Appendix 7A-1: Comprehensive Everglades Restoration Plan Annual Report – 470 Report

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SUMMARY

The Comprehensive Everglades Restoration Plan (CERP) Annual Report is required to provide oversight and accountability for financial commitments under the Everglades restoration section and to record progress in CERP implementation in accordance with Section 373.470(7), Florida Statutes (F.S.), as amended during calendar year 2005.

The South Florida Water Management District, in cooperation with the Florida Department of Environmental Protection, has prepared this CERP Annual Report, as required by Section 373.036(7), F.S. This report includes information on the Conservation and Recreation Lands Trust Fund, the Land Acquisition Trust Fund, the Preservation 2000 Trust Fund, the Florida Forever Trust Fund, the Save Our Everglades Trust Fund, and other named funds or accounts for the acquisition or construction of project components, features, or facilities that benefit CERP. The report identifies state and local sponsor revenues and itemizes expenditures related to CERP implementation. It also describes the purpose for which the funds were expended, provides the unencumbered fund balance remaining for implementation of CERP, and provides a schedule of anticipated expenditures for the next fiscal year. Lastly, this document fulfills the statutory requirements and includes CERP financial information and the progress of CERP implementation information for Fiscal Year 2007 (October 1, 2006 through September 30, 2007).

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[2] Florida Department of Environmental Protection, Water Quality Standards & Special Projects Program Division of Water Resource Management

CERP 470 REPORT

On May 10, 2005, the Florida legislature enacted and the governor of Florida approved Chapter 2005-36, Laws of Florida, an act relating to water management district planning and reporting, which amended Section 373.036, F.S. This act took effect July 1, 2005, and amended Section 15, Subsection (7) of Section 373.470, F.S., as follows:

> 373.470 Everglades restoration.—
>
> (7) ANNUAL REPORT.—To provide enhanced oversight of and accountability for the financial commitments established under this section and the progress made in the implementation of the comprehensive plan, the following information must be prepared annually as part of the consolidated annual report required by s. 373.036(7):
>
> (a) The district, in cooperation with the department, shall provide the following information as it relates to implementation of the comprehensive plan:
>
> 1. An identification of funds, by source and amount, received by the state and by each local sponsor during the fiscal year.
>
> 2. An itemization of expenditures, by source and amount, made by the state and by each local sponsor during the fiscal year.
>
> 3. A description of the purpose for which the funds were expended.
>
> 4. The unencumbered balance of funds remaining in trust funds or other accounts designated for implementation of the comprehensive plan.
>
> 5. A schedule of anticipated expenditures for the next fiscal year.
>
> (b) The department shall prepare a detailed report on all funds expended by the state and credited toward the state's share of funding for implementation of the comprehensive plan. The report shall include:
>
> 1. A description of all expenditures, by source and amount, from the Conservation and Recreation Lands Trust Fund, the Land Acquisition Trust Fund, the Preservation 2000 Trust Fund, the Florida Forever Trust Fund, the Save Our Everglades Trust Fund, and other named funds or accounts for the acquisition or construction of project components or other features or facilities that benefit the comprehensive plan.
>
> 2. A description of the purposes for which the funds were expended.
>
> 3. The unencumbered fiscal-year-end balance that remains in each trust fund or account identified in subparagraph 1.
>
> (c) The district, in cooperation with the department, shall provide a detailed report on progress made in the implementation of the comprehensive plan, including the status of all project components initiated after the effective date of this act or the date of the last report prepared under this subsection, whichever is later. The information required in paragraphs (a), (b), and (c) shall be provided as part of the consolidated annual report required by s. 373.036(7) annually in a single report to the Governor, the President of the Senate, and the Speaker of the House of Representatives, and copies of the report must be made available to the public. The initial report is due by November 30, 2000, and each annual report thereafter is due by March 1.

Section 373.470(7), F.S., requires the South Florida Water Management District (SFWMD or District) and Florida Department of Environmental Protection (FDEP) to submit a CERP Annual Report 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. This mandate is fulfilled by producing the CERP Annual Report (also known as the CERP 470 Report) in this appendix.

The CERP Annual Report is divided into three parts, based on the portion of the statute that each fulfills:

- In Part (A), the District and the FDEP jointly identify funding sources and amounts, itemize Fiscal Year 2007 (FY2007) (October 1, 2006 through September 30, 2007) expenditures and fund balances, and provide a schedule of anticipated expenditures for FY2008.
- In Part (B), the FDEP provides a detailed report on all funds appropriated and expended by the state on current projects related to CERP. Final credit toward the non-federal share of funding will be determined in each Project Cooperative Agreement.
- In Part (C), the District and the FDEP provide a detailed report on progress made in the implementation of CERP, including the status of all projects initiated after the effective date of the Everglades Restoration Investment Act (Section 373.470, F.S.).

PART (A) FUNDS – SFWMD AND FDEP

BACKGROUND

Pursuant to Section 373.470(7)(a), F.S., Part (A) of the CERP Annual Report contains information on revenues, expenditures, fund balances, and anticipated expenditures related to CERP implementation. FY2007 information is presented as follows:

- **Table 1**: Revenues
- **Table 2**: Expenditures
- **Table 3**: Unencumbered Balance of Funds remaining in trust funds or other accounts
- **Table 4**: Anticipated Expenditures for the next fiscal year

Only revenues, expenditures, and unencumbered balances dedicated to CERP are included in this report. The financial information contained in this annual report is taken from unaudited FY2007 records. Audited FY2007 information is scheduled to be available during the second quarter of FY2008. Any changes to the financial information presented here will be reflected in the District's Comprehensive Annual Financial Report and in future CERP annual reports. No federal revenues or expenditures are shown in these schedules.

The District is funding its share of CERP with revenues from several sources, the largest portion of which is composed of *ad valorem* taxes and state appropriations. Other sources include, but are not limited to, investment earnings on available cash balances, contributions from local governments, mitigation revenues, Florida Forever Program funds, and Preservation 2000 Trust funds and grants.

Table 1. CERP revenues for Fiscal Year 2007 (October 1, 2006–September 30, 2007)[1].

Source	SFWMD[2]	FDEP	Other Local Sponsors	Total
Save Our Everglades Trust Fund:				
General Revenue (Non-Bond Funding Sources)		24,000,000		24,000,000
Documentary Stamp Taxes (for Debt Service)		6,777,776		6,777,776
Land Acquisition Trust Fund – Transfers to SOETF		48,000,000		48,000,000
Investment Earnings (net)		1,036,700		1,036,700
Save Our Everglades Trust Fund – Total		**79,814,476**		**79,814,476**
Ad Valorem Resources	149,229,458			149,229,458
Net Proceeds from Certificates of Participation[3]	456,815,548			456,815,548
Investment Earnings [4]	18,682,615			18,682,615
Florida Forever Trust Fund	1,074,777	378,728		1,453,505
Martin County	2,208,128			2,208,128
Wetlands Mitigation Funds	730,199			730,199
Alligator Alley Toll Revenues	753,033			753,033
Water Management Lands Trust Fund	59,556			59,556
Florida Department of Transportation	257,662			257,662
Palm Beach County	249,959			249,959
Miscellaneous Revenues	641,732			641,732
				-
Total Revenues	**630,702,667**	**80,193,204**	**N/A**	**710,895,871**

[1]Federal revenues are not listed in this table.
[2]This information is being presented prior to the completion of the SFWMD annual audit and is subject to further adjustments.
[3]Certificates of Participation (COPs) were issued in November 2006 to fund the construction of the Acceler8 projects. Listed here are the net proceeds to be applied to fund the construction of Acceler8 projects within the CERP program (a portion of the proceeds was applied to fund Acceler8 projects outside of CERP, within the District Everglades program).
[4]The major portion of investment earnings ($17,133,092) accrued on unspent balances of COPs proceeds.

Table 2. CERP expenditures for Fiscal Year 2007 (October 1, 2006–September 30, 2007)[1].

Projects	SFWMD	FDEP	Total
Local Sponsor - SFWMD [(2) (3)]			
Pilot Projects			
Lake Okeechobee ASR Pilot	1,160		1,160
Caloosahatchee (C-43) River ASR Pilot	578		578
Hillsboro ASR Pilot	114,988		114,988
ASR Regional Study	1,941,735		1,941,735
Lake Belt In-Ground Reservoir Technology Pilot			0
L-31N Seepage Management Pilot	30,059		30,059
Wastewater Reuse Technology Pilot			0
Kissimmee River and Lake Okeechobee Region			
Lake Okeechobee Watershed	307,223	54,865,538	55,172,761
Lake Istokpoga Regulation Schedule			0
Lake Okeechobee Aquifer Storage and Recovery			0
Caloosahatchee River Region			
C-43 Basin Storage Reservoir – Part 1	8,975,604		8,975,604
C-43 Basin Aquifer Storage and Recovery – Part 2			0
Caloosahatchee Backpumping with Stormwater Treatment			0
Upper East Coast Region			
Indian River Lagoon – South	2,371,447	6,208,486	8,579,933
C-44 Reservoir/STA	12,867,935		12,867,935
Everglades Agricultural Area			
Everglades Agricultural Area Storage Reservoirs – Phase 1	89,820,516	4,878,935	94,699,451
EAA Bolles and Cross Canals	559,301		559,301
Everglades Agricultural Area Storage Reservoirs – Phase 2			0
Big Cypress Region			
Big Cypress/L-28 Interceptor Modifications			0
Water Conservation Areas and Everglades Region			
Flow to NW & Central WCA-3A			0
WCA-3 Decomp and Sheetflow Enhancement – Part 1	289,839		289,839
WCA-3 Decomp and Sheetflow Enhancement – Part 2			0
ENP Seepage Management			0
Loxahatchee National Wildlife Refuge Internal Canal Structures			0
Modify Holey Land Wildlife Management Area Operation Plan			0
Modify Rotenberger Wildlife Management Area Operation Plan			0
Melaleuca Eradication and Other Exotic Plants	24,602		24,602
Lower East Coast Region			
North Palm Beach County – Part 1	24,238,662	33,695,552	57,934,214
North Palm Beach County – Part 2			0
ACME Basin B Discharge	2,048,719		2,048,719
Strazzula Wetlands	96,271		96,271
Site 1 Impoundment	131,418		131,418
Broward County WPA	3,039,122	5,621,350	8,660,472
C-11 Impoundment	1,119,652		1,119,652

Table 2. Continued.

Projects	SFWMD	FDEP	Total
Local Sponsor - SFWMD [2] [3]			
C-4 Structure			0
Bird Drive Recharge Area	17,255		17,255
PBC Agriculture Reserve Reservoir – Part 1	30,712		30,712
PBC Agriculture Reserve Aquifer Storage & Recovery – Part 2			0
Hillsboro Aquifer Storage & Recovery – Part 2			0
Diverting WCA Flows to CLB to Downstream Natural Areas			0
Broward Co. Secondary Canal System			0
North Lake Belt Storage Area			0
Central Lake Belt Storage Area	1,916		1,916
Everglades National Park Seepage Management	55,368		55,368
Biscayne Bay Coastal Wetlands	2,864,170	5,039,456	7,903,626
C-111 Spreader Canal	2,821,108		2,821,108
Southwestern Florida Region			
Picayune Strand (So. Golden Gate Estates) Hydrologic Restoration	12,096,309	378,728	12,475,037
Florida Bay and Florida Keys Region			
Florida Keys Tidal Restoration			0
Critical Restoration Projects			
Ten Mile Creek	351,009		351,009
Western Tamiami Trail Culverts	4,847		4,847
Western C-4 Water Control Structures			0
Southern Crew/Imperial River Flow-way	2,160,464		2,160,464
Lake Trafford Restoration	2,201,865		2,201,865
Lake Okeechobee Water Retention/Phosphorus Removal	310,483		310,483
Western C-11 Water Quality Improvement			0
Critical Restoration Program Controls	172,593		172,593
Reconnaissance, Feasibility, and Planning Studies			
Southwest Florida Feasibility Study	1,776,136		1,776,136
Florida Bay and Florida Keys Feasibility Study	755,476		755,476
Indian River Lagoon Feasibility Study			0
Water Preserve Areas Feasibility Study			0
Monitoring and Evaluation			
RECOVER	1,048,446		1,048,446
Adaptive Assessment and Monitoring	6,023,998		6,023,998
Program Management & Support			
Program Management	4,105,736		4,105,736
Acceler8 Program Support[4]	77,073,702		77,073,702
Program Support[5]	1,248,572	6,777,776	8,026,348
Program Controls	911,119		911,119
Public Involvement and Outreach	247,300		247,300
Environmental and Economic Equity	24,930		24,930
Data Management	822,628		822,628
Interagency Modeling Center	3,244,048		3,244,048
Master Recreation Plan			0
Programmatic Regulations	4,768		4,768
CERP Pre-Cursors			
C-111 Project Implementation	4,018,711		4,018,711

Table 2. Continued.

Projects	SFWMD	FDEP	Total
Comprehensive Integrated Water Quality Feasibility Study (FDEP)			N/A
Biscayne Bay Feasibility Study (Miami-Dade DERM)			N/A
Seminole Tribe Big Cypress Reservation Water Conservation Plan (Seminole Tribe)			N/A
Henderson Creek/Belle Meade Restoration (FDEP)			N/A
Lakes Park Restoration (Lee County)			N/A
Winsburg Farms Wetlands Restoration (Palm Beach County)			N/A
Miccosukee Water Management Plan (Miccosukee Tribe)			N/A
Restoration of Pineland & Hardwood Hammocks in C-111 Basin (Miami-Dade County)			N/A
West Miami-Dade Reuse (Miami-Dade County)			N/A
South Miami-Dade Reuse (Miami-Dade County)			N/A
TOTALS[6]	**274,562,736**	**117,465,821**	**392,028,557**

[1]Federal expenditures are not listed in this table.
[2]Project expenditures include indirect costs that are charged to the program by applying a federally approved rate to direct salaries.
[3]This information is being presented prior to the completion of the SFWMD annual audit and is subject to further adjustments.
[4]SFWMD: Includes debt service on the first COPs issuance and repayment (from COPs proceeds) of prior year short-term loan for Acceler8 construction plus interest thereon.
[5]FDEP: Reflects debt service on existing bonds.
[6]Expenditures for local sponsors other than the SFWMD are presented in the "Total" column only. N/A indicates the information is not available.

Table 3. CERP unencumbered fund balance for Fiscal Year 2007 (October 1, 2006–September 30, 2007)[1].

	SFWMD[2]	FDEP	Other Local Sponsors	Total
Fund Balance as of October 1, 2006[3]	62,302,778	49,804,757	N/A	112,107,535
Add: Revenues	630,702,667	80,193,204	N/A	710,895,871
Less: Expenditures	274,562,736	117,465,821	N/A	392,028,557
				-
Fund Balance as of September 30, 2007[3]	418,442,709	12,532,140	N/A	430,974,849
Less: Encumbrances	48,115,053	0	N/A	48,115,053
Designated Fund Balance[4]	286,250,981	0	N/A	286,250,981
Unencumbered Balance as of September 30, 2007	84,076,675	12,532,140	N/A	96,608,815

[1]Federal expenditures are not included in this table.

[2]This information is being presented prior to the completion of the SFWMD annual audit and is subject to further adjustments and will be reflected in subsequent annual reports.

[3]Fund balance figures for SFWMD include the CERP Ad Valorem Fund, Other Creditable CERP Funds, and CERP Acceler8 Fund.

[4]A major portion of designated fund balance ($270,368,446) represents funds designated for construction of the Acceler8 projects in the CERP Acceler8 Fund.

Table 4. CERP anticipated expenditures for Fiscal Year 2008 (October 1, 2007–September 30, 2008)[1].

CERP Projects	Total Anticipated Expenditures
Local Sponsor – South Florida Water Management District	
Pilot Projects	
Lake Okeechobee ASR Pilot	0
Caloosahatchee (C-43) River ASR Pilot	11,604
Hillsboro ASR Pilot	553,741
ASR Regional Study	575,448
Lake Belt In-Ground Reservoir Technology Pilot	0
L-31N Seepage Management Pilot	115,842
Wastewater Reuse Technology Pilot	0
Kissimmee River and Lake Okeechobee Region	
Lake Okeechobee Watershed	784,012
Lake Istokpoga Regulation Schedule	
Lake Okeechobee Aquifer Storage and Recovery	0
Caloosahatchee River Region	
C-43 Basin Storage Reservoir – Part 1	2,895,562
C-43 Basin Aquifer Storage and Recovery – Part 2	0
Caloosahatchee Backpumping with Stormwater Treatment	0
Upper East Coast Region	
Indian River Lagoon – South	2,510,438
C-44 Reservoir / STA	1,733,858
Everglades Agricultural Area	
Everglades Agricultural Area Storage Reservoirs – Phase 1	276,215,314
EAA Bolles and Cross Canals	12,340
Everglades Agricultural Area Storage Reservoirs – Phase 2	0
Big Cypress Region	
Big Cypress/L-28 Interceptor Modifications	0
Water Conservation Areas and Everglades Region	
Flow to NW & Central WCA-3A	0
WCA-3 Decomp and Sheetflow Enhancement – Part 1	245,553
WCA-3 Decomp and Sheetflow Enhancement – Part 2	0
Loxahatchee National Wildlife Refuge Internal Canal Structures	0
Modify Holey Land Wildlife Management Area Operation Plan	0
Modify Rotenberger Wildlife Management Area Operation Plan	0
Melaleuca Eradication and Other Exotic Plants	28,641

Table 4. Continued.

CERP Projects	Total Anticipated Expenditures
Local Sponsor – South Florida Water Management District	
Lower East Coast Region	
North Palm Beach County – Part 1	46,052,742
North Palm Beach County – Part 2	0
Strazzula Wetlands	0
Site 1 Impoundment	381,834
Broward County WPA	324,665
C-11 Impoundment	220,000
C-9 Impoundment	-
WCA-3A/3B Seepage Management	57,395
C-4 Structure	0
Bird Drive Recharge Area	300,000
PBC Agriculture Reserve Reservoir – Part 1	0
PBC Agriculture Reserve Aquifer Storage & Recovery – Part 2	0
Hillsboro Aquifer Storage & Recovery – Part 2	0
Diverting WCA Flows to CLB to Downstream Natural Areas	0
Broward Co. Secondary Canal System	0
North Lake Belt Storage Area	0
Central Lake Belt Storage Area	0
Everglades National Park Seepage Management	119,623
Biscayne Bay Coastal Wetlands	23,062,405
C-111 Spreader Canal	1,409,702
Southwestern Florida Region	
Picayune Strand (So. Golden Gate Estates) Hydrologic Restoration	4,972,801
Florida Bay and Florida Keys Region	
Florida Keys Tidal Restoration	-
Critical Restoration Projects	
Ten Mile Creek	1,246,512
Western Tamiami Trail Culverts	0
Western C-4 Water Control Structures	0
Southern Crew/Imperial River Flow-ways	3,850,336
Lake Trafford Restoration	551,984
Lake Okeechobee Water Retention/Phosphorus Removal	338,036
Western C-11 Water Quality Improvement	0
Critical Restoration Project Implementation Support	0
Reconnaissance, Feasibility, and Planning Studies	
Southwest Florida Feasibility Study	1,058,896

Table 4. Continued.

CERP Projects	Total Anticipated Expenditures
Local Sponsor – South Florida Water Management District	
Florida Bay and Florida Keys Feasibility Study	340,888
Indian River Lagoon Feasibility Study	0
Water Preserve Areas Feasibility Study	0
Monitoring and Evaluation	
RECOVER	855,717
Adaptive Assessment and Monitoring	3,952,038
Program Management & Support	
Acceler8 – Program Support	18,310,482
Program Management and Support[2]	4,014,821
Geodetic Vertical Control Surveys	0
Program Controls	0
Public Involvement and Outreach	488,695
Environmental and Economic Equity	-
Data Management	1,388,012
Master Recreation Plan	0
Interagency Modeling Center	2,559,509
Programmatic Regulations	0
Project Implementation Support	0
Program Indirect Costs[3]	4,644,276
Land Acquisition Reserve[4]	11,505,300
Construction Reserve[5]	38,918,922
Debt Service and COPs Issuance Costs[6]	31,144,114
CERP Pre-Cursors	
C-111 Project Implementation	7,338,656
Other Local Sponsors	
Comprehensive Integrated Water Quality Feasibility Study (FDEP)	N/A
Biscayne Bay Feasibility Study (Miami-Dade DERM)	N/A
Seminole Tribe Big Cypress Reservation Water Conservation Plan (Seminole Tribe)	N/A
Henderson Creek/Belle Meade Restoration (FDEP)	N/A
Lakes Park Restoration (Lee County)	N/A
Winsburg Farms Wetlands Restoration (Palm Beach County)	N/A
Miccosukee Water Management Plan (Miccosukee Tribe)	N/A
Restoration of Pineland and Hardwood Hammocks in C-111 Basin (Miami-Dade County)	N/A
West Miami-Dade Reuse (Miami-Dade County)	N/A
South Miami-Dade Reuse (Miami-Dade County)	N/A
TOTALS	**495,090,714**

[1]No anticipated federal expenditures are listed in this table.

[2]Includes general engineering services for Acceler8 and consulting services for Acceler8 program management.

[3]This includes the cost of District central service departments (e.g., accounting, budget, procurement, etc.) charged to the program by applying a federally-approved indirect rate to direct salaries.

[4]Reflects funds budgeted for CERP land acquisition in FY08, but not earmarked for any specific project.

[5]"Future Capital Projects Fund," represents funds set aside for Acceler8 construction.

[6]FY2008 projected debt service on the first Certificates of Participation issued in FY2007 to fund Acceler8 construction.

BASIS OF PRESENTATION

Accounting principles, policies, and practices of both the District and the FDEP conform to generally accepted accounting principles for state and local governments, and are structured in accordance with the Government Accounting Standards Board's requirements. 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 show compliance with legal and contractual obligations.

470 PART (B) FUNDS – FDEP

BACKGROUND

Pursuant to Section 373.470(7)(b), F.S., Part (B) of the CERP Annual Report provides a detailed account of all funds expended by the state of Florida toward land acquisition for CERP in FY2007. Every CERP project will be described in a Project Implementation Report (PIR), and a Project Cooperation Agreement will be executed subsequently. The amount of expenditures to be credited toward the state of Florida's share of funding for implementation of CERP will be developed during the detailed design phase and affirmed in the 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 Government Accounting Standards Board's requirements. 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 relates 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 that are legally restricted to expenditure for specified purposes (see **Table 5**).

Table 5. Florida Department of Environmental Protection, 2007 CERP Annual Report for Fiscal Year 2007 (October 1, 2006–September 2007).

October 1, 2006 through September 30, 2007	Save Our Everglades Trust Fund	Florida Forever Trust Fund	Totals
REVENUES – By Source of Funds			
General Revenue – Non Bond Funding Sources	24,000,000	-	24,000,000
Bond Proceeds	-	-	-
Documentary Stamp Taxes for Debt Service	6,777,776	-	6,777,776
Land Acquisition Trust Fund – Transfers to SOETF	48,000,000	-	48,000,000
Florida Forever Trust Fund – Purchases of CERP Lands	-	378,728	378,728
Refunds	-	-	-
Florida Forever Trust Fund	-	-	-
Interest Earnings (Net)	1,036,700	-	1,036,700
TOTAL REVENUES	79,814,476	378,728	80,193,204
EXPENDITURES – By Project			
Lake Okeechobee Watershed	54,865,539	-	54,865,539
North Palm Beach County – Part 1	33,695,552	-	33,695,552
Biscayne Bay Coastal Wetlands	5,039,456	-	5,039,456
Broward County WPA	5,621,350	-	5,621,350
Everglades Agricultural Area Storage Reservoir – Phase 1	4,878,935	-	4,878,935
Indian River Lagoon – South	6,208,486	-	6,208,486
Picayune Strand Hydrologic Restoration	-	378,728	378,728
Debt Service on Bonds	6,777,776	-	6,777,776
TOTAL EXPENDITURES	117,087,093	378,728	117,465,821
ENCUMBRANCES			
TOTAL ENCUMBRANCES	-	-	-
Excess (Deficiency) of Revenues Over Expenditures and Encumbrances	(37,272,617)	-	(37,272,617)
Unencumbered Balance as of September 30, 2006	49,804,757	-	49,804,757
Fund Balance Reserved for Encumbrances as of September 30, 2006	-	-	-
Unencumbered Balance as of September 30, 2007	12,532,140	-	12,532,140

PART (C) – IMPLEMENTATION STATUS

THE CERP PROCESS

Comprehensive Plan Overview

The overarching purpose of CERP is to restore, protect, and preserve the South Florida ecosystem while providing for other water-related needs of the region. 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 in the Central and Southern Florida (C&SF) Project first must be increased. Moreover, to prevent further damage to the system and to allow restoration, the quality of the water must be improved where necessary prior to its distribution.

CERP projects are interrelated; therefore many can perform optimally only after other projects are implemented. Projects to store water and improve water quality require determining the feasibility of using new technologies, defining the optimum timing and distribution of water, and developing supporting programs. Lands necessary for the projects must be acquired, and detailed designs must be produced. Further, a process must be in place to monitor CERP's progress and to modify the plan when warranted.

The optimum timing and distribution of water within the natural Everglades ecosystem must be refined. By reviewing historical data, a big-picture concept of how the natural system probably performed prior to human intervention has been developed; detailed information, however, is lacking for certain areas. In some cases, it is neither practical nor possible to restore parts of the system to its historical condition. Also, existing animal and plant populations have adapted in different degrees to the altered ecosystem. Monitoring is essential to ensure that the restoration effort does not cause long-term negative impacts to the populations.

CERP will investigate technologies to accomplish the alterations necessary to restore South Florida's ecosystem. Through pilot projects, the feasibility of using different technologies will be determined. Some technologies, such as Aquifer Storage and Recovery (ASR) and seepage control, while currently in use in Florida, have never been implemented on the scale envisioned in CERP.

Given the scale and complexity of CERP, the effects of its implementation on ecosystem restoration may not be apparent for many years. A number of projects must be implemented before the hydrologic improvements necessary for visible restoration can begin. As each of the components to improve the timing and distribution of water are completed, it is expected that the ecosystem will begin to recover the unique characteristics that make it the Everglades.

Design Agreements

Three Design Agreements have been executed to implement CERP. Unless otherwise noted, this CERP Annual Report refers to the Design Agreement between the District and the U.S. Army Corps of Engineers (USACE) for those projects for which the District is the local sponsor. The Design Agreements are described below.

- **USACE and the District.** A Design Agreement for design of elements of CERP and the South Florida Ecosystem Restoration Project was executed on May 12, 2000, and covers activities related to planning, engineering, and design of CERP implementation. A copy of this agreement is posted at:

  http://www.evergladesplan.org/pm/pm_docs/desagree_ped_design_agreement_051200.pdf

- **USACE and Palm Beach County.** The second Design Agreement, covering engineering and design for the Winsberg Farm Wetland Restoration Project, was executed on January 3, 2002. To view a copy of this agreement, see

  http://www.evergladesplan.org/pm/pm_docs/des_agree_winsberg.pdf

- **USACE and Lee County.** The third Design Agreement, covering engineering and design for the Lakes Park Restoration Project, was executed on January 17, 2003. A copy of this agreement is available at

  http://www.evergladesplan.org/pm/pm_docs/des_agree_lee.pdf

Design Agreements for other CERP projects are pending with the FDEP, Miami-Dade County, and the Miccosukee Tribe of Indians of Florida. Further information on the Design Agreements is available at http://www.evergladesplan.org/pm/progr_part.cfm

Program Management Process Overview

CERP program management implements the goals and purposes of CERP through a variety of methods, processes, tools and traditions, including:

- **Design Coordination Team**. Provides consistent and effective communication, coordination, and issue resolution on projects. For more information, see http://www.evergladesplan.org/pm/dct.aspx

- **Environmental and Economic Equity.** Pertains to social, cultural, behavioral, historical, and economic subjects involved with CERP. For more information, see http://www.evergladesplan.org/pm/progr_eee.aspx

- **Geodetic Vertical Controls.** Provides a common vertical elevation framework for scientific data analysis, modeling, design, construction, and operations and maintenance. For more information, see http://www.evergladesplan.org/pm/progr_geodetic.aspx

- **Independent Scientific Review**. Based on a concept prepared by the Department of the Army that describes the creation of an independent scientific review panel. For more information, see http://www.evergladesplan.org/pm/ind_review.aspx

- **Information and Data Management.** Provides for coordination and management of all CERP data. For more information, see http://www.evergladesplan.org/pm/progr_data_mgmt.aspx

- **Land Acquisition.** Various real-estate activities performed in support of CERP projects, from the planning phase to the acquisition of needed lands. For more information, see http://www.evergladesplan.org/pm/progr_land_aquisition.aspx

- **Master Recreation Plan.** A systemwide approach to identify, evaluate and address the impacts of CERP implementation on existing recreational use in South Florida. For more information, see http://www.evergladesplan.org/pm/progr_master_rec_plan.aspx

- **Outreach.** Keeps stakeholders informed about existing and new projects. For more information, see http://www.evergladesplan.org/pm/progr_outreach.aspx
- **Program Controls.** Activities include financial management, schedule management and records management. For more information, see http://www.evergladesplan.org/pm/progr_controls.aspx
- **Programmatic Regulations.** Regulations that ensure that the goals and purposes of CERP are achieved. For more information, see http://www.evergladesplan.org/pm/progr_regs.aspx
- **RECOVER.** Restoration Coordination and Verification (RECOVER) links science and technology to a set of systemwide planning, evaluation and assessment tasks. For more information, see http://www.evergladesplan.org/pm/recover/recover.aspx
- **Systemwide Modeling.** Provides model results and performance measures simulated by predictive computer models. For more information, see http://www.evergladesplan.org/pm/recover/system_wide_modeling.aspx

Program Management Plans

Program Management Plans (PMPs) are in place for seven Program Elements. A list of these completed plans, some of which are being updated, is provided in **Table 6.** For more detail on these completed plans, see http://www.evergladesplan.org/pm/program_docs/mgmtplns.cfm.

Table 6. Completed Program Management Plans

Program Management Plan	Completed
Environmental and Economic Equity	September 2001
Geodetic Vertical Control Surveys	February 2001
Information and Data Management	September 2003
Interagency Modeling Center	January 2004
Program Controls	December 2000
Public Outreach	August 2001
RECOVER	August 2004

RECOVER: CERP Systemwide Performance Measures

RECOVER is an arm of CERP responsible for linking science and the tools of science to a set of systemwide planning, evaluation, and assessment tasks. The objectives of RECOVER are to:

- Evaluate and assess CERP performance
- Refine and improve the plan during the implementation period
- Ensure that a systemwide perspective is maintained throughout the restoration program

RECOVER provides essential support to CERP in meeting its goals and purposes by applying a systemwide and integrative perspective to planning and implementation. The goal of the

restoration plan is the recovery and sustainability of the defining characteristics of the greater Everglades ecosystem. RECOVER conducts scientific and technical evaluations and assessments for improving CERP's ability to restore, preserve, and protect the South Florida ecosystem while providing for the region's other water-related needs. RECOVER communicates and coordinates the results of these evaluations and assessments.

Performance measures are indicators of conditions in the natural and human systems that have been determined to be characteristic of a healthy, restored ecosystem. Achieving the targets of a well-selected set of performance measures is expected to result in systemwide sustainable restoration. RECOVER has identified performance measures to predict systemwide performance of alternative plans and to assess actual performance following implementation of CERP.

The revised CERP Systemwide Performance Measures document, released in June 2007, provides the most recent performance measure documentation sheets for CERP systemwide performance measures. The performance measures are organized into five categories: four physiographic regions (Lake Okeechobee, Northern Estuaries, Greater Everglades Wetlands, and Southern Estuaries), total system, and water supply and flood protection of urban and agricultural areas.

Each regional set of performance measures outlines the applicable conceptual ecological models and discusses how the performance measures correlate to the relationships depicted in the models. This document also lays out information related to performance measure scope, development, application and associated uncertainty. Comprehension of every section will lead to full understanding of the performance measures and their applications.

The set of performance measures was developed with the best available science and tools. As the understanding of the ecosystem grows and new tools are developed, the performance measures will be refined. As such, the CERP Systemwide Performance Measures document will be updated periodically to reflect the best available science and tools. The most recent version of this document is available at http://www.evergladesplan.org/pm/recover/eval_team_perf_measures.aspx .

The Annual Systemwide Assessment was approved at the RECOVER Leadership Group meeting in November 2007 and was conveyed to the implementing agencies in December 2007. Also in December, a Tree Island Workshop was held for the purpose of reaching agreement on one or more tree island performance measures for CERP. Invited scientists used the conceptual ecological modeling process for building agreement on tree island measures for restoration.

The Picayune Strand Hydrologic Restoration Baseline, a product of RECOVER, comprises Appendix 7A-2 of this volume.

Adaptive Management

Adaptive Management is an iterative and deliberate process of applying principles of scientific investigation to design and implementation stages to better understand the ecosystem and reduce the key uncertainties. Adaptive Management also is a basis for continuously refining the program and project design and operation. CERP is being planned, implemented, assessed, and refined using the principles of Adaptive Management. This will aid in defining a restoration strategy that recognizes present-day solutions may be deficient for future conditions and that the future will be influenced by unanticipated internal and external events, particularly at the large scale of the South Florida Ecosystem.

CERP teams in RECOVER have created two documents which define and provide the principles of Adaptive Management. These documents explain how and when Adaptive

Management should be used and provide an overall strategy for integrating Adaptive Management into CERP.

The CERP Adaptive Management Strategy will be used as the restoration framework for CERP and is not intended to be an artificial constraint on project implementation. The CERP Adaptive Management Strategy consists of a learning process that seeks a better understanding of the South Florida ecosystem and incorporates improvements to the plan in response to new scientific and technical information.

The CERP Adaptive Management Document Executive Summary, as well as the entire strategy document, are respectively available at:
http://www.evergladesplan.org/pm/recover/recover_docs/am/rec_am_exec_summary.pdf and
http://www.evergladesplan.org/pm/recover/recover_docs/am/rec_am_stategy_brochure.pdf

The CERP Adaptive Management Implementation Guidance Manual is being developed for use by project teams, managers and scientists working on CERP. The Guidance Manual is designed to be a more detailed companion document to the Adaptive Management Strategy. The manual will provide detailed discussion, examples, and a step-by-step approach for each of the components and processes described in the Adaptive Management Strategy. The final Adaptive Management Implementation Guidance Manual will be released during FY2008.

CERP program management echoes the 2007 SFER Peer Review Panel's recommendation to clearly state that the Adaptive Management Program should and will be used throughout the construction and monitoring phase of the restoration of the Everglades.

A three-day workshop of the Southern Everglades Integrated Adaptive Restoration (IAR) Team was held in November 2007 to develop a multi-project IAR plan for the southern Everglades region. This region includes the Decompartmentalization, Modified Water Deliveries to Everglades National Park, C-111 Spreader Canal, Everglades National Park Seepage Management, and Everglades Agricultural Area Storage Reservoir projects. The goal of the workshop was to ensure that the IAR plan serves to better link and integrate objectives of these projects; provides learning on key uncertainties about required rates of sheetflow and volumes of estuarine flow to meet restoration objectives; and results in earlier restoration benefits.

Quality Assurance Oversight

The Quality Assurance Oversight Team is a multi-agency team comprised of four to six standing members. The lead agencies are the District and the USACE, with other standing members from the FDEP, the U.S. Environmental Protection Agency, U.S. Geological Survey and U.S. Fish and Wildlife Service. The team is responsible for providing guidance and oversight on environmental monitoring procedures, quality assurance and quality control issues as well as data validation for CERP projects and RECOVER. It is the forum to develop consistency among the various entities involved with monitoring, data quality, quality assurance, and quality control processes.

To ensure that quality assurance, quality control and data validation processes provide accurate and defensible environmental data, the Quality Assurances Systems Requirements Manual was created. This manual provides specific guidance on quality assurance methods and procedures for CERP environmental data. Every agency and individual involved with CERP monitoring shares the responsibility for maintaining knowledge of the quality assurance system and adhering to the procedures listed in the Quality Assurances Systems Requirements Manual. The manual is available at http://www.evergladesplan.org/pm/program_docs/qasr.aspx .

The USACE and the District made the Draft Revised Comprehensive Everglades Restoration Plan Quality Assurance Systems Requirements Manual available for review during a 45-day

public comment period beginning October 17, 2007, and ending November 30, 2007. The Draft Revised Quality Assurance Systems Requirements Manual lays out the protocols and procedures for environmental data-gathering activities for the implementation of CERP. It is the foundation of the CERP quality assurance and quality control program, and will be periodically updated and refined to strengthen the quality assurance and quality control program for CERP. The Draft Revised Quality Assurance Systems Requirements Manual is available for review at: http://www.evergladesplan.org./pm/program_docs/qasr.aspx

All agencies that provide data during the implementation of CERP are required to adhere to this manual. Oversight of the Quality Assurance Systems Requirements is the responsibility of the CERP Quality Assurance Oversight Team. For more information, see http://www.evergladesplan.org/pm/qaot.aspx.

Interagency Modeling Center (IMC) – Systemwide Modeling

As the participation of all agencies involved in Everglades ecosystem restoration is critical, increased coordination of modeling efforts has been provided through the establishment of an Interagency Modeling Center (IMC) at the District's Headquarters in West Palm Beach, with District and USACE modelers co-located onsite.

System modeling in support of CERP projects incorporates a range of activities, including use of systemwide model results by RECOVER teams to evaluate the systemwide performance of CERP projects. Likewise, Project Delivery Teams can review model results for plan alternatives.

Systemwide model results will be used by RECOVER teams to evaluate the systemwide performance of particular CERP projects. Project Development Teams can also review systemwide model results of their plan alternatives via the links to the models below:

- **South Florida Water Management Model (SFWMM).** Simulates the hydrology and management of the southern Florida water resources system from Lake Okeechobee to Florida Bay. See the District web site for documentation and model review: www.sfwmd.gov, under *Simulation Modeling, Models.*
- **Everglades Landscape Model (ELM).** Predicts landscape response and water quality changes as a result of water management scenarios. For model status, including current calibration and documentation, see www.sfwmd.gov, under *Simulation Modeling, Models* section.
- **Lake Okeechobee Water Quality Model (LOWQM).** Simulates eutrophication process in water column and underlying sediments in Lake Okeechobee to produce estimates of total phosphorus. For further details, see www.sfwmd.gov, under *Simulation Modeling, Models.*

Other Systemwide Models will be added as needed in the future.

The Interagency Modeling Center's Everglades Stage Based Rainfall Driven Formula for the Acceler8 Rainfall Driven Operation Project was sent for final review in September 2007, which represented a key deliverable in the development of real time operations for the Acceler8 Everglades Agricultural Area Reservoir Project.

Design Coordination Team

The Design Coordination Team provides consistent and effective communication, coordination and issue resolution on projects. Design Coordination Team membership is composed of District, USACE and the FDEP staff from various disciplines including, but not limited to, project management and program controls; planning, engineering, design, and

construction management; real estate; research and monitoring; operations and maintenance; environmental compliance; regulation and permitting.

The Design Coordination Team also provides consistent and effective communication, coordination, and issue resolution as well as technical and managerial oversight on issues related to design including schedules and budgets; construction plans and specifications; and updates of the Master Program Management Plan. The Design Coordination Team reviews plans and work products including Project Management Plans (PMPs), Project Implementation Reports (PIRs), and Pilot Project Design Reports (PPDRs). Further, the Design Coordination Team considers real property requirements; contract scopes of work; program and project cost projections; and RECOVER efforts. The performance of operation, maintenance, repair, replacement and rehabilitation is directed by the Design Coordination Team, along with development of program-level procurement strategies. For more information on the Design Coordination Team, see www.evergladesplan.org/pm/dct.cfm.

Environmental and Economic Equity

As CERP is implemented, citizen concerns, needs, and economics are considered and integrated into the project-specific and restoration-related processes and decisions. Environmental and Economic Equity deals with social, cultural, behavioral, historical, and economic subjects to maximize the potential benefits, both systemwide and project-specific, resulting from CERP activities, and to minimize adverse social or economic impacts. Efforts to ensure that CERP implementation is open to all audiences include conducting town hall meetings, one-on-one sessions, and public meetings in minority communities. Presentations are given in economically disadvantaged communities, and many meetings are conducted in Spanish or Creole to reach Hispanic and Haitian residents.

U.S. Environmental Protection Agency (USEPA) training and standards for population census analysis form the basis for each project's Environmental and Economic Equity success. The District and the USACE have developed custom maps that interpret 2000 census data to show the locations of low income and minority communities. These maps are posted on CERP's web site to help project managers and teams to see where projects and populations of concern intersect. To view baseline data acquisition and analysis maps, see http://www.evergladesplan.org/pm/progr_eee.cfm. In FY2006, the Urban Corridor Analysis and Economic Justice Maps were completed, and the EEE Program Management Plan revised.

As required by the Water Resources Development Act of 2000, Section 601(k), programs at the federal and state levels ensure that small and minority-owned businesses are aware of and provided with opportunities to participate in CERP contracting under Section 15(g) of the Small Business Act. An array of outreach programs and products are in place, and efforts are made to hold public meetings and workshops in locations readily accessible to low-income and minority populations and in communities adjacent to CERP projects. Translators are provided for some meetings to ensure inclusion of those with limited English proficiency. CERP will have a direct impact on regional economies through the creation of jobs and contracting opportunities. Established programs ensure that small and minority-owned businesses are aware of these opportunities.

Geodetic Vertical Controls

The purpose of the Geodetic Vertical Control Survey Project is to provide a common vertical elevation framework for scientific data analysis, modeling, design, construction, and operations and maintenance. All spatial data collections for CERP are based on this survey, and all project elements with an elevation component are referenced to the new monuments, which were set to ensure systems connectivity. The project was completed under budget and ahead of schedule in

November 2003. The web link http://www.evergladesplan.org/pm/progr_geodetic.cfm includes links to the National Spatial Reference System and to the CERP Survey Monuments application.

Independent Scientific Review Panel

The Independent Scientific Review Panel, convened by the National Academy of Sciences as required by WRDA 2000, reviews CERP's progress toward achieving the natural system restoration goals of the plan and produces a biennial report to Congress that includes an assessment of the ecological indicators and other measures of progress in restoring the ecology of the natural system. The panel was established to review CERP's progress toward achieving natural system restoration goals. The web link http://www.evergladesplan.org/pm/ind_review.cfm includes National Academy of Sciences documents related to the panel.

For more information on the panel and its first report, see http://www8.nationalacademies.org/cp/projectview.aspx?key=WSTB-U-03-04-A.

CERP Information and Data Management

The purpose of CERP Information and Data Management is to provide coordinated management and integration of all CERP information through a program-level strategy. The strategy evolves with CERP's information requirements and includes oversight of the CERPZone and Electronic Document Management.

During FY2007, this program element launched an interactive web meeting application, which enables live on-line meetings, virtual classes and group collaboration. This allows effective sharing of a wide range of content among the implementing agencies, including presentations, video and multi-user exchanges. Also newly created is the Policy Digest database, a searchable repository of essential USACE planning guidance and a reference guide. The Policy Digest provides directives used during creation of PMPs and PIRs.

The Electronic Data Catalog application was enhanced to provide a combined full text search capability for Documentum, which is the CERP records management system. The Geographic Information Systems (GIS) Data Catalog was updated so that GIS data users and stewards now can load GIS data directly to the CERPZone GIS data repository. CERPZone loading allows multi-agency access for storing spatial data.

Land Acquisition

The District is responsible for acquiring the real estate needed for the construction, monitoring, and operation of CERP projects. The CERP projects were estimated, in October 1999, to cost $7.8 billion, of which $2.2 billion was allocated to the acquisition of lands. The District prioritizes the purchase of lands based on authorized project construction schedules, availability of willing sellers, identification of lands threatened by development potential, and recognition of lands in areas of rapidly escalating property values.

Properties acquired are managed until the land is needed for construction of CERP projects. When historical uses of properties are allowed to continue through reservations or leases, lessees typically are responsible for managing the property. Information on CERP land acquisition activities is presented annually in the Florida Forever Work Plan, which is included in the 2008 SFER – Volume II, Chapter 6A.

During FY2007, the District expended $67.7 million to purchase 4,195 acres for CERP projects. As of September 30, 2007, the District had acquired nearly 57 percent of the lands needed to implement CERP. The acres acquired in FY2007 increased the total lands available for use by CERP projects to 217,584 acres; lands will be used to enhance water quality, quantity, timing, and distribution. The District's aggressive purchase of land, in advance of project plans

being approved by the U.S. Congress, has provided 99 percent of the real estate needed for early construction of Acceler8 projects.

Highlights of FY2007 land acquisitions include:

- Acquisitions for the Broward County Water Preserve Area, C-11 Impoundment were completed with the purchase of 45 acres of land for $11.6 million.
- The 1,659 acres acquired for the Lake Okeechobee Watershed Project will be used for the Lake Okeechobee Watershed Water Quality Treatment Facility.
- In partnership with The Nature Conservancy, the District completed the multi-year Pomcor acquisition for the Lake Okeechobee Watershed Project.
- Multi-year payouts were made to acquire 1,027 acres at a cost of $20.9 million for the Pal Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration components of the North Palm Beach – Part 1 Project.
- The 326 acres of land acquired for the Indian River Lagoon – South Project will be used for the C-23/C-24 South Reservoir and the C-44 Reservoir and Stormwater Treatment Areas (STAs).
- Other key acquisitions included the Henscratch Ranch conservation easement acquired for the Florida Forever/SOR Program, and acquisitions for the CREW and C-111 Canal projects.

Master Recreation Plan

The Master Recreation Plan will identify, evaluate, and address the impacts of CERP implementation on existing recreational use within the South Florida ecosystem, and will identify and evaluate potential new recreation, public use, and public educational opportunities. Promising opportunities may be recommended for further evaluation during development of PIRs, for implementation through other cost-share arrangements, or for stand-alone Congressional authorizations.

Following a series of regional public meetings in the West Palm Beach area and the Everglades area of Palm Beach County, and in Broward, Miami-Dade, Monroe, Martin, Collier and Lee counties, work began to develop the systemwide plan of outdoor recreation uses that will be developed and coordinated with CERP and other projects where possible. The Master Recreation Plan is the basic document that will guide agencies in following federal laws to preserve, conserve, restore, maintain, manage and develop project lands, waters and associated resources. In turn, it will guide recreational use on CERP project lands that are compatible with restoration and project goals. The Master Recreation Plan will be an evolving planning document; based on changing conditions, it is designed to be flexible.

In November 2007, Okeechobee County and the District held a ceremony to mark the opening of the Taylor Creek Stormwater Treatment Area for recreation on the U.S. Highway 441 North site. The public was invited to attend and learn about opportunities for walking, jogging, cycling and bird watching.

Public Information and Outreach

Outreach efforts include the CERP Report, which highlights community outreach initiatives, and Community Outreach in Action, which targets minority communities. An array of media is used for CERP public outreach efforts in South Florida. Environmental education has been promoted in educational supplements including “The Everglades: An American Treasure,” and a

more comprehensive booklet and poster, "The Journey of Wayne Drop to the Everglades" (available to educators at http://www.evergladesplan.org/education/learning.cfm).

FY2007 accomplishments include implementing community partnerships for CERP and Acceler8, and completing the second of a job training and workforce development program, which was launched during FY2005.

The District recently strengthened its partnerships with workforce development organizations, community colleges and non-profits to train area workers and provide the goods and services needed to tackle $1.8 billion in Everglades Restoration projects. Two District initiatives, the Small Business Enterprise Program and Workforce Training Initiative, boost prospects for local businesses and workers in the Palm Beach, Hendry, Lee, Martin and St. Lucie county areas.

To date, more than $5 million has been spent within the District's 16-county region on subcontractors and direct purchases for restoration projects, with approximately $2.2 million spent in the immediate Pahokee, South Bay, Belle Glade, and Clewiston areas. To increase the availability of qualified local workers, the District contracted with the Education Center of Southwest Florida and with Palm Beach Community College to train and certify workers in heavy equipment operation and construction trades. The District has invested more than $1.2 million in partnerships with these two institutions, which have graduated 261 trained workers.

Program Controls

To ensure successful implementation of the CERP by keeping it on schedule and within budget, a set of program controls is being implemented. These controls, critical for a program with the scope and magnitude of CERP, consist of management of records, finances, and schedules. The management task also requires strict adherence to protocols for cost estimating and forecasting, budget development, and financial reporting.

The plan presented to Congress in 1999 included a baseline cost estimate for projects, including pilot projects and feasibility studies, at $7.8 billion at October 1999 price levels. The plan also included a baseline cost estimate for Adaptive Assessment and Monitoring of $387 million. These estimates did not include costs for program coordination required by the Water Resources Development Act (WRDA) 2000 or Programmatic Regulations. The current cost estimate for the plan, as shown in the CERP 2005 Report to the U.S. Congress, is $10.5 billion at October 2004 price levels. A detailed discussion is found in the CERP 2005 Report to Congress, available at http://www.evergladesplan.org/pm/program_docs/cerp_report_congress_2005.aspx.

Cost increases include price level adjustments (inflation), scope changes based on final decision documents with the USACE Chief's Reports, and scope changes for additional program coordination requirements such as those arising from WRDA 2000. The CERP Annual Report's Parts (A) and (B) contain only State of Florida and District revenue, expenditure, and fund balance information. Federal expenditures are found in the 2005 Report to the U.S. Congress. A companion 2007 Report to the Public is under development and will be released early in 2008.

The original implementation schedule for CERP that is described in Section 10 of the 1999 C&SF Project Comprehensive Review Study (Restudy) was based on the knowledge, experience and requirements known at that time. An update to the Implementation Schedule completed in July 2001 is referred to as Master Implementation Schedule (MISP) 1.0. The MISP defines the order in which the many projects within the South Florida Ecosystem Restoration Program will be planned, designed, and constructed. The MISP addresses sequencing and scheduling of all of the CERP projects, including pilot projects and operational elements, based on the best scientific, technical, funding, contracting, and other information available. View the MISP at http://www.evergladesplan.org/pm/misp.aspx .

Programmatic Regulations

The CERP Programmatic Regulations (Pro Regs), which were issued during FY2004 pursuant to WRDA 2000, Section 601(h), require the development of six program-wide Guidance Memoranda and a Pre-CERP Baseline. The Guidance Memoranda and Pre-CERP Baseline provide direction for using the tools for planning, implementation and evaluation, and provide assurances that the goals and purposes of the plan will be achieved. The web page http://www.evergladesplan.org/pm/progr_regs.cfm provides information on the Pro Regs, including Guidance Memoranda, the Pre-CERP Baseline and the MISP.

The System Operating Manual, which provides an integrated, systemwide framework for operating the implemented projects of CERP and the C&SF Project, was drafted in December 2005 in consultation with the U.S. Department of the Interior (USDOI), USEPA, Seminole Tribe of Florida, Miccosukee Tribe of Indians of Florida, the FDEP and other agencies. The manual is posted at http://www.evergladesplan.org/pm/progr_regs_syst_oper_manual.cfm.

The USACE, Jacksonville District and the District developed the six guidance memoranda required by the Pro Regs for the CERP for approval by the Secretary of the Army. The public was invited to review and comment on the Revised Final Draft Guidance Memoranda during the 60-day comment period ending December 17, 2007. The Revised Final Draft CERP Guidance Memoranda can be downloaded and reviewed at:

http://www.evergladesplan.org/pm/progr_regs_guidance_memoranda.aspx

The guidance memoranda are fundamental to the integrated framework of tools, processes, and an enforcement mechanism for ensuring that the goals and purposes of the plan are achieved. The guidance memoranda document illustrates the interrelationship between the tools and technical guidance used to implement the tools. The guidance memoranda address numerous topics including common methods, general procedures, and guidance to implement CERP. The six program-wide subjects for the guidance memoranda as set forth in the Pro Regs are:

- GM #1: Project Implementation Reports (PIRs)
- GM #2: Formulation and Evaluation of Alternatives for Project Implementation Reports
- GM #3: Savings Clause Requirements
- GM #4: Identifying Water Made Available for the Natural System and for Other Water Related Needs
- GM #5: Format and Content of Project Operating Manuals
- GM #6: Assessment Activities for Adaptive Management

The guidance memoranda were originally released for a 30-day public comment period in April 2005. Based on feedback received during that process, the guidance memoranda were revised to establish the linkages between the planning process, saving clause requirements, identification of water, and operating manuals. In addition, the guidance memoranda have been simplified to make the concepts more accessible to the end users and the public.

Master Implementation Sequencing Plan

The purpose of the MISP is to define the order in which the many projects within the South Florida Ecosystem Restoration Program will be planned, designed and constructed.

The MISP was developed by the USACE and the District, in consultation with USDOI, the USEPA, the U.S. Department of Commerce, the Seminole Tribe of Florida, the Miccosukee Tribe of Indians of Florida, the FDEP, and other federal, state and local agencies.

As required by the Pro Regs, the MISP includes the sequencing and scheduling of all of the projects of the CERP, including pilot projects and operational elements, based on the best scientific, technical, funding, contracting and other information available.

Major changes that have affected CERP implementation include:

- Passage of the WRDA 2000
- Promulgation of the Pro Regs required by WRDA 2000
- Water reservations and savings clause (elimination or transfer and flood protection) provisions:
    - Detailed analyses required in PIRs
    - Formulation analyses and justification is more detailed than originally envisioned and may also require additional project dependencies
- Increased complexity of the project implementation process
- Updated schedules for PIRs that are underway
- Extensive agency and public involvement

During Phase 1 of MISP development, a classification process termed "banding" focused the implementing agencies' limited resources on the products that can be accomplished and generate the expected benefits within a specified timeframe. The projects are grouped in five-year "bands." These five-year bands coincide with incremental model runs (i.e., Band 1 = 2005–2009, Band 2 = 2010–2014, etc.).

Phase 2 then consisted of presenting the output of Phase 1 for public and stakeholder review and comment as well as taking into account factors that will affect the sequencing, such as the state's Acceler8 initiative. The bands provide clear priorities and allow focusing of resource and agency expertise. The MISP 1.0 product can be viewed online at http://www.evergladesplan.org/pm/pm_docs/misp/040605_misp_report_1.0.pdf.

Overview of Project Processes

Project-level activities conducted under the Design Agreement include planning, engineering, design, and project management efforts specific to individual projects. A PMP is developed, which provides a detailed description of each project's scope, activities, tasks, schedule, cost estimates and agency responsibilities. PMPs are also developed for Studies, as they establish the project scope, schedule, costs, funding and technical performance requirements for each CERP project. The Project and Study Management Plans can be viewed online at http://www.evergladesplan.org/pm/program_docs/mgmtplns.cfm. A list of completed PMPs is provided in **Table 7.**

Table 7. Completed Project Management Plans.

Project Management Plan	Completed
Acme Basin B	October 2003
Aquifer Storage and Recovery (ASR) Regional Study	August 2003
Biscayne Bay Coastal Wetlands	August 2002
Broward Water Preserve Areas	May 2004
C-111 Spreader Canal	March 2002
Caloosahatchee River (C-43) Basin ASR Pilot	January 2002
C-43 Basin Storage Reservoir – Part 1	February 2002
Comprehensive Integrated Water Quality Feasibility Study	August 2003
Everglades Agricultural Area Storage Reservoirs – Phase 1	January 2002
Everglades National Park Seepage Management	October 2005
Florida Keys Tidal Restoration	April 2002
Florida Bay/Florida Keys Feasibility Study	February 2002
Hillsboro ASR Pilot	March 2001
Indian River Lagoon (IRL) – North	April 2003
IRL – South	July 2004
L-31N (L-30) Seepage Management Pilot	May 2006
Lake Belt In-Ground Reservoir Technology Pilot	April 2002
Lake Okeechobee ASR Pilot	March 2001
Lake Okeechobee Watershed	December 2003
Lakes Park Restoration	July 2005
North Palm Beach County – Part 1	June 2005
Site 1 Impoundment	November 2003
Southwest Florida Feasibility Study	January 2002
Picayune Strand (Southern Golden Gate Estates) Hydrologic Restoration	March 2001
Strazzulla Wetlands	December 2003
WCA-3 Decompartmentalization and Sheetflow Enhancement – Part 1	March 2002
Wastewater Reuse Technology Pilot	December 2003
Winsberg Farm Wetland Restoration	May 2004

Once a PMP has been approved, a PIR is developed to conduct additional project formulation and evaluation and to provide more detailed engineering and design. During this process, structural and non-structural alternatives are evaluated for economic, environmental, and engineering effectiveness. Criteria for site suitability are established, and a siting analysis is conducted. An Environmental Impact Statement (EIS) may be prepared as part of the National Environmental Policy Act (NEPA) process or an Environmental Assessment (EA) may be completed. The completed PIR then serves as the authorization document for the project.

More than 20 PIRs have been initiated. These documents present the alternative designs evaluated in developing the project plan to be recommended for construction authorization to Congress. Completed PIRs are listed in **Table 8**.

Table 8. Completed Project Implementation Report, Environmental Impact Statement, and Environmental Assessment documents.

PIRs, EIS, and EA Documents	Completion Date
Draft Everglades Agricultural Area Reservoirs PIR/EIS	February 2006
Final Indian River Lagoon – South PIR/EIS	March 2004
Final Picayune Strand Hydrologic Restoration PIR/EIS	November 2004
Final Site 1 Impoundment (Fran Reich Preserve) PIR/EA	August 2006

When necessary, a Design Documentation Report (DDR) is produced to provide the technical basis for a project's plans and specifications, and to serve as a summary of engineering and design decisions made during project development and implementation. The DDR covers the time period from preconstruction engineering through project completion. Plans and specifications are then prepared for construction of the project. The status of CERP project implementation is discussed later in this chapter. Pilot projects, feasibility studies, critical restoration projects, and other CERP efforts also are addressed.

Public Meetings to Monitor Ecosystem Restoration Progress

The South Florida Ecosystem Restoration Task Force's Working Group is the forum for agency interaction and public participation in CERP projects and related ecosystem restoration efforts. The Working Group provides the opportunity for federal, state and local agencies to participate in development, review, discussion and recommendation on issues associated with each Everglades restoration project. These meetings also provide stakeholders and the public an opportunity to review progress and decisions, and to provide input through a public comment period.

The Working Group is consulted formally during the NEPA Scoping Process and during development of alternatives in the Plan Formulation and Evaluation Stage of each project. Consultation on the draft PIR is with the Task Force, although the Working Group is briefed on the project in advance of the Task Force meeting. Consultations with Native American tribes are held separately and independent of the Task Force and Working Group briefings. The CERP calendar at http://www.evergladesplan.org/news/calendar.cfm provides links to the Task Force calendar and other public meetings.

Project Delivery Teams (PDTs) established for each project include staff from the USACE and the District that have expertise in planning, engineering, and other relevant technical areas. All PDT meetings are posted on the CERP calendar and have conference call-in lines available. The public may call in to these meetings or attend in person, and have the opportunity to make comments that will be recorded and noted for consideration. The role of the PDT includes ensuring consistency of approaches employed for the project, soliciting and processing feedback, leading the oversight of contractor activities to produce products, and ensuring high quality products are delivered on schedule.

The District's Water Resources Advisory Committee (WRAC) serves as an advisory body to both the Task Force and the District's Governing Board. All items for CERP are presented to the WRAC prior to seeking consultation with the Task Force. More detail on the Task Force and upcoming Working Group meetings are posted at http://www.sfrestore.org. Task Force and Working Group meetings are held throughout the CERP region, and agendas are published two weeks prior to each meeting. For information about upcoming meetings and workshops, see http://www.sfrestore.org/wg/wg_meetings.html.

Achievement of WRDA Requirements

All WRDA 2000 requirements directed by the U.S. Congress to be completed in the initial five-year period of CERP implementation have been completed. The required accomplishments, which are detailed in the Five Year Report to Congress, include the following:

- **Executed President/Governor's Agreement.** On January 9, 2002, President Bush and Governor Bush executed the *Comprehensive Everglades Restoration Plan Assurance of Project Benefits Agreement* as required by §601(h)(1)(A) of WRDA 2000.
- **Executed Governor/Secretary of Army Agreement.** In 2002, the Governor and the Secretary of the Army executed an agreement for resolving disputes between the USACE and the state associated with implementation of the plan as required by §601(i)(1) of WRDA 2000.
- **Promulgated CERP Programmatic Regulations.** Promulgated the Programmatic Regulations for the Comprehensive Everglades Restoration Plan: Final Rule in 2003 by the Department of the Army, with the concurrence of the Governor of Florida and the Secretary of the Interior to ensure that the goals and purposes of the plan are achieved as required by §601(h)(3) of WRDA 2000.
- **Established Independent Scientific Review Panel.** Established in 2004, an independent scientific review panel, the Committee on Independent Scientific Review of Everglades Restoration Progress, convened by the National Academy of Sciences to review the plan's progress toward achieving the natural system goals of the plan as required by §601(j)(1) of WRDA 2000.
- **Transmitted Miami-Dade ASR Report**. In 2003, transmitted the report for Miami-Dade ASR as required by §601 of WRDA 2000.
- **Developed Outreach Programs.** Outreach programs have been developed to reach a variety of audiences, including individuals with limited English proficiency, and socially and economically disadvantaged communities. Small and minority-owned businesses are provided opportunities to participate in CERP contracting opportunities. Outreach and assistance activities were commenced as required by §601(k) of WRDA 2000.
- **Finalized Master Implementation Sequencing Plan.** The MISP (Version 1.0) was finalized in March 2005. This document describes the current sequencing and scheduling for the projects included in the plan, and lists and groups individual projects in the five-year period in which construction is to be completed.
- **Promulgated Program-Wide Guidance Memoranda.** Six Draft Program-Wide Guidance Memoranda promulgated in 2005 provide guidance on the general format and content of PIRs; formulation and evaluation of alternatives developed for PIRs; general content of operating manuals; general direction for the assessment activities of RECOVER; instructions for identifying in PIRs the appropriate quantity, timing, and distribution of water to be dedicated and managed for the natural system; and

instructions for identifying in PIRs whether an elimination or transfer of existing legal sources of water will occur as a result of implementation of the plan.

- **Completed Pre-CERP Baseline.** A Pre-CERP Baseline Draft was completed; this is one of the tools to be used in determining whether existing legal sources of water will be eliminated or transferred because of CERP implementation and whether levels of service for flood protection will be reduced.
- **Completed Interim Goals Agreement.** An Interim Goals Agreement Draft was completed and will be used to evaluate the restoration success of the plan throughout the implementation process.
- **Complete Interim Targets.** The Interim Targets Draft was completed and will be used to evaluate the success of the plan in providing for other water-related needs of the region, including water supply and flood protection throughout the implementation process.

PROJECTS OVERVIEW

Through WRDA 2000, the U.S. Congress authorized an initial $1.4 billion package of projects to begin CERP implementation. The initial authorization included four pilot projects, plus two pilots authorized in WRDA 1999, 10 specific project features, and a programmatic authority through which smaller projects can be more quickly implemented.

Passage in November of the Water Resources Development Act of 2007 represents an important step forward in Everglades restoration. This act benefits South Florida in many ways, but specifically the Everglades, as it grants Congressional authorization for two major projects. The Indian River Lagoon Project will help restore one of the most beautiful, diverse and productive coastal estuaries in the hemisphere. The Picayune Strand Restoration Project will help to restore uplands and wetlands, which once again will become studded with cypress trees, shrouded in air plants and roamed by Florida panthers.

The Everglades is a national treasure. With an endeavor that spans an area as large and as complex as the Everglades, progress toward restoration may seem slow. But significant progress is being made. Restoration of the Kissimmee River, which is fundamental to the successful implementation of CERP, is one example. The District and the USACE are halfway to completion of the project. The tremendous benefits that have been made by filling the first 10 miles of canal have proven the resiliency of nature. With the restoration of the Kissimmee River ecosystem under way, native plants and wildlife are already returning.

The implementing agencies have a number of restoration projects under way. The state has moved ahead on key projects even as federal funding has lagged behind schedule. The USACE has continued on projects that are the foundation of Everglades restoration such as restoring flows to Everglades National Park. Newer projects continue to be developed and brought forward to Congress for legislative consideration of authorization and funding.

Everglades restoration is a profound endeavor, and it will take many years to complete. Given current low water levels and expected drought conditions into FY2008, one can appreciate how restoration projects that capture and maintain water in the ecosystem are essential to human and natural survival. This is a challenging time for Everglades restoration. The District and the USACE, along with other implementing partners, are meeting each new challenge head on, and with a commitment to reexamine and modify the approach based on sound science and fiscal efficiency.

Recently, the National Academy of Science recommended that the Everglades could be helped sooner if massive projects were divided into smaller segments that will provide

incremental benefits, as opposed to entire projects completed over the longer term. The District and the USACE are implementing this advice.

BAND 1 PROJECTS

Over the next five years, subject to issuance of Section 404 permits, construction will be completed through the District's Acceler8 efforts for all or portions of seven of these 10 projects:

- C-44 Basin Storage Reservoir (IRL – South)
- Everglades Agricultural Area (EAA) Storage Reservoirs – Part 1, Phase 1
- Site 1 Impoundment
- WCA-3A/3B Levee Seepage Management
- C-11 Impoundment and Stormwater Treatment Area
- C-9 Impoundment and Stormwater Treatment Area
- C-111 Spreader Canal

These projects will provide about 261,400 acre-feet (ac-ft) of water storage; 4,000 acres of STAs; restoration of freshwater wetlands, tidal wetlands, and nearshore habitat; and restoration of the quantity, quality, timing, and distribution of freshwater to the estuarine systems such as Barnes Sound and Manatee Bay, while providing public access and recreational opportunities.

Additional projects in CERP to be completed in the next five-year period as part of Acceler8 and other state initiatives are all or a portion of the following projects recommended in the plan but not yet authorized by Congress:

- C-43 West Reservoir
- Biscayne Bay Coastal Wetlands – Phase 1
- Picayune Strand Restoration
- Acme Basin B Discharge
- C-51 and L-8 Basin Reservoir – Phase 1

These projects will provide significant increases in water storage; restoration of the quantity, quality, timing, and distribution of freshwater to Biscayne Bay and Biscayne National Park; restoration and enhancement of wetlands by reducing over-drainage while restoring natural and beneficial sheetflow; increased spatial extent of wetlands; improved quality and volume of water delivered to coastal estuaries; and public access and recreational opportunities.

CERP projects and feasibility studies scheduled for completion by the USACE and local sponsors in the next five-year period include the following:

- Lakes Park Restoration
- Winsberg Farms Wetland Restoration, Phase 2
- ASR Pilot Projects (installations to be completed, testing to continue)
- L-31 Seepage Management Pilot
- Lake Istokpoga Regulation Schedule
- Rotenberger Wildlife Management Area Operation Plan
- Florida Bay/Florida Keys Feasibility Study
- Comprehensive Integrated Water Quality Feasibility Study

Prior to full-scale implementation, six pilot projects, costing about $97 million, were planned to address uncertainties with some of CERP's features. These projects include an ASR in each geographic region that the technology is proposed, in-ground reservoir technology in the lake belt

region of Miami-Dade County, levee seepage management technology adjacent to Everglades National Park (ENP or Park), and advanced wastewater treatment technology to determine the feasibility of using reuse water for ecological restoration.

The 10 projects and the adaptive assessment program, totaling $1.1 billion and recommended in the initial authorization, were selected because they could provide systemwide water quality and flow distribution benefits to the ecosystem, as well as opportunities to integrate these features with other ongoing federal and state restoration programs.

The MISP facilitates the understanding of the current overall implementation strategy by presenting the information in the sequence it will be worked on by the implementing agencies. Bands are management tools that provide clear priorities and allow focusing of resource and agency expertise. The Band 1 projects and components, along with their MISP construction completion dates (2005–2010), are shown in **Table 9**.

Table 9. MISP construction completion dates – Band 1 projects.

Project or Component Name	Completion Date
Caloosahatchee (C-43) River ASR Pilot	2006
Hillsboro ASR Pilot Project	2006
Melaleuca Eradication and Other Exotic Plants (PIR)	2007
Winsberg Farm Wetlands Restoration	2008
L-30 (formerly L-31 N) Seepage Management Pilot	2008
Lake Okeechobee ASR Pilot	2007
Biscayne Bay Coastal Wetlands (Phase 1)	2008
Picayune Strand Hydrologic Restoration	2009
Indian River Lagoon – South	
- C-44 Reservoir	2009
- Natural Areas Real Estate Acquisition (Phase 1)	2009
Broward County Water Preserve Area	
- C-9 Impoundment	2009
- C-11 Impoundment	2009
- WCA-3A/3B Levee Seepage Management	2008
Acme Basin B	2007
Site 1 Impoundment	2009
North Palm Beach County – Part 1	
- C-51 and L-8 Basin Reservoir, Phase 1 (Palm Beach Aggregates)	2008
EAA Storage Reservoir	
- Part 1, Phase 1	2009
Lake Okeechobee Watershed	
- Lake Istokpoga Regulation Schedule	2008
Modify Rotenberger Wildlife Management Area Operation Plan	2009
Lakes Park Restoration	2009
C-43 Basin Storage Reservoir	2010

The state of Florida has provided its 50:50 share of the agreement, having contributed more than $2 billion to the federal government's $363 million to date. In November 2007, overriding a presidential veto, the U.S. Congress approved a $22 billion water resources bill that contains necessary infrastructure projects, including two major wetlands restoration projects for the Everglades (the Indian River Lagoon – South Project and the Picayune Strand Hydrologic

Restoration Project) and the Fran Reich Preserve. However, this bill only authorizes the necessary fund, and another congressional act and appropriation will be required to receive the monies for these projects.

Successful implementation of CERP will need expeditious appropriation of funds for authorized projects. These funds are needed soon in order to sustain the momentum of CERP. Subsequent pages in this document describe the individual projects and milestones, such as development of PMPs and PIRs, and are organized by category as Acceler8 projects, pilot projects, feasibility studies, critical projects, and CERP priority projects.

ACCELER8

The state of Florida is implementing the Acceler8 Initiative for the purpose of expediting design and construction of a number of restoration projects consistent with the CERP prior to one or more of the following: federal administration approval, congressional committee resolution, congressional authorization or federal construction funding. Acceler8 is expected to provide immediate environmental, social and economic benefits in the South Florida region.

The Acceler8 initiative began in October 2004 to expedite specific Everglades restoration projects, which range in construction value from $14 million to $480 million. Several of the projects include multiple components for a total of 18 independent projects. This initiative will expend more than $1.5 billion in additional state funds above the $200 million annually planned for CERP. The goal of Acceler8 is to complete the design and construction of the identified projects by 2011. Through close coordination with federal agencies, the District will design and construct projects that are consistent with CERP recommended plans and will be proposed to Congress for crediting authorization.

All Acceler8 projects must be specifically authorized by the U.S. Congress before becoming a part of CERP. The District is the state agency responsible for water resources management in South Florida and acts as the non-federal sponsor for federal water resources projects, including CERP. The District is also the lead state agency responsible for implementing Acceler8, and, as such, acquires Department of the Army permits under Section 404 of the Clean Water Act prior to construction.

Of the projects that comprise Acceler8, the following projects were initially authorized CERP Projects under WRDA 2000:

- C-44 Basin Storage Reservoir
- Everglades Agricultural Area Storage Reservoir – Phase I
- Fran Reich Preserve (formerly Site 1 Impoundment)
- Water Conservation Areas 3A and 3B Levee Seepage
- C-11 Impoundment
- C-9 Impoundment
- C-111 Spreader Canal

One Acceler8 project, Acme Basin B, potentially falls under the WRDA 2000 programmatic authority provisions. Three other Acceler8 projects require separate federal authorization: Biscayne Bay Coastal Wetlands, Caloosahatchee River (C-43) West Basin Storage Reservoir and the Picayune Strand Restoration Project. The Picayune Strand Project was authorized in WRDA 2007.

The District will accelerate construction and attainment of ecosystem restoration benefits and other advantages of certain CERP projects by obtaining required permits and initiating

construction upon completion of the final integrated Project Implementation Report and Environmental Impact Statement for the associated CERP project.

Acceler8 Outreach

Acceler8 has established an effort to inform the public on progress realized in implementing the initiative and its projects. Based on recommendations from 2007's SFER peer-review panel, some of these efforts are highlighted here. The official Acceler8 web site provides current information on the initiative, its projects, project maps, news releases, and answers to frequently asked questions. The web site can be accessed at www.evergladesnow.org.

News releases and newsletters have been specifically developed and are used for Acceler8. Groundbreaking ceremonies and other milestones are announced through news releases, and a monthly electronic newsletter provides timely articles. View the latest newsletter at http://www.sfwmd.gov/newsr/enews/A8_eNews.html.

District-hosted Everglades educator workshops are popular among secondary school teachers who learn about current ecosystem issues and restoration efforts from the District's environmental scientists. The teachers have the opportunity to explore the Everglades by airboat while earning in-service credit.

A major event and successful Acceler8 business outreach effort is the District's annual Construction Symposium and Exhibit. This event continues to be a significant factor in restoration success, as information is exchanged with prospective consultants, contractors and vendors on Acceler8 projects, and on topics such as the District's Small Business Enterprise program, owner-controlled insurance program, and work force training opportunities.

Acceler8 Land Acquisition

By the end of the FY2007 reporting cycle, 99 percent of the real estate acquisitions for Acceler8 projects were completed due to the District's aggressive land acquisition efforts in advance of project plans being approved by the U.S. Congress. Land acquisition activities during the year focused on acquiring the real estate interests needed for relocating the drainage canal system within the project boundary of the C-44 reservoir and STA project. The required acquisitions and land exchanges were accomplished in May 2007, representing the completion of a major milestone leading to the approval of the Project Final Design in June 2007. Additionally, acquisitions for the Broward County Water Preserve Areas C-11 Impoundment were completed with the purchase of 45 acres of land for $11.6 million.

Advanced Work on C-43 (Caloosahatchee River) West Reservoir

The Recommended Plan for the C-43 west reservoir, which will be implemented under the Acceler8 Initiative will reduce damaging discharges of basin runoff and flood-control releases from Lake Okeechobee. Otherwise, such water releases will continue during wet periods causing periodic unnatural low salinity levels in the Caloosahatchee Estuary and adjacent estuarine areas, including nearby parks, refuges, preserves and other publicly owned and managed areas.

This project comprises a significant portion of the total water storage requirement for the C-43 basin, consisting as it does, of an above-ground reservoir located south of the Caloosahatchee River and west of the Ortona lock (S-78). The planned storage capacity is 170,000 acre-feet. Depending on storage needs, water depth may vary from 12 to 26 feet. The reservoir will be constructed on an 11,000-acre parcel in Hendry County, west of LaBelle.

Conceptual engineering, design and test cell construction are complete, as is test cell monitoring. The final Biological Assessment is complete. The C-43 reservoir project design is 95

percent complete and separate District pump procurement bid documents have been completed. A manatee barrier structure design in the Townsend Canal, to be operated in the dry season as requested as part of the U.S. Fish and Wildlife Service's Biological Opinion, is 75 percent complete and will be incorporated into the Project Final Design documents.

Existing property leases were coordinated with the start of site preparation in July 2007, and are now terminated. Real estate has been 100 percent acquired. Public outreach activities for this project include a Pre-Qualification Process Meeting for Large Reservoir Embankments and Structures, which was held during March 2007. Pre-Final Design (90 percent) was submitted in September 2007.

The Final C-43 Reservoir Project Implementation Report was completed and posted in the Federal Register on September 21, 2007. C-43 reservoir design continues as planned. The 90 percent constructability review was conducted on October 3, 2007. In Early October 2007, the District finalized the exchange of real estate interests for this project for current crop harvest until April 30, 2008.

During November, the FDEP 1502 permit was received. The permit stipulates that a monitoring plan proposal is expected 120 days after receipt of the permit. The USACE 404 permit is pending. The District is negotiating a reservoir "dry down" definition with the U.S. Fish and Wildlife Service for initial reservoir rehydration for indigo snakes. This definition is needed prior to 404 permit issuance.

Advanced Work on C-44 (St. Lucie Canal) Reservoir/STA

As a component of the larger Indian River Lagoon – South restoration project, this Acceler8 project will capture and treat local stormwater runoff from the 116,516-acre C-44 basin in Martin County, decreasing flows and improving water quality into the St. Lucie Estuary. The project consists of a 3,400-acre, 15-ft-deep above-ground reservoir that will hold 50,600 ac-ft of water, providing significant water storage for the C-44 basin.

The project also includes a 6,300-acre STA to capture and treat stormwater runoff before it enters the St. Lucie Canal and ultimately the St. Lucie Estuary and Indian River Lagoon. New conveyance canals, embankments and a pump station are designed to aid in moving water through the reservoir and STA. This project is located in southern Martin County, directly north of the C-44 canal, halfway between Lake Okeechobee and the Atlantic Ocean.

As of mid-February 2007, trees were cleared from 1,590 acres. The burning process was started and continued until mid-March 2007. Disking, a plowing technique, was then initiated to begin evening out the soil, and was completed in mid-May 2007. At the District's Governing Board meeting in February 2007, a contract was approved to start clearing trees from the remaining 10,000 acres using the same process of cut, burn, and disk.

Temporary reconfiguration was completed in March 2007 with the Troup Indiantown Water Control District. Some of these 298 District canals were temporarily out of service during the construction, but measures were used to ensure that drainage was not compromised.

All advance planning and field work are complete. Project configuration and components are established. Intermediate design was issued February 2007. Some early construction activities were started in October 2006, these being three contracts for site preparation and reconfiguration of existing irrigation and drainage canals. Real estate is 96 percent acquired. Public outreach activities for this project include a Pre-Qualification Process Meeting for Large Reservoir Embankments and Structures, which was held during March 2007.

In June 2007, the final plans and specifications were approved by the District's Operations and Maintenance Department, Technical Service Group, and the Everglades Restoration

Construction Department. The comprehensive Project Final Design, which was three years in the making, encompasses a reservoir, pump station, STAs, bridge, structures and canals resulting in a fully functional project that meets the design goals and objectives as stated in the recommended plan contained in the PIR.

In early October 2007, the District finalized exchange of real estate interests for this project for a guaranteed three year reservation. In November 2007, the Substantial Completion for site preparation was issued. Final Completion is expected by mid-December 2007. This project is waiting funding to move forward to full construction.

Advanced Work on Everglades Agricultural Area Reservoir – Phase 1

The Everglades Agricultural Area (EAA) Reservoir A-1 Acceler8 project is a component of the larger EAA Reservoir Project and is designed to provide significant additional water storage in the southern region of the EAA. The project is an above-ground reservoir for water storage, with a planned capacity of 190,000 ac-ft, or 62 billion gallons, at a maximum depth of 12.5 feet. The reservoir will be constructed on a 16,700-acre parcel of land in southern Palm Beach County in the EAA, situated north of STA-3/4 and between the Miami and North New River canals.

This project will allow the District to capture, move, and store regulatory releases from Lake Okeechobee, reducing the number and volume of harmful discharges to coastal areas, among other benefits. Final reservoir design has been initiated. Test cell investigations and water flow modeling are complete, with excavation, which began in August 2006, well under way. All blasting was completed and the North Office Complex was constructed by March 2007. Real estate has been 100 percent acquired. This project's benefits to the local economy have been substantial and are highlighted in **Table 10**.

Table 10. Benefits to local economy.

114 Hourly Project Employees Hired to Date	
82 have been from Florida	[72 percent]
33 from the tri-cities area	[29 percent]
9 from Clewiston	[7 percent]
22 from within the District service area	[19 percent]
Over $1,000,000 has been put directly into local households	
Over $4,388,000 has been spent in Florida for sub-contractors and direct project purposes	
Over 71 percent of total project dollars for sub-contractors and materials	
This includes approximately $824,900 in the tri-cities area	
$127,100 in the Clewiston area	
$2,121,000 in District counties alone	

The Everglades Stage-Based Rainfall-Driven Formula for the Acceler8 Rainfall-Driven Operation Project was sent for final review in September 2007. This represents a key deliverable in the development of real-time operations for the Acceler8 EAA Reservoir Project.

By calendar-year end, the construction activities on the EAA A-1 Reservoir were in full swing and the first of seven construction contracts was completed. Guaranteed Maximum Price Contract Number 1 for the first phase of seepage canal excavation and site mobilization was essentially completed in summer 2007. The contract was completed ahead of schedule and approximately $10 million under the originally budgeted contract of $53.7 million. This was due mainly to dry weather conditions throughout the year, which significantly improved productivity.

Also initiated in the past year were Guaranteed Maximum Price Contracts Numbers 2 and 3, which are also ahead of schedule and under budget primarily due to good weather conditions. Contract Number 2 for rock processing includes a $112 million plant to produce 5.1 million tons of processed rock materials for the dam construction. Initial plant start-up began in November 2007 and is expected to run for approximately 30 months to produce the required quantities of material. Contract Number 3 for $94 million was also initiated to finish the remainder of the seepage canal excavation and is expected to be completed in May 2008.

Design continues on the final earthworks and embankment and Contract Number 4 for the reservoir dam construction was negotiated in November 2007 for $350 million. The design for the remainder of the pump station and structures is expected to be completed by May 2008. Negotiation for the remaining construction contracts are expected to be completed in 2008 with construction completed in spring 2011.

Advanced Work on Bolles Canal

The Bolles Canal Improvements Project includes expansion of the L-21 reach of the Bolles Canal. This expansion will include enlargement of the existing canal with commensurate bridge and appurtenant structure replacements and relocations along the approximately eight-mile alignment. The purpose of this project is to improve local flood protection and canal conveyance capacity. Specifically, this project is intended to improve the conveyance and functional transfer of inter-basin flows in the Bolles (L-21) Canal. Land and right-of-way requirements and evaluations will be progress during FY2008, and a modified Draft Basis of Design Report is being developed as this report goes forward. Construction is scheduled to begin in FY2008.

Advanced Work on EAA STAs Expansion: ECART

This project is part of the Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area (Long-Term Plan) and will further reduce phosphorus levels and help achieve state water quality standards for the Everglades.

The EAA Conveyance and Regional Treatment (ECART) project includes several integrated components of facilities, upgrades and new improvements, such as canal expansions, control structure modifications, new construction, bridge modifications and appurtenant facilities relocations and modifications.

The purpose of this project is to improve EAA canal conveyance capacities to redistribute flows and loads between existing and planned STAs to optimize total phosphorus removal efficiencies. During FY2007, land surveying, geotechnical analyses, and Initial Design were in progress.

Advanced Work on EAA Feasibility Study

The EAA Regional Feasibility Study looked at optimizing water delivery to the STAs based on water quality, available treatment at any individual STA and hydraulic capacity for transport and delivery of water to the STAs. The purpose of the project was to determine the optimal configuration of STAs on Compartments B and C with the objective of assisting the STAs in improving water quality in the Everglades Protection Area (EPA).

This study was completed in October 2005. Its recommendations are incorporated in the Long-Term Plan. Current information can be found in 2008 SFER – Volume I, Chapter 8. Further information on the EAA Regional Feasibility Study is available at www.sfwmd.gov/sta, under *Long-Term Plan, Documents* link.

Advanced Work on EAA STA Compartment B

Stormwater Treatment Area 2 (STA-2) is located in southern Palm Beach County. Expansion of STA-2 includes the construction of an additional 2,015-acre treatment cell that will operate in parallel with three existing cells. The purpose of this project is to capture agricultural runoff from the EAA for water quality treatment prior to discharge into the EPA, while providing operational flexibility. The effective treatment area of the new cell will be approximately 1,902 acres. Design of the new cell is complete, and construction of the new cell was certified as flow-capable in December 2006. This Acceler8 project is also part of the Long-Term Plan. For more information, refer to Chapter 8 of this volume.

Advanced Work on EAA STA Compartment B Build-out

Compartment B is an approximately 9,590-acre parcel in southern Palm Beach County between STA-2 and U.S. Highway 27. It consists of areas identified as the North Build-out Area (4,300 acres), STA-2 Cell 4 (2,015 acres) and the South Build-out Area (3,275 acres). The long-term Everglades water quality goal is for all discharges to the EPA to achieve and maintain compliance with water quality standards, including phosphorus, as established in Rule 62-302.540, Florida Administrative Code (F.A.C.).

The Acceler8 Compartment B Project is a component of the Revised Part 2 of the Long-Term Plan that will permit the State of Florida and the District to fulfill their respective obligations under the Everglades Forever Act (F.S., 373.4592). The purpose of Compartment B is to treat agricultural run-off prior to discharge into the EPA. Compartment B supplements STA-2 and therein provides flexibility for the future operation of the other STAs. In FY2007, the Basis of Design Report was being finalized, and Preliminary Design had been initiated.

Advanced Work on EAA STA Compartment C Build-out

Compartment C is located in eastern Hendry County between STA-5 and STA-6. Compartment C will be built on approximately 8,800 acres. The objective of this project, like the Compartment B Build-out, is to further assist the existing STAs in improving water quality entering the EPA.

Agricultural runoff and discharges from the C-139 Basin and Annex will be captured in Compartment C for water quality treatment prior to discharge into the EPA. Once fully implemented, Compartment C is intended to provide operational flexibility for directing flows and loads to optimize STA performance in addition to improving water quality. This project has been incorporated into the Long-Term Plan.

In FY2007, the Compartment C Watershed Hydraulic Study was completed, the Basis of Design Report was under way and the accelerated construction schedule had been implemented. An Environmental Impact Statement is required for this project, and was under way as this report was written.

Advanced Work on EAA STA Compartment C: STA-5 and STA-6 Expansions

STA expansion in Compartment C consists of three components: expansion of STA-5 with and additional 2,560 acres; expansion of STA-6 with an additional 1,440 acres; and completion of the build-out of Compartment C between STA-5 and STA-6.

STAs 5 and 6 treat agricultural runoff and discharges from the C-139 basin and C-139 annex. These STAs will be expanded to alleviate the high flows and loads currently delivered from the C-139 basin and annex. The purpose of the project is to provide operational flexibility and

improve the quality of water entering the EPA. This project is part of the Long-Term Plan. The STA-6 Section 2 portion is a component of the Everglades Construction Project.

Both the STA-5 expansion (Flow-way 3) and the STA-6 expansion (Section 2) projects were certified flow-capable in December 2006, and substantially complete in July 2007. Construction of the build-out portion is reported above.

Advanced Work on Broward County Water Preserve Areas

This project includes the Site 1, C-9, C-11, Acme Basin B, and Water Conservation Area 3A and 3B (WCA-3A/3B) CERP components. This project will improve Everglades water quality by diverting runoff into impoundments. It will improve hydropatterns in the WCAs along with improved flows to the ENP, and will enhance and increase the spatial extent of wetlands adjacent to the remaining Everglades.

This project will reduce the seepage of pristine water from the WCAs into urban areas and provide a buffer between natural and developed areas. Benefits of this project include reducing the amount of excess water discharged to tide and "lost" to the system in Palm Beach and Broward counties. Furthermore, this project will provide supplemental water supply deliveries and aquifer recharge to urban areas, thus, reducing demands on Lake Okeechobee and the WCAs. Following are updates for FY2007 on the components that comprise this Acceler8 project:

Advanced Work on Water Preserve Areas: Fran Reich Preserve (formerly Site 1 Impoundment)

The Fran Reich Preserve, formerly known as the Water Preserve Areas (WPAs) Site 1 Impoundment, includes canal conveyance improvements, water control structures and an above-ground impoundment with a total storage capacity of approximately 13,280 ac-ft, with a depth of up to 8 ft, located in the Hillsboro Canal Basin in southern Palm Beach County.

The purpose of this project is to improve hydroperiods and hydropatterns that support improved habitat for natural populations of wildlife in the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge), WCA-2A, and the estuarine area at the mouth of the Hillsboro Canal. The impoundment pool also will provide supplemental deliveries reducing demands on Lake Okeechobee and the Refuge, groundwater recharge, reduce seepage from adjacent natural areas and prevent saltwater intrusion by releasing impounded water back to the Hillsboro Canal when conditions dictate.

The District has accepted a proposal by the USACE to complete the design and then construct the Broward County WPAs and the Frank Reich Preserve restoration projects as a part of the federal government's share of the $10-billion plan to restore the Everglades. The District has invested close to $334 million to acquire more than 10,000 acres of land and start preliminary design on the projects.

The Basis of Design Report has been completed as has a Final Design for a potential early start component (S-527B, gated culvert). Since completion of this work, USACE has requested that it undertake the design and construction of this project as part of its contribution to CERP. This project has thus been transferred to USACE. Further survey and geotechnical investigation is under way.

Start of construction will be contingent on congressional authorization of the projects and subsequent appropriation of funds. The USACE schedule includes completion of Intermediate (60 percent) Design in May 2008 and Final Design in February 2009. Construction is scheduled from July 2009 through July 2010.

Advanced Work on Water Preserve Areas: C-9 Impoundment

The prime feature of the WPAs C-9 impoundment Acceler8 project is a 1,050-acre, above-ground impoundment capable of holding a water depth up to 4.3 feet. The site is located in the northeast corner of the junction of U.S. Highway 27 and the C-9 canal along the Miami-Dade County boundary. Sunset Lakes is to the east. The impoundment is approximately 2.1 miles from north to south by 1.4 miles east to west, and is located within the City of Miramar.

The purpose of the C-9 impoundment is to capture excess stormwater from the western C-11 basin, route it south on the west side of U.S. 27 through an expanded borrow canal (C-502B), which currently is owned and operated by the Florida Department of Transportation. If the impoundment has available capacity and there are no flows from the C-11 basin, then excess stormwater from the western C-9 basin could be pumped into the impoundment for temporary storage and release.

The Draft Basis of Design Report was released in November 2006, followed by an extended period of consultation. Public meetings (District Water Resources Advisory Committee [WRAC] Issues Workshops) were held in January 2007, followed by the WRAC Meeting in April 2007 and District Governing Board Meeting in May 2007. Since completion of this consultation period, the USACE has requested that it undertake the design and construction of this project as part of its contribution to CERP. This project therefore has been transferred to the USACE. The Final Basis of Design Report is complete.

Advanced Work on Water Preserve Areas: C-11 Impoundment

This project is part of the Long-Term Plan and features include an impoundment with a pump station, a three-bay gated spillway and gated culvert, an ungated culvert, two fixed weir structures, seepage canals, embankments, and windbreaks. The prime feature of the WPAs C-11 impoundment component is a 1,050-acre, above-ground impoundment capable of holding a water depth up to 4.3 feet. The site is located in the northeast corner of the junction of U.S. Highway 27 and the C-11 canal at Griffin Road. The project site is within the City of Weston, which lies to the east, with the Town of Southwest Ranches to the south. The planned impoundment is approximately 2.3 miles long north to south by up to 1.5 miles east to west.

The purpose of the C-11 impoundment is to receive diverted, untreated stormwater from the western C-11 basin that otherwise would enter WCA-3A directly. The impoundment is intended to hold this diverted stormwater, pumped by the S-9 pump station to provide flood protection to the urban areas, until the storm event is over or until such time as the C-11 canal stage allows the stored water to enter the canal and be discharged to tide.

The Draft Basis of Design Report was released in November 2006, followed by an extended period of consultation. Public meetings (WRAC Issues Workshops) were held in January 2007, followed by the WRAC Meeting in April 2007, and District Governing Board Meeting in May 2007. Since completion of this consultation period, the USACE has requested that it undertake the design and construction of this project as part of its contribution to CERP. This project therefore has been transferred to the USACE. The Final Basis of Design Report is complete.

Advanced Work on Water Preserve Areas: Acme Basin B Discharge

The Acme Basin B Acceler8 project is a 365-acre multi-purpose impoundment located in central Palm Beach County in the Village of Wellington (Wellington). The purpose of the project ultimately is to allow the delivery of surface water of improved quality to the Refuge.

The impoundment is intended to provide 1028 ac-ft of temporary storage during peak rainfall events. It also has a 200-cubic-foot-per-second (cfs) diesel pump station and two 72-inch gated

inflow/outflow culverts connected to the C-1 canal. Additional facilities include a 220 cfs pump station at the intersection of the C-1 canal and the C-51 canal to convey water west before passing through STA-1E to the Refuge.

Temporary pumps were tested on December 21, 2006, resulting in a serious erosion problem. Modifications were immediately applied to the outfall from the pumps to correct the problem. The pumps are working properly and the outfall is within the expected parameters.

During FY2007, pump station 7 was relocated to the west of Flying Cow Road to be designed, constructed and operated by Wellington. Wellington plans to construct a Nature Center adjacent to the Section 24 Impoundment, relying on the impoundment's wetland features to create the center's attraction. This project is part of the Long-Term Plan and includes the Section 24 impoundment, which includes earthwork, levee, seepage canals, a natural area and recreational components, two pump stations along with gated culverts, and C-1 canal improvements.

This project was divided into 2 phases as allocated to the District:

- Phase 1 comprised widening of the C-1 canal and addition of pump station 7 to move water northwards from Drainage Basin B to the C-51 canal
- Phase 2 comprises the Section 24 impoundment and inflow pump station 9 to attenuate peak storm flows

Work allocated to Wellington involved adjustments to flow-control structures and pump stations within Drainage Basins A and B. Wellington's work and the District's Phase 1 is complete and is being operated and maintained by Wellington. A preliminary design completed for the District's Phase 2 works identified a potential increase in project cost, and so a value-engineering exercise was initiated to examine options for cost reduction. Key to the cost reduction is the storage volume, which is dictated by Wellington's drainage system model. In order to achieve the most effective solution to complete Phase 2, the collaborative working between the District and Wellington continues.

A Memorandum of Agreement has been prepared and approved by the Village of Wellington Council for the municipality to design, construct, operate, and maintain the Phase 2 Project. The District will fund up to $21.5 million for Phase 2. The Memorandum of Agreement was approved by the District Governing Board approval at the December 13, 2007, meeting.

Advanced Work on Water Preserve Areas: WCA-3A/3B Seepage Management Area

The project site for the WPAs 3A/3B seepage management area consists of 4,312 acres of short hydro-period wetlands that have been heavily infested by exotic vegetation, primarily melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper (*Schinus terebinthifolius*). The relatively narrow strip of land is oriented north-to-south, and is approximately 11 miles long and one-half mile wide. The site is bounded by I-75 to the north; the Pennsuco wetlands to the south; U.S. Highway 27 to the east; and WCA-3, with levees L-37 and L-33, to the west.

The purpose of the WPAs 3A/3B Seepage Management Area Project is to enable water stages to be held at higher elevation, creating a step-down effect adjacent to WCA-3A and WCA-3B, thereby limiting seepage of natural system water out of the WCAs. The Seepage Management Area also increases the spatial extent of wetlands.

The Draft Basis of Design Report was released in November 2006, followed by an extended period of consultation. Public meetings (WRAC Issues Workshops) were held in January 2007, followed by the WRAC Meeting in April 2007, and District Governing Board in May 2007. Since completion of this consultation period, the USACE requested that it undertake the design and

construction of this project as part of its contribution to CERP. This project, therefore, has been transferred to the USACE.

Advanced Work on Picayune Strand Restoration

The Picayune Strand (formerly Southern Golden Gate Estates) Restoration Acceler8 Project includes a combination of pump stations with spreader channels, canal plugs, and road removal in Collier County, south of I-75 and north of U.S. 41, between the Belle Meade Area and the Fakahatchee Strand State Preserve.

The purpose of this project is to restore and enhance the wetlands in Picayune Strand and in adjacent public lands by reducing over-drainage. This project will restore a natural and beneficial sheet flow of water to the Ten Thousand Islands National Wildlife Refuge. It also will significantly increase the size of wetlands, and restore major wetland ecosystems on the site and in adjacent lands including:

- Fakahatchee Strand State Preserve
- South Belle Meade Forest
- Ten Thousand Islands National Wildlife Refuge
- Collier Seminole State Park

This project will eliminate unnatural salinity fluctuations caused by freshwater canal flow from the Faka Union Canal into the estuaries. Finally, this project proposes to maintain existing levels of flood protection for adjacent private properties.

Although analysis of a value-engineering recommendation delayed portions of this project by up to six months, Prairie Canal backfilling was completed during March 2007, as was the original contract for demolition of existing structures. Road removal work is nearly complete, and approximately half of 65 miles of former road has been degraded. Remediation of approximately 50 percent of contaminated soils has been completed.

In 2007, removal of 65 miles of roads was completed. In addition, over 160 structures and numerous trash sites have been demolished and removed. Clean-up of approximately 65 acres of pesticide-contaminated soils has begun and over 25 acres have been completed. Seven miles of Prairie Canal adjacent to the road removal area have been plugged and filled. The plugged area is beginning to show signs of returning to pre-development conditions with the re-establishment of native plants and numerous wildlife sightings. Control of exotic flora and fauna within the construction footprints is also under way. This project was approved as part of the 2007 WRDA. Design is proceeding with one of the three pump stations completed and the other two due in early 2008. The design of protection features will also be completed in 2008, and construction of the project will be turned over to USACE for completion. For more detail on this project, please see Appendix 7A-2 of this volume.

Advanced Work on Biscayne Bay Coastal Wetlands – Phase 1

The Biscayne Bay Coastal Wetlands Project is located in south Miami-Dade County. Phase 1 consists of the design and construction of the Deering Estates and Cutler Wetlands Flow-ways, as well as L-31E culverts. This project provides for ecosystem restoration of freshwater wetlands, tidal wetland and near-shore habitat. Freshwater run-off to Biscayne Bay will be redistributed to moderate point canal discharges and captured and redistributed by overland sheet flow to improve freshwater and estuarine habitat. This project will improve salinity distribution and re-establish productive nursery habitat along the shoreline. Further, the quantity, quality, timing and distribution of freshwater to the Bay and Biscayne National Park will be restored.

This project was divided into two phases. Phase 1 includes the design and construction of three project components under Acceler8: The Deering Estate Flow-way; the Cutler Wetlands Flow-way and the L-31E culverts. In September 2006, the Preliminary Design Report for the Deering Estate Component was completed. In November 2006, Preliminary Design for the L-31E culverts and cutler wetlands flow-way was completed. The project continued to move forward with the preparation of Pre-Final and Intermediate Design packages.

In June 2007, the Preliminary Design for Deering Estate was completed followed by the submittal of the Pre-Final Design Package on the L-31E culverts in July 2007 and the Cutler Wetlands Flow-way Intermediate Design Package in November 2007. During the development of the design packages, the District worked closely with the USACE and the FDEP to obtain the 404 and 1502 permits required for the construction and implementation of this project. Phase 2 is in the CERP planning phase.

Advanced Work on C-111 Spreader Canal

This Acceler8 project is intended to provide more natural sheetflow to Florida Bay via Taylor Slough while reducing harmful pulsed point source discharges of freshwater down the lower C-111. This Acceler8 project is also intended to improve water quality in the lower C-111 canal by replacing the C-111E canal with an above-ground rapid infiltration basin. As part of the overall C-111 Spreader Canal Project, additional public access and recreational opportunities will be provided, where it is not inconsistent with the overall ecosystem restoration goals. The PIR team is currently evaluating a suite of final alternatives, while the Acceler8 project team has entered into the design phase for some of project features which are anticipated to provide early ecological benefits.

This project was divided into two phases. Phase 1 includes the design and construction of a 500-acre impoundment to attenuate excess water in the C-111 canal system up to 750 cfs. The project is currently under design and the Preliminary Design Package was received in October 2007. It is anticipated that intermediate design efforts will continue in spring 2008 after the technical review and value-engineering processes are completed. Beginning the permitting process with the USACE and the FDEP is planned for spring 2008. The Phase 2 Project is in the CERP planning phase.

Certificates of Participation

Accelerating the funding, design, and construction of these projects will bring benefits to the Everglades much sooner and more cost effectively. Financing and fast-tracking these projects will avoid expected increases in construction materials and labor costs. The District will finance project construction with Certificates of Participation (COPs). Florida Statutes define COPs as a type of revenue bond that a water management district may issue “to finance the undertaking of any capital or other project for the purposes permitted by the State Constitution.” COPs are statutorily authorized tax-exempt certificates showing participation through ownership of a share of lease payments for a capital facility of a government agency.

In July 2006, the District’s COPs Series 2006 received ratings of Aa3, AA+, and AA- from Moody’s Investor Services, Standard & Poor’s, and Fitch Ratings, respectively. These outstanding ratings mean the District will be required to carry less bond insurance, resulting in a cost savings. The ratings reflect the strong legal features of the master lease-purchase agreements, the essentiality of the Series 2006 projects for the restoration of the Everglades ecosystem, and the District’s underlying credit characteristics. The bonds sold in early September 2006.

CERP PILOT PROJECTS OVERVIEW

Pilot projects authorized under the WRDAs of 1999 and 2000 (**Figure 1**) will be conducted to assist in CERP implementation by determining the feasibility and optimum design of the features prior to embarking on full-scale development. Three projects will address the technical and regulatory uncertainties regarding regional implementation of Aquifer Storage and Recovery (ASR) projects. Three other projects will test other proposed technologies.

PMPs have been completed for all of the pilot projects, and Pilot Project Design Reports are completed or in progress. WRDA 1999 authorized the Hillsboro and Lake Okeechobee ASR pilot projects. Authorized under WRDA 2000 are the Caloosahatchee River (C-43) Basin ASR, Lake Belt In-Ground Reservoir Technology, L-31 N Seepage Management, and Wastewater Reuse Technology pilot projects.

Restoring any major part of the Everglades will involve some technical exploration. The District and the USACE are moving forward with the pilot projects for ASR, which is untried on the scale envisioned in CERP. Although these projects are awaiting congressional authorization and appropriations, planning, design, construction, testing, monitoring, and reporting activities have proceeded.

If the wells utilizing this technology work as expected, they can replenish urban drinking-water supplies, irrigate farmland, and nourish natural areas while requiring very little land for a very large water return. The status of the CERP Pilot Projects is presented below. More detailed information is found in the project database of the 2008 SFER on CD #2, and on the CERP web site at http://www.evergladesplan.org/.

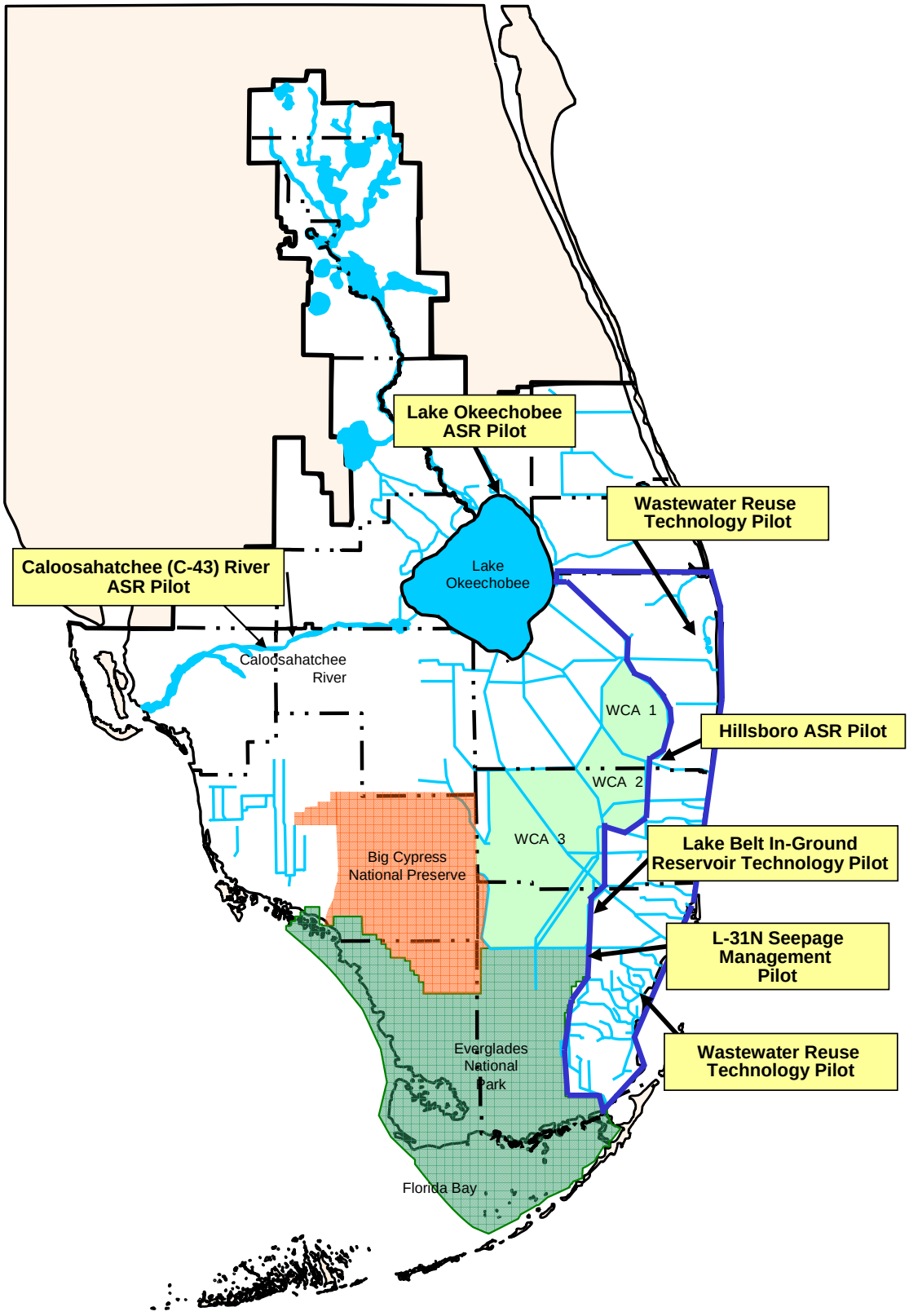

Figure 1. General locations of CERP pilot projects.

Lake Okeechobee Aquifer Storage and Recovery Pilot

Project Mission:

Construct test wells and collect data to identify the most suitable sites for the aquifer storage and recovery wells in the vicinity of Lake Okeechobee and to identify the optimum configuration of those wells.

Project Benefits:

Answer technical questions about the use of Aquifer Storage and Recovery (ASR) for CERP. Identify the most suitable sites for the ASR wells and best configuration of the wells near Lake Okeechobee. It will also provide information about the local aquifers and the effects to the stored water.

Component:

Pilot

Authorization:

WRDA 1999

Local Sponsor:

South Florida Water Management District

Description:

This multi-purpose project provides benefits to environmental, urban and agricultural users. Pilot projects were authorized for several components of CERP which were to be implemented on a very large scale. The components of CERP had sufficient detail for plan selection, but were not of sufficient detail for traditional USACE Feasibility Studies.

ASR technology has been demonstrated and is feasible, but has not been tested on the scale required for CERP. The ASR pilot projects are intended to answer questions of scale. Further, the pilot projects are intended determine the specific water quality characteristics of waters to be injected, the specific water quality characteristics and amount of water recovered from the aquifer, and the water quality characteristics of the receiving aquifer.

Information from the pilot project will provide the hydrogeological and geotechnical characteristics of the upper Floridan Aquifer System within the region, and the ability of the upper Floridan Aquifer System to maintain injected water for future recovery.

The pilot projects will provide the technical detail for additional plan formulation and development. This will be a technical data report. From this information judgments can be made on the number of wells required, where to site these wells, and any specific treatment requirements.

Documents:

Final Project Management Plan March 2001.
http://www.evergladesplan.org/pm/pmp/pmp_32_lake_o_asr.cfm

ASR Regional Study Reference List Lookup Website, a searchable index of key documents.
http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#asr

Documentation of ASR regional model development efforts, including a geochemical modeling report, evaluation of pressure induced changes and draft technical memoranda. http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#rod

The Final Report of the Fate of Microorganisms in Aquifers Study funded by the District and the Southwest Florida Water Management District (SWFWMD), June 2004. http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#fate

The Final PPDR and Environmental Impact Statement October 2005 (for the Lake Okeechobee, Hillsboro and Caloosahatchee (C-43) River ASR Pilot Projects) October 2004. http://www.evergladesplan.org/pm/projects/pdp_asr_comb_deis_ppdr.aspx

FY2007 Status:

A document titled "Geochemical Models of Water-Quality Changes During Aquifer Storage Recovery (ASR) Cycle Tests, Phase I: Geochemical Models Using Existing Data" was completed in September 2006 and then published in October 2006. The contract for the Port Mayaca ASR well was awarded and the Notice-to-Proceed was issued in November 2006. This project is being constructed by the USACE.

Caloosahatchee River (C-43) River Aquifer Storage and Recovery Pilot

Project Mission:

Construct pilot wells and collect data to provide information regarding the characteristics of the aquifer system within the Caloosahatchee River Basin and determine the hydrogeological and geotechnical characteristics of the upper Floridan Aquifer System.

Project Benefits:

Answer technical questions about the use of ASR for CERP. The study will identify the most suitable sites for the ASR wells and best configuration of the wells in the Caloosahatchee Basin. It will also provide information about the local aquifers and the effects to the stored water.

Component:

Pilot

Authorization:

WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

ASR wells are proposed in order to maximize the benefits associated with the Caloosahatchee River Storage Reservoir. A pilot project for these wells is necessary to identify the most suitable sites for the aquifer storage and recovery wells in the vicinity of the reservoir and to determine the optimum configuration of those wells.

The pilot project is intended to determine the specific water quality characteristics of waters to be injected, the specific water quality characteristics and the amount of water recovered from the aquifer, and the water quality characteristics of water within the receiving aquifer.

Documents:

Final Project Management Plan, January 2002. http://www.evergladesplan.org/pm/pmp/pmp_docs/pmp_33_cal_river/pmp_33_main_body.pdf

ASR Regional Study Reference List Lookup Website, a searchable index of key documents. http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#asr

Documentation of ASR regional model development efforts, including a geochemical modeling report, evaluation of pressure induced changes and draft technical memoranda. http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#rod

The Final Report of the Fate of Microorganisms in Aquifers Study funded by the District and the Southwest Florida Water Management District (SWFWMD), June 2004. http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#fate

The Final PPDR and Environmental Impact Statement October 2005 (for the Lake Okeechobee, Hillsboro and Caloosahatchee (C-43) River ASR Pilot Projects) October 2004. http://www.evergladesplan.org/pm/projects/pdp_asr_comb_deis_ppdr.aspx

FY2007 Status:

Despite additional exploration at deeper depths, this pilot site never produced the expected results.

Hillsboro Aquifer Storage and Recovery Pilot

Project Mission:

Construct pilot wells and collect data to determine the hydrogeological and geotechnical characteristics of soils and aquifer, the most suitable sites for the ASR wells in the vicinity of the Hillsboro Site 1 Impoundment and the optimum configuration of those wells.

Project Benefits:

Answer technical questions about the use of ASR for CERP. The study will identify the most suitable sites for the ASR wells and best configuration of the wells in the Hillsboro Basin. It will also provide information about the local aquifers and the effects to the stored water.

Component:

Pilot

Authorization:

Hillsboro Impoundment – WRDA 1999; ASR – WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

The Hillsboro (Site 1) above-ground impoundment operates in conjunction with multiple aquifer storage and recovery wells in order to maximize the benefits of the impoundment. A pilot project for these wells is necessary to determine the hydrogeological and geotechnical characteristics of the soils and aquifer, the most suitable sites for the ASR

wells in the vicinity of the impoundment, and the optimum configuration of those wells. The pilot project will also determine the specific water quality characteristics of water within the aquifer, as well as the quality of water proposed for injection and the water quality characteristics of water recovered from the aquifer.

Documents:

Final Project Management Plan, March 2001.
http://www.evergladesplan.org/pm/pmp/pmp_34_hillsboro.aspx

ASR Regional Study Reference List Lookup Website, a searchable index of key documents.
http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#asr

Documentation of ASR regional model development efforts, including a geochemical modeling report, evaluation of pressure induced changes and draft technical memoranda.
http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#rod

The Final Report of the Fate of Microorganisms in Aquifers Study funded by the District and the Southwest Florida Water Management District (SWFWMD), June 2004.
http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#fate

The Final PPDR and Environmental Impact Statement October 2005 (for the Lake Okeechobee, Hillsboro and Caloosahatchee (C-43) River ASR Pilot Projects) October 2004. http://www.evergladesplan.org/pm/projects/pdp_asr_comb_deis_ppdr.aspx

FY2007 Status:

During FY2007, the District's installation contractor continued construction of the surface facilities, and cycle testing began in April 2007. Installation and testing activities were scheduled for completion in October 2007.

Lake Belt In-Ground Reservoir Pilot

Project Mission:

Determine reservoir construction technologies, storage efficiencies, impacts on local hydrology, and water quality effects of lime rock mines.

Component:

Pilot

Authorization:

WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

Several projects recommend the use of areas where lime rock mining has (or will have by the end of CERP) occurred. The initial design of these reservoirs includes subterranean seepage barriers around their perimeter in order to enable drawdown during dry periods, prevent seepage loss, and prevent water quality impacts due to transmissivity of the aquifer in these areas.

The pilot project is required to determine construction technologies, storage efficiencies, impacts on local hydrology, and water quality effects. Water quality assessments will

include a determination as to whether the in-ground reservoirs and seepage barriers will allow for storage of untreated waters without concern for groundwater contamination.

Documents:

Final Project Management Plan, April 2002.
http://www.evergladesplan.org/pm/pmp/pmp_35_lakebelt.cfm)

FY2007 Status:

This project has been on hold since FY2005.

L-30 (formerly L-31 N) Seepage Management Pilot

Project Mission:

Construct an underground barrier and collect data to determine the appropriate technology needed to control levee seepage flow across the L-30 (formerly L-31N) canal adjacent to the ENP.

Project Benefits:

Answer technical questions about how to best reduce the rapid loss of water underground from the Everglades. This pilot project will test underground barriers and other technologies.

Component:

Pilot

Authorization:

WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

The purpose of the seepage management pilot is to determine the appropriate technology needed to control levee seepage flow across the L-30 (formerly L-31N) canal adjacent to the ENP and provide the appropriate amount of wet season groundwater flow that will minimize potential impacts to the Miami-Dade County's West Wellfield and freshwater flows to Biscayne Bay. A seepage management feature located along L-31N would reduce some seepage as proposed in CERP, but the L-31N site is located in an area that may be modified, which could render it less useful for long-term affects.

There are similar issues regarding levee seepage along the southern portion of L-30 canal adjacent to WCA-3B. A seepage management feature along the L-30 levee would help reduce seepage loss from WCA-3B, which in turn would reduce water flowing farther south into the L-30/L-31N system. Field tests, seepage reports, and historical data have independently shown the L-30 Levee north of U.S. Highway 41 as having a higher seepage rate than L-31N. Pilot project monitoring and data gathering at the new project location – along the southern portion of the L-30 Levee – will provide essential information needed to further address uncertainties prior to recommending full-scale implementation of seepage management measures adjacent to WCA-3B and the ENP.

The PMP establishes the scope, defines the schedule and determines the costs associated with conducting the L-30 Seepage Management Pilot Project Design Report. The PMP documents the assumptions, work tasks, products and level of detail necessary to

formulate a range of alternative plans, to assess the effects of the alternative plans and to present a clear rationale for project features selected for implementation.

Documents:

Project Management Plan, May 2006
http://www.evergladesplan.org/pm/pmp/pmp_36_l30.aspx

FY2007 Status:

Preparation of the Draft Pilot Project Design Report was in progress throughout FY2007. The Project Delivery Team held a pre-application meeting with the FDEP during August 2007, and was on schedule to complete the Draft PPDR/NEPA Report by December 2007. The Final PPDR/NEPA document is expected to be submitted during April 2008.

Wastewater Reuse Pilot

Mission:

To address water quality issues associated with discharging reclaimed water into natural areas.

Component:

Pilot

Authorization:

WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

Currently, two projects involve the advanced treatment of wastewater. The Water Reuse Pilot project will address water quality issues associated with discharging reclaimed water into natural areas such as the West Palm Beach Water Catchment Area, Biscayne National Park, and the Bird Drive Basin. This project is also intended to determine the level of superior treatment and the appropriate methodologies for that treatment.

A series of studies will be conducted to help determine the level of treatment needed. A pilot facility will be constructed in south Miami-Dade County (during Part 2) to determine the ecological effects of using superior, advanced treated reuse water to replace and augment freshwater flows to Biscayne Bay and to determine the level of superior, advanced treatment required to prevent degradation of freshwater and estuarine wetlands and Biscayne Bay. The constituents of concern in wastewater will be identified and the ability of superior, advanced treatment to remove those constituents will be determined.

The City of West Palm Beach will construct a pilot facility (during Part 1) to treat wastewater from the East Central Regional Wastewater Treatment Facility using advanced and superior wastewater treatment processes to remove nitrogen and phosphorus. After treatment, the wastewater will be used to restore 1,500 acres of wetlands and to recharge wetlands surrounding the City of West Palm Beach's wellfield. A portion of the treated wastewater will be used to recharge a residential lake system surrounding the city's wellfield and a Palm Beach County wellfield. In addition to the monitoring performed by the city, CERP will also monitor the site and apply the data to potential reuse sites in West Miami-Dade.

Research associated with West Palm Beach and west Miami-Dade will be performed concurrently with Part 1 of the pilot project. Part 2 of the pilot project will involve construction at a pilot facility in south Miami-Dade.

Documents:

Final Project Management Plan, December 2003.
http://www.evergladesplan.org/pm/pmp/pmp_37_ww_reuse_pp.cfm)

FY2007 Status:

The PMP and Technical Report were completed in FY2005. Then, in accordance with the Master Implementation Sequencing Plan, the pilot project was placed on hold until 2015.

FEASIBILITY STUDIES OVERVIEW

The time frame of the Central & South Florida Project Comprehensive Review Study (Restudy) did not permit a thorough investigation of all of the regional water resource challenges of South Florida, thus, conducting new studies was proposed under the authority of WRDA 1996. These studies are intended to investigate conceptual designs and to make regional recommendations for meeting the future needs of agricultural, urban, and environmental users.

This CERP Annual Report includes the following reconnaissance and feasibility studies:

- Additional Water for ENP and Biscayne Bay Reconnaissance Study
- Comprehensive Integrated Water Quality Feasibility Study
- Florida Bay/Florida Keys Feasibility Study
- Indian River Lagoon – North Feasibility Study
- Indian River Lagoon – South Feasibility Study
- Southwest Florida Feasibility Study
- Water Preserve Areas Feasibility Study

FY2007 status updates for the CERP Feasibility Studies during are provided below. **Figure 2** shows the general location of the feasibility studies within the District. More detailed information is found on the database included with the 2008 SFER on CD #2, and the at CERP web site (see www.evergladesplan.org/pm/studies/studies.cfm).

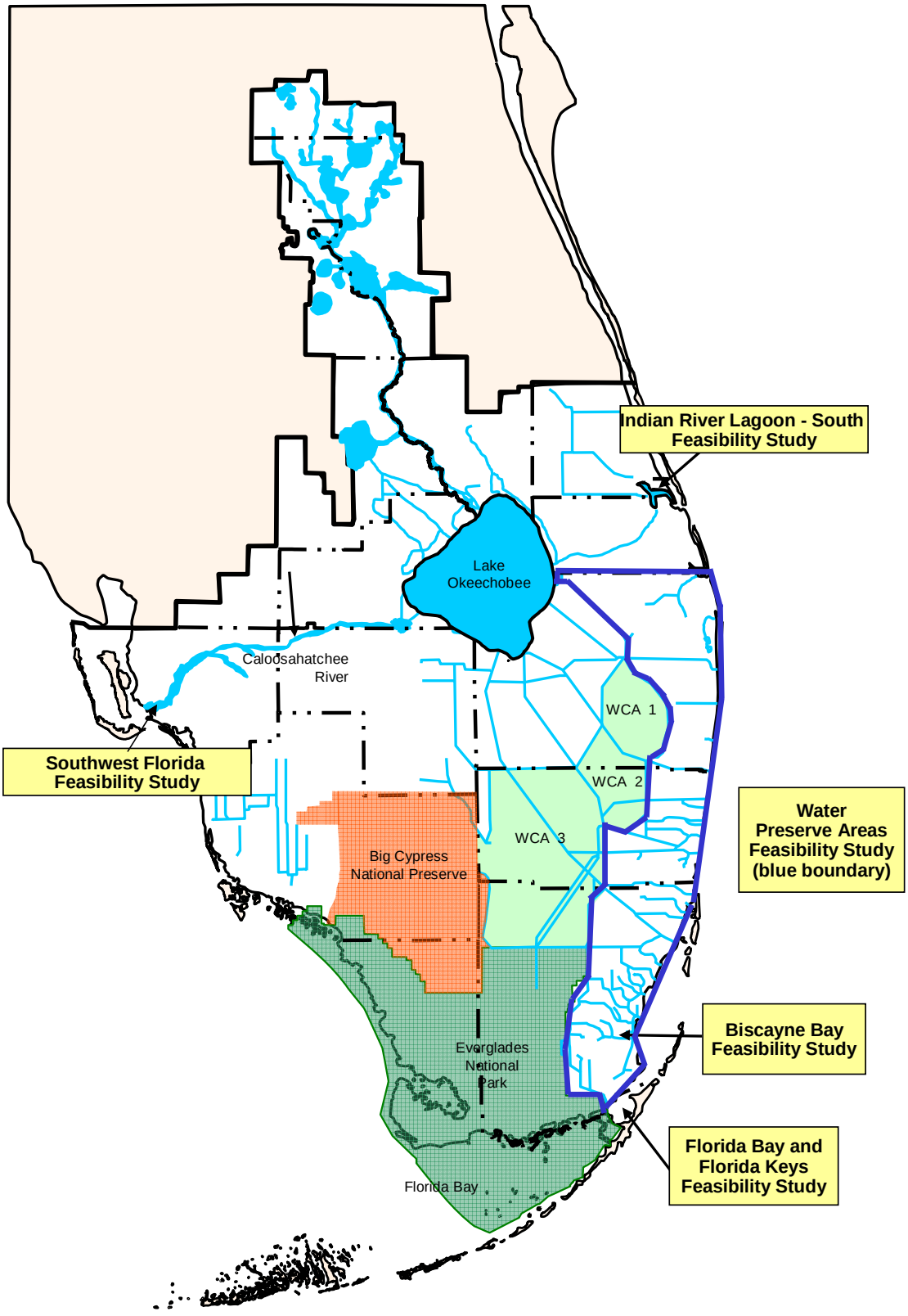

Figure 2. General locations of feasibility studies within the SFWMD.

Additional Water for the ENP and Biscayne Bay Reconnaissance Study

The USACE initiated the Additional Water for the ENP and Biscayne Bay Reconnaissance Study to investigate the need for, quantity needed, timing and distribution, and impacts and benefits associated with providing additional water to the ENP and Biscayne Bay in association with CERP. The final study report confirmed that federal participation is warranted to proceed to a feasibility-level study; however, a non-federal sponsor for the feasibility phase must be identified. The report also recommended deferral of the feasibility phase until completion of the technical documentation report for the Initial CERP Update. Miami-Dade County Department of Environmental Resource Management (DERM) is the local sponsor for the Biscayne Bay Feasibility Study, which is composed of hydrodynamic modeling, application of the water quality tool, and numerical biological modeling. Completion of the Phase II Feasibility Study is awaiting funding.

Comprehensive Integrated Water Quality Feasibility Study

The Comprehensive Integrated Water Quality Feasibility Study is a study co-sponsored by the USACE and the FDEP. The study is the result of a recommendation of the Restudy, which recognized the need for a comprehensive plan that would integrate CERP projects and other federal, state, and local government programs. Negotiation of a Feasibility Study Cost-Sharing Agreement between the USACE and the FDEP is pending.

Florida Bay/Florida Keys Feasibility Study

The project authorization for the Restudy directs the development of a hydrodynamic model for Florida Bay. Related tasks include developing data to support analysis of the effect of the C&SF Flood Control Project on historic and current pathways and volumes of freshwater inflows into Florida Bay, developing data to support analysis of the effect of freshwater inflows on salinity, and determining the biological responses to changes in salinity gradients and salinity fluctuations. Hydrodynamic model runs, consistent with the CERP Guidance Memoranda, neared completion during FY2006. Integration of the Water Quality Model and completion of Management Scenarios modeling is progressing towards completion in the current fiscal year. By the end of FY2007, it was anticipated that the Modeling Report and the transfer of technology will be completed.

Indian River Lagoon – North Feasibility Study

Issues under consideration for the Indian River Lagoon – North Feasibility Study include improving habitat, improving circulation, improving water quality, developing a sediment strategy, better control of runoff, exotic vegetation removal, and increasing recreational opportunities. The St. Johns River Water Management District is the local sponsor for this effort, which will (1) improve habitat, circulation, and water quality; (2) develop a sediment strategy; (3) provide better control of runoff; (4) remove exotic vegetation; (5) and increase recreational opportunities.

Indian River Lagoon – South Feasibility Study

The Indian River Lagoon – South Feasibility Study investigated the options to alter the detrimental effects from the flow of surface waters through the existing C&SF canal system on the St. Lucie Estuary and Indian River Lagoon. The C&SF Project features in this study area are C-25 (Belcher Canal), C-24, C-23, and C-44 (St. Lucie Canal). This study focused on making improvements to restore the environmental health of the receiving water bodies as well as their watershed. The results of this study produced a final PIR in March 2004. The PIR, which will create habitat improvement in the estuary and lagoon, is awaiting authorization under a WRDA.

Southwest Florida Feasibility Study

The Southwest Florida 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. The target completion date was changed to October 2008 due to difficulties in obtaining and reconciling necessary water flow data for the region, and in developing and calibrating new hydrologic models. The Project Delivery Team is working to complete formulation of alternatives and finalization of alternative analysis tools.

Water Preserve Areas Feasibility Study

The WPAs Study in Palm Beach, Broward, and Miami-Dade counties is focused on comprising an interconnected series of marshlands, impoundments, STAs, conveyance, and aquifer recharge areas. The WPAs provide a critical source for new water by reducing undesirable losses from the natural system through seepage and capturing and storing stormwater runoff that was previously discharged to tide. The WPAs Feasibility Study provided the basis of information for the PIRs that will be developed for the following projects and components:

- Strazzulla Wetlands
- Fran Reich Preserve (formerly Site 1 Impoundment)
- C-4 structure
- Bird Drive Recharge Area
- Broward County WPA (which includes C-9 impoundment/STA, C-11 impoundment and diversion canal and WCA-3A/3B levee seepage management)
- WCA-2B flows to the ENP (which includes Phase 1 of Central Lake Belt Component and WCA-3 flows to the Central Lake Belt)
- WPA conveyance (which includes Dade-Broward Levee Improvements and Phase 1 of North Lake Belt Component)

CRITICAL RESTORATION PROJECTS OVERVIEW

The progress made on the nine Critical Restoration Projects (CRPs) (**Figure 3**) authorized under WRDA 1996, with modification in WRDA 1999, to produce immediate, substantial, and independent benefits prior to CERP is summarized here, with details provided in the 2008 SFER – Volume I, CD, and on the USACE Jacksonville District's web site at http://www.saj.usace.army.mil/projects/index.html.

Seventy-five million dollars in federal funds were authorized for appropriation to be matched by local sponsors, while the maximum federal expenditure on any one project was capped at $25 million. To assist with implementing these CRPs, $7 million in federal funds for land acquisition were transferred to the state through a grant administered by the USDOI.

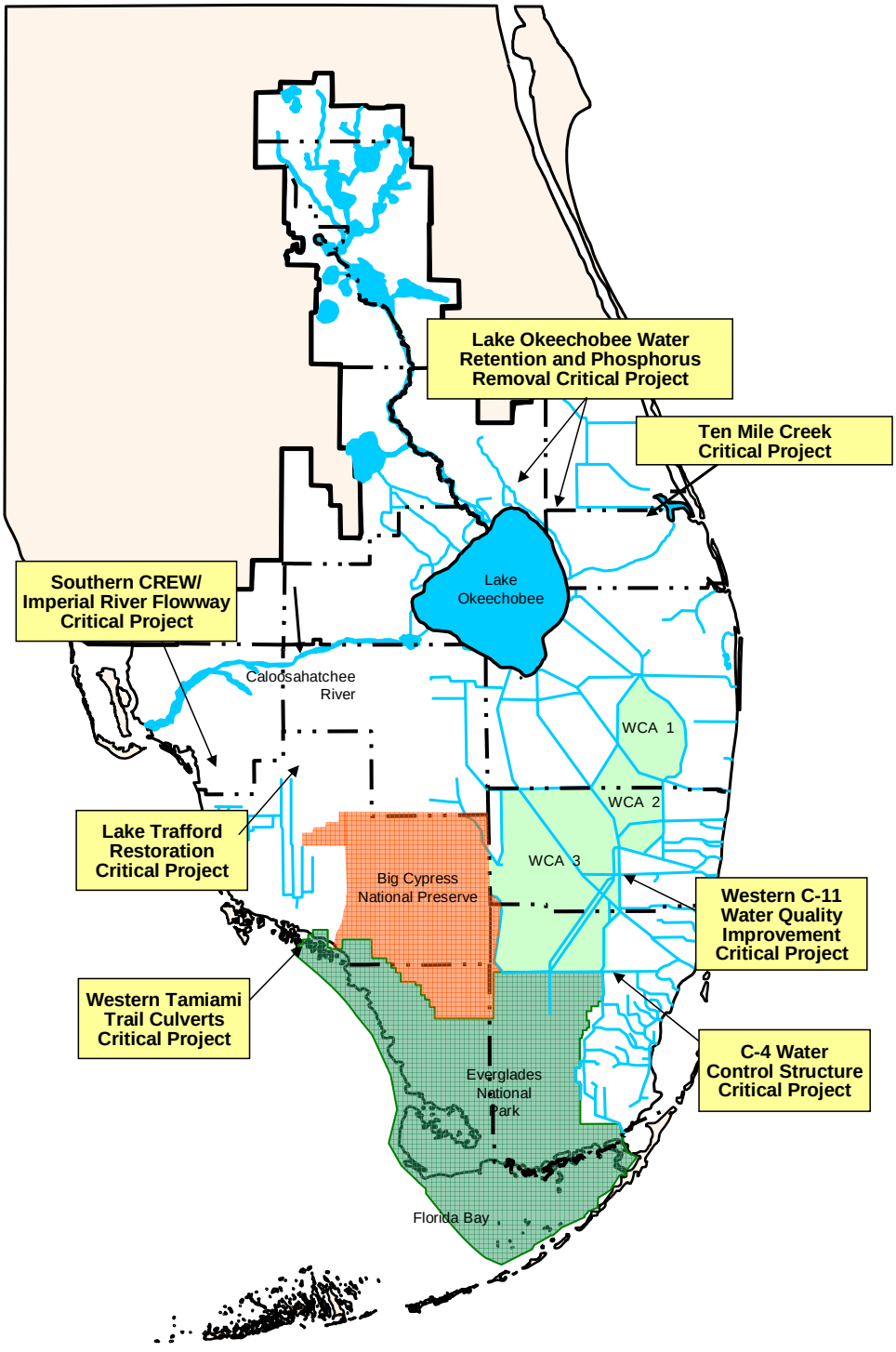

Figure 3. General location of Critical Restoration Projects.

The CRPs are important foundation projects that were assumed to be completed before certain CERP project components could be implemented. A discussion and update of the CRPs follows.

Lake Okeechobee Water Retention/Phosphorus Removal Critical Restoration Project

Construction at the 190-acre STA on Grassy Land Ranch on Taylor Creek and the 780-acre Nubbin Slough STA on the former New Palm/Newcomer Dairy site was completed in FY2006. This project re-established wetlands that were drained previously for agriculture and constructed STAs to reduce phosphorus loading to Lake Okeechobee. Construction of the key components of this project, STAs at Taylor Creek and Nubbin Slough, is complete. During FY2007, the drought precluded start-up operations and testing at both sites. On November 7, 2007, the District and Okeechobee County marked the opening of the Taylor Creek STA for recreation, which includes opportunities for walking, jogging, cycling, and bird watching.

Lake Trafford Restoration Critical Restoration Project

This project is an important component of Everglades restoration, as the lake periodically overflows its banks, providing freshwater to the Corkscrew Swamp's wetland ecosystem. The project's containment facility and base bid dredging have been completed. The cost estimates for completion of this project in combination with the other CRPs exceeded the USACE's appropriation cap set by WRDA 1996. The District assumed 100 percent of the cost of detailed design and construction with the intent of receiving credit or reimbursement from the USACE if the U.S. Congress authorizes the increase in the federal cap for these projects.

In this project's Phase I, the District dredged 3.2 million cubic yards of muck from the central section of the lake. The District had begun Phase II dredging in the shallow littoral zone when, in April, severe drought conditions caused operations to be placed on hold. A dredge, under contract to the District to complete removal of up to 3 ft of organic muck from Lake Trafford's sandy bottom was stranded on the lake bottom in April 2007, due to the severe drought. The drought reduced Lake Trafford water levels so that fishermen no longer could launch their boats from Ann Olesky Park. Phase II proposes to dredge approximately 800,000 yards of muck. Phase II was about one-third completed when work was suspended.

Due to the regional drought, Lake Trafford has become an oasis for wildlife. Alligators of all sizes have abandoned their dried wetlands in favor of the lake's waters, and wading birds are flocking to its shores. To enhance recreational opportunities, a temporary off-road vehicle riding site was secured under an annual lease, which was approved by the Collier County Board of County Commissioners and the District's Governing Board in May 2007.

Dredging, natural wave action, and the ongoing drought combined to expose 10 ancient, possibly 1,000-year-old, long-buried canoes. A commissioned archeological investigation took samples to determine the age of the canoes and the types of trees used for their construction.

The Florida Fish and Wildlife Conservation Commission (FWC) is planning test plots of native aquatic vegetation, with mass plantings of bulrush and eelgrass to begin in early 2008. The native plants will help absorb nutrients that previously caused massive algae blooms and fish kills in the lake.

Southern CREW/Imperial River Flow-way Critical Restoration Project

This project will restore historical sheetflow, reduce freshwater discharges to Estero Bay during the rainy season, reduce nutrient loading to the Imperial River and Estero Bay, and reduce flooding west of the project area. The project is approximately 80 percent complete, with

construction proceeding as restoration lands are acquired. Land acquisition is on hold pending USDOI review and approval of an application and grant cost share agreement submitted by the District under which the USDOI will provide matching funds for acquisition of the lands needed for this project. The cost estimates for this project in combination with the other CRPs exceed the USACE's appropriation cap set by WRDA 1996. Land restoration activities such as backfilling drainage ditches, demolishing existing structures, removing illegal dumping, and improving wildlife habitat have progressed, with the assistance of the FWC.

Ten-Mile Creek Critical Restoration Project

The Ten-Mile Creek Basin contributes the second largest volume of stormwater of the St. Lucie Estuary's five tributary basins. This project is located at the headwaters of the North Fork of the St. Lucie River Aquatic Preserve. The project was initiated in the 1990s to moderate high-water volume freshwater flows and salinity fluctuations in the St. Lucie Estuary, to reduce sediment and nutrient loads, and to benefit estuarine habitat. Capital construction was completed on schedule in December 2005. The Interim Operations and Testing Phase began in the second quarter of FY2006. Along with completion of the remote telemetry system, interim testing and monitoring, including periodic safety inspections, progressed through FY2007.

Western Tamiami Trail Culverts Critical Restoration Project

The District completed work on culvert penetrations, guard rails and ancillary components along the first five miles of Tamiami Trail, beginning at State Road 92 and proceeding eastward. This section of road was completely repaved and project construction was completed on time and within budget in May 2006.

The Tamiami Trail Phase I work has been incorporated into the Picayune Strand PIR. This PIR was authorized by Congress in November 2007, which opens the way for the Tamiami Trial PCA to be voided, and the Tamiami Trail Phase I to be fully eligible for cost share under the Picayune Strand project. Once this is done, it will be necessary to negotiate a new PCA for the Tamiami Trail Phase II. The USACE is the lead agency for Tamiami Trail Phase II.

Completed Critical Restoration Projects

- **East Coast Canal Structures**. Construction of the C-4 structure was completed in July 2003, and the project is now operational. This project will help reduce seepage loss from the Everglades, increase aquifer recharge, and enhance habitat in the Pensucco Wetlands.
- **Florida Keys Carrying Capacity Study.** The User's Manual, published in March 2003, provides local planners and decision makers with an Impact Assessment Model and Planning Tool to determine whether and how their comprehensive plans should be amended.
- **Seminole Big Cypress Reservation Water Conservation Plan.** Construction of Phase I, the conveyance canal system on the east side of the reservation, was completed in May 2004. Canal pump stations will connect this conveyance canal system to the North Feeder Canal system. This project will enhance the Big Cypress Reservation's water storage capacity, improve wetland hydrology, enhance flood protection, and reduce the concentration of phosphorus flowing off reservation lands. The USACE has completed the designs for Phase II.
- **Tamiami Trail Culverts.** Construction of Phase I, the western portion of the project located south of the Picayune Strand Restoration Project, started in June 2004 and was completed in March 2006. Implementation was accomplished with District and

Florida Department of Transportation (FDOT) funds for culvert construction and road resurfacing, respectively. Construction of Phase II, the eastern portion of the project, is dependent upon additional funding. The cost estimate for completion of this and other CRPs exceeded the USACE appropriation cap set in WRDA 1996. For purposes of improving water quality, this project will help restore more natural hydropatterns and improve sheetflow of surface water within the Ten Thousand Islands National Wildlife Refuge, Rookery Bay Estuarine Research Reserve and Aquatic Preserve, Big Cypress National Park, and the ENP.

- **Western C-11 Basin Water Quality Improvement.** Construction of the S-9A pump station and the S-381 structure was completed in 2005. During non-flood conditions, these new features will separate seepage from stormwater runoff, allowing the return of seepage waters to WCA-3A.

CERP PRIORITY PROJECTS OVERVIEW

Work has commenced on many CERP projects, and the District is the local sponsor for most of these projects. The PMPs have been completed for these projects, and PIRs have been initiated. Up-to-date information on CERP projects can be found on the CERP web site at http://www.evergladesplan.org. Additional information on those CERP projects that are being advanced under the state of Florida's Acceler8 initiative can be found on the Acceler8 web site at http://www.evergladesnow.org. Unless otherwise noted, the District is the local sponsor for the CERP projects described below.

CERP Acme Basin B Discharge Project

Project Mission:

Construct reservoir and water conveyance features

Project Benefits:

Add new source of clean fresh water to the Refuge and reduce harmful discharges to the Lake Worth Lagoon. Additional details on the Refuge are available at http://www.fws.gov/loxahatchee/home/default.asp.

Component:

Other Program Element

Authorization:

Section 601(c)(3) of WRDA 2000 (Additional Program Authority)

Local Sponsor:

South Florida Water Management District

Description:

Acme Basin B is one of two primary drainage basins within the Acme Improvement District. The Acme Improvement District, a dependent district to the Village of Wellington, is located in central Palm Beach County. Acme Basin B boundaries generally follow Pierson Road to the north, Flying Cow Road to the west, the Refuge to the southwest and south, and Lake Worth Drainage District to the east.

Acme Basin B encompasses approximately 8,680 acres of low-density development with the primary land uses being rural residential lots and nurseries with a substantial presence of stables and other equestrian uses. The primary goal of the Acme Basin B Discharge

project is to provide surface water to the refuge that would otherwise be routed through Basin A to C-51 and lost to tide.

Documents:

Final Project Management Plan, October 2003
http://www.evergladesplan.org/pm/pmp/pmp_38_acme.cfm.

Draft Project Implementation Report, December 2005, is not available online.

FY2007 Status:

This project was added to the Long-Term Plan and was included in the Acceler8 initiative to comply with the Everglades Forever Act target date of December 2006. District PIR activities were completed during FY2006.

Under the Acceler8 Initiative, the temporary pumps were tested on December 21, 2006 resulting in a serious erosion problem. Modifications were immediately applied to the outfall from the pumps to correct the problem. The pumps are working properly and the outfall is within the expected parameters.

Design was completed for the impoundment and its pump, and construction began in February 2007. During September 2007, an amendment to a Memorandum of Understanding with the Village of Wellington was negotiated, under which Wellington will assume responsibility for the design and construction of water control structures in Section 24, a 420-acre portion of the project that has been designated for development both as a passive park and as a filtration marsh to cleanse phosphorus-laden waters that will flow into the Everglades.

CERP Aquifer Storage and Recovery Regional Study Project

Component:

None

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

The ASR Regional Study is principally a data compilation and analysis project designed to evaluate potential effects of the full-scale CERP ASR Program on economically-disadvantaged communities, existing users of the Floridan Aquifer System, agribusiness, utilities, and the environment.

The project is designed to address regional ASR issues raised by the ASR Issue Team, Committee for Restoration of the Greater Everglades Ecosystem, and other interested parties that are beyond the scope of the ASR pilot projects.

The ASR Reference List is a searchable index (http://green.cerpzone.info/asr/default.jsp) of a compilation of key documents related to the ASR program. As part of the ASR Regional Study, a large literature search was completed. This literatures search developed a list of key documents related to the ASR Program. The document list is extensive and

includes reports from federal agencies, state agencies, universities, consulting engineering firms and private organizations.

The literature search compiled the various bibliographic references into categories and reviewed a large portion of them. Key data descriptions and codes were utilized to separate the various references into "searchable" categories.

This report contains a Final Pilot Project Design Report (PPDR) dated October 2004 followed by a Final Environmental Impact Statement (FEIS) associated with the Comprehensive Everglades Restoration Plan (CERP). It references three CERP pilot projects using the ASR technology – the Lake Okeechobee ASR Pilot Project, the Hillsboro ASR Pilot Project, and the Caloosahatchee ASR Pilot Project.

The PPDR and FEIS are intended to function as a decision document for engineering options for the field pilot tests recommended by the Restudy, and authorized in WRDAs 1999 and 2000. These tests are required, along with other evaluations, before the co-sponsors of CERP, the USACE and the District, can determine the feasibility of full-scale implementation of ASR technology proposed in CERP.

Documents:

Final PMP, August 2003 http://www.evergladesplan.org/pm/pmp/pmp_44_regional.cfm.

Final PPDR and FEIS, October 2005
http://www.evergladesplan.org/pm/projects/pdp_asr_comb_deis_ppdr.cfm.)

ASR Regional Study Reference List Lookup Website, a searchable index of key documents:
http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#asr

Documentation of ASR regional model development efforts, including a geochemical modeling report, evaluation of pressure induced changes and draft technical memoranda:
http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#rod

The Final Report of the Fate of Microorganisms in Aquifers Study funded by the District and the Southwest Florida Water Management District (SWFWMD), June 2004:
http://www.evergladesplan.org/pm/projects/pdp_32_33_34_44_asr_combined.aspx#fate

The Final PPDR and Environmental Impact Statement October 2005 (for the Lake Okeechobee, Hillsboro and Caloosahatchee (C-43) River ASR Pilot Projects) October 2004: http://www.evergladesplan.org/pm/projects/pdp_asr_comb_deis_ppdr.aspx

ASR Regional Model Development Efforts, August 2006
http://www.evergladesplan.org/pm/projects/project_docs/pdp_asr_combined/082206_asr_lit_report_no_app_c.pdf and
http://www.evergladesplan.org/pm/projects/project_docs/pdp_asr_combined/082206_asr_benchscale_study.pdf

Geochemical Modeling Report, September 2006
http://www.evergladesplan.org/pm/projects/project_docs/pdp_asr_combined/101206_asr_geotechnical_mod_rpt.pdf

Aquifer Storage and Recovery Program Interim Report 2007 (Draft is circulating for internal review; Final to be posted on www.evergladesplan.org)

FY2007 Status:

Exploratory wells have been constructed at all five ASR pilot project locations. Funding constraints have delayed the construction of the Moore Haven and Port Mayaca pilot projects. The exploratory test at the Caloosahatchee River Pilot Project indicated that a high-capacity ASR pilot facility was not feasible in the area west of LaBelle. The Lake Okeechobee ASR Pilot includes the Kissimmee River ASR Pilot Project, which is slated to become operational in FY2008. It is expected that the Hillsboro Canal ASR Pilot Project will begin cycle testing in late 2007 (first quarter FY2008).

Although these CERP ASR Pilot projects will yield valuable information, extensive regional data are needed for full-scale implementation. This information can only be obtained through a well-designed, rigorous, large-scale scientific program conducted simultaneously with the installation of the ASR pilot facilities.

The pilot projects at the Kissimmee River and Hillsboro sites will be operated and monitored for two years, during which time operational testing will be performed. Information gathered during the operational testing ultimately will be used in the Technical Data Report to evaluate ASR technology.

The future of the Moore Haven and Port Mayaca ASR Pilot Projects is dependent on funding for construction and testing. As with other pilot projects, the information gathered during the operational testing phase ultimately will be used in the Technical Data Report.

The future direction of the Caloosahatchee River ASR Pilot Project is less certain. The need for a pilot project in this region will be dependent on the selection of a new site, possibly located with another surface water storage reservoir in the basin. As additional reservoir sites are considered in this basin, opportunities to construct more exploratory wells will be considered.

CERP Big Cypress/L-28 Interceptor Modifications Project

Component:

CCC

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes modification of levees and canals, water control structures, pumps, and STAs with a total storage capacity of 7,600 ac-ft located within and adjacent to the Miccosukee and Seminole Indian Reservations in Collier and Hendry counties.

The initial design of the STAs assumed a total acreage of 1,900 with the water level fluctuating up to 4 ft above grade. Conceptual sizes of the STAs were based on interim phosphorus concentration targets in the conceptual plan for the Everglades Construction Project. The final size, depth and configuration of this facility, including the STAs, will be determined through more detailed planning and design.

Design of the STAs will be based on water quality criteria of the Seminole Tribe and criteria applicable to Big Cypress National Preserve, as appropriate. The purpose of this project is to re-establish sheetflow from the West Feeder Canal across the Big Cypress Reservation and into the Big Cypress National Preserve, maintain flood protection on Seminole Tribal lands, and ensure that inflows to the North and West Feeder Canals meet applicable water quality standards. Consistency with the Seminole Tribe's Conceptual Water Conservation System Master Plan will be maintained.

Upstream flows entering the West and North Feeder Canals will be routed through two STAs to be located at the upstream ends of the canals. Sheetflow will be re-established south of the West Feeder Canal by a system to be developed consistent with the Seminole Tribe's Conceptual Water Conservation System Master Plan. After conversion to a pump station, S-190 will also push flows south into the L-28 interceptor canal where sheetflow to the southwest will also be re-established with backfilling and degradation of the southwest levee of the canal.

Documents:

None

Real Estate:

Acres Required: 1,900; Acres Acquired: 0

FY2007 Status:

This project is not currently authorized.

CERP Bird Drive Recharge Area Project

This separable element, whose purpose is to recharge groundwater and reduce seepage from the ENP buffer area, has been incorporated into the Everglades National Park Seepage Management Project.

CERP Biscayne Bay Coastal Wetlands Project

Project Mission:

Construct pump stations, spreader swales, stormwater treatment areas, flow-ways, levees and culverts, and backfill canals.

Project Benefits:

Restore Biscayne Bay, which includes Biscayne National Park. The natural overland sheetflow of water has been changed with the construction of drainage canals.

This project will restore the overland sheetflow in a 13,600-acre area through the construction of spreader canals and other features. The more natural water flow will improve the ecology of Biscayne Bay, including its freshwater and tidal wetlands, nearshore bay habitat, marine nursery habitat, oysters, and the oyster reef community.

Component:

FFF and OPE

Local Sponsor:

South Florida Water Management District

Authorization:

Not Currently Authorized

Description:

This project includes pump stations, spreader swales, STAs, flow-ways, levees, culverts, and backfilling canals located in southeast Miami-Dade County and covers 13,600 acres from the Deering Estate at C-100C, south to the Florida Power & Light Turkey Point power plant, generally along L-31E.

The purpose of this project is to rehydrate wetlands and reduce point source discharge to Biscayne Bay. The proposed project will replace lost overland flow and partially compensate for the reduction in groundwater seepage by redistributing, through a spreader system, available surface water entering the area from regional canals. The proposed redistribution of freshwater flow across a broad front is expected to restore or enhance freshwater wetlands, tidal wetlands, and nearshore bay habitat.

Sustained lower-than-seawater salinities are required in tidal wetlands and the nearshore bay to provide nursery habitat for fish and shellfish. This project is expected to create conditions that will be conducive to the re-establishment of oysters and other components of the oyster reef community. Diversion of canal discharges into coastal wetlands is expected not only to re-establish productive nursery habitat all along the shoreline, but also to reduce the abrupt freshwater discharges that are physiologically stressful to fish and benthic invertebrates in the bay near canal outlets.

More detailed analyses will be required to define target freshwater flows for Biscayne Bay and the wetlands within the redistribution system. The targets will be based upon the quality, quantity, timing and distribution of flows needed to provide and maintain sustainable biological communities in Biscayne Bay, Biscayne National Park, and the coastal wetlands. Additionally, potential sources of water for providing freshwater flows to Biscayne Bay will be identified and evaluated to determine their ability to provide the target flows. The component Biscayne Bay Coastal Canals as modeled in D-13R and the Critical Project on the L-31E flow-way redistribution are smaller components of the Biscayne Bay Coastal Wetlands Project described above.

Documents:

Final Project Management Plan, August 2002
http://www.evergladesplan.org/pm/pmp/pmp_28_biscayne.cfm.

Project Implementation Report is not yet available online

FY2007 Status:

During FY2007, CERP program leadership directed the development of a two-phased planning approach. Phase 1 includes Acceler8 and additional features that will not require additional modeling. This phase proceeded during FY2007 with completion of the Tentatively Selected Plan and the In Progress Review.

CERP Broward County Secondary Canal System Project

Component:

CC

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

The purpose of this project is to reduce water shortages in the local wellfields and stabilize saltwater interface. This will be accomplished by pumping excess water from C-9, C-12, and C-13 canal basins into the coastal canal systems in order to maintain canal stages at optimum levels. To maintain these stages, water will be drawn from other sources such as Site 1 Impoundment and North Lake Belt Storage Area, Lake Okeechobee, and the WCA when basin water is insufficient.

This project includes a series of water control structures, pumps, and canal improvements in C-9, C-12 and C-13 canal basins and the east basin of the North New River Canal in central and southern Broward County.

Documents:

None

FY2007 Status:

This project has not started.

CERP Broward County Water Preserve Area Project

Project Mission:

Construct two reservoirs and add wetlands buffer strip

Project Benefits:

Capture and store rainwater, reduce phosphorus and other unwanted nutrients entering the Everglades, reduce seepage out of the Everglades, increase urban drinking water supplies, reduce saltwater intrusion in underground water supplies, and increase the spatial amount of wetlands in South Florida.

Component:

O, Q, and R

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

Three components comprise this project: C-11 impoundment, C-9 impoundment, and WCA-3A/3B levee seepage management. The impoundment areas will aid in reducing seepage from the WCA-3A/3B seepage management area; provide groundwater recharge; provide adequate water supply to urban areas; and prevent saltwater intrusion.

The WCA-3A/3B levee seepage management system will focus on seepage reduction by allowing higher water levels in the L-33 and L-37 borrows. The purpose of the C-11 Impoundment is to direct runoff from the western C-11 drainage basin into the impoundment in lieu of pumping the untreated runoff via S-9 pump station into the WCA-3A. If water is not available in the impoundment area to perform these functions,

S-381 will be opened to allow seepage water to recharge the basin and prevent excessive dry outs. In addition, seepage will be collected and returned to the impoundment area.

The purpose of C-9 impoundment is to pump runoff from the western C-9 drainage basin and diverted water from the western C-11 basin into the impoundment. As a result, this impoundment will assist in reducing seepage from the WCA-3A/3B Levee Seepage Management Area.

Documents:

Final Project Management Plan, May 2004
http://www.evergladesplan.org/pm/pmp/pmp_45_broward_wpa.cfm.

PIR/Environmental Impact Statement is not yet available online.

FY2007 Status:

The C-9 and C-11 impoundments were added to the Long-Term Plan in 2006. The Broward County Water Preserve Area (WPA) Project is an integral piece of the greater CERP, and an Acceler8 project of the District. Ecological restoration of the Everglades will require a significant increase in the quantity of water made available or retained for the natural system. A main tenet behind the WPA concept is the capture and storage of excess water that is currently lost to tide via the many canals in the South Florida. It is estimated that approximately 1.7 billion gallons of water each day is lost to tide. In addition, the WPA will also provide the ability to make timely releases of water to meet agricultural, municipal, and saltwater intrusion prevention demands for water supply.

The C-11 and C-9 impoundment components of the WPA project aid the WCA-3A and 3B seepage management area component in reducing seepage by reducing the water level difference between WCA-3 and the drained areas immediately to the east. The impoundments also will assist in maintaining existing levels of flood protection that result from discharges at the S-9 pump station.

The final PIR was completed in March 2007, and unanimously approved by the Civil Works Review Board for final state and agency review and preparation for a Chief of Engineer's Report. In June 2007, the District's Governing Board approved the transfer of responsibility for the WPA project and its individual components to the USACE for completion of design and construction. The project received the FDEP approval [§ 373.026(8)(b)] for the Broward County WPA PIR. The project was reviewed for compliance with § 373.1501(5). A Final Order (OGC # 07-1375) was issued August 21, 2007. More information is available at:

http://www.evergladesplan.org/pm/projects/proj_45_broward_wpa.aspx.

CERP C-4 Structure Project

Component:

T

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This component is a water control structure in the C-4 canal just east of the intersection with the C-2 canal in Miami-Dade County. The primary purpose of S-380E (C-4 structure) is to divert water south into the C-2 canal for ground water wellfield recharge. The ability to direct flows south into the C-2 canal will provide more freshwater flows to the central Biscayne Bay area. The structure can be operated to maximize the flow in both canals during the wet season to optimize flood protection. Although incidental, the possibility of improving flood protection of the C-4 basin is significant since flooding continues to be an issue for the surrounding communities.

Documents:

None

FY2007 Status:

The work is on hold; it may be proposed under separate authority.

CERP C-43 Basin Aquifer Storage and Recovery – Part 2 Project

Component:

D Part 2

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project is the second part of the C-43 basin storage reservoir and ASR component. This project includes ASR wells with a total capacity of approximately 220 million gallons per day and associated pre- and post-water quality treatment located in the C-43 basin in Hendry, Glades, or Lee counties. The initial design of the wells assumed 44 wells, each with the capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post treatment. The level and extent of treatment and number of the ASR wells may be modified based on findings from a proposed ASR pilot project.

The purpose of this project is to capture C-43 basin runoff and releases from Lake Okeechobee. The wells will be designed for water supply benefits, some flood attenuation, water quality benefits to reduce salinity and nutrient impacts of runoff to the estuary, and to provide environmental water supply deliveries to the Caloosahatchee Estuary. Excess runoff from the C-43 basin and Lake Okeechobee flood control discharges will be pumped into the C-43 basin reservoir. Water from the reservoir will be injected into the ASR wellfield for long-term (multi-season) storage.

Any estuarine demands not met by basin runoff and the ASR wells will be met by Lake Okeechobee as long as the lake stage is above a pre-determined level. Lake water is also used to meet the remaining basin demands subject to supply-side management.

Documents:

None

FY2007 Status:

This project has not started.

CERP Caloosahatchee (C-43) Basin Storage Reservoir – Part 1 Project

Project Mission:

Construct reservoir and water conveyance features

Project Benefits:

Improve the health of the Caloosahatchee Estuary. Improve the health of Lake Okeechobee and coastal estuaries; and provide an additional source of water for the natural ecosystem, people, and farms.

Component:

D Part 1

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

The Caloosahatchee River and Estuary is at the head of a vast estuarine and marine ecosystem that includes numerous parks, recreation areas, and six aquatic preserves:

- Matlacha Pass Aquatic Preserve
- Estero Bay Aquatic Preserve
- Pine Island Sound Aquatic Preserve
- Charlotte Harbor National Estuary
- Caloosahatchee, Matlacha Pass
- Ding Darling National Wildlife Refuge

Restoration of a healthy, productive aquatic ecosystem in the Caloosahatchee River is essential to maintaining the ecological integrity and associated economic activity in these publicly owned and managed areas.

The combined result of too much and too little freshwater flowing to the Caloosahatchee Estuary is a degraded estuarine ecological community, characterized by declines in the abundance and diversity of native finfish, shellfish, and other marine and estuarine species. The overabundance or absence of freshwater also results in poor water quality and reductions in the extent of submerged habitat suitable for seagrass and oysters – two primary indicators of healthy estuarine communities in South Florida. Higher trophic level species are also affected including threatened and endangered species such as manatees and wood storks.

Currently, there is insufficient storage capacity in the regional water management system to minimize or prevent the harmful effects of periodic excessive discharges of freshwater to the Caloosahatchee Estuary. Conversely, during dry periods, there is sometimes not enough freshwater available in the regional system to maintain desirable salinity levels in the estuary. This project is the first part of the C-43 basin storage reservoir and ASR component. The project includes an above-ground reservoir with a total storage capacity

of approximately 160,000 ac-ft located in the C-43 basin in Hendry, Glades, or Lee counties. The initial design of the reservoir assumed 20,000 acres with water levels fluctuating up to 8 ft above grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design.

The purpose of this project is to capture C-43 basin runoff and releases from Lake Okeechobee. The reservoir will be designed for water supply benefits, some flood attenuation, to provide environmental water supply deliveries to the Caloosahatchee Estuary, and water quality benefits to reduce salinity and nutrient impacts of runoff to the estuary. It is assumed that, depending upon the location of the reservoir and pollutant loading conditions in the watershed, the reservoir could be designed to achieve significant water quality improvements, consistent with appropriate pollution load reduction targets. Excess runoff from the C-43 basin and Lake Okeechobee flood control discharges will be pumped into the proposed reservoir.

Lake Okeechobee will meet any estuarine demands not met by basin runoff – as long as the lake stage is above a pre-determined level. Lake water will also be used to meet the remaining basin demands subject to supply-side management. The C-43 reservoir will also be operated in conjunction with the Caloosahatchee back-pumping project, which includes an STA for water quality treatment. If the level of water in the reservoir exceeds 6.5 ft and Lake Okeechobee is below a pre-determined level, then water is released and sent to the back-pumping facility.

The project is expected to provide approximately 170,000 ac-ft of above-ground storage volume in a two-cell reservoir with normal pool depths. Project features encompass approximately 10,500 acres acquired via USDOI funds for Everglades restoration and the State of Florida. Major project features include external and internal embankments, canals, two pump stations, internal control and outflow water control structures, and environmentally responsible design features to provide fish and wildlife habitat.

Documents:

Final Project Management Plan, February 2002:
http://www.evergladesplan.org/pm/pmp/pmp_04_c43_basin_1.aspx

Caloosahatchee River (C-43) West Basin Storage Reservoir Final PIR/EIS:
http://www.evergladesplan.org/pm/projects/docs_04_c43_pir_final.aspx

Real Estate:

East Reservoir: 9,746 acres required; 1,972 acres acquired
West Reservoir: 10,254 acres acquired; 10,254 acres acquired

FY2007 Status:

The District proposes to initiate construction of the Caloosahatchee River (C-43) West Reservoir Acceler8 Project prior to the planned implementation of the CERP Caloosahatchee River (C-43) West Basin Storage Reservoir Project. Accordingly, the USACE is proceeding with two separate and independent-but-related actions: the feasibility-level evaluation of the federal project and the regulatory evaluation of the District's proposed Acceler8 project. Both are described in the Caloosahatchee River (C-43) West Basin Storage Reservoir Project Draft PIR and the Environmental Impact Statement, which were released for a 45-day public review and comment period that ended on June 11, 2007. The project described under the Acceler8 initiative is the same as the NEPA Preferred Alternative or Recommended Plan, described in the Draft Project Implementation Report and Environmental Impact Statement (PIR/EIS), and the purposes are consistent.

In September, the USACE and the District made the Final PIR/EIS for the Caloosahatchee River (C-43) West Basin Storage Reservoir Project available for public review and comment. The Final EIS was filed with the USEPA and is available to interested parties for review and comment.

Also available in the Final Integrated PIR/EIS is the proposed report of the Chief of Engineers. At the close of the FY2007, these documents are under review by state and federal agencies. Upon receipt of their comments, the report of the Chief of Engineers will be finalized and submitted to the Secretary of the Army for transmittal to Congress.

The C-43 reservoir Final PIR was completed and posted in the Federal Register on September 21, 2007. The public comment period ran from September 21, 2007 through October 22, 2007. The C-43 reservoir design continues as planned. The 90 percent constructability review was held on October 3, 2007. This project is on hold pending District Governing Board resolution of funding issues.

To download and review the Caloosahatchee River(C-43) West Basin Storage Reservoir Final PIR/EIS, go to:
http://www.evergladesplan.org/pm/projects/docs_04_c43_pir_final.aspx.

For more information about this project or to view project documents, see http://www.evergladesplan.org/pm/projects/proj_04_c43_basin_1.aspx

CERP C-111 Spreader Canal Project

Project Mission:

To provide a more natural distribution of water to the Southern Everglades, Model Lands, and Florida Bay. The project purposes are to rehydrate the Model Lands, establish sheetflow and hydropatterns that will sustain ecosystems in the Southern Glades and Model Lands; provide more natural sheetflow to Florida Bay by eliminating point sources of freshwater discharges through 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.

Project Benefits:

Benefits include extended wetland hydroperiods within the Southern Everglades and Model Lands, reduction in seepage from Taylor Slough, and reduction in the number, duration, and severity of hyper-saline events in central Florida Bay.

Component:

WW

Authorization:

WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

This project provides for construction of an STA and pump station, extension of a spreader canal and addition of culverts and other features, to improve health and water quality of southern Everglades wetlands by restoring more natural overland sheetflow.

The current plan will alter the 1994 design for the C-111 project by adding the following enhancements: peak flow attenuation reservoirs and/or seepage reduction features, enlarging pump station S-332E from 50 cfs to approximately 500 cfs; and extension of the spreader canal to serve the Model Lands.

As currently conceived, the project also will fill, or partially fill, the southern reach of the C-111 canal below the C-111 spreader canal to S-197, remove structures S-18C and S-197, and backfill the C-110 canal.

Documents:

Project Management Plan, April 15, 2002:
http://www.evergladesplan.org/pm/pmp/pmp_29_c111_spreader.cfm.

FY2007 Status:

This project provides for construction of an STA and pump station, extension of a spreader canal and addition of culverts and other features, to improve health and water quality of Southern Everglades wetlands by restoring more natural overland sheetflow.

The current plan will alter the 1994 design for the C-111 project by adding the following enhancements:

- Constructing a 3,200-acre STA
- Enlarging pump station S-332E from 50 cfs to 500 cfs
- Extending the spreader canal approximately two miles under U.S. Highway 1 and Card Sound Road to the Model Lands
- Installing culverts under U.S. Highway 1 and Card Sound Road
- Filling the southern reach of the C-111 canal below C-111 spreader canal to S-197, removing S-18C and S-197, and backfilling C-110.

Modeling is nearing completion, and the team has begun evaluation and comparison of alternatives. For additional information about the C-111 spreader canal project, see http://www.evergladesplan.org/pm/projects/proj_29_c111.aspx

CERP Caloosahatchee Backpumping with Stormwater Treatment Area Project

Component:

DDD

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes pump stations and an STA with a total capacity of approximately 20,000 ac-ft located in the C-43 basin in Hendry and Glades counties. The initial design of the STA assumed 5,000 acres with the water level fluctuating up to 4 ft above grade. The final size, depth, and configuration of this facility will be determined through more detailed planning and design.

The purpose of this feature is to capture excess C-43 basin runoff, which will be used to augment regional system water supply. Backpumping will only occur after estuary and agricultural/urban demands have been met in the basin and when water levels in the C-43 Storage Reservoir exceed 6.5 ft above grade. Further, Lake Okeechobee water levels must be within a specified range to accept this water so as to not impact ecological resources. When these conditions are met, a series of pump stations will back-pump excess water from the reservoir and the C-43 basin to Lake Okeechobee after treatment through an STA.

The STA will be designed to meet Lake Okeechobee phosphorus and other pollutant loading reduction targets consistent with the Surface Water Improvement and Management Plan for the lake and future appropriate pollution load reduction targets which may be developed for the lake and the watershed in which the facility is to be located.

Documents:

None

Real Estate:

Acres Required: 5,000; Acres Acquired: 0.

FY2007 Status:

This project has not started.

CERP Central Lake Belt Storage Area Project

Component:

S

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes pumps, water control structures, an STA, and a combination above-ground and in-ground storage reservoir with a total storage capacity of approximately 190,000 ac-ft located in Miami-Dade County. The initial design of the reservoir assumed 5,200 acres with water levels fluctuating from 16 ft above grade to 20 ft below grade. A subterranean seepage barrier will be constructed around the perimeter to enable drawdown during dry periods and to prevent seepage losses.

A pilot test of this technology will be conducted prior to final design of this component to determine construction technologies, storage efficiencies, impacts upon local hydrology, and water quality effects. Since this facility is to be located within the protection area of Miami-Dade County's Northwest Wellfield, the pilot test will also be designed to identify and address potential impacts to the county's wellfield which may occur during construction and/or operation. The STA was assumed to be 640 acres with the water level fluctuating up to 4 ft above grade. The final size, depth, and configuration of these facilities will be determined through more detailed planning and design.

The purpose of the project is to store excess water from WCA-2 and WCA-3 and provide environmental water supply deliveries to: (1) Northeast Shark River Slough, (2) WCA-3B, and (3) Biscayne Bay, in that order, if available. Due to the source of the water (WCA-2 and WCA-3), it is assumed that water stored in this facility is of adequate quality to return to the EPA and Biscayne Bay; however, the final size, depth, and configuration of these facilities, including treatment requirements, will be determined through more detailed planning and design.

Excess water from WCA-2 and WCA-3 will be diverted into the L-37, L-33, and L-30 borrow canals, which run along the eastern boundaries of the WCAs, and pumped into the Central Lake Belt Storage Area. Water supply deliveries will be pumped through an STA prior to discharge to the Everglades via the L-30 borrow canal and a reconfigured L-31N borrow canal. If available, deliveries will be directed to Biscayne Bay through the Snapper Creek Canal at Florida's Turnpike. A structure will be provided on the Snapper Creek Canal to provide regional system deliveries when water from the Central Lake Belt Storage Area is not available.

Documents:

None

FY2007 Status:

This project has not started.

CERP Everglades Agricultural Area Storage Reservoirs – Phase 1 Project

Project Mission:

This plan is designed to capture, store, and redistribute freshwater previously lost to tide and to regulate the quantity, timing, and distribution of water for environmental deliveries.

Project Benefits:

Reduction of Lake Okeechobee flood control releases to the St. Lucie and Caloosahatchee estuaries, improve timing of environmental water deliveries to the WCAs including reducing damaging flood releases from the EAA to the WCAs and backpumping to Lake Okeechobee, and to provide an alternate source of water (currently the primary source is Lake Okeechobee) to meet agricultural irrigation demands.

Component:

G Part 1

Authorization:

WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

This project is located in the EAA in western Palm Beach County and Hendry County on lands purchased with USDOI Farm Bill funds, District funds, and on lands gained through a series of exchanges for lands being purchased with these funds. The area

presently consists of land that is mostly under sugar cane cultivation. Implementation of this project will be consistent with the Farm Bill land acquisition agreements.

The project will provide 360,000 ac-ft of above-ground storage volume, and consists of two cells (Cell 1 and Cell 2, approximately 17,000 and 14,000 acres in size, respectively), each with a 12-ft storage depth. Features of the selected plan include reservoirs with associated embankments, canals, pump stations, water control structures, and environmentally responsible design features to provide fish and wildlife habitat such as buffer area, littoral area, and deep-water refugia. The selected plan also includes canal conveyance improvements for the existing Miami, North New River, and the Bolles and Cross canals of the C&SF Project and an STA.

The reservoirs and STA would contribute to Everglades restoration by improving the quantity, quality, timing, and distribution of water within the greater Everglades. The project will benefit Lake Okeechobee, St. Lucie and Caloosahatchee estuaries, WCAs, and the ENP. Additionally, the plan will have localized benefits including wetlands, deep water refugia, and terrestrial habitat.

Documents:

Project Management Plan, January 2002
http://www.evergladesplan.org/pm/pmp/pmp_08_eaa_store.cfm.

Revised Draft Project Implementation Report, February 2006
http://www.evergladesplan.org/pm/projects/docs_08_eaa_phase_1_pir.cfm.

Real Estate:

Everglades Agricultural Area Parts 1 and 2 (Including Bolles Canal) – Acres Required: 32,578; Acres Acquired: 15,013

Acceler8 Everglades Agricultural Area Reservoir Part 1 – Acres Required: 16,414; Acres Acquired: 16,414

Acceler8 Everglades Agricultural Area STA Expansion – Acres Required: 9,248; Acres Acquired: 9,248

Acceler8 Everglades Agricultural Area STA Expansion Compartment C – Acres Required: 8,884; Acres Acquired: 8,884

FY2007 Status:

The canal improvements and reservoir are intended to provide conveyance and storage for releases from Lake Okeechobee to reduce the harmful effects of flood control releases on the St. Lucie and Caloosahatchee estuaries. These components will enable more effective management of water levels in Lake Okeechobee to promote recovery of fish and wildlife habitat in the Everglades. In addition, the project will provide an alternative source of water for agricultural water supply needs in the EAA and provide ancillary improvements in local flood protection.

The EAA Storage Reservoirs project will capture, store and make use of EAA Basin runoff and regulatory releases from Lake Okeechobee to reduce releases to the estuaries, restore Everglades hydropatterns, balance inflow timing into STA-3/4, preserve existing agricultural water uses, and provide ancillary improvement in flood protection in the EAA.

This plan is designed to capture, store, and redistribute freshwater previously lost to tide, and regulate the quantity, timing, and distribution of water for environmental deliveries. Expected benefits of project implementation include:

- Reduction of Lake Okeechobee flood control releases to the St. Lucie and Caloosahatchee estuaries.
- Improved timing of environmental water deliveries to the WCAs, including reducing damaging flood releases from the EAA to the WCAs and backpumping to Lake Okeechobee.
- An alternate source of water to meet agricultural irrigation demands. Currently, the primary source is Lake Okeechobee.

Advanced construction on the EAA Reservoir has moved to the western edge of U.S. 27 through Palm Beach County. July 2007 marked the beginning of blasting through rock and soil within 150 feet of the highway's edge to create the reservoir's seepage canal.

In the parallel planning effort during FY2007, the Tentatively Selected Plan and In Progress Review were completed. The PIR is scheduled to be completed in the second quarter of FY2008. More information on this project is available at: http://www.evergladesplan.org/pm/projects/proj_08_eaa_phase_1.aspx .

CERP Everglades Agricultural Area Storage Reservoirs – Phase 2 Project

Component:

G Part 2

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project is the second part of the EAA Storage Reservoir component. It includes an above-ground reservoir with a total storage capacity of approximately 120,000 ac-ft located in the EAA in western Palm Beach County.

The initial design for the reservoir assumed 20,000 acres, which would make up the third compartment of the storage the EAA Reservoir, with water levels fluctuating up to 6 ft above grade. The need for this compartment will be determined through more detailed planning and design after Phase 1 is completed.

The purpose of this project is to further improve the timing of environmental deliveries to the WCAs, including reducing damaging flood releases from the EAA to the WCAs and reducing Lake Okeechobee regulatory releases to the estuaries. This last increment of storage would be used to meet environmental demands as a priority. The sources of water for this reservoir are overflow from the Phase 1 reservoirs and Lake Okeechobee regulatory releases only during extreme wet events.

This project will be operated as a dry storage reservoir and discharges made down to 18 inches below ground level. The project can also be designed to provide a water quality treatment function, augmenting the performance of the Everglades Construction Project and ensuring protection of water quality in the EPA.

Design of this project for water quality performance will be based on water quality targets for the Everglades Construction Project and other water quality targets developed to protect designated uses in EAA waters.

Documents:

None

FY2007 Status:

This project has not started.

CERP Everglades National Park Seepage Management Project

Component:

V, FF and U

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes three CERP Components: L-31N improvements for seepage management, S-356 structures and Bird Drive Recharge Area.

The L-31N levee seepage improvements include relocating and enhancing L-31N, groundwater wells, and sheetflow delivery system adjacent to the ENP and located in Miami-Dade County. More detailed planning, design and pilot studies will be conducted to determine the appropriate technology to control seepage from the ENP. These studies and tests will also determine the appropriate amount of wet season groundwater flow control that will minimize potential impacts to Miami-Dade County's West Wellfield and freshwater flows to Biscayne Bay. The purpose of this project is to improve water deliveries to Northeast Shark River Slough and restore wetland hydropatterns in the ENP by reducing levee and groundwater seepage and increasing sheetflow.

This project reduces levee seepage flow across L-31N adjacent to the ENP via a levee cutoff wall. Groundwater flows during the wet season are captured by ground water wells adjacent to L-31N and pumped back to the ENP. Water from upstream natural areas will be diverted into a buffer area adjacent to the ENP where sheetflow will be reestablished. Further, this project will include the relocation of the Modified Water Deliveries structure S-356 to provide more effective water deliveries to the ENP. New discharges to the ENP will be designed to meet applicable water quality criteria.

The Bird Drive Recharge Area component includes pumps, water control structures, canals, and an above-ground recharge area with a total storage capacity of approximately 11,500 ac-ft located in western Miami-Dade County. The initial design of the recharge facility assumed 2,877 acres with the water level fluctuating up to 4 ft above grade. Final design will seek to enhance and maintain the continued viability of wetlands within the basin. The final size, depth, and configuration of these facilities including treatment requirements will be determined through more detailed planning and design.

The purpose of the Bird Drive Recharge Area is to recharge groundwater and reduce seepage from the ENP buffer area by increasing water table elevations east of Krome Avenue. The facility will also provide C-4 flood peak attenuation and water supply deliveries to the South Dade Conveyance System and Northeast Shark River Slough. Inflows from the western C-4 canal basin and from the proposed West Miami-Dade Wastewater Treatment Plant will be pumped into the Recharge Area. Inflows from the

wastewater treatment plant will stop when the Recharge Area depth exceeds 3 ft above ground and will be diverted to a deep well injection disposal system.

Recharge area outflows will be prioritized to meet groundwater recharge demands, South Dade Conveyance System demands, and Northeast Shark River Slough demands when supply is available. Regional system deliveries will be routed through the seepage collection canal system of the Bird Drive Recharge Area to the South Dade Conveyance system.

Documents:

Final Project Management Plan, October 2005
http://www.evergladesplan.org/pm/pmp/pmp_27_enp_sm.cfm.

FY2007 Status:

This project includes three CERP components: L-31N levee improvements for seepage management, S-356 structure relocation, and Bird Drive Recharge Area.

CERP Florida Keys Tidal Restoration Project

Component:

OPE

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes the use of bridges or culverts to restore the tidal connection between Florida Bay and the Atlantic Ocean in Monroe County. The four locations are as follows:

- Tarpon Creek, just south of mile marker 54 on Fat Deer Key (width, 150 feet)
- Unnamed creek between Fat Deer Key and Long Point Key, south of mile marker 56 (width, 450 feet)
- Tidal connection adjacent to Little Crawl Key (width, 300 feet)
- Tidal connection between Florida Bay and Atlantic Ocean at mile marker 57 (width, 2,400 feet)

The unnamed creek between Fat Deer Key and Long Point Key was selected as the project's initial restoration area, per the site selection matrix. Work is under way to locate an area for fill removal. Details must be worked out with Navigational Servitude.

The purpose of this project is to restore the tidal connection that was eliminated in the early 1900s during the construction of Flagler's railroad. Restoring circulation to areas of surface water will significantly improve water quality, benthic floral and faunal communities, larval distribution of both recreational and commercial species (e.g., spiney lobster), and the overall hydrology of Florida Bay.

Documents:

Final Project Management Plan, April 2002
http://www.evergladesplan.org/pm/pmp/pmp_31_fl_keys_tidal.cfm.

FY2007 Status:

With the exception of the baseline monitoring collection effort, this project has been on hold since FY2004. All other work on delivery of PIR products has been halted since that time at the direction of the USACE.

CERP Flow to Eastern WCA Project

Component:

EEE

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

The purpose of this project is to attenuate high stages in WCA-2 and WCA-3 and transport this excess water to Central Lake Belt Storage Area where it will be stored to meet downstream demands in WCA-3B.

Documents:

None

FY2007 Status:

This project has not started.

CERP Flow to Northwest and Central WCA-3A Project

Component:

II and RR

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes relocation and modifications to pump stations and development of a spreader canal system located in the northwest corner and west-central portions of WCA-3A in western Broward County.

The purpose of this project is to increase environmental water supply availability, increase depths, and extend wetland hydropatterns in the northwest corner and west-central portions of WCA-3A. Additional flows will be directed to the northwest corner and west central portions of WCA-3A by increasing the capacity of the G-404 pump

station and increasing the capacity and relocating the S-140 pump station. A spreader canal system at S-140 will reestablish sheetflow to the west-central portion of WCA-3A.

Water quality treatment of flows is assumed to be provided by the Everglades Construction Project, and water quality treatment strategies developed to fulfill the Non-Everglades Construction Project requirements of the Everglades Forever Act. If additional treatment was determined to be required as a result of future detailed planning and design work, those existing facilities would be modified to provide that treatment.

Documents:

None

FY2007 Status:

The PMP was initiated in October 2002, but was stopped in March 2003 and has remained on hold since then. This project is not currently authorized.

CERP Hillsboro Aquifer Storage and Recovery – Part 2 Project

Component:

M Part 2

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes a series of ASR wells with a total capacity of approximately 150 million gallons per day and associated pre- and post- water quality treatment which will be located adjacent to the reservoir or along the Hillsboro Canal. The initial design of the ASR facility assumed 30 well clusters, each with a capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post-treatment. The source of water to be injected is in the surficial ground water adjacent to the reservoir. The location, extent of treatment, and final number of ASR wells may be modified based on findings from a proposed ASR pilot project.

The purpose of this project is to supplement water deliveries to the Hillsboro Canal during dry periods thereby reducing demands on Lake Okeechobee and the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge). Water will be pumped into the aquifer during the wet season or periods when excess water is available. Water will be released back to the reservoir or Hillsboro Canal to help maintain canal stages during the dry season.

Documents:

None

FY2007 Status:

This project has not started and is not currently authorized.

CERP Indian River Lagoon – South Project

Project Mission:

Construct reservoirs, STAs, acquire land, and remove sediment.

Project Benefits:

Restoration of the southern Indian River Lagoon watershed, a part of the most diverse estuary in the United States. The southern lagoon and its watershed have been negatively affected over the past 100 years by the construction of canals discharging directly into the lagoon, changed water flow patterns, and stormwater runoff.

This project will help restore the southern Indian River Lagoon and St. Lucie Estuary and its associated watershed. This will be accomplished by reducing canal discharge, storing more water on land, returning a more natural water flow to the lagoon and estuary, removing 7.9 million cubic yards of muck, and restoring upland areas including the Allapattah Natural Storage Area. Water quality, plant and animal habitat, and estuary nursery conditions will improve.

Component:

B and UU

Authorization:

C-44 – WRDA 2000; Remainder Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

The Indian River Lagoon is the most biodiverse estuarine system in North America. The Final Feasibility Study for the Indian River Lagoon – South Project recommends a plan in Martin, St. Lucie, and Okeechobee counties that will improve water quality within the St. Lucie Estuary and the Indian River Lagoon by reducing the damaging effects of watershed runoff, reducing high peak freshwater discharges to control salinity levels, and reducing nutrient loads, pesticides, and other pollutants. The project will also provide water supply for agriculture to offset reliance on the Floridian Aquifer System.

The plan includes 170,000 ac-ft of storage in reservoirs (C-44, C-23 and 24 North and South Reservoirs and C-25 Reservoir) and STAs (C-44, C-23, C-24, and C-25), provides storage on 92,000 acres of natural storage areas (Allapattah, Pal Mar, and Cypress Creek), and removes 7,900,000 cubic yards of muck from the St. Lucie River and Estuary.

C-44 Reservoir, the C-44 East STA, and the C-44 West STA. The C-44 reservoir and STAs replace the original C-44 reservoir, C-44 west STA, C-44 east STA, and C-23/44 STA from the Indian River Lagoon South Feasibility Study. All component features associated with those components, including real estate, are no longer applicable. The features of the new C-44 components are explained below. Some structure numbers used for the C-44 component features in the feasibility study are used for similar features in the new components, however they are not the same structures.

The new C-44 reservoir and STAs include a 3,315-acre, 10-ft deep above-ground reservoir, a 3,000-acre STA to the west, and a 3,000-acre STA to the east. The C-44 reservoir and STAs are located in Martin County adjacent to and north of C-44 canal, and approximately midway between Lake Okeechobee and Florida's Turnpike.

C-23/24 Basin. The recommended plan includes five components within the C-23/24 basin. These components are the (1) C-23/24 north reservoir, (2) C-23/24 south reservoir, (3) C-23/24 STA, (4) Cypress Creek Complex – Natural Storage and Water Quality

Treatment Area, and (5) Allapattah Complex – Natural Storage and Water Quality Treatment Area.

An operational feature of the Indian River Lagoon – South Project known as the Northern and Southern Diversions is accomplished via use of the construction features described for this basin. The Allapattah – Natural Storage and Water Quality Treatment Area is located in Martin County. The balance of the C-23/24 basin features are located in St. Lucie and Okeechobee counties.

In early October 2007, the District negotiated an agreement regarding the C-23/24 reservoir properties (1,757 acres) at 28 percent over the appraised value with title transferring to the entire acreage in January 2008, and payment over three fiscal years. With this acquisition, C-23/24 lands will be completely acquired on North Reservoir and the STA, and 77 percent acquired on the South Reservoir.

C-25 and Northfork and Southfork Basins. The recommended plan includes three components within the C-25 basin and North Fork and South Fork Basins of the St. Lucie River. These components include the C-25 reservoir and STA, Muck Remediation, Artificial Habitat, and North Fork Floodplain Restoration.

Final Project Implementation Report and Supplemental Environmental Impact Statement. This document (http://www.evergladesplan.org/pm/studies/irl_south_pir.cfm) addresses the requirements of Section 601 of the WRDA 2000 (http://www.evergladesplan.org/wrda2000/wrda.cfm) and addresses USACE Headquarters policy compliance review comments on the Final Feasibility Report that was completed in August 2002. This final report replaces the Final Feasibility Report from August 2002.

This revision/supplement includes revised sections and appendices of the Final Feasibility Report and an EIS as well as new appendices. This report replaces the Final Integrated Feasibility Report and Supplemental FEIS. Click here to view and download the results of the independent scientific review panel on the Indian River Lagoon – South PIR (http://www.evergladesplan.org/pm/studies/report#report).

Documents:

Final Project Management Plan – Updated, July 2004
http://www.evergladesplan.org/pm/pmp/pmp_07_irl_south.cfm.

Final Project Implementation Report, March 2004
http://www.evergladesplan.org/pm/studies/irl_south_pir.cfm.

Real Estate:

C-44 Reservoir – Acres Required: 4,800; Acres Acquired: 4,800

C-44 East STA – Acres Required: 2,800; Acres Acquired: 2,800

C-44 West STA – Acres Required: 4,500; Acres Acquired: 4,500

C-23/C-24 South Reservoir – Acres Required: 4,155; Acres Acquired: 3,425

C-23/C-24 North Reservoir – Acres Required: 4,399; Acres Acquired: 2,287

Allapattah Complex – Acres Required: 42,348; Acres Acquired: 20,948

Muck Remediation and Artificial Habitat – Acres Required: 640; Acres Acquired: 0

FY2007 Status:

One component of the Indian River Lagoon – South Plan, the C-44 reservoir and STA complex, will be designed and constructed as an Acceler8 project. The USACE is

currently designing the C-23/24 STA component and has completed the 30 percent of the design. Allapattah Natural Area restoration design and construction is under way.

This project is designed to return historic flows of cleaner water across 90,000 acres of natural land spanning Martin, St. Lucie, and Okeechobee counties. The plan includes construction and operation of 12,000 acres of inland reservoirs and 9,000 acres of pollution-filtering treatment marsh, and the removal of more than 5 million cubic yards of muck from the waterways.

Fulfilling a requirement of WRDA 2000, the District's Governing Board, in July 2007, formally took action to reserve the water needed for environmental protection as part of the plan to restore the Indian River Lagoon, which marks the first CERP project for which the agency will undertake a water reservation rule-making process.

The District also is setting aside the existing water in the lagoon system to be used for the protection of fish and wildlife. For more information on the Indian River Lagoon – South Project, see http://www.evergladesplan.org/pm/projects/proj_07_irl_south.aspx

The Indian River Lagoon – South Project has now received congressional authorization. The timing of appropriation will affect the design and construction schedule. Modification of water control structures downstream of proposed C-23/24 discharges will require negotiation and execution of a Memorandum of Understanding with the local drainage district.

CERP Lake Istokpoga Regulation Schedule Project

This project was incorporated into the Lake Okeechobee Watershed Project, which will consider operational and structural solutions to address water resources issues in both lakes.

CERP Lake Okeechobee ASR Project

Component:

GG

Authorization:

WRDA 1999

Local Sponsor:

South Florida Water Management District

Description:

This project includes a series of ASR wells adjacent to Lake Okeechobee with a total capacity of 1 billion gallons per day and associated pre- and post-water quality treatment in Glades and Okeechobee counties. The initial design assumes 200 wells, each with the capacity of 5 million gallons per day with eight ultra-filtration water quality pre-treatment facilities and aeration for post-treatment.

Based on information from existing ASR facilities studied, it is assumed that recovery of aquifer-stored water would have no adverse effects on water quality conditions in Lake Okeechobee. In fact, some level of nutrient load reduction may occur as a result of aquifer storage, which would be a long-term benefit to in-lake water quality conditions.

The level and extent of treatment and number of the ASR wells may be modified based on findings from the Lake Okeechobee ASR pilot project. The pilot project will also

investigate changes to water chemistry resulting from aquifer storage and identify post-retrieval water quality treatment requirements, if any, necessary to implement ASR facilities.

CERP includes pilot studies to investigate the feasibility of the ASR facilities, including water quality changes associated with aquifer storage and recovery.

The purpose of this project is to provide additional regional storage while reducing both evaporation losses and the amount of land removed from current land use (e.g., agriculture) that would normally be associated with construction and operation of above-ground storage reservoirs. This project will increase the lake's water storage capability to better meet regional water supply demands for agriculture, Lower East Coast urban areas and the Everglades. This project will help to manage a portion of regulatory releases from the lake primarily to improve Everglades hydropatterns and to meet supplemental water supply demands of the Lower East Coast. Further, this project will reduce harmful regulatory discharges to the St. Lucie and Caloosahatchee estuaries and maintain and enhance the existing level of flood protection.

The operation of this project assumes that after treatment, water from Lake Okeechobee will be injected into the upper Floridan Aquifer System when the climate-based inflow model forecasts that the lake water level will rise significantly above those levels that are desirable for the lake littoral zone. During the dry season, water stored in the Floridan Aquifer System will be returned to the lake after aeration either when the lake water level is projected to fall to within three quarters of a foot of the supply-side management line or below an established water level during the dry season.

Documents:

None

Real Estate:

Acres Required: 100 for each phase; Acres Acquired: 0

FY2007 Status:

This project has not started.

CERP Lake Okeechobee Watershed Project

Project Mission:

Construct two reservoirs and an STA, and remove 150 metric tons (mt) of total phosphorus.

Project Benefits:

Provide better management of lake water levels, improve lake water quality, reduce damaging releases to the estuaries, restore isolated wetlands in the watershed, and resolve water resource problems in Lake Istokpoga.

Component:

A, W, LOWQTF and LOTSD

Authorization:

Taylor Creek/Nubbin Slough STA – WRDA 2000; Remainder Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

The purposes of this project are to reduce phosphorus loading to Lake Okeechobee, attenuate peak flows from the watershed, provide more natural water level fluctuations in the lake, and restore wetland habitat. These goals will be accomplished by a 17,500-acre reservoir in the lower Kissimmee Basin, a 5,000-acre reservoir and a 5,000 STA in the Taylor Creek/Nubbin Slough Basin, smaller Reservoir Assisted STAs (RASTAs) and restoration of isolated wetlands, and removal of 150 mt of total phosphorus from 10 miles of primary tributary canals.

As a first step in development of the PIR, a Watershed Assessment Report was prepared in June 2003 to better define water quality and hydrologic problems in the watershed. The Taylor Creek/Nubbin Slough RASTA was authorized as one of the 10 initial projects in WRDA 2000. The Lake Okeechobee Tributary Sediment Dredging Project is included in the programmatic authorization for implementation of projects with a total project cost under $25 million. The other projects will be authorized in future WRDAs.

Documents:

None

Real Estate:

North Lake Okeechobee Storage Reservoir – Acres Required: 20,000;
Acres Acquired: 3,054

Lake Okeechobee Tributary Sediment Dredging – Acres Required: 320;
Acres Acquired: 0

Lake Okeechobee Watershed Quality Treatment Facilities – Acres Required: 7,875; Acres Acquired: 157

Taylor Creek / Nubbin Slough Storage and Treatment Areas – Acres Required: 10,000; Acres Acquired: 7,515

FY2007 Status:

Survey and Geotechnical work was ongoing during FY2007. Also in progress during FY2007 were the Biological Assessment, Rights of Entry, Monitoring Plan, and Recreation Plan. Partial USACE comments were received on a revised Alternative Formulation Briefing (AFB) package in September 2007. An In-Progress Review to discuss the responses to the revised AFB package was held during October 2007. Efforts are continuing in the preparation of the draft PIR. Real estate gross appraisals will continue. Award of the hydrologic design contract is pending. The contracting package will be prepared for award during FY2008 of the Cultural Resources Contract.

Arthur R. Marshall Loxahatchee National Wildlife Refuge Internal Canal Structures

Component:

KK

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes two water control structures in the northern ends of the perimeter canals encircling the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge) located in Palm Beach County. The purpose of this project is to improve the timing and location of water depths within the Refuge. It is assumed that these structures will remain closed except to pass STA-1 East and STA-1 West outflows and water supply deliveries to the coastal canals.

Documents:

None

FY2007 Status:

This project has not started and is not authorized.

CERP Melaleuca Eradication and Other Exotic Plants Project

Project Mission:

Develop natural weapons to reduce spread of unwanted plants, and develop a report describing further federal involvement in the fight against exotic plants in South Florida.

Project Benefits:

Reduce melaleuca and other unwanted plants that are flourishing throughout the greater Everglades ecosystem.

Component:

OPE

Authorization:

Not Currently Authorized.

Local Sponsor:

South Florida Water Management District

Description:

The Melaleuca Eradication and Other Exotic Plants project is a two-part plan to enhance efforts to control invasive exotic plant species in South Florida. The two parts include: (1) mass rearing and controlled release of biological agents throughout South Florida; and (2) preparation of a report to further identify the overall problem with exotic invasive plants and provide a recommendation regarding further federal involvement.

Documents:

Project Management Plan, September 2004
http://www.evergladesplan.org/pm/pmp/pmp_95_melaleauca.aspx

FY2007 Status:

The goal of the Melaleuca Eradication Project is to develop natural weapons to reduce the spread of unwanted plants and create a report describing further federal involvement in the fight against exotic plants in South Florida. The project benefits are reduction in

melaleuca and other unwanted plants that are flourishing throughout the greater Everglades ecosystem.

This project is a two-part plan to enhance efforts to control invasive exotic plant species in South Florida:

- Mass rearing and controlled release of biological agents throughout South Florida
- Preparation of a report to further identify the overall problem with exotic invasive plants and provide a recommendation regarding further federal involvement.

The Project Implementation Report is under development, and it is scheduled to be completed in FY2008. For more information on the Melaleuca Eradication Project, see http://www.evergladesplan.org/pm/projects/proj_95_melaleauca.aspx

CERP Modify Holey Land Wildlife Management Area Operation Plan Project

Component:

DDD

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project consists of a modification to the current operating plan for Holey Land Wildlife Management Area (Holey Land) to implement rain-driven operations for this location. Water deliveries are made to Holey Land from the Rotenberger Wildlife Management Area (Rotenberger) or from STA-3 and STA-4 if Rotenberger flows are insufficient and the water quality of the deliveries are assumed to be acceptable. These new operational rules are intended to improve the timing and location of water depths within Holey Land.

Documents:

None

FY2007 Status:

This project has not started and is not authorized.

CERP Modify Rotenberger Wildlife Management Area Operation Plan Project

Project Mission:

Modify current operational plan to provide more rainfall-driven water deliveries.

Project Benefits:

Restore more natural water depths to improve plant and animal habitat and the overall ecology of this wildlife area.

Component:

EE

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project consists of a modification to the current operating plan for Rotenberger Wildlife Management Area to implement rain-driven operations for this area. Water deliveries are made to Rotenberger from STA-5. Discharges from the Rotenberger are made to the Holey Land Wildlife Management Area. The deliveries are assumed to be of acceptable water quality. These new operational rules are intended to improve the timing and location of water depths within Rotenberger.

Documents:

None

FY2007 Status:

This project has not started and is not authorized.

CERP North Lake Belt Storage Area Project

Component:

XX Part 2

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes canals, pumps, water control structures, and an in-ground storage reservoir with a total capacity of approximately 90,000 ac-ft located in Miami-Dade County.

The initial design of the reservoir assumed 4,500 acres with water levels fluctuating from ground level to 20 ft below grade. A subterranean seepage barrier will be constructed around the perimeter to enable drawdown during dry periods, to prevent seepage losses, and to prevent water quality impact due to the high transmissivity of the Biscayne Aquifer in the area.

The reservoir will be located within an area proposed for rock mining. A pilot test of this component will be conducted prior to final design to determine construction technologies, storage efficiencies, impacts upon local hydrology, and water quality effects.

The water quality assessment will include a determination as to whether the in-ground reservoir with perimeter seepage barrier will allow storage of untreated runoff. The final size, depth, and configuration of these facilities including treatment facilities will be determined through more detailed planning and design.

The purpose of this project is to capture and store a portion of the stormwater runoff from the C-6, western C-11 and C-9 basins. The stored water will be used to maintain stages during the dry season in the C-9, C-6, C-7, C-4, and C-2 canals and to provide water deliveries to Biscayne Bay to aid in meeting salinity targets. Runoff is pumped and gravity fed into the in-ground reservoir from the C-6 (west of Florida's Turnpike), western C-11 and C-9 basins.

Outflows from the facility will be directed into the C-9 STA/impoundment for treatment prior to delivery to the C-9, C-7, C-6, C-4, and C-2 canals. If necessary, additional STAs will be constructed adjacent to the in-ground reservoir.

Documents:

None

FY2007 Status:

This project has not started and is not authorized.

CERP North Palm Beach County – Part 1 Project

Project Mission:

Construct structures and other features and widen a canal

Project Benefits:

Increase water supplies to the Grassy Waters Preserve and Loxahatchee Slough; enhance water timing, flow and depth in the slough; increase flows to the Northwest Fork of the Loxahatchee River; and reduce high discharges to the Lake Worth Lagoon.

Component:

X, Y, GGG, Pal Mar, LWL, and K Par

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes six separable elements including Pal Mar and J.W. Corbett Wildlife Management Area Hydropattern restoration, L-8 basin modifications, C-51 and L-8 reservoir, Lake Worth Lagoon restoration, C-17 backpumping and treatment, and C-51 backpumping and treatment. These separable elements have been combined into a single project to address the interdependencies and tradeoffs between the different elements and provide a more efficient and effective design of the overall project.

Pal Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration Other Project Element (OPE). This separable element will consider improvements such as new or modified water control structures, canal modifications and the acquisition of 3,000 acres located between Pal Mar and the J.W. Corbett Wildlife Management Area in Palm Beach County.

The purpose of this separable element, described in the CERP, is to provide hydrologic connections between the J. W. Corbett Wildlife Management Area and (1) the Moss Property, (2) the C-18 canal, (3) the Indian Trail Improvement District, and (4) the L-8

borrow canal, in addition to extending the spatial extent of protected natural areas. These connections would reduce detrimental effects due to over inundation on native vegetation frequently experienced during the wet season and extend the footprint of the contiguous greenbelt to 126,000 acres. This greenbelt extends from the Dupuis Reserve near Lake Okeechobee across the J.W. Corbett Wildlife Management Area and south to Jonathan Dickinson State Park.

L-8 Basin Modifications (K – Part 1). This separable element involves modifications to the L-8 basin including a series of pumps, water control structures, and canal capacity improvements in the M Canal. The purpose of this project is to construct the required conveyance to make the C-51 and the L-8 reservoir (see below) functional – and thereby increase water supply availability while maintaining or enhancing flood protection for northern Palm Beach County areas. This component will also provide conveyances necessary to deliver flows required to enhance hydroperiods in the Loxahatchee Slough; increase base flows to the Northwest Fork of the Loxahatchee River; and reduce high discharges to the Lake Worth Lagoon.

C-51 and L-8 Reservoir (GGG). This separable element includes a combination above ground and in-ground reservoir with a total storage capacity of approximately 48,000 ac-ft located immediately west of the L-8 borrow canal and north of the C-51 canal in Palm Beach County. The initial design for the reservoir assumed a 1,800-acre reservoir with 1,200 usable acres and the water level fluctuating from 10 ft above grade to 30 ft below grade. The final size, depth, and configuration of this facility will be determined through more detailed planning and design.

The purpose of this project is to increase water supply availability, and attenuate discharge to the Lake Worth Lagoon and provide ancillary drainage benefits for northern Palm Beach County areas. It will also provide flows to enhance hydroperiods in the Loxahatchee Slough; increase base flows to the Northwest Fork of the Loxahatchee River, and reduces high discharges to the Lake Worth Lagoon. Water will be pumped into the reservoir from the C-51 canal and southern L-8 borrow canal during the wet season, or periods when excess water is available, and returned to the C-51 and L-8 reservoir during dry periods. Additional projects will also direct excess water into the West Palm Beach Water Catchment Area (also known as the Grassy Waters Preserve). This component or portions of this component may be implemented under a previous authorization.

Lake Worth Lagoon Restoration (OPE). This project includes sediment removal in the C-51 canal and sediment removal or capping within a distance of 2.5 miles downstream of the confluence of the C-51 canal and the Lake Worth Lagoon. A prototype project will be conducted to determine the feasibility and potential cost of removing and disposing of sediments in the lagoon versus capping them. This project includes the evaluation of sediment traps to reduce future accumulation of sediment.

The purpose of this project is to improve water quality and allow for the reestablishment of seagrasses and benthic communities. The elimination of the organically enriched sediment from the C-51 canal discharge will provide for long-term improvements to the lagoon and enable success for additional habitat restoration and enhancement projects planned by Palm Beach County.

The Lake Worth Lagoon already is benefiting from restoration work that removed 100,000 cubic yards of muck from the West Palm Beach (C-51) Canal, which sends water into the lagoon. Sediments in the canal had accumulated over time, settling as a

layer of muck that impaired plant growth and animal life. The muck also reduced water flow capacity needed for effective flood control.

Project dredging was performed in a length of canal about one mile south of Southern Boulevard, adjacent to Interstate 95. Dredging was completed by the county in partnership with the District, the State of Florida and the City of West Palm Beach. The scope of work included installation of a prototype sediment trap to reduce muck accumulation and ease dredging efforts in the future. This sediment trap is basically a large hole excavated on the canal bottom that is designed to force muck to settle there; the trap will be cleaned out when necessary. The District will monitor the effectiveness of the sediment trap for up to two years.

C-17 Backpumping and Treatment (X). This project includes backpumping facilities and an STA with a total storage capacity of approximately 2,200 ac-ft located in northeastern Palm Beach County. The design assumes a 550-acre STA with the water level fluctuating up to 4 ft above grade. The final size, depth, and configuration of this facility will be determined through more detailed planning and design, and will address appropriate pollution load reduction targets necessary to protect receiving waters (e.g., West Palm Beach Water Catchment Area).

The purpose of this project is to increase water supplies to the West Palm Beach Water Catchment Area and Loxahatchee Slough by capturing and storing excess flows currently discharged to the Lake Worth Lagoon from the C-17 canal. Excess C-17 canal water will be backpumped through existing canals and proposed water control structures to the STA which will provide water quality treatment prior to discharge into the West Palm Beach Water Catchment Area.

C-51 Backpumping and Treatment (Y). This project includes back-pumping facilities and an STA with a total storage capacity of approximately 2,400 ac-ft located in Palm Beach County. The design includes a 600-acre STA with the water level fluctuating up to 4 ft above grade. The final size, depth and configuration of this facility will be determined through more detailed planning and design, and will address appropriate pollution load reduction targets necessary to protect receiving waters (e.g., West Palm Beach Water Catchment Area).

The purpose of this project is to increase water supplies to the West Palm Beach Water Catchment Area and Loxahatchee Slough by capturing and storing excess flows currently discharged to the Lake Worth Lagoon from the C-51 canal. The conceptual design allows excess C-51 canal water to be backpumped through existing and proposed water control structures and canals to the STA. The STA will provide water quality treatment prior to discharge into the West Palm Beach Water Catchment Area.

Documents:

Final Project Management Plan, June 2005
http://www.evergladesplan.org/pm/pmp/pmp_17_npalmbeach_p1.cfm.

Real Estate:

Pal-Mar Complex and South Fork – Acres Required: 17,143; Acres Acquired: 5,197

FY2007 Status:

Construction of the G-161 structure began in FY2007. Lower East Coast Sub-Regional (LECsR) Model results are completed and under review. Revised performance measures have been submitted to RECOVER for review. Planning level cost estimates are being finalized and regional evaluations are beginning with RECOVER.

Appendix 4 of this chapter contains the 2007 Water Quality Assessment Report, which presents the results of the L-8 reservoir project component's monitoring program, and a determination as to whether any significant water quality degradation may have occurred when using the reservoir cells for temporary water storage. The assessment is required by the permit and associated Consent Agreement to ensure that the collection and analysis of the water quality data complied with the FDEP-approved quality assurance and quality control procedures.

For more information on the North Palm Beach County – Part 1 Project, see http://www.evergladesplan.org/pm/projects/proj_17_npbc_1.aspx

CERP North Palm Beach County – Part 2 Project

Component:

K Part 2 and LL

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes two separable elements: the C-51 regional groundwater ASR system and the L-8 basin ASR system. These projects will provide additional long-term storage within the North Palm Beach County region.

C-51 Regional Groundwater Aquifer Storage and Recovery (LL). This project includes a series of ASR wells with a total capacity of 170 million gallons per day, associated pre- and post-water quality treatment to be constructed along the C-51 canal, and canals that can receive water from the C-51 canal. The conceptual design assumes 34 well clusters, each with an individual capacity of 5 million gallons per day fed by a combination of vertical and horizontal wells located near existing canals. The conceptual design includes disinfection pre-treatment and post-storage aeration. The level and extent of treatment and number of the ASR wells may be modified based on findings from a proposed ASR pilot project.

The purpose of this project is to capture and store excess flows from the C-51 canal, currently discharged to the Lake Worth Lagoon, for later use during dry periods. The ASR facilities will be used to inject and store surficial aquifer ground water adjacent to the C-51 canal into the upper Floridan Aquifer instead of discharging the canal water to tide. Water will be returned to the C-51 canal to help maintain canal stages during the dry season. If water is not available in the ASR system, existing rules for water delivery to this region will be applied.

L-8 Basin ASR (K – Part 2). This separable element includes ASR wells with a total capacity of 50 million gallons per day and associated pre- and post-water quality treatment to be constructed within the L-8 basin or along the City of West Palm Beach water supply conveyance and storage system or a combination of both. The conceptual design consists of 10 wells, each with an individual capacity of 5 million gallons per day for a total capacity of 50 million gallons per day. The conceptual design includes disinfection pre-treatment and post storage aeration. The level and extent of treatment and number of the ASR wells may be modified based on findings from a proposed ASR pilot project.

The purpose of this project is to increase water supply availability and moderate water level within the West Palm Beach Water Catchment Area. It will also provide flows to enhance hydroperiods in the Loxahatchee Slough; increase base flows to the Northwest Fork of the Loxahatchee River, and reduces high discharges to the Lake Worth Lagoon. During periods when the West Palm Beach Water Catchment Area is above desirable stages, 50 million gallons per day will be diverted for storage in ASR wells.

Documents:

None

FY2007 Status:

This project has not started.

CERP Palm Beach County Agricultural Reserve Reservoir – Part 2 Project

Component:

W Part 2

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes ASR wells with a total capacity of 75 million gallons per day and associated pre- and post- water quality treatment located adjacent to the reservoir. The initial design of the wells assumed 15 well clusters, each with a capacity of 5 million gallons per day as well as chlorination for pre-treatment and aeration for post-treatment.

The source of water to be injected is surficial ground water adjacent to the Palm Beach County Agricultural Reserve Reservoir. The level and extent of treatment and number of ASR wells may be modified based on findings from a proposed ASR pilot project.

The purpose of this project is to supplement water supply deliveries for central and southern Palm Beach County by capturing and storing excess water currently discharged to the Lake Worth Lagoon. These supplemental deliveries will reduce demands on Lake Okeechobee and the Refuge. The wells will pump water into the aquifer during the wet season and will pump water from the aquifer to the Lake Worth Drainage District canals to help maintain canal stages during the dry season. If water is not available in the ASR wells, existing rules for water delivery to this region will be applied.

Documents:

None

FY2007 Status:

This project has not started.

CERP Palm Beach County Agriculture Reserve Reservoir – Part 1 Project

Project Mission:

Construct an above-ground reservoir

Project Benefits:

Supplement water supply deliveries for central and southern Palm Beach County, and reduce demands on Lake Okeechobee and the Refuge.

Component:

W Part 1

Authorization:

Not currently authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes an above-ground reservoir with a total storage capacity of approximately 20,000 ac-ft located in the western portion of the Palm Beach County Agricultural Reserve. The initial design for the reservoir assumed 1,660 acres with water levels fluctuating up to 12 ft above grade. The final size, depth and configuration of these facilities will be determined through more detailed planning and design.

The purpose of this project is to supplement water supply deliveries for central and southern Palm Beach County by capturing and storing excess water currently discharged to the Lake Worth Lagoon. These supplemental deliveries will reduce demands on Lake Okeechobee and the Refuge. It is assumed that this facility could also be designed to achieve water quality improvements in downstream receiving waters, depending upon pollutant loading conditions in the watershed.

The reservoir will be filled during the wet season with excess water from the western portions of the Lake Worth Drainage District and possibly from Acme Basin B. Water will be returned to the Lake Worth Drainage District canals to help maintain canal stages during the dry season. If water is not available in the reservoir, existing rules for water delivery to this region will be applied.

FY2007 Status:

This project has not started.

CERP Picayune Strand (Southern Golden Gate Estates) Restoration Project

Project Mission:

Construct spreader channels, canal plugs, and pump stations, and remove roads

Project Benefits:

Restore the natural hydrology of an 85-square-mile area in rural Collier County that was over-drained in the early 1960s as part of a failed subdivision. Removing roads, plugging canals, and adding other structural features will reduce fresh water drainage, elevate

ground water levels, and replenish wetland habitat. This will restore hydrology, reduce exotic species, and improve downstream coastal estuaries.

Component:

OPE

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project includes a combination of spreader channels, canal plugs, road removal, and pump stations in the Western Basin and Big Cypress, Collier County, south of I-75 and north of U.S. 41 between the Belle Meade Area and the Fakahatchee Strand State Preserve.

The purpose of this project is to restore and enhance the wetlands in Picayune Strand and in adjacent public lands by reducing over-drainage. Implementation of the restoration plan would also improve the water quality of coastal estuaries by moderating the large salinity fluctuations caused by freshwater point discharge of the Faka Union Canal.

Documents:

Final Project Management Plan, March 2001
http://www.evergladesplan.org/pm/pmp/pmp_30_sgge.cfm.

Final Integrated PIR/EIS, November 2004
http://www.evergladesplan.org/pm/projects/docs_30_sgge_pir_final.cfm.

Real Estate:

Acres Required: 55,246; Acres Acquired: 55,247

FY2007 Status:

The first phase of road removal was completed in February 2007. The final PIR, approved by the Assistant Secretary of the Army and the Office of Management and Budget, was delivered to the U.S. Congress and the U.S. Senate in April 2007. The Panther Study Report was delivered in June 2007 to the PIR team to assist in Threatened and Endangered Species coordination. Cultural resources surveys are underway. A Notice-to-Proceed is scheduled to be issued in October 2007 for Phase II Road Removal. The Picayune Strand Hydrologic Restoration Baseline, a product of RECOVER, comprises Appendix 7A-2 of the CERP Annual Report. More information on the Picayune Strand Project is available at: http://www.evergladesplan.org/pm/projects/proj_30_sgge.aspx

CERP Fran Reich Preserve (formerly Site 1 Impoundment) Project

Project Mission:

Construct reservoir and water conveyance features

Project Benefits:

Store water that otherwise would flow to the Atlantic Ocean. Benefits include increased water supplies for the natural environment, people and farms; habitat restoration;

improvements to Lake Okeechobee and the coastal estuaries; groundwater recharge; reduced saltwater intrusion; and decreased seepage losses from the Everglades.

Component:

M Part 1

Authorization:

None

Local Sponsor:

South Florida Water Management District

Description:

The purpose of this project is to supplement water deliveries to the Hillsboro Canal by capturing and storing excess water currently discharged to the Intracoastal Waterway. These supplemental deliveries will reduce demands on Lake Okeechobee and the Refuge. The impoundment pool will provide groundwater recharge, reduce seepage from adjacent natural areas, and prevent saltwater intrusion by releasing impounded water back to the Hillsboro Canal when conditions dictate. Some measure of flood protection may also be provided along with water quality improvements.

This project includes canal and structure relocations, canal conveyance improvements, water control structures and an above-ground impoundment with a total storage capacity of approximately 13,280 ac-ft located in the Hillsboro Canal Basin in southern Palm Beach County. The design of the impoundment includes two compartments totaling 1,660 acres with water levels fluctuating up to eight feet above grade.

North Springs Improvement District flows were redirected from WCA-3 northward via the L-36 borrow canal to the Hillsboro Canal where the volume can be pumped into the impoundment. The conveyance of the Hillsboro Canal was increased from the impoundment inflow structure east to the Lake Worth Drainage District E-1 canal to allow backpumping of additional flows from the western Hillsboro Canal Basin. An ASR system within the impoundment also was modeled and proved to be beneficial for long-term storage and meeting water supply demands.

Documents:

Final Project Management Plan, November 2003
http://www.evergladesplan.org/pm/pmp/pmp_40_site_1.cfm.

Revised Draft PIR/EA, December 2005
http://www.evergladesplan.org/pm/projects/docs_40_site_1_pir.cfm.

FY2007 Status:

In October 2006, the USACE and the District completed the Final Integrated PIR/EIS for the Site 1 Impoundment in Palm Beach County, Florida. The final report describes the purpose and need for the project, location, selected alternative plan and other alternatives considered. The report also describes the evaluations that were conducted which led to the selection of a plan for implementation. The selected plan includes:

- An 8 ft deep, 1,800-acre above-ground reservoir adjacent to the Hillsboro Canal with an effective storage area of 1,660 acres and a storage capacity of approximately 13,500 ac-ft
- A 650 cfs total capacity inflow pump station along the Hillsboro Canal

- A 150 cfs seepage management pump station, a seepage canal, and overflow weir along the eastern edge of the impoundment; discharge gated culverts to control flows within and discharges out of the impoundment and seepage canal
- A combined service and auxiliary non-gated spillway allowing discharges to the Hillsboro Canal and an auxiliary spillway allowing overflow into the Refuge

In October 2006, the Fran Reich Preserve (formerly named the Site 1 Impoundment) Final Integrated PIR/EIS were released for public review and the comment period ended in November 2006.

In June 2007, the District accepted a proposal by the USACE to complete the design and then construct the Broward County WPAs and the Fran Reich Preserve restoration projects as a part of the federal government's share of CERP. Recreational features include elevated boardwalks, viewing platforms, picnic areas, canoe launches and information kiosks.

In October 2007, the District and the Village of Wellington celebrated the completion of the S-7 pump station, a major construction milestone of the Acme Basin B Discharge Project, as part of the Acceler8 initiative. Operation of the S-7 pump station will move water from the C-1 canal into the C-51 west canal and subsequently to STA-1E for treatment prior to being discharged to the Refuge, which is part of the EPA. The STA uses plants to naturally clean phosphorus from water flowing into the Everglades.

For more information on the Fran Reich Preserve Project, see http://www.evergladesplan.org/pm/projects/proj_40_site_1_impoundment.aspx

CERP Strazzulla Wetlands Project

Component:

OPE

Authorization:

Section 601(c)(3) of WRDA 2000 (Additional Program Authority)

Description:

This separable element includes water control structures and the acquisition of 3,335 acres located in Palm Beach County. The purpose of this separable element is to provide a hydrological and ecological connection to the Refuge and expand the spatial extent of protected natural areas.

This land will act as a buffer between higher water stages to the west and lands to the east. This increase in spatial extent will provide vital habitat connectivity for species that require large, un-fragmented tracts of land for survival. It also contains the only remaining cypress habitat in the eastern Everglades, and one of the few remaining sawgrass marshes adjacent to the coastal ridge. This is a unique and endangered habitat and provides an essential Everglades landscape heterogeneity function.

Documents:

None

FY2007 Status:

This project was placed on hold in FY2005 and FY2006, due to high cultural resources costs with respect to the total project cost. The project remained on hold in FY2007.

CERP WCA-2B Flows to Everglades National Park Project

Component:

S P1 and YY

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

Two components comprise this project: WCA-2B flows to Central Lake Belt Storage Area and Central Lake Belt Storage Area (L-30 partial).

The purpose of the first component is to attenuate high stages in WCA-2B and divert excess water primarily to Northeast Shark River Slough and eventually to the Central Lake Belt Storage Area via pump station, culverts, canals such as L-33, L-35, and L-37, and conveyance features. Part of this component consists of the improvements to L-37 and L-33 borrow canals (renamed C-500A and C-500B) to enable excess flow.

The Central Lake Belt Storage Area will require the upgrade of the L-30 borrow canal and a revision of its purpose. Initially, the L-30 borrow canal would make dry-season deliveries to the South Dade Conveyance System via the C&SF Project L-31N System located south of U.S. 41 (Tamiami Trail). However, it will now be upgraded to convey regional natural system deliveries to the Northeast Shark River Slough while still maintaining its primary purpose in reducing seepage losses from the WCA-3B area. As a result, the L-30 canal will be re-designated as the C-501 canal and either the C-503 canal or the Dade-Broward Levee Canal will make deliveries to the South Dade Conveyance system.

Documents:

None

FY2007 Status:

This project has not started.

CERP WCA-3A and 3B Flows to Central Lake Belt Project

Component:

ZZ

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

The purpose of this project is to divert excess water above the target depths from WCA-3A/3B to the Central Lake Belt Storage Area or Shark River Slough (on an interim basis) via C-500A and C-500B canals (improved L-37 and L-33 borrow canals, respectively). Excess water will be diverted via modified structures at S-9 and S-31.

Documents:

None

FY2007 Status:

This project is not authorized and has not started.

CERP WCA 3 Decompartmentalization and Sheetflow Enhancement – Part 1 Project

Component:

QQ Part 1 and SS Part 2

Authorization:

WRDA 2000

Local Sponsor:

South Florida Water Management District

Description:

Part 1 of the WCA-3 Decompartmentalization and Sheetflow Enhancement Project includes the modification or removal of levees, canals, and water control structures in both WCA-3A and WCA-3B, which are located in western Broward County.

This project includes backfilling the Miami Canal in WCA-3 from one-to-two miles south of the S-8 pump station down to the East Coast Protective Levee. To make up for the loss of water supply conveyance to the Lower East Coast urban areas from the Miami Canal, the capacity of the North New River Canal within WCA-3A will be doubled to convey water supply deliveries to Miami-Dade County as necessary. Modifications will also be made to the eastern section of Tamiami Trail which includes elevating the roadway through the installation of a series of bridges between L-31N levee and the L-67 levees. The eastern portion of L-29 levee and canal will also be degraded in the same area as the Tamiami Trail modifications.

The purpose of this project is to restore sheetflow and reduce unnatural discontinuities in the Everglades landscape. The project includes raising and bridging portions of Tamiami Trail and filling in portions of the Miami Canal within WCA-3. Due to the dependencies of components, this project would be implemented with the WPAs Project that would create a bypass for water supply deliveries to Miami Canal using the North New River Canal.

This project, commonly referred to as "Decomp," is an important component of CERP: Decompartmentalizing the Everglades, that is, restoring the historic ridge-and-slough landscape through the WCAs and into the ENP, is vital to Everglades restoration. It is the natural flow of water – volume, direction, speed, and depth – that helps create the unique characteristics of the Everglades ecosystem. Restoring natural water flows will require removing or modifying levees, canals, and other barriers to sheetflow.

Documents:

Final Project Management Plan, March 2002
http://www.evergladesplan.org/pm/pmp/pmp_12_wca3_decom_p1.cfm.

Draft Water Conservation Area 3A Decompartmentalization and Sheetflow Enhancement PIR No. 1 is not available yet online

FY2007 Status:

The Decomp Project is considered to be the heart of Everglades restoration efforts. The purpose of the project is to remove barriers to sheetflow in WCA-3.

The Decomp project schedule and budget were adjusted in April 2007 to reflect a multiple PIR approach. Three PIRs will address the implementation of this project:

- PIR 1 will cover the Miami Canal and North New River features
- PIR 2 then will focus on the remainder of Part 1 features: Tamiami Trail, degradation of L-29, backfilling the L-29 borrow canal, and addition of more structures
- PIR 3 will incorporate the remaining Decomp features outlined in CERP. This includes the sequencing of Decomp with Modified Water Deliveries and other CERP projects, specifically the ENP Seepage Management and the EAA. This sequencing will be critical because the area's projects are so interrelated.

Only existing models will be used for PIR 1, and the hydraulics and hydrology modeling will be coordinated with the ecological and water quality modeling to ensure performance measures are adequately addressed.

The Project Delivery Team met in April 2007, at which time it formed sub-teams (adaptive management, the physical model, data mining, hydraulic and hydrological modeling, socio-economics, recreation, ecological, and plan formulation). The team also initiated tasks to meet a Feasibility Scoping Meeting target date in January 2008. A site visit was conducted to assist team members with determining contractual needs for surveys, and potential recreational and ecological impacts. Surveying, geotechnical boring and cultural resources surveys were initiated.

A Project Delivery Team meeting for the completion of the PIR was held in May 2007, followed shortly by release of the Adaptive Management Physical Model. This model is a large-scale, on-site, ecological field test in the Everglades that will guide the complex Decomp restoration design. The public comment period regarding the Decomp Physical Model concluded in June 2007.

The project's physical model will help the Project Delivery Team address uncertainty and constraints in the restoration process, refine the team's understanding of the ecological benefits, support the selection of alternative plans, modify evaluation performance measures, and obtain a better scientific understanding of how regions of the ecosystem will respond to hydrologic restoration.

In August 2007, the USACE and the District held two public workshops to present information and take comments on development of Decomp's PIR 1.

The meetings were held on August 21, 2007, in West Palm Beach at the District's Headquarters, and on August 23, 2007, at the Southwest Broward County Regional Library in Pembroke Pines. Interested individuals, groups and agencies were invited to participate in the public comment period, which ended on September 24, 2007.

The Decomp PIR 1 study area includes WCA-3 and extends as far north as the southern end of Lake Okeechobee and as far south as the Tamiami Trail within Broward and Miami-Dade counties. Potential modifications to the Miami Canal and the North New River Canal will be analyzed. Additional PIRs will address barriers to sheetflow in other parts of the ecosystem.

A physical test of water flow and ecological responses to removal of portions of canals and levees will be investigated through the Decomp Physical Model, scheduled to begin at the end of 2008.

For additional information on the CERP Decompartmentalization Project, see http://www.evergladesplan.org/pm/projects/proj_12_wca3_1.aspx .

CERP WCA-3 Decompartmentalization and Sheetflow Enhancement – Part 2 Project

Component:

AA and QQ Part 2

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

Part 2 of Decomp includes the modification or removal of levees, canals, and water control structures in WCA-3A located in western Broward County.

This project includes backfilling the southern 7.5 miles of the L-67A borrow canal, removal of the L-68A, L-67C, the western portion of L-29 below WCA-3A, L-28 and L-28 tieback levees and borrow canals, and elevating the western portion of Tamiami Trail below WCA-3A.

Eight passive weir structures will be located along the entire length of L-67A to promote sheetflow from WCA-3A to WCA-3B during high flow conditions, and additional water control structures will be added to the southern end of L-67A to allow for flow during extreme dry events. The purpose of these features is to re-establish the ecological and hydrological connection between WCA-3A and WCA-3B, the ENP, and Big Cypress National Preserve.

The compartmentalization of the WCAs has contributed to the loss of historic overland flows of the central Everglades ridge-and-slough landscape. This alteration of flows has resulted in temporal changes in hydropatterns and hydroperiods in the historic deepwater, central axis of the Shark River Slough system.

This component adds conveyance to WCA-3B to help re-establish natural hydroperiods and hydropatterns in the WCAs and Shark River Slough.

Documents:

None

FY2007 Status:

This project is not authorized has not started.

CERP Water Preserve Area Conveyance Project

Component:

BB and XX P1

Authorization:

Not Currently Authorized

Local Sponsor:

South Florida Water Management District

Description:

This project relates to two components: Dade Broward Levee and Canal and the Florida's Turnpike Canal deliveries associated with the North Lake Belt Storage Area. A new conveyance canal will be constructed east of the Dade-Broward Levee Canal where the existing canal presently connects to the wellfield protection canal. In lieu of using the Florida's Turnpike Canal, this new canal will convey regional water supply deliveries from Lake Okeechobee to the C-6, C-7, C-4, and C-2 canals and the South Dade Conveyance System. This feature will reduce seepage to the east from the Pennsuco wetlands and southern WCA-3B, enhance hydroperiods in the Pennsuco Wetlands, provide recharge to the Miami-Dade County's Northwest Wellfield, and convey regional water supply deliveries south to Miami-Dade County.

Documents:

None

FY2007 Status:

This project is not authorized and has not started.

FDEP Sponsored CERP Project: Henderson Creek/Belle Meade Restoration

Component:

OPE

Authorization:

Not Currently Authorized

Local Sponsor:

Florida Department of Environmental Protection

Description:

The Henderson Creek and Belle Meade region of Southwest Florida is currently facing a high urban growth rate. Changes in land use within the primary watersheds that drain into the Rookery Bay Estuary and adjacent waters have been identified in the Rookery Bay National Estuarine Research Reserve Management Plan as the highest priority resource issue that threatens the long-term preservation of Rookery Bay National Estuarine Research Reserve resources.

The coastal habitats in Collier County have been impacted by alterations of hydrology and habitat due to channelization of natural systems. Roads, canals, planned unit developments, commercial projects, and agriculture represent primary land uses within Rookery Bay National Estuarine Research Reserve watersheds. These alterations have greatly modified the volume, timing, and quality of freshwater entering the fragile estuarine ecosystems. In addition, channelized flow in these watersheds has severely restricted the ability of the associated wetlands to filter pollutants.

The area known locally as Belle Meade is the primary drainage basin for the Henderson Creek Estuary and is currently targeted for acquisition by the FDEP. Historically, freshwater traveled across the surface of the land, percolating through wetland flow-ways before entering Henderson Creek. While channelization and development have disrupted this system, acquisition and restoration of the undeveloped lands surrounding Henderson Creek, which link the watershed and estuary, can stop further hydrologic and habitat disturbance. These estuarine areas provide critical nursery habitat for commercially and recreationally important finfish and shellfish. Land acquisition will ensure long-term protection of the upland and wetland communities associated with these parcels.

Additionally, the proposed restoration efforts on the acquired lands will return a portion of the historic timing, duration, and volume of freshwater inflow, thereby enhancing estuarine habitats.

Documents:

None

FY2007 Status:

A design agreement between the USACE and the FDEP has been executed. The project will restore a portion of the historic timing, duration, and volume of freshwater inflow to estuarine areas, and to ensure long-term protection of the upland and associated wetland communities. The PMP was initiated in January 2007, and discussions have proceeded between the FDEP and the USACE regarding scope and alternatives.

Lee County Sponsored CERP Project: Lakes Park Restoration

Project Mission:

Remove exotic species and create flow-way marsh

Project Benefits:

Improve water quality conditions in this public park and downstream conditions in Hendry Creek, enhance overall watershed biodiversity and federal wildlife resources, remove or control non-native plants, and provide compatible recreation.

Component:

Other Project Element

Authorization:

WRDA 2000 Section 601(c)(3) – Additional Program Authority

Local Sponsor:

Lee County

Description:

Lakes Park is located east of Cape Coral in Lee County, just west of U.S. 41. The park consists of an old rock mine with a series of borrow pit “lakes.” The entire area drains south into Hendry Creek, an Outstanding Florida Water, which flows for a few miles before entering Estero Bay.

Lee County has developed the area as a regional park with a bathing area along the shoreline of the lakes. Adjacent to the developed area, the remaining natural habitat contains pine flatwoods with some cypress heads. The pits capture runoff from the surrounding developed area (commercial, industrial, and residential). County monitoring

has indicated a decline in water quality in the lakes. The lakes are infested with hydrilla (*Hydrilla verticillata*) and adjacent uplands and islands are covered with exotic plant species such as Australian pine (*Casuarina equisetifolia*) and Brazilian pepper.

The project is expected to enhance surface water runoff quality by creating a meandering marsh flow-way system with shallow littoral zones, and by removing aquatic and upland exotic vegetation. The littoral zone will be harvested periodically to remove excess nutrients from the system. Exotic vegetation will be removed and replaced with native vegetation on 11 acres of upland.

Documents:

Final Project Management Plan, July 2005
http://www.evergladesplan.org/pm/pmp/pmp_94_lakespark.cfm.

FY2007 Status:

Lee County is the local sponsor for this project and is providing in-kind services including water quality data collection and real estate coordination. The Alternative Formulation Briefing was scheduled to be held in October 2007. The Draft PIR was published in the Federal Register in September 2007.

Miccosukee Tribe Sponsored CERP Project: Miccosukee Water Management Area

Component:

Other Program Element

Authorization:

Not Currently Authorized

Local Sponsor:

Miccosukee Tribe – Design Agreement pending

Description:

The Miccosukee Water Management Area is a project to construct a managed wetland on the Miccosukee Tribe's Alligator Alley Reservation located in western Broward County. The purpose of the project is to provide water storage capacity and water quality enhancement for waters which discharge into the EPA.

The project will convert approximately 900 acres of tribally owned cattle pastures into a wetland retention/detention area, which will be designed to filter out harmful nutrients contained in stormwater runoff before the water enters the EPA. Tribal Water Quality Standards dictate a numerical criterion of 10 parts per billion for total phosphorous inside the EPA. The Miccosukee Water Management Area was sized to treat the nutrient inputs of the Miccosukee Tribal lands.

Documents:

None

FY2007 Status:

A Design Agreement is pending for this project.

Miami-Dade County Sponsored CERP Project: Restoration of Pineland and Hardwood Hammocks in C-111 Basin

Component:

Other Program Element

Authorization:

Not Currently Authorized

Local Sponsor:

Miami-Dade County

Description:

The project is located in south Miami-Dade County, just east of the ENP, along S.R. 9336 in the area known as Frog Pond. Eighty percent of Frog Pond was used for agricultural purposes. Farmers rock-plowed the cap rock to create soil for tomato farming. The Frog Pond area has since been purchased by the District as part of the C-111 project to restore the Taylor Slough portion of the Everglades.

The project involves restoring South Florida slash pine and tropical hardwood hammock species on a 200-ft wide strip on each side of the two miles of S.R. 9336 from the C-111 canal to the L-31W canal (approximately 50 acres). This project will demonstrate the techniques required to re-establish native conifer and tropical hardwood forests on land that has been rock-plowed.

Documents:

None

FY2007 Status:

A Design Agreement is pending for this project.

Miami-Dade County Sponsored CERP Project: South Miami-Dade Reuse

Component:

BBB

Authorization:

Not Currently Authorized

Local Sponsor:

Miami-Dade County

Description:

This feature includes a plant expansion to produce superior, advanced treatment of wastewater from the existing South District Wastewater Treatment Plant located north of the C-1 canal in Miami-Dade County.

The initial design of this feature assumed that the plant will have a capacity of 131 million gallons per day. More detailed analyses will be required to determine the quality and quantity of water needed to meet the ecological goals and objectives of Biscayne Bay. Additionally, due to the water quality issues associated with discharging reclaimed water into Biscayne National Park, an Outstanding Florida Water, such as potential

failures of the treatment system and the limited ability to control contaminant inputs to the sanitary sewer system serving the treatment facility, other potential sources of water to provide required freshwater flows to southern and central Biscayne Bay should be investigated before pursuing the reuse facility as a source. If it is determined that other, more appropriate sources are not available, the reuse project will be initiated by determining the parameters of concern, the necessary wastewater treatment requirements, and the appropriate treatment technology to be implemented.

The purpose of this feature is to provide additional water supply to the South Biscayne Bay and Coastal Wetlands Enhancement Project. In order to attain the superior level of treatment, construction of an add-on pre-treatment and membrane treatment system to the existing secondary treatment facility will be necessary. Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters, specifically, Biscayne Bay.

Documents:

None

FY2007 Status:

A Design Agreement is pending for this project.

Miami-Dade County Sponsored CERP Project: West Miami-Dade Reuse

Component:

HHH

Authorization:

Not Currently Authorized.

Local Sponsor:

Miami-Dade County

Description:

This feature includes a wastewater treatment plant expansion to produce superior, advanced treatment of wastewater from a future West Miami-Dade Wastewater Treatment Plant to be located in the Bird Drive Basin in Miami-Dade County. The initial design assumed a potential discharge volume of 100 million gallons/day from the plant.

The final configuration of these facilities will be determined through more detailed planning and design to be completed in the ongoing West Dade Water Reuse Feasibility Study authorized in Section 413 of WRDA 1996. Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters.

The purpose of the feature is to meet the demands for: (1) the Bird Drive Recharge Area; (2) the South Dade Conveyance System; (3) and the Northeast Shark River Slough. When all demands have been met, the plant will stop treatment beyond secondary treatment standards and will dispose of the secondary treated effluent into deep injection wells.

This feature includes a wastewater treatment plant expansion to provide advanced treatment of wastewater from a future West Miami-Dade Wastewater Treatment Plant. The final configuration will be determined through detailed planning and design to be completed in the West Miami-Dade Reuse Feasibility Study.

Documents:

None

FY2007 Status:

A Design Agreement is pending for this project.

Palm Beach County Sponsored CERP Project: Winsberg Farms Wetlands Restoration

Project Mission:

Construct 175 acres of wetlands and related equipment to irrigate wetlands with reclaimed water.

Project Benefits:

Create additional habitat for wildlife and native plants, efficiently re-use reclaimed water, provide opportunities for public recreation, and connect to the already-established 50-acre Wakodahatchee Wetland.

Component:

Other Program Element

Authorization:

Not Currently Authorized.

Local Sponsor:

Palm Beach County

Description:

In an effort to reduce the amount of treated water from the Southern Region Water Reclamation Facility that is currently wasted in deep injection wells, the Palm Beach County Water Utilities Department plans to further treat and recycle this water.

The Palm Beach County Water Utilities Department has completed construction of a 50-acre constructed wetland at the county's System 3 site east of Jog Road, southeast of the Winsberg property. This wetland has been named Wakodahatchee, which means is "created waters" in the Seminole language. As part of this wetland, a public access facility with limited parking, boardwalk, kiosks and interpretive signage was designed to educate the public about the importance of wetlands for both treatment of water and creation of wildlife habitat.

This project proposes construction of an additional 175 acres of wetlands on the Winsberg property. This will serve to recycle and preserve additional water for future use, to link the Wakodahatchee and Winsberg Farms facilities, and to provide additional green space in an area currently under heavy development.

Approximately 6-to-8 million gallons/day of reclaimed water from the Southern Region Water Reclamation Facility will be applied to the area. The wetland will be planted to maximize the diversity of native plant material and habitat for various species of wildlife.

Documents:

Final PMP, May 2004 http://www.evergladesplan.org/pm/pmp/pmp_91_winsberg.cfm.

Draft PIR, November 2007, not yet available online

FY2007 Status:

A Design Agreement was approved January 3, 2002. The Draft PIR/NEPA Report was completed October 2007. The period for public review and comment on the draft report ended November 2007. The Final PIR/NEPA is slated for completion in April 2008.

OTHER CERP FOUNDATION AND EVERGLADES RESTORATION PROJECTS

C-111/Modified Water Deliveries/Combined Structural and Operational Plan

This work consists of Modified Water Deliveries to the ENP and the C-111 project, along with an authorized plan of improvements that consist of structural modifications and additions to the existing C&SF Project that are needed to enable water deliveries for the restoration of more natural hydrologic conditions in the ENP.

On August 2, 2007, a groundbreaking ceremony was held for the S-332D component of the C-111 project. This construction, located east of the L-31N canal, is important to the ENP and Miami-Dade County agriculture as it completes construction authorized in the 1994 General Reevaluation Report. This construction was partially completed in response to the Interim Operational Plan for Protection of the Cape Sable Sea Side Sparrow.

This construction is expected to increase the size of the detention area from approximately 500 to 1,000 acres. More importantly, this construction should greatly increase the continuous length of detention area and enable more effective seepage management by creating a hydraulic ridge, when operated, to separate and buffer the ENP water levels from the L-31N canal levels. Currently, the detention area covers less than 2.5 miles of the approximately 5.5 miles from S-332B to S-332D. This construction fills in the missing 3 miles of detention area. These improvements will result in more natural hydroperiod in the ENP while maintaining drainage to the privately own lands located within the C-111 basin east of the L-31N canal.

Everglades Construction Project

The Everglades Construction Project is one element of the Everglades restoration strategy. The District is responsible for projects which include the construction of STAs, hydropattern restorations, water diversions, and other improvements.

As part of its intensive schedule to improve water quality in the Everglades, the state of Florida is operating more than 41,000 acres of constructed wetlands. Last year, the STAs combined treated nearly 1.5 million ac-ft of water and prevented 176 mt of total phosphorus from reaching the Everglades. STAs also have also become prime locations for native wildlife. Their vast, shallow waters and rich plant life attract a wide variety of birds and fish, as well as alligators, wild hogs and deer. The Everglades Construction Project STAs are reported in more detail in Chapter 5 of this volume.

Kissimmee River Restoration Project

The Kissimmee River Basin covers 3,000 square miles and stretches from southern Orlando southward to Lake Okeechobee in Central Florida. The Kissimmee River Restoration project has two component parts: the Upper Basin, which are where the Kissimmee River Restoration Headwaters Revitalization project is focused; and the Lower Basin, where the Kissimmee River Restoration project is taking place.

The Kissimmee River Restoration Project is being implemented to reestablish over 40 square miles of floodplain wetland and to reconnect 43 miles of continuous meandering river channel. This project is reported in detail in Chapter 11 of this volume.

Florida Keys Water Quality Improvement Program

Public Law 106-554 authorizes the USACE to provide technical and financial assistance to implement projects for the planning, design, and construction of treatment works to improve water quality in the Florida Keys National Marine Sanctuary. The primary purpose of this effort is to improve water quality in the Florida Keys by implementation of several wastewater and stormwater master plans previously prepared for Monroe County and various municipalities within Monroe County.

Miami-Dade County Regional Canal Study

The purpose of the Miami-Dade County Regional Canal Study is to determine whether modifications should be made to the existing C&SF Project to provide flood-damage reduction and solutions to other related water resource problems within Miami-Dade County. The District is the local sponsor for this work, which is not a CERP project and is not a part of WRDA 2000.

The reconnaissance phase study determined that there is a federal (USACE) interest in participating in a cost-shared feasibility phase study to provide flood-damage reduction and solutions to other related water resource problems within Miami-Dade County.

It was recommended that the feasibility phase be divided into three interim reports:

- Interim Report 1: Basins C-2, C-3, C-4, and C-5
- Interim Report 2: Basins C-6, C-7, C-8, and C-9
- Interim Report 3: Basins C-1, C-100, C-102, C-103, C-111, and L-31E.

This recommendation was based on the large geographic area associated with the study, the need to prioritize basins severely affected by flooding, and potential cost savings resulting from information generated in the first interim feasibility study. The C-7, C-8, and C-9 basins were being studied under a Continuing Authority Program. However, due to budgetary constraints, the studies have been suspended. Close coordination among Miami-Dade County, the District and the USACE will be needed once the project is resumed with preparation of Interim Report 2, which is planned for 2010.