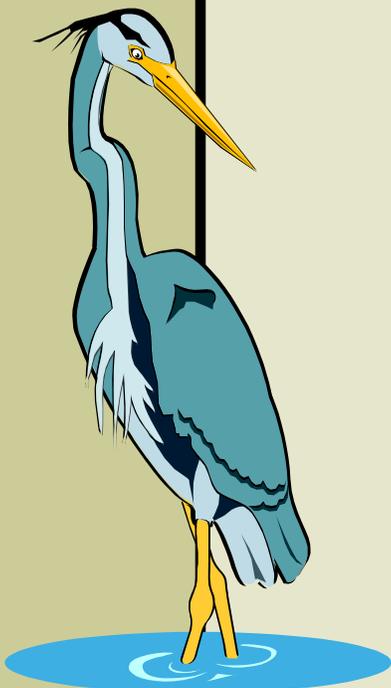


**SOUTH FLORIDA ECOSYSTEM
RESTORATION PROGRAM**

**Fiscal Year
2001
Cross-Cut
Budget**



1.1 What Is The South Florida Ecosystem?

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

1.12 Why is The South Florida Ecosystem Important?

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

The built environment is equally complex. Developed areas from Kissimmee to Key West offer cultural diversity and an attractive climate. The region supports major sea and air transportation hubs, thriving tourism and agricultural industries, and national and international commerce. South Florida also possesses fine institutions of higher education and rich points of historical and architectural interest. Over

6.5 million residents and 37 million annual tourists rely on the region and its \$200 billion economy for their livelihoods and well-being.

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

1.13 The Magnitude of the Problem

Disrupted Hydrology / Water Quality Degradation

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

- ⇒ Half of the original Everglades has been drained, and perhaps lost forever.
- ⇒ Two million acre-feet of water are lost from the natural system annually through discharge and seepage.
- ⇒ Phosphorus and nitrogen from agricultural and urban runoff have

contaminated Lake Okeechobee, the Everglades, and adjacent areas.

⇒ Unnatural freshwater discharges have damaged coastal estuaries, including Florida Bay.

Loss of Habitat and Native Species

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

⇒ Wading-bird populations have dropped by 90%-95%.

⇒ To date, 68 plant and animal species are federally listed as threatened or endangered.

⇒ The incidence of coral diseases in the Florida Keys National Marine Sanctuary has increased 4-fold since 1996.

⇒ Over 1.5 million acres of land are infested with invasive exotic plants.

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

Urban Development / Suburban Sprawl

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

metropolitan areas cover most of the eastern coast and portions of the west coast.

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

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

⇒ There are thousands of contaminated sites (brownfields) along the southeast coast of Florida.

⇒ Much of the eastern urban corridor of South Florida is characterized by income levels lower than those found in surrounding suburbs.

⇒ The city of Miami is ranked the fourth poorest city in the nation.

⇒ Miami-Dade County is ranked the third most congested area in the nation.

1.14 Why Should We Care?

A healthy ecosystem is not a nicety, it is a necessity. Water that is cleaned as it passes through the Everglades and the aquifer, supports habitats throughout the region. Clean water also supports the

state's multiple industries and rapidly growing population. In South Florida the urban and the natural systems are inextricably linked. This makes stakeholders inclusive of every living thing in South Florida – human or nonhuman.

Efforts like the Army Corps of Engineers' Central and Southern Florida Comprehensive Review Plan also known as the "Restudy" are key parts of the restoration plan. The Restudy, presented to Congress on July 1, 1999, recommends a plan that is focused on recovering the major characteristics that defined the historic Everglades – the "river of grass". What made the Everglades special was its large size and how water acted to connect myriad habitats, and served to support numerous species of fish and wildlife. The construction of flood control levees following a 1948 hurricane compartmentalized the Everglades. Canals efficiently drained water to the ocean. An explosion of development followed which reduced the size of the Everglades and introduced pollutants to the natural system. As the physical form and function of the flood plan was altered dramatically, natural patterns of water flow were disrupted, and ultimately interfered with the ability of most animals to find dependable habitat, at the right times, and in the right places.

By removing many miles of levees and canals and recovering water storage, the recommended plan will restore the essential defining features of the historic Everglades over large portions of the remaining area. As a result, animals are expected to show a dramatic and

positive response. Throughout the food chain the numbers of animals such as crayfish, minnows, sunfish, frogs, alligators, herons, ibis and otters will substantially increase. Equally important, animals will respond to the recovery of more natural water patterns by recovering their traditional distribution patterns.

How will you know if the plan works and if the ecosystem is being restored? Two telling measures of success will be: 1.) the return of large wading bird nesting grounds, called "rookeries", to Everglades National Park, and 2.) the recovery of several endangered species to a more certain and optimistic future. Scientists believe that wading birds, such as herons, egrets, ibis and storks, are indicators of the overall health of the Everglades. Before they make decisions about where, when or even whether, to nest, wading birds, perhaps more than any other animals, size up the quality of habitats over the entire region of wetlands. As recently as the 1950s and 1960s, large "super colonies" of nesting wading birds remained in the Park, but have since disappeared. The recovery of these super colonies will be a sure sign that the entire Everglades has made substantial progress toward being restored. Among the endangered species, the wood stork, the snail kite, the Cape Sable seaside sparrow, the West Indian manatee, the American crocodile, and the Okeechobee gourd will benefit from improved habitat as a result of the recommended plan.

1.2 Enacting Laws and Initiatives

Over the past 25 years the Florida Legislature and U.S. Congress have passed legislation to manage growth and protect the natural environment. This collective legislation has evolved into a more holistic and integrated vision for restoring the South Florida ecosystem in its totality.

Early state legislation, such as the 1972 Land Conservation Act and the Florida Water Resources Act, established the foundation for managing state growth and protecting sensitive waters. These acts signaled a change in public and governmental attitudes about development and the natural environment.

Another major initiative expanded this theme with the launching of the 1983 Save Our Everglades program – a partnership between the South Florida Water Management District (SFWMD) and state and federal governmental agencies. The initiative's goal was to work toward restoring the natural components of the ecosystem. Affecting the entire Kissimmee River, Lake Okeechobee, Big Cypress Swamp, and Everglades, this initiative set a precedent for addressing problems on a regionwide scale and for interagency cooperation.

In 1985 Florida strengthened its existing planning laws by adopting the Local Government Comprehensive Planning and Land Development Regulation Act. This act has resulted in the adoption of comprehensive plans by every local

government in the state. The 1987 Surface Water Improvement and Management Act (SWIM) complemented the new growth regulations by requiring each Florida water management district to identify critical problems in surface waters and to implement comprehensive restoration plans.

In the early 1990s restoration efforts became more consolidated and focused, while at the same time the scope of these efforts was expanded. The federal 1992 Water Resources Development Act authorized a massive and comprehensive review study of the Army Corps of Engineers original 1948 Central & Southern Florida Project, designed to control flooding. This project, successful in its time, built a huge network of canals and levees to drain much of the Glades. The goal of the Review Study or “Restudy” is to restore the system's natural hydropattern, while maintaining the existing levels of flood control and improving the integrity, capability, and conservation of urban and agricultural water supplies. The Restudy focused on virtually the entire ecosystem and was carried out by an interdisciplinary/interagency team composed of state and federal representatives. The final Restudy Comprehensive Everglades Restoration Plan was completed and delivered to the U.S. Congress on July 1, 1999.

The Kissimmee River Restoration Project underscores the success of collaborative efforts. Plans to restore the river, developed by the U.S. Army Corps of

Engineers (Corps) and the SFWMD culminated in the Water Resources Development Act of 1992. The act authorized the restoration of this critical river/floodplain ecosystem, which was disrupted when the river was channelized during the 1960s.

Florida's 1994 Everglades Forever Act established another ambitious ecosystem restoration plan known as the Everglades Program. The program involves the construction of man-made wetlands on land previously used for agriculture and the implementation of agricultural best management practices (BMPs) designed to reduce phosphorus contamination on remaining farmlands. The act also initiated intensive research and monitoring studies and implemented new incentive-based regulations requiring farmers and municipalities to meet state phosphorus-reduction standards.

A concerted effort is being made to dovetail activities associated with the Restudy and those ongoing under the

Everglades Program. Both represent major steps toward implementing a regionwide, integrated plan based on federal and state cooperation.

The 1996 Water Resources Development Act and subsequent appropriation bills continued to stress interagency cooperation and provided funding for restoration efforts on a regionwide basis. The bill requires the Corps to develop a comprehensive review study for restoring the hydrology of South Florida (i.e., the Restudy). Further, it authorized federal, state, local, and tribal governments to develop recommendations for implementing the plan. The act also authorized additional critical construction projects related to the C&SF Restudy. Finally, the bill formally established a South Florida Ecosystem Restoration Task Force.

This evolving body of legislation and initiatives has culminated into what is now known as the South Florida Ecosystem Restoration and Sustainability Project.

ENVIRONMENTAL AND ECOSYSTEM RESTORATION MILESTONES

1947 Establishment of Everglades National Park	Set aside 1.3 million acres of Everglades as wilderness; expanded to 1.4 million acres in 1989
1972 Florida Land Conservation Act	authorized the issuance of bonds to purchase environmentally endangered and recreation lands

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1983 Governor's Save Our Everglades Program	recognized that the entire ecosystem needs to be restored, not just parts of it; initiated Kissimmee River Restoration Project
1984 Florida Warren Henderson Act	gave authority to the Department of Environmental Regulation (now DEP) to protect wetlands and surface waters of the state for public interest
1985 Florida Local Government Comprehensive Planning and Land Development Regulation Act	required the development and coordination of local land use plans
1987 Florida Surface Water Improvement and Management Act (SWIM)	required the five Florida water management districts to develop plans to clean up and preserve Florida lakes, bays, estuaries, and rivers
1990 Florida Preservation 2000 Act	established a coordinated land acquisition program to protect the integrity of ecological systems and to provide multiple benefits, including the preservation of fish and wildlife habitat, recreation space, and water recharge areas
1990 The Florida Keys National Marine Sanctuary and Protection Act	established a 2,800-square-nautical-mile marine sanctuary and authorized a water quality protection program
1991 Florida Everglades Protection Act	provided water management districts with clear tools for ecosystem restoration
1992 Water Resources Development Act	authorized the Kissimmee River Restoration Project and the Central and Southern Florida Project Restudy
1993 Federal South Florida Ecosystem Restoration Task Force	established to coordinate state ecosystem restoration efforts in South Florida
1994 Florida Everglades Forever Act	outlined a comprehensive plan to restore significant portions of the South Florida ecosystem through construction, research, and regulation
1994 Governor's Commission for a Sustainable South Florida	established to make recommendations for achieving a healthy South Florida ecosystem that can coexist with and mutually support a sustainable economy and quality communities
1996 Farm Bill	Section 390 of this Bill directly appropriated \$200 million to conduct restoration activities in the Everglades ecosystem in South Florida
1996 Water Resources Development Act	expanded the task force to include tribal, state, and local governments, mandated extensive public involvement, allowed task force to address full scope of restoration needs (natural and built)

1.3 Partners in Restoration

Forming Partnerships

Legislative efforts and changing land use patterns have led to the formation of several important partnerships involving federal, state, local, and tribal governments, and private entities. Groups that in the past held opposing views on how to manage natural and economic resources are now working more closely together in pursuit of increasingly common goals. Today, these partnerships provide the vision, strategic thinking, and planning needed to carry out coordinated and effective restoration actions.

South Florida Ecosystem Restoration Task Force

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

The Task Force was later formalized and expanded to include tribal, state, and local governments by the 1996 Water Resources Development Act.

The purpose of the expanded Task Force is to facilitate implementation of the overall restoration effort. In this capacity it serves as an information clearinghouse, referee,

and coordinating entity that helps guide the restoration effort, keep it on track, and ensure fiscal accountability.

The South Florida Ecosystem Restoration Task Force currently facilitates the coordination of the restoration work associated with the Everglades Forever Act, the C&SF Restudy, the Kissimmee River Restoration Project, and other efforts being conducted by federal, state, and academic entities. These efforts have largely focused on reestablishing the functions of natural systems of the South Florida Ecosystem.

1.4 Fixing the Problem

A Vision for the Future

Ecosystem restoration partners have come to three important conclusions:

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

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

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

This vision can be attained by reaching three long-term goals as indicated below:

GOAL 1: GET THE WATER RIGHT

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

GOAL 2: RESTORE AND PRESERVE THE NATURAL SYSTEM

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

These changes, combined with other wildlife management actions such as monitoring and reintroducing species, will play critical roles in maintaining and enhancing species diversity. Reducing and reversing the rampant spread of invasive exotic species will also be important.

Finally, halting the stormwater discharge into coastal areas will be vital in restoring the health of estuaries and sensitive coral reef systems.

GOAL 3: TRANSFORM THE BUILT ENVIRONMENT

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

1.5 How Do We Achieve The Goals?

1.51 Adaptive Management

To reach these goals and the future vision for South Florida, the Task Force and its partners have adopted an adaptive management strategy. The strategy acknowledges that not all the data needed to restore the entire system is in hand. It also recognizes the need to move forward. Therefore, the project's learn-as-you-go strategy is to implement action where possible, while continuing to

gather data and refine the collective understanding of the problems.

Adaptive management entails three essential elements: models, support studies, and monitoring. Each is a tool that is used in combination with the other two elements.

Models provide the conceptual framework that forms the basis for support studies. These studies provide data and interpretation that lead to a better understanding of the problem and then to the development of a series of management alternatives. The costs and benefits of the alternatives are then calculated using the models to determine which alternative represents the best course of action.

Once an alternative is selected and implemented, monitoring is used to assess the effectiveness of the action and to provide feedback on ways to modify it (if warranted). Similarly, monitoring data can be used to revise and refine the original model, thereby completing and continuing the interactive feedback loop of decision making and implementation.

Adaptive management provides a structure for initiating critical projects immediately, the flexibility to modify activities when needed, and the feedback and coordination to ensure accountability.

1.52 Innovative Management

The Task Force and its partners also have adopted a series of creative tactics needed to implement goal-oriented actions as follows:

1.52.1 Science-Based Decision Making

To be successful, restoration decisions must be based on sound, applied science. Applied science has two major roles in restoration efforts. 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 or information that is needed to validate (or modify) ongoing management actions.

Much of the restoration effort is based on the assumption that better water management will provide sustainability across both natural and human systems. This suggests, as a working hypothesis, that hydrologic restoration is a prerequisite for ecosystem restoration.

The challenge is to determine how to modify the structure and operation of the current hydrology so that it more closely resembles pre-drainage patterns. To do this

- previous drainage patterns must be reconstructed
- key species and habitat indicators must be identified
- predictive and evaluative models must be developed
- monitoring programs need to be implemented

These activities are necessary to provide the scientific data needed to make informed decisions on how to implement restoration projects and to assess their outcomes.

1.52.2 Systemwide Management

Science alone is not the answer. Another crucial step in achieving the restoration goals is to overcome institutional barriers that encourage the status quo. In the past, there has been a tendency to manage natural, economic, and human resources as independent variables that are administered and regulated by discrete jurisdictions. This approach leads to reduced communication, duplication of effort, and inefficiency.

The task force and its partners, therefore, advocate a holistic, systemwide approach that addresses issues regionally, not locally. There is also an emphasis on obtaining results, rather than implementing programs that have no clear outcome. Finally, there is a growing recognition that the problems faced in South Florida must be solved collaboratively and must be based on a sound understanding of the variables involved.

1.52.3 Integrated Governance

Integrated governance is a creative approach to coordinating federal, state, local, and tribal laws, authorities, and regulations to achieve a shared restoration vision. It also seeks ways to streamline funding, coordinate different levels of federal, state, local, and tribal government, cut costs, and allow actions to be implemented faster.

To be successful, governmental entities will need to seek regulations

that are based on common sense, to share their funding, to integrate their budgets, and to develop cooperative programs.

1.52.4 Broad-Based Partnerships

South Florida problems affect all individuals living there but in different ways. To be successful, there must be a shared vision and mutual commitment for change. It is critical that federal, state, local, and tribal governments join with interested and affected parties to examine differing views and needs. This will form the basis for the respect and trust needed to work together.

1.52.5 Public Outreach and Communication

Finally, building broad-based partnerships requires a good understanding of the issues and an atmosphere of open dialogue. Because of the diversity of cultures in South Florida, public outreach and communication will form an important cornerstone for ecosystem restoration efforts. Public outreach strategies should find concrete and meaningful ways to connect people with ecosystem restoration efforts. They should foster a clear exchange of views, perspectives, and information. The strategies should seek to instill a broad sense of stewardship, ownership, and responsibility for all parties involved, including private citizens.

1.6 Progress Made

1.6.1 Introduction

Creating a sustainable South Florida cannot happen overnight. It will require continued planning, restoration, and monitoring. However, federal, state, tribal, regional, and local partners have made significant progress. The following examples serves to highlight just some of the many accomplishments currently taking place in South Florida.

1.6.2 Restoring the Environment

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

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

The Restudy is the linchpin of the South Florida ecosystem restoration effort. The purpose of the Restudy was to reevaluate the entire C&SF Project's water distribution system and to develop a comprehensive plan for implementing changes needed to meet ecosystem water supply needs through 2050. The Restudy represented a massive undertaking to better understand the management needs in a water system covering an 18,000-square-mile-area.

Implementing the comprehensive plan recommended by the Restudy is a necessary precondition for most future restoration efforts. Besides the Restudy report, this effort also includes the Water Preserve Areas, Indian River Lagoon, Southwest Florida, Comprehensive Water Quality, and Florida Bay/Florida Keys Feasibility studies.

On January 18, 2000, in recognition of the need to take decisive action to further protect and restore the Everglades ecosystem, the State of Florida embarked upon an unprecedented plan to finance Florida's cost-share for implementation of the Comprehensive Everglades Restoration Plan, forwarded to Congress by the U.S. Army Corps of Engineers in July, 1999. The State's plan includes a commitment of more than \$100 million annually to be matched by an additional \$100 million from South Florida resources for a total of \$200 million each year. The financing plan creates a unique Everglades trust fund to build reserves for restoration and calls for a new, stronger state/federal partnership. This funding proposal, establishment of the Everglades Restoration Reserve Fund and the call for a new partnership with the federal government, are aimed at achieving a vision for America's Everglades that restores the unique national treasure, protects the endangered or protected species in the Everglades ecosystem, preserves the quality of life, achieves a balance between land and water and protects coastal resources.

directly addresses all three of the Task Force's goals.

Accomplishment Highlights

The Secretary of the Army submitted the final Restudy report, recommending a Comprehensive Everglades Restoration Plan, to Congress on July 1, 1999. Authorization of portions of this plan is expected to be included in the Water Resources Development Act of 2000. Pre-Construction Engineering and Design will begin on this plan upon the execution of Design Agreements by the South Florida Water Management District and other local cooperating agencies and tribal entities. The planning efforts for the Water Preserve Areas and Indian River Lagoon Feasibility studies continued through 1999. Additionally, the Southwest Florida and Comprehensive Water Quality Feasibility Studies were initiated in 1999. These feasibility efforts will further refine the actions necessary to improve the ecosystem in specific critical areas.

In general, these efforts focus on capturing and storage of large quantities of stormwater runoff that currently are discharged to the ocean. Actions recommended in the Comprehensive Everglades Restoration Plan will significantly improve the quantity, timing, and distribution of water deliveries throughout the natural system, and will improve water quality in some areas. The plan will also augment urban and agricultural water supplies. While focused mainly on getting the water right, the plan

The Restudy Planning Effort

A lesson learned from the multidisciplinary, multi-agency planning effort employed during the development of the Restudy report is that it works! The Restudy team was comprised of over 160 specialists from 30 state, federal, regional, local, and tribal governments and worked to produce the Comprehensive Everglades Restoration Plan. It is expected that Local and tribal governments as well as stakeholder groups like the Governor's Commission for the Everglades will continue to play important roles as this method of "doing business" will be employed throughout the implementation phase of the Comprehensive Everglades Restoration Plan and the feasibility efforts currently or soon to be underway.

1.6.3 Land Acquisition

Accomplishment Highlights

Since 1993 and through the end of calendar year 1999, 481,686 acres have been acquired for \$1,033,282,688. The lands were purchased with funding from the Farm Bill, Florida Preservation 2000 program, Conservation and Recreation Lands (CARL) program, and other federal, state, regional, and local sources.

Water Preserve Areas

One strategy to restore regional water patterns is to establish water preserve areas along the eastern boarder of the Everglades. These areas will control the loss of water through unnatural seepage, help clean the water, provide buffer zones between urban areas and the natural system, and enhance the region's water supply. The South Florida Water Management District has acquired land in its East Coast Buffer Strip footprint within the Water Preserve Area. The total number of acres purchased within this footprint within the 96-99 period was 8,422 at a total cost of \$80,359,055 of this number. Of this number, 3567 acres were federally funded at a cost of \$33,252,903 and 4,855 acres were state funded at a cost of \$47,106,152. 39,661 acres of land still need to be acquired in the East Coast Buffer Strip portion of the Water Preserve Areas. This land will become a connected series of marshlands, reservoirs, and aquifer recharge basins that will help to meet future water supply needs for urban areas, agriculture, and the environment.

Kissimmee River Restoration Project

The construction phase of this project calls for backfilling portions of the Kissimmee canal (C-38 canal), removing structures, and rechannelling the river. But first the land must be obtained. To date the South Florida Water Management District has acquired 87,127 acres of land located around headwater lakes

and in the river's historical 100-year floodplain. From 1996 through 1999, 30,022 acres were acquired and 9,420 acres are still remaining to be acquired.

Talisman Land Acquisition

This unique land acquisition deal, negotiated between the Department of the Interior, the U.S. Environmental Protection Agency, the Governor's Office, the South Florida Water Management District, the Nature Conservancy, St. Joe Company, and a coalition of sugar growers, is a testimony to how cooperation among government agencies and stakeholders can help to accomplish South Florida Ecosystem restoration and sustainability. The agreement includes a combination of land purchases, land swaps, and agricultural leases that will help to provide lands to meet long-term water storage and water quality treatment needs for the Everglades, while also providing for the near-term and mid-term needs of agriculture. The coalition of sugar growers has guaranteed use of lands for at least five years. In exchange for portions of the Talisman properties, the coalition will swap agricultural lands to be used by the South Florida Water Management District for water storage and water quality treatment purposes. In March 1999, land acquisition totaled 50,719 acres.

Everglades Stormwater Treatment Areas (STAs)

The South Florida Water Management District acquired 46,500 acres (36,037 acres of which were

acquired from 1996 through 1999) within this project for the construction of six stormwater treatment areas (man-made wetlands) under the Everglades Construction Project. 1151 acres still need to be acquired.

East Everglades Addition to Everglades National Park

The park acquired 81,460 acres (or 74%) of the congressionally authorized expansion area, with 42,089 acres of this land being donated by the state of Florida. The remaining 26% (28,044 acres) must be acquired before the Corps can implement the Modified Water Deliveries Project, which will restore natural hydrologic conditions in the park's critical Shark River Slough drainage. The National Park Service received \$20 million in FY 2000 to complete this land acquisition. NPS estimates it will complete its portion of the work by November 2000. The Department of Justice and U.S. Attorney's Office actions on condemnation filings will continue after the November date.

1.6.4 Construction and Infrastructure Improvements

Accomplishment Highlights

Kissimmee River Restoration Project

This project, jointly funded by The Corps and the Water Management District, will reestablish more natural flows and water levels through the historical Kissimmee River channel and floodplain.

Construction to expand Water Control Structure S-65, which controls water releases from Lake Kissimmee to the Kissimmee River, was initiated in August 1997 and will be completed in January 2000. Work has been completed to reestablish sheetflow of water across floodplain lands by removing small agricultural ditches and levees. With land acquisition and detailed design almost completed, the Corps/SFWMD project team initiated a major river restoration effort in March 1999 by backfilling a 7-mile stretch of the canal. Contracts have also been initiated to enlarge the capacity of the upper basin canals and to modify tie-back levees at S-65A. Over the next 10 years this project will restore over 40 square miles of river and floodplain ecosystem that is home to approximately 320 fish and wildlife species.

Modified Water Deliveries to the Everglades National Park Project

This project is funded from the Construction Account managed by the National Park Service and the Department of the Interior and is designed to restore more natural hydropatterns in Water Conservation Area 3 (WCA-3) and Shark River Slough. This will be accomplished by 2003 through removal and modification of existing levees and canals along with construction of new water control structures and pump stations. In December 1998, construction was completed on two new water control structures, S-3 STA and S-355B, that will help to

reestablish flows from WCA 3B to Northwest Shark River Slough. The new water delivery regime required the Miccosukee Indian community of Tigertail Camp to be raised 8 feet to prevent flooding. This construction, which also included replacing substandard housing with new concrete homes, will be completed in early 1999.

The current authorized components of the 8.5 Square Mile Area include the construction of a flood mitigation canal and levee extending along the northern and western perimeters of the area. Two pump stations were also specified to transfer the seepage water from this system to Northeast Shark Slough. In April 1999, the local sponsor (SFWMD) requested the COE to conduct a comprehensive review of a full array of alternatives for the 8.5 Square Mile Area. Nine alternatives are under examination including the original design, the creation of a buffer between the park and developed areas, as well as full acquisition of the area. This completed construction contract replaced substandard housing with new concrete homes.

C-111 Project

This project, jointly funded by the Corps and the SFWMD will restore more natural quantity, quality, timing, and distribution of water deliveries to Taylor Slough and wetlands in the panhandle of Everglades National Park. This will be accomplished over the next six years through the construction of four new pump stations, the

replacement of a bridge over Taylor Slough, the construction or modification of numerous canals and levees, and the acquisition of land to be used as detention/retention and buffer areas between Everglades National Park and agricultural lands. Under this project, the Corps/SFWMD project team recently removed over 600,000 cubic yards of material from the spoil mounds along the southern side of the C-111 canal. This immediately allowed water to overflow the spoil material and establish a more normal sheetflow across the panhandle of Everglades National Park and on to Florida Bay. The construction of a new pump station (S-332D) was completed in 1997. When fully operational, the pump station will help reestablish more normal water flows to Taylor Slough and will increase deliveries of freshwater to Florida Bay. Creation of the detention/retention area will require congressional approval of a realignment of the Everglades National Park boundary. This realignment may involve exchanges of land between the National Park Service and SFWMD. The Taylor Slough Bridge contract is currently under construction.

Everglades Construction Project

This project is primarily funded by the South Florida Water Management District. During 1999, operations continued for the fifth full year at the 3,700-acre Everglades Nutrient Removal Project. Since the ENR began operation, over 70 metric tons

of phosphorus has been retained that would otherwise have entered the Everglades. Also during 1999, operations continued for the second full year at the 870-acre STA 6, Section 1. In addition, start-up operations began in the 4,120-acre STA-5, the 3,000-acre Cell 5 for STA-1 West, and the 6,430-acre STA-2. Also during 1999, construction of the large outflow pump stations continued at STA-1 West and STA-2, and final design was initiated for the 16,480-acre STA-3/4.

Critical Restoration Projects

Under the authority of the 1996 Water Resources Development Act (WRDA 96), the Corps completed letter reports and executed Project Cooperation Agreements on 9 projects that will provide immediate benefits to the South Florida ecosystem. These agreements and their respective project partners are: the Florida Keys Carrying Capacity Study, with the State of Florida, Department of Community Affairs; East Coast Canal Structure (C-4), Tamiami Trail Culverts, Western C-11 Basin Water Quality Improvement, Southern CREW Project Addition / Imperial River Flowway, Lake Okeechobee Water Retention / Phosphorus Removal, Ten Mile Creek Water Preserve Area, and Lake Trafford Restoration, all with the South Florida Water Management District; and the Seminole Tribe Big Cypress Reservation Water Conservation Plan, with the Seminole Tribe of Florida. Design work is underway on these projects with the

first construction scheduled for early next year. To date \$23 million has been appropriated to the Corps. Completion of these projects is dependent upon appropriation of the remaining \$52 million authorized in WRDA 96.

STA -1 East/C-51 West Project

The project is located in Palm Beach County and runs east/west from Water Conservation Area No. 1 (Loxahatchee National Wildlife Refuge) to West Palm Beach at Lake Worth. The authorized project will provide 30-year flood protection to the urbanized eastern basin and 10-year flood protection to the western basin. All eastern basin features have been completed. WRDA 96 modified the original authorization for the project. The modified plan expanded the original 1,600 acre flood water detention area into a 6,500 acre stormwater detention area. In addition to the flood damage reduction benefits provided by the original project, the modified plan provides water quality treatment, reduction of damaging freshwater discharges to Lake Worth, and increased water supply for the Everglades and other users. The Corps and the South Florida Water Management District executed a Project Cooperation Agreement on 29 April 1999. A machinery contract was awarded in May 1999 for the inflow and outflow pump stations and a model pump test (the second of five) was performed in December 1999. The Periphyton Stormwater Treatment Area test facility contract was awarded in August 1999 and is

scheduled to be completed in March 2000. Design work on remaining features is underway.

1.6.5 Exotic Species Control

Accomplishment Highlights

Melaleuca Control Program

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

Exotic Plant Control Strategy

Invasive Exotic Plant Management Assessment and Strategy for Florida: In 1998 the Task Force and Working Group authorized the establishment of the Noxious Exotic Weed Task Team (NEWTT) and interagency task team to develop an assessment and strategy for managing invasive exotic plants in southern Florida. NEWTT has produced a final draft of the assessment and first draft of the strategy and they were submitted to the Working Group on January 20, 2000. The assessment should be

published and available as a final report to the Working Group in the spring or early summer of 2000. The strategy should be in final form in early fall of 2000 and published and available as a final report to the Working Group later in 2000.

The Assessment describes the issues of invasive species, which species are included and their locations, management methods, regulations, recommendations and conclusions. The Strategy follows-up the Assessment and includes discussions of why current management is not working, outlines the goals and outcomes and actions necessary to develop a comprehensive and effective program for management of invasive exotic plants in Florida.

1.6.6 Habitat/Wildlife Restoration and Preservation

Accomplishment Highlights

Multi-Species Recovery Plan

This nearly 2,200-page document discusses the biology, management, and recovery needs of the 68 federally-listed species that occur in South Florida. It also discusses the multi-species/ecosystem aspects of recovery and restoration needs for South Florida. In addition to the federally listed species, it incorporates species that are listed as threatened or endangered by the State of Florida, wading birds, neotropical migrants, and others that might indicate the health or well-being of an ecosystem. Restoration actions are also defined for 23

ecological communities in South Florida.

The final section of the recovery plan discusses the continuing collection of data and implementation of the recovery and restoration actions for the 68 federally-listed species and their habitats. This section calls for establishing a Multi-species/Ecosystem Recovery Implementation Team (MERIT). Consisting of 30-40 members, representation on MERIT is similar to other recovery teams and includes individuals from Federal, State, and local agencies, Tribal Governments, academia, industry, non-governmental organizations, the private sector, and other stakeholders. The focus of MERIT will be on prioritizing recovery actions as identified in the Multi-Species Recovery Plan from an ecosystem perspective, and on recommending and funding on-the-ground recovery and restoration activities at the species and community level. Because the Multi-Species Recovery Plan is integral to all other restoration strategies in South Florida, MERIT will need to coordinate with other Working Group efforts. Representatives on MERIT are currently being appointed. In addition to the oversight role of MERIT, FWS representatives serve as liaisons to the Project Coordination Teams, the Science Coordination Team and the Working Group.

Florida Keys Water Quality Protection Program

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

1.6.7 Built Environment

Accomplishment Highlights

Eastward Ho! This initiative marks a major effort to make urban areas more livable. The goal of this collaborative, multi-agency effort is to improve regional quality of life, support the creation of communities that are environmentally, economically, and socially healthy, and lessen development pressure on sensitive environmental and agricultural lands. The Eastward Ho! corridor is roughly a 150-mile long corridor, which encompasses the area between and around the CSX and

Florida East Coast railroads. It runs from Fort Pierce in St. Lucie County to Florida City in Miami-Dade County and includes the major metropolitan areas of Miami, Fort Lauderdale, and West Palm Beach. The corridor does not include coastal high hazard areas such as beaches. By revitalizing and improving the quality of life in this historic urban growth corridor for existing and future residents, and attracting a greater portion of future regional growth into the corridor, supporters of Eastward Ho! hope to lessen urban sprawl into sensitive lands adjacent to the Everglades and secure a sustainable future for the South Florida region. Promoters of the initiative estimate that redirecting growth patterns and limiting urban sprawl will save over \$6 billion in combined land, infrastructure, housing, and other fiscal impacts by 2020.

Eastward Ho! Brownfields Partnership.

This partnership is a collaboration of local, state, regional and federal agencies with private sector, non-profit and community organizations targeting the cleanup and reuse of contaminated and abandoned/underused urban sites. The partnership recently celebrated its designation as a National Brownfields Showcase Community, one of 16 communities chosen from 230 nationwide applicants. This designation brings the promise of increased financial attention and resources for Brownfields work.

To further the Showcase Community effort, several Federal Partnership summits have been held with the federal and local partners where local case studies were reviewed and constructive advice provided to help further the ongoing efforts. The summits have been instrumental in leading local partners to additional funding sources in EDA and HUD. Periodic mini-summits are being planned to expand this support effort to the local partners. There are also efforts underway to conduct a financial workshop with lending institutions in May 2000 to enhance the connectivity of funding to the local efforts. In addition, several additional Brownfields pilots have been initiated with the City of Fort Lauderdale, the Seminole Tribe, and the City of Fort Myers that target revitalization of underutilized areas. Planning is currently underway to host the Florida Statewide Brownfields Conference in South Florida in June 2000.

The federal Superfund program continues to pursue the timely remediation of sites on (or candidates for) the National Priority List and in some cases has facilitated discussions with the public and local governments furthering the consideration of future reuse in coordination with the remediation effort. This effort, in coordination with federal, state, and local Brownfields initiatives, is focusing on revitalization in the Eastward Ho! Corridor, as well as other underutilized areas in South Florida.

Florida Keys Carrying Capacity Study

The Governor's Executive Order 98-309 called for a carrying capacity analysis for the Florida Keys to resolve litigation of the Monroe County Comprehensive Plan. The Department of Community Affairs and the U.S. Army Corps of Engineers, in partnership, and in cooperation with Monroe County and the municipalities have initiated the study. The goal of the study is to determine the ability of the Florida Keys ecosystem, and the various segments thereof, to withstand all impacts of additional land development activities. The study is equally funded by the federal and state governments. The federal funds are from the Critical Restoration Projects authority provided by WRDA-96 while the state funds are legislative appropriations and Work in Kind Service. When completed the study will identify the carrying capacity of development in the Keys based upon the limits of the natural environment, hurricane evacuation, and social preference. A series of nine workshops, involving experts from around the country, have been held to assist the study partners in fully addressing these complex issues. A study consultant has been retained and the initial collection and analysis of data has begun. The study is required to be completed by July 2002.

Innovative Planning and Management

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

Accomplishment Highlights

Big Cypress Water Conservation Plan

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

agreement to construct a significant portion of this plan as a critical project. Design, planning, and construction activities have begun.

1.6.9 Science

Accomplishment Highlights

Everglades Nutrient Removal (ENR) Project

This prototype stormwater treatment area successfully completed its fifth year of operation in August 1999 and continues to exceed performance expectations. During this time, the ENR Project removed more than 155,000 pounds of phosphorus that would have otherwise flowed directly into the Everglades Protection Area. These results have validated the premise that the STAs can effectively remove nutrients from Everglades Agricultural Area runoff and will achieve the interim treatment criteria mandated by the Everglades Forever Act. The ENR Project was incorporated into the footprint of STA 1-West in late 1999. A \$4.5-million modification to the ENR Project test cells was completed in 1998. The District is currently using these 30 small wetlands to conduct experiments that will evaluate the ability of several advanced treatment technologies to reduce phosphorus concentrations to 10 ppb or less and determine how changing operational conditions may influence STA performance as part of research on STA optimization.

Across-Trophic-Level System Simulation (ATLSS)

ATLSS computer landscape models of two types have been developed. First, spatially-explicit species index (SESI models) predict changes in the habitat conditions of several key wildlife species in the Everglades (Cape Sable seaside sparrow, Florida snail kite, Florida panther, American alligator, white-tailed deer, long-legged and short-legged wading birds). These SESI models were applied in 1999, and continuing through 2000, to Modwater evaluations. Second, a spatially-explicit population models (SEPMs) was completed for the Cape Sable seaside sparrow in 1998. The Florida snail kite SEPM was completed in 1999, and has been applied to AltD13R4 and Modwater evaluations. In addition, an ATLSS Viewer (version 1.0) for converting ATLSS output data files to ArcView has been developed and is being tested. This Viewer permits users who have access to ArcView to retrieve from storage, display, and perform analyses on any of the stored ATLSS data sets for 31-year runs of AltD13R4 or Modwater evaluations.

Natural System Model

In April 1998 the South Florida Water Management District completed and released an updated version of the Natural System Model. This computer model simulates the hydrologic response of a pre-drained Everglades system. This updated

model served as one of the primary tools in the Restudy planning process where output data were used to measure the degree to which various water management alternatives achieved targeted restoration goals in the Everglades

Everglades Consolidated Report

On January 1, 2000, the Water Management District completed the second major technical document mandated by the Everglades Forever Act. This document synthesizes scientific information gathered during the period from May 1, 1998 through April 30, 1999 and summarizes major findings related to Everglades restoration. The Report was peer reviewed by a panel of experts and through two public workshops. Information from this report will be used by the SFWMD and Florida Department of Environmental Protection for making decisions affecting the implementation of the Everglades Construction Project, particularly STA 3/4, the last and largest stormwater treatment area, and other restoration initiatives associated with the Everglades Forever Act. Copies of the report are available on the Web at www.sfwmd.gov/org/wre/eir/index/html, or they can be ordered by contacting 561/682-6745.

Florida Bay Science Program

Florida Bay Science Program. This program, overseen by an interagency program management committee, is guided by a strategic plan for research, monitoring, and modeling. The program goals are to: 1) determine the historical condition of Florida Bay to help establish restoration targets; 2) quantify the status and trends of the Bay ecosystem and its vital components, such as seagrass coverage and water quality; 3) determine the mechanisms and causes of recent ecological changes; and 4) provide accurate predictions of the response of the Bay to environmental management actions. Significant progress toward reaching each of these goals was reported by scientists at the peer-reviewed Florida Bay Science Conference in November 1999. This progress includes the documentation of historical salinity and seagrass cover; quantification of seagrass die-off and recovery patterns; the development of performance measures for salinity, seagrass, fish and shrimp; and the development of models to predict salinity and water quality changes as a function of water management scenarios. The cooperative interagency science management approach developed for Florida Bay and adjacent coastal waters is regarded as a model for ecosystem research throughout South Florida.

Everglades Water Quality Model

The SFWMD developed this computer model to predict the quantity of phosphorus transported

to a specific area when a new water treatment alternative is implemented. The Restudy Team used this model to assess water quality impacts of the various water management alternatives. The United States Army Corps of Engineers, Jacksonville District, is currently utilizing this computer model to design and optimize phosphorus removal in Stormwater Treatment Area 1- East.

Miccosukee and Seminole Water Quality Monitoring Programs

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

Conceptual Ecological Models

Multiagency teams have developed a set of conceptual models to organize technical information for the South Florida Ecosystem. The organized

data allows planners to design restoration projects to correct specific problems (stressors) resulting in ecosystem degradation. They also identify the ecological performance measures (indicators) that are most likely to reflect the success of the restoration programs. These models are a way of creating a consensus among scientists regarding the cause and effect linkages in the stressed Everglades system. The organization of the models is based on scientific information collected during many years of research in the natural systems of south Florida. The South Florida Water Management District issued a report on the conceptual models in 1999. The Comprehensive Everglades Restoration Plan Team is using the conceptual models as major planning tools.

Seminole Tribe Nutrient Removal Studies

The Seminole Tribe is conducting ongoing studies to determine the effects of agricultural runoff on forest/grassland wetland mosaics. The Tribe's studies are identifying indicator species that measure hydrologic impacts on sensitive lands. In addition to monitoring the impacts of water quality, the studies also map and monitor the effect of hydroperiod changes. These studies will provide the hydrological and biological analysis necessary for the design engineering of the Big Cypress Conservation Plan, as well as other South Florida ecosystem restoration projects. The other major area of research that the Tribe has ongoing is to determine the assimilative capacity

for phosphorus of the C&SF canals. While the results of this study will be used by the Tribe to determine the phosphorus movement through the Big Cypress Reservation, the results will be applicable throughout the C&SF system.

Committee on Restoration of the Greater Everglades Ecosystem

This year the National Research Council (NRC) established a new Committee on Restoration of the Greater Everglades Ecosystem (CROGEE). This provides an opportunity to enhance the science base for Everglades restoration through independent peer review using the mechanism that Congress has established to provide such advise.

The NRC considered approximately 200 qualified candidates for membership. The Working Group and it's Science Coordination Team submitted names of members who were among the 15 final appointees.

The Science Coordination Team prepared a two day overview briefing and field trip involving airboats in the Water Conservation Area and a helicopter over-flight. The Working Group submitted a suggested list of priority items for the CROGEE to begin work.

After its initial meeting the CROGEE forwarded a list of proposed work topics for review. They were "spatial, temporal and social context ", the scientific underpinning of the Conceptual Ecosystem Model, aquifer

storage and recovery, the regional assessment of invasive exotic plants and a review of the hydrological models. These items were reviewed by the Working Group for submission to the Task Force.

The CROGEE requested additional briefings directly related to their proposal such as material on the Natural System and South Florida Water Management models, and reviews of the research and dates associated with the storm water treatment issues. Finally they requested information on the consideration of environmental justice and brownfields issues.

The Working Group looks forward to an ongoing productive interaction with the CROGEE.

1.6.10 Public Outreach and Participation

The Governor's Commission for the Everglades

The Governor's Commission is an effective forum for informing and engaging key stakeholders in free-flowing dialogue. The Commission is an informed body of disparate interests working toward resolution of many controversial issues. It serves as an important conduit for sharing and input of information from Commission constituencies.

Public Outreach and Participation Strategy

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

Seminole Ah-Tah-Thi-Ki Museum

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

Tortugas 2000 / Dry Tortugas General Management Plan Amendment and EIS.

In fall 1998, the Florida Keys National Marine Sanctuary and Dry Tortugas National Park launched an interagency planning effort to protect sensitive Tortugas habitats. Tortugas 2000, an important component of the Florida Keys marine zoning strategy, will establish an Ecological Reserve to protect biodiversity, maintain ecosystem integrity, and act as a reference site to help scientists discriminate between natural versus

induced changes to the Keys ecosystem. The reserve will be located in the western Tortugas region and will be in place by the year 2000.

The Dry Tortugas National Park Management Plan Amendment and EIS will explore ways to protect resources while continuing to provide high quality visitor experiences in the unique setting of historic Fort Jefferson and the surrounding reefs.

The agencies combined their initial scoping efforts through a newsletter, extensive media contacts, and a series of successful open houses. These joint efforts allowed the agencies to show the difference between these similar, but distinct, efforts in a convenient forum that encouraged strong public participation. The agencies continued to coordinate scientific analysis and planning this past year in an effort to release draft plans simultaneously in March 2000.

Museum of Discovery and Science Partnership

The most creative part of the Task Force's strategy for public outreach and participation was implemented through the formalization of a public - private partnership between the Task Force and the Museum of Discovery and Science. The Task Force desires expert assistance in disseminating information about South Florida ecosystem restoration, and recognized the Museum of Discovery and Science's expertise and demonstrated success for two decades in educating the public about

the habitats and wildlife in South Florida.

The Museum of Discovery and Science is a private, nonprofit institution that has more visitation than any other museum in Florida. Annually 500,000 or more people, including over 75,000 children, visit the museum. The Museum attracts and educates persons of all ages, including residents of South Florida, and tourists from all across the United States and many other countries. The Museum collaborates with museums worldwide in research, collections, program development, and exhibits, and has also demonstrated effective outreach, inclusion, and environmental education of urban, minority, and underserved communities. Because of the Museum's success in increasing visitation, a major expansion has been initiated of its physical facilities, exhibits and programs, part of which will tell the story of the restoration of the South Florida ecosystem.

The Task Force and the Museum recognized their mutual interests in increasing public understanding of the restoration, and the unique opportunity in time for cooperation in the planning for the Museum's expansion. Both parties know that their partnership will result in more inclusive, higher quality, and more accurate outreach to the public with information about the ecosystem and the restoration in ways that are better interpreted and more relevant to the public than either organization could do on its own.

Following an iterative, consensus building process, the Task Force and the Museum entered into a formal partnership. The agreement spells out expectations for collaboration as the Museum plans, develops and evaluates exhibits, curriculum, audio-visual presentations, and other public outreach and educational devices, strategies, or publications. A Partnership Collaboration Committee will report regularly to the Working Group on its activities and on the achievements of the collaboration. The Working Group will report regularly to the Task Force on the Museum's progress and activities concerning the public outreach and education goals of the Partnership.

Outcome Oriented Strategic Plan

An Outcome Oriented Strategic Plan is being developed to:

- Outline how Everglades restoration will occur, including a 5-, 10-, 25-, and 50-year timeline.
- Identify the resources needed to achieve full restoration
- Identify those responsible and accountable for accomplishing actions
- Link the strategic plan to the goals of the initiative identified thus far by the Task Force, and to outcome-oriented annual goals

This effort is being lead by the SFERTF - Office of the Executive Director. A project team composed of senior staff members from the constituent Task Force agencies has been assembled to ensure the goals

and projects of the agencies are fully integrated into the plan. Additionally a 16 county effort to collect and evaluate the plans of over 100 local and regional governments and business organizations, which had previously been underway by Task Force staff, is being incorporated into the plan. These local entities make most of the major land use decisions in the Everglades watershed.

The interagency planning team has had 3 three-day workshops thus far. The initial workshop was held in August 1999. This was an interagency effort to scope the project. Workshop #2 was held in December 1999. Workshop #3 was held in January 2000. The state of the Plan to date is a completed draft introduction, history, and description of the problem. Guiding principles of the way the business of restoration is being conducted have been described. A 16 county, multi-agency vision of restoration and sustainability is nearing completion. Goals and draft indicators of success have been developed. Finally, a compendium of all of the state and federal restoration projects approved and or underway is being assembled to describe the lead agencies, coordination, costs, and timelines. The Task Force will present this plan to Congress in July 2000.

Integrated Strategic Plan

The Integrated Strategic Planning Team is developing for Task Force approval an integrated plan for restoring and sustaining the South Florida ecosystem describing the

applications and linkages among governmental programs or projects which will achieve shared ecosystem goals in the region. This plan will incorporate activities that are directed toward achievement of all three goals outlined in Success In the Making : Getting the water right; restoring and enhancing the natural system, and transforming the built environment.

In 1999 the planning team:

- Collected, reviewed, and analyzed planning, vision, and project documentation from the Regional, County, Municipal, and non-profit organizations working in the system
- Interviewed lead staff in the 5 Regional Planning Councils, water management district, 16 counties, a few cities, and a number of environmental and economic organizations about local issues and how they may integrate into the larger ecosystem effort
- Provided briefing presentations to elected officials of the Regional Planning Councils, Counties, and Cities interviewed.
- Provided briefing presentations to environmental organizations, economic development organizations, and minority organizations
- Conducted a DELPHI with selected academic and practitioner participants to refine desired future conditions for the region.
- Collected and analyzed

information developed from public input to forums on environmental issues.

- Began development of strategic indicators for measures of success in achieving the shared vision of a sustainable future that comes out of the first planning phase summary.

**Table 1 -Federal Agency Cross-Cut Budget matrix by functional area for fiscal years 1993-2001
(Note: ALL \$ ARE REPORTED IN THOUSANDS (000))**

Function/Agency	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Actual	2000 Enacted	2001 PB
AREA MANAGEMENT									
USACE									
C&SF Project, O&M	7,987	11,000	11,300	9,846	9,513	9,500	8,328	8,470	10,558
Okeechobee Waterway, O&M	3,062	5,540	3,100	3,933	4,276	3,503	3,060	4,680	5,811
Removal of Aquatic Growth	2,643	3,292	3,796	3,700	3,980	3,032	2,615	3,130	3,340
subtotal, USACE	13,692	19,832	18,196	17,479	17,769	16,035	14,003	16,280	19,709
FWS									
Refuges and Wildlife:									
A.R.M. Loxahatchee NWR	1,420	1,140	1,392	1,501	1,544	1,658	1,482	1,476	1,482
Florida Panther National Wildlife Refuge	251	263	336	338	479	657	517	515	517
J.N. "Ding" Darling National Wildlife Refuge	399	524	657	654	767	912	750	747	750
Florida Keys NWRs Complex ⁴	565	476	524	567	713	896	1,009	1,005	1,009
Pelican Island/Archie Carr	0	0	0	0	75	105	105	105	105
Endangered Species Recovery	18	18	20	20	20	40	40	40	0
Habitat Conservation/Project Planning	0	0	20	20	20	40	40	40	0
subtotal, FWS	2,653	2,421	2,949	3,100	3,618	4,308	3,943	3,928	3,863
NPS									
Big Cypress National Preserve	1,776	2,355	3,024	3,098	3,164	4,032	4,268	4,749	5,245
Biscayne National Park	1,444	1,541	2,002	1,997	2,115	2,392	2,437	3,056	3,463
Dry Tortugas National Park	440	457	506	480	494	759	768	1,028	1,298
Everglades National Park	8,137	10,858	12,142	12,230	12,665	12,544	12,790	13,172	14,295
Task Force Support	0	0	0	0	800	800	800	800	1,319
subtotal, NPS	11,797	15,211	17,674	17,805	19,238	20,527	21,063	22,805	25,620
NOAA									
Florida Keys National Marine Sanctuary	1,700	1,900	2,230	2,230	2,260	2,500	2,400	3,400	4,200
Integrated Coastal Management	0	0	0	100	200	200	200	0	0
Rookery Bay NERR	90	90	90	90	125	125	125	152	267
Florida Coastal Management Program	476	581	600	600	1,300	1,300	1,300	1,300	2,850
subtotal, NOAA	2,266	2,571	2,920	3,020	3,885	4,125	4,025	4,852	7,317
AREA MANAGEMENT TOTAL	30,408	40,035	41,739	41,404	44,510	44,995	43,034	47,865	56,509
NATURAL RESOURCES MGMT.									
EPA									
Wetland Conservation	1,202	1,079	812	1,038	400	308	308	308	310
Task Force Support	0	0	0	0	440	442	300	300	300
subtotal, EPA	1,202	1,079	812	1,038	840	750	608	608	610
FWS									
Endangered Species/Candidate Cons.:Listing (FY95);Consultation (FY01)	16	0	50	40	40	40	40	40	535
Endangered Species Recovery	343	557	728	778	1,045	1,025	1,025	1,021	1,065
Habitat Conservation/Coastal Program	0	0	499	499	503	503	503	501	0
Environmental Contaminants	60	120	120	120	120	120	120	120	120
Law Enforcement	620	637	637	637	637	637	637	637	637
Migratory Bird Management	44	44	104	104	104	104	104	104	104

**Table 1 -Federal Agency Cross-Cut Budget matrix by functional area for fiscal years 1993-2001
(Note: ALL \$ ARE REPORTED IN THOUSANDS (000))**

Function/Agency	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Actual	2000 Enacted	2001 PB
Fisheries Assistance (Panama City FRO)	90	100	100	100	100	100	100	100	100
subtotal, FWS	1,173	1,458	2,238	2,278	2,549	2,529	2,529	2,523	2,561
NOAA									
Fisheries Mangmt/Endangered Species	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
NRCS									
On-Farm assistance/Technical Coord.	1,900	1,900	2,900	3,435	3,535	3,535	5,088	6,456	9,397
NATURAL RESOURCES MGMT. TOTAL	5,275	5,437	6,950	7,751	7,924	7,814	9,225	10,587	13,568
WATER QUAL.& HABITAT PROTECT.									
USACE									
General Regulatory Functions	1,800	1,800	1,800	1,800	2,200	2,200	2,200	2,200	2,200
EPA									
Water Quality and Habitat Protection	891	305	427	1,638	0	0	0	0	0
Water Permit Compliance & Enforcmt.	0	0	0	0	1,183	1,569	1,312	1,312	1,309
FKNMS Water Quality Protection Plan	0	0	0	0	1,031	1,081	35	35	35
Special Studies	0	0	0	0	100	0	200	0	0
Water Quality Criteria	0	0	0	0	0	83	83	83	0
Water Quality Plan	0	0	0	0	143	135	184	257	275
Urban Needs	0	0	0	0	275	0	50	50	75
Mercury Studies	0	0	0	0	0	100	100	50	50
Pesticide Assessment	0	0	0	0	250	125	0	0	0
South Florida Office	0	0	0	0	100	240	310	440	440
subtotal, EPA	891	305	427	1,638	3,082	3,333	2,274	2,227	2,184
FWS									
Endangered Species/Consultation	180	312	411	411	495	495	495	493	0
Habitat Conservation//Project Planning:Environmental Coordination	170	170	169	169	324	304	304	303	344
Habitat Conservation/Coastal Program	0	0	0	0	0	0	0	0	503
subtotal, FWS	350	482	580	580	819	799	799	796	847
NOAA									
Habitat Conservation	15	100	110	110	110	110	110	110	110
WATER QUAL.& HABITAT PROTECT. TOTAL	2,691	2,105	2,227	3,438	5,282	5,533	4,474	4,427	4,384
INFORMATION MGMT/ASSESSMT.									
EPA									
Data Management	1,119	653	50	955	50	50	60	60	60
NOAA									
Technical Support to Fla. Keys Mgt.(NOS)	1,000	400	200	0	441	441	441	252	52
Coastal Mapping and Habitat Assess. (NOS)	205	650	535	475	445	445	445	754	693
Weather Forecasting Services (NWS)	480	480	1,480	1,480	1,480	1,480	1,480	1,480	1,480
subtotal, NOAA	1,685	1,530	2,215	1,955	2,366	2,366	2,366	2,486	2,225

**Table 1 -Federal Agency Cross-Cut Budget matrix by functional area for fiscal years 1993-2001
(Note: ALL \$ ARE REPORTED IN THOUSANDS (000))**

Function/Agency	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Actual	2000 Enacted	2001 PB
FWS									
Habitat Conservation/Project Planning	100	100	100	100	0	0	0	0	0
USGS									
Earth Science	2,000	2,000	4,325	5,852	440	440	1,031	1,612	1,612
INFORMATION MGMT/ASSESSMT.									
TOTAL	4,804	4,183	6,590	8,762	2,856	2,856	3,457	4,158	3,897
SCIENCE: MONITORING									
USACE¹									
Experimental Program	0	0	0	0	0	50	831	875	0
Indian River Lagoon	0	0	0	0	0	137	33	35	20
Toxic and Mutagenic Effects	0	0	0	0	500	0	0	0	0
Salinity in Florida Bay	0	0	0	0	300	0	0	0	0
Water Flow to Florida and Biscayne Bays	0	0	0	0	800	0	0	0	350
Restoration,Coordination, and Verification (RECOVER)	0	0	0	0	0	0	0	0	2,790
subtotal, USACE*	0	0	0	0	1,600	187	864	910	3,160
BIA									
Water Quality Monitoring	0	400	399	399	399	399	399	397	397
EPA									
Water Quality Prot. Prog./Mercury	1,460	2,395	1,983	2,415	0	0	0	0	0
Environmental Monitoring & Assessment	0	0	0	0	140	140	157	100	0
FKNMS Water Qual. Prot. Plan Monitoring	0	0	0	0	540	700	1,092	1,260	1,233
subtotal, EPA	1,460	2,395	1,983	2,415	680	840	1,249	1,360	1,233
NOAA									
Fisheries Monitoring and Assessment	1,130	1,130	1,160	1,160	1,160	1,160	1,160	1,160	1,160
National Status & Trends Monitoring	20	40	40	40	120	120	120	120	120
Intergrated Ecosystem Health Monitoring	0	0	0	270	850	650	900	900	1,900
Rookery Bay NERR	20	20	20	20	25	25	25	40	110
subtotal, NOAA	1,170	1,190	1,220	1,490	2,155	1,955	2,205	2,220	3,290
USGS									
Earth Science Monitoring	0	0	777	2,290	1,000	1,000	584	515	515
SCIENCE: MONITORING TOTAL	2,630	3,985	4,379	6,594	5,834	4,194	4,437	4,492	5,435
SCIENCE: RESEARCH									
ARS									
General Research	2,814	3,033	2,092	2,046	2,025	3,264	4,045	4,148	4,448
USACE¹									
Modeling (Hydrologic, hydrodynamic,ecologic,water quality)	0	0	0	0	2,500	1,160	997	980	545
Indicator Species	0	0	0	0	300	100	473	485	290
subtotal, USACE*	0	0	0	0	2,800	1,260	1,470	1,465	835

**Table 1 -Federal Agency Cross-Cut Budget matrix by functional area for fiscal years 1993-2001
(Note: ALL \$ ARE REPORTED IN THOUSANDS (000))**

Function/Agency	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Actual	2000 Enacted	2001 PB
EPA									
Mercury Risk Assessment	0	0	0	0	300	100	83	83	75
Mercury Contamination Studies	97	1,371	3,894	1,554	2,976	3,396	1,736	258	270
subtotal, EPA	97	1,371	3,894	1,554	3,276	3,496	1,819	341	345
NOAA									
National Marine Fisheries Service	335	1,025	1,458	1,458	1,460	1,460	1,460	1,460	2,060
Atlantic Oceanographic & Meteor. Labs.	500	200	200	200	200	200	200	250	250
University of Miami/CIMAS Pass-through	1,525	1,163	2,175	1,278	1,559	600	600	600	0
Florida Sea Grant	400	400	400	400	450	470	470	470	470
NOAA Underwater Research Program	2,000	1,500	1,500	675	1,200	1,300	1,000	1,000	1,000
Coastal Ocean Program	395	545	1,000	1,000	2,300	2,300	2,300	1,300	1,300
Climate/Agriculture Research - FSUniversity (OGP)	436	746	1,020	1,026	544	0	0	0	0
Climate/Agriculture Research -UnivSo FI (OGP)	197	288	323	0	132	0	0	0	0
Florida Keys/Florida Bay Economic Valuation	0	0	100	200	71	71	71	190	190
NOVA Coral Reef Institute	0	0	0	0	0	500	500	500	0
Rookery Bay NERR	47	0	0	100	0	0	0	33	35
subtotal, NOAA	5,835	5,867	8,176	6,337	7,916	6,901	6,601	5,803	5,305
NPS									
Everglades Research	0	0	0	0	7,200	12,000	12,000	7,908	7,908
USGS									
Earth Science	0	0	698	1,858	6,007	6,007	5,706	4,190	4,190
Biological Science	0	654	1,154	654	1,154	1,154	1,281	2,243	2,243
subtotal, USGS	0	654	1,852	2,512	7,161	7,161	6,987	6,433	6,433
SCIENCE: RESEARCH TOTAL	8,746	10,925	16,014	12,449	30,378	32,822	31,452	24,933	19,991
LAND ACQUISITION									
FWS									
Archie Carr NWR	1,983	1,390	1,996	0	0	2,000	0	0	6,000
Crocodile Lake NWR	0	0	0	0	0	400	0	0	500
Florida Panther NWR	0	0	0	0	0	0	0	0	200
J.N. "Ding" Darling NWR	0	0	0	0	0	1,500	0	4,000	9,000
Keys Complex NWR ⁴	1,983	0	0	0	0	2,400	0	0	6,000
Lake Wales Ridge	0	2,000	998	0	500	0	1,000	0	2,000
Pelican Island NWR	0	1,720	250	1,450	0	2,000	0	4500 ⁵	6,300
subtotal, FWS	3,966	5,110	3,244	1,450	500	8,300	1,000	8,500	30,000
NPS									
BCNP & ENP ⁷	9,419	6,000	6,986	0	12,000	33,000	20,000	31,300	3,000
Everglades Transition Lands (Asst. - State) ⁸	0	0	8,587	0	0	46,000	60,000	45,000	47,000
Biscayne National Park	0	0	0	0	0	0	0	600	0
Land Acquisition Administration	0	0	0	0	0	0	0	1,000	2,000
subtotal, NPS	9,419	6,000	15,573	0	12,000	79,000	80,000	77,900	52,000
LAND ACQUISITION TOTAL	13,385	11,110	18,817	1,450	12,500	87,300	81,000	86,400	82,000

**Table 1 -Federal Agency Cross-Cut Budget matrix by functional area for fiscal years 1993-2001
(Note: ALL \$ ARE REPORTED IN THOUSANDS (000))**

Function/Agency	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Actual	2000 Enacted	2001 PB
INFRASTRUCTURE INVESTMENT									
USACE									
Everglades & S FL Ecosystem Restoration	0	0	0	0	0	10,000	7,000	19,623	20,525
Hillsborough & Okeechobee Aquifer	0	0	0	0	0	0	0	0	4,562
Kissimmee River Restoration	2,783	7,400	4,000	5,851	3,000	3,000	8,000	27,571	20,000
Central and Southern Florida Project ²	3,178	7,244	6,624	8,918	11,267	27,400	14,112	47,828	90,087
Melaleuca Fac. Cons. (\$637K, prior app.)	0	1,000	0	0	0	0	0	0	0
Biscayne Bay ³	0	700	0	0	0	250	100	400	543
subtotal,USACE	5,961	16,344	10,624	14,769	14,267	40,650	29,212	95,422 ⁶	135,717
EPA									
Programmatic EIS	0	0	0	0	203	215	155	100	100
FWS									
Habitat Conservation/Project Planning	0	55	55	55	0	0	0	0	0
NOAA									
Rookery Bay NERR	0	250	0	0	0	0	0	950	400
Florida Keys National Marine Sanctaury	0	0	0	0	0	0	0	1,000	500
Florida Coastal Management Program	134	135	0	0	0	0	0	0	0
subtotal, NOAA	134	385	0	0	0	0	0	1,950	900
NPS									
Modified Water Delivery System to ENP	6,942	0	4,478	4,457	2,800	11,900	14,000	12,000	12,000
INFRASTRUCTURE INVESTMENT TOTAL	13,037	16,784	15,157	19,281	17,270	52,765	43,367	14,050	148,717
GRAND TOTALS	81,441	95,246	112,663	101,919	127,483	239,188	221,355	292,940	339,906
¹ Monitoring and Research funds for the Corp's in FY 98,99, 00 and 01 are accounted for in the C&SF Project and Biscayne Bay funds and are included in the Infrastructure Investment totals. ² The number shown does not reflect costs for Upper St. Johns Project (not w/in the SFWMD boundaries/not part of the Cross-Cut), but does include Monitoring and Research funds which is also broken out separately above. ³ FY 01 funding includes \$50K of the Monitoring funds broken out separately above (see Water Flow to Florida and Biscayne Bay). ⁴ The Florida Keys NWRs Complex includes the National Key Deer NWR, Key West NWR, and White Heron NWR ⁵ FY2000 land acquisition includes \$2.5 million provided in Title VI of FY 2000 Interior Appropriations. ⁶ USACE Infrastructure Investments for 2000 Enacted include a rescission of budget authority per the Fiscal Year 2000 Consolidated Appropriations Bill. ⁷ FY 1998 land acquisition includes \$3.0 million provided in Title V of FY 1998 Interior Appropriations. ⁸ FY 2000 Everglades transition lands includes \$35.0 million provided in Title VI of FY 2000 Interior Appropriations * The FY 94 total excludes \$5 million originally provided in the 1994 construction account which was transferred to land acquisition in accordance with FY 1994 Emergency Supplemental Appropriation language.									

**Table 1 -Federal Agency Cross-Cut Budget matrix by functional area for fiscal years 1993-2001
(Note: ALL \$ ARE REPORTED IN THOUSANDS (000))**

USDA									
Agricultural Research Service	2,814.0	3,033.0	2,092.0	2,046.0	2,025.0	3,264.0	4,045.0	4,148.0	4,448.0
Natural Resources Conservation Service	1,900.0	1,900.0	2,900.0	3,435.0	3,535.0	3,535.0	5,088.0	6,456.0	9,397.0
subtotal, USDA	4,714.0	4,933.0	4,992.0	5,481.0	5,560.0	6,799.0	9,133.0	10,604.0	13,845.0
USACE**	21,453.0	37,976.0	30,620.0	34,048.0	38,636.0	58,885.0	45,415.0	113,902.0	157,626.0
EPA	4,769.0	5,803.0	7,166.0	7,600.0	8,131.0	8,684.0	6,165.0	4,696.4	4,531.8
NOAA	12,105.0	12,643.0	15,641.0	13,912.0	17,432.0	16,457.0	16,307.0	18,421.0	20,147.0
DOI									
Bureau of Indian Affairs	0.0	400.0	399.0	399.0	399.0	399.0	399.0	397.0	397.0
Fish and Wildlife Service	8,242.0	9,626.0	9,166.0	7,563.0	7,486.0	15,936.0	8,271.0	15,747.0	37,271.0
National Park Service	28,158.0	21,211.0	37,725.0	22,262.0	41,238.0	123,427.0	127,063.0	120,613.0	97,528.0
US Geological Survey	2,000.0	2,654.0	6,954.0	10,654.0	8,601.0	8,601.0	8,602.0	8,560.0	8,560.0
subtotal, DOI	38,400.0	33,891.0	54,244.0	40,878.0	57,724.0	148,363.0	144,335.0	145,317.0	143,756.0
GRAND TOTAL	81,441.0	95,246.0	112,663.0	101,919.0	127,483.0	239,188.0	221,355.0	292,940.4	339,905.8
									1,612,141.2

Table 2. Federal Cross-Cut budget matrix by Agency for fiscal years 1993-2001

TOTALS BY AGENCY (thousands of dollars)	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998*** Actual	1999 Actual	2000 **** Enacted	2001 Requested
USDA									
Agricultural Research Service	2,814	3,033	2,092	2,046	2,025	3,264	4,045	4,148	4,448
Natural Resources Conservation Service	1,900	1,900	2,900	3,435	3,535	3,535	5,088	6,456	9,397
subtotal, USDA	4,714	4,933	4,992	5,481	5,560	6,799	9,133	10,604	13,845
USACE	21,453	37,976	30,620	34,048	38,636	58,885*	45,415	113,902	157,626
EPA	4,769	5,803	7,166	7,600	8,131	8,684	6,165	4,696	4,532
NOAA	12,105	12,643	15,641	13,912	17,432	16,457	16,307	18,421	20,147
DOI									
Bureau of Indian Affairs	0	400	399	399	399	399	399	397	397
Fish and Wildlife Service	8,242	9,626	9,166	7,563	7,486	15,936	8,271	15,747	37,271
National Park Service	28,158	21,211**	37,725	22,262	41,238	123,427	127,063	120,613	97,528
US Geological Survey	2,000	2,654	6,954	10,654	8,601	8,601	8,602	8,560	8,560
subtotal, DOI	38,400	33,891	54,244	40,878	57,724	148,363	144,335	145,317	143,756
TOTALS	81,441	95,246	112,663	101,919	127,483	239,188	221,355	292,940	339,906

Grand Total Federal: 1993-2001 **\$1,612,141,200**

Notes:

**** The FY94 total excludes \$5 million originally provided in the 1994 construction account which was transferred to land acquisition in accordance with FY94 Emergency Supplemental Appropriation language.**

*****Title V funds appropriated to the Department of the Interior in FY 1999; transferred to FWS in FY 1999.**

****** Includes rescissions authorized by the FY 2000 Interior & Related Agencies Appropriations Act**

Table 3. State of Florida Cross-Cut budget matrix for fiscal years 1983-01

TOTALS BY DEPARTMENT (thousands of dollars)	1983/93 Cumulative	1994/95 Actual	1995/96 Actual	1996/97 Actual	1997/98 Actual	1998/99 Actual	1999/00 Enacted	2000/01 Request
Florida Department of Agriculture and Consumer Services	N/A*	N/A*	N/A*	N/A*	4,930	5,174	6,174	24,700
Florida Department of Community Affairs	N/A*	N/A*	N/A*	N/A*	35,240	37,129	27,248	31,830
Florida Department of Environmental Protection	N/A*	N/A*	N/A*	N/A*	62,530	68,500	154,648	203,482
Florida Game and Fresh Water Fish Commission	N/A*	N/A*	N/A*	N/A*	9,470	9,470	9,800	N/A
Florida Department of Transportation	N/A*	N/A*	N/A*	N/A*	9,730	43,535	3,456	16,104
South Florida Water Management District (SFWMD)	130,990	150,300	170,000	242,000	324,900	265,600	348,129	338,566
Everglades Restoration Reserve Fund**								200,000
STATE TOTALS	236,020	162,300	199,200	276,600	446,800	429,408	549,455	814,682

NOTE: In reviewing this table, please reference the text provide on pages 97-106

** Individual Departmental expenditures for years 1983-97 are not available.*

***Contingent on the passage of Legislation by 2000 Legislature and Identification of Funding Sources by the South Florida Water Management District*

Grand Total State: 1983-2001	\$3,114,464,436
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3.1 INTRODUCTION

The text contained within this section of the Cross-Cut budget provides written descriptions for the project(s) identified in Tables 1, 2 and 3. The text is presented separately for each of the respective Federal and State Agencies/ Departments by functional area and provides a detailed description of the intended use of the funds requested to be appropriated for FY 01. An individual matrix summary table is also included for use as a reference tool for all Federal Agency(s)/Department(s) at the beginning of each individual section.

3.2 U.S. DEPARTMENT OF AGRICULTURE

USDA budget matrix for fiscal years 1993- 2001
(thousands of dollars)

Function/Project name	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 PB
NATURAL RESOURCES MANAGEMENT									
NRCS									
On-Farm assistance/Technical Coordination	1,900	1,900	2,900	3,435	3,535	3,535	5,088	6,456	\$9,397
SCIENCE: RESEARCH									
ARS									
General Research	2,814	3,033	2,092	2,046	2,025	3,264	4,045	4,148	4,448
TOTALS	4,714	4,933	4,992	5,481	5,560	6,799	9,133	10,604	13,845

3.2.1 Natural Resources Conservation Service (NRCS) - (\$9,397,000)

Natural Resources Management (\$9,397,000)

- On-Farm Assistance/Technical Coordination (\$9,397,000)

Base Program (\$2,640,000)

The NRCS provides technical assistance to individuals and groups on privately owned land to conserve renewable natural resources within the Everglades ecosystem on a voluntary basis. Water management assistance includes the application of best management practices (BMPs) to conserve water used to produce vegetables, citrus and pastures as well as on urban lands, such as lawns, parks, golf courses, and other open space. It also includes the operation of Mobile Irrigation Laboratories to assist land users in reducing irrigation-water use and nutrient loading to downstream receiving waters. Assistance is provided to

livestock producers to encourage application of BMPs, including animal waste management systems and fencing of streams and canals to reduce off-farm nutrient discharges. NRCS provides wetland determination on agricultural lands as required by the 1985 and 1990 Farm Bill. NRCS is the lead agency in providing a detailed soil survey, including interpretations, on privately owned lands.

Everglades Agricultural Area (EAA) Project (\$1,000,000)

The EAA Project is a special effort to assist the farmers in the EAA and the C-139 basin in meeting requirements outlined in Florida's 1994 Everglades Forever Act. Assistance is provided on a voluntary basis to develop management plans that address natural resource concerns in the EAA. These concerns include: phosphorus loading, soil subsidence, water quality and quantity, suspended sediments, water and wind erosion, agricultural sustainability, and threatened and endangered species.

South Florida Community-Urban Resource Partnership (SFUCRP) (\$365,000)

The SFUCRP provides funding and on-site technical assistance to natural resource restoration and education efforts in the Palm Beach, Broward, Miami-Dade and Monroe counties. Funding is provided by USDA's Forest Service and NRCS. The SFUCRP's established steering committee that includes federal, state and local agencies, non-profit organizations, local business and foundations, provides overall program direction and priority setting. The Steering Committee selects priority natural resource projects through a grant application process that matches federal dollars with local, state or non-profit dollars.

Wetland Reserve Program (WRP) (Technical and Financial Assistance: \$2,000,000)

The WRP is a voluntary program offering landowners a chance to receive payments for restoring and protecting wetlands on their property. The WRP provides a unique opportunity for farmers to retire marginal agricultural lands. WRP obtains conservation easements from participating landowners and provides cost-share payments for wetland restoration. Through the WRP, the USDA restores and protects valuable wetland acres.

Environmental Quality Incentives Program (EQIP) (Technical and Financial Assistance: \$1,157,000)

The EQIP is a voluntary program offering land users financial, technical and educational help to install or implement structural, vegetative and/or management practices where there are significant natural resource concerns that impact water quality and quantity, wildlife habitat, wetlands or grazing lands. Cost sharing may be up to 75% of the cost of the BMP's called for in 5 - 10 year contracts.

Wildlife Habitat Incentives Program (WHIP) (Financial Assistance: \$100,000)
WHIP provides financial incentives to develop habitat for fish and wildlife on private lands. Participants agree to implement a wildlife habitat development plan, and USDA agrees to provide cost-share assistance through 5 - 10 year contracts for the initial implementation of wildlife habitat development practices.

Farmland Protection Program (FPP) (Financial Assistance: \$2,000,000)
FPP provides funds to State, tribal, or local government entities to help purchase development rights to keep productive farmland in agricultural use. USDA joins with other government or tribal interests to acquire conservation easements or other interests from landowners. The land must be privately owned and be a part of a pending offer from a non-Federal government agency or Indian tribe.

Resource Conservation and Development (RC&D) (Technical Assistance \$135,000)
RC&D Project areas are established through requests of local Councils to address the conservation, development and utilization of natural resources to improve the standard of living and enhance the environment. These not for profit Councils are established as Florida Corporations to address and solve identified problems with help of federal, state, and local government and private sources. A Council has been established in Broward, Miami-Dade and Monroe Counties and another that includes the counties of Glades, Hendry, Highlands, Polk and Osceola.

3.2.2 Agricultural Research Service (ARS)- (\$4,448,000)

Science: Research

The ARS mission is to develop and transfer solutions to agriculture problems of high national priority; to provide information access and dissemination to ensure high-quality, safe food and other agricultural products; assess the nutritional needs of Americans; sustain a competitive agricultural economy; enhance the natural resource base and the environment; and provide economic opportunities for rural citizens, communities, and society. Related to the South Florida Restoration Initiative, ARS conducts research on sustainable agriculture production systems for sugarcane and other crops, improved water management, reduced plant stress and protection, and biological control of invasive species. Individual projects are as follows:

- **Development of Improved Sugarcane Varieties and their Use in Sustainable Agricultural Production Systems (\$1,397,400)**

The primary mission of the Sugarcane Field Station in Canal Point, Florida is to develop high-yielding, disease-resistant sugarcane varieties. In the past 29 years, researchers at Canal Point have released more than 40 sugarcane varieties in Florida. Work has now been ongoing at Canal Point for several years that aims to quantify and improve sugarcane's water tolerance and phosphorus uptake characteristics. As substantive information becomes available, it is hoped that it will be used to integrate sugarcane production in the Everglades Agricultural Area (EAA) with other linked regions of the Everglades so that it will become advantageous for EAA growers to use practices that will help meet water quality, quantity, and timing goals of Everglades restoration.

Research objectives of these projects are: (1) quantify and genetically improve sugarcane's tolerance to wetter conditions, (2) determine seasonal flood-drain cycles that improve or maintain yields while controlling soil subsidence, and (3) quantify and genetically improve sugarcane's ability to yield well with less phosphorus fertilizer or to yield well and take up more soil phosphorus.

- **Hydrologic Evaluation and Water Quality Studies Affecting Dade County (\$907,400)**

An ARS Hydrologist was hired in 1998 and stationed at the Subtropical Horticulture Research Laboratory in Miami, Florida, and an agronomist/engineer will be hired in June of 2000. Current funding totals \$607,400 and a program increase of \$300,000 is proposed in FY 01 as part of the Committee on the Environment and Natural Resources (CENR) initiative on Integrated Science for Ecological Challenges. A water quality scientist/ chemist would be hired in FY 01 if funds are appropriated.

The mission of the Everglades Agro-Hydrology Research Unit is to provide hydrologic science and technology needed to sustain agricultural production and a quality environment in regions with minimal drainage and shallow ground water. The objectives of the unit are: (1) to assess the interrelationships between the hydrology of the drainage practices and agricultural production in regions with shallow ground water; (2) to understand the hydrology including nonpoint source water pollution; (3) to determine best management practices to reduce the impact of agricultural practices on water quality; (4) to develop a farm-scale, computer model that will simulate the water balance, crop production, and pesticide and nutrient movement within the unsaturated zone; and (5) to link the farm-scale model with other regional hydrologic models.

- **Sugarcane Variety Response to Stresses of High Water Table, Soil Type, and Climate Change; Sustainable Agriculture Systems for Controlling Organic Soil Subsidence and Nutrient Runoff (\$448,200)**

Two research projects are being conducted at the Crop Genetics and Environmental Research Unit in Gainesville, Florida. On the first project, research has been conducted for 3 years on four sugarcane varieties that are being grown in computer-controlled, temperature-gradient greenhouses using two CO₂ atmospheric concentrations (360 and 700 ppm), two soil types (organic and mineral), two water-table depths (8 and 20 inches below the soil surface), and four temperatures. Preliminary results indicate increases in productivity by about 10% with the higher water-table practice. The variety CP 72-2086 tolerated flood conditions well. CP 73-1547 had poor flood tolerance, but responded well to increased CO₂. There appear to be variety interactions with water-table depths, soil type, and CO₂ X water-table practice. These results suggest that scientists will successfully identify sugarcane adapted to high productivity under conditions that will conserve organic soils and curtail nutrient losses from fields.

On a related study, the growth of two varieties of sugarcane was evaluated at three water-table depths (2 inches above the soil surface and 6 and 18 inches below the soil surface). The two higher water-table depths were imposed beginning at 20, 88, and 133 days after planting, resulting in treatment durations of 232, 164, and 119 days. Preliminary analysis of the data indicated that plants grew best under the 6-inch water-table depth below the soil surface for all durations and that early flooding with the 2-inch water-table depth above the soil surface was particularly detrimental to sugarcane growth.

On a second project, ARS scientists in Gainesville have developed a family of simple, mechanistic crop growth models that have proved ARS scientists beneficial in evaluating and predicting crop responses to the environment. These models have predicted crop responses to soil water availability and nutrient availability. Working with Australian scientists, these models will be modified to predict water requirements (evapotranspiration) and nutrient runoff impacts for sugarcane production in the EAA. Knowledge of agricultural evapotranspiration and nutrient runoff are being incorporated into regional water management models for south Florida.

- **Biological Control and Management of Aquatic Weeds/Invasive Plant Species in south Florida (\$1,695,000)**

ARS has conducted research in the biological control of weeds in South Florida for more than 50 years. During the period, alligatorweed, water lettuce, and water hyacinth have been partially or entirely controlled. Since 1989, ARS Aquatic Weeds Research Unit in Ft. Lauderdale and Gainesville, Florida has cooperated with the ARS Australian Biological Control of Weeds Laboratory for

research on biological control of melaleuca. Research is continuing under current funding to develop management strategies and biological control agents that are efficient, economical, and environmentally sound. The research includes overseas surveys for biocontrol agents of melaleuca, old world climbing fern, skunkvine, water hyacinth, water lettuce, Brazilian pepper tree, and giant salvinia; quarantine evaluation (requiring quarantine facilities) of natural enemies for melaleuca control; release and establishment of melaleuca-control management system; and evaluation of the biological control of hydrilla, water hyacinth, water lettuce, and giant salvinia by biological control agents.

The research has been expanded to (1) identify and collect, through cooperative efforts of ARS Biological Control Laboratories in Australia, Europe, and South America, natural enemies for control of *Melaleuca quinquenervia* and other invasive pest plants; (2) evaluate biological control agents for control of melaleuca and other exotic plant species under U.S. quarantine conditions and obtain approvals of qualified natural enemies; and (3) develop biological-based integrated pest (weed) management strategies that are efficient, economical, and environmentally sound. The release of approved biological control agents will be integrated with other methods of exotic plant species control (chemical, culture, and physical), determination of optimum re-vegetation methods, and an evaluation of compliance with economic and environmental impact assessments on control measures. Plans are underway to begin construction of a new quarantine facility in Ft. Lauderdale in FY 00.

3.3 U. S. DEPARTMENT OF THE ARMY \$157,626,000

3.3.1 U. S. Army Corps of Engineers (USACE) \$157,626,000

USACE budget matrix for fiscal years 1993-01

(thousands of dollars)

Function/Project name	1993 Enacted	1994 Enacted	1995 Enacted	1996 Enacted	1997 Enacted	1998 Enacted	1999 Enacted	2000 Enacted	2001 PB
AREA MANAGEMENT									
C&SF Project, O&M	7,987	11,000	11,300	9,846	9,513	9,500	8,328	8,470	10,558
Okeechobee Waterway, O&M	3,062	5,540	3,100	3,933	4,276	3,503	3,060	4,680	5,811
Removal of Aquatic Growth	2,643	3,292	3,796	3,700	3,980	3,032	2,615	3,130	3,340
Subtotal: USACE	13,692	19,832	18,196	17,479	17,769	16,035	14,003	16,280	19,709
WATER QUALITY HABITAT PROTECTION									
General Regulatory Functions	1,800	1,800	1,800	1,800	2,200	2,200	2,200	2,200	2,200
SCIENCE: MONITORING¹									
Experimental Program	0	0	0	0	0	50	831	875	0
Indian River Lagoon	0	0	0	0	0	137	33	35	20
Toxic and Mutagenic Effects	0	0	0	0	500	0	0	0	0
Salinity in Florida Bay	0	0	0	0	300	0	0	0	0
Water Flow to Florida and Biscayne Bays	0	0	0	0	800	0	0	0	350
Restoration, Coordination, and Verification (RECOVER)	0	0	0	0	0	0	0	0	2,790
Subtotal: USACE	0	0	0	0	1,600	187	864	910	3,160
SCIENCE: RESEARCH¹									
Modeling (Hydrologic, Hydrodynamic, Ecologic, Water Quality)	0	0	0	0	2,500	1,160	997	980	545
Indicator Species	0	0	0	0	300	100	473	485	290
Subtotal: USACE	0	0	0	0	2,800	1,260	1,470	1,465	835
INFRASTRUCTURE INVESTMENT									
Everglades & S FL Ecosystem Restoration	0	0	0	0	0	10,000	7,000	19,623	20,525
Hillsborough & Okeechobee Aquifer									4,562
Kissimmee River Restoration	2,783	7,400	4,000	5,851	3,000	3,000	8,000	27,571	20,000
Central and Southern Florida Project ²	3,178	7,244	6,624	8,918	11,267	27,400	14,112	47,828	90,087
Melaleuca Facility Construction	0	1,000	0	0	0	0	0	0	0
Biscayne Bay ³	0	700	0	0	0	250	100	400	543
Subtotal: USACE⁴	5,961	16,344	10,624	14,769	14,267	40,650	29,212	95,422	135,717
TOTALS	21,453	37,976	30,620	34,048	38,636	58,885	45,415	113,902	157,626

¹ Monitoring and Research funds for the Corp's in FY 98,99, 00 and 01 are accounted for in the C&SF Project and Biscayne Bay funds and are included in the Infrastructure Investment totals.

² The number shown does not reflect costs for Upper St. Johns Project (not w/in the SFWMD boundaries/not part of the Cross-Cut), but does include Monitoring and Research funds which is also broken out separately above.

³ FY 01 funding includes \$50K of the Monitoring funds broken out separately above (see Water Flow to Florida and Biscayne Bay).

⁴ USACE totals for FY 2000 include a rescission of budget authority per the FY 2000 Consolidated Appropriations Bill.

Area Management (\$19,709,000)

Operations and maintenance funding is provided for the Corps for the Federally operated portions of the Central and Southern Florida Project and the Okeechobee Waterway. The Corps operates and maintains the Herbert Hoover Dike around Lake Okeechobee and the main outlets of the Lake and the Water Conservation Areas. Additionally, five navigation locks and associated water control structures and the channels for the St. Lucie Canal and Caloosahatchee River that compose the Okeechobee Waterway, are operated and maintained by the Corps.

- Central and Southern Florida Project, O&M (\$10,558,000).
- Okeechobee Waterway, O&M (\$5,811,000).
- Removal of Aquatic Growth (\$3,340,000).

Water Quality and Habitat Protection (\$2,200,000)

- General Regulatory Functions (\$2,200,000).

The Corps Regulatory Program consists of administering the permitting program for placement of fill in waters of the United States under the authority of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. This is an ongoing program to identify impacts of proposed projects to the ecosystem and to ensure that compensation is provided for issued permits. Appropriated funds are utilized for salaries and expenses for staff to review permit applications in South Florida and to lead the Federal interagency effort to improve the decision-making process.

Science: Monitoring (\$3,160,000)

- Indian River Lagoon (\$20,000).

Continue sea grass mapping of the types and health of sea grasses in the Indian River Lagoon. Continue water quality testing.
Funding Source is the Central and Southern Florida Project.

- Restoration, Coordination, and Verification (RECOVER). (\$2,790,000).

Continue the development and implementation of the Adaptive Assessment program for the Comprehensive Everglades Restoration Plan. Funding source is the Central and Southern Florida project.

- Florida Bay. (\$300,000).

Continue hydrological and ecological monitoring for Florida Bay. Funding source is the Central and Southern Florida project.

- Biscayne Bay. (\$50,000).

Continue hydrological and ecological monitoring for Biscayne Bay. Funding source is the Biscayne Bay Feasibility study.

Science: Research (\$835,000)

- Hydrologic Models (\$150,000).

Under the RECOVER program, continue improvements to hydrologic models to enable use for design evaluation and development of operational criteria. Canal routing methods, structure operations and updated topography will be further enhanced in the finite element model (FEMWATER) to provide design level parameters and better estimate impacts to private and adjoining lands from operational changes. Funding source is the Central and Southern Florida project.

- Hydrodynamic Models (\$150,000).

Continue development of hydrodynamic model of Florida Bay. Run additional scenarios for water quality analysis using Florida Bay circulation models. Funding source is the Central and Southern Florida project.

- Ecological Models (\$95,000).

Continue integration with the Everglades Landscape Model (ELM) and Across Trophic Levels System Simulation (ATLSS) model. Funding source is the Central and Southern Florida project.

- Water Quality Models (\$150,000).

Continue Phase II development which will include calibration of the Florida Bay water quality model. Funding source is the Central and Southern Florida project.

- Indicator Species (\$290,000).

Continue determination of species autoecology, with respect to the influences of hydropattern, nutrients, and/or salinity, for potential ecological indicator species such as alligator, apple snail, snail kite, wading birds, and sea grasses. Determine the appropriate indicator species for evaluating the ecological effect of changes in freshwater inflow to the estuaries.

Funding source is the Central and Southern Florida project.

Infrastructure Investment (\$135,717,000)

- Everglades and South Florida Ecosystem Restoration (\$20,525,000).

This project involves the implementation of "critical restoration projects" authorized in Section 528 of the Water Resources Development Act of 1996. The legislation authorizes the COE, in consultation with the Task Force and the non-federal sponsor, to implement projects that produce independent, immediate and substantial restoration, preservation and protection benefits. FY 2001 activities will include continuing study efforts on the Keys Carrying Capacity study, engineering and design on 8 projects, and construction on 3 projects. Construction will also be initiated on 3 additional projects.

- Kissimmee River Restoration (\$20,000,000).

This project involves restoring the historic habitat in much of the Kissimmee River floodplain and restoring water-level fluctuations and seasonal discharges from Lakes Kissimmee, Cypress, and Hatchineha in the upper basin. Congress authorized the recommended plan in 1992 and design and construction is underway. The Project Modification Report recommending modifications to the upper basin was approved in FY 1996. Construction of canal improvements in the upper basin will continue through FY 2001. FY 2001 activities will include continuing engineering and design, initiating 3 new construction contracts and completion of 4 ongoing construction contracts.

- Biscayne Bay (\$543,000).

This study will propose solutions that would alleviate adverse factors affecting Biscayne Bay and will develop guidelines for future management of the natural resource. FY 2001 activities will initiate Phase II of feasibility.

- Central and Southern Florida Project (\$90,087,000).

NOTE: The number shown does not reflect costs for Upper St. Johns Project (not w/in the SFWMD boundaries/not part of the Cross-Cut).

South Dade County, C-111 Project. This project consists of modifications to the C&SF Project to provide more natural hydrologic conditions in Taylor Slough and to minimize

damaging flood releases to Barnes Sound/Manatee Bay, while maintaining flood protection for adjacent agricultural lands. FY 2001 activities will include continued engineering and design of project features and initiation of 2 construction contracts.

Comprehensive Everglades Restoration Plan. This effort includes the Comprehensive Everglades Restoration Plan (Comp Plan) as recommended in the Central and Southern Florida Project Comprehensive Review Study (Restudy) submitted to Congress on July 1, 1999. The Comp Plan also includes the Water Preserve Areas, Indian River Lagoon, Southwest Florida, Comprehensive Water Quality, and Florida Bay/Florida Keys Feasibility studies. The FY 2001 activities include the continuation of Pre-Construction, Engineering and Design of features contained in the Comp Plan; continuation of the Southwest Florida, Comprehensive Water Quality, and Florida Bay/Florida Keys Feasibility studies; and the completion of the Water Preserve Areas and Indian River Lagoon Feasibility studies.

Manatee Pass Gates Project. 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 fatalities associated with their operation. The project is being implemented in two phases; the first phase report was approved in FY 96 and addresses the addition of pressure sensitive devices at water control structures. These devices will reverse the gate closure if a foreign object is detected. In the second project phase, acoustic sending and sensing devices will be placed at lock gates. FY 2001 activities will continue the construction of project features.

West Palm Beach Canal, C-51/STA 1E Project. This project consists of design and construction of the C-51/STA 1E project to provide flood control for the western C-51 basin, provide water quality enhancement, and to restore a portion of the historic Everglades flows. It is being implemented in conjunction with SFWMD's Everglades Construction Project. FY 2001 activities will continue engineering and design, complete STA-1E grading contract, initiate 4 additional construction contracts, and continue the machinery contract.

- Hillsboro and Lake Okeechobee Aquifer Storage and Recovery Pilot Project (\$4,562,000).

This project will involve conducting pilot studies on two separate sites within the south Florida ecosystem to evaluate the viability of utilizing large scale aquifer storage and recovery (ASR) technology as recommended in the Restudy report. The design of this pilot project will be pursued under the C&SF project as part of the Comprehensive Plan. FY 2001 activities will include continuing engineering and design of the project features and initiation of construction.

3.4 U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) - \$4,532,000

EPA budget matrix for fiscal year 1993-2001

(thousands of dollars)

Function/Project Name	1993 Enacted	1994 Enacted	1995 Enacted	1996 Enacted	1997 Enacted	1998 Enacted	1999 Enacted	2000 Enacted	2001 PB
NATURAL RESOURCES MANAGEMENT.									
Wetland Conservation	1,202	1,079	812	1,038	400	308	308	308	310
Task Force Support	0	0	0	0	440	442	300	300	300
Subtotal: EPA	1,202	1,079	812	1,038	840	750	608	608	610
WATER QUALITY & HABITAT PROTECTION									
Water Quality and Habitat Protection	891	305	427	1,638	0	0	0	0	0
Water Permit Compliance & Enforcement	0	0	0	0	1,183	1,569	1,312	1,312	1,309
FKNMS Water Quality Protection Plan	0	0	0	0	1,031	1,081	35	35	35
Special Studies	0	0	0	0	100	0	200	0	0
Water Quality Criteria	0	0	0	0	0	83	83	83	0
Water Quality Plan	0	0	0	0	143	135	184	257	275
Urban Needs	0	0	0	0	275	0	50	50	75
Mercury Studies	0	0	0	0	0	100	100	50	50
Pesticide Assessment	0	0	0	0	250	125	0	0	0
South Florida Office	0	0	0	0	100	240	310	440	440
Subtotal: EPA	891	305	427	1,638	3,082	3,333	2,274	2,227	2,184
INFORMATION MANAGEMENT/ASSESSMENT									
Data Management	1,119	653	50	955	50	50	60	60	60
SCIENCE: MONITORING									
Water Quality Protection/ Prog./Mercury	1,460	2,395	1,983	2,415	0	0	0	0	0
Environmental Monitoring & Assessment	0	0	0	0	140	140	157	100	0
FKNMS Water Quality Prot. Plan Monitoring	0	0	0	0	540	700	1,092	1,260	1,233
Subtotal: EPA	1,460	2,395	1,983	2,415	680	840	1,249	1,360	1,233
SCIENCE: RESEARCH									
Mercury Risk Assessment	0	0	0	0	300	100	83	83	75
Water Quality & Habitat Protection Research	97	1,371	3,894	1,554	2,976	3,396	1,736	258.4	269.8
Subtotal: EPA	97	1,371	3,894	1,554	3,276	3,496	1,819	341.4	345
INFRASTRUCTURE INVESTMENT									
Programmatic EIS	0	0	0	0	203	215	155	100	100
TOTALS	4,769	5,803	7,166	7,600	8,131	8,684	6,165	4,696	4,532

Natural Resources Management (\$610,000)

- Wetland Conservation (\$310,000)

EPA and the Army Corps are implementing a wetlands conservation, permitting, and mitigation strategy that includes interagency mechanisms to coordinate the permitting and mitigation planning needed to implement the existing regulatory programs with the greatest efficiency in the face of intense pressure to develop increasingly small parcels, many with wetland impacts. EPA has dedicated two staff associated with its South Florida Office to participate in this work.

- Task Force Support (\$300,000)

This activity includes the time of staff in the South Florida Office, EPA's Atlanta Regional Office, and EPA Headquarters associated with participation in the South Florida Ecosystem Restoration Task Force and its working groups. It also includes the Staff time associated with the administration of grants that support activities included in the restoration effort.

Water Quality and Habitat Protection (\$2,184,000)

- Water Permit Compliance and Enforcement (\$1,309,000)

Compliance and enforcement activities for existing regulatory requirements play an important role in the prevention of further degradation in the South Florida ecosystem. For this reason, these resources will be devoted to provide technical assistance to help ensure compliance with permits and to provide prompt and thorough attention to enforcement when it is needed.

- Florida Keys National Marine Sanctuary Water Quality Protection Plan (\$35,000)

The 1990 Florida Keys National Marine Sanctuaries and Protection Act requires EPA, in conjunction with National Oceanic and Atmospheric Administration (NOAA) and the State of Florida to both plan and implement a Water Quality Protection Program that includes research, monitoring, waste source reduction, and public education.

Remediation of nutrient impacts on the near-shore waters of the Keys continues to be a project focus, although the continuing ecosystem management program also includes monitoring to confirm the status of the ecological conditions there, and research into the mechanisms of pollutant flows and interactions.

Detailed monitoring, and data management plans are being implemented. (See discussion below.)

- Water Quality Plan (\$275,000)

The South Florida Ecosystem Restoration Task Force, has identified the urgent need to restore more natural water flows to the Everglades National Park and Florida Bay. Restoring the flows, however will not achieve the desired goals if the quality of the diverted water is inadequate to sustain the natural system of the areas we want to restore and protect. The Task Force has requested the preparation of a Water Quality Plan to identify where water quality is a concern and to propose actions to restore and protect it in these areas.

The Water Quality Plan is designed to contain components (some already underway) that contribute information needed by other elements of the Task Force work. It expects that other related activities will provide useful assistance in preparing the Plan through a process of close coordination.

- Urban Needs (\$75,000)

Urban issues in South Florida include a rapidly expanding human population competing for resources with the Everglade's natural systems, generating pollutant loading to coastal and inland waters via stormwater runoff, and rapid urban development westward toward the remaining Everglades.

EPA activities are directed at reducing unsustainable westward sprawl by redirecting future growth into appropriate areas, many within the urban corridor. Activities include developing appropriate incentives that assist local governments and other parties to implement revitalization strategies that encourage infill development and redevelopment in the region's urban core with emphasis in those areas served by existing infrastructure.

- Mercury Studies (\$50,000)

Mercury Studies will augment past and on going research by examining the means of reducing mercury's risks to the environment.

- South Florida Office (\$440,000)

EPA's South Florida Office provides the core of EPA participation in Task Force activities. These include the coordination of section 404 and Stormwater Treatment Area permits associated with the Everglades Construction Project, staff to support section 404 dredge and fill permitting, the development of a Water Quality Implementation Plan, liaison with the Governor's Commission on the Everglades, coordination with the C&SF Restudy including the discussion of the role of aquifer

storage and recovery, studies of mercury and procedures for the development of phosphorus criteria, an Urban Initiative, and implementation of South Florida waste management programs.

Information Management and Assessment (\$60,000)

- Data Management (\$60,000)

The data needs of South Florida are being addressed in conjunction with the Florida Marine Resources Research Institute (FMRI) which is coordinating data management for the State, and certain Federal agencies. Under this initiative, FMRI is working with agencies to produce an information library to locate and catalog the data collected from major current studies of the South Florida Ecosystem, provide geographic information useful in future studies, and provide information to the public using data resources retained by FMRI. The Internet is used to convey information to the public and to link FMRI with other data repositories.

A major part of this demonstration involves FMRI's piloting the use of an early version of EPA's modernized STORET water quality data base, which the State of Florida has used for years.

Science: Monitoring: (\$1,233,000)

- Florida Keys National Marine Sanctuary Water Quality Protection Plan Monitoring (Monitoring elements, \$1,233,000)

The 1990 Florida Keys National Marine Sanctuaries and Protection Act requires EPA, in conjunction with National Oceanic and Atmospheric Administration (NOAA) and the State of Florida to both plan and implement a Water Quality Protection Program that includes research, monitoring, waste source reduction, and public education. (See above.)

Science: Research (\$345,000)

- Mercury Risk Assessment (\$75,000)

Mercury contamination of Everglades biota is an issue of great concern. The entire Everglades and Big Cypress region has a human health fish consumption advisory posted. Species such as the endangered Florida panther and wading birds may also be at increased risk. A coordinated, multi-agency scientific effort is underway to define the mercury contamination, and elucidate the source and environmental conditions that result in bioaccumulation. These efforts must continue in order to assess the nature and

extent of mercury contamination over various Everglades water conditions (wet years, dry years), develop a mass balance of mercury movement through the system, identify appropriate management or regulatory strategies, and assess their effectiveness by monitoring over time.

- Water Quality and Habitat Protection Research (\$269,800)

These resources address the effects of phosphorus on surrounding open water and upland coastal systems; of UV-B, infectious diseases, and nutrient enrichment on corals; and of endocrine disrupting compounds on certain wildlife species. In addition, EPA maintains a monitoring station to measure ambient levels of UV-B in the Everglades National Park.

Infrastructure Investment (\$100,000)

- Programmatic Environmental Impact Assessment (\$100,000)

The Environmental Protection Agency participates in the preparation of various Environmental Impact Statements concerning south Florida.

The Environmental Protection Agency also provides funding to the State of Florida to support activities in this category under grants authorized by the Clean Water Act to capitalize loans for the construction of municipal wastewater treatment plants and for other pollution reduction projects. The State of Florida supports important projects in South Florida from this fund, but the amount varies as it adjusts the available funding to project needs across the state.

3.5 U.S. DEPARTMENT OF COMMERCE \$20,147,000

3.5.1 National Oceanic and Atmospheric Administration (NOAA) - \$20,147,000

NOAA budget matrix for fiscal year

1993-01 (thousands of dollars)

Function/Project Name	1993-98 Enacted	1999 Enacted	2000 Enacted	2001 PB	2002 PB
AREA MANAGEMENT					
Florida Keys National Marine Sanctuary (NOS)	12,820	2,400	3,400	4,200	
Integrated Coastal Management (NOS)	500	200	0	0	
Rookery Bay NERR (NOS)	610	125	152	267	
Florida Coastal Management Program (NOS)	4,857	1,300	1,300	2,850	
Subtotal: NOAA	18,787	4,025	4,852	7,317	
NATURAL RESOURCES MANAGEMENT					
Fisheries Management/Endangered Species (NMFS)	6,000	1,000	1,000	1,000	
WATER QUALITY & HABITAT PROTECTION					
Habitat Conservation (NMFS)	555	110	110	110	
INFORMATION MANAGEMENT/ASSESSMENT					
Technical Support to Fl. Keys Management (NOS)	2,482	441	252	52	
Coastal Mapping and Habitat Assessment (NOS)	2,755	445	754	693	
Weather Service Forecasting (NWS)	6,880	1,480	1,480	1,480	
Subtotal: NOAA	12,117	2,366	2,486	2,225	
SCIENCE: MONITORING					
Fisheries Monitoring and Assessment (NMFS)	6,900	1,160	1,160	1,160	
National Status & Trends Monitoring (NOS)	380	120	120	120	
Integrated Ecosystem Health Monitoring (NOS)	1,770	900	900	1,900	
Rookery Bay NERR (NOS)	130	25	40	110	
Subtotal: NOAA	9,180	2,205	2,220	3,290	
SCIENCE: RESEARCH					
National Marine Fisheries Service (NMFS)	7,196	1,460	1,460	2,060	
Atlantic Oceanographic & Meteorological Labs. (OAR)	1,500	200	250	250	
University of Miami/CIMAS Pass-through (OAR)	8,300	600	600	0	
Florida Sea Grant (OAR)	2,520	470	470	470	
NOAA Underwater Research Program (OAR)	8,175	1,000	1,000	1,000	
Coastal Ocean Program (NOS)	7,540	2,300	1,300	1,300	
Climate/Agriculture Research - FSUniversity (OGP)	3,772	0	0	0	
Climate/Agriculture Research - UnivSoFlorida (OGP)	940	0	0	0	
Florida Keys/Florida Bay Economic Valuation (NOS)	442	71	190	190	
NOVA Coral Reef Institute (NOS)	500	500	500	0	
Rookery Bay NERR (NOS)	147	0	33	35	
Subtotal: NOAA	41,032	6,601	5,803	5,305	
INFRASTRUCTURE INVESTMENT					
Rookery Bay NERR (NOS)	250	0	950	400	
Florida Keys National Marine Sanctuary	0	0	1000	500	
Florida Coastal Management Program (NOS)	269	0	0	0	
Subtotal: NOAA	519	0	1,950	900	
TOTALS	88,190	16,307	18,421	20,147	

Abbreviations in table:

NOS -	National Ocean Service
NMFS -	National Marine Fisheries Service
NWS -	National Weather Service
OAR -	Office of Oceanic and Atmospheric Research
OGP -	Office of Global Programs

Area Management (\$7,317,000)

- Florida Keys National Marine Sanctuary (\$4,200,000)

Funding will be used for operational activities in the Florida Keys National Marine Sanctuary (FKNMS) at the southern edge of the South Florida ecosystem. The coral reefs and other coastal areas of the FKNMS have been impacted by changes in water flow in inland areas, and will benefit greatly from the planned ecosystem restoration efforts. Funding will support a range of activities including enforcement efforts for sanctuary regulations and operation of a permit system designed to protect sanctuary resources. *Increases requested in FY2001 as part of the Lands Legacy Initiative will ensure that the FKNMS has all the resources necessary for adequate operations and to begin a comprehensive site characterization.* Public outreach and education activities will be conducted including on-the-water interpretation about coral reefs and other coastal resources. A volunteer program designed to assist in management of the sanctuary will be continued. Funding will also support priority Federal, state, and county partnership efforts required for implementation of the FKNMS Management Plan. (National Ocean Service)

- Rookery Bay National Estuarine Research Reserve (\$267,000)

Funding will be used to operate the Rookery Bay National Estuarine Research Reserve site including salaries, travel, facility maintenance, vehicles (autos and watercraft), and various supplies. Funds will also support program activities such as control of invasive exotic species, periodic aircraft patrols of the site, and the use of remote sensing data to map and classify the habitats of the Reserve. *Increases as part of the Lands Legacy Initiative will ensure that the Reserve has the resources needed to operate the facility, undertake additional training activities, and implement critical next phases of the comprehensive monitoring system.* (National Ocean Service)

- Florida Coastal Management Program (\$2,850,000)

These funds, provided by the National Ocean Service, support the South Florida component of the state of Florida's coastal zone management program within the Florida Department of Community Affairs. Projects include an evaluation of cumulative and secondary impacts of on-site sewage disposal systems (particularly in the Florida Keys), restoration dredging, an investigation of alleys as stormwater treatment facilities, and land acquisition for improved beach access. The sewage

disposal project includes investigation of alternative waste treatment technologies. A portion of these funds also support the Governor's Commission for a Sustainable South Florida. The Governor's Commission serves as a coordination mechanism to focus the many competing interests in South Florida on a restoration and management solution to provide for sustainable economic development that can co-exist with a healthy South Florida ecosystem. *Increases as part of the Lands Legacy Initiative will allow the State to implement actions to reduce the flow of polluted runoff into the coastal waters and help South Florida's coastal communities implement sustainable growth and development practices.* (National Ocean Service)

Natural Resources Management (\$1,000,000)

- Fisheries Management/Endangered Species (\$1,000,000)

Funding will be used by the National Marine Fisheries Service (NMFS) to continue the management of fisheries in Federal waters of South Florida to rebuild and maintain stocks at optimum levels. The effectiveness of the management measures will be evaluated by several criteria including the recruitment of juveniles to fisheries. Other management activities are directed at reducing the detrimental impacts of fishing and other human activities on populations of protected species, including turtles and dolphins.

Water Quality and Habitat Protection (\$110,000)

- Habitat Conservation (\$110,000)

This funding supports activities at the Miami office of the Habitat Conservation Division of the National Marine Fisheries Service. Activities include commenting on permits affecting marine resources and participating in management activities of the Federal Working Group, especially development of the Comprehensive Wetland Conservation, Permitting, and Mitigation Strategy for South Florida. These efforts involve extensive consultation and tracking of a variety of projects that may have significant impacts on South Florida Ecosystem Restoration efforts and essential fish habitat. Funding supports participation in planning and implementation of restoration and enhancement activities.

Information Management and Assessment (\$ 2,225,000)

- Technical Support to Florida Keys Management (\$52,000)

These funds support a variety of technical and assessment activities in and around the Florida Keys including providing supporting working groups in studying alternatives for ecological reserves within the Sanctuary boundaries. (National Ocean Service)

- Coastal Mapping and Habitat Assessment (\$693,000)

Funding supports a number of on-going activities undertaken to provide resource managers in South Florida with the information needed to make the decisions for the long-term health and sustainability of the South Florida Ecosystem. This includes mapping a number of ecosystems, providing information on land cover change in Florida through the Coastal Change Analysis Program (C-CAP), providing data and tools through geographical information systems, and providing characterizations and assessments of salinity and other parameters for better understanding. Many of these activities are done in coordination with other Federal agencies, and state and local government agencies. (National Ocean Service)

- Weather Service Forecasting (\$1,480,000)

The National Weather Service maintains a regional weather forecasting operation that includes collecting climate data important for many scientific investigations including providing information for the modeling and managing water budgets in South Florida as part of the Restudy effort. The forecasting also provides important information related to nonpoint pollution and fresh water inflow (precipitation), and the flow of water from land into coastal waters via wind-driven circulation patterns (wind speed and direction).

Science: Monitoring (\$ 3,290,000)

- Fisheries Monitoring and Assessment (\$1,160,000)

NOAA's National Marine Fisheries Service routinely conducts monitoring and assessment activities in South Florida waters for a number of commercial, recreational, and ecologically important species. These activities include estimating population size and distribution, and assessments of species' life histories and movements. Landscape changes in regional watersheds and along the coastal zone are monitored in cooperation with the Department of the Interior.

- National Status and Trends Monitoring (\$120,000)

The National Status and Trends program will continue monitoring contaminants, macroinvertebrates, and bioeffects in the South Florida region. This is an important part of the effort to monitor the impacts and outcomes of inland Restoration efforts that will alter the flow of water (and possibly contaminants) from land to coastal bays and estuaries. These funds will also support implementation of actions of a regional ecosystem monitoring plan to help state, federal and other groups to adequately monitor and implement efforts to restore South Florida's coastal areas (National Ocean Service).

- Integrated Ecosystem Health Monitoring (\$1,900,000)

This is one of three key components to NOAA's South Florida Ecosystem Restoration Initiative. In FY 2001, \$1 million in new funding (a total of \$1.9 million) is requested to support NOAA's critical role of providing science, monitoring and management for coastal components of the South Florida Ecosystem Restoration effort.

As the U.S. Army Corps of Engineers and State of Florida begin to implement major projects to re-route the flow of fresh water through the South Florida ecosystem, coastal resources downstream from these projects will be affected.

With new funding in FY 2001, NOAA will provide monitoring and data critical to successful completion of these island restoration projects so they deliver the desired freshwater to coastal habitat and minimized negative impacts on these areas from estuaries to coral reefs. NOAA's monitoring of key coastal indicators of seagrasses, macroinvertebrates, coral reefs, circulation and salinity is also important for tracking and changing the restoration effort as it proceeds.

Results will be used in part to develop a baseline description of current physical and biological conditions, including how conditions vary in space and time. This data will ultimately be used to determine the best alternatives, progress and effectiveness of efforts to replumb inland water flow and restore a healthy South Florida ecosystem.

For example, a major new regional ecosystem monitoring plan was designed but only partially implemented in FY97-98 due to lack of funding. New funding will allow NOAA to fully implement this monitoring strategy for South Florida's coastal areas including coral reefs of the Florida Keys National Marine Sanctuary, contaminants in South Florida's bays and estuaries, and other key indicators of coastal ecosystem health (National Ocean Service). This project is intended to fulfill NOAA's responsibility to establish a long-term ecological monitoring program and database for the South Florida Restoration effort and Florida Keys National Marine Sanctuary and provide a forum for integrating most monitoring in the marine ecosystem. The geographic scope includes all the marine waters of South Florida.

- Rookery Bay National Estuarine Research Reserve (\$110,000)

The Rookery Bay NERR monitoring program currently includes a suite of water quality parameters including temperature, salinity, dissolved oxygen, and turbidity. Initial efforts in habitat monitoring of the site's wetlands, particularly the mangrove areas, will be undertaken as part of the NERRS System-wide monitoring program. (National Ocean Service)

Science: Research (\$ 5,305,000)

- National Marine Fisheries Service (\$2,060,000)

This is one of three key components to NOAA's South Florida Ecosystem Restoration Initiative. New funding is requested to support NOAA's critical role of providing science, monitoring and management for coastal components of the South Florida Ecosystem Restoration effort.

As the U.S. Army Corps of Engineers and State of Florida begin to implement major projects to re-route the flow of fresh water through the South Florida ecosystem, coastal resources downstream from these projects will be affected.

NMFS will continue research that defines the impact of inland restoration efforts and changing freshwater inflow on Florida Bay habitats, nutrients flow, hydrodynamics, and ultimately on measurable ecosystem productivity, diversity, and health. This research is conducted, in part, through a strong partnership with local scientists.

Significant program enhancement funds are targeted for an integrative spatial study of the benthic communities in relation to habitat particularly seagrass and salinity, and to build a relationship among abundance, biomass, and the management of freshwater inflow. Elements of the study will include modeling, geographic information systems (GIS), field sampling across the entire Bay, and laboratory studies. Spatial community modeling will be incorporated into a total ecosystem model of Florida Bay to help integrate the interagency program of studies in Florida Bay. This effort also includes expansion of tests of water quality entering Florida Bay using biological assays appropriate for South Florida.

- Atlantic Oceanographic and Meteorological Laboratory (\$250,000)

The Atlantic Oceanographic and Meteorological Laboratory (AOML) conducts and supports a wide variety of research important to the South Florida Ecosystem Restoration effort including research on circulation, productivity and changes in coastal waters, modelling of possible future conditions of South Florida's coastal waters under different restoration scenarios, monitoring of water conditions near coral reefs, and atmospheric research on the impacts of winds, precipitation and evaporation on the water available for restoration efforts. AOML provides sophisticated modelling and research capabilities to synthesis and apply information from many other NOAA and other agency monitoring efforts to help find solutions for the restoration effort (Office of Oceanic and Atmospheric Research).

- University of Miami, Cooperative Institute for Marine and Atmospheric Research (CIMAS) (\$ 0)

As part of the South Florida Ecosystem Restoration Prediction and Modeling program, NOAA's Office of Oceanic and Atmospheric Research funds research in a variety of fields to better understand, restore and sustain the South Florida Ecosystem. Funding is available to universities and other academic institutions on a competitive, peer-review basis. No funds are available for this activity in FY 2001.

- Florida Sea Grant (\$470,000)

Florida Sea Grant is currently sponsoring four multi-year research projects in South Florida. Two of the projects are investigating the causes of algal blooms in Florida Bay, looking at both changes in the planktonic food webs and at the input of groundwater nutrients. Another project involves investigating the effect of the sponge die-off in Florida Bay on spiny lobsters and the possibilities for artificial habitat enhancement. A fourth project is evaluating the effect of algal blooms and turbidity on coral reefs. (Office of Oceanic and Atmospheric Research)

- National Undersea Research Program (NURP) (\$1,000,000)

The NURP provides access for the U.S. research community to civilian, military, and international undersea platforms. The research it supports relies on submersibles, underwater laboratories, and diving to enable scientists to perform in situ studies, and on remotely operated vehicles and observatories for indirect access. The program is directed by a national office and carried out by six university-based National Undersea Research Centers. Primary research emphases in NURP are fisheries, coastal processes, ecosystem health, marine lithospheric processes, undersea technology, and diving safety and physiology. The program serves as a center for Federal research support of the nation's coral reef resources and is invaluable to the efforts to monitor, understand and restore coral reefs in South Florida. (Office of Oceanic and Atmospheric Research)

- Coastal Ocean Program (\$1,300,000)

This is one of three key components to NOAA's South Florida Ecosystem Restoration Initiative. Funding is requested to support NOAA's critical role of providing science, monitoring and management for coastal components of the South Florida Ecosystem Restoration effort.

As the U.S. Army Corps of Engineers and State of Florida begin to implement major projects to re-route the flow of fresh water through the South Florida ecosystem, coastal resources downstream from these projects will be affected.

Funding will support scientific investigations in the South Florida coastal ecosystem to better understand and restore the coastal areas as part of the overall restoration effort. When coupled with monitoring efforts, these investigations show the interactions between restoration efforts and oceanographic, atmospheric, geologic, hydrologic, and fisheries processes. Much of this work is coordinated through researchers at the NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) and a variety of university partners. (National Ocean Service)

- Florida Keys/Florida Bay Economic Valuation (\$190,000)

Socioeconomic assessments are being undertaken to determine the market and non-market values of natural resources and associated industry sectors such as recreation and tourism in the Florida Keys. FY2001 funding will allow NOAA to work with community, industry and state partners to collect and provide new information on the value of natural resources such as beaches and coral reefs to visitors, local businesses, the tourism industry and other economic sectors. (National Ocean Service).

- Rookery Bay National Estuarine Research Reserve (\$ 35,000)

The Rookery Bay NERR supports a wide variety of research projects to help find solutions to managing and protecting estuaries in South Florida and the nation. The Reserve is a living laboratory where scientists from around the nation and the world come to answer key questions about human impacts on estuaries, and how to minimize them. For example, the Reserve is the site of several studies to understand the effects of changing freshwater inflows on fish species. Research by the Florida Department of Environmental Protection indicates that alterations in freshwater inflows during Hurricane Andrew and other major storm events damaged estuarine habitats within the reserve. The fluctuations in salinity caused by tropical storms and hurricanes have an immediate and long-term impact on the organisms that serve as food for commercially and recreationally important fish, and the juvenile stages of many fishes and crustaceans. Combined with the Reserve's water quality monitoring program, these projects are helping determine how to restore the timing, quality and quantity of freshwater flow into many of South Florida's valuable estuaries.

Infrastructure (\$ 900,000)

- Florida Keys National Marine and Rookery Bay National Estuarine Reserve (\$900,000)

Funds will support facilities at both the Reserve and Sanctuary that provide visitors with access to and knowledge of the coastal and marine components of the South Florida Ecosystem. These facilities provide essential support for studies to improve

understanding and restoration of the ecosystem, as well as educational opportunities for visitors and residents.

3.6 U. S. DEPARTMENT OF THE INTERIOR \$143,756,000

3.6.1 Bureau of Indian Affairs (BIA) - \$397,000

BIA budget matrix for fiscal year 2001 (FY93-00 included).									
(thousands of dollars)									
Function/Project name	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Enacted	2000 Enacted	2001 PB
SCIENCE: MONITORING									
Water Quality Monitoring	0	400	399	399	399	399	399	397	397
TOTALS	0	400	399	399	399	399	399	397	397

The Bureau of Indian Affairs fulfills its trust responsibility to Indian tribes through a variety of programs. The Miccosukee and Seminole Indian Tribes reservations (located in South Florida) are an integral part of the Everglades ecosystem. Today, approximately 462,000 acres (720 sq mi) in South Florida are considered Indian lands. The traditional and modern lifestyles of the 430 Miccosukee tribal members and 2,500 Seminole tribal members are carried out on these trust lands.

Science: Monitoring (\$397,000)

- Water Quality Monitoring

The FY01 funding level of \$397,000 will provide the necessary water quality monitoring and associated GIS requirements of the tribes. These funds will be used to develop and implement tribal water quality standards and expand tribal opportunities and capabilities in the field.

3.6.2 U. S. Fish and Wildlife Service (FWS) - \$37,271,000**FWS budget matrix for fiscal year 2001 (FY93-2000 included)**

(thousands of dollars)

Function/Project name	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual ¹	1999 Enacted	2000 Enacted ²	2001 PB
AREA MANAGEMENT									
A.R.M. Loxahatchee National Wildlife Refuge (NWR)	1,420	1,140	1,392	1,501	1,544	1,658	1,482	1,476	1,482
Florida Panther NWR	251	263	336	338	479	657	517	515	517
J.N. "Ding" Darling NWR	399	524	657	654	767	912	750	747	750
Florida Keys NWRs Complex ³	565	476	524	567	713	896	1,009	1,005	1,009
Pelican Island NWR/ Archie Carr NWR	0	0	0	0	75	105	105	105	105
Endangered Species/Recovery	18	18	20	20	20	40	40	40	0
Habitat Conservation/Project Planning	0	0	20	20	20	40	40	40	0
Subtotal: FWS	2,653	2,421	2,949	3,100	3,618	4,308	3,943	3,928	3,863
NATURAL RESOURCES MANAGEMENT									
Endangered Species/ Candidate Cons.; Listing (FY95); Consultation (FY01)	16	0	50	40	40	40	40	40	535
Endangered Species/Recovery	343	557	728	778	1,045	1,025	1,025	1,021	1,065
Habitat Conservation/Coastal Program	0	0	499	499	503	503	503	501	0
Environmental Contaminants	60	120	120	120	120	120	120	120	120
Law Enforcement	620	637	637	637	637	637	637	637	637
Migratory Bird Management	44	44	104	104	104	104	104	104	104
Fisheries (Panama City FRO)	90	100	100	100	100	100	100	100	100
Subtotal: FWS	1,173	1,458	2,238	2,278	2,549	2,529	2,529	2,523	2,561
WATER QUALITY & HABITAT PROTECTION									
Endangered Species/Consultation	180	312	411	411	495	495	495	493	0
Habitat Conservation/Project Planning; Environmental Coordination	170	170	169	169	324	304	304	303	344
Habitat Conservation/Coastal Program	0	0	0	0	0	0	0	0	503
Subtotal: FWS	350	482	580	580	819	799	799	796	847
INFORMATION MGMT/ ASSESSMENT									
Habitat Conservation/Project Planning	100	100	100	100	0	0	0	0	0
INFRASTRUCTURE INVESTMENT									
Habitat Conservation/Project Planning	0	55	55	55	0	0	0	0	0
LAND ACQUISITION									
Archie Carr NWR	1,983	1,390	1,996	0	0	2,000	0	0	6,000
Crocodile Lake NWR	0	0	0	0	0	400	0	0	500
Florida Panther NWR	0	0	0	0	0	0	0	0	200
J.N. "Ding" Darling NWR	0	0	0	0	0	1,500	0	4,000	9,000
Florida Keys NWRs Complex ³	1,983	0	0	0	0	2,400	0	0	6,000
Lake Wales Ridge NWR	0	2,000	998	0	500	0	1,000	0	2,000
Pelican Island NWR ⁴	0	1,720	250	1,450	0	2,000	0	4,500	6,300
Subtotal: FWS	3,966	5,110	3,244	1,450	500	8,300	1,000	8,500	30,000
TOTAL, FWS	8,242	9,626	9,166	7,563	7,486	15,936	8,271	15,747	37,271

Footnotes from previous table:

¹ FY98 column includes the following Title V funds appropriated to the Department of the Interior in FY 99; and transferred to FWS in FY 1999: J.N. "Ding" Darling, 1,500; Keys Complex, 2,000; Pelican Island, 2,000. FY98 also includes 400 in migratory Bird Conservation Funds for Keys Complex.

² Includes rescissions authorized by the FY 2000 *Interior & Related Agencies Appropriations Act*

³ The Florida Keys NWRs Complex includes the National Key Deer NWR, Key West NWR, and White Heron NWR

⁴ FY 2000 includes \$2.5 million in Title VI funding in the FY 2000 *Interior & Related Agencies Appropriations Act*. This funding was released after submission of the Administration's FY 2001 Budget to Congress.

The U.S. Fish and Wildlife Service (FWS) administers 16 national wildlife refuge units in South Florida. The Service manages all actions under the *Endangered Species Act*, provides comments on comprehensive wetland programs (including permitting), carries out authorities of the *Fish and Wildlife Coordination Act*, and enforces federal wildlife laws. As a member of the South Florida Ecosystem Restoration Task Force, the FWS will continue to undertake important on-ground restoration activities.

Area Management (\$3,863,000)

The Service administers four major (staffed) National Wildlife Refuges (NWR) within the South Florida ecosystem (A.R.M. Loxahatchee, Florida Panther, J.N. "Ding" Darling, and National Key Deer) and 12 national wildlife units. Hundreds of thousands of people visit the refuges annually. Funding will be used for Refuge operations and maintenance, public education, and outreach to increase public awareness of the issues facing the South Florida ecosystem, control of exotic species, and protection of listed species.

- A.R.M. Loxahatchee National Wildlife Refuge (including Hobe Sound NWR) (\$1,482,000)

A major facet of Everglades ecosystem restoration is to improve the hydro pattern of surface water in the Everglades. Funding will be used to comply with the 1992 Everglades Federal Consent Decree (water quality monitoring, cooperating on a multi-year dosing study to determine the appropriate nutrient limits for the Everglades), map the vegetation changes caused by nutrient pollution, initiate research to determine the effects on vegetation caused by the revised water regulation schedule, and contract with consultants for water quality data analysis. Funding will also be used to provide environmental education to visitors through the Visitor Center, on the trails, and in the local community. Eradication of invasive exotic plants is a major on going management activity.

- Florida Panther National Wildlife Refuge (including Ten Thousand Islands NWR) (\$517,000)

The funding will be used to maintain efforts at control and eradication of exotic species, continue research efforts aimed at improving land management techniques and restoring South Florida's endangered species, and continue to monitor a project to restore historic water flow to Lucky Lake Strand. Funding will also be used to address the needs of the newly established Ten Thousand Islands NWR, particularly for law

enforcement and biological projects to protect and survey the natural resources of the mangrove island ecosystem. Funding will also be used to implement the recently approved Comprehensive Conservation Plans for both Refuges.

- J.N. "Ding" Darling National Wildlife Refuge (including Caloosahatchee, Matlacha Pass, Island Bay, and Pint Island NWRs) (\$750,000)

This funding will be used specifically to minimize further loss of ecologically functioning fish and wildlife habitats in the South Florida ecosystem by (1) initiating new, and by expanding existing, invasive exotic plant species control programs, (2) enhancing and restoring ecological function and habitat values to degraded fish and wildlife habitat, and then by (3) expanding existing exotic plant control programs to those habitats. Additionally the funding will be used to protect non-listed indigenous fish and wildlife and plants by, (1) increasing hours expended for law enforcement, (2) enhancing public awareness and ethic of shared responsibility for a sustainable environment in South Florida implementing an environmental education and outreach program, and (3) by increasing the interpretation and recreation programs through the addition of exhibits and a new visitor center.

- National Key Deer Refuge (including Great White Heron, Key West, and Crocodile Lake) (\$1,009,000)

These four refuges contain over 415,000 acres of terrestrial and marine habitat for nearly 100 federal or state listed endangered/threatened plant and animal species. This funding will allow for the increased protection of existing lands and marine and coral reef habitat; protection and inventory of new acquisitions; expanded exotic plant control program; planning to reduce impacts of harmful terrestrial and marine recreational activities; restoration of degraded/modified habitat; conducting of important surveys/censuses; coordination of activities; inventory and assessing coral reef and associated marine habitats; enhancement of partnerships with other agencies/organizations, and continued planning and management efforts through the use of tools, such as GIS.

- Pelican Island/ Archie Carr Lake Wales Ridge National Wildlife Refuges (\$105,000)

These funds will be used to stabilize the shoreline of Pelican Island. Excessive wave action from boats has reduced the island to one-half its original size, thus threatening the historic island and the bird rookery it sustains. These waves are being generated in the Intracoastal Waterway and the only means of protecting the island is through the placing of a breakwater composed of natural materials.

Natural Resources Management (\$2,561,000)

- Endangered Species (\$1,600,000)

These funds will enable the Service to continue implementing the multi-species recovery plan in 2000. The recovery plan will provide the federal, state, tribal, and local government agencies with a blueprint for protecting, conserving, and managing the threatened and endangered fish and wildlife resources of South Florida. This information will become particularly important as the Corp of Engineers develops plans for restoration of the south Florida ecosystem. In addition to salaries and other expenses, the Service will use the funds to initiate or continue recovery actions on the endangered Cape Sable seaside sparrow, wood stork, and American crocodile as part of the Experimental Program of Modified Water Deliveries to Everglades National Park. The Service will also fund recovery actions and field investigations for several other Federally listed species in South Florida, including the Florida grasshopper sparrow, Florida scrub jay, Garber's spurge, Lake Wales plants, Pine Rockland plants, Red-cockades woodpecker, and several species in the Florida Keys. This work will support the Florida Keys Carrying Capacity Study and other studies and investigations affecting listed species and their habitats.

The Service will use these funds to consult with the Corps and other agencies relative to those agency activities that potentially affect federally-listed species. These consultations occur on over two thousand Corps permits issued annually. In 2001, the Service will continue consultation with the Corps on the Central and South Florida Restudy, in addition to other ongoing or new federal projects and permits.

Additionally, The Service will evaluate the potential need to list additional species pursuant to the *ESA*, and develop cooperative agreements with landowners for the protection and conservation of listed species through Candidate Conservation Agreements, Safe Harbor Agreements, and Habitat Conservation Plans.

- Environmental Contaminants (\$120,000)

Primary emphasis will be placed on ensuring that all lands identified for restoration purposes are reviewed for potential environmental contaminants prior to acquisition. Additionally, evaluation of the extent and effects of mercury contamination will remain a high priority.

- Fisheries Assistance (\$100,000)

Efforts will be directed toward restoration of anadromous and coastal fish species in South Florida. Emphasis will be placed on ensuring that non-indigenous fish species are adequately evaluated for potential effects on restoration activities.

- Law Enforcement (\$637,000)

Funding will be used to enhance law enforcement's ability to handle the quickly escalating regional workload. There has been a marked increase in the illegal trafficking of exotic protected species and the unlawful "taking" of endemic species protected by the ESA and MBTA throughout South Florida. Southwest Florida is one of the most ecologically sensitive and rapidly growing areas of the State, requiring the highest priority for establishing an increased law enforcement presence. Funding will allow the purchase of vehicles, boats, and marine equipment needed by law enforcement personnel to conduct investigations in remote areas. Additional personnel will be detailed to "task force" enforcement operations within the ecosystem as needed. Increased efforts to educate the public regarding the law and illegal activities will be emphasized.

- Migratory Bird Management (\$104,000)

These funds will be used to study migratory birds and their habitat in South Florida. Attention will be placed on surveying the location, extent, and duration of migrations of neo-tropical birds. Ecologically significant habitats to support these species will be identified and prioritized for protection.

Water Quality and Habitat Protection (\$847,000)

The FWS will use these funds to continue to focus on protection of fish and wildlife resources by providing assistance to the Corps Regulatory Program for the permitting of placement of fill in waters of the United States. The FWS focuses on minimizing impacts to wetlands and other important habitat, especially for Federally listed species. Further, the FWS works with others to ensure mitigation for wetland losses and to provide consistency and predictability for permit reviews. The FWS will also have a key role in development of the Comprehensive Conservation, Permitting, and Mitigation Strategy for the South Florida ecosystem, including the Southwest Florida EIS.

The Coastal Habitat Restoration Program is also funded within this category. The South Florida Coastal Program actively forms partnerships with other federal and state agencies, local governments, non-governmental entities, and private property owners to implement "on-the-ground" restoration projects as well as to conduct research, monitoring and public outreach activities. The Coastal Program complements the larger, more comprehensive South Florida Ecosystem Restoration Initiative by implementing immediate "on-the-ground" actions designed to protect, conserve, and restore coastal living resources. Since its implementation in FY95, the South Florida Coastal Program has provided funding support and technical assistance for 17 projects

totaling \$2,005,726 in project costs. FWS funding contribution for these projects totaled \$743,745, which represents a 37 percent share. For the past several years, the importance of “on-the-ground” restorative actions has been reflected by the distribution of half of the Coastal Program’s budget toward actual habitat restoration. In FY 2000 the Coastal Program will emphasize increased use of funding for “on-the-ground” habitat restoration.

Land Acquisition (\$30,000,000)

- Archie Carr National Wildlife Refuge (\$6,000,000)

Funding will be used to preserve and protect critical sea turtle nesting habitat from rapidly escalating land development. A 20.5 mile stretch of beach on the Atlantic Ocean, between Melbourne Beach, Florida and Wabasso Beach, Florida represents some of the last remaining natural beach habitat for nesting sea turtles and barrier island ecosystems. This area is recognized as among the most significant nesting areas for loggerhead sea turtles in the world and is among the most significant nesting area for green sea turtles in North America. Continuous growth along the beach front has brought development and the accompanied seawalls, revetments, rip-rap or other measures to mitigate erosion. These measures tend to destroy or significantly degrade the quality of the beach for sea turtle nesting. Preservation and protection of these prime nesting beaches are vital to the stability of the breeding population of sea turtles in the United States.

- Crocodile Lake National Wildlife Refuge (\$500,000)

Funding will be used to protect and preserve critical habitat of the endangered American crocodile and other threatened and endangered species. Crocodile Lake National Wildlife Refuge was established 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 boundary includes 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 including the eastern indigo snake, the bald eagle, the West Indian manatee, the Key Largo woodrat, the Key Largo cottonmouse, and the Shaus swallowtail butterfly. The crocodile has little tolerance to human activities. Wetland areas are less threatened, but severe alteration and damage has occurred. The major threat to this habitat is conversion of the uplands to residential or commercial developments. Acquisition of a trailer park inholding in FY 1998 has helped to minimize this threat.

- Florida Panther National Wildlife Refuge (\$200,000)

The funds will be used to preserve and protect critical habitat for the endangered Florida panther. The unique and environmentally sensitive Fakahatchee Strand area has been designated Critical Habitat for the endangered Florida panther. The Florida panther is one of the most endangered mammals in the Nation, with perhaps only 20 to 30 individuals inhabiting the Big Cypress-Everglades region. The ecosystem within the target boundary is absolutely essential to the survival of the Florida panther. The Fakahatchee Strand is one of the largest remaining wilderness habitats in Florida and supports a wide variety of wildlife including the Florida black bear. The Strand is also known for its abundant and diverse "air" plants. Over 45 species of orchids can be found on these lands, many of which are considered to be rare. The increasing human population in south Florida and the resulting urban expansion is jeopardizing the Strand'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.

- J.N. "Ding" Darling National Wildlife Refuge Complex (\$9,000,000)

The funds will be used to protect and preserve a portion of Sanibel Island's unique subtropical vegetative complex for shore birds, wading birds, and migrating waterfowl and endangered species as well as that of other important habitat in the surrounding vicinity. Acquisitions within the complex will protect a portion of Sanibel Island's unique subtropical habitat for shore birds, wading birds, and migrating waterfowl. The refuge complex, provides habitat for approximately 291 species of birds, more than 50 types of reptiles and amphibians, and at least 32 different mammals. Threatened and endangered species including the southern bald eagle, West Indian manatee, peregrine falcon, indigo snake and gopher tortoise. Several tracts within the acquisition boundary of the Refuges that remain in private ownership may eventually be developed if left unprotected.

- Florida Keys National Wildlife Refuges Complex (\$6,000,000)

Funding will be used to preserve and protect critical habitat for endangered species, notably the endangered key deer. Acquisitions are for the purpose of protecting and maintaining habitat extensively used by the endangered key deer. Preservation of the major habitats contributes to the overall faunal diversity of Florida. No Name Key and Big Pine Key are the two most extensively used keys in the range of the key deer. Several other rare, endangered, and "special emphasis" species are also found here including the white-crowned pigeon, the mangrove cuckoo, the osprey, the brown pelican, the West Indian manatee, and the American alligator.

The greatest threat to key deer habitat in key deer range is habitat modification 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 key 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 on the south half of Big Pine Key is underway. The objective is to assure the continued existence of habitat reserved for deer movement throughout the island. Safe crossings are in need of development at two locations on U.S. Highway 1 (Overseas Highway) where the highway bisects the corridors.

- Lake Wales Ridge National Wildlife Refuge (\$2,000,000)

The Service will use the funds to protect and preserve a nationally significant scrub habitat containing an extensive inventory of threatened and endangered plant species endemic to the region. The Lake Wales Ridge is in south-central Florida. It includes approximately 400,000 acres of which half are historically xeric habitats, primarily scrub and "high pineland" with longleaf pine and wiregrass. At the present time, only about 18,000 acres of unique virgin scrub remain and that figure is steadily shrinking. The need to purchase as many sites as quickly as possible led to cooperation among private, State, and Federal organizations to develop and manage a scrub preserve network, namely The Florida Department of Environmental Protection, the Archbold Biological Station and The Nature Conservancy. The Service portion of this effort, the Lake Wales Ridge National Wildlife Refuge now contains approximately 1,900 acres of scrub habitat along the Lake Wales Ridge in both Highlands and Polk Counties. The objectives of this refuge are: (1) to significantly enhance the recovery of 13 federally listed plant species, (2) to enhance recovery of other federally listed animal species associated with scrub, and (3) to support prelisting recovery of 13 candidate plant species. Through this cooperative network, the two federally threatened plant species could be delisted and six of the federally endangered plant species could be downlisted to threatened status or perhaps even delisted.

- Pelican Island National Wildlife Refuge (\$6,300,000)

The funds will be used to preserve and protect breeding habitat for the endangered wood stork and numerous other migratory birds and lagoon habitat for the endangered manatee and juvenile sea turtles. Pelican Island was established as the Nation's first National Wildlife Refuge in 1903 by President Theodore Roosevelt. Acquisition of the remaining lands would protect lagoonal waters that are utilized as grazing/feeding areas for the endangered West Indian manatee. These lagoons serve as nursery habitat for juvenile sea turtles. The remaining lands include mosquito control impoundments that are rich feeding ponds for colonial water birds, especially those nesting at Pelican Island. Also remaining is a 365 acre boundary expansion area, of mangroves that provide for nesting sites utilized by the endangered wood stork, also provides roosting

sites for white and brown pelicans, anhingas, tropical birds, cormorants, egrets, and herons.

3.6.3 National Park Service (NPS) - \$97,528,000

NPS budget matrix for fiscal year 2001 (FY 1993-2000 included)

(thousands of dollars)

Function/Project name	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Enacted	2000 Enacted	2001 Request
AREA MANAGEMENT									
Big Cypress National Preserve	1,776	2,355	3,024	3,098	3,164	4,032	4,268	4,749	5,245
Biscayne National Park	1,444	1,541	2,002	1,997	2,115	2,392	2,437	3,056	3,463
Dry Tortugas National Park	440	457	506	480	494	759	768	1,028	1,298
Everglades National Park	8,137	10,858	12,142	12,230	12,665	12,544	12,790	13,172	14,295
Task Force Support	0	0	0	0	800	800	800	800	1,319
Subtotal: NPS	11,797	15,211	17,674	17,805	19,238	20,527	21,063	22,805	25,620
SCIENCE: RESEARCH									
Everglades Research	0	0	0	0	7,200	12,000	12,000	7,908	7,908
LAND ACQUISITION									
Big Cypress National Preserve And Everglades National Park **	9,419	6,000	6,986	0	12,000	33,000	20,000	31,300	3,000
Everglades Transition Lands (Asst. - State) ***	0	0	8,587	0	0	46,000	60,000	45,000	47,000
Biscayne National Park	0	0	0	0	0	0	0	600	0
Land Acquisition Administration	0	0	0	0	0	0	0	1,000	2,000
Subtotal: Land	9,419	6,000	15,573	0	12,000	79,000	80,000	77,900	52,000
INFRASTRUCTURE INVESTMENT									
Modified Water Delivery System to ENP	6,942	0	4,478	4,457	2,800	11,900	14,000	12,000	12,000
TOTALS	28,158	21,211**	37,725	22,262	41,238	123,427	127,063	120,613	97,528

* The FY 94 total excludes \$5 million originally provided in the 1994 construction account which was transferred to land acquisition in accordance with FY 1994 Emergency Supplemental Appropriation language.

** FY 1998 land acquisition includes \$3.0 million provided in Title V of FY 1998 Interior Appropriations.

*** FY 2000 Everglades transition lands includes \$35.0 million provided in Title VI of FY 2000 Interior Appropriations.

The National Park Service administers three national parks (Everglades, Biscayne, and Dry Tortugas), and one national preserve (Big Cypress) in South Florida. Together, these sites total more than 2,466,804 acres of the most environmentally challenged areas in the National Park System. In order to provide the leadership and direction required for continued coordination and management of the South Florida ecosystem, the NPS proposes in FY2001: \$25.620 million for area management; \$7.908 million to support research associated with the restoration of the South Florida ecosystem; \$52 million for land acquisition; and \$12 million for continuation of water delivery improvements. The NPS component of the South Florida Restoration Initiative totals \$97,528,000 compared to a FY 2000 enacted level of \$120,613,000 resulting in a reduction of \$23,085,000.

Area Management (\$25,620,000)

- Big Cypress National Preserve (\$5,245,000)

Costs associated with current area management activities support mandated programs such as the protection, inventorying and monitoring of ten threatened and endangered species (Florida Panther, Cape Sable Sparrow, Florida Manatee, etc.) and a large hydrology program that includes restoration of sheet water flow to the Everglades National Park and the Ten Thousand Islands. Additional mandated programs include special uses such as oil exploration/production, 3,000 acres of cattle leases, the largest recreation hunting wildlife management area in south Florida, implementation of the largest recreational off-road vehicle program in the 48 states, and 11 Native American (Seminole and Miccosukee) villages on Preserve lands. The Preserve supports the largest prescribed fire program in the Service; visitor and resources protection of 728,000 acres of predominately backcountry areas; maintenance of 47 employee housing units, two major visitor support facilities, public utility systems, seven primitive campgrounds, and 66 miles of roads and management of 394 known archeological sites. Public visitation is approximately 1 ½ million.

The current natural resources management program includes collection of baseline data in formats that are compatible with interagency regional hydrologic and community/species-based models, non-native plant control, threatened and endangered species, mitigation of visitor impacts, and about five percent are management funds to support direct inventory/monitoring of resources and a geographic information system.

The \$400,000 increase of funding proposed for area management for Big Cypress in FY 2001 will be used to inventory, monitor, and eradicate invasive, non-native vegetation that is displacing native plant communities in the park.

- Biscayne National Park (\$3,463,000)

Costs for area management activities involve operations associated with a marine park that is exposed to intense urban pressures. These include efforts to address impacts to park resources associated with urban sprawl from the metropolitan area of Miami, four solid waste landfills, a nuclear power facility, and the impending conversion of a former Air Force Base to a commercial airport, with attendant issues of industrial runoff, air quality, noise, and adjacent land uses. All of these threats are located along the park's western boundary, and "upstream" with respect to surface- and ground-water flow into the park.

Other area management activities are associated with the protection of 173,000 acres of marine resources, which include the largest living coral reef system in the National Park

Service, eight known terrestrial and 40 known submerged cultural sites, and approximately 20 historic structures and two national historic districts within a boundary that has unlimited access points. Costs also involve the maintenance of three developed islands and one mainland site that include six harbors/docking facilities, two campgrounds, six picnic areas, approximately ten miles of trail, six residences, an environmental education camp and a major visitor center. Visitation in 1999 was approximately 450,000.

Current natural resources management efforts are directed towards coral reef and seagrass protection, water quality monitoring, documentation and mitigation of impacts due to visitor and commercial uses, controlling exotic vegetation, and monitoring at least eight threatened and endangered species. Special efforts are applied to prevent and restore extensive damage to seagrass beds and coral reefs from boat groundings.

The \$348,000 increase of funding proposed for area management for Biscayne in FY 2001 will address the park's greatest needs in coral reef protection, i.e., fisheries management and coral reef restoration.

- Dry Tortugas National Park (\$1,298,000)

Costs are for operations of the 65,000-acre marine and historical national park 70 miles west of Key West. Over the past 14 years visitation at Dry Tortugas has quadrupled, rising from 18,000 visitors in 1984 to 84,109 visitors in 1999. This increased popularity is putting stress on park facilities and is threatening park resources, visitor safety, and the quality of the visitor experience. This raises concerns over visitor impacts on the remote, wilderness qualities of the site. A General Management Plan Amendment and a visitor use and commercial services planning process is underway to identify the types and levels of visitor activities and services that are consistent with protecting park resources and quality visitor experiences. Current funding will continue a preservation and maintenance program for Fort Jefferson.

Efforts will continue this year to document and recommend management strategies for submerged cultural resources. These efforts are supported by park staff, with overall technical direction provided by the NPS Submerged Cultural Resources Unit.

The \$258,000 increase of funding for area management for Dry Tortugas in FY2001 will allow the park to comply with anticipated new management zoning requirements, including carrying capacity indicators and standards. Funding will also be used to support resource education and protection efforts which would provide a link to long-term protection of the coral reef.

- Everglades National Park (\$14,295,000)

Costs for area management reflect continuing demands on operations, natural resources management, planning, maintenance and ecosystem restoration. The park continues to attract significant national and international attention, as a symbol of the effort to save the Everglades, and of the balance being sought in striving to secure South Florida's future. With over 1.5 million acres of fragile wilderness immediately adjacent to some 6 million people, the park has special challenges. Over one and one-half million visitors come each year. The Park has extensive outreach programs to the local community and sustains a large backcountry/wilderness operation.

The park operates major visitor use areas at Flamingo, Shark Valley, Everglades City, and Chekika, and oversees 3 concessions operations. Aging infrastructure requires extensive short-term maintenance, as well as long-term upgrade. The park has 82 miles of surfaced roads, 160 miles of trails, three campgrounds, 48 backcountry campsites, and three fee collection stations. The park has an unprecedented three international treaty designations and is unique in the world. It is home to over 1,000 species of plants, 400 species of birds, and 2 rare orchids, and is a refuge for 14 threatened and endangered species.

Everglades National Park remains the most ecologically threatened park in the nation. Florida Bay is continuing to experience dramatic changes, including striking alterations between hypo- and hyper-salinity, increased turbidity, dramatic seagrass die-offs and persistent and increasing spreads of algae blooms. Exotic plants have and are continuing to replace native plant communities in Everglades National Park and adjacent natural areas.

Shark Slough and eastern Florida Bay have the most extensive network of monitoring networks (hydrological, meteorological, and biological), but even these sites must be tied into a broader program to provide the level of information needed for an understanding of the relation between biotic and abiotic factors in restoration. Current funds primarily cover megafauna and key restoration areas such as Shark Slough, the C-111 basin, and eastern Florida Bay.

The \$800,000 increase of funding for area management for Everglades in FY2001 will be used to establish an ecosystem restoration implementation program; the funding will enable the park to incorporate the results of ongoing monitoring and research, and provide overall program oversight.

- South Florida Ecosystem Restoration Task Force Support (\$1,319,000)

This activity also provides \$1,319,000 to support operations of the South Florida Ecosystem Restoration Task Force which is responsible for coordinating and integrating the activities of the participating Federal, State, and Tribal agencies. The Water Resources Development Act of 1996 directs the task force and working group to

implement procedures to facilitate public participation in the advisory process; to maintain records and make the proceedings of meetings available for public inspection; and to submit biennial reports to Congress, summarizing the activities of the task force, the policies, strategies, projects, and priorities developed or implemented, and the progress made toward the restoration.

Science: Research (\$7,908,000)

Critical Ecosystem Studies Initiative (CESI)

This activity represents the continuation of the Interior Department's 5-year Critical Ecosystem Studies Initiative (CESI). This is the Department's contribution in support of science and research programs focused on meeting the Everglades restoration goals established by the South Florida Ecosystem Restoration Task Force. The Critical Ecosystem Studies Initiative supports work to provide information on the hydrological and ecological requirements of a healthy ecosystem that forms the basis for the first goal of the task force: get the water right, in terms of quality, quantity, timing and distribution. This program supports a science partnership between thirty Federal, State, local and Tribal governments to develop the knowledge base needed for meeting the two other ecosystem restoration goals of the task force: Restore and preserve the natural system; and, transform the built environment. Established in 1997, the CESI program has added significantly to information needed for restoration planning in terms of the hydrological and ecological simulations of water management changes and indicator species habitat requirements. In 1998 CESI program added additional studies to: (1) plan and implement water quality improvement technologies, (2) complete regional scale landscape ecology projects, (3) develop control strategies for exotic species and (4) begin the integration of ecosystem restoration efforts with adjacent land use impacts on the manmade environment of South Florida. The 1999 program added four new tropical areas that include: (1) the completion of an integrated interagency science plan and peer review workshops, (2) expanded landscape scale projects to examine patterns, processes, and regional scale modeling, (3) begin assessments of the influence of contaminants and biogeochemical processes, and (4) the development of improved integration of scientific databases and geo-spatial analyses. Work will be completed on linking macro and micro-scale hydrologic/vegetation models in the southern and eastern mangrove communities and completion of a model of freshwater inflow into eastern Florida Bay. As work is completed, emphasis will shift to the western part of the Everglades and to the broader coastal ecosystems of the east and west coasts of southern Florida.

The Critical Ecosystem Studies Initiatives for Everglades restoration is described below:

Ecosystem Restoration Planning - For the past several years the task force and working group have been working on a strategy to integrate the many Federal, State, and Tribal

ecosystem restoration efforts planned or underway. This integrated strategy emphasizes the interrelationships of the natural and human environment, i.e., restoration is more than replumbing the water systems. It also strives to include the local governments, the business community, and minority communities -- key ecosystem partners with whom coordination had not previously been done. The integrated strategy will document a common vision and goals, facilitate collaborative, coordinated, incentive-based actions to fulfill them, and create a system to track progress. It will serve as the framework for restoration and sustainability for the next 50 years. Primary tasks for FY 2000 include finalizing consensus on the 16 county (systemwide) goals. In addition, a symposium and a series of roundtables of national and Florida experts will be conducted to develop strategies to accomplish restoration. Development of performance measurements will also begin in FY 2000. When complete, this regional integrated strategy will better define the very broad restoration goals and performance measures upon which the Outcome-Based Strategic Plan and subsequent annual performance plans will be based.

Ecosystem Science Planning and Peer Review - A key component of the South Florida Ecosystem Restoration initiative is the regular convening of outside review of the science program and its projects. The South Florida Ecosystem Restoration Task Force, its interagency Working Group and Science Coordination Team (SCT) will continue to review and coordinate scientific investigations and conduct independent peer reviews, workshops and symposiums on South Florida restoration-related topics. Numerous scientific workshops were held in 1998 and 1999 including Ecotoxicity and Risk Management in Restored Ecosystems, Seagrass Modeling Workshop, Sustainable Agriculture and Ecosystem Restoration, Endangered Species Protection such as the Cape Sable Seaside Sparrow Workshop and Review, and an interagency South Florida Ecosystem Restoration Science Forum. Some of the upcoming local workshops for FY 2000 include: Hydrologic and Hydrodynamic Modeling; Populations, Ecological Processes and Landscapes; and the annual Florida Bay Symposium, and a new initiative with the National Academy of Sciences to review the science effort and provide advice to the task force. All local workshops generally include local scientists and resource managers working in the South Florida area, and an external peer review panel. The external panels produce reports which provide guidance to the science coordination team and agency staff in evaluating the quality of their science, and identifying critical monitoring and research needs to support decision-making by local managers and policy makers. The requested funds to support the National Academy of Science panel represent one-third of the requirement and are programmed to be matched by other task force members. The panel will provide quarterly reports to the task force and conduct additional detailed studies as tasked by the task force. This interagency planning and implementation process helps to design the needed long-term monitoring and research studies and the development of predictive models that guide us on the selection of alternative management plans, proposed implementation actions, and the specific engineering design for numerous ecosystem restoration initiatives.

Ecological Modeling - Expansion, Refinement and Applications - Simulation-based planning and decision-making rely on the accuracy and scope of ecological models, particularly the Across Trophic Level Systems Simulation (ATLSS) models, developed by USGS. These models help define the relationship between water levels, water quality, fish, wildlife, and vegetation at the individual, community, and landscape level. Evaluation of water management alternatives can only be accomplished with simulation of the response of key biotic elements of the ecosystem to changes in water delivery amount and timing. Ecological models that are continuing development for on-line implementation in 2001 include: additional species-specific models for the snail kite, the American alligator and crocodile, and the Florida panther, as well as individual and community-based models for freshwater fish and macro-invertebrates, four additional species of wading birds, and several small mammals. In 2001 and beyond, the ecological modeling program will continue to integrate mangrove and coastal, and nearshore communities (including the Florida Keys). Additional research will also be done to refine the linkage between vegetative production and succession, water quality, and hydrological models. The degree to which models can be used to accelerate the adaptive management process will depend on their developed scope and the empirical data provided by other programs [see Landscapes, Ecological Processes/Indicator Species, Coastal Ecosystems, Hydrologic Modeling. Also see USGS, p 92].

Selective High Density Topographic Surveys - Accurate predictions of the hydrologic effects of restoration actions depend on sophisticated hydrologic models, which require highly accurate elevation data. Highly accurate elevation data, provided by the USGS. As specific restoration projects come online, high-resolution site-specific elevation data will be necessary to more closely define ecosystem response to changes in hydrologic conditions, and to assess and refine information on specific restoration actions/works. Standard topographic data and techniques do not offer the degree of resolution needed, and are not accurate enough in the low relief terrain that is characteristic of South Florida. The extensive mangrove zone and inland marshes make logistics and data collection difficult, presenting a unique set of problems in accomplishing data acquisition on a landscape scale. Helicopters are often the only option for data collection. Despite these obstacles, twenty-one quads have been completed with 15 more in progress. Completed quads are concentrated in the east and southeastern Everglades. Modelers need additional data for much of the western Everglades, Big Cypress area, the Greater Everglades systems, and the northern Everglades. Additionally, hydrologic models require higher density of information around certain critical features. Research is underway to test new techniques, which have promise to increase the density of data collection in certain types of Everglades environments.

Ecological Processes and Indicator Species - Research in this program area addresses biological data needed for the ATLSS modeling effort, for development of science-based performance criteria, and for design of species monitoring programs to track restoration

success. Ecological process and indicator species studies in FY 1999 and FY 2000 have focused on the abundance, distribution, and diversity patterns of key plants and animals and their critical habitat factors. Studies have included wading birds, alligators, crocodiles, fish, plants, and invertebrates that characterize the South Florida ecosystem. A significant amount of information is still needed concerning the ecology of mangroves, the responses of key habitats to changes in hydroperiods, response to changes in fire patterns, and the biogeochemistry of soil formation. Site-specific research plots, developed in 1997 and 1998, are being used to establish permanent reference stations to track natural versus man-induced variability. Additional support is also needed to increase the number of permanent reference stations that will play an important role in monitoring changes in plant and animal communities and populations in response to water management changes implemented for restoration purposes. Key ecological processes and indicator species will continue to be the focus in 2001 for assessing the response of the ecosystem to restoration activities that include changes in water quality, amount, timing, and duration of water deliveries. Additional research is necessary to complete current studies, refine the research to more closely link species-specific responses to actual restoration changes, and refine region-wide monitoring programs to accomplish monitoring and assessing of ecological responses on a landscape scale. Much of the species and ecological process data also serves as the foundation for the ATLSS ecological models where specific models of indicator species have been developed and used for assessing alternatives for restoration. Additionally, it will provide a set of science-based performance measures to be used by resource managers and decision-makers during the period of restoration implementation.

Landscape Patterns, Processes, and Modeling - As a complex mosaic of coastal, wetland, and upland habitats, the Everglades ecosystem is dynamic, and animal and plant populations respond differently to disturbance, both natural and man-made (e.g., fire, flood, drought, hurricanes, etc.). The purpose of this program is to link the Everglades mosaic on a landscape scale to permit an evaluation of large-scale environmental changes on interacting populations and communities of plants and animals. The goal is to develop a regional model of ecosystem response to assess changes in water management, application of fire management, and changes in water quality. Landscape scale research and modeling program is integral to the synthesis of ecological, vegetation, trophic level, hydrologic and biogeochemical information into the decision-making process. The purpose of this effort is to give resource managers the tools to evaluate broad spatial trends in habitats and populations, and assess management options and their implications at the broader regional/landscape scale. This program is important in the integration of localized information on vegetation, animal population dynamics, hydrologic regime, and biogeochemical cycles into a comprehensive view of the state of the ecosystem. Recent and newly emerging technologies allow for addressing landscape-scale restoration issues. Region-level assessment of landscape elements, fauna and habitats unique to the Everglades are being initiated in FY 2000 employing the gap analysis technique pioneered by the U.S.

Fish and Wildlife Service. These efforts will continue in FY 2001 as part of the program to give resource managers models and tools to evaluate the results of restoration activities and their implications at the broad regional/landscape scale.

Hydrologic Modeling for Everglades Restoration, Coastal and Estuarine Systems and Contaminants and Biogeochemical Processes in Inland and Coastal Systems - Because of its unique geology and terrain, hydrological processes in the Greater Everglades ecosystem are complex and a key physical factor in shaping its ecology. An understanding of land-water relationships is essential in devising water management plans that will promote restoration of the ecosystem. Studies have been conducted in FY 1997 through FY 2000 with the USGS to develop information on the complex hydrological processes in the southern inland coastal of the southeastern Everglades. Most of the effort focused primarily on refining the knowledge of physical processes in the eastern and southern Everglades regions, providing support to linking physical models being developed in Florida Bay. These include canal and wetland flow and water transport interaction, effects of wind on surface water flows, vegetation resistance to flow, surface water and groundwater interactions, and freshwater discharge to Florida Bay. As research and modeling for the southeastern Everglades is completed, work will shift to the western watershed and western coastal areas. Additional research is also necessary to model the linkage between site-specific plant community responses and existing and restored hydrologic conditions. This research will require the collaborative involvement of biological and physical scientists to not only develop the micro-scale linkage between hydrology and the biota, and develop linkages between local hydrologic changes and response of individual parts. It will also integrate local- and community-scale data into regional-scale information necessary for informed water management in the natural systems.

Water Quality Improvement Technology and Monitoring - This program category merges two categories from previous budget requests. The funds for FY 2001 are requested to continue water quality research and monitoring within the South Florida ecosystem, with a priority to meet needs on Tribal lands. Technology using biological alternatives for water quality enhancement is greatly improving. Since inflows to the Greater Everglades must meet very stringent water quality standards that protect these sensitive, nutrient depleted wetlands, continued monitoring and additional research is necessary to assess as well as enhance existing and emerging water quality improvement technologies. The linkage of macrophyte treatment technology with algal treatment technology may allow for developing a merged algal-periphyton treatment system that may emulate water quality conditions in the southern Everglades. Additional research is necessary to assess management options for increasing efficiency of the macrophyte or combined macrophyte/algal treatment systems. Prior to FY 2000, funds were used to install automatic water quality samplers and to collect water quality and nutrient data on Tribal lands beginning in late 1997. The Seminole Tribe completed the initial design for farm-scale wetland treatment systems, and conducted studies that

describe the total phosphorus loads for sites on their reservation lands, including studies of the water quality impacts on forested wetlands. The Miccosukee Tribe of Indians will use its portion of the FY 2000 funds to conduct studies to support advanced water quality treatment for their lands and acquire equipment to improve their testing program. A small-scale pilot project will be initiated in FY 2000 to assess the efficiency of using a periphyton treatment system in reducing phosphorus concentrations in canal water. Funding in FY 2001 will continue to support water quality studies on forested wetlands, research and small-scale pilot projects to refine construction and operation of biological treatment for improvement of water quality, particularly in support of ongoing Tribal initiatives.

Invasive Species Control Strategy - The spread of invasive exotic plants and animals represents one of the greatest threats to successful South Florida ecosystem restoration. Over 285,000 acres in the park have been adversely affected. Without an integrated plan to control these exotic species, recovery of the protected species may not be possible. Exotic species such as melaleuca, Brazilian pepper, Old World climbing fern and Australian pine are all species that have been shown to degrade the quality of native habitats that are essential habitat for listed species such as the Florida scrub-jay, Florida panther, Key deer and sea turtles. State, Tribal, Federal and local governmental programs are addressing new facets to the invasive control program through biological, chemical or mechanical control mechanisms. A unified strategy for the control of exotic species is essential for the recovery of threatened and endangered species as well as the success of the South Florida restoration. The funding in 2000 will be used to complete the Assessment Methodology System and interagency strategy to improve the integration of the various agency exotic plant control programs. Funding in 2001 will be used to develop the Weed Risk Assessment System to guide the implementation of the strategy and continue research efforts, which will assist the task force in the development of a strategy for the control of exotic animals.

Science Information Synthesis and Dissemination - This program was established to develop a standardized data storage and retrieval system for all of the projects funded under the CESI program. Funding during 2000 will continue the development of this data management system and improve the efficiency of data retrievals by establishing an electronically linked or centralized database. Database development started with physical sciences data because of its relatively simple format. Work in 2001 will continue development of the database access interface for better accessibility to restoration-related data sets from other State and Federal agencies funded outside of CESI. Timely dissemination of the most up-to-date data and information will give all agencies involved in the restoration access to the data needed to make time-sensitive evaluations and decisions regarding restoration activities. It will, for example, provide them with information so that agency actions taken to implement ecosystem restoration plans can be consistent with the recovery needs of threatened and endangered species.

Water Resources Planning, Impact, and Mitigation Assessment - South Florida ecosystem restoration takes place amidst six million current inhabitants, 16 counties, over 250 cities, and ranges over approximately 18,000 square miles. Planning, design, construction, and monitoring of specific projects, particularly those related to the C&SF Restudy, can be more successful through improved site-specific and baseline analyses of current and future resource usage. The National Environmental Policy Act, various Water Resource Development Acts, and State, regional and local processes require social impact assessment and public engagement as restoration projects are formulated. All relevant ecological, cultural, and socio-economic benefits and costs must be assessed as part of this process. Specific research projects relating to environmental economics, demographic and community studies, resource valuation, planning and environmental justice, and public involvement and education, are outlined in a 1999 Action Plan developed by South Florida Ecosystem Restoration Task Force's Science Coordination Team (SCT) and Working Group. The plan emerged as the working document from a 3-day workshop held in February 1998 in Miami, Florida. The requested funds for FY 2001 will be used to support critical items in the plan in partnership with other agency programs. This portion of the action plan is aimed at maximizing mutual benefits of resource and socio-economic factors while improving the overall feasibility, acceptability and implementation of ecosystem restoration projects within the resource, socio-political and economic landscape.

Land Acquisition (\$52,000,000)

- Big Cypress National Preserve (\$3,000,000)

Over 200 Improved tracts containing over 400 acres remaining in the pre-1988 portion ("original") of the National Preserve require acquisition. Acquisition and subsequent removal of these improved properties will contribute to the restoration of the South Florida ecosystem by restoring sheetflows and wetlands in the former fill pads and road, and by removal of hazardous materials, failed septic systems, and non-compatible uses such as commercial operations.

The funds will allow acquisition of 13 improved tracts containing a total of 128 acres in the pre-1988 portion of the National Preserve. These acquisitions, though not occurring in the Big Cypress National Preserve Addition that was established in 1988, will contribute to the restoration of the South Florida ecosystem.

- Everglades Transition Lands (State) (\$47,000,000)

The funds are needed to provide assistance to the State of Florida to purchase land located within the Everglades ecosystem outside of National Park System units. The State is in the process of acquiring high priority areas to implement the Army Corps of Engineers' Comprehensive Everglades Restoration Plan that was submitted to Congress

on July 1, 1999. Ongoing acquisition projects include among others, lands in East Coast Buffer and Water Preserve Areas, which comprise areas directly east and adjacent to existing Water Conservation Areas, the transition lands known as the Rocky Glades and 8.5 square mile area, as well as other high priority areas in the ecosystem necessary to create additional water storage.

The most critical physical constraint in restoring the Everglades is a shortage of areas for water storage. Flood control has been provided in the past 50 years by a network of canals, which quickly drained stormwater and released it to "tide." The system has proven so successful that a region that receives an annual average rainfall of over 50 inches a year is now facing a projected water supply crisis in dry years.

The efforts funded through the FY 2001 budget request will continue this important land acquisition partnership with the State of Florida. This partnership was funded initially through the \$200 million appropriated to the Department as part of the Federal Agriculture Improvement and Reform Act of 1996 (Farm Bill), Public Law 104-127, as well as funds provided through the Land and Water Conservation Fund in FY 1998-2000. Thus, the funds in the budget are necessary to continue this important partnership effort.

The \$47 million requested would be utilized under cost-share terms that require the State of Florida to match the Federal share.

- Land Acquisition Administration (\$2,000,000)

This funding will be used to administer the Federal land acquisition program in South Florida to enable completion of land acquisition and to meet the schedule established by the Department of the Interior.

Infrastructure Investment (\$12,000,000)

- Modified Water Delivery System to Everglades National Park (\$12,000,000)

This project involves construction of modifications to the Central and Southern Florida Project (C&SF) water management system and related operational changes to provide improved water deliveries to Everglades National Park. The original project design includes water control structures to restore more natural hydrologic conditions within Everglades National Park and a flood mitigation system.

Planned features will be implemented by the U.S. Army Corps of Engineers (Corps) with the concurrence of the National Park Service and the non-Federal sponsor, the South Florida Water Management District (SFWMD). Consistent with the provisions of the Everglades National Park Protection and Expansion Act of 1989 (1989 Act), project construction will be Federally funded, and in accordance with the USACE General

Design Memorandum (GDM) for Modified Water Deliveries to Everglades National Park, the Federal Government will provide 75% of operating and maintenance costs, with the South Florida Water Management District assuming responsibility for the remaining 25%.

Project Components

The authorized project consists of structural features with the intended purpose of restoring conveyance between water conservation areas north of Everglades National Park and the Shark River Slough within the park. The original authorization also specified the construction of flood mitigation features for the 8.5 Square Mile Area (a residential area adjacent to the park expansion boundary in East Everglades). Based on recent decisions and additional information, the Modified Water Deliveries Project design is being altered to accommodate an improved design. The project consists of four components: Conveyance, 8.5 Square Mile Area, Tamiami Trail, and Seepage Control.

1. The original 1992 design specified water control structures through the L-67 A and C levees and canals. To make the design more compatible with the C&SF Restudy features as well as allow for the conveyance of larger volumes of water, the following features have been substituted for the original design: a) weirs in the L-67 A levee and elimination of the L-67 C canal and levee for the purpose of improving the discharge of water from Water Conservation Area 3A (WCA3A) to Water Conservation Area 3B (WCA3B); (b) additional weirs in the L-29 levee to augment the existing S-355 A&B for discharge of water from WCA3B into Northeast Shark River Slough and; (c) removal of the existing levee and canal that runs along part of the park's original eastern boundary and cuts across the center of Shark River Slough (L-67 extension canal and levee).
2. The current authorized components of the 8.5 Square Mile Area include the construction of a flood mitigation canal and levee extending along the northern and western perimeters of the area. Two pump stations were also specified to transfer the seepage water from this system to Northeast Shark Slough. In April 1999, the local sponsor (SFWMD) requested the COE to conduct a comprehensive review of a full array of alternatives for the 8.5 Square Mile Area. Nine alternatives are under examination including the original design, the creation of a buffer between the park and developed areas, as well as full acquisition of the area. A Draft SEIS was submitted to the local sponsor in April 2000 and a final Record of Decision by August 2000.
3. The Tamiami Trail, under the authorized project, would be raised over only a short distance to accommodate the flows based on the design of the original conveyance features. Based on improved hydrological information and the increased volumes

associated with the revised conveyance features, it is now anticipated that additional modifications will be required to accommodate the anticipated increased volumes of water. The COE, FDOT, and the NPS are in the process of evaluating several alternatives to accommodate the increased stage and volumes of water associated with the improved conveyance features.

4. Project features associated with items (1) – (3) have the potential to increase seepage losses from the restored wetland areas into both the L-30 and L-31N canals. Seepage control structures were incorporated in the original design as part of the design of pump stations S-356 and S-357. As part of the Restudy effort, design features have been identified to control seepage from both Water Conservation Area 3B and from Northeast Shark Slough. Although these features were evaluated for inclusion in the Modified Water Deliveries Project, seepage control for the L-31N canal will be limited to the original S-356 structure.

In addition to the reevaluation of the project features during FY 2000, work will continue on the Experimental Program of Water Deliveries, acquisition of land in the park expansion area, and the completion of a post-authorization change report for the Tamiami Trail, including required National Environmental Policy Act (NEPA) documentation for each of the modifications specified above.

Research conducted in Everglades National Park has documented substantial declines in the natural resources of the area associated with the impacts of water management. Since the park is located at the downstream terminus of a larger water management system, water supply to the park is often in conflict with the other functions of the system such as water supply and flood control. The operation of the overall C&SF Project to accomplish its multi-objective mandates has impacted the distribution, timing, volumes, and quality of water supplied to the park. The Modified Water Deliveries Project will continue to fund some of the critically needed modifications to the existing water management system. If unfunded, the damaging effects will continue to contribute to the decline of the ecosystem, including potential extinction of endangered species such as the Cape Sable Sparrow and Wood Stork.

3.6.4 U. S. Geological Survey (USGS) - \$8,560,000

USGS budget matrix for fiscal year 2001 (FY1993-2000 included)
(thousands of dollars)

Function/Project name	1993 Actual	1994 Actual	1995 Actual	1996 Actual	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 PB
INFORMATION MANAGEMENT/ASSESSMENT									
Earth Science	2,000	2,000	4,325	5,852	440	440	1,031	1,612	1,612
SCIENCE: MONITORING									
Earth Science Monitoring	0	0	777	2,290	1,000	1,000	584	515	515
SCIENCE: RESEARCH									
Earth Science	0	0	698	1,858	6,007	6,007	5,706	4,190	4,190
Biological Science	0	654	1,154	654	1,154	1,154	1,281	2,243	2,243
Subtotal: USGS	0	654	1,852	2,512	7,161	7,161	6,987	6,433	6,433
TOTALS	2,000	2,654	6,954	10,654	8,601	8,601	8,602	8,560	8,560

The U.S. Geological Survey is the nation's primary provider of earth and biological science information on natural hazards, the environment, water, minerals, and energy resources. It is the Federal government's principal civilian map-making agency and the primary source of its data on the quality and quantity of the nation's water and biological resources. The maps, reports, and information produced by the USGS help others meet their needs to manage, develop, protect, and conserve America's water, energy, mineral, land, and biological resources.

The USGS program of integrated science began in 1995 and 1996 with major input from Federal and State agencies in Florida. The USGS works through the South Florida Ecosystem Restoration Task Force, its associated work groups, and the Science Coordination team to ensure that its science is relevant to the broad stakeholder community and to communicate scientific information to managers and collaborators. Implementation of the Restudy requires information on how the natural environment responds to manipulation so that managers can ensure that their strategies are effective. Scientists must provide monitoring programs and predictive models to meet these needs, and USGS research scientists are working closely with State and Federal partner agencies to develop and use these tools. For example, USGS ecosystem and hydrologic models were used to evaluate the effects on species and habitats of the Central and Southern Florida Project restudy alternatives under consideration by the Corps of Engineers. Periodic adjustment and refinement of plans and management schemes will be necessary, but possible only if performance measures are defined, monitoring tools are developed, a monitoring strategy is in place, and models are adequate to guide future change.

Existing Program

The USGS program encompasses data, ecological and hydrologic processes and models, information integration and synthesis, and tools that make integrated science available

to Federal and State agencies and the public. USGS collects data on hydrology, biology, geology, and other land characteristics. It uses these data to describe the biological, geochemical, hydrologic, and ecological processes that drive changes in the ecosystem. The USGS program covers many of the identified science requirements for the Everglades and Florida Bay. Much of the research on hydrologic, cartographic, geologic, biological and ecological issues relevant to DOI's research role in South Florida ecosystem restoration reflects a strong collaborative program between the USGS and the NPS through DOI's Critical Ecosystems Studies Initiative (CESI). USGS scientists are integral in the research and critical to managing the CESI program.

The USGS program is designed to enable managers to predict the impacts of restoration actions. In addition to models, predictive ability requires information on the characteristics of the original system, the achievable targets and indicators of restoration, and the likely biological responses of the system to each proposed restoration alternative. Predictive capability requires extensive understanding of the relations between and among the biological, physical and chemical components of the ecosystem. Comprehensive regional scale monitoring information is equally important to track for restoration trends.

FY 2001 Program Thrusts

As the implementation phase of the restudy proceeds, the USGS program in FY 2001 will expand in several areas. Regional Monitoring and research related to implementation of the restudy will be augmented to address critical information gaps relevant to key components of the Restudy's Conceptual Ecosystem Models and Performance Measures. Monitoring and research conducted by the multiple federal, state, tribal and local agencies will be coordinated through the CERP's Adaptive Assessment Team, coupled with coordination by the Science Coordination Team. USGS will become more heavily involved in developing adaptive performance measures and new evaluation tools. In partnership with the US Army Corps of Engineers, USGS will provide information for evaluation and implementation of Aquifer Storage and Recovery (ASR) facilities. Hydrologic and ecological models will be expanded to provide better predictive capabilities in critical geographic locations such as Everglades National Park.

Information Management and Assessment (\$1,612,000)

South Florida Information Access (SOFIA) includes a comprehensive internet site (<http://sofia.usgs.gov/>), a database of all USGS data relevant to South Florida restoration, and USGS activities related to coordination and the South Florida Restoration Science Forum. The SOFIA site provides scientific information and data in formats that are appropriate to managers and scientists. The Internet site also helps to keep the general public informed of the scientific rationale behind the restoration. Real-time data on surface water, groundwater, weather, and the sea surface are available on

the Internet so that managers and engineers can see the current hydrologic effects of water projects and wildlife managers can keep tabs on habitat. In FY 2001, SOFIA will continue to expand GIS capabilities in collaboration with the USGS GEODE Database. The SOFIA Internet site will sustain and update topical presentations from the South Florida Restoration Science Forum.

Science: Monitoring (\$515,000)

USGS monitors water and/or associated nutrients flowing into Florida Bay, Biscayne Bay, and the southwest coast, and measures salinity within the Bay. These data are used in Florida Bay circulation models and Everglades hydrologic models under development by the Corps, the SFWMD, and the NPS. These models estimate salinity and other water quality conditions resulting from various restoration scenarios. The Corps, NPS, National Oceanic and Atmospheric Administration, and other resource managers need predictive models to determine the location, circulation, and effects of nutrients and toxicants entering Florida Bay, and to better understanding of relations between freshwater inflow and Bay salinity. Temperature and salinity data collected in the Bay have been compared with estimates from the recent past to help set restoration targets. The USGS flow and nutrient measurements will help define present conditions as a benchmark to document changes after restoration activities decrease freshwater flows into the Bay.

Science: Research (\$6,433,000)

● Earth Science (\$4,190,000)

The USGS is providing data, information and model components to improve existing and planned models of water flow and water quality in the Everglades and Florida Bay. Information collected for models of the Everglades, and USGS model subcomponents include: aerial variation in evapotranspiration (data and model), vegetative resistance to flow (data and model), ground-water flow information, remote sensing interpretations, and an open channel and wetlands flow model. USGS application of advanced, classified remote sensing analysis will provide for the extrapolation of data on vegetative roughness, enabling point data to be used in aerially distributed models. The USGS Southern Inland Coastal System (SICS) Model will be expanded to cover the land area within Everglades National Park and renamed the Tides and Inflows Model (TIME). The US Army Corps of Engineers used the results from the SICS model and associated studies to develop their Florida Bay hydrodynamic model that is used to predict the effect of Corps projects on Florida Bay.

Historic Conditions

The USGS is providing information about historic hydrological conditions. Sedimentation rates, paleoecology and mineralogy determined from shallow cores reveal the history of flooding and drought in the recent past and are critical to the efforts of the Corps, ENP, and the SFWMD. This information is used to evaluate how well models simulate historical conditions, and to compare projected targets and variability to natural hydrologic variability of the environments of South Florida. Ecosystem history studies have revealed that seagrasses were not such a dominant part of the bottom community in Florida Bay when Bays had lower salinity. Studies at many of the existing sites have been completed, and focus is turning to Shark Slough and the tree islands. Tree islands are an important rookery area that is critical nesting habitat for many neotropical migratory birds, white ibis, little blue heron and other resident bird populations. In addition, tree islands serve as refuge habitat during high water. In areas where the natural flow is compromised, tree islands have degraded, and valuable avian habitat has been lost. Tree island research will help managers understand how to reestablish this habitat.

USGS research on the sources, cycling and geochemistry of nutrients, mercury, and related chemicals helps management agencies set restoration and water quality targets, establish best management practices and an operating schedule for nutrient removal facilities, and determine the best strategies for reducing methylmercury in South Florida fisheries. The synthesis of mercury and geochemistry will provide data and quantitative relationships for the EPA model. The model will help water managers predict the potential for management actions to exacerbate the conversion of mercury to its most toxic and bioaccumulative [methyl mercury] form.

Estuarine and Marine Earth Science Research

USGS is also changing the emphasis in Florida Bay. In keeping with its shift toward monitoring, the USGS is developing a monitoring index of bay productivity, and a tool for using molluscs as an indicator of bay salinity. Several existing projects on Florida Bay will be completed. For example, a project on sediment production and transport within Florida Bay shows that much of the internal transport and deposition is influenced by major coastal storms with external input to Florida Bay, especially near the Everglades coast, being primarily influenced surge events of freshwater inflow. In contrast, however, another USGS study indicates that since external freshwater inflows from the Everglades coast has been altered in recent history, that much of the Bay's current biogeochemical cycling has be internalized.

Aquifer Storage and Recovery (ASR)

The restudy identified the ASR as a critical component of Everglades restoration. Additional storage will allow water managers to better control water levels thereby providing regional environmental and water-supply benefits for all of south Florida. When high rainfall events cause water levels to rise, water can be injected into the aquifer for use at a later time when the lake levels are low. In collaboration with the US Army Corps of Engineers, USGS will provide information required to evaluate and implement ASR technology.

- Biological Science (\$2,243,000)

Ecological Modeling -Refinement and Application

The cornerstone of the ecological modeling effort is the Across Trophic Level System Simulation (ATLSS), a series of linked models that permit prediction of the effects of various restoration scenarios on biological resources of concern. ATLSS relies on landscape and hydrological models, and links these to ecological models for producer and consumer organisms, and populations of special emphasis, including wading birds, crocodilians, Florida panthers, and other species with diminished populations. ATLSS has been used already in the evaluation of proposed water management plans (the Corps of Engineers "Restudy") and will be used in the future to analyze the effectiveness of restoration actions and to recommend modifications and improvements. As ATLSS components are developed for the freshwater systems of the Everglades, emphasis will shift to extending them to the southwest Florida/Big Cypress region, the mangrove zones, and coral reef systems of the Florida Keys. (See also NPS, p 80).

Ecological Processes and Indicator Species

Selected species of animals and plant communities either have special ecological roles in the South Florida landscape, or are sensitive indicators of the overall condition of the environment. Research provides improved understanding of the relationships among biological components of the South Florida ecosystem and identifies those components that may be sensitive indicators of restoration success. A growing base of knowledge on these species and communities will ultimately permit incorporation into the suite of ATLSS models. The Cape Sable seaside sparrow, the wood stork, and the American crocodile are the focal species. Information collected will also accelerate recovery actions for the Florida grasshopper sparrow, Audubon's crested caracara, the lower keys marsh rabbit, and other threatened and endangered plant and animal species.

Landscape Patterns, Processes, and Modeling

Free-living animal populations and the plant communities upon which they depend are known to have been affected historically by a complex mosaic of driving forces, including fires, floods, droughts, and hurricanes. Acting across the landscape, these dynamic events affected living resources in different ways. For example, some populations were favored in wet years while others were favored in dry years. Effects varied locally and across broader portions of the landscape. Understanding these temporal and spatial effects will be essential to developing a long-term restoration program able to maintain a variety of different living resources with different needs. Research will seek to link large-scale population dynamics of living resources with management practices, including water delivery, fire, etc. Field-verified remote-sensing information is a valuable tool for developing the vegetation data for models. The goal is to provide resource managers with models and tools to develop optimal management prescriptions.

Florida Bay and the Great Coastal Ecosystems Complex

Florida Bay, the western mangrove/coastal system, Biscayne Bay, and the Florida Keys are coastal and marine systems at the downstream end of the South Florida drainage systems. The distribution, amounts, and quality of freshwater entering these systems will change as a result of restoration activities in more upland systems. These coastal areas are important for fisheries and include the largest coral reef systems in North America. Studies now underway are documenting their degraded pre-restoration conditions, and will provide information that will ultimately be useful in predictive modeling under an expanded ATLSS program.

Contaminants and Biogeochemical Processes in Inland and Coastal Systems

The greater Everglades system is contaminated from inputs of pesticides, potential endocrine disruptors, and most importantly by mercury, which arises from unknown sources. Research on the mobilization, storage, and transport of mercury in non-living components of the system has made important progress for understanding factors that influence mercury bioavailability. These studies have incorporated living resources. Studies on the effect(s) of contaminants on the well-being and persistence of populations, and ultimately on the success of the restoration as a whole are still needed.

3.7 STATE OF FLORIDA EVERGLADES RESTORATION AND PROTECTION PROGRAM: \$589,981,436

On January 18, 2000, in recognition of the need to take decisive action to further protect and restore the Everglades ecosystem, the State of Florida embarked upon an unprecedented plan to finance Florida's cost-share for implementation of the Comprehensive Everglades Restoration Plan, forwarded to Congress by the U.S. Army Corps of Engineers in July 1999. The State's plan includes a commitment of more than \$100 million annually to be matched by an additional \$100 million from South Florida resources for a total of \$200 million each year. The financing plan creates a unique Everglades trust fund to build reserves for restoration and calls for a new, stronger state/federal partnership. This funding proposal, establishment of the Everglades Restoration Reserve Fund and the call for a new partnership with the federal government, are aimed at achieving a vision for America's Everglades that restores the unique national treasure, protects the endangered or protected species in the Everglades ecosystem, preserves the quality of life, achieves a balance between land and water and protects coastal resources. Legislation to fund the State of Florida's share of the costs to implement the Comprehensive Everglades Restoration Plan and create the Everglades Restoration Trust Fund was recently filed for consideration by the 2000 Florida Legislature.

Since its beginning on August 8, 1983, the Governor's Everglades protection and restoration program has sought to have the Everglades look and function more as it did in 1900 than in 1983. The program is guided by the principle that although the Everglades cannot be fully restored to its original condition, natural functions and values can be revitalized while maintaining an economically strong South Florida.

Recently revised, this comprehensive ecosystem restoration and protection program seeks to 1). restore and protect the Kissimmee River-Lake Okeechobee-Big Cypress/Ten Thousand Islands-Everglades/Florida Bay Ecosystem and protect the estimated 68 endangered and threatened species that depend on the Everglades system for survival; 2). protect and enhance the water resources of South Florida; 3). ensure effective implementation of the 1994 Florida Everglades Forever Act; 4). reduce the flow of polluted water into the Everglades by establishing the numeric standard for phosphorous levels and accelerating research, demonstration and implementation of additional cleanup technologies and methods; 5). ensure that citizen's property rights are protected as Everglades restoration is undertaken and that citizens participate in decision-making; and, 6). ensure that taxpayers' dollars are not wasted. The Governor's Office and the Departments of Agriculture, Community Affairs, Environmental Protection and Transportation, the Florida Fish and Wildlife Conservation Commission and the South Florida Water Management District have been working and will continue to work together with local and Federal agencies to implement these objectives.

The progress toward reaching these objectives is substantial and has included: enactment of Federal and state legislation to protect the ecosystem; acquisition of hundreds of thousands of acres of environmental lands and the construction and operation of some of the World's largest flow-through filtration marshes. New water control features are being constructed to improve fresh water flows to Everglades National Park and Florida Bay; urban stormwater runoff is being treated; parks, preserves and refuges have been created or expanded and endangered plants and animals are being protected. Florida's agencies have worked with Federal counterparts to develop knowledge and understanding of the Everglades ecosystem. In cooperation with Federal agencies and other interests, Florida has recommended plans for restoring the Everglades and is moving forward to implement those plans.

The state contribution to Everglades protection and restoration begins with land acquisition. Florida has acquired approximately 51,115 acres in the Big Cypress National Preserve Addition, pursuant to provisions of the Federal legislation authorizing the Addition which require the state to share 20 percent of the costs of the 146,130 acre area. The State is also acquiring land within the state designated " Big Cypress Area of Critical State Concern" and other parts of Southwest Florida to protect the Big Cypress Swamp and the Ten Thousand islands estuary. The State of Florida is also participating in acquiring the 109,400-acre Everglades National Park Expansion area. In October 1994, Florida conveyed title to nearly 43,000 acres of land in the Park expansion area. The South Florida Water Management District and the State will continue to acquire land adjacent to the Park to help improve fresh water flows into the Park and Florida Bay

As is illustrated in Table 3 in Section 2 of this Cross-Cut Budget document, Florida State agencies including South Florida Water Management District (SFWMD) have appropriated approximately \$2.8 billion for Everglades ecosystem protection and restoration since August 1983 (beginning of the Governor's "Save Our Everglades" program).

Expenditures of \$236.02 million for the period August 1983 to June 1993 do not include state or SFWMD costs for Everglades National Park, Big Cypress National Preserve or other land acquisition costs incurred before August 1983, nor administrative/management, land management, routine regulatory, and operation and maintenance costs. The costs do include land acquisition and project design, permitting and construction, and research/monitoring costs for the period.

Expenditures for FY 94 through 97 do not include certain administrative, management, regulatory and operation and maintenance costs. SFWMD expenditures for FY 94 & 95 were estimated based on District expenditure history for Everglades protection and restoration and for all years do not include Federal funds.

Florida State Agency contributions to Everglade's protection and restoration for state fiscal year 2000-01 are as follows:

3.7.1 Florida Department of Agriculture and Consumer Services (DACS) - \$24,700,000

The Florida Department of Agriculture and Consumer Services, through the Office of Agricultural Water Policy, addresses water related issues relating to agriculture and ecosystem restoration. The Office also has responsibility for the Department's agriculture non-point source program that encompasses Lake Okeechobee and other agricultural areas in South Florida. The Department's Division of Forestry has responsibility for the management of Picayune State Forest (Golden Gate Estates and Belle Meade) in southeast Florida and is the lead agency dealing with wildfire suppression, prevention and forest protection in south Florida.

The following expenditure are planned by the DACS for the state fiscal year 2000-2001:

(thousands of dollars)	
South Florida restoration coordination and planning:	2,100
Agriculture non-point source program	15,500
State Forest land management:	400
Wildlands and forest protection:	6,700
Total DACS	\$24,700

3.7.2 Florida Department of Community Affairs (DCA) - \$31,830,000

The Department of Community Affairs' mission is to create livable and sustainable communities that are safe, prosperous and energy efficient., DCA also helps manage growth by encouraging avoidance of sensitive natural areas and wise land use planning (e.g. reducing urban sprawl). In South Florida, DCA is promoting the revitalization of the southeastern urban corridor as a means of protecting the Everglades ecosystem. The Department accomplishes this through representation on the South Florida Ecosystem Restoration Working Group and the Governor's Commission for the Everglades.

To date, DCA has provided almost \$2.5 million for Eastward Ho! implementation activities promoting infill development and redevelopment in the urban corridor to slow urban sprawl toward the Everglades. In FY 98-99 the Department allocated \$1.5 million over a two year period for sustainable South Florida-related activities. In January of 1997, DCA designated five communities to take part in a Sustainable Communities Demonstration program. Three of the five communities are in South Florida and are working with DCA to develop and implement strategic plans and incentives for sustainable development. Since that time, with DCA's assistance, 36

other communities have formed, a Florida Sustainable Communities Network. DCA's FY 99-00 budget includes approximately \$500,000 for the sustainable communities initiative.

DCA's comprehensive planning activities in South Florida also contribute to ecosystem restoration by promoting sound land use planning. The Department administers two Areas of Critical State Concern in South Florida: one in the Big Cypress Swamp and the other in the Florida Keys. This program allows DCA to assist local governments in planning and land use regulation decisions. In FY 99-00, DCA will contribute to the following initiatives in the Florida Keys: the Florida Keys Carrying Capacity Study, Wastewater Master Plan, and the Cesspit Replacement Program. For FY 2000-01, the DCA has requested funds to continue the Cesspit Replacement Program, and to contribute to the Monroe County Stormwater Master Plan, the Big Pine Key and No Name Key Habitat Conservation Plan, Monroe County comprehensive planning and a water quality monitoring.

The Florida Coastal Management Program (FCMP) aims to protect and manage ocean resources, promote hazard mitigation, revitalize working waterfronts, and improve access to coastal resources. In 1999-00 the FCMP will contribute \$29,000 in NOAA funded, coastal Zone Management grants directly related to ecosystem restoration and sustainable development in South Florida. The Florida Communities Trust program assists local governments in implementing their outdoor recreation and open space, conservation, and coastal management component of the local government comprehensive plans through grant awards for acquisition of recreation, conservation, and open space lands that further these comprehensive plan directives.

The following expenditures are planned by DCA for fiscal year 1999-00:

(thousands of dollars)	
Sustainable South Florida Projects	500
Areas of Critical State Concern	1,974
Comprehensive Planning	680
Florida Coastal Management Program	29,000
DCA Total:	\$31,830

3.7.3 Florida Department of Environmental Protection (DEP) - \$203,481,514

The Department of Environmental Protection is Florida's principal environmental protection agency. The Department protects and monitors air and water quality, acquires and manages land important to ecosystem protection. It regulates air emissions, dredging and filling activities, mining and oil and gas production, development and exploration, prevents pollution and implements recycling programs,

regulates solid and hazardous waste, operates and manages the State Park System; and protects and manages coastal marine, and estuarine resources.

Department priorities in South Florida are the implementation of the Everglades Forever Act (in cooperation with the South Florida Water Management District), ecosystem restoration project management, planning and coordination, research and monitoring, aquatic plant control, and land acquisition and management. The department is also represented on the South Florida Ecosystem Task Force and Working Group, the Governor's Commission for the Everglades, and the Recover Team for the Comprehensive Everglades Restoration Plan.

The Department's budget for FY-2000-2001 has not been approved as of this date, but expenditures of approximately \$203,481,514 for South Florida ecosystem restoration, protection, land acquisition and management, planning, research and monitoring activities are planned.

Department of Environmental Protection FY 1999-2000 Budget for South Florida Ecosystem Restoration and Protection

Category	FY 1999-2000
Land Acquisition	\$177,900,000
Aquatic and Upland Exotic/Invasive Plant Control	\$8,750,000
State Park Operations and Management	\$10,004,164
Everglades Technical Review (Everglades Forever Act)	\$415,000
Ecosystem Projects	\$242,095
Mercury Research and Monitoring	\$1,550,000
Southeast Florida District Office	\$742,058
South Florida District Office	\$1,011,620
Central Florida District Office	\$15,000
Coastal and Aquatic Managed Areas	\$2,851,577
Total:	\$203,481,514

3.7.4 Florida Fish and Wildlife Conservation Commission (FWC) - [Dollar figure unavailable]

The Florida Fish and Wildlife Conservation Commission (FWC) is the state agency responsible for the conservation of fish and wildlife. It was formed in July 1999 through the merging of the Florida Game and Fresh Water Fish Commission and Florida Marine Fisheries Commission. The new FWC is directed by the Florida Constitution to exercise the regulatory and executive powers of the state with respect to wild animal life, and freshwater aquatic life, and marine life. Funding comes from general revenue appropriated by the Florida Legislature, hunting and fishing licenses, and several trust

funds. The FWC is comprised of seven members appointed by the Governor and confirmed by the State Senate. Approximately 1,700 staff implement the FWC programs, including land acquisition and management; regulation of hunting and fishing; and research and monitoring of fish, game, and nongame species. The FWC provides technical assistance and interagency coordination for activities affecting fish and wildlife habitat in the state.

The FWC manages more than 1.6 million acres of land in the Kissimmee Lake Okeechobee Everglades watershed, some 766,000 acres of which are in the historic Everglades River of Grass. These lands are managed to support the natural diversity of fish and wildlife species typical of South Florida, including over 30 listed species. The FWC implements research and monitoring for both saltwater and freshwater fisheries; research and monitoring of listed species, including the Florida panther, Florida grasshopper sparrow, Florida black bear, West Indian manatee, sea turtles, and wading bird rookeries; monitoring of mercury in fish; and the reintroduction of the whooping crane. The law enforcement programs address lands managed by the FWC, and provide protection for private lands. Pursuant to 1996 legislative action, the FWC has directed increased resources to Everglades restoration activities in cooperation with Federal, state, regional, and local agencies.

[Due to the fact that the FWC was formed within the past year, a comprehensive compilation of revenues dedicated to research, monitoring, management, and coordination on issues dealing with restoration of south Florida was not available at the time of printing.]

3.7.5 Florida Department of Transportation (DOT) - \$16,104,000

The Florida Department of Transportation (DOT) provides safe, aesthetically pleasing transportation for Florida's citizens, visitors and commerce. The DOT is nationally recognized for its aesthetically pleasing highways. The department assists local and regional government agencies with funding, planning, design, mapping, transportation research and technical assistance. It also plans and implements programs for energy efficient transit, public transit, transportation programs for the disadvantaged and handicapped and assists agencies in planning safe bicycle routes.

The department is among the top agencies of its type in the nation for protecting wildlife and redesigning roadways to restore natural water flow to overdrained areas. It also leads the nation in providing funding and technical assistance to plan and implement greenways and trails. Many of these bellwether programs have been implemented in South Florida, particularly the Big Cypress Swamp (Interstate-75/Alligator Alley), and Tamiami Trail.

The DOT provided \$3,456,200 during FY1999/00 for designing wildlife crossings for the Florida key deer, support of the Key's Carrying Capacity Study, support of the Florida

key deer Conservation Plan, location and maintenance of Tamiami Trail culverts and various mitigation/maintenance projects in south Florida. The department's planned expenditures for south Florida ecosystem restoration related programs in fiscal year 2000/2001 are:

(thousands of dollars)	
Tamiami Trail culverts design and construction	10,400
Key Deer Habitat Conservation Plan Study contribution	200
Exotic plant control along I-75 Miami/Dade County	450
Exotic removal in the South Florida ecosystem along transportation rights-of-way	1,100
Key Deer Crossing Construction	3,600
South Florida Mitigation projects	154
South Florida mitigation projects-maintenance/monitoring	200
Total DOT:	\$16,104

3.7.6 Governor's Commission for the Everglades (GCE) (\$300,000)

The Governor's Commission for a Sustainable South Florida (GCSSF) was established by Executive Order in March 1994 to improve coordination of activities affecting the Everglades ecosystem, recommend actions for the restoration and protection of the ecosystem and recommend strategies to ensure the South Florida economy is based on sustainable economic activities that can coexist with a healthy Everglades. The Commission was intended to enhance coordination among private and public organizations and has recommended action steps and conceptual plans to restore, better manage, preserve and protect the Everglades ecosystem and the South Florida economy.

The Commission produced an Initial Report (October 1995), an Everglades Water Budget (July 1995), a report on Aquifer Storage and Recovery (May 1996), recommendations for Farm Bill expenditures (May 1996), a Conceptual Plan for Everglades Restoration (August 1996), an Eastward Ho! Report (July 1996), recommendations on the South Florida Ecosystem Restoration Working Group Critical Restoration Projects Lists (May 1997), a report on Energy Issues (August 1997), a Seepage Management Report (September 1997), an Interim Report on the C&SF Project Restudy (July 1998), a Full Cost Accounting Report (December 1998), and a Restudy Plan Report (January 1999), a report on Funding the Restudy of the Central and Southern Florida Project (March 1999), a report on the Draft Implementation Plan for the C&SF Project Restudy (March 1999), and Planning 2000: A Conceptual Plan to Achieve Sustainable Communities in South Florida. The GCSSF completed its work in June 1999.

On June 24, 1999, Governor Bush signed Executive Order 99-144, establishing the Governor's Commission for the Everglades (GCE) to replace the GCSSF. The role of the GCE is to serve as an advisory body to the South Florida Ecosystem Restoration Task Force, serves as a forum for improving decision-making and public participation in

Everglades restoration and South Florida economic and community sustainability, evaluate and make recommendations on the funding and implementation of the Comprehensive Everglades Restoration Plan, consider the needs of rural and low income communities as Everglades restoration progresses, and recommend actions to better integrate land, water, and transportation planning for the South Florida region.

Commission Members and the Chair are appointed by the Governor to represent state, regional, local and tribal government, business, agriculture, and environmental and civic organizations. The Executive Director of the South Florida Ecosystem Restoration Task Force and the Chairman of the Working Group serve as non-voting, ex-officio members.

Planned projects for the coming year focus on providing review, evaluation, and recommendations for implementation and funding of the Comprehensive Everglades Restoration Plan. Work plan items include: serving as an advisory body to the South Florida Ecosystem Restoration Task Force, identifying relevant issues in need of discussion and resolution and attempting to resolve any conflict, assisting the Task Force and Working group in improving public involvement and outreach efforts regarding Everglades restoration, evaluating critical water management issues and preparing recommendations for their resolution, making recommendations on how to better integrate rural and/or low-income community concerns with restoration efforts, and better integrating land use, water use and transportation planning. Other activities the Commission may deal with include: recommending actions for developing a prototype rural project to demonstrate the application of full benefit/cost assessment for a selected Restudy component; making recommendations for enhancing sustainable and environmentally compatible development that sustains the regional economy and supports a healthy everglades ecosystem; making recommendations for creating sustainable agriculture programs compatible with ecosystem restoration and protection; and making recommendations for allocating natural resources to support natural and human systems.

Planned expenditures for the Commission for fiscal year 2000/01 from DOT, DEP, DCA, (including a NOAA Grant), and DACS are expected to be approximately \$300,000. This amount is not included in the grand total for the State of Florida.

3.7.7 South Florida Water Management District (SFWMD) \$338,565,922

The South Florida Water Management District (SFWMD) works closely with the Florida Department of Environmental Protection (FDEP) and other state and federal agencies, and tribal governments, stakeholders and special interest groups to construct projects and implement programs to restore and protect the South Florida ecosystem. The Florida Legislature also requires the SFWMD to manage water and related land

resources; promote conservation, development and use of surface and ground water for reasonable beneficial uses; manage dams, impoundments, and other "Works of the District" to provide water storage; prevent flood and soil erosion damage; maintain navigable rivers and harbors; and promote outdoor recreation on publicly owned lands.

Currently, the SFWMD's priority ecosystem restoration and protection projects include:

- (1) Development and execution of Pre-construction Engineering and Design (PED) Agreement with the USACE, followed by planning, engineering and design on projects included in the Comprehensive Everglades Restoration Plan. Work is also continuing on feasibility studies for the Indian River Lagoon, Water Preserve Areas, and Southwest Florida;
- (2) Restoration of the Kissimmee River and floodplain (in cooperation with the USACE) through land acquisition, construction (backfilling 22 miles of canal and recarving 9 miles of remnant river channel), and a comprehensive ecological evaluation program;
- (3) Protection of Lake Okeechobee by reducing nutrient loading and controlling the spread of nuisance and exotic plants;
- (4) Implementation of the Everglades Program mandated by the Everglades Forever Act through land acquisition, construction of stormwater treatment areas (STAs) and hydropattern restoration projects (Everglades Construction Project), control of exotic plants, research and monitoring, and regulation;
- (5) Restoration of the southern Everglades and Florida Bay (in cooperation with the USACE and ENP) through land acquisition (Frog Pond, Rocky Glades, Southern Glades), construction and operational changes to restore natural water flows to ENP and Florida Bay;
- (6) Development and implementation of regional water management plans;
- (7) Design and construction of seven Critical Restoration Projects (in cooperation with the USACE);
- (8) Acquisition of lands needed for ongoing and future restoration projects (e.g., Water Preserve Areas, Ten Mile Creek), and for conservation and protection of critical wildlife habitat (e.g., Okaloacoochee Slough, Pal-Mar); and

- (9) Control of invasive exotic pest plants in lakes, wetlands, and uplands throughout the South Florida ecosystem.

The District's total operating budget for FY00 is \$469 million, of which approximately \$338.5 million is allocated for land acquisition, construction, research, monitoring, planning, regulation, and other efforts necessary to accomplish planned ecosystem restoration and protection efforts. The following table shows projected expenditures for South Florida ecosystem restoration efforts during FY 00.

South Florida Water Management District
FY 00 Budget for Ecosystem Restoration and Protection

Project	FY 00 Budget (\$)
Kissimmee River Land Acquisition (\$20,316,714) Research & Monitoring (\$1,230,247)	26,560,817
Kissimmee Chain of Lakes	649,564
Lake Okeechobee Research & Monitoring (\$3,334,966)	9,714,332
Everglades Land Acquisition (\$18,802,511) Research & Monitoring (\$16,637,407) Construction (\$27,288,411)	79,523,899
Southern Everglades/Florida Bay Land Acquisition (\$37,098,931) Research & Monitoring (\$2,561,906) Construction (\$962,947)	45,134,375
Estuaries (IRL, Caloosahatchee, SLE)	4,945,788
Biscayne Bay	1,125,145
C&SF Restudy Critical Restoration Projects (\$20,142,373)	76,484,384
Land Acquisition and Management (in addition to project specific lands listed above) Land Acquisition (\$18,513,172) Land Management (\$7,062,178) Wetland Mitigation (\$5,563,757)	31,985,153
Water Management Planning & Implementation	20,549,490
Additional Ecosystem Research, Monitoring, and Modeling	15,677,573
Exotic Plant Control	9,034,680
Environmental Resource Permitting and Coastal Management Programs	8,726,350
Florida Keys Water Quality Plan	977,971
Government and Public Outreach	4,978,318
Lower West Coast Research & Monitoring (\$1,014,581)	2,498,083
Total:	\$338,565,922

SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

TABLE 5

PROJECT SUMMARY TABLE

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
Goal 1.	GET THE WATER RIGHT								
Sub-Goal 1.A.	GET THE HYDROLOGY RIGHT (Quantity, Timing & Distribution)								
1.A.1.	SURFACE WATER STORAGE RESERVOIR PROJECTS IN ACRE-FEET						ACRE-FT.		
	C&SF: CERP- C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs	USACE/SFWMD	1999	2010	\$710,223,000	\$3,348,000	349,400	1.A.1	
	C&SF: CERP- North Lake Belt Storage Area (Phase I & II)	USACE/SFWMD	2012	2036	\$500,346,000	\$0	90,000	1.A.1	
	C&SF:CERP Central Lake Belt Storage Area	USACE/SFWMD	2012	2036	\$466,725,000	\$0	187,200	1.A.1	1.B.1
	C&SF:CERP-C-43 Basin Storage Reservoir and ASR	USACE/SFWMD	2000	2012	\$440,195,000	\$3,078,000	160,000	1.A.1	1.A.2
	C&SF: CERP- Water Preserve Areas/L-8 Basin	USACE/SFWMD	2004	2014	\$399,372,000	\$0	48,000	1.A.1	1.A.2
	C&SF:CERP-North of Lake Okeechobee Storage Reservoir	USACE/SFWMD	2005	2015	\$284,854,000	\$0	200,000	1.A.1	1.B.1
	C&SF: CERP- Everglades Agricultural Storage Reservoir Phase II	USACE/SFWMD	2006	2015	\$203,240,000	\$0		1.A.1	
	C&SF: CERP- Everglades Agricultural Storage Reservoir Phase I	USACE/SFWMD	1999	2009	\$233,408,000	\$2,673,000	360,000	1.A.1	
	C&SF: CERP- Site 1 Impoundment and Aquifer Storage and Recovery	USACE/SFWMD	2001	2014	\$131,379,000	\$0	15,000	1.A.1	1.A.2
	C&SF:CERP- Bird Drive Recharge Area (U)	USACE/SFWMD	2004	2013	\$124,083,000	\$0	11,500	1.A.1	
	C&SF: CERP- Palm Beach County Agricultural Reserve Reservoir and ASR	USACE/SFWMD	2005	2013	\$121,359,000	\$0	19,920	1.A.1	1.A.2
	C&SF: CERP- C-44 Basin Storage Reservoir	USACE/SFWMD	1999	2007	\$112,562,000	\$602,000	40,000	1.A.1	
	C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWMD	2000	2009	\$104,026,000	\$1,021,000	50,000	1.A.1	1.A.4/1.B.1
	Allapattah Flats/Ranch	FDEP/SFWMD	1997	2001	\$75,594,990	\$0		1.A.1	2.A.1
	Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminoles	2002	2012	\$22,452,000	\$0	7,569	1.A.1	1.B.3
	C&SF: CERP- Acme Basin B Discharge	USACE	2001	2006	\$20,100,000	\$0	4,960	1.A.1	
	Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminoles	1999	2010	\$15,818,000	\$170,000	10,000	1.A.1	1.B.3
	Wetland Reserve Program	NRCS	1997	2008	\$2,135,000	\$465,000		1.A.1	1.B.3
	Critical Projects - Seminole Big Cypress Reservation Water Conservation Plan	Seminoles & USACE	1997	2004	\$47,608,000	\$10,686,000	3,389	1.A.1	
1.A.2.	ASR PROJECTS IN BILLION GALLONS PER DAY (BGD)						BGD		
	C&SF: CERP- Lake Okeechobee ASR	USACE/SFWMD	2004	2020	\$1,097,312,000	\$0	1	1.A.2	
	C&SF: CERP- C-51 Regional Groundwater Aquifer Storage and Recovery	USACE/SFWMD	2004	2013	\$127,291,000	\$0	0.17	1.A.2	
	C&SF:CERP-C-43 Basin Storage Reservoir and ASR	USACE/SFWMD	2000	2012	*	*	0.22	1.A.2	1.A.1
	C&SF: CERP- Water Preserve Areas/L-8 Basin	USACE/SFWMD	2004	2014	*	*	0.05	1.A.2	1.A.1
	C&SF: CERP- Palm Beach County Agricultural Reserve Reservoir and ASR	USACE/SFWMD	2005	2013	*	*	0.075	1.A.2	1.A.1
	C&SF: CERP- Site 1 Impoundment and Aquifer Storage and Recovery	USACE/SFWMD	2001	2014	*	*	0.15	1.A.2	1.A.1
1.A.3.	PROJECTS REMOVING BARRIERS TO SHEETFLOW IN MILES						MILES MODIFIED		
	Modified Water Deliveries to Everglades National Park	NPS	1990	2003	\$135,363,000	\$62,037,000		1.A.3	2.A.3
	C&SF: CERP- WCA -3 Decompartmentalization and sheetflow Enhancement	USACE/SFWMD	2002	2019	\$85,059,000	\$0	240	1.A.3	1.A.4
	Critical Projects - Southern CREW	USACE	1997	2001	\$12,021,000	\$8,968,000		1.A.3	

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SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

TABLE 5

PROJECT SUMMARY TABLE

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
	Kissimmee Prairie	FDEP/SFWMD	1996	1997	\$22,120,000	\$22,120,000	39.3	1.A.3	2.A.3
	C&SF: Canal 111	USACE/SFWMD	1994	2003	TBD	\$136,281,000		1.A.3	
1.A.4.	OTHER RELATED HYDROLOGY PROJECTS						TBD		
	C&SF: CERP- Flow to Northwest and Central WCA -3A	USACE/SFWMD	2000	2009	\$30,877,000	\$0		1.A.4	
	C&SF: CERP- WCA -3 Decompartmentalization and sheetflow Enhancement	USACE/SFWMD	2002	2019	*	*		1.A.4	1.A.3
	West WCA-3A Hydropattern Restoration	SFWMD	1994	2006	\$17,250,097	\$7,223,376		1.A.4	
	East WCA-3A Hydropattern Restoration	SFWMD	1994	2003	\$14,667,884	\$289,374		1.A.4	
	WCA-2A Hydropattern Restoration	SFWMD	1994	1999	\$5,010,296	\$4,158,513		1.A.4	
	C&SF:CERP Diverting WCA-2 and WCA-3 Flows to Central Lake Belt Storage Area	USACE/SFWMD	2012	2018	\$76,921,000	\$0		1.A.4	
	Additional Water Conveyance Structures Under Tamiami Trail	FDOT	1998	2002	\$8,431,885	\$1,333,000		1.A.4	
	East Coast Buffer/Water Preserve Areas	FDEP/SFWMD	1994	TBD	\$165,100,000	\$86,500,000		1.A.4	2.A.3
	C&SF: CERP- Broward County Secondary Canal System	USACE/SFWMD	2001	2009	\$12,898,000	\$0		1.A.4	
	C&SF: CERP C-4 Control Structures	USACE/SFWMD	2000	2005	\$2,330,000	\$25,000		1.A.4	
	C&SF:CERP Lake Belt (In-Ground Reservoir) Technology - Pilot Project	USACE/SFWMD	1999	2011	\$23,000,000	\$2,000,000		1.A.4	
	C&SF:CERP L-31 N Seepage Management Pilot Project	USACE/SFWMD	2000	2003	\$10,000,000	\$0		1.A.4	
	C&SF:CERP L-31 N Improvements for Seepage Management and S-356 Structures	USACE/SFWMD	2002	2010	\$184,845,000	\$0		1.A.4	
	Frog Pond/L-31 N	FDEP/SFWMD	1994	TBD	TBD	\$79,890,107	10,450	1.A.4	
	C&SF: CERP- C-111N Spreader Canal	USACE/SFWMD	2000	2008	\$94,035,000	\$553,000		1.A.4	
	C&SF:CERP Operational Modification to Southern Portion of L-31N and C-111	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4	
	C&SF:CERP-West Miami-Dade County Reuse	USACE/M-DADE	2011	2020	\$437,237,000	\$0		1.A.4	
	Biscayne Bay Feasibility Study	USACE/M-DADE	1996	2001	\$6,370,000	\$2,674,000		1.A.4	
	C&SF:CERP-Biscayne Bay Coastal Wetlands	USACE/SFWMD	1999	2018	\$299,583,000	\$538,000		1.A.4	
	Model Lands	SFWMD/M-DADE	1994	2007	TBD	\$6,437,703		1.A.4	
	C&SF:CERP-South Miami-Dade County Reuse	USACE/M-DADE	2011	2020	\$363,024,000	\$0		1.A.4	
	Biscayne Coastal Wetlands	SFWMD/M-DADE	1998	TBD	TBD	\$566,097		1.A.4	
	C&SF:CERP-Florida Keys Tidal Restoration	USACE/SFWMD	2000	2005	\$1,251,000	\$21,000		1.A.4	
	C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWMD	2000	2009	*	*		1.A.4	1.A.1/1.B.1
	C&SF:CERP Lake Okeechobee Aquifer Storage and Recovery Pilot Project	USACE/SFWMD	1999	2004	\$19,000,000	\$9,600		1.A.4	
	C&SF:CERP Lake Okeechobee Regulation Schedule	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4	
	Rotenberger/Holey Land Tract	FDEP	1984	TBD	\$18,100,000	\$16,100,000		1.A.4	2.A.1
	C&SF:CERP Modified Holeyland Wildlife Management Area Operation Plan	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4	
	Rotenberger Restoration	SFWMD	1994	2000	\$4,159,214	\$3,232,465		1.A.4	
	C&SF:CERP Modified Rotenberger Wildlife Management Area Operation Plan	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4	
	Northern L-8 Basin Improvements	SFWMD	1994	2006	\$16,638,892	\$25,197		1.A.4	

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TABLE 5

PROJECT SUMMARY TABLE

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
	S-5A Basin Runoff Diversion Works	SFWMD	1994	2006	\$19,017,404	\$12,149,871		1.A.4	
	C&SF:CERP Caloosahatchee R. (C-43) Basin ASR Pilot Project	USACE/SFWMD	2000	2005	\$6,000,000	\$0		1.A.4	
	C&SF:CERP Site 1 Impoundment and Aquifer Storage and Recovery Pilot Project	USACE/SFWMD	1999	2002	\$9,000,000	\$900,000		1.A.4	
	C&SF:CERP Wastewater Reuse Technology Pilot Project	USACE/SFWMD	1999	2007	\$30,000,000	\$753,000		1.A.4	
	C&SF: CERP- Loxahatchee National Wildlife Refuge Internal Canal Structures	USACE/SFWMD	2000	2003	\$7,669,000	\$168,000		1.A.4	
	Loxahatchee Slough Land Acquisition	SFWMD	1996	2002	\$21,000,000	\$18,875,000		1.A.4	2.A.1
	C&SF: CERP- Pal-Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration	USACE/SFWMD	2001	2006	\$10,500,000	\$0		1.A.4	
	Indian River Lagoon	FDEP/SFWMD	1998	TBD	\$147,200,000	\$11,400,000		1.A.4	2.A.1
	Shingle Creek	SFWMD	1987	TBD	TBD	\$1,344,400		1.A.4	
	Kissimmee River (Lower Basin)	SFWMD	1985	2007	***	***		1.A.4	
	Kissimmee River (Upper Basin)	SFWMD	1990	2007	***	***		1.A.4	
	Paradise Run	SFWMD	1998	2001	\$12,281,656	\$8,623,598		1.A.4	2.A.1
	C&SF: CERP- Lake Istokpoga Regulation Schedule	USACE/SFWMD	2000	2001	\$50,000	\$25,000		1.A.4	
	C&SF: CERP- Winsburg Farms Wetland Restoration	USACE	2000	2005	\$14,140,000	\$172,000		1.A.4	
	C&SF: CERP- Seminole Tribe Big Cypress Water Conservation Plan	USACE & Seminoles	2001	2008	\$75,288,000	\$0		1.A.4	1.B.3
	C&SF:CERP Lake Park Restoration	USACE/Lee Co.	1999	2004	\$5,166,000	\$228,000		1.A.4	
	C&SF:CERP Southern Golden Gates Estates Restoration	USACE/SFWMD	1999	2005	\$45,654,000	\$534,000		1.A.4	
	C&SF:CERP-Henderson Creek/Belle Meade Restoration	USACE	2000	2005	\$4,806,000	\$65,000		1.A.4	
	Southern Glades	SFWMD/M-DADE	1964	TBD	TBD	\$13,301,517		1.A.4	
	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	\$1,159,040	\$1,159,040		1.A.4	2.A.1
	Belle Meade	FDEP	1993	TBD	\$47,700,000	\$32,800,000		1.A.4	2.A.1
	Corkscrew Regional Ecosystem Watershed	FDEP/SFWMD	1991	TBD	\$45,800,000	\$17,300,000		1.A.4	2.A.1
	Fakahatchee Strand	FDEP	1980	TBD	\$24,800,000	\$20,200,000		1.A.4	2.A.1
	Southern Golden Gate Estates	FDEP	1984	TBD	\$148,000,000	\$40,900,000		1.A.4	2.A.1
	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	TBD	TBD		1.A.4	2.A.3
	Soil Survey for Everglades National Park, Big Cypress, National Preserve & Water Conservation Areas	NRCS	2001	2006	\$5,340,000	\$0		1.A.4	
	Monitoring of Organic Soils in the Everglades	NRCS	1998	2010	\$1,136,000	\$36,000		1.A.4	
	Soil Survey Update for the Everglades Agricultural Area	NRCS	2002	2005	\$1,500,000	\$0		1.A.4	
	C&SF:CERP Everglades Rain Driven Operations	USACE/SFWMD	TBD	TBD	TBD	\$0		1.A.4	
	C&SF: CERP- Big Cypress/L-28 Interceptor Modifications	USACE/SFWMD	2006	2016	\$42,751,000	\$0		1.A.4	1.B.1
	C&SF: CERP - Dade-Broward Levee/Pensucco Wetlands (BB)	USACE/SFWMD	2001	2008	\$18,778,000	\$0		1.A.4	
	Florida Bay and The Florida Keys Feasibility Study	USACE	1999	2004	TBD	TBD		1.A.4	
	Southwest Florida Feasibility Study	USACE	1999	2004	\$6,790,000	\$210,000		1.A.4	1.B.3
	Herbert Hoover Dike Stabilization	USACE/SFWMD	1995	2006	\$248,121,000	\$2,565,000		1.A.4	
	Kissimmee River Restoration Project	USACE/SFWMD	1994	2009	\$518,000,000	\$234,906,000		1.A.4	2.A.3
	Indian River Lagoon Restoration Feasibility Study	USACE/SFWMD	1996	2001	\$6,356,000	\$5,188,000		1.A.4	1.B.3
	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/SFWMD	1997	2003	\$30,458,000	\$8,890,000		1.A.4	1.B.3
	North Fork of the New River Restoration	Broward Co.	1997	2003	\$2,336,000	\$1,126,000		1.A.4	2.A.3

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SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

TABLE 5

PROJECT SUMMARY TABLE

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
	L-8 Canal Water Catchment Area - Loxahatchee Slough Infrastructure Improvements	COWPB	1997	2002	\$32,000,000	\$19,837,000		1.A.4	
	Loxahatchee Slough Ecosystem Restoration	USACE/SFWMD/PBCo.	1997	2000	\$6,850,000	\$6,850,000		1.A.4	2.A.3/2.B.4
	Miccosukee Water Resources Management	Miccosukee	TBD	TBD	25,200,000	2,100,000		1.A.4	1.B.3
Sub-Goal 1.B	GET THE WATER QUALITY RIGHT								
1.B.1.	STORMWATER TREATMENT AREAS (STA) PROJECTS IN ACRES						ACRES		
	C&SF: CERP - Taylor Creek/Nubbin Slough Reservoir and STA	USACE/SFWMD	2000	2009	*	*	5,000	1.B.1	1.A.1/1.A.4
	C&SF:CERP-Lake Okeechobee Watershed Water Quality Treatment Facilities	USACE/SFWMD	2001	2010	\$62,247,000	\$0	4,375	1.B.1	
	C&SF:CERP-North of Lake Okeechobee Storage Reservoir	USACE/SFWMD	2005	2015	*	*	2,500	1.B.1	1.A.1
	C&SF:CERP Caloosahatchee Backpumping with Stormwater Treatment	USACE/SFWMD	2005	2015	\$82,895,000	\$0	20,000	1.B.1	
	C&SF: CERP- Big Cypress/L-28 Interceptor Modifications	USACE/SFWMD	2006	2016	*	*	1,900	1.B.1	1.A.4
	Everglades Agricultural Area (EAA) / Talisman	SFWMD/DOI	1997	1999	\$138,087,114	\$138,087,114	50,719	1.B.1	
	STA-3/4 Works	SFWMD	1994	2004	\$195,423,150	\$56,553,028		1.B.1	
	STA-1 West Works and Outflow Pump Station (G-310)	USACE/SFWMD	1994	2000	\$95,042,875	\$73,182,832	6700	1.B.1	
	STA-2 Works and Outflow Pump Station (G-335)	SFWMD	1994	2000	\$113,573,117	\$92,089,635	6430	1.B.1	
	STA-5 Works	SFWMD	1994	2003	\$53,109,899	\$33,677,773	4118	1.B.1	
	STA-6 (includes sections 1 and 2)	SFWMD	1994	2004	\$20,584,401	\$10,188,850	2222	1.B.1	
	C&SF: CERP- C-17 Backpumping and Treatment	USACE/SFWMD	2002	2008	\$20,190,000	\$0	550	1.B.1	
	C&SF: CERP- C-51 Backpumping and Treatment	USACE/SFWMD	2002	2008	\$32,632,000	\$0	600	1.B.1	
	Miccosukee Tribe Water Management Area	Miccosukee	TBD	TBD	\$42,113,000	\$0		1.B.1	
	C&SF: CERP-C-9 STA and Impoundment	USACE/SFWMD	2001	2007	\$89,146,000	\$0	2500	1.B.1	
	C&SF: CERP- Western C-11 Diversion Impoundment & WCA-3A&B Levee Seepage Management	USACE/SFWMD	2001	2008	\$224,544,000	\$0	1,600	1.B.1	
	C&SF:CERP Central Lake Belt Storage Area	USACE	2012	2036	*	*	640	1.B.1	1.A.1
	C&SF: CERP-Miccosukee Tribe Water Management Plan	USACE & Miccosukee	2000	2008	\$24,459,000	\$312,000	900	1.B.1	
	C&SF: West Palm Beach Canal (C-51) and STA-1E	USACE/SFWMD	1997	2002	\$240,418,000	\$76,532,000	6,500	1.B.1	
1.B.2.	DEVELOPMENT OF TOTAL MAXIMUM DAILY LOAD (TMDL) PLANS								
	Total Maximum Daily Load (TMDL) for South Florida	FDEP	2000	TBD	\$3,400,000	\$1,000,000		1.B.2	
1.B.3.	OTHER RELATED WATER QUALITY PROJECTS								
	Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project	SFWMD	2000	2003	TBD	\$0		1.B.3	
	Lake Okeechobee Tributary Sediment Removal Pilot Project	SFWMD	2000	2002	\$420,000	\$156,100		1.B.3	
	Development of Best Management Practices Related to the Land Application of Residuals and Chicken Manure in the Lake Okeechobee Watershed	SFWMD	2000	2003	TBD	TBD		1.B.3	
	C&SF: CERP- Lake Okeechobee Tributary Sediment Dredging	USACE/SFWMD	2001	2005	\$4,700,000	\$0		1.B.3	
	Lake Okeechobee Water Retention/ Phosphorus Removal	USACE/SFWMD	1997	2002	\$16,360,000	\$8,286,000		1.B.3	

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SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

TABLE 5

PROJECT SUMMARY TABLE

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
	Technical Assistance to Seminole and Miccosukee Indian Reservations	NRCS	1998	2009	\$3,850,000	\$150,000		1.B.3	
	Seminole Tribe Best Management Practices for the Brighton Reservation	Seminoles	1998	2004	\$338,000	\$144,000		1.B.3	
	Seminole Tribe Best Management Practices for the Big Cypress Reservation	Seminoles	1996	2004	\$4,779,000	\$1,911,600		1.B.3	
	Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminoles	1999	2010	*	*		1.B.3	1.A.1
	C&SF: CERP- Seminole Tribe Big Cypress Water Conservation Plan	USACE & Seminoles	2001	2008	*	*		1.B.3	1.A.4
	Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminoles	2002	2012	*	*		1.B.3	1.A.1
	Everglades Stormwater Program	SFWMD	1998	2006	TBD	\$7,650,000		1.B.3	
	Chapter 298 Districts/Lease 3420 Improvements	SFWMD	1994	2004	\$13,635,079	\$12,020,220		1.B.3	
	STA-1 Inflow and Distribution Works	SFWMD	1994	2002	\$11,662,799	\$9,291,894		1.B.3	
	Indian River Lagoon Restoration Feasibility Study	USACE	1996	2001	*	*		1.B.3	1.A.4
	C&SF: CERP- Lake Worth Lagoon Restoration	USACE/SFWMD	2005	2011	\$2,300,000	\$0		1.B.3	
	Wetland Reserve Program	NRCS	1997	2008	*	*		1.B.3	1.A.1
	BMPs for Agriculture	NRCS	1997	2011	\$65,245,000	\$12,000,000		1.B.3	
	Pollution Prevention	NRCS/FDACS	2001	2005	\$890,000	\$0		1.B.3	
	Urban Mobile Irrigation Lab	NRCS	1998	2011	\$2,860,000	\$360,000		1.B.3	
	Agriculture Land Stewardship	NRCS/FDACS	2001	2012	\$10,920,000	\$0		1.B.3	
	South Florida Water Quality Protection Program	FDEP	1999	TBD	\$564,652	\$454,652		1.B.3	
	New Palm Dairy Land Acquisition	SFWMD	2000	TBD	TBD	TBD		1.B.3	
	Floridan Aquifer Restoration	NRCS	1998	2002	\$1,200,000	\$200,000		1.B.3	
	Outfall (Military) Canal Remediation	AFBCA	1999	2002	TBD	\$1,900,000		1.B.3	
	Critical Projects - Lake Trafford	USACE	1997	2003	\$17,540,000	\$3,672,000		1.B.3	2.A.3
	Critical Projects - Western C-11 Water Quality Treatment	USACE	1997	2002	\$8,957,000	\$1,400,000		1.B.3	
	Southwest Florida Feasibility Study	USACE	1999	2004	*	*		1.B.3	1.A.4
	Comprehensive Integrated Water Quality Plan	USACE	1999	2006	TBD	TBD		1.B.3	
	Everglades National Park Water & Wastewater	NPS	1997	TBD	\$38,491,000	\$5,954,000		1.B.3	
	Critical Ecosystems Restoration Projects - Ten Mile Creek	USACE/SFWMD	1997	2003	*	*		1.B.3	1.A.4
	Miccosukee Water Resources Management	Miccosukee	1997	TBD	*	*		1.B.3	1.A.4
Goal 2.	RESTORE, PRESERVE AND PROTECT NATURAL HABITATS AND SPECIES								
Sub-Goal 2.A.	RESTORE, PRESERVE AND PROTECT NATURAL HABITATS								
2.A.1.	HABITAT PROTECTION LAND ACQUISITION PROJECTS								
	Water Conservation Areas 1,2, and 3	SFWMD	1948	2010	\$18,050,000	\$10,250,000	862,800	2.A.1	
	East Everglades Addition to Everglades National Park	NPS	1990	2000	\$113,149,000	\$113,149,000	109,504	2.A.1	
	Complete Land Acquisition for Biscayne National Park	NPS	1998	2002	\$2,900,000	\$430,000	2,002	2.A.1	
	Miami-Dade County Archipelago	FDEP	1994	TBD	\$9,900,000	\$8,200,000	856	2.A.1	

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SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

TABLE 5

PROJECT SUMMARY TABLE

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
	Florida Keys Ecosystem	FDEP	1992	TBD	\$71,000,000	\$31,100,000	7,611	2.A.1	
	Coupon Bight/ Key Deer Big Pine Key	USFWS	1985	TBD	\$44,900,000	\$11,800,000	3,452	2.A.1	
	North Key Largo Hammocks	FDEP	1983	TBD	\$7,900,000	\$4,800,000	4,508	2.A.1	
	Fisheating Creek	SFWMD/FDEP	1999	TBD	\$163,200,000	\$46,300,000	168,360	2.A.1	
	Atlantic Ridge Ecosystem	FDEP/SFWMD	1995	TBD	\$78,000,000	\$31,900,000	12,514	2.A.1	
	Indian River Lagoon	FDEP	1998	TBD	*	*	5,136	2.A.1	1.A.4
	Juno Hills	FDEP	1994	TBD	\$19,400,000	\$15,000,000	440	2.A.1	
	Loxahatchee River Land Acquisition	SFWMD	1984	2001	\$11,927,120	\$11,927,120	1,936	2.A.1	
	Loxahatchee Slough Land Acquisition	SFWMD	1996	2002	*	*	15,200	2.A.1	1.A.4
	North Fork St Lucie River	FDEP/SFWMD	1988	TBD	\$27,900,000	\$3,400,000	3,800	2.A.1	
	North Savannas	SFWMD	1997	2002	\$5,000,000	\$1,100,000	930	2.A.1	
	Pal-Mar	FDEP/SFWMD	1992	TBD	\$19,900,000	\$10,100,000	35,435	2.A.1	
	South Fork St. Lucie River Land Acquisition	SFWMD	1995	1996	\$2,480,000	\$2,480,000	184	2.A.1	
	Allapattah Flats/Ranch	FDEP	1997	TBD	*	*	34,221	2.A.1	1.A.1
	Rotenberger/Holey Land Tract	FDEP	1984	TBD	*	*	79,170	2.A.1	1.A.4
	Cayo Costa	FDEP	1980	TBD	\$26,800,000	\$23,600,000	1,932	2.A.1	
	Charlotte Harbor Flatwoods	FDEP	1986	TBD	\$50,500,000	\$34,900,000	44,755	2.A.1	
	Caloosahatchee Ecoscape	FDEP	1998	TBD	\$18,100,000	\$0	15,391	2.A.1	
	Lake Wales Ridge Ecosystem	FDEP	1992	TBD	\$25,200,000	\$19,100,000	12,770	2.A.1	
	Upper Lakes Basin Watershed	SFWMD	1995	2002	\$38,100,000	\$19,650,000	43,500	2.A.1	
	Kissimmee Prairie	FDEP	1996	1997	*	*	38,282	2.A.1	1.A.3
	Catfish Creek	FDEP	1990	TBD	\$22,200,000	\$9,070,000	10,609	2.A.1	
	Parker-Poinciana	SFWMD	1996	TBD	TBD	TBD	1,970	2.A.1	
	Pineland Site Complex	FDEP	1996	TBD	\$2,000,000	\$280,000	250	2.A.1	3
	Osceola Pine Savannas	FDEP	1995	TBD	\$30,100,000	\$0	42,291	2.A.1	
	Barfield Farms	SFWMD	1998	TBD	TBD	TBD	1,367	2.A.1	
	Cypress Creek/Trail Ridge	SFWMD	1997	TBD	TBD	TBD	13,788	2.A.1	
	Corkscrew Regional Mitigation Bank	SFWMD	1995	1999	*	*	661	2.A.1	1.A.4
	Dupuis Reserve	SFWMD	1985	1986	\$23,016,601	\$23,016,601	21,875	2.A.1	
	Lake Walk-In-Water	SFWMD	1995	TBD	TBD	\$3,950,000	4,615	2.A.1	
	Nicodemus Slough	SFWMD	1981	1988	\$1,744,500	\$1,744,500	2,219	2.A.1	
	Six Mile Cypress	SFWMD	1987	TBD	TBD	\$1,975,321	1,741	2.A.1	
	South Savannas	FDEP/SFWMD	1981	TBD	TBD	\$16,522,480	6,046	2.A.1	
	Tibet-Butler Preserve	SFWMD	1998	1999	\$3,601,900	\$3,601,900	439	2.A.1	
	Belle Meade	FDEP	1993	TBD	*	*	27,200	2.A.1	1.A.4
	Big Cypress National Preserve Addition	NPS	1997	2004	\$49,560,000	\$49,560,000	6,113	2.A.1	
	Big Cypress National Preserve Private Inholdings**	NPS	1998	2010	\$207,061,269	\$184,961,000	878	2.A.1	
	Corkscrew Regional Ecosystem Watershed	FDEP	1991	TBD	*	*	59,008	2.A.1	1.A.4
	Fakahatchee Strand	FDEP	1980	TBD	*	*	80,231	2.A.1	1.A.4
	Southern Golden Gate Estates	FDEP	1984	TBD	*	*	57,200	2.A.1	1.A.4
	Dade County Training Jetport	NPS	2000	2003	\$0	\$0	24,000	2.A.1	
	Twelve Mile Slough	SFWMD	1998	2001	\$3,300,000	\$3,300,000	3,300	2.A.1	
	Rookery Bay	FDEP	1980	TBD	\$46,240,000	\$46,200,000	18,532	2.A.1	

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SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

TABLE 5

PROJECT SUMMARY TABLE

Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
	Estero Bay	FDEP	1985	TBD	TBD	\$40,100,000	16,740	2.A.1	
	Okaloacoochee Slough	FDEP/SFWMD	1996	TBD	\$21,300,000	\$20,000,000	37,210	2.A.1	
	South Florida Multi-Species Recovery Plan	USFWS	1994	2010	\$329,950,000	\$118,410,000		2.A.1	2.B.4
	Paradise Run	SFWMD	1998	2001	*	*	4,265	2.A.1	1.A.4
2.A.2.	CORAL REEF PROTECTION PROJECTS								
	Planning and Implementation of the Tortugas Ecological Reserve	NOAA	1998	2004	TBD	\$0		2.A.2	
2.A.3.	OTHER NATURAL HABITAT PROJECTS								
	Modified Water Deliveries to Everglades National Park	NPS	1990	2003	*	*		2.A.3	1.A.3
	C&SF: CERP- Protect and Enhance Existing Wetland Systems along LNWR (Strazzulla Tract)	USACE/SFWMD	2001	2007	\$52,772,000	\$0		2.A.3	
	C&SF:CERP Environmental Water Supply Deliveries to the Caloosahatchee Estuary	USACE/SFWMD	TBD	TBD	TBD	\$0		2.A.3	
	C&SF:CERP Environmental Water Supply Deliveries to the St. Lucie Estuary	USACE/SFWMD	TBD	TBD	TBD	\$0		2.A.3	
	Kissimmee River Restoration Project	USACE/SFWMD	1994	2009	*	*		2.A.3	1.A.4
	East Coast Buffer/Water Preserve Areas	FDEP	1994	TBD	*	*		2.A.3	1.A.4
	New River Forest Restoration Project	Broward	1997	TBD	*	*		2.A.3	2.B.4
	Big Cypress National Preserve Mineral Rights	NPS	2000	2003	TBD	\$0		2.A.3	
	Critical Projects - Lake Trafford	USACE	1997	2003	*	*		2.A.3	1.B.3
	McDaniel Ranch Land Acquisition	SFWMD	2000	TBD	*	*		2.A.3	1.A.4
	WCA-2A Regulation Schedule Review	USACE	1998	2001	\$500,000	\$300,000		2.A.3	
	Miami-Dade County Environmentally Endangered Lands Program	Dade	1991	TBD	\$56,074,406	\$25,749,000		2.A.3	
	C&SF:CERP Restoration of pineland and hardwood hammocks in C-111 Basin	USACE	2000	2006	\$600,000	\$0		2.A.3	
	North Fork of the New River Restoration	Broward	1997	2003	*	*		2.A.3	1.A.4
	West Palm Beach Wetland Reclamation Project	COWPB	1996	2001	\$24,600,000	\$21,100,000		2.A.3	3
	Loxahatchee Slough Ecosystem Restoration	PBCo.	1997	2000	*	*		2.A.3	1.A.4/2.B.4
Sub-Goal 2.B.	CONTROL INVASIVE PLANTS								
2.B.1.	INVASIVE EXOTIC PLANT MANAGEMENT PLAN DEVELOPMENT								
	Prepare management plans for top 20 south Florida exotic pest plants	NEWTT	2001	2011	\$600,000	\$0		2.B.1	
2.B.2.	EXOTIC SPECIES MAINTENANCE CONTROL PROJECTS								
	Achieve "Maintenance Control" status for Brazilian Pepper, Melaleuca, Australian pine and Old world climbing fern in all natural areas statewide by 2020	NEWTT	2002	2020	\$100,000,000	\$0		2.B.2	
	Integration of Federal, State, and Local Agency Invasive Exotic Control Programs into Florida-wide Strategy	FDEP	2000	2005	TBD	\$76,418,000		2.B.2	
2.B.3.	INVASIVE EXOTIC PLANTS PREVENTION PLAN DEVELOPMENT								
	Complete an Invasive Exotics Plant Prevention, Early Detection and Eradication Plan by 2005	NEWTT	2001	2004	\$5,000,000	\$0		2.B.3	

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TABLE 5

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Goals	Project Name	Org.	Start	End	Financial Requirement	Appropriated to Date	Measures & Targets	Primary Objective	Secondary Objectives
2.B.4	OTHER RELATED EXOTIC SPECIES PROJECTS								
	Hole-in-the-Donut	NPS	1994	2017	\$75,000,000	\$11,582,000	6,000	2.B.4	
	Melaleuca Control (Critical) Big Cypress National Preserve	NPS	1998	2005	\$1,400,000	\$1,050,000	150 sq. miles	2.B.4	
	Everglades National Park Exotic Control Program	NPS	2001	TBD	TBD	\$0	650,000	2.B.4	
	Estero Bay Aquatic Preserve and Buffer Reserve Enhancement and Exotic Removal Project	FDEP	1998	2004	\$1,350,000	\$1,020,000	732	2.B.4	
	South Florida Multi-Species Recovery Plan	USFWS	1994	2010	*	*		2.B.4	2.A.1
	New River Forest Restoration Project	Broward	1997	TBD	\$2,220,000	\$520,000	30	2.B.4	2.A.3
	Exotic Species Removal	Seminoles	1998	2010	\$988,000	\$228,000	80	2.B.4	
	Exotic Pest Plant Controls in South Florida Ecosystems	ARS	1998	2006	\$10,317,000	\$1,190,000		2.B.4	
	C&SF:CERP- Melaleuca Eradication Project and other Exotic Plants	USACE	2006	2011	\$5,772,000	\$0		2.B.4	
	Melaleuca Quarantine Facility	USDA/ARS	1997	2003	\$5,000,000	\$1,000,000		2.B.4	
	Loxahatchee Slough Ecosystem Restoration	PBCo.	1997	2000	*	*		2.B.4	1.A.4/2.A.3
GOAL 3.	FOSTER COMPATIBILITY								
SAMPLE	PROJECTS								
	Regional Water Supply Plans	SFWMD	1999	TBD	TBD	TBD		3	
	South Biscayne Bay Watershed Management Plan	Miami-Dade	1999	2002	\$6,400,000	\$4,900,000		3	
	Agriculture and Rural Area Study	Miami-Dade	2000	2001	\$1,100,000	\$400,000		3	
	Critical Projects - Florida Keys Carrying Capacity	USACE/DCA	1997	2001	\$5,500,000	\$3,739,000		3	
	C&SF:CERP Change Coastal Wellfield Operations	USACE/SFWMD	TBD	TBD	TBD	\$0		3	
	C&SF:CERP Lower East Coast Utility Water Conservation	USACE/SFWMD	1999	2036	TBD	\$0		3	
	Miami River Dredging Project	USACE	TBD	TBD	TBD	\$0		3	
	Pineland Site Complex	FDEP	1996	TBD	*	*		3	2.A.1
	Eastward HO! Brownfields Partnership	SFRPC	1998	2010	TBD	\$13,200,000		3	
	Palm Beach County Freshwater Chain-of-Lakes Project	PBCo.	1998	2003	\$6,813,000	\$1,820,000		3	
	West Palm Beach Wetland Reclamation Project	COWPB	1996	2001	*	*		3	2.A.3
OTHER	RESTORATION PROJECTS								
	Enhance the NPS South Florida Ecosystem Restoration Implementation Program	NPS	1999	TBD	TBD	TBD			
	C&SF: CERP- Lake Okeechobee and Hillsboro Site1 ASR Pilot	USACE			\$27,000,000	\$0			
	C&SF: CERP- Miami-Dade County Water Supply	USACE			\$76,668,000	\$0			
	Kissimmee Chain of lakes Drawdown/Restoration Project	FWC	1999	2010	\$23,000,000	\$0			
	Lake Tohopekaliga Wetland Acquisition	FWC	1998	2000	\$10,000,000	\$0			
	Economic Analysis of Agricultural Land and Water Management	USDA	1997	2002	\$1,845,000	\$0			
	Lake Istokpoga Ecosystem Restoration and Management	FWC	1998	2002	\$17,325,000	\$5,155,000			
	Winsberg Wetlands Water Reclamation Project	PBCo.	1999	2003	\$14,500,000	\$3,000,000			
	Extension/Public Information to Support Ecosystem Restoration in C-111 Basin	UF/IFAS	1998	2004	\$250,000	\$81,000			

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	Eastward Ho! Corridor Rival Development Trends Fiscal Impact Analysis (DCA)	FDCA	1997	1998	\$150,000	\$150,000			
	South Florida Community-Urban Resources Partnership Ecosystem Restoration Project	USDA	1998	2000	\$2,000,000	\$1,020,000			
	South Miami-Dade Stormwater Treatment and Distribution Area Demonstration Project	Dade	1996	2001	\$2,136,000	\$2,136,000			
	Big Pine and No Name Keys Multi-Species Habitat Conservation Plan	FDCA	1999	2000	\$300,000	\$200,000			

LEGEND

Project ID #

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

Goals, Sub-Goals & Objectives

GOAL 1 = GET THE WATER RIGHT

Sub-Goal 1.A = GET THE HYDROLOGY RIGHT (Quantity, Timing & Distribution)

- 1.A.1 = Surface Water Storage Reservoir Projects in Acre-Feet
- 1.A.2 = Aquifer Storage and Recovery (ASR) Projects in Billion Gallons per Day (BGD)
- 1.A.3 = Projects Removing Barriers to Sheetflow in Miles

1.A.4 = Other Related Hydrology Projects

Sub-Goal 1.B = GET THE WATER QUALITY RIGHT

- 1.B.1 = Stormwater Treatment Area (STA) Projects in Acres
- 1.B.2 = Development of Total Maximum Daily Load (TMDL) Plans
- 1.B.3 = Other Related Water Quality Projects

GOAL 2 = RESTORE, PRESERVE & PROTECT NATURAL HABITATS & SPECIES

Sub-Goal 2.A = RESTORE, PRESERVE AND PROTECT NATURAL HABITATS

- 2.A.1 = Acres of Land Acquired for Habitat Protection
- 2.A.2 = Coral Reef Protection Projects
- 2.A.3 = Other Related Natural Habitat Restoration, Preservation and Protection Projects

Sub-Goal 2.B = CONTROL INVASIVE PLANTS

- 2.B.1 = Invasive Exotic Plant Species Management Plan Development
- 2.B.2 = Exotic Species Maintenance Control Projects
- 2.B.3 = Invasive Exotic Plant Prevention Plan Development

Goal 3 = FOSTER COMPATIBILITY

Sample Projects

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