

Florida Natural Lands Conservation and Management



April 2014

Florida Fish and Wildlife Conservation Commission
Division of Habitat and Species Conservation

The following presentation provides an overview of the Wildlife Management Area (WMA) system.

Overview

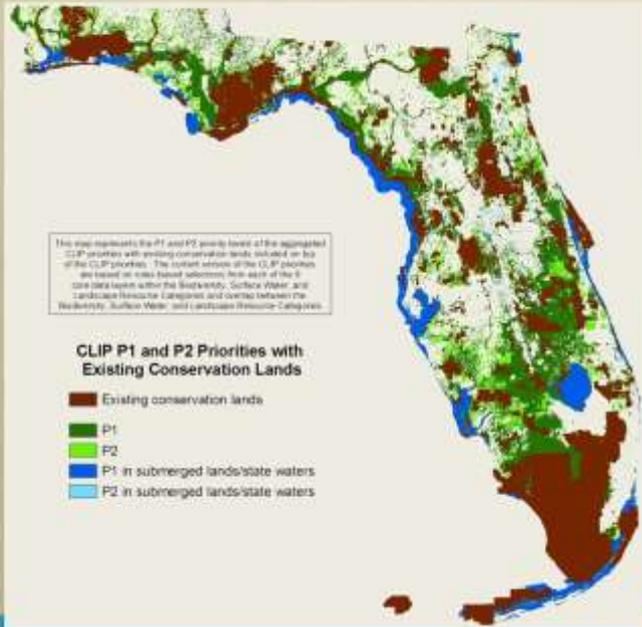
- Context and importance of FWC's managed lands
- Management and use
 - Budget and staffing
 - Acquisition and state lands
 - Management challenges
 - Management tools and approaches
 - Human uses of FWC managed lands
 - Infrastructure and maintenance
- Cooperative areas
- Private lands



Overview of the presentation components.

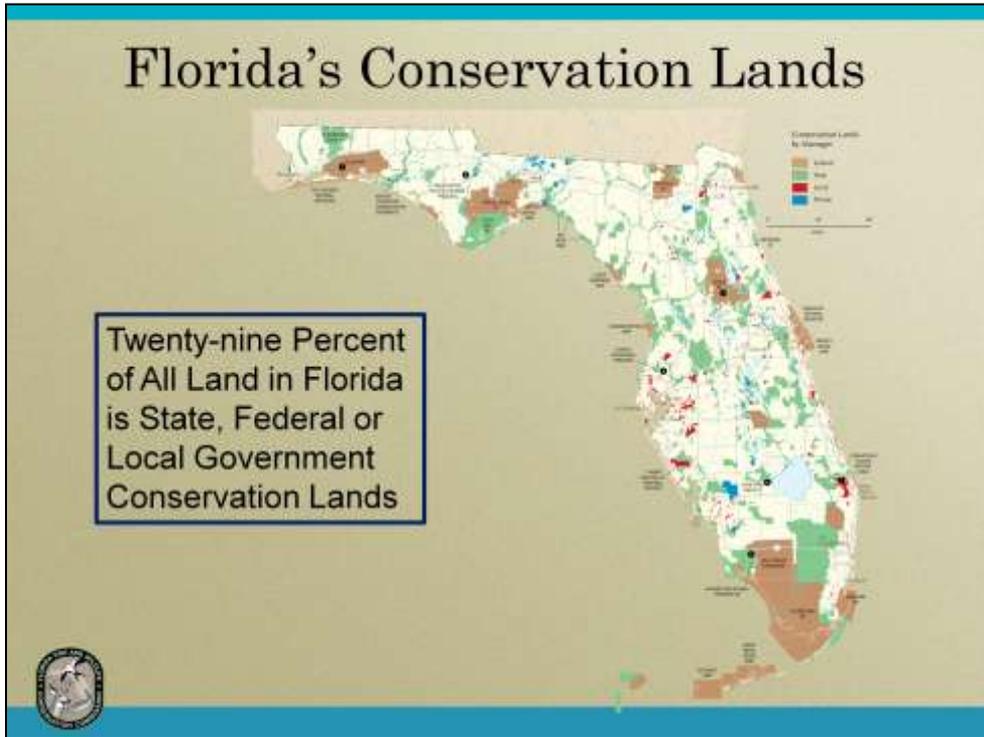
Critical Lands and Waters

Consensus
Priority
1 & 2



Prioritization of conservation lands using the Critical Lands and Waters Identification Project (CLIP) model.

Florida's Conservation Lands



34.7 million acres in Florida

9.9 million acres in State, Federal and Local Conservation lands (29%)

Public Conservation Ownership

- **Federal = 4.0 million acres**

- National Park Service = 1.7 million acres
- Forest Service = 1.2 million acres
- Dept. of Defense = 650,000 acres
- Fish and Wildlife Service = 500,000 acres

The rest
or 70%
is privately owned

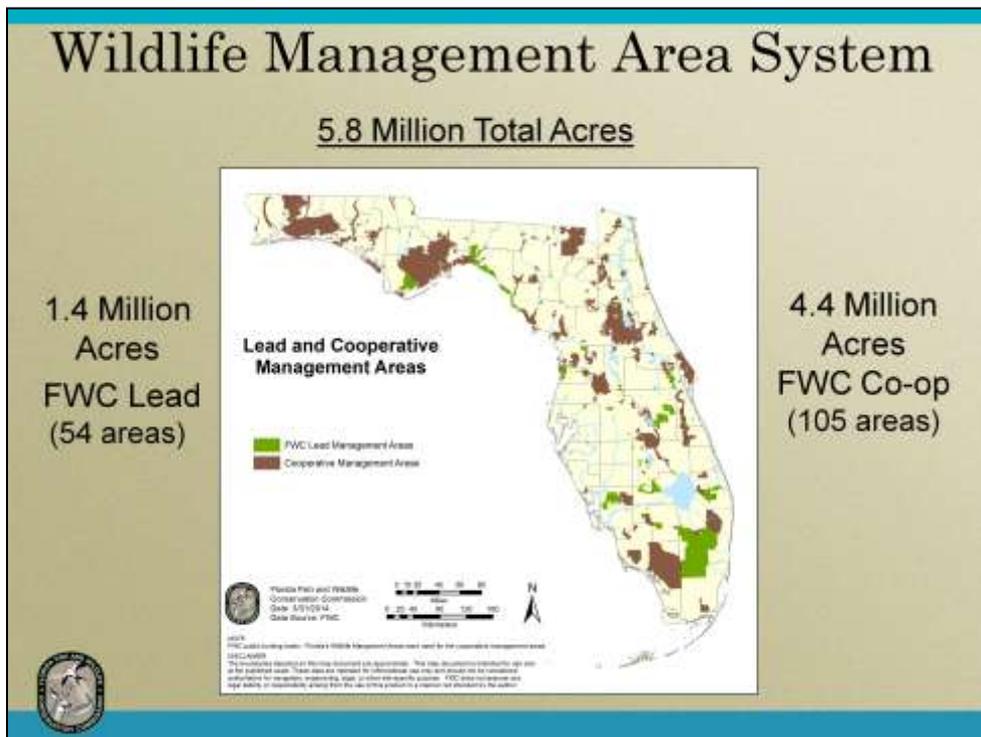
- **State = 5.4 million acres**

- Water Management Districts = 1.5 million acres
- FWC = 1.4 million acres
- Florida Forest Service = 1.0 million acres
- State Parks = 600,000 acres

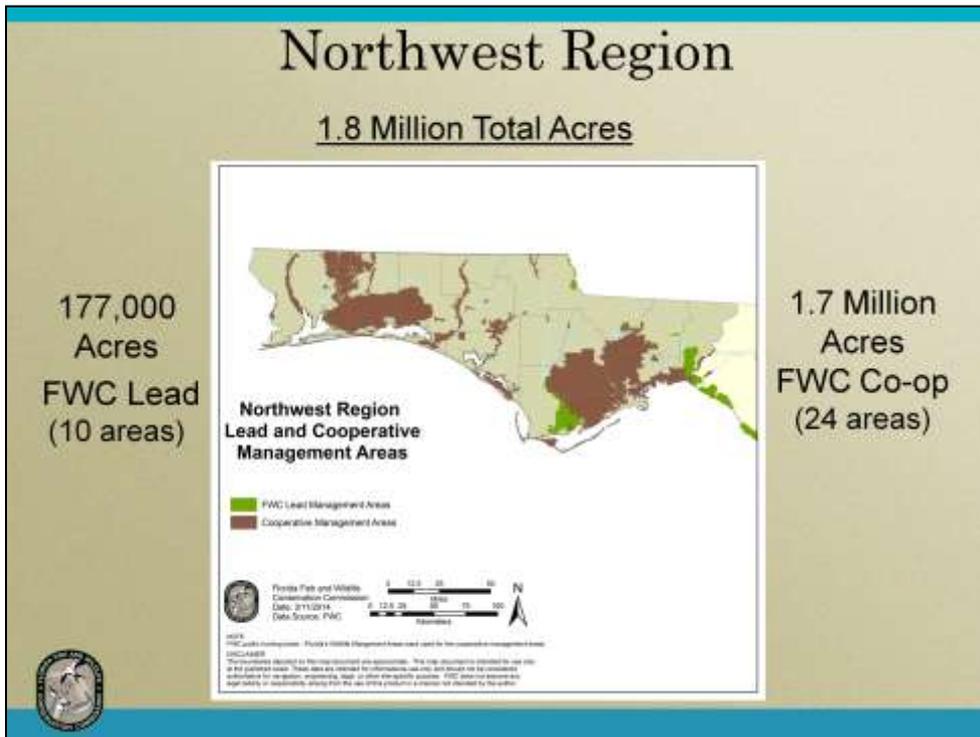
Total = 10 million acres
or
29% of Florida land area



- **Local = 480,000 acres**



The Wildlife Management Area (WMA) System consists of conservation lands that FWC is the lead manager on, meaning FWC either holds fee title to the property or Division of State Lands (DSL) has assigned FWC to be the lead managing agency for that property. A lead area manager is responsible for all aspects of land management on that property. In addition, the Wildlife Management Area System contains Co-op or cooperative management areas. These lands are owned or managed by other government agencies, water management districts, private industry, etc. They are the lead managing agency but are also cooperators in the WMA System. This presentation will explore the differences between FWC lead areas and Co-op areas.



The next series of slides will focus on a few Wildlife Management Areas in each of the five FWC administrative Regions.

Aucilla WMA



- Extensive Restoration of Industrial Pine to Natural Communities
- Florida Special Outstanding Waterways
- Over 300 Archeological Sites



Approximately 5000 acres of pine plantations will be converted to natural pine stands.

The Wacissa and Aucilla Rivers are both considered Florida Special Outstanding Waterways and provide unique access into the heart of this WMA.

Aucilla WMA contains a significant number of archeological sites that must be conserved and protected.

Apalachicola River WEA



- Highest Diversity of Herpetofauna in North America
- Extensive Natural Communities and Hydrology Restoration
- Expanding Population of RCW



With more than 1,300 plant species, 40 amphibian species, and 80 species of reptiles, the Apalachicola River basin is one of the most ecologically diverse areas in the United States and contains the highest diversity of herpetofauna in North America.

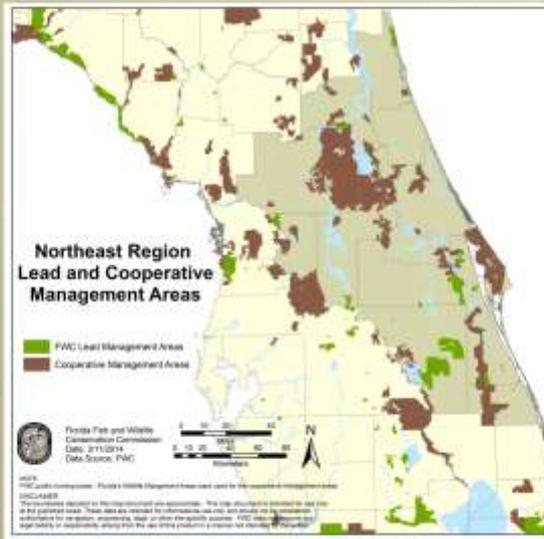
With a diverse array of natural communities historically occurring on this area a wide variety of restoration techniques including prescribed fire and hydrology restoration are being utilized to restore more than 60,000 acres.

Northeast Region

956,000 Total Acres

176,000
Acres
FWC Lead
(11 areas)

780,000
Acres
FWC Co-op
(23 areas)



Three Lakes WMA

- 22 Bald Eagle Nests
- 50 Active RCW Clusters
- 194 Active RCW Cavity Trees
- Florida Grasshopper Sparrows



Three Lakes is part of the highest concentration of bald eagle nests in the contiguous United States.

Three Lakes contains an expanding population of red-cockaded woodpeckers (RCW)

The [Florida Grasshopper Sparrow](#) is at the brink of extinction. At Three Lakes Wildlife Management Area in Osceola County in central Florida, the Florida Fish and Wildlife Conservation Commission is researching the sparrow with the goal of reversing its decline.

Guana River WMA



- 2300-acre Impoundment
- Waterfowl and Wading Birds
- Fishing, Crabbing
- Urban Encroachment



Guana River WMA's impoundment is managed for the benefit of waterfowl and wading birds. Nearly 3000-4000 migratory ducks, American coots, common moorhens, common gallinules, and pied-billed grebes winter at Guana Lake.

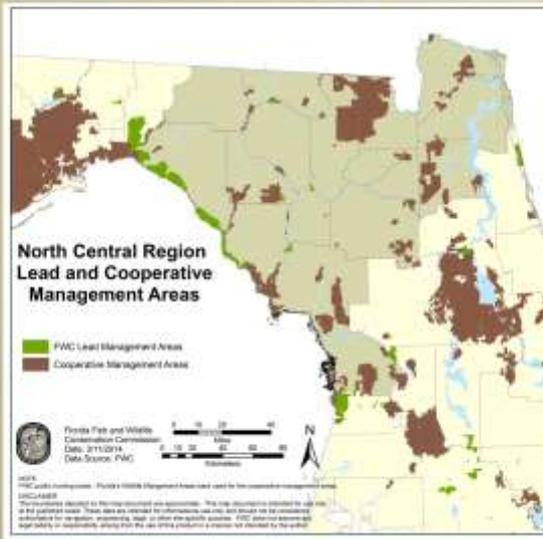
Guana Lake is also an extremely popular for fishing and crabbing.

The greatest challenge for management of this area is urban encroachment.

North Central Region

903,000 Total Acres

95,000
Acres
FWC Lead
(9 areas)



808,000
Acres
FWC Co-op
(36 areas)



Big Bend WMA Hickory Mound



- Waterfowl
- Wading Birds
- Hunting
- Crabbing
- Fishing
- Wildlife Viewing



One of five units that make up the Big Bend Wildlife Management Area. Hickory mound features a unique coastal impoundment that provides excellent waterfowl habitat.

Twin Rivers WMA Blue Spring Unit



- Florida Forest Service Area
- Bobwhite Quail Focus
- Bird Dog Training and Quail Hunting Only



Cooperative area with Florida Forest Service as lead agency.

Southwest Region

492,000 Total Acres

154,000
Acres
FWC Lead
(14 areas)

338,000
Acres
FWC Co-op
(14 areas)



Babcock-Webb WMA



- Bobwhite Quail is Hallmark Species
- Home to the Rare Bonneted Bat
- Popular Shooting Range
- Need to Restore Hydrology



The bobwhite quail is the hallmark species of the WMA. The area is an extremely important area to quail hunters. Over the years, FWC expended significant resources managing quail including research with the universities of Florida and Tennessee. FWC is currently working with Tall Timbers to study the effects on the scale of burn on quail numbers.

Babcock – Webb is also home to one of the rarest species in North America the Bonneted bat.

Webb also contains an extremely popular shooting range used by a significant number of the 320,000 visitors during the 2012-13 fiscal year.

Management challenges on Babcock-Webb include the need to restore the natural hydrology of the area

Chassahowitzka WMA



Extensive Sandhill
Restoration Benefiting
a Variety of Species
Including:

- Gopher Tortoise
- Fox Squirrel
- Bachman Sparrow
- Brown-headed Nuthatch
- Black Bear



Very good example of Sandhill restoration underway in uplands

Restoration and management for scrub-jays, Sherman's fox squirrel, and Florida black bear

Sustains a small population of bears

Largest hardwood swamp south of the Suwannee River

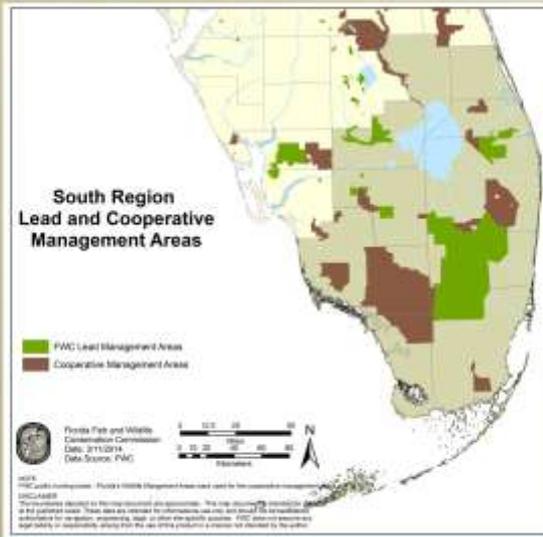
South Region

1.7 Million Total Acres

868,000
Acres
FWC Lead
(10 areas)

South Region
Lead and Cooperative
Management Areas

806,000
Acres
FWC Co-op
(8 areas)



Everglades WMA



- Largest WMA
- Everglades Restoration
- Tree Island Restoration
- Snail Kites



Over 671,000 acres

Extremely important part of the extensive Everglades restoration effort. Presents challenges in balancing management of hydrology and the natural Everglades ecosystem.

FWC expends significant resources on control of invasive plants and restoration of tree islands important to.

Endangered Snail Kite inhabits the Everglades WMA and is an important indicator of water quality.

J.W. Corbett WMA



- Established in 1947 With Pittman-Robertson Funds
- Very Popular for Hunting and Other Uses
- Extensive Hydrology Restoration



One of the oldest WMAs in Florida with the original purchase in 1947 utilizing Pittman-Robertson funds.

135,349 visitors in 2012-13

Recent actions by Commission will allow approximately 2300 acres of hydrology restoration

Biological Values of WMAs



WMAs:

- Contribute to conservation of biodiversity for thousands of plant and animal species
- Provide protection and conservation of imperiled species
- Provide and maintain ecosystem services, such as air filtration and water recharge

Florida is home to approximately 57 species of mammals, 503 birds, 55 amphibians, 89 reptiles, 142 freshwater fish, tens of thousands of invertebrates and 3,500 plants. Of these, at least 147 species or subspecies of vertebrates, 410 terrestrial and freshwater invertebrates, and 235 plants occur nowhere except Florida.

The Wildlife Conservation Prioritization and Recovery program (WCPR) is designed to identify and prioritize management activities for all imperiled and focal species with potential habitat on each WMA.

A study done by the Defenders of Wildlife found that the total annual value of the ecosystem services generated by ten conservation areas in Florida was estimated to be about \$1.8 billion/year. Defenders of Wildlife. 2008. A Preliminary Assessment of the Economic Benefits of Land Conservation in Florida.

Economic Value of WMAs



- **1.4 million trips by 2.9 million visitors to lead WMAs**
- **Annual Economic Benefit: \$462 million for lead areas; most important in rural communities**
- **Create and support 2900 jobs annually**



2.9 million visitors enjoyed hunting, fishing and numerous other wildlife centric recreation activities on our lead WMAs in fiscal year 2012-2013. Visitation is calculated using traffic counters and correction factors derived from a study of WMA visitors in 2010.

(*Economic benefits calculated using number of trips from counters and the Office of Public Access and Wildlife Viewing Services' Economic Impact formula using (2012-13 visitation of 1,437,796 trips))

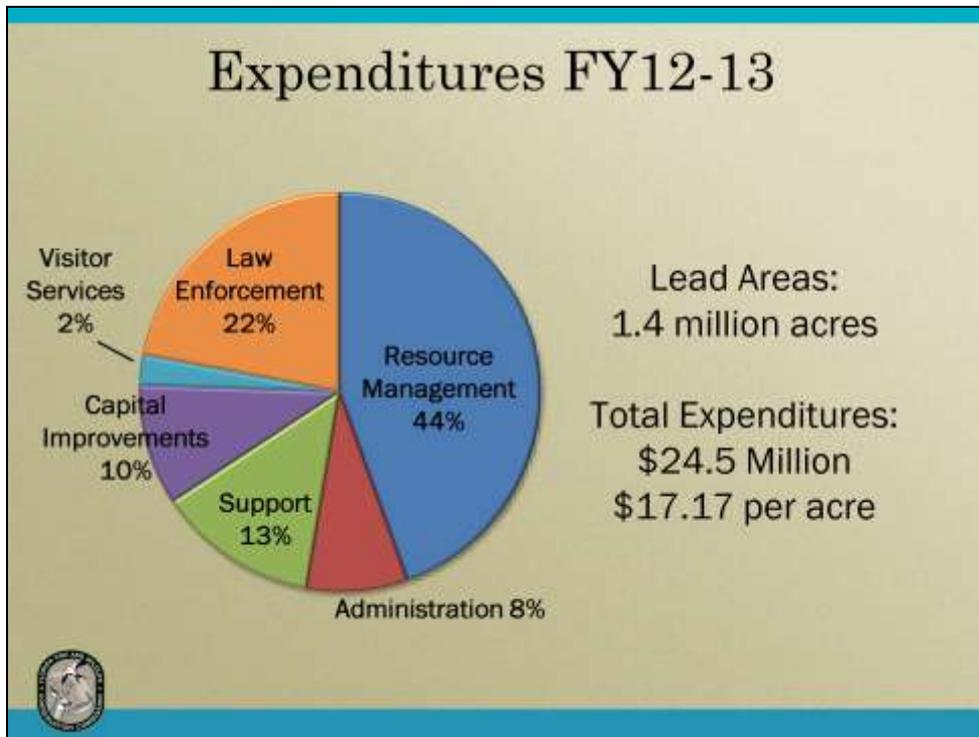
Social Values of WMAs



- Hunting
- Fishing
- Environmental Education
- Wildlife Viewing



Whether it is a solitary adventure or enjoying the outdoors with friends and family, Florida's WMA system offers numerous opportunities to experience nature and participate in wildlife centric recreation.



This pie chart reflects uniform cost accounting categories used by each agency so cost reports can be combined for

EXPENSE CATEGORY

Resource Management – Includes Exotic Species Control, Prescribed Burning, Cultural Resource Management, Timber Management, and Hydrological Management

Administration – Includes Operation of Central Office/Headquarters, Districts/Region Offices, WMA or Area Specific Offices

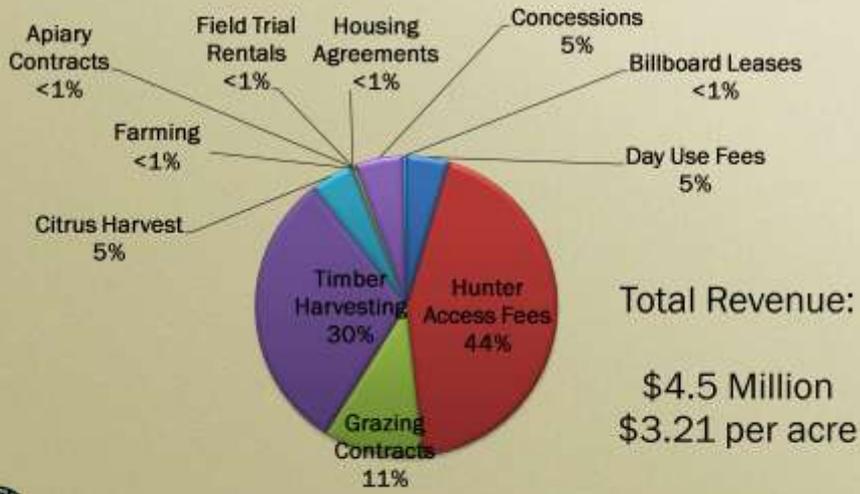
Support - Includes Land Management Planning, Land Management Reviews, Training/Staff Development, Vehicle Purchase, and Vehicle Operation & Maintenance

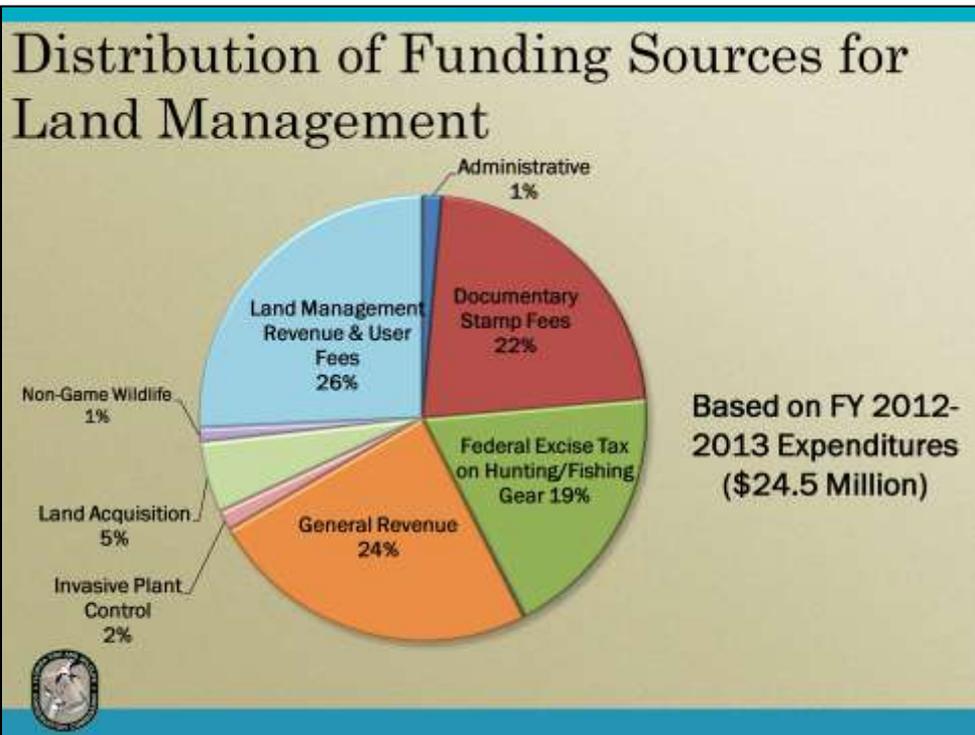
Capital Improvements - Includes All New Facility Construction and Facility Maintenance

Visitor Services/Recreation - Includes Information/Education Programs

Law Enforcement

Revenues FY12-13





The direct revenues generated from the land are just one important component in our land management funding structure.

We depend on a diverse array of funding sources including federal funds from the Federal Aid in Wildlife Restoration Program paid by hunters and anglers through excise taxes on guns, ammunition and other hunting supplies. We also rely on direct user fees such as WMA permits and hunting licenses. General revenue funding covers a portion of the cost for FWC law enforcement support on WMAs, and doc stamp funding is important to cover the costs of habitat management, public access, infrastructure and contracted services.

This diversity of funding sources helps us work through significant reductions in funding, particularly over the past several years. In addition, FWC has built in efficiencies and budgetary resilience by keeping staffing rates at low levels; using volunteer support and prison labor as much as possible; leveraging partnerships and in-kind support from other agencies; and leaning heavily on private sector contracting to accomplish many land management activities. This approach gives us the flexibility to adjust management priorities and workloads relative to fluctuating funding levels. Other ways we have addressed reductions in funding include delaying replacement of vehicles and equipment; extending timelines for maintenance of roads, and fences; delaying habitat restoration projects; and pursuing grant funding to accomplish priority management actions.

Staffing and Capacity

Wildlife and Habitat Management Section

- **Total Staff = 179**
 - Administration = 5
 - Conservation and Planning = 6
 - Regional Field Staff= 164
 - Statewide Programs = 4
- **Contractors = \$7.3 million (173 man years)**
- **Volunteers = 21,857 hours (12 man years)**
- **Inmate Labor**



Staffing numbers refer to WMA biologists and technicians and their administrative and support staff within the Wildlife and Habitat Management Section. WMA staff often work across the many FWC Divisions and Sections. The most significant contributors to the management of the WMAs Division of Law Enforcement, Office of Public Access and Wildlife Viewing, and Division of Hunting and Game Management.

Vital WMA Cooperators

- 4.4 million acres
- FWC expends \$28.6 million
- \$6.65 per acre



WMA cooperators significantly increase FWC's capacity to provide hunting and fishing opportunities to the public. In addition, as part of the WMA system FWC can provide technical assistance and influence concerning wildlife habitat management.

Cooperative Partners

- **Federal:** Fish & Wildlife Service, Forest Service, Department of Defense, Corps of Engineers, National Park Service
- **State:** Dept of Environmental Protection, DACS Florida Forest Service, Water Management Districts, Armory Board, Dept. of Corrections, PRIDE
- **Other:** Miccosukee Tribe, Plum Creek, Rayonier, Potash, Cities and Counties



We have over 20 cooperators in the WMA system.

Land Acquisition and Planning

- Florida Forever Program is acquisition funding source
- Florida Department of Environmental Protection (DEP) leads acquisition program
- State land managing agencies assigned management authority by DEP
- Management funding is allocated based on distribution formula



Florida Forever Act governs acquisition process and distribution of funding.

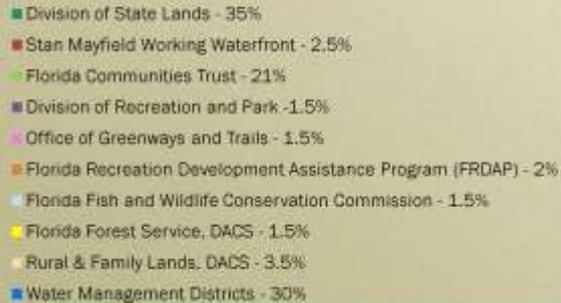
Florida Forever Program Funding

- Under the Florida Forever Act, FWC may receive up to \$4.5 million annually to acquire inholdings and additions



- In 2010, funding was \$225,000

- No funding since 2010



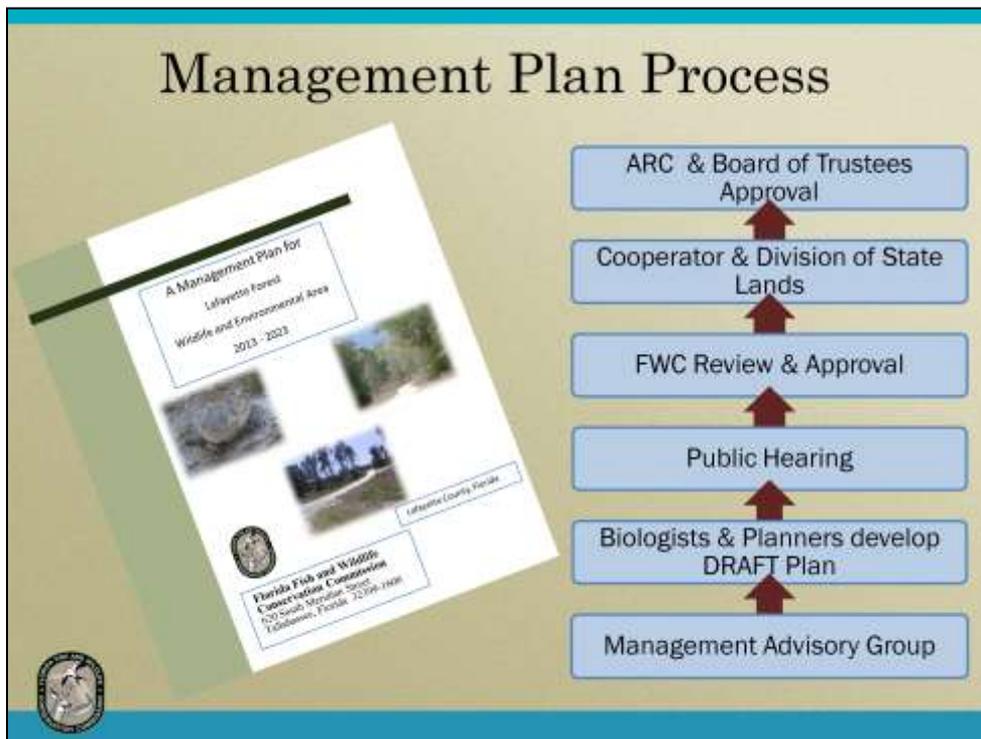
This slide provides an overview of the specific allocation/distribution of Florida Forever funds. The FWC Additions and Inholding program receives 1.5%, or \$4.5 million annually when fully appropriated.

Acquisition and Restoration Council (ARC)

- 11 member board to oversee state land management in Florida
- Development, review, and approval of acquisition proposals
- Identify appropriate management lead for acquisition projects
- Prioritization of Florida Forever projects and list
- Review management plans and land uses
- Administration of state conservation land management issues
 - Conservation land exchange proposals
 - Proposed uses on state conservation lands
 - Incompatible use issues
 - Proposals to surplus



As a member of the Acquisition and Restoration Council (ARC), FWC has a vital role in the administration of state-owned lands



Each WMA has a 10 year Management Plan that guides the management for the area. The vertical process outlines the various steps and entities involved in development and approval of the plan. The initial step in the Management Plan process is the convening of the Management Advisory Group or MAG. Use of the MAG and it's participants is outlined in the Florida Forever legislation. This group is made up of representatives from other land managing agencies, WMA users groups such as hunters and fishermen, equestrians, etc., as well city and county officials. The MAG helps formulate ideas for the Management Plan. The process continues with public hearings and a variety of reviews along the way to ultimate approval by ARC and the Board of Trustees. Legislatively mandated land management reviews are conducted every 5 years to ensure compliance with plan.



Three primary areas of management on the WMAs.

Management Challenges

Social

- Incompatible uses
- Urban interface issues
- Public perceptions
- Human/ wildlife conflicts
- User groups needs/wants

Biological

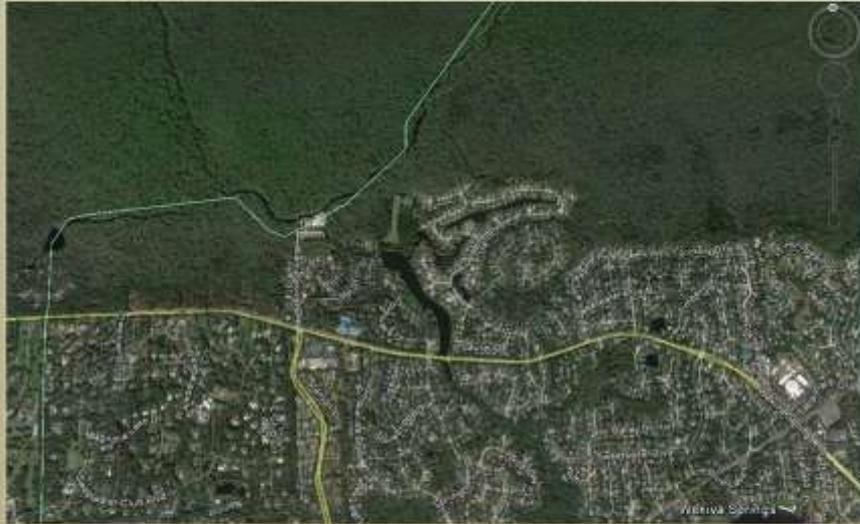
- Habitat loss and fragmentation
- Exotic species
- Restoration of altered systems

* *Conflicting missions of cooperative managing agencies can present challenges from both the biological and the social perspective*



Each WMA is different and may have a unique set of management challenges, however, this list is common to many of the WMAs now or will soon be in the future.

Wildland/Urban Interface



Wekiva Springs
Google earth



Multitude of challenges are caused by urban encroachment on our WMAs.

Invasive Plants

Before Treatment



After Treatment



Old World Climbing Fern



Invasive plant control is one of the most costly challenges faced by WMA managers. Last fiscal year over \$2.6 million were spent on control efforts on.

Wildlife Habitat Restoration and Management



Our wildlife habitat restoration and management efforts are focused on providing the best available habitat for the appropriate wildlife species. These efforts are carried out in a variety of ways including prescribed burning, various mechanical treatments, invasive plant control, and timber management. Adaptive management is utilized with monitoring of our efforts measuring outcomes (Objective Based Vegetation Management (OBVM)) of our habitat treatments instead of just outputs.

Prescribed Fire



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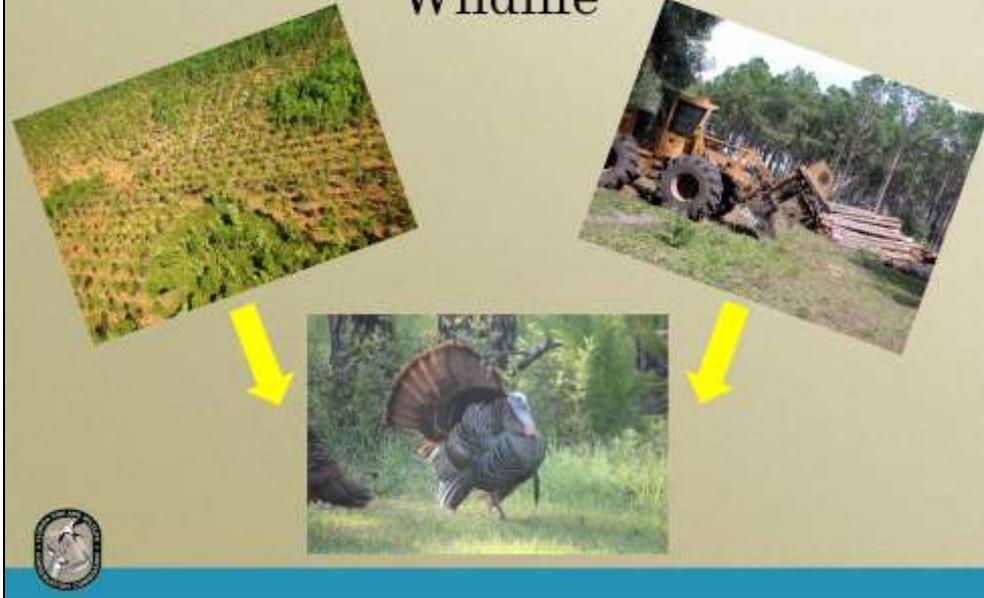


Primary Objective: Improve Wildlife Habitat



Prescribed fire is the most common tool used to restore and manage wildlife habitats.

Managing Timber Resources for Wildlife



FWC manages forest resources to improve habitat for a variety of wildlife species. FWC uses both the Florida Forest Service (FFS) and private sector forestry consultants to handle timber sale contracts. FWC develops the harvest goals based on wildlife habitat needs and either FFS or private consultants administers the sales

Habitat Restoration

- Hydrology
- Invasive Plants Treatment
- Mowing/Chipping
- Roller-chopping
- Groundcover Restoration



For those lands that are in need of habitat restoration we often cannot use fire to begin the restoration process. In those situations it is often necessary to use some type of mechanical treatment to manipulate vegetation so fire can be used. To fully restore many of the habitats on WMAs hydrology restoration must be conducted. Restoring historical flows and distribution is often the key to successfully completing habitat restoration. Hydrology restoration is often complicated by the fact that WMA managers have no control over the outside influences on hydrology. In addition, any hydrology restoration must consider its affect on the WMA adjacent land owners.

Wildlife Monitoring and Management



Wildlife population monitoring and management is designed to:

- Ensure wildlife populations are responding positively to our management efforts
- Are healthy and robust
- Harvest Regulation
- Provide species specific needs to ensure the increase or maintenance of wildlife populations

Fish and Wildlife Populations

- Sustainable Management
- Monitor for Disease and Parasites
- Harvest Regulations
- Hunting and Fishing Opportunities



WMA staff provide data and work with Division of Hunting and Game Management to establish hunting seasons and harvest recommendations. In addition WMA staff collect and provide wildlife disease information to the Fish and Wildlife Research Institute.

Imperiled and Nongame Species



WMAs are managed for the benefit of game and nongame species alike. Programs like the Wildlife Conservation Prioritization and Recovery program are designed to ensure that management efforts are beneficial and not detrimental to the numerous and various wildlife species that reside within the WMA system

Common Uses of Wildlife Management Areas

- Hunting
- Hiking
- Camping
- Bird watching
- Geo Caching
- Environmental Education



- Fishing
- Biking
- Equestrian
- Paddling
- Photography
- Orienteering

2.9 million visitors to lead areas, 2012-2013



The Wildlife Management Area system offers a diverse assemblage of forest and landscape experiences that are becoming increasingly scarce as the state becomes more urbanized. Dispersed recreation is low intensity activities that can occur through out the entire area like bird watching, hunting, hiking and nature appreciation which do not require developed facilities.

Infrastructure Maintenance



- 1800 miles of roads
- 558 miles of trails
- Facilities occupying 1,790 ac



Although WMAs are much less developed than state parks maintenance of the infrastructure is critical to provide safe access to the public.

Cooperative WMAs

- Provide wildlife habitat management technical assistance
- Monitor game species populations
- Collect biological data at check stations
- May establish food plots and dove fields
- Manage imperiled species
- Assist with land management activities such as burning



FWC provides a wide variety of services to cooperating agencies and landowners depending on the cooperator's goals and desires along with available resources in FWC.

Some cooperators are only interested in providing public hunting and FWC establishes the area, post boundary signs, set regulations and provide law enforcement.

The other end of the spectrum, two agencies provide funding for FTEs and management where FWC handles all wildlife management activities and recreation.

WMA's Greatest Needs

- Overcome Challenges to Use of Prescribed Fire
- Innovate Ways to Balance Use of WMAs
- Increased Invasive Plant Control
- Balancing Hydrology Concerns
- Overcome an Aging Equipment/Infrastructure



Private Lands



Thank You!

