

MAINTAINING THE MOMENTUM

South Florida Ecosystem
Restoration Task Force
Biennial Report

to the

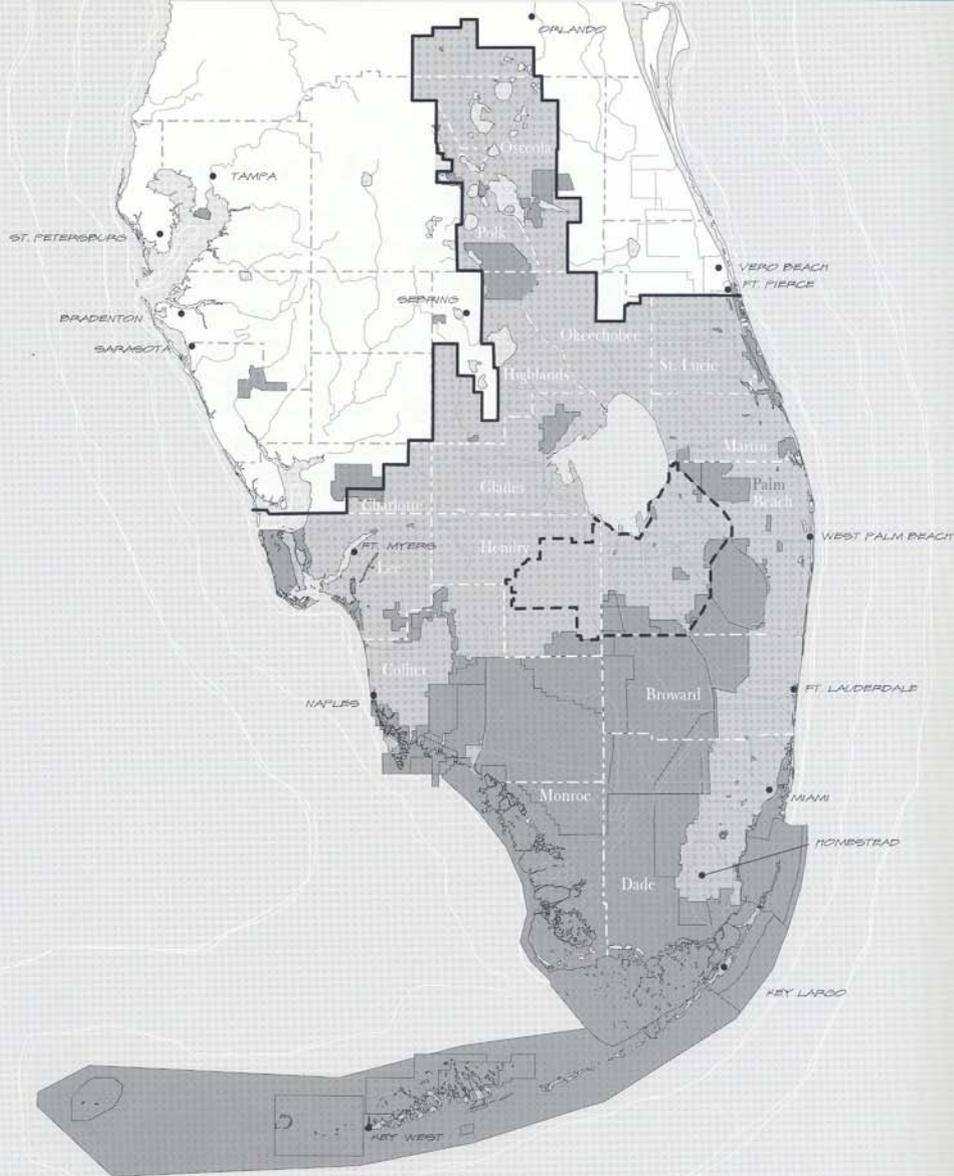
U.S. Congress, Florida Legislature, Seminole
Tribe of Florida, and Miccosukee Tribe of Indians of Florida

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The South Florida Ecosystem

- South Florida Ecosystem Boundary
- Everglades Agricultural Area
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SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE*

In 1993 a federal ecosystem restoration Task Force was established through an interagency agreement. The Task Force was created "to coordinate the development of consistent policies, strategies, plans, programs, and priorities for addressing the environmental concerns of the South Florida ecosystem."

The Task Force was later formalized and expanded to include tribal, state, and local governments by the 1996 Water Resources Development Act. The purpose of the expanded Task Force is to facilitate implementation of the South Florida restoration effort. In this capacity it serves as an information clearinghouse and coordinating entity that helps guide the restoration effort, keep it on track, and ensure fiscal accountability.

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SOUTH FLORIDA ECOSYSTEM RESTORATION AND SUSTAINABILITY

A WORD FROM THE TASK FORCE —

Not long ago South Florida's future was troublesome. The natural flow of water — the key to the health of the ecosystem — was disrupted by canals and water diversion features. Contaminants permeated much of the water, disturbing the natural balance of wetlands, estuaries, and coral reefs. As the quality and extent of vital habitats diminished, many plant and animal species were imperiled.

The human side of the equation was equally troubling. Rapid population increases, crime, and social tensions encouraged many to leave urban core areas and move into suburban and rural areas. This outward flight, plus the addition of 800 new residents every day, placed increasing stress on urban infrastructures.

Over the past two decades — and especially during the past two years — the state and its federal, tribal, local, and private restoration partners have made tremendous strides in confronting these daunting issues. Large-scale construction projects designed to restore the natural flow of water are underway. Man-made wetlands now filter tons of unwanted contaminants out of runoff that is discharged to the Everglades. The preservation of critical habitats is giving endangered species such as the Florida panther another chance. In the built environment inventive redevelopment projects are beginning to breathe life back into urban neighborhoods, while coordinated planning is mapping a future for sensitive areas like the Florida Keys.

Your support — in the form of funds, resources, new legislation, and cooperation — has provided the impetus behind these recent gains. The participation of all sovereign governments (federal, state, and tribal) in planning and oversight of the restoration and sustainability effort has also played an indispensable role and has encouraged local governments to join this growing partnership.

Today we are at a critical juncture. Progress is being made, but the real fruits of these efforts lie many years, even decades, away. Many efforts build on and reinforce one another. Others must be implemented immediately to have the proper effect. Faltering support at this critical point would undercut the gains we have made and would jeopardize the future of South Florida and the 44 million people inhabiting or visiting the region.

In South Florida the environment is the economy, and the economy is the environment. Together, we are working to improve the environment, economy, and quality of life for this and future generations. We need to continue the important work we have begun to achieve a healthy, whole, and sustainable South Florida — and an enduring legacy for ourselves and our children.

Patricia Beneke,
Chair

PURPOSE OF THE REPORT

This *Biennial Report* summarizes the progress made over the past two years to restore the South Florida ecosystem. The report describes the range and complexity of the ecosystem and sustainability efforts underway and the creative approaches being developed to address critical issues. The report is illustrative, not all inclusive. It is intended to demonstrate that measurable progress is being made and that funds targeted for these projects are being spent in logical and accountable ways.

WATER RESOURCES DEVELOPMENT ACT OF 1996

The passage of the 1996 Water Resources Development Act represents an ambitious milestone in the goal of restoring a sustainable South Florida. The act charged the U.S. Army Corps of Engineers (Corps) to develop a comprehensive plan for restoring the hydrology of South Florida (the Central and Southern Florida Project Restudy), and it established a 50% federal cost-share for implementing the plan. The act also authorized the Corps to appropriate \$75 million to begin immediate implementation of restoration projects deemed critical for restoring the South Florida ecosystem. The act formally established a South Florida Ecosystem Restoration Task Force (Task Force), with a membership that includes tribal, federal, state, regional, and local governments, and defined the Task Force's mission.

The act stipulated that every two years the Task Force would report on the following Task Force activities

- policies, strategies, plans, programs, projects, activities, and priorities planned, developed, or implemented for South Florida ecosystem restoration
- progress made toward restoration

This is the first of the biennial reports required by the act.

INTENDED AUDIENCES

This report is intended for four principal audiences, the

- United States Congress
- Florida Legislature
- Seminole Tribe of Florida
- Miccosukee Tribe of Indians of Florida

Although the report is tailored to these entities, it is anticipated that others — including state and federal agencies, local governments, regional agencies and industries, private interest groups, and the public — also will be interested in this update.

REPORT SCOPE

Over 200 restoration and sustainability projects are identified in the Task Force's *Integrated Financial Plan for Restoring the South Florida Ecosystem*. This large number of projects underscores the scope of the restoration and sustainability efforts. The large number also precludes providing descriptions for each project. Instead, this report illustrates the *kinds* of actions taking place and the *types* and *nature* of accomplishments. Annual reports produced by agencies, such as the South Florida Water Management District (Water District), provide greater details on individual projects. *This report paints the big picture.*

THE SOUTH FLORIDA ECOSYSTEM

WHAT IS THE SOUTH FLORIDA ECOSYSTEM?

Many people see the ecosystem as just the natural environment. But the South Florida ecosystem is also home to humans and their built environment (cities, towns, and farms). Today we understand that all living beings, including humans, are interconnected. The South Florida ecosystem is not just the natural environment. It is both the natural and the built environment.

WHY IS THE SOUTH FLORIDA ECOSYSTEM IMPORTANT?

The South Florida ecosystem is a complex network extending from the Chain of Lakes south of Orlando to the coral reefs off the Florida Keys — over 18,000 square-miles of land and water. Within these boundaries is a wide array of upland, lowland, and marine habitats. Throughout the region are areas with special designations such as outstanding Florida waters, a national marine sanctuary, an international biosphere reserve, and numerous state and federal parks, preserves, and wildlife refuges — all of which are interconnected.



More Than a River of Grass



The built environment is equally complex. Developed areas from Kissimmee to Key West offer cultural diversity and an attractive climate. The region supports major sea and air transportation hubs, thriving tourism and agricultural industries, and national and international commerce. South Florida also possesses fine institutions of higher education and rich points of historical and architectural interest. Over 6.5 million residents and 37 million annual tourists rely on the region and its \$200 billion economy for their livelihoods and well-being.

This unique and complicated national treasure is the physical, economic, and social anchor for the country's fourth most populated state. It can be found nowhere else in the world.



South Florida is a mixture of distinct habitats encompassing lakes, swamps, upland pine woods, coastal mangrove forests, beaches and coral reefs — to name just a few. These interconnected habitats support a diverse array of plant and animal species, including economically important fish, wading birds, migratory waterfowl, and 68 federally-listed threatened and endangered species.



THE MAGNITUDE OF THE PROBLEM

Disrupted Hydrology / Water Quality Degradation

Once water flowed unimpeded through the southern half of the state. Today flood control and water supply systems, agriculture, and development disrupt the region's natural hydropatterns (depth, timing, and distribution of water). Runoff from cities and farms introduces high levels of phosphorus, nitrogen, and other contaminants, polluting many bodies of water. High discharges of stormwater into estuaries severely damage aquatic habitats that support seagrasses, oysters, and other species. Saltwater intrusion and pollutants threaten groundwater. These impacts have significantly stressed the natural system. The following underscore these problems:

- ☛ Half of the original Everglades has been drained, and perhaps lost forever.
- ☛ Two million acre-feet of water are lost from the natural system annually through discharge and seepage.
- ☛ Phosphorus and nitrogen from agricultural and urban runoff have contaminated Lake Okeechobee, the Everglades, and adjacent areas.
- ☛ Unnatural freshwater discharges have damaged coastal estuaries, including Florida Bay.

Loss of Habitat and Native Species

Natural habitats are now disconnected through growth and development. The rampant spread of invasive exotic species has further disrupted natural habitats. The cumulative loss of habitat has caused sharp declines in native plants and animals, placing many native species at risk. Specific impacts include:

- ☛ Wading-bird populations have dropped by 90%–95%.
- ☛ To date 68 plant and animal species are federally listed as threatened or endangered.
- ☛ The incidence of coral diseases in the Florida Keys National Marine Sanctuary has increased 4-fold since 1996.
- ☛ Over 1.5 million acres of land are infested with invasive exotic plants.

- ☛ Since 1989 the biomass of turtlegrass in western Florida Bay has decreased by 25%.

Urban Development / Suburban Sprawl

Today South Florida is home to over 6.5 million people, over nine times the population in 1948 when the C&SF Project was authorized. This influx of people has led to dramatic changes to the landscape. Former wetlands are now agricultural lands. Parts of the historical Everglades are now suburbs. Large metropolitan areas cover most of the eastern coast and portions of the west coast.

As this development spread, older urban areas suffered. The migration to the suburbs reduced tax bases in urban zones and diverted resources to outlying areas. Growth in suburban and rural areas demanded more roads and services.

Today roads, hospitals, schools, and utilities are aging, and human services are overtaxed. Disinvestment and crime in inner cities are persistent problems. Increasingly, outlying areas are strained. For many people the quality of life has decreased. Some indications of built environment stresses include:

- ☛ There are thousands of contaminated sites (brownfields) along the southeast coast of Florida.
- ☛ Much of the eastern urban corridor of South Florida is characterized by income levels lower than are found in surrounding suburbs.
- ☛ The city of Miami is ranked the fourth poorest city in the nation.
- ☛ Miami-Dade County is ranked the third most congested area in the nation.

Why Should We Care?

A healthy ecosystem is not a nicety, it is a necessity. Water that is cleaned as it passes through the Everglades and the aquifer supports habitats throughout the region. Clean water also supports the state's multiple industries and rapidly growing population. In South Florida the urban and the natural systems are inextricably linked. This makes every living thing in South Florida — human or nonhuman — a stakeholder.



"The Everglades is our mother . . . We must all work together to save her."

— Billy Cypress, Chairman, Miccosukee Tribe of Indians of Florida

FIXING THE PROBLEM

A LEGACY OF ENDEAVORS

Over the past 25 years the Florida Legislature and the U.S. Congress have passed legislation to manage growth and protect the natural environment. Many of the state measures have set precedents in managing growth and dealing with ecosystem issues, while federal legislation and funding have helped to establish partnerships on major restoration initiatives. This collective legislation, summarized below, has laid the groundwork for the current ecosystem restoration effort.

A VISION FOR THE FUTURE

Ecosystem restoration partners have come to three important conclusions:

- ☉ On its present course South Florida is not sustainable.
- ☉ The natural system and the built environment are inextricably linked.
- ☉ Fixing South Florida ecosystem problems will take decades of commitment.

These conclusions have led to an emerging vision of South Florida as

a landscape whose health, integrity, and beauty are restored and nurtured by its interrelationships with South Florida's human communities.

This vision can be attained by reaching three long-term goals.

GOAL 1: GET THE WATER RIGHT

Getting the water right means restoring a more natural flow of water through the region while also providing adequate water supplies, water quality, and flood control. This involves addressing the quantity, quality, timing, and distribution of water throughout the system. The goal is to deliver the right *amount* and *quality* of water to the right *places* at the right *time*.

South Florida Ecosystem Restoration Legislation

- 1947 Establishment of Everglades National Park
- 1948 Flood Control Act
- 1972 Florida Water Resources Act
- 1972 Florida Land Conservation Act
- 1983 Governor's "Save Our Everglades Program"
- 1984 Florida Warren Henderson Act (wetlands)
- 1985 Florida Local Government Comprehensive Planning and Land Development Act
- 1987 Florida Surface Water Improvement and Management Act (SWIM)
- 1990 Florida Preservation 2000 Act
- 1990 Florida Keys National Marine Sanctuary and Protection Act
- 1991 Everglades Protection Act
- 1992 Water Resources Development Act
- 1994 Florida Everglades Forever Act
- 1996 Waters Resources Development Act
- 1997 Everglades Oversight Act
- 1997 Florida House Bill 715
- Set aside 1.3 million acres as wilderness; expanded to 1.4 million acres in 1989.
- Authorized a massive water delivery system for South Florida – the Central and Southern Florida (C&SF) Project
- Established water policy for Florida
- Authorized the purchase of endangered and recreation lands.
- Recognized that the entire ecosystem needed to be restored.
- Authorized the protection of wetlands and surface waters.
- Required the development and coordination of local land use plans.
- Required water districts to restore Florida lakes, bays, estuaries, and rivers.
- Established a land acquisition program to protect ecosystems.
- Established the sanctuary and authorized a water quality protection program.
- Provided water districts with clear tools for ecosystem restoration.
- Authorized Kissimmee River Restoration Project and the C&SF Project Restudy.
- Outlined a comprehensive plan to restore significant portions of the Everglades.
- Expanded the South Florida ecosystem restoration Task Force; allowed the Task Force to address full scope of restoration needs (natural and built), and provided 50% cost-share on implementing the Restudy Comprehensive Plan.
- Established a committee of Florida state senators and representatives to oversee the schedules, progress, and costs for the Everglades Construction Project.
- Addressed the long-term water supply needs of Florida urban areas, agriculture and the natural systems by assigning responsibility for water supply planning and water resource development to local governments and water management districts, respectively.

GOAL 2: RESTORE AND ENHANCE THE NATURAL SYSTEM

Restoring and enhancing the natural system means protecting South Florida's natural habitats and reestablishing healthy populations of now threatened and endangered species. Restoring habitats will involve optimizing the spatial extent of wetlands and other habitats through land acquisition and changes in current land use and land and water management. It also will involve reestablishing the physical and biological connections between different parts of the natural system.

These changes, combined with other wildlife management actions such as monitoring and reintroducing species, will play critical roles in maintaining and enhancing species diversity. Reducing and reversing the rampant spread of invasive exotic species also will be important. Finally, halting the stormwater discharge into coastal areas will be vital in restoring the health of estuaries and sensitive coral reef systems.



GOAL 3: TRANSFORM THE BUILT ENVIRONMENT

Transforming the built environment means developing lifestyles and economics that do not degrade the natural environment or reduce the quality of life in built areas. This will entail rebuilding or revitalizing urban core areas to curtail the outward sprawl of suburbs and development. It also will involve making urban areas more livable by creating green spaces, improving transit systems, and providing jobs and affordable housing. Balancing human needs and those of the natural system will require a review of how resources should be used. A sustainable built environment also will require a diverse and balanced economy.

At the southern tip of Florida lies the nation's only living coral reef next to the continent. The shallow waters near shore also harbor many other habitats, such as fringing mangroves, seagrass meadows, and patch reefs. This complex marine ecosystem forms the foundation of the South Florida commercial and recreational fisheries and the tourism industry.

PROGRESS MADE

Creating a sustainable South Florida cannot happen overnight. It will require continued planning, restoration, and monitoring. However, federal, state, tribal, regional, and local partners have made significant progress. Many of the accomplishments highlighted in this *Biennial Report* are just beginning. Others are well underway. The following examples illustrate the accomplishments taking place in South Florida.

RESTORING THE ENVIRONMENT

Over the past 50 years the physical appearance of South Florida has undergone vast transformations. Correcting problems stemming from these changes will require altering the landscape as well as the way we use and manage resources.

Central and Southern Florida (C&SF) Project Comprehensive Review Study (Restudy)

**Rethink,
revise,
revitalize.**

The Restudy is the linchpin of the South Florida ecosystem restoration effort. The purpose of the Restudy is to reevaluate the entire C&SF Project water distribution system and to develop a comprehensive plan for implementing changes needed to meet ecosystem water supply needs through 2050. The Restudy represents a massive undertaking to better manage the water system of an 18,000-square-mile-area. Implementing the comprehensive plan is a necessary precondition for most future restoration efforts.

Accomplishment Highlights

In 1998 a multiagency planning team completed a draft comprehensive plan for modifying South Florida's water management system. Actions outlined in the draft plan will significantly improve the quantity, timing, and distribution of water deliveries throughout the natural system, and will improve water quality in some areas. The plan will also augment urban and agricultural water supplies. While focused mainly on getting the water right, the plan directly addresses all three of the Task Force's goals.

THE RESTUDY PLANNING EFFORT

Multidisciplinary, multiagency planning works! A Restudy team composed of 160 specialists from 30 state, federal, regional, local, and tribal governments worked to produce the draft comprehensive plan. Consensus building was difficult, but it resulted in broad goals that will guide restoration efforts. Critical to the process was public comment (through the Restudy internet web site and numerous workshops and public forums). Local governments and stakeholder groups such as the Governor's Commission for a Sustainable South Florida (Governor's Commission) also played important roles. The Restudy plan marks an unprecedented level of public participation and is a model for future ecosystem restoration planning.

Many of the Restudy recommendations focus on projects that capture and store large quantities of stormwater runoff that currently are discharged to the ocean. The reclamation and treatment of this water will help ensure adequate water supplies for the natural system, agriculture, and urban areas.

In July 1999 the Corps will submit the final comprehensive plan to Congress for approval. The plan must also be approved by the Florida Legislature and the Water District governing board as a joint sponsor. Pending authorization through the Water Resources Development Act of 2000, the Corps and Water District will begin implementing pilot projects and other critical elements of the plan.

Land Acquisition

**Intelligent
use of our
scarce land
is critical.**

Acquiring land is a critical part of many ecosystem restoration projects. Land is needed for water storage and aquifer recharge areas that will help restore natural hydrology. It is needed to construct water quality treatment areas and to preserve habitat for wildlife corridors. Land can also act as a buffer zone or as critical habitat for recovering threatened and endangered species.

Restoration partners acquire land prudently to ensure that they meet common restoration goals. Yet, undeveloped land in strategic locations is increasingly scarce. This makes obtaining land, while it is still available and affordable, a critical objective of the restoration and sustainability efforts. It also means that restoration partners

must seek other ways to obtain access to lands without purchasing it (see Resource Conservation Agreements, pg. 16).

Accomplishment Highlights

Since 1996, 309,300 acres have been acquired for \$354 million dollars. The lands were purchased with funding from the Farm Bill, the Florida Preservation 2000 program, the Conservation and Recreation Lands (CARL) program, and other federal, state, regional, and local sources.

Water Preserve Areas. One strategy to restore regional water patterns is to establish water preserve areas along the eastern border of the Everglades. These areas will control the loss of water through unnatural seepage, help clean the water, provide buffer zones between urban areas and the natural system, and enhance the region's water supply. The Water District, state, and federal agencies have spent approximately \$119 million (\$31 million from the Farm Bill) to purchase 15,919 acres of land along the eastern edge of the Everglades. This land will become part of a connected series of marshlands, reservoirs, and aquifer recharge basins that will help to meet future water supply needs for urban areas, agriculture, and the environment. Another 24,990 acres are targeted for acquisition as soon as funding is available.

Kissimmee River Restoration Project. The construction phase of this project calls for backfilling portions of the Kissimmee canal (C-38 canal), removing structures, and rechanneling the river. But first the land must be obtained. To date the Water District has acquired 87,978 acres of land located around headwater lakes and in the river's historical 100-year floodplain. This represents 93% of the total 94,265 acres needed to complete the project.

Talisman Land Acquisition. This unique land acquisition deal, negotiated between the Department of the Interior, the U.S. Environmental Protection Agency, the Governor's Office, the Water District, the Nature Conservancy, St. Joe Company, and a joint venture of sugar growers, is a testimony to how cooperation among government agencies and stakeholders can help to accomplish South Florida ecosystem restoration and sustainability. The agreement includes a combination of land purchases, land swaps, and agricultural leases that will help to provide lands to meet long-term water

storage and water quality treatment needs for the Everglades, while also providing for the near-term and mid-term needs of agriculture. As part of the deal, 50,400 acres of agricultural land will now be made available for future conversion to water storage facilities under the Restudy. Another 10,700 acres will be acquired for use as filtering marshes to cleanse agricultural stormwater runoff before releasing it to the Everglades. The joint venture of sugar growers will have guaranteed use of the Talisman lands for at least five years. In exchange for portions of the Talisman properties, the joint venture will swap agricultural lands to be used by the Water District for water storage and water quality treatment purposes.

Kissimmee Prairie Ecosystem. The Florida Department of Environmental Protection and Water District acquired 38,282 acres of imperiled dry prairie habitat. This land will be enhanced and protected as a state preserve.

Everglades Stormwater Treatment Areas (STAs). The Water District acquired 37,700 acres, or 79% of the 47,250 acres needed for construction of six stormwater treatment areas (man-made wetlands) under the Everglades Construction Project.

Southern Golden Gate Estates. The Florida Department of Environmental Protection acquired 18,500 acres of sensitive cypress, wet prairie, pine and hardwood hammock, and swamp communities in south central Collier County using state and federal (Farm Bill) funds.

East Everglades Addition to Everglades National Park. The park acquired 62,000 acres (or 57%) of the congressionally authorized expansion area,



This 15,235-acre Pal-Mar Tract will be purchased in early 1999 under a cooperative, cost-sharing agreement between the Water District, the Florida Department of Environmental Protection, and Palm Beach and Martin Counties. This land will provide a wildlife corridor between Jonathan Dickinson State Park and the Corbett Wildlife Management Area.

Land Acquisition Funding Summary 1996-1998

Funding Source	Amount (\$Millions)	Acres
Farm Bill 1996	\$43	9,200
P2000	\$83	27,700
Federal Appropriations	\$15	124,300*
CARL	\$132	79,600
Water District	\$81	68,500
Totals	\$354	309,300

* Includes 108,000 acres acquired in the Florida-Arizona Land Exchange

with 42,959 acres of this land being donated by the state of Florida. The remaining 43% (47,000 acres) must be acquired before the Corps can implement the Modified Water Deliveries Project, which will restore natural hydrologic conditions in the park's critical Shark River Slough drainage.

Florida-Arizona Land Exchange. In 1996 the Department of the Interior completed an innovative land swap with Collier Corporation of southwest Florida. The exchange involved trading 111 acres of DOI land in downtown Phoenix for multiple tracts of South Florida land owned by the corporation. Of the total land obtained, 83,000 acres were added to the Big Cypress National Preserve, 4,000 acres were added to the Florida Panther National Wildlife Refuge, and 21,000 acres were used to create the Ten Thousand Islands National Wildlife Refuge.

Construction and Infrastructure Improvements

If water is the life blood of South Florida, then construction and infrastructure are the backbone.

Many ecosystem construction and infrastructure improvement efforts focus on "getting the water right." Activities include restoring natural hydropatterns (the depth, timing, and distribution of freshwater), improving water quality, preventing flooding, and ensuring adequate water supplies.

Accomplishment Highlights

Kissimmee River Restoration Project. This project, jointly funded by the Corps and the Water District,

will reestablish more natural flows and water levels through the historical Kissimmee River channel and floodplain. Construction to expand Water Control Structure S-65, which controls water releases from Lake Kissimmee to the Kissimmee River, was initiated in August 1997 and is nearing completion. Work is also underway to reestablish sheetflow across floodplain lands by removing small agricultural ditches and levees. With land acquisition and detailed design almost finished, the project team is now poised to begin a major river restoration effort in March 1999 by backfilling a 9-mile stretch of the canal. Over the next 10 years this project will restore more than 40 square miles of river and floodplain ecosystem that is home to approximately 320 fish and wildlife species.

Modified Water Deliveries to the Everglades National Park Project. This project, jointly funded by the Corps and Everglades National Park, is designed to restore more natural hydropatterns in Water Conservation Area 3 (WCA-3) and Shark River Slough. This will be accomplished by 2003 through removal and modification of existing levees and canals, along with construction of new water control structures and pump stations. In December 1998 construction was completed on two new water control structures, S-355A and S-355B, that will help to reestablish flows from WCA-3B to Northeast Shark River Slough. The new water delivery regime required the Miccosukee Indian community of Tigertail Camp to be raised 8 feet to prevent flooding. This construction, which also



Removing the spoil mounds along a five-mile reach of the C-111 canal reestablished more natural sheetflow across the panhandle of Everglades National Park and on to Florida Bay.

included replacing substandard housing with new concrete homes, will be completed in early 1999.

A recent study associated with this project used a multiple criteria decision model to evaluate six alternatives for dealing with the 8.5 Square Mile Area. This area is a flood-prone residential area on the eastern edge of the project area. The model indicated that the complete buyout of the land was the most cost-effective alternative for meeting restoration objectives of the project. In November 1998 the Water District's Governing Board approved full buyout of the 6,087-acre residential area as the locally preferred option, subject to the execution of cost-share agreements with Miami-Dade County and the Department of the Interior.

C-111 Project. The overall goal for the C-111 Project is to restore more natural quantity, quality, timing, and distribution of water deliveries to Taylor Slough and wetlands in the panhandle of Everglades National Park. This will be accomplished over the next six years through the construction of four new pump stations, the replacement of a bridge over Taylor Slough, the construction or modification of numerous canals and levees, and the acquisition of land to be used as detention/retention and buffer areas between Everglades National Park and agricultural lands. Under this project, the Corps/Water District pro-



Once fully operational, this new pump station (S-332D) will be capable of delivering 325 million gallons of water per day (500 cubic feet per second) to help reestablish more natural flows to Taylor Slough in Everglades National Park, which will also provide much needed freshwater to Florida Bay.

ject team recently removed over 600,000 cubic yards of material from the spoil mounds along the southern side of the C-111 canal. This immediately allowed water to overflow the spoil material and establish a more normal sheetflow across the panhandle of Everglades National Park and on to Florida Bay. The construction of a new pump station (S-332D) was completed in 1997. When fully operational, the pump station will help reestablish more normal water flows to Taylor Slough and will increase deliveries of freshwater to Florida Bay. Creation of the detention/retention area will require congressional approval of a realignment of the Everglades National Park boundary. This realignment will involve exchanges of land between the National Park Service and the Water District.



Expansion of the S-65 water control structure, projected for completion in early 1999, will provide greater flexibility for controlling water levels in the Kissimmee River headwaters. This will reestablish littoral wetlands around the lakes and allow for more natural delivery of water needed to restore the river and floodplain downstream.

Everglades Construction Project. The Water District completed construction on the first of six stormwater treatment areas (STA-6, Section 1) and began flow-through water quality treatment in December 1997. During the first three months of operation, this 870-acre treatment area reduced phosphorus concentrations from 59 to 21 parts per billion and removed approximately 2,200 pounds of unwanted phosphorus that would have been discharged to the Everglades. The Water District began constructing three more treatment areas (STA-1-West, STA-2, and STA-5) ranging in size from 4,118 to 6,670 acres; all three will be operational in 1999.

The Corps will start construction on a 5,350-acre stormwater treatment area (STA-1 East) in October 1999.

Critical Restoration Projects. Under the authority of the 1996 Water Resources Development Act (WRDA-96), the Corps completed preliminary scoping reports and started detailed design and planning on 12 projects that will provide immediate benefits to the South Florida ecosystem. These projects will provide improvements in the quantity, quality, distribution, and timing of water deliveries and will help restore and protect critical wildlife habitat. WRDA-96 authorized the Corps to spend \$75 million on critical restoration projects. To date, only \$17 million have been appropriated to the Corps. Completion of the highest ranking critical projects is dependent upon appropriation of the remaining \$58 million.

Exotic species may be the single greatest threat to a healthy ecosystem.



In addition to filtering out nutrients and other contaminants from stormwater runoff, stormwater treatment areas also support thriving plant communities that provide food and shelter for many aquatic animals.

Exotic Species Control

The rampant spread of invasive exotic species poses multiple threats. They outcompete native plants and animals and destroy native habitats. They interfere with recreational and navigational activities as well as water flow in canals. They also reduce agricultural and economic productivity. Some invasive exotic plants provide dangerous fuel sources for fire. Collectively, these strangers in a new land cover 1.5 million acres of the South

Florida ecosystem, and that represents only land species. Controlling and eliminating the spread of exotic species are critical steps in restoring a sustainable South Florida.

Achievement Highlights

Melaleuca Control Program. Melaleuca is an invasive exotic plant that covers vast tracts of land in South Florida. Over the past two years the Water District and National Park Service have chemically treated 6.8 million trees and have manually removed over 3.7 million seedlings in the South Florida water conservation areas, Everglades National Park expansion area, and Big Cypress National Preserve. Since 1996 approximately 1,450 acres of melaleuca have been aerially treated with herbicides. Between 1990 and 1998 an interagency melaleuca control program has successfully treated over 24.3 million trees and removed over 26 million seedlings.

Melaleuca Snout-Nosed Beetle Release Program. Biological control programs represent innovative and potentially more cost-effective ways to control and eliminate exotic species. In spring 1997 the Department of Agriculture (funded by the Water District, Corps, Florida Department of



The melaleuca snout beetle, a natural enemy of melaleuca in Australia, was first released in South Florida in 1997. Other biological control agents are being developed and should be available during the next few years.

Environmental Protection, and Miami-Dade County) released the first batch of melaleuca snout-nosed beetles. By June 1998 over 1,550 adults and 6,700 larvae were released at 13 sites in 6 counties. Preliminary results are promising.

Reproducing colonies now exist in 9 of the 13 sites, and the beetles are damaging new growth on melaleuca trees at several release sites.

Old World Climbing Fern Control Technologies. This rapidly spreading invasive exotic vine covers almost 40,000 acres in South Florida and continues to spread rapidly. The Center for Aquatic and Invasive Plants (University of Florida) is working with the state water districts to develop control technologies for the fern. In addition the Water District entered into a five-year cooperative agreement with U.S. Department of Agriculture to begin overseas research into potential biocontrols for this species.

Exotic Plant Control Strategy. The Task Force and its Working Group established an interagency task team to develop a strategy for eliminating and/or controlling invasive exotic plants. The team is currently working with the Florida Exotic Pest Plant Council to develop a prioritized list of invasive exotic plant species, determine their spatial distribution throughout South Florida, and identify the best control methods for each species. The strategy, to be completed in 1999, will provide specific recommendations and action steps for controlling high priority species and will identify ways to maximize coordination and cost-sharing between federal, tribal, state, and local governments as well as non-governmental organizations. The strategy also will recommend educational programs, incentive programs, and local ordinances to encourage the control of exotic plants on private lands.

Public Information Materials. In 1998 the Florida Exotic Pest Plant Council launched the publication of a quarterly magazine, *Wildland Weeds*. The journal seeks to educate both resource managers and the public about exotic pest plant problems.

Habitat/Wildlife Restoration and Preservation

Many restoration projects include a component designed to restore critical habitats or to remove

All living things need a place to live.

barriers that block natural migration corridors for species needing large territories (e.g., the Florida panther). Others focus on reintroducing species or enhancing the size of populations at risk.

These projects serve to protect natural areas that are needed for maintaining biological functions or ecological connections and maximize the ecosystem's biodiversity. Sustainable habitats and species

populations also benefit humans in the forms of open spaces and recreational areas and perpetuate important industries such as fishing, agriculture, tourism, and trade.

Accomplishment Highlights

Multi-Species Recovery Plan. This plan is a major initiative to deal with habitat and species population problems on a regionwide basis. The U.S. Fish and Wildlife Service recently completed a two-phased draft recovery plan. The plan addresses the recovery needs of South Florida's 68 federally listed threatened and endangered species. In phase one a team of over 200 experts from federal, state, regional, and local agencies and other special interest groups developed profiles on the biology, ecology, status, trends, and recovery goals for the federally listed species.

In phase two researchers developed profiles for South Florida's major ecological communities and



Newly developed electronic safety devices have been installed on four coastal water control structures to prevent them from fatally crushing federally endangered manatees. Preliminary results are promising – no manatee deaths have occurred during two years of testing. A total of 20 structures responsible for 79 manatee deaths since 1975 will be fitted with these new safety devices under a joint Corps/Water District program.

identified specific management actions needed to restore key habitats and at-risk species. When completed in 1999 the plan will serve as a model for other regional and international recovery efforts. The U.S. Fish and Wildlife Service will also use the plan to evaluate the effects of the

Restudy on fish and wildlife in the study area and to recommend specific management actions.

Florida Keys Water Quality Protection Program. The Environmental Protection Agency, the state of Florida, and the National Oceanic and Atmospheric Administration have implemented the Florida Keys National Marine Sanctuary Water Quality Protection Program. The program provides comprehensive monitoring to record water quality trends, changes in coral reef health and recruitment, and shifts in the conditions of the surrounding seagrass community. This enables scientists and managers to track the reef ecosystem's overall health while water quality problems are addressed. The program has launched several special studies to address wastewater and stormwater problems that affect the nearshore waters of the Keys.

The Marine Zoning Plan. This plan, implemented by the Florida Keys National Marine Sanctuary, is another bold step in coral reef protection. Along the reef tract, 18 no-take Sanctuary Preservation Areas protect coral reef biodiversity. A larger Ecological Reserve and four Research-Only Areas protect important habitat and provide ideal locations for research and monitoring. The different zones provide varying levels of protection and access designed to protect the reef system from damage and over-use while providing reference sites to help scientists and managers evaluate changes in the coral reef ecosystem. Already anecdotal data collected in these protected areas show an encouraging increase in fish and invertebrates.

Turner River Restoration. In 1996 approximately 1.5 miles of the Turner River Canal in Big Cypress National Preserve were filled. This cooperative effort led by the National Park Service – along with previous efforts to plug canals, install culverts, and manage exotic vegetation – has restored the river's original channel and hydrology.

Pond Apple Slough Restoration. The Broward County Department of Natural Resource Protection began the process of restoring more than 200 acres of the Pond Apple Slough and Griffey Tract. This area, adjacent to the South Fork of the New River, contains the largest remaining stand of freshwater riverine forest in the urban lower east coast. Phase 1 is designing a freshwater delivery system to help counteract the adverse impacts of saltwater intrusion and to enhance drainage in the basin. This phase should

be completed in 1999 and will be followed by a second construction and operation phase.

Florida Panther Project. In a multiagency effort to increase genetic diversity in this endangered species, eight female Texas cougars were released in Big Cypress National Preserve, Everglades National Park, and Fakahatchee Strand State Preserve in 1995 to breed with endangered Florida panthers.



Eight female Texas cougars were released in Big Cypress National Preserve, Everglades National Park, and Fakahatchee Strand State Preserve to increase genetic diversity in the endangered Florida panther population. Since 1995, the transplanted cougars have given birth to 12 kittens.

Built Environment

Transforming the built environment is one of the most challenging goals of regaining a sustainable South Florida. This requires balancing growth and development with the need to protect the natural resources. A critical component is to make developed areas more desirable to inhabit. This entails providing efficient transportation systems, designing pedestrian friendly communities, offering a

Even the horizon has a limit.

range of housing at different income levels, and providing adequate human services — to name a few. Partners are seeking ways to engender a sense of community among diverse cultural and ethnic populations, many of whom are recent immigrants to the area. Failing to transform the built environment will result in continued outward growth into natural areas and the depletion of resources, both of which negatively affect the natural environment.

Accomplishment Highlights

Eastward Ho! This initiative marks a major effort to make urban areas more livable. The goal of this collaborative, multiagency effort is to redirect a greater portion of the future population back to the historical eastern corridor of South Florida. It emphasizes revitalizing older urban areas, improving services, and enhancing the appeal of existing built areas. Promoters of the initiative estimate that redirecting growth patterns and stopping urban sprawl could save over \$6 billion by 2020.

Brownfields Partnership. This partnership is a collaboration targeting the cleanup and reuse of contaminated, abandoned, or underused urban sites. The partnership recently celebrated its designation as an U.S. Environmental Protection Agency *National Brownfields Showcase Community*, one of 16 communities chosen from 230 nationwide applicants. This designation brings the promise of increased financial attention and resources for restoration of brownfield sites.

Sustainable Lake Okeechobee Initiative. Eight local governments and nonprofit organizations around Lake Okeechobee will receive assistance under this Florida Department of Community Affairs initiative. Grantees will receive up to \$25,000 and technical assistance from the department and the Conservation Fund to aid their efforts to make these rural communities and the surrounding environment more sustainable.

Sustainable Communities Demonstration Project. The 1996 Florida Legislature created this project to test a more flexible, results-oriented approach to community planning. Two South Florida communities – Boca Raton and Martin County – were among five chosen in the state to participate. These communities now have less state oversight of their comprehensive plan amendments. In return, the communities place higher priority on developing strategies and tactics to control sprawl, encourage compact development, protect the environment, create public transit alternatives, and provide new opportunities for affordable housing.

Florida Sustainable Communities Network. The Department of Community Affairs also has formed the Florida Sustainable Communities Network. With membership now standing at 34 communities, the network provides sustainability-related training, information, technical assistance, and peer-to-peer information sharing to its member local governments and interested parties.

Florida Keys Carrying Capacity Study. The governor's Executive Order 96-108 called for a carrying capacity analysis for the Florida Keys in response to rapid population growth. The Department of Community Affairs and the Corps, with public and private support, are designing the study under the Critical Restoration Projects authority provided by WRDA-96. When completed, the informational database will allow planners to make knowledgeable decisions about balancing economic and environmental needs.

Transportation and Land Use Study Committee. This committee was created by the 1998 Florida Legislature to make recommendations for modifying the Florida statutes and associated rules to improve the integration of land use and transportation planning. The 25 committee members were appointed by the secretaries of the Florida Departments of Transportation and Community Affairs. The final report of the committee, issued in January 1999, contained an evaluation of the roles of all agencies and stakeholders involved in land use and transportation planning, including local governments, regional planning councils, state agencies, regional transportation authorities, and metropolitan planning organizations.

CHANGING THE WAY WE WORK

Changing how we approach, use, and manage our resources, in both the natural and built environments, is another crucial component of restoration and sustainability efforts. The following projects illustrate steps taken to evaluate and revise how we manage the South Florida ecosystem.

Changing mind-sets is as important as changing the landscape.

Innovative Planning and Management

The shared vision of a sustainable South Florida has helped restoration partners coordinate their actions. Former adversaries now work together toward reaching common goals. Many governmental entities share resources and expertise to meet pressing needs. This increased interaction is breaking down institutional barriers, streamlining regulatory processes, and making it possible to deal with problems proactively. The following accomplishments depict the successes made through these collaborative efforts.



The Osceola Street renovation project in downtown Stuart, Florida is an ideal example of a public/private partnership that works towards a sustainable urban environment. The City of Stuart implemented streetscape renovations which include traffic calming, landscaping, free parking, green spaces, waterfront event sites and a free transit system. Business owners, with matching funds from the federal government through the Florida Mainstreet Program, performed facade improvements as part of this project.

Accomplishment Highlights

Integrated Financial Plan. Coordinating funding and projects is critical at the massive scale of the South Florida ecosystem. The Task Force, through the Working Group and the Governor's Commission, plays a major role in this coordination. For example, the Working Group developed an *Integrated Financial Plan* that summarizes the objectives, funding requirements, and project schedules for over 200 projects. This document, updated annually, is used by state, federal, regional, and tribal governments to plan and prioritize their fiscal year budgets.

Funding Recommendations. The Task Force, Working Group, and Governor's Commission also play valuable roles in disbursing special funding. When Congress authorized \$200 million to the Department of the Interior under the 1996 Farm Bill, DOI Secretary Bruce Babbitt requested recommendations for wisely investing the funds. Through a series of meetings, and with significant opportunities for public comment, the Working Group and Governor's Commission ranked a total of 27 candidate projects that met criteria set by Congress. Over 85% of the funding went toward the two highest ranked projects: acquiring lands needed for water storage in the Everglades Agricultural Area and in the East Coast Buffer/Water Preserve Areas.

Interagency Issue Teams. The Working Group employed a number of multiagency, multidisciplinary teams to recommend resolutions and action plans for South Florida environmental issues. In

response to a request from Lieutenant Governor Buddy Mackay, three separate issue teams worked with elected officials and stakeholders to develop near-term action plans for improving water quality in the St. Lucie Estuary, Caloosahatchee Estuary, and Lake Okeechobee. The Working Group also established and used an issue-advisory team to refine a master plan for rock mining in the environmentally sensitive Lake Belt Area.

Southern Everglades Restoration Alliance (SERA). This multidisciplinary, multiagency alliance was formed in 1996 to improve coordination of several ongoing restoration projects in the southern Everglades, including the C-111 Project, the Modified Water Deliveries Project, the L-28

For more information on South Florida ecosystem restoration and sustainability efforts see:

- Draft Feasibility Report on C&SF Project Comprehensive Review Study (Restudy) 1998
- South Florida Ecosystem Restoration Task Force Cross-Cut Budget Report
- South Florida Water Management District 1998 Everglades Annual Report
- An Integrated Plan for South Florida Ecosystem Restoration and Sustainability: Success in the Making (1998)
- Eastward Ho! Revitalizing Southeast Florida's Urban Core (1996)
- Eastward Ho! Building on Success (1998)
- 1996 Conceptual Plan of the Governor's Commission for a Sustainable South Florida

Project, and the Experimental Water Deliveries Program. Resolving critical issues related to these projects requires the participation of federal, tribal, state, regional, and local government agencies. SERA meetings and communications are designed to encourage public and stakeholder participation in the planning, design, and implementation process.

Big Cypress Water Conservation Plan. This project represents a groundbreaking collaboration involving the Seminole Tribe of Florida, Corps, National Park Service, U.S. Department of Agriculture, U.S. Fish and Wildlife Service, and Environmental Protection Agency. This multiyear plan will improve water quality, increase water storage capacity, and enhance hydroperiods on the Big Cypress Reservation. The project will also enhance flood control and provide flexible water conveyance capabilities in the reservation.

Resource Conservation Agreements. Conservation agreements are an innovative approach for managing sensitive resources. These agreements are 20-year service contracts for managing natural resources on private lands. This incentive program, administered by the Florida Stewardship Foundation and the USDA Natural Resources Conservation Service, encourages private landowners to manage natural areas on their properties that harbor endangered species, contain wetlands, recharge aquifers, or provide other ecological functions. Landowners receive tax deductions, annual per acre fees, bonus payments, and other incentives for participating. A model resource conservation agreement is presently being negotiated on a 5,500-acre ranch in central Florida.



The U.S. Army Corps of Engineers is coordinating with local and regional governments to prepare an environmental impact statement for Southwest Florida. Designed to improve the understanding of the environmental impacts of growth, this impact statement marks a new technique allowing agencies to deal with development proactively.



Landowners in the Everglades Agricultural Area have reduced phosphorus loads to the Everglades by 55% over the past three years through the use of on-farm best management practices. Under an incentive-based regulatory program managed by the Water District, landowners are rewarded with tax reductions for reducing phosphorus loads from their farms.

Science — Research, Monitoring, Feedback

Science is a powerful tool that helps us determine a path to a desired condition, keeps us on course, and tells us when we get there.

Science is the pervasive underpinning for all South Florida restoration efforts. Restoration partners use research and applied science to fill information gaps, evaluate the effectiveness of management actions, model future outcomes and needs, and define criteria that signal success. The following accomplishments underscore the critical role that science plays in regaining a sustainable South Florida.

Accomplishment Highlights

Everglades Nutrient Removal (ENR) Project. This prototype stormwater treatment area successfully completed its fourth year of operation in August 1998 and continues to exceed performance expectations. During this time, the ENR Project removed 139,000 pounds of phosphorus that would have otherwise flowed directly into the Everglades Protection Area. A \$4.5-million modification to the ENR Project research test cells was completed in 1998. The Water District will use this bank of 30 football field-sized wetland facilities to conduct controlled experiments to optimize STA performance and to evaluate supplemental water quality treatment technologies that have the

potential for reducing phosphorus concentrations to 10 parts per billion or less.

Across-Trophic-Level System Simulation (ATLSS). ATLSS computer landscape models were developed to predict population changes in key Everglades wildlife species that occur as a result of changes in water management. To date population models have been completed for the Florida panther, Cape Sable seaside sparrow, Florida snail kite, wood stork, great blue heron, white ibis, and American alligator. Developed by the Biological Resources Division of the U.S. Geological Survey, these models forecast changes in species health and distributions in response to long-term trends in key variables such as hydrology, food supply, and predator species. The Corps and other partners have used the ATLSS models in the Restudy to evaluate the relative effects of alternative water management scenarios.

Natural System Model. In April 1998 the Water District completed and released an updated version of the Natural System Model. This computer model simulates water flow through the Everglades before the construction of the C&SF Project. This updated model served as one of the primary tools in the Restudy planning process where output data used to measure the degree to which various water management alternatives achieved targeted restoration goals in the Everglades.

Everglades Interim Report. On January 1, 1999, the Water District completed this key science review document mandated by the Everglades Forever Act. This document synthesizes scientific information gathered since 1994 and summarizes major findings related to Everglades restoration. Information from this report will be used by the Water District and Florida Department of Environmental Protection for making decisions affecting the implementation of the Everglades Construction Project, particularly STA 3/4, the last and largest stormwater treatment area.

Integrated Marine Monitoring Program. Beginning in 1995 scientists from federal, state, and local agencies have worked together to integrate the environmental monitoring projects taking place in South Florida's marine and estuarine waters. Led by the National Oceanic and Atmospheric Administration and the Florida Department of Environmental Protection, an inventory was conducted of more than 200 planned, ongoing, and



State and federal scientists completed three years of research to provide data for establishing water quality standards for phosphorus that will prevent an imbalance of native Everglades flora and fauna. Peer-reviewed research in Water Conservation Area 2A indicates that significant changes in native biological communities begin to occur at total phosphorus concentrations between 10 and 20 parts per billion.

completed projects in coastal waters. Additional agencies came together to review and prioritize the issues affecting coastal areas, determine information needs, and develop a comprehensive monitoring plan. A geographic information system for sampling sites throughout the region is now being constructed, and gaps in data collection are being filled. This extensive multiagency effort will help to document changes at the ecosystem level, measure the effectiveness of management actions, reduce monitoring gaps and overlaps, and improve existing monitoring capabilities.

Applied Behavioral Science Action Plan. Restoration and sustainability partners also apply the human or social sciences to environmental issues. In February 1998 the Task Force's Social Science Subgroup, with support from multiple agencies, sponsored a symposium to gather recommendations for applying social science research to land management and ecosystem restoration planning, implementation, and monitoring. These recommendations are contained in a Draft Summary of Symposium Results published in April 1998. This information is being used to build a social science action plan for South Florida, to be completed in fiscal year 1999.

Florida Bay Science Program. This program, overseen by an interagency program management com-

mittee, is guided by a strategic plan for research designed to determine the mechanisms and causes behind detrimental changes in Florida Bay, such as reduced seagrass coverage and water quality. The program has coordinated the collection of sediment cores to document historical water quality and ecology, assembled critical baseline data sets, established restoration targets for salinity, and has begun developing predictive models for the bay and adjacent areas. The science management approach developed for Florida Bay is regarded as a model for ecosystem research throughout South Florida.

Everglades Water Quality Model. The Water District developed this computer model to predict the quantity of phosphorus transported to a specific area when a new water or phosphorus management alternative is implemented. The Restudy Team used this model to assess water quality impacts of the various water management alternatives.

Micosukee and Seminole Water Quality Monitoring Programs. The Micosukees have an established water quality monitoring program and recently have adopted stringent standards to limit phosphorus levels to 10 parts per billion for reservation water. Similarly, through a cooperative effort with the Bureau of Indian Affairs, Environmental Protection Agency, and U.S. Geological Survey, the Seminole Tribe of Florida has implemented a monitoring program and adopted water quality standards for the Big Cypress and Brighton Reservations. The Seminole Tribe is now developing standards for other reservations. These efforts demonstrate the commitment of both tribes in maintaining good water quality on tribal lands — lands that are integral to the entire ecosystem.

Conceptual Ecological Models. Multiagency teams have developed an initial set of conceptual models to organize technical information for the South Florida ecosystem. The organized data allow planners to design projects to correct specific problems resulting in ecosystem degradation. They also identify the ecological performance measures that are most likely to reflect the success of the restoration programs. These models are a way of creating a consensus among scientists regarding the cause and effect linkages in the stressed Everglades system.

Public Outreach and Education

Everyone is a steward.

Success in restoring and preserving the South Florida ecosystem depends on the commitment and support of the people of South Florida, the nation, and the world. The high degree of public involvement in the Restudy and other projects clearly shows the value of public outreach in focusing issues and consensus building. Arming the public with facts helps create a respect for the environment and a sense of shared community.

Accomplishment Highlights

The Governor's Commission for a Sustainable South Florida. The Governor's Commission is an effective forum for informing and engaging key stakeholders in free-flowing dialogue. The commission is an informed body of disparate interests that has successfully reached consensus on many controversial issues and helped to keep individual interest groups working together. It serves as an important conduit for sharing information received from commission constituencies.

Public Outreach and Participation Strategy. The Working Group developed a public outreach and participation strategy designed to attain broad-based public understanding and long-term support for a restored ecosystem and a sustainable South Florida. Through this strategy the Working Group and the Governor's Commission promote public awareness, actively engage everyone who is affected in restoration and sustainability efforts, and incorporate their views in the many important decisions being made.

Seminole Ah-Tah-Thi-Ki Museum. Opened in April 1997 on the Big Cypress Reservation, the museum preserves and interprets the culture, language, and customs of the Florida Seminoles. The museum's exhibits, rare artifacts, and interactive computers are effective educational tools for tribal members and the non-Seminole community alike. The museum is a centerpiece of recent tribal achievements.

Southwest Florida Environmental Information Center. The center represents a new outreach tool for South Florida. Co-sponsored by 10 federal, state, and regional agencies and environmental organizations, the center opened in December 1997. The facility's strategic location, on a major highway and near the southwest entrance to the

Everglades National Park, encourages visitors to stop. The center draws the visitor's attention to the complex issues confronting ecosystem restoration in South Florida and helps to instill a sense of stewardship and responsibility for the resources.

Tortugas 2000 / Dry Tortugas Commercial Services and Visitor Use Planning Efforts. In fall 1998 the Florida Keys National Marine Sanctuary and Dry Tortugas National Park launched an interagency planning effort to protect sensitive Tortugas habitats. Tortugas 2000, an important component of the Florida Keys marine zoning strategy, will establish an Ecological Reserve to protect biodiversity, maintain ecosystem integrity, and act as a reference site to help scientists discriminate between natural versus induced changes to the Keys ecosystem. The reserve will be located in the western Tortugas region and will be in place by the year 2000.

The Dry Tortugas National Park commercial services and visitor use plan will explore ways to protect resources while continuing to provide high quality visitor experiences in the unique setting of historic Fort Jefferson and the surrounding reefs.

The agencies combined their initial scoping efforts through a newsletter, extensive media contacts, and a series of successful open houses. These joint efforts allowed the agencies to show the differences between these similar, but distinct, efforts in a convenient forum that encouraged strong public participation.

Anthropological Techniques for Public Outreach on Brownfields. The U.S. Environmental Protection Agency and the Society for Applied Anthropology began initial "community profiling" to test the agency's existing Community Profile Guide. The information gained will also assist the emerging brownfields initiative in South Florida. The data – which will include demographic, ethnic, age, gender, and income information – will be used to assess community perceptions of brownfields and their risks as well as community preferences on how to deal with them.

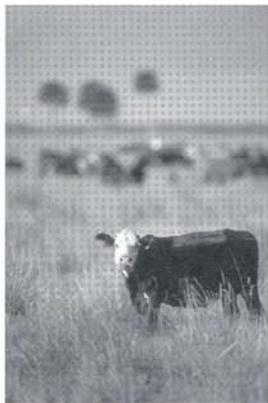
For more information on South Florida ecosystem restoration and sustainability projects and for current rosters for the Task Force and its supporting teams and advisory committees, log on to one of the following web sites

<http://www.sfrestore.org>

<http://sustainable.state.fl.us>



The South Florida ecosystem is a unique natural and cultural system. There is no other like it in the world. The future of this special place depends on its health, vitality, and sustainability. It will take the effort of us all to meet the challenge.



THE FUTURE

The South Florida ecosystem is a unique natural and cultural system. There is no other like it in the world. The future of this special place depends on its health, vitality, and sustainability. It will take the effort of us all to meet the challenge.

The problems faced in South Florida do not stem from a single origin. They have arisen from many sources and have compounded through time. No single entity can resolve them. Making South Florida sustainable and restoring the natural ecosystem will take decades of continuous effort and commitment.

WHAT WILL IT TAKE TO SUCCEED

The South Florida Ecosystem Restoration Task Force and all the partners in restoration and sustainability efforts are committed to the long-term challenge of saving South Florida.

A strategic funding and communications plan is needed from the state and federal partners.

U.S. Congressional Action

The support received from Congress, in the form of the Water Resources Development Act of 1996, Farm Bill, and other key appropriations, has allowed us to make significant strides in regaining a sustainable South Florida. Your continued attention in the following areas will maintain the momentum of progress.

Funding. Adequate and consistent funding for the following projects will be crucial in getting the water right, restoring and enhancing the natural system, and transforming the built environment:

- ongoing restoration projects including the completion of the Kissimmee River Restoration Project, the Modified Water Deliveries Project, the C-111 Project, and the C-51/STA-1-East Project
- critical restoration projects initiated under the 1996 Water Resources Development Act authorities
- implementation of the Restudy Comprehensive Plan once it is authorized

- implementation of the Multi-species Recovery Plan
- continued acquisition of land needed for ecosystem restoration and sustainability projects such as the East Everglades Addition and the Water Preserve Areas
- continued implementation of water quality improvement projects in the Florida Keys to reduce impacts of wastewater and urban stormwater
- Critical Ecosystem Studies Initiative and other ecological research, monitoring, and modeling projects to provide the scientific basis for ecosystem restoration and management

Legislative and Legal Authorities. Sometimes money is not the issue, but having the legal authority to take action is.

- authorization of the C&SF Project Restudy Comprehensive Plan will be required

Communication and Involvement. The complexity of the South Florida ecosystem restoration and sustainability efforts calls for good communication and involvement at all levels. The problems are not simply local or regional issues. They have far-reaching implications that can affect a broad range of constituencies, here and around the world. To be successful we need to:

- develop better lines of communication and institutional relationships with elected and appointed officials at the tribal, state, regional, and local levels
- become better acquainted with ecosystem restoration and sustainability efforts through direct participation in workshops, field inspections, etc.
- convey to constituents and colleagues the need for, and value of, viewing ecosystem issues holistically and with a long-term perspective

Florida Legislative Action

The long list of environmental and community development legislation (see page 5) clearly demonstrates the commitment that the Florida

Legislature has in addressing the issues facing South Florida. Continued attention in the following areas will help achieve our mutual restoration and sustainability goals.

Funding. State funding has always played a critical role in ecosystem restoration and sustainability efforts, and it will remain vital in the future. Here are some areas where continued funding will be needed:

- acquiring critical land parcels needed for implementing the Restudy Comprehensive Plan and other restoration and sustainability projects (e.g., Preservation 2000)
- completion of ongoing ecosystem restoration and sustainability projects
- operation and management of newly acquired lands

Legislative and State Support. Several key issues need your attention:

- authorize a successor program to Preservation 2000
- authorize state involvement in the Restudy Comprehensive Plan
- support an executive order to continue the Governor's Commission for a Sustainable South Florida

Communication and Involvement. The Florida Legislature, as well as many state agencies and offices, plays a key role in oversight, planning, and direction of ecosystem restoration activities. To be successful we need to:

- develop better lines of communication and institutional relationships with elected and appointed officials at the federal, regional, and tribal levels
- become better acquainted with ecosystem restoration and sustainability efforts through direct participation in workshops, field inspections, etc.
- convey to constituents and colleagues the need for, and value of, viewing ecosystem issues holistically and with a long-term view

Tribal Action

The Miccosukee Tribe of Florida Indians and the Seminole Tribe of Florida are valued ecosystem partners, and each has unique needs and concerns. As sovereign nations with borders adjacent to state, federal, and private lands, restoration actions taken elsewhere can greatly affect tribal lands, and vice versa. For restoration and sustainability efforts to be successful, and equitable, tribal participation is important to:

- ensure that the Seminole and Miccosukee Tribes continue to be equal partners in planning and implementing restoration actions
- continue to seek ways to work together amicably to find resolution to joint problems and concerns
- continue to provide human and fiscal resources to restoration projects, especially critical projects on tribal lands
- continue to cooperate in ongoing programs (e.g., science and monitoring projects)
- share concepts of stewardship

Conclusion

The vision for South Florida is a sustainable and integrated ecosystem. Current successes show that restoring the ecosystem is possible, and the benefits are real. But restoring a healthy and sustainable South Florida is a massive undertaking that will take decades to complete and will require long-term commitments.

A conceptual blueprint is in hand, and we have made a productive start. Revitalizing urban core areas is creating new jobs. Reducing the levels of phosphorus in stormwater runoff is beginning to revive estuaries and coastal breeding grounds and is helping to maintain commercial and recreational fishing. Progress is being made, but much remains to be done.

SOUTH FLORIDA ECOSYSTEM RESTORATION WORKING GROUP*

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**Members as of December 1998*

Please note:

While recognizing that the Restudy is an excellent analysis and that the private sector understands the importance of Everglades Restoration, the Miccosukee Tribe of Indians of Florida has expressed minority views with respect to some aspects of this biennial report. In particular, the Tribe has expressed the opinion that some projects are moving too slowly (e.g., Stormwater Treatment Areas, the East Everglades Addition to Everglades National Park, and the Modified Water Deliveries project), that interagency cooperation needs to be improved, and that water quality needs to be more fully addressed.

The statement of views of Mr. Dexter Lehtinen, the Miccosukee Tribe's representative will be distributed separately and is available upon request at 7700 North Kendall Drive, Miami, Florida, 33156 or by calling 305-279-3353.

For more information about the Task Force, the Working Group, or related sub-groups, please write or call:

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