

Coordinating Success

Strategy for Restoration of the South Florida Ecosystem

Tracking Success

Biennial Report for FY 2004-2006 of the
South Florida Ecosystem Restoration Task Force

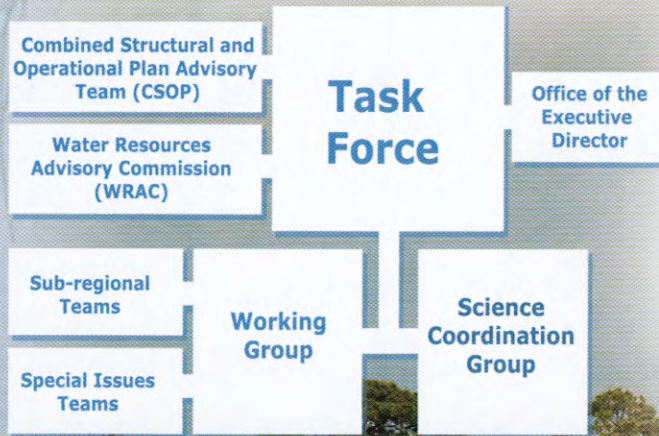
Integrated Financial Plan

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

Volume 1
of 2



South Florida Ecosystem Restoration Organization



Task Force

- U.S. Department of the Interior
(Chair)
- U.S. Department of Agriculture
- U.S. Department of the Army
- U.S. Department of Commerce
- U.S. Department of Justice
- U.S. Department of Transportation
- U.S. Environmental Protection Agency
- Miccosukee Tribe of Indians of Florida
- Seminole Tribe of Florida
- Florida Department of Environmental Protection
- South Florida Water Management District
- Florida Governor's Office
- Two Local Governments -
Cities of Sweetwater and South Bay

Working Group

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No more than five representatives of local governments or regional planning councils.

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South Florida Ecosystem Restoration Task Force

Volume 1

COORDINATING SUCCESS:

2006 Strategy for Restoration of the South Florida Ecosystem

and

TRACKING SUCCESS:

**Biennial Report of the South Florida Ecosystem Restoration Task Force for
July 2004 – June 2006**

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

*This is Volume 1 of a two-volume report.
Volume 1 contains the coordination strategy and biennial report
of the South Florida Ecosystem Restoration Task Force.
Volume 2 contains the Integrated Financial Plan,
including descriptions of all the individual projects that
participating entities have identified as
supporting ecosystem restoration.*

*Both volumes combine information from federal, state, tribal,
and local agencies and therefore do not
strictly follow any single agency's format.*

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GLOSSARY

Terms

Acre-foot: The volume of water, 43,560 cubic feet, that will cover an area of one acre to a depth of one foot.

Adaptive management: 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.

Benthic: Bottom dwelling, as in organisms.

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

Decompartmentalization: Modifications to impediments of sheetflow.

Economic equity: The fair treatment of all persons regardless of color, creed, or belief in aspects of opportunities and/or diseconomies regarding economic or environmental activities.

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

El niño/la niña: Warming and cooling patterns in the Pacific Ocean that affect the earth's atmosphere.

Environmental justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Eutrophication: The natural or cultural enrichment of an aquatic environment with plant nutrients leading to rapid ecological changes and high productivity.

Exotic or invasive species: Exotic species are kinds of plants and animals not native to an area and found beyond their natural range. Exotic plants are

introduced by people intentionally for social and economic reasons, and as accidental consequences of travel and commerce. Often such species are highly invasive and dominating to native forms.

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

Hectare: a unit of surface area equal to 10,000 square meters; equivalent to 2.471 acres.

Hydrology: The study of the properties, distribution, and effects of water. When used in the Task Force strategy and biennial reports, the term refers to the quantity, timing, and distribution of water in the ecosystem.

Hydropattern: Water depth and duration, along with the quantity, timing, and distribution of surface water to a specific area; critical for maintaining various ecological communities in wetlands.

Hydroperiod: Depth and duration of inundation in a particular wetland area.

Indicator: A metric that is designed to inform us easily and quickly about the conditions over time and space of an ecosystem.

Minimum flows and levels: Florida statute requires water management districts to set water levels for each major body of water “at which further withdrawals would be significantly harmful to the water resources or ecology of the area.”

Nonpoint source pollution: Comes from many diffuse sources; caused by rainfall (or snowmelt in colder climates) moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even underground sources of drinking water.

Nonstructural flood protection: Use of operation schedules, redirection of flows, or other operating strategies to manage water other than building new or modifying existing infrastructure.

Objective: A goal expressed in specific, directly quantifiable terms.

Outcome: An end result. When used in the Task Force strategy and biennial reports, a quality of the restored South Florida Ecosystem.

Output: Levels of work and effort. When used in the Task Force strategy and biennial reports, the products, activities, or services produced by a project or program.

Periphyton: The biological community of microscopic plants and animals attached to surfaces in aquatic environments. Algae are the primary component in these assemblages and periphyton can be very important in aquatic food webs, such as those of the Everglades.

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

Point source: Any discernible, confined discrete conveyance from which pollutants are or may be discharged which are regulated by federal or state issued National Pollutant Discharge Elimination System ("NPDES") permits.

Restoration: When used in the Task Force strategy and biennial reports, 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.

Seiches: Waves on the surface of a lake or other landlocked water body caused by atmospheric or seismic disturbances.

Sheetflow: Water movement as a broad front with shallow uniform depth.

South Florida Ecosystem: An area consisting of the lands and waters within the boundaries of the South Florida Water Management District and the Multi-Species Recovery Plan, including the Kissimmee Basin, Lake Okeechobee, Everglades, the Florida Keys, and the contiguous nearshore coastal waters of south Florida.

Stormwater: Surface water runoff 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.

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 of future conditions. 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

ASR	Aquifer storage and recovery	DACS	Florida Department of Agriculture and Consumer Services
AWS	Alternative Water Supply	DCA	Florida Department of Community Affairs
BMP	Best management practices	DEP	Florida Department of Environmental Protection
C&SF	Central and Southern Florida Project	DOI	U.S. Department of the Interior
CERP	Comprehensive Everglades Restoration Plan	EAA	Everglades Agricultural Area
CFS	Cubic foot per second	EAR	Evaluation and Appraisal Report
CREW	Corkscrew Regional Ecosystem Watershed	EFA	Everglades Forever Act
CROGEE	Committee on Restoration of the Greater Everglades Ecosystem	EIS	Environmental Impact Statement
CSOP	Combined Structural and Operational Plan	ENP	Everglades National Park

Acronyms continued

EPA	Everglades Protection Area	NAS	National Academy of Science
ERC	Environmental Regulation Commission	NEWTT	Noxious Exotic Weed Task Team
ERN	Everglades Radio Network	NMFS	National Marine Fisheries Service
ERP	Environmental Resource Permit	NOAA	National Oceanic and Atmospheric Administration
FCAT	Florida Comprehensive Assessment Test	NPDES	National Pollutant Discharge Elimination System
FEMA	Federal Emergency Management Agency	NPS	National Park Service
FIATT	Florida Invasive Animal Task Team	NRCS	Natural Resources Conservation Service
FKNMS	Florida Keys National Marine Sanctuary	NWR	National Wildlife Refuge
FRPP	Farm and Ranch Land Protection Program	OSHA	Occupational Safety and Health Administration
FWS	U.S. Fish and Wildlife Service	PIR	Project Implementation Report
GAO	U.S. Government Accountability Office	PMP	Project Management Plan
GCSSF	Governor’s Commission for a Sustainable South Florida	PPB	Parts per billion
GPD	Gallons per day	PSTA	Periphyton stormwater treatment area
IFP	Integrated Financial Plan	RECOVER	REstoration COordination and VERification Team
IRL	Indian River Lagoon	SAV	Submerged aquatic vegetation
ISR	Independent scientific review	SCG	Science Coordination Group
LATT	Land Acquisition Task Team	SFWMD	South Florida Water Management District
LILA	Loxahatchee Impoundment Landscape Assessment	STA	Stormwater treatment area
LOER	Lake Okeechobee and Estuary Recovery	SWIM	Surface Water Improvement and Management Act
LOFT	Lake Okeechobee Fast Track	TMDL	Total maximum daily load
LOPA	Lake Okeechobee Protection Act	TSP	Tentatively Selected Plan
LOPP	Lake Okeechobee Protection Plan	TP	Total phosphorus
LOST	Lake Okeechobee Scenic Trail	USACE	U.S. Army Corps of Engineers
MAP	Monitoring and Assessment Plan	USDA	U.S. Department of Agriculture
µg/l	Micrograms per liter	USEPA	U.S. Environmental Protection Agency
MGD	Million gallons per day	USGS	U.S. Geological Survey
MERIT	Multi-Species/Ecosystem Recovery Implementation Team	WCA	Water Conservation Area
MFL	Minimum flows and levels	WRAC	Water Resources Advisory Commission
MISP	Master Implementation Sequencing Plan	WRDA	Water Resources Development Act
MRP	Master Recreation Plan	WRP	Wetlands Reserve Program
MSRP	Multi-Species Recovery Plan	WY	Water year
MT	Metric ton		
MWD	Modified Water Deliveries to Everglades National Park Project		

Executive Summary



Coordinating Success
2006 Strategy for Restoration of the South Florida Ecosystem

Tracking Success
**July 2004 - June 2006 Biennial Report of the South Florida
Ecosystem Restoration Task Force**

EXECUTIVE SUMMARY

Progress continues in developing and coordinating the highly complex plans and initiating action to restore the quality of the South Florida Ecosystem, one of America's unique natural areas¹. The revised *Coordinating Success: 2006 Strategy for Restoration of the South Florida Ecosystem (Strategy)* and *Tracking Success: Biennial Report of the South Florida Ecosystem Restoration Task Force, July 2004 – June 2006 (Biennial Report)*, both included in Volume 1, summarize recent progress, ongoing challenges, and plans that guide the coordinated efforts of local, state, tribal, and federal governments as they implement their respective work. The *Strategy* and *Biennial Report* were prepared in accordance with Congressional guidance by the South Florida Ecosystem Restoration Task Force (hereinafter referred to as the Task Force), an intergovernmental group created by the Congress in 1996 to coordinate the restoration effort.

The purpose of the revised *Strategy* is to update the strategy document submitted to Congress in 2004. This *Strategy* responds to Congressional direction to outline how the restoration effort will occur, identify the resources needed, establish responsibility for accomplishing actions, and link strategic goals to outcome-oriented goals. The *Strategy* describes how the restoration effort is being coordinated among many government entities to achieve broad improvements throughout the ecosystem. The *Strategy* retains the three strategic goals first published in July 2000: (1) get the water right; (2) restore, preserve, and protect natural habitats and species; and (3) foster compatibility of the built and natural systems. (These goals and the measurable objectives are summarized in a table included in this summary.)

The overall premise of restoration is that the ecosystem must be managed from a system-wide perspective. Rather than dealing with issues independently, the challenge is to seek out the interrelationships that exist between all the components of the ecosystem. The same issues that are critical to the natural environment — getting the water right and restoring, preserving, and protecting diverse habitats and species — are equally critical to maintaining a quality built environment and lifestyle for south Florida's residents and visitors.

The success of this comprehensive approach will depend upon the coordination and integration of hundreds of individual restoration projects carried out by various agencies at all levels of government, and with input from the public. Each agency brings its own authority, jurisdiction, capabilities, and expertise to this initiative and applies them through its individual programs, projects, and activities.

The Task Force strategy is to focus the efforts of its members on a shared vision and set of strategic goals and objectives for achieving that vision, to coordinate individual member projects, to track and assess progress through indicators of success, and to facilitate the resolution of issues and conflicts as they arise.


It is important to note the significant contributions from other programs toward achievement of the Task Force's three strategic goals. While the Comprehensive Everglades Restoration Plan (CERP) is vital to accomplishing all the strategic goals, many other restoration projects are important to achieving restoration. Some of the pre-CERP projects that are also critical to achieving goal one (get the water right) include the Kissimmee River Restoration, Modified Water Deliveries to Everglades National Park, Canal-111, and the Everglades Construction Project. The Lake Okeechobee and Estuary Recovery program, begun in 2005, is the latest action plan to help restore the ecological health of Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. The Acceler8 program, with an estimated construction cost of \$1.5 billion was launched in 2004 in efforts to expedite several projects that will help accomplish goal one. For goal two (restore, preserve, and protect natural habitats and species), the state's Florida Forever program is the lynchpin of the effort to acquire important habitat lands. For goal three (foster compatibility of the built and natural systems), state and local governments are improving the coordination between land use and water supply planning to ensure availability of adequate water supplies to meet legislative direction to support existing development but not degrade the environment. The State of Florida's ongoing Florida

¹See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section 1.

Forever program increases the spatial extent of open space and multiplies its benefits by linking park, conservation, recreation, water resource, and other open space lands. These efforts help protect natural systems by providing additional habitat and serving as buffers between the natural and built environments.

The *Biennial Report* documents the activities of the Task Force and its members and progress made between July 2004 and June 2006 in achieving the strategic goals and objectives included in the Task Force *Strategy*.

Restoring the Everglades is a global, national, and state priority. The South Florida Ecosystem not only supports the economy and the high quality of life of Floridians and Native American Indians who live there, but also enriches the national legacy of all Americans. By working cooperatively and communicating with the public in this unique conservation effort, the Task Force members seek to ensure that all interests are protected as each member works to fulfill its individual responsibilities to local residents and the nation at large.



Strategic Goals and Objectives

of the
South Florida Ecosystem
Restoration Task Force



Goal 1: Get the Water Right

Subgoal 1-A: Get the hydrology right.

Objective 1-A.1: Provide 1.8 million acre-feet of surface water storage by 2036.

Objective 1-A.2: Develop Aquifer Storage and Recovery systems capable of storing 1.5 billion gallons per day by 2030.

Objective 1-A.3: Modify 345 miles of impediments to flow by 2020.

Subgoal 1-B: Get the water quality right.

Objective 1-B.1: Construct 91,345 acres of stormwater treatment areas by 2035.

Objective 1-B.2: Prepare locally-based plans to reduce pollutants as determined necessary by the total maximum daily loads 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: Complete acquisition of 5.8 million acres of land identified for habitat protection by 2015.

Objective 2-A.2: Protect 20 percent of the coral reefs by 2010.

Objective 2-A.3: Improve habitat quality for 2.4 million acres of natural areas in South Florida.

Subgoal 2-B: Control invasive exotic plants.

Objective 2-B.1: Coordinate the development of management plans for the top twenty South Florida invasive exotic plant species by 2011.

Objective 2-B.2: Achieve maintenance control of Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern on South Florida's public conservation lands by 2020.

Objective 2-B.3: Complete an invasive exotic plant species prevention, early detection, and eradication plan by 2007.



Goal 3: Foster the Compatibility of the Built and Natural Systems

Subgoal 3-A: Use and manage land in a manner compatible with ecosystem restoration.

Objective 3-A.1: Designate or acquire an additional 480,000 acres as part of the Florida Greenways and Trails System by 2009.

Objective 3-A.2: Increase participation in the voluntary Farm Bill conservation programs by 230,000 acres by 2014.

Objective 3-A.3: Acquire an additional 2,500 acres of park, recreation, and open lands by 2007.

Objective 3-A.4: Complete five brownfield rehabilitation and redevelopment projects by 2010.

Objective 3-A.5: Increase community understanding of ecosystem restoration.

Subgoal 3-B: Maintain or improve existing flood protection in a manner compatible with ecosystem restoration.

Objective 3-B.1: Maintain or improve existing levels of flood protection.

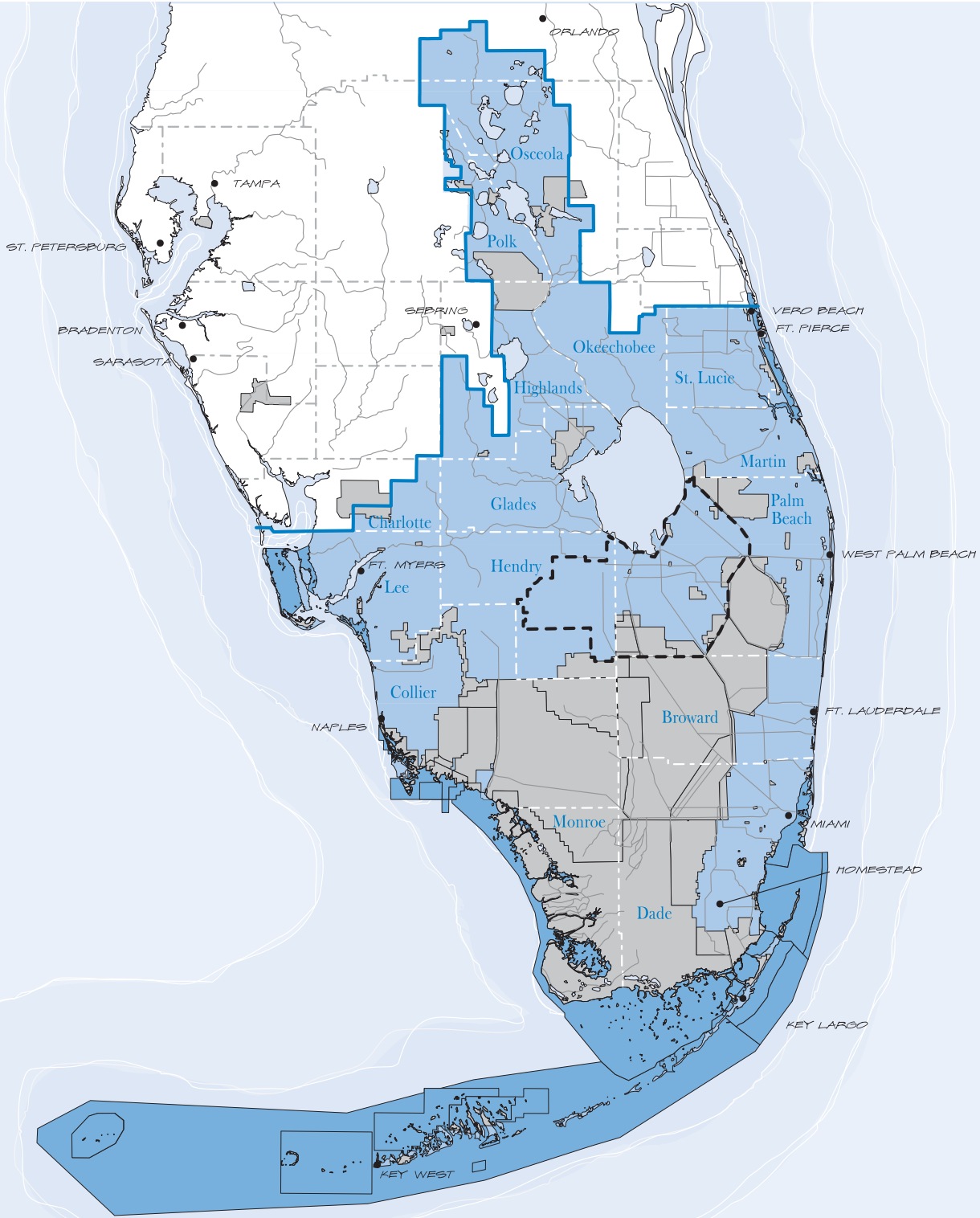
Subgoal 3-C: Provide sufficient water resources for built and natural systems.

Objective 3-C.1: Plan for regional water supply needs*.

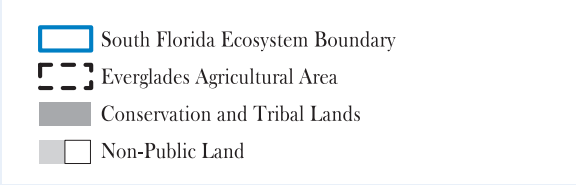
Objective 3-C.2: Increase volume of reuse on a regional basis.

Objective 3-C.3: Increase water made available through the South Florida Water Management District Alternative Water Supply Development Program.

* Due to a change in state law the output for this objective has been changed.



The South Florida Ecosystem



Coordinating Success

2006 Strategy for Restoration of the South Florida Ecosystem

Strategy Purpose and Background

Restoration Strategy

Vision and Indicators of Success

Strategic Goals and Objectives

STRATEGY PURPOSE AND BACKGROUND

Purpose

The purpose of *Coordinating Success: 2006 Strategy for Restoration of the South Florida Ecosystem (Strategy)* is to describe how the South Florida Ecosystem Restoration Task Force (Task Force) will coordinate the intergovernmental effort to restore and sustain the imperiled South Florida Ecosystem². The American people have a strong national as well as a state and local interest in preserving this 18,000-square-mile region of subtropical uplands, wetlands, and coral reefs that extends from the Kissimmee Chain of Lakes south of Orlando through Florida Bay and 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 significant conservation areas, including Everglades, Biscayne, and Dry Tortugas National Parks, Big Cypress National Preserve, the Everglades in the Water Conservation Areas (WCAs), the Fakahatchee Strand, the Picayune Strand State Forest, the Collier-Seminole, John Pennekamp, and Jonathan Dickinson State Parks, the Rookery Bay National Estuarine Research Reserve, 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 ecological conditions in south Florida. The Task Force reports on and facilitates the coordination of the work. In 1999 Congress directed the Task Force to produce a restoration strategy that meets four requirements as recommended by the United States Government Accountability Office (GAO):

1. Outline how the restoration effort will occur
2. Identify the resources needed
3. Establish responsibility for accomplishing actions
4. Link the strategic goals established by the participants to outcome-oriented goals

This *Strategy* describes how the restoration effort is being coordinated. The Task Force members have agreed upon guiding principles for restoration and a

vision for the results to be achieved; they have established three broad strategic goals and measurable objectives for the work needed to achieve the 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 strategic goals and the results-oriented vision. The vision, strategic goals, objectives, indicators of success, and individual project data (including cost, responsible agency, and targeted completion dates) are all specified in this *Strategy*. The project details are summarized in the Integrated Financial Plan (IFP) Summary Table provided as Appendix A in Volume 1. Additional information for each project is available in the complete IFP that is provided in Volume 2.

The Task Force *Strategy* is designed for planning purposes only, is subject to modification as needed, and is not legally binding on any of the Task Force members. Each Task Force member entity retains all of its sovereign rights, authorities, and jurisdiction for implementation of the projects identified as part of the Task Force *Strategy*.



Who Is Involved: The South Florida Ecosystem Restoration Task Force

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

²See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration."

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 participation by the State of Florida, the Seminole Tribe of Florida, and the Miccosukee Tribe of Indians of Florida. In recognition of the magnitude of the restoration effort and the critical importance of partnerships with state, tribal, and local governments, the Task Force was expanded to include tribal, state, and local governments by the Water Resources Development Act of 1996 (WRDA 1996).



WRDA 1996 outlines the Task Force duties:

- Consult with, and provide recommendations to, the Secretary of the Army during development of the Comprehensive Everglades Restoration Plan (CERP)
- Coordinate development of consistent policies, strategies, plans, programs, projects, activities, and priorities for addressing the restoration, preservation, and protection of the South Florida Ecosystem
- Exchange information regarding programs, projects, and activities of the agencies and entities represented on the Task Force to promote ecosystem restoration and maintenance
- Establish a Florida-based Working Group that includes representatives of the agencies and entities represented on the Task Force as well as other governmental entities as appropriate for the purpose of formulating, recommending, coordinating, and implementing the policies, strategies, plans, programs, projects, activities, and priorities of the Task Force
- May establish advisory bodies as determined necessary to assist the Task Force in its duties, including public policy and scientific issues
- When desired, designate an existing advisory

body or entity that represents a broad variety of private and public interests for additional input into their work

- Facilitate the resolution of interagency and intergovernmental conflicts associated with the restoration of the South Florida Ecosystem among agencies and entities represented on the Task Force
- Coordinate scientific and other 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 and progress made toward restoration

In December 2003 the Task Force revised the Working Group charter to streamline and clarify its duties. To assist the Task Force in fulfilling its obligations the Working Group was tasked to develop, for Task Force approval, a draft biennial report that summarizes the activities of the Task Force and progress made toward restoration; a draft integrated financial plan and recommendations for a coordinated budget request; a draft biennial update to the strategic plan; a draft biennial update to the total cost report; and responses to specific priority activities assigned by the Task Force.

The Task Force established a Science Coordination Group (SCG) in December 2003 to assist it in coordinating scientific and other research. This group was charged to develop, for Task Force approval, a draft science coordination plan that tracks and coordinates programmatic-level science and other research, identifies programmatic level priority science needs and gaps, and facilitates management decisions. The SCG also provides specific responses to priority work activities assigned by the Task Force.

The Task Force does not have any oversight or project authority, and participating agencies are responsible for meeting their own projected accomplishments. The Task Force serves as a forum in which ideas are shared and consensus is sought. This enhances the productivity of each member government or agency effort.

Brief History of South Florida Ecosystem Management

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 or filled 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 Ecosystem led to the creation of Everglades National Park (ENP). 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. Other parks and preserves were subsequently authorized (see Strategic Plan Table 1).

The Miccosukee and the Seminole Indians, whose culture and way of life depend on a healthy Everglades Ecosystem, had been living and thriving in this natural environment, which was being dramatically altered by human actions, for generations. The legislation establishing ENP specifically recognized the rights of the Miccosukee Tribe to live in the park and subsequent legislation clarified the tribe's right to live in its community along the border of the park and to govern its own affairs in perpetuity.

The South Florida Ecosystem has historically been 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 and causing damaging muck fires. 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 for the better part of the year.

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 original Central and Southern Florida Flood Control Project that later evolved into the current Central and Southern Florida Project (C&SF), a flood control project jointly built and managed by the U.S. Army Corps of Engineers (USACE) and the South Florida Water Management District (SFWMD). The C&SF Project significantly altered the region's hydrology. 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 ENP and fish and wildlife resources in the Everglades. 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 South Florida Ecosystem have been the subject of much study. Many projects have been authorized to begin to restore more natural water flows to this region.

The original C&SF Project water supply component for ENP was based on the understanding of the park's hydrologic and ecologic needs at the time the plan was developed. Subsequent research has indicated the importance of hydroperiods to the health of natural systems as opposed to a conventional water supply delivery. Historically most rainwater flowed slowly across the extremely flat landscape, soaking into the region's wetlands and forming what became known as the "River of Grass." This natural functioning system began to be altered a century ago. The most significant alteration was the C&SF canal system, which by the year 2000 was comprised of over 1,800 miles of canals and levees and 200 water control structures and drained approximately 1.7 billion gallons of water per day into the Atlantic Ocean and the Gulf of Mexico. As a result, not enough water was available for the natural functioning of the Everglades or for the communities in the region and at times portions of the Everglades suffered from too much water. Water quality also was degraded. Excess phosphorus from agriculture and other sources polluted much of the northern Everglades and Lake Okeechobee and caused destructive 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. In 1972, for example, 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 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 WCAs, Big Cypress Swamp, ENP, Florida Bay, and endangered wildlife. In 1987 the Florida Legislature passed the Surface Water Improvement and Management Act (SWIM), which directed the five water management districts to clean up the priority water bodies in the state. In 1988 Congress, with strong support from the State of Florida, passed the Big Cypress National Preserve Addition and Florida/Arizona Land Exchange Acts, which added 146,000 acres to the Big Cypress National Preserve. This act also affirmed the rights of the Seminole Tribe and Miccosukee Tribe of Indians to customary use and occupancy in the Preserve. In 1989 Congress passed the Everglades Expansion and Protection Act, which added 107,600 acres to ENP and authorized the Modified Water Deliveries Project to restore more natural water flows through Shark River Slough into the park.

Despite progress toward restoration in the 1980s and early 1990s, dramatic growth in the population and development of south Florida kept pressure on the environment. Research at this time detected declines in many native plant and animal species and discovered heightened phosphorus pollution in the Everglades. Particularly alarming was evidence of the decline of Florida Bay, indicated by dramatic losses in seagrass 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, alleging that the state had failed to direct the SFWMD to require water quality permits for the discharge of water into the C&SF Project canals, thereby causing a violation of state water quality standards and causing conditions that allowed for the replacement of native species in the Everglades marsh with invasive vegetation. After three years and much additional litigation, no settlement had been reached. In 1991 Governor Lawton Chiles agreed to reach a settlement. For several years, mediation efforts helped

reduce the scope 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 ENP and the Arthur R. Marshall Loxahatchee National Wildlife Refuge (NWR) by creating artificial wetlands designed to process and remove nutrients from agricultural runoff. In 1993 the sugar industry agreed to adopt best management practices (BMPs) 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 a numeric phosphorus criterion for class III waters.

The mid-1990s saw the establishment of two important consensus building forums for Everglades issues. In 1993 the Task Force was established through a federal interagency agreement. In recognition of the magnitude of the restoration effort and the critical importance of partnerships with state, tribal, and local governments, the Task Force was formalized and expanded to include tribal, state, and local governments in WRDA 1996. In 1994 the Governor of Florida established the Governor's Commission for a Sustainable South Florida (GCSSF) "to develop recommendations and public support for regaining a healthy Everglades Ecosystem with sustainable economies and quality communities." The Task Force and the GCSSF were instrumental in formulating consensus in the early stages of Everglades restoration.

In 1996 two significant pieces of legislation were approved by the U.S. Congress. The Federal Agriculture Improvement and Reform Act (the Farm Bill) provided \$200 million to conduct restoration activities in the Everglades Ecosystem, including land acquisition, resource protection, and resource maintenance. The second piece of legislation, WRDA 1996, clarified Congressional guidance to the USACE to develop a comprehensive review study for restoring the hydrology of south Florida. This study, commonly referred to as "the Restudy," has since resulted in the CERP, a consensus plan that was approved by Congress and signed by the president as part of WRDA 2000. The CERP is designed to reverse unintended consequences resulting from the operation of the C&SF Project. The physical limitations of the existing water management system

still have the potential to exacerbate resource conflicts. Implementation of the CERP should increase the system’s flexibility, helping water managers avoid such conflicts. In 2000 Governor Jeb Bush proposed, and the legislature passed, the Everglades Restoration and Investment Act, which committed the state to provide \$2 billion over 10 years to implement the first 10 years of the CERP.

The Seminole and Miccosukee Tribes, which have maintained their way of life in this natural system, became active participants in the dialogue on restoration and were formally added to the Task Force under WRDA 1996. In 1934, the Enabling Act establishing ENP recognized the right of the

Miccosukee Tribe of Indians to continue to live in their traditional homeland. In 1998, Congress passed the Miccosukee Reserved Area Act which clarified the rights of the Miccosukee Tribe to live in the park and set aside 666.6 acres along its border for the tribe to govern its own affairs in perpetuity. The presence of two Indian tribes living in the Everglades, whose culture and way of life depend on the health of this ecosystem, is an important reason to restore the ecosystem.

The growing body of federal and state legislation and regulatory approvals directed at managing growth and protecting the natural environment is summarized in Strategic Plan Table 1.

Strategic Plan Table 1 – Significant Events in South Florida Ecosystem Management

1934	Everglades National Park is authorized.	1987	Florida Surface Water Improvement and Management Act requires the five Florida water management districts to develop plans to clean up and preserve Florida lakes, bays, estuaries, and rivers.
1968	Biscayne National Park is established as a national monument; expanded to a national park in 1980.	1988	Federal government sues the State of Florida, alleging that the state had failed to direct the SFWMD to require water quality permits for the discharge of water into the C&SF project canals.
1972	Florida Water Resources Act establishes fundamental water policy for Florida, attempting to meet human needs and sustain natural systems; puts in place a comprehensive strategic program to preserve and restore the Everglades Ecosystem.	1988	Land Settlement Act transfers acreage in WCA-3 and the Rotenberger tract to the State of Florida for Everglades restoration.
1972	Florida Land Conservation Act authorizes the issuance of bonds to purchase environmentally endangered and recreation lands.	1988	Big Cypress National Preserve Addition Act expands the preserve and affirms the Seminole and Miccosukee Indian Tribes’ customary use and occupancy rights in the preserve.
1974	Big Cypress National Preserve is created; legislation incorporates concerns of the Seminole Tribe and the Miccosukee Tribe for access to this preserve.	1989	Everglades National Park Expansion Act adds the East Everglades addition.
1982	Florida Indian Land Claims Settlement Act establishes a perpetual lease from the State of Florida for the Miccosukee Tribe’s use and occupancy of 189,000 acres in WCA-3A, which is to be preserved in its natural state, and a 75,000-acre Federal Indian Reservation in the Everglades.	1990	Florida Preservation 2000 Act establishes a coordinated land acquisition program at \$300 million per year for 10 years 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.
1983	Florida Governor’s Save Our Everglades Program outlines a six-point plan for restoring and protecting the South Florida Ecosystem so that it functions more like it did in the early 1900s.	1990	Florida Keys National Marine Sanctuary and Protection Act establishes a 2,800-square-nautical-mile marine sanctuary and authorizes a water quality protection program.
1984	Florida Warren Henderson Act authorizes the Department of Environmental Regulation (now the Department of Environmental Protection) to protect the state’s wetlands and surface waters for public interest.	1991	Florida Everglades Protection Act provides the SFWMD with clear tools for ecosystem restoration.
1985	Florida Local Government Comprehensive Planning and Land Development Regulation Act requires the development and coordination of local land use plans.	1992	Federal and state parties enter into a consent decree on Everglades water quality issues in federal court. The Miccosukee Tribe signs a Memorandum of Agreement with the federal government which gives it the right to seek enforcement of the Settlement Agreement entered as a Consent Decree.
1987	Compact among the Seminole Tribe, the State of Florida, and the federal government is completed, clearly describing the Tribe’s water supply and flood control rights; the goal of the compact is to harmonize state and federal water law.	1992	WRDA 1992 authorizes the Kissimmee River Restoration Project and the C&SF Project Restudy; also provides for a fifty/fifty cost share between the federal government and the project sponsor, the SFWMD.
1987	The Seminole Tribe transfers ownership to lands critical to the State of Florida’s Everglades Construction Project in WCA-3.		

- 1993 Task Force is established to coordinate ecosystem restoration efforts in south Florida.
- 1993 Seminole Tribe is approved by the U.S. Environmental Protection Agency (USEPA) to establish water quality standards for reservation lands in accordance with section 518 of the Clean Water Act.
- 1994 Florida Everglades Forever Act establishes and requires implementation of 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 is 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 is approved by USEPA to establish water quality standards for reservation lands in accordance with section 518 of the Clean Water Act.
- 1996 WRDA 1996 authorizes a comprehensive review study for restoring the hydrology of south Florida; expands the Task Force to include tribal, state, and local governments; mandates extensive public involvement.
- 1996 Section 390 of the Farm Bill grants \$200 million to conduct restoration activities in the South Florida Ecosystem.
- 1997 Seminole Tribe of Florida’s water quality standards for the Big Cypress Reservation are approved by USEPA.
- 1997 Miccosukee Tribe water quality standards for the Tribe’s Federal Indian Reservation establish a 10 ppb criterion for total phosphorus in tribal waters.
- 1997 - Annual Interior Appropriations Acts provide for land acquisition by the National Park Service and the Fish and Wildlife Service in the South Florida Ecosystem.
- 2000
- 1998 Miccosukee Reserved Area Act clarifies the rights of the Miccosukee Tribe to live in ENP and sets aside 666.6 acres along the border for the tribe to govern in perpetuity.
- 1998 Seminole Tribe of Florida’s water quality standards for the Brighton Reservation are approved by USEPA.
- 1998 Miccosukee Reserved Area Act directs the Miccosukee Tribe to establish water quality standards for the Miccosukee Reserved Area (inflow points to ENP).
- 1999 WRDA 1999 extends Critical Restoration Project authority until 2003; authorizes two pilot infrastructure projects proposed in the CERP.
- 1999 Governor’s Commission for the Everglades is established to make recommendations on issues relating to Everglades protection and restoration, environmental justice, and water resource protection, among other issues.
- 1999 Miccosukee Tribe water quality standards are established for the Miccosukee Reserved Area on the border of ENP and they are approved by USEPA.
- 1999 Florida Forever Act improves and continues the coordinated land acquisition program initiated by the Florida Preservation 2000 Act of 1990; commits \$300 million per year for 10 years.
- 1999 Florida State Legislature passes Chapter 99-143, Laws of Florida, authorizing the SFWMD to be the local sponsor for Everglades restoration projects.
- 2000 Florida Everglades Restoration Investment Act creates a funding and accountability plan to help implement the CERP; commits an estimated \$2 billion in state funding to Everglades restoration over 10 years.
- 2000 Florida Legislature passes the Lake Okeechobee Protection Act, a phased, comprehensive program designed to restore and protect the lake.
- 2000 WRDA 2000 includes \$1.4 billion in authorizations for 10 initial Everglades infrastructure projects, four pilot projects, and an adaptive management and monitoring program; also grants programmatic authority for projects with immediate and substantial restoration benefits at a total cost of \$206 million; establishes a 50 percent federal cost share for implementation of CERP and for operation and maintenance.
- 2001 Numeric water quality criterion of 10 ppb geometric mean is proposed by Florida DEP in the Everglades Protection Area.
- 2001 The Water Resources Advisory Commission (WRAC) is established by the SFWMD Governing Board as a representative public interest group to advise them on all aspects of water resource protection in south Florida.
- 2002 Task Force designates the WRAC as an advisory body to the Task Force on ecosystem restoration activities.
- 2003 Senate Bill 626 amends the Everglades Forever Act.
- 2003 Science Coordination Group is established with direct reporting responsibilities to the Task Force.
- 2003 Combined Structural and Operational Plan (CSOP) Advisory Team is established with direct reporting responsibilities to the Task Force.
- 2003 Final USACE Programmatic Regulations are issued.
- 2003 SFWMD develops the Long-Term Plan for achieving Everglades water quality goals.
- 2003 Environmental Regulation Commission adopts phosphorus rule for the Everglades Protection Area.
- 2003 State of Florida initiates early start on Southern Golden Gate Estates Project.
- 2004 Indian River Lagoon-South CERP project is approved by State of Florida under Section 373.1501.F.S.
- 2004 State of Florida unveils plan to accelerate restoration of America’s Everglades (Acceler8).
- 2005 USEPA approves State’s phosphorus rule for the Everglades Protection Area.
- 2005 The State of Florida’s Water Resource Protection and Sustainability Program requires a higher level of water supply planning and coordination between the water management districts and local governments.
- 2005 State of Florida announces the Lake Okeechobee Estuary Recovery Plan to help restore the ecological health of Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries.

What Is at Stake

Current efforts to restore the South Florida Ecosystem must address a century of changes to the environment that have put the ecosystem in jeopardy. The seriousness of the problem was fully evident during the initial strategic planning process of the Task Force in 2000. Problems noted at that time included:

- Fifty percent reduction in the original extent of the Everglades, including important habitat and groundwater recharge areas
- Ninety percent reductions in some 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 EAA
- 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 WCAs
- Loss of 37 percent of living corals at 40 sites in the Florida Keys National Marine Sanctuary from 1996 to 2000

In 2006, south Florida is home to over 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 Federal Indian Reservations; thirty state parks; numerous state forests and wildlife management areas; seventeen state aquatic preserves; thirteen federal wildlife refuges; a national marine sanctuary; three national parks; a national preserve; and a national estuarine research reserve. ENP 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.



RESTORATION STRATEGY

The Task Force *Strategy* includes a set of guiding principles, which have been adopted by the Task Force member agencies to guide all aspects of ecosystem restoration, and a clear definition of the roles of the Task Force as a coordinating, facilitating, and reporting body. Each of these is described separately in this chapter.

Guiding Principles

The Ecosystem Must Be Managed as a Whole

This is the overall premise that guides ecosystem planning and management. It demands that managers, scientists, and the public view the natural and the built environments and the resources needed to support them as parts of a single larger system. The challenges faced in south Florida must be solved collaboratively. Rather than dealing with issues independently, the challenge is to seek out the interrelationships and mutual dependencies that exist among all the components of the ecosystem.

The Task Force advocates a system-wide approach that addresses issues holistically, recognizing that the various levels of government have distinct jurisdictions and responsibilities that can be coordinated but not shared. For example, the state retains exclusive responsibility for all land management and water use except for lands and waters specifically reserved by the federal government or the Miccosukee or Seminole Tribes.

Holistic management by a variety of jurisdictions will require broad-based partnerships, coordinated management, and considerable 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 communication and examining 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, including the coordination of land and water use and the

development of 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, including historically underserved communities and neighborhoods. Therefore, public outreach and communication will be an important part of the ecosystem restoration efforts. Outreach strategies will seek two-way communication with all public sectors to broaden understanding and to instill a sense of stewardship among all south Floridians and visitors.

The Natural and Built Environments Are Inextricably Linked in the Ecosystem

Understanding the complexities of the South Florida Ecosystem is daunting. Until recently, the term ecosystem generally referred to the natural environment. However, the ecosystem also includes people and their built environment, which is inextricably linked to the natural environment. Events in the built environment can have catastrophic consequences in the natural environment, such as the destruction of wetlands when they are drained for development. Similarly, 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.

The Task Force recognizes that the restoration of the South Florida Ecosystem is not possible if subsequent decisions about the built environment are not consistent with ecosystem health. At the same time, the solutions to restore ecosystem health must be supportive of human needs. These links make it critical that decision-makers for both the natural and the built environments be involved in the restoration effort.

Expectations Should Be Reasonable

Major ecological improvements will take many years to realize in south Florida. The large-scale hydrological improvements that will be necessary to stimulate major ecological improvements will depend upon and follow the implementation of CERP features designed to substantially increase the water

storage capabilities of the regional system and to provide the infrastructure needed to move the water. Other features of the CERP must be in place before the additional storage and distribution components can be constructed and operated. Substantial alteration and degradation of the South Florida Ecosystem has occurred over many decades, and it will take decades to reverse this process.



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 has adopted an adaptive management process, authorized by Congress in WRDA 2000, that will continuously provide managers with updated scientific information, which will then be used to guide critical decisions. In this process, scientific models provide a conceptual framework and identify critical support studies. Support studies provide data and analysis that lead to better understanding of problems and the development of alternative solutions. Monitoring may be used to help establish a baseline, and once an alternative is implemented, to assess the effectiveness of the action and provide feedback on ways to modify it (if warranted). Similarly, monitoring data can be used to revise and refine the original concepts and models, thereby continuing an interactive feedback loop of decision-making, implementation, and assessment.

Economic Equity and Environmental Justice Need to Be Integrated into Restoration Efforts

The federal members of the Task Force are directed by federal law and executive orders to promote

economic equity and environmental justice through fair treatment of all persons, regardless of color, creed, or belief.

In WRDA 2000 Congress specifically recognized the importance of ensuring that small business concerns were addressed during the implementation of CERP. Fair treatment associated with economic equity includes efforts required to expand opportunities to small business concerns, including those controlled by socially and economically disadvantaged individuals and persons with limited proficiency in English. Additional targeted efforts will be needed to provide opportunities to socially and economically disadvantaged individuals and small businesses to participate in the implementation of restoration programs and projects.

Fair treatment associated with environmental justice means that no group of people, including no racial, ethnic, or socioeconomic group, should bear a disproportionate share of any negative environmental consequences resulting from industrial, municipal, or commercial operations or the execution of federal, state, or local programs or policies.

In WRDA 2000 Congress specifically recognized the importance of ensuring to the maximum extent practicable, that public outreach and educational opportunities are provided to all the individuals of south Florida.

The unique cultural and ethnic diversity of south Florida's population, with its strong representation of peoples from all over the world, will require significant efforts on behalf of the restoration partners to ensure that projects are implemented in ways that do not result in disproportionate impacts on any communities.



The Task Force and Working Group see this guiding principle as critical to long-term success. The Working Group established a task team for outreach and environmental and economic equity. The team solicited input about the various restoration outreach efforts of member agencies and developed an inventory of these efforts.

Restoration Must Meet Applicable Federal Indian Trust Responsibilities

The restoration of the South Florida Ecosystem involves a unique partnership between the Indian tribes of south Florida and the federal, state, and local governments. In carrying out the Task Force's responsibilities laid out in WRDA 2000, the Secretary of the Interior must fulfill the obligations to the Indian tribes in Florida specified under the Indian Trust Doctrine, and other applicable legal obligations³. All federal agencies have a trust responsibility and are responsible for meaningful consultation with the tribes under Executive Order 13175 and Secretarial Order 3206.

Task Force Roles in the Coordination of the Restoration Effort

The role of the Task Force is to facilitate the coordination of conservation and restoration efforts implemented through a combination of federal, state, local, and tribal initiatives in south Florida. It provides a forum for the participating agencies to share information about their restoration projects, resolve conflicts, and report on progress. Congress and the public are particularly interested in how each individual agency's efforts contribute to the larger framework of total ecosystem restoration. The Task Force *Strategy* and *Biennial Report* are critical vehicles for sharing information and coordination.

Providing a forum for consensus building and issue engagement 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. Each member is accountable individually to its appropriate

authorities and to each other for the success of the restoration. The Task Force has no overriding authority to direct its members. Instead the Task Force role of coordination complements the implementation roles of its members.

The Task Force meets regularly to report on progress, facilitate consensus, and identify opportunities for improvement. The Task Force members coordinate and track the restoration effort as follows.



Focus on Goals

The Task Force *Strategy* establishes strategic goals and measures of success that represent 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 strategic goals, be consistent with all the guiding principles, be timely, and support rather than duplicate other efforts. The Task Force *Strategy* includes a master list of restoration projects that compiles information about goals and objectives, start and finish dates, lead agencies, and funding (see Appendix A). The IFP in Volume 2 provides additional details about all of these projects.

Track and Assess Progress

The Task Force facilitates the coordination of the adaptive management processes used by the member agencies to track and assess progress. Adaptive management, an important restoration concept, involves constantly monitoring project contributions, indicators of success, and current scientific information to determine the actual versus expected

³ See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section III.

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 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 producing the anticipated results may be replaced with new projects. Because each Task Force member is responsible for its particular programs, projects, and funding, such decisions are made by the entities involved. The Task Force will modify the strategic goals and objectives as relevant information becomes available.



Recognize and Work with Conflicting Goals

As restoration activities move forward in south Florida, there may be occasional conflicts between the strategic goals described in this *Strategy* and individual agency programs or missions. When such conflicts occur, the strategic goals should prevail whenever possible, and it is the statutory duty of the Task Force to facilitate their resolution in ways that advance the strategic goals of restoring natural hydrology and ecology throughout south Florida. The Task Force recognizes that it may on occasion be appropriate to take short-term or interim management actions that are not immediately consistent with long-range strategic goals, while allowing time for other activities more consistent with strategic goals to take effect⁴. The Task Force is committed to facilitating the resolution of these issues, consistent with its statutory duties, without compromising its long-term focus on restoring natural conditions to south Florida. Where there may be conflicts between existing statutes and strategic goals, the Task Force recognizes that it may be necessary to have Congress address such issues.

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. The ability of the Task Force to resolve conflicts is complicated by the large number of governmental entities involved at the federal, state, tribal, and local levels, the differing, and sometimes conflicting, legal mandates and agency missions among the entities involved, and the diverse public interests, which include environmental, agricultural, Native American, urban, recreational, and commercial values.

The Task Force will facilitate the prevention and resolution of conflict to the extent possible by clarifying the issue(s), identifying public concerns, obtaining and analyzing relevant information, and identifying possible solutions. Although these efforts are intended to facilitate conflict resolution, opportunities will always exist for parties to pursue conflicts through litigation. Litigation may prove to be time consuming, costly, and uncertain, and it may divert resources from restoration efforts⁵.

Changes made through project coordination, adaptive management, and the conflict resolution process will be incorporated into future editions of this *Strategy*.



⁴ See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section II.B.2

⁵ See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section II.A.1.

VISION AND INDICATORS OF SUCCESS

One of the first actions of the Task Force was to describe a vision for a resulting condition of the South Florida Ecosystem that all the member agencies could strongly support. Translating that vision into discernable and measurable terms is an ongoing process supported by intensive discussion, research, and monitoring. Teams of scientists are working to develop and refine the indicators that the Task Force will use to know when they have finally achieved their vision. The Task Force vision is presented below, followed by a discussion of the indicators of success.

Vision

The participants in the South Florida Ecosystem Restoration Task Force share this 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 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. These efforts, which are described in detail in the "Strategic Goals and Objectives" section of the Strategy, 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.

The Task Force members believe that the efforts described in this *Strategy*, managed through an adaptive management process, will achieve their vision. The region's rich and varied habitats—Biscayne Bay; Lake Okeechobee; the Wild and Scenic Loxahatchee River; the Caloosahatchee, St. Lucie, and other estuaries; the Everglades, mangroves, coastal marshes, and seagrass beds of south Florida; and the coral reef ecosystem of the Florida Reef Tract—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. Commercial fishing, farming, recreation, and tourism dependent businesses and associated economies will benefit from a viable, productive, and aesthetically beautiful resource base. The quality of life enjoyed by residents and visitors will be enhanced by sustainable natural resources and by access to natural areas managed by federal, state, and local governments to provide a great variety of recreational and educational activities.

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 healthier than the current ecosystem, it will not completely match the predrainage system. The irreversible physical changes made to the ecosystem make restoration to pristine conditions 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.

Indicators of Success

The Task Force recognizes that restoration must be based on the best science available and that this will require use of adaptive management principles to continually incorporate new knowledge and tools. The Task Force created the SCG in December 2003 to support its efforts to coordinate the scientific aspects of policies, strategies, plans, programs, projects, activities, and priorities and to respond to Congressional directives to improve science coordination based on GAO's recommendations.

In August 2004 the Task Force assigned this group the task of developing a proposed integrated suite of System-wide Indicators for helping assess the direction and success of the restoration efforts. This suite of System-wide Indicators replaces the indicators reported in the 2002 *Strategy* and *Biennial Report*.

Over the past three reporting periods (1998-2000, 2000-2002, and 2002-2004), a great deal of modeling and analysis has generated new information providing the technical and scientific basis for developing a more integrated and rigorous set of indicators than was originally included in the 2002 report. After examination of comments from an Independent Scientific Review and public comments, the SCG developed a suite of proposed System-wide Indicators for 2006 and identified additional indicator gaps they hope to have developed by the 2008 reporting timeframe. There are general desired restoration trends identified for each indicator, but they are not yet well developed or refined enough to set performance targets or end points. The SCG is working on refining these restoration targets and expects to report their findings to the Task Force in 2008 when the first assessment of the entire suite of indicators is anticipated. The SCG will use the feedback from public input and an independent scientific review process to complete the indicators, targets, performance measures, and timelines used to measure success⁶.

**Strategic Plan Table 2 –
Task Force System-wide Indicators for 2006**

ECOLOGICAL INDICATORS

- Fish and Macroinvertebrates
- Wading Birds (White Ibis, Wood Stork, and Roseate Spoonbill)
- Florida Bay Submerged Aquatic Vegetation
- Florida Bay Algal Blooms
- Crocodylians (American Alligators and Crocodiles)
- American Oysters
- Periphyton and Epiphyton
- Juvenile Pink Shrimp
- Lake Okeechobee Littoral Zone
- Invasive Exotic Species

COMPATIBILITY INDICATORS

- Water Volume
- Biscayne Aquifer Saltwater Intrusion
- Flood Protection – C-111 Basin

Ecological Indicators

Fish and Macroinvertebrates

Significance and background. Marsh and estuarine aquatic fauna, including small fishes and crustaceans, are critical in the food web as primary and secondary consumers and as prey for focal Everglades predators such as wading birds. This indicator uses the density (number of animals per unit area) and community composition (how many of each species per unit area) of a suite of native fishes (e.g., eastern mosquito fish, bluefin killifish, sheepshead minnows, sailfin molly) and crustaceans (slough and Everglades crayfish, riverine grass shrimp) to describe trends in their populations related to hydrology.

Fish and macroinvertebrate responses are directly related to the suitability of environmental conditions. Correlations between biological responses and environmental conditions contribute to an understanding of the species’ status and trends over time. The positive or negative trends of this indicator relative to hydrological changes permit an assessment of positive or negative trends in restoration.

Factors affecting success. The most important factors affecting fish abundances regionally are the loss of habitat, hydroperiod, and water depth and frequency of drying events. Because of relatively dry hydrological conditions in the Everglades Ecosystem resulting from water management over the past several decades, and a loss of habitat to agricultural and urban uses, fish and macroinvertebrate densities have decreased and community structure has changed.

Toward restoration. The broad restoration goals for this indicator are to enhance population density and community composition of fish and macroinvertebrates through hydrologic restoration and improved water management.

Wading Birds (White Ibis, Wood Stork, and Roseate Spoonbill)

Significance and background. Extremely large numbers of wading birds were one of the defining characteristics of the pre-drainage wetlands of south Florida. Of particular relevance in understanding the population dynamics of wading birds in the pre-drainage system are the combined features of large

⁶ See Appendix C Additional View of the Miccosukee Tribe “Putting the Everglades back into Everglades Restoration.” Section II.B.5.

spatial extent and highly variable hydrological conditions that created and maintained a mosaic of wetland habitats. This combination is what made it possible for the region to support large nesting colonies of wading birds with quite different foraging strategies and prey requirements.

Factors affecting success. The drainage of extensive areas of short-hydroperiod wetlands, large-scaled alterations in water depth and distribution patterns due to compartmentalization of wetlands in the central Everglades, and the reduction of freshwater flows into the formerly more productive estuaries are the human induced stressors that have substantially impacted ibis, storks, spoonbills, and other wading birds in south Florida. The number of ibis nesting in south Florida has declined from an estimated 100,000 – 200,000 birds in the 1930s and 1940s to 20,000 – 60,000 birds since the late 1990s. The number of nesting storks has declined from 14,000 – 20,000 birds prior to 1960 to about 2,000 – 5,000 birds since the late 1990s.

Toward restoration. The broad restoration goals for this indicator are recovering the kind of ecosystem with the spatial and temporal variability to support large numbers of these wading birds. This will include specific restoration goals for these species with targets defined for numbers of nesting pairs, location of colonies, timing of nesting, and an increase in the size and frequency of the larger nesting assemblages referred to as “super colonies.”

Florida Bay Submerged Aquatic Vegetation

Significance and background. Florida Bay and adjacent areas of the Florida Keys and southwest Florida coastal zone contain one of the largest contiguous seagrass beds in world. Within Florida Bay, seagrasses are the dominant biological community, covering 90% of the 180,000 hectares of the bay’s subtidal mudbanks and basins. Submerged aquatic vegetation (SAV) is well documented as a community that serves many critical functions within estuarine and coastal ecosystems, including habitat for higher trophic level species, a base of primary production for the food web, and a beneficial influence on water quality through sediment stabilization and nutrient retention. A conceptual ecological model of Florida Bay, developed for the Restoration Coordination and Verification Team (RECOVER), identifies the SAV community and its

structure and dynamics as being central to the health of the entire Florida Bay ecosystem – the condition of this community is an essential indicator for South Florida Ecosystem restoration.



Factors affecting success. The SAV indicator for the southern estuaries focuses only on Florida Bay as it currently has the best models available for this indicator. Changes in the seagrass community of Florida Bay have been one of the primary drivers behind a public call for Everglades restoration. Starting in 1987, a mass-mortality event or “die-off” of SAV through much of central and western Florida Bay devastated the once lush seagrass beds. This die-off initiated a cycle of changes in the Florida Bay ecosystem, likely due to increased sediment suspension, turbidity, nutrient mobilization, and phytoplankton blooms resulting in decreased light that caused additional seagrass mortality. The extent to which fish and birds will recover following a sustained recovery of these plants remains to be seen and is a major focus of ongoing research.

Toward restoration. The broad restoration goal for this indicator is an increase in two species, *Halodule wrightii* and *Ruppia maritima*, that are associated with relatively lower salinities and are far less common than the dominant species, *Thalassia testudinum*, and greater species richness and density through a greater proportion of the bay. Another restoration goal is widespread SAV coverage that includes increases in species diversity and richness with moderate density with overall vegetation coverage similar to those found prior to the 1987 “die-off.”

Florida Bay Algal Blooms

Significance and background. Algal blooms are a major concern regarding the current and future health of Florida Bay, as well as of waters near the Florida Keys and the southwest Florida coastal zone. The initiation of algal blooms in Florida Bay in 1991,

following the seagrass mass-mortality event of the late 1980s, has been a major element of ecological change. Algal blooms decrease light penetration through the water column and can lead to seagrass mortality, which in turn can release nutrients and stimulate more algal blooms.

Factors affecting success. The role of nutrient inputs from the Everglades as a cause of Florida Bay algal blooms is not clear, but it has been hypothesized that these inputs are an important factor and increased freshwater flow with restoration could increase such blooms. The algal bloom indicator reflects overall water quality and is based on the assessment and evaluation of chlorophyll-a concentrations in the water column. The indicator has three components: bloom magnitude, frequency, and spatial extent.

Toward restoration. The broad restoration goal for this indicator is to reduce or eliminate the number and extent of algal blooms in the watershed.

Crocodylians (American Alligators and Crocodiles)

Significance and background. Crocodylians are important in south Florida wetlands and play a major role in influencing the overall health and ecological patterns of the region. Alligators and crocodiles are critical in the food web as top predators, influencing abundance and composition of prey. The American alligator's behavior creates variations in physical conditions that otherwise would not exist in the Everglades landscape such as the holes they dig that become habitat for other species. The American crocodile is an endangered species representing the importance of freshwater inflow to estuarine health and productivity.

Factors affecting success. Reproduction, growth, and survival of crocodylians are dependent on food availability—birds, mammals, fish, and macroinvertebrates—that, in turn, are entirely dependent on hydrologic conditions. Loss of flow and relatively dry hydrologic conditions, resulting from water management over the past several decades and a loss of habitat in the Everglades, have adversely affected alligators and crocodiles. Loss of habitat in southern marl prairies and rocky glades and reduction in depth and period of inundation of remaining areas have reduced abundance of alligators and alligator holes in these habitats. Reduced prey availability

throughout the system as a result of hydrologic alterations corresponds with lower growth rates, survival, and reproduction of alligators.

In estuaries, crocodylians of all species orient towards areas of low salinity and sources of freshwater. In mangrove estuaries, alteration of location and quantity of freshwater flow has lowered the relative density of crocodiles where freshwater has been diverted and decreased growth and survival of juvenile crocodiles throughout the estuary in areas of higher salinities. Reduced freshwater flow into the mangrove estuaries also has resulted in succession of former freshwater mangrove areas to saltwater systems, reducing American alligator populations in tidal rivers and tributaries.

Finally, a large portion of the adult alligator population in the Everglades exists in canals but does not contribute to population growth due to the combination of increased nest flooding and decreased hatchling and juvenile survival during low water periods (predation and cannibalism).



Toward restoration. The broad restoration goal for this indicator is based on recovery of more natural hydropatterns regionally, which in turn will promote increased habitat quantity and improved habitat quality that will support healthy populations of these species. The alligator indicator uses relative density (reported as an encounter rate), body condition, nesting effort and success, and occupancy rates of alligator holes, while the crocodile indicator uses relative density, growth, and survival to describe trends in their populations related to hydrology.

For example, alligators are now largely absent from over-drained rocky glades and marl prairies, and hence are no longer creating alligator holes. As restoration proceeds the occupancy rate of alligator holes should increase, providing ecosystem services

for other species. With the resumption of natural patterns of volume, timing, and distribution of flow to the Everglades, the American alligator is expected to repopulate and resume nesting in the rocky glades and the freshwater reaches of tidal rivers in the mangrove estuaries and will increase in population size and body condition throughout most of the Everglades wetlands.

American Oysters

Significance and background. Oysters are indicative of ecosystem health as a whole. They are natural components of estuaries along the eastern seaboard of the United States as well as the Gulf of Mexico and were documented to once be abundant in the South Florida Ecosystem. The American oyster is the dominant species in these oyster reef communities. Oyster bars provide important habitat and food for numerous estuarine species including mollusks, worms, crustaceans, sponges, fish, and birds. Oysters are also an important commercial and recreational resource. The American oyster improves water quality by filtering particles from the water, serves as prey and habitat for numerous other organisms, and plays an important role in the estuarine food chain. Salinity conditions suitable for oysters also produce optimal conditions suitable for a suite of other desirable estuarine organisms. In the Caloosahatchee, Loxahatchee, and St. Lucie Estuaries, oysters have been identified as a valued ecosystem component.

Factors affecting success. Historically, rainfall on the watershed was detained in natural wetland systems and gradually percolated into the groundwater, evaporated, and/or flowed overland into tributaries. As south Florida developed, the canal network built as a result of the C&SF Project drastically altered the quantity, quality, timing, and distribution of freshwater entering the system. Resultant rapid changes in salinity resulted in degradation of biological integrity of the system and introduced contaminants from urban and agricultural development, including excess suspended solids, nutrients, pesticides, and other harmful pollutants. Inflows became extremely variable and tended to be too great in the wet season and too little in the dry season to support a healthy estuary. The inflow extremes and degraded water quality (particularly suspended solids and nutrients) severely compromise the development of healthy, sustainable oyster and related estuarine communities.

Toward restoration. The broad restoration goal for this indicator in the northern estuaries is the restoration of oyster beds within the St. Lucie, Caloosahatchee, Loxahatchee, and Lake Worth Lagoon Estuaries, including the restoration of habitat function and oyster health in areas that become suitable habitat. Acre increases are identified in the 2005 RECOVER *Interim Goals and Targets Report* but these need to be further refined as to locations and definition of what an acre of oysters means (i.e. how many oysters per meter square, what quality, reproductive capacity, etc.).

Periphyton and Epiphyton

Significance and background. Periphyton communities, comprised of algae, floating plants, and associated animals, are a common feature of Everglades marshes and respond strongly to alterations in hydrologic conditions and water quality, especially phosphorus. Epiphyton communities are also comprised of algae and associated animals, but instead of floating are attached to other plants and underwater surfaces. Both periphyton and epiphyton are important both as a food source and a refuge for aquatic invertebrates that are consumed by small fish, crayfish, and grass shrimp. Periphyton has been studied extensively in the Everglades because of its utility as an early warning indicator of impending ecosystem change and the significant consequences of altered periphyton communities on the rest of the food web. Epiphyton serves much the same role as periphyton but is primarily associated with estuarine and coastal ecosystems, particularly seagrass beds.



Factors affecting success. Increased nutrient delivery to natural Everglades marshes causes periphyton mats to disintegrate and collapse, resulting in a major alteration in food availability at the base of the food web. Research shows periphyton losses are initiated upon exposure to even very low nutrient enhancements. Models have been developed to

determine the extent of periphyton losses throughout the South Florida Ecosystem because of nutrient enrichment. Further, hydrologic changes have strong functional and structural consequences in the periphyton community. Studies have shown that sites that are dry for a majority of the year have minimal production values, while sites that are flooded for less than six months are most productive. The timing of reflooding of previously dried periphyton mats is also important as dried periphyton releases large quantities of nutrients into the water column upon reflooding that subsequently may negatively affect downstream systems. Periphyton cover, biomass, productivity, and composition are affected by the duration and frequency of droughts. The reduction of hydroperiod resulting from long-term water and land management practices has limited the period of production for periphyton in Everglades wetlands for many decades. Recovery of this indicator will depend on hydrological restoration to improve habitat for periphyton production in both long and short hydroperiod wetlands.

Toward restoration. The broad restoration goal for this indicator is to increase the periphyton mat cover, structure, and composition to periphyton communities that were characteristic of the spatially distinct hydroperiods and low nutrient conditions that were present in the greater Everglades wetland communities historically.

Juvenile Pink Shrimp

Significance and background. Pink shrimp are important both economically and ecologically in south Florida and are a core component of the ecologic food chain. Juvenile pink shrimp are present in coastal waters throughout south Florida and densities are highest in western Florida Bay. Biscayne Bay supports small local fisheries for food shrimp and bait shrimp. The growth and survival of young pink shrimp is influenced by salinity.

Factors affecting success. Historically, water management practices have changed the quantity, timing, and distribution of freshwater inflow to estuaries, which have affected the frequency and rate of salinity change. Both Florida Bay and parts of Biscayne Bay have been subjected to prolonged hypersaline conditions. Eastern Florida Bay, Whitewater Bay, and Biscayne Bay experience large, rapid changes in salinity.

Restoration of flows more similar to rainfall-driven flows should benefit the Tortugas pink shrimp fishery. The potential for improving shrimp nursery habitat in Florida Bay may be greatest in the north-central bay, where water management changes associated with the CERP could potentially reduce the frequency, spatial extent, and duration of hypersaline conditions. **Toward restoration.** The broad restoration goal for this indicator is increased juvenile pink shrimp density at peak abundance during the August-October period in optimal habitat (seagrass) in three regions of Florida Bay, in Ponce de Leon Bay on the lower southwestern mangrove coast, and in western nearshore southern Biscayne Bay.

Lake Okeechobee Littoral Zone

Significance and background. The SAV in Lake Okeechobee provides nesting habitat and food resources for economically important sport fish populations, wading birds, migratory waterfowl, alligators, and the federally-listed endangered Everglades snail kite. In addition, the SAV community stabilizes shoreline sediments and supports attached algae that help to remove phosphorus from the water. The littoral zone emergent vegetation community in the lake covers an area larger than 400 square kilometers.

Factors affecting success. Florida has an annual rainfall cycle that can lead to prolonged or extreme high or low lake levels that in turn can stress the ecosystem. The spatial extent of the SAV in the lake has fluctuated significantly over the years according to wet and dry years and management schedules. Just after a period of low water levels in 1989 to 1991, between 43,000 and 51,000 total SAV acres were found. In 1998, after many years of high lake levels, a rough estimate indicated that only 3,000 acres of total SAV remained in the lake. In July 2002, the spatial extent of SAV was back up to 43,000 acres, though not all desirable species. In the most recent sampling, conducted in August 2004, the total acres had increased to nearly 55,000.

Toward restoration. The broad restoration goals for this indicator include lowering average water levels in the lake, reducing frequency of extreme high water levels, and decreasing phosphorus inputs. Under those conditions, the distribution and abundance of bulrush and submerged plants are expected to increase. In addition, reducing phosphorus loads from agricultural

and urban activities to 40 parts per billion in the pelagic zone (open-water area) will result in the following changes: a decrease in algal blooms; an increase in water clarity; an increase in the spatial extent and biomass of native SAV; and a decrease in the rate of nuisance and exotic plant species expansion along the edge of the littoral zone.

Invasive Exotic Species

Significance and background. Florida is noted, along with Hawaii, California, and Louisiana, as one of the states with the greatest number of invasive non-indigenous species. Approximately one-third of the plant species in south Florida are exotic, and south Florida has more introduced animals than any other region in the United States. An estimated 26 percent of all mammals, birds, reptiles, amphibians, and fish are exotic. While invasive exotic plants may result in changes in ecological function and structure, they do not provide a measure that relates to the ecosystem's ecological condition except as it pertains to their level of invasion and adverse impacts on the ecosystem and biota. This is an indicator of the status of the spread, spatial distribution, and dominance of invasive exotic species and an indicator of progress (or lack thereof) in the control and management of invasive exotic species. The indications provided by monitoring and assessments of invasive exotic species are an evaluation of the integrity of the natural system and native vegetation.

Factors affecting success. During the past 400 years, Florida has been inundated with many predominantly tropical non-indigenous plants and animals. These waves of introductions accelerated during the twentieth century principally through importations by the ornamental plant and exotic pet industries. Exotic species compete with indigenous species for limited water, prey, and habitat; too often the exotics species outcompete the native. Since exotic species often drive ecological changes that may be irreversible, prevention, early detection, and removal are key to control and management. Monitoring and regular assessment of the spread of existing exotic species and the detection of new potentially invasive species is critical to effective control and management. Trends in the spread and density of invasive exotic plants, as well as the impacts that control and management activities have on their spread and density, will be important to the assessment of management success to control and eradicate invasive species in the Everglades.

Toward restoration. Broad restoration goals for this indicator are a reduction in spatial extent of invasive exotic plant species and populations of invasive exotic animal species in the South Florida Ecosystem. In addition, development of a comprehensive management program would address prevention, maintenance, and management of this condition.

Restoration Compatibility

Indicators

Water Volume

Significance and background. A regional volume of water can be evaluated on how well it meets reasonable and beneficial urban and agricultural demands even in drought years. In 1997 Florida established a water supply planning goal to provide water to all existing users during droughts up to the level of severity of a one-in-ten-year frequency of occurrence. This goal has been interpreted to mean at least a 90 percent probability that during any given year all of the needs of reasonable, beneficial water uses will be met while also not causing harm to the water resources and related natural environment.

The C&SF Project was originally designed to provide flood control and deliver water for municipal, industrial, and agricultural uses. Later this was modified to include prevention of saltwater intrusion and provision of adequate water to ENP. The system put in place was an attempt to meet the estimated water needs for a projected population of approximately two million residents by 2000. This population projection was significantly low as the actual population in 2000 was over six million and continues to grow rapidly.

Factors affecting success. As south Florida's population increased, so did the demand for water and land, and the subsequent conversion of natural lands to urban and agricultural uses. The result of this conversion was:

- A reduction in the extent of the natural system
- A reduction in water available for the natural system
- Reduced water resources and recharge capability for the aquifer
- Loss of water from the natural and human systems
- Increased needs for flood protection in urban and agricultural areas
- Less water available for the human population
- Conflicts for water between the natural system and people

Under current conditions, canals and levees associated with the C&SF Project have altered the timing and distribution of water across the landscape while the regional flood control and water supply constraints create unnatural surface and groundwater stages (altered volumes) in many areas. The CERP is expected to improve the timing, volume, and distribution of water throughout the system primarily by increasing regional storage capacity, removing barriers to flow, and through a careful redistribution of water within the system that more closely matches natural cycles. The CERP’s cumulative objective is to significantly reduce the release of millions of acre-feet of water for flood control by increasing storage capacity and thus increasing the amount of freshwater available to all water users—people as well as the environment—and to meet anticipated water supply needs for the 50 year CERP planning horizon. This retained and stored water is referred to as “new” water.

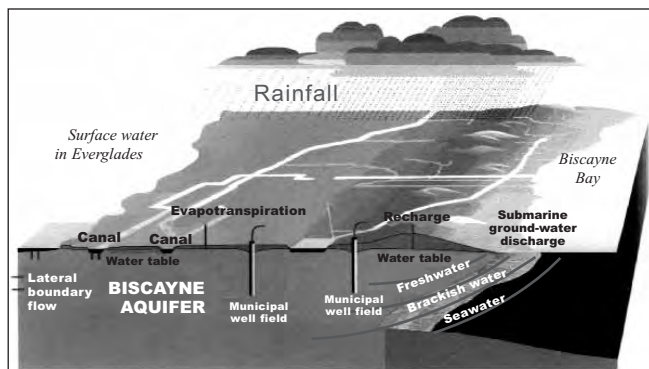
Toward restoration. Broad restoration goals for this indicator are to distribute water across the ecosystem in a manner that reflects natural conditions while providing for the other water-related needs of the region. In addition the water supply planning goal that will support achieving this condition is to provide water to all existing users during droughts up to the level of severity of a one-in-ten-year frequency of occurrence. Though specific targets are being refined the general target is to meet predicted “new” water volume targets (in acre-feet) identified through the C&SF Restudy. Current projections for new water are outlined below.

TARGETS FOR “NEW” WATER VOLUME	
By 2010	931,000 acre-feet of new water
By 2015	1,060,000 acre-feet of new water
Full Restoration	1,620,000 acre-feet of new water

Biscayne Aquifer Saltwater Intrusion

Significance and background. The Biscayne aquifer underlying southeast Florida provides freshwater resources to both the ecosystem and most of south Florida’s human population. Saltwater intrusion poses a continuing threat to the Biscayne aquifer. In order to restrict the inland migration of the saline interface, a sufficient freshwater head must be consistently maintained within the aquifer. Both the volume and

water quality in the aquifer are affected by human activities, including extractions for public and private water services, and pumping and diversion of the freshwater to restoration projects or to sea.



Conceptual diagram of hydrologic system of south Florida (from Langevin, 2000).

Factors affecting success. Harm to the Biscayne aquifer in terms of saltwater intrusion is considered to be movement of the saltwater interface to a greater distance inland than has occurred historically as a consequence of seasonal water level fluctuations up to and including a one-in-ten-year drought event. Groundwater levels within the Biscayne aquifer are controlled by local rainfall and by the canals and structures that are regionally operated by the SFWMD. The SFWMD implements two programs, canal operations and consumptive use permitting, to prevent increases in movement of saltwater within the Biscayne aquifer. The CERP intends to increase the storage capacity of water in the regional system for delivery to the Lower East Coast Service Area. The increase in regional storage capacity provided by the CERP will supplement regional and local sources used to prevent saltwater intrusion. CERP’s water projects that may directly or indirectly affect Biscayne aquifer dynamics include surface and water storage, aquifer storage and recovery (ASR), and modifications to impediments of sheetflow (decompartmentalization).

Toward restoration. The broad restoration goal for this indicator is for the Biscayne aquifer to achieve a level of protection where the movement of the saltwater interface is maintained at no greater distance inland than has occurred historically as a consequence of seasonal water level fluctuations up to and including a one-in-ten-year drought event.

Flood Protection – C-111 Basin

Significance and background. The 1948 C&SF Project was intended to help protect the public living in south Florida from flooding. As population increased the land uses changed, agricultural areas were developed for housing and natural wetlands were developed for agriculture, with increasing pressure to continue this pattern toward the Everglades. As agricultural and residential areas eventually abutted the Everglades a direct conflict related to water levels occurred.

Factors affecting success. The water levels required for the health of Everglades wetlands and aquifer recharge are often not the same as needed for agricultural and developed areas. In south Miami-Dade County, the draining of the developed side of the levee also caused the loss by seepage of water needed for sustenance of natural wetlands and ENP. During dry seasons the C&SF Project moved water into south Miami-Dade County for agriculture and the Everglades, but constant pumping drained even more water from the Everglades, exacerbating the dry

conditions. This scenario particularly describes the evolution of flooding challenges in the C-111 Basin that covers approximately 100 square miles in the southernmost portion of Miami-Dade County adjacent to the ENP. The predominant land use in this basin is agricultural, although portions of Florida City and Homestead lie within the basin.

Toward restoration. A goal of Everglades restoration and the CERP is to enhance economic values and social well being by maintaining or enhancing the current level of flood protection while restoring appropriate water levels and hydroperiods in the natural system. By avoiding increased flood damages or mitigating for flood encroachment, increases to project and societal costs can be minimized.

Broad restoration goals for this indicator are to reduce conflict in the water management operations in the C-111 Basin where agricultural lands abut ENP and to achieve a one-in-ten-year level of flood protection for the C-111 Basin.



STRATEGIC GOALS AND OBJECTIVES

The ultimate result of the Task Force member agencies' efforts should be the restoration of the South Florida Ecosystem. The direct measures of success for achieving this result are addressed in the preceding "Vision" section of this *Strategy*.

Because of the complexity and the long time frame of this initiative, it is also important to measure and track the hundreds of activities (*outputs* in the language of performance management) that must be performed 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 strategic goals, related subgoals, and specific objectives for the work that must be done. The three strategic 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 divide 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

- Subgoal 3-A: Use and manage land in a manner compatible with ecosystem restoration
- Subgoal 3-B: Maintain or improve flood protection in a manner compatible with ecosystem restoration
- Subgoal 3-C: Provide sufficient water resources for built and natural systems

Specific 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, outputs, or research findings.

The objectives included in this *Strategy* 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 accomplishments and whether they are proceeding on schedule, indicating whether or not the work of the Task Force member agencies is on track. The objectives, like the projects, are subject to adaptive management and may be modified as new information becomes available or when desired outcomes are not achieved. The Task Force agencies periodically provide updated data to the Task Force, which synthesizes the information for its strategy and biennial reports.

The major projects contributing to each objective are listed in this section of the *Strategy*. 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 Appendix A and all are described in detail in the IFP project sheets provided in Volume 2.

GOAL 1: GET THE WATER RIGHT

Water is the lifeblood of the South Florida Ecosystem. However, by the year 2000, the water flows had been reduced to less than one-third of those occurring in the historic Everglades. The quality of water that did enter the ecosystem had been seriously degraded. Water did not flow at the same times or durations as it did historically, nor could it move freely through the system. The whole South Florida Ecosystem suffered. The health of Lake Okeechobee was seriously threatened. Many plants and animals that live in south Florida and the Everglades were in danger of becoming extinct because their habitats had been degraded, reduced, or eliminated. Excessive freshwater discharges in the wet season and inadequate flows in the dry season threatened the estuaries and bays that are critical nurseries and home to many fish and wildlife. Urban and agricultural areas were also adversely affected. Water shortages and water restrictions were 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 also must recognize the needs of natural systems, urban and rural 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 right quantity of water, of the right quality, needs to be delivered to the right places and at the right times.

A consensus-building exercise in 1999 with broad public input identified a list of statements that Task Force participants used as a foundation to develop the Task Force Strategy. Based on that consensus, the water will be right when the following conditions are met: Natural hydrologic functions are 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 are restored without diminishing essential levels of water supply or flood control. Compartmentalization is reduced, and natural patterns of sheet flow are recovered to the maximum extent possible. Water resources accommodate the needs of natural systems, communities, and business. Safe drinking water is 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) is eliminated. Water levels and the timing of water deliveries reflect quantities resulting from natural rainfall and are distributed according to natural hydrologic patterns or patterns modified by scientific consensus. Damage to natural and human systems caused by flood and drought is minimized. Groundwater resources are protected from depletion and contamination.

Efforts to achieve goal one must incorporate a process to address concerns of environmental justice and economic equity. The unique cultural and ethnic diversity of south Florida's population, with its strong representation of peoples from all over the world, will require significant efforts on behalf of the restoration partners to ensure that projects are implemented in ways that do not result in disproportionate impacts on any communities. Additional targeted efforts will be required to provide opportunities for socially and

economically disadvantaged individuals and small businesses to participate in the implementation of restoration programs and projects. The Task Force and Working Group see this guiding principle as critical to long-term success.

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 is discharged via canals to the ocean or gulf. The CERP and other projects include the following 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 EAA, and in Palm Beach, Broward, and Miami-Dade Counties. These areas will encompass approximately 181,300 acres and will have the capacity to store 1.8 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 (ASR). Subsurface storage 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, treated, 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. Although ASR technology has been used successfully in Florida since 1983, concerns have been expressed about the proposed use of large-scale ASR in south

Florida. Many of these concerns were outlined in a 1999 report prepared by the ASR Issue Team of the Task Force.

To address concerns about ASR, an interagency study team led by the USACE and SFWMD was formed in 2000 and included representatives from the U.S. Geological Survey, U.S. Environmental Protection Agency (USEPA), Task Force, the Florida Department of Environmental Protection (DEP), Florida Geological Survey, Florida Department of Health, and various local governments. The interagency study team was tasked with preparing Project Management Plans (PMPs) and overseeing the implementation on the three ASR Pilot Projects. In 2001, an independent scientific review panel of the National Academies of Science and the Committee for the Restoration of the Greater Everglades Ecosystem (CROGEE) reviewed the draft PMPs for two ASR Pilot Projects and subsequently issued a report that recommended additional research. The ASR Regional Study was designed to answer many of the questions concerning the feasibility of full-scale ASR implementation. CROGEE subsequently reviewed the PMP for the ASR Regional Study. The PMP was approved and the ASR Regional Study has been initiated to collect regional hydrogeologic and water quality data, and develop a regional groundwater model as well as other tools required to address regional scale technical uncertainties.

If proven successful, wells will be located around Lake Okeechobee, in the Caloosahatchee Basin, and along the east coast. As much as 1.5 billion gallons a day may be pumped down the wells into underground storage zones for subsequent recovery. Because water does not evaporate when stored underground and less land is required for storage, ASR has some advantages over surface storage. In particular, water stored in the aquifer can be made available for longer durations in years of severe drought conditions. The stored water will be pumped into the existing surface water delivery system to meet environmental, urban, and agricultural water supply demands. ASR components represented approximately one-fifth of the total CERP costs presented in the 1999 C&SF Restudy.

Removal of barriers to sheetflow. Canals, internal levees, and other impediments will be removed or modified to reestablish the natural sheetflow of water through the system. The Kissimmee River Restoration

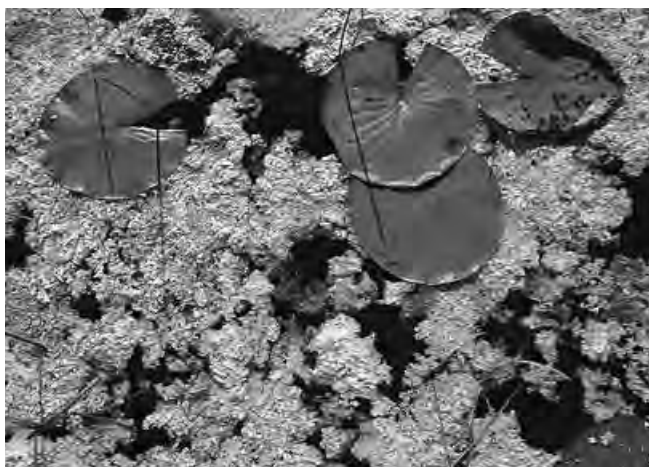
Project will restore approximately 40 square miles of free-flowing river floodplain and associated wetlands, which likely will help improve the quality of water flowing into Lake Okeechobee. The Modified Water Deliveries to ENP and Canal-111 projects will restore historic hydrological patterns to the Everglades. In the CERP, many of the internal levees and most of the Miami Canal in WCA-3 will be removed, and 20 miles of the Tamiami Trail (U.S. Route 41) will be rebuilt with bridges and culverts, allowing water to flow more naturally into ENP. In the Big Cypress National Preserve, the levee that separates the preserve from WCA-3A 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, where groundwater levels were lowered by the C&SF Project to allow for development and all human uses. Seepage generally occurs either as underground flow or through levees (the artificial boundaries of the natural system). Three kinds of projects will reduce unwanted water loss and redirect this flow westward to the WCAs, ENP, 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 east of the protective levee 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. All efforts in CERP to restore the ecosystem incorporate reviews required by the assurance language of WRDA 2000 (attached as Appendix D) to ensure that existing legal sources of water are not eliminated or transferred until a new source of water supply of comparable quality and quantity is available.

Long-Term Operations and Maintenance Needs

Effective management of water storage and delivery will require close coordination between the USACE and the SFWMD. Project sponsors will constantly monitor in-place storage and water flows to ensure that the storage and recovery systems are functioning properly. Wells, wellheads, and pumps will require regular maintenance to operate effectively, and long-term operating plans will be developed to ensure continued service.



Factors Affecting Achievement of this Subgoal

Population growth. 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 gpd to two billion gpd, taxing the limited natural and economic resources of the Task Force participants.

Funding. A critical factor is stable and reliable funding for the 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 subgoal 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 strategic goals. However, the State of Florida has committed to the expedited completion of several projects within this subgoal area through the 2004 initiation of the Acceler8 program.

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 canals to connect an 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.

Natural disasters. Severe weather, including *el niño* and *la niña* cycles, and natural disasters, such as hurricanes and forest fires, could delay completion of the restoration activities. Impoundment dikes are particularly susceptible to severe rainstorm damage during and immediately after construction. Careful construction can minimize but not eliminate project setbacks and delays due to weather events, such as hurricanes and tropical storms. Extreme weather conditions may also affect the ability to manage and maintain aquifer water storage, given the complexity of the limestone geology of Florida.

Technical Uncertainties. Although aquifer storage and recovery technology has been used for many years there are some technical uncertainties of using this technology on such a large scale. These uncertainties are being thoroughly researched through ASR pilot projects and a Regional ASR Study. In addition, an ASR Contingency Plan is being developed to identify storage and water supply options should implementation of ASR at the scale envisioned in CERP not be possible. There is similar uncertainty associated with in-ground storage and seepage management which the CERP pilot projects will address.

Specific, Measurable Objectives for Achieving this Subgoal

Three objectives for achieving this subgoal have been adopted by the Task Force:

- Provide 1.8 million acre-feet of surface water storage by 2036
- Develop aquifer storage and recovery systems capable of storing 1.5 billion gallons per day by 2030
- Modify 345 miles of impediments to flow by 2020

The key projects needed to achieve these objectives and the schedule for their implementation are shown in Strategic Plan Table 3.

Strategic Plan Table 3 – Subgoal 1-A: Get the Hydrology Right

1-A Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.) <i>* Some projects have been combined with others since 2004</i>			
Objective 1-A.1: Provide 1.8 million acre-feet of surface water storage by 2036	Project ID	Project Endpoint	Project Name
	1101	2025	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs, and C-44 Basin Storage Reservoir (CERP Project # WBS 07)
	1102	2015	C&SF: CERP Everglades Agricultural Area (EAA) Storage Reservoir (CERP Projects # WBS 08 and 09)*
	1104	2015	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)
	1105	2040	C&SF: CERP North Lake Belt Storage Area (CERP Project # WBS 25)
	1106	2020	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (CERP Projects # WBS 20 and 21)
	1107	2025	C&SF: CERP Site 1 Impoundment and Aquifer Storage and Recovery (CERP Project # WBS 22 and 40)
	1109	2020	C&SF: CERP C-43 Basin Storage Reservoir and ASR (CERP Projects # WBS 04 and 05)
	1110	2040	C&SF: CERP Central Lake Belt Storage Area (CERP Project # WBS 26)
	1111	2006	Critical Ecosystem Restoration Projects - Ten Mile Creek
	1112	2010	LOFT (Identified under LOER)-Taylor Creek Reservoir
	1113	2020	C&SF: CERP WPA Conveyance (CERP Project # WBS 49)
	1114	2020	C&SF: CERP ENP Seepage Management (CERP Projects # WBS 27 and 43)
	1501	2009	C&SF: CERP Broward County WPA – C-9 STA/Impoundment, Western C-11 Diversion Impoundment and Canal, and Water Conservation Areas 3A and 3B Levee Seepage Management (CERP Project # WBS 45)
1503	2020	C&SF: CERP North Palm Beach County PIR Part 1 (CERP Project # WBS 17)	
2100	TBD	Allapattah Ranch	
Objective 1-A.2: Develop aquifer storage and recovery systems capable of storing 1.5 billion gallons per day by 2030	Project ID	Project Endpoint	Project Name
	1106	2020	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (CERP Project # WBS 21)
	1109	2020	C&SF: CERP C-43 Basin Storage Reservoir and ASR (CERP Project # WBS 05)
	1200	2020	C&SF: CERP North Palm Beach – Part 2 (CERP Project # WBS 18)
	1201	2030	C&SF: CERP Lake Okeechobee ASR (CERP Project # WBS 03)
Objective 1-A.3: Modify 345 miles of impediments to flow by 2020	Project ID	Project Endpoint	Project Name
	1300	2010	Canal 111
	1301	2020	C&SF: CERP WCA-3 Decompartmentalization and Sheetflow Enhancement (CERP Projects # WBS 12, 13, and 47)
	1302	2015	C&SF: CERP Florida Keys Tidal Restoration (CERP Project # WBS 31)
	1303	2005	Critical Projects Southern Crew
	1304	2012	East WCA-3A Hydropattern Restoration
	1305	1997	Kissimmee Prairie
	1306	2010	Kissimmee River Restoration Project
1307	2009	Modified Water Deliveries to Everglades National Park	

Subgoal I-B: Get the Water Quality Right

Runoff from agriculture and stormwater from urban areas has polluted areas of the Everglades and Lake Okeechobee and impaired ecological functions in those critical ecosystems. Excess phosphorus is a major concern, but it is not the only pollution problem. The water quality of the Caloosahatchee River, St. Lucie Estuary, Biscayne Bay, Florida Bay, the Florida Keys, and the nearshore waters off the coasts periodically show signs of significant degradation, including eutrophication, excessive salinity range, and short-term variability and introduction of anthropogenic agricultural or industrial pollutants. In marine systems, exogenous nitrogen appears to be of particular concern. Mercury is also a concern in both freshwater and marine systems in south Florida. Potentially toxic contaminants, such as trace metals, pesticides and other synthetic organic chemicals, and emerging pollutants of concern (EPOCs), which occur in wastewater, certain soils, and sediments, may occur in alternative sources of water or be present in former agriculture sites that are used in connection with restoration.

The Task Force is committed to working with the relevant federal, state, and local agencies to ensure that water quality problems like coastal eutrophication are not exacerbated by the altered water management and delivery achieved through CERP and other projects.

How This Subgoal Will Be Implemented

Everglades Forever Act. In 1994 the Florida Legislature passed the Everglades Forever Act (EFA), which codified measures to improve water quality within the Everglades Protection Area (EPA), defined as the Loxahatchee NWR, WCAs 2 and 3, and ENP⁷. One provision establishes the Everglades Construction Project, a set of six stormwater treatment areas (STAs) between the EAA and the natural areas to the south. The main purpose of these treatment areas is to reduce the phosphorus loads in waters entering the EPA. Additionally, the state uses regulatory programs and landowners implement best management practices to reduce phosphorus from urban and agricultural discharges. These programs and practices have reduced the phosphorus levels discharged from the EAA and neighboring basins into

the Everglades. However, the final standards have not yet been met. A plan of construction projects, source controls, and continuing scientific investigations has been developed by the SFWMD to ensure that discharges from all basins impacting the Everglades meet state water quality standards. This plan is referred to as the Long-Term Plan.

In March 2003 the SFWMD presented a conceptual plan for achieving long-term water quality goals, the district strategy for meeting water quality standards. During the 2003 legislative session, the Everglades Forever Act was amended to include reference to the SFWMD Long-Term Plan as the Best Available Phosphorus Reduction Technology. The amended act required the SFWMD to implement the Long-Term Plan without delay. In July 2003 the DEP proposed a rule establishing a long-term geometric mean of 10 ppb with associated natural variability as the numeric phosphorus criterion for class III waters in the EPA. The rule also establishes moderating provisions for permits authorizing discharges into the EPA in compliance with water quality standards, including the numeric phosphorus criterion and a method for determining achievement of the numeric phosphorus criterion. The rule also establishes moderating provisions authorizing discharges above the criterion, provided measures are taken to implement the best available phosphorus reduction technologies, and a compliance methodology for determining achievement of the criterion. The rule was approved by the USEPA in July 2005.

Tribal water quality standards. In May 1999 the USEPA approved the 10 micrograms per liter (10 µg/l) total phosphorus water column quality standard adopted by the Miccosukee Tribe of Indians of Florida. The tribe, which is treated as a state for purposes of the Clean Water Act, adopted water quality standards to protect the tribal Everglades under their jurisdiction on the Federal Reservation. The phosphorus 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 South Florida Ecosystem."

⁷ See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section II.A.

While tribal waters on the Federal Reservation are located in the area of the Everglades which has median background total phosphorus concentrations ranging from 4 to 10 µg/l (often lower than the standard), the USEPA determined that at present no data suggest that phosphorus concentrations less than or equal to 10 µg /l cause changes in flora or fauna. Citing peer reviewed publications and technical reports, the USEPA determined that the 10 µg/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 µg/l is not protective of class III-A waters, then the tribe should revise its standard as necessary.

Best Management Practices. The Natural Resources Conservation Service (NRCS) provides technical assistance on a voluntary basis to private landowners and operators, Indian Tribes, and others for the planning of conservation practices and installation of needed conservation management systems with the goal of achieving natural resource sustainability. Participants associated with animal feeding, livestock grazing operations, and fruit and crop production within the South Florida Ecosystem are helped to implement practices that improve nutrient management, water quality, and water conservation. The Environmental Quality Incentives Program provides farmers and ranchers financial and technical assistance to install or implement structural and management practices on agricultural lands that will improve or maintain the health of natural resources in the area including water quality.

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 subgoal 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 impaired, the DEP, in conjunction with the SFWMD, the Florida Department of Agriculture and Consumer

Services (DACS), 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.



The state's watershed management program is based on a five-phase cycle. During the first phase, the water quality data for each basin are assessed and waters determined to be potentially impaired are identified. In phase two, intensive monitoring is conducted to supply data needed to either verify a suspected impairment or (in cases where the impairment has previously been verified) to model the impaired waters and generate TMDLs. During the third phase, TMDLs for impaired waters are calculated and allocated to individual point sources and the major categories of nonpoint sources. After TMDLs are adopted, a consensus-based basin management action plan, which includes a TMDL implementation plan, is developed during the fourth phase. The fifth and final phase involves the implementation of the proposed management plan, including securing funding, passing local or state legislation, and writing permits that reflect the limits of the TMDLs. Implementation of TMDLs may involve 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 best management practices, 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 TMDL⁸.

⁸ See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section II.A.5.

Once these plans have been adopted and implemented, progress is monitored until waters are eventually certified as meeting water quality standards.

The DEP provides annual updates to the 303(d) list. Any new water bodies identified as being impaired by pollutants will be added to the list and given a priority for TMDL development, normally as part of the next five-year cycle. In addition, each existing TMDL will be reevaluated as part of the next five-year cycle to determine progress toward meeting water quality standards and whether the TMDL needs to be revised.

Lake Okeechobee Protection Program. The Lake Okeechobee Protection Act (LOPA) commits the State of Florida to restore and protect Lake Okeechobee. This will be accomplished by achieving and maintaining compliance with water quality standards in the lake and its tributary waters. The approach is a watershed-based, phased, comprehensive, and innovative protection program designed to reduce phosphorus loads and implement long-term solutions based upon the TMDL for Lake Okeechobee developed by the DEP. This TMDL is a long-term (five-year) rolling average of 140 metric tons (mt) to be attained by 2015. The TMDL consists of 105 mt yr⁻¹ from the watershed and 35 mt yr⁻¹ from atmospheric deposition. Atmospheric deposition is defined as both wet and dry fall input directly to the lake. The LOPA also requires aggressive programs to control exotic plants and a long-term program of water quality and ecological assessment, research, and predictive model development.

Elements of the program include (1) the Lake Okeechobee Protection Plan (LOPP), (2) the Lake Okeechobee Construction Project, (3) the Watershed Phosphorus Control Program, (4) the Research and Water Quality Monitoring Program, (5) the Internal Phosphorus Management Program, (6) the Exotic Species Control Plan, and (7) an Annual Progress Report. The SFWMD, in cooperation with DEP and DACS, developed the LOPP, which was submitted to the Florida Legislature on January 1, 2004. The LOPP describes in detail how water quality standards, particularly for phosphorus, will be met in Lake Okeechobee and its downstream receiving waters by 2015. The watershed phosphorus control program uses a multifaceted approach to reduce phosphorus loads through continued implementation of existing

regulations and BMPs, development and implementation of improved BMPs, improvement and restoration of the hydrologic functions of the natural and managed systems, and use of alternative technologies for nutrient reduction. Projects are being implemented in a cooperative manner by the SFWMD, DEP, and DACS.

Considerable progress has been made to control the spread of exotic plants in the lake, watershed projects have been implemented to reduce phosphorus transport from agricultural lands and capture runoff water during high rainfall periods, and modifications to the lake regulation schedule are under consideration. Because of the complex nature and long history of problems, full implementation of the LOPA will require more than a decade, and improvements in lake water quality are expected to be slowed by internal nutrient recycling. Ongoing research in the watershed is helping to optimize the design of phosphorus reduction/flow attenuation measures, and research in the lake is providing guidance for adaptive management of water levels and exotic plants. Restoration of water quality and ecosystem functions in Lake Okeechobee is critical to south Florida because the lake is the central part of both the natural and man-made regional aquatic system.

Lake Okeechobee Estuary Recovery Plan. The Lake Okeechobee Estuary Recovery Plan (LOER) identifies five construction projects north of Lake Okeechobee that were specifically designed for water quality improvement as the Lake Okeechobee Fast Track Projects (LOFT). The projects that have been fast tracked include Nubbin Slough STA expansion, Taylor Creek Reservoir, Lakeside Ranch STA, and rerouting runoff from the S-133 and S-154 basins to the Lakeside Ranch STA. In addition to the LOFT projects, LOER includes acceleration of TMDL development for Lake Okeechobee tributaries; implementation of mandatory fertilizer BMPs in the Lake Okeechobee, St. Lucie Estuary, and Caloosahatchee Estuary watersheds; implementation of revised Environmental Resource Permit criteria for new development; implementation of growth management programs encouraging innovative land use; elimination of land application of wastewater treatment residuals; and full implementation of the LOPP.

Florida Keys National Marine Sanctuary Water Quality Protection Program. The USEPA and the DEP conduct a comprehensive water quality monitoring and research program aimed at correcting point and nonpoint sources of water pollution within the Florida Keys National Marine Sanctuary (FKNMS). The Water Quality Protection Program, initiated in 1996, is the first such program developed for a national marine sanctuary. All state waters within the sanctuary boundary were designated a no-discharge zone in 2002.

Comprehensive Integrated Water Quality Feasibility Study. The USACE and the DEP developed a PMP for the Comprehensive Integrated Water Quality Feasibility Study in February 2004 and are currently coordinating a draft design agreement. The study is consistent with the goals and purposes of CERP and will:

- Identify links between water quality and ecosystem functions
- Identify degraded ecosystems and quantify the types and sources of pollution
- Develop targets for ecosystem restoration
- Inventory and evaluate a suite of structural and other measures capable of improving water quality
- Integrate planned and existing water quality restoration and management programs with CERP projects and with other federal, state, tribal, and local programs and projects
- Recommend additional programs and projects needed to achieve ecosystem restoration
- Identify appropriate funding sources

The study area encompasses approximately 17,500 square miles from Orlando to the Florida Reef Tract. The Kissimmee River, Lake Okeechobee, and the Everglades are the dominant watersheds included in the study area connecting a mosaic of wetlands, uplands, coastal systems, and marine areas within all or portions of 19 counties.

The Task Force urges the USACE and other agencies to undertake and complete the Comprehensive Water Quality Feasibility Study for the restoration of the Florida Everglades⁹.

Factors Affecting Achievement of the Subgoal Natural disasters. Severe weather, including *el niño* and *la niña* cycles, and natural disasters, such as hurricanes and forest fires, will adversely affect water quality.

Land acquisition. 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.

Funding. 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 progress toward meeting the habitat restoration and preservation subgoals. Although Acceler8 is primarily focused on water storage, a few water quality projects are also being funded and expedited through this program.

Specific, Measurable Objectives for Achieving this Subgoal

Two objectives for achieving this subgoal have been adopted by the Task Force:

- Construct 91,345 acres of stormwater treatment areas by 2035
- Prepare locally-based plans to reduce pollutants as determined necessary by the TMDL by 2011

The key projects needed to achieve these objectives and the schedule for their implementation are shown in Strategic Plan Table 4.

⁹ See Appendix C Additional View of the Miccosukee Tribe “Putting the Everglades back into Everglades Restoration.” Section II.A.7.

Strategic Plan Table 4 – Subgoal 1-B: Get the Water Quality Right

1-B Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)			
Objective 1-B.1: Construct 91,345 acres of stormwater treatment areas by 2035	Project ID	Project Endpoint	Project Name
	1101	2025	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs and C-44 Basin Storage Reservoir (CERP Project # WBS 07)
	1104	2015	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)
	1110	2035	C&SF: CERP Central Lake Belt Storage Area (CERP Project # WBS 26)
	1112	2010	LOFT (Identified under LOER) - Taylor Creek Reservoir
	1500	2025	C&SF: CERP Big Cypress/L-28 Interceptor Modifications (CERP Project # WBS 10)
	1501	2009	C&SF: CERP - Broward County WPA - C-9 STA/ Impoundment, Western C-11 Diversion Impoundment and Canal, and WCAs 3A and 3B Levee Seepage Management (CERP Project # WBS 45)
	1502	2020	C&SF: CERP Miccosukee Tribe Water Management Plan (CERP Project # WBS 90)
	1503	2020	C&SF: CERP North Palm Beach County PIR Part 1 (CERP Project # WBS 17)
	1505	2020	C&SF: CERP Caloosahatchee Backpumping with Stormwater Treatment (CERP Project # WBS 06)
	1506	2006	Critical Projects: Lake Okeechobee Water Retention/Phosphorus Removal
	1508	2000	STA-1 West Works and Outflow Pump Station (G-310)
	1509	2000	STA-2 Works and Outflow Pump Station (G-335)
	1510	2005	STA-3/4 Works
	1511	2005	STA-5 Works
	1512	2006	STA-6 (includes sections 1 and 2)
	1513	2008	C&SF: STA-1E/C-51 West
	1514A	2010	ACCELER8 Project Includes Everglades Agricultural Area (EAA) Stormwater Treatment Areas (STAs) Expansion
	1515	2009	LOFT (Identified under LOER) - Lakeside Ranch STA
1516	2007	LOFT (Identified under LOER) - Nubbin Slough STA Expansion	
1517	2009	C&SF: CERP C-111 Spreader Canal (CERP Project # WBS 29)	
1518	2015	Henderson Creek/Belle Meade Restoration (CERP Project # WBS 93)	
Objective 1-B.2: Prepare locally- based plans to reduce pollutants as determined necessary by the TMDL by 2011	Project ID	Project Endpoint	Project Name
	1600	2011	Total Maximum Daily Load (TMDL) for south Florida

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

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, such as 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.

By the year 2000, the Florida panther and sixty-eight other animal or plant species were 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. 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 and coral reefs have suffered a similar decline. Altered biological communities are being overrun by invasive exotic plants and animals capable of outcompeting native species and habitats. By the year 2000, exotic plants made up approximately one-third of the total plant species known in Florida. At that time, the Florida Exotic Pest Plant Council identified 125 of these as serious risks to Florida's natural areas and its threatened and endangered native plants and animals.

A combination of connectivity and spatial extent created the range of habitats and supported the levels of productivity needed for the historic 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 hydrologic and other conditions conducive to native communities and piecing together large 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.

A consensus-building exercise in 1999 with broad public input identified a list of statements that Task Force participants used as a foundation to develop the Task Force *Strategy*. Based on that consensus, the habitats will be restored, preserved, and protected when the following conditions are met: The diversity, abundance, and behavior of native south Florida animals and plants and their terrestrial and aquatic habitats are characteristic of pre-drainage conditions. The spatial extent of wetlands and other natural systems is sufficient to support the historic functions of the greater Everglades Ecosystem. Important wildlife corridors are identified, enhanced, and preserved. Endangered and other federal and state listed species recover self-sustaining levels, and sufficient habitats for maintaining healthy numbers are restored and protected. Invasive exotic plant and animal species are substantially eliminated or reduced to manageable levels.

Efforts to achieve goal two must incorporate a process to address concerns of environmental justice and economic equity. The unique cultural and ethnic diversity of south Florida's population, with its strong representation of peoples from all over the world, will require significant efforts on behalf of the restoration partners to ensure that projects are implemented in ways that do not result in disproportionate impacts on any communities. Additional targeted efforts will be required to provide opportunities for socially and economically disadvantaged individuals and small businesses to participate in the implementation of restoration programs and projects. The Task Force and Working Group see this guiding principle as critical to long-term success.

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

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. Federal, state, and local governments have all played important roles in land acquisition. The most efficient use of resources may not be the simple purchase of land, nor is it always desirable. Many alternative tools to meet restoration land use needs are being implemented to maximize the benefits of these limited resources. The Task Force supports the use of less than fee acquisitions or the use of other tools. Some examples of the tools being used include:

- Easements
- Temporary lease agreements
- Mitigation banks
- Public private partnerships

Over the past several decades, the federal government has acquired title to lands for conservation and public enjoyment of national parks, preserves, and wildlife refuges. 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, 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. 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. Based upon the availability of annual appropriations, federal land managers will continue to look for opportunities to assist the State of Florida in preserving the highest priority areas for implementation of the CERP.

The Florida Forever Program is Florida's primary land acquisition program. The 10 year program,

passed in 1999 as an extension of the successful Florida Preservation 2000 Act, will raise approximately \$3 billion (\$300 million per year) for land acquisition. The program identifies and acquires lands from voluntary sellers through a process described under Chapters 259 and 373 of the Florida Statutes. The state also partners with local governments and other entities to identify and jointly acquire conservation lands. All of the state laws governing the acquisition of land with public funds for the purposes of conservation, recreation, or fish and wildlife management ensure that the public will be provided access.

In recent years local governments have initiated, voted, and approved land acquisition programs for hundreds of millions of dollars that are helping to protect and restore the South Florida Ecosystem. Interest is growing for many counties to undertake similar initiatives. These programs have the potential to complement and support the CERP as well as to foster compatibility of the built and natural systems.

State Florida Forever lands, federal parks and preserves, state 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. These lands also provide opportunities for water supply enhancement, natural-resource based outdoor recreation, and environmental awareness and education for the state's residents and visitors.

Protection of critical habitat for threatened and endangered species. As part of the South Florida Ecosystem restoration initiative, in 1995 the FWS was directed to prepare a comprehensive, ecosystem-wide strategy to recover threatened and endangered species and to restore and maintain the extremely high biodiversity of native plants and animals in the upland, wetland, estuarine, and marine communities of the South Florida Ecosystem. This extensive effort is known as the Multi-Species Recovery Plan (MSRP).

The MSRP addresses the recovery needs of south Florida's federally listed threatened and endangered species. As of 2000, there were sixty-nine federally

listed threatened and endangered species within the South Florida Ecosystem. A major section of that plan describes 23 of the natural vegetative communities in south Florida and identifies management actions needed to restore the South Florida 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. The Task Force has appointed a Multi-Species/Ecosystem Recovery Implementation Team (MERIT) to prioritize actions included in the recovery plan.



Wetlands enhancement. The CERP calls for removing barriers to sheetflow, restoring more natural hydroperiods to wetlands, and providing natural system water flows to coastal waters. These projects will restore hydrological connections to large portions of the remnant Everglades marsh, improve water quality, and increase the extent of wetlands, thus enhancing fish and wildlife habitat. Habitat heterogeneity will also be improved as upland and transitional areas experience more natural hydroperiods. Modeling of CERP project components shows that almost 2.4 million acres will be restored and enhanced.

Wetlands enhancement is also achieved through the Wetlands Reserve Program, a voluntary conservation program funded by the Farm Bill through which the U.S. Department of Agriculture (USDA) provides incentive payments and cost-sharing to restore, enhance, and protect degraded wetlands on agricultural lands.

Restoration and preservation of coral reefs. Other major efforts to restore and preserve habitat involve the designation of an ecological reserve and a research natural area to protect critical coral reef communities in the western portion of the FKNMS and Dry Tortugas National Park. The Tortugas region in the Straits of Florida has near-pristine marine resources, including one of the best-developed tropical coral reef systems on the continent. It is the epicenter of marine productivity for the region. Ensuring its long-term protection and appropriate public use will require cooperation among multiple and overlapping jurisdictions, including the U.S. Department of Commerce, the U.S. Department of the Interior (DOI), and the State of Florida.

The FKNMS’s Tortugas Ecological Reserve fully protects 151 square nautical miles of coral reefs and associated communities. The Dry Tortugas National Park’s research natural area protects an additional 46 nautical miles of reefs and marine habitats. Combined, these two areas encompass 197 square nautical miles, protecting more than 10 percent of the coral reefs in the Florida Keys. Reefs in Biscayne National Park are also protected, and reefs in state parks and other portions of the FKNMS are managed for conservation.

Factors Affecting Achievement of this Objective

Progress in acquiring lands needed for habitat protection will depend upon the availability of land from willing sellers, land values, the rate of development, and annual federal and state legislative appropriations.

Specific, Measurable Objectives for Achieving this Subgoal

Three objectives for achieving this subgoal have been adopted by the Task Force:

- Complete acquisition of 5.8 million acres of land identified for habitat protection by 2015
- Protect 20 percent of the coral reefs by 2010
- Improve habitat quality for 2.4 million acres of natural areas in south Florida

The key projects needed to achieve these objectives and the schedule for their implementation are shown in Strategic Plan Table 5.

Strategic Plan Table 5 – Subgoal 2-A: Restore, Preserve, and Protect Natural Habitats

2-A Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)			
Objective 2-A.1: Complete acquisition of 5.8 million acres of land identified for habitat protection by 2015	Project ID	Project Endpoint	Project Name
	STATE/SFWMD PROJECTS		
	2100		Allapattah Flats/Ranch
	2101		Atlantic Ridge Ecosystem
	2102		Babcock Ranch
	2104		Belle Meade
	2105		Big Bend Swamp/Holopaw Ranch
	2106		Biscayne Coastal Wetlands
	2107		Bombing Range Ridge
	2108		Caloosahatchee Ecoscape
	2109		Catfish Creek
	2111		Charlotte Harbor Estuary/Flatwoods/Cape Haze
	2112		Corkscrew Regional Ecosystem Watershed (CREW)
	2114		Coupon Bight/Key Deer/Big Pine Key
	2115		Cypress Creek/Trail Ridge
	2172		Cypress Creek/Loxahatchee
	2185		Devils Garden
	2117		East Coast Buffer/Water Preserve Areas
	2118		Estero Bay
	2119		Everglades Agricultural Area/Talisman
	2120		Fakahatchee Strand
	2121		Fisheating Creek
	2122		Florida Keys Ecosystem
	2123		Frog Pond/L31N
	2174		Half Circle L Ranch
	2124		Indian River Lagoon Blueway
	2125		Juno Hills/Dunes
	2176		Jupiter Ridge
	2127		Kissimmee River (Lower Basin)*
	2128		Kissimmee River (Upper Basin)*
	2126		Kissimmee-St. Johns River Connector
	2129		Lake Wales Ridge Ecosystem
	2132		Loxahatchee Slough
	2133		McDaniel Ranch
	2134		Miami Dade County Archipelago
	2135		Model Lands Basin
	2138		North Fork of the St. Lucie River
	2139		North Key Largo Hammocks
	2141		Okaloacoochee Slough
	2142		Okeechobee Battlefield
	2143		Osceola Pine Savannas
	2144		Pal-Mar

2-A Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)		
Project ID	Project Endpoint	Project Name
2145		Panther Glades
2146		Paradise Run
2147		Parker-Poinciana/Lake Hatchineha Watershed
2186		Pine Island Slough Ecosystem
2148		Pineland Site Complex
2178		Ranch Reserve
2149		Rookery Bay
2150		Rotenberger/Holey Land Tract
2151		Shingle Creek
2152		Six Mile Cypress I & II
2154		South Savannas
2155		Southern Glades
2156		Southern Golden Gate Estates
1508-1512		STA 1 W, 2, 3/ 4, 5 and 6
2158		Twelve Mile Slough
2159		Upper Lakes Basin Watershed (ULBW)
2160		WCAs 2 and 3
STATE COMPLETED PROJECTS		
2110		Cayo Costa Island
2113		Corkscrew Regional Mitigation Bank
2116		Dupuis Reserve
1305		Kissimmee Prairie
2130		Lake Walk-In-Water a/k/a Sumica
2131		Loxahatchee River Land Acquisition
2137		Nicodemus Slough
2153		South Fork St. Lucie River Land Acquisition
1513		STA 1 E
2180		Ten Mile Creek
2157		Tibet-Butler Preserve
2161		Yamato Scrub
FCT, STATE PARKS, & WMAs		
		State Florida Communities Trust Lands
		State Park Lands
		State Wildlife Management Areas
FEDERAL CONSERVATION LANDS		
2162		A.R.M. Loxahatchee NWR
2163		Big Cypress National Preserve
2164		Big Cypress National Preserve Addition
2165		Biscayne National Park
2166		Crocodile Lake NWR
2167		Everglades National Park Expansion

2-A Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)			
	Project ID	Project Endpoint	Project Name
	2169		Florida Panther NWR
	2168		Florida Keys NWR
	2170		Hobe Sound NWR
	2171		J. N. Ding Darling NWR
Objective 2-A.2: Protect 20 percent of the coral reefs by 2010	Project ID	Project Endpoint	Project Name
		2006	Florida Keys National Marine Sanctuary Zoning Action Plan
Objective 2-A.3: Improve habitat quality for 2.4 million acres of natural areas in south Florida.	Project ID	Project Endpoint	Project Name
<p><i>Note – The April 1999 USACE C&SF Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement included an extensive environmental evaluation of habitat units that would be improved through implementation of the CERP projects. Table 7-18 of that publication identifies in detail which projects are anticipated to achieve this objective. However, appropriate measures by project are currently being developed through the establishment of interim goals. There are some projects included in our tracking matrix that exemplify how this objective will be achieved and are listed below.</i></p>			
	1101	2025	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North and South Fork Storage Reservoirs and C-44 Basin Storage Reservoir (CERP Project # WBS 07)
	1104	2015	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)
	1107	2025	C&SF: CERP Site 1 Impoundment and ASR (CERP Projects # WBS 22 and 40)
	1111	2003	Critical Ecosystems Restoration Projects - Ten Mile Creek
	1306	2010	Kissimmee River Restoration Project
	1501	2009	C&SF: CERP Broward County WPA - C-9 Stormwater Treatment Area/Impoundment and Western C-11 Diversion Impoundment and Canal and WCAs 3A and 3B Levee Seepage Management (CERP Project # WBS 45)
	2300	2015	C&SF: CERP Strazzulla Wetlands (CERP Project # WBS 39)
	2301	2008	C&SF: CERP Winsburg Farms Wetlands Restoration (CERP Project # WBS 91)
	2302	2009	C&SF: CERP Lake Park Restoration (CERP Project # WBS 94)
	2303	2025	C&SF: CERP Restoration of Pineland and Hardwood Hammocks in C-11 Basin (CERP Project # WBS 92)
	2304	Ongoing	A.R.M. Loxahatchee NWR Prescribed Fire Program
	2306	2007	C&SF CERP Acme Basin B Discharge (CERP Project # WBS 38) (was Project ID #1100)
	2307	2009	C&SF: CERP Southern Golden Gates Estates Restoration (CERP Project # WBS 30) (was Project ID #1424)
	2606	2017	Hole-in-the-Donut
	3802	2020	C&SF: CERP Wastewater Reuse Technology Pilot Project (CERP # WBS 37)

Subgoal 2-B: Control Invasive Exotic Plants

The MSRP identifies the control of invasive 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 plant and animal communities are being replaced. The most widespread and serious exotic plants are discussed, along with the extent of their current infestations.

How This Subgoal Will Be Implemented

Invasive exotic plant management strategies. In 1993 the Florida Legislature charged the DEP with establishing a plan to control invasive exotic plants on public conservation lands (§369.252, *Florida Statutes*). The DEP Bureau of Invasive Plant Management has developed a comprehensive interagency strategy for elimination or control of the highest priority species and management to control and minimize the spread of other pest plant species.

The Noxious Exotic Weed Task Team (NEWTT) established by the Task Force has completed an assessment and strategy, *Weeds Won't Wait*, for managing invasive exotic plants and is working with all the agencies to implement the strategy. The following three actions, management plans, maintenance control, and prevention, were identified in *Weeds Won't Wait* as the highest priorities for ecosystem restoration. Other actions are still being developed and will be incorporated into updates of an implementation plan based on the *Weeds Won't Wait* strategy.

Management Plans. Comprehensive management plans, when adequately funded and implemented, have provided successful control of invasive exotic plants. These plans offer the advantage of replacing piecemeal efforts to manage exotic plants—typically by controlling them on individual sites or by controlling only one or a few species in broader regions—with coordinated multi-agency programs that integrate invasive plant management activities, organizations, priorities, and resources statewide.

Six species in Florida (melaleuca, Brazilian pepper, Old World climbing fern, hydrilla, water lettuce, and water hyacinth) already have state-wide species-based management plans. More than 20 exotic plants need urgent attention, and developing plans for just the top 20 will take several years. Plans must be developed for each species because each has species-specific characteristics (biology, method of reproduction, life form, etc.) that need to be addressed.

The DEP has developed and is implementing the Upland Invasive Exotic Plant Management (Upland Weeds) Program. This is a state-wide strategy to coordinate the efforts of federal, state, and local agencies and nongovernmental organizations in prioritizing needs and developing the methods, research, public education, technology transfer,

oversight, and funding needed to conduct an efficient and cost-effective state-wide maintenance control program for the control of upland weeds.

Maintenance control. Maintenance control is defined in the Florida Statutes as “a method for the control of exotic plants in which control techniques are utilized in a coordinated manner on a continuous basis in order to maintain the plant population at the lowest feasible level” (§369.22, *Florida Statutes*). Many techniques are used in an integrated approach and they include mechanical removal, chemical treatment, and biological controls. The three major aquatic species (hydrilla, water hyacinth, and water lettuce) are currently under a maintenance control program for Florida’s 1.25 million acres of public water bodies. Achieving maintenance control for melaleuca is well underway through mechanical and chemical treatment. In 1993 the SFWMD estimated more than 252,008 acres of melaleuca within its boundaries (melaleuca also occurs outside the district). Of these total acres 52 percent were public lands and 48 percent were private lands. In 2002 the estimated acreage was 154,423 acres, of which 22 percent were public lands. The decrease of 97,071 acres has been made possible by funding from many agencies, especially the DEP and the SFWMD.

The state is funding research to determine the best approaches for chemical treatment and biological control of Brazilian pepper and Old World climbing fern. Although the climbing fern has only recently been recognized as a serious ecological threat, between 1998 and 2004 the state expended over \$6 million to control 32,000 acres of infestations.

Plans for other priority species need to be developed and incorporated into the state’s multi-agency management framework and invasive exotic plant implementation plan and strategy.

The DEP and the National Park Service (NPS) have jointly implemented Exotic Plant Management Teams for Florida natural areas. An additional team for national wildlife refuges is being planned and funded by the FWS. These teams are trained to identify and remove invasive exotic plants and to help the land-managing agencies bring the species under maintenance control. Miami-Dade County develops management plans and removes exotic vegetation in natural areas within parks and conservation lands. Miami-Dade County has a voluntary program offering owners of environmentally sensitive lands a reduction

in taxes in exchange for managing the natural areas to remove invasive exotic vegetation. Miami-Dade County also requires removal of exotic vegetation from all sites as a condition of approval of development and prohibits planting or propagation of invasive species. Additionally, removal of exotics and perpetual maintenance of wetlands and other natural areas is generally achieved or required in mitigation banks and other mitigation lands, such as Hole-in-the-Donut in ENP.

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.

Long-Term Operations and Maintenance Needs

Weed management is like any other long-term program in that sufficient funds must be available on a continuous basis to achieve and then sustain maintenance control. If resources necessary to support management drop below the maintenance level requirement, the species will expand and reinvade to pre-control levels, and the program must start from zero again. The only exception is when adequate maintenance control is being achieved exclusively through biological control organisms and even in those instances, minimal monitoring is needed to ensure that the biocontrol organisms are continuing to work. Discontinuing funding once maintenance control has been achieved is a problem that has continually plagued invasive species management programs nationally.

Factors Affecting Achievement of this Subgoal
Management complexity. 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 have multi-agency coordination and adequate funding.

To ensure success in bringing other high priority species under maintenance control, agencies will need to build upon the foundation of coordination and cooperation that has been established as part of their collective planning and control efforts to date. Collective efforts sufficient to manage invasive species throughout Florida will require formal agreements supporting the multi-agency approach and the formal designation of a lead agency to direct cooperative planning, project integration, and integrated budgets and resource requests. Identifiable elements from the strategies developed by the DEP and the Task Force NEWTT need to be integrated to expand policy setting, planning, prioritization, funding, and management to the ecosystem level.

Interface with infested landscapes. Continuing degradation of the natural environment may enhance the spread or rate of spread of exotic species. Adjacent landowners will impact the success of controlling exotics if these lands remain infested or if the landowners are not interested in land acquisition.

Importation of new exotics. The unregulated importation of new plant species continues to increase the potential for infestations of exotic plants.

Specific, Measurable Objectives for Achieving this Subgoal

Three objectives for achieving this subgoal have been adopted by the Task Force:

- Coordinate the development of management plans for the top 20 south Florida invasive exotic plant species by 2011
- Achieve maintenance control of Brazilian pepper, melaleuca, Australian Pine, and Old World climbing fern on south Florida's public conservation lands by 2020
- Complete an invasive exotic plant species prevention, early detection, and eradication plan by 2007

The key projects needed to achieve these objectives and the schedule for their implementation are shown in Strategic Plan Table 6.

Strategic Plan Table 6 – Subgoal 2-B: Control Invasive Exotic Plants

2-B Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)			
Objective 2-B.1: Coordinate the development of management plans for the top 20 south Florida invasive exotic plant species by 2011	Project ID	Project Endpoint	Project Name
	2500	2011	Coordinate the development of management plans for the top 20 south Florida exotic pest plants
Objective 2-B.2: Achieve maintenance control of Brazilian pepper, melaleuca, Australian Pine, and Old World climbing fern on south Florida’s public conservation lands by 2020	Project ID	Project Endpoint	Project Name
	2600	2020	Achieve maintenance control status for Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern in all natural areas statewide
	2601	2005	Integration of federal, state, and local agency invasive exotic control programs into Florida-wide strategy
	2602	2009	C&SF: CERP – Melaleuca Eradication Project and other Exotic Plants (CERP Project # WBS 95)
	2603	2004	Estero Bay Aquatic Preserve and Buffer Reserve Enhancement and Exotic Removal Project
	2604	TBD	Everglades National Park Exotic Control Program
	2605	2010	Exotic Species Removal
	2606	2017	Hole-in-the-Donut
	2607	TBD	Exotic Vegetation Control (Critical) Big Cypress National Preserve
	2608	TBD	Aquatic and Upland Invasive Plant Management
Objective 2-B.3: Complete an invasive exotic plant species prevention, early detection, and eradication plan by 2007	Project ID	Project Endpoint	Project Name
	2700	2007	Invasive Exotic Plant Prevention, Early Detection, and Eradication Plan
	2701	2008	Melaleuca Quarantine Facility

GOAL 3: FOSTER COMPATIBILITY OF THE BUILT AND NATURAL SYSTEMS

Balmy weather, vibrant communities, beautiful scenery, and abundant natural habitats at the land/sea interface offer south Florida residents a unique choice of lifestyles and visitors a variety of destinations. The diversity of landscapes, including some of the most intensively developed and densely populated areas in the state, has contributed to the economic success and high quality of life enjoyed by Floridians and experienced by visitors from around the world.

This lifestyle has not come without a price. Tremendous population growth and the subsequent need for public services have resulted in adverse

impacts on natural ecological systems. These impacts include loss of marine, wetland, and upland habitat, severe drawdown of freshwater resources, intrusion of saltwater into freshwater aquifers, loss of open space, and degradation of water quality. The rapid rate and volume of growth and the accompanying sprawl development patterns have reduced the spatial extent and vitality of the natural system. Its declining health has become more apparent as symptoms of stress have developed in the South Florida Ecosystem. The imbalance has caused state, local, regional, and national decision-makers and citizens to focus on addressing the unintended consequences of growth.

A consensus-building exercise in 1999 with broad public input identified a list of statements that Task Force participants used as a foundation to develop the Task Force *Strategy*. Based on that consensus, the compatibility of the built and natural systems will be achieved when the following conditions are met: The people of south Florida understand the connections between a healthy environment and a healthy community. Development patterns—development, redevelopment, and infrastructure—are complementary to ecosystem restoration and compatible with a restored natural system. Development practices support conservation of significant and special natural areas and reduce habitat fragmentation. Flood-protection level of service and water resources are maintained at existing levels, or augmented where appropriate. The quality of life of people in south Florida is enhanced through the ability to reside in areas with fishable, drinkable, and swimmable water and clean air. Parks, open space, recreation lands, blueways, greenways, and roadways are compatible with and complementary to getting the water right and enhancing and preserving the natural system. Land, water, wastewater, and transportation planning are coordinated and supportive of ecosystem restoration. Agriculture is an environmentally and economically sound component of the landscape, consistent with ecosystem restoration. In agricultural and urban areas, stormwater and wastewater are reclaimed when possible. The ecosystem is not damaged by improper disposal of wastes.

The same issues that are critical to the natural system—getting the water right and restoring, preserving, and protecting diverse habitats and species—are equally critical to maintaining a high quality of life for south Florida’s residents. Like the future of south Florida’s natural systems, the future of its human communities is dependent on getting the water right. The appropriate quantity, quality, timing, and distribution of water is essential to meeting the future water supply needs generated by projected population growth and by continuing economic productivity, most notably in tourism and agriculture (the two largest sectors of the economy). The overriding issue is not who gets the water, the natural system or the built system, but how to fulfill all water needs by ensuring that what is built can be adequately supported within the parameters of a healthy natural system. Failure to achieve this compatibility would

likely be detrimental for both future residents and the environment. Recognizing this relationship, the State of Florida’s guiding statute, Chapter 373.016, in the Declaration of Policy, promotes the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems.

Similarly, in order to maintain a high quality of life for south Florida’s residents, the built environment must be planned and managed in a manner that both supports the social and economic needs of communities and is compatible with the restoration, preservation, and protection of natural habitats and species. This will require development patterns, policies, and practices that serve both built and natural systems. Urban, suburban, and rural development utilizes lands that would otherwise be available to support natural system functioning. To the extent that development patterns in these areas are sensitive to the critical needs of both community residents and the natural system, south Florida’s communities can be a sustainable part of a healthy ecosystem.



Providing the land for suitable development and human habitation will continue to require considerable flood protection, since without such protection most of south Florida would be unsuitable for existing urban and agricultural uses. Given the population growth projections for south Florida, there will be an ongoing need for monitoring and balancing the flood-protection needs of urban, natural, and agricultural lands as part of restoration.

Providing sufficient water resources, using and managing land, and maintaining and improving flood protection—all in a manner compatible with restoration of the South Florida Ecosystem—are important subgoals for fostering compatibility of the built and natural systems. Land use planning, flood control, environmental regulation, and similar activities needed to accomplish these subgoals are

primarily the responsibility of the tribal, state, regional, and local governments in Florida. These government agencies must function within the authorities and appropriations for programs and activities established by the Florida Legislature and the local elected governing bodies. Constitutionally protected private property rights and the freedom of movement of the American people are also factors that affect the growth and development patterns in a given state and in localities.

The Task Force members recognize that these factors affect implementation of the restoration *Strategy* and achievement of the strategic goals. Efforts to achieve goal three must incorporate a process to address concerns of environmental justice and economic equity. The unique cultural and ethnic diversity of south Florida's population, with its strong representation of peoples from all over the world, will require significant efforts on behalf of the restoration partners to ensure that projects are implemented in ways that do not result in disproportionate impacts on any communities. Additional targeted efforts will be required to provide opportunities for socially and economically disadvantaged individuals and small businesses to participate in the implementation of restoration programs and projects. The Task Force and Working Group see this guiding principle as critical to long-term success.

Subgoal 3-A: Use and Manage Land in a Manner Compatible with Ecosystem Restoration

How This Subgoal Will Be Implemented

Compatible land use policies and practices. State, regional, and local agencies are using a variety of planning tools to foster increased compatibility of the built and natural systems. Over the past several decades Florida has enacted several pieces of legislation regarding comprehensive planning and growth management, including the Local Government Comprehensive Planning and Land Development Regulation Act, which provide an integrated framework of planning at the state, regional, and local levels. However, growth continues to stress both public infrastructure and the natural environment. The Governor's Growth Management Study Commission has reported that although the processes established

by the existing growth management laws were well intended, improvements to the process should still be made.

Recognizing the critical importance of water to both the built and natural systems, the Florida Legislature passed a law in 2002 that addresses growth management and alternative water supply. The law requires that the comprehensive land use plans of counties and cities be coordinated with the completed regional water supply plans of the state's water management districts to ensure the availability of adequate water supplies.

An initiative by the Florida Department of Community Affairs (DCA) involves the review and analysis of existing and future land use designations adjacent to lands identified for acquisition for ecosystem restoration and associated buffers. DCA anticipates working with local governments as they develop the criteria for this review process.

Protection of a wide range of compatible recreational uses. People's enjoyment of nature is arguably the strongest impetus for the broad public support of ecosystem restoration. Many of the cultural traditions of the residents of south Florida have been shaped by people's access to expansive wetland, upland, and marine habitats harboring abundant populations of fish, birds, and other wildlife, and to exceptionally beautiful landscapes where they could lose themselves for days or a few moments. As citizens and their governments work to restore and protect the unique South Florida Ecosystem, they must not lose sight of the importance of public access to natural areas. At the same time the public must respect the sensitivities of the natural system and ensure that their activities do not unduly stress the wildlife and the landscapes that are such an important part of their heritage.

The Task Force members are working to protect opportunities for a wide range of compatible outdoor recreational activities for all residents of south Florida and their visitors. The acquisition of rural and urban park, recreation, and other open space lands, and efforts to link these natural areas through a system of greenways, blueways, and trails, are specifically addressed in this section of the Task Force *Strategy*. So are the efforts to help ensure that agricultural lands, which provide valuable open space and wildlife

habitat, remain undeveloped. Other efforts include the improvement of recreational areas with appropriate facilities (including boat ramps, off road vehicles/airboat ramps, hiking trails, and horse trails) and the management of canals to enhance fishery habitat. The work to improve the health and productivity of habitats, addressed directly by goal two and indirectly by goal one, is expected to restore a sustainable natural system that south Floridians may continue to enjoy for generations to come. Local, state, and federal efforts to ensure a variety of opportunities for people's access to this natural system are a critically important complement to this work.

Park, recreation, and other open space lands. Park, recreation, and other open space lands protect natural systems and/or serve as buffers between natural and built environments. They often improve water quality and help attenuate flood waters after significant storm events. Public access to these areas fosters an appreciation for the natural system. When residents of urban areas have access to natural areas and a variety of resource-based recreational opportunities, it increases the potential that they will appreciate the importance of protecting a healthy natural system.



The Florida Communities Trust program provides grants to local governments to help implement the natural resource, conservation, coastal, and recreation elements of their statutorily mandated Local Government Comprehensive Plans. These grant funds are primarily used for the acquisition of green and open space and park and recreation lands at the local level. In addition, many localities use grant funds appropriated by the Florida Legislature to acquire and develop local park and recreation areas under the Florida Recreational Development and Assistance Program.

Linked open space and buffers. Greenways, blueways, and trails multiply the benefits of open spaces and natural systems by linking those spaces together, and they enrich the quality of life of community residents and visitors by facilitating access to the state's natural and cultural heritage sites and by enhancing people's sense of place. In some cases, the greenway system also offers opportunities to improve the water quality of stormwater runoff.

The Florida Greenways and Trails System is a state-wide initiative to create a system of greenways and trails connecting communities and conservation areas. When completed, the system will connect one end of the state to the other, from Key West to Pensacola. One goal of the program is to work with land managers to add an additional 10 percent per year to the total lands designated. The criteria for a designated land or waterway are that it must (1) protect and/or enhance natural, recreational, cultural, or historic resources and (2) either provide linear open space or a hub or site, or promote connectivity between or among conservation lands, communities, parks, other recreational facilities, cultural sites, or historic sites. The designation program encourages voluntary partnerships in conservation, development, and management of greenways and trails, provides recognition for individual components of the system and the partners involved, and raises public awareness of the conservation and recreation benefits of greenways and trails.

Protecting and preserving sustainable agriculture. Agriculture is Florida's second leading industry, producing \$18 billion in economic value each year. A large portion of agricultural land can be viewed as open space that benefits the natural system through buffering, augmentation of natural habitats, water storage and filtration, and aquifer recharge. It is of great concern that Florida is losing its farms and ranches because of declining profitability, land valuation, import/export and trade issues, and urban sprawl. State-wide almost 150,000 acres of productive agricultural lands are converted to other land uses each year. In the past some agricultural practices have impaired the functioning of natural systems, sometimes with adverse effects on native plants and animals, and sometimes to the detriment of the ability of the land to sustain agricultural uses over the long term. Several regulatory and voluntary

programs are underway in the South Florida Ecosystem and other areas in Florida to enhance environmental quality and the natural resource base upon which the agricultural economy depends.

The Everglades Best Management Practices Program, required by the 1994 Everglades Forever Act, specifically addresses the EAA and the C-139 Basin. The program goal of achieving a 25 percent reduction in the phosphorus load from the EAA has been met for each water year since the first full year of implementing BMPs (water years 1996 – 2003). EAA farmers have implemented a variety of practices to reduce the levels of phosphorus coming from their farms, including efficient fertilizer application, control of erosion and sediment loss, and effective stormwater management. Similar BMPs are implemented in the C-139 Basin, which is located adjacent to the EAA. The goal in this basin is to maintain phosphorus loads at or below historic levels.

The federal Farm Bill of 2002 provides several voluntary conservation programs through the USDA to assist landowners in protecting and preserving their natural resources. The USDA provides incentive payments and cost-sharing to restore, enhance, and protect degraded wetlands on agricultural lands, including the purchase of easements through the Wetland Reserve Program. The Farm and Ranch Land Protection Program (FRPP) helps farmers and ranchers keep their land in agriculture through the purchase of conservation easements in partnership with local and state governments and nonprofit entities. The Environmental Quality Incentive Program promotes agricultural production and environmental quality as compatible goals. Financial and technical assistance is provided to landowners to implement BMPs to improve water quality or enhance natural resource values. The Wildlife Habitat Incentives Program encourages the creation of high-quality wildlife habitats that support wildlife populations important to the ecosystem. Financial assistance is provided to develop upland, wetland, riparian, and aquatic habitats on private lands. The Grassland Reserve Program helps landowners and operators restore and protect grassland, including rangeland and pastureland, while maintaining the areas as grazing lands. Implementation of these programs will contribute significantly to the strategic goals for South Florida Ecosystem restoration.

Strategies for implementing the 2001 Rural and Family Lands Protection Act. The conversion of rural lands to higher density and more intense uses is having a profound effect on Florida's ability to maintain a balance between population growth and the natural resources necessary to support that growth. The development of previously isolated rural landscapes is fragmenting and degrading the quality and character of Florida's natural and agricultural lands. The prevailing development patterns threaten the state's ability to meet the needs of its citizens through adequate delivery of services and the maintenance of an agricultural economy. Additionally, these growth patterns interrupt the natural hydrological and biological functions that support not only sustainable agriculture and healthy ecosystems, but also the quality of life enjoyed by south Floridians.

The Florida Legislature recognized the importance of maintaining a healthy agriculture industry when it passed the Rural and Family Lands Protection Act of 2001. This act authorizes the responsible agencies to develop strategies to protect rural, agricultural, and timber lands. Implementation strategies and appropriations for this effort are currently being developed, and appropriations continue to be sought for the program.

One such strategy is to secure conservation easements or protection agreements to compensate property owners for restrictions on the future use of their land. One of the biggest challenges in administering these programs is identifying economic resources to fund the program each year in a growing state struggling with many fiscal challenges. Recognizing these challenges in Florida and elsewhere, the NRCS FRPP provides matching funds to state, tribal, and local governments and nongovernmental organizations with existing farm and ranch land protection programs to purchase conservation easements that help keep land in agriculture.

Concerned with the rapid rate at which agricultural lands are being converted into an urban environment in south Florida, federal and state agriculture agencies are implementing a number of incentive programs to decrease that rate. An effort is underway to assess how much land is in productive agriculture and what kind of development pressure it is under. The DEP,

DACS, and the University of Florida Institute of Food and Agricultural Sciences have been working together to implement incentive programs and to collect comprehensive data that will support efforts to retain viable and sustainable agriculture as part of the South Florida Ecosystem.

Redevelopment of brownfields. Federal (USEPA), state, regional, and local programs are contributing to the cleanup and redevelopment of contaminated and abandoned or underused sites in urban and rural areas of south Florida. Actual or perceived environmental contamination in urban infill sites—along with the risks and costs associated with cleanup—is a significant barrier to redevelopment. The remediation of this problem is contributing to the revitalization of south Florida’s historic developed areas. This revitalization is expected to lessen development pressure and urban sprawl in areas needed in order to restore the South Florida Ecosystem and to ensure future regional water supplies.

The Eastward Ho! Brownfields Partnership, which includes Miami-Dade, Broward, and Palm Beach Counties, is a good example of how local, regional, state, and federal agencies are working with private nonprofit and community organizations to facilitate the redevelopment of brownfields. The partnership received a National Brownfields Showcase Community designation from the USEPA in 1998. The USEPA also has granted \$2 million to capitalize a brownfields cleanup revolving loan fund, which is being used to assist in the cleanup and reuse of brownfields in southeast Florida.

The Partnership has also been active in the Florida Brownfields Program, administered and implemented by the DEP. The DEP has delegated the administration and implementation of the Florida Brownfields Program in their respective jurisdictions to Miami-Dade and Broward Counties. This streamlines the review and implementation of assessment and cleanup activities. Miami-Dade and Broward Counties are the only counties in the state of Florida to receive this delegation.

Community Understanding of Restoration Projects.

The USACE and the SFWMD coordinated an intensive public involvement process during the development of CERP, which culminated in more than 1,500 people attending 12 public meetings in the

fall of 1998. The agencies remain committed to involving the public in all aspects of CERP implementation. Their *Public Outreach Program Management Plan*, completed in 2001, defines the general scope, schedules, costs, products, and funding requirements necessary for the first five years of outreach activities.

The major elements of the outreach plan are summarized below:

- *General public awareness:* Information about the CERP will be provided to the general population through media stories, participation by CERP outreach staff at community events, and distribution of informative print, electronic, and other materials.
- *Minority community outreach:* Special efforts will be made to inform and involve African-American, Haitian, and Hispanic residents of south Florida about CERP – groups that historically have been underrepresented in environmental programs.
- *Environmental education:* Appreciation of the Everglades and other natural resources by the youth of today is extremely important because they will benefit from, and perhaps even participate in, CERP and other related restoration efforts as adults. Curricula and teachers’ guides will be developed and distributed in K-12 schools throughout the 16-county south Florida region, often in partnership with the Newspapers in Education program.
- *Small business outreach:* Many CERP components will be handled by the private sector through contracts. Outreach activities will seek to empower and enable south Florida’s small businesses to do business with the USACE and its partners. Staff will proactively engage and assist small businesses through business forums, workshops, and training sessions, development of web sites, distribution of printed materials, and other means.
- *Project-level involvement:* Hundreds of public workshops and public meetings have already been held to involve local residents in the development of CERP projects. These have been widely publicized, planned in locations convenient to the public, and often featured an open house for staff to meet with residents. This form of one-on-one communication is essential to the success of CERP.

The Working Group also participates in a public-private partnership between the Task Force and the Museum of Discovery and Science. The success of this collaborative effort will result in environmental education programs, enhanced outdoor exhibitry, and an informative kiosk about the South Florida Ecosystem restoration effort, which will provide information to the half million people who visit the museum annually.

Factors Affecting Achievement of this Subgoal

Unanticipated growth. Accelerated growth in south Florida over predicted levels will significantly increase the loss of open space to other land uses, particularly development. Government agencies are preparing long-term plans and setting priorities based on assumptions about levels of growth and demand for services, which if eclipsed will seriously challenge the ability of local governments and agencies to respond in ways that adequately protect the natural system.

Management complexity. Fostering development patterns that are compatible with natural systems requires close coordination of multiple jurisdictions with authority over the built environment. Without such coordination, gains in compatibility on lands within one jurisdiction (in habitat connectivity, for example) might be negated by incompatible development in a neighboring jurisdiction. Because many development issues involve corridors such as roads, transit routes, or greenways that cross multiple jurisdictions, unilateral actions by individual communities are often impossible.

Coordination is also required between jurisdictions with authority over the built environment and jurisdictions with authority over natural systems. The strategic goal is compatibility, and any efforts that undermine the sustainability of either the built or the natural system could further harm the ecosystem. Potential regulations on agriculture pose a good example. On the one hand, any federal, state, or local agricultural policy intended to protect natural systems but that does not sufficiently provide for economic stability of the industry may result in such unintended consequences as a long-term reduction in open space and wildlife habitat as agricultural land is converted to other land uses. On the other hand, agricultural practices that degrade the natural environment may also ultimately prove catastrophic to agriculture. If

awareness of and respect for these interrelationships lags behind other considerations, the success of ecosystem restoration may be delayed.

Funding. Local and regional jurisdictions will need adequate revenues and possibly supplemental funding to develop plans for a better pattern of protection by acquiring land, or less-than-fee interests in land, to link park, recreation, open space, and other significant land and water areas, and to enforce environmental regulations for the protection of those areas. Changes in local, state, or federal economic conditions may change the priorities of projects needed to implement this subgoal.

Environmental Justice. Early and sustained participation in community affairs by all segments of the community is critical. This may not occur unless policies and activities designed to involve all segments of the community are institutionalized so that they may continue beyond the timeline of the Working Group. Environmental ombudsmen located in restoration partner agencies would aid in getting community issues to the appropriate person and responsible agency. In addition, trained volunteers who continually improve the knowledge base of restoration in the community will be important.

Specific, Measurable Objectives for Achieving this Subgoal

Five objectives for achieving this subgoal have been adopted by the Task Force:

- Designate or acquire an additional 480,000 acres as part of the Florida Greenways and Trails System by 2009
- Increase participation in the voluntary Farm Bill conservation programs by 230,000 acres by 2014
- Acquire an additional 2,500 acres of park, recreation, and open space lands by 2007
- Complete five brownfield rehabilitation and redevelopment projects by 2010
- Increase community understanding of ecosystem restoration

The key projects needed to achieve these objectives and the schedule for their implementation are shown in Strategic Plan Table 7.

Strategic Plan Table 7 – Subgoal 3-A: Use and Manage Land in a Manner Compatible with Ecosystem Restoration

3-A Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)			
Objective 3-A.1: Designate or acquire an additional 480,000 acres as part of the Florida Greenways and Trails System by 2009	Project ID	Project Endpoint	Project Name
	3100	2009	Florida Greenways and Trails Program
	3102	Ongoing	Lake Okeechobee Scenic Trail
Objective 3-A.2: Increase participation in the voluntary Farm Bill conservation programs by 230,000 acres by 2014	Project ID	Project Endpoint	Project Name
	3201	2011	Technical Assistance to Seminole and Miccosukee Indian Reservations
	3202	2007	2002 Farm Bill
Objective 3-A.3: Acquire an additional 2,500 acres of park, recreation, and open space lands by 2007	Project ID	Project Endpoint	Project Name
	3301	Ongoing	Florida Keys Overseas Heritage Trail
Objective 3-A.4: Complete five brownfield rehabilitation and redevelopment projects by 2010	Project ID	Project Endpoint	Project Name
	3400	2002	The Wynwood Project – Miami
		2003	Former Palm Beach Lakes Golf Course – West Palm Beach
		2005	CFC Multifamily Northwest – West Palm Beach
		2005	DR Lakes, Inc. Parcel II – West Palm Beach
		2005	Biscayne Commons Site – North Miami Beach
		2005	DR Lakes Multifamily Northside – West Palm
		2006	Konover Site – Fort Lauderdale
		2006	Little Haiti Park Site – Miami
		2006	Siegel Gas & Oil Corp – Miami
		2006	Former Gipson’s Service Station – Miami
		2006	Former JG Shamrock/Supreme Service Station – Miami
		2006	McArthur Dairy Site – Lauderhill
		2006	Corinthian Multifamily Apts. – Miami
		2006	Los Suenos Multifamily Apts. – Miami
		2007	Liberia Area – Hollywood
		2007	Gravity Entertainment Site – Lauderdale Lakes
		2007	DR Palm Beach Hotel Complex – Brownfield Site WPB
		2007	DR Palm Beach Residential Complex Brownfield Site – WPB
		2007	Dedicated Transportation – Miami-Dade County
		2007	Harbour Cove Associates – Hallandale Beach
		2007	Dania Motocross Brownfield Area – Dania Beach
		2007	Wagner Square Project – Miami
		2007	Potamkin Properties – Miami Beach
		2008	Pompano Beach Multi-Purpose Project
		2008	Liberty City Area – Miami
		2008	Mid-Town Miami – Miami
	2009	Beacon Lakes – Miami Dade County	
Objective 3-A.5: Increase community understanding of ecosystem restoration	3502	Ongoing	USACE Outreach Program
	3503	Ongoing	SFWMD Outreach Program

Subgoal 3-B: Maintain or Improve Flood Protection in a Manner Compatible with Ecosystem Restoration

WRDA 2000 clearly states that implementation of the CERP shall not reduce levels of service for flood protection that were in existence on the date that the law was enacted and in accordance with applicable law. The Savings Clause states that CERP environmental protection projects, including increased canal and groundwater levels, need to be accomplished in a way that does not harm flood protection.

The SFWMD operates and maintains the primary flood control and water supply system within its 16-county jurisdiction. The major portion of that system is comprised of the federally designed and constructed C&SF Project. The SFWMD operates and maintains the multipurpose C&SF Project and projects within the Big Cypress Basin pursuant to regulation schedules and operational guidelines established by the USACE. This primary regional system is complemented by secondary and tertiary systems that are operated and managed by local governments, drainage districts established by Chapter 298 of the Florida Statutes, and private interests to ensure that the drainage and surface waters are routed to the primary drainage system.

The C&SF Project was originally authorized by the Flood Control Act of 1948, and most of the originally authorized project facilities were constructed during the period from 1950 to 1972. Some modifications to the primary system have occurred since the original authorization. Larger than predicted population growth and different development patterns from those projected in 1948 have, over time, challenged the ability of the primary, secondary, and tertiary drainage systems to meet the original goals of maintaining flood protection for urban and agricultural lands.

Maintaining efficiencies in a combination of primary and secondary drainage systems is needed to achieve and maintain original design flood protection planning goals for south Florida. Further modifications, updates, and upgrades are needed in many of the existing water control facilities in order

to support the current restoration endpoint levels of flood protection. The CERP, as authorized by Congress in WRDA 2000, is the consensus plan that is to be used to modify and improve the C&SF Project to benefit the South Florida Ecosystem and to help provide for the water needs of the south Florida region, including water supply and flood protection.

Severe flooding occurred within areas of Miami-Dade County as a result of Hurricane Irene in October 1999 and intense rainfall in October 2000. In response to the October 2000 flood, the executive director of the SFWMD appointed a Recovery Task Force under the auspices of the Emergency Operations Center to develop a list of proposed flood mitigation projects for the impacted areas of Miami-Dade County. This Task Force has recommended that mitigation projects be considered on a basin-wide basis and include improvements to both the primary and secondary stormwater conveyance systems. A Miami-Dade County Flooding Task Force, which also was created in response to these events, made recommendations that included the expeditious completion of the Modified Water Deliveries and C-111 Projects to help alleviate the flooding risk. Although none of the recommendations are designed to "flood-proof" the basins in which they are constructed, the projects should provide for increased primary system conveyance, which will then allow flood mitigation benefits from secondary system improvements provided by local communities.

Maintaining flood protection can also impact water supply. The C&SF Project provides flood protection by discharging water into the coastal waters through canals. That water therefore is made unavailable for water supply. As flood protection is provided for the agricultural and urban areas bordering the Everglades, there is the potential for increasing the loss of freshwater supplies. Some components of the CERP are designed to decrease this loss.

How This Subgoal Will Be Implemented

Public works construction. Capital improvements, modifications, and repairs to water control and conveyance facilities will help maintain and improve flood protection. The CERP consists of numerous projects that may provide incidental improvements to flood protection while decreasing the loss of freshwater supplies. Other large-scale projects, such

as the C-111 Project, consist of structural and nonstructural modifications to existing works intended in part to maintain flood protection. Opportunities to provide greater levels of flood protection or to provide flood protection in areas where there is currently no flood protection may be considered during implementation of the CERP, provided that the greater level of protection or the provision of new flood protection is consistent with the goals and purposes of the CERP and is economically justified.

Additional flood protection is provided by projects funded by the Federal Emergency Management Agency (FEMA), including the C-4 Basin Flood Mitigation Project. This project, which is administered by the SFWMD, will improve canals in the C-4 basin and provide an emergency water impoundment to hold excess canal water when canals reach critical capacity.

Nonstructural flood protection. Numerous nonstructural options for flood protection exist for the built environment. These include, but are not limited to, ensuring that new construction meets FEMA guidelines, land use planning to guide development away from flood-prone areas, and acquiring undeveloped lands from willing sellers.

Long-term operations and maintenance needs. The SFWMD implements an ongoing Canal Conveyance Capacity Program to evaluate the maintenance, dredging, and bank stabilization requirements of the C&SF Project. This program is intended to restore the original design capacity of the canals as constructed. The SFWMD’s Capital Maintenance Program evaluates and implements refurbishment and/or replacement of existing water control structures and pumping stations that have reached the end of their design life. Exotic and aquatic plant control, through herbicidal, mechanical, and biological control

methods, is another means of ensuring that conveyance capacity within canals and water bodies is maintained to their original capacity.

Factors Affecting Achievement of this Subgoal
Unanticipated growth. Population growth and changes in land use, especially if different from what is projected, will continue to affect the capability of state and federal agencies to provide flood protection for natural, urban, and agricultural lands. Land conversions to different uses are particularly stressful to the flood protection system, since the flood protection requirements may vary greatly among different uses.

The increase in developed areas to accommodate population growth within the drainage basin of the C&SF Project may increase surface runoff, lowering the level of service for flood protection and increasing the intensity and duration of floods.

Funding. Continued financial support from Congress and the Florida Legislature will be necessary to complete projects for timely achievement of flood protection goals.

Specific, Measurable Objectives for Achieving this Subgoal

One objective for achieving this subgoal has been adopted by the Task Force:

- Maintain or improve existing levels of flood protection

The key project needed to achieve this objective and the schedule for its implementation are shown in Strategic Plan Table 8.

Strategic Plan Table 8 – Subgoal 3-B: Maintain or Improve Flood Protection in a Manner Compatible with Ecosystem Restoration

3-B Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)			
Objective 3-B.1: Maintain or improve existing levels of flood protection	Project ID	Project Endpoint	Project Name
	3600	2007	C-4 Basin Flood Mitigation Projects
	1300	2010	Canal 111

Subgoal 3-C: Provide Sufficient Water Resources for Built and Natural Systems

The State of Florida has statutory goals and responsibilities to ensure an adequate supply of water for protection of the natural system and for existing and future “reasonable-beneficial” potable, industrial, and agricultural uses. For protection of the natural system, Florida law directs the SFWMD to set minimum flows and levels (MFLs) to prevent significant harm to water resources. MFLs have been established for ENP, the WCAs, Lake Okeechobee, and the northern Biscayne aquifer (except that portion of the aquifer located in southern Miami-Dade County). MFLs also have been established for the Caloosahatchee River and Estuary, Lake Istokpoga, the Lower West Coast Aquifer System, the St. Lucie River and Estuary, and the Northwest Fork of the Loxahatchee River.



WRDA 2000 (attached as Appendix D) requires water reservations for the protection of fish and wildlife in natural systems pursuant to state and federal laws associated with implementation of the CERP. Additionally, WRDA 2000, through the Savings Clause, prohibits the elimination or transfer of existing legal sources of water until a new source of water supply of comparable quantity and quality as that available on December 11, 2000 is available to replace the water that will be lost as a result of CERP implementation.

How This Subgoal Will Be Implemented

As water storage and other water supply related projects and programs are implemented, reliable sources of water identified for human supplies will become available to meet projected demands on a regular basis. The potential for water shortages will be reduced as projects are completed.

Restoration partners support the state’s strong commitment to achieving its water supply goals through a variety of additional state and local efforts. Some of these efforts are reflected under other strategic goals and subgoals. Efforts unique to this subgoal are described below.

Implement a process of reserving water through time that will meet the needs of the natural system. WRDA 2000 requires the State of Florida to reserve the water generated by the CERP and needed for Everglades restoration. The SFWMD, consistent with its water management responsibilities, is working to fulfill that commitment.

The SFWMD will also identify existing water supplies for the protection of fish and wildlife for key natural systems (e.g. Everglades, WCAs, and estuaries). This will provide information needed to make future decisions about consumptive use permits.

The SFWMD Governing Board has developed guiding principles for reviewing permit applications dependent upon C&SF Project deliveries and recharge to ensure consistency with the CERP. These will complement the “B” list consumptive use permitting rules that limit permit durations for increased withdrawals that affect the regional system water supplies. This document was accepted by the SFWMD Governing Board in June 2003. Guidance Memoranda, required by the Federal Programmatic Regulations, are being developed which further detail the process and methodology for identifying water to be managed and reserved for the natural system.

Implement the recommendations of the 2002 Water Conservation Initiative Report. The SFWMD is updating the 1993 Water Conservation Rule for Public Water Supplies to bring Rule 40E-2, F.A.C. Basis of Review for Water Conservation in line with Chapter 62-40, F.A.C. at the request of the DEP. The rule will establish a goal-based water conservation approach for water utilities. An analytical web-based tool has been developed by the DEP and the water management districts to assist utilities in creating water conservation plans, which through the new rule will become part of each utility’s consumptive use permit. These plans will be designed to be both cost effective and tailored to the use characteristics of the individual utility’s service area.

The rule will enhance the SFWMD's ability to achieve efficient levels of water use and enhance other ongoing conservation efforts focused on public outreach, cooperative grant funding, and technical assistance.

Implement and update regional water supply plans.

Regional water supply plans with twenty-year planning horizons, which reassess base assumptions and current technologies every five years, have been completed for each of the four SFWMD regional water supply planning areas: Lower East Coast, Upper East Coast, Kissimmee Basin, and Lower West Coast. The goal of each plan is to meet the water supply needs of the region during a one-in-ten-year drought while not causing harm to the environment. The water supply plans include strategies for (1) increasing supply for natural systems and the human population through water resource development projects, (2) promoting the use of alternative water supply sources and conservation, (3) protecting water quality at the source of supply, (4) accurately reflecting limitations of the available groundwater or other available water supplies in plans for future growth and development, (5) increasing the available water supply, and (6) protecting natural systems from harm through the consumptive use permitting process, from significant harm through establishment of minimum flows and levels, and from serious harm through proper implementation of water shortage plans.

Improve water conservation and reuse. The SFWMD regional water supply plans outline the planning and permitting efforts needed to encourage water conservation and lower consumptive use rates over time. Strategies to improve conservation and reuse incorporate different approaches for public, commercial, landscape, and agricultural consumers. These strategies include limits on the time of day irrigation is allowed, inverted rate structures, xeriscape landscaping using native plants, establishment of mobile irrigation labs, grants to implement conservation projects, and feasibility analyses for using reclaimed water. A strong public education program supports these strategies.

Increase water resources through alternative water supply development and water resource development projects. The SFWMD has implemented programs with goals to increase the amount of available water.

These programs have been in place for some time and are often in addition to the projects in the CERP. The Alternative Water Supply Development Program awards grants to local water providers to develop additional water supply through alternative technologies. Through its Water Resource Development Projects, the SFWMD attempts to increase the regional water resources available for natural and built environment needs.

Establish minimum flows and levels for priority water bodies. The SFWMD is working to establish minimum flows and levels for priority water bodies according to the annual DEP approved schedule. This will improve the efficiencies of delivering water and maximizing available resources.

Factors Affecting Achievement of this Subgoal

Unanticipated growth. If population growth and/or water used for irrigation exceed projections, variations in growth projections will be incorporated into the five-year updates of the regional water supply plans.

Funding. Adequate funding will be required to accomplish water storage and other water supply related projects. Likewise, adequate funding of public outreach and education will be critical to achieving water conservation strategies and reduced consumption rates. Efforts to encourage partnerships that promote and enhance local government programs to develop and implement alternative water supply resources will be important to achieving water supply goals.

Specific, Measurable Objectives for Achieving this Subgoal

Three objectives for achieving this subgoal have been adopted by the Task Force:

- Plan for regional water supply needs
- Increase volumes of reuse on a regional basis
- Increase water made available through the SFWMD Alternative Water Supply Development Program

The key projects needed to achieve these objectives and the schedule for their implementation are shown in Strategic Plan Table 9.

Strategic Plan Table 9 – Subgoal 3-C: Provide Sufficient Water Resources for Built and Natural Systems

3-C Milestone Projects (Refer to Appendix A for more information about project schedules, funding, responsible agencies, etc.)			
3-C.1: Plan for regional water supply needs	Project ID	Project Endpoint	Project Name
	3704	2008	Lower East Coast Water Supply Plan
			Lower West Coast Water Supply Plan
			Upper East Coast Water Supply Plan
			Kissimmee Basin Water Supply Plan
3-C.2: Increase volumes of reuse on a regional basis	Project ID	Project Endpoint	Project Name
	3800	2025	C&SF: CERP – South Miami-Dade County Reuse (CERP Project # WBS 98)
	3801	2025	C&SF: CERP – West Miami-Dade County Reuse (CERP Project # WBS 97)
	3802	2020	C&SF: CERP – Wastewater Reuse Technology Pilot Project (CERP Project # WBS 37)
	2301	2003	C&SF: CERP – Winsburg Farms Wetland Restoration (CERP Project # WBS 91)
	2306	2007	C&SF: CERP – Acme Basin B Discharge (CERP Project # WBS 38)
3-C.3: Increase water made available through the SFWMD Alternative Water Supply Development Program	Project ID	Project Endpoint	Project Name
	3900	Ongoing	Alternative Water Supply Grant

Linkages between Strategic Work Efforts and Ecosystem Restoration

The Task Force members measure progress on two complementary scales: (1) scales that measure the satisfactory completion of work and (2) scales that measure ecosystem health (in terms of either stressors, ecological conditions, or other water-related needs). With these two scales the Task Force distinguishes between those things that are within people’s capability to manipulate and control (the strategic goals, subgoals, and objectives) and those things that are the responses of natural systems (indicators and restoration endpoints) to the Task Force agencies’ efforts.

No exclusive linkage exists between any one strategic goal or objective (let alone, any one specific project) and any one indicator of ecological conditions. Efforts on many fronts will be necessary to restore and sustain a healthy ecosystem, which will then be manifested through a myriad of species and processes. However, positive correlations are expected between individual indicators of ecological conditions and groups of projects designed to eliminate or mitigate stressors that are detrimental to those indicators. Some of these relationships were charted in a previous table (2004 Strategy Appendix D). This table will be revised following the 2008 update of the System-wide Indicators.

The Task Force believes that the ecosystem will respond with improved health and vigor to efforts to

reverse disruptive human influences. Due to the complexity and large scope of this effort, the agencies involved in restoration continue to improve their understanding of how restoration will occur. This understanding is critical to the ability to accurately assess the major stressors on the various components of the ecosystem and consider how the physical improvements expected to result from projects designed to eliminate or mitigate stressors will affect ecological conditions and other water-related needs. Relationships between projects and the elimination or mitigation of stressors will be more direct than relationships between projects and resulting ecological conditions; however, even these relationships cannot yet be accurately predicted with current ecological models.

The monitoring and assessment complexities cited above pose challenges, but the monitoring conducted

to date has provided good information that has been useful in assessing the success of early restoration efforts. For example, in response to the reestablishment of more natural flow characteristics in the Kissimmee River, accomplished through the implementation of the Kissimmee River Restoration Project, wetland vegetation, particularly broadleaf marsh species and buttonbush, is rapidly expanding within the re-flooded floodplain. Recent observations indicate that the reconstructed section of river channel has received increased use by wading bird species, particularly snowy egrets, white ibis, tricolored herons, wood storks, and black crowned night herons. Other notable bird observations in this region include roseate spoonbills and whooping cranes. This is one localized and general example of how the ecosystem is responding to work efforts that eliminate or mitigate disruptive human influences.

South Florida Ecosystem Restoration Timeline

by project completion date

Legend



Surface Water Storage



Sheet Flow



Water Quality



Wildlife Habitat



Exotic Species Control



Aquifer Storage



Coral Reef Protection

1985 through 2005



- Dupuis Reserve
- Nicodemus Slough
- South Fork of the St. Lucie River
- Yamato Scrub
- Kissimmee Prairie
- Lake Walk in Water
- Corkscrew Regional Mitigation Bank
- Tibet Butler Reserve
- Loxahatchee River Land Acquisition
- Ten Mile Creek Acquisition
- Cayo Costa
- Hobe Sound National Wildlife Refuge
- East Everglades Addition to ENP
- Kissimmee River - lower basin
- Kissimmee River - upper basin
- Big Cypress National Preserve Addition
- Crocodile Lake National Refuge
- Florida Keys National Wildlife Refuge Complex
- J.N. "Ding" Darling National Wildlife Refuge
- A.R.M. Loxahatchee National Wildlife Refuge

2005 through 2010



- Broward County WPA, C-9 STA/Impoundment & Western C-11 Impoundment & Canal & WCA 3A/3B Levee Seepage Management
- Lake Okeechobee Water Retention/Phosphorus Removal
- STA-1E/C-51 West



- Broward County WPA, C-9 STA/Impoundment & Western C-11 Impoundment & Canal & WCA 3A/3B Levee Seepage Management
- Seminole Tribe Comprehensive Surface Water Management System for Brighton Reservoir
- Ten Mile Creek

2010 through 2015



- Lake Okeechobee Watershed
- Everglades Agricultural Storage Reservoir Phase I and II



- Loxahatchee Impoundment Landscape Assessment
- Wastewater Reuse Pilot Project

2015 through 2020



- Florida Keys Tidal Restoration
- WCA-3 Decom & Sheetflow Enhancement



- Everglades National Park Seepage Management
- C-43 Basin Storage Reservoir
- Palm Beach County Agricultural

2020 through 2040



- Site 1 Impoundment & ASR
- Indian River Lagoon South, C-23/C-24/C-25/Northfork & Southfork Storage Reservoirs & C-44 Basin Storage Reservoir
- Central Lake Belt Storage Area
- North Lake Belt Storage Area



- Central Lake Belt Storage Area
- Big Cypress/L-28 Interceptor Modification



- Maintenance control achieved: Melaleuca; Brazilian Pepper; Australian Pine; Old World Climbing Fern



- STA-1 West Works
- STA-2 Works
- STA-5 Works
- STA-3/4



- Estero Bay Aquatic Preserve



- Southern Crew



- Dry Tortugas National Park General Management Plan
- Planning & Implementation of the Tortugas Ecological Reserve



- Modified Water Deliveries to ENP
- Canal 111
- Kissimmee River Restoration
- WCA-3A Hydropattern Restoration



- Melaleuca Quarantine Facility
- Melaleuca Eradication Project & Other Exotic Plants
- Integration of Federal, State & Local Agency Invasive Exotic Control



- Modified Water Deliveries to ENP
- Southern Golden Gate Estates - Picayune Strand
- Canal 111
- Kissimmee River Restoration
- Lake Park Restoration



- 20 Additional Species Management Plan



- Henderson Creek/Belle Meade
- Total Maximum Daily Load (TMDL) Program
- Lake Okeechobee Watershed



- North PBC PIR Part 1
- Caloosahatchee Backpumping
- Miccosukee Tribe Water Management Plan



- Florida Keys Tidal Restoration
- Flow to NW & Central WCA-3A(11) (RR)
- WCA-3 Decomp & Sheetflow Enhancement



- C-43 Basin Storage Reservoir & ASR
- Palm Beach County Agricultural Reservoir ASR



- Pineland & hardwood hammock restoration in C-111 Basin



- North Palm Beach County Part 2
- Site 1 Impoundment & ASR
- Lake Okeechobee Aquifer Storage & Recovery

Wildlife Habitat Projects
(completion date to be determined)

- Allapattah Flats/Ranch
- Atlantic Ridge Ecosystem
- Babcock Ranch
- Barfield Farms
- Belle Meade
- Big Cypress National Preserve Private Inholdings
- Big Bend Swamp/Holopaw Ranch
- Biscayne Coastal Wetlands
- Biscayne National Park
- Bombing Range Ridge
- Caloosahatchee Ecoscape
- Catfish Creek
- Charlotte Harbor Estuary/Flatwoods/Cape Haze
- Corkscrew Regional Watershed
- Coupon Bight/Key Deer Big Pine Key
- Cypress Creek/Loxahatchee
- Cypress Creek/Trail Ridge
- Devils Garden
- Estero Bay
- East Coast Buffer/Water Preserve Areas
- Everglades Agricultural Area/Talisman
- Fakahatchee Strand
- Fisheating Creek
- Florida Keys Ecosystem
- Frog Pond/L-31 N
- Half Circle L Ranch
- Hen Scratch Ranch
- Indian River Lagoon Blueway
- Juno Hills/Dunes
- Jupiter Ridge
- Kissimmee - St. John Connector
- Lake Wales Ridge Ecosystem
- Loxahatchee Slough
- McDaniel Ranch
- Miami-Dade County Archipelago
- North Key Laro Hammocks
- Model Lands
- North Fork St. Lucie River
- North Savannas
- Okaloacoochee Slough
- Okeechobee Battlefield
- Osceola Pine Savannas
- Pal-Mar
- Panther Glades
- Paradise Run
- Lake Hatchineha Watershed/Parker Poinciana
- Pineland Site Complex
- Ranch Reserve
- Rookery Bay
- Rotenberger/Holey Land Tract
- Shingle Creek
- Six Mile Cypress
- South Savannas
- Southern Glades
- Southern Golden Gate Estates - Picayune Strand
- Twelve Mile Slough
- Upper Lakes Basin Watershed
- Upper Econ Mosaic





Tracking Success

**July 2004 - June 2006 Biennial Report of the South Florida
Ecosystem Restoration Task Force**

Biennial Report Background and Purpose

**Activities, Priorities, Policies, Strategies, Plans,
Programs, and Projects: July 2004 Through June 2006**

Measuring Progress Toward Restoration

BIENNIAL REPORT BACKGROUND AND PURPOSE

Background

The Water Resources Development Act (WRDA) of 1996 established the intergovernmental South Florida Ecosystem Restoration Task Force (Task Force). It consists of fourteen members from four sovereign entities: seven federal agency representatives at the assistant secretary or equivalent level, five state representatives, and two Native American Indian representatives. Among other duties, WRDA 1996 requires the Task Force to:

- Coordinate the development of consistent strategies, policies, projects, and programs to address the restoration, preservation, and protection of the South Florida Ecosystem
- Exchange information on Everglades restoration efforts
- Coordinate scientific research
- Facilitate the resolution of interagency and intergovernmental disputes
- Facilitate participation by the public

The Task Force facilitates the coordination of conservation and restoration efforts implemented through a combination of federal, state, local, and tribal initiatives in south Florida. The Comprehensive Everglades Restoration Plan (CERP) is the single largest initiative. The Programmatic Regulations for the CERP require consultation with the Task Force on specific program and project activities. The Task Force also provides opportunities to improve cohesion among public interest groups on the disparate elements and programs of the South Florida Ecosystem restoration (land acquisition and conservation, water quality improvement, water infrastructure development, and habitat protection).

A Working Group and Science Coordination Group (SCG) have been established to assist the Task Force in accomplishing its duties in general. Advisory groups, such as the Water Resources Advisory Commission (WRAC) and the Combined Structural and Operational Plan (CSOP) Advisory Team, provide the Task Force with recommendations on specific issues. Each year the Task Force establishes priorities to guide these efforts. The intergovernmental Task Force is the only forum that provides strategic coordination and a system-wide perspective to guide the separate restoration efforts being planned and implemented in south Florida.

Purpose

This report summarizes the activities, priorities, policies, strategies, plans, programs, and projects of the Task Force for the reporting years July 2004 – June 2006.¹⁰ WRDA 1996 directs the Task Force to report to the Congress biennially on:

- The activities of the Task Force for the reporting years
- Activities, priorities, policies, strategies, plans, programs, and projects planned, developed, or implemented for South Florida Ecosystem restoration
- Progress made toward restoration

The *Biennial Report of the South Florida Ecosystem Restoration Task Force (Biennial Report)* documents activities and progress and describes how funds are targeted for restoration. It satisfies the WRDA requirements by providing the following information: First, it summarizes the activities and major accomplishments of the reporting period in terms of the activities, priorities, policies, strategies, plans, programs, and projects that were developed or conducted to carry out the specific strategic goals and objectives adopted by the Task Force members and the Task Force. Second, it tracks the progress made toward restoration during the reporting period in terms of selected measurable indicators of ecosystem health.

The indicators of success tracked in previous biennial reports have been revised and are outlined in this document.

This *Biennial Report* is intended for four principal audiences:

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

This information will be broadly shared with state and federal agencies, local governments, regional agencies, industries, private interest groups, and private citizens interested in South Florida Ecosystem restoration.

¹⁰ The Task Force member agencies operate within various fiscal year periods. All the federal agencies and the South Florida Water Management District operate within a fiscal year that begins on October 1 and ends on September 30 of each year. The State of Florida agencies operate within a fiscal year that starts on July 1 and ends on June 30 of each year. Any annual dollar amounts included in this report apply to each agency's fiscal year. Pertinent footnotes are provided for these data.

ACTIVITIES, PRIORITIES, POLICIES, STRATEGIES, PLANS, PROGRAMS, AND PROJECTS: JULY 2004 THROUGH JUNE 2006

Intergovernmental Coordination

A comprehensive discussion of the principles and strategies adopted by the Task Force, along with the major plans, programs, and projects of the various Task Force member agencies, is provided in *Coordinating Success: Strategy for Restoration of the South Florida Ecosystem (Strategy)*. The *Strategy* identifies strategic goals, subgoals, and measurable objectives that have been adopted by the Task Force member agencies, along with schedules for their accomplishment.

The *Biennial Report (Tracking Success)* summarizes the major activities of the Task Force and its members during the past two years. It describes progress made toward each strategic goal and objective during the two-year reporting period and outlines how progress will be measured through a suite of proposed System-wide Indicators.

Each year the Task Force publishes an *Integrated Financial Plan (IFP)*. The IFP (located in Volume 2) provides more detailed information about the federal, state, tribal, and local restoration projects that contribute to the accomplishment of the vision, goals, subgoals, and objectives of the Task Force found in Volume 1.

In 2003 the Task Force began publishing an annual *Land Acquisition Strategy*. This document describes the strategy for land acquisition needed for ecosystem restoration projects that are funded in part or wholly by the federal government. In 2006 the Task Force also prepared a *Natural Lands Report* that identifies and prioritizes the natural attributes of lands associated with four key CERP projects and identifies potential funding sources, potential creative partnerships, and acquisition timeframes.

During the reporting period there were 30 consultations on CERP issues with the Task Force regarding programmatic requirements, such as the Master Implementation Sequencing Plan, and the projects at three different stages (scoping, alternative development, and final draft). In May 2005 the Task Force delegated project consultations at the scoping and alternative development phases to the Working Group.

Coordination of Strategic Science Issues

In 2004 the Task Force approved its first biennial *Plan for Coordinating Science*. The plan coordinates system-wide or programmatic science and complements the ongoing science coordination conducted by the CERP Restoration Coordination and Verification (RECOVER) group and the agencies. A key feature of the plan's approach is the identification of strategic science needs and gaps through a systematic review of the Conceptual Ecological Models used to understand the cause and effect relationships in the ecosystem.

During the reporting period the Task Force assigned the SCG the task of developing a proposed integrated suite of System-wide Indicators to help assess the direction and success of the restoration efforts. Over the past three reporting periods (1998-2000, 2000-2002, and 2002-2004) a great deal of modeling and analysis has generated new information that was used to improve the initial set of indicators and to identify more accurate measures of restoration success. After examination of peer review and public comments, the SCG has selected a proposed suite of System-wide Indicators. These indicators are incorporated into the 2006 *Strategy* and *Biennial Report*.

Invasive species were identified by the Task Force as an important restoration concern at the beginning of the Everglades restoration initiative. The Task Force's two exotic species organizations, the Noxious Exotic Weed Task Team (NEWTT) and the Florida Invasive Animal Task Team (FIATT) have worked on two key initiatives for the reporting period, which are described below. In addition, FIATT is developing a non-native animal report to provide a broad picture of the status of exotic animal species in south Florida. It will focus on the agencies, along with their respective departments, that are represented on the Working Group. FIATT has established draft invasive animal lists by taxonomic groups developed from previous reports (e.g., Carole Goodyear's 2000 *Exotic Animal Report*), peer review, input from FIATT members, survey results, and interviews with member agencies and natural area managers throughout south Florida.

The National Invasive Species Council. The National Invasive Species Council has recognized the work of the NEWTT and FIATT groups by establishing a south Florida regional budget initiative that will be used to help coordinate invasive species funding and activities in south Florida and to develop a model for other invasive species activities and regions nation-wide.

Invasive Species Website (www.ecostems.org).

NEWTT followed up their 2002 invasive exotic plant assessment and strategy, *Weeds Won't Wait*, with the development of a comprehensive web-based information sharing and project-tracking database for all invasive species projects (all agencies) associated with Everglades restoration.

Exchange of Information

Exchanging information is a key aspect of intergovernmental coordination. At each of their regularly scheduled meetings, the Task Force and the Working Group receive detailed updates on CERP and other projects and programs. These updates help maintain a common understanding of the restoration activities being planned or implemented by its members. Beginning in October 2004, Acceler8 updates were provided at each regularly scheduled Task Force and Working Group meeting.

To make this information available on the broadest possible basis the Task Force website has been completely updated during the reporting period. The new website format explains the purpose of the Task Force and provides easy navigation to current and historic meeting information.

Facilitation and Conflict Resolution

In 2003 the Task Force began developing tailored approaches to the most difficult restoration challenges that were not under judicial review. The CSOP Advisory Team is the most comprehensive example of this approach during the reporting period. The CSOP Advisory Team was chartered by the Task Force on October 15, 2003 for the purpose of providing recommendations to the U.S. Army Corps of Engineers (USACE) during key phases in the CSOP process. The CSOP is the combined operating schedule for two critical Everglades restoration projects, the Modified Water Deliveries

(MWD) project and the C-111 project. The CSOP Advisory Team brought together representatives of disparate viewpoints with the goal of seeking their input, reducing conflict, and building consensus on a challenging effort. It was assisted by neutral facilitators.



The CSOP Advisory Team conducted 23 meetings for the purpose of developing a thorough understanding of the issues and providing consensus recommendations to the Task Force, which in turn provided recommendations to the USACE. In May 2006 the team provided its final consensus recommendations to the Task Force on the Tentatively Selected Plan (TSP). The team expressed support for the Corps' adaptive management approach and provided recommendations to help improve the performance of the TSP in key areas. The Task Force conveyed the recommendations to the USACE. Where performance improvements were beyond the scope of the CSOP the Task Force asked that these issues be taken into account in the development of subsequent CERP and other related projects.

Public Participation and Access

The Task Force took a number of steps to improve public participation and access during the reporting period. The Task Force and its subgroups conducted 67 publicly noticed meetings during the reporting period that included opportunities for the public to share their views on current issues. As previously mentioned the new website format makes current and historic meeting information available to anyone with internet access and some meetings are available to the public through a webcast.

Regional Project Delivery Team Meetings

From January to July 2006 the USACE and the South Florida Water Management District (SFWMD) conducted Regional Project Delivery Team meetings

before each Working Group meeting. These meetings provided the public and the members with an informal opportunity to discuss the projects in detail with project managers.

CSOP Advisory Team

In addition to resolving conflict the CSOP Advisory Team increased public participation during the development of the CSOP. The team consisted of voting members representing the public interests of residents, recreation, environment, and agriculture; and non-voting members representing federal, state, local, and tribal entities.

Biscayne Bay Regional Restoration Coordination Team

One of the primary purposes of the Biscayne Bay Regional Restoration Coordination Team is to provide a forum for public involvement and outreach for activities, programs, and projects affecting Biscayne Bay. The team consists of members representing the public interests and agencies. During the reporting period the team achieved its initial goal of developing an Action Plan for improving the health of Biscayne Bay through coordination and cooperation of the members of the team. This was accepted by the Working Group in May of 2006.

Water Resources Advisory Commission

The SFWMD Governing Board appointed the 48-member WRAC in March 2001 to provide a forum for discussion of critical water resource issues in south Florida and to provide consensus recommendations to the Governing Board. The Task Force designated the WRAC as a public interest advisory body in 2002. The WRAC has met every month, except for the months of August, since its creation and has met annually with the Task Force to discuss issues of mutual interest. In addition, the WRAC hosts “Issues Workshops” each month on a wide variety of water resource, water supply, and South Florida Ecosystem restoration topics. Recommendations from the issues workshops are made to the full WRAC.

In 2004, the WRAC recommended significant improvement to the State’s Long-Term Plan for Achieving Water Quality Goals (concurrent with by the Governing Board); recommended a comprehensive Recreational Use and Public Access

Policy for SFWMD-owned lands (adopted by the Governing Board); recommended interim policy guidelines to conserve water in the administration of Consumptive Use Permitting while considering the water needs of CERP projects; initiated a series of issues workshops on alternative water supply; and initiated a series of workshops on Biscayne Bay Minimum Flows and Levels (MFLs).

In 2005, the WRAC recommended consensus comments to the SFWMD Governing board on CERP Guidance Memoranda and the CERP Master Implementation Sequencing Plan (MISP) for communication to the USACE; initiated a series of workshops and WRAC updates on initial reservations of water for the natural system; initiated a series of workshops on each SFWMD Acceler8 project; provided consensus comments to the Task Force regarding C-111 Project design as related to the CSOP; created a 30-member Lake Okeechobee committee to recommend measures to help restore Lake Okeechobee and the Caloosahatchee and St. Lucie Estuaries (this committee meets monthly); recommended that the USACE expedite revisions to the Lake Okeechobee Water Control Plan and Schedule to achieve a more refined balance between the competing needs of the land and estuarine ecosystems, the Everglades ecosystem, flood control, and water supply; recommended to the Governing Board that the Lake Okeechobee Fast Track Plan (LOFT) for north of the lake projects should move forward, including evaluation of temporary and permanent forward pumps; recommended new or improved program components for the recovery of Lake Okeechobee and the estuaries that became the Lake Okeechobee and Estuary Recovery Plan (LOER); held a series of Alternative Water Supply workshops that resulted in 57% of south Florida utilities creating alternative water supply projects to help meet water supply demands over the next 20 years; and supported expansion of recreational opportunities on SFWMD lands.

In 2006, the WRAC requested the Governing Board, based on monitoring of salinities and seagrasses in the estuaries, recommend that the USACE continue pulse releases to the estuaries to continue to lower water levels in Lake Okeechobee for lake recovery; and supported expansion of recreational opportunities on SFWMD lands.

CERP Programs and Projects _____

CERP Programmatic Regulations

The USACE, with the concurrence of the Governor of Florida and the U.S. Department of the Interior (DOI), and in consultation with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the U.S. Environmental Protection Agency, the U. S. Department of Commerce, and other federal, state, and local agencies, published the final rule for the “Programmatic Regulations for the Comprehensive Everglades Restoration Plan” in the *Federal Register* on November 12, 2003. The Programmatic Regulations are required by WRDA 2000 to define:

- CERP implementation processes, including the development of project implementation reports, project coordination agreements, and operating manuals that ensure that the CERP goals and objective are achieved
- Processes to ensure that new information, resulting from new or unforeseen circumstances, new scientific or technical information, or from adaptive management, is integrated into CERP implementation
- Processes to ensure the protection of the natural system consistent with CERP goals and purposes, including the establishment of interim goals needed to evaluate success throughout the implementation process



The Programmatic Regulations direct the USACE and the SFWMD, in consultation with DOI, the Miccosukee Tribe of Indians of Florida, the Seminole Tribe of Florida, the USEPA, the Department of Commerce, the Florida Department of Environmental Protection (DEP), other federal, state, and local agencies, and the Task Force, to develop:

- A pre-CERP baseline
- Six program-wide guidance memoranda
- A master implementation sequencing plan
- Periodic CERP updates

The Programmatic Regulations also require the establishment of interim goals and endpoints. The progress made toward these requirements during the reporting period is summarized below.

Pre-CERP Baseline. The final draft of the pre-CERP baseline was completed in April 2005. This baseline is defined in the Programmatic Regulations as the hydrologic conditions in the South Florida Ecosystem on the date of enactment of WRDA 2000, as modeled by using a multi-year period of record based on assumptions such as land use, population, water demand, water quality, and assumed operations of the Central and Southern Florida Project (C&SF). The pre-CERP baseline is used, along with other analyses, to determine if an existing legal source of water has been eliminated or transferred or if a new source of water is of comparable quality to that which has been transferred. Also, each Project Implementation Report (PIR) includes appropriate analyses and considers the operational conditions included in the pre-CERP baseline to demonstrate that the project will not reduce levels of service for flood protection that (1) were in existence on the date of enactment of WRDA 2000 and (2) are in accordance with applicable law.

Six Program-Wide Guidance Memoranda. These guidance memoranda, currently in draft form, provide guidance on the general format and content of PIRs; formulation and evaluation of alternatives developed for PIRs; general content of operating manuals; general direction for the assessment activities of RECOVER; instructions for identifying in PIRs the appropriate quantity, timing, and distribution of water to be dedicated and managed for the natural system; and instructions for identifying in PIRs if an elimination or transfer of existing legal source of water will occur as a result of implementation of CERP. The process to develop the Guidance Memoranda, which are required by the Programmatic Regulations, has been a cooperative effort between the federal and state partners. There have been some challenges in getting agreement from all parties, however the six Guidance Memoranda are expected to be completed and approved by the end of 2006.

Master Implementation Sequencing Plan. The MISP, which is required by the Programmatic Regulations, was finalized March of 2005. The five-year preliminary draft time bands of the MISP for CERP projects have been incorporated into the Task Force *Strategy* and the IFP. The MISP includes the sequencing and scheduling of all the CERP projects, including pilot projects and operational elements, based on the best scientific, technical, funding, contracting, and other information available. The MISP identifies a framework for restoration of the South Florida Ecosystem by defining the order in which the many projects within the South Florida Ecosystem restoration program will be planned, designed, and constructed. The MISP will be reviewed at least every five years.

Initial CERP Update. Preliminary drafts of the Initial CERP Update were prepared in 2004 and 2005. The USACE and the SFWMD are working through technical issues associated with updating the modeling. This evaluation of the CERP is intended to use new or updated modeling that includes the latest scientific, technical, and planning information. It will occur whenever necessary to ensure that the goals and purposes of the CERP are achieved, but not any less often than every five years. As part of these evaluations the USACE and the SFWMD shall determine the total quantity of water that is expected to be generated by the plan, including the quantity expected to be generated for the natural system to attain the Task Force strategic goals, as well as the quantity expected to be generated for use in the human environment.

The Comprehensive Everglades Restoration Plan 2005 Report to Congress. This report is the first in a series of periodic reports fulfilling requirements of WRDA 2000. This Report provides members of Congress and other interested parties with an update on the progress of the CERP over the first five-year period of its implementation. It is submitted jointly by the Secretary of the Army and the Secretary of the Interior. The report summarizes the progress made to date and the accomplishments expected over the next five years. Expenditures for the first five years are included, along with forecasts for funding requirements for the next five years.

CERP Interim Goals and Targets

The Programmatic Regulations require the

establishment of interim goals to provide a means for evaluating restoration success of the CERP at specific time intervals during implementation, and the establishment of interim targets to evaluate progress in providing for other water-related needs of the region. The interim goals and targets are to be consistent with each other.

In October 2002 a RECOVER subteam developed a process for identifying and establishing numeric measures for indicators of ecosystem restoration (referred to as interim goals) and measures for indicators of other water-related needs (referred to as interim targets). In February 2003 the subteam published *Proposed Indicators for Interim Goals and Interim Targets for the CERP*. Because of the importance placed on the interim goals in WRDA 2000 and the CERP Programmatic Regulations, the RECOVER subteam determined that the proposed indicators and the methods for setting specific goals and targets should be vetted through a public and agency review process and submitted to an independent peer review panel.

RECOVER's recommendations for interim goals and interim targets were transmitted to the DOI, the USACE, and the State of Florida in February 2005 and were peer reviewed in June 2004. The RECOVER Team's *Recommendations for Interim Goals and Interim Targets for the Comprehensive Everglades Restoration Plan* describes twenty-two hydrologic, water quality, and biological indicators and five indicators for other water-related needs (including water supply and flood protection). Once an Interim Goals Agreement and an Interim Targets Agreement are executed, the indicators contained within will be used for assessment of CERP projects to support planning and adaptive management. The suite of Task Force System-wide Indicators is intended to be both complementary to CERP indicators and to also assess restoration goals more broadly and cover other non-CERP restoration aspects. However, because the Task Force Indicators have been developed in concert with RECOVER, and by continuing to work closely with RECOVER to develop and assess their suite of System-wide Indicators, the Task Force is able to ensure that these indicators are not in conflict with the larger RECOVER sets of indicators¹¹.

¹¹ See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section II.B.5.

CERP Adaptive Management Program

This program developed by the USACE and the SFWMD, in consultation with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the USEPA, the U.S. Department of Commerce, and other federal, state, and local agencies, will assess responses of the South Florida Ecosystem to implementation of the CERP. Periodic CERP updates will ensure that the goals and purposes of the plan are being achieved. A CERP *Adaptive Management Strategy* was submitted by RECOVER to the agencies in April 2006. A final draft *Adaptive Management Implementation Guidance Manual* is anticipated to be completed in August 2006.

CERP Monitoring and Assessment Plan

The *CERP Monitoring and Assessment Plan (MAP)* is the primary tool by which the RECOVER program will assess the performance of the CERP. Part one (February 2004) describes the monitoring components and supporting research of the MAP and summarizes the assessment process. Part two, the *Assessment Strategy for the MAP* (final draft April 2006), fully describes an assessment process for interpreting the information to be collected under the plan.

The overarching goal for implementation of the MAP is to have a single, integrated, system-wide monitoring and assessment plan that will be used and supported by all participating agencies and tribal governments as the means of tracking and measuring the performance of the CERP. The four broad

objectives for the MAP are to:

- Establish a pre-CERP reference state (“baseline”), including variability for each of the performance measures
- Assess system-wide responses of the ecosystem to CERP implementation
- Detect unexpected responses of the ecosystem to changes in stressors resulting from CERP activities
- Support scientific investigations designed to increase ecosystem understanding, establish cause-and-effect relationships, and interpret unanticipated results

The first assessment report, termed a *System Status Report*, which reports on baseline data collected since the MAP’s implementation, is anticipated to be completed in the fall 2006.

Independent Scientific Review

On June 14, 2004, the DOI, the USACE, and the SFWMD signed an intergovernmental agreement to engage the National Academy of Science (NAS) in the implementation of Everglades restoration. This agreement addresses requirements established by the Programmatic Regulations (33CFR Part 385). The NAS have convened an Independent Science Review Panel composed of a diverse team of internationally recognized experts in restoration science who have begun their work during seven meetings around the country during this reporting period. Their first report is anticipated in September 2006.

GOAL I ACCOMPLISHMENTS: GETTING THE WATER RIGHT

The first strategic goal of the Task Force focuses on the lifeblood of the Everglades: water. The Task Force has adopted the following for this goal:

GOAL I: GET THE WATER RIGHT

Subgoal I-A: Get the hydrology right

Objective 1-A.1: Provide 1.8 million acre-feet of surface water storage by 2036

Objective 1-A.2: Develop aquifer storage and recovery systems capable of storing 1.5 billion gallons per day by 2030

Objective 1-A.3: Modify 345 miles of impediments to flow by 2020

Subgoal I-B: Get the water quality right

Objective 1-B.1: Construct 91,345 acres of stormwater treatment areas by 2035

Objective 1-B.2: Prepare locally-based plans to reduce pollutants as determined necessary by the total maximum daily loads by 2011

The major projects planned to meet these objectives are listed in the Task Force *Strategy* in part one of this volume (*Coordinating Success*), along with a schedule for their implementation. The projects or activities that were ongoing or completed during the July 2004 – June 2006 reporting period are described below in the context of progress toward meeting each of the Task Force objectives. The Critical Restoration Projects and Acceler8 contribute to various objectives but are grouped together in this *Biennial Report* to provide an overview of the progress associated with these early efforts.

ACCELER8 Program

The Acceler8 Program began on October 1, 2004 as an effort to expedite several Everglades restoration projects. The projects range in construction value from \$14 million to \$480 million¹². Several of the projects include multiple components or sub-projects for a total of 18 independent projects. This initiative expects to expend over \$1.5 billion in additional state funds above the \$200 million per year already planned for CERP. The goal of the Acceler8 initiative is to complete the design and construction of the identified projects by 2011. It is anticipated that through close coordination with federal agencies the

state will design and construct Acceler8 projects that are consistent with all or part(s) of the recommended plan for the corresponding CERP components. It is also anticipated that Acceler8 projects that are consistent with CERP recommended plans will be proposed to Congress for crediting authorization.

The design phase is complete for four projects and these projects currently are under construction. Design of the remaining projects is ongoing with overall progress at approximately 32 percent complete. Several projects will be constructed in phases with scheduled construction start dates between July and September, 2006. Design of these early phases is nearing completion.

Permits have been received for all construction currently underway. Permit applications have been submitted for upcoming construction and are in the review and approval stage of the permitting process.

The four projects currently under construction are approximately 28 percent complete. All four projects are on schedule. In order to guide final design, minimize risk, minimize cost, and maximize efficiency for the reservoir and impoundment projects, three sets of full-scale test cells are included as part of the Acceler8 Program. Construction and testing of one set of test cells located at the Everglades Agricultural Area (EAA) Reservoir site is complete. Construction of test cells at the C-44 Reservoir and C-43 Reservoir sites will be completed by the end of June 2006. Monitoring and testing will be complete in mid-2007.

To date (June 2006), construction of the initial phase of the EAA Compartment B Stormwater Treatment Area (STA) Cell 4 project is complete. The remainder of STA Cell 4 and three other projects are under construction: EAA Compartment C STA 6 Section 2, Compartment C STA 5 Flowway 3, and Compartment C USSC C-139 Annex Pump Station.

¹² See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section II.B.6.

Everglades Forever Act

In March 2003 the SFWMD presented a conceptual plan for achieving long-term water quality goals, the district strategy for meeting water quality standards. During the 2003 legislative session, the Everglades Forever Act was amended to include reference to the SFWMD Long-Term Plan as the Best Available Phosphorus Reduction Technology. The amended act required the SFWMD to implement the Long-Term Plan without delay. In July 2003 the DEP proposed a rule establishing a long-term geometric mean of 10 parts per billion (ppb) with associated natural variability as the numeric phosphorus criterion for class III waters in the Everglades Protection Area (EPA)¹³. The rule also establishes moderating provisions for permits authorizing discharges into the EPA in compliance with water quality standards, including the numeric phosphorus criterion and a method for determining achievement of the numeric phosphorus criterion. The rule also establishes moderating provisions authorizing discharges above the criterion, provided measures are taken to implement the best available phosphorus reduction technologies and a compliance methodology for determining achievement of the criterion. The rule was submitted to the USEPA for approval. The USEPA approved the rule, with the exception of one provision, in January 2005. The DEP initiated rulemaking to revise the rule and the revised rule was adopted by the Florida Environmental Regulation Commission in May 2005. The revised rule was submitted to the USEPA in June 2005 and approved by the USEPA in July 2005.

Critical Restoration Projects

The progress made on the nine Critical Restoration Projects authorized under WRDA 1996 to produce immediate, substantial, and independent benefits prior to the CERP is summarized below. Seventy-five million dollars in federal funds was authorized for appropriation to be matched by local sponsors, while the maximum federal expenditure on any one project was capped at \$25 million. To assist with implementation of these Critical Projects, \$7 million in federal funds for land acquisition was transferred to the state through a grant administered by the DOI. Under current federal appropriation authority, federal contributions will not be sufficient to share construction costs with the SFWMD on Southern Corkscrew Regional Ecosystem Watershed (CREW),

Lake Trafford, and Tamiami Trail Culverts. The SFWMD is proceeding with construction on all or a portion of these projects with its own funding. Recently introduced WRDA bills include language that would raise the federal program cap from \$75 million to \$95 million and the per-project cap from \$25 million to \$30 million. Raising federal contribution caps on the program and its projects would allow the USACE to share increased project costs.

Western C-I I Basin Water Quality Treatment

Construction of the S-9A pump station was previously completed. Construction for S-381 was completed in 2005. During nonflood conditions, these new features will separate seepage from stormwater runoff, allowing the return of seepage waters to WCA-3A.

Seminole Big Cypress Reservation Water Conservation Plan

Construction of the conveyance canal system on the east side of the reservation (Phase I) was completed in May 2004. Canal pump stations will connect this conveyance canal system to the North Feeder Canal system. The USACE completed the designs for Phase II in April 2004 and plans to award contracts to construct by September 2006. This project will enhance the Big Cypress Reservation's water storage capacity, improve wetland hydrology, enhance flood protection, and reduce the concentration of phosphorus from water flowing off reservation lands. Outflows from the project will be routed southward and to the current West Feeder Canal system on the reservation to rehydrate the undeveloped native area and the Big Cypress National Preserve.

Lake Okeechobee Water Retention/Phosphorus Removal

Construction of the Taylor Creek and Nubbin Slough STAs was completed in 2006. This project reestablished wetlands that were previously drained for agriculture and constructed STAs to reduce phosphorus loading to Lake Okeechobee.

¹³ See Appendix C Additional View of the Miccosukee Tribe "Putting the Everglades back into Everglades Restoration." Section II.A.2 and 3.

Ten Mile Creek Water Preservation Area

A ribbon-cutting ceremony was held in April 2006 celebrating the completion of this reservoir and associated STA. Detailed monitoring of the reservoir will give practical information about how well the reservoir can capture nutrients on its own, prior to treatment in the STA, and about fish and wildlife use of the reservoir and whether species can persist under the greatly fluctuating hydrologic regime. This project will attenuate flows and improve water quality to the St. Lucie Estuary and Indian River Lagoon.

Lake Trafford Restoration

The Lake Trafford Restoration Project was initiated in 2004. The containment facility and dredging have been completed. This project will improve water quality and enhance fish and wildlife habitat in Lake Trafford by removing approximately 2.85 million cubic yards of organic sediments that blanket the bottom of the lake. The cost estimates for completion of this project in combination with the other eight Critical Projects exceed the USACE appropriation cap for the Critical Projects (\$75,000,000) set by WRDA 1996. The SFWMD assumed 100% of the cost of detailed design and construction with the intent of receiving credit and/or reimbursement from the USACE if Congress authorizes an increase in the federal cap for Critical Projects.



Tamiami Trail Culverts

Construction of the western portion of the project (Phase I), located south of the Picayune Strand (Southern Golden Gate Estates) Restoration Project, started in June 2004 and was completed in March 2006. Implementation was accomplished with SFWMD (culvert construction) and Florida Department of Transportation (road resurfacing) funds. Construction of the eastern portion of the project (Phase II) is dependent upon additional

funding. For purposes of improving water quality, this project will help restore more natural hydropatterns and improve sheetflow of surface water within the Ten Thousand Islands National Wildlife Refuge, Rookery Bay Estuarine Research Reserve and Aquatic Preserve, Big Cypress National Preserve, and Everglades National Park (ENP). The cost estimates for completion of this project in combination with the other eight Critical Projects exceed the USACE appropriation cap for the Critical Projects (\$75,000,000) set by WRDA 1996. Congress is considering draft legislation that would raise the cap so that this project may move forward with federal cost-share.

Southern CREW Addition/Imperial River Flowway

This project was approximately 80 percent complete at the end of the reporting period, with construction proceeding. Land acquisition is on hold pending DOI review and approval of an application and grant cost-share agreement submitted by SFWMD under which the DOI would provide matching funds for acquisition of the lands needed for this project. This project will restore historical sheetflow in the project area, reduce freshwater discharges to Estero Bay during the rainy season, reduce loading of nutrients to the Imperial River and Estero Bay, and reduce flooding of homes and private lands west of the project area. The cost estimates for this project in combination with the other eight Critical Projects exceed the USACE appropriation cap for the Critical Projects (\$75,000,000) set by WRDA 1996. Congress is considering draft legislation that would raise the cap so that this project may move forward with federal cost-share.

Previously Completed Critical Projects

Two of the Critical Projects were completed during the previous reporting period. The user's manual for the *Florida Keys Carrying Capacity Study* was made available in March 2003. The manual provides local planners and decision-makers with an impact assessment model and planning tool to determine if and how their comprehensive plans should be amended. Additionally, construction of the *East Coast Canal Structures (C-4 Structure)* was completed in July 2003 and the project is now operational. This project will help reduce seepage losses from the Everglades, increase aquifer recharge, and enhance habitat in the Pensucco Wetlands.

Objective 1-A.1: Provide 1.8 million acre-feet of surface water storage by 2036

At the end of the reporting period, six of the projects contributing to objective 1-A.1 were underway, along with a technology pilot to determine the feasibility of the two Lake Belt storage projects, and the Ten Mile Creek project was completed.

Everglades Agricultural Area Storage Reservoir, Phase I

The preliminary survey and geotechnical work on the expedited reservoir was completed in May 2004.

Thirty percent design commenced in June 2004 with a restoration endpoint finish date of February 2005. In late April 2004, the U.S. Sugar Corporation agreed to vacate leased, state-owned land (former Talisman Sugar Company property) just south of Lake Okeechobee, allowing the SFWMD to expedite work on this large reservoir and stormwater treatment area. Work on the PIR is proceeding.

C-43 Basin Storage Reservoir and Aquifer Storage and Recovery

The SFWMD initiated the 30 percent design of the reservoir at Berry Groves during the prior reporting period. Subsequent technical uncertainties with associated potentially high rates of seepage are currently being investigated with the construction of two test cells on-site employing a variety of seepage barrier technologies. The results of this pilot project, along with the Aquifer Storage and Recovery (ASR) Regional Study, will form the basis for future feasibility studies or PIRs concerning high-capacity ASR.

Lake Belt In-Ground Reservoir Technology Pilot

Work on this project is currently suspended as of June 3, 2006 due to resource constraints. A site (“North Stairstep”) with similar geology to the full-scale in-ground reservoir site was selected to test whether installing a barrier around a rock-mined area used as a reservoir can adequately protect against potential adverse impacts associated with seepage. The technology pilot is required to determine whether the two full-scale Lake Belt Storage Area CERP components can be successfully constructed and

operated to supply environmental and water supply deliveries.

Indian River Lagoon South

The *Indian River Lagoon Feasibility Study* was completed in October 2002 and the final PIR for the Indian River Lagoon (IRL) Project was published in the *Federal Register* on May 7, 2004. During this reporting period, the Chief’s Report was approved August 6, 2004 and the Record of Decision was signed November 2005. It currently awaits Congressional authorization. The project will also restore approximately 90,000 acres of wetland/upland mosaic and 4,000 acres of estuary within the St. Lucie River and Southern IRL.

The Loxahatchee Impoundment Landscape Assessment

The U.S. Fish and Wildlife Service (FWS) has a cooperative agreement with the SFWMD to conduct long-term research on two impoundments on the Arthur R. Marshall Loxahatchee National Wildlife Refuge (NWR). This research is needed to inform the development of several CERP performance measures of a healthy South Florida Ecosystem. The Loxahatchee Impoundment Landscape Assessment (LILA) was constructed to include the key Everglades landscape features: tree islands, sawgrass ridges, and open-water sloughs. Since June 1, 2004 LILA has served as a research platform used to explore the response of those landscapes as well as wading birds to differing hydrologic regimes. The Biennial Report Table 2 outlines the projects and investigators that have conducted research in LILA during the time covered in this report.

Lake Okeechobee and Estuary Recovery Plan

During the Reporting Period, the state initiated LOER, a comprehensive plan consisting of a combination of capital projects and numerous interagency initiatives designed to provide measurable and meaningful improvements to water quality and water quantity in Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. Key state agencies charged with carrying out the plan include the SFWMD, the DEP, the Florida Department of Agriculture and Consumer Services (DACS), and the Florida Department of Community Affairs (DCA). Components of the plan that will improve hydrology include revisions to the Lake Okeechobee regulation schedule, evaluation of alternative storage and/or

Biennial Report Table 1 – Surface Water Storage

1-A.1 Table reflects June 2006 Status of the Projects to Provide 1.8 million Acre-Feet of Surface Water Storage by 2036				
Project ID	Project Endpoint	Project Name	Output (acre-feet)**	Status
1101	2025	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs, and C-44 Basin Storage Reservoir (CERP Project # WBS 07)	165,000	Underway
1102	2015	C&SF: CERP Everglades Agricultural Area (EAA) Storage Reservoir (CERP Project # WBS 08 and 09)*	360,000	Underway
1104	2015	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)	250,000	Underway
1105	2040	C&SF: CERP North Lake Belt Storage Area (CERP Project # WBS 25)	90,000	
1106	2020	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (CERP Project # WBS 20 and 21)	20,000	
1107	2025	C&SF: CERP Site 1 Impoundment and Aquifer Storage and Recovery (CERP Projects # WBS 22 and 40)	13,280	Underway
1109	2020	C&SF: CERP C-43 Basin Storage Reservoir and ASR (CERP Project # WBS 04 and 05)	160,000	Underway
1110	2040	C&SF: CERP Central Lake Belt Storage Area (CERP Project # WBS 26)	190,000	
1111	2006	Critical Ecosystem Restoration Projects – Ten Mile Creek	6,000	Complete
1112	2010	LOFT (Identified under LOER) – Taylor Creek Reservoir	32,000	
1113	2020	C&SF: CERP WPA Conveyance (CERP Project # WBS 49)	90,000	
1114	2020	C&SF: CERP ENP Seepage Management (CERP Project # WBS 27 & 43)	11,500	
1501	2009	C&SF: CERP Broward County WPA – C-9 STA/Impoundment, Western C-11 Diversion Impoundment and Canal, and Water Conservation Areas 3A and 3B Levee Seepage Management (CERP Project # WBS 45)	13,280	
1503	2020	C&SF: CERP North Palm Beach County PIR Part 1 (CERP Project # WBS 17)	48,000	
2100	TBD	Allapattah Flats/Ranch	32,000	Underway
* Some projects have been combined with others since 2004.				
** The outputs listed in Biennial Report Table 1 and the measures and restoration endpoints in Appendix A (the Integrated Financial Plan Summary Table) reflect the strategic goals and are not intended to function as an allocation or reservation of water, which must be implemented through applicable law.				

Biennial Report Table 2 – Research conducted at LILA

(June 2004 to June 2006)				
Title of Research Project	Tree Island Seedling Analysis	The Response of the Slough Crayfish to Water Recession	Prey Vulnerability to Avian Predation	Measurement of Flock Transport in the Everglades
Organization Affiliation of Researchers	Iowa State University	South Florida Water Management District	Florida Atlantic University	South Florida Water Management District

disposal options for excess surface water in the watershed, implementation of growth management programs encouraging innovative land use planning, revisions to Environmental Resource Permit criteria for new development, implementation of growth management programs encouraging innovative land use planning, elimination of land application of wastewater treatment residuals, and full implementation of the Lake Okeechobee Protection Program (LOPP).

The excessive loads of phosphorus to Lake Okeechobee originate from agricultural and urban activities that dominate land use in the watershed. Total phosphorus (TP) loading averages more than four times higher than the recently established Total Maximum Daily Load (TMDL) considered necessary to achieve the target in-lake TP goal of 40 ppb. The loadings from Water Year¹⁴ (WY) 2005 were extremely high, at 950 metric tons (mt) of phosphorus, and directly related to the exceptional 2004 summer season that included three hurricanes (Charley, Frances, and Jeanne), and the remnants of a fourth (Hurricane Ivan), which impacted the Lake Okeechobee watershed. Large amounts of phosphorus-laden sediments were resuspended from the central region of the lake and distributed throughout the lake. The high water levels and high suspended sediments resulted in reduced light availability within the lake's nearshore and littoral zones that resulted in a significant decline of submerged aquatic vegetation (SAV). Efforts were made to reduce water levels in the lake by constant discharges into the St. Lucie and Caloosahatchee Rivers from September to mid-November 2004.

Although there is a long history of regulatory and voluntary incentive-based programs to control phosphorus inputs to Lake Okeechobee, there has not been any substantial reduction in loading during the last decade. Consequently, the lake continues to exhibit signs of hyper-eutrophication, including blooms of noxious blue-green algae (cyanobacteria), loss of benthic invertebrate diversity, and spread of cattail (*Typha* spp.) in shoreline areas. The response of the lake to load reductions, when they occur, is expected to take 20 to 30 years because of an internal

sediment buffer. However, new technologies for targeted sediment removal are being investigated due to hurricane impacts and heightened concerns about in lake sediment resuspension.

In August 2004, there were 54,857 acres of SAV in Lake Okeechobee, the maximum coverage encountered since annual mapping surveys were instituted in 1999. The impacts of Hurricanes Frances and Jeanne, which included storm surges (seiches) of up to 10 feet, wind-driven waves, strong currents, and a rapid increase in lake stage, resulted in immediate uprooting and damage to much of the lake's emergent and submerged aquatic vegetation. Ongoing research using models, laboratory studies, and monitoring of SAV beds in Lake Okeechobee will aid in the assessment of long-term impacts of these storms on lake recovery and management of lake levels.

Independent of the extraordinary events of September 2004, the SFWMD and USACE are in the process of refining the operating schedule for the lake, developing release rules that will be more favorable to maintaining its long-term ecological health, and reducing large discharges to downstream ecosystems while also reducing the impact on water supply. Until there are large alternative storage projects, this will be a difficult balancing act. Because the lake receives water from a large watershed, it provides the main source of irrigation water in drought and its major outlets are to estuarine systems that are impacted by large releases of fresh water.

Restoration of natural habitats for fish and wildlife continues following the removal of the 4.84 miles of perimeter agricultural berms surrounding Ritta Island at the south end of the lake. This restoration was fulfilled by the removal of exotic vegetation and backfilling the adjacent ditches with the berm material to reestablish natural hydrologic connections between the island's wetland habitat and the lake. A 100-acre section of degraded wetland on Torry Island, which was replanted in native pond apple as part of this restoration effort, was destroyed by the recent hurricane events.

¹⁴ A "water year" is from May 1 through April 30 of the following calendar year. This period is used instead of calendar year because it more closely matches South Florida weather patterns – wet season and dry season.

Objective 1-A.2: Develop aquifer storage and recovery systems capable of storing 1.5 billion gallons per day by 2030

At the end of the reporting period, two of the projects were underway and two were scheduled in later bands.

Aquifer Storage and Recover Projects

The design and permitting of the Hillsboro ASR Pilot Project was finalized and a surface facility construction contractor was procured by the SFWMD. It is anticipated that construction of that system will commence in August 2006. The design and permitting of the Kissimmee River ASR Pilot project was also finalized and the procurement of a surface facility construction contractor was initiated by the USACE. The exploratory program at the Caloosahatchee ASR Pilot Project indicated that the Floridan aquifer might not yield water at the quantities anticipated by the CERP, so the design was frozen and additional deep geotechnical investigations at Berry Groves were initiated.

Tasks completed for the ASR Regional Study included geophysical surveys of Lake Okeechobee, a well siting evaluation, development of a preliminary

hydrogeologic framework in association with the U.S. Geological Survey (USGS), an engineering assessment of the potential to induce formation fracturing, and an evaluation of modeling codes for development of Floridan aquifer groundwater model(s) to evaluate the potential regional and local-scale impacts of CERP ASR operation. Baseline water quality and environmental monitoring was initiated at each of the pilot ASR project locations so that the ecological effects of cycle testing can be determined when the pilot projects become operational. An interim report for the ASR Regional Study will be published in mid-2007.

Although ASR has been used for many years, there are some technical uncertainties of using this technology on such a large scale. These uncertainties are being thoroughly researched through the ASR pilot projects currently underway and an ASR Contingency Plan being prepared to identify storage and water supply options should implementation of ASR at the scale envisioned in CERP not be possible.

Lake Okeechobee and Estuary Recovery Plan

Feasibility studies for deep well injection and re-activation of the Taylor Creek ASR well will begin in June 2006. Siting evaluations and conceptual design for a Brighton Reservation ASR well and a 10 well Okeechobee system will also begin in June 2006.

Biennial Report Table 3 – ASR Water Storage

1-A.2 Table reflects June 2006 Status of the Projects to Develop Aquifer Storage and Recovery Systems Capable of Storing 1.5 Billion Gallons per Day by 2030				
Project ID	Project Endpoint	Project Name	Output (Billion gpd)**	Status
1106	2020	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (CERP Project # WBS 21)	.075	
1109	2020	C&SF: CERP C-43 Basin Storage Reservoir and ASR (CERP Project # WBS 05)	.220	Underway
1200	2020	C&SF: CERP North Palm Beach – Part 2 (CERP Project # WBS 18)	.170	
1201	2030	C&SF: CERP Lake Okeechobee ASR (CERP Project # WBS 03)	1	Underway

**The outputs listed in Biennial Report Table 3 and the measures and restoration endpoints in Appendix A (the Integrated Financial Plan Summary Table) reflect the strategic goals and are not intended to function as an allocation or reservation of water, which must be implemented through applicable law.

Objective 1-A.3: Modify 345 miles of impediments to flow by 2020

At the end of the reporting period, one of the projects contributing to objective 1-A.3 was completed and the rest were underway.

Foundation Projects

Kissimmee River Restoration Project

Approximately 12,000 acres of river floodplain and wetlands were reestablished as a result of continuous flows being restored along a 15 mile section of the river during the reporting period (following the backfilling of 7 miles of the C-38 in 2001). All 102,061 acres needed for restoration have been acquired.

The project, which is being jointly implemented and cost-shared by the SFWMD and the USACE, will eliminate two major water control structures and restore over 40 square miles of river/floodplain ecosystem, including 43 miles of meandering river channel and 27,000 acres of wetlands. Upon completion of the construction phase, a five year comprehensive restoration evaluation study is required to be performed by the SFWMD to determine the success of restoration and allow for adaptive management of the system. River floodplain conditions are expected to stabilize in 2017.

In addition, the SFWMD, in cooperation with the USACE and many other local, state, and federal entities and with public input, is developing a Kissimmee Watershed Operational Modeling Study to better balance the Upper and Lower Kissimmee Basins resource needs for the Kissimmee Chain of Lakes and the Kissimmee River restoration; maintain existing levels of service for flood control; determine water supply availability; and create a coordinated and adaptive operations plan for the Kissimmee Watershed.

Modified Water Deliveries to Everglades National Park Project

This project was initially authorized by the ENP Protection and Expansion Act in 1989 to improve water deliveries to the expanded ENP. It was also intended to benefit the Everglades wetlands in WCA 3A and WCA 3B. Due to concerns over delays and the development of the larger CERP in WRDA 2000, Congress made the appropriation of funds for construction of components of the CERP WCA-3 Decompartmentalization and Sheetflow Enhancement Project and the Central Lakebelt Storage Project contingent on the completion of the MWD¹⁵.

¹⁵ See Appendix C Additional View of the Miccosukee Tribe “Putting the Everglades back into Everglades Restoration.” Section II.B.1, 3 and 4.

Biennial Report Table 4 – Impediments to Flow

1-A.3 Table reflects June 2006 Status of the Projects to Modify 345 Miles of Impediments to Flow by 2020				
Project ID	Project Endpoint	Project Name	Output (miles modified)	Status
1300	2010	Canal 111	4.75	Underway
1301	2020	C&SF: CERP WCA-3 Decompartmentalization and Sheetflow Enhancement (CERP Projects # WBS 12, 13, and 47)	240.00	Underway
1302	2015	C&SF: CERP Florida Keys Tidal Restoration (CERP Project # WBS 31)	0.60	Underway
1303	2005	Critical Projects Southern CREW		Completed
1304	2012	East WCA-3A Hydropattern Restoration	8.50	Underway
1305	1997	Kissimmee Prairie	39.30	Completed
1306	2010	Kissimmee River Restoration Project	31.00	Underway
1307	2009	Modified Water Deliveries to Everglades National Park	21.00	Underway



The Final General Reevaluation Report and Supplemental Environmental Impact Statement for the Tamiami Trail modifications component of the MWD Project was completed in November 2005. The Record of Decision was signed in January 2006 and a real estate supplement was prepared in March 2006. The selected plan (Alternative 14) includes constructing approximately three miles of bridges and raising the remaining road to allow conveyance of higher water stages expected to occur under the CSOP for the MWD ENP and C-111 projects. The western bridge (two miles) starts approximately one mile east of S-333. The eastern (one mile) bridge ends approximately one mile west of S-334. The USACE has initiated design of the bridges and road raising and has completed the initial geotechnical investigation and boundary surveys. In addition, the USACE constructed the 500 cfs (cubic foot per second) temporary S-356 pump station and removed four miles of the L-67 extension levee. The S-333 pump station modifications construction contract is scheduled to be awarded in late FY 2006.

The USACE completed engineering and design for the 8.5 Square Mile Area Alternative 6D features (pump station S-357, a seepage canal and levee, and an STA) in May 2004. The construction contract bid solicitation closed in July 2005 and was awarded in September 2005. Construction began in November 2005 and is scheduled for completion in March 2007. Of the 842 tracts of land required for the project, 695 have been acquired. Remaining real estate acquisitions require orders of possession and are scheduled for completion by September 2006. Demolition of structures on tracts of land owned by the government within the construction footprint was 78 percent complete at the end of the reporting period.

Canal 111 Project

The land exchange for this project of approximately 1,000 acres between ENP and the SFWMD was approved by Congress and executed in 2005. The USACE will prepare an Integrated CSOP Decision Document with Environmental Impact Statement (EIS) for the MWD ENP and C-111 projects to authorize extending the S-332B North detention area. This extension will increase the S-332B North detention area and contain discharges of the 8.5 Square Mile Area STA component of the MWD ENP. The C-111 Project will help restore flows to Taylor Slough, reduce damaging discharges to Florida Bay, and maintain drainage.

Other Related Hydrology Projects

Seepage Management Pilot

The purpose of this project is to investigate seepage management technologies to control seepage from ENP and to provide necessary information to determine the appropriate amount of wet season groundwater flow to return to the park while minimizing potential impacts to Miami-Dade County's west wellfield and freshwater flows to Biscayne Bay. In early 2005, after further study of the L-31 North site, it was determined that a seepage management feature located along L-31 North would reduce some seepage, but due to modifications under CERP (ENP Seepage Management Project) it would be less useful for long term effects. Therefore, the project team was asked to review seepage management on the L-30. The team is in the process of developing the Pilot Project Design Report. They are using as much information as possible from the investigations done on the L-31 North site and are collecting some additional data on the L-30 site.



Objective 1-B.1: Construct 91,345 acres of stormwater treatment areas by 2035

At the end of the reporting period, five of the projects contributing to objective 1-B.1 were completed, and ten were underway.

Everglades Construction Project

As of June 2006, over 35,000 acres of STAs had been constructed by the SFWMD. Almost 30,000 acres were in flow-through operation and removing total phosphorus that otherwise would have gone into the EPA. During WY 2005, STA-1W, STA-2, STA-3/4, STA-5, and STA-6 Section 1 removed more than 189 metric tons of total phosphorus, bringing the total removal to over 617 tons since 1994. Inflow concentrations averaged 147 ppb, while the outflow concentrations averaged 41 ppb¹⁶. STA performance varied, ranging from 13-20 ppb for STA-2, STA-3/4, and STA-6, to 81 ppb for STA-5, and to 98 ppb for STA-1W. Portions of the stormwater treatment areas were being managed for SAV, and the remainder for cattails and other emergent vegetation. The STAs sustained damages from two hurricanes in 2004, and portions of the STAs were undergoing major enhancement projects during WY2005. Both of these factors contributed to the less than optimal performance observed in the WY2005 STA performance data. Everglades restoration is now focused on developing biologically based (“green”) technologies to the maximum extent possible. This approach is based on manipulating hydrology together with selective vegetation management to create a wetland plant community dominated by emergent plants, SAV, or periphyton (algae). Research has indicated that SAV and periphyton-based STAs (PSTA) have the potential to reach restoration endpoint total phosphorus levels on a consistent basis. One scenario for improving performance in the STAs envisions that these wetlands would be reconfigured internally to contain sequences of cells dominated by emergent plants followed by cells dominated by SAV. Another possible scenario would sequence cells dominated by emergent plants followed by SAV followed by PSTA. The SFWMD and the DEP will continue to investigate ways to exploit green technologies for use in Everglades restoration.

The most significant milestone during this last reporting period was completion of construction of STA-1E and the initiation of flow-through for two of the flow-ways. The Everglades Forever Act (EFA) and National Pollutant Discharge Elimination System (NPDES) final permits were issued by the DEP on August 30, 2005. On September 20, 2005, DEP officially concurred with the SFWMD’s submittal which documented that start-up compliance tests for phosphorus and mercury, as outlined in the EFA and NPDES permits, were achieved for the western (treatment cells 5, 6, and 7) and central flow-ways (treatment cells 3, 4N, and 4S) of STA-1E. The eastern flow-way, representing about 20% of the treatment area, currently remains off-line and is under the control of the USACE for a PSTA demonstration project. The construction and monitoring of a PSTA demonstration project by the USACE will limit the hydraulic and treatment capacity of STA-1E through at least October 2008, subject to delays due to weather and other external conditions. After completion of the demonstration project, an undetermined amount of time will be required to remove the test cell levees and structures, and return the eastern flow-way to full flow capability. The Corps has provided no schedule indicating when the eastern flow-way will achieve net improvement following the completion of the PSTA demonstration project. For the purpose of forecasting a performance schedule, it is assumed that flow-through in the eastern flow-way will occur by June 2009; the actual time frame is subject to vegetation establishment and other factors outside the control of the SFWMD.

Lake Okeechobee and Estuary Recovery Plan

In addition to the water quantity projects detailed under objective 1-A, LOER will accomplish multiple improvements to water quality in the region as well. The SFWMD completed design of an 800 acre expansion of the Nubbin Slough STA which is anticipated to remove about 15-16 metric tons of phosphorus per year. Construction activities will commence in the fall of 2006. A Basis of Design Report has been initiated for the Lakeside Ranch STA and two associated projects which will re-route water from the S-154 and S-133 Basins to the Lakeside Ranch STA. The Lakeside Ranch STA will be approximately 2,700 acres and will remove about 39-48 metric tons of phosphorus per year.

¹⁶ See Appendix C Additional View of the Miccosukee Tribe “Putting the Everglades back into Everglades Restoration.” Section II.A.6.

Biennial Report Table 5 – Acres of Stormwater Treatment Areas

1-B.1 Table reflects June 2006 Status of the Projects to Construct 91,345 Acres of Stormwater Treatment Areas by 2035				
Project ID	Project Endpoint	Project Name	Output (acres)	Status
1101	2025	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs and C-44 Basin Storage Reservoir (CERP Project # WBS 07)	6,200	Underway
1104	2015	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)	11,875	Underway
1110	2035	C&SF: CERP Central Lake Belt Storage Area (CERP Project # WBS 26)	640	
1112	2010	LOFT (Identified under LOER) - Taylor Creek Reservoir	4,000	
1500	2025	C&SF: CERP Big Cypress/L-28 Interceptor Modifications (CERP Project # WBS 10)	1,900	
1501	2009	C&SF: CERP - Broward County WPA - C-9 STA/ Impoundment, Western C-11 Diversion Impoundment and Canal, and WCAs 3A and 3B Levee Seepage Management (CERP Project # WBS 45)	3,500	Underway
1502	2020	C&SF: CERP Miccosukee Tribe Water Management Plan (CERP Project # WBS 90)	900	Underway
1503	2020	C&SF: CERP North Palm Beach County PIR Part 1 (CERP Project # WBS 17)	1,150	Underway
1505	2020	C&SF: CERP Caloosahatchee Backpumping with Stormwater Treatment (CERP Project # WBS 06)	5,000	Underway
1506	2006	Critical Projects: Lake Okeechobee Water Retention/Phosphorus Removal	940	Underway
1508	2000	STA-1 West Works and Outflow Pump Station (G-310)	6,700	Completed
1509	2000	STA-2 Works and Outflow Pump Station (G-335)	6,430	Completed
1510	2005	STA-3/4 Works	16,600	Completed
1511	2005	STA-5 Works	4,118	Completed
1512	2006	STA-6 (includes sections 1 and 2)	2,222	Section 1 completed
1513	2008	C&SF: STA-1E/C-51 West	6,500	Underway
1514A	2010	ACCELER8 Project Includes Everglades Agricultural Area (EAA) Stormwater Treatment Areas (STAs) Expansion	5,960	Underway
1515	2009	LOFT (Identified under LOER) - Lakeside Ranch STA	2,700	
1516	2007	LOFT (Identified under LOER) - Nubbin Slough STA Expansion	800	
1517	2009	C&SF: CERP C-111 Spreader Canal (CERP Project # WBS 29)	3,200	
1518	2015	Henderson Creek/Belle Meade Restoration (CERP Project # WBS 93)	10	Underway

Objective 1-B.2: Prepare locally-based plans to reduce pollutants as determined necessary by the total maximum daily loads by 2011

By the end of the reporting period, the project contributing to objective 1-B.2 was underway.

Total Maximum Daily Loads

The Watershed Restoration Act and the rules DEP has subsequently adopted are intended to identify Florida’s surface waters impaired by pollutants; establish scientifically-based pollutant reduction objectives (TMDLs); develop locally-based plans to reduce pollutants as determined necessary by the TMDL; and promote the physical and financial mechanisms necessary to implement those plans.

DEP has developed a phased approach to implementing the law. DEP’s comprehensive “watershed management” strategy views the state based on its natural boundaries, like river and estuary

basins, rather than political boundaries. These naturally bounded areas have been organized into five “groups” of basins. In 2000, DEP began addressing the first group of basins (Group 1) and continues to initiate activities in a new group (Groups 2 through 5) each year over a five-year cycle to cover the entire state. The five-year cycle will then begin again in the Group 1 basins and continue through Groups 2-5 to re-evaluate the status of impaired waters, determine the successes and problems associated with ongoing activities, make necessary changes, and consider and address new circumstances associated with growth and development. The cycle will be repeated methodically and continuously over time.

The status of TMDLs for waters of the South Florida Ecosystem are located in Groups 1-5 and can be found by visiting:
www.dep.state.fl.us/water/tmdl/index.htm.

[Comprehensive Integrated Water Quality Feasibility Study](#). The USACE and the DEP developed a Project Management Plan for the Comprehensive Integrated Water Quality Feasibility Study in February 2004 and are currently coordinating the cost share agreement.

Biennial Report Table 6 – Plans for Impaired Waters to Comply with TMDLs

1-B.2 Table reflects June 2006 Status of the Project to Prepare Locally-Based Plans to Reduce Pollutants as Determined Necessary by the Total Maximum Daily Loads by 2011				
Project ID	Project Endpoint	Project Name	Output (% of waters having plans)	Status
1600	2011	Total Maximum Daily Load for South Florida		Underway

GOAL 2 ACCOMPLISHMENTS: RESTORING, PRESERVING, AND PROTECTING NATURAL HABITATS AND SPECIES

The second strategic goal of the Task Force concerns natural habitats and species. The Task Force has adopted the following for this goal:

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

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

Objective 2-A.1: Complete acquisition of 5.8 million acres of land identified for habitat protection by 2015

Objective 2-A.2: Protect 20 percent of the coral reefs by 2010

Objective 2-A.3: Improve habitat quality for 2.4 million acres of natural areas in south Florida

Subgoal 2-B: Control invasive exotic plants

Objective 2-B.1: Coordinate the development of management plans for the top 20 south Florida invasive exotic plant species by 2011

Objective 2-B.2: Achieve maintenance control of Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern on south Florida's public conservation lands by 2020

Objective 2-B.3: Complete an invasive exotic plant species prevention, early detection, and eradication plan by 2007

The major projects planned to meet these objectives are listed in the Task Force *Strategy* in part one of this volume (*Coordinating Success*), along with a schedule for their implementation. The projects or activities that were ongoing or completed during the reporting period of July 2004 to June 2006 are described below in the context of progress toward meeting each of the Task Force objectives.

Objective 2-A.1: Complete acquisition of 5.8 million acres of land identified for habitat protection by 2015

By the end of the reporting period, state and federal agencies had acquired a total of approximately 4.9 million acres of land identified for habitat protection. As of June 2006 the state had acquired 3.6 million acres of habitat conservation land in south Florida at a cost of over \$2.3 billion.

Land Acquisition Strategy and Database

The Task Force Land Acquisition Task Team (LATT) updated the 2004 *Land Acquisition Strategy* with 2005 data and the Task Force accepted it on December 7, 2005. The 2006 document is currently being prepared and approval is anticipated by year's end. The associated database includes local government programs, as well as state and federal land acquisition programs, providing a broad picture of the combined effort for conservation and restoration in the South Florida Ecosystem.

The first *Land Acquisition Strategy* was accepted by the Task Force in February 2003. It was developed as a response to a U.S. Government Accountability Office (GAO) recommendation for a land acquisition plan that identifies and prioritizes additional lands needed to achieve restoration goals. The GAO highlighted the importance of acquiring as much land as possible, and quickly, because undeveloped land in south Florida is becoming increasingly scarce and costly.

Habitat Acquisition

The federal, state, and local accomplishments in land acquisition during the reporting period are shown in *Biennial Report* Table 8.

Biennial Report Table 7 – Land Acquisition for Habitat Protection

2-A.1 Table reflects June 2006 Status of the Projects to Complete Acquisition of 5.8 Million Acres of Land Identified for Habitat Protection by 2015					
Project ID	Project Endpoint	Project Name	Total Project Acres	Acres Acquired to Date	Acres Remaining To Be Acquired
STATE/SFWMD PROJECTS					
1508-1512		STA 1 W, 2 ,3/4, 5 and 6	41,089	41,043	46
2100		Allapattah Flats/Ranch	35,999	21,407	14,592
2101		Atlantic Ridge Ecosystem	16,002	6,094	9,908
2102		Babcock Ranch	91,361	0	91,361
2104		Belle Meade	28,506	18,238	10,268
2105		Big Bend Swamp/Holopaw Ranch	59,123	4,151	54,981
2106		Biscayne Coastal Wetlands	2,241	686	1,555
2107		Bombing Range Ridge	44,439	6,357	38,082
2108		Caloosahatchee Ecoscape	18,497	3,180	15,317
2109		Catfish Creek	14,901	10,184	4,717
2111		Charlotte Harbor Estuary/Flatwoods/Cape Haze	15,054	10,603	4,451
2112		Corkscrew Reg. Ecosystem Watershed (CREW)	69,500	26,271	43,229
2114		Coupon Bight/Key Deer/Big Pine Key	4,014	1,519	2,495
2115		Cypress Creek/Trail Ridge	13,788	3,285	10,503
2117		East Coast Buffer/Water Preserve Areas	66,809	21,947	44,862
2118		Estero Bay	14,378	9,149	5,229
2119		Everglades Agricultural Area/Talisman	51,210	50,794	416
2120		Fakahatchee Strand	80,332	60,993	19,339
2121		Fisheating Creek	176,876	59,910	116,966
2122		Florida Keys Ecosystem	15,336	2,374	12,962
2123		Frog Pond/L31N	10,450	9,741	709
2124		Indian River Lagoon Blueway	1,435	750	685
2125		Juno Hills /Dunes	590	576	14
2127		Kissimmee River (Lower Basin)*	68,332	55,684	12,648
2128		Kissimmee River (Upper Basin)*	36,763	34,981	1,782
2126		Kissimmee-St. Johns River Connector	9,463	0	9,463
2129		Lake Wales Ridge Ecosystem	13,848	9,223	4,625
2132		Loxahatchee Slough	15,200	15,056	144
2133		McDaniel Ranch	7,000	0	7,000
2134		Miami Dade County Archipelago	884	505	379
2135		Model Lands Basin	42,402	12,182	30,220
2138		North Fork of the St. Lucie River	3,800	1,646	2,154
2139		North Key Largo Hammocks	5,048	3,538	1,510
2141		Okaloacoochee Slough	37,210	34,982	2,228
2142		Okeechobee Battlefield	211	145	66
2143		Osceola Pine Savannas	1,374	1,333	41
2144		Pal-Mar	36,745	24,667	12,078
2145		Panther Glades	57,604	21,724	35,880
2146		Paradise Run	4,265	3,328	937
2147		Parker-Poinciana/Lake Hatchineha Watershed	6,437	0	6,437

2-A.1 Table reflects June 2006 Status of the Projects to Complete Acquisition of 5.8 Million Acres of Land Identified for Habitat Protection by 2015					
Project ID	Project Endpoint	Project Name	Total Project Acres	Acres Acquired to Date	Acres Remaining To Be Acquired
STATE/SFWMD PROJECTS					
2148		Pineland Site Complex	206	57	149
2149		Rookery Bay	18,721	18,636	85
2150		Rotenberger/Holey Land Tract	79,170	70,833	8,337
2151		Shingle Creek	7,655	1,588	6,067
2152		Six Mile Cypress	1,966	1,864	102
2154		South Savannas	6,046	5,182	864
2155		Southern Glades	37,620	33,587	4,033
2156		Southern Golden Gate Estates	55,247	54,442	805
2158		Twelve Mile Slough	15,653	7,486	8,167
2159		Upper Lakes Basin Watershed (ULBW)	47,300	12,550	34,750
2160		WCAs 2 and 3	721,433	670,844	50,589
2172		Cypress Creek/Loxahatchee	4,347	4,276	71
2174		Half Circle L Ranch	11,269	0	11,269
2176		Jupiter Ridge	287	271	16
2178		Ranch Reserve	2,217	67	2,150
2185		Devils Garden	82,508	0	82,508
2186		Pine Island Slough Ecosystem	21,583	0	21,583
STATE COMPLETED PROJECTS					
1111		Ten Mile Creek	913	913	0
1305		Kissimmee Prairie	38,282	38,282	0
1513		STA 1 E	6,503	6,503	0
2110		Cayo Costa Island	1,954	1,954	0
2113		Corkscrew Regional Mitigation Bank	633	633	0
2116		Dupuis Reserve	21,875	21,875	0
2130		Lake Walk-In-Water a/k/a Sumica	4,009	4,009	0
2131		Loxahatchee River Land Acquisition	1,936	1,936	0
2137		Nicodemus Slough	2,231	2,231	0
2153		South Fork St. Lucie River Land Acquisition	184	184	0
2157		Tibet-Butler Preserve	439	439	0
2161		Yamato Scrub	207	207	0
FCT, STATE PARKS, & WMAs					
		State Florida Communities Trust Lands	25,197	25,197	0
		State Park Lands	101,438	88,599	12,839
		State Wildlife Management Areas	126,867	126,620	247
FEDERAL CONSERVATION LANDS					
2162		A.R.M. Loxahatchee NWR	145,567	143,874	1,693
2164		Big Cypress National Preserve Addition	146,117	143,436	2,681
2163		Big Cypress National Preserve	574,449	573,614	835
2165		Biscayne National Park	172,924	172,590	334

2-A.1 Table reflects June 2006 Status of the Projects to Complete Acquisition of 5.8 Million Acres of Land Identified for Habitat Protection by 2015					
Project ID	Project Endpoint	Project Name	Total Project Acres	Acres Acquired to Date	Acres Remaining To Be Acquired
2166		Crocodile Lake NWR	7,100	6,696	404
2167		Everglades National Park Expansion	109,504	108,797	707
2169		Florida Panther NWR	61,573	61,563	10
2168		Florida Keys NWR	415,433	410,045	5,388
2170		Hobe Sound NWR	1,130	1,034	96
2171		J. N. Ding Darling NWR	10,275	8,767	1,508
		Dry Tortugas National Park	64,701	64,701	0
		Everglades National Park	1,399,078	1,398,617	461
TOTAL HABITAT ACQUISITION			5,773,973	4,885,925	890,048

**Biennial Report Table 8 – Land Acquisition Expenditures Summary
2004-2006***

Funding Source	Amount (\$ millions)	Acres
Florida Forever	169.6	29,027.74
Save Our Everglades Trust Fund	149.8	13,898.08
State, Local & Other Funding Sources 1	130.6	29,055.41
Land & Water Conservation Fund 2	35	618
TOTALS	\$485.8	72,599.23
1 The following funding sources are captured in this category: SFWMD ad valorem, county, mitigation, special state appropriations, Preservation 2000, Land Acquisition Trust Fund, and Water Management Lands Trust Fund. 2 The Land and Water Conservation Fund is administered by the DOI. * The fiscal year for the DEP is July 1 through June 30. The fiscal year for the SFWMD, the FWS, and the NPS is October 1 through September 30.		

Southern Golden Gate Estates (Picayune Strand) CERP Restoration Project

The State of Florida initiated an early start on this hydrologic restoration project in October 2003. Prairie Canal Early Start, Phase 1, backfilled the northern two miles of the canal. Phases 2 and 3 of the Early Start work will remove the roads adjacent to the canal and backfill the southern five miles resulting in restored sheetflow. This first phase has reduced drainage of the adjacent Fakahatchee Strand State Preserve and restored habitat for threatened and endangered species. The PIR and Chief’s Report are complete. The Chief’s Report was signed September 15, 2005 and the PIR and Chief’s Report are under Administration review. The recommended plan will restore and enhance over 50,000 acres of wetlands in the former Southern Golden Gate Estates and in adjacent natural areas and public lands by reducing over-drainage. Implementation of the restoration plan will also improve the water quality of coastal estuaries by moderating the large salinity fluctuations caused by the freshwater point discharge from the Faka Union Canal. The project 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 US 41 between the Belle Meade Area and the Fakahatchee Strand State Preserve.



Florida Keys National Marine Sanctuary Zoning Plan

The Florida Keys National Marine Sanctuary (FKNMS) has implemented a marine zoning action plan that includes a network of fully protected areas, including two ecological reserves (Western Sambo and Tortugas Ecological Reserves), eighteen sanctuary preservation areas, and four research only areas. Combined, these areas fully protect 10 percent of the coral reef resources in the Sanctuary. The Sanctuary has met the initial objective of protecting 10 percent of the coral reefs in this region by 2006. It is currently monitoring the biological, ecological, and socioeconomic changes resulting from the full protection of these areas and will use the information learned to extend protection to 20 percent of the coral reefs by 2010.

Objective 2-A.2: Protect 20 percent of the coral reefs by 2010

At the end of the reporting period, the initial project contributing to objective 2-A.2 was completed. Additional efforts will be required to expand the protected areas from 10 percent to 20 percent by 2010.

Objective 2-A.3: Improve habitat quality for 2.4 million acres of natural areas in south Florida

At the end of the reporting period, one project was complete, three were underway, and one was ongoing in support of objective 2-A.3.

Biennial Report Table 9 – Protect Coral Reefs

2-A.2 Table reflects June 2006 Status of the Projects to Protect 20 Percent of the Coral Reefs by 2010				
Project ID	Project Endpoint	Project Name	Output (Percent of reefs protected)	Status
	2010	Florida Keys National Marine Sanctuary Zoning Action Plan		Underway

Biennial Report Table 10 – Improve Habitat Quality

2-A.3 Table reflects June 2006 Status of the Projects to Improve Habitat Quality for 2.4 Million Acres of Natural Areas in South Florida				
Project ID	Project Endpoint	Project Name	Output (Acres of Habitat)	Status
<p>Note – The April 1999 USACE <i>C&SF Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement</i> included an extensive environmental evaluation of habitat units that would be improved through implementation of the CERP projects. Table 7-18 in that publication identifies which projects are anticipated to achieve this objective. However, specific measures for each project are still being developed. The projects listed below do not constitute an exhaustive list to accomplish this measurable objective, but exemplify how this objective will be achieved. The list includes CERP projects as well as other habitat quality improvement efforts.</p>				
1101	2025	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North and South Fork Storage Reservoirs and C-44 Basin Storage Reservoir (CERP Project # WBS 07)	152,329	
1104	2015	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)	3,500	
1107	2015	C&SF: CERP Site 1 Impoundment and ASR (CERP Projects # WBS 22 and 40)	114	
1111	2006	Critical Ecosystems Restoration Projects - Ten Mile Creek	2,740	Complete
1306	2010	Kissimmee River Restoration Project	27,000	
1501	2009	C&SF: CERP Broward County WPA - C-9 Stormwater Treatment Area/Impoundment and Western C-11 Diversion Impoundment and Canal and WCAs 3A and 3B Levee Seepage Management (CERP Project # WBS 45)	4,032	
2300	2015	C&SF: CERP Strazzulla Wetlands (CERP Project # WBS 39)	3,335	
2301	2008	C&SF: CERP Winsburg Farms Wetlands Restoration (CERP Project #WBS 91)	114	Underway
2302	2009	C&SF: CERP Lake Park Restoration (CERP Project # WBS 94)	40	Underway
2303	2025	C&SF: CERP Restoration of Pineland and Hardwood Hammocks in C-11 Basin (CERP Project # WBS 92)	50	Underway
2304	Ongoing	A.R.M. Loxahatchee NWR Prescribed Fire Program	84.5	Ongoing
2306	2007	C&SF CERP Acme Basin B Discharge (CERP Project # WBS 38) (was 1100)	365	
2307	2009	C&SF: CERP Southern Golden Gates Estates Restoration (CERP Project #30) (was Project ID # 1424)	55,000	
2606	2017	Hole-in-the-Donut	6,000	
3802	2020	C&SF: CERP Wastewater Reuse Technology Pilot Project (CERP # WBS 37)	3,500	

Loxahatchee National Wildlife Refuge Prescribed Burn Program

In December 2005, several Arthur R. Marshall Loxahatchee NWR impoundments were prescribed burned to provide suitable foraging habitat for birds (figure 1). Wading bird and shorebird use increased in the impoundments as a result. Further, staff identified over 100 ducks including mottled, blue-winged teal, green-winged teal, and hooded mergansers using the impoundment as recently as two weeks after burning where few used the impoundment before treatment (figure 2).

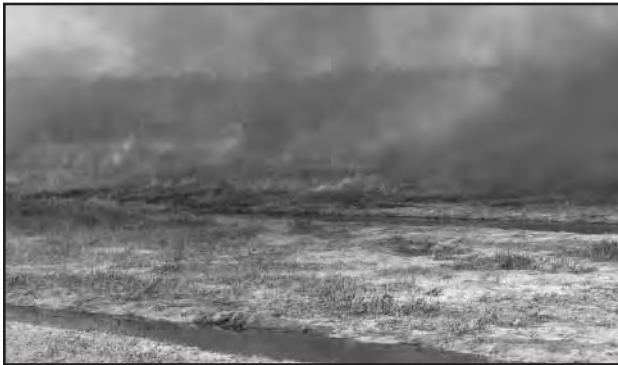


Figure 1. Prescribed fire at A.R.M. Loxahatchee National Wildlife Refuge.



Figure 2. Wading bird use increased dramatically after the prescribed fire.

The Loxahatchee Impoundment Landscape Assessment

The FWS has a cooperative agreement with the SFWMD to conduct long-term research on two impoundments on the Arthur R. Marshall Loxahatchee NWR. LILA is needed to inform the development of several CERP performance measures of a healthy South Florida Ecosystem. LILA will serve as a pilot study for hydrologic regimes proposed under the CERP. The approach will be to sculpt key Everglades landscape features, overlay controlled hydrologic regimes with flow rates that simulate historic flows, and measure responses by

wading birds, tree islands, and ridge and slough communities. LILA provides a unique opportunity to fill key information gaps of the CERP and to give the public a rare opportunity to see restored Everglades habitats.

Other Natural Habitat and Species Projects

South Florida Multi-Species Recovery Plan

A draft implementation schedule for the Multi-Species Recovery Plan (MSRP) was announced in the Federal Register in 2004 and is being finalized by the FWS. The MSRP and the implementation schedule are intended to be used by state and federal agencies, tribes, nongovernmental organizations, and other partners who are committed to endangered and threatened species conservation and to restoration of the South Florida Ecosystem. The implementation schedule prioritizes certain recovery actions in the MSRP, as well as providing time and cost estimates for those actions. Participants to complete those actions are also identified.

American Crocodile Reclassification in Florida

The American crocodile, which occurs only in south Florida in the United States, was listed as endangered in 1975. Loss of nesting habitat, killing for sport, nest predation by raccoons, and disturbance to individuals, nest sites, and habitat led to widespread population decline. In 1976, the crocodile population in Florida was estimated to be 200-300 individuals, with only 10-20 breeding females estimated in 1975. Today, the population in Florida is estimated to be 1,400-2,000 individuals (excluding hatchlings), including greater than 90 nesting females. The nesting range has expanded to include Key Largo, Biscayne Bay, Florida Bay, and occasional nests on the southwest coast. Approximately 95 percent of the remaining habitat in south Florida has been acquired by federal, state, or county agencies and is now protected from development. The American crocodile population in Florida has increased since listing and has met the criteria for reclassification in the MSRP. On March 24, 2005, the FWS published the proposed rule in the Federal Register to reclassify the American crocodile in Florida from endangered to threatened and requested public comment and review. The final rule is anticipated to be published in 2006.

Florida Panther Recovery Plan

The Florida Panther Recovery Plan was updated during this reporting period. The latest draft was completed by the FWS South Florida Ecological Services Office in concert with the Panther Recovery Team, composed of the Florida Fish and Wildlife Conservation Commission, the National Park Service, and many other local, state, federal, tribal, and non-government partners. The draft was made available for public comment and underwent peer review in early 2006. The latest draft includes specific recovery objectives and criteria to be met in order to reclassify the panther from endangered to threatened, and eventually to remove the panther from Endangered Species Act protection. A final version of the plan is anticipated at the end of 2006.

Key Deer Recovery

As part of the FWS recovery program, consistent with the MSRP, Key deer were translocated from Big Pine Key to Sugarloaf and Cudjoe Keys from 2003 through 2005. The National Key Deer Refuge hired a deer biologist in September 2003 for project oversight and continuity.

Objective 2-B.1: Coordinate the development of management plans for the top 20 south Florida invasive exotic plant species by 2011

At the end of the reporting period, the planning efforts contributing to objective 2-B.1 were underway.

Noxious Exotic Weed Task Team (NEWTT)

NEWTT has been coordinating on three primary projects. The first project is the development and

implementation of an exotic plant indicator as part of the System-wide Indicators for the Task Force. This includes the development of a performance measure, conceptual ecological model, and communication tool for invasive exotic plant indicators. The second task has been the development of a PIR with the USACE and the SFWMD for biological control of plants. The third is working with the USACE and the SFWMD to develop a master plan for invasive exotic species (plants and animals). The exotic plant indicator will be completed for the 2008 Task Force *Biennial Report* and is presented in draft form in the 2006 indicator report. The bio-control PIR will be completed in late 2006. The master plan development committee, which includes representatives from NEWTT (all Task Force agencies) and is led by the USACE and the SFWMD, will have its initial kickoff meeting in the fall of 2006.

Objective 2-B.2: Achieve maintenance control of Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern on south Florida’s public conservation lands by 2020

At the end of the reporting period, the project contributing to objective 2-B.2 was underway.

Current efforts on melaleuca have achieved remarkable success in the use of chemical control on public lands within the EPA. Since the development and release of two biological control insects and the anticipated release of two additional insects, monitoring information indicates that melaleuca may well be a species that will no longer be a serious pest of natural areas in Florida by 2020.

Biennial Report Table 11 – Plans to Manage Invasive Exotic Plant Species

2-B.1 Table reflects July 2006 Status of the Projects to Coordinate the Development of Management Plans for the Top Twenty South Florida Invasive Exotic Plant Species by 2011				
Project ID	Project Endpoint	Project Name	Output (plans)	Status
2500	2011	Coordinate the development of management plans for the top 20 south Florida exotic pest plants	20	Underway

In contrast, the control programs for Brazilian pepper are severely lacking in support and coordination. The state’s biological control program has been slow to find and research possible biocontrols, and the control organism that is nearing preparation appears to be held up in administrative regulatory procedures. Brazilian pepper is still and will continue to be an extremely widespread and serious threat to natural areas of Florida.

Australian pine control efforts are not coordinated among all the agencies and areas. However, where control is being conducted, it is quite successful. It appears that this species is relatively simple to control, and once controlled reinvasion can easily be prevented so long as occasional detection is undertaken. It is this latter element that seems to be preventing this species from being controlled at most sites.

Old World climbing fern (*Lygodium*) is still considered the most serious recent invader. Less is known about how to control it than is known about the other high-priority species. Research is being conducted to determine the efficacy of biological and chemical control methods. Recent revisions to the *Lygodium* management plan spell out the next round of needed research initiatives. While sparsely funded, the biological control program is progressing, and the first biocontrol agent for *Lygodium* was released in 2005. In addition, two more insects are under development for release in the near future.

Loxahatchee National Wildlife Refuge Exotic Management

During the 2004-2006 reporting period, 7,600 acres of the Arthur R. Marshall Loxahatchee NWR interior were treated for both melaleuca and *Lygodium*. Approximately 2,000 acres of *Lygodium* were aerially

treated on heavily infested islands in the northern interior. An additional 1,442 acres were covered and treated for *Lygodium* by ground crews. State funding specifically allotted for melaleuca control enabled 15,000 acres of re-treatment and 7,000 acres of initial treatment.

Melaleuca Control Program – Melaleuca Eradication and Other Exotic Plants Project

The USACE and the SFWMD amended the CERP design agreement to include this project. The PIR is being developed by the Project Delivery Team with the feasibility scoping meeting anticipated for August 2006. The PIR is focusing on the mass rearing and controlled release of biological agents to control melaleuca, Brazilian pepper, Australian Pine, and Old World climbing fern. PIR approval is scheduled for September 2008 with a recommendation for congressional authorization in WRDA 2009.



Special Report on Invasive Species

The USACE contracted with the DOI invasive species specialist to produce a special report on the federal role in invasive species management for Everglades restoration and to make recommendations on further federal involvement.

Biennial Report Table 12 – Maintenance Control of Invasive Species on Public Lands

2-B.2 Table reflects June 2006 Status of the Project to Achieve Maintenance Control of Brazilian Pepper, Melaleuca, Australian Pine, and Old World Climbing Fern on South Florida’s Public Conservation Lands by 2020				
Project ID	Project Endpoint	Project Name	Output (control)	Status
2600	2020	Achieve maintenance control status for Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern		Underway

Removal of Exotic Plants from Big Cypress National Preserve

In 2003 Big Cypress National Preserve completed initial treatment of melaleuca in the originally estimated 150 square miles infested with this invasive exotic tree. Follow-up treatments in areas of previous control have been ongoing, and were continued each of the years since. With initial treatments of melaleuca completed, more resources have been applied to control Brazilian pepper. The Preserve's strategy has been initially to eliminate some of the largest seed-source populations to reduce exotic propagule introduction from these densely populated areas, and to allow these areas to be restored to native biological communities. Treatment of *Lygodium* has been underway for several years and all known populations have been treated or are now being treated. Surveillance for *Lygodium* continues and because of its prolific ability to spread, additional discoveries and treatment strategies are needed.

Many other exotic trees and shrubs are routinely eliminated during exotic management treatments. Since 2004 through June of 2006, 282.3 square miles of the Preserve has been surveyed for melaleuca resulting in a canopy area treatment of 0.9 square

miles. For Brazilian pepper the Preserve has conducted initial treatment along 52 miles of roadside, surveyed 3.9 square miles, and treated 1.9 square miles of canopy area. For *Lygodium*, work was initiated in 2005 resulting in canopy area treatment of 0.2 square miles.

Objective 2-B.3: Complete an invasive exotic plant prevention, early detection, and eradication plan by 2007

At the end of the reporting period, the project contributing to objective 2-B.3 was underway.

Exotic Species Quarantine Facility

The Melaleuca Quarantine Facility was completed in early 2005 (January/March). The Melaleuca Research and Quarantine Facility, now known as the Invasive Plant Research Laboratory, was ready for staff use on January 19, 2005, with a well-attended dedication ceremony held on April 8, 2005. The Laboratory was certified on December 1, 2004 as meeting the USDA Animal Plant and Health Inspection Service guidelines for anthropod containment.

Biennial Report Table 13 – Invasive Exotic Plant Prevention, Early Detection, and Eradication

2-B.3 Table reflects June 2006 Status of the Project to Complete an Invasive Exotic Plant Prevention, Early Detection, and Eradication Plan by 2007				
Project ID	Project Endpoint	Project Name	Output (plans)	Status
2700	2007	Invasive Exotic Plant Prevention, Early Detection, and Eradication Plan	Plans	Underway

GOAL 3 ACCOMPLISHMENTS: FOSTERING COMPATIBILITY OF THE BUILT AND NATURAL SYSTEMS

The third strategic goal of the Task Force is fostering compatibility of the built and natural systems. The Task Force has adopted the following for this goal:

GOAL 3: FOSTER COMPATIBILITY OF THE BUILT AND NATURAL SYSTEMS

Subgoal 3-A: Use and manage land in a manner compatible with ecosystem restoration

Objective 3-A.1: Designate or acquire an additional 480,000 acres as part of the Florida Greenways and Trails System by 2009

Objective 3-A.2: Increase participation in the Voluntary Farm Bill conservation programs by 230,000 acres by 2014

Objective 3-A.3: Acquire an additional 2,500 acres of park, recreation, and open space lands by 2007

Objective 3-A.4: Complete five brownfield rehabilitation and redevelopment projects by 2010

Objective 3-A.5: Increase community understanding of ecosystem restoration

Subgoal 3-B: Maintain or improve flood protection in a manner compatible with ecosystem restoration

Objective 3-B.1: Maintain or improve existing levels of flood protection

Subgoal 3-C: Provide sufficient water resources for built and natural systems¹⁷

Objective 3-C.1: Plan for regional water supply needs

Objective 3-C.2: Increase volumes of reuse on a regional basis

Objective 3-C.3: Increase water made available through the SFWMD Alternative Water Supply Development Program

The major projects planned to meet these objectives are listed in the Task Force *Strategy* in part one of this Volume (*Coordinating Success*), along with a schedule for their implementation. The projects or activities that were ongoing or completed during the reporting period of July 2004 to June 2006 are described below in the context of progress toward meeting each of the Task Force objectives.

Subgoal 3-A: Use and manage land in a manner compatible with ecosystem restoration

Integrated Land Use and Water Supply Planning

The Florida DCA, DEP, and water management districts are implementing 2005 legislation that requires local governments to address current and future water supply needs of their communities. The statutory changes require local governments to ensure that future land use plans are based on the availability of adequate water supplies and the necessary public treatment and distribution facilities. Local governments must also amend their comprehensive plans to identify and incorporate alternative water supply projects, and include a 10-year water supply facilities work plan that shows a commitment to the construction, operation, and financing of the identified projects. Currently the same agencies are completing guidelines for local governments in adopting comprehensive plan amendments to implement the new requirements.

In November 2002 the Florida DCA, DEP, and the five water management districts released a report, *Agency Coordination of Comprehensive Planning and Water Supply Planning in Florida*, outlining an improved interagency coordination process to improve the integration of land use comprehensive planning and water supply planning. The new process includes technical assistance and the review of comprehensive plan amendments and evaluation and appraisal reports (EARs).

¹⁷ The legal authority and requirements for water supply planning are included in Chapters 373, 403, and 187 Florida Statutes. During the State of Florida's 2005 legislative session, lawmakers revised state water law. This has led to the SFWMD reporting increased water supply in objective 3-C.2 in the alternative water supply program and deleting the Objective 3-C.1 as a measurable output of increased water. The regional water supply plans are still being done but the increased supply is being funded through the Alternative Water Supply Development program.

Objective 3-A.1: Designate or acquire an additional 480,000 acres as part of the Florida Greenways and Trails System by 2009¹⁸

Florida Greenways and Trails Designation Program

At the end of the reporting period, the Florida Statewide System of Greenways and Trails contained 298,774 acres plus an additional 147 linear miles of greenways and trails land in the 16-county area corresponding in whole in the SFWMD.¹⁹ The primary mission of this program is to provide a recreational trail or greenway experience within 15 minutes of every residence and business within the state.

Lake Okeechobee Scenic Trail State Park

Design and construction of the Lake Okeechobee Scenic Trail (LOST) began in 2003. This project will create a 100-mile multi-purpose trail around Lake Okeechobee. November 22, 2005 marked the official opening for Phases 1 and 2, consisting of 26 and 36 miles, respectively, of 11 foot wide asphalt multi-purpose trail with an adjacent three foot hiking tread. Phases 1 and 2 were constructed by the Florida Department of Transportation using \$12.5 million of the state’s federal enhancements funds. The DEP’s Office of Greenways and Trails submits annual requests for funding to complete the remaining 48 miles of trail, which is expected to cost an additional \$12.5 million. Completion is contingent upon funding.

The project will make Lake Okeechobee accessible to pedestrians, backpackers, bicyclists, equestrians, sightseers, naturalists, skaters, picnickers, campers, and fishermen, allowing the surrounding communities to appreciate this great natural resource.

Objective 3-A.2: Increase participation in the voluntary Farm Bill conservation programs by 230,000 acres by 2014

At the end of the reporting period, the two projects contributing to objective 3-A.2 were both underway.

Farm Bill Conservation Programs

In 2004-2006, a total of 229,716 acres in the 16-county south Florida region were enrolled in Farm Bill conservation programs at an obligated cost of \$29 million. *Biennial Report* Table 16 reflects the achievement during this reporting period by specific programs.

In FY 2006, the first two Grassland Reserve Program (GRP) easements were acquired in Florida. The GRP is a voluntary program offering landowners the opportunity to protect, restore, and enhance grasslands on their property. More than \$800,000 were obligated to Collier and Highlands Counties to help landowners restore and protect rangeland and pastureland. The program will conserve 438.9 acres of vulnerable grasslands from conversion to cropland or other uses, while helping to maintain viable ranching operations. These conservation easements will provide essential habitat for grassland dependent wildlife species in perpetuity.

¹⁸ This is a statewide goal; a regional breakout was not available from the reporting agency at the time this goal was established by the Task Force.

¹⁹ The SFWMD encompasses all of Broward, Collier, Glades, Hendry, Lee, Martin, Miami-Dade, Monroe, Palm Beach, and St. Lucie Counties, as well as portions of Charlotte, Highlands, Okeechobee, Orange, Osceola, and Polk Counties.

Biennial Report Table 14 – Florida Greenways and Trails Program

3-A.1 Table reflects June 2006 Status of the Project to Designate or Acquire an Additional 480,000 Acres as Part of the Florida Greenways and Trails System by 2009				
Project ID	Project Endpoint	Project Name	Output (additional acres)	Status
3100	2009	Florida Greenways and Trails Program	480,000	Ongoing

Biennial Report Table 15 – Participation in Voluntary Farm Bill Conservation Programs

3-A.2 Table reflects June 2006 Status of the Projects to Increase Participation in the Voluntary Farm Bill Conservation Programs by 230,000 Acres by 2014				
Project ID	Project Endpoint	Project Name	Output (Annual additional acres)	Status
3201	2011	Technical Assistance to Indian Reservations	107,000	Underway
3202	2007	2002 Farm Bill Conservation Programs	1,106,108	Underway

Biennial Report Table 16 – Farm Bill Accomplishments 2004-2006

Program	Dollar Amount	Acreage Enrolled
Wetlands Reserve Program	\$10.1 million	7,953 acres
Farm Land Protection Program	\$3.97 million	2,432 acres
Environmental Quality Incentive Program	\$13.7 million	210,525 acres
Wildlife Habitat Incentives Program	\$0.44 million	8,367 acres
Grassland Reserve Program	\$0.84 million	439 acres
TOTALS	\$29.04 million	229,716 acres

Objective 3-A.3: Acquire an additional 2,500 acres of park, recreation, and open space lands by 2007²⁰

At the end of the reporting period, the project contributing to objective 3-A.3 was underway.

Florida Communities Trust Grant

In the 2005-2006 state fiscal year, \$24.8 million of state funds and \$18.6 million of local funds were spent through this program to acquire 474 acres in the South Florida Ecosystem. The local governments in the South Florida Ecosystem have utilized this program with regular applications for resources to increase open space in this region.

CERP Master Recreation Plan (MRP)

The draft Program Management Plan (PMP) for the CERP MRP was released for public comment on February 23, 2004. Development of the recreation performance measures was completed in May 2006. When completed the MRP will guide a system-wide approach to identifying, evaluating, and addressing the recreation aspects of CERP project implementation. This will include not only existing recreation use within the South Florida Ecosystem, but also potential new recreation, public use, and public educational opportunities. The MRP will coordinate CERP recreation with other known public and private recreation plans.

²⁰ This is a statewide goal; a regional breakout was not available from the reporting agency at the time this goal was established by the Task Force.

Biennial Report Table 17 – Additional Park, Recreation, and Open Space Land

3-A.3 Table reflects June 2006 Status of the Project to Acquire an Additional 2,500 Acres of Park, Recreation, and Open Space Lands by 2007				
Project ID	Project Endpoint	Project Name	Output (acres/miles)	Status
	2007	Florida Communities Trust Grant Program	1,000 acres	Underway

Objective 3-A.4: Complete five brownfield rehabilitation and redevelopment projects by 2010

At the end of the reporting period, 18 individual brownfield rehabilitation and redevelopment projects were underway through the Eastward Ho! Brownfields Partnership. This partnership, which includes Miami-Dade, Broward, and Palm Beach Counties, is a good example of how local, regional, state, and federal agencies are working with private nonprofit and community organizations to facilitate the redevelopment of brownfields. The partnership received a National Brownfields Showcase Community designation from the USEPA in 1998. The Partnership has also been active in the Florida Brownfields Program, administered and implemented by the DEP.

Miami-Dade County and the cities of West Palm Beach, Opa-Locka, Miami, Miramar, Pompano Beach, Dania Beach, Miami Beach, Lauderhill, Hollywood, North Miami Beach, Hialeah, Lake Worth, Hallandale Beach, Homestead, Deerfield Beach, and Lauderdale Lakes have designated 39 sites and areas, totaling 49,450 acres, under the Florida Brownfields Program. This accounts for 64 percent of the acreage designated in Florida as brownfields. The DEP has delegated the administration and implementation of the Florida Brownfields Program in their respective jurisdictions to Miami-Dade and Broward Counties. This streamlines the review and implementation of assessment and cleanup activities. Miami-Dade and Broward Counties are two of the three counties in the state of Florida to receive this delegation.

Of the approximately 2,100 estimated brownfield sites in the three-county southeast Florida area, some 390 sites have received various levels of environmental assessment review. Approximately 75 sites need no further assessment and will not require remediation. Approximately 30 sites have undergone remediation activities and are either undergoing redevelopment or will shortly undergo redevelopment. The redevelopment activities will create at a minimum 2,000 jobs and 600 very low to moderate income housing units. The South Florida Regional Planning Council and the Eastward Ho! Brownfields Partnership received a \$2.2 million grant from the

USEPA to capitalize a Brownfields Cleanup Revolving Loan Fund that is being used to assist in the cleanup and reuse of brownfields sites in southeast Florida. Loans totaling \$1.41 million dollars have been awarded under this program to two local businesses to assist in remediation activities.

Objective 3-A.5: Increase community understanding of ecosystem restoration

At the end of the reporting period, the projects contributing to objective 3-A.5 were underway.

CERP Outreach and Regional Coordination

The USACE and SFWMD continued to make much progress during this reporting period to raise awareness of south Florida's public-at-large and minority communities about CERP, and continued some of these efforts at the state or national level. Innovative products, unique delivery methods, and public involvement all helped ensure that CERP was better understood and that the public had opportunities to participate in decision-making. Highlights from the reporting period are summarized below.

General Public Awareness. Many successful outreach efforts took place to raise awareness of and encourage involvement in CERP. The CERP logo – The Journey to Restore America's Everglades – continued to be incorporated on many CERP materials. An innovative interactive computer kiosk program to bring the CERP message to non-traditional audiences was expanded, with seven kiosks in use by the summer of 2006. The website (www.evergladesplan.org) continued to be an important source of information on CERP for all audiences and was updated regularly. Fact sheets, newspaper inserts, and promotional items were widely distributed throughout the 16-county south Florida region, and to other areas of Florida and the nation in select cases. In 2005, the first five-year Report to Congress on CERP was completed, with related public information materials on the "first five years" produced. In April 2006, a billboard campaign was launched with a new message: Restoring America's Everglades for our Future. A pre-recorded nation-wide toll-free line (1-877-CERP-USA) was introduced at that time as well.

Biennial Report Table 18 – Brownfield Projects

3-A.4 Table reflects June 2006 Status of the Projects Contributing to the Completion of Five Brownfield Rehabilitation and Redevelopment Projects by 2010				
Project ID	Project End point	Project Name	Output	Status
3400	2002	The Wynwood Project – Miami	Completion of rehabilitation and/or redevelopment of current projects underway each year.	All of these projects are at varying states moving toward final completion of both cleanup (if needed) and redevelopment
	2003	Former Palm Beach Lakes Golf Course – West Palm Beach		
	2005	CFC Multifamily Northwest – West Palm Beach		
	2005	DR Lakes, Inc. Parcel II – West Palm Beach		
	2005	Biscayne Commons Site – North Miami Beach		
	2005	DR Lakes Multifamily Northside – West Palm		
	2006	Konover Site – Fort Lauderdale		
	2006	Little Haiti Park Site – Miami		
	2006	Siegel Gas & Oil Corp – Miami		
	2006	Former Gipson's Service Station – Miami		
	2006	Former JG Shamrock/Supreme Service Station – Miami		
	2006	McArthur Dairy Site – Lauderhill		
	2006	Corinthian Multifamily Apts. – Miami		
	2006	Los Suenos Multifamily Apts. – Miami		
	2007	Liberia Area – Hollywood		
	2007	Gravity Entertainment Site – Lauderdale Lakes		
	2007	DR Palm Beach Hotel Complex – Brownfield Site WPB		
	2007	DR Palm Beach Residential Complex Brownfield Site – West Palm Beach		
	2007	Dedicated Transportation – Miami-Dade County		
	2007	Harbour Cove Associates – Hallandale Beach		
	2007	Dania Motocross Brownfield Area – Dania Beach		
	2007	Wagner Square Project - Miami		
	2007	Potamkin Properties – Miami Beach		
	2008	Pompano Beach Multi-Purpose Project		
	2008	Liberty City Area – Miami		
	2008	Mid-Town Miami – Miami		
2009	Beacon Lakes – Miami Dade County			

Biennial Report Table 19 – Increase Community Understanding

3-A.5 Table reflects June 2006 Status of the Projects to Increase Community Understanding of Ecosystem Restoration				
Project ID	Project Endpoint	Project Name	Output	Status
3502	Ongoing	USACE Outreach Program		Underway
3503	Ongoing	SFWMD Outreach Program	Public Meetings, Stakeholders Meetings, Schools and Teacher Education, Job Training, Symposiums, Media Exposure, Groundbreakings, Special Events, Awards and Recognitions	Underway

Minority Community Outreach. Special efforts continued to reach south Florida’s African American, Hispanic, and Haitian American residents with the CERP message. This included participating at community events with a display, materials, and team members; developing creative and culturally-sensitive public information products and programs; translating materials to Spanish and Creole; continuing an electronic newsletter (CERP Report) and newspaper insert (Community Outreach in Action); producing television and radio programs; and holding special events (such as for Earth Day) in minority communities. The kiosks were placed in cities with high populations of minority residents, such as Belle Glade, when possible.

Environmental Education. A major environmental education product was introduced this plan period. The “Journey of Wayne Drop to the Everglades” is a story about a water drop that travels through the greater South Florida Ecosystem with his friends and teacher, and they learn valuable lessons along the way. The storybook and companion teacher guide with lesson plans were distributed to fourth grade classes throughout the 16-county south Florida region in the fall of 2005. In 2006, the curriculum materials were placed online for national downloading and use. USACE staff attended state and national science teacher conferences to introduce the curriculum to teachers. The student storybook was translated into Spanish and Creole in 2006. The storybook is also being used to help readers of all ages better understand Florida’s Everglades in a fun, imaginative manner.

The SFWMD, in conjunction with the School Board of Palm Beach County and other partnering bodies, has redeveloped the Newspaper in Education (NIE)

curriculum for middle and high school students: “The Everglades: An American Treasure.” This environmental educational material provides a history of the Everglades, educates students on goals of CERP, and discusses current and future plans for restoring the ecosystem. The curriculum includes a student newspaper along with a teacher’s guide that has Florida Comprehensive Assessment Test (FCAT) structured questioning and benchmark reading for 7th and 9th graders. It is distributed to more than 200,000 students throughout the 16-county region of the SFWMD.

As a complement to the NIE, the SFWMD also offers an Everglades Teacher Workshop where teachers are provided hands-on training on how to teach their students about the Everglades using our curriculum. The SFWMD offers one workshop per region on an annual basis where more than 100 teachers participate in these sessions.

The SFWMD has also purchased five CERP kiosks that will be strategically placed within the District’s region to further showcase the goals, objectives, and progress on CERP.

Small Business Outreach. Many efforts were made to reach south Florida’s small and minority-owned businesses with information on how to participate in CERP. This included holding workshops, distributing printed materials, updating materials, participating in small business related conferences and fairs, and other efforts to ensure small business owners and representatives understand the separate federal and state contracting processes.

As part of CERP’s mission to reach out to socially and economically disadvantaged communities, the

SFWMD has partnered with Palm Beach Community College, SW Education Center, and other local bodies to develop and implement a workforce development program. Residents and contractors in areas where CERP projects will be built are being trained in skills such as masonry, carpentry, plumbing and rigging, and construction site safety to carry out future Acceler8 construction projects. Ultimately, this effort will assist firms in being better technically positioned to participate in contracts at the prime and subcontract levels. In May 2006, 17 students from Belle Glade, Florida, graduated from this training, making them the first class trained to work on Everglades restoration. Graduates received an Acceler8 certificate [Occupational Safety and Health Administration (OSHA) 10 certification, employability skills, small tool identification, site orientation, blue print reading, etc.] along with a uniform, hard hat, tools, and other accessories required for the trade.

In addition to the jobs training, several symposiums have been offered to local communities to increase their awareness, provide skill assessments, and promote workforce training. To date, the SFWMD has held five symposiums in Hendry County, LaBelle, Belle Glade, Okeechobee, and Martin County along with face-to-face meetings with more than 450 individuals/businesses for potential partnership and participation in this workforce effort.



Project-Level Involvement. Many public meetings and workshops were held to inform and include the public in the planning of CERP projects. Meetings were announced in advance, held in convenient locations, and often featured an open house session to meet CERP staff prior to the formal meeting or workshop. For those people who could not attend meetings, all meeting documents were posted online. Comments were taken online, in addition to those taken in person at the meetings and workshops. Fact sheets were developed for individual CERP projects, with some translated into Spanish.

Since the launching of the Acceler8 initiative in 2004, the SFWMD has held numerous public workshops to encourage the exchange of ideas and information from stakeholders and the general public on the design phases of specific projects. Since 2004, four Construction Symposiums and thirteen WRAC Issues Workshops/Public Meetings have been held. These meetings and workshops are held in locations in close proximity to the projects in order to offer greater public and stakeholder attendance and participation. As the Acceler8 projects move from design into construction, the SFWMD has invited the public to participate in groundbreaking ceremonies to share the accomplishments of ‘turning dirt’ on these projects. To date, 12 groundbreakings have been held for Acceler8 projects.

Economic Benefits. The Acceler8 initiative has provided the south Florida economy with new job opportunities on various projects. Below is a breakdown on the progress to date:

- C-43 Test Cells (Hendry County region)
 - 33 local businesses
 - \$3,000,000 in expenditures to date (29.3%)
 - 55 new jobs
- C-44 Test Cells (Martin/St. Lucie County region)
 - 42 local businesses
 - \$4,800,000 in expenditures to date (53.5%)
 - 20 new jobs
- Compartment B -- STA-2, Cell 4
 - 19 local businesses
 - \$700,000 in expenditures to date (21.6%)
 - 19 new jobs
- Over 3,000 local businesses in database
- Local business participation – provides variety of services
 - Excavating
 - Construction materials
 - Heavy Equipment Rental
 - Food services

Honors and Recognition. The SFWMD’s Department of Public Information efforts were recognized recently when they received nine awards from the National Association of Government Communicators. These Blue Pencil/Gold Screen Awards underscore the high standards of professionalism in public service. The SFWMD also received eight awards from the 2006 Communicator Print Media Awards,

an international awards competition based in Arlington, Texas, that recognizes outstanding work in the communication field.

The Museum of Discovery and Science and the Task Force Collaboration Committee. The Museum of Discovery and Science continued to serve as the interpretive site for Everglades restoration by educating south Florida’s residents and visitors about the quality, quantity, timing, and distribution of water in the Everglades. During the reporting period, the *Florida Ecoscapes* exhibit was visited by over 450,000 visitors including 95,000 school children. Museum programming focused on a unique combination of engaging hands-on demonstrations, labs, and live animal encounters. These presentations were delivered at the Museum and in the community. By visiting community centers, churches, schools, fairs, and festivals the Museum staff served over 10,000 individuals in underserved communities in south Florida. Additional Everglades programming was delivered during the Museum’s camp-ins, day camps, summer camps, and via school, public, and BECON television programs.

The Museum brought nearly 2,000 *Water Matters* public programs to over 60,000 visitors, thanks to funding from the Broward Environmental Protection Department. Generous support from the Florida Division of Forestry provided 10 at-risk high school students with job experience and the opportunity to learn and teach the public about the importance of trees. The Broward County Waste and Recycling Department increased visibility for its recycling exhibit through new signage, and the *Florida Ecoscapes* exhibit was freshened with updated graphic panels as a result of a SFWMD grant. The SFWMD also supported the razing of an old Museum structure to help clear the way for the Museum’s building expansion. Foundation support assisted the Museum’s collaborative initiative with the South Florida National Parks Trust and Florida Aquarium (Tampa) on a pilot outreach program that trains public school teachers how to bring Everglades education

into the classroom. The USACE supported the public education component of this initiative through the generous loan of an informational kiosk.

Everglades Radio Network. The Everglades Radio Network (ERN) was launched on February 23, 2004. The ERN is a low-power, 24/7 FM transmission along Alligator Alley that informs travelers about the South Florida Ecosystem and the progress toward restoration. It is broadcast from WGPU which is located on the campus of the Florida Gulf Coast University in Fort Myers.

Signage is now in place inviting drivers on I-75 from Naples to Fort Lauderdale (Alligator Alley) to tune in to ERN on 98.7 WFLP-LP and FM 107.9 WFLU-LP. The radio programs cover the history, heritage, natural beauty, and environmental challenges facing the Everglades, and the wildlife that live there. The ERN can also be accessed via the internet at www.evergladesradionetwork.org.

Objective 3-B.1: Maintain or improve existing levels of flood protection

At the end of the reporting period, one project contributing to objective 3-B.1 was ongoing and one was underway.

C-4 Basin Flood Mitigation Project

The project was under construction during the reporting period and is scheduled to be completed in March 2007. The C-4 Emergency Detention Basin Phase 1 is completed and operational. The C-4 Emergency Detention Phase 2 is completed and operational. Phase 3 involves the selective dredging of the C-4 to improve conveyance capacity at SW 137th Avenue and the Florida Turnpike. This project is in the solicitation process and the contract is expected to be awarded in July 2006. The construction period for this contract is six months.

Biennial Report Table 20 – Flood Protection

3-B.1 Table reflects June 2006 Status of the Projects to Maintain or Improve Existing Levels of Flood Protection				
Project ID	Project Endpoint	Project Name	Output	Status
3600	2007	C-4 Flood Mitigation Projects	Flood protection at 1 in 10-year level	Ongoing
1300	2010	C&SF: Canal C-111	Flood protection at 1 in 10-year level	Underway

Objective 3-C.1: Plan for regional water supply needs²¹

At the end of reporting period updates of the four regional water supply plans within the South Florida Ecosystem that contribute to objective 3-C.1 were all underway and nearing completion.

Regional Water Supply Plans

Updates of the Upper East Coast, Kissimmee Basin, Lower East Coast, and Lower West Coast Water Supply Plans are scheduled for completion in July 2006. The updated plans will reflect the Water Resource Protection and Sustainability Program, created by Senate Bills 444 and 332 and enacted in the 2005 state legislative session. The Water Resource Protection and Sustainability Program requires a higher level of water supply planning and coordination between the water management districts and local governments and ensures that permitted water supply and potable water facilities are available before new development is approved.

The legal authority and requirements for water supply planning are included in Chapters 373, 403, and 187 of the Florida Statutes. During the State of Florida’s 2005 legislative session, lawmakers revised state water law. Several growth management related bills were signed into state law and the Water Resource Protection and Sustainability Program was created. This program is intended to reduce competition between users and natural systems for available water by encouraging the development of Alternative Water Supply (AWS).

The new statutory provision strengthens the link between regional water supply plans and the potable water provisions contained within each local government’s comprehensive plan. The program is intended to ensure permitted water supply and potable water facilities are available for new development in a timely manner. All local governments within the regional planning areas are now required to prepare

10-year Water Supply Facility Work Plans and adopt revisions to their comprehensive plans within 18 months following the approval of the regional water supply plan updates.

The Water Resource Protection and Sustainability Program provides annual state revenues and matching SFWMD funds to support AWS development, such as construction of desalination, reclaimed water, and new storage facilities. This combination of state and SFWMD funds are specifically for cost-sharing AWS project construction costs. The program also adds permitting incentives for water providers selecting projects recommended by the water supply plans.

Objective 3-C.2: Increase volumes of reuse on a regional basis

At the end of the reporting period, the projects contributing to objective 3-C.2 were on hold.

Wastewater Reuse Technology Pilot

The Technology Pilot project has been on hold since 2004. The PMP was approved in November 2003. As part of initial efforts during the PIR, the site-selection process narrowed the number of potential sites to receive discharge from eight to four. The scope of this project was changed to include two main efforts.

The first is the preparation of a Technology Report to evaluate various treatment alternatives, the performance of these alternatives in obtaining the desired water quality to be discharged to a pristine environment, and the capital and operating costs associated with these technologies for full-scale implementation. This Technology Report has been

²¹ The legal authority and requirements for water supply planning are included in Chapters 373, 403, and 187 Florida Statutes. During the State of Florida’s 2005 legislative session, lawmakers revised state water law. This has led to the SFWMD reporting increased water supply in objective 3-C.2 in the alternative water supply program and deleting the Objective 3-C.1 as a measurable output of increased water. The regional water supply plans are still being done but the increased supply is being funded through the Alternative Water supply program.

Biennial Report Table 21 – Regional Water Supply

3-C.1 Table reflects June 2006 Status of the Regional Water Supply Plans				
Project ID	Project Endpoint	Project Name	Output (plans)	Status
3704	2007	Regional Water Supply Plans	Plan	Underway

Biennial Report Table 22 – Water Reuse

3-C.2 Table reflects June 2006 Status of the Projects to Increase Volumes of Reuse on a Regional Basis				
Project ID	Project Endpoint	Project Name	Output (mgd)	Status
3800	2025	C&SF: CERP – South Miami-Dade County Reuse (CERP Project # WBS 98)	131	
3801	2025	C&SF: CERP – West Miami-Dade County Reuse (CERP Project # WBS 97)	100	

completed. The second is the monitoring and evaluation of the presence of emergent pollutants of concern in the existing wastewater treatment facility in south Miami-Dade County. Presently, there are ongoing coordination efforts between the Miami-Dade County Water and Sewer Department, the DEP, and the SFWMD to restart the Technology Pilot project in the near future.

The DEP continued to work with the water management districts, public water suppliers, and other public interests to implement the recommendations of the 2002 State Water Conservation Initiative Report, now called Conserve Florida. The legislature affirmed this effort in the 2004 legislative session with the passage of HB 293. Several key products have been developed through the effort: establishment of standards and procedure, a web based program development software for utilities, and a clearing house for data sharing on successful water conservation projects and programs.

Objective 3-C.3: Increase water made available through the SFWMD Alternative Water Supply Development Program

At the end of the reporting period, the project contributing to objective 3-C.3 was underway and ongoing.

Alternative Water Supply Grant Program

The Alternative Water Supply Development Program awards grants to local water providers to develop additional water supply through alternative technologies.

The annual targets and the actual alternative water supplies for each region are listed in *Biennial Report Table 24*. The 2005 achievements were lower than the annual water targets by 35.61 million gallons per day (mgd). The 2005 targets were based on the 2004 achievements of 34 funded projects. The Alternative Water Supply Funding Selection Committee recommended that 28 projects receive funding for fiscal year 2005. In fiscal year 2005 the SFWMD contributed \$6.0 million to 28 water supply projects as part of the Alternative Water Supply Funding Program.

Biennial Report Table 23 – Alternative Water Supplies

3-C.3 Table reflects June 2006 Status of the Project to Increase Water Made Available through the SFWMD Alternative Water Supply Program				
Project ID	Project Endpoint	Project Name	Output (mgd)	Status
3900	Ongoing	Alternative Water Supply Grant Program	172	Ongoing

Biennial Report Table 24 – SFWMD Alternative Water Supply Program Achievements, 2004

Region	2005 Targets (mgd)	2005 Achievements (mgd)
Lower East Coast	55.11	39.19
Lower West Coast	30.59	11.24
Upper East Coast	8.33	5.02
Kissimmee Basin	7.70	10.67
TOTALS	101.73	66.12

MEASURING PROGRESS TOWARD RESTORATION

The appropriate Task Force agencies are tracking progress toward the restoration of the South Florida Ecosystem by developing and monitoring specific indicators of ecosystem health. Over the past three reporting periods a great deal of modeling and analyses has created new information that has been used to revise the initial set of indicators and to identify more accurate restoration endpoints that will aid in measuring restoration success.

In compliance with the Programmatic Regulations discussed in this *Biennial Report*, RECOVER is vetting indicators to be used to assess restoration progress and to adaptively manage the CERP portion of the restoration effort over time. Additional scientific and technical information about issues and efforts outside of CERP is being developed and refined by federal, state, and local agencies, including the FWS, which has developed and is implementing the *Multi-Species Recovery Plan*. The Task Force has also developed, in coordination with RECOVER, a suite of System-wide Indicators to provide the Task Force with a “top-of-the-mountain” perspective to help assess restoration success. Because this is being done in coordination with RECOVER, both the Task Force and RECOVER will continue to provide input and guidance on the refinement and use of the Task Force System-wide Indicators to ensure correspondence among the sets of indicators.

As noted in the *Strategy*, the Task Force has charged the SCG with recommending a comprehensive set of System-wide Indicators and restoration endpoints that the Task Force will report on in the future. The SCG began this process by designing an open process that provided ample opportunity for peer review and public input in the selection of a comprehensive set of System-wide Indicators.

Indicators are a prerequisite to a series of tasks to accurately predict progress toward restoration. These tasks include: identifying what will be tracked (indicators), the baseline for those indicators, what the indicators will look like when restoration is successful (restoration endpoints), and a system-wide monitoring plan. The baseline will define the condition of the indicators prior to restoration efforts as a basis for determining whether changes that are measured are due to the natural variability of the indicator or due to real change that may be linked to restoration or other changes in the environment.

Finally a process will be implemented to synthesize and report on interim progress on a periodic (annual/biennial) basis that includes a period of public input and peer review.

The 13 strategic System-wide Indicators are listed in Biennial Report Table 25 and described in more detail in the *Strategy*. Ten of these are ecological indicators that assess the biologic and ecologic features of the ecosystem in response to environmental improvements and benefits provided by restoration.²² Three compatibility indicators relate to the built system and projects that receive some benefits from restoration, such as flood protection, and assess the compatibility of these benefits with the natural system.

Work of the SCG will continue over the next reporting period to refine the System-wide Indicators and how they will be assessed based on input from peer review. Some of the areas of work will include possible refinements of the current list based on detailed comments from independent scientific review (ISR) of the first indicator report and will also consider the addition of other indicators identified as gaps in the system-wide suite (mercury, cattails, contaminants, and exotic animals). Additional suggestions by the ISR include the development of an Integrated Index of Ecological Health or Integrity, establishment of a Bureau of Ecological Information for Restoration, and statistical testing of data correlations among the indicators to determine if the indicators are integrative of ecological conditions.

Biennial Report Table 25 – Task Force System-wide Indicators for 2006

ECOLOGICAL INDICATORS

- Fish and Macroinvertebrates
- Wading Birds (White Ibis, Wood Stork, and Roseate Spoonbill)
- Florida Bay Submerged Aquatic Vegetation
- Florida Bay Algal Blooms
- Crocodylians (American Alligators and Crocodiles)
- American Oysters
- Periphyton and Epiphyton
- Juvenile Pink Shrimp
- Lake Okeechobee Littoral Zone
- Invasive Exotic Species

COMPATIBILITY INDICATORS

- Water Volume
- Biscayne Aquifer Saltwater Intrusion
- Flood Protection – C-111 Basin

²² See Appendix C Additional View of the Miccosukee Tribe “Putting the Everglades back into Everglades Restoration.” Section II.B.5.



Appendices



Appendix A: Integrated Financial Plan Summary

Appendix B: Total Cost Estimate

**Appendix C: An Additional View of the Miccosukee Tribe
of Indians of Florida**

**Appendix D: Water Resources Development Act of 2000,
Title VI, Section 601 Comprehensive Everglades Restoration Plan**

**Appendix E: South Florida Ecosystem Restoration
Task Force Charter**



APPENDIX A Integrated Financial Plan Summary

2006 Integrated Financial Plan

Purpose

In 1996 Congress directed the Task Force to prepare an integrated financial plan for the restoration, preservation, and protection of the South Florida Ecosystem. The IFP is updated annually and posted on the South Florida Ecosystem Restoration Task Force website. Every two years it is published along with the Task Force *Strategy* and *Biennial Report*.

The purpose of the Integrated Financial Plan (IFP) is to provide detailed information about the federal, state, tribal, and local restoration projects that contribute to the accomplishment of the vision, goals, subgoals, and objectives of the Task Force Strategy for restoration of the South Florida Ecosystem.

Background

The overall premise of restoration is that the ecosystem must be managed from a system-wide perspective. Rather than dealing with issues independently, the challenge is to seek out the interrelationships that exist between all the components of the ecosystem. The same issues that are critical to the natural environment — getting the water right and restoring, preserving, and protecting diverse habitats and species — are equally critical to maintaining a quality built environment and lifestyle for south Florida's residents and visitors.

The success of this comprehensive approach will depend upon the coordination and integration of hundreds of individual restoration projects carried out by various agencies at all levels of government, and with input from many stakeholders. Each agency brings its own authority, jurisdiction, capabilities, and expertise to this initiative and applies them through its individual programs, projects, and activities.

Criteria and Assumptions

The IFP is a compilation of project specific information provided by the members of the Task Force. The cost estimating protocols, fiscal year cycles, time frames and methodologies used by the members vary widely. As such, the IFP reflects the criteria and assumptions used by the reporting Task Force entities and does not follow a single format.

Specific criteria and assumptions for each project are annotated with footnotes.

For policy reasons, the Florida Department of Environmental Protection (FDEP) and the South Florida Water Management District (SFWMD) do not make individual project cost projections on future non-CERP land acquisitions for habitat preservation and conservation purposes listed under Goal 2. The cost of lands already purchased for habitat preservation and conservation purposes are the actual costs. An estimate of future land costs for non-CERP Goal 2 land acquisition is provided in the Total Cost Estimate in Appendix B of the 2006 edition of the Coordinating Success Volume 1 document.

The following criteria and assumptions apply to all of the project financial information as provided in the Task Force's 2006 Integrated Financial Plan:

- Federal agencies and the SFWMD operate and report financial activities on an October 1 to September 30 fiscal year, while other State of Florida agencies operate on a July 1 to June 30 fiscal year.
- Generally the U.S. Army Corps of Engineers (USACE), in seeking project authorizations, uses constant year dollars to develop cost estimates, as provided in appropriate authorizing documents. Once a project is authorized, the USACE uses the Office of Management and Budget (OMB) inflation indices to price level estimated project costs to current year dollars, then inflates to mid point of construction using current schedule to produce a fully funded project cost estimate. Estimated project costs are updated annually using the OMB directed inflation indices and current schedules.
- USACE project costs are reported as follows:
 - a) CERP: The Project Implementation Report (PIR) is the decision document used to obtain approval and/or authorization of CERP projects and completion of the final PIR is normally the time when all costs are updated. Prior to the development of a final PIR, project cost estimates assume a 50% Federal and 50 % Non-Federal cost share and are reported in 2005 dollars that

have been updated using OMB inflation indices. None of the CERP projects are fully funded.

b) Central & Southern Florida (C&SF) South Dade County C-111, C&SF West Palm Beach STA 1 East/ C-51 West, Kissimmee River Restoration, Everglades, and South Florida Ecosystem Restoration Critical Projects costs are reported in 2005 dollars, fully funded.

c) Southwest Florida Feasibility Study: study cost estimate is reported in 2000 dollars. Per the Project Management Plan (pp 48-49), \$12M is the fully funded cost estimate.

d) Florida Bay/Florida Keys Feasibility Study: study cost estimate is reported in 2001 dollars per the Master Implementation Sequencing Plan (MISP) with a fully funded cost of \$6.35M.

- The SFWMD project costs are reported as follows:
 - a) Lake Okeechobee Protection Plan – project cost estimate is reported in 2003 dollars. This cost estimate is being revised for the 2007 plan update. Cost estimates for the Lake Okeechobee and Estuary Recovery program have been developed for the Lake Okeechobee Fast Track (LOFT) projects and permanent forward pumps. Cost estimates for the remaining components are under development.
 - b) Long Term Plan Projects – project cost estimates are escalated values and are derived from construction industry-accepted cost databases and compared with similar previous SFWMD completed projects. Escalated value is defined as the value of when that component is expected to be constructed, including the estimated cost of inflation.
 - c) Acceler8 Projects – Project cost estimates are updated as each project progresses through the design process. Each updated cost estimate is reported as the present day value at the time the estimate is performed. Contingencies are included in each estimate with larger contingencies (30%) used during early stages of the design phase and smaller contingencies (10%)

used at the final design phase. The contingencies are intended to account for cost escalation due to inflation.

- Reporting agencies needed to presume annual levels of Congressional and State of Florida appropriations to develop project completion schedules. If the actual appropriations vary from presumed levels, then project completion schedules and estimated projects costs may change.
- The Project Summary Table and IFP do not include operational costs or agency programmatic costs that would be incurred regardless of the restoration initiatives. For example, the 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 water delivery infrastructure are not included herein.
- The Project Summary Table and IFP do not include the costs of land development and associated infrastructure as well as infrastructure improvements in existing urban areas including but not limited to redeveloping declining urban areas, wastewater and storm water management systems construction and improvements, schools, roadways, utilities, government services, and light rail.
- The Project Summary Table and IFP do not include any current or future costs for science/research projects or studies.
- The Project Summary Table and IFP do not include any costs or future resource needs projected for environmental and system-wide monitoring programs (for example, the \$100 million funded over ten years for the CERP monitoring programs is not included).
- The Project Summary Table and IFP do not include any post-construction operations and maintenance costs in the total financial requirement.

HOW TO USE THE IFP PROJECT SUMMARY TABLE

The Integrated Financial Plan Summary Table provides a great deal of useful information for those interested in project details at a glance and describes how the projects link to the overall strategic goals, subgoals, and objectives of the Task Force. This same table is repeated in Volume 1, Appendix A.

Each column of the table has a specific purpose to assist in finding information quickly and aggregating different information components:

Column 1	identifies the goal and subgoal the project is designed to achieve or partially achieve.	Column 4	identifies the lead agency.
Column 2	assigns a unique project number linked to the Task Force goals, subgoals, and objectives. The first digit is a goal number (1, 2, or 3). The second digit is the subgoal/objective number. For the purpose of assigning project numbers, the objectives under each goal have been numbered consecutively regardless of their subgoal. For example, project 1104 would be a project that supports objective 1-A.1. The third and fourth digits reflect the order of listing of the projects under each subgoal/objective. For example, project 1104 would be the 4th project on the list for that objective.	Columns 5 and 6	identify the reported start and completion dates.
Column 3	is the project name. The staff strives to use the same project name used by all agencies, although at times this is quite challenging. Some of the project names changed from year to year as projects are grouped together or split apart in the CERP adaptive management process. For example the Lake Istokpoga Project, which was a separate project in 2002, has since been included in the Lake Okeechobee Watershed Project. These types of actions affect the restoration endpoints and total outputs measured by some of the objectives, and as a result some of the restoration endpoints have changed.	Column 7	identifies the current estimated financial requirements.
		Column 8	identifies the financial resources appropriated as of June 30, 2006 unless otherwise noted.
		Column 9	identifies the measurable output (e.g., acre-feet of storage, miles modified, etc.) that collectively add up to the restoration endpoint identified for achieving the objectives of each subgoal.
		Columns 10 and 11	identify the primary and secondary objectives that the project outputs support. The staff identified the primary and secondary objectives based on input from the reporting agency. Some projects provide outputs supporting more than one objective. Thus, they are listed in more than one section with different outputs. For example, the Lake Okeechobee Watershed Project (project 1104) provides acres of stormwater treatment for Objective 1.B.1 and acre-feet of storage for Objective 1.A.1. Such projects are numbered according to the primary objective identified for the project, and the same number is maintained when the project is repeated to identify the secondary benefit.
		Column 12	identifies the page number in Volume 2 where the detailed project sheet can be located.

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
GOAL 1. GET THE WATER RIGHT											
1.A.1	SURFACE WATER STORAGE PROJECTS										
	1101	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU), and C-44 Basin Storage Reservoir (B) (CERP Project # WBS 07)	USACE/ SFWMD	2002	2025	1,309,693,000	136,799,000	165,000	1.A.1	1.B.1	25
	1102	C&SF: CERP Everglades Agricultural Area (EAA) Storage Reservoir (CERP Project # WBS 08 and 09)	USACE/ SFWMD	2001	2015	526,413,000	36,538,000	360,000	1.A.1		30
	1104	C&SF: CERP Lake Okeechobee Watershed (A, N, OPE) (CERP Project # WBS 01)	USACE/ SFWMD	2001	2015	575,559,000	42,013,000	250,000	1.A.1	1.B.1/2.A.3	34
	1105	C&SF: CERP North Lake Belt Storage Area (XX P2) (CERP Project # WBS 25)	USACE/ SFWMD	2017	2040	308,154,000	0	90,000	1.A.1		37
	1106	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (VV) (CERP Project # WBS 20 and 21)	USACE/ SFWMD	2006	2020	154,441,000	5,245,000	20,000	1.A.1	1.A.2	39
	1107	C&SF: CERP Site 1 Impoundment and Aquifer Storage and Recovery (CERP Project # WBS 22 and 40)	USACE/ SFWMD	2002	2025	153,931,000	13,889,000	13,280	1.A.1	2.A.3	41
	1109	C&SF: CERP C-43 Basin Storage Reservoir and ASR (D) (CERP Project # WBS 04 and 05)	USACE/ SFWMD	2001	2020	530,600,000	59,143,000	160,000	1.A.1	1.A.2	45
	1110	C&SF: CERP Central Lake Belt Storage Area (SP2) (CERP Project # WBS 26)	USACE/ SFWMD	2017	2040	155,353,000	0	190,000	1.A.1	1.B.1	48
	1112	LOFT (identified under LOER)- Taylor Creek Reservoir	USACE/ SFWMD	2005	2010	102,160,000	2,410,000	32,000	1.A.1	1.B.1	50
	1113	C&SF: CERP - Water Preserve Area Conveyance (BB XX p1)(CERP Project # WBS 49)	USACE/ SFWMD	2002	2020	331,665,000	6,856,000	90,000	1.A.1		51
	1114	C&SF: CERP Everglades National Park Seepage Management (V) (FF) (U)(CERP Project # WBS 27 and 43)	USACE/ SFWMD	2004	2020	390,942,000	59,004,000	11,500	1.A.1		52
	1501	C&SF: CERP - Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O) (CERP Project # WBS 45)	USACE/ SFWMD	2002	2009	Footnote 1	Footnote 1	13,280	1.B.1	1.A.1/2.A.3	108
	1503	C&SF: CERP North Palm Beach County PIR Part 1 (CERP Project # WBS 17)	USACE/ SFWMD	2001	2020	Footnote 1	Footnote 1	48,000	1.B.1	1.A.1	116

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2100	Allapattah Flats/Ranch	FDEP	1997	TBD	Footnote 1	Footnote 1	32,000			149
		Completed Projects									
	1111	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/ SFWMD	1997	2006	40,676,000	38,657,000	6,000	1.A.1	2.A.3	277
1.A.2		AQUIFER STORAGE & RECOVERY (ASR) PROJECTS						BGD			
	1200	C&SF: CERP North Palm Beach County - Part 2 (LL, K, PT2) (CERP Project # WBS 18)	USACE/ SFWMD	2009	2020	203,891,000	0	0.17	1.A.2		54
	1201	C&SF: CERP Lake Okeechobee ASR (GG)(CERP Project # WBS 03)	USACE/ SFWMD	2010	2030	1,254,142,000	0	1	1.A.2		55
	1106	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (CERP Project # WBS 21)	USACE/ SFWMD	2010	2020	Footnote 1	Footnote 1	0.075	1.A.1	1.A.2	39
	1109	C&SF: CERP C-43 Basin Storage Reservoir and ASR (CERP Project # WBS 05)	USACE/ SFWMD	2001	2020	Footnote 1	Footnote 1	0.22	1.A.1	1.A.2	45
1.A.3		MODIFY IMPEDIMENTS TO SHEETFLOW PROJECTS						MILES MODIFIED	1.A.1	1.B.1	
	1300	Canal 111	USACE/ SFWMD	1994	2010	287,600,000	184,081,000	4.75	1.A.3	3.B.1	57
	1301	C&SF: CERP WCA-3 Decentralization and Sheetflow Enhancement (AA)(QQ)(SS)(ZZ) (CERP Project # WBS 12, 13 and 47)	USACE/ SFWMD	2001	2020	253,443,000	17,255,000	240	1.A.3	2.A.3	59
	1302	C&SF: CERP Florida Keys Tidal Restoration (OPE) (CERP Project # WBS 31)	USACE/ SFWMD	2001	2015	1,536,000	1,250,000	0.6	1.A.3		63
	1303	Critical Projects Southern CREW	USACE/ SFWMD	1999	2005	33,321,000	33,321,000		1.A.3		65
	1304	East WCA-3A Hydropattern Restoration	SFWMD	1994	2012	28,224,966	5,344,966	8.5	1.A.3		66
	1306	Kissimmee River Restoration Project	USACE/ SFWMD	1994	2010	575,400,000	266,421,000	31	1.A.3	2.A.3	67
	1307	Modified Water Deliveries to Everglades National Park (Footnote 3)	NPS/ USACE	1990	2009	398,420,000	252,645,000	21	1.A.3		69
		Completed Projects									
	1305	Kissimmee Prairie	FDEP/ SFWMD	1996	1997	Footnote 1	Footnote 1	39.3	1.A.3	2.A.1	279
		OTHER RELATED HYDROLOGY PROJECTS									
	1400	Critical Projects: Additional Water Conveyance Structures Under Tamiami Trail	USACE/ SFWMD	1998	2006	16,506,000	16,506,000				71

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1401	Biscayne Bay Feasibility Study	USACE/ M-DADE	1996	2010	6,370,000	6,370,000				72
	1403	C&SF: CERP Broward County Secondary Canal System(CC) (CERP Project # WBS 24)	USACE/ SFWMD	2001	2015	15,476,000	50,000				73
	1408	C&SF: CERP Loxahatchee National Wildlife Refuge Internal Canal Structures (KK) (CERP Project # WBS 14)	USACE/ SFWMD	2004	2020	9,052,000	49,000				74
	1409	C&SF: CERP Seminole Tribe Big Cypress Water Conservation Plan (CERP Project # WBS 96)	USACE/ Seminole	2015	2020	89,455,000	0				75
	1410	C&SF: CERP Biscayne Bay Coastal Wetlands (FFF) (OPE) (CERP Project # WBS 28)	USACE/ SFWMD	2001	2015	386,856,000	43,494,000				76
	1411	C&SF: CERP Caloosahatchee R. (C-43) Basin ASR Pilot Project (D)(CERP Project # WBS 33)	USACE/ SFWMD	2001	2009	7,898,000	4,555,000				79
	1412	C&SF: CERP Diverting WCA-2B and WCA-3 Flows to Central Lake Belt Storage Area (YY) (S P1) (CERP Project # WBS 48)	USACE/ SFWMD	2005	2025	539,423,000	284,000				81
	1413	C&SF: CERP Everglades Rain Driven Operations (H)	USACE/ SFWMD	TBD	TBD	TBD	TBD				83
	1416	C&SF: CERP L-31 N Seepage Management Pilot Project (V)(CERP Project # WBS 36)	USACE/ SFWMD	2001	2010	11,569,000	4,033,000				84
	1417	C&SF: CERP Lake Belt (In-Ground Reservoir) Technology - Pilot Project (CERP Project # WBS 35)	USACE/ SFWMD	2001	2020	26,618,000	1,919,000				86
	1418	C&SF: CERP Lake Okeechobee Aquifer Storage and Recovery Pilot Project (GG) (CERP Project # WBS 32)	USACE/ SFWMD	2000	2009	36,429,000	16,688,000				87
	1419	C&SF: CERP Lake Okeechobee Regulation Schedule	USACE/ SFWMD	TBD	TBD	TBD	0				89
	1420	C&SF: CERP Modified Holeyland Wildlife Management Area Operation Plan (CERP Project # WBS 15)	USACE/ SFWMD	2007	2015	TBD	0				90
	1421	C&SF: CERP Modified Rotenberger Wildlife Management Area Operation Plan (EE)(CERP Project # WBS 16)	USACE/ SFWMD	2007	2009	TBD	0				91
	1422	C&SF: CERP Operational Modification to Southern Portion of L-31N and C-111 (OO)(CERP Project # WBS)	USACE/ SFWMD	TBD	TBD	TBD	0				92
	1423	C&SF: CERP Hillsboro Aquifer Storage and Recovery Pilot Project (M)(CERP Project # WBS 34)	USACE/ SFWMD	2000	2009	9,395,000	6,043,000				93

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1425	Critical Projects Seminole Big Cypress Reservation Water Conservation Plan	Seminole/USACE	1997	2008	52,249,000	30,208,000				95
	1426	Florida Bay and The Florida Keys Feasibility Study	USACE/SFWMD	2001	2012	6,350,000	4,236,000				97
	1431	Southwest Florida Feasibility Study	USACE/SFWMD	2001	2009	12,000,000	9,466,000				99
	1432	WCA-2A Hydropattern Restoration	SFWMD	1994	2012	6,067,016	4,942,179				101
	1433	West WCA-3A Hydropattern Restoration	SFWMD	1994	2012	11,843,375	7,402,471				102
	1434	C&SF: CERP - Flows to Eastern Water Conservation Area (EEE) (CERP Project # WBS 23)	USACE/SFWMD	2011	2020	8,019,000	0				103
	1435	C&SF: CERP- C-4 Control Structures (T) (CERP Project # WBS 46)	USACE/SFWMD	2004	2015	2,804,000	113,000				104
	1436	LOFT (identified under LOER)- Permanent Forward Pumps	SFWMD	2006	2010	100,000,000	1,800,000				105
		Completed Projects:									
	1406	Critical Projects East Coast Canal Structures (C-4)	USACE/SFWMD	1999	2003	3,683,000	3,683,000				280
	1428	Indian River Lagoon Restoration Feasibility Study	USACE/SFWMD	1996	2002	6,150,000	6,150,000				281
	1430	Rotenberger Restoration	SFWMD	1994	2005	5,204,444	5,204,444				282
Sub-Goal 1.B GET THE WATER QUALITY RIGHT											
1.B.1	STORMWATER TREATMENT AREA (STA) PROJECTS										
	1500	C&SF: CERP Big Cypress/L-28 Interceptor Modifications (CCC) (CERP Project # WBS 10)	USACE/SFWMD	2015	2025	51,385,000	0	1,900	1.B.1		106
	1501	C&SF: CERP - Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O) (CERP Project # WBS 45)	USACE/SFWMD	2002	2009	408,348,000	132,883,000	3,500	1.B.1	1.A.1/2.A.3	108
	1502	C&SF: CERP Miccosukee Tribe Water Management Plan (OPE) (CERP Project # WBS 90)	USACE/Miccosukee	2003	2020	29,036,000	0	900	1.B.1		115
	1503	C&SF: CERP North Palm Beach County PIR Part 1 (X, Y, GGG, KP1, OPE)(CERP Project # WBS 17)	USACE/SFWMD	2001	2020	533,161,000	34,479,000	1,150	1.B.1	1.A.1	116
	1505	C&SF: CERP Caloosahatchee Backpumping with Stormwater Treatment (DDD)(CERP Project # WBS 06)	USACE/SFWMD	2011	2020	99,664,000	0	5,000	1.B.1		120

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1506	Critical Projects: Lake Okeechobee Water Retention/ Phosphorus Removal	USACE/ SFWMD	1997	2006	21,902,000	21,902,000	940	1.B.1		121
	1513	C&SF: STA-1E/C-51 West	USACE/ SFWMD	1994	2008	288,600,000	278,627,000	6,500	1.B.1		122
	1514A	ACCELER8 project includes Everglades Agricultural Area (EAA) Stormwater Treatment Areas (STAs) Expansion	SFWMD	2005	2010	226,698,774	22,714,054	5,960	1.B.1		123
	1515	LOFT (identified under LOER)- Lakeside Ranch STA	SFWMD	2005	2009	52,105,000	1,336,000	2,700	1.B.1		124
	1516	LOFT (identified under LOER)- Nubbin Slough STA Expansion	SFWMD	2005	2007	21,112,000	1,000,000	800	1.B.1		125
	1517	C&SF: CERP C-111 Spread Canal (CERP Project # WBS 29)	USACE/ SFWMD	2000	2009	117,595,000	21,399,000	3,200	1.B.1		126
	1518	C&SF:CERP Henderson Creek/Belle Meade Restoration (OPE)(CERP Project # WBS 93)	USACE/ FDEP	2002	2015	5,761,000	1,239,000	10	1.B.1		130
	1101	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU), and C-44 Basin Storage Reservoir (B) (CERP Project # WBS 07)	USACE/ SFWMD	2002	2025	Footnote 1	Footnote 1	6,200	1.A.1	1.B.1	25
	1104	C&SF: CERP Lake Okeechobee Watershed (A, N, OPE)(CERP Project # WBS 01)	USACE/ SFWMD	2001	2015	Footnote 1	Footnote 1	11,875	1.A.1	1.B.1	34
	1110	C&SF:CERP Central Lake Belt Storage Area (S, P2)(CERP Project # WBS 26)	USACE/ SFWMD	2017	2035	Footnote 1	Footnote 1	640	1.A.1	1.B.1	48
	1112	LOFT (identified under LOER)- Taylor Creek Reservoir	SFWMD	2005	2010	Footnote 1	Footnote 1	4,000	1.A.1	1.B.1	50
		Completed Projects:									
	1508	STA-1 West Works and Outflow Pump Station (G-310)	SFWMD	1994	2000	107,546,889	107,546,889	6,700	1.B.1		283
	1509	STA-2 Works and Outflow Pump Station (G-335)	SFWMD	1994	2000	126,104,852	126,104,852	6,430	1.B.1		284
	1510	STA-3/4 Works	SFWMD	1994	2005	210,941,770	210,941,770	16,600	1.B.1		285
	1511	STA-5 Works	SFWMD	1994	2005	44,434,079	44,434,079	4,118	1.B.1		286
	1512	STA-6 (includes sections 1 and 2)	SFWMD	1994	2006	35,175,950	14,575,063	2,222	1.B.1		287
1.B.2		TOTAL MAXIMUM DAILY LOAD (TMDL) PLAN DEVELOPMENT					COMPLETED PLANS				
	1660	Total Maximum Daily Load (TMDL) for South Florida	FDEP	2000	2011	Footnote 2	3,730		1.B.2		131
		OTHER RELATED WATER QUALITY PROJECTS									
	1701	Comprehensive Integrated Water Quality Feasibility Study	USACE/ FDEP	2001	2014	9,334,000	735,000				132

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1702	Critical Projects Lake Trafford	USACE/ SFWMID	1999	2005	30,043,000	30,043,000				134
	1703	Critical Projects Western C-11 Water Quality Treatment	USACE/ SFWMID	1997	2005	18,066,000	18,066,000				135
	1705	Everglades National Park Water & Wastewater	NPS	1997	2006	18,965,000	17,365,000				136
	1706	Everglades Regulation Division	SFWMID	1998	2016	Footnote 2	21,705,000				137
	1707	Floridan Aquifer Restoration	NRCS	2002	2006	900,000	900,000				138
	1714	Seminole Tribe Best Management Practices for the Big Cypress Reservation	Seminole	1996	2008	4,779,000	1,433,700				139
	1715	Seminole Tribe Best Management Practices for the Brighton Reservation	Seminole	1998	2008	338,000	144,000				140
	1716	Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminole	1999	2010	15,818,000	10,647,000				141
	1717	Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminole	2002	2012	49,000,000	11,750,000				142
	1720	LOFT - Rerouting of flows from S-133 Basin	SFWMID	2005	2009	29,000,000	810,000				143
	1721	LOFT (identified under LOER)- Rerouting of flows from S-154 Basin	SFWMID	2005	2009	2,000,000	810,000				144
	1722	Lake Okeechobee Protection Plan	SFWMID	1999	2015	392,000,000	222,000,000				145
	1723	Long-Term Plan for Achieving Everglades Water Quality Goals	SFWMID	2003	2016	749,800,000	118,481,376				146
		Completed Projects:									
	1700	Chapter 298 Districts/Lease 3420 Improvements	SFWMID	1994	2005	24,115,521	24,115,521				288
	1704	Development of Best Management Practices Related to the Land Application of Residuals and Chicken Manure in the Lake Okeechobee Watershed	SFWMID	2000	2005	421,633	421,633				289
	1708	Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project	SFWMID	2000	2003	955,069	955,069				290
	1709	Lake Okeechobee Tributary Sediment Removal Pilot Project	SFWMID	2000	2004	440,000	440,000				291
	1713	S-5A Basin Runoff Diversion Works	SFWMID	1994	2005	14,233,758	14,233,758				292
	1719	STA-1 Inflow and Distribution Works	SFWMID	1994	2005	12,679,955	12,679,955				293

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
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						ACRES			
		State Acquisitions									
	2100	Allapattah Ranch	FDEP	1997	TBD	TBD	2,286,995	35,999	2.A.1		149
	2101	Atlantic Ridge Ecosystem (Footnote 4)	FDEP/ SFWMD	1995	TBD	TBD	7,892,759	16,002	2.A.1		150
	2102	Babcock Ranch	FDEP	2001	TBD	TBD	0	91,361	2.A.1		151
	2104	Belle Meade	FDEP	1993	TBD	TBD	39,412,158	28,506	2.A.1		152
	2105	Big Bend Swamp/Holopaw Ranch	FDEP	2000	TBD	TBD	6,829,000	59,132	2.A.1		153
	2106	Biscayne Coastal Wetlands (Footnote 4)	SFWMD/ M-DADE	1998	TBD	TBD	0	2,241	2.A.1		154
	2107	Bombing Range Ridge	FDEP	1998	TBD	TBD	15,003,388	44,439	2.A.1		155
	2108	Caloosahatchee Ecoscape	FDEP	1998	TBD	TBD	1,948,038	18,497	2.A.1		156
	2109	Catfish Creek	FDEP	1990	TBD	TBD	47,442,266	14,901	2.A.1		157
	2111	Charlotte Harbor Estuary/ Flatwoods/Cape Haze	FDEP	1986	TBD	TBD	17,781,504	15,054	2.A.1		158
	2112	Corkscrew Regional Ecosystem Watershed	FDEP	1991	TBD	TBD	57,432,391	69,500	2.A.1		159
	2114	Coupon Bight/ Key Deer/ Big Pine Key	FDEP	1985	TBD	TBD	26,950,877	4,014	2.A.1		160
	2172	Cypress Creek/Loxahatchee	SFWMD	2002	TBD	TBD	44,116,173	4,347	2.A.1		161
	2115	Cypress Creek/Trail Ridge (Footnote 4)	SFWMD	1997	TBD	TBD	968,856	14,270	2.A.1		162
	2183	Devils Garden	FDEP	2002	TBD	TBD	0	82,508	2.A.1		163
	2117	East Coast Buffer/Water Preserve Areas (Footnote 4)	FDEP/ SFWMD	1994	TBD	TBD	175,590,276	66,809	2.A.1		164
	2118	Esterio Bay	FDEP	1985	TBD	TBD	59,220,290	14,378	2.A.1		165
	2119	Everglades Agricultural Area (EAA) / Talisman (Footnote 4)	SFWMD/ DOI	1997	TBD	TBD	2,214,760	51,210	2.A.1		166
	2120	Fakahatchee Strand	FDEP	1980	TBD	TBD	24,836,008	80,332	2.A.1		167
	2121	Fisheating Creek	SFWMD/ FDEP	1999	TBD	TBD	101,928,563	176,876	2.A.1		168
	2122	Florida Keys Ecosystem	FDEP	1992	TBD	TBD	55,224,862	15,336	2.A.1		169
	2123	Frog Pond/L-31 N	FDEP/ SFWMD	1982	TBD	TBD	86,187,297	10,450	2.A.1		170
	2185	Half Circle L Ranch	SFWMD	2003	TBD	TBD	0	11,269	2.A.1		171
	2124	Indian River Lagoon Blueway	FDEP	1998	TBD	TBD	21,927,795	5,136	2.A.1		172
	2125	Juno Hills /Dunes	FDEP	1994	TBD	TBD	41,892,718	590	2.A.1		173
	2176	Jupiter Ridge	FDEP	1991	TBD	TBD	23,099,950	287	2.A.1		174

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2126	Kissimmee - St. John Connector	FDEP	2001	TBD	TBD	0	9,463	2.A.1		175
	2127	Kissimmee River (Lower Basin)	SFWMD	1985	2005	TBD	99,007,882	68,332	2.A.1		176
	2128	Kissimmee River (Upper Basin)	SFWMD	1990	2005	TBD	70,825,219	36,763	2.A.1		177
	2129	Lake Wales Ridge Ecosystem	FDEP	1992	TBD	TBD	27,897,827	13,848	2.A.1		178
	2132	Loxahatchee Slough Land Acquisition	SFWMD	1996	TBD	TBD	35,920,793	15,200	2.A.1		179
	2133	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	TBD	0	7,000	2.A.1		180
	2134	Miami-Dade County Archipelago	FDEP	1994	TBD	TBD	23,524,235	884	2.A.1		181
	2135	Model Lands (Footnote 4)	SFWMD/ M-DADE	1994	2007	TBD	363,806	47,482	2.A.1		182
	2138	North Fork St Lucie River (Footnote 4)	FDEP/ SFWMD	1988	TBD	TBD	682,938	3,800	2.A.1		183
	2139	North Key Largo Hammocks	FDEP	1983	TBD	TBD	75,403,715	5,048	2.A.1		184
	2141	Okaloacoochee Slough	FDEP	1996	TBD	TBD	20,570,673	37,218	2.A.1		185
	2142	Okeechobee Battlefield	FDEP	2001	TBD	TBD	3,217,250	211	2.A.1		186
	2143	Osceola Pine Savannas	FDEP	1995	TBD	TBD	310,000	1,374	2.A.1		187
	2144	Pal-Mar (Footnote 4)	FDEP	1992	TBD	TBD	78,582,550	38,549	2.A.1		188
	2145	Panther Glades	FDEP	2001	TBD	TBD	75,049,836	57,604	2.A.1		189
	2146	Paradise Run	SFWMD	1998	TBD	TBD	4,908,095	7,978	2.A.1		190
	2147	Lake Hatchineha Watershed/ Parker-Poinciana	SFWMD	1996	TBD	TBD	0	6,437	2.A.1		191
	2186	Pine Island Slough Ecosystem	FDEP	2005	TBD	TBD	0	21,583	2.A.1		192
	2148	Pineland Site Complex	FDEP	1996	TBD	TBD	1,751,874	206	2.A.1		193
	2178	Ranch Reserve	SFWMD	1997	TBD	TBD	39,286	2,217	2.A.1		194
	2149	Rookery Bay	FDEP	1980	TBD	TBD	45,500,833	18,721	2.A.1		195
	2150	Rotenberger/Holey Land Tract	FDEP	1984	TBD	TBD	20,114,395	79,170	2.A.1		196
	2151	Shingle Creek	SFWMD	1987	TBD	TBD	6,314,344	8,066	2.A.1		197
	2152	Six Mile Cypress Land Acquisition	SFWMD	1987	TBD	TBD	6,903,701	2,193	2.A.1		198
	2154	South Savannas	FDEP	1981	TBD	TBD	20,902,290	6,046	2.A.1		199
	2155	Southern Glades (Footnote 4)	SFWMD/ M-DADE	1964	TBD	TBD	6,938,380	36,362	2.A.1		200
	2156	Southern Golden Gate Estates (Footnote 4)	FDEP	1984	TBD	TBD	6,456,717	55,247	2.A.1		201
		STA 1 W, 2,3/4, 5, and 6 (See project IDs 1508-1512)	SFWMD		TBD	TBD	126,772,412	41,089	2.A.1		
	2158	Twelve Mile Slough	FDEP	1998	TBD	TBD	11,000,000	15,653	2.A.1		202
	2159	Upper Lakes Basin Watershed	SFWMD	1995	TBD	TBD	12,343,957	47,300	2.A.1		203
	2160	Water Conservation Areas 2, and 3	SFWMD	1948	TBD	TBD	10,572,395	721,433	2.A.1		204
	2110	Completed Projects: Cayo Costa	FDEP	1980	2004	28,337,346	28,337,346	1,954	2.A.1		294

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Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2113	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	2,600,000	2,600,000	633	2.A.1		295
	2116	Dupuis Reserve	SFWMD	1985	1986	23,016,601	23,016,601	21,875	2.A.1		296
	1305	Kissimmee Prairie	FDEP	1996	1997	21,953,790	21,953,790	38,284	2.A.1		279
	2130	Lake Walk-In-Water	SFWMD	1995	1998	3,950,000	3,950,000	4,009	2.A.1		297
	2131	Loxahatchee River Land Acquisition	SFWMD	1984	2001	13,074,703	13,074,703	1,547	2.A.1		298
	2137	Nicodemus Slough	SFWMD	1981	1988	1,894,501	1,894,501	2,231	2.A.1		299
	2153	South Fork St. Lucie River Land Acquisition	SFWMD	1995	1995	2,480,000	2,480,000	184	2.A.1		300
	2180	Ten Mile Creek	SFWMD	1990	2004	5,332,000	5,332,000	913	2.A.1		277
	2157	Tibet-Butler Preserve	SFWMD	1988	1999	3,601,900	3,601,900	439	2.A.1		301
	2161	Yamato Scrub	FDEP	1992	1996	25,932,850	25,932,850	207	2.A.1		302
		STA 1 E (See project ID1513)				46,000,000	46,000,000	6503	2.A.1		
		Federal Acquisitions									
	2161	A.R. M. Loxahatchee National Wildlife Refuge	USFWS	1955	2005	30,119,000	119,000	145,567	2.A.1		205
	2163	Big Cypress National Preserve Addition	NPS	1989	2005	75,466,000	72,958,737	146,117	2.A.1		206
	2164	Big Cypress National Preserve Private Inholdings (Footnote 3)	NPS	1974	TBD	243,982,000	222,105,000	574,449	2.A.1		207
	2165	Biscayne National Park	NPS	1968	TBD	33,699,000	31,850,735	172,924	2.A.1		208
	2166	Crocodile Lake National Wildlife Refuge	USFWS	1979	2005	14,319,000	13,093,000	7,100	2.A.1		209
	2167	Everglades National Park Expansion	NPS	1990	2005	109,892,000	97,669,000	109,504	2.A.1		210
	2169	Florida Panther National Wildlife Refuge	USFWS	1989	TBD	10,692,000	10,682,000	61,573	2.A.1		211
	2168	Florida Keys National Wildlife Refuge Complex	USFWS	1960	2005	35,028,000	31,374,000	415,433	2.A.1		212
	2170	Hobe Sound National Wildlife Refuge	USFWS	1968	2004	5,818,000	18,000	1,130	2.A.1		213
	2171	J.N. "Ding" Darling National Wildlife Refuge	USFWS	1945	2005	12,885,000	9,785,000	10,275	2.A.1		214
2.A.2		CORAL REEF PROTECTION PROJECTS						% Reef Protected			
	2200	Planning and Implementation of the Tortugas Ecological Reserve	NOAA	1997	TBD	Footnote 2	38,400,000	10	2.A.2		215
2.A.3		IMPROVE NATURAL AREAS HABITAT QUALITY PROJECTS						ACRES			
	2300	C&SF: CERP Strazulla Wetlands (OPE) (CERP Project # WBS 39)	USACE/SFWMD	2002	2015	70,392,000	7,451,000	3,335	2.A.3		216
	2301	C&SF: CERP Winsburg Farms Wetland Restoration (OPE) (CERP Project # WBS 91)	USACE/PD Co.	2000	2008	17,055,000	5,983,000	114	2.A.3	3.C.2	217
	2302	C&SF: CERP Lake Park Restoration (CERP Project # WBS 94)	USACE/ Lee Co.	1999	2009	5,971,000	873,000	40	2.A.3		219
	2303	C&SF: CERP Restoration of Pineland and Hardwood Hammocks in C-111 Basin (OPE) (CERP Project # WBS 92)	USACE/ MIA Co.	2016	2025	705,000	0	50	2.A.3		220
	2304	A.R.M. Loxahatchee NWR Prescribed Fire program	USFWS	2002	TBD	TBD	888,600	84.5	2.A.3		221

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2306	C&SF: CERP Acme Basin B Discharge (OPE) (CERP Project # WBS 38)	USACE/ SFWMD	2002	2007	26,512,000	14,488,000	365	2.A.3	3.C.2	222
	2307	C&SF: CERP Picayune Strand (Southern Golden Gates Estates) Hydrologic Restoration (OPE) (CERP Project # WBS 30)	USACE/ SFWMD	2001	2009	362,603,000	151,525,000	55,000	2.A.3		225
	1101	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (U), and C&SF: CERP C-44 Basin Storage Reservoir. (B) (CERP Project # WBS 07)	USACE/ SFWMD	2002	2025	Footnote 1	Footnote 1	152,329	1.A.1	2.A.3	25
	1104	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)	USACE/ SFWMD	2001	2015	Footnote 1	Footnote 1	3,500	1.A.1	2.A.3	34
	1107	C&SF: CERP Site 1 Impoundment and Aquifer Storage and Recovery (CERP Project # WBS 22 and 40)	USACE/ SFWMD	2002	2025	Footnote 1	Footnote 1	114	1.A.1	2.A.3	41
	1111	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/ SFWMD	1997	2003	Footnote 1	Footnote 1	2,740	1.A.1	2.A.3	277
	1306	Kissimmee River Restoration Project	USACE/ SFWMD	1994	2010	Footnote 1	Footnote 1	27,000	1.A.3	2.A.3	67
	1501	C&SF: CERP - Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O) (CERP Project # WBS 45)	USACE/ SFWMD	2002	2009	Footnote 1	Footnote 1	4,032	1.B.1	1.A.1/2.A.3	108
	2606	Hole-in-the-Donut	NPS	1994	2017	Footnote 1	Footnote 1	6,000	2.B.2	2.A.3	241
	3802	C&SF: CERP Wastewater Reuse Technology Pilot Project (CERP Project # WBS 37)	USACE/ SFWMD	2001	2013	Footnote 1	Footnote 1	3,500	3.C.2	2.A.3	266
	OTHER NATURAL HABITAT AND SPECIES PROJECTS										
	2400	Big Cypress National Preserve Mineral Rights	NPS	2000	TBD	TBD	0				228
	2402	South Florida Multi-Species Recovery Plan	USFWS	1994	TBD	386,112,000	130,258,000				229
	2403	WCA-2A Regulation Schedule Review	USACE	TBD	TBD	TBD	0				231
	2404	C&SF: Manatee Pass Gates	USACE/ SFWMD	2001	2007	13,800,000	10,716,000				232
	2305	Loxahatchee Impoundment Landscape Assessment (LILA)	USFWS	2002	2012	6,050,000	4,074,500				234
	Sub-Goal 2.B. CONTROL INVASIVE PLANT AND ANIMAL SPECIES										
	2.B.1 INVASIVE EXOTIC PLANT SPECIES MANAGEMENT PLAN DEVELOPMENT										
	2500	Coordinate the development of management plans for top 20 south Florida exotic pest plants	NEWTT	2001	2011	600,000	0	20	2.B.1		235

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#	
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12	
2.B.2		EXOTIC PLANT SPECIES MAINTENANCE CONTROL PROJECTS										
	2600	Achieve "Maintenance Control" status for Brazilian Pepper, Melaleuca, Australian pine and Old world climbing fern in all natural areas statewide by 2020	NPS/ SFWMD	2002	2020	139,078,000	117,250,000			2.B.2	236	
	2601	Integration of Federal, State, and Local Agency Invasive Exotic Control Programs into Florida-wide Strategy	NPS	2000	2005	Footnote 2	415,090,000		2.B.2		237	
	2602	C&SF: CERP- Melaleuca Eradication Project and other Exotic Plants (CERP Project # WBS 95)	USACE/ SFWMD	2003	2009	6,587,000	2,092,000		2.B.2		238	
	2604	Everglades National Park Exotic Control Program	NPS	2002	TBD	TBD	4,953,000		2.B.2		239	
	2605	Exotic Species Removal	Seminole	1998	2010	988,000	480,000		2.B.2		240	
	2606	Hole-in-the-Donut	NPS	1994	2017	123,750,000	59,536,000		2.B.2	2.A.3	241	
	2607	Exotic Vegetation Control (Critical) Big Cypress National Preserve	NPS	1998	TBD	4,000,000	3,600,000		2.B.2		242	
	2608	Aquatic and Upland Invasive Plant Management	FDEP	TBD	TBD	TBD	132,818,000		2.B.2		243	
		COMPLETED PROJECTS										
	2603	Estero Bay Aquatic Preserve and Buffer Reserve Enhancement and Exotic Removal Project	FDEP	1998	2004	587,600	587,600		2.B.2		303	
2.B.3		INVASIVE EXOTIC PLANT SPECIES PREVENTION PLAN DEVELOPMENT										
	2700	Complete an Invasive Exotics Plant Prevention, Early Detection and Eradication Plan by 2005	NEWTT/ DEP/NPS	2001	2004	5,000,000	0		2.B.3		244	
	2701	Melaleuca Quarantine Facility	USDA/ ARS	1997	2004	7,200,000	6,200,000		2.B.3		245	

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
GOAL 3. FOSTER COMPATIBILITY OF THE BUILT AND NATURAL SYSTEM											
Sub-Goal 3.A. USE AND MANAGE LAND COMPATIBLE WITH RESTORATION											
3.A.1		DESIGNATE OR ACQUIRE LAND FOR FLORIDA GREENWAYS AND TRAILS SYSTEM						ACRES			
	3100	Florida Greenways and Trails Program	FDEP/OGT	2000	2009	4,500,000	0	480,000	3.A.1		249
	3102	Lake Okeechobee Scenic Trail	FDEP	2003	TBD	25,000,000	12,500,000	TBD	3.A.1		250
3.A.2		AGRICULTURE LANDS CONSERVATION MANAGEMENT PROJECTS						ACRES			
	3201	Technical Assistance to Seminole and Miccosukee Indian Reservations	NRCS	1998	2011	15,000,000	778,000	107,000	3.A.2		251
	3202	2002 Farm Bill	NRCS	2002	2007	97,436,000	75,381,000	1,106,108	3.A.2		252
3.A.3		FLORIDA PARK, RECREATION AND OPEN SPACE LANDS PROJECTS						ACRES			
	3301	Florida Keys Overseas Heritage Trail	FDEP	TBD	TBD	40,000,000	22,867,600	TBD	3.A.3		253
3.A.4		BROWNFIELDS REHABILITATION AND REDEVELOPMENT PROJECTS									
	3400	Eastward Hol Brownfields Partnership	SFRPC	1998	2010	Footnote 2	78,328,500		3.A.4		257
3.A.5		INCREASE COMMUNITY UNDERSTANDING OF RESTORATION PROJECTS									
	3502	USACE Outreach Program	USACE	ongoing	TBD	7,398,800	7,398,800		3.A.5		258
	3503	SFWMD Outreach Program	SFWMD	ongoing	TBD	TBD	1,282,327		3.A.5		259
Sub-Goal 3.B FLOOD PROTECTION COMPATIBLE WITH ECOSYSTEM RESTORATION											
3.B.1		FLOOD PROTECTION COMPATIBLE WITH ECOSYSTEM RESTORATION PROJECTS									
	3600	C-4 Flood Mitigation Projects	SFWMD	2001	2004	8,367,000	120,000		3.B.1		260
	1300	Canal 111	USACE/SFWMD	1994	2010	287,600,000	184,081,000		1.A.3	3.B.1	57
Sub-Goal 3.C PROVIDE SUFFICIENT WATER RESOURCES FOR BUILT AND NATURAL SYSTEMS											
3.C.1		WATER RESOURCE DEVELOPMENT PROJECTS						MG			
	3704	Regional Water Supply Plans	SFWMD	2004	2006	19,454,000	0		3.C.1		262
3.C.2		INCREASE VOLUME OF WATER RESOURCE PROJECTS						MGD			
	3800	C&SF-CERP-South Miami-Dade County Reuse (BBB) (CERP Project # WBS 98)	USACE/M-DADE	2013	2025	430,553,000	0	131	3.C.2		263

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	3801	C&SF:CERP-West Miami-Dade County Reuse (HHH)(CERP Project # WBS 97)	USACE/ M-DADE	2013	2025	518,120,000	0	100	3.C.2		265
	3802	C&SF:CERP Wastewater Reuse Technology Pilot Project(HHH)(BBB)(OPE) (CERP Project # WBS 37)	USACE/ SFWMID	2001	2020	35,442,000	1,856,000		3.C.2	2.A.3	266
	2301	C&SF: CERP Winsburg Farms Wetland Restoration (OPE) (CERP Project # WBS 91)	PBCo.	1999	2003	Footnote 1	Footnote 1		2.A.3	3.C.2	217
	2306	C&SF: CERP Acme Basin B Discharge (OPE) (CERP Project # WBS 38)	USACE	2002	2007	Footnote 1	Footnote 1		2.A.3	3.C.2	222
3.C.3		ALTERNATIVE WATER SUPPLY PROJECTS						MGD			
	3900	Alternative Water Supply Grant	SFWMID	1996	TBD	Footnote 1	45,056,000	172			268
OTHER BUILT AND NATURAL SYSTEM COMPATIBILITY PROJECTS											
	4101	BMPs for Agriculture	NRCS	1997	2011	141,203,000	65,166,000				269
	4102	Monitoring of Organic Soils in the Everglades	NRCS	1998	2017	1,236,000	36,000				270
	4103	Soil Survey Update for the Everglades Agricultural Area	NRCS	2004	2012	2,100,000	0				271
	4104	Soil Survey Update for Everglades National Park, Big Cypress National Preserve and Water Conservation Areas	NRCS	2007	2013	6,000,000	0				272
	4105	C&SF: CERP- Flow to Northwest and Central WCA -3A (II)(RR) (CERP Project # WBS 11)	USACE/ SFWMID	2002	2020	36,264,000	66,000				273
		Completed Projects									
	4100	Critical Project Keys Carrying Capacity Study	FDCA USACE	1997	2003	6,000,000	6,000,000				304

Project specific footnotes:

The following information is project specific and is provided in reference to its appearance as a numbered notation on the project summary table:

- 1 This is a multiple objective project, funding is listed in other objective.
- 2 Available funding through project completion is not provided on the project sheet, due to the uncertainty of the annual Federal and State appropriations process. For the purposes of calculating Goal subtotals for all projects, only the dollars appropriated to date have been used for this project.
- 3 Consistent with authorizing Big Cypress legislation.
- 4 The cost information for this project reflects the adjusted total cost information provided on the project sheet.

Changes from 2005 edition:

- Project ID 1507 Miccosukee Tribe Water Management Area deleted as Project ID 1502 is the same project
- Project ID 1100 C&SF: CERP Acme Basin B Discharge is now Project ID 2306
- Project ID 1404 C&SF: CERP C-111N Spreader Canal is now Project ID 1517
- Project ID 1424 C&SF: CERP Picayune Strand (Southern Golden Gates Estates) is now Project ID 2307
- Project ID 1414 C&SF: CERP Henderson Creek/Belle Meade Restoration is now Project ID 1518
- Project ID 1415 C&SF: CERP Everglades National Park Seepage Management is now Project ID 1114
- Project ID 2401 C&SF: CERP Flow to Northwest and Central Water Conservation Area 3A is now Project ID 4105

Project changes from 2004 edition:

- Project ID 1103 C&SF: CERP Everglades Agricultural Storage Reservoir Phase II (GP2) (CERP Project # WBS 09) combined with 1102
- Project ID 1108 C&SF: CERP Bird Drive Recharge Area (U) (CERP Project # WBS 43) combined with 1415
- Project ID 1434 C&SF: CERP Flows to Eastern Water Conservation Area (EEE) (CERP Project # WBS 23) new project
- Project ID 1435 C&SF: CERP C-4 Control Structures (T) (CERP Project # WBS 46) new project
- Project ID 3500 and Project ID 3501 Deleted as project no longer viable

STRATEGIC GOALS AND OBJECTIVES OF THE SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

GOAL 1: GET THE WATER RIGHT

Subgoal 1-A: Get the hydrology right

- Objective 1-A.1: Provide 1.8 million acre-feet of surface water storage by 2036
- Objective 1-A.2: Develop aquifer storage and recovery systems capable of storing 1.5 billion gallons per day by 2030
- Objective 1-A.3: Modify 345 miles of impediments to flow by 2020

Subgoal 1-B: Get the water quality right

- Objective 1-B.1: Construct 91,345 acres of stormwater treatment areas by 2035
- Objective 1-B.2: Prepare locally-based plans to reduce pollutants as determined necessary by the total maximum daily loads by 2011

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

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

- Objective 2-A.1: Complete acquisition of 5.8 million acres of land identified for habitat protection by 2015
- Objective 2-A.2: Protect 20 percent of the coral reefs by 2010
- Objective 2-A.3: Improve habitat quality for 2.4 million acres of natural areas in south Florida

Subgoal 2-B: Control invasive exotic plants

- Objective 2-B.1: Coordinate the development of management plans for the top 20 south Florida invasive exotic plant species by 2011
- Objective 2-B.2: Achieve maintenance control of Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern on south Florida's public conservation lands by 2020
- Objective 2-B.3: Complete an invasive exotic plant species prevention, early detection, and eradication plan by 2007

GOAL 3: FOSTER COMPATIBILITY OF THE BUILT AND NATURAL SYSTEMS

Subgoal 3-A: Use and manage land in a manner compatible with ecosystem restoration

- Objective 3-A.1: Designate or acquire an additional 480,000 acres as part of the Florida Greenways and Trails System by 2009
- Objective 3-A.2: Increase participation in the voluntary Farm Bill conservation programs by 230,000 acres by 2014
- Objective 3-A.3: Acquire an additional 2,500 acres of park, recreation, and open space lands by 2007
- Objective 3-A.4: Complete five brownfield rehabilitation and redevelopment projects by 2010
- Objective 3-A.5: Increase community understanding of ecosystem restoration

Subgoal 3-B: Maintain or improve flood protection in a manner compatible with ecosystem restoration

- Objective 3-B.1: Maintain or improve existing levels of flood protection

Subgoal 3-C: Provide sufficient water resources for built and natural systems

- Objective 3-C.1: Plan for regional water supply needs*
- Objective 3-C.2: Increase volumes of reuse on a regional basis
- Objective 3-C.3: Increase water made available through the SFWMD Alternative Water Supply Development Program

*Due to a change in state law the output for this objective has been changed

APPENDIX B: Total Cost Estimate

I. Purpose

The 2006 Total Cost Estimate (TCE) provides an updated estimate of the total cost to restore the South Florida Ecosystem as directed by Congress in 1999. The Task Force's 2006 Strategy, Biennial Report, and Integrated Financial Plan (IFP) are the primary sources of information. This approach links the Total Cost Estimate with the project cost information reported by the Task Force members and reflects their individual procedures for reporting project costs. It includes project costs funded by federal, state, tribal, and local government sources both individually and in partnerships.

The TCE addresses the estimated cost for achieving all three of the Task Force's strategic goals and generally covers the period from 1994 to 2040. The estimate includes the actual cost of work accomplished to date, as well as estimates for work to be completed in the future. As with all estimates of future work, these costs are based on a variety of assumptions, uncertainties, and levels of planning and design (from the conceptual to the detailed).

II. 2006 Estimate of the total costs to restore the South Florida Ecosystem

For this update the Total Cost Estimate is defined as the sum of the financial requirements for the completion of all Comprehensive Everglades Restoration Plan (CERP) and non-CERP restoration

projects reported by the Task Force members and compiled in the 2006 Task Force Strategy and Biennial Report (Volume 1, Appendix A) and the Integrated Financial Plan (Volume 2) plus an estimated range of costs for future state land acquisitions under Goal 2.

The total cost of the projects reported in the 2006 IFP is estimated to be \$18.9 billion; of which the federal share is \$8 billion. Including future state land acquisitions for Goal 2, the total cost to restore the South Florida Ecosystem is estimated to range between \$26.3 and \$31.7 billion.

The State of Florida manages the world's largest conservation land buying program. As a matter of policy the Florida Department of Environmental Protection (FDEP) and the South Florida Water Management District (SFWMD) do not make individual project cost projections on future Goal 2 land acquisitions for habitat preservation and conservation purposes. These costs (estimated at \$7.4 to \$12.8 billion) are funded exclusively by the State of Florida and are not reported for inclusion in the IFP, but are added separately.

III. Changes since 2004

The same approach was used to prepare the TCE in 2004 and 2006. The total cost of the projects reported in the 2004 IFP was estimated to be \$14.2

2006 COST SUMMARY TABLE

COSTS BY STRATEGIC GOAL	FEDERAL SHARE	STATE SHARE	FINANCIAL REQUIREMENT (Billions)
Goal 1	\$5.5	\$7.2	\$12.7
Goal 2	\$1.7	\$3.0	\$4.7
Goal 3	\$0.8	\$0.7	\$1.5
TOTAL IFP COSTS	\$8.0	\$10.9	\$18.9
NON-IFP COSTS			
Future Goal 2 state land acquisitions		\$7.4 - \$12.8	\$7.4 - \$12.8
TOTAL COST ESTIMATE	\$8.0	\$18.3 - \$23.7	\$26.3 - \$31.7

billion. After including estimated future state land acquisitions for Goal 2 of \$2.3 to \$3.9 billion for 779,101 acres, the Total Cost Estimate in 2004 was reported to range from \$16.5 to 18.1 billion. While individual members are responsible for addressing the specific costs, budgeting, and appropriations for their respective projects and programs, in general the following factors have contributed to the cost increases since 2004.

The project costs summarized in the 2006 IFP include two additional years of actual costs as well as updated estimates for future work. The updated project estimates may reflect higher costs for a number of reasons to include a revised scope of work with improved performance, a more detailed design that incorporates new information based on science or experience, and rising costs due to inflation and other factors.

While yearly inflation as measured by the Consumer Price Index averaged around 3.1% from 2004 to 2006, some project component costs, including land prices and construction costs, increased at a much higher percentage rate.

Increases in the cost of land in south Florida exceeded increases in most other locations in the nation. Professor John Reynolds with the University of Florida's Institute of Food and Agricultural Services documented double-digit annual increases in the cost of agricultural land in south Florida in 2005. As an example, he noted a 58% increase for cropland and a 76% increase for pastureland.

Construction costs increased in part due to a growing international demand for materials such as cement and steel. This growing demand increased the cost of construction not only in Florida, but throughout the United States. Increases in fuel prices also had a national impact on construction costs. Locally, the Florida Department of Transportation (FDOT) noted that in 2004 the value of construction placement per capita in Florida was twice the national average. This unusually high demand was largely fueled by residential construction and later by recovery from two extraordinarily severe hurricane seasons. During this period there was rapid growth in construction employment while the overall unemployment rate remained low. This high demand for construction coupled with low unemployment also contributed to increased construction costs in Florida.

IV. Criteria and assumptions for the total cost estimate

Except for the future state land acquisitions costs for Goal 2, the TCE is based on the Task Force's 2006 Integrated Financial Plan which reflects the criteria and assumptions used by the various agencies and entities to report individual project costs. These specific criteria and assumptions are noted in the 2006 Integrated Financial Plan.

In general, individual Task Force member cost estimating protocols, fiscal year cycles, and methodologies vary both in approach and in the time period for reporting financial information. Federal agencies and the SFWMD, for example, operate and report financial activities on an October 1 to September 30 fiscal year, while other State of Florida agencies operate on a July 1 to June 30 fiscal year. Agencies use a variety of methods for updating costs due to inflation.

The TCE does not include operational costs or agency programmatic costs that would be incurred regardless of the restoration initiatives. For example, the National Park Service costs to operate and maintain Everglades National Park, Fish and Wildlife Service costs to provide for Endangered Species Act consultation, and SFWMD costs to operate and maintain water delivery infrastructure are not included in the TCE.

Reporting agencies needed to assume annual levels of Congressional and State of Florida appropriations to develop project completion schedules as noted in the Integrated Financial Plan. If the actual appropriations vary from the assumed levels, then project completion schedules and estimated projects costs may change.

The cost of lands already purchased for habitat preservation and conservation purposes are the actual costs and are included in the Goal 2 costs. The \$7.4 to \$12.8 billion for future land acquisitions in Goal 2 is derived by using the FDEP forecast of 890,048 acres remaining to be acquired as of June 2006 and an approximate value for land ranging between \$8,359-\$14,362 per acre. The \$8,359 estimate is the average cost per acre of land, including associated costs, acquired by FDEP between July 2005 and May 2006. The \$14,362 estimate is the average cost per acre of land, including associated costs, acquired by the SFWMD between October 2005 and June 2006.

The majority report was approved by all the members of the intergovernmental Task Force except for the representative of the Miccosukee Tribe of Indians. In accordance with the Task Force protocol regarding consensus and voting, the following minority report was provided by the Miccosukee Tribe of Indians and expresses their thoughts and positions. It was not reviewed by the members of the Task Force and may contain issues that were not raised with the members while discussing the majority report or that exceed the scope or reporting period of the majority report. Additionally, the Miccosukee Tribe of Indians are in litigation with several members of the Task Force over some of the issues raised in the minority report. Accordingly, resolution of these matters is the subject of judicial review.

APPENDIX C: An Additional View of the Miccosukee Tribe of Indians of Florida Putting the Everglades Back Into Everglades Restoration

Supplement to Coordinating Success 2006:
Strategy for Restoration of the South
Florida Ecosystem

Submitted to the U.S. Congress, Florida
Legislature, Seminole Tribe of Florida and All
Interested Parties

By Dexter W. Lehtinen, Task Force Member,
October 2006.

*"The Everglades is our mother
and she is dying."*

- Billy Cypress, Chairman of the
Miccosukee Tribe of Indians

I. EXECUTIVE SUMMARY

The Tribe agrees with the South Florida Ecosystem Restoration Task Force Biennial Report, *Coordinating Success 2006*, in many respects. However, the Tribe continues to have serious concerns about the restoration process that will not allow it to adopt the Biennial Report in its entirety. Thus, the Tribe is submitting its 2006 Additional View to provide Congress and the public with its assessment of problems and concerns that continue to exist in critical areas. These concerns include: a lack of commitment to water quality; the continued delay of the Modified Water Deliveries Project; escalating costs of projects; favoring some areas of the Everglades at the expense of others; short-sighted policies that move us away from restoration goals; a lack of a comprehensive approach to restoration; *pro forma* use of the Task Force; the lack of meaningful Tribal and public input on restoration decisions; a failure of certain federal agencies to abide by their Trust Responsibility; and the danger that the Everglades is being left out of the Everglades Restoration process. The Tribe believes that a report that goes to Congress should openly detail restoration problems, as well as progress. It further believes that Everglades Restoration, despite its problems, is of great national importance and well worth the effort.

The Tribe, whose members have lived in the Everglades since time immemorial, wants nothing more than to see their traditional homeland restored.

The Tribe will not agree, however, that progress has been made in certain areas where it knows that none exists. The National Research Council ("NRC") of the National Academy of Sciences recently issued its first Biennial Review for 2006. Many of the concerns in this report were raised by the Tribe in its 2004 Additional View. The NRC Biennial Review finds that, "no CERP projects have been completed to date, and anticipated restoration progress in the Water Conservation Areas (WCAs) and Everglades National Park appears to be lagging behind the production of natural system benefits in other portions of the South Florida ecosystem." It acknowledges that, "the remaining Everglades landscape will continue to move away from conditions that support the defining ecosystem process until greater progress is made in implementing CERP and non-CERP projects." It echoes the Tribe in recommending that, "Mod Waters should be completed without further delay." It is abundantly clear that the public and Congress can no longer be fooled into believing that progress is being made in Everglades Restoration. It is imperative that the Task Force address, and attempt to resolve, the problems that currently threaten the restoration process, so that real progress can be made. One very large step forward would be for the agencies charged with restoration to finally implement the Modified Water Deliveries Project, so that CERP projects necessary to restore the only Everglades in the world can move forward.

II. GETTING THE WATER RIGHT IN THE EVERGLADES

*"The Indians, before anyone else, knew the
Everglades were being destroyed"*

- Marjory Stoneman Douglas in:
The Everglades: River of Grass

A. WATER QUALITY MUST BE A RESTORATION PRIORITY

*"As for Everglades water, everything has
changed... We cannot just say that the water is
no good ... and turn our back on that."*

- Buffalo Tiger, Tribal Elder in:
A Life in the Everglades

1. The 1988 Everglades Lawsuit Brought a Focus on the Everglades

The Tribe does not agree with the language at page 12 of the Biennial Report that "litigation may divert resources away from restoration efforts." It was a federal government lawsuit against the state in 1988 for not enforcing pollution laws that brought national attention to the plight of the Everglades and the need for its restoration. The Miccosukee Tribe remains a party in this federal lawsuit which was settled in the form of a Consent Decree in 1992. The Tribe has a Memorandum of Agreement that allows it to seek enforcement of the Consent Decree if its provisions are being violated. The Tribe has sought such enforcement through the years. In April 2004, the Tribe filed a motion seeking a finding that there had been violations of the Settlement Agreement requirements in the Loxhatchee National Wildlife Refuge. After evidentiary hearings, Judge Moreno, who is overseeing the Consent Decree, made a preliminary finding in June 2005 that the Tribe had sufficiently shown sufficient evidence of possible non-compliance. The Court ordered the Special Master to hold a Remedies Hearing to take rebuttal testimony from the state parties and hear from all the parties on remedies to stop the water quality exceedances. After the Remedies Hearing, Special Master John Barkett issued a July 5, 2006 report recommending that the Court uphold its finding of a violation in Loxahatchee, and that an Order be issued adopting the remedies proposed by the parties, which included the construction of an additional 18,000 acres of Stormwater Treatment Areas ("STAs"). Judge Moreno currently has the Special Report before him to decide whether he will adopt the recommendations.

The Tribe has also been forced to file other lawsuits to stop the pollution and flooding of its Everglades homeland. These lawsuits are filed to protect the Everglades after nothing else works. The Tribe contends that litigation has often proven to be the only effective means to force agencies to fulfill their legal duties under the National Environmental Policy Act, Endangered Species Act, Clean Water Act, Administrative Procedures Act, Federal Advisory Committee Act, Indian Trust Doctrine, and other federal law. The Tribe believes that litigation is often necessary to ensure compliance

with federal laws, which is beneficial to the restoration process. The Tribe contends that the Settlement Agreement in the 1998 lawsuit is the reason that over 35,000 acres of STAs have been constructed, and an additional 18,000 acres more are proposed to be constructed, to help clean the phosphorous laden water before it flows into the Everglades.

2. The Amended Everglades Forever Act Threatens Restoration

The Task Force Biennial Report fails to address the controversy surrounding the 2003 Amended Everglades Forever Act (Amended EFA) discussed at page 27, which is listed as a tool for getting the water quality right. The Tribe contends that this state law, which authorizes moderating provisions in the form of a Long Term Plan and suspends water quality enforcement for a decade or more, is harmful to restoration. The Comprehensive Everglades Restoration Plan ("CERP") contained in the Final Integrated Feasibility Report and Programmatic Environmental Impact Statement ("PEIS" or Yellow Book) adopted by Congress on July 1, 1999, acknowledged the state's responsibility to meet water quality requirements in waters being discharged to the Everglades by December 31, 2006. The Amended EFA passed in 2003 proves that the state has no intention to do so. The Tribe has filed a lawsuit in federal court (Case No. 04-22072-CIV-GOLD) against the Environmental Protection Agency ("EPA") claiming that both the Amended EFA, and the Phosphorus Rule, do not meet the requirements of the CWA.

The fact that the Amended EFA (then a Senate Bill) would allow the state to miss the December 31, 2006 date promised to Congress when CERP was authorized, did not escape the notice of the Congressional Appropriations Committee. On April 29, 2003, a joint statement was issued by Congressmen Young, Regula, Hobson, Taylor, Shaw, and Goss which stated: "The earlier agreed upon deadline for achieving compliance is December 2006, which is the foundation for implementing the \$8 billion equally cost shared and congressionally authorized Comprehensive Everglades Restoration Plan or CERP. The joint statement further addressed the Long Term Plan in what is now the Amended EFA: "The bill directs

that the Long Term Plan be implemented over 23 years. This makes uncertain the time period for compliance. This is inconsistent not only with the Everglades Forever Act, but also with the 1992 Consent Decree that settled the federal and state water quality litigation."

The Amended EFA delays enforcement of water quality in the Everglades until at least 2016; allows the Everglades to be rehydrated with dirty water; and contains moderating provisions that will allow polluted water to continue to be discharged, not only to Tribal Everglades, but also to Everglades National Park and the Loxahatchee National Wildlife Refuge. As discussed herein, Congress and all of us have a very good reason to be concerned about the delay of water quality sanctioned by the Amended EFA, the Long Term Plan, and the Phosphorus Rule. It is the golden rule of Everglades Restoration that the Everglades can not be restored with dirty water.

3. The Tragedy of the Long Term Plan

The fundamental flaw with the Long Term Plan, authorized by the Amended EFA and discussed at page 27 of the Biennial Report, is that it embodies a decision not to fully employ the best available technology to achieve the water quality necessary to restore and preserve the Everglades. Indeed, it is designed to excuse and cover the failure to achieve water quality for the Everglades in a timely manner. Both the 1992 federal Consent Decree, and the 1994 Everglades Forever Act, required that water discharged to the Everglades was to meet the final phosphorus criterion by December 31, 2006. No imbalance of flora and fauna was allowed. Concerned that the state would not meet the deadline, the Tribe took action to protect its Everglades by establishing its own water quality standards for its Federal Reservation. In 1999, the Environmental Protection Agency ("EPA") approved the Tribe's water quality standards, which include a 10ppb phosphorus criterion, as scientifically defensible and protective of the Everglades.

In 2004, the state of Florida adopted a complicated Phosphorus Rule, which set the phosphorous criterion at a 10ppb long term geometric mean. Despite claims that it too embraced 10ppb for the

Everglades, the state's 10 is not a 10. The Rule's inappropriate use of a geometric mean to set the criterion, along with a complicated compliance methodology that allows individual stations to reach an annual limit of 15ppb geometric mean, masks high phosphorus values. Also, the inclusion of moderating provisions, and other loopholes in the Rule, allows the Everglades to continue to be polluted with phosphorus for an extended period of time. The trinity of trickery consisting of the Amended EFA, the Phosphorus Rule, and the Long Term Plan means that the quality of water necessary for Everglades Restoration will not be achieved by December 31, 2006. Instead, it is a license for dischargers to pollute the Everglades until 2016 and beyond. The result will be the continued degradation of the Everglades, the massive spread of cattail, and the delay of vital restoration projects that require clean water to operate.

Most disturbing, as long as dischargers are following the Long Term Plan, they are deemed in compliance with water quality standards even if the water being discharged to the Everglades is polluted. This allows the state bureaucracy complete discretion to determine that the bureaucracy has fully complied with all requirements of law at any and all times. The Tribe, of course, disagrees that "non-compliance" is "compliance," as long as a discharger follows the Long Term Plan, or that "achieve" water quality can actually mean "not achieve." To the Tribe, "enforce" water quality means "enforce," so it sued the EPA in federal court to force the agency to enforce the Clean Water Act to protect the Everglades and ensure the water quality goal is met.

4. NPDES Permits, Regulation, and Enforcement Should be Water Quality Tools

The Tribe is concerned that National Pollutant Discharge Elimination System ("NPDES") permits, regulation, and enforcement are not listed as tools to implement the Get the Water Quality Right Subgoal in Section 1-B of the Biennial Report. The Report appears to rely primarily on Total Maximum Daily Loads ("TMDLs") that are not to be attained until far in the future (i.e. 2015) and which are not enforceable. The CERP Yellow Book presented to Congress in July 1999 requires CERP implementation to comply with the Clean Water Act

and its NPDES permit requirements. (PEIS at pp. 5-5 to 5-6.) It also states that pursuant to the CWA, "NPDES permits are required for all new and existing point sources from which pollutants are to be discharged to navigable waters." (Id. at App. H-12). Thus, both the CWA and its NPDES permitting requirements should be listed, along with other regulatory and enforcement action, as tools that will achieve the water quality Subgoal. It should be noted that the SFWMD continues to refuse to obtain NPDES permits for its point source discharge of pollutants into Lake Okeechobee and the Everglades, which has necessitated litigation by the Tribe and environmental groups. Moreover, the Environmental Protection Agency recently proposed a Rule which, if adopted, will be challenged because it will damage Everglades Restoration and is contrary to the Clean Water Act.

5. Lake Okeechobee Water Quality: The Elephant in the Restoration Room

The Biennial Report at page 29 discusses the Lake Okeechobee Protection Program, and its goal of attaining a TMDL of a long term rolling average of 140 metric tons phosphorus by 2015, as a way to meet the water quality Subgoal. It fails to acknowledge that this TMDL date has no regulatory enforcement, and that scientists acknowledge that the phosphorus concentration goal of 40ppb may not be met until hundreds of years after the TMDL is attained. The Biennial Report fails to mention that SFWMD's *2006 South Florida Environmental Report* shows that the total phosphorus load to the Lake for Water Year 2005 was 950 metric tons (more than four times higher than the TMDL of 140 metric tons) with an average phosphorus concentration of 237 ppb. Without tools such as NPDES permits, and compliance and enforcement deadlines, there is no assurance that water quality will ever be met in Lake Okeechobee or in its discharges to the Everglades and the estuaries. This is disconcerting both for restoration and the Everglades. Recent concerns about the integrity of the Herbert Hoover Dike could lead to a lower lake regulation schedule which will cause phosphorus laden lake water to be discharged to the Everglades and the estuaries. It is vital that the expected volumes and destinations of water, and the

phosphorus contained therein, released under any revised Lake Okeechobee schedule be fully disclosed. Despite 30 years of state initiatives to allegedly to address Lake Okeechobee's pollution problem, phosphorus concentrations in the Lake have continued to rise. As the Special Master noted in his July 5, 2006 Report, "The Lake's woes have been with us for a while and if history is a guide, they are not going away any time soon." Because Lake Okeechobee is the liquid heart of the Everglades, and its water will be used to restore it, the entities implementing CERP can no longer afford to ignore this elephant in the room. To do so, will jeopardize the entire Everglades Restoration plan which requires clean water to succeed.

6. Everglades Construction Project and the December 31, 2006 Deadline

The Tribe disagrees with the overly rosy view of STA performance contained at page 74 of the Report. The statement that outflows of the STAs averaged 41 ppb is meaningless. What is meaningful is the fact STA 1 West outflow (which discharges into Loxahatchee) was as high as 98 ppb and almost twice the Settlement Agreement interim requirements of 50 ppb. As the Tribe demonstrated at hearings before Judge Moreno and the Special Master, the STAs are not designed to treat all the water and phosphorus loads that must be treated before entering the Everglades Protection Area. The state itself has proposed building an additional 18,000 acres of STAs. The additional 18,000 acres should be discussed in this section of the Biennial Report. There is also no discussion in the Report of the December 31, 2006, deadline in the Settlement Agreement which requires the state to meet the Class III phosphorus criterion (10ppb) or long term phosphorus limit, which ever is lower. The Tribe contends that whether or not the state will meet this deadline should be discussed in the Biennial Report, because the Yellow Book adopted by Congress assumed that the Everglades Construction Project would treat water delivered to the Everglades to either the adopted criterion or the default numeric criterion of 10 ppb phosphorus by December 31, 2006, as a base condition for CERP. (PEIS at p. H-F-17).

7. The Water Quality Feasibility Study is Essential to Restoration

Concerned that there had been no progress on implementing the Comprehensive Integrated Water Quality Feasibility Study ("WQFS") since the last Biennial Report, the Tribe asked the Task Force to reiterate its support for the study. The Task Force agreed to insert language in the Biennial Report urging, "the USACE and other agencies to undertake and complete the Comprehensive Water Quality Feasibility Study for the restoration of the Florida Everglades." The WQFS has long been at the top of the Task Force "must do" list. A June 17, 1999, letter from then Task Force Chair, Patricia Beneki, to Secretary of the Army, Louis Caldera, said: "The Task Force recommends that important water quality improvements have been added to the plan that will when combined with the follow-on-feasibility study provide the water quality capability necessary for restoration. We believe that these features are essential to restoration and should be cost shared with the non-federal sponsor. It is vitally important that the follow-on-feasibility study and detailed component designs continue to focus on this requirement."

These words were memorialized in the July 1999 Yellow Book that went to Congress when it authorized CERP. The Yellow Book states at pages 9-52 to 9-53 of the PEIS: "To ensure that the South Florida Ecosystem restoration objectives are achieved, a Comprehensive Integrated Water Quality plan that links water quality restoration remediation programs to the hydrologic restoration objectives of the recommended plan must be developed for the entire study area...Development of a comprehensive integrated water quality plan for South Florida is consistent with the recommendations of the South Florida Ecosystem Restoration Task Force and the Florida Governor's Commission for a Sustainable South Florida." Despite the Task Force's unwavering support for the WQFS, it has been unreasonably delayed. The Tribe believes that this delay is indicative of the overall lack of priority that has been given to water quality in the restoration process. The Tribe urges the Task Force to closely monitor the progress of the WQFS, so that by the next Biennial Report it will be able to report that this study, so important to the Everglades and its restoration, has finally been implemented.

B. RESTORING MORE NATURAL FLOWS TO THE EVERGLADES

1. Modified Water Deliveries Project: Restoration Delayed is Restoration Denied

Perhaps the best example of an ongoing Everglades Restoration problem is the failure to complete the Pre-CERP Modified Water Deliveries Project. This essential project was authorized by Congress in 1989, but its implementation continues to be delayed. The delay of Mod Waters has been recognized by Congress, the Department of the Interior ("DOI") Inspector General, and the National Research Council. Originally priced at \$76 million dollars for both construction and land costs, this project has more restoration bang for the buck than many high cost CERP projects. Its purpose is to restore more natural flows to the Everglades and Everglades National Park. Doing so will benefit more than 900,000 acres of Everglades wetlands. The Corps told Congress Mod Waters could be completed by 1997, but it continues to be mired in political red tape. After the Tribe submitted its Additional View in April 1999, Congress held hearings on the failure to complete this project. Congress was so concerned about the inability to complete Mod Waters that WRDA 2000, the law authorizing CERP, contains language Congress believed would ensure its completion. WRDA 2000 mandates that CERP components important to restoring natural flows to the historic Everglades, such as Decompartmentalization, could not move forward until it is completed. Rather than complete Mod Waters, the agencies cleverly pushed forward CERP projects located outside the historic Everglades for authorization and funding.

The Mod Waters Project has been combined with another delayed project, the C-111 Project, into the Combined Structural and Operational Plan (CSOP). Admirably, the Task Force created a CSOP Advisory Team that met for over a year to analyze the proposed plan and report back to the Task Force. While the work of the CSOP advisory team is complete, the project unfortunately is not. CSOP will not be implemented until at least 2010. The Tribe is concerned that the delay will continue even beyond the 2010 date. Today the comment of Congressman Hansen at the 1999 Congressional hearing on the delay of the Modified Water

Deliveries Project that, "we will all be pushing up daisies before you fully get it resolved" still rings true.

The Biennial Report does not treat the Mod Waters Project with the heightened sense of urgency it deserves. The document at pages 72-73 does not accurately reflect the lack of progress on this project. The Report does finally acknowledge that Congress made the appropriation of funds for the CERP Decentralization and sheet flow project contingent on the completion of Mod Waters. The Tribe continues to be concerned that this important Pre-CERP project necessary to restore a more natural flow through the historic Everglades is being put on the back burner, while others that merely attach themselves to the name "Everglades" are expedited. While the Tribe agrees that all ecosystem projects are important, it does not believe that Congress or the public intended for the Everglades to be left out of Everglades Restoration. It appears that both the Congress and the public are beginning to realize that the Everglades is not being restored.

The Biennial Report fails to mention the results of an important investigative study on the delay of Mod Waters that was conducted by the Inspector General of the U.S. Department of Interior ("DOI"). Report No. C-IN-MOA-0006-2005 entitled: *Modified Water Deliveries to Everglades National Park AUDIT REPORT* was released in March 2006. The Inspector General's Report found that DOI's failure to communicate a comprehensive and unified restoration strategy, and to clearly define its consultation role, has contributed to project delays and cost increases. It further found that DOI's participation in the Mod Waters Project has been "ineffective," and that it has not effectively communicated with stakeholders to build consensus. In discussing the cost of delay the Report acknowledges that, "The Corps estimates that damage to tree islands resulting from current high water levels could be as much as 246 acres per year and the cost to restore the islands ranges from \$12.3 million to \$123 million per year." The Audit Report is referring to a Corps document that estimates the cost of each year of delay of Mod Waters to tree islands on Tribal Everglades in WCA 3A. The cost to the Tribe's culture and way of life is incalculable.

In September 2006, the National Research Council ("NRC") of the National Academy of Sciences recognized the delay of Mod Waters in its report entitled: *Progress Toward Restoring the Everglades: The First Biennial Review, 2006, ISBN:039-10335-5*. The NRC Review acknowledges that CERP builds upon other activities, such as the Modified Water Deliveries Project, which are essential to its success. It states, "The Mod Waters and C-111 projects have suffered long delays but are now moving forward, although Mod Waters should be completed without further delay." It echoes the issue raised by the Tribe for years that, "Since the Mod Waters project is an assumed precursor for the WCA 3A Decentralization and Sheet Flow Enhancement Part 1 (Decomp) project, further delays in the project's completion may ultimately delay funding appropriations for Decomp." The Report also recognizes that "anticipated restoration progress in the Water Conservation Areas and Everglades National Park appears to be lagging behind the production of natural system benefits in other portions of the South Florida ecosystem."

The Modified Water Deliveries Project should be constructed and operating now. Instead, the cost of the project has more than quadrupled and the delay has resulted in draconian "interim" water management actions that have backed water up in the Everglades causing excessive tree island loss and environmental damage to the largest expanse of sawgrass Everglades left in existence; contributed to high water in Lake Okeechobee and damaging releases to the St. Lucie and Caloosahatchee estuaries; and resulted in a 50% decline in the endangered snail kite population. Until the Modified Water Deliveries project is operational, the natural flow of water through the Everglades and Everglades National Park will not be restored, and the historic Everglades, no matter how much CERP progress is touted, will continue to be destroyed. The agencies charged with implementing restoration should heed the advice of the Tribe, and the NRC, that Mod Waters be completed without further delay.

2. "Short Term" Actions or Destroying the Everglades to Save It ?

The statement at page 12 of the Biennial Report that, "The Task Force recognizes that it may on

occasion be appropriate to take short-term or interim management actions that are not immediately consistent with long range strategic goals" is disconcerting. While this line has been explained as (and should properly be understood as) referring to temporary adverse consequences of initial steps in implementing restoration projects, it could be improperly interpreted to support damaging agency actions that are actually moving us further away from restoration. The Tribe, and the Everglades, have suffered greatly from so-called "short-term" and "interim" actions which have instead turned out to be long-term both in duration and damage. The draconian "short-term" water management actions at issue began in 1998 when the DOI agencies forced the Corps to start closing massive gates that allow water to flow through the Everglades to allegedly protect the Cape Sable seaside sparrow. These short-sighted actions have: continued for more than eight years; not helped subpopulation "A" of the sparrow; resulted in an alarming 50% decline in the endangered snail kite; devastated vast areas of the Everglades; and caused high water in the Water Conservation Areas and Lake Okeechobee which have necessitated damaging water releases to the St. Lucie and Caloosahatchee estuaries.

These so-called "short term" actions, culminating in the current Interim Operational Plan (IOP), have caused severe man-made flooding of the Tribal Everglades in WCA 3A, which is the designated critical habitat for the endangered snail kite. Believe it or not, DOI has actually forced the Corps to move away from strategic restoration goals in these short-sighted actions. The water in the area of subpopulation "A" of the sparrow is being kept unnaturally low (well below CERP levels), and water levels in WCA 3A, snail kite critical habitat, are being kept unnaturally high (above CERP levels) and even above the previous C&SF high water levels that are supposed to be reduced through restoration. The Tribe has been forced to file lawsuits against the Corps (Case No. 02-22778-CIV-MOORE) and the FWS (Case No. 05-23045-CIV-MOORE) over these damaging water management actions and the faulty FWS Biological Opinion which inspired them. In an Order dated March 13, 2006, Judge Moore agreed that the Corps had acted "arbitrarily and capriciously," and in violation of NEPA, and ordered the Corps to

conduct a Supplemental Environmental Impact Statement ("SEIS") on its IOP. The Tribe contends it also forced FWS to reinitiate consultation on the IOP, and the agency is currently amending its biological opinion.

Ironically, more than eight years of closing flood control gates that allow the water to flow south out of the Everglades for nine months of the year has not increased the number of sparrows in subpopulation "A" on which jeopardy was declared, which has plummeted under the short-sighted actions demanded by the FWS. A Park Service news release reported the sighting of only one singing male sparrow in subpopulation A in the 2004 census. This is down from the 25 singing males counted in "A" under the operating plan on which FWS declared jeopardy in its 1999 Biological Opinion. (Note: the actual number counted is arbitrarily multiplied by 16 to estimate population.) While the 2005 survey results allegedly climbed slightly from 1 to 6 in "A", remains below the 25 counted prior to the actions demanded by FWS, and the numbers don't divulge that the agencies went outside the original survey area to find more birds. While the survey results are usually released in July or August, they have not yet been released for 2006.

It is obvious to anybody, except the agencies involved, that these so-called "short term" actions designed to keep the western subpopulation "A" area unnaturally dry have hurt, not helped, the once estuarine sparrow. It is also painfully clear that the unnatural flooding of snail kite critical habitat on Tribal land in WCA 3A has harmed the snail kite. The *Snail Kite Demography Annual Report 2005* prepared for FWS shows that the snail kite population has declined an alarming 50% during the years of these water management actions and no young birds fledged out of WCA 3A that year. The researchers raised concerns that water levels in WCA 3A have been kept at alarmingly high levels. The FWS arbitrary and capricious determination that although IOP would degrade 88,300 acres of designated snail kite critical habitat in WCA 3A, it would not jeopardize the snail kite, has been squarely called into question.

The agencies involved, apparently embarrassed and reluctant to admit their mistakes, are unwilling to

acknowledge the disastrous impacts of these "short-term" actions on the Everglades and its wildlife. They ignored the warnings of sparrow scientists Dr. Will Post and Dr. Jon Greenlaw. In a peer reviewed article in the *Florida Field Naturalist: The Present and Future of the Cape Sable Seaside Sparrow*, Vol. 28, No. 3, August 2000, Dr. Post and Dr. Greenlaw warned that the water management actions being taken for the sparrow were "overly simplistic," and that the impact on large areas of the Everglades was unknown. These respected scientists recommended strategies such as relocation, captive rearing, localized flood control, and predator control for the birds in subpopulation "A." The article states: "Federal agencies responsible for the recovery of the sparrow have been unwilling to take such actions in its behalf." This is still the case.

Based on its experience, the Tribe will not endorse an ambiguous statement on "short term" or "interim" actions that can be twisted by agencies to support destroying the Everglades, harming its species, and moving us farther away from restoration goals. The Tribe contends that these so-called "short term" actions are short sighted and harmful to restoration. Tree islands, once destroyed by high water take geological time frames to return, if they ever do. A Corps employee testified that to restore all the tree islands lost in WCA 3 would cost more than the entire CERP. Rather than support a blanket statement on "short term" actions that have harmful long-term side effects, the Tribe encourages the Task Force to adopt the oath of the physician: "First do no harm." The Task Force should be cautious about using statements that could be used to endorse this type of conduct, which if it continues, will leave no tree islands or historic Everglades left to restore. For the Miccosukee Tribe of Indians, whose entire culture and way of life depend on a healthy Everglades ecosystem, this would be a tragedy indeed.

3. Costs of Restoration Projects Should Be Fully Reported

The Tribe is concerned that the Biennial Report does not fully and accurately inform Congress about the full cost of restoration projects. The Project Summary Table should contain a separate column that depicts the full cost of the project from when it was authorized until the present time and

discusses whether the project is subject to Section 902 cost constraints. There is no way for Congress to know from the Summary Table in the Report that the Modified Water Deliveries Project has experienced significant cost overruns. This project was initially estimated to cost \$76 million dollars for both construction and land costs. The 1994 Project Cooperation Agreement (PCA) with the local partner estimated \$114 million dollars in construction costs, which included a Section 902 cap at 20% above the estimated cost. Under Section 902, the agencies would be forced to go back to Congress if the cap was exceeded, but the agencies later determined that Section 902 did not apply to Mod Waters. Removal of the Section 902 cap may be part of the reason that, according to a recent estimate, the cost of the Mod Waters Project has now escalated to \$398 million dollars. Of this cost escalation, almost \$200 million dollars is attributed to acquiring land in the 8.5 Square Mile Area, which the Tribe opposed as being expensive and unnecessary for restoration of more natural flows. It continues to be the Tribe's position that the Project Summary Table does not give Congress the information it must have to make certain that similar unrestrained cost escalations do not occur on other restoration projects.

4. Cost of Delay to the Everglades Should Be Assessed

The Tribe believes that the Biennial Report should include an estimate of environmental damage caused by the failure to implement restoration projects in a timely manner. For instance, it is well known that from the time the C&SF Project went into operation in the 1940s through 1995, Water Conservation Area 3A ("WCA 3A") has lost 45% of its tree islands and 61% of the tree island acreage. The Corps used this data to calculate the cost of delay of the Mod Waters Project in its General Reevaluation Report (GRR) on the 8.5 Square Mile Area. The Corps estimated that each year of delay of the Mod Waters Project would result in the loss of 8.4 tree islands and 246 acres per year in WCA 3 alone. (8.5 SMA GRR, July 2000 at Table 7.) The loss to the Tribe's culture and way of life is, of course, incalculable. The DOI Inspector General referred to this cost of delay in his report on Mod Waters. An assessment of the cost of delay in the Biennial Report would help Congress decide

whether project delays are reasonable in light of the environmental cost to the Everglades. The Report could similarly assess the amount of acreage of sawgrass Everglades that has been lost to cattail due to the failure to meet water quality in the Everglades for each reporting period.

5. Hydrologic Performance Measures Should Be Used

The Tribe continues to support the use of hydrological performance measures for restoration. It believes that if proper water quantity and quality are achieved, the biology will follow. The Tribe urges that any performance measures developed by the Science Coordination Group of the Task Force be consistent with, and not conflict with, those of RECOVER for CERP.

6. The Current Restoration Process Should Be Defined

The current restoration process (i.e. project construction, funding, and sequencing implementation) is different from that adopted by Congress in the Yellow Book. The state's ACCELER8 changes the priority of certain CERP projects and shifts construction responsibility for those projects from the Secretary of the Army to the State of Florida. As the NRC Report pointed out, "Restoration benefits from early water storage projects remain uncertain, because decisions have not yet been made regarding water allocations for the natural system." While the Tribe agrees that CERP must move forward, Congress should be fully advised of the current process, so that it can ensure that changes in sequencing and authority do not adversely impact restoration goals. The federal agencies must also ensure that any acceleration or "streamlining" does not result in legally inadequate NEPA documents or disregard for federal law. Congress and the Task Force must ensure that federal funds are only expended on projects that are consistent with the CERP Yellow Book and comply with applicable federal law.

III. TRUST RESPONSIBILITY AND THE RESTORATION PROCESS

"The River of Grass is a world of beauty

and life... and the world and life of the Miccosukee."

- Houston Cypress, Miccosukee Tribal member and writer

These words of Houston Cypress illustrate the importance of the Everglades to the Miccosukee. The Miccosukee Tribe not only has a unique relationship with the Everglades, it has a unique relationship with the federal government. Congress recognized the fact that federal agencies have a solemn Trust responsibility to the Tribe in the Water Resources Development Act of 2000 that authorized CERP. WRDA 2000 mandates: "In carrying out his responsibilities under this subsection with respect to the restoration of the South Florida ecosystem, the Secretary of the Interior shall fulfill his obligations to the Indian tribes in South Florida under the Indian trust doctrine." While the Task Force includes this language in the Biennial Report, the unfortunate reality is that the federal agencies' adherence to these Congressional mandates is a rare exception, rather than the rule. Federal agencies continue to make important restoration decisions which impact Tribal natural resources without meaningful, pre-decisional consultation with the Tribe. The Tribe remains hopeful that one day these federal agencies will understand that the law requires them to consult with the Tribe, whose members live in the Everglades, before restoration decisions are made. The federal agencies have a duty to protect Indian people and their land in the Everglades Restoration process.

IV. CONGRESSIONAL OVERSIGHT AND PUBLIC SCRUTINY ARE CRITICAL TO ACCOUNTABILITY IN RESTORATION

President Thomas Jefferson said: "Information is the currency of democracy." It is equally true that information, and Congressional scrutiny, are the basis for agency accountability in Everglades Restoration. The Tribe has attended more than a decade of meetings on the Everglades Restoration plans. WRDA 1996 and WRDA 2000 dictate an open public process as an important element of the restoration process. The Tribe fears that the public process, much like the Task Force process, is often used *pro forma* to give an appearance of public

involvement. The Tribe is concerned that Project Delivery Teams, comprised of federal and non-federal members, are being utilized by the Corps to make recommendations without complying with the Federal Advisory Committee Act ("FACA"), and that these pre-ordained decisions are then brought to the public. The Tribe also has concerns that current effort to streamline the process could result in hastily put together National Environmental Policy Act ("NEPA") documents (again with pre-ordained decisions) that do not comply with federal law. The Task Force must insist that Everglades Restoration decisions be made following a full and open public process, as Congress directed. Such an open public process requires bringing restoration proposals before the Task Force and the public before decisions are made. Full public scrutiny and input is the only way that citizens, and Congress, will ensure accountability in Everglades Restoration.

V. THE COMPREHENSIVE EVERGLADES RESTORATION PLAN MUST BE COMPREHENSIVE AND INCLUDE RESTORATION OF THE EVERGLADES

As described herein, some agencies do not treat all parts of the Everglades equally. The Tribal Everglades, and even its endangered species, are given secondary status. In its 2004 Additional View, the Tribe warned that the historic Everglades itself was being lost in the Everglades Restoration process, and that in the eagerness to push certain CERP projects forward, the need to restore more natural flows to the Everglades was being left behind. The reason is simple. WRDA 2000 directed the agencies to complete the long delayed Mod Waters Project before funds would be authorized for CERP projects designed to restore the natural flow of water through the historic Everglades. The failure to complete Mod Waters has resulted in the agencies pushing CERP projects on the periphery of the Everglades forward while the Everglades has been left behind. Both Congress, and the public, are concerned about this lack of progress.

In a July 22, 2004, news release about Congressional Hearings on the "First Projects of Everglades Restoration," Congressman John J. Duncan, Jr. (R-TN), Chairman, reminds us, "The principal goal of this effort is to restore water to the

Everglades, but at the same time recognizing the water supply needs of agricultural and urban areas." He warned, "And, even if we focus on Everglades restoration alone, we have to recognize that doing expensive projects early in the process will effect how other Everglades projects can be implemented." The Congressman reminded us that it is important to take "a logical, system-wide approach" to restoration. A review of the 1999 Yellow Book adopted by Congress contains such a comprehensive approach and promised that project implementation and sequencing would be an open process, subject to public and scientific review. Yet, the selection of ACCELER8 projects did not go through such a prior public process. Some are priority projects that benefit the Everglades, others have been moved up based on a state decision to construct them on its own. Today, the \$10.9 billion dollar question is: How much will the Everglades benefit from the plan that benefits from its name?

WRDA 2000 was a positive step toward Everglades Restoration. Six years later, the Pre-CERP Modified Water Deliveries Project that is essential to restoring the Everglades, and moving forward with the CERP Decomp Project, continues to suffer troubling delays while peripheral CERP projects are accelerated. The Tribe's concern that the Everglades is being left out of restoration has been echoed in the National Research Council *2006 Biennial Review* which finds that important projects necessary to re-establish sheet flow in the Everglades are "far behind the original schedule," and which recommends that Mod Waters "be completed without further delay." It is of the utmost importance to the future of the Everglades, and its restoration, that the recommendation to complete Mod Waters without further delay be followed. Progress on Everglades Restoration will only be made when more natural flows are restored to the "River of Grass," and when restoring the Everglades once again becomes the overarching purpose of the Comprehensive Everglades Restoration Plan. The Tribe remains hopeful that through its continued urging the public, Congress, and others monitoring restoration will realize that steps must be taken at once to put the restoration of the Everglades back into the Comprehensive Everglades Restoration Plan by implementing the Mod Waters Project expeditiously.

APPENDIX D: Water Resources Development Act of 2000, Title VI, Section 601

Comprehensive Everglades Restoration Plan

TITLE VI--COMPREHENSIVE EVERGLADES RESTORATION

Sec. 601. Comprehensive Everglades Restoration Plan.
Sec. 602. Sense of Congress concerning Homestead
Air Force Base.

SEC. 601. COMPREHENSIVE EVERGLADES RESTORATION PLAN.

(a) DEFINITIONS- In this section, the following
definitions apply:

(1) CENTRAL AND SOUTHERN FLORIDA
PROJECT-

(A) IN GENERAL- The term 'Central and
Southern Florida Project' means the project for
Central and Southern Florida authorized under
the heading 'CENTRAL AND SOUTHERN
FLORIDA' in section 203 of the Flood Control
Act of 1948 (62 Stat. 1176).

(B) INCLUSION- The term 'Central and
Southern Florida Project' includes any
modification to the project authorized by this
section or any other provision of law.

(2) GOVERNOR- The term 'Governor' means the
Governor of the State of Florida.

(3) NATURAL SYSTEM-

(A) IN GENERAL- The term 'natural system'
means all land and water managed by the
Federal Government or the State within the
South Florida ecosystem.

(B) INCLUSIONS- The term 'natural system'
includes--

- (i) water conservation areas;
- (ii) sovereign submerged land;
- (iii) Everglades National Park;
- (iv) Biscayne National Park;
- (v) Big Cypress National Preserve;
- (vi) other Federal or State (including a
political subdivision of a State) land that
is designated and managed for conservation
purposes; and
- (vii) any tribal land that is designated and
managed for conservation purposes, as
approved by the tribe.

(4) PLAN- The term 'Plan' means the

Comprehensive Everglades Restoration Plan
contained in the 'Final Integrated Feasibility
Report and Programmatic Environmental Impact
Statement', dated April 1, 1999, as modified by
this section.

(5) SOUTH FLORIDA ECOSYSTEM-

(A) IN GENERAL- The term 'South Florida
ecosystem' means the area consisting of the
land and water within the boundary of the
South Florida Water Management District in
effect on July 1, 1999.

(B) INCLUSIONS- The term 'South Florida
ecosystem' includes--

- (i) the Everglades;
- (ii) the Florida Keys; and
- (iii) the contiguous near-shore coastal water
of South Florida.

(6) STATE- The term 'State' means the State
of Florida.

(b) COMPREHENSIVE EVERGLADES
RESTORATION PLAN-

(1) APPROVAL-

(A) IN GENERAL- Except as modified by this
section, the Plan is approved as a framework
for modifications and operational changes to
the Central and Southern Florida Project that
are needed to restore, preserve, and protect the
South Florida ecosystem while providing for
other water-related needs of the region,
including water supply and flood protection.
The Plan shall be implemented to ensure the
protection of water quality in, the reduction of
the loss of fresh water from, and the
improvement of the environment of the South
Florida ecosystem and to achieve and
maintain the benefits to the natural system and
human environment described in the Plan, and
required pursuant to this section, for as long as
the project is authorized.

(B) INTEGRATION- In carrying out the Plan,
the Secretary shall integrate the activities
described in subparagraph (A) with ongoing
Federal and State projects and activities in
accordance with section 528(c) of the Water
Resources Development Act of 1996 (110 Stat.

3769). Unless specifically provided herein, nothing in this section shall be construed to modify any existing cost share or responsibility for projects as listed in subsection (c) or (e) of section 528 of the Water Resources Development Act of 1996 (110 Stat. 3769).

(2) SPECIFIC AUTHORIZATIONS-

(A) IN GENERAL-

(i) PROJECTS- The Secretary shall carry out the projects included in the Plan in accordance with subparagraphs (B), (C), (D), and (E).

(ii) CONSIDERATIONS- In carrying out activities described in the Plan, the Secretary shall--

(I) take into account the protection of water quality by considering applicable State water quality standards; and

(II) include such features as the Secretary determines are necessary to ensure that all ground water and surface water discharges from any project feature authorized by this subsection will meet all applicable water quality standards and applicable water quality permitting requirements.

(iii) REVIEW AND COMMENT- In developing the projects authorized under subparagraph (B), the Secretary shall provide for public review and comment in accordance with applicable Federal law.

(B) PILOT PROJECTS- The following pilot projects are authorized for implementation, after review and approval by the Secretary, at a total cost of \$69,000,000, with an estimated Federal cost of \$34,500,000 and an estimated non-Federal cost of \$34,500,000:

(i) Caloosahatchee River (C-43) Basin ASR, at a total cost of \$6,000,000, with an estimated Federal cost of \$3,000,000 and an estimated non-Federal cost of \$3,000,000.

(ii) Lake Belt In-Ground Reservoir Technology, at a total cost of \$23,000,000, with an estimated Federal cost of \$11,500,000 and an estimated non-Federal cost of \$11,500,000.

(iii) L-31N Seepage Management, at a total cost of \$10,000,000, with an estimated Federal cost of \$5,000,000 and an estimated non-Federal cost of \$5,000,000.

(iv) Wastewater Reuse Technology, at a

total cost of \$30,000,000, with an estimated Federal cost of \$15,000,000 and an estimated non-Federal cost of \$15,000,000.

(C) INITIAL PROJECTS- The following projects are authorized for implementation, after review and approval by the Secretary, subject to the conditions stated in subparagraph (D), at a total cost of \$1,100,918,000, with an estimated Federal cost of \$550,459,000 and an estimated non-Federal cost of \$550,459,000:

(i) C-44 Basin Storage Reservoir, at a total cost of \$112,562,000, with an estimated Federal cost of \$56,281,000 and an estimated non-Federal cost of \$56,281,000.

(ii) Everglades Agricultural Area Storage Reservoirs--Phase I, at a total cost of \$233,408,000, with an estimated Federal cost of \$116,704,000 and an estimated non-Federal cost of \$116,704,000.

(iii) Site 1 Impoundment, at a total cost of \$38,535,000, with an estimated Federal cost of \$19,267,500 and an estimated non-Federal cost of \$19,267,500.

(iv) Water Conservation Areas 3A/3B Levee Seepage Management, at a total cost of \$100,335,000, with an estimated Federal cost of \$50,167,500 and an estimated non-Federal cost of \$50,167,500.

(v) C-11 Impoundment and Stormwater Treatment Area, at a total cost of \$124,837,000, with an estimated Federal cost of \$62,418,500 and an estimated non-Federal cost of \$62,418,500.

(vi) C-9 Impoundment and Stormwater Treatment Area, at a total cost of \$89,146,000, with an estimated Federal cost of \$44,573,000 and an estimated non-Federal cost of \$44,573,000.

(vii) Taylor Creek/Nubbin Slough Storage and Treatment Area, at a total cost of \$104,027,000, with an estimated Federal cost of \$52,013,500 and an estimated non-Federal cost of \$52,013,500.

(viii) Raise and Bridge East Portion of Tamiami Trail and Fill Miami Canal within Water Conservation Area 3, at a total cost of \$26,946,000, with an estimated Federal cost of \$13,473,000 and an estimated non-Federal cost of \$13,473,000.

(ix) North New River Improvements, at a

total cost of \$77,087,000, with an estimated Federal cost of \$38,543,500 and an estimated non-Federal cost of \$38,543,500.

(x) C-111 Spreader Canal, at a total cost of \$94,035,000, with an estimated Federal cost of \$47,017,500 and an estimated non-Federal cost of \$47,017,500.

(xi) Adaptive Assessment and Monitoring Program, at a total cost of \$100,000,000, with an estimated Federal cost of \$50,000,000 and an estimated non-Federal cost of \$50,000,000.

(D) CONDITIONS-

(i) PROJECT IMPLEMENTATION

REPORTS- Before implementation of a project described in any of clauses (i) through (x) of subparagraph (C), the Secretary shall review and approve for the project a project implementation report prepared in accordance with subsections (f) and (h).

(ii) SUBMISSION OF REPORT- The Secretary shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Environment and Public Works of the Senate the project implementation report required by subsections (f) and (h) for each project under this paragraph (including all relevant data and information on all costs).

(iii) FUNDING CONTINGENT ON APPROVAL- No appropriation shall be made to construct any project under this paragraph if the project implementation report for the project has not been approved by resolutions adopted by the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Environment and Public Works of the Senate.

(iv) MODIFIED WATER DELIVERY- No appropriation shall be made to construct the Water Conservation Area 3

Decomartmentalization and Sheetflow Enhancement Project (including component AA, Additional S-345 Structures; component QQ Phase 1, Raise and Bridge East Portion of Tamiami Trail and Fill Miami Canal within WCA 3; component QQ Phase 2, WCA 3

Decomartmentalization and Sheetflow Enhancement; and component SS, North New River Improvements) or the Central Lakebelt Storage Project (including components S and EEE, Central Lake Belt Storage Area) until the completion of the project to improve water deliveries to Everglades National Park authorized by section 104 of the Everglades National Park Protection and Expansion Act of 1989 (16 U.S.C. 410r-8).

(E) MAXIMUM COST OF PROJECTS-

Section 902 of the Water Resources Development Act of 1986 (33 U.S.C. 2280) shall apply to each project feature authorized under this subsection.

(c) ADDITIONAL PROGRAM AUTHORITY

(1) IN GENERAL- To expedite implementation of the Plan, the Secretary may implement modifications to the Central and Southern Florida Project that--

(A) are described in the Plan; and

(B) will produce a substantial benefit to the restoration, preservation and protection of the South Florida ecosystem.

(2) PROJECT IMPLEMENTATION REPORTS- Before implementation of any project feature authorized under this subsection, the Secretary shall review and approve for the project feature a project implementation report prepared in accordance with subsections (f) and (h).

(3) FUNDING-

(A) INDIVIDUAL PROJECT FUNDING-

(i) FEDERAL COST- The total Federal cost of each project carried out under this subsection shall not exceed \$12,500,000.

(ii) OVERALL COST- The total cost of each project carried out under this subsection shall not exceed \$25,000,000.

(B) AGGREGATE COST- The total cost of all projects carried out under this subsection shall not exceed \$206,000,000, with an estimated Federal cost of \$103,000,000 and an estimated non-Federal cost of \$103,000,000.

(d) AUTHORIZATION OF FUTURE PROJECTS-

(1) IN GENERAL- Except for a project authorized by subsection (b) or (c), any project included in the Plan shall require a specific authorization by Congress.

(2) SUBMISSION OF REPORT- Before seeking congressional authorization for a project under

paragraph (1), the Secretary shall submit to Congress--

- (A) a description of the project; and
- (B) a project implementation report for the project prepared in accordance with subsections (f) and (h).

(e) COST SHARING-

(1) FEDERAL SHARE- The Federal share of the cost of carrying out a project authorized by subsection (b), (c), or (d) shall be 50 percent.

(2) NON-FEDERAL RESPONSIBILITIES- The non-Federal sponsor with respect to a project described in subsection (b), (c), or (d), shall be--

- (A) responsible for all land, easements, rights-of-way, and relocations necessary to implement the Plan; and
- (B) afforded credit toward the non-Federal share of the cost of carrying out the project in accordance with paragraph (5)(A).

(3) FEDERAL ASSISTANCE-

(A) IN GENERAL- The non-Federal sponsor with respect to a project authorized by subsection (b), (c), or (d) may use Federal funds for the purchase of any land, easement, rights-of-way, or relocation that is necessary to carry out the project if any funds so used are credited toward the Federal share of the cost of the project.

(B) AGRICULTURE FUNDS- Funds provided to the non-Federal sponsor under the Conservation Restoration and Enhancement Program (CREP) and the Wetlands Reserve Program (WRP) for projects in the Plan shall be credited toward the non-Federal share of the cost of the Plan if the Secretary of Agriculture certifies that the funds provided may be used for that purpose. Funds to be credited do not include funds provided under section 390 of the Federal Agriculture Improvement and Reform Act of 1996 (110 Stat. 1022).

(4) OPERATION AND MAINTENANCE-

Notwithstanding section 528(e)(3) of the Water Resources Development Act of 1996 (110 Stat. 3770), the non-Federal sponsor shall be responsible for 50 percent of the cost of operation, maintenance, repair, replacement, and rehabilitation activities authorized under this section. Furthermore, the Seminole Tribe of Florida shall be responsible for 50 percent of the cost of operation, maintenance, repair, replacement, and rehabilitation activities for the

Big Cypress Seminole Reservation Water Conservation Plan Project.

(5) CREDIT-

(A) IN GENERAL- Notwithstanding section 528(e)(4) of the Water Resources Development Act of 1996 (110 Stat. 3770) and regardless of the date of acquisition, the value of lands or interests in lands and incidental costs for land acquired by a non-Federal sponsor in accordance with a project implementation report for any project included in the Plan and authorized by Congress shall be--

- (i) included in the total cost of the project; and
- (ii) credited toward the non-Federal share of the cost of the project.

(B) WORK- The Secretary may provide credit, including in-kind credit, toward the non-Federal share for the reasonable cost of any work performed in connection with a study, preconstruction engineering and design, or construction that is necessary for the implementation of the Plan if--

- (i) (I) the credit is provided for work completed during the period of design, as defined in a design agreement between the Secretary and the non-Federal sponsor; or (II) the credit is provided for work completed during the period of construction, as defined in a project cooperation agreement for an authorized project between the Secretary and the non-Federal sponsor;
- (ii) the design agreement or the project cooperation agreement prescribes the terms and conditions of the credit; and
- (iii) the Secretary determines that the work performed by the non-Federal sponsor is integral to the project.

(C) TREATMENT OF CREDIT BETWEEN PROJECTS- Any credit provided under this paragraph may be carried over between authorized projects in accordance with subparagraph (D).

(D) PERIODIC MONITORING-

- (i) IN GENERAL- To ensure that the contributions of the non-Federal sponsor equal 50 percent proportionate share for projects in the Plan, during each 5-year period, beginning with commencement of

design of the Plan, the Secretary shall, for each project--

(I) monitor the non-Federal provision of cash, in-kind services, and land; and

(II) manage, to the maximum extent practicable, the requirement of the non-Federal sponsor to provide cash, in-kind services, and land.

(ii) OTHER MONITORING- The Secretary shall conduct monitoring under clause (i) separately for the preconstruction engineering and design phase and the construction phase.

(E) AUDITS- Credit for land (including land value and incidental costs) or work provided under this subsection shall be subject to audit by the Secretary.

(f) EVALUATION OF PROJECTS-

(1) IN GENERAL- Before implementation of a project authorized by subsection (c) or (d) or any of clauses (i) through (x) of subsection (b)(2)(C), the Secretary, in cooperation with the non-Federal sponsor, shall complete, after notice and opportunity for public comment and in accordance with subsection (h), a project implementation report for the project.

(2) PROJECT JUSTIFICATION-

(A) IN GENERAL- Notwithstanding section 209 of the Flood Control Act of 1970 (42 U.S.C. 1962-2) or any other provision of law, in carrying out any activity authorized under this section or any other provision of law to restore, preserve, or protect the South Florida ecosystem, the Secretary may determine that--

(i) the activity is justified by the environmental benefits derived by the South Florida ecosystem; and

(ii) no further economic justification for the activity is required, if the Secretary determines that the activity is cost-effective.

(B) APPLICABILITY- Subparagraph (A) shall not apply to any separable element intended to produce benefits that are predominantly unrelated to the restoration, preservation, and protection of the natural system.

(g) EXCLUSIONS AND LIMITATIONS- The following Plan components are not approved for implementation:

(1) WATER INCLUDED IN THE PLAN-

(A) IN GENERAL- Any project that is designed to implement the capture and use of

the approximately 245,000 acre-feet of water described in section 7.7.2 of the Plan shall not be implemented until such time as--

- (i) the project-specific feasibility study described in subparagraph (B) on the need for and physical delivery of the approximately 245,000 acre-feet of water, conducted by the Secretary, in cooperation with the non-Federal sponsor, is completed;
- (ii) the project is favorably recommended in a final report of the Chief of Engineers; and
- (iii) the project is authorized by Act of Congress.

(B) PROJECT-SPECIFIC FEASIBILITY STUDY- The project-specific feasibility study referred to in subparagraph (A) shall include--

- (i) a comprehensive analysis of the structural facilities proposed to deliver the approximately 245,000 acre-feet of water to the natural system;
- (ii) an assessment of the requirements to divert and treat the water;
- (iii) an assessment of delivery alternatives;
- (iv) an assessment of the feasibility of delivering the water downstream while maintaining current levels of flood protection to affected property; and
- (v) any other assessments that are determined by the Secretary to be necessary to complete the study.

(2) WASTEWATER REUSE-

(A) IN GENERAL- On completion and evaluation of the wastewater reuse pilot project described in subsection (b)(2)(B)(iv), the Secretary, in an appropriately timed 5-year report, shall describe the results of the evaluation of advanced wastewater reuse in meeting, in a cost-effective manner, the requirements of restoration of the natural system.

(B) SUBMISSION- The Secretary shall submit to Congress the report described in subparagraph (A) before congressional authorization for advanced wastewater reuse is sought.

(3) PROJECTS APPROVED WITH LIMITATIONS- The following projects in the Plan are approved for implementation with limitations:

(A) LOXAHATCHEE NATIONAL WILDLIFE REFUGE- The Federal share for

land acquisition in the project to enhance existing wetland systems along the Loxahatchee National Wildlife Refuge, including the Strazzulla tract, should be funded through the budget of the Department of the Interior.

(B) SOUTHERN CORKSCREW REGIONAL ECOSYSTEM- The Southern Corkscrew regional ecosystem watershed addition should be accomplished outside the scope of the Plan.

(h) ASSURANCE OF PROJECT BENEFITS-

(1) IN GENERAL- The overarching objective of the Plan is the restoration, preservation, and protection of the South Florida Ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The Plan shall be implemented to ensure the protection of water quality in, the reduction of the loss of fresh water from, the improvement of the environment of the South Florida Ecosystem and to achieve and maintain the benefits to the natural system and human environment described in the Plan, and required pursuant to this section, for as long as the project is authorized.

(2) AGREEMENT-

(A) IN GENERAL- In order to ensure that water generated by the Plan will be made available for the restoration of the natural system, no appropriations, except for any pilot project described in subsection (b)(2)(B), shall be made for the construction of a project contained in the Plan until the President and the Governor enter into a binding agreement under which the State shall ensure, by regulation or other appropriate means, that water made available by each project in the Plan shall not be permitted for a consumptive use or otherwise made unavailable by the State until such time as sufficient reservations of water for the restoration of the natural system are made under State law in accordance with the project implementation report for that project and consistent with the Plan.

(B) ENFORCEMENT-

(i) IN GENERAL- Any person or entity that is aggrieved by a failure of the United States or any other Federal Government instrumentality or agency, or the Governor or any other officer. of a State instrumentality or agency, to comply with

any provision of the agreement entered into under subparagraph (A) may bring a civil action in United States district court for an injunction directing the United States or any other Federal Government instrumentality or agency or the Governor or any other officer of a State instrumentality or agency, as the case may be, to comply with the agreement.

(ii) LIMITATIONS ON

COMMENCEMENT OF CIVIL ACTION-

No civil action may be commenced under clause (i)—

(I) before the date that is 60 days after the Secretary and the Governor receive written notice of a failure to comply with the agreement; or

(II) if the United States has commenced and is diligently prosecuting an action in a court of the United States or a State to redress a failure to comply with the agreement.

(C) TRUST RESPONSIBILITIES- In carrying out his responsibilities under this subsection with respect to the restoration of the South Florida ecosystem, the Secretary of the Interior shall fulfill his obligations to the Indian tribes in South Florida under the Indian trust doctrine as well as other applicable legal obligations.

(3) PROGRAMMATIC REGULATIONS-

(A) ISSUANCE- Not later than 2 years after the date of enactment of this Act, the Secretary shall, after notice and opportunity for public comment, with the concurrence of the Governor and the Secretary of the Interior, and in consultation with the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the Administrator of the Environmental Protection Agency, the Secretary of Commerce, and other Federal, State, and local agencies, promulgate programmatic regulations to ensure that the goals and purposes of the Plan are achieved.

(B) CONCURRENCY STATEMENT- The Secretary of the Interior and the Governor shall, not later than 180 days from the end of the public comment period on proposed programmatic regulations, provide the Secretary with a written statement of concurrence or nonconcurrence. A failure to provide a written statement of concurrence or nonconcurrence within such time frame will be

deemed as meeting the concurrency requirements of subparagraph (A)(i). A copy of any concurrency or nonconcurrency statements shall be made a part of the administrative record and referenced in the final programmatic regulations. Any nonconcurrency statement shall specifically detail the reason or reasons for the nonconcurrency.

(C) CONTENT OF REGULATIONS-

(i) IN GENERAL- Programmatic regulations promulgated under this paragraph shall establish a process--

(I) for the development of project implementation reports, project cooperation agreements, and operating manuals that ensure that the goals and objectives of the Plan are achieved;

(II) to ensure that new information resulting from changed or unforeseen circumstances, new scientific or technical information or information that is developed through the principles of adaptive management contained in the Plan, or future authorized changes to the Plan are integrated into the implementation of the Plan; and

(III) to ensure the protection of the natural system consistent with the goals and purposes of the Plan, including the establishment of interim goals to provide a means by which the restoration success of the Plan may be evaluated throughout the implementation process.

(ii) LIMITATION ON APPLICABILITY OF PROGRAMMATIC REGULATIONS- Programmatic regulations promulgated under this paragraph shall expressly prohibit the requirement for concurrence by the Secretary of the Interior or the Governor on project implementation reports, project cooperation agreements, operating manuals for individual projects undertaken in the Plan, and any other documents relating to the development, implementation, and management of individual features of the Plan, unless such concurrence is provided for in other Federal or State laws.

(D) SCHEDULE AND TRANSITION RULE-

(i) IN GENERAL- All project implementation reports approved before the

date of promulgation of the programmatic regulations shall be consistent with the Plan.

(ii) PREAMBLE- The preamble of the programmatic regulations shall include a statement concerning the consistency with the programmatic regulations of any project implementation reports that were approved before the date of promulgation of the regulations.

(E) REVIEW OF PROGRAMMATIC REGULATIONS- Whenever necessary to attain Plan goals and purposes, but not less often than every 5 years, the Secretary, in accordance with subparagraph (A), shall review the programmatic regulations promulgated under this paragraph.

(4) PROJECT-SPECIFIC ASSURANCES-

(A) PROJECT IMPLEMENTATION REPORTS-

(i) IN GENERAL- The Secretary and the non-Federal sponsor shall develop project implementation reports in accordance with section 10.3.1 of the Plan.

(ii) COORDINATION- In developing a project implementation report, the Secretary and the non-Federal sponsor shall coordinate with appropriate Federal, State, tribal, and local governments.

(iii) REQUIREMENTS- A project implementation report shall--

(I) be consistent with the Plan and the programmatic regulations promulgated under paragraph (3);

(II) describe how each of the requirements stated in paragraph (3)(B) is satisfied;

(III) comply with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.);

(IV) identify the appropriate quantity, timing, and distribution of water dedicated and managed for the natural system;

(V) identify the amount of water to be reserved or allocated for the natural system necessary to implement, under State law, subclauses (IV) and (VI);

(VI) comply with applicable water quality standards and applicable water quality permitting requirements under subsection (b)(2)(A)(ii);

(VII) be based on the best available science; and

(VIII) include an analysis concerning the cost-effectiveness and engineering feasibility of the project.

(B) PROJECT COOPERATION

AGREEMENTS-

(i) **IN GENERAL-** The Secretary and the non-Federal sponsor shall execute project cooperation agreements in accordance with section 10 of the Plan.

(ii) **CONDITION-** The Secretary shall not execute a project cooperation agreement until any reservation or allocation of water for the natural system identified in the project implementation report is executed under State law.

(C) OPERATING MANUALS-

(i) **IN GENERAL-** The Secretary and the non-Federal sponsor shall develop and issue, for each project or group of projects, an operating manual that is consistent with the water reservation or allocation for the natural system described in the project implementation report and the project cooperation agreement for the project or group of projects.

(ii) **MODIFICATIONS-** Any significant modification by the Secretary and the non-Federal sponsor to an operating manual after the operating manual is issued shall only be carried out subject to notice and opportunity for public comment.

(5) SAVINGS CLAUSE-

(A) NO ELIMINATION OR TRANSFER-

Until a new source of water supply of comparable quantity and quality as that available on the date of enactment of this Act is available to replace the water to be lost as a result of implementation of the Plan, the Secretary and the non-Federal sponsor shall not eliminate or transfer existing legal sources of water, including those for--

- (i) an agricultural or urban water supply;
- (ii) allocation or entitlement to the Seminole Indian Tribe of Florida under section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e);
- (iii) the Miccosukee Tribe of Indians of Florida;
- (iv) water supply for Everglades National Park; or
- (v) water supply for fish and wildlife.

(B) MAINTENANCE OF FLOOD PROTECTION- Implementation of the Plan shall not reduce levels of service for flood protection that are--

- (i) in existence on the date of enactment of this Act; and
- (ii) in accordance with applicable law.

(C) NO EFFECT ON TRIBAL COMPACT-

Nothing in this section amends, alters, prevents, or otherwise abrogates rights of the Seminole Indian Tribe of Florida under the compact among the Seminole Tribe of Florida, the State, and the South Florida Water Management District, defining the scope and use of water rights of the Seminole Tribe of Florida, as codified by section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e).

(i) DISPUTE RESOLUTION-

(1) IN GENERAL- The Secretary and the Governor shall within 180 days from the date of enactment of this Act develop an agreement for resolving disputes between the Corps of Engineers and the State associated with the implementation of the Plan. Such agreement shall establish a mechanism for the timely and efficient resolution of disputes, including--

- (A) a preference for the resolution of disputes between the Jacksonville District of the Corps of Engineers and the South Florida Water Management District;
- (B) a mechanism for the Jacksonville District of the Corps of Engineers or the South Florida Water Management District to initiate the dispute resolution process for unresolved issues;
- (C) the establishment of appropriate timeframes and intermediate steps for the elevation of disputes to the Governor and the Secretary; and
- (D) a mechanism for the final resolution of disputes, within 180 days from the date that the dispute resolution process is initiated under subparagraph (B).

(2) CONDITION FOR REPORT APPROVAL-

The Secretary shall not approve a project Implementation report under this section until the agreement established under this subsection has been executed.

(3) NO EFFECT ON LAW- Nothing in the agreement established under this subsection shall alter or amend any existing Federal or State law,

or the responsibility of any party to the agreement to comply with any Federal or State law.

(j) INDEPENDENT SCIENTIFIC REVIEW-

(1) IN GENERAL- The Secretary, the Secretary of the Interior, and the Governor, in consultation with the South Florida Ecosystem Restoration Task Force, shall establish an independent scientific review panel convened by a body, such as the National Academy of Sciences, to review the Plan's progress toward achieving the natural system restoration goals of the Plan.

(2) REPORT- The panel described in paragraph (1) shall produce a biennial report to Congress, the Secretary, the Secretary of the Interior, and the Governor that includes an assessment of ecological indicators and other measures of progress in restoring the ecology of the natural system, based on the Plan.

(k) OUTREACH AND ASSISTANCE-

(1) SMALL BUSINESS CONCERNS OWNED AND OPERATED BY SOCIALLY AND ECONOMICALLY DISADVANTAGED INDIVIDUALS- In executing the Plan, the Secretary shall ensure that small business concerns owned and controlled by socially and economically disadvantaged individuals are provided opportunities to participate under section 15(g) of the Small Business Act (15 U.S.C. 644(g)).

(2) COMMUNITY OUTREACH AND EDUCATION-

(A) IN GENERAL- The Secretary shall ensure that impacts on socially and economically disadvantaged individuals, including individuals with limited English proficiency, and communities are considered during implementation of the Plan, and that such individuals have opportunities to review and comment on its implementation.

(B) PROVISION OF OPPORTUNITIES- The Secretary shall ensure, to the maximum extent practicable, that public outreach and educational opportunities are provided, during implementation of the Plan, to the individuals of South Florida, including individuals with limited English proficiency, and in particular for socially and economically disadvantaged communities.

(l) REPORT TO CONGRESS- Beginning on October 1, 2005, and periodically thereafter until

October 1, 2036, the Secretary and the Secretary of the Interior, in consultation with the Environmental Protection Agency, the Department of Commerce, and the State of Florida, shall jointly submit to Congress a report on the implementation of the Plan. Such reports shall be completed not less often than every 5 years. Such reports shall include a description of planning, design, and construction work completed, the amount of funds expended during the period covered by the report (including a detailed analysis of the funds expended for adaptive assessment under subsection (b)(2)(C)(xi)), and the work anticipated over the next 5-year period. In addition, each report shall include--

(1) the determination of each Secretary, and the Administrator of the Environmental Protection Agency, concerning the benefits to the natural system and the human environment achieved as of the date of the report and whether the completed projects of the Plan are being operated in a manner that is consistent with the requirements of subsection (h);

(2) progress toward interim goals established in accordance with subsection (h)(3)(B); and

(3) a review of the activities performed by the Secretary under subsection (k) as they relate to socially and economically disadvantaged individuals and individuals with limited English proficiency.

(m) REPORT ON AQUIFER STORAGE AND RECOVERY PROJECT- Not later than 180 days after the date of enactment of this Act, the Secretary shall transmit to Congress a report containing a determination as to whether the ongoing Biscayne Aquifer Storage and Recovery Program located in Miami-Dade County has a substantial benefit to the restoration, preservation, and protection of the South Florida ecosystem.

(n) FULL DISCLOSURE OF PROPOSED FUNDING-

(1) FUNDING FROM ALL SOURCES- The President, as part of the annual budget of the United States Government, shall display under the heading 'Everglades Restoration' all proposed funding for the Plan for all agency programs.

(2) FUNDING FROM CORPS OF ENGINEERS CIVIL WORKS PROGRAM- The President, as part of the annual budget of the United States Government, shall display under the accounts

'Construction, General' and 'Operation and Maintenance, General' of the title 'Department of Defense--Civil, Department of the Army, Corps of Engineers--Civil', the total proposed funding level for each account for the Plan and the percentage such level represents of the overall levels in such accounts. The President shall also include an assessment of the impact such funding levels for the Plan would have on the budget year and long-term funding levels for the overall Corps of Engineers civil works program.

(o) SURPLUS FEDERAL LANDS- Section

390(f)(2)(A)(i) of the Federal Agriculture Improvement and Reform Act of 1996 (110 Stat. 1023) is amended by inserting after 'on or after the date of enactment of this Act' the following: 'and before the date of enactment of the Water Resources Development Act of 2000'.

(p) SEVERABILITY- If any provision or remedy provided by this section is found to be unconstitutional or unenforceable by any court of competent jurisdiction, any remaining provisions in this section shall remain valid and enforceable.

APPENDIX E: South Florida Ecosystem Restoration 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 restoration 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





Coordinating Success and Tracking Success

For further information on this document please contact:

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Marsha Bansee Lee

**For more information on the
South Florida Ecosystem Restoration Program
or to view this document on-line, please visit
<http://www.sfrestore.org>**



Coordinating and Tracking Success

Coordinating Success

Strategy for Restoration of the South Florida Ecosystem

Tracking Success

Biennial Report for FY 2004-2006 of the
South Florida Ecosystem Restoration Task Force

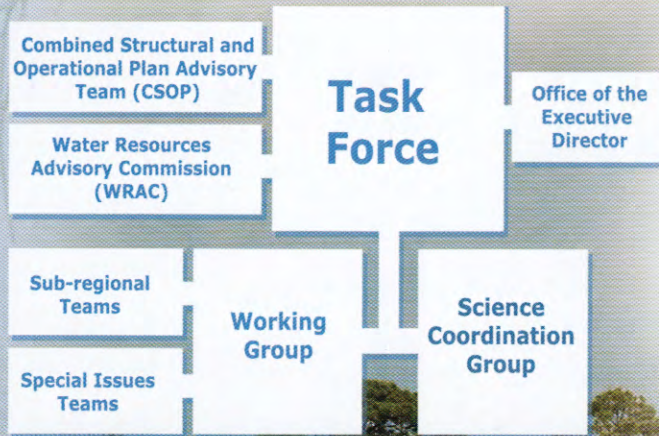
Integrated Financial Plan

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

Volume 2
of 2



South Florida Ecosystem Restoration Organization



Task Force

- U.S. Department of the Interior (Chair)
- U.S. Department of Agriculture
- U.S. Department of the Army
- U.S. Department of Commerce
- U.S. Department of Justice
- U.S. Department of Transportation
- U.S. Environmental Protection Agency
- Miccosukee Tribe of Indians of Florida
- Seminole Tribe of Florida
- Florida Department of Environmental Protection
- South Florida Water Management District
- Florida Governor's Office
- Two Local Governments - Cities of Sweetwater and South Bay

Working Group

U.S. Department of the Interior: National Park Service, Bureau of Indian Affairs, U.S. Fish & Wildlife, U.S. Geological Survey; U.S. Department of Agriculture: Natural Resources Conservation Service; U.S. Department of the Army: U.S. Army Corps of Engineers; U.S. Department of Commerce: National Oceanic and Atmospheric Administration, National Marine Fisheries Service, National Ocean Service; Florida Keys National Marine Sanctuary; U.S. Department of Justice; U.S. Environmental Protection Agency; U.S. Department of Transportation; Miccosukee Tribe of Indians of Florida; Seminole Tribe of Florida; State of Florida: Florida Office of the Governor, Florida Department of Environmental Protection, South Florida Water Management District, Florida Fish and Wildlife Conservation Commission, Florida Department of Community Affairs, Florida Department of Agriculture and Consumer Services, Florida Department of Transportation. No more than five representatives of local governments or regional planning councils.

Science Coordination Group

U.S. Department of the Interior: National Park Service, U.S. Fish and Wildlife, U.S. Geological Survey; U.S. Department of Agriculture: Natural Resources Conservation Service, Agricultural Research Service; U.S. Department of Commerce: National Oceanic and Atmospheric Administration, National Marine Fisheries Service - SEFSC, Ocean and Atmospheric Research - AOML; U.S. Department of the Army: U.S. Army Corps of Engineers; U.S. Environmental Protection Agency; Miccosukee Tribe of Indians of Florida; Seminole Tribe of Florida; Florida Fish and Wildlife Conservation Commission; Florida Department of Agriculture and Consumer Services; Florida Department of Environmental Protection; South Florida Water Management District; Miami-Dade Department of Environmental Resource Management; Palm Beach County; Florida Atlantic University.

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TRACKING SUCCESS:
2006 INTEGRATED FINANCIAL PLAN FOR THE SOUTH FLORIDA ECOSYSTEM
RESTORATION TASK FORCE

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2006 Integrated Financial Plan

Purpose

In 1996 Congress directed the Task Force to prepare an integrated financial plan for the restoration, preservation, and protection of the South Florida Ecosystem. The IFP is updated annually and posted on the South Florida Ecosystem Restoration Task Force website. Every two years it is published along with the Task Force *Strategy* and *Biennial Report*.

The purpose of the Integrated Financial Plan (IFP) is to provide detailed information about the federal, state, tribal, and local restoration projects that contribute to the accomplishment of the vision, goals, subgoals, and objectives of the Task Force Strategy for restoration of the South Florida Ecosystem.

Background

The overall premise of restoration is that the ecosystem must be managed from a system-wide perspective. Rather than dealing with issues independently, the challenge is to seek out the interrelationships that exist between all the components of the ecosystem. The same issues that are critical to the natural environment — getting the water right and restoring, preserving, and protecting diverse habitats and species — are equally critical to maintaining a quality built environment and lifestyle for south Florida's residents and visitors.

The success of this comprehensive approach will depend upon the coordination and integration of hundreds of individual restoration projects carried out by various agencies at all levels of government, and with input from many stakeholders. Each agency brings its own authority, jurisdiction, capabilities, and expertise to this initiative and applies them through its individual programs, projects, and activities.

Criteria and Assumptions

The IFP is a compilation of project specific information provided by the members of the Task Force. The cost estimating protocols, fiscal year cycles, time frames and methodologies used by the members vary widely. As such, the IFP reflects the criteria and assumptions used by the reporting Task Force entities and does not follow a single format.

Specific criteria and assumptions for each project are annotated with footnotes.

For policy reasons, the Florida Department of Environmental Protection (FDEP) and the South Florida Water Management District (SFWMD) do not make individual project cost projections on future non-CERP land acquisitions for habitat preservation and conservation purposes listed under Goal 2. The cost of lands already purchased for habitat preservation and conservation purposes are the actual costs. An estimate of future land costs for non-CERP Goal 2 land acquisition is provided in the Total Cost Estimate in Appendix B of the 2006 edition of the Coordinating Success Volume 1 document.

The following criteria and assumptions apply to all of the project financial information as provided in the Task Force's 2006 Integrated Financial Plan:

- Federal agencies and the SFWMD operate and report financial activities on an October 1 to September 30 fiscal year, while other State of Florida agencies operate on a July 1 to June 30 fiscal year.
- Generally the U.S. Army Corps of Engineers (USACE), in seeking project authorizations, uses constant year dollars to develop cost estimates, as provided in appropriate authorizing documents. Once a project is authorized, the USACE uses the Office of Management and Budget (OMB) inflation indices to price level estimated project costs to current year dollars, then inflates to mid point of construction using current schedule to produce a fully funded project cost estimate. Estimated project costs are updated annually using the OMB directed inflation indices and current schedules.
- USACE project costs are reported as follows:
 - a) CERP: The Project Implementation Report (PIR) is the decision document used to obtain approval and/or authorization of CERP projects and completion of the final PIR is normally the time when all costs are updated. Prior to the development of a final PIR, project cost estimates assume a 50% Federal and 50 % Non-Federal cost share and are reported in 2005 dollars that

have been updated using OMB inflation indices.

None of the CERP projects are fully funded.

b) Central & Southern Florida (C&SF) South Dade County C-111, C&SF West Palm Beach STA 1 East/ C-51 West, Kissimmee River Restoration, Everglades, and South Florida Ecosystem Restoration Critical Projects costs are reported in 2005 dollars, fully funded.

c) Southwest Florida Feasibility Study: study cost estimate is reported in 2000 dollars. Per the Project Management Plan (pp 48-49), \$12M is the fully funded cost estimate.

d) Florida Bay/Florida Keys Feasibility Study: study cost estimate is reported in 2001 dollars per the Master Implementation Sequencing Plan (MISP) with a fully funded cost of \$6.35M.

- The SFWMD project costs are reported as follows:
 - a) Lake Okeechobee Protection Plan – project cost estimate is reported in 2003 dollars. This cost estimate is being revised for the 2007 plan update. Cost estimates for the Lake Okeechobee and Estuary Recovery program have been developed for the Lake Okeechobee Fast Track (LOFT) projects and permanent forward pumps. Cost estimates for the remaining components are under development.
 - b) Long Term Plan Projects – project cost estimates are escalated values and are derived from construction industry-accepted cost databases and compared with similar previous SFWMD completed projects. Escalated value is defined as the value of when that component is expected to be constructed, including the estimated cost of inflation.
 - c) Acceler8 Projects – Project cost estimates are updated as each project progresses through the design process. Each updated cost estimate is reported as the present day value at the time the estimate is performed. Contingencies are included in each estimate with larger contingencies (30%) used during early stages of the design phase and smaller contingencies (10%)

used at the final design phase. The contingencies are intended to account for cost escalation due to inflation.

- Reporting agencies needed to presume annual levels of Congressional and State of Florida appropriations to develop project completion schedules. If the actual appropriations vary from presumed levels, then project completion schedules and estimated projects costs may change.
- The Project Summary Table and IFP do not include operational costs or agency programmatic costs that would be incurred regardless of the restoration initiatives. For example, the 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 water delivery infrastructure are not included herein.
- The Project Summary Table and IFP do not include the costs of land development and associated infrastructure as well as infrastructure improvements in existing urban areas including but not limited to redeveloping declining urban areas, wastewater and storm water management systems construction and improvements, schools, roadways, utilities, government services, and light rail.
- The Project Summary Table and IFP do not include any current or future costs for science/research projects or studies.
- The Project Summary Table and IFP do not include any costs or future resource needs projected for environmental and system-wide monitoring programs (for example, the \$100 million funded over ten years for the CERP monitoring programs is not included).
- The Project Summary Table and IFP do not include any post-construction operations and maintenance costs in the total financial requirement.

HOW TO USE THE IFP PROJECT SUMMARY TABLE

The Integrated Financial Plan Summary Table provides a great deal of useful information for those interested in project details at a glance and describes how the projects link to the overall strategic goals, subgoals, and objectives of the Task Force. This same table is repeated in Volume 1, Appendix A.

Each column of the table has a specific purpose to assist in finding information quickly and aggregating different information components:

Column 1	identifies the goal and subgoal the project is designed to achieve or partially achieve.	Column 4	identifies the lead agency.
Column 2	assigns a unique project number linked to the Task Force goals, subgoals, and objectives. The first digit is a goal number (1, 2, or 3). The second digit is the subgoal/objective number. For the purpose of assigning project numbers, the objectives under each goal have been numbered consecutively regardless of their subgoal. For example, project 1104 would be a project that supports objective 1-A.1. The third and fourth digits reflect the order of listing of the projects under each subgoal/objective. For example, project 1104 would be the 4th project on the list for that objective.	Columns 5 and 6	identify the reported start and completion dates.
Column 3	is the project name. The staff strives to use the same project name used by all agencies, although at times this is quite challenging. Some of the project names changed from year to year as projects are grouped together or split apart in the CERP adaptive management process. For example the Lake Istokpoga Project, which was a separate project in 2002, has since been included in the Lake Okeechobee Watershed Project. These types of actions affect the restoration endpoints and total outputs measured by some of the objectives, and as a result some of the restoration endpoints have changed.	Column 7	identifies the current estimated financial requirements.
		Column 8	identifies the financial resources appropriated as of June 30, 2006 unless otherwise noted.
		Column 9	identifies the measurable output (e.g., acre-feet of storage, miles modified, etc.) that collectively add up to the restoration endpoint identified for achieving the objectives of each subgoal.
		Columns 10 and 11	identify the primary and secondary objectives that the project outputs support. The staff identified the primary and secondary objectives based on input from the reporting agency. Some projects provide outputs supporting more than one objective. Thus, they are listed in more than one section with different outputs. For example, the Lake Okeechobee Watershed Project (project 1104) provides acres of stormwater treatment for Objective 1.B.1 and acre-feet of storage for Objective 1.A.1. Such projects are numbered according to the primary objective identified for the project, and the same number is maintained when the project is repeated to identify the secondary benefit.
		Column 12	identifies the page number in Volume 2 where the detailed project sheet can be located.

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
GOAL 1. GET THE WATER RIGHT											
1.A.1		SURFACE WATER STORAGE PROJECTS						ACRE-FT.			
	1101	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU), and C-44 Basin Storage Reservoir (B) (CERP Project # WBS 07)	USACE/ SFWMD	2002	2025	1,309,693,000	136,799,000	165,000	1.A.1	1.B.1	25
	1102	C&SF: CERP Everglades Agricultural Area (EAA) Storage Reservoir (CERP Project # WBS 08 and 09)	USACE/ SFWMD	2001	2015	526,413,000	36,538,000	360,000	1.A.1		30
	1104	C&SF: CERP Lake Okeechobee Watershed (A, N, OPE) (CERP Project # WBS 01)	USACE/ SFWMD	2001	2015	575,559,000	42,013,000	250,000	1.A.1	1.B.1/2.A.3	34
	1105	C&SF: CERP North Lake Belt Storage Area (XX P2) (CERP Project # WBS 25)	USACE/ SFWMD	2017	2040	308,154,000	0	90,000	1.A.1		37
	1106	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (VV) (CERP Project # WBS 20 and 21)	USACE/ SFWMD	2006	2020	154,441,000	5,245,000	20,000	1.A.1	1.A.2	39
	1107	C&SF: CERP Site 1 Impoundment and Aquifer Storage and Recovery (CERP Project # WBS 22 and 40)	USACE/ SFWMD	2002	2025	153,931,000	13,889,000	13,280	1.A.1	2.A.3	41
	1109	C&SF: CERP C-43 Basin Storage Reservoir and ASR (D) (CERP Project # WBS 04 and 05)	USACE/ SFWMD	2001	2020	530,600,000	59,143,000	160,000	1.A.1	1.A.2	45
	1110	C&SF: CERP Central Lake Belt Storage Area (SP2) (CERP Project # WBS 26)	USACE/ SFWMD	2017	2040	155,353,000	0	190,000	1.A.1	1.B.1	48
	1112	LOFT (identified under LOER)- Taylor Creek Reservoir	USACE/ SFWMD	2005	2010	102,160,000	2,410,000	32,000	1.A.1	1.B.1	50
	1113	C&SF: CERP - Water Preserve Area Conveyance (BB XX p1)(CERP Project # WBS 49)	USACE/ SFWMD	2002	2020	331,665,000	6,856,000	90,000	1.A.1		51
	1114	C&SF: CERP Everglades National Park Seepage Management (V) (FF) (U)(CERP Project # WBS 27 and 43)	USACE/ SFWMD	2004	2020	390,942,000	59,004,000	11,500	1.A.1		52
	1501	C&SF: CERP - Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O) (CERP Project # WBS 45)	USACE/ SFWMD	2002	2009	Footnote 1	Footnote 1	13,280	1.B.1	1.A.1/2.A.3	108
	1503	C&SF: CERP North Palm Beach County PIR Part 1 (CERP Project # WBS 17)	USACE/ SFWMD	2001	2020	Footnote 1	Footnote 1	48,000	1.B.1	1.A.1	116

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2100	Allapattah Flats/Ranch	FDEP	1997	TBD	Footnote 1	Footnote 1	32,000			149
		Completed Projects									
	1111	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/ SFWMD	1997	2006	40,676,000	38,657,000	6,000	1.A.1	2.A.3	277
1.A.2		AQUIFER STORAGE & RECOVERY (ASR) PROJECTS						BGD			
	1200	C&SF: CERP North Palm Beach County - Part 2 (LL, K, PT2) (CERP Project # WBS 18)	USACE/ SFWMD	2009	2020	203,891,000	0	0.17	1.A.2		54
	1201	C&SF: CERP Lake Okeechobee ASR (GG)(CERP Project # WBS 03)	USACE/ SFWMD	2010	2030	1,254,142,000	0	1	1.A.2		55
	1106	C&SF: CERP Palm Beach County Agricultural Reserve Reservoir and ASR (CERP Project # WBS 21)	USACE/ SFWMD	2010	2020	Footnote 1	Footnote 1	0.075	1.A.1	1.A.2	39
	1109	C&SF: CERP C-43 Basin Storage Reservoir and ASR (CERP Project # WBS 05)	USACE/ SFWMD	2001	2020	Footnote 1	Footnote 1	0.22	1.A.1	1.A.2	45
1.A.3		MODIFY IMPEDIMENTS TO SHEETFLOW PROJECTS						MILES MODIFIED	1.A.1	1.B.1	
	1300	Canal 111	USACE/ SFWMD	1994	2010	287,600,000	184,081,000	4.75	1.A.3	3.B.1	57
	1301	C&SF: CERP WCA-3 Decentralization and Sheetflow Enhancement (AA)(QQ)(SS)(ZZ) (CERP Project # WBS 12, 13 and 47)	USACE/ SFWMD	2001	2020	253,443,000	17,255,000	240	1.A.3	2.A.3	59
	1302	C&SF: CERP Florida Keys Tidal Restoration (OPE) (CERP Project # WBS 31)	USACE/ SFWMD	2001	2015	1,536,000	1,250,000	0.6	1.A.3		63
	1303	Critical Projects Southern CREW	USACE/ SFWMD	1999	2005	33,321,000	33,321,000		1.A.3		65
	1304	East WCA-3A Hydropattern Restoration	SFWMD	1994	2012	28,224,966	5,344,966	8.5	1.A.3		66
	1306	Kissimmee River Restoration Project	USACE/ SFWMD	1994	2010	575,400,000	266,421,000	31	1.A.3	2.A.3	67
	1307	Modified Water Deliveries to Everglades National Park (Footnote 3)	NPS/ USACE	1990	2009	398,420,000	252,645,000	21	1.A.3		69
		Completed Projects									
	1305	Kissimmee Prairie	FDEP/ SFWMD	1996	1997	Footnote 1	Footnote 1	39.3	1.A.3	2.A.1	279
		OTHER RELATED HYDROLOGY PROJECTS									
	1400	Critical Projects: Additional Water Conveyance Structures Under Tamiami Trail	USACE/ SFWMD	1998	2006	16,506,000	16,506,000				71

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1401	Biscayne Bay Feasibility Study	USACE/ M-DADE	1996	2010	6,370,000	6,370,000				72
	1403	C&SF: CERP Broward County Secondary Canal System(CC) (CERP Project # WBS 24)	USACE/ SFWMD	2001	2015	15,476,000	50,000				73
	1408	C&SF: CERP Loxahatchee National Wildlife Refuge Internal Canal Structures (KK) (CERP Project # WBS 14)	USACE/ SFWMD	2004	2020	9,052,000	49,000				74
	1409	C&SF: CERP Seminole Tribe Big Cypress Water Conservation Plan (CERP Project # WBS 96)	USACE/ Seminole	2015	2020	89,455,000	0				75
	1410	C&SF: CERP Biscayne Bay Coastal Wetlands (FFF) (OPE) (CERP Project # WBS 28)	USACE/ SFWMD	2001	2015	386,856,000	43,494,000				76
	1411	C&SF: CERP Caloosahatchee R. (C-43) Basin ASR Pilot Project (D)(CERP Project # WBS 33)	USACE/ SFWMD	2001	2009	7,898,000	4,555,000				79
	1412	C&SF: CERP Diverting WCA-2B and WCA-3 Flows to Central Lake Belt Storage Area (YY) (S P1) (CERP Project # WBS 48)	USACE/ SFWMD	2005	2025	539,423,000	284,000				81
	1413	C&SF: CERP Everglades Rain Driven Operations (H)	USACE/ SFWMD	TBD	TBD	TBD	TBD				83
	1416	C&SF: CERP L-31 N Seepage Management Pilot Project (V)(CERP Project # WBS 36)	USACE/ SFWMD	2001	2010	11,569,000	4,033,000				84
	1417	C&SF: CERP Lake Belt (In-Ground Reservoir) Technology - Pilot Project (CERP Project # WBS 35)	USACE/ SFWMD	2001	2020	26,618,000	1,919,000				86
	1418	C&SF: CERP Lake Okeechobee Aquifer Storage and Recovery Pilot Project (GG) (CERP Project # WBS 32)	USACE/ SFWMD	2000	2009	36,429,000	16,688,000				87
	1419	C&SF: CERP Lake Okeechobee Regulation Schedule	USACE/ SFWMD	TBD	TBD	TBD	0				89
	1420	C&SF: CERP Modified Holeyland Wildlife Management Area Operation Plan (CERP Project # WBS 15)	USACE/ SFWMD	2007	2015	TBD	0				90
	1421	C&SF: CERP Modified Rotenberger Wildlife Management Area Operation Plan (EE)(CERP Project # WBS 16)	USACE/ SFWMD	2007	2009	TBD	0				91
	1422	C&SF: CERP Operational Modification to Southern Portion of L-31N and C-111 (OO)(CERP Project # WBS)	USACE/ SFWMD	TBD	TBD	TBD	0				92
	1423	C&SF: CERP Hillsboro Aquifer Storage and Recovery Pilot Project (M)(CERP Project # WBS 34)	USACE/ SFWMD	2000	2009	9,395,000	6,043,000				93

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1425	Critical Projects Seminole Big Cypress Reservation Water Conservation Plan	Seminole/USACE	1997	2008	52,249,000	30,208,000				95
	1426	Florida Bay and The Florida Keys Feasibility Study	USACE/SFWMD	2001	2012	6,350,000	4,236,000				97
	1431	Southwest Florida Feasibility Study	USACE/SFWMD	2001	2009	12,000,000	9,466,000				99
	1432	WCA-2A Hydropattern Restoration	SFWMD	1994	2012	6,067,016	4,942,179				101
	1433	West WCA-3A Hydropattern Restoration	SFWMD	1994	2012	11,843,375	7,402,471				102
	1434	C&SF: CERP – Flows to Eastern Water Conservation Area (EEE) (CERP Project # WBS 23)	USACE/SFWMD	2011	2020	8,019,000	0				103
	1435	C&SF: CERP- C-4 Control Structures (T) (CERP Project # WBS 46)	USACE/SFWMD	2004	2015	2,804,000	113,000				104
	1436	LOFT (identified under LOER)- Permanent Forward Pumps	SFWMD	2006	2010	100,000,000	1,800,000				105
		Completed Projects:									
	1406	Critical Projects East Coast Canal Structures (C-4)	USACE/SFWMD	1999	2003	3,683,000	3,683,000				280
	1428	Indian River Lagoon Restoration Feasibility Study	USACE/SFWMD	1996	2002	6,150,000	6,150,000				281
	1430	Rotenberger Restoration	SFWMD	1994	2005	5,204,444	5,204,444				282

Sub-Goal 1.B GET THE WATER QUALITY RIGHT

1.B.1	STORMWATER TREATMENT AREA (STA) PROJECTS										
										ACRES	
	1500	C&SF: CERP Big Cypress/L-28 Interceptor Modifications (CCC) (CERP Project # WBS 10)	USACE/SFWMD	2015	2025	51,385,000	0	1,900	1.B.1		106
	1501	C&SF: CERP - Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O) (CERP Project # WBS 45)	USACE/SFWMD	2002	2009	408,348,000	132,883,000	3,500	1.B.1	1.A.1/2.A.3	108
	1502	C&SF: CERP Miccosukee Tribe Water Management Plan (OPE) (CERP Project # WBS 90)	USACE/Miccosukee	2003	2020	29,036,000	0	900	1.B.1		115
	1503	C&SF: CERP North Palm Beach County PIR Part 1 (X, Y, GGG, KP1, OPE)(CERP Project # WBS 17)	USACE/SFWMD	2001	2020	533,161,000	34,479,000	1,150	1.B.1	1.A.1	116
	1505	C&SF: CERP Caloosahatchee Backpumping with Stormwater Treatment (DDD)(CERP Project # WBS 06)	USACE/SFWMD	2011	2020	99,664,000	0	5,000	1.B.1		120

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1506	Critical Projects: Lake Okeechobee Water Retention/ Phosphorus Removal	USACE/ SFWMD	1997	2006	21,902,000	21,902,000	940	1.B.1		121
	1513	C&SF: STA-1E/C-51 West	USACE/ SFWMD	1994	2008	288,600,000	278,627,000	6,500	1.B.1		122
	1514A	ACCELER8 project includes Everglades Agricultural Area (EAA) Stormwater Treatment Areas (STAs) Expansion	SFWMD	2005	2010	226,698,774	22,714,054	5,960	1.B.1		123
	1515	LOFT (identified under LOER)- Lakeside Ranch STA	SFWMD	2005	2009	52,105,000	1,336,000	2,700	1.B.1		124
	1516	LOFT (identified under LOER)- Nubbin Slough STA Expansion	SFWMD	2005	2007	21,112,000	1,000,000	800	1.B.1		125
	1517	C&SF: CERP C-111 Spreader Canal (CERP Project # WBS 29)	USACE/ SFWMD	2000	2009	117,595,000	21,399,000	3,200	1.B.1		126
	1518	C&SF:CERP Henderson Creek/Belle Meade Restoration (OPE)(CERP Project # WBS 93)	USACE/ FDEP	2002	2015	5,761,000	1,239,000	10	1.B.1		130
	1101	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU), and C-44 Basin Storage Reservoir (B) (CERP Project # WBS 07)	USACE/ SFWMD	2002	2025	Footnote 1	Footnote 1	6,200	1.A.1	1.B.1	25
	1104	C&SF: CERP Lake Okeechobee Watershed (A, N, OPE)(CERP Project # WBS 01)	USACE/ SFWMD	2001	2015	Footnote 1	Footnote 1	11,875	1.A.1	1.B.1	34
	1110	C&SF:CERP Central Lake Belt Storage Area (S, P2)(CERP Project # WBS 26)	USACE/ SFWMD	2017	2035	Footnote 1	Footnote 1	640	1.A.1	1.B.1	48
	1112	LOFT (identified under LOER)- Taylor Creek Reservoir	SFWMD	2005	2010	Footnote 1	Footnote 1	4,000	1.A.1	1.B.1	50
		Completed Projects:									
	1508	STA-1 West Works and Outflow Pump Station (G-310)	SFWMD	1994	2000	107,546,889	107,546,889	6,700	1.B.1		283
	1509	STA-2 Works and Outflow Pump Station (G-335)	SFWMD	1994	2000	126,104,852	126,104,852	6,430	1.B.1		284
	1510	STA-3/4 Works	SFWMD	1994	2005	210,941,770	210,941,770	16,600	1.B.1		285
	1511	STA-5 Works	SFWMD	1994	2005	44,434,079	44,434,079	4,118	1.B.1		286
	1512	STA-6 (includes sections 1 and 2)	SFWMD	1994	2006	35,175,950	14,575,063	2,222	1.B.1		287
1.B.2		TOTAL MAXIMUM DAILY LOAD (TMDL) PLAN DEVELOPMENT					COMPLETED PLANS				
	1660	Total Maximum Daily Load (TMDL) for South Florida	FDEP	2000	2011	Footnote 2	3,730		1.B.2		131
		OTHER RELATED WATER QUALITY PROJECTS									
	1701	Comprehensive Integrated Water Quality Feasibility Study	USACE/ FDEP	2001	2014	9,334,000	735,000				132

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1702	Critical Projects Lake Trafford	USACE/ SFWMID	1999	2005	30,043,000	30,043,000				134
	1703	Critical Projects Western C-11 Water Quality Treatment	USACE/ SFWMID	1997	2005	18,066,000	18,066,000				135
	1705	Everglades National Park Water & Wastewater	NPS	1997	2006	18,965,000	17,365,000				136
	1706	Everglades Regulation Division	SFWMID	1998	2016	Footnote 2	21,705,000				137
	1707	Floridan Aquifer Restoration	NRCS	2002	2006	900,000	900,000				138
	1714	Seminole Tribe Best Management Practices for the Big Cypress Reservation	Seminole	1996	2008	4,779,000	1,433,700				139
	1715	Seminole Tribe Best Management Practices for the Brighton Reservation	Seminole	1998	2008	338,000	144,000				140
	1716	Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminole	1999	2010	15,818,000	10,647,000				141
	1717	Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminole	2002	2012	49,000,000	11,750,000				142
	1720	LOFT - Rerouting of flows from S-133 Basin	SFWMID	2005	2009	29,000,000	810,000				143
	1721	LOFT (identified under LOER)- Rerouting of flows from S-154 Basin	SFWMID	2005	2009	2,000,000	810,000				144
	1722	Lake Okeechobee Protection Plan	SFWMID	1999	2015	392,000,000	222,000,000				145
	1723	Long-Term Plan for Achieving Everglades Water Quality Goals	SFWMID	2003	2016	749,800,000	118,481,376				146
		Completed Projects:									
	1700	Chapter 298 Districts/Lease 3420 Improvements	SFWMID	1994	2005	24,115,521	24,115,521				288
	1704	Development of Best Management Practices Related to the Land Application of Residuals and Chicken Manure in the Lake Okeechobee Watershed	SFWMID	2000	2005	421,633	421,633				289
	1708	Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project	SFWMID	2000	2003	955,069	955,069				290
	1709	Lake Okeechobee Tributary Sediment Removal Pilot Project	SFWMID	2000	2004	440,000	440,000				291
	1713	S-5A Basin Runoff Diversion Works	SFWMID	1994	2005	14,233,758	14,233,758				292
	1719	STA-1 Inflow and Distribution Works	SFWMID	1994	2005	12,679,955	12,679,955				293

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
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						ACRES			
		State Acquisitions									
	2100	Allapattah Ranch	FDEP	1997	TBD	TBD	2,286,995	35,999	2.A.1		149
	2101	Atlantic Ridge Ecosystem (Footnote 4)	FDEP/ SFWMD	1995	TBD	TBD	7,892,759	16,002	2.A.1		150
	2102	Babcock Ranch	FDEP	2001	TBD	TBD	0	91,361	2.A.1		151
	2104	Belle Meade	FDEP	1993	TBD	TBD	39,412,158	28,506	2.A.1		152
	2105	Big Bend Swamp/Holopaw Ranch	FDEP	2000	TBD	TBD	6,829,000	59,132	2.A.1		153
	2106	Biscayne Coastal Wetlands (Footnote 4)	SFWMD/ M-DADE	1998	TBD	TBD	0	2,241	2.A.1		154
	2107	Bombing Range Ridge	FDEP	1998	TBD	TBD	15,003,388	44,439	2.A.1		155
	2108	Caloosahatchee Ecoscape	FDEP	1998	TBD	TBD	1,948,038	18,497	2.A.1		156
	2109	Cattfish Creek	FDEP	1990	TBD	TBD	47,442,266	14,901	2.A.1		157
	2111	Charlotte Harbor Estuary/ Flatwoods/Cape Haze	FDEP	1986	TBD	TBD	17,781,504	15,054	2.A.1		158
	2112	Corkscrew Regional Ecosystem Watershed	FDEP	1991	TBD	TBD	57,432,391	69,500	2.A.1		159
	2114	Coupon Bight/ Key Deer/ Big Pine Key	FDEP	1985	TBD	TBD	26,950,877	4,014	2.A.1		160
	2172	Cypress Creek/Loxahatchee	SFWMD	2002	TBD	TBD	44,116,173	4,347	2.A.1		161
	2115	Cypress Creek/Trail Ridge (Footnote 4)	SFWMD	1997	TBD	TBD	968,856	14,270	2.A.1		162
	2183	Devils Garden	FDEP	2002	TBD	TBD	0	82,508	2.A.1		163
	2117	East Coast Buffer/Water Preserve Areas (Footnote 4)	FDEP/ SFWMD	1994	TBD	TBD	175,590,276	66,809	2.A.1		164
	2118	Estero Bay	FDEP	1985	TBD	TBD	59,220,290	14,378	2.A.1		165
	2119	Everglades Agricultural Area (EAA) / Tallisman (Footnote 4)	SFWMD/ DOI	1997	TBD	TBD	2,214,760	51,210	2.A.1		166
	2120	Fakahatchee Strand	FDEP	1980	TBD	TBD	24,836,008	80,332	2.A.1		167
	2121	Fisheating Creek	SFWMD/ FDEP	1999	TBD	TBD	101,928,563	176,876	2.A.1		168
	2122	Florida Keys Ecosystem	FDEP	1992	TBD	TBD	55,224,862	15,336	2.A.1		169
	2123	Frog Pond/L-31 N	FDEP/ SFWMD	1982	TBD	TBD	86,187,297	10,450	2.A.1		170
	2185	Half Circle L Ranch	SFWMD	2003	TBD	TBD	0	11,269	2.A.1		171
	2124	Indian River Lagoon Blueway	FDEP	1998	TBD	TBD	21,927,795	5,136	2.A.1		172
	2125	Juno Hills /Dunes	FDEP	1994	TBD	TBD	41,892,718	590	2.A.1		173
	2176	Jupiter Ridge	FDEP	1991	TBD	TBD	23,099,950	287	2.A.1		174

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2126	Kissimmee - St. John Connector	FDEP	2001	TBD	TBD	0	9,463	2.A.1		175
	2127	Kissimmee River (Lower Basin)	SFWMD	1985	2005	TBD	99,007,882	68,332	2.A.1		176
	2128	Kissimmee River (Upper Basin)	SFWMD	1990	2005	TBD	70,825,219	36,763	2.A.1		177
	2129	Lake Wales Ridge Ecosystem	FDEP	1992	TBD	TBD	27,897,827	13,848	2.A.1		178
	2132	Loxahatchee Slough Land Acquisition	SFWMD	1996	TBD	TBD	35,920,793	15,200	2.A.1		179
	2133	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	TBD	0	7,000	2.A.1		180
	2134	Miami-Dade County Archipelago	FDEP	1994	TBD	TBD	23,524,235	884	2.A.1		181
	2135	Model Lands (Footnote 4)	SFWMD/ M-DADE	1994	2007	TBD	363,806	47,482	2.A.1		182
	2138	North Fork St Lucie River (Footnote 4)	FDEP/ SFWMD	1988	TBD	TBD	682,938	3,800	2.A.1		183
	2139	North Key Largo Hammocks	FDEP	1983	TBD	TBD	75,403,715	5,048	2.A.1		184
	2141	Okaloacoochee Slough	FDEP	1996	TBD	TBD	20,570,673	37,218	2.A.1		185
	2142	Okeechobee Battlefield	FDEP	2001	TBD	TBD	3,217,250	211	2.A.1		186
	2143	Osceola Pine Savannas	FDEP	1995	TBD	TBD	310,000	1,374	2.A.1		187
	2144	Pal-Mar (Footnote 4)	FDEP	1992	TBD	TBD	78,582,550	38,549	2.A.1		188
	2145	Panther Glades	FDEP	2001	TBD	TBD	75,049,836	57,604	2.A.1		189
	2146	Paradise Run	SFWMD	1998	TBD	TBD	4,908,095	7,978	2.A.1		190
	2147	Lake Hatchineha Watershed/ Parker-Poinciana	SFWMD	1996	TBD	TBD	0	6,437	2.A.1		191
	2186	Pine Island Slough Ecosystem	FDEP	2005	TBD	TBD	0	21,583	2.A.1		192
	2148	Pineland Site Complex	FDEP	1996	TBD	TBD	1,751,874	206	2.A.1		193
	2178	Ranch Reserve	SFWMD	1997	TBD	TBD	39,286	2,217	2.A.1		194
	2149	Rookery Bay	FDEP	1980	TBD	TBD	45,500,833	18,721	2.A.1		195
	2150	Rotenberger/Holey Land Tract	FDEP	1984	TBD	TBD	20,114,395	79,170	2.A.1		196
	2151	Shingle Creek	SFWMD	1987	TBD	TBD	6,314,344	8,066	2.A.1		197
	2152	Six Mile Cypress Land Acquisition	SFWMD	1987	TBD	TBD	6,903,701	2,193	2.A.1		198
	2154	South Savannas	FDEP	1981	TBD	TBD	20,902,290	6,046	2.A.1		199
	2155	Southern Glades (Footnote 4)	SFWMD/ M-DADE	1964	TBD	TBD	6,938,380	36,362	2.A.1		200
	2156	Southern Golden Gate Estates (Footnote 4)	FDEP	1984	TBD	TBD	6,456,717	55,247	2.A.1		201
		STA 1 W, 2,3/4, 5, and 6 (See project IDs 1508-1512)	SFWMD		TBD	TBD	126,772,412	41,089	2.A.1		
	2158	Twelve Mile Slough	FDEP	1998	TBD	TBD	11,000,000	15,653	2.A.1		202
	2159	Upper Lakes Basin Watershed	SFWMD	1995	TBD	TBD	12,343,957	47,300	2.A.1		203
	2160	Water Conservation Areas 2, and 3	SFWMD	1948	TBD	TBD	10,572,395	721,433	2.A.1		204
	2110	Completed Projects: Cayo Costa	FDEP	1980	2004	28,337,346	28,337,346	1,954	2.A.1		294

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Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2113	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	2,600,000	2,600,000	633	2.A.1		295
	2116	Dupuis Reserve	SFWMD	1985	1986	23,016,601	23,016,601	21,875	2.A.1		296
	1305	Kissimmee Prairie	FDEP	1996	1997	21,953,790	21,953,790	38,284	2.A.1		279
	2130	Lake Walk-In-Water	SFWMD	1995	1998	3,950,000	3,950,000	4,009	2.A.1		297
	2131	Loxahatchee River Land Acquisition	SFWMD	1984	2001	13,074,703	13,074,703	1,547	2.A.1		298
	2137	Nicodemus Slough	SFWMD	1981	1988	1,894,501	1,894,501	2,231	2.A.1		299
	2153	South Fork St. Lucie River Land Acquisition	SFWMD	1995	1995	2,480,000	2,480,000	184	2.A.1		300
	2180	Ten Mile Creek	SFWMD	1990	2004	5,332,000	5,332,000	913	2.A.1		277
	2157	Tibet-Butler Preserve	SFWMD	1988	1999	3,601,900	3,601,900	439	2.A.1		301
	2161	Yamato Scrub	FDEP	1992	1996	25,932,850	25,932,850	207	2.A.1		302
		STA 1 E (See project ID1513)				46,000,000	46,000,000	6503	2.A.1		
		Federal Acquisitions									
	2161	A.R. M. Loxahatchee National Wildlife Refuge	USFWS	1955	2005	30,119,000	119,000	145,567	2.A.1		205
	2163	Big Cypress National Preserve Addition	NPS	1989	2005	75,466,000	72,958,737	146,117	2.A.1		206
	2164	Big Cypress National Preserve Private Inholdings (Footnote 3)	NPS	1974	TBD	243,982,000	222,105,000	574,449	2.A.1		207
	2165	Biscayne National Park	NPS	1968	TBD	33,699,000	31,850,735	172,924	2.A.1		208
	2166	Crocodile Lake National Wildlife Refuge	USFWS	1979	2005	14,319,000	13,093,000	7,100	2.A.1		209
	2167	Everglades National Park Expansion	NPS	1990	2005	109,892,000	97,669,000	109,504	2.A.1		210
	2169	Florida Panther National Wildlife Refuge	USFWS	1989	TBD	10,692,000	10,682,000	61,573	2.A.1		211
	2168	Florida Keys National Wildlife Refuge Complex	USFWS	1960	2005	35,028,000	31,374,000	415,433	2.A.1		212
	2170	Hobe Sound National Wildlife Refuge	USFWS	1968	2004	5,818,000	18,000	1,130	2.A.1		213
	2171	J.N. "Ding" Darling National Wildlife Refuge	USFWS	1945	2005	12,885,000	9,785,000	10,275	2.A.1		214
2.A.2		CORAL REEF PROTECTION PROJECTS						% Reef Protected			
	2200	Planning and Implementation of the Tortugas Ecological Reserve	NOAA	1997	TBD	Footnote 2	38,400,000	10	2.A.2		215
2.A.3		IMPROVE NATURAL AREAS HABITAT QUALITY PROJECTS						ACRES			
	2300	C&SF: CERP Strazulla Wetlands (OPE) (CERP Project # WBS 39)	USACE/ SFWMD	2002	2015	70,392,000	7,451,000	3,335	2.A.3		216
	2301	C&SF: CERP Winsburg Farms Wetland Restoration (OPE) (CERP Project # WBS 91)	USACE/ PD Co.	2000	2008	17,055,000	5,983,000	114	2.A.3	3.C.2	217
	2302	C&SF: CERP Lake Park Restoration (CERP Project # WBS 94)	USACE/ Lee Co.	1999	2009	5,971,000	873,000	40	2.A.3		219
	2303	C&SF: CERP Restoration of Pineland and Hardwood Hammocks in C-111 Basin (OPE) (CERP Project # WBS 92)	USACE/ MIA Co.	2016	2025	705,000	0	50	2.A.3		220
	2304	A.R.M. Loxahatchee NWR Prescribed Fire program	USFWS	2002	TBD	TBD	888,600	84.5	2.A.3		221

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2306	C&SF: CERP Acme Basin B Discharge (OPE) (CERP Project # WBS 38)	USACE/ SFWMD	2002	2007	26,512,000	14,488,000	365	2.A.3	3.C.2	222
	2307	C&SF: CERP Picayune Strand (Southern Golden Gates Estates) Hydrologic Restoration (OPE) (CERP Project # WBS 30)	USACE/ SFWMD	2001	2009	362,603,000	151,525,000	55,000	2.A.3		225
	1101	C&SF: CERP Indian River Lagoon South, C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU), and C&SF: CERP C-44 Basin Storage Reservoir. (B) (CERP Project # WBS 07)	USACE/ SFWMD	2002	2025	Footnote 1	Footnote 1	152,329	1.A.1	2.A.3	25
	1104	C&SF: CERP Lake Okeechobee Watershed (CERP Project # WBS 01)	USACE/ SFWMD	2001	2015	Footnote 1	Footnote 1	3,500	1.A.1	2.A.3	34
	1107	C&SF: CERP Site 1 Impoundment and Aquifer Storage and Recovery (CERP Project # WBS 22 and 40)	USACE/ SFWMD	2002	2025	Footnote 1	Footnote 1	114	1.A.1	2.A.3	41
	1111	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/ SFWMD	1997	2003	Footnote 1	Footnote 1	2,740	1.A.1	2.A.3	277
	1306	Kissimmee River Restoration Project	USACE/ SFWMD	1994	2010	Footnote 1	Footnote 1	27,000	1.A.3	2.A.3	67
	1501	C&SF: CERP - Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O) (CERP Project # WBS 45)	USACE/ SFWMD	2002	2009	Footnote 1	Footnote 1	4,032	1.B.1	1.A.1/2.A.3	108
	2606	Hole-in-the-Donut	NPS	1994	2017	Footnote 1	Footnote 1	6,000	2.B.2	2.A.3	241
	3802	C&SF: CERP Wastewater Reuse Technology Pilot Project (CERP Project # WBS 37)	USACE/ SFWMD	2001	2013	Footnote 1	Footnote 1	3,500	3.C.2	2.A.3	266
	OTHER NATURAL HABITAT AND SPECIES PROJECTS										
	2400	Big Cypress National Preserve Mineral Rights	NPS	2000	TBD	TBD	0				228
	2402	South Florida Multi-Species Recovery Plan	USFWS	1994	TBD	386,112,000	130,258,000				229
	2403	WCA-2A Regulation Schedule Review	USACE	TBD	TBD	TBD	0				231
	2404	C&SF: Manatee Pass Gates	USACE/ SFWMD	2001	2007	13,800,000	10,716,000				232
	2305	Loxahatchee Impoundment Landscape Assessment (LILA)	USFWS	2002	2012	6,050,000	4,074,500				234
	Sub-Goal 2.B. CONTROL INVASIVE PLANT AND ANIMAL SPECIES										
	2.B.1 INVASIVE EXOTIC PLANT SPECIES MANAGEMENT PLAN DEVELOPMENT										
	2500	Coordinate the development of management plans for top 20 south Florida exotic pest plants	NEWTT	2001	2011	600,000	0	20	2.B.1		235

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#	
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12	
2.B.2		EXOTIC PLANT SPECIES MAINTENANCE CONTROL PROJECTS										
	2600	Achieve "Maintenance Control" status for Brazilian Pepper, Melaleuca, Australian pine and Old world climbing fern in all natural areas statewide by 2020	NPS/ SFWMD	2002	2020	139,078,000	117,250,000			2.B.2	236	
	2601	Integration of Federal, State, and Local Agency Invasive Exotic Control Programs into Florida-wide Strategy	NPS	2000	2005	Footnote 2	415,090,000		2.B.2		237	
	2602	C&SF: CERP- Melaleuca Eradication Project and other Exotic Plants (CERP Project # WBS 95)	USACE/ SFWMD	2003	2009	6,587,000	2,092,000		2.B.2		238	
	2604	Everglades National Park Exotic Control Program	NPS	2002	TBD	TBD	4,953,000		2.B.2		239	
	2605	Exotic Species Removal	Seminole	1998	2010	988,000	480,000		2.B.2		240	
	2606	Hole-in-the-Donut	NPS	1994	2017	123,750,000	59,536,000		2.B.2	2.A.3	241	
	2607	Exotic Vegetation Control (Critical) Big Cypress National Preserve	NPS	1998	TBD	4,000,000	3,600,000		2.B.2		242	
	2608	Aquatic and Upland Invasive Plant Management	FDEP	TBD	TBD	TBD	132,818,000		2.B.2		243	
		COMPLETED PROJECTS										
	2603	Estero Bay Aquatic Preserve and Buffer Reserve Enhancement and Exotic Removal Project	FDEP	1998	2004	587,600	587,600		2.B.2		303	
2.B.3		INVASIVE EXOTIC PLANT SPECIES PREVENTION PLAN DEVELOPMENT										
	2700	Complete an Invasive Exotics Plant Prevention, Early Detection and Eradication Plan by 2005	NEWTT/ DEP/NPS	2001	2004	5,000,000	0		2.B.3		244	
	2701	Melaleuca Quarantine Facility	USDA/ ARS	1997	2004	7,200,000	6,200,000		2.B.3		245	

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
GOAL 3. FOSTER COMPATIBILITY OF THE BUILT AND NATURAL SYSTEM											
Sub-Goal 3.A. USE AND MANAGE LAND COMPATIBLE WITH RESTORATION											
3.A.1		DESIGNATE OR ACQUIRE LAND FOR FLORIDA GREENWAYS AND TRAILS SYSTEM						ACRES			
	3100	Florida Greenways and Trails Program	FDEP/OGT	2000	2009	4,500,000	0	480,000	3.A.1		249
	3102	Lake Okeechobee Scenic Trail	FDEP	2003	TBD	25,000,000	12,500,000	TBD	3.A.1		250
3.A.2		AGRICULTURE LANDS CONSERVATION MANAGEMENT PROJECTS						ACRES			
	3201	Technical Assistance to Seminole and Miccosukee Indian Reservations	NRCS	1998	2011	15,000,000	778,000	107,000	3.A.2		251
	3202	2002 Farm Bill	NRCS	2002	2007	97,436,000	75,381,000	1,106,108	3.A.2		252
3.A.3		FLORIDA PARK, RECREATION AND OPEN SPACE LANDS PROJECTS						ACRES			
	3301	Florida Keys Overseas Heritage Trail	FDEP	TBD	TBD	40,000,000	22,867,600	TBD	3.A.3		253
3.A.4		BROWNFIELDS REHABILITATION AND REDEVELOPMENT PROJECTS									
	3400	Eastward Hol Brownfields Partnership	SFRPC	1998	2010	Footnote 2	78,328,500		3.A.4		257
3.A.5		INCREASE COMMUNITY UNDERSTANDING OF RESTORATION PROJECTS									
	3502	USACE Outreach Program	USACE	ongoing	TBD	7,398,800	7,398,800		3.A.5		258
	3503	SFWMD Outreach Program	SFWMD	ongoing	TBD	TBD	1,282,327		3.A.5		259
Sub-Goal 3.B FLOOD PROTECTION COMPATIBLE WITH ECOSYSTEM RESTORATION											
3.B.1		FLOOD PROTECTION COMPATIBLE WITH ECOSYSTEM RESTORATION PROJECTS									
	3600	C-4 Flood Mitigation Projects	SFWMD	2001	2004	8,367,000	120,000		3.B.1		260
	1300	Canal 111	USACE/SFWMD	1994	2010	287,600,000	184,081,000		1.A.3	3.B.1	57
Sub-Goal 3.C PROVIDE SUFFICIENT WATER RESOURCES FOR BUILT AND NATURAL SYSTEMS											
3.C.1		WATER RESOURCE DEVELOPMENT PROJECTS						MG			
	3704	Regional Water Supply Plans	SFWMD	2004	2006	19,454,000	0		3.C.1		262
3.C.2		INCREASE VOLUME OF WATER RESOURCE PROJECTS						MGD			
	3800	C&SF-CERP-South Miami-Dade County Reuse (BBB) (CERP Project # WBS 98)	USACE/M-DADE	2013	2025	430,553,000	0	131	3.C.2		263

Goals	Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated Date	Measurable Outputs	Primary Objective	Secondary Objective	Pg#
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	3801	C&SF:CERP-West Miami-Dade County Reuse (HHH)(CERP Project # WBS 97)	USACE/ M-DADE	2013	2025	518,120,000	0	100	3.C.2		265
	3802	C&SF:CERP Wastewater Reuse Technology Pilot Project(HHH)(BBB)(OPE) (CERP Project # WBS 37)	USACE/ SFWMID	2001	2020	35,442,000	1,856,000		3.C.2	2.A.3	266
	2301	C&SF: CERP Winsburg Farms Wetland Restoration (OPE) (CERP Project # WBS 91)	PBCo.	1999	2003	Footnote 1	Footnote 1		2.A.3	3.C.2	217
	2306	C&SF: CERP Acme Basin B Discharge (OPE) (CERP Project # WBS 38)	USACE	2002	2007	Footnote 1	Footnote 1		2.A.3	3.C.2	222
3.C.3		ALTERNATIVE WATER SUPPLY PROJECTS						MGD			
	3900	Alternative Water Supply Grant	SFWMID	1996	TBD	Footnote 1	45,056,000	172			268
OTHER BUILT AND NATURAL SYSTEM COMPATIBILITY PROJECTS											
	4101	BMPs for Agriculture	NRCS	1997	2011	141,203,000	65,166,000				269
	4102	Monitoring of Organic Soils in the Everglades	NRCS	1998	2017	1,236,000	36,000				270
	4103	Soil Survey Update for the Everglades Agricultural Area	NRCS	2004	2012	2,100,000	0				271
	4104	Soil Survey Update for Everglades National Park, Big Cypress National Preserve and Water Conservation Areas	NRCS	2007	2013	6,000,000	0				272
	4105	C&SF: CERP- Flow to Northwest and Central WCA -3A (II)(RR) (CERP Project # WBS 11)	USACE/ SFWMID	2002	2020	36,264,000	66,000				273
		Completed Projects									
	4100	Critical Project Keys Carrying Capacity Study	FDCA USACE	1997	2003	6,000,000	6,000,000				304

Project specific footnotes:

The following information is project specific and is provided in reference to its appearance as a numbered notation on the project summary table:

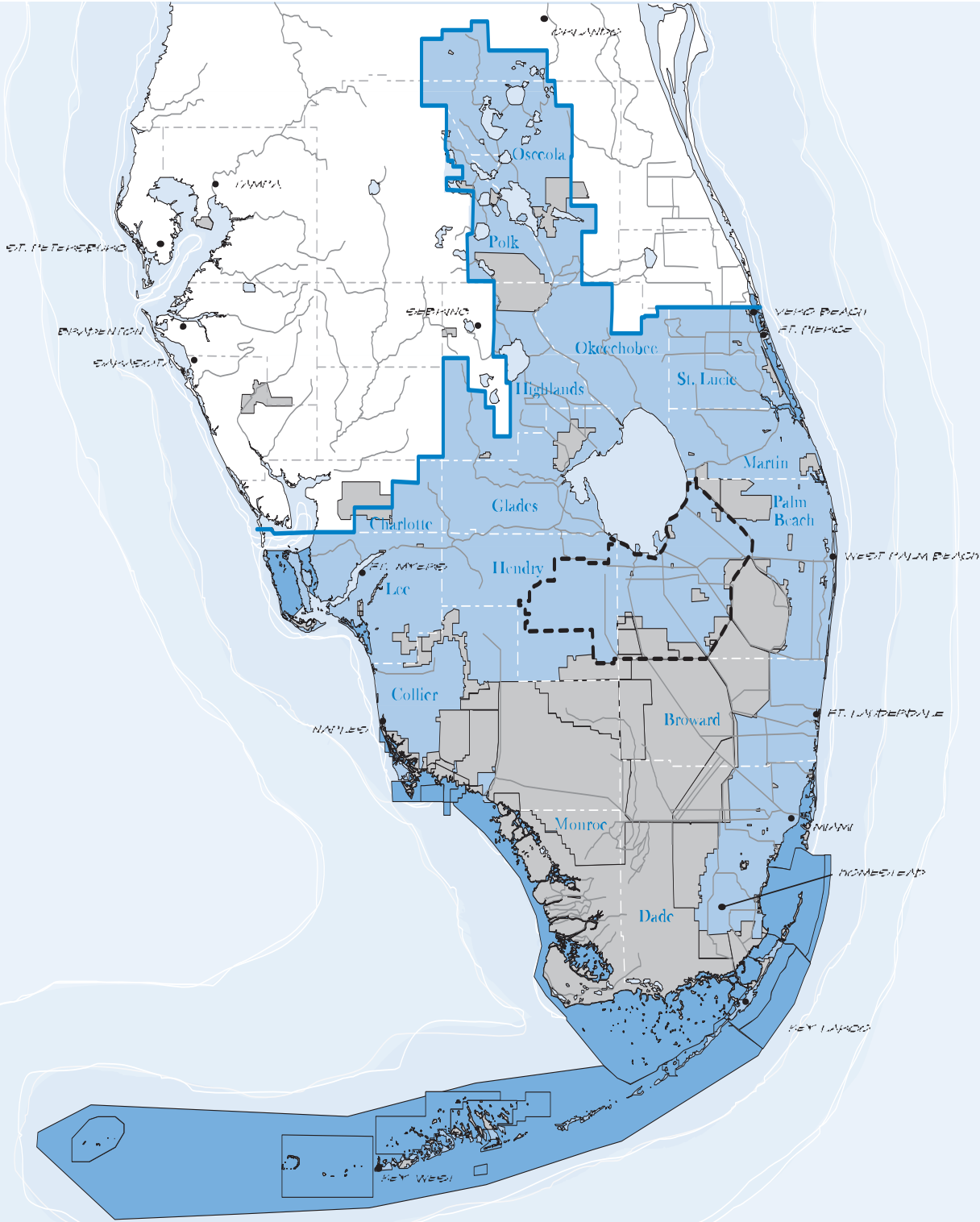
- 1 This is a multiple objective project, funding is listed in other objective.
- 2 Available funding through project completion is not provided on the project sheet, due to the uncertainty of the annual Federal and State appropriations process. For the purposes of calculating Goal subtotals for all projects, only the dollars appropriated to date have been used for this project.
- 3 Consistent with authorizing Big Cypress legislation.
- 4 The cost information for this project reflects the adjusted total cost information provided on the project sheet.

Changes from 2005 edition:

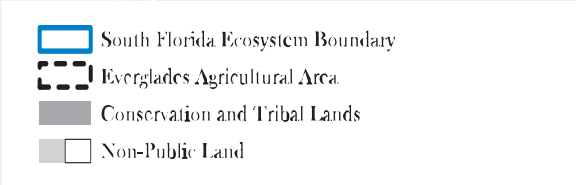
- Project ID 1507 Miccosukee Tribe Water Management Area deleted as Project ID 1502 is the same project
- Project ID 1100 C&SF: CERP Acme Basin B Discharge is now Project ID 2306
- Project ID 1404 C&SF: CERP C-111N Spreader Canal is now Project ID 1517
- Project ID 1424 C&SF: CERP Picayune Strand (Southern Golden Gates Estates) is now Project ID 2307
- Project ID 1414 C&SF: CERP Henderson Creek/Belle Meade Restoration is now Project ID 1518
- Project ID 1415 C&SF: CERP Everglades National Park Seepage Management is now Project ID 1114
- Project ID 2401 C&SF: CERP Flow to Northwest and Central Water Conservation Area 3A is now Project ID 4105


Project changes from 2004 edition:

- Project ID 1103 C&SF: CERP Everglades Agricultural Storage Reservoir Phase II (GP2) (CERP Project # WBS 09) combined with 1102
- Project ID 1108 C&SF: CERP Bird Drive Recharge Area (U) (CERP Project # WBS 43) combined with 1415
- Project ID 1434 C&SF: CERP Flows to Eastern Water Conservation Area (EEE) (CERP Project # WBS 23) new project
- Project ID 1435 C&SF: CERP C-4 Control Structures (T) (CERP Project # WBS 46) new project
- Project ID 3500 and Project ID 3501 Deleted as project no longer viable



The South Florida Ecosystem





Strategic Goals and Objectives

of the
South Florida Ecosystem
Restoration Task Force



Goal 1: Get the Water Right

Subgoal 1-A: Get the hydrology right.

Objective 1-A.1: Provide 1.8 million acre-feet of surface water storage by 2036.

Objective 1-A.2: Develop Aquifer Storage and Recovery systems capable of storing 1.5 billion gallons per day by 2030.

Objective 1-A.3: Modify 345 miles of impediments to flow by 2020.

Subgoal 1-B: Get the water quality right.

Objective 1-B.1: Construct 91,345 acres of stormwater treatment areas by 2035.

Objective 1-B.2: Prepare locally-based plans to reduce pollutants as determined necessary by the total maximum daily loads 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: Complete acquisition of 5.8 million acres of land identified for habitat protection by 2015.

Objective 2-A.2: Protect 20 percent of the coral reefs by 2010.

Objective 2-A.3: Improve habitat quality for 2.4 million acres of natural areas in South Florida.

Subgoal 2-B: Control invasive exotic plants.

Objective 2-B.1: Coordinate the development of management plans for the top twenty South Florida invasive exotic plant species by 2011.

Objective 2-B.2: Achieve maintenance control of Brazilian pepper, melaleuca, Australian pine, and Old World climbing fern on South Florida's public conservation lands by 2020.

Objective 2-B.3: Complete an invasive exotic plant species prevention, early detection, and eradication plan by 2007.



Goal 3: Foster the Compatibility of the Built and Natural Systems

Subgoal 3-A: Use and manage land in a manner compatible with ecosystem restoration.

Objective 3-A.1: Designate or acquire an additional 480,000 acres as part of the Florida Greenways and Trails System by 2009.

Objective 3-A.2: Increase participation in the voluntary Farm Bill conservation programs by 230,000 acres by 2014.

Objective 3-A.3: Acquire an additional 2,500 acres of park, recreation, and open lands by 2007.

Objective 3-A.4: Complete five brownfield rehabilitation and redevelopment projects by 2010.

Objective 3-A.5: Increase community understanding of ecosystem restoration.

Subgoal 3-B: Maintain or improve existing flood protection in a manner compatible with ecosystem restoration.

Objective 3-B.1: Maintain or improve existing levels of flood protection.

Subgoal 3-C: Provide sufficient water resources for built and natural systems.

Objective 3-C.1: Plan for regional water supply needs*.

Objective 3-C.2: Increase volume of reuse on a regional basis.

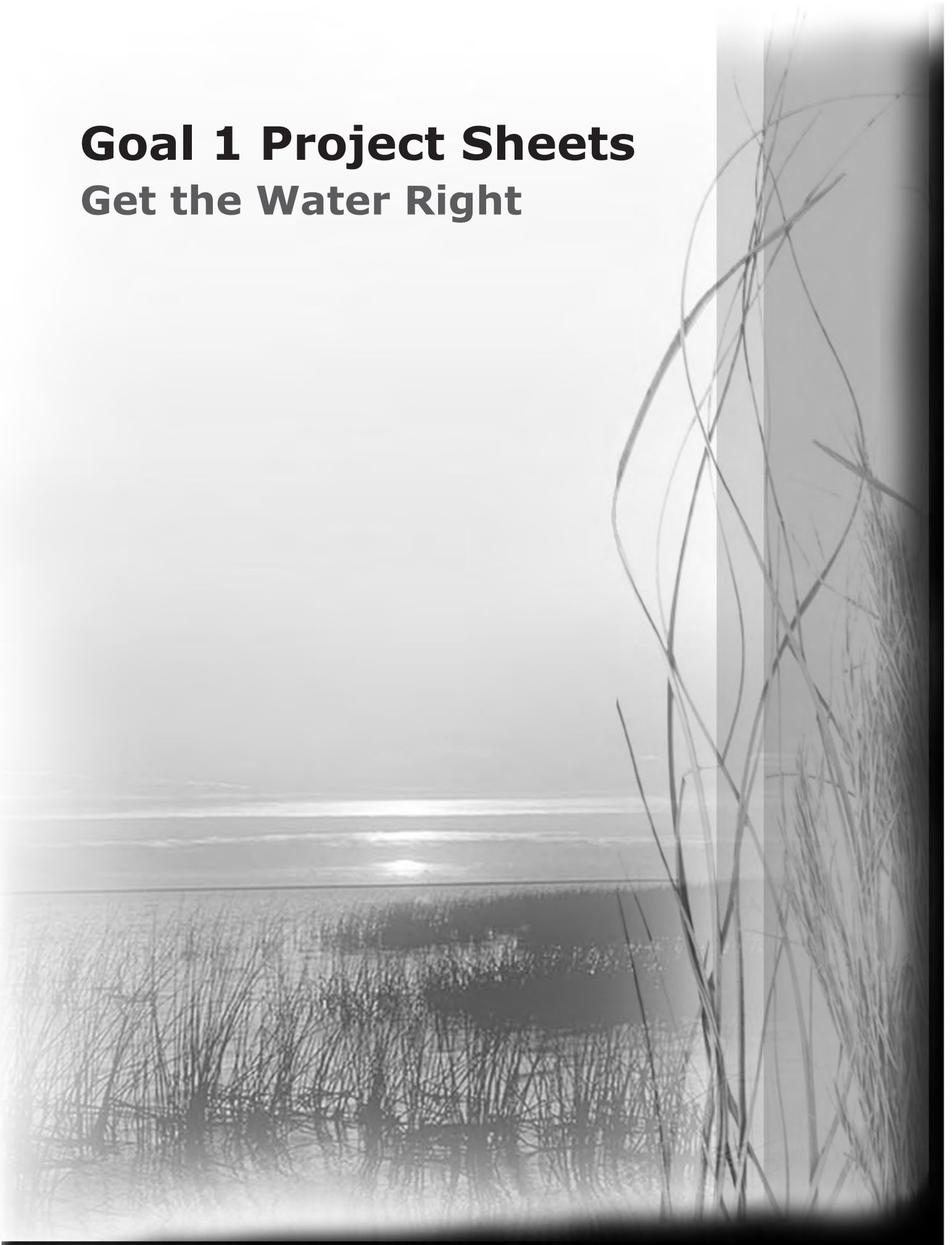
Objective 3-C.3: Increase water made available through the South Florida Water Management District Alternative Water Supply Development Program.

* Due to a change in state law the output for this objective has been changed.

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Goal 1 Project Sheets

Get the Water Right



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Program Name: Infrastructure
Project Name: C&SF: CERP – Indian River Lagoon South - C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU) and C-44 Basin Storage Reservoir (B)
Project ID: 1101 (CERP Project # WBS 07)
Lead Agency: USACE / SFWMD
Authority: C-44 initially authorized in WRDA 2000; other components not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.A.1 **Secondary:** 1.B.1

Measurable Output(s): Total of 130,000 ac-ft reservoir storage; total of 35,000 ac-ft stormwater treatment area; restoration of 92,000 acres natural upland/wetland areas; 889 acres oyster habitat restoration; 90 acres artificial substrate created for oysters and submerged aquatic vegetation; 920 acres submerged aquatic vegetation restored; 122 metric tons phosphorus load reduction; 475 metric tons nitrogen load reduction; 53,600 acres restored wetlands; creation of 2,650 acres benthic habitat; 7.9 million cubic yards muck removal; 3,100 acres of floodplain preservation; structures; improved hydrology; water quality treatment; water supply.

The C-44 component was originally one of the ten Initially Authorized Projects identified in WRDA 2000. The initial concept for the Indian River Lagoon South feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes above-ground reservoirs with a total storage capacity of approximately 349,400 acre-feet located in the C-23/C-24/C-25/ North Fork and South Fork Basins in St. Lucie and Martin Counties, as well as 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 reservoirs in the C-23/C-24/C-25 Basins assumed 39,000 acres with water levels fluctuating up to eight feet above grade and 9,350 acres with water levels fluctuating up to four feet above grade. The initial design of the reservoir in the C-44 basin assumed 10,000 acres with the water levels fluctuating up to four feet above grade.

The project was refined during the Project Implementation Report process. As a part of the Corps planning process, several alternative plans were reviewed. Currently, the Recommended Plan provides for the following features:

- Construction and operation of four new above-ground reservoirs and their connecting canals, control structures, levees and pumps – providing approximately 130,000 acre-feet of storage. Capturing water from the C-44, C-23, C-24 and C-25 canals.
- Construction and operation of four new stormwater treatment areas with a storage capacity of approximately 35,000 acre-feet to reduce delivery of sediment, phosphorus, and nitrogen to the estuary. Two in the C-44 basin, one in the C-23/24 basin, and one in the C-25 basin.
- Restoration of approximately 92,000 acres of upland/wetland mosaic by ditch plugging, berm construction, and periodic fire maintenance at three locations; 30,000 acre-ft of storage and nutrient load reduction as well as habitat improvement.
- Redirection of approximately 64,500 acre-feet of water from the C-23/24 basin to the North Fork of the St. Lucie River.
- Removal of approximately 7.9 million cubic yards of muck from the North and South Forks of the St. Lucie River and the middle estuary. Oyster shell, reef balls, and artificial submerged aquatic vegetation will be placed near the muck removal sites.

The final Project Implementation Report (PIR) was completed in May 2004, and the Chief of Engineers signed the report in August 2004. The SFWMD, through its Acceler8 initiative, is advancing the design and construction of the C-44 Storage Reservoir. This project is further described on the following pages.

Cost: \$1,309,693,000

Project Schedule:

C-44 Reservoir (B) construction is scheduled to be completed in 2009.

C-23/24/25 Reservoirs (UU) construction is scheduled to be completed in Band 2 (2010 – 2015).

Natural Areas/Muck Remediation construction is scheduled to be completed in Band 4 (2020 – 2025).

C-44 Reservoir (B)	2004	2005	2006	2007	2008	2009	2010
Planning & Design							
Real Estate							
Construction							

C-23 /24, North & South (UU P1)	2004	2005	2006	2007	2008	2009	2010
Planning & Design							
Real Estate							
Construction							

C-25 Reservoir (UU P2)	2009	2010	2011	2012	2013	2014
Plans & Specs						
Real Estate						
Construction						

Cypress Creek	2014	2015	2016	2017	2018	2019
Plans & Specs						
Real Estate						
Construction						

Palmar	2014	2015	2016	2017	2018	2019	2020
Plans & Specs							
Real Estate							
Construction							

Muck Remediation	2014	2015	2016	2017	2018	2019	2020	2021
Plans & Specs								
Real Estate								
Construction								

Allapattah	2014	2015	2016	2017	2018	2019	2020	2021	2022
Plans & Specs									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	Balance to Complete 2011-2022	Total
USACE	4,443	65,040	65,040	65,040	65,040	65,040	325,202	654,847
SFWMD	2,034	65,281	65,281	65,281	65,281	65,281	326,406	654,847
Total	6,477	130,322	130,322	130,322	130,322	130,322	651,608	1,309,693

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_07_irl_south.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*. Current project description summarized from the *Central and Southern Florida Project Indian River Lagoon – South Final Integrated Project Implementation Report and Environmental Impact Statement*.

Program Name: Infrastructure
Project Name: C-44 Basin Storage Reservoir (B)
Project ID: **Initially Authorized Project:**
Lead Agency: USACE / SFWMD
Authority: WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.A.1

Measurable Output(s): 33,150 ac-ft of reservoir storage; 9,000 ac-ft storage in the STA (C-44 measurable outputs are part of totals given for IRL-S reservoir storage and STA.)

The current total estimated cost for this Initially Authorized Project at October 2005 price levels is \$153,450,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the Indian River Lagoon South project (Project ID 1101; CERP Project # WBS 07).**

Program Name: Infrastructure
Project Name: C&SF: CERP – Indian River Lagoon South - C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs (UU) and C-44 Basin Storage Reservoir (B) – **ACCELER8 project includes C-44 (St. Lucie Canal) Reservoir / Stormwater Treatment Area (STA)**
Project ID: 1101A (CERP Project # WBS 07)
Lead Agency: SFWMD
Authority: C-44 initially authorized in WRDA 2000; other components not authorized Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 50,200 ac-ft reservoir, pump station and 6,200 acre STA (Acceler8 C-44 measurable outputs are part of the overall project total.)

Project Synopsis: A 3,400 acre above-ground reservoir approximately 15 feet deep (50,200 acre-feet) to capture local C-44 basin runoff with 6,200 acres of Stormwater Treatment Areas. This *Acceler8* project is a component of the Indian River Lagoon South (IRL-S) Project Implementation Report (PIR) and is located in southern Martin County, adjacent to the C-44 Canal, between Lake Okeechobee and the Coast.

Total Estimated Project Cost: \$339,768,479

Scheduled Construction Start Date: Oct, 2006
Scheduled Project Completion Date: Dec, 2009

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$4,848,225	\$11,272,939	\$16,121,164

Real Estate Acquisition:**

Acres	Cost
16,700	\$44,151,381

Contact: Sue Ray, 561-242-5520, x4019

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Infrastructure
Project Name: C&SF: CERP - Everglades Agricultural Area (EAA) Storage Reservoirs (G)
Project ID: 1102 (CERP Project # WBS 08) and 1103 (CERP Project # WBS 09)
Lead Agency: USACE / SFWMD
Authority: Phase 1 initially authorized in WRDA 2000; Phase 2 not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1

Measurable Output(s): 360,000 ac-ft total surface storage

At one time this project was divided into two phases but has now been recombined into one phase. Phase 1 of this project was one of the ten Initially Authorized Projects identified in the Water Resources Development Act (WRDA) of 2000. As a part of the Corps planning process, several alternative plans were reviewed. The Selected Alternative Plan, identified in August 2005, allows for Phase 1 to include two aboveground reservoirs with a total storage capacity of approximately 240,000 acre-feet located on land associated with the Talisman Land acquisition in the EAA. Conveyance capacity increases for the Miami, North New River, Bolles, and Cross Canals are also included in the design of the project. The initial design for the reservoir(s) assumed 40,000 acres divided into two equally sized compartments with water levels fluctuating up to six feet above grade in each compartment. Phase 2 includes an aboveground reservoir with a total storage capacity of approximately 120,000 acre-feet located in the EAA in western Palm Beach County. The initial design for the reservoir assumed 20,000 acres, which would make up the third storage compartment of the EAA reservoir, with water levels fluctuating up to six feet above grade. However, the land acquired through the Farm Bill land acquisition agreements encompassed 50,000 acres. The draft Project Implementation Report (PIR) will address maximum use of the existing land acquired through Farm Bill funds. This project will improve timing of environmental deliveries to the Water Conservation Areas (WCAs) by reducing damaging flood releases from the EAA to the WCAs, reducing Lake Okeechobee regulatory releases to estuaries, meeting supplemental agricultural irrigation demands, and increasing flood protection within the EAA.

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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. Additionally, it provides for conveyance capacity increases for the Miami, North New River, 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 six feet above grade in each compartment.

A draft PIR is being developed. The SFWMD, through its Acceler8 initiative, is advancing the design and construction of Part 1 of Phase 1. The balance would be constructed by the Corps. This project is further described on the following pages.

Cost: \$526,413,000 (Phase 1 and 2)

Project Schedule:

Phase 1, Part 1 construction is scheduled to be completed in 2009.

Phase 1, Part 2 and Phase 2 construction is scheduled to be completed in Band 2 (2010 – 2015).

Phase 1, Part 1	2002	2003	2004	2005	2006	2007	2008	2009
PIR/ Plans & Specs								
Real Estate								
Construction								

Phase 1, Part 2	2007	2008	2009	2010	2011	2012
Plans & Specs						
Construction						

Phase 2	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Plans & Specs										
Real Estate										
Construction										

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010 - 2015	Total
USACE	7,404	12,790	12,790	12,790	12,790	204,642	263,207
SFWMD	3,351	12,993	12,993	12,993	12,993	207,884	263,207
Total	10,755	25,783	25,783	25,783	25,783	412,526	526,413

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_08_eaa_phase_1.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Everglades Agricultural Area (EAA) Storage Reservoirs (G) (Phase 1)
Project ID: **Initially Authorized Project**
Lead Agency: USACE / SFWMD
Authority: WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.A.1

Measurable Output(s): 360,000 ac-ft total surface storage

The current total estimated cost for this Initially Authorized Project at October 2005 price levels is \$293,105,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the Everglades Agricultural Area (EAA) Storage Reservoirs project (Project ID 1102; CERP Project # WBS 08).**

Program Name: Infrastructure
Project Name: C&SF: CERP - Everglades Agricultural Area (EAA) Storage Reservoirs (G) – **ACCELER8 project includes Everglades Agricultural Area (EAA) Reservoir – Phase 1 with Bolles Canal Improvements**
Project ID: 1102A (CERP Project # WBS 08) and 1103 (CERP Project # WBS 09)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1

Measurable Output(s): 190,000 ac-ft surface storage, water conveyance, flood protection (Acceler8 EAA measurable outputs are part of the overall project total.)

Project Synopsis: This *Acceler8* project is a component of the larger EAA Reservoir Project and is designed to provide significant additional water storage in the southern region of the Everglades Agricultural Area (EAA). The Phase 1 project is an above-ground reservoir for water storage, with a capacity of 190,000 acre-feet at a maximum depth of 12 feet. The reservoir will be constructed on a 16,700-acre parcel of land situated north of Stormwater Treatment Area 3/4 and between the Miami and North New River canals. This Acceler8 project also includes conveyance capacity increases for the Bolles Canal (L-21 and L-16 Reaches) in order to provide improved flood protection and water flow capabilities for moving water to and from the EAA Reservoir and STAs.

Storage Reservoir:

Estimated Cost: \$500,175,949
Scheduled Construction Start Date: July, 2006
Scheduled Project Completion Date: Dec, 2010

Bolles Canal:

Estimated Cost: \$35,599,493
Scheduled Construction Start Date: Mar, 2007
Scheduled Project Completion Date: Dec, 2009

Actual Expenditures to date by SFWMD*:

Storage Reservoir:

	Thru 2005	2006	Total
SFWMD	\$14,877,464	\$17,765,910	\$32,643,374

Bolles Canal:

	Thru 2005	2006	Total
SFWMD	\$96,576	\$39,368	\$135,944

Real Estate Acquisition:**

Acres	Cost
16,700	\$41,729,064

Contact: Shawn Waldeck, 561-242-5520, x4023

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Infrastructure
Project Name: C&SF: CERP - Lake Okeechobee Watershed (A, W, OPE)
Project ID: 1104 (CERP Project # WBS 01)
Lead Agency: USACE / SFWMD
Authority: Component W initially authorized in WRDA 2000; other components not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: **Primary:** 1.A.1 **Secondary:** 1.B.1 2.A.3

Measurable Output(s): 200,000 ac-ft. reservoir and 2,500 acres STA; 50,000 ac-ft reservoir and 5,000 acres STA; 4,375 acres reservoir-assisted STA; Restoration of 3,500 acres of wetlands; Removal of 150 tons of phosphorous from 10 miles of primary canals; Balance fish and wildlife benefits with long-term management

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated by July 2006. The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* includes each of the following separate elements:

- a) **North of Lake Okeechobee Storage Reservoir (A)** - This feature includes an above-ground reservoir and a 2,500-acre stormwater treatment area, to be located in the Kissimmee River Region, north of Lake Okeechobee. The total storage capacity of the reservoir is approximately 200,000 acre-feet. 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.
- b) **Taylor Creek/Nubbin Slough Storage and Treatment Area (W)** - This feature was one of the ten Initially Authorized Projects identified in the Water Resources Development Act (WRDA) 2000. Currently, it 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.
- c) **Lake Okeechobee Watershed Water Quality Treatment Facilities (LOWQTF)** - 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. The other portion of this feature includes the purchase of conservation easements within four key basins of Lake Okeechobee to restore the hydrology of isolated wetlands by plugging the connection to drainage ditches and the diversion of canal flows to adjacent wetlands. The sites range in size from an individual wetland to an entire sub-basin and are located within the lower Kissimmee River Basins (S-65D, S-65E, and S-154) and Taylor Creek/Nubbin Slough Basin (S-191).
- d) **Lake Okeechobee Tributary Sediment Dredging (LOTSD)** - 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. The purpose of this feature is to remove phosphorous from canals located in areas of the most intense agriculture in the Lake Okeechobee watershed. These sediments presently contribute to the excessive phosphorus loading to Lake Okeechobee. A partnership with local landowners will be pursued for the disposal of the dredged material on uplands.

- e) **Lake Istokpoga Regulation Schedule (LIRS)** - 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, and a tributary of both 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.

These elements were combined for an opportunity to generate a more efficient design of the components and to address the interdependencies and tradeoffs between them. The description of the project remains largely unchanged, other than the combination of the separable elements into one project and the addition of the Lake Istokpoga Regulation Schedule in August 2003.

Cost: \$575,559,000

Project Schedule:

TSP is scheduled for July 2006.

LIRS construction is scheduled to be completed in 2009.

LOTS, LOWQTF, A, W construction is scheduled to be completed in Band 2 (2010 – 2015).

LOW	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
PIR															
Plans & Specs															
Real Estate															
Construction															

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Balance to complete 2010-2013	Total
USACE	7,952	13,991	13,991	13,991	13,991	223,862	287,780
SFWMD	5,980	14,090	14,090	14,090	14,090	225,440	287,780
Total	13,932	28,081	28,081	28,081	28,081	449,302	575,559

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_01_lake_o_watershed.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: Taylor Creek Nubbin Slough Reservoir & Stormwater Treatment Area (STA) (W)
Project ID: **Initially Authorized Project**
Lead Agency: USACE / SFWMD
Authority: WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: **Primary:** 1.A.1, Other **Secondary:** 1.B.1 2.A.3

Measurable Output(s): 200,000 ac-ft. reservoir and 2,500 acres STA; 50,000 ac-ft reservoir and 5,000 acres STA; 4,375 acres reservoir-assisted STA; Restoration of 3,500 acres of wetlands; Removal of 150 tons of phosphorous from 10 miles of primary canals; Balance fish and wildlife benefits with long-term management

The current total estimated cost for this Initially Authorized Project at October 2005 price levels is \$128,428,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the Lake Okeechobee Watershed project (Project ID 1104; CERP Project # WBS 01).**

Program Name: Infrastructure
Project Name: C&SF: CERP - North Lake Belt Storage Area (XX P2)
Project ID: 1105 (CERP Project # WBS 25)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1

Measurable Output(s): 90,000 ac-ft. reservoir; water control structures; levee modifications

This feature adheres to the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* and 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 drawdown 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.

Runoff is pumped and gravity fed into the in-ground reservoir from the C-6 (west of Florida's Turnpike), western C-11, and C-9 Basins. Outflows from the facility will be directed into the C-9 Stormwater Treatment Area/Impoundment for treatment prior to delivery to the C-9, C-7, C-6, C-4 and C-2 Canals. If necessary, additional stormwater treatment areas will be constructed adjacent to the in-ground reservoir.

The purpose of this feature is to capture and store a portion of the stormwater runoff from the C-6, western C-11 and C-9 Basins. The stored water will be used to maintain stages during the dry season in the C-9, C-6, C-7, C-4 and C-2 Canals and to provide water deliveries to Biscayne Bay to aid in meeting salinity targets.

Cost: \$308,154,000

Project Schedule:

Phase 1 construction is scheduled to be completed in Band 5 (2025 – 2030).

Phase 2 construction is scheduled to be completed in Band 7 (2035 – 2040).

Phase I	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
PIR/Plans & Specs											
Real Estate											
Construction											

Phase II	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Plans & Specs											
Real Estate											
Construction											

Detailed Project Budget Information (\$1000)

	2017	2018	2019	2020	2021	2022	Balance to Complete 2023-2035	Total
USACE	7,704	7,704	7,704	7,704	7,704	7,704	107,854	154,077
SFWMD	7,704	7,704	7,704	7,704	7,704	7,704	107,854	154,077
Total	15,408	15,408	15,408	15,408	15,408	15,408	215,708	308,154

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_25_north_lake_belt.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Palm Beach Co. Agricultural Reserve Reservoir & ASR (VV)
Project ID: 1106 (CERP Project # WBS 20 and 21)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1 **Secondary:**1.A.2

Measurable Output(s): 20,000 ac-ft. reservoir; 75 mgd of ASR wells

This feature adheres to the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) which 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. The initial design for the reservoir assumed 1,660 acres with water levels fluctuating up to 12 feet above grade.

The facilities will be filled during the wet season with excess water from the western portions of the Lake Worth Drainage District and possibly from Acme Basin B. Water will be returned to the Lake Worth Drainage District Canals to help maintain canal stages during the dry-season. If water is not available in the reservoir or the associated aquifer storage and recovery wells, existing rules for water delivery to this region will be applied.

	<u>Total</u>	<u>Part 1</u>	<u>Part 2</u>
Cost:	\$154,441,000	\$104,878,000	\$49,563,000

Project Schedule:

Reservoir (Part 1) construction is scheduled to be completed in Band 3 (2015 – 2020).

ASR (Part 2) construction is scheduled to be completed in Band 3 (2015 – 2020).

Reservoir (Part 1)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PIR/Plans & Specs											
Real Estate											
Construction											

ASR (Part 2)	2010	2011	2012	2013	2014	2015	2016	2017	2018
PIR/Plans & Specs									
Construction									

Detailed Project Budget Information (\$1000)

Reservoir (Part 1)	Thru 2005	2006	2007	2008	2009	2010	Balance to Complete 2011-2016	Total
USACE	0	2,622	2,622	2,622	5,244	7,866	31,463	52,439
SFWMD	1	2,622	2,622	2,622	5,244	7,866	31,463	52,439
Total	1	5,244	5,244	5,244	10,488	15,732	62,926	104,878

Detailed Project Budget Information (\$1000)

ASR (Part 2)	2010	2011	2012	2013	2014	Balance to Complete 2015-2018	Total
USACE	1,239	1,239	1,239	1,239	1,239	18,586	24,782
SFWMD	1,239	1,239	1,239	1,239	1,239	18,586	24,782
Total	2,478	2,478	2,478	2,478	2,478	37,172	49,563

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_20_pbc_asr_1.cfm

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_21_pbc_asr_2.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Site 1 Impoundment and Aquifer Storage and Recovery (M)
Project ID: 1107 (CERP Project # WBS 22 and 40)
Lead Agency: USACE / SFWMD
Authority: Phase I initially authorized in WRDA 2000; Phase II not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1 **Secondary:** 2.A.3

Measurable Output(s): 13,280 ac-ft. reservoir; 114 acres of restored wetland and upland habitat

Phase I of this project was one of the ten Initially Authorized Projects identified in WRDA 2000. As a part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) was identified in 2004 and the Alternative Formulation Briefing (AFB) was held in August 2004. A revised draft Project Implementation Report (PIR) was released in December 2005. The final PIR for Phase I is expected to be completed in 2006.

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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. The initial design of the reservoir assumed 2,460 acres with water levels fluctuating up to 6 feet above grade. Water from the Hillsboro Canal will be pumped into the reservoir during the wet season or periods when excess water is available. Water will be released back to the Hillsboro Canal to help maintain canal stages during the dry-season.

The project was refined during the PIR process. The Site 1 Impoundment Selected Alternative Plan features an 1,800-acre project footprint with a 1,660-acre, approximately eight-foot deep above ground impoundment (13,280 acre-feet) with inflow pump station, discharge gated culvert, emergency overflow spillway, and seepage control canal with associated structures. The impoundment is divided into two compartments or cells (eastern and western) by an internal levee. A gated culvert is located in the internal levee to provide hydraulic connection in the transference of impounded water and compartment stage equalization.

The SFWMD, through its Acceler8 initiative, is advancing the design and construction of the reservoir. This project is further described on the following pages.

Cost:	<u>Total</u>	<u>Phase I</u>	<u>Phase II</u>
	\$153,931,000	\$49,151,000	\$104,780,000

Project Schedule:

Reservoir (Phase I) construction is scheduled to be completed in 2009.
 ASR (Phase II) construction is scheduled to be completed in Band 4 (2020 – 2025).

Reservoir (Phase I)	2003	2004	2005	2006	2007	2008	2009
PIR							
Plans & Specs							
Real Estate							
Construction							

ASR (Phase II)	2014	2015	2016	2017	2018	2019	2020
PIR							
Plans & Specs							
Construction							

Detailed Project Budget Information (\$1000)

Phase I	Thru 2005	2006	2007	2008	2009	Total
USACE	1,572	5,751	5,751	5,751	5,751	24,576
SFWMD	561	6,004	6,004	6,004	6,004	24,576
Total	2,133	11,755	11,755	11,755	11,755	49,151

Phase II	Thru 2005	2014	2015	2016	2017	2018	2019	2020	Total
USACE	0	2,620	2,620	2,620	7,859	7,859	13,098	15,717	52,390
SFWMD	1	2,619	2,619	2,619	7,858	7,858	13,097	15,717	52,390
Total	1	5,239	5,239	5,239	15,717	15,717	26,195	31,434	104,780

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_40_site_1_impoundment.cfm

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_22_hillsboro_asr_2.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Current project description summarized from the *Central and Southern Florida Project Site 1 Impoundment Project Final Integrated Project Implementation Report and Environmental Assessment* and from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: Site 1 Impoundment (M)
Project ID: **Initially Authorized Project**
Lead Agency: USACE / SFWMD
Authority: Phase I initially authorized in WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1

Secondary: 1.A.2

Measurable Output(s): 13,280 ac-ft. reservoir; 114 acres of restored wetland and upland habitat

The current total estimated cost for this Initially Authorized Project at October 2005 price level is \$51,159,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the Site 1 Impoundment and Aquifer Storage and Recovery project (Project ID 1107; CERP Project # WBS 22 and 40).**

Program Name: Infrastructure
Project Name: C&SF: CERP - Site 1 Impoundment and Aquifer Storage and Recovery (M) – **ACCELER8**
Project ID: 1107A (CERP Project # WBS 22 and 40)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1 **Secondary:** 1.A.2

Measurable Output(s): Water supply for WCA 2A, Loxahatchee Refuge, and Hillsboro estuarine area

Project Synopsis: This *Acceler8* project is one of a series of five project components located adjacent to the Everglades Water Conservation Areas (WCAs) in Palm Beach, Broward and Miami-Dade counties which make up the Water Preserve Areas Project (Site 1 Impoundment, C-9 Impoundment, C-11 Impoundment, Acme Basin B Discharge, and WCA-3A/3B Seepage Management).

This project component includes approximately 13,000 ac-ft impoundment, pump station, gated culverts and expand Hillsboro Canal.

Total Estimated Project Cost: \$41,296,990

Scheduled Construction Start Date: Aug, 2006
Scheduled Project Completion Date: Dec, 2009

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$1,850,397	\$806,876	\$2,657,273

Real Estate Acquisition:** All land has been acquired

Acres	Cost
1,658	\$8,300,000

Contact: Juan Prieto, 561-242-5520, x4034

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Infrastructure
Project Name: C&SF: CERP - C-43 Basin Storage Reservoir and ASR (D)
Project ID: 1109 (CERP Project # WBS 04 and 05)
Lead Agency: USACE / SFWMD
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1 **Secondary:** 1.A.2

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

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in 2006. The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study (Restudy)* 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. Excess runoff from the C-43 Basin and Lake Okeechobee flood control discharges will be pumped into the proposed reservoir. Water from the reservoir will be injected into the aquifer storage and recovery wellfield for long-term (multi-season) storage. Any estuarine demands, not met by basin runoff and the aquifer storage and recovery wells, will be met by Lake Okeechobee as long as the lake stage is above a pre-determined level.

The SFWMD, through its Acceler8 initiative, is advancing the design and construction of the C-43 Basin Storage Reservoir. This project is further described on the following pages.

Cost: \$530,600,000

Project Schedule:

Storage Reservoir construction is scheduled to be completed in Band 2 (2005 – 2010).
 ASR construction is scheduled to be completed in Band 3 (2015 – 2020).

Storage Reservoir (Part 1)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
PIR/Plans & Specs										
Real Estate										
Construction										

ASR (Part 2)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
PIR/Plans & Specs										
Real Estate										
Construction										

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	Balance to Complete 2011-2019	Total
USACE	4,232	26,107	26,107	26,107	26,107	26,107	130,534	265,300
SFWMD	2,527	26,277	26,277	26,277	26,277	26,277	131,387	265,300
Total	6,759	52,384	52,384	52,384	52,384	52,384	261,921	530,600

*Expenditures for Storage Reservoir (Part 1) only.

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_04_c43_basin_1.cfm

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_05_c43_asr_2.cfm

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Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Central Lake Belt Storage Area (S P2)
Project ID: 1110 (CERP Project # WBS 26)
Lead Agency: USACE / SFWMD
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1 **Secondary:** 1.B.1

Measurable Output(s): 190,000 ac-ft. storage; 640 acres stormwater treatment area

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes a stormwater treatment area (STA), 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 drawdown during dry periods and to prevent seepage losses. A pilot test of this technology will be conducted prior to final design of this component. 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 four feet above grade.

Excess water from Water Conservation Areas 2 and 3 will be diverted into the L-37, L-33, and L-30 Borrow Canals, which run along the eastern boundaries of the Water Conservation Areas, and pumped into the Central Lake Belt Storage Area. Water supply deliveries will be pumped through an STA prior to discharge to the Everglades via the L-30 Borrow Canal and a reconfigured L-31N Borrow Canal. If available, deliveries will be directed to Biscayne Bay through the Snapper Creek Canal at Florida’s Turnpike. A structure will be provided on the Snapper Creek Canal to provide regional system deliveries when water from the Central Lake Belt Storage Area is not available.

Cost: **Total**
 \$155,353,000

Project Schedule:

Phase II construction is scheduled to be completed in Band 7 (2035 – 2040).

Phase II	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Plans and Specs											
Real Estate											
Construction											

Detailed Project Budget Information (\$1,000)

	2017	2018	2019	2020	2021	2022	2023	Balance to Complete 2024-2035	Total
USACE	1,554	2,330	3,884	7,768	7,768	11,651	11,651	31,071	77,677
SFWMD	1,554	2,330	3,884	7,768	7,768	11,651	11,651	31,071	77,677
Total	3,107	4,661	7,768	15,535	15,535	23,303	23,303	62,141	155,353

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_26_central_lake_belt.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
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Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Restoration Program: Hydrology and Water Quality
Project Name: LOFT (identified under LOER)- Taylor Creek Reservoir
Project ID: 1112
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: 1.A.1

Secondary: 1.B.1

Measurable Output(s): 32,000 acre ft of storage; 3-5 metric ton phosphorus reduction

Project Synopsis: The state has initiated a comprehensive plan, entitled the Lake Okeechobee and Estuary Recovery Plan (LOER), consisting of a combination of capital projects and numerous interagency initiatives designed to provide measurable and meaningful improvements to water quality and water quantity in Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. The LOER plan identifies 5 construction projects north of Lake Okeechobee, including the Taylor Creek Reservoir, as Lake Okeechobee Fast Track projects (LOFT). The Taylor Creek Reservoir project involves construction of a 4,000 acre reservoir in Taylor Creek which will provide approximately 32,000 acre feet of storage and 3-5 metric ton phosphorus reduction.

Cost:
 Total

\$102 million

Project Schedule:

Start Date: October 2005
 Finish Date: December 2010

	2005	2006	2007	2008	2009	2010
Project Design						
Construction and Installation						
Operations and Monitoring						

Detailed Project Budget Information (\$1000)

	2006	2007	2008	2009	2010	Balance to complete	Total
Federal EPA							
State SFWMD	2,410	3,148	21,329	37,526	37,747		102,160
Tribal							
Local							
Other							
Total							102,160

Hyperlink: N/A

Contact: Temperince Morgan (561) 682-6534

Program Name: Infrastructure
Project Name: C&SF: CERP – Water Preserve Area Conveyance (BB, XX P1)
Project ID: 1113 (CERP Project # WBS 49)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1

Measurable Output(s): 90,000 ac-ft. reservoir; water control structures; levee modifications

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes water control structures and modifications to the Dade-Broward Levee and associated conveyance system located in Miami-Dade County. 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.

Cost: \$331,665,000

Project Schedule:

Dade-Broward Levee (BB) construction is scheduled to be completed in Band 2 (2010 – 2015)
 North Lake Belt Storage Area (XXP1) construction is scheduled to be completed in Band 3 (2015 – 2020).

BB	2006	2007	2008	2009	2010	2011	2012	2013
Planning & Design								
Real Estate								
Construction								

XXP1	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Planning & Design											
Real Estate											
Construction											

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	Balance to Complete 2011-2016	Total
USACE	227	3,312	3,312	4,968	4,968	16,561	132,484	165,833
SFWMD	0	3,317	3,317	4,975	4,975	16,583	132,666	165,833
Total	227	6,629	6,629	9,943	9,943	33,144	265,150	331,665

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_49_wpa.cfm

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Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP – Everglades National Park Seepage Management (V)(FF)(U)
Project ID: 1114 (CERP Project # WBS 27 and 43)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.A.1

Measurable Output(s): Relocation and restoration of L-31N, groundwater wells, and sheetflow delivery system; 11,500 ac-ft. storage; pumps, water control structures, and canals

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in November 2007. The original concept for this feature as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes relocating and enhancing L-31N, groundwater wells, and sheetflow delivery system adjacent to Everglades National Park located in Miami-Dade County. This feature reduces levee seepage flow across L-31N adjacent to Everglades National Park via a levee cutoff wall. Groundwater flows during the wet season are captured by ground water wells adjacent to L-31N and pumped to Everglades National Park. Water from upstream natural areas will be diverted into a buffer area adjacent to Everglades National Park where sheetflow will be reestablished. Further, this feature includes relocation of the Modified Water Deliveries structure S-357 *sic* (note: likely is supposed to be S-356) to provide more effective water deliveries to Everglades National Park. New discharges to Everglades National Park will be designed to meet applicable water quality criteria.

The original project description also includes pumps, water control structures, canals, and an above-ground recharge area with a total storage capacity of approximately 11,500 acre-feet located in western 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. Inflows from the western C-4 Canal Basin and from the proposed West Miami-Dade Wastewater Treatment Plant will be pumped into the Recharge Area. Inflows from the wastewater treatment plant will stop when the Recharge Area depth exceeds 3 feet above-ground and will be diverted to a deep well injection disposal system. Recharge area outflows will be prioritized to meet: (1) groundwater recharge demands, (2) South Dade Conveyance System demands, and (3) Northeast Shark River Slough demands, when supply is available. Regional system deliveries will be routed through the seepage collection canal system of the Bird Drive Recharge Area to the South Dade Conveyance system. The Bird Drive Recharge Area feature was added to the project in 2004 as part of the effort associated with the Master Implementation Sequencing Plan (MISP) due to the possibility that benefits were insufficient as individual projects.

The purpose of this feature is to improve water deliveries to Northeast Shark River Slough and restore wetland hydropatterns in Everglades National Park by reducing levee and groundwater seepage and increasing sheetflow, as well as recharge groundwater and reduce seepage from the Everglades National Park buffer areas by increasing water table elevations east of Krome Avenue. More detailed planning, design, and pilot studies (WBS 36) will be conducted to determine the appropriate technology to control seepage from Everglades National Park and 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.

The Everglades National Park Seepage Management Project will evaluate three of the 68 components identified in the Comprehensive Everglades Restoration Plan (CERP). Specifically, those components are: L-31N Improvements (Component V), S-356 Structure Relocation (Component FF), and Bird Drive Recharge Area (Component U). The purpose of the L-31N Improvements and S-356 Structure Relocation are to improve water deliveries to Northeast Shark River Slough (NESRS) and restore wetland hydroperiods in Everglades National Park (ENP). The Bird Drive Recharge Area's purpose is to recharge groundwater and reduce seepage from ENP by increasing water table elevations east of Krome Ave. The facility will also provide C-4 flood peak attenuation and water supply deliveries to South Dade Conveyance System and NESRS.

Cost: \$390,942,000

Project Schedule:

L-31N Seepage Management (V) is scheduled to complete construction in Band 2 (2010-2015).
 S-356 Structure (FF) is scheduled to complete construction in Band 2 (2010-2015).
 Bird Drive Recharge Area (U) is scheduled to complete construction in Band 3 (2015-2020).

L-31N Seepage (V)	2005	2006	2007	2008	2009	2010	2011
PIR/ Plans & Specs							
Real Estate							
Construction							

S-356 (FF)	2005	2006	2007	2008	2009	2010	2011
PIR/ Plans & Specs							
Real Estate							
Construction							

Bird Drive (U)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
PIR/ Plans & Specs											
Real Estate											
Construction											

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Balance to Complete 2010-2015	Total
USACE	359	29,267	29,267	29,267	29,267	78,045	195,471
SFWMD	68	29,310	29,310	29,310	29,310	78,161	195,471
Total	427	58,577	58,577	58,577	58,577	156,206	390,942

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_27_enp_seepage.cfm

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_43_bird_drive.cfm

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Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP – North Palm Beach County – Part 2 (LL, K Pt2)
Project ID: 1200 (CERP Project # WBS 18)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.2

Measurable Output(s): 170 mgd of ASR wells

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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 aquifer storage and recovery facilities will be used to inject and store surficial aquifer ground water adjacent to the C-51 Canal into the upper Floridan Aquifer instead of discharging the canal water to tide. Water will be returned to the C-51 Canal to help maintain canal stages during the dry-season. If water is not available in the aquifer storage and recovery system, existing rules for water delivery to this region will be applied.

Cost: \$203,891,000

Project Schedule:

Project is scheduled to complete construction in Band 3 (2015-2020).

L-8 Basin (K Pt2)	2009	2010	2011	2012	2013	2014	2015	2016	2017
PIR/Plans and Specs	■	■	■	■	■	■			
Real Estate				■					
Construction					■	■	■	■	■

C-51 (LL)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
PIR/Plans and Specs	■	■	■	■	■	■				
Real Estate			■	■	■	■				
Construction					■	■	■	■	■	■

Detailed Project Budget Information (\$1000)

	2009	2010	2011	2012	2013	2014	Balance to Complete 2015-2019	Total
USACE	2,039	3,058	5,097	15,292	15,292	15,292	45,875	101,946
SFWMD	2,039	3,058	5,097	15,292	15,292	15,292	45,875	101,946
Total	4,078	6,117	10,195	30,584	30,584	30,584	91,751	203,891

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_18_npbcb_2.cfm

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Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Lake Okeechobee Aquifer Storage and Recovery (GG)
Project ID: 1201 (CERP Project # WBS 03)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.2

Measurable Output(s): 1 bgd of ASR wells

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes a series of aquifer storage and recovery wells adjacent to Lake Okeechobee with a capacity of one 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 five million gallons per day with eight 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 operation of this feature assumes that after treatment, water from Lake Okeechobee will be injected into the upper Floridan Aquifer when the climate-based inflow model forecasts that the Lake water level will rise significantly above those levels that are desirable for the Lake littoral zone. During the dry season, water stored in the Floridan Aquifer will be returned to the Lake after aeration, either when the Lake water level is projected to fall to within three quarters of a foot of the supply-side management line or below an established water level during the dry season.

The purpose of this feature is to: (1) provide additional regional storage while reducing both evaporation losses and the amount of land removed from current land use (e.g. agriculture) that would normally be associated with construction and operation of above-ground storage reservoirs; (2) increase the Lake's water storage capability to better meet regional water supply demands for agriculture, Lower East Coast urban areas, and the Everglades; (3) manage a portion of regulatory releases from the Lake primarily to improve Everglades hydropatterns and to meet supplemental water supply demands of the Lower East Coast; (4) reduce harmful regulatory discharges to the St. Lucie and Caloosahatchee Estuaries; and (5) maintain and enhance the existing level of flood protection.

Cost: \$1,254,142,000

Project Schedule:

Phase 1 construction is scheduled to be completed in Band 3 (2015 – 2020).
 Phase 2 construction is scheduled to be completed in Band 4 (2020 – 2025).
 Phase 3 construction is scheduled to be completed in Band 5 (2025 – 2030).

Phase 1	2010	2011	2012	2013	2014	2015	2016	2017	2018
PIR (all phases)									
Plans & Specs									
Real Estate (all phases)									
Construction									

Phase 2	2018	2019	2020	2021	2022	2023
Plans & Specs						
Construction						

Phase 3	2023	2024	2025	2026	2027
Plans & Specs					
Construction					

Detailed Project Budget Information (\$1,000)

	2010	2011	2012	2013	2014	2015	Balance to Complete 2016-2027	Total
USACE	25,083	31,354	37,624	62,707	94,061	94,061	282,182	627,071
SFWMD	25,083	31,354	37,624	62,707	94,061	94,061	282,182	627,071
Total	50,166	62,707	75,249	125,414	188,121	188,121	564,364	1,254,142

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_03_lake_o_asr.cfm

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Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: Canal C-111
Project ID: 1300
Lead Agency: USACE / SFWMD
Authority: FCA 1962 and WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: **Primary:** 1.A.3 **Secondary:** 3.B.1

Measurable Output(s): Canals, levees, and pump stations; replacement of an existing bridge; more natural flow and hydropatterns; removal of approximately 4.75 miles total length impediments

This authorized project has a lengthy planning history. Originally authorized as an addition to the C&SF Project by the Flood Control Act of 1962, the C-111 Project has been further modified by authorization of the ENP-South Dade Conveyance System in 1968 and the Everglades National Park Expansion Act of 1989. A Final Integrated Reevaluation Report/Environmental Impact Statement was completed in May 1994 and recommended a preferred alternative to meet these project purposes.

The 1996 Water Resources Development Act (WRDA 1996) provided for a new cost sharing agreement for the C-111 project as approved and described in the Canal 111 (C-111), South Dade County, Florida, Final Integrated General Reevaluation Report and Environmental Impact Statement dated May of 1994 (1994 GRR) such that it was 50-50 including real estate. Also provided was the authority to cost share water quality improvement features if deemed necessary for Everglades restoration purposes. These two new requirements resulted in the preparation of a supplement to the 1994 GRR, which was completed in 2002. In 2004, an addendum, that updated the supplement, was produced to satisfy HQ concerns regarding Real Estate and water quality.

Canal 111 (C-111) is a part of the South Dade portion of the Central and Southern Florida (C&SF) project authorized in 1962 and constructed in the 1960s. The project is located at the very downstream end of the C&SF project. The basin includes about 100 square miles of agriculture in the Homestead/Florida City area and the entire Taylor Slough basin within Everglades National Park (ENP). C-111 discharges into Florida Bay at its downstream terminus and into Taylor Slough which ultimately also flows to Florida Bay. Because of the extreme porosity of the Biscayne Aquifer in this area, water levels in the canal have a direct impact on water levels in the adjacent areas. The project provides for modifications to the existing water management system that will restore historic freshwater flows in the Taylor Slough and Eastern Panhandle areas of Everglades National Park, which is expected to help reverse the current deterioration of Florida Bay. Existing flood protection will be maintained for developed lands east of canals L-31N and C-111.

In order to meet C-111 project objectives, an alternative plan was selected in the 1994 GRR that would elevate the canal stages in the C-111 canal without adversely impacting authorized flood protection to the agricultural interests immediately east of the canal. A hydraulic ridge would be created via a collection of features/activities that would result in higher stages within the canal, limiting the amount of seepage leaving ENP lands. A series of pump structures would provide control for this hydraulic ridge and would also serve to supply additional canal water to ENP by pumping directly into detention/buffer zones that were contiguous with ENP lands.

Currently, two interim pump stations and one permanent pump station have been completed, along with construction of three detention areas, replacement of the Taylor Slough Bridge, and removal of Spoil Mounds along lower C-111. The C-111 project will also degrade approximately 4.75 miles total length of spoil mounds. Modifications to the C-111 Project are expected to be completed by 2010, subject to appropriations. A Combined Structural and Operational Plan (CSOP) for the Mod Waters Deliveries Project and the C-111 Project is currently being developed. The CSOP will ensure that the Mod Waters and C-111 Projects are operated consistent with project purposes in order to achieve the intended benefits while protecting the quality of water entering Everglades National Park. The L31W tie back and the S332D tie back are linked to 8.5 SMA. Currently a PMP is under development as well as an Engineering Design Report (EDR) and a letter report (to address the 50-50 cost share).

Cost: \$287,600,000

Project Schedule:

Start Date: 1994
 Finish Date: 2010

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Planning & Design													
Real Estate													
Construction													

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	Total
USACE	83,321	20,160	20,160	20,160	143,800
SFWMD	49,000	31,600	31,600	31,600	143,800
Total	132,321	51,760	51,760	51,760	287,600

Hyperlink: <http://www.saj.usace.army.mil/restore/projects/C-111.htm>

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Source: Project History description summarized from the *Central and Southern Florida Project Comprehensive Review Study, Draft Fish and Wildlife Coordination Act Report*. 1994 Project Synopsis summarized from the *C-111 GRR Plan*. Current status summarized from the *Draft CERP 2005 Report to Congress*, and the *Addendum to the Final Integrated General Reevaluation Report Supplement and Environmental Assessment, July 2004*.

Program Name: Infrastructure
Project Name: C&SF:CERP – WCA 3 Decomartmentalization and Sheetflow Enhancement (AA)(QQ)(SS)(ZZ)
Project ID: 1301 (CERP Project # WBS 12, 13, and 47)
Lead Agency: USACE / SFWMD
Authority: QQ and SS initially authorized in WRDA 2000; other components not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.3

Measurable Output(s): Restoration of sheet flow in historical Everglades; removal of approximately 240 miles of impediments

Components QQ (Raise and Bridge East Portion of Tamiami Trail and Fill Miami Canal within Water Conservation Area 3) and SS (North New River Improvements) were two of the ten Initially Authorized Projects identified in the Water Resources Development Act (WRDA) 2000. The original concept for the Water Conservation Area (WCA) 3 Decpartmentalization and Sheetflow Enhancement project outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes the construction of new water control structures and the modification or removal of levees, canals, and water control structures in WCA 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. Overall, the project will provide for the removal of approximately 240 miles of impediments. 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 WCA 3A to 3B during high flow conditions. The purpose of these features is to reestablish the ecological and hydrological connection between WCA 3A and 3B, the Everglades National Park, and Big Cypress National Preserve.

This project adheres to the original Restudy concept with the addition of Part 2 of WCA 3 Decpartmentalization and Sheetflow (QQP2, WBS 13), as well as the conveyance features from WCA 3 to the Central Lake Belt storage area (ZZ, WBS 47). These conveyance features include pumps, water control structures, canals, and conveyance improvements located adjacent to WCA 3 in Broward County. When stages in WCA 3A and 3B exceed target depths, water will be diverted to the Central Lake Belt Storage Area through water control structures and conveyance features. Water supply deliveries will be made first to Northeast Shark River Slough, then to WCA 3B, and, finally, to Biscayne Bay, if flows are available.

The project team and RECOVER have been working together to integrate adaptive management into the decpartmentalization project. The team is developing planning documents and a physical model to address key ecological uncertainties associated with alternative design features. They are also proposing a phased PIR that implements decpartmentalization using adaptive management, construction of a first phase, monitoring of component performance, and additional construction for decpartmentalization to achieve desired results. The first phase would implement a subset of the CERP decpartmentalization project and include a range of plans for a second phase of implementation.

Cost: \$253,443,000

Project Schedule:

SS (P1 & P2) is scheduled to complete construction in Band 2 (2010 – 2015).
 AA, QQ (P1 & P2), and ZZ are scheduled to complete construction in Band 3 (2015 – 2020).

SS (P1 & P2)	2005	2006	2007	2008	2009	2010	2011	2012
PIR/Plans & Specs								
Real Estate								
Construction								

AA, QQ (P1 & P2, & ZZ)	2014	2015	2016	2017	2018	2019
PIR/Plans & Specs						
Real Estate						
Construction						

Detailed Project Budget Information (\$1,000)

	Thru 2005	2006	2007	2008	2009	2010	Balance to Complete 2011-2019	Total
USACE	2,254	6,223	6,223	6,223	18,670	24,894	62,234	126,722
SFWMD	2,570	6,208	6,208	6,208	18,623	24,830	62,076	126,722
Total	4,824	12,431	12,431	12,431	37,293	49,724	124,310	253,443

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_12_wca3_1.cfm
Hyperlink: http://www.evergladesplan.org/pm/projects/proj_47_wca_3a_3b.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: Raise and Bridge East Portion of Tamiami Trail and Fill Miami Canal within Water Conservation Area 3 (QQ)
Project ID: **Initially Authorized Project**
Lead Agency: USACE / SFWMD
Authority: QQ initially authorized in WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.3 **Secondary:** 2.A.3

Measurable Output(s): Restoration of sheet flow in historical Everglades

The current total estimated cost for this Initially Authorized Project at October 2005 price level is \$42,092,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the WCA 3 Decompartmentalization and Sheetflow Enhancement project (Project ID 1301; CERP Project # WBS 12, 13, and 47).**

Program Name: Infrastructure
Project Name: North New River Improvements (SS)
Project ID: **Initially Authorized Project** (part of (1301) WCA 3 Decompartmentalization and Sheetflow Enhancement (AA, QQ, SS, ZZ) - CERP Project # WBS 12, 13, and 47)
Lead Agency: USACE / SFWMD
Authority: SS initially authorized in WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.3 **Secondary:** 2.A.3

Measurable Output(s): Restoration of sheet flow in historical Everglades

The current total estimated cost for this Initially Authorized Project at October 2005 price level is \$106,483,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the WCA 3 Decompartmentalization and Sheetflow Enhancement project (Project ID 1301; CERP Project # WBS 12, 13, and 47).**

Program Name: Infrastructure
Project Name: C&SF: CERP - Florida Keys Tidal Restoration (OPE)
Project ID: 1302 (CERP Project # WBS 31)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.3

Measurable Output(s): Bridges and culverts; removal of approximately 0.6 miles of impediments

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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).

The purpose of this feature is to restore the tidal connection that was eliminated in the early 1900's during the construction of Flagler's railroad. Restoring the circulation to areas of surface water that have been impeded and stagnant for decades will significantly improve water quality, benthic floral and faunal communities, larval distribution of both recreational and commercial species (e.g. spiny lobster), and the overall hydrology of Florida Bay. Since issuance of the Restudy, various studies and other projects have led to the refinement of the project scope. The project had begun its PIR when it was suspended.

This project provides for the removal of approximately 0.6 miles of impediments and will restore an historic flow way between the Atlantic Ocean and the Gulf of Mexico which was blocked during the construction of US Highway 1. An existing tidal creek restoration project in the vicinity of the proposed restoration project was fully successful. One tidal creek in the vicinity of Marathon, Florida has been selected for restoration. Culverts to maximize flow will be located, sized, and placed under U.S. 1 between Fat Deer Key and Long Point Key (MM56) to allow tidal exchange and flushing. Monitoring of water quality, benthic community composition, and sediment particle size will be performed before construction, at six months, and one year after construction completion. Additional tidal flow way restoration projects will be subsequently identified based upon the results of this initial restoration project.

Cost: \$1,536,000

Project Schedule:

Project is scheduled to complete construction in Band 2 (2010 – 2015).

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
PIR/Plans & Specs										
Real Estate										
Construction										

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	Total
USACE	833	0	0	0	0	0	833
SFWMD	385	32	64	64	80	80	703
Total	1,218	32	64	64	80	80	1,536

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_31_fl_keys_tidal.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Budget information based on the *Central and Southern Florida Project Comprehensive Review Study, April 1999* and the updated Project Implementation Report (PIR) cost included in the approved Project Management Plan (PMP). Schedule information based on the *Master Implementation Sequencing Plan (MISP)*. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: E&SF: Critical Projects - Southern CREW
Project ID: 1303
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.A.3

Measurable Output(s): Structural modifications;

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes the acquisition and restoration of 4,670 acres of land, replacement of the Imperial Bonita Estates bridge on the Imperial River, and replacement of the Kehl Canal Weir in southern Lee County, adjacent to Corkscrew Sanctuary. The purpose of this feature is to re-establish historic flow patterns and hydroperiods on the project lands; restore historical storage potential of the Southern Corkscrew Regional Ecosystem Watershed lands, reduce excessive freshwater discharges to Estero Bay during the rainy season; decrease saltwater intrusion during the dry season; reduce loading of nutrients and other pollutants to the Imperial River and Estero Bay; increase aquifer recharge and water supply for an area frequently facing water restrictions during dry years; and to reduce flooding of homes and private lands west of the project area.

Currently, this project includes removal of canal and road berms, house pads and ditches to allow historic sheetflow to be re-established in the Southern Corkscrew Regional Ecosystem Watershed (CREW). The South Florida Water Management District (SFWMD) continues to acquire land and construct the project.

Cost: \$33,321,000

Project Schedule:

Start Date: 1999
 Finish Date: 2005

	1999	2000	2001	2002	2003	2004	2005
Design							
Construction							

Detailed Project Budget Information (\$1000)

	Thru 2005	Total
USACE	281	1,753
SFWMD	29,306	31,568
Total	29,587	33,321

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan* (MISP) and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Restoration Program: Hydrological Restoration
Project Name: East WCA-3A Hydropattern Restoration
Project ID: 1304
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: 1.A.3

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

Project Synopsis: This project was modified from the original plan shown in the 1994 Conceptual Design, Everglades Protection Project. The new conceptual design for this project is shown in Part 7 of the 2003 Long-Term Plan and is subject to adjustment following completion of the a recommended alternatives analysis and plan formulation phase. The new conceptual design consists of a 1,500 cfs pump station, a new discharge canal across the FPL transmission line right-of-way, and a new bridge at the canal's crossing of North Levee L-5. This conceptual plan also includes new gated concrete box culverts, L-5 canal enlargement and construction of a spreader canal paralleling L-5. Detailed design and engineering of the final recommended plan would occur in the second half of FY 2009 and the first half of FY 2010. Actual construction of the recommended plan would occur in FY 2011 and 2012.

*** Cost (Estimate):**

Total:	\$ 28,224,966
(1) Project Development:	\$ 2,113,967
Land Acquisition:	\$ -
(2) Implementation:	\$ 24,510,999
Operations and Maintenance:	\$ 400,000 per year after FY 2012

Project Schedule:

Expected Completion Date: October 2012

	FY 1994- FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 94-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$5,344,966	-	-	-	-	\$22,880,000	\$28,224,966
Tribal							
Local							
Other							
Total	\$5,344,966	-	-	-	-	\$22,880,000	\$28,224,966

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

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

Point of Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Infrastructure
Project Name: Kissimmee River Restoration Project
Project ID: 1306
Lead Agency: USACE / SFWMD
Authority: WRDA 1986,1988, 1992
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.A.3 **Secondary:** 2.A.3

Measurable Output(s): 27,000 acres of floodplain wetlands; 43 miles of contiguous river channel; 40 square miles of the river/floodplain ecosystem; Lower Basin Land Acquisition (SFWMD 68,332 acres); Upper Basin Land Acquisition (SFWMD 36,763 acres); removal of approximately 31 miles of impediments

The Kissimmee River Restoration Project was authorized by Section 1135 of the WRDA of 1986, and funding for preparation of a Feasibility Report/Environmental Impact Statement was authorized by WRDA of 1990. As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) was identified in 1992. The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes backfilling the 30-foot deep Canal 38 and restoring flow to over 25 miles of presently isolated river channel would restore an estimated 27,000 acres of floodplain wetlands and associated fish and wildlife resources. The project would also provide more natural seasonal flow to Lake Okeechobee.

This 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 nine miles of new river channel, removal of two water control structures and locks, and land acquisition. The project will restore the ecological integrity of the historical Kissimmee River/floodplain ecosystem by recreating approximately 40 square miles of the river/floodplain ecosystem, including 43 miles of contiguous river channel and 27,000 acres of floodplain wetlands.

Currently, the acquisition of land necessary to restore the Kissimmee River in accordance with the Level II Backfilling Plan is complete. The DOI recommends that the current scheduled completion date of 2011 be adhered to, as the completion of river restoration is not anticipated to disrupt restoration efforts to the south, provided the additional water is delivered to the remaining natural system in an uninterrupted seasonal flow pattern.

Cost: \$575,400,000

Project Schedule:

Start Date: 1994
 Finish Date: 2010

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Design																	
Real Estate																	
Construction																	

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	Total
USACE	105,789	50,935	49,116	27,287	27,287	27,287	287,700
SFWMD	40,474	69,223	66,751	37,084	37,084	37,084	287,700
Total	146,263	120,158	115,867	64,371	64,371	64,371	575,400

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
(904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Project Schedule:

Start Date: 1990
 Finish Date: 2009

	< 2004	2004	2005	2006	2007	2008	2009
Design							
Real Estate							
Construction							

Detailed Project Budget Information (\$M)

Planned Expenditures	Thru 2005	2006	2007	2008	2009	Balance to complete	Total
Federal	192.645	60.000	48.760	59.771	37.244	145.775	398.420

Hyperlink: N/A
Contact: Ingrid Bon, 305-224-4209

Program Name: Infrastructure
Project Name: E&SF: Critical Projects – Additional Water Conveyance Structures Under Tamiami Trail
Project ID: 1400
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Hydrologic sheetflow restoration

This project consists of two phases. Phase I involves planning, project design and construction of 62 culverts under US 41 and 15 under Loop Road between SR 92 and Collier / Miami-Dade County line. Phase II involves resurfacing of the roadway of the Tamiami Trail pursuant to construction of the culverts. State Road 29 West is being completed as part of the Southern Golden Gate Estates Hydrologic Restoration. This project will improve the natural sheetflow of surface water within the watersheds of the Ten Thousand Islands National Wildlife Refuge & Aquatic Preserve, Southern Golden Gate Estates, Fakahatchee Strand State Preserve, Big Cypress National Preserve and Everglades National Park. By creating a more diffuse flowway beneath the Tamiami Trail, a more natural hydro pattern will be established north and south of this highway. Improvement of the natural hydrology will also enhance biological restoration of the region. This project will directly support objectives for several other south Florida projects such as the Levee 28 modification and restoration of Southern Golden Gate Estates.

The South Florida Water Management District (SFWMD) continues to acquire land and construct the project.

Cost: \$16,506,000

Project Schedule:

Start Date: 1998
 Finish Date: 2006

	2002	2003	2004	2005	2006
Design					
Construction					

Detailed Project Budget Information (\$1,000)

	Thru 2005	2006	Total
USACE	2,622	0	2,622
SFWMD	239	13,645	13,884
Total	2,861	13,645	16,506

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: Biscayne Bay Feasibility Study
Project ID: 1401
Lead Agency: USACE / Miami-Dade County
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Report

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 Comprehensive Everglades Restoration Plan (CERP) is modifying the C&SF project to improve flows needed for the environment, including Biscayne 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: \$6,370,000

Project Schedule:

Start Date 1996
 Finish Date 2010

	Thru 2004	2005	2006	2007	2008	2009	2010
Planning & Design							

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	Total
USACE	1,086	2,334	3,420
Miami-Dade Co.	557	2,393	2,950
Total	1,643	4,727	6,370

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Broward County Secondary Canal System (CC)
Project ID: 1403 (CERP Project # WBS 24)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Water control structures, pumps, and canal improvements

This feature adheres to the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* and 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. Excess water in the basins will be pumped into the coastal canal systems to maintain canal stages at optimum levels. When basin water is not sufficient to maintain canal stages, the canals will be maintained from other construction features such as the Site 1 Impoundment and the North Lake Belt Storage Area and then from Lake Okeechobee and the Water Conservation Areas.

Cost: \$15,476,000

Project Schedule:

Project is scheduled to complete construction in Band 2 (2010 – 2015).

	2008	2009	2010	2011	2012	2013	2014
PIR/Plans & Specs							
Real Estate							
Construction							

Detailed Project Budget Information (\$1000)

	Thru 2005	2008	2009	2010	2011	2012	2013	2014	Total
USACE	8	387	387	773	1,933	1,933	1,160	1,160	7,738
SFWMD	42	385	385	770	1,924	1,924	1,154	1,154	7,738
Total	50	771	771	1,543	3,857	3,857	2,314	2,314	15,476

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_24_broward_canal.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Loxahatchee National Wildlife Refuge Internal Canal Structures (KK)
Project ID: 1408 (CERP Project # WBS 14)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Water control structures

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) which 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.

Cost: \$9,052,000

Project Schedule:

Project is scheduled to complete construction in Band 3 (2015 – 2020).

	2011	2012	2013	2014	2015
PIR/Plans & Specs					
Real Estate					
Construction					

Detailed Project Budget Information (\$1000)

	Thru 2005	2011	2012	2013	2014	2015	Total
USACE	49	224	224	1,119	1,119	1,791	4,526
SFWMD	0	226	226	1,132	1,132	1,810	4,526
Total	49	450	450	2,251	2,251	3,601	9,052

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_14_loxahatchee.cfm

Contact : David Tipple, Chief North/Central Florida Restoration Branch, USACE (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP – Seminole Tribe Big Cypress Water Conservation Plan (East & West) (OPE)
Project Name: 1409(CERP Project # WBS 96)
Lead Agency: USACE / Seminole Tribe
Authority: Not authorized.
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Construction of conveyance systems, major canal bypass structures, irrigation storage cells, and water resource areas to meet the 50 ppb phosphorous level goal of the Everglades Construction Project or more stringent performance levels as developed

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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 removal of pollutants will be achieved using natural treatment processes in pretreatment cells and water storage areas. A phosphorus level of 50 ppb is the goal, which is the current level to be achieved by the stormwater treatment areas of the Everglades Construction Project. Should design performance levels for phosphorus become more stringent, this project has sufficient flexibility to incorporate additional alternative technology.

The purpose of this feature is to improve the quality of water and runoff from phosphorus-generating agricultural sources within the Reservation. 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.

Cost: \$89,455,000

Project Schedule:

Project is scheduled to complete construction in Band 3 (2015 – 2020).

	2015	2016	2017	2018	2019	2020	2021
Planning & Design							
Real Estate							
Construction							

Detailed Project Budget Information (\$1000)

	2015	2016	2017	2018	2019	2020	2021	Total
USACE	2,236	4,473	4,473	8,946	8,946	6,709	8,946	44,728
Tribe	2,236	4,473	4,473	8,946	8,946	6,709	8,946	44,728
Total	4,473	8,946	8,946	17,891	17,891	13,418	17,891	89,455

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_96.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Biscayne Bay Coastal Wetlands (FFF)(OPE)
Project ID: 1410 (CERP Project # WBS 28)
Lead Agency: USACE / SFWMD
Authority: Not authorized.
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Acres of restored wetlands

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in July 2006. The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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. The component Biscayne Bay Coastal Canals as modeled in D-13R and the Critical Project on the L-31E Flowway Redistribution are smaller components of the Biscayne Bay Coastal Wetlands feature. The purpose of this feature is to rehydrate wetlands and reduce point source discharge to Biscayne Bay.

The project will capture, treat, and redistribute freshwater runoff from the watershed into Biscayne Bay, creating more natural water deliveries, expanding spatial extent and connectivity of coastal wetlands, and providing improved recreational opportunities in Biscayne Bay and adjacent wetlands. The proposed project will replace lost overland flow and partially compensate for the reduction in groundwater seepage by redistributing, through a spreader system, available surface water entering the area from regional canals. The proposed redistribution of freshwater flow across a broad front is expected to restore or enhance freshwater wetlands, tidal wetlands, and near shore bay habitat. Diversion of canal discharges into coastal wetlands is expected not only to reestablish productive nursery habitat all along the shoreline but also to reduce the abrupt freshwater discharges that are physiologically stressful to fish and benthic invertebrates in the bay near canal outlets.

Target freshwater flows for Biscayne Bay and the wetlands within the redistribution system are based upon the quality, quantity, timing and distribution of flows needed to provide and maintain sustainable biological communities in Biscayne Bay, Biscayne National Park and the coastal wetlands. Potential sources of water for providing freshwater flows to Biscayne Bay will be identified and evaluated to determine their ability to provide the target flows.

Currently, the project is designed to expand and restore the wetlands adjacent to Biscayne Bay in Miami-Dade County and help to restore the ecological health of Biscayne National Park. Phase 1 of the project consists of the design and construction of two essential components, Deering Estate Flow-way and Cutler Ridge Wetlands, and will restore the quantity, quality, timing, and distribution of freshwater to Biscayne Bay and Biscayne National Park. It will also improve salinity distribution near the shoreline, which will reestablish productive nursery habitat for shrimp and shellfish.

The SFWMD, through its Acceler8 initiative, is advancing the design and construction of Phase 1. This project is further described on the following pages.

Cost: \$386,856,000

Project Schedule:

Phase 1 is scheduled to complete construction in 2008.
 Phase 2 is scheduled to complete construction in Band 2 (2010 – 2015).

Phase 1 & 2	2004	2005	2006	2007	2008	2009	2010	2011
PIR/Plans & Specs								
Real Estate								
Construction (Ph 1)								
Construction (Ph 2)								

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	2011	Total
USACE	4,052	18,938	37,875	47,344	28,406	28,406	28,406	193,428
SFWMD	1,291	19,214	38,427	48,034	28,821	28,821	28,821	193,428
Total	5,343	38,151	76,303	95,378	57,227	57,227	57,227	386,856

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_28_biscayne_bay.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Current project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*

Program Name Infrastructure
Project Name: C&SF: CERP - Biscayne Bay Coastal Wetlands (FFF) (OPE) – **ACCELER8**
Project ID: 1410A (CERP Project # WBS 28)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Freshwater wetland, tidal wetland, near-shore habitat restoration, flood protection, recreation

Project Synopsis: This *Acceler8* project is a component of a larger project that will expand and restore the wetlands adjacent to Biscayne Bay in Miami-Dade County, enhancing the ecological health of Biscayne National Park. This project consists of the design and construction of two essential components - Deering Estates Flow-way and Cutler Ridge Wetlands and includes Spur Canal Extension, pump stations, seepage canals, spreader swales, levees and canals.

Total Estimated Project Cost: \$22,419,228

Scheduled Construction Start Date: Aug, 2007
Scheduled Project Completion Date: Dec, 2009

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$718,510	\$1,143,559	\$1,862,069

Real Estate Acquisition:**

Acres	Cost
938	\$14,020,000

Contact: Jorge Jaramillo, 561-242-5520, x4021

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Infrastructure
Project Name: C&SF: CERP - Caloosahatchee R. (C-43) Basin Aquifer Storage & Recovery – Pilot Project (D)
Project ID: 1411 (CERP Project # WBS 33)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (pilot project)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Report

A Pilot Project Design Report (PPDR) was completed in September 2004. Installation of exploratory wells has been completed. Congressional appropriations included in FY06 for installation and operational testing of the ASR Pilots. The project was refined during the Pilot Project Design Report to include providing information regarding the hydrogeological and geotechnical characteristics of the Hawthorn Aquifer.

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes Aquifer Storage and Recovery wells 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.

The CERP Caloosahatchee River ASR Pilot Project is located just west of LaBelle, along the Caloosahatchee River, on SFWMD-owned land in western Hendry County. The pilot project will include the construction of one five-mgd ASR well and associated monitoring wells and surface facilities. Its purpose is to evaluate and reduce the technical and regulatory uncertainties of implementing the full-scale Caloosahatchee ASR Project. The full-scale project includes the construction of up to 220 mgd of ASR capacity (approximately 44 ASR wells) and a surface water reservoir (impoundment). The full-scale system will store excess water from the Caloosahatchee River Basin when available (typically in the wet season) and release water into the Caloosahatchee River during dry periods.

Cost: \$7,898,000

Project Schedule:

Project is scheduled to complete construction in 2009.

	2002	2003	2004	2005	2006	2007	2008	2009
Feasibility & Design								
Construction								
Monitoring								

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	1,122	848	707	707	565	3,949
SFWMD	2,000	585	487	487	390	3,949
Total	3,122	1,433	1,194	1,194	955	7,898

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_33_cal_river_c43_asr_pilot.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
(904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Schedule information based on the *Master Implementation Sequencing Plan (MISP)*. Detailed budget information based on the final Pilot Project Design Report (PPDR). Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Diverting WCA 2B and WCA 3 Flows to Central Lake Belt Storage Area (YY) (S P1)
Project ID: 1412 (CERP Project # WBS 48)
Lead Agency: USACE / SFWMD
Authority: Not Authorized.
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Pumps, water control structures, canals, and canal improvements

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes diverting excess water from Water Conservation Area 2 [and 3] and into the L-37, L-33, and L-30 Borrow Canals, which run along the eastern boundaries of the Water Conservation Areas, and pumped into the Central Lake Belt Storage Area. Water supply deliveries will be pumped through a stormwater treatment area prior to discharge to the Everglades via the L-30 Borrow Canal and a reconfigured L-31N Borrow Canal. If available, deliveries will be directed to Biscayne Bay through the Snapper Creek Canal at Florida's Turnpike. A structure will be provided on the Snapper Creek Canal to provide regional system deliveries when water from the Central Lake Belt Storage Area is not available. *(Items in "[]" are included in the Central and Southern Florida Project Comprehensive Review Study description, but the feature was divided into two parts and thus these belong to the other part.)*

The purpose of the feature is to store excess water from Water Conservation Areas 2 [and 3] and provide environmental water supply deliveries to: (1) Northeast Shark River Slough, (2) Water Conservation Area 3B, and (3) to Biscayne Bay, in that order, if available.

Cost: \$539,423,000

Project Schedule:

This project is scheduled to complete construction in Band 4 (2020-2025).

YY & S P1	2013	2014	2015	2016	2017	2018	2018	2019	2020	2021
Planning & Design										
Real Estate										
Construction (S P1)										
Construction (YY)										

Detailed Project Budget Information (\$1000)

	Thru 2005	2013	2014	2015	2016	Balance to Complete 2017-2021	Total
USACE	284	13,471	13,471	13,471	26,943	202,071	269,712
SFWMD	0	13,486	13,486	13,486	26,971	202,284	269,712
Total	284	26,957	26,957	26,957	53,914	404,354	539,423

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_48_wca_2b.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Everglades Rain-Driven Operations (H)
Project ID: 1413
Lead Agency: USACE / SFWMD
Authority: No Congressional action is required
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: **Primary:** Other

Measurable Output(s): Revised Water Conservation Area regulation schedule

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) which includes 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. A plan for this will be developed following completion of the initial CERP update.

Cost: TBD

Project Schedule: TBD*

* Implement when appropriate as other facilities come on-line.

Detailed Project Budget Information

No budget information available, as project has not started.

Hyperlink: www.evergladesplan.org

Contact : USACE

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - L-31N (L-30) Seepage Management – Pilot Project (V)
Project ID: 1416 (CERP Project # WBS 36)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (pilot project)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Report and technology determination

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in August 2006. 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. This information will be used in the full scale seepage management project, which will reduce levee seepage flow across L-31N adjacent to Everglades National Park via a levee cutoff wall. Additionally, this 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.

After further study of the L-31 N site, it was determined that a seepage management feature located along L-31N would reduce some seepage but the L-3 N site is located within an area that may be modified under the CERP, which could render it less useful for long term effects. As a result, the team was tasked to review seepage management on the L-30 (levee).

The Jacksonville District is proposing to further study a seepage management feature located along a portion of the L-30 levee, north of U.S. Highway 41, in Miami-Dade County, Florida, that would allow testing of uncertainties relating to the constructability of a seepage barrier at a predetermined length and depth. In addition, a seepage management feature along the L-30 levee would help reduce seepage lost from Water Conservation Area 3B, which, in turn, will reduce water flowing farther south into the L-30/L-31N system. Field tests, seepage reports and historical data have independently shown the L-30 levee, north of U.S. Highway 41, as having a higher seepage rate than the L-31N. The pilot project monitoring and data gathering would be useful prior to recommending full-scale implementation.

The Pilot Project Design Report (PPDR) will focus on a seepage management feature along the L-30 site in lieu of the previous location along the L-31 N canal. The change in study area was endorsed at the October 2005 Quality Review Board meeting in Fort Lauderdale, Florida. As a follow up, the Jacksonville District prepared a memo to Headquarters through South Atlantic Division (SAD) to request official approval to prepare a PPDR for the L-30 site and to officially change the project name to L-30 Seepage Management Pilot Project.

Cost: \$11,569,000

Project Schedule:

This project is scheduled to complete construction in 2010.

	2002	2003	2004	2005	2006	2007	2008	2009	2010
PPDR/Plans & Specs									
Installation & Testing									
Monitoring									

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	Total
USACE	1,962	382	1,338	956	573	573	5,785
SFWMD	1,234	455	1,593	1,138	683	683	5,785
Total	3,196	837	2,931	2,093	1,256	1,256	11,569

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_36_l31n_seepage.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP – Lakebelt (In-Ground Reservoir) Technology – Pilot Project
Project ID: 1417 (CERP Project # WBS 35)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (pilot project)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Pilot Project Technical Data Report and test site

Several features recommend the use of areas where lime rock mining will have occurred. This project adheres to the original concept for this feature as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy). 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. This project was authorized in WRDA 2000 and has a completed Project Management Plan.

Cost: \$26,618,000

Project Schedule:

This project is scheduled to complete construction in Band 3 (2015-2020).

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
PPDR/ Plans & Specs											
Construction											
Monitoring											

Detailed Project Budget Information (\$1000)

	Thru 2005	2010	2011	2012	2013	2014	Balance to Complete 2015-2020	Total
USACE	1,387	596	596	596	596	596	8,942	13,309
SFWMD	532	639	639	639	639	639	9,583	13,309
Total	1,919	1,235	1,235	1,235	1,235	1,235	18,524	26,618

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_35_lake_belt_pilot.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Lake Okeechobee Aquifer Storage and Recovery – Pilot Project (GG)
Project ID: 1418 (CERP Project # WBS 32)
Lead Agency: USACE / SFWMD
Authority: WRDA 1999
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Report

This project was refined during the Pilot Project Design Report (PPDR) which was completed in September 2004. Additionally, exploratory wells were installed at sites around Lake Okeechobee to obtain the preliminary lithologic, geophysical, and hydrogeologic information. The results of this preliminary investigation were evaluated to confirm that these are viable sites for ASR purposes. These results were incorporated into the PPDR that includes all three pilot projects (Lake Okeechobee, Hillsboro, and Caloosahatchee River (C-43)). Installation and operation of the pump will start in 2006.

The pilot project is necessary to identify the most suitable sites for the aquifer storage and recovery (ASR) 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.

The CERP Lake Okeechobee ASR pilot project will initially consist of up to five ASR wells, each with an estimated capacity of five million gallons per day (mgd) per well. Three of the ASR wells will be located spatially around Lake Okeechobee to demonstrate ASR performance in geographically dispersed areas. A three-well cluster facility will also be installed; to demonstrate how multiple-well ASR systems perform. Monitoring wells and surface facilities will also be constructed at each of these systems. The wells will be used to recharge and recover surface water from the Lake and/or its tributaries. Extensive water quality characterization and pilot treatment testing will take place during the permitting and design phase. Once constructed, the Lake Okeechobee ASR pilot project systems will be cycle tested to evaluate their ability to achieve assumed water quality and volumetric levels of performance, and allow for recommendations to be made for facility expansion. Well sites are as follows:

- The Port Mayaca site includes the construction of three ASR wells and multiple monitoring wells.
- The Kissimmee site includes the construction of one ASR well and multiple monitoring wells.
- The Moore Haven site includes the construction of one ASR well and multiple monitoring wells.

Cost: \$36,429,000

Project Schedule:

This project is scheduled to complete construction in 2009.

	2001	2002	2003	2004	2005	2006	2007	2008	2009
PIR/Plans & Specs									
Construction									
Monitoring									

Detailed Project Budget Information (\$1,000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	4,057	4,247	4,247	2,831	2,831	18,215
SFWMD	4,169	4,214	4,214	2,809	2,809	18,215
Total	8,227	8,461	8,461	5,641	5,641	36,429

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_32_lake_o_asr_pilot.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
(904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Schedule information based on the *Master Implementation Sequencing Plan (MISP)*. Detailed budget information based on the Final Pilot Project Design Report (PPDR). Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Lake Okeechobee Regulation Schedule (F)
Project ID: 1419
Lead Agency: USACE / SFWMD
Authority: No Congressional action is required
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): New Lake Okeechobee regulation schedule

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in June 2006. 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.

It is anticipated that all flood control releases through the C-43 and C-44 Canals will be eliminated with the exception of emergency zone A. Zone A levels are expected to be similar to the levels that occur in the current regulation schedule Run 25, however, the number of times that the Lake is above zone A is expected to be dramatically reduced.

Currently, regulation schedule revisions are proposed in two phases - the first studies will occur through late 2006, with implementation in January 2007. The goal of this interim schedule revision is to operate Lake Okeechobee at lower pool elevation while meeting water supply requirements. The interim schedule revision will "bridge the gap" between 2006, and when the Comprehensive Everglades Restoration Plan (CERP) Band 1 projects and the Accelerate 8 projects are built.

The second phase studies will begin in 2007, and will be implemented in 2010. This second Regulation Schedule revision will consider the effects of the CERP Band 1 projects and the Accelerate 8 projects upon Lake Okeechobee. For both Regulation Schedule revisions, National Environmental Policy Act supplemental Environmental Impact Statements are anticipated.

Cost: TBD as schedule revisions are initiated

Project Schedule: TBD*

*Regulation Schedule revisited when appropriate as other facilities come on-line.

Hyperlink: www.evergladesplan.org

Contact: USACE

Source: Original project descriptions summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Modify Holey Land Wildlife Management Area Operation Plan (DD)
Project ID: 1420 (CERP Project # WBS 15)
Lead Agency: USACE / SFWMD
Authority: No Congressional action is required
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Modified operational plan for the Holey Land

This feature adheres to the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy). 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. This project is not currently authorized.

Cost: \$0

Project Schedule:

This project is scheduled for completion in Band 2 (2010-2015).

	2007	2008	2009	2010	2011
Operation Schedule					

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_15_modify_holey.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Modify Rotenberger Wildlife Management Area Operation Plan (EE)
Project ID: 1421(CERP Project # WBS 16)
Lead Agency: USACE / SFWMD
Authority: No Congressional action is required
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Modified Operational Plan for the Rotenberger Land

Modification to the current operating plan for the Rotenberger Wildlife Management Area will be made to implement rain-driven operations for this area. Water deliveries are made to the Rotenberger Area from Stormwater Treatment Area 5. 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. This project is not currently authorized.

Cost: \$0

Project Schedule:

This project is scheduled for completion in 2009.

	2007	2008	2009
Implement Regulation Schedule			

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_16_modify_rotenberger.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Operational Modification to Southern Portion of L-31N and C-111 (OO)
Project ID: 1422
Lead Agency: SFWMD / USACE
Authority: No Congressional action is required
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Modified operations of C-111 project

Modifications to the operations of the C-111 project, currently under construction, will be made to the southern portion of L-31N Borrow Canal and C-111. These operational modifications will be made to improve deliveries to Everglades National Park and decrease flood risk of adjacent agricultural areas in the Lower East Coast Service Area. The first part of the operational changes are being implemented under the Combined Structural and Operational Plan (CSOP) analysis. The balance of change will be implemented in coordination with CERP implementation.

Cost: \$0

Project Schedule:

Implement as part of C-111 project.

Detailed Budget:

Implement as part of C-111 project.

Hyperlink: <http://www.evergladesplan.org>

Contact: USACE

Program Name: Infrastructure
Project Name: C&SF: CERP - Hillsboro Aquifer Storage and Recovery (ASR) – Pilot Project (M)
Project ID: 1423 (CERP Project # WBS 34)
Lead Agency: USACE / SFWMD
Authority: WRDA 1999
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Report and optimum design

This project was refined during the Pilot Project Design Report (PPDR) which was completed in September 2004. The pilot project will address uncertainties associated with ASR technology that are proposed in the CERP. It will be designed to determine the feasibility and evaluate technical and regulatory uncertainties, as well as optimum design, of a facility prior to embarking upon full scale implementation of the ASR facilities at the Western Hillsboro site, and other sites in the lower east coast region. The formulation of alternative pilot project designs is intended to address cost effective means to address these uncertainties. Alternate sites are now being investigated due to physical problems with the planned locations.

The CERP Hillsboro ASR Pilot Project (Hillsboro Site 1) is located just south of the Loxahatchee National Wildlife Refuge (LNWR) and north of the Hillsboro Canal on a 1,660-acre tract of SFWMD-owned land in south-central Palm Beach County. The Hillsboro site includes the construction of one ASR well and several monitoring wells. The pilot project will include the construction of one five-mgd ASR well. Its purpose is to evaluate and reduce the technical and regulatory uncertainties of implementing the full-scale Hillsboro ASR Project, as described in the CERP. The full-scale Hillsboro project includes the construction of up to 150 mgd of ASR capacity (approximately 30 ASR wells) and a 1,660-acre surface water reservoir (impoundment). The full-scale system will store excess water from the Hillsboro Basin when available (typically in the wet season) and release water into the Hillsboro Canal to maintain canal stages during dry periods.

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.

Cost: \$9,395,000

Project Schedule:

This project is scheduled to complete construction in 2009.

	2001	2002	2003	2004	2005	2006	2007	2008	2009
PIR/Plans and Specs									
Construction									
Monitoring									

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	1,606	1,237	618	464	773	4,698
SFWMD	2,203	998	499	374	624	4,698
Total	3,809	2,234	1,117	838	1,397	9,395

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_34_hillsboro_asr_pilot.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
(904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Schedule information based on the *Master Implementation Sequencing Plan (MISP)*. Detailed budget information based on the Final Pilot Project Design Report (PPDR). Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: E&SF: Critical Projects - Seminole Big Cypress Reservation Water Conservation Plan
Project ID: 1425
Lead Agency: USACE / Seminole Tribe of Florida
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Construction of conveyance systems, major canal bypass structures, irrigation storage cells, and water resource areas to meet the 50 ppb phosphorous level goal of the Everglades Construction Project or more stringent performance levels as developed

The project is located on the Seminole Tribe Big Cypress Reservation in Hendry County, directly north of the Big Cypress National Preserve and west of Water Conservation Area 3A (WCA 3A). The Big Cypress Reservation is traversed by the L-28 and L-28I canals and the North and West Feeder canals. The originally proposed comprehensive watershed management system was outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and is designed to achieve environmental restoration on the Reservation, the Big Cypress Preserve, and the Central and Southern Everglades. In addition, the project will reduce flood damage and promote water conservation on the Reservation. The overall plan has been divided into east and west portions, each of which can provide independent benefits. Due to the legislated funding limits of the Critical Projects program, only the west portion of this project was nominated as a Critical Project. The Seminole Tribe has also requested the assistance of the Natural Resources Conservation Service (NRCS) to implement the eastern portion of the plan. In light of the uncertainty of the NRCS funding for the east portion and the potential that the west portion may not be funded through the Critical Projects program, the combined project is being recommended as an Other Project Element of the Comprehensive Plan to ensure the complete project will be implemented.

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: 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 (WRAs). The Tribe's WRAs 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) Re-water 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. Construction of the conveyance canal system is complete. Construction of the western-basin water management features is scheduled to begin in FY06.

Cost: \$52,249,000

Project Schedule:

Start Date: 1997
 Finish Date: 2008

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	Total
USACE	3,486	7,546	7,546	7,546	26,125
Tribe	15,702	3,474	3,474	3,474	26,125
Total	19,188	11,020	11,020	11,020	52,249

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Original Project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*. Detailed schedule and budget information from U.S. Army Corps of Engineers, Jacksonville District (CESAJ).

Program Name: Infrastructure
Project Name: Florida Bay and Florida Keys Feasibility Study (FB&FK FS)
Project ID: 1426
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Feasibility Report

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in July 2007. The original concept for this feature was outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy). 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 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 that 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.

The current FB&FK Feasibility Study (FS) will comprehensively examine the Florida Bay and Florida Keys marine environments, and the actions and land uses upstream, to determine the modifications that are needed to successfully restore water quality and ecological conditions of the Bay. The study may also include analyses of alternatives for restoration of the marine environment surrounding the Florida Keys, if there are positive impacts on Florida Bay. For example, additional tidal creek restoration projects (beyond those authorized in the Florida Keys Tidal Restoration Project) may be considered.

The study goal, developed by the Project Delivery Team (PDT) for the FB&FK FS, is: "Evaluate Florida Bay and its connections to the Everglades, the Gulf of Mexico and the Florida Keys marine ecosystem to determine the modifications that are needed to successfully restore water quality and ecological conditions of the Bay, while maintaining or improving these conditions in the Keys' marine ecosystem."

Likewise, the PDT has determined that the objectives of the FB&FK FS are:

- Determine the quantity, timing, distribution and quality of freshwater that should flow to Florida Bay and provide recommendations for any modifications of water deliveries that will result from current CERP plans for Everglades wetlands.
- Determine the nutrient sources and loads to the study area, evaluate their impacts to reef and Bay ecosystems, and recommend restoration targets and implementation plans.
- Establish water quality and ecological performance measures.
- Evaluate the effects of restoring historical connectivity between Florida Bay and the Atlantic Ocean.
- Evaluate management alternatives in a holistic manner employing, where necessary, hydrodynamic, water quality and ecological models.

Cost: \$6,350,000

Project Schedule:

Start Date: 2001
Finish Date: 2012

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Feasibility Study												

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	2011	2012	Total
USACE	1,493	240	240	240	240	240	240	240	3,175
SFWMD-WIK	2,391	112	112	112	112	112	112	112	3,175
Total	3,884	352	352	352	352	352	352	352	6,350

Hyperlink: http://www.evergladesplan.org/pm/studies/fl_bay.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Sources: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*. Current Description summarized from the *Florida Bay / Florida Keys Feasibility Study Project Management Plan (PMP), Feb 2002 – Final*. Detailed schedule and budget information based on the *Master Implementation Sequencing Plan (MISP)*.

Program Name: Feasibility Studies Infrastructure
Project Name: Southwest Florida Feasibility Study
Project ID: 1431 (WBS 516)
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Feasibility Report

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in May 2007. The Caloosahatchee River is the only portion of the C&SF Project that lies in southwest Florida. However, there are additional water resources problems and opportunities in southwest Florida that require studies that are beyond the scope of the Comprehensive Plan. The Southwest Florida 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.

The SWFFS will investigate water resources problems and opportunities in all or parts of Lee, Collier, Hendry, Glades, Charlotte, and Monroe counties. The purpose of the study is to determine the feasibility of making structural, non-structural, and operational modifications and improvements in the region in the interest of environmental quality, water supply, and other purposes. The SWFFS will develop a comprehensive regional plan of action to address the health of aquatic and upland ecosystems; the quantity, quality, timing, and distribution of water flows; agricultural, environmental, and urban water supply; the sustainability of economic and natural resources; flood protection; fish and wildlife; biological diversity; and natural habitat.

Because the southwest Florida area was included as a part of the Restudy reconnaissance and feasibility studies, the SWFFS was initiated in August 1999 with a scoping phase instead of another reconnaissance phase. The purpose of the scoping phase was to further identify water resources problems and opportunities, gather existing data, develop the scope and cost of the feasibility study, and execute a study cost-share agreement between the Corps and the South Florida Water Management District (SFWMD).

The SWFFS study area covers approximately 4,300 square miles including all of Lee County, most of Collier and Hendry counties, and portions of Charlotte, Glades, and Monroe counties. There are 11 municipalities in the study area: Bonita Springs, Cape Coral, Clewiston, Everglades City, Fort Myers, Fort Myers Beach, LaBelle, Marco Island, Moore Haven, Naples, and Sanibel. In addition, the study area includes the unincorporated areas of Lehigh Acres, Golden Gate Estates, and Immokalee. The project boundary corresponds to that of the South Florida Water Management District (SFWMD) Lower West Coast Water Supply Plan (LWCWSP) Planning Area.

Cost: \$12,000,000

Project Schedule:

Start Date: 2001
 Finish Date: 2009

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Feasibility Study									

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	4,759	310	310	310	310	6,000
SFWMD-CASH	976	535	535	535	535	3,114
SFWMD-WIK	2,886					2,886
Total	8,621	845	845	845	845	12,000

Hyperlink: <http://www.evergladesplan.org/pm/studies/swfl.cfm>

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget information based on the approved Project Management Plan (PMP). Schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress*. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Restoration Program: Hydrological Restoration
Project Name: WCA-2A Hydropattern Restoration
Project ID: 1432
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

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

Project Synopsis: WCA-2A Hydropattern Restoration Works originally consisted of a modification of the L-6 levee and borrow canal to result in an approximation of sheet flow into Water Conservation Area-2A. This modification of the levee was to extend from G-335, the outflow pump station for STA-2, northeasterly to the STA-2 inflow canal from S-6, a total length of approximately 39,750 feet. The sheet flow approximation project was partially implemented and the following changes were made to the original 1994 Conceptual Design, Everglades Protection Project. G-338 is situated immediately downstream of the S-6 Pump Station, discharging from the STA-2 Supply Canal to the Hillsboro Canal in WCA-1. The overflow weirs originally intended for passing STA-2 discharges across the East L-6 to WCA-2A have been replaced with un-gated box culverts, and the number of structures and their locations was modified from the original design. The plan for the remainder of the sheet flow approximation project includes the construction of six additional culverts through the East Levee L-6 over an approximate 18,000 ft.

*** Cost (Estimate):**

Total:	\$ 6,067,016
(1) Project Development:	\$ 950,423
Land Acquisition:	\$ -
(2) Implementation:	\$ 4,764,266
Operations and Maintenance:	\$ 352,327

Project Schedule:

Expected Completion Date: October 2012

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$4,942,179	\$23,861	\$24,576	\$25,320	\$26,080	\$1,025,000	\$6,067,016
Tribal							
Local							
Other							
Total	\$4,942,179	\$23,861	\$24,576	\$25,320	\$26,080	\$1,025,000	\$6,067,016

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.
- (3) Project Development includes Design Phase [contracts & staff costs] costs.
- (4) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration
Project Name: West WCA-3A Hydropattern Restoration
Project ID: 1433
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

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 is discharges from the Rotenberger Wildlife Management Area and the outflows from STA-5 via the pump station G-404 and STA-6. The original plan for this project as shown in the 1994 Conceptual Design, Everglades Protection Project, was revised and is now addressed in the 2003 Long-Term Plan. The one remaining element of the West WCA-3A Hydropattern Restoration Project is the degradation (removal to existing grade) of the South Levee L-4 generally between the Miami Canal and the L-3 Canal Extension.

*** Cost (Estimate):**

Total:	\$ 11,843,375
(1) Project Development:	\$ 51,492
Land Acquisition:	\$ -
(2) Implementation:	\$ 8,377,931
Operations and Maintenance:	\$ 3,413,952

Project Schedule:

Expected Completion Date: October 2012

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 94-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$7,402,471	\$239,697	\$246,879	\$254,349	\$261,979	\$3,438,000	\$11,843,375
Tribal							
Local							
Other							
Total	\$7,402,471	\$239,697	\$246,879	\$254,349	\$261,979	\$3,438,000	\$11,843,375

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

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

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Infrastructure
Project Name: C&SF: CERP - Flows to Eastern Water Conservation Area (EEE)
Project ID: 1434 (CERP Project # WBS 23)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Improved hydropattern in Eastern Water Conservation Area

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and includes pumps and water control structures. Excess water from Water Conservation Areas 2 and 3 will be diverted into the L-37, L-33, and L-30 Borrow Canals, which run along the eastern boundaries of the Water Conservation Areas, and pumped into the Central Lake Belt Storage Area.

The purpose of the feature is to store excess water from Water Conservation Areas 2 and 3 and provide environmental water supply deliveries to: (1) Northeast Shark River Slough, (2) Water Conservation Area 3B, and (3) to Biscayne Bay, in that order, if available.

Cost: \$8,019,000

Project Schedule:

Project is scheduled to complete construction in Band 3 (2015 – 2020).

	2011	2012	2013	2014	2015	2016	2017
PIR/Plans & Specs							
Construction							

Detailed Project Budget Information (\$1000)

	2011	2012	2013	2014	2015	2016	2017	Total
USACE	80	120	200	401	882	1,123	1,203	4,010
SFWMD	80	120	200	401	882	1,123	1,203	4,010
Total	160	241	401	802	1,764	2,245	2,406	8,019

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_23_flow_eastern.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - C-4 Control Structures (T)
Project ID: 1435 (CERP Project # WBS 46)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Wellfield recharge; seepage reduction

This feature adheres to the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and includes two water control structures located in the C-4 Canal in Miami-Dade County. 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 a higher elevation to reduce seepage losses from the Pennsuco Wetlands and areas to the west of the structure. The purpose of this feature will be to enhance wetland hydroperiods and enhance recharge to Miami-Dade County's Northwest Wellfield.

Cost: \$2,804,000

Project Schedule:

Project is scheduled to complete construction in Band 2 (2010-2015).

	2008	2009	2010	2011	2012	2013
PIR/Plans & Specs						
Real Estate						
Construction						

Detailed Project Budget Information (\$1000)

	Thru 2005	2008	2009	2010	2011	2012	2013	Total
USACE	92	26	210	210	210	393	262	1,402
SFWMD	21	28	221	221	221	414	276	1,402
Total	113	54	431	431	431	807	538	2,804

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_46_c4_structure.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Restoration Program: Hydrology
Project Name: LOFT (identified under LOER)- Permanent Forward Pumps
Project ID: 1436
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: Other (Hydrology)

Measurable Output(s): Forward pumps to provide water supply

Project Synopsis: The USACE has initiated a process for revising the Lake Okeechobee regulation schedule. The new regulation schedule is expected to result in lower lake levels which have the potential to affect water supply. This potential exists because constraints occur on gravity water supply releases when the Lake reaches 10.5 ft NGVD or less. Therefore, forward pumps are being designed to provide water supply deliveries when Lake levels are between 10.5-7.5 ft NGVD.

Cost:
 Total \$100,000,000

Project Schedule:

Start Date: January 2006
 Finish Date: February 2010

	2005	2006	2007	2008	2009	2010
Project Design						
Construction and Installation						
Operations and Monitoring						

Detailed Project Budget Information (\$1000)

	2006	2007	2008	2009	2010	Balance to complete	Total
Federal EPA							
State SFWMD	1,800	8,200	30,000	60,000			100,000
Tribal							
Local							
Other							
Total							100,000

Hyperlink: N/A

Contact: Temperince Morgan (561) 682-6534

Program Name: Infrastructure
Project Name: C&SF: CERP - Big Cypress/L-28 Interceptor Modifications (CCC)
Project ID: 1500 (CERP Project # WBS 10)
Lead Agency: USACE / SFWMD
Authority: Not Authorized.
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 1,900 acres STA; levee degrading and canal filling

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and 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. 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.

Upstream flows entering the West and North Feeder Canals will be routed through two stormwater treatment areas to be located at the upstream ends of the canals. Sheetflow will be reestablished south of the West Feeder Canal by a system to be developed consistent with the Seminole Tribe’s Conceptual Water Conservation System master plan. After conversion to a pump station, S-190 will also push flows south into the L-28 Interceptor Canal where sheetflow to the southwest will also be reestablished with backfilling of and degradation of the southwest levee of the canal.

The purpose of this feature is to reestablish sheetflow from the West Feeder Canal across the Big Cypress Reservation and into the Big Cypress National Preserve, maintain flood protection on Seminole Tribal lands, and ensure that inflows to the North and West Feeder Canals meet applicable water quality standards. Consistency with the Seminole Tribe’s Conceptual Water Conservation System master plan will be maintained.

Cost: \$51,385,000

Project Schedule:

This project is scheduled to complete construction in Band 4 (2020-2025).

	2015	2016	2017	2018	2019	2020	2021	2022
Planning & Design								
Real Estate								
Construction								

Detailed Project Budget Information (\$1000)

	2015	2016	2017	2018	2019	2020	2021	2022	Total
USACE	514	771	2,569	2,569	2,569	5,139	5,139	6,423	25,693
SFWMD	514	771	2,569	2,569	2,569	5,139	5,139	6,423	25,693
Total	1,028	1,542	5,139	5,139	5,139	10,277	10,277	12,846	51,385

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_10_big_cypress.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP – Broward County WPA - C-9 Stormwater Treatment Area/ Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O)
Project ID: 1501 (CERP Project # WBS 45)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (initially authorized)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B.1 **Secondary:**1.A.1, 2.A.3

Measurable Output(s): 3,500 acre impoundment ,13,280 ac-ft total storage; 4,032 acres of natural area

This project contains three of the ten Initially Authorized Projects identified in the Water Resources Development Act (WRDA) of 2000: C-9 Impoundment, C-11 Impoundment, and WCA 3A/3B Levee Seepage Management. As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan was identified in January 2005. A draft Project Implementation Report (PIR) was completed and is ready for review. The project was refined during the Project Implementation Report Process. The original concept for these features outlined in the *Central and Southern Florida Project Comprehensive Review Study (Restudy)* 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 the water level fluctuating up to four feet above grade. Detailed design of this feature will address appropriate pollution load reduction targets necessary to protect receiving waters. Runoff in the western C-11 Canal Basin that was previously backpumped into Water Conservation Area 3A through the S-9 pump station will be diverted into the C-11 Impoundment and then into either the North Lake Belt Storage Area, the C-9 Stormwater Treatment Area/Impoundment, or Water Conservation Area 3A after treatment, as applicable.

Currently, the C-9 Stormwater Treatment Area (STA)/Impoundment feature includes canals, levees, water control structures and a STA/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 STA/impoundment assumed 2,500 acres with the water level fluctuating up to four feet above grade. 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.

The Western C-11 Diversion Impoundment and Canal and Water Conservation Areas 3A and 3B Levee Seepage Management feature includes a 4,032 acre natural area, canals, levees, water control structures, and an impoundment with a total storage capacity of 6,400 acre-feet located in western Broward County. The initial design of the impoundment assumed 1,600 acres with water levels fluctuating up to 4 feet above grade. 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.

The final size, depth and configuration of these facilities were determined through more detailed planning and design completed as a part of the Draft Water Preserve Areas Feasibility Study and as part of the draft PIR. Detailed design of these features will address pollution load reduction targets necessary to protect receiving waters.

The SFWMD, through its Acceler8 initiative, is advancing the design and construction of the project. This project is further described on the following pages.

Cost: \$408,348,000

Project Schedule:

This project is scheduled to complete construction in 2009.

WCA 3A/B Seepage Mgmt	2004	2005	2006	2007	2008
PIR/ Plans & Specs					
Real Estate					
Construction					

C-9 & C-11 Impoundments	2004	2005	2006	2007	2008	2009
PIR/ Plans & Specs						
Real Estate						
Construction						

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	2,515	64,531	56,465	40,332	40,332	204,174
SFWMD	737	65,100	56,962	40,687	40,687	204,174
Total	3,252	129,631	113,427	81,019	81,019	408,348

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_45_broward_wpa.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: Water Conservation Areas 3A and 3B Levee Seepage Management (O)
Project ID: **Initially Authorized Project**
Lead Agency: USACE / SFWMD
Authority: WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 6,400 ac-ft. of treatment and storage capacity

The current total estimated cost for this Initially Authorized Project at October 2005 price level is \$136,904,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the Broward County WPA project (Project ID 1501; CERP Project # WBS 45).**

Program Name: Infrastructure
Project Name: Western C-11 Diversion Impoundment and Canal (Q)
Project ID: **Initially Authorized Project**
Lead Agency: USACE / SFWMD
Authority: WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 1,850 acres total impoundment

The current total estimated cost for this Initially Authorized Project at October 2005 price level is \$167,206,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the Broward County WPA project (Project ID 1501; CERP Project # WBS 45).**

Program Name: Infrastructure
Project Name: C-9 Stormwater Treatment Area/ Impoundment (R)
Project ID: **Initially Authorized Project**
Lead Agency: USACE / SFWMD
Authority: WRDA 2000
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 1,650 acres total impoundment

The current total estimated cost for this Initially Authorized Project at October 2005 price level is \$120,139,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the Broward County WPA project (Project ID 1501; CERP Project # WBS 45).**

Program Name: Infrastructure
Project Name: C&SF: CERP – Broward County WPA - C-9 Stormwater Treatment Area/ Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O) – **ACCELER8 project relabeled as 3A/3B Seepage Management Area (SMA), C-11 Impoundment and C-9 Impoundment**
Project ID: 1501A (CERP Project # WBS 45)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): (These Acceler8 measurable outputs are part of the overall project total.)

3A/3B SMA – 4,312 acres improved hydroperiod wetlands

C-11 Impoundment – 1,490 acres Storage Area, S-9 Diversion Storage

C-9 Impoundment – 1,650 acres Storage Area, S-9 Diversion Storage

Project Synopsis: This *Acceler8* project consists of three components of a series of five project components located adjacent to the Everglades Water Conservation Areas (WCAs) in Palm Beach, Broward and Miami-Dade counties which make up the Water Preserve Areas Project (Site 1 Impoundment, C-9 Impoundment, C-11 Impoundment, Acme Basin B Discharge and 3A/3B Seepage Management Area).

These Broward County Water Preserve Area (BCWPA) project components include:

3A/3B Seepage Management Area – canal widening; levees, water control structures; decontamination containment; levee protection system with seepage control pump stations, bridges, and culverts

C-11 Impoundment – embankment; inflow pump station; spillways; seepage collection system and pump station

C-9 Impoundment – embankment; inflow pump station; spillways; seepage collection system and pump station; and water control structure

Total Estimated Construction Cost (based on Draft PIR): 3A/3B SMA - \$53.1M, C-11 Impoundment - \$88.5M, C-9 Impoundment - \$62.6M

Scheduled Construction Start Date:

3A/3B SMA – Aug, 2006

C-11 Impoundment – Aug, 2006

C-9 Impoundment – Aug, 2006

Scheduled Project Completion Date:

3A/3B SMA - Dec, 2009

C-11 Impoundment – Dec, 2009

C-9 Impoundment – Dec, 2009

3A/3B SMA:

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$114,951	\$1,062,671	\$1,177,622

C-11 Impoundment:

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$158,086	\$824,398	\$982,484

C-9 Impoundment:

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$200,184	\$406,070	\$606,254

Real Estate Acquisition:**

Acres	Cost
6,551	\$232,756,178

Contact: Mike Hind, 561-242-5520, x4033

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Infrastructure
Project Name: C&SF: CERP - Miccosukee Tribe Water Management Plan (OPE)
Project ID: 1502 (CERP Project # WBS 90)
Lead Agency: USACE / Miccosukee Tribe
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 900-acre constructed wetland

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and includes construction of a 900-acre wetland retention/detention area on the Miccosukee Tribe's Alligator Alley Reservation. The feature also includes a pump station, levees, trenches and culverts to create the inflow and outflow facilities for the retention/detention area. The purpose of this feature is to provide water storage capacity and water quality enhancement for tribal reservation waters which discharge from tribal lands and downstream into the Everglades Protection Area.

Cost: \$29,036,000

Project Schedule:

This project is scheduled to complete construction in Band 3 (2015-2020).

	2010	2011	2012	2013	2014	2015	2016
Water Management Plan							

Detailed Project Budget Information (\$1000)

	2010	2011	2012	2013	2014	2015	2016	Total
USACE	2,074	2,074	2,074	2,074	2,074	2,074	2,074	14,518
Tribe	2,074	2,074	2,074	2,074	2,074	2,074	2,074	14,518
Total	4,148	4,148	4,148	4,148	4,148	4,148	4,148	29,036

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_90_miccosukee.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - North Palm Beach County Part 1 (X, Y, GGG, K P1, OPE)
Project ID: 1503 (CERP Project # WBS 17)
Lead Agency: USACE / SFWMD
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.B.1

Secondary: 1.A.1

Measurable Output(s): 1,260 acre reservoir (48,000 ac-ft); 1,150 acres of STA

This projects elements were listed separately in the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) but have since been combined into one project. The purpose of the following features is to increase water supplies to the West Palm Beach Water Catchment Area and Loxahatchee Slough by capturing and storing excess flows currently discharged to the Lake Worth Lagoon. Excess Canal water will be backpumped through existing and proposed water control structures and canals to the stormwater treatment areas which will provide water quality treatment prior to discharge into the West Palm Beach Water Catchment Area.

a) Water Preserve Areas / L-8 Basin (K and GGG):

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, 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.

b) C-17 Backpumping and Treatment:

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.

c) C-51 Backpumping and Treatment:

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 four feet above grade.

d) Lake Worth Lagoon Restoration (OPE):

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.

e) Pal-Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration (OPE):

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 PIR will evaluate whether the L-8 Reservoir is a necessary part of the North Palm Beach County – Part 1 Project, however, early information suggests that its inclusion may be beneficial.

The C-51 and L-8 Basin Reservoir Phase 1 (Palm Beach Aggregates) portion of the projects is being designed and constructed through a state initiative, which will be implemented earlier than currently scheduled. The construction of up to 47,000 acre-feet of storage with associated inflow and pumping infrastructure is scheduled to be complete in 2008, resulting in time savings of approximately six years over the conceptual schedule outlined in the Plan. By utilizing a phased approach to the construction, approximately 18,000 acre feet of discharge capacity has been made available for interim water management benefits in the L-8 Basin area and this capacity will increase every year until completion.

Originally the objectives were discussed in relation to the six CERP separable elements included in the study area. During the course of the plan formulation process, the project focus evolved away from the separable elements toward five study subareas. Following extensive PDT discussion of these objectives, the following were established:

- **L-8 and Associated Basins (C-18 Basin)**
 - Capture and store excess surface water that would be lost to tide to Lake Worth Lagoon through S-155, or to the Loxahatchee River Estuary through S-46.
 - Optimize quantity, quality, timing and delivery of surface water to/from areas including: Corbett Wildlife Management Area, Grassy Waters Preserve, Loxahatchee Slough, and Loxahatchee River to achieve ecological and water supply enhancement purposes.
 - Minimize damaging slug stormwater releases to downstream receiving water bodies.
 - Maintain or enhance the current level of flood protection in the L-8 Basin.
- **Pal Mar/Cypress Creek and Associated Basins Surrounding the Loxahatchee River (Pal Mar/Loxahatchee)**
 - Capture and store excess surface waters, and use it to increase discharge to and base flow in the Northwest Fork of the Loxahatchee River during periods of insufficient flow and lowered groundwater levels.
 - Reduce peak discharges to the Loxahatchee Estuary through the Southwest Fork of the Loxahatchee River through the S-46 water control structure.
 - Restore freshwater forested wetlands in the Loxahatchee River closer to 1940's conditions (consistent with FDEP vision for river restoration).
 - Establish and preserve a continuous greenway system that to improves wildlife corridor and habitat values and links up with the regional greenway system.
 - Provide or improve hydrologic connections within the contiguous greenway and the regional water management system to increase water management options for maintaining or enhancing the existing natural areas (i.e., pine flatwoods, wetlands and other natural habitats).
- **C-51 Basin**
 Capture, store, and treat excess surface waters and supplement water deliveries to areas including: Grassy Waters Preserve or adjacent wetlands, Loxahatchee Slough, and/or Loxahatchee River to achieve ecological and water supply enhancement purposes.
- **C-17 Basin**
 Capture, store, and treat excess surface waters from the upstream reaches of the C-17 Basin and supplement water deliveries to areas including: Grassy Waters Preserve or adjacent wetlands, Loxahatchee Slough, and/or Loxahatchee River to achieve ecological and water supply enhancement purposes.
- **Lake Worth Lagoon Near the S-155 Discharge**
 - Protect and improve Lake Worth Lagoon water quality, and improve aquatic conditions to enhance benthic and sea grass communities.
 - Reduce stormwater discharges to the Lake Worth Lagoon through the S-155 water control structure.
 - Reduce adverse impacts of accumulated undesired sediments in the Lagoon.
 - Reduce sediment loading to the Lagoon through S-155.
 - Establish a more stable salinity regime within the Lake Worth Lagoon restoration area, as the area is defined in the *Central and Southern Florida Project Comprehensive Review Study*.

Cost: \$533,161,000

Project Schedule:

C-51 & L-8 Phase 1 (PBA) is scheduled to complete construction in 2008.
 LWL, Pal-Mar/Corbett, X, Y, K P1 is scheduled to complete construction in Band 2 (2010 – 2015).
 GGG is scheduled to complete construction in Band 3 (2015-2020).

C-51 and L-8 Phase 1 (PBA)	2003	2004	2005	2006	2007	2008
Construction						

LWL	2003	2004	2005	2006	2007	2008	2009	2010
PIR/Plans and Specs								
Real Estate								
Construction								

Pal-Mar/Corbett	2003	2004	2005	2006	2007	2008	2009	2010	2011
PIR/Plans and Specs									
Real Estate									
Construction									

C-17 (X) & C-51 (Y)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
PIR/Plans and Specs										
Real Estate										
Construction										

L-8 (K P1)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
PIR/Plans and Specs											
Real Estate											
Construction											

C-51 and L-8 (GGG)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
PIR/Plans and Specs													
Real Estate													
Construction (GGG)													

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	Balance to Complete 2009-2015	Total
USACE	3,112	13,173	52,694	52,694	144,908	266,581
SFWMD	5,121	13,073	52,292	52,292	143,803	266,581
Total	8,233	26,246	104,986	104,986	288,710	533,161

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_17_npbcr1.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Caloosahatchee Backpumping with Stormwater Treatment (DDD)
Project ID: 1505 (CERP Project # WBS 06)
Lead Agency: USACE / SFWMD
Authority: Not authorized.
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 5,000 acre STA with a total capacity of 20,000 acre-feet

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and 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 purpose of this feature is to capture excess C-43 Basin runoff, which will be used to augment regional system water supply. The feature operates after estuary and agricultural/urban demands have been met in the basin and when water levels in the C-43 storage reservoir exceed 6.5 feet above grade. Lake Okeechobee must also be considered to have available storage. When these conditions are met, a series of pump stations will back pump excess water from the reservoir and the C-43 Basin to Lake Okeechobee after treatment through a stormwater treatment area.

Cost: \$99,664,000

Project Schedule:

Project is scheduled to complete construction in Band 3 (2015 – 2020).

	2011	2012	2013	2014	2015	2016	2017	2018
PIR/ Plans & Specs								
Real Estate								
Construction								

Detailed Project Budget Information (\$1000)

	2011	2012	2013	2014	Balance to Complete 2015-2018	Total
USACE	6,229	6,229	6,229	6,229	24,916	49,832
SFWMD	6,229	6,229	6,229	6,229	24,916	49,832
Total	12,458	12,458	12,458	12,458	49,832	99,664

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_06_cal_backpumping.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure

Project Name: E&SF: Critical Projects - Lake Okeechobee Water Retention/Phosphorous Removal
Project ID: 1506
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 1.B. 1

Measurable Output(s): Two stormwater treatment areas with 940 acres

This project reestablishes wetlands currently drained for agriculture. It includes construction of two stormwater treatment areas, which will reduce phosphorous loading to Lake Okeechobee. As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) was identified in 1998. Construction is underway.

This project focuses on specific land parcels (project elements) located within four key basins of the Lake Okeechobee watershed. These four basins are the lower Kissimmee River basins (S-65D Basin, S-65E Basin, and S-154 Basin) and the Taylor Creek-Nubbin Slough basin (S-191). Wetlands account for between 18 and 25 percent of the land classification in these basins (based on data from US Fish and Wildlife Service 1990 National Wetlands Inventory); however, approximately 37 percent of these wetlands have been ditched to drain the land for agriculture (i.e., improved pasture). Many of these wetlands were isolated depressions that once functioned as small water retention areas in the landscape. Others were more expansive and experienced drying from the regional drainage system. The current system causes the accelerated loss of water from the watershed as surface water runoff, which is rapidly transported to the tributary system that drains into Lake Okeechobee. The loss of these isolated wetlands has resulted in various environmental impacts. It has contributed to rapid rises in the stage of Lake Okeechobee resulting in the need for damaging freshwater discharges to the estuaries. There has also been a loss of the water quality treatment function that used to result from retaining water for short periods of time in these wetlands, and the loss of wetland habitat for migratory birds and waterfowl. A two-pronged approach will be taken in this project. The first approach is to restore the hydrology of isolated wetlands by plugging the connection to drainage ditches and the second approach is diversion of the collector canal flows to adjacent wetlands to attenuate peak flows and retain phosphorus in Reservoir-Assisted Stormwater Treatment Areas (RSTAs). The project will result in increased regional water storage north of Lake Okeechobee and restoration of wetland functions in the process. At the subbasin scale, land parcels that were once part of the tributary system's historic flood plain will be reflooded to add adjacent and/or isolated wetlands back to the landscape.

Cost: \$21,902,000

Project Schedule:

Start Date: 1997
 Finish Date: 2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Planning & Design	■	■	■	■	■	■	■			
Real Estate				■						
Construction								■	■	■

Detailed Project Budget Information (\$1,000)

	Thru 2005	2006	Total
USACE	8,808	2,143	10,951
SFWMD	9,595	1,356	10,951
Total	18,403	3,499	21,902

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: C&SF: STA-1E / C-51 West
Project ID: 1513
Lead Agency: USACE / SFWMD
Authority: FCA 1968, WRDA 1996
Funding Source: N/A - Completed

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): Acres of stormwater treatment area (target: 6,500 acres)

The project is located in Palm Beach County and runs east/west from Water Conservation Area 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. This project will operate in parallel with STA 1W to reduce the total phosphorus in runoff from both the C-51 West and S 5A basins prior to their discharge into Water Conservation Area 1. 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 floodwater detention area into a 6,500-acre STA. 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. Major project components include, but are not limited to, construction of the following: STA 1E works, pumping station S-319 and S-362, Canal C-51 enlargement, and gated structure S-155A. These works have been completed and transferred to the SFWMD. A field test of periphyton treatment is underway. Additional work included in the project is the design and construction of the L-40 improvements. This work is underway.

Cost: \$288,600,000

Project Schedule:

Start Date: 1994
 Finish Date: 2008

	Thru 2002	2003	2004	2005	2006	2007	2008
Planning & Design							
Real Estate							
Construction							
O&M							

Detailed Project Budget Information (\$1000):

	Thru 2005	2006	2007	2008	Balance to Complete 2009-2014	Total
USACE	202,429	987	987	987	6,910	212,300
SFWMD	29,090	121	121	121	847	30,300
DOI	46,000	0	0	0	0	46,000
Total	277,519	1,108	1,108	1,108	7,757	288,600

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Program Name: Infrastructure
Project Name: ACCELER8 project includes Agricultural Area (EAA) Stormwater Treatment Areas (STAs) Expansion
Project ID: 1514 A
Lead Agency: SFWMD
Authority:
Funding Source: State

Strategic Plan Goal(s) Addressed: Primary:, 1.B.1

Measurable Output(s): 5,960 acre STA expansion, water quality

Project Synopsis: This *Acceler8* project will expand the size and enhance the performance of existing stormwater treatment areas created as part of the Everglades Construction Project. These constructed wetlands naturally reduce stormwater runoff pollution levels flowing from the Everglades Agricultural Area before entering the Everglades. This project will expand STA-2 by an additional 2,000 acres; and expand STA-5 by an additional 2,560 acres. STA 6 will also be expanded with a 1,400 acre Section 2. Feasibility studies will determine optimal configuration of treatment works in the remaining land in both expansion areas.

Total Estimated Project Cost: \$226,698,774

Scheduled Construction Start Date: Sep, 2005
Scheduled Project Completion Date: Dec, 2010

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$3,975,288	\$18,738,766	\$22,714,054

Real Estate Acquisition:**

Acres	Cost
18,132	\$52,206,694

Contact: Maria Clemente, 561-242-5520, x4025

Program Name: Restoration Program: Water Quality and Hydrology
Project Name: LOFT (identified under LOER)- Lakeside Ranch STA
Project ID: 1515
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 2,700 acre STA

Project Synopsis: The state has initiated a comprehensive plan, entitled the Lake Okeechobee and Estuary Recovery Plan (LOER), consisting of a combination of capital projects and numerous interagency initiatives designed to provide measurable and meaningful improvements to water quality and water quantity in Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. The LOER plan identifies 5 construction projects north of Lake Okeechobee, including the Lakeside Ranch STA, as Lake Okeechobee Fast Track projects (LOFT). The Lakeside Ranch STA involves construction of a 2,700 acre STA at Lakeside Ranch which will provide approximately 39-48 metric ton phosphorus reduction.

Cost:
 Total \$52 million

Project Schedule:

Start Date: October 2005
 Finish Date: December 2009

	2005	2006	2007	2008	2009	2010
Project Design						
Construction and Installation						
Operations and Monitoring						

Detailed Project Budget Information (\$1000)

	2006	2007	2008	2009	2010	Balance to complete	Total
Federal EPA							
State SFWMD	1,336	1,745	15,212	27,005	6,808		52,105
Tribal							
Local							
Other							
Total							52,105

Hyperlink: N/A

Contact: Temperince Morgan (561) 682-6534

Program Name: Restoration Program: Water Quality and Hydrology
Project Name: LOFT (identified under LOER)- Nubbin Slough STA Expansion
Project ID: 1516
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 800 Acre STA, 14 metric tons phosphorus reduction

Project Synopsis: The state has initiated a comprehensive plan, entitled the Lake Okeechobee and Estuary Recovery Plan (LOER), consisting of a combination of capital projects and numerous interagency initiatives designed to provide measurable and meaningful improvements to water quality and water quantity in Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. The LOER plan identifies 5 construction projects north of Lake Okeechobee, including the Nubbin Slough STA Expansion, as Lake Okeechobee Fast Track projects (LOFT). The Nubbin Slough STA Expansion involves construction of an additional 800 acres of treatment wetland in conjunction with the original Nubbin Slough Critical Project. The completed Nubbin Slough STA project is expected to provide approximately a 14 metric ton phosphorus reduction.

Cost:
 Total \$21,112,000

Project Schedule:

Start Date: March 2005
 Finish Date: October 2007

	2005	2006	2007	2008	2009	2010
Project Design						
Construction and Installation						
Operations and Monitoring						

Detailed Project Budget Information (\$1000)

	2006	2007	2008	2009	2010	Balance to complete	Total
Federal EPA							
State SFWMD	1,000	20,112					21,112
Tribal							
Local							
Other							
Total							21,112

Hyperlink: N/A

Contact: Temperince Morgan (561) 682-6534

Program Name: Infrastructure
Project Name: C&SF: CERP - C-111 Spreader Canal (WW)
Project ID: 1517 (CERP Project # WBS 29)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (initially authorized)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.B.1

Measurable Output(s): 3,200 acres of STA; levees, canals, pumps, and water control structures

This project was one of the ten Initially Authorized Projects identified in WRDA 2000. As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in 2006. The Project Management Plan (PMP) for this project was approved in 2002. The purpose of this feature is to improve deliveries and enhance the connectivity and sheetflow in the Model Lands and Southern Glades areas, reduce wet season flows in C-111, and decrease potential flood risk in the lower south Miami-Dade County area.

This feature adheres to the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* and 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 feature also calls for filling in the southern reach of the C-111 Canal and removal of structures S-18C and S-197. The SFWMD, through its Acceler8 initiative, is advancing the design and construction of the project. This project is further described on the following pages.

Cost: \$117,595,000

Project Schedule:

Project is scheduled to complete construction in 2009.

	2002	2003	2004	2005	2006	2007	2008	2009
Planning & Design								
Real Estate								
Construction								

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	2,829	8,395	8,395	11,194	27,984	58,798
SFWMD	1,594	8,581	8,581	11,441	28,602	58,798
Total	4,423	16,976	16,976	22,634	56,586	117,595

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_29_c111.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C-111 Spreader Canal (WW)
Project ID: **Initially Authorized Project 1404** (CERP Project # WBS 29)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (initially authorized)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.B.1

Measurable Output(s): 3,200 acres of STA; levees, canals, pumps, and water control structures

The current total estimated cost for this Initially Authorized Project at October 2005 price level is \$129,363,000.

During the planning process, it was determined that certain Initially Authorized Projects and closely related CERP projects should be combined. Thus, the Initially Authorized Projects contained in this report will be de-authorized in order to be included as sub-features within larger CERP projects. **Therefore, this Initially Authorized Project and its associated costs are already included in the C-111 Spreader Canal project (Project ID 1404; CERP Project # WBS 29).**

Program Name: Infrastructure
Project Name: C&SF: CERP - C-111 Spreader Canal (WW) – **ACCELER8**
Project ID: 1507A (CERP Project # WBS 29)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: Primary: 1.B.1

Measurable Output(s): 3,200 acres of STA; Water quality enhancement feature, pump station, spreader canal, freshwater wetland, tidal wetland, near-shore habitat restoration, flood protection, recreation

Project Synopsis: This *Acceler8* project is a multi-purpose project that provides for ecosystem restoration of freshwater wetlands, tidal wetlands and near-shore habitat, maintenance of flood protection, and recreation opportunities. Located in south Miami-Dade County, project works include pump stations, culverts, spreader canal, water control structures and a stormwater treatment area. In addition, an existing canal and levee will be degraded to enhance sheetflow across the restored area.

Total Estimated Project Cost: \$46,822,983

Scheduled Construction Start Date: Nov, 2007
Scheduled Project Completion Date: Dec, 2010

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$1,050,630	\$1,234,342	\$2,284,972

Real Estate Acquisition:**

Acres	Cost
33.000	\$10,175,057

Contact: Jorge Jaramillo, 561-242-5520, x4021

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Infrastructure
Project Name: C&SF: CERP - Henderson Creek/Belle Meade Restoration (OPE)
Project ID: 1518 (CERP Project # WBS 93)
Lead Agency: USACE / FDEP
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 1.B.1

Measurable Output(s): 10-acre stormwater lake/marsh filtering system; four culverts; a swale and spreader system; hydrologic restoration

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes the combination of 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.

Changes in land use within the primary watersheds draining into Rookery Bay have been identified as the highest priority resource issue that threatens the long-term preservation of the research reserve's Estuarine resources. The purpose of this feature is to restore historic sheetflow to the estuary, treatment of stormwater, improvement of water quality and increase in habitat value and wetland functions. This project is currently on hold while discussions are held between the SFWMD and the FDEP on who should be the local sponsor.

Cost: \$5,761,000

Project Schedule:

This project is scheduled to complete construction in Band 2 (2010-2015).

	2004	2005	2006	2007	2008	2009	2010	2011
PIR/ Plans & Specs								
Real Estate								
Construction								

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	2011	Total
USACE	1,051	73	201	366	457	366	366	2,881
FDEP	0	115	317	576	720	576	576	2,881
Total	1,051	188	518	942	1,178	942	942	5,761

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_93_henderson.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Water Quality
Project name: Total Maximum Daily Load (TMDL) for South Florida
Project ID: 1600
Lead Agency: Florida Department of Environmental Protection
Authority: 403.067, F.S.
Funding Source:

Strategic Plan Goal(s) Addressed: 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 nonpoint 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 nonpoint 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: \$1,000,000/yr
 Project Development: \$1,000,000/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(1000s)

	Thru 2001	2002	2003	2004	2005	2006	2007	Total
Federal								
State	.400	.600	.600	.600	.600	.930	.930	4.6
Tribal								
Local								
Other								
Total	.400	.600	.600	.600	.600	.930	.930	4.6

Hyperlink: <http://www.dep.state.fl.us/water/tmdl/index.htm>

Contact: Florida Dept. of Environmental Protection

Program Name: Infrastructure
Project Name: Comprehensive Integrated Water Quality Feasibility Study
Project ID: 1701
Lead Agency: USACE / FDEP
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Feasibility Report

There is no comprehensive plan for achieving water quality restoration in south Florida which links together water quality restoration programs in the context of comprehensive planning for ecosystem restoration. It is also recognized that achieving all of the water quality goals for ecosystem restoration in all use-impaired water bodies within the study area will depend on actions outside the scope of the *Central and Southern Florida Project Comprehensive Review Study* (Restudy). However, the degree to which some of the existing water quality improvement programs have been implemented has been limited. To ensure that south Florida ecosystem restoration objectives are achieved, a Comprehensive Integrated Water Quality (CIWQ) Plan that links water quality restoration targets and remediation programs to the hydrologic restoration objectives of the recommended plan must be developed for the entire study area. In its July, 1998 Interim Report on the C&SF Project Restudy (GCSSF, 1998), the Governor's Commission recommended that a water quality implementation plan for the Restudy be developed with Florida Department of Environmental Protection as the lead agency, in cooperation with the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, South Florida Water Management District, the Seminole and Miccosukee Native American Tribes, and local governments. In order to resolve water quality problems on an ecosystem wide basis, the Governor's Commission recommended that a comprehensive water quality plan be initiated as a feature of the Restudy.

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. Although the scope of the feasibility study has not yet been developed, it is 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.

Currently, the CIWQ Feasibility Study (CIWQFS) will focus on the development of water quality targets in order to evaluate various management measures, which benefit the ecosystems of south Florida by improving water quality, protecting fish and wildlife and their associated habitat, managing wetland and associated upland ecosystems, and sustaining economic and natural resources. The CIWQFS will include an evaluation of existing and future water quality concerns/issues that will result in the development of water quality targets. The purpose of the CIWQFS is to develop a comprehensive plan that will present an array of recommendations to achieve and sustain water quality sufficient to support ecosystem restoration in south Florida.

The CIWQFS Plan will complement and be consistent with the goals and purposes of CERP. Accordingly, the study will:

1. Identify links between water quality and ecosystem functions.
2. Identify degraded ecosystems and quantify the types and sources of pollution.
3. Develop targets for ecosystem restoration.
4. Inventory and evaluate a suite of structural and other measures capable of improving water quality.
5. Integrate planned and existing water quality restoration and management programs with projects of the Everglades restoration plan and with other Federal, State, tribal, and local programs and projects.
6. Recommend additional programs and projects needed to achieve ecosystem restoration,
7. Identify appropriate sources of funding.

The study area encompasses approximately 17,500 square miles from Orlando to the Florida Reef Tract. The Kissimmee River, Lake Okeechobee and the Everglades are the dominant watersheds that connect a mosaic of wetlands, uplands, coastal areas, and marine areas. The study area includes all or part of the following 19 counties: Monroe, Miami-Dade, Broward, Collier, Palm Beach, Hendry, Indian River, Martin, St. Lucie, Brevard, Volusia, Glades, Lee, Charlotte, Highlands, Okeechobee, Osceola, Orange, and Polk. The project boundary corresponds to that of the SFWMD and the Indian River Lagoon (IRL) North Feasibility Study.

Cost: \$9,334,000

Project Schedule:

	2006	2007	2008	2009	2010
Planning & Design					

Detailed Project Budget Information (\$1000)

	Thru 2005	2010	2011	2012	2013	2014	Total
USACE	735	786	786	786	786	786	4,667
FDEP	0	933	933	933	933	933	4,667
Total	735	1,720	1,720	1,720	1,720	1,720	9,334

Hyperlink: <http://www.evergladesplan.org/pm/studies/ciwq.cfm>

Contact: USACE

Sources: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*. Current Description and Additional Information summarized from the *Comprehensive Integrated Water Quality Feasibility Study PMP*, February 2004. Detailed budget information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and updated to reflect current price levels in October 2005 dollars.

Program Name: Infrastructure
Project Name: Critical Projects - Lake Trafford
Project ID: 1702
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 Programmatic Authority
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Removal of 8.5 million cubic yards of organic material

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) provides for removal of 8.5 million cubic yards of organic material from the lake will improve water quality and reestablish native vegetation. SFWMD is constructing the project.

Cost: \$30,043,000

Project Schedule:

Start Date: 1999
 Finish Date: 2005

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

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	Total
USACE	1,602	0	1,602
SFWMD	16,696	11,745	28,441
Total	18,298	13,751	30,043

Contact: USACE

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study* and updated by U.S. Army Corps of Engineers, Jacksonville District (CESAJ). Detailed schedule and budget information from CESAJ.

Program Name: Infrastructure
Project Name: E&SF: Critical Projects - Western C-11 Water Quality Treatment
Project ID: 1703 (CERP Project # WBS 486)
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Gated spillway structure; pump station

This project will construct 500-cfs seepage pump station (S-9A) and spillway (S-381) in Canal C-11 to separate clean seepage from urban run-off waters and pump the clean water back into Water Conservation Area 3A. Construction of pump station S-9A was completed in August 2002. Construction of re-designed spillway S-381 was completed in 2005. The initial audit of original construction contract termination for spillway S-381 was completed in September 2003. The second audit phase began in February 2004. Obermeyer construction contract has been physically completed and is in the closeout phase.

The purpose of this project is to improve the quality and timing of stormwater discharges to the Everglades Protection Area from the Western C-11 Basin located in south central Broward County. The S-9 pump station currently pumps untreated urban and agricultural stormwater runoff from the Western C-11 Basin directly into Water Conservation Area 3A. The project involves construction of a gated control structure on C-11 to divide western seepage waters (i.e., clean water) from the eastern runoff waters in C-11 canal (i.e., polluted water) and construction of an additional pumping station adjacent to S-9 to pump clean seepage back into the Everglades Protection Area. Both features will be remotely controlled using sponsor-installed telemetry.

Cost: \$18,066,000

Project Schedule:

Construction close-out is in progress.

Start Date: 1997
 Finish Date: 2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Design									
Construction									

Detailed Project Budget Information (\$1000)

	Thru 2005	Total
USACE	9,074	9,074
SFWMD	8,992	8,992
Total	18,066	18,066

Hyperlink: <http://www.saj.usace.army.mil/projects/newrpt.htm>

Contact: USACE

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*. Additional Information summarized from <http://corpsconnect.saj.usace.army.mil/CoeConnect/corps/PRJ01.aspx?Page=Detail&view=&ProjID=6870&ProjWICode=114790>

Program Name: Infrastructure
Project Name: Everglades National Park Water and Wastewater
Project ID: 1705
Lead Agency: National Park Service

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Number of water and wastewater systems that are rehabilitated or replaced

Project Synopsis: This project will rehabilitate or replace 28 water and wastewater systems in two districts of Everglades National Park. A large percentage of the existing water and wastewater systems within the park were constructed over 35 years ago when the public health and environmental standards were not as fully evolved as they are today. While originally constructed to code, all of the systems are in non compliance with environmental regulations and standards for operating a public water supply. This rehabilitation effort would modify or replace all of the existing systems with 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 \$18,965,000

Project Schedule:
 Start Date: 1997
 Finish Date: 2006

	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	3,516	1,894	2,883	4,192	4,594	286	1,600	18,965
State								
Tribal								
Local								
Other								
Total	3,516	1,894	2,883	4,192	4,594	286	1,600	18,965

Hyperlink: N/A
Contact: Michael Jester, 305 242 7771

Program Name: Phosphorus Source Controls for Basins Tributary to the Everglades
Project Name: Everglades Regulation Division
Project ID: 1706
Lead Agency: South Florida Water Management District
Authority: Everglades Forever Act (EFA)
Funding Source: Long-term Plan allocated funds and Everglades Agricultural Privilege Tax

Strategic Plan Goal(s) Addressed: I.B.3

Measurable Output(s): Mandatory BMP Program Compliance Model Results; Updates on Implementation of Basin Specific Water Quality Improvement Plans; Reporting on the Long-term Compliance Permit requirements.

Project Synopsis: As a result of the EFA, the SFWMD established the Everglades Regulation Division. The Division includes two main sub-components of the Everglades Construction Project (ECP) and the Non-ECP permits, respectively, the Best Management Practices (BMPs) Regulatory Program in the ECP tributary basins and the BMP cooperative programs in the Non-ECP tributary basins. The ECP source controls include a regulatory program developed to decrease phosphorus loads from the Everglades Agricultural Area (EAA) and C-139 basins by reducing phosphorus from permittee discharges prior to downstream treatment in stormwater treatment areas. For the 10 years that the program has been in place in the EAA, the total phosphorus loads have been reduced each year by more than the 25% reduction requirement averaging greater than 50%. The C-139 basin BMP regulatory program was initially implemented in 2002, and BMPs are being implemented at the highest level described by rule and compliance monitoring continues. Water Quality Improvement Plans were developed for each of the Non-ECP basins that discharge to the Everglades to ensure that all basins discharging directly to the Everglades meet state water quality standards. These strategies include best management practices, regulatory programs, public outreach, and construction of public works projects.

Cost:

Total	N/A
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 2016

Detailed Project Budget Information (1000s)

	Through 1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
Federal										
State	4,000	1,954	1,960	1,866	1,998	2,245	3,446	4,236	2,722	
Tribal										
Local										
Other										
Total	4,000	1,954	1,960	1866	1,998	2,245	3,446	4,236	2,745	TBD

Hyperlink: <http://www.sfwmd.gov/org/reg/esp/index.html>
Contact: Pam Sievers (561) 682-6901

Program Name: Management
Project name: Floridan Aquifer Restoration
Project ID: 1707
Lead Agency: USDA - NRCS
Authority: PL-46

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Reduced Aquifer Contamination

Project Synopsis: Saline aquifer water will cause well casings to corrode and eventually leak causing cross aquifer contamination caused by artesian flow from the Floridan. This project seeks to permanently decommission irrigation wells via plugging in St. Lucie County in order to reduce saline water from the Floridan Aquifer by leaking well casings transferring groundwater into the surficial aquifer used for drinking.

Cost:
 Total: \$900,000
 Project Development
 Land Acquisition
 Implementation \$900,000
 Operations and maintenance:

Project Schedule:
 Start Date: 2002
 Finish Date: 2006

Detailed Project Budget Information (\$1000s)

	Thru 2004	2005	2006	2007	2008	2009	2010	Total
Federal	\$50	\$100	\$100					\$250
State	\$150	\$150	\$150					\$450
Tribal								
Local								
Other	\$100	\$50	\$50					\$200
Total	\$300	\$300	\$300					\$900

Hyperlink: N/A
Contact: Donna Smith – 772-467-9779 USDA – NRCS

Program Name: Surface Water Management
Project Name: Seminole Tribe Best Management Practices for the Big Cypress Reservation
Project ID: 1714
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Resolution
Funding Source:

Strategic Plan Goal(s) Addressed: Other

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 2008

Detailed Project Budget Information (\$1000)

	2004	2005	2006	2007	2008	Balance to complete	Total
Federal	358.4	358.4	358.4	358.4	358.4	1,792.1	3,584.3
State							0
Tribal	119.5	119.5	119.5	119.5	119.5	597.2	1,194.7
Total	477.9	477.9	477.9	477.9	477.9	2,389.3	4,779

Hyperlink: N/A

Contact: Craig Tepper 954-967-3402, Seminole Tribe of Indians

Program Name: Infrastructure
Program Name: Surface Water Management
Project Name: Seminole Tribe Best Management Practices for the Brighton Reservation
Project ID: 1715
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Resolution
Funding Source:

Strategic Plan Goal(s) Addressed: Other

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, 2008

Detailed Project Budget Information (1000s)

	2004	2005	2006	2007	2008	Balance to complete	Total
Federal	36	36	36	36	36	73.5	253.5
State						0	0
Tribal	12	12	12	12	12	24.5	84.5
Total	48	48	48	48	48	98	338

Hyperlink: N/A

Contact: Craig Tepper 954-967-3402, Seminole Tribe of Indians

Program Name: Surface Water Management
Project Name: Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation
Project ID: 1716
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Council by Resolution
Funding Source:

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s):

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. Re-hydration 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, 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 (1000s)

	2004	2005	2006	2007	2008	Balance to complete	Total
Federal	20	4,344	970	679	853	1,508	8,374
State							0
Tribal	0	4,343	970	679	852	600	7,444
Total	20	8,687	1,940	1,348	1,705	2,108	15,818

Hyperlink: N/A
Contact: Craig Tepper 954-967-3402, Seminole Tribe of Indians

Program Name: Surface Water Management
Project Name: Seminole Tribe Water Conservation Project for the Big Cypress Reservation
Project ID: 1717
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Council Resolution / USDA WRP / PL-53-866 USDA
Funding Source:

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s):

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 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	\$49,000,000
Project Development	
Land Acquisition	
Implementation	
Operations and maintenance	

Project Schedule:

Start Date:	2002
Finish Date:	2012

Detailed Project Budget Information (1000s)

	2004	2005	2006	2007	2008	Balance to complete	Total
Federal	1,500	3,500	3,500	3,500	3,500	20,500	36,000
State							0
Tribal	0	1,625	1,625	1,625	1,625	6,500	13,000
Total	1,500	5,125	5,125	5,125	5,125	27,000	49,000

Hyperlink: N/A

Contact: Craig Tepper 954-967-3402, Seminole Tribe of Indians

Program Name: Restoration Program: Water Quality and Hydrology
Project Name: LOFT (identified under LOER)- Rerouting of flows from S-133 Basin
Project ID: 1720
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: Other (Water Quality)

Measurable Output(s): Rerouting of flows

Project Synopsis: The state has initiated a comprehensive plan, entitled the Lake Okeechobee and Estuary Recovery Plan (LOER), consisting of a combination of capital projects and numerous interagency initiatives designed to provide measurable and meaningful improvements to water quality and water quantity in Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. The LOER plan identifies 5 construction projects north of Lake Okeechobee, including rerouting S-133 basin flows to Lakeside Ranch STA, as Lake Okeechobee Fast Track projects (LOFT). This project is designed to reroute flow from the S-133 basin to the Lakeside Ranch STA for treatment. In the absence of this project, this water flows untreated into Lake Okeechobee.

Cost:
 Total \$29 million

Project Schedule:

Start Date: October 2005
 Finish Date: December 2009

	2005	2006	2007	2008	2009	2010
Project Design						
Construction and Installation						
Operations and Monitoring						

Detailed Project Budget Information (\$1000)

	2006	2007	2008	2009	2010	Balance to complete	Total
Federal EPA							
State SFWMD	810	1,087	8,278	14,673	3,698		28,546
Tribal							
Local							
Other							
Total							28,546

Hyperlink: N/A

Contact: Temperince Morgan (561) 682-6534

Program Name: Restoration Program: Water Quality and Hydrology
Project Name: LOFT (identified under LOER)- Rerouting of flows from S-154 Basin
Project ID: 1721
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: Other (Water Quality)

Measurable Output(s): Rerouting of flows

Project Synopsis: The state has initiated a comprehensive plan, entitled the Lake Okeechobee and Estuary Recovery Plan (LOER), consisting of a combination of capital projects and numerous interagency initiatives designed to provide measurable and meaningful improvements to water quality and water quantity in Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries. The LOER plan identifies 5 construction projects north of Lake Okeechobee, including rerouting S-154 basin flows to Lakeside Ranch STA, as Lake Okeechobee Fast Track projects (LOFT). This project is designed to reroute flow from the S-154 basin to the Lakeside Ranch STA for treatment. In the absence of this project, this water flows untreated into Lake Okeechobee.

Cost:
 Total \$2 million
 (study only- no detailed design or construction)

Project Schedule:

Start Date: October 2005
 Finish Date: December 2009

	2005	2006	2007	2008	2009	2010
Project Design						
Construction and Installation						
Operations and Monitoring						

Detailed Project Budget Information (\$1000)

	2006	2007	2008	2009	2010	Balance to complete	Total
Federal EPA							
State SFWMD	810	1,087	188	0*	0*		2,085
Tribal							
Local							
Other							
Total							2,085

* Not budgeted for construction

Hyperlink: N/A

Contact: Temperince Morgan (561) 682-6534

Program Name: Lake Okeechobee Restoration: Water Quality
Project Name: Lake Okeechobee Protection Plan
Project ID: 1722
Lead Agency: South Florida Water Management District
Funding Source: State of Florida Allocation

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Improve the health of Lake Okeechobee through the reduction of total phosphorus loads from the watershed to meet the Lake's Total Maximum Daily Load (TMDL) of 140 MT/year.

Project Synopsis: Although there has been a long history of regulatory and voluntary incentive-based programs to control phosphorus inputs to Lake Okeechobee, there has not been any substantial reduction in loading during the last decade. As a result, the Florida legislature passed the Lake Okeechobee Protection Act (LOPA) in 2000, mandating that the TMDL be met by 2015 and that the SFWMD, FDEP, and FDACS work together to implement an aggressive program to address the issues of excessive phosphorus loading and exotic species expansion. The SFWMD, in cooperation with FDEP and FDACS, developed the Lake Okeechobee Protection Plan (LOPP) as required by LOPA, which was submitted to the Florida Legislature in January 2004, and will be updated in January 2007. The LOPP contains a phased, watershed-based, comprehensive approach to reduce phosphorus loading to the lake. Because the legislature has provided substantial funding for the implementation of the LOPA since 2000, the cooperating agencies have been able to implement a large number of phosphorus reduction projects including phosphorus source control grant programs for agricultural landowners, dairy best available technology pilot projects, soil amendment projects, isolated wetland restoration, remediation of former dairies and regional public/private partnerships. In addition, the LOPP contains elements of research and monitoring as specified by the act. A comprehensive monitoring program for water quality in the lake and watershed and ecological indicators in the lake has been implemented.

Cost:

Total	\$ 392 M*
Project Development	\$ 1.5 M
Land Acquisition	\$ TBD
Implementation	\$ 181.5 M
Operations and Maintenance	\$ 209 M

Project Schedule:

Start Date: 1999
 Finish Date: 2015

Detailed Project Budget Information (1000s)

	FY 1999-2004	2005	2006	2007	Balance to complete	Total
Federal EPA						
** State SFWMD	\$ 56,000	\$13,300		\$25,000		
Tribal						
Local						
Other	\$86,000	\$9,700		\$44,000		
Total	\$142,000	\$23,000	\$57,000	\$69,000	\$101,000	\$392,000

Sources:

* 2004 Lake Okeechobee Protection Plan

** 2006 SFER; Vol. 1 Chapter 10, Lake Okeechobee Protection Program – State of the Lake and Watershed

Contact: Susan Gray (561) 682-6919

Program Name: Long-Term Plan for Achieving Everglades Water Quality Goals
Project Name: Long-Term Plan for Achieving Everglades Water Quality Goals
Project ID: 1723
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Achieving State water quality standards in the Everglades Protection Area

Project Synopsis: The Long-Term Plan was developed with the goal of achieving compliance with water quality standards, including the phosphorus criterion established in Rule 62-302.540, in the Everglades Protection Area. The Long-Term Plan was subsequently identified in the 2003 amendment to the Everglades Forever Act (EFA) (s. 373.4592 F.S.) as the Best Available Phosphorus Reduction Technology (BAPRT) for achieving Everglades water quality standards. The Long-Term Plan includes a variety of projects and components, such as structural and vegetative enhancements in the STAs, Operations and Maintenance of the STAs, STA optimization research, monitoring, source controls programs, hydropattern restoration projects, as well as projects designed to accelerate recovery in the impacted areas of the Everglades Protection Area. The Long-Term Plan is being implemented through a process of adaptive implementation, whereby the plan is revised when new information becomes available, however per the 2003 amended EFA, the FDEP must approve all revisions to the Long-Term Plan. The Long-Term Plan cost estimates are updated after revisions are approved by the FDEP. The original overall cost estimate for implementation of the Long-Term Plan shown in the October 27, 2003 document was \$444 million. The cost estimates shown herein reflect all approved revisions to the Long-Term Plan since development of the original document and cost estimates. The Long-Term Plan addresses the initial 13-year phase (FY 2004-2016, inclusive) defined in that 2003 amendment to the EFA.

*** Cost (Estimate):** Total for Long-Term Plan: \$749.8 million

Project Schedule:

Expected Completion Date: Initial 13-year phase covers the period FY2004 through FY2016

	FY 2003 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development (included in Implementation)						
Land Acquisition						
Implementation						
Operations and Maintenance (included in Implementation)						

*** Detailed Project Budget Information**

	Actual FY 2003-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$50,296,530	\$68,184,846	\$78,395,675	\$64,935,318	\$78,595,896	\$409,391,735	\$749,800,000
Tribal							
Local							
Other							
Total	\$50,296,530	\$68,184,846	\$78,395,675	\$64,935,318	\$78,595,896	\$409,391,735	\$749,800,000

- (7) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.
- (8) Project Development includes Design Phase [contracts & staff costs] costs.
- (9) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Tracey Piccone, P.E., SFWMD (561) 682-6495

Goal 2 Project Sheets

**Restore, Preserve, and Protect
Natural Habitats and Species**



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Program Name: Restoration Program: Hydrological Restoration, Water Quality, Habitat and Species,
Project Name: Allapattah Flats/Ranch
Project ID: 2100
Lead Agency: Department of Environmental Protection/South Florida Water Management District
Authority: CARL/SOR

Strategic Plan Goal(s) Addressed: 2.A.1 Secondary: 1.A.1

Measurable Output(s): 35,999 Acres Acquired

Project Synopsis: The Allapattah Flats/Ranch project covers 35,999 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: Project size 35,999. 21,407 acres have been acquired at a cost of \$53,564,222
 Project Development
 Land Acquisition: 14,592 acres remain to be acquired.
 Implementation
 Operations and Maintenance

Project Schedule:
 Start Date: 1997
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2006	2007	2008	2009	Balance to complete	Total
Federal						
State	43,643	0	0			
Tribal						
Local	9,920	0	0			
Total	53,564	0	0			TBD
Adjusted Total*	2,286					

*A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Contact: John Outland (850) 245-2089

Project Name: Atlantic Ridge Ecosystem
Project ID: 2101
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: CARL/SOR

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 16,002 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 16,002 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. Currently, none of this project is in public ownership.

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: Project size 16,002. 6,094 acres have been acquired at a cost of \$44,826,162
 Project Development
 Land Acquisition: 9,908 acres remaining to be acquired
 Implementation
 Operations and Maintenance

Project Schedule:
 Start Date: 1995
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	38,226	0	0				
Tribal							
Local	6,600	0	0				
Other							
Total	44,826	0	0				TBD
Adjusted Total*	7,892						

*A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Contact: John Outland (850) 245-2089

Project Name: Babcock Ranch
Project ID: 2102
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 91,361 Acres acquired

Project Synopsis: The Babcock Ranch project consists of approximately 91,361 acres in Charlotte and Lee counties. Acquisition would assist in the creation of a wildlife corridor that would span from Lake Okeechobee to the Gulf of Mexico. The majority of the project area consists of mesic flatwoods with the center of the project dominated by Telegraph Swamp. This ten thousand acre swamp drains most of the project area. Portions of the project provide habitat for the endangered red-cockaded woodpecker, crested caracara, and numerous other plants and animals. The project is proposed primarily as a less-than-fee simple acquisition a portion of the project will be acquired in full fee title. The evaluation team visited the project on September 25, 2001.

The majority of the Babcock Ranch project lies in southeastern Charlotte County; a small part extends into northeastern Lee County. It is contiguous with Fred C. Babcock-Cecil M. Webb Wildlife Management Area (Babcock-Webb WMA) for approximately 6 miles (mostly Babcock Family Reserve portion; proposed Curry Lake conservation easement is contiguous for 0.75 mile) on the west, Fisheating Creek Florida Forever project for approximately 3 miles on the east, and Caloosahatchee Regional Park for approximately 1.5 miles on the south. Bright Hour Watershed conservation easement is situated approximately 12 miles to the north, Hall Ranch Florida Forever project (contiguous with Babcock-Webb WMA) is contiguous with the Babcock Family Reserve portion for approximately 3 miles (it is ca. 4 miles to the northwest of the proposed Curry Lake conservation easement), Hickey Creek Mitigation Park Wildlife and Environmental Area is located less than 1.5 miles to the south, Moya Sanctuary is located less than 1 mile east of the southeast boundary of the proposal, and the Caloosahatchee Ecoscape Florida Forever project and Okaloacoochee Slough State Forest lie 10.5 miles and 15 miles, respectively, to the southeast.

Cost: Total: Project size is 91,361 acres
 Project Development
 Land Acquisition: 91,361 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 2001
 Finish Date: Upon completion

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	0	0	0				
Total	0	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Belle Meade
Project ID: 2104
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 28,506 Acres acquired

Project Synopsis: This area of 28,506 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.

Cost: Total: Project size 28,506 acres. 18,238 acres have been acquired at a cost of \$39,412,158 million
 Project Development
 Land Acquisition: 10,694 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1993
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	\$36,183		3,229				
Tribal							
Local							
Other							
Total	36,183		3,229				TBD

Contact: John Outland (850) 245-2089

Project Name: Big Bend Swamp/Holopaw Ranch
Project ID: 2105
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 59,123 Acres acquired

Project Synopsis: Many kinds of wildlife in the expanses of palmetto prairies, pine flatwoods, and cypress swamps in Osceola County. The Big Bend Swamp project will acquire certain rights from landowners to maintain a link of natural lands between the Bull Creek and Three Lakes Wildlife Management Area, and help the ensure survival of caracara, red-cockaded woodpeckers, sandhill cranes, and other wildlife that require these large natural areas.

Cost: Total: Project size is 59,123 acres. 4,151 acres have been acquired at a cost of \$6,829,000.
 Project Development
 Land Acquisition: 54,981 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 2000
 Finish Date: TBD

Detailed Project Budget Information (1000s)

	Thru 2005	2006	2007	2008	Balance to complete	Total
Federal						
State	3,600	3,229				TBD
Tribal						
Local						
Other						
Total	3,600	3,229				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration, Water Quality, Habitat and Species
Project Name: Biscayne Coastal Wetlands Land Acquisition
Project ID: 2106
Lead Agency: South Florida Water Management District, Miami-Dade County and Florida Communities Trust
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 2,241 Acres

Project Synopsis: The Biscayne Coastal Wetlands are divided into three units that total 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 appear 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. Some of the properties in this land acquisition project are necessary for the L-31E Flow Redistribution Project. This project falls within the conceptual boundary of the CERP - Biscayne Bay Coastal Wetlands project.

Cost: Total: Project size is 2,241 acres. 686 acres acquired at a cost of \$1,245,168
 Project Development
 Land Acquisition: 1,555 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1998
 Finish Date: TBD

Detailed Project Budget Information (1000s)

	Through 2005	2006	2007	2008	2009	2010	Balance to Complete	Total*
Federal								
State	153.5	0						153.5
Tribal								
Local	1,091.6	0						1,091.6
Other								
Total	1,245.2	0						1,245.2
Adjusted Total*	0	0						

*A portion of the acres and costs on this project sheet overlap with Project ID 1410 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

** Miami-Dade County estimate; SFWMD does not make cost projections on SOR projects--the maximum funding currently authorized for this project is \$1 million.

Contact: Wanda Caffie-Simpson, (561) 682-6445

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Project Name: Bombing Range Ridge
Project ID: 2107
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 44,439 Acres acquired

Project Synopsis: Public acquisition of the 44,439 acre Bombing Range Ridge project will conserve and protect significant habitat for native species and endangered and threatened species. Additionally, public acquisition will provide areas, including recreational trails for natural resource based recreation.

Cost: Total: Project size 44,439 with 6,357 acquired at a cost of \$15,003,388.
 Project Development
 Land Acquisition: 38,082 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1998
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2005	2006	2007	2008	Balance to complete	Total
Federal						
State	12,003	3,000				
Tribal						
Local						
Other						
Total	12,003	3,000				TBD

Contact: John Outland (850) 245-2089

Project Name: Caloosahatchee Ecoscape
Project ID: 2108
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 18,497 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.

Cost: Total: Project size 18,497 acres. 3,180 acres acquired at a cost of \$1,948,038
 Project Development
 Land Acquisition: 15,317 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1998
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2005	2006	2006	2007	2008	Balance to complete	Total
Federal							
State	\$1,948	0					
Tribal							
Local							
Other							
Total	1,948	0					TBD

Contact: John Outland (850) 245-2089

Project Name: Catfish Creek
Project ID: 2109
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 14,901 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.

Cost: Total: Project size 14,901 acres. 10,184 acres have been acquired at a cost of \$47,442,266
 Project Development
 Land Acquisition: 4,717 acres remain to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1990
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2005	2006	2006	2007	2008	Balance to complete	Total
Federal							
State	\$47,442	0					
Tribal							
Local							
Other							
Total	\$47,442	0					TBD

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Charlotte Harbor Estuary/Flatwoods/Cape Haze
Project ID: 2111
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 15,054 Acres acquired

Project Synopsis: The project area, located northwest of Fort Myers in Charlotte and Lee Counties, includes 15,054 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.

Cost: Total: Project size 15,054. 10,603 acres acquired at a cost of \$17,781,504
 Project Development
 Land Acquisition: 4,451 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1986
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2005	2006	2007	2008	Balance to complete	Total
Federal						
State	\$17,174	0				
Tribal						
Local	607	0				
Other						
Total	\$17,781	0				TBD

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

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Water Quality, Hydrological Restoration, Habitat and Species
Project Name: Corkscrew Regional Ecosystem Watershed (CREW)
Project ID: 2112
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: CARL/SOR

Strategic Plan Goal(s) Addressed: 1, and 2, Getting the Water Right
 Restore, Preserve and Protect the Natural Habitat and Species

Measurable Output(s): Target 69,500 Acres

Project Synopsis: CREW covers 69,500 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 Wildlife Refuge, 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 Florida Fish and Wildlife Commission under contract with the SFWMD.

Hydrologic restoration of CREW will restore and protect important habitat for the Florida panther and black bear and will protect the quality of water delivered to Corkscrew Swamp Sanctuary, Florida Panther National Wildlife Refuge, 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 SFWMD for management.

Cost: Total: Project size is 64,103 acres of which 26,271 have been acquired for a cost of \$55,814,925
 Project Development
 Land Acquisition: 43,229 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1991
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2003	2004	2005	2006	2007	Balance to complete	Total
Federal	\$3,927.1	\$785.6	669.8	0			\$5,382.5
State	\$20,256.6	\$2,628.4	11,548.6	5,998.7			\$40,432.4
Tribal							
Local	10,000	0	0	0			\$10,000
Other							
Total	\$34,183.7	\$3,414	\$12,218.4	5,998.7			TBD

*This total includes Critical CREW project lands.

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

Contact: John Outland (850) 245-2089

Project Name: Coupon Bight/Key Deer/Big Pine Key
Project ID: 2114
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 4,014 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.

Cost: Total: Project size 4,014 acres. 1,519 acres have been acquired at a cost of \$26,950,877
 Project Development
 Land Acquisition: 2,495 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1985
 Finish Date: Upon completion

Detailed Project Budget Information(1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	17,734	1,389.2	7,827.6				
Tribal							
Local							
Other							
Total	17,734	1,389.2	7,827.6				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Habitat and Species
Project Name: Cypress Creek/Loxahatchee
Project ID: 2172
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 4,347 Acres

Project Synopsis: Cypress Creek/Loxahatchee project is located in southern Martin and northern Palm Beach Counties, near lands recently acquired in Pal-Mar, and adjacent to Jonathan Dickinson State Park. It is a mixture of land uses and community types. Nearly 3,000 acres are mostly undisturbed natural area, containing a mixture of pine flatwoods, cypress swamps, depression marshes, and wet prairies. This area forms the headwaters of Cypress Creek, which drains to the Northwest Fork of the Loxahatchee River. The remainder of the site is cleared and drained for intense agriculture, including row crops and citrus.

Cost: Total: Project size is 4,347 acres of which 4,276 has been acquired at a cost of \$44,116,173
 Project Development
 Land Acquisition: 71 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: November 2002
 Finish Date: Until completed

Detailed Project Budget Information (1000s)

	Through 2005	2006	2007	2008	2009	Balance to Complete	Total
Federal							
State	36,407.6						
Tribal							
Local	7,708.5						
Other							
Total	44,116.2						TBD

Refer to CERP component for acquisition schedule.

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: Cypress Creek/Trail Ridge Land Acquisition
Project ID: 2115
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 13,788 Acres

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.

Cost: Total: Project size is 13,788 acres of which 3,285 have been acquired at a cost of \$3,411,244
 Project Development
 Land Acquisition: 10,503 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1997
 Finish Date: Upon Completion

Detailed Project Budget Information (1000s)

	Through 2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal								
State	1,691	0	0					
Tribal								
Local*	1,720	0	0					
Other								
Total	3,411	0	0					TBD
Adjusted Total	968.8							

Refer to CERP component for acquisition schedule.

*A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: Devils Garden
Project ID: 2183
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 82,508 acres acquired

Project Synopsis: The Devil's Garden project is located in Hendry and Collier Counties, and is approximately 82,508 acres. This vast project is being proposed to fill a gap in a corridor that will provide a large landscape for the federally endangered Florida panther. There are numerous records of panther use of the property for several years as well as numerous other rare and threatened plants and animals.

Cost: Total: 82,508 acres needed.
 Project Development:
 Land Acquisition: 82,508 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 2002
 Finish Date: When completed

Detailed Project Budget Information

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	\$0	0	0				
Tribal							
Local							
Other							
Total	0	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Water Quality, Hydrological Restoration, Habitat and Species
Project Name: East Coast Buffer/Water Preserve Areas
Project ID: 2117
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District/
 U.S. Department of the Interior
Authority: CARL/ SOR

Strategic Plan Goal(s) Addressed:2.A.1

Measurable Output(s): Target 66,809 Acres

Project Synopsis: The East Coast Buffer/Water Preserve Areas project involves acquisition of land 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 and include 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.

In addition, these lands are needed to implements several components of the Everglades Restoration Plan developed under the C&SF Project Comprehensive Review Study (CERP). As part of the implementation plan, portions of the project will be used to create 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 CERP projects 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.

Cost: Total: Project size is 66,809 acres of which 21,947 have been acquired at a cost of \$374,194,976
 Project Development
 Land Acquisition: 44,862 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1994
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2006	2005	2007	2008	Balance to complete	Total
Federal	72,483.740	0				72,483.740
State	272,998.640	0				272,998.640
Tribal						
Local**	28,712.596					28,712.596
Total						TBD
Adjusted Total	175,529					

*A portion of the acres and costs on this project sheet overlap with Project ID 1405 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

**Includes \$8,276,165 of land acquisitions by Palm Beach County; and \$4,224,440 of funding from Broward County.

Contact: John Outland (850) 245-2089
Hyperlink: <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

Program Name: Land Acquisition
Project Name: Estero Bay
Project ID: 2118
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 14,378 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.

Cost: Total: Project size 14,378 acres. 9,149 acres have been acquired at a cost of \$ 59,220,290.
 Project Development
 Land Acquisition: 5,229 acres to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1985
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2006	2007	2008	2009	2010	Balance to complete	Total
Federal							
State	51,970.3						
Tribal							
Local	7,250						
Other							
Total	59,220.3						TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Water Quality, Hydrological Restoration
Project Name: Everglades Agricultural Area (EAA) / Talisman Land Acquisition
Project ID: 2119
Lead Agency: South Florida Water Management District/U.S. Department of the Interior
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 51,210 Acres

Project Synopsis: The District has acquired 50,794 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 hydropattern 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.

Cost: Total: Project size is 51,210 acres . 50,794 acres have been acquired at a cost of \$135,374,902
 Project Development
 Land Acquisition: 416 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1997
 Finish Date: Upon Completion

Detailed Project Budget Information (1000s)

	Through 2006	2007	2008	2009	2010	Balance to complete	Total*
Federal	103,557.459						103,557.459
State	31,817.443						31817.443
Tribal							
Local							
Other							
Total	135,374.902						TBD
Adjusted Total	2,214						

*A portion of the acres and costs on this project sheet overlap with Project ID 1102 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name Fakahatchee Strand
Project ID: 2120
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 80,332 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.

Cost: Total: Project size 80,332. 60,993 acres have been acquired at a cost of \$24,836,008
 Project Development
 Land Acquisition: 19,339 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1980
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	Balance to complete	Total
Federal				
State	\$24,743	93		
Tribal				
Local				
Other				
Total	24,743	93		TBD

Contact: John Outland (850) 245-2089
Hyperlink: <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

Project Name: Fisheating Creek
Project ID: 2121
Lead Agency: Department of Environmental Protection and South Florida Water Management District
Authority: CARL/SOR

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 176,876 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 176,876 acres. Currently, none of this acreage is in public ownership. 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: Project size 176,876 acres. 59,910 acres have been acquired at a cost of \$101,928,563
 Project Development
 Land Acquisition: 116,850 remaining to be acquired
 Implementation
 Operations and Maintenance

Project Schedule:

Start Date: 1999
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	\$101,928	0					
Tribal							
Local							
Other							
Total	\$101,928	0					TBD

Contact: Wanda Caffie-Simpson, (561) 682-6445
Hyperlink: <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

Project Name: Florida Keys Ecosystem
Project ID: 2122
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 15,336 Acres acquired

Project Synopsis: This project, in conjunction with the Complete National Key Deer Refuge proposal, includes the remaining 15,336 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.

Cost: Total: Project size 15,336 acres. 2,374 acres have been acquired at a cost of \$55,224,862.
 Project Development
 Land Acquisition: 12,962 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1992
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	\$35,941	1,674	17,609.7				
Tribal							
Local							
Other							
Total	\$35,941	1,674	17,609.7				TBD

Contact: John Outland (850) 245-2089

Project name: Frog Pond/L31N
Project ID: 2123
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 10,450 Acres acquired

Project Synopsis: Lands border Everglades National Park and are considered critical to the Park's ecosystem, particularly Shark River Slough. The project's water storage capacity helps to prevent excessive flooding and serves as a recharge area for well fields in South Dade. The area is highly vulnerable to development pressure.

Cost: Total: Project size 10,450 acres. 9,741 acres have been acquired at a cost of \$86,187,297
 Project Development
 Land Acquisition: 709 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1982
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal	\$4,700	0					
State	\$78,923	0	2,564.3				
Tribal							
Local							
Other							
Total	\$83,623	0	2,564.3				TBD

Contact: John Outland (850) 245-2089

Project Name: Half Circle L Ranch
Project ID: 2185
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1.

Measurable Output(s): 11,269 Acres acquired

Project Synopsis: Located in Collier & Hendry Counties the project is approximately 11,269 acres. There are two owners and sponsored by Turrell and Associates. The project is proposed for fee simple acquisition. FNAI ranks the biological conservation priority for the project as medium high. The project is located within primary habitat zones for the Florida panther and the Florida Black bear, and compliments ongoing conservation efforts in the region.

Cost: Total: 11,269 acres needed.
 Project Development:
 Land Acquisition: 11,269 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 2003
 Finish Date: when completed

Detailed Project Budget Information (1000s)

	Thru 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	\$0	0	0					
Tribal								
Local								
Other								
Total	0	0	0					TBD

Contact: John Outland (850) 245-2089

Project Name: Indian River Lagoon Blueway
Project ID: 2124
Lead Agency: Department of Environmental Protection and South Florida Water Management District
Authority: CARL/SOR

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 5,136 Acres Acquired

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.

In 1997, protection was expanded to include lands in Martin County as well.

Cost: Total: Project size 5,136 acres. 1,619 acres have been acquired by the state at a cost of \$18,594,773 million and \$3,333,022 federal contribution
 Project Development
 Land Acquisition: 3,517 acres remaining to be acquired
 Implementation
 Operations and Maintenance

Project Schedule:
 Start Date: 1998
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal	\$3,333	0	0					
State	\$18,594	0	0					
Tribal								
Local								
Other								
Total	\$21,927	0	0					TBD

Contact: John Outland (850) 245-2089

Project name: Juno Hills/Dunes
Project ID: 2125
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 590 Acres acquired

Project Synopsis: This 590-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.

Cost: Total: Project size 590 acres. 576 acres have been acquired at a cost of \$41,892,718
 Project Development
 Land Acquisition: 14 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1994
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	15,023	0	0				
Tribal							
Local	26,869.7	0	0				
Other							
Total	41,892.7	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Jupiter Ridge
Project ID: 2176
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 287 Acres acquired

Project Synopsis: The Jupiter Ridge Natural Area is one of the best remaining examples of the Florida Scrub ecosystem in Palm Beach County. Less than 2% of the historic Florida scrub still exists in the county, making preservation of this endangered natural community extremely important. This 287-acre natural area is located in the Town of Jupiter. It is bordered on the north by commercial development, on the east by U.S. Highway 1, on the west by the Intracoastal Waterway, and on the south by the Bluffs residential development. Small areas of scrubby flatwoods, mangrove swamp and freshwater wetland ecosystems also are present. These diverse habitats support many threatened and endangered species.

Cost: Total: Project size is 287 acres of which 271 has been acquired for a cost of \$23,099,950
 Project Development
 Land Acquisition: 16 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule: On-going
 Start Date: 1991
 Finish Date: TBD.

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	\$11,047.6						\$11,047.6
Tribal							
Local	\$12,052.3						\$12,052.3
Other							
Total	\$23,099.9						TBD

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Kissimmee-St. Johns Connector
Project ID: 2126
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 9,463Acres acquired

Project Synopsis: Encompassing the watersheds of the Kissimmee and St. Johns Rivers, the Kissimmee-St. Johns Connector project will provide an approximately 9,463 acre hydrological and habitat connection. Though most of the area has been farmed and ranched for years many of the natural communities are in fair condition. Portions of the project provide habitat for Florida sandhill crane, crested caracara, hand ferns and numerous other plants and animals. The project is proposed primarily as a less-than-fee simple acquisition.

The project lies in northeastern Okeechobee and southwestern Indian River counties. It is contiguous with the Ordway-Whittell Kissimmee Prairie Sanctuary (OWKPS) to the west and the Fort Drum Marsh Conservation Area to the east. Kissimmee Prairie Preserve State Park lies immediately to the west of the OWKPS.

Cost: Total: The project consists of approximately 9,463 acres.
 Project Development
 Land Acquisition: 9,463 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 2001
 End Date: TBD

Detailed Project Budget Information (\$1000)

	Exp Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State							
Total	\$0	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration
Project Name: Kissimmee River (Lower Basin) Land Acquisition
Project ID: 2127
Lead Agency: South Florida Water Management District
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 68,332 Acres

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; Pool A, Chandler Slough, and Istokpoga Canal Basin; all of which are components of the Kissimmee River Restoration Project.

Cost: Total*: Project size is 68,332 acres of which 55,684 acres have been acquired for a cost of \$99,007,882.
 Project Development
 Land Acquisition: 12,648 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1985
 Finish Date: 2005

Detailed Project Budget Information (1000s)

	Through 2003	2004	2005	2006	2007	2008	Balance to complete	Total*
Federal								
State	\$55,856	\$551	0	42,601	.			\$99,007.9
Tribal								
Local								
Other								
Total	\$55,856	\$551	0	42,601				TBD

*Total includes lands for several components of the Kissimmee River Restoration project.

Program Name: Restoration Program: Hydrological Restoration
Project Name: Kissimmee River (Upper Basin) Land Acquisition
Project ID: 2128
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Target 36,763 Acres

Project Synopsis: In the early 1990s it was determined that not enough water would be available in the upper chain of lakes to provide year round base flow for the restored Kissimmee River. As a result the scope of the Kissimmee River Restoration project includes the acquisition of land around the shoreline of the Kissimmee Chain of Lakes between elevations 52.5' and 54.0'. This land is needed to support the KRR Headwaters Revitalization Regulation Schedule, which will raise the seasonal high stage in Lakes Kissimmee, Hatchineha and Cypress 1.5' to 54.0' NGVD.

Cost: Total: Project size is 36,763 acres of which 34,981 has been acquired for a cost of \$70,825,219
 Project Development
 Land Acquisition: 1,782 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1990
 Finish Date: TBD

Detailed Project Budget Information(1000s)

	Through 2003	2004	2005	2006	2007	2008	Balance to complete	Total*
Federal								
State	\$70,812	\$14	0	0				\$70,825
Tribal								
Local								
Other								
Total	\$70,812	\$14	0	0				TBD

*The total includes Kissimmee River Restoration Project Lands.

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project name: Lake Wales Ridge Ecosystem
Project ID: 2129
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2

Measurable Output(s): 13,848 Acres acquired

Project Synopsis: The proposed refuge was authorized in November 1992 and would comprise 13,848 acres 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.

Cost: Total: Project size 13,848 acres. 11,037 acres acquired at a cost of \$27,897.8
 Project Development
 Land Acquisition: 2,811 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1992
 Finish Date: Upon completion

Detailed Project Budget Information (\$1000)

	Exp Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal	\$3,280	0					3,280
State	21,285	942.4	2,390.4				24,617.8
Tribal							
Local							
Other							
Total	\$24,565	942.4					TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration, Habitat and Species
Project Name: Loxahatchee Slough Land Acquisition
Project ID: 2132
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 15,200 Acres

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.

Cost: Total: Project size is 15,200 acres. 15,056 acres acquired for \$35,920,793
 Project Development
 Land Acquisition: 144 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1996
 Finish Date: Upon Completion

Detailed Project Budget Information (\$1000)

	Through 2005	2006	2007	2008	Balance to complete	Total
Federal						
State	6,756	0				6,756
Tribal						
Local	29,164	0				29,164
Other						
Total	35,920	0				TBD

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Water Quality, Habitat and Species
Project Name: McDaniel Ranch Land Acquisition
Project ID: 2133
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 7,000 Acres

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.

Cost: Total: Project size is 7,000 acres
 Project Development
 Land Acquisition: 7,000 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 2000
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2004	2005	2006	2007	2008	2009	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
Total	0	0	0					TBD

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project name: Dade County Archipelago
Project ID: 2134
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 884 Acres acquired

Project Synopsis: This project includes 884 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.

Cost: Total: Project size 858 acres. 505 acres have been acquired at a cost of \$23,524,235
 Project Development
 Land Acquisition: 379 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1994
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	11,524	0	0	0				
Tribal								
Local	12,000	0	0	0				
Other								
Total	23,524	0	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration, Habitat and Species
Project Name: Model Lands Land Acquisition
Project ID: 2135
Lead Agency: South Florida Water Management District and Miami-Dade County
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 42,402 acres

Project Synopsis: The Model Lands project is located in Miami-Dade County and encompasses the lands between US 1 and Biscayne National Park. The project area of 42,402 acres includes a variety of habitats, both freshwater and estuarine. Lands within the project 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 Biscayne Bay Coastal Wetland and C-111 North Spreader Canal, CERP projects. The SFWMD and Miami-Dade County partner in the acquisition of lands for the project. 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 of the project area 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: Project size is 42,402 acres. 12,182 acres acquired at a cost of \$15,177,692
 Project Development
 Land Acquisition: 30,220 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1994
 Finish Date: TBD

Detailed Project Budget Information (\$1000)

	Through 200	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	4,605							
Tribal								
Local*	10,571							
Other								
Total	15,177							TBD
Adjusted Total	363							

*A portion of the acres and costs on this project sheet overlap with Project IDs 1404 and 1415 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

* Miami-Dade acquisitions as of June 30, 2004

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: North Fork St. Lucie River
Project ID: 2138
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 3,800 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.

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: Project size 3,800 acres. 1,646 acres have been acquired at a cost of \$5,109,620
 Project Development
 Land Acquisition: 2,154 acres remaining to be acquired
 Implementation
 Operations and Maintenance

Project Schedule:

Start Date: 1988
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2004	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	2,960	0	0					2,962
Tribal								
Local	2,148	0	0					1,765
Other								
Total	5,109	0	0					TBD
Adjusted Total	682							

*A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Contact: John Outland (850) 245-2089
 Hyperlink: <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

Project Name: North Key Largo Hammocks
Project ID: 2139
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 4,513 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.

Cost: Total: Project size 5,048 acres. 3,538 acres have been acquired at a cost of \$75,403,715
 Project Development
 Land Acquisition: 1,510 acres to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1983
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	75,403.7	0	0				
Tribal							
Local							
Other							
Total	75,403.7	0	0				TBD

Contact: John Outland (850) 245-2089
Hyperlink: <http://www.dep.state.fl.us/stland/oes/carlmain.htm>

Program Name: Restoration Program: Habitat and Species
Project Name: Okaloacoochee Slough
Project ID: 2141
Lead Agency: Florida Department of Environmental Protection
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 37,210 Acres

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. 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.

Cost: Total: Project size is 37,210 acres. 34,982 acres have been acquired at a cost of \$20,570,673

Project Development
 Land Acquisition: 2,228 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1996
 Finish Date: Upon completion

Detailed Project Budget Information (\$1000s)

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State	20,411	160						20,570.7
Tribal								
Local								
Other								
Total	20,411	160						TBD

Contact: John Outland (850) 245-2089

Project Name: Okeechobee Battlefield
Project ID: 2142
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 211 Acres acquired

Project Synopsis: The Okeechobee Battlefield project represents a portion of one of the last battles of the Second Seminole Indian war. The 211-acre project consists of improved pasture and freshwater marsh, and provides the backdrop for a yearly reenactment of the battle. The site is home to bald eagles, and offers potential habitat for the crested caracara and wood stork. The evaluation team visited the project on September 24, 2001.

The project is situated adjacent to U.S. Highway 441/98 along the northeastern rim of Lake Okeechobee, approximately five miles southeast of the town of Okeechobee in southern Okeechobee County. There are no adjacent or close by conservation lands in the FNAI database, however South Florida Water Management District lands Paradise Run and Kissimmee River are approximately 8 and 12 miles to the west, respectively. St. Lucie County's Bluefield Ranch and St. Lucie Pinelands are approximately 8.5 miles to the east, and 12 miles to the northeast, respectively.

Cost: Total: Project size is 211 acres. 145 acres have been acquired at a cost of \$3,217,250
 Project Development
 Land Acquisition: 66 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 2001
 Finish Date: Upon completion

Detailed Project Budget Information (\$1000)

	Exp Thru 2005	2006	2007	2008	2009	2010	Balance to complete	Total
Federal								
State		3,217.2						
Total	\$0	3,217.2						TBD

Contact: John Outland (850) 245-2089

Project name: Osceola Pine Savannas
Project ID: 2143
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 1,374 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.

Cost: Total: Project size 1,374 acres. 1,333 acres have been acquired
 Project Development
 Land Acquisition: 41 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1995
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	\$310	0	0	0				
Tribal								
Local								
Other								
Total	310	0	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Habitat & Species
Project Name: Pal-Mar
Project ID: 2144
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: CARL/SOR

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 36,745 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 36,745 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.

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: Project size 36,745 acres. 24,667 acres have been acquired at a cost of \$78,608,044
 Project Development
 Land Acquisition: 12,078 acres remaining to be acquired
 Implementation
 Operations and Maintenance

Project Schedule:

Start Date: 1992
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2006	2007	2008	2009	Balance to complete	Total
Federal						
State	65,312	0				
Tribal						
Local	13,295	0				
Other						
Total	78,608	0				TBD
Adjusted Total	78,582					

*A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Contact: John Outland (850) 245-2089

Project name: Panther Glades
Project ID: 2145
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 53,894 acres acquired

Project Synopsis: The area consists of a landscape mosaic of forested uplands interspersed among forested wetland communities. The ecosystem encompassed by the project is a large landscape and watershed in south-central Hendry County that includes portions of both the Big Cypress and Kissimmee Billy Strand. The Panther Glades project is important to many wildlife species, particularly those that require extensive areas of habitat to maintain viable populations.

Cost: Total: Project size 57,604. 21,724 acres have been acquired at a cost of \$75,049,836
 Project Development
 Land Acquisition: 35,880 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 2001
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	\$75,050	0	0					
Tribal								
Local								
Other								
Total	\$75,050	0	0					TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration, Habitat and Species
Project Name: Paradise Run Land Acquisition
Project ID: 2146
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 4,265 Acres

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.

Cost: Total*: Project size 4,265 acres. 3,328 acres have been acquired at a cost of \$4,908,095
 Project Development
 Land Acquisition: 937 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1998
 Finish Date: TBD

Detailed Project Budget Information (1000s)

	Through 2004	2005	2006	2007	2008	Balance to complete	Total*
Federal							
State	\$4,908	0					\$4,908
Tribal							
Local							
Other							
Total	\$4,908	0					TBD

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Hydrological Restoration, Habitat and Species
Project Name: Lake Hatchineha Watershed/ Parker-Poinciana
Project ID: 2147
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 6,437 Acres

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 6,437 acres.

Cost: Total: Project size 6,437acres.
 Project Development
 Land Acquisition: 6,437 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1996
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2004	2005	2006	2007	2008	2009	Balance to Complete	Total
Federal								
State	0	0						
Tribal								
Local								
Other								
Total	0	0						TBD

Additional information available at www.sfwmd.gov under the heading “Major Projects”
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Hydrological Restoration, Water Quality, Habitat and Species,
Project Name: Pine Island Slough Ecosystem
Project ID: 2186
Lead Agency: Department of Environmental Protection/South Florida Water Management District
Authority: FF/SOR

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 21,583 Acres

Project Synopsis:

The Pine Island Slough Ecosystem project consists of approximately 49,583 acres in Osceola and Indian River Counties, Florida. About 21,583 acres are within the South Florida Ecosystem boundary. This landscape - intact ecological upland and wetland habitat - is reminiscent of the kind of landscape that once dominated Central Florida in pre-European settlement times. It is contiguous with the Kissimmee Prairie Preserve State Park, which is noted for its high quality resource values, and the project's acquisition would allow for the protection of and management of additional high ecological quality habitats in an area of Florida with significant vertebrate wildlife, hydrological values and other important natural resource attributes.

Cost: Total: Project size 21,583.
 Project Development
 Land Acquisition: 21,583 acres remain to be acquired.
 Implementation
 Operations and Maintenance

Project Schedule:

Start Date:
 Finish Date: TBD

Detailed Project Budget Information (1000s)

	Through 2004	2005	2006	2007	Balance to complete	Total
Federal						
State						
Tribal						
Local						
Total						TBD

Contact: John Outland (850) 245-2089

Project name: Pineland Site Complex
Project ID: 2148
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 206 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.

Cost: Total: Project size 206 acres. 57 acres have been acquired at a cost of \$1,751,874
 Project Development
 Land Acquisition: 149 acres to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1996
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	1,355	0	0				
Tribal							
Local	396.9	0	0				
Other							
Total	1,751	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Ranch Reserve
Project ID: 2178
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 2,217Acres acquired

Project Synopsis: The project consists of four cattle ranches on the Osceola Plain west of and above the St. Johns River marshes. Mesic flatwoods interrupted by depression marshes cover about 40 percent of the project area. Swamps and hammocks make up much of the remaining natural communities. At least 24 FNAI-listed animals are known or reported from the project, including red-cockaded woodpeckers and one of the best populations of sandhill cranes in Florida.

Cost: Total: 2,217 acres of a much larger project (36,116 acres) lie with the boundary of the SFWMD. 67 acres acquired at a cost of \$39,286
 Project Development:
 Land Acquisition: 2,150 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1997
 Finish Date: TBD

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	2009	Balance to complete	Total
Federal								
State	\$39.286	0	0					
Tribal								
Local								
Other								
Total	\$39.286	0	0					TBD

Contact: John Outland (850) 245-2089

Project name: Rookery Bay
Project ID: 2149
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2 - Restore and Enhance the Natural System

Measurable Output(s): 18,721 acres acquired

Project Synopsis: This project consists of 18,721 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.

Cost: Total: Project size 18,721 acres. 18,636 acres have been acquired at a cost of \$45,500,833
 Project Development
 Land Acquisition: 85 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1980
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 1999	2005	2006	2007	2008	2009	Balance to complete	Total
Federal								
State	\$44,960.8	540	0					45,500.8
Tribal								
Local								
Other								
Total	\$44,960.8	540	0					TBD

Contact: John Outland (850) 245-2089

Project name: Rotenberger-Holey land Tract
Project ID: 2150
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 79,170 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.

Cost: Total: Project size 79,170 acres. 70,833 acres have been acquired at a cost of \$20,114,395
 Project Development
 Land Acquisition: 8,337 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1984
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Balance to complete	Total
Federal							
State	20,114	0	0				
Tribal							
Local							
Other							
Total	20,114	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration
Project Name: Shingle Creek Land Acquisition
Project ID: 2151
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 7,655 Acres

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. In June 2003, Osceola County acquired an additional 124 acres within the project, granting the District a conservation easement for funding \$1,275,000 of the land acquisition cost.

Cost: Total: Project size 7,655. 1,588 acres have been acquired at a cost of \$6,314,344
 Project Development
 Land Acquisition: 6,067 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1987
 Finish Date: Upon completion

Detailed Project Budget Information (\$1000)

	Through 2003	2004	2005	2006	2007	2008	Balance to Complete	Total
Federal								
State	2,489.3	0	0	0				2,489.3
Tribal								
Local**	\$3,825							\$3,825
Total	\$6,314.3	0	0	0				TBD

** Coordination with Osceola County of the Babb property acquisition is required; This is an estimate of the land costs contributed based on file comments indicating that the District funded 25% of the acquisition \$1,275,000.

*Mitigation Funds/Donations

Additional information available at www.sfwmnd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Hydrological Restoration, Water Quality, and Habitat and Species
Project Name: Six Mile Cypress Land Acquisition
Project ID: 2152
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 1,966 Acres

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 consists 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 1,966 acres.

Cost: Total: Project size 2,193. 1,966 acres have been acquired at a cost of \$6,903,701
 Project Development
 Land Acquisition: 102 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1987
 Finish Date: Upon completion

Detailed Project Budget Information (\$1000)

	Through 2003	2004	2005	2006	2007	2008	Balance to Complete	Total
Federal								
State	\$1,770.3	0	0	0				\$1,770.3
Tribal								
Local	5,133.38	0	0	0				5,133.38
Other*								
Total	\$6,903.7	0	0	0				TBD

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: South Savannas Land Acquisition
Project ID: 2154
Lead Agency: Florida Department of Environmental Protection
Authority: Save Our Rivers (SOR), Conservation and Recreation Lands (CARL)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 6,046 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 in partnership with Martin County acquired ownership of a single 77-acre tract and transferred title to the property to the State of Florida in 1999. It is now and will continue to be managed by the Department of Environmental Protection as the Savannas Preserve.

Cost: Total: The project totals 6,046 acres which 5,182 acres have been acquired at a cost of \$20,902,290.

Project Development

Land Acquisition: 864 acres remaining to be acquired.

Implementation

Operations and Maintenance

Project Schedule:

Start Date: 1981

Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Through 2003	2004	2005	2006	2007	2008	Balance to Complete	Total*
Federal								
State	19,902	0	0	0				
Tribal								
Local	1,000	0	0	0				
Other								
Total	\$20,902	0	0	0				TBD

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration
Project Name: Southern Glades Land Acquisition
Project ID: 2155
Lead Agency: South Florida Water Management District and Miami-Dade County
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 37,620 Acres

Project Synopsis: This 37,620-acre project is located adjacent to the C-111 Canal, between U.S. 1 and Everglades National Park. 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. This land is needed for the C-111 Canal project and C-111 Spreader Canal CERP project. These projects will benefit the flow of water into Everglades National Park and Northeast Florida Bay.

Cost: Total: Project size 37,620 acres. 33,587 acres have been acquired at a cost of \$14,437,728
 Project Development
 Land Acquisition: 4,033 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1964
 Finish Date: Upon completion

Detailed Project Budget Information (\$1000)

	Through 2006	2007	2008	2009	Balance to complete	Total*
Federal						
State	12,952					
Tribal						
Local**	1,485					
Other						
Total	14,437					TBD
Adjusted Total*	6,938					

*A portion of the acres and costs on this project sheet overlap with Project ID 1404 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Project name: Southern Golden Gate Estates
Project ID: 2156
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 55,247 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.

Cost: Total: Project size 55,247 acres. 54,442 acres have been acquired at a cost of \$124,996,452
 Project Development
 Land Acquisition: 805 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1984
 Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	2006	2007	2008	Balance to complete	Total
Federal	32,793				
State	92,202				
Tribal					
Local					
Other					
Total	124,996				TBD
Adjusted Total	6,194				

*A portion of the acres and costs on this project sheet overlap with Project ID 1424 in Goal 1. The **Adjusted Total** compensates for this overlap by allocating the appropriate costs to this project.

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Habitat and Species
Project Name: Twelve Mile Slough
Project ID: 2158
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 15,653 Acres

Project Synopsis: This site contains 15,653 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: Project size 15,653 acres. 7,486 acres have been acquired at a cost of \$11,000,000
 Project Development
 Land Acquisition: 8,167 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1998
 Finish Date: TBD

Detailed Project Budget Information (\$1000)

	Through 2004	2005	2006	2007	2008	2009	Balance to complete	Total
Federal								
State	11,000	0	0					
Tribal								
Local								
Other								
Total	11,000	0	0					TBD

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: Upper Lakes Basin Watershed
Project ID: 2159
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 47,300 Acres

Project Synopsis: This 47,300-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. 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. The SFWMD in partnership with Polk County has acquired 12,550 acres. SFWMD is the lead land manager.

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 Floridan 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.

Cost: Total: Project size 47,300 acres. 12,550 acres have been acquired at a cost of \$12,343,957
 Project Development
 Land Acquisition: 34,750 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1995
 Finish Date: TBD

Detailed Project Budget Information (\$1000s)

	Through 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	9,257.9	0	0					
Tribal	0	0	0					
Local	836	0	0					
Other***	2,250	0	0					
Total	12,343.9	0	0					TBD

**Dollars contributed by Polk County

*** 332 acres of lands acquired in June 2003 with Mitigation funds.

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: Water Conservation Areas 2 and 3
Project ID: 2160
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 103,635 Acres of outstanding fee interests

Project Synopsis: The WCAs encompass approximately 721,433 acres in Broward, Dade, and Palm Beach counties in which the SFWMD holds a combination of fee and easement interests. The SOR project is designed to complete the public acquisition of the outstanding fee interests in the project area, estimated to total 50,717 acres. The SFWMD has already acquired 52,918 acres of the original estimated 103,635 acres of outstanding fee interests. Land management is carried out by the Florida Fish and Wildlife Commission 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 WCAs 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: Project size 103,635 acres. 12,550 acres have been acquired at a cost of \$12,343,957
 Project Development
 Land Acquisition: 34,750 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1948
 Finish Date: Upon Completion

Detailed Project Budget Information (1000s)

	Through 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State*	10,474.4	98						10,572.4
Tribal								
Local								
Other								
Total	10,474.4	98						TBD

*2004 Dollars reflect purchases associated with 980 acres of outstanding fee interest

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project name: A.R. M. Loxahatchee National Wildlife Refuge
Project Number: 2161
Lead Agency: U.S. Fish and Wildlife Service
Authority: Migratory Bird Conservation Act of 1929

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 145,567 Acres

Project Synopsis: The Arthur R. Marshall Loxahatchee NWR was established in 1951 through an agreement between the South Florida Water Management District and the U.S. Fish and Wildlife Service under the Migratory Bird Conservation Act of 1929. Acquisition is for the purposes of providing buffer to the refuge, Everglades habitats, water recharge and storage, and for habitat protection. Increasing population growth is rapidly changing the landscape, converting farmland to residential neighborhoods. Acquisition support both refuge wildlife management goals as well as CERP restoration goals.

Cost: Total project size 145,567 acres. 143,874 acres have been acquired at a cost of \$119,000
 Project Development
 Land Acquisition 1,693 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1955
 Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2004	2005	2006	2007	2008	2009	Balance to complete	Total
Federal	119							
SFWMD								
Total	119						30,000	30,119

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: Big Cypress National Preserve Addition
Project ID: 2163
Lead Agency: National Park Service
Authority: Public Law 100-301
Funding Source:

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 146,117 acres

Project Synopsis: On April 29, 1988, Public Law 100-301 established the Big Cypress National Preserve (BCNP) Addition. At that time, I-75 was being designed in such a way as to improve the natural water flow to Everglades National Park, which had been disrupted by State Road 84 (commonly known as Alligator Alley). This provided an opportunity to enhance protection of Everglades National Park, to promote protection of the endangered Florida panther, and to provide for public recreational use and enjoyment of public lands by expanding the BCNP to include those lands adjacent to Interstate 75 in Collier County north and east of the Preserve, west of the Broward County line, and south of the Hendry County line.

The purpose of the Federal acquisition is to provide significant public benefits by limiting development pressures on lands which are important both in terms of fish and wildlife habitat supporting endangered species and of wetlands which are the headwaters of the Preserve. Additionally public ownership of the lands adjacent to the Preserve would enhance the protection of the Everglades National Park while providing recreational opportunities and other public uses currently offered by the Big Cypress.

The Act provided for expansion of the Big Cypress by 146,117 acres, of which approximately 32,557 acres have been acquired by the State of Florida. The authorizing legislation allows the Secretary of the Interior to purchase lands within the preserve boundaries and stipulates that no improved property, as defined by the Act, nor oil and gas rights, shall be acquired without the consent of the owner, unless that property is subject to, or threatened with, uses which are, or would be, detrimental to the purposes of the Preserve. The NPS will acquire the remaining private lands, excluding qualifying exempt property, using fair market value appraisals, consistent with the enabling Act.

Cost: Total project size 146,117 acres. 143,436 acres have been acquired at a cost of \$72,958,737

Total

Project Development

Land Acquisition: 2,681 acres remaining to be acquired.

Implementation

Operations and maintenance

Project Schedule:

Start Date: 1989

Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	2006	2007	2008	2009	Balance to complete	Total
Federal	49,572				2,507	52,079
State	23,386.7					23,387
Total	72,958.7				2,507	75,466

All acquisitions will be consistent with authorizing Big Cypress Legislation.

Hyperlink: N/A

Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project Name: Big Cypress National Preserve Private Inholdings
Project ID: 2164
Lead Agency: National Park Service
Authority: Public Law 93-440

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 835 acres

Project Synopsis: On October 11, 1974, Public Law 93-440 established the Big Cypress National Preserve in order to assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed. The total size of the original Preserve is 574,449 acres. The State of Florida donated 186,340 acres to establish the Big Cypress. The Federal government has acquired all but 845 acres of the remaining 388,109 acres in the original Preserve boundaries. The authorizing legislation allows the Secretary of the Interior to purchase lands within the Preserve boundaries and stipulates that no improved property, as defined in the Act, nor oil and gas rights, shall be acquired without the consent of the owner, unless that property is subject to, or threatened with, uses which are, or would be, detrimental to the purposes of the Preserve.

The 179 privately owned tracts are scattered throughout the Preserve. The National Park Service will acquire those tracts, excluding qualifying exempt property, using fair market value appraisals consistent with the Act.

Cost:

Total project size 574,449 acres. 573,614 acres have been acquired at a cost of \$72,958,737

Project Development

Land Acquisition 835 acres remaining to be acquired.

Implementation

Operations and maintenance

Project Schedule:

Start Date: 1974

Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2004	2005	2006	2007	2008	2009	Balance to complete	Total
Federal	180,572						21,877	202,449
SFWMD	41,533							41,533
Total	222,105						21,877	243,982

All Acquisitions will be consistent with authorizing Big Cypress Legislation.

Hyperlink: N/A

Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project Name: Biscayne National Park
Project ID: 2165
Lead Agency: National Park Service
Authority: Public Law 96-287
Funding Source:

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 172,924 acres

Project Synopsis: This project includes acquisition of three Ragged Keys (326 acres), one tract of submerged lands only (20 acres) and two on-shore tracts (36 acres) in Biscayne National Park. The Ragged Keys are five islands immediately adjacent to the most popular use area in the park, Boca Chita Key. Two islands were acquired through 1999. Two of the three islands remaining to be acquired 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 islands. A total of 382 acres remains to be acquired.

Cost:

Total project size 172,924 acres. 172,590 acres have been acquired at a cost of \$31,850,735
 Project Development
 Land Acquisition: 334 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1968
 Finish Date: Open

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2005	2006	2007	2008	2009	2010	Balance to complete	Total
Federal	31,851	0					1,848	33,699
SFWMD								
Total	31,851	0					1,848	33,699

Hyperlink: N/A
Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project name: Crocodile Lake National Wildlife Refuge
Project Number: 2166
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act of 1973

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 7,100 acres

Project Synopsis: Crocodile Lake National Wildlife Refuge was established on April 2, 1980 to preserve mangrove wetlands, tropical West Indian hardwood hammocks and open water areas on Key Largo, which are critical feeding and nesting habitat for the endangered American crocodile. The Refuge is within the designated Critical Habitat for the species and contains one-third of all crocodile nests found in Florida. The Refuge consists of about 5,300 acres of mangrove swamp, 1,200 acres of upland hardwood hammock, and 300 acres of open water. The uplands are vegetated with the last remaining remnants of unspoiled West Indian Hardwoods in the United States. The Refuge is inhabited by a number of other endangered or threatened species, most notably the eastern indigo snake, the bald eagle, the Key Largo woodrat, the Key Largo cottonmouse, and the Schaus swallowtail butterfly. The major threat to this habitat is conversion of the uplands to residential or commercial developments. The crocodile has little tolerance to human activities. Wetlands areas are less threatened, but severe alteration and damage has occurred.

Cost: Total project size 7,100 acres. 6,696 acres have been acquired at a cost of \$13,093,000
 Project Development
 Land Acquisition 404 acres remaining to be acquired
 Implementation
 Operations and maintenance:

Project Schedule:

Start Date: 1979
 Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal	13,319						1,226	14,319
SFWMD								
Total	13,093						1,226	14,319

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project Name: Everglades National Park Expansion
Project ID: 2167
Lead Agency: National Park Service
Authority: Everglades National Park Protection and Expansion Act of 1989 (Public Law 101-229)
Funding Source:

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 109,504 acres

Project Synopsis: In 1989, Congress authorized the addition to Everglades National Park involving approximately 109,504 acres of an area known as Northeast Shark Slough and the East Everglades. The act also directed the Army Corps of Engineers to modify water management structures to allow the sheetflow of water and extend the hydroperiod to more closely resemble the historic Everglades. 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. The acquisition of the East Everglades Addition lands and completion of the Modified Water Deliveries to Everglades National Park project are the most significant efforts underway to restore water deliveries to Shark Slough, the principal watershed in the Park. These hydrologic 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.

Cost: Total project size 109,504 acres. 108,797 acres have been acquired at a cost of \$97,669,000
 Project Development
 Land Acquisition 707 acres remaining to be acquired
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1990
 Finish Date: 2005

	1997	1998	1999	2000	2001	2002	2003	2004
Real Estate								

Detailed Project Budget Information (\$1,000)

	Thru 2006	2005	2006	2007	2008	2009	Balance to complete	Total
Federal	81,397						12,223	93,620
State	16,272							16,272
Total	97,669						12,223	109,892

Hyperlink: N/A
Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project name: Florida Panther National Wildlife Refuge (includes Ten Thousand Islands refuge)
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act of 1973 (Florida Panther); P.L. 100-696 (Ten Thousand Islands)
Project Number: 2169

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 61,573 acres

Project Synopsis: The Florida panther is one of the most endangered mammals in the Nation, with less than 80 individuals inhabiting the Big Cypress-Everglades region. The target lands are valuable for flood water retention, water purification, and aquifer recharge, while providing high quality habitat for a wide variety of flora and fauna in addition to the panther. Most of the area is relatively inaccessible and is one of the few remaining retreats for the Florida black bear. The area is diverse and interesting botanically containing rare orchids, large oaks, cypress, maples, cabbage palms and a diversity of tropical trees which form a dense canopy. The increasing human population in South Florida with its consequent urban expansion is jeopardizing the area's ecological integrity. Thus essential habitat for the survival of the Florida panther is being threatened by conversion for agricultural projects, residential development, oil field activities, lumbering and road construction. A preliminary project proposal has been developed for expansion of the Florida Panther Refuge. The ecosystem within the target boundary is absolutely essential to the survival of the Florida panther.

Cost: Total project size 61,573 acres. 61,563 acres have been acquired at a cost of \$10,682,000
 Project Development
 Land Acquisition : 10 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1989
 Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2006	2007	2008	2009	2010	Balance to complete	Total
Federal	10,682						
SFWMD							
Total	10,682					10	10,692

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: Florida Keys National Wildlife Refuge (includes National Key Deer, Great White Heron, Key West refuges)
Project Number: 2168
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act (Key Deer), Executive Order 7993 (Great White Heron), Executive Order 923 (Key West)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 415,433 acres

Project Synopsis: Acquisitions are to protect and maintain habitat extensively used by the endangered key deer. Preservation of the major habitats for this deer through acquisition contributes to the overall faunal diversity of Florida. Negotiations have been successful and with the availability of funding, acquisition of about 500 acres (30 willing sellers) within the refuge boundary would be possible. No Name and Big Pine Keys are the two most extensively used keys in the deer’s range. Other rare, endangered and ‘special emphasis’ species are also found here. The greatest threat to key deer habitat is habitat modifications by land clearing. Residential development is rapidly proceeding as demand increases for the dwindling supply of acreage that will support construction. Unfortunately, this same land is prime deer habitat. An observable consequence of the residential development of these lands is the incidence of deer kills by vehicle traffic. An expansion of the Refuge to acquire a system of no-development corridors assure the continued existence of habitat for deer movement throughout the island.

Cost: Total project size 415,433 acres. 410,045 acres have been acquired at a cost of \$31,374,000
 Project Development
 Land Acquisition : 5,388 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1960
 Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2004	2005	2006	2007	2008	2009	Balance to complete	Total
Federal	31,168		206					
SFWMD								
Total	31,168	0	206				3,654	35,028

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: Hobe Sound National Wildlife Refuge
Project Number: 2170
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act of 1973

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 1,130 Acres

Project Synopsis: Hobe Sound National Wildlife Refuge was established in 1969 and presently includes 1,027 acres of coastal sand dunes, mangrove and sand pine-scrub habitat. The primary objective of the refuge is to maintain habitat for some of the most productive nesting areas of the endangered leatherback, green and threatened loggerhead sea turtles. Hobe Sound provides habitat and protection to eight plan and animal species listed as federal threatened or endangered. The South Florida Ecosystem Plan highlights the importance of beaches to sea turtles. One of the Plan's objectives is to prevent the further decline of candidate, threatened, and endangered species and prevent further degradation of their habitats. This project is supported by the State and local governments, the public and conservation groups, with no know opposition. There are many willing sellers of high priority habitat. Nonprofit conservation groups are involved in this project.

Cost: Total project size 1,130 acres. 1,034 acres have been acquired at a cost of \$18,000
 Project Development
 Land Acquisition : 96 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1968
 Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 1999	2005	2006	2007	2008	Balance to complete	Total
Federal	18					5,800	
SFWMD							
Total	18	0	0			5,800	5,818

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: J.N. "Ding" Darling National Wildlife Refuge (includes Caloosahatchee, Island Bay, Matlacha Pass & Pine Island refuges)
Project Number: 2171
Lead Agency: U.S. Fish and Wildlife Service
Authority: Migratory Bird Conservation Act; Executive Order 3299; Executive Order 943

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 10,275 acres

Project Synopsis: The J.N. "Ding" Darling National Wildlife Refuge was established in 1945 and is located in Lee County, Florida on Sanibel Island. The island is 12 miles long and is fringed with mangrove trees, shallow bays and white sandy beaches. Tourism and seasonal residential development threatened to envelop the islands private lands until a growth plan was instituted. Caloosahatchee NWR is located in Fort Myers and acquisition of lands here is necessary for the protection of the endangered West Indian Manatee. Island Bay NWR is located in the Cape Haze area of Charlotte County and includes portions of three islands. All wetlands are protected by Federal or State ownership. Matlacha Pass NWR's acquisition boundary includes all islands, wetlands and uplands lying south of the north boundary line of Township 44 South, crossing the Caloosahatchee River and running southerly and easterly to Bunch Beach. Pine Island NWR generally lies between the western boundary of Pine Island and the Coastal Islands of Cayo Costs, North Captiva and Sanibel.

Cost: Total Total project size 10,275 acres. 8,767 acres have been acquired at a cost of \$9,785,000
 Project Development
 Land Acquisition : 1,508 acres remaining to be acquired.
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1945
 Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Exp Thru 2004	2005	2006	2007	2008	2009	2010	Balance to complete	Total
Federal	9,035		750					3,100	12,885
SFWMD									
Total	9,035		750					3,100	12,885

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: NOAA South Florida Program
Project Name: Planning and Implementation of the Tortugas Ecological Reserve
Project ID: 2200
Lead Agency: NOAA
Authority: Magnuson Stevens Fisheries Wildlife Conservation Act, Marine Mammal Protection Act. NMSA (16 U.S.C. §§ 1431 *et seq.*), FKNMSPA (PL 101-605), and Executive Order 13089 (Coral Reef Protection)

Funding Source:

Strategic Plan Goal(s) Addressed: 2.A.2

Measurable Output(s): Physical, Water Quality and Biological Data input to CERP Monitoring and Assessment Plan, Hydrodynamic Model for South Florida Coastal Waters (Florida Bay boundary), Assessment of Critical Indicator Species (both commercial and recreational fisheries), marine mammal population health and status, research publications and contributions to the Florida Bay and Adjacent Marine Waters Syntheses and biannual symposia

Project Synopsis: Ongoing program initiated in FY96 including research, monitoring and modeling components as well as a specific Education/Outreach Component. Includes three NOAA line organizations (NOS, NMFS and OAR) as well as Florida Sea Grant.

Cost:

Total: FY06 total\$ Not Yet Determined
 FY06 Total = \$2.8K NOAA
 Project Development: \$1.0K USACE to us
 \$120K State to us
 0 Tribal or Local

Land Acquisition:
 Implementation
 Operations and maintenance

Project Schedule:

Start Date: 1997
 Finish Date: Ongoing

Detailed Project Budget Information (1000s)

	Thru 2000	2001	2002	2003	2004	2005	Balance to complete	Total to Date
Federal	15,200	4,200	4,200	4,200	4,200	4,200	ongoing	36.2M
State					.4	.4	ongoing	0.8M
Tribal								
Local								
Other (Corps)					.7	.7	ongoing	1.4M
Total	19,400	4,200	4,200	4,200	5,300	5,300	ongoing	Ongoing

Hyperlink: N/A
Contact: Peter Ortner 305-361-4374

Project Name: C&SF: CERP –Strazzulla Wetlands (OPE)
Project ID: 2300 (CERP Project # WBS 39)
Lead Agency: USACE / SFWMD
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Increased spatial extent and habitat connectivity

This feature adheres to the original concept outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and includes water control structures and the acquisition of 3,335 acres located in Palm Beach County. This land will act as a buffer between higher water stages to the west and lands to the east that must be drained.

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.

Cost: \$70,392,000

Project Schedule:

Project is scheduled to complete construction in Band 2 (2010 – 2015).

	2003	2004	2005	2006	2007	2008	2009	2010
PIR/ Plans & Specs								
Real Estate								
Construction								

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	2010	Total
USACE	318	3,488	6,976	10,463	6,976	6,976	35,196
SFWMD	140	3,506	7,011	10,517	7,011	7,011	35,196
Total	458	6,993	13,987	20,980	13,987	13,987	70,392

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_39_strazzulla.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan* (MISP) and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP Winsberg Farm Wetlands Restoration (OPE)
Project ID: 2301 (CERP Project # WBS 91)
Lead Agency: USACE / Palm Beach County
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 2.A.3

Measurable Output(s): 114 acres of wetlands

As a part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) was identified in 2005. The TSP has been presented at the AFB and was refined during the plan formulation process. The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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.

Since the Restudy, the TSP provides for the project to be located on approximately 165 acres of farmland just east of the Southern Region Water Reclamation Facility (SRWRF). Approximately 114 of the 165 acres would be hydrated using treated wastewater from the SRWRF. Thus, the concept proposed would result in creation of a wetland system approximately three times the size of the Wakodahatchee Wetlands, and its location adjacent to the Wakodahatchee site would leverage the recently created ecosystem restoration benefits by expanding the constructed wetland into an integrated system having even greater regional significance. The configuration includes a Phase 1 design and construction, which includes approximately 72 acres of wetlands to be created in the western half of the project. The remaining 42 acres of the project area on the east half of the Winsberg Farm, considered Phase 2 of the project, would contain the same habitat types as Phase 1. The TRP is configured assuming constant inflow of water to maintain continuous inundation. Water levels will be allowed to fluctuate seasonally within a 1- to 2-foot range throughout the entire 114 acres in response to natural seasonal variation in rainfall. This variation in the depth and duration of flooding (i.e., hydroperiod) will influence the growth and distribution of plant species within the wetland.

The purpose of this facility is to create a wetland using water that would normally be lost to deep well injection and any future beneficial use. The wetland will reuse a valuable resource, recharge the local aquifer system, create a new ecologically significant wildlife habitat and extend the function of the nearby Wakodahatchee Wetland.

The control structure can be operated to allow flow:

1. to the eastern half of the project (Phase 2) or
2. circulate flow in the western half of the project by a 15-hp recirculation pump or
3. send flow to deep well injection by a 250-hp discharge pump in the event pool elevations rise beyond a set point due to direct rainfall.

Phase 2 of the project will be constructed to the same design elevations as Phase 1. This is in line with the original concept that the whole project would be constructed at one time, rather than 2 separate phases.

The TSP is configured assuming constant inflow of water to maintain continuous inundation at water level of 20.0 ft-NGVD. Water levels will be allowed to fluctuate seasonally within a 1- to 2-foot range throughout the entire 114 acres in response to natural seasonal variation in rainfall. This variation in the depth and duration of flooding (i.e., hydroperiod) will influence the growth and distribution of plant species within the wetland.

Cost: \$17,055,000

Project Schedule:

Project is scheduled to complete construction in 2008.

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

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	Total
USACE	1,238	2,187	2,551	2,551	8,528
Palm Bch Co.	0	2,558	2,985	2,985	8,528
Total	1,238	4,745	5,536	5,536	17,055

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_91_winsberg.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Lakes Park Restoration (OPE)
Project ID: 2302 (CERP Project # WBS 94)
Lead Agency: USACE / Lee County
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): 40 acres marsh/flowway

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) is anticipated in July 2006. The project adheres to the original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) which 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.

Lakes Park is located east of Cape Coral in Lee County, just west of Highway 41. Lee County has developed the area as a regional park with a bathing area along the shores of mining pits, which have been developed as lakes. Adjacent to the developed area, the remaining natural habitat contains pine flatwoods with some cypress heads. The pits capture runoff from the surrounding developed area (commercial, industrial, and residential), and county monitoring has indicated a decline in water quality in the lakes. The lakes are infested with hydrilla, and adjacent uplands and islands are covered with exotic plant species such as Australian pine and Brazilian pepper. This project is expected to restore surface water runoff quality by creating a meandering 40-acre flowway with shallow littoral zones and removing aquatic and upland exotic vegetation. The littoral zone will be harvested periodically to remove excess nutrients from the system. Exotic vegetation will be removed and replaced with native vegetation.

Cost: \$5,971,000

Project Schedule:

Project is scheduled to complete construction in 2009.

	2003	2004	2005	2006	2007	2008	2009
Planning & Design							
Real Estate							
Construction							

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	307	268	804	804	804	2,986
Lee County	0	299	896	896	896	2,986
Total	307	566	1,699	1,699	1,699	5,971

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_94_lakes_park.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan* (MISP) and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - Restoration of Pineland & Hardwood Hammocks in C-111 Basin (OPE)
Project ID: 2303 (CERP Project # WBS 92)
Lead Agency: USACE
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 2.A.3

Measurable Output(s): Approximately 50 acres pine rockland and tropical hardwood hammock

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and 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 two, one-acre hammocks in low-lying areas on each side of the road located in Miami-Dade County.

The purpose of this feature is to restore hammocks to a portion of the Frog Pond which has been purchased by the South Florida Water Management District as part of the C-111 Project to restore the Taylor Slough portion of the Everglades. This feature will provide some water quality treatment for runoff passing through the hammocks and will demonstrate the techniques required to re-establish native conifer and hardwood forests on land that has been rock plowed.

Cost: \$705,000

Project Schedule:

Project is scheduled to complete construction in Band 4 (2020 – 2025).

	2016	2017	2018	2019	2020	2021
PIR/ Plans and Specs						
Construction						

Detailed Project Budget Information (\$1000)

	2016	2017	2018	2019	2020	2021	Total
USACE	7	11	106	106	53	71	353
Sponsor	7	11	106	106	53	70	352
Total	14	21	212	212	106	141	705

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_92_rest_pineland.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: A.R.M. Loxahatchee NWR Prescribed Fire Program
Project ID: 2304
Lead Agency: USFWS A.R.M. Loxahatchee NWR
Authority:
Funding Source: 9131, 9263, 9264

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Acres of habitat improved including contribution to invasive exotic control.

Due to an abnormally wet June we were not able to conduct a burn in the interior of the refuge which was planned to be 10,000 acres in size. We did conduct eight smaller prescribed burns for a total of 84.5 acres.

Project Synopsis: Fire is a natural part of the Everglades ecosystem. Fire also can be used to help control invasive exotic species. The natural fire patterns in the Everglades and in A.R.M. Loxahatchee NWR have been altered. A prescribe fire program will help to improve habitats by reducing fuel loads and mimicking natural fire frequencies and intensities where appropriate. The overall result will be an improvement in wildlife habitat on the refuge.

Cost:

Total:

Project Development:

Land Acquisition:

Implementation

\$200,000

Operations and maintenance

\$200,000 (each year)

Project Schedule:

Start Date 2002

Finish Date: recurring

Detailed Project Budget Information (1000s)

	Thru 1999	2001	2002	2003	2004	2005	2006	Total
Federal		190.5	131.5	127.7	153	124.5	161.4	
State								
Tribal								
Local								
Other								
Total		190.5	131.5	127.7	153	124.5	161.4	TBD

Hyperlink: N/A

Contact: Rolf E. Olson (561) 735-6022

Program Name: Infrastructure
Project Name: C&SF: CERP – Acme Basin B Discharge (OPE)
Project ID: 2306 (CERP Project # WBS 38)
Lead Agency: USACE / SFWMD
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 2.A.3 **Secondary:** 3.C.2

Measurable Output(s): 365-acre constructed upland/wetland mosaic; 14,000 ac-ft per year of water conveyance to WCA-2, WCA-3, Everglades National Park, and Shark River Slough; 17,000 ac-ft per year recaptured for reuse; 1,000 ac-ft per year supplement to Lake Worth Drainage District municipal water supply.

As a part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan identified allows for the opportunity to recapture and reuse water (32,000 ac-ft/yr) that would otherwise be lost to tide and likely cause adverse ecological effects within the central Lake Worth Lagoon (LWL) estuarine system. It would also add to the local area's ecological spatial extent (section 24) and would contribute much needed water (14,000 ac-ft/yr) further south into WCA-2, WCA-3, Everglades National Park and Shark River Slough, while supplementing the Lake Worth Drainage District (LWDD) municipal water supply (1000 ac-ft/yr). Additionally, it would relieve Lake Okeechobee from the burden for supplying water (32,000 ac-ft/yr) to the WCA-1, which would result in one less commitment to Lake Okeechobee's Water Supply/Environmental (WS/E) obligations.

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) includes the construction of a wetland or chemical treatment area and a storage reservoir with a combined total storage capacity of 3,800 acre-feet located adjacent to the Loxahatchee National Wildlife Refuge in Palm Beach County. Stormwater runoff from Acme Basin "B" will be pumped into the wetland treatment area and then into the storage reservoir until such time as the water can be discharged into the Loxahatchee National Wildlife Refuge if water quality treatment criteria is met, or into the one of two alternative locations: the Palm Beach County Agricultural Reserve Reservoir (VV) or the combination above-ground and in-ground reservoir area located adjacent to the L-8 Borrow Canal and north of the C-51 Canal (GGG). Estimated real estate cost of this 930 acres is \$8,500,000, which would include all land costs and administrative/acquisition costs (both Federal and non-Federal).

In the time period between the Restudy and the start of the Acme Basin B Discharge Project Implementation Report (PIR), the land the restudy had envisioned for a reservoir was sold to a developer. Thus, due to real estate cost increases, the project changed from an on-site water quality treatment project to a water conveyance project to an off-site water quality treatment area (STA 1E).

Currently, the operational plan is an operational change to the future without project (FWOP) and would route all Basin B runoff to C-51 and then west to STA-1E rather than east to tide as per the FWOP. The operational plan will treat Basin B runoff in STA-1E instead of discharging to tide through S-155A. This alternative incorporates construction of 365 acres of wetland/upland mosaic habitat in Section 24 as an increment to the non-structural plan operations. The plan would require no new structures or improvements to existing structures in Village of Wellington Basin A or Basin B and does not provide conveyance of Basin B runoff through Section 24.

A draft Project Implementation Report (PIR) has been completed. The SFWMD, through its Acceler8 initiative, is advancing the design and construction of the project. This project is further described on the following pages.

Cost: \$26,512,000

Project Schedule:

Project construction is scheduled to be completed in 2007.

	2002	2003	2004	2005	2006	2007
PIR/Plans and Specs						
Real Estate						
Construction						

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	Total
USACE	1,847	5,705	5,705	13,256
SFWMD	617	6,320	6,320	13,256
Total	2,464	12,024	12,024	26,512

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_38_acme.cfm

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
 (904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP – Acme Basin B Discharge (OPE) – **ACCELER8**
Project ID: 2306A (CERP Project # WBS 38)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Surface water for Everglades Protection Area; 1,028 ac-ft water storage

Project Synopsis: This *Acceler8* project is one of a series of five project components located adjacent to the Everglades Water Conservation Areas (WCAs) in Palm Beach, Broward and Miami-Dade counties which make up the Water Preserve Areas Project (Site 1 Impoundment, C-9 Impoundment, C-11 Impoundment, Acme Basin B Discharge, and WCA-3A/3B Seepage Management).

This project component includes 400 acre natural area, 2 pump stations and C1 Canal improvements.

Total Estimated Project Cost: \$33,606,689 †††

†††-Total estimated Acceler8 cost for design, land management, and construction. This estimate does not include planning, land acquisition, or other non-Acceler8 costs.

Scheduled Construction Start Date: Jun, 2006
Scheduled Project Completion Date: Dec, 2007

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$417,537	\$1,180,571	\$1,598,108

Real Estate Acquisition:**

Acres	Cost
415	\$4,119,830

Contact: Kathy Collins, 561-242-5520, x4024

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Infrastructure
Project Name: C&SF: CERP – Picayune Strand (Southern Golden Gate Estates) Hydrologic Restoration (OPE)
Project ID: 2307 (CERP Project # WBS 30)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Spreader channels, canal plugs, road removal, and pump stations; restoration of 55,000 acres of wetlands

The final Project Implementation Report (PIR) for this feature was completed in November 2004 and signed by the Chief of Engineers in September 2005. The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study (Restudy)* 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.

The project was refined during the Project Implementation Report Process. This project involves the restoration of natural water flow across 85 square miles in western Collier County that was drained in the early 1960s in the anticipation of extensive residential development. This subsequent development dramatically altered the natural landscape, changing a healthy wetland ecosystem into a distressed environment. The project includes 83 miles of canal plugs, 227 miles of road removal, and the addition of pump stations and spreader swales to aid in rehydration of wetlands and maintenance of flood protection for the Northern Golden Gate Estates residential area.

The project will restore the wetlands in Picayune Strand (Southern Golden Gate Estates) and in adjacent public lands by reducing over drainage while restoring a natural and beneficial sheetflow of water to the Ten Thousand Islands National Wildlife Refuge. Additionally, the project will significantly increase the size of wetlands and improve major wetland ecosystems in adjacent lands including the Fakahatchee Strand State Preserve, Florida Panther National Wildlife Refuge, and Collier Seminole State Park, benefiting threatened and endangered species such as the Florida panther and the red cockaded woodpecker. Water quality and volume delivered to coastal estuaries will be improved by the moderation of large salinity fluctuations caused by freshwater flowing from the Faka Union Canal into the estuaries. The project will also maintain existing flood protection for the Northern Golden Gate Estates and provide public access and recreational opportunities.

The SFWMD, through its Acceler8 initiative, is advancing the design and construction of the project. This project is further described on the following pages.

Cost: \$362,603,000

Project Schedule:

This project is scheduled to complete construction in 2009.

	2001	2002	2003	2004	2005	2006	2007	2008	2009
PIR/ Plans & Specs									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	6,789	69,805	34,903	34,903	34,903	181,302
SFWMD	4,017	70,914	35,457	35,457	35,457	181,302
Total	10,806	140,719	70,359	70,359	70,359	362,603

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_30_sgge.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Schedule information based on the *Master Implementation Sequencing Plan (MISP)*. Detailed budget information based on the final Project Implementation Report (PIR). Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP – Picayune Strand (Southern Golden Gate Estates) Hydrologic Restoration (OPE) – **ACCELER8**
Project ID: 2307A (CERP Project # WBS 30)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Three pump stations with spreader canals; pump stations; 83 canal plugs; flood control berms; road removal; and habitat restoration

Project Synopsis: This *Acceler8* project involves the restoration of natural water flow across 85 square miles in western Collier County, drained in the early 1960s with the intention of extensive residential development. This project includes three diesel pump stations with spreader canals, 83 canal plugs, and 227 miles of road removal. Levees will be installed to provide flood protection for adjacent private properties that would be impacted by the project.

Total Estimated Project Cost: \$188,724,455

Scheduled Construction Start Date: Aug, 2006

Scheduled Project Completion Date: Dec, 2009

Actual Expenditures to date by SFWMD*:

	Thru 2005	2006	Total
SFWMD	\$1,950,110	\$3,178,099	\$5,128,209

Real Estate Acquisition:**

Acres	Cost
55,247	\$121,575,762

Contact: Chip Eitel, 561-242-5520, x4031

*Credit for Acceler8 work subject to inclusion in authorized Federal project.

**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Program Name: Mineral Rights Acquisition
Project Name: Big Cypress National Preserve Mineral Rights
Project ID: 2400
Lead Agency: National Park Service

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Acres Acquired

Project Synopsis: Acquire the non-Federal mineral rights on approximately 729,000 acres in the Big Cypress National Preserve. The Secretary of the Interior has made an announcement of the intent to purchase the rights from Collier Resources. The Collier family is the primary holder of mineral rights in the Preserve. The Secretary's announcement did not include acquisition of other mineral rights.

Acquisition of mineral rights would protect wetlands habitat from oil and gas development activities. The goal is acquisition of all mineral rights which would preclude surface disturbance associated with mineral exploration and development in relatively pristine wetlands.

Cost: TBD

Project Schedule:

Start Date: 2000
 Finish Date: TBD

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Appraisal											
Acquisition											

Detailed Project Budget Information

	Thru 1999	2000	2001	2002	2003	2004	2005	2006	2007	Balance to complete	Total
Federal											TBD
Total											TBD

Funds for this project were requested to be appropriated by Congress subject to affecting an agreement with the majority mineral owner and DOI. Negotiations have been suspended, and no Congressional appropriation has occurred.

Hyperlink: N/A
Contact: Ron Clark, (239) 695-1106

Program Name: South Florida Ecological Services Office Threatened and Endangered Species Program
Project Name: South Florida Multi-Species Recovery Plan
Project ID: 2402
Lead Agency: USFWS
Authority: Endangered Species Act of 1973 (16 U.S.C. 1531-1543)
Funding Source: No specific funding source, incorporated into agency/organization budgets to the extent practical

Strategic Plan Goal(s) Addressed: Primary: 2.A.4 **Secondary:** 2.A.1

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 MSRP is underway through the work of the Service and their many Federal, State, and non-governmental partners. A draft implementation schedule was announced in the Federal Register in 2004 and is being finalized. The implementation schedule prioritizes recovery actions in the MSRP, as well as providing time and cost estimates for those actions. Participants to complete those actions are also identified. The Service expects to finalize the implementation schedule in the near future. Two species, the Key deer and American crocodile, are improving in status. The American crocodile population in Florida was proposed for reclassification from endangered to threatened in March 2005, a final rule is anticipated in summer 2006. The Service is revising the Key deer recovery plan and a draft is anticipated to be available for public review and comment in late 2006.

The Service is working with partners to initiate, continue, or complete recovery actions in the MSRP for a multitude of species. Research, monitoring, and/or habitat restoration are being conducted for the Florida panther, Key deer, Key Largo cotton mouse, Key Largo woodrat, Lower Keys marsh rabbit, southeastern beach mouse, West Indian manatee, Audubon's crested caracara, Cape Sable seaside sparrow, Everglade snail kite, Florida grasshopper sparrow, Florida scrub jay, Roseate tern, wood stork, American crocodile, bluetail mole skink, Eastern indigo snake, green sea turtle, hawksbill sea turtle, loggerhead sea turtle, sand skink, Schaus swallowtail butterfly, Stock Island tree snail, crenulate lead-plant, four-petal pawpaw, Garber's spurge, Avon Park harebells, Okeechobee gourd, Lakela's mint, beach jacquemontia, Key tree cactus, pygmy fringe-tree, short-leaved rosemary, scrub buckwheat, snakeroot, Highlands scrub hypericum, scrub blazing star, papery whitlow-wort, Lewton's polygala, wireweed, sandlace, scrub plum, and Florida ziziphus.

Cost: Total: \$386,112,000 (does not include all amounts for habitat acquisition, management, or restoration because those tasks are expressed as costs per acre and could not be determined at this time)

Project Schedule:
Start Date: 1994
Finish Date: TBD

Estimated Cost of Recovery

Includes the estimated cost of accomplishing all recovery actions in the MSRP. These costs were calculated as totals per community for the multiple species that occur within each community. Costs for land acquisition, management, and restoration will be more accurately determined as the MSRP is implemented.

Estimated Cost of Recovery for Implementation of the MSRP (Dollars x 1,000)

Community	Year 1	Year 2	Year 3	Total
Florida Scrub/Scrubby Flatwoods/Scrubby High Pine	3615	3131	2738	9484
Beach Dune/Coastal Strand	488	478	448	1414
Tropical Hardwood Hammock	1888	1811	1311	5010
Pine Rocklands	2622	2405	1465	6492
Mesic and Hydric Pine Flatwoods	421	411	301	1133
Dry Prairie	1104	1014	954	3072
Freshwater Marsh/Wet Prairie	93369	93229	92994	279592
Mangrove	25782	25768	25753	77303
Coastal Salt Marsh	969	907	736	2612
Total	130,258	129,154	126,700	386,112

These total cost estimates do not include amounts for habitat acquisition, management, or restoration because those tasks are expressed as costs per acre and could not be combined with overall costs per species.

Contact: Schulz (772) 562-3909

Program Name: Infrastructure
Project Name: WCA 2A Regulation Schedule Review
Project ID: 2403
Lead Agency: USACE
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Revised WCA-2A Regulation Schedule

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. This project will be done in coordination with the Rain-Driven Operations.

Cost: TBD

Project Schedule: TBD

Detailed Project Budget Information (\$1000)

No budget information available, as project has not started.

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Program Name: Infrastructure
Project Name: C&SF: Manatee Pass Gates
Project ID: 2404 (CERP Project # WBS 511)
Lead Agency: USACE / SFWMD
Authority: WRDA 1994
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed:

Measurable Output(s): Other

The purpose of this project is to develop and install Manatee Protection Devices on vertical lift gates and sector gates at specific navigation and flood control structures. The original concept for this feature was outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy). In Section 4.9.1.5 of the Restudy, the Manatee Protection project is described as follows:

“The West Indian manatee (*Trichechus manatus*) is listed as a Federally endangered species and is one of the most endangered species in Florida. As a response to recent manatee mortality trends associated with water control structures, this project will provide operational changes and implement the installation of a manatee protection system at seven sector gates at navigational locks near Lake Okeechobee. The beneficial outcome of this project will be the reduction of risk, injury, and mortality of the manatee. The seven sector gates include S-193 at Okeechobee and S-310 at Clewiston on Lake Okeechobee; St. Lucie Lock and Port Mayaca Lock on the St. Lucie Canal; and Moore Haven Lock, Ortona Lock, and W. P. Franklin Lock on the Caloosahatchee River.

The mechanism proposed would use hydro acoustic and pressure sensitive devices that will immediately stop the gates when an object is detected between the closing gates. These systems will transmit an alarm and signal to stop the gate movement when a manatee is detected. When an object or manatee activates the gate sensors, the gate will stop and open approximately six inches to release a manatee. As a result, a manatee will be able to travel between the open gates. After the gate opens, the operator can fully close the gate unless an object remains between the gates. Then the opening process will repeat the cycle as the sensors are activated again. Due to these structural modifications, manatees will be at a significantly less risk as they encounter locks with sector gate.”

Currently, this project consists of alternative structural modifications to 23 existing water control structures and locks in the C&SF Project to reduce or eliminate manatee mortalities associated with their operation. The project is being implemented in two phases; the first phase addresses the addition of pressure sensitive devices at water control structures. These devices will reverse the gate closure if a foreign object is detected. During the second project phase, similar devices will be placed at lock gates. Phase 2 is under construction.

Cost: \$13,800,000

Project Schedule:

Start Date: 2001
 Finish Date: 2007

	Thru 2004	2005	2006	2007
PIR/ Plans & Specs				
Real Estate				
Construction				

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	Total
USACE	7,178	2,211	2,211	11,600
SFWMD	453	874	874	2,200
Total	7,631	3,085	3,085	13,800

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
(904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study* and from <http://www.sfrestore.org/documents/xcut/usace.htm> and <http://corpsconnect.saj.usace.army.mil/CoeConnect/corps/PRJ01.aspx?Page=Detail&view=&ProjID=8702&ProjWICode=114894>.

Program Name: Infrastructure
Project Name: Loxahatchee Impoundment Landscape Assessment (LILA)
Project ID: 2305
Lead Agency: SFWMD / USFWS A.R.M. Loxahatchee NWR
Authority:
Funding Source:

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Reports outlining quantitative targets for CERP performance measures. Educational kiosk.

Project Synopsis: The objective of LILA is to support CERP by defining hydrologic regimes that sustain a healthy Everglades Ridge and Slough ecosystem and reduce uncertainty in predicting the ecosystem response. LILA will address the effects of water depth, hydroperiod, and flow rate on wading birds, tree islands, marsh plant communities, marsh fishes and invertebrates, and peat soils. In addition, LILA supports refuge and CERP public outreach by providing opportunities to observe ongoing investigations and results. It will provide educational opportunities through on-site demonstrations, kiosks as well as a forum for discussion of restoration designs.

	SFWMD	USFWS/A.R.M. Lox NWR
Cost:		
Total :	\$4,010,000	\$2,040,000 *
		*((\$1,900,000 is contribution of land 64 acres)
Project Development:		
Land Acquisition:		
Implementation	\$1,399,000	\$70,000
Operations and maintenance	\$2,611,000	\$70,000

Project Schedule:

Start Date: 2002
 Finish Date: 2012

Detailed Project Budget Information (1000s)

	2002	2003	2004	2005	2006	Balance to complete	Total
Federal	1,900*	60	10	10	10	50	2,040
State	700	338	361	197.5	488	1,925.5	4,010
Tribal							
Local							
Other							
Total	2,600	398	371	207.5	498	1,975.5	6,050

*\$1,900,000 is contribution of land 64 acres

Hyperlink: N/A
Contact: Rolf E. Olson (561) 735-6022

Program Name: Invasive Exotic Species Management
Project Name: Coordinate the development of management plans for top 20 south Florida exotic pest plants
Project ID: 2500
Lead Agency: NEWTT (Noxious Exotic Weed Task Team)

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. Accomplishments to date have included an assessment of the key species and priorities for plan development. No new plans are being developed at this time as no funding or agency leadership for developing these plans has been identified. In addition, FDEP has expressed that additional plans for control of the key invasive species is not needed and thus the development of such plans is in question.

To date no funding has been provided to begin this project.

Cost:

Total	\$600,000
Project Development	\$30,000 per plan
Land Acquisition	N/A
Implementation Unknown	
Operations and maintenance Unknown	

Project Schedule:

Proposed Start Date:	Spring 2001
Finish Date:	2011

Detailed Project Budget Information (1000s)

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
Total								\$600

Hyperlink: N/A

Contact: Robert Doren (305) 348-6721

Program Name: Invasive Exotic Species Management
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: 2600
Lead Agency: SFWMD/DEP/USFWS

Goal(s) Addressed: Primary: 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 Old World climbing fern management plan has been updated and revised for 2006. The Lygodium Task Force of the Florida Exotic Pest Plant Council completed the revision in November 2005. New herbicide trials and biological control elements of the plan have been underway and are showing some progress in understanding how to possibly manage this serious pest. The first insect has been released on Lygodium, a second is awaiting release soon, and monitoring of the establishment and spread of the insect in the wild and preliminary effects on the Lygodium sites where the insects are distributed. However, no significant inroads into control of Old World climbing fern have been made except at very local levels in small park areas. No plan exists for Australian pine. The COE and SFWMD have agreed to lead the effort to develop an all taxa invasive species Master Plan for south Florida restoration by 2008. Partial funding through the SFWMD, FLDEP and USFWS for public lands in south Florida has been allocated for melaleuca and Old World climbing fern; and maintenance control has been achieved for melaleuca on SFWMD, NPS and identified DEP upland control sites. Brazilian pepper still has no control funding but an enhanced biological control program was started in 2005; the direction of the program was moved to the Davie Quarantine facility and the SFWMD increased project funding.

Cost:

Total	\$139,078,000
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:

Proposed Start Date: 2002
 Finish Date: Achieve maintenance control 2020

Detailed Project Budget Information (1,000s)

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal				10.3		7.6		
State				39.8		38.5		
Tribal								
Local				20.6		0.45		
Other								
Total				70,700		46,550	\$68,338	\$139,078

*Maintenance Control is simply defined in SS.369.22(1)(d), F.S., as applying management techniques on a continuous basis to keep non-indigenous plant populations at the lowest feasible levels.

Hyperlink: N/A
Contact: Bob Doren (305) 348-6721

Program Name: Invasive Exotic Species Management
Project Name: Integration of Federal, State, and Local Agency Invasive Exotic Control Programs into Florida-wide Strategy
Project ID: 2601
Lead Agency: National Park Service

Goal(s) Addressed: Primary: 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. The COE is funding a special report on the Federal role in invasive species management that will include the implementation planning elements of the strategic plan for federal agencies.

Cost:
 Total TBD
 Project Development
 Land Acquisition
 Implementation \$60,850,000 (Annual Requirement)
 Operations and maintenance \$76,418,000 (Annual Requirement)

Project Schedule:
 Proposed Start Date: 2000
 Finish Date: 2006 – This date is used as a guidepost to implement the key elements of the strategic plan.

Detailed Project Budget Information (\$1000)

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal*					70,000	120,000		TBD
State**		\$22,436	\$22,436	\$33,436	\$33,436	\$33,436		TBD
Tribal		Not Reported						
Local		\$23,200	\$23,200	\$23,200	\$23,200	\$23,200		
Total		\$45,636	\$45,636	\$56,636	\$126,636	\$176,636	TBD	TBD

*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: N/A
Contact: Bob Doren (305) 348-6721

Program Name: Infrastructure
Project Name: C&SF: CERP - Melaleuca Eradication Project and other Exotic Plants (OPE)
Project ID: 2602 (CERP Project # WBS 95)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 (Programmatic Authority)
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: 2.B.2

Measurable Output(s): Increase effectiveness of biological control technologies

The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) 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. The purpose of this feature is to increase the effectiveness of biological control technologies to manage Melaleuca and other invasive exotic species. Design and construction of the upgrade work needed at the existing Gainesville facility was postponed due to the lack of non-Federal funding on behalf of the sponsor.

The Design Agreement between the USACE and South Florida Water Management District was amended 29 July 2004 to add the Melaleuca and Other Exotic Plants – Implement Biological Controls project. The project management plan was approved 28 Jan 2005. The kick-off meeting for the project implementation report was held 20 July 2005 and is currently scheduled for completion March 2009.

Cost: \$6,587,000

Project Schedule:

Project is scheduled to be completed in 2009.

	2004	2005	2006	2007	2008	2009
PIR/Plans and Specs						

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	2009	Total
USACE	587	677	677	677	677	3,294
SFWMD	7	822	822	822	822	3,294
Total	594	1,498	1,498	1,498	1,498	6,587

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_95_melaleuca.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Invasive Exotic Species Management
Project Name: Everglades National Park Exotic Control Program
Project ID: 2604
Lead Agency: National Park Service

Strategic Plan Goal(s) Addressed: 2.B.2

Measurable Output(s): Acres infested with Exotic Plants

Project Synopsis: Exotic plants are the single most serious long-term threat to Everglades National Park. Over 200,000 acres of the park and 500,000 acres of adjacent lands are infested. Without control and management, these plants can and will continue to replace all native plant communities in the park. Funds are needed for control efforts and determining effective means of dealing with the many exotic species.

The program will (1) complete the initial treatment of melaleuca and Australian pine in the East Everglades; (2) perform retreatment of Old World climbing fern along the Gulf Coast; (3) complete the initial treatment of Australian pine in the southeastern panhandle; (4) perform retreatment of Asiatic colubrina sites along the northern fringe of Florida Bay; (5) perform the annual reconnaissance flight across the park to monitor and document exotic plant occurrence, (6) perform initial treatment and/or retreatment of localized populations of exotic Ardisia, Schinus, and other exotic pest plants in all the park's districts, and (7) support the essential monitoring and maintenance control programs in treated zones..

Cost:
 Total: TBD

Project Schedule:

Start Date: 2002
 Finish Date: To be determined

	1997	1998	1999	2000	2001	2002	2003	2004
Operation/Management								

Detailed Project Budget Information (\$1,000)

	Thru 1999	2000	2001	2002	2003	2004	2005	Balance to complete	Total
Federal				508	400	1,414	493		TBD
Non-Fed				396	200	571	971		
Total				904	600	1,985	1,464		TBD

Hyperlink: N/A
Contact: Margaret Garvin (305) 242-7721

Program Name: Invasive Exotic Species Management
Project Name: Exotic Species Removal
Project ID: 2605
Lead Agency: Seminole Tribe of Florida/BIA
Authority: Tribal Resolution

Strategic Plan Goal(s) Addressed: 2.B.2

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 (1000s)

	2002	2003	2004	2005	2006	Balance to complete	Total
Federal	30	60	30	30	30	254	434
State							0
Tribal	20	70	70	70	70	254	554
Total	50	130	100	100	100	508	988

Hyperlink: N/A

Contact: Craig Tepper 954-967-3402, Seminole Tribe of Indians

Program Name: Invasive Exotic Species Management
Project Name: Hole-in-the-Donut
Project ID: 2606
Lead Agency: National Park Service
Authority:
Funding Source:

Strategic Plan Goal(s) Addressed: **Primary:** 2.B.2 **Secondary:** 2.A.3

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: \$123,750,000

Project Schedule:
 Start Date: 1994
 Finish Date: 2017

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Operations and Maintenance										

Detailed Project Budget Information (\$1,000)

	Thru 2000	2001	2002	2003	2004	2005	2006	Balance to complete	Total
Dade Co.	11,582	3,738	2,743	9,574	9,804	5,700	0	31,859	75,000
Total	11,582	3,738	2,743	9,574	13,892	16,957	1,050	65,264	123,750

Hyperlink: N/A
Point of Contact: Everglades CFO (305) 242- 7700

Program Name: Invasive Exotic Species Management
Project Name: Exotic Vegetation Control (Critical) in Big Cypress National Preserve
Project ID: 2607
Lead Agency: National Park Service

Strategic Plan Goal(s) Addressed: 2.B.2

Measurable Output(s): Acres infested with invasive exotic plant species

Project Synopsis: Treatment, re-treatment and subsequent monitoring and evaluation of *Melaleuca quinquenervia*, *Schinus terebinthifolius*, and *Lygodium microphyllum*, introduced species from Australia, South America, and Asia, that are recognized as serious threats to the Big Cypress/Everglades ecosystem. Removal of these invasive exotic species from sensitive Preserve wetlands will permit the re-establishment of native plant communities. Efforts to date have involved treatment of more than 150 square miles of Big Cypress wetlands. Maintenance control activities and funding for exotic plant species are anticipated to continue at a level sufficient to keep them under control within BICY.

Cost:
 Total through 2008 \$4,000,000

Project Schedule:
 Start Date: 1998
 Finish Date: Ongoing

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Treatment												
Re-Treatment												
Monitoring												

Detailed Project Budget Information

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Federal												2,000
Local												2,000
Total	450	450	600	650	650	200	200	200	200	200	200	4,000

Hyperlink: <http://www.nps.gov/bicy/exotic.htm>
Contact: Ron Clark, (239) 695-1106

Program Name: Invasive Exotic Species Management
Project Name: Aquatic and Upland Invasive Plant Management
Project ID: 2608
Lead Agency: Florida Department Of Environmental Protection
Authority: Chapter 369, F.S.
Funding Source:

Strategic Plan Goal(s) Addressed: 2.B.2

Measurable Output(s): Acres of upland and aquatic invasive plants controlled¹

Acres Controlled:

Aquatics Program 55,879
 Uplands Program 80,738

Project Synopsis: The Bureau of Invasive Plant Management is the lead agency in Florida responsible for coordinating and funding two statewide programs controlling invasive aquatic and upland plants on public conservation lands and waterways throughout the state. The aquatic plant management program designs, funds, coordinates, and contracts invasive non-native aquatic plant control efforts in Florida's 1.25 million acres of public waters. The upland plant management program coordinates and funds invasive plant removal projects on 11 million acres of public conservation lands, which include federal, state, and local government owned lands.

Cost: TBD
 Total (operations and maintenance):
 Aquatics Program \$29,747,718
 Uplands Program \$8,686,929

Project Schedule:

Start Date: annual
 Finish Date: continuous

Detailed Project Budget Information (1000s):

	2002	2003	2004	2005	2006	2007	Total
Federal	400	795.5	944	676.9	675.2		
State ²	20,536.9	28,038.3	22,122.8	29,747.7	38,434.6		
Tribal	0	0	0	0	0		
Local	54.3	255.7	129	0	0		
Other	0	0	0	0	0		
Total	20,991.3	29,089.5	23,195.8	30,424.6	39,109.8		TBD

¹Within the 16-county SFWMD region during the previous state fiscal year

²Includes \$1 million match from SFWMD for melaleuca control

Hyperlink: <http://www.dep.state.fl.us/lands/invaspec/index.htm>
Contact: Greg Jubinsky 850-245-2821

Program Name: Invasive Exotic Species Management
Project Name: Complete an Invasive Exotic Plant Prevention, Early Detection and Eradication Plan by 2005
Project ID: 2700
Lead Agency: NEWTT/NPS/DEP

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. A rapid response team is proposed for large reptiles and team development and prototype funding are being provided by the USGS and NPS.

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. NPS & FLDEP teams are operating and jointly funded. Additional agencies are being recruited to expand team support and coverage. Early-warning system and risk assessment protocols have not been funded. While the need for Early-Detection Rapid Response program are identified by several agencies none are being funded or implemented in any agency programs at this point.

No authorization or funding has been provided to begin this project.

Cost:

Total	\$5,000,000 plus O&M (\$50,000 for reptile team)
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:

Proposed Start Date: 2001
 Finish Date: 2005

Detailed Project Budget Information

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
Total								TBD

Hyperlink: N/A
Contact: Bob Doren - (305) 348-6721

Program Name: Invasive Exotic Species Management
Project Name: Melaleuca Quarantine Facility
Project ID: 2701
Lead Agency: U.S. Department of Agriculture – Agricultural Research Service
Authority: ARS
Funding Source:

Strategic Plan Goal(s) Addressed: 2.B.3

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. Construction of the quarantine facility has been completed after an additional contribution of about \$500K by USDA-ARS and \$400K from the South Florida Water Management District. It opened during March 2005. Design problems and shoddy construction of some critical subsystems are hampering full use of the quarantine areas but funding for needed repairs has not been identified. Full staffing has not been realized due to a lack of O&M funds (\$350K/yr estimated need).

Cost:
 Total: \$7,200,000
 Project Development: \$1,000,000
 Land Acquisition: \$0 (long term lease - University of Florida)
 Implementation: \$5,200,000
 Operations and maintenance: not yet included in budget

Project Schedule:
 Start Date: 1997
 Finish Date: 2003

Detailed Project Budget Information (\$1000)

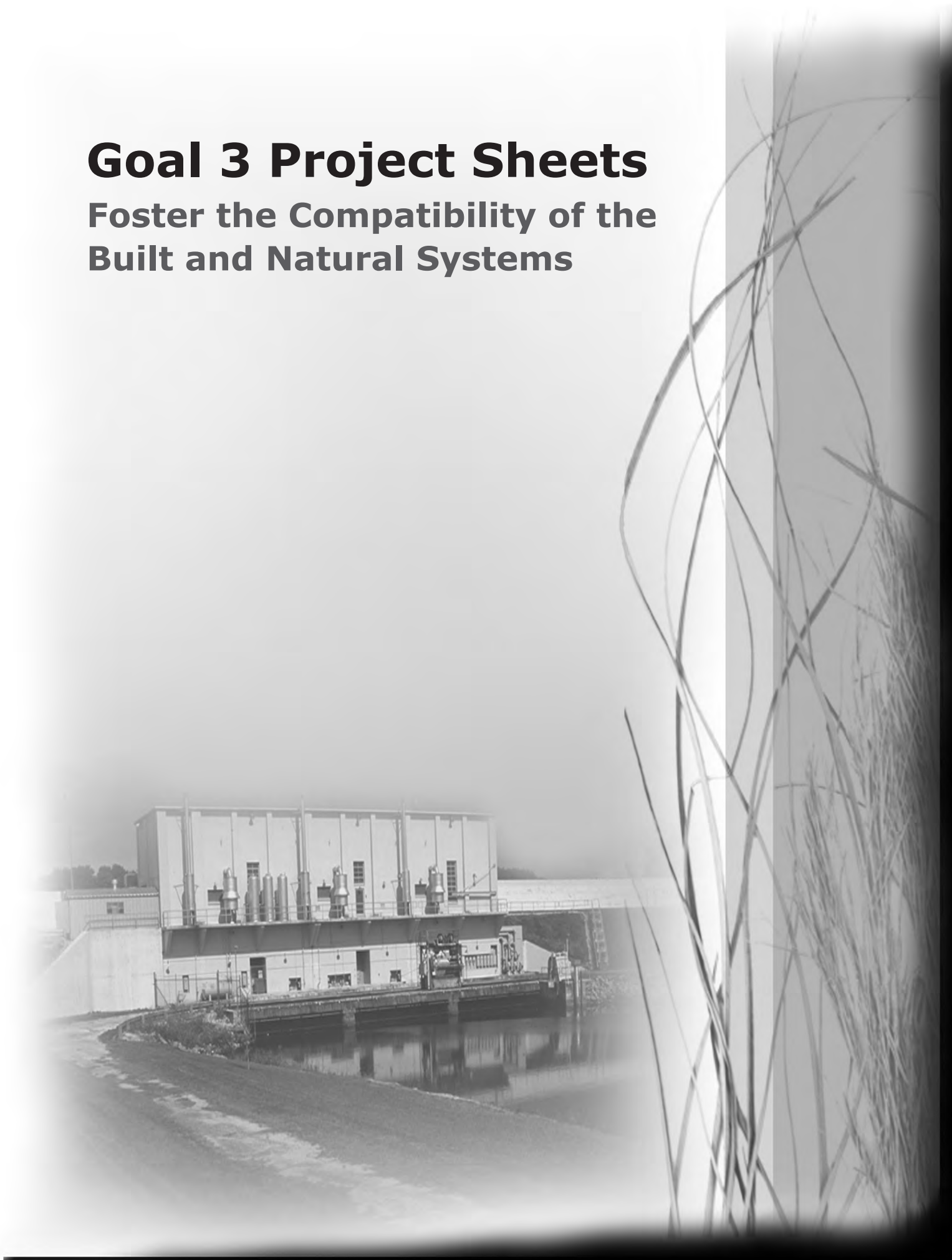
	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal	\$1,000		\$600	\$3,200	\$1,400			\$6,200
State								
Tribal								
Local								
Other								
Total	\$1,000		\$600	\$3,200	\$1,400		1,000	\$7,200

Hyperlink: N/A
Contact: Ted Center, 954-475-0541 (USDA – ARS)

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Goal 3 Project Sheets

Foster the Compatibility of the Built and Natural Systems



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Program Name: Florida Greenways and Trails
Project Name: Florida Greenways and Trails Program
Project ID: 3100
Lead Agency: FDEP-Florida Office of Greenways and Trails
Authority: Acquisition: Florida Forever Act, Section 259.105, Florida Statutes
Designation: Chapter 260, F.S.; 62S-1.400, 62S-1.450, F.A.C
Funding Source: Florida Forever

Strategic Plan Goals(s) Addressed: 3.A.1

Measurable Output(s): Target 480,000 acres

Project Synopsis: The Florida Office of Greenways and Trails is guiding a statewide initiative to create a system of greenways and trails connecting communities and conservation areas. When completed the trail system will connect one end of the state to the other, from Key West to Pensacola.

The Florida Forever Act authorizes a land acquisition program for the statewide trail system. This is a competitive program that provides funding for local and regional land acquisition projects that will facilitate the establishment of a statewide system of greenways and trails. The primary mission of this program is to facilitate the establishment of a statewide system of greenways and trails for recreation and conservation purposes. Once acquired, the property is owned by the Board of Trustees of the Internal Improvement Trust Fund (Governor and Cabinet) and managed by the state, regional and local governments.

The Office of Greenways and Trails Designation Program encourages voluntary partnerships in conservation, development, and management of greenways and trails, provides recognition for individual components of the system and the partners involved, and raises public awareness of the conservation and recreation benefits of greenways and trails. The criteria for a designated land or waterway are that it must (1) protect and/or enhance natural, recreational, cultural or historic resources and (2) either provide linear open space or a hub or site, or promote connectivity between or among conservation lands, communities, parks, other recreational facilities, cultural sites, or historic sites.

Cost:	
Total	\$4.5 million for land acquisition (statewide) No direct cost to the state for designation
Project Development	
Land Acquisition	\$4.5 million (statewide)
Implementation	
Operations and maintenance	

Project Schedule:
Start Date: 2000
Finish Date: 2009

South Florida Acres

Through Fiscal Year 2003 227,094 acres plus 75 linear miles

Through Fiscal Year 2004 298,774 acres plus 147 linear miles (add 71,680 acres & 72 linear miles)

Money Spent \$FY 03-04 - no land acquisition dollars spent
\$FY 04-05 - \$174,000
\$FY 05-06 \$497,372

Hyperlink: <http://www.dep.state.fl.us/gwt/>

Contact: Heather Pence (designations) 850-245-2052
Cindy Radford (acquisitions) 850-245-2052

Program Name: Florida Greenways and Trails Program
Project Name: Lake Okeechobee Scenic Trail
Project ID: 3102
Lead Agency: Office of Greenways and Trails
Authority: Florida Department of Environmental Protection
Funding Source:

Strategic Plan Goal(s) Addressed: 3.A.1

Measurable Output(s): Designated miles of trails

Project Synopsis: The LOST will consist of an 11 foot wide paved trail with 3 foot wide grassed shoulder on the lake side. It will accommodate pedestrians, backpackers, bicyclists, equestrians, sightseers, naturalists, skaters, picnickers, campers and fishermen. The trail will be approximately 110 miles long.

Cost:
 Total: \$25,000,000
 Project Development:
 Land Acquisition:
 Implementation:
 Operations and maintenance: \$ 100,000.00 a year when completed

Project Schedule:

Start Date: 7/1/03
 DOT Segment One is complete between the Kissimmee River and the St. Lucie Canal (26 miles)
 DOT Segment Two is completed between Moore Haven and Pahokee (36 miles)
 Finish Date: Completion date will depend on monies from D.E.P.

Detailed Project Budget Information (1000s)

	2003	2004	2005	2006	2007	Balance to complete	Total
Federal	6,250	6,250					12,500
State						12,500.	
Tribal							
Local							
Other							
Total	6,250	6,250				12,500	25,000

Hyperlink: <http://www.dep.state.fl.us/gwt/>
Contact: John Outland (850) 245-2089

Program Name: Watershed Management Assistance
Project Name: Technical Assistance to Seminole and Miccosukee Indian Reservations
Project ID: 3201
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46 & Public Law 566
Funding Source:

Strategic Plan Goal(s) Addressed: 3.A.2

Measurable Output(s): Target 107,000 Acres

Project Synopsis: From a watershed management perspective, 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, cost shared installation and management of BMP's that will improve water quality and the ecological integrity of the landscape.

Cost:
 Total (projected through 2006) \$15,000,000
 Project Development
 Land Acquisition
 Implementation
 Operations and maintenance
 Management \$15,000,000

Project Schedule:
 Start Date: 1998
 Finish Date: 2011

Detailed Project Budget Information (1000s)

	2003	2004	2005	2006	2007	Balance to Complete	Total
Federal	\$300	\$200	\$193	\$85	\$1600	\$12622	\$15,000
State							
Tribal							
Local							
Other							
Total	\$300	\$200	\$193	\$85	\$1600	\$12622	\$15,000

Hyperlink: N/A
Contact: Edward Wright – 386-329-4116 (USDA – NRCS)

Program Name: Agricultural Assistance
Project Name: 2002 Farm Bill
Project ID: 3202
Lead Agency: Natural Resources Conservation Service
Authority: Farm Security and Rural Investment Act of 2002 (Farm Bill)
Funding Source:

Strategic Plan Goal(s) Addressed: 3.A.2

Measurable Output(s): Acres Enrolled in 2002 Farm Bill Programs

Project Synopsis: The 2002 Farm Bill responds to a broad range of emerging natural resource challenges faced by farmers and ranchers, including soil erosion, wetlands, wildlife habitat, and farmland protection. Private landowners will benefit from a portfolio of voluntary assistance, including cost-share, land rental, incentive payments, and technical assistance. The 2002 Farm Bill places a strong emphasis on the conservation of working lands, ensuring that land remain both healthy and productive. The assistance includes the design, layout and consultation services associated with the conservation practice application or management guidance provided. Technical assistance is targeted towards nutrient management, water quality, and water conservation concerns associated with animal feeding, livestock grazing operations and fruit and crop production within the Everglades Ecosystem. As of 2006, a total of 1,106,108 acres in the sixteen-county South Florida region were enrolled in these and other Farm Bill Conservation Programs at an obligated cost of \$75.4 million dollars.

Cost:

Total: \$97,436,000
 Project Development:
 Land Acquisition:
 Implementation:
 Operations and maintenance:

Project Schedule:

Start Date: 2002
 Finish Date: 2007

Detailed Project Budget Information (1000)

	Through 2004	2005	2006	2007	Balance to Complete	Total
Federal	\$51,700	\$15,168	\$8,513	\$17,400	\$4655	97,436
State						
Tribal						
Local						
Other						
Total	\$51,700	\$15,168	\$8,513	\$17,400	\$4655	\$97,436

Hyperlink: <http://www.nrcs.usda.gov/programs/farmbill/2002/>
Contact: Edward Wright – (386) 329-4116 (USDA – NRCS)

Program Name: Florida Greenways and Trails Program
Project Name: Florida Keys Overseas Heritage Trail
Project ID: 3301
Lead Agency: Office of Greenways and Trails
Authority: Florida Department of Environmental Protection

Strategic Plan Goal(s) Addressed: 3.A.3

Florida Keys Overseas Heritage Trail Vision

The Florida Keys Overseas Heritage Trail (FKOHT) is being developed by the FDEP/OGT, the Florida Department of Transportation (FDOT) and Monroe County as a world-class, multi-use bicycle and pedestrian facility that will traverse the Florida Keys from Key Largo to Key West. A recreational greenway, that upon completion, will include an integrated system of educational kiosks, roadside picnic areas, scenic overlooks, fishing piers, water access points, and bicycle and jogging paths serving both residents and visitors to the Florida Keys. The FKOHT will link communities by providing a safe and continuous multi-use path, offer an alternative form of transportation, help mitigate congestion, promote health opportunities, and provide a mechanism for the preservation and use of the historic Flagler Railroad Bridges. The trail will also provide outstanding educational opportunities for both residents and visitors to learn about the unique history of the Florida Keys and the importance of sustainable development, by offering cultural, historical and ecological interpretation, as users traverse the historical railroad bridges and the many conservation areas between Key Largo and Key West.

Measurable Output(s): Miles of trails: Existing 66, Proposed 40 additional. A recreational greenway, that upon completion, will include an integrated system of educational kiosks, roadside picnic areas, scenic overlooks, fishing piers, water access points, and bicycle and jogging paths serving both residents and visitors to the Florida Keys.

Project Synopsis: Trail Planning and Development: Spurred by concerns in the community for the future of the Old Keys Bridges and under Executive Order, the “Old Keys Bridge Task Force” report was presented to then Governor Lawton Chiles in 1997, outlining recommendations for the old Flagler Railroad bridges as a linear greenway. A similar report had been presented in 1938, to then Governor Fred Cone by the Road and Toll Authority, the State Forestry Department and the National Park Service outlining the creation of a linear park from Key Largo to Key West. In 1998, Clean Florida Keys rallied enough local support to prepare a Florida Keys Overseas Heritage Trail Conceptual plan published in January 1999, and a Florida Keys Overseas Heritage Trail Action plan published in November 1999. With a combination of local citizen support, the Rails To Trails, National Park Service, Greenways and Trails, Monroe County, the Florida Department of Environmental Protection, the Florida Department of Transportation and many other agencies, the Florida Keys Overseas Heritage Trail Master Plan was approved in August 2000. Monroe County passed a resolution in 2000, approving allocation of enhancement funding to the project and a Memorandum of Understanding (MOU) was signed allowing the coordination, planning and implementation of the FKOHT as a joint effort between the FDEP, Monroe County, and the FDOT. Direct support for the 106-mile long multi-use recreational trail and facilities is one of the primary features of the Scenic Highway Corridor Management Plan Goals and Objectives, the Corridor Management Plan (CMP), the Florida Keys Overseas Heritage Trail Master Plan, the Scenic Highway Interpretive Master Plan. In addition, the FKOHT was nominated as a National Recreational Trail in 1994 and has designated all 23 remaining historical Flagler Railroad Bridges on the National Registry of Historic Places. Recently completed signage plan and environmental plan provide a look and mechanism for reviewing the trail corridor as one entity rather than multiple separate segments. A Memorandum of Agreement was signed in August 2001, by the FDEP/OGT to maintain FDOT right-of-way where the trail will be designed and built. The FDEP/OGT maintains a 50-year lease on all 23 historical bridges from State of Florida, Division of State Lands.

Cost:

Total: \$40 Million

Project Development:

Land Acquisition: One trailhead in Key Largo.

The FDOT work program and the FDEP/OGT implementation plan outline a progression of design and build projects that will construct the Florida Keys Overseas Heritage Trail over the next six years. Construction of the FKOHT is funded in the FDOT Five Year Work Program using enhancement funds for the segments between historic bridges. Additional funding is being sought to retrofit the remaining historical bridges and fishing platforms. The FDEP/OGT is certified by the FDOT to design and build projects under the Local Agency Program (LAP) using enhancement funds.

Project 3301 page 1 of 4

Operations and maintenance

There are currently 52 miles of existing bike path and 40 miles of new trail programmed for construction over the next eight years. There are twenty-three bridges comprising fourteen miles of trail in various stages of completion and funding. The City of Key West currently maintains an agreement with the Florida Park Service on maintenance of the existing sections throughout the City. The Village of Islamorada signed an agreement in 2003 and the City of Marathon is in the process of developing agreements for maintenance and trail planning. The FDEP/OGT has subcontracted the maintenance of the trail in accordance with the agreement established between FDOT and the FDEP/OGT and currently maintains 35 miles of trail and manages approximately 16 miles of bridges.

Project Schedule: See table below:

TABLE 1

Year/ Maintained By	Length	Trail MM	Status	Location
City of Key West	3.8	0 – 3.8	Existing	City of Key West
DEP/OGT	1.4	3.8 – 5.2	Existing	Stock Island
2003/4	6.0	5.2 – 9	New	Key Haven to Big Coppitt
DEP/OGT	2.0	9 – 11	Existing	Big Coppitt
DEP/OGT	4.0	11 – 15	Existing	Landscaping on Saddlebunch Keys
2003/4	1.7	15 – 16.7	New	Lower Sugarloaf Trail
2003/4	8.0	17 – 25	New	Lower Sugarloaf to Summerland (2 miles of existing bike path)
2004/5	4.0	25 – 29	New	Ramrod to Big Pine Key
DEP/OGT	2.0	29 – 31	Existing	Big Pine
	2.0	31 – 33	Study Area	Big Pine
2008/9	7.0	33 – 40	New	Spanish Harbor to 7-Mile Bridge (Seven Mile Bridge excluded)
DEP/OGT	11	47 – 58	Existing	City of Marathon
2003/4	7.0	58 - 65	New	Grassy Key to Long Key
DEP/OGT	3.0	65 – 68	Existing	Long Key Bike Path
2005/6	3.0	68 - 71	New	Layton to Channel 5
2005/6	3.0	71 – 74	New	Channel 5 to Annes Beach
Village	19	72 – 91	Various	Village of Islamorada
DEP/OGT	15	91 – 106	Existing	Key Largo
Total (excluding 7 mile bridge)	99 miles			

- DEP/OGT – Maintenance conducted by FDEP/OGT.
- 40 Miles of new trail
- 59 Miles of existing (includes 16 Miles of bridges)
- 7 Mile Bridge

Detailed Project Budget Information (1000s)– See Table Below

	Thru 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State								
Tribal								
Local								
Other								
Total	7,117.7	7,438.2	2,499.9	5,811.8	1,036.1	2,875.5	12,000	40,000

Table 2

			2003
Big Coppitt Landscaping	MM 10-15	PE/CST	\$677,000.00
Big Coppitt Handrails	MM 10-15	PE/CST	\$ 423,000.00
Lower Sugarloaf Trail	MM 15-16.5	PE	\$130,000.00
Lower Sugarloaf Trail	MM 15 - 16.5	CST,CEI	\$670,000.00
Lower Sugarloaf Historic Bridge	MM 15.5	PE	\$73,000.00
Lower Sugarloaf Historic Bridge	MM 15.5	CST,CEI	\$213,000.00
Overseas Heritage Trail Safety Improvements	Various	PE	\$175,992.00
Overseas Heritage Trail Safety Improvements	Various	CST,CEI	\$ 879,957.00
Key Haven to Big Coppitt Trail	MM 5.2-11	PE	\$400,673.00
Key Haven to Big Coppitt Trail	MM 5.2-11	CST,CEI	\$2,871,495.00
Rockland Channel Bridge	MM 9.5	PE	\$112,518.00
Rockland Channel Bridge	MM 9.5	CST,CEI	\$400,000.00
Grassy Key to Long Key Trail	61.3 - 65.6	PE	\$91,047.00
Year Total			\$7,117,682.00
			2004
FKOHT Signage Master Plan	Various	PDE	\$25,000.00
Grassy Key to Long Key Trail	58 - 61.3	PE	\$273,079.00
Grassy Key to Long Key Trail	58 - 65.6	CST,CEI	\$1,213,968.00
Tom's Harbor Bridge Platforms	MM 60.5	PE	\$61,800.00
Tom's Harbor Bridge Platforms	MM 60.5	CST,CEI	\$560,000.00
Tom's Harbor Cut Bridge Platforms	MM 61.7	PE	\$54,075.00
Tom's Harbor Cut Bridge Platforms	MM 61.7	CST,CEI	\$560,000.00
Long Key Bridge	MM 63-65	PE	\$224,000.00
Lower Sugarloaf to Summerland Key Trail	MM 16.5-24.5	PE	\$491,000.00
Lower Sugarloaf to Summerland Key Trail	MM 16.5-24.5	CST,CEI	\$3,550,156.00
Environmental Consultant	Various	PDE	\$250,000.00
Ramrod Key to Big Pine Key Trail	MM 26.2-29.9	PE	\$175,081.00
Year Total			\$7,438,159.00

			2005
Park Channel Bridge	MM 18.7	PE	\$80,000.00
Park Channel Bridge	MM 18.7	CST,CEI	\$ 670,000.00
Rails to Trails Project	Various	PDE	\$25,000.00
Intus Property Key Largo Trailhead	MM 106	PE	\$25,000.00
Ramrod Key to Big Pine Key Trail	MM 26.2-29.9	CST,CEI	\$1,006,712.00
Channel 5 to Anne's Beach Trail	MM 71.8-73.5	PE	\$ 315,100.00
Layton to Channel 5 Trail	MM 68.4-70.8	PE	\$378,120.00
Year Total			\$ 2,499,932.00
			2006
Long Key Bridge	MM 63 - 65	CST,CEI	\$1,745,000.00
South Pine Channel Bridge	MM 29	PE	\$80,753.00
Channel 5 to Anne's Beach Trail	MM 71.8-73.5	CST,CEI	\$1,811,825.00
Layton to Channel 5 Trail	MM 68.4-70.8	CST,CEI	\$2,174,190.00
Year Total			\$ 5,811,768.00
			2007
South Pine Channel Bridge	MM	CST,CEI	\$600,000.00
Spanish Harbor to Seven-Mile Bridge Trail	MM33.3-40.5	PE	\$436,128.00
Year Total			\$1,036,128.00
			2008
Spanish Harbor to Seven-Mile Bridge Trail	MM33.3-40.5	CST,CEI	\$2,717,604.00
Ohio-Missouri Historic Bridge	MM39.1	PE	\$157,882.00
Year Total			\$2,875,486.00
			2009
Ohio-Missouri Historic Bridge	MM39.1	CST,CEI	\$1,210,246.00
Year Total			\$1,210,246.00

Hyperlink: <http://www.dep.state.fl.us/gwt/>
Contact: John Outland (850) 245-2089

Program Name: Brownfields
Project Name: Eastward Ho! Brownfields Partnership
Project ID: 3400
Lead Agency: South Florida Regional Planning Council
Authority:

Strategic Plan Goal(s) Addressed: Goal 3.A.4

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 28 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, Palm Beach, Martin, St. Lucie, and Indian River 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 Eastward Ho! Brownfields Cleanup Revolving Loan Fund has been established to assist with site-specific cleanup activities and two loans for brownfields activities have been awarded under this program. The project is managed by the South Florida and Treasure Coast Regional Planning Councils.

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 (estimated)	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 (1000s)

	Actual FY 1999-2004	Projected FY 2005	Projected FY 2006	Projected FY 2007	Balance to complete	Total
Federal	\$30,439	\$950	\$200	\$200	TBD	
State	\$1,355	\$45	\$4		TBD	
Local	\$39,812	\$190	\$40	\$40	TBD	
Other *	2.5	\$22,991	\$3,000	\$1,000	TBD	
Total	\$71,608.5	\$3,476	\$3,244	\$1,240	TBD	TBD

* Private party contributions

Hyperlink: <http://www.sfrpc.com/>

Contact: Terry Manning, SFRPC (954) 985-4416

Program Name: USACE Outreach Program
Project Name: CERP Public Outreach Program Management Plan
Project ID: 3502
Lead Agency: U.S. Army Corps of Engineers, Jacksonville District
Authority: Water Resources Development Act (2000); CERP Programmatic Regulations

Strategic Plan Goal(s) Addressed: 3A5

Measurable Output(s) from January 2004 to September 2006:

- Distributed more than 687,000 brochures, newsletters, CDs and other informational items, with 525,000 of these in English, 158,000 in Spanish, and more than 4,000 in Creole.
- Distributed approximately 150,000 student storybooks about the Everglades for 4th grade level and 10,000 related teacher packages.
- Participated in approximately 80 community events, often with bilingual staff and materials.
- Distributed approximately 90 news releases.
- Distributed 16 issues of an electronic newsletter on outreach efforts.
- Placed CERP message on 9 billboards and 11 smaller signs in south Florida in April 2006 (for one month duration).
- Placed four touch-screen kiosks in public locations such as schools, malls, museums and government buildings.
- Developed 3 large standing displays.
- Produced 3 radio programs and 1 television program in Creole.
- Developed 2 Kwanzaa screensavers.
- Initiated toll-free line in 2006 (1-877-CERP-USA).
- Held more than 30 public meetings or workshops.
- Updated official website with current information, including many of these public information products. Some electronic materials in Spanish and Creole.

Project Schedule:

Budget Start Date: October 1, 2003

Budget Finish Date: July 31, 2006

Detailed Project Budget Information (\$1000s)

	FY 2004	FY 2005	FY 2006	Total
Federal	2,517.4	3,172.7	1,708.7	7,398.8

Contact: Nanciann Regalado, Corporate Communication Chief Nanciann.e.regalado@saj02.usace.army.mil
Hyperlink: http://www.evergladesplan.org/pm/progr_outreach.cfm

Program Name: SFWMD Outreach Program
Project Name: Outreach
Project ID: 3503
Lead Agency: SFWMD
Authority:

Strategic Plan Goal(s) Addressed: 3-A.5 Increase community understanding of ecosystem restoration

Measurable Output(s): Public Meetings, Stakeholders Meetings, Schools and Teacher Education, Job Training, Symposiums, Media Exposure, Groundbreakings, Special Events, Awards and Recognitions

Project Synopsis: The South Florida Water Management District continues to participate with the USACE, and other agencies/major stakeholders and general public in various Outreach activities as listed above to increase the understanding of ecosystem restoration.

Cost: Total:
Project Development:

Project Schedule:
Start Date: Ongoing
Finish Date: Ongoing

Detailed Project Budget Information (\$000)

	Thru 2001	2002	2003	2004	2005	2006	Balance to complete	Total
Federal								
State				\$96,427	\$895,000*	\$160,000	ongoing	
Tribal								
Local								
Other					\$108,000*	\$22,900	ongoing	
Total								TBD

*\$843,000 + in-kind services is part of this total that is the Workforce Development Program which is carried over into future years

Hyperlink: N/A
Contact: Bridget Appow, Sr. PR/Outreach Specialist, SFWMD, 561-682-6004, bappow@sfwmd.gov

Program Name: Flood Protection
Project Name: C-4 Flood Mitigation Projects
Project ID: 3600
Lead Agency: South Florida Water Management District
Authority: FEMA/DCA
Funding Source:

Strategic Plan Goal(s) Addressed: 3.B.1

Measurable Output(s): Improve conveyance and level of service protection in the C-4 Basin

Project Synopsis

The following projects are complete:

1. S-25B Forward Pump Station
2. S-26 Forward Pump Station
3. C-4 Phase 1 Impoundment (G-420 & G-421)
4. C-4 Phase 2 Impoundment (G-422)
5. Sweetwater Linear Berm

The following projects are to be completed in the near future (Phase 3):

1. Belen Conveyance Improvements (Contract solicitation process)
2. Sweetwater Phase 3 Gravity Wall (Land Acquisition required)
3. Belen Gravity Wall (Land Acquisition required)
4. City of Sweetwater Fence (under construction)

The Belen Conveyance Improvement project involves the selective dredging of the C-4 canal to improve conveyance capacity at specific locations including 137th Ave to the Turnpike. The project is currently being permitted.

Sweetwater Gravity Wall: This work involves the construction of a gravity wall along the north side of the C-4 Canal within the city limits of Sweetwater. The north berm will be raised from Elevation 6 to 7.0 to Elevation 9.0. This will prevent canal overflows into the city during high canal stages and allow for a pumping system being implemented by the city to provide flood protection . The project area is from NW 92th Avenue to SW 107th Avenue.

The Belen Gravity Wall: This work involves the construction of a gravity wall along the north side of the C-4 Canal from the Florida Turnpike to SW 137th Ave. This work will be providing the same level of service as in the Sweetwater Gravity Wall.

The Sweetwater Safety Fence project involves the installation of a fence along the north side of the C-4 Canal in the City of Sweetwater's Linear Park.

Cost:

Total	\$ 8,367,000
Project Development	\$ 100,000
Land Acquisition	\$ 467,000
Implementation	\$ 7,800,000
Operations and maintenance	\$ TBD

Project Schedule:

Start Date: January 2005
 Finish Date: March 31, 2007

	2005	2006	2007	2008		
Planning & Design						
Real Estate						
Construction						

Detailed Project Budget Information (\$1000)

	Exp thru 2005	Exp thru 2006				Balance to complete	Total
Federal	50	70				8,247	8,367
SFWMD	0	0					
State	0	0					
Total	50	70				8,247	8,367

Hyperlink: N/A
Contact: John Leslie (561) 682-6289

Program Name: Water Supply Planning
Project Name: Regional water supply plans (*LEC Plan, LWC Plan, UEC Plan, KB Plan*)
Project ID: 3704
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source:

Strategic Plan Goal(s) Addressed: 3.C.1

Measurable Output(s): Water made available through Alternative Water Supply (AWS) Program is reported separately as Project ID: 3900.

Project Synopsis: Updates of the Upper East Coast, Kissimmee Basin, Lower East Coast, and Lower West Coast Water Supply Plans are scheduled for completion in July 2006. The updated plans will reflect the Water Resource Protection and Sustainability Program, created by Senate bills 444 and 332 and enacted in the 2005 state legislative session. The Water Resource Protection and Sustainability Program requires a higher level of water supply planning coordination between the water management districts and local governments and ensures that permitted water supply and potable water facilities are available before new development is approved.

The new legislation requires that water supply plans provide specific details concerning alternative water supply (AWS) projects. Local governments may select and incorporate these AWS projects into their comprehensive plans, implementing a work plan for building needed facilities. Alternatively, local governments may recommend AWS options if they provide sufficient information about funding and water to be produced. The laws also require that the comprehensive plan's evaluation and appraisal process include a review of progress made in implementing the AWS projects.

Funding of AWS development is now a shared responsibility between local water providers, users, the water management districts and the state. The Water Resource Protection and Sustainability Program provides annual state revenues and matching District funds to support construction of AWS projects as well as permitting incentives for water providers selecting AWS projects recommended by the water supply plans. The AWS Program is reported as Project ID: 3900.

Each regional water supply plan includes a water resource development chapter. Water resource development projects support and enhance water supply development projects, but often do not by themselves yield specific quantities of water. For example, hydrologic investigations and groundwater monitoring and modeling provide important information on aquifer characteristics, such as hydraulic properties and water quality. All of these efforts are useful in developing an appropriate facility design, identifying the safe yield and evaluating the economic viability of water supply development projects.

Because water resource development projects often cross planning region boundaries or are conducted districtwide and usually do not produce water, the projects are not discussed individually in this document.

Cost:	Total Cost*+
Regional water supply plans	\$ 19,454,000

*Excludes: costs associated with CERP, and costs of alternative water supply projects which are reported separately.

+ Source: *The 2007 South Florida Environmental Report, Volume II, Chapter 5: Water Supply*

Contact: Joni Warner (561) 242-5520

Program Name: Infrastructure
Project Name: C&SF: CERP - South Miami-Dade County Reuse (BBB)
Project ID: 3800 (CERP Project # WBS 98)
Lead Agency: USACE / Miami-Dade County
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 3.C.2

Measurable Output(s): 131 mgd advanced WWTP

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and includes a plant expansion to produce superior, advanced treatment of wastewater from the existing South District Wastewater Treatment Plant (WWTP) 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. Additionally, due to the water quality issues associated with discharging reclaimed water into Biscayne National Park, an Outstanding Florida Water, such as potential failures of the treatment system and the limited ability to control contaminant inputs to the sanitary sewer system serving the treatment facility, other potential sources of water to provide required freshwater flows to southern and central Biscayne Bay should be investigated before pursuing the reuse facility as a source. If it is determined that other, more appropriate sources are not available, the reuse project will be initiated by determining the parameters of concern, the necessary wastewater treatment requirements, and the appropriate treatment technology to be implemented.

The purpose of this feature is to provide additional water supply to the South Biscayne Bay and Coastal Wetlands Enhancement Project. In order to attain the superior level of treatment, construction of an add-on pretreatment and membrane treatment system to the existing secondary treatment facility will be necessary. Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters (Biscayne Bay).

Cost: \$430,553,000

Project Schedule:

Project is scheduled to complete construction in Band 4 (2020 – 2025).

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
PIR/Plans & Specs										
Real Estate										
Construction										

Detailed Project Budget Information (\$1000)

	2013	2014	2015	2016	2017	2018	Balance to Complete 2019-2022	Total
USACE	4,306	4,306	4,306	32,291	32,291	32,291	105,485	215,277
M-D Co	4,306	4,306	4,306	32,291	32,291	32,291	105,485	215,277
Total	8,611	8,611	8,611	64,583	64,583	64,583	210,971	430,553

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_98_south_miami.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Infrastructure
Project Name: C&SF: CERP - West Miami-Dade County Reuse (HHH)
Project ID: 3801(CERP Project # WBS 97)
Lead Agency: USACE / Miami Dade County
Authority: Not authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 3.C.2

Measurable Output(s): Report and pilot facility; 100 mgd advanced WWTP

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and includes a wastewater treatment plant expansion to produce superior, advanced treatment of wastewater from a future West Miami-Dade Wastewater Treatment Plant (WWTP) 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.

The purpose of the feature is to meet the demands for: (1) the Bird Drive Recharge Area; (2) the South Dade Conveyance System, and (3) the Northeast Shark River Slough. When all demands have been met, the plant will stop treatment beyond secondary treatment standards and will dispose of the secondary treated effluent into deep injection wells.

Cost: \$518,120,000

Project Schedule:

Project is scheduled to complete construction in Band 4 (2020 – 2025).

	2014	2015	2016	2017	2018	2019	2020	2021	2022
PIR/Plans & Specs									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	2014	2015	2016	2017	2018	Balance to Complete 2019-2022	Total
USACE	10,362	25,906	25,906	38,859	38,859	119,168	259,060
M-D Co	10,362	25,906	25,906	38,859	38,859	119,168	259,060
Total	20,725	51,812	51,812	77,718	77,718	238,335	518,120

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_97_west_miami.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Detailed Project Budget Information (\$1000)

	Thru 2005	2010	2011	2012	2013	2014	Balance to Complete 2015-2021	Total
USACE	1,189	331	331	331	4,133	1,653	9,754	17,721
SFWMD	668	341	341	341	4,263	1,705	10,061	17,721
Total	1,856	672	672	672	8,396	3,359	19,816	35,442

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_37_wastewater_pilot.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed schedule and budget information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Alternative Water Supply
Project Name: Alternative Water Supply Grant
Project ID: 3900
Lead Agency: SFWMD
Authority: Chapter 373.1961, Florida Statutes
Funding Source:

Strategic Plan Goal(s) Addressed: 3.C.3

Measurable Output(s): 172 MGD added to water supply system district-wide by end of FY06

Project Synopsis: SFWMD began a program of cooperative funding with local governments and other entities for the development of alternative water supply systems in 1986. Legislative changes in 2005 required the SFWMD to match from the FY2006 budget, activities advancing alternative water supply, in order to receive \$30 million in AWS funding for local government and other partners. Additionally, the SFWMD added \$13.1 million in funds for a total of \$43.1 million in available grant funds. Eighty projects were selected, and are slated to be complete by the end of FY06 increasing water supply by 172 MGD.

Cost: **\$ TBD**
 Total:
 Project Development:
 Land Acquisition:
 Implementation:
 Operations and maintenance:

Project Schedule:
 Start Date: 1996
 Finish Date: On-going/ annual grants

Detailed Project Budget Information (\$1000)

	Exp Thru 1999	2001	2002	2003	2004	2005	2006	On-going
SFWMD	27,950	600	3,900	4,006	4,500	6,000	43,100	N/A
Total	27,950	600	3,900	4,006	4,500	6,000	43,100	TBD

Hyperlink: N/A
Contact: Jane Bucca (561) 682-6791

Program Name: Agriculture
Project Name: BMP's for Agriculture
Project ID: 4101
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46
Funding Source:

Strategic Plan Goal(s) Addressed: Other

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 (TMDLs).

Cost

Total: \$141,203,000
 Project Development:
 Land Acquisition:
 Implementation:
 Operations and maintenance: \$141,203,000

Project Schedule:

Start Date: 1997
 Finish Date: 2011

Detailed Project Budget Information (1000s)

	Through 2005	2006	2007	2008	Balance to Complete	Total
Federal	32,521	4,710	4,820	5,011	22,736	69,798
State	21,135	6,800	8,150	8,820	26,500	71,405
Tribal						
Local						
Other						
Total	53,656	11,510	12,970	13831	49,236	141,203

Hyperlink: N/A
Contact: Edward Wright – 386-329-4116 (USDA – NRCS)

Program Name: Soils
Project Name: Monitoring of Organic Soils in the Everglades
Project ID: 4102
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46
Funding Source:

Strategic Plan Goal(s) Addressed: Other

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: \$1,236,000
 Project Development:
 Land Acquisition:
 Implementation:
 Operations and maintenance: \$1,236,000

Project Schedule:
 Start Date: 1998
 Finish Date: 2017

Detailed Project Budget Information (\$1000)

	Thru 1999	2004	2005	2006	2007	2008	Balance to complete	Total
Federal	25				100	100	1,011	1,225
State	11							11
Tribal								
Local								
Other								
Total	36				100	100	1,011	1,236

Hyperlink: N/A
Contact: Warren Henderson 352-338-9535 (USDA – NRCS)

Program Name: Soil Survey
Project Name: Soil Survey Update for the Everglades Agricultural Area
Project ID: 4103
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46
Funding Source:

Strategic Plan Goal(s) Addressed: Other

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: \$2,100,000
 Project Development: \$2,100,000
 Land Acquisition:
 Implementation:
 Operations and maintenance:

Project Schedule:
 Start Date: 2007
 Finish Date: 2012

Detailed Project Budget Information (\$1000)

	2006	2007	2008	Balance to complete	Total
Federal				2,100	2,100
State					
Tribal					
Local					
Other					
Total				2,100	2,100

Hyperlink: N/A
Contact: Warren Henderson 352-338-9535 (USDA – NRCS)

Program Name: Soil Survey

Project Name: Soil Survey for Everglades National Park, Big Cypress, National Preserve, and Water Conservation Areas

Project ID: 4104

Lead Agency: NRCS

Authority: PL-46

Funding Source:

Strategic Plan Goal(s) Addressed: Primary :Other

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:	\$6,000,000
Project Development:	\$6,000,000
Land Acquisition:	
Implementation:	
Operations and maintenance:	

Project Schedule:

Start Date:	2007
Finish Date:	2013

Detailed Project Budget Information (\$1000s)

	2007	2008	2009	2010	2011	2013	Balance to complete	Total
Federal			900	900	900	900	2,400	6,000
State								
Tribal								
Local								
Other								
Total			900	900	900	900	2,400	6,000

Hyperlink- N/A

Contact: Warren Henderson -352-338-9535 USDA - NRCS

Program Name: Infrastructure
Project Name: C&SF: CERP - Flow to Northwest and Central Water Conservation Area 3A (II)(RR)
Project ID: 4105 (CERP Project # WBS 11)
Lead Agency: USACE / SFWMD
Authority: Not Authorized
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Increased flows to WCA 3A

This feature adheres to the original concept as outlined in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) and 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 G-404 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 reestablish sheetflow to the west-central portion of Water Conservation Area 3A. Water quality treatment of flows is assumed to be provided by the Everglades Construction Project and water quality treatment strategies developed to fulfill the Non-Everglades Construction Project requirements of the Everglades Forever Act.

The purpose of this feature is to increase environmental water supply availability, increase depths and extend wetland hydropatterns in the northwest corner and west-central portions of Water Conservation Area 3A. If additional water quality treatment is determined to be required as a result of future detailed planning and design work, existing facilities would be modified to provide the necessary treatment.

Cost: \$36,264,000

Project Schedule:

Project is scheduled to complete construction in Band 3 (2015 – 2020).

G-404 (II)	2010	2011	2012	2013	2014	2015
PIR/Plans & Specs						
Real Estate						
Construction						

Flows (RR)	2010	2011	2012	2013	2014	2015	2016	2017
PIR/Plans & Specs								
Real Estate								
Construction								

Detailed Project Budget Information (\$1000)

	Thru 2005	2010	2011	2012	2013	2014	Balance to Complete 2015-2017	Total
USACE	59	361	542	5,060	361	4,518	7,229	18,132
SFWMD	7	363	544	5,075	363	4,531	7,250	18,132
Total	66	724	1,086	10,135	724	9,050	14,479	36,264

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_11_flow_nw_central.cfm

Contact: Kim Brooks-Hall, Chief South Florida Restoration Branch, USACE
 (904) 232-3155, Kimberly.Brooks-Hall@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Completed Projects



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Program Name: Land Acquisition & Infrastructure
Project Name: E&SF: Critical Projects – Ten Mile Creek
Project ID: 1111
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: N/A - Complete

Strategic Plan Goal(s) Addressed: Primary: 1.A.1 **Secondary:** 2.A.3

Measurable Output(s): Water preserve area and polishing cell: 2,740 acres enhanced by project; 6,000 acre feet of storage provided on 526 acres of land

As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) was identified in 1998. The project site is located just south of Ten Mile Creek in St. Lucie County. Ten Mile Creek is the largest sub-basin delivering water to the North Fork of the St. Lucie River Estuary (SLE) which has been established as an Outstanding Florida Water (OFW). The SLE discharges into the Indian River Lagoon (IRL) which is also an OFW. The IRL is the most biologically diverse estuary in North America. The entire lagoon is endangered by increased runoff from watershed drainage enhancements. Excess stormwater due to drainage improvements is causing radical fluctuations of the salinity concentration in the SLE. Adverse salinity concentrations are eliminating viable habitat suitable for oysters, seagrasses, and marine fish spawning. The original concept for this feature outlined in the *Central and Southern Florida Project Comprehensive Review Study (Restudy)* includes construction of a water preserve area to attenuate flows and improve water quality discharged to the SLE/IRL. The proposed site is approximately 1,559 acres. The project includes land acquisition, construction, and operation of an aboveground reservoir with a pump station for filling the reservoir from Ten Mile Creek and a gated water-level control structure for the release of water back to the creek. The foot-print of the reservoir is anticipated to be approximately 526 acres in size with the remaining acreage being utilized as a polishing cell and a natural preserve area. Based upon existing topography, stored water depths average ten feet. Total storage capacity will be approximately 6,000 acre-feet. The project also includes construction of four hydraulic control structures to control intake and discharge from both the deep water storage area and the polishing cell.

Currently, this project consists of the acquisition of approximately 1,559 acres of land in the eastern portion of the Ten Mile Creek Basin and the construction of an aboveground impoundment for stormwater detention purposes on this property. It also includes construction of a pump station and several control structures for circulation and discharge within the project. A constructed wetland or flow-through marsh has been added for additional water quality improvement purposes. The construction of a water preserve area and polishing cell will attenuate flows and improve water quality discharge into St. Lucie Estuary. Construction is complete, with interim operations and testing underway.

Cost: \$40,676,000

Project Schedule:

Start Date: 1997
 Finish Date: 2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Design									
Real Estate									
Construction									

Detailed Project Budget Information (\$1000)

	Thru 2005	2006*	2007*	Total
USACE	18,020	1,159	1,159	20,338
SFWMD	18,578	880	880	20,338
Total	36,598	2,039	2,039	40,676

*Project is complete. Monitoring will continue into 2007.

Contact: David Tipple, Chief North/Central Florida Restoration Branch, USACE
(904) 232-1375, David.A.Tipple@saj02.usace.army.mil

Source: Detailed budget and schedule information based on the *Central and Southern Florida Project Comprehensive Everglades Restoration Plan 2005 Report to Congress* and the *Master Implementation Sequencing Plan (MISP)* and updated to reflect current price levels in October 2005 dollars. Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study*.

Program Name: Restoration Program: Hydrological Restoration, Habitat and Species
Project Name: Kissimmee Prairie Ecosystem
Project ID: 1305
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: CARL/Save Our Rivers

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

Measurable Output(s): 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. **This project has been completed.**

Cost:

Total: Project size 38,282 acres. 38,282 acres have been acquired at a cost of \$22 million
 Project Development
 Land Acquisition:

Project Schedule:

Start Date: 1996
 Finish Date: 1997

Detailed Project Budget Information (\$1000s)

	Through 2003	2004	2005	2006	2007	2008	Total
Federal							
State	22,000						22,000
Tribal							
Local							
Other							
Total	22,000						22,000

Hyperlink: N/A

Contact: John Outland (850) 245-2089

Program Name: Infrastructure
Project Name: Critical Projects – East Coast Canal Structures (C-4)
Project ID: 1406
Lead Agency: USACE / SFWMD
Authority: WRDA 1996

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Water control structures

Project Synopsis: This project calls for the construction of a gated water control structure (S-380) on the C-4 canal in Dade County, Florida. This structure will be located immediately southeast of the Pennsuco Wetlands. The purpose of the structure is to maintain stages to create and preserve wetlands as well as aquifer recharge. The construction for this project is complete.

Cost:
 Total \$3,683,000
 Project Development
 Land Acquisition (est. 2 ac)
 Implementation
 Operations and Maintenance

Project Schedule:

Start Date: 1999
 Finish Date: 2003

	1999	2000	2001	2002	2003
Planning & Design					
Real Estate					
Construction					

Detailed Project Budget Information (\$1000)

	Thru 2003	Total
USACE	1,841	\$1,841
SFWMD	1,842	\$1,842
Total	3,683	\$3,683

Hyperlink: <http://www.saj.usace.army.mil/projects/proj1.htm>
Contact: USACE

Program Name: Infrastructure
Program Name: Infrastructure
Project Name: C&SF: Indian River Lagoon Feasibility Study
Project ID: 1428
Lead Agency: USACE / SFWMD
Authority: WRDA 1996

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Reports

Project Synopsis: The purpose of the study is to investigate making structural and operational modifications to the C&SF Project to improve the quality of the environment, improve protection of the aquifer, improve the integrity, capability, and conservation of urban and agricultural water supplies and other water related purposes. The product of this study is a regional plan for addressing the water resource problems and opportunities of the St. Lucie River and Estuary and Indian River Lagoon watersheds in Martin and St. Lucie Counties.

Note: The Indian River Lagoon South Feasibility Study was completed October 2002 and a project implementation report was completed in march 2004.

Cost:

Total	\$6,150,000
Project Development	\$6,150,000
Land Acquisition	
Implementation	
Operations and maintenance	

Project Schedule:

Start Date:	1996
Finish Date:	2002

	1999	2000	2001	2002
Planning & Design				
Real Estate				
Construction				

Detailed Project Budget Information (\$1000)

	Thru 2002	Total
USACE	\$3,075	\$3,075
SFWMD	\$3,075	\$3,075
Total	\$6,150	\$6,150

Hyperlink: http://www.evergladesplan.org/pm/studies/irl_south.cfm

Program Name: Restoration Program: Hydrological Restoration
Project Name: Rotenberger Restoration
Project ID: 1430
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right.

Measurable Output(s): Extent of hydropattern restored (Target: 29,000 acres).

Project Synopsis: The Rotenberger Restoration project restores hydropattern on the Rotenberger Wildlife Management Area, a total of over 29,000 acres. An inflow pump station and distribution canal were constructed near the southeast corner of STA-5. Also constructed were four outfall culverts, which were placed in the east levee of the Rotenberger Wildlife Management Area to route water to the Miami Canal.

*** Cost (Estimate):**

Total:	\$ 5,204,212
(1) Project Development:	\$ 307,283
Land Acquisition:	\$ -
(2) Implementation:	\$ 3,035,047
Operations and Maintenance:	\$ 1,861,882

Project Schedule:

Completion Date: September 2002

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$3,647,953	\$121,475	\$125,115	\$128,901	\$132,768	\$1,048,000	\$5,204,212
Tribal							
Local							
Other							
Total	\$3,647,953	\$121,475	\$125,115	\$128,901	\$132,768	\$1,048,000	\$5,204,212

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

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

Contact: Steve Poonasingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: STA-1 West Works and Outflow Pump Station (G-310)
Project ID: 1508
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water right.

Measurable Output(s): Acres of stormwater treatment area (6,700 acres).

Project Synopsis: STA-1 West is located in Western Palm Beach County and it serves the area tributary to Pump Station S-5A and the Loxahatchee National Wildlife Refuge (WCA-1). STA 1 West consists of almost 7,000 acres (over 10 square miles) of prior agricultural fields that have been converted to wetland treatment systems designed to reduce phosphorus loads entering the Everglades. The construction consisted of approximately 6,700 acres of wetlands, 14 miles of levees, three concrete spillways, culverts and related ancillary facilities. STA-1 West includes the former Everglades Nutrient Removal (ENR) Project, which was a demonstration project of wetland treatment technology. 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 former ENR project. With a capacity of 3,040 cfs, G-310 provides treated water to the Loxahatchee National Wildlife Refuge, also known as, WCA 1. Enhancements to this STA are part of the Long-Term Plan and are not included in the project costs and schedules shown below.

*** Cost (Estimate):**

Total:	\$ 107,546,889
(1) Project Development:	\$ 3,120,981
Land Acquisition:	\$ 22,639,867
(2) Implementation:	\$ 47,055,072
Operations and Maintenance:	\$ 34,730,969

Project Schedule:

Completion Date: Approximate 2000 (construction)

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$82,112,462	\$2,378,258	\$2,010,780	\$2,071,620	\$2,133,769	\$16,840,000	\$107,546,889
Tribal							
Local							
Other							
Total	\$82,112,462	\$2,378,258	\$2,010,780	\$2,071,620	\$2,133,769	\$16,840,000	\$107,546,889

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.
- (3) Project Development includes Design Phase [contracts & staff costs] costs.
- (4) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: STA-2 Works and Outflow Pump Station (G-335)
Project ID: 1509
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Acres of stormwater treatment area (6,430 acres).

Project Synopsis: STA-2 Works is located in southern Palm Beach County including and surrounding the Brown's Farm Wildlife Management Area. This project provides a total effective treatment area of 6,430 acres serving the area tributary to pump station S-5A and S-6. Construction included approximately 28 miles of levees constructed in the inflow, interior and discharge works combined, remote controlled structures and pump station G-335. This stormwater treatment area discharges to Water Conservation Area -2A (WCA-2A). Outflow Pump Station G-335 is located at the south east corner of STA-2. This 3,040 cubic foot per pump station discharges treated water into the L-6 Canal for delivery to Water Conservation Area 2A. Enhancements to this STA including expansion by approximately 2,000 acres are part of the Long-Term Plan and are not included in the project costs and schedules shown below.

*** Cost (Estimate):**

Total:	\$126,104,852
(1) Project Development:	\$ 4,382,696
Land Acquisition:	\$ 30,780,094
(2) Implementation:	\$ 59,889,158
Operations and Maintenance:	\$ 31,052,904

Project Schedule:

Completion Date: December 2000 (construction)

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$100,412,226	\$1,612,183	\$2,100,148	\$2,163,692	\$2,228,603	\$17,588,000	\$126,104,852
Tribal							
Local							
Other							
Total	\$100,412,226	\$1,612,183	\$2,100,148	\$2,163,692	\$2,228,603	\$17,588,000	\$126,104,852

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

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

Contact: Steve Poonasingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: STA-3/4 Works
Project ID: 1510
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Acres of stormwater treatment area (16,600 acres)

Project Synopsis: STA-3/4 treats the area tributary to Pump Station S-7 and S-8 and provides 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 the Inflow Pump Stations 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. The STA-3/4 treatment facilities were substantially completed in 2003 and treatment operations began in the spring of 2004. The G-371 and G-373 gated spillways were completed in 2005. Enhancements to this STA are part of the Long-Term Plan and are not included in the project costs and schedules shown below.

*** Cost (Estimate):**

Total:	\$210,941,770
(1) Project Development:	\$ 7,443,548
Land Acquisition:	\$ 50,402,532
(2) Implementation:	\$127,793,311
Operations and Maintenance:	\$ 25,302,379

Project Schedule:

Completion Date: October 2005 (construction)

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$170,384,794	\$3,281,945	\$3,251,261	\$3,349,148	\$3,449,622	\$27,225,000	\$210,941,770
Tribal							
Local							
Other							
Total	\$170,384,794	\$3,281,945	\$3,251,261	\$3,349,148	\$3,449,622	\$27,225,000	\$210,941,770

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

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

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: STA-5 Works
Project ID: 1511
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Acres of stormwater treatment area (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, and provides treatment of water discharged from the C-139 Basin. STA-5 provides a total effective treatment area of 4,118 acres. Major components of this STA include construction of eight gravity control structures which convey flows into and out of STA-5 treatment cells, 18 miles of canal and levee construction, eight intermediate concrete culverts with fixed weirs, modifications to the existing L-3 Levee, seepage return pump stations, (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. Enhancements to this STA including expansion by approximately 2,000 acres are part of the Long-Term Plan and are not included in the project costs and schedules shown below.

*** Cost (Estimate):**

Total:	\$ 44,434,079
(1) Project Development:	\$ 1,408,508
Land Acquisition:	\$ 15,498,109
(2) Implementation:	\$ 16,163,569
Operations and Maintenance:	\$ 11,363,893

Project Schedule:

Completion Date: Approx. January 1999 (construction of treatment works)

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$36,183,366	\$1,462,397	\$592,063	\$609,977	\$628,276	\$4,958,000	\$44,434,079
Tribal							
Local							
Other							
Total	\$36,183,366	\$1,462,397	\$592,063	\$609,977	\$628,276	\$4,958,000	\$44,434,079

- Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

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

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: STA-6 (includes Sections 1 and 2)
Project ID: 1512
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Acres of stormwater treatment area (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 were 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 pumps. STA-6 Section 2 is currently being implemented as part of the Acceler8 program. Cost estimates shown below are approximate and does not include operations and maintenance costs for STA-6 Section 2. These costs are yet to be determined.

*** Cost (Estimate):**

Total:	\$ 35,175,950
(1) Project Development:	\$ 755,865
Land Acquisition:	\$ 7,451,810
(2) Implementation:	\$ 22,308,208
Operations and Maintenance:	\$ 4,660,067(Does not include O&M for Section 2)

Project Schedule:

Expected Completion Date: Flow capable STA-6 Section 2 by December 2006

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$14,575,063	\$11,439,368	\$3,315,355	\$575,450	\$592,714	\$4,678,000	\$35,175,950
Tribal							
Local							
Other							
Total	\$14,575,063	\$11,439,368	\$3,315,355	\$575,450	\$592,714	\$4,678,000	\$35,175,950

- (11) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.
- (12) Project Development includes Design Phase [contracts & staff costs] costs.
- (13) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: Chapter 298 Districts/Lease 3420 Improvements
Project ID: 1700
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Extent of reduction of total phosphorus entering Lake Okeechobee.

Project Synopsis: South Florida Water Management District funded 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 these diversion works as described in the Everglades Forever Act. South Florida Water Management District also funded works of the Lessee of Lease No. 3420 (Closter Farms) for the design and construction of diversion works described in the Everglades Forever Act. The primary objective of these improvements is to reduce total phosphorus loads discharged directly to Lake Okeechobee. All projects are complete and are in operation.

*** Cost (Estimate):**

Total:	\$ 24,115,521
(1) Project Development:	\$ 779,995
Land Acquisition:	\$ -
(2) Implementation:	\$ 23,335,526
Operations and Maintenance:	\$ -

Project Schedule:

Completion Date: September 2005

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$24,115,521	-	-	-	-	-	\$24,115,521
Tribal							
Local							
Other							
Total	\$24,115,521	-	-	-	-	-	\$24,115,521

(14) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

(15) Project Development includes Design Phase [contracts & staff costs] costs.

(16) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonasingh, (561) 682-2934

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: 1704
Lead Agency: South Florida Water Management District
Funding Source: SFWMD Ad Valorem; EPA 319

Strategic Plan Goal(s) Addressed: Other

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) document any exiting environmental problems associated with their use, (2) establish environmentally-sound guidelines for the land application of residuals and chicken manure, and (3) educate landowners in the watershed on the proper management and use of the waste materials.

Cost:

Total	\$421,633 + (subject to contract bids and negotiations)
Project Development	\$20,000 + (subject to contract bids and negotiations)
Land Acquisition	N/A
Implementation	\$401,633
Operations and Maintenance	N/A

Project Schedule:

Start Date: 7/1/00
 Finish Date: 1/08/05 (project terminated – project site land use change)

Detailed Project Budget Information (\$1000)

	Thru 2005	2006	2007	2008	Balance to complete	Total
Federal EPA	227.671					227.671
State SFWMD	193.962					193.962
Tribal						
Local						
Other						
Total	421.633					421.633

Hyperlink: N/A
Contact: Jim Laing, (561) 682-6667

Program Name: Restoration Program: Water Quality, Habitat & Species
Project Name: Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project
Project ID: 1708
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source:

Strategic Plan Goal(s) Addressed : Other

Measurable Output(s): Recommendation Regarding Sediment Removal from Lake Okeechobee

Project Synopsis: The goal of this project was to analyze alternatives and determine the best method of sediment management to reduce internal phosphorus loading in Lake Okeechobee. The Feasibility Study addressed alternatives such as sediment removal, processing, disposal, chemical treatment, and/or sealing sediment to achieve the project goal. The goal of the Feasibility Study was achieved using an objective methodology that allowed for review and input by experts and stakeholders throughout the study process. A pilot test of a state-of-the-art sediment removal/treatment technology train was conducted in parallel with the Feasibility Study. The pilot test included sediment removal, de-watering, treatment, and a pilot water quality treatment system. The results of the pilot test were incorporated into the Feasibility Study.

The results for the feasibility study indicated that once the TMDL is met the annual frequency of algal blooms would decrease to below a 15% annual probability of a bloom occurrence (from a current annual likelihood of approximately 20%) by 2015 and 10% by 2028. Under this “no in-lake action” alternative, steady-state lake recovery conditions would be achieved approximately 35 years from the point that external loads are reduced to the inflow load of 140 metric tons. Dredging did not prove feasible, while chemical treatment might be of value under limited conditions.

Cost:

Total	\$955,069
Project Development	\$955,069
Land Acquisition	N/A
Implementation	N/A
Operations and Maintenance	N/A

Project Schedule:
 Start Date: 6/1/00
 Finish Date: 6/1/03 (Completed 04/03)

Detailed Project Budget Information (\$1000)

	Throug h1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State		0	287.5	280.8	386.7			955.1
Tribal								
Local								
Other								
Total			287.5	280.8	386.7			955.1

Hyperlink: N/A
Contact: Don Nuelle (561) 682-6743

Program Name: Restoration Program: Water Quality, Habitat & Species
Project Name: Lake Okeechobee Tributary Sediment Removal Pilot Project
Project ID: 1709
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: SFWMD Ad Valorem; EPA 319

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Reduction in phosphorus loads from the Lettuce Creek drainage basin to Lake Okeechobee.

Project Synopsis: This project provides a direct comparison between two sediment removal technologies, namely, a continuous deflective separation (CDS) unit and a tributary sediment trap (TST) to determine if particulate phosphorus loading to Lake Okeechobee from Lettuce Creek drainage basin may be reduced using either of two pre-selected technologies. This project also examines the feasibility of sediment removal in a tributary as a method of reducing phosphorus loading to Lake Okeechobee. The effectiveness of the two technologies is being evaluated over a 12-month monitoring period. Initial monitoring results have indicated poor removal efficiencies for phosphorus by both units. Upon evaluation of the physical characteristics of the particles in the Lettuce Creek water, it was hypothesized that the settling velocities of the particles are too slow to allow capture of the particulate phosphorus within the relatively short residence times provided by the two units. Additional sediment management techniques are being investigated to examine if the effectiveness of these units can be improved by enhancing the settling velocity of the particles. The effectiveness of each system will be quantified using both a concentration-based and mass balance approach. The economic viability of each technology will be evaluated by comparing the present worth cost (20-yr) per kilogram of sediment and phosphorus removed by each system. 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 wherever possible on District facilities. **This project has been completed.**

Cost:

Total	\$440,000
Project Design (Phase I)	\$93,728
Construction, Installation and Calibration of Monitoring Instruments (Phase II)	\$210,940
Post Sediment Removal Monitoring and Measuring Effectiveness of the Project (Phase III)	\$135,332

Project Schedule:

Start Date: October 2000
 Completion Date: June 2004 (**Project completed; no funding requests at this time**)

	10/2000	08/2001	01/2002	04/2002	05/2002	06/2004
PROJECT DESIGN						
CONSTRUCTION AND INSTALLATION						
MONITORING AND PROJECT EVALUATION						

Detailed Project Budget Information (\$1000)

	2000-2001	2001-2002	2002-2003	2003-2004	Balance to complete	Total
Federal EPA	59.5	87.1	23.4			170
State SFWMD	71	136.6	42.4	20		270
Tribal						
Local						
Total	130.5	223.7	65.8	20		440

Hyperlink: N/A

Contact: Odi Villapando (561) 682-2936

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: S-5A Basin Runoff Diversion Works
Project ID: 1713
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Reduce phosphorus levels before it enters the Everglades Protection Area (EPA).

Project Synopsis: S-5A Basin Runoff Diversion Works is located in western Palm Beach County at the confluence of the Hillsboro and Ocean Canals in the Everglades Agricultural Area (EAA). The project diverts flow from the S-5A Basin into STA-2 for treatment. This project included enlargement of approximately 17 miles of the Hillsboro and Ocean Canals in approximately 2001 and the construction of a water control structure (G-341) which was completed in June 2005.

*** Cost (Estimate):**

Total:	\$ 14,233,758
(1) Project Development:	\$ 408,815
Land Acquisition:	\$ 1,902,688
(2) Implementation:	\$ 11,298,233
Operations and Maintenance:	\$ 624,022

Project Schedule:

Completion Date: June 2005

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$13,536,252	\$49,892	\$51,387	\$53,314	\$54,913	\$488,000	\$14,233,758
Tribal							
Local							
Other							
Total	\$13,536,252	\$49,892	\$51,387	\$53,314	\$54,913	\$488,000	\$14,233,758

- (17) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.
- (18) Project Development includes Design Phase [contracts & staff costs] costs.
- (19) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonasingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: STA-1 Inflow and Distribution Works
Project ID: 1719
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Reduce phosphorus levels in outflows from the STAs as directed in the Everglades Forever Act.

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 four water control structures (G-300, G-301, G-302, 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:	\$ 12,679,955
(1) Project Development:	\$ 1,090,618
Land Acquisition:	\$ -
(2) Implementation:	\$ 11,589,337
Operations and Maintenance:	\$ Included with STA-1 West

Project Schedule:

Completion Date: September 2005 (including structure G-311, inflow structure for STA-1E)

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	\$12,679,955	-	-	-	-	-	\$12,679,955
Tribal							
Local							
Other							
Total	\$12,679,955	-	-	-	-	-	\$12,679,955

(20) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

(21) Project Development includes Design Phase [contracts & staff costs] costs.

(22) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Restoration Program: Habitat and Species
Project name: Cayo Costa
Project ID: 2110
Lead Agency: FDEP
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 1,954 Acres acquired

Project Synopsis: The project area, involving 1,954 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. **This project is completed.**

Cost: Total: Project size 1,954. All acres acquired at a cost of \$28,337,346
 Project Development
 Land Acquisition:
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1980
 Finish Date: 2004

Detailed Project Budget Information (1000s)

	Thru 2004	2005	2006	2007	2008	Total
Federal						
State	\$28,337					28,337
Tribal						
Local						
Other						
Total	\$28,337					28,337

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Habitat and Species and Water Quality
Project Name: Corkscrew Regional Mitigation Bank Land Acquisition
Project ID: 2113
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 633 Acres

Project Synopsis: The Corkscrew Regional Mitigation Bank is located in southern Lee County, along Corkscrew 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 633 acres. **This project has been completed.**

Cost: Total \$2,600,000
 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
Federal								
State	2,600,000							2,600,000
Tribal								
Local								
Other								
Total	2,600,000							2,600,000

Contact: Wanda Caffie-Simpson, (561) 682-6445

Additional information available at www.sfwmd.gov under the heading “Major Projects”

Program Name: Restoration Program: Habitat and Species
Project Name: Dupuis Reserve Land Acquisition
Project ID: 2116
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 21,875 Acres

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 (\$1000)

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State	23,016.601							23,016.601
Tribal								
Local								
Other								
Total	23,016.601							23,016.601

Contact: Wanda Caffie-Simpson, (561) 682-6445

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Restoration Program: Habitat and Species
Project Name: Lake Walk-in-Water Land Acquisition
Project ID: 2130
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 4,009 Acres

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 Town of Sumica. Polk County actively manages the property with financial assistance from the District. The total project acreage is 4,009 acres and all have been acquired. **This project has been completed.**

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: 1998

Detailed Project Budget Information (1000s)

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State	\$1,975							\$1,975
Tribal								
Local	\$1,975							\$1,975
Other								
Total	\$3,950							3,950

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: Loxahatchee River Land Acquisition
Project ID: 2131
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Restore, Preserve and Protect the Natural Habitat and Species

Measurable Output(s): Target 1,936 Acres

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 first 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. **This project has been completed.**

Project is completed.

Cost:	Total	\$13,074,703
	Project Development	N/A
	Land Acquisition	\$13,074,703
	Implementation	N/A
	Operations and Maintenance	N/A

Project Schedule:

Start Date:	1984
Finish Date:	2001

Detailed Project Budget Information (\$1000)

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State	\$11,927.120							\$11,927.120
Tribal								
Local	\$1,147.583							\$1,147.583
Other								
Total	\$13,074.703							\$13,074.703

Additional information available at www.sfwmd.gov under the heading “Major Projects”

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: Nicodemus Slough Land Acquisition
Project ID: 2137
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 2,231 Acres

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 has been completed.**

Cost: Total \$1,894,501
 Project Development N/A
 Land Acquisition \$1,894,501
 Implementation N/A
 Operations and Maintenance N/A

Project Schedule:

Start Date: 1981
 Finish Date: 1988

Detailed Project Budget Information (1000s)

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State	\$1,894.5							\$1,894.5
Tribal								
Local								
Other								
Total	\$1,894.5							\$1,894.5

Contact: Wanda Caffie-Simpson, (561) 682-6445
 Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Restoration Program: Habitat and Species
Project Name: South Fork St. Lucie River Land Acquisition
Project ID: 2153
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Restore, Preserve and Protect the Natural Habitat and Species

Measurable Output(s): Target 184 Acres

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. Responsibility for management of land is divided between the Department of Environmental Protection and Martin County. **This project has been completed.**

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

Detailed Project Budget Information (1000s)

	Through 1999	2000	2001	2002	2003	2004	Balance to complete	Total*
Federal								
State	\$2,480						0	\$2,480
Tribal								
Local								
Other								
Total	\$2,480						0	\$2,480

Contact: Wanda Caffie-Simpson, (561) 682-6445
 Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Restoration Program: Habitat and Species
Project Name: Tibet-Butler Preserve Land Acquisition
Project ID: 2157
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Restore, Preserve and Protect the Natural habitat and Species

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 manages 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 (1000s)

	Through 1999	2000	2001	2002	2003	2004	Balance to Complete	Total
Federal								
State	\$3,601.9							\$3,601.9
Tribal								
Local								
Other								
Total	\$3,601.9							\$3,601.9

Contact: Wanda Caffie-Simpson, (561) 682-6445

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Restoration Program: Habitat and Species
Project Name: Yamato Scrub
Project ID: 2161
Lead Agency: FDEP
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: Primary: 2.A.1 Secondary:

Measurable Output(s): Target 207 Acres

Project Synopsis: Predominantly natural communities here are sand pine scrub and scrubby flatwoods. The species richness of the scrub is considered higher than that of any other scrub on the southeast coast. A bargain shared project. **This project has been completed.**

Cost: Total: Project size 207 acres all acquired
 Project Development
 Land Acquisition: 207 acres acquired at a cost of \$25,932,850
 Implementation
 Operations and maintenance

Project Schedule:
 Start Date: 1992
 Finish Date: 1996

Detailed Project Budget Information (1000)

	Thru 1999	2000	2001	2002	2003	2004	Balance to complete	Total
Federal								
State	17,500							17,500
Tribal								
Local	8,432.8							8,432.8
Other								
Total	25,932.8							25,932.8

Contact: John Outland (850) 245-2089

Program Name: Invasive Exotic Species Management
Project Name: Estero Bay Aquatic Preserve and Buffer Enhancement and Exotic Removal Project
Project ID: 2603
Lead Agency: FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Authority: Chapter 403, Florida Statutes
Funding Source:

Strategic Plan Goal(s) Addressed: 2.B.2

Measurable Output(s): Acres of exotic plants removed

Project Synopsis:

I. Melaleuca removal: Treatment, removal, monitoring and follow-up treatment of 708 acres of Melaleuca within the 10,405 acre Estero Bay Preserve State Park – **PROJECT COMPLETED**

II. Dog Key Exotic Removal: Treatment, removal, 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 – **PROJECT COMPLETED**

Cost: Total: \$1.05 million

Project Development:

I. Melaleuca Removal – The initial aerial treatment of 708 acres of melaleuca was completed through funding by the Bureau of Invasive Plant Management (BIPM) at a cost of approximately \$100,000.00. Only the heavily infested monoculture areas were treated, leaving untreated buffers around native plant communities. It will be necessary to hand treat these buffer areas and any unsuccessful initial treatment areas. It is anticipated that \$600,000.00 will be needed for this work. Monitoring and follow-up treatment of this large-scale treatment still needs funding. Smoke from a prescribed fire within these treatment areas (dead) would be a major problem in the Estero development area so actual removal of dead or live trees off site would be preferable. In this case, costs could exceed the \$600,000.00 figure.

Implementation:

I - initial treatment completed in 2001. On the ground treatment of the buffer areas (edges of the treated areas) and any unsuccessful treatment areas should also occur toward the end of 2001 or beginning of 2002. Monitoring and follow-up treatment to continue through 2004 at an estimated cost of \$300,000.00.

Operations and maintenance: Total =2,852 acres treated at a cost \$1,129,214
 Estimated at \$40,000.00 through 2004.

Project Schedule:

Start Date: 1998
 Finish Date: 2004

Detailed Project Budget Information (1000s)

	Thru 2003	2004	2005	2006	2007	2008	Balance to complete	Total
Federal								
State	\$538.5	\$28.6	\$20.5					
Tribal								
Local								
Other								
Total	\$538.5	\$28.6	\$20.5					\$587.6

Hyperlink: N/A
Contact: N/A

Program Name: Infrastructure
Project Name: Critical Projects - Florida Keys Carrying Capacity
Project ID: 4100
Lead Agency: USACE / FDCA
Authority: WRDA 1996

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Report

Project Synopsis: The carrying capacity study/analysis will develop information that will improve decision-making regarding development approvals and infrastructure investments, and its impact on the ecology and natural system in the Florida Keys and Florida Bay. 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. The Study was completed March 2003. **This project has been completed.**

Cost:
 Total: \$6,000,000
 Project Development: \$6,000,000
 Land Acquisition:
 Implementation:
 Operations and maintenance:

Project Schedule:

Start Date: 1997
 Finish Date: 2003

	1997	1998	1999	2000	2001	2002	2003
Planning & Design							
Real Estate							
Construction							

Detailed Project Budget Information (\$1000)

	Thru 2003	Total
USACE	3,000	\$3,000
FDCA	3,000	\$3,000
Total	6,000	\$6,000

Hyperlink: <http://www.saj.usace.army.mil/projects/proj4.htm>
Contact: USACE



Coordinating Success and Tracking Success

For further information on this document please contact:

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**For more information on the
South Florida Ecosystem Restoration Program
or to view this document on-line, please visit
<http://www.sfrestore.org>**



Coordinating and Tracking Success