

# COORDINATING SUCCESS:

## Strategy for Restoration of the South Florida Ecosystem

July 31, 2000



Courtesy of SFWMD



Courtesy of SFWMD



Courtesy of Treasure Coast Regional Planning Council



Courtesy of SFWMD

This document describes a coordination strategy consistent with the authorities Congress gave to the South Florida Ecosystem Restoration Task Force. It combines information from federal, state, tribal, and local agencies and therefore does not strictly follow any single agency's format.



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# GLOSSARY

## Terms

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*Adaptive assessment:* A process for learning and incorporating new information into the planning and evaluation phases of the restoration program. This process ensures that the scientific information produced for this effort is converted into products that are continuously used in management decision-making.

*Best management practices:* Agricultural and other industrial management activities designed to achieve an important goal, such as reducing farm runoff or optimizing water use.

*Ecosystem:* A community of organisms, including humans, interacting with one another and the environment in which they live.

*Goal:* Something to be achieved. Goals can be established for outcomes (results) or outputs (efforts).

*Hydrology:* Literally, the properties, distribution, and effects of water. Used in this report to mean water quantity, timing, and distribution.

*Objective:* A goal expressed in specific, directly measurable terms.

*Outcome:* An end result. For purposes of this plan, a quality of the restored South Florida ecosystem.

*Output:* Levels of work and effort. For purposes of this plan, the products or services produced by a project or program.

*Performance measure:* A desired result stated in quantifiable terms to allow for an assessment of how well the desired result has been achieved.

*Restoration:* The recovery of a natural system's vitality and biological and hydrological integrity to the extent that the health and ecological functions are self-sustaining over time.

*South Florida ecosystem / Greater Everglades ecosystem:* An area consisting of the lands and waters within the boundary of the South Florida Water Management

District, including the Everglades, the Florida Keys, and the contiguous nearshore coastal waters of South Florida.

*Stormwater:* Surface water resulting from rainfall that does not percolate into the ground or evaporate.

*Subsidence:* The lowering of the soil level caused by shrinkage of organic layers. This shrinkage is due to desiccation, consolidation, and biological oxidation.

*Success indicator:* A subset of performance measures selected as a good representation of overall performance.

*Sustainability:* The state of having met the needs of the present without endangering the ability of future generations to be able to meet their own needs.

*Vision:* An aspiration for the future. In this case the results that the task force members intend to achieve in terms of ecosystem health and quality of life for South Florida residents and visitors.

*Wetlands:* Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of vegetative or aquatic life that require saturated or seasonally saturated soil conditions for growth and reproduction.

## Acronyms

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ASR     Aquifer storage and recovery

BMP     Best management practices

C&SF Project: Central and Southern Florida Project

CARL    Conservation and Recreational Lands

CERP    *Comprehensive Everglades Restoration Plan*

DEP     Florida Department of Environmental Protection

EAA     Everglades Agricultural Area

SFWMD: South Florida Water Management District

STA     Stormwater treatment area

TMDL    Total maximum daily load

WCA     Water conservation area

# EXECUTIVE SUMMARY

## Introduction

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The South Florida ecosystem is an 18,000-square-mile region of subtropical uplands, wetlands, and coral reefs that extends from the Chain of Lakes south of Orlando through the reefs southwest of the Florida Keys. This ecosystem not only supports the economy and the quality of life of the Floridians and the Native American Indians who live there, but also enriches the legacy of all Americans. It encompasses many nationally significant conservation areas, including Everglades and Biscayne National Parks, Big Cypress National Preserve, the Arthur R. Marshall Loxahatchee National Wildlife Refuge, and the Florida Keys National Marine Sanctuary.

This ecosystem is sustained by water, and it has been seriously degraded by disruptions to the natural hydrology. Engineered flood control and water distribution systems for agriculture and urban development have dewatered large areas and greatly altered the quantity, timing, and distribution of water flows in other locations. Agricultural runoff and urban stormwater have introduced phosphorus and other contaminants into the water systems, polluting lakes, rivers, and wetlands. Discharges of stormwater into estuaries and coastal waters have severely degraded aquatic habitats. Groundwater is threatened by saltwater intrusion and other pollutants. These impacts have stressed the natural system, as evidenced by

- Fifty percent reduction in the original extent of the Everglades
- Ninety percent reduction in wading bird populations
- Sixty-nine species on the federal endangered or threatened list
- Declines in commercial fisheries in Biscayne and Florida Bays
- Nineteen percent decline in living corals in the last decade

## Purpose

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The purpose of this document is to describe the existing federal and nonfederal programs designed to restore and sustain the imperiled South Florida ecosystem. Many federal, state, tribal, and local entities are working to address the deteriorating ecological conditions in South Florida. The South Florida Ecosystem Restoration Task Force (the task force) coordinates and tracks the work. Congress directed the task force to produce a restoration strategy. This document provides the information needed to coordinate and integrate the restoration effort.

Congress identified four elements to be included in this document. They wanted it to outline how the restoration effort will occur, identify the resources needed, establish responsibility for accomplishing actions, and link the strategic goals established by the participants to outcome-oriented goals (see appendix A). This document describes how the restoration effort is being coordinated: The task force members have agreed upon a vision for the results; they have established three broad goals and measurable objectives for the work that needs to be accomplished to achieve that vision; they have identified the projects needed to achieve the objectives; they are coordinating those projects so that they are mutually supportive and nonduplicative; and they are tracking progress toward both the work-oriented goals and the results-oriented vision. This strategy, along with the vision, goals, objectives, performance measures, and individual project data (including cost, responsible agency, and targeted completion dates) are all included in this document.

This strategy document is for planning purposes only, is subject to modification, and is not legally binding on any of the task force members. Each task force member and the interests they represent retain all of their sovereign rights, authorities, and jurisdiction for implementation of the projects contained within this document.

The integrated federal and nonfederal effort to restore, preserve, and protect the ecosystem will take many decades. This document and funding needs may be revised over time based on information gained through monitoring and study.

The authorization of the *Comprehensive Everglades Restoration Plan* (CERP), a major component of the restoration effort, is currently pending before the Congress. The estimated \$7.8 billion cost of the CERP will be split 50-50 between the federal government and nonfederal sponsors.

### Who Is Involved

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***The task force provides a forum for consensus building and issue engagement among the entities involved in restoring the South Florida ecosystem. This is a collaborative role, not one in which the task force can dictate to its members. Because on-the-ground restoration is accomplished through the efforts of the individual task force member agencies, they are the ones that are ultimately responsible for their particular programs, projects, and associated funding. This is an important distinction. The task force has no overriding authority to edit its members. Instead, the members are accountable individually to their appropriate authorities and to each other for the success of the restoration.***

Six federal departments (twelve agencies), seven Florida state agencies or commissions, two American Indian tribes, sixteen counties, scores of municipal governments, and interested groups and businesses from throughout South Florida are participating in the restoration effort. Four sovereign entities (federal, state, and two tribes) are represented. The task force sought extensive involvement from local agencies, citizen groups, nonprofit organizations, and other interested parties as part of its assessment for this strategy.

The task force was created in 1993 as a federal interagency partnership, with informal partici-

pation by the State of Florida, the Seminole Tribe of Florida, and the Miccosukee Tribe of Indians of Florida. The Water Resources Development Act of 1996 authorized the operation of the task force and provided for specific membership and duties. Pursuant to its statutory duties, a task force working group of agency and tribal representatives (the working group) works to resolve conflicts among participants, coordinate research, assist participants, prepare an integrated financial plan, and report to Congress. The task force does not have any oversight or project authority, and participating agencies are responsible for meeting their own targeted accomplishments. The task force's role as a forum in which ideas are shared and consensus is sought enhances the productivity of each member government or agency effort.

### Vision and Goals

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The participants in the task force share the vision of a healthy South Florida ecosystem that supports diverse and sustainable communities of plants, animals, and people. To this end, hundreds of different entities have been working for over a decade to restore and preserve more natural hydrology in the ecosystem, to protect the spatial extent and quality of remaining habitat, to promote the return of abundant populations of native plants and animals, and to foster human development compatible with sustaining a healthy ecosystem. The past, current, and future efforts of governmental entities in South Florida involve more than 200 projects related to three primary work goals. Subgoals and objectives have been established for the first two work goals and will be reported for the third goal in future updates to this document.

The task force members believe through accomplishing these objectives they will achieve the restoration of the ecosystem. The region's rich and varied habitats will become healthy and productive. Imperiled species will recover, and the large nesting rookeries of wading birds will return.

## Goal 1: Get the water right

### Subgoal 1-A: Get the hydrology right

**Objective 1-A.1:** Provide 1.6 million acre-feet of surface water storage by 2037

**Objective 1-A.2:** Develop aquifer storage and recovery systems capable of storing 1.7 billion gallons per day by 2020

**Objective 1-A.3:** Modify 279 miles of impediments to flow by 2019

### Subgoal 1-B: Get the water quality right

**Objective 1-B.1:** Construct 122,000 acres of stormwater treatment areas by 2036

**Objective 1-B.2:** Prepare plans, with strategies and schedules for implementation, to comply with TMDLs (total maximum daily loads) for 100 percent of impaired water bodies by 2011

## Goal 2: Restore, preserve, and protect natural habitats and species

### Subgoal 2-A: Restore, preserve, and protect natural habitats

**Objective 2-A.1:** Acquire 1.95 million acres of land for habitat protection by 2015

**Objective 2-B.2:** Protect 20 percent of the coral reefs by 2020

### Subgoal 2-B: Control invasive exotic plants

**Objective 2-B.1:** Prepare management plans for the top twenty South Florida invasive exotic plant species by 2010

**Objective 2-B.2:** Achieve maintenance control status for Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern in all natural areas in the region by 2020

**Objective 2-B.3:** Complete an Invasive Exotic Plant Prevention, Early Detection, and Eradication Plan by 2005

## Goal 3: Foster compatibility of the built and natural systems

The appropriate agencies will track progress toward restoring the ecosystem through approximately 200 performance measures developed as part of the *Comprehensive Everglades Restoration Plan* plus additional measures for areas not covered by the CERP, such as the *South Florida Multi-Species Recovery Plan*. These measures, which range from the number of acres of periphyton in Everglades marshes to the frequency of water supply restrictions in urban and agricultural areas, represent the myriad physical, biological, and human elements that interrelate as parts of the ecosystem and are important to ecosystem health. The agencies will provide data to the task force, which will update this document for transmittal to Congress, the state legislature, and the councils of the tribes.

The following measures are a representative subset of a broader list of indicators for tracking success. Many of these represent end

results that may take up to fifty years to realize. Interim targets, which focus on earlier indications of successional change, will allow assessment of incremental progress.

- Improved status for fourteen federally listed threatened or endangered species, and no declines in status for those additional species listed by the state, by 2020
- A 90 percent recovery of the acreage and number of tree islands existing in 1940, and a health index of 0.90 (where 0 = death is imminent, 1 = completely stress free) (Interim target: A 20 percent improvement in the general health index of the tree islands, and no further loss in the total number of tree islands by 2020)
- Healthy oyster beds in the major estuaries, such as the St. Lucie Estuary and those in Biscayne Bay
- Four thousand nesting pairs of wood storks in the Everglades and Big Cypress basins (Interim target: Fifteen hundred nesting pairs by 2010)

- Water quality within the Everglades ecosystem that meets federal, state, and tribal water quality standards
- A lakewide average phosphorus concentration of 40 parts per billion (ppb) total in the open-water regions of Lake Okeechobee
- Water provided to all users during droughts up to the level of certainty of a one-in-ten-year frequency of occurrence
- Nesting roseate spoonbills in the coastal zone of the southwestern Gulf Coast between Lostman's River and the Caloosahatchee River; and 1,000 nesting pairs in Florida Bay, including 250 nesting pairs in northeast Florida Bay
- A 65-75 percent coverage of Florida Bay with high-quality seagrass beds
- A long-term commercial harvest of pink shrimp on the Dry Tortugas fishing grounds that equals or exceeds the rate that occurred during the years 1961-1962 to 1982-1983; and an amount of large shrimp in the long-term average catch exceeding 500 pounds per vessel-day
- An average annual loading to the St. Lucie Estuary of no more than 400 pounds of phosphorus per 1,000 acre-feet of discharge
- The capture and storage of most of the excess freshwater currently lost to the ocean and the gulf, and delivery of the water when and where it is needed

## **Restoration Strategy**

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The task force provides a forum for consensus building and issue engagement among the entities involved in restoring the South Florida ecosystem. This is a collaborative role, not one in which the task force can dictate to its members. Because on-the-ground restoration is accomplished through the efforts of the individual task force member agencies, they are the ones that are ultimately responsible for their

particular programs, projects, and associated funding. This is an important distinction. The task force has no overriding authority to direct its members. Instead, the members are accountable individually to their appropriate authorities and to each other for the success of the restoration.

The task force and its members coordinate and track the restoration effort as follows:

*FOCUS ON GOALS.* This document establishes specific goals and measures that define the scope of the restoration initiative and answer these fundamental questions: What will the restoration partners accomplish? When will the restoration effort be done? What key indicators will signal progress and success?

*COORDINATE PROJECTS.* To be effective, individual projects should contribute to the vision and goals, be timely, and support rather than duplicate other efforts. This document includes a master list of restoration projects and includes information about goals and objectives, start and finish dates, lead agencies, and funding.

*TRACK AND ASSESS PROGRESS.* The task force will facilitate the implementation of the individual entities' *adaptive assessment* processes to track and assess progress. Adaptive assessment involves constantly monitoring project contributions and indicators of success to determine the actual versus expected results of various actions. This process acknowledges that not all the data needed to restore the South Florida ecosystem are available now. As project managers track incremental progress in achieving objectives they may raise "red flags" alerting the task force members that a project (1) is not on schedule or (2) is not producing the projected outputs or anticipated results. The ability to anticipate problems early helps to minimize their effect on the total restoration effort. Management responses may involve revising the project design, evaluating changing resource needs, or working collaboratively on projects that fall behind. Projects that are not

proving effective may be replaced with new projects. Because each participating agency is responsible for its particular programs, projects, and funding, such decisions are made by the entities involved.

*FACILITATE THE RESOLUTION OF ISSUES AND CONFLICTS.* Disagreements and conflict are to be expected given the scope, complexity, and large number of sponsors and interests involved in ecosystem restoration. In particular, the ability to resolve existing conflicts is complicated by (1) the large number of governmental entities involved at the federal, state, tribal, and local levels; (2) the differing, and sometimes conflicting, legal mandates and agency missions among the entities involved; and (3) the diverse stakeholder interests represented by the member agencies, which include environmental, agricultural, Native American, urban, and commercial values.

The task force will facilitate the prevention and resolution of conflict to the extent possible by clarifying the issue(s), identifying stakeholder concerns, obtaining and analyzing relevant information, and identifying solutions. The working group will regularly track issues in dispute and report to the task force when there are unresolved issues. Although these efforts are intended to facilitate conflict resolution, opportunities will always exist for parties to pursue conflicts through litigation, although litigation is time consuming, costly, and uncertain. Further, litigation diverts resources from restoration efforts. Unfortunately, judicial resolution of legal claims does not always resolve the underlying conflict to the satisfaction of every party.

The task force will meet regularly to report on progress, coordinate consensus, and identify opportunities for improvement.

# PURPOSE AND BACKGROUND

## **PURPOSE**

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The purpose of this document is to describe the existing federal and nonfederal programs designed to restore and sustain the imperiled South Florida ecosystem. The American people have a strong national as well as local interest in preserving this 18,000-square-mile region of subtropical uplands, wetlands, and coral reefs that extends from the Chain of Lakes south of Orlando through the reefs southwest of the Florida Keys. The South Florida ecosystem not only supports the economy and the distinctive quality of life of the Floridians and the Native American Indians who live there, but also greatly enriches the shared legacy of all Americans. It encompasses many nationally significant conservation areas, including Everglades and Biscayne National Parks, Big Cypress National Preserve, the Arthur R. Marshall Loxahatchee National Wildlife Refuge, and the Florida Keys National Marine Sanctuary.

Many federal, state, tribal, and local entities are working to address the deteriorating ecological conditions in South Florida. The South Florida Ecosystem Restoration Task Force (the task force) coordinates and tracks the work. Congress directed the task force to produce a restoration strategy. This document provides the information needed to coordinate and integrate the restoration effort.

Congress identified four elements to be included in this document. They wanted it to outline how the restoration effort will occur, identify the resources needed, establish responsibility for accomplishing actions, and link the strategic goals established by the participants to outcome-oriented goals (see appendix A). This document describes how the restoration effort is being coordinated: The task force members have agreed upon a vision for the results; they have established three broad goals and measurable objectives for the work that needs to be accomplished to achieve that vision; they have

identified the projects needed to achieve the objectives; they are coordinating those projects so that they are mutually supportive and nonduplicative; and they are tracking progress toward both the work-oriented goals and the results-oriented vision. This strategy, along with the vision, goals, objectives, performance measures, and individual project data (including cost, responsible agency, and targeted completion dates) are all included in this document.

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## **WHO IS INVOLVED: SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE**

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Six federal departments (twelve agencies), seven Florida state agencies or commissions, two American Indian tribes, sixteen counties, scores of municipal governments, and interested groups and businesses from throughout South Florida participate in the restoration effort. Four sovereign entities (federal, state, and two tribes) are represented. The task force sought extensive involvement from local agencies, citizen groups, nonprofit organizations, and other interested parties as part of its assessment for this strategy.

The South Florida Ecosystem Restoration Task Force was created in 1993 as a federal interagency partnership, with informal participation by the State of Florida, the Seminole Tribe of Florida, and the Miccosukee Tribe of Indians of Florida. The Water Resources Development Act of 1996 authorized the operation of the task force and provided for specific membership and duties (see appendix B). The act expanded the role of the task force to include the following duties:

- Facilitate the resolution of interagency and inter-governmental conflicts associated with the restoration of the South Florida ecosystem among agencies and entities represented on the task force.
- Coordinate research associated with the restoration.
- Provide assistance and support to agencies and entities represented.
- Prepare an integrated financial plan and recommendations for coordinated budget requests to be expended by agencies and entities on the task force.
- Submit a biennial report to Congress that summarizes the restoration activities.

Pursuant to its statutory duties, a task force working group of agency and tribal representatives (the working group) works to resolve conflicts among participants, coordinate research, assist participants, prepare an integrated financial plan, and report to Congress. The task force does not have any oversight or project authority, and participating agencies are responsible for meeting their own targeted accomplishments. The task force's role as a forum in which ideas are shared and consensus is sought enhances the productivity of each member government or agency effort.

### **BRIEF HISTORY OF SOUTH FLORIDA ECOSYSTEM MANAGEMENT**

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Early land developers viewed the Everglades and related habitats as worthless swamps. By the late 1800s efforts were underway to "reclaim" these swamplands for productive use. These initial efforts were encouraging, and more wetlands were drained for agriculture and for residential and commercial development. Little by little, canals, roads, and buildings began to displace native habitats.

In 1934 national concern about the degradation of the South Florida Everglades led to the creation of Everglades National Park. The portion of the Everglades included in the park was to be permanently reserved as a wilderness with no development that would interfere with preserving the unique flora and fauna and the essential primitive character existing at the date of enactment. This mandate to preserve wilderness is one of the strongest in the National Park System. The park was authorized by Congress in 1934 and opened to the public in 1947.

Meanwhile the region was plagued with both hurricanes and droughts. A 1928 hurricane caused Lake Okeechobee to overflow, drowning approximately 2,400 people. Droughts from 1931 to 1945 lowered groundwater levels, creating serious threats of saltwater intrusion into wells. In 1947 successive storms left 90 percent of South Florida—more than 16,000 square miles from south of Orlando to the Keys—under water.

In 1948 the ongoing efforts to drain the Everglades, protect the region from hurricanes, and make the region habitable culminated in the congressional authorization of the Central & Southern Florida (C&SF) Project, a flood control project jointly built and managed by the U.S. Army Corps of Engineers and the South Florida Water Management District (SFWMD). The primary project goal was to provide water and flood control for urban and agricultural lands. Another goal was to ensure a water supply for Everglades National Park. The first goal was achieved. The project succeeded in draining half of the original Everglades and allowing for expansion of the cities on the lower east coast of Florida and the farming area south of Lake Okeechobee known as the Everglades Agricultural Area (EAA). The second goal has not yet been accomplished. The correct quantity, quality, timing, and distribution of water to the Greater Everglades ecosystem have been the subject of much study. Many projects have been undertaken to restore natural water flows to this region.

The C&SF Project significantly altered the region's hydrology (quantity, timing, and distribution of water). Whereas historically most rainwater had soaked into the region's wetlands, the C&SF canal system, comprised of over 1,800 miles of canals and levees and 200 water control structures, drained an average of approximately 1.7 billion gallons of water per day into the ocean and the gulf. As a result, not enough water was available for the natural functioning of the Everglades or for the communities in the region. Water quality also was degraded. Phosphorus runoff from agriculture and other sources polluted much of the northern Everglades and Lake Okeechobee and caused key changes to the food chain.

During the 1970s and 1980s public policy, in line with predominant public opinion, moved in the direction of environmental protection and restoration in South Florida. For example, in 1972 the Florida Legislature passed the Florida Water Resources Act to balance human and natural system water resource needs. In the same year, the Florida Land and Water Conservation Act was enacted to protect lands for environmental protection and recreation. In 1983, under the leadership of Governor Bob Graham, the Save Our Everglades program was initiated to protect and restore the Kissimmee River Basin, Lake Okeechobee, the state-managed water conservation areas, Big Cypress Swamp, Everglades National Park, Florida Bay, and endangered wildlife. In 1987 the Florida Legislature passed the Surface Water Improvement and Management Act (SWIM) to clean up all waters affected by Florida water management districts. In 1989 Congress passed the Everglades Expansion and Protection Act, which added 107,600 acres to Everglades National Park and called for increased and improved water flows to the park.

Despite progress toward restoration in the 1980s, dramatic growth in the population and development of South Florida kept pressure on the environment. Research at this time reflected declines in many native plant and animal

species and heightened phosphorus pollution of the Everglades. Of particular alarm was evidence of the decline of Florida Bay, indicated by dramatic losses in sea grass habitat, algae blooms, reductions in shrimp and many fish species, and a decline in water clarity.

In 1988 the federal government sued the State of Florida over its failure to protect the Everglades from pollution. After three years and much additional litigation no settlement was reached. In 1991 the newly elected governor, Lawton Chiles, agreed to reach a settlement. For several years mediation efforts led to a reduction in the range of conflict between the state and federal governments and between agricultural and environmental interests. In February 1992 a court settlement was achieved to reduce the level of phosphorus entering Everglades National Park and the Arthur R. Marshall Loxahatchee National Wildlife Refuge by creating artificial wetlands to filter polluted agricultural wastewater. In 1993 the sugar cane industry agreed to adopt the best management practices available and to pay for approximately one-third of the costs of the artificial wetlands to help reduce the phosphorous pollution in the Everglades. The settlement also called for additional measures to be implemented over the long term to meet final numeric water quality standards. In 1994 the agreements developed as a result of litigation and mediation were reflected in the Everglades Forever Act adopted by the Florida Legislature.

The mid-1990s saw the establishment of two important consensus building forums for Everglades issues. In 1993 the South Florida Ecosystem Restoration Task Force was established through an interagency agreement. (Refer to the discussion of the task force on pages 6-7). The task force was formalized and expanded to include tribal, state, and local governments by the 1996 Water Resources Development Act (WRDA 1996). In 1994 the governor of Florida established the Governor's Commission for a Sustainable South Florida "to develop recommendations and public support for regaining a healthy Everglades ecosystem

with sustainable economies and quality communities." The task force and the governor's commission have been instrumental in formulating consensus for Everglades restoration.

In 1996 two significant pieces of legislation were approved by the U.S. Congress. The Farm Bill provided \$200 million to conduct restoration activities in the Everglades ecosystem including land acquisition, resource protection, and resource maintenance. The WRDA 1996 clarified congressional guidance to the U.S. Army Corps of Engineers to develop a comprehensive review study for restoring the hydrology of South Florida. This study, commonly referred to as the Restudy, has resulted in the *Comprehensive Everglades Restoration Plan* (CERP), a consensus plan that is the basis of current legislation that will authorize initial restoration projects. The CERP is designed to reverse unintended consequences resulting from the operation of the Central and Southern Florida Project. The physical limitations of the existing water management system can exacerbate resource conflicts. Implementation of the CERP should increase flexibility for water managers to help avoid such conflicts.

The growing body of federal and nonfederal legislation and regulatory approvals directed at managing growth and protecting the natural environment is summarized below:

- 1972 Florida Water Resources Act established fundamental water policy for Florida, attempting to meet human needs and sustain natural systems; put in place a comprehensive strategic program to preserve and restore the Everglades ecosystem.
- 1972 Florida Land Conservation Act authorized the issuance of bonds to purchase environmentally endangered and recreation lands.
- 1983 Governor's Save Our Everglades Program recognized that the entire ecosystem should be restored and protected; initiated Kissimmee River Restoration Project.
- 1984 Florida Warren Henderson Act authorized the Department of Environmental Regulation (now the Department of Environmental Protection) to protect the state's wetlands and surface waters for public interest.
- 1985 Florida Local Government Comprehensive Planning and Land Development Regulation Act required the development and coordination of local land use plans.
- 1987 Compact amongst the Seminole Tribe of Florida, the State of Florida and the South Florida Water Management District completed.
- 1987 Florida Surface Water Improvement and Management Act required the five Florida water management districts to develop plans to clean up and preserve Florida lakes, bays, estuaries, and rivers.
- 1988 Land Settlement Act of 1987 transferred acreage in WC-A3 and the Rotenberger Tract to the State of Florida for Everglades restoration.
- 1990 Florida Preservation 2000 Act established a coordinated land acquisition program to protect the integrity of ecological systems and to provide multiple benefits, including the preservation of fish and wildlife habitat, recreation space, and water recharge areas.
- 1990 Florida Keys National Marine Sanctuary and Protection Act established a 2,800 square-nautical-mile marine sanctuary and authorized a water quality protection program.
- 1991 Florida Everglades Protection Act provided the South Florida Water Management District with clear tools for ecosystem restoration.
- 1992 Water Resources Development Act authorized the Kissimmee River Restoration Project and the Central and Southern Florida Project Restudy.

- *1993* Federal South Florida Ecosystem Restoration Task Force established to coordinate ecosystem restoration efforts in South Florida.
- *1994* Florida Everglades Forever Act outlined a comprehensive plan to restore significant portions of the South Florida ecosystem through construction, research, and regulation.
- *1994* Governor's Commission for a Sustainable South Florida established to make recommendations for achieving a healthy South Florida ecosystem that can coexist with and mutually support a sustainable economy and quality communities.
- *1994* Miccosukee Tribe approved by EPA to establish water quality standards for reservation lands in accordance with Section 518 of the Clean Water Act.
- *1996* Water Resources Development Act authorized a comprehensive review study for restoring the hydrology of South Florida; expanded the South Florida Ecosystem Restoration Task Force to include tribal, state, and local governments, mandated extensive public involvement, and allowed the task force to address the full scope of restoration needs (natural and built).
- *1996* Section 390 of the Farm Bill directly appropriated \$200 million to conduct restoration activities in the Everglades ecosystem in South Florida.
- *1997* Seminole Tribe of Florida's water quality standards for the Big Cypress Reservation approved by USEPA.
- *1997* Miccosukee Tribe water quality standards established for tribal lands located in WCA-3A. Standards established 10 ppb criteria for total phosphorus in tribal waters.
- *1997-2000* 1997, 1998, 1999, and 2000 Interior Appropriations Acts provided for land acquisition by the National Park Service and the Fish and Wildlife Service in the Everglades ecosystem.
- *1998* Seminole Tribe of Florida's water quality standards for the Brighton Reservation approved by the Environmental Protection Agency.
- *1999* *Comprehensive Everglades Restoration Plan* submitted to Congress, outlining 68 infrastructure projects to modify the current water delivery system and improve the quantity, quality, timing, and distribution of water to the natural system; estimated total cost of \$7.8 billion to be shared on a 50-50 basis by the federal and non-federal sponsors.
- *1999* Water Resources Development Act extended Critical Restoration Project authority until 2003; authorized two pilot infrastructure projects proposed in the *Comprehensive Everglades Restoration Plan*
- *1999* Governor's Commission for the Everglades appointed to advise the South Florida Ecosystem Restoration Task Force on issues relating to Everglades protection and restoration, environmental justice, and water resource protection, among other issues.
- *1999* Miccosukee water quality standards approved by the Environmental Protection Agency.
- *1999* Miccosukee Reserved Area Act directed Miccosukee Tribe to establish water quality standards for the Miccosukee Reserved Area (inflow points to Everglades National Park).
- *1999* Miccosukee Tribe water quality standards established for water passing through the Miccosukee Reserved Area, into Everglades National Park.
- *2000* Florida Everglades Restoration Investment Act created a funding and accountability plan to help implement the *Comprehensive Everglades Restoration Plan* \$1.6 billion in state funding committed to Everglades restoration.

● 2000 Water Resources Development Act (proposed legislation) includes \$1.7 billion in authorizations for the first round of Everglades infrastructure projects and pilot projects; proposes programmatic authority for projects with immediate and substantial restoration benefits.

## **WHAT IS AT STAKE**

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Current efforts to restore the South Florida ecosystem must address a century of changes to the environment that have put the ecosystem in jeopardy. Evidence of the seriousness of the problem includes

- Fifty percent reduction in the original extent of the Everglades, including important habitat and groundwater recharge areas
- Ninety percent reductions in wading bird populations
- Sixty-nine species on the federal endangered or threatened list
- Declines in commercial fisheries in Biscayne and Florida Bays
- Loss of over five feet of organic soil in the Everglades Agricultural Area
- Fifty percent decline in the clarity of water in the Florida Keys
- Infestations of exotic plant species on over 1.5 million acres
- Damaging freshwater releases into the St. Lucie and Caloosahatchee Estuaries
- Loss of 40,000 acres of grass beds in Lake Okeechobee
- Loss of tree islands and damaging ecological effects in the state-managed water conservation areas
- Nineteen percent decline in living corals in the last decade

Today South Florida is home to 6.5 million people, and the population is expected to double by 2050. The region also receives more than 37 million tourists annually. The quality of life in South Florida and the region's \$200 billion economy depend on the health and vitality of the natural system. If the coral reefs, estuaries, and shallow waters of Florida Bay cannot support populations of aquatic species, South Florida's tourism industry and associated economy will decline. The loss of fertile soil and conversion of land to nonagricultural uses will make farming and ranching harder to maintain and less profitable.

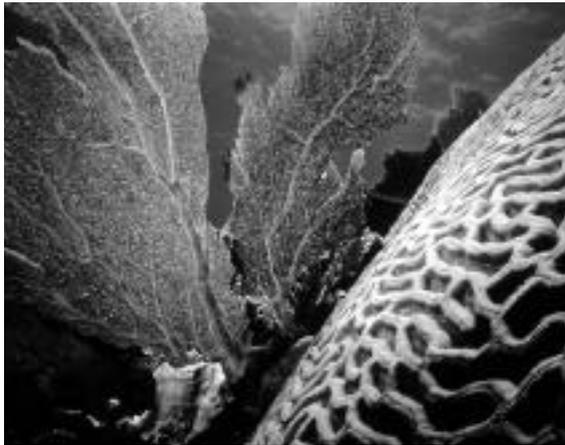
The stakes are high. The South Florida ecosystem once supported some of the greatest biodiversity on earth. The biological abundance and the aesthetic values of the natural system warrant regional, national, and even international interest and concern. In addition to numerous local parks and private conservation areas, South Florida encompasses thirty state parks, seventeen state aquatic preserves, eleven federal wildlife refuges, four national parks, a national marine sanctuary, and a national estuarine research reserve. Everglades National Park has been designated a World Heritage Site, a Wetland of International Significance, and an International Biosphere Reserve. Biosphere reserves are protected examples of the world's major ecosystem types, which are intended to serve as standards for measuring human impacts on the environment worldwide.

# VISION AND INDICATORS OF SUCCESS

The participants in the South Florida Ecosystem Restoration Task Force share a vision:

*A healthy South Florida ecosystem that supports diverse and sustainable communities of plants, animals, and people*

To this end, hundreds of different entities have been working for over a decade to restore and preserve more natural hydrology, to protect the spatial extent and quality of remaining habitat, to promote the return of abundant populations of native plants and animals, and to foster human development compatible with sustaining a healthy ecosystem. These efforts, which are described in detail in the "Work



Courtesy of SFWMD

Goals and Objectives" section of this report, will continue. The results will be continuously analyzed to provide restoration managers with increasingly comprehensive information about what remains to be done to achieve ecosystem restoration. This process, called *adaptive assessment* is described in the "Restoration Strategy" section of this report.

The task force members believe that the efforts described in this report, managed through an adaptive assessment process, will achieve the restoration of the ecosystem: The region's rich and varied habitats will be restored to health. Lake Okeechobee, the Caloosahatchee, St. Lucie, and other estuaries, the Everglades, the mangroves, the coastal marshes, and the sea-



Courtesy of SFWMD

grass beds and coral reefs of Florida and Biscayne Bays will become healthy feeding, nesting, and breeding grounds for diverse and abundant fish and wildlife. The American crocodile, manatee, snail kite, Cape Sable seaside sparrow, and other endangered species will recover. The large nesting rookeries of herons, egrets, ibis, and storks will return. Fishermen, farmers, tourism-dependent businesses, and associated economies will benefit from a viable, productive, and aesthetically beautiful resource base.

The appropriate agencies will track progress toward restoring the ecosystem through approximately 200 performance measures developed as part of the *Comprehensive Everglades Restoration Plan* plus additional measures for areas not covered by the CERP, such as the *South Florida Multi-Species Recovery Plan*. These measures, which range from the number of acres of periphyton in Everglades



Courtesy of Treasure Coast Regional Planning Council

marshes to the frequency of water supply restrictions in urban and agricultural areas, represent the myriad physical, biological, and human elements that interrelate as parts of the ecosystem and are important to ecosystem health. The agencies will provide data to the task force, which will synthesize the information and report to Congress, the state legislature, and the councils of the tribes.

The following measures are a representative subset of a broader list of indicators for tracking success. Many of these represent end results that may take up to fifty years to realize. Interim targets, which focus on earlier indications of successional change, will allow assessment of incremental progress.

- Improved status for fourteen federally listed threatened or endangered species, and no decline in status for those additional species listed by the state, by 2020
- A 90 percent recovery of the acreage and number of tree islands existing in 1940, and a health index of 0.90 (where 0 = death is imminent, 1 = completely stress free) (Interim target: A 20 percent improvement in the general health index of the tree islands, and no further loss in the total number of tree islands by 2020)
- Healthy oyster beds in major estuaries, such as the St. Lucie Estuary and those in Biscayne Bay
- Four thousand nesting pairs of wood storks in the Everglades and Big Cypress basins (Interim target: Fifteen hundred nesting pairs by 2010)
- Water quality within the Everglades ecosystem that meets federal, state, and tribal water quality standards
- A lakewide average phosphorus concentration of 40 parts per billion (ppb) total in the open-water regions of Lake Okeechobee
- Water provided to all users during droughts up to the level of severity of a one-in-ten-year frequency of occurrence
- Nesting roseate spoonbills in the coastal zone of the southwestern Gulf Coast between Lostman's River and the Caloosahatchee River; and 1,000 nesting pairs in Florida Bay, including 250 nesting pairs in northeast Florida Bay
- A 65-75 percent coverage of Florida Bay with high-quality seagrass beds
- A long-term average rate of commercial harvest of pink shrimp on the Dry Tortugas fishing grounds that equals or exceeds the 600 pounds per vessel-day rate that occurred during the years 1961-1962 to 1982-1983; and an amount of large shrimp in the long-term average catch exceeding 500 pounds per vessel-day
- An average annual loading to the St. Lucie Estuary of no more than 400 pounds of phosphorus per 1,000 acre-feet of discharge
- The capture and storage of most of the excess freshwater currently lost to the ocean and the gulf, and delivery of the water when and where it is needed

It is important to understand that the "restored" Everglades of the future will be different from any version of the Everglades that has existed in the past. While it is very likely to be more healthy than the current ecosystem, it will not completely match the predrainage system. The irreversible physical changes made to the ecosystem make a complete match impossible. The restored Everglades will be smaller and somewhat differently arranged than the historic ecosystem. However, it will have recovered those hydrological and biological characteristics that defined the original Everglades and made it unique among the world's wetland systems. It will evoke the wildness and richness of the former Everglades.

# WORK GOALS AND OBJECTIVES

The ultimate result of all the task force members' efforts should be the restoration of the South Florida ecosystem. The direct measures of success for achieving this result are described in the "Vision" section of this document.

Because of the complexity and the long time frame of this initiative, it is also important to measure and track the hundreds of things that must be done (the outputs) to achieve the result of a restored ecosystem. By measuring and tracking the contributions of individual and aggregated work efforts, or projects, the task force members can identify whether restoration activities are being implemented in a timely and effective manner.

To this end, the task force members have identified three goals, related subgoals, and specific measurable objectives for the work that must be done. The three goals recognize that water, habitats and species, and the built environment are inextricably linked in the ecosystem and must be addressed simultaneously if the ecosystem is to be restored and preserved over the long term. The subgoals break the goals into more definitive areas of concern:

## **Goal 1: Get the water right**

*SUBGOAL 1-A:* Get the hydrology right

*SUBGOAL 1-B:* Get the water quality right

## **Goal 2: Restore, preserve, and protect natural habitats and species**

*SUBGOAL 2-A:* Restore, preserve, and protect natural habitats

*SUBGOAL 2-B:* Control invasive exotic plants

## **Goal 3: Foster compatibility of the built and natural systems**

Specific, measurable objectives for what must be done in order to achieve the subgoals and goals—and ultimately the intended result of a restored ecosystem—were developed using the best information available, gained through models or research. Examples of these objectives include "develop aquifer storage and recovery systems capable of storing 1.7 billion

gallons per day (gpd) by 2020" and "protect 20 percent of the coral reefs by 2020."

The objectives included in this document do not comprise the exhaustive list of everything that needs to be done to restore the South Florida ecosystem. Rather they provide an overview of the major restoration work efforts, with the assumption that if those efforts are proceeding on schedule, that is a good indication that the work of the task force members is on track. The objectives, like the projects, are subject to adaptive assessment and may be modified as restoration continues.

The major projects contributing to each objective are listed in this section of the document. If more than one project is required to meet a single objective, then each project's partial contribution is identified. Not all the task force projects are listed in this section. However, all are listed in the master table at the end of this document, and many are described in greater detail in appended project sheets. (See the Project Summary Table, page 35, and appendix D in volume 2 of this report.)

## **GOAL 1: GET THE WATER RIGHT**

***Getting the water right means restoring natural hydrologic functions and water quality in wetland, estuarine, marine, and groundwater systems, while also providing for the water resource needs of urban and agricultural landscapes***

Water is the lifeblood of the South Florida ecosystem. The water flows today, however, have been reduced to less than one-third of those occurring in the historic Everglades. The quality of water that does enter the ecosystem has been seriously degraded.

Water does not flow at the same times or durations as it did historically, nor can it move freely through the system. The whole South Florida ecosystem has suffered. The health of Lake Okeechobee is seriously threatened. Many plants and animals that live in South Florida and the Everglades are in danger of

becoming extinct because their habitats have been degraded, reduced, or eliminated. Excessive freshwater discharges in the wet season and inadequate flows in the dry season threaten the estuaries and bays that are critical nurseries and home to many fish and wildlife. Urban and agricultural areas are also adversely affected. Water shortages and water restrictions are occurring more frequently in some parts of South Florida.

Getting the water right must address four interrelated factors: the quantity, quality, timing, and distribution of water. More water is not always better. Alternating periods of flooding and drying were vital to the historical functioning of the Everglades ecosystem. Getting the water right must also recognize the needs of natural systems, urban communities, and agriculture. Waters need to meet applicable water quality standards, including standards to protect the natural functioning of the Everglades and those that ensure the availability of safe drinking water. The goal is that the right quantity of water, of the right quality, gets delivered to the right places and at the right times.

The following descriptions of desired future conditions elaborate on what it means to get the water right. These descriptions are the result of a consensus-building exercise that first listed all the goals related to ecosystem restoration included in the planning documents of all the participating agencies, then synthesized that information into a single list of desired future conditions that all the task force participants could support.

- Natural hydrologic functions will be restored in wetland, estuarine, marine, and groundwater systems, while also providing for the water resource needs of urban and agricultural landscapes.
- Natural variations in water flows and levels will be restored without diminishing essential levels of water supply or flood control.

- Compartmentalization will be reduced, and natural patterns of sheet flow will be recovered to the maximum extent possible.
- Water resources will accommodate the needs of natural systems, communities, and business.
- Safe drinking water will be available for the people of South Florida.
- Damage caused to water quality by pollutants and contaminants (such as from agricultural nutrients or urban-related pollutants) will be eliminated.
- Water levels and the timing of water deliveries will reflect quantities resulting from natural rainfall and will be distributed according to natural hydrologic patterns or patterns modified by scientific consensus.
- Damage to natural and human systems caused by flood and drought will be minimized.
- Groundwater resources will be protected from depletion and contamination.

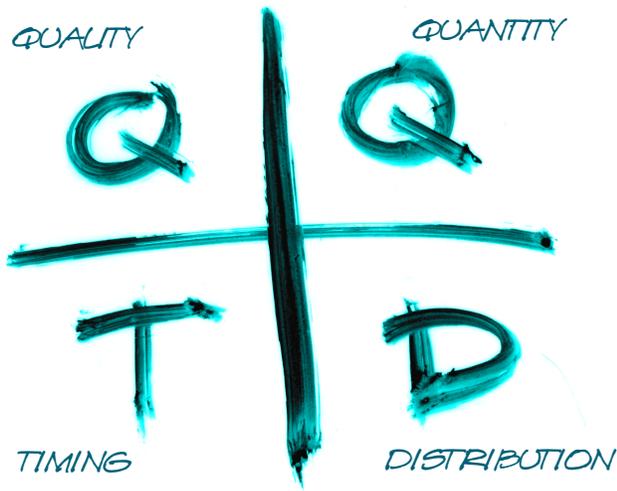
### **Subgoal I-A: Get The Hydrology Right (Water Quantity, Timing, And Distribution)**

#### ***How This Subgoal Will Be Implemented:***

On average 1.7 billion gallons per day (gpd) of water that once flowed through the South Florida ecosystem are discharged via canals to the ocean or gulf. The *Comprehensive Everglades Restoration Plan* and other projects include five programs for recapturing most of this water and redirecting it to sustain natural system functioning and to supplement urban and agricultural water supplies:

#### ***SURFACE WATER STORAGE***

***RESERVOIRS.*** Surface water storage impoundments and water control structures will allow manipulation of flows in the system to mimic the natural system. A number of water storage facilities are planned north of Lake Okeechobee, in the Caloosahatchee and St. Lucie basins, in the Everglades Agricultural Area, and in Palm Beach, Broward, and



Miami-Dade counties. These areas will encompass approximately 181,300 acres and will have the capacity to store 1.6 million acre-feet of water. Two rock mining areas in Miami-Dade County will be converted to in-ground storage areas.

**AQUIFER STORAGE AND RECOVERY.** Subsurface water will be used to meet remaining water supply needs. The limestone platform that underlies Florida is honeycombed with voids and porous layers of sedimentary rock capable of holding water in storage. Water that currently leaves the ecosystem in canals can be captured and injected into these aquifers, and held in storage until the water is needed to augment surface storage supplies. The CERP envisions that more than 300 wells will be built to store water 1,000 feet underground in the upper Floridan aquifer. Pilot testing of this approach in different geologic areas is ongoing. If proven successful wells will be located around Lake Okeechobee and in the Caloosahatchee Basin. As much as 1.7 billion gallons a day may be pumped down the wells into underground storage zones. Since water does not evaporate when stored underground and less land is required for storage, aquifer storage and recovery has some advantages over surface storage. The stored water will be fed into existing surface water impoundments for distribution through the existing surface water delivery system.

**REMOVING BARRIERS TO SHEET FLOW.** Canals, internal levees, and other impediments to sheet flow will be removed or modified to reestablish the natural sheet flow of water through the system. The Kissimmee River Restoration Project will restore approximately 40 square miles of free-flowing river floodplain and associated wetlands, and likely will help improve the quality of water flowing into Lake Okeechobee. The Modified Water Deliveries Project and the C-111 project will restore historic hydrological patterns to the Everglades. Most of the Miami Canal in Water Conservation Area 3 will be removed, and twenty miles of the Tamiami Trail (U.S. Route 41) will be rebuilt with bridges and culverts, allowing water to flow more naturally into Everglades National Park. In the Big Cypress National Preserve, the levee that separates the preserve from the Everglades will be removed to restore more natural overland water flow.

**SEEPAGE MANAGEMENT.** Millions of gallons of groundwater are lost each year as it seeps away from the Everglades towards the east coast. Seepage generally occurs either as underground flow or through levees. Three kinds of projects will reduce unwanted water loss and redirect this flow westward to the water conservation areas, Everglades National Park, and northeast Shark River Slough: (1) adding impervious barriers to the levees to block loss of water; (2) installing pumps near levees to redirect water back into the Everglades; and (3) holding water levels higher in undeveloped areas between the Everglades and Palm Beach, Broward, and Miami-Dade counties.

**OPERATIONAL CHANGES.** Changes in water delivery schedules will be made in some areas to alleviate extreme fluctuations. Lake Okeechobee water levels will be modified to improve the health of the lake. In other areas, rainfall-driven operational plans will enhance the timing of water flows. Water will be delivered, as facilities are constructed, according to schedules that match natural hydrological patterns as closely as possible.

Continued research will improve understanding of the hydrology and how it can be restored while maintaining urban and agricultural water supply and flood control.

**Long-Term Operations and Maintenance Needs**

Effective management of water storage and delivery will require close coordination among task force members from the Army Corps of Engineers and the South Florida Water Management District. Project sponsors will constantly monitor in-place storage and water flows to ensure that the storage and recovery systems are functioning properly. Wells, well-heads, and pumps will require regular maintenance to operate effectively, and long-term operating plans have been developed to ensure continued service.

**Factors Affecting Achievement of this Subgoal:**

**DEPENDENCE ON ADEQUATE FUNDING:**

A critical factor is adequate funding for completion of the projects. Stable and reliable funding will be necessary for timely completion of these projects. If the hydrology projects cannot be completed on schedule, the effects can cascade through the restoration effort, blocking successful completion of the water quality sub-

goal and delaying the habitat restoration and preservation subgoals. Delays can increase costs over the long-term and, in some cases, foreclose land acquisition options, thus creating further delays or requiring project design modifications. Increasing demands on the limited natural and financial resources of the task force members may affect their ability to achieve their goals.

**DEPENDENCE ON LAND ACQUISITION:**

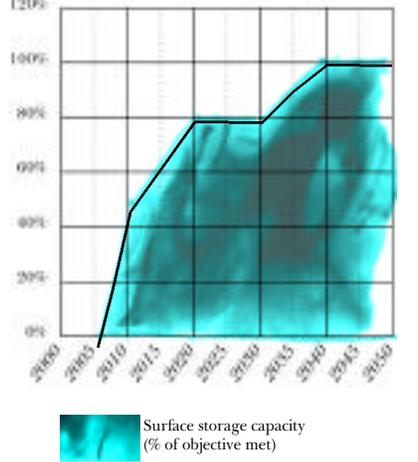
Many of the surface storage impoundments will be constructed on lands that have yet to be acquired. In some cases, easements are needed for impoundments and/or for canals to connect the impoundment to the system. Willingness of landowners to sell land, funds to exercise land acquisition options, and community acceptance of projects are factors that can affect completion of the objective.

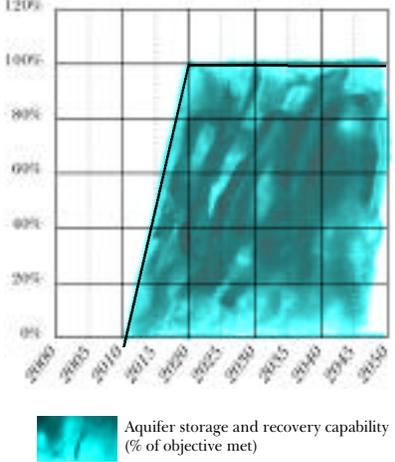
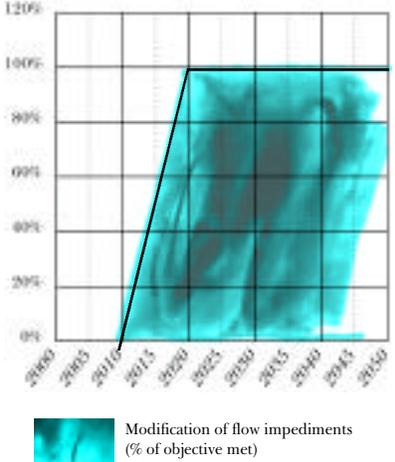
**SUSCEPTIBILITY TO NATURAL**

**DISASTERS:** Severe weather, including *el nino* and *la nina* cycles, and natural disasters, such as hurricanes and forest fires, will delay completion of the restoration activities.

Impoundment dikes are particularly susceptible to severe rain storm damage during and immediately after construction. Careful construction can minimize but not eliminate proj-

**Table 1. Subgoal 1-A: Get The Hydrology Right**

Objective	Milestone Projects <small>(Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)</small>	Outputs <small>(acre-feet)</small>	Implementation Schedule
<p><b>Objective I-A.1:</b> Provide 1.6 million acre-feet of surface water storage by 2037</p>	<p>2001: Allapattah Flats 2004: Seminole Critical Project for the West Side of the Big Cypress Water Conservation Project 2006: Acme Basin B Discharge 2007: C-44 Basin Storage Reservoir 2008: Wetland Reserve Program 2009: Everglades Agricultural Area Storage Reservoir (Phase I) Taylor Creek/Nubbin Slough Storage and Treatment Area 2010: C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation 2012: C-43 Basin Storage Phase I Seminole Tribe Water Conservation Project for Big Cypress Reservation 2013: Bird Drive Recharge Area Palm Beach County Agricultural Reserve Reservoir and ASR 2014: Water Preserve Areas/L-8 Basin Site 1 Impoundment and Aquifer Storage and Recovery 2015: Everglades Agricultural Area Storage Reservoir (Phase II) North of Lake Okeechobee Storage Reservoir 2036: Central Lake Belt Storage Area North Lake Belt Storage Area</p>	<p>3,000 5,000 40,000 360,000 50,000 349,400 10,000 160,000 7,500 11,500 20,000 48,000 15,000 200,000 190,000 90,000</p>	 <p>Surface storage capacity (% of objective met)</p>

Objective	Milestone Projects (Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)	Outputs (million gpd)	Implementation Schedule
<p><b>Objective 1-A.2:</b> Develop aquifer storage and recovery systems capable of storing 1.7 billion gpd by 2020</p>	<p>2012: C-43 Basin Storage Reservoir and ASR 2013: C-51 Regional Groundwater Aquifer Storage and Recovery Palm Beach County Agricultural Reserve Reservoir and ASR 2014: Site 1 Impoundment and Aquifer Storage and Recovery Water Preserve Areas/L-8 Basin 2020: Lake Okeechobee Aquifer Storage and Recovery</p>	<p>220 170 75 150 50 1,000</p>	 <p>A line graph showing the percentage of the objective met for aquifer storage and recovery capability from 2000 to 2020. The y-axis ranges from 0% to 120% in 20% increments. The x-axis shows years from 2000 to 2020 in 5-year increments. The data points are: 2000: 0%, 2005: 0%, 2010: 0%, 2012: ~10%, 2013: ~20%, 2014: ~40%, 2015: ~60%, 2016: ~80%, 2017: ~90%, 2018: ~95%, 2019: ~98%, 2020: 100%. A legend indicates 'Aquifer storage and recovery capability (% of objective met)'.</p>
Objective	Milestone Projects (Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)	Outputs (miles modified)	Implementation Schedule
<p><b>Objective 1-A.3:</b> Modify 279 miles of impediments to flow by 2019</p>	<p>1997: Kissimmee Prairie Ecosystem 2001: Southern CREW Project Addition 2006: Modified Water Deliveries Project 2008: South Dade Wetlands Addition 2016: Big Cypress/L-28 Interceptor Modifications 2019: WCA-3 Decompartmentalization No date: C-111</p>	<p>39 240</p>	 <p>A line graph showing the percentage of the objective met for modification of flow impediments from 2000 to 2019. The y-axis ranges from 0% to 120% in 20% increments. The x-axis shows years from 2000 to 2020 in 5-year increments. The data points are: 2000: 0%, 2005: 0%, 2006: ~10%, 2007: ~20%, 2008: ~40%, 2009: ~60%, 2010: ~80%, 2011: ~90%, 2012: ~95%, 2013: ~98%, 2014: ~99%, 2015: ~100%, 2016: 100%, 2017: 100%, 2018: 100%, 2019: 100%. A legend indicates 'Modification of flow impediments (% of objective met)'.</p>

ect setbacks and delays due to weather events such as hurricanes and tropical storms. Extreme weather conditions, such as droughts or hurricanes may affect the ability to manage and maintain aquifer water storage given the complexity of the limestone geology of South Florida.

**Specific, Measurable Objectives for Achieving This Subgoal:**

The objectives established for achieving this subgoal are

- Provide 1.6 million acre-feet of surface water storage by 2037.
- Develop aquifer storage and recovery systems capable of storing 1.7 billion gpd by 2020.
- Modify 279 miles of impediments to flow by 2019.

The key projects needed to achieve these objectives and the schedule for their implementation are shown in table 1. The outputs listed in

tables 1 through 4 and the measures and targets in table 5 reflect strategy goals and are not intended to function as an allocation or reservation of water, which must be implemented through applicable law.

### **Subgoal I-B: Get The Water Quality Right**

Phosphorus runoff from agriculture and stormwater from urban areas has polluted much of the Everglades and Lake Okeechobee and impaired ecological conditions. The water quality of the Caloosahatchee River, St. Lucie Estuary, Biscayne Bay, Florida Bay, the Florida Keys, and the nearshore waters of the coasts similarly shows significant signs of degradation, largely from pollutants and releases of excess fresh water into estuaries.

#### ***How This Subgoal Will Be Implemented:***

*EVERGLADES FOREVER ACT.* In 1994 the Florida Legislature passed the Everglades Forever Act, which codified measures to improve water quality. One provision established the Everglades Construction Project, a series of six stormwater treatment areas (STAs) currently under construction between the Everglades Agricultural Area (EAA) and the natural areas to the south. The purpose of these STAs is to reduce the phosphorus loads in waters entering the conservation areas.

Additionally, the state uses regulatory programs and best management practices (BMPs) to reduce phosphorus from urban and agricultural discharges. These programs and practices have reduced the phosphorus loads from the EAA to the Everglades. However, the final goals have not been met. The Urban and Tributary Basins Program is being developed to ensure that all other basins impacting the Everglades meet state water quality standards.

Generally, the STAs and BMPs are expected to reduce overall phosphorus levels to 50 parts per billion (ppb). Additional actions will be needed to meet the state phosphorus standard for natural areas. If the state has not yet adopt-

ed this standard by January 2003, the Everglades Forever Act sets a default of 10 ppb. The South Florida Water Management District is researching advanced treatment technologies to enhance the performance of the STAs and potentially expand application to other tributaries of the Everglades. For the STAs, approximately 35,600 acres of manmade wetlands will be built to treat urban and agricultural runoff water before it is discharged to the natural areas throughout the system. STAs are to be located in basins draining to Lake Okeechobee, the Caloosahatchee River basin, the St. Lucie Estuary basin, the Everglades, and the lower east coast. These are in addition to over 44,000 acres of areas already being constructed under the Everglades Forever Act. Once completed, these efforts are expected to improve water quality.

#### *RECENT WATER QUALITY STANDARD MODIFICATIONS.*

In May 1999 the Environmental Protection Agency approved the 10 micrograms total phosphorus per liter (mg TP/l) water column quality standard adopted by the Miccosukee Tribe of Indians of Florida. The water quality standard applies to class III-A waters within tribal boundaries, defined by the tribe as tribal water bodies used for "fishing, frogging, recreation (including air-boating), and the propagation and maintenance of a healthy, well-balanced population of fish and other aquatic life and wildlife...primarily designated for preservation of native plants and animals of the natural Everglades ecosystem." While tribal waters are located within the interior of water conservation area 3A, which has median background total phosphorus concentrations ranging from 4 to 10 micrograms per liter, the EPA determined that at present no data suggest that phosphorus concentrations less than or equal to 10 micrograms per liter cause changes in flora or fauna. Citing peer-reviewed publications and technical reports, the EPA determined that the 10 mg /l standard was a "scientifically defensible value which is not overly protective" and will protect the class III-A designated use. It also states, however, that additional Everglades data are still being collected and if further studies show

that 10 mg /l is not protective of class III-A waters, then the tribe should revise its standard as necessary.

*OTHER ONGOING PROJECTS.* Other ongoing projects include the Lake Okeechobee Protection Program, which includes a study that will identify a feasible method for reducing phosphorus loading in the lake, and a multi-agency program for protecting water quality in the Florida Keys National Marine Sanctuary.

*WATER MANAGEMENT PLANS.* Monitoring and research will be required before outlining additional plans for improving water quality in South Florida's lakes, wetlands, estuaries, and bays. Consequently, not all the projects and outputs needed to achieve this goal have been identified.

Section 303(d) of the federal Clean Water Act requires states to submit lists of surface waters that still do not meet applicable water quality standards (impaired waters) after implementation of technology-based effluent limitations, and to establish total maximum daily loads (TMDLs) for these waters on a prioritized schedule. For those waters deemed to be impaired, the Florida Department of Environmental Protection, in conjunction with the South Florida Water Management District, the Florida Department of Agriculture and Consumer Services, and other appropriate entities, will develop TMDLs. The TMDL will establish the maximum amount of a pollutant that a water body can assimilate without impairing the designated use. Currently there are 154 water segments listed on the state's 303(d) list within the boundaries of the South Florida Water Management District. The primary causes of impairment are nutrients, dissolved oxygen, and coliform bacteria. Section 403.067 of the Florida Statutes sets forth the process by which the 303(d) list is refined through more detailed water quality assessments. It also establishes the means for adopting TMDLs, allocating pollutant loadings among contributing sources, and implementing pollution reduction strategies.

Implementation of TMDLs refers to any combination of regulatory, nonregulatory, or incentive-based actions that attain the necessary reduction in pollutant loading. Nonregulatory or incentive-based actions may include development and implementation of BMPs, pollution prevention activities, and habitat preservation or restoration. Regulatory actions may include issuance or revision of wastewater, stormwater, or environmental resource permits to include permit conditions consistent with the TMDL. These permit conditions may be numeric effluent limitations or, for technology-based programs, requirements to use a combination of structural and nonstructural BMPs needed to achieve the necessary pollutant load reduction.

The state is currently transitioning to a watershed management program that is based on a five-phase cycle that rotates through the state's basins every five years. During the first phase, the water quality data for each basin will be assessed in detail, including the identification of waters for which TMDLs will be developed. Once a basin assessment report and a plan of study are completed, intensive monitoring will be conducted in the basin to supply any additional data needed to model the impaired waters in the basin and generate TMDLs. During the third phase, TMDLs will be calculated and then allocated to individual point sources and the major categories of nonpoint sources. After TMDLs are adopted, a consensus-based basin management action plan, which will include a TMDL implementation plan, will be developed during the fourth phase. Once these plans have been adopted and implemented, verification (using added water quality monitoring data, evaluations of beach closure reports, or number of fish kills, for example) will allow waters to be certified as meeting water quality standards.

*COMPREHENSIVE INTEGRATED WATER QUALITY PLAN* The Comprehensive Integrated Water Quality Plan will serve as a framework for integrating water quality restoration targets for South Florida water bodies into future planning, design, and construc-

tion activities included in the *Comprehensive Everglades Restoration Plan*

**Factors Affecting Achievement of the Subgoal:**

The population of South Florida is expected to double by 2050, greatly increasing demands on water. Urban water supply demands could increase from approximately one billion gallons of water per day to two billion gallons per day, taxing the limited natural and economic

resources of the task force participants. Severe weather, including *el nino* and *la nina* cycles, and natural disasters, such as hurricanes and forest fires, will adversely affect water quality.

Many of the stormwater treatment areas will be constructed on lands that have yet to be acquired. Willing land sellers, funds to exercise land acquisition options, and community acceptance of projects are factors that can affect completion of the objective.

**Table 2. Subgoal 1-B: Get the Water Quality Right**

Objective	Milestone Projects <small>(Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)</small>	Outputs <small>(acres)</small>	Implementation Schedule
<p><b>Objective 1-B.1:</b> Construct 122,000 acres of stormwater treatment areas by 2036</p>	<p>1999: Everglades Agricultural Area / Talisman 2000: STA-2 Works STA-1 West Works 2002: Miccosukee Tribe Water Management Area Lake Okeechobee Water Retention/Phosphorus Removal West Palm Beach Canal (C-51) and STA-1E 2003: STA-5 Works 2004: STA-3/4 STA-6 2007: C-9 STA 2008: C-17 Backpumping and Treatment C-51 Backpumping and Treatment Western C-11 Diversion Impoundment and WCA 2009: Taylor Creek / Nubbin Slough Reservoir and STA 2010: Lake Okeechobee Watershed Water Quality Treatment Facilities 2015: North of Lake Okeechobee Storage Reservoir Caloosahatchee Backpumping with Stormwater Treatment 2016: Big Cypress/L-28 2036: Central Lake Belt Storage Area</p>	<p>50,700 6,400 6,700 900 6,500 4,100 2,200 2,500 550 600 1,600 5,000 4,400 2,500 20,000 1,900 600</p>	<p>Modification of flow impediments (% of objective met)</p>
Objective	Milestone Projects <small>(Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)</small>	Outputs	Implementation Schedule
<p><b>Objective 1-B.2:</b> Prepare plans, with strategies and schedules for implementation, to comply with TMDLs for 100 percent of impaired water bodies by 2011</p>	<p>TMDL Program: Implementation of the Florida Watershed Restoration Act</p>		<p>% of impaired water bodies with plans to achieve TMDL's (% of objective met)</p>

Funding is always a critical factor. If the water quality projects cannot be completed on schedule, the effects can cascade through the restoration effort, delaying the habitat restoration and preservation subgoals.

**Specific, Measurable Objectives for Achieving This Subgoal:** The objectives established for achieving this subgoal are

- Construct 122,000 acres of stormwater treatment areas by 2036.
- Prepare plans, with strategies and schedules for implementation, to comply with TMDLs for 100 percent of impaired water bodies by 2011.

The key projects needed to achieve these objectives and the schedule for their implementation are shown in table 2. The outputs listed in tables 1 through 4 and the measures and targets in table 5 reflect strategy goals and are not intended to function as an allocation or reservation of water, which must be implemented through applicable law.

**GOAL 2: RESTORE, PRESERVE, AND PROTECT NATURAL HABITATS AND SPECIES**

**Natural habitats and species will be restored when the diversity, abundance, and behavior of native South Florida animals and plants in terrestrial and aquatic environs are characteristic of predrainage conditions.**

Before European settlement the natural habitats of South Florida covered an area of about 18,000 square miles. This enormous space encompassed a rich mosaic of ponds, sloughs, sawgrass marshes, hardwood hammocks, and forested uplands. In and around the estuaries, freshwater mingled with salt to create habitats supporting mangroves and nurseries for wading birds and fish. Beyond, nearshore islands and coral reefs provided shelter for an array of terrestrial and marine life. The vast expanses of habitat were large enough to support far-ranging animals, like the Florida panther, and super colonies of

wading birds, such as herons, egrets, roseate spoonbills, ibis, and wood storks. For thousands of years this resilient ecosystem withstood and repeatedly recovered from the effects of hurricanes, fires, severe droughts and floods, retaining some of the greatest biodiversity found on earth.

Today the Florida panther and 68 other animal or plant species are listed by the U.S. Fish and Wildlife Service (FWS) as threatened or endangered. Many additional species are of special concern to the State of Florida or are imperiled, meaning that they could become listed by the FWS. Super colonies of wading birds no longer nest in the Everglades. The wetland habitats that supported these species have been reduced by half, fragmented by roads, levees, and other structures, dewatered by canals, and degraded by urban and agricultural pollutants. The marine environments of the bays have suffered a similar decline. Altered biological communities are being overrun by invasive exotic plants and animals capable of outcompeting native species and habitats. Exotic plants now make up approximately one-third of the total plant species known in Florida. The Florida Exotic Pest Plant Council has identified 125 of these as serious risks to Florida's natural areas and its threatened and endangered native plants and animals.

The combination of *connectivity* and *spatial extent* created the range of habitats and supported the levels of productivity needed for the diversity and abundance of native plants and animals. The original Everglades and other South Florida environments formed hydrologically integrated systems from boundary to boundary. Restoring natural habitats and species will require reestablishing the hydrological and other conditions conducive to native communities and piecing together enough areas of potential habitat. Exotic species must be managed and the escape of new exotics must be prevented. Then it will require time for native plants and animals to reestablish populations and communities. The intended result will be self-sustaining populations of diverse native

animal and plant species. This must take into account that populations that have adapted to current conditions may be impacted.

The following descriptions of desired future conditions elaborate on what it means to restore, preserve, and protect natural habitats and species. These descriptions are the result of a consensus-building exercise that first listed all the goals related to ecosystem restoration included in the planning documents of all the participating agencies, then synthesized that information into a single list of desired future conditions that all the task force participants could support.

- The diversity, abundance, and behavior of native South Florida animals and plants and their terrestrial and aquatic habitats will be characteristic of predrainage conditions.
- The spatial extent of wetlands and other natural systems will be sufficient to support the historic functions of the greater Everglades ecosystem.
- Important wildlife corridors will be identified, enhanced, and preserved.
- Endangered and other federal and state listed species will recover self-sustaining levels, and sufficient habitats for maintaining healthy numbers will be restored and protected.
- Invasive exotic plant and animal species will be substantially eliminated or reduced to manageable levels.

### **Subgoal 2-A: Restore, Preserve, and Protect Natural Habitats**

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#### ***How This Subgoal Will Be Implemented:***

**LAND ACQUISITION.** Land acquisition is critical to South Florida ecosystem restoration efforts. Land is needed to preserve habitat for native plants and animals and to act as a buffer to existing natural areas. Land is also needed for water quality treatment areas, water storage

reservoirs, and aquifer recharge areas that will help restore natural hydrology.

The federal government has played an important role in land acquisition. Over the past several decades, the federal government has acquired title to lands for conservation purposes, such as inclusion in national parks, national preserves, and national wildlife refuges. The federal government also has provided financial support to state land acquisition programs, such as the \$200 million provided by the 1996 Farm Bill for acquisition in support of ecosystem restoration. Using existing land use plans and priorities, and based upon the availability of annual appropriations, federal land managers will continue to acquire lands within authorized boundaries of existing national wildlife refuges and national parks and preserves in the South Florida ecosystem. The completion of these areas will provide additional habitat for threatened, endangered, and other species, as well as recreational opportunities for the people of South Florida. Further, based upon the availability of annual appropriations, federal land managers will continue to look for opportunities to assist the State of Florida in acquiring the highest priority areas for the implementation of the *Comprehensive Everglades Restoration Plan*

As of September 1999 the State of Florida had acquired 3.2 million acres in South Florida for habitat conservation purposes and had identified an additional 500,000 acres for acquisition. The Conservation and Recreational Lands (CARL) and Save Our Rivers (SOR) programs have been Florida's primary land acquisition programs. These and the other land acquisition programs identify and acquire lands from voluntary sellers through a process described under chapters 259 and 373 of the Florida Statutes. The governor and cabinet approve CARL projects, and the South Florida Water Management District Governing Board approves SOR projects. The state also partners with local governments and other entities to identify and jointly acquire conservation lands.

These lands are acquired primarily for ecosystem protection and restoration and are managed for those purposes and for water resource protection and recreation.

Both CARL and SOR projects are currently primarily funded by P-2000 funds and will be funded over the next ten years by Florida Forever funds. Florida Forever is a ten-year continuation of the P-2000 Program and will raise approximately \$3 billion (\$300 million per year) over the next ten-year period.

In recent years, local governments have initiated, voted, and approved land acquisition programs for hundreds of millions of dollars. These existing land acquisition programs protect and restore the South Florida ecosystem, and interest is growing for many counties to undertake similar initiatives. These programs have the potential to complement and support the *Comprehensive Everglades Restoration Plan* as well as to foster compatibility of the built and natural systems.

State CARL and SOR lands, federal parks and preserves, water preserve areas, county and private conservation lands, conservation easements and other agreements with private landowners, and other lands acquired for South Florida ecosystem restoration will help expand and connect a mosaic of upland, wetland, coastal, and marine habitats that will support the recovery of many currently imperiled species. When completed, these efforts will yield a total of approximately 5.1 million acres for habitat protection. These lands also provide opportunities for outdoor recreation and education to the state's residents and visitors.

*PROTECTION OF CRITICAL HABITAT FOR THREATENED AND ENDANGERED SPECIES.* The *South Florida Multi-Species Recovery Plan* prepared by The U.S. Fish and Wildlife Service, addresses the recovery needs of South Florida's 69 federally listed threatened and endangered species. A major section of that plan describes 23 of the natural vegetative communities in South Florida and identi-

fies management actions needed to restore South Florida's ecosystem. Protecting critical habitat for threatened and endangered species will involve major coordination between the aggressive land acquisition programs of the state and the land acquisition plans for the National Wildlife Refuge System and the National Park System.

*WETLANDS ENHANCEMENT.* The *Comprehensive Everglades Restoration Plan* calls for removing impediments to water flow and restoring near natural volumes of water in the remaining wetlands. This will make hydrological connections among large portions of the remaining habitat and substantially enlarge the extent of healthy wetlands, thus greatly enhancing the value of this habitat to wildlife.

*RESTORATION AND PRESERVATION OF CORAL REEFS.* Another major effort to restore and preserve habitat is the proposed designation of an ecological reserve to protect critical coral reef communities in the western portion of the Florida Keys National Marine Sanctuary and Dry Tortugas National Park. The U.S. Coral Reef Task Force's Action Plan calls for protection of 20 percent of all U.S. coral reefs through designation as ecological reserves by the year 2020. The combined designations within the sanctuary and the park would total 192 square nautical miles of reserve. This would protect 10 percent of the Florida Keys coral habitat.

***Factors Affecting Achievement of this Objective:*** The availability of land from willing sellers, land values, the rate of development, and annual legislative appropriations will determine land acquisition progress.

***Specific, Measurable Objectives for Achieving This Subgoal:*** The objectives established for achieving this subgoal are

- Acquire 1.95 million acres of land for habitat protection. [This acreage represents the total acreage of all the habitat-protection land-acquisition projects that have not yet been completed. It

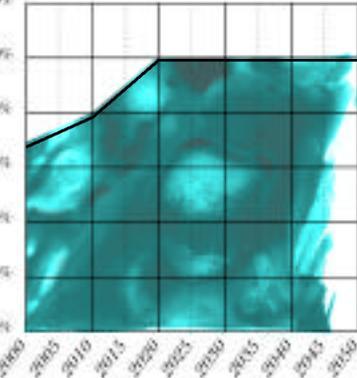
does not include the completed projects, which have an additional total acreage of approximately 3.15 million acres. Of the 1.95 million acres in uncompleted projects, approximately 1.4 million acres have already been acquired, leaving approximately 550,000 acres still targeted for acquisition. Of this 550,000 acres, approximately 500,000 acres are projected for acquisition by

the State of Florida and local governments, and the remaining 50,000 are projected for acquisition by the federal government.]

- Protect 20 percent of the coral reefs by 2020.

The key projects needed to achieve these objectives and the schedule for their implementation

**Table 3. Subgoal 2-A: Restore, Preserve, and Protect Natural Habitats**

Objective	Milestone Projects (Refer to table 5, p. 35 for more information about specific project schedules, funding, responsible agencies, etc.)	Outputs (acres)	Implementation Schedule
<p><b>Objective 2-A.1:</b> Acquire 1.95 million acres of land for habitat protection.<sup>1,2</sup></p>	<p>1986- 1999: Dupuis Reserve Nicodemus Slough South Fork St.Lucie River Land Acquisition Kissimmee Prairie Ecosystem Tibet-Butler Preserve Miami- Dade County Archipelago Corkscrew Regional Mitigation Bank</p> <p>2000: East Everglades Addition to Everglades National Park Complete Land Acquisition for Biscayne National Park</p> <p>2001: Loxahatchee River Land Acquisition Twelve Mile Slough Paradise Run</p> <p>2002: Loxahatchee Slough Land Acquisition North Savannas Upper Lakes Basin Watershed</p> <p>2004: Big Cypress National Preserve Addition<sup>3</sup></p> <p>2006: C&amp;SF-CERP Restoration of pineland and hardwood hammocks in C-111 Basin</p> <p>2010: Multi-Species Recovery Strategy Water Conservation Areas 1,2,and 3</p> <p>No target date: Big Cypress National Preserve Private Inholdings<sup>3</sup> Six Mile Cypress South Savannas Florida Keys Ecosystem North Key Largo Hammocks Atlantic Ridge Ecosystem Rotenberger/Holey Land Tract Cayo Costa Charlotte Harbor Flatwoods Lake Wales Ridge Ecosystem Pineland Site Complex Osceola Pine Savannas Barfield Farms Cypress Creek/Trail Ridge Estero Bay Lake Walk-In-Water Land Adjacent to Dade County Training Jetport Fisheating Creek North Fork St Lucie River Juno Hills Belle Meade Fakahatchee Strand Rookery Bay Coupon Bight/ Key Deer Big Pine Key Allapattah Flats/Ranch Okaloacoochee Slough Indian River Lagoon Pal-Mar Corkscrew Regional Ecosystem Watershed Southern Golden Gate Estates Caloosahatchee Ecoscape Catfish Creek</p>	<p>21,875 2,219 184 38,282 439 856 661 109,504 2,002 1,936 3,300 4,265 15,200 930 43,500 6,113 50 862,800 878 1,741 6,046 7,611 4,508 12,514 79,170 1,932 44,755 12,770 250 42,291 1,367 13,788 16,740 4,615 24,000 168,360 3,800 440 27,200 80,231 18,532 3,452 34,221 37,210 5,136 35,435 59,008 57,200 15,391 10,609</p>	 <p>Acres acquired for habitat protection (% of objective met)</p> <p><sup>1</sup> The 1.95 million-acre objective represents the total acreage of all the unfinished acquisition projects, which are listed in the table. It does not include the completed acquisition projects, which have an additional total acreage of approximately 3.15 million acres.</p> <p><sup>2</sup> The state will acquire lands in accordance with Florida laws and protocols. The actual time line and acquisition will be subject to negotiations with private landowners.</p> <p><sup>3</sup> Consistent with the Big Cypress Acts of 1974 and 1988.</p>

Objective	Milestone Projects (Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)	Outputs (Acres)	Implementation Schedule												
<p>Objective 2-A.2: Protect 20 percent of the coral reefs by 2020</p>	<p>Establish an ecological reserve encompassing 192 square nautical miles of coral reefs in the Tortugas region by 2001</p>	<p>10 percent of coral reefs in South Florida</p>	<table border="1"> <caption>% of coral reefs protected (% of objective met)</caption> <thead> <tr> <th>Year</th> <th>% of coral reefs protected</th> </tr> </thead> <tbody> <tr><td>2000</td><td>0%</td></tr> <tr><td>2005</td><td>45%</td></tr> <tr><td>2010</td><td>48%</td></tr> <tr><td>2015</td><td>100%</td></tr> <tr><td>2020</td><td>100%</td></tr> </tbody> </table>	Year	% of coral reefs protected	2000	0%	2005	45%	2010	48%	2015	100%	2020	100%
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2005	45%														
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are shown in table 3. The outputs listed in tables 1 through 4 and the measures and targets in table 5 reflect strategy goals and are not intended to function as an allocation or reservation of water, which must be implemented through applicable law.

**Subgoal 2-B: Control Invasive Exotic Plants**

The *South Florida Multi-Species Recovery Plan* identifies the control of exotic species as integral to the restoration of the ecosystem and to the recovery of threatened and endangered and other imperiled species. Some invasive exotic plants have spread in natural areas to the extent that the native plants and animals are in danger of being replaced in their entirety. The most widespread and serious exotic plants are listed to the right, along with the extent of their current infestations.

**How This Subgoal Will Be Implemented:**

The Noxious Exotic Weed Task Team established by the task force has developed an assessment and strategy for managing invasive exotic plants. The following three actions included in that strategy can begin immediately as part of the restoration process. Other actions are still being developed and will be incorporated into updates of this document.

Terrestrial Species	Extent of Infestation
Melaleuca ( <i>Melaleuca quinquenervia</i> )	<b>400,000 acres</b>
Brazilian pepper ( <i>Schinus terebinthefolius</i> )	<b>1,000,000 acres</b>
Australian pine ( <i>Casuarina</i> spp.)	<b>200,000 acres</b>
Old World climbing fern ( <i>Lygodium microphyllum</i> )	<b>100,000 acres</b>
<b>Aquatic Species</b>	
Hydrilla ( <i>Hydrilla verticillata</i> )	
Water hyacinth ( <i>Eichornia crassipes</i> )	
Water lettuce ( <i>Pistia stratiotes</i> )	

*SPECIES MANAGEMENT PLANS.* Species management plans, when adequately funded and implemented, have provided successful control of invasive exotic plants. These plans offer the advantage of replacing piecemeal efforts of managing exotic plants on individual sites, or controlling a few plants in broader regions, with multiagency programs that integrate statewide invasive plant management activities, organizations, priorities, and

resources. More than twenty exotic plants need attention, and developing plans for just the top twenty will take several years.

Six species in Florida (melaleuca, Brazilian pepper, Old World climbing fern, hydrilla, water lettuce, and water hyacinth) have statewide species-based management plans. Plans must be developed for each species because each has some unique properties that need to be addressed.

**MAINTENANCE CONTROL.** 'Maintenance control' is an approach that applies routine, coordinated management to reduce invasive exotic plant populations and maintain them at the lowest feasible levels. Many techniques are used including mechanical removal, chemical treatment, and predatory biological controls. The three major aquatic species (hydrilla, water hyacinth, and water lettuce) are currently in maintenance control. Achieving maintenance control for melaleuca is well underway; infestations have been reduced from approximately 500,000 to less than 400,000 acres. Additional resources are needed to completely implement the melaleuca plan. Plans for Brazilian pepper and Old World climbing have been minimally implemented due to lack of resources. Plans and control programs for other priority species need to be incorporated into the multi-agency management framework and invasive exotic plant strategy.

The South Florida Water Management District and the Southeast Regional Office of the National Park Service are jointly implementing Exotic Plant Control Teams for Florida national parks and natural lands within the South Florida Water Management District. These teams are trained to identify and remove invasive exotic plants. After locating populations of plants for control these teams move in and eradicate them, also helping the individual agency bring the species under maintenance control.

**PREVENTION.** The reasons some species become invasive and some ecosystems seem

more readily invaded are not well understood. However, if a species becomes widely invasive it is difficult and expensive to manage.

Preventing the introduction of invasive species is the only absolute means to control them, but absolute prohibitions and exclusions are impractical. An early warning program for potentially invasive species, a risk assessment for evaluating possible invasiveness prior to introduction, methods for early detection of incipient populations of new species, predictive tools to assist in determining where plants may invade, and the ability to eradicate incipient populations are needed.

The Federal Interagency Committee for the Management of Noxious Exotic Weeds is planning a national early-warning information system for invasive exotic plants. Florida needs to participate in this national program.

***Long-Term Operations and Maintenance Needs:***

At no time in an exotic species control program, even when the population is under control, should resources drop below the maintenance-level requirement, or the species will expand and reinvade to precontrol levels and the program must start from zero once again. Weed management is like any other long-term program in that sufficient funds must be available on a continuous basis in order to achieve maintenance control. A reduced level of resources may be all that is needed to maintain control. However, discontinuing this funding has been a problem that has continually plagued invasive species management programs nationally.

***Factors Affecting Achievement of this Subgoal:***

The control programs for water hyacinth, water lettuce, and hydrilla have been successful because good management plans were developed for each species that included prioritizing sites for control, assessing the extent of infestations, directing essential research to understand the biology of the species, and specifying proven control techniques. The plans had multi-agency coordination and adequate funding.

To bring the other high priority species under maintenance control, agencies will need to organize formally to implement similarly complex management programs. Any of these factors will adversely affect success: Lack of a comprehensive plan, failure to integrate individual control programs, inadequate interagency coordination, inadequate funding and implementation, or a lack of motivation among the agencies to coordinate on a statewide level. The major impediment to success has not been the ability to control these species but the willingness to do so.

Continuing degradation of the natural environment, severe weather, including *el nino* and *la nina* cycles, and natural disasters such as hurricanes and fires may introduce or spread exotic species and improve habitat conditions for them. Adjacent landowners will impact the success of controlling exotics if these lands remain infested or if the landowners are not interested in land acquisition.

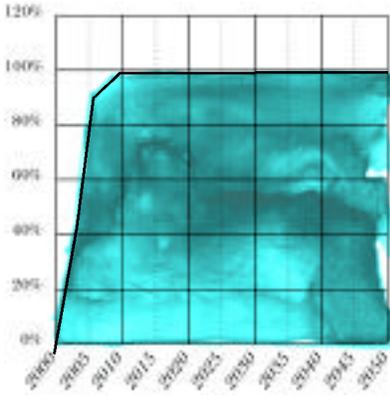
The unregulated importation of new plant species will increase the potential for infestations of exotic plants.

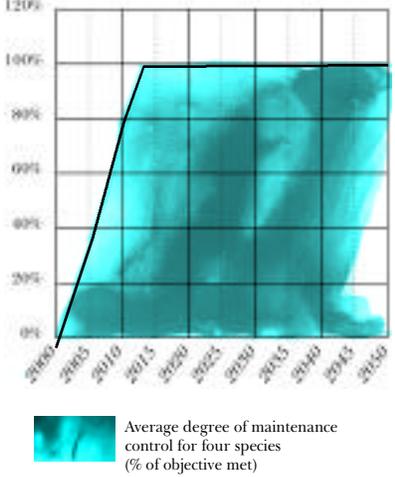
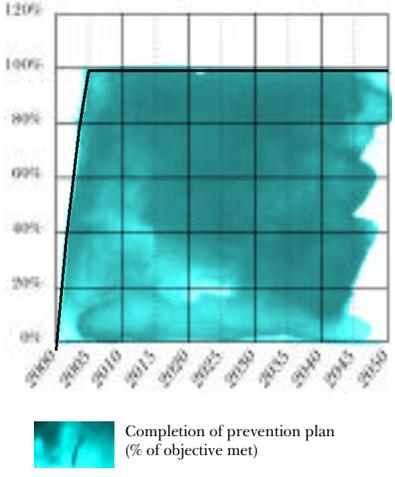
Specific, Measurable Objectives for Achieving This Subgoal: The objectives established for achieving this subgoal are

- Prepare management plans for the top twenty South Florida invasive exotic plant species by 2010.
- Achieve maintenance control status for Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern in all natural areas statewide by 2020.
- Complete an invasive exotic plant prevention, early detection, and eradication plan by 2005.

The key projects needed to achieve these objectives and the schedule for their implementation are shown in table 4. The outputs listed in tables 1 through 4 and the measures and targets in table 5 reflect strategy goals and are not intended to function as an allocation or reservation of water, which must be implemented through applicable law.

**Table 4. Subgoal 2-B: Control Invasive Exotic Plants**

Objective	Milestone Projects (Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)	Outputs	Implementation Schedule																								
<p><b>Objective 2-B.1:</b> Prepare management plans for the top twenty South Florida invasive exotic plant species by 2010</p>	<p>2000: Management plans for melaleuca, Brazilian pepper, Old World climbing fern, hydrilla, water lettuce, and water hyacinth Prioritization of remaining plans is underway.</p>		 <p>Number of management plans for top 20 species (% of objective met)</p> <table border="1"> <caption>Data for Objective 2-B.1 Implementation Schedule</caption> <thead> <tr> <th>Year</th> <th>% of Objective Met</th> </tr> </thead> <tbody> <tr><td>2000</td><td>0%</td></tr> <tr><td>2005</td><td>90%</td></tr> <tr><td>2010</td><td>100%</td></tr> <tr><td>2015</td><td>100%</td></tr> <tr><td>2020</td><td>100%</td></tr> <tr><td>2025</td><td>100%</td></tr> <tr><td>2030</td><td>100%</td></tr> <tr><td>2035</td><td>100%</td></tr> <tr><td>2040</td><td>100%</td></tr> <tr><td>2045</td><td>100%</td></tr> <tr><td>2050</td><td>100%</td></tr> </tbody> </table>	Year	% of Objective Met	2000	0%	2005	90%	2010	100%	2015	100%	2020	100%	2025	100%	2030	100%	2035	100%	2040	100%	2045	100%	2050	100%
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Objective	Milestone Projects (Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)	Outputs	Implementation Schedule
<p><b>Objective 2-B.2:</b> Achieve maintenance control status for Brazilian pepper, melaleuca, Australian pine and Old World climbing fern in all natural areas statewide by 2020</p>	<p>Integrated Maintenance Control Program</p>		
Objective	Milestone Projects (Refer to table 5, p. 35, for more information about specific project schedules, funding, responsible agencies, etc.)	Outputs	Implementation Schedule
<p><b>Objective 2-B.3:</b> Complete an invasive exotic plant prevention, early detection and eradication plan by 2005</p>	<p>Invasive Exotic Plant Prevention Program</p>		

**GOAL 3: FOSTER COMPATIBILITY OF THE BUILT AND NATURAL SYSTEMS**

***This goal will be realized when the built environment is compatible with ecosystem restoration and preservation goals***

the decisions that guide and regulate the built environment. Those entities are currently ana-

The State of Florida, the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, and regional, county, and city governments make

lyzing the plans and regulations in place and the development that has resulted. Changes to the existing policies may be considered by the state and local governments. The above listed governmental entities may report to the task force on policy and legal changes. The task force will track the evolution of these changes and use the results to refine goal 3. The task force will coordinate the information it receives and will report on the final goals, subgoals, objectives, and projects in the update to this document.

The following set of statements are desired future conditions for the built environment as it relates to ecosystem restoration and preservation.

- The people of South Florida will understand the connections between a healthy environment and a healthy community.
- Development patterns—development, redevelopment, and infrastructure—will be compatible with and complementary to ecosystem restoration.
- Development practices will support conservation of significant and special natural areas and reduce habitat fragmentation.
- Flood control will be maintained at existing levels, or augmented where appropriate.
- The quality of life of people in South Florida will be enhanced through the ability to reside in areas with fishable, drinkable and swimmable water and clean air.
- Blueways, greenways, and roadways will be compatible with and complementary to getting the water right and enhancing and preserving the natural system.
- Land, water, and transportation planning will be coordinated and supportive of ecosystem restoration.
- Agriculture will be an environmentally and economically sound component of the landscape, consistent with ecosystem restoration.
- Stormwater and wastewater will be reclaimed when possible.
- The ecosystem will not be damaged by improper disposal of wastes, consistent with applicable laws.

Because most decisions regarding the built environment are made by local governments achievement of these goals is contingent on sufficient funding to local government. While development of this goal, subgoals, and objectives is not complete, many projects are underway that support the compatibility of the natural and human environments. The following projects serve as examples to illustrate the types of projects that will be included in the expanded Goal 3 section of the update to this document.

- **SFWMD Regional Water Supply Plans**
- **CERP Coastal Wellfield Operations**
- **CERP Utility Water Conservation**
- **Eastward Ho! Brownfields Partnership**
- **Palm Beach County Freshwater Chain-of-Lakes Project**
- **West Palm Beach Wetland Reclamation Project**
- **South Biscayne Bay Watershed Management Plan and the Miami-Dade Agriculture and Rural Land Retention Study**
- **Miami River Dredging Project**
- **Florida Keys Carrying Capacity Study**
- **Pineland Site Complex**

A data sheet for each of these projects is included in appendix D in volume 2 of this report.

# RESTORATION STRATEGY

## GUIDING PRINCIPLES

*The following principles will guide all aspects of ecosystem restoration and management:*

*THE NATURAL AND BUILT ENVIRONMENTS ARE INEXTRICABLY LINKED IN THE ECOSYSTEM.* This is the overall premise that must drive ecosystem planning and management. Until recently the term ecosystem meant the natural environment. However, the ecosystem is also home to people and their built environment. All of these aspects are inextricably linked. Not only can the built environment have catastrophic consequences in the natural environment, such as the destruction of wetlands when they are drained for development, but disruptions in the natural environment can have catastrophic consequences in the built environment, such as the unnaturally severe flooding that occurs when natural wetlands are gone. Because the natural and the built environments are two sides of the same coin, attempting to deal with the problems of one and not the other is never successful. This link between the natural and built environments supports the involvement of the many entities with authority to make the land use decisions affecting each. Equally important is the development of public understanding and support of ecosystem restoration issues.

The task force recognizes that the restoration of a healthy hydrologic regime and the improvement of habitat will not be enough to achieve the long-term sustainability of the South Florida ecosystem if subsequent decisions about the built environment are not consistent with ecosystem health. The billions of dollars spent to restore the South Florida ecosystem could be wasted if, in 100 years, the built environment was once again allowed to dominate the natural environment. At the same time, the solutions to restore ecosystem health must be supportive of human needs for water supply, flood control, and recreation. Therefore, strategies and actions must be directed at the totality of the relationships that exist between the natural and built environments and among all the inhabitants of the ecosystem.

*THE ECOSYSTEM MUST BE MANAGED AS A WHOLE.* Understanding the complexities of the South Florida ecosystem is daunting. It forces managers, scientists, and the public to view the natural and the built environments and the resources needed to support them as parts of a single larger system. Rather than dealing with issues independently, the challenge is to seek out the interrelationships and mutual dependencies that exist between the components of the ecosystem.



*AUTHORITIES AND RESPONSIBILITIES REMAIN INTACT; REVISIONS MADE TO THE PROCESS*

*INTERGOVERNMENTAL COORDINATION IMPROVED*

*PLANNING AND IMPLEMENTATION BECOME AN INTEGRATED PROCESS*

The challenges faced in South Florida must be solved collaboratively and be based on a sound understanding of the interconnected variables. The task force advocates a systemwide approach that fosters coordination and addresses issues holistically. This approach requires broad-based partnerships, coordinated management, and public outreach and communication.

**BROAD-BASED PARTNERSHIPS:** It is critical that federal, state, local, and tribal governments and other interested and affected parties work together in broad-based partnerships. Maintaining open communications and examining their different views and needs will form the basis for the respect and trust needed to work together.

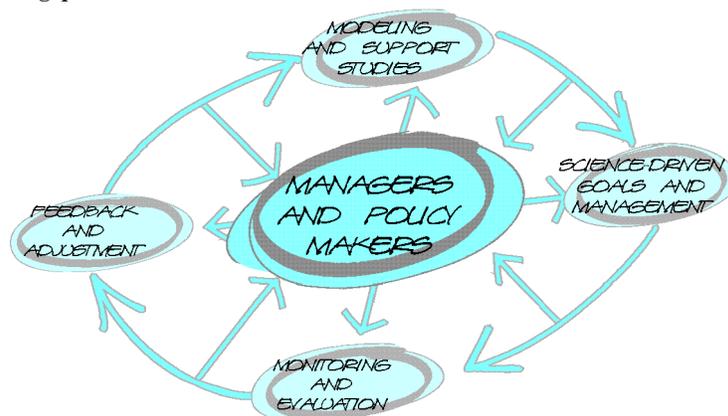
**COORDINATED MANAGEMENT:** To be successful, governmental entities will need to coordinate their ecosystem restoration activities and to develop cooperative programs. The task force will foster this cooperation and facilitate the resolution of conflicts and disputes among the diverse participants.

**PUBLIC OUTREACH AND COMMUNICATION:** Innovative partnerships and coordinated management will not be possible without the understanding, trust, and support of the public. Therefore, public outreach and communication will be an important part of the ecosystem restoration efforts. Outreach strategies will seek two-way communication with the public to broaden understanding and to instill a sense of stewardship among all parties involved, including private citizens.

**DECISIONS MUST BE BASED ON SOUND SCIENCE.** Science plays two major roles in the restoration process. One is to facilitate and promote the application of existing scientific information to planning and decision making. The other is to acquire critical missing information that can improve the probability that restoration objectives will be met.

The task force members have adopted an adaptive assessment process to continuously provide managers with updated scientific information, which they can use to guide critical decisions. In this process, scientific models provide a conceptual framework and identify critical support studies. Support studies provide data and interpretation that lead to a better understanding of the problem and then to the development of a series of alternative solutions. Once an alternative is selected and implemented, monitoring is used to assess the effectiveness of the action and to provide feedback on ways to modify it (if warranted). Similarly, monitoring data can be used to revise and refine the original model, thereby completing and continuing the interactive feedback loop of decision-making, implementation, and assessment.

A framework for promoting the application of sound science is included in appendix E in volume 2 of this report. The framework describes the tools and methods for building scientific knowledge and applying it to ecosystem restoration.



## **COORDINATION OF THE RESTORATION EFFORT**

The role of the task force is not to manage the South Florida restoration, but to coordinate the restoration, provide a forum for the managing agencies to share information on their restoration projects, and report on progress. Congress and other stakeholders are particularly interested in how each individual agency's efforts contribute to the larger framework of total ecosystem restoration. This document provides that information.

The task force provides a forum for consensus building and issue engagement among the entities involved in restoring the South Florida ecosystem. This is a collaborative role, not one in which the task force can dictate to its members. Because on-the-ground restoration is accomplished through the efforts of the individual task force member agencies, they are the ones that are ultimately responsible for their particular programs, projects, and associated funding. This is an important distinction. The task force has no overriding authority to direct its members. Instead, the members are accountable individually to their appropriate authorities and to each other for the success of the restoration.

***The task force members coordinate and track the restoration efforts as follows:***

***FOCUS ON GOALS.*** This document establishes specific goals and measures that define the scope of the restoration initiative and answer these fundamental questions: What will the restoration partners accomplish? When will the restoration effort be done? What key indicators will signal progress and success?

***COORDINATE PROJECTS.*** To be effective, individual projects should contribute to the vision and goals, be timely, and support rather than duplicate other efforts. This document includes a master list of restoration projects and includes information about goals and objectives, start and finish dates, lead agencies, and funding.

***TRACK AND ASSESS PROGRESS.*** The task force will facilitate the implementation of the individual entities' adaptive assessment processes to track and assess progress. Adaptive assessment involves constantly monitoring project contributions and indicators of success to determine the actual versus expected results of various actions. This process acknowledges that not all the data needed to restore the South Florida ecosystem are available now. As project managers track incremental progress in achieving objectives they may raise "red flags" alerting the task force members that a project (1) is not on schedule or (2) is not producing the projected outputs or anticipated results. The ability to anticipate problems early helps to minimize their effect on the total restoration effort. Management responses may involve revising the project design, evaluating changing resource needs, or working collaboratively on projects that fall behind. Projects that are not proving effective may be replaced with new projects. Because each participating agency is responsible for its particular programs, projects, and funding, such decisions are made by the entities involved.

***FACILITATE THE RESOLUTION OF ISSUES AND CONFLICTS.*** Disagreements and conflict are to be expected given the scope, complexity, and large number of sponsors and interests involved in ecosystem restoration. In particular, the ability to resolve existing conflicts is complicated by (1) the large number of governmental entities involved at the federal, state, tribal, and local levels; (2) the differing, and sometimes conflicting, legal mandates and agency missions among the entities involved; and (3) the diverse stakeholder interests represented by the member agencies, which include environmental, agricultural, Native American, urban, and commercial values.

The task force will facilitate the prevention and resolution of conflict to the extent possible by clarifying the issue(s), identifying stakeholder concerns, obtaining and analyzing relevant information, and identifying solutions. The working group will regularly track issues in dis-

pute and report to the task force when there are unresolved issues. Although these efforts are intended to facilitate conflict resolution, opportunities will always exist for parties to pursue conflicts through litigation, although litigation is time consuming, costly, and uncertain. Further, litigation diverts resources from restoration efforts. Unfortunately, judicial resolution of legal claims does not always resolve the underlying conflict to the satisfaction of every party.

The task force will meet regularly to report on progress, coordinate consensus, and identify opportunities for improvement.

### **OVERVIEW OF MAJOR PROGRAMS AND COSTS**

The best estimate for the total cost to restore the South Florida ecosystem is \$14.8 billion, as reported in the letter to Congress dated March 8, 2000 (see appendix C). Of the total restoration cost, \$7.8 billion represents the cost of implementing the *Comprehensive Everglades Restoration Plan* which will be shared equally by the federal government and nonfederal sponsors. The CERP outlines 68 projects that will take more than 30 years to construct. The CERP was submitted to Congress on July 1, 1999, and is integral to achieving two of the three goals of restoration: get the water right (restore more natural flows to the ecosystem while guaranteeing regional water supplies and flood control), and restore, preserve, and protect natural habitats and species. Because congressional authorization is required for the proposed projects included in the CERP, and because individual projects must undergo additional site-specific studies and analyses, the overall cost to implement this significant component of the restoration effort could be lower or higher depending upon future analyses and site-specific studies.

The CERP builds on other plans and projects that were authorized by Congress or the Florida Legislature prior to and independent of the CERP. These include the Everglades Construction Project, the C-111 Project, the Modified Water Deliveries to Everglades National Park Project, the Kissimmee River Restoration Project, a number of smaller 'Critical Projects' authorized by the Water Resources Development Act of 1996, the *South Florida Multi-Species Recovery Plan*, state water quality plans, state land acquisitions authorized for Save Our Rivers (SOR) and Conservation and Recreation Lands (CARL) programs, and federal land acquisitions for national parks, preserves, and wildlife refuges. Taken together, these projects represent an additional \$7 billion investment. The costs for these measures have been included because they actively promote overall restoration goals and establish the baseline conditions for the CERP. Table 5 on page 35 is a tracking matrix which identifies individual projects, responsible agencies, targets, and costs.

The projections and project schedules in this report span multiple decades and depend upon certain assumptions about state and federal budget requests and funding levels, optimized construction schedules, willing sellers, and other contingencies. These assumptions are likely to change as the project progresses, and appropriate revisions to this document will be necessary. Therefore, this document does not represent a commitment by the federal, state, or local governments or the tribes to seek appropriations for specific projects and activities at the funding levels laid out in this document.

State and federal agencies have already acquired 4.7 million acres of land for ecosystem restoration purposes (4.55 million for habitat and 0.15 million for water storage). As of September 1999 the state alone had acquired 3.2 million acres of habitat conservation land in South Florida at a cost of over \$1 billion.

# PROJECT SUMMARY TABLE

This section provides detailed information about the restoration projects that contribute to the accomplishment of the vision, goals, subgoals, and objectives described earlier in this document. Table 5 provides a summary listing of projects with information about schedule, cost, and the goals addressed by each project.

Detailed information data sheets, which are included in appendix D in volume 2 of this report, provide further information for each of these projects, including:

- PROGRAM NAME
- PROJECT NAME
- PROJECT #
- LEAD AGENCY
- AUTHORITY
- GOAL(S) ADDRESSED
- MEASURABLE OUTPUT(S)
- COST
- PROJECT SCHEDULE
- PROJECT SYNOPSIS
- DETAILED PROJECT BUDGET INFORMATION
- HYPERLINK OR A POINT OF CONTACT FOR MORE DETAILED PROJECT INFORMATION

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
<b>Goal 1. GET THE WATER RIGHT</b>										
<b>Sub-Goal 1.A. GET THE HYDROLOGY RIGHT (Quantity, Timing &amp; Distribution)</b>										
<b>1.A.1. SURFACE WATER STORAGE RESERVOIR PROJECTS IN ACRE-FEET</b>							<b>ACRE-FT.</b>			
C&SF: CERP- C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs	USACE/SFWMD	1999	2010	\$710,223,000	\$3,348,000	349,400	1.A.1			1
C&SF: CERP- North Lake Belt Storage Area (Phase I & II)	USACE/SFWMD	2012	2036	\$500,346,000	\$0	90,000	1.A.1			2
C&SF: CERP Central Lake Belt Storage Area	USACE/SFWMD	2012	2036	\$466,725,000	\$0	187,200	1.A.1		1.B.1	3
C&SF: CERP-C-43 Basin Storage Reservoir and ASR	USACE/SFWMD	2000	2012	\$440,195,000	\$3,078,000	160,000	1.A.1		1.A.2	4
C&SF: CERP- Water Preserve Areas/L-8 Basin	USACE/SFWMD	2004	2014	\$399,372,000	\$0	48,000	1.A.1		1.A.2	5
C&SF: CERP-North of Lake Okeechobee Storage Reservoir	USACE/SFWMD	2005	2015	\$284,854,000	\$0	200,000	1.A.1		1.B.1	6
C&SF: CERP- Everglades Agricultural Storage Reservoir Phase II	USACE/SFWMD	2006	2015	\$203,240,000	\$0		1.A.1			7
C&SF: CERP- Everglades Agricultural Storage Reservoir Phase I	USACE/SFWMD	1999	2009	\$233,408,000	\$2,673,000	360,000	1.A.1			8
C&SF: CERP- Site 1 Impoundment and Aquifer Storage and Recovery	USACE/SFWMD	2001	2014	\$131,379,000	\$0	15,000	1.A.1		1.A.2	9
C&SF: CERP- Bird Drive Recharge Area (U)	USACE/SFWMD	2004	2013	\$124,083,000	\$0	11,500	1.A.1			10
C&SF: CERP- Palm Beach County Agricultural Reserve Reservoir and ASR	USACE/SFWMD	2005	2013	\$121,359,000	\$0	19,920	1.A.1		1.A.2	11
C&SF: CERP- C-44 Basin Storage Reservoir	USACE/SFWMD	1999	2007	\$112,562,000	\$602,000	40,000	1.A.1			12
C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWMD	2000	2009	\$104,026,000	\$1,021,000	50,000	1.A.1		1.A.4/1.B.1	13
Allapattah Flats/Ranch	FDEP/SFWMD	1997	2001	\$75,594,990	\$0		1.A.1		2.A.1	14
Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminoles	2002	2012	\$22,452,000	\$0	7,569	1.A.1		1.B.3	15
C&SF: CERP- Acme Basin B Discharge	USACE	2001	2006	\$20,100,000	\$0	4,960	1.A.1			16
Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminoles	1999	2010	\$15,818,000	\$170,000	10,000	1.A.1		1.B.3	17
Wetland Reserve Program	NRCS	1997	2008	\$2,135,000	\$465,000		1.A.1		1.B.3	18
Critical Projects - Seminole Big Cypress Reservation Water Conservation Plan	Seminoles & USACE	1997	2004	\$47,608,000	\$10,686,000	3,389	1.A.1			19
<b>1.A.2. ASR PROJECTS IN BILLION GALLONS PER DAY (BGD)</b>							<b>BGD</b>			
C&SF: CERP- Lake Okeechobee ASR	USACE/SFWMD	2004	2020	\$1,097,312,000	\$0	1	1.A.2			20
C&SF: CERP- C-51 Regional Groundwater Aquifer Storage and Recovery	USACE/SFWMD	2004	2013	\$127,291,000	\$0	0.17	1.A.2			21
C&SF: CERP-C-43 Basin Storage Reservoir and ASR	USACE/SFWMD	2000	2012	*	*	0.22	1.A.2		1.A.1	4
C&SF: CERP- Water Preserve Areas/L-8 Basin	USACE/SFWMD	2004	2014	*	*	0.05	1.A.2		1.A.1	5
C&SF: CERP- Palm Beach County Agricultural Reserve Reservoir and ASR	USACE/SFWMD	2005	2013	*	*	0.075	1.A.2		1.A.1	11
C&SF: CERP- Site 1 Impoundment and Aquifer Storage and Recovery	USACE/SFWMD	2001	2014	*	*	0.15	1.A.2		1.A.1	9
<b>1.A.3. PROJECTS REMOVING BARRIERS TO SHEETFLOW IN MILES</b>							<b>MILES MODIFIED</b>			
Modified Water Deliveries to Everglades National Park	NPS	1990	2003	\$135,363,000	\$62,037,000			1.A.3	2.A.3	22
C&SF: CERP- WCA -3 Decompartmentalization and sheetflow Enhancement	USACE/SFWMD	2002	2019	\$85,059,000	\$0	240	1.A.3		1.A.4	23
Critical Projects - Southern CREW	USACE	1997	2001	\$12,021,000	\$8,968,000			1.A.3		24
Kissimmee Prairie	FDEP/SFWMD	1996	1997	\$22,120,000	\$22,120,000	39.3	1.A.3		2.A.3	25
C&SF: Canal 111	USACE/SFWMD	1994	2003	TBD	\$136,281,000			1.A.3		26
<b>1.A.4. OTHER RELATED HYDROLOGY PROJECTS</b>							<b>TBD</b>			
C&SF: CERP- Flow to Northwest and Central WCA -3A	USACE/SFWMD	2000	2009	\$30,877,000	\$0			1.A.4		27
C&SF: CERP- WCA -3 Decompartmentalization and sheetflow Enhancement	USACE/SFWMD	2002	2019	*	*			1.A.4	1.A.3	23
West WCA-3A Hydropattern Restoration	SFWMD	1994	2006	\$17,250,097	\$7,223,376			1.A.4		28
East WCA-3A Hydropattern Restoration	SFWMD	1994	2003	\$14,667,884	\$289,374			1.A.4		29
WCA-2A Hydropattern Restoration	SFWMD	1994	1999	\$5,010,296	\$4,158,513			1.A.4		30
C&SF: CERP Diverting WCA-2 and WCA-3 Flows to Central Lake Belt Storage Area	USACE/SFWMD	2012	2018	\$76,921,000	\$0			1.A.4		31
Additional Water Conveyance Structures Under Tamiami Trail	FDOT	1998	2002	\$8,431,885	\$1,333,000			1.A.4		32
East Coast Buffer/Water Preserve Areas	FDEP/SFWMD	1994	TBD	\$165,100,000	\$86,500,000			1.A.4	2.A.3	33
C&SF: CERP- Broward County Secondary Canal System	USACE/SFWMD	2001	2009	\$12,898,000	\$0			1.A.4		34
C&SF: CERP C-4 Control Structures	USACE/SFWMD	2000	2005	\$2,330,000	\$25,000			1.A.4		35
C&SF: CERP Lake Belt (In-Ground Reservoir) Technology - Pilot Project	USACE/SFWMD	1999	2011	\$23,000,000	\$2,000,000			1.A.4		36
C&SF: CERP L-31 N Seepage Management Pilot Project	USACE/SFWMD	2000	2003	\$10,000,000	\$0			1.A.4		37
C&SF: CERP L-31 N Improvements for Seepage Management and S-356 Structures	USACE/SFWMD	2002	2010	\$184,845,000	\$0			1.A.4		38
Frog Pond/L-31 N	FDEP/SFWMD	1994	TBD	TBD	\$79,890,107	10,450		1.A.4		39
C&SF: CERP- C-111N Spreader Canal	USACE/SFWMD	2000	2008	\$94,035,000	\$553,000			1.A.4		40
C&SF: CERP Operational Modification to Southern Portion of L-31N and C-111	USACE/SFWMD	TBD	TBD	TBD	\$0			1.A.4		41
C&SF: CERP-West Miami-Dade County Reuse	USACE/M-DADE	2011	2020	\$437,237,000	\$0			1.A.4		42

\* = This is a multiple obj. project funding is listed in other obj.

\*\* = Consistent with authorizing Big Cypress legislation

\*\*\* See Kissimmee River Restoration Project Data Sheet pg. 90

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Biscayne Bay Feasibility Study	USACE/M-DADE	1996	2001	\$6,370,000	\$2,674,000		1.A.4		43
	C&SF:CERP-Biscayne Bay Coastal Wetlands	USACE/SFWMD	1999	2018	\$299,583,000	\$538,000		1.A.4		44
	Model Lands	SFWMD/M-DADE	1994	2007	TBD	\$6,437,703		1.A.4		45
	C&SF:CERP-South Miami-Dade County Reuse	USACE/M-DADE	2011	2020	\$363,024,000	\$0		1.A.4		46
	Biscayne Coastal Wetlands	SFWMD/M-DADE	1998	TBD	TBD	\$566,097		1.A.4		47
	C&SF:CERP-Florida Keys Tidal Restoration	USACE/SFWMD	2000	2005	\$1,251,000	\$21,000		1.A.4		48
	C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWMD	2000	2009	*	*		1.A.4	1.A.1/1.B.1	13
	C&SF:CERP Lake Okeechobee Aquifer Storage and Recovery Pilot Project	USACE/SFWMD	1999	2004	\$19,000,000	\$9,600		1.A.4		49
	C&SF:CERP Lake Okeechobee Regulation Schedule	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		50
	Rotenberger/Holey Land Tract	FDEP	1984	TBD	\$18,100,000	\$16,100,000		1.A.4	2.A.1	51
	C&SF:CERP Modified Holeyland Wildlife Management Area Operation Plan	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		52
	Rotenberger Restoration	SFWMD	1994	2000	\$4,159,214	\$3,232,465		1.A.4		53
	C&SF:CERP Modified Rotenberger Wildlife Management Area Operation Plan	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		54
	Northern L-8 Basin Improvements	SFWMD	1994	2006	\$16,638,892	\$25,197		1.A.4		55
	S-5A Basin Runoff Diversion Works	SFWMD	1994	2006	\$19,017,404	\$12,149,871		1.A.4		56
	C&SF:CERP Caloosahatchee R. (C-43) Basin ASR Pilot Project	USACE/SFWMD	2000	2005	\$6,000,000	\$0		1.A.4		57
	C&SF:CERP Site 1 Impoundment and Aquifer Storage and Recovery Pilot Project	USACE/SFWMD	1999	2002	\$9,000,000	\$900,000		1.A.4		58
	C&SF:CERP Wastewater Reuse Technology Pilot Project	USACE/SFWMD	1999	2007	\$30,000,000	\$753,000		1.A.4		59
	C&SF:CERP- Loxahatchee National Wildlife Refuge Internal Canal Structures	USACE/SFWMD	2000	2003	\$7,669,000	\$168,000		1.A.4		60
	Loxahatchee Slough Land Acquisition	SFWMD	1996	2002	\$21,000,000	\$18,875,000		1.A.4	2.A.1	61
	C&SF: CERP- Pal-Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration	USACE/SFWMD	2001	2006	\$10,500,000	\$0		1.A.4		62
	Indian River Lagoon	FDEP/SFWMD	1998	TBD	\$147,200,000	\$11,400,000		1.A.4	2.A.1	63
	Shingle Creek	SFWMD	1987	TBD	TBD	\$1,344,400		1.A.4		64
	Kissimmee River (Lower Basin)	SFWMD	1985	2007	***	***		1.A.4		65
	Kissimmee River (Upper Basin)	SFWMD	1990	2007	***	***		1.A.4		66
	Paradise Run	SFWMD	1998	2001	\$12,281,656	\$8,623,598		1.A.4	2.A.1	67
	C&SF: CERP- Lake Istokpoga Regulation Schedule	USACE/SFWMD	2000	2001	\$50,000	\$25,000		1.A.4		68
	C&SF: CERP- Winsburg Farms Wetland Restoration	USACE	2000	2005	\$14,140,000	\$172,000		1.A.4		69
	C&SF: CERP- Seminole Tribe Big Cypress Water Conservation Plan	USACE & Seminole	2001	2008	\$75,288,000	\$0		1.A.4	1.B.3	70
	C&SF:CERP Lake Park Restoration	USACE/Lee Co.	1999	2004	\$5,166,000	\$228,000		1.A.4		71
	C&SF:CERP Southern Golden Gates Estates Restoration	USACE/SFWMD	1999	2005	\$45,654,000	\$534,000		1.A.4		72
	C&SF:CERP-Henderson Creek/Belle Meade Restoration	USACE	2000	2005	\$4,806,000	\$65,000		1.A.4		73
	Southern Glades	SFWMD/M-DADE	1964	TBD	TBD	\$13,301,517		1.A.4		74
	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	\$1,159,040	\$1,159,040		1.A.4	2.A.1	75
	Belle Meade	FDEP	1993	TBD	\$47,700,000	\$32,800,000		1.A.4	2.A.1	76
	Corkscrew Regional Ecosystem Watershed	FDEP/SFWMD	1991	TBD	\$45,800,000	\$17,300,000		1.A.4	2.A.1	77
	Fakahatchee Strand	FDEP	1980	TBD	\$24,800,000	\$20,200,000		1.A.4	2.A.1	78
	Southern Golden Gate Estates	FDEP	1984	TBD	\$148,000,000	\$40,900,000		1.A.4	2.A.1	79
	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	TBD	TBD		1.A.4	2.A.3	80
	Soil Survey for Everglades National Park, Big Cypress, National Preserve & Water Conservation Areas	NRCS	2001	2006	\$5,340,000	\$0		1.A.4		81
	Monitoring of Organic Soils in the Everglades	NRCS	1998	2010	\$1,136,000	\$36,000		1.A.4		82
	Soil Survey Update for the Everglades Agricultural Area	NRCS	2002	2005	\$1,500,000	\$0		1.A.4		83
	C&SF:CERP Everglades Rain Driven Operations	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		84
	C&SF: CERP- Big Cypress/L-28 Interceptor Modifications	USACE/SFWMD	2006	2016	\$42,751,000	\$0		1.A.4	1.B.1	85
	C&SF: CERP - Dade-Broward Levee/Pensucco Wetlands (BB)	USACE/SFWMD	2001	2008	\$18,778,000	\$0		1.A.4		86
	Florida Bay and The Florida Keys Feasibility Study	USACE	1999	2004	TBD	TBD		1.A.4		87
	Southwest Florida Feasibility Study	USACE	1999	2004	\$6,790,000	\$210,000		1.A.4	1.B.3	88
	Herbert Hoover Dike Stabilization	USACE/SFWMD	1995	2006	\$248,121,000	\$2,565,000		1.A.4		89
	Kissimmee River Restoration Project	USACE/SFWMD	1994	2009	\$518,000,000	\$234,906,000		1.A.4	2.A.3	90
	Indian River Lagoon Restoration Feasibility Study	USACE/SFWMD	1996	2001	\$6,356,000	\$5,188,000		1.A.4	1.B.3	91
	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/SFWMD	1997	2003	\$30,458,000	\$8,890,000		1.A.4	1.B.3	92
	North Fork of the New River Restoration	Broward Co.	1997	2003	\$2,336,000	\$1,126,000		1.A.4	2.A.3	93
	L-8 Canal Water Catchment Area - Loxahatchee Slough Infrastructure Improvements	COWPB	1997	2002	\$32,000,000	\$19,837,000		1.A.4		94
	Loxahatchee Slough Ecosystem Restoration	USACE/SFWMD/PBCo.	1997	2000	\$6,850,000	\$6,850,000		1.A.4	2.A.3/2.B.4	95

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Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Micosukee Water Resources Management	Micosukee	TBD	TBD	25,200,000	2,100,000		1.A.4	1.B.3	96
<b>Sub-Goal 1.B</b>	<b>GET THE WATER QUALITY RIGHT</b>									
<b>1.B.1.</b>	<b>STORMWATER TREATMENT AREAS (STA) PROJECTS IN ACRES</b>						<b>ACRES</b>			
	C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWM	2000	2009	*	*	5,000	1.B.1	1.A.1/1.A.4	13
	C&SF:CERP-Lake Okeechobee Watershed Water Quality Treatment Facilities	USACE/SFWM	2001	2010	\$62,247,000	\$0	4,375	1.B.1		97
	C&SF:CERP-North of Lake Okeechobee Storage Reservoir	USACE/SFWM	2005	2015	*	*	2,500	1.B.1	1.A.1	6
	C&SF:CERP Caloosahatchee Backpumping with Stormwater Treatment	USACE/SFWM	2005	2015	\$82,895,000	\$0	20,000	1.B.1		98
	C&SF: CERP- Big Cypress/L-28 Interceptor Modifications	USACE/SFWM	2006	2016	*	*	1,900	1.B.1	1.A.4	85
	Everglades Agricultural Area (EAA) / Talisman	SFWM/DOI	1997	1999	\$138,087,114	\$138,087,114	50,719	1.B.1		99
	STA-3/4 Works	SFWM	1994	2004	\$195,423,150	\$56,553,028		1.B.1		100
	STA-1 West Works and Outflow Pump Station (G-310)	SFWM	1994	2000	\$95,042,875	\$73,182,832	6700	1.B.1		101
	STA-2 Works and Outflow Pump Station (G-335)	SFWM	1994	2000	\$113,573,117	\$92,089,635	6430	1.B.1		102
	STA-5 Works	SFWM	1994	2003	\$53,109,899	\$33,677,773	4118	1.B.1		103
	STA-6 (includes sections 1 and 2)	SFWM	1994	2004	\$20,584,401	\$10,188,850	2222	1.B.1		104
	C&SF: CERP- C-17 Backpumping and Treatment	USACE/SFWM	2002	2008	\$20,190,000	\$0	550	1.B.1		105
	C&SF: CERP- C-51 Backpumping and Treatment	USACE/SFWM	2002	2008	\$32,632,000	\$0	600	1.B.1		106
	Micosukee Tribe Water Management Area	Micosukee	TBD	TBD	\$42,113,000	\$0		1.B.1		107
	C&SF: CERP-C-9 STA and Impoundment	USACE/SFWM	2001	2007	\$89,146,000	\$0	2500	1.B.1		108
	C&SF: CERP- Western C-11 Diversion Impoundment & WCA-3A&B Levee Seepage Management	USACE/SFWM	2001	2008	\$224,544,000	\$0	1,600	1.B.1		109
	C&SF:CERP Central Lake Belt Storage Area	USACE	2012	2036	*	*	640	1.B.1	1.A.1	3
	C&SF: CERP-Micosukee Tribe Water Management Plan	USACE & Micosukee	2000	2008	\$24,459,000	\$312,000	900	1.B.1		110
	C&SF: West Palm Beach Canal (C-51) and STA-1E	SFWM	1997	2002	\$240,418,000	\$76,532,000	6,500	1.B.1		111
<b>1.B.2.</b>	<b>DEVELOPMENT OF TOTAL MAXIMUM DAILY LOAD (TMDL) PLANS</b>									
	Total Maximum Daily Load (TMDL) for South Florida	FDEP	2000	TBD	\$3,400,000	\$1,000,000		1.B.2		112
<b>1.B.3.</b>	<b>OTHER RELATED WATER QUALITY PROJECTS</b>									
	Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project	SFWM	2000	2003	TBD	\$0		1.B.3		113
	Lake Okeechobee Tributary Sediment Removal Pilot Project	SFWM	2000	2002	\$420,000	\$156,100		1.B.3		114
	Development of Best Management Practices Related to the Land Application of Residuals and Chicken Manure in the Lake Okeechobee Watershed	SFWM	2000	2003	TBD	TBD		1.B.3		115
	C&SF: CERP- Lake Okeechobee Tributary Sediment Dredging	USACE/SFWM	2001	2005	\$4,700,000	\$0		1.B.3		116
	Lake Okeechobee Water Retention/ Phosphorus Removal	USACE/SFWM	1997	2002	\$16,360,000	\$8,286,000		1.B.3		117
	Technical Assistance to Seminole and Micosukee Indian Reservations	NRCS	1998	2009	\$3,850,000	\$150,000		1.B.3		118
	Seminole Tribe Best Management Practices for the Brighton Reservation	Seminoles	1998	2004	\$338,000	\$144,000		1.B.3		119
	Seminole Tribe Best Management Practices for the Big Cypress Reservation	Seminoles	1996	2004	\$4,779,000	\$1,911,600		1.B.3		120
	Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminoles	1999	2010	*	*		1.B.3	1.A.1	17
	C&SF: CERP- Seminole Tribe Big Cypress Water Conservation Plan	USACE & Seminoles	2001	2008	*	*		1.B.3	1.A.4	70
	Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminoles	2002	2012	*	*		1.B.3	1.A.1	15
	Everglades Stormwater Program	SFWM	1998	2006	TBD	\$7,650,000		1.B.3		121
	Chapter 298 Districts/Lease 3420 Improvements	SFWM	1994	2004	\$13,635,079	\$12,020,220		1.B.3		122
	STA-1 Inflow and Distribution Works	SFWM	1994	2002	\$11,662,799	\$9,291,894		1.B.3		123
	Indian River Lagoon Restoration Feasibility Study	USACE	1996	2001	*	*		1.B.3	1.A.4	91
	C&SF: CERP- Lake Worth Lagoon Restoration	USACE/SFWM	2005	2011	\$2,300,000	\$0		1.B.3		124
	Wetland Reserve Program	NRCS	1997	2008	*	*		1.B.3	1.A.1	18
	BMPs for Agriculture	NRCS	1997	2011	\$65,245,000	\$12,000,000		1.B.3		125
	Pollution Prevention	NRCS/FDACS	2001	2005	\$890,000	\$0		1.B.3		126
	Urban Mobile Irrigation Lab	NRCS	1998	2011	\$2,860,000	\$360,000		1.B.3		127
	Agriculture Land Stewardship	NRCS/FDACS	2001	2012	\$10,920,000	\$0		1.B.3		128
	South Florida Water Quality Protection Program	FDEP	1999	TBD	\$564,652	\$454,652		1.B.3		129
	New Palm Dairy Land Acquisition	SFWM	2000	TBD	TBD	TBD		1.B.3		130
	Floridan Aquifer Restoration	NRCS	1998	2002	\$1,200,000	\$200,000		1.B.3		131
	Outfall (Military) Canal Remediation	AFBCA	1999	2002	TBD	\$1,900,000		1.B.3		132
	Critical Projects - Lake Trafford	USACE	1997	2003	\$17,540,000	\$3,672,000		1.B.3	2.A.3	133
	Critical Projects - Western C-11 Water Quality Treatment	USACE	1997	2002	\$8,957,000	\$1,400,000		1.B.3		134
	Southwest Florida Feasibility Study	USACE	1999	2004	*	*		1.B.3	1.A.4	88

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Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Comprehensive Integrated Water Quality Plan	USACE	1999	2006	TBD	TBD		1.B.3		135
	Everglades National Park Water & Wastewater	NPS	1997	TBD	\$38,491,000	\$5,954,000		1.B.3		136
	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/SFWMD	1997	2003	*	*		1.B.3	1.A.4	92
	Micosukee Water Resources Management	Micosukee	1997	TBD	*	*		1.B.3	1.A.4	96
Goal 2.	RESTORE, PRESERVE AND PROTECT NATURAL HABITATS AND SPECIES									
Sub-Goal 2.A.	RESTORE, PRESERVE AND PROTECT NATURAL HABITATS									
2.A.1.	HABITAT PROTECTION LAND ACQUISITION PROJECTS									
	Water Conservation Areas 1,2, and 3	SFWMD	1948	2010	\$18,050,000	\$10,250,000	862,800	2.A.1		137
	East Everglades Addition to Everglades National Park	NPS	1990	2000	\$113,149,000	\$113,149,000	109,504	2.A.1		138
	Complete Land Acquisition for Biscayne National Park	NPS	1998	2002	\$2,900,000	\$430,000	2,002	2.A.1		139
	Miami-Dade County Archipelago	FDEP	1994	TBD	\$9,900,000	\$8,200,000	856	2.A.1		140
	Florida Keys Ecosystem	FDEP	1992	TBD	\$71,000,000	\$31,100,000	7,611	2.A.1		141
	Coupon Bight/ Key Deer Big Pine Key	USFWS	1985	TBD	\$44,900,000	\$11,800,000	3,452	2.A.1		142
	North Key Largo Hammocks	FDEP	1983	TBD	\$7,900,000	\$4,800,000	4,508	2.A.1		143
	Fisheating Creek	SFWMD/FDEP	1999	TBD	\$163,200,000	\$46,300,000	168,360	2.A.1		144
	Atlantic Ridge Ecosystem	FDEP/SFWMD	1995	TBD	\$78,000,000	\$31,900,000	12,514	2.A.1		145
	Indian River Lagoon	FDEP	1998	TBD	*	*	5,136	2.A.1	1.A.4	63
	Juno Hills	FDEP	1994	TBD	\$19,400,000	\$15,000,000	440	2.A.1		146
	Loxahatchee River Land Acquisition	SFWMD	1984	2001	\$11,927,120	\$11,927,120	1,936	2.A.1		147
	Loxahatchee Slough Land Acquisition	SFWMD	1996	2002	*	*	15,200	2.A.1	1.A.4	61
	North Fork St Lucie River	FDEP/SFWMD	1988	TBD	\$27,900,000	\$3,400,000	3,800	2.A.1		148
	North Savannas	SFWMD	1997	2002	\$5,000,000	\$1,100,000	930	2.A.1		149
	Pal-Mar	FDEP/SFWMD	1992	TBD	\$19,900,000	\$10,100,000	35,435	2.A.1		150
	South Fork St. Lucie River Land Acquisition	SFWMD	1995	1996	\$2,480,000	\$2,480,000	184	2.A.1		151
	Allapattah Flats/Ranch	FDEP	1997	TBD	*	*	34,221	2.A.1	1.A.1	14
	Rotenberger/Holey Land Tract	FDEP	1984	TBD	*	*	79,170	2.A.1	1.A.4	51
	Cayo Costa	FDEP	1980	TBD	\$26,800,000	\$23,600,000	1,932	2.A.1		152
	Charlotte Harbor Flatwoods	FDEP	1986	TBD	\$50,500,000	\$34,900,000	44,755	2.A.1		153
	Caloosahatchee Ecoscape	FDEP	1998	TBD	\$18,100,000	\$0	15,391	2.A.1		154
	Lake Wales Ridge Ecosystem	FDEP	1992	TBD	\$25,200,000	\$19,100,000	12,770	2.A.1		155
	Upper Lakes Basin Watershed	SFWMD	1995	2002	\$38,100,000	\$19,650,000	43,500	2.A.1		156
	Kissimmee Prairie	FDEP	1996	1997	*	*	38,282	2.A.1	1.A.3	25
	Cattfish Creek	FDEP	1990	TBD	\$22,200,000	\$9,070,000	10,609	2.A.1		157
	Parker-Poinciana	SFWMD	1996	TBD	TBD	TBD	1,970	2.A.1		158
	Pineland Site Complex	FDEP	1996	TBD	\$2,000,000	\$280,000	250	2.A.1		3 159
	Osceola Pine Savannas	FDEP	1995	TBD	\$30,100,000	\$0	42,291	2.A.1		160
	Barfield Farms	SFWMD	1998	TBD	TBD	TBD	1,367	2.A.1		161
	Cypress Creek/Trail Ridge	SFWMD	1997	TBD	TBD	TBD	13,788	2.A.1		162
	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	*	*	661	2.A.1	1.A.4	75
	Dupuis Reserve	SFWMD	1985	1986	\$23,016,601	\$23,016,601	21,875	2.A.1		163
	Lake Walk-In-Water	SFWMD	1995	TBD	TBD	\$3,950,000	4,615	2.A.1		164
	Nicodemus Slough	SFWMD	1981	1988	\$1,744,500	\$1,744,500	2,219	2.A.1		165
	Six Mile Cypress	SFWMD	1987	TBD	TBD	\$1,975,321	1,741	2.A.1		166
	South Savannas	FDEP/SFWMD	1981	TBD	TBD	\$16,522,480	6,046	2.A.1		167
	Tibet-Butler Preserve	SFWMD	1998	1999	\$3,601,900	\$3,601,900	439	2.A.1		168
	Belle Meade	FDEP	1993	TBD	*	*	27,200	2.A.1	1.A.4	76
	Big Cypress National Preserve Addition	NPS	1997	2004	\$49,560,000	\$49,560,000	6,113	2.A.1		169
	Big Cypress National Preserve Private Inholdings**	NPS	1998	2010	\$207,061,269	\$184,961,000	878	2.A.1		170
	Corkscrew Regional Ecosystem Watershed	FDEP	1991	TBD	*	*	59,008	2.A.1	1.A.4	77
	Fakahatchee Strand	FDEP	1980	TBD	*	*	80,231	2.A.1	1.A.4	78
	Southern Golden Gate Estates	FDEP	1984	TBD	*	*	57,200	2.A.1	1.A.4	79
	Dade County Training Jetport	NPS	2000	2003	\$0	\$0	24,000	2.A.1		171
	Twelve Mile Slough	SFWMD	1998	2001	\$3,300,000	\$3,300,000	3,300	2.A.1		172
	Rookery Bay	FDEP	1980	TBD	\$46,240,000	\$46,200,000	18,532	2.A.1		173
	Estero Bay	FDEP	1985	TBD	TBD	\$40,100,000	16,740	2.A.1		174
	Okaloacoochee Slough	FDEP/SFWMD	1996	TBD	\$21,300,000	\$20,000,000	37,210	2.A.1		175
	South Florida Multi-Species Recovery Plan	USFWS	1994	2010	\$329,950,000	\$118,410,000		2.A.1	2.B.4	176

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Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Paradise Run	SFWMD	1998	2001	*	*	4,265	2.A.1	1.A.4	67
<b>2.A.2.</b>	<b>CORAL REEF PROTECTION PROJECTS</b>									
	Planning and Implementation of the Tortugas Ecological Reserve	NOAA	1998	2004	TBD	\$0		2.A.2		177
<b>2.A.3.</b>	<b>OTHER NATURAL HABITAT PROJECTS</b>									
	Modified Water Deliveries to Everglades National Park	NPS	1990	2003	*	*		2.A.3	1.A.3	22
	C&SF: CERP- Protect and Enhance Existing Wetland Systems along LNWR (Strazzulla Tract)	USACE/SFWMD	2001	2007	\$52,772,000	\$0		2.A.3		178
	C&SF:CERP Environmental Water Supply Deliveries to the Caloosahatchee Estuary	USACE/SFWMD	TBD	TBD	TBD	\$0		2.A.3		179
	C&SF:CERP Environmental Water Supply Deliveries to the St. Lucie Estuary	USACE/SFWMD	TBD	TBD	TBD	\$0		2.A.3		180
	Kissimmee River Restoration Project	USACE/SFWMD	1994	2009	*	*		2.A.3	1.A.4	90
	East Coast Buffer/Water Preserve Areas	FDEP/SFWMD	1994	TBD	*	*		2.A.3	1.A.4	33
	New River Forest Restoration Project	Broward	1997	TBD	*	*		2.A.3	2.B.4	194
	Big Cypress National Preserve Mineral Rights	NPS	2000	2003	TBD	\$0		2.A.3		181
	Critical Projects - Lake Trafford	USACE	1997	2003	*	*		2.A.3	1.B.3	133
	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	*	*		2.A.3	1.A.4	80
	WCA-2A Regulation Schedule Review	USACE	1998	2001	\$500,000	\$300,000		2.A.3		182
	Miami-Dade County Environmentally Endangered Lands Program	Dade	1991	TBD	\$56,074,406	\$25,749,000		2.A.3		183
	C&SF:CERP Restoration of pineland and hardwood hammocks in C-111 Basin	USACE	2000	2006	\$600,000	\$0		2.A.3		184
	North Fork of the New River Restoration	Broward	1997	2003	*	*		2.A.3	1.A.4	93
	West Palm Beach Wetland Reclamation Project	COWPB	1996	2001	\$24,600,000	\$21,100,000		2.A.3		3 185
	Loxahatchee Slough Ecosystem Restoration	PBCo.	1997	2000	*	*		2.A.3	1.A.4/2.B.4	95
<b>Sub-Goal 2.B.</b>	<b>CONTROL INVASIVE PLANTS</b>									
<b>2.B.1.</b>	<b>INVASIVE EXOTIC PLANT MANAGEMENT PLAN DEVELOPMENT</b>									
	Prepare management plans for top 20 south Florida exotic pest plants	NEWTT	2001	2011	\$600,000	\$0		2.B.1		186
<b>2.B.2.</b>	<b>EXOTIC SPECIES MAINTENANCE CONTROL PROJECTS</b>									
	Achieve "Maintenance Control" status for Brazilian Pepper, Melaleuca, Australian pine and Old world climbing fern in all natural areas statewide by 2020	NEWTT	2002	2020	\$100,000,000	\$0		2.B.2		187
	Integration of Federal, State, and Local Agency Invasive Exotic Control Programs into Florida-wide Strategy	FDEP	2000	2005	TBD	\$76,418,000		2.B.2		188
<b>2.B.3.</b>	<b>INVASIVE EXOTIC PLANTS PREVENTION PLAN DEVELOPMENT</b>									
	Complete an Invasive Exotics Plant Prevention, Early Detection and Eradication Plan by 2005	NEWTT	2001	2004	\$5,000,000	\$0		2.B.3		189
<b>2.B.4</b>	<b>OTHER RELATED EXOTIC SPECIES PROJECTS</b>									
	Hole-in-the-Donut	NPS	1994	2017	\$75,000,000	\$11,582,000	6,000	2.B.4		190
	Melaleuca Control (Critical) Big Cypress National Preserve	NPS	1998	2005	\$1,400,000	\$1,050,000	150 sq. miles	2.B.4		191
	Everglades National Park Exotic Control Program	NPS	2001	TBD	TBD	\$0	650,000	2.B.4		192
	Esteros Bay Aquatic Preserve and Buffer Reserve Enhancement and Exotic Removal Project	FDEP	1998	2004	\$1,350,000	\$1,020,000	732	2.B.4		193
	South Florida Multi-Species Recovery Plan	USFWS	1994	2010	*	*		2.B.4	2.A.1	176
	New River Forest Restoration Project	Broward	1997	TBD	\$2,220,000	\$520,000	30	2.B.4	2.A.3	194
	Exotic Species Removal	Seminoles	1998	2010	\$988,000	\$228,000	80	2.B.4		195
	Exotic Pest Plant Controls in South Florida Ecosystems	ARS	1998	2006	\$10,317,000	\$1,190,000		2.B.4		N/A
	C&SF:CERP- Melaleuca Eradication Project and other Exotic Plants	USACE	2006	2011	\$5,772,000	\$0		2.B.4		196
	Melaleuca Quarantine Facility	USDA/ARS	1997	2003	\$5,000,000	\$1,000,000		2.B.4		197
	Loxahatchee Slough Ecosystem Restoration	PBCo.	1997	2000	*	*		2.B.4	1.A.4/2.A.3	95
<b>GOAL 3.</b>	<b>FOSTER COMPATIBILITY</b>									
<b>SAMPLE</b>	<b>PROJECTS</b>									
	Regional Water Supply Plans	SFWMD	1999	TBD	TBD	TBD		3		198
	South Biscayne Bay Watershed Management Plan	Miami-Dade	1999	2002	\$6,400,000	\$4,900,000		3		199
	Agriculture and Rural Area Study	Miami-Dade	2000	2001	\$1,100,000	\$400,000		3		200

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	Critical Projects - Florida Keys Carrying Capacity	USACE/DCA	1997	2001	\$5,500,000	\$3,739,000		3		201
	C&SF:CERP Change Coastal Wellfield Operations	USACE/SFWMD	TBD	TBD	TBD	\$0		3		202
	C&SF:CERP Lower East Coast Utility Water Conservation	USACE/SFWMD	1999	2036	TBD	\$0		3		203
	Miami River Dredging Project	USACE	TBD	TBD	TBD	\$0		3		N/A
	Pineland Site Complex	FDEP	1996	TBD	*	*		3	2.A.1	159
	Eastward HO! Brownfields Partnership	SFRPC	1998	2010	TBD	\$13,200,000		3		204
	Palm Beach County Freshwater Chain-of-Lakes Project	PBCo.	1998	2003	\$6,813,000	\$1,820,000		3		205
	West Palm Beach Wetland Reclamation Project	COWPB	1996	2001	*	*		3	2.A.3	185
OTHER	RESTORATION PROJECTS									
	Enhance the NPS South Florida Ecosystem Restoration Implementation Program	NPS	1999	TBD	TBD	TBD				N/A
	C&SF: CERP- Lake Okeechobee and Hillsboro Site1 ASR Pilot	USACE			\$27,000,000	\$0				N/A
	C&SF: CERP- Miami-Dade County Water Supply	USACE			\$76,668,000	\$0				N/A
	Kissimmee Chain of lakes Drawdown/Restoration Project	FWC	1999	2010	\$23,000,000	\$0				N/A
	Lake Tohopekaliga Wetland Acquisition	FWC	1998	2000	\$10,000,000	\$0				N/A
	Economic Analysis of Agricultural Land and Water Management	USDA	1997	2002	\$1,845,000	\$0				N/A
	Lake Istokpoga Ecosystem Restoration and Management	FWC	1998	2002	\$17,325,000	\$5,155,000				N/A
	Winsberg Wetlands Water Reclamation Project	PBCo.	1999	2003	\$14,500,000	\$3,000,000				N/A
	Extension/Public Information to Support Ecosystem Restoration in C-111 Basin	UF/IFAS	1998	2004	\$250,000	\$81,000				N/A
	Eastward Ho! Corridor Rival Development Trends Fiscal Impact Analysis (DCA)	FDCA	1997	1998	\$150,000	\$150,000				N/A
	South Florida Community-Urban Resources Partnership Ecosystem Restoration Project	USDA	1998	2000	\$2,000,000	\$1,020,000				N/A
	South Miami-Dade Stormwater Treatment and Distribution Area Demonstration Project	Dade	1996	2001	\$2,136,000	\$2,136,000				N/A
	Big Pine and No Name Keys Multi-Species Habitat Conservation Plan	FDCA	1999	2000	\$300,000	\$200,000				N/A

#### LEGEND

##### Project ID #

- CE = Central Everglades
- CERP = Comprehensive Everglades Restoration Plan
- ECP = Everglades Construction Project
- FK = Florida Keys
- GL = Greater Lake Okeechobee
- KV = Kissimmee Valley
- SE = Southeast Coast
- SW = Southwest Coast and Big Cypress
- TS = Total System

##### Goals, Sub-Goals & Objectives

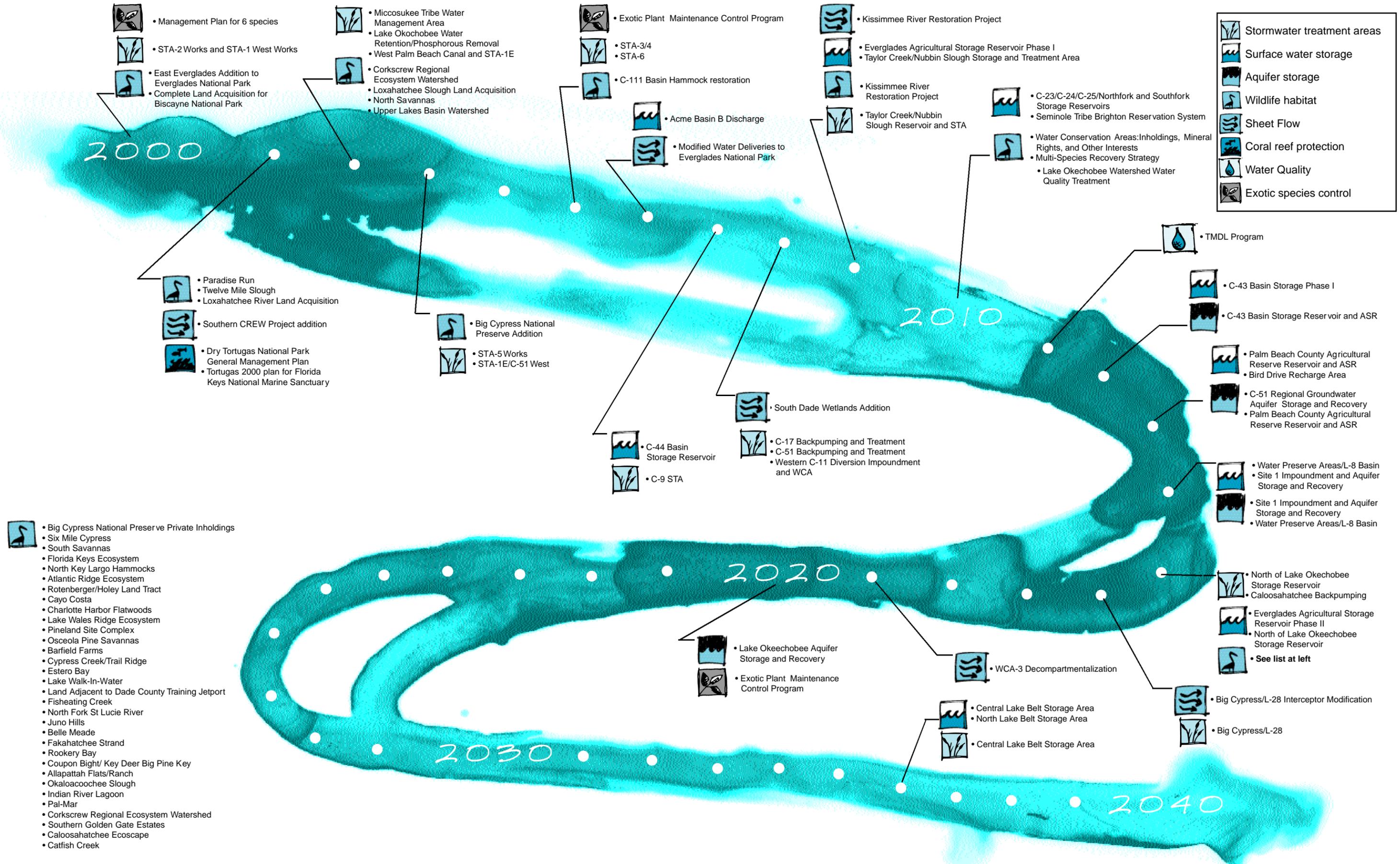
- GOAL 1 = GET THE WATER RIGHT
  - Sub-Goal 1.A = GET THE HYDROLOGY RIGHT (Quantity, Timing & Distribution)
    - 1.A.1 = Surface Water Storage Reservoir Projects in Acre-Feet
    - 1.A.2 = Aquifer Storage and Recovery (ASR) Projects in Billion Gallons per Day (BGD)
    - 1.A.3 = Projects Removing Barriers to Sheetflow in Miles
    - 1.A.4 = Other Related Hydrology Projects
  - Sub-Goal 1.B = GET THE WATER QUALITY RIGHT
    - 1.B.1 = Stormwater Treatment Area (STA) Projects in Acres
    - 1.B.2 = Development of Total Maximum Daily Load (TMDL) Plans
    - 1.B.3 = Other Related Water Quality Projects
- GOAL 2 = RESTORE, PRESERVE & PROTECT NATURAL HABITATS & SPECIES
  - Sub-Goal 2.A = RESTORE, PRESERVE AND PROTECT NATURAL HABITATS
    - 2.A.1 = Acres of Land Acquired for Habitat Protection
    - 2.A.2 = Coral Reef Protection Projects
    - 2.A.3 = Other Related Natural Habitat Restoration, Preservation and Protection Projects
  - Sub-Goal 2.B = CONTROL INVASIVE PLANTS
    - 2.B.1 = Invasive Exotic Plant Species Management Plan Development
    - 2.B.2 = Exotic Species Maintenance Control Projects
    - 2.B.3 = Invasive Exotic Plant Prevention Plan Development
- Goal 3 = FOSTER COMPATIBILITY
  - Sample Projects

\* = This is a multiple obj. project funding is listed in other obj.

\*\* = Consistent with authorizing Big Cypress legislation

\*\*\* See Kissimmee River Restoration Project Data Sheet pg. 90

# TIMELINE FOR SOUTH FLORIDA RESTORATION



2000

2010

2020

2030

2040

- Stormwater treatment areas
- Surface water storage
- Aquifer storage
- Wildlife habitat
- Sheet Flow
- Coral reef protection
- Water Quality
- Exotic species control

- Management Plan for 6 species
- STA-2 Works and STA-1 West Works
- East Everglades Addition to Everglades National Park
- Complete Land Acquisition for Biscayne National Park

- Miccosukee Tribe Water Management Area
- Lake Okechobee Water Retention/Phosphorous Removal
- West Palm Beach Canal and STA-1E
- Corkscrew Regional Ecosystem Watershed
- Loxahatchee Slough Land Acquisition
- North Savannas
- Upper Lakes Basin Watershed

- Exotic Plant Maintenance Control Program
- STA-3/4
- STA-6
- C-111 Basin Hammock restoration
- Acme Basin B Discharge
- Modified Water Deliveries to Everglades National Park

- Kissimmee River Restoration Project
- Everglades Agricultural Storage Reservoir Phase I
- Taylor Creek/Nubbin Slough Storage and Treatment Area
- Kissimmee River Restoration Project
- Taylor Creek/Nubbin Slough Reservoir and STA

- C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs
- Seminole Tribe Brighton Reservation System
- Water Conservation Areas: Inholdings, Mineral Rights, and Other Interests
- Multi-Species Recovery Strategy
- Lake Okechobee Watershed Water Quality Treatment

- Paradise Run
- Twelve Mile Slough
- Loxahatchee River Land Acquisition
- Southern CREW Project addition
- Dry Tortugas National Park General Management Plan
- Tortugas 2000 plan for Florida Keys National Marine Sanctuary

- Big Cypress National Preserve Addition
- STA-5 Works
- STA-1E/C-51 West

- C-44 Basin Storage Reservoir
- C-9 STA
- South Dade Wetlands Addition
- C-17 Backpumping and Treatment
- C-51 Backpumping and Treatment
- Western C-11 Diversion Impoundment and WCA

- TMDL Program
- C-43 Basin Storage Phase I
- C-43 Basin Storage Reservoir and ASR
- Palm Beach County Agricultural Reserve Reservoir and ASR
- Bird Drive Recharge Area
- C-51 Regional Groundwater Aquifer Storage and Recovery
- Palm Beach County Agricultural Reserve Reservoir and ASR

- Water Preserve Areas/L-8 Basin
- Site 1 Impoundment and Aquifer Storage and Recovery
- Site 1 Impoundment and Aquifer Storage and Recovery
- Water Preserve Areas/L-8 Basin

- Big Cypress National Preserve Private Inholdings
- Six Mile Cypress
- South Savannas
- Florida Keys Ecosystem
- North Key Largo Hammocks
- Atlantic Ridge Ecosystem
- Rotenberger/Holey Land Tract
- Cayo Costa
- Charlotte Harbor Flatwoods
- Lake Wales Ridge Ecosystem
- Pineland Site Complex
- Osceola Pine Savannas
- Barfield Farms
- Cypress Creek/Trail Ridge
- Estero Bay
- Lake Walk-In-Water
- Land Adjacent to Dade County Training Jetport
- Fisheating Creek
- North Fork St Lucie River
- Juno Hills
- Belle Meade
- Fakahatchee Strand
- Rookery Bay
- Coupon Bight/ Key Deer Big Pine Key
- Allapattah Flats/Ranch
- Okaloacoochee Slough
- Indian River Lagoon
- Pal-Mar
- Corkscrew Regional Ecosystem Watershed
- Southern Golden Gate Estates
- Caloosahatchee Ecoscape
- Cattfish Creek

- Lake Okeechobee Aquifer Storage and Recovery
- Exotic Plant Maintenance Control Program

- WCA-3 Decompartmentalization
- Central Lake Belt Storage Area
- North Lake Belt Storage Area
- Central Lake Belt Storage Area

- North of Lake Okechobee Storage Reservoir
- Caloosahatchee Backpumping
- Everglades Agricultural Storage Reservoir Phase II
- North of Lake Okechobee Storage Reservoir
- See list at left

- Big Cypress/L-28 Interceptor Modification
- Big Cypress/L-28

# APPENDIXES



# Appendix A: REPORT FROM CONGRESS

106TH CONGRESS 1st Session	HOUSE OF REPRESENTATIVES	REPORT 106-479
<p>MAKING APPROPRIATIONS FOR THE GOVERNMENT OF THE DISTRICT OF COLUMBIA AND OTHER ACTIVITIES CHARGEABLE IN WHOLE OR IN PART AGAINST REVENUES OF SAID DISTRICT FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2000, AND FOR OTHER PURPOSES</p>		
<hr/> <p>CONFERENCE REPORT</p>		
<p>TO ACCOMPANY</p>		
<p>H.R. 3194</p>		
		
<p>NOVEMBER 16 (legislative day, NOVEMBER 17), 1999.—Ordered to be printed</p>		
<hr/> <p>U.S. GOVERNMENT PRINTING OFFICE WASHINGTON : 1999</p>		
50-651		

vided quarterly to the House and Senate Committees on Appropriations. Once the lists have been provided to the Committees for approval, any subsequent changes to these lists must also be forwarded to the Appropriations Committees for approval.

The Committees are aware of proposals to address needs in parks through the pursuit of non-Federal sponsors. The Committees have been, and continue to be, supportive of partnerships that further the Service's mission. The need for a certain degree of flexibility in order to respond to private philanthropic opportunities is understood. However, the conference agreement reiterates that partnerships should be linked to the accomplishment of service-wide goals and not pursued strictly for enhancing park infrastructure.

Partnership arrangements, including those where no Federal funds are involved, are not to be viewed as a way to bypass compliance with or adherence to existing policies, procedures, and approval requirements. Partnerships that benefit NPS sites or programs must have active involvement by NPS managers, and should be subject to the same review and approval requirements as projects funded with NPS funds. Review by the Development Advisory Board is expected for all partnership donation projects with a total cost above \$500,000. While some projects may be proposed to be accomplished without any Federal funds, the operation and maintenance requirements are frequently assumed to be the responsibility of the Service, and for this reason full review is expected before commitments are made.

Within the amounts provided, not less than \$500,000 is for maintenance activities at Isle Royale National Park to address infrastructure and visitor facility deterioration.

The National Park Service is directed to prepare a General Management Plan for the Lower East Side Tenement National Historic Site by November 2000 pursuant to section 104(c) of Public Law 105-378.

*South Florida.*—The conference agreement retains bill language in the land acquisition and state assistance account, as proposed by the House, that makes the \$10,000,000 grant to the State of Florida in the land acquisition account and the \$35,000,000 in Title VI subject to a fifty percent match of newly appropriated non-Federal funds. The State may not use funds for land acquisition which were previously provided in another fiscal year as the match. These funds are also subject to an agreement that the lands to be acquired will be managed in perpetuity for the restoration of the Everglades and other natural areas.

The conference agreement includes modified bill language in the land acquisition account which makes the release of the \$10,000,000 State grant funds subject to the Administration submitting legislative language that will ensure a guaranteed water supply to Everglades National Park and the remaining natural system areas located in the Everglades watershed, including but not limited to Big Cypress National Preserve, Biscayne National Park, Loxahatchee National Wildlife Refuge and Water Conservation Areas 2 and 3, as well as Biscayne Bay. While there has been recent testimony by the other partners, including the Army Corps of Engineers and the Florida Water Management District, assuring

the Congress that there will be adequate water supply to the natural areas, the water supply must include high-quality water and not merely storm water runoff.

It would be useful to have a complete estimate of the total costs to restore the South Florida ecosystem. The House and Senate Committees on Appropriations believe that this new estimate will exceed the \$7,800,000,000 estimate that has been used over the last five years. This recalculated estimate should include all three goals of this initiative, namely, (1) getting the water right, (2) restoring and enhancing the natural habitat, and (3) transforming the built environment. The Congress and the American people are committed to this project. Over \$1,300,000,000 has been appropriated to date; however, and the public deserves to know how much this project will truly cost. This information should be submitted to the House and Senate Committees on Appropriations no later than February 1, 2000, and should be updated biennially.

The Secretary of the Interior, in his capacity as Chair of the South Florida Restoration Task Force, is directed to develop a region-wide strategic plan as recommended by the General Accounting Office. The plan should coordinate and integrate Federal and non-Federal activities necessary to achieve the three ecosystem restoration goals. The Secretary is directed to submit a progress report to the House and Senate Committees on Appropriations in February, 2000, and the final strategic plan no later than July 31, 2000. This plan should be updated every two years.

The timely resolution of disputes regarding South Florida ecosystem restoration is important to avoid cost overruns and unnecessary delays in attaining the goals and benefits of the initiative. The Secretary of the Interior is directed to develop recommendations for resolving the most difficult conflicts and submit recommendations to the House and Senate Committees on Appropriations by February 15, 2000. These recommendations should be developed in consultation with the other major partners in this effort.

The Committees, through previous appropriations, have supported the preparation of a new General Management Plan for Gettysburg NMP to enable the NPS to interpret more adequately the Battle of Gettysburg and to preserve the artifacts and landscapes that help to tell the story of this great conflict of the Civil War. Accordingly, the conference agreement acknowledges the need for a new visitors facility and supports the proposed public-private partnership as a unique approach to the interpretive needs of our National Parks.

#### NATIONAL RECREATION AND PRESERVATION

The conference agreement provides \$53,899,000 for National recreation and preservation instead of \$49,449,000 as proposed by the House and \$51,451,000 as proposed by the Senate. The agreement provides \$533,000 for Recreation programs, the same as the House and Senate. The agreement provides \$10,090,000 for Natural programs as proposed by the House instead of \$10,555,000 as proposed by the Senate. This includes a \$500,000 general program increase and a \$285,000 increase for hydropower relicensing. While the conference agreement has not earmarked the River and Trails Conservation Assistance program, consideration should be given to

# Appendix B: TASK FORCE CHARTER

## **SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE**

Task Force Charter  
August 1, 1997

**1. AUTHORIZATION.** The South Florida Ecosystem Restoration Task Force was established by section 528(f) of Public Law 104-303, the Water Resources Development Act of 1996 (hereinafter referred to as the Act), enacted October 12, 1996.

**2. DUTIES.** The Task Force was established to:

**a.** Consult with, and provide recommendations to, the Secretary of the Army and the non-Federal project sponsor in developing a comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem, in accordance with sections 528(b)(1) and 528(f)(2)(A) of the Act.

**b.** Coordinate the development of consistent policies, strategies, plans, programs, projects, activities, and priorities for addressing the restoration, preservation, and protection of the South Florida ecosystem, as provided in section 528(f)(2)(B) of the Act. Such coordination shall include cooperation with the Secretary of the Army and the non-Federal project sponsor in determining whether a critical restoration project for the South Florida ecosystem will produce independent, immediate, and substantial restoration, preservation, and protection benefits, and will be generally consistent with the "Conceptual Plan for the Central and Southern Florida Project Restudy" prepared by the Governor's Commission for a Sustainable South Florida, in accordance with section 528(b)(3)(A) of the Act.

**c.** Exchange information regarding programs, projects, and activities of the agencies and entities represented on the Task Force to promote ecosystem restoration and maintenance, as provided in section 528(f)(2)(C) of the Act.

**d.** Establish a Florida-based working group to formulate, recommend, coordinate, and implement the policies, strategies, plans, programs, projects, activities, and priorities of the Task Force, in accordance with section 528(f)(2)(D) of the Act.

**e.** Facilitate the resolution of interagency and intergovernmental conflicts associated with the restora-

tion of the South Florida ecosystem among agencies and entities represented on the Task Force, as provided in section 528(f)(2)(F) of the Act.

**f.** Coordinate scientific and other research associated with the restoration of the South Florida ecosystem, as provided in section 528(f)(2)(G) of the Act.

**g.** Provide assistance and support to agencies and entities represented on the Task Force in their restoration activities, as provided in section 528(f)(2)(H) of the Act.

**h.** Prepare an integrated financial plan and recommendations for coordinated budget requests for the funds proposed to be expended by agencies and entities represented on the Task Force for the restoration, preservation, and protection of the South Florida ecosystem, as provided in section 528(f)(2)(I) of the Act.

**i.** Submit a biennial report to Congress that summarizes the activities of the Task Force; the policies, strategies, plans, programs, projects, activities, and priorities planned, developed, or implemented for the restoration of the South Florida ecosystem; and progress made toward the restoration, as provided in section 528(f)(2)(J) of the Act.

**3. POWERS.** The Task Force may -

**a.** Establish advisory bodies as it deems necessary to assist the Task Force in its duties, including advisory bodies on public policy and scientific issues, in accordance with section 528(f)(2)(E)(i) of the Act.

**b.** Select as an advisory body any entity, such as the Governor's Commission for a Sustainable South Florida, that represents a broad variety of public and private interests, as provided in section 528(f)(2)(E)(ii) of the Act.

**c.** Seek advice and input from any interested, knowledgeable, or affected party as it determines necessary to perform its duties, as provided in section 528(f)(3)(B).

**4. MEMBERSHIP.**

**a.** The Task Force consists of 14 members, as follows, pursuant to section 528(f)(1) of the Act:

(1) Seven Federal members, each of whom may be represented by a designee at the level of assistant secretary or the equivalent:

(i) The Secretary of the Interior, who shall serve as chairperson.

(ii) The Secretary of Commerce.

(iii) The Secretary of the Army.

(iv) The Attorney General.

(v) The Administrator of the Environmental Protection Agency.

(vi) The Secretary of Agriculture.

(vii) The Secretary of Transportation.

(2) One member from each the following Indian Tribes, each of whom shall be appointed by the Secretary of the Interior based on the recommendations of the respective tribal chairman:

(i) The Seminole Tribe of Florida.

(ii) The Miccosukee Tribe of Indians of Florida.

(3) Two representatives of the State of Florida appointed by the Secretary of the Interior based on the recommendations of the Governor.

(4) One representative of the South Florida Water Management District appointed by the Secretary of the Interior based on the recommendations of the Governor.

(5) Two representatives of local government in the State of Florida to be appointed by the Secretary of the Interior based on the recommendations of the Governor.

**b.** There is no time limit for the term of any member. A person's membership shall terminate after leaving the office from which that member was appointed or designated. Any of the federal officials listed in subparagraph 4.a.(1), above, may at any time designate a substitute member at the level of assistant secretary or the equivalent. Any member appointed by the Secretary of the Interior based on the recommendation of the Governor may be removed or replaced by the Secretary of the Interior based on the recommendation of the

Governor. Any member appointed by the Secretary of the Interior based on the recommendation of a tribal chairman may be removed or replaced by the Secretary of the Interior based on the recommendation of the chairman of the same Tribe.

**c.** Any vacancy on the Task Force shall be filled in the same manner in which the original appointment was made.

**d.** A member shall receive no additional compensation for service on the Task Force, in accordance with section 528(f)(4) of the Act.

## **5. ADMINISTRATION.**

**a.** An Executive Director shall assist the Secretary of the Interior and the Task Force in carrying out their administrative and procedural duties, including the requirements in section 528(f)(3)(ii) of the Act. The Executive Director shall be appointed by the Secretary of the Interior, and shall be an employee of the United States Department of the Interior.

**b.** The Task Force will meet at the call of the Chairperson or of a majority of the members, but not less often than semi-annually.

**c.** A majority of the members then serving will constitute a quorum.

**d.** Travel expenses incurred by a member of the Task Force in the performance of services for the Task Force shall be paid by the agency, tribe, or government that the member represents, as provided in section 528(f)(5) of the Act.

**e.** The Task Force is not considered an advisory committee subject to the Federal Advisory Committee Act, and it may seek advice or input from interested, knowledgeable, or affected parties without being subject to the Federal Advisory Committee Act, pursuant to section 528(f)(3)(C) of the Water Resources Development Act of 1996.

**f.** The Task Force shall implement procedures to facilitate public participation in its functions. Those procedures shall include providing advance notice of meetings, providing adequate opportunity for public input and comment, maintaining appropriate records, and making a record of the proceedings of meetings available for public inspection, as required by section 528(f)(3)(A)(i) of the Act.

**g.** The Task Force may adopt principles and operational guidelines to set forth the required procedures for public participation, and for any other purpose necessary or convenient for the accomplishment of the duties of the Task Force.

**h.** In the absence of procedures adopted by the Task Force, the Executive Director may establish protocols for accomplishment of the duties of the Task Force. The Executive Director will promptly notify all members of the protocols. Such protocols may be amended by the Task Force.

**i.** Nothing in this Charter shall be construed to prejudice the appointments of members already made pursuant to the Act, or the activities of the Task Force since October 12, 1996.

#### **6. PERSONNEL.**

**a.** The Executive Director shall provide staff support to the Task Force.

**b.** The Executive Director may be assisted by a permanent staff of the executive directorate; personnel on temporary assignment to the executive directorate from agencies, governments, or tribes represented on the Task Force or the Working Group; by members of the Task Force or Working Group or the staffs of such members; or by contractors. The Task Force may authorize the Executive Director to request, from the head of any Federal agency not represented on the Task Force, personnel to be detailed to assist the Executive Director or the Task Force.

**7. TERMINATION.** The Task Force shall continue to exist only for so long as it is authorized by Federal law.

Signed By:

Secretary of the Interior - Bruce Babbitt

# Appendix C: FY 2000 REPORT TO CONGRESS



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, D.C. 20240

MAR 30 2000



Honorable Ralph Regula  
Chairman  
Subcommittee on  
Interior and Related Agencies  
Committee on Appropriations  
House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

On March 8, 2000, the Department submitted a report to you on the total cost estimate to restore the South Florida ecosystem.

This provides a revised cost estimate report.

The total cost of \$14.8 billion has not changed, nor has the \$8.4 billion estimated to be the responsibility of the State of Florida. Total Federal costs have been revised from \$6.4 billion to \$6.5 billion (+\$25.0 million) to reflect revised estimates for the Department of the Interior land acquisition needs.

As a result of this revision, \$424.0 million is estimated as the balance to complete Department of the Interior funding, subject to the availability of appropriations. Through FY 2000, \$915.0 million has been appropriated for the Department of the Interior.

Again, the Department appreciates the significant support and funding that this Committee has provided for the South Florida Ecosystem Restoration Initiative.

Similar letters have been sent to the Honorable Norman Dicks, Ranking Minority Member; the Honorable Slade Gorton and the Honorable Robert C. Byrd, Chairman and Ranking Minority Member respectively, of the Subcommittee on the Department of the Interior and Related Agencies, Committee on Appropriations, United States Senate.

Sincerely,

John Berry  
Assistant Secretary  
Policy, Management and Budget

Enclosure

## South Florida Ecosystem – Total Cost Report (Revised 3/27/00)

(\$ in millions)

	Federal Costs	State Costs
<b>Goal 1: Getting the water right</b>		
Ongoing projects	1,197	1,044
Comprehensive Plan	3,900	3,900
<b>Goal 2: Restore and enhance the natural system</b>		
Land acquisition	584	3,405
Other	713	34
<b>Goal 3: Transforming the built environment</b>		
	59	to be determined
<b>Total</b>	<b>6,453</b>	<b>8,383</b>

### I. Introduction

The Conference Committee Report language accompanying the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 2000, Public Law 106-113, requested that the Department submit information, to be updated biennially, on the total cost of the effort to restore the South Florida ecosystem. In relevant part, the report language states:

It would be useful to have a complete estimate of the total costs to restore the South Florida ecosystem. The House and Senate Committees on Appropriations believe that this new estimate will exceed the \$7,800,000,000 estimate that has been used over the last five years. This recalculated estimate should include all three goals of this initiative, namely, (1) getting the water right, (2) restoring and enhancing the natural habitat, and (3) transforming the built environment. The Congress and the American people are committed to this project. Over \$1,300,000,000 has been appropriated to date; however, and the public deserves to know how much this project will truly cost. This information should be submitted to the House and Senate Committees on Appropriations no later than February 1, 2000, and should be updated biennially.

The purpose of this report is to provide the House and Senate Appropriations Committees with the Department's best estimate for the total costs to restore the South Florida ecosystem. The estimate provided in Part V of this report reflects state and Federal costs to date for major on-going programs that advance the goals of the restoration effort, as well as future estimated costs to complete this work or associated with planned or proposed activities that are not yet underway. The estimate exceeds the \$7.8 billion figure representing the costs to construct project features associated with the implementation of the Army Corps of Engineers' Central and Southern Florida Project Comprehensive Everglades Restoration Plan presented to Congress on July 1, 1999. The Department believes that the actual costs to construct the Comprehensive Plan may be lower or higher depending upon a variety of factors, such as congressional authorization for project features that will undergo further site specific studies and analyses prior to initiating construction. The Department will update this report biennially to reflect any future changes.

Although some of the activities included in the Department's total cost estimate began well before the emphasis in the last decade on ecosystem restoration (e.g. state land preservation efforts, the Modified Water Deliveries Project for Everglades National Park, the State of Florida's Everglades Construction Project), and may well have occurred without such increased emphasis, the Department is including the non-recurring costs for these activities as their completion is integral to the overall success of the restoration of the South Florida ecosystem. Not included in the Department's estimate, however, are the normal recurring operating costs - or "agency mission" costs - for state and federal agencies. For example, National Park Service costs to operate and maintain Everglades National Park, Fish and Wildlife Service costs to provide for Endangered Species Act consultation, and South Florida Water Management District costs to operate and maintain its water delivery infrastructure are not included. Although the Department has cited such figures in the past, as included in the Task Force's annual cross-cut budget, to describe its total funding in support of the South Florida ecosystem restoration effort, the Department believes that it is proper to exclude these agency mission costs and focus primarily on the increased funding devoted to this effort that occurred or is planned to occur due to specific restoration needs or goals.

To provide context for the total cost estimate, Part II of this report provides a brief background on the South Florida ecosystem; Part III summarizes major on-going state and Federal efforts key to the restoration that preceded the establishment of the South Florida Ecosystem Restoration Task Force (Task Force) and the 1992 Congressional authorization and direction for the Army Corps of Engineers to complete its Restudy for the Central and Southern Florida Project; Part IV briefly describes future efforts; and Part V provides the Department's best estimate to date for the total costs to restore the South Florida ecosystem. The programs and associated costs included in Part V are arranged according to the three goals for the restoration effort; Federal and state costs are noted accordingly. Federal costs are further subdivided according to individual agencies.

In accordance with the Committee's directive, this report will be updated biennially as more information becomes available and current plans and cost estimates are updated in response to lessons learned and new information. The Department believes that expanding knowledge of ecosystem restoration requirements in South Florida and the process of adaptive management for implementation of the Comprehensive Plan will result in changes to the total cost estimate presented in Part V.

## **II. Background - South Florida Ecosystem**

**In its natural state, the South Florida ecosystem was connected by the flow of water south from Lake Okeechobee through vast freshwater marshes - known as the Everglades - to Florida Bay and on to the coral reefs of the Florida Keys. The Everglades covered approximately 18,000 square miles and were the heart of a unique and biologically productive region, supporting vast colonies of wading birds, a mixture of temperate and tropical plant and animal species, and teeming coastal fisheries.**

During the last century, efforts were made to drain the Everglades and make the region habitable. This culminated in the construction of the Central and Southern Florida Project, a flood control

project jointly built and managed by the Army Corps of Engineers and the South Florida Water Management District. In response to periods of drought and extreme floods, which left 90 percent of South Florida under water, this project was authorized by Congress in 1948 and succeeded in draining half of the original Everglades, allowing for the expanded development of cities on the lower east coast of Florida and the farming area south of Lake Okeechobee known as the Everglades Agricultural Area (EAA). Although historically most rainwater soaked into the region's wetlands, the Central and Southern Florida Project canal system, comprised of over 1,800 miles of canals and levees and 200 water control structures, now drains the water off the land such that an average of 1.7 billion gallons of water per day are discharged into the ocean. Additionally, phosphorus runoff from agricultural operations has polluted much of the remaining Everglades and Lake Okeechobee and caused fundamental, and negative, ecological change.

As a result, not enough clean water is available for the environment, resulting in long-term problems for the Everglades and the communities in the region. Examples include: (i) ninety percent reductions in wading bird populations; (ii) 68 species listed as endangered or threatened; (iii) reduced fisheries in Biscayne and Florida Bays; (iv) loss of over five feet of organic soil in the EAA; (v) degraded water quality in inland and coastal areas; (vi) infestation and spread of invasive exotic plant species on over 1.5 million acres; (vii) damaging fresh water releases into the St. Lucie, Caloosahatchee, and many other estuaries; (viii) loss of wetlands that provide important species habitat and ground water recharge; (ix) loss of tree islands and damaging ecological effects in the state managed water conservation areas. Without significant infrastructure modification, these problems have the potential only to get worse and water shortages are a certainty in future years as water demands continue to grow.

Today, South Florida is home to 6.5 million people and the population is expected to double by 2050. The region receives over 37 million tourists annually and supports a \$200 billion economy. Restoration is an imperative - not only for ensuring a sustainable South Florida economy to guarantee clean fresh water supplies for all future needs - but also to protect the ecological health of the Everglades that has been nationally and internationally recognized as like no other place on Earth.

### **III. Major On-Going State and Federal Efforts to Protect and Restore the South Florida Ecosystem**

Over the last decade, and prior to the establishment of the South Florida Ecosystem Restoration Task Force in 1993, significant efforts have been made at both the Federal and state level to reverse the trend of environmental degradation in the Everglades. These efforts include: (i) improving water quality and reducing pollutants entering Lake Okeechobee and the Everglades from agricultural interests; (ii) restoring more natural hydro patterns in areas such as Everglades National Park and the Kissimmee River Basin; (iii) acquiring land for Federal and state conservation areas, regional water storage capacity, habitat and recreation; and (iv) management and protection of the coral reef through the trusteeship of the National Oceanic and Atmospheric Administration's (NOAA) Florida Keys National Marine Sanctuary. Although other activities are included in the total cost estimate, a brief summary of the most significant projects follows:

**Improving water quality:** In the late 1970s, the State of Florida and the South Florida Water Management District began investigating ways to improve ecosystem water quality, including the Lake Okeechobee Works of the District, farm Best Management Practices, and a cattle buy-out program. By 1988, design had begun on the 3,700-acre Everglades Nutrient Removal Project. In 1988, the federal government sued the State of Florida for its failure to enforce state water quality standards on pollution discharges from the EAA into the Everglades. This lawsuit was settled in 1991 and a judicially enforceable Consent decree ordered the state to take a series of remedial measures, including the construction of stormwater treatment areas (STAs) on former farms in the EAA to help clean up farm runoff. The technical plan in the original Consent decree was expanded significantly after mediation with stakeholders. In 1994, the Florida legislature enacted the Everglades Forever Act, which codified proposed modifications to the consent decree as and provided for other measures to improve overall water quality, including funding mechanisms and construction timetable for a comprehensive program of six STAs, implementation of best management practices, additional research, establishing water quality criteria and implementation of advanced water quality treatment measures.

Among the most important of these measures is the completion of the Everglades Construction Project, a series of six STAs presently under construction and located between the EAA and the natural areas to the south. Of the six STAs, five are funded by the State of Florida and the sixth, STA 1-E, is federally funded to improve water quality discharges into Loxahatchee National Wildlife Refuge. The Everglades Construction Project is expected to cost approximately \$696 million in capital costs to complete, of which \$505 million is being financed by the State of Florida and \$190 million by the federal government (of which \$46 million was appropriated to the Department of the Interior in FY 1998 for land acquisition within STA 1-E). Construction of the STAs are proposed to be complete in December 2006. Although that date has yet to be approved by the court, which retains jurisdiction over this matter, the projects called for by the Consent decree are implemented by the South Florida Water Management District.

Additionally, as a result of the Everglades Forever Act, the South Florida Water Management District established the Everglades Stormwater Program, which includes two main components in the form of an EAA phosphorus reduction program and the Urban and Tributary Basins Program. The EAA phosphorus reduction program includes regulatory programs developed to reduce phosphorus loads from the EAA by reducing phosphorus on the surrounding farms and other adjacent land prior to discharging off-site. Landowners in the EAA have implemented a series of best management practices that have effectively reduced the phosphorus loads to the Everglades. Over the last three years, the total cumulative loads attributable to the EAA have been reduced by 44 percent. The Urban and Tributary Basins Program was developed to ensure that all basins discharging into, from or within the Everglades, other than those included in the EAA, meet state water quality standards. Costs associated with this program are not included in this report at this time as additional strategies, in the form of regulatory changes and construction, are still being developed.

Generally, the STAs and farm Best Management Practices are expected to reduce overall phosphorus levels to 50 parts per billion (ppb), thus improving water quality from EAA discharges and other sources compared to current levels. However, the Everglades Forever Act requires the state to adopt a numeric criterion for phosphorus by 2003 so that all discharges into

the Everglades will meet Federal and state water quality standards by 2006. If the state does not adopt a numeric criterion, the Everglades Forever Act sets a default standard of 10ppb. It appears that additional measures will likely be needed to further enhance the performance of the STAs to meet these requirements; however, the costs to make such modifications are not known at this time. The South Florida Water Management District is presently conducting research into advanced treatment technologies to enhance the performance of the STAs, and also to be potentially applied to other tributaries of the Everglades. Although funding for the implementation of advanced treatment has not been appropriated, to date \$10 million has been budgeted by the South Florida Water Management District towards that research. Once completed, these efforts are expected to significantly improve water quality for the region.

As part of the effort to improve water quality in Lake Okeechobee, the South Florida Water Management District is conducting the Lake Okeechobee Sediment Removal Feasibility Study. The purpose of the study is to identify a feasible method of removing sediment that will reduce the internal phosphorus loading and balance the lake's nutrient assimilative capacity. Costs to implement this program are not known at this time.

In addition to these measures, and in recognition of the critical role of water quality in maintaining coral reef natural resources, the Florida Keys National Marine Sanctuary and Protection Act of 1990 required the Secretary of Commerce, the Environmental Protection Agency, and the State of Florida to develop a Water Quality Protection Program for the Sanctuary.

**Restoring more natural hydropatterns:** More natural hydropatterns are presently being restored in Everglades National Park and the Kissimmee River Basin. In 1989, Congress enacted the Everglades National Park Protection and Expansion Act (Act) to expand Everglades National Park and to restore more natural sheet water flows to the park and Shark River Slough. To restore more natural sheet water flows to the park, the Act authorized the construction of the Modified Water Deliveries Project. That project is 100% federally funded by the Department of the Interior and is presently scheduled for completion in 2003, depending upon the availability of federal funding and completion of ongoing planning. The estimated total cost for this project is between \$133.5 million and \$212 million. The range of costs is based upon alternative design scenarios for certain project features that are presently undergoing supplemental National Environmental Policy Act (NEPA) compliance. The project is undergoing supplemental NEPA compliance because: (i) the original project authorization was amended in 1994; and (ii) completion of both the C-111 project design and the Comprehensive Everglades Restoration Plan expanded agency knowledge that raised questions concerning the original 1992 design for the 8.5 Square Mile Area flood mitigation component of the Modified Water Deliveries Project. This led to technical disagreements among the relevant agencies and stakeholders over the appropriate course of action and alternatives are being explored under the NEPA process. If a locally preferred option for the 8.5 Square Mile Area component of this project is chosen the project will be cost shared between the Federal government and the South Florida Water Management District. For the purposes of this report, a range of costs is presented for this project, although this does not indicate a decision by the Federal government or the South Florida Water Management District to proceed with any of the alternatives presently being evaluated under NEPA.

Authorized by Congress in 1992, the Kissimmee River Restoration project is intended to reverse the environmental devastation of earlier efforts to channel the once 103 mile free flowing river into a 56 mile canal, destroying nearly 43,000 acres of wetlands and important habitat. The project involves restoring about 40 square miles of the historic habitat in the Kissimmee river floodplain north of Lake Okeechobee, as well as restoring water-level fluctuations and seasonal discharges from Lakes Kissimmee and in the upper basin lakes. This project is estimated to cost approximately \$518 million, is equally cost shared with the South Florida Water Management District, and is expected to be complete in 2010.

The C-111 project comprises modifications to the Central and Southern Florida Project to provide more natural hydrologic conditions in Taylor Slough and the panhandle of Everglades National Park and to minimize damaging flood releases to Barnes Sound and Manatee Bay. Restoring natural hydrologic conditions in Taylor Slough is integral to restoring fresh water flows to Florida Bay. The project was initially authorized by Congress in 1991 at a cost of \$155 million, including land, and a completion date of 2001. Reauthorized by Congress in 1996, the Army Corps is directed to consider state water quality standards and incorporate the necessary features into the C-111 project implementation. The 1996 authorization states that all project costs, including land, are to be shared equally between the Army Corps and the South Florida Water Management District. A supplement to the 1994 C-111 General Reevaluation Report will include actual land acquisition costs, a water quality strategy, redistribution of funding responsibilities and a revised implementation timeline, all of which may result in a revised cost estimate.

In addition to improving water quality, certain components of the Everglades Construction Project described above will restore more natural hydro patterns in the northern Everglades presently severed by the Central and Southern Florida Project. The STA 1-E/C-51W Project will provide flood control for the western C-51 basin and will restore a portion of the historic Everglades flows to Loxahatchee National Wildlife Refuge. The current project was reauthorized by Congress in 1996; project construction is 15% cost shared with the South Florida Water Management District, with the District providing all lands, easements and rights-of-way, with the exception of those lands that are incorporated into STA1-E, as discussed below, which is 100% federally funded and for which the Department of the Interior provided \$46 million, through a grant to the South Florida Water Management District, towards land acquisition costs. The Department has just learned that the costs to complete land acquisition for STA 1-E will be higher, but does not have a revised estimate at this time. It is estimated that the STA 1-E/C-51W project will cost \$210 million when complete in 2003, although this number will change once final land acquisition costs are known.

**Land Acquisition:** The Federal and state governments have expended significant funds to acquire and protect lands in the region. Land acquisition is a critical part of ecosystem restoration as acquired lands are needed to protect key federal and state conservation areas, create and restore additional water storage capacity and recharge areas to help increase overall water supplies and restore natural hydrology, and for habitat protection and enhancement and for recreation. As described above, some lands are also used to improve overall water quality (e.g. STAs).

Significant actions taken to protect South Florida's natural resources since the establishment of Everglades National Park in 1947 and its expansion in 1989 (together protecting 1.4 million acres of the remaining Everglades) include: (i) Florida's 1972 Land Conservation Act, 1981 Save Our Rivers Program, 1990 Preservation 2000 Act, and the Florida Forever Act that dedicate state funding for land acquisition at state parks and preserves in the ecosystem; (ii) the 1996 Federal Agriculture Improvement and Reform Act (Farm Bill) that provided the Department with \$200 million for ecosystem restoration, including land acquisition; and (iii) numerous annual Interior Appropriations Acts that have funded land acquisition at parks and refuges in the region, as well as additional state land acquisition assistance funds. The state assistance funds provided by the Department of the Interior have, for the most part, been targeted towards acquisition of lands that create additional opportunities for water storage and are generally expected to be incorporated into a Comprehensive Plan project feature.

Through these efforts, it is estimated that \$1.6 billion has been spent to date (of which \$1.1 billion is state funding and \$0.5 billion is federal) for the acquisition of 4.7 million acres. It is estimated that about 638,000 non-Federal acres remain to be acquired in South Florida at an estimated cost of \$2.2 billion. These figures do not include the 220,000 acres of lands needed for the Comprehensive Plan implementation, which are included in the overall cost estimate for the Comprehensive Plan.

**Critical Restoration Projects:** Pursuant to the Water Resources Development Act of 1996, the Army Corps and the South Florida Water Management District have entered into agreements to undertake nine critical restoration projects that will provide immediate and substantial benefits for the ecosystem. The Corps and the Seminole Tribe have entered into a similar agreement for one critical project. The ten projects have a total cost of \$150 million, half of which will be paid for by the Federal government. These projects, although small and including such features as improving flows under the Tamiami Trail, have immediate environmental benefits that will assist in achieving the goals of the restoration.

**Exotic Species Control:** Commensurate with land acquisition is proper land management and efforts to eradicate and prevent the spread of invasive exotic plant species. More than 200 species of exotic plant species have invaded the Everglades. The majority of these species occur in limited areas, and do not pose a direct threat to native plant communities. However, plants like melaleuca, Brazilian pepper, Australian pine, and Old World climbing fern, are causing widespread damage throughout the South Florida ecosystem, and are considered species of primary concern. The South Florida Water Management District, state, and federal government are all directing resources to combat this problem. While areal coverage for some species will decrease with vigilant management efforts – which has been the case with melaleuca – new species could invade without additional management initiatives. The history of this problem indicates that management efforts will only intensify with time and should be considered a perpetual management requirement in the Everglades region.

#### **IV. Proposed Future Everglades Restoration Efforts**

Despite the on-going efforts described above, it is widely recognized that full restoration of the South Florida would require an overhaul of the 1948 Central and Southern Florida Project. To this end, in the 1992 and 1996 Water Resources Development Acts, Congress directed the Army Corps of Engineers to conduct a comprehensive review study (now known as the Comprehensive Plan) of the entire project with a focus on making changes that would restore, preserve and protect the environment, while also providing clean and adequate fresh water supplies and flood protection to communities. Completion of the Comprehensive Plan was an interagency and intergovernmental effort consisting of an inclusive and open process with opportunity for input from all stakeholders.

The Comprehensive Plan was submitted to Congress on July 1, 1999. Comprised of over 60 structural and operational elements, the Comprehensive Plan proposes a conceptual framework to store water for critical uses; manage water to improve the quality, quantity, timing and distribution of flows to the Everglades; improve wildlife habitat; and create wetlands to filter runoff. The estimated non-recurring capital cost, including real estate acquisition and construction of project features, for the Comprehensive Plan is \$7.8 billion, of which 50% is proposed to be provided by the state, with the remainder provided by the Federal government. Operating costs, or those costs that recur on an annual basis, are estimated at \$172 million per year at full build out and are not included in the total cost estimate as they resemble agency mission costs that were excluded for other programs. The Administration shortly expects to submit its authorization proposal for an initial suite of projects to implement the Comprehensive Plan. It is expected that the Comprehensive Plan will take more than 20 years to complete, with the Army Corps of Engineers providing nearly all of the Federal funding. Its completion is integral to achieving two of the three goals of the restoration effort, discussed further below, and it is the single largest cost component of the restoration effort.

Also in 1996, in an effort to encourage appropriate Federal and state agencies to work more closely together, the Congress established the South Florida Ecosystem Restoration Task Force (Task Force), chaired by the Secretary of the Interior, with the mandate to guide the restoration of the South Florida ecosystem. To this end, the Task Force established three goals: (1) getting the water right: that is, to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control; (2) restore and enhance the natural system, protecting natural habitats and reestablishing threatened and endangered species; and (3) transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas.

The Task Force is presently developing a Strategic Plan, to be submitted to Congress by July 31, 2000, that will integrate on-going efforts with future proposed actions like the Comprehensive Plan. The Strategic Plan will outline how the overall restoration of the South Florida ecosystem will occur, identify the resources needed to accomplish restoration objectives, assign accountability for accomplishing actions, and link the goals established by the Task Force to outcome-oriented goals. At this time, and based upon input from State of Florida stakeholders, the state is reviewing Goal 3, "transforming the built environment," including state proposals for managing growth. Because implementation of Goal 3 is largely viewed as a state responsibility

and the State of Florida is considering how to address this issue, the Department is including only estimated Federal costs in support of the present goal. The Department expects that the completion of the Strategic Plan will result in an improved ability to report on costs to implement this goal.

## **V. Estimated Total Costs for the Restoration of the South Florida Ecosystem**

This section presents the Department's best estimate for the total costs for South Florida ecosystem restoration. As noted earlier, these costs are comprised of: (1) major on-going programs; and (2) future planned activities that may change, based upon site specific designs and new information, or may require future Federal and/or state legislative authorization.

Finally, this report may not have captured all of the costs that could be categorized by some as meeting the goals of Everglades restoration. A sustainable environment will also need a diverse and balanced economy. The regional economy should continue to support traditional industries such as agriculture, tourism, development, fishing and manufacturing. It must ensure that these resource-dependent industries are compatible with restoration goals and will maintain or enhance the quality of life in built areas. It is difficult to quantify the costs of responsible development that would include such characteristics as redeveloping declining urban areas, roads, utilities, services, and light rail, to name a few.

Managing growth and development problems cannot be solved by each local government acting alone. Roads do not stop at city and county boundaries. Our major natural resources and ecosystems frequently encompass parts of many local jurisdictions. A decision by one local government to construct a major public facility or permit private development can have a significant impact on an entire region, and the collective decisions of all local governments affect the entire state.

Among its recommendations to Congress in July 1999, the Comprehensive Plan recommended a feasibility study to identify the dominant water and environmental resource issues in southwest Florida in view of robust population growth in the region and to develop potential solutions to any problems that may be identified. The Southwest Florida Study is being conducted by the Army Corps and the South Florida Water Management District. The study area includes all of Lee County, most of Collier and Hendry Counties, and portions of Charlotte, Glades and Monroe Counties. It encompasses approximately 4,300 square miles and includes two major drainage basins. It is likely that this feasibility study could recommend programs and costs that would support any of the goals of the restoration effort. At this time, however, no costs are included as they are not yet known.

In accordance with the Committee's direction, the Department expects to provide updates of this information on at least a biennial basis, or more frequently should it be desired, so that all parties involved are aware of the significant Federal, state and local investments that are being made in this important effort. Following are estimated total costs, arranged according to the ecosystem restoration goals:

Goal 1:

Getting the water right to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control

(\$ in millions)

<u>Ongoing Project/Agency</u>	<u>Total Cost</u>	<u>\$ Thru FY00</u>	<u>\$ Balance to Complete</u>
Modified Water Deliveries for Evg. Nat'l Park /see note 1			
National Park Service	135-212	63	72-150
Kissimmee River Restoration			
Army Corps of Engineers	225	64	161
SFWMD	293	183	110
C-111 /see note 2			
Army Corps of Engineers	85	40	45
SFWMD	96	96	to be determined
C-51/STA-1E /see note 3			
Army Corps of Engineers	205	107	98
DOI (FY 98, STA-1E)	[46]	[46]	to be determined
SFWMD	35	35	0
Army Corps Critical Restoration Projects			
Army Corps of Engineers	75	14	61
SFWMD	75	14	61
Everglades Construction Project /see note 4			
SFWMD	506	246	260
Ecosystem Restoration Monitoring /see note 5			
NOAA/NOS	83	4	79

Federal Assistance for ecosystem land acquisition: /see note 6			
DOI (1996 Farm Bill)	193	193	N/A
DOI (P.L. 103-219)	4	4	N/A
DOI (FY 94 Supp.)	5	5	N/A
DOI (FY 95)	5	5	N/A
DOI (FY 98)	[46]	[46]	N/A
DOI (FY 99)	60	60	N/A
DOI (FY 00)	45	45	N/A
Lake Okeechobee Rest. Plan /see note 7			
SFWMD	39	0	39
<b>Future Projects:</b>			
Comprehensive Everglades Restoration Plan	[7,800]		
Federal	3,900	0	3,900
Non-federal	3,900	0	3,900
Subtotal, Goal 1	10,041	1,178	8,864

Notes on Goal 1:

1. Range of costs for the Modified Water Deliveries Project represents uncertainties associated with the on-going NEPA process for project components, including the 8.5 Square Mile Area, and does not represent a final agency decision to select any alternative that is presently being studied.
2. C-111 is undergoing a GRR supplement. The original project estimate was \$155; however, this will increase based upon the final alternative selected. The Water Resources Development Act of 1996 provides for a 50 percent cost share.
3. STA1-E/C-51W is reported separately, as it is a Federal responsibility. Further, an additional amount is required to complete land acquisition. That cost estimate is being developed.
4. Costs for STA1-E, which is a Federal part of the Everglades Construction Project, are shown separately.
5. Assumes 20 year restoration effort beginning in 2002.
6. FY 1998 funds for state assistance are included within estimate for C-51/STA 1-E project as the \$46 million appropriated was used to fund land acquisition costs for STA 1-E; the number is shown here as a non-add. Future DOI Federal funding assistance for state assistance, including the FY 01 budget request for \$47 million, is included within the future estimate for the Comprehensive Plan or State of Florida SOR/CARL land acquisitions, as lands that would be acquired would likely target implementation of these programs.
7. Does not include funds for sediment removal for Lake Okeechobee; cost estimate not yet developed.

Goal 2: Restore and enhance the natural system protecting natural habitats and reestablishing threatened and endangered species

(\$ in millions)

<u>Ongoing Project/Agency</u>	<u>Total Cost</u>	<u>\$ Thru FY00</u>	<u>\$ Balance to Complete</u>
Federal land acquisition for parks and refuges: /see note 1			
NPS:			
East Everglades Addition	104	104	0
Big Cypress Addition	43	43	0
Big Cypress Preserve	195	185	10
FWS:			
Archie Carr NWR	105	11	94
J.N. Ding Darling NWR	29	9	20
Pelican Island NWR	30	9	21
Lake Wales Ridge NWR	8	4	4
Florida Panther NWR	12	12	0
Florida Keys NWR	43	33	10
Crocodile Lake NWR	15	14	1
State land acquisition efforts /see note 2			
DEP/SFWMD	3,405	1,155	2,250
Exotic Species			
NPS, Hole in the Donut	75	12	63
DOI 1996 Farm Bill, Melaleuca Quarantine Facility	6	6	0
SFWMD /see note 3	4	4	0
Multi-species Recovery Plan			
FWS	26	8	18
Manatee Pass Gates			
Army Corps of Engineers	12	3	9
Biscayne Bay Study			
Army Corps of Engineers	6	2	4

Florida Keys Water Quality			
EPA	410	12	398
Comprehensive Water Quality Protection Plan			
EPA	3	1	2
Research, including Cooperative Ecosystem Restoration Studies Initiative /see note 4			
NPS (CESI)	39	39	to be determined
NOAA/NMFS	86	10	76
NOAA/NOS	50	11	39
SFWMD	30	8	22
Subtotal, Goal 2	4,736	1,695	3,041

Notes on Goal 2:

1. For FY 01, \$0.2 million is requested to complete Florida Panther, NWR. The number does not show due to rounding.
2. These lands were acquired using state dedicated funding sources such as Save Our Rivers, Preservation 2000 and the Florida Forever Act, but do not include acreage or costs associated with donation of lands for Everglades National Park and Biscayne National Park.
3. Includes advanced treatment technologies research, research and research monitoring, and modeling for Florida Bay and adjacent waters and wetlands.
4. CESI research needs are being determined as part of the Strategic Plan; NOAA costs assume 20 year restoration effort.

**Goal 3:** Transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas

**Note:** As described in the text, this goal is being revised due to input from State stakeholders and no state cost data is available. However, Federal costs supporting the concept of this goal are shown below.

(\$ in millions)

Ongoing Projects	Total Cost	\$ Thru FY00	Balance to Complete
<b>Brownfield Redevelopment Grants</b>			
EPA	13	3	10
<b>Waste Water Treatment Facilities</b>			
NPS, Everglades NP	38	5	33
<b>Future Projects:</b>			
<b>Southwest Florida Programmatic EIS re: Clean Water Act Section 404 permits /see note 1</b>			
Army Corps of Engineers	to be determined	to be determined	to be determined
<b>Southwest Florida Feasibility Study</b>			
Army Corps of Engineers	4	3	1
SFWMD	4	3	1
<b>Subtotal, Goal 3</b>	<b>59</b>	<b>14</b>	<b>45</b>

**Notes on Goal 3:**

1. This EIS is ongoing; costs to implement future recommended actions are not included at this time.



# United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, D.C. 20240



MAR - 8 2000

Honorable Ralph Regula  
Chairman  
Subcommittee on the Department of the  
Interior and Related Agencies  
Committee on Appropriations  
House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

The Conference Committee Report language accompanying the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 2000, Public Law 106-113, requested that the Department submit information, to be updated biennially, on the total cost of the effort to restore the South Florida ecosystem. In relevant part, the report language states:

It would be useful to have a complete estimate of the total costs to restore the South Florida ecosystem. The House and Senate Committees on Appropriations believe that this new estimate will exceed the \$7,800,000,000 estimate that has been used over the last five years. This recalculated estimate should include all three goals of this initiative, namely, (1) getting the water right, (2) restoring and enhancing the natural habitat, and (3) transforming the built environment. The Congress and the American people are committed to this project. Over \$1,300,000,000 has been appropriated to date; however, and the public deserves to know how much this project will truly cost. This information should be submitted to the House and Senate Committees on Appropriations no later than February 1, 2000, and should be updated biennially.

The \$7.8 billion figure cited in the report language represents the estimated costs to construct project features associated with the implementation - over the next twenty years or so - of the Army Corps of Engineers' Central and Southern Florida Project Review Study (Restudy). The Restudy, now known as the Comprehensive Everglades Restoration Plan, or Comprehensive Plan, was submitted to the Congress on July 1, 1999 and is integral to achieving two of the three goals of the restoration: (1) "getting the water right" to restore more natural water flows to the ecosystem, while guaranteeing regional water supplies and flood control; and (2) restoring and enhancing the natural system. Because congressional authorization is required for the Comprehensive Plan's proposed project features, and individual project features must undergo additional site specific studies and analyses, the Department believes that the overall cost to implement this significant and important component of the restoration effort could be lower or higher depending upon future analyses and site specific studies. Nothing in this report changes

the present estimate of \$7.8 billion to complete the Comprehensive Plan, for which the State of Florida will provide half, or \$3.9 billion, of the cost.

To develop the total cost estimate, the Department included the cost of the Comprehensive Plan, as well as certain on-going programs that pre-date the emphasis on ecosystem restoration that developed since the establishment of the South Florida Ecosystem Restoration Task Force in 1993. This includes several projects authorized prior to and independent of the Comprehensive Plan. For example, the Congress and the State of Florida have enacted legislation requiring the appropriate agencies to take certain steps towards restoration. The Department has included the costs for these measures because they actively promote overall restoration goals and establish baseline conditions for the Comprehensive Plan. An example of this type of cost is the Everglades Construction Project, authorized by the State of Florida's 1994 Everglades Forever Act and undertaken by the South Florida Water Management District as a direct result of a judicially enforceable consent decree settling water quality litigation brought by the United States against the South Florida Water Management District in 1988. The Everglades Construction Project is designed to significantly improve overall regional water quality through the construction of stormwater treatment areas.

The Department has excluded certain "agency mission" costs, which are generally recurring in nature, including the operation and maintenance costs for the Central and Southern Florida Project, and operational costs for national parks and national wildlife refuges because the Department believes that these costs would occur without any additional emphasis on ecosystem restoration.

In response to the Committee's request, the Department submits the enclosed report with its best estimate for the total costs to restore the South Florida ecosystem. As noted in the report, the Department's total cost estimate is \$14.8 billion, of which \$8.4 billion are solely the responsibility of the State of Florida and \$6.4 billion are Federal costs. This total cost estimate represents state and Federal costs to date for major on-going programs that advance the goals of the restoration effort, as well as future estimated costs associated with planned or proposed activities that require congressional authorization or are in the preliminary planning stages. Of the federal costs included in this report, \$1.3 billion is estimated to be Department of the Interior funding supporting Goals 1 and 2; of which \$907 million represents funding through FY 2000, and \$405 million is estimated as the balance to complete, subject to the availability of future appropriations. A tabular display, by goal, of this cost estimate follows on the next page:

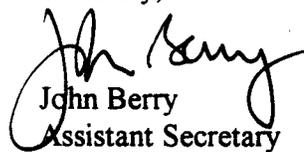
(\$ in millions)

	Federal Costs	State Costs
<b>Goal 1: Getting the water right</b>		
Ongoing projects	1,197	1,044
Comprehensive Plan	3,900	3,900
<b>Goal 2: Restore and enhance the natural system</b>		
Land acquisition	559	3,405
Other	713	34
<b>Goal 3: Transforming the built environment</b>	59	to be determined
<b>Total</b>	<b>6,428</b>	<b>8,383</b>

As noted in Part V of this report, the Department has limited information concerning state programs affecting Goal 3, "transforming the built environment." The state programs affecting Goal 3 are under review at this time in response to recent state proposals to manage growth and may be slightly revised, thus the Department is including information on Federal programs that it believes support this goal. Updated information concerning Goal 3 will be included in the Strategic Plan due this July, and a revised cost estimate for Goal 3 will be provided at that time.

The Department appreciates the significant support and funding that this Committee has provided for the South Florida Ecosystem Restoration Initiative. The Department notes that the State of Florida has recently committed to fund its share of the Comprehensive Plan and the Department looks forward to working with the Committee to secure the necessary funding and legislative authorization that will be required to continue our important work in this effort, protect the Federal investments made to date in national parks and national wildlife refuges, and most importantly, save America's Everglades. The Department would be pleased to discuss this report and its contents with you further. Similar letters have been sent to the Honorable Norman Dicks, Ranking Minority Member; the Honorable Slade Gorton and the Honorable Robert C. Byrd, Chairman and Ranking Minority Member respectively, of the Subcommittee on the Department of the Interior and Related Agencies, Committee on Appropriations, United States Senate.

Sincerely,



John Berry  
Assistant Secretary  
Policy, Management and Budget

Enclosure

## **I. Introduction**

The Conference Committee Report language accompanying the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 2000, Public Law 106-113, requested that the Department submit information, to be updated biennially, on the total cost of the effort to restore the South Florida ecosystem. In relevant part, the report language states:

It would be useful to have a complete estimate of the total costs to restore the South Florida ecosystem. The House and Senate Committees on Appropriations believe that this new estimate will exceed the \$7,800,000,000 estimate that has been used over the last five years. This recalculated estimate should include all three goals of this initiative, namely, (1) getting the water right, (2) restoring and enhancing the natural habitat, and (3) transforming the built environment. The Congress and the American people are committed to this project. Over \$1,300,000,000 has been appropriated to date; however, and the public deserves to know how much this project will truly cost. This information should be submitted to the House and Senate Committees on Appropriations no later than February 1, 2000, and should be updated biennially.

The purpose of this report is to provide the House and Senate Appropriations Committees with the Department's best estimate for the total costs to restore the South Florida ecosystem. The estimate provided in Part V of this report reflects state and Federal costs to date for major ongoing programs that advance the goals of the restoration effort, as well as future estimated costs to complete this work or associated with planned or proposed activities that are not yet underway. The estimate exceeds the \$7.8 billion figure representing the costs to construct project features associated with the implementation of the Army Corps of Engineers' Central and Southern Florida Project Comprehensive Everglades Restoration Plan presented to Congress on July 1, 1999. The Department believes that the actual costs to construct the Comprehensive Plan may be lower or higher depending upon a variety of factors, such as congressional authorization for project features that will undergo further site specific studies and analyses prior to initiating construction. The Department will update this report biennially to reflect any future changes.

Although some of the activities included in the Department's total cost estimate began well before the emphasis in the last decade on ecosystem restoration (e.g. state land preservation efforts, the Modified Water Deliveries Project for Everglades National Park, the State of Florida's Everglades Construction Project), and may well have occurred without such increased emphasis, the Department is including the non-recurring costs for these activities as their completion is integral to the overall success of the restoration of the South Florida ecosystem. Not included in the Department's estimate, however, are the normal recurring operating costs - or "agency mission" costs - for state and federal agencies. For example, National Park Service costs to operate and maintain Everglades National Park, Fish and Wildlife Service costs to provide for Endangered Species Act consultation, and South Florida Water Management District costs to operate and maintain its water delivery infrastructure are not included. Although the Department has cited such figures in the past, as included in the Task Force's annual cross-cut budget, to describe its

total funding in support of the South Florida ecosystem restoration effort, the Department believes that it is proper to exclude these agency mission costs and focus primarily on the increased funding devoted to this effort that occurred or is planned to occur due to specific restoration needs or goals.

To provide context for the total cost estimate, Part II of this report provides a brief background on the South Florida ecosystem; Part III summarizes major on-going state and Federal efforts key to the restoration that preceded the establishment of the South Florida Ecosystem Restoration Task Force (Task Force) and the 1992 Congressional authorization and direction for the Army Corps of Engineers to complete its Restudy for the Central and Southern Florida Project; Part IV briefly describes future efforts; and Part V provides the Department's best estimate to date for the total costs to restore the South Florida ecosystem. The programs and associated costs included in Part V are arranged according to the three goals for the restoration effort; Federal and state costs are noted accordingly. Federal costs are further subdivided according to individual agencies.

In accordance with the Committee's directive, this report will be updated biennially as more information becomes available and current plans and cost estimates are updated in response to lessons learned and new information. The Department believes that expanding knowledge of ecosystem restoration requirements in South Florida and the process of adaptive management for implementation of the Comprehensive Plan will result in changes to the total cost estimate presented in Part V.

## **II. Background - South Florida Ecosystem**

In its natural state, the South Florida ecosystem was connected by the flow of water south from Lake Okeechobee through vast freshwater marshes - known as the Everglades - to Florida Bay and on to the coral reefs of the Florida Keys. The Everglades covered approximately 18,000 square miles and were the heart of a unique and biologically productive region, supporting vast colonies of wading birds, a mixture of temperate and tropical plant and animal species, and teeming coastal fisheries.

During the last century, efforts were made to drain the Everglades and make the region habitable. This culminated in the construction of the Central and Southern Florida Project, a flood control project jointly built and managed by the Army Corps of Engineers and the South Florida Water Management District. In response to periods of drought and extreme floods, which left 90 percent of South Florida under water, this project was authorized by Congress in 1948 and succeeded in draining half of the original Everglades, allowing for the expanded development of cities on the lower east coast of Florida and the farming area south of Lake Okeechobee known as the Everglades Agricultural Area (EAA). Although historically most rainwater soaked into the region's wetlands, the Central and Southern Florida Project canal system, comprised of over 1,800 miles of canals and levees and 200 water control structures, now drains the water off the land such that an average of 1.7 billion gallons of water per day are discharged into the ocean.

Additionally, phosphorus runoff from agricultural operations has polluted much of the remaining Everglades and Lake Okeechobee and caused fundamental, and negative, ecological change

As a result, not enough clean water is available for the environment, resulting in long-term problems for the Everglades and the communities in the region. Examples include: (i) ninety percent reductions in wading bird populations; (ii) 68 species listed as endangered or threatened; (iii) reduced fisheries in Biscayne and Florida Bays; (iv) loss of over five feet of organic soil in the EAA; (v) degraded water quality in inland and coastal areas; (vi) infestation and spread of invasive exotic plant species on over 1.5 million acres; (vii) damaging fresh water releases into the St. Lucie, Caloosahatchee, and many other estuaries; (viii) loss of wetlands that provide important species habitat and ground water recharge; (ix) loss of tree islands and damaging ecological effects in the state managed water conservation areas. Without significant infrastructure modification, these problems have the potential only to get worse and water shortages are a certainty in future years as water demands continue to grow.

Today, South Florida is home to 6.5 million people and the population is expected to double by 2050. The region receives over 37 million tourists annually and supports a \$200 billion economy. Restoration is an imperative - not only for ensuring a sustainable South Florida economy to guarantee clean fresh water supplies for all future needs - but also to protect the ecological health of the Everglades that has been nationally and internationally recognized as like no other place on Earth.

### **III. Major On-Going State and Federal Efforts to Protect and Restore the South Florida Ecosystem**

Over the last decade, and prior to the establishment of the South Florida Ecosystem Restoration Task Force in 1993, significant efforts have been made at both the Federal and state level to reverse the trend of environmental degradation in the Everglades. These efforts include: (i) improving water quality and reducing pollutants entering Lake Okeechobee and the Everglades from agricultural interests; (ii) restoring more natural hydropatterns in areas such as Everglades National Park and the Kissimmee River Basin; (iii) acquiring land for Federal and state conservation areas, regional water storage capacity, habitat and recreation; and (iv) management and protection of the coral reef through the trusteeship of the National Oceanic and Atmospheric Administration's (NOAA) Florida Keys National Marine Sanctuary. Although other activities are included in the total cost estimate, a brief summary of the most significant projects follows:

**Improving water quality:** In the late 1970s, the State of Florida and the South Florida Water Management District began investigating ways to improve ecosystem water quality, including the Lake Okeechobee Works of the District, farm Best Management Practices, and a cattle buy-out program. By 1988, design had begun on the 3,700-acre Everglades Nutrient Removal Project. In 1988, the federal government sued the State of Florida for its failure to enforce state water quality standards on pollution discharges from the EAA into the Everglades. This lawsuit was settled in 1991 and a judicially enforceable Consent decree ordered the state to take a series of remedial

measures, including the construction of stormwater treatment areas (STAs) on former farms in the EAA to help clean up farm runoff. The technical plan in the original Consent decree was expanded significantly after mediation with stakeholders. In 1994, the Florida legislature enacted the Everglades Forever Act, which codified proposed modifications to the consent decree and provided for other measures to improve overall water quality, including funding mechanisms and construction timetable for a comprehensive program of six STAs, implementation of best management practices, additional research, establishing water quality criteria and implementation of advanced water quality treatment measures.

Among the most important of these measures is the completion of the Everglades Construction Project, a series of six STAs presently under construction and located between the EAA and the natural areas to the south. Of the six STAs, five are funded by the State of Florida and the sixth, STA 1-E, is federally funded to improve water quality discharges into Loxahatchee National Wildlife Refuge. The Everglades Construction Project is expected to cost approximately \$696 million in capital costs to complete, of which \$505 million is being financed by the State of Florida and \$190 million by the federal government (of which \$46 million was appropriated to the Department of the Interior in FY 1998 for land acquisition within STA 1-E). Construction of the STAs are proposed to be complete in December 2006. Although that date has yet to be approved by the court, which retains jurisdiction over this matter, the projects called for by the Consent decree are implemented by the South Florida Water Management District.

Additionally, as a result of the Everglades Forever Act, the South Florida Water Management District established the Everglades Stormwater Program, which includes two main components in the form of an EAA phosphorus reduction program and the Urban and Tributary Basins Program. The EAA phosphorus reduction program includes regulatory programs developed to reduce phosphorus loads from the EAA by reducing phosphorus on the surrounding farms and other adjacent land prior to discharging off-site. Landowners in the EAA have implemented a series of best management practices that have effectively reduced the phosphorus loads to the Everglades. Over the last three years, the total cumulative loads attributable to the EAA have been reduced by 44 percent. The Urban and Tributary Basins Program was developed to ensure that all basins discharging into, from or within the Everglades, other than those included in the EAA, meet state water quality standards. Costs associated with this program are not included in this report at this time as additional strategies, in the form of regulatory changes and construction, are still being developed.

Generally, the STAs and farm Best Management Practices are expected to reduce overall phosphorus levels to 50 parts per billion (ppb), thus improving water quality from EAA discharges and other sources compared to current levels. However, the Everglades Forever Act requires the state to adopt a numeric criterion for phosphorus by 2003 so that all discharges into the Everglades will meet Federal and state water quality standards by 2006. If the state does not adopt a numeric criterion, the Everglades Forever Act sets a default standard of 10ppb. It appears that additional measures will likely be needed to further enhance the performance of the STAs to meet these requirements; however, the costs to make such modifications are not known

at this time. The South Florida Water Management District is presently conducting research into advanced treatment technologies to enhance the performance of the STAs, and also to be potentially applied to other tributaries of the Everglades. Although funding for the implementation of advanced treatment has not been appropriated, to date \$10 million has been budgeted by the South Florida Water Management District towards that research. Once completed, these efforts are expected to significantly improve water quality for the region.

As part of the effort to improve water quality in Lake Okeechobee, the South Florida Water Management District is conducting the Lake Okeechobee Sediment Removal Feasibility Study. The purpose of the study is to identify a feasible method of removing sediment that will reduce the internal phosphorus loading and balance the lake's nutrient assimilative capacity. Costs to implement this program are not known at this time.

In addition to these measures, and in recognition of the critical role of water quality in maintaining coral reef natural resources, the Florida Keys National Marine Sanctuary and Protection Act of 1990 required the Secretary of Commerce, the Environmental Protection Agency, and the State of Florida to develop a Water Quality Protection Program for the Sanctuary.

**Restoring more natural hydropatterns:** More natural hydropatterns are presently being restored in Everglades National Park and the Kissimmee River Basin. In 1989, Congress enacted the Everglades National Park Protection and Expansion Act (Act) to expand Everglades National Park and to restore more natural sheet water flows to the park and Shark River Slough. To restore more natural sheet water flows to the park, the Act authorized the construction of the Modified Water Deliveries Project. That project is 100% federally funded by the Department of the Interior and is presently scheduled for completion in 2003, depending upon the availability of federal funding and completion of ongoing planning. The estimated total cost for this project is between \$133.5 million and \$212 million. The range of costs is based upon alternative design scenarios for certain project features that are presently undergoing supplemental National Environmental Policy Act (NEPA) compliance. The project is undergoing supplemental NEPA compliance because: (i) the original project authorization was amended in 1994; and (ii) completion of both the C-111 project design and the Comprehensive Everglades Restoration Plan expanded agency knowledge that raised questions concerning the original 1992 design for the 8.5 Square Mile Area flood mitigation component of the Modified Water Deliveries Project. This led to technical disagreements among the relevant agencies and stakeholders over the appropriate course of action and alternatives are being explored under the NEPA process. If a locally preferred option for the 8.5 Square Mile Area component of this project is chosen the project will be cost shared between the Federal government and the South Florida Water Management District. For the purposes of this report, a range of costs is presented for this project, although this does not indicate a decision by the Federal government or the South Florida Water Management District to proceed with any of the alternatives presently being evaluated under NEPA.

Authorized by Congress in 1992, the Kissimmee River Restoration project is intended to reverse

the environmental devastation of earlier efforts to channel the once 103 mile free flowing river into a 56 mile canal, destroying nearly 43,000 acres of wetlands and important habitat. The project involves restoring about 40 square miles of the historic habitat in the Kissimmee river floodplain north of Lake Okeechobee, as well as restoring water-level fluctuations and seasonal discharges from Lakes Kissimmee and in the upper basin lakes. This project is estimated to cost approximately \$518 million, is equally cost shared with the South Florida Water Management District, and is expected to be complete in 2010.

The C-111 project comprises modifications to the Central and Southern Florida Project to provide more natural hydrologic conditions in Taylor Slough and the panhandle of Everglades National Park and to minimize damaging flood releases to Barnes Sound and Manatee Bay. Restoring natural hydrologic conditions in Taylor Slough is integral to restoring fresh water flows to Florida Bay. The project was initially authorized by Congress in 1991 at a cost of \$155 million, including land, and a completion date of 2001. Reauthorized by Congress in 1996, the Army Corps is directed to consider state water quality standards and incorporate the necessary features into the C-111 project implementation. The 1996 authorization states that all project costs, including land, are to be shared equally between the Army Corps and the South Florida Water Management District. A supplement to the 1994 C-111 General Reevaluation Report will include actual land acquisition costs, a water quality strategy, redistribution of funding responsibilities and a revised implementation timeline, all of which may result in a revised cost estimate.

In addition to improving water quality, certain components of the Everglades Construction Project described above will restore more natural hydropatterns in the northern Everglades presently severed by the Central and Southern Florida Project. The STA 1-E/C-51W Project will provide flood control for the western C-51 basin and will restore a portion of the historic Everglades flows to Loxahatchee National Wildlife Refuge. The current project was reauthorized by Congress in 1996; project construction is 15% cost shared with the South Florida Water Management District, with the District providing all lands, easements and rights-of-way, with the exception of those lands that are incorporated into STA 1-E, as discussed below, which is 100% federally funded and for which the Department of the Interior provided \$46 million, through a grant to the South Florida Water Management District, towards land acquisition costs. The Department has just learned that the costs to complete land acquisition for STA 1-E will be higher, but does not have a revised estimate at this time. It is estimated that the STA 1-E/C-51W project will cost \$210 million when complete in 2003, although this number will change once final land acquisition costs are known.

**Land Acquisition:** The Federal and state governments have expended significant funds to acquire and protect lands in the region. Land acquisition is a critical part of ecosystem restoration as acquired lands are needed to protect key federal and state conservation areas, create and restore additional water storage capacity and recharge areas to help increase overall water supplies and restore natural hydrology, and for habitat protection and enhancement and for recreation. As described above, some lands are also used to improve overall water quality (e.g. STAs).

Significant actions taken to protect South Florida's natural resources since the establishment of Everglades National Park in 1947 and its expansion in 1989 (together protecting 1.4 million acres of the remaining Everglades) include: (i) Florida's 1972 Land Conservation Act, 1981 Save Our Rivers Program, 1990 Preservation 2000 Act, and the Florida Forever Act that dedicate state funding for land acquisition at state parks and preserves in the ecosystem; (ii) the 1996 Federal Agriculture Improvement and Reform Act (Farm Bill) that provided the Department with \$200 million for ecosystem restoration, including land acquisition; and (iii) numerous annual Interior Appropriations Acts that have funded land acquisition at parks and refuges in the region, as well as additional state land acquisition assistance funds. The state assistance funds provided by the Department of the Interior have, for the most part, been targeted towards acquisition of lands that create additional opportunities for water storage and are generally expected to be incorporated into a Comprehensive Plan project feature.

Through these efforts, it is estimated that \$1.6 billion has been spent to date (of which \$1.1 billion is state funding and \$0.5 billion is federal) for the acquisition of 4.7 million acres. It is estimated that about 638,000 non-Federal acres remain to be acquired in South Florida at an estimated cost of \$2.2 billion. These figures do not include the 220,000 acres of lands needed for the Comprehensive Plan implementation, which are included in the overall cost estimate for the Comprehensive Plan.

**Critical Restoration Projects:** Pursuant to the Water Resources Development Act of 1996, the Army Corps and the South Florida Water Management District have entered into agreements to undertake nine critical restoration projects that will provide immediate and substantial benefits for the ecosystem. The Corps and the Seminole Tribe have entered into a similar agreement for one critical project. The ten projects have a total cost of \$150 million, half of which will be paid for by the Federal government. These projects, although small and including such features as improving flows under the Tamiami Trail, have immediate environmental benefits that will assist in achieving the goals of the restoration.

**Exotic Species Control:** Commensurate with land acquisition is proper land management and efforts to eradicate and prevent the spread of invasive exotic plant species. More than 200 species of exotic plant species have invaded the Everglades. The majority of these species occur in limited areas, and do not pose a direct threat to native plant communities. However, plants like melaleuca, Brazilian pepper, Australian pine, and Old World climbing fern, are causing widespread damage throughout the South Florida ecosystem, and are considered species of primary concern. The South Florida Water Management District, state, and federal government are all directing resources to combat this problem. While areal coverage for some species will decrease with vigilant management efforts – which has been the case with melaleuca – new species could invade without additional management initiatives. The history of this problem indicates that management efforts will only intensify with time and should be considered a perpetual management requirement in the Everglades region.

#### **IV. Proposed Future Everglades Restoration Efforts**

Despite the on-going efforts described above, it is widely recognized that full restoration of the South Florida would require an overhaul of the 1948 Central and Southern Florida Project. To this end, in the 1992 and 1996 Water Resources Development Acts, Congress directed the Army Corps of Engineers to conduct a comprehensive review study (now known as the Comprehensive Plan) of the entire project with a focus on making changes that would restore, preserve and protect the environment, while also providing clean and adequate fresh water supplies and flood protection to communities. Completion of the Comprehensive Plan was an interagency and intergovernmental effort consisting of an inclusive and open process with opportunity for input from all stakeholders.

The Comprehensive Plan was submitted to Congress on July 1, 1999. Comprised of over 60 structural and operational elements, the Comprehensive Plan proposes a conceptual framework to store water for critical uses; manage water to improve the quality, quantity, timing and distribution of flows to the Everglades; improve wildlife habitat; and create wetlands to filter runoff. The estimated non-recurring capital cost, including real estate acquisition and construction of project features, for the Comprehensive Plan is \$7.8 billion, of which 50% is proposed to be provided by the state, with the remainder provided by the Federal government. Operating costs, or those costs that recur on an annual basis, are estimated at \$172 million per year at full build out and are not included in the total cost estimate as they resemble agency mission costs that were excluded for other programs. The Administration shortly expects to submit its authorization proposal for an initial suite of projects to implement the Comprehensive Plan. It is expected that the Comprehensive Plan will take more than 20 years to complete, with the Army Corps of Engineers providing nearly all of the Federal funding. Its completion is integral to achieving two of the three goals of the restoration effort, discussed further below, and it is the single largest cost component of the restoration effort.

Also in 1996, in an effort to encourage appropriate Federal and state agencies to work more closely together, the Congress established the South Florida Ecosystem Restoration Task Force (Task Force), chaired by the Secretary of the Interior, with the mandate to guide the restoration of the South Florida ecosystem. To this end, the Task Force established three goals: (1) getting the water right: that is, to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control; (2) restore and enhance the natural system, protecting natural habitats and reestablishing threatened and endangered species; and (3) transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas.

The Task Force is presently developing a Strategic Plan, to be submitted to Congress by July 31, 2000, that will integrate on-going efforts with future proposed actions like the Comprehensive Plan. The Strategic Plan will outline how the overall restoration of the South Florida ecosystem will occur, identify the resources needed to accomplish restoration objectives, assign accountability for accomplishing actions, and link the goals established by the Task Force to

outcome-oriented goals. At this time, and based upon input from State of Florida stakeholders, the state is reviewing Goal 3, "transforming the built environment," including state proposals for managing growth. Because implementation of Goal 3 is largely viewed as a state responsibility and the State of Florida is considering how to address this issue, the Department is including only estimated Federal costs in support of the present goal. The Department expects that the completion of the Strategic Plan will result in an improved ability to report on costs to implement this goal.

## **V. Estimated Total Costs for the Restoration of the South Florida Ecosystem**

This section presents the Department's best estimate for the total costs for South Florida ecosystem restoration. As noted earlier, these costs are comprised of: (1) major on-going programs; and (2) future planned activities that may change, based upon site specific designs and new information, or may require future Federal and/or state legislative authorization.

Finally, this report may not have captured all of the costs that could be categorized by some as meeting the goals of Everglades restoration. A sustainable environment will also need a diverse and balanced economy. The regional economy should continue to support traditional industries such as agriculture, tourism, development, fishing and manufacturing. It must ensure that these resource-dependent industries are compatible with restoration goals and will maintain or enhance the quality of life in built areas. It is difficult to quantify the costs of responsible development that would include such characteristics as redeveloping declining urban areas, roads, utilities, services, and light rail, to name a few.

Managing growth and development problems cannot be solved by each local government acting alone. Roads do not stop at city and county boundaries. Our major natural resources and ecosystems frequently encompass parts of many local jurisdictions. A decision by one local government to construct a major public facility or permit private development can have a significant impact on an entire region, and the collective decisions of all local governments affect the entire state.

Among its recommendations to Congress in July 1999, the Comprehensive Plan recommended a feasibility study to identify the dominant water and environmental resource issues in southwest Florida in view of robust population growth in the region and to develop potential solutions to any problems that may be identified. The Southwest Florida Study is being conducted by the Army Corps and the South Florida Water Management District. The study area includes all of Lee County, most of Collier and Hendry Counties, and portions of Charlotte, Glades and Monroe Counties. It encompasses approximately 4,300 square miles and includes two major drainage basins. It is likely that this feasibility study could recommend programs and costs that would support any of the goals of the restoration effort. At this time, however, no costs are included as they are not yet known.

In accordance with the Committee's direction, the Department expects to provide updates of this

information on at least a biennial basis, or more frequently should it be desired, so that all parties involved are aware of the significant Federal, state and local investments that are being made in this important effort. Following are estimated total costs, arranged according to the ecosystem restoration goals:

Goal 1: Getting the water right to restore a more natural water flow to the region while providing adequate water supplies, water quality and flood control

(\$ in millions)

<u>Ongoing Project/Agency</u>	<u>Total Cost</u>	<u>\$ Thru FY00</u>	<u>\$ Balance to Complete</u>
Modified Water Deliveries for Evg. Nat'l Park /see note 1 National Park Service	135-212	63	72-150
Kissimmee River Restoration Army Corps of Engineers SFWMD	225 293	64 183	161 110
C-111 /see note 2 Army Corps of Engineers SFWMD	85 96	40 96	45 to be determined
C-51/STA-1E /see note 3 Army Corps of Engineers DOI (FY 98, STA-1E) SFWMD	205 [46] 35	107 [46] 35	98 to be determined 0
Army Corps Critical Restoration Projects Army Corps of Engineers SFWMD	75 75	14 14	61 61
Everglades Construction Project /see note 4 SFWMD	506	246	260

Ecosystem Restoration Monitoring see note 5			
NOAA/NOS	83	4	79
Federal Assistance for ecosystem land acquisition: see note 6			
DOI (1996 Farm Bill)	193	193	N/A
DOI (P.L. 103-219)	4	4	N/A
DOI (FY 94 Supp.)	5	5	N/A
DOI (FY 95)	5	5	N/A
DOI (FY 98)	[46]	[46]	N/A
DOI (FY 99)	60	60	N/A
DOI (FY 00)	45	45	N/A
Lake Okeechobee Rest. Plan /see note 7			
SFWMD	39	0	39
<u>Future Projects:</u>			
Comprehensive Everglades Restoration Plan	[7,800]		
Federal	3,900	0	3,900
Non-federal	3,900	0	3,900
Subtotal, Goal 1	10,041	1,178	8,864

Notes on Goal 1:

1. Range of costs for the Modified Water Deliveries Project represents uncertainties associated with the ongoing NEPA process for project components, including the 8.5 Square Mile Area, and does not represent a final agency decision to select any alternative that is presently being studied.
2. C-111 is undergoing a GRR supplement. The original project estimate was \$155; however, this will increase based upon the final alternative selected. The Water Resources Development Act of 1996 provides for a 50 percent cost share.
3. STA1-E/C-51W is reported separately, as it is a Federal responsibility. Further, an additional amount is required to complete land acquisition. That cost estimate is being developed.
4. Costs for STA1-E, which is a Federal part of the Everglades Construction Project, are shown separately.
5. Assumes 20 year restoration effort beginning in 2002.
6. FY 1998 funds for state assistance are included within estimate for C-51/STA 1-E project as the \$46 million appropriated was used to fund land acquisition costs for STA 1-E; the number is shown here as a non-add. Future DOI Federal funding assistance for state assistance, including the FY 01 budget request for \$47 million, is included within the future estimate for the Comprehensive Plan or State of Florida SOR/CARL land acquisitions, as lands that would be acquired would likely target implementation of these programs.
7. Does not include funds for sediment removal for Lake Okeechobee; cost estimate not yet developed.

Goal 2: Restore and enhance the natural system protecting natural habitats and reestablishing threatened and endangered species

(\$ in millions)

<u>Ongoing Project/Agency</u>	<u>Total Cost</u>	<u>\$ Thru FY00</u>	<u>\$ Balance to Complete</u>
<b>Federal land acquisition for parks and refuges: /see note 1</b>			
<b>NPS:</b>			
East Everglades Addition	104	104	0
Big Cypress Addition	41	41	0
Big Cypress Preserve	207	185	22
<b>FWS:</b>			
Archie Carr NWR	99	11	88
J.N. Ding Darling NWR	18	7	11
Pelican Island NWR	22	7	15
Lake Wales Ridge NWR	4	4	0
Florida Panther NWR	13	13	0
Florida Keys NWR	35	31	4
Crocodile Lake NWR	15	14	1
<b>State land acquisition efforts /see note 2</b>			
DEP/SFWMD	3,405	1,155	2,250
<b>Exotic Species</b>			
NPS, Hole in the Donut	75	12	63
DOI 1996 Farm Bill, Melaleuca Quarantine Facility	6	6	0
SFWMD /see note 3	4	4	0
<b>Multi-species Recovery Plan</b>			
FWS	26	8	18
<b>Manatee Pass Gates</b>			
Army Corps of Engineers	12	3	9

Biscayne Bay Study			
Army Corps of Engineers	6	2	4
Florida Keys Water Quality			
EPA	410	12	398
Comprehensive Water Quality Protection Plan			
EPA	3	1	2
Research, including Cooperative Ecosystem Restoration Studies Initiative /see note 4			
NPS (CESI)	39	39	to be determined
NOAA/NMFS	86	10	76
NOAA/NOS	50	11	39
SFWMD	30	8	22
Subtotal, Goal 2	4,710	1,688	3,022

Notes on Goal 2:

1. For FY 01, \$0.2 million is requested to complete Florida Panther, NWR. The number does not show due to rounding.
2. These lands were acquired using state dedicated funding sources such as Save Our Rivers, Preservation 2000 and the Florida Forever Act, but do not include acreage or costs associated with donation of lands for Everglades National Park and Biscayne National Park.
3. Includes advanced treatment technologies research, research and research monitoring, and modeling for Florida Bay and adjacent waters and wetlands.
4. CESI research needs are being determined as part of the Strategic Plan; NOAA costs assume 20 year restoration effort.

**Goal 3:** Transform the built environment to develop lifestyles and economies that do not degrade the natural environment and improve the quality of life in urban areas

**Note:** As described in the text, this goal is being revised due to input from State stakeholders and no state cost data is available. However, Federal costs supporting the concept of this goal are shown below.

(\$ in millions)

<u>Ongoing Projects</u>	<u>Total Cost</u>	<u>\$ Thru FY00</u>	<u>Balance to Complete</u>
<b>Brownfield Redevelopment Grants</b>			
EPA	13	3	10
<b>Waste Water Treatment Facilities</b>			
NPS, Everglades NP	38	5	33
<b><u>Future Projects:</u></b>			
<b>Southwest Florida Programmatic EIS re: Clean Water Act Section 404 permits /see note 1</b>			
Army Corps of Engineers	to be determined	to be determined	to be determined
<b>Southwest Florida Feasibility Study</b>			
Army Corps of Engineers	4	3	1
SFWMD	4	3	1
<b>Subtotal, Goal 3</b>	<b>59</b>	<b>14</b>	<b>45</b>

**Notes on Goal 3:**

1. This EIS is ongoing; costs to implement future recommended actions are not included at this time.

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## **Palm Beach County**

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Wayne Daltry

## **Treasure Coast Regional Planning Council**

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**SOUTH FLORIDA ECOSYSTEM RESTORATION  
TASK FORCE**

***COORDINATING SUCCESS:***

**Strategy for Restoration of the South Florida Ecosystem**

**Volume 2: Appendixes D-F**

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Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
<b>Goal 1. GET THE WATER RIGHT</b>										
<b>Sub-Goal 1.A. GET THE HYDROLOGY RIGHT (Quantity, Timing &amp; Distribution)</b>										
<b>1.A.1. SURFACE WATER STORAGE RESERVOIR PROJECTS IN ACRE-FEET</b>							<b>ACRE-FT.</b>			
C&SF: CERP- C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs	USACE/SFWMD	1999	2010		\$710,223,000	\$3,348,000	349,400	1.A.1		1
C&SF: CERP- North Lake Belt Storage Area (Phase I & II)	USACE/SFWMD	2012	2036		\$500,346,000	\$0	90,000	1.A.1		2
C&SF: CERP Central Lake Belt Storage Area	USACE/SFWMD	2012	2036		\$466,725,000	\$0	187,200	1.A.1	1.B.1	3
C&SF: CERP-C-43 Basin Storage Reservoir and ASR	USACE/SFWMD	2000	2012		\$440,195,000	\$3,078,000	160,000	1.A.1	1.A.2	4
C&SF: CERP- Water Preserve Areas/L-8 Basin	USACE/SFWMD	2004	2014		\$399,372,000	\$0	48,000	1.A.1	1.A.2	5
C&SF: CERP-North of Lake Okeechobee Storage Reservoir	USACE/SFWMD	2005	2015		\$284,854,000	\$0	200,000	1.A.1	1.B.1	6
C&SF: CERP- Everglades Agricultural Storage Reservoir Phase II	USACE/SFWMD	2006	2015		\$203,240,000	\$0		1.A.1		7
C&SF: CERP- Everglades Agricultural Storage Reservoir Phase I	USACE/SFWMD	1999	2009		\$233,408,000	\$2,673,000	360,000	1.A.1		8
C&SF: CERP- Site 1 Impoundment and Aquifer Storage and Recovery	USACE/SFWMD	2001	2014		\$131,379,000	\$0	15,000	1.A.1	1.A.2	9
C&SF: CERP- Bird Drive Recharge Area (U)	USACE/SFWMD	2004	2013		\$124,083,000	\$0	11,500	1.A.1		10
C&SF: CERP- Palm Beach County Agricultural Reserve Reservoir and ASR	USACE/SFWMD	2005	2013		\$121,359,000	\$0	19,920	1.A.1	1.A.2	11
C&SF: CERP- C-44 Basin Storage Reservoir	USACE/SFWMD	1999	2007		\$112,562,000	\$602,000	40,000	1.A.1		12
C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWMD	2000	2009		\$104,026,000	\$1,021,000	50,000	1.A.1	1.A.4/1.B.1	13
Allapattah Flats/Ranch	FDEP/SFWMD	1997	2001		\$75,594,990	\$0		1.A.1	2.A.1	14
Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminoles	2002	2012		\$22,452,000	\$0	7,569	1.A.1	1.B.3	15
C&SF: CERP- Acme Basin B Discharge	USACE	2001	2006		\$20,100,000	\$0	4,960	1.A.1		16
Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminoles	1999	2010		\$15,818,000	\$170,000	10,000	1.A.1	1.B.3	17
Wetland Reserve Program	NRCS	1997	2008		\$2,135,000	\$465,000		1.A.1	1.B.3	18
Critical Projects - Seminole Big Cypress Reservation Water Conservation Plan	Seminoles & USACE	1997	2004		\$47,608,000	\$10,686,000	3,389	1.A.1		19
<b>1.A.2. ASR PROJECTS IN BILLION GALLONS PER DAY (BGD)</b>							<b>BGD</b>			
C&SF: CERP- Lake Okeechobee ASR	USACE/SFWMD	2004	2020		\$1,097,312,000	\$0	1	1.A.2		20
C&SF: CERP- C-51 Regional Groundwater Aquifer Storage and Recovery	USACE/SFWMD	2004	2013		\$127,291,000	\$0	0.17	1.A.2		21
C&SF: CERP-C-43 Basin Storage Reservoir and ASR	USACE/SFWMD	2000	2012		*	*	0.22	1.A.2	1.A.1	4
C&SF: CERP- Water Preserve Areas/L-8 Basin	USACE/SFWMD	2004	2014		*	*	0.05	1.A.2	1.A.1	5
C&SF: CERP- Palm Beach County Agricultural Reserve Reservoir and ASR	USACE/SFWMD	2005	2013		*	*	0.075	1.A.2	1.A.1	11
C&SF: CERP- Site 1 Impoundment and Aquifer Storage and Recovery	USACE/SFWMD	2001	2014		*	*	0.15	1.A.2	1.A.1	9
<b>1.A.3. PROJECTS REMOVING BARRIERS TO SHEETFLOW IN MILES</b>							<b>MILES MODIFIED</b>			
Modified Water Deliveries to Everglades National Park	NPS	1990	2003		\$135,363,000	\$62,037,000		1.A.3	2.A.3	22
C&SF: CERP- WCA -3 Decompartmentalization and sheetflow Enhancement	USACE/SFWMD	2002	2019		\$85,059,000	\$0	240	1.A.3	1.A.4	23
Critical Projects - Southern CREW	USACE	1997	2001		\$12,021,000	\$8,968,000		1.A.3		24
Kissimmee Prairie	FDEP/SFWMD	1996	1997		\$22,120,000	\$22,120,000	39.3	1.A.3	2.A.3	25
C&SF: Canal 111	USACE/SFWMD	1994	2003		TBD	\$136,281,000		1.A.3		26
<b>1.A.4. OTHER RELATED HYDROLOGY PROJECTS</b>							<b>TBD</b>			
C&SF: CERP- Flow to Northwest and Central WCA -3A	USACE/SFWMD	2000	2009		\$30,877,000	\$0		1.A.4		27
C&SF: CERP- WCA -3 Decompartmentalization and sheetflow Enhancement	USACE/SFWMD	2002	2019		*	*		1.A.4	1.A.3	23
West WCA-3A Hydropattern Restoration	SFWMD	1994	2006		\$17,250,097	\$7,223,376		1.A.4		28
East WCA-3A Hydropattern Restoration	SFWMD	1994	2003		\$14,667,884	\$289,374		1.A.4		29
WCA-2A Hydropattern Restoration	SFWMD	1994	1999		\$5,010,296	\$4,158,513		1.A.4		30
C&SF: CERP Diverting WCA-2 and WCA-3 Flows to Central Lake Belt Storage Area	USACE/SFWMD	2012	2018		\$76,921,000	\$0		1.A.4		31
Additional Water Conveyance Structures Under Tamiami Trail	FDOT	1998	2002		\$8,431,885	\$1,333,000		1.A.4		32
East Coast Buffer/Water Preserve Areas	FDEP/SFWMD	1994	TBD		\$165,100,000	\$86,500,000		1.A.4	2.A.3	33
C&SF: CERP- Broward County Secondary Canal System	USACE/SFWMD	2001	2009		\$12,898,000	\$0		1.A.4		34
C&SF: CERP C-4 Control Structures	USACE/SFWMD	2000	2005		\$2,330,000	\$25,000		1.A.4		35
C&SF: CERP Lake Belt (In-Ground Reservoir) Technology - Pilot Project	USACE/SFWMD	1999	2011		\$23,000,000	\$2,000,000		1.A.4		36
C&SF: CERP L-31 N Seepage Management Pilot Project	USACE/SFWMD	2000	2003		\$10,000,000	\$0		1.A.4		37
C&SF: CERP L-31 N Improvements for Seepage Management and S-356 Structures	USACE/SFWMD	2002	2010		\$184,845,000	\$0		1.A.4		38
Frog Pond/L-31 N	FDEP/SFWMD	1994	TBD		TBD	\$79,890,107	10,450	1.A.4		39
C&SF: CERP- C-111N Spreader Canal	USACE/SFWMD	2000	2008		\$94,035,000	\$553,000		1.A.4		40
C&SF: CERP Operational Modification to Southern Portion of L-31N and C-111	USACE/SFWMD	TBD	TBD		TBD	\$0		1.A.4		41
C&SF: CERP-West Miami-Dade County Reuse	USACE/M-DADE	2011	2020		\$437,237,000	\$0		1.A.4		42

\* = This is a multiple obj. project funding is listed in other obj.

\*\* = Consistent with authorizing Big Cypress legislation

\*\*\* See Kissimmee River Restoration Project Data Sheet pg. 90

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Biscayne Bay Feasibility Study	USACE/M-DADE	1996	2001	\$6,370,000	\$2,674,000		1.A.4		43
	C&SF:CERP-Biscayne Bay Coastal Wetlands	USACE/SFWMD	1999	2018	\$299,583,000	\$538,000		1.A.4		44
	Model Lands	SFWMD/M-DADE	1994	2007	TBD	\$6,437,703		1.A.4		45
	C&SF:CERP-South Miami-Dade County Reuse	USACE/M-DADE	2011	2020	\$363,024,000	\$0		1.A.4		46
	Biscayne Coastal Wetlands	SFWMD/M-DADE	1998	TBD	TBD	\$566,097		1.A.4		47
	C&SF:CERP-Florida Keys Tidal Restoration	USACE/SFWMD	2000	2005	\$1,251,000	\$21,000		1.A.4		48
	C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWMD	2000	2009	*	*		1.A.4	1.A.1/1.B.1	13
	C&SF:CERP Lake Okeechobee Aquifer Storage and Recovery Pilot Project	USACE/SFWMD	1999	2004	\$19,000,000	\$9,600		1.A.4		49
	C&SF:CERP Lake Okeechobee Regulation Schedule	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		50
	Rotenberger/Holey Land Tract	FDEP	1984	TBD	\$18,100,000	\$16,100,000		1.A.4	2.A.1	51
	C&SF:CERP Modified Holeyland Wildlife Management Area Operation Plan	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		52
	Rotenberger Restoration	SFWMD	1994	2000	\$4,159,214	\$3,232,465		1.A.4		53
	C&SF:CERP Modified Rotenberger Wildlife Management Area Operation Plan	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		54
	Northern L-8 Basin Improvements	SFWMD	1994	2006	\$16,638,892	\$25,197		1.A.4		55
	S-5A Basin Runoff Diversion Works	SFWMD	1994	2006	\$19,017,404	\$12,149,871		1.A.4		56
	C&SF:CERP Caloosahatchee R. (C-43) Basin ASR Pilot Project	USACE/SFWMD	2000	2005	\$6,000,000	\$0		1.A.4		57
	C&SF:CERP Site 1 Impoundment and Aquifer Storage and Recovery Pilot Project	USACE/SFWMD	1999	2002	\$9,000,000	\$900,000		1.A.4		58
	C&SF:CERP Wastewater Reuse Technology Pilot Project	USACE/SFWMD	1999	2007	\$30,000,000	\$753,000		1.A.4		59
	C&SF:CERP- Loxahatchee National Wildlife Refuge Internal Canal Structures	USACE/SFWMD	2000	2003	\$7,669,000	\$168,000		1.A.4		60
	Loxahatchee Slough Land Acquisition	SFWMD	1996	2002	\$21,000,000	\$18,875,000		1.A.4	2.A.1	61
	C&SF: CERP- Pal-Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration	USACE/SFWMD	2001	2006	\$10,500,000	\$0		1.A.4		62
	Indian River Lagoon	FDEP/SFWMD	1998	TBD	\$147,200,000	\$11,400,000		1.A.4	2.A.1	63
	Shingle Creek	SFWMD	1987	TBD	TBD	\$1,344,400		1.A.4		64
	Kissimmee River (Lower Basin)	SFWMD	1985	2007	***	***		1.A.4		65
	Kissimmee River (Upper Basin)	SFWMD	1990	2007	***	***		1.A.4		66
	Paradise Run	SFWMD	1998	2001	\$12,281,656	\$8,623,598		1.A.4	2.A.1	67
	C&SF: CERP- Lake Istokpoga Regulation Schedule	USACE/SFWMD	2000	2001	\$50,000	\$25,000		1.A.4		68
	C&SF: CERP- Winsburg Farms Wetland Restoration	USACE	2000	2005	\$14,140,000	\$172,000		1.A.4		69
	C&SF: CERP- Seminole Tribe Big Cypress Water Conservation Plan	USACE & Seminole	2001	2008	\$75,288,000	\$0		1.A.4	1.B.3	70
	C&SF:CERP Lake Park Restoration	USACE/Lee Co.	1999	2004	\$5,166,000	\$228,000		1.A.4		71
	C&SF:CERP Southern Golden Gates Estates Restoration	USACE/SFWMD	1999	2005	\$45,654,000	\$534,000		1.A.4		72
	C&SF:CERP-Henderson Creek/Belle Meade Restoration	USACE	2000	2005	\$4,806,000	\$65,000		1.A.4		73
	Southern Glades	SFWMD/M-DADE	1964	TBD	TBD	\$13,301,517		1.A.4		74
	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	\$1,159,040	\$1,159,040		1.A.4	2.A.1	75
	Belle Meade	FDEP	1993	TBD	\$47,700,000	\$32,800,000		1.A.4	2.A.1	76
	Corkscrew Regional Ecosystem Watershed	FDEP/SFWMD	1991	TBD	\$45,800,000	\$17,300,000		1.A.4	2.A.1	77
	Fakahatchee Strand	FDEP	1980	TBD	\$24,800,000	\$20,200,000		1.A.4	2.A.1	78
	Southern Golden Gate Estates	FDEP	1984	TBD	\$148,000,000	\$40,900,000		1.A.4	2.A.1	79
	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	TBD	TBD		1.A.4	2.A.3	80
	Soil Survey for Everglades National Park, Big Cypress, National Preserve & Water Conservation Areas	NRCS	2001	2006	\$5,340,000	\$0		1.A.4		81
	Monitoring of Organic Soils in the Everglades	NRCS	1998	2010	\$1,136,000	\$36,000		1.A.4		82
	Soil Survey Update for the Everglades Agricultural Area	NRCS	2002	2005	\$1,500,000	\$0		1.A.4		83
	C&SF:CERP Everglades Rain Driven Operations	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4		84
	C&SF: CERP- Big Cypress/L-28 Interceptor Modifications	USACE/SFWMD	2006	2016	\$42,751,000	\$0		1.A.4	1.B.1	85
	C&SF: CERP - Dade-Broward Levee/Pensucco Wetlands (BB)	USACE/SFWMD	2001	2008	\$18,778,000	\$0		1.A.4		86
	Florida Bay and The Florida Keys Feasibility Study	USACE	1999	2004	TBD	TBD		1.A.4		87
	Southwest Florida Feasibility Study	USACE	1999	2004	\$6,790,000	\$210,000		1.A.4	1.B.3	88
	Herbert Hoover Dike Stabilization	USACE/SFWMD	1995	2006	\$248,121,000	\$2,565,000		1.A.4		89
	Kissimmee River Restoration Project	USACE/SFWMD	1994	2009	\$518,000,000	\$234,906,000		1.A.4	2.A.3	90
	Indian River Lagoon Restoration Feasibility Study	USACE/SFWMD	1996	2001	\$6,356,000	\$5,188,000		1.A.4	1.B.3	91
	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/SFWMD	1997	2003	\$30,458,000	\$8,890,000		1.A.4	1.B.3	92
	North Fork of the New River Restoration	Broward Co.	1997	2003	\$2,336,000	\$1,126,000		1.A.4	2.A.3	93
	L-8 Canal Water Catchment Area - Loxahatchee Slough Infrastructure Improvements	COWPB	1997	2002	\$32,000,000	\$19,837,000		1.A.4		94
	Loxahatchee Slough Ecosystem Restoration	USACE/SFWMD/P BCo.	1997	2000	\$6,850,000	\$6,850,000		1.A.4	2.A.3/2.B.4	95

\* = This is a multiple obj. project funding is listed in other obj.

\*\* = Consistent with authorizing Big Cypress legislation

\*\*\* See Kissimmee River Restoration Project Data Sheet pg. 90

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Micosukee Water Resources Management	Micosukee	TBD	TBD	25,200,000	2,100,000		1.A.4	1.B.3	96
<b>Sub-Goal 1.B</b>	<b>GET THE WATER QUALITY RIGHT</b>									
<b>1.B.1.</b>	<b>STORMWATER TREATMENT AREAS (STA) PROJECTS IN ACRES</b>						<b>ACRES</b>			
	C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWM	2000	2009	*	*	5,000	1.B.1	1.A.1/1.A.4	13
	C&SF:CERP-Lake Okeechobee Watershed Water Quality Treatment Facilities	USACE/SFWM	2001	2010	\$62,247,000	\$0	4,375	1.B.1		97
	C&SF:CERP-North of Lake Okeechobee Storage Reservoir	USACE/SFWM	2005	2015	*	*	2,500	1.B.1	1.A.1	6
	C&SF:CERP Caloosahatchee Backpumping with Stormwater Treatment	USACE/SFWM	2005	2015	\$82,895,000	\$0	20,000	1.B.1		98
	C&SF: CERP- Big Cypress/L-28 Interceptor Modifications	USACE/SFWM	2006	2016	*	*	1,900	1.B.1	1.A.4	85
	Everglades Agricultural Area (EAA) / Talisman	SFWM/DOI	1997	1999	\$138,087,114	\$138,087,114	50,719	1.B.1		99
	STA-3/4 Works	SFWM	1994	2004	\$195,423,150	\$56,553,028		1.B.1		100
	STA-1 West Works and Outflow Pump Station (G-310)	SFWM	1994	2000	\$95,042,875	\$73,182,832	6700	1.B.1		101
	STA-2 Works and Outflow Pump Station (G-335)	SFWM	1994	2000	\$113,573,117	\$92,089,635	6430	1.B.1		102
	STA-5 Works	SFWM	1994	2003	\$53,109,899	\$33,677,773	4118	1.B.1		103
	STA-6 (includes sections 1 and 2)	SFWM	1994	2004	\$20,584,401	\$10,188,850	2222	1.B.1		104
	C&SF: CERP- C-17 Backpumping and Treatment	USACE/SFWM	2002	2008	\$20,190,000	\$0	550	1.B.1		105
	C&SF: CERP- C-51 Backpumping and Treatment	USACE/SFWM	2002	2008	\$32,632,000	\$0	600	1.B.1		106
	Micosukee Tribe Water Management Area	Micosukee	TBD	TBD	\$42,113,000	\$0		1.B.1		107
	C&SF: CERP-C-9 STA and Impoundment	USACE/SFWM	2001	2007	\$89,146,000	\$0	2500	1.B.1		108
	C&SF: CERP- Western C-11 Diversion Impoundment & WCA-3A&B Levee Seepage Management	USACE/SFWM	2001	2008	\$224,544,000	\$0	1,600	1.B.1		109
	C&SF:CERP Central Lake Belt Storage Area	USACE	2012	2036	*	*	640	1.B.1	1.A.1	3
	C&SF: CERP-Micosukee Tribe Water Management Plan	USACE & Micosukee	2000	2008	\$24,459,000	\$312,000	900	1.B.1		110
	C&SF: West Palm Beach Canal (C-51) and STA-1E	SFWM	1997	2002	\$240,418,000	\$76,532,000	6,500	1.B.1		111
<b>1.B.2.</b>	<b>DEVELOPMENT OF TOTAL MAXIMUM DAILY LOAD (TMDL) PLANS</b>									
	Total Maximum Daily Load (TMDL) for South Florida	FDEP	2000	TBD	\$3,400,000	\$1,000,000		1.B.2		112
<b>1.B.3.</b>	<b>OTHER RELATED WATER QUALITY PROJECTS</b>									
	Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project	SFWM	2000	2003	TBD	\$0		1.B.3		113
	Lake Okeechobee Tributary Sediment Removal Pilot Project	SFWM	2000	2002	\$420,000	\$156,100		1.B.3		114
	Development of Best Management Practices Related to the Land Application of Residuals and Chicken Manure in the Lake Okeechobee Watershed	SFWM	2000	2003	TBD	TBD		1.B.3		115
	C&SF: CERP- Lake Okeechobee Tributary Sediment Dredging	USACE/SFWM	2001	2005	\$4,700,000	\$0		1.B.3		116
	Lake Okeechobee Water Retention/ Phosphorus Removal	USACE/SFWM	1997	2002	\$16,360,000	\$8,286,000		1.B.3		117
	Technical Assistance to Seminole and Micosukee Indian Reservations	NRCS	1998	2009	\$3,850,000	\$150,000		1.B.3		118
	Seminole Tribe Best Management Practices for the Brighton Reservation	Seminoles	1998	2004	\$338,000	\$144,000		1.B.3		119
	Seminole Tribe Best Management Practices for the Big Cypress Reservation	Seminoles	1996	2004	\$4,779,000	\$1,911,600		1.B.3		120
	Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminoles	1999	2010	*	*		1.B.3	1.A.1	17
	C&SF: CERP- Seminole Tribe Big Cypress Water Conservation Plan	USACE & Seminoles	2001	2008	*	*		1.B.3	1.A.4	70
	Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminoles	2002	2012	*	*		1.B.3	1.A.1	15
	Everglades Stormwater Program	SFWM	1998	2006	TBD	\$7,650,000		1.B.3		121
	Chapter 298 Districts/Lease 3420 Improvements	SFWM	1994	2004	\$13,635,079	\$12,020,220		1.B.3		122
	STA-1 Inflow and Distribution Works	SFWM	1994	2002	\$11,662,799	\$9,291,894		1.B.3		123
	Indian River Lagoon Restoration Feasibility Study	USACE	1996	2001	*	*		1.B.3	1.A.4	91
	C&SF: CERP- Lake Worth Lagoon Restoration	USACE/SFWM	2005	2011	\$2,300,000	\$0		1.B.3		124
	Wetland Reserve Program	NRCS	1997	2008	*	*		1.B.3	1.A.1	18
	BMPs for Agriculture	NRCS	1997	2011	\$65,245,000	\$12,000,000		1.B.3		125
	Pollution Prevention	NRCS/FDACS	2001	2005	\$890,000	\$0		1.B.3		126
	Urban Mobile Irrigation Lab	NRCS	1998	2011	\$2,860,000	\$360,000		1.B.3		127
	Agriculture Land Stewardship	NRCS/FDACS	2001	2012	\$10,920,000	\$0		1.B.3		128
	South Florida Water Quality Protection Program	FDEP	1999	TBD	\$564,652	\$454,652		1.B.3		129
	New Palm Dairy Land Acquisition	SFWM	2000	TBD	TBD	TBD		1.B.3		130
	Floridan Aquifer Restoration	NRCS	1998	2002	\$1,200,000	\$200,000		1.B.3		131
	Outfall (Military) Canal Remediation	AFBCA	1999	2002	TBD	\$1,900,000		1.B.3		132
	Critical Projects - Lake Trafford	USACE	1997	2003	\$17,540,000	\$3,672,000		1.B.3	2.A.3	133
	Critical Projects - Western C-11 Water Quality Treatment	USACE	1997	2002	\$8,957,000	\$1,400,000		1.B.3		134
	Southwest Florida Feasibility Study	USACE	1999	2004	*	*		1.B.3	1.A.4	88

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\*\*\* See Kissimmee River Restoration Project Data Sheet pg. 90

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Comprehensive Integrated Water Quality Plan	USACE	1999	2006	TBD	TBD		1.B.3		135
	Everglades National Park Water & Wastewater	NPS	1997	TBD	\$38,491,000	\$5,954,000		1.B.3		136
	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/SFWMD	1997	2003	*	*		1.B.3	1.A.4	92
	Micosukee Water Resources Management	Micosukee	1997	TBD	*	*		1.B.3	1.A.4	96
Goal 2.	RESTORE, PRESERVE AND PROTECT NATURAL HABITATS AND SPECIES									
Sub-Goal 2.A.	RESTORE, PRESERVE AND PROTECT NATURAL HABITATS									
2.A.1.	HABITAT PROTECTION LAND ACQUISITION PROJECTS									
	Water Conservation Areas 1,2, and 3	SFWMD	1948	2010	\$18,050,000	\$10,250,000	862,800	2.A.1		137
	East Everglades Addition to Everglades National Park	NPS	1990	2000	\$113,149,000	\$113,149,000	109,504	2.A.1		138
	Complete Land Acquisition for Biscayne National Park	NPS	1998	2002	\$2,900,000	\$430,000	2,002	2.A.1		139
	Miami-Dade County Archipelago	FDEP	1994	TBD	\$9,900,000	\$8,200,000	856	2.A.1		140
	Florida Keys Ecosystem	FDEP	1992	TBD	\$71,000,000	\$31,100,000	7,611	2.A.1		141
	Coupon Bight/ Key Deer Big Pine Key	USFWS	1985	TBD	\$44,900,000	\$11,800,000	3,452	2.A.1		142
	North Key Largo Hammocks	FDEP	1983	TBD	\$7,900,000	\$4,800,000	4,508	2.A.1		143
	Fisheating Creek	SFWMD/FDEP	1999	TBD	\$163,200,000	\$46,300,000	168,360	2.A.1		144
	Atlantic Ridge Ecosystem	FDEP/SFWMD	1995	TBD	\$78,000,000	\$31,900,000	12,514	2.A.1		145
	Indian River Lagoon	FDEP	1998	TBD	*	*	5,136	2.A.1	1.A.4	63
	Juno Hills	FDEP	1994	TBD	\$19,400,000	\$15,000,000	440	2.A.1		146
	Loxahatchee River Land Acquisition	SFWMD	1984	2001	\$11,927,120	\$11,927,120	1,936	2.A.1		147
	Loxahatchee Slough Land Acquisition	SFWMD	1996	2002	*	*	15,200	2.A.1	1.A.4	61
	North Fork St Lucie River	FDEP/SFWMD	1988	TBD	\$27,900,000	\$3,400,000	3,800	2.A.1		148
	North Savannas	SFWMD	1997	2002	\$5,000,000	\$1,100,000	930	2.A.1		149
	Pal-Mar	FDEP/SFWMD	1992	TBD	\$19,900,000	\$10,100,000	35,435	2.A.1		150
	South Fork St. Lucie River Land Acquisition	SFWMD	1995	1996	\$2,480,000	\$2,480,000	184	2.A.1		151
	Allapattah Flats/Ranch	FDEP	1997	TBD	*	*	34,221	2.A.1	1.A.1	14
	Rotenberger/Holey Land Tract	FDEP	1984	TBD	*	*	79,170	2.A.1	1.A.4	51
	Cayo Costa	FDEP	1980	TBD	\$26,800,000	\$23,600,000	1,932	2.A.1		152
	Charlotte Harbor Flatwoods	FDEP	1986	TBD	\$50,500,000	\$34,900,000	44,755	2.A.1		153
	Caloosahatchee Ecoscape	FDEP	1998	TBD	\$18,100,000	\$0	15,391	2.A.1		154
	Lake Wales Ridge Ecosystem	FDEP	1992	TBD	\$25,200,000	\$19,100,000	12,770	2.A.1		155
	Upper Lakes Basin Watershed	SFWMD	1995	2002	\$38,100,000	\$19,650,000	43,500	2.A.1		156
	Kissimmee Prairie	FDEP	1996	1997	*	*	38,282	2.A.1	1.A.3	25
	Cattfish Creek	FDEP	1990	TBD	\$22,200,000	\$9,070,000	10,609	2.A.1		157
	Parker-Poinciana	SFWMD	1996	TBD	TBD	TBD	1,970	2.A.1		158
	Pineland Site Complex	FDEP	1996	TBD	\$2,000,000	\$280,000	250	2.A.1		3 159
	Osceola Pine Savannas	FDEP	1995	TBD	\$30,100,000	\$0	42,291	2.A.1		160
	Barfield Farms	SFWMD	1998	TBD	TBD	TBD	1,367	2.A.1		161
	Cypress Creek/Trail Ridge	SFWMD	1997	TBD	TBD	TBD	13,788	2.A.1		162
	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	*	*	661	2.A.1	1.A.4	75
	Dupuis Reserve	SFWMD	1985	1986	\$23,016,601	\$23,016,601	21,875	2.A.1		163
	Lake Walk-In-Water	SFWMD	1995	TBD	TBD	\$3,950,000	4,615	2.A.1		164
	Nicodemus Slough	SFWMD	1981	1988	\$1,744,500	\$1,744,500	2,219	2.A.1		165
	Six Mile Cypress	SFWMD	1987	TBD	TBD	\$1,975,321	1,741	2.A.1		166
	South Savannas	FDEP/SFWMD	1981	TBD	TBD	\$16,522,480	6,046	2.A.1		167
	Tibet-Butler Preserve	SFWMD	1998	1999	\$3,601,900	\$3,601,900	439	2.A.1		168
	Belle Meade	FDEP	1993	TBD	*	*	27,200	2.A.1	1.A.4	76
	Big Cypress National Preserve Addition	NPS	1997	2004	\$49,560,000	\$49,560,000	6,113	2.A.1		169
	Big Cypress National Preserve Private Inholdings**	NPS	1998	2010	\$207,061,269	\$184,961,000	878	2.A.1		170
	Corkscrew Regional Ecosystem Watershed	FDEP	1991	TBD	*	*	59,008	2.A.1	1.A.4	77
	Fakahatchee Strand	FDEP	1980	TBD	*	*	80,231	2.A.1	1.A.4	78
	Southern Golden Gate Estates	FDEP	1984	TBD	*	*	57,200	2.A.1	1.A.4	79
	Dade County Training Jetport	NPS	2000	2003	\$0	\$0	24,000	2.A.1		171
	Twelve Mile Slough	SFWMD	1998	2001	\$3,300,000	\$3,300,000	3,300	2.A.1		172
	Rookery Bay	FDEP	1980	TBD	\$46,240,000	\$46,200,000	18,532	2.A.1		173
	Estero Bay	FDEP	1985	TBD	TBD	\$40,100,000	16,740	2.A.1		174
	Okaloacoochee Slough	FDEP/SFWMD	1996	TBD	\$21,300,000	\$20,000,000	37,210	2.A.1		175
	South Florida Multi-Species Recovery Plan	USFWS	1994	2010	\$329,950,000	\$118,410,000		2.A.1	2.B.4	176

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\*\*\* See Kissimmee River Restoration Project Data Sheet pg. 90

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Paradise Run	SFWMD	1998	2001	*	*	4,265	2.A.1	1.A.4	67
<b>2.A.2.</b>	<b>CORAL REEF PROTECTION PROJECTS</b>									
	Planning and Implementation of the Tortugas Ecological Reserve	NOAA	1998	2004	TBD	\$0		2.A.2		177
<b>2.A.3.</b>	<b>OTHER NATURAL HABITAT PROJECTS</b>									
	Modified Water Deliveries to Everglades National Park	NPS	1990	2003	*	*		2.A.3	1.A.3	22
	C&SF: CERP- Protect and Enhance Existing Wetland Systems along LNWRR (Strazzulla Tract)	USACE/SFWMD	2001	2007	\$52,772,000	\$0		2.A.3		178
	C&SF: CERP Environmental Water Supply Deliveries to the Caloosahatchee Estuary	USACE/SFWMD	TBD	TBD	TBD	\$0		2.A.3		179
	C&SF: CERP Environmental Water Supply Deliveries to the St. Lucie Estuary	USACE/SFWMD	TBD	TBD	TBD	\$0		2.A.3		180
	Kissimmee River Restoration Project	USACE/SFWMD	1994	2009	*	*		2.A.3	1.A.4	90
	East Coast Buffer/Water Preserve Areas	FDEP/SFWMD	1994	TBD	*	*		2.A.3	1.A.4	33
	New River Forest Restoration Project	Broward	1997	TBD	*	*		2.A.3	2.B.4	194
	Big Cypress National Preserve Mineral Rights	NPS	2000	2003	TBD	\$0		2.A.3		181
	Critical Projects - Lake Trafford	USACE	1997	2003	*	*		2.A.3	1.B.3	133
	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	*	*		2.A.3	1.A.4	80
	WCA-2A Regulation Schedule Review	USACE	1998	2001	\$500,000	\$300,000		2.A.3		182
	Miami-Dade County Environmentally Endangered Lands Program	Dade	1991	TBD	\$56,074,406	\$25,749,000		2.A.3		183
	C&SF: CERP Restoration of pineland and hardwood hammocks in C-111 Basin	USACE	2000	2006	\$600,000	\$0		2.A.3		184
	North Fork of the New River Restoration	Broward	1997	2003	*	*		2.A.3	1.A.4	93
	West Palm Beach Wetland Reclamation Project	COWPB	1996	2001	\$24,600,000	\$21,100,000		2.A.3		3 185
	Loxahatchee Slough Ecosystem Restoration	PBCo.	1997	2000	*	*		2.A.3	1.A.4/2.B.4	95
<b>Sub-Goal 2.B.</b>	<b>CONTROL INVASIVE PLANTS</b>									
<b>2.B.1.</b>	<b>INVASIVE EXOTIC PLANT MANAGEMENT PLAN DEVELOPMENT</b>									
	Prepare management plans for top 20 south Florida exotic pest plants	NEWTT	2001	2011	\$600,000	\$0		2.B.1		186
<b>2.B.2.</b>	<b>EXOTIC SPECIES MAINTENANCE CONTROL PROJECTS</b>									
	Achieve "Maintenance Control" status for Brazilian Pepper, Melaleuca, Australian pine and Old world climbing fern in all natural areas statewide by 2020	NEWTT	2002	2020	\$100,000,000	\$0		2.B.2		187
	Integration of Federal, State, and Local Agency Invasive Exotic Control Programs into Florida-wide Strategy	FDEP	2000	2005	TBD	\$76,418,000		2.B.2		188
<b>2.B.3.</b>	<b>INVASIVE EXOTIC PLANTS PREVENTION PLAN DEVELOPMENT</b>									
	Complete an Invasive Exotics Plant Prevention, Early Detection and Eradication Plan by 2005	NEWTT	2001	2004	\$5,000,000	\$0		2.B.3		189
<b>2.B.4</b>	<b>OTHER RELATED EXOTIC SPECIES PROJECTS</b>									
	Hole-in-the-Donut	NPS	1994	2017	\$75,000,000	\$11,582,000	6,000	2.B.4		190
	Melaleuca Control (Critical) Big Cypress National Preserve	NPS	1998	2005	\$1,400,000	\$1,050,000	150 sq. miles	2.B.4		191
	Everglades National Park Exotic Control Program	NPS	2001	TBD	TBD	\$0	650,000	2.B.4		192
	Esteros Bay Aquatic Preserve and Buffer Reserve Enhancement and Exotic Removal Project	FDEP	1998	2004	\$1,350,000	\$1,020,000	732	2.B.4		193
	South Florida Multi-Species Recovery Plan	USFWS	1994	2010	*	*		2.B.4	2.A.1	176
	New River Forest Restoration Project	Broward	1997	TBD	\$2,220,000	\$520,000	30	2.B.4	2.A.3	194
	Exotic Species Removal	Seminoles	1998	2010	\$988,000	\$228,000	80	2.B.4		195
	Exotic Pest Plant Controls in South Florida Ecosystems	ARS	1998	2006	\$10,317,000	\$1,190,000		2.B.4		N/A
	C&SF: CERP- Melaleuca Eradication Project and other Exotic Plants	USACE	2006	2011	\$5,772,000	\$0		2.B.4		196
	Melaleuca Quarantine Facility	USDA/ARS	1997	2003	\$5,000,000	\$1,000,000		2.B.4		197
	Loxahatchee Slough Ecosystem Restoration	PBCo.	1997	2000	*	*		2.B.4	1.A.4/2.A.3	95
<b>GOAL 3.</b>	<b>FOSTER COMPATIBILITY</b>									
<b>SAMPLE</b>	<b>PROJECTS</b>									
	Regional Water Supply Plans	SFWMD	1999	TBD	TBD	TBD		3		198
	South Biscayne Bay Watershed Management Plan	Miami-Dade	1999	2002	\$6,400,000	\$4,900,000		3		199
	Agriculture and Rural Area Study	Miami-Dade	2000	2001	\$1,100,000	\$400,000		3		200

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Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives	
	Critical Projects - Florida Keys Carrying Capacity	USACE/DCA	1997	2001	\$5,500,000	\$3,739,000		3		201
	C&SF:CERP Change Coastal Wellfield Operations	USACE/SFWMD	TBD	TBD	TBD	\$0		3		202
	C&SF:CERP Lower East Coast Utility Water Conservation	USACE/SFWMD	1999	2036	TBD	\$0		3		203
	Miami River Dredging Project	USACE	TBD	TBD	TBD	\$0		3		N/A
	Pineland Site Complex	FDEP	1996	TBD	*	*		3	2.A.1	159
	Eastward HO! Brownfields Partnership	SFRPC	1998	2010	TBD	\$13,200,000		3		204
	Palm Beach County Freshwater Chain-of-Lakes Project	PBCo.	1998	2003	\$6,813,000	\$1,820,000		3		205
	West Palm Beach Wetland Reclamation Project	COWPB	1996	2001	*	*		3	2.A.3	185
OTHER	RESTORATION PROJECTS									
	Enhance the NPS South Florida Ecosystem Restoration Implementation Program	NPS	1999	TBD	TBD	TBD				N/A
	C&SF: CERP- Lake Okeechobee and Hillsboro Site1 ASR Pilot	USACE			\$27,000,000	\$0				N/A
	C&SF: CERP- Miami-Dade County Water Supply	USACE			\$76,668,000	\$0				N/A
	Kissimmee Chain of lakes Drawdown/Restoration Project	FWC	1999	2010	\$23,000,000	\$0				N/A
	Lake Tohopekaliga Wetland Acquisition	FWC	1998	2000	\$10,000,000	\$0				N/A
	Economic Analysis of Agricultural Land and Water Management	USDA	1997	2002	\$1,845,000	\$0				N/A
	Lake Istokpoga Ecosystem Restoration and Management	FWC	1998	2002	\$17,325,000	\$5,155,000				N/A
	Winsberg Wetlands Water Reclamation Project	PBCo.	1999	2003	\$14,500,000	\$3,000,000				N/A
	Extension/Public Information to Support Ecosystem Restoration in C-111 Basin	UF/IFAS	1998	2004	\$250,000	\$81,000				N/A
	Eastward Ho! Corridor Rival Development Trends Fiscal Impact Analysis (DCA)	FDCA	1997	1998	\$150,000	\$150,000				N/A
	South Florida Community-Urban Resources Partnership Ecosystem Restoration Project	USDA	1998	2000	\$2,000,000	\$1,020,000				N/A
	South Miami-Dade Stormwater Treatment and Distribution Area Demonstration Project	Dade	1996	2001	\$2,136,000	\$2,136,000				N/A
	Big Pine and No Name Keys Multi-Species Habitat Conservation Plan	FDCA	1999	2000	\$300,000	\$200,000				N/A

#### LEGEND

##### Project ID #

- CE = Central Everglades
- CERP = Comprehensive Everglades Restoration Plan
- ECP = Everglades Construction Project
- FK = Florida Keys
- GL = Greater Lake Okeechobee
- KV = Kissimmee Valley
- SE = Southeast Coast
- SW = Southwest Coast and Big Cypress
- TS = Total System

##### Goals, Sub-Goals & Objectives

- GOAL 1 = GET THE WATER RIGHT
  - Sub-Goal 1.A = GET THE HYDROLOGY RIGHT (Quantity, Timing & Distribution)
    - 1.A.1 = Surface Water Storage Reservoir Projects in Acre-Feet
    - 1.A.2 = Aquifer Storage and Recovery (ASR) Projects in Billion Gallons per Day (BGD)
    - 1.A.3 = Projects Removing Barriers to Sheetflow in Miles
    - 1.A.4 = Other Related Hydrology Projects
  - Sub-Goal 1.B = GET THE WATER QUALITY RIGHT
    - 1.B.1 = Stormwater Treatment Area (STA) Projects in Acres
    - 1.B.2 = Development of Total Maximum Daily Load (TMDL) Plans
    - 1.B.3 = Other Related Water Quality Projects
- GOAL 2 = RESTORE, PRESERVE & PROTECT NATURAL HABITATS & SPECIES
  - Sub-Goal 2.A = RESTORE, PRESERVE AND PROTECT NATURAL HABITATS
    - 2.A.1 = Acres of Land Acquired for Habitat Protection
    - 2.A.2 = Coral Reef Protection Projects
    - 2.A.3 = Other Related Natural Habitat Restoration, Preservation and Protection Projects
  - Sub-Goal 2.B = CONTROL INVASIVE PLANTS
    - 2.B.1 = Invasive Exotic Plant Species Management Plan Development
    - 2.B.2 = Exotic Species Maintenance Control Projects
    - 2.B.3 = Invasive Exotic Plant Prevention Plan Development
- Goal 3 = FOSTER COMPATIBILITY
  - Sample Projects

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\*\*\* See Kissimmee River Restoration Project Data Sheet pg. 90

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs (UU)  
**Project ID:** CERP 08  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.A.1

**Measurable Output(s):** 349,400 ac-ft surface storage

**Cost:**

Total	\$710,223,000
Project Development	\$19,317,000
Land Acquisition (estimated 48,350 acres)	\$429,048,000
Implementation	\$261,858,000
Operations and maintenance	\$4,832,774

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 5/2010

**Project Synopsis:** This feature includes above-ground reservoirs with a total storage capacity of approximately 349,400 acre-feet located in the C-23/C-24/C-25/Northfork and Southfork Basins in St. Lucie and Martin Counties. The initial design of the reservoirs assumed 39,000 acres with water levels fluctuating up to 8 feet above grade and 9,350 acres with water levels fluctuating up to 4 feet above grade. The final location, size, depth and configuration of these facilities will be determined through more detailed analysis to be completed as a part of the Indian River Lagoon Feasibility Study. It is noted from experience with the Upper St. Johns Project that greater variability of water levels are more desirable for the ecology and water quality.

C23&C24	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Planning & Design											
Real Estate											
Construction											

C25, North & South	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Planning & Design											
Real Estate											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	0	837	837	38,794	38,794	73,118	35,934	52,117	33,505	32,732	32,732	15,712	0	\$355,112
SFWMD	0	837	837	38,794	38,794	73,118	35,934	52,117	33,505	32,732	32,732	15,712	0	\$355,112
Total	0	1,674	1,674	77,588	77,588	146,236	71,867	104,235	67,010	65,465	65,465	31,423	0	\$710,223

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - North Lake Belt Storage Area (Phase I & II) (XX)  
**Project ID:** CERP 30  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2012 (scheduled)

**Goal(s) Addressed:** I.A.1

**Measurable Output(s):** 90,000 ac-ft. reservoir

<b>Cost:</b>		<b>Phase I</b>	<b>Phase II</b>
Total	\$500,346,000	\$250,173,000	\$250,173,000
Project Development	\$10,474,000	\$5,237,000	\$5,237,000
Land Acquisition (estimated 5,861 acres)	\$154,868,000	\$77,434,000	\$77,434,000
Implementation	\$335,004,000	\$167,502,000	\$167,502,000
Operations and maintenance	\$1,241,234		

**Project Schedule:**

Start Date: 2/2012  
 Finish Date: 6/2036

**Project Synopsis:** This feature includes canals, pumps, water control structures, and an in-ground storage reservoir with a total capacity of approximately 90,000 acre-feet located in Miami-Dade County. The initial design of the reservoir assumed 4,500 acres with the water level fluctuating from ground level to 20 feet below grade. A subterranean seepage barrier will be constructed around the perimeter to enable draw down during dry periods, to prevent seepage losses, and to prevent water quality impact due to the high transmissivity of the Biscayne Aquifer in the area. The reservoir will be located within an area proposed for rock mining. A pilot test of this component will be conducted prior to final design to determine construction technologies, storage efficiencies, impacts upon local hydrology, and water quality effects. The water quality assessment will include a determination as to whether the in-ground reservoir with perimeter seepage barrier will allow storage of untreated runoff without concerns of groundwater contamination.

Phase I	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Planning & Design												
Real Estate												
Construction												

Phase II	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Planning & Design												
Real Estate												
Construction												

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2012	2013	2014	2015	2016	2017	2018-2020	2021-2025	2026-2029	2030	2031-2035	Balance to Complete	Total
Federal	0	20,013	20,013	655	655	16,750	16,750	16,750	0	524	39,241	16,750	0	\$250,173
SFWMD	0	20,013	20,013	655	655	16,750	16,750	16,750	0	524	39,241	16,750	0	\$250,173
Total	0	40,026	40,026	1,309	1,309	33,500	33,500	33,500	0	1,047	78,481	33,500	0	\$500,346

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Central Lake Belt Storage Area (S)(EEE)  
**Project ID:** CERP 49  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2012 (scheduled)

**Goal(s) Addressed:** I.A.1 and I.B.1

**Measurable Output(s):** 187,200 ac-ft. storage; 640 acres

<b>Cost:</b>		<b>Phase I</b>	<b>Phase II</b>
Total	\$466,725,000	\$346,793,000	\$119,932,000
Project Development	\$10,872,000	\$8,154,000	\$2,718,000
Land Acquisition (estimated 5,770 acres)	\$100,359,000	\$75,269,000	\$25,090,000
Implementation	\$355,494,000	\$263,370,000	\$92,124,000
Operations and maintenance	\$1,964,519		

**Project Schedule:**

Start Date: 2/2012  
 Finish Date: 12/2036

**Project Synopsis:** This feature includes pumps, water control structures, a stormwater treatment area, and a combination above-ground and in-ground storage reservoir with a total storage capacity of approximately 190,000 acre-feet located in Miami-Dade County. The initial design of the reservoir assumed 5,200 acres with the water level fluctuating from 16 feet above grade to 20 feet below grade. A subterranean seepage barrier will be constructed around the perimeter to enable drawdowns during dry periods and to prevent seepage losses. A pilot test of this technology will be conducted prior to final design of this component to determine construction technologies, storage efficiencies, impacts upon local hydrology, and water quality effects. Since this facility is to be located within the protection area of Miami-Dade County’s Northwest Wellfield, the pilot test will also be designed to identify and address potential impacts to the County’s wellfield which may occur during construction and/or operation. The stormwater treatment area was assumed to be 640 acres with the water level fluctuating up to 4 feet above grade.

Phase I	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Planning & Design												
Real Estate												
Construction												

Phase II	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Planning & Design												
Real Estate												
Construction												

**Detailed Project Budget Information (\$1,000)**

	Exp Thru 1999	2012	2013	2014	2015	2016	2017	2018-2020	2021-2026	2027-2030	2031	2032-2036	Balance to Complete	Total
Federal	0	19,837	19,837	1,019	1,019	26,337	26,337	26,337	0	272	12,817	9,212	0	\$233,363
SFWMD	0	19,837	19,837	1,019	1,019	26,337	26,337	26,337	0	272	12,817	9,212	0	\$233,363
Total	0	39,673	39,673	2,039	2,039	52,674	52,674	52,674	0	544	25,634	18,425	0	\$466,725

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - C-43 Basin Storage Reservoir and ASR (D)  
**Project ID:** CERP 02  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.1 and 1.A.2

**Measurable Output(s):** 160,000 ac-ft storage  
 220 mgd (44 ASR wells)

**Cost:**

Total	\$440,195,000
Project Development	\$21,543,000
Land Acquisition (estimated 20,000 acres)	\$132,621,000
Implementation	\$286,031,000
Operations and maintenance	\$6,707,889

**Project Schedule:**

Start Date: 6/2000  
 Finish Date: 3/2012

**Project Synopsis:** This feature includes above-ground reservoir(s) with a total storage capacity of approximately 160,000 acre-feet and aquifer storage and recovery wells with a capacity of approximately 220 million gallons per day and associated pre- and post-water quality treatment located in the C-43 Basin in Hendry, Glades, or Lee Counties. The initial design of the reservoir(s) assumed 20,000 acres with water levels fluctuating up to 8 feet above grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design. The initial design of the wells assumed 44 wells, each with the capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post-treatment. The level and extent of treatment and number of the aquifer storage and recovery wells may be modified based on findings from a proposed aquifer storage and recovery pilot project (U.S. Environmental Protection Agency, 1999).

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Planning & Design													
Real Estate													
Construction													

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010-2011	Balance to Complete	Total
Federal	0	1,539	1,539	1,539	34,694	34,694	21,970	21,970	20,431	20,431	20,431	20,431	0	\$220,098
SFWMD	0	1,539	1,539	1,539	34,694	34,694	21,970	21,970	20,431	20,431	20,431	20,431	0	\$220,098
Total	0	3,078	3,078	3,078	69,388	69,388	43,939	43,939	40,862	40,862	40,862	40,862	0	\$440,195

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Water Preserve Areas / L-8 Basin (K)(GGG)  
**Project ID:** CERP 17  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2004 (scheduled)

**Goal(s) Addressed:** 1.A.1 and 1.A.2

**Measurable Output(s):** Canal improvements; 50 mgd ASR wells; 48,000 ac-ft surface storage

<b>Cost:</b>		<b><u>L-8</u></b>	<b><u>C-51 &amp; S. L-8 Reservoir</u></b>
Total	\$399,372,000	\$71,316,000	\$328,056,000
Project Development	\$10,540,000	\$1,921,000	\$8,619,000
Land Acquisition (estimated 2,180 acres)	\$31,641,000	\$4,290,000	\$27,351,000
Implementation	\$357,191,000	\$65,105,000	\$292,086,000
Operations and maintenance	\$2,273,929		

**Project Schedule:**

Start Date: 9/2004  
 Finish Date: 9/2014

**Project Synopsis:** This feature includes a combination above-ground and in-ground reservoir with a total storage capacity of approximately 48,000 acre-feet located immediately west of the L-8 Borrow Canal and north of the C-51 Canal in Palm Beach County. Other construction features include aquifer storage and recovery wells with a capacity of 50 million gallons per day and associated pre- and post- water quality treatment to be constructed in the City of West Palm Beach (Lake Mangonia), a series of pumps, water control structures, and canal capacity improvements in the M Canal. The initial design for the reservoir assumed a 1,800-acre reservoir with 1,200 usable acres with the water level fluctuating from 10 feet above grade to 30 feet below grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design. The initial design of the wells assumed 50 wells, each with a capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post-treatment. The level and extent of treatment and number of the aquifer storage and recovery wells may be modified based on findings from a proposed aquifer storage and recovery pilot project.

L-8 Basin Mods.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Planning & Design												
Real Estate												
Construction												

C-51 & S. L-8 Res.	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Planning & Design												
Real Estate												
Construction												

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Balance to Complete	Total
Federal	0	0	21,633	21,633	20,560	23,820	22,742	22,742	22,742	14,604	14,604	14,604	0	\$199,686
SFWMD	0	0	21,633	21,633	20,560	23,820	22,742	22,742	22,742	14,604	14,604	14,604	0	\$199,686
Total	0	0	43,266	43,266	41,121	47,640	45,485	45,485	45,485	29,209	29,209	29,209	0	\$399,372

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - North of Lake Okeechobee Storage Reservoir (A)  
**Project ID:** CERP 42  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2010 (scheduled)

**Goal(s) Addressed:** 1.A.1 and 1.B.1

**Measurable Output(s):** 200,000 ac-ft surface storage  
 2,500 ac-ft STA

**Cost:**

Total	\$284,854,000
Project Development	\$6,536,000
Land Acquisition (estimated 20,000 acres)	\$189,720,000
Implementation	\$88,598,000
Operations and maintenance	\$1,515,245

**Project Schedule:**

Start Date: 10/2005  
 Finish Date: 9/2015

**Project Synopsis:** This feature includes an above-ground reservoir and a 2,500-acre stormwater treatment area. The total storage capacity of the reservoir is approximately 200,000 acre-feet and is located in the Kissimmee River Region, north of Lake Okeechobee. The specific location of this facility has not been identified, however, it is anticipated that the facility will be located in Glades, Highlands, or Okeechobee Counties. The initial design of this feature assumed a 20,000-acre facility (17,500-acre reservoir and 2,500-acre treatment area) with water levels in the reservoir fluctuating up to 11.5 feet above grade. The final size, depth and configuration of this facility will be determined through more detailed planning, land suitability analyses, and design. Future detailed planning and design activities will also include an evaluation of degraded water bodies within the watersheds of the storage/treatment facility to determine appropriate pollution load reduction targets, and other water quality restoration targets for the watershed.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Planning & Design											
Real Estate											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Balance to Complete	Total
Federal	0	0	545	545	545	32,165	32,165	32,165	11,075	11,075	11,075	11,075	0	\$142,427
SFWMD	0	0	545	545	545	32,165	32,165	32,165	11,075	11,075	11,075	11,075	0	\$142,427
Total	0	0	1,089	1,089	1,089	64,329	64,329	64,329	22,150	22,150	22,150	22,150	0	\$284,854

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Everglades Agricultural Storage Reservoirs Phase II (G-P2)  
**Project ID:** CERP 09  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.1

**Measurable Output(s):** (See Phase I)

**Cost:**

Total	\$203,240,000
Project Development	\$8,018,000
Land Acquisition (estimated 17,500 acres)	\$86,536,000
Implementation	\$108,686,000
Operations and maintenance	\$7,229,205

**Project Schedule:**

Start Date: 1/2006  
 Finish Date: 12/2015

**Project Synopsis:** This feature includes above-ground reservoir(s) with a total storage capacity of approximately 360,000 acre-feet located in the Everglades Agricultural Area in western Palm Beach County and conveyance capacity increases for the Miami, North New River, and Bolles and Cross Canals. The initial design for the reservoir(s) assumed 60,000 acres, divided into three, equally sized compartments (1, 2, and 3), with the water level fluctuating up to 6 feet above grade in each compartment. The final size, depth and configuration of this facility will be determined through more detailed planning and design.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Planning &amp; Design</b>											
<b>Real Estate</b>											
<b>Construction</b>											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Balance to Complete	Total
Federal	0	6,181	6,849	6,849	6,849	6,849	6,849	6,849	13,586	13,586	13,586	13,586	0	\$101,620
SFWMD	0	6,181	6,849	6,849	6,849	6,849	6,849	6,849	13,586	13,586	13,586	13,586	0	\$101,620
<b>Total</b>	<b>0</b>	<b>12,362</b>	<b>13,699</b>	<b>13,699</b>	<b>13,699</b>	<b>13,699</b>	<b>13,699</b>	<b>13,699</b>	<b>27,172</b>	<b>27,172</b>	<b>27,172</b>	<b>27,172</b>	<b>0</b>	<b>\$203,240</b>

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Everglades Agricultural Storage Reservoirs Phase I (G-P1)  
**Project Number:** CERP 31  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.A.1

**Measurable Output(s):** 360,000 ac-ft surface storage (Total Phase I and II)

**Cost:**

Total	\$233,408,000
Project Development	\$16,035,000
Land Acquisition (estimated 17,500 acres)	\$0
Implementation	\$217,373,000
Operations and maintenance	\$7,229,205

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 9/2009

**Project Synopsis:** This feature includes above-ground reservoir(s) with a total storage capacity of approximately 360,000 acre-feet located in the Everglades Agricultural Area (inclusive of the Talisman property) in western Palm Beach County and conveyance capacity increases for the Miami, North New River, and Bolles and Cross Canals. The initial design for the reservoir(s) assumed 60,000 acres, divided into three, equally sized compartments (1, 2, and 3), with the water level fluctuating up to 6 feet above grade in each compartment. The final size, depth and configuration of this facility will be determined through more detailed planning and design. The purpose of this feature is to improve the timing of environmental deliveries to the Water Conservation Areas.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Planning &amp; Design</b>											
<b>Real Estate</b>											
<b>Construction</b>											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	0	0	1,336	1,336	1,336	1,336	1,336	1,336	27,172	27,172	27,172	27,172	0	\$116,704
SFWMD	0	0	1,336	1,336	1,336	1,336	1,336	1,336	27,172	27,172	27,172	27,172	0	\$116,704
Total	0	0	2,673	2,673	2,673	2,673	2,673	2,673	54,343	54,343	54,343	54,343	0	\$233,408

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Site 1 Impoundment and Aquifer Storage and Recovery (M)  
**Project ID:** CERP 26  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled Phase I)  
 WRDA 2006 (scheduled Phase II)

**Goal(s) Addressed:** 1.A.1 and 1.A.2

**Measurable Output(s):** 15,000 ac-ft. reservoir; 150 mgd of ASR wells

<b>Cost:</b>		<b>Phase I</b>	<b>Phase II</b>
Total	\$131,379,000	\$38,535,000	\$92,844,000
Project Development	\$8,024,000	\$1,027,000	\$6,997,000
Land Acquisition (estimated 2,458 acres)	\$23,587,000	\$23,587,000	\$0
Implementation	\$99,768,000	\$13,921,000	\$85,847,000
Operations and maintenance	\$2,052,608		

**Project Schedule:**

Start Date: 9/2001  
 Finish Date: 10/2014

**Project Synopsis:** This feature includes an above-ground reservoir with a total storage capacity of approximately 15,000 acre-feet located in the Hillsboro Canal Basin in southern Palm Beach County. A series of aquifer storage and recovery wells with a total capacity of approximately 150 million gallons per day and associated pre- and post-water quality treatment will also be a part of this feature located adjacent to the reservoir or along the Hillsboro Canal. The initial design of the reservoir assumed 2,460 acres with water levels fluctuating up to 6 feet above grade. The final size, depth and configuration of these facilities will be determined through more detailed planning and design to be completed as a part of the Water Preserve Areas Feasibility Study. The initial design of the aquifer storage and recovery facility assumed 30 well clusters, each with a capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post-treatment.

Phase I	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Planning & Design													
Real Estate													
Construction													

Phase II	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Planning & Design													
Real Estate N/A													
Construction													

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2014	Balance to Complete	Total
Federal	0	6,068	6,505	608	2,757	2,757	2,757	437	437	437	10,731	10,731	0	\$65,690
SFWMD	0	6,068	6,505	608	2,757	2,757	2,757	437	437	437	10,731	10,731	0	\$65,690
Total	0	12,136	13,010	1,217	5,515	5,515	5,515	875	875	875	21,462	21,462	0	\$131,379

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – Bird Drive Recharge Area (U)  
**Project ID:** CERP 77  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2002 (scheduled)

**Goal(s) Addressed:** 1.A.1

**Measurable Output(s):** 11,500 ac-ft. storage; pumps, water control structures, and canals

**Cost:**

Total	\$124,083,000
Project Development	\$3,603,000
Land Acquisition (estimated 10,000 acres)	\$71,625,000
Implementation	\$48,855,000
Operations and maintenance	\$1,470,869

**Project Schedule:**

Start Date: 1/2004  
 Finish Date: 12/2013

**Project Synopsis:**

This feature includes pumps, water control structures, canals, and an aboveground recharge area with a total storage capacity of approximately 11,500 acre-feet located in Miami-Dade County. The initial design of the recharge feature assumed 2,877 acres with the water level fluctuating up to 4 feet above grade. Final design will seek to enhance and maintain the continued viability of wetlands within the basin. The final size, depth and configuration of these facilities will be determined through more detailed planning and design to be completed as a part of the Water Preserve Areas Feasibility Study and will address appropriate pollution load reduction targets necessary to protect downstream receiving surface waters.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Planning &amp; Design</b>													
<b>Real Estate</b>													
<b>Construction</b>													

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Balance to Complete	Total
Federal	0	7,523	7,523	7,523	7,523	7,523	4,886	4,886	4,886	4,886	4,886	0	0	\$62,042
SFWMD	0	7,523	7,523	7,523	7,523	7,523	4,886	4,886	4,886	4,886	4,886	0	0	\$62,042
<b>Total</b>	<b>0</b>	<b>15,046</b>	<b>15,046</b>	<b>15,046</b>	<b>15,046</b>	<b>15,046</b>	<b>9,771</b>	<b>9,771</b>	<b>9,771</b>	<b>9,771</b>	<b>9,771</b>	<b>0</b>	<b>0</b>	<b>\$124,083</b>

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Palm Beach Co. Agricultural Reserve Reservoir & Aquifer Storage & Recovery (VV)  
**Project ID:** CERP 24  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2004 (scheduled)

**Goal(s) Addressed:** 1.A.1 and 1.A.2

**Measurable Output(s):** 19,920 ac-ft. reservoir  
 75 mgd of ASR wells

**Cost:**

Total	\$121,359,000
Project Development	\$1,825,000
Land Acquisition (estimated 1,660 acres)	\$57,657,000
Implementation	\$61,877,000
Operations and maintenance	\$1,019,500

**Project Schedule:**

Start Date: 9/2005  
 Finish Date: 8/2013

**Project Synopsis:** This feature includes an above-ground reservoir with a total storage capacity of approximately 20,000 acre-feet located in the western portion of the Palm Beach County Agricultural Reserve. Aquifer storage and recovery wells with a capacity of 75 million gallons per day and associated pre- and post- water quality treatment located adjacent to the reservoir will also be a part of this feature. The initial design for the reservoir assumed 1,660 acres with water levels fluctuating up to 12 feet above grade. The final size, depth and configuration of these facilities will be determined through more detailed planning and design to be completed as a part of the Water Preserve Areas Feasibility Study. The initial design of the wells assumed 15 well clusters, each with a capacity of 5 million gallons per day as well as chlorination for pre-treatment and aeration for post-treatment. The source of water to be injected is surficial ground water adjacent to the reservoir. The level and extent of treatment and number of the aquifer storage and recovery wells may be modified based on findings from a proposed aquifer storage and recovery

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Planning &amp; Design</b>													
<b>Real Estate</b>													
<b>Construction</b>													

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Balance to Complete	Total
Federal	0	0	9,838	9,838	9,838	228	7,735	7,735	7,735	7,735	0	0	0	\$60,680
SFWMD	0	0	9,838	9,838	9,838	228	7,735	7,735	7,735	7,735	0	0	0	\$60,680
Total	0	0	19,675	19,675	19,675	456	15,469	15,469	15,469	15,469	0	0	0	\$121,359

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - C-44 Basin Storage Reservoir (B)  
**Project ID:** CERP 07  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.1

**Measurable Output(s):** 40,000 ac-ft surface storage

**Cost:**

Total	\$112,562,000
Project Development	\$1,503,000
Land Acquisition (estimated 10,000 acres)	\$90,675,000
Implementation	\$20,384,000
Operations and maintenance	\$759,953

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 6/2007

**Project Synopsis:** This feature includes an above-ground reservoir with a total storage capacity of approximately 40,000 acre-feet located in the C-44 Basin in Martin County. The initial design of the reservoir assumed 10,000 acres with the water levels fluctuating up to 4 feet above grade. The final location, size, depth and configuration of this facility will be determined through more detailed analysis to be completed as a part of the ongoing Indian River Lagoon Feasibility Study. The purpose of the feature is to capture local runoff from the C-44 Basin, then return the stored water to the C-44 when there is a water supply demand. The reservoir will be designed for flood flow attenuation to the estuary, water supply benefits including environmental water supply deliveries to the estuary, and water quality benefits to control salinity and reduce loading of nutrients, pesticides, and other pollutants contained in runoff presently discharged to the estuary.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Planning &amp; Design</b>										
<b>Real Estate</b>										
<b>Construction</b>										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	0	150	150	15,263	15,263	15,263	3,397	3,397	3,397	0	0	0	0	\$56,281
SFWMD	0	150	150	15,263	15,263	15,263	3,397	3,397	3,397	0	0	0	0	\$56,281
Total	0	301	301	30,526	30,526	30,526	6,795	6,795	6,795	0	0	0	0	\$112,562

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Taylor Creek/Nubbin Slough Storage and Treatment Area (W)  
**Project ID:** CERP 39  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.1, 1.A.4 and 1.B.1

**Measurable Output(s):** 50,000 ac-ft surface storage  
 5,000 acres

**Cost:**

Total	\$104,026,000
Project Development	\$5,106,000
Land Acquisition (estimated 10,000 acres)	\$29,700,000
Implementation	\$69,220,000
Operations and maintenance	\$2,164,000

**Project Schedule:**

Start Date: 1/2000  
 Finish Date: 1/2009

**Project Synopsis:** This feature includes an above-ground reservoir with a total storage capacity of approximately 50,000 acre-feet and a stormwater treatment area with a capacity of approximately 20,000 acre-feet in the Taylor Creek/Nubbin Slough Basin. The initial design of this feature assumed a reservoir of 5,000 acres with water levels fluctuating up to 10 feet above grade and a stormwater treatment facility of approximately 5,000 acres. The final size, depth and configuration of this feature will be determined through more detailed planning, land suitability analysis and design.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Planning &amp; Design</b>											
<b>Real Estate</b>											
<b>Construction</b>											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	511	511	7,936	7,936	511	8,653	8,653	8,653	8,653	0	0	0	\$52,013
SFWMD	0	511	511	7,936	7,936	511	8,653	8,653	8,653	8,653	0	0	0	\$52,013
Total	0	1,021	1,021	15,871	15,871	1,021	17,305	17,305	17,305	17,305	0	0	0	\$104,026

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality, Habitat and Species,  
**Project Name:** Allapattah Flats/Ranch  
**Project ID:** GL29  
**Lead Agency:** Department of Environmental Protection/South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 1.A.1 and 2.A.1

**Measurable Output(s):** 34,221 Acres to be Acquired

**Project Synopsis:** The Allapattah Flats/Ranch project covers 34,221 acres in western Martin County. The site is dominated by poorly drained flatwoods soils, which are saturated for much of the wet season. Historically, this area was a flatwoods matrix, interspersed with depression marshes and wet prairies. With the exception of the four northern sections that drain to Canal-23, the entire site drains slowly to the southeast to the South Fork of the St. Lucie River. Over the past 30 years, the project area has undergone a change in land use from native range grazing to improved pasture, sod farms, and row crops. Most of the understory has been cleared and planted in non-native pasture grasses. Most of the depression marshes remain; however, most of the wet prairies have been drained and the extreme western boundary. There is good species diversity and many large trees remain.

Restoration of Allapattah Flats will play a key role in the effort to reduce flows from C-23 into the St. Lucie Estuary. Regional attenuation facilities, or Water Preserve Areas, are proposed which would store discharges into the St. Lucie Estuary. After acquisition, about 8,000 acres of the project adjacent to C-23 would be converted to a reservoir to provide approximately 32,000 acre-feet of water storage. Estimates indicate that this would reduce wet season stormwater flows into the estuary by 39%. It is estimated that an additional 14% reduction in discharge to the estuary could be achieved by not draining the property. Completely eliminating stormwater discharges is not possible; however, significant reductions could probably be made by blocking existing drainage ditches.

The Florida Fresh Water Fish and Wildlife Commission would be the lead manager for the non-reservoir areas. The District will take the lead on all hydrologic restoration efforts.

**Cost:** Total: \$75,594,990  
 Project Development:  
 Land Acquisition: \$75,594,990 (Assessed value of 34,221 acres)  
 Implementation:  
 Operations and Maintenance:

**Project Schedule:**

Start Date: 1997  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal							\$75,594,990	\$75,594,990
<b>Total</b>							<b>\$75,594,990</b>	<b>\$75,594,990</b>

\*This total includes Comprehensive Plan Implementation lands.

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Water Quantity/Quality  
**Project name:** Seminole Tribe Water Conservation Project for the Big Cypress Reservation  
**Project ID:** SW03  
**Lead Agency:** Seminole Tribe of Florida  
**Authority:** Tribal Council Resolution / USDA WRP / PL-53-866 UDSA

**Goal(s) Addressed:** 1.A.1 and 1.B.3

**Measurable Output(s):** 7,569 acres-feet of storage

This network of surface water management structures will produce the following substantial restoration, preservation, and protection benefits and will do so immediately and independently of the completion of any other projects:

- Remove phosphorus and other pollutants from water leaving the Reservation and flowing to the Big Cypress National Preserve into Mullet Slough to the Everglades Protection Area. The removal of these pollutants will be achieved using natural treatment processes in pretreatment cells and water resource areas (WRA's). Unlike the stormwater treatment areas in the Everglades Construction Project, the Tribe's WRA's will take advantage of the natural treatment processes and will serve additional functions of water storage and conveyance.
- Rewater the Big Cypress National Preserve. This project will provide the opportunity to restore more natural hydroperiods in the Big Cypress National Preserve. The clean water sent in a sheetflow over the Preserve and into Mullet Slough will improve the hydrology in the Everglades Protection Area as well.
- Convey and store irrigation water. To make use of water provided by the SFWMD to replace the Tribe's diverted Compact water rights, the Tribe needs to be able to move and store such water, when it is available. Water conveyance improvements and irrigation storage cells will move and store the Compact water converted for Everglades restoration. This diversion allowed for treatment of water flowing to the Everglades Protection Area.
- Provide improved flood control. To prevent extended periods of flooding and to limit downstream impacts of flooding, stormwater must be controlled. Stormwater attenuation areas will detain water from large storm events.

**Project Synopsis:** The Seminole Tribe's Big Cypress Reservation is located in Hendry and Broward Counties, directly north of the Big Cypress National Preserve. And the federal Miccosukee Reservation. This project provides for the design and construction of water control, management, and treatment facilities in Basins 5, 6 & 7 composing the eastern portion of the Big Cypress Reservation. The project elements include conveyance systems, including major canal bypass structures, irrigation storage cells, and water resources areas. This project will create 7,569 acre-feet of storage and is designed to meet 50 ppb. phosphorus, which is the current performance level designed to be achieved by the Everglades Construction Project. Should design performance levels for phosphorus become more stringent, this project is designed to be able to incorporate additional technology to meet stricter levels. This project will enhance the hydroperiod in Big Cypress National Preserve through Mullet Slough and improve the water quality in the Everglades Protection Area.

**Cost:** Total \$ 22,452,000

**Project Schedule:**

Start Date: 2002  
 Finish Date: 2012

**Detailed Project Budget Information (\$1,000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal				6,654	5,535	3,597	1,053	16,839
Tribal				2,218	1,845	1,199	351	5,613
<b>Total</b>				<b>\$8,872</b>	<b>\$7,380</b>	<b>\$4,796</b>	<b>\$1,404</b>	<b>\$22,452</b>

**Contact:** Craig Tepper 954/967-3402

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – Acme Basin B Discharge (OPE)  
**Project ID:** CERP 18  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.A.1

**Measurable Output(s):** 4,960 ac-ft storage capacity and STA

**Cost:**

Total	\$20,100,000
Project Development	\$797,000
Land Acquisition (estimated 930 acres)	\$8,500,000
Implementation	\$10,803,000
Operations and maintenance	\$594,000

**Project Schedule:**

Start Date: 10/2001  
 Finish Date: 9/2006

**Project Synopsis:** This feature includes the construction of a wetland or chemical treatment area and a storage reservoir with a combined total storage capacity of 3,800 ac-ft located adjacent to the Loxahatchee National Wildlife Refuge in Palm Beach County. The initial design for the treatment area and reservoir assumed 310 acres with the water level fluctuating up to 4 feet above grade, and 620 acres with water levels fluctuating up to 8 feet above grade. The final size, depth, and configuration of these facilities will be determined through more detailed planning and design. The purpose of this feature is to provide water quality treatment and stormwater attenuation for runoff from Acme Basin “B” prior to discharge to the Loxahatchee National Wildlife Refuge or alternative locations described below. Excess available water may be used to meet water supply demands in central and southern Palm Beach County.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Planning &amp; Design</b>										
<b>Real Estate</b>										
<b>Construction</b>										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	2,258	2,258	133	2,701	2,701	0	0	0	0	0	0	\$10,050
SFWMD	0	0	2,258	2,258	133	2,701	2,701	0	0	0	0	0	0	\$10,050
Total	0	0	4,516	4,516	266	5,402	5,402	0	0	0	0	0	0	\$20,100

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration and Preservation  
**Project name:** Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation  
**Project ID:** GL54  
**Lead Agency:** Seminole Tribe of Florida  
**Authority:** Tribal Council by Resolution

**Goal(s) Addressed:** 1.A.1 and 1.B.3

**Measurable Output(s):** 10,000 acre-feet of storage

This plan would provide positive water management benefits to the Indian Prairie Basin which discharges into Lake Okeechobee.

- Water quality will be improved by reducing nutrient loadings through detaining discharges from Tribal lands in each group.
- Flood control will be enhanced through the implementation of additional sites in each sub-basin.

Storage and conveyance of surface waters will be increased and enhanced in each and between sub-basins. Rehydration of slough systems in each group will also be accomplished.

**Project Synopsis:** A comprehensive surface water management system will be designed and implemented for the Brighton Reservation which will include supplemental irrigation, 10,000 acre-feet of storage, improved flood control, surface water conveyance and water quality treatment.

**Cost:**

Total	\$15,818,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1999
Finish Date:	2010

**Detailed Project Budget Information (\$1,000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
<b>Federal</b>	150	20	4,344	970	679	853	1,358	8,374
<b>Tribal</b>			4,343	970	679	852	600	7,444
<b>Total</b>	<b>\$150</b>	<b>\$20</b>	<b>\$8,687</b>	<b>\$1,940</b>	<b>\$1,358</b>	<b>\$1,705</b>	<b>\$1,958</b>	<b>\$15,818</b>

**Contact:** Craig Tepper 954/967-3402

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project name:** Wetland Reserve Program  
**Project ID:** TS27  
**Lead Agency:** NRCS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.A.1, and 1.B.3

**Measurable Output(s):** acre-feet of storage, reduced nutrient loading

**Project Synopsis:** This USDA-NRCS project was authorized by the 1996 Farm Bill to assist landowners in the restoration and/or enhancement of wetlands that have been degraded due to agricultural activities. This voluntary program provides incentive payments and cost-sharing for restoration and/or enhancement of wetlands. In most cases, long-term conservation easements are obtained ensuring that healthy functioning wetlands on agricultural lands will contribute to over-all Everglades restoration goals and objectives.

**Cost:**

Total	\$2,135,000
Project Development	
Land Acquisition	
Implementation	\$2,135,000
Operations and maintenance	

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2008

**Detailed Project Budget Information (\$1000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$330	\$135	\$145	\$160	\$175	\$195	\$995	\$2,135
<b>Total</b>	<b>\$330</b>	<b>\$135</b>	<b>\$145</b>	<b>\$160</b>	<b>\$175</b>	<b>\$195</b>	<b>\$995</b>	<b>\$2,135</b>

**Contact:** Greg Hendricks, 561-795-5451  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project name:** Critical Projects- Seminole Big Cypress Reservation Water Conservation Plan  
**Project ID:** SW39  
**Lead Agency:** USACE/Seminole Tribe of Florida  
**Authority:** WRDA 96

**Goal(s) Addressed:** I.A.1

The planned network of surface water management structures is designed to accomplish the following four objectives to get the water right through quantity, quality, timing and distribution necessary for restoration.

**Measurable Output(s):** 3,389 acre-feet of storage

- (1) Remove phosphorus and other pollutants from water leaving the Reservation. The removal of these pollutants will be achieved using natural treatment processes, in pretreatment cells and water resource areas (WRA's). Unlike the stormwater treatment areas in the Everglades Construction Project, the Tribe's WRA's will take advantage of the natural treatment processes and will serve additional functions in the storage and conveyance of water.
- (2) Convey and store irrigation water. To make use of water provided by the District (to replace the Tribe's diverted Compact water rights), the Tribe needs to be able to take this water, when it is available, to move it and to store it. This will be accomplished through water conveyance improvements and irrigation storage cells.
- (3) Provide improved flood control. Stormwater must be controlled on the Reservation to prevent extended periods of flooding and limit impacts downstream. This will be accomplished by means of stormwater attenuation areas which will detain water from large storm events.
- (4) Rewater Big Cypress National Preserve. The Seminole Water Conservation Project will provide the opportunity to restore more natural hydroperiods in the Big Cypress National Preserve. Bypass structures will be placed under the West Feeder Canal that will sheetflow clean water south along the length of the Feeder Canal into the Big Cypress Addition.

**Project Synopsis:** This project includes design and construction of water control, management, and treatment facilities for all seven basins of the Big Cypress Reservation creating 3,389 acre-feet of storage. Basins 1-4 of the Water Conservation Project have been approved as a Critical Project under the procedures outlined by the USACE. This subset of the Water Conservation Project can be constructed and will function independently of the infrastructure required in Basins 5, 6, and 7 in the eastern portion of the Big Cypress Reservation.

**Cost:**

Total	\$47,608,000
Project Development	
Land Acquisition	\$3,743,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1997
Finish Date:	2004

	1997	1998	1999	2000	2001	2002	2003	2004
<b>Design</b>								
<b>Real Estate</b>								
<b>Construction</b>								

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
<b>USACE</b>	581	2,952	3,335	6,316	6,316	4,304		23,223
<b>Tribe</b>		7,153	3,898	5,358	5,358	2,037		23,084
<b>Total</b>	<b>581</b>	<b>10,105</b>	<b>7,233</b>	<b>11,674</b>	<b>11,674</b>	<b>6,341</b>		<b>47,608</b>

**Contact:** Craig Tepper 954/967-3402

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Okeechobee Aquifer Storage and Recovery (GG)  
**Project ID:** CERP 05  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.2

**Measurable Output(s):** 1,000 mgd in 200 ASR wells

**Cost:**

Total	\$1,097,312,000
Project Development	\$76,174,000
Land Acquisition (estimated 300 acres)	\$7,515,000
Implementation	\$1,013,623,000
Operations and maintenance	

**Project Schedule:**

Start Date: 6/2004  
 Finish Date: 6/2020

**Project Synopsis:** This feature includes a series of aquifer storage and recovery wells adjacent to Lake Okeechobee with a capacity of 1-billion gallons per day and associated pre- and post- water quality treatment in Glades and Okeechobee Counties. The initial design assumes 200 wells, each with the capacity of 5 million gallons per day with 8-ultrafiltration water quality pre-treatment facilities and aeration for post-treatment. Based on information for existing aquifer storage and recovery facilities, it is assumed that recovery of aquifer-stored water would have no adverse effects on water quality conditions in Lake Okeechobee. In fact, some level of nutrient load reduction may occur as a result of aquifer storage, which would be a long-term benefit to in-lake water quality conditions. The level and extent of treatment and number of the aquifer storage and recovery wells may be modified based on findings from a proposed aquifer storage and recovery pilot project (U.S. Environmental Protection Agency, 1999). The pilot project would also investigate changes to water chemistry resulting from aquifer storage and identify post-retrieval water quality treatment requirements, if any, necessary to implement aquifer storage and recovery facilities. The Implementation Plan (Section 10) includes pilot studies to investigate the proposed facilities, including water quality changes associated with aquifer storage and recovery.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2020
Planning & Design														
Real Estate														
Construction														

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2004-2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015-2019	Balance to Complete	Total
Federal	0	3,462	4,402	4,402	4,402	4,402	54,144	54,144	54,144	54,144	54,144	50,681	0	\$548,656
SFWMD	0	3,462	4,402	4,402	4,402	4,402	54,144	54,144	54,144	54,144	54,144	50,681	0	\$548,656
Total	0	6,925	8,804	8,804	8,804	8,804	108,287	108,287	108,287	108,287	108,287	101,362	0	\$1,097,312

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - C-51 Regional Groundwater Aquifer Storage and Recovery (LL)  
**Project ID:** CERP 23  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2004 (scheduled)

**Goal(s) Addressed:** 1.A.2

**Measurable Output(s):** 170 mgd of ASR wells

**Cost:**

Total	\$127,291,000
Project Development	\$3,363,000
Land Acquisition (estimated 34 acres)	\$9,945,000
Implementation	\$113,983,000
Operations and maintenance	\$1,496,000

**Project Schedule:**

Start Date: 9/2004  
 Finish Date: 9/2013

**Project Synopsis:** This feature includes a series of aquifer storage and recovery wells with a capacity of 170 million gallons per day as well associated pre- and post- water quality treatment to be constructed along the C-51 Canal in Palm Beach County. The initial design of the wells assumed 34 well clusters, each with a capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post-treatment. The level and extent of treatment and number of the aquifer storage and recovery wells may be modified based on findings from a proposed aquifer storage and recovery pilot project.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Planning & Design												
Real Estate												
Construction												

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Balance to Complete	Total
Federal	0	0	2,907	2,907	420	420	11,398	11,398	11,398	11,398	11,398	0	0	\$63,646
SFWMD	0	0	2,907	2,907	420	420	11,398	11,398	11,398	11,398	11,398	0	0	\$63,646
Total	0	0	5,813	5,813	841	841	22,797	22,797	22,797	22,797	22,797	0	0	\$127,291

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Modified Water Deliveries to Everglades National Park  
**Project ID:** CE10  
**Lead Agency:** National Park Service  
**Authority:** Everglades National Park Protection and Expansion Act of 1989 (Public Law 101-229)

**Goal(s) Addressed:** 1.A.3 and 2.A.3

**Measurable Output(s):** Modification of flow impediments; acres of habitat restored

**Project Synopsis:** This project is funded from the Construction Account managed by the National Park Service and the Department of the Interior. The authorized project consists of structural features with the intended purpose of restoring more natural hydrological conditions in Water Conservation Area (WCA) 3 and Shark River Slough within Everglades National Park. Hydrological improvements are crucial to restoring ecosystem productivity in the southern Everglades and maintaining adequate freshwater inflow to the downstream estuaries along the Gulf of Mexico and Florida Bay. Based on recent decisions and additional information the project design is being altered to accommodate an improved design. The project consists of four components: 1). water conveyance between WCA 3A and 3B, 2). roadbed elevation of Tamiami Trail, 3). 8.5 Square Mile Area flood mitigation, and 4). seepage control.

In 1999, the local sponsor (SFWMD) requested the COE to conduct a comprehensive review of a full array of alternatives for the 8.5 Square Mile Area. Nine alternatives are currently under examination including the original design, the creation of a buffer between the park and developed areas, as well as full acquisition of the area. The COE released the Draft Supplemental Environmental Impact Statement (SEIS) for public comment on April 3, 2000. A final Record of Decision will be issued in August 2000. NEPA analyses of design modifications for Tamiami Trail, seepage control and conveyance are currently underway. The total cost range of this project is \$135 million to \$212 million contingent on current planning efforts. The project features, with the exception of raising Tamiami Trail, will be completed by December 2003. Current schedules indicate that construction on Tamiami Trail will not be completed until late 2005 or early 2006.

This project is being implemented in conjunction with acquisition of 109,504 acres in the East Everglades as part of the Everglades National Park expansion. Acquisition of land within the East Everglades Addition is necessary to limit further losses suffered by the park due to habitat destruction outside former boundaries and to restore natural water flow patterns that are critical to the ecological integrity and long-term viability of park resources.

**Cost:**  
 Total \$135,363,000

**Project Schedule:**  
 Start Date: 1990  
 Finish Date: 2003

	1997	1998	1999	2000	2001	2002	2003	2004
Design								
Real Estate								
Construction								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	50,037	12,000	22,400	22,400	20,526		8,000	135,363

**Hyperlink:** [www.saj.usace.army.mil/dp/MWDC111.htm](http://www.saj.usace.army.mil/dp/MWDC111.htm)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF:CERP–WCA 3 Decomparmentalization and Sheetflow Enhancement (AA)(QQ)(SS)  
**Project ID:** CERP 13  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2012 (scheduled)

**Goal(s) Addressed:** 1.A.3 and 1.A.4

**Measurable Output(s):** Construction of new water control structures; modification or removal of levees, canals & water control structures

<b>Cost:</b>		<b>Phase I</b>	<b>Phase II</b>
Total	\$85,059,000	\$25,855,000	\$59,204,000
Project Development	\$4,794,000	\$727,000	\$4,067,000
Land Acquisition (estimated 255 acres)	\$479,000	\$479,000	\$0
Implementation	\$79,786,000	\$24,649,000	\$55,137,000
Operations and maintenance	\$740,111		

**Project Schedule:**

Start Date: 1/2002  
 Finish Date: 1/2019

**Project Synopsis:** These features include the construction of new water control structures and the modification or removal of levees, canals, and water control structures in Water Conservation Area 3A and B located in western Broward County. Sheetflow obstructions will be removed with the backfilling of the Miami Canal and southern 7.5 miles of L-67A Borrow Canal, removal of the L-68A, L-67C, L-29, L-28, and L-28 Tieback Levees and Borrow Canals, and elevating of Tamiami Trail. Water supply deliveries to Miami-Dade County, previously made through the Miami Canal, will be rerouted through an expanded North New River Canal and southern conveyance system. Eight passive weir structures to be located along the entire length of L-67A will also promote sheetflow from Water Conservation Area 3A and 3B during high flow conditions.

Phase I	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Planning & Design												
Real Estate												
Construction												

Phase II	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Planning & Design												
Real Estate												
Construction												

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2002-2003	2004	2005	2006	2007	2008	2009	2010	2011	2012-2014	2015-2018	Balance to Complete	Total
Federal	0	241	121	2,465	2,465	2,465	2,465	2,465	407	407	407	6,892	0	\$42,530
SFWMD	0	241	121	2,465	2,465	2,465	2,465	2,465	407	407	407	6,892	0	\$42,530
Total	0	482	242	4,930	4,930	4,930	4,930	4,930	813	813	813	13,784	0	\$85,059

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project name:** Critical Projects - Southern CREW  
**Project ID:** SW12  
**Lead Agency:** USACE  
**Authority:** WRDA 96

**Goal(s) Addressed:** 1.A.3

**Measurable Output(s):**

**Project Synopsis:** Removal of canal and road berms, house pads and ditches will allow historic sheetflow to be re-established. Design is underway.

**Cost:**

Total	\$12,021,000
Project Development	
Land Acquisition	\$8,438,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1997
Finish Date:	2001

	1997	1998	1999	2000	2001	2002	2003	2004
Design								
Real Estate								
Construction								

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	103	77	5,830				0	\$5,907
SFWMD		8,788	(2,777)				0	\$6,011
<b>Total</b>	<b>103</b>	<b>8,865</b>	<b>3,053</b>				<b>0</b>	<b>\$12,021</b>

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Habitat and Species  
**Project Name:** Kissimmee Prairie  
**Project ID:** KV07  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District  
**Authority:** CARL/Save Our Rivers

**Goal(s) Addressed:** 1.A.3 and 2.A.3

**Measurable Output(s):** 39.3 miles of ditches and dikes removed  
 38,282 acres acquired

**Project Synopsis:** This project involves acquisition and restoration of wetland and dry prairie habitat in Okeechobee County. The SFWMD and FDEP purchased 38,282 acres of land in 1997 for conservation as the Kissimmee Prairie State Preserve. Restoration has been initiated on the Preserve as well as the adjacent 7,315-acre Ordway-Whittell Kissimmee Prairie Sanctuary owned and managed by the National Audubon Society. The project will restore 13,100 acres of wetlands that were over drained or over impounded by agricultural activities. In addition, the project will enhance another 2,625 acres of wetlands and 9,500 acres of associated dry prairie habitat. Restoration will be accomplished by removing 39.3 miles of ditches and dikes to return sheet flow across the land. Enhancement will include removal of unwanted or invasive vegetation from wetland and dry prairie habitats.

The purpose of the land acquisition project is to preserve the unique wetland and dry prairie habitats that were in agriculture and cattle land use and, using a five-year federal grant, restore and enhance these lands. Approximately 5,000 acres of the project hydraulically linked with the Kissimmee River will be reconnected, thereby restoring wetland habitat to regain historical biological diversity. The remaining 40,000 acres of the project in the project area contain extensive wetland habitats and excellent examples of the dry-prairie community type, which is recognized by the Florida Natural Areas Inventory as endangered at state and global levels. Because of the conversion of similar lands to citrus and improved pasture throughout central Florida, the Kissimmee Prairie Ecosystem, in combination with the adjacent Air Force's Avon Park Bombing Range and Audubon's Kissimmee Prairie Sanctuary, will form the largest region of dry prairie in public ownership in the State. Its preservation is the most important step in the recovery of the federally endangered Florida grasshopper sparrow. The endangered whooping crane, Everglades snail kite, and the woodstork utilize the habitats of the project area. Protection of these lands will also provide habitat for the following threatened species: southern bald eagle, Audubon's caracara, Florida scrub jay, and the eastern indigo snake. In addition, the project area contains habitat that supports over 800 species of plants and animals. 38,282 acres have been acquired at a cost of \$22.1 million.

**Cost:**  
 Total: \$22.1 million

**Project Schedule:**

Start Date: 1996  
 Finish Date: 1997

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$22,120,000						0	\$22,120,000
Total	\$22,120,000						0	\$22,120,000

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: Canal 111  
**Project Number:** CE06  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** FCA 1962 and WRDA 1996

**Goal(s) Addressed:** I.A.3

**Measurable Output(s):** Canals, levees, 5 pump stations, and replacement of an existing bridge

**Project Synopsis:** The goal of the C-111 Project modifications is restoration of the Taylor Slough and eastern panhandle of Everglades National Park, while maintaining flood protection within the C-111 basin east of L-31N and C-111. The project plan consists of both structural and nonstructural modifications to the existing project works within the C-111 basin. Structural components of the plan include: construction or modification of nine canals, construction of an L-31 Tieback levee and S-332D tieback levee, removal of existing spoil material along the south side lower C-111, construction of five pump stations, and replacement of an existing bridge over Taylor Slough in ENP. The project requires the acquisition of lands in the Frog Pond; the Rocky Glades Agricultural Area (L-31N lands); and additional lands in the Southern Glades. These modifications will widen the areal extent of water distribution capability, thereby restoring more natural hydrology in 128 square miles of the Taylor Slough and its headwaters in the Rocky Glades.

The goal of this project is to restore more natural timing, distribution, and quantity of freshwater flows to Taylor Slough and the wetlands in the panhandle of ENP. Restoring the natural hydroperiods will help restore and maintain natural vegetation communities in these regions of ENP. The detention/retention area will also contribute to improving the water quality of waters delivered to ENP.

**Cost:** Total TBD

**Project Schedule:**

Start Date: 1994  
 Finish Date: 2003

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Planning & Design									
Real Estate									
Construction									
Completion									

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	33,758	6,523	11,449	22,759	9,936		525	84,500
SFWMD	96,000		TBD	TBD	TBD		TBD	TBD
<b>Total</b>	<b>129,758</b>							

**Hyperlink:** [www.saj02.usace.army.mil](http://www.saj02.usace.army.mil)

**Note:** The USACOE is preparing a supplement to the C-111 General Re-evaluation Report which will include actual land acquisition costs, a water quality strategy, redistribution of funding responsibilities and a revised implementation schedule, all of which may result in a revised cost estimate.

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name** C&SF: CERP - Flow to Northwest and Central Water Conservation Area 3A (II)(RR)  
**Project ID:** CERP 12  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Increased Capacity @ P.S. G-404 / S-140; Spreader Canal @ S-140

**Cost:**

Total	\$30,877,000
Project Development	\$2,121,000
Land Acquisition (0 acres)	\$0
Implementation	\$28,756,000
Operations and maintenance	\$1,102,327

**Project Schedule:**

Start Date: 11/2000  
 Finish Date: 4/2009

**Project Synopsis:** This feature includes relocation and modifications to pump stations and development of a spreader canal system located in the northwest corner and west-central portions of Water Conservation Area 3A in western Broward County. Additional flows will be directed to the northwest corner and west central portions of Water Conservation Area 3A by increasing the capacity of the G404 pump station, currently a part of the Everglades Construction Project, and increasing the capacity and relocating the S-140 pump station. A spreader canal system at S-140 will establish sheetflow to the west-central portion of Water Conservation Area 3A. Water quality treatment strategies developed to fulfill the Non-Everglades Construction Project requirements of the Everglades Forever Act. If additional treatment is determined to be required as a result of future detailed planning and design work, those existing facilities would be modified to provide the necessary treatment.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Planning & Design											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	0	152	152	152	152	3,746	3,746	3,746	3,595	0	0	0	\$15,439
SFWMD	0	0	152	152	152	152	3,746	3,746	3,746	3,595	0	0	0	\$15,439
Total	0	0	303	303	303	303	7,492	7,492	7,492	7,189	0	0	0	\$30,877

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** West WCA -3A Hydropattern Restoration  
**Project ID:** ECP10  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Improve the volume, timing and distribution of water entering the Everglades

**Project Synopsis:** The objective of this plan element is to restore hydroperiod along the northwest perimeter of Water Conservation Area 3A, west of the Miami Canal and east of Levee L-28. This will be accomplished through development of a sheet flow approximation along the affected three mile length. The source of the water supply for this sheet flow will be, discharges from the Rotenberger Wildlife Management Area and the outflows from STA-5 via the pump station G-404 and STA-6.

**Cost (Estimate):**

Total	\$ 17,250,097
Project Development	\$ 57,261
Land Acquisition	\$ -
Implementation	\$ 7,020,026
Operations and Maintenance	\$ 10,172,810

**Project Schedule:**

Expected Completion Date: 7/2006

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 94 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$6,386,478	\$836,898	\$545,659	\$564,757	\$584,523	\$604,982	\$7,726,800	\$17,250,097
<b>Total</b>	<b>\$6,386,478</b>	<b>\$836,898</b>	<b>\$545,659</b>	<b>\$564,757</b>	<b>\$584,523</b>	<b>\$604,982</b>	<b>\$7,726,800</b>	<b>\$17,250,097</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** East WCA-3A Hydropattern Restoration  
**Project ID:** ECP02  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Improve the volume, timing and distribution of water entering the Everglades

**Project Synopsis:** The existing L-5 levees and borrow canal will be modified to result in a sheet flow approximation along the northerly perimeter of WCA-3A adjacent to STA 3/4. This modification will extend from the North New River Canal westerly to the west line of STA 3/4, a total distance of approximately 48,000 feet. The East WCA-3A Hydropattern Restoration plan component includes, but is not limited to, the following physical works: removal of existing North and South Levee L-5 all along the southerly perimeter of STA 3/4, enlargement of the L-5 Borrow Canal for increased conveyance to the North New River Canal.

**Cost (Estimate):**

Total	\$ 14,667,884
Project Development	\$ 390,712
Land Acquisition	\$ -
Implementation	\$ 14,170,550
Operations and Maintenance	\$ 106,622

**Project Schedule:**

Expected Completion Date: 2/2003

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$348	\$289,026	\$1,020,536	\$8,852,144	\$4,399,208	\$8,113	\$98,509	\$14,667,884
<b>Total</b>	<b>\$348</b>	<b>\$289,026</b>	<b>\$1,020,536</b>	<b>\$8,852,144</b>	<b>\$4,399,208</b>	<b>\$8,113</b>	<b>\$98,509</b>	<b>\$14,667,884</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** WCA-2A Hydropattern Restoration  
**Project ID:** ECP 12  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Extent of hydropattern improved (Target: 7,680 acres)

**Project Synopsis:** WCA-2A Hydropattern Restoration Works, consists of a modification of the L-6 levees and borrow canal to result in an approximation of sheet flow into Water Conservation Area-2A. This modification will extend from G-335, the new outflow pump station for STA-2, northeasterly to the STA-2 inflow canal from S-6, a total length of approximately 39,750 feet.

**Cost (Estimate):**

Total	\$ 5,010,296
Project Development	\$ 935,572
Land Acquisition	\$ -
Implementation	\$ 3,180,264
Operations and Maintenance	\$ 894,460

**Project Schedule:**

Expected Completion Date: 10/1999

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 - 99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$3,381,684	\$776,829	\$48,186	\$49,872	\$51,618	\$53,425	\$648,682	\$5,010,296
<b>Total</b>	<b>\$3,381,684</b>	<b>\$776,829</b>	<b>\$48,186</b>	<b>\$49,872</b>	<b>\$51,618</b>	<b>\$53,425</b>	<b>\$648,682</b>	<b>\$5,010,296</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Diverting WCA-2 and WCA-3 flows to Central Lake Belt Storage Area (YY)(ZZ)  
**Project ID:** CERP 47  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2012 (scheduled)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** pumps; water control structures; canals, and canal improvements

**Cost:**

Total	\$76,921,000
Project Development	\$1,822,000
Land Acquisition (estimated 837 acres)	\$13,321,000
Implementation	\$61,778,000
Operations and maintenance	\$146,635

**Project Schedule:**

Start Date: 2/2012  
 Finish Date: 2/2018

**Project Synopsis:** This feature includes pumps, water control structures, canals, and conveyance improvements located adjacent to Water Conservation Areas 2 and 3 in Broward County. The final size and configuration of these facilities will be determined through more detailed planning and design to be completed as a part of the Water Preserve Areas Feasibility Study.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Planning & Design											
Real Estate											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Balance to Complete	Total
Federal	0	3,634	3,634	8,026	7,722	7,722	7,722	0	0	0	0	0	0	\$38,461
SFWMD	0	3,634	3,634	8,026	7,722	7,722	7,722	0	0	0	0	0	0	\$38,461
Total	0	7,268	7,268	16,052	15,445	15,445	15,445	0	0	0	0	0	0	\$76,921

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Critical Ecosystems Restoration Projects - Tamiami Trail Culverts  
**Project Number:** SW 01  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 96

**Strategic Plan Goal(s) Addressed:** Goal 1.A.4

**Measurable Output(s):** 80 culverts

**Cost:**

Total \$8,431,885  
 Project Development  
 Land Acquisition  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2002

**Project Synopsis:** The installation of approximately 80 culverts under Tamiami Trail will restore natural hydropatterns within Big Cypress National Preserve and Everglades National Park. Design is underway.

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Design									
Real Estate									
Construction									

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	461	647	577	(583)	1,610	1,504		4,216
State	175	50	0	525	(181)	(143)		426
Tribe	0	0	0	0	0	0		0
Locals	0	0	0	0	0	0		0
<b>Total</b>	<b>636</b>	<b>697</b>	<b>577</b>	<b>609</b>	<b>3,057</b>	<b>2,855</b>		<b>8,431</b>

**Hyperlink:** [www.saj.usace.army.mil](http://www.saj.usace.army.mil)

DATA SHEET PROFILE

**Program Name:** Restoration Program: Water Quality, Hydrological Restoration, Habitat and Species  
**Project Name:** East Coast Buffer/Water Preserve Areas  
**Project ID:** SE05  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District/  
 U.S. Department of the Interior  
**Authority:** CARL/ SOR

**Goal(s) Addressed:** 1.A.4 and 2.A.3

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The East Coast Buffer/Water Preserve Areas project involves acquisition of land parcels located along the eastern side of the Everglades Protection Area in western Palm Beach, Broward, and Miami-Dade Counties. Most of the lands in this project area are undeveloped, including a considerable amount of wetland habitat. Current land uses include very low intensity development, pastureland, and limestone mining. The original East Coast Buffer footprint was based on a land suitability analysis which selected lands primarily on the basis of those needed for controlling seepage from the Everglades. Since the original analysis, it has been determined that there are additional water storage and water quality treatment (e.g., S-9) requirements that will require more land. Some specific land parcels have already been identified; the precise acreage and locations for additional parcels needed for water storage and water quality treatment are being identified under the C&SF Project Comprehensive Review Study: Comprehensive Plan, Water Preserve Areas, and L-28 Feasibility Study. Parcels already targeted for acquisition include (1) remaining P2000 lands (12,650 acres); (2) remaining lands within the Pennsuko wetlands; and (3) the buffer/flow-way in the western 8.5 Square Mile Area (1,065 acres).

These lands are needed to implement the Everglades restoration plans being developed under the C&SF Project Comprehensive Review Study: Comprehensive Plan, Water Preserve Areas, and L-28 Feasibility Study. The ECB/WPA will consist of a series of surface-water areas that are interconnected and managed as a system of marshlands, reservoirs, water quality treatment areas, and/or aquifer recharge basins. The overall purposes of the project are to: (1) hold more water in the system by controlling seepage from the Everglades; (2) capture, store, and clean up excess stormwater currently lost to tide; (3) provide a buffer between the urban area and the Everglades; and (4) protect and conserve wetlands and habitat values outside the remaining Everglades. Restoration benefits include improved water supply for restoring hydropatterns of the Everglades, improved water quality and preservation of wetland habitat.

Because of the extreme development pressure in this area, it is critical that this project be completed as quickly as possible before target parcels are developed or permitted for development. Project size 70,883 acres. 26,552 acres have been acquired by the state at a cost of \$55.1 million and 4,670 acres have been acquired with federal dollars at a cost of \$31.4 million

**Cost:** Total \$165,100,000  
 Land Acquisition Estimated \$110 million needed to acquire the remaining 39,661 acres

**Project Schedule:**  
 Start Date: 1994  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$31.4 M							
State	\$55.1 M						\$110 M	\$165.1 M
<b>Total</b>	<b>\$86.5 M</b>							<b>\$165.1 M</b>

This total includes Comprehensive Plan Implementation lands.

Hyperlink: <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Broward County Secondary Canal System (CC)  
**Project ID:** CERP 27  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Water control structures; pumps; canal improvements

**Cost:**

Total	\$12,898,000
Project Development	\$754,000
Land Acquisition (estimated 2,45 acres)	\$1,920,000
Implementation	\$10,224,000
Operations and maintenance	\$418,017

**Project Schedule:**

Start Date: 7/2001  
 Finish Date: 6/2009

**Project Synopsis:** This feature includes a series of water control structures, pumps, and canal improvements located in the C-9, C-12 and C-13 Canal Basins and east basin of the North New River Canal in central and southern Broward County.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	63	63	303	1,325	1,325	1,325	1,022	1,022	0	0	0	0	\$6,449
SFWMD	0	63	63	303	1,325	1,325	1,325	1,022	1,022	0	0	0	0	\$6,449
Total	0	126	126	606	2,650	2,650	2,650	2,045	2,045	0	0	0	0	\$12,898

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – C-4 Control Structures (T)  
**Project Name:** SE21  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** 2 water control structures

**Cost:**

Total	\$2,330,000
Project Development	\$127,000
Land Acquisition (estimated 2 acres)	\$495,000
Implementation	\$1,708,000
Operations and maintenance	\$30,015

**Project Schedule:**

Start Date: 1/2000  
 Finish Date: 7/2005

**Project Synopsis:**

This feature includes two water control structures located in the C-4 Canal in Miami-Dade County. The purpose of this feature will be to enhance wetland hydroperiods and enhance recharge to Miami-Dade County’s Northwest Wellfield. The eastern structure will be operated to reduce regional system deliveries by diverting dry season stormwater flows to the C-2 Canal to provide salt water intrusion protection and recharge to downstream wellfields. A western structure, being implemented under the Critical Projects Program, will be operated to control water levels in the C-4 Canal at higher elevations to reduce seepage losses from the Pennsuco Wetlands and areas to the west of the structure.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	13	13	136	136	867	0	0	0	0	0	0	0	\$1,165
SFWMD	0	13	13	136	136	867	0	0	0	0	0	0	0	\$1,165
Total	0	25	25	273	273	1,733	0	0	0	0	0	0	0	\$2,330

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – Lakebelt (In-Ground Reservoir) Technology – Pilot Project  
**Project ID:** CERP 76  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** In-ground reservoir data

**Cost:**

Total	\$23,000,000
Project Development	\$2,000,000
Land Acquisition (0 acres)	\$0
Implementation	\$20,000,000
Operations and maintenance	\$1,000,000

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 12/2011

**Project Synopsis:** Several features recommend the use of areas where lime rock mining will have occurred. The initial design of these reservoirs includes subterranean seepage barriers around their perimeter in order to enable drawdown during dry periods, prevent seepage losses, and prevent water quality impacts due to transmissivity of the aquifer in these areas. The pilot project is required to determine construction technologies, storage efficiencies, impacts on local hydrology, and water quality effects. Water quality assessments will include a determination as to whether the in-ground reservoirs and seepage barriers will allow for storage of untreated waters without concerns of groundwater contamination.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Feasibility& Design													
Construction													
Monitoring													

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009-2011	Balance to Complete	Total
Federal	500	500	2,000	2,000	2,000	2,000	2,000	83	83	83	83	0	\$11,500
SFWMD	500	500	2,000	2,000	2,000	2,000	2,000	83	83	83	83	0	\$11,500
Total	1,000	1,000	4,000	4,000	4,000	4,000	4,000	167	167	167	167	0	\$23,000

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - L-31N Seepage Management – Pilot Project (V)  
**Project ID:** CERP 74  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Seepage Control Data

**Cost:**

Total	\$10,000,000
Project Development	\$500,000
Land Acquisition (0 acres)	\$0
Implementation	\$9,000,000
Monitoring	\$500,000

**Project Schedule:**

Start Date: 11/2000  
 Finish Date: 10/2003

**Project Synopsis:** The purpose of this feature is to reduce levee seepage flow across L-31N adjacent to Everglades National Park via a levee cutoff wall. Additionally, the feature was designed to reduce groundwater flows during the wet season by capturing groundwater flows with a series of groundwater wells adjacent to L-31N, then backpumping those flows to Everglades National Park. The pilot project is necessary to determine the appropriate technology to control seepage from Everglades National Park. The pilot project will also provide necessary information to determine the appropriate amount of wet season groundwater flow to return that will minimize potential impacts to Miami-Dade County’s West Wellfield and freshwater flows to Biscayne Bay.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feasibility& Design										
Construction										
Monitoring										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	0	333	4,583	83	0	0	0	0	0	0	0	0	\$5,000
SFWMD	0	0	333	4,583	83	0	0	0	0	0	0	0	0	\$5,000
Total	0	0	667	9,167	167	0	0	0	0	0	0	0	0	\$10,000

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - L-31N Improvements for Seepage Management and S-356 Structures (V)(FF)  
**Project ID:** CERP50  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2002 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Relocation and enhancement of L-31N, groundwater wells, and sheetflow delivery system

**Cost:**

Total	\$184,845,000
Project Development	\$6,777,000
Land Acquisition (estimated 3,947 acres)	\$94,704,000
Implementation	\$83,364,000
Operations and maintenance	\$4,647,234

**Project Schedule:**

Start Date: 10/2002  
 Finish Date: 10/2010

**Project Synopsis:** This feature includes relocating and enhancing L-31N, groundwater wells, and sheetflow delivery system adjacent to Everglades National Park located in Miami-Dade County. More detailed planning, design and pilot studies will be conducted to determine the appropriate technology to control seepage from Everglades National Park. These studies and tests will also determine the appropriate amount of wet season groundwater flow control that will minimize potential impacts to Miami-Dade County’s West Wellfield and freshwater flows to Biscayne Bay.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Planning & Design											
Real Estate											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Balance to Complete	Total
Federal	0	0	16,631	16,631	16,631	9,184	8,336	8,336	8,336	8,336	0	0	0	\$92,423
SFWMD	0	0	16,631	16,631	16,631	9,184	8,336	8,336	8,336	8,336	0	0	0	\$92,423
Total	0	0	33,262	33,262	33,262	18,367	16,673	16,673	16,673	16,673	0	0	0	\$184,845

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** Frog Pond/L-31N Land Acquisition  
**Project ID:** CE62  
**Lead Agency:** Florida Department of Environmental Protection, South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Frog Pond and L-31N Transition Lands are located in south Miami-Dade County. The total project size is 10,450 acres of which 9,156 have been purchased. The project includes 5,200 acres of agricultural lands known as the Frog Pond and 5,250 acres of "transitional" lands" located east of L-31N. All of these project lands are necessary for the C-111 Project.

<b>Cost:</b> Total*	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1994  
 Finish Date:

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total*
Federal								
State	\$79,890,107							
Tribal								
Local								
Other								
<b>Total</b>	<b>\$79,890,107</b>							

\*This total is included in the cost estimate for the C-111 Project.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - C-111N Spreader Canal (WW)  
**Project ID:** CERP 36  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** levees, canals, pumps, water control structures, and a 12,800 ac-ft STA

**Cost:**

Total	\$94,035,000
Project Development	\$3,317,000
Land Acquisition (estimated 12,415 acres)	\$45,766,000
Implementation	\$44,952,000
Operations and maintenance	TBD

**Project Schedule:**

Start Date: 4/2000  
 Finish Date: 9/2008

**Project Synopsis:** This feature includes levees, canals, pumps, water control structures, and a stormwater treatment area to be constructed, modified or removed in the Model Lands and Southern Glades (C-111 Basin) area of Miami-Dade County. This feature enhances the C-111 Project design for the C-111N Spreader Canal with the construction of a stormwater treatment area, the enlarging of pump station S-332E and the extension of the canal under U.S. Highway 1 and Card Sound Road into the Model Lands. The initial design of this feature pumps water from the C-111 and the C-111E Canals into a stormwater treatment area prior to discharging to Southern Everglades and Model Lands. This features also calls for filling in the southern reach of the C-111 Canal and removal of structures S-18C and S-197. The final size, depth, location and configuration of this feature will be determined through more detailed planning and design.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total *
Federal	0	276	276	7,904	7,904	7,904	276	7,492	7,492	7,492	0	0	0	\$47,018
SFWMD	0	276	276	7,904	7,904	7,904	276	7,492	7,492	7,492	0	0	0	\$47,018
Total	0	553	553	15,808	15,808	15,808	553	14,984	14,984	14,984	0	0	0	\$94,035

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

Note: \* This land acquisition cost is for lands to be acquired in the Model Lands area only. This figure does not include the cost of lands already acquired by the SFWMD in the Southern Glades portion.



**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - West Miami-Dade County Reuse (HHH)  
**Project ID:** CERP 52  
**Lead Agency:** U.S. Army Corps of Engineers / Miami Dade County  
**Authority:** WRDA 2014 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** 100 mgd Advanced WWTP

**Cost:**

Total	\$437,237,000
Project Development	\$29,953,000
Land Acquisition (estimated 3,947 acres)	\$3,540,000
Implementation	\$403,744,000
Operations and maintenance	\$36,500,000

**Project Schedule:**

Start Date: 7/2011  
 Finish Date: 6/2020

**Project Synopsis:** This feature includes a wastewater treatment plant expansion to produce superior, advanced treatment of wastewater from a future West Miami-Dade Wastewater Treatment Plant to be located in the Bird Drive Basin in Miami-Dade County. The initial design assumed a potential discharge volume of 100 million gallons per day from the wastewater treatment plant. The final configuration of these facilities will be determined through more detailed planning and design to be completed in the ongoing West Dade Water Reuse Feasibility Study authorized in Section 413 of the Water Resources Development Act of 1996. Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Planning & Design											
Real Estate											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Balance to Complete	Total
Federal	0	2,995	2,995	3,880	3,880	2,995	50,468	50,468	50,468	50,468	0	0	0	\$218,619
Local	0	2,995	2,995	3,880	3,880	2,995	50,468	50,468	50,468	50,468	0	0	0	\$218,619
Total	0	5,991	5,991	7,761	7,761	5,991	100,936	100,936	100,936	100,936	0	0	0	\$437,237

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project name:** Biscayne Bay Feasibility Study  
**Project ID:** SE28  
**Lead Agency:** USACE/Miami-Dade Co.  
**Authority:** WRDA 96

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):**

**Project Synopsis:** Biscayne Bay is a shallow, well-mixed estuary located along the southeastern coast of Florida. It includes most of Biscayne National Park and adjacent lands provide fresh surface or groundwater to Biscayne Bay. The Central and Southern Florida (C&SF) Project is believed to have changed the timing, distribution and amount of freshwater reaching the bay. This impacts the natural salinity patterns and ecology of that bay. The C&SF Project is undergoing review to determine if modifications are warranted to restore freshwater flows to the Everglades and Florida Bay. Proposed modifications to this hydrologically-connected system may impact Biscayne Bay. This study allows resource managers to assess those impacts and determine if further studies of Biscayne Bay are needed.

**Cost:**

Total	\$6,370,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date	1996
Finish Date	2001

	1996	1997	1998	1999	2000	2001
Planning & Design						

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	1,228	344	543	435	347	350	173	3,420
SFWMD	758	344	543	435	347	350	173	2,950
<b>Total</b>	<b>1,986</b>	<b>688</b>	<b>1,086</b>	<b>870</b>	<b>694</b>	<b>700</b>	<b>346</b>	<b>6,370</b>

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Biscayne Bay Coastal Wetlands (FFF)(OPE)  
**Project ID:** CERP 53  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2006 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** pump stations, spreader swales, stormwater treatment areas, flowways, levees, culverts, and backfilling canals

**Cost:**

Total	\$299,583,000
Project Development	\$6,452,000
Land Acquisition (estimated 13,950 acres)	\$205,655,000
Implementation	\$87,476,000
Operations and maintenance	\$923,300

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 5/2018

**Project Synopsis:** The feature includes pump stations, spreader swales, stormwater treatment areas, flowways, levees, culverts, and backfilling canals located in southeast Miami-Dade County and covers 13,600 acres from the Deering Estate at C-100C, south to the Florida Power and Light Turkey Point power plant, generally along L-31E.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Planning & Design														
Real Estate														

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Construction														

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000-2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014-2017	Balance to Complete	Total
Federal	269	269	14,958	14,958	14,958	14,958	14,958	14,958	14,690	7,290	7,290	7,290	0	\$149,792
SFWMD	269	269	14,958	14,958	14,958	14,958	14,958	14,958	14,690	7,290	7,290	7,290	0	\$149,792
Total	538	538	29,917	29,917	29,917	29,917	29,917	29,917	29,379	14,579	14,579	14,579	0	\$299,583

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Habitat and Species  
**Project Name:** Model Lands Land Acquisition  
**Project ID:** CE17  
**Lead Agency:** South Florida Water Management District, Miami-Dade County  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Model Lands land acquisition project is located in Miami-Dade County and encompasses the lands between US 1 and Biscayne National Park. The project area includes a variety of habitats, both freshwater and estuarine. In 1999, the SFWMD Governing Board approved the addition of 3,210 acres to the project for a total acreage of 42,138 acres. The addition lands were identified in the Restudy as necessary for treatment of stormwater from the north and L-31E Canal prior to releasing it to tide or into other project lands to the south. Most of the project lands will be included in the C-111 North Spreader Canal CERP project. There is a 50/50 co-operative cost share agreement between the SFWMD and Miami-Dade County for the Model Lands project. The SFWMD has acquired 4,463 acres and Miami-Dade County has acquired 5,000 acres under their Environmentally Endangered Lands program. The northern portions of the project and the areas near canals, roads, and other areas of disturbance are heavily infested with Australian Pine and Brazilian Pepper. The majority the tract is undisturbed fresh and saltwater wetlands. These lands form a contiguous habitat corridor with Everglades National Park, Southern Glades SOR project, Biscayne National Park, Crocodile Lakes National Wildlife Refuge, and John Pennekamp State Park.

**Cost:**

Total	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1994
Finish Date:	2007

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	3,091,811							
Local	3,345,892							
<b>Total</b>	<b>\$6,437,703</b>							

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - South Miami-Dade County Reuse (BBB)  
**Project ID:** CERP 54  
**Lead Agency:** U.S. Army Corps of Engineers / Miami-Dade County  
**Authority:** WRDA 2014 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** 131 mgd Advanced WWTP

**Cost:**

Total	\$363,024,000
Project Development	\$24,711,000
Land Acquisition (estimated 13,950 acres)	\$3,324,000
Implementation	\$334,989,000
Operations and maintenance	\$47,815,000

**Project Schedule:**

Start Date: 7/2011  
 Finish Date: 6/2020

**Project Synopsis:** This feature includes a plant expansion to produce superior, advanced treatment of wastewater from the existing South District Wastewater Treatment Plant located north of the C-1 Canal in Miami-Dade County. The initial design of this feature assumed that the plant will have a capacity of 131 million gallons per day. More detailed analyses will be required to determine the quality and quantity of water needed to meet the ecological goals and objectives of Biscayne Bay.

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Balance to Complete	Total
Federal	0	2,471	2,471	4,133	2,471	2,471	41,874	41,874	41,874	41,874	0	0	0	\$181,512
Local	0	2,471	2,471	4,133	2,471	2,471	41,874	41,874	41,874	41,874	0	0	0	\$181,512
Total	0	4,942	4,942	8,266	4,942	4,942	83,747	83,747	83,747	83,747	0	0	0	\$363,024

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality, Habitat and Species  
**Project Name:** Biscayne Coastal Wetlands Land Acquisition  
**Project ID:** SE49  
**Lead Agency:** Miami-Dade County, Florida Communities Trust, South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Biscayne Coastal Wetlands are divided into three units that are 2,241 acres. The units lie east of L-31E canal, and adjacent to other protected lands acquired as part of Biscayne National Park and Homestead Bayfront Park. All are a mixture of red, black and white mangroves. The three units appeared to be in good condition and relatively exotic-free, except along the western edge and along mosquito ditches, where there are Brazilian Pepper and Australian Pine. Acquisition of these areas would add another layer of protection to Biscayne National Park and provide opportunities for a better distribution of fresh water from L-31E. This project consists of 2,241 acres. Miami-Dade has acquired 67 acres and has received a matching grant from the Florida Communities Trust. The SFWMD is a potential acquisition partner with the County. Some of the properties in this land acquisition project are necessary for the L-31E Flow Redistribution Project.

**Cost:**

Total	\$2,961,668 (Miami-Dade County estimate; SFWMD does not make cost projections on SOR projects)
Project Development	N/A
Land Acquisition	\$2,961,668 (Miami-Dade County estimate; SFWMD does not make cost projections on SOR projects)
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1998  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total*
Local	\$566,097				\$525,571			\$1,091,668
<b>Total</b>	<b>\$566,097</b>							

\* Miami-Dade County estimate; SFWMD does not make cost projections on SOR projects

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Florida Keys Tidal Restoration (OPE)  
**Project ID:** CERP 60  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Bridges and culverts

**Cost:**

Total	\$1,251,000
Project Development	\$82,000
Land Acquisition (estimated 5 acres)	\$51,000
Implementation	\$1,118,000
Operations and maintenance	\$0

**Project Schedule:**

Start Date: 3/2000  
 Finish Date: 8/2005

**Project Synopsis:** This feature includes the use of bridges or culverts to restore the tidal connection between Florida Bay and the Atlantic Ocean in Monroe County. The four locations are as follows: (1) Tarpon Creek, just south of Mile Marker 54 on Fat Deer Key (width 150 feet); (2) unnamed creek between Fat Deer Key and Long Point Key, south of Mile Marker 56 (width 450 feet); (3) tidal connection adjacent to Little Crawl Key (width 300 feet); and (4) tidal connection between Florida Bay and Atlantic Ocean at Mile Marker 57 (width 2,400 feet).

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	10	23	23	10	280	280	0	0	0	0	0	0	\$626
SFWMD	0	10	23	23	10	280	280	0	0	0	0	0	0	\$626
Total	0	21	46	46	21	559	559	0	0	0	0	0	0	\$1,251

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Okeechobee Aquifer Storage and Recovery – Pilot Project (GG)  
**Project ID:** CERP 71  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Lake Okeechobee ASR Pilot Project Data

**Cost:**

Total	\$19,000,000
Project Development	\$1,000,000
Land Acquisition (0 acres)	\$0
Implementation	\$14,000,000
Monitoring	\$4,000,000

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 6/2004

**Project Synopsis:** This feature is multi-purpose and provides benefit to environmental, urban and agricultural users. The pilot project is necessary to identify the most suitable sites for the aquifer storage and recovery wells in the vicinity of Lake Okeechobee and to identify the optimum configuration of those wells. Additionally, the pilot project will determine the specific water quality characteristics of waters to be injected, the specific water quality characteristics and amount of water recovered from the aquifer, and the water quality characteristics of the receiving aquifer. Further information from the pilot project will provide the hydrogeological and geotechnical characteristics of the upper Floridan Aquifer System within the region, and the ability of the upper Floridan Aquifer System to maintain injected water for future recovery.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feasibility & Design										
Construction										
Monitoring										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	900		3,900	3,900	400	400	0	0	0	0	0	0	0	\$9,500
SFWMD	900		3,900	3,900	400	400	0	0	0	0	0	0	0	\$9,500
Total	1,800		7,800	7,800	800	800	0	0	0	0	0	0	0	\$19,000

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Okeechobee Regulation Schedule (F)  
**Project Number:** CERP 62  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** New Lake Okeechobee regulation schedule

**Cost:**  
Total TBD

**Project Schedule:**

Implement when appropriate as other facilities come on line.

**Project Synopsis:** The Lake Okeechobee Regulation Schedule will be modified in order to take advantage of the additional storage facilities identified in the construction features. Two additional zones will be added to the schedule. The first zone will trigger discharges to the north of Lake Okeechobee reservoir and the Everglades Agricultural Area reservoir. The second higher zone will trigger the Lake Okeechobee aquifer storage and recovery facilities to begin injecting water from the Lake. Climate based forecasting will be used to guide management decisions regarding releases to the storage facilities.

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Rotenberger/Holey land Tract  
**Project ID:** GL34  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The Rotenberger/Holey Lands were historically an integral part of the Everglades hydrological system. The natural communities of the project consisted of shallow sawgrass marshes with tree islands interspersed. Much of the area has been disturbed. Restoration of the area is important to the restoration of the water quality and quantity to the Everglades. Project size 79,170 acres. 69,344 acres have been acquired at a cost of \$16.1 million. An estimated \$2 million is needed to acquire the remaining 9,826 acres.

**Cost:** Total: \$181,100,000  
 Land Acquisition:  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date 1984  
 Finish Date Upon completion

**Detailed Project Budget Information (\$1,000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$16,100						\$2,000	\$18,100
<b>Total</b>	<b>\$16,100</b>						<b>\$2,000</b>	<b>\$18,100</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Modified Holey Land Wildlife Management Area Operation Plan (DD)  
**Project Number:** CERP 66  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Modified Operational Plan for the Holey Land

**Cost:**  
Total TBD

**Project Schedule:**

Implement when appropriate as other facilities come on line.

**Project Synopsis:** Modification to the current operating plan for Holey Land Wildlife Management Area will be made to implement rain-driven operations for this area. Water deliveries are made to Holey Land from the Rotenberger Wildlife Management Area or from Stormwater Treatment Area 3 & 4 if Rotenberger flows are insufficient. The deliveries are assumed to be of acceptable water quality. These new operational rules are intended to improve the timing and location of water depths within the Holey Land Wildlife Management Area.

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** Rotenberger Restoration  
**Project ID:** ECP01  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Extent of hydropattern restored (Target: 29,000 acres).

**Project Synopsis:** The Rotenberger Restoration project is intended to restore hydropattern on the Rotenberger Wildlife Management Area, a total of over 29,000 acres. An inflow pump station and distribution canal are planned as part of the restoration effort to be located near the southeast corner of STA-5. Also planned are four outfall culverts, which will be placed in the east levee of the Rotenberger Wildlife Management Area to route water to the Miami Canal.

**Cost (Estimate):**

Total:	\$ 4,159,214
Project Development:	\$ 307,283
Land Acquisition:	\$ -
Implementation:	\$ 2,887,192
Operations and Maintenance:	\$ 964,739

**Project Schedule:**

Expected Completion Date: 10/2000

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$310,196	\$2,922,269	\$52,427	\$54,262	\$56,161	\$58,127	\$705,772	\$4,159,214
<b>Total</b>	<b>\$310,196</b>	<b>\$2,922,269</b>	<b>\$52,427</b>	<b>\$54,262</b>	<b>\$56,161</b>	<b>\$58,127</b>	<b>\$705,772</b>	<b>\$4,159,214</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

## DATA SHEET PROFILE

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Modified Rotenberger Wildlife Management Area Operation Plan (EE)  
**Project Number:** CERP 67  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Modified Operational Plan for Rotenberger Wildlife Management Area

**Cost:**  
Total \$0

**Project Schedule:**

Implement when appropriate as other facilities come on line.

**Project Synopsis:** Modification to the current operating plan for Rotenberger Wildlife Management Area will be made to implement rain-driven operations for this area. Water deliveries are made to Rotenberger from Stormwater Treatment Area 5. Discharges from Rotenberger are made to the Holey Land Wildlife Management Area. The deliveries are assumed to be of acceptable water quality. These new operational rules are intended to improve the timing and location of water depths within the Rotenberger Wildlife Management Area.

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** Northern L-8 Basin Improvements  
 (Under consideration for removal from ECP and inclusion in L-8 GRR)  
**Project ID:** ECP03  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Improve the volume, timing and distribution of water entering the Everglades.  
 Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Project Synopsis:** The L-8 Basin Improvements are intended to redirect runoff from the northern part of the L-8 Basin to Lake Okeechobee. The project will include the following components: the construction of a divide structure (S-316) in the L-8 Borrow Canal, the renovation of existing Structure S-76 and the construction of a pumping station at Lake Okeechobee (near existing Culvert #10A).

**Cost (Estimate):**

Total:	\$ 16,638,892
Project Development:	\$ 679,921
Land Acquisition:	\$ 0
Implementation:	\$ 10,894,114
Operations and Maintenance:	\$ 5,064,857

**Project Schedule:**

Expected Completion Date: 9/2006

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
Federal								
State	\$25,197	-	\$654,724	\$1,600,798	\$369,769	-	\$13,988,404	\$16,638,892
Total	\$25,197	-	\$654,724	\$1,600,798	\$369,769	-	\$13,988,404	\$16,638,892

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** S-5A Basin Runoff Diversion Works  
**Project ID:** ECP14  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Project Synopsis:** S-5A Basin Runoff Diversion Works is located in western Palm Beach County at the confluence of the Hillsboro and Ocean Canal in the Everglades Agricultural Area (EAA). The project is required to divert flow from the S-5A Basin into STA-2 for treatment. This will require the enlargement of approximately 17 miles of the Hillsboro and Ocean Canals and the construction of a water control structure (G-341). In addition, depending upon the operation requirements, an additional structure, G-340, may also be necessary.

**Cost (Estimate):**

Total:	\$ 19,017,404
Project Development:	\$ 570,546
Land Acquisition:	\$ 2,318,440
Implementation:	\$ 15,250,511
Operations and Maintenance:	\$ 877,907

**Project Schedule:**

Expected Completion Date: September, 2006

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Land Acquisition							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$9,914,733	\$2,235,138	\$47,708	\$49,378	\$665,278	\$3,019,616	\$3,085,553	\$19,017,404
<b>Total</b>	<b>\$9,914,733</b>	<b>\$2,235,138</b>	<b>\$47,708</b>	<b>\$49,378</b>	<b>\$665,278</b>	<b>\$3,019,616</b>	<b>\$3,085,553</b>	<b>\$19,017,404</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Caloosahatchee R. (C-43) Basin Aquifer Storage & Recovery – Pilot Project (D)  
**Project ID:** CERP 72  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Caloosahatchee Project Data

**Cost:**

Total	\$6,000,000
Project Development	\$500,000
Land Acquisition (0 acres)	\$0
Implementation	\$5,000,000
Monitoring	\$500,000

**Project Schedule:**

Start Date: 11/2000  
 Finish Date: 10/2005

**Project Synopsis:** Aquifer Storage and Recovery wells are proposed in order to maximize the benefits associated with the Caloosahatchee River Storage Reservoir . A pilot project for these wells is necessary to identify the most suitable sites for the aquifer storage and recovery wells in the vicinity of the reservoir and to determine the optimum configuration of those wells. The pilot project will provide information regarding the characteristics of the aquifer system within the Caloosahatchee River Basin as well as determine the hydrogeological and geotechnical characteristics of the upper Floridan Aquifer. The pilot project will also determine the specific water quality characteristics of waters to be injected, the specific water quality characteristics and the amount of water recovered from the aquifer, and the water quality characteristics of water within the receiving aquifer.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feasibility & Design										
Construction										
Monitoring										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	0	250	2,500	83	83	83	0	0	0	0	0	0	\$3,000
SFWMD	0	0	250	2,500	83	83	83	0	0	0	0	0	0	\$3,000
Total	0	0	500	5,000	167	167	167	0	0	0	0	0	0	\$6,000

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Site 1 Impoundment and Aquifer Storage and Recovery – Pilot Project (M)  
**Project ID:** CERP 73  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Site 1 Project Data

**Cost:**

Total	\$9,000,000
Project Development	\$900,000
Land Acquisition (0 acres)	\$0
Implementation	\$7,000,000
Monitoring	\$1,100,000

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 11/2002

**Project Synopsis:** The Site 1 above-ground impoundment is proposed to be operated in conjunction with multiple aquifer storage and recovery wells in order to maximize the benefits of the reservoir. A pilot project for these wells is necessary to determine the most suitable sites for the aquifer storage and recovery wells in the vicinity of the reservoir and to determine the optimum configuration of those wells. The identification of the hydrogeological and geotechnical characteristics of the soils and aquifer will also be determined. The pilot project will also determine the specific water quality characteristics of water within the aquifer as well as the quality of water proposed for injection and the water quality characteristics of water recovered from the aquifer.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feasibility& Design										
Construction										
Monitoring										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	225	225	1,750	2,300	0	0	0	0	0	0	0	0	\$4,500
SFWMD	225	225	1,750	2,300	0	0	0	0	0	0	0	0	\$4,500
Total	450	450	3,500	4,600	0	0	0	0	0	0	0	0	\$9,000

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Wastewater Reuse Technology – Pilot Project (HHH)(BBB)(OPE)  
**Project ID:** CERP 75  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Wastewater Reuse Data

**Cost:**

Total	\$30,000,000
Project Development	\$3,011,000
Land Acquisition (0 acres)	\$2,800,000
Implementation	\$23,189,000
Monitoring	\$1,000,000

**Project Schedule:**

Start Date: 10/1999  
 Finish Date: 9/2007

**Project Synopsis:** Currently, two features involve the advanced treatment of wastewater. This pilot project will address water quality issues associated with discharging reclaimed water into natural areas such as the West Palm Beach Water Catchment Area, Biscayne National Park, and the Bird Drive Basin as well as determine the level of superior treatment and the appropriate methodologies for that treatment. A series of studies will be conducted to help determine the level of treatment needed.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Feasibility& Design										
Real Estate										
Construction										
Monitoring										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	0	376	376	376	843	6,264	6,264	250	250	0	0	0	\$15,000
SFWMD	0	376	376	376	843	6,264	6,264	250	250	0	0	0	\$15,000
Total	0	753	753	753	1,686	12,528	12,528	500	500	0	0	0	\$30,000

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Loxahatchee National Wildlife Refuge Internal Canal Structures (KK)  
**Project ID:** CERP 14  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Water control structure

**Cost:**

Total	\$7,669,000
Project Development	\$503,000
Land Acquisition (estimated 5 acres)	\$345,000
Implementation	\$6,821,000
Operations and maintenance	\$42,045

**Project Schedule:**

Start Date: 1/2000  
 Finish Date: 7/2003

**Project Synopsis:** This feature includes two water control structures in the northern ends of the perimeter canals encircling the Loxahatchee National Wildlife Refuge (Water Conservation Area 1) located in Palm Beach County. The purpose of this feature is to improve the timing and location of water depths within the Refuge. It is assumed that these structures will remain closed except to pass Stormwater Treatment Area 1 East and Stormwater Treatment Area 1 West outflows and water supply deliveries to the coastal canals.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	84	256	84	3,411	0	0	0	0	0	0	0	0	\$3,835
SFWMD	0	84	256	84	3,411	0	0	0	0	0	0	0	0	\$3,835
Total	0	168	513	168	6,821	0	0	0	0	0	0	0	0	\$7,669

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Habitat and Species  
**Project Name:** Loxahatchee Slough Land Acquisition  
**Project ID:** GL13  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):**

**Project Synopsis:** The Loxahatchee Slough Project is located in Palm Beach County and covers approximately 15,200 acres. It contains a mixture of habitat types, including pine flatwoods, cypress forest, and wet prairie. The present land use is native range. These lands are adjacent to the Loxahatchee Slough Corridor, an area that has been pledged for protection by the current landowner. Palm Beach County will lead the land management effort for this project.

The purpose of this project is to provide additional wetland and upland buffer to the Loxahatchee Slough Corridor and to preserve critical foraging and nesting sites for wildlife in an area that is undergoing rapid urban development. This system is important for storing surface water runoff and providing groundwater base flow to Canal 18 and the Loxahatchee River. The slough, which is the initial headwaters of the Loxahatchee River, can also spill over to the south and contribute to the Everglades watershed under certain hydrologic conditions.

Palm Beach County purchased 10,300 acres of this project in 1996.

**Cost:**

Total	\$21,000,000
Project Development	N/A
Land Acquisition	\$21,000,000
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1996
Finish Date:	2002

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	3,750,000	625,000	625,000					5,000,000
Local	13,000,000	1,500,000	1,500,000					16,000,000
<b>Total</b>	<b>16,750,000</b>	<b>2,125,000</b>	<b>2,125,000</b>					<b>21,000,000</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Pal-Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration (OPE)  
**Project ID:** CERP 16  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** 3,000 acres acquired for hydropattern improvement; water control structures, and canal improvements

**Cost:**

Total	\$10,500,000
Project Development	\$172,000
Land Acquisition (estimated 3,000 acres)	\$8,000,000
Implementation	\$2,328,000
Operations and maintenance	\$60,000

**Project Schedule:**

Start Date: 10/2001  
 Finish Date: 9/2006

**Project Synopsis:** This feature includes water control structures, canal modifications and the acquisition of 3,000 acres located between Pal-Mar and the J.W. Corbett Wildlife Management Area in Palm Beach County. The purpose of this feature is to provide hydrologic connections between the Corbett Wildlife Management Area and: (1) The Moss Property, (2) the C-18 Canal, (3) the Indian Trail Improvement District, and (4) the L-8 Borrow Canal, in addition to extending the spatial extent of protected natural areas. These connections would relieve the detrimental effects on native vegetation frequently experienced during wet season and form an unbroken 126,000 acre greenbelt extending from the Dupuis Reserve near Lake Okeechobee across the J. W. Corbett Wildlife Management Area and south to Jonathan Dickenson State Park.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	2,029	2,029	29	582	582	0	0	0	0	0	0	\$5,250
SFWMD	0	0	2,029	2,029	29	582	582	0	0	0	0	0	0	\$5,250
Total	0	0	4,057	4,057	57	1,164	1,164	0	0	0	0	0	0	\$10,500

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Habitat and Species  
**Project Name:** Indian River Lagoon  
**Project ID:** GL10  
**Lead Agency:** Department of Environmental Protection and South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):** Acquisition of 5,136 acres

**Project Synopsis:** This project consists of two tracts on Hutchinson island, in St. Lucie County, totaling 5,136 acres. Approximately 87% of the two tracts are wetlands, dominated by red and black mangroves, with a few freshwater wetlands.

This acquisition is part of a larger effort by several counties in both the SFWMD and St. Johns River WMD to protect, preserve and restore the Indian River Lagoon. These lands represent the only two undeveloped parcels along the Indian River in St. Lucie County that are not in public ownership. Mosquito control impoundments are present on both tracts. Public ownership of these parcels would allow installation of operable water control structures that allow flushing of the mosquito control impoundments during most of the year. This flushing will provide an important source of mangrove detrital matter, which is critical to the health of the estuary. Public ownership will also prevent aerial applications of chemical pesticides for mosquito control. Project size is 5,136 acres of which, 344 acres have been acquired by the state at a cost of \$9.9 million and 52 acres acquired by the federal government at a cost of \$1.5 million. An Estimated \$137.3 million needed for 4,740 acres remaining to be acquired.

In 1997, protection was expanded to include lands in Martin County as well.

**Cost:**  
 Total: \$147,200,000

**Project Schedule:**  
 Start Date: 1998  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$1.5 M							
State	\$9.9 M						\$137.3 M	\$147.2 M
<b>Total</b>	<b>\$11.4 M</b>						<b>\$137.3 M</b>	<b>\$147.2 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** Shingle Creek Land Acquisition  
**Project ID:** KV17  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):**

**Project Synopsis:** Shingle Creek Swamp is located in southern Orange and northern Osceola counties. It is a major receiving body for stormwater runoff from areas south and southwest of Orlando. The Orange County portion of the swamp is more than 1.5 miles wide, and is dominated by Cypress, Loblolly Bay, and Red Maple. Shingle Creek itself was channelized in the 1920s and it borders the eastern edge of the swamp. Most to the floodplain in Osceola County is intact, but adjacent uplands, which historically were wiregrass/longleaf pine-dominated systems, have been cleared and planted as improved pasture. As mitigation for the Orlando Beltway Southern Connector, a hydrologic restoration plan was implemented in 1995 which equalizes water levels and sheetflow across the Orange County portion of Shingle Creek Swamp. The project is 7,655 acres of which 1,132 have been acquired.

<b>Cost:</b> Total	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1987  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
State	1,344,400							
<b>Total</b>	<b>1,344,400</b>							

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** Kissimmee River (Lower Basin) Land Acquisition  
**Project ID:** KV14  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Lower Basin project includes those lands in the historic river floodplain and along the C-38 canal in Pools B, C and D that are required for the Kissimmee River Restoration Project. It also includes lands outside the boundaries of the restoration project in Pools A and E. The total project size is 62,628 acres of which 53,889 acres have been acquired.

**Cost:**

Total*	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1985  
 Finish Date: 2007

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total*
State	59,431,131							
<b>Total</b>	<b>59,431,131</b>							

\* The total includes Kissimmee River Restoration Project Lands.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** Kissimmee River (Upper Basin) Land Acquisition  
**Project ID:** KV15  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Upper Basin project includes lands along the shoreline of Lake Okeechobee for hydropattern restoration and regulation of Lake Okeechobee to increase the water storage capacity of the Lake for release into the Kissimmee river. The land acquisition project total is 33, 919 acres of which 27,299 acres have been purchased.

<b>Cost:</b> Total*	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1990  
 Finish Date: 2007

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total*
Federal								
State	29,758,807							
Tribal								
Local								
Other								
Total	29,758,807							

\*The total includes Kissimmee River Restoration Project Lands.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Habitat and Species  
**Project Name:** Paradise Run Land Acquisition  
**Project ID:** KV04  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This 4,265 acre project lies west of canal C-38, between Water Control Structure S-65E and Lake Okeechobee in Glades and Okeechobee Counties. Current land use is predominantly improved pasture and cattle grazing but agricultural activities in the area are intensifying as exemplified by new, nearby row crops (potatoes), sod extraction, and citrus. The remnant river run and adjacent wetlands remain largely intact but have no continuous water flow; hence water quality (especially dissolved oxygen) has become poor and organics have accumulated deeply in the remnant river run. This area consistently has greater wading bird and waterfowl use than most any area of the Kissimmee River. Its close proximity to Lake Okeechobee puts it in foraging flight distance of the large wading bird rookeries. Restoration would be fairly simple because the remnant river run and wetlands are largely intact, and water could gravity flow from Pool E (elevation 21 feet msl) one-half mile to Paradise Run (elevation 16 feet msl). The C-38 canal would be bypassed.

<b>Cost:</b>	Total*	\$12,281,656
	Project Development	N/A
	Land Acquisition	\$12,281,656
	Implementation	N/A
	Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1998
Finish Date:	2001

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total*</b>
State	4,823,598	3,800,000	2,000,000	1,658,058				12,281,656
<b>Total</b>	<b>4,823,598</b>	<b>3,800,000</b>	<b>2,000,000</b>	<b>1,658,058</b>				<b>12,281,656</b>

\*The total includes Comprehensive Plan Implementation lands.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Istokpoga Regulation Schedule (OPE)  
**Project ID:** CERP 04  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Balance fish and wildlife benefits with long term management

**Cost:**

Total	\$50,000
Project Development	\$50,000
Land Acquisition (estimated 320 acres)	\$0
Implementation	\$0
Operations and maintenance	\$0

**Project Schedule:**

Start Date: 7/2000  
 Finish Date: 12/2001

**Project Synopsis:** This feature includes development of a plan to address water resource problems in the Lake Istokpoga Basin. Lake Istokpoga is a natural lake located in Highlands County, a tributary of Lake Okeechobee and the Kissimmee River. The major focus of this plan is to create a balance between the environmental needs, water supply and flood control in the Lake Istokpoga drainage basin, to examine Lake Istokpoga Basin with a view towards enhancing fish and wildlife benefits, and to develop a long-term comprehensive management plan.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate N/A										
Construction N/A										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	13	13	0	0	0	0	0	0	0	0	0	0	\$25
SFWMD	0	13	13	0	0	0	0	0	0	0	0	0	0	\$25
Total	0	25	25	0	0	0	0	0	0	0	0	0	0	\$50

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Winsburg Farms Wetland Restoration (OPE)  
**Project ID:** CERP 20  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 1996

**Goal(s) Addressed:** Goal 1.A.4

**Measurable Output(s):** Creation of a 175 acre Wetlands

**Cost:**

Total	\$14,140,000
Project Development	\$687,000
Land Acquisition (0 acres)	\$4,140,000
Implementation	\$9,313,000
Operations and maintenance	\$200,000

**Project Schedule:**

Start Date: 1/2000  
 Finish Date: 12/2005

**Project Synopsis:** This feature includes the construction of a 175-acre wetland east of Loxahatchee Wildlife Preserve in Palm Beach County. The feature will reduce the amount of treated water from the Southern Region Water Reclamation Facility wasted in deep injection wells by further treating and recycling the water.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	86	1,121	1,121	86	2,328	2,328	0	0	0	0	0	0	\$7,070
Local	0	86	1,121	1,121	86	2,328	2,328	0	0	0	0	0	0	\$7,070
Total	0	172	2,242	2,242	172	4,657	4,657	0	0	0	0	0	0	\$14,140

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – Seminole Tribe Big Cypress Water Conservation Plan (East) (OPE)  
**Project ID:** CERP 11  
**Lead Agency:** U.S. Army Corps of Engineers / Seminole Tribe  
**Authority:** WRDA 2004 (scheduled)

**Goal(s) Addressed:** 1.A.4 and 1.B.3

**Measurable Output(s):** Construction of conveyance systems, major canal bypass structures, irrigation storage cells, and water resource areas

**Cost:**

Total	\$75,288,000
Project Development	\$4,778,000
Land Acquisition (estimated 3,800 acres)	\$5,735,000
Implementation	\$64,775,000
Operations and maintenance	\$775,000

**Project Schedule:**

Start Date: 1/2001  
 Finish Date: 6/2008

**Project Synopsis:**

This feature includes construction of water control, management and treatment facilities in the Big Cypress Reservation. The construction elements include conveyance systems, major canal bypass structures, irrigation storage cells, and water resource areas. The purpose of this feature is to improve the quality of water and runoff from phosphorous generating agricultural sources within the Reservation. The area is traversed by the L-28 and L-28I Borrow Canals and the North and West Feeder Canals, all of which were constructed as part of the CS&F Project. This comprehensive watershed management system is designed to achieve environmental restoration on the Reservation, the Big Cypress Preserve, and the Everglades Protection Area. In addition, the project will reduce flood damage and promote water conservation.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	478	1,912	1,912	478	11,274	10,796	10,796	0	0	0	0	0	\$37,644
Local	0	478	1,912	1,912	478	11,274	10,796	10,796	0	0	0	0	0	\$37,644
Total	0	956	3,823	3,823	956	22,547	21,592	21,592	0	0	0	0	0	\$75,288

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Park Restoration (OPE)  
**Project ID:** CERP 59  
**Lead Agency:** U.S. Army Corps of Engineers / Lee County  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Creation of a 40 acre Marsh flowway

**Cost:**

Total	\$5,166,000
Project Development	\$343,000
Land Acquisition (estimated 40 acres)	\$166,000
Implementation	\$4,657,000
Operations and maintenance	\$62,000

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 6/2004

**Project Synopsis:** This feature includes the construction of a 40-acre marsh/flowway in an abandoned rock mine, removal of exotic vegetation, and planting native vegetation on 11 acres of uplands and 9 acres of littoral zone. This feature is located in the Lee County Lakes Regional Park, upstream of Estero Bay.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	57	57	140	1,164	1,164	0	0	0	0	0	0	0	\$2,583
Local	57	57	140	1,164	1,164	0	0	0	0	0	0	0	\$2,583
Total	114	114	280	2,329	2,329	0	0	0	0	0	0	0	\$5,166

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Southern Golden Gate Estates Restoration (OPE)  
**Project ID:** CERP57  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** spreader channels, canal plugs, road removal and pump stations

**Cost:**

Total	\$45,654,000
Project Development	\$1,068,000
Land Acquisition (0 acres)	\$30,104,000
Implementation	\$14,482,000
Operations and maintenance	\$93,000

**Project Schedule:**

Start Date: 7/1999  
 Finish Date: 6/2005

**Project Synopsis:** This feature includes a combination of spreader channels, canal plugs, road removal and pump stations in the Western Basin and Big Cypress, Collier County, south of I-75 and north of U.S. 41 between the Belle Meade Area and the Fakahatchee Strand State Preserve. This project will restore and enhance the wetlands in Golden Gate Estates and in adjacent public lands by reducing over-drainage.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	134	134	15,186	134	3,621	3,621	0	0	0	0	0	0	\$22,827
SFWMD	134	134	15,186	134	3,621	3,621	0	0	0	0	0	0	\$22,827
Total	267	267	30,371	267	7,241	7,241	0	0	0	0	0	0	\$45,654

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Henderson Creek/Belle Meade Restoration (OPE)  
**Project ID:** CERP 58  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** 10-acre stormwater lake/marsh filtering system; four culverts; a swale and spreader system, and the removal of the Road-to-Nowhere

**Cost:**

Total	\$4,806,000
Project Development	\$260,000
Land Acquisition (estimated 12,415 acres)	\$1,029,000
Implementation	\$3,517,000
Operations and maintenance	\$41,000

**Project Schedule:**

Start Date: 1/2000  
 Finish Date: 12/2005

**Project Synopsis:** This feature combines multiple individual elements to complement each other to form a larger-scale combined effect. This feature includes a 10-acre stormwater lake/marsh filtering system; four culverts under State Road 951; hydrologic restoration around Manatee Basin including culverts, ditching, removal of some roadbed; invasive, exotic plant removal; a public access point and interpretive boardwalk; construction of a swale and spreader system; and removal of the Road-to-Nowhere. This southwest Florida feature is located in Collier County. The area known locally as Belle Meade is the primary drainage basin for the Henderson Creek Estuary, which drains into Rookery Bay.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	33	290	290	33	879	879	0	0	0	0	0	0	\$2,403
Local	0	33	290	290	33	879	879	0	0	0	0	0	0	\$2,403
Total	0	65	580	580	65	1,759	1,759	0	0	0	0	0	0	\$4,806

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** Southern Glades Land Acquisition  
**Project ID:** CE66  
**Lead Agency:** South Florida Water Management District, Miami-Dade County  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This 37,620-acre project is located adjacent to the G111 Canal, between the Everglades National Park and U.S. 1. Approximately 32,215 acres have been acquired by the SFWMD. This project includes in the total acreage 7,500 acres of Miami-Dade County's "C-111 North Project". As to this 7,500 acres there is a 50/50 co-operative cost-share agreement between Miami-Dade County and the SFWMD. The project land is dominated by Everglades sawgrass marsh and tropical hardwood hammock. Land management will be carried out by the Fish and Wildlife Conservation Commission and the land is currently open for public use. The majority of the land in this land acquisition project is necessary for the C-111 project and C-111 North Spreader Canal CERP project. These projects will benefit the flow of water into Everglades National Park and Northeast Florida Bay.

<b>Cost:</b>	Total	SFWMD does not make cost projections on SOR projects
	Project Development	N/A
	Land Acquisition	
	Implementation	N/A
	Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1964  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State*	12,802,493							
Local*	499,024							
<b>Total*</b>	<b>13,301,517</b>							

\*Does not include Miami-Dade County's C-111 North project lands.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species and Water Quality  
**Project Name:** Corkscrew Regional Mitigation Bank Land Acquisition  
**Project ID:** SW53  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):**

**Project Synopsis:** The Corkscrew Regional Mitigation Bank is located in southern Lee County, along Corskscrew Road (SR 850). It is adjacent to Lee County’s Stairstep Mitigation Areas, which has been established to offset impacts associated with the Southwest Florida Regional Airport. The total project acreage is 661 acres. This project has been completed.

**Cost:**

Total	\$1,159,040
Project Development	N/A
Land Acquisition	\$1,159,040
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1995
Finish Date:	1999

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
State	\$,159,040							\$,159,040
<b>Total</b>	<b>\$1,159,040</b>							<b>\$1,159,040</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project name:** Belle Meade  
**Project ID:** SW04  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** This area of 27,200 acres, includes some of the most extensive examples of mature old-growth hydric pine flatwoods in southwest Florida not within other CARL projects. The hydrology of the hydric pine flatwoods and dwarf cypress communities within the project is relatively intact. Three archaeological sites have been recorded within the project boundaries, and additional sites may be present. The area is vulnerable to changes in the timing and amount of water flowing through it. Residential and commercial development spreading from Naples threatens it. Project size is 27,200 acres of which 16,442 acres have been acquired at a cost of \$32.8 million. The 10,758 acres remaining to be acquired have an assessed value of \$14.9 million.

**Cost:**  
 Total: \$47,700,000  
 Project Development:  
 Land Acquisition:  
 Implementation:  
 Operations and maintenance:

**Project Schedule:**

Start Date: 1993  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$32.8 M						\$14.9 M	\$47.7 M
<b>Total</b>	<b>\$32.8 M</b>						<b>\$14.9 M</b>	<b>\$47.7 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality, Hydrological Restoration, Habitat and Species  
**Project Name:** Corkscrew Regional Ecosystem Watershed  
**Project ID:** SW08  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The CREW covers nearly 59,008 acres in Lee and Collier counties and is located at the top of the western Big Cypress watershed. It conveys surface water to private, State, and federally protected natural areas, including Corkscrew Swamp Sanctuary, Florida Panther National Preserve, and the Everglades National Park. The area supports populations of at least two species of rare and endangered orchids and includes an unusual stand of dwarf bald cypress. Land management will be carried out the SFWMD and the FGFWFC under contract with the SFWMD.

Hydologic restoration of the CREW restore and protect important habitat for the Florida Panther and the Florida Black bear and will protect the quality of water delivered to Corkscrew Swamp Sanctuary, Florida Panther National Preserve, ENP, and Estero Bay. NOTE: Lee County has agreed to cost share this project by purchasing properties equaling the \$10,000,000 appropriated. These properties have been turned over to the SFWMD for management with the balance of the project. The project size is 59,008 acres and 22,577 acres were purchased at a cost of \$17.3 million and the 36,431 acres remaining to be acquired have an assessed value of \$28.5 million.

**Cost:** Total: \$45,800,000

**Project Schedule:**

Start Date: 1991  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$17.3 M						\$28.5 M	\$45.8 M
<b>Total</b>	<b>\$17.3 M</b>						<b>\$28.5 M</b>	<b>\$45.8 M</b>

This total includes Comprehensive Plan Implementation lands.

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name** Fakahatchee Strand  
**Project ID:** SW09  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** Fakahatchee Strand is located in Collier County. Of the subtropical swamps in South Florida, Fakahatchee Strand is perhaps the most significant, being the richest in orchids and other rare tropical plants. It is the most critical to the survival of the Florida panther, and the most important for the mangrove swamps of the Ten Thousand Islands. The project area is probably the best example of the strand swamp found in the United States. It is linked hydrologically to the Everglades system and is important to the estuarine ecosystem of the Ten Thousand Islands. Project size is 80,231 acres, of which 58,648 acres have been acquired at a cost of \$20.2 million and the remaining 21,583 acres have been assessed at \$4.6 million.

**Cost:**  
 Total: \$24,800,000

**Project Schedule:**

Start Date: 1980  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$20.2 M						\$4.6 M	\$24.8 M
<b>Total</b>	<b>\$20.2 M</b>						<b>\$4.6 M</b>	<b>\$24.8 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Southern Golden Gate Estates  
**Project ID:** SW10  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 1.A.4 and 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The Southern Golden Gate Estates (SGGE) encompasses an approximately 94 square mile area of sensitive environmental landscape in South Central Collier County. It is an important surface water storage and aquifer recharge area with a unique ecology of cypress, wet and dry prairie, pine flatwoods and hardwood hammock swamp communities; and includes three flowways that contribute freshwater input to the Ten Thousand Island estuary of the western Everglades watershed. The area supports a diversity of wildlife, including at least a dozen endangered and threatened vertebrates as well as a large variety of rare orchids and other air plants. The area is linked hydrologically to the Everglades ecosystem and contains remnants of two large cypress strands, the Lucky Lake and Picayune Strands. The rapid urbanization of southwest Florida is posing a continuous and increasing threat to the wildlife habitat and maintenance of water quality within SGGE. Acquisition of lands within SGGE will preserve large pieces of the South Florida ecosystem. Ultimately, this will contribute to the formation of a continuous public conservation area extending across South Florida from the Gulf Coast to approximately 10 miles from the Atlantic Ocean, protecting the Everglades ecosystem from the encroachment of residential, commercial, and industrial developments. The project size is 57,200 acres, of which 35,708 acres have been acquired at a cost of \$41 million. An estimated \$64 million to \$107 million will be needed to acquire the remaining 21,492 acres.

**Cost:** Total: \$148,000,000

**Project Schedule:**

Start Date: 1984  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$20 M						\$18 M	\$38 M
State	\$20.9 M						\$89 M	\$110 M
<b>Total</b>	<b>\$40.9 M</b>						<b>\$107 M</b>	<b>\$148 M</b>

Use fully funded numbers when available; use current cost for Restudy

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality, Habitat and Species  
**Project Name:** McDaniel Ranch Land Acquisition  
**Project ID:** SW51  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.A.4 and 2.A.3

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** McDaniel Ranch covers nearly 23,000 acres in southeastern Hendry County. Total project acreage is 7,000 acres. The property owners have approached the District about selling a conservation easement in conjunction with an application for a surface water management permit. As proposed, the conservation easement would include only those lands not required for the surface water management system. The easement would grant the McDaniel family the following rights: timber management, cattle grazing, lease hunting and eco-tourism. No acreage has been acquired to date.

**Cost:**

Total	SFWMD does not make cost projections on SOR project
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR project
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 2000  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
<b>Total</b>								

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Science

**Project name:** Soil Survey for Everglades National Park, Big Cypress, National Preserve, and Water Conservation Areas

**Project ID:** CE05

**Lead Agency:** NRCS

**Authority:** PL-46

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Acres Mapped

**Project Synopsis:** This project will produce a comprehensive soil survey of Everglades National Park, Big Cypress National Preserve, and the Water Conservation Areas. The project is designed to produce a spatial representation of the soils on approximately 2,000,000 acres, and a detailed description of each soil's profile. Currently there is not a detailed soil survey available to land managers, modelers and planners. This project will provide an effective correlation/association tool for land managers, modelers and planners to identify, restore, and sustain natural ecological communities.

**Cost:** Total : \$5,340,000  
 Project Development : \$5,340,000  
 Land Acquisition  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date: 2001  
 Finish Date: 2006

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal			\$550K	\$1060K	\$1060K	\$1060K	\$1,610K	\$4,280K
State								
Tribal								
Local								
Other								
<b>Total</b>			<b>\$550K</b>	<b>\$1060K</b>	<b>\$1060K</b>	<b>\$1060K</b>	<b>\$1,610K</b>	<b>\$5,340K</b>

**For More Information Contact:** Greg Hendricks, 561-795-5451  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Science  
**Project name:** Monitoring of Organic Soils in the Everglades  
**Project ID:** GL37  
**Lead Agency:** NRCS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Resource Assessment

**Project Synopsis:** This project will produce an assessment of the amount of accretion and/or subsidence that has occurred on organic soils throughout the Everglades region. ARS and IFAS have initiated work within the Everglades Agricultural Area (EAA) based upon observations taken every 5-year from 1913 – 1978. The goal of this project is to expand this assessment to the entire Everglades ecosystem, in an effort to provide scientists and land managers a tool to ascertain the effects from hydrologic condition changes upon the organic soil resource.

**Cost:**

Total:	\$1,136,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance:	\$1,136,000

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2010

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$25K		\$100K	\$100K	\$100K	\$100K	\$700K	\$1125K
State	\$11K							\$ 11K
<b>Total</b>	<b>\$36K</b>		<b>\$100K</b>	<b>\$100K</b>	<b>\$100K</b>	<b>\$100K</b>	<b>\$700K</b>	<b>\$1,136K</b>

**For More Information Contact:** Greg Hendricks, 561-795-5451  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Science  
**Project name:** Soil Survey Update for the Everglades Agricultural Area  
**Project ID:** GL38  
**Lead Agency:** NRCS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Acres Mapped

**Project Synopsis:** This project will produce an updated comprehensive soil survey of the Everglades Agricultural Area (EAA). The project is designed to produce a spatial representation of the soils on approximately 700,000 acres, and a detailed description of each soil's profile. The current soil survey is over 20 years old. Significant changes have occurred due to organic soil subsidence and changes in landscape features. This project will provide an effective conservation planning tool for on-farm decision making that will contribute to over-all ecosystem restoration efforts.

**Cost:**

Total:	\$1,500,000
Project Development:	\$1,500,000
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	2002
Finish Date:	2005

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal				\$250K	\$500K	\$500K	\$250K	\$1,500K
<b>Total</b>				<b>\$250K</b>	<b>\$500K</b>	<b>\$500K</b>	<b>\$250K</b>	<b>\$1,500K</b>

**For More Information Contact:** Greg Hendricks, 561-795-5451  
 USDA - NRCS

## DATA SHEET PROFILE

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Everglades Rain-Driven Operations (H)  
**Project ID:** CERP 65  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 1.A-4

**Measurable Output(s):** Revised Water Conservation Area regulation schedule

**Cost:**  
Total TBD

**Project Schedule:**

Implement when appropriate as other facilities come on line.

**Project Synopsis:** Modifications to the regulation schedules for Water Conservation Areas 2A, 2B, 3A, 3B and the current Rainfall Delivery Formula for Everglades National Park will be made to implement rain-driven operations for all of these areas. These new operational rules are intended to improve timing and location of water depths in the Water Conservation Areas and Everglades National Park and to restore more natural hydropatterns.

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Big Cypress/L-28 Interceptor Modifications (CCC)  
**Project ID:** CERP 10  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.A.4 and 1.B.1

**Measurable Output(s):** 1,900 acres  
 Levee degrading and canal filling

**Cost:**

Total	\$ 42,751,000
Project Development	\$2,477,000
Land Acquisition (estimated 1,900 acres)	\$6,700,000
Implementation	\$ 33,574,000
Operations and maintenance	

**Project Schedule:**

Start Date: 10/2006  
 Finish Date: 9/2016

**Project Synopsis:** This feature includes modification of levees and canals, water control structures, pumps, and stormwater treatment areas with a total storage capacity of 7,600 acre-feet located within and adjacent to the Miccosukee and Seminole Indian Reservations in Collier and Hendry Counties. The initial design of the stormwater treatment areas assumed a total acreage of 1,900 acres with the water level fluctuating up to 4 feet above grade. Conceptual sizes of the stormwater treatment areas were based on interim phosphorus concentration targets in the conceptual plan for the Everglades Construction Project. The final size, depth and configuration of this facility, including the stormwater treatment areas, will be determined through more detailed planning and design. Design of the stormwater treatment areas will be based on water quality criteria of the Seminole Tribe and criteria applicable to Big Cypress National Preserve, as appropriate.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Planning & Design											
Real Estate											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Balance to Complete	Total
Federal	0	0	206	206	1,323	1,323	1,323	206	4,197	4,197	4,197	4,197	0	\$21,376
SFWMD	0	0	206	206	1,323	1,323	1,323	206	4,197	4,197	4,197	4,197	0	\$21,376
Total	0	0	413	413	2,646	2,646	2,646	413	8,394	8,394	8,394	8,394	0	\$42,751

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – Dade-Broward Levee/ Pennsuco Wetlands (BB)  
**Project Name:** SE27  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** water control structures; levee modifications

**Cost:**

Total	\$18,778,000
Project Development	\$693,000
Land Acquisition (estimated 10,000 acres)	\$8,676,000
Implementation	\$9,409,000
Operations and maintenance	\$105,871

**Project Schedule:**

Start Date: 10/2001  
 Finish Date: 9/2008

**Project Synopsis:** This feature includes water control structures and modifications to the Dade-Broward Levee and associated conveyance system located in Miami-Dade County. The final size and configuration of these facilities will be determined through more detailed planning and design to be completed as a part of the Water Preserve Areas Feasibility Study. The purpose of this feature is to reduce seepage losses to the east from the Pennsuco Wetlands and southern Water Conservation Area 3B, enhance hydroperiods in the Pennsuco Wetlands, and provide recharge to Miami-Dade County’s Northwest Wellfield.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	2,285	2,285	116	1,176	1,176	1,176	1,176	0	0	0	0	\$9,389
SFWMD	0	0	2,285	2,285	116	1,176	1,176	1,176	1,176	0	0	0	0	\$9,389
Total	0	0	4,569	4,569	231	2,352	2,352	2,352	2,352	0	0	0	0	\$18,778

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Florida Bay and the Florida Keys Feasibility Study  
**Project ID:** CERP 78  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 96

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):** Feasibility Report

**Cost:**  
 Total TBD  
 Project Development  
 Land Acquisition  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date: 10/1999  
 Finish Date: 10/2004

**Project Synopsis:** Construction of Flagler’s railroad to Key West and subsequent conversion into U.S. Highway 1 (US-1) involved the placement of fill material in wetlands and open water for the numerous causeways between the keys. These causeways altered tidal flows between Florida Bay and the Atlantic Ocean, resulting in adverse water quality and fish and wildlife habitat impacts. One of the House of Representatives Committee on Public Works and Transportation resolutions of September 24, 1992 requested the Corps of Engineers conduct a study of Florida Bay, including a comprehensive, coordinated ecosystem study with hydrodynamic modeling of Florida Bay and its connections to the Everglades, the Gulf of Mexico, and the Florida Keys Coral Reef ecosystem. Hydrodynamic and water quality models currently under development for Florida Bay will provide the tools necessary for evaluation of the problem in a holistic manner. A feasibility study is recommended to comprehensively evaluate Florida Bay and to determine the types of modifications that are needed to successfully restore water quality and ecological conditions of the Bay.

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Modeling									
Recon Study									
Feasibility Study									

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal														
Local							0							
Total														

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Southwest Florida Feasibility Study  
**Project ID:** CERP 79  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 96

**Goal(s) Addressed:** 1.A.4 and 1.B.3

**Measurable Output(s):** Feasibility Report

**Cost:**

Total	\$6,790,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	4/1999
Finish Date:	3/2004

**Project Synopsis:** The Caloosahatchee River is the only portion of the C&SF Project that lies in southwest Florida. The river serves as an outlet from Lake Okeechobee to the Gulf of Mexico and is the major source of surface water supply of the Lower West Coast region. It provides agricultural and lawn irrigation, public water supplies and is used to recharge shallow wellfields. The river also provides drainage for private drainage systems and local drainage districts.

The facilities included in the Comprehensive Plan for the Caloosahatchee River Basin will help meet the needs of the basin. However, there are additional water resources problems and opportunities in southwest Florida that require studies that are beyond the scope of the Comprehensive Plan. For example, primary water quality and hydrologic data do not exist for much of the region. This lack of information assessments and monitoring data is a fundamental gap for this region of the state and greatly hinders its long-term water resources management opportunities.

The Southwest Feasibility Study will include Collier, Lee, Charlotte, Glades and Hendry Counties; and provide a framework to address the health of aquatic ecosystems; water flows; water quality (including appropriate pollution reduction targets), water supply; flood protection, wildlife, and biological diversity and natural habitat. The study will also investigate non-structural alternatives.

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Recon Study									
Feasibility Study									

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	0	50	1,000	1,000	1,000	345	0	0	0	0	0	0	0	\$3,395
Local	0	50	1,000	1,000	1,000	345	0	0	0	0	0	0	0	\$3,395
Total	0	100	2,000	2,000	2,000	690	0	0	0	0	0	0	0	\$6,790

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Herbert Hoover Dike Stabilization  
**Project Number:** GL01  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** O&M

**Goal(s) Addressed:** 1.A.4

**Measurable Output(s):** Major Rehabilitation Report, stabilization of the dike

**Cost:**  
 Total \$248,121,000

**Project Schedule:**

Start Date: 1995  
 Finish Date: 2006

**Project Synopsis:** The purpose of the project is to protect the structural integrity of the Herbert Hoover Dike during extreme high water conditions. Construction of the Herbert Hoover Dike around Lake Okeechobee was initiated in the early 1930's and the last features were completed in the 1970's. The levee was constructed and improved through an incremental process during this period. Based on the best available existing data, it appears that the levee does not meet current safety factors for extreme flood conditions. Geotechnical data are being collected and evaluated to determine the extent of the problem and to develop recommendations for corrective actions. The results will be documented in a Major Rehabilitation Report. Construction cost may be incurred between 2000-2006. Note: Construction cost may be cost shared.

This project will contribute to the restoration of Lake Okeechobee and more natural water flows to the estuaries and the Everglades by avoiding operational constraints that would reduce the ability to meet restoration goals. If the Herbert Hoover Dike is not stable under high water conditions, it may be necessary to modify the operation of the project to minimize the probability of experiencing high water conditions. Such operations could dictate when and how much water is released from the lake. As a result, operational flexibility would be lost and restoration opportunities would be reduced.

	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Program											

**Detailed Project Budget Information (\$1000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Balance to complete</b>	<b>Total</b>
USACE	1,290	1,275	4,400	20,000	20,000	20,000	15,000	15,000	151,156	\$248,121
Local										\$0
<b>Total</b>										<b>\$248,121</b>

**Hyperlink:** [www.saj02.usace.army.mil](http://www.saj02.usace.army.mil)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project name:** Kissimmee River Restoration  
**Project ID:** KV01  
**Lead Agency:** USACE/SFWMD  
**Authority:** WRDA 92

**Goal(s) Addressed:** 1.A.4 and 2.A.3

**Measurable Output(s):**

**Project Synopsis:** The project includes 3,000 square miles stretching from Orlando to Lake Okeechobee in central Florida and involves the ecosystem restoration of the historic floodplain to reestablish wetland conditions through modifications to the operation of the lakes, modification of Structure 65, enlargement of canals 36 and 37, backfilling of 22 miles of C-38, excavation of about 9 miles of new river channel, removal of two water control structures and locks, and land acquisition.

**Cost:**

Total	\$518,000,000
Project Development	
Land Acquisition	\$173,897,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: 03/1994  
 Finish Date: 09/2009

	1994	1995	1996	1997	1999	2000	2002	2004	2006	2008	2009	
Design												
Real Estate												
Construction												

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	40,527	23,773	20,000	37,362	33,674	17,140	52,324	224,800
SFWMD	70,793	99,813	18,215	10,132	18,586	4,961	70,700	293,200
<b>Total</b>	<b>111,320</b>	<b>123,586</b>	<b>38,215</b>	<b>47,494</b>	<b>52,260</b>	<b>22,101</b>	<b>123,024</b>	<b>518,000</b>

**Hyperlink:** [www.saj02.usace.army.mil](http://www.saj02.usace.army.mil)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: Indian River Lagoon Feasibility Study  
**Project ID:** GL19  
**Lead Agency:** USACE/SFWMD  
**Authority:** WRDA 96

**Goal(s) Addressed:** 1.A.4 and 1.B.3

**Measurable Output(s):** Reports

**Cost:**

Total	\$6,356,000
Project Development	\$6,356,000
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: 1996  
 Finish Date: 2001

**Project Synopsis:** The Indian River Lagoon Feasibility Study is ongoing, and will formulate regional water resource plans for Martin and St. Lucie counties to address the much needed attenuation of stormwater runoff to the St. Lucie estuary and Indian River Lagoon, as well as supplemental irrigation water supply.

	1996	1997	1998	1999	2000	2001
Planning & Design						
Real Estate						
Construction						

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	1,124	1,346	708				0	3,178
SFWMD	1,671	1,047	460				0	3,178
<b>Total</b>	<b>2,795</b>	<b>2,393</b>	<b>1,168</b>				<b>0</b>	<b>6,356</b>

**Hyperlink:** [www.saj02.usace.army.mil](http://www.saj02.usace.army.mil)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project name:** Critical Ecosystems Restoration Projects - Ten Mile Creek  
**Project ID:** GL25  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 96

**Goal(s) Addressed:** 1.A.4 and 1.B.3

**Measurable Output(s):** water preserve area and polishing cell, 2,740 acres enhanced by project, 5000 acre feet of storage provided on 550 acres of land.

**Cost:**

Total	\$30,458,500
Project Development	\$ 2,107,000
Land Acquisition	\$ 6,845,000
Implementation	\$21,506,500
Operations and maintenance	

**Project Schedule:**

Start Date:	1997
Finish Date:	2003

**Project Synopsis:** The construction of a water preserve area and polishing cell will attenuate flows and improve water quality discharge into St. Lucie Estuary. Design is underway.

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Design									
Real Estate									
Construction									

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	400	1,000	372	8,386	5,071	0	0	15,229
SFWMD	575	70	629	5,614	1,496	0	0	8,384
Non-Fed LERRD	6,845	0	0	0	0	0	0	6,845
<b>Total</b>	<b>7,820</b>	<b>1,070</b>	<b>1,001</b>	<b>14,000</b>	<b>6,567</b>	<b>0</b>	<b>0</b>	<b>30,458</b>

**Hyperlink:** [www.saj.usace.army.mil](http://www.saj.usace.army.mil)

**DATA SHEET PROFILE**

**Program Name:** Environmental Restoration  
**Project Name:** North Fork New River Restoration Project  
**Project ID:** SE15  
**Lead Agency:** Broward County Department of Planning & Environmental Protection  
**Authority:** Federal: Section 528, WRDA 1996 (PL 104-303)  
 State: Legislative Appropriations, FY 1996-97, 1997-98, 1998-99, 2000-01

**Goal(s) Addressed:** 1.A.4 and 2.A.3

**Measurable Outputs:** Improved water quality; improved flushing; improved riverbed sediment quality; reduced/eliminated exotic vegetation and restored natural vegetation along riverbanks; increased community involvement and stewardship.

**Project Synopsis:** The project includes four efforts: dredging the North Fork to improve navigation, eliminate unclean sediments, and rid the river of trash; remove exotic vegetation and restore native shoreline plants; conduct a study to determine the beneficial effects of improved fresh water input to the North Fork; and conduct a community outreach, education, and stewardship program.

**Costs (estimated):**

Total:	\$2.3 million
Project Development:	\$736,000
Land Acquisition (LEERDS):	\$ 25,000
Implementation:	\$1.5 million
Operation and Maintenance:	Not included

**Project Schedule:**

Start Date: Fall, 1997  
 Finish Date: Spring, 2002

**Detailed Project Budget Information (in thousands of Dollars)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to Complete</b>	<b>Total</b>
Federal	0	0	0	1,068	0	0	0	1,068
State	600	450	0	0	0	0	0	1,050
Tribal	0	0	0	0	0	0	0	0
Local	15	24	48	94	0	0	0	181
Other	37	0	0	0	0	0	0	37
<b>Total</b>	<b>652</b>	<b>474</b>	<b>48</b>	<b>1,162</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,336</b>

**Hyperlink:** Not Available

**DATA SHEET PROFILE**

**Program Name:** Infrastructure Investment  
**Project Name:** L-8 Canal - Water Catchment Area - Loxahatchee Slough Infrastructure Improvements  
**Project ID:** GL24  
**Lead Agency:** City of West Palm Beach  
**Authority:**

**Goal(s) Addressed:** I.A.4

**Measurable Output(s):**

**Project Synopsis:** Will capture and store excess surface water as an alternative source for meeting present and future urban, agricultural and environmental demands. The project includes infrastructure improvements that include construction of aquifer storage and recovery (ASR) wells, canal and levee improvements, pumping stations, treatment and other control facilities to take water from L-8 Drainage Basin and Canal and route it to the City of West Palm Beach's Water Catchment Area and then into the Loxahatchee Slough and Estuary

**Cost:**  
 Total: \$32,000,000

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2002

	1997	1998	1999	2000	2001	2002	2003	2004
<b>Phase I</b>								
<b>Phase II</b>								
<b>Phase III</b>								
<b>Phase IV</b>								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$6,832	\$4,000	\$4,000	\$1,168				\$16,000
State	\$4,802	\$3,750	\$3,750	\$918				\$13,220
City	\$2,030	\$250	\$250	\$250				\$2,780
<b>Total</b>	<b>\$11,837</b>	<b>\$8,000</b>	<b>\$8,000</b>	<b>\$2,336</b>				<b>\$32,000</b>

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Infrastructure Investment, Natural Resource Management  
**Project Name:** Loxahatchee Slough Ecosystem Restoration  
**Project ID:** GL26  
**Lead Agency:** SFWMD, Palm Beach County DERM, USACE  
**Authority:**

**Goal(s) Addressed:** 1.A.4, 2.A.3, and 2.B.4

**Measurable Output(s):**

**Project Synopsis:** This ecosystem restoration project has two components; the construction of a new water control structure in the C-18 canal to permit re-flooding of Loxahatchee Slough wetlands previously drained by construction of the C-18 canal, and the elimination of approximately 1800 acres of melaleuca infestation associated with over-drained wetlands in the Loxahatchee Slough. The structure will raise water levels in the east leg of the C-18 canal to permit hydroperiod restoration for approximately 12,000 acres of the adjacent Loxahatchee Slough. This area proposed for hydroperiod restoration and exotic plant removal was purchased by Palm Beach County in 1996 as part of its Environmentally Sensitive Lands Acquisition Program. The Loxahatchee Slough is currently drained to elev. 15.0' by the C-18 canal. This proposed structure would permit management of some 12,000 acres to wet seasonal highs of about 18', while still maintaining flood protection for surrounding developed lands in the C-18 basin. In addition to environmental benefits, the project also enhances groundwater recharge for two major water supply utilities. Hydroperiod enhancement of this area was proposed in a USACE Environmental Assessment of the Loxahatchee Slough completed in 1983. The hydraulic and hydrologic models necessary for structure design are currently under construction as part of a \$300,000 cooperative agreement between the SFWMD and the City of West Palm Beach. Model work will be completed in FY98. Funding for structure construction is targeted for FY00. Melaleuca eradication is planned for FY99-FY00 to allow substantial completion prior to re-flooding of the Slough.

**Cost:**

Total: \$6,850,000

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2000

	1997	1998	1999	2000	2001	2002	2003	2004
Melaleuca Eradication								
Model Dev.								
Alternative/Design								
Construction								
Levee Gaps								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2001	2003	2004	Balance to complete	Total
Federal	\$1,500	\$1,925						\$3,425
State	\$1,000	\$1,425						\$2,425
County	\$500	\$500						\$1,000
<b>Total</b>	<b>\$3,000</b>	<b>\$3,850</b>						<b>\$6,850</b>

**DATA SHEET PROFILE**

**Program Name:** Miccosukee Tribe of Indians of Florida  
**Project Name:** Miccosukee Water Resources Management  
**Project ID:** CE37  
**Lead Agency:** Miccosukee Tribe  
**Authority:** Inherent Tribal Sovereignty.

**Goal(s) Addressed:** 1.A.4 and 1.B.3

**Measurable Output(s):** 1. Allows Tribe to meaningfully participate in ecosystem restoration activities, 2. Allows development of a regulatory program to manage discharges to Tribal Reservation lands (approx. 75,000 acres), 3. Allows for Management of a Surface Water Management System (approx 10,000 acres) to include a 900 acre STA, 4. Allows for water quality monitoring of 189,000 acres of the central Everglades, 5. Allows for an aquatic weed control program on Tribal Reservation lands (approx. 75,000 acres), 6. Allows for GIS/GPS activities to integrate data collection with resource management, 7. This project provides for improved management of flows and quantity distribution as well as enhanced water quality benefits, both on and off Reservation lands.

**Project Synopsis:** The project involves a holistic approach to surface-water resources management within the Federal Reservation, Miccosukee Leased Lands and Miccosukee Reserved Area (approx 265,000 acres total). It includes field surveying of canals and levees, engineering design, ditch excavation, installation of water control structures, aquatic weed control, collection and analysis of water quality data, and integration of GIS/GPS data into management data bases. This project allows the Tribe to participate in a meaningful way in the restoration activities while monitoring the success of multiple agency activities (rights protection).

**Cost:**

Total:	\$25,200,000.00 (\$2.1 Million annually)
Project Development :	Ten (10) year program
Land Acquisition:	

**Project Schedule:**

Start Date: No funding to date.  
 Finish Date: Completion of Restoration Activities

**Detailed Project Budget Information (in \$1,000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2001</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal								
State								
Tribal								
Local								
Other								
<b>Total</b>	<b>0</b>	<b>2,100</b>	<b>2,100</b>	<b>2,100</b>	<b>2,100</b>	<b>2,100</b>		<b>25,200</b>

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Okeechobee Watershed Water Quality Treatment Facilities (OPE)  
**Project ID:** CERP 41  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** 1,775 acres reservoir-assisted STA  
 2,600 acres reservoir-assisted STA  
 Restoration of 3,500 acres of wetlands

**Cost:**

Total	\$ 62,247,000
Project Development	\$3,283,000
Land Acquisition (estimated 4,515 acres)	\$14,448,000
Implementation	\$44,516,000
Operations and maintenance	\$2,602,000

**Project Schedule:**

Start Date: 10/2001  
 Finish Date: 9/2010

**Project Synopsis:** This feature includes two reservoir-assisted stormwater treatment areas and plugging of select local drainage ditches. The initial design of these reservoir-assisted stormwater treatment areas assumes a 1,775-acre facility in the S-154 Basin in Okeechobee County and a 2,600-acre facility in the S-65D sub-basin of the Kissimmee River Basin in Highlands and Okeechobee Counties. The plugged drainage ditches will result in restoration of approximately 3,500 acres of wetlands throughout the Lake Okeechobee watershed basin. This feature is also consistent with the recommendations of the South Florida Ecosystem Restoration Working Group’s Lake Okeechobee Issue Team for achieving water quality restoration objectives in the Lake and should provide significant long-term water quality benefits for the Lake.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Planning & Design											
Real Estate											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	328	328	3,940	3,940	328	5,565	5,565	5,565	5,565	0	0	\$31,124
SFWMD	0	0	328	328	3,940	3,940	328	5,565	5,565	5,565	5,565	0	0	\$31,124
Total	0	0	657	657	7,881	7,881	657	11,129	11,129	11,129	11,129	0	0	\$62,247

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Caloosahatchee Backpumping with Stormwater Treatment (DDD)  
**Project ID:** CERP 45  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.B.1

**Measurable Output(s):** 20,000 ac-ft STA

**Cost:**

Total	\$82,895,000
Project Development	\$4,790,000
Land Acquisition (estimated 5,000 acres)	\$13,179,000
Implementation	\$64,926,000
Operations and maintenance	\$2,273,076

**Project Schedule:**

Start Date: 10/2005  
 Finish Date: 9/2015

**Project Synopsis:** This feature includes pump stations and a stormwater treatment area with a total capacity of approximately 20,000 acre-feet located in the C-43 Basin in Hendry and Glades Counties. The initial design of the stormwater treatment area assumed 5,000 acres with the water level fluctuating up to 4 feet above grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Planning & Design												
Real Estate												
Construction												

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Balance to Complete	Total
Federal	0	0	399	399	399	3,694	3,694	399	8,116	8,116	8,116	8,116	0	\$41,448
SFWMD	0	0	399	399	399	3,694	3,694	399	8,116	8,116	8,116	8,116	0	\$41,448
Total	0	0	798	798	798	7,388	7,388	798	16,232	16,232	16,232	16,232	0	\$82,895

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality, Hydrological Restoration  
**Project Name:** Everglades Agricultural Area (EAA) / Talisman Land Acquisition  
**Project ID:** GL33  
**Lead Agency:** South Florida Water Management District/U.S. Department of the Interior  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This acquisition consisted of 50,719 acres in the EAA purchased at fair market value from willing sellers. The purpose of this project was to acquire strategically located lands in the EAA to be used for regional water storage, detention, and water quality treatment facilities. Ecosystem restoration benefits include: regional water storage that would reduce water currently lost to tide and make it available for hydroperiod restoration in the Everglades; pollution prevention through reduction of phosphorus loads; reduced loading of nutrients and other pollutants through implementation of water quality treatment facilities; reduced subsidence; and avoidance of adverse flooding of WCAs and tribal lands during wet years.

<b>Cost:</b>	Total*	\$138,087,114
	Project Development	N/A
	Land Acquisition	\$138,087,114
	Implementation	N/A
	Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1997
Finish Date:	1999

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total*</b>
Federal	102,943,000						0	102,943,000
State	35,144,114						0	35,144,114
<b>Total</b>	<b>\$138,087,114</b>						<b>0</b>	<b>\$138,087,114</b>

\*The total includes Comprehensive Plan Implementation lands.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** STA-3/4 Works  
**Project ID:** ECP05  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** Acres of stormwater treatment area (Target: 16,600 acres)

**Project Synopsis:** STA-3/4 will treat the area tributary to Pump Station S-7 and S-8 and will be constructed to provide a total effective treatment area of 16,600 acres extending generally from the Holey Land Wildlife Management Area to U.S. Highway 27. The major components of STA-3/4 are, but are not limited to the following: Inflow Pump Station G-370 and G-372, gated spillways G-371 and G-373, STA-3/4 Works, Supply Canal, and U.S. Highway 27 Bridge Relocation. Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Cost (Estimate):**

Total:	\$195,423,150
Project Development:	\$ 9,087,207
Land Acquisition:	\$ 50,100,852
Implementation:	\$109,365,046
Operations and Maintenance:	\$ 26,870,045

**Project Schedule:**

Expected Completion Date: December, 2004

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Land Acquisition							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$50,872,300	\$5,680,728	\$10,565,714	\$50,343,881	\$42,276,834	\$9,502,764	\$26,180,929	\$195,423,150
<b>Total</b>	<b>\$50,872,300</b>	<b>\$5,680,728</b>	<b>\$10,565,714</b>	<b>\$50,343,881</b>	<b>\$42,276,834</b>	<b>\$9,502,764</b>	<b>\$26,180,929</b>	<b>\$195,423,150</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** STA-1 West Works and Outflow Pump Station (G-310)  
**Project ID:** ECP07  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** Acres of stormwater treatment area (Target: 6,700 acres).

**Project Synopsis:** STA-1 West is located in Western Palm Beach County and is being constructed to serve the area tributary to Pump Station S-5A. The construction will consist of approximately 6,700 acres of wetlands, 18 miles of levees, three concrete spillways, culverts and related ancillary facilities. STA-1 West will include the current Everglades Nutrient Removal (ENR) Project. Pump Station G-310 is located at the south corner of STA-1 West and directly southwest of the existing G-251 outflow pump station for the ENR project. With a capacity of 3,040 cfs, it will provide treated water to the Loxahatchee National Wildlife Refuge, also known as, WCA 1. Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Cost (Estimate):**

Total:	\$ 95,042,875
Project Development:	\$ 3,119,981
Land Acquisition:	\$ 21,144,288
Implementation:	\$ 48,056,008
Operations and Maintenance:	\$ 22,722,598

**Project Schedule:**

Expected Completion Date: October, 2000

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Land Acquisition							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$57,800,595	\$15,382,237	\$1,299,840	\$1,275,999	\$1,320,658	\$1,366,882	\$16,596,664	\$95,042,875
<b>Total</b>	<b>\$57,800,595</b>	<b>\$15,382,237</b>	<b>\$1,299,840</b>	<b>\$1,275,999</b>	<b>\$1,320,658</b>	<b>\$1,366,882</b>	<b>\$16,596,664</b>	<b>\$95,042,875</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** STA-2 Works and Outflow Pump Station (G-335)  
**Project ID:** ECP08  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** I.B.1

**Measurable Output(s):** Acres of stormwater treatment area (Target: 6,430 acres).

**Project Synopsis:** STA-2 Works will provide a total effective treatment area of 6,430 acres situated generally on and surrounding the Brown's Farm Wildlife Management Area. STA-2 will serve the area tributary Pump Station S-6. There will be a total of approximately 17 miles of levees constructed in the inflow, interior and discharge works combined. Sixteen remotely controlled structures will reduce operation and maintenance expenditures and will allow additional flexibility to achieve balanced flows into the treatment cells. Outflow Pump Station G-335 will be located at the south east corner of STA-2. This 3,040 cubic foot per second structure will discharge treated water into Water Conservation Area 2A. Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Cost (Estimate):**

Total:	\$113,573,117
Project Development:	\$ 4,127,589
Land Acquisition:	\$ 30,709,122
Implementation:	\$ 56,488,939
Operations and Maintenance:	\$ 22,247,467

**Project Schedule:**

Expected Completion Date: October, 2000

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Land Acquisition							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$82,298,406	\$9,791,229	\$1,321,093	\$1,251,310	\$1,295,105	\$1,304,434	\$16,311,540	\$113,573,117
<b>Total</b>	<b>\$82,298,406</b>	<b>\$9,791,229</b>	<b>\$1,321,093</b>	<b>\$1,251,310</b>	<b>\$1,295,105</b>	<b>\$1,304,434</b>	<b>\$16,311,540</b>	<b>\$113,573,117</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** STA-5 Works  
**Project ID:** ECPI3  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** Acres of stormwater treatment area (Target: 4,118 acres).

**Project Synopsis:** STA-5 is bordered by L-3 on the west and immediately east of and adjacent to the Rotenberger Wildlife Management Area in Hendry County, is intended to improve the quality of water discharged from the C-139 Basin. STA-5 will achieve a total effective treatment area of 4,118 acres. Major components of this STA include, but are not limited to the following: construction of eight gravity control structures to convey flows into and out of STA-5 treatment cells, 18 miles of canal and levee construction, eight intermediate concrete culverts with fixed wiers, modifications to the existing L-3 Levee, seepage return pump station, (2) water supply pump stations and construction of a discharge canal. This STA consists of two parallel treatment cells with flow direction from west to east. Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Cost (Estimate):**

Total:	\$ 53,109,899
Project Development:	\$ 1,401,329
Land Acquisition:	\$ 14,645,314
Implementation:	\$ 20,101,655
Operations and Maintenance:	\$ 16,961,601

**Project Schedule:**

Expected Completion Date: July, 2003

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Land Acquisition							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$32,283,697	\$1,394,076	\$1,597,496	\$1,982,471	\$3,126,441	\$968,325	\$11,757,393	\$53,109,899
<b>Total</b>	<b>\$32,283,697</b>	<b>\$1,394,076</b>	<b>\$1,597,496</b>	<b>\$1,982,471</b>	<b>\$3,126,441</b>	<b>\$968,325</b>	<b>\$11,757,393</b>	<b>\$53,109,899</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** STA-6 (includes Sections 1 and 2)  
**Project ID:** ECP11  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** Acres of stormwater treatment area (Target: Section 1=812 acres; Section 2=1,410 acres).

**Project Synopsis:** STA-6 Section 1 was completed on October 31, 1997, and is located immediately west of the Rotenberger Wildlife Management Area and north of Levee L-3 in southeastern Hendry County. It was constructed to provide a total effective STA area of 870 acres. Project components included, but was not limited to, construction of various inflow and discharge structures, discharge canal and levee. STA-6 Section 2 will involve the addition of 1,410 acres of effective treatment area to treat runoff from US Sugar Corporation's Southern Division Unit 1. The improvements consist primarily of new inflow, outflow, exterior and perimeter levees, inflow structures and outflow structures, new access bridges and seepage return pump. Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Cost (Estimate):**

Total: \$ 20,584,401  
 Project Development: \$ 755,865  
 Land Acquisition: \$ 7,449,843  
 Implementation: \$ 9,013,530  
 Operations and Maintenance: \$ 3,365,163

**Project Schedule:**

Expected Completion Date: September, 2004

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Land Acquisition							
Implementation							
Operations and Maintenance							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$7,552,377	\$2,636,473	\$36,104	\$18,598	\$5,160,449	\$1,858,436	\$3,321,964	\$20,584,401
<b>Total</b>	<b>\$7,552,377</b>	<b>\$2,636,473</b>	<b>\$36,104</b>	<b>\$18,598</b>	<b>\$5,160,449</b>	<b>\$1,858,436</b>	<b>\$3,321,964</b>	<b>\$20,584,401</b>

Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - C-17 Backpumping and Treatment (Y)  
**Project ID:** CERP 21  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** 550 acres

**Cost:**

Total	\$20,190,000
Project Development	\$674,000
Land Acquisition (estimated 550 acres)	\$10,367,000
Implementation	\$9,149,000
Operations and maintenance	\$752,435

**Project Schedule:**

Start Date: 11/2002  
 Finish Date: 10/2008

**Project Synopsis:** This feature includes backpumping facilities and a stormwater treatment area with a total storage capacity of approximately 2,200 acre-feet located in northeastern Palm Beach County. The initial design for the stormwater treatment area assumed 550 acres with the water level fluctuating up to 4 feet above grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design, and will address appropriate pollution load reduction targets necessary to protect receiving waters (West Palm Beach Water Catchment Area).

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Balance to Complete	Total
Federal	0	0	1,840	1,840	1,840	1,525	1,525	1,525	0	0	0	0	0	\$10,095
SFWMD	0	0	1,840	1,840	1,840	1,525	1,525	1,525	0	0	0	0	0	\$10,095
Total	0	0	3,680	3,680	3,680	3,050	3,050	3,050	0	0	0	0	0	\$20,190

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - C-51 Backpumping and Treatment (Y)  
**Project ID:** CERP22  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.B.1

**Measurable Output(s):** 600 acres

**Cost:**

Total	\$32,632,000
Project Development	\$1,317,000
Land Acquisition (estimated 710 acres)	\$13,475,000
Implementation	\$17,840,000
Operations and maintenance	\$1,089,682

**Project Schedule:**

Start Date: 11/2002  
 Finish Date: 10/2008

**Project Synopsis:** This feature includes backpumping facilities and a stormwater treatment area with a total storage capacity of approximately 2,400 acre-feet located in Palm Beach County. The initial design for the stormwater treatment area assumed 600 acres in size with the water level fluctuating up to 4 feet above grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design, and will address appropriate pollution load reduction targets necessary to protect receiving waters (West Palm Beach Water Catchment Area).

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Balance to Complete	Total
Federal	0	0	2,465	2,465	2,465	2,973	2,973	2,973	0	0	0	0	0	\$16,316
SFWMD	0	0	2,465	2,465	2,465	2,973	2,973	2,973	0	0	0	0	0	\$16,316
Total	0	0	4,931	4,931	4,931	5,947	5,947	5,947	0	0	0	0	0	\$32,632

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Miccosukee Tribe of Indians of Florida  
**Project Name:** Miccosukee Tribe Water Management Area  
**Project ID:** CE36  
**Lead Agency:** Miccosukee Tribe  
**Authority:** Section 518 of the CWA, Miccosukee Water Quality Standards, Inherent Tribal Sovereignty.

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** 1. Reduction of total phosphorous loads to achieve a long term flow weighted average concentration of 10 parts per billion. 2. Conversion of upland acres to wetland by 900 acres, 3. Increase wetland habitat for threatened and endangered species by 900 acres, 4. Prevent urbanization / industrial development along the I-75 corridor by conversion to eco-tourism friendly use.

**Project Synopsis:** The Miccosukee Water Management Area is a project to construct a managed wetland (STA) on the Miccosukee Tribe’s Alligator Alley Reservation. The purpose of the project is to provide water storage capacity and water quality treatment for waters which discharge into the Everglades protection Area. The project will convert approximately 900 acres of tribally owned cattle pastures into a wetland retention detention area, which will be designated to filter out harmful nutrients contained in stormwater runoff before the water enters the Everglades Protection Area. Tribal Water Quality Standards have been approved by EPA and require 10 ppb total phosphorous for waters entering the Everglades Protection Area. This STA will be designed to achieve that standard. The Miccosukee Tribe proposes to convert up to 900 acres of upland cattle pastures to be used as their share of this projects cost. (This is 1/3 larger than STA-6)

**Cost:**

Total:	\$42,113,000.00
Project Development (Planning & Design):	\$2,528,000.00
Land Acquisition:	Acquisition costs will be equal to Capital costs of the project.
Implementation (STA Construction):	\$20,213,000.00
Operations and Maintenance:	\$19,372,000.00

**Project Schedule:**

Start Date:	90 days after funding is secured
Finish Date:	No longer than 5 years

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2001</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal								
Tribe								
<b>Total</b>								

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – C-9 Stormwater Treatment Area/ Impoundment (R)  
**Project Number:** CERP 01  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** I.B.1

**Measurable Output(s):** 2,500 acres  
 Impoundment; canal, levees; water control structures

**Cost:**

Total	\$89,146,000
Project Development	\$1,800,000
Land Acquisition (estimated 2,500 acres)	\$62,939,000
Implementation	\$24,407,000
Operations and maintenance	\$615,743

**Project Schedule:**

Start Date: 10/2001  
 Finish Date: 9/2007

**Project Synopsis:** This feature includes canals, levees, water control structures and a stormwater treatment area/impoundment with a total capacity of approximately 10,000 acre –feet, located in the western C-9 Basin in Broward County. The initial design of the stormwater treatment area/impoundment assumed 2,500 acres with the water level fluctuating up to 4 feet above grade. The final size, depth and configuration of these facilities will be determined through more detailed planning and design to be completed as a part of the Water Preserve Areas Feasibility Study and will address appropriate pollution load reduction targets necessary to protect receiving waters. The purpose of this feature is to provide treatment of runoff stored in the North Lake Belt Storage Area, enhance the groundwater recharge within the basin, provide seepage control for Water Conservation Area 3 and buffer areas to the west, and provide flood protection for western C-9 Basin.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	16,035	16,035	300	4,068	4,068	4,068	0	0	0	0	0	\$44,573
SFWMD	0	0	16,035	16,035	300	4,068	4,068	4,068	0	0	0	0	0	\$44,573
Total	0	0	32,070	32,070	600	8,136	8,136	8,136	0	0	0	0	0	\$89,146

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – Western C-11 Diversion Impoundment and Canal and Water Conservation Areas 3A and 3B Levee Seepage Management (O)(Q)  
**Project Number:** CERP 28  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 2000 (scheduled)

**Goal(s) Addressed:** 1.B.1

**Measurable Output(s):** 1,600 acres; canals, levees, and water control structures

**Cost:**

Total	\$224,544,000
Project Development	\$3,324,000
Land Acquisition (estimated 10,000 acres)	\$167,646,000
Implementation	\$53,574,000
Operations and maintenance	\$783,432

**Project Schedule:**

Start Date: 10/2001  
 Finish Date: 9/2008

**Project Synopsis:**

This feature includes canals, levees, water control structures, and a stormwater treatment area/impoundment with a total storage capacity of 6,400 acre-feet located in western Broward County. The initial design of the stormwater treatment area/impoundment assumed 1,600 acres with water level fluctuating up to 4 feet above grade. The final size, depth and configuration of these facilities will be determined through more detailed planning and design to be completed as a part of the Water Preserve Areas Feasibility Study. Detailed design of this feature will address pollution load reduction targets necessary to protect receiving waters. The purpose of this feature is to divert and treat runoff from the western C-11 Basin that is presently discharged into Water Conservation Area 3A, control seepage from Water Conservation Areas 3A and 3B by improving groundwater elevations, and providing flood protection for the western C-11 Basin.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	28,495	28,495	28,495	6,697	6,697	6,697	6,697	0	0	0	0	\$112,272
SFWMD	0	0	28,495	28,495	28,495	6,697	6,697	6,697	6,697	0	0	0	0	\$112,272
Total	0	0	56,990	56,990	56,990	13,394	13,394	13,394	13,394	0	0	0	0	\$224,544

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Miccosukee Tribe Water Management Plan (OPE)  
**Project ID:** CERP 15  
**Lead Agency:** U.S. Army Corps of Engineers / Miccosukee Tribe  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.B.1

**Measurable Output(s):** 900 ac. constructed wetlands (3,600 ac-ft of STA)

**Cost:**

Total	\$24,459,000
Project Development	\$1,562,000
Land Acquisition	\$1,718,000
Implementation	\$21,179,000
Operations and maintenance	\$540,000

**Project Schedule:**

Start Date: 7/2000  
 Finish Date: 12/2008

**Project Synopsis:** This feature includes construction of a 900-acre wetland retention/detention area on the Miccosukee Tribe’s Alligator Alley Reservation. The feature includes a pump station, levees, trenches and culverts to create the inflow and outflow facilities for the retention/detention area.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	156	1,015	156	156	156	2,647	2,647	2,647	2,647	0	0	0	\$12,230
Local	0	156	1,015	156	156	156	2,647	2,647	2,647	2,647	0	0	0	\$12,230
Total	0	312	2,030	312	312	312	5,295	5,295	5,295	5,295	0	0	0	\$24,459

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: West Palm Beach Canal (C-51) and STA -1E  
**Project Number:** SE50  
**Lead Agency:** USACE/SFWMD  
**Authority:** FCA 1968

**Goal(s) Addressed:** I.B.1

**Measurable Output(s):** 6,500 acres

**Project Synopsis:** The project is located in Palm Beach County and runs east/west from Water Conservation Area No. 1 (Loxahatchee National Wildlife Refuge) to West Palm Beach at Lake Worth. The authorized project will provide 30-year flood protection to the urbanized eastern basin and 10-year flood protection to the western basin. All eastern basin features have been completed. During mediation of the Everglades litigation, a technical mediated plan was developed for resolution of the litigation. The technical mediated plan included a substantially modified C-51 Project. The modified plan expands the original 1,600 acre flood water detention area into a 6,500 acre stormwater treatment area. In addition to the flood damage reduction benefits provided by the original project, the modified plan provides water quality treatment, reduction of damaging freshwater discharges to Lake Worth, and increased water supply for the Everglades and other users.

**Cost:**

Total	\$240,418,000
Project Development	
Land Acquisition	\$59,097,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: 00/1997  
 Finish Date: 00/2002

	1997	1998	1999	2000	2001	2002	2003
Design							
Real Estate							
Construction							

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	30,986	28,349	48,065	47,948	13,551			168,899
SFWMD	5,805	11,392	4,950	3,243	129			25,519
DOI	40,000	6,000						46,000
<b>Total</b>	<b>\$36,791</b>	<b>\$39,741</b>	<b>\$53,015</b>	<b>\$51,191</b>	<b>\$13,680</b>			<b>\$240,418</b>

Hyperlink: [www.saj02.usace.army.mil](http://www.saj02.usace.army.mil)

**DATA SHEET PROFILE**

**Program Name:** Water Quality  
**Project name:** Total Maximum Daily Load (TMDL) for South Florida  
**Lead Agency:** FDEP  
**Authority:** 403.067, F.S.

**Goal(s) Addressed:** Goal 1.B.2

**Measurable Output(s):** Basin Assessments, Identifying Impaired Waters, Supplemental Data Collection, Develop TMDLs, Implementation Plans, Verification WQ Standards have been met

**Project Synopsis:** During the first phase, the water quality data for each basin will be assessed in detail, including the identification of waters for which TMDLs will be developed. Once a basin assessment report and a Plan of Study are completed, intensive monitoring will be conducted in the basin to supply any additional data needed to model the impaired waters in the basin and generate TMDLs. During the third phase, TMDLs will be calculated and then allocated to individual point sources and the major categories of non-point sources. After TMDLs are approved, a consensus-based basin management action plan (BMAP), which will include a TMDL implementation plan, will be developed during the fourth phase. The implementation plan will include more detailed allocations to non-point sources, but the allocations will be voluntary if the sources are currently outside of the State’s regulatory authority. Once these plans have been adopted and implemented, verification (using added WQ monitoring data, evaluations of beach closure reports, or number of fish kills, for example) will allow waters to be certified as meeting water quality standards.

**Cost:**

Total: \$600,000/yr  
 Project Development: \$600,000/yr  
 Land Acquisition: Unknown  
 Implementation: Unknown  
 Operations and maintenance: Unknown

**Project Schedule:**

Start Date: July 1, 2000  
 Finish Date: Upon Completion (Current schedule runs to 2011)

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State	400,000	600,000	600,000	600,000	600,000	600,000	?	3,400,000
Tribal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Local	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total</b>	<b>400,000</b>	<b>600,000</b>	<b>600,000</b>	<b>600,000</b>	<b>600,000</b>	<b>600,000</b>	<b>?</b>	<b>3,400,000</b>

Hyperlink: <http://www.dep.state.fl.us>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality, Habitat & Species  
**Project Name:** Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project  
**Project ID:** GL07  
**Lead Agency:** South Florida Water Management District  
**Authority:** Chapter 373, Florida Statutes

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Recommendation Regarding Sediment Removal from Lake Okeechobee

**Project Synopsis:** The goal of this project is to analyze alternatives and determine the best method of sediment treatment to reduce internal phosphorus loading in Lake Okeechobee. The Feasibility Study will address alternatives such as sediment removal, processing, disposal, chemical treatment, and/or sealing methodology to achieve the project goal. The goal of the Feasibility Study will be achieved using an objective methodology that allows for review and input by experts and stakeholders throughout the study process. The evaluation information from the Feasibility Study will be used in conjunction with a multiple criteria decision process model and public input to make final recommendations to SFWMD’s Governing Board. A pilot test of a state-of-the-art sediment removal/treatment technology train will be conducted in parallel with the Feasibility Study. The pilot test will include sediment removal, de-watering, treatment, and water quality treatment of the disposal effluent. This will provide useful information to the Feasibility Study.

**Cost:**

Total	\$1,000,000 + (subject to contract bids and negotiations)
Project Development	\$1,000,000 + (subject to contract bids and negotiations)
Land Acquisition	N/A
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 6/2000  
 Finish Date: 6/2003

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State		*	*	*	*			*
<b>Total</b>		*	*	*	*			*

\* Subject to contract bids

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality, Habitat & Species  
**Project Name:** Lake Okeechobee Tributary Sediment Removal Pilot Project  
**Project ID:** GL67  
**Lead Agency:** South Florida Water Management District  
**Authority:** Chapter 373, Florida Statutes

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Reduction in phosphorus concentrations in tributaries to Lake Okeechobee

**Project Synopsis:** The objectives of this project are (1) to reduce particulate phosphorus loading to Lake Okeechobee using two sediment removal technologies, with a secondary benefit of reducing mineral sediment loading to the lake, (2) demonstrate the technical feasibility, economic viability, and environmental compatibility of sediment removal as a method to reduce phosphorus loading to the lake. A demonstration project will be implemented on Mosquito Creek, in the Nubbin Slough basin. The demonstration project will include two technologies, Continuous Deflective Separation (CDS) unit and Tributary Sediment Trap (TST). Based on the available information from current literature, sediment removal boxes have the lowest cost per cfs treated and provide good sediment removal efficiencies if designed properly (Herr et. al., 1999). CDS units have the next lowest cost per cfs treated, and provide excellent floating litter removal and moderate sediment removal efficiencies. CDS treatment systems appear to be the easiest to clean and do not require manned entry for normal operation and maintenance. If one of the tested sediment trap methods is found effective, landowners in the watershed will be encouraged to use it. The District will also use the technology where possible on District facilities.

**Cost:**

Total	\$420,000
Project Development	\$69,600
Land Acquisition	\$20,000
Implementation	\$238,100
Operations and Maintenance	\$92,300

**Project Schedule:**

Start Date: 06/2000  
 Finish Date: 2002

	2000	2001	2002	2003		
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

**Detailed Project Budget Information:**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$0	\$105,100	\$41,500	\$23,400				\$170,000
SFWMD	\$0	\$51,000	\$156,600	\$42,400				\$250,000
<b>Total</b>	<b>\$0</b>	<b>\$156,100</b>	<b>\$198,100</b>	<b>\$65,800</b>				<b>\$420,000</b>

**Hyperlink:** Additional information available at [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality  
**Project Name:** Development of Best Management Practices Related to the Land Application of Residuals and Chicken Manure in the Lake Okeechobee Watershed  
**Project ID:** GL71  
**Lead Agency:** South Florida Water Management District  
**Authority:**

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Establishment of Environmentally-Sound Guidelines for Land Application of Residuals and Chicken Manure

**Project Synopsis:** The overall objective of this project is to assess the potential impacts of residuals (sludge) and chicken manure application on the quality of water reaching Lake Okeechobee. The specific objectives are to (1) examine the extent in which residuals and chicken manure are imported into the watershed, (2) document any exiting environmental problems associated with their use, (3) establish environmentally-sound guidelines for the land application of residuals and chicken manure, and (4) educate landowners in the watershed on the proper management and use of the waste materials.

**Cost:**

Total	\$100,000 + (subject to contract bids and negotiations)
Project Development	\$100,000 + (subject to contract bids and negotiations)
Land Acquisition	N/A
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 6/1/00  
 Finish Date: 6/1/03

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State		*	*	*	*			*
<b>Total</b>		*	*	*	*			*

\* To Be Determined after Contract is Awarded

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Okeechobee Tributary Sediment Dredging (OPE)  
**Project ID:** CERP 03  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** I.B.3

**Measurable Output(s):** Removal of 150 tons of phosphorous from primary canals

**Cost:**

Total	\$4,700,000
Project Development	\$261,000
Land Acquisition (estimated 320 acres)	\$900,000
Implementation	\$3,539,000
Operations and maintenance	\$0

**Project Schedule:**

Start Date: 10/2001  
 Finish Date: 09/2005

**Project Synopsis:** This feature includes the dredging of sediments from 10 miles of primary canals within an 8-basin area in the northern watershed of Lake Okeechobee. The initial design assumes that the dredged material will contain approximately 150 tons of phosphorus.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	44	494	44	1,770	0	0	0	0	0	0	0	\$2,350
SFWMD	0	0	44	494	44	1,770	0	0	0	0	0	0	0	\$2,350
Total	0	0	87	987	87	3,539	0	0	0	0	0	0	0	\$4,700

**Hyperlink:** <http://www.evergladesplan.org/>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project name:** Critical Projects: Lake Okeechobee Water Retention/Phosphorous Removal  
**Project ID:** GL06  
**Lead Agency:** USACE/SFWMD  
**Authority:** WRDA 96

**Goal(s) Addressed:** I.B. 3

**Measurable Output(s):**

**Project Synopsis:** Re-establishing wetlands currently drained for agriculture. Purposes and the construction of 2 Stormwater Treatment Areas will reduce phosphorous loading to Lake Okeechobee. Design is underway.

**Cost:**

Total	\$16,360,000
Project Development	
Land Acquisition	\$3,300,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2002

	1997	1998	1999	2000	2001	2002	2003	2004
Design								
Real Estate								
Construction								

**Detailed Project Budget Information (\$1,000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	626	1,209	4,345	2,000			0	7,554
SFWMD		6,451	863	866			0	8,180
<b>Total</b>	<b>\$626</b>	<b>\$7,660</b>	<b>\$5,208</b>	<b>\$2,866</b>			<b>0</b>	<b>\$16,360</b>

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project Name:** Technical Assistance to Seminole and Miccosukee Indian Reservations  
**Project ID:** TS24  
**Lead Agency:** NRCS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Reduced Nutrient Loads

**Project Synopsis:** Assist the Seminole and Miccosukee Indian Reservations to plan and implement resource management systems on a voluntary basis to reduce nutrient loading. Assistance will be provided to each agricultural producer, at the direction of the Tribal Councils, to assist in their planning, design, application, and management of BMP's that will improve water quality and the ecological integrity of the landscape.

**Cost:**

Total	\$3,850,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	
Management	\$3,850,000

**Project Schedule:**  
 Start Date: 1998  
 Finish Date: 2009

**Detailed Project Budget Information (\$1000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$100	\$50	\$50	\$300	\$300	\$300	\$1,850	\$2,950
State	\$0	\$0	\$0	\$75	\$75	\$75	\$675	\$900
<b>Total</b>	<b>\$100</b>	<b>\$50</b>	<b>\$50</b>	<b>\$375</b>	<b>\$375</b>	<b>\$375</b>	<b>\$2,525</b>	<b>\$3,850</b>

**Contact:** Ron Smola, 561-682-2857  
 USDA – NRCS

**DATA SHEET PROFILE**

**Program Name:** Water Quality  
**Project Name:** Seminole Tribe Best Management Practices for the Brighton Reservation  
**Project ID:** GL76  
**Lead Agency:** Seminole Tribe of Florida  
**Authority:** Tribal Resolution

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Implementation of BMP's will provide immediate water quality benefits for the watershed which includes Lake Okeechobee. They will also compliment a comprehensive system of surface water management works planned for the Brighton Reservation.

**Project Synopsis:** The Seminole Tribe has contracted with NRCS to design a comprehensive system of best management practices (BMP's) for the Brighton Reservation. Enhanced water management will be accomplished through application of field-level BMP's which might include: conservation irrigation systems; nutrient loading reduction; application procedure training; cross-fencing for grazing management; livestock watering facilities; grazing management plans; closed-end irrigation systems; and a tail-water recovery system where appropriate.

**Cost:**

Total	\$338,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	January, 1998
Finish Date:	December, 2004

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$72,000	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$1,500	\$253,500
Tribal	\$24,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$500	\$84,500
<b>Total</b>	<b>\$96,000</b>	<b>\$48,000</b>	<b>\$48,000</b>	<b>\$48,000</b>	<b>\$48,000</b>	<b>\$48,000</b>	<b>\$2,000</b>	<b>\$338,000</b>

**Contact:** Craig Tepper, Seminole Tribe of Florida, 954-967-3401

**DATA SHEET PROFILE**

**Program Name:** Water Quality  
**Project Name:** Seminole Tribe Best Management Practices for the Big Cypress Reservation  
**Project ID:** SW54  
**Lead Agency:** Seminole Tribe of Florida  
**Authority:** Tribal Resolution

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** The project will result in immediate, measurable improvements in the quality of water discharged to the Everglades Protection Area. It will also provide tangible improvement of the water quality leaving the Western Basins, an area not addressed completely by the Everglades Construction Project and the Everglades Forever Act.

**Project Synopsis:** The Seminole Tribe has contracted with the NRCS to implement a comprehensive system of best management practices (BMP's) for all seven basins in the Big Cypress Reservation. Enhanced water management will be accomplished through BMP's that include: conservation irrigation systems; nutrient loading reduction; application procedure training; fencing of WRA's and irrigation cells as detailed in the Water Conservation Plan; cross fencing for grazing management; livestock watering facilities; grazing management plans; closed-end irrigation systems; and will function independently of the Water Conservation Project, the two will work best together to create the most benefit for the ecosystem.

**Cost:**

Total	\$4,779,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	June 1996
Finish Date:	December 2004

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$1,075,275	\$358,425	\$358,425	\$358,425	\$358,425	\$358,425	\$716,850	\$3,584,250
Tribal	\$358,425	\$119,475	\$119,475	\$119,475	\$119,475	\$119,475	\$238,950	\$1,194,750
<b>Total</b>	<b>\$1,433,700</b>	<b>\$477,900</b>	<b>\$477,900</b>	<b>\$477,900</b>	<b>\$477,900</b>	<b>\$477,900</b>	<b>\$955,800</b>	<b>\$4,779,000</b>

**Contact:** Craig Tepper, Seminole Tribe of Florida, 954-967-3401

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality  
**Project Name:** Everglades Stormwater Program  
**Project ID:** GL79  
**Lead Agency:** South Florida Water Management District  
**Authority:** Everglades Forever Act (EFA)

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Basin Specific Water Quality Improvement Plan; Long-term Compliance Permit; Achieve State Water Quality Standards at all structures discharging to the Everglades Protection Area by December 2006

**Project Synopsis:** As a result of the EFA, the SFWMD established the Everglades Stormwater Program (ESP). The ESP includes two main components, the Everglades Agricultural Area (EAA) Phosphorus Reduction Program and the Urban and Tributary Basins Program. The EAA Phosphorus Reduction Program includes regulatory programs developed to decrease phosphorus loads from the EAA by reducing phosphorus on the surrounding farms and other adjacent land prior to discharging off-site. Landowners in the EAA have implemented a series of best management practices that have reduced phosphorus loads to the Everglades. Over the last three years, the total cumulative loads attributable to the EAA have been reduced by 44 percent as compared to the calculated load that would have occurred during the pre- Best Management Practice period (adjusted for hydrologic variability). The Urban and Tributary Basins Program was developed to ensure that all basins discharging into the Everglades other than those included in the EAA meet state water quality standards. Cost information as to the costs associated with the Everglades Stormwater Program is being developed as the ESP progresses. Water quality improvement strategies will be developed for each basin that discharges into the Everglades Protection Area. These strategies may include best management practices, regulatory programs, public outreach, and construction of public works projects. Until the basin specific water quality improvement plans are developed, it will be difficult to estimate implementation costs of this program.

**Cost:**

Total	Subject to final compliance methodology
Project Development	N/A
Land Acquisition	N/A
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	March 1998
Finish Date:	December 2006

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	2005	2006	Balance to complete	Total
Federal				*	*	*	*	*	*	*
State	\$4,000	\$3,500	\$4,000						*	*
Tribal				*	*	*	*	*	*	*
Local	\$50	\$100	\$250	*	*	*	*	*	*	*
<b>Total</b>	<b>\$4,050</b>	<b>\$3,600</b>	<b>\$4,250</b>	*	*	*	*	*	*	*

\*Detailed Costs will be available after completion of Basin Specific analyses and issuance of Long-term Compliance Permit in 2003

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** Chapter 298 Districts/Lease 3420 Improvements  
**Project ID:** ECP04  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Extent of reduction of total phosphorus entering Lake Okeechobee.

**Project Synopsis:** South Florida Water Management District is funding works of the Chapter 298 District (East Beach Water Control District, East Shore Water Control District, South Shore Drainage District and South Florida Conservancy District) for the design and construction of this diversion work as described in the Everglades Forever Act. South Florida Water Management District is also funding works of the Lessee of Lease No. 3420 (Closter Farms) for the design and construction of diversion works as described in the Everglades Forever Act. The primary objective of these improvements is to reduce total phosphorus loads discharged directly to Lake Okeechobee.

**\* Cost (Estimate):**

Total	\$ 13,635,079
Project Development	\$ 124,650
Land Acquisition	\$ 0
Implementation	\$ 13,510,429
Operations and Maintenance	\$ 0

**Project Schedule:**

Start Date: 1994  
 Finish Date: December, 2004

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Implementation							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$2,387,058	\$9,633,162	\$1,614,859	-	-	-	-	\$13,635,079
<b>Total</b>	<b>\$2,387,058</b>	<b>\$9,633,162</b>	<b>\$1,614,859</b>	-	-	-	-	<b>\$13,635,079</b>

\* Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality  
**Project Name:** STA-1 Inflow and Distribution Works  
**Project ID:** ECP06  
**Lead Agency:** South Florida Water Management District  
**Authority:** Florida’s Everglades Forever Act

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Phosphorus levels in outflows from the STA are at or below the interim target of 50 parts per billion.

**Project Synopsis:** STA-1 Inflow and Distribution Works is located in Western Palm Beach County, just north of the Water Conservation Area No. 1 (Loxahatchee National Wildlife Refuge). This project redirects the discharge from S-5A Pump Station via the L-40 and L-7 Borrow Canals to STA-1 West and STA-1 East. The project scope includes the construction of three water control structures (G-300, G-301, G-302), future water control structure G-311, and associated bypass canals, a separation levee extending from L-7 to L-40 and an inflow canal and perimeter levee leading to the STA-1W project.

**\*Cost (Estimate):**

Total	\$ 11,662,799
Project Development	\$ 986,818
Land Acquisition	
Implementation	\$ 10,675,981
Operations and Maintenance	\$ Included with STA-1 West

**Project Schedule:**

Start Date: 1995  
 Finish Date: January, 2002 (including structure G-311, inflow structure for STA-1E)

	FY 1994 - FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005 - FY 2014
Project Development							
Implementation							

- Project Development includes Design Phase [contracts & staff costs] costs.
- Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

**Detailed Project Budget Information**

	Actual FY 1994 -99	Projected FY 2000	Projected FY 2001	Projected FY 2002	Projected FY 2003	Projected FY 2004	Balance to complete	Total
State	\$8,362,988	\$928,906	\$1,074,474	\$1,296,431	-	-	-	\$11,662,799
<b>Total</b>	<b>\$8,362,988</b>	<b>\$928,906</b>	<b>\$1,074,474</b>	<b>\$1,296,431</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$11,662,799</b>

\* Cost data supplied above is based on the January 2000 ECP Financial Schedules, which reflects actual expenditures and projected cost estimates through September 30, 1999.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lake Worth Lagoon Restoration (OPE)  
**Project ID:** CERP 19  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Sediment removal

**Cost:**

Total	\$2,300,000
Project Development	\$137,000
Land Acquisition (0 acres)	\$300,000
Implementation	\$1,863,000
Operations and maintenance	\$0

**Project Schedule:**

Start Date: 10/2005  
 Finish Date: 3/2011

**Project Synopsis:** This feature includes sediment removal and trapping within the C51 Canal and sediment removal or trapping within a 2.5 mile area downstream of the confluence of the C-51 Canal and the Lake Worth Lagoon located in Palm Beach County. A prototype project will be conducted to determine if the Lagoon sediments will either be removed or trapped.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Balance to Complete	Total
Federal	0	0	23	173	23	466	466	0	0	0	0	0	0	\$1,150
SFWMD	0	0	23	173	23	466	466	0	0	0	0	0	0	\$1,150
Total	0	0	46	346	46	932	932	0	0	0	0	0	0	\$2,300

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project Name:** BMP's for Agriculture *(This project has been combined with GL36 - Technical Assistance to EAA & C-139 Basin)*  
**Project ID:** TS05  
**Lead Agency:** NRCS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Nutrient Load Reduction

**Project Synopsis:** This project provides for technical assistance to landowners and managers of agricultural lands. The goals of this project are to encourage the adoption and implementation of Best Management Practices (BMPs) that will provide for sustainable agriculture within the Everglades ecosystem that is both ecologically and economically sound. Comprehensive resource management plans are developed with the farmer/rancher to achieve their management objectives, while meeting federal, state, regional and local environmental quality criteria and standards (TMDL'S).

**Cost:**

Total	\$65,245,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	\$65,245,000

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2011

**Detailed Project Budget Information (\$1000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$9,000	\$3,000	\$3,000	\$4,417	\$4,417	\$4,147	\$30,919	\$59,170
State				\$675	\$675	\$675	\$4,050	\$6,075
<b>Total</b>	<b>\$9,000</b>	<b>\$3,000</b>	<b>\$3,000</b>	<b>\$5,092</b>	<b>\$5,092</b>	<b>\$5,092</b>	<b>\$34,969</b>	<b>\$65,245</b>

**Contact:** Greg Hendricks, 561-795-5451  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project Name:** Pollution Prevention  
**Project ID:** TS22  
**Lead Agency:** NRCS and FDACS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Reduced Nutrient Loads

**Project Synopsis:** In cooperation with the FDEP, FDCA, and the EPA, develop a pollution prevention and control program for the South Florida Ecosystem to address TMDL's. This project will target the development of an enhanced urban and agriculture pollution prevention control program through public and private cooperation in the development of best management practices. Expand existing programs such as Farm-A-Syst Program, and develop new and innovative agricultural BMP's. Develop and provide information materials targeted to the urban populace to reduce pollution to the ecosystem. This project will result in a reduction of the release of pollutants to water bodies from urban and rural residences and agricultural producers.

**Cost:**

Total	\$890,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	
Management	\$890,000

**Project Schedule:**

Start Date: 2001  
 Finish Date: 2005

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal			\$112,000	\$132,000	\$132,000	\$132,000	\$132,000	\$640,000
State			\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
<b>Total</b>			<b>\$162,000</b>	<b>\$182,000</b>	<b>\$182,000</b>	<b>\$182,000</b>	<b>\$182,000</b>	<b>\$890,000</b>

**Contact:** Ron Smola 561-682-2857  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project name:** Urban Mobile Irrigation lab  
**Project ID:** GL57  
**Lead Agency:** USDA - NRCS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Water Conservation (Acre Feet water saved)

**Project Synopsis:** Establish Urban Mobile Irrigation Labs in the Upper East Coast Water Supply Area as a tool to reduce urban, industrial and landscape water consumption.

**Cost:**

Total	\$2,860,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	
Management	\$2,860,000

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2011

**Detailed Project Budget Information (\$1000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$120	\$60	\$200	\$200	\$200	\$200	\$1,200	\$2,180
State	\$120	\$60	\$50	\$50	\$50	\$50	\$300	\$680
<b>Total</b>	<b>\$240</b>	<b>\$120</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$250</b>	<b>\$1,500</b>	<b>\$2,860</b>

**Contact:** Ron Smola, 561-682-2857  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project Name:** Agricultural Land Stewardship  
**Project ID:** TS04  
**Lead Agency:** NRCS, FDACS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Reduced Nutrient Loads

**Project Synopsis:** Develop incentives targeting farming operations that address sound land stewardship. Develop a “whole conservation planning” programs approach to meet environmental regulatory goals on private lands with the landowners on a voluntary basis. Develop “team agricultural permitting” procedures that allows government agencies to expedite and improve the agricultural permitting process and develop a marketing system that rewards producers who exceed established environmental quality standards.

**Cost:**

Total	\$10,920,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	
Management	\$10,920,000

**Project Schedule:**

Start Date: 2001  
 Finish Date: 2012

**Detailed Project Budget Information (\$1000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal			\$310	\$310	\$310	\$310	\$2,480	\$3,720
State			\$600	\$600	\$600	\$600	\$4,800	\$7,200
<b>Total</b>			<b>\$910</b>	<b>\$910</b>	<b>\$910</b>	<b>\$910</b>	<b>\$7,280</b>	<b>\$10,920</b>

**Contact:** Ron Smola, 561-682-2857  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Water Quality Improvement  
**Project Name:** South Florida Water Quality Protection Program  
**Project ID:** TS99  
**Lead Agency:** Florida Department of Environmental Protection  
**Authority:** Chapters 373, and 403, Florida Statutes

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Implementation Plan and ultimately water quality improvements. Phase I- Create document that compiles information on existing water quality protection strategies and impacts in South Florida; Phase II – Comprehensive implementation plan, with costs; Phase III – Implement the plan.

**Project Synopsis:** Provide integration of water quality protection efforts, including the CERP and TMDL process, at all geographical scales; Develop a compendium of the existing water quality protection strategies in South Florida; Summarize existing water quality information to determine trends and provide an overview of the sub-basin’s environmental health; and Determine major pollutant sources in each sub-basin and actions currently being taken to address these sources.

The South Florida Water Quality Protection Program will recommend priority corrective actions and compliance schedules to address point and nonpoint source pollution and restore and maintain the chemical, physical and biological integrity within the south Florida ecosystem.

**Cost:**

Total	\$564,652
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1999
Finish Date:	Phase 1 and 2: January 2001, Phase 3, upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$344,652						0	\$344,652
State		\$110,000	\$110,000					\$220,000
Tribal								
Local								
Other								
<b>Total</b>	<b>\$344,652</b>	<b>\$110,000</b>	<b>\$110,000</b>					<b>\$564,652</b>

**Hyperlink:** [www.dep.state.fl.us](http://www.dep.state.fl.us)

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Water Quality  
**Project Name:** New Palm Dairy Land Acquisition  
**Project ID:** GL69  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):**

**Project Synopsis:** New Palm Dairy is located along Nubin Slough in Okeechobee County. It has been identified in numerous water quality studies, as well as in the Lake Okeechobee SWIM Plan, regarding phosphorus loading to Lake Okeechobee. Nubin Slough has long been noted as having the poorest quality water of all the Lake’s watersheds. Nubin Slough contributes 29 percent of the Lake’s phosphorus loading yet only 4 percent of its total inflow. This is still an active dairy which lies less than two miles north of the Lake. It has numerous small ditches that drain to Nubin Slough. Acquisition would allow immediate blocking of the ditches and removal of waste from the sludge pits and lagoons. The total project acreage is 2,135 acres. No acreage has been acquired to date.

**Cost:**

Total	*SFWMD does not make cost projections on SOR project
Project Development	N/A
Land Acquisition	*SFWMD does not make cost projections on SOR project
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 2000  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
<b>Total</b>								

\*The total includes Comprehensive Plan Implementation lands.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project Name:** Florida Aquifer Restoration  
**Project ID:** GL56  
**Lead Agency:** USDA - NRCS  
**Authority:** PL-46

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Reduced Aquifer Contamination

**Project Synopsis:** Permanently plug free flowing wells in St. Lucie County and reduce saline discharge to surface waters and eliminate saline contamination of the Floridan Aquifer by leaking well casing from other aquifers.

**Cost:**

Total	\$1,200,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	\$1,200,000

**Project Schedule:**

Start Date:	1998
Finish Date:	2002

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$50,000	\$50,000	\$250,000	\$250,000				\$600,000
State	\$50,000	\$50,000	\$250,000	\$250,000				\$600,000
<b>Total</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$500,000</b>	<b>\$500,000</b>				<b>\$1,200,000</b>

**Contact:** Ron Smola, 561-682-2857  
 USDA - NRCS

**DATA SHEET PROFILE**

**Program Name:** Infrastructure and Sediment Quality Restoration  
**Project Name:** Outfall (Military) Canal Remediation  
**Project ID:** SE38  
**Lead Agency:** Air Force Base Conversion Agency  
**Support Agencies:** EPA, FDEP, Miami-Dade DERM, NPS, SFWMD, ACOE  
**Authority:** CERCLA

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Eliminate sediment contamination threat to Biscayne National Park

**Project Synopsis:** Scientific data is available identifying the characteristics, degree, and extent of sediment contamination in the Outfall Canal. The project will (1) evaluate alternatives for the remediation of sediment contaminants in the Outfall Canal using scientific and engineering data, including public and stakeholder inputs in the selection of a remedy, (2) prepare engineering design and specifications for the selected alternative, and (3) implement the selected alternative. There is a concern that the existing contaminated sediments may be conveyed to Biscayne National Park during flow events. The extent of agency participation identified is necessary to ensure that concerns about contaminated sediments are addressed.

**Cost:** Total: (The Air Force can not provide the total project cost estimate at this time, although the total cost will be at least \$3.3 million, including what has already been spent to date.)

**Project Schedule:**

Start Date: 1999  
 Finish Date: June 2002

	1997	1998	1999	2000	2001	2002	2003	2004
Feasibility Study								
Proposed Plan								
Construction								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$1,400	\$500						
<b>Total</b>								

**Hyperlink:** <http://www.afbca.hq.af.mil/ols/homested.htm>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Critical Projects - Lake Trafford  
**Project ID:** SW26  
**Lead Agency:** USACE  
**Authority:** WRDA 96

**Goal(s) Addressed:** 1.B.3 and 2.A.3

**Measurable Output(s):**

**Project Synopsis:** The removal of 8.5 million cubic yards of organic material from the lake will improve water quality, and re-establish native vegetation. Design is underway.

**Cost:**

Total	\$17,540,000
Project Development	
Land Acquisition	\$1,300,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1997
Finish Date:	2003

	1997	1998	1999	2000	2001	2002	2003	2004
Design								
Real Estate								
Construction								

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	Balance to complete	Total
USACE	\$107	\$1,047	\$2,405	\$2,609	\$2,602		\$8,663
Local Sponsor		\$2,518	\$1,808	\$2,222	\$2,222		\$8,770
<b>Total</b>	<b>\$107</b>	<b>\$3,565</b>	<b>\$4,213</b>	<b>\$4,831</b>	<b>\$4,824</b>		<b>\$17,540</b>

**Hyperlink:** <http://www.saj.usace.army.mil/projects/index.html>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Critical Projects - Western C-11 Water Quality Treatment  
**Project ID:** SE41  
**Lead Agency:** USACE  
**Authority:** WRDA 96

**Goal(s) Addressed:** 1.B.3

**Measurable Output(s):**

**Project Synopsis:** Western C-11 Basin Water Quality Treatment. The construction of gated spillway structure in the C-11 canal will separate clean seepage flows from urban stormwater drainage. A pump station will be constructed to pump this clean flow into Water Conservation Area 3A. Construction to begin this calendar year.

**Cost:**

Total \$8,957,000  
 Project Development  
 Land Acquisition  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2002

	1997	1998	1999	2000	2001	2002
Design						
Construction						

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	\$673	\$500	\$1,700	\$1,942				\$4,142
SFWMD		\$900	\$1,700	\$2,215				\$4,815
<b>Total</b>		<b>\$1,400</b>	<b>\$3,400</b>	<b>\$4,157</b>				<b>\$8,957</b>

**Hyperlink:** <http://www.saj.usace.army.mil/projects/index.html>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Comprehensive Integrated Water Quality Plan  
**Project ID:** CERP 80  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 96

**Goal(s) Addressed:** I.B.3

**Measurable Output(s):** Feasibility Report

**Cost:**

Total TBD  
 Project Development

**Project Schedule:**

Start Date: 10/1999  
 Finish Date: 12/2006

**Project Synopsis:** The Comprehensive Plan includes a number of construction features, such as stormwater treatment areas, specifically designed to improve water quality conditions for the purpose of south Florida ecosystem restoration. Further, the plan includes other construction features, such as water storage reservoirs that could be designed to maximize water quality benefits to downstream water bodies. Optimizing the design and operation of construction features of the recommended plan to achieve water quality restoration targets is essential for achieving overall ecosystem restoration goals for south Florida.

The Comprehensive Integrated Water Quality Plan for south Florida would involve identifying pollution-impaired water bodies, quantifying types and sources of pollution, establishing interim and final pollution load reduction targets necessary to achieve ecosystem restoration, recommendations for development of potential source reduction programs, recommendations for baseline and future water quality monitoring programs to assess ecological responses to water quality changes, and recommendations for designing and constructing water quality treatment facilities, if necessary. It is also envisioned that the feasibility study would also address issues of fragmented, uncoordinated water quality sampling, data quality, and climatological effects and trends; recommendations for oversight and support of improved water quality modeling efforts in south Florida; development of additional water quality restoration targets, where needed; recommendations for remediation programs to achieve those targets; recommendations for Best Management Practices in specific agricultural and urban areas where appropriate (including identifying those urban areas where participation in the NPDES municipal stormwater program is needed); and recommendations for synchronizing water quality restoration programs with the implementation schedule for the components of the recommended plan. The Comprehensive Integrated Water Quality Plan would also include recommendations for locations of water storage and treatment areas and design features for optimizing recommended plan components to achieve water quality restoration targets. The comprehensive integrated water quality plan may also lead to recommendations for additional features (e.g., polishing cells, operational features) for recommended plan components currently lacking specific water quality performance elements.

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Recon Study									
Feasibility Study									

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal	0	0	0											
Local	0	0	0											
Total	0	0	0											

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

DATA SHEET PROFILE

**Program Name:** Infrastructure  
**Project Name:** Everglades National Park Water and Wastewater  
**Project ID:** CE08  
**Lead Agency:** National Park Service  
**Authority:**

**Strategic Plan Goal(s) Addressed:** 1.B.3

**Measurable Output(s):** Number of water and wastewater systems that are rehabilitated or replaced

**Project Synopsis:** This project will rehabilitate or replace the water and wastewater systems at 17 areas within Everglades National Park. A large percentage of the existing water and wastewater systems within the park were constructed over 25 years ago when the public health and environmental standards were not as fully evolved as they are today. While originally constructed to code, many of these systems fall short of meeting present day standards. This rehabilitation effort would modify or replace all of the existing systems with the new systems that offer the full level of public health and environmental protection that present day standards require. The final result will be potable water systems properly designed to provide safe, clean water and wastewater that is sufficiently treated to fully protect the fragile water resources within Everglades National Park.

**Cost: Total** \$38,491,000

**Project Schedule:**

**Start Date:** 1997

**Finish Date:** TBD

	1997	1998	1999	2000	2001	2002	2003	2004
Construction								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	5,348	606					32,537	38,491

Hyperlink

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Water Conservation Areas 1, 2 and 3  
**Project ID:** CE02  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The WCA's include approximately 862,800 acres in Broward, Dade, and Palm Beach counties. The acquisition program is attempting to purchase a combination of fee title flowage easements, and /or mineral rights on approximately 44,000 acres. Appropriate interests have already been acquired on 819,435 acres. Land management is carried out by the FGFWFC and the U.S. Fish and Wildlife Service, under contract to the SFWMD.

The general purpose of these lands is to store floodwater from developed areas adjacent to the WCA's for later use during the dry season. Releases of water from the WCA's during the dry seasonal and, particularly during drought conditions are considered vital to the maintenance of adequate water levels in the coastal canals, wellfields, and Everglades national Park and for the prevention of saltwater intrusion.

**Cost:**

Total	\$18,050,000
Project Development	N/A
Land Acquisition	\$18,050,000
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1948
Finish Date:	2010

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>Not Projected</b>	<b>Balance to complete</b>	<b>Total</b>
State	9,250,000	1,000,000	1,000,000	1,000,000	1,000,000	4,800,000	8,800,000	18,050,000
<b>Total</b>	<b>9,250,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>1,000,000</b>	<b>4,800,000</b>	<b>8,800,000</b>	<b>18,050,000</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov)



**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Complete Land Acquisition for Biscayne National Park  
**Project ID:** FK02  
**Lead Agency:** National Park Service  
**Authority:** Public Law 96-287

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired for habitat purposes

**Project Synopsis:** This project includes acquisition of the five Ragged Keys (602 acres) and approximately 1400 acres of submerged lands in Biscayne National Park. The Ragged Keys are five islands immediately adjacent to the most popular use area in the park, Boca Chita Key. Four of the five islands are natural habitat on the islands and in the surrounding shallows. Least terns nest on land and endangered sea turtles nest on the shoreline. Both nesting sites are greatly disturbed by overflow public use of the area and developers for resort and recreational facilities have repeatedly targeted the five islands.

**Cost:**  
 Total \$2,900,000

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2002

	1998	1999	2000	2001	2002
Real Estate					

**Detailed Project Budget Information (\$1,000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	430				2,470	2,900
<b>Total</b>	<b>430</b>				<b>2,470</b>	<b>2,900</b>

**Hyperlink:**

## DATA SHEET PROFILE

**Program Name:** Land Acquisition  
**Project Name:** Dade County Archipelago  
**Project ID:** SE26  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** This project includes 856 acres in Miami-Dade County and contains some of the most outstanding examples of rockland hammock that remain in Miami-Dade County, as well as the best remaining examples of the highly endangered pine rockland natural community outside of Everglades National Park. The Miami Rockridge Pinelands sites located within the County's urban development boundary are considered upland and developable. All sites are zoned residential, agricultural, or general use. The trees and endemics are also sensitive to adjacent development and agricultural activities. 294 acres have been acquired at a cost of \$8.2 million

**Cost:**

Total:	\$9,900,000
Project Development	
Land Acquisition:	\$9,900,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1994
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$8.2 M						\$1.7 M	\$9.9 M
<b>Total</b>	<b>\$8.2 M</b>						<b>\$1.7 M</b>	<b>\$9.9 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Florida Keys Ecosystem  
**Project ID:** FK05  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** This project, in conjunction with the Complete National Key Deer Refuge proposal, includes the remaining 7,611 acres of tropical hardwood hammocks and pine rocklands of significant size and quality remaining in the Florida Keys from southern Key Largo to Sugarloaf Key. 1,162 acres have been acquired at a cost of \$31.1 million.

**Cost:**

Total:	\$71,000,000
Project Development	
Land Acquisition:	\$71,000,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1992
Finish Date:	Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$31.1 M						\$39.9 M	\$71 M
<b>Total</b>	<b>\$31.1 M</b>						<b>\$39.9 M</b>	<b>\$71 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Coupon Bight/Key Deer Big Pine Key  
**Project ID:** FK06  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The project encompasses virtually all of the undeveloped land between the Coupon Bight Aquatic Preserve and the National Key Deer Refuge on Big Pine Key. It includes the only significant sources of freshwater in the lower Keys which are critical to the survival of the endangered Key Deer. The Pine Rocklands are the best remaining anywhere. The project is habitat for 24 FNAI special plant species and 41 FNAI listed animal species. Project size 3,452 acres. 938 acres have been acquired at a cost of \$11.8 million.

**Cost:**

Total:	\$44,900,000
Project Development	
Land Acquisition:	\$44,900,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: 1985  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$11.8 M						\$33.1 M	\$44.9 M
<b>Total</b>	<b>\$11.8 M</b>						<b>\$33.1 M</b>	<b>\$44.9 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** North Key Largo Hammocks  
**Project ID:** FK07  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The hammocks of north Key Largo form the largest stand of West Indian tropical forest in the United States. This rapidly disappearing forest, which is called Rockland forest, supports a wide diversity of rare plant and animal species. Degraded water quality is becoming an increasing issue in Florida Bay and the Florida Keys, as natural lands are converted to residential housing and commercial development. The project area has over 10 miles of shoreline that directly influences the adjacent waters of John Pennekamp Coral Reef State Park. As in other parts of the Keys, development seriously threatens this area. Project size 4,508 acres. 331 acres have been acquired at a cost of \$4.8 million.

**Cost:**

Total:	\$7,900,000
Project Development	
Land Acquisition:	\$7,900,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1983
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$4.8 M						\$3.1	\$7.9 M
<b>Total</b>	<b>\$4.8 M</b>						<b>\$3.1</b>	<b>\$7.9 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

## DATA SHEET PROFILE

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Fisheating Creek  
**Project ID:** GL02  
**Lead Agency:** Department of Environmental Protection and South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Fisheating Creek, the only free-flowing tributary to Lake Okeechobee, is an extensive riverine swamp flowing through Glades County and emptying into the Lake. The total project area is 168,360 acres. 51,393 acres have been acquired at a cost of \$46.3 million. The project area contains relatively undisturbed upland and wetland habitats that serve as habitat for the endangered Florida Panther and a number of threatened species, including the Florida black bear, the bald eagle, the Florida scrub jay, and the Florida sandhill crane. The federally listed wood stork and state listed white ibis are known to use the area.

This acquisition will preserve the water quality and critical habitat of this large watershed. Additionally, the acquisition will provide both hydrologic and water quality benefits for Lake Okeechobee, located downstream. When states in Lake Okeechobee are high, Fisheating Creek serves as an important feeding area for wading birds, which typically use the lake marshes. Restoration requirements would be minimal if any, as most of the property remains in a natural state.

**Cost:**

Total:	\$163,200,000
Project Development	
Land Acquisition:	\$163,200,000
Implementation	
Operations and Maintenance	

**Project Schedule:**

Start Date:	1999
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$46.3 M						\$116.9 M	\$163.2 M
<b>Total</b>	<b>\$46.3 M</b>						<b>\$116.9 M</b>	<b>\$163.2 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Atlantic Ridge Ecosystem  
**Project ID:** GL09  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The project area is located in southern Martin County, between I-95 and U.S. 1. The project area includes approximately 12,514 acres, which is extremely diverse ecologically. It contains large areas of forested sloughs and high quality flatwoods, as well as one of the largest remaining islands of coastal scrub. The current land use is mostly cattle grazing on unimproved pasture with intense agriculture and residential development occurring around the edges of the project area. However, the project also contains extensive wetland and upland systems. 5,116 acres have been acquired at a cost of \$31.9 million

The purpose of this project is to conserve and protect the high quality habitats and to protect water quality of the South Fork of the St. Lucie River and the North Fork of the Loxahatchee River. The project area forms the headwaters to these rivers and the extensive wetland systems provide a source of groundwater base flow to both rivers. This project will conserve and protect significant habitat for endangered and threatened species such as the Florida scrub jay, the Florida sandhill crane, and the Florida scrub lizard. The area is extremely important for aquifer recharge and water supply to the coastal portion of Martin County.

**Cost:**

Total:	\$78,000,000
Project Development	
Land Acquisition:	\$78,000,000
Implementation	
Operations and Maintenance	

**Project Schedule:**

Start Date: 1995  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$31.9 M						\$46.1 M	\$78 M
<b>Total</b>	<b>\$31.9 M</b>						<b>\$46.1 M</b>	<b>\$78 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Juno Hills  
**Project ID:** GL11  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** This 440-acre site in Palm Beach County contains one of the largest and best remaining examples of the now rare coastal scrub. The extremely rare four-petal pawpaw, known only from a few sites in the Southeast Florida coastal scrub, and at least three other rare species of scrub plants occur in the Juno Hills project. Such rare animals as the scrub jay, scrub lizard, gopher tortoise, and red widow spider also inhabit the scrub here. Endangered sea turtles nest on the Atlantic beach/dune portion of the property. A remnant portion of coastal hammock is located west of the dune system. Scrubby slash pine flatwoods, disturbed basin swamps, and estuarine tidal swamps cover parts of the project area. 336 acres have been acquired at a cost of \$15 million.

**Cost:**

Total:	\$19,400,000
Project Development	
Land Acquisition:	\$19,400,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1994
Finish Date:	Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$15 M						\$4.4 M	\$19.4 M
<b>Total</b>	<b>\$15 M</b>						<b>\$4.4 M</b>	<b>\$19.4 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

## DATA SHEET PROFILE

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Loxahatchee River Land Acquisition  
**Project ID:** GL12  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This 1,936-acre project connects to the southern end of Jonathan Dickinson State Park, and contains lands in Palm Beach and Martin Counties. The project includes the historic floodplain of the Northwest Fork of the Loxahatchee River, a National Wild and Scenic River.

The purpose of this project is to protect the outstanding natural and cultural values of Florida's only federally designated Wild and Scenic River. Public ownership of this property will prevent direct disruption of surface and groundwater flows to the northwest Fork, and increase minimum flows to the Loxahatchee River, which will affect downstream movement of the saltwater wedge during dry conditions.

**Project is completed.**

**Cost:**

Total	\$11,927,120
Project Development	N/A
Land Acquisition	\$11,927,120
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1984
Finish Date:	2001

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** North Fork St. Lucie River  
**Project ID:** GL14  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This 3,800-acre project includes a stretch of the North Fork approximately 6 miles long, extending from the White City bridge to Canal 24. This project will extend the boundary of the existing publicly owned St. Lucie River Aquatic preserve. More than 80 percent of the project area is comprised of wetlands within the river floodplain. In addition to the river floodplain, this project includes 175 acres of high quality uplands habitat such as high hammock, pine flatwoods, and sand pine scrub. 467 acres have been acquired at a cost of \$3.4 million.

The purpose of this project is to preserve the floodplain habitat and to protect the water quality of the St. Lucie River from the rapidly encroaching urban development. Floodplain wetlands help decrease current velocities in the river, thereby attenuating flood waters. This action also facilitates recharge of the surficial aquifer and filters out nutrients, pollutants and suspended solids. This stretch of the river is classified as an Outstanding Florida Water. Boating, fishing and canoeing are actively pursued on this part of the river.

**Cost:**

Total:	\$27,900,000
Project Development	
Land Acquisition:	\$27,900,000
Implementation	
Operations and Maintenance	

**Project Schedule:**

Start Date: 1988  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$3.4 M						\$24.5 M	\$27.9 M
<b>Total</b>	<b>\$3.4 M</b>						<b>\$24.5 M</b>	<b>\$27.9 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat & Species  
**Project Name:** North Savannas Land Acquisition  
**Project ID:** GL15  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Currently, none of this acreage, which contains a 930-acre remnant of the historical savannas community type in St. Lucie County, is in public ownership. Based on an evaluation conducted for the Florida Natural Areas Inventory, this area was found to have excellent natural community diversity. Seven upland and wetland community types, including a small area of sand pine scrub, are on the property. Important water management functions of this project area include attenuating peak discharges during major storm events and water quality improvement. The site promotes recharge to the surficial aquifer, which is the primary source of potable water in St. Lucie County. The water table at this location is extremely shallow and results in the aquifer being vulnerable to surface contamination.

Acquisition of this land will help in promoting recharge and protection of the surficial aquifer from surface contamination. Once acquired, sheetflow would be improved if several shellrock roads were removed. Further, acquisition will conserve and protect feeding and breeding habitat for a number of endangered and threatened species, including the wood stork, the Florida sandhill crane, and the osprey. This site also includes the world's only known population of an undescribed mint plant (*Dicerandra sp.*).

The Florida Fresh Water Fish and Wildlife Commission would be the lead manager for the non-reservoir areas. The District will take the lead on all hydrologic restoration efforts.

**Cost:**

Total	\$5,000,000
Project Development	N/A
Land Acquisition	\$5,000,000
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1997
Finish Date:	2002

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State		840,000	1,140,000	1,820,000		0		3,800,000
Local		260,000	360,000	580,000				1,200,000
<b>Total</b>	<b>0</b>	<b>1,100,000</b>	<b>1,500,000</b>	<b>2,400,000</b>				<b>5,000,000</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat & Species  
**Project Name:** Pal Mar  
**Project ID:** GL16  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Pal-Mar is located in Palm Beach and Martin Counties, east of the J.W. Corbett Wildlife Management Area and west of Jonathan Dickinson State Park. The total project encompasses 35,435 acres, including some of the highest quality pine flatwoods in southern Florida in an ecotone between pine flatwoods and the treeless Everglades. It also includes high quality prairie and savanna habitat. The first purchase of 1,922 acres was completed in 1992. 18,035 acres have been acquired at a cost of \$10.1 million.

The primary purpose of this project is to conserve and protect environmentally unique lands that contain native, relatively unaltered flora and fauna. Acquisition of this project will form an extensive wildlife corridor connecting Jonathan Dickinson State Park, Pal-Mar, J.W. Corbett Wildlife Management Area, and DuPuis Reserve. By protecting native flatwoods, prairies, and marshes, this project will protect critical habitat for at least four endangered bird species, including the Florida sandhill crane and Everglades snail kite, and for the endangered Florida panther.

**Cost:**

Total:	\$19,900,000
Project Development	
Land Acquisition:	\$19,900,000
Implementation	
Operations and Maintenance	

**Project Schedule:**

Start Date:	1992
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$10.1 M						\$9.8 M	\$19.9 M
<b>Total</b>	<b>\$10.1 M</b>						<b>\$9.8 M</b>	<b>\$19.9 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

## DATA SHEET PROFILE

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** South Fork St. Lucie River Land Acquisition  
**Project ID:** GL17  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This project includes 184 acres on the western shore of the upper South Fork St. Lucie River. The property begins approximately 0.75 miles south of State Road 76 and extends approximately 1.25 miles southward.

The purpose of this project is to protect the integrity of the river corridor. River water quality is best maintained when river corridor lands remain in their natural state and are restored and managed to enhance the natural community quality. Prescribed fire has successfully been used as the main restoration tool to improve the condition of degraded communities on this property.

**Project is completed.**

**Cost:**

Total	\$2,480,000
Project Development	N/A
Land Acquisition	\$2,480,000
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1995
Finish Date:	1996

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

## DATA SHEET PROFILE

**Program Name:** Land Acquisition  
**Project Name:** Cayo Costa  
**Project ID:** GL47  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The project area, involving 1,932 acres, includes Cayo Costa and North Captiva, both part of a small chain of barrier islands that provide protection for Charlotte Harbor, one of Florida's most productive estuaries. The natural communities within the project are in excellent condition and have high species diversity; some may be unique to these islands. This project contains several archaeological and historical sites. Cayo Costa Island is subdivided into small lots and is threatened by rapid residential development. 1,874 acres acquired at a cost of \$23.6 million.

**Cost:**

Total:	\$26,800,000
Project Development	
Land Acquisition:	\$26,800,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1980
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$23.6 M						\$3.2 M	\$26.8 M
<b>Total</b>	<b>\$23.6 M</b>						<b>\$3.2 M</b>	<b>\$26.8 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

## DATA SHEET PROFILE

**Program Name:** Land Acquisition  
**Project Name:** Charlotte Harbor Flatwoods  
**Project ID:** GL48  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The project area, located northwest of Fort Myers in Charlotte and Lee Counties, includes 18,708 acres containing the largest and highest quality slash-pine flatwoods left in Southwest Florida. The area contains pockets of old growth that provide habitat for red-cockaded woodpeckers, black bears, and bald eagles, and an occasional Florida panther ranges in the area. Additionally, the tract provides habitat for rare plant communities. Several drainages flow through these flatwoods into the Charlotte Harbor Aquatic Preserve. Project size is 44,755 acres. 29,518 acres acquired at a cost of \$34.9 million.

**Cost:**

Total:	\$50,500,000
Project Development	
Land Acquisition:	\$50,500,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1986
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$34.9 M						\$15.6 M	\$50.5 M
<b>Total</b>	<b>\$34.9 M</b>						<b>\$15.6 M</b>	<b>\$50.5 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Caloosahatchee Ecoscape  
**Project ID:** GL70  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The project encompasses a mosaic of wet prairie, cypress basin and dome swamp, mesic flatwoods, wet flatwoods, depressional marshes and scrub. Clearing and drainage from improved pasture development or farming have impacted the majority of the natural communities on the site. Despite the disturbed plant communities, the project provides important habitat for a variety of listed wildlife species. Most of the land is within the Barron Water Control District and canals have altered the natural hydrology to the extent that no significant natural water resources remain. Eleven archaeological sites are known from the project area; some with material dated to the archaic period. Project size 15,391 acres. No acres have been acquired.

**Cost:**

Total:	\$18,100,000
Project Development	
Land Acquisition:	\$18,100,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1998
Finish Date:	Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$ 0						\$18.1 M	\$18.1 M
<b>Total</b>	<b>\$ 0</b>						<b>\$18.1 M</b>	<b>\$18.1 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Lake Wales Ridge Ecosystem  
**Project ID:** KV03  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The proposed refuge was authorized in November 1992 and would comprise 12,770 in Osceola and Polk Counties. The area forms the headwaters boundary between the Kissimmee River basin and the Peace River basin. It is the oldest terrestrial ecosystem in the southeast region of the US, and is probably the most threatened ecosystem in South Florida due to citrus conversion, residential housing construction, and commercial development. It supports 24 species of endangered, threatened, and candidate plant species as well as four threatened or endangered animal species. 8,938 acres acquired at a cost of \$19.1 million.

**Cost:**

Total:	\$25,200,000
Project Development	
Land Acquisition:	\$25,200,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: 1992  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$19.1 M						\$6.1 M	\$25.2 M
<b>Total</b>	<b>\$19.1 M</b>						<b>\$6.1 M</b>	<b>\$25.2 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

## DATA SHEET PROFILE

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Upper Lakes Basin Watershed  
**Project ID:** KV06  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This 43,500-acre project is located at the headwaters of the Kissimmee-Okeechobee-Everglades ecosystem in Polk and Osceola Counties. The project area includes a substantial portion of Reedy Creek and Lake Marion Creek drainage basins, of which the SFWMD already owns substantial acreage. The land contains large expanses of endangered scrub, mesic and wet flatwoods, hydric hammock, and floodplain forest, including habitat for several threatened and endangered plants and animals. Land management will be carried out by the SFWMD and local Government.

The primary purpose of this project is to preserve this watershed which is a critical link in the restoration of the Kissimmee-Lake Okeechobee-Everglades ecosystem. Reedy Creek is the headwater drainage for Lake Russel and Cypress Lake. Peak Discharges from major storm events are modified and stored within the swamp and provide year-round base flow to these downstream lakes. The Lake Marion Creek portion of the project is of critical importance to the recharge of the Floridian Aquifer. Lake Marion serves as the headwaters to lake Marion Creek, which combines with Snell and Horse Creeks to provide a constant supply of high-quality water to Lake Hatchineha, which in turn discharges to Lake Kissimmee, and eventually the Kissimmee River and Lake Okeechobee. All three of these water bodies are primary components of the SFWMD's water management system.

<b>Cost:</b>	Total	\$38,100,000
	Project Development	N/A
	Land Acquisition	\$38,100,000
	Implementation	N/A
	Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1995
Finish Date:	2002

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	9,400,00	7,200,000	7,100,000	7,100,000				30,800,000
Local	850,000	2,200,000	2,100,000	2,150,000				7,300,000
<b>Total</b>	<b>10,250,000</b>	<b>9,400,000</b>	<b>9,200,000</b>	<b>9,250,000</b>				<b>38,100,000</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Catfish Creek  
**Project ID:** KV12  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** Catfish Creek is a diverse natural area extending over high scrub ridges, interspersed with lakes, next to the pristine shore of Lake Pierce. Natural communities include sandhill, scrub, scrubby flatwoods, mesic flatwoods, xeric hammock, bottomland hardwood forest, basin swamp, sandhill upland lake, wet flatwoods, blackwater stream, seepage slopes, and floodplain swamp, all are in excellent condition. The tract harbors at least 18 state listed rare plant and animal species. Rare or endangered animals include the bald eagle, wood stork, gopher tortoise, and scrub jay. Project size 10,609 acres. 4,286 acres have been acquired at a cost of \$9.07 million.

**Cost:** Total:  
 Project Development  
 Land Acquisition:  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date: 1990  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$9.07 M						\$13.2 M	\$22.2 M
<b>Total</b>	<b>\$9.07 M</b>						<b>\$13.2 M</b>	<b>\$22.2 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Habitat and Species  
**Project Name:** Parker – Poinciana Land Acquisition  
**Project ID:** KV16  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Parker – Poinciana is located in Osceola and Polk counties, and is located between the Disney Wilderness Preserve and District owned lands already acquired as part of the Kissimmee Chain of Lakes SOR project along the north shore of Lake Hatchineha. It contains a variety of community types, including mesic flatwoods, a large cypress/bay head, logged over flatwoods and hydric hammock along the Lake Hatchineha shoreline. The total project acreage is 1,970 acres. No acreage has been acquired to date.

**Cost:**

Total	*SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	*SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1996  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State								
Tribal								
Local								
Other								
<b>Total</b>								

\* The total includes Comprehensive Plan Implementation lands.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Pineland Site Complex  
**Project ID:** GL77  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1 and 3

**Measurable Output(s):** Acres acquired

**Project Synopsis:** This internationally significant archaeological site was inhabited by the Calusa for over a thousand years, and includes substantial midden mounds, a burial mound, remnants of an Indian-engineered canal, and buried deposits containing organic remains. Natural habitats within the project area include tidal saltern, a tidal creek, intertidal shoreline, and a large tract of mangrove wetland. Ponds on the site are important to white ibis, egrets, herons, and wood stork. Project size 250 acres. 1 acre has been acquired at a cost of \$280,000.

**Cost:**

Total:	\$2,000,000
Project Development	
Land Acquisition:	\$2,000,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1996
Finish Date:	Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$280 K						\$1.8 M	\$2 M
<b>Total</b>	<b>\$280 K</b>						<b>\$1.8 M</b>	<b>\$2 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Osceola Pine Savannas  
**Project ID:** KV13  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** The project covers an area of old beach ridges and intervening swales, with high-quality, longleaf pine flatwoods interrupted by cypress strands, cypress domes, and wet prairies. There are also extensive dry prairies and patches of oak or sand pine scrub, all of which are natural communities of the Kissimmee Prairie. Six FNAI-listed animals occur on the site, including sandhill crane, wood storks, and crested caracara. Project size 42,291 acres. 0 acres have been acquired.

**Cost:**

Total:	\$30,100,000
Project Development	
Land Acquisition:	\$30,100,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1995
Finish Date:	Upon completion

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$0						\$30.1 M	\$30.1 M
<b>Total</b>	<b>\$0</b>						<b>\$30.1 M</b>	<b>\$30.1 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Barfield Farms Land Acquisition  
**Project ID:** SW52  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Barfield Farms is located in extreme southwestern Hendry County, along the edge of Okaloocoochee Slough, and immediately north of the Big Cypress National Preserve. The owner proposes two sections, approximately 1,367 acres, for sale as a conservation easement. The property consists of cypress-dominated strand swamp, deep spike rush/pickerelweed marshes, and maple/cabbage palm hydric hammocks. The owner reports that panthers frequently use the property, and Florida Fish and Wildlife Conservation Commission has designated it Priority 1 panther habitat. The total project acreage is 1,367 acres. No acreage has been acquired to date.

**Cost:** Total SFWMD does not make cost projections on SOR projects  
 Project Development N/A  
 Land Acquisition SFWMD does not make cost projections on SOR projects  
 Implementation N/A  
 Operations and Maintenance N/A

**Project Schedule:**

Start Date: 1998  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State								
Tribal								
Local								
Other								
Total								

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Cypress Creek/Trail Ridge Land Acquisition  
**Project ID:** GL75  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Cypress Creek/Trail Ridge is in southwestern St. Lucie County. It is divided into three major tracts that lie north and south of State Road 70. Two tracts (Cypress Creek portion) are contiguous and the third (Trail Ridge) is not. The project gets its name from a large forested wetland system that once extended along the entire eastern edge of the Orlando Ridge south of Indian River County, through Allapattah Flats, and drained into the South Fork St. Lucie River. The Cypress Creek portion is also a CARL project. In 1998, St. Lucie County acquired 3,285 acres through their environmentally sensitive lands program. The total project size is 13,788 acres of which no acreage has been acquired by the state.

**Cost:**

Total	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1997
Finish Date:	Upon Completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State								
Tribal								
Local								
Other								
Total								

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Dupuis Reserve Land Acquisition  
**Project ID:** GL72  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Dupuis Reserve encompasses 21, 875 acres in northwestern palm beach and southwestern martin Counties. The property is interspersed with numerous ponds, wet prairies, cypress domes, pine flatwoods, and remnant Everglades marsh. Dupuis is actively managed by the District and the Florida Fish and Wildlife Conservation Commission. Numerous public use opportunities are available, including hiking, horseback riding, hunting, fishing, and bicycling. Total project acreage is 21,875 acres. This project has been completed.

**Cost:**

Total	\$23,016,601
Project Development	N/A
Land Acquisition	\$23,016,601
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1985
Finish Date:	1986

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to Complete</b>	<b>Total</b>
State	23,016,601							23,016,601
<b>Total</b>	<b>23,016,601</b>							<b>23,016,601</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Lake Walk-in-Water Land Acquisition  
**Project ID:** KV18  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Lake Walk-in-Water project covers land between the northeast shore of lake Weohyakapka (Walk-in-Water) and SR60. The retirement communities of Nalcrest and Fedhaven border the property to the west and the community of Indian Lake Estates lies to the south. The project has extensive frontage along SR60 and Lake Water-in-Water and contains a large expanse of dry prairie, interspersed with small, isolated depression marshes a very large basin marsh along the highway, and large pine stands that have grown back since being logged in the 1920s. In 1999, the District and Polk County partnered to make the initial 4,000 acre purchase. The project is historically significant to Polk of Sumica. Polk county actively managing the property with financial assistance from the District. The total project acreage is 4,615 acres of which 4,009 acres have been acquired.

**Cost:** Total SFWMD does not make cost projections on SOR projects  
 Project Development N/A  
 Land Acquisition SFWMD does not make cost projections on SOR projects  
 Implementation N/A  
 Operations and Maintenance N/A

**Project Schedule:**

Start Date: 1995  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
State	1,975,000							
Local	1,975,000							
<b>Total</b>	<b>3,950,000</b>							

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Nicodemus Slough Land Acquisition  
**Project ID:** GL73  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Nicodemus Slough consists of wet prairie, broadleaf marsh, and prairie hammock south of the Herbert Hoover Dike (LD-3) and west of State Road 78. Until recently, the construction of the Herbert Hoover Dike, coupled with the maintenance of lower stages in Lake Okeechobee, resulted in a shortened hydroperiod and general lowering of water levels in Nicodemus Slough. This in turn altered vegetative patterns on the property and allowed the spread of transition and upland species. This project consists of 2,219 acres and has been completed.

**Cost:**

Total	\$1,744,500
Project Development	N/A
Land Acquisition	\$1,744,500
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1981  
 Finish Date: 1988

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
State	1,744,500							1,744,500
<b>Total</b>	<b>1,744,500</b>							<b>1,744,500</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Hydrological Restoration, Water Quality, and Habitat and Species  
**Project Name:** Six Mile Cypress Land Acquisition  
**Project ID:** GL74  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Six Mile Cypress Slough is located in Lee County southeast of the City of Fort Myers. It extends from State Road 82 southwesterly for approximately nine miles to Ten Mile Canal. The Slough averages 1,500 feet in width, and coexists of Cypress swamps, interspersed with numerous open ponds. It is ringed with pine flatwoods, transitional hardwoods, wet prairies, and stands of Melaleuca. The total project size is 1,741 acres and 839 acres have been acquired.

**Cost:**

Total	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1987  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
State	1,975,321							
<b>Total</b>	<b>1,975,321</b>							

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** South Savannas Land Acquisition  
**Project ID:** GL78  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District  
**Authority:** Save Our Rivers (SOR), Conservation and Recreation Lands (CARL)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Savannas forms a chain of marshes and lakes that separate the inland pine flatwoods from the coastal scrub on the Atlantic Ridge in St. Lucie and Martin Counties. The State has acquired most of the lands within the project through the CARL program. The District’s ownership is restricted to a single 77-acre tract in Martin County. The State is in the process of buying the District’s ownership in the project. It is now and will continue to be managed by the Department of Environmental Protection as the Savannas Preserve. The project totals 6,046 acres which 4,968 acres have been acquired.

**Cost:**

Total	SFWMD does not make cost projections on SOR projects
Project Development	N/A
Land Acquisition	SFWMD does not make cost projections on SOR projects
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date: 1981  
 Finish Date: Upon completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
State	16,522,480							
<b>Total</b>	<b>16,522,480</b>							

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading “Major Projects”

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Tibet-Butler Preserve Land Acquisition  
**Project ID:** KV19  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** The Preserve covers 439 acres along the southwest shore of Lake Tibet-Butler in Orange County. The vegetative communities include bay swamp, pine flatwoods, cypress swamp, and smaller areas of xeric oak and freshwater marsh. The Tibet-Butler Preserve site includes approximately 4,000 feet of shoreline on Lake Tibet. Orange County Parks and Recreation Department manage Tibet-Butler Preserve as an environmental education facility. This project has been completed.

**Cost:**

Total	\$3,601,900
Project Development	N/A
Land Acquisition	\$3,601,900
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1988
Finish Date:	1999

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
State	3,601,900							3,601,900
<b>Total</b>	<b>3,601,900</b>							<b>3,601,900</b>

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"



**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Big Cypress National Preserve Private Inholdings  
**Project ID:** SW07  
**Lead Agency:** National Park Service  
**Authority:** Public Law 93-440

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Acquisition of 192 privately owned tracts (878 acres of wetlands) scattered throughout the original Preserve boundaries. This acquisition would allow the lands to be restored, protected and managed consistent with the conservation mandates of the Preserve, by the removal of fill pads and roads, and by the removal of hazardous materials, failed septic systems, and non-compatible uses such as commercial operations. Several of the tracts straddle surface water flow-ways critical to sustaining natural hydropatterns.

**Cost:**  
 Total \$207,061,269

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2010

	1997	1998	1999	2000	2001	2002	2003	Thru 2010
Acquisition								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	184,961						22,100	207,061
<b>Total</b>	<b>184,961</b>						<b>22,100</b>	<b>207,061</b>

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project Name:** Dade County Training Jetport  
**Project ID:** SW11  
**Lead Agency:** National Park Service  
**Authority:** Public Law 93-440

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Acquisition of 24,000 acres of wetlands – 23,000 undisturbed and 1,000 acres of dredged and filled wetlands.

**Cost:** Total (potentially none – see note below)

**Project Schedule:**

Start Date: 2000  
 Finish Date: 2003

	1997	1998	1999	2000	2001	2002	2003	2004
Appraisal								
Acquisition								

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
<b>Total</b>								

**Note:** There is the potential for transferring these lands, or at a minimum, the 24,000 acres of undeveloped lands, to the NPS without the necessity of expending financial resources, other than costs associated with transfer. By legislation, the NPS can only acquire publicly owned lands by donation.

**Hyperlink:**

## DATA SHEET PROFILE

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Twelve Mile Slough  
**Project ID:** SW13  
**Lead Agency:** South Florida Water Management District  
**Authority:** Save Our Rivers (SOR)

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This site contains 3,300 acres in Hendry County and is tributary to the much larger and regionally significant Okaloacoochee Slough. It contains a mosaic of uplands and wetlands, as well as improved pasture areas which appear to be reverting to native range. Based on a 1993 FGFWFC report, this single-owner tract provides habitat for the endangered Florida panther. Significant restoration on the site is necessary to correct overdrainage of the wetland communities.

Restoration and protection is important because the Twelve Mile Slough is a headwater tributary to Okaloacoochee Slough, which supplies a major source of water for Fakahatchee Strand State Preserve and Big Cypress National Preserve. Surface water storage in the numerous wetlands provides for ground-water recharge of the underlying surficial aquifer and provides surface water supply to the Caloosahatchee River.

**Cost:**

Total	\$3,300,000
Project Development	N/A
Land Acquisition	\$3,300,000
Implementation	N/A
Operations and Maintenance	N/A

**Project Schedule:**

Start Date:	1998
Finish Date:	2001

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	0	3,300,000						3,300,000
<b>Total</b>	<b>0</b>	<b>\$3,300,000</b>						<b>\$3,300,000</b>

**Hyperlink:**

## DATA SHEET PROFILE

**Program Name:** Land Acquisition  
**Project Name:** Rookery Bay  
**Project ID:** SW31  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** This project consists of 18,532 acres in Collier County and provides an outstanding example of a subtropical estuarine system. Its mangroves shelter important nesting colonies of water birds, and feed and protect many aquatic animals, which are the foundation of a commercial and sport fishery. The natural communities associated with the estuary are relatively undisturbed and range from mangrove and marsh to flatwoods and maritime hammock. As part of the national estuarine research reserve system, Rookery Bay is representative of the West Indian biogeographic type. The area is believed to have good potential for archaeological investigations. The area is threatened by dredging and filling associated with the rapid development of the area. 18,508 acres have been acquired at a cost of \$46.2 million.

**Cost:**

Total:	\$46,240,000
Project Development	
Land Acquisition:	\$46,240,000
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1980
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$46.2 M						\$44.6 K	\$46.24M
<b>Total</b>	<b>\$46.2M</b>						<b>\$44.6K</b>	<b>\$46.24M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

## DATA SHEET PROFILE

**Program Name:** Land Acquisition  
**Project Name:** Estero Bay  
**Project ID:** SW28  
**Lead Agency:** FDEP  
**Authority:** CARL Program

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres acquired

**Project Synopsis:** Much of the Estero Bay Project is comprised of wetlands fronting Estero Bay (mangrove swamp, salt marsh, and salt flats). These communities provide nutrients to the Bay, contributing substantially to its biological productivity. The Bay, one of the most productive estuaries in the State, supports a diversity of wildlife, including the federally endangered bald eagle. These communities provide an important nutrient for the Bay, thus contributing to biological productivity. The wetlands are in a natural condition and help maintain high quality of water in the Estero Bay Aquatic Preserve. The project also includes the largest remaining block of rosemary scrub in southwest Florida. Several archaeological sites attributed to the Calusa Indians and their prehistoric ancestors are known to be within the project area. The project is threatened by the rapid residential development in the area. Project size 16,740 acres. 8,426 have been acquired at a cost of \$40.14 million.

**Cost:**

Total:	TBD
Project Development	
Land Acquisition:	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date:	1985
Finish Date:	Upon completion

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
State	\$7.9 M	\$32.2 M					unknown	
<b>Total</b>	<b>\$7.9 M</b>	<b>\$32.2 M</b>					<b>unknown</b>	

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

**DATA SHEET PROFILE**

**Program Name:** Restoration Program: Habitat and Species  
**Project Name:** Okaloacoochee Slough  
**Project ID:** SW44  
**Lead Agency:** Florida Department of Environmental Protection/South Florida Water Management District  
**Authority:** CARL/SOR

**Goal(s) Addressed:** 2.A.1

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** This site contains more than 37,210 acres in Hendry and Collier Counties. It is a major tributary to Fakahatchee Strand and Big Cypress National Preserve. It is dominated by a central slough, consisting of sawgrass marshes and wet prairies, with fringes of live oak/cabbage palm hydric hammocks. Most of the pines have been logged, but otherwise the site is pristine. SFWMD acquired 21,000 acres in 1996. Prior to the acquisition, it was used for native range grazing. Okaloacoochee Slough is critical habitat for the Florida panther. Some exotic treatment is needed to control minor infestations of Brazilian pepper and melaleuca. Hydrologically, the property remains undisturbed. 34,982 acres have been acquired at a cost of \$20 million.

**Cost:**

Total:	\$21,300,000
Project Development	
Land Acquisition:	\$21,300,000
Implementation	
Operations and Maintenance	

**Project Schedule:**

Start Date:	1996
Finish Date:	Upon completion

**Detailed Project Budget Information**

	<b>Through 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
State	\$20 M						\$1.3 M	21.3M
<b>Total</b>	<b>\$20 M</b>						<b>\$1.3 M</b>	<b>\$21.3 M</b>

**Hyperlink:** <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

## DATA SHEET PROFILE

**Program Name:** South Florida Ecological Services Office Threatened and Endangered Species Program

**Project Name:** South Florida Multi-Species Recovery Plan

**Project ID:** TS19

**Lead Agency:** USFWS

**Authority:** Endangered Species Act of 1973 (16 U.S.C. 1531-1543)

**Goal(s) Addressed:** 2.A.1 and 2.B.4

**Measurable Output(s):** Number of species delisted, number of species reclassified, number of species status improving

**Project Synopsis:** A Multi-Species Recovery Plan (MSRP) for the threatened and endangered species of South Florida was completed in May 1999. This document was prepared to fulfill a major element of the South Florida Ecosystem Restoration Initiative. It contains information on the biology, ecology, status, trends, management, and recovery actions for 68 federally-listed species that occur in South Florida, as well as the ecology and restoration needs of 23 natural communities in this region. Implementation of the Recovery Plan is underway with the appointment of a Multi-Species Recovery Implementation Team (MERIT). The focus of MERIT will be on developing an implementation plan for South Florida to prioritize the recovery and restoration actions as identified in the Multi-Species Recovery Plan, and on recommending and funding on-the-ground recovery and restoration activities. This team will also develop an implementation schedule as a required component of the Recovery Plan. This Implementation Plan will provide guidance for project development. Costs of recovery projects will be integrated into and provide for in specific project design.

Two of the most significant recovery actions identified in the MSRP are the acquisition of selected acreage of land for five National Wildlife Refuges in South Florida and control of invasive exotic species such as melaluca, Brazilian pepper, Australian pine and Old World climbing fern. Additional lands for Archie Carr NWR, J.N.Ding Darling NWR, Pelican Island NWR, Lake Wales Ridge NWR and Crocodile Lake NWR as well as conservation easements for the Florida panther, are necessary for the recovery of threatened and endangered species in South Florida. The other critical component of restoration is the control of invasive exotic species which when present can render the lands unsuitable for their intended uses. Currently, over 100,000 acres of National Wildlife Refuge lands are infested with over 30 species of exotic vegetation. Over 70,000 acres of A.R.M. Loxhatchee NWR is infested with melaluca and Old world climbing fern. These areas must be cleared of infestations for that lands to provide the necessary habitat for threatened and endangered species.

**Cost:**

Total:	\$329,950,000
Project Development:	\$8,000,000
Land Acquisition:	\$259,000,000 (National Wildlife Refuge Land Acquisition)
Implementation:	\$17,600,000
Operations and maintenance:	\$45,350,000 (Exotic plant control on NWRs)

**Project Schedule:**

Start Date:	1994
Finish Date:	2010

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal*	\$8,000	\$1,560	\$1,560	\$1,560	\$1,560	\$1,560	\$9,800	\$25,600
Land acq <sup>1</sup>	\$87,000	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$87,000	\$259,000
O&M <sup>2</sup>	\$350	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$22,500	\$45,350
<b>Total</b>	<b>\$95,350</b>	<b>\$23,060</b>	<b>\$23,060</b>	<b>\$23,060</b>	<b>\$23,060</b>	<b>\$23,060</b>	<b>\$119,300</b>	<b>\$329,950</b>

\*Only funds for Project Development and Implementation- USFWS

1 Lands acquisition for National Wildlife Refuges ( NWR)

2 Invasive plant and animal control on NWRs

**Hyperlink:** <http://southeast.fws.gov/verobeach/vbms5.html>

**DATA SHEET PROFILE**

**Project Name:** Planning and Implementation of the Tortugas Ecological Reserve  
**Project ID:** FK58  
**Lead Agency:** DOC/NOAA/Florida Keys National Marine Sanctuary  
**Authority:** NMSA (16 U.S.C. §§ 1431 *et seq.*), FKNMSPA (PL 101-605), and Executive Order 13089 (Coral Reef Protection).

**Goal(s) Addressed:** 2.A.2

**Measurable Output(s):**

- The implementation of the Tortugas Ecological Reserve will bring the Florida Keys National Marine Sanctuary close to the Coral Reef Task Force’s target within the National Action Plan to Protect Coral Reefs by setting aside 10% of the Florida Keys’ coral reefs as “no-take” ecological reserves by 2005.
- The preferred alternative for the Reserve, if implemented as described in the Draft SEIS/Draft SMP, will protect 87% of the known coral reef habitat and 76% of the known hard bottom habitat in the area.
- The preferred alternative for the Tortugas Ecological Reserve, if implemented as described in the Draft SEIS/Draft SMP, has the potential to protect up to 85 species of sponges, 59 species of stony corals, and 29 species of soft corals (octocorals) by prohibiting anchoring and ship discharges.
- The preferred alternative for the Reserve, if implemented as described in the Draft SEIS/Draft SMP, will enhance fisheries resources by directly protecting 5 of 8 known fish spawning areas, and by protecting known essential fish habitat for red snapper, snowy grouper, tilefish, and golden crab.
- The Reserve will increase public awareness of coral reef ecosystems in the U.S. and worldwide.

**Project Synopsis:** The Florida Keys National Marine Sanctuary (FKNMS), working in cooperation with the State of Florida, the Gulf of Mexico Fishery Management Council, and the National Marine Fisheries Service, proposes to establish a 151 square nautical mile “no-take” ecological reserve to protect the critical coral reef ecosystem of the Tortugas, a remote area in the western part of the Florida Keys National Marine Sanctuary. The reserve would consist of two sections, Tortugas North and Tortugas South, and would require an expansion of Sanctuary boundaries to protect important coral reef resources in the areas of Sherwood Forest and Riley’s Hump. An ecological reserve in the Tortugas will preserve the richness of species and health of fish stocks in the Tortugas and throughout the Florida Keys, helping to ensure the stability of commercial and recreational fisheries. The reserve will protect important spawning areas for snapper and grouper, as well as valuable deepwater habitat for other commercial species. Restrictions on vessel discharge and anchoring will protect water quality and habitat complexity. The proposed reserve’s geographical isolation will help scientists distinguish between natural and human-caused changes to the coral reef environment.

**Cost:** Total  
 Project Development \$174,152.00  
 Implementation \$457,400.00  
 Operations and maintenance \$242,000.00

**Project Schedule:**

Start Date: April 1998  
 Finish Date: Implementation - January 2001; O&M through 2004.

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
Total								

Hyperlink: [www.fknms.nos.noaa.gov/tortugas](http://www.fknms.nos.noaa.gov/tortugas)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP – Protect and Enhance Existing Wetland Systems along Loxahatchee National Wildlife Refuge including the Strazzulla Tract (OPE)  
**Project ID:** CERP 25  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 2.A.3

**Measurable Output(s):** Water control structures

**Cost:**

Total	\$52,772,000
Project Development	\$261,000
Land Acquisition (estimated 10,000 acres)	\$48,972,000
Implementation	\$3,539,000
Operations and maintenance	\$90,000

**Project Schedule:**

Start Date: 9/2001  
 Finish Date: 10/2007

**Project Synopsis:**

The purpose of this feature is to provide a hydrological and ecological connection to the Loxahatchee National Wildlife Refuge and expand the spatial extent of protected natural areas. This land will act as a buffer between higher water stages to the west and lands to the east that must be drained. This increase in spatial extent will provide vital habitat connectivity for species that require large unfragmented tracts of land for survival. It also contains the only remaining cypress habitat in eastern Everglades and one of the few remaining sawgrass marshes adjacent to the coastal ridge. This is a unique and endangered habitat that must be protected as it provides essential heterogeneity function.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Balance to Complete	Total
Federal	0	0	8,162	8,206	8,206	44	885	885	0	0	0	0	0	\$26,386
SFWMD	0	0	8,162	8,206	8,206	44	885	885	0	0	0	0	0	\$26,386
Total	0	0	16,324	16,411	16,411	87	1,770	1,770	0	0	0	0	0	\$52,772

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Environmental Water Supply Deliveries to the Caloosahatchee Estuary (E)  
**Project ID:** CERP 63  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 2.A.3

**Measurable Output(s):** Operational rules for Caloosahatchee Estuary

**Cost:**  
Total TBD

**Project Schedule:**  
Implement when appropriate as other facilities come on line.

**Project Synopsis:** Freshwater deliveries to the Caloosahatchee Estuary will be provided to protect and restore more natural estuarine conditions. Minimum and maximum flows were identified which would cause poor water quality conditions for the estuary. This feature includes the development of a series of operational rules for storage features in the C43 Basin along with modifications to Lake Okeechobee operations in order to maintain the salinity conditions in the estuary to support a range of aquatic vegetation, seagrass, invertebrates, and fish communities.

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Environmental Water Supply Deliveries to St. Lucie Estuary ('C)  
**Project ID:** CERP64  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 2.A.3

**Measurable Output(s):** Operational rules for St. Lucie releases

**Cost:**  
Total TBD

**Project Schedule:**  
Implement when appropriate as other facilities come on line.

**Project Synopsis:** Freshwater deliveries to the St. Lucie Estuary will be provided to protect and restore more natural estuarine conditions. Minimum and maximum flows were identified which would cause poor water quality conditions for the estuary. This feature includes the development of a series of operational rules for storage features in the C23, C24, C25, C44, Northfork and Southfork Basins along with modifications to Lake Okeechobee operations in order to maintain the salinity conditions in the estuary to support a range of aquatic vegetation, seagrass, invertebrates, and fish communities.

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Acquisition of Mineral Rights  
**Project Name:** Big Cypress National Preserve Mineral Rights  
**Project ID:** SW06  
**Lead Agency:** National Park Service  
**Authority:**

**Goal(s) Addressed:** 2.A.3

**Measurable Output(s):** Acres Acquired

**Project Synopsis:** Acquire the non-Federal mineral rights on approximately 729,000 acres in the Big Cypress National Preserve. Acquisition would protect wetlands habitat from oil and gas development activities. This acquisition of all mineral rights would preclude surface disturbance associated with mineral exploration and development in relatively pristine wetlands.

**Cost:**  
 Total unknown (need appraisal)

**Project Schedule:**

Start Date: 2000  
 Finish Date: 2003

	1997	1998	1999	2000	2001	2002	2003	2004
Appraisal								
Acquisition								

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** WCA -2A Regulation Schedule Review  
**Project ID:** CE01  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA

**Goal(s) Addressed:** 2.A.3

**Measurable Output(s):** Revised WCA-2A Regulation Schedule

**Cost:**  
 Total \$500,000

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2001

**Project Synopsis:**

A revised regulation schedule was implemented for Water Conservation Area No.1 (WCA-1) (Loxahatchee National Wildlife Refuge) in 1995. The schedule was modified to improve water conditions for wading bird and snail kite habitat. Implementation of the revised regulation schedule has already shown benefits. When the WCA-1 regulation schedule modifications were approved, it was agreed that the WCA-2A regulation should also be reviewed to evaluate opportunities for similar benefits. The review will be initiated in FY98.

The purpose of the project is to evaluate the feasibility of modifying operational modifications for WCA-2A to benefit its fish and wildlife resources, without adversely impacting the area's ability to satisfy its flood control and water supply purposes. The study can be implemented with existing operational and maintenance authority. It can be funded through ongoing O&M appropriations for the Corps of Engineers. It will be initiated in FY99.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Program										

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	200	100	200				0	500
Local	0	0	0				0	0
<b>Total</b>	<b>200</b>	<b>100</b>	<b>200</b>				<b>0</b>	<b>500</b>

**Hyperlink:** [www.saj02.usace.army.mil](http://www.saj02.usace.army.mil)

**DATA SHEET PROFILE**

**Program Name:** Land Acquisition  
**Project name:** Miami-Dade County Environmentally Endangered Lands Program  
**Project ID:** SE37  
**Lead Agency:** Miami-Dade County  
**Authority:** Ordinance #91-67, Code of Metropolitan Dade County, Florida

**Goal(s) Addressed:** 2.A.3

**Measurable Output(s):** The number of appraisals performed, contracts executed, and sale closings per year.

**Project Synopsis:** The sites approved for acquisition in this program include the best remaining highly endangered pine rocklands outside of Everglades National Park, the best remaining examples of tropical rockland hammock that remain in Miami-Dade County, small scrub sites and freshwater and coastal wetlands. These sites will be used as preserves for the unique and endangered plant communities, will provide connections with existing natural areas, and/or buffer important natural areas from impacts of urban and agricultural development.

**Cost:**

Total	\$56,074,406
Project Development	
Land Acquisition	\$56,074,406
Implementation	
Operations and Maintenance	

**Project Schedule:**

Start Date: 1991  
 Finish Date: Upon Completion

**Detailed Project Budget Information**

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State	5,850	0	0	0	0	0	0	5,850
Tribal								
Local	18,599	1,300	0	1,100	0	0	35,075	56,074
Other								
<b>Total</b>	<b>24,449</b>	<b>1,300</b>	<b>0</b>	<b>1,100</b>	<b>0</b>	<b>0</b>	<b>35,075</b>	<b>61,924</b>

Note: Does not include figures for CARL and South Florida Water Management District joint acquisition projects with Miami-Dade County. These are accounted for on separate sheets.

**Hyperlink:** <http://www.co.miami-dade.fl.us/derm/to/do/eel.htm>

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Restoration of Pineland & Hardwood Hammocks in C-111 Basin (OPE)  
**Project ID:** CERP 56  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 2.A.3

**Measurable Output(s):** Approximately 50 ac. Pine Rockland and Tropical Hardwood Hammock

**Cost:**

Total	\$600,000
Project Development	\$41,000
Land Acquisition (estimated 13,950 acres)	\$0
Implementation	\$559,000
Operations and maintenance	\$0

**Project Schedule:**

Start Date: 10/2000  
 Finish Date: 3/2006

**Project Synopsis:** This feature includes restoring south Florida slash pine and hardwood hammock species on a 200-foot wide strip on each side of two miles of SR 9336 from the C-111 Canal to the L-31W Borrow Canal (approximately 50 acres) and the establishment of 2, one-acre hammocks in low-lying areas on each side of the road located in Miami-Dade County.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Planning & Design											
Real Estate N/A											
Construction											

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Balance to Complete	Total
Federal	0	0	7	7	7	140	140	0	0	0	0	0	0	\$300
Local	0	0	7	7	7	140	140	0	0	0	0	0	0	\$300
Total	0	0	14	14	14	280	280	0	0	0	0	0	0	\$600

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** West Palm Beach Wetland Reclamation Project  
**Project ID:** GL08  
**Lead Agency:** City of West Palm Beach  
**Authority:**

**Goal(s) Addressed:** 2.A.3 and 3

**Measurable Output(s):**

**Project Synopsis:**

This project will reuse safe, highly treated wastewater to increase the water supply in South Florida while lowering the demand on existing potable water resources including Lake Okeechobee. The plan involves directing the flow of tertiary treated wastewater through restored and created wetlands for additional cleansing and treatment processes, and at the same time creating wetland habitat. Then the water will be directed to the surficial aquifer where it will be recovered and pumped into the City of West Palm Beach’s M Canal, which flows to the water treatment plant. The City of West Palm Beach, Florida, with support from Palm Beach County and the South Florida Water Management District, is implementing a wetlands-based Water Reclamation Program. This will assist the City and County in achieving sustainability while providing water for Everglades restoration.

**Cost:**

Total \$24,600,000

**Project Schedule:**

Start Date: 1996  
 Finish Date: 2001

	1997	1998	1999	2000	2001	2002	2003	2004
Phase I								
Phase II A, B, C								
Phase III A								
Phase III B								
Phase III C								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$7,750	\$1,750	\$1,750					\$11,250
State	\$300	\$300	\$300					\$900
City	\$6,430	\$1,450	\$1,450					\$9,330
County	\$3,120	\$0	\$0					\$3,120
<b>Total</b>	<b>\$17,600</b>	<b>\$3,500</b>	<b>\$3,500</b>					<b>\$24,600</b>

**Hyperlink:** <http://www.cityofwpb.com/>

**DATA SHEET PROFILE**

**Program Name:** Control of Invasive Exotic Plants  
**Project name:** Prepare management plans for top 20 south Florida exotic pest plants  
**Project ID:** TS103  
**Lead Agency:** NEWTT (Noxious Exotic Weed Task Team)  
**Authority:**

**Goal(s) Addressed:** 2.B.1

**Measurable Output(s):** Species assessments, prioritized list of species, develop control methods, research reports on basic species biology, management plans, assessment of success, acres of invasion reduced

**Project Synopsis:** Each priority species will have a management plan developed. Existing plans that have proven effective will serve as examples. Plans will be developed through multi-agency coordination and planning. Two plans will be started each year and the plans will take 18 months to complete. All twenty plans will be completed within 10-12 years. As individual plans are completed they will be incorporated into the broader invasive exotic plant strategy. Multi-agency approval of each plan will be required to ensure support and funding.

**Cost:**

Total	\$600,000
Project Development	\$30,000 per plan
Land Acquisition	N/A
Implementation Unknown	
Operations and maintenance Unknown	

**Project Schedule:**

Start Date:	Spring 2001
Finish Date:	2011

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
<b>Total</b>								<b>\$600,000</b>

**For More Information Contact:** Bob Doren @ (305) 348-6721

**DATA SHEET PROFILE**

**Program Name:** Control of Invasive Exotic Plants  
**Project name:** Achieve “maintenance control\*” status for Brazilian pepper, melaleuca, Australian pine and Old World climbing fern in all natural areas statewide by 2020.  
**Project ID:** TS104  
**Lead Agency:** NEWTT (Noxious Exotic Weed Task Team)  
**Authority:**

**Goal(s) Addressed:** 2.B.2

**Measurable Output(s):** Completed plans for Old World climbing fern and Australian pine, agency integration and coordination for control of most wide-spread and serious species, implementation of all plans for these species as a coordinated program, development of control methods for Old World climbing fern, full implementation of biological control programs for Old World climbing fern, melaleuca, and Australian pine, reduction total acreage covered statewide, maintenance control for hydrilla, water hyacinth, water lettuce, Brazilian pepper, Australian pine, Old World climbing fern on all public lands, biennial assessments of success, application of planning and control techniques to additional species as plans are developed.

**Project Synopsis:** The beginning phase will be to complete the plan for Old World climbing fern, write one for Australian pine and organize the agencies in order to implement these species plans in the context of the broader invasive exotic plant strategy being developed. Agencies with existing programs would coordinate and organize with other agencies affected by these species but that may not be currently implementing their parts of an approved species-wide plan. Acquire complete funding to implement the multi-species control program with multi-agency integration.

**Cost:**

Total	\$100,000,000
Project Development	N/A
Land Acquisition	N/A
Implementation	\$5,000,000 per year for 15 years
Operations and maintenance	\$2,000,000 per year thereafter for maintenance control

**Project Schedule:**

Start Date: 2002  
 Finish Date: Achieve maintenance control 2020

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
<b>Total</b>							<b>\$100,000,000</b>	<b>\$100,000,000</b>

\*Maintenance Control is simply defined in SS.369.22(1)(d), F.S., as applying management techniques on a continuous basis to keep nonindigenous plant populations at the lowest feasible levels.

**For More Information Contact:** Bob Doren @ (305) 348-6721

**DATA SHEET PROFILE**

**Program Name:** Invasive Plant Control In Florida  
**Project Name:** Integration of Federal, State, and Local Agency Invasive Exotic Control Programs into Florida-wide Strategy  
**Project ID:** TS100  
**Lead Agency:** National Park Service  
**Authority:**

**Goal(s) Addressed:** 2.B.2

**Measurable Output(s):** The ratio of acres under maintenance control to total acres (by species)

**Project Synopsis:** Compilation of all Federal, State, and Local Agency programs participating in NEWTT (Noxious Exotic Weed Task Team) to develop statewide assessment and strategy for control of invasive exotic plants. Includes 5 Federal Agencies, 6 State Agencies, Actual cost reports for 26 reporting counties, estimated cost reports for 23 non-reporting counties, and one city government. This project incorporates the integration of all these Agencies under the current development and future implementation of the Strategic Plan for Managing Invasive Exotic Plants in Florida. This is the first integration of programmatic and budgetary information on a statewide basis. It includes all invasive exotic plant management programs statewide, including those related to South Florida Ecosystem Restoration, and incorporates the previous individually identified projects and programs that were part of the South Florida Ecosystem Restoration Strategic Planning effort.

Project includes the development of the Strategic Plan for Invasive Exotic Plant Management, Development of an Implementation Plan, and the first 5 years integration of individual agency programs and of implementation of the plan. Invasive exotic plant management does not have a completion date per se as management will continue as long as species are extant. However, it is estimated that the key elements of the Strategy can be implemented within 5 years and the greater proportion of the strategy should be able to be in place within 10 years with some individual recommendations taking longer.

**Cost:**

Total	TBD
Project Development	
Land Acquisition	
Implementation	\$60,850,000 (Annual Requirement)
Operations and maintenance	\$76,418,000 (Annual Requirement)

**Project Schedule:**

Start Date:	2000
Finish Date:	2005 – This date is used as a guidepost to implement the key elements of the strategic plan.

**Detailed Project Budget Information (Costs Reported in Millions of Dollars)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal*		\$30.782	\$30.782	\$30.782	\$30.782	\$30.782	\$40.9	TBD
State**		\$22.436	\$22.436	\$33.436	\$33.436	\$33.436	\$19.75***	TBD
Tribal		Not Reported					Not Reported	
Local		\$23.2	\$23.2	\$23.2	\$23.2	\$23.2	Not Reported	
<b>Total</b>		<b>\$76.418</b>	<b>\$76.418</b>	<b>\$87.418</b>	<b>\$87.418</b>	<b>\$87.418</b>	<b>\$60.65***</b>	<b>TBD</b>

\*Current Costs for Federal Agencies may be assumed for following years

\*\*Current Costs for State Agencies may be assumed for following years, except FLDEP has received their requested increase for 2002

\*\*\*Balance to Complete would be reduced by ~ \$11 Million in 2002 as FLDEP receives their increase that year.

\*\*\*\*The TOTAL figure is going to be conservative as some agencies could only estimate their expenditures, others did not report theirs, and still other did not estimate shortfalls needed to complete (see below).

Florida DOF did not report estimated costs for control. The USACOE, Florida FWCC, FDOF, Local Governments, did not identify shortfalls for balance to complete.

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Control of Invasive Exotic Plants  
**Project name:** Complete an Invasive Exotic Plant Prevention, Early Detection and Eradication Plan by 2005  
**Project ID:** TS105  
**Lead Agency:** NEWTT  
**Authority:**

**Goal(s) Addressed:** 2.B.3

**Measurable Output(s):** “Early Warning” system for Florida to identify exotic species invasion risk, and locations of new infestations of new species or species under maintenance control, roving invasive species strike teams to assist in locating and eradicating localized population of invasive exotic species, risk-assessment system to support current state prohibitions lists and coordination with USDS-APHIS for prohibitions, support for existing control programs through identification of re-infestation of sites by existing species in maintenance control areas.

**Project Synopsis:** Preventing the introduction of invasive species is the only absolute means to control them, but absolute prohibitions and exclusions are impractical. An “early warning” program for potentially invasive species, a risk-assessment for evaluating possible invasiveness prior to introduction, methods for early detection of incipient populations of new species, predictive tools to assist in determining where plants may invade, and the ability to eradicate incipient populations are needed.

**Cost:**

Total	\$5,000,000 plus O&M
Project Development	\$4,000,000 one time
Land Acquisition	
Implementation	\$1,000,000 one time
Operations and maintenance	\$2,500,000 per year

**Project Schedule:**

Start Date: 2001  
 Finish Date: Invasive Plant Strike Teams in place 2002, Completed “early-warning” system 2003, Risk-assessment system, 2004, operations and maintenance of completed system and teams 2004

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
<b>Total</b>								

**For More Information Contact:** Bob Doren @ (305) 348-6721

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Hole-in-the-Donut  
**Project ID:** CE09  
**Lead Agency:** National Park Service  
**Authority:**

**Goal(s) Addressed:** 2.B.4

**Measurable Output(s):** Acres infested with Brazilian pepper

**Project Synopsis:** This project will restore approximately 5,000 – 6,000 acres of wetlands within Everglades National Park by removing Brazilian pepper, an invasive exotic plant species, and the disturbed substrate to limestone bedrock. Invasive exotic plants are one of the greatest long-term threats to the Everglades ecosystem. As a result of this project, approximately 6,000 acres will be restored to natural wetlands within the park as mitigation for development projects in other areas of Dade County. A vast seed source with the potential to invade and disturb other areas of the Everglades will be eradicated.

**Cost:**  
 Total \$75,000,000

**Project Schedule:**

Start Date: 1994  
 Finish Date: 2017

	1997	1998	1999	2000	2001	2002	2003	2004
Construction								

**Detailed Project Budget Information (\$1,000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Dade Co.	8,353	3,229					63,418	75,000

**Hyperlink:** <http://www.nps.gov/ever/eco/exotics.htm>

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project name:** Melaleuca Control (Critical) on Big Cypress National Preserve  
**Project ID:** SW20  
**Lead Agency:** National Park Service  
**Authority:**

**Goal(s) Addressed:** 2.B.4

**Measurable Output(s):** Acres infested with Melaleuca

**Project Synopsis:** Treatment, re-treatment and subsequent monitoring and evaluation of *Melaleuca quinquenervia*, an introduced species from Australia that is recognized as a serious threat to the Big Cypress/Everglades ecosystem. Removal of Melaleuca from sensitive Preserve wetlands will permit the re-establishment of native plant communities. It currently infests more than 150 square miles of Big Cypress wetlands.

**Cost:**  
 Total \$1,400,000

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2005

	1997	1998	1999	2000	2001	2002	2003	2004
Treatment								
Re-Treatment								
Monitoring								

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								700
Local								700
<b>Total</b>	<b>900</b>	<b>150</b>	<b>150</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>700</b>	<b>1,400</b>

**Hyperlink:** <http://www.nps.gov/ever/eco/exotics.htm>



**DATA SHEET PROFILE**

**Program Name:** Exotic Plant Management  
**Project Name:** Estero Bay Aquatic Preserve and Buffer Enhancement and Exotic Removal Project  
**Project ID:** SW35  
**Lead Agency:** FDEP  
**Authority:** Chapter 403, Florida Statutes

**Goal(s) Addressed:** 2.B.4

**Measurable Output(s):** Acres of exotic plants removed

**Project Synopsis:** I. Melaleuca removal: Removal, treatment, monitoring and follow-up treatment of 708 acres of Melaleuca within the 8,426 acre Estero Bay State Buffer Preserve

II. Dog Key Exotic Removal: Removal, treatment, monitoring and follow-up treatment of exotic vegetation on Dog Key, a 24 acre island within the Estero Bay Aquatic Preserve and part of the Estero Bay State Buffer Preserve with documented Calusa Indian middens/mounds

**Cost:**

Total: \$1.355 million

Project Development: I. Melaleuca Removal – This project, 708 acres of initial exotic removal is included within an approved contract between the Bureau of Invasive Plant Management (BIPM), FL Department of Corrections and Keep Florida Beautiful. It is anticipated that \$1,000,000.00 will be spent for this work that is to begin after July 1, 2000. Monitoring and follow-up treatment of this large-scale removal still needs funding.

II. Dog Key Exotic Removal – This project is approved for funding in the estimated amount of \$22,500.00 through BIPM. Staff and volunteers have removed the smaller exotics and BIPM is funding the removal of the rest of the exotics through contracted work. Monitoring and follow-up treatment need funding.

Implementation: I and II initial treatment to be completed within 2000. Monitoring and follow-up treatment to continue through 2004 at an estimated cost of \$300,000.00.

Operations and maintenance: Estimated at \$32,500.00 through 2004.

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2004

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal								
State	\$0	\$1.02M					\$.322 M	\$1.35 M
Tribal								
Local								
Other								
<b>Total</b>	<b>\$0</b>	<b>\$1.02M</b>					<b>\$.332 M</b>	<b>\$1.35 M</b>

**Hyperlink:**

**DATA SHEET PROFILE**

**Program Name:** Environmental Restoration  
**Project Name:** New River Forest Restoration Project  
**Project ID:** SE35  
**Lead Agency:** Broward County Department of Planning & Environmental Protection  
**Authority:**

**Goal(s) Addressed:** 2.A.3 and 2.B.4

**Measurable Outputs:** Measurable outputs would include the elimination of exotic vegetation threatening the integrity of the forest, a continuation of the rip rap which has been used to stabilize portions of the shoreline and a reversal of the higher levels of salinity which is believed to have caused substantial cypress mortality. Also the County would like to provide access to Pond Apple Slough via a boardwalk system.

**Project Synopsis:** The project will help restore the remaining several hundred acres of freshwater riverine forest system adjacent to the South Fork of the New River. The various tracts of forest are in a variety of public and private ownerships and would benefit from implementation of an area-wide management plan. Important management needs include exotic vegetation control, shoreline stabilization and salinity management. Some aspects of this project are being addressed through mitigation funding while other elements remain unfunded. In addition the site(s) offer great potential for environmental education, nature based recreation and research opportunities.

**Costs (estimated):**

Total: \$2.22 million  
 Operation and Maintenance: Not included

**Project Schedule:**

Start Date: Fall, 1997  
 Finish Date: Dependent on funding

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal	0	0	0	0	0	0	0	0
State	0	0	0	0	0	0	0	0
Tribal	0	0	0	0	0	0	0	0
Local	0	0	0	0	0	0	0	0
Other	435	85	0	0	0	0	0	520
Total	435	85	0	0	0	0	0	520

These dollars are for existing and projected mitigation projects.

**Contact:** Eric Myers at (954)519-1231 or [emyers@broward.org](mailto:emyers@broward.org)

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project name:** Exotic Species Removal  
**Project ID:** SW15  
**Lead Agency:** Seminole Tribe of Florida/BIA  
**Authority:** Tribal Resolution

**Goal(s) Addressed:** 2.B.4

**Measurable Output(s):**  
 Eradication and control of exotic species.

**Project Synopsis:** Control growth of exotic species on the Big Cypress and Brighton reservations.

**Cost:**  
 Total 988,000  
 Project Development  
 Land Acquisition  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2010

**Detailed Project Budget Information**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
<b>Federal</b>	60,000	30,000	30,000	30,000	30,000	30,000	180,000	390,000
<b>State</b>	92,000	46,000	46,000	46,000	46,000	46,000	276,000	598,000
<b>Tribal</b>								
<b>Local</b>								
<b>Other</b>								
<b>Total</b>								<b>988,000</b>

**Contact:** Craig Tepper, Seminole Tribe of Florida, 954-967-3401

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Melaleuca Eradication Project and other Exotic Plants (OPE)  
**Project ID:** CERP 61  
**Lead Agency:** U.S. Army Corps of Engineers  
**Authority:** WRDA 1996

**Goal(s) Addressed:** 2.B.4

**Measurable Output(s):** Increase effectiveness of biological control technologies

**Cost:**

Total	\$5,772,000
Project Development	\$397,000
Land Acquisition	\$0
Implementation	\$5,375,000
Operations and maintenance	\$5,000

**Project Schedule:**

Start Date: 10/2006  
 Finish Date: 09/2011

**Project Synopsis:** This feature includes: 1) upgrading and retrofitting the current quarantine facility in Gainesville, and 2) large-scale rearing of approved biological control organisms for release at multiple sites within the south Florida ecosystem.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Planning & Design										
Real Estate										
Construction										

**Detailed Project Budget Information (\$1000)**

	Exp Thru 1999	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Balance to Complete	Total
Federal	0	0	66	66	66	1,344	1,344	0	0	0	0	0	0	\$2,886
Local	0	0	66	66	66	1,344	1,344	0	0	0	0	0	0	\$2,886
Total	0	0	132	132	132	2,688	2,688	0	0	0	0	0	0	\$5,772

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project Name:** Melaleuca Quarantine Facility  
**Project ID:** TS03  
**Lead Agency:** USDA - ARS  
**Authority:** ARS

**Goal(s) Addressed:** 2.B.4

**Measurable Output(s):** Number Biological Agents Approved

**Project Synopsis:** Biological control agents have the potential of providing greater efficiency and improved economy. Ultimately, they may prove to be the only truly effective large-scale means of reversing and halting the effects of non-native species on the South Florida habitat. This project consists of constructing a quarantine facility to enable the testing of candidate organisms for biological control and reversal of the spread of exotic plant species.

**Cost:**

Total:	\$5,000,000
Project Development	
Land Acquisition	
Implementation:	\$5,00,000
Operations and maintenance	

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2003

**Detailed Project Budget Information (\$1000)**

	<b>Thru 1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>Balance to complete</b>	<b>Total</b>
Federal	\$1,000		\$1,000	\$1,800	\$1,200			\$5,000
State								
Tribal								
Local								
Other								
<b>Total</b>								<b>\$5,000</b>

**Contact:** Ted Center, 954-475-0541

USDA - ARS

## DATA SHEET PROFILE

**Program Name:** Restoration Program: Hydrological Restoration  
**Project Name:** Regional Water Supply Plans  
**Project ID:** TS 102  
**Lead Agency:** South Florida Water Management District  
**Authority:** Chapter 373, Florida Statute

**Goal(s) Addressed:** 3

**Project Synopsis:** The SFWMD is charged by the Florida legislature with managing water use in South Florida. To partially fulfill this charge by planning for future water demand in specific geographic regions, the SFWMD has prepared long-term comprehensive regional water supply plans (WSP) for four planning areas encompassing the District: the Kissimmee Basin, the Lower West Coast, the Upper East Coast, and the Lower East Coast. The Kissimmee Basin Planning Area encompasses approximately 3,500 square miles and includes the portion of the SFWMD extending from southern Orange County through the Kissimmee Chain of Lakes and the Kissimmee River, to the north shore of Lake Okeechobee. The area includes parts of Orange, Osceola, Polk, Highlands, Okeechobee, and Glades Counties. The Lower West Coast (LWC) Planning Area covers approximately 4,300 square miles and includes all of Lee County, most of Collier and Hendry Counties, and portions of Charlotte, Glades, and Monroe counties. The Upper East Coast (UEC) Planning Area covers approximately 1,200 square miles and includes most of Martin and St. Lucie counties, and a small portion of Okeechobee County. The Lower East Coast (LEC) Planning Area encompasses approximately 9,000 acres and includes all of Miami-Dade, Broward, and Palm Beach counties plus portions of seven other counties. The Comprehensive Review Study of the Central and South Florida Project has initially relied heavily on concepts developed in the LEC planning process.

The general goal of these water supply plans is to: Assure the availability of an adequate water supply through identification of sufficient sources of water to meet the needs of all reasonable-beneficial uses through 2020 during a drought event that has the probability of occurring no more frequently than once every ten years, while sustaining the water resources and related natural systems. The Kissimmee Basin and Lower West Coast WSPs were approved in April 2000; the Upper East Coast WSP was approved in February 1998; and the Lower East Coast WSP was approved in May 2000. These plans will be updated at least every five years. Development of these plans was coordinated with other regional efforts, including the Restudy and Comprehensive Everglades Restoration Plan.

**Hyperlink:** [www.sfwmd.gov](http://www.sfwmd.gov) under the heading "Major Projects"

**DATA SHEET PROFILE**

**Program Name:** Management  
**Project name:** South Biscayne Bay Watershed Management Plan  
**Project ID:** SE06  
**Lead Agency:** Miami-Dade County, SFRPC, SFWMD  
**Authority:** Comprehensive Development Master Plan and Miami-Dade County Board of County Commission Resolution

**Goal(s) Addressed:** 3

**Measurable Output(s):** Completion of Comprehensive Study and Plan

**Project Synopsis:** An integrated land use and water management plan for the South Biscayne Bay watershed will be prepared, based on a comprehensive study that provides supporting data and analysis. This plan will direct the comprehensive management of land use, surface and ground water including its quality, quantity, timing and distribution; and will insure the restoration and sustainability of the environment, viable agriculture, flood protection and assist in the protection of the potable drinking water supply. This comprehensive approach to address water quantity, water quality, flood protection, private property rights and agricultural production, is essential in achieving a restored, sustainable, natural system for the critical area.

**Cost:**  
 Total \$6.4 Million  
 Project Development  
 Land Acquisition  
 Implementation  
 Operations and maintenance

**Project Schedule:**

Start Date: December 1999  
 Finish Date: January 2002

	1999	2000	2001	2002
Planning & Design				
Real Estate				
Construction				

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	Balance to complete	Total
Federal						
State	\$2,310,000	\$370,000				\$2,680,000
Tribal						
Local	\$850,000	\$1,370,000				\$2,220,000
Unfunded					\$1,500,000	\$1,500,000
Total	\$3,160,000	\$1,740,000			\$1,500,000	\$6,400,000

**DATA SHEET PROFILE**

**Program Name:** Science  
**Project name:** Agriculture and Rural Area Study  
**Project ID:** SE11  
**Lead Agency:** Miami-Dade County, SFRPC, SFWMD, and FDACS  
**Authority:** Comprehensive Development Master Plan, Miami-Dade County, Florida

**Goal(s) Addressed:** 3

**Measurable Output(s):** Completion of Study

**Project Synopsis:** Agriculture currently provides a 140-square mile buffer between urban land uses and two national parks in South Miami-Dade County. Future urban expansion to accommodate population growth in the County and economic pressures are impacting the agricultural industry’s viability in South Dade. It is the intention of this study to develop economically sustainable, environmentally sensitive agriculture in South Miami-Dade County in order to provide and retain agriculture as a buffer between the national parks. Specific project goals are to: 1) determine whether regulatory agencies should adjust existing and establish new policies to retain agriculture as a viable economic land use in south Miami-Dade County; 2) determine the extent of this area in which such policies should be implemented; 3) determine any additional land uses, development standards, and/or retention programs that should be authorized to maintain or promote recommended agricultural and rural development; and develop a plan to accomplish the foregoing purposes, including implementation programs and actions.

**Cost:**

Total	\$1,100,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: July 2000  
 Finish Date: March 2001

	1999	2000	2001	2002
Planning & Design				
Real Estate				
Construction				

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State		\$400,000	\$200,000					\$600,000
Tribal								
Local			\$500,000					\$500,000
Other								
<b>Total</b>		\$400,000	\$700,000					\$1,100,000

**DATA SHEET PROFILE**

**Program Name:** Infrastructure  
**Project name:** Critical Projects - Florida Keys Carrying Capacity  
**Project ID:** FK14  
**Lead Agency:** USACE/FDCA  
**Authority:** WRDA 96

**Goal(s) Addressed:** 3

**Measurable Output(s):**

**Project Synopsis:** The development of a decision making tool will provide a comprehensive basis for coordinating and strengthening water and land related planning efforts by local, state and federal agencies. Study to be completed June 2001.

**Cost:**

Total	\$6,000,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

**Project Schedule:**

Start Date: 1997  
 Finish Date: 2001

	1997	1998	1999	2000	2001
Planning & Design					
Real Estate					
Construction					

**Detailed Project Budget Information (\$1000)**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
USACE	545	1,444	1,011				0	3,000
SFWMD	1,250	500	750				0	2,500
<b>Total</b>	<b>1,795</b>	<b>1,944</b>	<b>1,761</b>				<b>0</b>	<b>5,500</b>

## DATA SHEET PROFILE

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Change Coastal Wellfield Operations (L)  
**Project ID:** CERP 68  
**Lead Agency:** U.S. Army Corps of Engineers / SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 3

**Measurable Output(s):** Changed Coastal Wellfield Operations

**Cost:**

Total	TBD
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**Project Schedule:**  
Operational change only.

**Project Synopsis:** For coastal public water supply utilities in the Lower East Coast Service Area, which are expected to experience an increased threat of saltwater intrusion, demands will be shifted from eastern facilities to western facilities away from the saltwater interface. The following utilities have a portion of their demands shifted inland: Riviera Beach, Lake Worth, Lantana, Manapalan, Boca Raton, and Florida City. The volume shifted is dependent upon the degree of saltwater intrusion, but is generally proportional to the increase in demands between the 1995 existing conditions and the 2050 future without plan conditions. Eastern wellfields at Miramar, Hollywood, Broward County 3A, 3B and 3C, Dania and Hallandale are assumed to be on standby with the entire demand met from western facilities.

**Hyperlink:** [www.evergladesplan.org](http://www.evergladesplan.org)

## DATA SHEET PROFILE

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Lower East Coast Utility Water Conservation (AAA)  
**Project ID:** CERP 69  
**Lead Agency:** U.S. Army Corps of Engineers /SFWMD  
**Authority:** No Congressional action is required

**Goal(s) Addressed:** 3

**Measurable Output(s):** Reduced public water supply demands

**Cost:**

Total                      TBD

**Project Schedule:**

Start Date:    7/1999  
Finish Date:   11/2036

**Project Synopsis:** This feature reduces the Lower East Coast public water supply demands through the full implementation of the South Florida Water Management District's current mandatory water conservation program. Full implementation of the conservation program over the next 50 years is projected to decrease public water supply demand by approximately 6 percent more than conservation incorporated in the future without project public water supply demands.

**Hyperlink:**            [www.evergladesplan.org](http://www.evergladesplan.org)

**DATA SHEET PROFILE**

**Program Name:** The Built Environment  
**Project Name:** Eastward Ho! Brownfields Partnership  
**Project ID:** SE46  
**Lead Agency:** South Florida Regional Planning Council  
**Authority:**

**Goal(s) Addressed:** 3

**Measurable Output(s):**

**Project Synopsis:** This partnership is a collaboration of local, state, regional and federal agencies with private sector, non-profit and community organizations targeting the cleanup and sustainable reuse of contaminated and abandoned/underused urban sites. The partnership has been designated a National Brownfields Showcase Community, one of 16 communities throughout the United States. This designation brings increased financial attention and resources for Brownfields work in south Florida. The target area is the portion of the Eastward Ho! corridor in Miami-Dade, Broward and Palm Beach Counties.

Federal/state/local partnership summits are held to network ideas and review local case studies. Stakeholder workshops are conducted to inform and link key players in revitalization projects. Constructive advice and additional project funding assistance are frequent outcomes of the summits. Establishment of county and city Brownfields Task Forces are encouraged to create and empower local focus on Brownfields issues. Design charrettes are conducted to consolidate local vision of future growth goals. Assistance in clarifying contamination issues at abandoned or underused properties is given to help expedite reuse considerations.

The goal of this project is to facilitate discussion among the many stakeholders in formulating future growth visions and implementation that accommodates community needs while being compatible with south Florida ecosystem restoration and preservation.

**Cost:**

Total	\$	TBD
Project Development	\$	N/A
Land Acquisition		- 0 -
Implementation	\$	N/A
Operations and maintenance		- 0 -

**Project Schedule:**

Start Date: 1998  
 Finish Date: 2010

**Detailed Project Budget Information**

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
EPA	2.5 M	0.79 M	1.05 M	1.1 M	1.2 M	1.3 M		
HUD	7.15 M	0.3M+						
Others	0.624 M+							
State	1.5 M	312 K+						
Tribal	Unk	Unk						
Local	23 K+	28 K+	15 K+	5 K+	5 K+	5 K+		
Other *	Unk	2.5 K						
Total	11.8 M	1.4 M						TBD

\*Private party contributions

**Hyperlink:** [www.sfrpc.com/brwnflds.htm](http://www.sfrpc.com/brwnflds.htm)



## **APPENDIX E: INTEGRATED SCIENCE PLAN**

## **APPENDIX E: INTEGRATED SCIENCE PLAN**

This *Integrated Science Plan* (ISP) provides an organizing framework of scientific tools and knowledge needed by managers and policy makers restoring the South Florida Greater Everglades ecosystem. This framework formalizes a multi-institutional network through which collective efforts are focused and information is shared. Timely scientific information must be available to guide decisions at each of a series of critical stages in the redesign of the Central and Southern Florida Project. The term "science" in this context includes biological, chemical, physical, and social sciences, because all play an integral role in development of a sustainable restoration plan.

Scientists have two distinct roles in the restoration process. The first role is to ensure that the best existing scientific knowledge is available in the planning and decision making processes. The second role is to acquire critical new information necessary to reduce uncertainty and improve the probability of meeting restoration objectives. Scientists must provide timely and well-focused scientific information in an appropriate form to ensure that the best scientific knowledge currently available is used to plan and evaluate restoration actions. It is critical that scientists be actively engaged in the restoration process while, at the same time, they are augmenting knowledge about the ecosystem. It is also critical that managers and regulators be aware of scientific recommendations. Decisions are being made continuously in the multiyear process of project design and implementation, and a scientific basis for these decisions is the key to restoration success.

### **Background**

The ecological integrity and functionality of the natural system of the Greater Everglades and coastal ecosystems is the theoretical target for restoration. The natural system supported clean and abundant water supplies, large populations of wading birds, fish, and other wildlife, and landscape patterns that made South Florida's Greater Everglades and coastal ecosystems unique. Using quantitative estimates of natural system conditions as theoretical targets for the remaining natural areas will ensure that changes brought about by restoration efforts are in the right direction. This approach does not favor one species or community over another, but rather the mix

of species that occurred here naturally. The objective of restoration is to recapture the defining characteristics of the diverse ecosystems within South Florida's Greater Everglades and coastal landscape.

Hydrologic restoration is viewed as an important prerequisite to ecosystem restoration. For this reason, the *Comprehensive Everglades Restoration Plan* (CERP), which is a redesign of the Central and Southern Florida [water management] Project, is the keystone of the restoration process. However, other measures, such as water quality improvement, also will be necessary. The working hypothesis of the South Florida ecosystem restoration effort is that a restored, sustainable ecosystem will follow from restoring a more ecologically beneficial hydrologic regime, improving water quality, recovering natural fire patterns, and controlling exotic species.

In reality, because of the reduced spatial extent of, and irreversible changes to, South Florida's wetlands, complete restoration is not possible. Rather, the restoration program is expected to shift the currently degraded system substantially in the direction of a natural system. How far the shift occurs towards natural composition and function depends on employment of an *adaptive assessment* process. This is a process of project evaluation and refinement that must be supported by a strong, continuous multiagency scientific research program and a comprehensive regional monitoring program.

## **Objectives**

The following systemwide objectives for South Florida ecosystem restoration were recommended in a 1993 *Science Subgroup Report*. They are equally applicable today. The purpose of this ISP is to organize the scientific basis for achieving these regional-scale objectives.

Restore water quality by reducing nutrients and contaminants.

Restore natural relationships between rainfall and hydro patterns.

Restore timing and volume of freshwater flow through the system and into estuaries.

Restore natural sheet flow, reduce compartmentalization, and restore inter-regional linkages.

Restore dynamic water storage capacity.

Reduce habitat fragmentation and restore ecological connections.  
Reestablish sustainable locally breeding wildlife populations.  
Recover endangered and threatened species.  
Halt/reverse expansion of invasive nonnative plant species.  
Halt/reverse expansion of invasive nutrient-loving native plant species.  
Increase spatial extent of wetlands.  
Increase natural biological diversity and landscape heterogeneity.  
Restore native vegetation communities, replacing lost communities.  
Restore natural periphyton communities.  
Restore coral cover.  
Restore biological productivity of wetlands, estuaries, reefs, and fisheries.  
Restore self-maintaining properties of natural and human systems.  
Increase the beneficial linkages of agricultural, urban, and natural ecosystems.

## **Approach**

Issues associated with restoration of South Florida's natural systems are so large in scale and geographically, ecologically, and socioeconomically complex that a broadly integrated planning and coordinating process is necessary to address them.

Natural and social scientists must pursue innovative approaches that will concurrently strengthen both human and environmental goals and acknowledge the concerns of the various interest groups. With so many issues, scientific disciplines, and stakeholders involved, a collaborative, scientific process must be utilized to seek consensus on the diverse set of technical issues for the restoration effort to be successful.

The ISP provides a framework for future detailed planning. It assumes that restoration goals can only be achieved through multidisciplinary and multiagency cooperation in identifying and resolving complex technical issues. The scientific community will make its strongest contributions by employing inclusive processes to create scientific consensus positions on the major issues. The

Science Coordination Team has the lead responsibility for encouraging and coordinating integration of the scientific effort.

## **Science Roles**

The two major goals for utilizing science in the South Florida restoration effort are (1) to acquire new information required to fill gaps in scientific knowledge critical to meeting the restoration goals, and (2) to create real-time processes by which scientists support managers and policy-makers in planning, monitoring, and evaluating restoration programs. The parallel processes addressing these goals are linked through the development and application of *conceptual ecological models*.

## **Science Structure**

A structure has evolved to coordinate acquisition and synthesis of scientific knowledge and to facilitate interaction between the scientific and management communities in planning and evaluating projects related to restoration. The structure consists of the following:

Science Coordination Team (SCT). The SCT, established by the South Florida Ecosystem Restoration Task Force Working Group (the working group) and approved by the task force, facilitates integration and coordination of the interagency science program and science application. Membership on the SCT is from agencies and entities of the working group, and members of the public.

Regional Science Groups. Regional science groups have been developed in several subregions where a number of federal and state agencies and universities are working and share jurisdiction. The prototype for this has been the Program Management Committee (PMC) for the Interagency Florida Bay Science Program. This PMC has been coordinating research in Florida Bay since 1994 in accordance with a strategic science plan organized around five central questions related to the structure, function, and restoration of Florida Bay. This PMC consists of designated representatives of the state and federal agencies

conducting or funding research in Florida Bay, and it receives guidance from a standing scientific oversight panel who attends the Florida Bay Science Conference and topical workshops and regularly reviews the strategic science plan. Recently, the working group requested this PMC to expand its coverage to adjacent coastal areas and to include agencies conducting research in Biscayne Bay and along the southwest coast (coastal portions of Subregions 3 and 5). A subcommittee of this PMC has begun to develop a strategic science plan for Biscayne Bay. Modeled on the PMC prototype, the Southwest Florida Science Group has prepared a regional science plan for Subregion 5. Other subregional science plans following the PMC prototype are being developed for the subregions where science information needs require coordinated multiagency science programs.

Selection of SCT Priorities for FY2000-2001. Throughout its first three years of operation, the SCT realized that the original charter was ambitious, given the amount of financial and human resources dedicated to the effort. In order to become more effective and to realistically assess its capabilities, the SCT began a prioritization process in February 2000, with a list of almost 60 possible priorities. Following much discussion and deliberation, the SCT narrowed the possible priorities down to 18 topics. The SCT further prioritized these topics using the following criteria: topical scope; short- versus long-term commitment; a realistic assessment of the amount of time each SCT member can contribute to any priority topic; and timing relative to restoration needs.

In May 2000, after a discussion of each topic, the following topics were selected as priority science issues for FY2000-2001: planning and implementation of the Greater Everglades Ecosystem Restoration Conference (GEER); support for the Committee on the Restoration of the Greater Everglades Ecosystem (CROGEE); water quality; the role of science in CERP (through participation in RECOVER); and water flow, function, and topography. Details on several of these topics follow:

National Academy of Sciences. In coordination with the South Florida Ecosystem Restoration Task Force, the National Academy of Sciences created the Committee on the Restoration of the Greater Everglades Ecosystem (CROGEE). CROGEE is charged with

providing a multiyear, systemwide peer review of the science underpinning of the CERP, and with reviewing the science processes used to support other South Florida restoration programs. CROGEE is linked to the SCT through a liaison team established by the South Florida Ecosystem Restoration Task Force Executive Office, the working group, and the SCT.

RECOVER (Restoration Coordination and Verification). RECOVER comprises five multiagency and multidisciplinary task teams organized by the Corps of Engineers and its local sponsor, the South Florida Water Management District (SFWMD), to help implement the CERP. The structure of RECOVER is described in the implementation plan for the CERP. RECOVER is the primary entity responsible for application of scientific knowledge to planning and implementation of water management projects. The Regional Evaluation Team (RET) of RECOVER primarily is responsible for developing conceptual ecological models for use in planning and evaluation, and the Adaptive Assessment Team (AAT) primarily is responsible for developing and implementing a science plan using the conceptual models as an organizing framework and prioritization tool. To facilitate cooperation and coordination between the SCT and RECOVER, some scientists serve jointly on the SCT and RECOVER teams.

## **BUILDING SCIENTIFIC KNOWLEDGE**

### **Conceptual Ecological Models**

RECOVER manages the development of conceptual ecological models by interdisciplinary science teams. These conceptual models identify societal drivers (e.g., water management), resulting ecological stressors (e.g., altered hydropatterns), and their effects on ecological systems (e.g., reduced fish production). They are more like risk-assessment models than quantitative ecological models. They are designed to focus attention upon the restoration hypotheses explaining the currently degraded condition of various ecosystems or regions in South Florida. Each model identifies principal biological attributes (e.g., endpoints and indicators) that characterize the "health" of each landscape or ecosystem and reflect important ecological and societal values of the

system. Formulation, examination, and refinement of hypotheses embedded in the models are expected to become the primary means for identifying gaps in current knowledge, setting future research priorities, and guiding modifications to restoration efforts. Research priorities established during the conceptual ecological model workshops addressed specific scientific needs associated with modeling, monitoring, and cause-and-effect scientific studies. Emphasis of new work will be on filling information gaps. The conceptual ecological models are dynamic and are being reviewed continually and revised as additional data and knowledge about the ecosystem and its response to restoration efforts emerge. Beyond CERP, recommendations developed through this process are presented to the working group through the SCT.

### **Communication**

The SCT facilitates communication among the many scientists and agencies conducting or supporting restoration program science. Multidisciplinary science conferences have been organized to present ongoing research, while topical workshops have been used to focus an exchange of information and ideas on specific technical issues. For example, in 1999 the SCT sponsored the South Florida Ecosystem Restoration Science Forum to promote communication between scientists and managers. The SCT has scheduled the Greater Everglades Ecosystem Restoration Science Conference for December 2000, with the primary focus of facilitating exchange between scientists. The Science Forum and Science Conference will be sponsored in alternate years.

### **Integrated Data Management**

Inventories are being conducted, and available databases are being archived in a multigovernmental data base management system accessible through the Internet. Metadata (data about the data) are being supplied through the South Florida Information Access (SOFIA) web site ([sofia.usgs.gov](http://sofia.usgs.gov)). SOFIA is routinely enhanced and updated. A guide to the information available from each database is available and continually updated. The process of accomplishing this critical activity has been initiated with a multiagency metadata workshop organized by the USGS under the aegis of the SCT in March 2000.

## **APPLYING SCIENTIFIC KNOWLEDGE**

An applied science strategy is being used to help plan and evaluate restoration projects. The initial application of the applied science strategy is in the selection of alternative and improved redesigns of the South Florida water management system to help restore the ecological health and integrity of the Everglades. In addition, a multi-species management plan has been developed to ensure that the future of each threatened and endangered species is evaluated in the context of the future quantity and quality of its habitat.

### **Applied Science / Adaptive Assessment Strategy**

A science-based strategic process has been designed to provide a comprehensive framework for organizing existing scientific knowledge about the natural systems in South Florida into formats which are most applicable to the planning, evaluation, and assessment of restoration projects at regional and systemwide scales.

The applied science / adaptive assessment strategy has five major components: (1) development and continuous improvement of conceptual models based on current scientific knowledge, (2) development and updating of performance measures for key stressors and attributes (indicators) in the conceptual models, (3) design of a systemwide science program that consists of (a) long-term monitoring and data collection to track ecosystem status and trends, (b) cause-and-effect scientific studies designed to increase understanding of ecosystem responses to restoration, (c) simulation modeling to provide a framework for assessing the degree of scientific understanding, and (d) peer review to ensure high-quality and credible science, (4) annual assessment based upon monitoring these performance measures of the degree to which restoration is meeting expectations, and (5) providing feedback to planners and engineers on where modifications in design are needed to meet targets.

Each component depends on the creation of scientific consensus, achieved through a series of technical workshops organized across multiagency and multidisciplinary lines and the use of an independent peer review process. Research will be required to reduce uncertainty in predictions,

to understand the causes of change, to distinguish causal connections from chance correlations, and to explain change that is not exactly as predicted. Simulation models developed in the science program will be used in this adaptive process to help predict how well specific restoration plans can be expected to meet the targets set for the performance measures, and to interpret measured responses against a background of annual and internal variation in major influencing environmental factors, such as rainfall.

### **Applying Conceptual Ecological Models**

The ultimate purposes of the conceptual ecological models are to (1) convert the broad, policy-level objectives that have been established for each restoration program into specific, measurable indicators, (2) develop a suite of hypotheses that describe the major ecological responses to the restoration projects, and (3) use the models to identify the performance measures needed to evaluate each restoration plan. The hypotheses become the basis for the restoration plans by identifying the improvements in hydrologic conditions and water quality that are necessary to achieve the restoration objectives. These conceptual models identify the major stressors and biological attributes (e.g., indicators) expected to best characterize the system's response to specific restoration actions. Hydrologic and biologic performance measures and a systemwide ecological monitoring program will be based on the relationships expressed in these conceptual models.

As specific restoration projects are planned and designed, simulation models are used to predict how well each alternative plan is likely to perform. Once the selected plan is implemented, a well-focused monitoring program will measure how well the key attributes in each system respond, according to their performance measures. Cause-and-effect scientific studies will increase understanding of ecosystem responses to restoration, particularly if responses are contrary to those predicted. The simulation modeling and the monitoring provide an objective means of testing the validity of the conceptual models and hypotheses, reducing scientific uncertainty, identifying new research priorities, and modifying restoration actions. This, in effect, is adaptive assessment.

## **Performance Measures**

Developing performance measures requires the identification of a set of biological and physical parameters that collectively represent the response of the system to restoration efforts over a range of spatial, temporal, and ecological scales. Performance measures were used in the feasibility phase of CERP to evaluate proposed alternative redesigns of the water management system. Performance measures will be used in the implementation phase of CERP to evaluate how well specific parts of a project, once implemented, are meeting the fundamental restoration objective of restoring ecological integrity.

Performance measures used in the feasibility phase of CERP (the “Restudy”) were largely hydrological. Through RECOVER, ecological performance measures are being developed for each of the attributes in the conceptual ecological models. These attributes include the combination of populations, species, guilds, communities, and ecological functions that collectively can represent the response of the system to restoration projects. Performance measures identify, for each attribute, the numerical, spatial, temporal, or organizational targets that serve as the foundation for determining the success of specific restoration projects.

## **Systemwide Science Program**

The Science Coordination Team is assisting the Adaptive Assessment Team in implementing a systemwide science program for restoration projects. The systemwide science program being developed has four components: (1) a long-term monitoring and data collection program, (2) cause-and-effect scientific studies, (3) simulation modeling, and (4) peer review. The science program will establish base line and trend data for a common set of biological and hydrological parameters and will address cause-and-effect relationships between restoration implementation and ecosystem response.

The systemwide science program is also being designed to build on current hydrological and ecological research programs being conducted by federal and state agencies in South Florida.

Existing programs are regularly reviewed for compatibility of protocols, completeness of spatial and temporal coverage, and their adequacy relative to the proposed set of performance measures. Integration of the current science programs is expected to reveal the need to initiate new science projects, expand some existing projects, and terminate lower priority projects. Science programs will best reveal system responses to restoration projects if science is focused on performance measures specific to restoration.

### **Multi-Species Recovery Plan**

A challenge for ecosystem restoration and an important science application issue is how to protect and enhance the status of over 60 federal and state listed species while, at the same time, altering regional hydropatterns to achieve landscape-scale recovery of natural systems. Population declines in most listed species are thought to have occurred due to loss or degradation of essential habitat. Some listed species have changed their range and habitat substantially in order to compensate for effects that urban, agricultural, and water-management practices have had on their original habitat. Responding to changes in water depth and distribution patterns, these species have come to depend on different areas of the managed system than they used in the natural system. Although the overall expectation is that system restoration will improve habitat conditions for all listed species, the restoration implementation period may create short-term stresses on those species that may have to relocate again to adjust to restored hydropatterns.

The Fish and Wildlife Service is leading the development of an integrated, comprehensive, multi-species recovery plan for the entire Kissimmee to Florida Bay basin. The purpose of the plan is to anticipate and plan for potential responses by listed species and to improve the design of the ecosystem restoration plans relative to recovery objectives. The *Multi-Species Recovery Plan* identifies the strategies and thresholds that will best protect listed species in South Florida as regional ecosystem restoration programs are planned and implemented. The draft plan contains two sections. Part I consists of species accounts for all listed species, describing biology and status and establishing the recovery goals and environmental compliance guidelines for each species. Part II relates the habitat requirements of the listed species to the landscape characteristics of South Florida, identifies specific land management actions necessary to recover listed species, identifies

jeopardy thresholds, and proposes multi-species recovery strategies in the context of long-term objectives.

The Multi-Species/Ecosystem Recovery Implementation Team (MERIT) will develop an implementation plan for South Florida to prioritize the recovery actions as identified in the *Multi-Species Recovery Plan* from an ecosystem perspective, and recommend and fund recovery and restoration activities.

# SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE PRELIMINARY SCIENCE PROJECT'S LIST

Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date
<b>Ecosystem Restoration Science Projects</b>					
Fire Management Plans for Public Lands	FDACS	1998	2003	\$3,000,000	\$0
Advanced Treatment Technologies Research Models and Model Enhancements	SFWMD	1997	2001	\$10,000,000	\$5,040,859
Distributed Information System and Mapping	USGS	1995	2005	\$21,485,000	\$11,183,000
High Density Topographic Surveys	USGS	1995	2003	\$9,501,000	\$4,887,000
Limitations of Environmental Stresses and Physiological Responses on Crop Productivity	USGS	1997	2003	\$10,325,000	\$2,910,000
Ecosystem History	ARS	1995	2000	\$250,000	\$210,000
Mercury, Geochemistry, and Nutrient Process Studies	USGS	1995	2002	\$5,597,000	\$3,941,000
Seminole Tribe Data Collection and Monitoring	USGS	1995	2003	\$9,038,000	\$5,316,000
Seminole Tribe Development of Water Quality Standards	Seminoles	1997	2010	\$6,715,000	\$1,565,000
NOAA South Florida Ecosystem Restoration Research and Modeling Program	Seminoles	1995	2000	\$108,000	\$108,000
Buck Island Agroecology Study	NOAA	1995	2022	\$136,000,000	\$21,000,000
Charlotte Harbor National Estuary Program	SFWMD	1991	2010	\$12,200,000	\$7,800,000
Lake Okeechobee Torpedo Grass Research	EPA	1996	END	\$19,447,127	\$3,241,100
Nutrient Threshold/dosing	SFWMD	2000	2001	\$150,000	\$150,000
Tree island Restoration Everglades Mgt Area	SFWMD	1994	2001	\$13,000,000	\$11,500,000
Everglades Landscape and Everglades Water Quality Model Development	FWC	1997	2003	\$253,000	\$108,000
Everglades Tree Island Research, Monitoring and Restoration	SFWMD	1994	2001	\$3,875,000	\$2,541,500
Population Ecology of American Alligators and Crocodiles in the Greater Everglades Ecosystem	SFWMD	1997	2006	\$4,495,273	\$1,511,263
Empirical and Modeling in Support of Florida Bay and South Florida Coastal System Restoration	USGS/BRD	1997	2006	\$1,145,000	\$3,745,000
Studies Supporting Restoration of Mangrove, Coastal Marshes and SAV Habitats; Faunal Component (Crustaceans, Fish, Manatees)	USGS/BRD	1997	2006	\$9,825,000	\$3,475,000
Development and Implementation of a Digital Library of Biological Information for the South Florida Ecosystem (Biological Data, Metadata, and Publications)	USGS/BRD	1999	2006	\$3,000,000	\$430,000
Wading Bird Empirical Studies	USGS/BRD	2000	2010	\$1,390,000	\$125,000
Aquatic Community Structure and Dynamics in Seasonally Variable Wetlands of Greater Everglades Ecosystem	USGS/BRD	1997	2000	\$205,000	\$95,000
Ecotoxicity and Risk Management of the Greater Everglades Ecosystem	USGS/BRD	1997	2006	\$4,500,000	\$1,568,000
Landscape Processes and Land Transformation Models	USGS/BRD	2000	2003	\$6,000,000	\$850,000
Across-Trophic-Level-System Simulation (ATLSS) Ecological Models for Greater Everglades Landscapes: A Decision Support System	USGS/BRD	1999	2002	\$6,000,000	\$0
Vegetation and Hydrology of Land-Margin Ecosystems: Mangroves of South Florida in Relation to Disturbance, Global Change and Response to Restoration	USGS	1997	2010	\$13,345,000	\$5,195,000
A Program to Reduce Phosphorus, Nitrogen and Pesticide Runoff and Leaching from Turf/Grass into South Florida Surface and Ground Waters	USGS	1997	2006	\$3,600,000	\$1,840,000
Comprehensive Water Quality Standards for Biscayne Bay	IFAS	1997	2000	\$280,000	\$0
Ground-Water Quality Discharge Standards	NPS	1997	2001	\$350,000	\$0
Ground-Water Quality in Coastal Environments	FDEP	2000	2002	\$750,000	\$0
Biscayne Bay Ecosystem Risk Assessment	FDEP	2000	2002	\$400,000	\$0
Assimilative Capacity for Phosphorus of C&SF Canals on the Big Cypress Reservation	NPS	2000	2002	\$1,200,000	\$800,000
Forested Wetland Nutrient Uptake Research	Seminoles	1997	2004	\$450,000	\$300,000
Impacts of Sludge Deposition on Phosphorus Levels on the Big Cypress Reservation	Seminoles	1998	2004	\$420,000	\$260,000
Long-term Study of Fire Regimes in Pineland and Associated Cypress Wetlands	Seminoles	1998	1998	\$30,000	\$30,000
Strand Structure and Productivity of Short-hydroperiod Graminoid Wetlands	USGS/BRD	1997	2017	\$5,540,000	\$1,290,000
Aquatic Animal Dynamics in Big Cypress Habitats	USGS/BRD	1999	2002	\$470,000	\$0
Plant Biodiversity of Big Cypress National Preserve	USGS/BRD	2001	2005	\$800,000	\$0
Southwest Florida Water Management Model and Natural System Model	USGS/BRD	1998	2000	\$48,000	\$48,000
Florida Keys Nutrient Feasibility Study	SFWMD	2000	2005	\$2,000,000	\$100,000
Florida Keys National Marine Sanctuary: Zone Monitoring Program	EPA	1996	1997	\$566,000	\$566,000
Seminole Tribe Ecotoxicology Study	NOS	1997	2002	\$2,730,000	\$1,580,000
Hydrologic and Ecological Processes in the Marsh and Slough Communities of the Everglades	Seminoles	2000	2020	\$221,000	\$103,000
Wading Bird/Wildlife Hydrologic Requirements	SFWMD	2000	2010	\$5,000,000	\$0
Ecological Responses of the Southeastern Everglades and Florida Bay Salinity Transition Zone	SFWMD	1998	2006	\$2,627,000	\$800,000
Ecological Responses of Florida Bay: Effects of Freshwater flow on Water Quality, Seagrass Community, and Algal Blooms	SFWMD	1996	2006	\$7,909,000	\$2,534,000
Inventory of Tree Islands in WCAs 2 and 3	SFWMD	1996	2006	\$13,616,000	\$3,616,000
Florida Keys National Marine Sanctuary Water Quality Protection Program	FWC/FWS	1997	2002	\$512,800	\$342,200

Projects identified on the matrix serve to illustrate the type of science projects that are underway as part of the restoration effort. This matrix is not intended to be a complete list of all ongoing science projects.

**APPENDIX F: FEDERALLY LISTED THREATENED OR  
ENDANGERED SPECIES**

**FEDERALLY ENDANGERED, THREATENED AND CANDIDATE SPECIES  
IN SOUTH FLORIDA**

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**Mammals** (except whales)

Florida panther	<i>Puma (=Felis) concolor coryi</i>	E
Puma (=Mountain lion)	<i>Puma (=Felis) concolor</i>	T (S/A)
Key deer	<i>Odocoileus virginianus clavium</i>	E
Key Largo cotton mouse	<i>Peromyscus gossypinus allapaticola</i>	E
Key Largo woodrat	<i>Neotoma floridana smalli</i>	E
Lower Keys rabbit	<i>Sylvilagus palustris hefneri</i>	E
Rice rat (=silver rice rat)	<i>Oryzomys palustris natator (=O. argentatus)</i>	E (CH)
Southeastern beach mouse	<i>Peromyscus polionotus niveiventris</i>	T
West Indian manatee	<i>Trichechus manatus</i>	E (CH)

**Birds**

Audubon's crested caracara	<i>Polyborus plancus audubonii</i>	T
Bachman's warbler	<i>Vermivora bachmanii</i>	E
Bald eagle	<i>Haliaeetus leucocephalus</i>	T
Cape Sable seaside sparrow	<i>Ammodramus (=Ammospiza) maritimus mirabilis</i>	E (CH)
Everglade snail kite	<i>Rostrhamus sociabilis plumbeus</i>	E (CH)
Florida grasshopper sparrow	<i>Ammodramus savannarum floridanus</i>	E
Florida scrub-jay	<i>Aphelocoma coerulescens</i>	T
Ivory-billed woodpecker	<i>Campephilus principalis</i>	E
Kirtland's warbler	<i>Dendroica kirtlandii</i>	E
Piping plover	<i>Charadrius melodus</i>	T
Red-cockaded woodpecker	<i>Picoides (= Dendrocopos) borealis</i>	E
Roseate tern	<i>Sterna dougallii dougallii</i>	T
Whooping crane	<i>Grus americana</i>	XN
Wood stork	<i>Mycteria americana</i>	E

**Reptiles**

American crocodile	<i>Crocodylus acutus</i>	E (CH)
American alligator	<i>Alligator mississippiensis</i>	T (S/A)
Atlantic salt marsh snake	<i>Nerodia clarkii (=fasciata) taeniata</i>	T
Bluetail (=blue-tailed) mole skink	<i>Eumeces egregius lividus</i>	T
Eastern indigo snake	<i>Drymarchon corais couperi</i>	T
Green sea turtle	<i>Chelonia mydas (incl. agassizi)</i>	E (CH)
Hawksbill (=carey) sea turtle	<i>Eretmochelys imbricata</i>	E (CH)
Kemp's (=Atlantic) ridley sea turtle	<i>Lepidochelys kempii</i>	E
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E (CH)
Loggerhead sea turtle	<i>Caretta caretta</i>	T
Sand skink	<i>Neoseps reynoldsi</i>	T

E=Endangered; T=Threatened; C=Candidate; (S/A)=Similarity of Appearance species; XN=Nonessential  
Experimental population; CH=Critical Habitat has been designated

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**Invertebrates**

Schaus swallowtail butterfly	<i>Heracles (= Papilio) aristodemus ponceanus</i>	E
Stock Island tree snail	<i>Orthalicus reses</i> (not incl. <i>nesodryas</i> )	T
Highlands tiger beetle	<i>Cicindela highlandensis</i>	C

**Plants**

<i>Amorpha crenulata</i>	Crenulate lead-plant	E
<i>Argythamnia blodgettii</i>	Blodgett's silverbush	C
<i>Asimina tetramera</i>	Four-petal pawpaw	E
<i>Bonamia grandiflora</i>	Florida bonamia	T
<i>Brickellia mosieri</i>	Florida brickell-bush	C
<i>Cereus eriophorus</i> var. <i>fragrans</i>	Fragrant prickly-apple	E
<i>Chamaecrista lineata</i> var. <i>keyensis</i>	Big Pine partridge pea	C
<i>Chamaesyce</i> (= <i>Euphorbia</i> ) <i>garberi</i>	Garber's spurge	T
<i>Chamaesyce</i> (= <i>Euphorbia</i> ) <i>deltoidea</i> ssp. <i>deltoidea</i>	Deltoid spurge	E
<i>Chamaesyce deltoidea</i> ssp. <i>pinetorum</i>	Pineland sandmat	C
<i>Chamaesyce deltoidea</i> ssp. <i>serpyllum</i>	Wedge spurge	C
<i>Chionanthus pygmaeus</i>	Pygmy fringe-tree	E
<i>Chromolaena frustrata</i>	Cape Sable thoroughwort	C
<i>Chrysopsis</i> (= <i>Heterotheca</i> ) <i>floridana</i>	Florida golden aster	E
<i>Cladonia perforata</i>	Florida perforate cladonia	E
<i>Clitoria fragrans</i>	Pigeon wings	T
<i>Conradina brevifolia</i>	Short-leaved rosemary	E
<i>Crotalaria avonensis</i>	Avon Park harebells	E
<i>Cucurbita okeechobeensis</i> ssp. <i>okeechobeensis</i>	Okeechobee gourd	E
<i>Dalea carthagenensis</i> var. <i>floridana</i>	Florida prairie clover	C
<i>Deeringothamnus pulchellus</i>	Beautiful pawpaw	E
<i>Dicerandra christmanii</i>	Garrett's mint	E
<i>Dicerandra frutescens</i>	Scrub mint	E
<i>Dicerandra immaculata</i>	Lakela's mint	E
<i>Digitaria pauciflora</i>	Florida pineland crabgrass	C
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	Scrub buckwheat	T
<i>Eryngium cuneifolium</i>	Snakeroot	E
<i>Galactia smallii</i>	Small's milkpea	E
<i>Halophila johnsonii</i>	Johnson's seagrass	T
<i>Hypericum cumulicola</i>	Highlands scrub hypericum	E
<i>Indigofera mucronata</i> var. <i>keyensis</i>	Florida indigo	C
<i>Jacquemontia reclinata</i>	Beach jacquemontia	E
<i>Liatris ohlingerae</i>	Scrub blazing star	E
<i>Linum arenicola</i>	Sand flax	C
<i>Linum carteri</i> var. <i>carteri</i>	Carter's small flowered flax	C
<i>Lupinus aridorum</i>	Scrub lupine	E
<i>Nolina brittoniana</i>	Britton's beargrass	E
<i>Opuntia corallicola</i>	Florida semaphore cactus	C
<i>Paronychia chartacea</i> (= <i>Nyachia pulvinata</i> )	Papery whitlow-wort	T
<i>Pilosocereus</i> (= <i>Cereus</i> ) <i>robinii</i>	Key tree-cactus	E

E=Endangered; T=Threatened; C=Candidate; (S/A)=Similarity of Appearance species; XN=Nonessential  
Experimental population; CH=Critical Habitat has been designated

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<i>Polygala lewtonii</i>	Lewton's polygala	E
<i>Polygala smallii</i>	Tiny polygala	E
<i>Polygonella basiramia</i> (=ciliata var. b.)	Wireweed	E
<i>Polygonella myriophylla</i>	Sandlace	E
<i>Prunus geniculata</i>	Scrub plum	E
<i>Warea amplexifolia</i>	Wide-leaf warea	E
<i>Warea carteri</i>	Carter's mustard	E
<i>Ziziphus celata</i>	Florida ziziphus	E

E=Endangered; T=Threatened; C=Candidate; (S/A)=Similarity of Appearance species; XN=Nonessential  
 Experimental population; CH=Critical Habitat has been designated

