 93, inclusive, according to the plat of Everglades Land Company's Subdivision, in Section 31, Township 52 South, Range 38 East, as recorded in Plat Book 2, Page 1, Dade County, Florida, public records; and

Tracts 1 to 63, inclusive, according to the plat of Everglades Land Company's Subdivision, in Section 32, Township 52 South, Range 38 East, as recorded in Plat Book 2, Page 1, Dade County, Florida, public records.

It is specifically understood and agreed that the foregoing grant of the uses, rights, and privileges aforesaid shall in no wise prohibit or interfere with the right of the parties of the first part, their heirs, administrators, assigns or lessees, to:

(a) Lease or conduct operations on the premises herein described, for the exploration or drilling for, or the developing, producing, storing or removing of oil, gas, or other minerals in or under the aforesaid premises.

(b) Make such further use as will not conflict with the purposes for which this grant is given.

To exercise these rights, the grantors, their heirs, administrators, assigns or lessees, and agents and employees, shall have such right of ingress and egress to and from such lands as may be necessary. It being further specifically understood and agreed that the rights retained under the provisions of this paragraph shall be exercised by the grantors, their heirs, administrators, assigns or lessees, subject to any reasonable rules and regulations which the Governing Board of the Flood Control District may prescribe for the efficient maintenance and operation of a public project in the interest of flood control, reclamation, conservation and allied purposes, but which shall permit the reserved rights to be exercised so that oil, gas and minerals may be developed, extracted and removed from the District in accordance with sound engineering principles.

The District hereby assumes the responsibility for 1950 taxes and years subsequent thereto, as referred to in Section 5, Chapter 25213, Laws of Florida, Acts of 1949, so long as said land in which the easement is granted remains within the Conservation Areas of the Flood Control District as determined by Engineers in charge of said project.

This easement granted and conveyed to the Flood Control District shall be for the public purposes of the said District as contemplated herein and as set forth in the statutes of the State of Florida, and is subject to the condition, that in the event any or all of said lands are not within the area finally determined by the Engineers in charge of said project to be required for Conservation Area purposes, any or all of such lands not within the required area shall automatically and immediately revert to the grantors herein.

IN TESTIMONY WHEREOF, the parties hereto have caused these presents to be executed, the party of the second part by its duly authorized officers, and its corporate seal to be affixed hereunto.

W. T. Price (SEAL)

Vannie B. Cave (SEAL)

Parties of the First Part

Signed, sealed and delivered
in our presence:

Marcella C. Baker

As to Parties of the First Part

CENTRAL AND SOUTHERN FLORIDA
FLOOD CONTROL DISTRICT

By _____
Chairman, Governing Board

ATTEST:

_____
Secretary

Signed, sealed and delivered
in our presence:

F. D. McCray

C. A. Leak Jr.

As to Party of the Second Part

STATE OF FLORIDA
COUNTY OF DADE

I HEREBY CERTIFY That on this 26th day of January A. D. 1951, before me personally appeared W. T. PRICE and VANNIE E. PRICE, his wife, to me well known and known to me to be the persons described in and who executed the foregoing conveyance to CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT and they acknowledged the execution thereof to be their free act and deed for the uses and purposes therein mentioned.

WITNESS my signature and official seal at Miami in the County of Dade and State of Florida the day and year last aforesaid.

Notary Public

My Commission Expires:
Notary Public, State of Florida at Large
My Commission Expires Sept. 5, 1952.

State of Florida, County of Dade.
This instrument was filed for record the 2 day of Feb
1951 at 10 10 A. M and duly recorded in Deed
Book 3394 on Page 368 File No. AA 122021
E. B. LEATHERMAN
Clerk Circuit Court
By [illegible] D.C

## 11.3 Public Hearing Notice, Advertisements, and Press Release

### 11.3.1 Public Hearing Notice

# NOTICE

**The Florida Fish and Wildlife Conservation Commission (FWC)**
**Announces a**

# PUBLIC HEARING

## for the
## Everglades Complex of
## Wildlife Management Areas
## Management Plan

**Broward County, Florida**
**7:00 P.M. Tuesday, October 25th, 2022**
Long Key Natural Area & Nature Center
3501 SW 130th Ave
Davie, FL 33330

**Palm Beach County, Florida**
**7:00 P.M. Wednesday, October 26th, 2022**
Jane M. Thompson Memorial Chambers
301 N. Olive Ave, 6th Floor
West Palm Beach, FL 33401

**PURPOSE: To receive public comment regarding considerations for the FWC ten-year Land Management Plan for the Everglades Complex of Wildlife Management Areas (ECWMA). This hearing is being held EXCLUSIVELY for discussion of the DRAFT Everglades Complex of WMAs Management Plan. This meeting is not being held to discuss area hunting or fishing regulations. For more information on the process for FWC rule and regulation development go online to: http://myfwc.com/about/rules-regulations/**

A Management Prospectus for the Everglades Complex of WMAs is available upon request. For a copy, please contact Clara Boyas, Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850) 404-6132.

This program receives Federal financial assistance from the U.S. Fish and Wildlife Service. Under Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972, the U.S. Department of the Interior 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 if you need more information, please write to: Office of Diversity, Inclusion and Civil Rights, U.S. Department of the Interior, 1849 C Street, NW Washington, D.C. 20240

### 11.3.2 Internal FWC Press Release

# Help plan the future of the Everglades Complex of Wildlife Management Areas

The Florida Fish and Wildlife Conservation Commission (FWC) will present a draft 10-year management plan for the EC of Wildlife Management Areas at two public hearings: one in Broward County on Tuesday, October 25th, 2022, and a second in Palm Beach County on Wednesday, October 26th, 2022.

The public hearing in Broward County will be held at 7 p.m. at the Long Key Natural Area & Nature Center, 3501 SW 130th Ave, Davie, FL 33330. The public hearing in Palm Beach County will be held at 7 p.m. at the Jane M. Thompson Memorial Chambers, 301 N. Olive Ave, 6th Floor, West Palm Beach, FL 33401. The public is encouraged to attend and will have the opportunity to comment and ask questions regarding the management plan for the FWC-managed WMA.

The Everglades Complex of WMAs encompasses approximately 736,881 acres in Palm Beach, Broward, and Miami-Dade counties. The Everglades is the largest wetland and subtropical wilderness in the United States; it contains the largest mangrove ecosystem in the western hemisphere, the largest continuous stand of sawgrass prairie, and the most significant breeding ground for wading birds in North America. The Everglades Complex WMA conserves critically important elements of the Everglades ecosystem and provides essential habitat for the wildlife species that inhabit the area. The Everglades Complex of WMAs also offers many opportunities for public recreation, including hunting, fishing, wildlife viewing, bird watching, hiking, and biking.

“The ECWMA was purchased to ensure the preservation of fish, wildlife and other natural and cultural resources for future generations, and to provide fish- and wildlife-based outdoor recreation opportunities to the public,” said Clara Boyas, FWC land conservation planner. “This draft management plan will specify how we intend to accomplish that goal.”

For more information on this upcoming public hearing, go to MyFWC.com/Conservation and select “Terrestrial Programs” then “Management Plans.” Hunting and fishing regulations are not included in this plan or meeting; they are addressed through a separate public process. Please visit MyFWC.com/hunting/regulations or MyFWC.com/fishing/freshwater/regulations to learn more about hunting and fishing regulations.

Pursuant to Chapters 253 and 259, Florida Statutes, all lands purchased with public funds must have a management plan that ensures the property will be managed in a manner that is consistent with the intended purposes of the purchase. For more information and background on management plans and their goals, visit MyFWC.com/conservation/management-plans/terrestrial.

To obtain a copy of the land management prospectus for the Everglades Complex of WMAs, call Clara Boyas at (850) 404-6132 or email Clara.Boyas@myfwc.com.

To learn more about the ECWMA, go to MyFWC.com and select “Wildlife Viewing” then “Wildlife Management Areas.” The following areas are within the ECWMA: Everglades and Francis S. Taylor , Holey Land, and Rotenberger .

This program receives Federal financial assistance from the U.S. Fish and Wildlife Service. Under Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972, the U.S. Department of the Interior 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 if you need more information, please write to:

Office of Diversity, Inclusion and Civil Rights

U.S. Department of the Interior

1849 C Street, NW

Washington, D.C. 20240

### 11.3.3 Newspaper

SunSentinel

**Affidavit – Affidavits:**
**Publication:** Affidavit
**Section:** Affidavits
**AdSize:** 1 Column
**Lines:** 0
**Run Date(s):** Sunday, October 9, 2022
**Color:** No

## Preview:

**THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) ANNOUNCES TWO PUBLIC HEARINGS FOR THE FWC LEAD MANAGED PORTIONS OF EVERGLADES COMPLEX OF WILDLIFE MANAGEMENT AREAS LOCATED IN PALM BEACH, BROWARD, AND MIAMI-DADE COUNTIES, FLORIDA.**

Broward County, Florida
7:00 P.M. Tuesday, October 25th, 2022
Long Key Natural Area & Nature Center
3501 SW 130th Ave
Davie, FL 33330

Palm Beach County, Florida
7:00 P.M. Wednesday, October 26th, 2022
Jane M. Thompson Memorial Chambers
301 N. Olive Ave, 6th Floor
West Palm Beach, FL 33401

PURPOSE: To receive public comment regarding considerations for FWC's ten-year Management Plan for the FWC Lead Managed Portions of Everglades Complex of Wildlife Management Areas (ECWMA)

This hearing is being held EXCLUSIVELY for discussion of the DRAFT Everglades Complex WMA Management Plan. This meeting is not being held to discuss area hunting or fishing regulations. For more information on the process for FWC rule and regulation development visit our Proposed Rule Changes page.

A Management Prospectus for the Everglades Complex of WMAs and copy of the agenda is available upon request from the Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning Group, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850) 404-6132 or by e-mail at Clara.Boyas@myfwc.com

This program receives Federal financial assistance from the U.S. Fish and Wildlife Service. Under Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972, the U.S. Department of the Interior 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 if you need more information, please write to:
Office of Diversity, Inclusion and Civil Rights
U.S. Department of the Interior
1849 C Street, NW
Washington, D.C. 20240

### 11.3.4 Florida Administrative Register Ad

Notice of Meeting/Workshop Hearing

**FISH AND WILDLIFE CONSERVATION COMMISSION**

**Freshwater Fish and Wildlife**

The Fish and Wildlife Conservation Commission announces a public meeting to which all persons are invited.

DATE AND TIME: October 25, 2022, 7:00 p.m.

PLACE: Long Key Natural Area & Nature Center, 3501 SW 130th Ave., Davie, FL 33330

GENERAL SUBJECT MATTER TO BE CONSIDERED: The Florida Fish and Wildlife Conservation Commission (FWC) announces a PUBLIC HEARING for the FWC Lead Managed Portions of Everglades Complex of Wildlife Management Areas located in Palm Beach, Broward, and Miami-Dade Counties, Florida.

Broward County, Florida

7:00 P.M. Tuesday, October 25th, 2022

Long Key Natural Area & Nature Center

3501 SW 130th Ave.

Davie, FL 33330

PURPOSE: To receive public comment regarding considerations for FWC's ten-year Management Plan for the FWC Lead Managed Portions of Everglades Complex of Wildlife Management Areas (ECWMA)

This hearing is being held EXCLUSIVELY for discussion of the DRAFT Everglades Complex WMA Management Plan. This meeting is not being held to discuss area hunting or fishing regulations. For more information on the process for FWC rule and regulation development visit our Proposed Rule Changes page.

A Management Prospectus for the Everglades Complex WMA and copy of the agenda is available upon request from the Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning Group, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850) 404-6132 or by e-mail at Clara.Boyas@myfwc.com

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U.S. Department of the Interior

1849 C Street, NW

Washington, D.C. 20240

A copy of the agenda may be obtained by contacting: Clara.Boyas@myFWC.com

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 14 days before the workshop/meeting by contacting: . If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771 (TDD) or 1(800)955-8770 (Voice).

For more information, you may contact: Clara Boyas via telephone at (850) 404-6132 or email Clara.Boyas@myFWC.com

Notice of Meeting/Workshop Hearing

**FISH AND WILDLIFE CONSERVATION COMMISSION**

**Freshwater Fish and Wildlife**

The Fish and Wildlife Conservation Commission announces a public meeting to which all persons are invited.

DATE AND TIME: October 26, 2022, 7:00 p.m.

PLACE: Jane M. Thompson Memorial Chambers, 301 N. Olive Ave., 6th Floor, West Palm Beach, FL 33401

GENERAL SUBJECT MATTER TO BE CONSIDERED: The Florida Fish and Wildlife Conservation Commission (FWC) announces a PUBLIC HEARING for the FWC Lead Managed Portions of Everglades Complex of Wildlife Management Areas located in Palm Beach, Broward, and Miami-Dade Counties, Florida.

Palm Beach County, Florida
7:00 p.m. Wednesday, October 26th, 2022
Jane M. Thompson Memorial Chambers
301 N. Olive Ave., 6th Floor
West Palm Beach, FL 33401

PURPOSE: To receive public comment regarding considerations for FWC's ten-year Management Plan for the FWC Lead Managed Portions of Everglades Complex of Wildlife Management Areas (ECWMA)

This hearing is being held EXCLUSIVELY for discussion of the DRAFT Everglades Complex WMA Management Plan. This meeting is not being held to discuss area hunting or fishing regulations. For more information on the process for FWC rule and regulation development visit our Proposed Rule Changes page.

A Management Prospectus for the Everglades Complex WMA and copy of the agenda is available upon request from the Florida Fish and Wildlife Conservation Commission, Land Conservation and Planning Group, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Telephone: (850) 404-6132 or by e-mail at Clara.Boyas@myfwc.com

This program receives Federal financial assistance from the U.S. Fish and Wildlife Service. Under Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, sex, or disability.

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## 11.4 Public Input

### 11.4.1 Management Advisory Group Meeting Results

Everglades Complex of Wildlife Management Areas (ECWMA)
Management Advisory Group (MAG)
**Consensus Meeting Results**

*September 14th, 2022 | Fort Lauderdale, Florida*

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

The MAG consensus meeting was held on the morning of *September 14th, 2022* at Secret Woods Nature Center, in Fort Lauderdale, Florida in Broward County. The ideas found below were provided by stakeholders for consideration in the 2023 - 2033 Management Plan (MP) with priority determined by vote. These ideas represent a valuable source of information to be used by biologists, planners, administrators, and others during the development of the MP. Upon approval by FWC, the Acquisition and Restoration Council (ARC), and the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), the MP will guide the activities of FWC personnel over the ten-year duration of the management plan and will help meet agency, state, and federal planning requirements.

Numbers to the left of **bold-faced ideas** listed below represent the total number of votes and the score of each idea. Rank is first determined by the number of votes and then by the score. Score is used to break ties when two or more ideas have the same number of votes. A lower score indicates higher importance because each voter's most important idea received a score of 1, and their fifth most important idea received a score of 5. Ideas not receiving any votes are listed were still considered during the development of the Management Prospectus.

Statements following the bold-faced ideas represent a synopsis of the clarifying discussion of ideas as transcribed and interpreted by the FWC recorder at the meeting. As indicated above, the ideas below are presented in priority order:

| Rank | # of Votes | Score | Idea | |
|---|---|---|---|---|
| 1. | [6] | [7] | 1. | **Continue Perscribed Burning and collaborate/cooperate with neighboring agencies to maximize burn acreage:** Continue the Prescribed Burn Plan already in place, and partner with other agencies to update and revise the plan as necessary. Continue to refine burn plan and prioritize burn units for maximum benefit. The FWC issues authority, education, and training for the South Florida Water Management District, as well as assists them on prescribed burns. Utilize grants for more opportunity to do so. Wildfires benefit the area greatly. |
| 2. | [6] | [19] | 14. | **Increase law enforcement presence and Increase funding for WMA LE:** Designated FWC Law Enforcement for the area would be beneficial. |
| 3. | [3] | [8] | 25. | **Continue to conduct and participate in hydrological restoration; coordinate with government agencies to manage water quality inflow; restore the inundation, flow, and hydroperiod duration and timing; include Peat soil processes in water depth management decisions; and prioritize water flows:** The FWC should cooperate wih other agencies to prioritize water flows, quality etc; requests for more from the WMD, as well as giving them more details in their recommendation. A water treatement system was mentioned, such as riparian buffers, a soybean-management method, or a water treatment system; it is important that water is, "cleaner when it leaves than when it got there." Regulating water flow and depth will greatly benefit the ECWMA: the timing of flow is essential for wildlife and soil quality; tree islands currently flood at the wrong times, which is detrimental to snakes, turtles, and small mammals. The hydroperiod time trajectory is essential, because peat accumulates if its wet enough, and dissapears if it is too dry. |

| Rank | # of Votes | Score | Idea | |
|---|---|---|---|---|
| 4. | [3] | [9] | 11. | **Prevent further marsh destruction:** There was a problem with having ATVs in area, but it was shut down in 2008. Since then, it has been banned outside of being used for hunting. Currently, there is an identical problem with wheeled buggies and Jeeps. These vehicles are creating holes and tearing up the vegetation; they are very destructive and need to be limited. |
| 5. | [2] | [7] | 13. | **Management and monitoring of game and non-game species:** This goal can be met via wildlife inventory surveys, continuing to facilitate check station operators for hunting data, and aerial deer monitoring. |
| 6. | [2] | [7] | 17. | **Manage invasive plant species:** Staff should ID and target current Category I FISC species. |
| 7. | [2] | [7] | 30. | **Increase funding for personell:** This will provide more FWC staff and law enforcement, which will improve many of the other goals. |
| 8. | [2] | [9] | 38. | **Accommodate CERP restoration in management goals and objectives, and restore historic communities in cooperation with CERP:** The cooperation with CERP is such that FWC staff are not sitting on regional commitees. This WMA is at the center of some of the projects that CERP brings forward. The FWC should not manage the land for what it is, but manage for what it will be. FWC needs to sit on committees to know what's going on because results of CERP will affect how the Everglades ecosystem and area is managed. The FWC needs to be cognizant that CERP will change this area, so don't manage for what it is now, but what it will be |
| 9. | [1] | [1] | 4. | **Landscape approach to management:** The FWC should consider the different elevations holistically; for example, shallow for islands, deep for slough. There needs to be emphasis on flowing water; decompartmentalization helps. |

| Rank | # of Votes | Score | Idea | |
|---|---|---|---|---|
| 10. | [1] | [1] | 40. | **Require a permit for general use:** Currently, the public only needs a permit if hunting and frogging. Requiring more groups to get a permit will help provide funding for other projects. This should be considered mainly for people who are using the area and also having an impact on it. |
| 11. | [1] | [2] | 3. | **Tree island preservation and restoration:** From about 1914-90s, 70% of area was lost, including 50% of the tree islands. Because the habitat as a whole has changed, the function of tree islands has also changed. These communities are very important for the ecosystem, and managing it now is easier because of roads, waterways, etc. |
| 12. | [1] | [2] | 12. | **Imperiled and locally important species monitoring and management:** Continue following the WCPR prioritization and recovery program. |
| 13. | [1] | [2] | 20. | **Control plant and animal invasive species:** It is not just plants or animals, sometimes they are synergystic. Sometimes plants aren't a problem until the right animal gets there. Both need to be attended to. Sanitation of possible transportation on the area for phyto and other organisms is essential because prevention is useful in addition to controlling; there should be clean horses, boots, boats, tires, etc. People not cleaning can be huge vectors in terms of transporting invasives, and sanitation is a huge part of prevention. This should apply to all users. |
| 14. | [1] | [3] | 46. | **Expand public use where appropriate**. |
| 15. | [1] | [4] | 7. | **Restore flow to L5 in Water Conservation Area 3:** As a general observation, there is a lack of culverts or control structures between the Miami Canal and U.S. 27. This is similar to how the Tamiami Trail should open up for sheet flow. |
| 16. | [1] | [5] | 2. | **Continue cultural resource monitoring and management**. |

| Rank | # of Votes | Score | Idea | |
|---|---|---|---|---|
| 17. | [1] | [5] | 10. | **Restore upland communities to historic slough:** During Hurricane Wilma, a pump in Holey Land was broken and wasn't fixed until 6 years ago. When the pump got fixed, the HWMA was back to operating at regularly, but we created a massive new habitat that shouldn't have happened. This area needs to be reverted back to marsh. |
| 18. | [1] | [5] | 21. | **Expand public use (especially hunting and environmental education); increase public interprative and informational materials on site and online; and georeference trail maps and landmarks:** In terms of education, over time funding for environmental education has been lost. A lot of resources previously available to staff that had handled that program has fallen back. Now on the area there is a lot of "do it on your own", instead of having guides. More funding toward environmental education would be helpful. This region is underrepresented histoically, and it's important to make sure interesting facts are recorded and not lost. Maps are helpful to public, especially online. These maps already exist, but can be improved. |
| 19. | [1] | [5] | 24. | **Native plant management and monitoring:** Continue the programs the FWC are doing for cattail and other native nuisances. Complete physical, chemical treatment, monitoring as well. |
| 20. | [1] | [5] | 32. | **Identify specific management needs for unique habitats**: Changes are expected as water levels change. The FWC needs to ID what unique habitats they want to keep, what needs to happen, and to make that happen. Unless you ID the needs of the ECWMA, you can't project the effectiveness of management activities. |

The following items received no votes. All ideas represent valuable input, and are considered in development of the MP, but carry no rank with regard to the priority perceptions of the MAG.

| Rank | # of Votes | Score | | Idea |
|---|---|---|---|---|
| 21. | [] | [] | 5. | **Expansion of hunting invasive wildlife:** There should not be a limit on what device may be used to kill invasive species; this should be allowed at any time no matter season. Interagency collaboration could be utilized to allow entire area to be managed, as "invasives know no boundary". There should be expansion on hunting of invasive species however possible; furthermore, there should be a focus on informing the public on hunting invasive species, as well as invasive species in general. This can be done by implementing an ID program for invasive species, or creating a permit for hunting only invasive species with any firearm during any season. This goal should be expanded beyond just the levees. There needs to be a comprehensive approach where hunters can hunt any invasive while on the ECWMA. |
| 22. | [] | [] | 15. | **Be conscious of time trajectories for management activities:** Within our constraints, the FWC must think about what these management decisions are likely to lead to when making decisions. For example, water levels may become too low. |
| 23. | [] | [] | 16. | **Expand interagency collaboration**: This can be done wtihin every single area for the plan, and be considered a top priority; for example, hunting wildlife: the FWC and other agencies can coordinate to ensure that information is shared across the board. |
| 24. | [] | [] | 19. | **Maximize recreational opportunities while managing and controlling drone use**: Because it is public land, we should always maximize recreation. This goes along with the goal of having more infrastructure, staffing, and law enforcement. |
| 25. | [] | [] | 22. | **Keep management plans flexible to accommodate cooperation/conflicts with ongoing collaborative restoration projects.** |
| 26. | [] | [] | 27. | **Explicitly identify historic, current, and target landscape conditions**: When making comments or recommendations to other agencies that have more control over water, the FWC and said agencies should compare these three things. |

| Rank | # of Votes | Score | Idea | |
|---|---|---|---|---|
| 27. | [] | [] | 28. | **Increase volunteering opportunities and participation**. |
| 28. | [] | [] | 31. | **Control nuissance native species.** |
| 29. | [] | [] | 33. | **Implement a trail system:** Remove this idea. |
| 30. | [] | [] | 34. | **Manage and improve infrastructure and facilities**. |
| 31. | [] | [] | 35. | **Cooperate with partners on Everglades restoration**. |
| 32. | [] | [] | 41. | **Continue to consider inholdlings for acquisition.** |
| 33. | [] | [] | 42. | **Continue land conservation partner and cooperation agreements with other agencies.** |
| 34. | [] | [] | 43. | **Restoration of wildlife.** |
| 35. | [] | [] | 45. | **Implement management activities to support declining species and prevent imperilement.** |
| 36. | [] | [] | 47. | **Control access to fragile habitats**: With uncontroled public use, destructive activities can occur on fragile areas, which destroys those habitats. |
| 37. | [] | [] | 48. | **Monitor, manage, and increase imperiled species habitat, particularly in disturbed areas and levees.** |
| 38. | [] | [] | 49. | **Improve interagency cooperation with regard to imperiled species management.** |
| 39. | [] | [] | 50. | **Restoration of hydrology and water quality should guide WMA management activities.** |
| 40. | [] | [] | 51. | **Establish wildlife coridors:** This should be done on the levees or where its easy. |
| 41. | [] | [] | 52. | **Coordinate with geocaching groups to avoid placement impacting sensitive resources**. |

| Rank | # of Votes | Score | Idea |
|---|---|---|---|
| 42. | [] | [] | 53. **Have set goals for fire return intervals**: Better fire rotation will avoid high levels of intensity. |

**Everglades Complex of Wildlife Management Areas**
**MAG Meeting Participants**

| **Name** | **Affiliation** |
|---|---|
| **Active Participants** | |
| Josiah Freese | FWC Area Biologist |
| Jacob Larsson | FWC Area Biologist |
| Lt. Lindsay McDonald | FWC Law Enforcement |
| Lt. Chris Ryan | FWC Law Enforcement |
| Marie Desources | South Florida Water Management District |
| Adam Bass | Conservation Florida |
| Craig van der Heilden | Miccosukee Tribe of Indians |
| Chris McVoy | South Florida Wildlands Association |
| William Wilkerson | Palm Beach County Environmental Resources Management |
| Garrett Rowe | Miami-Dade County Planning Department |
| Kevin MacEwen | Florida Forest Service |
| Mitchell Aman | Miami-Dade County NRCS |
| Gwen Burzycki | Florida Native Plant Society |
| John Rosier | Everglades Coordination Council |
| **Supportive Participants** | |
| Marsha Ward | FWC Habitat and Species Conservation (HSC), Regional Biologist |
| Colleen Closius | FWC HSC, District Biologist |
| Mark Asleson | FWC HSC, Landowner Assistance Program |
| Katherine Burke | FWC Office of Public Access and Wildlife Viewing Services (OPAWVS) |
| Kelsey Stoneberg | FWC Personnel |
| Grayson Boehing | (OPAWVS) |
| William Bruce | FWC Personnel |
| Nicholas Gonzalez | Miccosukee Tribe of Indians |
| Lauren McCullough | FWC Personnel |

**Invited but Unable to Attend**

| | |
|---|---|
| Jason O'Donoughue | Division of Historical Resources |
| Dan Hipes | Florida Natural Areas Inventory |
| Nadine Bowers | Seminole Indian Tribe of Florida |
| Kevin Fischer | Palm Beach County Planning Department |
| Nan H. Rich | Broward County Commissioner |
| Barbara Blake Boy | Broward County Planning Department |
| Jon Moore | Department of Environmental Protection |
| Jon Sabatier | Everglades Bicycle Club |
| Gary Matthews | Private Property Inholder |
| Jeffrey Gouveia | Private Property Inholder |
| Okeelanta Corporation | Private Property Inholder |
| Palm Beach Pack and Paddle Club | |
| Todd Kersey | Angling Stakeholder |
| Audubon Society of the Everglades | |

**FWC Planning Personnel**

| | |
|---|---|
| Clara Boyas | Land Conservation Planner, Lead Planner |
| Jacqueline Bucheck | Senior Conservation Planner |
| Nicholas Coppock | Land Conservation Planner, Recorder |

### 11.4.2 Public Hearing Report Broward County

**PUBLIC HEARING REPORT**

**FOR**

**EVERGLADES COMPLEX OF WILDLIFE MANAGEMENT AREAS MANAGEMENT PLAN**

**HELD BY THE**

**EVERGLADES COMPLEX OF WILDLIFE MANAGEMENT AREAS MANAGEMENT ADVISORY GROUP**

**AND THE**

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

**OCTOBER 25TH, 2022 – BROWARD COUNTY, FLORIDA**

The following report documents the public input that was received at the Everglades Complex of WMAs Management Advisory Group's (MAG) public hearing for the update to the Management Plan for the ECWMA that was held at 7:00-9:00 PM, on October 25th, 2022, at the Broward County Long Key Natural Area and Nature Center in Davie, Florida.

**ECWMA Management Advisory Group Introduction:**

The meeting was introduced by Mr. Larson, an ECWMA Management Advisory Group participant, who represented the ECWMA MAG. Mr. Larson indicated that he was one of 22 stakeholders that attended the Florida Fish and Wildlife Conservation Commission (FWC) facilitated the ECWMA MAG meeting held on September 14th, 2022. Mr. Larson stated that the elements of the Draft Management Plan were being presented tonight by FWC staff, and that hardcopies of the overview, management prospectus and the ECWMA MAG meeting report were available at the front door for the public's review. Mr. Larson thanked everyone for attending and then introduced Mx. Boyas, Land Conservation Planner, FWC, to facilitate and coordinate the presentation of an overview of the ECWMA, FWC's planning process, and the draft components of the ECWMA Draft Management Plan.

**Presentation on an Overview of the ECWMA and the FWC Planning Process:**

Mx. Boyas welcomed everyone and thanked the public for their attendance. Mx. Boyas then went over an orientation of the material and explained that the purpose of the public hearing was to solicit public input regarding the Draft Management Plan for the ECWMA, and not hunting and fishing regulations, indicating there is a separate public input process for FWC rule and regulation development. Mx. Boyas then described the materials that were available at the door for public review, including the ECWMA Management Prospectus and the MAG Meeting Report. Mx. Boyas then presented the agenda for the public hearing and facilitated the

introduction of all FWC staff in attendance to the audience. Mx. Boyas then presented an overview and orientation of the ECWMA, including a description of the natural communities, data about the ECWMA visitation, revenue and economic benefits generated for the state and region by the area, wildlife species, recreational opportunities found on the area, surrounding conservation lands, surrounding Florida Forever Program Land Acquisition Projects, acquisition history, etc. They also explained FWC's planning process for the management of the public conservation land and asked if there were any questions regarding that process.

**Questions, Answers and Discussion on the ECWMA Overview and FWC's Planning Process:**

Mx. Boyas facilitated an informal question and answers session where members of the public in attendance, without necessarily identifying themselves, could ask questions of the FWC staff, and discuss the answers. Mx. Boyas again emphasized that the exclusive purpose for the public hearing was to collect public input regarding the elements of the Draft Management Plan for the ECWMA, and not to discuss area hunting, fishing and use regulations since, as was noted earlier, FWC has a separate process for input on hunting and fishing regulations.

No questions or comments were received at this stage of the ECWMA public hearing meeting.

**Presentation of the ECWMA Draft Management Plan:**

At this point, Mx. Boyas, began the presentation of the ECWMA Draft Management Plan. Mx. Boyas then completed and concluded the presentation of the ECWMA Draft Management Plan.

**Questions and Comments on the ECWMA Draft Management Plan Presentation:**

Mx. Boyas asked if there were any comments or questions from the public regarding the Draft Management Plan and encouraged everyone to fill out a speaker card for public testimony. They informed them that all comments, questions, and public testimony will be duly considered equally by FWC.

No questions or comments were received at this stage of the ECWMA public hearing meeting.

**Public Testimony on the ECWMA Draft Management Plan:**

No member(s) of the public audience submitted speaker card(s) indicating their intention to provide formal public testimony.

**Adjournment:**

Mx. Boyas asked if there were any other members of the public that wished to give public testimony.

No speakers offered further comments.

Then Mx. Boyas declared the public hearing adjourned.

### 11.4.3 Public Hearing Report Palm Beach County

**PUBLIC HEARING REPORT**

**FOR**

**EVERGLADES COMPLEX OF WILDLIFE MANAGEMENT AREAS MANAGEMENT PLAN**

**HELD BY THE**

**EVERGLADES COMPLEX OF WILDLIFE MANAGEMENT AREAS MANAGEMENT ADVISORY GROUP**

**AND THE**

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

**OCTOBER 26TH, 2022 – PALM BEACH COUNTY, FLORIDA**

The following report documents the public input that was received at the Everglades Complex of WMAs Management Advisory Group's (MAG) public hearing for the update to the Management Plan for the ECWMA that was held at 7:00-9:00 PM, on October 26th, 2022, at the Palm Beach County Jane M. Thompson Memorial Chambers in West Palm Beach, Florida.

**ECWMA Management Advisory Group Introduction:**

The meeting was introduced by Mr. Freese, an ECWMA Management Advisory Group participant, who represented the ECWMA MAG. Mr. Freese indicated that he was one of 22 stakeholders that attended the Florida Fish and Wildlife Conservation Commission (FWC) facilitated the ECWMA MAG meeting held on September 14th, 2022. Mr. Freese stated that the elements of the Draft Management Plan were being presented tonight by FWC staff, and that hardcopies of the overview, management prospectus and the ECWMA MAG meeting report were available at the front door for the public's review. Mr. Freese thanked everyone for attending and then introduced Mx. Boyas, Land Conservation Planner, FWC, to facilitate and coordinate the presentation of an overview of the ECWMA, FWC's planning process, and the draft components of the ECWMA Draft Management Plan.

**Presentation on an Overview of the ECWMA and the FWC Planning Process:**

Mx. Boyas welcomed everyone and thanked the public for their attendance. Mx. Boyas then went over an orientation of the material and explained that the purpose of the public hearing was to solicit public input regarding the Draft Management Plan for the ECWMA, and not hunting and fishing regulations, indicating there is a separate public input process for FWC rule and regulation development. Mx. Boyas then described the materials that were available at the door for public review, including the ECWMA Management Prospectus and the MAG Meeting Report. Mx. Boyas then presented the agenda for the public hearing and facilitated the

introduction of all FWC staff in attendance to the audience. Mx. Boyas then presented an overview and orientation of the ECWMA, including a description of the natural communities, data about the ECWMA visitation, revenue and economic benefits generated for the state and region by the area, wildlife species, recreational opportunities found on the area, surrounding conservation lands, surrounding Florida Forever Program Land Acquisition Projects, acquisition history, etc. They also explained FWC's planning process for the management of the public conservation land and asked if there were any questions regarding that process.

**Questions, Answers and Discussion on the ECWMA Overview and FWC's Planning Process:**

Mx. Boyas facilitated an informal question and answers session where members of the public in attendance, without necessarily identifying themselves, could ask questions of the FWC staff, and discuss the answers. Mx. Boyas again emphasized that the exclusive purpose for the public hearing was to collect public input regarding the elements of the Draft Management Plan for the ECWMA, and not to discuss area hunting, fishing and use regulations since, as was noted earlier, FWC has a separate process for input on hunting and fishing regulations.

No questions or comments were received at this stage of the ECWMA public hearing meeting.

**Presentation of the ECWMA Draft Management Plan:**

At this point, Mx. Boyas, began the presentation of the ECWMA Draft Management Plan. Mx. Boyas then completed and concluded the presentation of the ECWMA Draft Management Plan.

**Questions and Comments on the ECWMA Draft Management Plan Presentation:**

Mx. Boyas asked if there were any comments or questions from the public regarding the Draft Management Plan and encouraged everyone to fill out a speaker card for public testimony. They informed them that all comments, questions, and public testimony will be duly considered equally by FWC.

No questions or comments were received at this stage of the ECWMA public hearing meeting.

**Public Testimony on the ECWMA Draft Management Plan:**

No member(s) of the public audience submitted speaker card(s) indicating their intention to provide formal public testimony.

**Adjournment:**

Mx. Boyas asked if there were any other members of the public that wished to give public testimony.

No speakers offered further comments.

Then Mx. Boyas declared the public hearing adjourned.

## 11.5 Native Plant and Animal Species Lists

**Table 10. Plant Species Known to Occur at the ECWMA**

| Scientific Name | Common Name |
|---|---|
| *Acacia auriculiformis* | Earleaf acacia |
| *Acer rubrum* | Red maple |
| *Acer sp.* | Maple |
| *Acrostichum danaeifolium* | Giant leather fern |
| *Alternanthera philoxeroides* | Alligator weed |
| *Amaranthus sp.* | Amaranth |
| *Ambrosia artemisiifolia* | Common ragweed |
| *Ambrosia sp.* | Ragweed |
| *Ampelopsis arborea* | Peppervine |
| *Andropogon sp.* | Bluestem |
| *Andropogon virginicus* | Broomsedge bluestem |
| *Annona glabra* | Pond apple |
| *Asclepias sp.* | Milkweed |
| *Baccharis halimifolia* | Groundsel tree |
| *Bacopa caroliniana* | Lemon bacopa |
| *Bacopa monnieri* | Herb-of-grace |
| *Berchemia scandens* | Rattan vine |
| *Bidens alba* | Beggarticks |
| *Bidens laevis* | Smooth beggarticks |
| *Bischofia javanica* | Javanese bishopwood |
| *Blechum pyramidatum* | Browne's blechum |
| *Boehmeria cylindrica* | False nettle |
| *Calystegia sepium ssp. limnophila* | Hedge false bindweed |
| *Calystegia sp.* | Bindweed |
| *Carex sp.* | Sedge |
| *Casuarina equisetifolia* | Australian pine |
| *Celtis laevigata* | Sugarberry |
| *Centella asiatica* | Spadeleaf |
| *Cephalanthus occidentalis* | Common buttonbush |
| *Cestrum diurnum* | Day jessamine |
| *Cicuta maculata* | Spotted water hemlock |
| *Cirsium nuttallii* | Nuttall's thistle |
| *Cirsium sp.* | Thistle |
| *Cladium jamaicense* | Jamaica swamo sawgrass |
| *Cocos nucifera* | Coconut palm |
| *Colocasia esculenta* | Wild taro |
| *Commelina sp.* | Dayflower |
| *Conoclinium coelestinum* | Blue mistflower |

| | |
|---|---|
| *Cornus sp.* | Dogwood |
| *Cupaniopsis anacardioides* | Carrotwood |
| *Cyperus ovatus* | Pinebarren flatsedge |
| *Cyperus sp.* | Flatsedge |
| *Dactyloctenium aegyptium* | Durban crowfootgrass |
| *Dichanthelium strigosum var. glabrescens* | Roughhair witchgrass |
| *Diodia virginiana* | Virginia buttonweed |
| *Echinochloa sp.* | Cockspur |
| *Eichhornia crassipes* | Water hyacinth |
| *Eleocharis cellulosa* | Gulf coast spikerush |
| *Eleocharis sp.* | Spikerush |
| *Erechtites hieraciifolius* | Fireweed |
| *Erigeron quercifolius* | Oakleaf fleabane |
| *Eupatorium compositifolium* | Yankeeweed |
| *Ficus aurea* | Strangler fig |
| *Ficus microcarpa* | Laurel fig |
| *Ficus sp.* | Fig |
| *Fimbristylis sp.* | Fimbry |
| *Flueggea virosa ssp. melanthesoides* | Simpleleaf bushweed |
| *Fraxinus caroliniana* | Carolina ash |
| *Funastrum clausum* | White twinevine |
| *Galium tinctorium* | Stiff marsh bedstraw |
| *Hamelia patens* | Firebush |
| *Hibiscus grandiflorus* | Swamp rosemallow |
| *Hydrilla verticillata* | Hydrilla |
| *Hydrocotyle umbellata* | Manyflower marshpennywort |
| *Hydrocotyle verticillata* | Whorled marshpennywort |
| *Hymenocallis latifolia* | Perfumed spiderlily |
| *Hymenocallis sp.* | Spiderlily |
| *Hypericum fasciculatum* | Peelbark St. John's wort |
| *Hypericum sp.* | St. John's wort |
| *Hyptis alata* | Clustered bushmint |
| *Ilex cassine* | Dahoon |
| *Ilex sp.* | Holly |
| *Imperata cylindrica* | Cogongrass |
| *Ipomoea sp.* | Morning glory |
| *Ixora sp.* | Jungleflame |
| *Juncus effusus ssp. solutus* | Soft rush |
| *Juncus marginatus* | Grassleaf rush |
| *Juncus megacephalus* | Bighead rush |
| *Lantana strigocamara* | Lantana, shrub verbena |

| | |
|---|---|
| *Leersia hexandra* | Southern cutgrass |
| *Lemna sp.* | Duckweed |
| *Ludwigia palustris* | Marsh seedbox |
| *Ludwigia peruviana* | Peruvian primrosewillow |
| *Ludwigia repens* | Creeping primrosewillow |
| *Ludwigia sp.* | Primrosewillow |
| *Lygodium microphyllum* | Old world climbing fern |
| *Magnolia virginiana* | Sweetbay |
| *Melaleuca quinquenervia* | Melaleuca, Paper bark |
| *Melaleuca viminalis* | Bottlebrush, Weeping bottlebrush |
| *Melilotus albus* | White sweetclover |
| *Melinis repens* | Natal grass |
| *Melothria pendula* | Creeping cucumber |
| *Mikania scandens* | Climbing hempvine |
| *Momordica balsamina* | Southern balsampear |
| *Momordica charantia* | Balsam pear, balsam apple |
| *Morella cerifera* | Wax myrtle |
| *Musa sp.* | Banana |
| *Myrsine cubana* | Myrsine |
| *Nephrolepis exaltata* | Wild Boston fern |
| *Neyraudia reynaudiana* | Burma reed, Cane grass |
| *Nolina sp.* | Beargrass |
| *Nuphar advena ssp. advena* | Yellow pondlily |
| *Nymphaea sp.* | Waterlily |
| *Nymphoides aquatica* | Big floatingheart |
| *Oplismenus hirtellus* | Woodsgrass |
| *Packera glabella* | Butterweed |
| *Panicum hemitomon* | Mountain panic |
| *Panicum repens* | Torpedo grass |
| *Panicum sp.* | Panic grass |
| *Parietaria floridana* | Florida pellitory |
| *Parthenocissus quinquefolia* | Virginia creeper |
| *Paspalum sp.* | Crowngrass |
| *Paspalum urvillei* | Vaseygrass |
| *Passiflora sp.* | Passion-flower |
| *Passiflora suberosa* | Corkystem passion-flower |
| *Peltandra virginica* | Green arrow arum |
| *Pennisetum purpureum* | Napier grass |
| *Persea palustris* | Swamp bay |
| *Phlebodium aureum* | Golden polypody |
| *Phoenix sp.* | Date palm |

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|---|---|
| *Phragmites sp.* | Reed |
| *Phyla nodiflora* | Turkey tangle fogfruit |
| *Phytolacca americana* | American pokeweed |
| *Piscidia piscipula* | Jamaican dogwood |
| *Pistia stratiotes* | Water-lettuce |
| *Pleopeltis polypodioides* | Tropical resurrection fern |
| *Pluchea baccharis* | Rosy camphorweed |
| *Pluchea sp.* | Camphorweed |
| *Poinsettia sp.* | Poinsettia |
| *Polygonum punctatum* | Dotted smartweed |
| *Polygonum sp.* | Knotweed |
| *Pontederia cordata* | Pickerelweed |
| *Potamogeton sp.* | Pondweed |
| *Proserpinaca palustris* | Marsh mermaidweed |
| *Proserpinaca pectinata* | Combleaf mermaidweed |
| *Psidium cattleianum* | Strawberry guava |
| *Psidium guajava* | Guava |
| *Psychotria nervosa* | Wild coffee |
| *Pteridium aquilinum var. pseudocaudatum* | Tailed bracken |
| *Pteridium sp.* | Bracken fern |
| *Pteris cretica* | Cretan brake |
| *Pteris sp.* | Brake fern |
| *Ptilimnium capillaceum* | Mock bishopsweed |
| *Quercus virginiana* | Live oak |
| *Rhynchospora colorata* | Starrush white-top |
| *Rhynchospora corniculata* | Shortbristle horned beaksedge |
| *Rhynchospora divergens* | Spreading beaksedge |
| *Rhynchospora glomerata* | Clustered beaksedge |
| *Rhynchospora inundata* | Narrowfruit horned beaksedge |
| *Rhynchospora microcarpa* | Southern beaksedge |
| *Rhynchospora rariflora* | Fewflower beaksedge |
| *Rhynchospora sp.* | Beaksedge |
| *Rhynchospora tracyi* | Tracy's beaksedge |
| *Ricinus communis* | Castor bean |
| *Rivina humilis* | Rougeplant |
| *Rumex sp.* | Dock |
| *Rumex verticillatus* | Swamp dock |
| *Sabal palmetto* | Cabbage palm |
| *Saccharum giganteum* | Sugarcane plumegrass |
| *Sagittaria lancifolia* | Bulltongue arrowhead |
| *Sagittaria latifolia* | Common arrowhead |

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|---|---|
| *Salix caroliniana* | Coastalplain willow |
| *Salvia misella* | River sage |
| *Salvinia minima* | Water spangles |
| *Sambucus nigra ssp. canadensis* | Elderberry |
| *Sansevieria hyacinthoides* | Bowstring hemp |
| *Saururus cernuus* | Lizard's tail |
| *Schefflera actinophylla* | Schefflera, Octopus tree, Astralian umbrella tree |
| *Schinus terebinthifolia* | Brazilian pepper |
| *Scirpus californicus* | Giant bulrush |
| *Scirpus sp.* | Bulrush |
| *Sida sp.* | Fanpetals |
| *Sideroxylon foetidissimum* | False mastic |
| *Smilax laurifolia* | Laurel greenbrier |
| *Smilax tamnoides* | Bristly greenbrier |
| *Solanum sp.* | Nightshade |
| *Solidago sp.* | Goldenrod |
| *Sonchus sp.* | Sowthistle |
| *Stenotaphrum secundatum* | St. Augustine grass |
| *Syagrus romanzoffiana* | Queen palm |
| *Symphyotrichum carolinianum* | Climbing aster |
| *Syngonium podophyllum* | Arrowhead vine, American evergreen |
| *Syzygium cumini* | Java plum |
| *Taliparitiliaceum* | Sea hibiscus |
| *Taxodium ascendens* | Pond cypress |
| *Telmatoblechnum serrulatum* | Toothed midsorus fern |
| *Teucrium canadense* | Canadian germander |
| *Thalia geniculata* | Alligatorflag |
| *Thelypteris interrupta* | Hottentot fern |
| *Thelypteris kunthii* | Southern shield fern |
| *Thelypteris palustris var. pubescens* | Marsh fern |
| *Thelypteris sp.* | Maiden fern |
| *Thrinax sp.* | Thatch palm |
| *Tillandsia sp.* | Airplant |
| *Toxicodendron radicans* | Eastern poison ivy |
| *Trema micrantha* | Nettletree |
| *Triadenum sp.* | Marsh St. John's wort |
| *Typha domingensis* | Southern cattail |
| *Typha latifolia* | Broadleaf cattail |
| *Urena lobata* | Caesar's weed |
| *Utricularia inflata* | Floating bladderwort |
| *Utricularia radiata* | Little floating bladderwort |

| | |
|---|---|
| *Utricularia sp.* | Bladderwort |
| *Verbena sp.* | Vervain |
| *Verbesina sp.* | Crownbeard |
| *Vicia acutifolia* | Fourleaf vetch |
| *Vicia sp.* | Vetch |
| *Vitis sp.* | Grape |
| *Washingtonia robusta* | Washington fan palm |
| *Woodwardia virginica* | Virginia chain fern |
| *Xyris sp.* | Yellow-eyed grass |
| *Zeuxine sp.* | Zeuxine |

**Table 11. Wildlife Species Observed on the ECWMA**

| Common Name | Scientific Name |
|---|---|
| American alligator | *Alligator mississippiensis* |
| American bittern | *Botaurus lentiginosus* |
| American coot | *Fulica americana* |
| American crow | *Corvus brachyrhynchos* |
| American redstart | *Setophaga ruticilla* |
| American white pelican | *Pelecanus erythrorhynchos* |
| anhinga | *Anhinga anhinga* |
| bald eagle | *Haliaeetus leucocephalus* |
| banded water snake | *Nerodia fasciata* |
| barn owl | *Tyto alba* |
| barred owl | *Strix varia* |
| belted kingfisher | *Ceryle alcyon* |
| big brown bat | *Eptesicus fuscus* |
| big cypress fox squirrel | *Sciurus niger avicennia* |
| black bear | *Ursus americanus* |
| black racer | *Coluber constrictor* |
| black rail | *Laterallus jamaicensis* |
| black vulture | *Coragyps atratus* |
| black-and-white warbler | *Mniotilta varia* |
| black-crowned night-heron | *Nycticorax nycticorax* |
| black-necked stilt | *Himantopus mexicanus* |
| black-throated blue warbler | *Setophaga caerulescens* |
| blue jay | *Cyanocitta cristata* |
| blue-gray gnatcatcher | *Polioptila caerulea* |
| blue-winged teal | *Anas discors* |
| boat-tailed grackle | *Quiscalus major* |
| bobcat | *Lynx rufus* |
| bobolink | *Dolichonyx oryzivorus* |
| Brazilian free-tailed bat | *Tadarida brasiliensis* |
| broad-winged hawk | *Buteo platypterus* |
| brown anole | *Anolis sagrei* |
| brown basilisk | *Basiliscus vittatus* |
| brown thrasher | *Toxostoma rufum* |
| brown water snake | *Nerodia taxispilota* |
| burrowing owl | *Athene cunicularia* |
| Carolina wren | *Thryothorus ludovicianus* |
| Caspian tern | *Hydroprogne caspia* |
| cattle egret | *Bubulcus ibis* |
| cedar waxwing | *Bombycilla cedrorum* |
| Chuck-will's-widow | *Caprimulgus carolinensis* |

| | |
|---|---|
| common grackle | *Quiscalus quiscula* |
| common ground-dove | *Columbina passerina* |
| common moorhen | *Gallinula chloropus* |
| common nighthawk | *Chordeiles minor* |
| common snapping turtle | *Chelydra serpentina* |
| common yellowthroat | *Geothlypis trichas* |
| Cooper's hawk | *Accipiter cooperii* |
| corn snake | *Pantherophis guttata guttata* |
| cotton mouse | *Peromyscus gossypinus* |
| coyote | *Canis latrans* |
| double-crested cormorant | *Phalacrocorax auritus* |
| downy woodpecker | *Dryobates pubescens* |
| Eastern diamondback rattlesnake | *Crotalus adamanteus* |
| Eastern garter snake | *Thamnophis sirtalis* |
| Eastern kingbird | *Tyrannus tyrannus* |
| Eastern meadowlark | *Sturnella magna* |
| Eastern mud snake | *Farancia abacura* |
| Eastern narrowmouth toad | *Gastrophryne carolinensis* |
| Eastern phoebe | *Sayornis phoebe* |
| Eastern screech owl | *Megascops asio* |
| Eastern spadefoot toad | *Scaphiopus holbrookii* |
| Eastern towhee | *Pipilo erythrophthalmus* |
| evening bat | *Nycticeius humeralis* |
| Everglades racer | *Coluber constrictor paludicola* |
| Florida black bear | *Ursus americanus floridanus* |
| Florida bonneted bat | *Eumops floridanus* |
| Florida brown snake | *Storeria dekayi* |
| Florida cottonmouth | *Agkistrodon piscivorus* |
| Florida cricket frog | *Acris gryllus dorsalis* |
| Florida green water snake | *Nerodia floridana* |
| Florida kingsnake | *Lampropeltis getula floridana* |
| Florida mottled duck | *Anas fulvigula* |
| Florida mud turtle | *Kinosternon subrubrum* |
| Florida panther | *Puma concolor coryi* |
| Florida red-bellied cooter | *Pseudemys nelsoni* |
| Florida snapping turtle | *Chelydra serpentina* |
| Florida softshell | *Apalone ferox* |
| Florida tree snail | *Liguus fasciatus* |
| Florida water snake | *Nerodia fasciata pictiventris* |
| glossy ibis | *Plegadis falcinellus* |
| gray catbird | *Dumetella carolinensis* |
| gray fox | *Urocyon cinereoargenteus* |
| gray kingbird | *Tyrannus dominicensis* |

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|---|---|
| great blue heron | *Ardea herodias* |
| great crested flycatcher | *Myiarchus crinitus* |
| great egret | *Ardea alba* |
| great horned owl | *Bubo virginianus* |
| greater yellowlegs | *Tringa melanoleuca* |
| green anole | *Anolis carolinensis carolinensis* |
| green heron | *Butorides virescens* |
| green tree frog | *Hyla cinerea* |
| green-winged teal | *Anas crecca* |
| hairy woodpecker | *Leuconotopicus villosus* |
| hispid cotton rat | *Sigmodon hispidus* |
| hooded warbler | *Wilsonia citrina* |
| house wren | *Troglodytes aedon* |
| killdeer | *Charadrius vociferus* |
| king rail | *Rallus elegans* |
| least bittern | *Ixobrychus exilis* |
| least shrew | *Cryptotis parva* |
| leopard frog | *Lithobates sphenocephala* |
| lesser yellowlegs | *Tringa flavipes* |
| limpkin | *Aramus guarauna* |
| little blue heron | *Egretta caerulea* |
| little grass frog | *Pseudacris ocularis* |
| loggerhead shrike | *Lanius ludovicianus* |
| Louisiana waterthrush | *Seiurus motacilla* |
| magnolia warbler | *Dendroica magnolia* |
| marsh rabbit | *Sylvilagus palustris* |
| marsh rice rat | *Oryzomys palustris* |
| marsh wren | *Cistothorus palustris* |
| merlin | *Falco columbarius* |
| mourning dove | *Zenaida macroura* |
| Nile Monitor | *Varanus niloticus* |
| nine-banded armadillo | *Dasypus novemcinctus* |
| Northern cardinal | *Cardinalis cardinalis* |
| Northern flicker | *Colaptes auratus* |
| Northern harrier | *Circus cyaneus* |
| Northern mockingbird | *Mimus polyglottos* |
| Northern parula | *Parula americana* |
| Northern river otter | *Lontra canadensis* |
| Northern waterthrush | *Seiurus noveboracensis* |
| osprey | *Pandion haliaetus* |
| ovenbird | *Seiurus aurocapilla* |
| palm warbler | *Dendroica palmarum* |
| peninsula cooter | *Pseudemys floridana* |

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|---|---|
| peninsula newt | *Notophthalmus viridescens piaropicola* |
| peninsula ribbon snake | *Thamnophis sauritus sackenii* |
| peregrine falcon | *Falco peregrinus* |
| pied-billed grebe | *Podilymbus podiceps* |
| pig frog | *Lithobates grylio* |
| pileated woodpecker | *Dryocopus pileatus* |
| pine warbler | *Setophaga pinus* |
| prairie warbler | *Dendroica discolor* |
| prothonotary warbler | *Protonotaria citrea* |
| purple gallinule | *Porphyrula martinica* |
| purple martin | *Progne subis* |
| raccoon | *Procyon lotor* |
| red-bellied woodpecker | *Melanerpes carolinus* |
| red-eyed vireo | *Vireo olivaceus* |
| red-shouldered hawk | *Buteo lineatus* |
| red-tailed hawk | *Buteo jamaicensis* |
| red-winged blackbird | *Agelaius phoeniceus* |
| ring-necked duck | *Aythya collaris* |
| ring-necked snake | *Diadophis punctatus* |
| roseate spoonbill | *Ajaia ajaja* |
| rough green snake | *Opheodrys aestivus* |
| round-tailed muskrat | *Neofiber alleni* |
| ruby-throated hummingbird | *Archilochus colubris* |
| sanderling | *Calidris alba* |
| sandhill crane | *Grus canadensis spp.* |
| Seminole bat | *Lasiurus seminolus* |
| sharp-shinned hawk | *Accipiter striatus* |
| short-billed dowitcher | *Limnodromus griseus* |
| short-tailed hawk | *Buteo brachyurus* |
| snail kite | *Rostrhamus sociabilis* |
| snail kite (Everglade snail kite) | *Rostrhamus sociabilis plumbeus* |
| snowy egret | *Egretta thula* |
| sora | *Porzana carolina* |
| South Florida swamp snake | *Seminatrix pygaea* |
| Southeastern American kestrel | *Falco sparverius* |
| Southeastern five-lined skink | *Plestiodon inexpectatus* |
| Southeastern myotis | *Myotis austroriparius* |
| Southern bald eagle | *Haliaeetus leucocephalus leucocephalus* |
| Southern black racer | *Coluber constrictor priapus* |
| Southern cricket frog | *Acris gryllus* |
| Southern five-lined skink | *Eumeces inexpectatus* |
| Southern ringneck snake | *Diadophis punctatus punctatus* |
| Southern toad | *Anaxyrus terrestris* |

| | |
|---|---|
| squirrel tree frog | *Hyla squirella* |
| striped crayfish snake | *Regina alleni* |
| striped mud turtle | *Kinosternon baurii* |
| Swainson's hawk | *Buteo swainsoni* |
| swallow-tailed kite | *Elanoides forficatus* |
| swamp sparrow | *Melospiza georgiana* |
| tree swallow | *Tachycineta bicolor* |
| tricolored heron | *Egretta tricolor* |
| turkey vulture | *Cathartes aura* |
| two-toed amphiuma | *Amphiuma means* |
| Virginia opossum | *Didelphis virginiana* |
| whip-poor-will | *Caprimulgus vociferus* |
| white ibis | *Eudocimus albus* |
| white-eyed vireo | *Vireo griseus* |
| white-tailed deer | *Odocoileus virginianus* |
| white-tailed kite | *Elanus leucurus* |
| white-winged dove | *Zenaida asiatica* |
| Wilson's snipe | *Gallinago delicata* |
| wood duck | *Aix sponsa* |
| wood stork | *Mycteria americana* |
| worm-eating warbler | *Helmitheros vermivorum* |
| yellow bat | *Lasiurus intermedius* |
| yellow rail | *Coturnicops noveboracensis* |
| yellow rat snake | *Elaphe obsoleta quadrivittata* |
| yellow warbler | *Setophaga petechia* |
| yellow-billed cuckoo | *Coccyzus americanus* |
| yellow-crowned night-heron | *Nyctanassa violacea* |
| yellow-rumped warbler | *Dendroica coronata* |
| yellow-throated vireo | *Vireo flavifrons* |
| yellow-throated warbler | *Setophaga dominica* |

## 11.6 Soil Series Descriptions

## Map Unit Description

Water Conservation Area, Florida

[Minor map unit components are excluded from this report]

**Map unit:** 2 - Cooper Town muck, 0 to 1 percent slopes, frequently flooded

**Component:** Cooper Town (85%)

*The Cooper Town component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 7 to 20 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 4 - Shark Valley muck, 0 to 1 percent slopes, frequently flooded

**Component:** Shark Valley (85%)

*The Shark Valley component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 20 to 39 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October, November. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 7 - Macks Camp muck, 0 to 1 percent slopes, frequently flooded

**Component:** Macks Camp (85%)

*The Macks Camp component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 39 to 59 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October, November. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 8 - Loxahatche muck, 0 to 1 percent slopes, frequently flooded

**Component:** Loxahatche (90%)

*The Loxahatche component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 9 - Buffalo Tiger muck, 0 to 1 percent slopes, frequently flooded

**Component:** Buffalo Tiger (85%)

*The Buffalo Tiger component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes, coastal*

## Map Unit Description

Water Conservation Area, Florida

**Map unit:** 9 - Buffalo Tiger muck, 0 to 1 percent slopes, frequently flooded

**Component:** Buffalo Tiger (85%)

*plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 59 to 80 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is very frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 10 - Gator Lake muck, 0 to 1 percent slopes, frequently flooded

**Component:** Gator Lake (85%)

*The Gator Lake component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 2 to 7 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September, October, November. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 11 - Loxahatche muck, 0 to 2 percent slopes, occasionally flooded

**Component:** Loxahatche (95%)

*The Loxahatche component makes up 95 percent of the map unit. Slopes are 0 to 2 percent. This component is on swamps on marine terraces on coastal plains. The parent material consists of herbaceous organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 12 - Cooper Town-Perrine-Rattlesnake Ridge complex, 0 to 2 percent slopes, occasionally flooded

**Component:** Cooper Town (60%)

*The Cooper Town component makes up 60 percent of the map unit. Slopes are 0 to 1 percent. This component is on rises on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 7 to 20 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Component:** Perrine (15%)

*The Perrine component makes up 15 percent of the map unit. Slopes are 0 to 1 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of gravelly silty marl over oolitic limestone. Depth to a root restrictive layer, bedrock, lithic, is 20 to 39 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 80 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 5 within 30 inches of the soil surface.*

## Map Unit Description

Water Conservation Area, Florida

**Map unit:** 12 - Cooper Town-Perrine-Rattlesnake Ridge complex, 0 to 2 percent slopes, occasionally flooded

**Component:** Rattlesnake Ridge (15%)

*The Rattlesnake Ridge component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits over limestone. Depth to a root restrictive layer, bedrock, lithic, is 7 to 20 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 13 - Shark Valley-Buffalo Tiger-Rattlesnake Ridge complex, 0 to 2 percent slopes, occasionally flooded

**Component:** Shark Valley (40%)

*The Shark Valley component makes up 40 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 20 to 39 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Component:** Buffalo Tiger (35%)

*The Buffalo Tiger component makes up 35 percent of the map unit. Slopes are 0 to 1 percent. This component is on marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 59 to 80 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 3 inches during January, February, March, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Component:** Rattlesnake Ridge (15%)

*The Rattlesnake Ridge component makes up 15 percent of the map unit. Slopes are 0 to 2 percent. This component is on knolls on marine terraces on coastal plains. The parent material consists of sandy marine deposits over limestone. Depth to a root restrictive layer, bedrock, lithic, is 7 to 20 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 4w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 89 - Water-Udorthents complex, 0 to 35 percent slopes

**Component:** Water (55%)

*Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.*

**Component:** Udorthents (45%)

*The Udorthents component makes up 45 percent of the map unit. Slopes are 0 to 35 percent. This component is on fills on marine terraces on coastal plains. The parent material consists of sandy human-transported material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal*

## Map Unit Description

Water Conservation Area, Florida

**Map unit:** 89 - Water-Udorthents complex, 0 to 35 percent slopes

**Component:** Udorthents (45%)

*zone of water saturation is at 66 inches during January, February, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 1 percent. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

## Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

## Map Unit Description

Palm Beach County Area, Florida

[Minor map unit components are excluded from this report]

**Map unit:** 20 - Lauderhill muck, drained, frequently ponded, 0 to 1 percent slopes

**Component:** Lauderhill, drained (85%)

*The Lauderhill, drained component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 16 to 36 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during July, August, September, October. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 24 - Okeelanta muck, drained, frequently ponded, 0 to 1 percent slopes

**Component:** Okeelanta, drained (90%)

*The Okeelanta, drained component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over sandy marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 26 - Pahokee muck, drained, frequently ponded, 0 to 1 percent slopes

**Component:** Pahokee, drained (85%)

*The Pahokee, drained component makes up 85 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 36 to 51 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 43 - Terra Ceia muck, drained, frequently ponded, 0 to 1 percent slopes

**Component:** Terra Ceia, drained (84%)

*The Terra Ceia, drained component makes up 84 percent of the map unit. Slopes are 0 to 1 percent. This component is on depressions on marine terraces on coastal plains. The parent material consists of herbaceous organic material. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 0 inches during June, July, August, September. Organic matter content in the surface horizon is about 75 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 47 - Udorthents, 2 to 35 percent slopes

**Component:** Udorthents (95%)

*The Udorthents component makes up 95 percent of the map unit. Slopes are 2 to 65 percent. This component is on fills on marine*

## Map Unit Description

Palm Beach County Area, Florida

**Map unit:** 47 - Udorthents, 2 to 35 percent slopes

**Component:** Udorthents (95%)

*terraces on coastal plains. The parent material consists of altered marine deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.*

**Map unit:** 99 - Water

**Component:** Water (100%)

*Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.*

## Map Unit Description

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

## 11.7 Land Management Review

# 2016 Land Management Review Team Report for Everglades Complex of Wildlife Management Areas (Everglades and Francis S. Taylor, Holey Land, Rotenberger)

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## 1. Introduction

Section 259.036, F.S. requires a periodic on-site review of conservation and recreation lands titled in the name of the Board of Trustees to determine (1) whether the lands are being managed for the purposes for which they were acquired and (2) whether they are being managed in accordance with their land management plan adopted pursuant to s. 259.032, F.S. In cases where the managed areas exceed 1,000 acres in size, such a review must be scheduled at least every five years. In conducting this review, a statutorily constructed review team "shall evaluate the extent to which the existing management plan provides sufficient protection to threatened or endangered species, unique or important natural or physical features, geological or hydrological functions or archaeological features. The review shall also evaluate the extent to which the land is being managed for the purposes for which it was acquired and the degree to which actual management practices, including public access, are in compliance with the adopted management plan."

The land management review teams are coordinated by the Division of State Lands and consist of representatives from the Division of Recreation and Parks (DEP), the Florida Forest Service (DACS), the Fish and Wildlife Conservation Commission, the local government in which the property is located, the DEP District in which the parcel is located, the local soil and water conservation district, a conservation organization member, and a local private land manager.

Each land management review report is divided into three sections. Section 1 provides the details of the property being reviewed as well as the overall results of the report. Section 2 provides details of the field review, in which the review team inspects the results of management actions on the site. Section 3 provides details of the land management plan review, in which the team determines the extent to which the management plan provides for and documents adequate natural and recreational resource protection.

Finally, each report may also contain an Appendix that lists individual team member comments. This Appendix is a compilation of feedback, concerns or other thoughts provided by individual team members. It is not necessarily indicative of the final consensus reached by the land management review team.

## 1.1. Property Reviewed in this Report

**Name of Site:** Everglades Complex of Wildlife Management Areas

**Managed by:** Florida Fish & Wildlife Conservation Commission

**Acres:** 736,881 **Counties:** Broward, Miami-Dade, Palm Beach

**Purpose(s) for Acquisition:** See Section 1.3.1 of management plan.

**Acquisition Program(s):** Save Our Everglades, Everglades Forever **Original Acquisition Date:** 11/13/1979

**Area Reviewed:** Entire Property **Last Management Plan Approval Date:** 2/16/2015

**Review Date:** 2/11/2016

**Agency Manager and Key Staff Present:**

- Melissa Juntunen, FWC area biologist
- Marsha Ward, FWC district biologist
- Erik Eckles, FWC area biologist

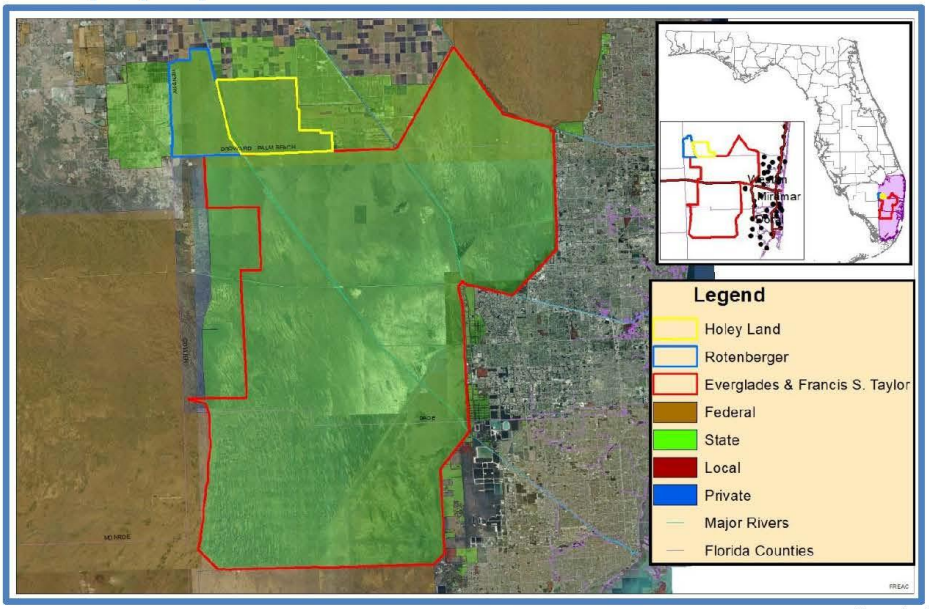
**Review Team Members Present** (voting)

- DRP: Scott Tedford
- FWC: Dave Sweetay
- FFS: Bill Korn
- DEP: Virginia King
- SWCD: Fred Segal
- Local gov't:
- Conservation org.: Richard Brownscombe
- Private land manager:

**Non-Team Members Present** (attending)

- Aric Larson, DEP/DSL
- Frank Powell, DEP/OEP
- Mark Torok, FFS
- Dennis Giardina, FWC IMP
- Ryan Brown, SFWMD

## 1.2 Property Map



## 1.3. Overview of Land Management Review Results

***Is the property managed in accordance with the purposes for which it was acquired?***

***Yes = 6, No = 0***

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

***Yes = 6, No = 0***

*Table 1* shows the average scores received for each applicable category of review. *Field Review* scores refer to the adequacy of management actions in the field, while *Management Plan Review* scores refer to adequacy of discussion of these topics in the management plan. Scores range from 1 to 5 with 5 signifying excellence. For a more detailed key to the scores, please see *Appendix A*.

Table 1: Results at a glance.

| Major Land Management Categories | Field Review | Management Plan Review |
|---|---|---|
| Natural Communities / Forest Management | 5.00 | 4.52 |
| Prescribed Fire / Habitat Restoration | 4.59 | 4.37 |
| Hydrology | 4.54 | 3.96 |
| Imperiled Species | 4.50 | 4.08 |
| Exotic / Invasive Species | 4.39 | 4.39 |
| Cultural Resources | 4.33 | 4.50 |
| Public Access / Education / Law Enforcement | 4.26 | 4.28 |
| Infrastructure / Equipment / Staffing | 3.19 | N/A |

**Color Code** (See Appendix A for detail)

### 1.3.1 Consensus Commendations for the Managing Agency

The following commendations resulted from discussion and vote of the review team members:

1. The review team commends the FWC local staff for an outstanding job of preparing such a professional, thorough, and useful LMR packet of maps, data, and information that greatly helped team members interpret and understand past and current activities at Everglades Complex of WMAs. (6+, 0-)

2. The review team commends FWC for recent efforts to fund and complete rare plant (FNAI) surveys. (6+, 0-)

3. The review team commends FWC staff for dedicated and recurring efforts to survey, treat and monitor invasive plants throughout an enormous landscape, including nearly 100 remote and isolated tree islands. (6+, 0-)

4. The review team commends FWC staff for a fire management program that successfully integrates a disciplined prescribed burning effort with the often large and extensive wildfire footprint. (6+, 0-)

5. The review team commends the FWC staff for a truly amazing resource monitoring program that sets a high bar for ground and aerial reconnaissance of not only native and game species, but also nuisance species such as cattail. Staff also closely monitors the success of reforestation plantings on nearly 100 tree islands throughout the WMA complex. (6+, 0-)

6. The review team commends the FWC staff for their extra efforts to pursue challenging maintenance and restoration projects including ditch removal and cattail treatments in old sugarcane fields; the habitat restoration associated with the removal of an old drill platform; and the removal of 150 abandoned hunting stands / platforms. (6+, 0-)

7. The review team commends the FWC staff for their perseverance since 1997 for an ongoing program of restoration on nearly 90 small tree islands throughout the WMA complex. Efforts have successfully out-planted over 20,000 native trees and shrubs with nearly an average 70 percent survival rate. Success has involved continued monitoring, cage installation and maintenance, and invasive plant control. (6+, 0-)

8. The review team commends the FWC staff for their continued diligence working weekly with regional and federal water management agencies to address site and species water level needs within the WMA complex.

9. The review team commends the FWC for high productivity with a relatively small number of staff. (6+, 0-)

### 1.3.2. Consensus Recommendations to the Managing Agency

The following recommendations resulted from a discussion and vote of the review team members. The next management plan update should include information about how these recommendations have been addressed:

1. The review team recommends that FWC assess the source and species of certain planting stock (e.g. firebush) to ensure the most appropriate native plants are used during the ongoing tree island restorations (avoid non-native cultivars). In addition, it is recommended to avoid the use of planting stock treated with systemic pesticides. (6+, 0- )

   ***Managing Agency Response:*** *FWC notes that only native species historically found on tree islands are selected for restoration efforts, and plant species names are included in contracted project specifications. FWC appreciates these additional recommendations, and will explore opportunities for incorporating these recommendations into future planting specifications.*

2. The review team recommends that FWC consider identifying a location for a field office and equipment storage / maintenance facility that is in closer proximity to the WMA complex. (6+, 0-)

***Managing Agency Response:*** *FWC identified the lack of equipment storage or housing facility on the ECWMA as a resource management challenge in the current management plan (8.5, page 110). FWC will continue to pursue location and funding to construct an equipment storage/shop/office facility and housing facility on ECWMA.*

3. The review team recommends that FWC continue to work with stakeholder groups to enhance messaging regarding negative resource impacts from inappropriate vehicular use. (6+, 0-)

   ***Managing Agency Response:*** *FWC will continue to maintain rapport with appropriate stakeholders and explore additional opportunities to provide education regarding restoration activities and negative impacts from inappropriate vehicular use. FWC notes that area regulations are in place to allow compatible vehicular use and access on the area.*

4. The review team recommends that FWC continue to monitor and assess long term impacts from allowable public tracked-vehicle access. (6+, 0-)

   ***Managing Agency Response:*** *FWC annually evaluates the need to revise area regulations including vehicle use and access. FWC will continue to monitor impacts on the area and evaluate the need for management actions.*

5. The review team recommends that FWC consider incorporating regional plant expertise, including non-profit organizations such as the Institute for Regional Conservation, in both plant survey and tree island restoration efforts. (6+, 0-)

   ***Managing Agency Response:*** *FWC notes that FNAI has completed 2 years of a 4 year rare plant survey across the ECWMA. FWC will consult with appropriate regional entities to determine the feasibility for incorporating additional expertise into restoration efforts.*

## 2. Field Review Details

### 2.1 Field Review Checklist Findings

The following items received high scores on the review team checklist, which indicates that management actions exceeded expectations.

1. **Natural communities, specifically hydric hammock/prairie hammock, slough, strand swamp, and swale**:
2. **Listed species protection and preservation for animals and plants in general:**
3. **Natural resources survey and monitoring, specifically listed species or their habitat monitoring, other non-game species or their habitat monitoring, fire effects monitoring, other habitat management effects monitoring, and invasive species survey and monitoring**:
4. **Cultural resources, specifically identification, protection, and preservation**:
5. **Prescribed Fire, specifically area being burned, frequency, and quality of burns**:
6. **Forest Management, specifically timber assessment**:

7. **Non-Native, Invasive & Problem Species, specifically prevention and control of plants, animals, and pests/pathogens:**
8. **Hydrologic and geologic function, specifically management of roads and culverts, ditches, hydro-period alteration, and water level alteration:**
9. **Surface Water Monitoring, specifically quality and quantity:**
10. **Resource protection, specifically boundary survey, gates and fencing, and signage:**
11. **Adjacent property concerns, specifically surrounding agriculture, invasive plants, and inholdings and additions:**
12. **Public Access, specifically roads, parking, and boat access:**
13. **Environmental education and outreach, specific to wildlife, invasive species, and habitat management:**
14. **Management Resources, specifically waste disposal, and equipment:**

## 2.2. Items Requiring Improvement Actions in the Field

The following items received low scores on the review team checklist, which indicates that management actions noted during the Field Review were not considered sufficient (less than 3.0 score on average). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. **The management plan update should include information on how these items have been addressed:**

1. **Management Resources, specifically buildings and staff, received below average scores. The review team is asked to evaluate, based on information provided by the managing agency, whether management resources are sufficient.**

   ***Managing Agency Response:*** *FWC identified the lack of equipment storage or housing facility on the ECWMA as a resource management challenge in the current management plan (8.5, page 110). FWC will continue to pursue location and funding to construct an equipment storage/shop/office facility and housing facility on ECWMA. FWC evaluates the need for more management resources, specifically staff and funding, on a continuous basis, and will continue to seek appropriate funding for staff and resources sufficient to implement the plan's goals and objectives. All land management funding is dependent upon legislative appropriations. An update on this item will be included in the next management plan update.*

## 2.3. Field Review Checklist and Scores

| Field Review Item | Reference # | Anonymous Team Members | | | | | | | | Average |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| **Natural Communities (I.A)** | | | | | | | | | | |
| Hydric Hammock/Prairie Hammock | I.A.1 | 5 | 5 | 5 | 5 | 5 | 5 | | | 5.00 |
| Slough | I.A.2 | 5 | 5 | 5 | 5 | 5 | 5 | | | 5.00 |
| Strand Swamp | I.A.3 | 5 | 5 | 5 | 5 | 5 | 5 | | | 5.00 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Swale | I.A.4 | 5 | 5 | 5 | 5 | 5 | 5 | | | 5.00 |
| | | | | | | | | | **Natural Communities Average Score** | 5.00 |
| **Listed Species: Protection & Preservation (I.B)** | | | | | | | | | | |
| Animals | I.B.1 | 5 | 4 | 4 | 5 | 5 | 5 | | | 4.67 |
| Plants | I.B.2 | 4 | 4 | 4 | 5 | 5 | 4 | | | 4.33 |
| | | | | | | | | | **Listed Species Average Score** | 4.50 |
| **Natural Resources Survey/Management Resources (I.C)** | | | | | | | | | | |
| Sport fish or their habitat monitoring | I.C.1 | 3 | 4 | 3 | 3 | 3 | 5 | | | 3.50 |
| Listed species or their habitat monitoring | I.C.2 | 5 | 5 | 5 | 4 | 5 | 3 | | | 4.50 |
| Other non-game species or their habitat monitoring | I.C.3 | 5 | 5 | 5 | 4 | 5 | 5 | | | 4.83 |
| Fire effects monitoring | I.C.4 | 5 | 5 | 5 | 5 | 4 | 5 | | | 4.83 |
| Other habitat management effects monitoring | I.C.5 | 5 | 4 | 5 | 4 | 4 | 5 | | | 4.50 |
| Invasive species survey / monitoring | I.C.6 | 5 | 5 | 5 | 5 | 5 | 4 | | | 4.83 |
| **Cultural Resources (Archeological & Historic sites) (II.A, II.B)** | | | | | | | | | | |
| Cultural Res. Survey | II.A | 4 | 4 | 5 | 4 | 4 | 5 | | | 4.33 |
| Protection and preservation | II.B | 4 | 4 | 5 | 4 | 4 | 5 | | | 4.33 |
| | | | | | | | | | **Cultural Resources Average Score** | 4.33 |
| **Resource Management, Prescribed Fire (III.A)** | | | | | | | | | | |
| Area Being Burned (no. acres) | III.A1 | 5 | 5 | 4 | 5 | 4 | 5 | | | 4.67 |
| Frequency | III.A.2 | 4 | 4 | 5 | 5 | 4 | 5 | | | 4.50 |
| Quality | III.A.3 | 5 | 5 | 5 | 5 | 5 | 5 | | | 5.00 |
| | | | | | | | | | **Resource Management, Prescribed Fire Average Score** | 4.72 |
| **Restoration (III.B)** | | | | | | | | | | |
| Tree Island | III.B.1 | 5 | 5 | 5 | 5 | 5 | 5 | | | 5.00 |
| Hydrology | III.B.2 | 4 | 4 | 4 | 3 | 5 | 4 | | | 4.00 |
| Drill Pad Road Removal | III.B.3 | 4 | 5 | 4 | 3 | X | 4 | | | 4.00 |
| Old Farm Restoration | III.B.4 | 4 | 5 | 5 | 5 | X | 5 | | | 4.80 |
| | | | | | | | | | **Restoration Average Score** | 4.45 |
| **Forest Management (III.C)** | | | | | | | | | | |
| Timber Inventory | III.C.1 | X | X | 5 | X | 5 | X | | | 5.00 |
| | | | | | | | | | **Forest Management Average Score** | 5.00 |
| **Non-Native, Invasive & Problem Species (III.D)** | | | | | | | | | | |
| **Prevention** | | | | | | | | | | |
| prevention - plants | III.D.1. a | 4 | 5 | 5 | 4 | 5 | 5 | | | 4.67 |
| prevention - animals | III.D.1. b | 3 | 5 | 5 | 4 | 3 | 5 | | | 4.17 |
| prevention - pests/pathogens | III.D.1. c | 3 | 3 | 4 | 4 | 5 | 5 | | | 4.00 |
| **Control** | | | | | | | | | | |
| control - plants | III.D.2. a | 5 | 5 | 5 | 5 | 5 | 5 | | | 5.00 |
| control - animals | III.D.2. b | 4 | 4 | 4 | 5 | 4 | 5 | | | 4.33 |
| control - pest/pathogens | III.D.2. c | 4 | 3 | 4 | 5 | 4 | 5 | | | 4.17 |
| | | | | | | | | | **Non-Native, Invasive & Problem Species Average Score** | 4.39 |
| **Hydrologic/Geologic function Hydro-Alteration (III.E.1)** | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Roads/culverts | III.E.1. a | 5 | 4 | 5 | 4 | 5 | 5 | | | 4.67 |
| Ditches | III.E.1. b | 5 | 4 | 5 | 4 | 5 | 5 | | | 4.67 |
| Hydro-period Alteration | III.E.1. c | 5 | 4 | 5 | 4 | 5 | 5 | | | 4.67 |
| Water Level Alteration | III.E.1. d | 5 | 4 | 5 | 4 | 5 | 5 | | | 4.67 |
| | | | | | | | | **Hydrologic/Geologic function, Hydro-Alteration Average Score** | | 4.67 |
| **Ground Water Monitoring (III.E.2)** | | | | | | | | | | |
| | | | | | | | | **Ground Water Monitoring Average Score** | | NA |
| **Surface Water Monitoring (III.E.3)** | | | | | | | | | | |
| Surface water quality | III.E.3. a | 5 | 4 | 5 | 4 | 3 | 5 | | | 4.33 |
| Surface water quantity | III.F.3. b | 5 | 5 | 5 | 4 | 3 | 5 | | | 4.50 |
| | | | | | | | | **Surface Water Monitoring Average Score** | | 4.42 |
| **Resource Protection (III.F)** | | | | | | | | | | |
| Boundary survey | III.F.1 | 4 | 4 | 5 | 3 | 4 | 5 | | | 4.17 |
| Gates & fencing | III.F.2 | 4 | 5 | 4 | 4 | 4 | 5 | | | 4.33 |
| Signage | III.F.3 | 5 | 4 | 5 | 5 | 4 | 5 | | | 4.67 |
| Law enforcement presence | III.F.4 | 3 | 2 | 4 | 4 | 3 | 4 | | | 3.33 |
| | | | | | | | | **Resource Protection Average Score** | | 4.13 |
| **Adjacent Property Concerns (III.G)** | | | | | | | | | | |
| **Land Use** | | | | | | | | | | |
| Agriculture | III.G.1. a | 4 | 4 | 4 | 4 | 4 | 5 | | | 4.17 |
| Tribal/Federal Land Exotics | III.G.1. b | 4 | 4 | 4 | 4 | 4 | 5 | | | 4.17 |
| Inholdings/additions | III.G.2 | 4 | 3 | 5 | 4 | 3 | 5 | | | 4.00 |
| **Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)** | | | | | | | | | | |
| **Public Access** | | | | | | | | | | |
| Roads | IV.1. a | 5 | 4 | 5 | 4 | 4 | 5 | | | 4.50 |
| Parking | IV.1. b | 4 | 4 | 5 | 4 | 5 | 5 | | | 4.50 |
| Boat Access | IV.1. c | 4 | 4 | 5 | 4 | 5 | 5 | | | 4.50 |
| **Environmental Education & Outreach** | | | | | | | | | | |
| Wildlife | IV.2. a | 4 | 4 | 5 | 4 | 4 | 5 | | | 4.33 |
| Invasive Species | IV.2. b | 4 | 4 | 5 | 4 | 3 | 5 | | | 4.17 |
| Habitat Management Activities | IV.2. c | 4 | 4 | 5 | 4 | 3 | 5 | | | 4.17 |
| Interpretive facilities and signs | IV.3 | 3 | 5 | 5 | 4 | 5 | 5 | | | 4.50 |
| Recreational Opportunities | IV.4 | 4 | 5 | 5 | 4 | 4 | 5 | | | 4.50 |
| Management of Visitor Impacts | IV.5 | 4 | 5 | 4 | 4 | 4 | 5 | | | 4.33 |
| | | | | | | | | **Public Access & Education Average Score** | | 4.39 |
| **Management Resources (V.1, V.2, V.3. V.4)** | | | | | | | | | | |
| **Maintenance** | | | | | | | | | | |
| Waste disposal | V.1.a | 3 | 4 | 5 | 3 | 4 | 5 | | | 4.00 |
| Sanitary facilities | V.1.b | 2 | 3 | 5 | 3 | 4 | 5 | | | 3.67 |
| **Infrastructure** | | | | | | | | | | |
| Buildings | V.2.a | 1 | 1 | 3 | 1 | 2 | 2 | | | 1.67 |
| Equipment | V.2.b | 4 | 5 | 5 | 3 | 4 | 5 | | | 4.33 |
| Staff | V.3 | 2 | 2 | 3 | 2 | 3 | 3 | | | 2.50 |
| Funding | V.4 | 4 | 2 | X | 2 | 4 | 3 | | | 3.00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | Management Resources Average Score | 3.19 |
| Color Code: | Excellent | Above Average | Below Average | Poor | | See Appendix A for detail |
| | | Missing Vote | Insufficient Information | | | |

## 3. Land Management Plan Review Details

### 3.1 Items Requiring Improvements in the Management Plan

The following items received low scores on the review team checklist, which indicates that the text noted in the Management Plan Review does not sufficiently address this issue (less than 3.0 score on average.). Please note that overall good scores do not preclude specific recommendations by the review team requiring remediation. The next management plan update should address the checklist items identified below:

**The review team did not identify any items requiring improvements in the management plan.**

### 3.2 Management Plan Review Checklist and Scores

| Plan Review Item | Reference # | Anonymous Team Members | | | | | | | | Average |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| **Natural Communities (I.A)** | | | | | | | | | | |
| Hydric Hammock/Prairie Hammock | I.A.1 | 4 | 5 | 5 | 4 | 4 | 5 | | | 4.50 |
| Slough | I.A.2 | 4 | 5 | 4 | 4 | 4 | 5 | | | 4.33 |
| Strand Swamp | I.A.3 | 4 | 5 | 4 | 4 | 4 | 5 | | | 4.33 |
| Swale | I.A.4 | 4 | 5 | 4 | 4 | 4 | 5 | | | 4.33 |
| | | | | | | | | | **Natural Communities Average Score** | 4.38 |
| **Listed species: Protection & Preservation (I.B)** | | | | | | | | | | |
| Animals | I.B.1 | 4 | 5 | 4 | 4 | 5 | 5 | | | 4.50 |
| Plants | I.B.2 | 2 | 5 | 4 | 4 | 4 | 3 | | | 3.67 |
| | | | | | | | | | **Listed Species Average Score** | 4.08 |
| **Natural Resources Survey/Management Resources (I.C)** | | | | | | | | | | |
| Sport fish or their habitat monitoring | I.C.1 | 3 | 5 | 3 | 3 | 4 | 5 | | | 3.83 |
| Listed species or their habitat monitoring | I.C.2 | 4 | 5 | 5 | 4 | 5 | 3 | | | 4.33 |
| Other non-game species or their habitat monitoring | I.C.3 | 3 | 5 | 5 | 4 | 4 | 5 | | | 4.33 |
| Fire effects monitoring | I.C.4 | 3 | 5 | 5 | 4 | 5 | 5 | | | 4.50 |
| Other habitat management effects monitoring | I.C.5 | 3 | 5 | 5 | 4 | 5 | 5 | | | 4.50 |
| Invasive species survey / monitoring | I.C.6 | 4 | 5 | 4 | 4 | 5 | 5 | | | 4.50 |
| **Cultural Resources (Archeological & Historic sites) (II.A, II.B)** | | | | | | | | | | |
| Cultural Res. Survey | II.A | 3 | 5 | 5 | 4 | 5 | 5 | | | 4.50 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Protection and preservation | II.B | 3 | 5 | 5 | 4 | 5 | 5 | | | 4.50 |
| | | | | | | | | **Cultural Resources Average Score** | | 4.50 |
| **Resource Management, Prescribed Fire (III.A)** | | | | | | | | | | |
| Area Being Burned (no. acres) | III.A.1 | 4 | 5 | 5 | 4 | 5 | 5 | | | 4.67 |
| Frequency | III.A.2 | 4 | 5 | 5 | 4 | 5 | 5 | | | 4.67 |
| Quality | III.A.3 | 4 | 5 | 5 | 4 | 5 | 5 | | | 4.67 |
| | | | | | | | | **Resource Management, Prescribed Fire Average Score** | | 4.67 |
| **Restoration (III.B)** | | | | | | | | | | |
| Tree Island | III.B.1 | 4 | 5 | 5 | 4 | 5 | | | | 4.60 |
| Hydrology | III.B.2 | 3 | 4 | 4 | 4 | 5 | 3 | | | 3.83 |
| Drill Pad Road Removal | III.B.3 | 4 | 4 | 4 | 4 | 4 | 3 | | | 3.83 |
| Old Farm Restoration | III.B.4 | 4 | 4 | 5 | 4 | 4 | 3 | | | 4.00 |
| | | | | | | | | **Restoration Average Score** | | 4.07 |
| **Forest Management (III.C)** | | | | | | | | | | |
| Timber Inventory | III.C.1 | 5 | 5 | 4 | 5 | 4 | 5 | | | 4.67 |
| | | | | | | | | **Forest Management Average Score** | | 4.67 |
| **Non-Native, Invasive & Problem Species (III.D)** | | | | | | | | | | |
| **Prevention** | | | | | | | | | | |
| prevention - plants | III.E.1. a | 5 | 4 | 5 | 4 | 5 | 5 | | | 4.67 |
| prevention - animals | III.E.1. b | 4 | 4 | 5 | 4 | 5 | 5 | | | 4.50 |
| prevention - pests/pathogens | III.E.1. c | 4 | 4 | 4 | 4 | 5 | 5 | | | 4.33 |
| **Control** | | | | | | | | | | |
| control - plants | III.E.2. a | 3 | 4 | 5 | 4 | 5 | 5 | | | 4.33 |
| control - animals | III.E.2. b | 3 | 4 | 5 | 4 | 5 | 5 | | | 4.33 |
| control - pest/pathogens | III.E.2. c | 3 | 4 | 4 | 4 | 5 | 5 | | | 4.17 |
| | | | | | | | | **Non-Native, Invasive & Problem Species Average Score** | | 4.39 |
| **Hydrologic/Geologic function, Hydro-Alteration (III.E.1)** | | | | | | | | | | |
| Roads/culverts | III.F.1. a | 4 | 4 | 3 | 4 | 4 | 5 | | | 4.00 |
| Ditches | III.F.1. b | 4 | 4 | 3 | 4 | 5 | 5 | | | 4.17 |
| Hydro-period Alteration | III.F.1. c | 4 | 4 | 3 | 4 | 5 | 5 | | | 4.17 |
| Water Level Alteration | III.F.1. d | 4 | 4 | 3 | 4 | 4 | 5 | | | 4.00 |
| | | | | | | | | **Hydrologic/Geologic function, Hydro-Alteration Average Score** | | 4.08 |
| **Ground Water Monitoring (III.E.2)** | | | | | | | | | | |
| | | | | | | | | **Ground Water Monitoring Average Score** | | NA |
| **Surface Water Monitoring (III.E.3)** | | | | | | | | | | |
| Surface water quality | III.F.3. a | 3 | 3 | 4 | 4 | 4 | 5 | | | 3.83 |
| Surface water quantity | III.F.3. b | 3 | 3 | 4 | 4 | 4 | 5 | | | 3.83 |
| | | | | | | | | **Surface Water Monitoring Average Score** | | 3.83 |
| **Resource Protection (III.F)** | | | | | | | | | | |
| Boundary survey | III.G.1 | 2 | 5 | 5 | 3 | 5 | 5 | | | 4.17 |
| Gates & fencing | III.G.2 | 3 | 5 | 3 | 3 | 4 | 5 | | | 3.83 |
| Signage | III.G.3 | 3 | 5 | 4 | 4 | 4 | 5 | | | 4.17 |
| Law enforcement presence | III.G.4 | 3 | 5 | 5 | 4 | 4 | 5 | | | 4.33 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | **Resource Protection Average Score** | | 4.13 |
| **Adjacent Property Concerns (III.G)** | | | | | | | | | | |
| **Land Use** | | | | | | | | | | |
| Agriculture | III.H.1. a | 3 | 4 | 5 | 4 | 4 | 5 | | | 4.17 |
| Tribal/Federal Land Exotics | III.H.1. b | 2 | 3 | 4 | 3 | 4 | 2 | | | 3.00 |
| Inholdings/additions | III.H.2 | 2 | 3 | 4 | 4 | 3 | 5 | | | 3.50 |
| Discussion of Potential Surplus Land Determination | III.H.3 | 3 | 5 | 4 | 4 | 4 | 5 | | | 4.17 |
| Surplus Lands Identified? | III.H.4 | 3 | 5 | 5 | 4 | 3 | 5 | | | 4.17 |
| **Public Access & Education (IV.1, IV.2, IV.3, IV.4, IV.5)** | | | | | | | | | | |
| **Public Access** | | | | | | | | | | |
| Roads | IV.1. a | 3 | 5 | 4 | 4 | 5 | 5 | | | 4.33 |
| Parking | IV.1. b | 3 | 5 | 5 | 4 | 5 | 5 | | | 4.50 |
| Boat Access | IV.1. c | 3 | 5 | 5 | 4 | 5 | 5 | | | 4.50 |
| **Environmental Education & Outreach** | | | | | | | | | | |
| Wildlife | IV.2. a | 4 | 5 | 5 | 4 | 4 | 5 | | | 4.50 |
| Invasive Species | IV.2. b | 4 | 5 | 5 | 4 | 4 | 5 | | | 4.50 |
| Habitat Management Activities | IV.2. c | 4 | 5 | 5 | 4 | 3 | 5 | | | 4.33 |
| Interpretive facilities and signs | IV.3 | 3 | 5 | 5 | 4 | 4 | 5 | | | 4.33 |
| Recreational Opportunities | IV.4 | 4 | 5 | 5 | 4 | 5 | 5 | | | 4.67 |
| Management of Visitor Impacts | IV.5 | 3 | 5 | 4 | 4 | 4 | 5 | | | 4.17 |
| | | | | | | | | **Public Access & Education Average Score** | | 4.43 |
| **Managed Area Uses (VI.A, VI.B)** | | | | | | | | | | |
| **Existing Uses** | | | | | | | | | | |
| Resource Conservation | VI.A.1 | 5 | 5 | 5 | 4 | 5 | 5 | | | 4.83 |
| Wildlife Observation | VI.A.2 | 5 | 5 | 5 | 4 | 5 | 5 | | | 4.83 |
| Hunting | VI.A.3 | 5 | 5 | 5 | 4 | | 3 | | | 4.40 |
| Fishing / Frogging | VI.A.4 | 4 | 5 | 5 | 4 | 5 | 4 | | | 4.50 |
| Boating | VI.A.5 | 4 | 5 | 5 | 4 | 5 | 5 | | | 4.67 |
| Hiking | VI.A.6 | 4 | 5 | 5 | 4 | 5 | 5 | | | 4.67 |
| Bicycling | VI.A.7 | 4 | 5 | 5 | 3 | 5 | 5 | | | 4.50 |
| Camping (Primitive) | VI.A.8 | 5 | 5 | 5 | 4 | 5 | 5 | | | 4.83 |
| Environmental Education | VI.A.9 | 5 | 5 | 5 | 4 | 5 | 5 | | | 4.83 |
| **Proposed Uses** | | | | | | | | | | |
| Multi-use Trail System | VI.B.1 | 3 | 5 | 4 | | 5 | 5 | | | 4.40 |
| Overlook | VI.B.2 | 5 | 5 | 5 | 4 | 4 | 5 | | | 4.67 |

| Color Code: | Excellent | Above Average | Below Average | Poor | See Appendix A for detail |
|---|---|---|---|---|---|
| | | Missing Vote | Insufficient Information | | |

## Appendix A: Scoring System Detail

**Explanation of Consensus Commendations:**

Often, the exceptional condition of some of the property's attributes impress review team members. In those instances, team members are encouraged to offer positive feedback to the managing agency in the form of a commendation. The teams develop commendations generally by standard consensus processes or by majority vote if they cannot obtain a true consensus.

**Explanation of Consensus Recommendations:**

Subsection 259.036(2), F.S., specifically states that the managing entity shall consider the findings and recommendations of the land management review. We ask team members to provide general recommendations for improving the management or public access and use of the property. The teams discuss these recommendations and develop consensus recommendations as described above. We provide these recommendations to the managing agency to consider when finalizing the required ten-year management plan update. We encourage the manager to respond directly to these recommendations and include their responses in the final report when received in a timely manner.

**Explanation of Field Review Checklist and Scores, and Management Plan Review Checklist and Scores:**

We provide team members with a checklist to fill out during the evaluation workshop phase of the Land Management Review. The checklist is the uniform tool used to evaluate both the management actions and condition of the managed area, and the sufficiency of the management plan elements. During the evaluation workshop, team members individually provide scores on each issue on the checklist, from their individual perspective. Team members also base their evaluations on information provided by the managing agency staff as well as other team member discussions. Staff averages these scores to evaluate the overall conditions on the ground, and how the management plan addresses the issues. Team

members must score each management issue 1 to 5: 1 being the management practices are clearly insufficient, and 5 being that the management practices are excellent. Members may choose to abstain if they have inadequate expertise or information to make a cardinal numeric choice, as indicated by an "X" on the checklist scores, or they may not provide a vote for other unknown reasons, as indicated by a blank. If a majority of members failed to vote on any issue, that issue is determined to be irrelevant to management of that property or it was inadequately reviewed by the team to make an intelligent choice. In either case staff eliminated the issue from the report to the manager.

**Average scores are interpreted as follows:**

Scores 4.0 to 5.0 are *Excellent*

Scores 3.0 to 3.99 are *Above Average*

Scores 2.0 to 2.99 are *Below Average*

Scores 1.0 to 1.99 are considered *Poor*

## 11.8 Management Plan Terms

## Management Plan Goals and Objectives

### Terms and Definitions

**Assessment:** Assessment—when a historic resource professional determines the possible effects—positive or negative—that an action or inaction may have on a historical resource (e.g., site, building, object or structures) by analyzing its current condition and documenting any modifications and changes to its original state as well as identifying any potential human or natural threats to its existence.

**Capital Improvement**: Capital improvement" or "capital project expenditure" means those activities relating to the acquisition, restoration, public access, and recreational uses of such lands, water areas, and related resources deemed necessary to accomplish the purposes of this chapter. Eligible activities include, but are not limited to: the initial removal of invasive plants; the construction, improvement, enlargement or extension of facilities' signs, firelanes, access roads, and trails; or any other activities that serve to restore, conserve, protect, or provide public access, recreational opportunities, or necessary services for land or water areas. Such activities shall be identified prior to the acquisition of a parcel or the approval of a project. The continued expenditures necessary for a capital improvement approved under this subsection shall not be eligible for funding provided in this chapter.

**Desired future condition**: Desired Future Condition is a description of the land or resource conditions that are believed necessary if management goals and objectives are fully achieved. Desired Future Condition varies by specific habitat and ecosystem. It can also vary, based upon a specific agency's management goals.

**Evaluation**: Review by a professional in archaeology, history or architecture as to the integrity and significance of the site, building or structure. The criteria of the National Register of Historic Places will be applied.

**Facility**: all developed structures and improvements provided for a specific purpose or contained within a clearly defined area.

**Fire management plan**: An element of the land management plan or an independent document that outlines the goals and objectives of a fire management program (prescribed and wildfire) for a predetermined period of time.

**Historic**: An object, site or structure that is 50 years or older.

**Hydrological assessment**: A documented, systematic evaluation by a qualified professional of the existing and historical quantity, quality, movement and function of water resources (e.g., computer modeling).

**Imperiled species**: A species or subspecies that is listed by the U.S. Fish and Wildlife Service as Endangered or Threatened; Florida Fish and Wildlife Conservation Commission (FWC) as Endangered, Threatened, or Special Concern; Florida Department of Agriculture and Consumer Services (FDACS) as Endangered or Threatened; or is tracked by Florida Natural Areas Inventory (FNAI) as globally or state Critically Imperiled or Imperiled. Imperiled Species does NOT refer to species that are on the FDACS list of commercially exploited plants that are not Endangered or Threatened.

**Improve**: the enhancement or expansion of facilities, roads and trails.

**Maintenance**: the daily or regular work of keeping facilities, roads and trails in proper condition.

**Monitoring**: Periodic examination of the site, building or structure to determine the current condition and threats such as erosion, structural deterioration, vegetation intrusion, poaching or vandalism. An updated Florida Master Site File form is used to complete this assessment.

**Natural community/habitat/ecological improvement:** Similar to restoration but on a smaller less intense scale. Typically includes small scale vegetation management activities, spot treatments of exotic plants, or minor habitat manipulations. Any habitat alteration that increases the diversity of a habitat or increases the population of a particular species.

**Natural community/habitat/ecological restoration**: The process of assisting the recovery and natural functioning of degraded natural communities to desired future condition, including the re-establishment of biodiversity, ecological processes, vegetation structure, and physical characters. Activities may include vegetative treatments (e.g., hardwood removal, mechanical treatment, pine tree thinning, etc.), groundcover establishment, non-commercial tree plantings, erosion control, hydrological manipulation (filling ditches), and beach management.

**Not in maintenance condition**: Species composition and/or structure is outside the targeted range. The natural community is in need of more frequent or recurring management treatments that are beyond maintenance activities. Examples include natural communities with exotic plant or animal infestations that are at levels requiring significant treatment, natural communities that have exceeded maximum targeted fire return intervals, and natural communities in need of restoration treatments.

**Poor, fair, good condition**: Evaluating the condition of cultural resources is accomplished using a three-part evaluative scale, expressed as good, fair and poor. These terms describe the present condition, rather than comparing what exists against the ideal. “Good” describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. “Fair” describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A “fair” assessment is cause for concern. “Poor” describes an unstable condition where there is palpable, accelerating decline, and physical

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

**Population survey**: Using broadly accepted methodologies to detect changes in population trends over time.

**Public access**: access by the general public to state lands and water, including vessel access made possible by boat ramps, docks, and associated support facilities, where compatible with conservation and recreation objectives.

**Recorded**: A Florida Master Site File form has been completed and filed with the Florida Department of State, Division of Historical Resources.

**Recreational/visitor opportunity**: measure of potential number of users based on existing resource conditions and developed facilities.

**Repair (major)**: the restoration of facilities, road and trails to proper condition after damage or failure.

**Restoration underway**: restoration planning/design, executing, evaluating and reporting.

**Restored/Maintenance condition**: (refers to natural community) - within the range of target species composition and structure such that no significant, non-recurring alterations to structure or species composition are needed for ecological restoration. Invasive exotic plants or animals are absent or at levels requiring minimal recurring treatments, and prescribed fire rotations are within target intervals. Refers to Natural Communities. Includes NCs that meet DFC, and NCs that have received restoration action (such as thinning, clear-cut and native species planting) and only require time and recurring maintenance actions such as prescribed fire, maintenance level exotics control, or sustainable forestry practices if applicable.

**Road**: a paved or unpaved motor vehicle route unless identified and managed as a trail.

**Significant**: Listed in or determined eligible for listing in the National Register of Historic Places as an individual property, element of a multiple listing or in an historic district. Cultural resource professionals are able to make the determination, but final determination rests with the Director of the Division of Historical Resources.

**Sustainable forestry**: The stewardship and harvest of forest products in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality, and potential to fulfill, now and in the future, relevant ecological, economic, and social functions at local, national and global levels, and that does not cause damage to other ecosystems.

**Systematic survey**: A sampling protocol designed to assess the occurrence or population

status of a species or a suite of species (e.g., presence/absence, mark and recapture, transect survey, etc.).

**Trail**: a linear route or path which has been specifically prepared or designed for one or more recreational functions such as hiking, biking, horseback riding or multiple use. In many cases, unimproved service roads are also designated as trails.

**Treatment**: A mechanical, chemical, biological or manual action that changes the structure or composition of an area in order to facilitate restoration or improvement.

**Visitor carrying capacity**: An estimate of the number of users a recreation resource or facility can accommodate and still provide a high-quality recreational experience and preserve the natural values of the site.

**Wildlife activities**: wildlife-associated recreation such as birdwatching, fishing, hunting, etc.

## 11.9 FNAI Element Occurrence Data Usage Letter

FLORIDA
Natural Areas
INVENTORY

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Tallahassee, FL 32303
850-224-8207
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www.fnai.org

November 15, 2021

Dylan Hasse, Senior Conservation Planner
Land Conservation and Planning Subsection
Florida Fish and Wildlife Conservation Commission
Tallahassee, FL

Dear Dylan,

By virtue of this letter, we are updating and continuing our agreement that it is unnecessary for your office to request FNAI Element Occurrence data for each land management plan you prepare, under the following conditions:

- FNAI will continue to provide our Florida Element Occurrence Map Package to FWC on a quarterly basis
- The FNAI GIS data will be available to FWC staff for reference and incorporation as required in management plan review and preparation with the following restrictions.
- FWC will limit spatial reference to Element Occurrence locations in public documents to the Management Area level (i.e., EOs will not be displayed on public maps to protect sensitive resources, habitats, and data sources)
- For Management Areas less than 160 acres in size, FWC will not list occurrences of resources (i.e., species and natural communities) coded as Data Sensitive. If desired, these sensitive resources can be included in a table as a count of occurrences and resource (e.g., three additional occurrences of two species/resources are coded as sensitive)
- When possible, FWC should use the FNAI provided Element Occurrence polygons, and consider the Representational Accuracy and Locational Uncertainty of each record, when determining which species occur on a Management Area

The FNAI Data Manager currently provides this update to FWC staff on a quarterly basis. Current FWC contacts are Rene Baumstark, Christi Santi, Steven Nicholl, Kristal Walsh, Kristen Sella, and yourself. We are pleased to continue this beneficial collaboration with the Florida Fish and Wildlife Conservation Commission.

Sincerely,

Frank Price
Assistant Director
Florida Natural Areas Inventory

Florida Resources
and Environmental
Analysis Center

Institute of Science
and Public Affairs

The Florida State University

*Tracking Florida's Biodiversity*

## 11.10 FWC Agency Strategic Plan

The Florida Fish and Wildlife Commission

# Strategic Plan
## 2020-2024

May 6, 2020

***This plan was written by the FWC 2020 Strategic Plan Development Team for the dedicated staff of the FWC, specifically designed with leaders and supervisors in mind with the intention of fostering and reinforcing our agency culture, core operations, and strategic approach to our conservation mission.***

# From the Executive Director

Balancing the needs of Florida's fish and wildlife resources with a diverse, growing population of people can be complicated and challenging. It is our honor to be the agency that
is entrusted to take care of these resources on behalf of all Florida residents and visitors. The
FWC team strives every day to uphold this public trust. An important element of effective management and administration is focusing on strategic priorities that are vital in accomplishing our overall mission and adjusting resources accordingly. This reallocation must be done while continuing to attend to day to day functions. It is critical to accurately identify these developing issues and set forth a strategy to address them. This formula is the basis for a strategic plan. As with any plan, it works best if it is a collaborative effort, with everyone having the opportunity to provide input in the planning process and identify emerging issues that require strategic solutions. We have put together diverse teams to develop the FWC's strategic plan, to encompass the major issues affecting our agency as a whole.

I also firmly believe that strategic plans are less about a printed document, and more about the process and collaboration necessary to achieve such a plan. The benefits of this process are seen and continued far beyond printing the final draft.

The success of this effort – of our mission – rests upon the shoulders of each and every one of us. Whether you work in the field or in an office, whether you're a scientist, technician, accountant, law enforcement officer, administrative assistant, or programmer, your unique skills and expertise are necessary to continue the good work of conservation that we do every day as well as the strategic work we will be taking up over these next five years . As you read through this plan, I challenge you to look for ways that you can help make a difference. I also ask that you challenge your co-workers to leverage their skills and talents for the good of our mission as well. The future of Florida's fish and wildlife conservation depends on our collective and diverse perspectives, backgrounds, contributions, creativity, and energy.

Respectfully yours,
Eric Sutton

# Vision & Values

The mission of the FWC is to manage fish and wildlife resources for their long term well-being and the benefit of people. Every organization has an identity that is forged not only by what it does, but by how it conducts itself. The values embedded in our mission and expressed in the vision of FWC leadership are to make quality decisions by being dynamic, science-based, efficient, ethical, collaborative, competent, and committed to the vitality of the state and its environment.

We work diligently to conserve fish and wildlife in a manner that honors the public trust that has been vested in us through Florida's constitution. This is based in long-standing law and traditions commonly referred to as the "Public Trust Doctrine." This doctrine is steeped in the principle that fish and wildlife should be managed for the public, and reflects the belief that certain resources are an intergenerational inheritance, held in trust by government for the benefit of all current and future residents and visitors.

## We envision...

***a Florida where fish and wildlife are abundant and thriving in healthy and connected natural landscapes with vital working lands and waterways; where natural resources are valued and safely enjoyed by all; and wherein natural systems support vibrant human communities and a strong economy.***

Consistent with this tradition, we strive to reinforce an inclusive culture that provides for public access, public input, technical assistance groups, stakeholder and public outreach, open communication, work teams, and shared decision making. The FWC encourages scientific inquiry and diversity of thought, and actively promotes these values with our public engagement efforts. The core concepts of these values are derived from a set of nationally accepted Wildlife Governance Principles that have been developed over time and focus efforts on conservation.

Additionally, we strive to make proactive resource decisions based on the best available science, balanced with social, economic and political interests, to create durable solutions with enforcement and managerial practicality. We empower staff to act locally on behalf of the agency to ensure decision making is as close to the issues as possible. We must cultivate a diverse and inclusive culture that care and includes values of integrity, professionalism, dedication, and adaptability, and create environment that is inclusive and supports diverse opinions and voices in decision making at all levels.

## Wildlife Governance Principles

Wildlife governance will:

- Be adaptable and responsive to citizens' current needs and interests, while also
- being forward-looking to conserve options of future generations.
- Seek and incorporate multiple and diverse perspectives.
- Apply social and ecological science, citizens' knowledge, and trust administrators' judgment.
- Produce multiple, sustainable benefits for all beneficiaries.
- Ensure that trust administrators are responsible for maintaining trust resources and allocating benefits from the trust.
- Be publicly accessible and transparent.
- Ensure that trust administrators are publicly accountable.
- Include means for citizens to become informed and engaged in decision making.
- Include opportunities for trust administrators to meet their obligations in partnerships with non-governmental entities.
- Facilitate collaboration and coordination across ecological, jurisdictional, and ownership boundaries.

## Our Core Values

**Resource Stewardship** We are passionate about Florida's natural resources and use our expertise to manage and conserve fish and wildlife

**Service Excellence** We are solution-oriented and committed to achieving wildlife and fisheries conservation results, and efficiently meeting the needs of the public and stakeholders

**Teamwork and Collaboration** We communicate openly and work together effectively to achieve our common goals We appreciate the value of diverse backgrounds, expertise, and ideas, and incorporate multiple perspectives into decision making

**Professional Integrity** We operate honestly and ethically, and apply our processes, rules, and regulations in a consistent manner that engenders a climate of trust and fairness

**Scientific and Technical Excellence** We use our science-based expert knowledge, technology, and other available resources to achieve high-quality work

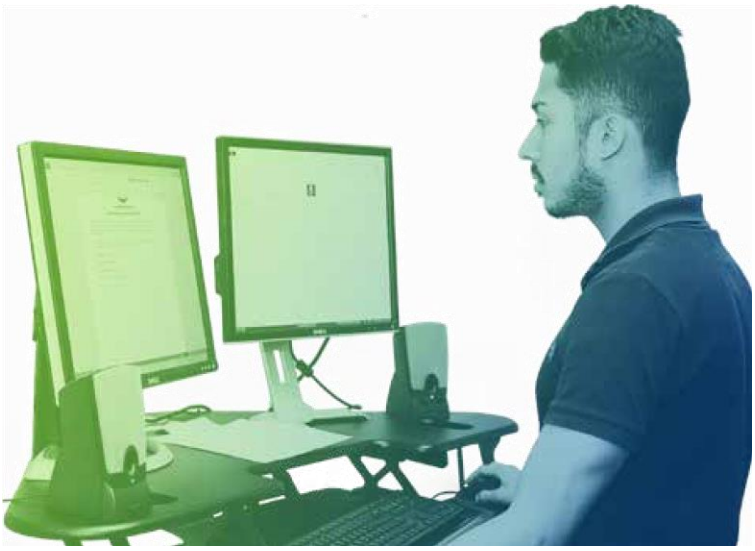
**Accountability** We set challenging goals for our achievement and hold ourselves accountable for the results

## Business Practices

In addition to our core values, we also strive to follow a core business model that addresses how best to deliver our vision, strategy, and mission through key practices. These include:

- ♦ Thinking proactively and strategically to anticipate challenges and opportunities while taking actions that contribute to the achievement of long-term interests.
- ♦ Coordinating science, resource management, enforcement, and research.
- ♦ Providing a safe and healthy environment where the public can enjoy Florida's resources and waterways.
- ♦ Providing an excellent experience for our customers.
- ♦ Creating and maximizing the use of integrated work and issue teams.
- ♦ Continually striving to improve processes and efficiency for the benefit of residents and visitors.
- ♦ Leveraging technology.
- ♦ Integrating leadership development.
- ♦ Optimizing fiscal management.
- ♦ Adapting to new and emerging needs for communication.

These core values and business practices are further defined in, and serve as, the foundation of our internal communications programs, hiring practices, and annual employee evaluation process, embedding these principles into the fabric of our organization and making them meaningful to employees in their daily activities.



# Overview of Strategic Planning

We have been developing strategic and operational plans since the FWC's inception in 1999. Our first planning effort focused on developing the structure and culture of a newly-formed agency. Subsequent plans similarly focused on norms and values, including development of a collaborative and team based culture. The strategic planning effort that resulted in the "FWC Agency Strategic Plan 2014-2019" was the first time we incorporated a large-scale, highly collaborative process to determine how to focus the strength of the agency on the most essential conservation challenges while ensuring safe and enjoyable public access to Florida's fish and wildlife resources . The 2014-2019 strategic plan identified agency Themes, Goals, and Strategies to define the conservation work required to achieve our mission. Hundreds of staff from across the agency at multiple levels worked in teams to create 109 measurable objectives across each of the five Themes, which were then prioritized by each Regional Leadership Team before being presented to our Commissioners. Executive leadership used that guidance, along with elements from other planning efforts, to develop seven Strategic Initiatives. These initiatives emphasized areas where we wanted to focus attention, discipline, and resources to make significant conservation gains over the subsequent five to 10 years. Strategic work is complex and takes considerable planning and developmental investment to accomplish. Cross-divisional teams worked together to further define the Sis, develop implementation plans, and operationalize key portions of the initiatives. The work that was accomplished on these seven SIs created a foundation for furthering more effective strategic thinking, planning, and implementation of meaningful and long-lasting conservation efforts for Florida's fish and wildlife resources. The 2014-2019 Sis are now becoming

## 2014-2019 Strategic Initiatives

**Boating as a Gateway to Conservation and the Outdoors:** Strengthen and promote the conservation connections of boating while protecting people and natural resources, and improving boating related opportunities.

**Conflict Wildlife:** Maintain the support and appreciation of fish and wildlife through sustainable coexistence by reducing human wildlife conflict.

**Conservation through Innovation – Marine Fisheries Management:** Enhance marine fisheries through the expansion of progressive and collaborative management techniques.

**Conservation through Innovation – Private Lands:** Partner with private landowners as a key to enhanced conservation.

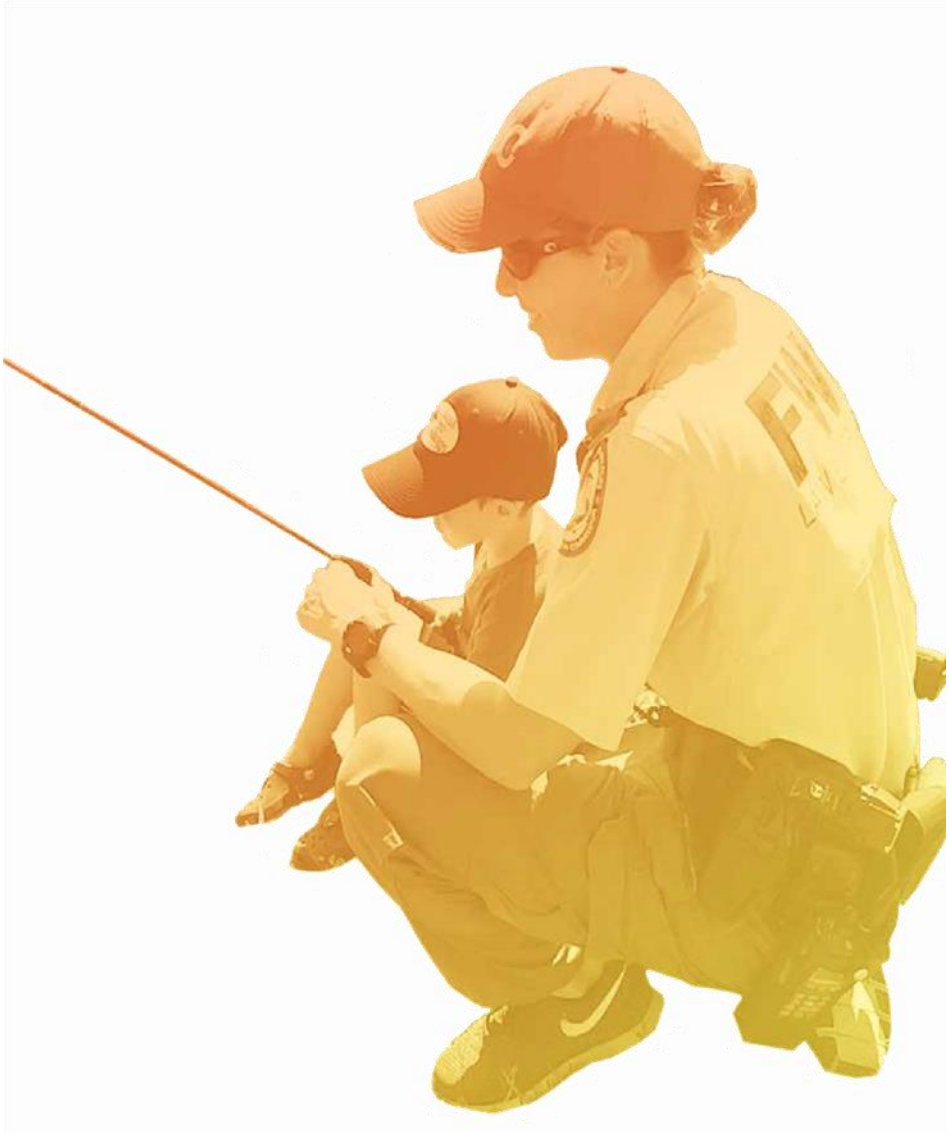
**Expanding Participation in Conservation:** Expand partnerships and FWC programs to encourage diverse youth and families to be more involved in the future of conservation.

**Imperiled Species Management Plan:** Improve the status of imperiled species to effectively reduce the risk of extinction.

**Running the Business:** Establish an internal infrastructure that identifies the areas of business operations and practices that represent high risk, prioritize them, and modify them to address risks.

part of the broader conservation work that we do and will continue to influence operational planning moving forward

The current strategic plan builds upon the knowledge gained and lessons learned from all our prior strategic planning efforts. The purpose of our agency strategic planning is to leverage our values and behaviors as an agency with our strategic planning is to leverage our values and behaviors as an agency with our operational workforce to produce significant conservation outcomes that align with an ever-changing world to better position ourselves in the future



# Strategic Landscape

We must be strategic in identifying our emerging issues and opportunities to put our agency in the best position to achieve our mission. We must adapt to take advantage of changing technology, seize opportunities to improve our fiscal and operational resources, increase efficiencies, and align priorities across the agency. In order to adapt to a changing environmental, economic, and socio-political landscape, we must first understand and define the environment in which we work. This plan is focused on aligning our agency resources to address our strategic opportunities. The issues, challenges, and risks we face will be addressed in division operational plans and priorities.

## Issues We Face

- Maintaining the significance of natural resources as pillars of the community and economy.
- Habitat loss and degradation.
- Climate change impacts.
- Water quality and water quantity issues.
- Changes in public views of wildlife and conservation.
- Impacts from exotic and invasive species on natural systems.
- Natural disasters and disease outbreaks.

**Challenges we must address:**

- Static revenue streams.
- Increasing program costs and infrastructure improvement needs.
- Loss of institutional knowledge with an unprecedented rate of upcoming retirements.
- Recruiting and retaining qualified employees.
- Leveraging legislative support for agency operations.
- Maintaining an adequate level of research, monitoring programs, and population assessments for fish and wildlife resource management.
- Balancing state and federal regulatory authorities and reducing unneeded regulatory burdens while ensuring sustainable species populations and protecting habitat.
- Securing habitat for fish and wildlife in the face of increasing development pressure.
- Managing aquatic systems and resources without control over water quality, quantity, timing, and distribution
- Gaining public support for conservation and management
- Shifts in demographics, changing attitudes toward conservation, and declining percentages of hunters and anglers, which all impact our relevancy to the public

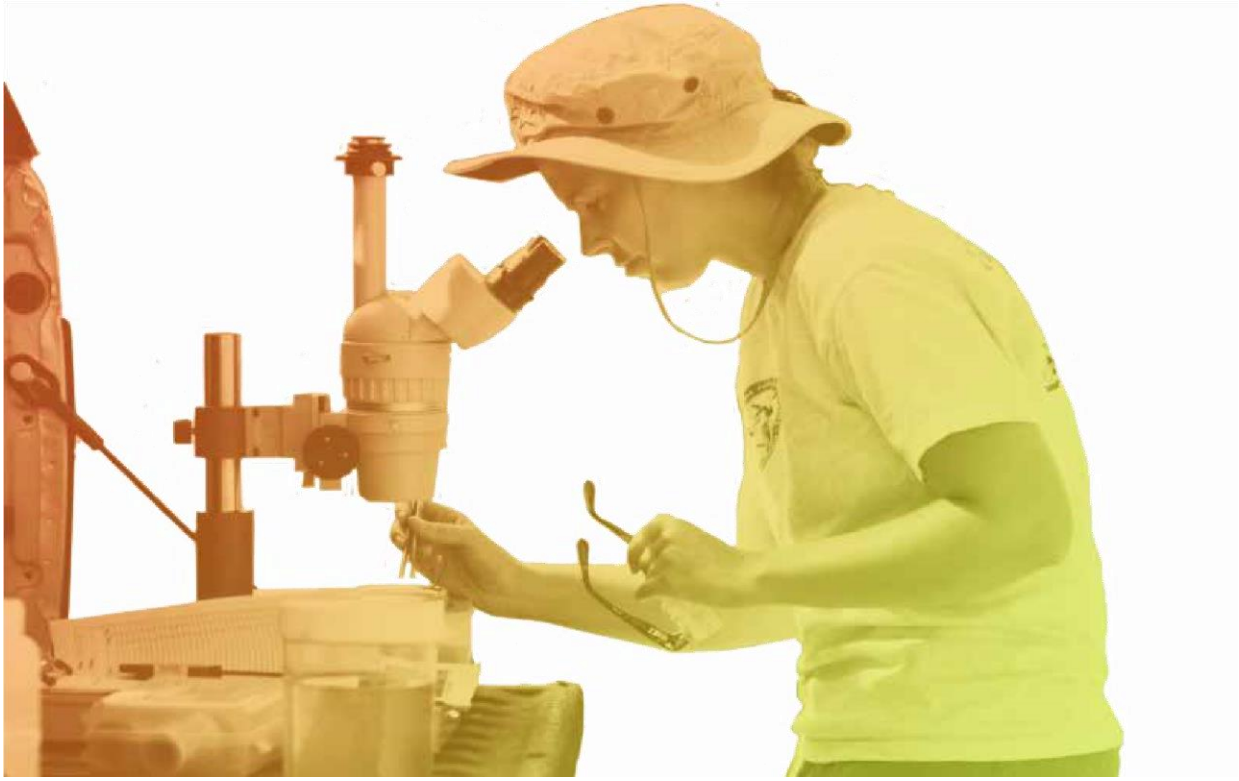
## Meeting the Challenges

We have a broad scope of core work that keeps us focused on our mission This core work is the foundation of our agency and provides the basis for building a culture of strategic planning and doing To address the identified challenges through strategic and operational planning, we must invest in the people, programs, and technology that best advance our highest priorities, which requires that we sunset low-priority activities, programs, or service. We must foster an agency culture and capacity to accept, understand, engage, and serve people with different interests and uses of fish, wildlife, and habitats We must demonstrate fairness, honesty, and compassion; practice dedication and adaptability; and include diverse opinions throughout our decision-making processes



As demographics change across the state, it becomes increasingly important to develop practices and processes that are responsive to the changing nature-based values of the public. We must focus on providing a safe environment for people to enjoy Florida's natural resources and the outdoors; adapt to the impacts of social media on communication; increase focus, capacity, and use of social sciences into agency conservation and management decisions and public engagement strategies; and foster cultural acceptance of hunting and fishing.

As we maintain a high level of core work and increase strategic planning and doing as part of our foundation, we will have a greater workload than the available resources can address. This will require a priority-based approach, meaning some work will not be completed. We will need to increase efficient use of our existing resources through realignments and decrease work on lower priority activities. We will need to work with our legislative team to secure the resources necessary for agency operations and priority issues, and leverage stakeholder relationships and partnerships to increase capacity for conservation work. We will integrate research, management, and law enforcement to focus on emerging threats, landscape conservation, and a holistic approach to watershed management. This will be accomplished through partnerships, leveraging funding sources, implementing existing plans, and fostering locally-led conservation. Achieving our conservation goals will require us to think strategically across the agency and prioritize our operations to meet the challenges that lie ahead.



# Our Organization

The core work of the FWC is broad and forms the basis from which strategic effort springs. Maintaining our core competencies and work is critical to our success and this section contains an overview of the core work areas within the FWC. This is by no means an all-encompassing description of the multifaceted work conducted throughout the agency. Additional information on each of the divisions, offices, and the institute can be found within the "Programs of the FWC" annual report as well as within each division's operational plans. This agency strategic plan focuses on a small portion of our overall work with the intent of identifying areas of strategic focus, using our existing work as the foundation.

Moreover, it is important to note that our agency's structure is intentionally organized into inter-dependent parts that must work together to achieve our mission. Divisions serve as the main operational elements, while offices provide critical support functions across the entire agency. Regions then serve to ensure geographic continuity of policy and programs across the state. This structure necessitates strong collaboration and teaming amongst all parts of the FWC. We then carry this heavy focus on working together outside of the agency and actively engage partners, stakeholders, and the public in our decision making and implementation.

**FWC**

**Florida Fish and Wildlife Conservation Commission**

**Mission: Managing fish and wildlife resources for their long-term well-being and the benefit of people.**

The FWC consists of more than 3,000 employees, including 848 sworn law enforcement officers. All personnel work together to protect and manage more than 575 species of wildlife, 200 species of freshwater fish, and 500 species of saltwater fish. The FWC works to balance the needs of these fish and wildlife species and the habitats that support them with the needs of Florida's growing population of more than 21 million residents and record numbers of visitors coming to the state – well over 100 million annually.



**The Commissioners**

The FWC's seven Commissioners are appointed by the Governor and confirmed by the Florida Senate to five-year terms. Their constitutional duty is to exercise the " . . .regulatory and executive powers of the state with respect to wild animal life and fresh water aquatic life and shall also exercise regulatory and executive powers of the state with respect to marine life, except that all license fees and penalties for violating regulations shall be as provided by law ."

**OED**

**Office of the Executive Director**

The Office of the Executive Director provides coordination, oversight, and support for FWC operations. It provides policy guidance, fosters accountability, and promotes continual improvement among the agency's divisions and offices. To address important conservation issues, OED coordinates and supports strong engagement of Commissioners and facilitates effective interaction with agency customers; stakeholders; federal, state, and local elected officials; federal and state agencies; and FWC staff. Further responsibilities include maintaining facilities and infrastructure and leading efforts to strategically focus agency staff and resources on conservation priorities. OED staff work closely with the agency's Senior Leadership Team to ensure effective integration of agency activities and programs across all divisions and offices.



There are multiple functions within OED, with some primary functions including media relations and informing residents and visitors about fish and wildlife resources; quickly and efficiently issuing licenses and permits for recreational fishing and hunting and for commercial saltwater and freshwater fishing; providing oversight for the agency's administrative functions such as disbursements, financial management, procurement, leasing, and property; managing an automated information technology environment that is reliable, secure, cost-effective, and responsive; and working closely with division, regional, and office directors to identify and coordinate programs with boundary-spanning implications that will benefit the FWC.

**FWRI**

**Fish and Wildlife Research Institute**

*The Fish and Wildlife Research Institute provides timely information and guidance to protect, conserve, and manage Florida's fish and wildlife resources through effective research and technical knowledge*.

The work done by the Fish and Wildlife Research Institute reaches far beyond the confines of the FWC. Research conducted on habitats, freshwater and marine fisheries, harvested and

imperiled species, and other important plant and wildlife communities in Florida is used by federal, state, and local governments; universities; recreational and commercial fishing interests; recreational hunting and boating interests; nongovernmental organizations; and the public . FWRI integrates its research activities with management efforts of other FWC divisions.



Primary work areas within FWRI include conducting monitoring, assessments, mapping, and research to support development of management practices to protect and improve the quality of habitat and diversity of wildlife on state managed lands; maintaining an extensive collection of fish and invertebrate specimens and providing data management services and scientific library services; integrating research on predicted or emerging threats to fish and wildlife conservation, such as climate change; and acquiring and distributing biological and ecological information critical for the science based management, conservation, restoration, and wise use of Florida's fish and wildlife resources .

**FFM**

**Freshwater Fisheries Management**

*The Division of Freshwater Fisheries Management manages, enhances, and conserves Florida's freshwater aquatic life for public benefit.*

The Division of Freshwater Fisheries Management is responsible for directing the management and identifying the research needs of freshwater fisheries within public lakes, rivers, streams, and canals, with efforts focused on improving the fish populations and their habitats to benefit anglers and other stakeholders . This is accomplished through strategies revolving around improving aquatic habitat; increasing access; improving freshwater sport and commercial fisheries; stocking sportfish; regulations; developing management plans; increasing aquatic stewardship; and building partnerships with state, county, and city governments, industry leaders, and freshwater stakeholders . FFM has developed a private-public partnership through the TrophyCatch conservation and marketing program, which uses citizen science to provide valuable information that contributes to the management of Florida's trophy bass fisheries. Special projects, such as the high school fishing program and kids' fishing clinics, encourage responsible fishing practices and help bolster future generations' understanding of and personal investment in the conservation of fish and wildlife resources.

Primary work areas include evaluating freshwater resources through surveys and inventories of fish populations and angler use; maintaining Fish Management Areas that provide access and promote fishing; developing aquatic habitat enhancement/restoration projects; producing fingerling and subadult fish for stocking in public waters to enhance fisheries, provide new opportunities, supplement urban pond populations, and for youth events; and work with communities surrounding major freshwater resources so they appreciate the intrinsic value and economic importance of the resource and the fishery .



**Habitat and Species Conservation**

**HSC**

*The Division of Habitat and Species Conservation ensures healthy populations of all native wildlife and their habitats on a statewide basis.*

The Division of Habitat and Species Conservation integrates scientific data with applied habitat and species management to maintain stable or increasing populations of fish and wildlife. Conservation integration efforts focus on the ecosystem or landscape scale to provide the greatest benefits to the widest possible array of fish and wildlife species. Accomplishing this mission requires extensive collaboration and partnering with local, state, and federal agencies to maintain diverse and healthy fish and wildlife populations for the benefit of all Floridians and visitors, which provides direct ecological, economic, aesthetic, scientific, and recreational benefits.



Primary work areas include managing, maintaining, enhancing, and restoring native natural habitats on 1.4 million acres, assisting cooperators with wildlife management on another 4.5 million acres, and working with partners to connect and expand public conservation lands; providing technical assistance to private landowners to implement wildlife conservation strategies; restoring, enhancing, and managing publicly-owned aquatic resources to improve the ecological health of freshwater, estuarine, and marine habitats; directing, coordinating, and funding control of invasive upland plants on public conservation lands and invasive aquatic plants in public waterways; developing and implementing high-priority conservation activities to improve conditions for native and

imperiled wildlife; addressing human wildlife interactions and managing the impact of native and nonnative fish and wildlife species; reviewing growth management and regulated land and water use project proposals that have potential to impact Florida's fish, wildlife, and habitat resources; and promoting, facilitating, and expanding nature-based tourism, recreational opportunities, and public participation in conservation .

**HGM**

**Hunting and Game Management**

*The Division of Hunting and Game Management manages and conserves game wildlife for the future, while fostering safe and responsible hunting.*

The Division of Hunting and Game Management uses scientifically proven game-management strategies and professional expertise to conserve game wildlife and perpetuate sustainable hunting opportunities on public and private lands statewide. The Division also manages public shooting sports facilities throughout the state and offers hunter safety programs to foster safe, responsible hunting.



Primary work areas include managing Florida's wild game populations using science, leadership, and key partnerships; providing opportunities for responsible and sustainable hunting on public and private lands; working with stakeholders and partners to coordinate support for hunting-related activities; providing hunter safety courses and special events to ensure Florida hunters are well prepared to be safe, responsible, and conservation minded; and constructing and managing public shooting ranges located throughout the state.

**LE**

**Law Enforcement**

*The Division of Law Enforcement protects Florida's natural resources and people through proactive and responsive law enforcement services.*

The FWC Division of Law Enforcement, comprised of 1,043 members including 848 sworn law enforcement officers, operates in six regions throughout the state. FWC officers are responsible for uniformed patrol and investigative law enforcement services on more than 8,400 miles of coastline, more than 13,000 square miles of offshore waters, and more than 34 million acres of land encompassing a variety of habitats including private lands, wildlife management areas, state parks, and forests.



Primary duties include protecting Florida's fish and wildlife and their habitats, and providing law enforcement services that protect public safety throughout the state of Florida. The division also provides support for state Emergency Operations Center activities and readiness for natural disasters and mutual aid requests. Personnel also engage in targeting illegal black markets and trafficking in fish and wildlife, conduct federal fisheries enforcement patrols, help to regulate the Florida seafood industry, and enforce rules related to captive wildlife.

Some internal programs undertaken by the division include professional recruitment efforts of new officers; providing world-class training and recruit instruction; conducting progressive advanced training; implementing the division career development programs; and providing intelligence information to officers in the field. The DLE enhances boating safety and waterway experiences through maintenance and repair of approximately 244 boat ramps, construction of new boat ramps, and placement and maintenance of waterway markers.

## MFM

**Marine Fisheries Management**

*The Division of Marine Fisheries Management manages Florida's marine fisheries for their long-term sustainability, their economic benefits, and for the enjoyment of the public.*

The Division of Marine Fisheries Management works with stakeholders, federal agencies, other states, and regional councils to manage and provide outreach on more than 500 marine fish and invertebrates. The division also provides expertise, monitoring, and grant funding for the deployment of artificial reefs; recovers lost or abandoned lobster and crab traps; conducts wholesale-dealer audits; provides agency comments on proposed development projects that may affect marine resources; and issues special activity licenses for harvest of species for research and educational purposes . This division additionally provides outreach and education to introduce people to the sport of fishing, instill ethical angling values, and ensure comprehension of marine fisheries regulations

Primary work areas include compiling fishery data, coordinating with other government agencies and research institutions, and soliciting information from the public regarding fishery management strategies for state saltwater fisheries regulations; serving as liaison between the FWC Commissioners, interstate fisheries commissions, and federal fishery management councils that manage marine fish species such as snapper and grouper in federal and interstate waters; promoting responsible recreational and commercial fishing activities; and administering the statewide artificial reef programs.




# Approach to the Future

## Strategic Framework

Maintaining the FWC's core work is foundational to achieving our mission and continuing our success of achieving conservation. Enforcement and education, public engagement, species and habitat management, comprehensive research, freshwater and marine fisheries enhancement, sustaining game wildlife as a public resource, and operating within responsible business practices are all components of the exceptional work we do every day. These central functions comprise the majority of our time and effort, and continuing to excel in this work is key to successfully conserving Florida's fish and wildlife and their habitats into the future.

Currently, considerable effort is spent responding to urgent challenges. Much of this work is reactive in nature, rapidly consumes resources, and ultimately pulls focus from identified priorities. A refined approach to the future – one that results in a more agile and focused organization – is necessary to minimize time spent reacting and increase time spent making progress toward our strategic priorities. By increasing the portion of work we do that is strategic, focused, and proactive, we can better adapt to our changing environment, integrate strategic solutions into our operations to address specific issues, and position ourselves to successfully conserve fish and wildlife into the future (Figure 1) .

The strategic approach presented here is a framework for infusing strategy into our operations and ultimately positioning the FWC to proactively address known challenges, capitalize on opportunities, and continue to successfully fulfill our mission. Investing time in strategic priorities is necessary to sustain the model for fish and wildlife conservation that the FWC has built. The conservation gains realized through focused planning and dedicated action are both worthwhile and essential. When strategic initiatives become fully integrated into the core components of the work we do, we achieve long-term, sustainable success.

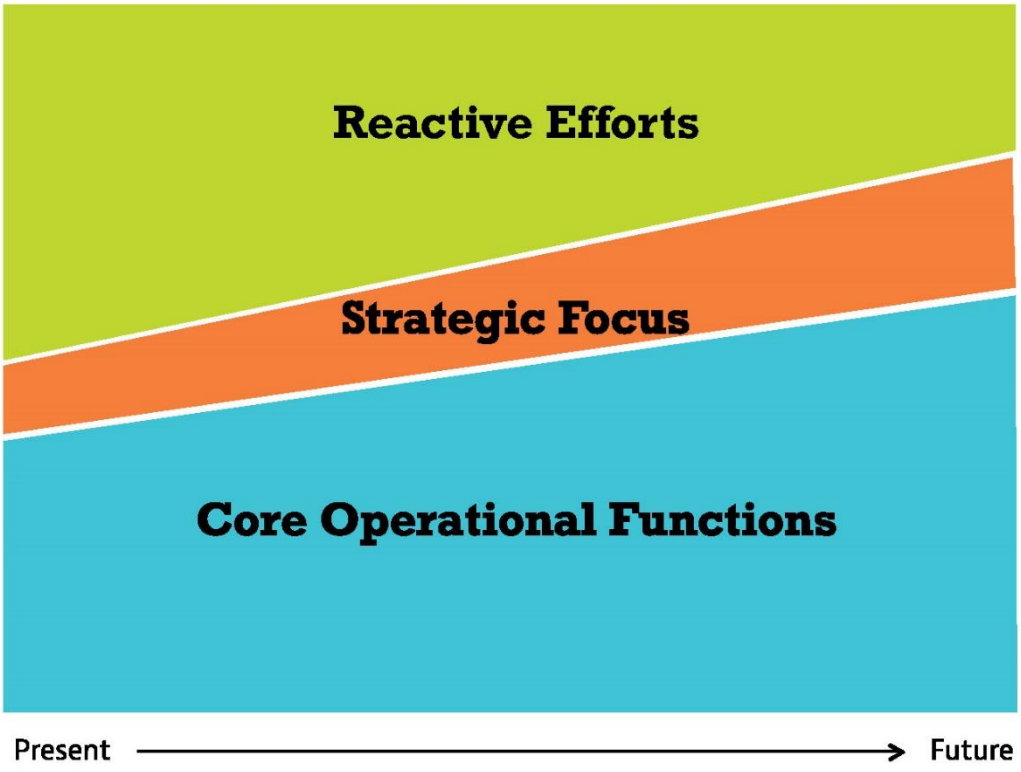



**Figure 1.** Currently, a significant portion of our effort is spent reacting to urgent issues. With a shift to a more proactive, forward-focused approach, through time we can reduce the overall amount of reactive efforts by using approaches that address future challenges.



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## Establishing Dynamic Strategic Initiatives

Identifying strategic priorities at the agency, division, and section/ program level is an important component of a future-focused approach. Strategic initiatives are intended to leverage areas of strategic importance and strengthen conservation efforts. SIs are distinguished as proactive, timely, and important topics requiring increased focus and a shift in resources. SIs are not a response to urgent, reactive challenges, nor are they a shift in course due to opportunities to address topics of lower priority. They are those critically important conservation efforts that focus on future opportunity or alignment, require dedicated attention, challenge us to work across organizational lines, and for which a shift in resources or change in operational structure may be required.

Initiatives will be selected through an ongoing process that includes environmental scanning and staff input. Strategic planning will include feedback and ongoing discussion with each division to clarify emerging issues and priorities. A cross-divisional strategic planning team will compile input, identify common themes across the agency, and evaluate potential initiatives. This team will produce recommendations on strategic areas of focus for agency and division-level initiatives to be discussed with each division leadership team and by the FWC's Executive Leadership Team. Collectively, the ELT will determine which issues become agency-level initiatives. Then, with support from the agency's strategic planning team, initiative sponsors will coordinate cross-divisional work to further describe the initiative and develop clear objectives and timelines.

## Strategic initiatives:

- Realize significant benefits for conservation that otherwise would not occur.
- Are forward-focused instead of reactive.
- Need directed increase in agency focus.
- Span section or division boundaries.
- Require resource reallocation.
- May necessitate realignment or organizational transformation.

To ensure available resources are fully focused on priorities, no more than three agency SIs will be active at any given time. Limiting the number of topics we are addressing through a strategic shift in resources is intended to yield more progress in each initiative more quickly than when resources are divided among numerous initiatives. Initiatives will develop clearly defined objectives from the onset and will be evaluated annually. Many topics identified through consideration of influences, challenges, and opportunities may be urgent in nature and require cross-divisional coordination at an operational level. While only a subset of these topics will be active as an SI at any given time, we will continue to design our core work to sustainably address urgent needs by working across organizational boundaries. As this intentionally necessitates an adaptive approach, we will reassess this process after another five-year period to improve our development of strategic initiatives moving forward.

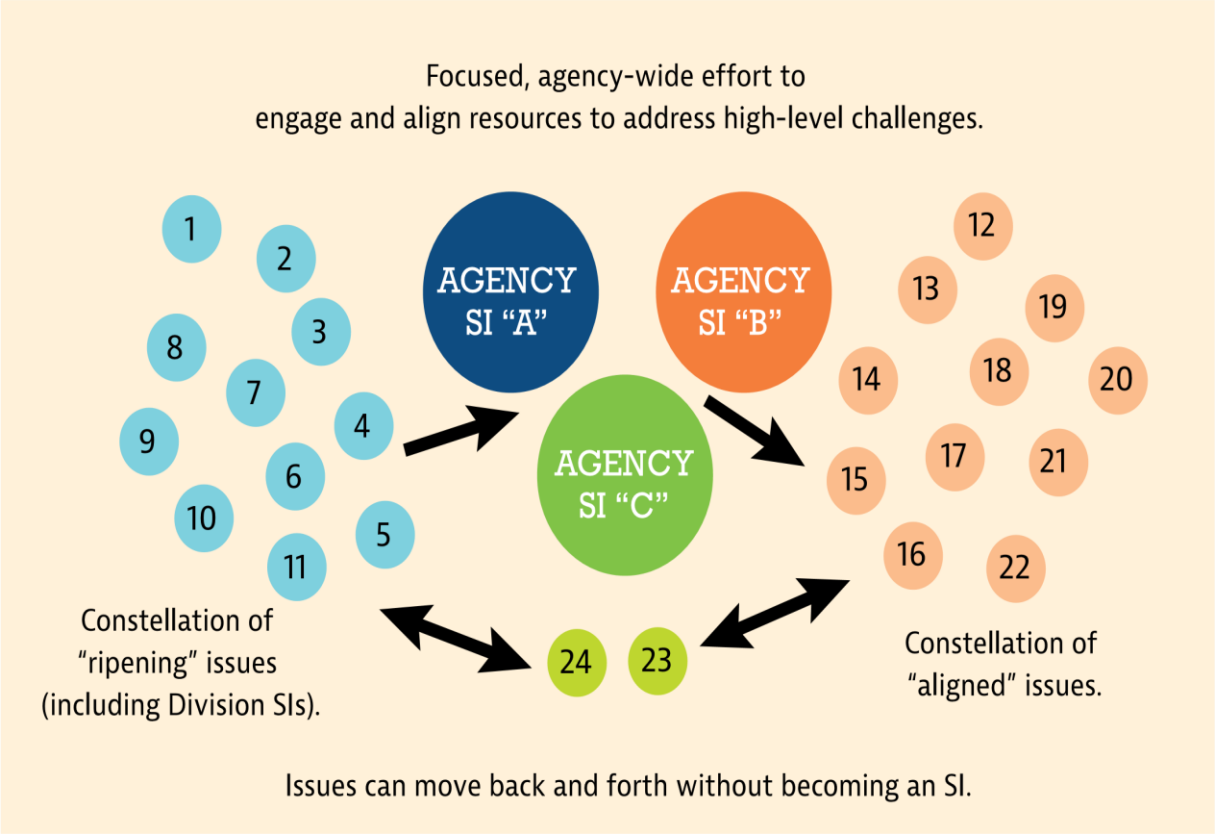



**Figure 2.** Dynamic Strategic Initiatives for 2020-2024

There will be no more than three agency strategic initiatives at any one time with no more than three strategic initiatives per division. Initiatives can change when special emphasis is no longer needed and they will be tracked as part of the strategic plan framework.

## Integrative Work Planning

To help weave strategic thinking into the fabric of the FWC, we will identify initiatives at multiple levels of the agency (e .g ., division, section, and program initiatives) to both support agency initiatives and integrate the strategic framework into the structure of our core work . While key issues will be addressed through agency initiatives, division initiatives are also critical to addressing important topics. Sections and programs may also identify initiatives by shifting focus to a refined set of topics. Divisions, sections, and programs are encouraged to apply a framework similar to the one presented here to identify priorities requiring a strategic approach and develop timely initiatives to address them. Like agency-level initiatives, these will have a refined focus, so no more than three initiatives will be active for a division at any given time. Divisions with a significant role in an agency initiative will assume the agency initiative as one of up to three initiatives on which to focus as a division. This framework is founded on each division, section, and program initiating proactive strategies in addition to maintaining operational priorities. To achieve this, divisions may need to identify operational activities that no longer warrant agency focus and evaluate where capacity can be created to refocus on proactive topics. With strategic efforts active at the agency, division, and potentially section and program levels, we will strive to align vertically to leverage resources and coordinate efforts (Figure 3).

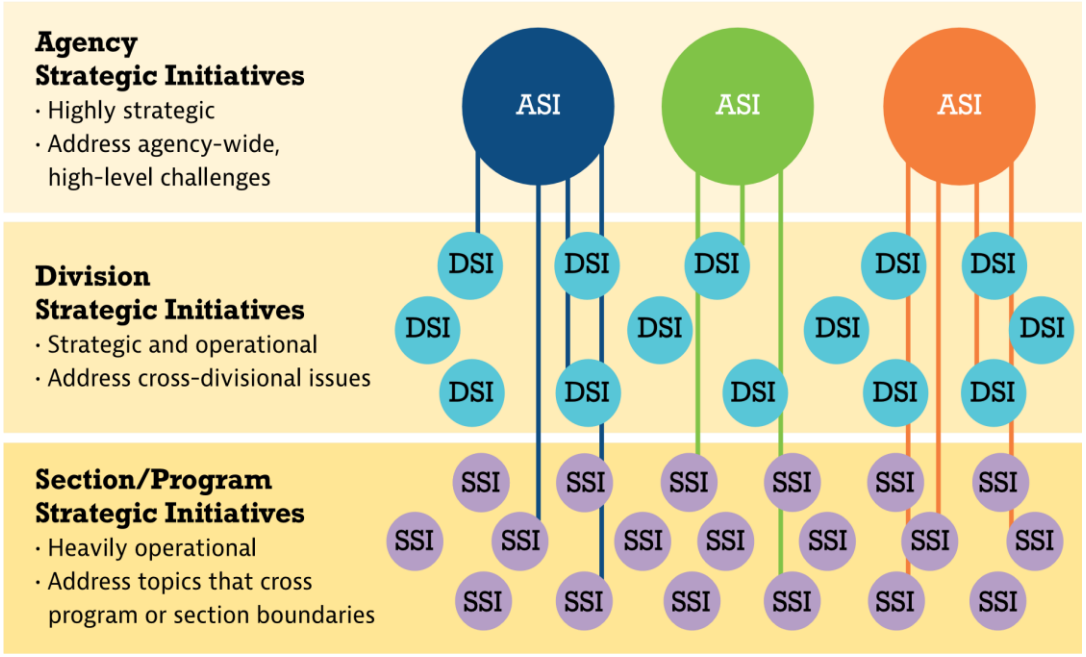



**Figure 3.** Strategic initiatives at the agency, division, and section or program levels. Vertical alignment of effort and coordination supports progress toward initiatives at multiple levels within the agency.

## Future-focused Conservation

FWC's 2020-2024 strategic plan is built upon the idea that we must be intentional in our work to conserve Florida's fish and wildlife resources so they are available for current and future generations. Our success in this arena directly depends on our individual and collective action, and accountability for achieving our mission. Guided by this strategic approach, shaped by our values and fueled by our passion, we will work together to build the Florida we envision: a Florida where fish and wildlife are abundant and thriving in healthy and connected natural landscapes with vital working lands and waterways; where natural resources are valued and safely enjoyed by all; and wherein natural systems support vibrant human communities and a strong economy.



# Strategic Initiatives: 2020

## Agency Initiatives

From October 2019 through March 2020, the agency strategic planning team worked with division leadership teams to determine the next round of SIs (this process is outlined in Appendix 1). The ELT collectively affirmed the initial three agency SIs and discussed initiative alignment under the new strategic approach. Moving forward, initiative sponsors will coordinate cross-divisional work to establish clear milestones and time frames for achieving objectives under the following areas of strategic focus:

**Invest Inward**

A strong foundation to maintain our core functions is critical to sustaining the important work we do and achieving our mission. **Investing Inward** means focusing on key challenges within our agency that, when addressed, position us to better accomplish sustainable conservation into the future. These challenges include: 1) staff retention, recruitment, capacity, and distribution; 2) infrastructure improvements, facilities, technology, and equipment; and 3) cultivating a culture that cares through investing in morale, professional development, diversity, and inclusion.

**Landscape Conservation**

The **Landscape Conservation** initiative will define a unified conservation vision to be implemented at the local level and fit within a broadly agreed-upon conservation target. This conservation vision should be one that can be shared with and implemented by internal and external, public and private partners to achieve broad-scaled, long-lasting conservation outcomes. Conservation delivery at the local level will require that we develop a network of local, state, federal, and private partners to provide technical and financial resources (data, information, assistance, funding opportunities) and a stable communication network.

**Relevancy, Engagement, and Support**

Recognizing the need to adapt to Florida's changing demographics and values by improving agency engagement and service to broader constituencies, **Relevancy, Engagement, and Support** focuses on the need to enhance conservation through broader engagement, identify available capacity for and challenges to reaching and servicing more constituents, and establish logical steps to helping the public understand the impact that fish and wildlife conservation has on their quality of life and mental and physical well-being. This includes increasing both social and financial support for conservation.

## Division Initiatives

The input provided by division leadership to determine agency strategic initiatives was also used to determine division initiatives. As outlined in the strategic framework section, divisions with a significant role in an agency strategic initiative will assume the agency initiative as one of their three division initiatives. The initiatives in Figure 4 were identified as the most timely to address at the agency and division levels. Division initiatives were also affirmed by the ELT. Each initiative will be further described by divisions as part of their workplans.

Many division initiatives align with the broader agency initiatives but will address discrete challenges relevant to the core work of those divisions. This alignment increases the focus and shift of resources towards these topics through both strategic and operational approaches and unifies work across the agency. Some divisions also have initiatives that do not directly align with agency initiatives but do represent important, timely topics that divisions, programs, and sections will strategically address. The constellation of initiatives at the agency and division levels illustrates the alignment of strategic work proposed in Figure 3.

### Strategic Alignment

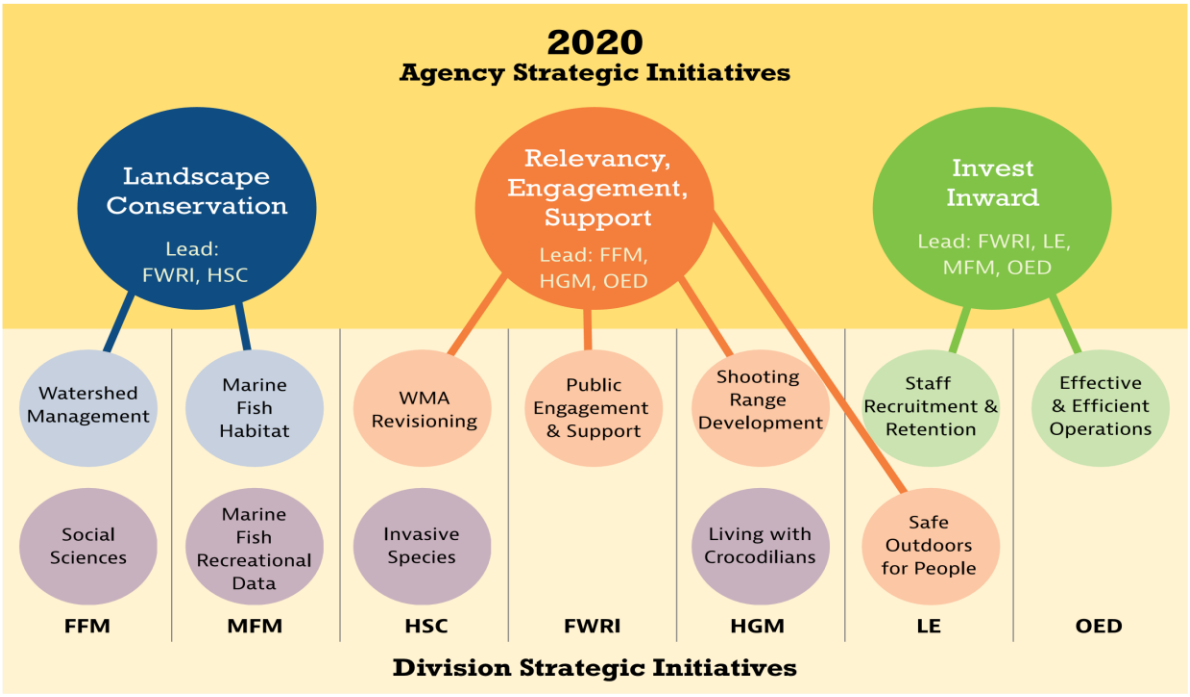



**Figure 4.** Vertical alignment between the agency and division initiatives shows multiple tiers of support for the broad initiative topics.

## APPENDIX 1

## 2020 Strategic Initiative Selection Process

Division leadership teams provided input on timely initiatives to the agency strategic planning team throughout the selection process. A number of challenges and opportunities were identified through a questionnaire and follow-up discussions. Common themes emerged among the initiatives proposed by each division, and alignment was strong in several themes. These themes may affect each division in unique ways, but they represent agency-wide challenges that require a directed focus to fully address.

Table 1 on the following page is a process illustration of preliminary initiatives from the first round of data analysis. Development of agency and division initiatives went through several iterations of division-level review through the ELT as concepts evolved and solidified, eventually becoming the 2020 Strategic Initiatives outlined in Figure 4.



Table 1. Common themes were identified from the initiatives, influences, and challenges put forward by each division. This crosswalk represents proposed initiatives and alignment among agency-wide challenges. This information guided the initiative selection process for 2020.

# Proposed Initiatives

**Agency Initiatives** **Division Initiatives**

**FFM** Wildlife conflict; Lake management plans; Watershed management; Chipola and shoal bass; Social sciences; Largemouth bass

**FWRI** Relevancy; Staff recruitment and retention; Landscape conservation; Integrative research on events; Diversify and modernize revenue; Integrative research on events; Integrate research and management; K-12 and new resident education

**HGM** Landscape conservation; Implement R3 plan; Expand participation in conservation; Shooting range construction; Living with crocodilians campaign; Wildlife conflict

**HSC** Infrastructure improvement; WMA re-visioning (relevancy); Landscape conservation; HSC's role in landscape conservation; Relevancy; Invasive species

**LE** Invest inward; Reinforce culture that cares; Public service; Recruit and retain quality staff; Science and conservation; Safe environment for people

**MFM** Invasives; Maximize productivity, capacity; Wildlife trafficking; Marine fish habitat; Corals; Marine fish recreation; Invest inward; data collection

**OED** Internal focus/invest inward; OED organizational management; Human dimensions and social science; Connectivity with other D/Os

Effective, efficient operation

# Common Themes

**Invest Inward**

- Staff: recruitment, retention, pay, capacity, distribution
- Infrastructure: facilities, technology
- Funding: stable sources
- Culture that cares: training, morale, professional development, diversity

**Landscape Conservation**

- Watershed management
- Integrate science with management
- WMA re-visioning
- Landscape conservation prioritization
- Marine and freshwater habitat

**Relevancy, Engagement, and Support**

- For fish and wildlife conservation
- For FWC as an agency
- Safe environment for people
- EPIC, R3, K-12 education
- Public service (good work)

**Social Science and Human Dimensions**

- Apply to management decisions
- Increase capacity to gather social science
- Increase value in FWC
- Use to influence behaviors
- Maintain focus on relevancy

**Wildlife Conflict and Invasives**

- Native species conflict
- Nonnative wildlife
- Invasive plants
- Aquaculture
- Trafficking and trade
- Living with crocodilians

**Operational: Proactive Research and Development/Other**

- Climate change
- Marine fish recreational data
- Largemouth bass
- Corals ♦Shooting Range Construction

## 11.11 FWC Apiary Policy

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**

# Apiary Policy

## Division of Habitat and Species Conservation

**Issued by:**
**Terrestrial Habitat Conservation and Restoration Section**
**9/1/2010**

Enclosed is the HSC/THCR Apiary Policy for all Florida Fish and Wildlife Conservation Commission's Wildlife Management Areas and Wildlife and Environmental Areas.

## DIVISION OF HABITAT AND SPECIES CONSERVATION POLICY

**Issued September 2010**

**SUBJECT: APIARY SITES ON FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION WILDLIFE MANAGEMENT AREAS AND WILDLIFE AND ENVIRONMENTAL AREAS**

**STATEMENT OF PURPOSE:** It is the intent of this policy to determine which Florida Fish and Wildlife Conservation Commission (FWC) Wildlife Management Areas or Wildlife and Environmental Areas (WMA/WEA) may have apiary sites, and provides direction on site location, management and administration of said apiaries.

Definitions

Apiary – A place where bees and beehives are kept, especially a place where bees are raised for their honey.

Apiary Site – An area set aside on a WMA/WEA for the purpose of allowing a beekeeper to locate beehives in exchange for a fee as established by contract between the beekeeper and FWC.

Apiary Wait List – An apiary wait list will be maintained by the Terrestrial Habitat Conservation and Restoration (THCR) Section Leader's Office based on applications received from interested beekeepers. Only qualified apiarists will be added to the list. To become qualified the new apiarist must submit an application form and meet the criteria below under the section titled "Apiary Wait List and Apiary Application."

Beekeeper/Apiarist – A person who keeps honey bees for the purposes of securing commodities such as honey, beeswax, pollen; pollinating fruits and vegetables; raising queens and bees for sale to other farmers and/or for purposes satisfying natural scientific curiosity.

Best Management Practices – The Florida Department of Agriculture & Consumer Services (FDACS; Division of Plant Industry (DPI), Apiary Inspection Section, P.O. Box 147100, Gainesville, FL 332614-1416) provides Best Management Practices (BMP) for maintaining European Honey Bee colonies and FWC expects apiarists to follow the BMP.

Hive/Colony – Means any Langstroth-type structure with movable frames intended for the housing of a bee colony. A hive typically consists of a high body hive box with cover, honey frames, brood chambers and a bottom board and may have smaller super hive boxes stacked on top for the excess honey storage. A hive/colony includes one queen, bees, combs, honey, pollen and brood and may have additional supers stacked on top of a high body hive box.

Establishment of Apiary Sites on WMA/WEA

During the development of an individual WMA/WEA Management Plan, apiaries will be considered under the multiple-use concept as a possible use to be allowed on the area. "Approved" uses are deemed to be in concert with the purposes for state acquisition, with the Conceptual State Lands Management Plan, and with the FWC agency mission, goals, and objectives as expressed in the agency strategic plan and priorities documents. Items to consider when making this determination can also include:

- Were apiaries present on the area prior to acquisition?
- Are there suitable available sites on the WMA/WEA?
- Will the apiary assist in pollination of an onsite FWC or offsite (adjacent landowner) citrus grove or other agricultural operation?

For those WMA/WEAs that have not considered apiaries in their Management Plan, upon approval of this policy Regional Staff will work with the Conservation Acquisition and Planning (CAP) staff and THCR Section leadership to determine if apiaries are an approved use on the area. If apiaries are considered an approved use then a request will be made to the Division of State Lands to allow this use as part of an amended Management Plan. This request will be made through the THCR's Section Leader's office and coordinated by the CAP.

Determination of apiary site locations on WMA/WEAs should be done using the following guidelines:

- Apiary sites should be situated so as to be at least one-half mile from WMA/WEA property boundary lines, and at least one mile from any other known apiary site. Exceptions to this requirement must be reviewed by the Area Biologist and presented to the THCR Section Leader for approval.
- Site should be relatively level, fairly dry, and not be prone to flooding when bees would normally be present.
- Site should be accessible by roads which allow reasonable transfer of hives to the site by vehicle.
- If a site is to be located near human activity, such as, an agricultural field, food plot, wildlife opening, campsites, etc., or if the site may be manipulated by machinery at a time when bees would be present, then the apiary site should be located at a minimum

of 150 to 200 yards from the edge of that activity. This will ensure minimal disturbance to the bees and minimize incidents with anyone working in the area.

- It is preferable to have apiary sites located adjacent to or off roads whenever possible. If traditional apiary sites were located on roads and the Area Biologist determines that the site will not impact use of the road by visitors then it will be allowed.

- FWC Area Biologist shall select apiary site(s) and the site(s) selected should not require excessive vegetation clearing (numerous large trees, dense shrubs) or ground disturbance (including fill).

WMA/WEA Staff Responsibilities

Area Biologist on WMAs/WEAs with approved apiary sites will forward a GIS shapefile depicting all the apiary site polygon(s), including a name or number with coordinates for each apiary site, to the THCR Contract Manager.

Area Biologist will monitor each apiary site no less than once a year to determine if the beekeeper is abiding by the contract requirements. If violations are noted, staff should bring them to the attention of the beekeeper for correction. If violations continue staff should notify the THCR Contract Manager who will determine if or what additional action is warranted.

Area Biologist will establish and maintain firelines around the apiary site to ensure the apiary site is ready when a planned burn is scheduled.

Area Biologist will advise the beekeeper of burn plans, road work, gate closures, or other site conditions and management activities that may affect the beekeeper's ability to manage or access the apiary site.

Area Biologist is not responsible to ensure access roads are in condition suitable for beekeepers to access their hives with anything other than a four wheeled drive vehicle. (The site of the apiary may be high and dry, but the roads accessing them may be difficult to impossible to get a two wheeled drive vehicle into during extreme weather, e.g., heavy rainfall events.)

Apiary Wait List and Apiary Application

An electronic waiting list for apiary sites will be maintained by the THCR's Contract Manager for each WMA/WEA. To be placed on the waiting list an interested beekeeper must submit an apiary application form to the contract manager (See Enclosed Application Form). Each applicant will be considered based on the following criteria:

- Proof of a valid registration with the FDACS/DPI.
- Proof of payment of outstanding special inspection fees for existing sites.
- A validated history of being an apiary manager.
- Three references that can attest to the applicant's beekeeping experience.

If an apiary site is becomes available on a WMA/WEA and there are beekeepers on the waiting list interested in that particular area, those individuals meeting the criteria above will be given preference. If there is more than one beekeeper meeting the criteria with their name on the list then a random drawing will be held by the THCR Contract Manager to determine who will receive the site. Beekeepers on the waiting list will be notified in writing of the random drawing's date/location and will be invited to attend. The individual's name selected during this drawing will be awarded the contract.

Apiary agreements are non-transferable. Each agreement serves as a contract between a specific individual or company and FWC, and the rights and responsibilities covered by an individual agreement cannot be transferred.

Contracts

Apiary contracts are for five (5) years and renewals are contingent upon a satisfactory performance evaluation by Area Biologist and concurrence of the THCR Section Leader. Approval is based on apiarist performance, adherence to rules and regulations and general cooperation. If an Area Biologist decides an apiarist whose contract is expiring is unacceptable he may recommend not approving the new contract. If this transpires then the wait list process using random selection will be used. If there is no apiarist on a current wait list then the apiarists who are in good standing with existing contracts will be notified to see if any want to be put on the wait list for the drawing. If none are interested then the site will be put on hold pending a valid request.

Pricing of Apiary Site(s)

Cost of each apiary site will be $40 annually which will include up to 50 beehives. Additional beehives will be charged at the rate of $40 per 50 beehives.

Pricing examples:

1. A beekeeper is leasing 2 apiary sites with up to 100 beehives - the fee per year is $80.
2. A beekeeper is leasing 3 apiary sites with up to 200 beehives - the fee per year is $160.

Note: The maximum number of hives/colonies allowed on an apiary site will be at the discretion of the apiarist. However, the apiarist is strongly recommended to follow the BMP as recommended by the FDACS/DPI. In addition to providing the BMP, FDACS/DPI's management has recommended 50 hives per site in pineland communities and no more than 100 hives per site in areas with bountiful resources. However, FWC will not dictate the number of hives on a site unless they create land management issues.

Bear Depredation Control at Apiary Site(s)

Beekeepers are required to consult with the WMA/WEA Area Biologist to see if electric fencing is required for their apiary sites. If the Area Biologist requires electric fencing then the Beekeeper shall construct and maintain electric fences for each apiary site. Numerous electric fence designs have been used to varying success and FWC as a courtesy provides an electric fence technical information bulletin with each Agreement. This bulletin is attached in order to assist the Beekeeper and/or provide a design that has been proven to be reasonable effective.

SUBJECT MATTER REFERENCES

Apiary Inspection Law - Chapter 586, Florida Statutes (see http://www.leg.state.fl.us/Statutes/), Rule Chapter 5B-54, Florida Administrative Code (see www.flrules.org).

The Board of Trustees of the Internal Improvement Trust Fund – Recommended Apiary Agreement Guidelines For Apiaries & Revisions to an Agreement for Apiary Activities on State Lands on September 23, 1986
S:\HSC\THCR\APIARY.BACKUP.POLICY\dlissupport@dos.state.fl.us_20100903_111446.pdf

Senate Resolution 580, September 21, 2006: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:sr580ats.txt.pdf

Attachments

Sample Apiary Agreement W/Attachments (Map Placeholder & Electric Fence Bulletin)

Sample Apiary Site Application Form W/Mission Statement

Best Management Practices for Maintaining European Honey Bee Colonies

Sample of Random Selection Process Procedure

**APPROVED:**

**_____**

**Division Director or Designee**

**DATE: _____**

## APIARY AGREEMENT

### AGREEMENT FOR APIARY ACTIVITIES ON STATE LANDS

THIS AGREEMENT is made by and between the Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600, hereinafter known as "the COMMISSION," and (Insert Name and Address of Apiarist Here), telephone number (Insert Phone Number of Apiarist Here), hereinafter known as "the USER."

**WITNESSETH**

In consideration of the mutual promises to be kept by each and the payments to be made by the USER, the parties agree as follows:

1. TERM: This Agreement will begin (Insert date here) or the date signed by both parties, whichever is later, and will end five (5) years from the date of execution. Issuance of a new five (5) year Agreement is contingent upon satisfactory performance evaluation by the Area Biologist and approval of the THCR Section Leader.

2. The COMMISSION Agrees:

    a. To provide apiary sites on state lands, which will be identified by the COMMISSION staff and located on the property identified in (4)(f) below.

    b. To provide technical assistance for bear-proofing, if required by Area Biologist, of sites made available under this Agreement.

    c. To allow the USER to place a total number of (insert number of hive boxes here) hive boxes on the COMMISSION-managed property at the apiary site(s).

3. The USER Agrees:

    a. To pay (Insert Total Dollars Here) on or before the execution date of this Agreement and each year thereafter on or before anniversary date of the original contract execution date, with check or money order payable to the Florida Fish and Wildlife Conservation Commission. All payments shall be remitted to The Florida Fish and Wildlife Conservation Commission, Finance and Budgeting, Accounting Section, PO Box 6150, Tallahassee, FL 32399-6150, and a copy of the check to The Florida Fish and Wildlife Conservation Commission, Terrestrial Habit Conservation and Restoration Section, Attn: Section Leader, 620 South Meridian Street, Tallahassee, Florida 32399-1600.

    b. To have no more than (Insert Number of Hive boxes here) hive boxes on the property at one time.

    c. To comply with the Florida Honey Certification and Honeybee Law, Chapter 586, Florida Statutes, and Rule 5B-54, Florida Administrative Code, and all other applicable federal, state, or local laws, rules or ordinances.

    d. To not damage, cut or remove any trees in the course of preparing for or conducting operations under this Agreement.

    e. To repair within 30 days of occurrence any damage to roads, trails, fences, bridges, ditches, or other public property caused by USER'S operations under this Agreement based on discretion of the COMMISSION to ensure the WMA/WEA management goals are met. All repairs will be coordinated with the Area Biologist to ensure management goals are met. If USER does not comply within the 30 day requirement, then the COMMISSION may use a third party to perform the repairs and charge the USER accordingly.

    f. To report any forest fires observed and to prevent forest fires during the course of operations under this Agreement.

    g. To abide by all WMA/WEA rules and regulations in addition to items in this Agreement.

    h. To notify the Area Biologist within 24 hours when a bear depredation event occurs.

i. To post their name in an agreed upon location at each site covered by this Agreement or otherwise use an identifying system that is approved by the Area Biologist.

j. To furnish proof of general liability insurance prior to starting apiary activities on state property or within 30 days of execution of this Agreement, whichever is earlier, and proof of annual renewal of the general liability insurance policy prior to or upon expiration date of the policy. The USER shall maintain continuous general liability insurance throughout the term of this Agreement for no less than $300,000 for bodily injury and $100,000 for property damage for each occurrence. Such a policy shall name the COMMISSION as the Certificate Holder. The USER's current certificate of insurance shall contain a provision that the insurance will not be canceled for any reason during the term of this Agreement except after thirty (30) days written notice to the COMMISSION.

k. To be liable for all damage to persons or property resulting from operations under this Agreement, and to release, acquit, indemnify, save and hold harmless the COMMISSION, its officers, agents, employees and representatives from any and all claims, losses, damages, injuries and liabilities whatsoever, whether for personal injury or otherwise, resulting from, arising out of or in any way connected with activities under this Agreement or activities occurring from any other source not under this Agreement and the USER further agrees to assume all risks of loss and liabilities incidental to any natural or artificial condition occurring on state lands cover by this Agreement.

l. To construct and maintain electric fences, if required by the Area Biologist at the Area Biologist’s discretion, to provide protection of apiaries from black bear depredation consistent with the technical information bulletin attached to this agreement, and, if so required, to maintain an open buffer around the fencing of five (5) feet or more. (See Attachment 1)

m. To remove all personal property from the site within thirty (30) days of termination or expiration of this Agreement. The USER understands that after this time, all the USER’S personal property remaining on the WMA/WEA shall be deemed abandoned and become the property of the COMMISSION, which will be utilized or disposed of at the sole discretion of the COMMISSION, and that reasonable storage and/or disposal fees and/or costs may be charged to the USER.

4. The parties mutually agree:

    a. This Agreement is not transferable.

    b. The USER's failure to submit payment by the due date established herein may result in cancellation of the Agreement by the COMMISSION.

    c. The USER's failure to submit proof of general liability insurance or proof of annual renewal in compliance with (3) (j) above may result in cancellation of this Agreement by the COMMISSION.

    d. This Agreement shall be in effect for a period of five (5) years and issuance of a new agreement will be contingent upon a satisfactory performance evaluation and approval of the Area Biologist and THCR Section Leader.

    e. Each apiary site shall be situated so as to be at least one-half (1/2) mile inward from state property lines and there shall be at least one (1) mile separation between sites. Exceptions to this rule must be reviewed by Area Biologist presented to and approved by the Terrestrial Habitat Conservation and Restoration Section Leader.

    f. The property covered by this Agreement is described as follows: That the property sites (Insert Area Name) Wildlife Management Area are represented by Attachment 2.

    g. In accordance with Section 287.134, Florida Statutes, an entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal or reply on a contract to provide goods or services to any public entity; may not submit a bid, proposal or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant with any public entity; and may not transact business with a public entity.

    h. As part of the consideration of this Agreement, the parties hereby waive trial by jury in action brought by either party pertaining to any matter whatsoever arising out of or in any way connected with this Agreement. Exclusive venue for all judicial actions pertaining to this Agreement is in Leon County, Florida.

    i. This Agreement may be terminated by the COMMISSION upon thirty (30) days written notice to the USER in the event the continuation of the apiary activities

are found to be incompatible with the COMMISSION'S management plans or for any other reason at the sole discretion of the COMMISSION.

**This Area Intentionally Left Blank**

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year last below written.

_____
USER SIGNATURE

Date: _____

_____
Witness

_____
Witness

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

_____
Mike Brooks, Section Leader
Terrestrial Habitat Conservation and Restoration

Date: _____

Approved as to form and legality

_____
Commission Attorney

Date: _____

# AGREEMENT
# ATTACHMENT 1

## Use of Electric Fencing to Exclude Bears And Prevent Property Damage

Florida Fish and Wildlife Conservation Commission
Technical Information Bulletin (2001)

Electric fencing has proven effective in deterring bears from entering landfills, apiaries (beehives), livestock pens, gardens, orchards, and other high-value properties. Numerous electrical fence designs have been used with varying degrees of success. Design, quality of construction, and proper maintenance determine the effectiveness of an electric fence. The purpose of this technical bulletin is to assist the property owner in understanding and implementing electrical fencing as a tool to exclude and prevent damage caused by black bears.

**Understanding Electric Fencing**

Electric fencing provides an electrical shock when an animal comes into contact with the electrically charged wires of the fence. People unfamiliar with electric fencing often are afraid that it will injure, permanently damage, or kill an individual or pet that contacts the fence. **This is not true!** A properly constructed electric fence is safe to people, pets, and bears.

**Components of Electric Fencing**

An electric fence is composed of four main elements: a charger, fence posts, wire, and the ground rod.

Fence Charger. On a small scale electric fence (like that typically needed for bear exclusion), the largest cost is normally the fence charger. A fence charger's job is to send an electrical pulse into the wire of the fence. Contrary to popular belief, there is not a continuous charge of electricity running through the fence. Instead the charger emits a short pulse or burst of electricity through the fence. The intensity and duration of the electrical pulse varies with the type of charger or controller unit. Chargers with a high-voltage, short duration burst capacity are the best because they are harder to ground out by tall grass and weeds. These types are also the safest, because, even though the voltage is high (5 kilovolts) the duration of the burst is very short (2/10,000 of a second) (FitzGerald, 1984).

Two basic energy sources for chargers are batteries (12-volt automotive type) and household current (110 volt). Battery-type chargers are typically cheaper to purchase but require more maintenance because of the necessity of charging the battery. The advantage of a battery powered charger is that it can be used in a remote location where 110-volt current is not available. Most units that are powered by a fully charged 12-volt deep-cycle batteries can last three weeks before needing a charge. Addition of a solar trickle charger will help prolong the duration of effective charge in 12-volt batteries.

Fence Posts. On small scale fences, the posts are normally the second largest expense involved in construction. Therefore, when planning an electric fence it is a good idea to utilize existing fencing in order to save money. If no existing fence is available, posts will need to be placed around the area needing protection. Posts may be wood, metal, plastic, or fiberglass. Wood and metal posts will need to have plastic insulators attached to them which prevent the electric wire from touching the post causing it to ground out. Plastic and fiberglass posts do not need insulators, the wire may be affixed directly to these posts. Wood and metal posts are typically more expensive and require the added expense of insulators, however, they are more durable and generally require less maintenance.

Wire. Fourteen to seventeen gauge wire is the most common size range used in electric fencing. Heavier wire (a lower gauge number) is more expensive but carries current with less resistance and is more durable (FitzGerald, 1984).

The two most common types of wire are galvanized and aluminum. Galvanized wire is simply a steel wire with a zinc coating to prevent rust, which makes the wire last longer. Some wire is more galvanized than others. The degree or amount of zinc coating that is around the core steel wire is measured in three classes. A class I galvanization means the wire has a thinner coating of zinc than a class II galvanization. Class III galvanized wire has the heaviest zinc coating and will last longer than the class I and class II wire (FitzGerald, 1984). In general, the cost of galvanized wire increases as the class or amount of galvanization increases.

Aluminum wire is typically more expensive than the galvanized wire. Some advantages of aluminum wire are: it will not rust, it conducts electricity four times better, and it weighs one-third less than steel wire.

The Ground Rod. The ground is an often overlooked, but critical part of an electric fence. Without a good ground, electricity will not flow through the wire. When an animal touches a charged wire, the body of the animal completes the electrical circuit and the animal feels the “shock”. The current must travel from the charger through the

wire to the animal and then back through the ground to the charger if the animal is to feel the shock. The soil acts as the return “wire” (ground) in the circuit. However, if a bird was to land on a charged wire without touching the soil the bird would not complete the circuit and would be unaffected (FitzGerald, 1984). Some fence configurations use actual grounded wires within the fence to enhance the grounding system.
The ground may be a commercial ground rod or a copper tube or pipe driven six to eight feet in moist soil. Copper is expensive, so a copper coated steel pipe or any other good conducting metal pipe will work also. Very dry soil can effect the ability to create a good ground and has sometimes been a problem during drought conditions. Pipe may be a better choice than a solid rod during drought conditions, because water may be poured down the ground pipe to improve the ground. Some fence configurations use wires as the grounding system, rather than relying solely on the soil as a ground.

**Recommended Electric Fence to Deter Black Bears**

Conditions at fence sites will vary and will determine what the most effective fence configuration will be. Commission biologists welcome the opportunity to visit sites and provide custom tailored advice on constructing an effective electric fence. The following recommendation will cover most situations with low to moderate pressure from black bears. Use a five strand aluminum wire fence that is 40 inches high with wire spacing every eight inches apart using the previously mentioned wired grounding system (see Figure 1). The wire closest to the ground level (the lowest wire) should be a charged or “hot” wire. The second wire should be grounded. The third wire should be hot. The fourth wire should be grounded and the fifth wire should be hot. If using metal or wood posts, insulators must be used to keep the hot wires from grounding out. The cost of this type of electric fence utilizing fiberglass posts and a 110 volt fence charger is approximately $200 for a 40' x 40' area (160 linear feet of fence).

Materials:
1 - 1, 312 foot roll (1/4 mile) 14 gauge aluminum electric fence wire
1 - 50 foot roll 12 gauge insulated wire
20 - 5 foot 5/8 inch dia fiberglass fence posts
5 - plastic gate handles
1 - 110 volt fence charger
1 - 10 foot ground pipe
4 - plastic electric fence signs

Installation. These instructions are for a square shape fence exclusion, but the process would be very similar for other applications. Drive 4 corner posts 1-foot deep into ground and stake with guy wires. Clip, rake, and keep clear any vegetation in a 15-inch wide strip under the fence and apply herbicide. Attach and stretch the

aluminum wire at 8-inch increments starting 8 inches from ground level. A loop of wire should be left on each wire at the first corner post. Once the wire has been stretched around the outside of all the corner posts back to the first post a plastic gate handle should be attached to each wire and the gate handles should be attached to each corresponding loop on the first corner post. Drive in the remaining 16 posts to the same depth at 8-foot intervals between corner posts. Secure each of the five wires to each of the posts with additional wire. Attach four plastic electric fence signs (one on each side) to the top wire of the fence. Attach a 12-gauge strand of insulated wire to the positive terminal of the fence charger and attach it to the first, third, and fifth wires of the fence. Attach another 12 gauge insulated wire to the negative terminal of the charger and attach this wire to the ground pipe which has been driven into the ground 6 to 8-feet deep. Attach another 12 gauge insulated wire from the negative terminal of the charger to the second and fourth wires on the fence. Plug the charger into a 110 volt power supply and the fence is in operation.

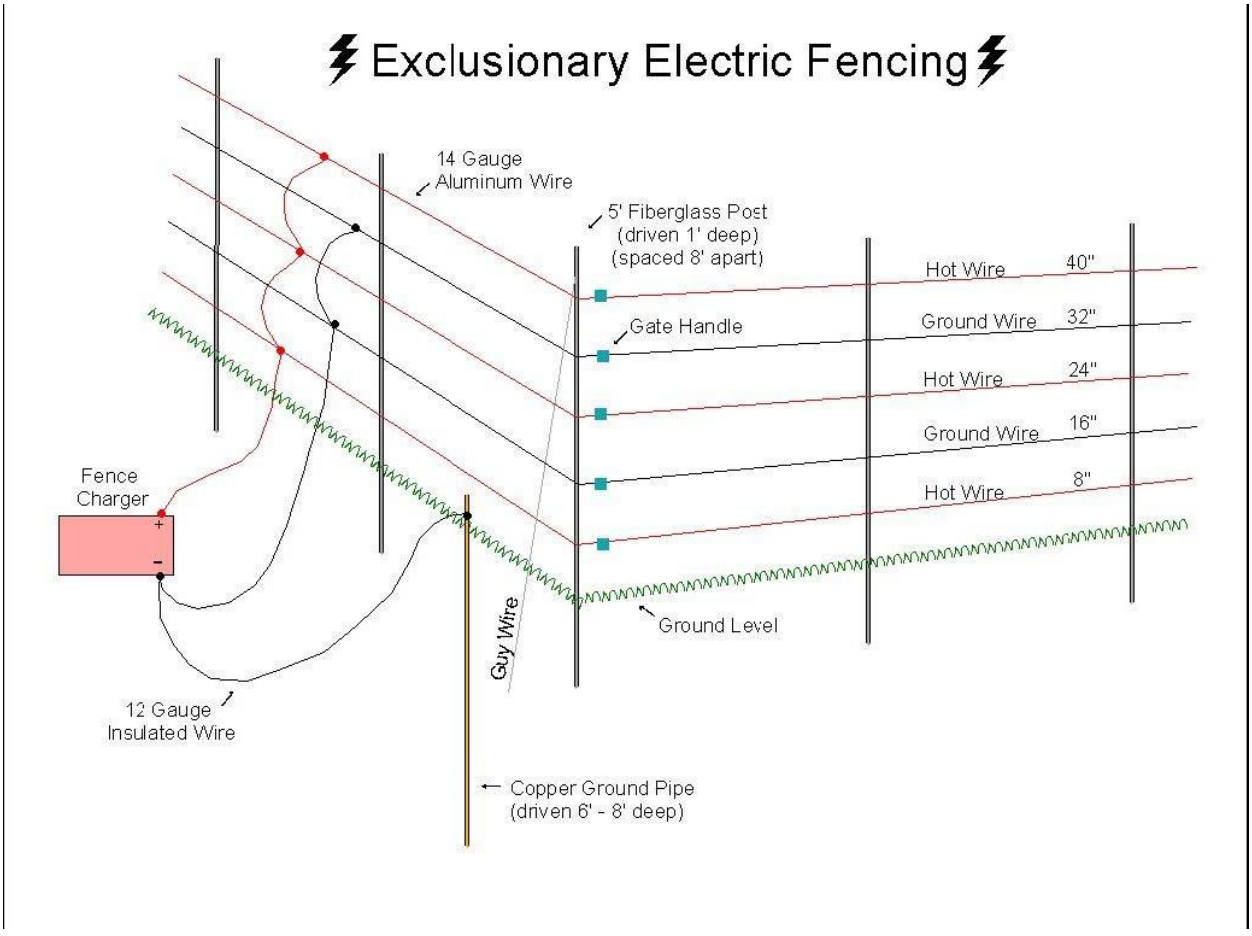
**Tips to improve the effectiveness of your electric fence to deter black bears**:

1. If using a 12-volt fence charger, ensure that the battery is charged; check every two weeks.
2. Make sure terminals on the charger and battery are free of corrosion.
3. Make sure hot wires are not being grounded out by tall weeds, fallen tree branches, broken insulators, etc.
4. If fence wires have been broken and repaired, make sure wires are corrosion free where they have been spliced together. Also, tighten the fence at each corner post as wires that have been spliced and are loose make poor connections.
5. Be sure to rake vegetation from under and around the outside of the fence as this may act as an insulator.
6. To improve the ground around the perimeter of the fence add a piece of 24 inch chicken wire laying on the ground around the outside of the fence. This should be connected to ground.
7. During periods of drought pour water down the ground pipe and around the ground pipe to improve the ground. Digging a 6 inch deep 6 inch diameter hole around the ground pipe and back filling with rock salt will also improve the ground. Additional ground pipes may also be added to portions of the fence farthest from the charger.
8. To ensure that the bear solidly contacts the charged portion of the fence, a bait like bacon strips, a can of sardines, or tin foil with peanut butter may be attached to one of the top hot wires. Make sure these do not contact the ground, thus shorting out the fence.
9. When protecting a specific structure (like a shed or rabbit hutch), the fence should be placed 3 to 5 feet away from the structure (rather than on it) so that the

bear encounters the fence before reaching the attractant.
10. Protect the fence charger from the elements by covering it with a plastic bucket or a wooden box.
11. Place plastic electric fence signs around the perimeter of your fence to improve visibility and to warn other people.

**LITERATURE CITED**

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**AGREEMENT**
**ATTACHMENT 2**

**Place Holder for Map**

**Of**

**Apiary Locations**

**At**

**WMA/WEA**

# APIARY SITE APPLICATION FORM

**Florida Fish and Wildlife**
**Conservation Commission**

**RETURN TO**: The Florida Fish and Wildlife Conservation Commission, 620 South Meridian Street, Tallahassee, FL 32399-1600. Please print or type all information. Attach additional sheets if necessary.

Name _____ Telephone Number _____

Mailing Address _____

City or Town_____ County _____ Zip Code _____

Physical Address (If Different from Mailing Address) _____

Company Name: _____

Email Address _____

Requested Wildlife Management or Wildlife and Environmental Area(s)(see attached list of WMA/WEAs with apiary sites):

WMA/WEA _____ County_____ # of Sites_____

WMA/WEA _____ County_____ # of Sites_____

WMA /WEA_____ County_____ # of Sites_____

WMA /WEA_____ County_____ # of Sites_____

Planned Number of Hives Per Site: _____ Permanent: ____ Seasonal: _____

Member of Beekeepers Association: Yes____ No____

Number of Years a Member_____

Name of Beekeepers Association:_____

Are you registered with Florida Department of Agriculture and Consumer Services/Division of Plant Industry (FDACS/DPI):_____Yes _____No _____N/A If yes, please provide proof.

Are you current with any and all special inspection fees:_____Yes _____No _____N/A. If yes, please provide proof.

Do you follow all recommended Best Management Practices from FDACS/DPI?:_____Yes _____No

If no, then please explain on a separate piece of paper.

Please provide below a chronological history of your beekeeping experience. If you need more space, please provide additional sheets:

**References:** If a new apiary contractor, please provide on a separate piece of paper at least 3 references who can verify your apiary experience. Provide each reference's name, address, phone number and email address (if applicable). Please attach reference sheet to this document and submit.

## MISSION STATEMENT

**Management**

**Of**

**Florida Fish and Wildlife Conservation Commission's**

**Wildlife Management Areas**

**And**

**Wildlife and Environmental Areas**

The mission of the Florida Fish and Wildlife Conservation Commission (FWC) is to manage fish and wildlife resources for their long-term well-being and the benefit of the people. To aid in accomplishing this mission, one of FWC's management goals is to manage fire-adapted natural communities on our Wildlife Management and Environmental Areas (WMA/WEA) to support healthy populations of the plants and animal's characteristic of each natural community. In order to achieve this goal various habitat management techniques are used. These include prescribed burning, applications of herbicides and mechanical treatment of vegetation. These management efforts will take place at various times and locations on each of the FWC's WMA/WEAs. Staff on each WMA/WEA will work with and make users aware of these activities when necessary. Users must be aware and accept that these activities are necessary for the proper management of the area.

Note: This document is included as an attachment with each Application and executed Contract.

# FDACS/DPI's BMP

## Florida Department of Agriculture & Consumer Services

**BEST MANAGEMENT PRACTICES FOR**

**MAINTAINING EUROPEAN HONEY BEE COLONIES**

1. Beekeepers will maintain a valid registration with the Florida Department of Agriculture and Consumer Services/Division of Plant Industry (FDACS/DPI), and be current with any and all special inspection fees.

2. A Florida apiary may be deemed as European Honey Bee with a minimum 10% random survey of colonies using the FABIS (Fast African Bee Identification System) and/or the computer-assisted morphometric procedure (i.e., Universal system for the detection of Africanized Honey Bees (AHB) (USDA-ID) or other approved methods by FDACS on a yearly basis or as requested.

3. Honey bee colony divisions or splits should be queened with production queens or queen cells from EHB breeder queens following Florida's Best Management Practices.

4. Florida beekeepers are discouraged from collecting swarms that cannot be immediately re-queened from EHB queen producers.

5. Florida Beekeepers should practice good swarm-prevention techniques to prevent an abundance of virgin queens and their ready mating with available AHB drones that carry the defensive trait.

6. Maintain all EHB colonies in a strong, healthy, populous condition to discourage usurpation (take over) swarms of AHB.

7. Do not allow any weak or empty colonies to exist in an Apiary, as they may be attractive to AHB swarms.

8. Recommend re-queening with European stock every six months unless using marked or clipped queens and having in possession a bill of sale from an EHB Queen Producer.

9. Immediately re-queen with a European Queen if previously installed clipped or marked queen is found missing.

10. Maintain one European drone source colony (250 square inches of drone comb) for every 10 colonies in order to reduce supercedure queens mating with AHB drones.

11. To protect public safety and reduce beekeeping liability, do not site apiaries in proximity of tethered or confined animals, students, the elderly, general public, drivers on public roadways, or visitors where this may have a higher likelihood of occurring.

12. Treat all honey bees with respect.

## RANDOM

## SELECTION PROCESS

# FOR VACANT APIARY SITE

When an apiary site becomes available the following procedure is used to randomly select the next apiarist (beekeeper) for an available apiary site on a WMA or WEA. Only those who have been evaluated and deemed qualified to be an apiarist on a WMA/WEA through the Apiary Application process will be eligible for this selection process. The steps below will be followed by the THCR Contract Manager when a site becomes available to be filled by a qualified apiarist:

1. The THCR Contract Manager will maintain an "Apiary Wait List Folder" on the THCR SharePoint for each WMA/WEA with apiary sites.
2. A wait list is either created or updated when an Apiary Application(s) is received by the THCR Contract Manager from a qualified apiarist.
3. Upon receipt of an apiary site application, the THCR Contract Manager will review the WMA/WEA folder to see if there is an "Apiary Wait List".
4. If a list exists then the qualified applicant will be added to the list.
5. When an apiary site becomes available if there are more than one qualified apiarist then these apiarists will be contacted by certified letter to determine their interest.
6. The letter will request a response within 10 working days to make them eligible for the random drawing.
7. If there is no response or is negative then that apiarist will not be included in the random drawing and the name will be removed from the waiting list*.
8. If only one apiarist responds positively to the certified letter then the available site will be awarded to that interested apiarist.
9. If there are no apiarists on a wait list or all responses are negative then apiarists who currently have site(s) under Agreement and where not on the waiting list will be contacted to see if any have interest in the available site. If more than one responds then the random drawing process will be used to determine who will be awarded the site.
10. Steps to be performed by the THCR Contract Manager to execute the random selection for an available apiary site are listed below:

a. The names of each interested apiarist will be noted on a 1” X 2” piece of paper and folded in half.

b. The pieces of paper will be inserted into a “black film canister” which has a snap top and placed into a container and stirred up prior to the selection.

c. A non-biased person will be selected to reach into the bowl (which will be held above the selection person’s eyesight) and randomly select one of the canisters.

d. The canister will be opened by the person performing the selection and the name is read aloud for those in attendance. Everyone in attendance will sign a witness sheet.

e. The apiarist whose name is selected will be awarded the available site.

f. A new Agreement will be developed by the THCR Contract Manager.

*****A new apiary application must be submitted once requestor’s name is removed from a waiting list.

## 11.12 Prescribed Burn Plan

# EVERGLADES COMPLEX OF WILDLIFE MANAGEMENT AREAS
# **PRESCRIBED FIRE PLAN**



**March 2019**

## INTRODUCTION

Many ecosystems in Florida evolved with fire and rely on its frequent return in order to sustain their unique structure and species assemblages (Myers and Ewel 1990). Florida experiences lighting storms more frequently than most parts of the country (Abrahamson et al. 1984) and fires have been started from these storms throughout history. Lightning-caused wildfires and anthropomorphic fires have been historically common throughout the Everglades ecosystem for thousands of years and have played an important role in shaping the ecosystem.

To continue the important effects that fire has on the landscape, prescribed fires are conducted. Prescribed fire fulfills the historical role of wildfire by maintaining natural plant communities and associations (Cohen 1974). Fire in the Everglades ecosystem is an important natural process which has many vital functions and is a primary factor in shaping the Everglades vegetation patterns (Wade et al. 1980). Prescribed fires allow these natural functions to occur under optimal conditions and are an important and required land management tool for maintaining healthy plant communities across Florida's landscape. Both plants and animals have adapted strategies which allow them to flourish under natural fire regimes. The Everglades Complex of Wildlife Management Areas (ECWMA) has been affected by compartmentalization and altered hydrology, both of which have affected the frequency, size, and severity of wildfires. Without fire, dramatic habitat changes occur, fuel loads reach dangerous levels, and desirable plant species are displaced. Subsequent damaging wildfires can further degrade these habitats. When fire is maintained across the landscape, both plants and animals can thrive.

The ECWMA is located within the Everglades ecosystem of southern Florida (Figure 1), and is characterized by tree islands, sawgrass marsh, wet prairies, and sloughs. Sawgrass is the dominant vegetation and is a fire-adapted plant that grows quickly and recovers rapidly after fire (Loveless 1959*b*, Wade et al. 1980). Dense stands of willow or cattail can be common locally, and are often found near alligator holes, areas previously altered by muck fires, and in disturbed areas adjacent to levees, drainage ditches, canals, and other elevated sites. These communities are all shaped by fire, and prescribed fire is used to maintain them. Prescribed fire and wildfires are an inherent part of the ECWMA.

## BURN OBJECTIVES

Prescribed fire is used on the ECWMA as a habitat management tool exclusively or in conjunction with other management techniques to accomplish a variety of objectives. Prescribed fire is used to restore and/or maintain fire-dependent native habitat communities. This results in preserving native plant communities and improving wildlife habitat. The primary objective of the prescribed burn program is to mimic a natural fire regime that reduces hazardous fuel loads, protects tree islands from catastrophic wildfires, and enhances and maintains a mosaic of natural plant communities for the benefit of wildlife.

Additional benefits of prescribed burning include releasing nutrients back into the soil, making them available to plants and wildlife, control of undesirable vegetation, control of exotic plant species, improving wildlife access for both foraging and travel (Givens 1982, Venne and Frederick 2013), promoting the growth and production of vegetation (Loveless 1959*a*), improved public access, and potentially reducing parasite populations, particularly immature stages of ticks and internal parasites (Garrison and Gedir 2006).

DESCRIPTION OF AREA

The ECWMA is comprised of approximately 736,881 acres and includes Everglades and Francis S. Taylor Wildlife Management Area (EWMA), Holey Land Wildlife Management Area (HWMA), and Rotenberger Wildlife Management Area (RWMA). The ECWMA is part of the Everglades ecosystem and stretches over 50 miles from southwestern Palm Beach County, through western Broward County, and into northwestern Miami-Dade County. The Florida Natural Areas Inventory has identified the following natural communities within the ECWMA: baygall/hydric hammock, cattail marsh, developed, dome swamp/strand swamp, exotic, levee, open water, ruderal, swale, wet prairie/slough, and willow (Figure 2). The EWMA, also known as Water Conservation Areas (WCA) 2 and 3, is comprised of 671,831 acres and is characterized by sawgrass marsh, freshwater slough, wet prairie, and upland tree island habitat. The two WCAs are subdivided into five water management units: WCA 2A, WCA 2B, WCA 3A North (3AN), WCA 3A South (3AS), and WCA 3B (also named Francis S. Taylor Wildlife Management Area). Situated above the northwest corner of EWMA, the RWMA is comprised of 29,700 acres of Everglades' ecosystem, including sawgrass marsh, freshwater slough, cattail, wet prairie, shrubs, and upland tree island habitat. The third unit of the complex, the HWMA, lies directly to the east of RWMA, totals approximately 35,350 acres of Everglades' ecosystem, and is characterized by a marsh of dense sawgrass with scattered shrubs, tree islands, cattail marsh, levee forest, and slough. There is minimal relief, generally with decreasing elevations from north to south (approximately 0.2 feet per mile). Peaty mucks are the dominant substrates of the ECWMA. The FWC is the lead managing agency on the ECWMA.

HYDROPERIOD

The amount and success of prescribed burns in the ECWMA depends heavily on hydroperiod. The natural hydroperiods of the areas have been altered for many years primarily due to their impoundment following the construction of levees, canals, and water control structures. Typically, WCA 2 and WCA 3AS are the wettest of the areas and generally have surface water (southern portions) year-round. The driest areas are WCA 3AN and HWMA. Both HWMA and WCA 3B are primarily rainfall-driven. The RWMA typically has surface water from July through March. During times of drought, portions or all of the ECWMA can dry out completely and halt any burning activities. Water levels in the ECWMA begin to rise with the start of the wet season (May – October) and recede during the dry season (November – April).

PRESCRIBED BURNING PROGRAM

A. Firebreaks



Natural and existing features, such as sloughs, wet prairies, and airboat trails, are used as firebreaks whenever possible. Firebreaks are created by flattening lanes of vegetation at least 40-50 feet (four-five airboat widths) wide using an airboat or tracked vehicle. Existing features are widened as necessary to meet this minimum. In addition to ensuring the unit is surrounded by firebreaks, wooden stakes with fluorescent flagging are deployed at strategic locations around burn unit boundaries. Stakes are placed on the inside of the firebreak to mark the side to be lit, which can be helpful for personnel unfamiliar

with the area.

Levees can be used for firebreaks, but typically require either Florida Forest Service (FFS) personnel/equipment and/or foot crews to monitor the fire line. Canals and roads can also be used for firebreaks, but are used infrequently due to availability and/or closeness to smoke sensitive areas.

B. Burn Units

Burn units are fluid and not permanently defined. Vegetation communities shift over time, and created firebreaks typically disappear rapidly. Factors such as vegetative communities, water levels, and objectives influence the boundaries and size of the unit. Burn units in the ECWMA can range from less than 500 acres to 3,000 acres depending on area conditions. Large-scale burn units have been developed for each WMA (Figures 3-5) to delineate general areas that should be prescribed burned. Specific burn units will be developed within these larger burn units according to factors described above. Typical prescribed burn rotations will be approximately 3-5 years with at least 8,000 acres burned each year. Shorter rotations may be used in areas of critical fire concern. Burn units will include a mosaic of habitats whenever possible so that wildlife species with small home ranges have nearby escape cover.

Each year, as part of the ECWMA Wildlife Conservation and Prioritization Strategy developed for the area, a map of proposed burn units for each WMA will be created and available upon request.

In November 2018, as part of FWC's Prescribed Fire Program Review, a perimeter burn unit analysis was initiated. All perimeter burns units are analyzed and approved by area and regional staff prior to burning to identify mitigation measures to reduce the potential for escape during prescribed burning operations. Each WMA's boundary burn unit analysis is in their respective WMA's SharePoint folder.

C. Type of Burn

Burns will be conducted by a certified (through FFS) prescribed burn manager utilizing the FWC's standardized prescription (Appendix 1) and in accordance with FWC's Prescribed Burning and Wildfire Suppression Standards (Appendix 2).



Ignition will typically be from airboats, although aerial ignition and flares are also used. Ignition from airboat is via a fuel tank equipped with a torch. The airboat driver navigates along the fire line while

the passenger ignites vegetation at each ignition point. Aerial ignition is conducted with an Aerial Ignition Device from a helicopter, with ground support provided by airboats. Aerial ignition is effective in reducing the time for the burn to be completed and reduces the impact of any adverse air quality effects. Flares can be used to ignite patches of vegetation that are difficult to access, or to protect tree islands from head fires (flares are shot into the upwind edge of islands to start a backing fire that will consume fuel around the island); however, flares typically have little success. Although large burn units, particularly those without fuel continuity or limited access, have been successfully burned with aerial ignition, due to fuel continuity, cost-effectiveness, and access, most burns will be ignited using airboat ground crews.

A variety of techniques (backing, flanking, and heading fire) will be used. The mosaic of natural communities found throughout most Everglades burn units allows for maximum success with minimal risk to wildlife. After a successful test fire is conducted, most burns will begin with a backfire along the downwind side of the unit. Once the backfire is secured, the rest of the unit will be burned with spot, flank, or head fires depending on fuel loads and desired fire intensity. Occasionally an ignition line through the middle of the unit will be utilized. Contingency plans are included within each prescription, and burns will be monitored daily until the burn is declared out.

D. Season and Time of Day

Because hydroperiods may be unpredictable, prescribed burns on the ECWMA may be conducted during both the growing (April – September) and dormant (October – March) seasons. Generally, prescription conditions occur from May through April, with most prescribed burns conducted during the dormant season (i.e. winter and early spring) when weather patterns are more stable and water levels are typically stable to receding. Prescribed burns are conducted during the growing season as weather and water levels allow.

Prescribed fire will be conducted primarily during daylight hours; night burning will be avoided due to problems associated with smoke dispersal, equipment limitations, and safety. Should a burn extend into the night, FFS will be notified. Recreational activities occur year-round; however, burning during peak periods of recreational use will be limited.

E. Optimal Weather and Water Conditions

Natural communities within burn units will be evaluated beforehand to determine the desired wind direction. Areas surrounding the burn unit will also be used to determine the best wind direction. In general, winds that blow away from smoke sensitive areas and areas where containment would be difficult will be favored. Other parameters, such as desired relative humidity, will be prescribed based on fire objectives within the unit and containment concerns. Burns will not be conducted on days that are deemed too volatile or days in which objectives would likely not be met. Water levels are one of the most important factors in the determination of prescribed burns; and at least four inches of water on average must be present before an area can be burned. Water levels are measured within firebreaks, and a minimum average of 4 inches allows for effective firebreak management as well as indicates that the underlying peat layer would be protected from ignition. Maximum water depths should also be considered. Burns should not be conducted when water levels meet or exceed twenty-four inches; however, ideal conditions will be dependent on specific unit characteristics.

F. Smoke Management

Smoke management will be considered when planning a prescribed burn in the ECWMA. Smoke sensitive areas include powerlines, U.S. Highway 27, Interstate 75, Sawgrass Expressway (869), State Road 84, urban portions of Broward County, and U.S. Highway 41. All prescriptions require a smoke screen to identify "smoke sensitive areas". The smoke screen will be performed either the day of or the day prior to conducting a prescribed burn. A FFS smoke screening tool is available via the internet. The map of the expected smoke plume will be included with the prescription. If the tool is not available online, a smoke plotter on the burn map is required. A minimum of five miles will be allowed for grass fuels, regardless of fire technique. When burning less than five miles from any public road, a person will be assigned to periodically monitor the road for smoke impacts (i.e. visibility on roadways, public health concerns).



To minimize smoke problems, preferred conditions include a dispersion index greater than 40, a minimum mixing height of 1,700 feet, and transport wind speeds of 9 miles per hour or more. Winds that blow away from smoke-sensitive areas are favored. Residual smoke problems such as stumps or snags will be promptly mopped-up and monitored to minimize smoke hazards.

G. Personnel



A minimum of four airboats and six personnel are required for a prescribed burn. Most burns will be conducted with at least five airboats (2 ignition, 2 holding, 1 burn boss) and nine personnel. Burn crew members will be assigned tasks according to training, experience, and burn requirements. Volunteers or personnel from other districts within FWC or state and federal agencies (i.e. FFS, South Florida Water Management District (SFWMD)) may be used if needed. FWC's Prescribed Burning and Wildfire Suppression Standards (Appendix 2) provide guidance on crew members.

H. Equipment

All members of the fire crew will wear the required PPE (Appendix 2) and ensure communication devices (i.e. hand-held radio, mobile radio) are in working condition. Each airboat driver shall be a FWC-certified airboat operator, and should have a GPS unit with the appropriate information (i.e. burn unit, trails, tree islands) uploaded. Each airboat should contain a minimum of one fire flap, one shovel,

and one water pack. Additionally, at least one pressurized water tank should be strategically placed on an airboat. Airboats are also equipped with burn tanks and torches as needed. Supplemental burn fuel and airboat gas will be placed at a strategic location near the burn unit. Other equipment such as engines, trucks, or ATVs may be utilized on roads and levees as conditions require. Smoke caution signs for nearby roads will be deployed as necessary.

I. Permits and Notifications

Burn authorization permits will be obtained from FFS on the morning of the burn in accordance with the provisions of FS 590.125 utilizing the web-based open burn authorization request. Notifications as per the prescription will also be made on the afternoon before or the morning of the burn.

J. Evaluation of Burn

Burns will be evaluated during and shortly after each burn through observations. Comments and/or results should be recorded on the prescription to include fire behavior, weather conditions, problems encountered, and if burn objectives were met. Also, a group discussion to review the burn will be conducted at the first FWC Sunrise Field Office staff meeting following the burn. This information will be used to improve efficiency and methods of future burns.

K. Special Considerations

Safety is the primary concern of any burn. Special attention will be given to ensure burns do not adversely affect adjacent landowners and nearby roads. Smoke impacts on nearby roads and residents will be minimized by utilizing the FFS's smoke screening tool and responding to changing weather conditions during the burn. Sensitive wildlife resources will be depicted on burn maps and protected. Areas of special concern, including potential hazards, hotspots, or infrastructure (such as water monitoring gauges) to protect within the unit will be depicted on burn maps.

A pre-burn briefing will be held prior to each burn to discuss details of the burn. The briefing at a minimum will include all items listed in the "crew briefing" section of the prescription (Appendix 1) and the "briefing checklist" from the National Wildfire Coordinating Group's Incident Response Pocket Guide (Appendix 3).

WILDFIRE

Wildfires remain a natural occurrence in the Everglades ecosystem. The primary causes of wildfires in the ECWMA are lightning and man. Wildfires have ranged in size from less than an acre to 90,000 acres. Wildfires most frequently occur at the onset of the wet season when lightning strikes commonly occur (Gunderson and Snyder 1994) and when water depths are most shallow. Areas with shorter hydroperiods tend to have larger and more numerous wildfires than areas with longer hydroperiods. Muck or peat fires can occur during drought conditions and can be detrimental to the vegetative community with the potential to permanently alter the landscape. Muck fire potential is frequently analyzed by FWC and SFWMD, and the information is used to assist in decisions regarding water management and public access during dry periods. The ECWMA experiences fluctuations (approximately every three to five years) of active fire seasons when frequent and large wildfires burn extensive portions of the area. The FFS is responsible for suppression of wildfires within the ECWMA, with FWC assisting as directed. The FWC reports all wildfires observed in the ECWMA to FFS. The

history of wildfires and prescribed burns dating back to 1980 are recorded in organized binders and in digital format (i.e. shapefiles, maps) at the FWC Sunrise Field Office.

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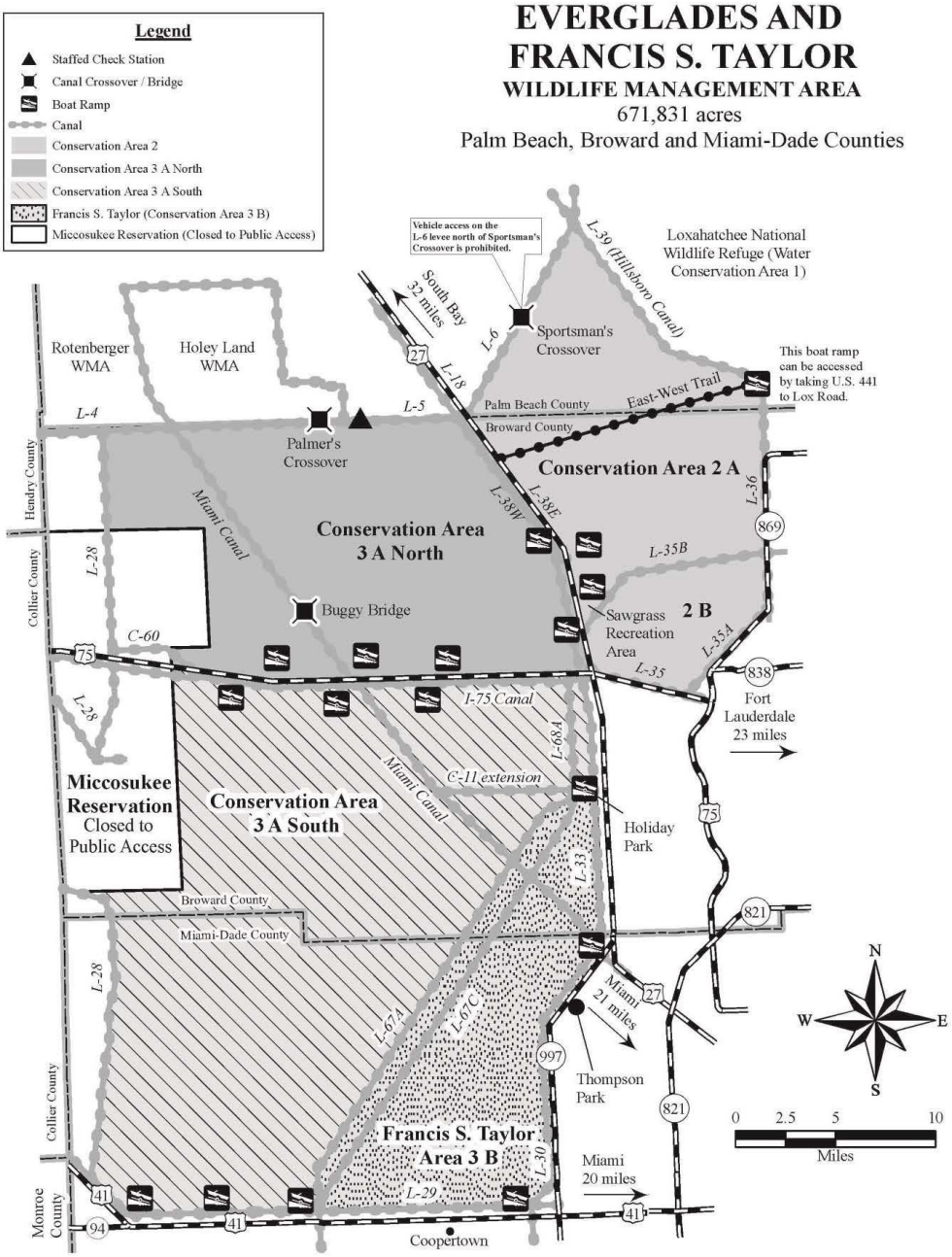



Figure 1. Map of the Everglades Complex of Wildlife Management Areas, 2015.

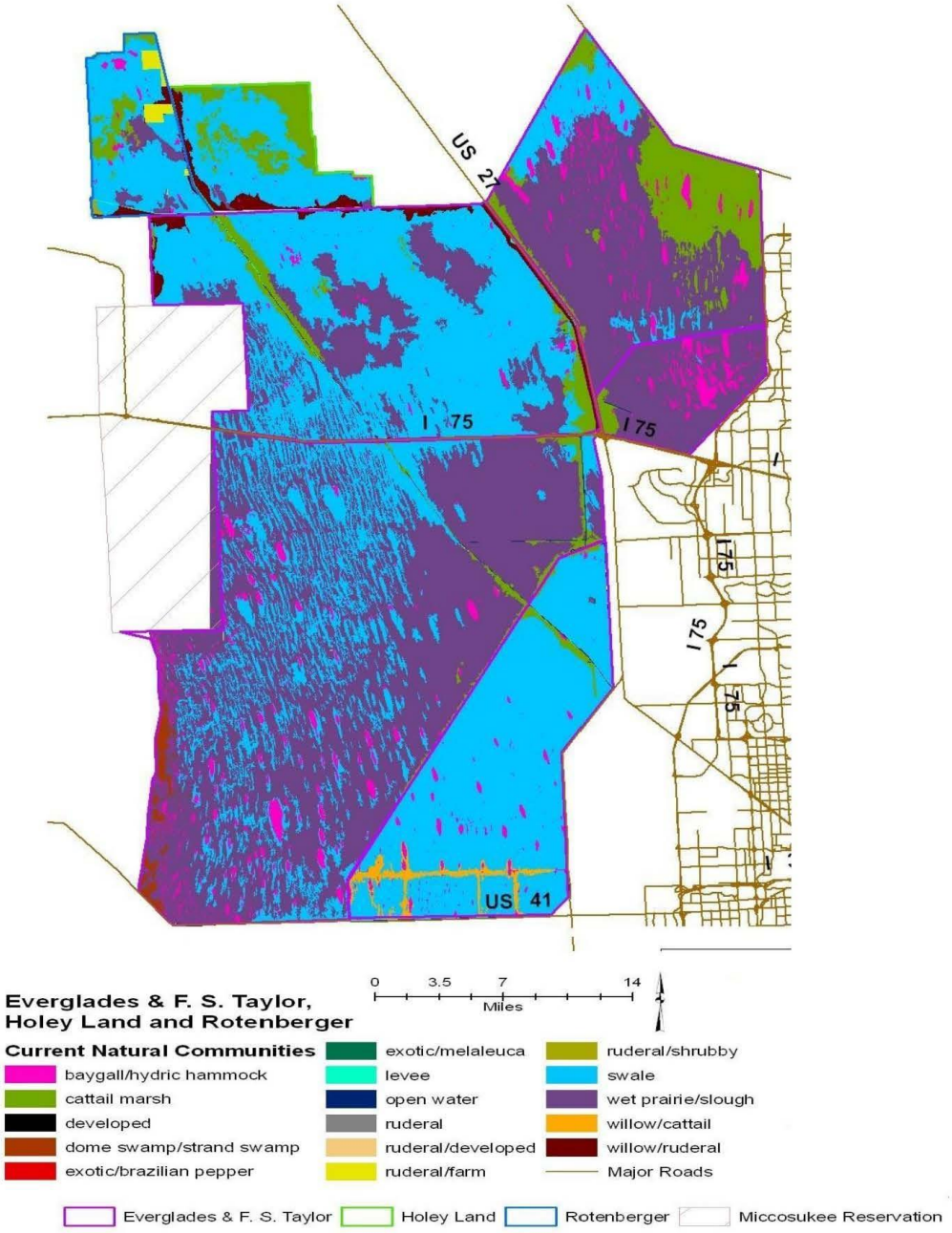



Figure 2. Natural community map of the Everglades Complex of Wildlife Management Areas, 2012.

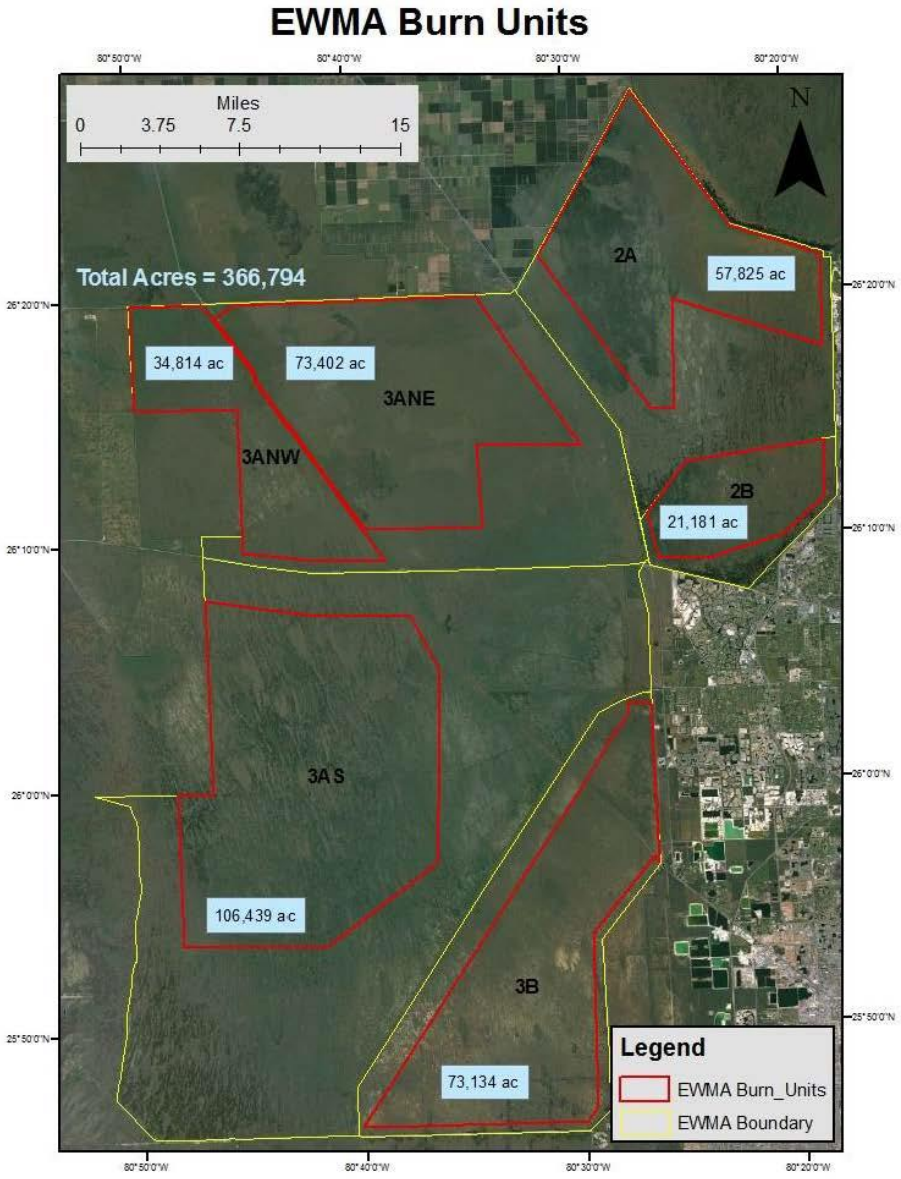



Figure 3. Prescribed burn units for Everglades and Francis S. Taylor Wildlife Management Area, 2015.

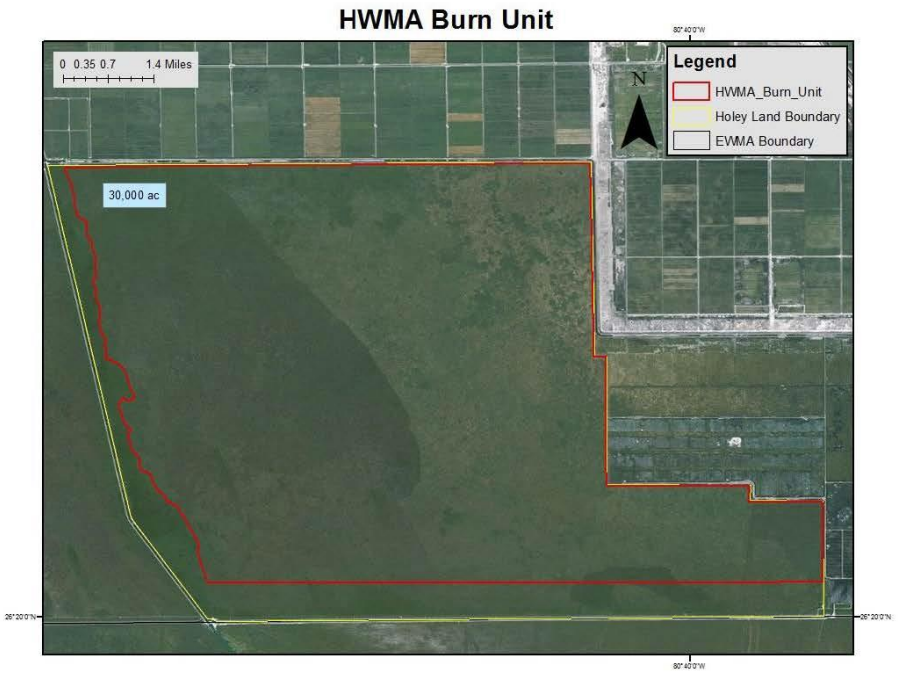



Figure 4. Prescribed burn unit for Holey Land Wildlife Management Area, 2015.




Figure 5. Prescribed burn unit for Rotenberger Wildlife Management Area, 2015.

Appendix 1. Burn Prescription.

# Prescribed Burning Prescription

Florida Fish and Wildlife Conservation Commission

| | |
|---|---|
| **WMA/WEA:** Click here to enter managed area | **Management Lease/Agreement Number:** Lease 3581 |
| **Burn Manager:** Burn manager name | **Customer Number:** Number |
| **Burn Manager Certification Number:** Number | **County of Burn:** County |
| **FFS Certified Burn Authorization Number:** | **Date of Burn:** Date of burn |
| **Authorization Date and Time Period:** | |

| Burn Unit Names/Numbers | Acres | Section(s) | Township | Range | Last Burn Date |
|---|---|---|---|---|---|
| Unit name/number | Acres | Section | Township | Range | Date |
| | | | | | |
| | | | | | |
| | | | | | |
| **Total** | Total Acres | | | | |

**Latitude/Longitude or Road Intersection to Assist with Emergency Locate:** Enter Lat/Long and/or intersection

**Nearest Helicopter Landing Zone and Coordinates:** Click here to enter. LZ should be in open grassy or asphalt/concrete area; not sandy.

**Unit Description and Habitat Composition - Attach Maps of Area to be Burned**

**Overstory Description and Basal Area if Applicable:** N/A

**Understory Description:** % Sawgrass: _____, % Slough: _____, % Willow: _____, % Tree Island/Cypress Dome: _____, % Mixed Prairie: _____, % Cattails: _____, % Other: _____.

**Fuel Loading – May Vary for Different Areas of the Burn Unit (Very Heavy, Heavy, Moderate, Light, Very Light):** % Very Heavy: _____, % Heavy: _____, % Moderate: _____, % Light: _____, % Very Light: _____. % Herbaceous_____, % Woody_____.

**Known Duff or Muck Locations:** Click here to enter duff or muck locations

**Hazards, Infrastructure and Wildlife Features to Protect:** Click here to enter along with locations

| | |
|---|---|
| **Description and Condition of Fire Breaks:** Click here to enter description and make sure firebreaks (internal and external) are shown on map | |
| **Other Important Stand Parameters if Applicable:** Click here to enter parameters | |
| **Restoration Burn** ☐ **Maintenance Burn** ☐ | |
| **Burn History and Vegetative Description of Surrounding Units (and/or attach map):** Click here to enter surrounding unit information | |
| **Emergency Contacts (can be attachment)** | |
| **FFS Dispatch:** 954-453-2800 | |
| **FFS Forest Area Supervisor(s):** Thomas Coletti, 954-680-4180/ 954-774-8370 | |
| **Local Fire Departments:** BSO Fire Rescue, 954-849-1094 | |
| **Local Hospitals or Emergency Care Centers:** Cleveland Clinic FL (Weston), 954-659-5000 | |
| **FHP:** 561-357-4000 | **DOT:** 954-847-2777 |
| **FWC Dispatch:** 561-357-4200 | |
| **Other:** FPL, 954-605-5697 (AJ Wolf) or SE Division Dispatch, 305-442-5732 | |
| **Notifications (e-mail group, adjacent landowners, schools, airports, media, etc):** See Attachment 1. | |
| **Minimum Number of Personnel to be Used on the Burn:** Enter minimum number of personnel | |
| **Personnel Names and Crew Assignments:** Click here to enter personnel/assignments | |
| **Equipment and Suppression Tools to be Used on Burn:**<br><br>*Staff are approved to deviate from required PPE listed in FWC burn policy; a wildland fire hard hat is not required due to burns being conducted from airboat where a headset must be worn. | |

| |
|---|
| **Purpose of Burn:** Click here to enter purpose |
| **Measurable Burn Objectives:** Click here to enter objectives |
| **Season and Time of Day to Meet Objectives:** Click here to enter season/time of day for fire to meet your objectives |
| **Firing Plan and Ignition Method/Pattern:** Click here to enter plan/pattern |
| **Intensity Desired to Meet Purpose and Objective:** Click here to enter intensity |
| **Contingencies (includes safety zones, escape routes, secondary control lines, escape response procedures):** Click here to enter contingencies |
| **Mop-up and Monitoring Standards:** Click here to enter standards |
| **Declaring the Fire Out Standards:** 1. Mop-up has been completed and meets standards. 2. The burn unit has been thoroughly examined and no active combustion could be detected. 3. Final inspection of the burn unit and adjacent area is complete and satisfactory. |

| Smoke Management |
|---|
| **Smoke Sensitive Areas Identified Using "A Guide for Prescribed Fire in Southern Forests" Smoke Screening Tool?** ☐ **Yes** ☐ **No** |
| **Any Critical Smoke Sensitive Areas Identified?** ☐ **Yes** ☐ **No** **If "Yes", Do Not Burn Under Current Prescription, or Provide Additional Smoke Monitoring and Mitigation Procedures in the Smoke Management Plan. Work with Florida Forest Service on Approval to Burn When Identifying Critical Smoke Sensitive Areas That May Be Impacted.** |
| **Downwind/Downdrainage Smoke Sensitive Areas and Distance from Burn:** Click here to enter areas |
| **Other Smoke Sensitive Areas and Distance from Burn:** Click here to enter areas |
| **Smoke Management Plan (attach smoke management screening maps):** Click here to enter smoke management plan |
| **Is There Potential for Smoke to Impact a Public Roadway?** ☐ **Yes** ☐ **No** **If yes, you need to erect smoke warning signs. Contact FHP if smoke will impact a federal or state roadway (not including WMA roads). Contact local LE agencies as needed to inform them of potential smoke impacts.** |
| **Plan for Monitoring Smoke During and After the Burn to Assess Visibility Issues if Applicable:** Click here to enter smoke monitoring plan |

| WEATHER PARAMETERS | Desired Parameters | Forecast Conditions – Attach Fire Weather Forecast and Spot Weather Forecast. Use Separate Form for Actual Weather Readings |
|---|---|---|
| **Surface (20') Wind Direction** | Any | Located on Forecast. |
| **Surface (20') Wind Speed** | <20 mph | Located on Forecast |
| **Transport Wind Direction** | Any | Located on Forecast |
| **Transport Wind Speed** | >9 mph | Located on Forecast |
| **Minimum Mixing Height** | >1700 | Located on Forecast |
| **Dispersion Index (DAY)** | >40 | Located on Forecast |
| **Dispersion Index (NIGHT)** | >1 | Located on Forecast |
| **Maximum Temperature** | No maximum | Located on Forecast |
| **Minimum Relative Humidity** | >34% | Located on Forecast |
| **Minimum Fine Fuel Moisture** | >6% | Estimated Fine Fuel Moisture. |
| **KBDI** | <700 | KBDI |
| **LVORI** | <7, only if burning next to road | Located on Forecast |
| **Fire Danger Index** | Do Not Populate | FDI |
| **Days since ½" Rain** | N/A | N/A |
| **Minimum Water Level** | >3 inches | |
| **No Spreading Fire** | 2 hours after sunset | |
| **FIRE BEHAVIOR** | | |
| **Rate of Spread** | Desired rate of spread | Pertinent Observations on Evaluation |
| **Starting Time** | After 09:00 | Actual Starting Time Below |
| **Flame Length** | Desired flame length | Pertinent Observations on Evaluation |

| PRE-BURN CHECKLIST – Check off as completed prior to burn. |
|---|
| BURN MANAGER: Check each item to indicate compliance.<br>☐ All prescription requisites met.<br>☐ Authorization obtained.<br>☐ All equipment required on scene and fully operational.<br>☐ Each crew member has required personal gear and clothing.<br>☐ Appropriate steps have been taken to ensure crew and public safety including signs for visitors and motorists. |

| CREW BRIEFING – Check off as discussed prior to burn. |
|---|
| ☐ Objectives of burn.<br>☐ Exact area of burn including unit size and boundaries (ensure crew members have maps).<br>☐ Hazards discussed (volatile fuels, spotting potential, weak points in perimeter lines, terrain features, fences, ditches, etc.).<br>☐ Predicted weather and anticipated fire behavior/smoke dispersal discussed.<br>☐ Crew assignments made.<br>☐ Weather monitoring assignment made.<br>☐ Ignition technique and pattern. Holding method(s).<br>☐ Location of extra equipment, fuel, water, vehicle keys.<br>☐ Authority and communications; conduct radio check.<br>☐ Contingencies covered including escape routes or procedures.<br>☐ Sources of nearest assistance. Nearest phone and emergency numbers.<br>☐ Special instructions regarding smoke management, contact with the public and others.<br>☐ Safety briefing. Any EMTs on burn crew?<br>☐ Mop-up standards discussed.<br>☐ Arrange next day inspection and mop-up assignments.<br>☐ Questions?<br>☐ Crew members given opportunity to decline participation (is there anything that is going to prevent full physical performance?).<br>☐ Conduct test burn. |

| **Prescription Prepared by:** | **Date/Time Prescription Prepared/Updated:** |
|---|---|
| **Burn Manager Signature/Date/Time:** | |
| **Start Time:** | **Completed Time:** |
| **Time Crew Released:** | **Time Burn Manager Left Burn Unit:** |
| **Date Fire Declared Out:** | **Evaluated Objectives, Recorded Pertinent Burn Notes, and Entered into LMIS** ☐ |

## Evaluation Notes

**Results/Comments**

**Certified Burners' Information - Everglades Complex of WMAs**

| | |
|---|---|
| Name: | **Rachel Taylor** |
| Burner's Number: | **2016-4752** |
| Customer Number: | **1392493** |

| | |
|---|---|
| Name: | **Colleen Closius** |
| Burner's Number: | **2019-5045** |
| Customer Number: | **1409566** |

| | |
|---|---|
| Name: | **Rob Creswell** |
| Burner's Number: | **2020-5099** |
| Customer Number: | **1411567** |

## Additional Pages

**Attachment 1. Everglades Complex of WMAs Burn Prescription Notifications.**

_____ Florida Forest Service:
(954) 453-2800 (Dispatch – do not need to call if WebOBA is used to request burn authorization)
(954) 774-8370 (Thom Coletti, Everglades FAS – notify for all burns)
(954) 347-8061 (Chris Wasil, Palm Beach FAS – notify for RWMA, HWMA, & northern 2A)
(954) 680-4180 (FFS shop)

_____ FWC Dispatch: (561) 357-4200 (call in the am on the day of the burn, and after the burn is completed)

_____ FL DOT Dispatch: (954) 847-2777 (always call for notification and "Smoke on the Road" signs if needed)

_____ Florida Hwy Patrol: (561) 357-4000 (all EWMA burns)

_____ Florida Hwy Patrol: (239) 938-1800 (any Rx burns along Alligator Alley; Ft. Myers, Alligator Alley MM25 west – call in the am on the day of the burn, and after the burn is completed)

_____ Email front page of prescription and an overview map of the burn unit location to:

edonlan@sfwmd.gov (Ellen Allen, SFWMD)
CraigV@miccosukeetribe.com (Craig van der Heiden, Miccosukee Tribe, Wildlife Director)
KevinD@miccosukeetribe.com (Kevin Donaldson, Miccosukee Tribe, Real Estate)
AmyC@miccosukeetribe.com (Amy Castaneda, Miccosukee Tribe, Water Resources)
grantsteelman@semtribe.com (Grant Steelman, Seminole Dept. of Forestry)
LeeKemp@semtribe.com (Lee Kemp, Seminole Dept. of Forestry)
anthonycurella@semtribe.com (Anthony Curella, Seminole Dept. of Forestry)
fred_north@sheriff.org (Lt. Fred North, BSO Fire Rescue, 954-849-1094)
orlando_genao@nps.gov (Orlando Genao, Big Cypress National Preserve, Fire Mgt. Office)
mimurphy@sfwmd.gov (Mitch Murphy, SFWMD)
lcrean@sfwmd.gov (Linda Crean, SFWMD)
ecline@sfwmd.gov (Eric Cline, SFWMD)
brobbin@sfwmd.gov (Brad Robbins, SFWMD)
pburke@sfwmd.gov (Trish Burke, SFWMD)
matthew.dickey@ufl.edu (Matthew Dickey, UF Snail Kite Crew Supervisor)
juliamagill@ufl.edu (Julia Magill, UF Snail Kite Assistant Crew Lead)
bjeffe01@ufl.edu (Brian Jeffery, UF Florida Cooperative Fish and Wildlife Unit)
lagarner@ufl.edu (Lindsey Garner, UF wading bird survey coordinator)
michael.anderson@myfwc.com (Mike Anderson, FWC Regional Biologist)
marsha.ward@myfwc.com (Marsha Ward, FWC Assistant Regional Biologist)
jimmy.conner@myfwc.com (Jimmy Conner, FWC Section Leader)
tina.hannon@myfwc.com (Tina Hannon, FWC Assistant Section Leader)
tom.reinert@myfwc.com (Tom Reinert, FWC Regional Director)
james.erskine@myfwc.com (James Erskine, FWC Everglades Coordinator)
thomas.coletti@freshfromflorida.com (Thom Coletti, DOF Everglades FAS, Broward County)
chris.wasil@freshfromflorida.com (Chris Wasil, DOF PB County)
tyler.beck@myfwc.com (Tyler Beck, FWC Snail Kite Biologist)
trexlerj@fiu.edu (Joel Trexler, FIU)
hoop@miamidade.gov (Miami-Dade Fire Rescue)
dosfmrcc@flhsmv.gov (FHP)
_DLESOWPBCHDutyOfficers@MyFWC.com (FWC Dispatch)
cstylian@sfwmd.gov (Christina Stylianos, SFWMD)
mworley@sfwmd.gov (Mike Worley, SFWMD Ft. Lauderdale Field Station)
jaskew@sfwmd.gov (Johnathan Askew, SFWMD Ft. Lauderdale Field Station)
StatewideRegionalCallCenter@myfwc.com (FWC Statewide Regional Call Center)
dgierhar@sfwmd.gov (Denise Gierhart, SFWMD)
cscharko@sfwmd.gov (Christopher Scharkopf, SFWMD)

_____ If burn will be near any power lines, call Florida Power and Light and email front page of prescription and map of burn unit location to:
AJ Wolf (call first): (954) 605-5697, A.J.Waltz@fpl.com
SE Division System Dispatcher: (305) 442-5732

**Attachment 2. Everglades Complex of WMAs Burn Prescription Weather Readings and Resources Used.**

**On-Site Weather**

Time: _____ Wind Direction/Speed: _____

Relative Humidity (%): _____ Air Temperature: _____

Flame Length: _____ Flame Rate of Spread: _____ft/min

---

Time: _____ Wind Direction/Speed: _____

Relative Humidity (%): _____ Air Temperature: _____

Flame Length: _____ Flame Rate of Spread: _____ft/min

---

Time: _____ Wind Direction/Speed: _____

Relative Humidity (%): _____ Air Temperature: _____

Flame Length: _____ Flame Rate of Spread: _____ft/min

---

Time: _____ Wind Direction/Speed: _____

Relative Humidity (%): _____ Air Temperature: _____

Flame Length: _____ Flame Rate of Spread: _____ft/min

---

| **Resources Used** | **Pre-Burn** | **Burn** | **Post-Burn** |
|---|---|---|---|
| Man Hours: | _____ | _____ | _____ |
| Vehicle Days: | _____ | _____ | _____ |
| Airboat Hours: | _____ | _____ | _____ |
| Helicopter Hours: | _____ | _____ | _____ |
| # of Ping-Pong Balls Used: | _____ | _____ | _____ |
| # of Flares Used: | _____ | _____ | _____ |
| Personnel Used: | _____ | _____ | _____ |

Appendix 2. Division of Habitat and Species Conservation's Prescribed Burning and Wildfire Suppression Standards.

**Florida Fish and Wildlife Conservation Commission**
**Division of Habitat and Species Conservation**
**Policies and Procedures**
**Updated May 2022**

Subject: **Prescribed Burning and Wildland Fire Suppression Standards**

**Policy:**

The following policy shall apply to all Division of Habitat and Species Conservation (DHSC) employees, volunteers and contractors engaged in prescribed burning or wildland fire suppression activities. Unless otherwise stated, the policy also applies to all other Florida Fish and Wildlife Conservation Commission (FWC) employees and volunteers engaged in prescribed burning or wildland fire suppression activities conducted through the DHSC. Prescribed burning or wildland fire suppression efforts that DHSC funds through grants, cost-share agreements, or other methods not conducted on DHSC-managed lands are outside the scope of this policy; however, DHSC staff physically participating in these burns are required to comply with the policy and this policy should be used to guide minimum standards regarding training and experience when developing DHSC-funded agreements or contracts. This policy will be reviewed at least once every three years.

**Background and General Guidelines:**

Wildland fire has been a major force shaping Florida landscapes for thousands of years. Florida's plant communities are the result of surface water conditions and frequent lightning ignitions across its vast landscape. Many plant communities experienced fire every few years and wildlife species adapted to these fire-maintained habitats. Floridians have consistently used fire as a land management tool and the Florida legislature recognizes the importance of prescribed burning per Chapter 590.125 F.S.

Likewise, DHSC recognizes the importance of prescribed fire for Florida's diverse wildlife and the habitats that sustain them. As Florida continues to lose natural wildlife habitat, prescribed fire is more important than ever in maintaining and enhancing our remaining natural areas. As FWC is the lead managing agency on more than 1.5 million acres of the Wildlife Management Area (WMA) system, DHSC regularly conducts burns on these lands, and others, for wildlife management, hazardous fuel reduction, and ecological purposes. DHSC also provides financial support and technical assistance for conducting prescribed burns outside of the WMA system.

In addition to conducting prescribed burning, DHSC employees are periodically asked to assist the Florida Forest Service (FFS) with wildland fire suppression efforts, particularly during declared wildfire emergencies. Working on prescribed fires or wildfires is an inherently dangerous and risky activity that can result in significant property damage, personal injury, or loss of life. Therefore, it is necessary to establish standards for training and certification to ensure DHSC employees, volunteers and contractors have the appropriate skills and knowledge

to perform these activities safely and effectively. Employees are encouraged to obtain higher levels of training and certification as warranted and approved through supervisory channels.

The majority of DHSC wildland fire activities occur within the Wildlife and Habitat Management Section (WHM). However, other Sections within DHSC have employees that participate in wildland fire activities. To ensure efforts are not duplicated, this policy designates specific WHM staff positions as the point of contact or lead on coordination for prescribed fire and wildland fire suppression activities conducted through DHSC.

Employees are responsible for acquiring (with agency funds and supervisor approval) and maintaining all required personal protection equipment. Immediate supervisors are responsible for ensuring that direct reports have all the required training to participate in wildland fire activities. WHM Regional Wildlife Biologists will be responsible for coordinating applicable wildland fire training and incident reviews through the WHM Section Leader or their designee.

All prescribed burns shall be conducted in compliance with all laws regulating the use of prescribed fire; specifically Chapter 590.125(3), Florida Statutes and Chapter 5I-2, Florida Administrative Code. When a DHSC employee, volunteer or private contractor is the burn manager, burn prescriptions shall be prepared using the FWC Prescribed Burning Prescription form and contain all the required elements per Chapter 5I-2.006 Florida Administrative Code, as well as all other applicable information requested on the prescription form. Prescriptions shall be prepared with employee and public safety as the highest priority. All prescribed burns shall be conducted as a certified prescribed burn within prescription, and managed by a Certified Prescribed Burn Manager.

All prescribed fires conducted on FWC lead WMAs shall be documented within the WHM Land Management Information System according to the procedures and schedules determined by the WHM Section Leader.

## Chapter 1 Prescribed Burning

**Prescribed Burn Participation**: This section establishes the training, certification, and experience standards required for members of a prescribed burn team. These standards apply to all DHSC burn crew members, regardless of the location of the burn, and for all non-DHSC crew members on burns managed by DHSC staff and/or conducted on DHSC-managed land unless otherwise noted.

A. Crew Member Trainee: Those who do not meet the requirements for Crew Member shall be classified as a Crew Member Trainee. A Crew Member Trainee may participate in prescribed burning activities provided that they are under the direct supervision of a Crew Member. A Crew Member may supervise no more than one Crew Member Trainee. No more than 40% of the burn crew shall be Crew Member Trainees*. They shall have successfully completed the following level of training:

1) Successful completion of fire shelter or fire shelter refresher training within the past 13 months;

**For prescribed burns conducted during a DHSC-coordinated training course, Crew Members may supervise more than one Crew Member Trainee, and more than 40% of the burn crew may be Crew Member Trainees.*

B. Crew Member**:** Crew members may participate independently in prescribed burning activities. They shall have successfully completed the following National Wildfire Coordinating Group (NWCG) courses and other training and testing requirements:

1) Introduction to the Incident Command System (I-100 or ICS-100);
2) Basic Wildland Firefighter Training (S-130);
3) Introduction to Wildland Fire Behavior (S-190);
4) Successfully completed fire shelter or fire shelter refresher training within the past 13 months;
5) At least once every 36 months, all **DHSC employees** shall successfully complete an agency-approved wildland fire refresher training course;
6) At least once every 36 months, **all DHSC employees and volunteers** shall successfully complete the DHSC Physical Abilities Test (PAT).*

**New DHSC employees may participate on prescribed burns during their first year of employment without taking the PAT, provided they meet all other requirements.*

C. Prescribed Burn Manager Mentee: Prescribed burn manager mentees may serve as burn manager to fulfill the responsibilities of acquiring DHSC and Florida Certified Prescribed Burn Manager status. Mentee must be under the direct supervision of a DHSC Certified Prescribed Burn Manager on prescribed burns that will be used to qualify them for DHSC Certified Prescribed Burn Manager status. They shall have successfully completed the following level of training and have the specified level of experience:

1) Qualified at or above Crew Member level for prescribed burning;
2) The FFS Florida Certified Prescribed Burn Manager Training Course;
3) Participated on at least five prescribed burns;
4) Enrolled in or completed the DHSC Prescribed Burn Manager Mentoring Program.

**Note: The DHSC Director may approve staff to attend the Prescribed Fire Correspondence Course during times when the Florida Certified Prescribed Burn Manager Training Course has reduced or no availability.**

D. Certified Prescribed Burn Manager: A DHSC Certified Prescribed Burn Manager may request prescribed burn authorizations and serve as burn manager for acreage burns.

They shall have successfully completed the following level of training and have the specified certification and level of experience:

1) Qualified at or above Crew Member level for prescribed burning;
2) FFS Prescribed Burn Manager Certification (per section 590.125, Florida Statutes and 5I-2, Florida Administrative Code);
3) Participated on at least ten prescribed burns;
4) DHSC employees and volunteers must successfully complete the DHSC Certified Prescribed Burn Manager Mentoring Program to become a burn manager. Burn managers certified prior to the implementation of the mentoring program may be required to complete all or part of the mentoring program at the discretion of the WHM Regional Biologist, or DHSC Division Director or designee for all non-WHM employees;
5) Complete the FFS requirements to maintain Florida Certified Prescribed Burn Manager status per 5I-2.006.

**Note: Any employee aspiring to become a Certified Prescribed Burn Manager must obtain certification within three years of completing the Florida Certified Prescribed Burn Manager Training Course. Otherwise they must re-take the full course to become certified. If the certification lapses, the employee may re-certify by successfully completing the FFS Prescribed Fire Correspondence Course if they served as a burn manager on five or more burns. Otherwise they must re-take the full course to regain certification.**

E. Certified Pile Burner: A Certified Pile Burner may request pile burn authorizations. They shall have successfully completed the following level of training and have the specified certification and level of experience:

1) Qualified as a Certified Prescribed Burn Manager;
2) FFS Certified Pile Burner.

F. Prescribed Burn Engine (Pumper Unit/Brush Truck) Operator: To independently operate a water-delivery engine in support of prescribed burns, crew members shall have successfully completed the following level of NWCG training and have the specified level of experience:

1) Qualified at or above Crew Member level for prescribed burning;
2) Demonstrated proficiency in operation of water-delivery engines to supervisor; ***or*** successful completion of Southern Area Engine Academy (S-211 and SA-214) or Engine Operator (PMS 419);
3) Participated on at least five prescribed burns.

G. Prescribed Burn Bulldozer Plow Unit Operator: To independently operate a dozer plow unit during prescribed burns, crew members shall have successfully completed the following level of training and have the specified level of experience:

1) Qualified at or above Crew Member level for prescribed burning;
2) The wildland fire portion of FFS Basic Fire Control Training (or equivalent training);
3) Participated on at least five prescribed burns;
4) Experience and demonstrated proficiency to supervisor operating a dozer plow unit.

H. Prescribed Burn Aerial Plastic Sphere Dispenser (PSD) Operator: To independently operate a PSD from an aircraft during a prescribed burn, crew members shall have successfully completed the following level of training and have the specified level of experience:

1) Qualified at or above Crew Member level for prescribed burning;
2) Completed an aerial PSD training course;
3) Participated on at least five prescribed burns;
4) Complete aerial PSD refresher training once every three years.

## Chapter 2 Wildland Fire Suppression

**Wildland Fire Suppression Participation:** The leadership of FFS, or other entity, may request assistance from FWC during a wildland fire suppression incident. This request will usually be for a wildland fire strike team to conduct mop-up operations. A wildland fire strike team consists of one wildland fire strike team leader, and two wildland fire strike team members per Type V or VI engine. Occasionally there will be a request for a bulldozer operator to facilitate mop-up operations. Standards for strike team members and leaders are outlined below. In addition, requests may be made for personnel to fill positions on a suppression incident that are not covered by the following standards. The decision to assist, and the level of assistance provided, on fire suppression incidents will be made by the DHSC Division Director or their designee. Coordination of all requests will be handled by the WHM Section Leader or their designee.

A. Wildland Fire Strike Team Member: To participate on wildland fire strike teams in support of suppression efforts, strike team members shall have successfully completed the following level of training and have the specified level of experience:

1) Qualified at or above Crew Member level for prescribed burning;
2) Southern Area Engine Academy or PMS 419*;
3) Participated on at least ten prescribed burns and/or wildland fire suppression incidents.

**Employees who have not yet completed Southern Area Engine Academy or PMS 419 can be approved by the WHM Section Leader or their designee to serve on a wildland fire*

*strike team. Exceptions can be granted when available strike team personnel are not sufficient to meet the requested need. Training and experience levels should be considered when approving exceptions.*

B. Wildland Fire Strike Team Leader: To serve as team leader for wildland fire strike teams in support of suppression efforts, strike team members shall have completed the following level of training and have the specified level of experience:

1) Qualified at or above Wildland Fire Strike Team Member;
2) Basic Incident Command System (I-200 or ICS-200);
3) Experience as a Certified Prescribed Burn Manager on at least ten prescribed burns and experience as a Wildland Fire Strike Team Member on at least one incident.

C. Wildland Fire Bulldozer Plow Unit Operator: To independently operate dozer fire-plow units in support of suppression efforts, strike team members shall have completed the following level of training and have the specified level of experience:

1) Qualified at or above Crew Member level for prescribed burning;
2) Dozer Operations on Florida Prescribed Burns, the wildland fire portion of FFS Basic Fire Control Training, or an equivalent course as approved by the HSC Division Director;
3) Participated on at least ten prescribed burns or wildland fire suppression incidents;
4) Experience and demonstrated proficiency to supervisor operating a dozer plow unit.

## Chapter 3 Safety

**3.1 Personal Protective Equipment (PPE):** Required Personal Protective Equipment for all wildland fire activities includes*:

A. Flame Resistant Shirt and Pants, or Jumpsuit
B. Wildland Fire Hard Hat
C. Leather Gloves
D. Leather Boots – ≥8" Lace-up
E. Eye Protection
F. Hand-held Radio
G. Fire Shelter

**Safety considerations and/or vegetation types may dictate that crew members wear additional equipment or deviate from the above required equipment. The burn manager/strike team leader shall determine what PPE will be worn by their crew to maximize safety, and shall document any deviations on their burn prescription or wildfire crew briefing report.*

**3.2 Physical Standards:** Prescribed burning and fire suppression are physically demanding activities. In addition to successfully completing the PAT, each prescribed burn crew/strike team member shall maintain a fitness level that will allow full participation in these activities. It is the burn crew/strike team member's responsibility to make the burn manager/strike team leader aware of any limitations that may restrict or prevent full participation.

**3.3 Mobile Equipment:** The following is a list of required items for mobile equipment used during wildland fire activities. Mobile equipment includes all-terrain vehicles, utility vehicles, airboats, swamp buggies, trucks, tractors, and bulldozers.

A. An ABC fire extinguisher that has been inspected, serviced, and maintained in accordance with the manufacturer's maintenance procedures shall be in or on all mobile equipment. Below are minimum extinguisher sizes (net extinguishing agent weights):
    1) All-terrain and utility vehicles – 2.5 pound
    2) Trucks and tractors – 5 pound
    3) Bulldozers and Swamp Buggies – 10 pound (could be two 5 pound extinguishers)
    4) Vessels – 5 pound (could be two 2.5 pound extinguishers)
B. All-terrain vehicles, utility vehicles, swamp buggies, and trucks used in the interior of a burn unit shall have an operational winch.
C. All mobile equipment used in the interior of a burn unit shall have an operational water delivery system with at least five gallons of water.

**3.4 Public Safety**: All wildland fire operations shall be conducted in a manner that protects the public and minimizes the potential adverse impacts of both smoke and fire. Prescriptions shall be prepared with public safety as the highest priority.

## Chapter 4 Incident Reviews

This chapter outlines the procedure for reviewing a prescribed fire whose results include negative consequences on DHSC managed lands or from a burn managed by a DHSC burn manager. The purpose of a fire-related incident review is to gather facts regarding the incident and, if possible, recommend actions that may help minimize the chance of reoccurrence.

**4.1 Fire-related Incident:** A fire or smoke related incident that includes any of the following:

A. FFS Notice of Violation;
B. Conducting a burn outside of the prescription;
C. Fire leaves the prescribed burn unit and resources in addition to the burn crew are utilized;
D. Fire leaves the WMA system;
E. Prescribed burn activities cause property damage or personal injury;
F. Post-burn combustion poses a threat to public safety, property, or natural resources.

**4.2 Reporting of Fire-related Incidents:** The burn manager shall notify the appropriate WHM Regional Biologist about the incident as soon as possible, but no later than 8:30 am the day after the fire-related incident occurred. For extended post-burn combustion, the burn manager shall notify the Regional Biologist if the combustion and/or associated smoke may pose a threat to public safety, property, or natural resources. The Regional Biologist shall notify the WHM Section Leader or their designee of the incident as soon as possible. The notification should include the following:

A. Date, time, and location of incident;
B. Brief description of the incident and current status;
C. Other agencies or entities assisting;
D. Resources needed.

**4.3 Fire-related Incident Review:** The WHM Section Leader shall determine the need for and the scope of fire-related incident reviews. The WHM Section Leader or their designee will coordinate the incident review. Within 60 days of completing a fire-related incident review, the reviewer(s) shall submit a report to the DHSC Division Director for approval.

Approved: Melissa Tucker — May 10, 2022

Division Director — Date

Appendix 3. Briefing checklist, 2018 National Wildfire Coordinating Group's Incident Response Pocket Guide.

## BRIEFING CHECKLIST

**Situation**

- ☐ Fire name, location, map orientation, other incidents in area
- ☐ Terrain influences
- ☐ Fuel type and conditions
- ☐ Fire weather (previous, current, and expected)
- ☐ Winds, RH, temperature, etc.
- ☐ Fire behavior (previous, current, and expected)
  Time of day, alignment of slope and wind, etc.

**Mission/Execution**

- ☐ Command
  Incident Commander/immediate supervisor
- ☐ Leader's intent
  Overall objectives/strategy
- ☐ Specific tactical assignments
- ☐ Contingency plans
- ☐ Medevac plan: Personnel, equipment, transport options, contingency plans

**Communications**

- ☐ Communication plan
  Tactical, command, air-to-ground frequencies
  Cell phone numbers

**Service/Support**

- ☐ Other resources
  Working adjacent and those available to order
  Aviation operations
- ☐ Logistics
  Transportation
  Supplies and equipment

**Risk Management**

- ☐ Identify known hazards and risks
- ☐ Identify control measures to mitigate hazards/reduce risk
  - Include LCES
- ☐ Identify trigger points for reevaluating operations

**Questions or Concerns?**

## 11.13 Wildlife Conservation and Prioritization and Recovery Program Strategy (WCPR)

# Everglades Complex of Wildlife Management Areas
## Wildlife Management Strategy

September 2022

Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation
Wildlife and Habitat Management Section

A product of the Wildlife Conservation
Prioritization and Recovery Program

## Executive Summary

The Florida Fish and Wildlife Conservation Commission's (FWC) Wildlife and Habitat Management Section (WHM) takes a proactive, science-informed approach to wildlife management on lands in the Wildlife Management Area (WMA/WEA) system. This approach uses information from statewide models, in conjunction with input from species experts and local staff, to create a Wildlife Management Strategy (hereafter "Strategy") for the area. The FWC intends for this Strategy to provide land managers with information on management and monitoring actions that should be taken to promote the presence and facilitate the persistence of wildlife species on the area.

This document presents the results of a science-informed process for evaluating the needs of locally important species on the Everglades and Francis S. Taylor (EWMA), Holey Land (HWMA), and Rotenberger (RWMA) WMAs, which make up the Everglades Complex of WMAs (ECWMA). The foundation for FWC's management is an understanding of Florida's natural communities and the ecological processes that affect the richness and abundance of the plant and animal species which inhabit them. By restoring and maintaining natural communities, management will benefit the greatest suite of native species reliant upon those natural communities. Monitoring select species can indicate whether natural community management is having the desired effect on wildlife. To maximize the potential wildlife conservation benefit, staff considers the role of ECWMA in regional and statewide conservation initiatives throughout the process.

Section 1 introduces the reader to the Strategy.

Section 2 describes historic and ongoing habitat management and monitoring actions on the property.

Section 3 provides an assessment of the area's role in the conservation of locally important species. This section includes management and monitoring recommendations identified during the Wildlife Conservation, Prioritization and Recovery Program (WCPR) workshop.

Section 4 identifies coordination and "beyond the boundaries" opportunities that will assist in conserving locally important species.

Maintaining resources at current levels would be required to provide for most of the land management recommended in this document. Some of the monitoring recommendations may require additional resources, while FWC can accomplish others with continuation of existing resources.

## Acknowledgements

The WCPR Strategy development process is intended to be a collaborative effort between multiple Divisions and Sections within the agency and coordination with experts beyond FWC. Without the support of these experts, we would not have successfully prioritized our management, monitoring, and coordination efforts for areas like EWMA, RWMA, and HWMA. As such, we would like to highlight the agency, local, and statewide experts that helped shape the discussion on ECWMA, including Tyler Beck, Elizabeth Braun de Torrez, Terry Doonan, Kevin Enge, James Erskine, Craig Faulhaber, Adrienne Fitzwilliam, Bradley O'Hanlon, Andrea Pereyra, Kim Rigano, Amy Schwarzer, Tim Towles, Ricardo Zambrano, and many others. Thank you for taking the time and effort to consider our management lands within context of the conservation needs for the region, as well as the State of Florida.

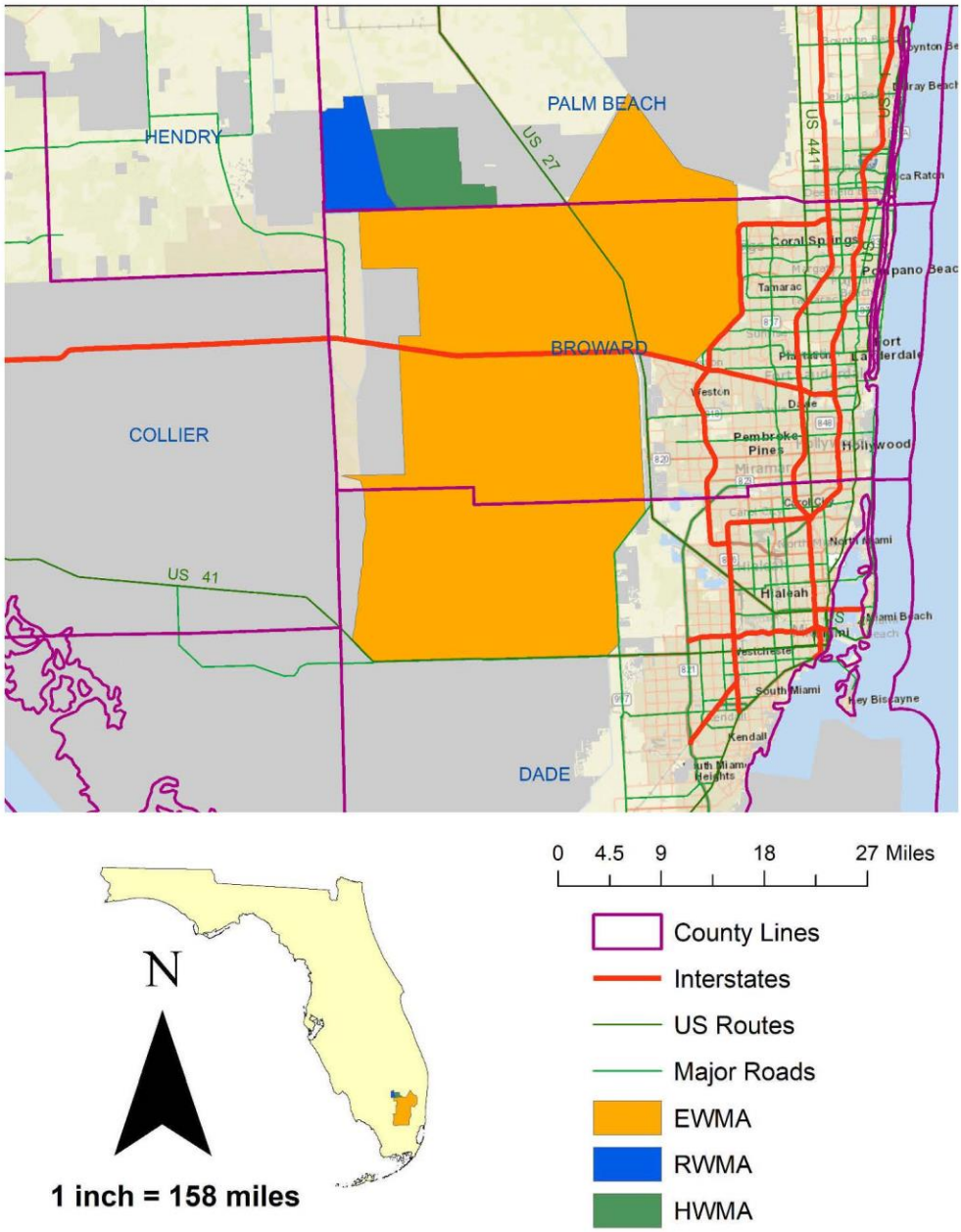
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## Acronym List

| | |
|---|---|
| BMPs | Best Management Practices |
| DFCs | Desired Future Conditions |
| ECWMA | Everglades Complex of Wildlife Management Areas |
| EWMA | Everglades and Francis S. Taylor Wildlife Management Area |
| FFS | Florida Forest Service |
| F.S. | Florida Statutes |
| FWC | Florida Fish and Wildlife Conservation Commission |
| HWMA | Holey Land Wildlife Management Area |
| FNAI | Florida Natural Areas Inventory |
| FWRI | Fish and Wildlife Research Institute |
| IPM | Invasive Plant Management |
| ISMP | Imperiled Species Management Plan |
| JDSP | Jonathan Dickinson State Park |
| MOU | Memorandum of Understanding |
| MU | Management Unit |
| NPS | National Park Service |
| NVGD | National Geodetic Vertical Datum |
| OBVM | Objective-Based Vegetation Management |
| RWMA | Rotenberger Wildlife Management Area |
| SaMP | Survey and Monitoring Protocol (Database) |
| SAP | Species Action Plan |
| SFWMD | South Florida Water Management District |
| SMEs | Subject Matter Experts |
| STA | Storm Water Treatment Area |
| UF | University of Florida |
| USACE | U.S. Army Core of Engineers |
| USFWS | United States Fish and Wildlife Service |
| WCA | Water Conservation Areas |
| WCPR | Wildlife Conservation Prioritization and Recovery (Program) |
| WEA | Wildlife and Environmental Area |
| WHM | Wildlife and Habitat Management (Section) |
| WMA | Wildlife Management Area |

**Locator Map**




6

## Section 1: Introduction

The Florida Fish & Wildlife Commission (FWC) manages the lands in the Wildlife Management Area (WMA) system using a science-informed, proactive approach, which includes an understanding of natural communities of plants and animals. As applied by FWC, natural community management starts by classifying lands into distinct natural communities that are then managed in a way to maintain or enhance the communities' unique structure and function. Land management that has a positive influence on natural community conditions benefits the wildlife living in those habitats.

While natural community management provides benefits to a host of species reliant upon these natural communities, imperiled species sometimes require specific attention. Additionally, subsection 253.034(5) of the Florida Statutes (F.S.) requires all land management plans to include an analysis of the property to determine if significant natural resources, including listed species, occur on the property. If significant natural resources occur, the plan shall contain management strategies to protect the resources. The Florida Forever Act (s. 259.105, F.S.) adds that all State lands that have imperiled species habitat shall include restoration, enhancement, management, and repopulation of such habitats as a consideration in the management plan.

FWC's Wildlife Conservation Prioritization and Recovery Program (WCPR) created this Strategy for the Everglades Complex of WMAs (ECWMA) to document the area's role in wildlife conservation, to ensure the management needs for wildlife in the WMA system are met, and to identify the appropriate species monitoring for the area. This Strategy provides WMA staff with information on management and monitoring actions that should be taken provided the necessary resources are available. By implementing the actions in this Strategy, FWC believes that management will promote the persistence of locally important species, aid in the recovery of imperiled species, and ensure staff are managing all wildlife species on ECWMA for their long-term well-being and for the benefit of people.

## Section 2: Historic, Current, and Planned Management

Located in Miami-Dade, Broward, and Palm Beach Counties, the 736,881-acre Everglades Complex of Wildlife Management Areas (ECWMA) is part of a network of WMAs comprised of Everglades and Francis S. Taylor WMA (EWMA [670,847 acres]), Holey Land WMA (HWMA [35,057 acres]), and Rotenberger WMA (RWMA [29,856 acres]). Big Cypress National Preserve, Everglades National Park, Loxahatchee National Wildlife Refuge, Miccosukee Indian Water Conservation Area, Storm Water Treatment Areas (STA), Broward and Miami-Dade County Parks, and private lands border ECWMA. The surrounding lands are managed by the United States Fish and Wildlife Service (USFWS), National Park Service (NPS), South Florida Water Management District (SFWMD), Miccosukee Indian Tribe, Broward and Miami-Dade Counties, and local municipalities (see Locator Map). This large area of conservation lands provides habitat for many locally important species just outside of the metro area of Miami-Dade, Broward, and Palm Beach Counties.

The State of Florida acquired title to much of the public land encompassed within ECWMA under the federal Swamp and Overflowed Lands Act of 1850. Large-scale human alteration in this area began in 1948 when Congress authorized the Central and Southern Florida Project for Flood Control and Other Purposes. This project included the construction of a substantial system of water control structures, canals, and levees in the Everglades ecosystem to provide environmental benefits to south Florida. The Water Conservation Areas (WCAs) were constructed primarily to provide flood protection to adjacent agricultural and urban areas, and to serve as a source of fresh water for the heavily populated Gold Coast (see WCA Map). Secondary considerations included the need to manage the area to benefit fish and wildlife, and to provide public recreation (see Recreational Master Plan). Adjacent zoning and land use classifications are slightly varied and range from conservation areas to parks and preserves to designated WCAs.

In 1952, the Board of Trustees granted FWC lead management authority. Also, in 1952 the FWC and SFWMD signed the Cooperative Management Agreement establishing cooperative management authority to lands within EWMA. These lands include WCA 2 (2A and 2B) and WCA 3 (3A and 3B). In the 1970s, the State acquired multiple parcels of land added to ECWMA via the Environmentally Endangered Land, Conservation and Recreational Land, Preservation 2000, and the Florida Forever programs. Currently, FWC manages ECWMA for the purpose of conserving and protecting natural resources and environmental quality, and includes areas designated for purposes such as flood control, protection of quality and quantity of groundwater and surface water, floodplain management, fisheries management, and protection of vegetative communities or wildlife habitats.

**2.1 Habitat Management**

The ECWMA Management Plan describes the vegetative communities on the WMA, management of those communities that require adaptive management, and the goals and objectives for the 10-year life of the plan. With the exception of hydrology alterations, the current state of ECWMA's natural communities is not drastically different from its historic condition. However, canals, levees, water control structures, and major roads bisecting and surrounding the area have altered hydroperiods and disrupted sheet flow, which have altered natural communities. Management techniques applied by FWC to restore and maintain the natural communities on ECWMA include prescribed burning, mechanical treatments, nonnative vegetation control, native vegetation control, hydrological restoration, and replanting native vegetation.

Since ECWMA does not have the natural communities monitored by the Objective Based Vegetation Management (OBVM) program, OBVM does not occur across the area. Instead, ECWMA staff contracted with Florida Natural Areas Inventory (FNAI) to help establish a comparable vegetation monitoring program for tree islands (prairie hammocks in 2019 and 2020. Tree islands comprise only 1.7% of the total acreage on ECWMA; however, tree islands are extremely important for wildlife and provide food, cover, and refuge, and contribute to the overall plant and animal diversity observed on the area.

To examine restoration efforts on tree islands, vegetation plots across 18 tree islands established during a study in 1999-2000 were re-sampled in 2019. Nine of these islands were sampled to confirm their status as suitable "reference" tree islands, and the other nine islands were "managed" islands, which are tree islands subject to restoration management activities. The goals from the first year included: first, establish whether the nine reference tree islands have changed significantly in measured diversity and density of canopy species over the past 20 years; second, using desired future conditions (DFC) set by the reference islands, determine what proportion of the nine managed islands are meeting those DFCs; lastly, regardless of whether the managed islands meet DFCs, determine whether these islands have changed significantly in measured diversity over the past 20 years.

Results from 2019 determined the reference islands had a reduced diversity and density compared to measurements taken in 1999. Managed islands showed a significant increase in density, but not diversity, although the general trend seemed to be moving towards higher diversity on these islands. The 2019 results also informed changes to the sampling methodology for 2020. In 2020, reference tree islands were re-surveyed using the new methodology, and 20 new randomly chosen managed islands that represented various native planting efforts were added to the survey.

Results from the 2020 study gave more detailed metrics for conditions on each of the tree islands measured. Species richness, stem area, average stem diameter, and a measure of canopy importance were all determined to be potentially useful measurements of canopy development and habitat quality. The reference islands had a significantly higher stem density median. However, when surveyors examined tail, fringe, and head vegetation separately, there was no difference in stem density between managed and reference islands. The only detectable difference was in species richness, which trends higher on managed islands. Sampling detected a marked decrease in nonnative plant abundance over the past 20 years, presumably reflecting restoration efforts by ECWMA staff. However, islands that still had a high cover of nonnative plants, have strong indicators of disturbance as measured by species richness, stem area, average stem diameter, and canopy importance. As a result, FNAI recommended that DFCs should be set using the upper tier of the relevant measurements from both reference and managed islands. Re-sampling on a regular basis (every 5 years) should allow FWC to track conditions and monitor progress on managed islands.

Area staff manage other natural communities including glades marsh, prairie hammock, strand swamp, and successional hydric shrubland forest. Primary management techniques used throughout the area include nonnative plant removal and prescribed burning, as well as managed 'let it burn' policies for beneficial wildfires. Prescribed fire reduces heavy fuel loading, controls invasive hardwoods, promotes fire dependent plant species, and enhances natural communities to benefit wildlife. Staff conduct prescribe burning during both growing and dormant seasons. Additionally, wildfires regularly burn large portions of the property.

As of February 2022, EWMA has 361,804 burnable acres and HWMA and RWMA have 52,874 burnable acres based on natural community type. Since the previous Strategy (July 2012),

staff burned 62,483 acres (EWMA [53,329], HWMA [2,383], RWMA [6,771]), mostly during the dormant season. Staff burned an average of 6,248 acres per year, with a maximum of 11,764 acres burned on EWMA in 2019. The years in which prescribed fire were limited, there were significant wildfires. Wildfires burned 232,274 acres on EWMA, 64,317 acres on HWMA, and 60,134 acres on RWMA. Large wildfires burned most of RWMA (77% of the area) in 2014 and HWMA (82% of the area) in 2021. Quickly fluctuating water levels throughout ECWMA make it difficult to keep burn units at the lower end of the recommended fire return interval for glades marsh (3-10 years). ECWMA staff will continue to employ a prescribed burning program that incorporates different seasons, burning frequencies, and intensities, to enhance habitat diversity and a mosaic of vegetation patterns. Staff will develop a more appropriate fire frequency metric that takes into account annual burnable acreage excluding areas that cannot be burned that year due to environmental factors (e.g., high or low water conditions) that are outside the control of ECWMA staff.

Since the last Strategy, staff applied herbicide treatments to 71,311 acres (EWMA [31,773], HWMA [31,067], RWMA [8,470]), to manage nonnative and native invasive plants (averaging 7,131 acres/year). Examples of nonnative invasive plants treated include melaleuca (*Melaleuca quinquenervia*), Brazilian pepper (*Schinus terebinthifolia)*, napier grass (*Pennisetum purpureum*), old world climbing fern (*Lygodium microphyllum*), and water lettuce (*Pistia stratiotes*). Depending on extent of infestation, certain units are treated more frequently. Staff treat native vegetation such as cattail (*Typha domingensis*) is chemically treated when encroaching into marsh habitats.

Staff seldom use mechanical treatments throughout ECWMA. Native woody species [Carolina willow (*Salix caroliniana*) and wax myrtle (*Morella cerifera*)] are sometimes treated mechanically where these plants have encroached into marsh habitats. Staff use mechanical treatments on HWMA to restore sawgrass marsh in areas of extensive woody shrub encroachment where prescribed fire cannot be safely implemented. On HWMA, to decrease woody vegetation encroachment, staff mechanically treated 427 acres and will follow this by applying a prescribed burning regime. Staff determined that mechanically treated areas need a longer fire return interval initially (4-5 years, possibly even 6). Mechanical treatment of woody vegetation is sometimes used to create and maintain firebreaks. Treatments include mechanically cutting and mulching woody vegetation.

Area staff conduct plantings on tree islands throughout ECWMA. Since the last Strategy staff have planted 326 acres of native trees, including red maple (*Acer rubrum*), sweet bay (*Laurus nobilis*), bald cypress (*Taxodium distichum*), pond apple (*Annona glabra*), Carolina willow (*Salix caroliniana*), and wild coffee (*Psychotria nervosa*). The only timber resources in ECWMA are the tropical hardwoods found on tree islands, and these are not merchantable. The FWC and the Florida Forest Service (FFS) have jointly determined that a professional forest assessment is unnecessary.

The hydrology of the Everglades region is very complex and has been heavily impacted by human activity. Both high and low water levels periodically require closing the area to the

public and impede management activities. Water managers define high water conditions as the average reading of two gauges (62 and 63) exceeding ≥11.60 feet National Geodetic Vertical Datum (NGVD). Prolonged high-water levels pose a threat to locally important species, and high-water conditions that last longer than 60 days can be detrimental to wildlife health and habitats. Managers define low water conditions as the average reading of two gauges receding below ≥9.30 feet NGVD. At or below low water conditions, the risk of muck fires is increased and conservation measures that limit public access may be enacted.

Hydrology is largely based on rainfall and the operational schedule implemented by the SFWMD and U.S. Army Corps of Engineers (USACE). Water managers use a large network of canals, levees and water control structures to manage water levels. FWC has not contracted for hydrological assessments for ECWMA. The SFWMD and USACE are experts in water management and have the authority to manage the hydrology, which negates the need for a hydrological assessment. FWC's role in water management on ECWMA is to work with cooperators to continue to develop and refine hydroperiods for the area and provide technical assistance and ecological recommendations on water levels and water management to cooperating agencies. EWMA plays an important role regarding Everglades restoration (see Central Everglades Planning Project) and is part of the combined operational plan.

RWMA has an operational plan that SFWMD, FWC, and the Department of Environmental Protection revised in 2010. The SFWMD uses the operational plan to guide water management on the area, and FWC also provides ecological water management recommendations to SFWMD. The RWMA drill pad road removal is a hydrological restoration project that FWC is conducting in fulfillment with one of the long-term goals on the area's management plan. Area staff continue to monitor the progress of the restoration per SFWMD permit requirements.

HWMA has a memorandum of understating (MOU) with SFWMD in managing hydrology. FWC follows a draft revised operational plan. The ECWMA Management Plan calls for a hydrological assessment for HWMA. Given the role in water management SFWMD has in HWMA, it would be more appropriate for SFWMD to complete any hydrological assessments while FWC provides support.

Over the next 10 years, staff will continue to manage natural communities throughout ECWMA. Staff will focus on maintaining functional natural communities and initiate actions to make altered communities more wildlife friendly. The actions outlined below will improve habitat for many locally important species that use ECWMA and its surrounding public lands.

*Mechanical Treatments*

- When necessary, staff will use mechanical treatments to restructure fuel loads in areas where it is unsafe to apply prescribed fire. Staff will plan to follow this type of mechanical treatment with fire as soon as practical after the treatment.
- Staff plan to use mechanical treatments to treat up to 100 acres per year of woody vegetation encroaching near the power lines in HWMA, or in other areas of HWMA as needed, to restore sawgrass marsh.

*Chemical Treatments*

- Staff will continue to chemically treat nonnative and native invasive plants prioritizing Florida Invasive Species Council Category I and II invasive nonnative plants.

*Prescribed Fire*

- Staff plan to conduct prescribed burning of Everglades marsh and other fire-maintained communities alone or in combination with chemical treatments.
- Staff will employ a burning program with different burning frequency, intensity, and seasonality (dormant vs. growing seasons) designed to provide a diversity of community structure.
- Staff will emphasize dormant season burns in areas with no fire history as well as growing season burns in areas with excess shrubs until in maintenance condition.
- Staff will develop a more appropriate fire frequency metric to develop the most appropriate burn frequency that will benefit wildlife and natural communities throughout the area.

- *Hydrological Restoration*
  - Staff will continue to provide ecological recommendations that benefit wildlife and their habitats to water managers.

*Tree Island Forest Management*

- Staff will continue to conduct tree island restoration plantings as appropriate.
- Staff will protect newly planted vegetation with enclosures as appropriate and contract the maintenance of enclosures as needed.
- Staff will photo monitor select newly planted areas to observe plant growth overtime as well as conduct camera trapping as appropriate to document wildlife using the island.

**2.2 Monitoring**

Monitoring recommendations in the 2012 Strategy included conducting a rare plant survey and documenting occurrence of locally-important species throughout ECWMA. Staff accomplished these monitoring recommendations during the 10-year lifetime of the Strategy.

In addition, staff conducted annual North American Breeding Bird Surveys (HWMA; approximately 40-50 species observed each year), a partial small mammal inventory in 2014 (HWMA; only 3 species detected), annual aerial, and spotlight and browse surveys (during highwater closures only) for white-tailed deer (*Odocoileus virginianus*) (ECWMA), ground-based wading bird nest surveys (HWMA), crested caracara (*Caracara cheriway*) territory and nest surveys (RWMA, HWMA), Florida bonneted bat (*Eumops floridanus*) acoustic surveys (ECWMA), Eastern black rail (*Laterallus jamaicensis jamaicensis*) callback surveys (EWMA), and tree island restoration and high water monitoring camera trapping surveys (EWMA). Staff continued enclosure maintenance monitoring for planted vegetation (ECWMA) as well as photo monitoring for planted islands. Results for these monitoring activities can be seen using the SaMP WebQuery tool. Staff continued monitoring and maintenance of wood duck (*Aix sponsa*)

boxes in EWMA (see results); however, staff will only continue to monitor and maintain wood duck boxes in WCA 2B as those are the only ones that have been used since the last Strategy. The FWC's Division of Freshwater Fisheries Management conducted fish surveys from 2006-2022 in various areas within EWMA (see results). The purpose of this is to track long-term monitoring trends, and FWC will continue to conduct those surveys for the length of this Strategy. The SFWMD conducts annual aerial wading bird surveys on EWMA (see wading bird reports). The University of Florida's (UF) Everglades Invasive Reptile and Amphibian Management Program conduct nonnative wildlife surveys (over 4,500 native and nonnative individuals encountered from approximately 60 different species [2011-2022]) and FWC volunteers and contractors continue to conduct Burmese python (*Python molurus bivittatus*) removal surveys throughout ECWMA (over 1,500 removed since 2017). The Division of Hunting and Game Management in conjunction with the Fish and Wildlife Research Institute (FWRI) conducted alligator (*Alligator mississippiensis*) spotlight surveys on a rotational schedule across ECWMA to assess population size and determine harvest regulations. The species assessments for white-tailed deer, crested caracara, Eastern black rail, Florida bonneted bat, and wading birds contain more details and results of these efforts.

*Species Specific Monitoring*

Some species warrant dedicated monitoring for one or more reasons. Imperiled species that are rare or declining may justify a dedicated effort to monitor local populations. In other cases, the species being monitored fulfills a role of an indicator species, a species whose presence indicates well-managed natural communities that will also benefit other species. Some species exist as both imperiled and as an indicator. The Species Assessments detail species' status and specific monitoring actions. On ECWMA, the following species or species groups will receive dedicated monitoring:

- Bald eagles (EWMA; monitoring conducted by SFWMD)
- Crested caracara (RWMA, HWMA)
- Colonial bats (ECWMA)
- Eastern black rail (ECWMA)
- Everglade snail kite (ECWMA; monitoring conducted by UF)
- Wading birds (HWMA, RWMA; aerial surveys on EWMA by SFWMD)
- White-tailed deer (ECWMA)

*Species Inventories*

Conducting periodic inventories on lands within the WMA system accomplishes several purposes. Inventories inform staff about species on ECWMA, provide an up-to-date species list for the area, and may alert staff to potential species declines that warrant further investigation. Additionally, conducting an inventory may be a more effective way to document species occurrence than other methods, such as opportunistic monitoring. Staff completed a 2-year herpetofauna inventory in July 2022. Due to the lack of staffing in the area, the herpetofauna inventory was extended from 1-year to 2-years. During the inventory, staff were limited on the

sampling techniques that could be used due to the natural communities present and large size of the area. Staff did not use any active trapping techniques (e.g., drift fences) during the inventory. Via opportunistic observations, road cruising, and frog call surveys, staff documented 40/51 herpetofauna that may occur in the area based off range maps and habitat preferences of different species. In addition to the 40 native species observed throughout ECWMA, an additional 12 nonnative species were also documented. Of the 11 native species that that were not detected during the inventory, staff document 4 of those species outside of the inventory period. Area staff are conducting an avian inventory throughout fiscal year 2022-2023.

During the 10-year lifetime of this Strategy, staff or contractors will conduct taxa inventory surveys for the main terrestrial vertebrate species and selected aquatic species as resources allow. Surveys on ECWMA will include, small and meso-mammal camera trap surveys, seasonal avian point count surveys, Breeding Bird Atlas surveys, and acoustic bat surveys. For species identified as unlikely to be documented by current methods, cryptic species and other special cases, modifications or enhancements to existing survey methodologies will be considered. After the completion of these inventories, staff will work with the South Region Conservation Biologist and subject matter experts (SMEs) to determine if taxa inventories should be repeated in the future.

*Document Occurrence*

Staff document opportunistic observations of species as they are encountered. While staff only need to enter opportunistic observations for common species on an occasional basis, there are other species for which staff should document every encounter. Collecting this information will help further our understanding of species' ranges statewide as well as the area's role in the conservation of these species. Staff will record observations of the following species when encountered using the Opportunistic Observations for Wildlife protocol and enter those data into the Survey and Monitoring Protocol (SaMP) database so it will be available to other FWC sections and divisions, as well as to cooperating agencies and organizations. It is not necessary to fill out the opportunistic monitoring form if data on these species are collected as part of another monitoring effort (e.g., herp arrays). Species for which all occurrences will be documented on ECWMA are:

- Eastern diamondback rattlesnake (*Crotalus adamanteus*)
- Eastern indigo snake (*Drymarchon couperi*)
- Florida box turtle (*Terrapene bauri*)
- Burrowing owl (*Athene cunicularia*)
- Crested caracara (*Caracara cheriway*)
- Eastern black rail (*Laterallus jamaicensis jamaicensis*)
- Florida sandhill crane (*Grus canadensis pratensis*; nesting or occurrence of dependent young as well as use of prairie habitat)
- Least bittern (*Ixobrychus exilis*; nesting activity or occurrence of dependent young)
- Limpkin (*Aramus guarauna*; nesting activity or occurrence of dependent young)
- Short-tailed hawk (*Buteo brachyurus*; include color phase and behavior)

- Snail kite (*Rostrhamus sociabilis*; banded individuals, breeding behavior [mating pairs and aggregations during spring] and nest activity)
- Southern bald eagle (*Haliaeetus leucocephalus*; nesting activity)
- Swallow-tailed kite (*Elanoides forficatus*; nesting activity)
- Wading birds (imperiled species; nest colonies)
- White-crowned pigeon (*Patagioenas leucocephala*)
- Bat roosts (multiple species)
- Bobcat (*Lynx rufus*; only in novel locations)
- Big Cypress fox squirrel (*Sciurus niger avicennia*)
- Eastern spotted skunk (*Spilogale putorius*)
- Everglades mink (*Neovison vison evergladensis*)
- Florida black bear (*Ursus americanus floridanus*)
- Florida panther (*Puma concolor coryi*)
- Round-tailed muskrat (*Neofiber alleni*)
- Striped skunk (*Mephitis mephitis*)
- Any listed species that does not have a monitoring protocol in this section

*Nonnative Species Observations*

Biologists as well as members of the public have documented over 500 vertebrate nonnative species in Florida and currently more than 150 of these species have reproducing populations in Florida. Most of these species are not a threat to locally important species; however, some (i.e., Burmese python and Argentine black and white tegus [*Salvator merianae*]) have shown to have detrimental impacts to Florida's native wildlife and are a priority for early detection and response. The Nonnative Fish and Wildlife Program aims to minimize the adverse impacts of nonnative species in Florida through prevention, early detection, rapid response, control and management, and education and outreach.

As Burmese pythons and other species continue to expand their range in Florida, the Nonnative Fish and Wildlife Program asks that all priority nonnative species be reported to the Exotic Species Hotline at 888-Ive-Got1 (483-4681). Burmese pythons occur throughout ECWMA. Spectacled caiman (*Caiman crocodilus*), ball pythons (*Python regius*), green iguanas (*iguana iguana*), black spiney-tailed iguanas (*Ctenosaura similis*), among many other nonnative species have been observed on the area. Nile monitors (*Varanus niloticus*), Argentine black and white tegus, and bullseye snakehead (*Channa marulius*) have established expanding populations nearby. In March 2022, there was one large Nile monitor observed dead on road along US-27 which borders EWMA. If staff observe a priority nonnative species on ECWMA, staff are encouraged to capture and remove the animal if they feel comfortable doing so. Once the animal is in possession, contact the Exotic Species Hotline to coordinate the transfer with a staff member in the Nonnative Fish and Wildlife Program. The Nonnative Fish and Wildlife Program also provides training on the safe handling and capture of nonnative species. For training, contact the Exotic Species Hotline or the staff contacts on the Wildlife Impact Management SharePoint

page. If new priority nonnative species become established anywhere on the area, the South Region Conservation Biologist will consult with FWC's Nonnative Program Coordinator and discuss potential nonnative species management efforts.

## Section 3: Species Assessments

Creating these assessments for locally important species on ECWMA involved several steps. First, WCPR staff created a list of locally important species for ECWMA (Appendix 2), starting with the listed and recently delisted species in the Imperiled Species Management Plan (ISMP) that are known to occur or could potentially occur on ECWMA. Staff then considered adding additional species to this list, including: species that were identified in the area's purpose for acquisition; species for which staff conduct significant monitoring or management for conservation, recreation, or public viewing purposes; candidates for federal listing; species recognized as habitat management indicators, keystone species, or umbrella species; and species for which occurrence data are lacking. Staff used references, in addition to the ISMP, which included: statewide potential habitat models, created by FWRI using Cooperative Land Cover V.3.2; agency documents such as the previous WCPR Strategy and the ECWMA Management Plan; and input from local staff and species experts.

After creating the species list, WCPR staff drafted assessments outlining proposed management and monitoring actions for each species (except those for which documenting occurrence was the only needed action identified by experts). Then staff conducted a workshop, held January 12-13th 2022, at which area managers, species experts, and section leaders reviewed the draft species assessments and discussed ECWMA potential role in the conservation of listed and locally important species. To determine management actions needed for each species, workshop participants considered: the species' status on ECWMA; the current condition of the area's natural communities; the amount and spatial arrangement of the species' potential habitat on the area and adjacent lands; the species' response to management; and any local overriding factors (e.g., status of species in the region, local declines or extirpations). Additionally, staff considered management actions identified in FWC's Species Action Plans (SAPs), Regional Assessment, and ECWMA Management Plan. Using the information from the workshop, staff drafted the Strategy and sent it to species experts for review. Following the review, the Strategy was finalized and implemented.

This section summarizes the assessment for each species. Each assessment outlines the species' status on ECWMA and the current condition of its habitat, planned habitat management actions, planned monitoring actions, and the area's role in conservation of the species. In addition, some assessments may identify species management recommendations, which refer to actions such as translocation, restocking, or installing artificial cavities.

### 3.1 Crested Caracara

*Current Condition:* Crested caracaras are rare on EWMA. ECWMA staff have observed nesting on HWMA and RWMA. Since 2015, staff have conducted breeding territory and nesting surveys on RWMA. Staff began surveys on HWMA in 2020. As of 2022, staff have documented

4 nests (3 in RWMA, 1 in HWMA). In HWMA and RWMA, caracaras are usually observed on levees and along canals and sometimes near water control structures.

The crested caracara is listed as federally-Threatened making it a statewide priority. Historically, this species would have occurred in native dry prairie. Due to habitat loss and degradation, crested caracaras now occur mostly on private and public land on improved or semi-improved pastures. This species prefers to forage in open areas with low ground and shrub cover and will build their nest on a cabbage palm in an open area. Crested caracaras have strong nest site-fidelity, often returning to the same tree every year to build a new nest. Nests are primarily constructed on cabbage palms, but they may nest on live oaks (*Quercus virginiana*) and bald cypress (*Taxodium distichum)*. Although ECWMA does not have much potential habitat for caracaras, the levees in the area, canals, marsh (in dry condition), and agriculture fields nearby provide foraging habitat. Isolated cypress and cabbage palms along the levee provide nesting habitat.

*Habitat Management:* Prescribed burning can help maintain open habitats that support foraging. If a nest is observed, staff should avoid disturbance within 1,000 feet of the nest during the first 2-3 weeks of nesting, as this is when caracaras are most likely to abandon the nest (see Crested Caracara Best Management Practices). The management proposed in Section 2 is compatible with the needs of the crested caracara.

*Monitoring:* Staff will continue to record opportunistic observations and conduct annual territory and nest surveys following the monitoring guidelines set forth by the Crested Caracara Breeding Territory Surveys.

*Area's Role:* The role of ECWMA in the conservation of crested caracaras is to provide suitable habitat to support the regional population. Staff will fulfill this role by continuing to manage ECWMA with prescribed burning and protecting known nests. These management practices will help maintain roosting and foraging habitat for the crested caracara.

**3.2 Eastern Black Rail**

*Current Condition:* Multiple marsh bird species occur on ECWMA including the Eastern black rail. In 2020, the USFWS listed the Eastern black rail as federally-Threatened due to serious population declines and significant range contractions. Staff conducted marsh bird surveys from 2010-2011 using the protocol developed by the National Marsh Bird Monitoring Program. Area staff have documented black rails opportunistically throughout the area. In 2021, ECWMA staff conducted black rail callback surveys in EWMA, however, no black rails were detected during callback surveys. Area staff did detect black rails opportunistically during 2021. In 2022, staff detected one black rail during callback surveys, as well as detecting multiple individuals opportunistically.

The black rail is the only listed marsh bird that occurs on ECWMA. Due to over 650,000 acres of marsh habitat available for black rails, species experts identified ECWMA as having an important role for black rail conservation and population monitoring. The black rail is a cryptic bird the size of a sparrow that lives in the shallowest reaches of freshwater and saltwater marshes. The vegetative composition of the glades marsh community throughout ECWMA

meets the needs for this species; however, hydrology, is a strong indicator of good nesting habitat.

*Habitat Management:* The structure of the habitat, open understory near or over shallow water, is the most important feature. Hydrology plays a crucial role in black rail habitat use. Adult black rails prefer water levels ranging from moist soil to 6 cm for adults and moist soil to 2 cm for chicks. Nonnative plant control and prescribed burning will maintain the healthy herbaceous cover this species needs to prevent excessively thick growth of vegetation or shrubs. The USFWS Species Status Assessment Report for black rails recommends that marsh burns should avoid sensitive time periods (i.e., the breeding season or flightless molt period). Unlike many birds, black rails molt all flight feathers simultaneously and therefore cannot fly until new feathers grow. Staff should avoid burning occupied marshes during the flightless molt period (August-September). Staff will follow the guidance of the Eastern Black Rail 4(d) rule.

Staff will use best management practices (BMPs) where black rails are present, which include avoiding treatment of more than 50 percent of a contiguous block of habitat, knowing that in certain occasions, staff will make adjustments to actions in order to meet the overall management goals for ECWMA. Approximately 10% of the burn unit should contain small, dispersed patches of unburned area. Staff will follow additional BMPs, such as leaving unburned refugia within a prescribed burn area and planning burn rotations that allow black rails to seek refuge in adjacent habitats, to reduce detrimental impacts on this species. Ignition techniques should strive for slow moving fires and avoid techniques that create numerous converging fires. Techniques such as spot-strip ignition and flanking will benefit black rail and other species by generating a slower moving fire. The FWRI, in collaboration with multiple interstate agencies and entities, are currently working on multiple projects to better understand the role of fire on black rail conservation, and staff will adjust practices as necessary based on the outcomes from these studies.

*Monitoring:* Based on the discussion at the workshop and interactions with species experts, staff will continue annual black rail surveys. Staff will increase the sampling scope to cover a larger area with varying water levels and microhabitat characteristics. Staff will continue to consult with SMEs because black rail monitoring efforts continue to evolve and new information about their ecology is constantly being updated.

*Area's Role:* The extensive glades marsh community on ECWMA means the area has a significant role in the conservation of black rail by providing suitable habitat to support the regional population. Staff will continue to record opportunistic observations and conduct surveys. ECWMA staff will continue to manage the natural communities with appropriate fire and chemical treatments.

**3.3 Everglade Snail Kite**

*Current Condition:* Staff frequently observe snail kites throughout ECWMA. FWC and UF staff have confirmed nesting on RWMA and EWMA, but have not confirmed nesting on HWMA. Except for 2016 and 2020, snail kites have nested every year on EWMA since 2012. Snail kites nested on RWMA from 2017-2019. For years when nesting occurred, annual nest

success varied from 11-54% throughout ECWMA. UF biologists monitor snail kites in Florida, and ECWMA staff record opportunistic observations.

The snail kite is a federally-Endangered species and considered a high priority species due to its high risk of decline and extinction. This species is a diet specialist and dependent on the availability of apple snails (*Pomacea spp.)*, which require high-quality wetlands with emergent vegetation. Snail kites are highly mobile but can stay in one area for extended periods of time if food is plentiful. Hydrology plays a crucial role in prey availability and nest success. In Florida, snail kites prefer habitats that include large inland freshwater marshes or edges of shallow lakes where apple snails occur, which is why ECWMA has so much potential for the species.

*Habitat Management:* Marsh vegetation is usually low profile (≤ 10 ft), often dense, dominated by sawgrass (*Cladium jamaicense*), with a mosaic of shallow, open-water areas (depth 0.7-4.3 ft), with or without sparse emergent vegetation, and with relatively clear and calm water. Prescribed fire can help maintain these communities in an open condition; however, studies have shown that burning during low water events can limit snail kites using wetlands and reduce their access to apple snail resources, due to reductions in dense emergent plant growth. Because water quality is important, staff will follow BMPs to protect water quality. Invasive nonnative plants can reduce habitat suitability and staff will consult with Invasive Plant Management Section (IPM) staff about chemical or mechanical removal of nonnative plants, (i.e., water hyacinth [*Eichhornia crassipes*] and water lettuce. If FWC's Snail Kite Coordinator and UF biologists determine that existing exotic emergent vegetation is a problem, staff will work with IPM to mitigate it. Staff will follow management guidelines about reducing activity within 1,640 ft of active nests and will not conduct any activity within 500 ft of known nests (USFWS Snail Kite Management Guidelines).

*Monitoring:* ECWMA is included in the statewide snail kite monitoring program. ECWMA staff will continue to record opportunistic observations. If staff observe mating pairs, nesting activity, or banded individuals throughout ECWMA, they will share data with the Snail Kite Coordinator.

*Area's Role:* The glades marsh community and its surrounding communities throughout ECWMA play a significant role in the conservation of snail kites by providing suitable habitat to support the regional population. Snail kites will only occur on ECWMA if wetland communities continue to be managed appropriately and hydrological conditions are appropriate for foraging and nesting. While partnering agencies have influence over water levels, current plans for natural community management will help maintain suitable nesting and foraging conditions.

**3.4 Southern Bald Eagle**

*Current Condition:* Bald eagles are occasionally observed throughout ECWMA. The SFWMD staff conduct annual nest monitoring on the one known nest on EWMA and first documented this nest (in WCA 2A) in 2013 and was active until 2017. The nest was not active in 2018, but SFWMD staff observed another nest nearby (in WCA 2A) in 2019. Staff believed this to be the same pair that moved to a more suitable location. SFWMD staff nest observed in 2019

was active in 2020, 2021, and 2022. FWC staff have not observed bald eagles nesting at HWMA or RWMA.

The bald eagle is not federally or state listed; however, it is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, along with the State Bald Eagle Rule. Since this species is a diet generalist and uses a wide variety of natural communities, ongoing and planned community management will likely meet the needs of this species. Continued management of natural communities will ultimately benefit bald eagles by providing suitable foraging habitat and in limited cases nesting habitat.

*Habitat Management:* Given the generalist nature of this species and its mobility, biologists do not consider it management dependent. Following water quality BMPs and maintaining healthy wetlands will fulfill the area's role in protecting foraging habitat. The Bald Eagle SAP recommends staff should maintain a 660-ft buffer around nest trees when planning management activities during the nesting season near an active bald eagle nest. Staff should be aware of and protect known nest trees from prescribed fire and other management practices.

*Monitoring:* Since the initial observation of a nest in 2019, SFWMD staff conducted annual nest monitoring. ECWMA staff will continue to record opportunistic observations, as well as assist SFWMD staff on an as-needed basis on any future surveys. All nesting information will be shared with Audubon's EagleWatch program.

*Area's Role:* The role of ECWMA in the conservation of the bald eagle is to provide suitable habitat to support the regional population. Staff will fulfill this role by continuing to record any unique observations and assist SFWMD on monitoring nests annually. Staff will also minimize disturbance to nest trees and follow water quality BMPs while performing management actions.

**3.5 Wading Birds**

*Current Condition:* Multiple imperiled wading bird species (tricolored heron [*Egretta tricolor*], little blue heron [*E. caerulea*], wood stork [*Mycteria americana*], and roseate spoonbill [*Platalea ajaja*]) occur and nest throughout ECWMA. The UF, Florida Atlantic University, and SFWMD conduct annual aerial wading bird surveys on EWMA; however, FWC primarily coordinates with SFWMD on monitoring, data analysis, and final reports. SFWMD staff found two small colonies of little blue and tricolored herons on HWMA in 2018 and area staff along with SFWMD staff monitor these two colonies via ground surveys each year. In 2021, area staff began monitoring two colonies on RWMA that had multiple non-listed species and contained low numbers of nesting little blue herons with one of the colonies having one tri0colored heron nest. Since the last Strategy, SFWMD aerial surveys on EWMA have observed multiple nesting colonies (25 colonies in 2020) of snowy egrets (*Egretta thula*), tricolored herons, little blue herons, great blue herons (*Ardea herodias*), great egrets (*A. alba*), wood storks, roseate spoonbills, white ibis (*Eudocimus albus*), and black-crowned night herons (*Nycticorax nycticorax*).

While all wading birds are protected by law, the wood stork is a federally-Threatened species, and the little blue heron, roseate spoonbill, and the tricolored heron are state-Threatened

species (see Imperiled Wading Birds Species Management Plan). ECWMA has approximately 700,000 acres of suitable habitat for these species. Many of the wading bird species that occur on ECWMA also occur on other nearby public lands. The vegetative composition of the wetland communities on ECWMA meets the needs for these species to nest and forage throughout the area.

*Habitat Management:* Natural community management, especially when conducted following wildlife BMPs, will benefit these species. Prescribed burning helps maintain open wetlands that support foraging. Staff will continue to provide ecological recommendations to the water managers, such as introducing more water into the area during breeding season. When appropriate, recommendations should include water management to ensure the availability of areas with water depths between 2-8 inches during the breeding season, appropriate recession rates throughout the breeding season, minimizing significant water reversals, and prioritizing water management in quality foraging habitat within 8 miles of known breeding sites. Staff will plan chemical treatments of aquatic vegetation near known nesting sites to occur during the non-breeding season and avoid damaging nest trees or shrubs. Staff will conduct management actions >330 ft. from active breeding sites if occurring during nesting season. Habitat conservation guidelines and BMPs for imperiled wading birds are available at the Imperiled Wading Bird Conservation Measures and Permitting Guidelines. More specific conservation guidelines for wood storks are available at the Wood Stork Management Guidelines.

*Monitoring:* Staff will continue to record opportunistic observations of all nesting imperiled species of wading birds in novel locations. For non-listed species, any large nesting colonies (>50 nests or pairs of any wading bird species) will be documented. Staff will report this information to the SFWMD and South Region Conservation Biologist will make sure any relevant information is received by WadingBirds@MyFWC.com. The FWC and SFWMD will continue to collaborate on monitoring wading bird colonies on EWMA. Area staff in conjunction with SFWMD staff will continue ground wading bird surveys on the existing nesting colonies on HWMA and RWMA and any future novel nesting colonies observed on HWMA and RWMA during the duration of the Strategy. If FWC approves the use of drones and SMEs determined that this methodology provides minimal disturbance to nesting birds while optimizing results, Team WCPR will work with species experts to develop a monitoring protocol.

*Area's Role:* The role of ECWMA in the conservation of wading birds is to provide suitable habitat to support the regional population. The natural communities on ECWMA play a significant role in the conservation of many wading bird species. ECWMA staff will continue to manage natural communities to provide foraging and nesting habitat. FWC staff will also continue to work with other agencies that manage hydrology in the area by considering how more water may impact other listed species (e.g., black rail) in the area. Staff will follow BMPs to protect nest sites and water quality.

**3.6 Colonial Bats**

*Current Condition:* There are 13 resident bat species in Florida, 9 of which gather in groups to form maternity or hibernation colonies. The remaining 4 species roost solitarily or in

small family groups in tree foliage. Since 2017, ECWMA staff have been conducting bat acoustic surveys throughout the area. These acoustic surveys are targeted towards determining the distribution of the federally-Endangered Florida bonneted bat that was first detected in the area by a UF graduate student in 2014. ECWMA falls within the Florida bonneted bat consultation area and the critical habitat area. Another notable observation by the UF graduate student was the detection of the southeastern myotis (*Myotis austroriparius*). Ecologists previously believed the southern range of ended in Sarasota, Hardee, and Osceola Counties; however, besides the observation of this bat species in 2014, acoustic surveys have recently detected the species as far south as CREW WEA (Collier County), Lake Okeechobee (Okeechobee County), and on Spirit of the Wild WMA (Hendry County). Other bat species detected in the area are the Brazilian free-tailed bat (*Tadarida brasiliensis*), northern yellow bat (*Lasiurus intermedius*), Seminole bat (*L. seminolus*), evening bat (*Nycticeius humeralis*), big brown bat (*Eptesicus fuscus*), and tricolored bat (*Perimyotis subflavus*).

*Habitat Management:* On ECWMA, bats will roost in tree cavities, structures, culverts, palm fronds, or foliage. All bat species may forage in most of the open communities (e.g., glades marsh) found on ECWMA. Bat species occurring on ECWMA use a variety of communities, therefore planned natural community management should benefit these species. Protecting any known roost sites from disturbance during habitat management actions is a priority.

Bats may benefit from large trees and snags found along the levee or on tree islands when trees have holes, cracks, or loose bark. In parts of its range, bonneted bats appear to respond positively to prescribed burns at an interval of 3-5 years (moderate frequency), particularly at the transition from the dry season to the wet season (April-June). The Florida Bonneted Bat SAP provides recommendations for habitat management, including retaining trees and snags with hollows and cavities, as well as inspecting any dead trees for bat roosts before felling. Bonneted bats may have multiple maternity seasons per year, so staff conducting habitat management around known or potential roost sites from April 15$^{th}$ through December 31$^{st}$ should follow BMPs (see Appendix D in USFWS Florida Bonneted Bat Consultation Guidelines). If bonneted bat roosts are found on ECWMA, staff will consult with species experts to consider both fire frequency and seasonality when maintaining these ecosystems and protect any identified roosts from disturbance during management.

*Monitoring:* ECWMA staff currently keep one acoustic recorder in one location to determine seasonal use of the area, while the other acoustic recorder is moved throughout ECWMA to determine distribution and to help find roost sites. Staff are working with FWRI staff to conduct future telemetry and roost studies. Staff will also work with the FWC Bat Monitoring Coordinator to help guide future monitoring and to determine the potential of adding bat houses in the area. All bonneted bat data will be shared with the appropriate FWC staff as well as the USFWS.

*Area's Role:* The role of ECWMA in the conservation of bats is to provide and manage suitable habitat to support the regional population. Management for healthy natural communities while considering the needs of bats will ensure ECWMA fulfills its role in the conservation of

these species. As such, ECWMA staff will make sure any known roost sites stay protected during habitat management actions.

**3.7 White-tailed Deer**

*Current Condition:* White-tailed deer are a priority game species on ECWMA and a focus of monitoring efforts. Staff conduct aerial deer surveys to monitor the population, and spotlight surveys and browse surveys during high water events to monitor the condition of deer and other terrestrial wildlife. These surveys inform management actions such as public restrictions. Additionally, staff collect harvest and chronic wasting disease data at the check station. Staff have conducted aerial surveys most years since 1990 on EWMA and since 1995 on HWMA and RWMA. Some portions of the area are not surveyed annually, but on a rotating basis, due to consistent low numbers of deer.

The deer population index has varied (348-939 on EWMA; 78-233 on HWMA; 14-54 on RWMA) since the last Strategy, likely due to varying water levels, as well as frequency of prescribed burning and wildfires each year. Recruitment data is not available for 2013, 2014, and 2020; however, from 2012-2021, recruitment has stayed relatively constant (23-47%; mean=35%). Members of the public hunt during archery more than any season (2,650 man-days from 2012-2021), with special-opportunity general gun a close second (2,390 man-days from 2012-2021). It is important to note that sometimes seasons are cancelled due to water levels or other conditions. During 7,409 man-days across all seasons, hunters harvested 172 antlered deer (67 EWMA, 77 HWMA, and 28 RWMA) from 2012-2021. Area regulations prohibit the harvest of does or antlerless deer on ECWMA, and there is a forked antler regulation. When age class was determined by check station operators, hunters harvested more deer in the 2.5-year age class than any other age class.

*Habitat Management*: White-tailed deer are habitat generalists that thrive where different natural communities are interspersed and there are extensive ecotones or "edge" habitats. Deer are primarily browsers that eat a wide variety of leaves, buds, hard and soft mast, and forbs. In the Everglades, under normal conditions, deer primarily forage in the marsh on preferred plants like aquatic herbs. Deer are attracted to areas of disturbance where tender new plant shoots are available for forage. Prescribed fire is important for maintaining suitable habitat as the post-fire response of tender new plant shoots and increased diversity of forbs and other herbaceous species provide a variety of browse. Non-fire-maintained communities are also important for providing food and cover. Staff will use prescribed fire and manage both native and nonnative plants to maintain and improve habitat for deer on ECWMA. Staff will continue to conduct plantings on tree islands to restore native vegetation that will help provide cover and food during fawning and high-water events. By conducting management that provides a variety of forage types and cover, ECWMA staff will continue to provide suitable habitat for deer and other terrestrial wildlife.

*Monitoring:* FWC uses the aerial deer surveys and hunter harvest information collected at check stations to provide annual vehicle permit quota recommendations, or other harvest recommendations. Staff will continue to consult with the FWC White-tailed Deer Research

Biologist to further modify aerial surveys as appropriate or investigate if there is an alternative population sampling methodology that will meet the needs for providing appropriate hunting recommendations. Area staff will continue to work with the South Region Regional Biologist to determine the frequency of spotlight and browse surveys during high water events to decrease stress on deer and other wildlife and maintain an achievable workload for staff. As they are able, FWC staff will continue to participate in the regular ecosystem-based management water coordination calls and WCA 3A periodic scientist calls to provide ecological recommendations and technical assistance to partnering agencies for water management decisions. FWC staff participate in these meetings with multiple agencies including USACE, Miccosukee Indian Tribe, Seminole Tribe of Florida, Bureau of Indian Affairs, SFWMD, U.S. Department of Interior, NPS, Florida Department of Environmental Protection, Florida Department of Agriculture and Consumer Services, Florida Department of Health, Environmental Protection Agency, USFWS, as well as universities and other conservation associations. Staff will continue to collect data from harvested deer, including biological samples for chronic wasting disease. Staff will continue to coordinate with FWRI and FWC's Hunting and Game Management Division to analyze and interpret results from monitoring efforts.

*Area's Role:* The role of ECWMA in white-tailed deer conservation is to provide suitable habitat and manage harvest to sustainably provide recreational hunting opportunities. Staff will fulfill this role by conducting management actions to restore and maintain natural communities and continuing to monitor the herd.

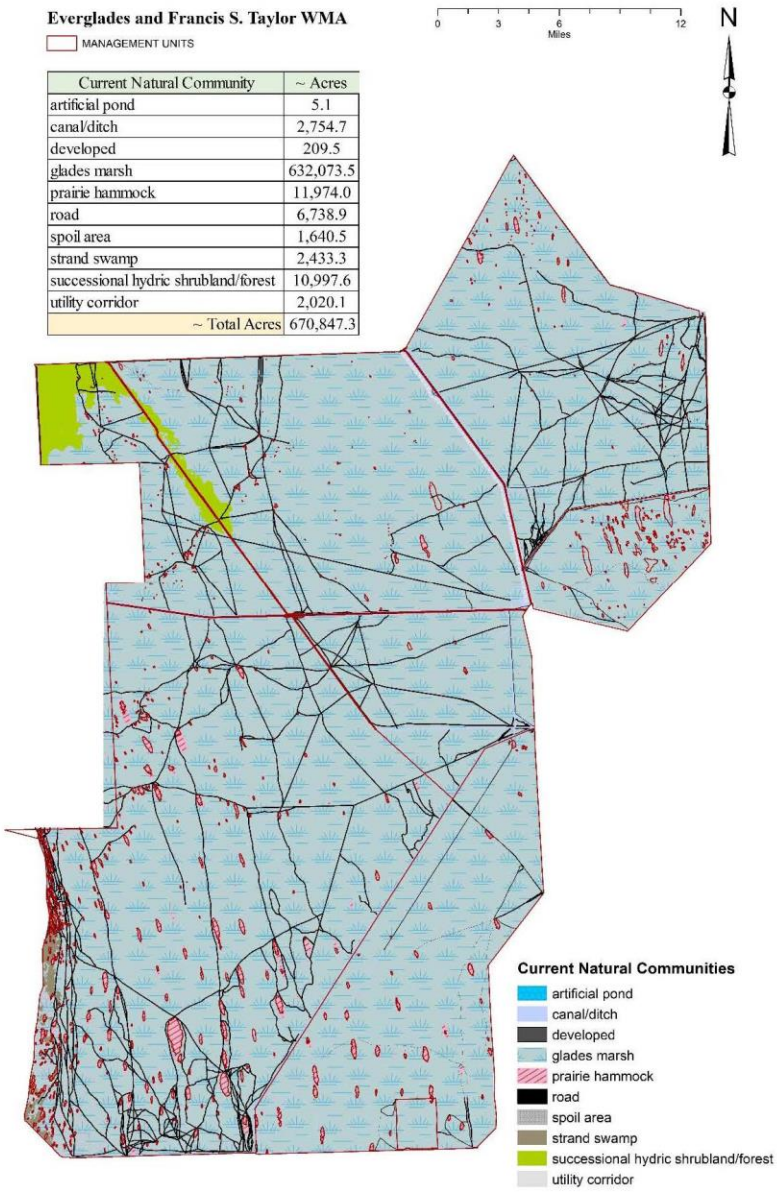
## Section 4: Coordination and Beyond the Boundaries Considerations

While the current condition and management of ECWMA provide an opportunity to conserve many locally important species, significant changes in management or land use beyond the boundaries may have a significant impact on some species that require large home ranges (i.e., snail kite). Many of the species that inhabit marshes and prairie hammocks are dependent on the availability of suitable habitat on adjacent public and private lands. As such, the actions of adjacent landowners could contribute to the persistence of some wildlife species in the surrounding region.

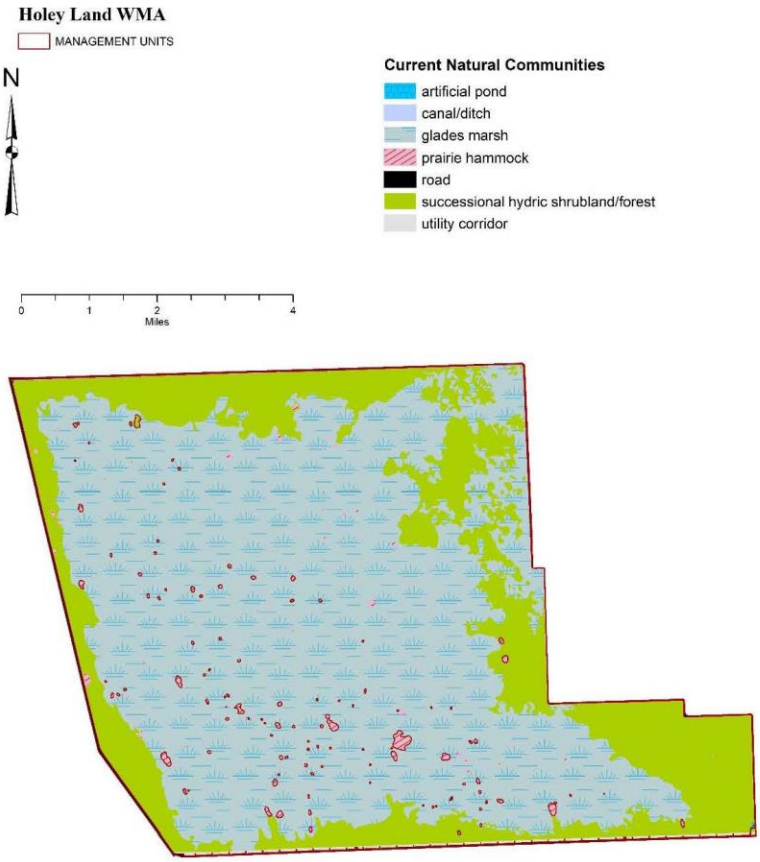
As part of the Comprehensive Everglades Restoration Plan, FWC staff continue coordinating with other agencies and entities on water quality and quantity, habitat management and restoration, and wildlife conservation measures to help restore and maintain the greater Everglades ecosystem. Conservation lands surround most of ECWMA; however, private municipalities form the majority of the eastern boundary. The STAs on the northern boundary help treat runoff water flowing south into ECWMA from nearby agricultural lands. Staff will continue to take advantage of every opportunity to continue cooperation with adjacent landowners and partnering agencies on the conservation of locally important species. The Office of Conservation Planning Services, Wildlife Diversity and Conservation Section, Office of Strategic Initiatives, and the Regional Operations Office can help coordinate on management efforts and cross-boundary conservation priorities. That, in turn will help provide conditions that allow locally important species to disperse through the greater Everglades landscape.

To reach management goals, ECWMA staff often coordinate with staff from nearby WMAs to conduct surveys and habitat management activities. Working with interagency partners like the FFS will continue to help meet desired fire return intervals on ECWMA. Partnering entities like the FNAI and universities provide invaluable services by performing monitoring and research. While ECWMA is large enough to support a viable population of several species, this area also serves as an important link in the conservation lands of southern Florida.

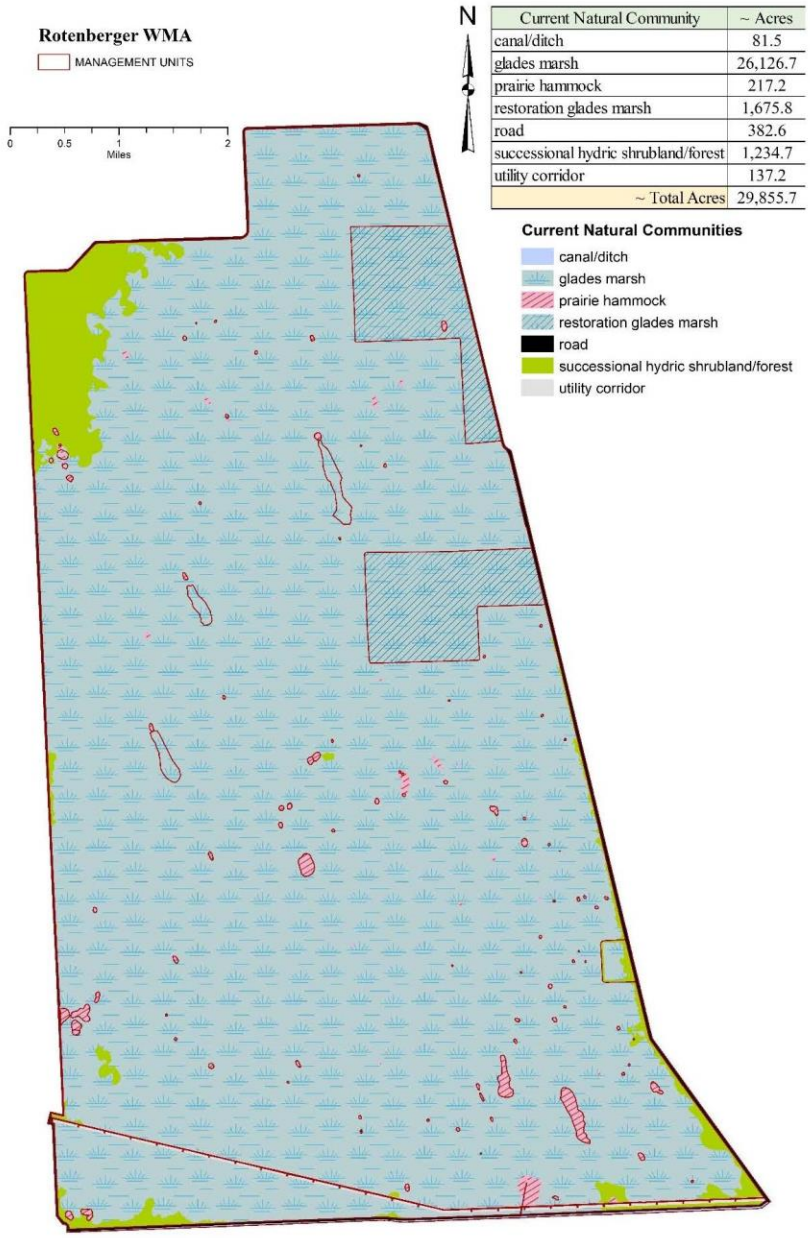
**Appendix 1.** EWMA, HWMA, and RWMA Natural Community Map based on 2017 map recertification.




| Current Natural Community | ~ Acres |
|---|---|
| artificial pond | 5.1 |
| canal/ditch | 2,754.7 |
| developed | 209.5 |
| glades marsh | 632,073.5 |
| prairie hammock | 11,974.0 |
| road | 6,738.9 |
| spoil area | 1,640.5 |
| strand swamp | 2,433.3 |
| successional hydric shrubland/forest | 10,997.6 |
| utility corridor | 2,020.1 |
| ~ Total Acres | 670,847.3 |




| Current Natural Community | ~ Acres |
|---|---|
| artificial pond | 1.6 |
| canal/ditch | 118.2 |
| glades marsh | 25,071.4 |
| prairie hammock | 269.5 |
| road | 404.2 |
| successional hydric shrubland/forest | 8,970.7 |
| utility corridor | 221.0 |
| ~ Total Acres | 35,056.7 |


Rotenberger WMA
MANAGEMENT UNITS
0
0.5
1
2
Miles
N
Current Natural Community
~ Acres
canal/ditch
81.5
glades marsh
26,126.7
prairie hammock
217.2
restoration glades marsh
1,675.8
road
382.6
successional hydric shrubland/forest
1,234.7
utility corridor
137.2
~ Total Acres
29,855.7
Current Natural Communities
canal/ditch
glades marsh
prairie hammock
restoration glades marsh
road
successional hydric shrubland/forest
utility corridor

28

**Appendix 2.** ECWMA Locally Important Species List

| Species | Location in Document |
|---|---|
| Big Cypress fox squirrel (*Sciurus niger avicennia*) | Document Occurrence |
| Bobcat (*Lynx rufus*) | Document Occurrence |
| Burrowing owl (*Athene cunicularia*) | Document Occurrence |
| Colonial bats (multiple species) | Species Assessments |
| Crested caracara (*Caracara cheriway*) | Species Assessments |
| Eastern black rail (*Laterallus jamaicensis jamaicensis*) | Species Assessments |
| Eastern diamondback rattlesnake (*Crotalus adamanteus*) | Document Occurrence |
| Eastern indigo snake (*Drymarchon couperi*) | Document Occurrence |
| Eastern spotted skunk (*Spilogale putorius*) | Document Occurrence |
| Everglades mink (*Neovison vison evergladensis*) | Document Occurrence |
| Florida black bear (*Ursus americanus floridanus*) | Document Occurrence |
| Florida box turtle (*Terrapene carolina bauri*) | Document Occurrence |
| Florida panther (*Puma concolor coryi*) | Document Occurrence |
| Florida sandhill crane (*Grus canadensis pratensis*) | Document Occurrence |
| Least bittern (*Ixobrychus exilis*) | Document Occurrence |
| Limpkin (*Aramus guarauna*) | Document Occurrence |
| Round-tailed muskrat (*Neofiber alleni*) | Document Occurrence |
| Short-tailed hawk (*Buteo brachyurus*) | Document Occurrence |
| Snail kite (*Rostrhamus sociabilis*) | Species Assessments |
| Southern bald eagle (*Haliaeetus leucocephalus*) | Species Assessments |
| Striped skunk (*Mephitis mephitis*) | Document Occurrence |
| Swallow-tailed kite (*Elanoides forficatus*) | Document Occurrence |
| Wading birds (multiple species) | Species Assessments |
| White-crowned pigeon (*Patagioenas leucocephala*) | Document Occurrence |
| White-tailed Deer (*Odocoileus virginianus*) | Species Assessments |

## 11.14 Recreation Master Plan/Recreation Assessment

# Recreation Master Plan
for the
# Everglades Complex of Wildlife Management Areas



Everglades and Francis S. Taylor · Holey Land · Rotenberger

## Florida Fish and Wildlife Conservation Commission

Office of Public Access and
Wildlife Viewing Services

**2015**

**Everglades Complex of Wildlife Management Areas**
**Recreation Master Plan**

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# I. Introduction

## *Purpose of Plan/Planning Process*

This Recreation Master Plan (RMP) serves as a guide for providing recreational and educational experiences focused on wildlife viewing and nature study on the Everglades Complex of Wildlife Management Areas (Everglades Complex). The Everglades Complex includes Everglades and Francis S. Taylor Wildlife Management Area (Everglades WMA), Holey Land Wildlife Management Area (Holey Land WMA), and Rotenberger Wildlife Management Area (Rotenberger WMA) (Figure 1). The RMP contains specific recommendations for recreational opportunity development, additional educational and informational facilities, and improved public access. It also provides guidelines for monitoring recreational use areas and facilities to ensure resource protection and meaningful visitor experiences. The RMP was developed by the Florida Fish and Wildlife Conservation Commission (FWC) Office of Public Access and Wildlife Viewing Services (PAWV) in collaboration with Everglades Complex field staff with input from other FWC divisions and input from recreational stakeholders.

## *Location*

The Everglades Complex is approximately 736,881 acres and is located west of Fort Lauderdale and Miami, distributed over roughly 50 linear miles of southern Palm Beach, western Broward, and northwestern Miami-Dade counties. Everglades WMA makes up the central core of the Everglades Complex including 671,831 acres of sawgrass marsh, freshwater slough, wet prairie, and upland tree island habitat. Interstate 75 (I-75) bisects the Everglades WMA and provides accessibility to recreational areas. The southern boundary of the area is formed by Tamiami Trail/US 41. Rotenberger (29,700 acres) and Holey Land (35,350) WMAs are located northwest of Everglades WMA.

The Everglades Complex is a major part of the overall Everglades ecosystem, covering the northeastern third of the existing Everglades area with Big Cypress National Preserve to the west and Everglades National Park to the south. The Everglades Complex also links Loxahatchee National Wildlife Refuge and Everglades National Park.

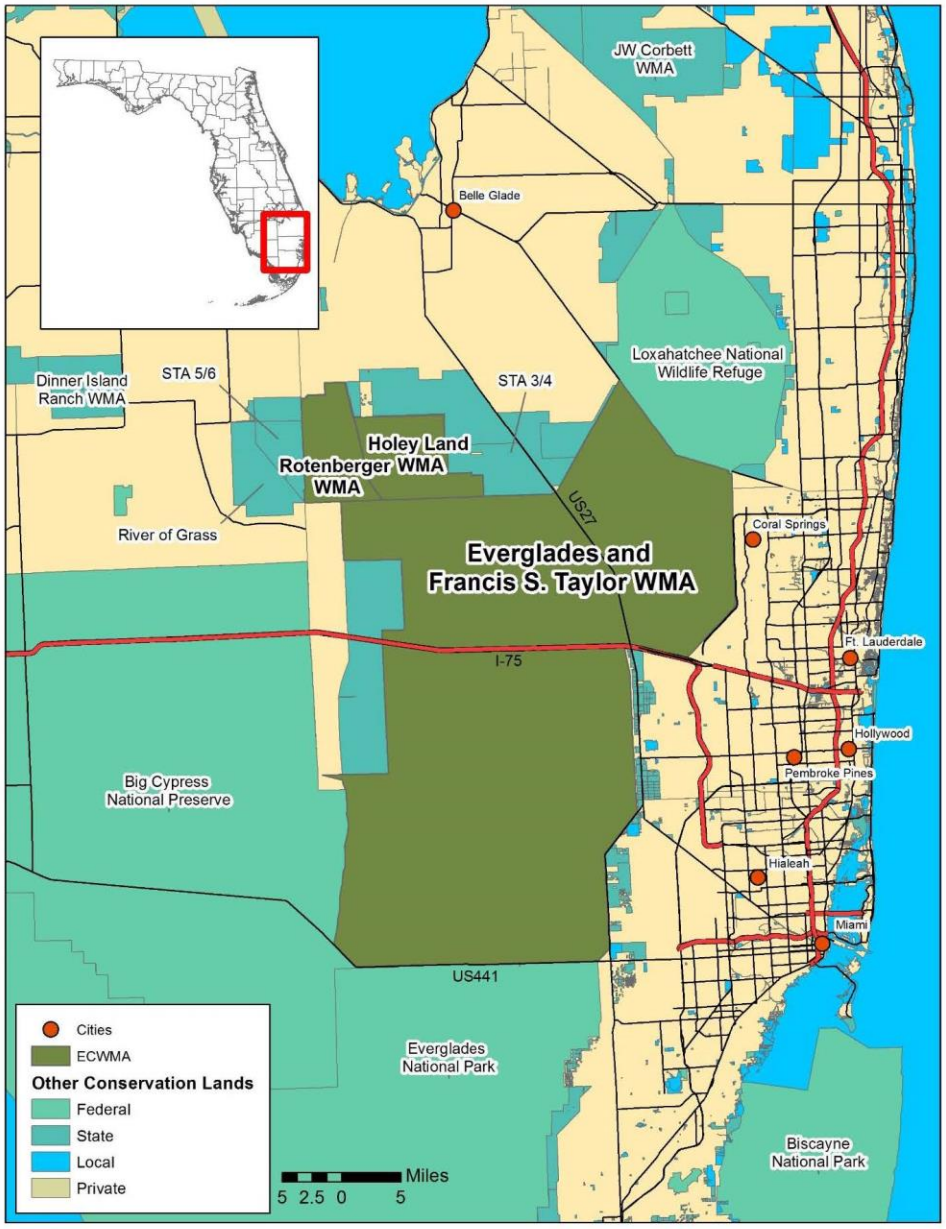



**Figure 1: Everglades Complex Location**

## II. Resource Inventory

### *Topography and Hydrology*

The Everglades Complex is part of the Kissimmee-Okeechobee-Everglades basin and gradually decreases in elevation from north to south, approximately 0.2 feet per mile. Scattered tree islands, ranging in size from less than an acre to 300-plus acres, vary in elevation from a few inches to several feet above the surrounding landscape.

Human activity has drastically impacted the hydrology of the Everglades region. A large system of canals and levees is used to manage water levels and is generally controlled by the U.S. Army Corps of Engineers (COE). Canals and levees also form means of recreation and access to the Everglades Complex. In addition to the creation of levees and canals, the movement of water was also impacted by the construction of I-75 and Tamiami Trail (US 41). The FWC provides agencies such as the COE and the South Water Management District (SFWMD) with ecological and technical recommendations to protect tree islands and wildlife from excessive floods and droughts.

### *Natural Communities*

(Figure 2)

The majority of the Everglades Complex is a grass-dominated wetland interspersed with tree islands (hammocks) and willow strands. The Florida Natural Areas Inventory (FNAI) has identified six natural and anthropogenic community types on the Everglades Complex. The documented communities include swale, ruderal, prairie hammock, strand swamp, slough, and hydric hammock. Swale (the FNAI classification for Everglades marsh) covers all but 5% of the Everglades Complex.

| FNAI Natural Community | GIS Acres | Percent of Area |
|---|---|---|
| Swale | 700,106.4 | 95.2% |
| Ruderal | 18,441.2 | 2.51% |
| Prairie hammock | 11,984.8 | 1.63% |
| Strand swamp | 2,817.4 | 0.38% |
| Slough | 1,715.1 | 0.23% |
| Hydric hammock | 317.9 | 0.04% |

### *Sensitive Areas*

The Everglades ecosystem is sensitive to disturbance from recreational and other activities. Tree islands are especially critical to sustaining the biodiversity of the Everglades Complex and should be protected from soil and vegetation disturbance. In addition, all of the remaining natural communities can be considered sensitive as ground and vegetation disturbance can further alter hydrology and displace native vegetation, impacting fish and wildlife and their habitats and providing infestation opportunities for invasive exotic plants.

### *Wildlife and Plant Species*

Wildlife viewing can be good at almost any spot on Everglades Complex. The wide-open vistas and of the swales provide easy viewing for many species. Almost 200 bird species are documented or expected to occur on the area and half of the "top 40 most sought-after birds" compiled by the PAWV Wildlife Viewing Section are found on the Everglades Complex including bald eagle, black rail, black-bellied whistling duck, burrowing owl, fulvous whistling duck, gray kingbird, hairy woodpecker, least tern, limpkin, mottled duck, painted bunting, purple gallinule, roseate spoonbill, sandhill crane, short-tailed hawk, crested caracara, smooth-billed ani, snail kite, swallow-tailed kite, white-tailed kite and wood stork. Everglades WMA hosts one of the top ten wading bird colonies in the nation, in addition to several other active wading bird colonies. Roseate spoonbills and wood storks typically nest within these colonies, alongside other wading birds such as great egrets, tricolored herons and white ibis. Migratory birds such as blue-winged teal, American white pelican, American bittern, hummingbirds, and a variety of warblers provide seasonal variety.

More than 100 species of butterflies have been identified in the Everglades region and many may occur on the Everglades Complex including Schaus' swallowtail, Florida white, atala, Miami blue, malachite, Florida duskywing, Meske's skipper, Baracoa skipper, and Cofaqui giant-skipper.

Other species of particular interest to visitors include the Florida black bear, Florida panther, bobcat, river otter, white-tailed deer, American alligator, and various snakes. Flowering plants include passionflower, morning glory, skyflower, blue mistflower, spider lily, climbing aster, and yellow-eyed grass with peak blooms in summer and winter. There are also several imperiled plant species found on Everglades Complex including Florida royal palm, meadow jointvetch, hoop vine, satinleaf, and several airplants.

### *Cultural Resources*

The Florida Master Site File contains 142 archaeological and historic sites recorded within the boundaries of the Everglades Complex. Archaeological sites include lithic scatter sites, prehistoric campsites and habitation, and middens ranging from prehistoric to Seminole and 20$^{th}$ century American.

### *Scenic Resources*

The primary scenic feature of the Everglades Complex is the open expanse of sawgrass swales which are easily viewed from I-75 and US 41. The FWC has constructed a viewing tower providing an elevated view over the expanse of Everglades WMA, located at mile marker 35 on I-75. This vantage provides a good view of the juxtaposition of tree islands to the grassy swale.

### *Resource Management*

The FWC's resource management goal for the Everglades Complex is to restore and maintain natural communities in a condition that sustains ecological processes and conserves biological diversity, especially fish and wildlife resources. To accomplish this objective, the FWC is

restoring and improving wildlife habitat, applying prescribed fire, managing imperiled species, and eliminating or controlling nonnative, invasive plants such as Brazilian pepper, Old World climbing fern, melaleuca, and Australian pine.

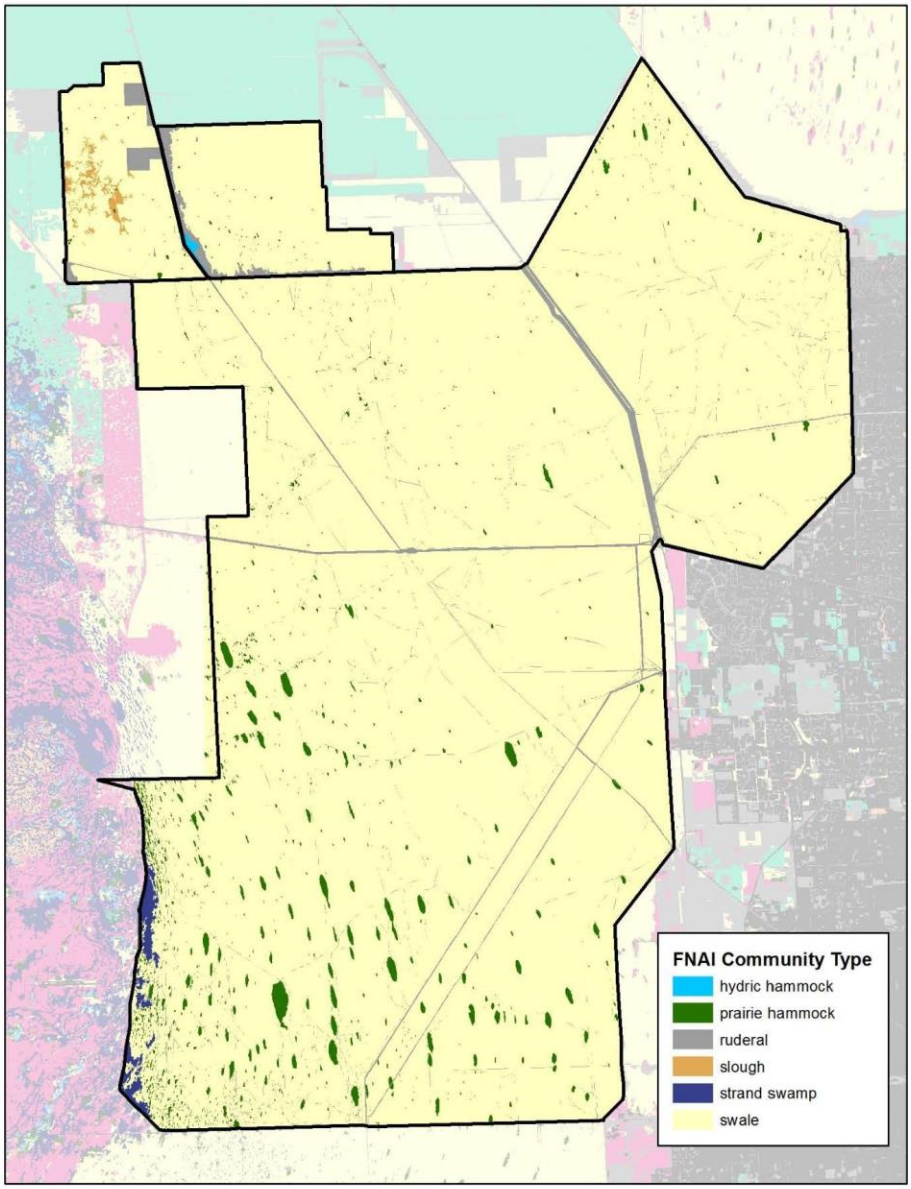



**Figure 2: Everglades Complex Natural Communities**

## III. Recreation Planning Context

Demographic characteristics provide important insight to the recreational interests, motivations, and needs of the surrounding population (demographic data is from the Florida Office of Economic and Demographic Research, 2015 and the 2010 Unites States Census). The 2010 population estimate for Palm Beach County was 1,320,134 people with a projected growth to 1,465,309 (11% increase) in 2020 and 1,733,331 (31.3% increase) by 2040. In most respects, the population demographics of Palm Beach County fall closely in line with statewide proportions, with a higher percentage of Hispanic residents.

| | Palm Beach County | | Florida | | |
|---|---|---|---|---|---|
| **Race/Ethnicity** | **#** | **%** | **#** | **%** | **Difference** |
| Hispanic or Latino | 250,823 | 19.00% | 4,223,806 | 22.5% | -3.50% |
| Non-Hispanic or Latino | 1,069,311 | 81.00% | 14,577,504 | 77.5% | 3.50% |
| White | 970,121 | 73.49% | 14,109,162 | 75.0% | -1.51% |
| African American | 228,690 | 17.32% | 2,999,862 | 16.0% | 1.32% |
| Asian | 31,100 | 2.36% | 454,821 | 2.4% | -0.04% |
| American Indian/Alaskan Native | 6043 | 0.46% | 71,458 | 0.4% | 0.06% |
| Native Hawaiian/Pacific Islander | 770 | 0.06% | 12,286 | 0.1% | -0.04% |
| Other | 53,138 | 4.03% | 681,144 | 3.6% | 0.43% |
| 2 or more | 30,272 | 2.29% | 472,577 | 2.5% | -0.21% |

The population age distribution is slightly older than the state as a whole with a larger percentage of people over 65. All other age groups are close to the statewide percentages.

| | Palm Beach County | | Florida | | |
|---|---|---|---|---|---|
| **Age/Gender** | **#** | **%** | **#** | **%** | **Difference** |
| Male | 638,888 | 48.40% | 9,189,355 | 48.9% | -0.50% |
| Female | 681,246 | 51.60% | 9,611,955 | 51.1% | 0.50% |
| <18 | 268,884 | 20.37% | 4,002,091 | 21.3% | -0.93% |
| 18+ | 1,051,250 | 79.63% | 14,799,219 | 78.7% | 0.93% |
| 20-24 | 74,105 | 5.61% | 1,228,758 | 6.5% | -0.89% |
| 25-34 | 146,694 | 11.11% | 2,289,545 | 12.2% | -1.09% |
| 35-49 | 261,308 | 19.79% | 3,832,456 | 20.4% | -0.61% |
| 50-64 | 252,686 | 19.14% | 3,677,959 | 19.6% | -0.46% |
| 65+ | 285,155 | 21.60% | 3,259,602 | 17.3% | 4.30% |

The 2010 population estimate for Broward County was 1,748,066 people with a projected growth to 1,850,809 (5.9% increase) in 2020 and 2,033,471 (16.3% increase) by 2040. The population demographics of Broward County show a significantly larger African American

population (+10.74 percentage points) and a significantly lower white population than the state as a whole (-11.95 percentage points). Other demographic segments are close to statewide percentages.

| | Broward County | | Florida | | |
|---|---|---|---|---|---|
| **Race/Ethnicity** | **#** | **%** | **#** | **%** | **Difference** |
| Hispanic or Latino | 438,247 | 25.07% | 4,223,806 | 22.50% | 2.57% |
| Non-Hispanic or Latino | 1,309,819 | 74.93% | 14,577,504 | 77.50% | -2.57% |
| White | 1,102,231 | 63.05% | 14,109,162 | 75.00% | -11.95% |
| African American | 467,519 | 26.74% | 2,999,862 | 16.00% | 10.74% |
| Asian | 56,795 | 3.25% | 454,821 | 2.40% | 0.85% |
| American Indian/Alaskan Native | 5065 | 0.29% | 71,458 | 0.40% | -0.11% |
| Native Hawaiian/Pacific Islander | 911 | 0.05% | 12,286 | 0.10% | -0.05% |
| Other | 64,694 | 3.70% | 681,144 | 3.60% | 0.10% |
| 2 or more | 50,851 | 2.91% | 472,577 | 2.50% | 0.41% |

The population age distribution is very close to the statewide distribution with a slightly lower percentage of people over 65 and slightly higher percentage of people 35-49.

| | Broward County | | Florida | | |
|---|---|---|---|---|---|
| **Age/Gender** | **#** | **%** | **#** | **%** | **Difference** |
| Male | 846,571 | 48.43% | 9,189,355 | 48.90% | -0.47% |
| Female | 901,495 | 51.57% | 9,611,955 | 51.10% | 0.47% |
| <18 | 391,349 | 22.39% | 4,002,091 | 21.30% | 1.09% |
| 18+ | 1,356,717 | 77.61% | 14,799,219 | 78.70% | -1.09% |
| 20-24 | 104,783 | 5.99% | 1,228,758 | 6.50% | -0.51% |
| 25-34 | 224,479 | 12.84% | 2,289,545 | 12.20% | 0.64% |
| 35-49 | 395,162 | 22.61% | 3,832,456 | 20.40% | 2.21% |
| 50-64 | 340,484 | 19.48% | 3,677,959 | 19.60% | -0.12% |
| 65+ | 249,424 | 14.27% | 3,259,602 | 17.30% | -3.03% |

The 2010 population estimate for Miami-Dade County was 2,496,435 people with a projected growth to 2,761,156 (11% increase) in 2020 and 3,204,915 (28.4% increase) by 2040. Miami-Dade County has a markedly higher percentage of Hispanic residents: 65% versus 23%, a difference of 43 percentage points. Other demographic segments are close to statewide percentages with a slightly higher percentage of African Americans.

| | Miami-Dade County | | Florida | | |
|---|---|---|---|---|---|
| **Race/Ethnicity** | **#** | **%** | **#** | **%** | **Difference** |
| Hispanic or Latino | 1,623,859 | 65.05% | 4,223,806 | 22.50% | 42.55% |
| Non-Hispanic or Latino | 872,576 | 34.95% | 14,577,504 | 77.50% | -42.55% |
| White | 1,841,887 | 73.78% | 14,109,162 | 75.00% | -1.22% |
| African American | 472,976 | 18.95% | 2,999,862 | 16.00% | 2.95% |
| Asian | 37,669 | 1.51% | 454,821 | 2.40% | -0.89% |
| American Indian/Alaskan Native | 5000 | 0.20% | 71,458 | 0.40% | -0.20% |
| Native Hawaiian/Pacific Islander | 675 | 0.03% | 12,286 | 0.10% | -0.07% |
| Other | 79,351 | 3.18% | 681,144 | 3.60% | -0.42% |
| 2 or more | 58,877 | 2.36% | 472,577 | 2.50% | -0.14% |

The population age distribution is very close to the statewide distribution with a slightly lower percentage of people over 50 and slightly higher percentage of people 20-49.

| | Miami-Dade County | | Florida | | |
|---|---|---|---|---|---|
| **Age/Gender** | **#** | **%** | **#** | **%** | **Difference** |
| Male | 1,208,364 | 48.40% | 9,189,355 | 48.90% | -0.50% |
| Female | 1,288,071 | 51.60% | 9,611,955 | 51.10% | 0.50% |
| <18 | 545,728 | 21.86% | 4,002,091 | 21.30% | 0.56% |
| 18+ | 1,950,707 | 78.14% | 14,799,219 | 78.70% | -0.56% |
| 20-24 | 176,823 | 7.08% | 1,228,758 | 6.50% | 0.58% |
| 25-34 | 340,467 | 13.64% | 2,289,545 | 12.20% | 1.44% |
| 35-49 | 570,650 | 22.86% | 3,832,456 | 20.40% | 2.46% |
| 50-64 | 440,237 | 17.63% | 3,677,959 | 19.60% | -1.97% |
| 65+ | 352,013 | 14.10% | 3,259,602 | 17.30% | -3.20% |

These demographic data will inform the design of public use opportunities, supporting infrastructure and interpretive materials in order to accommodate the full spectrum of potential visitors to the Everglades Complex.

As the regional population increases, the public use pressures on the Everglades Complex will likely increase. Recreational user groups can be expected to urge connections to lands outside the Everglades Complex. The Everglades Complex is within 15 miles of several other public recreation areas that offer a variety of recreation opportunities:

| Area | Hiking | Biking | Camping | Paddling | Fishing | Horseback Riding | Hunting | Wildlife Viewing |
|---|---|---|---|---|---|---|---|---|
| Arthur R. Marshall Loxahatchee NWR | ✓ | ✓ | × | ✓ | ✓ | × | ✓ | ✓ |
| Big Cypress National Preserve | ✓ | ✓ | ✓ | ✓ | ✓ | × | ✓ | ✓ |
| Dinner Island Ranch WMA | ✓ | ✓ | ✓ | × | ✓ | ✓ | ✓ | ✓ |
| Everglades Holiday Park (Broward County) | × | × | ✓ | ✓ | ✓ | × | × | ✓ |
| Everglades National Park | ✓ | ✓ | ✓ | ✓ | ✓ | × | × | ✓ |
| Fakahatchee Strand Preserve State Park | ✓ | ✓ | × | ✓ | ✓ | × | × | ✓ |
| Okaloacoochee Slough State Forest | ✓ | ✓ | ✓ | × | ✓ | ✓ | ✓ | ✓ |
| Okaloacoochee Slough WMA | ✓ | ✓ | ✓ | × | ✓ | ✓ | ✓ | ✓ |
| SFWMD Stormwater Treatment Area 3/4 | ✓ | ✓ | × | × | × | × | ✓ | ✓ |
| SFWMD Stormwater Treatment Area 5/6 | ✓ | × | × | × | × | × | ✓ | ✓ |

✓=Activity available
×=Activity not available

The 2013 Florida Statewide Comprehensive Outdoor Recreation Plan (SCORP) collects data on participation levels in various outdoor recreation activities for different regions of Florida. The results for the Southeast SCORP Region are summarized below:

| Activity | Resident Participation (%) | Tourist Participation (%) |
|---|---|---|
| Paddling | 26 | 10 |
| Picnicking | 41 | 37 |
| Hiking | 13 | 22 |
| Unpaved Bicycle Trails | 17 | 4 |
| Wildlife Viewing | 45 | 47 |
| Nature Study | 19 | 8 |
| Equestrian Activities | 4 | 6 |
| Geocaching | 3 | 3 |

Hiking participation is much lower in the Southeast SCORP Region versus the statewide percentage (13% vs. 21%) and the Southeast SCORP Region is at approximately 50% of the statewide average level of service (miles of trail/1000 participants) for hiking and nature study. Hiking/walking trails are one of the top five desired facilities in Florida among residents. Picnicking level of service (tables/1000 participants) is approximately 33% lower in the Southeast SCORP Region, unpaved bike trail level of service (miles of trail/1000 participants) is at 20% of the statewide level, and equestrian activities (miles of trail/1000 participants) is less than half the statewide level of service. Levels of service for the other listed activities are very close to the statewide mean.

With the expected population growth for this region, and statewide, additional facilities will be needed to meet current and projected levels of service. The Everglades Complex already offers a large number of picnic table facilities along I-75 and US 27. The unique natural communities of the Everglades Complex restrict opportunities for trail development. The FWC will attempt to continue to help meet these under-served needs in a variety of alternative ways including interpretive materials and digital resources while protecting the ecology of the region.

The Palm Beach Metropolitan Planning Organization (MPO) Long-Range Transportation Plan (LRTP) does not list any improvements to roads adjacent to the Everglades Complex. The Palm Beach County Comprehensive Plan classifies Everglades WMA as Conservation Land in the Current and Future Land Use components. The Broward MPO LRTP does not list any improvements to roads adjacent to Everglades Complex. The Broward County Comprehensive Plan classifies Everglades WMA as Conservation Land in the Current and Future Land Use components. The Miami-Dade MPO LRTP proposes addition of two lanes, reconstruction and improvement of bicycle and pedestrian facilities on SR997 along the eastern boundary of Everglades WMA as a Priority I project. The Miami-Dade County Comprehensive Plan classifies Everglades WMA as Conservation Land in the Current and Future Land Use components. The River of Grass Greenway has also been proposed along US 41, a bicycle and pedestrian corridor that roughly parallels US 41 from Collier County to Miami-Dade County. The Florida Department

of Environmental Protection Office of Greenways and Trails lists the L-4, L-5, and L-6 levees (between Loxahatchee NWR and the Palm Beach-Hendry County line), the L-35, L-35A, L-35B and L-36 levees, and US 27 as part of various trail opportunity corridors. The FWC will continue to cooperate with the SFWMD on participation in these projects as SFWMD is responsible for management of the levees.

## IV. Interpretation

In this plan, emphasis is placed on integrating recreation and interpretive planning. Using this approach, the type of recreational experience offered and the location of recreation amenities provided is strongly influenced by the interpretive goals for the area. Recreation opportunities thus become a means to an end - reaching visitors with important themes and concepts about an area's natural resources, plant communities, fish and wildlife, and habitat management.

### *Visitor Experience Goals*

The Everglades Complex has the potential to provide visitors with opportunities to see and learn about a variety of natural communities while engaging in recreational activities focused on fish and wildlife resources. Visitor experience goals are those concepts and experiences we want visitors to take away from their time at the Everglades Complex. These goals guide both interpretive and recreation planning.

The FWC will provide opportunities for visitors to:

1. Become oriented to and participate in a range of recreational activities on Everglades Complex and adjoining natural areas while:

- Becoming acquainted with fish and wildlife and natural plant communities
- Understanding Everglades Complex's natural, cultural and commercial history within the context of the state's prehistory and modern history
- Appreciating Everglades Complex as an oasis providing a retreat from the pressures of urban life and an opportunity to connect with the natural world

2. Learn information and stories associated with major interpretive themes and other related information, through interpretive materials at welcome kiosks, trails, and wildlife viewing sites.

3. Have an enjoyable recreational experience without impairing the natural and cultural values of the site. In terms of wildlife viewing, FWC's goal will be to facilitate positive, memorable experiences that keep wildlife disturbances to a minimum.

4. Understand the management goals and activities of the FWC on Everglades Complex.

## *Interpretive Themes*

Interpretive concepts are categorized into themes and subthemes. All interpretive materials revolve around one or two primary themes, which allow visitors to understand and remember important messages. Primary themes also help set visitor experience goals and priorities and are considered in the design of amenities offered to nature-based recreationists. Subthemes expand upon and support the primary themes. These guide the development of all interpretive products, which may include sign panels, printed materials, electronic media and educational programming. This detailed media prescription is included as Appendix 2.

*Central Theme: Well-managed, diverse habitats within the Everglades Complex support healthy wildlife populations, collect and store water that benefits south Florida communities, and offer a wide range of recreational opportunities.*

*Subtheme 1. The Everglades Complex is a key piece of the vast Everglades ecosystem, which stretches from the Kissimmee chain of lakes south of Orlando, to the southern tip of the Florida peninsula.*

A. The Everglades Complex contributes to south Florida's water supply and helps protect the quality and quantity of water within the Everglades ecosystem, which includes Everglades National Park and Florida Bay.
B. Sawgrass marsh, freshwater slough, wet prairie and tree islands in the Everglades Complex provide habitat for native plant and animal communities and recreational opportunities for the public.
C. The Everglades Complex supports species such as alligator, Florida panther, Florida black bear, Everglades mink, white-tailed deer and birds such as snail kite, limpkin, roseate spoonbill, wood stork, great and little blue heron, snowy egret, tricolored heron and a variety of migratory birds.
D. The Everglades Complex provides a range of recreational opportunities including fishing, hunting, camping, boating, hiking, bicycling and wildlife viewing, and is part of the Great Florida Birding and Wildlife Trail.
E. Because the Everglades Complex is part of an extensive network of conservation lands within the Everglades ecosystem, the FWC coordinates management with other governmental, tribal and regulatory agencies.

*Subtheme 2: FWC places a high value on habitat and wildlife management and employs a variety of management and restoration tools to achieve specific goals.*

A. Each habitat within the Everglades Complex receives a unique management prescription with science-based goals and objectives.
B. Prescribed fire is the most economical and effective tool for protecting the tree islands and surrounding marshes from catastrophic wildfires and for maintaining the function and wildlife habitat value of the sawgrass marshes and wet prairies.

C. Restoration of the tree islands is essential to the health of the Everglades Complex and involves removal of nonnative species and planting and preservation of native species.
D. Biologists conduct wildlife surveys and monitor endangered species, water levels and vegetation to help them fine-tune their management prescriptions.
E. Construction of canals, levees, water control structures and major roads disrupted natural hydroperiods and water flow, resulting in changes to plant communities. The FWC provides ecological recommendations to the COE and SFWMD on water management goals that maintain a mosaic of habitats that meet wildlife needs while providing water supply benefits to south Florida.
F. Management of a wide variety of nonnative, invasive plants and animals is an on-going, time-consuming process for biologists and is critical to protecting the Everglades ecosystem.
G. Restored and well-managed habitats benefit a wide range of species and improve the quality of recreation for all users.
H. Restored habitat is better able to support wildlife populations and may increase species' resilience to environmental changes and stressors.
I. Visitors discover that specific actions they take, such as not disturbing wildlife or releasing plants and animals into the wild, can help protect the Everglades ecosystem.

*Subtheme 3: The WMA preserves evidence of the history and culture of the region, which includes subsistence hunting and fishing by native peoples, the Gladesmen way of life, crop production, rangeland cattle grazing, and hydrological alterations associated with floodwater retention and water storage.*

A. Indian cultures were well established in Florida when European explorers arrived in the 1500s. People lived by hunting, fishing and gathering wild foods, often traveling from outlying villages to camps in the Everglades.
B. By the mid-1700s, most of these original Indian cultures were gone, but after the end of the Second Seminole War in 1842, Seminole and Miccosukee tribes escaped to south Florida and established small settlements on tree islands. Today, the Miccosukee Tribe has perpetual lease rights over 189,000 acres within the Everglades Complex and continues to use the land for camps, religious rituals and subsistence hunting and fishing.
C. The Gladesmen culture first arose around the mid-1800s and was represented by settlers who lived in close association with the Everglades and other south Florida wetlands and relied on its fish, wildlife and plants for their survival. Contemporary Gladesmen continue this appreciation of the Everglades habitats and wildlife.
D. The widespread use of agriculture and associated development in the 19$^{th}$ and 20$^{th}$ centuries resulted in significant alteration of the region's hydrology via levees, canals and water control structures.
E. The legacy of invasive species, altered natural hydroperiods and compromised water quality, will continue to challenge biologists as they work to restore and maintain these vital conservation lands and cope with the impacts of projected population growth.

## V. Recreation Assessment

### *Existing Recreational Use and Facilities*

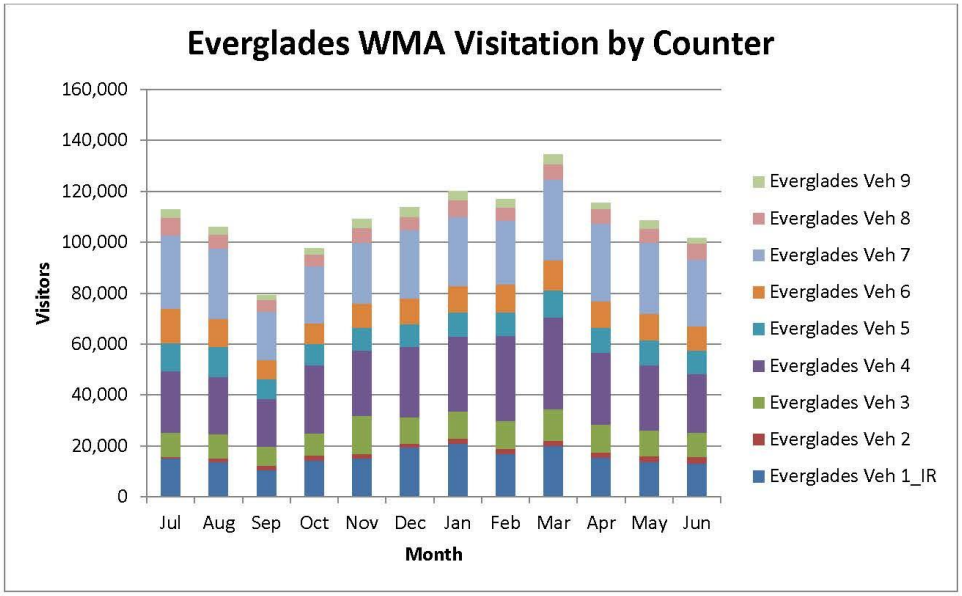
The purpose of this section is to identify and describe the existing recreational uses and facilities on Everglades Complex and note their status and condition (Figure 3). This informs recommendations for achieving visitor experience goals and meeting future recreation demands and needs.

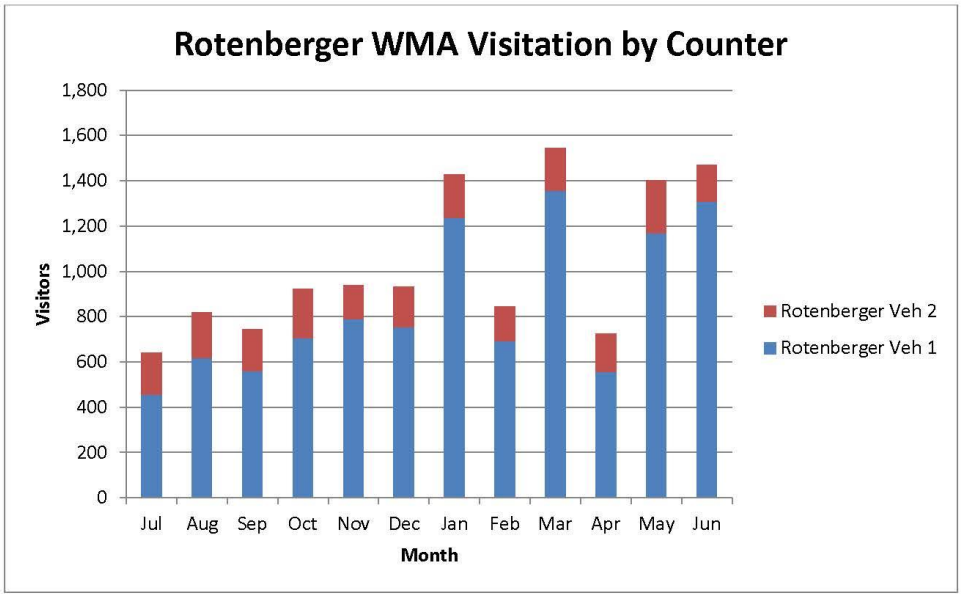
The Everglades Complex offers opportunities for a variety of high quality, wildlife-focused recreation activities. Based on the approved uses and activities as stated in the 2014-2024 Management Plan, the analysis of existing resources and uses, and the interpretive themes developed for the area, the following activities should be continued and enhanced as described in this section. Conditional activities are those that require additional licenses, permits or permission.

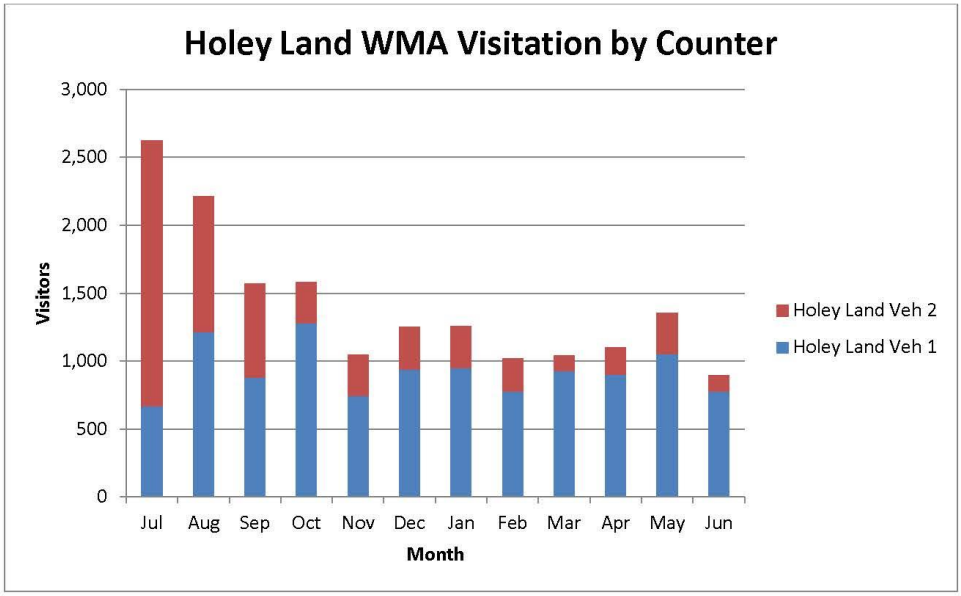
- Astronomy (Conditional)
- Bicycling
- Primitive Camping (Conditional)
- Ecotourism (Conditional)
- Environmental Education
- Fishing (Conditional)
- Paddling
- Geocaching (Conditional)
- Hiking
- Horseback riding (Conditional)
- Hunting (Conditional)
- Wildlife Observation

Visitation

Visitation to Everglades WMA, as recorded by eight separate vehicle counters and one infrared counter installed and monitored by FWC, has averaged 2,806 visitors/day for July 2014 to June 2015. Seasonally, use peaks with cooler temperatures. The majority of recorded visitation at Everglades WMA is associated with the boat ramps on the area and the observation tower at the I-75 rest area. Visitation to Rotenberger WMA, as recorded by two separate vehicle counters installed and monitored by FWC, has averaged 54 visitors/day for July 2014 to June 2015. Seasonally, use peaks during cooler temperatures and hunting seasons. Visitation to Holey Land WMA, as recorded by two separate vehicle counters installed and monitored by FWC, has averaged 42 visitors/day for July 2014 to June 2015. Seasonally, use peaks during hunting seasons.


Everglades WMA Visitation by Counter
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
Visitors
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Month
Everglades Veh 9
Everglades Veh 8
Everglades Veh 7
Everglades Veh 6
Everglades Veh 5
Everglades Veh 4
Everglades Veh 3
Everglades Veh 2
Everglades Veh 1_IR


Rotenberger WMA Visitation by Counter
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
Visitors
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Month
Rotenberger Veh 2
Rotenberger Veh 1




*Visitor Contact Points and Roads/Vehicle Access* - The designated entrances for Everglades WMA are established boat ramps, the L-4 and L-5 levees, and the L-6 levee from US 27 to Sportsman's Crossover. There is a staffed check station on the L-5 levee on the weekends during white-tailed deer hunting seasons that serves the entire Everglades Complex. The FWC has worked with the Florida Department of Transportation (FDOT) to develop four recreational access sites on I-75 with pavilions, picnic tables, boat ramps, and interpretive kiosks, as well as a wildlife exhibit and viewing tower at the FDOT rest area. The FWC also developed two day-use recreational areas on US 27 with pavilions, picnic tables, and boat ramps. All of the boat ramp/use areas on I-75 and US 27 are in good condition. The boat ramp/use areas on US 41 are generally unimproved beyond the ramp and a limerock/grass parking area. The designated entrances for Rotenberger WMA are the L-4 levee, Powerline levee, Miami Canal levee and Manley Ditch levee. The designated entrances for Holey Land WMA are the L-5 levee and the Miami Canal levee.

Vehicles are allowed on the levees mentioned above. Levee roads are well maintained and can be traversed in two wheel drive vehicles.

There are a number of entrance signs identifying the Everglades Complex and an approach sign on US 27.

*Hunting* - Currently, hunting opportunities include archery, muzzleloading gun, general gun, general gun-vehicle, small game, conditional reptile and migratory bird seasons. There are 218

days of hunting each year on the Everglades Complex, excluding migratory birds. Portions of the area are open to other users during certain hunt seasons.

*Boating/Paddling* –There is abundant boating access on the Everglades Complex. There are 21 boat launches on Everglades WMA, three unimproved boat launches on Rotenberger WMA and three unimproved boat launches on Holey Land WMA. There are no marked paddling trails. Users should consult area regulations regarding the operation of a vessel outside of the canals (i.e. the use of flags for visibility) and ensure they are familiar with the area and/or use a global positioning system unit for navigational safety.

*Fishing and Frogging* - Fishing and frogging are allowed year round. There are a variety of freshwater fish in the canals and throughout the WMAs.

*Trail Use and Infrastructure* – Hiking, bicycling, and horseback riding are allowed throughout Everglades Complex. However, there are no designated trails and the wet nature of the area generally restricts hiking to the more than 200 miles of levees. Most hikers and bicyclists use the L-67 and L-35 levees. The levees are generally kept in good condition and are appropriate for all-weather foot and bicycle use. Equestrian users should make note of the limerock and/or gravel surfaces of the levees.

*Wildlife Viewing and Nature Study* - Wildlife viewing opportunities are available throughout Everglades Complex, with some of the best, most accessible opportunities located along at the I-75 rest stops, I-75 tower, US 41, and the L-5 levee.

*Picnicking* - There are currently five rest areas on I-75 and two day-use recreational areas on US 27 with pavilions and picnic tables.

*Camping* – Camping is permitted only on the L-5 and Miami Canal levees (Holey Land WMA), and on the Manley Ditch, Powerline, and Miami Canal levees (Rotenberger WMA). Camping is allowed anywhere that is not posted as closed to camping in Everglades WMA. Camps may be set up seven days before archery season, and must be removed seven days after the close of general gun-vehicle season. At other times, camping is permitted only on Fridays, Saturdays, and Sundays.

*Geocaching* - Geocaching is allowed on the area. Approval of new geocaches and disposition of existing geocaches is at the discretion of the site manager and coordinated by FWC's PAWV.

*Special Events/Tours* – There are no regular, non-commercial tours or special events at Everglades Complex. Everglades WMA is the site of several fishing tournaments and airboat tours from Everglades Holiday Park are on the WMA. Everglades Complex is a participating area for the Python Challenge sponsored by FWC which is a competition to remove pythons from natural areas and highlight the issue on nonnative species in south Florida.

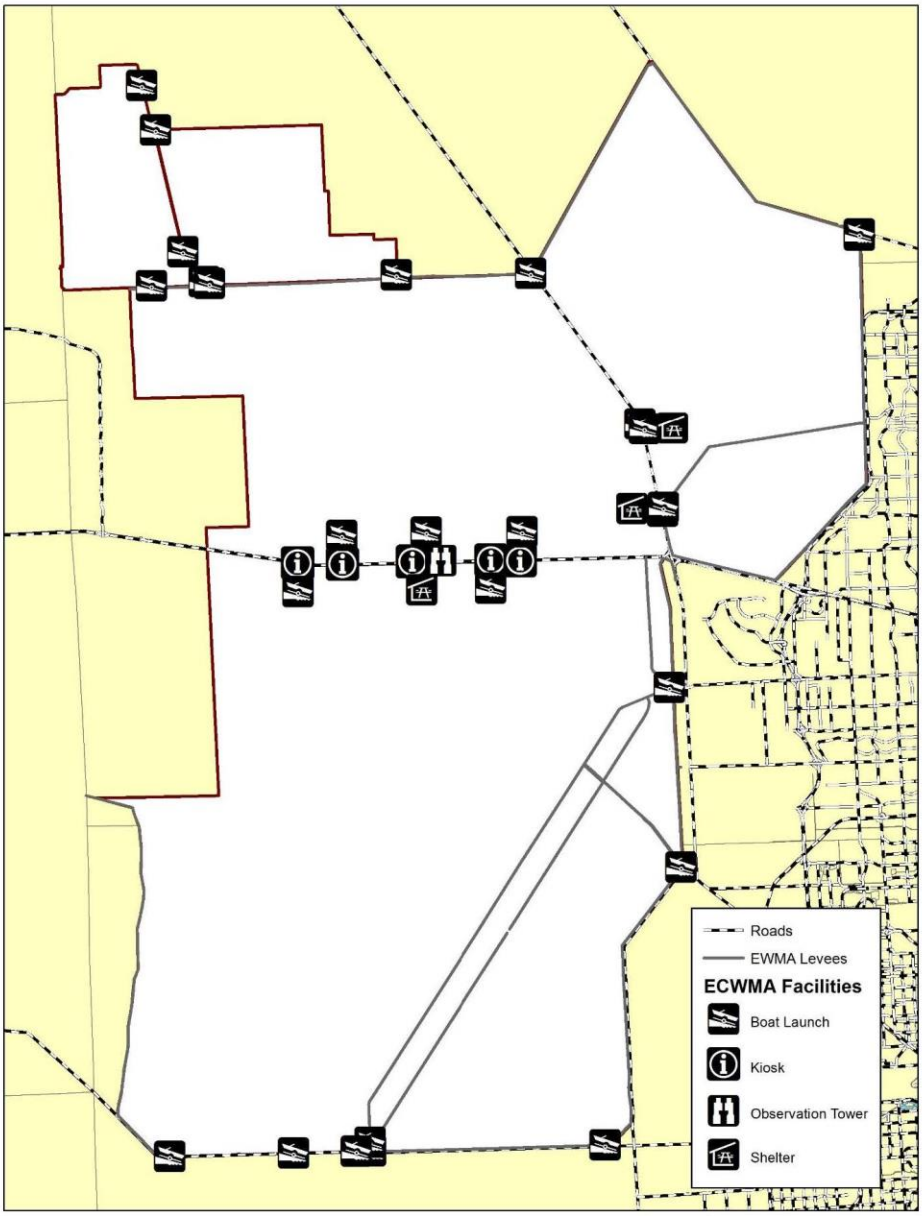



**Figure 3: Everglades Complex Existing Facilities**

## *Carrying Capacity*

In order to minimize disturbance of wildlife and other natural resources and to provide an enjoyable experience for visitors, FWC calculates a carrying capacity for its managed areas (Appendix 4). This carrying capacity takes into consideration natural community sensitivity, known locations of sensitive natural communities, known archaeological and historic sites, existing recreation facilities and wildlife disturbance distances with a turnover rate that varies with the activity or facility. This capacity is not a visitation goal but rather is a level at which the natural and recreation resources of the area can sustain use without damage. Current capacity for Everglades Complex is 5,857 people per day (including hunting capacity). If all proposed improvements are made this will increase to 6,109 people per day (including hunting capacity).

## *Everglades Complex of WMA's Recreation Use Potential*

Everglades Complex provides an opportunity for visitors to learn about and see examples of natural communities that once dominated the area south of Lake Okeechobee and are rapidly being converted to other uses in south Florida. The following sections of the plan provide for comprehensive interpretation of these communities, common and listed species of interest to visitors, and FWC's resource management. Recommended recreation enhancements are those that provide a range of enjoyable opportunities to view wildlife without negatively impacting resources. Due to the unique nature of the Everglades Complex, the prevalence of sensitive natural communities and species, and the lack of upland areas, the majority of recreation development and enhancements will be associated with existing use areas such as boat ramps, rest stops, and levees. FWC will utilize a variety of printed and electronic interpretive materials to interpret the ecology, history, and management of the Everglades Complex (Appendix 2).

## *Goals and Objectives*

Careful design and placement of recreational facilities can provide desirable visitor experiences and minimize impacts to the natural and cultural resources of the area. Construction and improvements will not harm wildlife, fragile habitats or historic and cultural sites. All planning and implementation should be done in accordance with guidelines in Appendix 3. A conceptual site plan for proposed recreation facilities is provided in Figure 4.

**Goal A. Orient visitors to the area and its recreation opportunities and interpret WMA resources**

1. Construct new kiosks at rest areas on US27.
2. Update interpretive panels in existing kiosks.
3. Stock regulation summaries and brochures at designated kiosks.
4. Maintain up-to-date information about the area on the FWC website.

**Goal B. Enhance existing facilities and develop new wildlife viewing opportunities**

1. Construct a viewing structure with interpretive information at Rotenberger WMA.

2. Assess feasibility of developing shade structures along levees.

**Goal C. Direct and manage recreational use to minimize negative resource impacts and maximize visitor satisfaction**

1. Collect and evaluate information about visitor use and satisfaction:
    - Number of visitors to the area and patterns of visitation
    - User group conflicts
    - Origin and length of stay
    - Motivations for visiting and preferred experiences
    - What visitors already know about the area and primary interpretive themes.
    - Implement a monitoring strategy to assess resource impacts and institute corrective management actions if indicators begin to approach standards.

**Goal D. Coordinate with local, state, and federal agencies and organizations when planning and implementing nature-based recreation opportunities and enhancements**

1. Cross-promote Everglades Complex with other regional public lands.

**Goal E. Continue to identify partnerships that could provide for environmental educational programs and outreach**

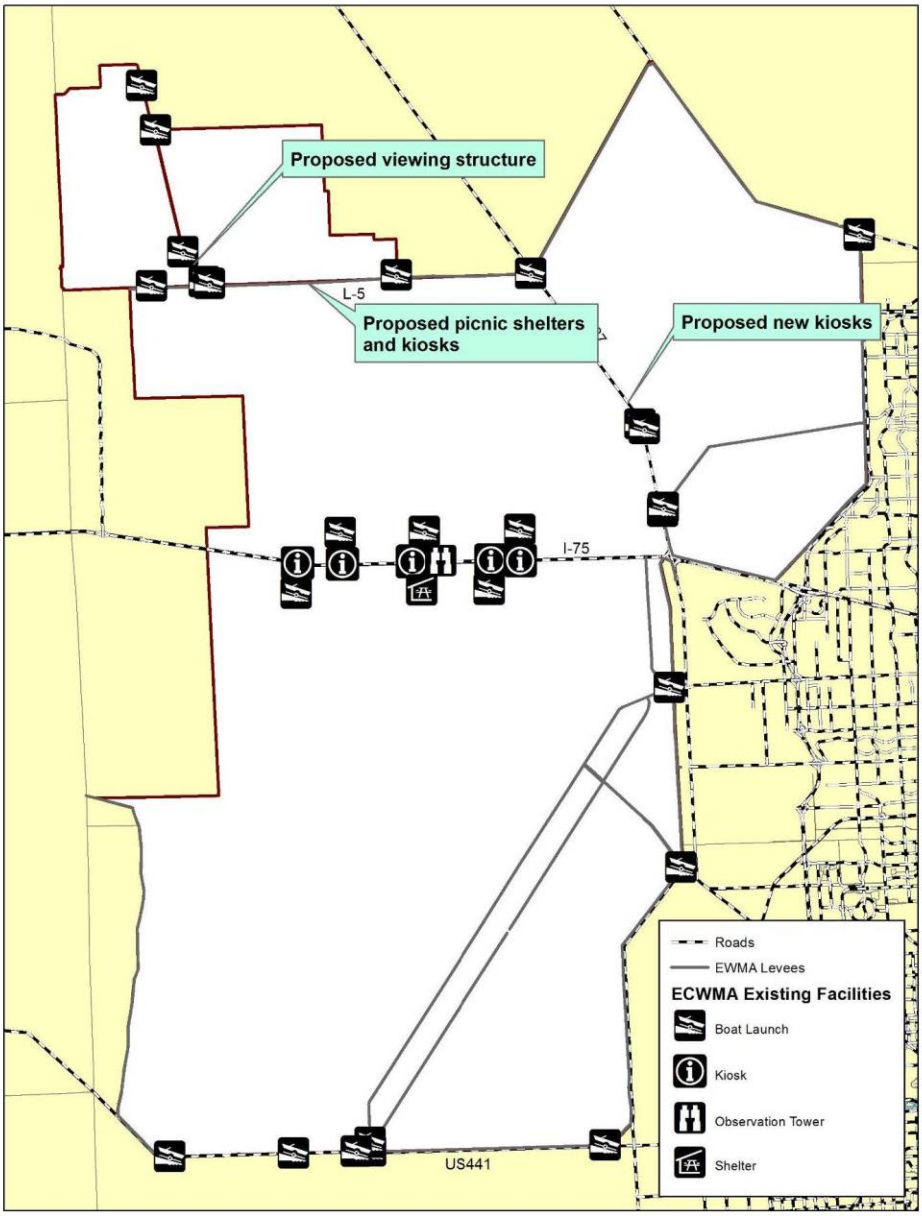



**Figure 4: Everglades Complex Proposed Recreation Facilities**

## *Challenges and Strategies*

There are several challenges facing the effective implementation and management of nature-based recreation opportunities on CWMA. Challenges and proposed strategies to address them are discussed in this section.

1. Challenge:

   Currently there is insufficient upland property within Everglades Complex to expand recreational and operational facilities.

   Strategies:
   - Coordinate with the SFWMD and DOT to determine the feasibility of locating such facilities on their lands.
   - Utilize interpretive materials and multimedia alternatives to interpret the resources of Everglades Complex.

2. Challenge:

   As the population density around Everglades Complex continues to increase, recreational use of the area will increase, potentially resulting in resource damage and wildlife disturbance.

   Strategies:

   - Periodically monitor all public use sites for environmental impacts and implement corrective actions when and where necessary.
   - Recreational use will be directed away from sensitive environments to the greatest degree possible.
   - Environmental protection information will be provided in all interpretive materials.

3. Challenge:

   As recreational use increases, conflicts among user groups may occur.

   Strategies:
   - Provide a range of recreational opportunities in a variety of settings to avoid user conflicts as much as possible.
   - Involve stakeholders and user groups during planning.
   - Ensure that user groups understand how to contact local staff to resolve problems.

- Provide opportunities for different user groups to volunteer together to maintain public access amenities and conduct conservation stewardship activities.
- Display hunting information (dates, times and types) at all entrances to help all users make choices as to when to visit.

4. Challenge:

   Vandalism of signs and facilities is a recurring problem.

   Strategies:
   - Where possible, place signs and facilities where they are in view of visitors, passers-by, and law enforcement.
   - Use vandalism-resistant materials in construction of signs and facilities.
   - Work with FWC and local law enforcement to identify problem areas.

### *Work Plans*

PAWV will work with local staff to prepare annual work plans and budgets to implement the RMP for Everglades Complex. PAWV will be responsible for 1) developing cost estimates for recreation-related facilities; 2) coordinating design and permitting; and 3) obtaining construction bids and the work of contractors during the construction phase. This includes pre-construction meetings, site visits at construction milestones and final reviews. Generally, the area manager and staff monitor construction sites frequently during the construction process to make sure contractor is not doing damage to the surrounding area.

PAWV will design interpretive materials for the areas in consultation with management area staff. Generally, the cost of producing maps and interpretive products and maps comes from the PAWV budget.

### *Monitoring and Management of Recreation Facilities*

PAWV will monitor recreation infrastructure on the WMA biannually including trail and structure photopoints. PAWV will also provide monitoring reports to area staff after each monitoring visit. Any impacts encountered during each monitoring will be brought to the attention of PAWV and WMA staff to determine the best course of action for correction and prevention.

Measurable indicators for monitoring key aspects of the visitor experience and resources at Everglades Complex are described in Appendix 4. Indicators should be monitored for each zone, and when necessary, management actions taken to ensure that visitor use and resource impacts remain within the established standards.

## References

A Management Plan for the Everglades Complex of Wildlife Management Areas 2014 – 2024. Florida Fish and Wildlife Conservation Commission (2014).

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Broward County Metropolitan Planning Organization 2040 Long Range Transportation Plan. Broward County (2015)

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Florida Statewide Comprehensive Outdoor Recreation Plan. Florida Department of Environmental Protection (2013). http://www.dep.state.fl.us/parks/outdoor/scorp.htm

Miami-Dade County Comprehensive Development Master Plan. Miami-Dade County (2013)

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National Park Service. The Visitor Experience and Resource Protection (VERP) Framework: A Handbook for Planners and Managers (1997).

Office of Economic and Demographic Research. http://www.edr.state.fl.us. 2015

Palm Beach County Comprehensive Plan. Palm Beach County (2015)

Palm Beach County Metropolitan Planning Organization 2040 Long Range Transportation Plan. Palm Beach County (2014)

US Census 2010. US Census Bureau (2010)

# Appendices

# Appendix 1: Work Plan for Recreation Enhancements

Based on the prioritization of the goals and objectives listed above, the following list of projects and tasks has been ordered in terms of short and long term completion timeframes.

**Long Term Completion and Ongoing Tasks**

- Assess feasibility of constructing shade structures along levees at selected locations

**Long Term Completion and Ongoing Tasks**

- Wildlife viewing structure with interpretation at Rotenberger WMA
- New kiosks at rest areas on US27
- Updated interpretive panels throughout Everglades Complex
- If feasible, construct shade structures along levees at selected locations

# Appendix 2: Everglades Complex Media Prescription

**A. General**

- Find more permanent solutions to brochure rack problems
- Look at alternatives to the locking bulletin boards

**B. Rotenberger and Holey Land**

1. **Construct** a viewing tower overlooking Rotenberger, located in southeast corner of the WMA. Construct a single-panel kiosk for signs or place them on platform railings.

   **New Interpretation**

   - Tree island restoration (an important management priority on all three WMAs).
   - Wetland and hydrological restoration (Rotenberger has had more restoration than Holey Land, making this a good location to interpret it).

2. **Construct** one or two covered picnic pavilions located along L-5 levee on south side of L-5 canal, with interpretive signage. Construct a single-panel kiosk adjacent to pavilions.

   **New Interpretation**

   - Everglades ecosystem (general information)
   - Restoration of hydrology and tree islands. Can compare to Rotenberger. Natural sheetflow in Holey Land has been disrupted by canals, levees, the conversion of marsh to farmland in surrounding areas; drought and muck fires that destroyed tree island acreage, etc.
   - Wildlife (highlight a few species, such as deer, waterfowl, alligators and wading birds). (Conservation Area 3A North supports the majority of the deer herd in the Everglades WMA because it is drier than more southern portions.)
   - Fishing and monofilament line recycling.
   - Hunting opportunities

**C. Everglades/Francis S. Taylor (Conservation Area 3A North and Area 2A (on east and west sides of U.S. 27, two northernmost areas only)**

1. **Construct** a single-panel kiosk (and possibly a fish cleaning station) close to one of the covered picnic pavilions at both rest areas.

   **New Interpretation**

   - Fish of the Everglades; fishing; monofilament line recycling

- General Everglades ecology

**D. Everglades/Francis S. Taylor, I-75 rest area/boat ramps**

1. **Replace** the three panels in 7 to 8 existing kiosks with updated signage that includes some of the topics covered in the existing signage and some additional topics indicated here.

**Existing Interpretation**

- MM31 N: Fish/Everglades/Wading Birds
- MM32 S: King of the Marsh (alligator)/Everglades/ Wading Birds]
- MM35 NE (older one near overlook and by boat ramp): Snail Kite/Everglades/Wading Birds
- MM35 NW: Wading Birds/Everglades/King of the Marsh (alligator)
- MM35 SW: Wading Birds/Everglades/Fish
- MM35 SE: Fire/Everglades/Wading Birds
- MM38 N: Fire/Everglades/Wading Birds
- MM41 S: Snail Kite/Everglades/Wading Birds

**New topics to work into the interpretation rotation**

- Tree island restoration
- Invasive/exotic species management

**E. Everglades/Francis S. Taylor, I-75 N, MM35, existing platform with three small rail mounted panels.** Sign panels are fiberglass embedded; 30"w x 9"h, mounted in blue metal frames that should be replaced with slightly less obtrusive mounts.

**Existing Interpretation**

- Tree island importance, management and restoration

**F. Everglades/Francis S. Taylor, I-75 N, MM35, existing kiosk in front of platform has three panels produced by Wilderness Graphics**

**Existing Interpretation**

- The Everglades WMA
- The Everglades Trail
- The greater Everglades ecosystem

**New Interpretation (**Need a sign on the back of the kiosk that is in front of the platform to make it more attractive from parking lot.)

- Suggestion "We're Glad You Stopped Here" or "Just Passing Through"

Just as many visitors make this a quick stop to another destination, the Everglades habitats are important for migratory species. Examples of species; resident vs. migrants; unwelcome visitors – invasive exotics.

G. **Everglades/Francis S. Taylor, Conservation Area 3A South, Tamiami Trail boat ramps on north side of Tamiami Trail, west of L-67C and L-67A.**

1. **Construct** a boat dock, possible fish cleaning station, "chickee-style" picnic pavilion and single-panel kiosk for signage at one of the existing boat launches.

**Interpret**

- Past and current use by Miccosukee and Seminole tribes
- Past and current Gladesmen culture
- Invasive plant and animal issues
- Tree islands/General Everglades ecology
- Restoration (hydrologic)
- Snail kites
- Prescribed fire
- Fish

# Appendix 3: Recreation and Wildlife Viewing Facilities Design Guidelines

- **Entrances**
  Should welcome visitors to the area, identify the Commission, describe the range of potential experiences on the area, and describe the wildlife viewing experiences by season, time of day or wildlife event.

- **Viewing structures**
  Structures should include wildlife identification or other interpretive information. The structure should be surrounded by and focused on wildlife and habitat, rather than being the focus itself. For towers, each level should focus visitor attention to a different habitat or feature.

- **Trails**
  Trails should be described at the trailhead with length or time required. If the focus is wildlife viewing, include best seasons. Interpretive panels or brochure stops should be well-spaced and focused by season.

General considerations in developing facilities:

- Locate viewing facilities on previously disturbed properties wherever possible.
- Preserve a sense of solitude and limit impact on natural resources by concentrating recreation uses in small "developed" zones and along existing road/trail corridors.
- Site facilities and design trails to minimize user conflicts.
- Avoid sensitive areas such as wetlands and route trails to avoid fragmenting habitat.
- Consider physical characteristics and the historical and natural character of the location.
- Adapt parking lots, buildings and other physical developments to existing topography.
- Retain on-site surface water run-off generated by development.
- Use porous pavements where surface hardening is required.
- Consider sewage disposal needs.
- Use native plants representative of the area for all landscaping.
- Design and build trails and observation structures to avoid disturbing wildlife and to minimize negative impacts such as erosion.
- Use elevated boardwalks in wet areas and swamps and walkovers to protect other sensitive areas.
- Incorporate wildlife viewing ethics into all interpretive materials.
- Incorporate interpretive themes into all brochures, trail guides and other materials produced to support recreation opportunities.
- Install interpretive signs and panels as appropriate at all recreation facilities.
- Route trails to interpret restoration and wildlife management activities.
- Insure interpretation of highly desired species viewable on the area.

**Universal Access**

Nature-based recreation facilities and programs must be developed and implemented in compliance with the Americans with Disabilities Act. All facilities in developed zones should be universally accessible. Recreation facilities in semi-primitive or primitive zones should be planned to be accessible to the degree possible except where:

- compliance will cause harm to cultural, historic or religious sites or significant natural features or characteristics.
- compliance will substantially alter the nature of the setting or purpose of the facility (or a portion of the facility).
- compliance would require construction methods or materials prohibited by federal, state or local regulations or statutes, or compliance would not be feasible due to terrain or prevailing construction practices.

# Appendix 4: Carrying Capacity Methodology

**FWC Recreation Carrying Capacity**

Carrying capacities for recreational users on FWC lands are developed using a methodology employing existing spatial data and models, recommended guidelines for spatial and temporal carrying capacity, recommended guidelines for minimizing wildlife disturbance by outdoor recreation, and site-specific characteristics. The intent of this methodology is to provide a realistic carrying capacity which is based on the best science and data available with a focus on minimizing wildlife and habitat disturbance and providing the type of recreation our visitors desire and FWC's managed areas can support. This methodology also provides a means of monitoring visitor impacts and allows for flexibility in responding to these impacts and adjusting the carrying capacity as necessary. The carrying capacities generated through this process are not a visitation goal but are a guideline included in the overall area Management Plan and used as a tool to help plan and develop recreation opportunities.

**Sensitivity Analysis**

An initial analysis of site sensitivity to recreation impacts is conducted using:

- Integrated Wildlife Habitat Ranking System model results for the site
- Natural community values based on threat rankings developed for the Florida Wildlife Legacy Initiative using the rankings for Roads, Incompatible Recreation Activities, and Conversion to Recreation Areas
- Natural community values based on the sensitivity guidelines published by the Florida Park Service
- Wetlands
- Slope
- Soils
- Known point locations of species-of-interest
- Known locations of sensitive resources
- Division of Historic Resources Master Site File sites
- Density of existing roads, trails and facilities
- Other datasets as available and appropriate

These data layers are converted to grids as necessary and normalized to a scale of 1-100. Then a weighted sum is calculated for all data resulting in a "Sensitivity Index" for the area with higher values being more sensitive to disturbance from recreation.

**Recreation Zoning**

Once the results of the Site Sensitivity model are obtained, a Recreation Zone Map is developed incorporating these results and any statutory or rule constraints for recreation activities. These Recreation Zone Maps will show the different types of recreation experiences

appropriate for each zone of the area. This guides potential trail lengths, trail types, types of facilities and other parameters related to recreation infrastructure.

**Carrying Capacity Development**

For linear recreation facilities (i.e. trails), a physical carrying capacity is developed based on trail length using a 100-meter buffer on either side of the trails. This buffer distance is consistent with the estimated area of wildlife disturbance along the trail. In addition, an additional 100-meter buffer is used between potential trail users to provide an undisturbed 100-meter area between users. This results in an estimate of 1 user or group every 300 meters along the trail. This estimate is generated using GIS and is adjusted to minimize disturbance "hot spots" such as overlapping disturbance buffers. Point facilities (i.e. observation structures) have a single 100-meter radius buffer. The temporal component of carrying capacity is developed based on the Florida Park Service turnover estimate of two per day on primitive hiking trails or four per day on shorter, improved nature trails. In addition, existing and planned parking and other trailhead limitations are factored into the estimate. If the site already has a Recreation Master Plan (RMP) developed, these estimates will be based on existing and planned facilities as detailed in the RMP. If the area does not have an RMP these estimates are based on potential trail corridors and potential point facility sites derived from the Recreation Zoning and site visits by PAWV and area staff. Another product of this estimate is a "Wildlife Habitat Disturbance Index" based on the ratio of potentially impacted habitat to impact-free habitat expressed as a percentage of the area potentially impacted by recreation.

Camping Facility Carrying Capacities

- Primitive tent camping with no facilities or limited facilities (fire ring, picnic table): 4 people/site with a turnover of once per day.
- Standard camping site (fire ring, picnic table, improved or paved pad, toilet facilities): 8 people/site with a turnover of once per day.
- Generally group camping will be 30 people per 5 acres of camping area.

Picnic Areas

- 8 tables/acre and 4 people/table with a turnover twice a day.

Structures

- Structures dependent on trails for access will be included in the calculated trail capacity.
- Structures that can be accessed independently of trails will have a carrying capacity determined on a case-by-case basis based on the type and size of the structure.

Shoreline Fishing Areas

- Shoreline fishing areas will have a capacity of 1 angler per 25 linear feet.

Seasonal Hunting

- For those areas with seasonal hunting use carrying capacities range from one hunter per 75 acres to one hunter per 150 acres. The exact density chosen depends on a variety of factors with game management most paramount, but is also influenced by the layout of the area and the chosen hunting framework. Areas with dove fields will have a dove field capacity of one hunter to 1.75 acres of dove fields. This capacity is in addition to the calculated capacity for non-hunting recreation uses. Areas with quota permits will have the hunting capacity established as double the maximum number of permits for any one season to account for guest permits.

As needed, capacities for other uses not listed above will use the carrying capacity guidelines published by the Florida Park Service as a baseline.

**Recreation Impact Monitoring**

To provide a quantitative measure of recreation impacts, limits will be established as "No impact ranks greater than 1," as observed during each biannual monitoring conducted by PAWV field staff. If any ranking values are greater than 1, the site will be assessed to determine the source of the impact. If impacts are the result of recreation activities (as opposed to facility design or other sources), the carrying capacity will be revisited and corrective measures will be developed by PAWV and area staff.

# Appendix 5: Management and Monitoring

## Recreation Facility Monitoring Protocol

Florida Fish and Wildlife Conservation Commission
Office of Public Access and Wildlife Viewing Services

### Introduction

In order to better plan and manage recreation opportunities on lands managed by the Florida Fish and Wildlife Conservation Commission (FWC), FWC's Office of Public Access and Wildlife Viewing Services (PAWV) has developed a monitoring program for recreation-related facilities and infrastructure. Using both qualitative and semi-quantitative methods this program will encompass trails, signs, wildlife viewing structures and other facilities. Data obtained through this program will help FWC better plan, construct and maintain facilities to provide the recreation experiences that are meaningful, enjoyable and safe.

### Materials

- Digital camera
- Tripod
- Kaidan panoramic photo mount
- VRWorx, or other software for creating panoramic photos
- Monitoring forms
- Tape measure
- Compass
- GPS (loaded with waypoints for monitoring points)
- Hand tools for checking structure hardware

### Monitoring Procedures

#### Frequency

Starting in FY 2013-2014, trails will be monitored annually in the fall and structures monitored annually in the spring. Prior to FY13-14 trails and structures were both monitored biannually.

#### Photopoints

Panoramic and single photopoints are used to track and document impacts such as trail degradation, corridor condition, structural integrity and vandalism. Single photopoints are taken at use areas to capture the overall condition. Additionally, each amenity and structure has a photopoint associated with it. Panoramic photos are taken at use areas in a central location and at trailheads. Photopoints are predetermined (with the exception of trouble areas along trails), geographically referenced, and consistent. Data are compiled by analyzing panoramas and

photopoints from each monitoring session and combining the findings with impact indices recorded for each site.

Photopoints should be recorded with GPS, which can also be used to navigate back to the photopoint location on future monitoring visits. A description of the location should be recorded to ensure maximum accuracy in relocating the photopoint.

Assemble the panoramic photo gear and set the tripod over the photopoint, making sure the panoramic head is level. Standard photopoint height is 60" to the center of the camera lens while mounted on the panoramic mount. This may be modified for some photopoints depending on surrounding vegetation or other considerations, but the new height should be recorded and used each time that photopoint is taken. The easiest way to set the height is to assemble the tripod, panoramic mount and camera on level ground, adjust the legs to their full length and adjust the center column to achieve the proper lens height. The center column can be marked with a permanent marker, tape, or scored with a small file or engraver and each mark should be labeled with the height and camera model. This will have to be done for each different camera that will be used for photopoints, although it is preferable that the same camera be used for all photopoints.

Cameras should be set to full wide zoom, landscape mode if available, with flash off. All photopoints begin with the detent closest to due north and continue in a clockwise direction. A log should be kept to record the photo numbers and their corresponding photopoint.

After downloading the images they should be processed into a flat panorama (a digital image composed of all of the photos for a particular photopoint). These panoramas along with the component images should be kept in a central location organized by WMA, photopoint number, and photopoint date. Parallel photopoints will not need to be processed but should be organized as above.

***Trails***

Trails are monitored with a panoramic photopoint centered at the trailhead, and one photopoint wherever problems areas exist: one photo taken facing forward on the trail and one facing the opposite direction on the trail.

***Use areas***

Use areas have 2 photopoints. One is a panoramic photo taken at the center of the use area that follows the procedure for trailhead photopoints. The other is a single photo taken from the perimeter of the area. The compass bearing of the photo should be recorded and used for all subsequent photos taken at that photopoint.

***Structures***
Structures have a single photopoint. This is a single photo, and the compass bearing of the photo should be recorded and used for all subsequent photos taken at that photopoint. If desired, a panoramic photo can be taken to represent the view from the structure (such as the top of a tower).

**Physical Inspections**

- Check for presence or absence (smaller amenities such as fire rings and benches)
- Check for proper location (smaller amenities such as fire rings and benches)
- Inspect for damage (signs and structures)
- Check hardware and tighten or replace if necessary (signs and structures)

Trails should be traversed in their entirety, either on foot for shorter trails or by vehicle for longer trails. Trouble spots (erosion, trail braiding, shortcuts, litter, excess vegetation encroachment, etc.) should be recorded by GPS and noted on the monitoring form.

**Monitoring Forms and Record Keeping**

Monitoring forms are completed in the field. This can be done electronically using the Recon field computer or manually. If done manually they should be transferred to an electronic version by filling out the form on computer. Completed electronic forms are then placed in the appropriate location on the Project Management Site for that WMA along with any relevant GPS data (converted to shapefile), photographs, photopoints and other notes.

Any issues that need attention should be sent to the appropriate Recreation Planner via email. The Recreation Planner is responsible for ensuring that the issue is brought to the attention of the appropriate personnel, both internal and external to FWC, and tracking the issue through resolution.

| Litter Impacts | | |
|---|---|---|
| **Rating** | **Category** | **Description** |
| 1 | None | |
| 2 | Very Little | small isolated pieces of litter |
| 3[2] | Some | frequent small pieces or isolated large pieces of litter |
| 4 | Extensive | small areas used for trash dumping or multiple areas of high litter |
| 5 | Very Extensive | large areas used for trash dumping |

| Structure or Amenity Damage | | |
|---|---|---|
| **Rating** | **Category** | **Description** |
| 1 | None | none/ loose bolts on new structures. |
| 2 | Very Little | minor graffiti or scratches, dirty, light crazing or oxidation, crooked, minor cracks. |
| 3[2] | Some | minor wood repair; extensive graffiti; cuts or gouges; bullet holes; major cracks, extensive crazing or fading. |
| 4 | Extensive | hazardous damage, rotten supports, severe rust, illegible signs, burnt |
| 5 | Very Extensive | structure is missing or rendered completely ruined/useless |

| Trail and Use Area Erosion | | |
|---|---|---|
| **Rating** | **Category** | **Description** |
| 1 | Very little | mostly natural groundcover distribution or man-made materials (concrete, aggregate, mulch, etc.) |
| 2 | Some | localized patches of bare soil from use or runoff from structures or impervious surfaces; vehicle tracks noticeable; standing water; minor hog damage |
| 3[2] | Moderate | large areas of bare soil created by use, ruts from vehicles, areas muddied by use, roots partially exposed, heavy hog damage |
| 4 | Extensive | channelization, washout, and/or undercutting banks; roots mostly exposed; deep ruts; trail widening |

| Trail Corridor Condition | | |
|---|---|---|
| **Rating** | **Category** | **Description** |
| 1 | Within Standards | minimal vegetation encroachment |
| 2[3] | Exceeds Standards | trail needs some mowing/lopping/chainsawing; minor tree fall |
| 3 | Unacceptable | trail is generally overgrown and difficult to find; tree fall that impedes passage |

[2]Ratings of three and above exceed PAWV standards for structure and amenity damage or litter impacts and trail erosion.
[3]Ratings of two and above exceed PAWV standards for trail corridor condition.

WMA Visit Checklist

- ○ Trail maintenance needs
- ○ Sign maintenance needs
- ○ Structure maintenance needs
- ○ Day-use area condition/maintenance needs
- ○ Sufficient PAWV publications in field office
- ○ Brochure boxes adequately stocked and installed
- ○ Hunting calendar posted and up-to-date
- ○ Users encountered on area (number, activity, address for future surveys)
- ○ Geocaches inspected
- ○ Manager concerns
- ○ New ideas for area enhancement

## 11.15 Management Procedures Guidelines - Management of Archaeological and Historical Resources

**Management Procedures for Archaeological and Historical Sites and Properties on State-Owned or Controlled Properties**
(revised June 2021)

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

## A. Historic Property Definition

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

## B. Agency Responsibilities

Per Chapter 267, *F.S.* and state policy related to historic properties, state agencies of the executive branch must provide the Division of Historical Resources (Division) the opportunity to comment on any undertakings with the potential to affect historic properties that are listed, or eligible for listing, in the National Register of Historic Places, whether these undertakings directly involve the state agency, i.e., land management responsibilities, or the state agency has indirect jurisdiction, i.e. permitting authority, grants, etc. No state funds should be expended on the undertaking until the Division has the opportunity to review and comment on the undertaking. (267.061(2)(a))

State agencies must consult with the Division when, as a result of state action or assistance, a historic property will be demolished or substantially altered in a way that will adversely affect the property. State agencies must take timely steps to consider feasible and prudent alternatives to the adverse effect. If no feasible or prudent alternatives exist, the state agency must take timely steps to avoid or mitigate the adverse effect. (267.061(2)(b))

State agencies must consult with Division to establish a program to locate, inventory and evaluate all historic properties under ownership or controlled by the agency. (267.061(2)(c))

State agencies are responsible for preserving historic properties under their control. State agencies are directed to use historic properties available to the agency when that use is consistent with the historic property and the agency's mission. State agencies are also directed to pursue preservation of historic properties to support their continued use. (267.061(2)(d))

## C. Statutory Authority

The full text of Chapter 267, F.S. and additional information related to the treatment of historic properties is available at:

https://dos.myflorida.com/historical/preservation/compliance-and-review/regulations-guidelines/

## D. Management Implementation

Although the Division sits on the Acquisition and Restoration Council and approves land management plans, these plans are conceptual and do not include detailed project information. Specific information for individual projects must be submitted to the Division for review and comment.

Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. The Division's recommendations may include, but are not limited to: approval of the project as submitted, recommendation for a cultural resource assessment survey by a qualified professional archaeologist, and modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions or alterations to historic structures as well as new construction must also be submitted to the Division for review. Projects involving structures fifty years of age or older must be submitted to the Division for a significance determination**.** In rare cases, structures under fifty years of age may be deemed historically significant.

Adverse effects to historic properties must be avoided when possible, and if avoidance is not possible, additional consultation with the Division is necessary to develop a mitigation plan. Furthermore, managers of state property should make preparations for locating and evaluating historic properties, both archaeological sites and historic structures.

## E. Archaeological Resource Management (ARM) Training

The ARM Training Course introduces state land managers to the nature of archaeological resources, Florida archaeology, and the role of the Division in managing state-owned archaeological resources. Participants gain a better understanding of the requirements of state and federal laws with regard to protecting and managing archaeological sites on state managed lands. Participants also receive a certificate recognizing their ability to conduct limited monitoring activities in accordance with the Division's Review Procedure, thereby reducing the time and money spent to comply with state regulations. Additional information regarding the ARM Training Course is available at:

https://dos.myflorida.com/historical/archaeology/education/arm-training-courses/

## F. Matrix for Ground Disturbance on State Lands

The matrix is a tool designed to help streamline the Division's Review Procedure. The matrix allows state land managers to make decisions about balancing ground disturbance and stewardship of historic resources. The matrix establishes types of undertakings that are either minor or major disturbances and then guides the land manager to consult the Division, conduct ARM-trained project monitoring, or proceed with the project. Additional information regarding the matrix is available at:

https://dos.myflorida.com/historical/archaeology/education/dhr-matrix-for-ground-disturbance-on-state-lands/

## G. Human Remains Treatment

Chapter 872, *Florida Statutes* makes it illegal to willfully and knowingly disturb human remains. In the event human remains are discovered, cease all activity in the area that may disturb the remains. Leave the bones and nearby items in place. Immediately notify law enforcement or the local district medical examiner of the discovery and follow the provisions of Chapter 872, FS. Additional information regarding the treatment of human remains and cemeteries is available at:

https://dos.myflorida.com/historical/archaeology/human-remains/
https://dos.myflorida.com/historical/archaeology/human-remains/abandoned-cemeteries/what-are-the-applicable-laws-and-regulations/

## H. Division of Historical Resources Review Procedure

Projects on state owned or controlled properties may submit projects to the Division for review using the streamlined State Lands Consultation Form. The form provides instructions to submit projects for review and outlines the necessary information for the Division to complete the review process. The State Lands Consultation Form and additional information about the Division's review process is available at:

https://dos.myflorida.com/historical/preservation/compliance-and-review/state-lands-review/

* * *

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

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

**StateLandsCompliance@dos.myflorida.com**

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

## 11.16 Land Management Uniform Accounting Council Categories

## Land Management Uniform Cost Accounting Council and FWC Activity Code Groupings

### Resource Management

Exotic Species Control

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

Prescribed Burning

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

Cultural Resource Management

201 Cultural resource management

Timber Management

202 Timber management

Hydrological Management

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

Other

185 GIS
200 RESOURCE MANAGEMENT
203 Tree and shrub planting
213 Wildlife management
214 Listed Species management
219 Upland restoration
221 Animal surveys
228 Inland aerial surveys
235 Vegetation and plant surveys
250 MONITORING AND ASSESSMENTS
252 Biomedical monitoring
253 Ecological monitoring
256 Habitat monitoring analysis
263 Nest box monitoring
264 Population demographics
275 Permits and authorizations
276 Commission rule development and review
281 Technical assistance
282 Hebaceous seeding
283 Clearings
284 Feeding/watering
285 Nest structures
286 Population control
287 Stocking enhancements/population augmentation
288 Nuisance animal complaints 282 Herbaceous seeding
289 Native vegetation management (mechanical)
290 Native vegetation management (chemical)
293 Mortality investigations
294 Program coordination and implementation C inter- and intra-agency coordination and program

implementation at the section, bureau, or division level 295 Biological data collection, analysis, and reporting
296 Habitat protection technical assistance
750 URTD assessment
789 Site Preparation – GCR
790 Irrigation – GCR
791 Seed Collection – Hand
792 Seed Collection – Mechanical
793 Herbicide Maintenance Treatment

**Administration**

Central Office/Headquarters

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

Districts/Regions

See Location code

Units/Projects

See Location code

**Support**

Land Management Planning

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

Land Management Reviews

101 Project inspection C field inspections of projects.
209 Land Management Reviews

Training/Staff Development

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

Vehicle Purchase

128 New Vehicle and Equipment Purchase

Vehicle Operation and Maintenance

923 FEM C vehicles/equipment

Other

140 REPORT WRITING/EDITING/MANUSCRIPT PREPARATION
141 Grant applications
180 SYSTEMS ADMINISTRATION AND MANAGEMENT
182 Data management
184 Metadata development and management
187 IT
188 Web development
226 Human dimensions surveys
721 Geospatial analysis techniques

**Capitol Improvements**

New Facility Construction

910 New facility construction C buildings/structures
912 New construction C roads/bridges
913 New construction C trails
914 New construction C fences

Facility Maintenance

920 Facility and equipment maintenance ( FEM) C buildings/structures
921 FEM C utilities
922 FEM C custodial functions
925 FEM C boating access
926 FEM C roads/bridges
927 FEM C trails
928 FEM C fences

**Visitor Services/Recreation**

Information/Education Programs

145 Technical bulletin

Operations

311 Boundary signs
312 Informational signs
320 Outreach and education C attending or developing educational or informational materials or events for the public
341 Public use administration (hunting)
342 Public use administration (non-hunting)
350 Customer service support C disseminating written or verbal information or assistance to the public
700 STUDIES
740 EVALUATIONS AND ASSESSMENTS

**Law Enforcement**

## 11.17 Operation Plan Fiscal Year 2021-2022

### 11.17.1 EWMA Operation Plan 2021-2022

| Activity | Description | Man Days | Salary | Fuel Cost | Other | Total |
|---|---|---|---|---|---|---|
| 100 | Administration | 100 | $21,798.00 | $850.00 | $149,324.43 | $171,972.43 |
| 103 | Meetings | 100 | $21,798.00 | $850.00 | $4,500.00 | $27,148.00 |
| 104 | Budget/purchasing/accounting | 55 | $11,988.90 | $467.50 | $0.00 | $12,456.40 |
| 150 | Personnel management | 40 | $8,719.20 | $340.00 | $0.00 | $9,059.20 |
| 185 | GIS | 10 | $2,179.80 | $85.00 | $0.00 | $2,264.80 |
| 200 | Resource Management | 150 | $32,697.00 | $1,275.00 | $94,062.67 | $128,034.67 |
| 201 | Cultural resource management | 8 | $1,743.84 | $68.00 | $0.00 | $1,811.84 |
| 203 | Tree and shrub planting | 55 | $11,988.90 | $467.50 | $66,230.00 | $78,686.40 |
| 204 | Resource planning | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 206 | Prescribed burning - growing season | 45 | $9,809.10 | $382.50 | $2,000.00 | $12,191.60 |
| 207 | Prescribed burning - dormant season | 75 | $16,348.50 | $637.50 | $22,000.00 | $38,986.00 |
| 212 | Exotic plant control (chemical) | 65 | $14,168.70 | $552.50 | $540,200.00 | $554,921.20 |
| 218 | Water level management | 10 | $2,179.80 | $85.00 | $0.00 | $2,264.80 |
| 221 | Animal surveys | 60 | $13,078.80 | $510.00 | $72,750.00 | $86,338.80 |
| 235 | Vegetation and plant surveys | 5 | $1,089.90 | $42.50 | $50.00 | $1,182.40 |
| 285 | Nest structures | 15 | $3,269.70 | $127.50 | $200.00 | $3,597.20 |
| 286 | Population control | 2 | $435.96 | $17.00 | $50.00 | $502.96 |
| 290 | Native vegetation management (chemical) | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 294 | Program coordination and implementation | 7 | $1,525.86 | $59.50 | $0.00 | $1,585.36 |
| 295 | Biological data collection, analysis, and reporting | 25 | $5,449.50 | $212.50 | $5,000.00 | $10,662.00 |
| 311 | Boundary signs | 15 | $3,269.70 | $127.50 | $2,500.00 | $5,897.20 |
| 320 | Outreach and education | 2 | $435.96 | $17.00 | $0.00 | $452.96 |
| 341 | Public use administration (hunting) | 5 | $1,089.90 | $42.50 | $100.00 | $1,232.40 |
| 342 | Public use administration (non-hunting) | 5 | $1,089.90 | $42.50 | $100.00 | $1,232.40 |
| 350 | Customer service support | 40 | $8,719.20 | $340.00 | $0.00 | $9,059.20 |
| 920 | FEM -- buildings/structures | 4 | $871.92 | $34.00 | $500.00 | $1,405.92 |
| 922 | FEM -- custodial functions | 80 | $17,438.40 | $680.00 | $2,000.00 | $20,118.40 |
| 923 | FEM -- vehicles/equipment | 70 | $15,258.60 | $595.00 | $33,500.00 | $49,353.60 |
| 925 | FEM -- boating access | 2 | $435.96 | $17.00 | $0.00 | $452.96 |
| Total: | | 1,060.00 | $231,058.80 | $9,010.00 | $995,067.10 | $1,235,135.90 |

### 11.17.2 HWMA Operation Plan 2021-2022

| Activity | Description | Man Days | Salary | Fuel Cost | Other | Total |
|---|---|---|---|---|---|---|
| 100 | Administration | 1 | $217.98 | $8.50 | $1,200.00 | $1,426.48 |
| 103 | Meetings | 20 | $4,359.60 | $170.00 | $2,000.00 | $6,529.60 |
| 104 | Budget/purchasing/accounting | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 150 | Personnel management | 7 | $1,525.86 | $59.50 | $0.00 | $1,585.36 |
| 185 | GIS | 10 | $2,179.80 | $85.00 | $0.00 | $2,264.80 |
| 200 | Resource Management | 50 | $10,899.00 | $425.00 | $0.00 | $11,324.00 |
| 203 | Tree and shrub planting | 15 | $3,269.70 | $127.50 | $4,000.00 | $7,397.20 |
| 204 | Resource planning | 1 | $217.98 | $8.50 | $0.00 | $226.48 |
| 206 | Prescribed burning - growing season | 15 | $3,269.70 | $127.50 | $1,250.00 | $4,647.20 |
| 207 | Prescribed burning - dormant season | 15 | $3,269.70 | $127.50 | $1,500.00 | $4,897.20 |
| 212 | Exotic plant control (chemical) | 50 | $10,899.00 | $425.00 | $543,576.73 | $554,900.73 |
| 218 | Water level management | 10 | $2,179.80 | $85.00 | $0.00 | $2,264.80 |
| 221 | Animal surveys | 33 | $7,193.34 | $280.50 | $200.00 | $7,673.84 |
| 235 | Vegetation and plant surveys | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 286 | Population control | 2 | $435.96 | $17.00 | $400.00 | $852.96 |
| 289 | Native vegetation management (mechanical) | 5 | $1,089.90 | $42.50 | $50,000.00 | $51,132.40 |
| 290 | Native vegetation management (chemical) | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 294 | Program coordination and implementation | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 295 | Biological data collection, analysis, and reporting | 10 | $2,179.80 | $85.00 | $400.00 | $2,664.80 |
| 311 | Boundary signs | 5 | $1,089.90 | $42.50 | $1,000.00 | $2,132.40 |
| 341 | Public use administration (hunting) | 4 | $871.92 | $34.00 | $100.00 | $1,005.92 |
| 342 | Public use administration (non-hunting) | 4 | $871.92 | $34.00 | $100.00 | $1,005.92 |
| 350 | Customer service support | 3 | $653.94 | $25.50 | $0.00 | $679.44 |
| 922 | FEM -- custodial functions | 4 | $871.92 | $34.00 | $200.00 | $1,105.92 |
| 923 | FEM -- vehicles/equipment | 5 | $1,089.90 | $42.50 | $3,650.00 | $4,782.40 |
| 925 | FEM -- boating access | 1 | $217.98 | $8.50 | $0.00 | $226.48 |
| Total: | | 290 | $63,214.20 | $2,465.00 | $609,576.73 | $675,255.93 |

### 11.17.3 RWMA Operation Plan 2021-2022

| Activity | Description | Man Days | Salary | Fuel Cost | Other | Total |
|---|---|---|---|---|---|---|
| 100 | Administration | 1 | $217.98 | $8.50 | $900.00 | $1,126.48 |
| 103 | Meetings | 20 | $4,359.60 | $170.00 | $400.00 | $4,929.60 |
| 104 | Budget/purchasing/accounting | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 150 | Personnel management | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 185 | GIS | 7 | $1,525.86 | $59.50 | $0.00 | $1,585.36 |
| 200 | Resource Management | 40 | $8,719.20 | $340.00 | $0.00 | $9,059.20 |
| 201 | Cultural resource management | 3 | $653.94 | $25.50 | $0.00 | $679.44 |
| 203 | Tree and shrub planting | 10 | $2,179.80 | $85.00 | $36,000.00 | $38,264.80 |
| 204 | Resource planning | 3 | $653.94 | $25.50 | $0.00 | $679.44 |
| 206 | Prescribed burning - growing season | 20 | $4,359.60 | $170.00 | $500.00 | $5,029.60 |
| 207 | Prescribed burning - dormant season | 20 | $4,359.60 | $170.00 | $500.00 | $5,029.60 |
| 212 | Exotic plant control (chemical) | 30 | $6,539.40 | $255.00 | $199,000.00 | $205,794.40 |
| 215 | Hydrology Management | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 218 | Water level management | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 221 | Animal surveys | 48 | $10,463.04 | $408.00 | $200.00 | $11,071.04 |
| 235 | Vegetation and plant surveys | 5 | $1,089.90 | $42.50 | $50.00 | $1,182.40 |
| 286 | Population control | 2 | $435.96 | $17.00 | $0.00 | $452.96 |
| 290 | Native vegetation management (chemical) | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 294 | Program coordination and implementation | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 295 | Biological data collection, analysis, and reporting | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 311 | Boundary signs | 5 | $1,089.90 | $42.50 | $300.00 | $1,432.40 |
| 341 | Public use administration (hunting) | 4 | $871.92 | $34.00 | $100.00 | $1,005.92 |
| 342 | Public use administration (non-hunting) | 4 | $871.92 | $34.00 | $100.00 | $1,005.92 |
| 350 | Customer service support | 5 | $1,089.90 | $42.50 | $0.00 | $1,132.40 |
| 910 | New facility construction -- buildings/structures | 0 | $0.00 | $0.00 | $225,000.00 | $225,000.00 |
| 922 | FEM -- custodial functions | 10 | $2,179.80 | $85.00 | $150.00 | $2,414.80 |
| 923 | FEM -- vehicles/equipment | 35 | $7,629.30 | $297.50 | $2,800.00 | $10,726.80 |
| 925 | FEM -- boating access | 2 | $435.96 | $17.00 | $0.00 | $452.96 |
| 926 | FEM -- roads/bridges | 1 | $217.98 | $8.50 | $20,000.00 | $20,226.48 |
| Total: | | 310 | $67,573.80 | $2,635.00 | $486,000.00 | $556,208.80 |

## 11.18 Arthropod Control Plans

### 11.18.1 Broward County Arthropod Control Plan

Florida Department of Agriculture and Consumer Services
Division of Agricultural Environmental Services

**ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS**

Section 388.4111, F.S.
Telephone: (850) 617-7995

Nicole 'Nikki' Fried
COMMISSIONER

**For use in documenting an Arthropod Control Pan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein. Fill this form out if control work is necessary or planned.**

Name of Designated Land: Everglades Complex of Wildlife Management Areas

Is Control Work Necessary: ❑ Yes ☒ No

Location: Broward County

Land Management Agency: Florida Fish and Wildlife Conservation Commission

Are Arthropod Surveillance Activities Necessary? ❑ Yes ☒ No
If "Yes", please explain:

Which Surveillance Techniques Are Proposed?
Please Check All That Apply: **N/A**

| | | |
|---|---|---|
| ❑ Landing Rate Counts | ❑ Light Traps | ❑ Sentinel Chickens |
| ❑ Citizen Complaints | ❑ Larval Dips | ❑ Other |

If "Other", please explain: **N/A**

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Arthropod Species for Which Control is Proposed:

**N/A**

Proposed Larval Control:

**N/A**

Proposed larval monitoring procedure:

Are post treatment counts being obtained: ❑Yes ☒ No

Biological Control of Larvae:

**N/A**

Might predacious fish be stocked: ❑ Yes ☒ No

Other biological controls that might be used:

Material to be Used for Larvaciding Applications:

(Please Check All That Apply:) **N/A**

❑ Bti

❑ Bs

❑ Methoprene

❑ Non-Petroleum Surface Film

❑ Other, please specify:

Please specify the following for each larvacide:

Chemical or Common name: N/A

❑ Ground ❑ Aerial

Rate of application:

Method of application:

Proposed Adult Mosquito Control:

Aerial adulticiding ❑Yes ☒No

Ground adulticiding ❑ Yes ☒No

Please specify the following for each adulticide: **N/A**

Chemical or common name:

Rate of application:

Method of application:

Proposed Modifications for Public Health Emergency Control: In the event of a declared public health emergency, control may be performed by the arthropod control agency, as part of a larger treatment plan to safeguard public health. Land managers of the area will be notified prior to treatment.

**None**

Proposed Notification Procedure for Control Activities:

Manager of the area will be notified by e-mail when treatment of the area will occur. The notice should include a map of the area being treated, the material to be used and the general time of day the treatment will occur.

**N/A**

Records:

Are records being kept in accordance with Chapter 388, F.S.:

❑ Yes ❑No

Records Location:

**Broward County**

How long are records maintained: **≥3 years**

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed?

**None**

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed:

**None**

Include proposed operational schedules for water fluctuations:

**None**

List any periodic restrictions, as applicable, for example peak fish spawning times.

**None**

Proposed Modification of Aquatic Vegetation:

**None**

Land Manager Comments:

Arthropod Control Agency Comments:

James C Conner III Digitally signed by James C Conner III Date: 2023.02.07 12:56:07 -05'00'

Signature of Lands Manager or Representative Date

DAGNE DUGUMA Digitally signed by DAGNE DUGUMA Date: 2022.12.12 10:57:52 -05'00'

Signature of Mosquito Control Director / Manager Date

### 11.18.2 Miami Dade Arthropod Control Plan

Florida Department of Agriculture and Consumer Services
Division of Agricultural Environmental Services

## ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS

Section 388.4111, F.S.
Telephone: (850) 617-7995

**For use in documenting an Arthropod Control Pan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein. Fill this form out if control work is necessary or planned.**

Name of Designated Land: Everglades Complex of Wildlife Management Areas

Is Control Work Necessary: ☐Yes ☒ No
*NOTE: Routine treatments are not scheduled per the FWC's request. Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

Location: Miami-Dade County

Land Management Agency: Florida Fish and Wildlife Conservation Commission

Are Arthropod Surveillance Activities Necessary? ☐Yes ☒ No
If "Yes", please explain:

*NOTE: Routine surveillance activities are not scheduled per the FWC's request. Surveillance may be necessary in the case of public request or public health emergency. Any proposed activities will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

Which Surveillance Techniques Are Proposed?
Please Check All That Apply:

| | | |
|---|---|---|
| ❑ Landing Rate Counts | ❑ Light Traps | ❑ Sentinel Chickens |
| ❑ Citizen Complaints | ❑ Larval Dips | ❑ Other |

If "Other", please explain:

*NOTE: Routine treatments are not scheduled per the FWC's request. Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

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Arthropod Species for Which Control is Proposed: N/A

Proposed Larval Control:

Proposed larval monitoring procedure:

Are post treatment counts being obtained: ☐Yes ☒ No

*NOTE: Routine treatments are not scheduled per the FWC's request. Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

Biological Control of Larvae:

Might predacious fish be stocked: ❑ Yes ☒ No

Other biological controls that might be used:

*NOTE: Routine treatments are not scheduled per the FWC's request. Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

Material to be Used for Larvaciding Applications:

(Please Check All That Apply:)

❑ Bti

❑ Bs

❑ Methoprene

❑ Non-Petroleum Surface Film

❑ Other, please specify:

Please specify the following for each larvacide: N / A

*NOTE: Routine treatments are not scheduled per the FWC's request. Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

Chemical or Common name: N/A

❑Ground ❑ Aerial

Rate of application: N/A

Method of application: N/A

*NOTE: Routine treatments are not scheduled per the FWC's request. Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

Proposed Adult Mosquito Control:

Aerial adulticiding ❑Yes ☒No

Ground adulticiding ❑ Yes ☒No

Please specify the following for each adulticide: N / A

Chemical or common name: N/A

Rate of application: N/A

Method of application: N/A

Proposed Modifications for Public Health Emergency Control:

In the event of a declared public health emergency, control may be performed by the arthropod control agency, as part of a larger treatment plan to safeguard public health. Land managers of the area will be notified prior to treatment.

- Larvicide ground application of Bti
- Larvicide ground application of Bs
- Larvicide aerial application of Bti
- Aerial ULV adulticiding treatments for pyrethroids or organophosphate insecticides

Proposed Notification Procedure for Control Activities:

Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC. Manager of the area will be notified by e-mail when treatment of the area will occur. The notice should include a map of the area being treated, the material to be used and the general time of day the treatment will occur.

Records:

Are records being kept in accordance with Chapter 388, F.S.:

xYes ☐No

Records Location:

**Mosquito Control Division**
Department of Solid Waste Management
8901 NW 58th St
Miami, Fl 33178

How long are records maintained: This information is maintained in perpetuity by the Mosquito Control Division and is not deleted.

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed?

None

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed:

None

Include proposed operational schedules for water fluctuations:

None

List any periodic restrictions, as applicable, for example peak fish spawning times.

None

Proposed Modification of Aquatic Vegetation:

None

Land Manager Comments:

*This agreement only applies to the area within the boundary of the ECWMA and does not restrict management activities for any additional buffer. Routine treatments are not scheduled. Treatments may be necessary in the case of public request or public health emergency. Any proposed treatments will be coordinated between the Miami-Dade Mosquito Control Division and the FWC.*

Arthropod Control Agency Comments:

James C Conner III Digitally signed by James C Conner III Date: 2023.02.07 12:44:05 -05'00'

Signature of Lands Manager or Representative Date

Isik Unlu, PhD 01/31/2023

Signature of Mosquito Control Director / Manager Date

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### 11.18.3 Palm Beach County Arthropod Control Plan

Florida Department of Agriculture and Consumer Services
Division of Agricultural Environmental Services

**ARTHROPOD MANAGEMENT PLAN - PUBLIC LANDS**

Section 388.4111, F.S.
Telephone: (850) 617-7995

Nicole 'Nikki' Fried
COMMISSIONER

**For use in documenting an Arthropod Control Pan for lands designated by the State of Florida or any political subdivision thereof as being environmentally sensitive and biologically highly productive therein. Fill this form out if control work is necessary or planned.**

Name of Designated Land: Everglades Complex of Wildlife Management Areas

Is Control Work Necessary: ❑ Yes ☒ No

Location: Palm Beach County

Land Management Agency: Florida Fish and Wildlife Conservation Commission

Are Arthropod Surveillance Activities Necessary? ❑ Yes ☒ No
If "Yes", please explain:

Which Surveillance Techniques Are Proposed?
Please Check All That Apply:

| | | |
|---|---|---|
| ❑ Landing Rate Counts | ❑ Light Traps | ❑ Sentinel Chickens |
| ❑ Citizen Complaints | ❑ Larval Dips | ❑ Other |

If "Other", please explain: N/A

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Arthropod Species for Which Control is Proposed:

Proposed Larval Control:

Proposed larval monitoring procedure:

Are post treatment counts being obtained: ❑Yes ☒ No

Biological Control of Larvae:

Might predacious fish be stocked: ❑ Yes ☒ No

Other biological controls that might be used:

Material to be Used for Larvaciding Applications:

(Please Check All That Apply:)

❑ Bti

❑ Bs

❑ Methoprene

❑ Non-Petroleum Surface Film

❑ Other, please specify:

Please specify the following for each larvacide: N / A

Chemical or Common name: N/A

❑ Ground ❑ Aerial

Rate of application:

Method of application:

Proposed Adult Mosquito Control:

| | | |
|---|---|---|
| Aerial adulticiding | ❑Yes | ☒No |
| Ground adulticiding | ❑ Yes | ☒No |

Please specify the following for each adulticide:

Chemical or common name: N/A

Rate of application: N/A

Method of application: N/A

Proposed Modifications for Public Health Emergency Control: In the event of a declared public health emergency, control may be performed by the arthropod control agency, as part of a larger treatment plan to safeguard public health. Land managers of the area will be notified prior to treatment.

Proposed Notification Procedure for Control Activities:

Manager of the area will be notified by e-mail when treatment of the area will occur. The notice should include a map of the area being treated, the material to be used and the general time of day the treatment will occur.

Records:

Are records being kept in accordance with Chapter 388, F.S.:

X-Yes ❑No

Records Location:

9011 Lantana Road, Lake Worth, Florida 33467

How long are records maintained:
2 YEARS

Vegetation Modification:

What trimming or altering of vegetation to conduct surveillance or treatment is proposed?

None

Proposed Land Modifications:

Is any land modification, i.e., rotary ditching, proposed:

None

Include proposed operational schedules for water fluctuations:

None

List any periodic restrictions, as applicable, for example peak fish spawning times.

None

Proposed Modification of Aquatic Vegetation:

None

Land Manager Comments:

Arthropod Control Agency Comments:
Everglades WMA is a remote area of Palm Beach County that requires no routine adulticide activities, and the area is cost prohibitive and inaccessible for routine larvicide activities.

James C Conner III Digitally signed by James C Conner III
Date: 2023.02.07 12:57:02 -05'00'

Signature of Lands Manager or Representative Date

Signature of Mosquito Control Director / Manager Date

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## 11.19 Broward County Letter of Compliance with Local Government Comprehensive Plan

Resilient Environment Department
**URBAN PLANNING DIVISION**
1 N. University Drive, Box 102 | Plantation, FL 33324 | 954-357-6634 | Fax 954-357-6521

February 8, 2023

Clara Boyas, Land Conservation Planner
Florida Fish and Wildlife Conservation Commission
620 S. Meridian Street
Tallahassee, FL 32399

Dear Mx. Boyas,

Thank you for the opportunity to review the Everglades Complex of Wildlife Management Areas Management Plan. As stated in our letter dated February 7, 2023, the Urban Planning Division staff finds the plan is generally consistent with Broward County's Comprehensive Plan.

Sincerely,

DARBY DELSALLE
Digitally signed by DARBY DELSALLE
Date: 2023.02.08 10:48:53 -05'00'

Darby Delsalle, AICP
Assistant Director

Broward County Board of County Commissioners
Mark D. Bogen • Lamar P. Fisher • Beam Furr • Steve Geller • Robert McKinzie • Nan H. Rich • Hazelle P. Rogers • Tim Ryan • Michael Udine
www.broward.org

## 11.20 Miami-Dade County Letter of Compliance with Local Government Comprehensive Plan

miamidade.gov

**Department of Regulatory and Economic Resources**
**Planning Division, Metropolitan Planning Section**
111 NW 1 Street • 12th Floor
Miami, Florida 33128-1902
Telephone: (305) 375-2835 Fax: (305) 375-2560
www.miamidade.gov/planning

February 22, 2023

*(Via E-Mail)*

Mx. Boyas
Land Conservation Planner
Florida Fish and Wildlife Conservation Commission
620 S. Meridian Street
Tallahassee, Florida 32399

Subject: Everglades Complex of Wildlife Management Areas (EWMA) Management Plan

Dear Mx. Boyas,

Per your request, this department has reviewed the Florida Fish and Wildlife Conservation Commission's 10-year update to the Everglades Complex of Wildlife Management Areas (ECWMA) Management Plan. Planning staff finds the Plan is in compliance with goals, objectives and policies of the Miami-Dade Comprehensive Development Master Plan (CDMP).

Thank you for the opportunity to review the Plan update. Should you require anything further, please contact me at jerry.bell@miamidade.gov or (305) 375-2835.

Sincerely,

Jerry Bell

Jerry Bell, AICP
Assistant Director for Planning

JB/GR/ga

## 11.21 Palm Beach County Letter of Compliance with Local Government Comprehensive Plan

**Department of Planning, Zoning & Building**
2300 North Jog Road
West Palm Beach, FL 33411-2741
(561) 233-5000

Planning Division 233-5300
Zoning Division 233-5200
Building Division 233-5100
Code Enforcement 233-5500
Contractors Certification 233-5525
Administration Office 233-5005
Executive Office 233-5228
www.pbcgov.com/pzb

**Palm Beach County Board of County Commissioners**

Gregg K. Weiss, Mayor
Maria Sachs, Vice Mayor
Maria G. Marino
Michael A. Barnett
Marci Woodward
Sara Baxter
Mack Bernard

**County Administrator**

Verdenia C. Baker

*"An Equal Opportunity Affirmative Action Employer"*

Official Electronic Letterhead

March 17, 2023

Clara Boyas, Land Conservation Planner
Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, Florida 32399

**RE: Everglades Complex of Wildlife Management Areas Ten Year Management Plan**

Dear Clara:

On behalf of the Palm Beach County Board of County Commissioners (BCC), I am pleased to provide a review of the Florida Fish and Wildlife Commission's Everglades Complex of Wildlife Management Areas Ten Year Management Plan. Planning Division staff has reviewed the Management Plan and find the Plan is compliant with the County's Comprehensive Plan.

If you have any questions regarding the County's comments on the proposed management plan, please contact Bryan Davis at (561) 233-5308 or BMDavis@pbcgov.org.

Sincerely,

Kevin Fischer, AICP
Planning Director

***Attachments:*** *Amendment Package (online upload)*

cc: Bryan M. Davis, CNU-A, Principal Planner

T:\Planning\CURRENT\ERM topics\Everglades Complex WMAs Letter for FWC 3-17-23.docx