

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

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SUMMARY

The Comprehensive Everglades Restoration Plan (CERP) Annual Report (also known as the CERP 470 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, as amended during calendar year 2005. This report has been prepared by the South Florida Water Management District (SFWMD or District), in cooperation with the Florida Department of Environmental Protection (FDEP), and is included in the *2009 South Florida Environmental Report (SFER) – Volume I*, pursuant to Chapter 2005-36, Laws of Florida, and Section 373.036(7), Florida Statutes.

The CERP Annual Report fulfills the statutory requirements and includes CERP financial information and the progress of CERP implementation information for Fiscal Year 2008 (October 1, 2007–September 30, 2008). This document 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. It identifies state and local sponsor revenues, and itemizes expenditures related to CERP implementation. The purpose for which the funds were expended, the unencumbered fund balance remaining for CERP implementation, and the schedule of anticipated expenditures for the next fiscal year (Fiscal Year 2009) are also covered.

The CERP Annual Report is divided into three parts (A–C), according to the portion of the statute that each fulfills. Similar to previous SFERs, Parts (A) and (B) in this year’s report provide an update on District and FDEP fund appropriations and expenditures related to the CERP Program. To streamline annual reporting and focus on key updates since the previous SFER, Part (C) in this year’s report highlights progress made on CERP projects during FY2008, with supplemental information presented in Chapter 7A of this volume and the 2008 SFER – Volume I, Appendix 7A-1. Further details on the topics briefly outlined in this appendix are also available on the CERP web site at www.evergladesplan.org.

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BACKGROUND

The Comprehensive Everglades Restoration Plan (CERP) is a conceptual plan, the implementation of which is a significant restoration program that builds upon and complements other state and federal initiatives to revitalize South Florida's ecosystem. The plan, authorized by the U.S. Congress in 2000, is composed of a series of projects designed to address four major characteristics of water flow: quantity, quality, timing, and distribution.

In 2000, the federal government and the state of Florida entered into an equal partnership agreement to restore, protect, and preserve water resources in Central and South Florida, including the Everglades. The U.S. Army Corps of Engineers (USACE) is the lead federal agency and the South Florida Water Management District (SFWMD or District) is the lead state agency for the effort. Together, the partners are working with other agencies and stakeholders to provide significant and lasting environmental benefits, enhance water supplies, and maintain food protection for the region.

KEY PROGRESS ON CERP

Key progress to date on CERP implementation includes:

- More than half of the nearly 400,000 acres needed for restoration are in public ownership.
- Project-specific planning and design are under way, with some project components under construction.
- The Water Resources Development Act of 2007 (WRDA 2007) was passed, authorizing the Picayune Strand Restoration, Indian River Lagoon – South (IRL-S), and Fran Reich Preserve (Site 1 Impoundment) projects for construction.
- Interim goals were established for CERP so that progress can be evaluated at specific points by agency managers, the state of Florida, and U.S. Congress throughout the planning and implementation process.
- Interim targets also were established to evaluate progress toward meeting other water-related needs, such as water supply for the region, provided for in the plan.
- State rulemaking for the first Water Reservations (IRL-S and Picayune Strand Restoration projects) has been initiated to ensure that water intended for natural systems is safeguarded from other uses (see Volume II, Chapter 3).
- The National Academy of Sciences' independent technical review of CERP progress found the science program to be comprehensive and of high quality.
- The first biennial System Status Report was completed. The report describes the current conditions of the ecosystem establishing a baseline that will be used to track changes in ecosystem health.
- Public outreach efforts continue to engage various communities in the region about the importance of CERP. In addition to traditional publications and newsletters, multi-language information is provided via the agency's web site, informational kiosks, community gatherings, public meetings, and ecosystem restoration-related curricula taught in local schools.

KEY PROGRESS ON EXPEDITED PROJECTS

To help achieve ecosystem-wide benefits early, Florida is fast-tracking various Everglades water quality and restoration projects. As part of this overall initiative, the South Florida Water Management District continues to move forward with financing, design, and construction aspects of selected projects or portions of projects identified in CERP. Key progress to date on expedited projects includes:

- Ninety-nine percent of the land needed for these selected projects has been acquired.
- The District obtained court approval and issued initial Certificates of Participation for accelerated construction.
- Design and/or construction is in progress for all project components.
- Small Business Enterprise and workforce training initiatives have helped promote contracting and increased the availability of skilled workers.

CERP 470 REPORT

Section 373.470(7), Florida Statutes (F.S.), requires the South Florida Water Management District and the Florida Department of Environmental Protection (FDEP) to submit the CERP Annual Report to provide enhanced oversight of and accountability for the financial commitments established under the statute's Everglades Restoration section, and the progress made in the implementation of CERP. The statute's mandate that this report be made available to the public is fulfilled by producing the CERP Annual Report (also known as the CERP 470 Report) and including it in the annual *South Florida Environmental Report* (SFER).

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 FY2008 expenditures and fund balances, and provide a schedule of anticipated expenditures for FY2009.
- 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 the progress made in implementing CERP, including the status of all projects initiated after the effective date of the Everglades Restoration Investment Act (Section 373.470, F.S.).

This report has been consolidated with other annual reports in the 2009 SFER – Volume I, pursuant to Chapter 2005-36, Laws of Florida, and Subsection 373.036(7), F.S. Similar to previous SFERs, Parts (A) and (B) in this year's report provides an update on District and FDEP fund appropriations and expenditures related to the CERP Program. To eliminate annual reporting redundancies and focus on key updates since the previous SFER, Part (C) in this year's report highlights progress made on CERP projects during Fiscal Year 2008 (FY2008) (October 1, 2007–September 30, 2008), complemented by supplemental information provided in Chapter 7A of this volume and the 2008 SFER – Volume I, Appendix 7A-1. Additional details on the topics highlighted in this appendix are also available on the CERP web site at www.evergladesplan.org.

PART (A) FUNDS – SFWMD AND FDEP

BACKGROUND

Pursuant to Section 373.470(7)(a), F.S., Part (A) of the CERP Annual Report contains fiscal-year information on revenues, expenditures, fund balance, and anticipated expenditures related to CERP implementation. This financial information is summarized in **Tables 1** through **4** as follows:

- **Table 1:** FY2008 revenues
- **Table 2:** FY2008 expenditures
- **Table 3:** FY2008 unencumbered balance of funds remaining in trust funds or other accounts
- **Table 4:** Anticipated expenditures for the next fiscal year, FY2009

Only revenues, expenditures, and unencumbered balances dedicated to CERP are included in these tables. The financial information contained in this annual report is taken from unaudited FY2008 records. Audited FY2008 information is scheduled to be available during the second quarter of FY2009. Any changes to the financial information presented in this appendix 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.

BASIS OF PRESENTATION

Accounting principles, policies and practices of both the District and the FDEP conform to generally accepted accounting principles (GAAPs) for state and local governments, and are structured in accordance with the Government Accounting Standards Board requirements. GAAPs 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.

Table 1. Comprehensive Everglades Restoration Plan (CERP) revenues for Fiscal Year 2008 (FY2008) (October 1, 2007–September 30, 2008)¹.

Source	SFWMD ²	FDEP ⁴	Other Local Sponsors	Total
Save Our Everglades Trust Fund:				
General Revenue (Non-Bond Funding Sources)		76,000,000		76,000,000
Bond Proceeds		99,528,821		99,528,821
Documentary Stamp Taxes (for Debt Service)		9,403,028		9,403,028
Investment Earnings (net)		2,373,333		2,373,333
Save Our Everglades Trust Fund - Total:				
		187,305,182		187,305,182
<i>Ad Valorem</i> Resources	137,762,169			137,762,169
Investment Earnings ³	17,396,254			17,396,254
Florida Forever Trust Fund	49,297,201	75,401		49,372,602
State Appropriations	250,000			250,000
Alligator Alley Toll Revenues	651,345			651,345
Miscellaneous Revenues	753,242			753,242
				0
Total Revenues	\$206,110,211	\$187,380,583	N/A	\$393,490,794

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 The major portion of investment earnings (\$15,650,681) accrued on unspent balances of Certificates of Participation proceeds.

⁴ The information for FDEP reflects the Save Our Everglades Trust Fund in its entirety, including funding to be used for the implementation of the Northern Everglades initiative.

Table 2. CERP expenditures for FY2008¹.

Projects	SFWMD	FDEP	Total
Local Sponsor - SFWMD ^{2,3}			
Pilot Projects			
Lake Okeechobee ASR Pilot	10,529		10,529
Caloosahatchee (C-43) River ASR Pilot			0
Hillsboro ASR Pilot	114,578		114,578
ASR Regional Study	1,480,998		1,480,998
Lake Belt In-Ground Reservoir Technology Pilot			0
L-31N Seepage Management Pilot	58,688		58,688
Wastewater Reuse Technology Pilot			0
Kissimmee River and Lake Okeechobee Region			
Lake Okeechobee Watershed	736,125	(87)	736,038
Lake Istokpoga Regulation Schedule			0
Lake Okeechobee Aquifer Storage and Recovery			0
Caloosahatchee River Region			
C-43 Basin Storage Reservoir – Part 1	1,796,595	170,800	1,967,395
C-43 Basin Aquifer Storage and Recovery – Part 2			0
Caloosahatchee Backpumping with Stormwater Treatment			0
Upper East Coast Region			
Indian River Lagoon – South	29,920,015	2,951,034	32,871,049
C-44 Reservoir / STA	2,255,584		2,255,584
Everglades Agricultural Area			
River of Grass	6,410,069		6,410,069
Everglades Agricultural Area Storage Reservoirs - Phase 1	130,982,307	50,615	131,032,922
EAA Bolles and Cross Canals	194,435		194,435
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	417,885		417,885
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	11,736		11,736
Lower East Coast Region			
North Palm Beach County - Part 1	14,512,309	46,325,866	60,838,175
North Palm Beach County - Part 2			0
ACME Basin B Discharge	-		0
Strazzula Wetlands			0
Site 1 Impoundment	149,874		149,874
Broward County WPA	304,421		304,421
C-11 Impoundment	609,920	3,000,000	3,609,920
C-9 Impoundment	113,113		113,113
WCA 3A 3B Seepage Management	817,708		817,708
C-4 Structure			0
Bird Drive Recharge Area	34,044		34,044
PBC Agriculture Reserve Reservoir – Part 1	14,312		14,312
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	102,131		102,131
Biscayne Bay Coastal Wetlands	8,948,720	2,122,495	11,071,215
C-111 Spreader Canal	2,192,238		2,192,238
Southwestern Florida Region			
Picayune Strand (S. Golden Gate Estates) Hydrologic Restoration	3,493,711	75,401	3,569,112

Table 2. Continued.

Projects	SFWMD	FDEP	Total
Local Sponsor - SFWMD ^{2,3}			
Florida Bay and Florida Keys Region			
Florida Keys Tidal Restoration			0
Critical Restoration Projects			
Ten Mile Creek	1,793,298		1,793,298
Western Tamiami Trail Culverts			0
Western C-4 Water Control Structures			0
Southern Crew/Imperial River Flowway	7,062,685		7,062,685
Lake Trafford Restoration	935,050		935,050
Lake Okeechobee Water Retention/Phosphorus Removal	312,765		312,765
Western C-11 Water Quality Improvement			0
Critical Restoration Program Controls			0
Reconnaissance, Feasibility, and Planning Studies			
Southwest Florida Feasibility Study	584,754		584,754
Florida Bay and Florida Keys Feasibility Study	413,747		413,747
Indian River Lagoon Feasibility Study			0
Water Preserve Areas Feasibility Study			0
Monitoring and Evaluation			
RECOVER	1,129,990		1,129,990
Adaptive Assessment and Monitoring	5,852,062		5,852,062
Program Management & Support			
Program Management	3,530,631		3,530,631
Acceler8 Program Support ⁴	43,411,187		43,411,187
Program Support ⁵	693,956	10,672,026	11,365,982
Program Controls	18,307		18,307
Public Involvement and Outreach	224,466		224,466
Environmental and Economic Equity	26,132		26,132
Data Management	1,527,774		1,527,774
Interagency Modeling Center	3,680,071		3,680,071
Master Recreation Plan	59,990		59,990
Programmatic Regulations			0
CERP Pre-Cursors			
C-111 Project Implementation	7,540,069		7,540,069
Other Local Sponsors ⁶			
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
Restn. 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 ⁵	\$284,478,979	\$65,368,150	\$349,847,129

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 Certificates of Participation issuance to fund project construction.

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 information not available.

Table 3. CERP unencumbered fund balance for FY2008¹.

	SFWMD ²	FDEP ⁵	Other Local Sponsors	Total
Fund Balance as of October 1, 2007³	464,114,015	12,532,140	N/A	\$476,646,155
Add: Revenues	206,110,211	187,380,583	N/A	\$393,490,794
Less: Expenditures	284,478,979	114,691,991	N/A	\$399,170,970
Fund Balance as of September 30, 2008³	385,745,247	85,220,732	N/A	\$470,965,979
Less: Encumbrances	13,031,231	133,533	N/A	\$13,164,764
Designated Fund Balance ⁴	355,963,653	0	N/A	\$355,963,653
Unencumbered Balance as of September 30, 2008	\$16,750,363	\$85,087,199	N/A	\$101,837,562

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.

³ Fund balance figures for SFWMD include the CERP *Ad Valorem* Fund, Other Creditable CERP Funds, and CERP Acceler8 Fund (for project construction).

⁴ This represents the portion of fund balance designated to fund the following year's budget. It includes \$95,190,753 of CERP *ad valorem* and \$260,772,900 of Certificates of Participation proceeds.

⁵ The information for FDEP reflects the Save Our Everglades Trust Fund in its entirety, including funding to be used for implementing NEEPP.

Table 4. CERP anticipated expenditures for FY2009¹.

CERP Project	Total Anticipated Expenditures
Local Sponsor - South Florida Water Management District	
Pilot Projects	
Lake Okeechobee ASR Pilot	0
Caloosahatchee (C-43) River ASR Pilot	0
Hillsboro ASR Pilot	564,037
ASR Regional Study	2,568,656
Lake Belt In-Ground Reservoir Technology Pilot	0
L-31N Seepage Management Pilot	145,705
Wastewater Reuse Technology Pilot	0
Kissimmee River and Lake Okeechobee Region	
Lake Okeechobee Watershed	258,309
Lake Istokpoga Regulation Schedule	0
Lake Okeechobee Aquifer Storage and Recovery	0
Caloosahatchee River Region	
C-43 Basin Storage Reservoir – Part 1	393,519
C-43 Basin Aquifer Storage and Recovery – Part 2	0
Caloosahatchee Backpumping with Stormwater Treatment	0
Upper East Coast Region	
Indian River Lagoon – South	2,259,737
C-44 Reservoir / STA	173,445
Everglades Agricultural Area	
River of Grass ²	1,877,732,642
Everglades Agricultural Area Storage Reservoirs - Phase 1	29,591,179
EAA Bolles and Cross Canals	0
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	924,801
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	24,565
Lower East Coast Region	
North Palm Beach County - Part 1	7,024,244
North Palm Beach County - Part 2	0
Strazzula Wetlands	0
Site 1 Impoundment	173,694
Broward County WPA	334,945
C-11 Impoundment	95,225
C-9 Impoundment	15,225
WCA 3A 3B Seepage Management	15,022
C-4 Structure	0
Bird Drive Recharge Area	114,895
PBC Agriculture Reserve Reservoir – Part 1	0
PBC Agriculture Reserve Aquifer Storage & Recovery – Part 2	0

Table 4. Continued.

CERP Project	Total Anticipated Expenditures
Local Sponsor - South Florida Water Management District	
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	89,049
Biscayne Bay Coastal Wetlands	8,502,058
C-111 Spreader Canal	76,647,907
Southwestern Florida Region	
Picayune Strand (So.Golden Gate Estates) Hydrologic Restoration	1,269,264
Florida Bay and Florida Keys Region	
Florida Keys Tidal Restoration	0
Critical Restoration Projects	
Ten Mile Creek	1,105,965
Western Tamiami Trail Culverts	0
Western C-4 Water Control Structures	0
Southern Crew/Imperial River Flowways	4,781,861
Lake Trafford Restoration	3,025,033
Lake Okeechobee Water Retention/Phosphorus Removal	366,999
Western C-11 Water Quality Improvement	0
Critical Restoration Project Implementation Support	0
Reconnaissance, Feasibility, and Planning Studies	
Southwest Florida Feasibility Study	203,183
Florida Bay and Florida Keys Feasibility Study	50,243
Indian River Lagoon Feasibility Study	0
Water Preserve Areas Feasibility Study	0
Monitoring and Evaluation	
RECOVER	953,635
Adaptive Assessment and Monitoring	4,580,956
Program Management & Support	
Acceler8 - Program Support	1,583,349
Program Management and Support	4,124,451
Geodetic Vertical Control Surveys	0
Program Controls	0
Public Involvement and Outreach	179,734
Environmental and Economic Equity	0
Data Management	1,913,588
Master Recreation Plan	0
Interagency Modeling Center	2,417,764
Programmatic Regulations	0
Project Implementation Support	0
Program Indirect Costs ³	4,700,000
Construction Reserve ⁴	11,233,170
Debt Service ⁵	15,770,708

Table 4. Continued.

CERP Project	Total Anticipated Expenditures
Local Sponsor - South Florida Water Management District	
CERP Pre-Cursors	
C-111 Project Implementation	681,261
Other Local Sponsors	
Comprehensive Integrated Water Quality Feasibility Study (FDEP)	133,583
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)	0
Lakes Park Restoration (Lee County)	N/A
Winsburg Farms Wetlands Restoration (Palm Beach County)	N/A
Miccosukee Water Management Plan (Missosukee 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	\$2,066,723,606

¹ Federal expenditures are not listed on this table.

² This reflects the proposed *River of Grass* Acquisition Project and debt service on anticipated financing.

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 These funds are set aside for project construction still to be determined.

⁵ This represents projected debt service in FY2009 on the first Certificates of Participation issued in FY2007 to fund project construction.

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 FY2008. Every CERP project is or will be described in a Project Implementation Report (PIR), and a Project Cooperation Agreement subsequently will be executed. 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 also conform to GAAP for state and local governmental units and are structured in accordance with the Government Accounting Standards Board requirements. 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,
CERP Annual Report for FY2008.

	Save Our Everglades Trust Fund	Florida Forever Trust Fund	Totals
REVENUES - By Source of Funds			
General Revenue	76,000,000	-	\$76,000,000
Bond Proceeds	99,528,821	-	\$99,528,821
Documentary Stamp Taxes for Debt Service	9,403,028	-	\$9,403,028
Florida Forever Trust Fund	-	75,401	\$75,401
Interest Earnings (Net)	2,373,334	-	\$2,373,334
TOTAL REVENUES	\$187,305,182	\$75,401	\$187,380,583
EXPENDITURES - By Project			
CERP Projects:			
Lake Okeechobee Watershed	(87)	-	(\$87)
C-43 Basin Storage Reservoir	170,800	-	\$170,800
Indian River Lagoon - South	2,951,034	-	\$2,951,034
Everglades Agricultural Area Storage Reservoirs	50,615	-	\$50,615
North Palm Beach County - Part 1	46,325,866	-	\$46,325,866
Biscayne Bay Coastal Wetlands	2,122,495	-	\$2,122,495
Broward County WPA (C-11 Impoundment)	3,000,000	-	\$3,000,000
Picayune Strand Hydrologic Restoration	-	75,401	\$75,401
Non-CERP Projects:			
Miami River Dredging Project	10,000,000	-	\$10,000,000
Northern Everglades Caloosahatchee River	22,323,841	-	\$22,323,841
Caloosahatchee River Watershed	5,000,000	-	\$5,000,000
Northern Everglades Non-Point Source Controls	9,000,000	-	\$9,000,000
Nutrient Control Technologies	3,000,000	-	\$3,000,000
Debt Service on Bonds	10,672,026	-	\$10,672,026
TOTAL EXPENDITURES	\$114,616,590	\$75,401	\$114,691,991
ENCUMBRANCES	133,583	-	133,583
TOTAL ENCUMBRANCES	\$133,583	-	\$133,583
Excess (Deficiency) of Revenues Over Expenditures and Encumbrances	72,555,009	-	72,555,009
Unencumbered Balance as of September 30, 2007	\$12,532,140	\$0	\$12,532,140
Unencumbered Balance as of September 30, 2008	\$85,087,149	-	\$85,087,149

PART (C) – IMPLEMENTATION STATUS

CERP PROCESS

Comprehensive Plan Overview

The Comprehensive Everglades Restoration Plan (USACE and SFWMD, 1999) is a conceptual plan which proposed major modifications to the Central and Southern Florida (C&SF) Project in order to reverse decades of ecosystem decline. The Yellow Book described nearly 50 major projects and 68 project components to be constructed at a cost, estimated in 2004 dollars, of approximately \$10.9 billion.

Major components of CERP focus on restoring the quantity, quality, timing, and distribution of water for the natural system, and include Aquifer Storage and Recovery (ASR), in-ground reservoirs, rainfall driven operations, removing barriers to sheetflow, seepage management, Stormwater Treatment Areas (STAs), surface water storage reservoirs, and water reuse and conservation.

CERP's goal, as set forth in the Water Resources Development Act of 2000 (WRDA 2000), is to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The Programmatic Regulations, which guide CERP implementation, define restoration as "the recovery and protection of the South Florida ecosystem so that it once again achieves and sustains the essential hydrological and biological characteristics that defined the undisturbed South Florida ecosystem." These defining characteristics include a large extent of interconnected wetlands, extremely low concentrations of nutrients in freshwater wetlands, sheetflow, healthy and productive estuaries, resilient plant communities, and abundant, native wetland animals.

When the U.S. Congress authorized CERP in WRDA 2000, several activities intended to restore key aspects of the Everglades ecosystem were already being implemented by the SFWMD and the USACE. These non-CERP initiatives are critical to the overall restoration success. In fact, the effectiveness of CERP was predicated upon the completion of many of these projects, which include Modified Water Deliveries to Everglades National Park, C-111, and the Critical Projects. While these non-CERP foundation projects are intended to provide restoration benefits, they also are important as necessary precursors for many CERP projects. The Modified Water Deliveries project, which includes Tamiami Trail modifications, is essential for decompartmentalization and the restoration of flows in Everglades National Park (ENP or Park). This precedence relationship is acknowledged, and WRDA 2000 requires the completion of this project before appropriations are made for certain CERP restoration projects in the Everglades, including the Water Conservation Area 3A (WCA-3A) Decompartmentalization and Sheetflow Project.

FY2008 updates on the implementation of CERP projects are summarized below, except for the following components of CERP (i.e., those topics for which there are no FY2008 updates), which are provided in 2008 SFER – Volume I, Appendix 7A-1:

- Design Agreements
- Program Management Process Overview
- Program Management Plans
- RECOVER (also, see Volume I – Chapter 7B)
- Interagency Modeling Center – Systemwide Modeling
- Design Coordination Team

- Environmental and Economic Equity
- Geodetic Vertical Controls
- Independent Scientific Review Panel
- CERP Information and Data Management
- Public Information and Outreach
- Programmatic Regulations
- Master Implementation Sequencing Plan
- Overview of CERP Project Processes
- Public Meetings to Monitor Ecosystem Restoration Progress
- Achievement of WRDA Requirements

Land Acquisition

The District is responsible for acquiring the real estate needed for the construction, monitoring, and operation of CERP projects. 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. During FY2008, \$131.6 million was expended to purchase 5,442 acres for CERP projects. As of September 30, 2008, the District had acquired nearly 59 percent of lands needed for CERP implementation. The acres acquired in FY2008 increased the total lands available for use by CERP projects to 229,094 acres. 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 expedited projects.

In FY2008, significant progress was made in acquiring additional lands for the Indian River Lagoon – South (IRL-S) Project through funding partnerships with Martin County and the U.S. Department of Agriculture, Wetlands Reserve Program. Approximately 769 acres of natural storage area land was acquired within the Allapattah Complex, IRL-S component, at a cost of \$10.8 million. Additionally, 1,760 acres were acquired within the C-23/24 basin for the C-23/24 North and South Reservoir, IRL-S components. The \$52.5 million cost of these acres will be paid over multiple years. It is expected that payments totaling approximately \$24.2 million will be made using future Florida Forever program funds.

A total of 684 acres was acquired for the Pal-Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration components of the North Palm Beach – Part 1 project, at a cost of \$31 million. This acquisition also was achieved with a multi-year contract, and it is expected that the remaining payments totaling approximately \$14.5 million will be made using future Florida Forever program funds.

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. Further information on CERP land acquisition activities is presented in Volume II, Chapter 6.

Master Recreation Plan

CERP projects will provide recreational opportunities in South Florida. The USACE and the District hosted a series of nine public meetings across South Florida in April and May 2008 to present and receive feedback on regionally based recreation plans. A formal comment period for the Master Recreation Plan was also held in April and May 2008.

In April 2008, the District's Governing Board authorized the Florida Fish and Wildlife Conservation Commission (FWC) to establish Stormwater Treatment Area 1 West in Palm Beach County and Stormwater Treatment Area 5 in Hendry County as Alligator Management Units for the annual alligator hunting season. The FWC, which monitors alligator hunting throughout the state, will allow permitted hunters take a total of 300 alligators from the two STAs on specified weekends from August through October. Alligator hunts do not effect the regular operation of the STAs.

Program Controls

To ensure successful implementation of CERP by keeping it on schedule and within budget, a set of program controls is being implemented. These controls, which are 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.

Cost Estimate Update

In October 1999, CERP's total cost was estimated at \$8.2 billion. The estimated cost in October 2007 was \$11.9 billion. The increase of \$3.7 billion included inflation adjustments of approximately \$2.6 billion for projects and adaptive assessment and monitoring; a \$500 million increase for program coordination efforts required by the U.S. Congress in WRDA 2000; and \$600 million for changes identified from the three final Project Implementation Reports (PIRs) that were authorized for construction by the U.S. Congress: the Indian River Lagoon – South, Picayune Strand Restoration, and Fran Reich Preserve (Site 1 Impoundment) projects.

Fiscal Year 2008 Budget

The federal budget for FY2008 included \$64 million for work on CERP implementation. Also in FY2008, the Florida legislature approved \$100 million for continued support of CERP implementation, and an additional \$100 million to initiate the state's Northern Everglades and Estuaries Program. The Florida Forever Program, the largest conservation program of its kind in the world, added \$36.8 million in FY2008. In addition, the District's FY2008 budget included \$495 million for the implementation of CERP and expedited projects.

Integrated Delivery Schedule

In response to Government Accounting Office recommendations, a new Integrated Delivery Schedule for the South Florida ecosystem is under development. This new implementation schedule is being developed in order to reprioritize the funding and timing of future restoration activities, with the goals updating the existing project schedules; providing current status and practical time lines for implementation; and focusing on delivering meaningful restoration benefits as early as possible.

The new Integrated Delivery Schedule goals also include phasing large projects, as necessary, to provide early benefits and learning. This includes related non-CERP projects in program sequencing, and new programs such as the Northern Everglades and Estuary Protection Program. This also includes CERP foundation projects and other projects which affect greater Everglades restoration efforts in an integrated schedule, allowing planners to highlight the precedence relationships among these projects.

Project prioritization and planning must include the objectives of reestablishing sheetflow to the central Everglades, optimizing water storage, improving water quality, restoring Lake Okeechobee and the Northern Estuaries (Caloosahatchee River and St. Lucie River estuaries), and restoring and enhancing wetlands and other natural areas.

CERP 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. WRDA 2007 grants congressional authorization for the Indian River Lagoon – South and the Picayune Strand Restoration projects. WRDA 2007 also authorized construction of a reservoir and water conveyance features under the Fran Reich Preserve (Site 1 Impoundment) Project.

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 a notable example. The District and the USACE are halfway to completion of that project. The 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 already are returning.

The implementing agencies have several 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 the U.S. Congress for legislative consideration of authorization and funding.

Everglades restoration is a profound endeavor, and it will take many years to complete. But, even as difficult as it may be, it must be done. Given the low water levels and drought conditions experienced going in to 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 challenges head on, and with a commitment to reexamine and modify the approach based on sound science and fiscal efficiency.

Two years ago, the National Academy of Sciences Committee on Independent Scientific Review of Everglades Restoration Progress (Committee) provided invaluable advice by recommending 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 USACE respectfully are implementing this advice.

The Committee's Second Biennial Review was published in 2008. Recommendations point toward developing systemwide planning mechanisms and sound project sequencing; revisiting the traditional project-by-project review, authorization, and funding process; continuing the state of Florida's aggressive land acquisition efforts; and encouraging strong leadership.

In 2007, the District accepted the USACE's proposal to complete the design and construction of the C-11 and C-9 Impoundments, the WCA-3A/3B Seepage Management Area, and the Fran Reich Preserve (Site 1 Impoundment) as part of the federal government's share of CERP. These expedited projects were part of the former Acceler8 initiative³. These projects were transitioned

³ Since the launch of Acceler8, the District has recently expanded its list of fast-tracked construction projects to also support a number of other restoration and water quality initiatives now under way in both the Northern and Southern Everglades regions. Further information on the agency's expedited projects is available on the District's web site at www.sfwmd.gov, under the *Everglades* tab (see *Everglades Expedited Projects* e-link).

during FY2008, and the District is supporting the USACE during the design phase. The USACE recently accepted a District proposal for the federal government to construct the remaining components of the Picayune Strand Restoration Project, another expedited project, which will better balance the overall CERP cost sharing. A similar request for the Caloosahatchee River (C-43) West Storage Reservoir expedited project also is pending.

The following sections in this document describe individual projects and milestones, such as development of Project Management Plans (PMPs) and Project Implementation Reports (PIRs), and are organized by category as Pilot Projects, Feasibility and Reconnaissance Studies, Critical Projects, and CERP Priority Projects.

CERP PILOT PROJECTS OVERVIEW

Pilot projects authorized under the WRDAs 1999 and 2000 were planned to 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 ASR projects. Three other projects will test other proposed technologies.

PMPs have been completed for all the CERP 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 35-year-old technology work as expected, then they can replenish urban drinking-water supplies, irrigate farmland, and nourish natural areas while requiring very little land for a very large water return.

A map of the CERP Pilot Projects is provided as **Figure 1**. The FY2008 status of the Pilot Projects is presented below. Supplemental information is also provided in the 2008 SFER – Volume I, Appendix 7A-1.

- **Lake Okeechobee Aquifer Storage and Recovery Pilot.** Construction has been completed at the Kissimmee River ASR Facility. Cycle 1 testing will begin in FY2009. Construction is planned at the Port Mayaca ASR Facility, with anticipated completion in late 2010. The design is being updated.
- **Caloosahatchee River (C-43) River Aquifer Storage and Recovery Pilot.** A sandy aquifer was found, which is not adequate for open-hole, high-capacity ASR wells. The C-43 ASR well has been plugged. A new location for an exploratory well will be determined in conjunction with siting of the second reservoir as part of the C-43 Basin Storage Reservoir feature.
- **Hillsboro Aquifer Storage and Recovery Pilot.** Substantial completion has been reached at the Hillsboro ASR Facility. Cycle 1 testing is scheduled to begin in FY2009.
- **Lake Belt In-Ground Reservoir Pilot.** Remains on hold.

- **L-30 (formerly L-31N) Seepage Management Pilot.** With identification of the Selected Plan during FY2008, this project was updated to include critical uncertainties associated with technologies that likely will be considered to control seepage from the ENP and WCA-3B. During FY2008, the USACE completed new design criteria for this seepage management pilot project. The L-31N Seepage Management Pilot Project's Draft Integrated Pilot Project Design Report with Environmental Assessment (PPDR/EA) was released for public review and comment in late 2008.
- **Wastewater Reuse Pilot.** Remains on hold.

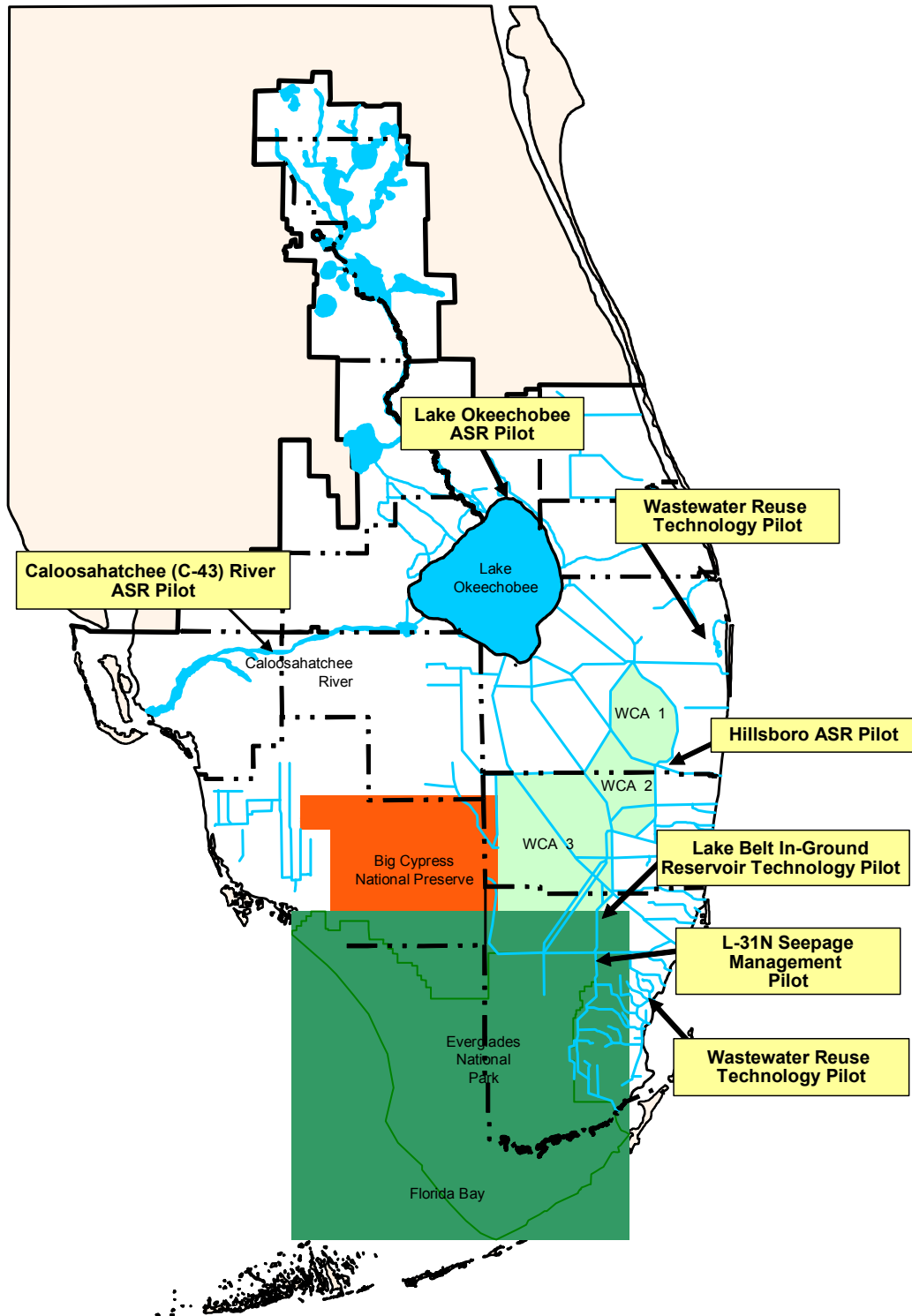


Figure 1. General location of Pilot Projects.

CERP FEASIBILITY AND RECONNAISSANCE STUDIES OVERVIEW

The time frame of the Central and South Florida Project Comprehensive Review Study (Restudy) did not permit a thorough investigation of all the regional water resource challenges in South Florida; therefore, new studies were proposed under WRDA 1996.

A map of the CERP Feasibility and Reconnaissance Studies is provided as **Figure 2**. The FY2008 status of the Feasibility and Reconnaissance Studies is presented below. Supplemental information is also provided in the 2008 SFER – Volume I, Appendix 7A-1.

- The status of the Additional Water for ENP and Biscayne Bay Reconnaissance, Comprehensive Integrated Water Quality Feasibility, IRL-North and South Feasibility, and Water Preserve Areas Feasibility studies remain unchanged since FY2007.
- **Florida Bay/Florida Keys Feasibility Study.** Integration of the water quality model and completion of management scenarios modeling is progressing toward completion in FY2008.
- **Southwest Florida Feasibility Study.** The Southwest Florida Feasibility Study will evaluate features in all sub-basins of the study area at a conceptual design level. The study will provide rough order-of-magnitude construction and real estate costs, with land acquisition limited to approximately 25 percent of total project costs. The outcome will be a “road plan” for restoration in Southwest Florida and will identify restoration projects that can be implemented at all levels of government. The Tentatively Selected Plan that is submitted to the U.S. Congress for approval will include only those projects that have a federal interest. Additional PIRs or more detailed feasibility studies will be required to develop design details for the recommend features.

The final array of alternatives identified a comprehensive regional framework to address water resources problems and opportunities. Alternatives modeling and evaluation progressed during FY2008, with the Alternative Formulation Briefing scheduled for March 2009. Based on the current schedule, the draft Southwest Florida Feasibility Study document is planned to be issued in July 2009, and the final document is expected to be completed in February 2010.

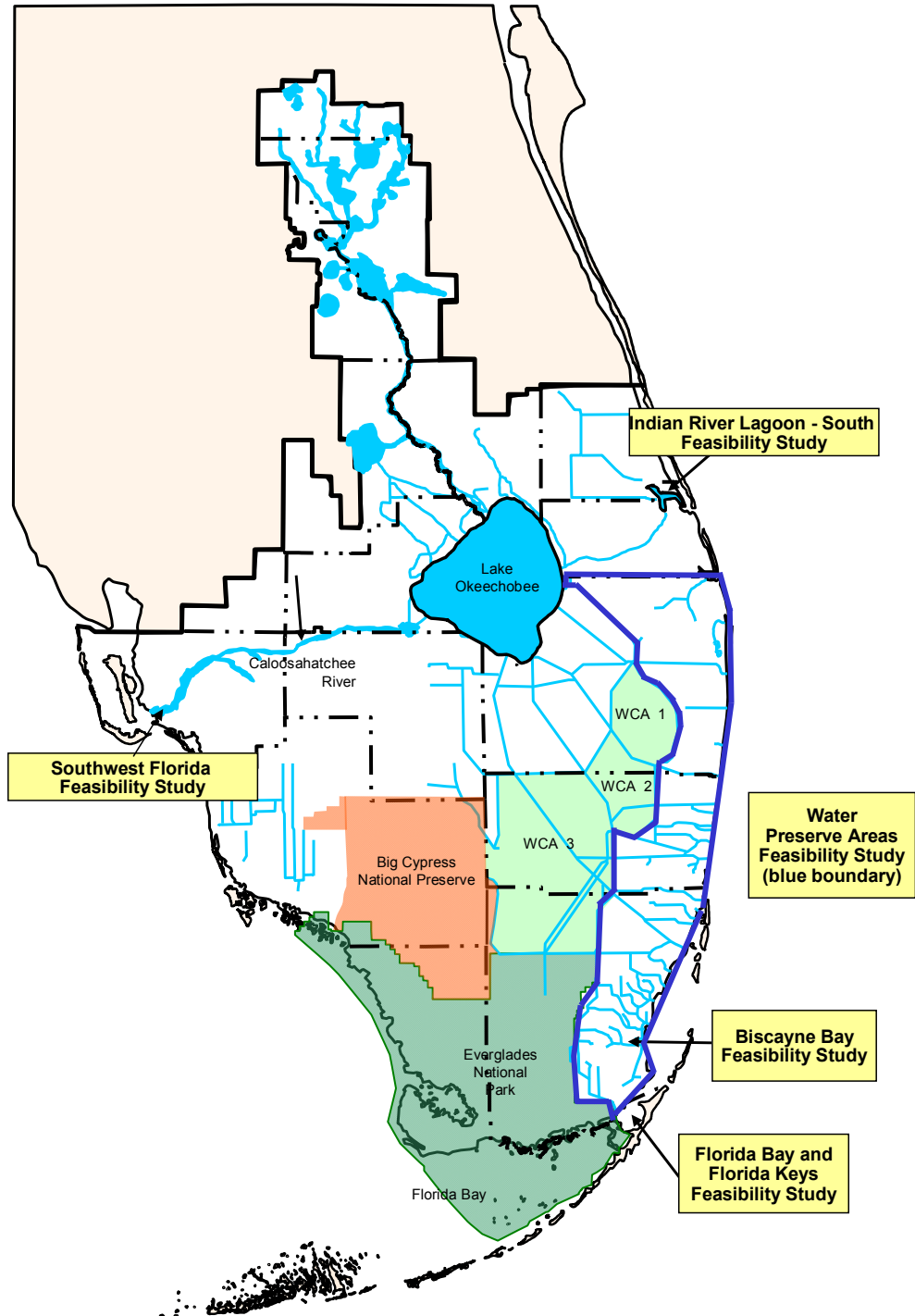


Figure 2. General location of Feasibility and Reconnaissance Studies.

CERP CRITICAL RESTORATION PROJECTS OVERVIEW

The progress made on the nine Critical Restoration Projects authorized under WRDA 1996, with modification in WRDA 1999, to produce immediate, substantial and independent benefits prior to CERP is summarized in this section, with further details available at the USACE web site <http://www.saj.usace.army.mil>.

A total of \$75 million 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 Critical Restoration Projects, \$7 million in federal funds for land acquisition were transferred to the state through a grant administered by the U.S. Department of the Interior (USDOI). The Critical Restoration Projects were assumed to be completed before certain CERP project components could be implemented.

A map of the CERP Critical Restoration Projects is provided as **Figure 3**. The FY2008 status of the Critical Restoration Projects is presented below. Supplemental information is also provided in the 2008 SFER – Volume I, Appendix 7A-1.

- **Lake Okeechobee Water Retention/Phosphorus Removal.** Operation of the Nubbin Slough STA by the USACE remains non-operational due to an electrical issue with the pumps discovered during the pump tests conducted in October 2007. At the time this report was written, the USACE expected repairs to be completed by the end of 2008. Once repairs have been completed satisfactorily, water availability will determine whether the District can begin STA start-up.
- **Lake Trafford Restoration.** The containment facility and base bid dredging are complete. In 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 lake's shallow littoral zone when, in 2007, prevailing drought conditions caused operations to be placed on hold. The dredging contract was terminated for convenience in October 2007. The District plans to issue a Request for Bid to begin dredging the approximately 750,000 cubic yards of remaining muck by February 2009, with completion planned by September 2009.
- **Southern CREW/Imperial River Flow-way.** Original plans called for the District to purchase, by condemnation if necessary, up to 4,670 acres of east Bonita and return it to its natural state. The District has acquired 3,770 acres to date. The project was expected to cost \$14 million, but the land and restoration costs to date are \$28 million. Acquiring the balance of the land is estimated to cost another \$16 million, for a total cost of \$44 million. Faced with a total project cost estimated at more than triple the original, rising land prices, declining tax revenues, and federal cost-share funds capped, the District has requested Lee County to consider acquiring the remaining lands south of Kehl Canal through the Conservation 2020 Program. If the county can acquire the fewer than 240 acres south of Kehl Canal, appraised at approximately \$6.8 million, then the District can apply the proceeds toward purchasing remaining project lands north of the canal. Acquisition and demolition activities are expected to allow sheetflow restoration.
- **Ten Mile Creek.** Although initial construction has been completed on the Ten Mile Creek Critical Restoration Project, it has not been put into beneficial use. Analysis is being performed by the USACE to determine an appropriate course of action necessary to remedy design and construction issues for the project to meet its expected goals.

- **Western Tamiami Trail Culverts.** The status of this project remains unchanged since FY2007.

The following Critical Restoration Projects have been completed to date.

- East Coast Canal Structures
- Florida Keys Carrying Capacity Study
- Seminole Big Cypress Reservation Water Conservation Plan
- Tamiami Trail Culverts
- Western C-11 Basin Water Quality Improvement

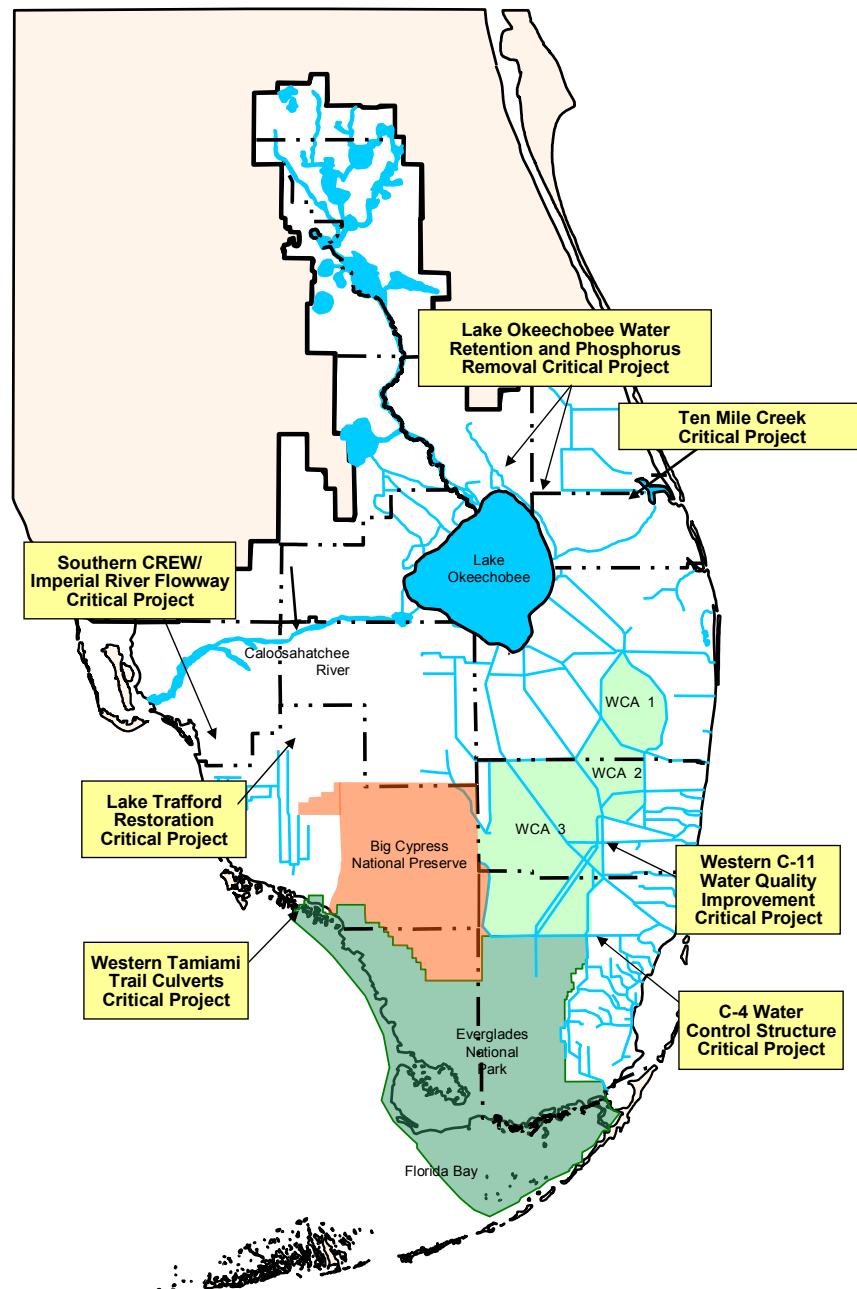


Figure 3. General location of Critical Restoration Projects.

CERP PRIORITY PROJECTS OVERVIEW

The District is the local sponsor for most CERP projects, with other government and agency sponsorship for some specific projects. Planning has commenced on many CERP projects, as evidenced by completion of many PMPs and PIRs. FY2008 updates on the implementation of CERP Priority Projects are summarized below, except for the following components of CERP (i.e., those topics for which there are no FY2008 updates), which are provided in 2008 SFER – Volume I, Appendix 7A-1:

- Big Cypress/L-28 Interceptor Modifications Project
- Bird Drive Recharge Area Project (incorporated into the Everglades National Park Seepage Management Project)
- Broward County Secondary Canal System Project
- C-4 Structure Project (on hold)
- C-43 Basin ASR – Part 2 Project
- Caloosahatchee Backpumping with Stormwater Treatment Project
- Central Lake Belt Storage Area Project
- Everglades Agricultural Area Storage Reservoirs – Phase 2 Project
- Florida Keys Tidal Restoration Project (on hold)
- Flow to Eastern WCA Project
- Flow to Northwest and Central WCA-3A Project (on hold)
- Hillsboro ASR – Part 2 Project
- Lake Istokpoga Regulation Schedule Project (incorporated into the Lake Okeechobee Watershed Project)
- Lake Okeechobee ASR Project
- Loxahatchee National Wildlife Refuge Internal Canal Structures
- Miami-Dade County-Sponsored CERP Project: Restoration of Pineland and Hardwood Hammocks in C-111 Basin
- Miami-Dade County-Sponsored CERP Project: South Miami-Dade Reuse
- Miami-Dade County-Sponsored CERP Project: West Miami-Dade Reuse
- Modify Holey Land Wildlife Management Area Operation Plan Project
- Modify Rotenberger Wildlife Management Area Operation Plan Project
- North Lake Belt Storage Area Project
- North Palm Beach County – Part 2 Project
- Palm Beach County Agricultural Reserve Reservoir – Part 2 Project
- Palm Beach County Agriculture Reserve Reservoir - Part 1 Project
- Strazzulla Wetlands Project – Expedited Project
- WCA-2B Flows to Everglades National Park Project
- WCA-3A and 3B Flows to Central Lake Belt Project
- WCA-3 Decompartmentalization and Sheetflow Enhancement – Part 2 Project
- Water Preserve Area Conveyance Project
- FDEP-Sponsored CERP Project: Henderson Creek/Belle Meade Restoration (on hold)

Acme Basin B Discharge Project (Expedited)

In October 2007, the S-7 pump station in central Palm Beach County was completed. Operation of this pump station, in concert with a planned impoundment area, is expected to move water from the C-1 canal into the C-51 West canal and subsequently to Stormwater Treatment Area 1 East prior to being discharged to the Arthur R. Marshall Loxahatchee National Wildlife Refuge, part of the Everglades Protection Area.

The Acme Basin B Discharge Project also includes improvements to nearly three miles of the C-1 canal, which will offer increased conveyance capacity, and a new impoundment and second pump station to provide temporary offline water storage of 1,028 acre-feet of water. This will maintain flood protection in the basin and reduce nutrient loads flowing into the C-51 canal and subsequently to the Everglades Protection Area.

The District's Governing Board approved a \$21.5 million contract amendment with the Village of Wellington for the second phase of the project. Land needed for the project was also transferred from the District to the municipality.

Aquifer Storage and Recovery Regional Study Project

The CERP Aquifer Storage and Recovery Baseline Environmental Monitoring Summary Report was completed in December 2007. This baseline report summarizes the monitoring activities and resulting data collected under the Regional ASR Baseline Water Quality and Ecology Monitoring Plan, which was developed in 2003 to augment the work efforts of the ASR pilot projects. The goal of the plan was to establish the water quality and ecological community baseline conditions at the ASR sites from which to detect changes in the physical, chemical, and biological characteristics of the receiving environment brought about by ASR operations.

The implementation of baseline monitoring in advance of ASR well testing will supply the data necessary to identify potential related impacts. Several projects were implemented under the ASR baseline plan: an environmental quality monitoring project that included surface water and sediment samples; a biological quality monitoring project that included in-situ field measurements, habitat assessment and macro-invertebrate samples; and a fish community study. A substantial quantity of data now exists for groundwater, surface water, sediment, and fish tissue in areas that may be affected by the ASR Program. These will serve as a baseline for future ASR Program tests and studies.

The CERP Aquifer Storage and Recovery Program Interim Report 2008, released in May 2008, details the first five years of the CERP Aquifer Storage and Recovery efforts. The report summarizes the status of technical studies conducted.

Favorable hydrogeologic conditions for ASR were found at four of the five ASR pilot project locations around Lake Okeechobee and along the Hillsboro Canal and the Caloosahatchee River. A vast hydrogeologic database has been compiled and developed into a comprehensive hydrogeologic framework of the Floridan aquifer system in South Florida. While building the database, some missing information was identified. Extensive geological and geophysical investigations were then performed to fill in the data gaps, including construction of seven new test wells and core borings throughout the region.

No technical flaws were uncovered that might hinder the implementation of CERP ASR. It is expected that ASR will work with some degree of efficiency. Cycle testing is about to begin and will continue over the next few years. A hydrogeologic, water quality, and ecological monitoring network has been constructed to monitor any changes that might take place as a result of ASR.

Two groundwater models are being developed, which will be used to simulate potential local and regional effects of ASR on the groundwater system. They will be used to simulate the effects of density, pressure, flow, and transport on both local and regional scales. The results of the pilot projects and the various geological and geophysical investigations will continue to be integrated into the models, which will undergo refinement and calibration.

Study planners continue to gain a deeper understanding of the complex geochemical and biological reactions that can take place within the Floridan aquifer system as a result of recharge, storage, and recovery of treated water. Teaming with the Florida Geological Survey, the U.S. Geological Survey, and others, various geochemical studies and techniques have been developed to assess the effects of ASR on the quality of water recovered from the Floridan aquifer system. These studies will continue as the pilot projects become operational.

Concerns with ASR, such as rock fracturing, ecological toxic effects, and water quality – particularly arsenic and mercury – are also being addressed. Baseline environmental monitoring program and preliminary ecological tests have been performed. Studies on the effects of chemicals on organisms and ecosystems, as well as potential for mercury contamination have been completed. Results from these studies will be integrated into a conceptual ecological model with data obtained during pilot project cycle testing. Results of future studies will be incorporated into the final ASR Program Technical Data Report, which is expected to be available by 2012.

Biscayne Bay Coastal Wetlands Project (Expedited)

The project has been separated into two phases. Phase 1 includes features that can be implemented while certain issues (such as raising water stage elevations in the dry season or availability of wastewater reuse) are evaluated for feasibility. Phase 1 is estimated to achieve more than 70 percent of the benefits of the expected restoration.

During FY2008, the Tentatively Selected Plan was identified for Biscayne Bay Coastal Wetlands – Phase I, and the PIR was drafted. The USACE initiated agency technical review of the Draft PIR, which is expected to be published in the Federal Register early in 2009. The District expedited detailed designs for most of the project in three geographical areas described in the Draft PIR – Deering Estate Flow-way, Cutler Wetland Flow-way, and some of the culverts for the L-31E Flow-way. Most of the permitting for these pieces also has been completed. The FDEP-required reporting for these permits is presented in Chapter 12 of this volume, under the *Biscayne Bay* section. The start of construction has been put on hold, however, pending the availability of funds. While the District's intent was to construct many features early, this project now may be turned over to the USACE for construction in its entirety.

The Draft PIR includes a proposal, contained in Annex C, to reserve water made available by the project according WRDA 2000 and state law. The estimated quantity ranges from about 48 to 88 percent of the total water discharged to Biscayne Bay by the canals within the project area.

Planning and regulatory actions began in October 2007 implement a new directive, given at the September 2007 meeting, from the District's Governing Board to strengthen protection for critical areas within the proposed footprints of environmental restoration projects in South Florida. The District's Governing Board identified nearly 6,400 acres adjacent to Biscayne Bay and within the Biscayne Bay Coastal Wetlands restoration project footprint as a critical area of public interest. Currently, more than 90 percent of the land, or 5,782 acres, needed to complete Phase I of the project is in public ownership. Some of the lands acquired by the District in this area were infested by non-native vegetation, which has been removed.

Broward County Water Preserve Area Project (Expedited)

The C-11 Impoundment is being designed 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 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. Seepage also will be collected and returned to the impoundment area. The preliminary design for the C-11 Impoundment was completed in January 2008, and the final design is scheduled for March 2009.

The C-9 Impoundment is planned 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. Design for the C-9 Impoundment is scheduled to begin after the C-11 design is completed, and is expected to be completed by 2012.

The WCA 3A/3B Levee Seepage Management Project system will be designed to focus on seepage reduction by allowing higher water levels in the L-33 and L-37 borrows. The WCA-3A/3B Seepage Management design will follow the C-9 design, and is scheduled to begin in 2012.

The Broward Water Preserve Areas Project has been transferred to the USACE for completion of design and construction. Project construction is expected to commence within six months of authorization and funding.

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

The expedited design for the C-43 West Storage Reservoir was completed during FY2008. At the District's Governing Board meeting in July 2008, this project was identified to be turned over to the USACE for construction. The start of construction is on hold pending the availability of funding.

Located on 10,000 acres of former farmland in Hendry County south of the river, the Caloosahatchee (C-43) West Reservoir is expected to hold approximately 170,000 acre-feet of water, with a range in depth from 15 to 25 feet. It will provide a significant portion of the total water storage requirement for the Caloosahatchee Estuary. The reservoir will capture and store local basin runoff reducing harmful discharges to the coastal estuaries, improving the health of the ecosystem, and revitalizing fish and oyster habitats by maintaining salinity levels.

A salinity model indicates that this project will have primary benefits in the Caloosahatchee River, San Carlos Bay, and a portion of Pine Island Sound, while secondary benefits will likely include portions of Estero Bay and the Gulf of Mexico. The reservoir will provide water supply benefits and some flood attenuation, as well as environmental water supply deliveries to the Caloosahatchee Estuary. Water quality benefits will occur by the reduction of basin freshwater flows to the estuary, thereby reducing salinity imbalances. Reservoir operations are expected to incidentally improve water quality in the Caloosahatchee Estuary due to the settling of nutrients and other pollutants within the reservoir cells prior to delivery to the estuary.

The Tentatively Selected Plan provides deep water habitat within the impoundment cells, including refugia, created by embankment excavation, for fish and other aquatic animals during extremely dry periods. The perimeter canal may include littoral areas for wading bird forage and nursery habitat.

C-44 Reservoir and Stormwater Treatment Area Project (Expedited)

Final design is complete and permits have been obtained for construction of the reservoir and Stormwater Treatment Areas. This project is a recommended plan component the IRL-S Project.

C-111 Spreader Canal Project (Expedited)

During FY2008, the District brought the stakeholders together to examine all options for the first phase of this multi-component restoration project, which consists of design and construction of new pump stations to redirect flood waters and prevent over-drainage of Taylor Slough by the existing C-111 canal, plugs in local canals to reduce drainage of sensitive wetlands, and pilot studies to improve future operations and basin water quality. The resultant ecological benefits are anticipated to be a critical first step in restoring Florida Bay.

With the project on an expedited schedule, a series of stakeholder technical workshops are in progress, and design, at 30 percent complete, is proceeding with a target completion in FY2009. The current schedule calls for construction to begin immediately following completion of the design.

In order to resolve implementation uncertainties, project planning is progressing in two phases: (1) Western PIR: An initial focus to reduce seepage losses from Taylor Slough and damaging pulse discharges from S-197. (2) Eastern PIR: A second focus to construct the spreader canal to the Southern Glades and Model Lands, and optimize operations to support the elimination of the lower C-111 canal approach.

Uncertainties include the extent of possible backwater flooding effect of the spreader canal, drainage by C-111 possibly negating the spreader canal benefits, the effectiveness of source control, and the infiltration basin in improving water quality for discharge into marsh. The plan will include adaptive management and monitoring activities that will assist in planning and designing the Phase II project.

Everglades Agricultural Area Storage Reservoir – Phase 1 Project (Expedited)

Under the District's expedited design and construction initiative, design was completed and construction was started on the Everglades Agricultural Area (EAA) 1-A Reservoir. The master contract, executed in June 2006, called for construction of the above-ground reservoir in a triangular 25-square-mile footprint, 13 miles south of Lake Okeechobee in former sugar cane land. Design specified a 21-mile-long perimeter embankment, meeting dam criteria, to impound a pool of 190,000 acre-feet. The depth of the reservoir is designed to be 12.5 feet in order contain storm surges.

The first three negotiated guaranteed-maximum-price construction phases – including the entire seepage canal that surrounds the perimeter of the reservoir footprint, a borrow area for fill, a rock-processing plant, and a stockpile of sorted embankment material – valued at \$265 million, were completed during FY2008. Work to construct the reservoir's \$330-million embankment, with a construction time of nearly three years, was suspended by the District's Governing Board in May 2008 due to a lawsuit challenging the federal construction permits and the District's authority to build the reservoir.

Everglades National Park Seepage Management Project

Planning documents, including alternatives analyses and modeling are under development. The current schedule calls for the Alternative Formulation Briefing to be held in July 2009. The draft PIR is scheduled to be published in the Federal Register in June 2010, and the final PIR is scheduled to be published in the Federal Register in January 2011.

Indian River Lagoon – South Project

The recommended plan in the Indian River Lagoon – South (IRL-S) Project Implementation Report includes the design and construction of several elements, including four large storage reservoirs, four stormwater treatment areas, acquisition and restoration of more than 90,000 acres of natural area and dredging of muck from the St. Lucie Estuary. 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 five million cubic yards of muck from the waterways.

In FY2008, significant progress was made in acquiring additional lands for the IRL-S Project through funding partnerships with Martin County and the U.S. Department of Agriculture, Wetlands Reserve Program. Approximately 764 acres of natural storage area land was acquired within the Allapattah Complex, IRL-S component, at a cost of \$10.8 million. Additionally, 1,765 acres were acquired within the C-23/C-24 basin for the C-23/C-24 North and South Reservoir, IRL – S components. The \$52.5 million cost of these acres will be paid over multiple years. It is anticipated that future payments totaling \$24.2 million will be made using future Florida Forever Program funds. Allapattah Natural Area restoration design and construction is under way.

Fulfilling a requirement of WRDA 2000, the District's Governing Board in July formally took action to reserve the water needed for environmental protection as part of the plan to restore the IRL, which marks the second CERP project for which the agency will undertake a Water Reservation Rulemaking process. Federal appropriation is pending, and effects the design and construction schedule for this project.

The District will be setting aside the existing water in the lagoon system to be used for the protection of fish and wildlife. 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.

Lake Okeechobee Watershed Project

The Lake Okeechobee Watershed Project is intended to reduce the total phosphorus load by approximately 60 metric tons per year and to store approximately 273,000 acre-feet of water. This load reduction will help to meet the restoration and Total Maximum Daily Load goal for Lake Okeechobee. Off-site storage is expected to reduce high lake stage and reduce flood control discharges to the estuaries. During FY2008, the Tentatively Selected Plan was presented at the Alternative Formulation Briefing, and the compilation of the draft PIR sections began. The final PIR is scheduled to be completed by February 2009. Additional information is presented in 10 of this volume.

Melaleuca Eradication and Other Exotic Plants Project

Invasive, nonindigenous species are a major and expanding threat to the South Florida ecosystem. Even if Everglades hydrology is effectively restored, the continuing introduction and spread of damaging species may threaten the restoration of ecological integrity. The PIR is under development for the CERP Melaleuca Eradication and Other Exotic Plants Project. This project is intended to enhance efforts to control invasive exotic plant species, such as melaleuca (*Melaleuca*

quinquenervia), in South Florida through the mass rearing and controlled release of biological agents throughout the District. A report will identify further the overall problem with exotic invasive plants in South Florida and will provide a recommendation regarding further federal involvement.

The draft PIR is expected to be released for public review in January 2009. The first appropriation for this project is expected in FY2010, and implementation of the project is expected to span 17 years with a federal cost of about \$5.5 million. Implementing biologic controls for melaleuca is a component of an invasive exotic plant management strategy that covers the entire CERP area. Biological controls are expected to reduce melaleuca, which, in turn, is expected to promote re-population by native plant species. The reduction of melaleuca and the increase in native plant species is anticipated to help to restore suitable habitat for native birds and wildlife and prevent further spread of melaleuca into restored areas.

North Palm Beach County – Part 1 Project

Modeling analyses using the Lower East Coast Sub-Regional Model is under way for the North Palm Beach County – Part 1 Project. A test of Flow-way 1 was completed, which showed that water could be moved from the L-8 reservoir to the Loxahatchee River. The L-8 reservoir excavation is complete, and temporary pumps have been installed to assist with completing a seepage analysis and providing deliveries to Flow-way 1.

In March 2008, the District made a \$37.2 million payment to Palm Beach Aggregates. This is the second-to-last installment in the land acquisition that led to the creation of the L-8 reservoir. A total of \$213.9 million, which includes almost \$620,000 in interest, has been paid into a court-controlled account. Out of the FY2008 payment, \$15 million was to remain in the account until the District verified that the reservoir can hold water. With the agreement of Palm Beach Aggregates, the District deducted \$2.4 million to compensate for an undisclosed lobbying fee that had been paid to an engineering consultant.

The District is expected to make one final payment of approximately \$6 million during 2008 for an extra 4,900 acre-feet of storage created on the site, as determined through bathymetric survey. Water stored in the reservoir provided relief to the City of West Palm Beach during the 2006–2008 regional drought.

Appendix 7A-4 of this volume presents the L-8 Reservoir Project: Annual Water Quality Assessment Report for the L-8 Reservoir Project. This report documents the annual evaluation of the results of the project's monitoring program during WY2008.

Picayune Strand Restoration Project (Expedited)

Under WRDA 2007, the U.S. Congress authorized the implementation of the Picayune Strand Hydrologic Restoration Project. While the WRDA bill did not give an appropriation of funds for the project, the federal FY2009 budget provides for the start of construction of one of the pump stations. All pump station designs for the Picayune Strand Hydrologic Restoration were completed during FY2008 and transferred to the USACE for construction. Construction of the Merritt Pump Station is scheduled to start in March 2009.

The first District Water Reservation rule was initiated in February 2008 for the Picayune Strand/Fakahatchee Estuary. Workshops were held throughout summer 2008, and the rule was published in November 2008 in the Florida Administrative Weekly (see Volume II, Chapter 3).

Appendix 7A-2 of this volume contains additional baseline data in the project area, including information on hydrology, the Florida panther (*Felis concolor*), inland aquatic fauna, and estuarine benthic habitat in and around the Picayune Strand. Baseline information for water

quality, wood storks and wading birds, oyster reef crabs, and nekton are expected to be provided in future SFERs. Also provided in Appendix 7A-2 is an annual status of the hydrologic response to Phase 1 road removal and filling of the Prairie Canal that was completed in 2007.

Appendix 7A-3 of this volume contains the annual 404 and 1502 Permit Reports to the FDEP for FY2008, which include Prairie Canal Phase I and Picayune Strand Restoration Project Road Removal. It is anticipated that baseline information will be updated in these reports in future SFERs.

Fran Reich Preserve (Site 1 Impoundment) Project (Expedited)

During the first quarter of FY2008, this project, along with the Picayune Strand Hydrologic Restoration and the IRL-S projects, was authorized by WRDA 2007. Preliminary Design is on schedule to be completed in the first quarter of FY2009. Depending on federal appropriation of funding for this project during FY2009, construction may begin in FY2010.

WCA-3 Decompartmentalization and Sheetflow Enhancement – Part 1 Project

The Water Conservation Area 3 (WCA-3) Decompartmentalization and Sheetflow Enhancement – Part 1 (Decomp) Project is considered key to Everglades restoration. A multiple-PIR approach is being implemented. This multiple PIR strategy, which was outlined by the USACE and the District, includes completing the Physical Model for the Decomp Project. The Physical Model is designed to address major engineering questions and ecological response uncertainties that could delay project implementation due to public or agency concerns over costs, ecological impacts or recreation access. The Physical Model effort coupled with a comprehensive monitoring program will be conducted simultaneously with the first PIR. Information from both the Physical Model and the results of any other CERP-related construction efforts will be used for evaluation and selection of alternatives for the remaining PIR documents. Features to these subsequent PIRs will be updated as new information is acquired from the Physical Model and hydrological modeling results.

The first PIR will focus on the Miami Canal and potential improvements to the North New River Canal as required to maintain conveyance capacity and to provide water of comparable quantity and quality for natural and other water supply needs. The Miami Canal constitutes a major disruption to sheetflow within WCA-3A and drains the conservation area. Water that historically moved slowly south in a sheetflow manner through the marsh over a large expanse of land or through seepage is now obstructed by berms, and may be quickly removed from the area by water management practices.

By truncating alteration of the Miami Canal at the northern junction with the L-67A canal, near the S-151 structure for the first PIR, the potential impacts to WCA-3B and ensuing concerns about possible seepage issues along portions of the Dade-Broward levee may be minimized. Whether and how the remaining southern portion of the Miami Canal will be backfilled or modified will be addressed under a subsequent PIR. Alternatives that negate the ability of the Miami Canal to fulfill current water supply deliveries will develop another method, such as an expanded North New River, to provide water of comparable quantity and quality to downstream elements of the natural system and to urban areas. This approach may allow the project to achieve some earlier benefits while addressing scientific uncertainties using the Physical Model. Environmental benefits realized will be largely confined to WCA-3A. There may be some benefits via the S-12S to the ENP that will need to be analyzed. Removal of additional disruptions to sheetflow within WCA-3A would be limited to any canals, levees, berms, or spoil mounds within WCA-3A.

There will be additional alternatives for evaluation including a minimum plan and a plan that incorporates the placement of pipes within the Miami Canal. The evaluation methodology used for the first PIR will not rely on the Physical Model and ongoing science initiatives. Existing information and computer modeling results will be used for plan selection for the first PIR. Information gained from the Physical Model will be compiled into a comprehensive adaptive management plan that will feed into the multiple construction phases and future PIRs. In this manner, construction of components can be timed to allow Physical Model results or new data to come on-line, allowing for an assessment with subsequent decisions as to whether to construct the next phase.

The second PIR for Decomp will center on WCA-3B and the movement of water toward Northeast Shark River Slough. It is expected that the remaining features of Decomp Part 1, as described in the Yellow Book, will be the focus of this PIR. The scope of the second PIR will be revised based on the progress of inter-related South Florida Everglades Ecosystem Restoration Projects, including Modified Water Deliveries to Everglades National Park and ENP Seepage Management. The anticipated second PIR features are as follows:

- Modification of the eastern section of Tamiami Trail by elevating the roadway via installation of a series of bridges between the L-31 and the L-67 levees/canals
- Degradation of the eastern portion of the L-29 levee and canal in the same area as the Tamiami Trail modifications
- Additional S-345s to increase the discharge capacity on the L-67A

The specific components of this second PIR may be influenced by the results of the Decomp Physical Model and the implementation of the Modified Waters Delivery Project. A synthesis of this information may suggest additional strategies for the removal of barriers to sheetflow in concert with other defined new sources of water for WCA-3A such as the EAA Reservoir Project.

The second PIR will be initiated as soon as resources become available, rather than waiting for the first PIR to be completed. Information from the Physical Model will be used as part of the evaluation process.

The third PIR will address those remaining features of the Restudy, Part 2. Unlike Part 1, these features are not contingently authorized and must be submitted to the U.S. Congress for authorization for construction. These include the following:

- Elevate Tamiami Trail west of the L-67 levees
- Remove L-29 levee and canal
- Remove L-68A levees
- Degrade the L-67C levee and backfill adjacent borrow canal
- Remove L-28
- Install 8 passive weirs along L-67A
- Relocate a single S-349 structure at the downstream end of the L-67A canal (upstream of the S-345)
- Backfill L-67A from Tamiami Trail for 7.5 miles northward
- Remove S-344, S-343 A, and S-343 B, and the S-12 structures

Some of these features, where possible and deemed appropriate, could become part of the second plan recommended in the second PIR.

Lee County-Sponsored CERP Project: Lakes Park Restoration

Federal efforts are being discontinued on this project.

Miccosukee Tribe-Sponsored CERP Project: Miccosukee Water Management Area

A Design Agreement is pending for this project.

Palm Beach County-Sponsored CERP Project: Winsberg Farms Wetlands Restoration

Public review of the draft PIR/NEPA Report was opened in April 2008 and completed in May 2008. The final PIR, with an estimated cost of \$19.1 million, is under way after concurrent review by the public, resource agencies and the USACE. Under the Tentatively Selected Plan, 114 acres of the site will be hydrated using treated wastewater. There will be constant inflow, with water levels fluctuating seasonally within a one- to two-foot range in response to rainfall. The project site includes a variety of emergent marsh, wet prairie, and hardwood hammock habitats. Control structures will allow the water to flow from Phase I to Phase II, and to re-circulate back into Phase I or to deep well injection during high rainfall events. An emergency spillway is planned for Phase II to meet federal dam safety requirements. The project will be designed to capture a 100-year storm event without discharge into the L-30 canal.

CERP FOUNDATION PROJECTS

When the U.S. Congress authorized CERP in WRDA 2000, other projects intended to restore important aspects of the Everglades ecosystem were already being implemented by the District, the USACE, the National Park Service, and the U.S. Fish and Wildlife Service. These non-CERP projects are vital to the overall restoration success.

FY2008 updates on the implementation of CERP Foundation Projects are summarized below, except for the following components of CERP (i.e., those topics for which there are no FY2008 updates), which are provided in 2008 SFER – Volume I, Appendix 7A-1:

- Everglades Construction Project (also, see Chapters 4, 5, and 8 of this volume)
- Kissimmee River Restoration Project (also, see Chapter 11 of this volume)
- Florida Keys Water Quality Improvement Program (also, see Chapter 12 of this volume)
- Critical Restoration Projects
- Invasive Species Plant Research Laboratory

Modified Water Deliveries to Everglades National Park

Authorized in 1989, the Everglades National Park Protection and Expansion Act this is designed to restore more natural hydrologic conditions in the ENP. This federally funded project includes levee modifications and a seepage control pump to increase water flow into Water Conservation Area 3B (WCA-3B) and northeastern portions of ENP. The project includes flood mitigation to approximately 60 percent of the 8.5-Square-Mile Area at the northeast corner of the Park and raising portions of Tamiami Trail. This project is a prerequisite for the first phase of removing barriers to sheetflow, which is fundamental to CERP's success.

In April 2008, the Draft Limited Reevaluation Report on Tamiami Trail was released for public review and comment. This report proposes a Tentatively Selected Plan for increasing flows under Tamiami Trail and into the northeastern area of the ENP. The Tentatively Selected Plan is

located in a 10.7-mile section of Tamiami Trail (U.S. Highway 41) between structures 334 and 333, and includes construction of a one-mile eastern bridge located about one-mile west of the intersection of Tamiami Trail and Krome Avenue. The plan allows water levels in the L-29 canal to reach 8.5 feet National Geodetic Vertical Datum, and includes reinforcing the remaining roadway to mitigate for possible effects of increased water levels. Primary hydrological objectives of the plan include restoring more natural timing of water flows, volume, and location. The main ecological objectives include restoration of the naturally occurring ridge-and-slough landscape pattern of the Everglades.

The project team made specific evaluations based on hydrological and ecological performance measures. The performance measures identified include the (1) total water flow volume, (2) changes in the water speed as it flows from the north side of the trail to the south, (3) the water depth needed to support slough vegetation, and (4) the degree to which habitats south of the trail are connected to habitats to the north.

All alternatives that did not increase the water level in the L-29 canal from the current 7.5 feet to at least 8.0 feet were eliminated since water volume was selected as a performance measure. Alternatives that did not produce sheetflow condition were eliminated. Maintaining deep water for a long enough time during the wet season is important to restoring slough vegetation, therefore, alternatives that only allowed for short-duration inundation during the wet season were eliminated. Finally, alternatives not modeled to produce acceptable flow speed did not meet the connectivity performance measure. These factors, when coupled with many others, including location, cost, and the need to protect the road from damage due to higher water levels in the L-29 canal, resulted in the selection of Alternative 3.2.2a as the Tentatively Selected Plan.

Modifications to the Federal C-111 Project

This project is designed to improve hydrologic conditions in Taylor Slough and the Rocky Glades of the eastern panhandle of Everglades National Park and increase freshwater flows to northeast Florida Bay. The project plan includes a tie-back levee to capture groundwater seepage to the east, detention areas to increase groundwater levels and thereby enhance flow into the ENP, and backfilling or plugging several canals.

A Combined Structural and Operational Plan is slated to integrate the goals of the Modified Waters and C-111 projects and protect the quality of water entering the ENP. The District's land acquisition was substantially completed during FY2008 for the L-31N restoration portion of the federal C-111 Project. Over 6,000 acres were acquired, with approximately 12 remaining acres in settlement negotiations.

Kissimmee River Restoration Project

This project, authorized by the U.S. Congress in 1992, is intended to reestablish the historical river-floodplain system at the headwaters of the Everglades watershed, thereby restoring biological diversity and functionality. The project proposes backfilling 22 miles of the 56-mile C-38 canal and restoration of 43 miles of meandering Kissimmee River channel. The project includes a comprehensive monitoring and evaluation program to track ecological responses to restoration.

During FY2008, hydrologic restoration continued on the \$634-million project, which is cost-shared equally by the USACE and the District. Since 1992, the District has invested approximately \$300 million to acquire all 102,064 acres needed for this restoration effort. To date, 9.9 miles of canal have been backfilled, and 18 miles of the former river channel have been restored. Two construction phases are complete, and continuous water flow has been reestablished to 19 miles of the original Kissimmee River. The current phase of construction,

which began in August 2008, is scheduled for completion in December 2009. Work on the fourth and final phase is scheduled for completion in 2013.

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. Due to budgetary constraints, the studies were suspended.

Lake Okeechobee and Estuary Recovery

The Lake Okeechobee and Estuary Recovery Plan, announced by the state of Florida in October 2005, was migrated into the Northern Everglades and Estuaries Protection Program (see below).

Northern Everglades and Estuaries Protection Program

In April 2007, the Florida legislature substantially expanded the Lake Okeechobee Protection Act to include protection and restoration of the Lake Okeechobee Watershed and the Caloosahatchee River and St. Lucie River watersheds and estuaries. At the same time, the legislature also extended the Save Our Everglades Trust Fund for 10 years, providing a dedicated state funding source for the restoration through 2020. The newly expanded program is named as the Northern Everglades and Estuaries Protection Program (NEEPP) (Section 373.4595, F.S., 2007).

NEEPP requires that the District, in collaboration with the FDEP and the Florida Department of Agriculture and Consumer Services (FDACS), develop a Phase II Technical Plan for the Lake Okeechobee Watershed Construction Project by February 1, 2008, and River Watershed Protection Plans for the Caloosahatchee and St. Lucie rivers and watersheds by January 1, 2009. The Phase II Technical Plan was developed by the District, in coordination with the FDEP and the FDACS, during FY2008 and submitted to the Florida legislature and governor on February 1, 2008, as scheduled.

Parallel planning efforts for the Caloosahatchee and St. Lucie Watershed Protection Plans began in FY2008 in order to meet the legislative deadline of January 1, 2009. Baseline information was assembled and alternatives formulated in mid-2008. The final Caloosahatchee and St. Lucie Estuary River Watershed Protection Plans are on schedule to meet the mandated deadline of January 1, 2009. The objectives of these plans are to identify (1) required storage and water quality features, (2) areas for restoring natural wetlands, (3) urban and agricultural best management practices, and (4) options for muck removal from water bodies to achieve water quality goals. If achieved, these water storage and quality goals are expected to curtail habitat loss and allow the recovery of more desirable plant, fish, and wildlife communities in the northern estuaries.

The goals and objectives of CERP and NEEPP overlap significantly. By design, the efforts complement and support one another. Chapters 10, 11, and 12 of this volume focus on the science necessary to support NEEPP, and Chapter 7A presents the planning efforts under way to develop the alternatives necessary to build a thorough, holistic plan for restoring the Northern Everglades. Appendix 7A-5 of this volume presents the Northern Everglades Annual Work Plan for FY2009–FY2010, which includes the Lake Okeechobee, Caloosahatchee River, and St. Lucie River watersheds.