Chapter 7A: Update on CERP Implementation

Kimberly Jacobs, E. Elizabeth Williams, John Outland,
Greg Knecht, Agnes R. McLean, John C. Ogden,
Jim Carnes, and SFWMD and FDEP accounting staff

SUMMARY AND HIGHLIGHTS

The Comprehensive Everglades Restoration Plan (CERP) is the framework and guide for the restoration, protection and preservation of the South Florida ecosystem. The CERP also provides for the region's other water-related needs such as water supply and flood protection. The plan was authorized by Section 601 of the Water Resources Development Act of 2000 (WRDA 2000) (Public Law 106-541), which requires that the CERP be integrated with existing federal and state activities in accordance with Section 528 of the WRDA 1996 (Public Law 104-303).

The goals of the CERP are to restore the quantity, quality, timing and distribution of water to the Everglades ecosystem. The CERP includes over 50 projects that involve either structural or operational changes to modify the Central and Southern Florida (C&SF) Project to achieve these goals. Due to the CERP's scale and complexity, the effects of its implementation on ecosystem restoration will not be apparent for many years. Many projects must be implemented before the hydrologic improvements necessary for ecosystem restoration can begin. The timing and distribution of water by the C&SF Project can be altered only after water storage capacity has been increased, along with any necessary water quality improvements. As each of the components to improve the timing and distribution of water are completed, the ecosystem should begin recovering.

Section 373.470(7), Florida Statutes, requires the submission of a single CERP Annual Report from the South Florida Water Management District (SFWMD) and the Florida Department of Environmental Protection (FDEP). This report includes CERP financial information and the progress of CERP implementation. For the past two years, this report has been produced separately. This year, an effort was made to incorporate this report into the *2003 Everglades Consolidated Report*. Unfortunately, the financial information, which is from the period of October 1, 2001 through September 30, 2002, is not yet available. The CERP Annual Report will once again be published in a separate report, but the implementation status and the unpopulated financial tables are still provided in this chapter.

At this stage of CERP implementation, the SFWMD and the United States Army Corps of Engineers (USACE) are acquiring land, developing and administering programs, conducting pilot projects and feasibility studies, and developing project management plans and implementation reports. Several critical projects begun prior to the authorization of the CERP have been incorporated into the plan, and some are currently under construction.

From May 1, 2001 through April 30, 2002 (Water Year 2002 [WY02]), 18,767 acres of land were acquired that are suitable for use by CERP projects. Some of this land will be used for the following projects: Biscayne Bay Coastal Wetlands, the C-111 Spreader Canal, Broward County WPA (Water Preserve Area), Taylor Creek/Nubbin Slough Storage and Treatment Area, and Indian River Lagoon-South.

Seven major efforts currently comprise the program-level activities for the CERP. The activities include program controls, geodetic vertical control surveys, restoration coordination and verification, public outreach, environmental and economic equity, data management and recreation. During the past two years, program management plans were developed for all the programs, with the exception of the Master Recreation Plan, which is currently being developed. Also, the Master Program Management Plan and the Restoration Coordination and Verification (RECOVER) Program Management Plan are currently being updated.

The SFWMD and the USACE have started detailed planning and design of CERP projects in accordance with the implementation schedule of the original plan. The implementation schedule is revised at least annually to incorporate changes based on new state and federal legislation and other factors. Also, changes are made to reduce technical uncertainties and clarify relationships between external milestones and specific CERP projects. The most recent schedule was published in July 2001 (USACE and SFWMD, 2001f) and will be revised following the promulgation of programmatic regulations required by WRDA 2000. The programmatic regulations will provide the blueprint by which the CERP will be implemented.

Several of these projects are pilot projects or feasibility studies. The purpose of the pilot projects is to resolve technical uncertainties related to the use of various technologies to accomplish the systems' modifications necessary to restore the South Florida ecosystem. The feasibility studies are designed to determine the need for additional projects to accomplish restoration goals that have been established for a particular region.

Detailed planning and design has begun for seven pilot projects, three feasibility studies and 12 construction projects. In addition, implementation has continued for three feasibility studies and seven critical projects that commenced prior to the authorization of the CERP.

More information on the CERP is available online at www.evergladesplan.org. This Website provides current information on all aspects of CERP implementation.

HISTORY

The Central and Southern Florida (C&SF) Project was authorized by Congress in 1948 to provide flood control, water supply, prevention of saltwater intrusion, and protection of fish and wildlife resources. The project design was based on forecasts that significantly underestimated the intensity of land uses and future population growth in Central and South Florida. The demands on the system's flood protection and water supply capabilities are now much greater than initially anticipated. In addition, South Florida's natural systems have been degraded by the intensity of land use and water management practices.

A process referred to as the Restudy began in 1994 to reexamine and determine the feasibility of modifying the C&SF Project to achieve updated goals. During the Restudy a multiagency, multidisciplinary team formulated and evaluated alternative comprehensive plans based on computer simulations, field observations and professional judgement. In 1999 a comprehensive

plan was laid out in the Central and Southern Florida Project Comprehensive Review Study, Final Integrated Feasibility Report and Programmatic Environmental Impact Statement (USACE and SFWMD, 1999). The plan was approved with the signing of the Water Resources Development Act of 2000 (WRDA 2000). WRDA 2000 recognized the comprehensive plan, now referred to as the Comprehensive Everglades Restoration Plan (CERP), as the framework for modifications to the C&SF Project, and requires that implementation be integrated with existing federal and state activities in accordance with WRDA 1996.

OVERVIEW OF THE CERP PROCESS

The overarching purpose of the CERP is the restoration, protection and preservation of the South Florida ecosystem. It also provides for other water-related needs of the region, such as water supply and flood protection.

Four interrelated factors essential to the restoration effort are the quantity, quality, timing and distribution of water. To restore the timing and distribution of water, the available quantity of water must first be increased. Also, to prevent further damage to and allow restoration of the system, the quality of the water must be improved, where necessary, prior to its distribution.

The CERP includes over 50 projects that involve either structural or operational changes to modify the C&SF Project. Many of these projects are interrelated and will perform optimally only when other related projects are implemented. A full list and descriptions of these projects are provided in **Appendix 7A-1**.

Even prior to implementing projects that will store water and improve water quality, numerous tasks must be accomplished. These include determining the feasibility of using new technologies, defining the optimum timing and distribution of water, developing supporting programs, acquiring the land necessary for the projects, and producing detailed project designs. In addition, a process will be developed to monitor the plan's progress and success and to also modify the plan where adjustments and improvements are necessary.

The Restudy recommended the use of several technologies to accomplish the alterations that are necessary to restore the South Florida ecosystem. Pilot projects will be conducted to determine the feasibility of using each of these technologies. Some of the technologies being proposed, such as Aquifer Storage and Recovery (ASR) and seepage control, have never been implemented on a large scale.

The optimum timing and distribution of water within the natural ecosystem must also be refined. By reviewing historical data, a picture has been developed regarding how the natural system behaved prior to human intervention; however, detailed information was lacking for many areas. In some cases, it will neither be practical nor possible to restore the system to its historical condition. Also, existing animal and plant populations have adapted in some degree to the altered ecosystem and must be monitored closely to ensure that the restoration effort does not cause long-term negative impacts to the populations.

New programs must be developed to support the restoration effort. Support will be needed, for example, to manage the budget, manage data, conduct land surveys, collect supporting data, communicate with the public, ensure environmental equity, preserve and enhance recreation, monitor the restoration effort's progress, and revise the plan, if necessary. Some of these

functions may be conducted within existing programs, but the majority will be performed by programs developed specifically for the CERP.

Due to the scale and complexity of the CERP, the effects of its implementation on ecosystem restoration will not be apparent for many years. Many projects must first be implemented before the hydrologic improvements necessary for ecosystem restoration can be made. The timing and distribution of water by the C&SF Project can be altered only after water storage capacity has been increased, along with any necessary water quality improvements. As the components to improve the timing and distribution of water are completed, the ecosystem should begin recovering. **Figure 7A-1** presents a conceptual time line for ecosystem recovery as CERP implementation proceeds. Note that the time line actually decreases before it increases. A less desirable condition may result from initial changes before the more desirable changes expected from the CERP are attained.

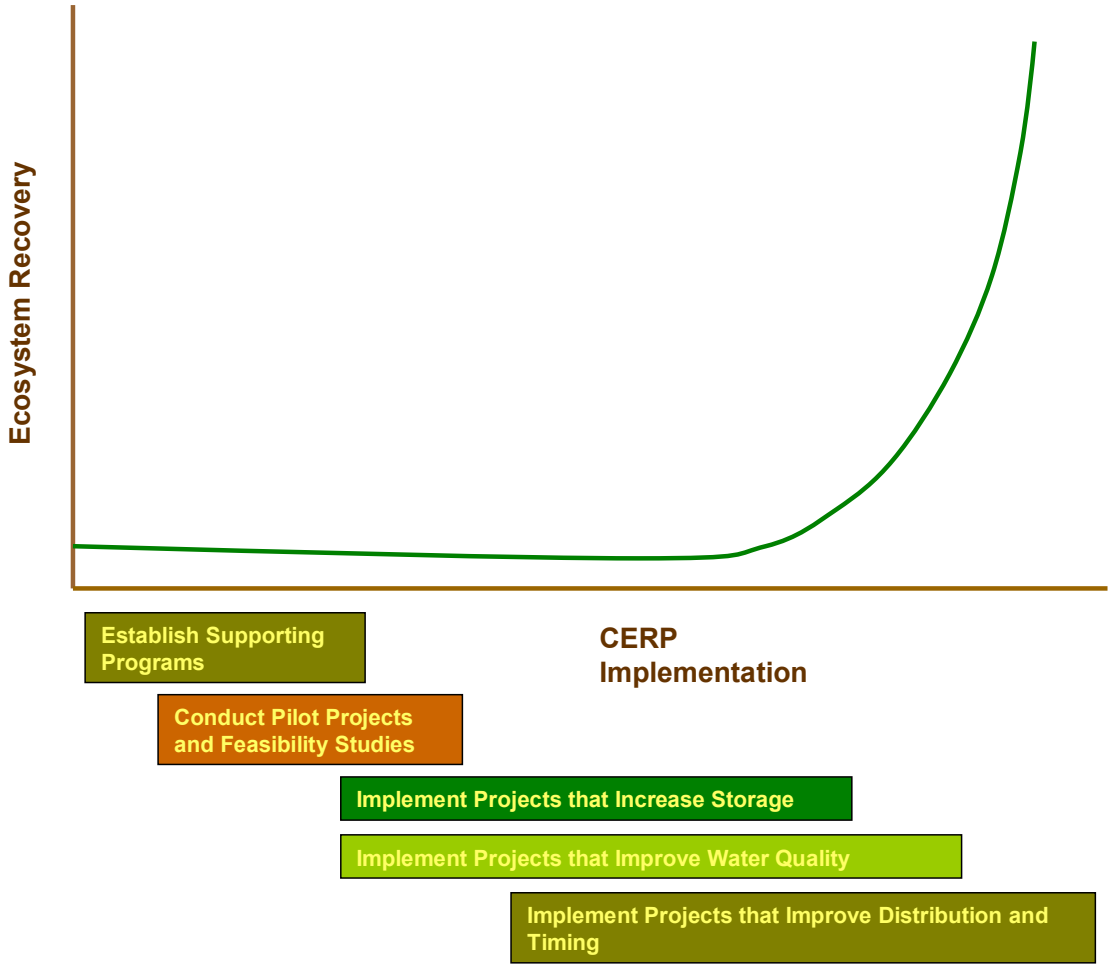

Figure 7A-1. Conceptual time line for CERP implementation and ecosystem recovery

DESIGN AGREEMENT

The Design Agreement executed between the South Florida Water Management District (SFWMD) and the United States Army Corps of Engineers (USACE) in May 2000 covers activities related to planning, engineering and design of CERP implementation (USACE and SFWMD, 2000a). The agreement established 50/50 cost sharing between the SFWMD and the USACE for all projects in which the SFWMD is the local sponsor. The Design Agreement requirements include the development of a Master Program Management Plan, the establishment of a design coordination team, and the development of management plans for each of the projects covered by the agreement.

Master Program Management Plan

According to the Design Agreement, the Master Program Management Plan must include descriptions and cost estimates for design work, performance schedules with deadlines, a schedule for planning and implementing RECOVER activities, and a budget.

The initial CERP Master Program Management Plan, completed in August 2000 (USACE and SFWMD, 2000b), specified completion of program management plans for several program-level activities. These efforts involve or affect a number of projects or the entire restoration program. The program-level activities include RECOVER, public outreach, program controls and other cross-project processes. All program-level activities either have an existing program management plan or have one under development. The status of these activities is discussed below.

Project-Level Activities

Project-level activities conducted under the Design Agreement include planning, engineering, design and project management efforts specific to individual projects. Each project has a Project Delivery Team (PDT) that is responsible for these activities.

The first step a PDT undertakes is the development of a Project Management Plan (PMP). A PMP is prepared for each project to provide a detailed description of the scope, activities, tasks, schedule, cost estimates and agency responsibilities for the project.

Once the PMP has been completed and approved, a Project Implementation Report (PIR) is developed. The purpose of the PIR is to conduct additional project formulation and evaluation and provide more detailed engineering and design. During this process, both structural and nonstructural alternative plans will be evaluated for economic, environmental, and engineering effectiveness. Criteria for site suitability will be established and a siting analysis will be conducted.

When necessary, a Design Documentation Report (DDR) will be produced. A DDR provides the technical basis for a project's plans and specifications and serves as a summary of all PDT engineering and design decisions made during project development and implementation. The DDR covers the period from preconstruction engineering through project completion. Plans and specifications will then be prepared for construction of the project.

Design Coordination Team

The Design Coordination Team (DCT) generally oversees design-related issues to, among other things, ensure that the USACE and the SFWMD agree on both the design work that will be performed and the scheduling and costs for the work. The DCT is responsible for reviewing design plans, schedules and budgets; work products, such as PMPs, PIRs, DDRs; construction plans and specifications; proposed updates of the Master Program Management Plan; land acquisition and relocation requirements; contract scopes of work, modifications, and costs; cost projections; anticipated requirements for the operation and maintenance of projects; and RECOVER activities.

CERP 470 REPORT

Section 373.470(7), Florida Statutes (F.S.) requires the SFWMD and the FDEP to submit a single CERP Annual Report to the governor, the president of the Senate, and the speaker of the House of Representatives by January 31. The report's purpose is to "provide enhanced oversight of and accountability for the financial commitments established under this section (Everglades Restoration) and the progress made in the implementation of the comprehensive plan." The statute also requires that this report be made available to the public. For the past two years, the SFWMD and FDEP have fulfilled this mandate by producing a stand-alone report (SFWMD and FDEP, 2000, 2002), referred to as the CERP Annual 470 Report. This year, an effort was made to incorporate the CERP Annual 470 Report into the *2003 Everglades Consolidated Report*. Unfortunately, the financial information was not available for publication at the time the *2003 Everglades Consolidated Report* went to press. A separate CERP Annual Report will be published containing the financial information. The report without the financial information is presented in this report.

The CERP Annual 470 report is divided into three parts based on the portion of the statute that each is fulfilling. These parts are summarized below. In Part (a), the SFWMD and FDEP will jointly identify funding sources and amounts, itemize fiscal year 2002 expenditures and fund balances, and provide a schedule of anticipated expenditures for fiscal year 2003. In Part (b), the FDEP will provide a detailed report on all funds appropriated and expended by the state on current land acquisition projects related to the CERP. Final credit toward the nonfederal share of funding will be determined in each project's cooperative agreement. In Part (c), the SFWMD and FDEP are required to provide a detailed report on progress made in the implementation of the CERP, including the status of all projects initiated after the effective date of the Everglades Restoration Investment Act (Section 373.470, F.S.). This status is included in this document and will also be included in the stand-alone CERP Annual Report that will be published in early 2003 and posted on the Web.

PART (a) FUNDS, SFWMD AND FDEP

BACKGROUND

Pursuant to Section 373.470(7)(a), F.S., Part (a) will contain information on revenues (**Table 7A-1**), expenditures (**Table 7A-2**), unencumbered balance of funds remaining in trust funds or other accounts (**Table 7A-3**), and anticipated expenditures for the next fiscal year (**Table 7A-4**) as they relate to implementation of the CERP. Only revenues, expenditures, and

unencumbered balances dedicated to the CERP will be included within this report. The purposes for which funds were expended are provided in **Appendix 7A-1**. The financial information that will be contained in this annual report will be from the period of October 1, 2001 through September 30, 2002. This period is the SFWMD's 2002 fiscal year. No federal revenues or expenditures will be reflected in these schedules.

BASIS OF PRESENTATION

Both the SFWMD's and FDEP's accounting policies conform to generally accepted accounting principles for state and local governments and are structured in accordance with the requirements of the Government Accounting Standards Board. These principles require the use of fund accounting. A fund is a separate fiscal and accounting entity having a self-balancing set of accounts. Fund accounting is designed to segregate transactions related to certain functions or activities to ensure resources are applied to finance the activities and objectives for which the resources are received, and to demonstrate compliance with legal and contractual obligations.

Table 7A-1. CERP revenues for October 1, 2001 through September 30, 2002

Source	SFWMD	FDEP	Other Local Sponsor	Total
Save Our Everglades Trust Fund				
General Revenue	-	-	-	-
Preservation 2000 Trust Fund	-		-	
Florida Forever Trust Fund	-		-	
Investment Earnings	-		-	
Total Save Our Everglades Trust Fund	-		-	
Ad Valorem			-	
Investment Earnings			-	
State Appropriations			-	
Save Our Rivers			-	
Conservation and Recreation Lands Trust Fund			-	
Preservation 2000 Trust Fund			-	
Grants			-	
Mitigation Revenue			-	
Palm Beach County Water Utility Revenues				
TOTAL REVENUES				

Table 7A-2. CERP expenditures for October 1, 2001 through September 30, 2002

Projects	SFWMD	FDEP	Total
Local Sponsor -- South Florida Water Management District			
Pilot Projects			
Lake Okeechobee ASR Pilot			
Caloosahatchee (C-43) River ASR Pilot			
Hillsboro ASR Pilot			
ASR Regional Study			
Lake Belt In-Ground Reservoir Technology Pilot			
L-31N Seepage Management Pilot			
Wastewater Reuse Technology Pilot			
Kissimmee River and Lake Okeechobee Region			
Lake Okeechobee Watershed			
Lake Istokpoga Regulation Schedule			
Lake Okeechobee Aquifer Storage and Recovery			
Caloosahatchee River Region			
C-43 Basin Storage Reservoir – Part 1			
C-43 Basin Aquifer Storage and Recovery – Part 2			
Caloosahatchee Backpumping with Stormwater Treatment			
Upper East Coast Region			
Indian River Lagoon – South			
Everglades Agricultural Area			
Everglades Agricultural Area Storage Reservoirs - Phase 1			
Everglades Agricultural Area Storage Reservoirs - Phase 2			
Big Cypress Region			
Big Cypress/L-28 Interceptor Modifications			
Water Conservation Areas and Everglades Region			
Flow to NW & Central WCA 3A			
WCA 3 Decomp and Sheetflow Enhancement - Part 1			
WCA 3 Decomp and Sheetflow Enhancement - Part 2			
Loxahatchee National Wildlife Refuge Internal Canal Structures			
Modify Holey Land Wildlife Management Area Operation Plan			
Modify Rotenberger Wildlife Management Area Operation Plan			
Lower East Coast Region			
North Palm Beach County - Part 1			
North Palm Beach County - Part 2			
ACME Basin B Discharge			
Strazzula Wetlands			
Site 1 Impoundment			
Broward County WPA			
Dade-Broward Levee and Canal			
Bird Drive Recharge Area			
PBC Agriculture Reserve Reservoir			
PBC Agriculture Reserve Aquifer Storage and Recovery			
Hillsboro Aquifer Storage and Recovery – Part 2			
Diverting WCA Flows to CLB to Downstream Natural Areas			
Broward Co. Secondary Canal System			
North Lake Belt Storage Area			
Central Lake Belt Storage Area			
Everglades National Park Seepage Management			
Biscayne Bay Coastal Wetlands			
C-111 Spreader Canal			
Southwestern Florida Region			
Southern Golden Gate Estates Hydrologic Restoration			
Florida Bay and Florida Keys Region			
Florida Keys Tidal Restoration			
Critical Restoration Projects			

Projects	SFWMD	FDEP	Total
Ten Mile Creek			
Western Tamiami Trail Culverts			
C-4 Water Control Structure			
Lake Trafford Restoration			
Lake Okeechobee Water Retention/Phosphorus Removal			
Western C-11 Water Quality Improvement			
Critical Restoration Program Controls			
Reconnaissance, Feasibility, and Planning Studies			
Southwest Florida Feasibility Study			
Florida Bay and Florida Keys Feasibility Study			
Indian River Lagoon Feasibility Study			
Water Preserve Areas Feasibility Study			
Monitoring and Evaluation			
RECOVER			
Land Aquisition and Project Support			
CERP Real Estate Acquisition and Support			
CERP Project Support			
Program Management & Support			
CERP Program Management			
CERP Geodetic Vertical Control Surveys			
CERP Program Controls			
CERP Public Involvement and Outreach			
CERP Socioeconomic and Environmental Justice			
CERP Data Management			
CERP Reserves			
Local Sponsors Other than South Florida Water Management District			
Comprehensive Integrated Water Quality Feasibility Study (FDEP)			
Biscayne Bay Feasibility Study (Miami-Dade DERM)			
Seminole Tribe Big Cypress Reservation Water Conservation Plan (Seminole Tribe)			
Henderson Creek/Belle Meade Restoration (FDEP)			
Lakes Park Restoration (Lee County)			
Melaleuca Eradication and Other Exotic Plants (USDA)			
Winsburg Farms Wetlands Restoration (Palm Beach County)			
Miccosukee Water Management Plan (Missosukee Tribe)			
Restoration of Pineland and Hardwood Hammocks in C-111 Basin (Miami-Dade County)			
West Miami-Dade Reuse (Miami-Dade County)			
South Miami-Dade Reuse (Miami-Dade County)			
TOTALS			

Table 7A-3. CERP unencumbered balance for October 1, 2001 through September 30, 2002

	SFWMD	FDEP	Other Local Sponsors	TOTAL
Fund Balance as of September 30, 2001				
Add: Revenues				
Less: Expenditures				
Expenditures for Non-CERP Critical Projects			-	-
Total Funds Available as of September 30, 2002				-
Less: Encumbrances				-
Unencumbered Balance as of September 30, 2002				

Table 7A-4. CERP anticipated expenditures for the next fiscal year - October 1, 2002 to September 30, 2003

Projects	Total Anticipated Expenses
Local Sponsor -- South Florida Water Management District	
Pilot Projects	
Lake Okeechobee ASR Pilot	
Caloosahatchee (C-43) River ASR Pilot	
Hillsboro ASR Pilot	
ASR Regional Study	
Lake Belt In-Ground Reservoir Technology Pilot	
L-31N Seepage Management Pilot	
Wastewater Reuse Technology Pilot	
Kissimmee River and Lake Okeechobee Region	
Lake Okeechobee Watershed	
Lake Istokpoga Regulation Schedule	
Lake Okeechobee Aquifer Storage and Recovery	
Caloosahatchee River Region	
C-43 Basin Storage Reservoir – Part 1	
C-43 Basin Aquifer Storage and Recovery – Part 2	
Caloosahatchee Backpumping with Stormwater Treatment	
Upper East Coast Region	
Indian River Lagoon - South	
Everglades Agricultural Area	
Everglades Agricultural Area Storage Reservoirs – Phase 1	
Everglades Agricultural Area Storage Reservoirs – Phase 2	
Big Cypress Region	
Big Cypress/L-28 Interceptor Modifications	
Water Conservation Areas and Everglades Region	
Flow to NW & Central WCA 3A	
WCA 3 Decomp and Sheetflow Enhancement - Part 1	
WCA 3 Decomp and Sheetflow Enhancement - Part 2	
Loxahatchee National Wildlife Refuge Internal Canal Structures	
Modify Holey Land Wildlife Management Area Operation Plan	
Modify Rotenberger Wildlife Management Area Operation Plan	
Lower East Coast Region	
North Palm Beach County - Part 1	
North Palm Beach County - Part 2	
ACME Basin B Discharge	

Projects	Total Anticipated Expenses
Strazzula Wetlands	
Site 1 Impoundment	
Broward County WPA	
Dade-Broward Levee and Canal	
Bird Drive Recharge Area	
PBC Agriculture Reserve Reservoir	
PBC Agriculture Reserve ASR	
Hillsboro Aquifer Storage and Recovery – Part 2	
Diverting WCA Flows to CLB to Downstream Natural Areas	
Broward Co. Secondary Canal System	
North Lake Belt Storage Area	
Central Lake Belt Storage Area	
Everglades National Park Seepage Management	
Biscayne Bay Coastal Wetlands	
C-111 Spreader Canal	
Southwestern Florida Region	
Southern Golden Gate Estates Hydrologic Restoration	
Florida Bay and Florida Keys Region	
Florida Keys Tidal Restoration	
Critical Restorations	
Ten Mile Creek	
Western Tamiami Trail Culverts	
C-4 Water Control Structure	
Lake Trafford Restoration	
Lake Okeechobee Water Retention/Phosphorus Removal	
Western C-11 Water Quality Improvement	
Critical Restoration Program Controls	
Reconnaissance, Feasibility, and Planning Studies	
Southwest Florida Feasibility Study	
Florida Bay and Florida Keys Feasibility Study	
Indian River Lagoon - South Feasibility Study	
Water Preserve Areas Feasibility Study	
Monitoring and Evaluation	
RECOVER	
Land Aquisition and Project Support	
CERP Real Estate Acquisition and Support	
CERP Project Support	
Program Management and Support	
CERP Program Management	
CERP Geodetic Vertical Control Surveys	
CERP Program Controls	
CERP Public Outreach	
CERP Environmental and Economic Equity	
CERP Data Management	
CERP Reserves	
CERP Indirect Costs	
Local Sponsors Other than South Florida Water Management District	
Comprehensive Integrated Water Quality Feasibility Study (FDEP)	
Biscayne Bay Feasibility Study (Miami-Dade DERM)	
Seminole Tribe Big Cypress Reservation Water Conservation Plan (Seminole Tribe)	
Henderson Creek/Belle Meade Restoration (FDEP)	
Lakes Park Restoration (Lee County)	
Melaleuca Eradication and Other Exotic Plants (USDA)	
Winsburg Farms Wetlands Reuse (Palm Beach County)	
Miccosukee Water Management Plan (Miccosukee Tribe)	
Restoration of Pineland and Hardwood Hammocks in C-111 Basin (Miami-Dade County)	
West Miami-Dade Reuse (Miaimi-Dade County)	

Projects	Total Anticipated Expenses
South Miami-Dade Reuse (Miami-Dade County)	
TOTALS	

PART (b) FUNDS, FDEP

BACKGROUND

Pursuant to Section 373.470(7)(b), F.S., Part (b) of this report will contain a detailed account of all funds expended by the state toward land acquisition for the CERP in fiscal year 2002 (**Table 7A-5**). **Appendix 7A-1** includes a description of the purposes for which funds were expended. The unencumbered fiscal year-end balance that remains in each identified trust fund is will also be reported. Only revenues, expenditures and unencumbered balances dedicated to the CERP will be included within this report.

Each component identified in the CERP will be described in detail in a project implementation report. A project cooperation agreement will be subsequently executed for that component or group of components (also referred to as a project). The amount of expenditures to be credited toward the state's share of funding for implementation of the CERP will be defined in the design and project cooperation agreements.

BASIS OF PRESENTATION

The FDEP's accounting policies conform to generally accepted accounting principles for state and local governmental units and are structured in accordance with the requirements of the Governmental Accounting Standards Board. These principles require the use of fund accounting. A fund is a separate fiscal and accounting entity having a self-balancing set of accounts. Fund accounting is designed to segregate transactions related to certain functions or activities to ensure resources are applied to finance the activities and objectives for which the resources are received and to demonstrate compliance with legal and contractual obligations.

The information in these special-purpose financial presentations will relate to the general fund and to special revenue funds classified as a governmental fund type. Special revenue funds are used to account for specific revenue sources, which are legally restricted to expenditure for specified purposes.

Table 7A-5. Revenues, expenditures and encumbrances by the state toward land acquisition for all CERP projects/separable elements for October 1, 2001 to September 30, 2002

	Save Our Everglades Trust Fund	Conservation & Recreation Lands Trust Fund	Preservation 2000 Trust Fund	Totals
REVENUES				
by source of funds				
General Revenue				
Preservation 2000 Trust Fund				
Florida Forever Trust Fund				
Conservation & Recreation Lands Trust Fund				
Interest Earnings				
TOTAL REVENUES				
EXPENDITURES				
by land acquisition project				
TOTAL EXPENDITURES				
ENCUMBRANCES				
by land acquisition project				
TOTAL ENCUMBRANCES				
Excess of Revenues Over Expenditures and Encumbrances				
Unencumbered Balance as of September 30, 2002				

PART (c) IMPLEMENTATION STATUS

One portion of the statute, Section 373.470(7)(c), F.S., or Part (c), requires that the status of CERP implementation be reported annually along with the financial information. Currently, the USACE and the SFWMD are acquiring land, developing and administering programs, and preparing PMPs and PIRs relating to the CERP.

STATUS OF LAND ACQUISITION

From May 1, 2001 through April 30, 2002 (WY02), 18,767 acres of land were acquired that are suitable for use by CERP projects. Some of this land will be used for the projects listed below. A more detailed description of land acquisition can be found in Chapter 8C. The general locations of the projects are presented in **Figure 7A-2**.

Biscayne Bay Coastal Wetlands. The Biscayne Bay Coastal Wetlands Project will rehydrate wetlands and reduce point-source discharges to Biscayne Bay.

C-111 Spreader Canal. The C-111 Spreader Canal Project is intended to rehydrate the Model Lands, establish sheetflow and hydropatterns that will sustain ecosystems in the Southern Everglades and Model Lands, provide more natural sheetflow to Florida Bay by eliminating point sources of freshwater discharges through the C-111 to the estuarine systems of Manatee Bay and Barnes Sound, and maintain some level of flood protection for agricultural and urban areas in the project area.

Broward County Water Preserve Area. The Broward County WPA Project is comprised of several parts, including the Water Conservation Area 3A (WCA-3A) and WCA-3B Levee Seepage Management Project, and the C-9 and C-11 Impoundments. The WCA-3A and WCA-3B Levee Seepage Management Project will reduce seepage and improve hydropatterns in WCA-3 and provide water supply deliveries to Miami-Dade County. The C-9 and C-11 impoundments will treat water in the C-9 and C-11 basins.

Taylor Creek/Nubbin Slough Storage and Treatment Areas. This project is part of the Lake Okeechobee Watershed Project. The purpose of the Taylor Creek/Nubbin Slough Storage and Treatment Areas is to attenuate flows to Lake Okeechobee and reduce the amount of nutrients flowing to the lake. It is designed to capture, store, and treat basin runoff during periods when levels in Lake Okeechobee are high or increasing and release the water back to the lake when lake levels decline to regain ecologically acceptable levels.

Indian River Lagoon - South. The Indian River Lagoon - South Project includes the C-44 Basin Storage Reservoir, the C-23 and C-24 Basins Storage Reservoirs, and the C-25 and the North and South Fork Storage Reservoirs. These storage reservoirs were included in the Indian River Lagoon - South Feasibility Study (USACE and SFWMD, 2002l). The C-44 Basin Storage Reservoir will capture local runoff from the C-44 basin, then return the stored water to the C-44 when there is a water supply demand. The remaining reservoirs will capture local runoff for flood flow attenuation to the St. Lucie River Estuary. The reservoirs will be designed for flood flow attenuation to the estuary; water supply benefits including environmental water supply deliveries to the estuary; and water quality benefits to control salinity and reduce loading of nutrients, pesticides, and other pollutants contained in runoff presently being discharged to the estuary.

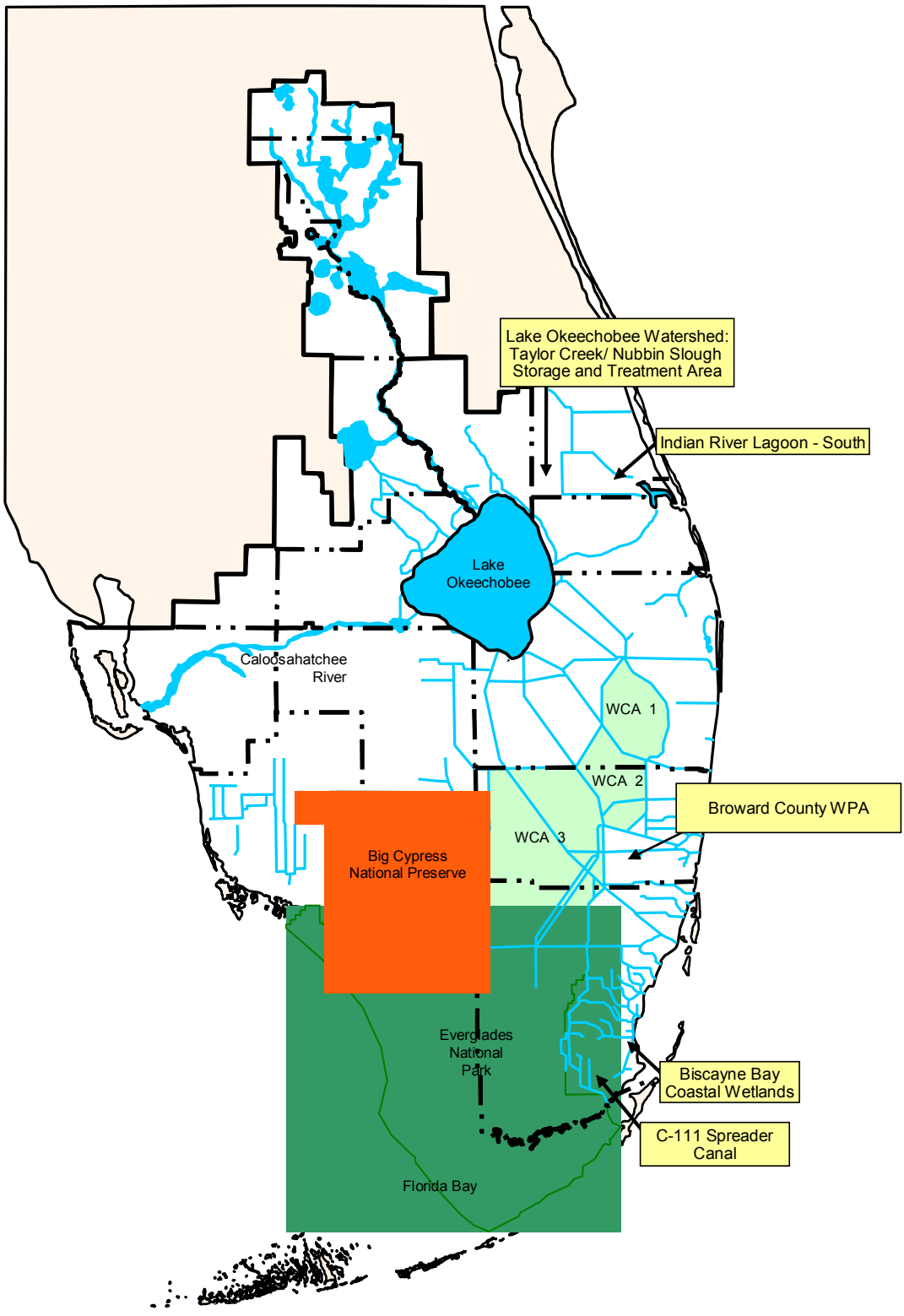

Figure 7A-2. General location of CERP projects for which land was acquired during Water Year 2002

STATUS OF PROGRAM-LEVEL ACTIVITIES

Seven major efforts currently comprise the program-level activities for the CERP: program controls, geodetic vertical control surveys, RECOVER, public outreach, environmental and economic equity, data management, and recreation. The initial Master Program Management Plan (USACE and SFWMD, 2000b) specified completion of program management plans for program controls, public outreach, environmental and economic equity, geodetic vertical control surveys, and RECOVER. Initial program management plans have been completed for all these program-level activities and for data management (**Table 7A-6**). Also, a program management plan is currently being developed for recreation. The Master Program Management Plan and the program management plan for RECOVER are currently being updated. The following paragraphs describe the program-level activities in more detail and provide an overview of their respective statuses.

Table 7A-6. Final approval of program management plans for program-level activities

Program-Level Activity	Initial Program Management Plan Completed	Expected Completion Date of Initial or Updated Plan
Master Program Management Plan	August 2000	February 2003
Program Controls	December 2000	
Geodetic Vertical Control Surveys	February 2001	
RECOVER	May 2001	Spring 2003
Public Outreach	August 2001	
Environmental and Economic Equity	August 2001	
Data Management	February 2002	
Master Recreation Plan		January 2003

Program Controls. The Program Controls Management Plan (USACE and SFWMD, 2001a) directs the implementation of a program controls function that will be able to confirm that CERP implementation is being managed in a manner consistent with what has been agreed upon by the SFWMD and the USACE. The initial management plan was approved in December 2000. This management plan identifies the joint implementation of critical program control functions, including program schedule management, financial management, records management, project performance measurement and reporting, and Website management. In November 2001, an enterprise project management system was rolled out to manage the CERP Master Implementation Schedule. In June 2002, the SFWMD and the USACE began using the Documentum database to manage document production and tracking. The CERP Master Implementation Schedule was updated in July 2001 (USACE and SFWMD, 2001f). This schedule, CERP Master Implementation Schedule 1.0, is included in **Appendix 7A-2**. It is currently being updated again. Also, a Program Controls Implementation Plan and a CERP guidance memorandum on project cost estimates are being developed.

Geodetic Vertical Control Surveys. The Geodetic Vertical Control Surveys program-level activity consists of surveying a thousand linear miles of First Order Class II level lines, setting or recovering approximately 1,000 monuments, route reconnaissance, web mapping, global position satellite positioning on red marks, data processing, and publication of the results on the National Spatial Reference System. The program management plan was approved in February 2001

(USACE and SFWMD, 2001b). Fieldwork began on May 9, 2001. The program is expected to be completed in March 2003.

RECOVER. The program management plan for RECOVER was completed in May 2001 (USACE and SFWMD, 2001c) and will be updated by spring 2003. An annual report card aimed at providing information to the public and state and federal legislatures has been developed and is scheduled to be issued in November 2002. A draft of the report was provided in **Appendix 7b-2**. RECOVER is also managing the approximately $10 million per year authorized in WRDA 2000 for monitoring and assessment. A newly revised draft of the systemwide Monitoring and Assessment Plan was completed in September 2002. Habitat suitability indices used to define the quality of the habitat for various fish and other wildlife species are being developed.

Public Outreach. Public outreach is a process by which interested and affected individuals, organizations and governmental entities are informed of a project and its goals and, therefore, have the opportunity to participate in the decision-making process. Public outreach supports the exchange of ideas and information among interested individuals and groups, a process that is critical to resolving the challenges that will arise during the implementation of the CERP. The Public Outreach Program Management Plan (USACE and SFWMD, 2001d) was completed in August 2001.

Environmental and Economic Equity. The environmental and economic equity activity covers economic equity, environmental justice, socioeconomic baseline data, project support and guidance, research, and evaluation and assessment on socioeconomic parameters of program implementation. The Environmental and Economic Equity Program Management Plan (USACE and SFWMD, 2001e) was completed in August 2001. Since then, several projects have been implemented. These include a preliminary occupation analysis, a small business technical assistance program, a collection of census data and the creation of maps, environmental justice training development and delivery, a project guidance document, a Florida Agricultural and Mechanical University contract, and the Glades Area Revitalization Project.

Data Management. The program management plan for data management will address the data needs of CERP implementation. A joint SFWMD-USACE team is currently identifying data requirements, developing the information technology infrastructure to support the requirements, and establishing data standards, guidelines, protocols, and standard operating procedures to assure effective data integration. The program management plan (USACE and SFWMD, 2002a) was completed in February 2002. Currently, implementation plans are being developed for a data clearinghouse and various other software and data needs.

Recreation. The impacts of CERP implementation on existing recreational use within the South Florida ecosystem will be identified, evaluated and addressed in a CERP Master Recreation Plan. The plan will also identify and evaluate potential new recreation, public use and public educational opportunities. Promising opportunities may be recommended for further evaluation during the development of PIRs for specific CERP projects, for implementation through other cost-share arrangements between federal, state, local or nonprofit entities or for stand-alone congressional authorization. Development of the program management plan was initiated in August 2002 and is expected to be completed during January 2003.

STATUS OF PROJECT-LEVEL ACTIVITIES

The SFWMD and the USACE have begun detailed planning and design of CERP projects generally in accordance with the implementation schedule of the original plan. The implementation schedule is revised at least annually to incorporate changes based on new state and federal legislation and other factors. Also, changes are made to reduce technical uncertainties and clarify relationships between external milestones and specific CERP projects. The most recent schedule was published in July 2001 (USACE and SFWMD, 2001f) and will be revised following the promulgation of programmatic regulations required by the WRDA 2000. The current list of all CERP projects is provided in **Appendix 7A-1**, along with a crosswalk to projects in the original comprehensive plan authorized by WRDA 2000.

This section of the report highlights the individual projects and the PMPs and PIRs that have been initiated or completed. For purposes of this section, the projects have been grouped into four classifications: pilot projects, feasibility studies, critical projects, and other CERP projects.

The SFWMD and the USACE have begun detailed planning and design of seven pilot projects, three feasibility studies and 12 construction projects. In addition, the agencies have continued implementing three feasibility studies and seven critical projects that commenced prior to CERP authorization.

Pilot Projects

Seven pilot projects will be conducted to assist in the implementation of the CERP (**Table 7A-7** and **Figure 7A-3**). Four of these pilot projects are designed to address the technical and regulatory uncertainties regarding regional implementation of the CERP Aquifer Storage and Recovery (ASR) projects. The remaining three are designed to test other proposed technologies. The PMPs have been completed for most of the projects. The project design teams (PDTs) are now working on the Pilot Project Design Reports (PPDRs) for each pilot project.

Table 7a-7. Final approval of PMPs and PPDRs for pilot projects

Pilot Project	PMP Completed	Expected PMP Completion	Expected PPDR Completion
Lake Okeechobee ASR Pilot	March 2001		July 2004
Caloosahatchee (C-43) River Basin ASR Pilot	February 2002		December 2004
Hillsboro ASR Pilot	March 2001		July 2004
ASR Regional Study		March 2003	
Lake Belt In-Ground Reservoir Technology Pilot	March 2002		April 2006
L-31N Seepage Management Pilot	April 2002		April 2006
Wastewater Reuse Technology Pilot Part 1	January 2002		
Wastewater Reuse Technology Pilot Part 2		February 2003	

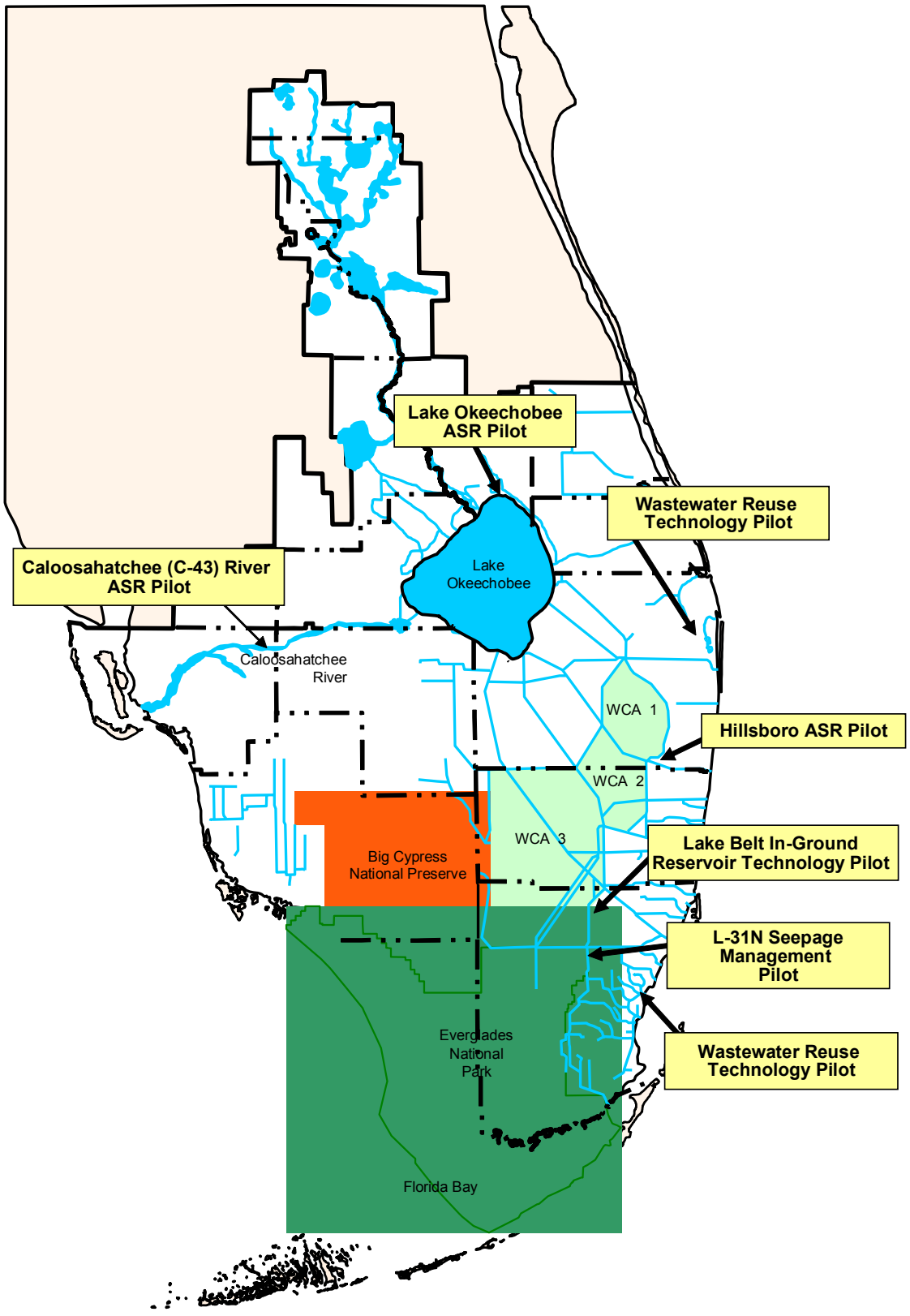

Figure 7A-3. General location of CERP pilot projects

Lake Okeechobee ASR Pilot. The Lake Okeechobee ASR Pilot Project will evaluate the technical and regulatory uncertainties associated with using ASR technology near Lake Okeechobee. The project includes data collection, plan formulation, permitting, design, construction, testing, operation and reporting for five ASR systems that will store available water for subsequent recovery during dry periods. These five systems will be located at three geographically dispersed areas around Lake Okeechobee, with one of these sites being a three-well cluster to evaluate how multiple ASR systems interact with one another. In March 2001 the PMP was approved (SFWMD and USACE, 2001g) and the PPDR was initiated. The PPDR is expected to be completed in July 2004.

Caloosahatchee River (C-43) Basin ASR Pilot. The Caloosahatchee River ASR Pilot Project Management Plan (USACE and SFWMD, 2000h) was completed in February 2002. This project will assess the hydrogeological characteristics of the Hawthorne and Floridan aquifers and water quality in the vicinity of the C-43 basin. The project will also determine suitable sites and optimal configurations of ASR wells and assess the quality of the source water to be stored and recovered. The PPDR for this project was initiated in February 2002 and is expected to be completed in December 2004.

Hillsboro ASR Pilot. The Hillsboro ASR Pilot Project will address uncertainties associated with ASR technology proposed in the CERP. The project will also determine the feasibility of using ASR technology, evaluate the technical and regulatory uncertainties of the technology, and determine the optimum design of a facility prior to embarking upon full-scale implementation of the ASR facilities at the Hillsboro and other sites in the Lower East Coast region. The PMP for this project was approved in March 2001 (USACE and SFWMD, 2001i). The PPDR was initiated in June 2002 and is expected to be completed in July 2004.

ASR Regional Study. The ASR Regional Study is being designed to address regional technical issues associated with the CERP ASR Program beyond the scope of the individual ASR pilot projects. The project scope and a draft PMP have been developed for the study. Cost estimates and a work breakdown structure are being developed, and the PMP should be completed in March 2003. The ASR Regional Study is expected to be completed approximately one year after the completion of the final ASR pilot project. Information gathered during the regional investigation will be used along with the results of the ASR pilot projects to make recommendations for the expanded use of ASR technology envisioned in the CERP.

Lake Belt In-Ground Reservoir Technology Pilot. The Lake Belt In-Ground Reservoir Technology Pilot Project will determine whether two full-scale Lake Belt Storage Area components can be successfully constructed and operated to provide environmental and water supply deliveries. The pilot project will consist of land acquisition, a geologic investigation, a pilot reservoir siting, construction of impermeable barriers and a pilot-scale, in-ground reservoir, and a water quality monitoring program. The PMP was completed in March 2002 (USACE and SFWMD, 2002b). The PPDR was initiated in April 2002 and is expected to be completed in April 2006.

L-31N Seepage Management Pilot. The goal of the L-31N Seepage Management Pilot Project is to improve water deliveries to Northeast Shark River Slough and restore wetland hydropatterns in Everglades National Park by reducing levee and groundwater seepage and increasing sheetflow. This pilot project will evaluate various alternatives to reduce seepage loss, and a water budget and source determination will be developed to quantify baseline conditions. The PMP received final approval in April 2002 (USACE and SFWMD, 2002c). The PPDR was initiated in April 2002 and is expected to be completed in April 2006.

Wastewater Reuse Technology Pilot. The Wastewater Reuse Technology Pilot Project will determine the ecological effects of using superior, advanced treated, reclaimed water to replace and augment freshwater flows to Biscayne Bay and the Bird Drive basin, and will determine the level of superior, advanced treatment that is required to prevent degradation of freshwater and estuarine wetlands and the Biscayne Bay. This pilot project will be implemented as two separate projects. The first project will concentrate on West Palm Beach/western Miami-Dade County ecological and technology assessments. The second project will involve design, construction, operation and monitoring of a pilot reuse plant in southern Miami-Dade County. The PMP (USACE and SFWMD, 2002d) was approved and the PPDR initiated for part 1 in January 2002. The PMP for part 2 is scheduled for completion in February 2003.

Feasibility Studies

Six feasibility studies have been authorized: Water Preserve Areas (WPAs), Indian River Lagoon South, Southwest Florida, Florida Bay and Florida Keys, Biscayne Bay, and Comprehensive Integrated Water Quality. The WPAs, Indian River Lagoon-South, and Biscayne Bay feasibility studies were authorized prior to the CERP; therefore, PMPs were not required. The expected completion dates of the PMPs and final feasibility report are listed in **Table 7A-8**. The locations of five of the feasibility studies are presented in **Figure 7A-4**. The boundary of the Comprehensive Integrated Water Quality Feasibility Study is presented in **Figure 7A-5**.

Table 7A-8. Final approval of PMPs and final studies for feasibility studies

Feasibility Study	PMP Completion	Expected PMP Completion	Expected Study Completion
Water Preserve Areas Feasibility Study	Authorized Prior to CERP		see below
Indian River Lagoon South Feasibility Study	Authorized Prior to CERP		August 2002
Southwest Florida Feasibility Study	January 2002		June 2006
Florida Bay and Florida Keys Feasibility Study	February 2002		March 2006
Biscayne Bay Feasibility Study	Authorized Prior to CERP		
Comprehensive Integrated Water Quality Feasibility Study		Fall 2002	December 2006

Water Preserve Areas Feasibility Study. The WPAs are intended to provide regional storage to assist in meeting the future water supply needs of all types of users: agricultural, urban, and environmental. The draft feasibility report was completed in October 2001. In June 2002, a revised strategy was formulated to finalize the feasibility study and proceed with individual PIRs for each of the WPA projects. Individual PMPs and PIRs will be initiated on an expedited basis between August 2002 and April 2003.

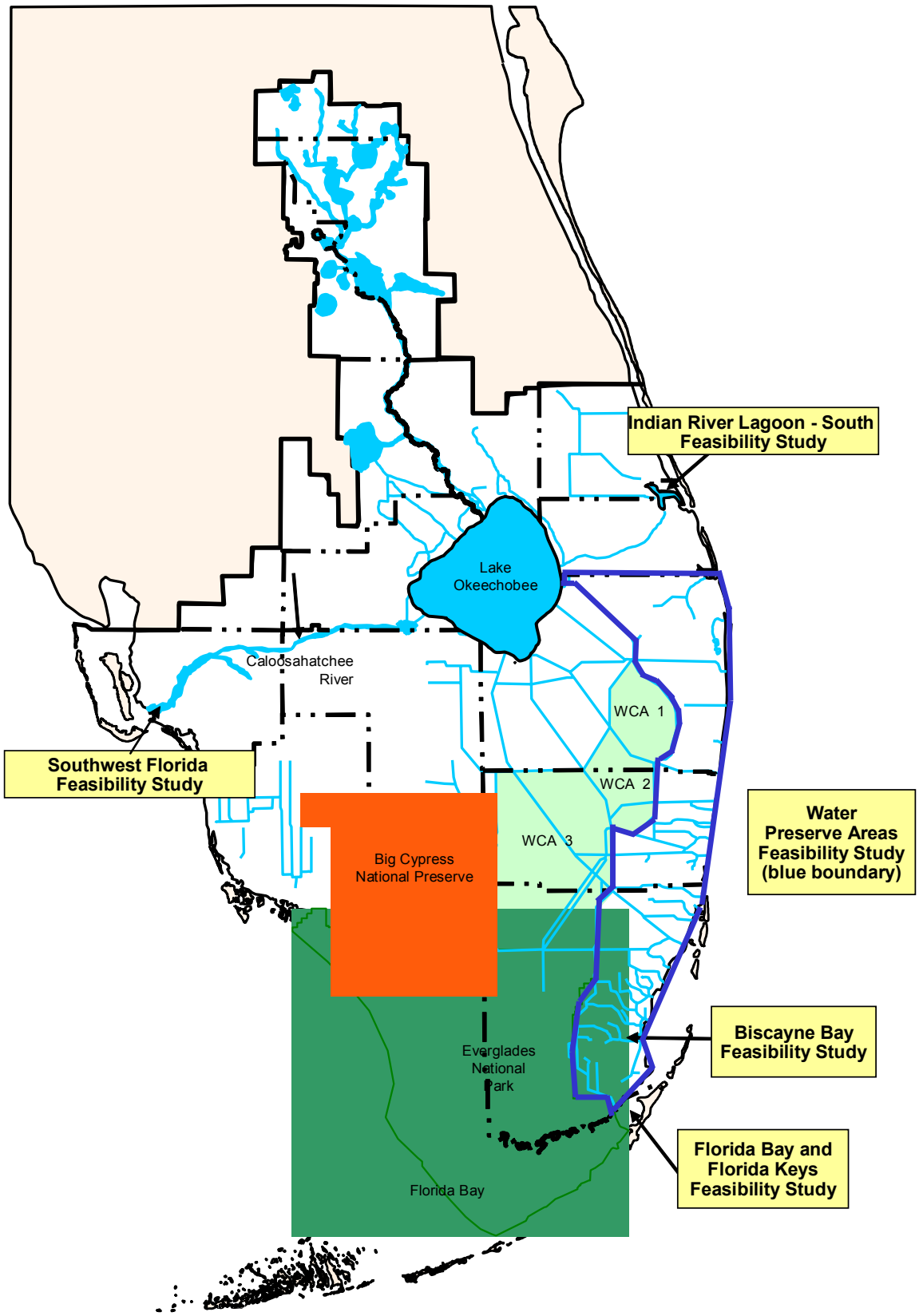

Figure 7A-4. General locations of five of the CERP feasibility studies

Indian River Lagoon-South Feasibility Study. The primary purpose of the Indian River Lagoon-South Feasibility Study is to improve surface water management in the C-23, C-24, C-25 and C-44 basins for habitat improvement in the St. Lucie Estuary and the Indian River Lagoon. Probable recommended facilities would include reservoirs for surface water storage and storage and treatment areas for water quality improvement. The final feasibility report was completed in August 2002 and released in September 2002 (USACE and SFWMD, 2002l). It is expected to be submitted to Congress in December 2002 and approved for inclusion in the WRDA 2002.

Southwest Florida Feasibility Study. This feasibility study will identify water resource-related problems and opportunities and provide a framework to address the health of aquatic ecosystems, water flows, water quality, water supply, flood protection, wildlife, biological diversity and natural habitat in Southwest Florida. The PMP was completed and approved in January 2002 (USACE and SFWMD, 2002e). Alternative plans are currently being evaluated. The feasibility study was initiated in August 2001, and the final feasibility report is scheduled for completion in June 2006.

Florida Bay and Florida Keys Feasibility Study. The Florida Bay and Florida Keys Feasibility Study will determine the types of modifications needed to successfully restore and protect the water quality and ecological conditions of Florida Bay and the Florida Keys' reef tract. The study will evaluate the quantity, timing, distribution and quality of fresh water that should flow to Florida Bay and provide recommendations for any modification of water deliveries that are expected as a result of the implementation of Everglades' restoration programs. The PMP was finalized in February 2002 (USACE and SFWMD, 2002f). The feasibility study was initiated in March 2002. Performance measures and evaluation models are currently being developed. The final feasibility report is scheduled for completion in March 2006.

Biscayne Bay Feasibility Study. The Biscayne Bay Feasibility Study was initiated in 1984 as a result of the findings of a USACE reconnaissance report. The report reviewed existing federal projects to determine the advisability of modifications to alleviate problems associated with water quality, biological productivity and related factors. The Biscayne Bay Florida Updated Reconnaissance Report (USACE, 1995), completed in July 1995, recommended developing and operating a hydrodynamic simulation model, as well as other ecosystem models, of Biscayne Bay. Hydrodynamic, groundwater and surface water, water quality, and biological (plant and animal communities) models are being developed.

Comprehensive Integrated Water Quality Feasibility Study. The Comprehensive Integrated Water Quality Feasibility Study will develop a recommended comprehensive plan to achieve and sustain improved water quality for ecosystem restoration in South Florida. The study area for the project is the SFWMD boundary, plus the study area for the Indian River Lagoon-North Feasibility Study, which is within the St. Johns River Water Management District. (**Figure 7A-5**). The study will integrate CERP projects with other federal, state and local government programs. The study will also identify degraded water bodies, identify and quantify pollution types and sources, develop recommended pollution load reduction targets, conduct an inventory and evaluation of the suite of structural and nonstructural measures that improve water quality, recommend additional programs and projects, and identify appropriate funding sources. The USACE and the FDEP are co-sponsoring this study. The PMP is expected to be completed by fall 2002. Following the completion of the PMP, the USACE and the FDEP will negotiate a cost-sharing agreement (50/50) to complete the feasibility study phase, which is scheduled for completion in December 2006.

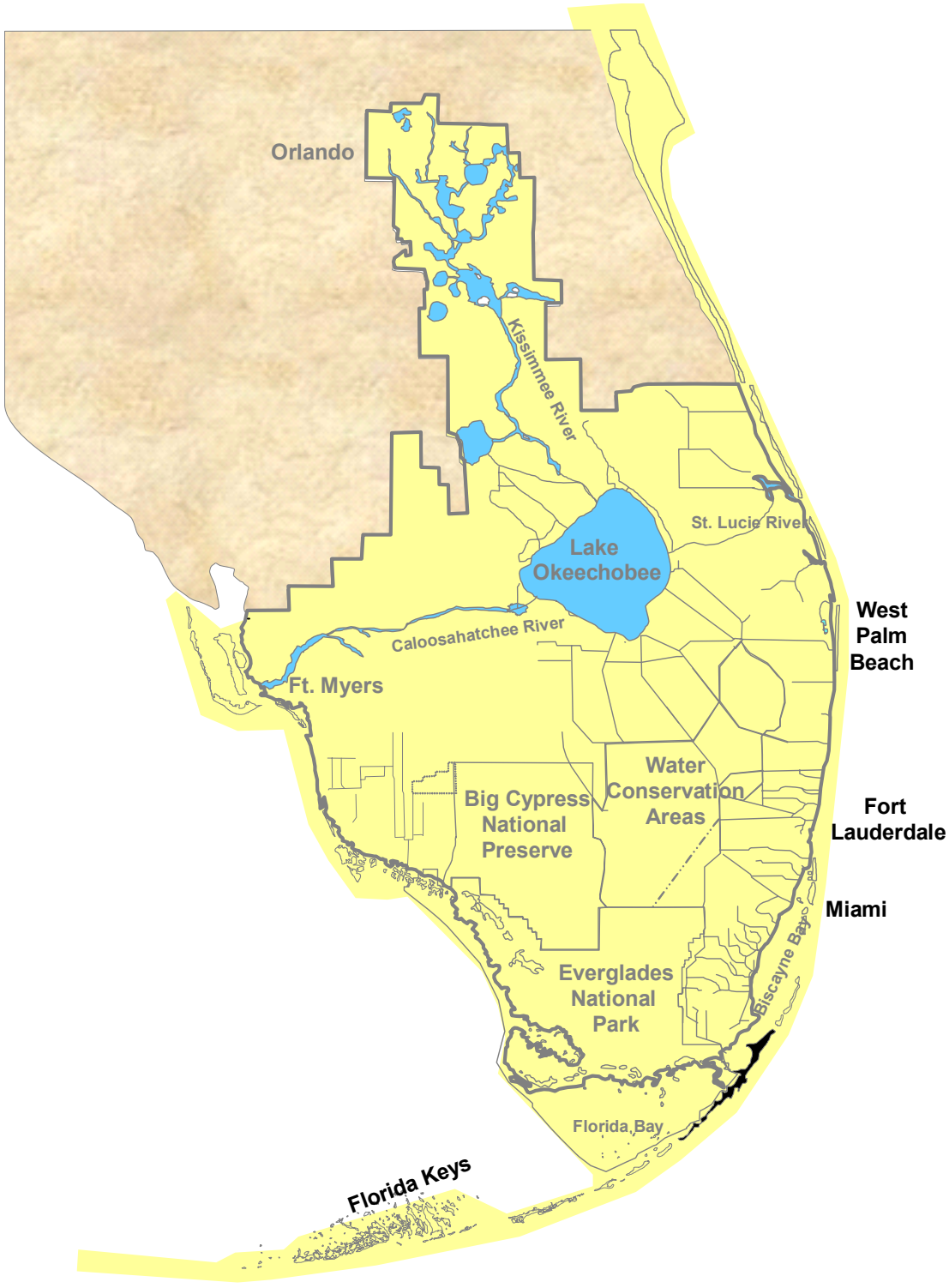

Figure 7A-5. Boundary of the Comprehensive Integrated Water Quality Feasibility Study

Critical Projects

Critical projects, authorized in 1996, are comparatively small restoration projects undertaken by the USACE prior to CERP authorization. Seven projects determined to be critical to the restoration of the South Florida ecosystem were authorized prior to the CERP (**Figure 7A-6**). They are now being implemented along with the CERP projects, but PMPs and PIRs were not required. Instead, brief project reports, referred to as "letter reports" were required for each of these projects. The letter reports are available on the USACE's Jacksonville District Website at www.saj.usace.army.mil.

Ten Mile Creek. The Ten Mile Creek Critical Project will provide seasonal or temporary storage of stormwater from the Ten Mile Creek basin in St. Lucie County. Increased runoff from this basin has contributed to salinity fluctuations that are causing habitat elimination in Indian River Lagoon. An aboveground reservoir, a pump station, and a gated water-level control structure will be constructed. Plans and specifications were completed in May 2002. Construction is expected to be awarded in April 2003 and completed in December 2005.

Western Tamiami Trail Culverts. The Tamiami Trail, constructed in 1928, intercepts north-south flowways to the Big Cypress National Preserve. The Western Tamiami Trail Culverts Critical Project will increase the number of north-south flowways by adding culverts that will restore natural hydropatterns and improve sheetflow of surface water within the Ten Thousand Island National Wildlife Refuge, the Big Cypress National Preserve, and Everglades National Park. Plans and specifications are expected to be completed in January 2003. Construction is expected to be awarded in July 2003 and completed in October 2005.

C-4 Water Control Structure. A large volume of seepage is lost from WCA-3B to the coast because the existing water management system is unable to raise surface water and groundwater levels high enough to prevent seepage. This project will construct a gated control structure in the C-4 canal. This control structure will raise surface and ground water levels to prevent drainage of the Everglades and to reestablish natural hydroperiod patterns, and increase aquifer recharge and surface and subsurface water storage to enhance regional water supplies. The project will also enhance plant and animal habitat. The plans and specifications were completed in July 2000. Construction began in November 2000 and is expected to be completed in the first quarter of fiscal year 2003.

Southern CREW/Imperial River Flowway. The Southern Corkscrew Regional Ecosystem Watershed (CREW)/Imperial River Flowway Critical Project will reestablish more natural flow patterns in the Southern CREW, restore the Imperial River's natural flowway to Estero Bay, and reduce nutrient loads to the Imperial and Estero Rivers. The project involves the acquisition of approximately 2,720 acres. The project is divided into three phases. Phase 1 was the construction of the Kehl Canal Weir Modification, which was completed in February 1998. Phase II is expected to be completed in February 2003 and consists of land acquisition and restoration of historic sheetflow to approximately 2,720 acres. Phase III consists of the acquisition of approximately 2,040 acres and restoration of historic sheetflow and is expected to be completed in September 2003.

Lake Trafford Restoration. The Lake Trafford Restoration Critical Project will improve lake water quality and subsequent flows to the Corkscrew Swamp Sanctuary, the CREW and the Florida Panther National Wildlife Refuge. Eight-and-a-half-million cubic yards of organic sediment will be dredged from the lake and disposed of on agricultural lands. The project is currently on hold pending further discussions.

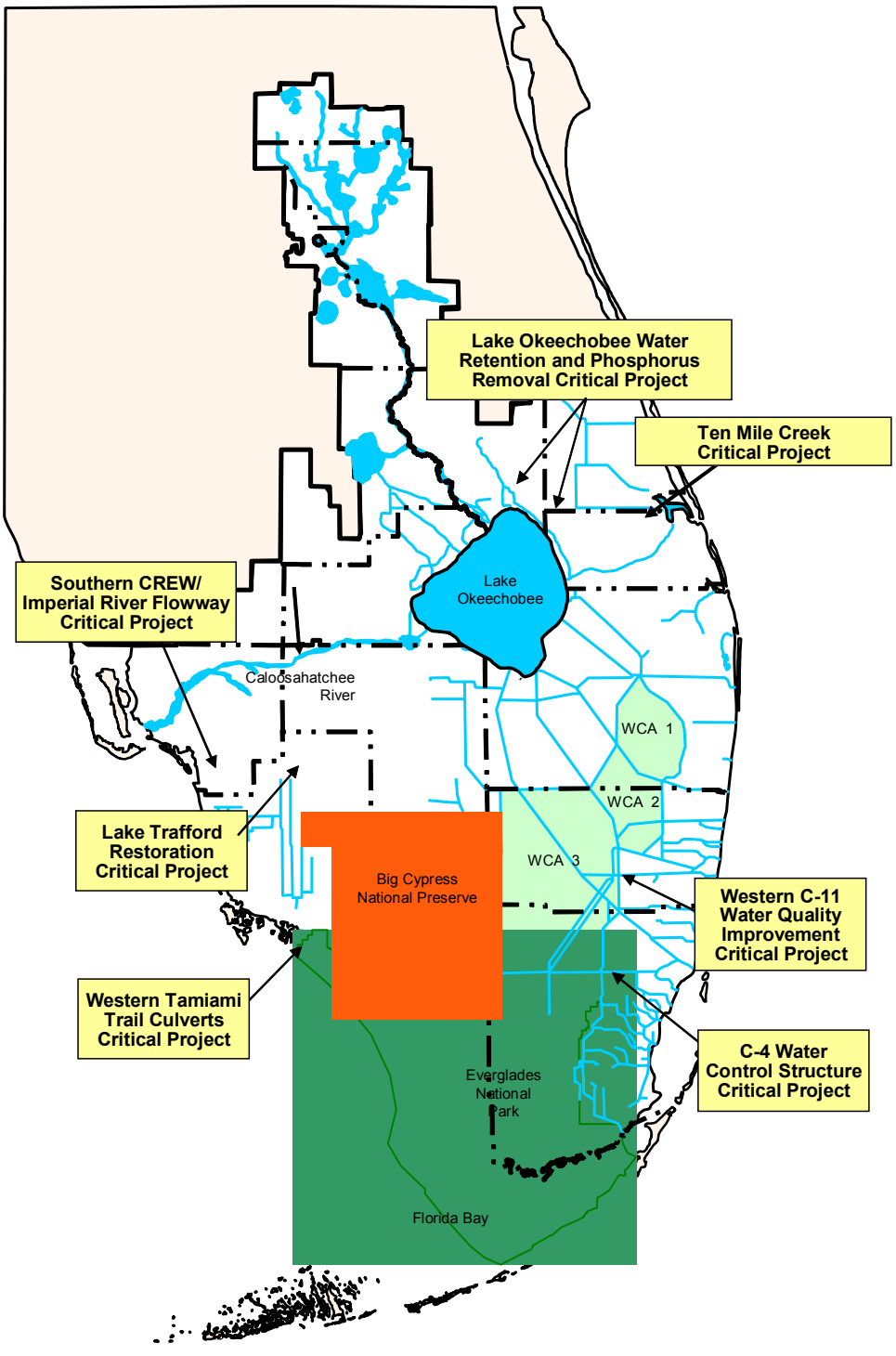

Figure 7A-6. General location of critical projects

Lake Okeechobee Water Retention/Phosphorus Removal. The purposes of the Lake Okeechobee Water Retention/Phosphorus Removal Critical Project are to capture and attenuate peak flows for portions of the watershed, restore wetlands and improve water quality by removing phosphorus from waters entering Lake Okeechobee. Stormwater treatment areas (STAs) will be constructed for Taylor Creek and Nubbin Slough. Also, isolated wetlands will be restored on privately owned agricultural parcels north of Lake Okeechobee. The construction of one isolated wetland, the Byrd wetland, was completed in June 2002. The others are expected to be completed by November 2004. The design for the STAs was completed in July 2001.

Western C-11 Water Quality Improvement. The purpose of the Western C-11 Water Quality Improvement Critical Project is to improve the quality and timing of stormwater discharges from the western C-11 basin to the Everglades Protection Area (EPA) by separating seepage from stormwater runoff and pumping the relatively clean seepage waters back into WCA-3A. Currently, the S-9 pump station pumps urban and agricultural stormwater runoff from the western C-11 basin directly into WCA-3A. Four new seepage return pumps adjacent to the S-9 pump station (phase 1) were installed in November 2000. The operations manual was completed in May 2002. Construction of a new divide structure in the C-11 canal (phase 2) began in November 2001. The divide structure construction and the operations manual should be completed by November 2003.

Other CERP Projects

Work has commenced on 12 other CERP projects (**Table 7A-9** and **Figure 7A-7**). The PMPs have been completed for seven of these projects, and PIRs have been initiated. The development of PMPs continues for the five remaining projects.

Table 7A-9. Final approval of project management plans for other CERP projects in progress

Project Name	Completion Date of PMP	Expected Completion Date of PMP	Completion Date of PIR	Expected Completion Date of PIR	Expected Completion Date of Project
Acme Basin B Discharge		October 2002			2006
Biscayne Bay Coastal Wetlands		September 2002			
C-111 Spreader Canal	March 2002			April 2006	
C-43 Basin Storage Reservoir – Part 1	February 2002			December 2004	
Everglades Agricultural Area Storage Reservoirs – Phase 1	January 2002			February 2005	
Florida Keys Tidal Restoration	April 2002			September 2004	
Indian River Lagoon - South		December 2002			
Lake Istokpoga Regulation Schedule		December 2002			
Lake Okeechobee Watershed	July 2001				
Taylor Creek/Nubbin Slough				December 2005	May 2010
Rest of project				September 2006	June 2013
North Palm Beach County - Part 1		November 2002			
Southern Golden Gate Estates Hydrologic Restoration	March 2001			May 2004	June 2008
WCA 3 Decomp and Sheetflow Enhancement - Part 1	March 2002				
Eastern Tamiami Trail				November 2004	
Canal and Levee Modifications				January 2006	

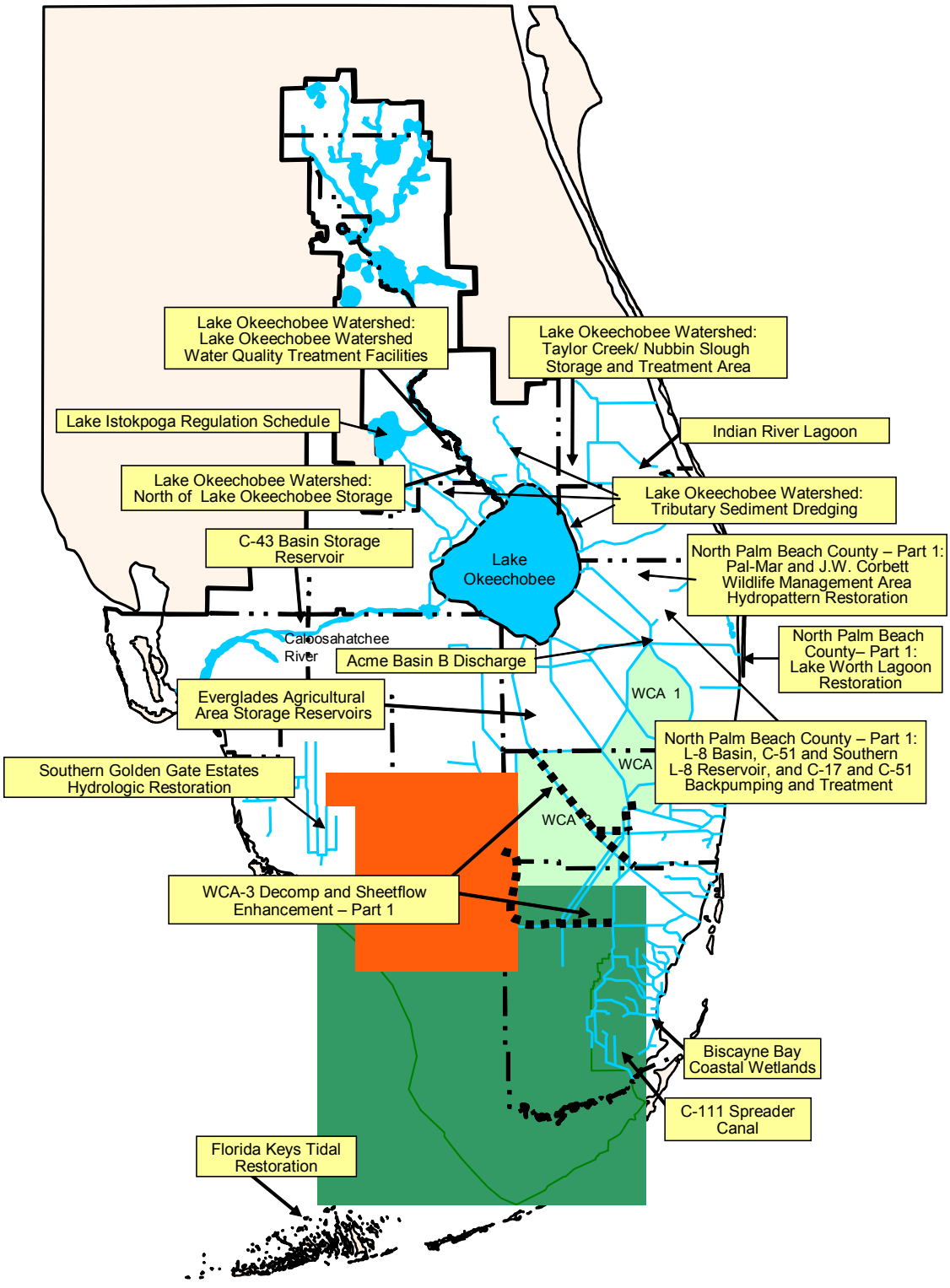

Figure 7A-7. General locations of other CERP projects currently being implemented

Acme Basin B Discharge. The ACME Basin B Discharge Project will provide water quality treatment and stormwater attenuation for runoff from ACME Basin B prior to discharge to the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge). Available excess water may be used to meet water supply demands. Several alternative designs for this project are being analyzed as part of the basin-specific feasibility studies that are scheduled for completion in November 2002. Data pertaining to ACME Basin B that were collected and evaluated for this effort will be available by August 2002. The PMP is scheduled for completion in October 2002. A PIR schedule that will enable the project to be completed in 2006 is being developed. Additionally, the DDR will be started prior to completion of the PIR to ensure the 2006 deadline is met.

Biscayne Bay Coastal Wetlands. The ability of the CERP to provide hydrologic benefits to the southern Everglades is supported in large part by the Biscayne Bay Coastal Wetlands Project. The project's objective is to develop the means to replace freshwater inputs to the Biscayne Bay Estuary that may potentially be reduced by other program components. The project has five separate elements: Deering Estate Flowway, Cutler Wetlands, L-31 East Flowway, North Canal Flowway and Barnes Sound Wetlands. The project commenced in October 2001. The PMP is scheduled to be completed in September 2002.

C-111 Spreader Canal. The C-111 Spreader Canal Project will alter the design of the C-111 Project by adding a number of enhancements, including constructing an STA, enlarging the pump station, extending the spreader canal approximately two miles, and installing culverts under U.S. Highway 1 and Card Sound Road. The PMP was completed in March 2002 (USACE and SFWMD, 2002g). The PIR was initiated in April 2002 and is expected to be completed by April 2006.

C-43 Basin Storage Reservoir – Part 1. The C-43 Basin Storage Reservoir – Part 1 Project involves design and construction of aboveground reservoirs in the C-43 basin to capture basin runoff and water releases from Lake Okeechobee. Facilities will be designed to provide water supply benefits, some flood attenuation, and environmental water supply deliveries and water quality benefits to the Caloosahatchee Estuary. Water quality improvement requirements are currently being assessed. Modeling efforts to determine the required reservoir capacity were completed in October 2001. The PMP was completed in February 2002 (USACE and SFWMD, 2002h). The PIR process was initiated in February 2002 and is scheduled for completion in December 2004.

Everglades Agricultural Area Storage Reservoirs - Phase 1. Phase 1 of the Everglades Agricultural Area Storage Reservoir Project has two components. The first is conveyance capacity increases for the Miami, North New River, Boles and Cross canals. The second part is an aboveground reservoir capacity that will provide for irrigation requirements in the EAA, environmental deliveries of water to the WCAs, storage of regulatory releases from Lake Okeechobee and increased flood protection within the Everglades Agricultural Area (EAA). The PMP for this project was completed in January 2002 (USACE and SFWMD, 2002i). The PIR process was initiated in February 2002 and is scheduled for completion in February 2005.

Florida Keys Tidal Restoration. The Florida Keys Tidal Restoration Project will enhance the ecological functions of the nearshore waters of the Florida Keys by restoring tidal connections that were eliminated by the construction of Henry Flagler's Railroad in the early 1900s. Four sites have been identified in the middle keys along U.S. Highway 1 in Monroe County. Tidal restoration will improve water quality, enhance the health and composition of benthic communities, restore circulation, improve larval distribution, and determine the viability of other tidal restoration projects in the Florida Keys. The PMP was completed in April 2002 (USACE

and SFWMD, 2002j). The PIR process was initiated on April 25, 2002 and is expected to be completed in September 2004.

Indian River Lagoon – South. The Indian River Lagoon - South Project will improve surface water management in the C-23, C-24, C-25 and C-44 basins for habitat improvement in the St. Lucie Estuary and the Indian River Lagoon. The facilities recommended for the project include reservoirs for surface water storage, STAs for water quality improvement, natural storage areas, and water treatment areas. This project is the detailed design associated with the Indian River Lagoon - South Feasibility Study (USACE and SFWMD, 2002l). A draft PMP was completed in March 2002. The final PMP is scheduled for completion in December 2002.

Lake Istokpoga Regulation Schedule. Water resource problems in the Lake Istokpoga basin will be addressed by implementing a new Lake Istokpoga Regulation Schedule. A long-term comprehensive management plan will be developed and will focus on creating a balance between environmental needs and water supply and flood control in the basin. The PMP is scheduled for completion in December 2002.

Lake Okeechobee Watershed. The Lake Okeechobee Watershed Project will reduce phosphorus (P) discharges into Lake Okeechobee from the watershed to the north, attenuate peak flows within the watershed, and provide for more natural water levels. This will be accomplished through reservoirs, STAs and the removal of 150 tons of P from 10 miles of primary canals. The PMP was completed in July 2001 (USACE and SFWMD, 2001j). The monitoring system design is expected to be approved in September 2002, and construction is expected to be completed by June 2003. The PIR process was initiated in January 2002. The watershed assessment document, the first step in the PIR process, is expected to be completed in October 2003. The PIR for the Taylor Creek/Nubbin Slough portion of this project is expected to be completed in December 2005, and work should be completed by May 2010. The PIR for the rest of the project is expected to be completed in September 2006. The entire project should be completed by June 2013.

North Palm Beach County - Part 1. Part 1 of the North Palm Beach County Project includes six separable elements: (1) Pal Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration; 2) C-51 and Southern L-8 Reservoir; 3) Lake Worth Lagoon Restoration; 4) C-17 Pumping and Treatment; 5) L-8 Basin Modifications and 6) C-51 Pumping and Treatment. The PMP is in the final stages of completion. However, early authorization has been granted to proceed with the PIR phase of the project. An architectural/engineering support services contract for assistance with the PIR was approved by the SFWMD governing board in August 2002. Furthermore, approval was previously granted to move forward with work on the L-8 Reservoir Testing Project prior to approval of the PMP to gather data necessary for the PIR.

Southern Golden Gate Estates Hydrologic Restoration. The objective of the Southern Golden Gate Estates Hydrologic Restoration Project is to reestablish historic flowways, sheetflow and hydroperiods of wetlands; reduce point discharges to improve the health and productivity of downstream estuaries; improve aquifer recharge for water supply and prevention of saltwater intrusion; and maintain flood protection. The PMP was approved in March 2001 (USACE and SFWMD, 2001k). A conceptual restoration plan was developed during 2001. The primary components of the restoration plan are land acquisition, construction of pumping stations, canal plugs, roadwork, ecological and hydrological monitoring and adaptive management. Furthermore, an ecological and hydrological monitoring program will be initiated to determine the project's effectiveness, and adaptive management practices will ensure desirable ecological responses. The PIR is scheduled for completion in May 2004. The project is scheduled for completion in June 2008.

WCA-3 Decomp and Sheetflow Enhancement - Part 1. Part 1 of the WCA-3 Decomp and Sheetflow Enhancement Project will reestablish the ecological and hydrologic connection between WCA-3A, WCA-3B and Everglades National Park. A more natural sheetflow and hydroperiod for both WCA-3 and Everglades National Park will be provided through the planning and implementation of this project. The PMP was completed in March 2002 (USACE and SFWMD, 2002k). The PIR process was initiated in April 2002. The PIR for the eastern Tamiami Trail portion of the project is expected to be completed in November 2004. The PIR for the canal and levee modifications is expected to be completed in January 2006.

LITERATURE CITED

SFWMD and FDEP. 2000. *Comprehensive Everglades Restoration Plan Annual Report Pursuant to Section 473.470(7), Florida Statutes*. South Florida Water Management District, West Palm Beach, FL, and Florida Department of Environmental Protection, Tallahassee, FL.

SFWMD and FDEP. 2002. *Comprehensive Everglades Restoration Plan Annual Report Pursuant to Section 473.470(7), Florida Statutes*. South Florida Water Management District, West Palm Beach, FL, and Florida Department of Environmental Protection, Tallahassee, FL.

USACE. 1995. Biscayne Bay, Florida Updated Reconnaissance Report. United States Army Corps of Engineers, Jacksonville District, Jacksonville, FL.

USACE and SFWMD. 1999. Central and Southern Florida Project Comprehensive Review Study, Final Integrated Feasibility Report and Programmatic Environmental Impact Statement. United States Army Corps of Engineers, Jacksonville District, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2000a. Design agreement between the Department of the Army and the South Florida Water Management District for the design of the elements of the Comprehensive Plan for the Everglades and South Florida Ecosystem Restoration Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2000b. Master Program Management Plan. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001a. Program Controls Management Plan. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001b. Program Management Plan - Geodetic Vertical Controls Survey. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001c. Management Plan for Restoration Coordination and Verification (RECOVER). United States Army Corps of Engineers, Jacksonville District, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001d. Public Outreach Program Management Plan. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001e. Environmental and Economic Equity Program Management Plan. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001f. CERP Master Implementation Schedule, Update 1.0. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL

USACE and SFWMD. 2001g. Project Management Plan – Lake Okeechobee Aquifer Storage and Recovery Pilot Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD, 2001h. Project Management Plan – Caloosahatchee River Aquifer Storage and Recovery Pilot Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001i. Project Management Plan – Western Hillsboro Aquifer Storage and Recovery Pilot Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001j. Project Management Plan – Lake Okeechobee Watershed Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2001k. Project Management Plan – Southern Golden Gate Estates Hydrologic Restoration Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002a. Program Management Plan – Data Management. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002b. Project Management Plan – Lake Belt In-Ground Reservoir Technology Pilot Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002c. Project Management Plan – L-31N Seepage Management Pilot. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002d. Project Management Plan – Wastewater Reuse Technology Pilot Project, Part 1. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002e. Project Management Plan – Southwest Florida Feasibility Study. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002f. Project Management Plan - Florida Bay and Florida Keys Feasibility Study. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002g. Project Management Plan – C-111 Spreader Canal. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002h. Project Management Plan – C-43 Basin Storage Reservoir. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002i. Project Management Plan – Everglades Agricultural Area Storage Reservoirs Phase 1. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002j. Project Management Plan – Florida Keys Tidal Restoration Project. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002k. Project Management Plan – WCA-3 Decompartmentalization and Sheet Flow Enhancement Project Phase 1. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.

USACE and SFWMD. 2002l. Central and Southern Florida Project Indian River Lagoon - South Feasibility Study Final Integrated Feasibility Report and Supplemental Environmental Impact Statement. United States Army Corps of Engineers, Jacksonville, FL, and South Florida Water Management District, West Palm Beach, FL.