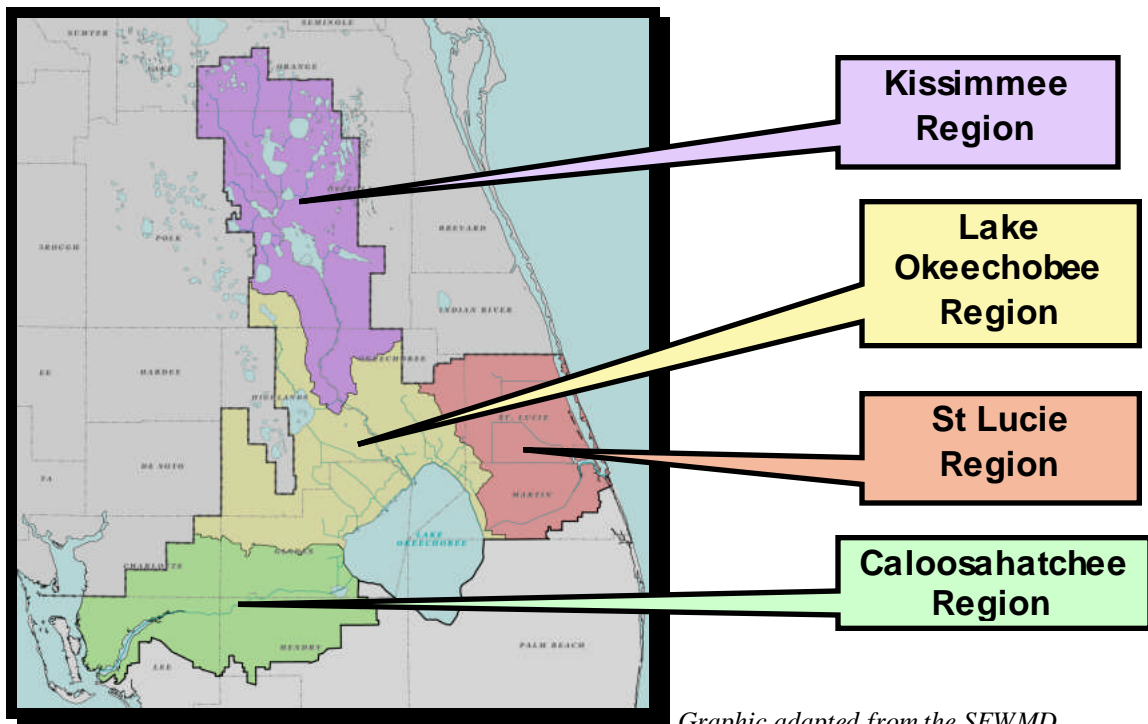


Florida's Working Landscapes - Will They Be Around In The Future? Evolving Tools Can Assist In Their Conservation

Farming and ranching are in the blood of the families and individuals that work the land. Through difficult times Florida's farmers and ranchers have been working hard to compete in the modern world, survive and pass their economy and culture along to the following generation. For years, the spiraling cost of land combined with an aging farmer population, among other factors, have led many large Florida farms and ranches to be eyed more for their potential development value than farming value. Future nodes of development, towns and even new cities were being negotiated out of the whole cloth of Florida's limited and precious working ranch and farm landscapes and new projects were arising as endless suburban expansion, retirement communities or as new boutique towns on a ranch-by-ranch approach (without a diversified underlying economic base).

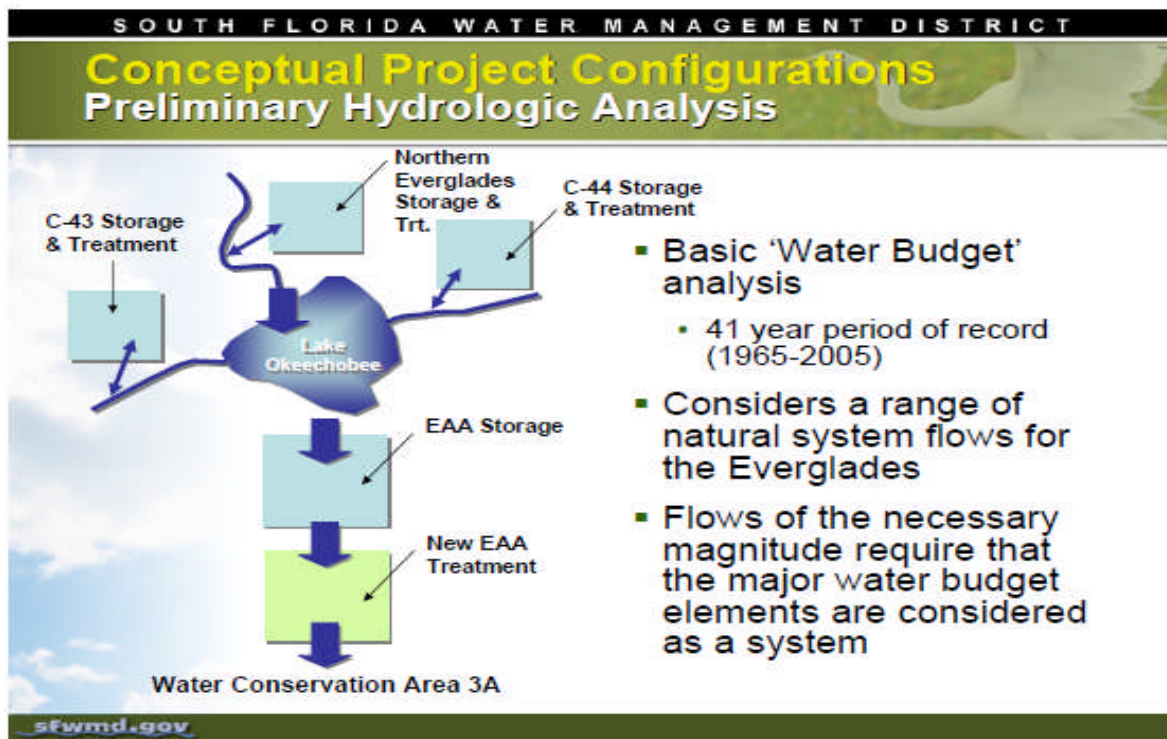
The pressures to develop were so real and extreme that many agricultural operations were being approached by land use attorneys and speculators looking to broker deals to convert rural agricultural lands into urban developments. Then the bottom dropped out of the financial and real estate market and many investor driven projects tumbled in value and bloated expectations of Florida's rural lands faltered. Nevertheless out of tough times innovation often follows. To help sustain Florida's working rural landscapes and the diverse ecosystems they contain, a variety of new tools are being used. Nowhere is the exploration of new tools more apparent than in south Florida and in the Northern Everglades basin between Orlando and Lake Okeechobee.

Northern Everglades



Graphic adapted from the SFWMD

For these areas, the changing economic circumstances of the past few years may be fostering recognition of the high value of rural land for rural enterprises, rural culture, natural wildlife conservation opportunities and ecosystem services inherent to these landscapes. Further, within this Northern Everglades area, water storage, attenuation and nutrient control objectives [clearly outlined in the [Comprehensive Everglades Restoration Program \(CERP\)](#) and the Lake Okeechobee Protection Plan (LOPP)] may be more economically achievable, multipurpose and beneficial to all stakeholders following these new conservation approaches.



The new approaches move in the direction of utilizing the inherent water storage, attenuation and treatment potential of the Northern Everglades landscape as a means to achieve the ecological goals of Everglades/Okeechobee restoration. For instance, in 2004 the U.S. Fish and Wildlife Service estimated a 65 percent loss of wetland acreage had occurred overtime within the Northern Everglades causing a loss or reduction of much of it seasonal wetland habitat. They proposed a minimum of 90,000 acres could be restored to meet the ecological goals of CERP. Further analysis by [The Nature Conservancy](#) estimated that nearly one million acres of restorable wetlands occur on public and private lands in the Northern Everglades, representing a tremendous opportunity to pursue which could recapture the ecological services they once provided. (Adapted from *Large-Scale Conservation Opportunities in the Fisheating Creek Basin of Highlands County, Florida*, TNC, February 2010 and, *The Northern Everglades: One of Florida's Last Great Places*, TNC, A white paper, 2009). Below is a look at some of the evolving tools and discussion of where and how they may be put to use along with short primer boxes of important terms and concepts.

Background - For generations the ecosystem services provided by a natural landscape were viewed as free-for-the-taking and open to major manipulation. The monetary value of the watershed or basin ecosystem services was not easily figured or bankable quantities for landowners – instead, their concerns were more parochial – remove water, wetlands and extend ranchable land. As the population grew and area’s natural ecosystem services were being lost, undervalued or restructured for localized land management purposes, the connection between the land and natural services provided (and the loss or lessening of these services) was becoming evermore apparent. The costs to replace natural ecosystem services were being found to be extremely high and often were being addressed with industrially large, complex engineered systems - paid for through increased taxing, special district creation and special public works appropriations from the US government or state legislature.

These engineered systems were often efficient single purpose solutions to one group of issues that often did not capture and bring along the larger complement of natural ecosystem services that the native lands provided. For example, in South Florida the vast system of large managed canals and an equally large network of landowner dug ditches and smaller canals developed to drain water off the land represent such an efficient single purpose solution. Land was being drained for farming and ranching, but the land’s water storage, attenuation and nutrient reduction capacities were reduced or lost along with much of the original wildlife habitat.

In the largest south Florida system, the Everglades (from Reedy Creek in Orange County to Florida Bay in Monroe and Collier Counties), upstream ranchers or landowners experienced several generations of governmental encouragement and cost-share that *did not* as extensively encourage landowners to provide or maintain ecological service inherent to their land. Benefits to landowners for onsite retention of broad environmental services on the working lands were less appreciated, understood and not an economic priority of the working landscape.

Through the 1940’s to the 1970s the overall south Florida human population favored this system and the natural complex Everglades system was reduced to a number of compartmentalized agricultural managed systems, bermed water conservation areas with the remaining low land natural lands at the end of the train. As the area grew from essentially a low populated frontier to a highly populated portion of the US (especially along the coastal lands) the priorities were changing and the loss of various environmental services on working agricultural and ranching lands was taking a more noticeable toll on important Everglades’ system resources.

Ecosystem Services - An ecosystem is a biological environment consisting of all the organisms living in a particular area, as well as all the nonliving, physical components of the environment with which the organisms interact, such as air, soil, water, and sunlight. It includes human working rural lands and developed areas. Ecosystem services are the benefits people obtain from [ecosystems](#). They are components of nature, directly enjoyed, consumed, or used to yield human well-being. Examples of services include:

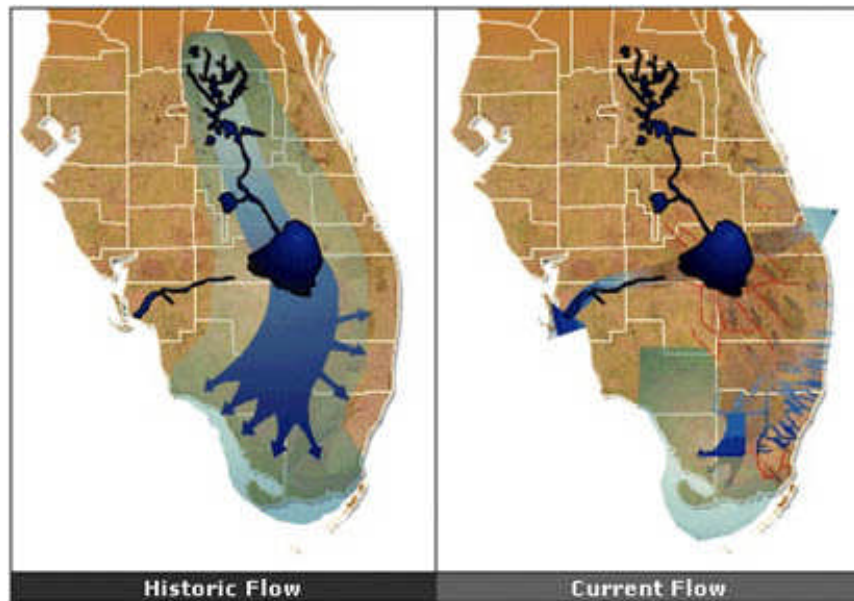
- regulating (climate, floods, nutrient balance, water filtration)
- provisioning (food, medicine, fur)
- cultural (science, spiritual, ceremonial, recreation, aesthetic)
- supporting (nutrient cycling, photosynthesis, soil formation).
- Ecosystem services naturally provided by areas can range from protecting from flooding, offering pollution control to providing natural “air conditioning” and local climate controls (see www.floridahabitat.org/wildlife-manual/wildlife-friendly-communities for a more thorough description). They are often inherent in the natural landscape and often undervalued and subject to loss or degradation.

Payments for Ecosystem Services (PES), also known as Payments for Environmental Services (or Benefits) broadly defined, is the practice of offering incentives to farmers, ranchers or landowners in exchange for managing their land to provide or maintain ecological service. These programs promote the conservation of natural resources in the marketplace and can help rural landowners have another source of income to maintain their properties through good production years or bad. PES programs are voluntary and mutually beneficial contracts between consumers of ecosystem services and the suppliers of these services. The landowner holds the property rights over an environmental good that provides a flow of benefits to the demanding party in return for some monetary compensation. The consumers of the ecosystem services are willing to offer to the service providers a payment that is greater than the cost of providing the services.

“Distributed” or “Dispersed” Water Management - Describe landscape-level water management methods typically consisting of new or revamped water control structures in existing ditches and canals that are currently over-draining the landscape. “Dispersed” water management potentially can store and treat more water on private working lands at much lower cost than sole reliance on large publically funded off-property engineered systems such as reservoirs, massive pump stations and drainage canals. “Dispersed” Water Management is a managed system of smaller dispersed structures within a defined landscape that can restore the hydroperiod of previously drained wetlands, elevate ground water tables to take advantage of storage capacity in aquifers impacted by drainage, and create shallow agricultural impoundments to manage water and re-create wetlands.

Dispersed water management contrasts with the construction of large-scale reservoirs or conventional stormwater treatment areas (STAs) in that the components are much smaller, more numerous, and do not require the permanent acquisition of land to build large public works projects. Dispersed water management can compliment and enhance performance of regional facilities necessary under programs such as CERP. Dispersed water management instead requires a managed and monitored landscape with smaller water control features linked to a system of payments for ecosystem services, or acquisition conservation easements and provision of technical assistance to landowners in exchange for managing their private land (can be on public lands too) to provide or maintain multiple desired ecological services.

Throughout south Florida and the Northern Everglades “the ecological and hydrological disruption caused by widespread ditching, draining and diking is now recognized as causing numerous detrimental effects within the watershed, particularly to the wildlife, natural communities, and humans that all depend upon a steady and seasonally predictable flow of freshwater through the system. The quantity, quality, timing and pattern of flow of this freshwater supply are paramount to the economy and well-being of the millions of residents living in South Florida and is also crucial to the continuation of the highly productive agricultural industry long established in the region” (adapted from *Large-Scale Conservation Opportunities in the Fisheating Creek Basin of Highlands County, Florida*, TNC, February 2010).



Graphic from the SFWMD

The challenge moving forward is for landowners and established land and water management providers such as the South Florida Water Management (SFWMD), the agricultural extension services (state and federal), and involved conservation-minded nonprofits (NGOs) to develop landscape-wide, well monitored distributed water management networks that renew lost and damaged wildlife habitats, soils, waters and working rural lands. It is a complex challenge that to be successful and sustained must fulfill multiple ecosystem services for the intertwined needs of our rural and urban areas.

New or Revamped Tools

Tool 1) Payments for Environmental Services (or Benefits) through Dispersed Water Management

In Florida, through the [Florida Ranchlands Environmental Services Project \(FRESP, a pilot project\)](#) and now part of SFWMD's and other state agencies evolving efforts there are payments for environmental services to agricultural owners for retaining and/or accepting water for storage and nutrient reduction. This new approach provides incentives for landowners to keep their property in low-intensity agriculture from utilization of service payments. The current approach is based on the premise that landowners know their land best and what they would be willing to do to retain water on their properties in consideration of their existing ranching or agricultural operations. The challenge is to establish a sustained program that provides a clear articulation of the services that are desired, financial incentives that are attractive and, a transparent and competitive process for selecting proposals from willing landowners that best provide the services wanted.

Presently, the selection criteria for rancher proposals for providing services include cost-effectiveness (e.g. \$/acre feet of water retention), but other criteria can be added that reflect preferences by the buyer, most logically the South Florida Water Management District in collaboration with other state agencies. In its most recent budget, SFWMD has decided to essentially double the financial backing for the PES effort, and has embarked upon a solicitation "Request for Proposals" driven program to be implemented in 2010-11.

In the initial FRESP pilot, multiple projects have demonstrated the usefulness of providing much-needed water retention and phosphorus reduction services upstream of Lake Okeechobee on the lands of multiple ranches by using new and existing equipment and features— (e.g., canals and ditches, berms, and water control structures) —to retain water, rehydrate wetlands, and reduce phosphorus loads. The program focuses on restoring and using the natural "benefits" of the land to hold and attenuate waters and reduce nutrient loads. It is distributive in nature, meaning that the land from multiple farms and ranches across a watershed landscape are involved to achieve program aims.

To get the ball rolling [FRESP pilot program partners](#) gathered over \$6 million dollars for the design and field-testing phases. Funding was provided by: two Conservation Innovation Grants from the USDA NRCS; the South Florida Water Management District; Florida Department of Agriculture and Consumer Services; the U.S. Environmental Protection Agency; and the W. K. Kellogg Foundation. With these funds FRESP has implemented 8 [pilot projects](#) that are examples of dispersed water management that provide water related environmental services such as:

- restoring previously drained wetlands and increasing habitat rejuvenation,
- managing pasture drainage to increase water retention,
- pumping water from regional canals into a "detention area" for natural nutrient removal and,

- building agricultural impoundments to store more water on ranches.

Pilot Project Sites

Water Management Alternative (WMA) projects are now operating at the eight ranches in the Northern Everglades. Four were constructed and operational in 2007, and an additional four were constructed and operational by early 2010. These pilots contributed to the development of the NE-PES program so that PES projects can evolve through careful soliciting of landowners and monitoring of desired environmental benefits both locally and within a more regional context. To grow the effort will require a “staging/scaling-up” of the program and sufficient funding to engage more landowners. Concurrently, the SFWMD will need to work to monitor, analyze and manage a growing distributive network over the larger basin landscape and assure ecosystem services management aims are being met and that no adverse impacts are occurring to adjacent or downstream property owners from excessive water management or nutrient buildups.

The PES program achieves two important goals. It complements other public investments by adding distributed network capacity for water retention, attenuation, storage and phosphorus removal. At the same time, it contributes to ranch economic sustainability by providing another source of income for ranchers, helping them to increase their profitability. It helps keep ranchland from being converted to more intensive uses that could have adverse impacts on water quality and wildlife. Prospectively, a permanent PES program with directed SFWMD involvement in the Northern Everglades will engage and pay eligible cattle ranchers to provide documented water and phosphorus retention on their private lands using fixed, long-term contracts.

SFWMD PES Projects Strategies Are Moving Forward

District’s Payment for Environmental Services Model Program

- Solicitation
- Service Payment Approach
- “Above And Beyond” Baseline
- Wetland Expansion
- Threatened and Endangered Species Consultation Key
- Standard Technical Assessment
- Separate pilot project for more intensive agriculture

In 2010 the SFWMD funded a new program, the Northern Everglades-PES program that is designed based on FRESP.. This PES solicitation “Request for Proposals” Program is funded by an increase in the SFWMD budget to \$8.8 million in the upcoming fiscal year.

From: [Dispersed Water Management & Treatment, NE Interagency Team Meeting, PowerPoint, South Florida Water Management District, July 23, 2010](#). Benita Whalen, P.E. and Jesse Markle, P.E...

Dispersed Water Management

Dispersed water management programs focus on restoring and using the natural “benefits” of the land to hold or attenuate water and reduce nutrient loads. It is distributive in nature, meaning that multiple farms and ranches across a watershed landscape can be involved to achieve program aims. Years of drainage by ranchers has resulted in literally thousands of miles of privately constructed canals and ditches in the greater upper Everglades watershed. Construction of most of these canals and ditches was primarily for the localized expediency to drain water away. Few have any water control structures and no systematic management to achieve basin water management or nutrient reduction goals.

The basic evolving program is the *systematic* retrofit of canals and ditches on private ranch and farm lands with small water control structures to take advantage of opportunities to hold higher water levels (within the surficial aquifer, wetlands and water bodies) further up stream in the watershed. To be effective over multiple watersheds within a larger basin, the dispersed storage and treatment network requires a new level of monitoring, analysis, technical assistance and cost sharing among management entities such as the SFWMD, state federal agencies, NGOs and landowners.

In the pilot projects and the evolving SFWMD effort, grants and some District funding have furthered program development and the technical assistance provided through NGOs such as the World Wildlife Fund (WWF). As the program matures it is clear that NGOs do not have the capacity to be responsible for funding, building, maintaining or monitoring these water management efforts on private lands reliant on their resources. Water management responsibilities are the District’s prerogative and sustained funding and program development is likely needed through their authorities. As noted by Sarah Lynch of the WWF the grant funding was “great for pilot projects, developing tools and innovative approaches, but to get 400,000 acre feet of retention you need a long term funding source.”

Since 2005, the South Florida Water Management District has been working with a coalition of other agencies, environmental organizations, ranchers and researchers to enhance opportunities for dispersed water management in the Northern Everglades. The following benefits are foreseen:

- Ongoing Lake Okeechobee and estuary ecological improvement projects are enhanced by providing an alternative to storing water in the lake and reducing the volume of discharges to estuaries and coasts (helping the ecological health of these estuaries).
- Restoring the hydro-period and ecological health of previously drained wetlands, ponds and creeks.
- Storing or attenuating water and providing added landscape-based nutrient removal to improve water quality. The actions provide natural chemical and biological uptake and resolution of nutrient loads.
- Expanding groundwater recharge opportunities by marginally elevating surficial groundwater tables to take advantage of the in-ground storage capacity impacted

by years of drainage (such in-ground storage lessens the need for large expensive above ground reservoirs).

- Restoring and improving habitats for native plants and wildlife and offering the opportunity to strengthen wildlife connection corridors.

Currently, the SFWMD reports there are more than 30 participating landowners providing water retention and/or storage ranging from 1 acre-foot to 10,000 acre-feet. This total includes more than 47,700 acre-feet provided by long-term Kissimmee River Floodplain Restoration efforts that have been in progress for years. To put this in perspective, 450,000 acre-feet of storage equates to approximately 1 foot of water off of Lake Okeechobee. SFWMD planned projects that have been assessed for implementation may provide approximately 366,700 acre-feet of additional storage in the future, pending funding. Additional acre-feet of storage is likely possible as the SFWMD continues to work with public, private and tribal property owners to expand the dispersed water management network.



A portion of the Kissimmee River restoration project putting the meanders and oxbows back to work. Graphic from the SFWMD

The SFWMD continues to make good strides and their dispersed water management network continues to evolve. Overtime this distributive approach will require growth in District funding, management, coordination and integration to “mainline” program status. Nevertheless, enough is known now to get started without waiting for completion of a definitive dispersed water management plan for the Northern Everglades. What is working quite well for the present is an SFWMD adaptive implementation process whereby the District is learning by moving the program forward making adjustments overtime in response to data received from careful project monitoring and watershed analyses of implementation results and impacts. Progressive increase of involved farms and ranches and their integration to an expanding network will evolve a more fine-grained and carefully managed distributive water storage and treatment system meeting Northern Everglades' management plan objectives.

Conservation organizations such as Audubon of Florida and 1000 Friends of Florida propose that the SFWMD quickly ramp-up the dispersed water management PES and cost share programs to increase water storage and nutrient reduction in the greater Northern Everglades (and possibly elsewhere). Audubon has detailed a program

investment strategy. These are exciting but complex recommendations that suggest growth, reorientation and some institutional changes within the SFWMD's normal operational mode.

Recommendations to grow the PES and dispersed water management program are:

- *The SFWMD needs to modify its approach in the Okeechobee tributary areas and amend the LOPP to recognize the benefits and increase the effort of dispersed water management facilities constructed in cooperation with private (and in some cases public) landowners through use of a PES program. Northern Everglades Legislation requires that the Lake Okeechobee Protection Plan (LOPP), be revised. The plan now provides that "...the majority of the (phosphorus) load reductions are proposed to be met through the regional solutions contained in the CERP Lake Okeechobee Watershed Project (LOWP)". In other words, the current LOPP relies largely upon construction of large reservoirs and STAs, generally north of the lake.*
- *The priorities of a significant part of the District staff and resources currently utilized to plan, design, and eventually supervise the construction of large centralized reservoirs and STAs in Okeechobee tributary areas should be changed. Permanent staffing and funding emphasis should be placed on planning, design and implementation of an integrated Northern Everglades distributed water management network, carrying out cooperative projects with landowners and establishment of the science and long-term monitoring apparatus necessary to efficiently manage such a network.*

To grow the program in this direction more District staff and fiscal resources should be utilized to pursue the following efforts:

- *Proactively identify an expanded group of landowners willing to commit to participation in distributed storage projects. Facilitate the widespread implementation of projects on those lands as on an expedited basis as willing landowners are identified.*
- *Increase dedicated funding and support for the "Payment for Environmental Services Program" and expand District's collaborative efforts with non-governmental organizations to support NRCS Wetland Reserve (easement-based) projects that may be configured to produce distributed storage benefits.*
- *Implement a detailed drainage ditch and canal mapping effort using advanced methods such as airborne laser profiling (LIDAR) to inventory the spatial distribution and conveyance capacity of canals and ditches in the Okeechobee tributary basins which are not part of the SFWMD publicly managed system but drain water to it. This is expensive and like planning for large STA's and reservoirs requires SFWMD program commitments and sustained funding.*
- *Implement program components through the District and/or NGO collaborators to build and maintain distributed storage and water quality improvement projects throughout the tributary basins. Enough is known*

now to get started without waiting for completion of a grand centralized distributive water management plan. Implementation programs can be adapted to varied landowner and water manager preferences:

(a) A program to provide specifications for results (such as acre feet of water stored, or pounds of phosphorus removed) to be achieved by landowners through landowner constructed and maintained structures in exchange for payment for environmental services.

(b) A program for District installed and maintained structures at District expense on private lands in conjunction with negotiated easements and contracts with payment to landowners in either a lump sum or on an annual basis.

(c) A program identical to (b) above but configured to install water control structures in ditches and canals on existing public land holdings to achieve distributed/dispersed storage and water management benefits.

- *Initiate a comprehensive engineering study and hydrologic model development to identify optimum locations for a large number of small water control structures, and low level impoundments throughout the basin.* The outcome of the engineering study and modeling would be determinations on a basin-wide and sub-basin level about the practical capacity for water retention/detention and storage in acre-feet as well as the practical capacity for nutrient removal linked to Okeechobee TMDL goals through distributed storage and water management projects.
- *The District should undertake a coordinated effort to develop and implement additional funding mechanisms for a watershed wide program of distributed storage and treatment.* This would include using both untapped funding mechanisms within existing legal authority, and seeking new funding through legislation. The goal should be to launch a collaborative effort with landowner interests, the Florida Department of Agriculture and Consumer Services, Agriculture advocacy groups such as the Florida Farm Bureau, Florida Cattleman's Association, and NGO conservation organizations.

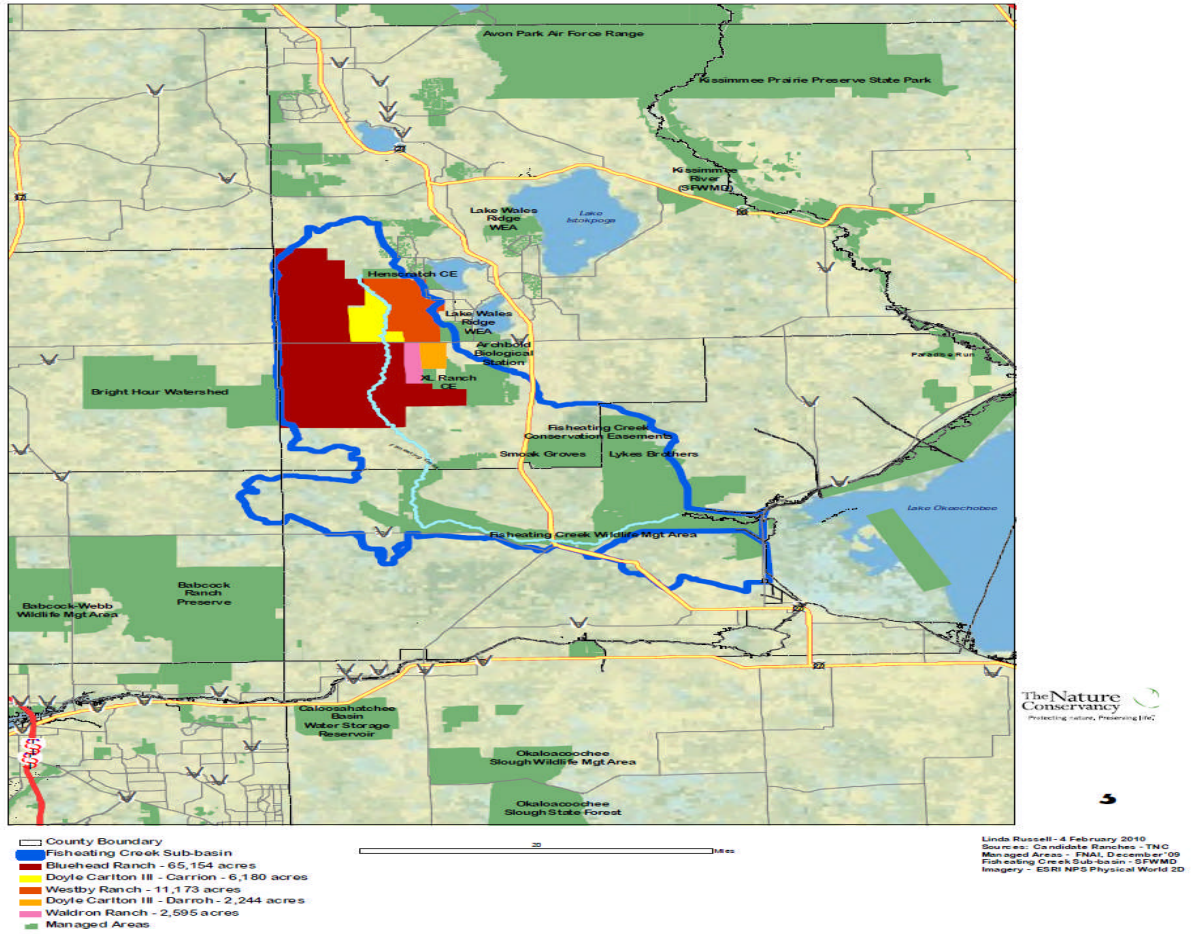
Tool 2) Easement Acquisition and Increased Distributed Water Storage Development with Cost-Share through such Federal programs as the Wetlands and Conservation Reserve Programs (WRP), Conservation Reserve Program (CRP), Wildlife Habitat Incentives Program (WHIP) and Environmental Quality Incentive Program (EQIP), Reserved Rights Pilot Program (RRPP)

The United States Department of Agriculture (USDA) and its affiliates the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), and the US Forest Service (FS) each work in conjunction with the Florida Department of Agriculture and Consumer Services (FDACS) and the FWC to provide technical and cost-share assistance to landowners. Such assistance may be provided in exchange for implementation of habitat and natural resource management practices, the placement of environmentally sensitive lands under conservation easement, or other types of land protection agreements such as dispersed water management efforts.

A variety of these Federal programs operate with targeted objective differences such as the Conservation Reserve Program (CRP) and Wetland Reserve Program (WRP) and other Wildlife Habitat Incentive programs (see: www.floridahabitat.org). Many of these programs have been around for years but have traditionally involved very small projects with private landowners across dispersed landscapes in the size range of a hundred to several hundred acres sized projects. Recently in Florida the Natural Resources Conservation Service (NRCS) took the bold step to help fund a much larger project within one basin - Fisheating Creek- northwest Lake Okeechobee tributary - that has great potential to return substantial environmental benefits over time and serve as impetus for similar future projects.

The Fisheating Creek Project involved the directed use of \$89 million in federal Wetland Reserve Program monies. The project, located in the Northern Everglades watershed, brings conservation easements to almost 26,000 acres of critical wetland habitat. The acquisition centers about the creation of a partnership between the USDA's Natural Resources Conservation Service, The Nature Conservancy environmental group and the South Florida Water Management District and other agencies to combine resources to assist in the restoration and management of the property. The land includes parts of five ranches and is home to dozens of rare and protected plant and wildlife species, such as cutthroat grass and crested caracaras. Restoration work will focus on reconnecting the easement property to the natural flows and water storing capacities of a more natural Fisheating Creek system. Though these federal conservation tools have been around for some time, the Fisheating Creek project represents a new approach whereby a large sum of the federal WRP funds is put to assembling one landscape level project within one particular watershed.

At the forefront of the hydrologic restoration opportunity is the fact that 15 miles of The upper portion of Fisheating Creek runs through the WRP ranches and through the middle of the large, regionally significant Fisheating Marsh system that was ditched and drained in the late 1950s and early 1960s.



Graphic by TNC

The opportunity to restore the entire Fisheating Marsh can now proceed given that the northern three ranches in this complex encompass the entire marsh. The total acreage available for wetland/hydrologic restoration on the portions of the three ranches (Blue Head, Carlton/Carrion and Westby) lying north of State Road 70, has been estimated by The Nature Conservancy at 23,328 acres” (Adapted from: *Large-Scale Conservation Opportunities in the Fisheating Creek Basin of Highlands County, Florida. February 2010 TNC*).



Large ditch on northern portion of Blue Head Ranch that drains marsh complex south of orange groves and tributaries to Fisheating Creek

Photo by TNC

Tool 3) Rural and Family Lands Protection Program

[The Rural & Family Lands Protection Program](#) (R&FLPP), was developed pursuant to ss. 259.105(3)(i) and 570.71(10) Florida Statutes and Rule 5I-7, Florida Administrative Code. The purpose of the program is to acquire perpetual agricultural conservation easements that ensure lands will be preserved in agricultural use while providing for the protection of natural resources. The program seeks to identify those in the agricultural field that exemplify sound agricultural principles, willingness and desire to remain in agriculture, and have an excellent track record of environmental stewardship. The program is statewide but could possibly be used to some effectiveness in southern and central Florida areas.

Unlike the Conservation and Recreation Lands portion of Florida Forever which focuses on protecting and preserving natural communities and providing nature-based recreational opportunities, the R&FLPP program evolved to as a growth management tool to help minimize the development of isolated, rural landscapes. Unplanned and scattered developments were seen as fragmenting and degrading the quality and character of Florida's natural and agricultural lands. Such development patterns sometimes threaten the state's ability to meet the needs of its citizens through adequate delivery of services and the maintenance of an agricultural economy and can interrupt the natural hydrological and biological functions that support both agriculture and healthy ecosystems.

During the initial application cycle for the program (November - December, 2008) the Department received 35 eligible project applications. As set forth in Rule 5I-7, FAC, the Department formed Technical Review Teams to evaluate each project. The technical review teams examined each project to assess the project's merits and its contributions to the goals and objectives of the program. In FY 2008/2009, the RFLPP was included in the Florida Forever formula at a rate of 3.5% of the proceeds of Florida Forever Funding. In FY 2008-2009 the program received an appropriation of \$10,500,000 dollars and in FY 2009-2010 an additional \$525,000 was received for a total of \$11,025,000.

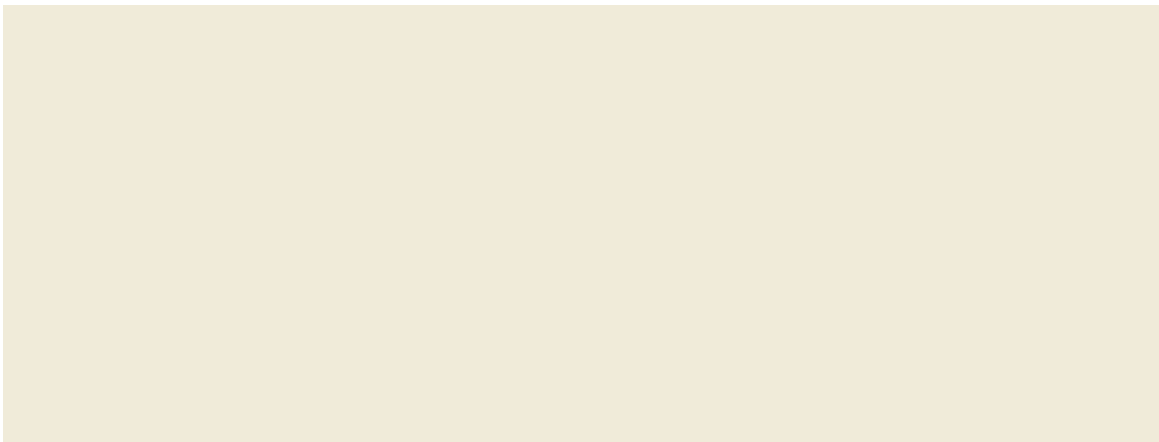
In 2009, the Selection Committee for the R&FLPP held a public hearing to review the project evaluation reports and receive public testimony about the projects and voted to approve a project list ranked in priority order. The Selection Committee chose a tiered system, with those projects in Tier I being designated as the highest acquisition priority. Following this the Department presented the recommended project list to the Acquisition & Restoration Council (ARC) for its review pursuant to statute whereby the list was approved by the Governor and Cabinet, sitting as the Board of Trustees (BOT) of the Internal Improvement Trust Fund of the State of Florida.

2010 Approved Project Priority List

Tier 1 Projects	Tier 2 Projects	Tier 3 Projects
Adams Ranch	Design Timber II	Bucket Creek Preserve

Rafter T Ranch	Buddy Hiers Farm	Crooked Creek Ranch
Tiger Lake Ranch	Scarborough and Sons Ranch (Highlands County)	Four Star Timber Inc.
Williamson Cattle Company	S & P Timber Properties	Russakis Ranch I
Evans Ranch	Taylor Ranch	Russakis Ranch II
Hastings Farm/Smith Family Farm	Cherokee Ranch	Russakis Ranch III
Walpole Ranch	Hardin Farm	Scarborough & Sons Ranch (DeSoto County)
Jahreis Family Ranch	Hartzog Farm	Circle Pine Farm
K-Rocker	Ox Creek Ranch	Lily of the Valley Farms
Moxon Family Ranch	A. Roy Hogan Groves	Macaulay Farm
Moye Ranch & Farm	Corona Cattle Company	Talley Farm
	Old Town Creek	Zinn Farm

At the time of this article the Division of Forestry had taken three deeds for conservation easement to the BOT for approval and anticipates taking 2 more prior to the end of the year (2010). The easements approved are Evans Ranch of Flagler County, an aquaculture and ranching operation with the agricultural easement covering 700 acres; The Adams Ranch in Osceola County, 780 acre agricultural easement over lands from the 33,000 acre premier cattle ranch; Smith Family Farms from historic Hastings in St. Johns County, with an agricultural easement protecting 343 acres. In October 2010, the DOF took Tiger Lake Cattle Corporation (Lightsey Cattle) to the BOT. This is a 1,763 acre cow/calf operation in Polk County. Once approved, the monies encumbered by contract in the program to date will be approximately \$8,601,775. Negotiations continue on two ranches from the top tier of approved projects that comprise approximately 1200 acres.



Tool 4) Rural Land Stewardship

[The Rural Land Stewardship Area \(RLSA\)](#) program was established by Collier County's Land Development Code in conformity with the Growth Management Plan (GMP). The purpose of the program is to encourage smart growth patterns in rural areas of the county as directed by the GMP and to create an incentive based land use overlay system based on the principles of rural land stewardship as defined in Chapter 163.3177.(11), Florida Statutes.

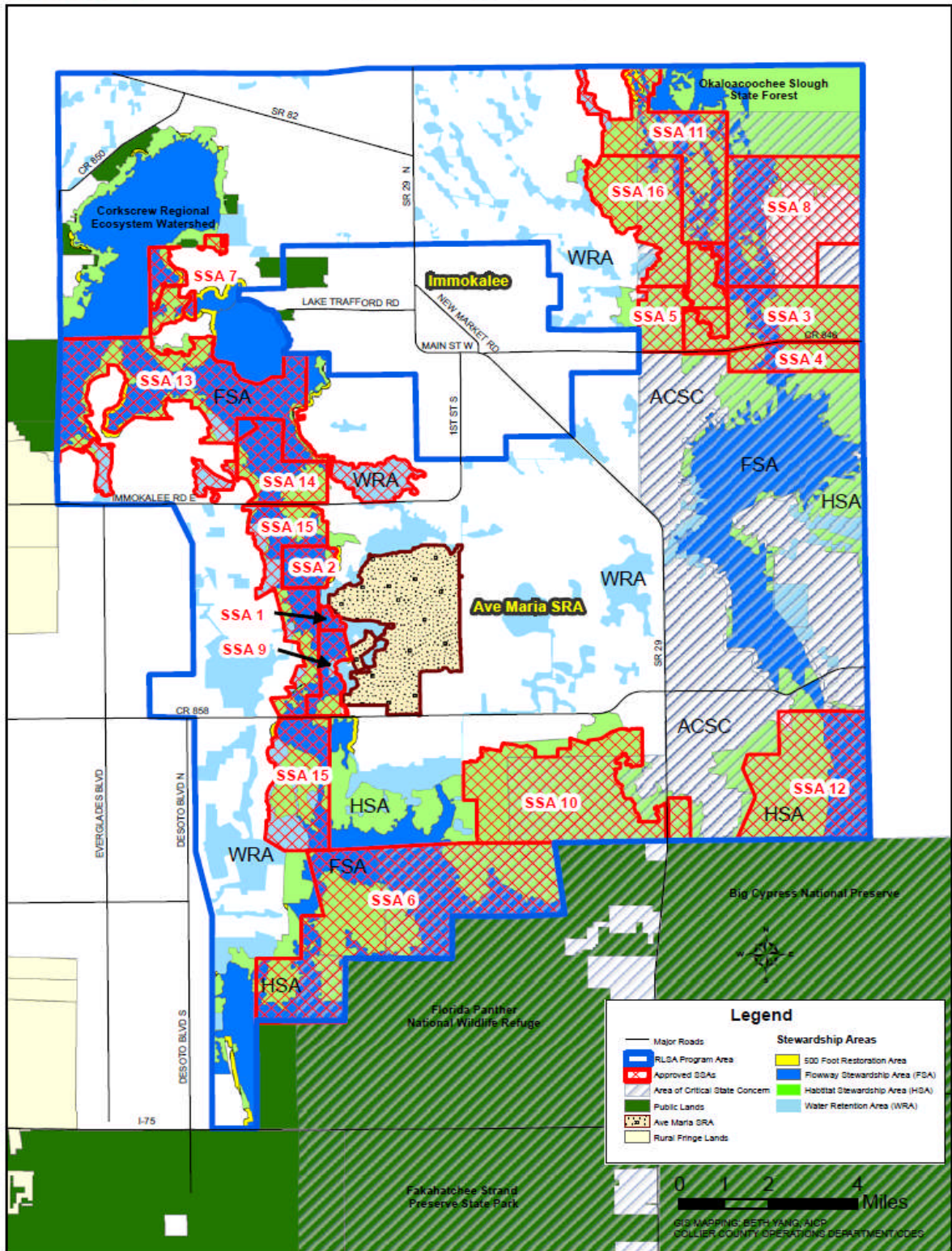
The RLSA program allows local governments to carefully address a host of related land planning issues such as minimum developmental density, intensity and required mix of land uses, size and percentage of public open space, affordable housing, street layout, school location and transportation. For a truly rural pattern to be maintained, the use of this tool may need to carefully control the spacing and distance between development areas. The goal is to achieve rural and agriculture land protection, conserve habitat, and new community development with appropriate transportation and other infrastructures without inducing sprawling or leap-frogging patterns.

Mechanics of RLSAs — The RLSA tool is different from “Transfer of Development Rights” (TDR) or conservation easement programs, which only give value for one land use layer — the residential layer. RLSAs set up a limited trading program within the designated stewardship area that provides landowners within Stewardship Sending Areas (SSAs). These valuable credits are for defined resources in exchange for giving up specific uses of the land and placing a perpetual conservation or agricultural easement on the land.



RLSA STATUS MAP

MARCH 2010



In order to build under the RLSA, landowners must petition to have a given area designated as a Stewardship Receiving Area (SRA) and purchase a specific number of credits per acre from SSA landowners. This allows multiple owners of natural amenities to participate in the economic development of the land. In fact, the more valuable the natural system resource is, the more the owner of that land can participate in the economic benefits of development within the buildable SRAs. The SSA Program within the RLSA establishes a method for protecting and conserving the most valuable environmental land, including large connected wetland systems and significant areas of linked habitat for listed species.

A Natural Resource Index (NRI) was developed to rank lands within the RLSA according to value for wetlands protection, water resource protection and management, and wildlife habitat conservation. Results from the NRI analysis were used to map all areas of the RLSA according to five major categories of land use (Wilson Miller 2002):

1. **Flowway Stewardship Area (FSA):** FSAs are privately owned lands that primarily include wetlands located within the Camp Keais Strand and Okaloacoochee Slough ecosystems.
2. **Habitat Stewardship Area (HSA):** HSAs are privately owned lands that include areas with natural characteristics that make them suitable for listed species as well as areas without these characteristics. The latter areas are included because they are contiguous to habitat with natural characteristics, thus forming a landscape continuum that can augment habitat values.
3. **Water Retention Area (WRA):** WRAs are privately owned lands that have been permitted by the South Florida Water Management District (SFWMD) to function as agricultural WRAs and that provide surface water quality and other natural resource value. Many of these areas are large natural wetlands that, in some cases, connect to and support FSAs.
4. **Open Land:** Open Lands are privately owned lands not otherwise classified as FSAs, HSAs, or WRAs and are generally of lower natural resource quality.
5. **Lake Trafford:** The RLSA also includes the open waters of Lake Trafford, which cover approximately 1,460 acres.

Notable wildlife benefits come from sustaining the large working landscapes. This is particular importance to wide ranging species such as the Florida panther and black bear. Since the initial development of the RLSP, adaptive modifications have been being made to better address Florida panther conservation needs. Representatives of eight landowners and four conservation organizations (Parties) signed a Memorandum of Understanding (MOU) in 2008 agreeing to work together under an agreed upon strategy to enhance the future of the Florida panther. This conservation strategy, known as the [Florida Panther Protection Program \(FPPP\)](#), is an incentive-based program built upon the 2002 Collier County Rural Lands Stewardship Area Overlay (RLSA). Through the incentive-based land use program, the FPPP would secure a contiguous range of panther habitat connecting the Florida Panther National Wildlife Refuge and Big Cypress National Preserve through Camp Keais Strand and the Okaloacoochee Slough with Corkscrew Marsh and adjacent lands in the region. The FPPP is an example of where environmental groups and governmental agencies with the land owners in the [Rural Land Stewardship](#)

Area have been working to ensure that the Florida panther can roam large tracts of land from this “hub” habitat linking public and private conservation lands in the Western Everglades and beyond.

The overarching goal of the MOU is to promote conservation, management and recovery of the Florida panther while preserving agricultural lands and identifying appropriate areas for development in eastern Collier County. Participating conservation organizations included Audubon of Florida, Collier County Audubon Society, Defenders of Wildlife, and Florida Wildlife Federation each of which has panther protection and recovery as major programs. Participating landowners are Alico Land Development Corporation, Barron Collier Partnership, Collier Enterprises, Consolidated Citrus LP, English Brothers, Half Circle L Ranch Partnership, Pacific Tomato Growers Ltd., and Sunniland Family Limited Partnership. They all own lands in Southwest Florida that are strategically important to the recovery of Florida panthers.

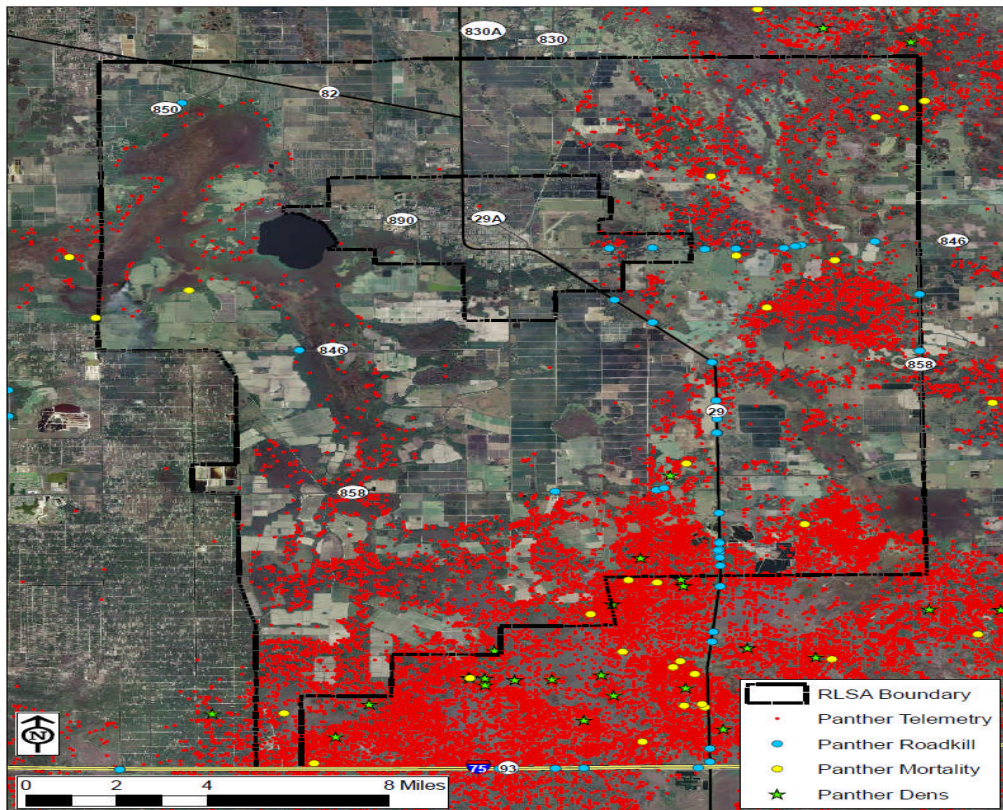


Figure 1. Florida panther radio-telemetry records (Feb 1981–Jun 2008), roadkill and other mortality records (thru January 20, 2009), and mapped den locations (thru Jun 2008) overlaid on 2004 aerial photography.

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World Wildlife Fund; John Outland, Department of Environmental Protection, Office of Ecosystem Projects; Nancy Payton, Florida Wildlife Federation; Dan Pennington, 1000 Friends of Florida; and Benita Whalen, South Florida Water Management District.

References

- 1.) [Planning Strategies for the Everglades Agricultural Area](#) , 1000 Friends of Florida, October 2009.
- 2.) [Working to Sustain Florida's Rural and Natural Lands: A Call to Action](#), 1000 Friends of Florida, 2007.
- 3.) [Distributed or Dispersed Water Management and Storage in the Lake Okeechobee Watershed](#), Audubon of Florida White Paper, May 2010.
- 4.) [Dispersed Water Management & Treatment, NE Interagency Team Meeting, PowerPoint, South Florida Water Management District, March 2010](#). Benita Whalen, Deputy Director, Environmental Resource Regulation; Sarah Lynch, Director, Agriculture, World Wildlife Fund; Len Shabman, Co-Director, FL Ranchlands Environmental Services Project.
- 5.) [Dispersed Water Management & Treatment, NE Interagency Team Meeting, PowerPoint, South Florida Water Management District, July 23, 2010](#). Benita Whalen, P.E. and Jesse Markle, P.E.
- 6.) [Ecosystem Restoration: The Coolest Work on the Planet](#), PowerPoint, South Florida Water Management District. Temperince Morgan, Director, Federal and State Policy Division, SFWMD.
- 7.) Email communication from Ms. Sarah Lynch of the World Wildlife Fund to Dan Pennington addressing information on the Northern Everglades Payment for Environmental Services Program.
- 8.) Large-Scale Conservation Opportunities in the Fisheating Creek Basin of Highlands County, Florida. TNC, 2010.
- 9.) Millennium Ecosystem Assessment, 2005. Ecosystems and Human Well-being: Biodiversity Synthesis. World Resources Institute, Washington, D.C.
- 10.) The Northern Everglades: One of Florida's Last Great Places, The Nature Conservancy, White paper from 2009.
- 11.) The Northern and Southern Everglades Ecosystem, PowerPoint by Ken Ammon, P.E., Deputy Executive Director Everglades Restoration, South Florida Water Management District, 2010.
- 12.) [Technical Review of the Florida Panther Protection Program Proposed for the Rural Lands Stewardship Area of Collier County](#), Florida, 2009. Technical Review of the Florida Panther Protection Program Proposed for the Rural Lands Stewardship Area of Collier County, Florida. Final Report. 84 pp.
- 13.) River of Grass" Land Acquisition Update Governing Board Workshop September 10, 2008, South Florida Water Management District.

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