TRACKING SUCCESS:

2009 INTEGRATED FINANCIAL PLAN FOR THE SOUTH FLORIDA ECOSYSTEM RESTORATION TASK FORCE

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2009 INTEGRATED FINANCIAL PLAN

PURPOSE

In 1996 Congress directed the Task Force to prepare an Integrated Financial Plan (IFP) for the restoration, preservation and protection of the South Florida Ecosystem. The IFP is updated annually and posted on the South Florida Ecosystem Restoration Task Force website http://www.sfrestore.org/documents/index.html. Every two years it accompanies the Task Force Strategy and Biennial Report (Volume 1) as Volume 2 (Coordinating Success/Tracking Success). The last combined report was approved by the Task Force in September 2008.

The purpose of the IFP is to provide detailed information about the federal, state, tribal and local restoration projects that contribute towards the accomplishment of the vision, goals, subgoals, and objectives of the Task Force Strategy in restoring the South Florida Ecosystem.

BACKGROUND

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

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

CRITERIA AND ASSUMPTIONS

The IFP is the compilation of project specific information provided by the members of the Task Force. It is important to note that the cost estimating protocols, fiscal year cycles, time frames and methodologies used by each member varies. As such, the IFP reflects criteria and assumptions specific to that reporting Task Force entity and does not follow a single format. Specific criteria and assumptions for each project are annotated with footnotes.

For policy reasons, the Florida Department of Environmental Protection (FDEP) and the South Florida Water Management District (SFWMD) do not make individual project cost projections related to future non-CERP land acquisitions for habitat preservation and conservation purposes listed under Goal 2. The cost of lands already purchased for habitat preservation and conservation purposes are the actual costs. An estimate of future land costs for non-Comprehensive Everglades Restoration Plan (CERP) Goal 2 land acquisition is provided as a Total Cost Estimate in Appendix B of the 2008 edition of the Coordinating Success Volume 1 document.

The following criteria and assumptions apply to all of the project financial information as provided in the Task Force's 2009 Integrated Financial Plan:

- Federal agencies and the South Florida Water Management District (SFWMD) operate and report financial activities on an October 1 to September 30 fiscal year, while other State of Florida agencies operate on a July 1 to June 30 fiscal year.
- The U.S. Army Corps of Engineers (USACE), in seeking project authorization, utilizes current year dollars in developing detailed cost estimates for authorizing documents. The costs reflected in this document were derived in the following manner. These costs are inflated using the Office of Management and Budget (OMB) inflation indices as of October 1, 2008.
- a. CERP

  For projects where a decision document has not yet been initiated, an estimated cost was derived from the CERP Yellow Book (1999) and inflated to current day dollars. It is important to note that the original project estimates acknowledged that the final methodology to reach the goal would vary and that the actual real estate footprint was still an unknown.

  The Project Implementation Report (PIR) is the primary decision document used to obtain approval and/or authorization of CERP projects. Project cost estimates are revised and updated during the PIR development. Once a PIR is approved, the estimated cost contained in the PIR is the new estimated project cost.

  For pilot projects a Pilot Project Design Report (PPDR) is completed instead of a PIR and contains similar cost information to that in a PIR.

  b. Central & Southern Florida (C&SF) Projects:

  Other previously authorized Central & Southern Florida (C&SF) projects including C-111 (South Dade), West Palm Beach STA 1 East/C-51 West; the Everglades and South Florida Ecosystem Restoration (E&SF) Critical Projects Projects; Kissimmee River Restoration and Herbert Hoover Dike have been reported in 2008 dollars.

- The SFWMD project costs are reported as follows:
  a) Lake Okeechobee Protection Plan – Project cost estimate is reported in 2007 dollars as approximately $1.4 billion dollars, not including the CERP Lake Okeechobee Watershed Project. These costs include the Lake Okeechobee expedited projects being implemented as part of the Northern Everglades Project, full implementation of BMP's throughout the entire Lake Okeechobee watershed, and on going in-lake restoration activities, monitoring, research, and exotics removal. These costs are being re-evaluated and adjusted in response to the Northern Everglades Program initiative.
  b) Long Term Plan Projects – Project cost estimates are escalated values and are derived from construction industry-accepted cost databases and compared with similar previous SFWMD completed projects. Escalated value is defined as the value of when that component is expected to be constructed, including the estimated cost of inflation.
  c) Expedited Projects – Project cost estimates are updated as each project progresses through the design process. Each updated cost estimate is reported as the present day value at the time the estimate is performed. Contingencies are included in each estimate with larger contingencies (30%) used during early stages of the design phase and smaller contingencies

(10%) used at the final design phase. The contingencies are intended to account for cost escalation due to inflation.

- Reporting agencies needed to presume annual levels of Congressional and State of Florida appropriations to develop project completion schedules. If the actual appropriations vary from presumed levels, then project completion schedules and estimated projects costs may change.
- Federal project execution is contingent upon Administration priorities and subject to available appropriations.
- The Project Summary Table and IFP do not include operational costs or agency programmatic costs that would be incurred regardless of the restoration initiatives. For example, the National Park Service costs to operate and maintain Everglades National Park, Fish and Wildlife Service costs to provide for Endangered Species Act consultation and South Florida Water Management District costs to operate and maintain water delivery infrastructure are not included herein.
- The Project Summary Table and IFP do not include the costs of land development and associated infrastructure as well as infrastructure improvements in existing urban areas including but not limited to redeveloping declining urban areas, wastewater and storm water management systems construction and improvements, schools, roadways, utilities, government services, and light rail.
- The Project Summary Table and IFP do not include any costs or future resource needs projected for environmental and system-wide monitoring programs (For example, the $100 million funded over ten years for the CERP monitoring programs is not included).
- The Project Summary Table and IFP do not include any post-construction operations and maintenance costs in the total financial requirement.

HOW TO USE THE IFP PROJECT SUMMARY TABLE

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

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

Column 1 identifies the goal and subgoal the project is designed to achieve or partially achieve

Column 2 assigns a unique project number linked to the Task Force goals, subgoals, and objectives. The first digit is a goal number (1, 2, or 3). The second digit is the subgoal/objective number. For the purpose of assigning project numbers, the objectives under each goal have been numbered consecutively regardless of their subgoal. For example, project 1104 would be a project that supports objective 1-A.1. The third and fourth digits reflect the order of listing of the projects under each subgoal/objective. For example, project 1104 would be the 4th project on the list for that objective.

Column 3 is the project name. The staff strives to use the same project name used by all agencies or officially approved in joint Guidance Memorandums, although at times this is quite challenging. Some of the project names changed from year to year as projects are grouped together or split apart in the CERP adaptive management process. For example the Lake Istokpoga Project, which was a separate project in 2002, has since been included in the Lake Okeechobee Watershed Project. These types of actions affect the restoration endpoints and total outputs measured by some of the objectives, and as a result some of the restoration endpoints have changed.

Column 4 identifies the lead agency.

Column 5 and 6 identify the reported start and Completion dates.

Column 7 identifies the current estimated financial requirements.

Column 8 identifies the financial resources appropriated as of June 30, 2008 unless otherwise noted.

Column 9 identifies the measurable output (e.g., acre-feet of storage, miles modified, etc.) that collectively add up to the restoration endpoint identified for achieving the objectives of each subgoal.

Columns 10 and 11 identify the primary and secondary objectives that the project outputs support. The staff identified the primary and secondary objectives based on input from the reporting agency. Some projects provide outputs supporting more than one objective. Thus, they are listed in more than one section with different outputs. For example, the Lake Okeechobee Watershed Project (project 1104) provides acres of stormwater treatment for Objective 1.B.1 and acre-feet of storage for Objective 1.A.1. Such projects are numbered according to the primary objective identified for the project, and the same number is maintained when the project is repeated to identify the secondary benefit.

Column 12 identifies the page number in Volume 2 where the detailed project sheet can be located.

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
GOAL 1. GET THE WATER RIGHT											
1.A.1		**SURFACE WATER STORAGE PROJECTS**						**ACRE-FT.**			
	1101	C&SF: CERP Indian River Lagoon-South [C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU P1 & UU P2), and C-44 Basin Storage Reservoir (B)] (CERP Project WBS # 07)	USACE/SFWMD	2002	TBD	$1,437,581,000	$13,224,019	135,000	1.A.1	1.B.1/2.A.3	21
	1102	C&SF: CERP Everglades Agricultural Area Storage Reservoir(s) (G P1 & G P2) (CERP Project WBS # 08)	USACE/SFWMD	2001	TBD	$585,508,000	$15,608,000	360,000	1.A.1		25
	1104	C&SF: CERP Lake Okeechobee Watershed (A, W; OPEs: LOWQTF, LOTSD, LIRS) (CERP Project WBS # 01)	USACE/SFWMD	2001	TBD	$1,332,873,000	$21,664,000	272,823	1.A.1	1.B.1/2.A.3	31
	1105	C&SF: CERP North Lake Belt Storage Area (XX P2) (CERP Project WBS # 25)	USACE/SFWMD	TBD	TBD	$327,333,000	$0	90,000	1.A.1		35
	1106	C&SF: CERP Palm Beach County Agriculture Reserve Reservoir -Part 1 (VV P1) (CERP Project WBS # 20)	USACE/SFWMD	2006	TBD	$120,402,000	$1,000	20,000	1.A.1		37
	1107	C&SF: CERP Site 1 Impoundment (M P1) a/k/a Site 1 Impoundment (Fran Reich Preserve) (CERP Project WBS # 40)	USACE/SFWMD	2004	2014	$84,442,000	$5,304,980	13,280	1.A.1	2.A.3	38
	1109	C&SF: CERP C-43 Basin Storage Reservoir --Part 1 (D P1) [Caloosahatchee River (C-43) West Basin Storage Reservoir (PIR #1); Caloosahatchee Watershed (PIR #2)] (CERP Project WBS # 04)	USACE/SFWMD	2001	2014	$533,731,000	$10,882,000	170,000	1.A.1		42
	1110	C&SF: CERP Central Lake Belt Storage Area (S); Flows to Eastern Water Conservation Ares (EEE - previously WBS #23); and Water Conservation Area 3A/3B Flows to Central Lake Belt Storage (ZZ - previously WBS #47).	USACE/SFWMD	TBD	TBD	$682,938,000	$82,000	190,000	1.A.1	1.B.1	47
	1111	E&SF: Critical Projects - Ten Mile Creek	USACE/SFWMD	1997	TBD	$50,000,000	$43,857,000	6,000	1.A.1	2.A.3	49
	1112	Taylor Creek Reservoir – Expedited Project – The SFWMD is implementing as part of Northern Everglades Project	SFWMD	2005	TBD	TBD	$3,685,505	32,000	1.A.1		52
	1113	C&SF: CERP Water Preserve Area Conveyance (XX P1) (CERP Project WBS # 49)	USACE/SFWMD	2002	TBD	$347,610,000	$227,000	90,000	1.A.1		53
	1114	C&SF: CERP Everglades National Park Seepage Management (V) (FF) (BB) (U) (CERP Projects WBS # 27 and # 43)	USACE/SFWMD	2004	2016	$470,131,000	$2,491,000	11,500	1.A.1		54

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Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	1115	C&SF: CERP North Palm Beach County-- Part 1 (X) (Y) (GGG) (K P1) (OPE) (CERP Project WBS # 17) (Formerly Project ID 1503)	USACE/ SFWMD	2001	TBD	$599,026,000	$10,533,000	48,000	1.A.1	1.B.1	57
	1116	C&SF: CERP Broward County (WPA) Water Preserve Areas (R) (Q) (O) [Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O)] (CERP Project WBS # 45) (Formerly Project ID 1501)	USACE/ SFWMD	2002	2020	$816,204,000	$8,591,000	11,648	1.A.1	2.A.3	61
	2100	Allapattah Flats/Ranch	FDEP	1997	TBD	Footnote 1	Footnote 1	32,000			174
1.A.2		**ALTERNATIVE WATER STORAGE SYSTEMS PROJECTS**						**BGD**			
	1200	C&SF: CERP North Palm Beach County - Part 2 (LL) (K P2) (CERP Project WBS # 18)	USACE/SFWMD	TBD	TBD	$227,359,000	$0	0.220	1.A.2		65
	1201	C&SF: CERP Lake Okeechobee ASR (GG P1, GG P2, GG P3) (CERP Project WBS # 03)	USACE/SFWMD	2010	TBD	$1,397,811,000	$0	1.000	1.A.2		67
	1202	C&SF: Hillsboro ASR Phase 2 (M P2) (CERP Project WBS # 22)	USACE/SFWMD	2014	TBD	$116,413,000	$0	0.150	1.A.2		69
	1203	C&SF: CERP ASR Regional Study (CERP Project WBS # 44)	USACE/SFWMD	2003	2017	$83,290,000	$12,701,000		1.A.2		71
	1204	C&SF: CERP PBC Agriculture Reserve Aquifer Storage & Recovery -- Part 2 (VV P2) (CERP Project WBS # 21)	USACE/SFWMD	2010	TBD	$55,198,000	$0	0.075	1.A.2		74
	1205	C&SF: CERP C-43 Basin Aquifer Storage and Recovery (ASR) (D P2) Caloosahatchee River Aquifer Storage and Recharge Project (C-43ASR) (CERP Project WBS # 05)	USACE/SFWMD	2010	TBD	$297,075,000	$0	0.220	1.A.2		76
1.A.3.		**MODIFY IMPEDIMENTS TO SHEETFLOW PROJECTS**						**MILES MODIFIED**			
	1300	C&SF: C-111 (South Dade)	USACE/SFWMD	1994	2012	$383,600,000	$112,199,000	4.75	1.A.3	3.B.1	78
	1301	C&SF: CERP WCA -3 Decompartmentalization and Sheetflow Enhancement (AA) (QQ P1 & QQ P2) (SS) (ZZ) (CERP Projects WBS # 12, # 13 and # 47)	USACE/SFWMD	2001	TBD	$314,927,000	$9,386,000	240	1.A.3		82
	1302	C&SF: CERP Florida Keys Tidal Restoration (OPE) (CERP Project WBS # 31)	USACE/SFWMD	2001	TBD	$16,143,000	$1,396,000	0.6	1.A.3		87
	1303	E&SF: Critical Projects Southern CREW Project Addition/ Imperial River Flowway (also CERP OPE) Southern CREW	USACE/SFWMD	1999	2015	$33,321,000	$1,357,000		1.A.3	2.A.3	89
	1306	Kissimmee River Restoration Project	USACE/SFWMD	1994	2012	$619,000,000	$246,772,000	31	1.A.3	2.A.3	91

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	1307	Modified Water Deliveries to Everglades National Park (Footnote 3and 5)	NPS	1990	2013			21	1.A.3	2.A.3	NA
	1308	E&SF: Critical Projects Tamiami Trail Culverts Additional Water Conveyance Structures under Tamiami Trail (Formerly Project ID 1400)	USACE/SFWMD	2003	TBD	$21,678,000	$3,575,000	16	1.A.3		94
	1309	Tamiami Trail Modifications: Next Steps (f/k/a Tamiami Trail 2 or Enabling Northeast Shark River Slough Restoration SFO –"support for others" (DOI)	DOI/USACE	2009	2010	$1,373,000	$0		1.A.3		96
	1520	Long-Term Plan for Achieving Everglades Water Quality Goals (Formerly project ID 1723)	SFWMD	2004	2016	Footnote 1	Footnote 1	8.5	1.B.1	1.A.3	156
		Completed Projects									
	1305	Kissimmee Prairie	FDEP/ SFWMD	1996	1997	Footnote 1	Footnote 1	39.3	1.A.3	2.A.1	319
		OTHER RELATED HYDROLOGY PROJECTS									
	1401	Biscayne Bay Feasibility Study	USACE/M-DADE	1996	TBD	$5,900,000	$2,113,000				98
	1403	C&SF: CERP Broward County Secondary Canal System (CC) (CERP Project WBS # 24)	USACE/SFWMD	2001	TBD	$17,320,000	$62,000				99
	1408	C&SF: CERP Loxahatchee National Wildlife Refuge Internal Canal Structures (KK) (CERP Project WBS # 14)	USACE/SFWMD	2004	TBD	$10,078,000	$49,000				100
	1409	C&SF: CERP Seminole Tribe Big Cypress Water Conservation Plan (CERP Project WBS # 96)	USACE/ Seminole Tribe	2015	TBD	$99,832,000	$0				101
	1411	C&SF: CERP C-43 Aquifer Storage and Recovery Pilot F/k/a Caloosahatchee (C-43) River ASR Pilot (CERP Project WBS # 33)	USACE/SFWMD	2001	2013	$8,601,000	$3,255,000				103
	1412	C&SF: CERP WCA 2B Flows to Everglades National Park (YY) (CERP Project WBS # 48)	USACE/SFWMD	2005	TBD	$106,721,000	$284,000				105
	1416	C&SF: CERP L-31N (L-30) Seepage Management Pilot F/k/a L-31N Seepage Management Pilot (CERP Project WBS # 36)	USACE/SFWMD	2001	2010	$15,402,000	$5,321,000				106
	1417	C&SF:CERP Lake Belt (In-Ground Reservoir) Technology - Pilot (CERP Project WBS # 35)	USACE/SFWMD	2001	TBD	$29,130,000	$1,919,000				109
	1418	C&SF: CERP Lake Okeechobee Aquifer Storage and Recovery Pilot Lake Okeechobee ASR Pilot [Kissimmee River ASR (KRASR); Port Mayaca ASR (PMASR)] (CERP Project WBS # 32)	USACE/SFWMD	2001	TBD	$33,986,000	$17,557,000				112

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	1419	C&SF: CERP Lake Okeechobee Regulation Schedule (LORS)	USACE/SFWMD	TBD	TBD	TBD	$0				115
	1420	C&SF: CERP Modify Holey Land Wildlife Management Area Operation Plan (DD) (CERP Project WBS # 15)	USACE/SFWMD	2007	TBD	$0	$0				116
	1421	C&SF: CERP Modify Rotenberger Wildlife Management Area Operation Plan (EE) (CERP Project WBS # 16)	USACE/SFWMD	2007	TBD	$0	$0				118
	1422	C&SF: CERP Modifications to Southern L-31N and C-111 (OO) F/k/a Operational Modification to Southern Portion of L-31N and C-111 (OO)	USACE/SFWMD	TBD	TBD	$0	$0				119
	1423	C&SF:CERP Hillsboro Aquifer Storage and Recovery Pilot A/k/a Hillsboro ASR (CERP Project WBS # 34)	USACE/SFWMD	2000	2009	$10,653,000	$6,179,000				120
	1425	E&SF: Critical Projects - Seminole Tribe Big Cypress Water Conservation Plan	Seminole Tribe/ USACE	1997	2010	$60,000,000	$25,932,000				123
	1426	C&SF: CERP Florida Bay Florida Keys Feasibility Study (CERP Study)	USACE	2001	TBD	$6,300,000	$5,813,000				126
	1431	C&SF: CERP Southwest Florida Feasibility Study (CERP Study)	USACE/SFWMD	2001	TBD	$17,000,000	$14,461,000				129
	1435	C&SF: CERP C-4 Control Structures (T) (CERP Project WBS # 46)	USACE/ SFWMD	2004	TBD	$3,108,000	$113,000				132
	1436	Permanent Forward Pumps – Expedited Project –The SFWMD is implementing as part of Northern Everglades Project	SFWMD	2006	2010	$135,000,000	$12,200,000				133
	1437	C&SF: CERP PLA /Information and Data Management	USACE/ SFWMD	2000	TBD	PLA Budget	$0				134
	1438	C&SF: CERP PLA/Interagency Modeling Center	USACE/ SFWMD	2000	TBD	PLA Budget	$0				135
	1439	C&SF: CERP PLA/Environmental and Economic Equity	USACE/ SFWMD	2000	TBD	PLA Budget	$0				136
	1440	C&SF: CERP PLA/Master Recreation Plan (MRP)	USACE/ SFWMD	2000	TBD	PLA Budget	$0				138
	1441	C&SF: CERP PLA /Restoration Coordination and Verification (RECOVER)	USACE/ SFWMD	2000	TBD	PLA Budget	$0				139
		Completed Projects:									
	1406	E&SF: Critical Projects - East Coast Canal Structures (C-4)	USACE/SFWMD	1999	2003	$3,683,000	$3,683,000				320
	1428	Indian River Lagoon Restoration Feasibility Study	USACE/SFWMD	1996	2002	$6,150,000	$6,150,000				321

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Sub-Goal 1.B GET THE WATER QUALITY RIGHT											
1.B.1		**STORMWATER TREATMENT AREA (STA) PROJECTS**						**ACRES**			
	1500	C&SF: CERP Big Cypress/L-28 Interceptor Modifications (CCC) (CERP Project WBS # 10)	USACE/ SFWMD	2015	TBD	$57,563,000	$0	1,900	1.B.1		142
	1502	C&SF: CERP Miccosukee Tribe Water Management Plan (OPE) (CERP Project WBS # 90)	USACE / Miccosukee Tribe	2003	TBD	$32,395,000	$0	900	1.B.1		144
	1505	C&SF: CERP Caloosahatchee Backpumping with Stormwater Treatment (DDD) (CERP Project WBS # 06)	USACE/ SFWMD	2011	TBD	$111,658,000	$0	5,000	1.B.1		145
	1506	E&SF: Critical Projects - Lake Okeechobee Water Retention/ Phosphorus Removal	USACE/ SFWMD	1997	TBD	$22,347,000	$21,011,000	940	1.B.1		146
	1513	C&SF: West Palm Beach Canal STA-1E / C-51 West	USACE/ SFWMD	1994	2010	$325,427,000	$250,394,000	6,500	1.B.1		149
	1514A	State Expedited project includes Agricultural Area (EAA) Stormwater Treatment Areas (STAs) Expansion	SFWMD	2009	2011	TBD	$100,477,430	18,000	1.B.1		151
	1515	Lakeside Ranch STA - Expedited Project – The SFWMD is implementing as part of Northern Everglades Project	SFWMD	2005	2012	$105,000,000	$13,730,000	2,700	1.B.1		152
	1518	C&SF: CERP Henderson Creek/Belle Meade Restoration (OPE) (CERP Project WBS # 93)	USACE/FDEP	2002	TBD	$6,500,000	$128,000	10	1.B.1		153
	1519	C-43 Water Quality Treatment Area and Test Facility	SFWMD	2007	2010	$6,768,000	$386,444	1,200	1.B.1		155
	1520	Long-Term Plan for Achieving Everglades Water Quality Goals (Formerly project ID 1723)	SFWMD	2004	2016	$765,600,000	$187,383,871	36,070	1.B.1		156
	1101	C&SF: CERP Indian River Lagoon-South [C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU P1 & UU P2), and C-44 Basin Storage Reservoir (B)] (CERP Project WBS # 07)	USACE/SFWMD	2002	TBD	Footnote 1	Footnote 1	9,000	1.A.1	1.B.1/2.A.3	21
	1104	C&SF: CERP Lake Okeechobee Watershed (A, W; OPEs: LOWQTF, LOTSD, LIRS) (CERP Project WBS # 01)	USACE/SFWMD	2001	TBD	Footnote 1	Footnote 1	12,000	1.A.1	1.B.1/2.A.3	31
	1110	C&SF: CERP Central Lake Belt Storage Area (SP1 & SP2) (EEE) (CERP Project WBS # 26)	USACE/SFWMD	TBD	TBD	Footnote 1	Footnote 1	640	1.A.1	1.B.1	47
	1115	C&SF: CERP North Palm Beach County -- Part 1 (X) (Y) (GGG) (K P1) (OPE) (CERP Project WBS # 17) (Formerly Project ID 1503)	USACE/SFWMD	2001	TBD	Footnote 1	Footnote 1	1,150	1.B.1	1.A.1	57

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1.B.2.		**TOTAL MAXIMUM DAILY LOAD (TMDL) PLAN DEVELOPMENT**						Completed Plans			
	1600	Total Maximum Daily Load (TMDL) for South Florida	FDEP	2000	2011	Footnote 2	$5,660,000		1.B.2		158
	OTHER RELATED WATER QUALITY PROJECTS										
	1701	C&SF: CERP Comprehensive Integrated Water Quality Feasibility Study (CERP Study)	USACE/FDEP	2001	2014	$8,100,000	$735,000				159
	1702	E&SF: Critical Projects - Lake Trafford Restoration	USACE/SFWMD	1999	2011	$35,214,000	$12,263,000				163
	1706	Everglades Regulation Division	SFWMD	1998	TBD	Footnote 2	$32,214,000				165
	1707	Floridan Aquifer Restoration	NRCS	2002	TBD	$900,000	$900,000				349
	1714	Seminole Tribe Best Management Practices for the Big Cypress Reservation	Seminole	1996	2013	$4,779,000	$2,867,400				166
	1715	Seminole Tribe Best Management Practices for the Brighton Reservation	Seminole	1998	2011	$338,000	$288,000				167
	1716	Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation	Seminole	1999	2010	$15,818,000	$14,989,000				168
	1717	Seminole Tribe Water Conservation Project for Big Cypress Reservation	Seminole	2002	2011	$60,000,000	$34,000,000				169
	1722	Lake Okeechobee Protection Plan	SFWMD	1999	2015	TBD	$376,112,000				171
		Completed Projects:									
	1700	Chapter 298 Districts/Lease 3420 Improvements	SFWMD	1994	2005	$24,115,521	$24,115,521				322
	1703	E&SF: Critical Projects - Western C-11 Water Quality Treatment	USACE	1997	2006	$18,066,000	$18,066,000				323
	1705	Everglades National Park Water & Wastewater	NPS	1997	2006	$18,965,000	$17,365,000				325
	1708	Lake Okeechobee Sediment Removal Feasibility Study and Pilot	SFWMD	2000	2003	$955,069	$955,069				326
	1709	Lake Okeechobee Tributary Sediment Removal Pilot	SFWMD	2000	2004	$440,000	$440,000				327
	1713	S-5A Basin Runoff Diversion Works	SFWMD	1994	2005	$14,233,758	$14,233,758				328
	1719	STA-1 Inflow and Distribution Works	SFWMD	1994	2005	$12,679,955	$12,679,955				329

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
Goal 2 Restore Preserve and Protect Natural Habitats and Species											
Sub-Goal 2.A. RESTORE, PRESERVE AND PROTECT NATURAL HABITATS											
2.A.1.		**HABITAT PROTECTION LAND ACQUISITION PROJECTS**						**ACRES**			
		State Acquisitions									
	2181	Adams Ranch	FDEP	2008	TBD	TBD	$0	10,841	2.A.1		173
	2100	Allapattah Flats/Ranch (Footnote 4)	FDEP	1997	TBD	TBD	$365,752	40,363	2.A.1		174
	2101	Atlantic Ridge Ecosystem (Footnote 4)	FDEP/ SFWMD	1995	TBD	TBD	$6,201,230	16,002	2.A.1		175
	2104	Belle Meade (Footnote 4)	FDEP	1993	TBD	TBD	$33,169,054	28,810	2.A.1		176
	2105	Big Bend Swamp/Holopaw Ranch	FDEP	2000	TBD	TBD	$6,829,000	59,132	2.A.1		177
	2106	Biscayne Coastal Wetlands (Footnote 4)	SFWMD/M-DADE	1998	TBD	TBD	$3,390,131	2,026	2.A.1		178
	2107	Bombing Range Ridge	FDEP	1998	TBD	TBD	$15,003,388	45,474	2.A.1		179
	2108	Caloosahatchee Ecoscape	FDEP	1998	TBD	TBD	$1,948,038	18,497	2.A.1		180
	2109	Catfish Creek	FDEP	1990	TBD	TBD	$47,410,466	18,641	2.A.1		181
	2111	Charlotte Harbor Estuary/ Flatwoods/Cape Haze	FDEP	1986	TBD	TBD	$17,781,504	12,305	2.A.1		182
	2112	Corkscrew Regional Ecosystem Watershed	FDEP	1991	TBD	TBD	$54,836,337	69,500	2.A.1		183
	2114	Coupon Bight/ Key Deer/ Big Pine Key	FDEP	1985	TBD	TBD	$30,650,827	3,373	2.A.1		184
	2172	Cypress Creek/Loxahatchee	SFWMD	2002	2007	TBD	$76,992,058	4,374	2.A.1		185
	2115	Cypress Creek/Trail Ridge (Footnote 4)	SFWMD	1997	TBD	TBD	$0	31,999	2.A.1		186
	2183	Devils Garden	FDEP	2002	TBD	TBD	$0	82,508	2.A.1		187
	2117	East Coast Buffer(Footnote 4)	FDEP/ SFWMD	1994	TBD	TBD	$66,935,982	49,643	2.A.1		188
	2118	Estero Bay	FDEP	1985	TBD	TBD	$69,418,260	14,358	2.A.1		189
	2120	Fakahatchee Strand (Footnote 4)	FDEP	1980	TBD	TBD	$23,982,644	80,332	2.A.1		190
	2121	Fisheating Creek	SFWMD/FDEP	1999	TBD	TBD	$101,928,563	176,876	2.A.1		191
	2122	Florida Keys Ecosystem	FDEP	1992	TBD	TBD	$94,995,304	13,632	2.A.1		192
	2185	Half Circle L Ranch	SFWMD	2003	TBD	TBD	$0	11,269	2.A.1		193
	2124	Indian River Lagoon Blueway	FDEP	1998	TBD	TBD	$17,846,530	1,617	2.A.1		194
	2125	Juno Hills /Dunes	FDEP	1994	TBD	TBD	$41,892,718	590	2.A.1		195
	2176	Jupiter Ridge	FDEP	1991	TBD	TBD	$23,099,950	280	2.A.1		196
	2126	Kissimmee - St. John Connector	FDEP	2001	TBD	TBD	$0	9,463	2.A.1		197
	2127	Kissimmee River (Lower Basin)	SFWMD	1985	2005	TBD	$174,833,078	75,617	2.A.1		198
	2128	Kissimmee River (Upper Basin)	SFWMD	1990	2005	TBD	$85,919,400	38,591	2.A.1		199
	2129	Lake Wales Ridge Ecosystem	FDEP	1992	TBD	TBD	$32,412,988	16,096	2.A.1		200
	2132	Loxahatchee Slough Land Acquisition	SFWMD	1996	TBD	TBD	$35,907,218	13,099	2.A.1		201
	2134	Miami-Dade County Archipelago	FDEP	1994	TBD	TBD	$23,717,314	884	2.A.1		202
	2135	Model Lands (Footnote 4)	SFWMD/M-DADE	1994	2007	TBD	$1,563,126	54,458	2.A.1		203
	2138	North Fork St Lucie River (Footnote 4)	FDEP/ SFWMD	1988	TBD	TBD	$0	3,714	2.A.1		204
	2139	North Key Largo Hammocks	FDEP	1983	TBD	TBD	$76,542,140	5,415	2.A.1		205
	2141	Okaloacoochee Slough	FDEP/ SFWMD	1996	TBD	TBD	$20,570,673	35,201	2.A.1		206
	2142	Okeechobee Battlefield	FDEP	2001	TBD	TBD	$3,217,250	211	2.A.1		207

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2143	Osceola Pine Savannas	FDEP	1995	TBD	TBD	$310,000	6,357	2.A.1		208
	2144	Pal-Mar (Footnote 4)	FDEP/ SFWMD	1992	TBD	TBD	$95,560,380	35,760	2.A.1		209
	2145	Panther Glades	FDEP	2001	TBD	TBD	$75,049,836	60,007	2.A.1		210
	2146	Paradise Run	SFWMD	1998	TBD	TBD	$4,908,582	3,841	2.A.1		211
	2147	Lake Hatchineha Watershed	SFWMD	1996	TBD	TBD	$0	6,437	2.A.1		212
	2186	Pine Island Slough Ecosystem	FDEP	2005	TBD	TBD	$0	21,583	2.A.1		213
	2148	Pineland Site Complex	FDEP	1996	TBD	TBD	$1,751,874	206	2.A.1		214
	2178	Ranch Reserve	SFWMD	1997	TBD	TBD	$39,286	2,217	2.A.1		215
	2149	Rookery Bay	FDEP	1980	TBD	TBD	$49,000,833	18,721	2.A.1		216
	2150	Rotenberger/Holey Land Tract	FDEP	1984	TBD	TBD	$20,114,395	79,170	2.A.1		217
	2151	Shingle Creek	SFWMD	1987	TBD	TBD	$4,365,170	7,689	2.A.1		218
	2152	Six Mile CypressLand Acquisition	SFWMD	1987	2007	TBD	$36,582,697	2,193	2.A.1		219
	2154	South Savannas	FDEP/ SFWMD	1981	TBD	TBD	$20,902,290	6,046	2.A.2		220
	2155	Southern Glades (Footnote 4)	SFWMD/M-DADE	1964	TBD	TBD	$7,635,574	34,093	2.A.1		221
	2156	Southern Golden Gate Estates (Save Our Everglades)- Picayune Strand (Footnote 4)	FDEP	1984	TBD	TBD	$0	55,127	2.A.1		222
	2180	Ten Mile Creek	SFWMD	1990	TBD	TBD	$338,644	240	2.A.1		223
	2182	Tiger Cattle Company Ranch	FDEP	2009	TBD	TBD	$0	2,230	2.A.1		224
	2158	Twelve Mile Slough	SFWMD	1998	TBD	TBD	$11,000,000	15,835	2.A.1		225
	2159	Lake Marion Creek and Reedy Creek Management Area	SFWMD	1995	TBD	TBD	$12,343,957	39,323	2.A.1		226
	2160	Water Conservation Areas 2, and 3	SFWMD	1948	TBD	TBD	$10,572,395	721,433	2.A.1		227
	2184	Florida Communities Trust lands, State Park Lands and State Wildlife Mgmt Areas	FDEP		TBD	TBD	$652,514,932	256,017	2.A.1		228
		Completed Projects:									
	2102	Babcock Ranch	FDEP	2001	2007	$350,000,000	$350,000,000	73,542	2.A.1		330
	2110	Cayo Costa	FDEP	1980	2004	$29,002,346	$29,002,346	1,954	2.A.1		331
	2116	Dupuis Reserve	SFWMD	1985	1986	$23,016,601	$23,016,601	21,878	2.A.1		332
	2123	Frog Pond	FDEP/ SFWMD	1982	2007	$19,997,038	$19,997,038	2,484	2.A.1		333
	1305	Kissimmee Prairie	FDEP	1996	1997	$21,953,790	$21,953,790	38,284	2.A.1		319
	2130	Sumica (previously Lake Walk-In-Water)	SFWMD	1995	1998	$3,950,000	$3,950,000	4,009	2.A.1		334
	2131	Loxahatchee River Land Acquisition	SFWMD	1984	2001	$13,074,703	$13,074,703	1,912	2.A.1		335
	2137	Nicodemus Slough	SFWMD	1981	1988	$1,894,501	$1,894,501	2,231	2.A.1		336
	2153	South Fork St. Lucie River Land Acquisition	SFWMD	1995	1995	$0	$0	184	2.A.1		337
	2157	Tibet-Butler Preserve	SFWMD	1988	1999	$3,601,900	$3,601,900	439	2.A.1		338
	2161	Yamato Scrub	FDEP	1992	1996	$25,932,850	$25,932,850	217	2.A.1		339
		Federal Acquisitions									
	2161	A.R. M. Loxahatchee National Wildlife Refuge	USFWS	1955	TBD	$30,119,000	$119,000	147,392	2.A.1		229
	2163	Big Cypress National Preserve Addition	NPS	1989	TBD	$76,797,000	$74,289,737	574,449	2.A.1		230

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2164	Big Cypress National Preserve Private Inholdings (Footnote 3)	NPS	1974	TBD	$244,000,000	$222,123,000	146,117	2.A.1		231
	2165	Biscayne National Park	NPS	1968	TBD	$33,699,000	$31,851,000	172,971	2.A.1		232
	2166	Crocodile Lake National Wildlife Refuge	USFWS	1979	TBD	$14,319,000	$13,093,000	7,100	2.A.1		233
	2184	Everglades and Dry Tortugas National Parks	NPS	1947	TBD	TBD	$31,791,250	1,463,779	2.A.1		234
	2167	Everglades National Park Expansion	NPS	1990	TBD	$109,892,000	$97,673,000	109,504	2.A.1		235
	2169	Florida Panther National Wildlife Refuge	USFWS	1989	TBD	$10,692,000	$10,682,000	61,573	2.A.1		236
	2168	Florida Keys National Wildlife Refuge Complex	USFWS	1960	TBD	$58,808,000	$32,038,000	415,433	2.A.1		237
	2170	Hobe Sound National Wildlife Refuge	USFWS	1968	TBD	$6,693,000	$18,000	1,130	2.A.1		238
	2171	J.N. "Ding" Darling National Wildlife Refuge	USFWS	1945	TBD	$13,885,000	$9,785,000	10,275	2.A.1		239
	2185	Lake Wales Ridge National Wildlife Refuge	USFWS	1945	TBD	TBD	$268,000	3,384	2.A.1		240
2.A.2.		**CORAL REEF PROTECTION PROJECTS**						**% Reef Protected**			
	2200	Planning and Implementation of the Tortugas Ecological Reserve	NOAA	1997	TBD	Footnote 2	$53,094,000	10	2.A.2		241
2.A.3		**IMPROVE NATURAL AREAS HABITAT QUALITY PROJECTS**						**ACRES**			
		Note – The April 1999 USACE C&SF Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement included an extensive environmental evaluation of habitat units that would be improved through implementation of the CERP projects. Table 7-18 in this publication identifies in detail which projects are anticipated to achieve this objective. However, appropriate measures by project are currently being developed through the establishment of interim goals. There are some projects included in our tracking matrix that exemplify how this objective will be achieved.									
	2302	C&SF: CERP Lakes Park Restoration (CERP Project WBS # 94)	USACE/Lee Co.	1999	TBD	$6,373,000	$773,000	60	2.A.3		243
	2303	C&SF: CERP Restoration of Pineland and Hardwood Hammocks in C-111 Basin (OPE) (CERP Project WBS # 92)	USACE	2016	2022	$784,000	$0	50	2.A.3		246
	2304	A.R.M. Loxahatchee NWR Prescribed Fire program	USFWS	2002	TBD	TBD	$1,416,100	TBD	2.A.3		247

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2306	C&SF: CERP Acme Basin B Discharge (OPE) (CERP Project WBS # 38)	USACE/SFWMD	2002	2012	$26,503,000	$2,870,000	365	2.A.3	3.C.2	248
	2307	C&SF: CERP Picayune Strand Restoration *(f/k/a Southern Golden Gate Estates Hydrologic Restoration)* (OPE) (CERP Project WBS # 30)	USACE/SFWMD	2001	TBD	$416,234,000	$15,403,900	55,000	2.A.3		251
	2308	C&SF: CERP PLA /Adaptive Assessment and Monitoring	USACE/SFWMD	ongoing	N/A	$145,936,000	$48,420,000	TBD			255
	2309	C&SF: CERP Biscayne Bay Coastal Wetlands (FFF) (OPE) (CERP Project WBS # 28) (Formerly project ID 1410)	USACE/SFWMD	2001	TBD	$431,804,000	$10,606,000	1,695	2.A.3		258
	2310	C&SF: CERP C-111 Spreader Canal (WW) (Formerly Project ID 1517) (CERP Project WBS # 29)	USACE/SFWMD	2000	2011	$131,252,000	$8,376,000	TBD	2.A.3		261
	1101	C&SF: CERP Indian River Lagoon--South [C-23/C-24/C-25/North Fork and South Fork Storage Reservoirs (UU P1 & UU P2), and C-44 Basin Storage Reservoir (B)] (CERP Project WBS # 07)	USACE/SFWMD	2002	TBD	Footnote 1	Footnote 1	97,880	1.A.1	1.B.1/2.A.3	21
	1104	C&SF: CERP Lake Okeechobee Watershed (A) (W) (OPEs: LOWQTF, LOTSD, LIRS) (CERP Project WBS # 01)	USACE/ SFWMD	2001	TBD	Footnote 1	Footnote 1	3,730	1.A.1	1.B.1/2.A.3	31
	1107	C&SF: CERP Site 1 Impoundment (M P1) *[a/k/a Site 1 Impoundment (Fran Reich Preserve)]* (CERP Project WBS # 40)	USACE/SFWMD	2002	2014	Footnote 1	Footnote 1	114	1.A.1	2.A.3	38
	1111	E&SF: Critical Projects - Ten Mile Creek	USACE/SFWMD	1997	TBD	Footnote 1	Footnote 1	2,740	1.A.1	2.A.3	49
	1116	C&SF: CERP Broward County (WPA) Water Preserve Areas (R) (Q) (O) [Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O)] (CERP Project WBS 45) (Formerly Project ID 1501)	USACE/ SFWMD	2002	2020	Footnote 1	Footnote 1	4,633	1.A.1	2.A.3	61
	1303	E&SF:Critical Projects - Southern CREW	USACE	1999	2015	Footnote 1	Footnote 1	4,090	1.A.3	2.A.3	89
	1306	Kissimmee River Restoration Project	USACE/SFWMD	1994	2012	Footnote 1	Footnote 1	27,000	1.A.3	2.A.3	91
	1307	Modified Water Deliveries to Everglades National Park (Footnote 3)	NPS	1990	2013	Footnote 1	Footnote 1	190,000	1.A.3	2.A.3	NA
	3902	C&SF: CERP Wastewater Reuse Technology Pilot (CERP Project WBS # 37) (Formerly Project ID 3802)	USACE/SFWMD	2001	2016	Footnote 1	Footnote 1	3,500	3.C.2	2.A.3	308
	OTHER NATURAL HABITAT AND SPECIES PROJECTS										
	2402	South Florida Multi-Species Recovery Plan	USFWS	1994	TBD	$386,112,000	$13,938,300				265

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2403	WCA-2A Regulation Schedule Review	USACE	TBD	TBD	TBD	$0				267
	2404	C&SF: Manatee Pass Gates	USACE/SFWMD	2001	2010	$18,600,000	$15,519,000				268
	2305	Loxahatchee Impoundment Landscape Assessment (LILA)	USFWS	2002	2012	TBD	$4,963,500				270
Sub-Goal 2.B. CONTROL INVASIVE PLANT AND ANIMAL SPECIES											
2.B.1	**EXOTIC PLANT SPECIES MAINTENANCE CONTROL PROJECTS**										
	2501	Monitoring the Effects of Repeated Aerial Herbicide Application on Lygodium microphyllum and Native Vegetation.	USFWS	2005	2009	$220,000	$220,000		2.B.1		271
	2502	Invasive exotic plants control in terrestrial and aquatic natural systems	SFWMD	2007	TBD	TBD	$11,819,000		2.B.1		272
	2503	Invasive Species Research and Information Exchange	SFWMD	2007	TBD	TBD	$90,000		2.B.1		273
	2504	Develop and implement a FWS Florida Invasive Species Strike Team	USFWS	2003	TBD	$4,940,000	$2,964,000		2.B.1		274
	2505	C&SF:CERP Melaleuca Eradication and Other Exotic Plants (OPE) (Formerly Project ID 2602) (CERP Project WBS # 95)	USACE	2003	TBD	$16,700,000	$1,473,000		2.B.1		275
	2506	Everglades National Park Exotic Control Program (Formerly Project ID 2604)(Footnote 5)	NPS	2002	TBD	TBD	$10,488,520		2.B.1		NA
	2507	Hole-in-the-Donut (Formerly Project ID 2606)(Footnote 5)	NPS	1994	2017	$123,750,000	$61,006,000		2.B.1	2.A.3	NA
	2508	Aquatic and Upland Invasive Plant Management	FWC	TBD	TBD	TBD	$223,080,247		2.B.1		277
	2509	Exotic Species Removal (Formerly Project ID 2605)	Seminole	1998	2014	$988,000	$516,000		2.B.1		278
2.B.2	**CONTROL OF INVASIVE EXOTIC PLANTS**										
	2601	Casuarina Biological Control Agents	USDA/ ARS	2004	TBD	TBD	TBD				279
	2602	Melaleuca Biological Control Agents	USDA/ ARS	1986	TBD	TBD	TBD				280
	2603	Lygodium Biological Control Agents	USDA/ ARS	1996	TBD	TBD	TBD				281
2.B.3	**ERADICATION OF THE GAMBIAN POUCH RAT**										
	2700	Eradication of Gambian Pouch Rat	FDACS	2006	2011	$75,000	$60,000				282
		COMPLETED PROJECTS									
	2300	C&SF: CERP Strazzulla Wetlands (OPE) (CERP Project WBS # 39)	USACE/SFWMD	2002	2010	$81,101,000	$498,000	3,335	2.A.3		340
	2301	C&SF: CERP Winsberg Farms Wetland Restoration (OPE) (CERP Project WBS # 91)	USACE/PBCWUD	2000	2010	$17,102,000	$3,805,000	114	2.A.3	3.C.2	341
	2311	C&SF: S-169/Nine Mile Canal Basin	USACE/SFWMD	2001	2009	$13,600,000	$1,200,000				344
	2604	Estero Bay Aquatic Preserve and Buffer Reserve Enhancement and Exotic Removal Project	FDEP	1998	2004	$587,600	$587,600		2.B.2		346

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	2701	Melaleuca Quarentine Facility	USDA/ ARS	1997	2005	$7,100,000	$7,100,000				347
GOAL 3. FOSTER COMPATIBILITY OF THE BUILT AND NATURAL SYSTEM											
Sub-Goal 3.A. USE AND MANAGE LAND COMPATIBLE WITH RESTORATION											
3.A.1	**LAND USE ANALYSIS**										
	3100	Analysis of Land Use Patterns Surrounding CERP Projects	FDCA	2008	2010	$2,000	$0		3.A.1		283
3.A.2	**FLORIDA PARK, RECREATION AND OPEN SPACE LANDS PROJECTS**							**Acres**			
	3200	Florida Keys Overseas Heritage Trail (Formerly Project ID 3301)	FDEP	TBD	TBD	$51,249,155	$51,249,155	TBD	3.A.2		285
	3201	Lake Okeechobee Scenic Trail (Formerly Project ID 3102)	FDEP	2003	TBD	$27,000,000	$15,000,000	TBD	3.A.1		289
	3202	Florida Greenways and Trails Program (Formerly Project ID 3100)	FDEP/ OGT	2000	2009	$4,500,000	$951,372	10,000	3.A.1		290
3.A.3		**AGRICULTURE LANDS CONSERVATION MANAGEMENT PROJECTS**						**Acres**			
	3300	Technical Assistance to Seminole and Miccosukee Indian Reservations (Formerly Project ID 3201)	NRCS	1998	2011	$15,000,000	$478,000	107,000	3.A.3		291
	3301	2002 Farm Bill (Formerly Project ID 3202)	NRCS	2002	2007	$150,000,000	$64,624,000	59,278	3.A.3		292
3.A.4	**COMPATIBLE ECOSYSTEM RESTORATION CONCEPTS IN COMPREHENSIVE PLANS**										
	3400	Consideration of Land Use Policies and Planning by Local Governments with CERP	FDCA	2008	2010	$2,000	$2,000		3.A.4		293
3.A.5	**INCREASE COMMUNITY UNDERSTANDING OF RESTORATION PROJECTS**										
	3502	C&SF: CERP PLA/Public Outreach	USACE	2000	TBD	TBD	$15,470,000		3.A.5		294
	3503	SFWMD Outreach Program	SFWMD	TBD	TBD	TBD	$2,084,960		3.A.5		297
Sub-Goal 3.B FLOOD PROTECTION COMPATIBLE WITH ECOSYSTEM RESTORATION											
3.B.1	**FLOOD PROTECTION COMPATIBLE WITH ECOSYSTEM RESTORATION PROJECTS**										
	3600	C-4 Flood Mitigation Projects	SFWMD	2005	2015	TBD	$4,868,000		3.B.1		298
	1300	C&SF: C-111 (South Dade)	USACE/SFWMD	1994	2014	Footnote 1	Footnote 1		1.A.3	3.B.1	78
3.B.2	**HERBERT HOOVER DIKE REHABILITATION**										
	3700	Herbert Hoover Dike Rehabilitation	USACE	2006	2025	$991,100,000	$64,867,000				300
Sub-Goal 3.C PROVIDE SUFFICIENT WATER RESOURCES FOR BUILT AND NATURAL SYSTEMS											
3.C.1		**WATER RESOURCE DEVELOPMENT PROJECTS**						**MG**			
	3800	Regional Water Supply Plans (Formerly Project ID 3704)	SFWMD	2004	2009	$17,542,000	$0		3.C.1		304
3.C.2		**INCREASE VOLUME OF WATER RESOURCE PROJECTS**						**MGD**			
	3900	C&SF: CERP South Miami-Dade County Reuse (BBB) (CERP Project WBS # 98) (Formerly Project ID 3800)	USACE/M-DADE	TBD	TBD	$480,211,000	$0	131	3.C.2		305

Goals	SP Project Number	Project Name	Lead Agency	Start	End	Financial Requirement	Appropriated thru FY09	Measurable Output	Primary Objective	Secondary Objective(s)	Pg #
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Col. 12
	3901	C&SF: CERP West Miami-Dade County Reuse (HHH) (CERP Project WBS # 97) (Formerly Project ID 3801)	USACE/ M-DADE	TBD	TBD	$581,306,000	$0	100	3.c.2		306
	3902	C&SF: CERP Wastewater Reuse Technology Pilot (CERP Project WBS # 37) (Formerly Project ID 3802)	USACE/ SFWMD	2001	TBD	$39,158,000	$1,876,000		3.C.2	2.A.3	308
3.C.3		**ALTERNATIVE WATER SUPPLY PROJECTS**						**MGD**			
	4000	Alternative Water Supply Grant (Formerly Project ID 3900)	SFWMD	1996	TBD	Footnote 1	$184,456,000	78			311
	OTHER BUILT AND NATURAL SYSTEM COMPATIBILITY PROJECTS										
	4101	BMPs for Agriculture	NRCS	1997	2011	$160,278,000	$93,116,000				312
	4102	Monitoring of Organic Soils in the Everglades	NRCS	1998	2017	$1,236,000	$36,000				313
	4103	Soil Survey Update for the Everglades Agricultural Area	NRCS	2007	2012	$2,100,000	$0				314
	4104	Soil Survey Update for Everglades National Park, Big Cypress National Preserve and Water Conservation Areas	NRCS	2007	2013	$6,000,000	$0				315
	4105	C&SF: CERP Flow to Northwest and Central WCA - 3A (II) (RR) (CERP Project WBS # 11)	USACE/SFWMD	2002	TBD	$40,308,000	$66,000				316
		Completed Projects									
	4100	E&SF: Critical Projects - Keys Carrying Capacity Study	FDCA/ USACE	1997	2003	$6,000,000	$6,000,000				348

Project Specific Footnotes:

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

1 This is a multiple objective project, funding is listed in other objective.

2 Available funding through project completion is not provided on the project sheet, due to the uncertainty of the annual Federal and State appropriations process. For the purposes of calculating Goal subtotals for all projects, only the dollars appropriated to date have been used for this project.

3 Consistent with authorizing Big Cypress legislation.

4 The cost information for this project reflects the adjusted total cost information provided on the project sheet.

5 Information for this project was not available at the time of this report.

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PROJECT SHEETS

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Project Name: C&SF: CERP Indian River Lagoon – South (IRLS)
C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs (UU P1 & UU P2) and C-44 Basin Storage Reservoir (B)
Project ID: 1101 (CERP Project WBS # 07)
Lead Agency: USACE / SFWMD
Authority: WRDA 2007; *("44 Basin Storage Reservoir (B)" was a WRDA 2000 Initially Authorized Project and was de-authorized with WRDA 2007)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: 1-A.1 **Secondary:** 2-A.3, 1-B.1, 1-B.2

Measurable Output(s

- 135,000 acre-feet reservoir storage
  (C-23/24 N: 43,920 ac-ft; C-23/24 S: 48,900 ac-ft; C-44: 33,150 ac-ft; C-25: 5,176 ac-ft)
- 9,000 acre STAs (C-23/24: 2,363 acres; C-44: 6,000 acres; C-25: 142 acres)
  - 122 metric tons/yr. phosphorus load reduced
  - 475 metric tons/yr. nitrogen load reduced
- 97,880 acres of habitat improved/restored
  - Mosaic**:** 95,230 acres natural upland/wetlands habitat
    - Allapattah: 42,348 acres
    - Palmar: 17,143 acres
    - Cypress Complex: 32,639 acres
    - North Fork: 3,100 acres (flood plain preservation)
  - Benthic: 2,650 acres habitat in St. Lucie River and Estuary (muck removal 1.8 ft = 7.9 M yd^2)
    - Submerged Aquatics: 922 acres and another 889 acres of oyster habitat

April 1999 (Restudy) Project Synopsis: Included above-ground reservoirs with a combined storage capacity of approximately 349,400 acre-feet located in the C-23/C-24/C-25**/** Northfork and Southfork basins in St. Lucie and Martin Counties, as well as an above-ground reservoir with a total storage capacity of approximately 40,000 acre-feet located in the C-44 Basin in Martin County. The initial design of the reservoirs in the C-23/C-24/C-25 Basins assumes 39,000 acres (water levels up to 8 feet above grade) and 9,350 acres (water levels up to 4 feet above grade). And the initial design of the reservoir in the C-44 basin assumes 10,000 acres (water levels up to 4 feet above grade). Features were to capture runoff and provide water quality improvement including reduced loading of nutrients, pesticides and runoff pollutants.

Current Project Synopsis: The Indian River Lagoon is the most biologically diverse estuarine system in all of North America. The project purpose is to capture local runoff from both the C-23/C-24/C-25/Northfork and Southfork basins for flood flow attenuation to the St. Lucie River Estuary and from the C-44 Basin to be returned to the C-44 when there is a water supply demand. The design is expected to provide significant water quality improvement benefits to the Indian River Lagoon and St. Lucie River Estuary to reduce loading of nutrients, pesticides, and suspended materials conveyed in stormwater runoff to those bodies. Interim Pollution Load Reduction Goals for total suspended material, total nitrogen, and total phosphorus have already been developed for the Indian River Lagoon Surface Water Improvement and Management Plan (SFWMD and SJRWMD, 1994). Water can also used to provide water supply and environmental water supply benefits. Upper St. Johns project experience revealed that greater variability of water levels is more desirable for the ecology and water quality.

The C-44 component was an Initially Authorized Project in WRDA 2000. A March 2004 final Project Implementation Report (PIR), on the broader project, was recommended by the Chief of Engineers in August 2004 with a record of decision in January 2006.

Based on the feasibility study and PIR, currently the refined Recommended Plan would provide the following features:

- Construction and operation of four new above-ground reservoirs and their connecting canals, control structures, levees and pumps to capture water from the C-44, C-23, C-24 and C-25 canals.
- Construction and operation of three new stormwater treatment areas to reduce sediment, phosphorus, and nitrogen going to the estuary. STAs are planned for each of the basins: C-44 basin (1), C-23/24 basin (1) and C-25 basin (1).
- Restoration of the upland/wetland mosaic with ditch plugging, berm construction, and periodic fire maintenance at three locations; increased storage; nutrient load reduction; and habitat improvement.
- Redirection of water from the C-23/24 basin to the Northfork of the St. Lucie River.
- Muck removal from the north and south forks of the St. Lucie River and the middle estuary. Oyster shell, reef balls, and artificial submerged aquatic vegetation near muck removal sites.

Current Status: The combined IRL-S project was authorized in WRDA 2007 for $1,365 billion; and at the same time uncompleted portions of the original C-44 Basin Storage Reservoir project was de-authorized. Half the land is acquired for the Allapattah "natural" area; and work has occurred to return it to a natural condition. The property was opened to the pubic for 'passive' recreational usage.

The SFWMD completed the design for the C-44 Reservoir and STA in April 2008 as a state expedited project. All land is acquired, permits were obtained and site preparations had begun as the SFWMD planned to move forward with construction. However, due to developments of the *River of Grass* land acquisition, the Corps has been asked to construct this feature. Permits issued to SFWMD are being transferred to the USACE; and the necessary conversion of plans and specifications is being expedited, using the designer of record, and should be completed in 2010.

The C-23/24 STA and C-23/24 North Reservoir plans and specifications were delayed due to a design change removing a pump station. As a result, the redesigned gravity feed system, the STA and reservoir must be constructed together rather than as stand-alone features though producing significant cost savings overall. But, construction is delayed with a decision to apply limited construction funding to higher priority projects; pushing back the schedule to start in 2021. Current emphasis has shifted to the construction and completion of the C-44 Reservoir and STA (largest and former state expedited project).

Est. Cost: $1,437,581,000

Project Schedule:

2011	C-44 Construction begun.
2014	C-44 (B) Construction complete.
TBD	C-23/24/25 Reservoirs (UU); natural areas/muck remediation completed.

Detailed Project Budget Information (rounded):

IRLS	Expenditures Thru FY 2008
USACE	$9,833,000
SFWMD	$3,391,019
Total	**$13,224,019**

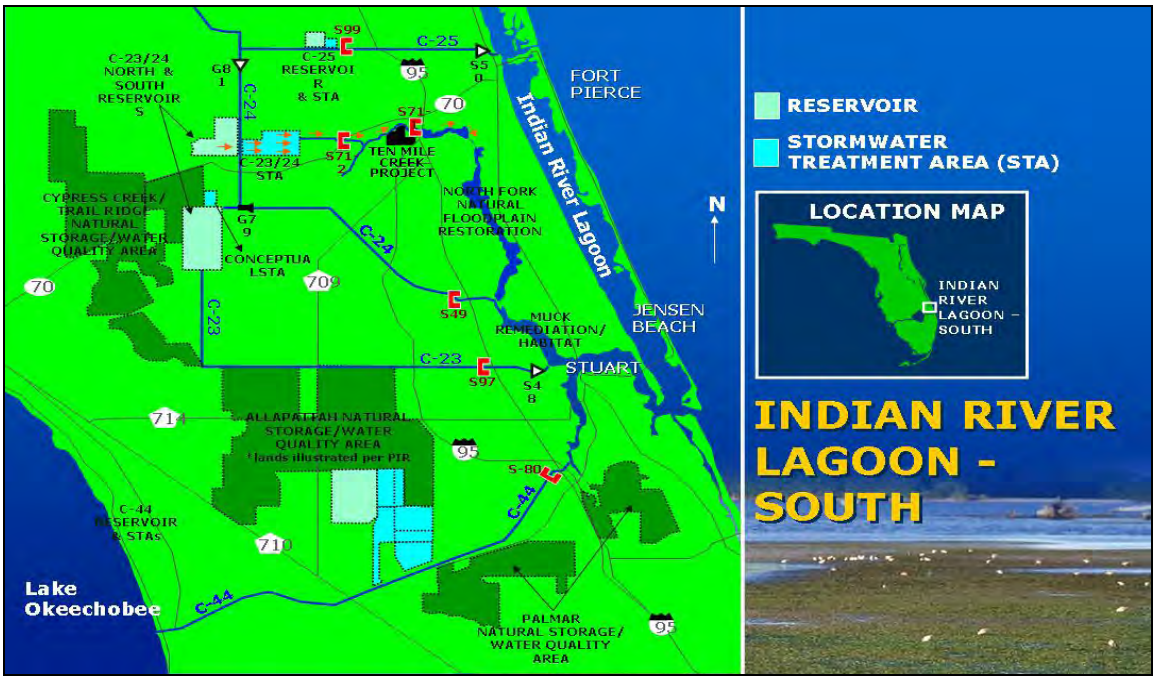
Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_07_irl_south.cfm

C-44 state expedited
https://my.sfwmd.gov/portal/page?_pageid=1855,2831854,1855_2831665&_dad=portal&_schema=PORTAL&navpage=prjc44

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate and current project status includes information summarized from the *Central and Southern Florida Project Indian River Lagoon – South Final Integrated Project Implementation Report (PIR) and Environmental Impact Statement (EIS)* (2004) and is updated to reflect current price levels in October 2008 dollars; along with the authorization in WRDA 2007. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:



Program Name: Infrastructure
Project Name: C&SF: CERP – Indian River Lagoon South - C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs (UU) and C-44 Basin Storage Reservoir (B) – Expedited project includes C-44 (St. Lucie Canal) Reservoir / Stormwater Treatment Area (STA)
Project ID: 1101A (CERP Project WBS #07)
Lead Agency: SFWMD
Authority: C-44 initially authorized in WRDA 2000; other components not authorized
Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 50,600 ac-ft reservoir, pump station and 6,300 acre STA (Acceler8 C-44 measurable outputs are part of the overall project total.)

Project Synopsis: A 3,400 acre above-ground reservoir approximately 15 feet deep (50,600 acre-feet) to capture local C-44 basin runoff with 6,300 acres of Stormwater Treatment Areas. This SFWMD expedited project is a component of the Indian River Lagoon South (IRL-S) Project Implementation Report (PIR) and is located in southern Martin County, adjacent to the C-44 Canal, between Lake Okeechobee and the Coast.

Total Estimated Project Cost: $366,553,294

Scheduled Construction Start Date: TBD
Scheduled Project Completion Date: TBD

Actual Expenditures to date by SFWMD*:

	Thru 2006	**2007**	**2008**	**2009**	**Total**
SFWMD	$16,231,952	$12,867,935	$2,255,176	$108,156	$31,463,219

*Credit for expedited work subject to inclusion in authorized Federal project.

Contact: Sue Ray, 561-242-5520, x4019

Project Name: C&SF: CERP Everglades Agricultural Area Storage Reservoirs (G P1 & G P2)
A/k/a Everglades Agricultural Area Storage Reservoirs - East & West
Project ID: 1102 (WBS # 08) and includes 1103 (previously WBS # 09)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(only Phase 1 'G P1'-"Initially Authorized Project);* Phase 2 not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.1

Measurable Output(s): 360,000 acre-feet total surface storage
(240,000 acre-feet Phase 1 (WRDA 2000) and 120,000 acre-feet Phase 2)

April 1999 (Restudy) Project Synopsis: Runoff from the Everglades Agricultural Area (EAA), Miami and North New River Canal Basins and regulatory releases from Lake Okeechobee is to be pumped into the reservoirs. Additionally, it provides for canal conveyance capacity increases for the Miami, North New River, Bolles, and Cross Canals. The aboveground reservoir(s) will have a storage capacity of approximately 360,000 acre-feet located in the EAA in western Palm Beach County. The initial design for the reservoir(s) assumed 60,000 acres, and was divided into three equally sized compartments (1, 2, and 3), with water level fluctuation up to 6-feet above grade:

1. Discharges used to meet Everglades Agricultural Area irrigation demands only.
2. Discharges used to meet environmental demands as a priority; and can be used to supply a portion of agricultural demands in cases where there is no environmental demand.
3. Discharges used to meet environmental demands.

The storage compartments can also be designed to provide a water quality treatment function, augmenting the performance of the Everglades Construction Project and ensuring protection of water quality in the Everglades Protection Area. Design of this feature for water quality performance will be based on water quality targets for the Everglades Construction Project and quality targets developed to protect designated uses in EAA waters.

Current Project Synopsis: The purpose of this feature is to improve the timing of environmental deliveries to the Water Conservation Areas, including reducing damaging flood releases from the Everglades Agricultural Area to the Water Conservation Areas, reducing Lake Okeechobee regulatory releases to the estuaries, meeting Everglades Agricultural Area irrigation and Everglades water demands, and increasing flood protection in the Everglades Agricultural Area.

The Tentative Selected Plan (February 2006), features a reservoir impoundment with a maximum normal pool storage depth of 12.5 feet at approximately 31,000 acres of above ground surface area storage. The reservoir is divided into two parts, Cell 1 and Cell 2, approximately 190,000 and 170,000 acre-feet in size, respectively. Cell 1 is essentially equivalent to the state expedited project. In November 2006, the National Research Council (NRC) Committee for Independent Scientific Review of Everglades Restoration Progress (CISRERP) recommended Incremental Adaptive Restoration (IAR) for implementation of some CERP projects to provide immediate restoration benefits. The EAA Storage Reservoir project is one of five CERP projects initially identified by the Jacksonville District to be implemented based on those IAR principles. Program managers recommended in December 2006 that the Phase 1 PIR should be modified to focus on implementation of Cell 1 (the 190,000 acre-feet storage project and associated features).

Current Status: Advanced design and construction activities by the SFWMD have been suspended while "River of Grass" planning and land acquisition is underway. Further work on the CERP project implementation report has been suspended and will be rescheduled once there is greater certainty about future conditions in the EAA and storage and treatment options provided by the "River of Grass" program.

Est. Cost: $585,508,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

EAA	Expenditures Thru FY 2008
USACE	$12,026,000
SFWMD	$3,582,000
Total	**$15,608,000**

Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_08_eaa_phase_1.cfm

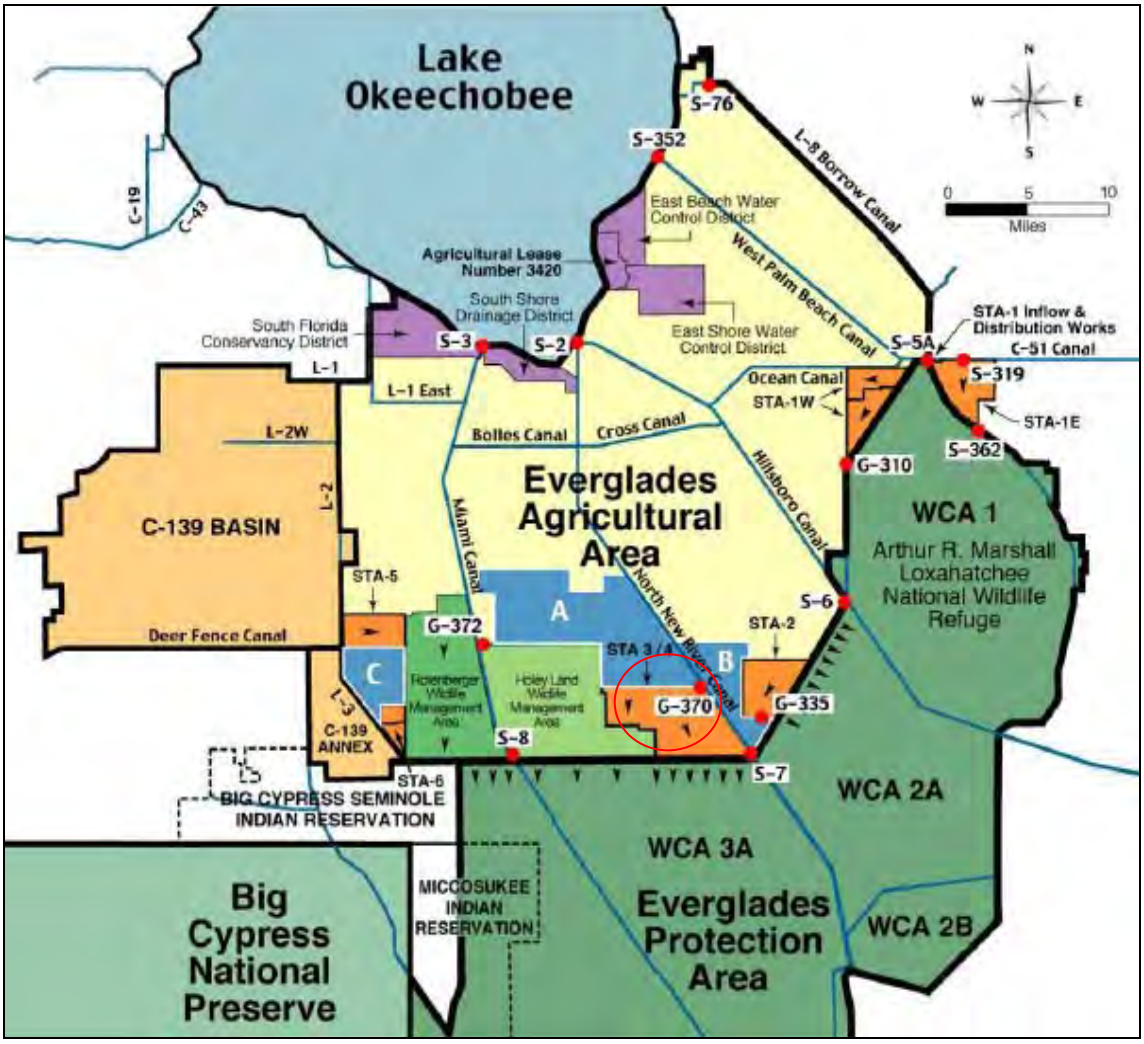
https://my.sfwmd.gov/portal/page?_pageid=1855,2831183,1855_2832538&_dad=portal&_schema=PORTAL&navpage=prjeaares

https://my.sfwmd.gov/portal/page?_pageid=1855,2856133,1855_2858170&_dad=portal&_schema=PORTAL

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Additional information was taken from the Everglades Agricultural Area Storage Reservoirs Integrated Project Implementation Report (PIR)/ Environmental Impact Statement (EIS) Revised Draft (Feb 2006).

Additional Information:



Design efforts are reviewing various combinations of reservoir footprint and pool depths, seeking to maximize the project benefits while minimizing the overall costs. The current storage reservoir project is being planned for Compartment A, which lies between the Miami Canal and North New River Canal. The design elevations for the reservoir and each cell are shown on Tables 1, 2 and 3 respectively.

Table 1:
Reservoir Design Elevations

Parameter	Height (Feet)
Top Of Levee	23.0
Maximum Surcharge Pool	16.3
Maximum Normal Pool	12.0

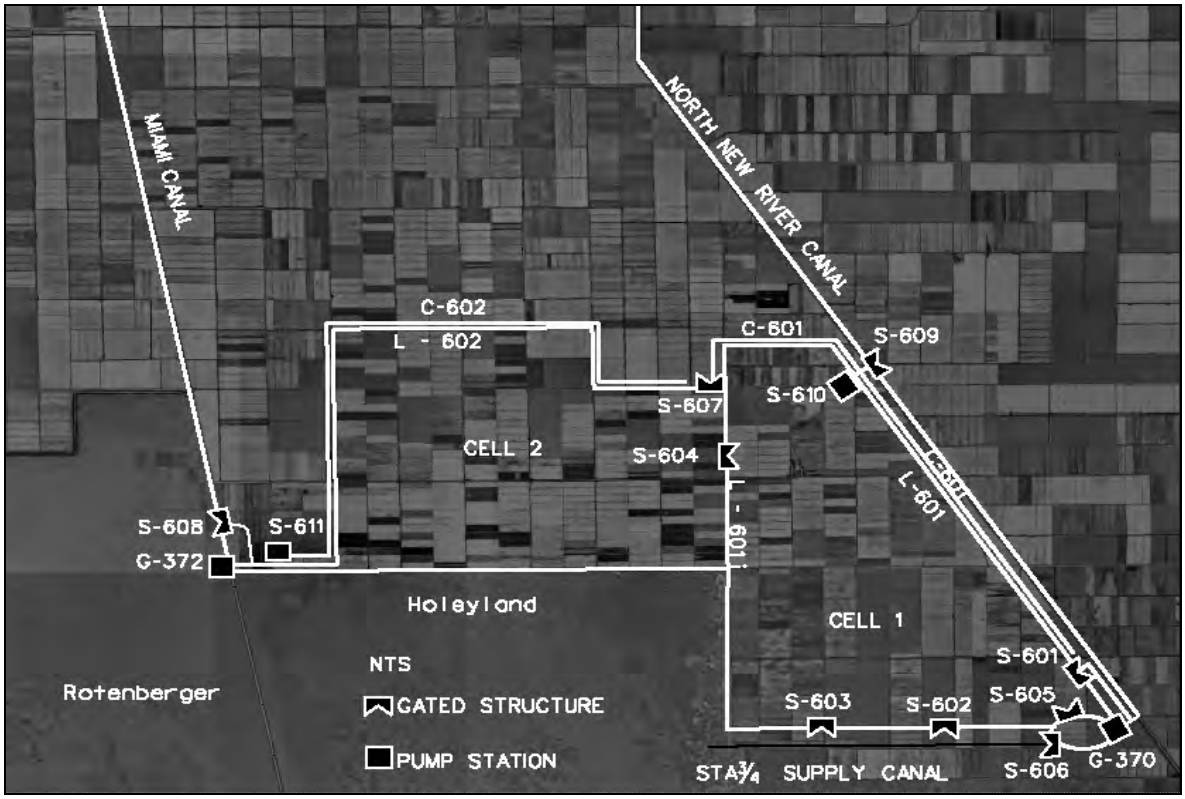
Note: The average impoundment ground elevation is 10.0 feet NGVD.

Table 2:
Cell 1 Reservoir Storage Calculations

Cell 1	
Storage Area	± 17,000 acres
Maximum Normal Pool Depth	12 feet
Storage	± 190,000 ac-ft
Fill Rate at 3,900 cfs	0.5 ft/day
Time to Fill 4 feet at 3,900 cfs	8.8 days
Drawdown Rate at 4,000 cfs	0.5 ft/day
Time to Drawdown 4 feet at 4,000 cfs	8.6 days

Table 3:
Cell 2 Reservoir Storage Calculations

Cell 2	
Storage Area	± 14,000 acres
Maximum Normal Pool Depth	12 feet
Storage	± 170,000 ac-ft
Fill Rate at 3,000 cfs	0.4 ft/day
Time to Fill 4 feet at 3,000 cfs	9.4 days
Drawdown Rate at 4,000 cfs	0.6 ft/day
Time to Drawdown 4 feet at 4,000 cfs	7.0 days


MIAMI CANAL
NORTH NEW RIVER CANAL
C-602
L - 602
C-601
S-609
S-607
S-610
CELL 2
S-604
L-601
S-608
S-611
G-372
Holeyland
CELL 1
S-601
NTS
Rotenberger
GATED STRUCTURE
S-603
S-602
S-605
PUMP STATION
STA¾ SUPPLY CANAL
S-606
G-370

Program Name: Infrastructure
Project Name: C&SF: CERP - Everglades Agricultural Area (EAA) Storage Reservoirs (G) – Expedited project includes Everglades Agricultural Area (EAA) Reservoir – Phase 1 with Bolles Canal Improvements
Project ID: 1102A (CERP Project WBS #08) and 1103 (CERP Project WBS #09)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1

Measurable Output(s): 190,000 ac-ft surface storage, water conveyance, flood protection (Expedited EAA measurable outputs are part of the overall project total.)

Project Synopsis: This SFWMD expedited project is a component of the larger EAA Reservoir Project and is designed to provide significant additional water storage in the southern region of the Everglades Agricultural Area (EAA). The Phase 1 project is an above-ground reservoir for water storage, with a capacity of 190,000 acre-feet at a maximum depth of 12.5 feet. The reservoir will be constructed on a 16,700-acre parcel of land situated north of Stormwater Treatment Area 3/4 and between the Miami and North New River canals. This expedited project also includes conveyance capacity increases for the Bolles Canal (L-21 and L-16 Reaches) in order to provide improved flood protection and water flow capabilities for moving water to and from the EAA Reservoir and STAs.

Storage Reservoir:
Estimated Cost: $798,719,697
Scheduled Construction Start Date: July 2006
Scheduled Project Completion Date: Project on Hold

Bolles Canal:
Estimated Construction Cost: $44,705,000
Scheduled Construction Start Date: March 2007
Scheduled Project Completion Date: Project on Hold

Actual Expenditures to date by SFWMD*:

Storage Reservoir:

	Thru 2006	2007	2008	2009	Total
SFWMD	$32,997,068	$91,060,566	$130,722,278	$6,676,296	$261,456,208

Bolles Canal:

	Thru 2006	2007	2008	2009	Total
SFWMD	$280,899	$559,301	$194,435	0	$1,034,635

Contact: Joe Albers, 561-242-5520 x4064

*Credit for expedited project work subject to inclusion in authorized Federal project.
**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Project Name: C&SF: CERP Lake Okeechobee Watershed (A) (W) (OPEs: LOWQTF, LOTSD, LIRS) *[North of LOW Storage Reservoir (A), Taylor Creek/Nubbin Slough Storage and Treatment Area (W), OPEs:: LOW Water Quality Treatment Area (LOWQTF), LOW Tributary Sediment Dredging (LOTS), Lake Istokpoga Regulation Schedule Modification (LIRS)*

Project ID: 1104 (CERP Project WBS # 01 and WBS #02)

Lead Agency: USACE / SFWMD

Authority: WRDA 2000 *('W' authorized as Initially Authorized Project);* WRDA 2000 *(Programmatic Authority < $25 M) OPEs: LIRS, LOTS);* other components not authorized.

Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary:** 1-A.1 **Secondary:** 1-B.1, 2-A.3

Measurable Output(s):

- 272,823 acre-feet storage capacity in the Lake Okeechobee Watershed
  (202,500 LOW; 55,000 Taylor Creek Nubbin Slough, 4,375 OPEs; 1,984 Taylor Creek Reservoir)
- 12,000 acre stormwater treatment area
- 3,730 acres of habitat restoration (primarily wetlands)
- 74 metric tons average annual reduction of phosphorus going into Lake Okeechobee

April 1999 (Restudy) Project Synopsis: The Restudy initially included each of the following separate elements:

North of Lake Okeechobee Storage Reservoir (A) – Initial design was an above-ground reservoir with total storage capacity of approximately 201,250 acre-feet in a 17,500-acre reservoir (water levels fluctuating up to 11.5 feet above grade) and a 2,500-acre stormwater treatment area to be located in the Kissimmee River Region, north of Lake Okeechobee. The location was anticipated to be in Glades, Highlands, or Okeechobee Counties. The final size, depth and configuration to be determined through more detailed planning, land suitability analyses, and design determined by an evaluation of degraded water bodies within the watersheds of the storage/treatment facility for appropriate pollution load reduction targets, and other water quality restoration targets for the watershed.

Taylor Creek/Nubbin Slough Storage and Treatment Area (W) - One of the ten Initially Authorized Projects identified in the Water Resources Development Act (WRDA) 2000, the initial design includes a 5,000-acre above-ground reservoir (water levels fluctuating up to 10 feet above grade) with a storage capacity of approximately 50,000 acre-feet and a 5,000-acre stormwater treatment area with 20,000 acre-feet capacity in the Taylor Creek/Nubbin Slough Basin to attenuate flows and reduce the amount of nutrients flowing to the lake.

Lake Okeechobee Watershed Water Quality Treatment Facilities (LOWQTF) - Two reservoir-assisted stormwater treatment areas and the plugging of select local drainage ditches. The initial design of these reservoir-assisted stormwater treatment areas assumes a 1,775-acre facility in the S-154 Basin in Okeechobee County and a 2,600-acre facility in the S-65D sub-basin of the Kissimmee River Basin in Highlands and Okeechobee Counties. The plugged drainage ditches will result in restoration of approximately 3,500 acres of wetlands throughout the Lake Okeechobee watershed basin. The other portion of this feature includes the purchase of conservation easements within four key basins of Lake Okeechobee to restore the hydrology of isolated wetlands by plugging the connection to drainage ditches and the diversion of canal flows to adjacent wetlands. Sites range from an individual wetland to an entire sub-basin and are located within the lower Kissimmee River Basins (S-65D, S-65E, and S-154) and Taylor Creek/Nubbin Slough Basin (S-191).

Lake Okeechobee Tributary Sediment Dredging (LOTSD) (OPE) - The purpose is to remove phosphorous from canals located in areas with the most intense agriculture in the watershed that contribute to excessive phosphorus loading to Lake Okeechobee by dredging sediments from 10 miles of primary canals within an 8-basin area in the northern watershed of Lake Okeechobee. The initial design assumes the dredged material will contain approximately 150 tons of phosphorus. A partnership with local landowners will be pursued for disposal of the material on uplands.

Lake Istokpoga Regulation Schedule (LIRS) (OPE) - Develops a plan to address water resource problems in the Lake Istokpoga Basin, a natural lake located in Highlands County, and a tributary of both Lake Okeechobee and the Kissimmee River. The focus is to create a balance between environmental needs, water supply and flood control in the basin.

Current Project Synopsis: The LOW project area covers approximately 1,800 square miles and consists of four major planning areas based on the four major tributary systems that naturally drain the lower portion of the watershed into Lake Okeechobee. The purpose is to increase aquatic and wildlife habitat, regulate extreme highs and lows in lake staging, reduce phosphorus loading and reduce damaging releases to the surrounding estuaries. In addition, this project will focus on rehydrating wetlands in and around the areas north of the lake and improve the ecological health of Lake Istokpoga. As part of Corps planning, several alternative plans were reviewed. The LOW Project Tentatively Selected Plan (TSP) consists of the following <u>six</u> structural water storage and treatment features and a recommended Lake Istokpoga Regulation Schedule (LIRS – combining WBS #2, formerly a separate project):

1. A **reservoir in the Taylor Creek/Nubbin Slough basin –** A 1,984-acre reservoir, located in the S-191 sub-basin, will provide a maximum capacity of 32,000 acre-feet at an average depth of 18 feet situated on the Grassy Island Ranch. The reservoir will receive inflows from and discharge back to Taylor Creek. *(One of the ten initial projects authorized in WRDA 2000).*
2. **A stormwater treatment area (STA) in the Taylor Creek/Nubbin Slough basin** - A 3,975 acre treatment area will be located in the S-135 sub-basin and will have an average operating depth of 1.5 feet. This feature will receive inflow from the L-64 canal and discharge back to the L-47 canal and is projected to provide 15.8 metric tons of average annual phosphorus load reduction. *(One of the ten initially authorized projects in WRDA 2000- a/k/a Lakeside Ranch STA).*
3. **A reservoir in the Kissimmee River basin –** A 10,281 acre above ground reservoir will provide a maximum storage capacity of 161,263 acre-feet (at 16 feet average depth) located in the C-41A sub-basin within the Kissimmee River drainage basin. It will receive flow from and discharge back to the C-38 canal (Kissimmee River).
4. **A reservoir in the Lake Istokpoga basin –** A 5,416-acre reservoir is proposed to be located in the C-40A and C-41A sub-basins and provide a maximum storage capacity of 79,560 acre-feet (at an average depth of 16 feet). It will receive inflow from and discharge back to the C-41A canal.
5. **A stormwater treatment area in the Lake Istokpoga basin** - An 8,044-acre treatment area will be located in the L-49 sub-basin (at an average operating depth of 1.5 feet). It will receive flow from the C-41 canal and discharge treated water to Lake Okeechobee and is expected to provide approximately 29.1 metric tons of average annual phosphorus load reduction.
6. **Restoring a wetland in Paradise Run** - A 3,730-acre wetland restoration site is located at the ecologically significant confluence (under pre-development conditions) of Paradise Run, oxbows of the Kissimmee River, and Lake Okeechobee. Under restored conditions, it would have a rain-driven hydrology unless future efforts to further enhance watershed conditions could link the site to the surface flows from the C-38 (Kissimmee River) or C-41A (Istokpoga) Canals.

Current Status: The Lake Okeechobee Tributary Sediment Dredging project (LOTSD) is included in the WRDA 2000 programmatic authorization for implementation of projects with a total project cost under $25 million, but was later removed from this project due to non-cost effectiveness.

SFWMD is pursuing a 4,000-acre Taylor Creek Reservoir as part of the Northern Everglades Project (Task Force ID #1112). However, it was on hold pending results of Northern Everglades Feasibility Study in the Taylor Creek/Nubbin Slough basin. Lake Okeechobee project completion has been delayed, since 2005, due to unresolved policy issues associated with federal cost sharing for water quality improvement features (the STA features in the Tentatively Selected Plan). Dependent on the outcome, the project may be unjustifiable due to substantially reduced ecosystem benefits. A decision from HQ-DC is expected by July 2009.

Est. Cost: $1,332,873,000

Project Schedule:

2019	Construction start estimated.
TBD	Construction completed.

Detailed Project Budget Information (rounded):

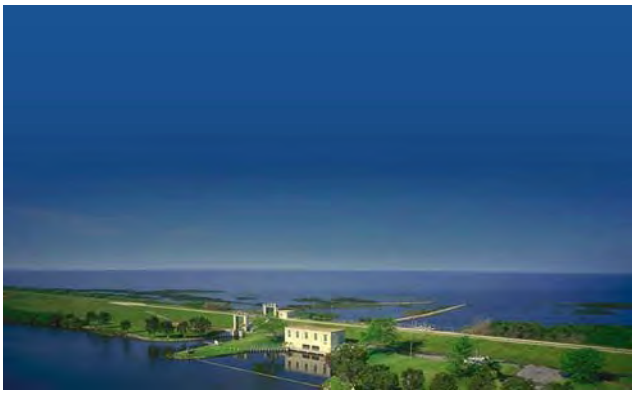
LOW	**Expenditures Thru FY 2008**
USACE	$14,602,000
SFWMD	$7,062,000
Total	$21,664,000

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_01_lake_o_watershed.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:



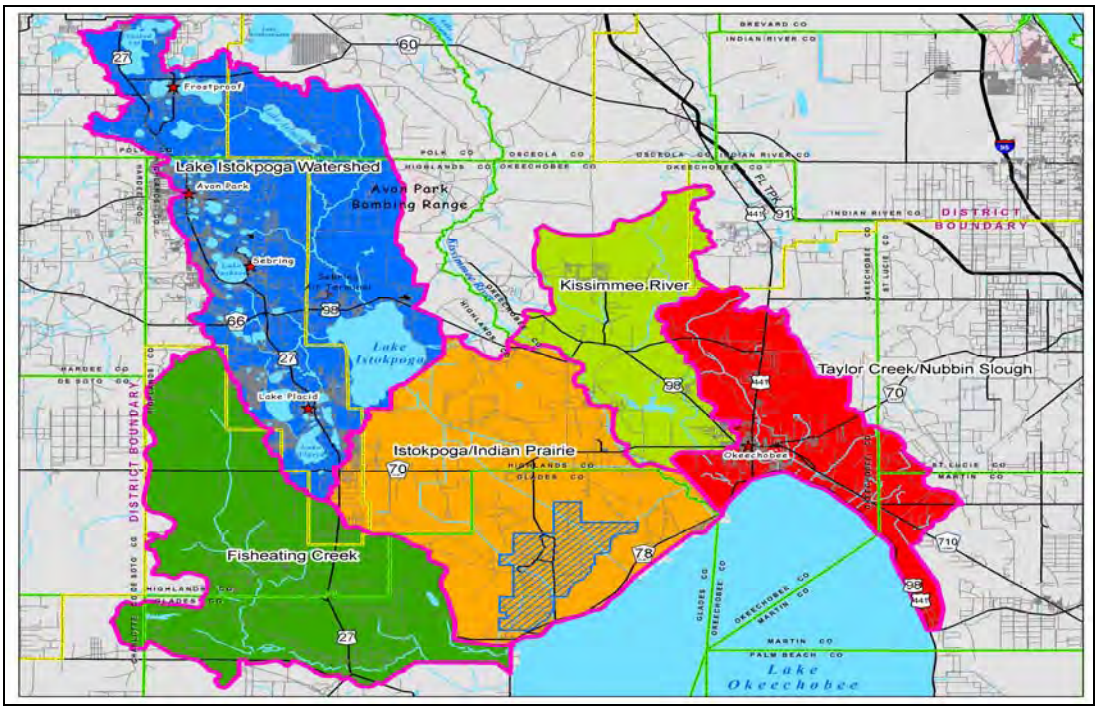


Figure 1: Lake Okeechobee Watershed Project Area

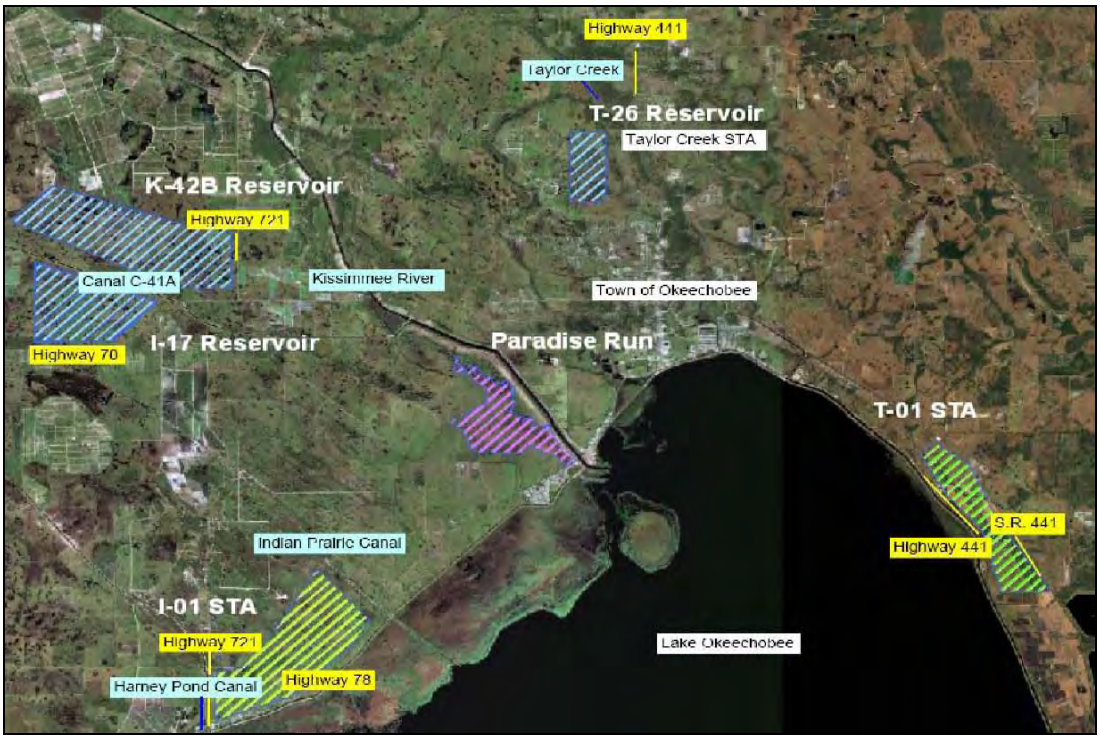


Figure 2: Lake Okeechobee Watershed Tentatively Selected Plan

Project Name: C&SF: CERP North Lake Belt Storage Area (XX P2)
Project ID: 1105 (CERP Project WBS # 25)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: 1-A.1

Measurable Output(s): 90,000 acre-feet reservoir

April 1999 (Restudy) Project Synopsis: Includes canals, pumps, water control structures, and an in-ground storage reservoir with a total capacity of approximately 90,000 acre-feet located in Miami-Dade County within an area proposed for rock mining. The initial design of the reservoir assumed 4,500 acres (water level fluctuating from ground level to 20-feet below grade). A subterranean seepage barrier will be constructed around the perimeter to enable drawdown during dry periods, to prevent seepage losses, and to prevent water quality impact due to the high transmissivity of the Biscayne Aquifer in the area.

Current Project Synopsis: The purpose of this project is to capture and store a portion of the stormwater runoff from the C-6, western C-11 and C-9 Basins. The stored water will be used to maintain stages during the dry season in the C-9, C-6, C-7, C-4 and C-2 canals and to provide fresh water deliveries to Biscayne Bay to aid in meeting salinity targets. Runoff is pumped and gravity fed into the in-ground reservoir from the C-6 (west of Florida's Turnpike), western C-11, and C-9 basins. Outflows from the facility will be directed into the C-9 Stormwater Treatment Area/Impoundment for treatment prior to delivery to the C-9, C-7, C-6, C-4 and C-2 canals.

This project adheres to the original concept outlined in the Restudy. However, a pilot test of this component will be conducted prior to final design to determine construction technologies, storage efficiencies, impacts upon local hydrology, and water quality effects. If necessary, additional stormwater treatment areas will be constructed adjacent to the in-ground reservoir.

Current Status: This project has not yet begun.

Est. Cost: $347,333,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

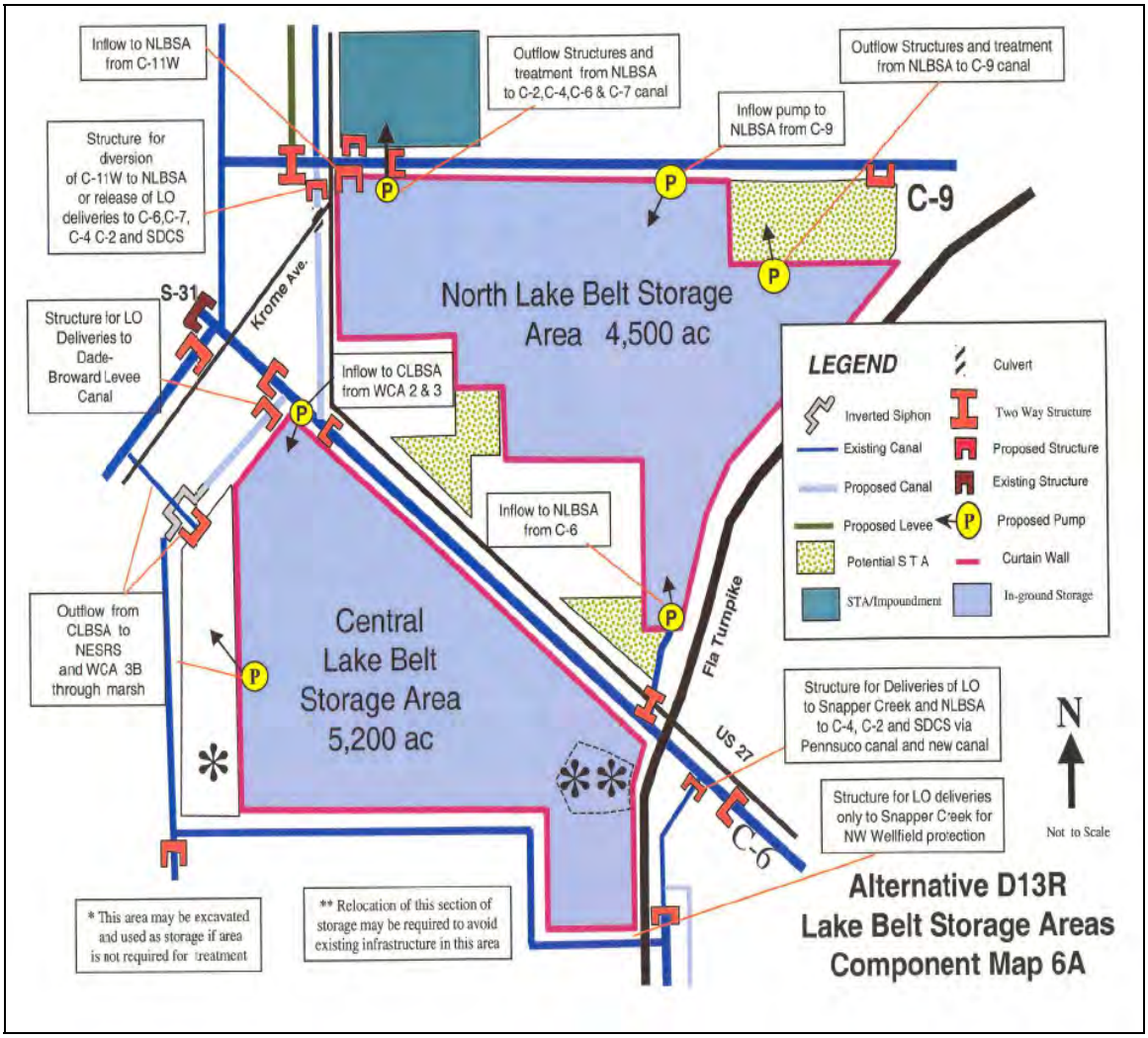
North Lake Belt	Expenditures Thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_25_north_lake_belt.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:



Project Name: C&SF: CERP PBC Agriculture Reserve Reservoir (VV P1)
Project ID: 1106 (CERP Project WBS # 20)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.1

Measurable Output(s): 20,000 acre-feet reservoir

April 1999 (Restudy) Project Synopsis: Includes an above-ground reservoir with a total storage capacity of approximately 20,000 acre-feet located in the western portion of the Palm Beach County (PBC) Agriculture Reserve. The initial design assumes a 1,660-acre reservoir (with water levels fluctuating up to 12-feet above grade). Facilities will be filled during the wet season with excess water from the western portions of the Lake Worth Drainage District and possibly from Acme Basin B. Water will be returned to the Lake Worth Drainage District Canals to help maintain canal stages during the dry-season. If water is not available in the reservoir or the associated ASR wells (Part 2), existing rules for water delivery to this region will be applied.

Current Project Synopsis: The purpose of this feature is to supplement water supplies for central and southern Palm Beach County by capturing and storing excess water currently discharged to the Lake Worth Lagoon. These supplemental deliveries will reduce demands on Lake Okeechobee and Loxahatchee National Wildlife Area. It is assumed that this facility could also be designed to achieve water quality improvements in downstream receiving waters, depending upon pollutant loading conditions in the watershed. The reservoir portion (part 1) was planned to work with the ASR (part 2 WBS #21 the following project).

Current Status: Adheres to the original concept outlined in the Restudy. This project has not yet begun.

Est. Cost.: $120,402,000

Project Schedule: TBD

Detailed Project Budget Information (rounded):

PBC Agriculture Reserve Reservoir	Expenditures Thru FY 2008
USACE	$0
SFWMD	$1,000
Total	**$1,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_20_pbc_asr_1.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Site 1 Impoundment (M P1)
Site 1 Impoundment (Fran Reich Preserve)
Project ID: 1107 (CERP Project WBS # 40)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Initially Authorized Project);* WRDA 2007
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: 1-A.1 **Secondary:** 2-A.3

Measurable Output(s):

- 13,280 acre-feet reservoir storage
- 114 acres of restored wetland and upland habitat

April 1999 (Restudy) Project Synopsis: The purpose of this project is to supplement water deliveries to the Hillsboro Canal by capturing and storing excess water currently discharged to the Intra-coastal Waterway. These supplemental deliveries will reduce demands on Lake Okeechobee and Loxahatchee National Wildlife Refuge. The impoundment pool will also provide groundwater recharge, reduce seepage from adjacent natural areas, and prevent saltwater intrusion by releasing impounded water back to the Hillsboro Canal when conditions dictate. Some measure of flood protection may also be provided along with water quality improvement. The project contained in the Restudy was titled *Site 1 Impoundment and Aquifer Storage and Recovery (M)* and included an above-ground reservoir and a series of aquifer storage and recovery wells. The reservoir was estimated with a total storage capacity of approximately 15,000 acre-feet located in the Hillsboro Canal Basin in southern Palm Beach County. The initial design of the reservoir assumed 2,460 acres (water levels fluctuating up to 6 feet above grade). Water from the Hillsboro Canal will be pumped into the reservoir during the wet season or periods when excess water is available and released back to help maintain canal stages during the dry-season.

The aquifer storage and recovery wells included a total capacity of approximately 150 million gallons per day and associated pre- and post- water quality treatment. The initial design of the aquifer storage and recovery facility assumed 30 well clusters, each with a capacity of five million gallons per day with chlorination for pre-treatment and aeration for post-treatment. The source of water to be injected was in the surficial ground water adjacent to the reservoir.

Current Project Synopsis: The original Restudy project has since been divided into two parts. The first part is known as *Site 1 Impoundment* (M P1) (a/k/a *Fran Reich Preserve*) (CERP Project WBS #40), this project, relates to the reservoir portion. The second part is known as the *Hillsboro ASR* (M P2) (CERP Project WBS #22) and relates to the aquifer storage and recovery wells portion, and is reported separately.

A Tentatively Selected Plan (TSP) for this project (the reservoir) was identified and the Alternative Formulation Briefing (AFB) held in August 2004. The Selected Alternative Plan includes an 1,800-acre project footprint with a 1,660-acre, approximately 8 foot deep above ground impoundment (13,280 acre-feet) with inflow pump station, discharge gated culvert, emergency overflow spillway, and seepage control canal with associated structures.

Current Status: A revised final PIR, which included refinements, received a signed Chief of Engineer's Report in December 2006. The reservoir project was authorized for construction in WRDA 2007 for $80,840,000, subject to appropriations. Surveying was done in 2008. The Intermediate Plans and Specs were sent out for 3-week review in late May 2009. A pre-application meeting for water quality was held in early June and the schedule for water reservations has been requested. The contracting acquisition strategy is ongoing, as well as the land certification process. Construction is planned to begin in FY10 pending appropriations.

Est. Cost: $84,442,000

Project Schedule:

2010 Construction begun.
2014 Construction physically complete.

Detailed Project Budget Information (rounded):

Site 1 (Phase I)	**Expenditures Thru FY 2008**
USACE	4,738,950
SFWMD	566,030
Total	**5,304,980**

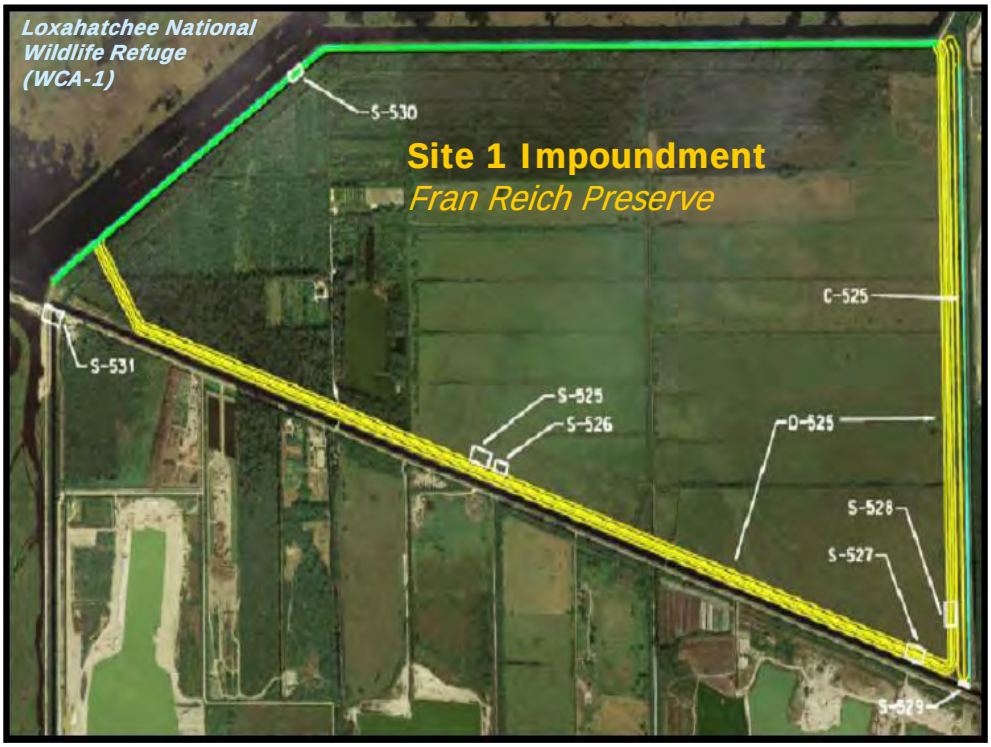
Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_40_site_1_impoundment.cfm

https://my.sfwmd.gov/portal/page?_pageid=1855,2831038,1855_2831245&_dad=portal&_schema=PORTAL&navpage=prjwpa.

Contact: Michael Rogalski, Chief Herbert Hoover Dike Branch, USACE
(904) 232-1460, Michael.B.Rogalski@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Current project status includes information summarized from the revised Final PIR and EA (2006) and authorization in WRDA 2007.

Additional Information:



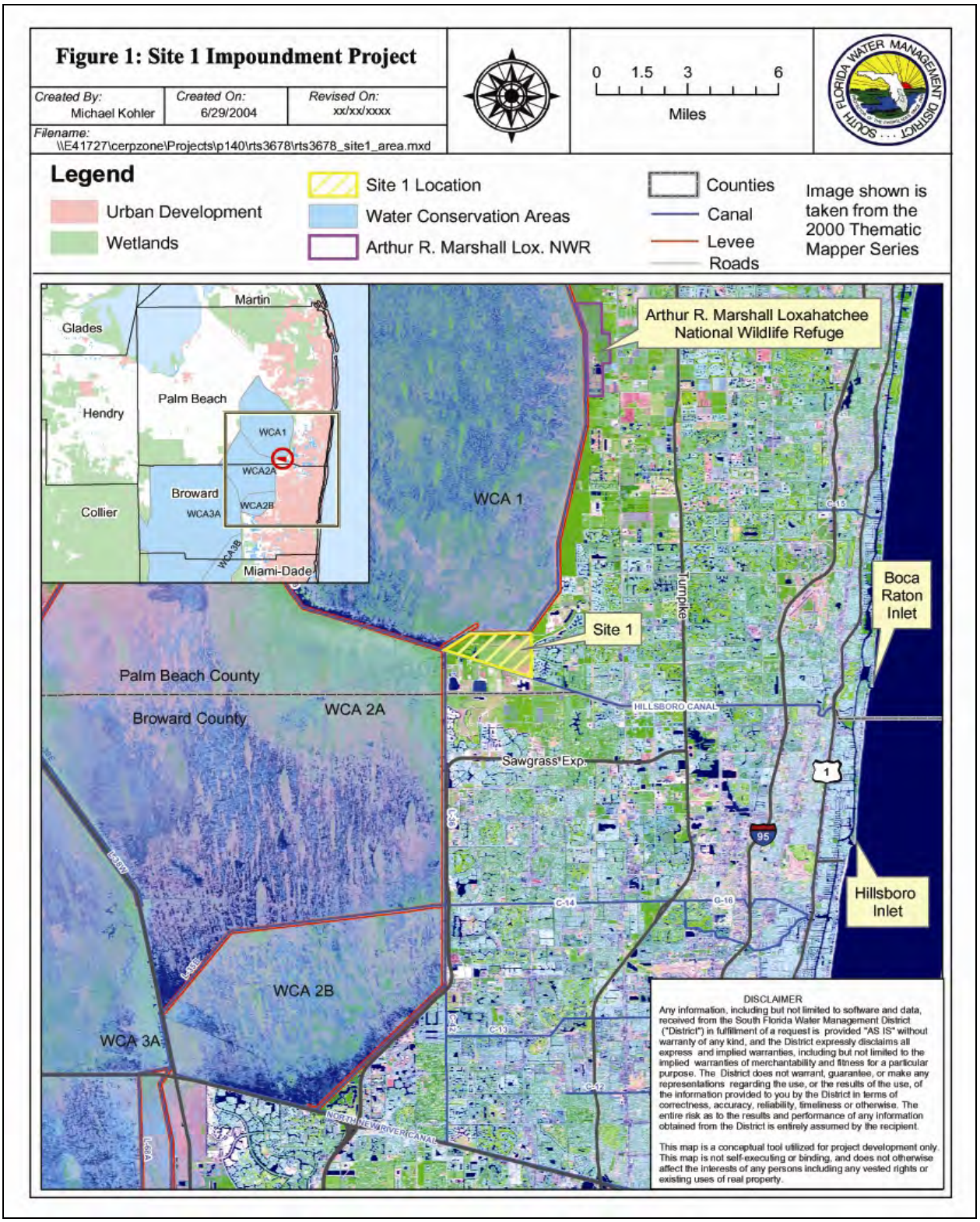


Figure 1: Site 1 Impoundment Project
Created By: Michael Kohler
Created On: 6/29/2004
Revised On: xx/xx/xxxx
Filename: \\E41727\cerpzone\Projects\p140\rts3678\rts3678_site1_area.mxd
0 1.5 3 6
Miles
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
Legend
Urban Development
Wetlands
Site 1 Location
Water Conservation Areas
Arthur R. Marshall Lox. NWR
Counties
Canal
Levee
Roads
Image shown is taken from the 2000 Thematic Mapper Series
Martin
Glades
Hendry
Palm Beach
Broward
Collier
Miami-Dade
WCA1
WCA2A
WCA2B
WCA3A
WCA3B
Arthur R. Marshall Loxahatchee National Wildlife Refuge
WCA 1
Site 1
Boca Raton Inlet
Hillsboro Inlet
Palm Beach County
Broward County
WCA 2A
WCA 2B
WCA 3A
HILLSBORO CANAL
Sawgrass Exp.
Turnpike
NORTH NEW RIVER CANAL
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Project Name: C&SF: CERP Caloosahatchee River (C-43) West Basin Storage Reservoir and Caloosahatchee Watershed (D P1)
F/k/a *C-43 Basin Storage Reservoir – Part 1;* currently 2 PIRs: *Caloosahatchee River (C-43) West Basin Storage Reservoir (PIR #1) and Caloosahatchee Watershed (PIR #2)*
Project ID: 1109 (CERP Project WBS # 04)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.1

Measurable Output(s): 170,000 acre-feet storage

April 1999 (Restudy) Project Synopsis: Excess runoff from the C-43 Basin and Lake Okeechobee flood control discharges will be pumped into the initially proposed above-ground reservoir(s) with a total storage capacity of approximately 160,000 acre-feet. The initial design of the reservoir(s) assumed 20,000 acres (water levels fluctuating up to 8 feet above grade). Water from the reservoir will be injected into aquifer storage and recovery well field with a capacity of approximately 220 million gallons per day and associated pre- and post- water quality treatment located in the C-43 Basin in Hendry, Glades, or Lee Counties for long-term storage. Estuarine demands not met by basin runoff and the aquifer storage and recovery wells will be met by Lake Okeechobee as long as the lake stage is above a pre-determined level.

Current Project Synopsis: The purpose of the west basin storage reservoir is to capture excess C-43 Basin runoff and regulatory releases from Lake Okeechobee and release water to the Caloosahatchee Estuary when needed. The reservoir will also help to improve water quality by reducing nutrient impacts of runoff and improving environmental water supply deliveries to the Caloosahatchee Estuary.

As part of the Corps planning process, alternative plans were reviewed. The Caloosahatchee (C-43) Basin Storage Reservoir and Aquifer Storage and Recovery (ASR) project (originally component D in the Yellow Book) has since been divided into two projects: The latter portion is now a separate project designated D P2 (part 2), previously USACE WBS #5. In 2007, D P1 (part 1), represented here, was further subdivided into two distinct Project Implementation Reports (PIRs) for implementation:

(1) **Caloosahatchee River (C-43) West Basin Storage Reservoir (WBSR)** project purpose is to restore the Caloosahatchee estuarine and riverine ecosystems by improving hydrologic conditions. To achieve this goal, the team identified two key objectives: (1) provide additional water to the estuary to augment low or no flows over Structure S-79 during the dry season/dry periods, and (2) reduce damaging peak flows to the estuary by capturing and storing excess basin run-off and Lake Okeechobee releases during high flow conditions.

(2) **Caloosahatchee Watershed** would address further water storage needs for the Caloosahatchee Estuary as well as water quality, water management, and ecological restoration challenges; while also ensuring that agricultural water supply requirements and flood attenuation are not negatively impacted. The project will build on the state's Caloosahatchee River Watershed Protection River Plan (January 2009). Goals are to: (1) Identify, evaluate and implement methods and/or means of further decreasing dependency upon water releases from Lake Okeechobee, without disrupting water supply needs in the basin; (2) Identify, evaluate and implement methods and/or means to restore the Estuary by storing and releasing water flows in a more natural manner; and (3) Identify, evaluate and implement methods and/or means to enhance basin water quality.

Current Status:

Caloosahatchee River (C-43) West Basin Storage Reservoir (WBSR) PIR addresses formulation, evaluation, and justification of a separable reservoir project in the lower basin by reaffirming a reservoir achieves the benefits outlined in the 1999 Restudy. Based on current conditions, this project achieves the benefits in a cost-effective manner. Completion of a Chief's Report on the final September 2007 PIR and submission to Congress is awaiting guidance on a local sponsor request for a return to national land valuation and crediting policy as it relates to the C-43 Reservoir project and subsequent future CERP projects. The requested policy change, if approved, would allow real estate crediting at the fair market value when the land was made available to the government instead of acquisition cost.

Additional information was prepared in an addendum, with updated costs from a real estate re-evaluation, and sent to HQ USACE in December 2008 for review. As a state expedited project, the SFWMD designed a reservoir at the Berry Groves site, and final plans and specifications were completed in 2008. The recommended plan now includes a 170,000 acre-foot storage reservoir with a 1500 cfs pump capacity. State funding has been on hold pending outcome of the proposed state River of Grass land acquisition of 130,000 -187,000 acres of sugarcane farmlands near Lake Okeechobee begun mid-2008. A construction date is dependent upon Congressional authorization (generally in a WRDA) and appropriation funding..

Caloosahatchee Watershed draft Project Management Plan (PMP) was sent to the SFWMD in November 2008 for comment. However, cost estimates and a schedule associated with the modeling were in flux with policy questions remaining from the C-43 WBSR PIR split. PMP adjustments include narrowing scope to river and estuary restoration, addressing the savings clause, the modeling plan and identification of the base conditions. Internal review, local sponsor review and full interagency PDT involvement is ongoing. A final PMP is expected late in 2009. Initiation of the PIR is delayed until FY2011.

Est. Cost:

Caloosahatchee River (C-43) West Basin Storage Reservoir:
$ 368,275,000

Caloosahatchee Watershed:
$ 165,456,000

Project Schedule

Caloosahatchee River (C-43) West Basin Storage Reservoir:
2011 Start construction.
2014 Storage reservoir construction completed.

Caloosahatchee Watershed: TBD

Detailed Project Budget Information (rounded)**:**
*For **West Basin Storage Reservoir (DP1)***

Caloosahatchee River (C-43) West Basin Storage Reservoir	**Expenditures Thru FY 2008**
USACE	$7,923,960
SFWMD	$2,865,040
Total	**$10,789,000**

Caloosahatchee Watershed	Expenditures Thru FY 2008
USACE	$93,000
SFWMD	$0
Total	**$93,000**

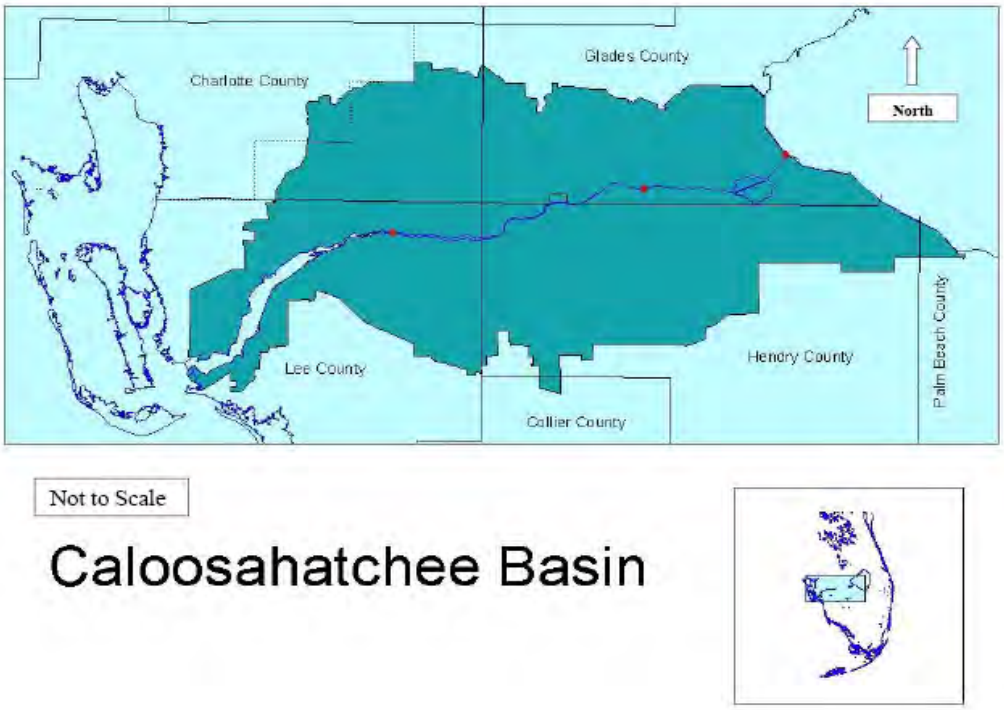
Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_04_c43_basin_1.aspx
https://my.sfwmd.gov/portal/page?_pageid=1855,2831854,1855_2831665&_dad=portal&_schema=PORTAL&navpage=prjc44.

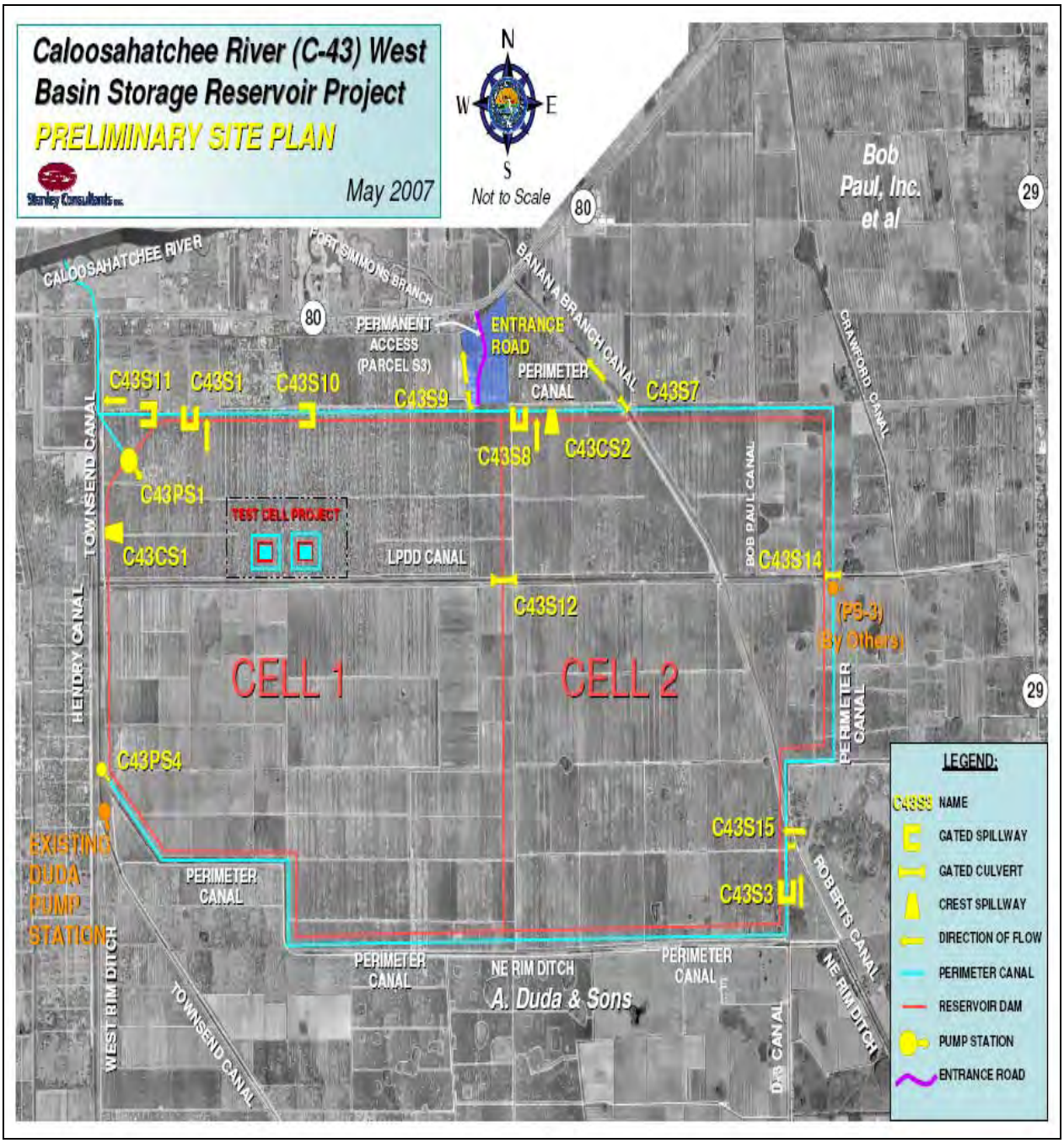
Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:

Figure B-2 Map Showing the Caloosahatchee River Drainage Basin




Caloosahatchee River (C-43) West Basin Storage Reservoir Project
PRELIMINARY SITE PLAN
May 2007
Stanley Consultants
N
W
E
S
Not to Scale
Bob Paul, Inc. et al
CALOOSAHATCHEE RIVER
FORT SIMMONS BRANCH
BANANA BRANCH CANAL
PERMANENT ACCESS (PARCEL S3)
ENTRANCE ROAD
PERIMETER CANAL
C43S11
C43S1
C43S10
C43S9
C43S7
C43S8
C43CS2
C43PS1
C43CS1
TEST CELL PROJECT
LPDD CANAL
TOWNSEND CANAL
HENDRY CANAL
CRAWFORD CANAL
BOB PAUL CANAL
C43S14
C43S12
(PS-3) By Others
CELL 1
CELL 2
C43PS4
EXISTING DUDA PUMP STATION
C43S15
C43S3
ROBERTS CANAL
NE RIM DITCH
WEST RIM DITCH
A. Duda & Sons
D/S CANAL
LEGEND:
C43S9 NAME
GATED SPILLWAY
GATED CULVERT
CREST SPILLWAY
DIRECTION OF FLOW
PERIMETER CANAL
RESERVOIR DAM
PUMP STATION
ENTRANCE ROAD

Program Name: Infrastructure
Project Name: C&SF: CERP - C-43 West Basin Storage Reservoir and ASR (D) – Expedited project includes C-43 (Caloosahatchee River) West Basin Storage Reservoir
Project ID: 1109A (CERP Project WBS #04 and 05)
Lead Agency: SFWMD
Authority: Memorandum of Agreement Regarding Acceleration of the CERP
Funding Source: State

Strategic Plan Goal(s) Addressed: Primary: 1.A.1 **Secondary:** 1.A.2

Measurable Output(s): 170,000 ac-ft reservoir; runoff storage from C-43 basin & Lake Okeechobee; some flood attenuation; water supply

Project Synopsis: This project will comprise a significant portion of the total water storage requirement for the C-43 basin. The expedited project consists of an above-ground reservoir located south of the Caloosahatchee River and west of the Ortona lock (S-78). Storage capacity is approximately 170,000 acre-feet. Water depth will vary from 15-25 feet. The reservoir will be constructed on an approximate 10,500-acre parcel in Hendry County, west of LaBelle.

Total Estimated Project Cost: $556,819,832

Scheduled Construction Start Date: June 2007
Scheduled Project Completion Date: Project on Hold

Actual Expenditures to date by SFWMD*:

	Thru 2006	2007	2008	2009	Total
SFWMD	$9,475,647	$8,436,557	$1,497,244	$79,528	$19,488,976

Contact: Joe Albers, 561-242-5520 ext. 4064

*Credit for expedited work subject to inclusion in authorized Federal project.
**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Project Name: C&SF: CERP Central Lake Belt Storage Area (S); Flows to Eastern Water Conservation Ares (EEE - previously WBS #23); and Water Conservation Area 3A/3B Flows to Central Lake Belt Storage (ZZ - previously WBS #47).
Project ID: 1110 (CERP Project WBS # 26)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary:** 1-A.1 **Secondary:** 1-B.1

Measurable Output(s):

- 190,000 acre-feet storage
- 640 acres stormwater treatment area

April 1999 (Restudy) Project Synopsis:
SS and *EEE:* Includes pumps, water control structures, a stormwater treatment area of 640 acres (water level fluctuating up to 4-feet above grade), and a combination above-ground and in-ground storage reservoir of 5,200 acres (water level fluctuating from 16-feet above to 20-feet below grade) with a total storage capacity of approximately 190,000 acre-feet located in Miami-Dade County. A subterranean seepage barrier will be constructed around the perimeter to enable drawdown during dry periods and to prevent seepage losses. A pilot will address potential impacts to the county's Northwest Wellfield during construction and/or operation.

Excess water from Water Conservation Areas 2 and 3 will be diverted into the L-37, L-33, and L-30 Borrow Canals, running along the eastern boundaries of the Water Conservation Areas, and pumped into the Central Lake Belt Storage Area. Water supply deliveries will be pumped through an STA prior to discharge to the Everglades via the L-30 Borrow Canal and a reconfigured L-31N Borrow Canal. A structure will be provided on the Snapper Creek Canal to provide regional system deliveries when water from the Central Lake Belt Storage Area is not available to: (1) Northeast Shark River Slough, (2) Water Conservation Area 3B, and (3) to Biscayne Bay through Snapper Creek Canal at Florida's Turnpike, improving hydropatterns in that order, if available.

ZZ: Includes pumps, water control structures, canals around conveyance improvements adjacent to WCA 2 and 3 in Broward County. When stages in WCA 2 B, 3A or 3B exceed target depths, excess water will also be transported to the Central Lake Belt Storage Area to meet priorities detailed above. Details TBD through a WPAs Feasibility Study.

Current Project Synopsis: The purpose of the feature is to store excess water from Water Conservation Areas 2 and 3 and provide environmental water supply deliveries to: (1) Northeast Shark River Slough, (2) Water Conservation Area 3B, and (3) to Biscayne Bay, in that order, if available. It is assumed that water diverted from WCAs 2 and 3 is of adequate quality to return to the Everglades Protection Area and Biscayne Bay. Final configurations and treatment requirements were to come from a Water Preserve Areas Feasibility Study. Though drafted, the study scope became too large, so projects are being revisited separately. In the past few years, (S) was temporarily split into two and tracked separately from (EEE). Today the configuration is similar to the way it was in the Yellow Book plus the addition of (ZZ).

Current Status: A pilot test of this technology will be conducted prior to final design of this component. Since this facility is to be located within a protection area, the pilot test will be designed to identify and address potential impacts to the Miami-Dade County's Northwest Wellfield, which may occur during construction and/or operation. Project is planned in the future.

Est. Cost: $682,938,000
$672,941,000 (S); $8,916,000 (EEE) and $1,081,000 (ZZ)

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

Central Lake Storage Reservoir (S)	**Expenditures Thru FY 2008**
USACE	$0
SFWMD	$0
Total	**$0**

Flows to Eastern Water (EEE)	**Expenditures Thru FY 2008**
USACE	$0
SFWMD	$0
Total	**$0**

WCA 3A/3B Flows to Central Lake Belt (ZZ)	**Expenditures Thru FY 2008**
USACE	$81,000
SFWMD	$1,000
Total	**$82,000**

Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_26_central_lake_belt.cfm
http://www.evergladesplan.org/pm/projects/proj_23_flow_eastern.cfm
http://www.evergladesplan.org/pm/projects/proj_47_wca_3a_3b.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: E&SF: Critical Projects - Ten Mile Creek Water Preservation Area
Project ID: 1111
Lead Agency: USACE / SFWMD
Authority: WRDA 1996 (section 528); WRDA 2007 *(amended cumulative cap)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary:** 1-A.1 **Secondary:** 2-A.3

Measurable Output(s):

- 6,000 acre feet of storage provided on 526 acres of land
- 2,740 acres of habitat improved by project

April 1999 (Restudy) Project History: WRDA 1996 authorizes the Secretary of the Army to expeditiously implement restoration projects deemed critical to the restoration of the south Florida ecosystem. The SFEER Task Force nominated 35 projects with input from the Governor's Commission for a Sustainable South Florida and the public. Based on the set of priorities, the USACE conducted an abbreviated study of and produced a report transmitted to the Secretary of the Army for approval. This is one of the 12 restoration "Critical Projects" having the Secretary of the Army's approval (WRDA 1996). However, funding caps under WRDA 1996 and later revised under WRDA 2007 limit spending.

Current Project Synopsis: This feature includes construction of a water preserve area and polishing cell to attenuate flows and improve water quality discharged to the St. Lucie River Estuary (SLE) and Indian River Lagoon (IRL). The project site is located just south of Ten Mile Creek in St. Lucie County. Ten Mile Creek is the largest sub-basin delivering water to the North Fork of the St. Lucie River Estuary (SLE), which has been established as an *Outstanding Florida Water* (OFW). The SLE discharges into the IRL, which is also an OFW and the most biologically diverse estuary in North America. The entire lagoon is endangered by increased runoff from watershed drainage enhancements. Excess stormwater due to drainage improvements is causing radical fluctuations of the salinity concentration in the estuary. Adverse salinity concentrations are eliminating viable habitat suitable for oysters, sea grasses, and marine fish spawning.

This project consists of the acquisition of approximately 1,559 acres of land in the eastern portion of the Ten Mile Creek Basin and construction of an above-ground impoundment for stormwater detention purposes. It includes construction of a pump station and several control structures for circulation and discharge within the project. A constructed wetland or flow-through marsh has been added for additional water quality improvement purposes.

Detailed monitoring will provide practical information about how well the reservoir can capture nutrients on its own, prior to treatment in the STA, fish and wildlife use of the reservoir and whether species can persist under the greatly fluctuating hydrologic regime.

The Tentatively Selected Plan (TSP) was identified in 1998 to provide seasonal or temporary storage of stormwater from the Ten Mile Creek basin. Land certification, Plans and Specs and the construction award occurred in 2003.

Current Status: Construction was physically completed on the Ten Mile Creek Water Preserve Area project by June 2006. Since that time, interim operations, testing and monitoring have been under way by the South Florida Water Management District (SFWMD) and the U.S. Army Corps of Engineers (USACE) in accordance with the water quality permit and Project Cooperation Agreement.

During the processes that occur in preparation to transfer the project to the sponsor (SFWMD) for full operations, concerns were raised about some aspects of the project. In September 2007, the USACE and the SFWMD immediately began identifying all issues and planning a course of action toward remediation and the delivery of a quality project. This process identified additional project needs and their associated costs, which were significant.

On June 1, the SFWMD ceased Operations and Maintenance. As holder of the FDEP permit, the USACE is responsible for the facility. In June 2009, the SFWMD transferred responsibility for the Ten Mile Creek project to the USACE and discontinued active project participation. The Corps has placed the facility in a passive operating state in order to limit project expenditures, which are within $187,000 of the $25 Million Federal spending cap for Critical Projects (WRDA 1996 and WRDA 2007.) There is language in the FY10 budget request that, if approved, will allow the USACE to exceed the spending cap by $3.5 million. The $3.5 million would be used to complete a post authorization change report and to fund maintenance and upkeep of the facility until 2013.

Est. Cost: $50,000,000

Project Schedule:

1997	Start
2006	Finish Construction
2007	Interim Operations and Monitoring– SFWMD
2009	Passive Operations and Monitoring begun - USACE
2010	Post Authorization Change Report (Pending Funding Authorization)

Detailed Project Budget Information (rounded):

Ten Mile Creek	**Expenditures Thru FY 2008**
USACE	$24,657,000
SFWMD	$19,200,000
Total	$43,857,000

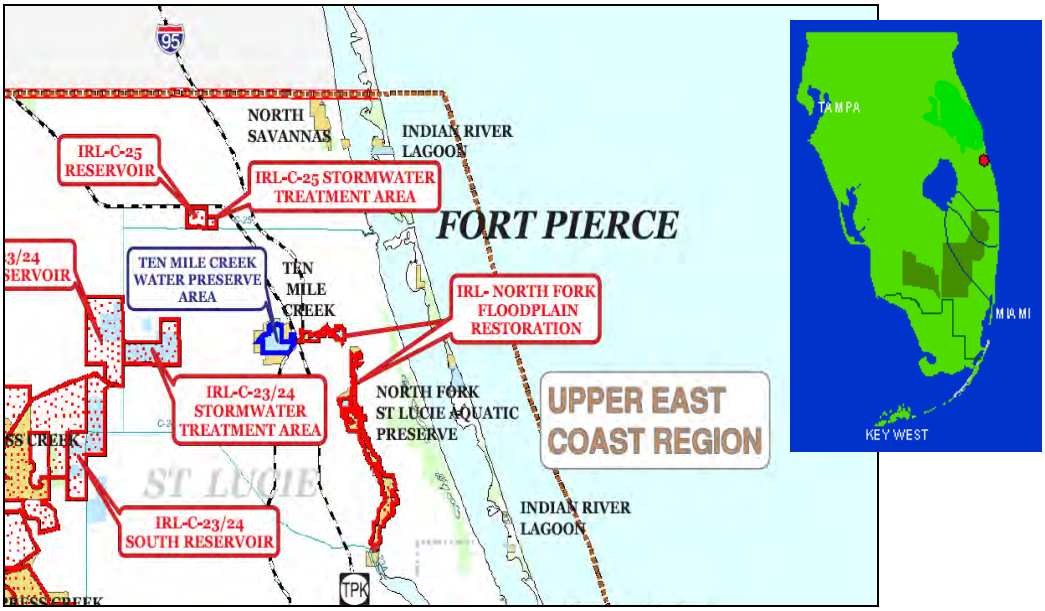
Hyperlink:

http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_Critical.htm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Project description was summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Current status information was provided by the project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:



Program Name: Restoration Program: Hydrology and Water Quality
Project Name: Taylor Creek Reservoir – Expedited Project – The SFWMD is implementing as part of Northern Everglades Project
Project ID: 1112
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: 1.A.1 **Secondary:** 1.B.1

Measurable Output(s): 32,000 acre ft of storage; 3-5 metric tons of phosphorus reduction

Project Synopsis: In 2007, the Florida legislature enacted the Northern Everglades Initiative, which expands the Lake Okeechobee Protection Act to the entire Northern Everglades system, including the Lake Okeechobee watershed as well as the Caloosahatchee and St. Lucie rivers and estuaries. The plan identifies five construction projects north of Lake Okeechobee, including the Taylor Creek Reservoir, as expedited projects. The Taylor Creek Reservoir project involves construction of a 4,000-acre reservoir in Taylor Creek, which will provide approximately 32,000 acre feet of storage and 3-5 metric tons of phosphorus reduction.

This project is on hold pending evaluation of benefits in the Taylor Creek/Nubbin Slough Feasibility Study as part of the Northern Everglades Project.

Total Estimated Project Cost: $TBD

Project Schedule:
Start Date: TBD
Finish Date: Project on Hold

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Project Design										
Construction and Installation										
Operations and Monitoring										

Detailed Project Budget Information

	2006	2007	2008	2009	2010	Balance to complete	Total
State SFWMD	$1,959,622	$1,707,691	$18,192	$0			$3,685,505

Hyperlink: N/A
Contact: Mark Long (561) 242-5520 x4061

Project Name: C&SF: CERP WPA Conveyance (XX Part 1)
A/k/a *Water Preserve Area Conveyance*
Project ID: 1113 (CERP Project WBS # 49)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.1

Measurable Output(s): 90,000 acre-feet reservoir

April 1999 (Restudy) Project Synopsis: Includes water control structures and modifications to the Dade-Broward Levee and associated conveyance system located in Miami-Dade County.

Current Project Synopsis: The purpose of this water preservation area is to reduce seepage losses to the east from the Pennsuco Wetlands and southern Water Conservation Area 3B, enhance hydroperiods in the Pennsuco Wetlands, and provide recharge to Miami-Dade County's Northwest Well field. This project adheres to the original concept outlined in the Restudy.

Current Status: This project has not yet begun.

Est. Cost: $347,610,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

WPA Conveyance	Expenditures Thru FY 2008
USACE	$227,000
SFWMD	
Total	**$227,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_49_wpa.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP ENP Seepage Management (V) (FF) (U) (BB)
Project ID: 1114 (CERP Project WBS # 27 and #43)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(only 'BB' Programmatic Authority < $25 M)*; others not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.1

Measurable Output(s): 11,500 acre-feet storage

April 1999 (Restudy) Project Synopsis: Includes three components: (1) L-31N Improvements for Seepage Management (Component FF), (2) S-356 Structures (Component V), and (3) Bird Drive Recharge Area. These three components would work to improve water deliveries to Northeast Shark River Slough (NESRS) and restore wetland hydroperiods and hydropatterns in ENP via seepage management. Groundwater flows during the wet season are captured by ground water wells adjacent to L-31N and pumped to ENP. The CERP L-31N improvements for seepage management and S-356 structures components included relocating and enhancing L-31N, groundwater wells and sheetflow delivery system adjacent to ENP in Miami-Dade County. Detailed planning, design, and pilot studies were to be conducted to determine the appropriate technology to control seepage from ENP. Also included was a feature to relocate the Modified Water Deliveries structure S-357 to provide more effective water deliveries to ENP.

The original project description includes pumps, water control structures, canals, and an aboveground recharge area with a total storage capacity of approximately 11,500 acre-feet. The initial design of the recharge feature assumed 2,877 acres (water level fluctuating up to 4-feet above grade). Final design will enhance and maintain the continued viability of wetlands within the basin. Inflows from the western C-4 Canal Basin and from the proposed West Miami-Dade Wastewater Treatment Plant will be pumped into the Recharge Area. Recharge area outflows will be prioritized to meet: (1) groundwater recharge demands, (2) South Dade Conveyance System demands, and (3) Northeast Shark River Slough demands, when supply is available. Regional system deliveries will be routed through the seepage collection canal system of the Bird Drive Recharge Area to the South Dade Conveyance system.

Current Project Synopsis: The purpose of this feature is to improve water deliveries to Northeast Shark River Slough (NESRS) and restore wetland hydropatterns in ENP by reducing levee and groundwater seepage and increasing sheetflow. Detailed planning, design, and pilot studies (CERP WBS #36) will be conducted to determine the appropriate technology to control seepage from ENP and an appropriate amount of wet season groundwater flow control to minimize potential impacts to Miami-Dade County's west well field and freshwater flows to Biscayne Bay.

The Bird Drive Recharge Area feature was added in 2004 to recharge groundwater and reduce seepage from ENP buffer areas by increasing water table elevations east of Krome Avenue. The facility should provide C-4 flood peak attenuation and water supply deliveries to South Dade Conveyance System and NESRS. As of 2008, the project evaluates four of the 68 components in the Restudy: L-31N Improvements (V), S-356 Structure Relocation (FF), Drive Recharge Area (U) and Dade-Broward Levee/Pennsuco Wetlands (BB) (added from North Lake Belt Storage Area - WPA Conveyance Area project).

Current Status: As part of the Corps planning process, evaluation of existing and future without project conditions was necessary as the Yellow Book description was limited. Pilot project are being used for the alternative analysis. ENPSM needs a flexible plan due to the highly variable rates of seepage during dry and wet years along with inconsistent aquifer hydro-geomorphology making a regional "k-value" (conductivity) determination difficult. The sub-regional ModBranch model is under construction. Upon QRB's suggestion, the model examined that if the Bird Drive Recharge Area and Dade/Broward Levee Pennsuco Wetlands features were removed from the future without project condition. Preliminary modeling indicated flooding potential within and east of the project site as a result of constructing and operating the ModWaters and DECOMP features – but, was not noted in the coarser SFWMM 2X2 model. The RECOVER review was completed in 2009.

Nearby, rock miners are moving forward with their own seepage management pilot in coordination with the USACE regulatory program. The CERP's pilot seepage barrier planned to be 1,000 ft long and approximately 18-20 ft in depth had construction scheduled for summer, 2009. Draft options and alternative plans are being developed and evaluated with a Tentatively Selected Plan (TSP) anticipated late in 2009. Coordination continues for related project schedules and timelines impacting the Integrated Delivery Schedule (IDS).

Est. Cost: $470,131,000

Project Schedule:

2014 Construction begun.
2016 Construction physically complete.

Detailed Project Budget Information (rounded):

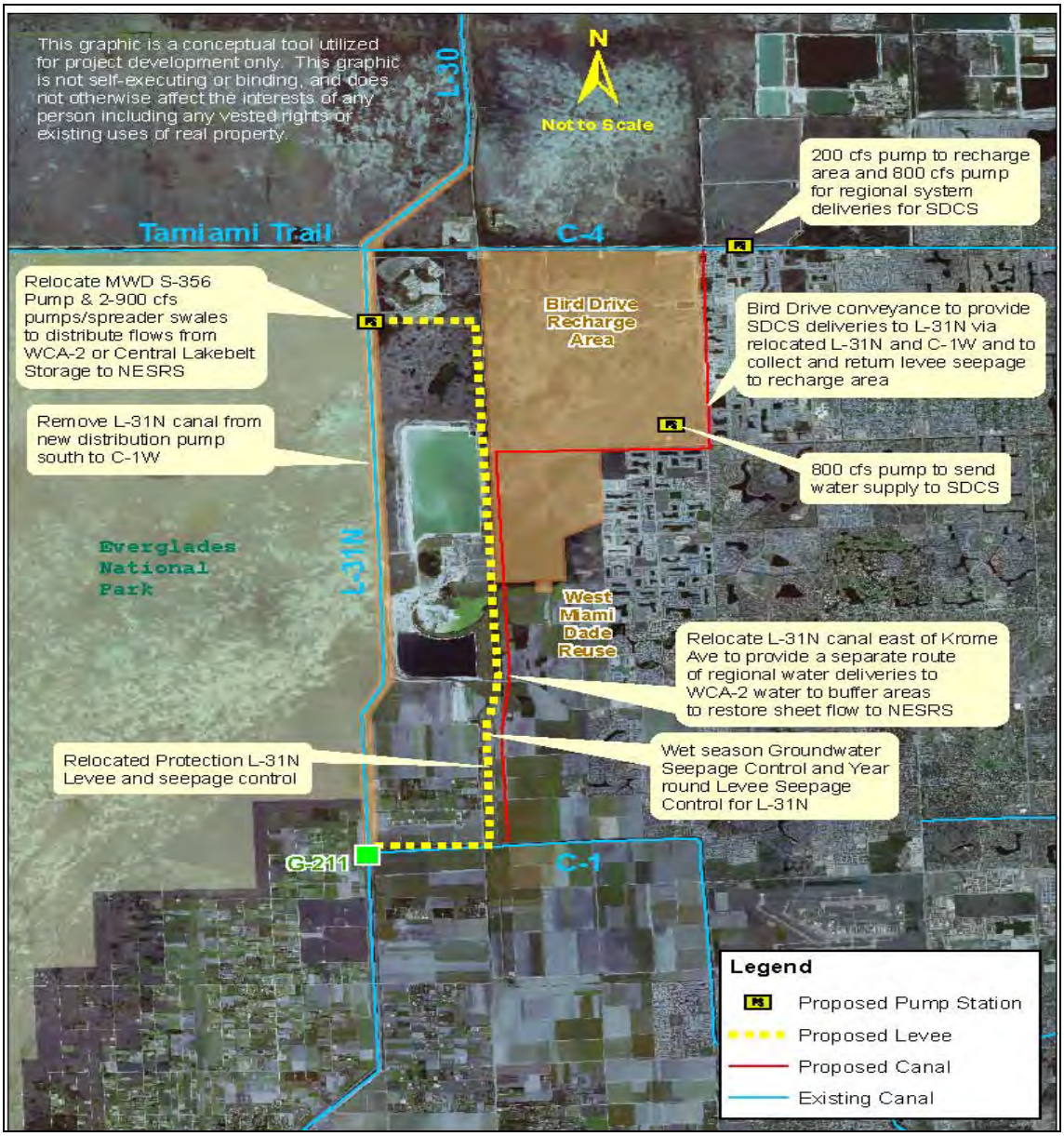
ENP Seepage Mgt.	**Expenditures Thru FY 2008**
USACE	$2,304,000
SFWMD	$187,000
Total	**$2,491,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_27_enp_seepage.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:



Project Name: C&SF: CERP North Palm Beach County -- Part 1 (X) (Y) (GGG) (K P1) (OPE)
Project ID: 1115 (CERP Project WBS # 17)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary:** 1-A.1 *(Reservoir)* **Secondary:** 1-B.1 *(STA)*

Measurable Output(s):

- 48,000 acre-feet reservoir (1,260 acres)
- 1,150 acres of STA

April 1999 (Restudy) Project Synopsis: Projects elements were listed separately in the original concept outlined in the Restudy (below):

1 *and* **2. Water Preserve Areas / L-8 Basin (K** and **GGG):** A combination above-ground and in-ground reservoir with a total storage capacity of approximately 48,000 acre-feet located immediately west of the L-8 Borrow Canal, north of the C-51 Canal in Palm Beach County. Other construction features include aquifer storage and recovery wells with a capacity of 50 million gallons per day and associated pre- and post- water quality treatment to be constructed in the City of West Palm Beach (Lake Mangonia), a series of pumps, water control structures, and canal capacity improvements in the M Canal. The initial design assumed a 1,800-acre reservoir with 1,200 usable acres (water level fluctuating from 10-feet above grade to 30-feet below grade).

3. C-17 Back-pumping and Treatment: Back-pumping facilities and a stormwater treatment area with a total storage capacity of approximately 2,200 acre-feet located in northeastern Palm Beach County. The initial design for the stormwater treatment area assumed 550 acres (water level fluctuating up to 4-feet above grade).

4. C-51 Back-pumping and Treatment: Back-pumping facilities and a stormwater treatment area with a total storage capacity of approximately 2,400 acre-feet located in Palm Beach County. The initial design for the stormwater treatment area assumed 600 acres in size (water level fluctuating up to 4-feet above grade).

5. Lake Worth Lagoon Restoration (OPE): Sediment removal and trapping within the C-51 Canal, as well as sediment removal or trapping within a 2.5-mile area downstream of the confluence of the C-51 Canal and the Lake Worth Lagoon, located in Palm Beach County. A prototype project will be conducted to determine if the Lagoon sediments will either be removed or trapped.

6. Pal-Mar and J.W. Corbett Wildlife Management Area Hydropattern Restoration (OPE): Water control structures, canal modifications and the acquisition of 3,000 acres located between Pal-Mar and the J.W. Corbett Wildlife Management Area in Palm Beach County.

Current Project Synopsis: The purpose is to capture, store and treat excess water that is currently discharged to the Lake Worth Lagoon and use that water to enhance the Loxahatchee River and Slough and provide for water supplies to the West Palm Beach Water Catchment Area. Excess canal water will be back-pumped through existing and proposed water control structures and canals to the stormwater treatment areas, which will provide water quality treatment prior to discharge into the West Palm Beach Water Catchment Area.

Originally, the objectives were discussed in relation to the six CERP separable elements included in the study area. During the course of the plan formulation process, the project focus evolved away from the separable elements and combined into a single project with five study sub-areas.

Following extensive PDT discussion of these components, the following objectives were established:

L-8 and Associated Basins (C-18 Basin) - Capture and store excess surface water that would be lost to tide to Lake Worth Lagoon through S-155, or to the Loxahatchee River Estuary through S-46. Optimize quantity, quality, timing and delivery of surface water to/from areas including Corbett Wildlife Management Area, Grassy Waters Preserve, Loxahatchee Slough, and Loxahatchee River to achieve ecological and water supply enhancement purposes. Minimize damaging slug stormwater releases to downstream receiving water bodies. Maintain or enhance the current level of flood protection in the L-8 Basin.

Pal Mar/Cypress Creek and Associated Basins Surrounding the Loxahatchee River (Pal Mar/Loxahatchee) - Capture and store excess surface waters, and use it to increase discharge to and base flow in the Northwest Fork of the Loxahatchee River during periods of insufficient flow and lowered groundwater levels. Reduce peak discharges to the Loxahatchee Estuary through the Southwest Fork of the Loxahatchee River through the S-46 water control structure. Restore freshwater forested wetlands in the Loxahatchee River closer to 1940's conditions (consistent with FDEP vision for river restoration). Establish and preserve a continuous greenway system that to improves wildlife corridor and habitat values and links up with the regional greenway system. Provide or improve hydrologic connections within the contiguous greenway and the regional water management system to increase water management options for maintaining or enhancing the existing natural areas (i.e., pine flatwoods, wetlands and other natural habitats).

C-51 Basin - Capture, store, and treat excess surface waters and supplement water deliveries to areas including Grassy Waters Preserve or adjacent wetlands, Loxahatchee Slough, and/or Loxahatchee River to achieve ecological and water supply enhancement purposes.

C-17 Basin - Capture, store, and treat excess surface waters from the upstream reaches of the C-17 Basin and supplement water deliveries to areas including Grassy Waters Preserve or adjacent wetlands, Loxahatchee Slough, and/or Loxahatchee River to achieve ecological and water supply enhancement purposes.

Lake Worth Lagoon Near the S-155 Discharge - Protect and improve Lake Worth Lagoon water quality, and improve aquatic conditions to enhance benthic and sea grass communities. Reduce stormwater discharges to the Lake Worth Lagoon through the S-155 water control structure. Reduce adverse impacts of accumulated undesired sediments in the Lagoon. Reduce sediment loading to the Lagoon through S-155. Establish a more stable salinity regime within the Lake Worth Lagoon restoration area, as the area is defined in the Restudy.

The PIR will evaluate whether the L-8 Reservoir is a necessary part of the North Palm Beach County – Part 1 project, however, early information suggests that its inclusion may be beneficial. Early constructed elements of Flowway 1 (G-160, G-161, M-canal widening) will also be evaluated. In addition, the planning process will evaluate a suite of alternatives associated with various other flowways and components with respect to providing beneficial flows to the Loxahatchee River, achieving hydropattern restoration and reducing flows to the Lake Worth Lagoon.

Current Status: The C-51 and L-8 Basin Reservoir Phase 1 (Palm Beach Aggregates) portion of the project is being designed and constructed through a state expedited initiative. The construction of up to 46,000 acre-feet of storage and associated temporary inflow and pumping infrastructure was installed and became operational in the summer of 2008, resulting in time-savings of approximately six years over the conceptual schedule outlined in the Plan. (Note: the engineering group decided to not install a temporary pump station, but to utilize rental pumps.) By utilizing a phased approach to construction, approximately 9,000 acre-feet of storage and discharge capacity has been made available for interim water management benefits in the L-8 Basin area.

The L-8 temporary pump design is underway. The full capacity of the reservoir will become available with construction of the final pump station and inflow structure. Criteria for the final pump station and inflow facility design are determined through alternative analysis. Cost estimating and the conceptual design for the permanent pump are ongoing. Hydrologic modeling has been limited by resources, but WAM modeling began, to complete evaluation and comparison of the alternative plans for selection of the Tentatively Selected Plan and the Alternative Formulation Briefing targeted for July 2009.

Est. Cost: $599,026,000

Project Schedule:

2008	C-51 & L-8 Phase 1 (PBA) construction completed.
TBD	LWL, Pal-Mar/Corbett (X), (Y), (K P1)
TBD	C-51 and L-8 (GGG)

Detailed Project Budget Information (rounded):

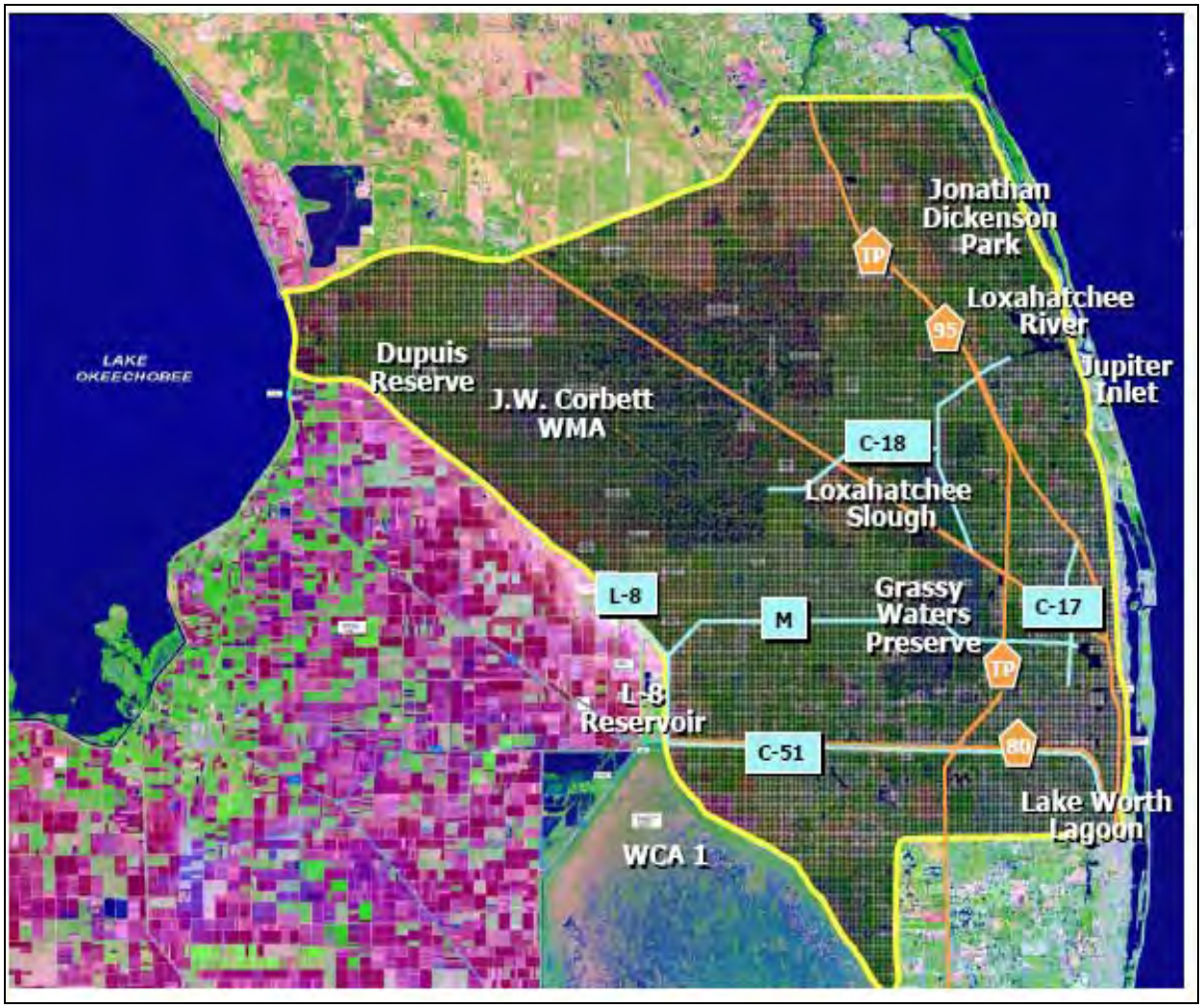
North Palm Beach County - Part 1	**Expenditures Thru FY 2008**
USACE	$4,212,000
SFWMD	$6,321,000
Total	**$10,533,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_17_npbc_1.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:



Project Name: C&SF: CERP Broward County Water Preserve Areas (R) (Q) (O)
A/k/a Broward County WPAs [Broward County WPA - C-9 Stormwater Treatment Area/Impoundment (R) and Western C-11 Diversion Impoundment and Canal (Q) and Water Conservation Areas 3A and 3B Levee Seepage Management (O)}
Project ID: 1116 (CERP Project WBS # 45)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Initially Authorized Projects- 3)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary**: 1-A.1 **Secondary**: 2-A.3

Measurable Output(s):

- 11,648 acre-feet total storage (2,808 acres of impoundment)
- 4,633 acres of natural area

April 1999 (Restudy) Project Synopsis: The original concept includes canals, levees, water control structures, and a stormwater treatment area/impoundment with a total storage capacity of 6,400 acre-feet located in western Broward County. The initial design of the stormwater treatment area/impoundment assumed 1,600 acres (water level fluctuating up to 4 feet above grade). Detailed design of this feature will address appropriate pollution load reduction targets necessary to protect receiving waters.

Purposes of the features (O) and (Q) are to divert and treat runoff from the western C-11 Basin presently discharged into Water Conservation Area 3A, control seepage from Water Conservation Areas 3A and 3B by improving groundwater elevations, and providing flood protection for the western C-11 Basin. Runoff in the western C-11 Canal Basin that was previously back-pumped into Water Conservation Area 3A through the S-9 pump station will be diverted into the C-11 Impoundment and then into either the North Lake Belt Storage Area, the C-9 Stormwater Treatment Area/Impoundment, or Water Conservation Area 3A after treatment, as applicable.

The initial design of the C-9 stormwater treatment area/impoundment (R) assumed 2,500 acres (water level fluctuating up to 4 feet above grade). Purposes of the C-9 feature are to provide treatment of runoff stored in the North Lake Belt Storage Area, enhance the groundwater recharge within the basin, provide seepage control for Water Conservation Area 3 and buffer areas to the west, and to provide flood protection for western C-9 Basin.

Current Project Synopsis: As part of the Corps planning process, several alternative plans were reviewed. The Tentatively Selected Plan was identified in January 2005. This project contains three (3) of the ten Initially Authorized Projects identified in the Water Resources Development Act (WRDA) of 2000: WCA 3A/3B Levee Seepage Management (Q), C-11 Impoundment (O), and C-9 Impoundment (R). The impoundment areas will 1) aid in reducing seepage 2) provide groundwater recharge 3) provide adequate water supply to urban areas and 4) prevent saltwater intrusion. The final size, depth and configuration of these facilities were determined through more detailed planning and design completed as a part of the *Draft Water Preserve Areas Feasibility Study* and as part of the final PIR. Detailed design of these features will address pollution load reduction targets necessary to protect receiving waters.

The project was refined in the Final Project Implementation Report (PIR) approved in June 2007. During the planning process, the stormwater treatment area (STA) component of the project was dropped.

WCA 3A/3B Levee Seepage Management system will focus on seepage reduction by allowing higher water levels in the L-33 and L-37 borrows.

C-11 Impoundment will direct runoff from the western C-11 drainage basin into the impoundment in lieu of pumping the untreated runoff via S-9 pump station into the WCA 3A. If water is not available in the impoundment area to perform these functions, S-381 will be opened to allow seepage water to recharge the basin and prevent excessive dry outs. In addition, seepage will be collected and returned to the impoundment area. The western C-11 Diversion Impoundment and Canal together with the Water Conservation Areas 3A and 3B Levee Seepage Management feature include 4,633 acres of natural area, canals, levees, water control structures, and an impoundment with a total storage capacity of 4,592 acre-feet located in western Broward County (with an initial design that assumes 1,068 acres and water levels fluctuating up to 4 feet above grade).

C-9 Impoundment is to pump runoff from the western C-9 drainage basin and diverted water from the western C-11 basin into the impoundment and assist in reducing seepage from the WCA 3A/3B Levee Seepage Management. Currently, this feature would include canals, levees, water control structures and an impoundment with a total capacity of 7,056 acre-feet located in the western C-9 Basin in Broward County (with an initial design that assumes 1,641 acres and water level fluctuating up to 4.3 feet above grade).

Current Status: Completion of the project implementation report and design of project features has been suspended pending resolution of the land crediting policy change request by SFWMD.

Est. Cost: $816,204,000

Project Schedule:

2012	Construction Begins C-11 Impoundment
2015	Construction Complete C-11 Impoundment
2016	Construction Begins C-9 Impoundment
2019	Construction Complete C-9 Impoundment
2020	Construction Begins WCA 3A&3B Levee/S-356

Detailed Project Budget Information (rounded):

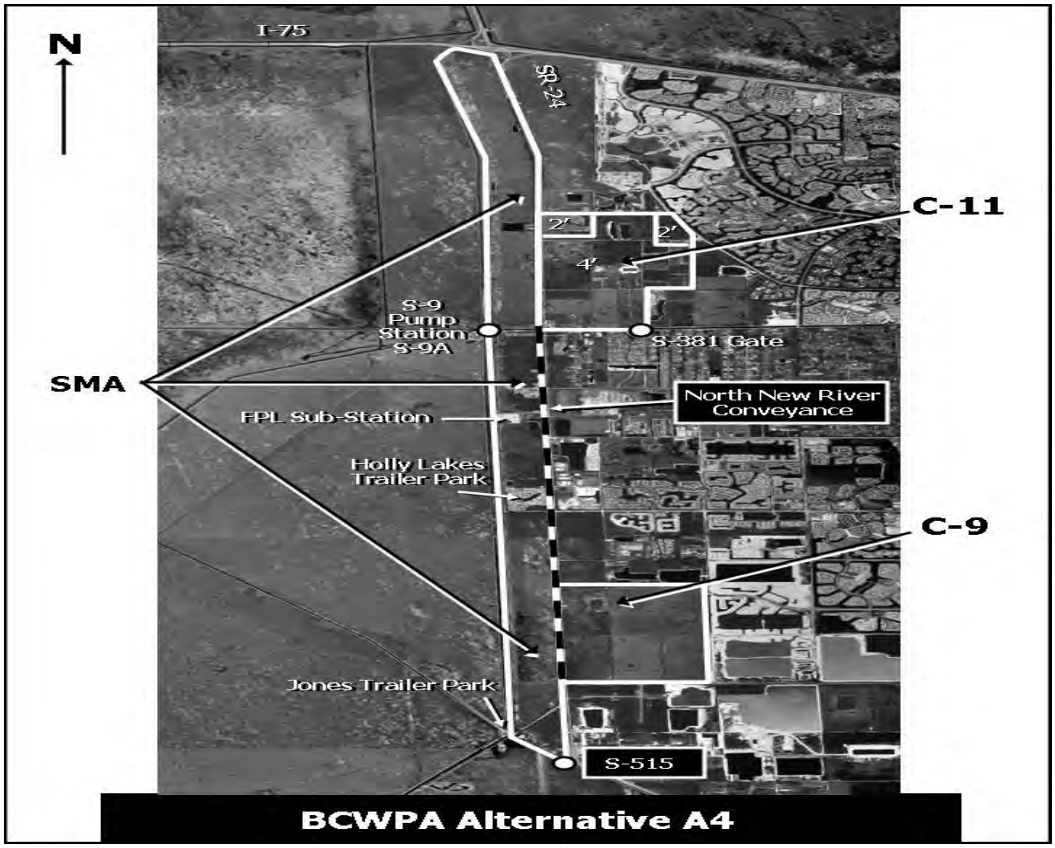
Broward County WPA	Expenditures Thru FY 2008
USACE	$7,585,000
SFWMD	$1,006,000
Total	**$8,591,000**

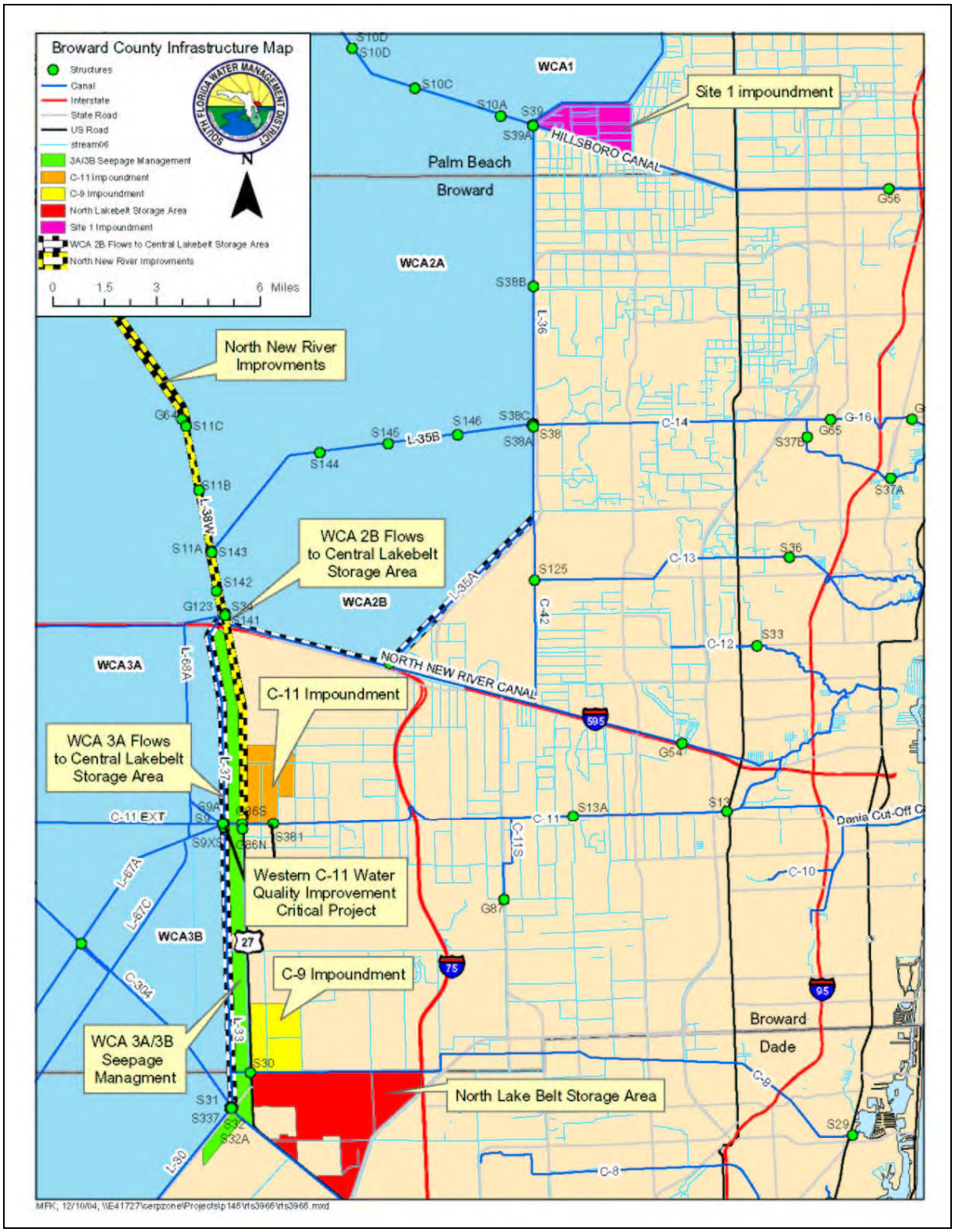
Hyperlink: http://www.evergladesplan.org/pm/projects/proj_45_broward_wpa.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Current synopsis is summarized from information contained in the *Final Project Implementation Report and Environmental Impact Statement* (2007). Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:




Broward County Infrastructure Map
Structures
Canal
Interstate
State Road
US Road
stream06
3A/3B Seepage Management
C-11 Impoundment
C-9 Impoundment
North Lakebelt Storage Area
Site 1 Impoundment
WCA 2B Flows to Central Lakebelt Storage Area
North New River Improvments
0 1.5 3 6 Miles
N
WCA1
WCA2A
WCA2B
WCA3A
WCA3B
Site 1 impoundment
HILLSBORO CANAL
Palm Beach
Broward
North New River Improvments
WCA 2B Flows to Central Lakebelt Storage Area
NORTH NEW RIVER CANAL
C-11 Impoundment
WCA 3A Flows to Central Lakebelt Storage Area
Western C-11 Water Quality Improvement Critical Project
C-9 Impoundment
WCA 3A/3B Seepage Managment
North Lake Belt Storage Area
Broward
Dade
Dania Cut-Off C
C-11 EXT
MRK; 12/10/04; \\E41727\cerpzone\Projects\p146\rts3966\rts3966.mxd

Project Name: C&SF: CERP North Palm Beach County – Part 2 (LL) (K P2)
Project ID: 1200 (CERP Project WBS # 18)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.2

Measurable Output(s): 220 million gallons per day of ASR wells *(.220 billion gallons per day)*

April 1999 (Restudy) Project Synopsis: Included **t**wo separable elements: (1) the C-51 Regional Groundwater ASR system and (2) the L-8 Basin Aquifer Storage and Recovery (ASR) system to provide additional long-term storage within the North Palm Beach County region.

Current Project Synopsis: The purpose of this feature is to capture and store excess flows from the C-51 Canal, currently discharged to the Lake Worth Lagoon, for later use during dry periods.

C-51 Regional Groundwater Aquifer Storage and Recovery (LL) includes a series of aquifer storage and recovery wells with a capacity of 170 million gallons per day as well associated pre- and post-water quality treatment to be constructed along the C-51 Canal in Palm Beach County. The initial design of the wells assumed 34-well clusters, each with a capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post-treatment. The ASR facilities will be used to inject and store surficial aquifer ground water adjacent to the C-51 Canal into the upper Floridan Aquifer instead of discharging the canal water out to tide. Water will be returned to the C-51 Canal to help maintain canal stages during the dry-season. If water is not available in the ASR system, existing rules for water delivery to this region will be applied.

L-8 Basin Aquifer Storage and Recovery (K Part 2) includes ASR wells with a capacity of 50 million gallons per day and associated pre- and post- water quality treatment to be constructed within the L-8 Basin or along the City of West Palm Beach water supply conveyance and storage system or a combination of both. The initial design of the wells assumed 10 wells, each with a capacity of 5 million gallons per day with chlorination for pre-treatment and aeration for post-treatment. During periods when the West Palm Beach Catchment Area is above desirable stages, 50 million gallons per day will be diverted to Lake Mangonia for storage in the ASR wells.

Current Status: Adheres to the original concept outlined in the Restudy. This project has not yet begun.

Est. Cost: $227,359,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

North Palm Beach County - Part 2	Expenditures Thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_18_npbc_2.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Lake Okeechobee Aquifer Storage and Recovery (GG)
(GG Pt. 1, GG Pt. 2, GG Pt. 3)
Project ID: 1201 (CERP Project WBS # 03)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.2

Measurable Output(s): 1 billion gallons/per day of ASR wells

April 1999 (Restudy) Project Synopsis: Includes a series of aquifer storage and recovery wells adjacent to Lake Okeechobee with a capacity of one billion gallons per day and associated pre- and post- water quality treatment in Glades and Okeechobee Counties. The initial design assumes 200 wells, each with the capacity of 5 million gallons per day with 8- ultra-filtration water quality pre-treatment facilities and aeration for post-treatment. Based on information from existing aquifer storage and recovery facilities, it is assumed that recovery of aquifer-stored water would have no adverse effects on water quality conditions in Lake Okeechobee. In fact, some level of nutrient load reduction may occur as a result of aquifer storage, which would be a long-term benefit to in-lake water quality conditions.

Current Project Synopsis: The purpose of this project is to:

(1) Provide additional regional storage while reducing both evaporation losses and the amount of land removed from current land use (e.g. agriculture) normally associated with construction and operation of above-ground storage reservoirs;
(2) Increase the Lake's water storage capability to better meet regional water supply demands for agriculture, Lower East Coast urban areas, and the Everglades;
(3) Manage a portion of regulatory releases from the Lake primarily to improve Everglades hydropatterns and to meet supplemental water supply demands of the Lower East Coast;
(4) Reduce harmful regulatory discharges to the St. Lucie and Caloosahatchee Estuaries; and
(5) Maintain and enhance the existing level of flood protection.

Operation assumes that after treatment, water from LOW will be injected into the upper Floridan Aquifer when the climate-based inflow model forecasts the lake water level will rise significantly above those desirable for the littoral zone. During a dry season, water in the aquifer will be returned to the lake post-aeration when the level is down.

Current Status: Adheres to the original concept outlined in the Restudy and is dependent on the findings from the LOW ASR pilot (WBS #32) in progress. This project is expected to have three (3) phases, but has not yet begun.

Est. Cost: $1,397,811,000

Project Schedule:

2019	Construction started
TBD	Completion

Detailed Project Budget Information ($1,000s):

LOW ASR	Expenditures Thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_03_lake_o_asr.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Hillsboro Aquifer Storage and Recovery (M P2)
Project ID: 1202 (CERP Project WBS # 22)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.2

Measurable Output(s): 150 million gallons per day *(.150 billion gallons per day)*

April 1999 (Restudy) Project Synopsis: *Site 1 Impoundment and Aquifer Storage and Recovery* (M) included both an above-ground reservoir and a series of aquifer storage and recovery (ASR) wells. The initial design of the ASR facility assumes 30 well clusters, each with a capacity of 5-million gallons per day with chlorination for pre-injection treatment and aeration for post- injection water quality treatment.

Current Project Synopsis: The purpose is to supplement water deliveries to the Hillsboro Canal during dry periods thereby reducing demands on Lake Okeechobee and the Loxahatchee National Wildlife Refuge. The source of water to be injected into the ASR wells is in the surficial ground water adjacent to the Site 1 reservoir located in the Hillsboro Canal Basin in southern Palm Beach County. The location, extent of treatment and number of ASR wells may be modified based on findings from the pilot (CERP project WBS #34). Water from the Hillsboro Canal will be pumped into the reservoir when excess water is available. Water will be released back to the Hillsboro Canal to help maintain canal stages during the dry-season with pre-injection and post-withdrawal injection water quality treatment.

This project adheres to the original concept outlined in the Restudy. However, for purposes of project execution it is being divided into two phases. This is the latter Phase 2 *Hillsboro ASR Phase 2* (M P2) (CERP project WBS #22) and relates to the companion aquifer storage and recovery (ASR) wells portion.

Current Status: Planning and design of Phase 2 is planned for the future and after the completion of Phase 1 [*Site 1 Impoundment* (M P1) (a/k/a *Fran Reich Preserve*) (CERP Project WBS #40), is detailed on its own project sheet, and refers to the reservoir portion] and depending upon the results from other ASR feasibility and pilot studies.

Est. Cost: $116,413,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

Hillsboro ASR	Expenditures Thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_22_hillsboro_asr_2.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Aquifer Storage and Recovery Regional Study
A/k/a *ASR Regional Study*
Project ID: 1203 (CERP Project WBS # 44)
Lead Agency: USACE / SFWMD
Authority: *Programmatic Authority*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.2

Measurable Output(s): Data

April 1999 (Restudy) Project Synopsis: Not described.

Current Project Synopsis: While the Plan did not directly call for an ASR Regional Study, the USACE and the SFWMD agreed that a coordinated central data collection and regional modeling effort was required to address the large-scale ASR implementation issues under the CERP. The ASR Regional Study described in the PMP will take roughly nine years to complete.

The study will investigate regional and technical issues governing the feasibility of full-scale ASR implementation; and its potential effect on water levels and water quality within the aquifer systems, and on existing water users, surface-water bodies, and the flora and fauna that inhabit them. This study will conduct critical ASR-related research and develop scientific data required to help determine the scientific and engineering feasibility of large-scale ASR implementation as proposed in the CERP.

State and Federal scientist, engineers, and stakeholders proposed a list of significant uncertainties related to hydro-geologic processes, geotechnical evaluations, ecosystem effects and ASR operation and performance. The ASR pilot facilities are the platforms used to conduct scientific and engineering studies addressing the uncertainties identified with using the technology at the scale envisioned under the CERP. Objectives of the ASR Regional Study are to acquire a comprehensive understanding of the characteristics of the Floridan Aquifer system, its ability to support ASR as envisioned in the CERP, and to identify any limitations to applying full scale ASR. With this information, optimum implementation of regional ASR water storage and recovery can be determined.

Goals of the ASR Regional Study include:

- Addressing outstanding issues of a regional nature that cannot be adequately addressed by the authorized ASR Pilot Projects.
- Reducing uncertainties related to full-scale CERP ASR implementation by conducting scientific studies based on existing and newly acquired data, evaluate the potential effects on water levels and water quality within the aquifer systems, as well as existing users, surface-water bodies, and the flora and fauna that inhabit them.
- Developing a regional groundwater model of the Floridan Aquifer System (FAS) and conduct predictive simulations to evaluate the technical feasibility of the proposed 333-well CERP ASR system, or if determined to be unfeasible, identify an appropriate magnitude of ASR capacity with minimal impact to the environment and existing users of the FAS.

Current Status: An interim report (June 2008) summarized efforts from 2003-2007. Data compilation, model development and plan formulation are underway. Hydrology, water quality, engineering and eco-toxicological data were collected successfully during the recharge phase of cycle-1 in the Kissimmee River ASR Pilot Facility. Data continued to be collected during the ongoing cycle testing. An In-Progress Review with HQ is expected to be scheduled for late summer 2009.

Est. Cost: $83,290,000

NOTE: In addition to budget amounts for the ASR Pilot Projects, the CERP April 1999 cost estimate included a total of approximately $128,000,000 for ASR-related Planning, Engineering and Design studies for the six (6) proposed ASR components identified. Funding was provided from redistribution of the established CERP ASR design budget from the other related projects.

Project Schedule:

2003	Start - Technical Design Report
2017	Completed

Detailed Project Budget Information (rounded):

ASR Regional Study	Expenditures Thru FY 2008
USACE	$6,789,000
SFWMD	$5,912,000
Total	**$12,701,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_44_asr_regional.aspx

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

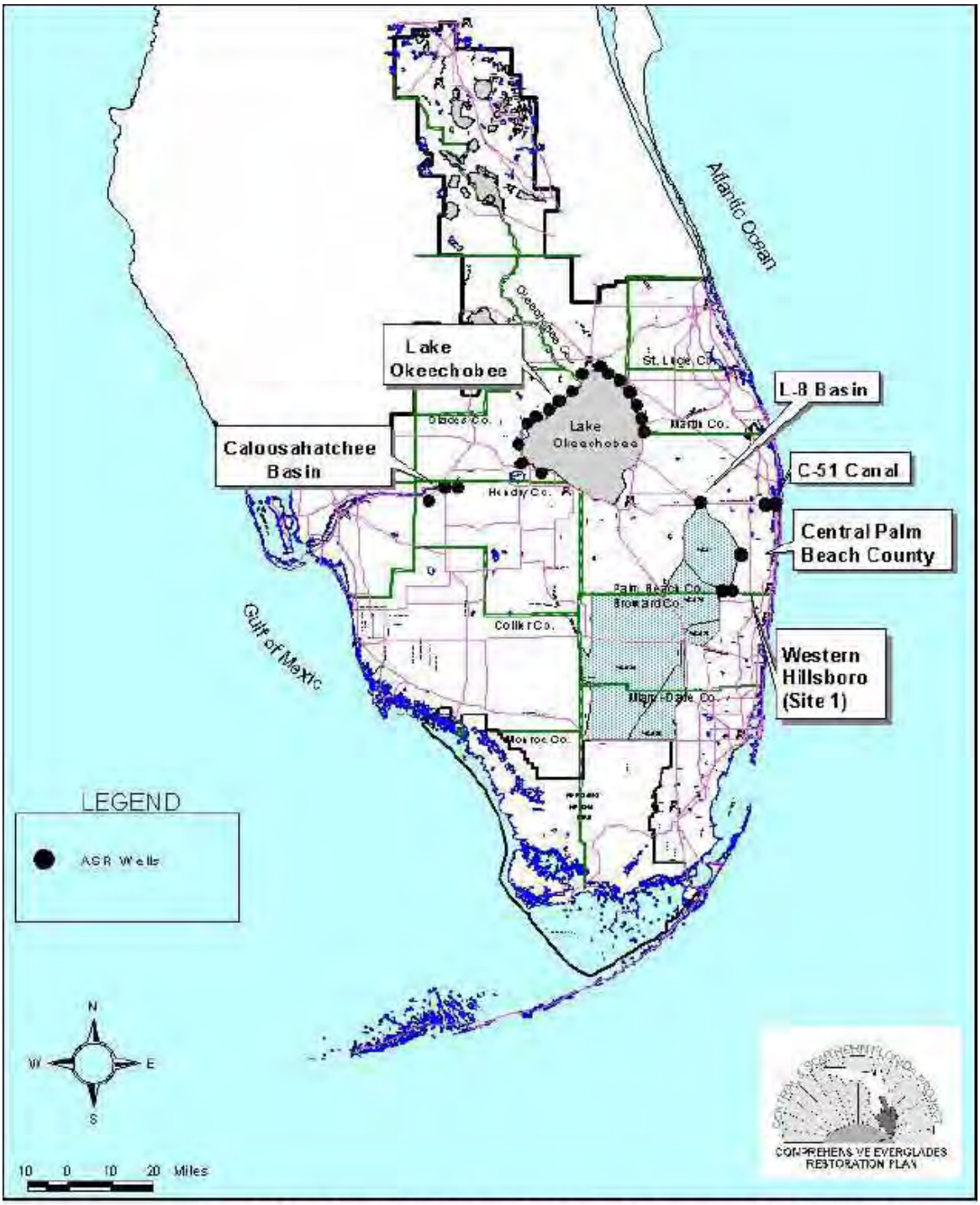

Figure 1. Proposed ASR Systems in the Compresensive Everglades Restoration Plan

Project Name: C&SF: CERP PBC Agriculture Reserve Aquifer Storage & Recovery (VV P2)
Project ID: 1204 (CERP Project WBS # 21)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.2

Measurable Output(s): 75 million gallons per day ASR wells *(0.075 billion gallons per day)*

April 1999 (Restudy) Project Synopsis: Includes companion aquifer storage and recovery (ASR) wells, with a capacity of 75-million gallons per day and associated pre- and post- water quality treatment located adjacent to the associated reservoir (Part 1). The initial design of the wells assumes 15 well clusters, each with a capacity of 5- million gallons per day as well as chlorination for pre-treatment and aeration for post-treatment. The source of water to be injected is expected to be surficial ground water, adjacent to the reservoir.

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

The wells will pump water into the aquifer during the wet season and will pump water from the aquifer to the Lake Worth Drainage District canals to help maintain canal stages during the dry season. If water is not available in the associated reservoir (Part 1) or the aquifer storage and recovery wells, existing rules for water delivery to this region will be applied.

Current Status: Adheres to the original concept outlined in the Restudy. This ASR project was planned as the next portion (Part 2) of the project on the previous page (WBS #20 "Part 1"). It is scheduled in the future. This project has not yet begun.

Est. Cost: $55,198,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

PBC Agriculture ASR	Expenditures thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_21_pbc_asr_2.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP C-43 Basin Aquifer Storage and Recovery (ASR) (D P2)
Caloosahatchee River Aquifer Storage and Recharge Project (C-43ASR)
Project ID: 1205 (CERP Project WBS # 05)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: 1-A.2

Measurable Output(s): 220 million gallons a day of ASR wells *(0.220 billion gallons per day)*

April 1999 (Restudy) Project Synopsis: Initially an above-ground reservoir(s) with a total storage capacity of approximately 160,000 acre-feet and aquifer storage and recovery wells with a capacity of approximately 220 million gallons per day and associated pre- and post- water quality treatment was to be located in the C-43 Basin in Hendry, Glades, or Lee Counties. The original design of the reservoir(s) assumed 20,000 acres (water levels fluctuating up to 8 feet above grade). Excess runoff from the C-43 Basin and Lake Okeechobee flood control discharges will be pumped into the proposed reservoir. Water from the reservoir will be injected into the aquifer storage and recovery well field for long-term storage. Any estuarine demands, not met by basin runoff and the aquifer storage and recovery wells, will be met by Lake Okeechobee as long as the lake stage is above a pre-determined level.

Current Project Synopsis: This latter ASR portion is now a distinct project (D P2); apart from its prior association with Caloosahatchee River (C-43) West Basin Storage Reservoir (USACE WBS #4 and Task Force #1109). The purpose of the ASR feature is to capture C-43 Basin runoff and releases from Lake Okeechobee. These facilities will be designed for water supply benefits, some flood attenuation, to provide environmental water supply deliveries to the Caloosahatchee Estuary, and water quality benefits to reduce salinity and nutrient impacts of runoff to the estuary. It is assumed that, depending upon the location of the facility and pollutant loading conditions in the watershed, the facility could be designed to achieve significant water quality improvements, consistent with appropriate pollution load reduction targets.

Current Status: As part of the Corps planning process, several alternative plans were reviewed. The original Caloosahatchee (C-43) Basin Storage Reservoir and Aquifer Storage and Recovery (ASR) project (component D in CERP) has since been divided into two parts. This project represents the ASR portion (D P2). This project has not yet begun.

Est. Cost: $ 297,075,000

Project Schedule:
TBD ASR construction completed.

Detailed Project Budget Information (rounded):

C-43 Basin ASR	Expenditures Thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_05_c43_asr_2.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Program Name: Infrastructure
Project Name: C&SF: C-111 (South Dade)
Project ID: 1300
Lead Agency: USACE / SFWMD
Authority: Flood Control Act of 1948 (modified Flood Control Act 1962, modified WRDA 1996) and the ENP Expansion Act 1989
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary:** 1-A.3 **Secondary:** 3-B.1

Measurable Output(s): 4.75 miles total length impediments removed

Project History*:* Originally authorized as an addition to the C&SF Project (1948) with the Flood Control Act of 1962, the C-111 Project has been further modified by authorization of the ENP-South Dade Conveyance System (1968) and the Everglades National Park Expansion Act of 1989.

The 1996 Water Resources Development Act (WRDA 1996) provided for a new cost sharing agreement for the C-111 project as approved and described in the Canal 111 (C-111), South Dade County, Florida, Final Integrated General Reevaluation Report and Environmental Impact Statement completed May of 1994 (1994 GRR). A supplement to the 1994 GRR was completed in 2002 and in 2004 an addendum, updating the supplement, was produced to satisfy USACE HQ concerns regarding real estate and water quality. Neither the 2002 supplemental nor the 2004 addendum have been approved.

Current Project Synopsis: The basin includes 100 square miles of agriculture in the Homestead/Florida City area and the entire Taylor Slough basin within Everglades National Park (ENP). The C-111 canal discharges into Florida Bay at its downstream terminus thru S-197. Because of extreme porosity in the Biscayne Aquifer in this area, canal water levels have a direct impact on water levels in adjacent areas.

Modifications to the existing water management system are to restore historic freshwater flows in the Taylor Slough and are expected to help reverse the current deterioration of Florida Bay. The Corps' Final Integrated General Reevaluation Report (GRR)/Environmental Impact Statement (1994) recommended a preferred alternative (6a) to create operational capability and flexibility to provide restoration of the ecological integrity of Taylor Slough and the eastern panhandle areas of the Everglades and to maintain flood protection for the agricultural interests adjacent to C-111.

This project includes structural modifications: canals, levees, pump stations and replacement of an existing bridge; as well as non-structural modifications for more natural flow and hydropatterns; and includes removal of approximately 4.75 miles total length impediments. Features address objectives of restoring natural timing, location and volumes of water flows to the headwaters, upper, and middle portions of Taylor Slough.

A hydraulic ridge would be created via a collection of features/activities resulting in higher stages within the canal, limiting the amount of seepage leaving ENP lands. A series of pump structures would provide control for this hydraulic ridge and supply additional canal water to ENP by pumping directly into detention/buffer zones that are contiguous with ENP lands and would be utilized for temporary storage of excess flood water. This area would reduce the slope of the groundwater gradient; from high water

A hydraulic ridge would be created via a collection of features/activities resulting in higher stages within the canal, limiting the amount of seepage leaving ENP lands. A series of pump structures would provide control for this hydraulic ridge and supply additional canal water to ENP by pumping directly into detention/buffer zones that are contiguous with ENP lands and would be utilized for temporary storage of excess flood water. This area would reduce the slope of the groundwater gradient; from high water conditions in Taylor Slough and the L-31N borrow canal stage, thereby reducing seepage loss from the wetlands.

Pump stations S-332B and S-332C would be located adjacent to L-31N levee and each pump station would have four 75-cfs pump units. Additional capacity of S-332B, C, and D pump stations are designed to pump water across the transition zone via lined canals into the detention/retention zone and address the objective of maintaining flood control capacity. (Pump station S-332A has been taken out of the project). A concrete lined canal will be connected to the outlet side and discharge ½ mile west beyond the new L-31W tieback levee. The S-332D pump station would be placed in the L-31W borrow canal, west of S-174, and would pump water through a concrete lined canal connected to the outlet side of S-332D and discharge 0.5 mile west through the new S-332D Tieback levee into the new retention/detention zone. Pump station S-332 would remain in service and be connected to C-111 via a new east-west connector canal. A flap-gate controlled culvert would divert water from C-111 to the connector canal. The connector canal would convey runoff from the detention/retention area via culvert/risers.

A battery of culverts (which is contentious) and an overflow spillway would be constructed along the western levee of the detention/retention strip. Identical to the lower basin of alternative (#6) are the spreader canal, a 50-cfs pump station (S-332E), plugs in C-109 and C-110, and degradation of the spoil mound south of C-111 which would provide overland flow into the Eastern panhandle of the park.

Construction began in 2000 under the IOP and ISOP. A land exchange of 1,000 acres between ENP and SFWMD was approved by Congress and executed 2005. The SFWMD completed a preliminary design for the Frog Pond Impoundment to reduce seepage of Taylor Slough water into lower C-111 canal system.

Current Status: A completed PMP for the C-111 (South Dade) project was revised in October 2007 and updated again September 2008.

Two interim pump stations and one permanent pump station have been completed, along with construction of three detention areas, replacement of the Taylor Slough Bridge, and removal of spoil mounds along lower C-111. Two construction projects were recently complete and are being transferred to the sponsor. Contract #6 (S-331 Command and Control Center) and Contract #7 (southern retention/detention area) are complete and in the process of being turned over to the sponsor.

Construction contracts were initiated in 2008 to complete earthwork for the detention flowway linking the B and C pump station detention areas. This extension expands the effective area being used to build a hydrologic barrier between ENP and the L-31N canal to reduce seepage losses from ENP. A construction contract to extend the S-332B North detention area and contain discharges from the 8.5 Square Mile Area STA component of the MWD project is anticipated in 2011.

USACE prepared a Post Authorization Change Report to detail the design refinements and update project costs and a schedule necessary for the approved plan. SFWMD requested real estate be credited at fair market value, versus cost at the time of acquisition. Scenarios for purchase price and fair market valuation have been provided, but the SFWMD has not yet committed to a methodology.

A Post Authorization Change Report and an Engineering Design Report are under development and scheduled to be transmitted in FY10 to HQ. USACE HQ must approve this report and an amended Project Cooperation Agreement addressing cost share. Both must be executed before the four remaining construction contracts may be awarded (subject to appropriations): the North Detention Area; the L-31West Borrow Canal Backfill; the S-332B Pump Station; and the S-332C Pump Station. Plans and specifications are done for the North Detention Area.

Est. Cost: $383,600,000

Project Schedule:

1994 Start
2012 Finish

Detailed Project Budget Information (rounded):

C-111 SD	Expenditures Thru FY 2008
USACE	$107,764,000
SFWMD	$4,435,000
Total	$112,199,000

Hyperlink:
http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_C111.htm

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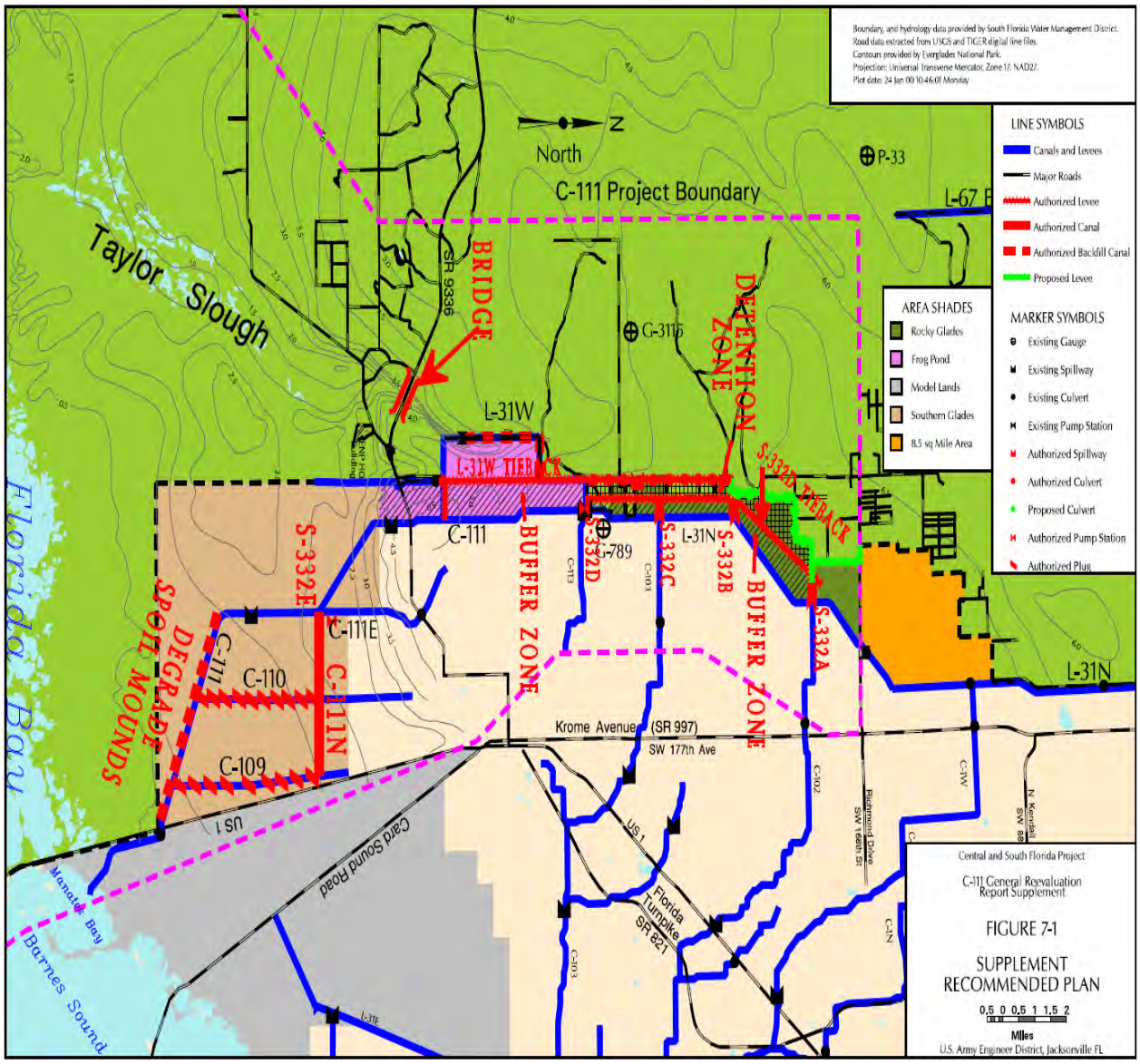
Source: Project History and Synopsis are summarized from the *Draft Fish and Wildlife Coordination Act Report*, the *Central and Southern Florida Project Comprehensive Review Study (1999)* and the *Addendum to the Final Integrated General Reevaluation Report Supplement and Environmental Assessment (July 2004)*. Current status summarized and the updated PMP (2007) and information provided from the project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information: *See next page*


Boundary, and hydrology data provided by South Florida Water Management District.
Road data extracted from USGS and TIGER digital line files.
Contours provided by Everglades National Park.
Projection: Universal Transverse Mercator, Zone 17. NAD27.
Plot date: 24 Jan 00 10:46:01 Monday
North
C-111 Project Boundary
P-33
L-67 F
Taylor Slough
SR 9336
BRIDGE
C-3116
DETENTION ZONE
L-31W
L-31W TIEBACK
S-332D TIEBACK
C-111
BUFFER ZONE
C-789
S-332D
S-332C
L-31N
S-332B
BUFFER ZONE
S-332A
S-332E
C-111E
C-111
C-110
C-111N
C-109
SPOIL MOUNDS
DEGRADE
Florida Bay
Krome Avenue (SR 997)
SW 177th Ave
US 1
Card Sound Road
Manatee Bay
Barnes Sound
Florida Turnpike SR 821
Richmond Drive SW 168th St
N Kendall Dr SW 88
C-102
C-103
C-1W
C-1N
L-31N
LINE SYMBOLS
Canals and Levees
Major Roads
Authorized Levee
Authorized Canal
Authorized Backfill Canal
Proposed Levee
AREA SHADES
Rocky Glades
Frog Pond
Model Lands
Southern Glades
8.5 sq Mile Area
MARKER SYMBOLS
Existing Gauge
Existing Spillway
Existing Culvert
Existing Pump Station
Authorized Spillway
Authorized Culvert
Proposed Culvert
Authorized Pump Station
Authorized Plug
Central and South Florida Project
C-111 General Reevaluation Report Supplement
FIGURE 7-1
SUPPLEMENT RECOMMENDED PLAN
0.5 0 0.5 1 1.5 2
Miles
U.S. Army Engineer District, Jacksonville FL

Project Name: C&SF: CERP WCA 3 Decompartmentalization and Sheetflow Enhancement - Part 1 (AA) (QQ P1 & QQ P2) (SS)
WCA 3 Decompartmentalization and Sheetflow Enhancement Part 1 and Part 2 (DECOMP) [Raise and Bridge East Portion of Tamiami Trail and Fill Miami Canal within Water Conservation Area 3 (QQ), North New River Improvements (SS); *Restoring Eastern Everglades Flow Path and Restoring Western Everglades Flow Path]*
Project ID: 1301 (CERP Project WBS # 12 and# 13)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(only 'QQ P1' and 'SS' – were Initially Authorized Projects);*
Other components not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.3

Measurable Output(s): 240 miles of impediments removed

April 1999 (Restudy) Project Synopsis: The Water Conservation Area (WCA) 3 Decompartmentalization and Sheetflow Enhancement project includes the following components:

AA: Construction of additional S-345 conveyance structures (through L-67A and L-67C levees and borrow canals), to improve flow of water from WCA3A to 3B.

QQ Phase 1: Raise and bridge *(using ten 100-foot box culvert bridges)* the eastern portion of Tamiami Trail and to completely backfill the Miami Canal within WCA-3.

SS: North New River Improvements, as needed to improve the discharge capability of an expanded/improved North New River Canal, and to compensate for any water conveyance capacity lost via removal of the Miami Canal.

QQ Phase 2: Remove the remaining sheetflow obstructions, i.e., L-67A borrow canal (by filling in the southern 7.5 miles), L-68A, L-67C, L-29, L-288 tieback levees and borrow canals (formerly WBS #13).

Current Project Synopsis: The primary impediment to the natural flow of water through WCA-3A is the Miami Canal, which separates WCA-3A north from WCA-3A south. As part of the larger effort to remove barriers to sheetflow, in 2006 the WCA 3 Decompartmentalization and Sheetflow Enhancement – "Part 2" (QQ P2 - WBS #13) and "Part 1" (AA, SS, QQ P1 - WBS #12) were combined.

Because of scientific and ecological uncertainties, and dependence upon the Modified Water Deliveries Project (WRDA 2000), the DECOMP Project Delivery Team is utilizing a multiple PIR phased approach for implementation that uses adaptive management, construction of a first phase, monitoring of component performance, and additional construction to achieve the desired results.

PIR 1 (Miami Canal portion of QQ P1 and SS) focuses on options to backfill the Miami Canal, and on any North New River improvements needed to offset conveyance lost in the Miami Canal. Alternatives being examined include complete backfill, partial backfill, plugging of the canal and removal of existing canal spoil mounds.

Concurrent with PIR #1, a temporary field test, or ***Physical Model,*** will be implemented. The DECOMP Physical Model (DPM) consists of culverts in the L67A levee, a gap in the L67C levee, and the complete and partial backfilling of segments of the L67-C canal. These features will provide a controllable hydrologic connection between WCA-3A and WCA-3B that delivers pulsed flows at velocities of at least 31 cm/sec over a period of days. The DPM will assess the effects of pulsed flows on hydrology, sediment transport, vegetation and wildlife. Results will guide planning, design and operational guidance for alternatives for both PIRs #2.and #3. An Environmental Assessment (EA) is in progress, and the draft is expected in August 2009. The project is tentatively located in northern Miami-Dade County, along the southern 10 to 15 miles of the L-67A and L-67C canals.

PIR 2 (Tamiami Trail portion QQ - P1 and AA) focuses on modifying eastern sections of Tamiami Trail.

PIR 3 (QQ - P2) includes backfilling the southern 7.5 miles of L-67A borrow canal, removal of the L-68A, L-67C; degradation of western portions of L-29 below WCA 3A, L-28, and L-28 Tieback Levees and Borrow Canals; and elevating the western portion of Tamiami Trail south of WCA 3A.
An adaptive management strategy will be developed for the overall project, including formation of an interagency adaptive management team. Sequencing with the Modified Water Deliveries, C-111 South Dade, and CERP projects (e.g., L-31N Seepage Management Pilot, ENP Seepage Management, Broward County Water Preserve Areas, and Everglades Agricultural Area) is critical because the projects in this region are so interrelated.

Current Status: ***PIR 1*** At a June 2008 Feasibility Scoping Meeting, the PDT recommended an IAR strategy. An initial plan formulation summary was drafted for HQUSACE and preliminary design of conceptual Miami Canal features begun. An external peer review plan was developed for Eco-PCX review. RECOVER completed its performance measure consistency review and final comments and recommendations from IMC on the project modeling strategy were received in 2008 and 2009. Modelers, biologists and RECOVER worked together on reporting performance measures based on the SFWMM output, the sub-regional model to be used for DECOMP. The schedule slipped to accommodate a revision to plan formulation, future planning conditions and evaluation strategies, which had also delayed conceptual design/cost and preliminary screening of backfill options. Initial backfill option screening; rough order of magnitude cost estimates; and plug design and evaluation were completed in 2009. Development of a final array of alternatives and evaluation strategy are underway.

Physical Model The project development team is working to streamline the process to move the Physical Model forward and to schedule plans and specs, water quality certification and contracting. A formal consultation with the Miccosukee Tribe was held April 20, 2009. The draft NEPA document, along with a science and engineering report, are expected August 2009. The five year anticipated duration includes: one year of baseline monitoring, one year for installation, and two years of post-construction monitoring and evaluation. This temporary project will be dismantled at the close of the monitoring period, if it cannot be incorporated into a full-scale project.

Est. Cost:	$314,927,000	
Project Schedule:	2011	Install Decomp Physical Model
	2012	Operate Decomp Physical Model
	2014	Decommission Physical Model
	2013	PIR 1 construction begins
	2016	PIR 1 construction physically complete
	2018	PIR 2 construction begins
	2019	PIR 2 construction physically complete
	2019	PIR 3 construction begins
	TBD	PIR 3 physically complete

Detailed Project Budget Information ($1,000s):

DECOMP	Expenditures Thru FY 2008	Budget FY 2009	Est. Budget FY 2010
USACE	6,360	3,071	3,500
SFWMD	3,026		
Total	**9,386**	**3,071**	**3,500**

Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_12_wca3_1.cfm
http://www.evergladesplan.org/pm/projects/proj_13_wca3_2.aspx
http://www.evergladesplan.org/pm/projects/docs_12_wca3_model.aspx

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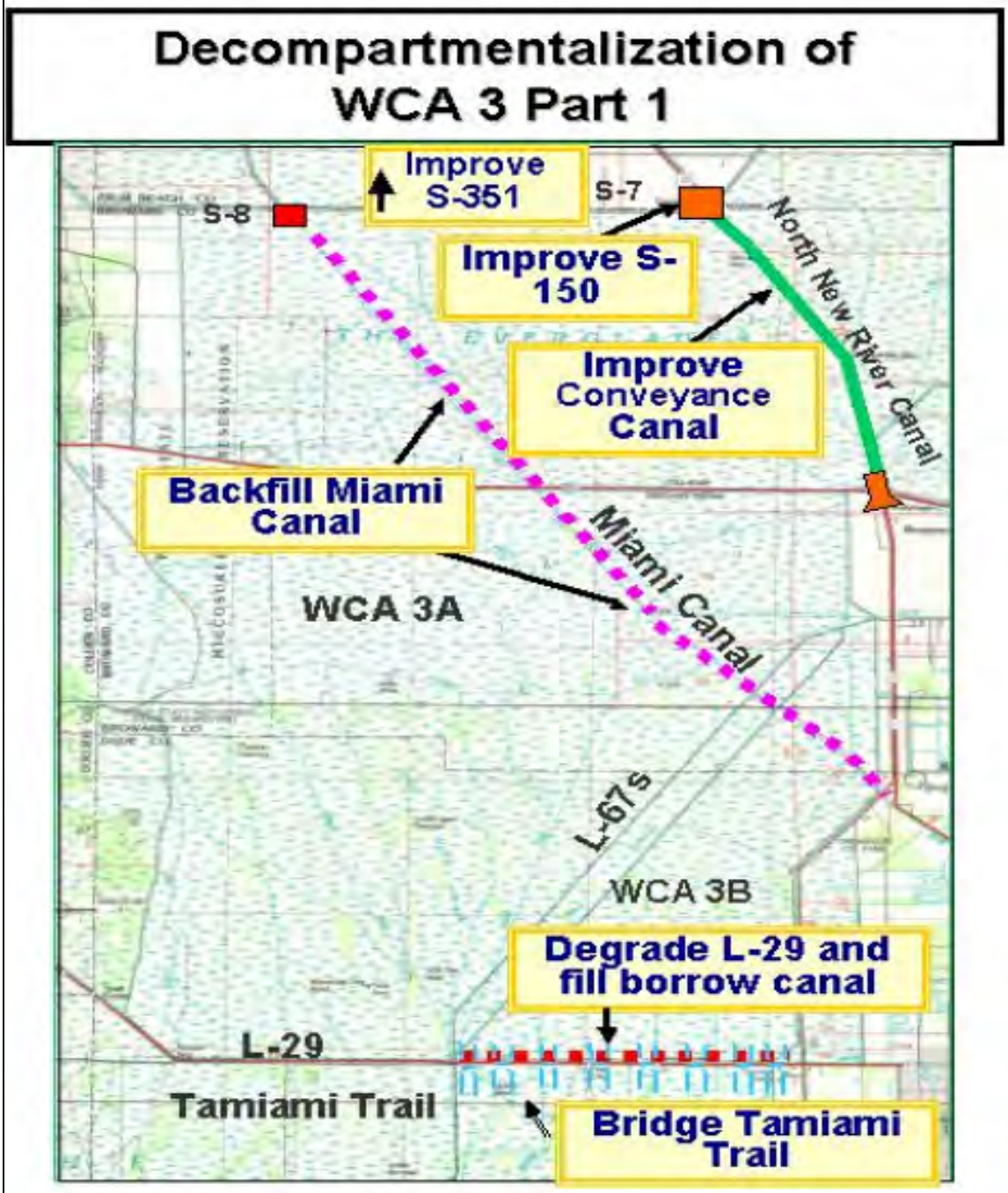
Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

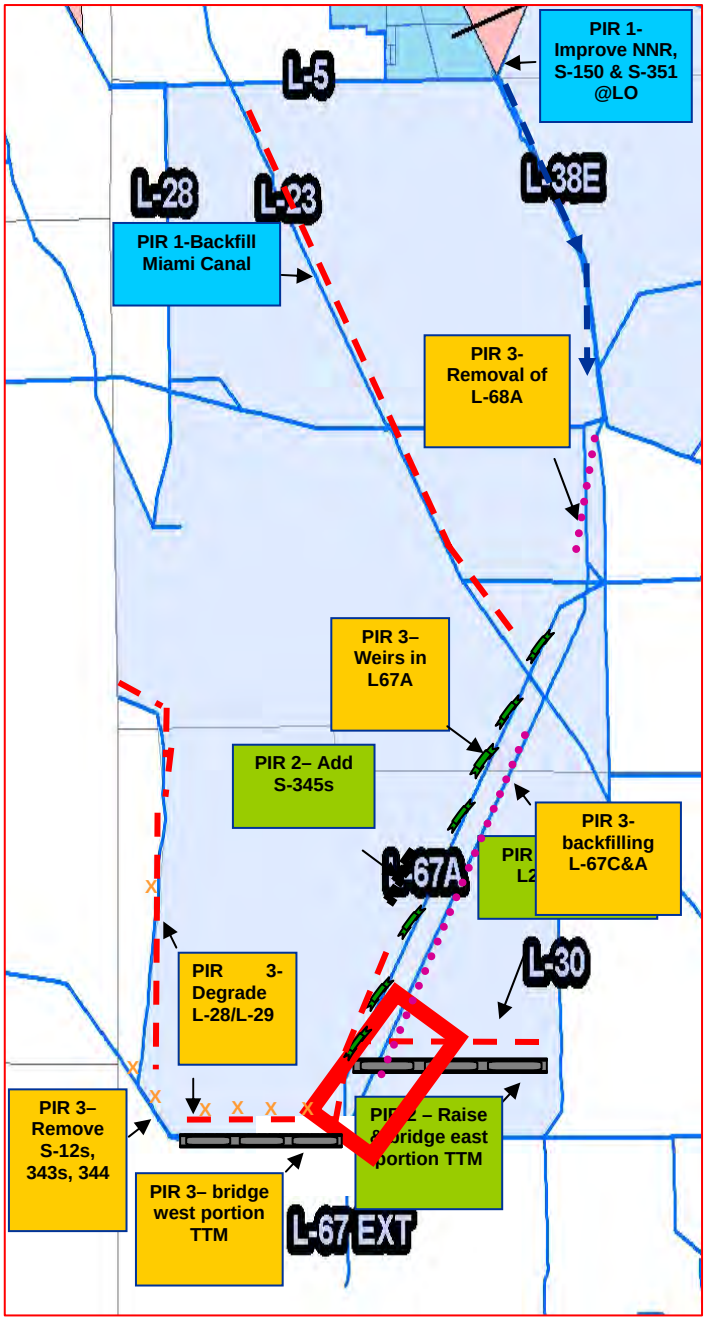
Additional Information: For the area of wetlands within the footprint of the CERP DECOMP Project, and downstream from this footprint into the southern estuaries, the objective is true restoration. Given the nature of irreversible constraints in modern south Florida, true restoration is defined as the recovery of an ecosystem that, as closely as possible, is a self-regulating system that has recovered the ecological functions, relationships and physical and biological components that defined the pre-drainage ecosystem. These defining characteristics include the great extent of naturally connected and inter-related wetland landscapes, uninterrupted marsh and slough "sheet flow", extremely low levels of nutrients in freshwater wetlands, numerous and healthy tree islands and solution "holes", the resilience of plant community mosaics, an abundance of large aquatic vertebrates exemplified by otters, storks, ibis and alligators, and high levels of downstream, estuarine productivity. Although the future Everglades ecosystem will be a "new" Everglades because it will be smaller than the pre-drainage system, the DECOMP project will have been successful, and true restoration accomplished, when the new system no longer acts like a set of managed, disconnected wetlands but rather responds to the recovery of these defining characteristics by functionally and organizationally behaving, both in space and time, as a wild Everglades system.

PROJECT MAP



This is the conceptual design for Decompartmentalization Part 1 in the Comprehensive Plan that will be modified during the PIR.

DECOMP: 3-PIR Strategy



PIR 1 – Alternatives for:

- Backfill Miami Canal
  – from S8 to S-151 only
- Conveyance in North New River (if necessary)
- Improvements to S-351 and S-150 (if necessary)

PIR 2- Alternatives for:

- East portion of Tamiami Trail
- L-29 level/canal
- Additional S-345s
- Backfill of Miami Canal S-151 to S-31
- Removal of S-151

PIR 3 – Alternatives for:

- Part 2 of the Yellow Book

DECOMP Physical Model

- Address uncertainties
- Concurrent with PIR 1
- Guide planning PIRs 2 & 3

Project Name: C&SF: CERP Florida Keys Tidal Restoration (OPE)
Project ID: 1302 (CERP Project WBS # 31)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.3

Measurable Output(s): 0.6 miles of impediments removed

April 1999 (Restudy) Project Synopsis: The purpose of this feature is to restore the tidal connection that was eliminated in the early 1900s during the construction of Flagler's railroad. Restoring the circulation to areas of surface water that have been impeded and stagnant for decades will significantly improve water quality, benthic floral and faunal communities, larval distribution of both recreational and commercial species (i.e. spiny lobster), and the overall hydrology of Florida Bay.

The project includes the use of bridges or culverts to restore the tidal connection between Florida Bay and the Atlantic Ocean in Monroe County. The four locations are as follows: (1) Tarpon Creek, just south of Mile Marker 54 on Fat Deer Key (width 150 feet); (2) Unnamed Creek between Fat Deer Key and Long Point Key, south of Mile Marker 56 (width 450 feet); (3) tidal connection adjacent to Little Crawl Key (width 300 feet); and (4) tidal connection between Florida Bay and Atlantic Ocean at Mile Marker 57 (width 2,400 feet).

Current Project Synopsis: Since issuance of the Restudy, various studies and other projects have refined this project's scope. This project provides for the removal of approximately 0.6 miles of impediments and will restore an historic flow way between the Atlantic Ocean and the Gulf of Mexico blocked during the construction of US Highway 1. An existing tidal creek restoration project near the proposed restoration project was fully successful. One tidal creek near Marathon, Florida has been selected for restoration. Culverts to maximize flow will be located, sized, and placed under U.S. 1 between Fat Deer Key and Long Point Key (MM56) to allow tidal exchange and flushing. Monitoring of water quality, benthic community composition, and sediment particle size will be performed before construction, at six months, and one year after construction completion. Additional tidal flow way restoration projects will be subsequently identified based upon the results.

Current Status: The project is planned for the future.

Est. Cost: $16,143,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

Florida Keys Tidal Restoration	Expenditures Thru FY 2008
USACE	$847,000
SFWMD	$549,000
Total	$1,396,000

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_31_fl_keys_tidal.cfm

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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

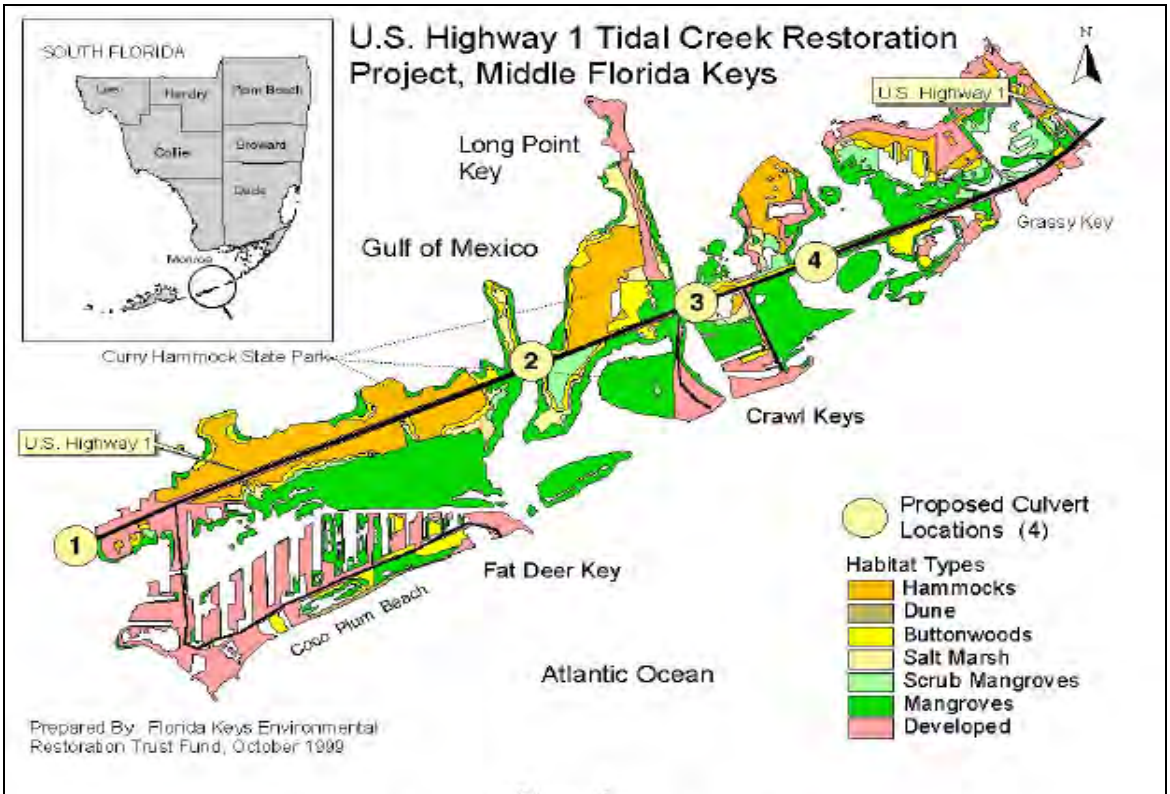

Figure 1
Florida Keys Tidal Restoration Project Area

Program Name: Infrastructure
Project Name: E&SF: Critical Projects Southern CREW Project Addition/ Imperial River Flowway (also CERP OPE) *Southern CREW*
Project ID: 1303
Lead Agency: USACE / SFWMD
Authority: WRDA 1996 (Critical Project), WRDA 2000 *(in CERP Plan; limitation of watershed addition outside of the CERP)*, WRDA 2007 *(modified Critical Project cap)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary 1-A.3 **Secondary:** 2-A.3

Measurable Output(s): 4,090 acres of restored wetlands *(proposed footprint)*

Project History: As noted in the Restudy, WRDA 1996 authorizes the Secretary of the Army to expeditiously implement restoration projects deemed critical to the restoration of the south Florida ecosystem. The SFEER Task Force nominated 35 projects with input from the Governor's Commission for a Sustainable South Florida and the public. Based on the set of priorities, the USACE conducted an abbreviated study of and produced a report transmitted to the Secretary of the Army for approval. This is one of the 12 restoration "Critical Projects" having the Secretary of the Army's approval (WRDA 1996). However, funding caps under WRDA 1996 and later revised under WRDA 2007 limit spending per project and for the group.

April 1999 (Restudy) Project Synopsis: The *Central and Southern Florida Project Comprehensive Review Study* (Restudy) included an (OPE) under Programmatic Authority for the acquisition and restoration of 4,670 acres of land, replacement of the Imperial Bonita Estates Bridge on the Imperial River, and replacement of the Kehl Canal Weir in southern Lee County, adjacent to Corkscrew Sanctuary; clearing and snagging on Imperial River, Estero River and Halfway Creek, reconnection of Spring Creek and Halfway Creek under U.S. I-75, and replacement of the Imperial Bonita Estates bridge.

WRDA 2000 approved as part of the Plan (CERP), but with the limitation that the Southern Corkscrew regional ecosystem "watershed addition should be accomplished outside of the scope of the Plan".

Current Project Synopsis: Acquisition of 4,670 acres and restoration of the land to a natural state. This project will re-establish historical sheetflow, hydroperiods and wetland storage on project lands and the Corkscrew Regional Ecosystem Watershed (CREW) and Corkscrew Sanctuary wetlands to the east; reduce excessive freshwater discharges to Estero Bay during the rainy season; improve habitat for listed species and other wildlife; reduce nutrient loads and pollutants to the Imperial River and Estero Bay, and mitigate flooding of homes and private lands west of the project area. The effort includes the removal of agricultural canals and road berms, house pads and the filling of ditches.

Current Status: Land acquisition has been accomplished with state and federal cost sharing. Exotic removal has taken place on over approximately 2,560 acres. Acres of exotic species, primarily Melaleuca, have been treated. In addition, a number of canals have been plugged and berms breached and dirt roads removed to restore sheet flow in areas of the restoration project footprint, restoring hydropatterns on approximately 640 acres of wetlands.

Because of escalating land costs in the region, particularly near Bonita Beach Road, and the difficulty in restoring hydrology in areas south of Kehl Canal, the project team considered changes to the project footprint proposed by the SFWMD. This would exclude the southern half of 32 and 33 that are south of the Kehl Canal and those areas impacted by the proposed alignment of County Road 951. Approximately 45 acres in the northwester corner of Section 32 and 15 acres in the southwestern corner of Section 34 would also be removed from the project. The footprint changes were approved by the SFWMD Governing Board at the March meeting.

Even with the change in footprint due to removal of these lands, the SFWMD will be able to maintain a flowway and corridor along the Kehl Canal and Imperial River connecting and restoring lands within Southern CREW and CREW Trust lands. The SFWMD continues to acquire land and construct the project.

Due to limitations of the federal funding cap for the overall Critical Projects program (WRDA 1996 and WRDA 2007), "reauthorization" will likely be required to proceed. The SFWMD may be able to partner with Lee County Conservation 20/20, which is already considering the acquisition of lands purchased by the SFWMD south of the Kehl Canal in Section 34 . These lands would be preserved and funds paid to the SFWMD could be used to acquire other lands needed within the footprint.

Est. Cost: $33,321,000

Project Schedule:

1999 Start design work
2015 Finish construction

Detailed Project Budget Information (rounded):

Southern CREW	**Expenditures Thru FY 2008**
USACE	$282,000
SFWMD	$1,075,000
Total	$1,357,000

Hyperlink:

http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_Critical.htm

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Source: Original project description (OPE) summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Program Name: Infrastructure
Project Name: Kissimmee River Restoration (KRR)
Project ID: 1306
Lead Agency: USACE / SFWMD
Authority: WRDA 1986, WRDA 1988, WRDA 1990, WRDA 1992
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: 1-A.3 **Secondary**: 2-A.3

Measurable Output(s):

- 31 miles of impediments removed
- 27,000 acres of floodplain wetlands improved

Project History: The *Central and Southern Florida Project Comprehensive Review Study* (Restudy) noted that the WRDA 1992 (section 101) authorized remaining portions of the Kissimmee River Restoration (lower basin ecosystem) and construction of the Kissimmee River Headwaters Revitalization project) creating a more natural physical environment in the lower Kissimmee River Basin. The project included backfilling the 30-foot deep Canal 38 and restoring flow to over 25 miles of presently isolated river channel to restore an estimated 27,000 acres of floodplain wetlands and associated fish and wildlife resources. The project would also provide more natural seasonal flow to Lake Okeechobee.

Current Project Synopsis: As part of the USACE planning process, several alternative plans were reviewed and the Tentatively Selected Plan (TSP) was identified in 1992. That project addressed the lower basin and includes 3,000 square miles stretching from Orlando to Lake Okeechobee in central Florida. It involves ecosystem restoration of the historic floodplain to reestablish wetland conditions by modifying the operation of the lakes and Structure 65, enlargement of canals 36 and 37, backfilling of 22 miles of C-38, excavation of nine miles of new river channel, removal of two water control structures and locks, along with land acquisition [Lower Basin Land Acquisition (SFWMD 68,332 acres); Upper Basin Land Acquisition (SFWMD 36,763 acres)]. The project will restore the ecological integrity of the historical Kissimmee River/floodplain ecosystem by recreating 40 square miles of the river/floodplain ecosystem, including re-establishing flow to 43 miles of contiguous meandering river channel and 27,000 acres of wetlands.

Current Status: Ninety percent of the 102,061 acres of land needed for the restoration have been acquired by the SFWMD. Natural flow has been reestablished for an 18 mile section of the Kissimmee River, including 4 miles reconnected during the past period and the 14 miles that were reconnected in 2001. These first two (of four) restoration phases required USACE to backfill a total of 10 miles of canal C-38 and resulted in about 6,300 acres of formerly drained portions of the river's floodplain experiencing enhanced inundation and converting them back to wetland habitat. Several species, including the Ring-necked Duck, American Avocet and Black-necked Stilt, have returned to the Kissimmee after being an absence of 40 years. Construction is complete on 1) S-83/84 Spillway Additions (July 2007); 2) S-65 DX2 Modifications and Reach 4 Backfilling (October 2007); and 3) Radio Tower relocation (February 2008).

A Project Authorization Change Report is being completed, as the estimated total project cost is expected to exceed the 902 Limit, due to unforeseen increases in construction and land costs. Of the seven construction contracts remaining, two contracts [Residential Flood Proofing (#15) and the S-65DX2 Grades Control Structure (#11A)] are scheduled for award in FY09.

Award of the Pool D Oxbow and Berm, and the C-36, C-37 & Local Levee are pending. Remaining contracts (U-Shared Weir, Reaches 2 & 3 Backfill contracts) are dependent upon resolution of negotiations on a CSX Railroad Bridge relocation anticipated in July, for an FY10 award. C-37 widening was identified as a USACE project for ARRA funding, enabling CNT #2B1 to be awarded in December 2009.

A comprehensive evaluation program for tracking environmental response to the restoration is in place to gauge the success of meeting goals for ecological integrity for the river and the floodplain. This program predicts and tracks resulting ecological changes that are expected, including changes in hydrology, water quality, and major biological communities such as plants, invertebrates, fish, and birds. Evaluation research is required to be continued by the SFWMD for at least 5 years following completion of the final phase of construction (projected for 2013), or until environmental responses stabilize.

The SFWMD is conducting the Kissimmee Basin Modeling and Operations Study (KBMOS) to evaluate alternative water regulation schedules for the Upper Kissimmee Basin to meet its hydrologic requirements and achieve a more acceptable balance between operations objectives associated with flood control, water supply, aquatic plant management, natural resource requirements of the Kissimmee River Restoration and the Kissimmee Chain of Lakes, and Lake Okeechobee. KBMOS involves many participating local, state, and federal entities, as well as the public.

Est. Cost: $619,000,000

Project Schedule:

1994	Start
1999	Construction begun
2012	Completed

Detailed Project Budget Information (rounded):

KRR	Expenditures Thru FY 2008
USACE	$191,014,000
SFWMD	$55,758,000
Total	$246,772,000

Hyperlinks:

http://www.saj.usace.army.mil/Divisions/Everglades/Branches/ProjectExe/Sections/UECKLO/KRR.htm
https://my.sfwmd.gov/portal/page?_pageid=2294,4946313,2294_4947316:2294_11158132&_dad=portal&_schema=PORTAL

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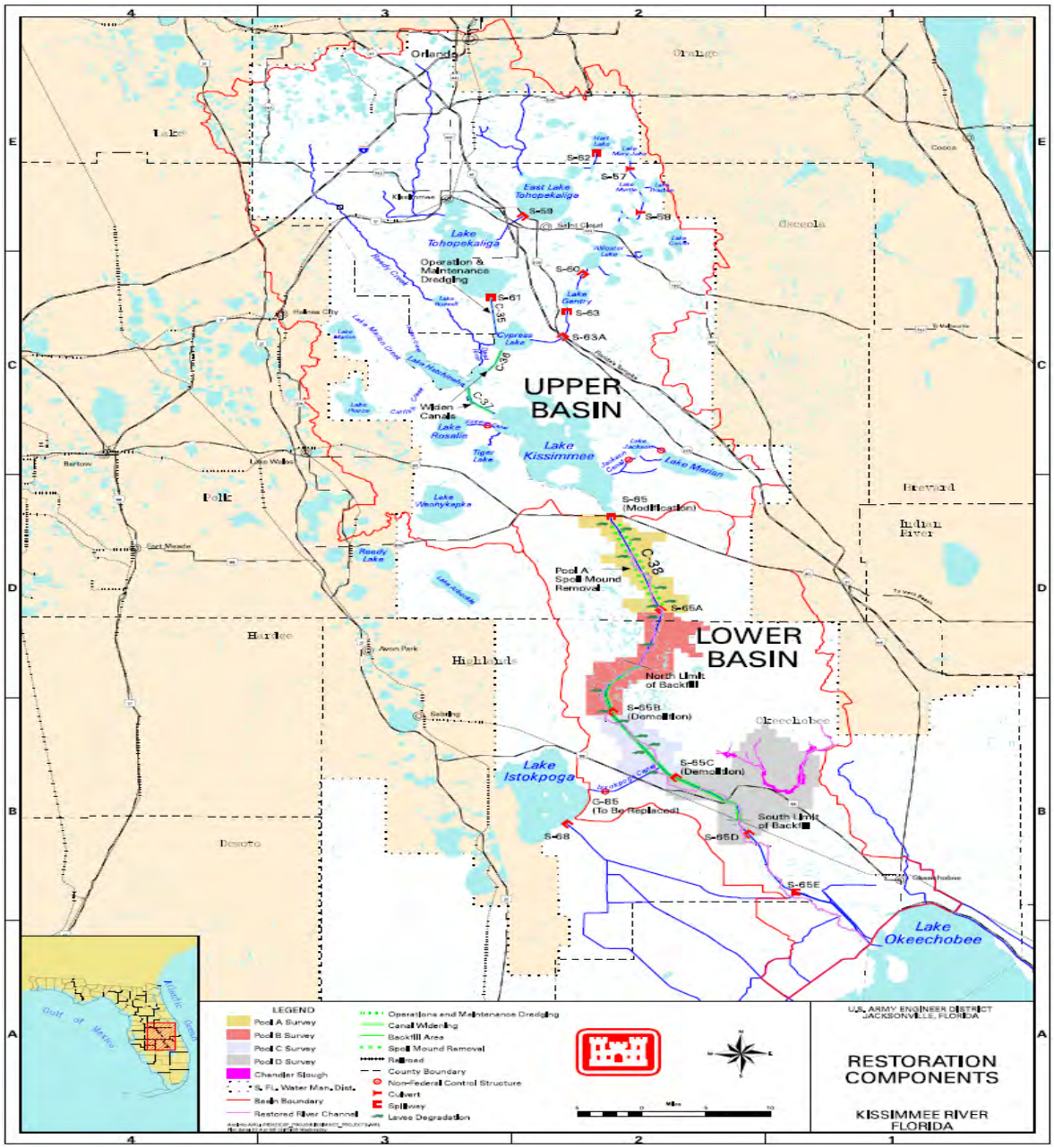
Source: Project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Current status information was provided by the project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:



Project Name: E&SF: Critical Projects Tamiami Trail Culverts
Additional Water Conveyance Structures under Tamiami Trail
Project ID: 1308 (formerly 1400)
Lead Agency: USACE / SFWMD
Authority: WRDA 1996; WRDA 2007 *(modified Critical Project cap)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.3

Measurable Output(s):16 miles of impediments removed

Project History: WRDA 1996 authorizes the Secretary of the Army to expeditiously implement restoration projects deemed critical to the restoration of the south Florida ecosystem. The SFEER Task Force nominated 35 projects with input from the Governor's Commission for a Sustainable South Florida and the public. Based on the set of priorities, the USACE conducted an abbreviated study of and produced a report transmitted to the Secretary of the Army for approval. This is one of the 12 restoration "Critical Projects" having the Secretary of the Army's approval (WRDA 1996). In the Restudy, this project was anticipated to be one of the top five funded under the funding cap restrictions of WRDA 1996, later revised under WRDA 2007, that limit spending.

Current Project Synopsis: In 1928, the Tamiami Trail was completed between Miami and Naples. To obtain fill material for the roadbed, a borrow canal was excavated on the northern side of the road. The effect has been to intercept existing north-south flowways to the Big Cypress National Preserve, and channelize flows through just a few bridges/culverts. Wetland habitats receive too much or too little fresh water and seasonal hydropatterns were interrupted.

This project will increase the number of north-south flowways by adding conveyance structures (77 culverts under Tamiami Trail (U.S. 41) in 30 locations) to restore natural hydropatterns impacting sheetflow of surface water within the watersheds of the Ten Thousand Islands National Wildlife Refuge & Aquatic Preserve, Southern Golden Gate Estates, Fakahatchee Strand State Preserve, Big Cypress National Preserve and Everglades National Park and enhance biological restoration of the region. This project directly supports objectives for other south Florida projects such as the L-28 modification and Picayune Strand Restoration.

There are two phases.
Phase I involves planning, project design and construction of 62 culverts and associated improvement of hydrologic sheetflow under 16 miles of Tamiami Trail (US 41) and 15 under Loop Road between SR 92 and the Collier/Miami-Dade County line. Phase I is not to increase the flows, but to redistribute them from the north side of the road to the south side. Other components include specific plug sites. Plugs are simply large earthen ditch blocks that could serve as driveway access across the canal. Some of the existing driveways have pipe culverts that need either to be removed or have the existing culvert replaced if its size is substandard. By providing additional culverts under Tamiami Trail and a more diffuse flowway beneath Tamiami Trail, a more natural hydropattern will be established both north and south of the highway enhancing biological restoration in the region.

Phase II involves resurfacing of the roadway of the Tamiami Trail pursuant to construction of the culverts. State Road 29 West was planned as part of the Southern Golden Gate Estates Hydrologic Restoration (Picayune Strand).

Current Status: Since the initial planning, the scope of the project was modified due to budget and time constraints. The SFWMD completed the acquisition of land and is constructing the project according to the *revised* plan. Per the revised plan and scope of work: The Tamiami Trail Culvert -- Phase I project begins at the intersection of US 41 and CR 92 and extends from this intersection eastward along the Tamiami Trail corridor to the intersection of US 41 and SR 29, a distance of approximately 16 miles. Construction of the western portion of the project (Phase I), located west of State Road 92, started in June 2004 and was completed in March 2006. It encompassed the placement of 9 culverts. The cost estimates for completion of this project in combination with the other eight Critical Projects previously exceeded the USACE appropriation cap of $75 million set by WRDA 1996.

Phase I of the project was incorporated as a component of the CERP Picayune Strand Restoration project, authorized for construction by Congress as part of WRDA 2007, making Phase I of the culvert project eligible for federal cost-share.

Est. Cost: $21,678,000 *(for the original plan)*

Project Schedule:

1998	Start
2004	Revisions on design
TBD	Finish

Detailed Project Budget Information (rounded):

Tamiami Trail	Expenditures Thru FY 2008
USACE	$2,622,000
SFWMD	$953,000
Total	$3,575,000

Hyperlink:

http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_Critical.htm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Janet Starnes, Principle Project Manager, SFWMD
(239) 338-2929 ext 7735, jstarnes@sfwmd.gov

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Program Name: Infrastructure
Project Name: Tamiami Trail Modifications: Next Steps (f/k/a Tamiami Trail 2 or Enabling Northeast Shark River Slough Restoration SFO –"support for others" (DOI)
Project ID: 1309
Lead Agency: DOI/USACE
Authority: H.R. 1105: Omnibus Appropriations Act of 2009 ((P.L. 111-008, dated March 11, 2009)
Funding Source: DOI

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Study with recommendations

Project Synopsis: The Tamiami Trail, a highway built in the 1920s to connect the east and west coasts of Florida, sliced through the heart of the Everglades and cut off the natural flow. Since that time, the Tamiami has acted like a dam; depriving the Everglades National Park (ENP) when it's parched in the dry season, and backing up water that drowns the water conservation areas to the north in the wet season.

The 2009 Omnibus directed the Secretary of the Interior, acting thorough the National Park Service (NPS) "to immediately evaluate the feasibility of additional bridge length, beyond that to be constructed pursuant to the Modified Water Deliveries to Everglades National Park Project (16 U.S.C. § 410r-S), including a continuous bridge, or additional bridges or some combination thereof, for the Tamiami Trail (U.S. Highway 41) to restore more natural water flow to Everglades National Park and Florida Bay and for the purpose of restoring habitat within the Park and the ecological connectivity between the Park and the Water Conservation Areas." The National Park Service requested support from the USACE to assist with the study to determine the next step of modification to Tamiami Trail for restoration. The special report will provide a holistic recommendation, drawn from information and analyses contained in prior 2005 and 2008 reports. This information and analysis will expedite the effort.

Current Status: PMP was recently executed in May 2009. Public scoping was held June 2. Contract execution expected in June 2009 for the technical analysis expected by August, 2009. The tentatively selected plan should be identified in September with the Draft Environmental Impact Statement completed by the end of December, 2009. DOI would further coordinate with Congress in the spring and finalize the EIS by May 2010.

Est. Cost: $1,373,000

Project Schedule:

2009 Start/PMP
2010 Report completed and ROD

Detailed Project Budget Information (rounded):

N/A

Hyperlink: http://www.nps.gov/ever/naturescience/nessrestoration.htm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Bruce Boler, Everglades National Park
(305) 224-4234, Bruce_Boler@nps.gov

Source: Project description and authority are taken from the PMP document. Current status information was provided by the project manager.

Program Name: Infrastructure
Project Name: Biscayne Bay Feasibility Study
Project ID: 1401
Lead Agency: USACE / Miami-Dade County
Authority: WRDA 1996
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other

Current Project Synopsis: Biscayne Bay is a shallow, well-mixed estuary located along the southeastern coast of Florida. It includes most of Biscayne National Park, and adjacent lands provide fresh surface- or groundwater to the Bay. The Central and Southern Florida (C&SF) Project impacted the timing, distribution and amount of freshwater reaching the bay affecting natural salinity patterns and ecology.

The Comprehensive Everglades Restoration Plan (CERP) is modifying the C&SF project to improve flows needed for the environment, including Biscayne Bay. Proposed modifications to this connected hydrologic system may also affect Biscayne Bay. Although not part of CERP, this study will allow Miami-Dade County resource managers to assess potential impacts and determine if further studies are needed. Miami-Dade County study is sharing the cost.

Current Status: Work on this project has been suspended.

Est. Cost: $5,900,000

Project Schedule:

1996	Start
TBD	Finish

Detailed Project Budget Information (rounded):

Biscayne Bay Feasibility Study	Expenditures Thru FY 2008
USACE	$1,556,000
Miami-Dade Co.	$557,000
Total	$2,113,000

Reconnaissance Study (100% Federal, not included in Estimated Cost or Expenditures): $470,000

Hyperlink: http://www.saj.usace.army.mil/rwp/index.html

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Current status information was provided by the project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Broward Co. Secondary Canal System (CC)
Project ID: 1403 (CERP Project WBS # 24)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Water control structures, pumps, and canal improvements

April 1999 (Restudy) Project Synopsis: Includes a series of water control structures, pumps, and canal improvements located in the C-9, C-12 and C-13 Canal basins and east basin of the North New River Canal in central and southern Broward County. Excess water in the basins will be pumped into the coastal canal systems to maintain canal stages at optimum levels. When basin water is not sufficient to maintain canal stages, the canals will be maintained from other construction features such as the Site 1 Impoundment and the North Lake Belt Storage Area and then from Lake Okeechobee and the Water Conservation Areas.

Current Project Synopsis: The purpose of this feature is to reduce water shortages by recharging local well fields and stabilizing the saltwater interface.

Current Status: This project adheres to the original concept outlined in the Restudy. This project has not yet begun.

Est. Cost: $17,320,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

Broward Co. Secondary Canal System	Expenditures Thru FY 2008
USACE	$20,000
SFWMD	$42,000
Total	**$62,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_24_broward_canal.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Loxahatchee National Wildlife Refuge Internal Canal Structures (KK)
Project ID: 1408 (CERP Project WBS # 14)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Programmatic Authority <$25 M)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Water control structures

April 1999 (Restudy) Project Synopsis: Two water control structures in the northern ends of the perimeter canals encircling the Loxahatchee National Wildlife Refuge (Water Conservation Area 1) located in Palm Beach County.

Current Project Synopsis: The purpose of this feature is to improve the timing and location of water depths within the Refuge. It is assumed that these structures will remain closed except to pass Stormwater Treatment Area 1 East and Stormwater Treatment Area 1 West outflows and water supply deliveries to the coastal canals.

WRDA 2000 specified that this project was approved as part of the Plan with a limitation that the Federal share for land acquisition to enhance existing wetland systems along the Loxahatchee Wildlife Refuge, including the Strazzulla tract, should be funded through the budget of the Department of the Interior (DOI).

Current Status: This project adheres to the original concept outlined in the Restudy. This project has not yet begun.

Est. Cost: $10,078,000

Project Schedule:
TBD Construction completed.

Detailed Project Budget Information (rounded):

Loxahatchee NWR-ICS	Expenditures Thru FY 2008
USACE	$49,000
SFWMD	$0
Total	**$49,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_14_loxahatchee.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Seminole Big Cypress Reservation Water Conservation Plan (OPE)
Project Name: 1409 (CERP Project WBS # 96)
Lead Agency: USACE / Seminole Tribe
Authority: Not authorized.
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other supports 3-A.4 and 3-B.1

Measurable Output(s): Plan to reduce phosphorus level.

April 1999 (Restudy) Project Synopsis: Legislative funding limits of the Critical Projects program (see E&SF Critical Projects sheet) prevented inclusion of the 'east' portion and had only allowed only the 'west' portion of this project to be nominated as a Critical Project. With uncertainty around funding the remaining 'east' portion, the "combined" project was recommended as an OPE in the CERP. The Restudy included construction of water control, management, and treatment facilities to improve the quality of water and runoff from phosphorus generating agricultural sources within the Reservation.

Current Project Synopsis: The proposed comprehensive watershed management system is designed to achieve environmental restoration on the Seminole Big Cypress Reservation located in Hendry County, north of the Big Cypress Preserve, and the Everglades Protection Area. The overall plan has been divided into east and west portions, each of which can provide independent benefits. In addition, the project will reduce flood damage and promote water conservation. The removal of pollutants will be achieved using natural treatment processes in pretreatment cells and water storage areas. A phosphorus level of 50 ppb is the goal; also the level to be achieved by STAs in the Everglades Construction Project.

This project adheres to the original concept described in the Restudy. Should design performance levels for phosphorus become more stringent, this project has sufficient flexibility to incorporate additional alternative technology.

Current Status: The Project Cooperation Agreement (PCA) between the SFWMD and the Corps was executed in 2005. This project is planned for the future.

Est. Cost: $99,832,000

Project Schedule:
TBD

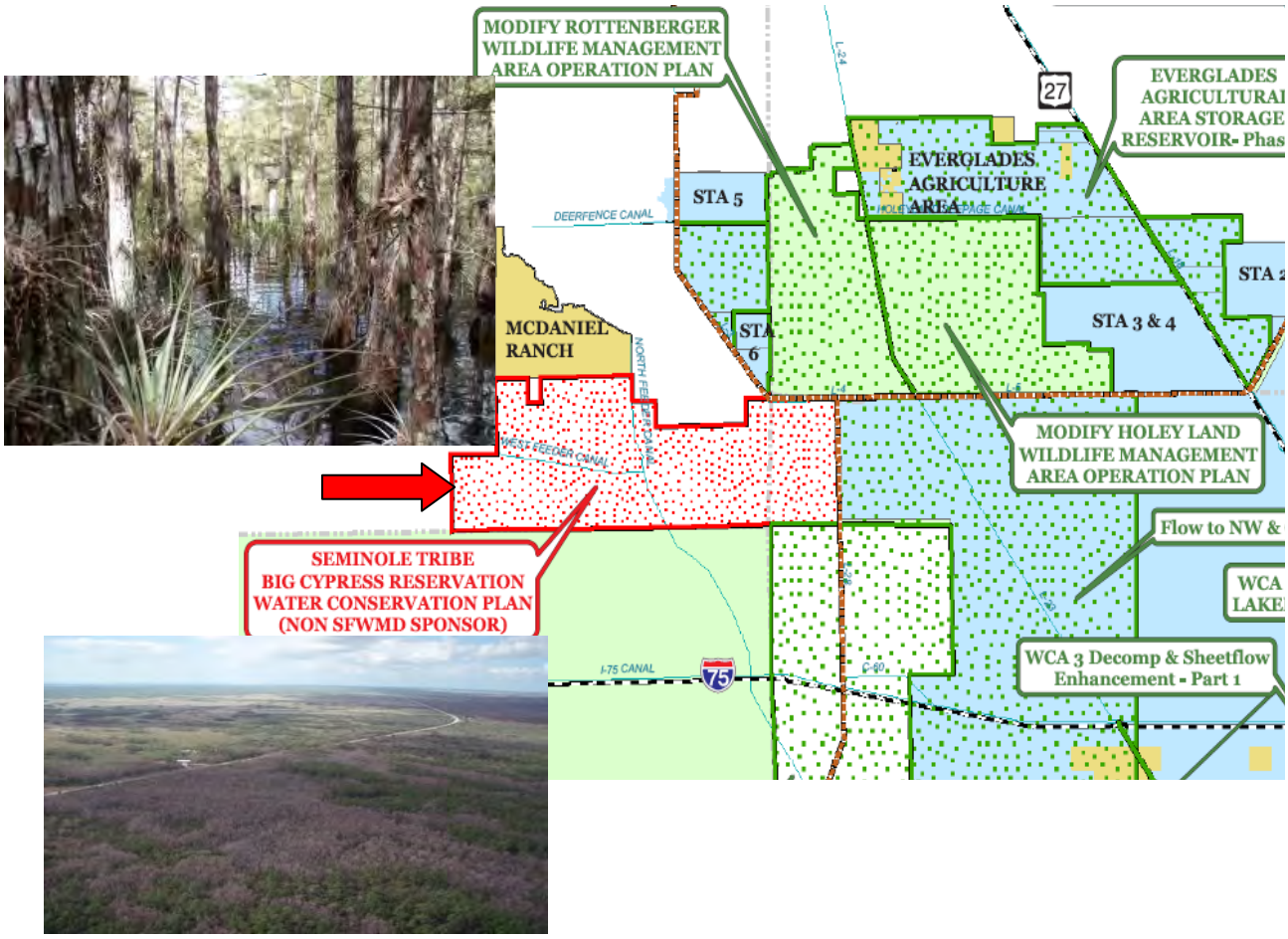
Detailed Project Budget Information (rounded):

Seminole Big Cypress Reservation WCP	Expenditures Thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.saj.usace.army.mil/projects/proj6.htm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Current status is summarized from the PMP (2005).



Project Name: C&SF: CERP C-43 Aquifer Storage and Recovery Pilot
F/k/a *Caloosahatchee (C-43) River ASR Pilot*
Project ID: 1411 (CERP Project WBS # 33)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(pilot project);* WRDA 2007 *(modified cost)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 1-A.2

Measurable Output(s): Pilot *(output is temporary)*

April 1999 (Restudy) Project Synopsis: Included Aquifer Storage and Recovery (ASR) wells to maximize the benefits associated with the Caloosahatchee River Storage Reservoir. A pilot project for these wells is necessary to evaluate and reduce the technical and regulatory uncertainties of implementing the full-scale Caloosahatchee ASR Project. The pilot will identify the most suitable sites for the aquifer storage and recovery wells near the reservoir and determine the optimum configuration of those wells. It will provide information regarding the characteristics of the aquifer system within the Caloosahatchee River Basin as well as determine the hydro-geological and geotechnical characteristics of the upper Floridan Aquifer. The pilot will also determine the specific water quality characteristics of waters to be injected, the water quality characteristics; and the amount of water recovered from the aquifer and those within the receiving aquifer.

Current Project Synopsis: The pilot was initially sited just west of LaBelle, along the Caloosahatchee River, on SFWMD-owned land in western Hendry County. The pilot includes the construction of one five-million gallons per day ASR well and associated monitoring wells and surface facilities. The full-scale project includes the construction of up to 220 mgd of ASR capacity (approximately 44 ASR wells) and a surface water reservoir (impoundment). The full-scale system will store excess water from the Caloosahatchee River Basin when available (typically in the wet season) and release water into the Caloosahatchee River during dry periods.

The project was refined to include providing information regarding the hydro-geological and geotechnical characteristics of the Hawthorn Aquifer. A Pilot Project Design Report (PPDR) was completed in September 2004. An exploratory well was drilled. However, geological formations including a sand aquifer at the site were not appropriate for open-hole high-capacity ASR wells.

WRDA 2007 amended section 601 (b) (2) (B) of WRDA 2000 and increased authorization for pilot implementation to $8.2 Million (previously $6.0 M).

Current Status: The well has been plugged. Work on this pilot project is currently suspended pending the Caloosahatchee Watershed PDT's determination of the location of the second surface reservoir on the Caloosahatchee River. Once a location is determined, another exploratory well may be drilled in the vicinity. If the aquifer characteristics at the site are appropriate the design and installation of a single ASR well pilot facility will be constructed and cycle tested.

Est. Cost: $8,601,000

Project Schedule:

2002	Start of Feasibility
2013	Construction completed

Detailed Project Budget Information (rounded):

C-43 ASR Pilot	Expenditures Thru FY 2008
USACE	$1,206,000
SFWMD	$2,049,000
Total	$3,255,000

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_33_cal_river_c43_asr_pilot.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP WCA 2B Flows to ENP *(Everglades National Park)* (YY)
Project ID: 1412 (CERP Project WBS # 48)
-Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 2-A.3 and 1=B.1

Measurable Output(s): Water control structures, canals, pumps and canal improvements

April 1999 (Restudy) Project Synopsis: "Diverting Water Conservation Area 2 and 3 Flows to Central Lake Belt", originally included two features (YY) and (ZZ) in the Yellow Book. "This feature includes pumps, water control structures, canals, and conveyance improvements located adjacent to Water Conservation Areas 2 and 3 in Broward County." The final size and configuration of the facilities will be determined through the Water Preserve Areas Feasibility Study. "The purpose of this feature is to attenuate high stages in WCA 2 and 3 and transport this excess water to the Central Lake Belt Storage Area where it will be stored to meet downstream demands in Shark River Slough, Water Conservation Area 3B or Biscayne Bay. "

Current Project Synopsis: ZZ has since been combined into the Central Lake Belt Project (WBS #26). This project, the (YY) component, adheres to the original concept described in the Restudy. It's purpose is to store excess water from WCA 2 in the Central Lake Belt Storage Area through control structures and conveyance features and supplement environmental water supply deliveries to: (1) Northeast Shark River Slough, (2) WCA 3B, and (3) to Biscayne Bay, in that order, if available.

Current Status: This project has not yet begun.

Est. Cost: $106,721,000

Project Schedule:
TBD
Detailed Project Budget Information (rounded):

WCA 2B Flows to ENP	Expenditures Thru FY 2008
USACE	$284,000
SFWMD	
Total	**$284,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_48_wca_2b.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP L-31N (L-30) Seepage Management Pilot
F/k/a *L-31N Seepage Management Pilot*
Project ID: 1416 (CERP Project WBS # 36)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(pilot project)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: Other – supports 1-A.2 and 2-A.3

Measurable Output(s): Pilot *(output is temporary)*

April 1999 (Restudy) Project Synopsis: The purpose of this feature is to reduce levee seepage flow across L-31N adjacent to Everglades National Park (ENP) via a levee cutoff wall. Additionally, the feature was designed to reduce groundwater flows during the wet season by capturing groundwater flows with a series of groundwater wells adjacent to L-31N, then back-pumping those flows to ENP. The pilot is necessary to determine the appropriate technology to best control seepage from ENP. The pilot will also provide necessary information to determine the appropriate amount of wet season groundwater flow to return that will minimize potential impacts to Miami-Dade County's West Well field and freshwater flows to Biscayne Bay.

Current Project Synopsis: In early 2005, after further study of the L-31N site, it was determined that a seepage management feature located along L-31N could reduce some seepage. However, the L-31N site was located within an area that may be modified under the CERP, rendering it less useful for long-term impacts. As a result, the team was tasked to review seepage management on L-30 as an alternative.

The USACE Jacksonville District proposed further study for a feature located along a portion of the L-30 levee, north of U.S. Highway 41, in Miami-Dade County, Florida. Technical information obtained from pilot project monitoring and data gathering will provide essential information needed to resolve critical uncertainties related to technologies for controlling seepage prior to recommending full-scale implementation of seepage management measures from natural areas in ENP and WCA 3B at a predetermined length and depth. A feature along the L-30 levee would help reduce seepage lost from Water Conservation Area 3B, which, in turn, will reduce water flowing farther south into the L-30/L-31N system. However, the field tests, seepage reports and historical data independently show the L-30 levee, north of U.S. Highway 41, as having a higher seepage rate than L-31N.

This change in study area was endorsed by the Quality Review Board (October 2005). As a follow up, the Jacksonville District requested official approval, to prepare a Pilot Project Design Report (PPDR) for the L-30 site and to officially change the name to "L-30 Seepage Management Pilot" project, from the USACE South Atlantic Division (SAD). The PPDR focuses on a feature along the L-30 site (vs. L-31N canal) and will be useful prior to recommending full-scale implementation. The project will address constructability, reliability, the ability to implement, monitoring capabilities, costs and scheduling.

Current Status: A Draft PPDR was released for independent technical review late in May, 2008. This "L-30" PPDR recommends construction of a roughly 1,000 foot linear seepage barrier of sheet pile and soil cement bentonite mixture for testing of constructability and effectiveness in the new project location, the southern portion of the L-30 levee. After two years of monitoring, a Technical Data Report will be prepared to assess the viability of the technology for the development of full-scale seepage management features.

The final CERPRA permit was received. A detailed monitoring plan has been developed for the measurement of the seepage reduction achieved by the constructed barrier In December 2008, intermediate plans and specs were reviewed by SFWMD and readied for Technical Review Briefing in January 2008. SFWMD determined they had additional electrical or telemetry needs. An integrated Draft PPDR completed agency review in December 2008. Comments include ensuring minimal impacts to WC3A/B and noise abatement and continued access to Tiger Tail for the Miccosukee Tribe. External technical review from early 2009 was incorporated into the final Integrated Pilot Project Design Report and EA and the final P&S prepared. BCOE routing is occurring.

This pilot was identified by USACE for funding outside the FY09/FY10 budget process under the American Recovery and Reinvestment Act (ARRA) in April, 2009; enabling a Notice to Proceed for construction award as early as August 2009.

Est. Cost: $15,402,000

Project Schedule:

2009	Installation begins
2010	Installation complete

Detailed Project Budget Information (rounded):

L-31N (L-30) Seepage Management Pilot	Expenditures Thru FY 2008
USACE	$4,022,000
SFWMD	$1,299,000
Total	$5,321,000

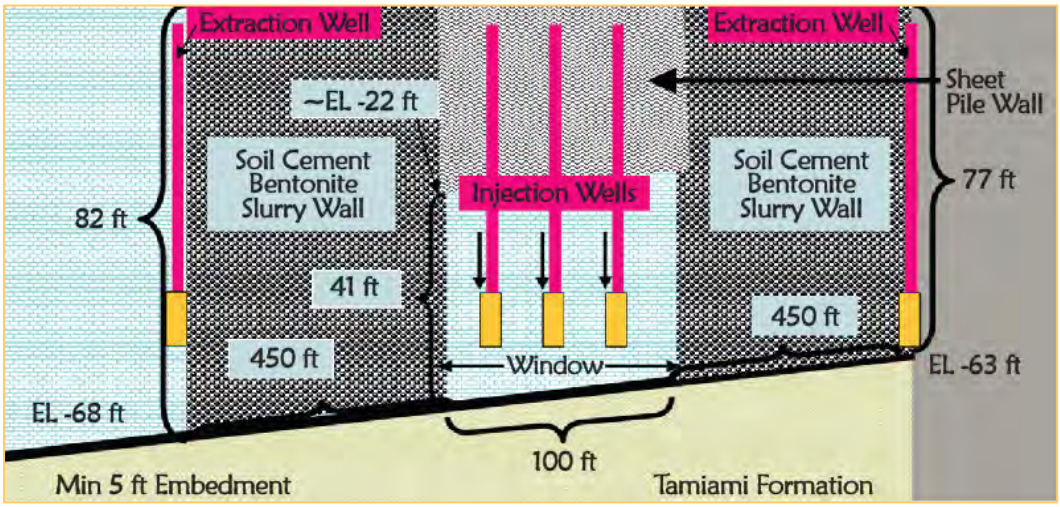
Hyperlink: http://www.evergladesplan.org/pm/projects/proj_36_l31n_seepage.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:

Underground View



Project Name: C&SF: CERP Lake Belt In-Ground Reservoir Technology Pilot
Project ID: 1417 (CERP Project WBS # 35)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(pilot project)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 1-A.2

Measurable Output(s): Pilot *(output is temporary)*

April 1999 (Restudy) Project Synopsis: The initial design of these reservoirs includes subterranean seepage barriers around their perimeter in order to enable drawdown during dry periods, prevent seepage losses, and prevent water quality impacts due to transmissivity of the aquifer in these areas. The pilot is required to determine construction technologies, storage efficiencies, impacts on local hydrology, and water quality effects.

Current Project Synopsis: Several features recommend the use of areas where lime rock mining will have occurred. The pilot project is required to determine construction technologies, storage efficiencies, impacts on local hydrology, and water quality effects. Water quality assessments will include a determination as to whether the in-ground reservoirs and seepage barriers will allow for storage of untreated waters without concern for groundwater contamination. This project adheres to the original concept outlined in the Restudy.

Current Status: The Project Management Plan is completed. The project is planned for the future.

Est. Cost: $29,130,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

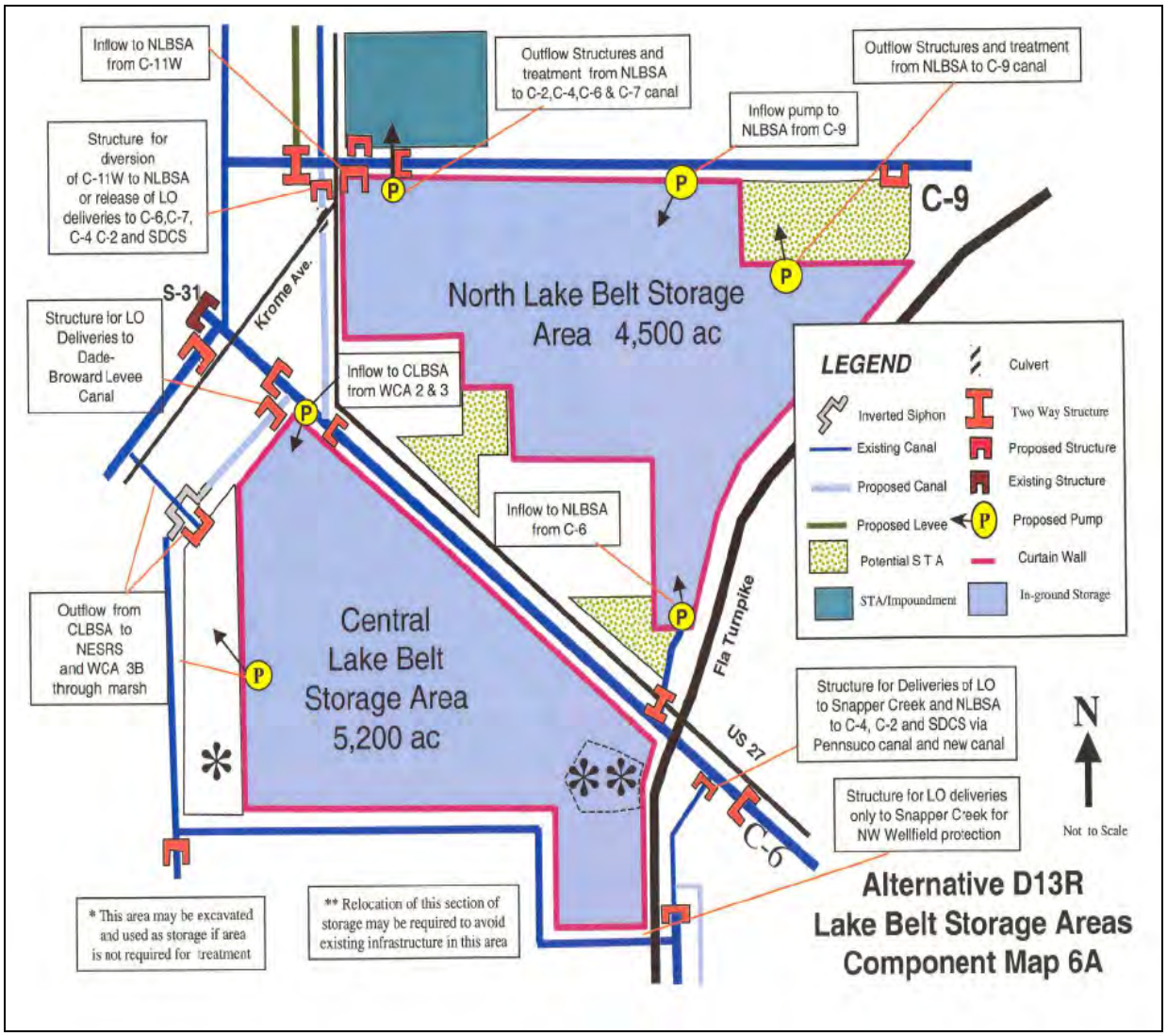
Lake Belt In-Ground Res Pilot	**Expenditures Thru FY 2008**
USACE	$1,387,000
SFWMD	$532,000
Total	$1,919,000

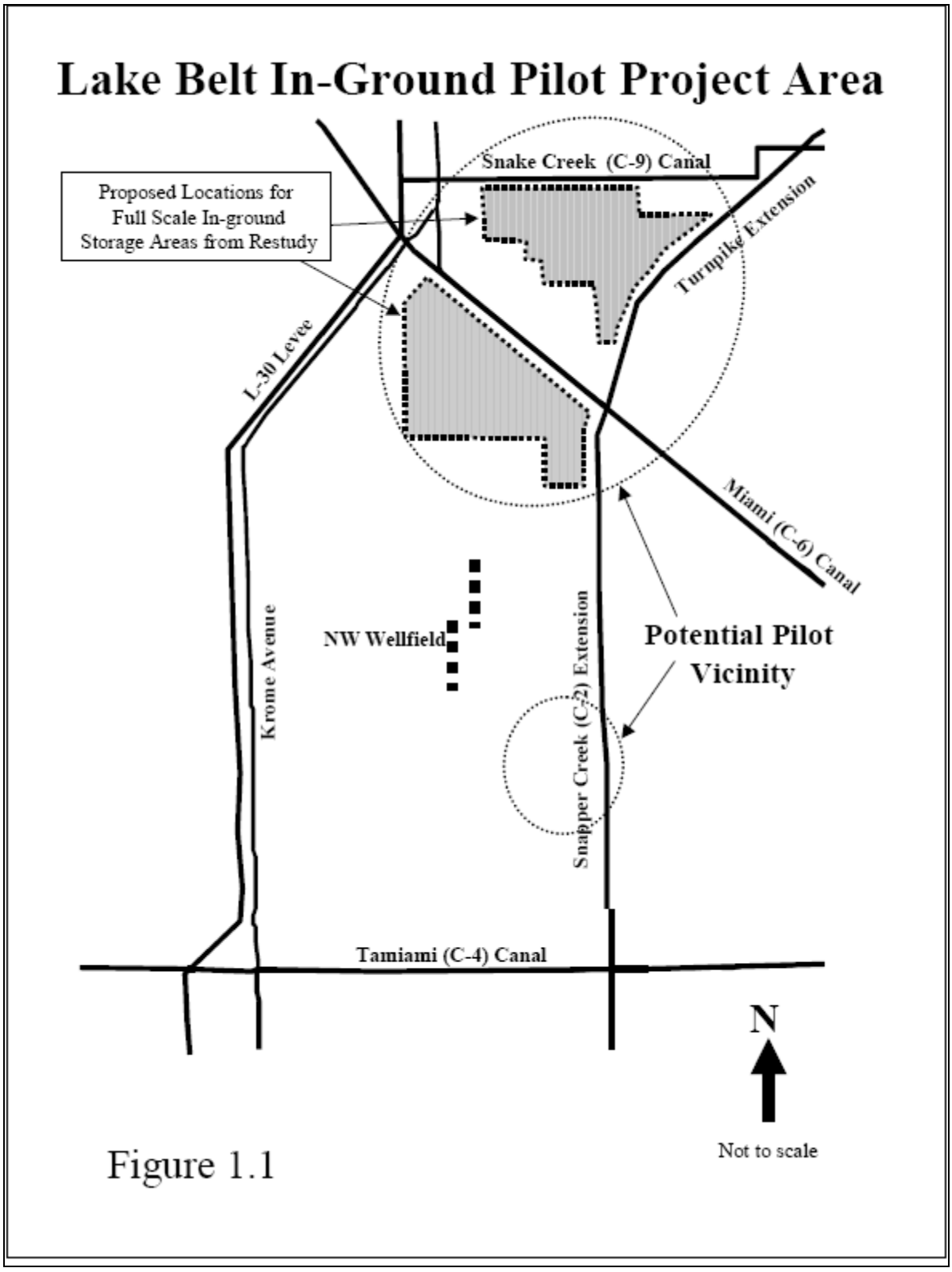
Hyperlink: http://www.evergladesplan.org/pm/projects/proj_35_lake_belt_pilot.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:




Lake Belt In-Ground Pilot Project Area
Proposed Locations for Full Scale In-ground Storage Areas from Restudy
Snake Creek (C-9) Canal
Turnpike Extension
L-30 Levee
Miami (C-6) Canal
NW Wellfield
Krome Avenue
Snapper Creek (C-2) Extension
Potential Pilot Vicinity
Tamiami (C-4) Canal
N
Not to scale
Figure 1.1

Project Name: C&SF: CERP Lake Okeechobee Aquifer Storage and Recovery Pilot
Lake Okeechobee ASR Pilot [Kissimmee River ASR (KRASR); Port Mayaca ASR (PMASR)]
Project ID: 1418 (CERP Project WBS # 32)
Lead Agency: USACE / SFWMD
Authority: WRDA 1999; WRDA 2007 *(modified cost)*
As part of the "Hillsboro and Okeechobee Aquifer, Florida" project
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other - supports 1-A.2

Measurable Output(s): Pilot testing *(output is temporary)*

April 1999 (Restudy) Project Synopsis: The pilot project is necessary to identify the most suitable sites for the aquifer storage and recovery (ASR) wells in the vicinity of Lake Okeechobee and to identify the optimum configuration of those wells. Additionally, the pilot will investigate changes to water chemistry resulting from aquifer storage and determine specific water quality characteristics of water to be injected and the water quality characteristics and amount of water recovered from the aquifer. Further information from the pilot project will provide the hydro-geological and geotechnical characteristics of the upper Floridan Aquifer System within the region and the ability of the upper Floridan Aquifer System to maintain injected water for future recovery.

Current Project Synopsis: The pilot project initially consisted of up to five ASR wells, each with an estimated capacity of five million gallons per day (mgd) per well. Three of the ASR wells will be located spatially around Lake Okeechobee to demonstrate ASR performance in geographically different areas. A three-well cluster facility will be installed to demonstrate how multiple-well ASR systems perform. Monitoring wells and surface facilities will also be constructed at each of these systems. The wells will be used to recharge and recover surface water from the Lake and/or its tributaries. Extensive water quality characterization and pilot treatment testing will take place during the permitting and design phase. Once constructed, the Lake Okeechobee ASR pilot project systems (Kissimmee River and Port Mayaca locations) will be cycle tested to evaluate their ability to achieve assumed water quality and volumetric levels of performance, and recommendations for facility expansion. Well sites are as follows:

- Port Mayaca site includes the construction of three ASR wells and multiple monitoring wells.
- Kissimmee site includes the construction of one ASR well and multiple monitoring wells.
- Moore Haven site includes the construction of one ASR well and multiple monitoring wells.

WRDA 1999 authorized the project described in the Chief's Report for the Hillsboro and Okeechobee Aquifer Project for aquifer storage and recovery described in the U. S. Corps of Engineers Central and Southern Florida Water Supply Study, Florida, dated April 1989, and in House Document 369, dated July 30, 1968. This project was refined during the Pilot Project Design Report (PPDR), completed in September 2004.

WRDA 2007 amended WRDA 2000 by adding the "Hillsboro and Okeechobee Aquifer, Florida" project(s) to be treated "in the Plan", except that operation and maintenance costs of the project shall remain a non-Federal responsibility. WRDA 2007 section 6001 also modified WRDA 1999 and authorized the Secretary to carry out the project for aquifer storage and recovery, Hillsboro and Okeechobee Aquifer (WBS #32 and #34) at a total cost of $42,500,000 combined.

Current Status: Exploratory wells were installed at sites around Lake Okeechobee to obtain preliminary lithologic, geophysical, and hydrogeologic information. The results of the investigation were evaluated to confirm that these are viable sites for ASR purposes. Results were incorporated into the PPDR that now includes all three pilot projects [Lake Okeechobee, Hillsboro, and Caloosahatchee River (C-43)].

Installation of the Kissimmee River ASR Pilot facility was completed in 2008. Operational issues delayed the start of cycle testing, which is expected to take up to two years. Recharging phase of cycle-1 was finalized successfully in February 2009 and the storage phase ended in March. Subsequently the recovery phase began and lasted 5 weeks into April. An operations report was completed for FDEP. Water quality and toxicological data is being processed now for cycle-2. Recharge began in mid-May 2009 and is expected to last twelve weeks. Installation of the multi-ASR pilot facility portion planned for Port Mayaca has been inhibited by funding constraints. Funding authority and availability may also preclude the installation of the ASR pilot facility planned at Moore Haven.

Est. Cost: $33,986,000

Project Schedule:

2001	Start
2009	Cycle testing began

Detailed Project Budget Information (rounded):

LOW ASR Pilot	Expenditures Thru FY 2008
USACE	$13,344,000
SFWMD	$4,213,000
Total	**$17,557,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_32_lake_o_asr_pilot.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

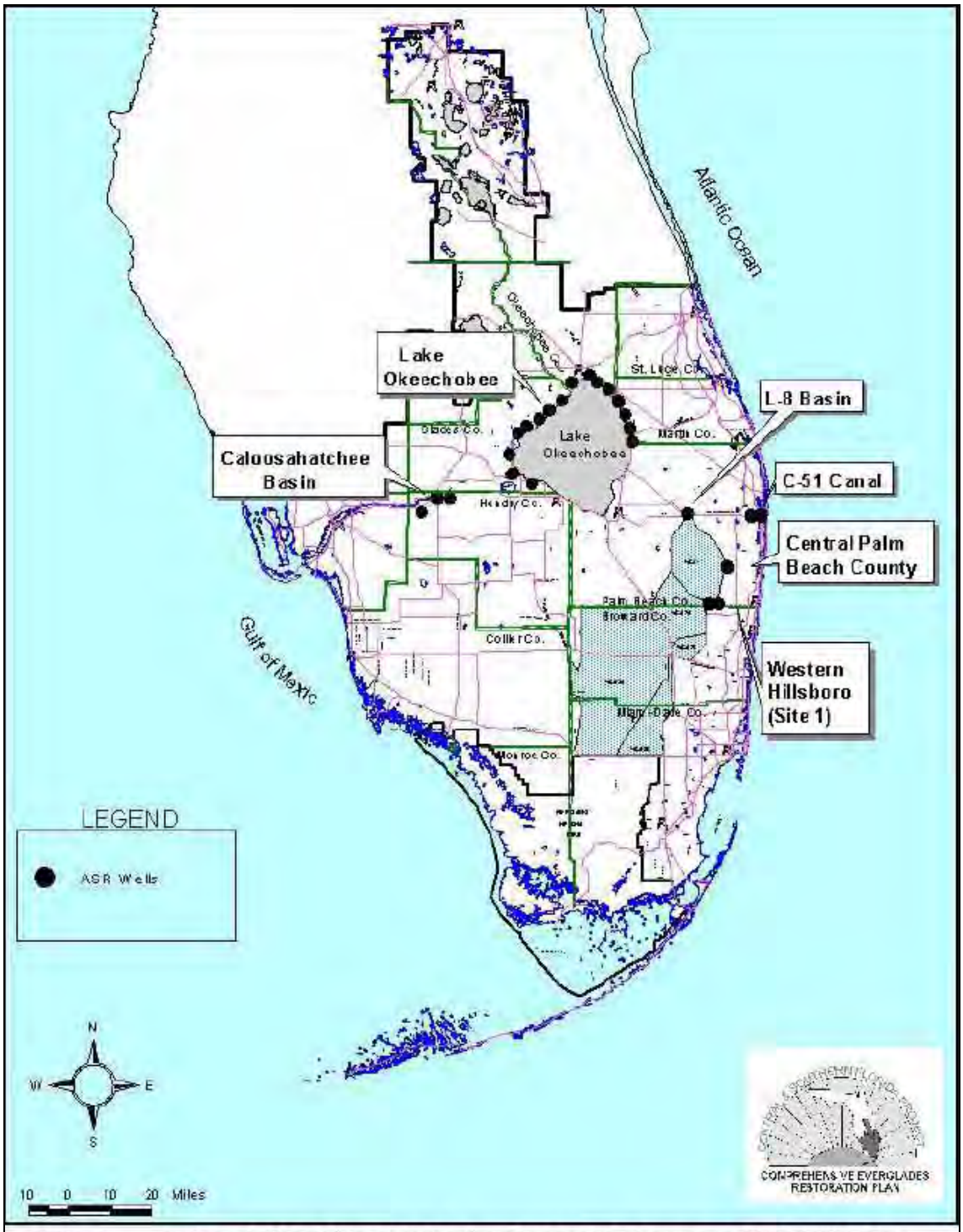


Figure 1. Proposed ASR Systems in the Compresensive Everglades Restoration Plan

Program Name: Infrastructure
Project Name: C&SF: CERP Lake Okeechobee Regulation Schedule (F)
Project ID: 1419
Lead Agency: USACE / SFWMD
Authority: No Congressional action is required
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other -supports 1-A.1

Measurable Output(s): Water Management change

April 1999 (Restudy) Project Synopsis: The Lake Okeechobee Regulation Schedule will be modified in order to take advantage of the additional storage facilities identified in the construction features. Two additional zones will be added to the schedule. The first zone will trigger discharges to the north of Lake Okeechobee reservoir and the Everglades Agricultural Area reservoir. The second higher zone will trigger the Lake Okeechobee aquifer storage and recovery facilities to begin injecting water from the Lake. Climate based forecasting will be used to guide management decisions regarding releases to the storage facilities.

It is anticipated that all flood control releases through the C-43 and C-44 Canals will be eliminated with the exception of emergency zone A. Zone A levels are expected to be similar to the levels that occur in the current regulation schedule Run 25, however, the number of times that the Lake is above zone A is expected to be dramatically reduced.

Current Project Synopsis: During the Corps planning process, several alternative plans were reviewed. Currently, regulation schedule revisions are proposed in two phases. The goal of this interim schedule revision is to operate Lake Okeechobee at lower pool elevation while meeting water supply requirements. The second phase studies will be implemented in 2010. This revision will consider the effects of the early CERP projects and the state-expedited projects upon the lake. For both Regulation Schedule revisions, National Environmental Policy Act supplemental Environmental Impact Statements are anticipated.

Est. Cost: TBD as schedule revisions are initiated (C&SF O&M)

Schedule: TBD*
** Regulation Schedule revisited when appropriate as other facilities come on-line.*

Hyperlink:
https://my.sfwmd.gov/portal/page?_pageid=1314,2554645,1314_19738269:1314_19738234&_dad=portal&_schema=PORTAL

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project descriptions summarized from the *Central and Southern Florida Project Comprehensive Review Study*. Current status summarized from information from project manager.

Project Name: C&SF: CERP Modify Holey Land Wildlife Management Area Operation Plan (DD)
Project ID: 1420 (CERP Project WBS # 15)
Lead Agency: USACE / SFWMD
Authority: No Congressional action is required
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 2-A.3

Measurable Output(s): Operational changes and water deliveries TBD

April 1999 (Restudy) Project Synopsis: Several operational components were recommended after evaluation on a regional scale using the South Florida Water Management Model, to analyze regional hydrologic effects. More detailed planning will be necessary to develop the optimum modifications to the C&SF project. Costs to implement these features were not estimated. Most measures will be implemented in association with related construction features and it is assumed costs will be borne by the appropriate affected utilities.

Current Project Synopsis: Water deliveries are made to Holey Land from the Rotenberger Wildlife Management Area or from Stormwater Treatment Area 3/4 if Rotenberger flows are insufficient. The deliveries are assumed to be of acceptable water quality. Modification to the current operating plan and rules for Holey Land Wildlife Management Area will be made to implement rain-driven operations for this area to improve the timing and location of water depths within this wildlife management area.

Current Status: To be implemented under existing authorization and address as needed.

Est. Cost: $0 *(no budget)*

Project Schedule:
TBD

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_15_modify_holey.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

Project Name: C&SF: CERP Modify Rotenberger Wildlife Management Area Operation Plan (EE)
Project ID: 1421(CERP Project WBS # 16)
Lead Agency: USACE / SFWMD
Authority: No Congressional action is required
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 2-A.3

Measurable Output(s): Operational changes and water deliveries TBD

April 1999 (Restudy) Project Synopsis: Several operational components were recommended after evaluation on a regional scale using the South Florida Water Management Model, to analyze regional hydrologic effects. More detailed planning will be necessary to develop the optimum modifications to the C&SF project. Costs to implement these features were not estimated. Most measures will be implemented in association with related construction features and it is assumed costs will be borne by the appropriate affected utilities.

Current Project Synopsis: These new operational rules are intended to improve the timing and location of water depths within the Rotenberger Wildlife Management Area. Modification to the current operating plan for the Rotenberger Wildlife Management Area will be made to implement rain-driven operations for this area as needed. Water deliveries are made to the Rotenberger Area from Stormwater Treatment Area 5. The deliveries are assumed to be of acceptable water quality.

Current Status: Project adheres to the original concept outlined in the Restudy. To be implemented under existing authorization and address as needed.

Est. Cost: $0 *(no budget)*

Project Schedule:
TBD

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_16_modify_rotenberger.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Program Name: Infrastructure
Project Name: C&SF: CERP Modifications to Southern L-31N and C-111 (OO)
F/k/a *Operational Modification to Southern Portion of L-31N and C-111* (OO)
Project ID: 1422
Lead Agency: SFWMD / USACE
Authority: No Congressional action is required
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 3-B.1

Measurable Output(s): Modified operations

April 1999 (Restudy) Synopsis: Modifications to the operations of the C-111 project, currently under construction, will be made to the southern portion of L-31N Borrow Canal and C-111. These operational modifications will be made to improve deliveries to Everglades National Park and decrease flood risk of adjacent agricultural areas in the Lower East Coast Service Area.

Current Status: The first part of the operational changes is being implemented under the Combined Structural and Operational Plan (CSOP) analysis component associated with the C-111 (South Dade) and Modified Water Deliveries to Everglades National Park projects. The balance of change will be implemented in coordination with other CERP implementation.

Est. Cost: $0 budget

Schedule: *Implement as part of C-111 project (ID #1300).*

Budget: *Implement as part of C-111 project.*

Hyperlink:
http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_C111.htm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).*

Project Name: C&SF: CERP Hillsboro Aquifer Storage and Recovery Pilot
A/k/a *Hillsboro ASR*
Project ID: 1423 (CERP Project WBS # 34)
Lead Agency: USACE / SFWMD
Authority: WRDA 1999; WRDA 2007 *(modified cost)*
As part of the "Hillsboro and Okeechobee Aquifer, Florida" project
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-A.2

Measurable Output(s): Pilot *(output is temporary)*

April 1999 (Restudy) Project Synopsis: The Site 1 above-ground impoundment is proposed to be operated in conjunction with multiple aquifer storage and recovery (ASR) wells in order to maximize the benefits of the reservoir. The pilot will include the construction of a five million gallons per day ASR well. The pilot will determine the most suitable sites for the aquifer storage and recovery wells near the reservoir. In addition, identification of the hydrogeological and geotechnical characteristics of the soils and aquifer, the specific water quality characteristics of water within the aquifer, and the quality of water injected and recovered from the aquifer will be determined. Using the pilot project data, the ASR Regional Study team will then determine the optimum configuration and operation of the ASR wells.

Current Project Synopsis: WRDA 1999 authorized the project described in the Chief's Report for the "Hillsboro and Okeechobee Aquifer, Florida" Project for aquifer storage and recovery described in the U. S. Corps of Engineers Central and Southern Florida Water Supply Study, Florida, dated April 1989, and in House Document 369, dated July 30, 1968. This project was refined during the Pilot Project Design Report (PPDR) completed in September 2004. The CERP Hillsboro ASR Pilot project (Hillsboro Site 1) is located just south of the Loxahatchee National Wildlife Refuge (LNWR) and north of the Hillsboro Canal on a 1,660-acre tract of SFWMD-owned land in south-central Palm Beach County. The Hillsboro site includes the construction of one ASR well and several monitoring wells. The pilot project will include the construction of one five mgd ASR well. Its purpose is to evaluate and reduce the technical and regulatory uncertainties of implementing the full-scale Hillsboro ASR Project, as described in the CERP.

The full-scale Hillsboro project includes the construction of up to 150 mgd of ASR capacity (approximately 30 wells) and a 1,660-acre surface water reservoir (impoundment). The full-scale system will store excess water from the Hillsboro Basin when available (typically in the wet season) and release water into the Hillsboro Canal to maintain canal stages during dry periods.

WRDA 2007 amended WRDA 2000 by adding the Hillsboro and Okeechobee Aquifer, Florida project(s) (WBS #32 and #34) to be treated "in the Plan", except that operation and maintenance costs of the project shall remain a non-Federal responsibility. WRDA 2007 section 6001 also modified the prior authorization under WRDA 1999 and authorized the Secretary to carry out the project(s) for aquifer storage and recovery at a total cost of $42,500,000 (combined two projects).

Current Status: The SFWMD has taken the lead on this project. Substantial completion of the facility has been achieved, after facing several issues with construction. The 5-mgd pilot facility is scheduled to begin in late summer 2009 with cycle testing expected thereafter for a period of up to two years.

Est. Cost: $10,653,000

Project Schedule:

2001	Start
2009	Cycle testing began

Detailed Project Budget Information (rounded):

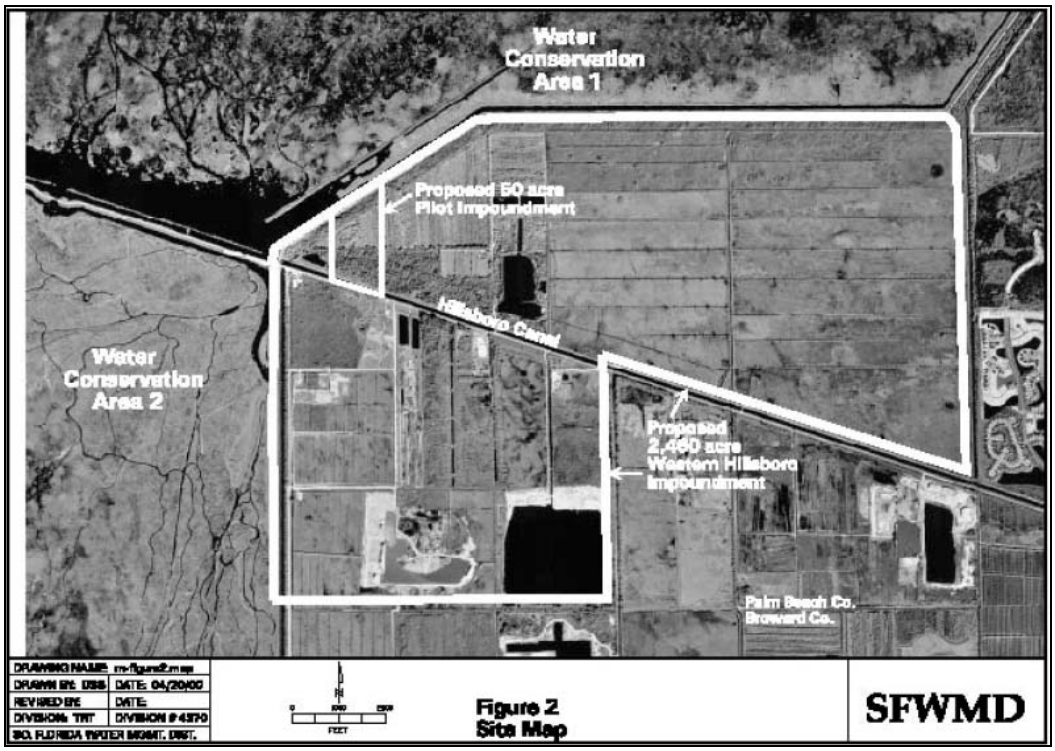
Hillsboro ASR Pilot	**Expenditures Thru FY 2008**
USACE	$1,670,000
SFWMD	$4,509,000
Total	$6,179,000

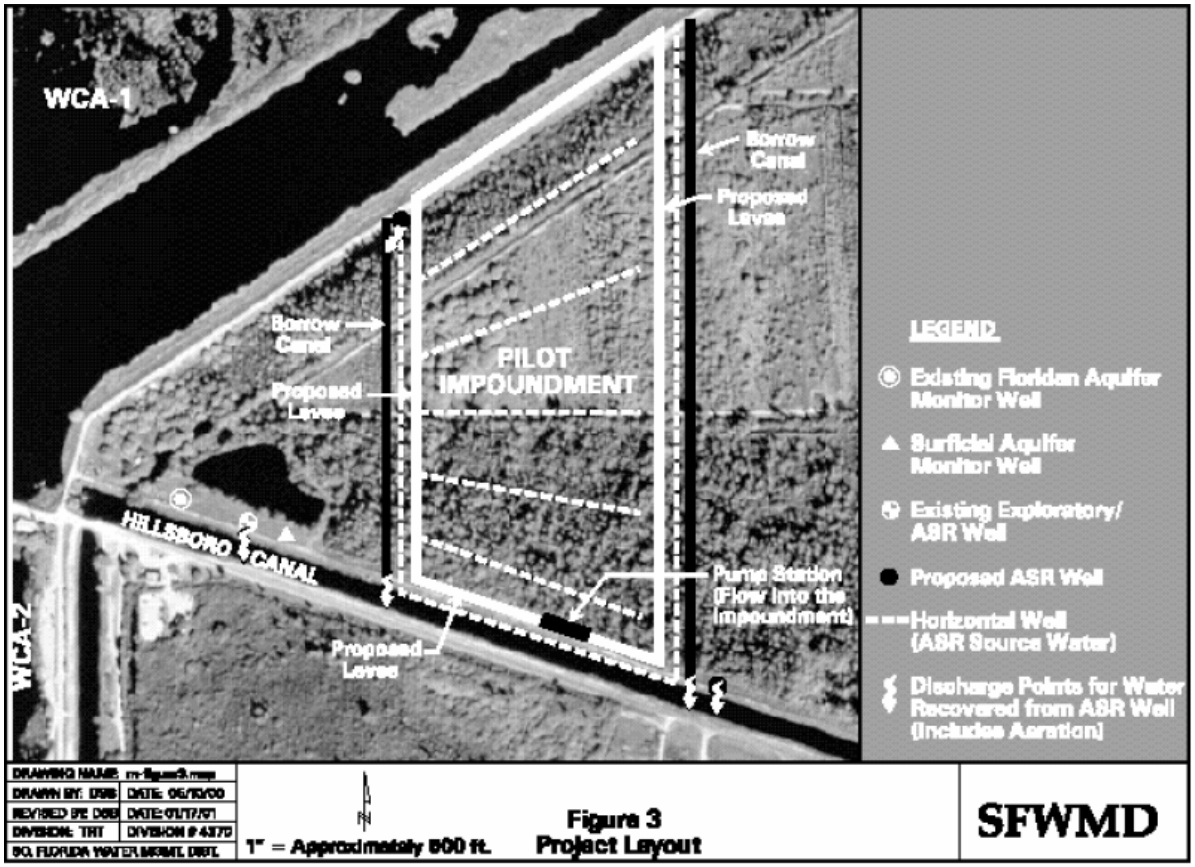
Hyperlink: http://www.evergladesplan.org/pm/projects/proj_34_hillsboro_asr_pilot.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information: *(See next page)*


Water Conservation Area 1
Proposed 50 acre Pilot Impoundment
Hillsboro Canal
Water Conservation Area 2
Proposed 2,460 acre Western Hillsboro Impoundment
Palm Beach Co.
Broward Co.
DRAWING NAME: m-figure2.map
DRAWN BY: DSB
DATE: 04/20/00
REVISED BY:
DATE:
DIVISION: TRT
DIVISION # 4370
SO. FLORIDA WATER MGMT. DIST.
FEET
Figure 2
Site Map
SFWMD


WCA-1
Borrow Canal
Proposed Levee
Borrow Canal
Proposed Levee
PILOT IMPOUNDMENT
HILLSBORO CANAL
WCA-2
Proposed Levee
Pump Station (Flow into the impoundment)
LEGEND
Existing Floridan Aquifer Monitor Well
Surficial Aquifer Monitor Well
Existing Exploratory/ ASR Well
Proposed ASR Well
Horizontal Well (ASR Source Water)
Discharge Points for Water Recovered from ASR Well (Includes Aeration)
DRAWING NAME: m-figure3.map
DRAWN BY: DSB
DATE: 06/10/00
REVISED BY: DSB
DATE: 07/17/01
DIVISION: TRT
DIVISION # 4370
SO. FLORIDA WATER MGMT. DIST.
1" = Approximately 900 ft.
Figure 3
Project Layout
SFWMD

Project Name: E&SF: Critical Projects - Seminole Tribe Big Cypress Water Conservation Plan
Project ID: 1425
Lead Agency: USACE / Seminole Tribe of Florida
Authority: WRDA 1996; WRDA 2000 *(addressed cost sharing);* WRDA 2007 *(amended WRDA 1996 Critical Projects cap; raised federal share of cost ceiling to $30 M for this project))*
Funding Source: Federal/Seminole Tribe

Strategic Plan Goal(s) Addressed: Other – supports 1-B.2

Measurable Output(s): Construction of conveyance systems, major canal bypass structures, irrigation storage cells, and water resource areas to meet the 50 ppb phosphorous level goal of the Everglades Construction Project or more stringent performance levels as developed.

Project History, WRDA 1996 authorized the Secretary of the Army to expeditiously implement restoration projects deemed critical to the restoration of the south Florida ecosystem. The SFEER Task Force nominated 35 projects with input from the Governor's Commission for a Sustainable South Florida and the public. Based on the set of priorities, the USACE conducted an abbreviated study of and produced a report transmitted to the Secretary of the Army for approval. This is one of the 12 restoration "Critical Projects" having the Secretary of the Army's approval (WRDA 1996) with a funding cap of $12 Mil. Due to the legislated funding limits of the Critical Projects program, only the "west" portion of the project was nominated as a Critical Project.

The Seminole Tribe had requested the assistance of the Natural Resources Conservation Service (NRCS) to implement the "east" portion of the plan. With uncertainty of the NRCS funding and the potential that the west portion might not be entirely funded through the Critical Projects program, the "combined" project was recommended as an Other Project Element (OPE) as part of the Comprehensive Plan in the Restudy. (See: CERP Projects).

April 1999 (Restudy) Synopsis: The proposed comprehensive watershed management system is designed to achieve environmental restoration on the Reservation, the Big Cypress Preserve, and the Central and Southern Everglades and reduce flood damage and promote water conservation on the Reservation to ensure a complete project.

Current Project Synopsis: The project purpose is to improve quality of agricultural water runoff within the Reservation; improve wetland hydrology; restore water storage capacity, and return native vegetation. In addition, this project will mitigate flood risk and promote water conservation on the Reservation. The Big Cypress Reservation, in Hendry County, is traversed by the L-28 and L-28I canals and the North and West Feeder canals (conveyances were constructed as part of the Central and Southern Florida (C&SF) Project). East side work consists of conveyance canals, designed and constructed by the Seminole Tribe. West side work consists of several basins, each of which will consist of an irrigation storage cell, water resource area (similar to a stormwater treatment area (STA)), pump stations for transferring water, canals for distribution, and inverted siphons to carry effluent under the West Feeder Canal into the reservation's Native Range. Water will then flow southward into the Big Cypress National Preserve.

The planned network of surface water management structures is designed to accomplish the following <u>four</u> objectives to get the water right through quantity, quality, timing and distribution necessary for restoration: (1) Remove phosphorus and other pollutants from water leaving the Reservation. The removal of these pollutants will be achieved using natural treatment processes, in pretreatment cells and water resource areas (WRAs). The Tribe's WRAs will take advantage of the natural treatment processes

and will serve additional functions in the storage and conveyance of water, (2) Convey and store irrigation water. To make use of water provided by the District (to replace the Tribe's diverted Compact water rights), the Tribe needs to be able to take this water, when it is available, to move it and to store it.

This will be accomplished through water conveyance improvements and irrigation storage cells, (3) Provide improved flood control. Stormwater must be controlled on the Reservation to prevent extended periods of flooding and limit impacts downstream. This will be accomplished by means of stormwater attenuation areas, which will detain water from large storm events. (4) Re-hydrate Big Cypress National Preserve. The Seminole Water Conservation Project will provide the opportunity to restore more natural hydroperiods in the Big Cypress National Preserve.

Current Status: WRDA 2000 stated that "the Seminole Tribe of Florida shall be responsible for 50 percent of the cost of operation, maintenance, repair, replacement, and rehabilitation activities for the Big Cypress Seminole Reservation Water Conservation Plan Project". WRDA 2007 increased the Federal share cap specific for the 'west' portion of this Critical Project "not to exceed $30,000,000". Construction of the conveyance canal system on the 'east' side of the Reservation (Phase I) was completed in May 2004. Canal pump stations will connect this conveyance canal system to the North Feeder Canal system.

Phase II identified four basins for construction. Basin 1 has been fully funded. The USACE awarded a contract for construction of the largest basin, Basin 1, November 2006 and expects completion shortly. The Basin 4 scope of work has been accepted with data investigations over the summer and an award later in 2009. The last two construction features, Basin 2 and Basin 3, have design features dependent on findings, but are scheduled to be awarded in 2009 with completion spring 2010 pending funding. The tribe may have limited funding after FY09 for Basin 3.

Est. Cost: $60,000,000

Project Schedule:

1997	Start
2010	Construction completed.

Detailed Project Budget Information (rounded):

Seminole Big Cypress	Expenditures Thru FY 2008
USACE	$21,854,000
SFWMD	$4,078,000
Total	$25,932,000

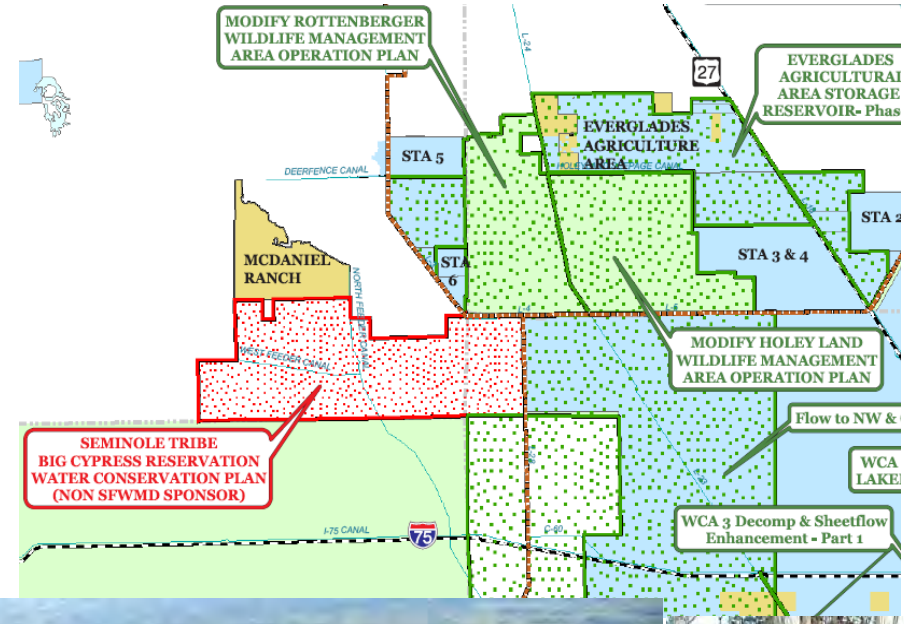
Hyperlink:

http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_Critical.htm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Current status is summarized from information provided by the USACE project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:



Project Name: C&SF: CERP Florida Bay Florida Keys Feasibility Study (FBFKFS)
Project ID: 1426 (CERP Feasibility Study)
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 2-A.3

Measurable Output(s): Recommendations

April 1999 (Restudy) Project Synopsis: Construction of Flagler's railroad to Key West and subsequent conversion into U.S. Highway 1 (US-1) involved the placement of fill material in wetlands and open water to build the numerous causeways between keys. These causeways altered tidal flows between Florida Bay and the Atlantic Ocean, resulting in adverse water quality and fish and wildlife habitat impacts.

One of the House of Representatives Committee on Public Works and Transportation resolutions of September 24, 1992 requested that the USACE conduct a study of Florida Bay, including a comprehensive, coordinated ecosystem study with hydrodynamic modeling of Florida Bay and its connections to the Everglades, the Gulf of Mexico, and the Florida Keys Coral Reef ecosystem. The Plan recognized that more thorough investigations of regional water resource problems was needed, and directed these to be conducted under the authority of WRDA 1996 that allows for the continuation of studies and analyses necessary**.** A comprehensive feasibility study was recommended to evaluate Florida Bay and to determine the types of modifications needed to restore water quality and ecological conditions of the Bay.

Current Project Synopsis: The study goal, developed by the Project Delivery Team (PDT) is: "Evaluate Florida Bay and its connections to the Everglades, the Gulf of Mexico and the Florida Keys marine ecosystem to determine the modifications that are needed to successfully restore water quality and ecological conditions of the Bay, while maintaining or improving these conditions in the Keys' marine ecosystem."

Likewise, the PDT has determined that the objectives of the FB&FK FS are:

- Determine the quantity, timing, distribution and quality of freshwater that should flow to Florida Bay and provide recommendations for any modifications of water deliveries that will result from current CERP plans for Everglades wetlands.
- Determine the nutrient sources and loads to the study area, evaluate their impacts to reef and bay ecosystems, and recommend restoration targets and implementation plans.
- Establish water quality and ecological performance measures.
- Evaluate the effects of restoring historical connectivity between Florida Bay and the Atlantic Ocean.
- Evaluate management alternatives in a holistic manner employing, where necessary, hydrodynamic, water quality and ecological models.

Various models were completed in 2006 and early results of these models were reviewed by the PDT. The focus was on refinement and documentation of the models for reevaluation of the problem in a holistic manner.

Current Status: This project was suspended in January 2007. No Tentatively Selected Plan has been chosen. A draft "letter" report was completed to document work completed as of January 2007. The project is planned for the future

Est. Cost: $6,300,000

Project Schedule:
TBD

Detailed Project Budget Information (in $1,000s):

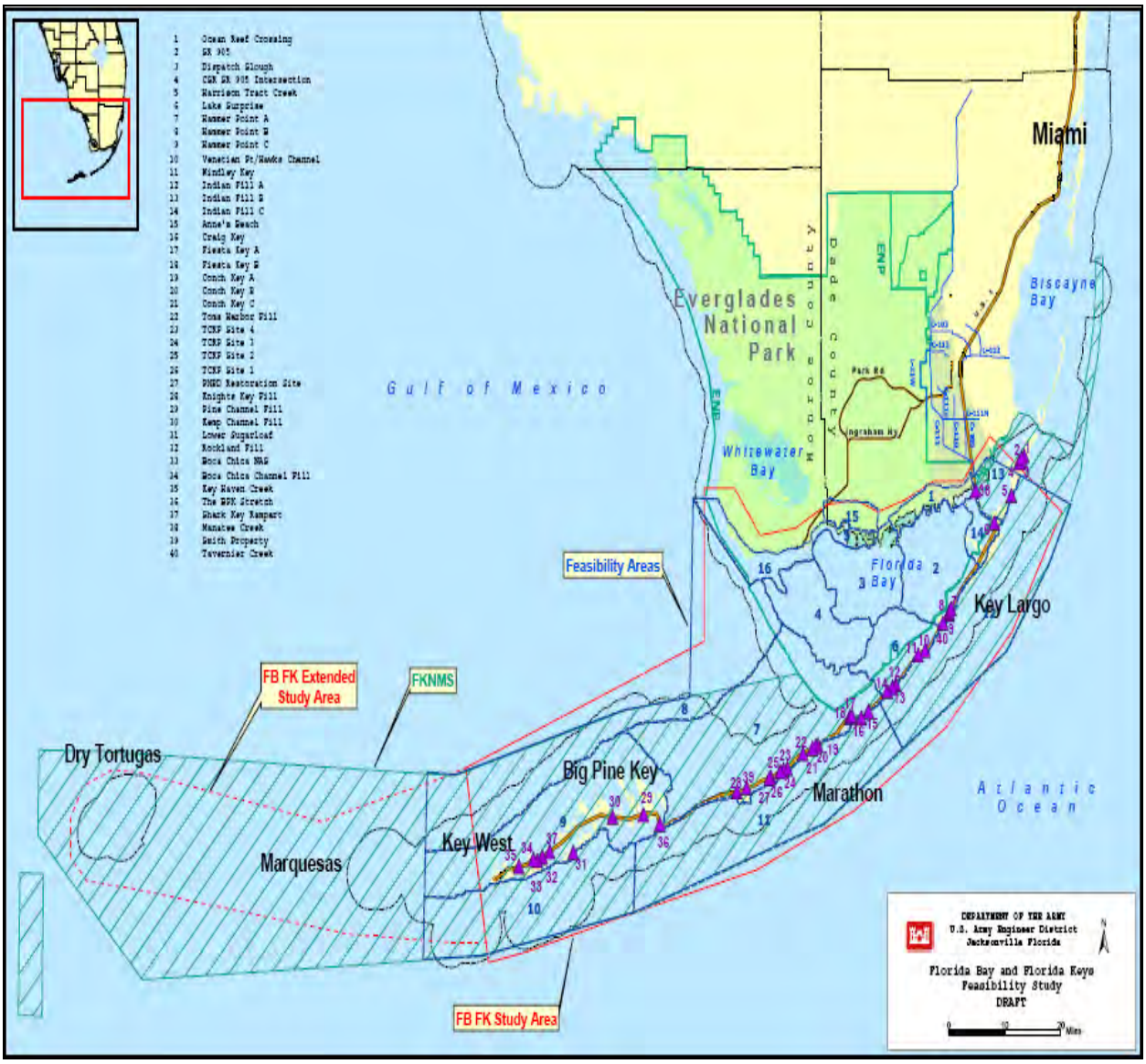
Florida Bay Florida Keys	Expenditures Thru FY 2008
USACE	$1,999,000
SFWMD	$3,814,000
Total	$5,813,000

Hyperlink: http://www.evergladesplan.org/pm/studies/fl_bay.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Sources: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Current Description summarized from the *Florida Bay / Florida Keys Feasibility Study Project Management Plan (PMP), Feb 2002 – Final*. Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:



Project Name: C&SF: CERP Southwest Florida Feasibility Study (SWFFS)
Project ID: 1431 (CERP Feasibility Study WBS # 516)
Lead Agency: USACE / SFWMD
Authority: WRDA 1992, WRDA 1996,
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 3-A.4

Measurable Output(s): Regional Plan

April 1999 (Restudy) Project Synopsis: The Plan recognized that more thorough investigations of regional water resource problems was needed, and directed these to be conducted under the authority of WRDA 1996 that allows for the continuation of studies and analyses necessary**.**

The purpose of the study is to determine the feasibility of making structural, non-structural, and operational modifications and improvements in the region in the interest of environmental quality, water supply, and other purposes and investigate water resources problems and opportunities.

Current Project Synopsis: Because southwest Florida was included as a part of the larger Restudy, this study was initiated (Aug 1999) with a scoping phase instead of another reconnaissance phase. It will develop a comprehensive regional plan of action to address the health of aquatic and upland ecosystems; the quantity, quality, timing, and distribution of water flows; agricultural, environmental, and urban water supply; the sustainability of economic and natural resources; flood protection; fish and wildlife; biological diversity; and natural habitat. A Notice of Intent was published in 2002. The study area encompasses 4,300 square miles including eleven municipalities: Bonita Springs, Cape Coral, Clewiston, Everglades City, Fort Myers, Fort Myers Beach, LaBelle, Marco Island, Moore Haven, Naples, and Sanibel and unincorporated areas of Lehigh Acres, Golden Gate Estates, and Immokalee. The study boundary also corresponds to the SFWMD Lower West Coast Water Supply Plan area.

The intended outcome of this Southwest Florida Feasibility Study is two-fold; 1) to develop a conceptual Comprehensive Watershed Master Plan (CWMP) to be implemented in the future by able federal, state, and local agencies and organizations; and 2) to develop, through the use of the USACE plan formulation process, a tentatively selected plan (TSP) that is a sub-set of the CWMP for USACE/non-federal sponsor implementation. The CWMP presents a framework for regional restoration and identifying water resource problems and opportunities in all of Lee County, most of Collier and Hendry counties, and portions of Charlotte, Glades, and Monroe counties. A cost effectiveness/incremental cost analysis will determine the TSP from the CWMP components and will be presented for authorization for construction. Both steps will occur through a feasibility cost-share agreement between the USACE and the SFWMD.

Issues addressed by the CWMP and TSP include loss of habitat, fragmentation of natural areas, alteration of natural freshwater flows to wetlands and estuaries (altered surface water hydrology), invasion of exotics, loss of groundwater recharge and water quality degradation in surface waters. The study has been underway since 2002, with the assistance of an interagency and interdisciplinary planning team.

Current Status: In February of 2008, several CWMP iterations were reviewed by the PDT and a plan was selected. Cost benefit analysis was completed on the components of the CWMP; and a TSP was identified from the plan in November 2008 by the multi-agency PDT. The team completed a draft Integrated Feasibility Report and EIS July 2009. The report will be sent for Agency Technical Review in August 2009. The USACE HQ review, an AFB meeting will be held in October of 2009 for approval of the TSP.

Est. Cost: $17,000,000

Project Schedule:
2001 Start

Detailed Project Budget Information (in $1,000s)**:**

SWFFS	Expenditures Thru FY 2008
USACE	$6,682,000
SFWMD	$7,779,000
Total	$14,461,000

Hyperlink: http://www.evergladesplan.org/pm/studies/swfl.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

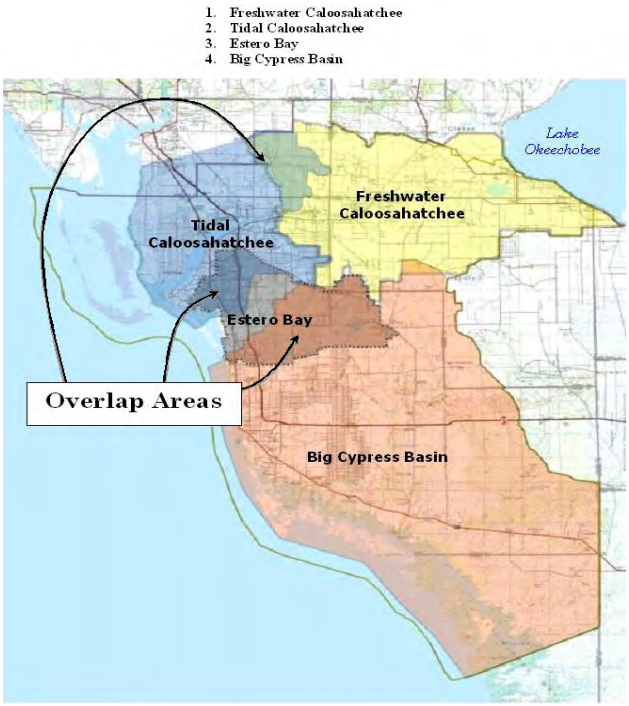
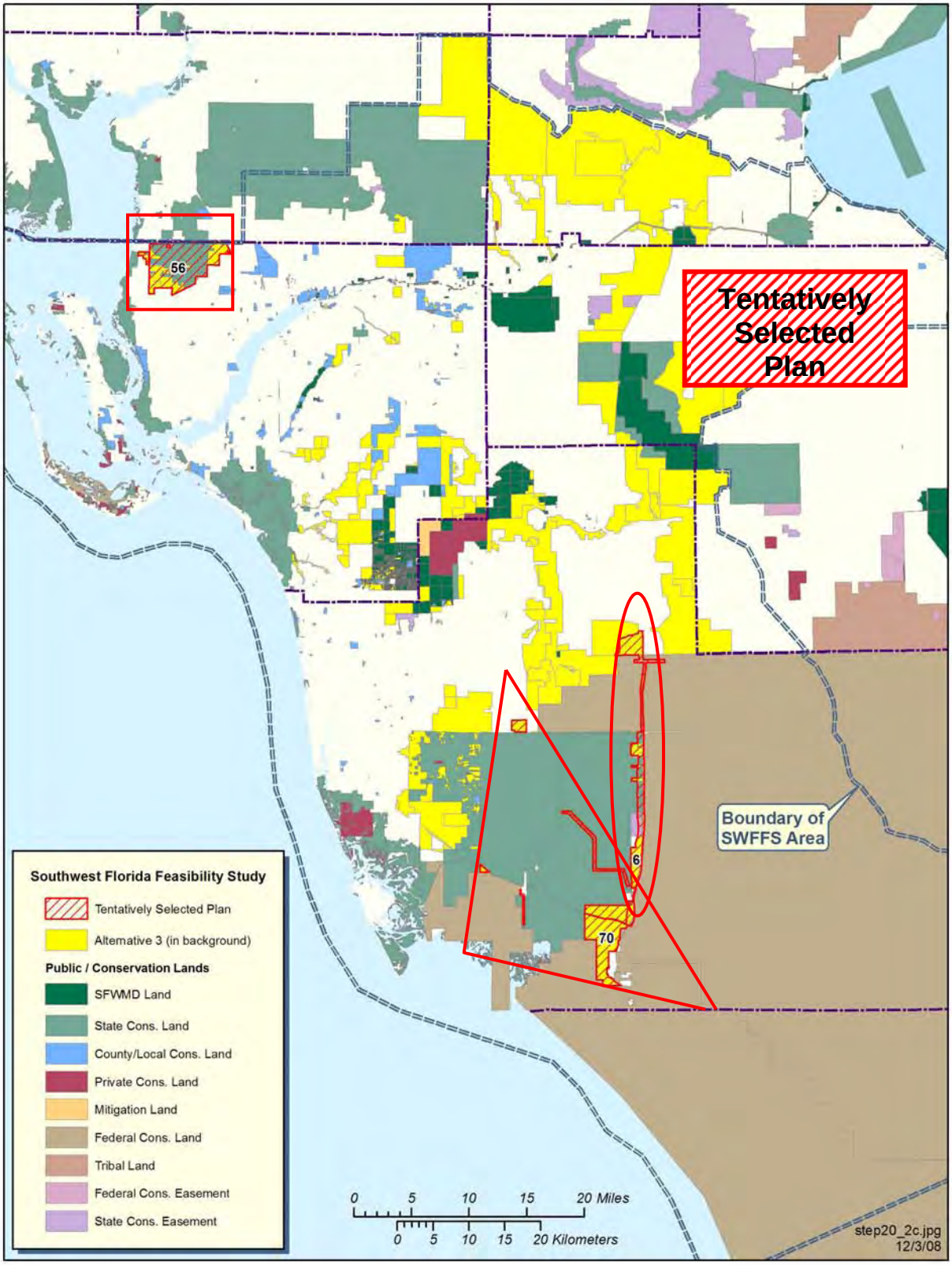


Figure 2: Watersheds in the SWWFS Area


Tentatively Selected Plan
56
6
70
Boundary of SWFFS Area
Southwest Florida Feasibility Study
Tentatively Selected Plan
Alternative 3 (in background)
Public / Conservation Lands
SFWMD Land
State Cons. Land
County/Local Cons. Land
Private Cons. Land
Mitigation Land
Federal Cons. Land
Tribal Land
Federal Cons. Easement
State Cons. Easement
0 5 10 15 20 Miles
0 5 10 15 20 Kilometers
step20_2c.jpg
12/3/08

Project Name: C&SF: CERP C-4 Control Structures (T)
Project ID: 1435 (CERP Project WBS # 46)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 1-A.2

Measurable Output(s): Well field recharge; seepage reduction

April 1999 (Restudy) Project Synopsis: Includes two water control structures located in the C-4 Canal in Miami-Dade County.

Current Project Synopsis: The purpose will be to enhance wetland hydroperiods and enhance recharge to Miami-Dade County's Northwest Well field. The eastern structure will be operated to reduce regional system deliveries by diverting dry season stormwater flows to the C-2 Canal to provide salt-water intrusion protection and recharge to downstream well fields. The existing western structure, being implemented under the E&SF Critical Projects (WRDA 1996) program, will be operated to control water levels in the C-4 Canal at a higher elevation to reduce seepage losses from the Pennsuco Wetlands and areas to the west of the structure. This project adheres to the original concept outlined in Restudy.

Current Status: This project has not yet begun.

Est. Cost: $3,108,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

C-4 Control Structures	Expenditures Thru FY 2008
USACE	$92,000
SFWMD	$21,000
Total	**$113,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_46_c4_structure.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Program Name: Restoration Program: Hydrology
Project Name: Permanent Forward Pumps – Expedited Project –The SFWMD is implementing as part of Northern Everglades Project
Project ID: 1436
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: State Funds

Strategic Plan Goal(s) Addressed: Other (Hydrology)

Measurable Output(s): Forward pumps to provide water supply

Project Synopsis: The USACE has initiated a process for revising the Lake Okeechobee regulation schedule. The new regulation schedule is expected to result in lower lake levels, which have the potential to affect water supply. This potential exists because constraints occur on gravity water supply releases when the Lake reaches 10.5 ft NGVD or less. Therefore, forward pumps are being designed to provide water supply deliveries when lake levels are between 10.5-7.5 ft NGVD.

Cost:
Total $135,000,000

Project Schedule: **This project has been put on hold for the following reasons:**

The use of temporary forward pumps will be able to meet water supply demands for the Lake Okeechobee Service Area south of Lake Okeechobee at 45% cutback for all but the most extreme conditions that were modeled, and that resulted in a shortfall of only 4 weeks. Solutions to the north of the Lake are being partially addressed through the construction of tail water weirs at S-72 and S-71.

Start Date: January 2006
Finish Date: June 2010

	2005	2006	2007	2008	2009	2010	2011
Project Design							
Prepare Environmental Impact Statement							
Construction and Installation							
Operations and Monitoring							

Detailed Project Budget Information

	2006	2007	2008	2009	2010	Balance to complete	Total
State SFWMD	1,000,000	1,200,000	10,000,000	60,000,000	63,000,000	133,000,000	135,000,000

Hyperlink: N/A
Contact: Joseph Albers, (561) 242-5520, x4064

Program Name: C&SF: CERP PLA /Information and Data Management
Program ID: 1437
Lead Agency: USACE / SFWMD
Authority: Design Agreement

Strategic Plan Goal(s) Addressed: Other - Support

April 1999 (Restudy) Program Synopsis: While not specifically described in the Restudy, the CERP Master Program Management Plan (MPMP) called for the creation of a shared data network. The MPMP directed implementation of these activities under the guidance of the Program Controls Management Plan.

Current Program Synopsis: The Design Coordination Team (DCT) recommended the creation of a Program Management Plan (PMP) for CERP Information and Data Management (IDM). The Corporate Review Group (CRG) and the Project Review Board (PRB) approved this concept. The Program Controls PMP (December 2000) included the functional areas of infrastructure, World Wide Web services and electronic document management. The scope of these functions was originally to identify, standardize, organize, document, serve and preserve program data in accordance with the Program Controls PMP. However, responsibility for these areas was moved to the Information and Data Management PMP in 2007. The initial Information and Data Management PMP (February 26, 2002) included the functional areas of GIS and engineering data. Many aspects of the GIS program for CERP were developed and put into place under this PMP.

Under this program, the South Florida restoration effort operates a common information system used to collaborate during the planning, engineering, construction, and post-construction phases of the program. This common information system is accessible, upon request, to all Program/Project Delivery Team (PDT) members in the performance of their current and future roles. Much of this data is made available to the public as it moves out of the developmental stage and into completion. Sharing information by all participating agencies thereby increases efficiency, avoids duplication, and provides reliable short term and long term repositories for CERP data.

Current Status: The Information & Data Management PMP was rewritten and approved in April 2007, superseding the prior December 2002 version. The data Quality Assurance and Oversight function, which is responsible for the quality of scientific data collected for the entire CERP program, was also incorporated into the latest Information & Data Management PMP. IDM Programmatic activity is currently a combination of information services and systems that support the project and program level activities of CERP and other South Florida restoration programs. A revised IDM PMP is expected in 2010 and will cover the years 2011 to 2015.

In 2009, the Quality Assurance Oversight Team (QAOT) released a revision to the Quality Assurance Systems Report (QASR). The QASR manual lays out the protocols and procedures for environmental data gathering activities for the implementation of CERP. Quality Assurance Reports, which compile individual QA CERP reports into an integrated QA report on CERP projects to CERP management, were released in 2008 and 2009. The QAOT will update their PMP in conjunction with the IDM PMP and will also cover the years 2011 to 2015. Funding is part of the overall Program-Level Activities budget.

Hyperlink: http://www.evergladesplan.org/pm/progr_data_mgmt.aspx

Contact: Karen Tippett, Program Execution Branch Chief, USACE
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Program Name: C&SF: CERP PLA/Interagency Modeling Center (IMC)
Program ID: 1438
Lead Agency: USACE / SFWMD
Authority: Master Program Management Plan

Strategic Plan Goal(s) Addressed: Other - Support

Measurable Output(s): Critical models and modeling results.

April 1999 (Restudy) Program Synopsis: While the authority for the IMC Program Management Plan (PMP) was not specifically mentioned in the Water Resources Development Act of 2000 it is implicit in the Design Agreement between the Department of the Army and the South Florida Water Management District; and in the Master Program Management Plan that the modeling needs of CERP implementation must be met in a sufficient and adequate manner.

Current Program Synopsis: Good program and project management require that such a program be implemented to meet the unique and complex modeling needs to execute CERP implementation. System-wide computer models are important tools used to simulate South Florida hydrology and water management, and to evaluate the system-wide performance of the Plan.

A collaborative state and federal interagency effort, the Interagency Modeling Center was established in 2003 to provide a centralized pool of resources and expertise to promote greater efficiency and consistency in the hydrologic and ecologic modeling that supports CERP planning. It provides, coordinates, and oversees the modeling needs and efforts for CERP both at the Program Coordination level, such as modeling that will be needed for the MISP scheduling updates, and at the project level for individual project analyses.

Current Status: The Interagency Modeling Center was created. The primary models that are now being used to evaluate the Plan as projects are being evaluated and implemented are the South Florida Water Management Model and the Natural Systems Model. Next generation models such as the Regional Systems Model (RSM) are being developed that will provide more accurate predictions of system-wide performance under CERP.

Funding is part of the overall Program-Level Activities budget.

Hyperlink: http://www.evergladesplan.org/pm/progr_imc_plan.aspx.

Contact: Karen Tippett, Program Execution Branch Chief, USACE
(904) 232-1061, Karen.S.Tippett@usace.army.mil

Program Name: C&SF: CERP PLA/Environmental and Economic Equity (EEE)
Program ID: 1439
Lead Agency: USACE / SFWMD
Authority: Executive Order E012898 (1994)

Strategic Plan Goal(s) Addressed: Other - Support

The 1994 EO12898 directed Federal agencies to make "Achieving Environmental Justice" part of their missions; and requires these agencies to identify and address adverse environmental effects of their programs, policies, and activities on minority and low-income populations, U.S. territories, Commonwealths, and Indian tribes.

April 1999 (Restudy) Program Synopsis: Not specifically described in the *Central and Southern Florida Project Comprehensive Review Study* (Restudy).

Current Program Synopsis: Economic Equity and Environmental Justice have been integrated into restoration efforts. Federal laws and executive orders (EO) directed Federal agencies to promote economic equity and environmental justice through fair treatment of all persons regardless of color, creed, belief, or national origin; and to ensure that no group of people, including racial, ethnic, or tribal groups bear a disproportionate share of the negative environmental impacts resulting from industrial, governmental operations, or execution of Federal actions or local programs or policies.

In WRDA 2000 Congress specifically recognized the importance of ensuring that small business concerns, including those owned or controlled by socially and economically disadvantaged individuals and persons with limited English proficiency are provided with assistance and educational opportunities to review, comment on, and participate in the development and implementation of the CERP. This law also recognized the importance of ensuring to the maximum extent practicable that public outreach and assistance, and educational opportunities are provided to all and every citizen of South Florida including low-income populations and minority populations. The U.S. Army Corps of Engineers District Jacksonville, Florida, under its Environmental and Economic Equity and Outreach program, has targeted efforts to ensure that these opportunities are provided to realize Everglades Ecosystem restoration benefits to both the natural and human systems, and to ensure the complete success of the CERP.

The USACE and SFWMD co-chair the Environmental and Economic Equity Program, which supports mitigation of adverse socio-economic, socio-ecological, and environmental effects that may result from CERP. The Environmental and Economic Equity Program Management Plan (PMP) states six objectives. One objective is to provide relevant, timely, valid and reliable socio-economic and environmental justice baseline data for system-wide and project specific assessments. Baseline data will include, but not be limited to, demographic, economic, water use, conservation and land use data.

The USACE's environmental justice mission embodied in its environmental and economic equity and outreach program sees this guiding principle as critical to the long-term success of the Federal Government continuing responsibility to ensure that civil works projects are implemented in ways that do not result in disproportionate impacts on any community(s); and to assure that All Americans, including the unique cultural and ethnic diversity of South Florida's populations, live in "safe, healthful and aesthetically and culturally pleasing surroundings."

Current Status: Other Project Delivery Team (PDT) technical efforts are underway to identify, assess and address potential negative impacts of socio-economic, socio-ecological and environmental effects on the people of South Florida, including low-income and minority populations.

More than fifteen CERP and CERP-related contracts, valued at over $40 million, were awarded to socially and economically disadvantaged firms between 2004 and 2009. In addition, the USACE participated in over 70 business outreach events in South Florida to educate newly qualifying companies about contracting processes and opportunities with the USACE and other Federal agencies.

The 2001 PMP is being revised for approval by the USACE and the SFWMD. The PMP emphasizes meaningful participation by local communities, as well as collection of data, to support the analyses and mitigation of potential adverse impacts on humans.

Funding is part of the overall Program-Level Activities budget.

Hyperlink: http://www.evergladesplan.org/pm/progr_eee.aspx

Contact: Karen Tippett, Program Execution Branch Chief, USACE
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Program Name: C&SF: CERP PLA/Master Recreation Plan (MRP)
Program ID: 1440
Lead Agency: USACE / SFWMD
Authority: WRDA 1996, WRDA 2000

Strategic Plan Goal(s) Addressed: Supports 3-A2

Measurable Output(s): Critical planning document

April 1999 (Restudy) Program Synopsis: This programmatic need was not initially identified in the *Central and Southern Florida Project Comprehensive Review Study* (Plan); however, recreation is an authorized purpose of the Central & Southern Florida Project. The purpose of the Master Recreation Plan (MRP) is to support the implementation of the CERP Projects while maintaining and protecting the authorized purpose of recreation.

Current Program Synopsis: A significant part of recreation in South Florida is water based. As CERP projects are implemented, the impact to recreation opportunities will be addressed along with the additional recreation opportunities that may be made available by the CERP. A Master Recreation Plan (MRP) is under development that will identify the best locations for regional recreation sites within the CERP area. The goal of this planning effort is to take a system-wide approach to identify, evaluate, and address the impacts of CERP implementation on existing recreational use within the South Florida Ecosystem and to identify and evaluate potential new recreation, public use and public educational opportunities. A particular focus will be on the identification of additional public use and recreational opportunities to compensate for public use facilities that may be lost as a result of CERP implementation.

Promising opportunities may be recommended for further evaluation during the development of Project Implementation Reports for specific CERP Projects; for implementation through other cost-share arrangements between federal, state, local, or not-for-profit entities; or as stand-alone Congressional authorizations. Specific recreation features will not be recommended, opportunities to address deficiencies identified through the Florida Statewide Comprehensive Outdoor Recreation Plan (SCORP) and public involvement will be identified on a regional basis through Conceptual Regional Plans.

Current Status: Initial suitability mapping for the MRP began in June 2005. A mapping study looked at nine key recreation activities and how they might mesh with the surrounding landscape and restoration purposes of each of the projects. After the maps were complete, the USACE and the SFWMD held 18 "listen and learn" public scoping workshops throughout South Florida, gathering input regarding recreation demand and emerging recreation issues. Following the workshops, regional program analysis and conceptual recreation plans were created. After public review and comment during the spring of 2008, the regional conceptual recreation plans were finalized.

A DRAFT Ethnographic Study, completed in December 2008, was provided to the SFWMD as background and historical analysis for the MRP. External review will follow with public review on the website. Of the 13 "Gladesmen" sites identified, five met the definition of a "traditional cultural property" and have potential for the National Historic Registry. The draft MRP has been reviewed and is undergoing agency technical review prior to submittal to the public. Public review is scheduled for August 2009. Funding is part of the overall Program-Level Activities budget.

Hyperlink: http://www.evergladesplan.org/pm/progr_master_rec_plan.aspx
Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
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Program Name: C&SF: CERP PLA/REstoration COordination and VERification (RECOVER)
Program ID: 1441
Lead Agency: USACE / SFWMD
Authority: WRDA 2000; Master Program Management Plan (USACE and SFWMD 2000a); Design Agreement between the Department of the Army and the South Florida Water Management District for the Design of Elements of the Comprehensive Plan for the Everglades and South Florida Ecosystem Restoration Project (USACE and SFWMD 2000b); Programmatic Regulations for the Comprehensive Everglades Restoration Plan; Final Rule (DOD 2003)

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s):

- CERP Conceptual Ecological Models (CEMs)
- System-wide Monitoring and Assessment plan (MAP)
- Hydrologic, Ecological/Biological and Water Quality Performance Measures
- System Status Report
- CERP Adaptive Management Strategy
- CERP Adaptive Management Implementation Guide
- Recommendations for CERP Interim Goals and Interim Targets
- System-wide evaluations of individual CERP projects or groups of projects and refinements of the Plan and the existing and future without project condition
- Identification and evaluation of operational modifications to improve system-wide performance during plan formulation
- Reviews of project-level performance measures for consistency with system-level hydrologic, ecological and water quality performance measures
- Identification of improvements for project performance that will improve its system-wide performance
- Maintenance of the most current version of the Plan
- Maintenance of the most current version of the existing and future without project conditions
- Assessment and identification of opportunities for operational modifications to improve system-wide performance
- System-wide Operating Manual
- Identification of opportunities for refinements to the CERP
- Climate Change Study
- Committee on Independent Scientific Review of Everglades Restoration Progress (CISRERP) coordination

April 1999 (Restudy) Program Synopsis: The RECOVER team will be established to provide system-wide evaluations and analyses. The RECOVER team represents the evolution of the multi-disciplinary interagency Restudy Team that formulated the Plan. CERP is science-based and it is the role of RECOVER to ensure that science continues to guide implementation of the Plan. RECOVER is designed to organize and provide the highest quality scientific and technical support during CERP implementation including assessment of whether the goals and objectives of the CERP are being met.

RECOVER conducts scientific and technical evaluations and assessments for improving the CERP's ability to restore, preserve and protect the south Florida ecosystem while providing for the region's other water-related needs including water supply and flood protection.

Current Program Synopsis: RECOVER links science and the tools of science in three broad missions of system-wide assessment, evaluation and planning and integration. RECOVER has a 3-part mission:

- *Assessment* - to physically measure,(through monitoring, and interpret actual responses in the natural and human systems as the CERP projects are implemented
- *Evaluation* - to work with project delivery teams to evaluate (through predictive modeling) and maximize the contribution made by each project to the system-wide performance of the CERP
- *Planning and Integration* - to identify potential improvements in the design and operation of the CERP, consistent with the CERP objectives, and to strive for consensus regarding scientific and technical aspects of the CERP

At the program level, RECOVER maintains a system-wide focus as it evaluates and assesses the performance of CERP, develops refinements and improvements in the design and operations of the Plan, and reviews the effects that other projects may have on the performance of the CERP. RECOVER continues to operate throughout the entire duration of the restoration process, continuously seeking ways to improve the Plan as responses measured by a system-wide monitoring program are used to direct the CERP Adaptive Management process.

RECOVER accomplishes its activities through a partnership amongst the following twelve federal, state and local agencies, and tribal governments: the U.S. Army Corps of Engineers, the South Florida Water Management District, U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, U.S. Geological Survey, National Park Service, Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida, Florida Department of Agriculture and Consumer Services, Florida Department of Environmental Protection and Florida Fish and Wildlife Conservation Commission. RECOVER also provides opportunities for the public and stakeholders to participate in the review and refinement of RECOVER work products.

RECOVER encompasses all the CERP projects and works with the project delivery teams to relate system-wide goals and objectives to project design and performance as well as incorporates information obtained during project plan formulation into the Plan. The CISRERP, in their 2008 Biennial Review, concluded that the RECOVER team has produced nearly all the elements needed to implement a decision-making framework using adaptive management to assess scientific uncertainty.

Current Status: RECOVER is continuing to establish baseline conditions (pre-CERP) and to provide parameters for comparison of pre and post-CERP implementation. Additionally, RECOVER continues to develop/refine predictive tools and identify opportunities for the Plan and operational modifications to improve system-wide CERP performance.

Two revised performance measures: "Southern Estuaries Salinity Performance Measure" and "Southern Coastal Systems Everglades Water Levels Performance Measure" were released for comment in 2009. The Band 1 evaluation is also to be completed in 2009.

The CERP Climate Change Technical Report was initiated in 2009, in cooperation with CERP partner agencies. Its purpose is to identify potential climate change impacts and develop coordinated plans for more detailed studies in FY10 and beyond that evaluate alternative adaptation strategies. RECOVER funded the USGS FY09 development and testing of a coupled surface water and groundwater model covering the developed areas of Miami-Dade County and natural areas south of Tamiami Trail westward to the Gulf of Mexico. Throughout 2009, the RECOVER Defining Success ad hoc team will write a "*Knowledge Gained Since the Yellow Book*" paper to inventory advancements in ecological research on the south Florida ecosystem over the past 10 years. This paper will be the basis for stake holders to formulate "what if" scenarios in decision-making among management options that have previously posed dilemmas.

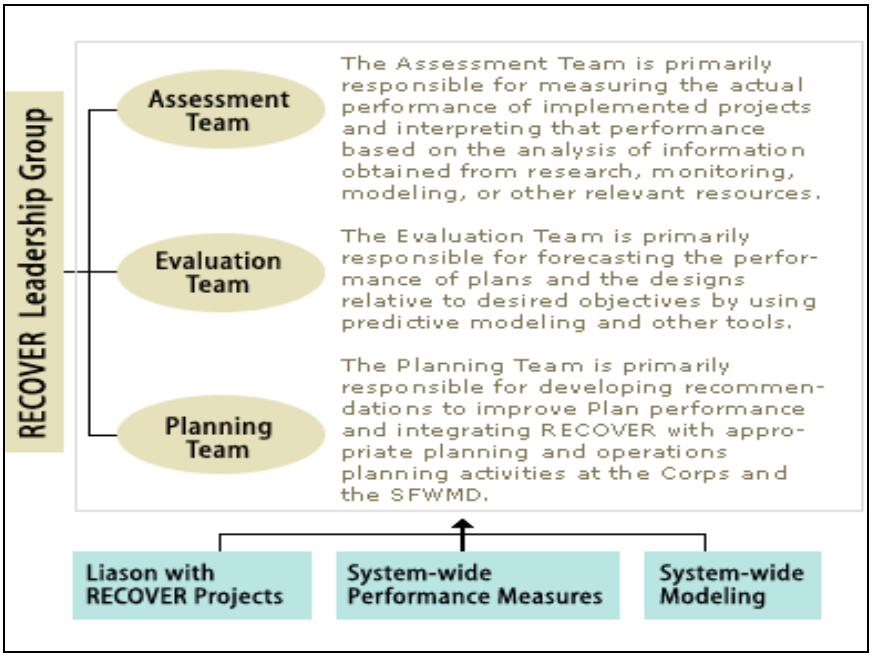
Hyperlinks: http://www.evergladesplan.org/pm/recover/recover.aspx
http://www.saj.usace.army.mil/Divisions/Everglades/Branches/RECOVER/index.htm

Contact: Dave Tipple, RECOVER and System-wide Analysis Branch Chief, USACE
(904) 232-1375, Dave.A.Tipple@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999)* and WRDA 2000. Cost estimate information is updated to reflect current price levels in October 2008 dollars. Additional information provided from the Monitoring and Assessment Plan (2008) and the RECOVER team.

Additional Information:

RECOVER is composed of three technical teams that align with its mission:



Project Name: C&SF: CERP Big Cypress - L-28 Interceptor Modifications (CCC)
Project ID: 1500 (CERP Project WBS # 10)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-B.1

Measurable Output(s): 1,900 acre Stormwater Treatment Area

April 1999 (Restudy) Project Synopsis: This feature includes modification of levees and canals, water control structures, pumps, and stormwater treatment areas with a total storage capacity of 7,600 acre-feet located within and adjacent to the Miccosukee and Seminole Indian Reservations in Collier and Hendry Counties. The initial design of the stormwater treatment areas assumed a total acreage of 1,900 acres (water level fluctuating up to 4-feet above grade). Conceptual sizes of the stormwater treatment areas were based on interim phosphorus concentration targets in the conceptual plan for the Everglades Construction Project.

Current Project Synopsis: The purpose of this feature is to reestablish sheetflow from the West Feeder Canal across the Big Cypress Reservation and into the Big Cypress National Preserve, maintain flood protection on Seminole Tribal lands, and ensure that inflows to the North and West Feeder Canals meet applicable water quality standards. Upstream flows entering the West and North Feeder Canals will be routed through two stormwater treatment areas to be located at the upstream ends of the canals. After conversion to a pump station, S-190 will also push flows south into the L-28 Interceptor Canal where sheetflow to the southwest will be reestablished with backfilling and degradation of the southwest levee of the canal.

Sheetflow will be reestablished south of the West Feeder Canal by a system to be developed consistent with the Seminole Tribe's Conceptual Water Conservation System master plan. Design of the STAs will be based on water quality criteria of the Seminole Tribe and criteria applicable to Big Cypress National Preserve, as appropriate.

This project adheres to the original concept outlined in the Restudy.

Current Status: This project is planned for the future.

Est. Cost: $57,563,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

BC-L-28	**Expenditures Thru FY 2008**
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_10_big_cypress.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

Project Name: C&SF: CERP Miccosukee Tribe Water Management Plan (OPE)
Project ID: 1502 (CERP Project WBS # 90)
Lead Agency: USACE / Miccosukee Tribe
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-B.1

Measurable Output(s): 900-acre constructed wetland

April 1999 (Restudy) Project Synopsis: Converts 900-acres tribally owned cattle pastures into a wetland retention / detention area on the Miccosukee Tribe's Alligator Alley Reservation and includes a pump station, levees, trenches and culverts to create the inflow and outflow facilities for the retention/detention area to filter out harmful nutrients contained in stormwater runoff before entering the Everglades Protection Area.

Current Project Synopsis: The Miccosukee Tribe Water Management Plan pertains to constructing a managed wetland on the Tribe's Reservation in western Broward County. It would also provide water storage capacity and water quality enhancement for tribal reservation waters, which discharge from tribal lands downstream into the Everglades Protection Area. The project was sized to treat the nutrient inputs of the Miccosukee Tribal lands and adheres to the original concept outlined in the Restudy.

Current Status: This project has not yet begun.

Est. Cost: $32,395,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

Miccosukee Tribe WMP	**Expenditures Thru FY 2008**
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_90_miccosukee.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Caloosahatchee Back-pumping with Stormwater Treatment (DDD)
Project ID: 1505 (CERP Project WBS # 06)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-B.1

Measurable Output(s): 5,000 acre STA with a total capacity of 20,000 acre-feet

April 1999 (Restudy) Project Synopsis: This feature includes pump stations and a stormwater treatment area with a total capacity of approximately 20,000 acre-feet located in the C-43 Basin in Hendry and Glades Counties. The initial design of the stormwater treatment area assumed 5,000 acres (water level fluctuating up to 4 feet above grade).

Current Project Synopsis: The purpose of this feature is to capture excess C-43 Basin runoff, which will be used to augment regional system water supply. The feature operates after estuary and agricultural/urban demands have been met in the basin and when water levels in the C-43 storage reservoir exceed 6.5 feet above grade. Lake Okeechobee must also be considered to have available storage. When these conditions are met, a series of pump stations will back pump excess water from the reservoir and the C-43 Basin to Lake Okeechobee after treatment through a stormwater treatment area. This project adheres to the original concept outlined in the Restudy.

Current Status: The project has not yet been initiated.

Est. Cost: $111,658,000

Project Schedule:
TBD Construction completed.

Detailed Project Budget Information (rounded):

Caloosahatchee Back-pumping with Stormwater Treatment	Estimated Cost thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_06_cal_backpumping.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: E&SF: Critical Projects - Lake Okeechobee Water Retention / Phosphorous Removal
Project ID: 1506
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-B.1

Measurable Output(s): Two stormwater treatment areas with 940 acres

Project History: WRDA 1996 authorizes the Secretary of the Army to expeditiously implement restoration projects deemed critical to the restoration of the south Florida ecosystem. The SFEER Task Force nominated 35 projects with input from the Governor's Commission for a Sustainable South Florida and the public. Based on the set of priorities, the USACE conducted an abbreviated study of and produced a report transmitted to the Secretary of the Army for approval. This is one of the 12 restoration "Critical Projects" having the Secretary of the Army's approval and authorized to be appropriated by Congress (WRDA 1996) for the Department of the Army to pay the federal share up to $75 million (no more than $25 million for any single project) for fiscal years 1997-1999. WRDA 2007 amended the sum to up to $95 million.

Current Project Synopsis: Four key basins for the Lake Okeechobee watershed include the lower Kissimmee River basins (S-65D, S-65E, and S-154), and the Taylor Creek Nubbin Slough basin (S-191). Wetlands account for between 18 and 25 percent of the land classification in the basins (data from US Fish and Wildlife Service 1990 National Wetlands Inventory); however, approximately 37 percent of these wetlands have been ditched to drain the land for agriculture (i.e., improved pasture). Many of these wetlands were isolated depressions that once functioned as small water retention areas in the landscape. Others were more expansive and experienced drying from the regional drainage system.

The resulting drainage system causes an accelerated loss of water from the watershed as surface water runoff, which is rapidly transported to the tributary system draining into Lake Okeechobee. Loss of isolated wetlands has contributed to rapid rises in the stage of Lake Okeechobee -- resulting in damaging freshwater discharges to the estuaries. There has been a loss of the water quality treatment function that used to result from retaining water for short periods in those wetlands, and a loss of wetland habitat for migratory birds and waterfowl.

As part of the USACE planning process, several alternative plans were reviewed. The Tentatively Selected Plan (TSP) was identified in 1998. It includes construction of two stormwater treatment areas, acquiring conservation easements and removing improvements, which will also reduce phosphorous loads going to Lake Okeechobee. This project reestablishes wetlands currently drained for agriculture. A two-pronged approach will be taken. The first approach is to restore the hydrology of isolated wetlands by plugging the connection to drainage ditches and the second is diversion of the collector canal flows to adjacent wetlands to attenuate peak flows and retain phosphorus in Reservoir-Assisted Stormwater Treatment Areas (RSTAs). The result will be increased regional water storage north of Lake Okeechobee and restoration of wetland functions in the process. At the sub- basin scale, land parcels that were once part of the tributary system's historic flood plain will be re-flooded to add adjacent and/or isolated wetlands back to the landscape.

Current Status: Construction on the Nubbin Slough portion was physically complete September 2006. The interim construction and testing phase has been in progress since September 2007 thru September 2009. After a pipe leak during a routine test late in 2008, the PDT team is determining responsible party for cost of reparations. Transfer of the project to the sponsor is pending resolution of all warranty issues.

Est. Cost: $22,347,000

Project Schedule:

1997	Start
2006	Construction complete
TBD	Testing complete; transfer to sponsor

Detailed Project Budget Information (rounded):

LOW	**Expenditures Thru FY 2008**
USACE	$10,978,000
SFWMD	$10,033,000
Total	$21,011,000

Hyperlink:

http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_Critical.htm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Current status information was provided by the project manager. Project description is from the Tentatively Selected Plan (1998), and other planning documents. Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

Project Name: C&SF: West Palm Beach Canal STA-1E / C-51 West
Project ID: 1513
Lead Agency: USACE / SFWMD
Authority: Flood Control Act 1968; WRDA 1996
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary**: 1-B.1 **Secondary**: 3-B.1

Measurable Output(s): 6,500-acre stormwater treatment area

Project History: The USACE completed work on the West Palm Beach (C-51) Canal, opening it for travel in February 1917 and citrus and agriculture boomed in the area. Containing the same National Economic Development plan and many of the same features proposed in the June 1992 Detailed Design Memorandum, a Design Memorandum (February 1998) was approved referencing an "authorized plan", which includes replacement of the 2.5 square-mile detention area with STA 1E from the Everglades Construction Project. The "authorized" plan is one result of the Technical Mediated Plan, agreed to as a resolution by the Department of Justice, DOI, DOA, the State of Florida and the SFWMD related to Everglades litigation.

The state's Everglades Forever Act is based, in part, on the Technical Mediated Plan. The Act included language for the C-51 West project that additional work, as described in the Everglades Construction Project, shall be accomplished at full Federal cost. That plan was authorized by WRDA 1996.

Current Project Synopsis: The project is located in Palm Beach County and runs east/west from Water Conservation Area 1 (Loxahatchee National Wildlife Refuge) to West Palm Beach at Lake Worth.

The technical mediated plan included a substantially modified C-51 project. The modified plan expanded the original 1,600-acre floodwater detention area into what is currently a 6,500-acre STA (1E). It provides 30-year flood risk management to the urbanized eastern basin and 10-year flood protection to the western basin. In addition to the flood damage/reduction benefits provided by the original project, the modified plan provides water quality treatment, reduction of damaging freshwater discharges to Lake Worth, and increased water supply for the Everglades and other users. Major components include construction of the following: STA 1E works, pumping station S-319 and S-362, Canal C-51 enlargement, and gated structure S-155A. This project will operate in parallel with STA 1W to reduce the total phosphorus in runoff from both the C-51 West and S-5A basins improving water quality prior to their discharge into Water Conservation Area (Arthur R. Marshall Loxahatchee Wildlife Refuge). Periphyton is being utilized to aid in the removal and monitoring of total phosphorus (P) found in agricultural and stormwater runoff.

Current Status: All eastern basin features have been constructed. The STA 1E works, pumping station S-319 and S-362, Canal C-51 enlargement, and gated structure S-155A are completed and were transferred to the SFWMD for operations in 2005. Additional design and construction of other L-40 improvements, that were requested, still need a post authorization change to move forward. Maintenance issues and minor repairs are being addressed that required de-watering access and a mechanical change on another structure to finalize inspections. A field test for treatment with periphyton has also been underway; and is expected to continue into 2010.

Est. Cost: $325,427,000

Project Schedule:

1994	Start
2010	Finish

Detailed Project Budget Information (rounded):

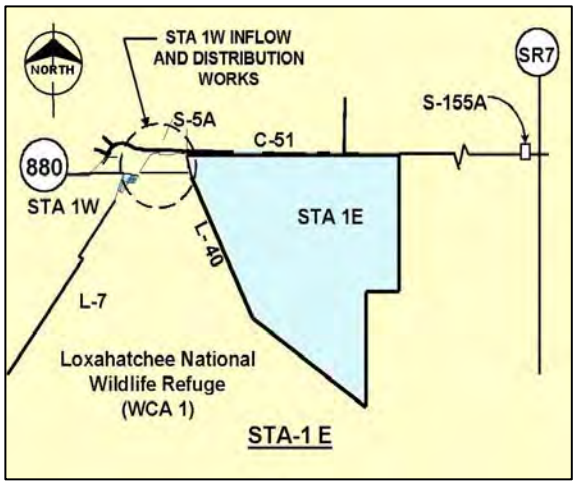
STA 1E/C-51	Expenditures Thru FY 2008
USACE	$219,036,000
SFWMD	$31,358,000
Total	$250,394,000

Hyperlink: http://www.saj.usace.army.mil/restore/projects/C-51.htm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Current status information was provided by the project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June5, 2009).

Additional Information:



Program Name: Infrastructure
Project Name: State Expedited project includes Agricultural Area (EAA) Stormwater Treatment Areas (STAs) Expansion (Project is being implemented as part of the Long-Term Plan for Achieving Everglades Water Quality Goals [Long-Term Plan])
Project ID: 1514 A
Lead Agency: SFWMD
Authority: Everglades Forever Act (EFA)
Funding Source: State – Long-Term Plan funds

Strategic Plan Goal(s) Addressed: Primary: 1.B.1

Measurable Output(s): ~18,000-acre STA expansion, water quality

Project Synopsis: This SFWMD expedited project, which is being implemented as part of the Long-Term Plan, will expand the size and enhance the performance of existing Stormwater Treatment Areas created as part of the Everglades Construction Project. These constructed wetlands naturally reduce stormwater runoff pollution levels flowing from the Everglades Agricultural Area before entering the Everglades. This Project will add approximately 18,000 acres of additional treatment area to the existing Everglades Agricultural Area Stormwater Treatment Areas (EAA STAs). The expansions are being built in Compartment B, an approximately 9,500-acre parcel of land located in southern Palm Beach County, and Compartment C, an approximately 8,800-acre parcel of land located in eastern Hendry County.

The first phase of implementation was the EAA STA Initial Expansion Projects and involved expanding STA-2 into Compartment B and expanding STA-5 into Compartment C. Phase 1 became flow capable on December 31, 2006.

The second phase of implementation, the EAA STA Compartment B and Compartment C Build-out Projects, involves STA construction in the remaining areas of Compartment B and Compartment C. The second phase is currently in construction.

Total Estimated Project Cost: $275,503,404 (DOES NOT INCLUDE L-6 CANAL MODIFICATIONS)

Scheduled Construction Start Date: January 2009
Scheduled Project Completion Date: December 2010 (Flow Capable STA)
December 2011 (Pump Stations completed)

Actual Expenditures to date by SFWMD:

	Thru 2006	2007	2008	2009	Total
SFWMD	$45,541,198	$36,377,772	$8,468,665	$6,114,507	$100,477,430 (as of May 26, 2009)

Contact: Matthew Alexander, 561 686-8800 x7304

Program Name: Restoration Program: Water Quality and Hydrology
Project Name: Lakeside Ranch STA - Expedited Project – The SFWMD is implementing as part of the Northern Everglades Project
Project ID: 1515
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: Lake Okeechobee Trust Fund

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 2,700-acre STA

Project Synopsis: In 2007, the Florida legislature enacted the Northern Everglades Initiative, which expands the Lake Okeechobee Protection Act to the entire Northern Everglades system, including the Lake Okeechobee watershed as well as the Caloosahatchee and St. Lucie rivers and estuaries. The plan identifies five construction projects north of Lake Okeechobee, including the Lakeside Ranch STA, as expedited projects. The Lakeside Ranch STA involves construction of a 2,000-acre STA at Lakeside Ranch, which will provide approximately 12-25 metric tons of phosphorus reduction. The STA will be constructed in two phases, STA North and STA South.

Total Estimated Project Cost: $105,000,000

Project Schedule:
Start Date: October 2005
Finish Date: December 2012 for STA North, TBD for STA South

	2005	2006	2007	2008	2009	2010	2011	2012
Project Design								
Construction and Installation								
Operations and Monitoring								

Detailed Project Budget Information

	2006	2007	2008	2009	2010	Balance to complete	Total
State SFWMD	$1,056,933	$1,311,069	$7,106,147	$2,186,228	15,000,000	76,270,000	105,000,000

Hyperlink: N/A
Contact: Mark Long (561) 242-5520 x4061

Project Name: C&SF: CERP Henderson Creek-Belle Meade Restoration (OPE)
Project ID: 1518 (CERP Project WBS # 93)
Lead Agency: USACE / FDEP
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 1-B.1

Measurable Output(s): 10-acre stormwater lake/marsh filtering system

April 1999 (Restudy) Project Synopsis: Includes multiple individual elements to complement each other to form a larger-scale combined effect: a 10-acre stormwater lake/marsh filtering system; four culverts under State Road 951; hydrologic restoration around Manatee Basin including culverts, ditching, removal of some roadbed; invasive, exotic plant removal; a public access point and interpretive boardwalk; construction of a swale and spreader system; and removal of the Road-to-Nowhere.

Current Project Synopsis: The area known as Belle Meade is the primary drainage basin for the Henderson Creek Estuary, which drains into Rookery Bay. Changes in land use within the primary watersheds draining into Rookery Bay have been identified as the highest priority resource issue that threatens the long-term preservation of the research reserve's estuarine resources. The purpose of this feature in Collier County is to restore historic sheetflow to the estuary, treatment of stormwater, improvement of water quality and increase in habitat value and wetland functions.

Current Status: This project is planned for the future.

Est. Cost: $6,500,000

Project Schedule:
TBD
Detailed Project Budget Information (rounded):

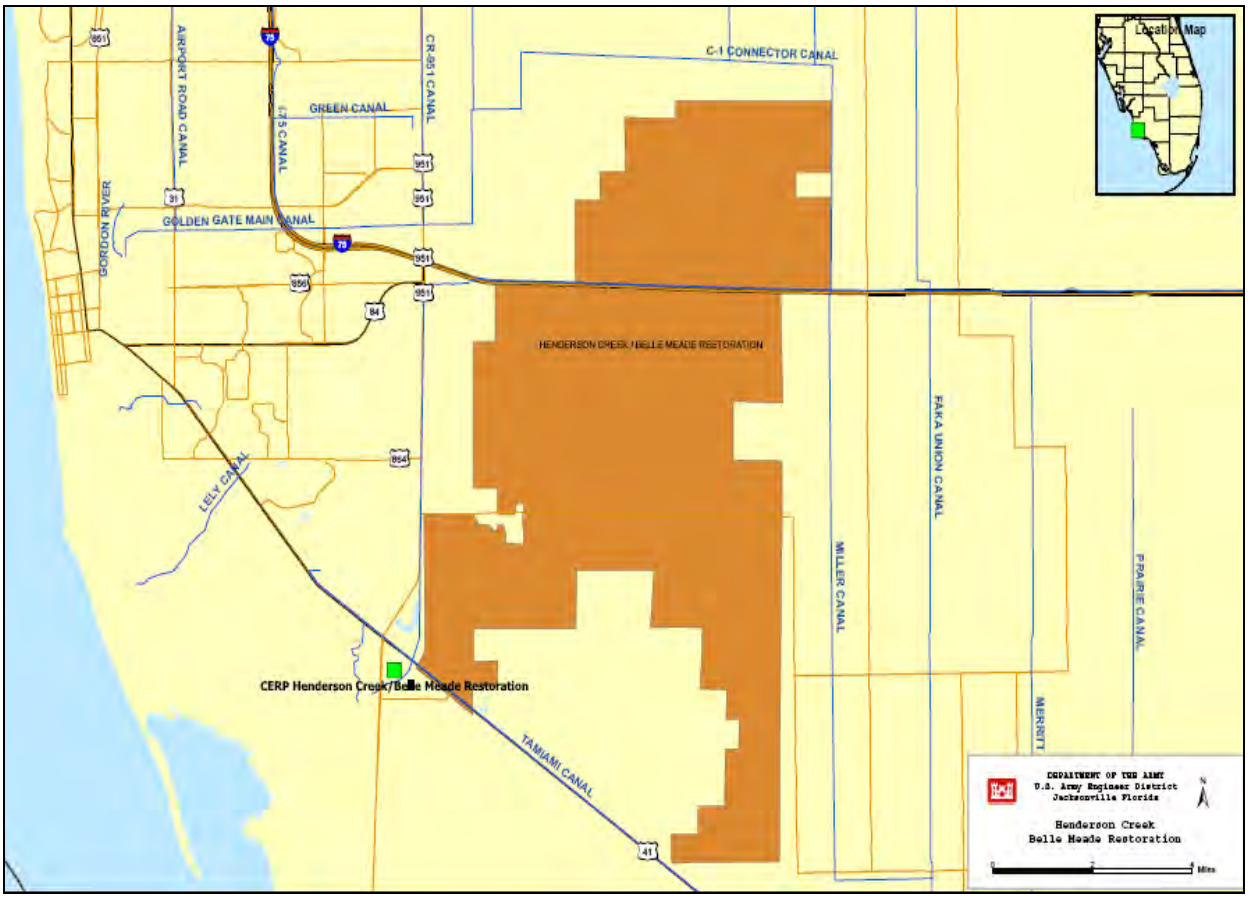
Henderson Creek-Belle Meade	Expenditures Thru FY 2008
USACE	$128,000
SFWMD	$0
Total	**$128,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_93_henderson.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:



Program Name: Restoration Program: Water Quality
Project Name: C-43 Water Quality Treatment Area and Test Facility
Project ID: 1519
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: State Funds

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): 1,200-acre Water Quality Treatment Area (WQTA) and Test Facility

Project Synopsis: In 2007, the Florida legislature enacted the Northern Everglades Initiative, which expands the Lake Okeechobee Protection Act to the entire Northern Everglades system, including the Lake Okeechobee watershed as well as the Caloosahatchee and St. Lucie rivers and estuaries. It is anticipated that the C-43 Water Quality Treatment Area and Test Facility Project will involve the construction of approximately 1,200 acres of natural system treatment cells and flow ways, a pump station, and other water control structures that will provide total nitrogen (TN) reduction, with a focus on organic nitrogen and other incidental nutrients, in the Caloosahatchee River Basin upstream of the S-78 structure. The District is proceeding with the design of a Test Facility to conduct pilot-scale studies and full-size testing prior to the design and construction of the full Water Quality Treatment Area. The full project will be scoped and scheduled upon completion of the testing phase.

Total Estimated Project Cost: $6,768,000 (Test Facility)

Project Schedule:
Start Date: September 2007
Finish Date: December 2010 (Test Facility)

	2006	2007	2008	2009	2010	2011	2012
Project Design							
Construction and Installation							
Operations and Monitoring							

Detailed Project Budget Information

	2007	2008	2009	Total
State SFWMD	0	817	385,627	386,444

Hyperlink: N/A
Contact: Jim Sturgis (561) 242-5520 x4093

Project Name: Long-Term Plan for Achieving Everglades Water Quality Goals
Project ID: 1520 (Formerly project ID 1723)
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: 1.B.1 **Secondary**: 1.A.3

Measurable Output(s): 36,070 acres STA, 8.5 miles of impediments removed

Project Synopsis: The Long-Term Plan was developed with the goal of achieving compliance with water quality standards, including the phosphorus criterion established in Rule 62-302.540, in the Everglades Protection Area. The Long-Term Plan was subsequently identified in the 2003 amendment to the Everglades Forever Act (EFA) (s. 373.4592 F.S.) as the Best Available Phosphorus Reduction Technology (BAPRT) for achieving Everglades water quality standards. The Long-Term Plan includes a variety of projects and components, such as structural and vegetative enhancements in the STAs, operations and maintenance of the STAs, STA optimization research, monitoring, source controls programs, hydropattern restoration projects, as well as projects designed to accelerate recovery in the impacted areas of the Everglades Protection Area. The Long-Term Plan is being implemented through a process of adaptive implementation, whereby the plan is revised when new information becomes available. However per the 2003 amended EFA, the FDEP must approve all revisions to the Long-Term Plan. The Long-Term Plan cost estimates are updated after revisions are approved by the FDEP. The original overall cost estimate for implementation of the Long-Term Plan shown in the October 27, 2003 document was $444 million. The cost estimates shown herein reflect all approved revisions to the Long-Term Plan since development of the original document and cost estimates. The Long-Term Plan addresses the initial 13-year phase (FY 2004-2016, inclusive) defined in that 2003 amendment to the EFA.

*** Cost (Estimate):** Total for Long-Term Plan: $765.6 million (See expedited project IFP sheets for additional Long-Term Plan costs)

Project Schedule: Expected Completion Date: Initial 13-year phase covers the period FY2004 through FY2016

	FY 2003 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development (included in Implementation)						
Land Acquisition						
Implementation						
Operations and Maintenance (included in Implementation)						

*** Detailed Project Budget Information**

	Actual FY 2003-08	Actual Thru June 2009	Projected FY 2010	Projected FY 2011	Projected FY 2012	Balance to complete	Total
State	**$172,869,914 (1)**	**$14,513,957**	**$38,083,569**	**$77,600,267**	**$97,763,540**	**$364,866,745**	**$765,697,992(4)**
Tribal							
Local							
Other							
Total	**$172,869,914**	**$14,513,957**	**$38,083,569**	**$77,600,267**	**$97,763,540**	**$364,866,745**	**$765,697,992(4)**

(1) Cost data reflects actual inception-to-date expenditures through September 30, 2008 and current preliminary cost estimate projections.

(2) Project Development includes Design Phase [contracts & staff costs] costs.

(3) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

(4) See expedited project IFP sheets for additional Long-Term Plan costs.

Contact: Tracey Piccone, P.E., SFWMD (561) 682-6495

Program Name: Water Quality
Project name: Total Maximum Daily Load (TMDL) for South Florida
Project ID: 1600
Lead Agency: Florida Department of Environmental Protection
Authority: 403.067, F.S.

Strategic Plan Goal(s) Addressed: 1.B.2

Measurable Output(s): Basin Assessments, Identifying Impaired Waters, Supplemental Data Collection, Develop TMDLs, Implementation Plans, Verification WQ Standards have been met

Project Synopsis: During the first phase, the water quality data for each basin will be assessed in detail, including the identification of waters for which TMDLs will be developed. Once a basin assessment report and a Plan of Study are completed, intensive monitoring will be conducted in the basin to supply any additional data needed to model the impaired waters in the basin and generate TMDLs. During the third phase, TMDLs will be calculated and then allocated to individual point sources and the major categories of nonpoint sources. After TMDLs are approved, a consensus-based basin management action plan (BMAP), which will include a TMDL implementation plan, will be developed during the fourth phase. The implementation plan will include more detailed allocations to nonpoint sources, but the allocations will be voluntary if the sources are currently outside of the State's regulatory authority. Once these plans have been adopted and implemented, verification (using added WQ monitoring data, evaluations of beach closure reports, or number of fish kills, for example) will allow waters to be certified as meeting water quality standards.

Cost:
Total:
$1,000,000/yr
Project Development:
$1,000,000/yr
Land Acquisition: Unknown
Implementation: Unknown
Operations and maintenance: Unknown

Project Schedule:
Start Date: July 1, 2000
Finish Date: Upon Completion (Current schedule runs to 2011)

Detailed Project Budget Information(1000s)

	Thru 2007	**2008**	**TOTAL**
Federal			
State	4,660	1,000	
Tribal			
Local			
Other			
Total	**4,660**	**1,000**	**TBD**

Hyperlink: http://www.dep.state.fl.us/water/tmdl/index.htm
Contact: Florida Dept. of Environmental Protection

Project Name: C&SF: CERP Comprehensive Integrated Water Quality Plan (CIWQP)
Project ID: 1701 (CERP Feasibility Study)
Lead Agency: USACE / FDEP
Authority: WRDA 1996
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 3-A.4

Measurable Output(s): Recommendations

April 1999 (Restudy) Project Synopsis: There was no comprehensive plan for achieving water quality restoration in south Florida, which links together water quality restoration programs in the context of comprehensive planning for ecosystem restoration. Achieving all of the water quality goals for ecosystem restoration in all use-impaired water bodies within the study area will depend on actions outside the scope of the *Central and Southern Florida Project Comprehensive Review Study* (Restudy). The degree to which some of the existing water quality improvement programs have been implemented has been limited. To ensure that south Florida ecosystem restoration objectives are achieved, a Comprehensive Integrated Water Quality (CIWQ) Plan that links water quality restoration targets and remediation programs to the hydrologic restoration objectives of the recommended plan must be developed for the entire study area.

In its July, 1998 Interim Report on the C&SF Project Restudy (GCSSF, 1998), the Governor's Commission recommended that a water quality implementation plan for the Restudy be developed with Florida Department of Environmental Protection as the lead agency, in cooperation with the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, South Florida Water Management District, the Seminole and Miccosukee Native American Tribes, and local governments. In order to resolve water quality problems on an ecosystem wide basis, the Governor's Commission recommended that a comprehensive water quality plan be initiated as a feature of the Restudy. The 1999 Restudy recommended this plan to be conducted under the authority of WRDA 1996 that allows for the continuation of studies and analyses**.** The Restudy recognized the need for a comprehensive water quality plan that would integrate the Comprehensive Everglades Restoration Plan (CERP) projects and other federal, state and local government programs.

Current Project Synopsis: The Comprehensive Integrated Water Quality Plan for south Florida would involve identifying pollution-impaired water bodies, quantifying types and sources of pollution, establishing interim and final pollution load reduction targets necessary to achieve ecosystem restoration, recommendations for development of potential source reduction programs, recommendations for baseline and future water quality monitoring programs to assess ecological responses to water quality changes, and recommendations for designing and constructing water quality treatment facilities, if necessary.

Although the scope of the feasibility study was not fully developed, it was envisioned that the study would also address issues of fragmented, uncoordinated water quality sampling, data quality, and climatological effects and trends; recommendations for oversight and support of improved water quality modeling efforts in south Florida; development of additional water quality restoration targets, where needed; recommendations for remediation programs to achieve those targets; recommendations for Best Management Practices in specific agricultural and urban areas where appropriate (including identifying those urban areas where participation in the NPDES municipal stormwater program is needed); and, recommendations for synchronizing water quality restoration programs with the implementation schedule for the components of the recommended plan.

The Comprehensive Integrated Water Quality Plan may also include recommendations for locations of water storage and treatment areas and design features for optimizing recommended plan components to achieve water quality restoration targets or lead to recommendations for additional features (e.g., polishing cells, operational features) for the larger recommended plan components currently lacking specific water quality performance elements.

DEP agreed to participate in the Project Management Plan (PMP) phase of the feasibility study as the local sponsor. The Project Delivery Team identified the issues to be addressed by the feasibility study, and a Draft Project Management Plan (PMP) was prepared in 2003 and approved by the project's design coordination team.

Current Status: In the same year that the Restudy was published, the Watershed Restoration Act of 1999 (s. 403.067 F.S.) directed the DEP to scientifically evaluate the quality of Florida's surface waters and promote the mechanisms necessary to clean up pollution. The Act was created specifically to implement the federal Total Maximum Daily Load (TMDL) program, which is a systematic approach to establishing how much pollution water bodies can assimilate while still meeting water quality standards. This act had a direct effect on the suspension of the Comprehensive Integrated Water Quality Plan.

To streamline the TMDL program, DEP adopted a five-year cycle that divides Florida into five groups in which different activities take place each year and the cycle is reiterated continuously. Activities include 1.) preliminary basin assessments; 2.) identification of pollutant-impaired waters; 3.) targeted water quality monitoring and data analysis; 4.) TMDL development and adoption; 5.) basin planning with local stakeholders to establish the actions necessary to reduce pollution; and 6.) implementation through regulatory action, funding, pollution prevention strategies, and other measures. In addition, DEP has adopted an Impaired Waters Rule, which establishes the methods by which surface waters are evaluated and the need for TMDL's is determined.

DEP has been through the whole five year cycle once and is now halfway through the cycle a second time. DEP has developed and adopted, by rule, 92 TMDLs as of June 2009; another 87 TMDLs have been proposed or are in draft, all of which must also be adopted by rule. Of these, as many as 16 final TMDLs and 5 draft TMDLs are in the CERP study area.

At the same time, DEP has worked with the Florida Department of Agriculture and Consumer Services (DACS) and the state's five water management districts to improve the mechanisms local governments, utilities, industries and agricultural operations can use to implement pollution reductions and improve water quality. DACS has invested significant resources in targeting best management practices to particular agricultural commodity groups and demonstrating why it is in their best long-term economic and social interests to implement them. DEP has invested over $17.5 million on research and development of non-agricultural best management practices and implementation of targeted monitoring expressly for the TMDL program. DEP has awarded another $26 million in federal section 319 grants to local governments to implement better urban stormwater treatment projects and practices.

In addition, the SFWMD and the Monitoring Assessment Plan (MAP) have gone through significant efforts to coordinate water quality monitoring in the CERP study area in order to increase efficiency and decrease duplicative efforts. Also the Interagency Modeling Center was established between the SFMWD and the USACE to better coordinate modeling efforts in south Florida. Given this significant on-going effort by the State of Florida to assess and address water quality problems in the greater Everglades Ecosystem, the Comprehensive Integrated Water Quality Plan has been suspended.

Est. Cost: $8,100,000

Hyperlink: http://www.evergladesplan.org/pm/studies/ciwq.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Sources: Original project description was summarized from the original PMP and discussion documents. Cost estimates need to be re-determined, as the PMP has never been finalized. Current status of the TMDL program is from the report "*Florida's Total Maximum Daily Load Program: the First 5 Years.*"

Additional Information: The study area encompasses approximately 17,500 square miles from Orlando to the Florida Reef Tract. The Kissimmee River, Lake Okeechobee and the Everglades are the dominant watersheds that connect a mosaic of wetlands, uplands, coastal areas, and marine areas. The study area includes all or part of the following 19 counties: Monroe, Miami-Dade, Broward, Collier, Palm Beach, Hendry, Indian River, Martin, St. Lucie, Brevard, Volusia, Glades, Lee, Charlotte, Highlands, Okeechobee, Osceola, Orange, and Polk. The project boundary corresponds to that of the SFWMD and the Indian River Lagoon (IRL) North Feasibility Study.

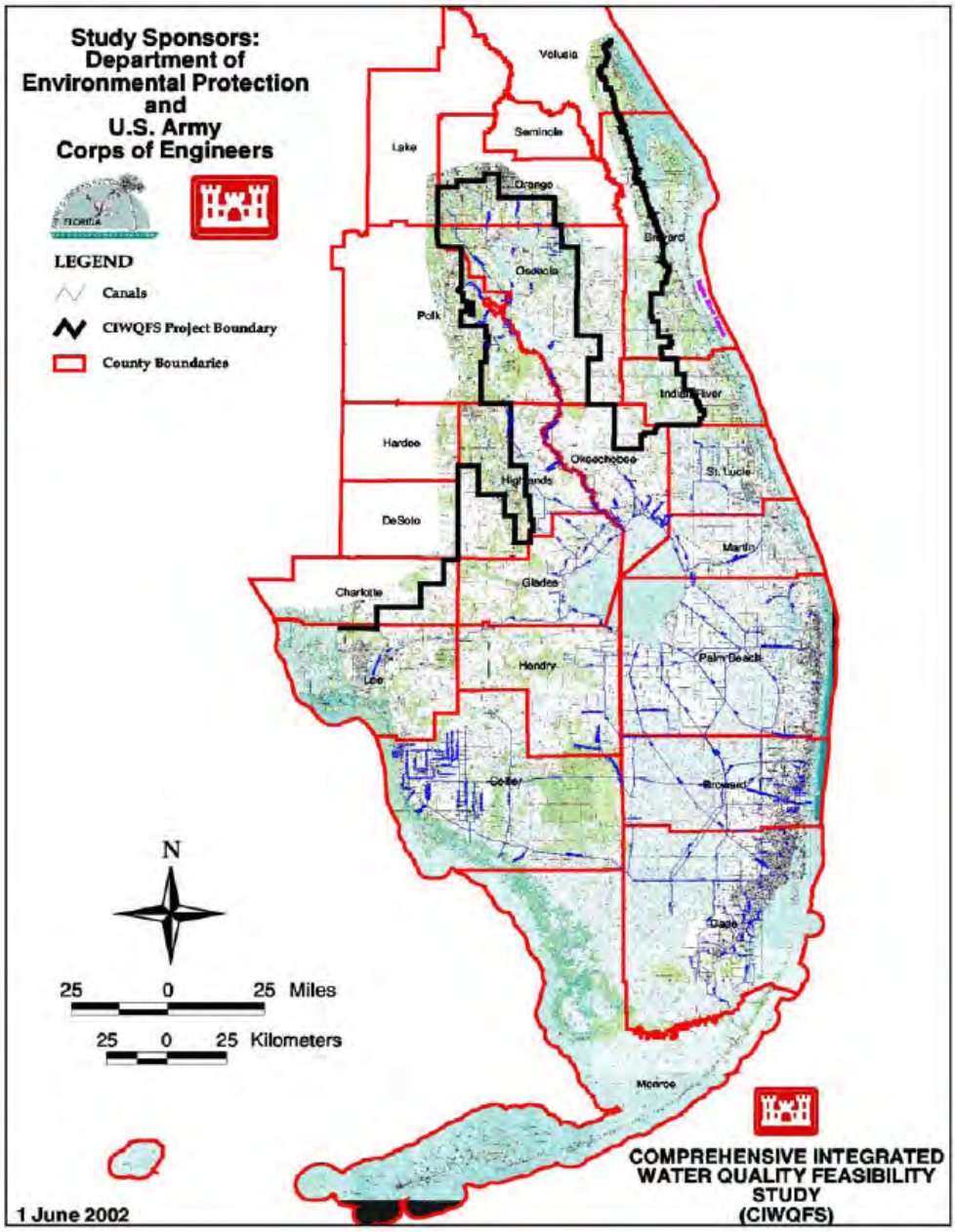


Figure 1.1 STUDY AREA BOUNDARY

Program Name: Infrastructure
Project Name: E&SF: Critical Project - Lake Trafford Restoration
Project ID: 1702
Lead Agency: USACE / SFWMD
Authority: WRDA 1996; WRDA 2000 *(Programmatic Authority)*

Strategic Plan Goal(s) Addressed: 2-A.3

Measurable Output(s): 2.85 million cubic yards of organic sediments removed

Project History: WRDA 1996 authorizes the Secretary of the Army to expeditiously implement restoration projects deemed critical to the restoration of the south Florida ecosystem. The SFEER Task Force nominated 35 projects with input from the Governor's Commission for a Sustainable South Florida and the public. Based on the set of priorities, the USACE conducted an abbreviated study of and produced a report transmitted to the Secretary of the Army for approval. This is one of the 12 restoration "Critical Projects" having the Secretary of the Army's approval (WRDA 1996).

April 1999 (Restudy) Project Synopsis: The project is also described in the *Central and Southern Comprehensive Review Study (1999)* as an *OPE* utilizing one or more 14-inch portable cutter dredges to accomplish lake-wide organic sediment removal.

Current Project Synopsis: Lake Trafford, the largest lake south of Lake Okeechobee with a surface area of approximately 1,494 acres, is located in north Collier County. It is the headwaters for the Corkscrew Swamp Sanctuary to the southwest, the Corkscrew Regional Ecosystem Watershed (CREW) to the west, and the Fakahatchee Strand system including the Florida Panther National Wildlife Refuge, to the south. Lake Trafford has poor water quality, extensive muck accumulations, lost native submerged plant communities, experienced periodic aquatic weed infestations, and had numerous moderate fish kills. Poor water quality is attributed to internal nutrient cycling from extensive organic muck deposits throughout the basin. About 8.5 million cubic yards of loose, flocculent, organic materials form a blanket with a thickness of 9" to 9' on the bottom of the lake. The project includes the use of cutter dredges to remove this material and pump it into a 449-acre, diked, agricultural facility. Once completed, improved water quality should enhance fish and wildlife habitat in Lake Trafford.

Current Status: The Lake Trafford Restoration project was initiated in 2002. The in-lake portion of dredging was completed by the spring of 2006. This phase of the project removed approximately 3 million cubic yards of organic sediments from the bottom of the lake. A second phase was to remove approximately 800,000 cubic yards of sediment from the littoral zone and commenced in 2006. However, the prevailing historic drought in south Florida rendered the lake levels critically low, for operation of the dredging machinery, and the construction contract had to be terminated the same year. The second phase of the Lake Trafford project was re-initiated in spring of 2009 and is expected to be complete by end of the fiscal year.

The USACE completed plans and specifications, but at that time there was insufficient funding to award a contract. The SFWMD assumed 100% of the cost of revamping the detailed design and the construction with the intent of receiving credit and/or reimbursement upon project completion and approval by the USACE. The containment facility and much of the dredging have been completed as of early 2008. The FWC and Collier County Tourist Development Council provided some financial assistance to SFWMD for the project.

Est. Cost: $35,214,000

Project Schedule:
2011 Construction complete

Detailed Project Budget Information (rounded):

Lake Trafford	Expenditures Thru FY 2008
USACE	$1,601,000
SFWMD	$10,662,000
Total	$12,263,000

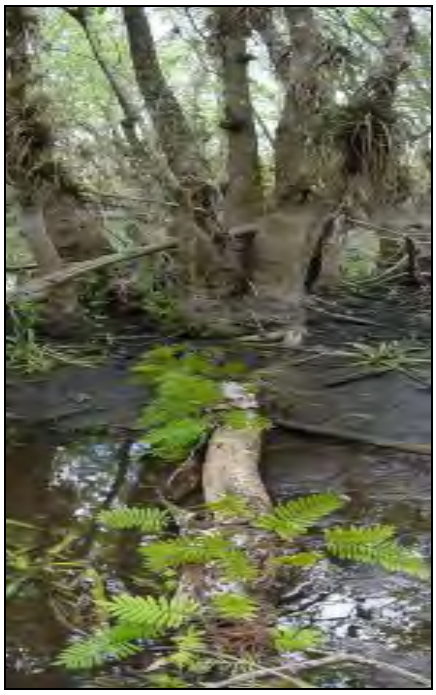
Hyperlink:
http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/Projects_Critical.htm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Ananta Nath, Big Cypress Basin, SFWMD,
(239) 263-7615, anath@sfwmd.gov

Source: Original project description (OPE) is summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999)*. Cost estimate information is updated to reflect current price levels in October 2008 dollars.

"Last year was Lake Trafford's drought of record, plunging below 17.5 ft for a record-setting 12 consecutive months (from May 2007 to May 2008). "
--- Robert V. Sobczak , NPS, *South Florida Watershed Journal* 4/20/09



Program Name: Long-Term Plan for Achieving Everglades Water Quality Goals (Long-Term Plan)
Project Name: Phosphorus Source Controls for Basins Tributary to the Everglades
Project ID: 1706
Lead Agency: South Florida Water Management District
Authority: Everglades Forever Act (EFA)
Funding Source: State - Long-Term Plan funds, which include Everglades Agricultural Privilege Tax

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Mandatory BMP Program Compliance Model Results; Updates on Implementation of Basin Specific Water Quality Improvement Plans; Reporting on the Long-term Compliance Permit requirements.

Project Synopsis: As a result of the EFA, the SFWMD established the Everglades Regulation Division. The Division is responsible for complying with the requirements of the Everglades Construction Project (ECP) and the Non-ECP permits to implement the Best Management Practices (BMPs) Regulatory Source Control Program in the ECP and Non-ECP tributary basins. The ECP source controls include a regulatory program developed to decrease phosphorus loads from the Everglades Agricultural Area (EAA) and C-139 Basins by reducing phosphorus in permittee discharges to specified levels prior to downstream treatment in stormwater treatment areas. For the 13 years that the program has been in place in the EAA, the total phosphorus loads have been reduced by greater than 50% on average. The C-139 Basin regulatory source control program was initially implemented in 2002, and as of 2009, BMPs are being implemented at the highest level described by rule. The District is in the rule development process to amend the C-139 Basin source control program to optimize water quality improvement efforts. Water Quality Improvement Plans were developed for each of the Non-ECP basins to ensure that all basins discharging directly to the Everglades meet state water quality standards. These strategies include BMPs, existing regulatory stormwater management programs, public outreach, and construction of public works projects. All of this work and all of the funding for this work is mandated by the Everglades Forever Act and the Long-Term Plan.

Cost:

Total	N/A
Project Development	N/A
Land Acquisition	N/A
Operations and Maintenance	N/A

Project Schedule:
Start Date: March 1998
Finish Date: N/A – This is an on-going mandated regulatory program with no end date.

Detailed Project Budget Information (1000s)

	Thru 2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010***	**Total**
Federal												
State	5,954	1,960	1,866	1,998	2,245	3,446	4,236	2,722	2,924	4,863	4,008	
Tribal												
Local												
Other												
Total	**5,954**	**1,960**	**1866**	**1,998**	**2,245**	**3,446**	**4,236**	**2,722**	**2,924**	**4,863**	**4,008**	**TBD**

*estimated **Hyperlink**: http://www.sfwmd.gov/org/reg/esp/index.html
Contact: Pamela Wade (561) 682-6901

Program Name: Surface Water Management
Project Name: Seminole Tribe Best Management Practices for the Big Cypress Reservation
Project ID: 1714
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Resolution

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s):
The project will result in immediate, measurable improvements in the quality of water discharged to the Everglades Protection Area. It will also provide tangible improvement of the water quality leaving the Western Basins, an area not addressed completely by the Everglades Construction Project and the Everglades Forever Act.

Project Synopsis:
The Seminole Tribe has contracted with the NRCS to implement a comprehensive system of best management practices (BMP's) for all seven basins in the Big Cypress Reservation. Enhanced water management will be accomplished through BMP's that include: conservation irrigation systems; nutrient loading reduction; application procedure training; fencing of WRA's and irrigation cells as detailed in the Water Conservation Plan; cross fencing for grazing management; livestock watering facilities; grazing management plans; closed-end irrigation systems; and will function independently of the Water Conservation Project, the two will work best together to create the most benefit for the ecosystem.

Cost:
Total: $4,779,000
Project Development:
Land Acquisition:
Implementation:
Operations and maintenance:

Project Schedule:
Start Date: June 1996
Finish Date: December 2013

Detailed Project Budget Information ($1000)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Balance to complete**	**Total**
Federal	358.4	358.4	358.4	358.4	358.4	358.4	358.4	358.4	716.9	3,584.1
State										0
Tribal	119.5	119.5	119.5	119.5	119.5	119.5	119.5	119.5	238.7	1,194.7
Total	**477.9**	**477.9**	**477.9**	**477.9**	**477.9**	**477.9**	**477.9**	**477.9**	**955.6**	**4,778.8**

Hyperlink: N/A
Contact: Craig Tepper 954-965-4380, Seminole Tribe of Indians

Program Name: Infrastructure
Program Name: Surface Water Management
Project Name: Seminole Tribe Best Management Practices for the Brighton Reservation
Project ID: 1715
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Resolution

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s):
Implementation of BMP's will provide immediate water quality benefits for the watershed which includes Lake Okeechobee. They will also compliment a comprehensive system of surface water management works planned for the Brighton Reservation.

Project Synopsis:
The Seminole Tribe has contracted with NRCS to design a comprehensive system of best management practices (BMP's) for the Brighton Reservation. Enhanced water management will be accomplished through application of field-level BMP's which might include: conservation irrigation systems; nutrient loading reduction; application procedure training; cross-fencing for grazing management; livestock watering facilities; grazing management plans; closed-end irrigation systems; and a tail-water recovery system where appropriate.

Cost:
Total
$338,000
Project Development
Land Acquisition
Implementation
Operations and maintenance

Project Schedule:
Start Date: January, 1998
Finish Date: December, 2011

Detailed Project Budget Information (1000s)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Total**
Federal	36	36	36	36	36	36	36	1.5	253.5
State									0
Tribal	12	12	12	12	12	12	12	.5	84.5
Total	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**2**	**338**

Hyperlink: N/A
Contact: Craig Tepper 954-965-4380, Seminole Tribe of Indians

Program Name: Surface Water Management
Project Name: Seminole Tribe Comprehensive Surface Water Management System for the Brighton Reservation
Project ID: 1716
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Council by Resolution

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s):
This plan would provide positive water management benefits to the Indian Prairie Basin which discharges into Lake Okeechobee. Water quality will be improved by reducing nutrient loadings through detaining discharges from Tribal lands in each group. Flood control will be enhanced through the implementation of additional sites in each sub-basin. Storage and conveyance of surface waters will be increased and enhanced in each and between sub-basins. Re-hydration of slough systems in each group will also be accomplished.

Project Synopsis:
A comprehensive surface water management system will be designed and implemented for the Brighton Reservation which will include supplemental irrigation, storage, improved flood control, surface water conveyance and water quality treatment.

Cost:
Total
15,818,000
Project Development
Land Acquisition
Implementation
Operations and maintenance

Project Schedule:
Start Date: 1999
Finish Date: 2010

Detailed Project Budget Information (1000s)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Balance to complete**	**Total**
Federal	20	4,344	970	679	853	853	655	0	8,374
State									0
Tribal	0	4,343	970	679	852	426	174	0	7,444
Total	**20**	**8,687**	**1,940**	**1,358**	**1,705**	**1,279**	**829**	**0**	**15,818**

Hyperlink: N/A
Contact: Craig Tepper 954-965-4380, Seminole Tribe of Indians

Program Name: Surface Water Management
Project Name: Seminole Tribe Water Conservation Project for the Big Cypress Reservation
Project ID: 1717
Lead Agency: Seminole Tribe of Florida
Authority: Tribal Council Resolution / USDA WRP / PL-53-866 UDSA

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s):
This network of surface water management structures will produce the following substantial restoration, preservation, and protection benefits and will do so immediately and independently of the completion of any other projects:

Remove phosphorus and other pollutants from water leaving the Reservation and flowing to the Big Cypress National Preserve into Mullet Slough to the Everglades Protection Area. The removal of these pollutants will be achieved using natural treatment processes in pretreatment cells and water resource areas (WRA's). Unlike the stormwater treatment areas in the Everglades Construction Project, the Tribe's WRA's will take advantage of the natural treatment processes and will serve additional functions of water storage and conveyance.
Rewater the Big Cypress National Preserve. This project will provide the opportunity to restore more natural hydroperiods in the Big Cypress National Preserve. The clean water sent in a sheetflow over the Preserve and into Mullet Slough will improve the hydrology in the Everglades Protection Area as well.
Convey and store irrigation water. To make use of water provided by the SFWMD to replace the Tribe's diverted Compact water rights, the Tribe needs to be able to move and store such water, when it is available. Water conveyance improvements and irrigation storage cells will move and store the Compact water converted for Everglades restoration. This diversion allowed for treatment of water flowing to the Everglades Protection Area.
Provide improved flood control. To prevent extended periods of flooding and to limit downstream impacts of flooding, stormwater must be controlled. Stormwater attenuation areas will detain water from large storm events.

Project Synopsis:
The Seminole Tribe's Big Cypress Reservation is located in Hendry and Broward Counties, directly north of the Big Cypress National Preserve. And the federal Miccouskee Reservation. This project provides for the design and construction of water control, management, and treatment facilities in Basins 5, 6 & 7 composing the eastern portion of the Big Cypress Reservation. The project elements include conveyance systems, including major canal bypass structures, irrigation storage cells, and water resources areas. This project is designed to meet 50 ppb. phosphorus, which is the current performance level designed to be achieved by the Everglades Construction Project. Should design performance levels for phosphorus become more stringent, this project is designed to be able to incorporate additional technology to meet stricter levels. This project will enhance the hydroperiod in Big Cypress National Preserve through Mullet Slough and improve the water quality in the Everglades Protection Area.

Cost:
Total
$60,000,000

Project Schedule:
Start Date: 2002
Finish Date: 2011

Detailed Project Budget Information (1000s)

	2004	2005	2006	2007	2008	2009	2010	2011	Total
Federal	1,500	3,500	3,500	3,500	3,500	8,000	12,500	0	36,000
Tribal	0	1,625	1,625	1,625	1,625	4,000	6,400	7,100	24,000
Total	**1,500**	**5,125**	**5,125**	**5,125**	**5,125**	**12,000**	**18,900**	**7,100**	**60,000**

Contact: Craig Tepper 954-965-4380, Seminole Tribe of Indians

Program Name: Lake Okeechobee Restoration: Water Quality
Project Name: Lake Okeechobee Protection Plan
Project ID: 1722
Lead Agency: South Florida Water Management District
Funding Source: State of Florida Appropriation

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Improve the health of Lake Okeechobee through the reduction of total phosphorus loads from the watershed to meet the Lake's Total Maximum Daily Load (TMDL) of 140 MT/year.

Project Synopsis: Although there has been a long history of regulatory and voluntary incentive-based programs to control phosphorus inputs to Lake Okeechobee, there had not been any substantial reduction in loading during the preceding decade. As a result, the Florida legislature passed the Lake Okeechobee Protection Act (LOPA) in 2000, mandating that the TMDL be met by 2015 and that the SFWMD, FDEP, and FDACS work together to implement an aggressive program to address the issues of excessive phosphorus loading and exotic species expansion. The SFWMD, in cooperation with FDEP and FDACS, developed the Lake Okeechobee Protection Plan (LOPP) as required by LOPA, which was submitted to the Florida Legislature in January 2004, and was updated in February 2007. In addition, in 2007 the Florida Legislature substantially expanded the Lake Okeechobee Protection Act to the Northern Everglades and Estuaries Protection Program. The newly expanded program was named as the Northern Everglades and Estuaries Protection Program (NEEPP) (Section 373.4595, F.S., 2007). Consequently, the Lake Okeechobee and Estuary Recovery (LOER) Plan, announced in October 2005, was migrated into this program. The NEEPP required the SFWMD, in collaboration with coordinating agencies (FDEP and FDACS), to develop a Technical Plan for Phase II of the Lake Okeechobee Watershed Construction Project (LOWCP P2TP) by February 2008, and to develop protection plans for the Caloosahatchee and St. Lucie River Watersheds by January 2009. The Lake Okeechobee Watershed Construction Project Phase II Technical Plan (P2TP) (SFWMD et al., 2008) was submitted to the legislature in February 2008.

The LOPP contains a phased, watershed-based, comprehensive approach to reduce phosphorus loading to the lake. Because the legislature has provided substantial funding for the implementation of the LOPP since 2000, the cooperating agencies have been able to implement a large number of phosphorus reduction projects including phosphorus source control grant programs for agricultural landowners, dairy best available technology pilot projects, soil amendment projects, isolated wetland restoration, remediation of former dairies and regional public/private partnerships. In addition, the LOPP contains elements of research and monitoring as specified by the act. A comprehensive monitoring program for water quality in the lake and watershed and ecological indicators in the lake has been implemented. The LOWCP P2TP identifies construction projects, along with on-site measures that prevent or reduce pollution at its source such as agricultural and urban best management practices, needed to achieve water quality targets for the Lake. In addition, the LOWCP P2TP includes other projects for increasing water storage north of Lake Okeechobee to achieve healthier lake levels and reduce harmful discharges to the Caloosahatchee and St. Lucie rivers' estuaries. The Phase II Technical Plan is currently being implemented.

The next LOPP update, due in 2010, will provide updated information on all elements of the LOPP including the LOWCP P2TP and will provide estimated costs for plan implementation.

Cost: Costs will be estimated in future plan update
Total

Project Schedule:

Start Date: 1999

Finish Date: 2015

Detailed Project Budget Information (1000s)

	FY 1999-2004	2005	2006	2007	2008	2009	Balance to complete	Total
Federal EPA								
*State SFWMD	$41,850	$14,400	25,000	$35,439	54,000	67,890	TBD	TBD
**Other	$52,522	$9,844	8,331	$14,195	30,336	22,305		
Total	**$94,372**	**$24,244**	**$33,331**	**$49,634**	**84,336**	**90,195**	**TBD**	**TBD**

Sources:

* 2007 SFER; Vol. 1 Chapter 10, Lake Okeechobee Protection Program – State of the Lake and Watershed (Lake Okeechobee Program adopted budget - state appropriations)

** Lake Okeechobee Program adopted budget – non-state appropriations

Contact: Pinar Balci (561) 682-6982

Program Name: Land Acquisition
Project Name: Adams Ranch
Project ID: 2181
Lead Agency: Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 10,841 Acres Acquired

Project Synopsis: The Adams Ranch Florida Forever project includes a portion of one ownership to be considered for less than-fee-simple acquisition totaling 11,057 acres in southern Osceola County. About 5.2 miles of the western boundary of the project abuts the southeastern boundary of Three Lakes Wildlife Management Area. The northwestern boundary fronts Lake Marian for 1.3 miles. The project stretches east through the center of the entire Adams Ranch holding, which is bracketed to the north and south with Adams Ranch, Inc. property and bounded on the east by Peavine Road. Avon Park Air Force Range and Bombing Range Ridge Florida Forever project are no more than 10 miles to the west of the project. The Mills Ranch and Escape Ranch Conservation Easements lie approximately 3.5 miles to the east. Kissimmee Prairie Preserve State Park is approximately 8.5 miles to the south.

One of the primary concepts of this project is the protection of the way of life for the ranch, which is managed in a way that has historically allowed for the continued protection of an important and biodiverse assemblage of imperiled vertebrate wildlife. Another stated goal of the project is to provide for continued buffering of the Three Lakes Wildlife Management Area from development, avoiding fragmentation of the landscape and allowing for the continuation of proper management on a landscape scale through prescribed fire, maintenance of hydrological regimes, and other appropriate strategies.

This project meets the Florida Forever goals of increasing protection of biodiversity by acquiring 81 acres of Priority 1 habitat and 6,140 acres of Priority 2 habitat, and preserving 10,618 acres of habitat for such rare species as the eastern indigo snake and the bald eagle. Another Florida Forever goal is to increase the acreage of landscape linkages and conservation corridors, by contributing to a 200,000-acre mosaic of protection areas that includes the adjoining Three Lakes Wildlife Management Area. Other Florida Forever goals are to protect waters and wetlands of the state, and the Adams Ranch will preserve 762 acres of floodplain, 5,811 acres that would help protect surface waters, and 2,598 acres of functioning wetlands. Some 10,979 acres of the proposal help recharge the aquifer.

Cost: Project size 10,841. No acres have been acquired.

Project Schedule:
Start Date: 1997
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	Balance to complete	Total
State*			
Federal			
Total	**0**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Allapattah Flats
Project ID: 2100
Lead Agency: Department of Environmental Protection/South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1 Secondary: 1.A.1

Measurable Output(s): 40,363 Acres Acquired

Project Synopsis: The Allapattah Flats/Ranch project covers 40,363 acres in western Martin County. The site is dominated by poorly drained flatwoods soils, which are saturated for much of the wet season. Historically, this area was a flatwoods matrix, interspersed with depression marshes and wet prairies. With the exception of the four northern sections that drain to Canal-23, the entire site drains slowly to the southeast to the South Fork of the St. Lucie River. Over the past 30 years, the project area has undergone a change in land use from native range grazing to improved pasture, sod farms, and row crops. Most of the understory has been cleared and planted in non-native pasture grasses. Most of the depression marshes remain; however, most of the wet prairies have been drained and the extreme western boundary. There is good species diversity and many large trees remain.

Restoration of Allapattah Flats will play a key role in the effort to reduce flows from C-23 into the St. Lucie Estuary. Regional attenuation facilities, or Water Preserve Areas, are proposed which would store discharges into the St. Lucie Estuary. After acquisition, about 8,000 acres of the project adjacent to C-23 would be converted to a reservoir to provide approximately 32,000 acre-feet of water storage. Estimates indicate that this would reduce wet season stormwater flows into the estuary by 39%. It is estimated that an additional 14% reduction in discharge to the estuary could be achieved by not draining the property. Completely eliminating stormwater discharges is not possible; however, significant reductions could probably be made by blocking existing drainage ditches.

The Florida Fresh Water Fish and Wildlife Commission would be the lead manager for the non-reservoir areas. The District will take the lead on all hydrologic restoration efforts.

Cost: Project size 40,363. 21,714 acres have been acquired at a cost of $63,031,278.
Land Acquisition: 18,649 acres remain to be acquired.

Project Schedule:
Start Date: 1997
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	Balance to complete	Total
State*	43,374.92		
Local	15,323.384		
Federal	4,332.974		
Total	**63,031.278**	**TBD**	**TBD**
Adjusted Total**	**365.752**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Atlantic Ridge Ecosystem
Project ID: 2101
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 16,002 Acres Acquired

Project Synopsis: The project area is located in southern Martin County, between I-95 and U.S. 1. The project area includes approximately 16,002 acres, which is extremely diverse ecologically. It contains large areas of forested sloughs and high quality flatwoods, as well as one of the largest remaining islands of coastal scrub. The current land use is mostly cattle grazing on unimproved pasture with intense agriculture and residential development occurring around the edges of the project area. However, the project also contains extensive wetland and upland systems. Currently, none of this project is in public ownership.

The purpose of this project is to conserve and protect the high quality habitats and to protect water quality of the South Fork of the St. Lucie River and the North Fork of the Loxahatchee River. The project area forms the headwaters to these rivers and the extensive wetland systems provide a source of groundwater base flow to both rivers. This project will conserve and protect significant habitat for endangered and threatened species such as the Florida scrub jay, the Florida sandhill crane, and the Florida scrub lizard. The area is extremely important for aquifer recharge and water supply to the coastal portion of Martin County.

Cost: Project size 16,002. 5,905 acres have been acquired at a cost of $41,897,324
Land Acquisition: 10,097 acres remaining to be acquired

Project Schedule:
Start Date: 1995
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
State*	35,394		
Local	6,503		
Total	**41,897**	**TBD**	**TBD**
Adjusted Total**	**6,201.230**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
247.34 acres plus 100 acres of the Atlantic Ridge Ecosystem and South Fork of the St. Lucie projects respectively, are currently being managed as part of Halpatiokee Park (Martin County).
*** A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Belle Meade
Project ID: 2104
Lead Agency: Florida Forever
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 28,810 Acres acquired

Project Synopsis: This area of 28,810 acres includes some of the most extensive examples of mature old-growth hydric pine flatwoods in southwest Florida not within other CARL projects. The hydrology of the hydric pine flatwoods and dwarf cypress communities within the project is relatively intact. Three archaeological sites have been recorded within the project boundaries, and additional sites may be present. The area is vulnerable to changes in the timing and amount of water flowing through it. Residential and commercial development spreading from Naples threatens it.

Cost: Project size 28,810 acres. 18,238 acres have been acquired at a cost of $39,412,158.
Land Acquisition: 10,752 acres remaining to be acquired.

Project Schedule:
Start Date: 1993
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	39,412		
Tribal			
Local			
Other			
Total	**39,412**	**TBD**	**TBD**
Adjusted Total	**33,169.054**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 1518 in Goal 1. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Big Bend Swamp/Holopaw Ranch
Project ID: 2105
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 59,132 Acres acquired

Project Synopsis: Many kinds of wildlife in the expanses of palmetto prairies, pine flatwoods, and cypress swamps in Osceola County. The Big Bend Swamp project will acquire certain rights from landowners to maintain a link of natural lands between the Bull Creek and Three Lakes Wildlife Management Area, and help the ensure survival of caracara, red-cockaded woodpeckers, sandhill cranes, and other wildlife that require these large natural areas.

Cost: Project size is 59,132** acres. 4,151 acres have been acquired at a cost of $6,829,000.
Land Acquisition: 54,981 acres remaining to be acquired.

Project Schedule:
Start Date: 2000
Finish Date: TBD

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	6,829		TBD
Tribal			
Local			
Other			
Total	**6,829**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
***This project is not entirely within SFWMD; the numbers here are that portion of the project within the SFWMD. Expenditures are pro-rated for that portion of the project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Biscayne Coastal Wetlands
Project ID: 2106
Lead Agency: South Florida Water Management District, Miami-Dade County and Florida Communities Trust
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 2,026 Acres

Project Synopsis: The Biscayne Coastal Wetlands are divided into three units that total 2,241 acres. The units lie east of L-31E canal, and adjacent to other protected lands acquired as part of Biscayne National Park and Homestead Bayfront Park. All are a mixture of red, black and white mangroves. The three units appear to be in good condition and relatively exotic-free, except along the western edge and along mosquito ditches, where there are Brazilian Pepper and Australian Pine. Acquisition of these areas would add another layer of protection to Biscayne National Park and provide opportunities for a better distribution of fresh water from L-31E. Some of the properties in this land acquisition project are necessary for the Biscayne Bay Coastal Wetlands-Phase 1, CERP Project.

Cost: Project size is 2,026 acres. 2,001 acres acquired at a cost of $12,200,814
Land Acquisition: 25 acres remaining to be acquired.

Project Schedule:
Start Date: 1998
Finish Date: TBD

Detailed Project Budget Information (1000s)

	Through 2009	**Balance to Complete**	**Total***
Federal			
State*	10,310.5		
Tribal			
Local	1,890.314		
Other			
Total	12,200.814	TBD	TBD
Adjusted Total**	3,390.131		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 2309. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: Wanda Caffie-Simpson, (561) 682-6445

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Land Acquisition
Project Name: Bombing Range Ridge
Project ID: 2107
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 45,747 Acres acquired

Project Synopsis: Public acquisition of the 45,474 acre Bombing Range Ridge project will conserve and protect significant habitat for native species and endangered and threatened species. Additionally, public acquisition will provide areas, including recreational trails for natural resource based recreation.

Cost: Project size 45,474 with 6,357 acquired at a cost of $15,003,388.
Land Acquisition: 39,117 acres remaining to be acquired

Project Schedule:
Start Date: 1998
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	15,003		
Tribal			
Local			
Other			
Total	**15,003**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Caloosahatchee Ecoscape
Project ID: 2108
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 18,497 acres acquired

Project Synopsis: The project encompasses a mosaic of wet prairie, cypress basin and dome swamp, mesic flatwoods, wet flatwoods, depressional marshes and scrub. Clearing and drainage from improved pasture development or farming have impacted the majority of the natural communities on the site. Despite the disturbed plant communities, the project provides important habitat for a variety of listed wildlife species. Most of the land is within the Barron Water Control District and canals have altered the natural hydrology to the extent that no significant natural water resources remain. Eleven archaeological sites are known from the project area; some with material dated to the archaic period.

Cost: Project size 18,497 acres. 3,180 acres acquired at a cost of $1,948,038
Land Acquisition: 15,317 acres remaining to be acquired

Project Schedule:
Start Date: 1998
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	$1,948		
Tribal			
Local			
Other			
Total	**1,948**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Project Name: Catfish Creek
Project ID: 2109
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 18,641 Acres acquired

Project Synopsis: Catfish Creek is a divers natural area extending over high scrub ridges, interspersed with lakes, next to the pristine shore of Lake Pierce. Natural communities include sandhill, scrub, scrubby flatwoods, mesic flatwoods, xeric hammock, bottomland hardwood forest, basin swamp, sandhill upland lake, wet flatwoods, blackwater stream, seepage slopes, and floodplain swamp, all are in excellent condition. The tract harbors at least 18 state listed rare plant and animal species. Rare or endangered animals include the bald eagle, wood stork, gopher tortoise, and scrub jay.

Cost: Project size 18,641 acres. 10,222 acres have been acquired at a cost of $47,410,466
Land Acquisition: 8,419 acres remain to be acquired.

Project Schedule:
Start Date: 1990
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	$47,444		
Tribal			
Local			
Other			
Total	**$47,410**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Charlotte Harbor Estuary/Flatwoods/Cape Haze
Project ID: 2111
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 12,305 Acres acquired

Project Synopsis: The project area, located northwest of Fort Myers in Charlotte and Lee Counties, includes 12,305 acres containing the largest and highest quality slash-pine flatwoods left in Southwest Florida. The area contains pockets of old growth that provide habitat for red-cockaded woodpeckers, black bears, and bald eagles, and an occasional Florida panther ranges in the area. Additionally, the tract provides habitat for rare plant communities. Several drainages flow through these flatwoods into the Charlotte Harbor Aquatic Preserve.

Cost: Project size 12,305**. 10,631 acres acquired at a cost of $17,781,504
Land Acquisition: 1,674 acres remaining to be acquired

Project Schedule:
Start Date: 1986
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	17,174		
Tribal			
Local	607		
Other			
Total	**17,781**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
***This project is not entirely within SFWMD; the numbers here are that portion of the project within the SFWMD. Expenditures are pro-rated for that portion of the project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Corkscrew Regional Ecosystem Watershed (CREW)
Project ID: 2112
Lead Agency: Florida Department of Environmental Protection/South Florida Water Mgmt District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 69,500 Acres

Project Synopsis: CREW covers 69,500 acres in Lee and Collier counties and is located at the top of the western Big Cypress watershed. It conveys surface water to private, state, and federally protected natural areas, including Corkscrew Swamp Sanctuary, Florida Panther National Wildlife Refuge, and the Everglades National Park. The area supports populations of at least two species of rare and endangered orchids and includes an unusual stand of dwarf bald cypress. Land management will be carried out the SFWMD and the Florida Fish and Wildlife Commission under contract with the SFWMD.

Hydrologic restoration of CREW will restore and protect important habitat for the Florida panther and black bear and will protect the quality of water delivered to Corkscrew Swamp Sanctuary, Florida Panther National Wildlife Refuge, ENP, and Estero Bay. NOTE: Lee County has agreed to cost share this project by purchasing properties equaling the $10,000,000 appropriated. These properties have been turned over to SFWMD for management.

Cost: Project size is 69,500** acres. 26,440 have been acquired for a cost of $54,836,337.
Land Acquisition: 43,060 acres remaining to be acquired.

Project Schedule:
Start Date: 1991
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
Federal	5,414.629		
State*	39,877.563		
Tribal			
Local	9,544.145		
Other			
Total	**54,836.337**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
***This total includes Critical CREW project lands.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Coupon Bight/Key Deer/Big Pine Key
Project ID: 2114
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 3,373 Acres acquired

Project Synopsis: The project encompasses virtually all of the undeveloped land between the Coupon Bight Aquatic Preserve and the National Key Deer Refuge on Big Pine Key. It includes the only significant sources of freshwater in the lower Keys which are critical to the survival of the endangered Key Deer. The Pine Rocklands are the best remaining anywhere. The project is habitat for 24 FNAI special plant species and 41 FNAI listed animal species.

Cost: Project size 3,373 acres. 1,558 acres have been acquired at a cost of $30,650,827
Land Acquisition: 1,815 acres remaining to be acquired

Project Schedule:
Start Date: 1985
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	30,650.8		
Tribal			
Local			
Other			
Total	**30,650.8**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Habitat and Species
Project Name: Cypress Creek/Loxahatchee
Project ID: 2172
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 4,374 Acres

Project Synopsis: Cypress Creek/Loxahatchee project is located in southern Martin and northern Palm Beach Counties, near lands recently acquired in Pal-Mar, and adjacent to Jonathan Dickinson State Park. It is a mixture of land uses and community types. Nearly 3,000 acres are mostly undisturbed natural area, containing a mixture of pine flatwoods, cypress swamps, depression marshes, and wet prairies. This area forms the headwaters of Cypress Creek, which drains to the Northwest Fork of the Loxahatchee River. The remainder of the site is cleared and drained for intense agriculture, including row crops and citrus.

Cost: Project size is 4,374 acres, of which 4,180 has been acquired at a cost of $76,992,058.
Land Acquisition: 194 acres remaining to be acquired.

Project Schedule:
Start Date: November 2002
Finish Date: Until completed

Detailed Project Budget Information ($1000s)

	Through 2005	2006	Balance to Complete	Total
Federal				
State**	41,846.365			
Tribal				
Local	693			
Other				
Total	**76,992.058**			**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: Cypress Creek/Trail Ridge Land Acquisition
Project ID: 2115
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 31,999 Acres

Project Synopsis: Cypress Creek/Trail Ridge is in southwestern St. Lucie County. The project gets its name from a large forested wetland system that once extended along the entire eastern edge of the Orlando Ridge south of Indian River County, through Allapattah Flats, and drained into the South Fork St. Lucie River. The Cypress Creek portion is also a CARL project.

Cost: Project size is 31,999 acres of which 3,285 have been acquired at a cost of $23,760,859
Land Acquisition: 28,714 acres remaining to be acquired.

Project Schedule:
Start Date: 1997
Finish Date: Upon Completion

Detailed Project Budget Information (1000s)

	Thru 2009	Balance to Complete	Total
Federal			
State*	22,040.5		
Tribal			
Local	1,720.3		
Other			
Total	**23,760.8**	**TBD**	**TBD**
Adjusted Total	**0**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: Devil's Garden
Project ID: 2183
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 82,508 acres acquired

Project Synopsis: The Devil's Garden project is located in Hendry and Collier Counties, and is approximately 82,508 acres. This vast project is being proposed to fill a gap in a corridor that will provide a large landscape for the federally endangered Florida panther. There are numerous records of panther use of the property for several years as well as numerous other rare and threatened plants and animals.

Cost: Project size: 82,508 acres.
Land Acquisition: 82,508 acres remaining to be acquired

Project Schedule:
Start Date: 2002
Finish Date: When completed

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State	0		
Tribal			
Local			
Other			
Total	**0**	**TBD**	**TBD**

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: East Coast Buffer
Project ID: 2117
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District/U.S. Department of the Interior
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed:2.A.1

Measurable Output(s): Target 49,643 Acres

Project Synopsis: The East Coast Buffer/Water Preserve Areas project involves acquisition of land located along the eastern side of the Everglades Protection Area in western Palm Beach, Broward, and Miami-Dade Counties. Most of the lands in this project area are undeveloped and include a considerable amount of wetland habitat. Current land uses include very low intensity development, pastureland, and limestone mining. The original East Coast Buffer footprint was based on a land suitability analysis which selected lands primarily on the basis of those needed for controlling seepage from the Everglades.

In addition, these lands are needed to implements several components of the Everglades Restoration Plan developed under the C&SF Project Comprehensive Review Study (CERP). The overall purposes of the CERP projects are to: (1) hold more water in the system by controlling seepage from the Everglades; (2) capture, store, and clean up excess stormwater currently lost to tide; (3) provide a buffer between the urban area and the Everglades; and (4) protect and conserve wetlands and habitat values outside the remaining Everglades. Restoration benefits include improved water supply for restoring hydropatterns of the Everglades, improved water quality and preservation of wetland habitat.

The project acres under the Florida Forever/SOR program are directed toward the purchase of natural lands acquired for their conservation, preservation value --high quality flood plains, wetlands and uplands that continue providing recreation, water resource protection, and wildlife habitat for future generations. Acres used or to be used for construction of facilities, such as STAs, reservoirs, and impoundments for Critical Restoration Projects (CRP) and Comprehensive Everglades Restoration Plan (CERP) initiatives have been removed from the Natural Lands project boundary.

Cost: Project size is 49,643 acres of which 14,658 have been acquired at a cost of $140,083,898. Land Acquisition: 34,985 acres remaining to be acquired.

Project Schedule:
Start Date: 1994
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
Federal	14,127.108		
State*	121,822.790		
Local	4,134		
Total	**140,083.898**	**TBD**	**TBD**
Adjusted Total**	**66,935.982**		

This project is no longer on the Florida Forever –BOT list (66,809 acres). The total federal grant for the East Coast Buffer/Water Preserve Area was $72,614,143.
**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 1113. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*
Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Estero Bay
Project ID: 2118
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 14,378 Acres acquired

Project Synopsis: Much of the Estero Bay Project is comprised of wetlands fronting Estero Bay (mangrove swamp, salt marsh, and salt flats). These communities provide nutrients to the Bay, contributing substantially to its biological productivity. The Bay, one of the most productive estuaries in the State, supports a diversity of wildlife, including the federally endangered bald eagle. These communities provide an important nutrient for the Bay, thus contributing to biological productivity. The wetlands are in a natural condition and help maintain high quality of water in the Estero Bay Aquatic Preserve. The project also includes the largest remaining block of rosemary scrub in southwest Florida. Several archaeological sites attributed to the Calusa Indians and their prehistoric ancestors are known to be within the project area. The project is threatened by the rapid residential development in the area.

Cost: Project size 14,358 acres. 9,392 acres have been acquired at a cost of $69,418,260.
Land Acquisition: 4,966 acres to be acquired

Project Schedule:
Start Date: 1985
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	59,220.290		
Tribal			
Local	10,197.970		
Other			
Total	**69,418.260**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name Fakahatchee Strand
Project ID: 2120
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 80,332 Acres acquired

Project Synopsis: Fakahatchee Strand is located in Collier County. Of the subtropical swamps in South Florida, Fakahatchee Strand is perhaps the most significant, being the richest in orchids and other rare tropical plants. It is the most critical to the survival of the Florida panther, and the most important for the mangrove swamps of the Ten Thousand Islands. The project area is probably the best example of the strand swamp found in the United States. It is linked hydrologically to the Everglades system and is important to the estuarine ecosystem of the Ten Thousand Islands.

Cost: Project size 80,332. 61,066 acres have been acquired at a cost of $24,905,179.
Land Acquisition: 19,266 acres remaining to be acquired

Project Schedule:
Start Date: 1980
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	24,905.179		
Tribal			
Local			
Other			
Total	**24,905.179**		**TBD**
Adjusted Total	**23,982.644**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 2307 in Goal 1. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089

Project Name: Fisheating Creek Ecosystem
Project ID: 2121
Lead Agency: Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 176,876 Acres Acquired

Project Synopsis: Fisheating Creek, the only free-flowing tributary to Lake Okeechobee, is an extensive riverine swamp flowing through Glades County and emptying into the Lake. The total project area is 176,876 acres. Currently, none of this acreage is in public ownership. The project area contains relatively undisturbed upland and wetland habitats that serve as habitat for the endangered Florida Panther and a number of threatened species, including the Florida black bear, the bald eagle, the Florida scrub jay, and the Florida sandhill crane. The federally listed wood stork and state listed white ibis are known to use the area.

This acquisition will preserve the water quality and critical habitat of this large watershed. Additionally, the acquisition will provide both hydrologic and water quality benefits for Lake Okeechobee, located downstream. When states in Lake Okeechobee are high, Fisheating Creek serves as an important feeding area for wading birds, which typically use the lake marshes. Restoration requirements would be minimal if any, as most of the property remains in a natural state.

Cost: Project size 176,876 acres. 59,910 acres have been acquired at a cost of $101,928,563.
Land Acquisition: 116,966 remaining to be acquired

Project Schedule:
Start Date: 1999
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2008	2009	2010	Balance to complete	Total
Federal					
State*	$101,928.5				
Tribal					
Local					
Other					
Total	**$101,928.5**				**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects. Breakdown of Fisheating Creek total acres acquired is 59,910.07 - 9,879.80 fee, 50,030.27 conservation easement*

Contact: John Outland, (850) 245-2089

Project Name: Florida Keys Ecosystem
Project ID: 2122
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 13,632 Acres acquired

Project Synopsis: This project, in conjunction with the Complete National Key Deer Refuge proposal, includes the remaining 15,336 acres of tropical hardwood hammocks and pine rocklands of significant size and quality remaining in the Florida Keys from southern Key Largo to Sugarloaf Key.

Cost: Project size 13,632 acres. 2,765 acres have been acquired at a cost of $94,995,304.
Land Acquisition: 10,867 acres remaining to be acquired

Project Schedule:
Start Date: 1992
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	94,995.304		
Tribal			
Local			
Other			
Total	**94,995.304**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Half Circle L Ranch
Project ID: 2185
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1.

Measurable Output(s): 11,269 Acres acquired

Project Synopsis: Located in Collier & Hendry Counties the project is approximately 11,269 acres. There are two owners and sponsored by Turrell and Associates. The project is proposed for fee simple acquisition. FNAI ranks the biological conservation priority for the project as medium high. The project is located within primary habitat zones for the Florida panther and the Florida Black bear, and compliments ongoing conservation efforts in the region.

Cost: Project size: 11,269 acres needed.
Land Acquisition: 11,269 acres remaining to be acquired.

Project Schedule:
Start Date: 2003
Finish Date: when completed

Detailed Project Budget Information (1000s)

	2009	**Balance to complete**	**Total**
Federal			
State	0		
Tribal			
Local			
Other			
Total	**0**	**TBD**	**TBD**

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Indian River Lagoon Blueway**
Project ID: 2124
Lead Agency: Department of Environmental Protection and South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 1,617 Acres Acquired

Project Synopsis: This project consists of wetlands, dominated by red and black mangroves, with a few freshwater wetlands.

This acquisition is part of a larger effort by several counties in both the SFWMD and St. Johns River WMD to protect, preserve and restore the Indian River Lagoon. These lands represent the only two undeveloped parcels along the Indian River in St. Lucie County that are not in public ownership. Mosquito control impoundments are present on both tracts. Public ownership of these parcels would allow installation of operable water control structures that allow flushing of the mosquito control impoundments during most of the year. This flushing will provide an important source of mangrove detrital matter, which is critical to the health of the estuary. Public ownership will also prevent aerial applications of chemical pesticides for mosquito control.

In 1997, protection was expanded to include lands in Martin County as well.

Cost: Project size 1,617 acres. 750 acres have been acquired at a cost of $17,846,530.
Land Acquisition: 867 acres remaining to be acquired

Project Schedule:
Start Date: 1998
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
Federal	$3,332.074		
State*	$11,615.272		
Tribal			
Local	$2,899.272		
Other			
Total	**$17,846.530**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
***This project is not entirely within SFWMD; the numbers here are that portion of the project within the SFWMD. Expenditures are pro-rated for that portion of the project.*

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project name: Juno Hills/Dunes
Project ID: 2125
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 590 Acres acquired

Project Synopsis: This 590-acre site in Palm Beach County contains one of the largest and best remaining examples of the now rare coastal scrub. The extremely rare four-petal pawpaw, known only from a few sites in the Southeast Florida coastal scrub, and at least three other rare species of scrub plants occur in the Juno Hills project. Such rare animals as the scrub jay, scrub lizard, gopher tortoise, and red widow spider also inhabit the scrub here. Endangered sea turtles nest on the Atlantic beach/dune portion of the property. A remnant portion of coastal hammock is located west of the dune system. Scrubby slash pine flatwoods, disturbed basin swamps, and estuarine tidal swamps cover parts of the project area.

Cost: Project size 590 acres. 576 acres have been acquired at a cost of $41,892,718.
Land Acquisition: 14 acres remaining to be acquired

Project Schedule:
Start Date: 1994
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	15,023.556		
Tribal			
Local	26,869.162		
Other			
Total	**41,892.718**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Jupiter Ridge
Project ID: 2176
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 280 Acres acquired

Project Synopsis: The Jupiter Ridge Natural Area is one of the best remaining examples of the Florida Scrub ecosystem in Palm Beach County. Less than 2% of the historic Florida scrub still exists in the county, making preservation of this endangered natural community extremely important. This 287-acre natural area is located in the Town of Jupiter. It is bordered on the north by commercial development, on the east by U.S. Highway 1, on the west by the Intracoastal Waterway, and on the south by the Bluffs residential development. Small areas of scrubby flatwoods, mangrove swamp and freshwater wetland ecosystems also are present. These diverse habitats support many threatened and endangered species.

Cost: Project size is 280 acres, of which 271 has been acquired for a cost of $23,099,950
Land Acquisition: 9 acres remaining to be acquired.

Project Schedule: On-going
Start Date: 1991
Finish Date: TBD.

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	$11,047.600		$11,047
Tribal			
Local	$12,052.350		$12,052
Other			
Total	**$23,099.950**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Kissimmee-St. Johns Connector**
Project ID: 2126
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 9,463 Acres acquired

Project Synopsis: Encompassing the watersheds of the Kissimmee and St. Johns Rivers, the Kissimmee-St. Johns Connector project will provide an approximately 9,463 acre hydrological and habitat connection. Though most of the area has been farmed and ranched for years many of the natural communities are in fair condition. Portions of the project provide habitat for Florida sandhill crane, crested caracara, hand ferns and numerous other plants and animals. The project is proposed primarily as a less-than-fee simple acquisition.

The project lies in northeastern Okeechobee and southwestern Indian River counties. It is contiguous with the Ordway-Whittell Kissimmee Prairie Sanctuary (OWKPS) to the west and the Fort Drum Marsh Conservation Area to the east. Kissimmee Prairie Preserve State Park lies immediately to the west of the OWKPS.

Cost: Project size**:** 9,463 acres.
Land Acquisition: 9,463 acres remaining to be acquired.

Project Schedule:
Start Date: 2001
End Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State			
Total	**$0**	**TBD**	**TBD**

***This project is not entirely within SFWMD; the numbers here are that portion of the project within the SFWMD. Expenditures are pro-rated for that portion of the project.*

Contact: John Outland (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration
Project Name: Kissimmee River (Lower Basin) Land Acquisition
Project ID: 2127
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 75,617 Acres

Project Synopsis: The Lower Basin project includes those lands in the historic river floodplain and along the C-38 canal in Pools B, C and D; Pool A, Chandler Slough, and Istokpoga Canal Basin; all of which are components of the Kissimmee River Restoration Project.

Cost: Project size is 75,617 acres. 72,032 acres have been acquired for a cost of $174,833,078. Land Acquisition: 3,585 acres remaining to be acquired.

Project Schedule:
Start Date: 1985
Finish Date: TBD

Detailed Project Budget Information (1000s)

	Thru 2009	Balance to complete	Total*
Federal			
State**	174,833.078		
Tribal			
Local			
Other			
Total	**174,833.078**	**TBD**	**TBD**

**Total includes lands for several components of the Kissimmee River Restoration project.*
***State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Hydrological Restoration
Project Name: Kissimmee River (Upper Basin) Land Acquisition (a/k/a Kissimmee Chain of Lakes)
Project ID: 2128
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Target 38,591 Acres

Project Synopsis: In the early 1990s it was determined that not enough water would be available in the upper chain of lakes to provide year round base flow for the restored Kissimmee River. As a result the scope of the Kissimmee River Restoration project includes the acquisition of land around the shoreline of the Kissimmee Chain of Lakes between elevations 52.5′ and 54.0′. This land is needed to support the KRR Headwaters Revitalization Regulation Schedule, which will raise the seasonal high stage in Lakes Kissimmee, Hatchineha and Cypress 1.5′ to 54.0′ NGVD. This project is completed.

Cost: Project size is 38, 591 acres of which 35,427 has been acquired for a cost of $85,919,400. Land Acquisition: 3,164 acres remaining to be acquired.

Project Schedule:
Start Date: 1990
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total*
Federal			
State**	85,919.400		TBD
Tribal			
Local			
Other			
Total	**85,919.400**		**TBD**

**The total includes Kissimmee River Restoration Project Lands.*
***State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project name: Lake Wales Ridge Ecosystem**
Project ID: 2129
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 16,096 Acres acquired

Project Synopsis: The proposed refuge was authorized in November 1992 and would comprise 16,096 acres in Osceola and Polk Counties. The area forms the headwaters boundary between the Kissimmee River basin and the Peace River basin. It is the oldest terrestrial ecosystem in the southeast region of the US, and is probably the most threatened ecosystem in South Florida due to citrus conversion, residential housing construction, and commercial development. It supports 24 species of endangered, threatened, and candidate plant species as well as four threatened or endangered animal species.

Cost: Project size 16,096 acres. 10,520 acres acquired at a cost of $32,412,988.
Land Acquisition: 5,576 acres remaining to be acquired.

Project Schedule:
Start Date: 1992
Finish Date: Upon completion

Detailed Project Budget Information ($1000)

	Thru 2009	**Balance to complete**	**Total**
Federal	6,928		
State*	25,484.988		
Tribal			
Local			
Other			
Total	**32,412.988**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
***The SFWMD Henscratch Ranch project falls within the boundary of the Lake Wales Ridge project. Acres acquired and dollars spent are included in the reported Lake Wales Ridge numbers.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Loxahatchee Slough Land Acquisition
Project ID: 2132
Lead Agency: South Florida Water Management District/Palm Beach County
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 13,099 Acres

Project Synopsis: The Loxahatchee Slough Project is located in Palm Beach County and covers approximately 13,099 acres. It contains a mixture of habitat types, including pine flatwoods, cypress forest, and wet prairie. The present land use is native range. These lands are adjacent to the Loxahatchee Slough Corridor, an area that has been pledged for protection by the current landowner. Palm Beach County will lead the land management effort for this project and holds title to land.

The purpose of this project is to provide additional wetland and upland buffer to the Loxahatchee Slough Corridor and to preserve critical foraging and nesting sites for wildlife in an area that is undergoing rapid urban development. This system is important for storing surface water runoff and providing groundwater base flow to Canal 18 and the Loxahatchee River. The slough, which is the initial headwaters of the Loxahatchee River, can also spill over to the south and contribute to the Everglades watershed under certain hydrologic conditions.

Cost: Project size is 13,099 acres. 12,392 acres acquired for $35,907,218.
Land Acquisition: 707 acres remaining to be acquired.

Project Schedule:
Start Date: 1996
Finish Date: Upon Completion

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to complete	Total
Federal			
State*	6,743.1		6,743
Tribal			
Local	29,164.118		29,164
Other			
Total	**35,907.218**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project name: Dade County Archipelago
Project ID: 2134
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 884 Acres acquired

Project Synopsis: This project includes 884 acres in Miami-Dade County and contains some of the most outstanding examples of rockland hammock that remain in Miami-Dade County, as well as the best remaining examples of the highly endangered pine rockland natural community outside of Everglades National Park. The Miami Rockridge Pinelands sites located within the County's urban development boundary are considered upland and developable. All sites are zoned residential, agricultural, or general use. The trees and endemics are also sensitive to adjacent development and agricultural activities.

Cost: Project size 884 acres. 535 acres have been acquired at a cost of $23,717,314.
Land Acquisition: 379 acres remaining to be acquired

Project Schedule:
Start Date: 1994
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	11,717.314		
Tribal			
Local	12,000		
Other			
Total	**23,717.314**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Model Lands Basin Acquisition
Project ID: 2135
Lead Agency: South Florida Water Management District and Miami-Dade County
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: **Primary**: 2.A.1

Measurable Output(s): Target 54,458 acres

Project Synopsis: The Model Lands project is located in Miami-Dade County and encompasses the lands between US 1 and Biscayne National Park. The project area of 54,458 acres includes a variety of habitats, both freshwater and estuarine. Lands within the project were identified in the Restudy as necessary for treatment of stormwater from the north and L-31E Canal prior to releasing it to tide or into other project lands to the south. Most of the project lands will be included in the Biscayne Bay Coastal Wetland and C-111 North Spreader Canal, CERP projects. The SFWMD and Miami-Dade County partner in the acquisition and management of lands for the project. The northern portions of the project and the areas near canals, roads, and other areas of disturbance are heavily infested with Australian Pine and Brazilian Pepper. The majority of the project area is undisturbed fresh and saltwater wetlands. These lands form a contiguous habitat corridor with Everglades National Park, Southern Glades SOR project, Biscayne National Park, Crocodile Lakes National Wildlife Refuge, and John Pennekamp State Park.

Cost: Project size is 54,458 acres. 15,670 acres acquired at a cost of $40,688,018.
Land Acquisition: 38,788 acres remaining to be acquired.

Project Schedule:
Start Date: 1994
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to complete	Total
Federal			
State*	8,936.104		
Tribal			
Local	31,751.914		
Other			
Total	**40,688.018**	**TBD**	**TBD**
Adjusted Total**	**1,563.126**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 2310 and 1114. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: North Fork St. Lucie River
Project ID: 2138
Lead Agency: Florida Department of Environmental Protection/South Florida Water Mgmt District
Authority: Florida Forever/Save Our Rivers (SOR)/CERP

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 3,714 Acres Acquired

Project Synopsis: This 3,714-acre project includes a stretch of the North Fork approximately 6 miles long, extending from the White City bridge to Canal 24. This project will extend the boundary of the existing publicly owned St. Lucie River Aquatic preserve. More than 80 percent of the project area is comprised of wetlands within the river floodplain. In addition to the river floodplain, this project includes 175 acres of high quality uplands habitat such as high hammock, pine flatwoods, and sand pine scrub.

The purpose of this project is to preserve the floodplain habitat and to protect the water quality of the St. Lucie River from the rapidly encroaching urban development. Floodplain wetlands help decrease current velocities in the river, thereby attenuating flood waters. This action also facilitates recharge of the surficial aquifer and filters out nutrients, pollutants and suspended solids. This stretch of the river is classified as an Outstanding Florida Water. Boating, fishing and canoeing are actively pursued on this part of the river.

Cost: Project size 3,714 acres. 482 acres have been acquired at a cost of $3,344,865.
Land Acquisition: 3,232 acres remaining to be acquired

Project Schedule:
Start Date: 1988
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
Federal			
State*	3,004.292		
Tribal			
Local	340.573		
Other			
Total	**3,344.865**	**TBD**	**TBD**
Adjusted Total**	**0**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 1101. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089
Hyperlink: http://www.dep.state.fl.us/stland/oes/carlmain.htm

Program Name: Land Acquisition
Project Name: North Key Largo Hammocks
Project ID: 2139
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 5,415 Acres acquired

Project Synopsis: The hammocks of north Key Largo form the largest stand of West Indian tropical forest in the United States. This rapidly disappearing forest, which is called Rockland forest, supports a wide diversity of rare plant and animal species. Degraded water quality is becoming an increasing issue in Florida Bay and the Florida Keys, as natural lands are converted to residential housing and commercial development. The project area has over 10 miles of shoreline that directly influences the adjacent waters of John Pennekamp Coral Reef State Park. As in other parts of the Keys, development seriously threatens this area.

Cost: Project size 5,415 acres. 3,544 acres have been acquired at a cost of $76,542,140.
Land Acquisition: 1,871 acres to be acquired

Project Schedule:
Start Date: 1983
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	76,542.140		
Tribal			
Local			
Other			
Total	**76,542.140**		**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089
Hyperlink: http://www.dep.state.fl.us/stland/oes/carlmain.htm

Program Name: Land Acquisition
Project Name: Okaloacoochee Slough
Project ID: 2141
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 35,201 Acres

Project Synopsis: This site contains more than 35,201 acres in Hendry and Collier Counties. It is a major tributary to Fakahatchee Strand and Big Cypress National Preserve. It is dominated by a central slough, consisting of sawgrass marshes and wet prairies, with fringes of live oak/cabbage palm hydric hammocks. Most of the pines have been logged, but otherwise the site is pristine. Okaloacoochee Slough is critical habitat for the Florida panther.

Some exotic treatment is needed to control minor infestations of Brazilian pepper and melaleuca. Hydrologically, the property remains undisturbed.

Cost: Project size is 35,201 acres. 34,984 acres have been acquired at a cost of $20,570,673.
Land Acquisition: 217 acres remaining to be acquired.

Project Schedule:
Start Date: 1996
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
Federal			
State*	20,570.673		20,570
Tribal			
Local			
Other			
Total	**20,570.673**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Okeechobee Battlefield
Project ID: 2142
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 211 Acres acquired

Project Synopsis: The Okeechobee Battlefield project represents a portion of one of the last battles of the Second Seminole Indian war. The 211-acre project consists of improved pasture and freshwater marsh, and provides the backdrop for a yearly reenactment of the battle. The site is home to bald eagles, and offers potential habitat for the crested caracara and wood stork. The evaluation team visited the project on September 24, 2001.

The project is situated adjacent to U.S. Highway 441/98 along the northeastern rim of Lake Okeechobee, approximately five miles southeast of the town of Okeechobee in southern Okeechobee County. There are no adjacent or close by conservation lands in the FNAI database, however South Florida Water Management District lands Paradise Run and Kissimmee River are approximately 8 and 12 miles to the west, respectively. St. Lucie County's Bluefield Ranch and St. Lucie Pinelands are approximately 8.5 miles to the east, and 12 miles to the northeast, respectively.

Cost: Project size is 211 acres. 145 acres have been acquired at a cost of $3,217,250.
Land Acquisition: 66 acres remaining to be acquired.

Project Schedule:
Start Date: 2001
Finish Date: Upon completion

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to complete	Total
Federal			
State*	3,217.250		
Total	**3,217.250**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Osceola Pine Savannas
Project ID: 2143
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 6,357 Acres acquired

Project Synopsis: The project covers an area of old beach ridges and intervening swales, with high-quality, longleaf pine flatwoods interrupted by cypress strands, cypress domes, and wet prairies. There are also extensive dry prairies and patches of oak or sand pine scrub, all of which are natural communities of the Kissimmee Prairie. Six FNAI-listed animals occur on the site, including sandhill crane, wood storks, and crested caracara.

Cost: Project size 6,357** acres. 1,333 acres have been acquired at a cost of $310,000
Land Acquisition: 5,024 acres remaining to be acquired.

Project Schedule:
Start Date: 1995
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	310		
Tribal			
Local			
Other			
Total	**310**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
***This project is not entirely within SFWMD; the numbers here are that portion of the project within the SFWMD. Expenditures are pro-rated for that portion of the project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Pal-Mar
Project ID: 2144
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)/CERP

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 35,760 Acres Acquired

Project Synopsis: Pal-Mar is located in Palm Beach and Martin Counties, east of the J.W. Corbett Wildlife Management Area and west of Jonathan Dickinson State Park. The total project encompasses 35,760 acres, including some of the highest quality pine flatwoods in southern Florida in an ecotone between pine flatwoods and the treeless Everglades. It also includes high quality prairie and savanna habitat.

The primary purpose of this project is to conserve and protect environmentally unique lands that contain native, relatively unaltered flora and fauna. Acquisition of this project will form an extensive wildlife corridor connecting Jonathan Dickinson State Park, Pal-Mar, J.W. Corbett Wildlife Management Area, and DuPuis Reserve. By protecting native flatwoods, prairies, and marshes, this project will protect critical habitat for at least four endangered bird species, including the Florida sandhill crane and Everglades snail kite, and for the endangered Florida panther.

Cost: Project size 35,760 acres. 27,279 acres have been acquired at a cost of $95,778,065.
Land Acquisition: 8,481 acres remaining to be acquired.

Project Schedule:
Start Date: 1992
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
Federal			
State*	75,465.184		
Tribal			
Local	20,312.881		
Other			
Total	**95,778.065**		**TBD**
Adjusted Total**	**95,560.380**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 1101. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Panther Glades
Project ID: 2145
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 60,007 acres acquired

Project Synopsis: The area consists of a landscape mosaic of forested uplands interspersed among forested wetland communities. The ecosystem encompassed by the project is a large landscape and watershed in south-central Hendry County that includes portions of both the Big Cypress and Kissimmee Billy Strand. The Panther Glades project is important to many wildlife species, particularly those that require extensive areas of habitat to maintain viable populations.

Cost: Project size 60,007. 21,724 acres have been acquired at a cost of $75,049,836
Land Acquisition: 38,283 acres remaining to be acquired

Project Schedule:
Start Date: 2001
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	$75,049.836		
Tribal			
Local			
Other			
Total	**$75,049.836**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Paradise Run Land Acquisition
Project ID: 2146
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 3,841 Acres

Project Synopsis: This acre project lies west of canal C-38, between Water Control Structure S-65E and Lake Okeechobee in Glades and Okeechobee Counties. Current land use is predominantly improved pasture and cattle grazing but agricultural activities in the area are intensifying as exemplified by new, nearby row crops (potatoes), sod extraction, and citrus. The remnant river run and adjacent wetlands remain largely intact but have no continuous water flow; hence water quality (especially dissolved oxygen) has become poor and organics have accumulated deeply in the remnant river run. This area consistently has greater wading bird and waterfowl use than most any area of the Kissimmee River. Its close proximity to Lake Okeechobee puts it in foraging flight distance of the large wading bird rookeries. Restoration would be fairly simple because the remnant river run and wetlands are largely intact, and water could gravity flow from Pool E (elevation 21 feet msl) one-half mile to Paradise Run (elevation 16 feet msl). The C-38 canal would be bypassed.

Cost: Total*: Project size 3,841 acres. 3,447 acres have been acquired at a cost of $4,908,582.
Land Acquisition: 395 acres remaining to be acquired

Project Schedule:
Start Date: 1998
Finish Date: TBD

Detailed Project Budget Information (1000s)

	Thru 2009	Balance to complete	Total
Federal			
State*	$4,908.582		
Tribal			
Local			
Other			
Total	**$4,908.582**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Hydrological Restoration, Habitat and Species
Project Name: Lake Hatchineha Watershed
Project ID: 2147
Lead Agency: Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 6,437 Acres

Project Synopsis: Parker – Poinciana is located in Osceola and Polk counties, and is located between the Disney Wilderness Preserve and District owned lands already acquired as part of the Kissimmee Chain of Lakes SOR project along the north shore of Lake Hatchineha. It contains a variety of community types, including mesic flatwoods, a large cypress/bay head, logged over flatwoods and hydric hammock along the Lake Hatchineha shoreline. The total project acreage is 6,437 acres.

Cost: Total: Project size 6,437 acres.
Land Acquisition: 6,437 acres remaining to be acquired

Project Schedule:
Start Date: 1996
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to Complete	Total
Federal			
State	0		
Tribal			
Local			
Other			
Total	**0**	**TBD**	**TBD**

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Contact: John Outland, (850) 245-2089

Program Name: Restoration Program: Hydrological Restoration, Water Quality, Habitat and Species,
Project Name: Pine Island Slough Ecosystem
Project ID: 2186
Lead Agency: Department of Environmental Protection/South Florida Water Management District
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 21,583 Acres

Project Synopsis: The Pine Island Slough Ecosystem project consists of approximately 49,583 acres in Osceola and Indian River Counties, Florida. About 21,583 acres are within the South Florida Ecosystem boundary. This landscape - intact ecological upland and wetland habitat - is reminiscent of the kind of landscape that once dominated Central Florida in pre-European settlement times. It is contiguous with the Kissimmee Prairie Preserve State Park, which is noted for its high quality resource values, and the project's acquisition would allow for the protection of and management of additional high ecological quality habitats in an area of Florida with significant vertebrate wildlife, hydrological values and other important natural resource attributes.

Cost: Total: Project size 21,583*.
Land Acquisition: 21,583 acres remain to be acquired.

Project Schedule:
Start Date:
Finish Date: TBD

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State	0		
Tribal			
Local			
Total	**0**	**TBD**	**TBD**

**This project is not entirely within SFWMD; the numbers here are that portion of the project within the SFWMD. Expenditures are pro-rated for that portion of the project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Pineland Site Complex
Project ID: 2148
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 206 Acres acquired

Project Synopsis: This internationally significant archaeological site was inhabited by the Calusa for over a thousand years, and includes substantial midden mounds, a burial mound, remnants of an Indian-engineered canal, and buried deposits containing organic remains. Natural habitats within the project area include tidal saltern, a tidal creek, intertidal shoreline, and a large tract of mangrove wetland. Ponds on the site are important to white ibis, egrets, herons, and wood stork.

Cost: Total: Project size 206 acres. 57 acres have been acquired at a cost of $1,751,874.
Land Acquisition: 149 acres to be acquired

Project Schedule:
Start Date: 1996
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	1,355		
Tribal			
Local	396.874		
Other			
Total	**1,751.874**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Ranch Reserve
Project ID: 2178
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 2,217Acres acquired

Project Synopsis: The project consists of four cattle ranches on the Osceola Plain west of and above the St. Johns River marshes. Mesic flatwoods interrupted by depression marshes cover about 40 percent of the project area. Swamps and hammocks make up much of the remaining natural communities. At least 24 FNAI-listed animals are known or reported from the project, including red-cockaded woodpeckers and one of the best populations of sandhill cranes in Florida.

Cost: Total: 2,217** acres. 67 acres have been acquired at a cost of $39,286.
Land Acquisition: 2,150 acres remaining to be acquired

Project Schedule:
Start Date: 1997
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	39.286		
Tribal			
Local			
Other			
Total	**39.286**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
***This project is not entirely within SFWMD; the numbers here are that portion of the project within the SFWMD. Expenditures are pro-rated for that portion of the project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Rookery Bay
Project ID: 2149
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2 - Restore and Enhance the Natural System

Measurable Output(s): 18,721 acres acquired

Project Synopsis: This project consists of 18,721 acres in Collier County and provides an outstanding example of a subtropical estuarine system. Its mangroves shelter important nesting colonies of water birds, and feed and protect many aquatic animals, which are the foundation of a commercial and sport fishery. The natural communities associated with the estuary are relatively undisturbed and range from mangrove and marsh to flatwoods and maritime hammock. As part of the national estuarine research reserve system, Rookery Bay is representative of the West Indian biogeographic type. The area is believed to have good potential for archaeological investigations. The area is threatened by dredging and filling associated with the rapid development of the area.

Cost: Project size 18,721 acres. 18,636 acres have been acquired at a cost of $49,000,833.
Land Acquisition: 85 acres remaining to be acquired

Project Schedule:
Start Date: 1980
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal	3,500		
State*	45,500.833		
Tribal			
Local			
Other			
Total	**49,000.833**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Rotenberger-Holey Land Tract
Project ID: 2150
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 79,170 Acres acquired

Project Synopsis: The Rotenberger/Holey Lands were historically an integral part of the Everglades hydrological system. The natural communities of the project consisted of shallow sawgrass marshes with tree islands interspersed. Much of the area has been disturbed. Restoration of the area is important to the restoration of the water quality and quantity to the Everglades.

Cost: Total: Project size 79,170 acres. 70,833 acres have been acquired at a cost of $20,114,395.
Land Acquisition: 8,337 acres remaining to be acquired

Project Schedule:
Start Date: 1984
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	**Balance to complete**	**Total**
Federal			
State*	20,114.395		
Tribal			
Local			
Other			
Total	**20,114.395**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Shingle Creek
Project ID: 2151
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 7,689 Acres

Project Synopsis: Shingle Creek Swamp is located in southern Orange and northern Osceola counties. It is a major receiving body for stormwater runoff from areas south and southwest of Orlando. The Orange County portion of the swamp is more than 1.5 miles wide, and is dominated by Cypress, Loblolly Bay, and Red Maple. Shingle Creek itself was channelized in the 1920s and it borders the eastern edge of the swamp. Most to the floodplain in Osceola County is intact, but adjacent uplands, which historically were wiregrass/longleaf pine-dominated systems, have been cleared and planted as improved pasture. As mitigation for the Orlando Beltway Southern Connector, a hydrologic restoration plan was implemented in 1995, which equalizes water levels and sheetflow across the Orange County portion of Shingle Creek Swamp. Osceola County in partnership with SFWMD has acquired an additional 194 acres within the project, granting the District a conservation easement for funding $2,666,174 of the land acquisition cost.

Cost: Project size 7,689. 2,626 acres have been acquired at a cost of $4,365,170.
Land Acquisition: 5,063 acres remaining to be acquired

Project Schedule:
Start Date: 1987
Finish Date: Upon completion

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to Complete	Total
Federal			
State	4,365.170		4,372.3
Tribal			
Local			
Total	**4,365.170**	**TBD**	**TBD**

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: Six Mile Cypress
Project ID: 2152
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 2,193 Acres

Project Synopsis: Six Mile Cypress Slough is located in Lee County southeast of the City of Fort Myers. It extendgs from State Road 82 southwesterly for approximately nine miles to Ten Mile Canal. The Slough averages 1,500 feet in width, and consists of Cypress swamps, interspersed with numerous open ponds. It is ringed with pine flatwoods, transitional hardwoods, wet prairies, and stands of Melaleuca. The total project size is 1,966 acres.

Cost: Project size 2,193. 819 acres have been acquired at a cost of $36,582,697.
Land Acquisition: 1,374 acres remaining to be acquired

Project Schedule:
Start Date: 1987
Finish Date: Upon completion

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to Complete	Total
Federal			
State*	1,770.323		
Tribal			
Local	34,812.374		
Other			
Total	**36,582.697**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: South Savannas
Project ID: 2154
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 6,046 Acres Acquired

Project Synopsis: The Savannas forms a chain of marshes and lakes that separate the inland pine flatwoods from the coastal scrub on the Atlantic Ridge in St. Lucie and Martin Counties. The State has acquired most of the lands within the project through the CARL program. The District in partnership with Martin County acquired ownership of a single 77-acre tract and transferred title to the property to the State of Florida in 1999. It is now and will continue to be managed by the Department of Environmental Protection as the Savannas Preserve.

Cost: The project totals 6,046 acres. 5,182 acres have been acquired at a cost of $20,902,290.
Land Acquisition: 864 acres remaining to be acquired.

Project Schedule:
Start Date: 1981
Finish Date: Upon completion

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to Complete	Total
Federal			
State*	19,902.290		
Tribal			
Local	1,000		
Other			
Total	**20,902.290**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Southern Glades
Project ID: 2155
Lead Agency: South Florida Water Management District and Miami-Dade County
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: **Primary:** 2.A.1

Measurable Output(s): Target 34,093 Acres

Project Synopsis: This 34,093-acre project is located adjacent to the C-111 Canal, between U.S. 1 and Everglades National Park. The project land is dominated by Everglades sawgrass marsh and tropical hardwood hammock. Land management will be carried out by the SFWMD and Fish and Wildlife Conservation Commission and the land is currently open for public use. This land is needed for the C-111 Canal project and C-111 Spreader Canal CERP project. These projects will benefit the flow of water into Everglades National Park and Northeast Florida Bay.

The project acres under the Florida Forever/SOR program are directed toward the purchase of natural lands acquired for their conservation, preservation value --high quality flood plains, wetlands and uplands that continue providing recreation, water resource protection, and wildlife habitat for future generations. Acres used or to be used for construction of facilities, such as STAs, reservoirs, and impoundments for Critical Restoration Projects (CRP) and Comprehensive Everglades Restoration Plan (CERP) initiatives have been removed from the Natural Lands project boundary.

Cost: Total: Project size 34,093 acres. 33,692 acres have been acquired at a cost of $15,363,259.
Land Acquisition: 401 acres remaining to be acquired

Project Schedule:
Start Date: 1964
Finish Date: Upon completion

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to complete	Total
Federal			
State*	12,902.651		
Tribal			
Local	2,460.608		
Other			
Total	**15,363.259**	**TBD**	**TBD**
Adjusted Total**	**7,635.574**		

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 2310. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project name: Southern Golden Gate Estates (Save Our Everglades)- Picayune Strand
Project ID: 2156
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 55,127 Acres acquired

Project Synopsis: The Southern Golden Gate Estates (SGGE) encompasses an approximately 94 square mile area of sensitive environmental landscape in South Central Collier County. It is an important surface water storage and aquifer recharge area with a unique ecology of cypress, wet and dry prairie, pine flatwoods and hardwood hammock swamp communities; and includes three flowways that contribute freshwater input to the Ten Thousand Island estuary of the western Everglades watershed. The area supports a diversity of wildlife, including at least a dozen endangered and threatened vertebrates as well as a large variety of rare orchids and other air plants. The area is linked hydrologically to the Everglades ecosystem and contains remnants of two large cypress strands, the Lucky Lake and Picayune Strands. The rapid urbanization of southwest Florida is posing a continuous and increasing threat to the wildlife habitat and maintenance of water quality within SGGE. Acquisition of lands within SGGE will preserve large pieces of the South Florida ecosystem. Ultimately, this will contribute to the formation of a continuous public conservation area extending across South Florida from the Gulf Coast to approximately 10 miles from the Atlantic Ocean, protecting the Everglades ecosystem from the encroachment of residential, commercial, and industrial developments.

Cost: Project size 55,127 acres. 54,322 acres have been acquired at a cost of $131,406,207.
Land Acquisition: 805 acres remaining to be acquired.

Project Schedule:
Start Date: 1984
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2008	**2009**	**2010**	**Balance to complete**	**Total**
Federal	38,084.965				
State*	93,228.177				
Tribal					
Local					
Other					
Total	131,313.142				**TBD**
Adjusted Total**	0				

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 2309. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Ten Mile Creek-Natural Lands
Project ID: 2180
Lead Agency: Department of Environmental Protection/South Florida Water Mgmt District
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 240 Acres Acquired

Project Synopsis:
The ten mile creek natural areas are those areas of the 10 Mile Creek project that are outside of the levee footprint of the reservoir. These areas include small pockets of hammock vegetation along 10 Mile Creek, an oxbow island north of the reservoir, and the Gordy Road Recreation Area (managed by St. Lucie County under a 50 year lease) east of the 10 Mile Creek STAs.

Cost: Project size 240. 113 acres have been acquired at a cost of $338,644.
Land Acquisition: 127 acres remain to be acquired.

Project Schedule:
Start Date: 1998
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2009	Balance to complete	Total
State*	338.644		
Local			
Federal			
Total	**338.644**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Tiger Cattle Company Ranch
Project ID: 2182
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 2,230 Acres

Project Synopsis: The proposal is comprised of two large, impressive, basin marshes (making up approximately 20 percent of the site's landcover), along with scattered depression marshes, dry prairie, mesic fl atwoods, and mesic hammock and remnant upland natural communities, imbedded in a matrix of extensive areas of improved pasture (approximately 50 percent). The basin marshes are oriented north-south through the middle third of the site and most of the remaining natural areas occur adjacent to these marshes. Improved pastures make up most of the eastern and western thirds of the property. A network of relatively shallow ditches/canals and roads have altered hydrology to some extent. Currently, family and friends utilize the land for recreation and wildlife viewing. There is no hunting lease on the property. While the largest marsh and some of the flatwoods have burned recently, prescribed burning apparently is not used on a regular basis.

Acquiring the conservation easement over the Tiger Cattle Company Ranch fulfills Florida Forever goals of increasing the number of acres protected with alternatives to fee-simple acquisition; increasing the number of acres of preserved Strategic Habitat Conservation Areas; creating significant landscape linkages by helping connect the preserved lands of the Kissimmee Prairie Preserve State Park, the Kissimmee-St. Johns River Connector Florida Forever project and the Pine Island Slough Florida Forever project; and protecting 733 acres of surface-water protection.

Cost: Project size 2,230 acres.
Land Acquisition: 2,230 acres remaining to be acquired

Project Schedule:
Start Date: 2009
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to complete	Total
Federal			
State*			
Tribal			
Local			
Other			
Total	**0**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland, (850) 245-2089

Program Name: Restoration Program: Habitat and Species
Project Name: Twelve Mile Slough
Project ID: 2158
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 15,835Acres

Project Synopsis: This site contains 15,835 acres in Hendry County and is tributary to the much larger and regionally significant Okaloacoochee Slough. It contains a mosaic of uplands and wetlands, as well as improved pasture areas which appear to be reverting to native range. Based on a 1993 FGFWFC report, this single-owner tract provides habitat for the endangered Florida panther. Significant restoration on the site is necessary to correct overdrainage of the wetland communities.

Restoration and protection is important because the Twelve Mile Slough is a headwater tributary to Okaloacoochee Slough, which supplies a major source of water for Fakahatchee Strand State Preserve and Big Cypress National Preserve. Surface water storage in the numerous wetlands provides for ground-water recharge of the underlying surficial aquifer and provides surface water supply to the Caloosahatchee River.

Cost: Project size 15,835 acres. 7,486 acres have been acquired at a cost of $11,000,000
Land Acquisition: 8,349 acres remaining to be acquired

Project Schedule:
Start Date: 1998
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2009	Balance to complete	Total
Federal			
State*	11,000		
Tribal			
Local			
Other			
Total	**11,000**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*

Contact: John Outland, (850) 245-2089

Program Name: Restoration Program: Habitat and Species
Project Name: Lake Marion Creek and Reedy Creek Management Area (Formerly Upper Lakes Basin Management)
Project ID: 2159
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 39,323 Acres

Project Synopsis: This 39,323-acre project is located at the headwaters of the Kissimmee-Okeechobee-Everglades ecosystem in Polk and Osceola Counties. The project area includes a substantial portion of Reedy Creek and Lake Marion Creek drainage basins. The land contains large expanses of endangered scrub, mesic and wet flatwoods, hydric hammock, and floodplain forest, including habitat for several threatened and endangered plants and animals. The SFWMD in partnership with Polk County has acquired 12,915 acres. SFWMD is the lead land manager.

The primary purpose of this project is to preserve this watershed which is a critical link in the restoration of the Kissimmee-Lake Okeechobee-Everglades ecosystem. Reedy Creek is the headwater drainage for Lake Russel and Cypress Lake. Peak Discharges from major storm events are modified and stored within the swamp and provide year-round base flow to these downstream lakes. The Lake Marion Creek portion of the project is of critical importance to the recharge of the Floridan Aquifer. Lake Marion serves as the headwaters to lake Marion Creek, which combines with Snell and Horse Creeks to provide a constant supply of high-quality water to Lake Hatchineha, which in turn discharges to Lake Kissimmee, and eventually the Kissimmee River and Lake Okeechobee. All three of these water bodies are primary components of the SFWMD's water management system.

Cost: Project size 39,323 acres. 12,915 acres have been acquired at a cost of $12,343,957.
Land Acquisition: 26,408 acres remaining to be acquired

Project Schedule:
Start Date: 1995
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
Federal			
State*	11,507.908		
Tribal			
Local**	836.049		
Other			
Total	**12,343.957**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
**Dollars contributed by Polk County
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Restoration Program: Habitat and Species
Project Name: Water Conservation Areas 2 and 3
Project ID: 2160
Lead Agency: South Florida Water Management District
Authority: Florida Forever/Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 721,433 Acres of outstanding fee interests

Project Synopsis: The WCAs encompass approximately 721,433 acres in Broward, Dade, and Palm Beach counties in which the SFWMD holds a combination of fee and easement interests. The SOR project is designed to complete the public acquisition of the outstanding fee interests in the project area. Land management is carried out by the Florida Fish and Wildlife Commission and the U.S. Fish and Wildlife Service, under contract to the SFWMD.

The general purpose of these lands is to store floodwater from developed areas adjacent to the WCAs for later use during the dry season. Releases of water from the WCA's during the dry seasonal and, particularly during drought conditions are considered vital to the maintenance of adequate water levels in the coastal canals, wellfields, and Everglades national Park and for the prevention of saltwater intrusion.

Cost: Project size 721,433 acres*. 670,844 acres have been acquired at a cost of $10,572,395.
Land Acquisition: 50,589 acres remaining to be acquired

Project Schedule:
Start Date: 1948
Finish Date: Upon Completion

Detailed Project Budget Information (1000s)

	Thru 2009	Balance to complete	Total
Federal			
State*	10,572.395		
Tribal			
Local			
Other			
Total	**10,572.395**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects. The total project size of the WCA's is 867,000 acres. Which encompasses WCA's 1, 2 and 3. WCA 1 is reported as the State/SFWMD acquired acres under the ARM Loxahatchee National Wildlife Refuge entry.*

Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: Florida Communities Trust lands, State Park Lands and State Wildlife Mgmt Areas
Project ID: 2184
Lead Agency: Department of Environmental Protection
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 256,017 Acres Acquired

Project Synopsis: The Florida Communities Trust administers two state land acquisition grant programs that provide funding to local governments and eligible non-profit organizations to acquire parks, open space, greenways and projects supporting Florida's seafood harvesting and aquaculture industries. The source of funding for Florida Communities Trust comes from Florida Forever proceeds. Florida Communities Trust assists communities in strengthening local comprehensive plans through the competitive criteria in two grant programs, the Parks and Open Space Florida Forever Grant Program and the Stan Mayfield Working Waterfronts Florida Forever Grant Program.

The Parks and Open Space Florida Forever grant program assists the Department of Community Affairs in helping communities meet the challenges of growth, supporting viable community development and protecting natural resources and open space. The program receives 21 percent, or $63 million of the total $300 million Florida Forever appropriation.

The creation of the Stan Mayfield Working Waterfronts Florida Forever grant program by the 2008 Florida Legislature acknowledges the importance of the traditional seafood harvesting and aquaculture industries in Florida. The program receives 2.5 percent, or $7.5 million of the total $300 million Florida Forever appropriation.

Florida Communities Trust projects play a significant role in improving the quality of life of Florida's residents. The local and regional parks funded by the Trust's Parks and Open Space grant program also help to promote economic growth and revitalization in local communities through nature based tourism. To learn more about Florida's industries and how Florida Communities Trust fits into the state's economic fabric, please visit the Enterprise Florida website.

Cost: Project size is 256,017 acres. 243,179 acres have been acquired at a cost of $652,541,932.
Land Acquisition: 12,838 acres remaining to be acquired.

Project Schedule:
Start Date:
Finish Date:

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
State*	357,012.898		
Local	286,756.632		
Federal	8,745.402		
Total	**652,514.932**	**TBD**	**TBD**

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: A.R. M. Loxahatchee National Wildlife Refuge
Project Number: 2161
Lead Agency: U.S. Fish and Wildlife Service
Authority: Migratory Bird Conservation Act of 1929

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 147,392 Acres

Project Synopsis: The Arthur R. Marshall Loxahatchee NWR was established in 1951 through an agreement between the South Florida Water Management District and the U.S. Fish and Wildlife Service under the Migratory Bird Conservation Act of 1929. Acquisition is for the purposes of providing buffer to the refuge, Everglades habitats, water recharge and storage, and for habitat protection. Increasing population growth is rapidly changing the landscape, converting farmland to residential neighborhoods. Acquisition support both refuge wildlife management goals as well as CERP restoration goals.

Cost: Total project size 147,392* acres. 143,854 acres have been acquired at a cost of $119,000. Land Acquisition 3,438 acres remaining to be acquired.

Project Schedule:
Start Date: 1955
Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information ($1000)

	Thru 2009	**2009**	**2010**	**2011**	**Balance to complete**	**Total**
Federal	119					
SFWMD						
Total	**119**				**30,000**	**30,119**

*The total size of the ARM Loxahatchee NWR is 145,567. 141,324 of these acres are state owned and leased to the USFWS for management. The State owned acres are Water Conservation Area

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: Big Cypress National Preserve Addition
Project ID: 2163
Lead Agency: National Park Service
Authority: Public Law 100-301
Funding Source:

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 146,117 acres

Project Synopsis: On April 29, 1988, Public Law 100-301 established the Big Cypress National Preserve (BCNP) Addition. At that time, I-75 was being designed in such a way as to improve the natural water flow to Everglades National Park, which had been disrupted by State Road 84 (commonly known as Alligator Alley). This provided an opportunity to enhance protection of Everglades National Park, to promote protection of the endangered Florida panther, and to provide for public recreational use and enjoyment of public lands by expanding the BCNP to include those lands adjacent to Interstate 75 in Collier County north and east of the Preserve, west of the Broward County line, and south of the Hendry County line.
The purpose of the Federal acquisition is to provide significant public benefits by limiting development pressures on lands which are important both in terms of fish and wildlife habitat supporting endangered species and of wetlands which are the headwaters of the Preserve. Additionally public ownership of the lands adjacent to the Preserve would enhance the protection of the Everglades National Park while providing recreational opportunities and other public uses currently offered by the Big Cypress.
The Act provided for expansion of the Big Cypress by 146,117 acres, of which approximately 32,557 acres have been acquired by the State of Florida. The authorizing legislation allows the Secretary of the Interior to purchase lands within the preserve boundaries and stipulates that no improved property, as defined by the Act, nor oil and gas rights, shall be acquired without the consent of the owner, unless that property is subject to, or threatened with, uses which are, or would be, detrimental to the purposes of the Preserve. The NPS will acquire the remaining private lands, excluding qualifying exempt property, using fair market value appraisals, consistent with the enabling Act.

Cost: Total project size 146,117 acres. 143,865 acres have been acquired for $73,662,737
Land Acquisition: 2,252 acres remaining to be acquired.

Project Schedule:
Start Date: 1989
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2009	2010	Balance to complete	Total
Federal	50,903			
State*	23,386.7			
Total	**74,289,737**		**2,507**	**76,797**

All acquisitions will be consistent with authorizing Big Cypress Legislation.
*State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.
**State acres are Florida's donation to Federal Government.

Hyperlink: N/A
Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project Name: Big Cypress National Preserve
Project ID: 2164
Lead Agency: National Park Service
Authority: Public Law 93-440

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 574,449 acres

Project Synopsis: On October 11, 1974, Public Law 93-440 established the Big Cypress National Preserve in order to assure the preservation, conservation, and protection of the natural, scenic, hydrologic, floral and faunal, and recreational values of the Big Cypress Watershed. The total size of the original Preserve is 574,449 acres. The State of Florida donated 186,340 acres to establish the Big Cypress. The Federal government has acquired all but 845 acres of the remaining 388,109 acres in the original Preserve boundaries. The authorizing legislation allows the Secretary of the Interior to purchase lands within the Preserve boundaries and stipulates that no improved property, as defined in the Act, nor oil and gas rights, shall be acquired without the consent of the owner, unless that property is subject to, or threatened with, uses which are, or would be, detrimental to the purposes of the Preserve.

The 179 privately owned tracts are scattered throughout the Preserve. The National Park Service will acquire those tracts, excluding qualifying exempt property, using fair market value appraisals consistent with the Act.

Cost: Project size 574,449 acres. 573,620 acres have been acquired at a cost of $222,123,000.
Land Acquisition: 829 acres remaining to be acquired.

Project Schedule:
Start Date: 1974
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Exp Thru 2008	2009	Balance to complete	Total
Federal	180,590			
SFWMD*	41,533			
Total	**222,123**		**21,877**	**244,000**

All Acquisitions will be consistent with authorizing Big Cypress Legislation.
*State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.
**State acres are Florida's donation to Federal Government.
Hyperlink: N/A
Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project Name: Biscayne National Park
Project ID: 2165
Lead Agency: National Park Service
Authority: Public Law 96-287
Funding Source:

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 172,971 acres

Project Synopsis: This project includes acquisition of three Ragged Keys (326 acres), one tract of submerged lands only (20 acres) and two on-shore tracts (36 acres) in Biscayne National Park. The Ragged Keys are five islands immediately adjacent to the most popular use area in the park, Boca Chita Key. Two islands were acquired through 1999. Two of the three islands remaining to be acquired are natural habitat on the islands and in the surrounding shallows. Least terns nest on land and endangered sea turtles nest on the shoreline. Both nesting sites are greatly disturbed by overflow public use of the area and developers for resort and recreational facilities have repeatedly targeted the islands. A total of 382 acres remains to be acquired.

Cost: Project size 172,971 acres. 170,977 acres have been acquired at a cost of $31,851,000.
Land Acquisition: 334 acres remaining to be acquired

Project Schedule:
Start Date: 1968
Finish Date: Open

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information ($1000)

	Exp Thru 2008	**2009**	**2010**	**Balance to complete**	**Total**
Federal	31,851				
SFWMD					
Total	**31,851**			**1,848**	**33,699**

Hyperlink: N/A
Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project name: Crocodile Lake National Wildlife Refuge
Project Number: 2166
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act of 1973

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 7,100 acres

Project Synopsis: Crocodile Lake National Wildlife Refuge was established on April 2, 1980 to preserve mangrove wetlands, tropical West Indian hardwood hammocks and open water areas on Key Largo, which are critical feeding and nesting habitat for the endangered American crocodile. The Refuge is within the designated Critical Habitat for the species and contains one-third of all crocodile nests found in Florida. The Refuge consists of about 5,300 acres of mangrove swamp, 1,200 acres of upland hardwood hammock, and 300 acres of open water. The uplands are vegetated with the last remaining remnants of unspoiled West Indian Hardwoods in the United States. The Refuge is inhabited by a number of other endangered or threatened species, most notably the eastern indigo snake, the bald eagle, the Key Largo woodrat, the Key Largo cottonmouse, and the Schaus swallowtail butterfly. The major threat to this habitat is conversion of the uplands to residential or commercial developments. The crocodile has little tolerance to human activities. Wetlands areas are less threatened, but severe alteration and damage has occurred.

Cost: Total project size 7,100 acres. 6,702 acres have been acquired at a cost of $13,093,000
Land Acquisition: 398 acres remaining to be acquired

Project Schedule:
Start Date: 1979
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2008	2009	2010	Balance to complete	Total
Federal	13,319	0			
SFWMD					
Total	13,093	0		**1,226**	**14,319**

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project Name: Everglades and Dry Tortugas National Parks
Project ID: 2184
Lead Agency: US Department of the Interior
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 1,463,779 Acres Acquired

Project Synopsis: In 1928 landscape architect Ernest Coe began a concentrated effort to designate a "Tropical Everglades National Park." His persistence paid off when he and others persuaded Congress to designate the Everglades as a national park in 1934. It took park supporters another 13 years to acquire land and secure funding. In 1947, Marjory Stoneman Douglas would publish *The Everglades: River of Grass*, a work that would come to greatly influence the public perception of the oft-misunderstood region. That same year, Everglades National Park officially opened, marking the first large-scale attempt to protect the area's unique biology. Today, the park comprises a vast wetland wilderness unlike any other in the world.

National Park Service conservation of marine resources in south Florida began when Fort Jefferson National Monument was established in 1935 to include the surrounding water, submerged land, and a series of keys. In 1992 it was redesignated Dry Tortugas National Park and its purposes expanded. The park now protects significant nesting areas for seabirds, habitat for endangered and threatened sea turtles, and sensitive portions of the Florida Keys coral reef ecosystem.

The creation of these national park system units has underscored both the need for and the public interest in preserving south Florida ecosystem resources. The presence of numerous national wildlife refuges and marine sanctuaries as well as state, local, and private protected areas are also evidence of this support. Yet, even though much of the region has been set aside, the ecosystem remains threatened. Combating nutrient-rich (nitrate-contaminated) water, interrupted hydrology, decreased water supply, exotic plants, and mercury contamination cannot be done successfully at the park level alone. Instead, combined and integrated efforts at the federal, state, county, and local levels are necessary.

Cost: Project size is 1,463,779. 1,463,318 acres have been acquired at a cost of $31,791,250.
Land Acquisition: 461 acres remaining to be acquired.

Project Schedule:
Start Date: 1947
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	Thru 2009	Balance to complete	Total
State*	2,000		
Local			
Federal	29,791.250		
Total	**31,791.250**	**TBD**	**TBD**

Hyperlink: N/A
Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project Name: Everglades National Park Expansion
Project ID: 2167
Lead Agency: National Park Service
Authority: Everglades National Park Protection and Expansion Act of 1989 (Public Law 101-229)
Funding Source:

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 109,504 acres

Project Synopsis: In 1989, Congress authorized the addition to Everglades National Park involving approximately 109,504 acres of an area known as Northeast Shark Slough and the East Everglades. The act also directed the Army Corps of Engineers to modify water management structures to allow the sheetflow of water and extend the hydroperiod to more closely resemble the historic Everglades. The East Everglades Addition is necessary to limit further losses suffered by the Park due to habitat destruction outside former boundaries and to restore natural water-flow patterns that are critical to the ecological integrity and long-term viability of Park resources. The acquisition of the East Everglades Addition lands and completion of the Modified Water Deliveries to Everglades National Park project are the most significant efforts underway to restore water deliveries to Shark Slough, the principal watershed in the Park. These hydrologic improvements are crucial to restoring ecosystem productivity in the southern Everglades and maintaining adequate freshwater inflow to the downstream estuaries along the Gulf of Mexico and Florida Bay.

Cost: Project size 109,504 acres. 108,799 acres have been acquired at a cost of $97,673,000.
Land Acquisition: 705 acres remaining to be acquired

Project Schedule:
Start Date: 1990
Finish Date**:** 2005

	1997	1998	1999	2000	2001	2002	2003	2004
Real Estate								

Detailed Project Budget Information ($1,000)

	Thru 2008	**2009**	**2010**	**Balance to complete**	**Total**
Federal	81,401				
State*	16,272				
Total	**97,673**			**12,219**	**109,892**

*State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.
**State acres are Florida's donation to Federal Government.
Hyperlink: N/A
Contact: Brian Coleman, (239) 213-2242

Program Name: Land Acquisition
Project name: Florida Panther National Wildlife Refuge (includes Ten Thousand Islands refuge)*
Project Number: 2169
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act of 1973 (Florida Panther); P.L. 100-696 (Ten Thousand Islands)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 61,573 acres

Project Synopsis: The Florida panther is one of the most endangered mammals in the Nation, with less than 80 individuals inhabiting the Big Cypress-Everglades region. The target lands are valuable for flood water retention, water purification, and aquifer recharge, while providing high quality habitat for a wide variety of flora and fauna in addition to the panther. Most of the area is relatively inaccessible and is one the few remaining retreats for the Florida black bear. The area is diverse and interesting botanically containing rare orchids, large oaks, cypress, maples, cabbage palms and a diversity of tropical trees which form a dense canopy. The increasing human population in South Florida with its consequent urban expansion is jeopardizing the area's ecological integrity. Thus essential habitat for the survival of the Florida panther is being threatened by conversion for agricultural projects, residential development, oil field activities, lumbering and road construction. A preliminary project proposal has been developed for expansion of the Florida Panther Refuge. The ecosystem within the target boundary is absolutely essential to the survival of the Florida panther.

Cost: Total project size 61,573 acres. 61,563 acres have been acquired at a cost of $10,682,000
Land Acquisition : 10 acres remaining to be acquired.

Project Schedule:
Start Date: 1989
Finish Date: TBD

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Planning & Design									
Real Estate									
Construction									

Detailed Project Budget Information ($1000)

	Thru 2008	**2009**	**2010**	**Balance to complete**	**Total**
Federal	10,233				
State	449				
Total	**10,682**			**10**	**10,692**

*Acres and expenditures reported for the Florida Panther NWR also includes parcels acquired in the Cape Romano/Ten Thousand Islands NWR.

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: Florida Keys National Wildlife Refuge (includes National Key Deer, Great White Heron, Key West refuges
Project Number: 2168
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act (Key Deer), Executive Order 7993 (Great White Heron), Executive Order 923 (Key West)

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 415,433 acres*

Project Synopsis: Acquisitions are to protect and maintain habitat extensively used by the endangered key deer. Preservation of the major habitats for this deer through acquisition contributes to the overall faunal diversity of Florida. Negotiations have been successful and with the availability of funding, acquisition of about 500 acres (30 willing sellers) within the refuge boundary would be possible. No Name and Big Pine Keys are the two most extensively used keys in the deer's range. Other rare, endangered and 'special emphasis' species are also found here. The greatest threat to key deer habitat is habitat modifications by land clearing. Residential development is rapidly proceeding as demand increases for the dwindling supply of acreage that will support construction. Unfortunately, this same land is prime deer habitat. An observable consequence of the residential development of these lands is the incidence of deer kills by vehicle traffic. An expansion of the Refuge to acquire a system of no-development corridors assure the continued existence of habitat for deer movement throughout the island.

Cost: Total project size 415,433 acres. 410,880 acres have been acquired for $32,038,000. Land Acquisition: 4,553 acres remaining to be acquired.

Project Schedule:
Start Date: 1960
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2009	2010	Balance to complete	Total
Federal	32,038			
SFWMD				
Total	**32,038**		**26,770**	**58,808**

*Acres and expenditures reported for the Florida Keys NWR also includes parcels acquired in the National Key Deer Refuge, Great White Heron NWR and Key West NWR. Ownership of lands in the Key West NWR have never been under private ownership. They have been transferred between federal agencies.

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: Hobe Sound National Wildlife Refuge
Project Number: 2170
Lead Agency: U.S. Fish and Wildlife Service
Authority: Endangered Species Act of 1973

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 1,130 Acres

Project Synopsis**:** Hobe Sound National Wildlife Refuge was established in 1969 and presently includes 1,027 acres of coastal sand dunes, mangrove and sand pine-scrub habitat. The primary objective of the refuge is to maintain habitat for some of the most productive nesting areas of the endangered leatherback, green and threatened loggerhead sea turtles. Hobe Sound provides habitat and protection to eight plan and animal species listed as federal threatened or endangered. The South Florida Ecosystem Plan highlights the importance of beaches to sea turtles. One of the Plan's objectives is to prevent the further decline of candidate, threatened, and endangered species and prevent further degradation of their habitats. This project is supported by the State and local governments, the public and conservation groups, with no know opposition. There are many willing sellers of high priority habitat. Nonprofit conservation groups are involved in this project.

Cost: Total project size 1,130 acres. 1,034 acres have been acquired at a cost of $18,000
Land Acquisition : 96 acres remaining to be acquired.

Project Schedule:
Start Date: 1968
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2008	**2009**	**2010**	**Balance to complete**	**Total**
Federal	18				
SFWMD					
Total	**18**			**6,675**	**6,693**

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: J.N. "Ding" Darling National Wildlife Refuge (includes Caloosahatchee, Island Bay, Matlacha Pass & Pine Island refuges
Project Number: 2171
Lead Agency: U.S. Fish and Wildlife Service
Authority: Migratory Bird Conservation Act; Executive Order 3299; Executive Order 943

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 10,275 acres

Project Synopsis: The J.N. "Ding" Darling National Wildlife Refuge was established in 1945 and is located in Lee County, Florida on Sanibel Island. The island is 12 miles long and is fringed with mangrove trees, shallow bays and white sandy beaches. Tourism and seasonal residential development threatened to envelop the islands private lands until a growth plan was instituted. Caloosahatchee NWR is located in Fort Myers and acquisition of lands here is necessary for the protection of the endangered West Indian Manatee. Island Bay NWR is located in the Cape Haze area of Charlotte County and includes portions of three islands. All wetlands are protected by Federal or State ownership. Matlacha Pass NWR's acquisition boundary includes all islands, wetlands and uplands lying south of the north boundary line of Township 44 South, crossing the Caloosahatchee River and running southerly and easterly to Bunch Beach. Pine Island NWR generally lies between the western boundary of Pine Island and the Coastal Islands of Cayo Costs, North Captiva and Sanibel.

Cost: Total project size 10,275 acres*. 7,588 acres have been acquired at a cost of $9,785,000. Land Acquisition : 2,687 acres remaining to be acquired.

Project Schedule:
Start Date: 1945
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2008	2009	2010	Balance to complete	Total
Federal	9,785				
SFWMD					
Total	**9,785**			**4,100**	**13,885**

*Acres and expenditures reported for the J. N. "Ding" Darling NWR also includes parcels acquired in the Caloosahatchee NWR, Matlacha Pass NWR and Pine Island NWR. Ownership of lands in the Caloosahatchee NWR and Matlacha Pass NWR have never been under private ownership. They have been transferred between federal agencies.

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: Land Acquisition
Project name: Lake Wales Ridge National Wildlife Refuge
Project Number: 2185
Lead Agency: U.S. Fish and Wildlife Service

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): Target 3,384 acres

Project Synopsis: The Lake Wales Ridge NWR is managed as part of the Pelican Island NWR complex located about 80 miles away. The Refuge was established in 1994 as the first Refuge designated for the recovery of endangered and threatened plants. The Refuge contains 23 listed plants, at least four listed animals, and more than 40 endemic invertebrates. The Refuge is part of a network of scrub preserves owned by the state of Florida, The Nature Conservancy, Archbold Biological Station, two water management districts and Polk and Highland Counties.

The refuge is composed of four tracts within Polk and Highlands Counties. Because of the potential impact to the plants and animals, the refuge has not been opened to the public. However, this Refuge is an exciting place where researchers from Archbold Biological Station have conducted important ecological studies. Per acre, the Refuge has a very high density of listed species. The Snell Creek tract, located within the SFWMD, contains one of the last remaining tracts of undisturbed sandhill in northern Polk County.

Cost: Total project size 3,384 acres. 147 acres have been acquired at a cost of $268,000.
Land Acquisition : 3,237 acres remaining to be acquired.

Project Schedule:
Start Date: 1945
Finish Date: TBD

Detailed Project Budget Information ($1000)

	Thru 2008	2009	2010	Balance to complete	Total
Federal	268				
SFWMD					
Total	**268**			**TBD**	**TBD**

Contact: Susan C. Trokey, Realty Specialist FWS 239-472-1100

Program Name: NOAA South Florida Program
Project Name: South Florida Ecosystem Restoration Planning and Projects
Project ID: 2200
Lead Agency: NOAA
Authority: Magnuson Stevens Fisheries Wildlife Conservation Act, Marine Mammal Protection Act. NMSA (16 U.S.C. §§ 1431 *et seq.*), FKNMSPA (PL 101-605), and Executive Order 13089 (Coral Reef Protection)
Funding Source:

Strategic Plan Goal(s) Addressed: Goal 2, Restore, Preserve, and Protect Natural Habitats and Species, Subgoal, 2A, Restore, Preserve, and Protect Natural Habitats; and 2B, Control Invasive Exotic Plant and Animal Species

Measurable Output(s): NOAA conducts several projects to support the South Florida Ecosystem Restoration. These projects involve (1) collection and analysis of Physical, Water Quality and Biological Data input to CERP Monitoring and Assessment Plan, (2) development of a Hydrodynamic Model for South Florida Coastal Waters (Florida Bay boundary), (3) Monitoring and Assessment of Critical Indicator Species in the ecosystem, including important commercial species and coral reefs, (4) determination of marine mammal population health and status, (5) development and application of ecological models, and (5) analyses of species and community attributes in relation to freshwater inflow and salinity. NOAA scientists and managers are contributing members to several multi-agency groups addressing different aspects of South Florida Ecosystem Restoration, including, the Task Force, the Working Group, the Science Coordination Group, and various RECOVER teams of the Comprehensive Everglades Restoration Program. NOAA prepares research publications for scientific journals, contributes to the biannual assessment report, and presents scientific findings about South Florida at the Greater Everglades Ecosystem Restoration and Florida Bay and Adjacent Ecosystems Symposia. With NOAA funding beginning in FY09, NOAA is conducting a goal-setting project focused on the coastal marine ecosystem of three major geographic domains: the Southwest Florida Shelf, the Florida Keys and Dry Tortugas, and the Southeast Florida shelf. As part of this effort, NOAA will be conducting a series of consensus-building workshops. Two types of workshops will be held concerning each of the four domains. The first is workshop to produce conceptual ecological models (CEMs), and the second is a workshop to develop Quantitative Ecosystem Indicators (QEI). Goals and indicators will be refined based on input obtained from targeted briefings and stakeholder workshops. The process will be facilitated by a project website designed for communication among technical representatives and also to be used for outreach and education.

Project Synopsis: Ongoing program initiated in FY96 including research, monitoring and modeling components as well as a specific Education/Outreach Component. Includes three NOAA line organizations (NOS, NMFS and OAR) as well as Florida Sea Grant.

Cost: Total: FY09 $1.895M from NOAA
Project Development: $1.540M USACE
$0.285M State

Project Schedule:
Start Date: 1997
Finish Date: Ongoing

Detailed Project Budget Information ($1,000s)

	Thru 2004	**2005**	**2006**	**2007**	**2008**	**2009**	**Balance to complete**	**Total to Date**
Federal (NOAA)	33,000	4,200	1,240	1,663	2,018	1,895	ongoing	44,016
State	370	400	400	575	285	285	ongoing	2,315
Tribal								0
Local								0
Other (Corps)	700	700	1,071	1,474	1,278	1,540	ongoing	6,763
Total	**34,070**	**5,300**	**2,711**	**3,712**	**3,581**	**3,720**	**ongoing**	**53,094**

Hyperlink: N/A
Contact: Joan Browder 305-361-4270; Christopher Kelble 305-361-4330

Project Name: C&SF: CERP Lakes Park Restoration (OPE)
Project ID: 2302 (CERP Project WBS # 94)
Lead Agency: USACE / Lee County
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/County

Strategic Plan Goal(s) Addressed: 2-A.3

Measurable Output(s): 40-acre marsh flowway, 11 acres of uplands, 9 acres of littoral zone

April 1999 (Restudy) Project Synopsis: Includes the construction of a 40-acre marsh/flow way in an abandoned rock mine, removal of exotic vegetation, and planting native vegetation on 11 acres of uplands and 9 acres of littoral zone. This feature is located in the Lee County Lakes Regional Park, upstream of Estero Bay.

Current Project Synopsis: The purpose of this feature is to enhance surface water runoff quality by creating a meandering flowway with shallow littoral zones to enhance pollution removal and oxygen content, removing aquatic and upland exotic infestation while allowing public access into upland areas of improved native habitat. The restoration will provide immediate habitat and water quality benefits at Lakes Park and improve downstream conditions in Hendry County and the Estero Bay Aquatic Preserve. The project adheres to the original concept described in the Restudy. In addition water quality is being impacted due to its use by a growing number of birds as a rookery.

Current Status: Federal efforts on this project are being discontinued. The South Florida Water Management District has advised that they will work with the non-federal sponsor (Lee County) to accomplish this project with non-federal resources to expedite design and construction outside of the CERP. Jacksonville District received a letter from Lee County requesting the project "close-out" process begin. Lee County, working with the SFWMD has retrofitted two control structures to stop salt water intrusion and has also constructed detention areas to improve water quality along the eastern edge of the park upstream of the control structures (Phase I and II). Lee County has moved forward with the design and permitting for an additional treatment area consisting of a 40 acre filter marsh and flowway (Phase III) to address the offsite Stormwater issues. Construction of the filter marsh and flowway is anticipated to begin in FY 2011.

Est. Cost: $6,373,000

Project Schedule: TBD by Sponsor

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_94_lakes_park.aspx

Detailed Project Budget Information (rounded):

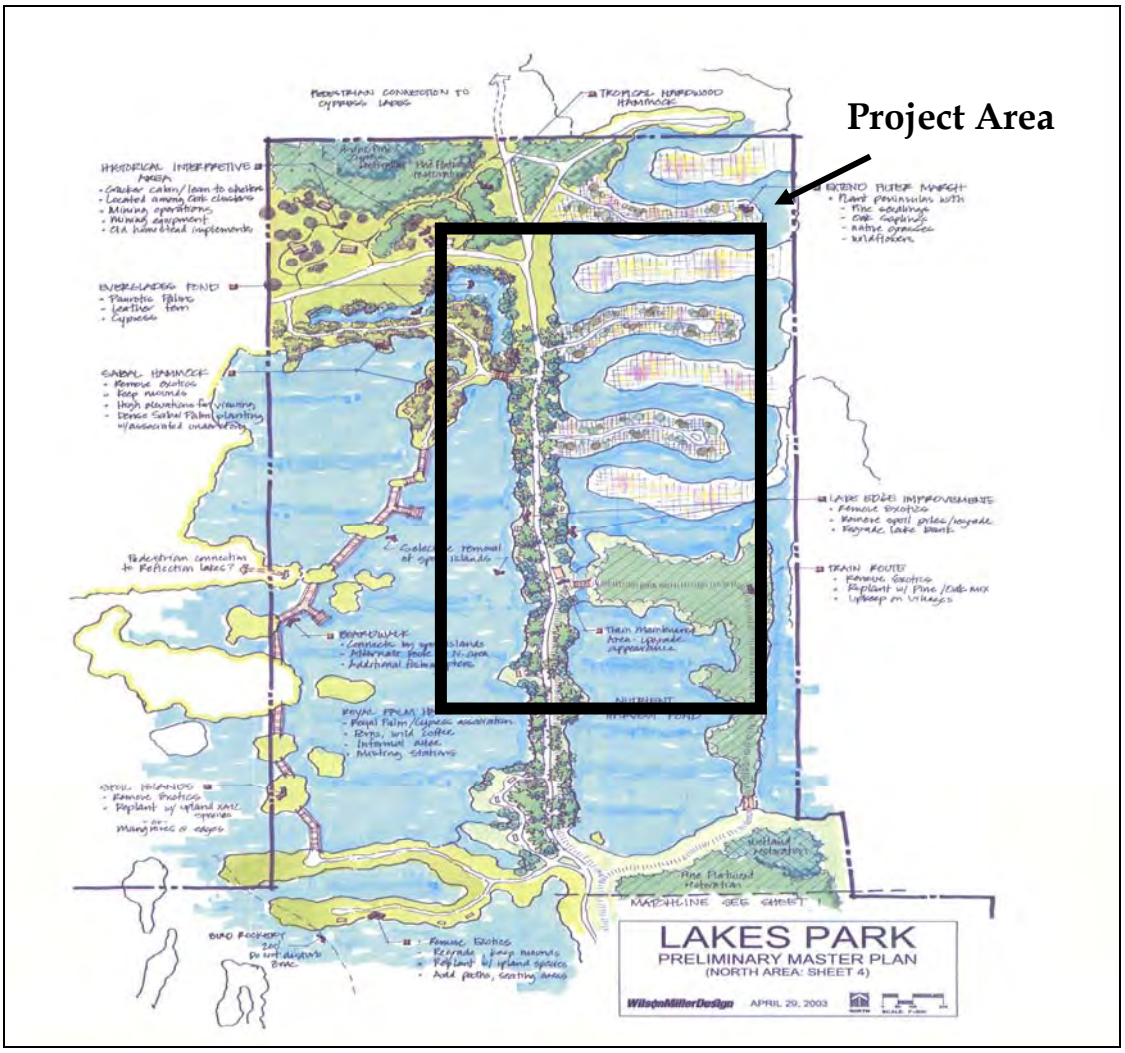
Lakes Park Restoration	Expenditures Thru FY 2008
USACE	$656,000
SFWMD	$117,000
Total	**$773,000**

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Janet Starnes, Principle Project Manager, Everglades Restoration, SFWMD
(239) 338-2929 ext 7735, jstarne@sfwmd.gov

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Additional information is summarized from the PMP (2005).

Additional Information: Lakes Park is located east of Cape Coral in Lee County, just west of Highway 41. Lee County has developed the area as a regional park with a bathing area along shores of mining pits developed as lakes. Adjacent to the developed area, the remaining natural habitat contains pine flatwoods with some cypress heads. The pits capture runoff from the surrounding developed area (commercial, industrial, and residential), and county monitoring has indicated a decline in water quality in the lakes. The lakes are infested with hydrilla, and adjacent uplands and islands are covered with exotic plant species such as Australian pine and Brazilian pepper. This project is expected to restore surface water runoff quality by creating a meandering 40-acre flow way with shallow littoral zones and removing aquatic and upland exotic vegetation. The littoral zone will be harvested periodically to remove excess nutrients from the system. Exotic vegetation will be removed and replaced with native vegetation.


Project Area
LAKES PARK
PRELIMINARY MASTER PLAN
(NORTH AREA: SHEET 4)
WilsonMillerDesign
APRIL 29, 2003

Project Name: C&SF: CERP Restoration of Pineland and Hardwood Hammocks in C-111 Basin (OPE)
Project ID: 2303 (CERP Project WBS # 92)
Lead Agency: USACE
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/Miami-Dade County

Strategic Plan Goal(s) Addressed: Primary: 2-A.3

Measurable Output(s): 50 acres pine rockland and tropical hardwood hammock improved

April 1999 (Restudy) Project Synopsis: Includes restoring south Florida slash pine and hardwood hammock species on a 200-foot wide strip ion each side of two miles of SR9336 from the C-111 Canal to the L-31W Borrow Canal (approximately 50 acres) and the establishment of 2, one-acre hammocks in low-lying areas on each side of the road located in Miami-Dade County.

Current Project Synopsis: The project is located in south Miami-Dade County, just east of Everglades National Park (ENP), along State Road 9336 in the area known as the Frog Pond. Eighty percent of the Frog Pond was used for agricultural purposes and farmers plowed the cap rock to create soil for tomato farming. The Frog Pond has since been purchased by the SFWMD as part of the C-111 Project to restore the Taylor Slough portion of the Everglades. This project will provide some water quality treatment for runoff passing through the hammocks and demonstrate the techniques required to re-establish native conifer and tropical hardwood forests on land that has been rock plowed.

This project adheres to the original concept described in the Restudy.

Current Status: Planned for the future.

Est. Cost: $784,000

Project Schedule: TBD
Detailed Project Budget Information (rounded):

Restoration of Pineland and Hardwood	**Expenditures Thru FY 2008**
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_92_rest_pineland.aspx

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Program Name: Infrastructure
Project Name: A.R.M. Loxahatchee NWR Prescribed Fire Program
Project ID: 2304
Lead Agency: USFWS A.R.M. Loxahatchee NWR

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Acres of habitat improved including contribution to invasive exotic control.

Five prescribed fires were conducted in 2008 totaling 22,000 acres. Five wildfires burned an additional 100 acres for a total of 22,100 acres.

Project Synopsis: Fire is a natural part of the Everglades ecosystem. Fire also can be used to help control invasive exotic species. The natural fire patterns in the Everglades and in A.R.M. Loxahatchee NWR have been altered. A prescribe fire program will help to improve habitats by reducing fuel loads and mimicking natural fire frequencies and intensities where appropriate. The overall result will be an improvement in wildlife habitat on the refuge.

Cost:
Total:
Implementation $200,000
Operations and maintenance $200,000 (each year)

Project Schedule:
Start Date 2002
Finish Date: recurring

Detailed Project Budget Information (1000s)

	Thru 2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**Total**
Federal	1,070.1	170	176					
State								
Tribal								
Local								
Other								
Total	**1,070.1**	**170**	**176**					**TBD**

Hyperlink: N/A
Contact: Rolf E. Olson (561) 735-6022

Project Name: C&SF: CERP Acme Basin B Discharge (OPE)
Project ID: 2306 (CERP Project WBS # 38)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: 2-A.3 **Secondary:** 3-C.2

Measurable Output(s):

- 365-acre constructed upland/wetland mosaic improved
- 17,000 acre-feet (ac-ft) per year recaptured for reuse
- 1,000 acre-feet per year supplement to Lake Worth Drainage District municipal water supply
- 14,000 acre-feet per year of water conveyance to WCA-2, WCA-3, Everglades National Park, and Shark River Slough

April 1999 (Restudy) Project Synopsis: The original concept includes the construction of a wetland or chemical treatment area and a storage reservoir with a combined total storage capacity of 3,800 acre-feet located adjacent to the Loxahatchee National Wildlife Refuge in Palm Beach County. Stormwater runoff from Acme Basin "B" will be pumped into the wetland treatment area and then into the storage reservoir until such time as the water can be discharged into the Loxahatchee National Wildlife Refuge if water quality treatment criteria is met, or into the one of two alternative locations: the Palm Beach County Agricultural Reserve Reservoir (VV) or the combination above-ground and in-ground reservoir area located adjacent to the L-8 Borrow Canal and north of the C-51 Canal (GGG). Estimated real estate cost of this 930 acres was $8,500,000, which would include all land costs and administrative/acquisition costs (both Federal and non-Federal).

Current Project Synopsis: Acme Basin B encompasses approximately 8,680 acres of low-density development with the primary land uses being rural residential lots and nurseries with a substantial presence of stables and other equestrian uses. The primary goal of the Acme Basin B Discharge project is to provide surface water to the refuge that would otherwise be routed through Basin A to C-51 and lost to tide.

In the time period between the Restudy and the start of the Acme Basin B Discharge Project Implementation Report (PIR), the land the Restudy had envisioned for a reservoir was sold to a developer. Thus, due to real estate cost increases, the project changed from an on-site water quality treatment project to a water conveyance project to an off-site water quality treatment area (STA 1E).

Current Status: The SFWMD has decided to work with local interests to expedite design and construction of the Acme Basin B Discharge project, outside the CERP.

Est. Cost: $26,503,000

Project Schedule:

2002	Planning begun.
2009	Construction completed

Detailed Project Budget Information (rounded):

Acme Basin B Discharge	Expenditures Thru FY 2008
USACE	$2,238,000
SFWMD	$632,000
Total	$2,870,000

Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_38_acme.cfm
https://my.sfwmd.gov/portal/page?_pageid=1855,2831593,1855_2830635&_dad=portal&_schema=PORTAL&navpage=abbd

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Additional status information is summarized from the Draft PIR document and the TSP.

Additional Information:

Acme Basin B is one of two primary drainage basins within the Acme Improvement District (AID). The AID, a dependent district to the Village of Wellington, is located in central Palm Beach County, Township 43South and 44 South, Range 41 East. Acme Basin B boundaries generally follow Pierson Road to the north, Flying Cow Road to the west, the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge) to the southwest and south and Lake Worth Drainage District (LWDD) to the east.

Program Name: Infrastructure
Project Name: Acme Basin B Discharge – Expedited Project (Project is being implemented as part of the Long-Term Plan for Achieving Everglades Water Quality Goals)
Project ID: 2306A (CERP Project WBS# 38)
Lead Agency: SFWMD
Authority: Everglades Forever Act (EFA)
Funding Source: State – Long-Term Plan funding

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Surface water for Everglades Protection Area; 1,028 ac-ft water storage

Project Synopsis: This SFWMD expedited project is one of a series of five project components located adjacent to the Everglades Water Conservation Areas (WCAs) in Palm Beach, Broward and Miami-Dade counties, which make up the Water Preserve Areas Project (Site 1 Impoundment, C-9 Impoundment, C-11 Impoundment, Acme Basin B Discharge, and WCA-3A/3B Seepage Management).

This project component includes Section 24 Impoundment, 2 pump stations and C1 Canal improvements. All of this work and all funding for this work is part of the Long-Term Plan.

Total Estimated Project Cost: $41,621,545

Scheduled Construction Start Date: June 2006 (Phase 1)
Scheduled Project Completion Date: December 2007 (Phase 1)

Scheduled Construction Start Date: February 2009 (Phase 2)
Scheduled Project Completion Date: May 2010 (Phase 2)

Actual Expenditures to date by SFWMD*:

	Thru 2006	2007	2008	2009	Total
SFWMD	$4,348,857	$6,740,768	$3,984,526	1,912,528	$16,986,679

Contact: Jorge A. Jaramillo, P.E, 561-242-5520, x4021

*Credit for expedited project work subject to inclusion in authorized Federal project.
**Amount estimated subject to credit once project is authorized and authorization has been given to credit work accomplished prior to signing of a PCA.

Project Name: C&SF: CERP Picayune Strand Restoration
F/K/A Southern Golden Gate Estates Hydrologic Restoration (OPE)
Project ID: 2307 (CERP Project WBS # 30)
Lead Agency: USACE / SFWMD
Authority: WRDA 2007
Funding Source: Corps/State

Strategic Plan Goal(s) Addressed: 2-A.3

Measurable Output(s): 55,000 acres of wetlands restored (22,000 – Faka; 16,500 - Merritt; 16,500 - Miller)

April 1999 (Restudy) Project Synopsis: Involves the restoration of natural water flow across 85 square miles in western Collier County that were drained in the early 1960s in anticipation of extensive residential development. This subsequent development dramatically altered the natural landscape, changing a healthy wetland ecosystem into a distressed environment. Implementation of the restoration plan would also improve the water quality of coastal estuaries by moderating the large salinity fluctuations caused by freshwater point discharge from the Faka Union Canal at the Port of the Islands. The plan would also aid in protecting the City of Naples' eastern Golden Gate well field by improving groundwater recharge.

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

Current Project Synopsis: The project will restore wetlands in Picayune Strand (Southern Golden Gate Estates) and in adjacent public lands by reducing overdrainage, while restoring a natural and beneficial sheetflow of water to the Ten Thousand Islands National Wildlife Refuge. The refined project includes 83 miles of canal plugs, 227 miles of road removal, and the addition of pump stations (3) and spreader swales to aid in rehydration of wetlands. Protection levees are planned for adjacent private properties impacted by the project along with maintenance of flood protection for the Northern Golden Gate Estates residential area. The project significantly increases the size of wetlands and improves major wetland ecosystems in adjacent lands including the Fakahatchee Strand State Preserve, Florida Panther National Wildlife Refuge, and Collier Seminole State Park, benefiting threatened and endangered species such as the Florida panther and the red cockaded woodpecker. Water quality and volume delivered to coastal estuaries will also be improved by the moderation of large salinity fluctuations caused by freshwater flowing from the Faka-Union Canal into the estuaries. The project provides public access and recreational opportunities.

The State of Florida initiated an early-start on this hydrologic restoration project in October 2003 as a state expedited project. The PIR was completed in 2004 and the Report of the Chief of Engineers was signed September 15, 2005. The Assistant Secretary of the Army (ASA) completed a review and referred the project to Congress by letter dated April 2, 2007; and OMB completed their review.

Current Status: Backfilling of the northern two miles of the Prairie Canal is complete and successfully reduced drainage of the adjacent Fakahatchee Strand State Preserve and restored habitat for threatened and endangered species as part of the early-start (Phase 1). Phases 2 and 3 include backfilling the southern five miles to restore sheetflow and the early-start work by the SFWMD that removed roads between Prairie Canal and the Merritt Canal. The balance of construction, along with the remaining road removal efforts will be implemented by the U.S. Army Corps of Engineers.
The project was authorized for construction in WRDA 2007 for $375,330,000, dependent on appropriation funding from Congress. The FY09 President's budget included $24.2M to initiate construction. The USACE Biological Assessment (BA) was reviewed by the SFWMD. The Fish and Wildlife Service Biological Opinion (BO) followed determining low impact to panther habitat; with a review of the final ecological and water quality monitoring plan.

100% plans and specs were completed, for the Merritt Pump Station phase by the USACE in April 2009 with the BCOE planned for July 2009. DEP sent the draft Water Quality Certification permit to the USACE and responses from the FDEP and Corps were incorporated. The modification to the WQC Permit was approved and the permit was received from DEP June 9, 2009. Water Reservations, from the State of Florida, were scheduled for February 2009, but were challenged by a Collier County filing. This challenge was dropped in June 2009 and the Water Reservations were signed into law on July 2, 2009.

Telecommunications relocation was nearly complete and the state of Florida was finalizing the acquisition of three remaining real estate parcels as of mid-June. Land certification is a pre-requisite for the construction contract advertisement for the first pump station, Merritt. In addition, the Project Partnership Agreement (PPA), between sponsors has been delayed with other discussions related to land credit (non-Federal share) and a signed Master Agreement.

The Merritt portion has been identified for USACE funds, outside the FY09/FY10 budget process, under the American Recovery and Reinvestment Act (ARRA) stimulus package in April 2009; enabling a construction award and groundbreaking by early 2010. Design work will be expedited on the second pump station, Faka-Union, with an anticipated advertisement date in June 2010. However, the Florida Department of Environmental Protection has expressed concern that the purchase and title to all required lands, including the final pump station, Miller, may take until 2010.

Est. Cost: **$**416,234,000

Project Schedule:

2004	PIR completed
2006	Merritt State expedited construction begun.
2009	Merritt USACE construction begun.
2010	Faka-Union USACE construction begun.
2011	Merritt construction physically complete.
2012	Faka-Union construction physically complete.
2016	Miller construction begun
2018	Miller construction physically complete.
TBD	Prairie Canal

Detailed Project Budget Information (rounded):

Picayune Strand	Expenditures Thru FY 2008
USACE	$10,326,560
SFWMD	$5,077,340
Total	$15,403,900

Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_30_sgge.aspx
https://my.sfwmd.gov/portal/page?_pageid=1855,2831193,1855_2831931&_dad=portal&_schema=PORTAL&navpage=prjsgge.

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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Additional information was summarized from the Final Project Implementation Report and EIS (2004) and WRDA 2007 authorization. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:

Summary of Changes	Southern Golden Gate Estates Restoration Conceptual Source Report (1996)	Picayune Strand Restoration PIR (November 2004)
Construction Cost	$ 15,500,000 (Oct 1999 Price Level)	$ 124,946,000 (Oct 2004 Price Level)
Real Estate Cost	$0 in main report; $134,400,000 in Appendix A, Plan Formulation	$193,043,000
Components	Non-specific/Conceptual Source report (1996 conceptual plan): Miller Pump Station 200 cfs Faka Union Pump Station 500 cfs Merritt Pump Station 160 cfs Prairie Canal Plugs 130 miles of roads removed. (No levees) (No culverts and levee ramps)	Miller Pump Station 1,250 cfs Faka Union Pump Station 2,630 cfs Merritt Pump Station 800 cfs Prairie Canal Plugs (same) 227 miles of roads removed. 5 ring levees for flood protection Culverts and levee ramps
Feature Siting	Non Specific/Conceptual	Criteria Used: Current Land Use, Topography, Hydrologic, and Ecological Connectivity
Amount of Land	Land between I-75, U.S. 41, Fakahatchee Strand, and Belle Meade area	59,294 acres between I-75, U.S. 41, Fakahatchee

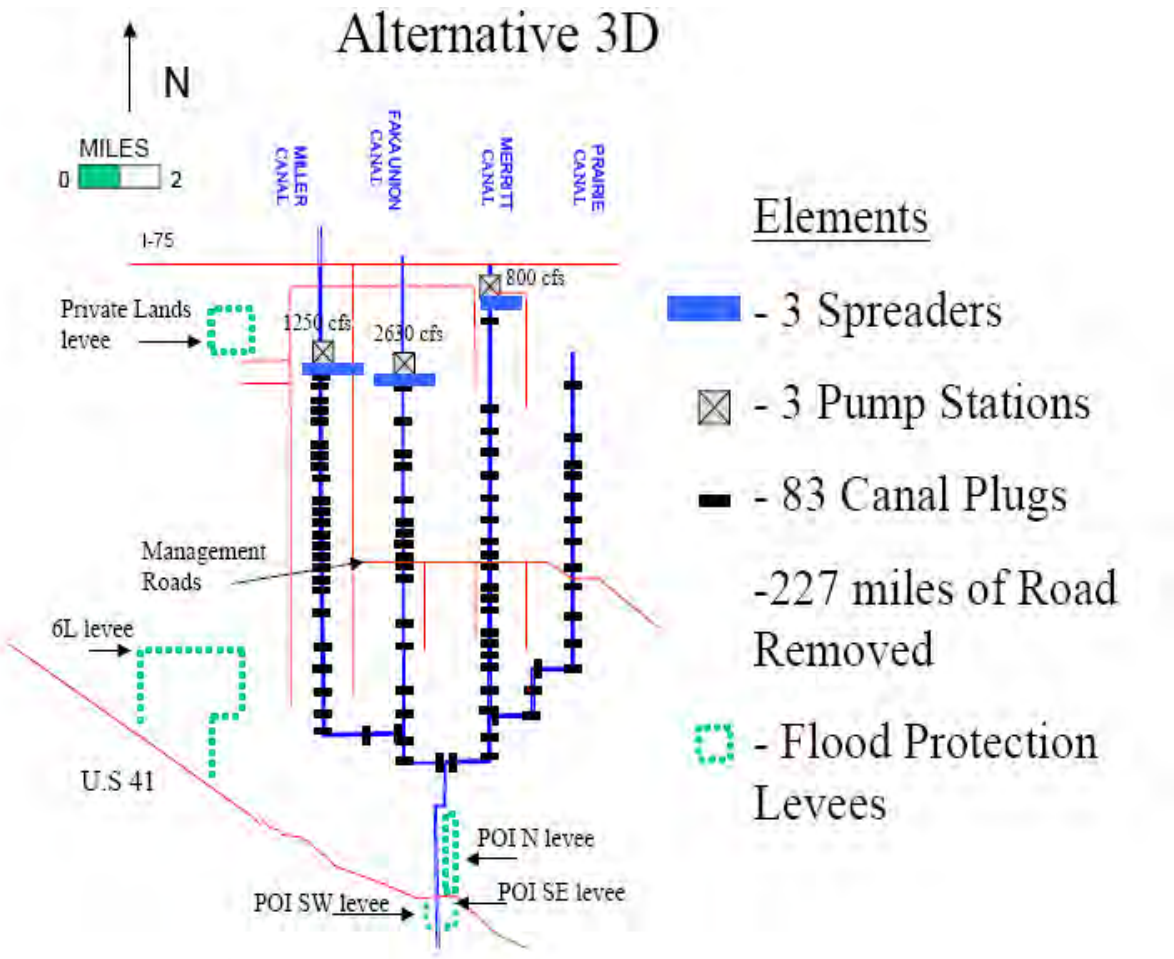

FIGURE 8 - 1 ALTERNATIVE 3D

Program Name: C&SF: CERP Adaptive Assessment and Monitoring Program (AA&M)
Project ID: 2308
Lead Agency: USACE / SFWMD
Authority: Design Agreement; WRDA 1996, WRDA 2000 *(Initially Authorized Project)*

Strategic Plan Goal(s) Addressed: supports 2-A.3

Measurable Output(s): System-wide/Regional Monitoring and Assessment Plan (MAP), Biennial System Status Report

April 1999 (Restudy) Project/Program Synopsis: A rigorous Adaptive Assessment and Monitoring (AA&M) program was included as an essential feature of the Plan and implementation of the AA&M program will ensure the Plan's overall success. New information about the natural system, learned from continuing research and from measuring responses to implementation of Plan components, can be used to increase the ultimate level of success of the overall restoration program. Specifically, AA&M utilizes a focused, system-wide/regional monitoring program (MAP) to measure how well each component of the Plan accomplishes its goals and objectives. Data from monitoring is assessed and reported biennially in system status reports (SSRs), providing a status on the Everglades and South Florida ecosystem and information critical to refinement of the Plan as well as its individual components. AA&M was authorized along with the ten Initially Authorized Projects under WRDA 2000.

The RECOVER team will implement this program and subsequently evaluate how well CERP is meeting expected objectives; these evaluations will be used as a basis for determining how to refine the Plan in the future. The AA&M program is rooted in science and includes not only comprehensive monitoring and assessment but development of conceptual models, performance measures, and scientific peer review.

Current Project/Program Synopsis: AA&M-related activities include: (1) developing and refining the conceptual ecological models; (2) developing performance measures; (3) implementing a system-wide monitoring and assessment plan (MAP); (4) conducting annual assessments by synthesizing MAP and CERP project data; (5) coordinating peer reviews; and (6) resolving scientific/technical issues. The goal of the AA&M program is to increase the probability of restoration success by recognizing that modifications will be made the Plan and its components in the future; based upon new information garnered from the AA&M program.

The CERP is also being planned, implemented, and refined using the principles of adaptive management (AM). AM was mandated by the Water Resources Development Act of 2000 and the CERP Programmatic Regulations (2003). AM is an iterative and deliberate process of applying principles of scientific investigation to both design and implementation in order to better understand the ecosystem and reduce key uncertainties; AM seeks to continuously refine program/project design and operation. To address uncertainties, and to improve the performance of CERP, AM addresses the challenges inherent in predicting and restoring large-scale complex ecosystems by replacing dependencies on numerical models and traditional planning guidelines with using a "learning-by-doing" approach to decision-making. This approach takes that learning and applies it to: (1) reducing uncertainties and guiding management decision-making; (2) transferring lessons from one project to another or among project phases in order to refine alternatives and enhance restoration success; (3) using physical models/field testing to test hypotheses and the outcomes of management decisions; and (4) incorporating flexibility and versatility into project design and implementation. AM for CERP recognizes that the future will be influenced by unanticipated internal and external events and that the Plan must be implemented with flexibility in mind.

Current Status: Ongoing

Monitoring and Assessment Plan (MAP): Over a three-year period, a team of federal, state, tribal governments, local agencies and stakeholders, interest groups, and the public developed the MAP which was completed in 2004. The goal is to have a single, integrated, system-wide monitoring and assessment plan that will be used and supported by all participating agencies to track and measure system-wide responses to implementation of the CERP performance objectives. As the primary tool by which RECOVER assesses Plan performance, monitoring determines if ecosystem responses are desirable; if progress is being made toward Interim Goals and Interim Targets; and whether refinement of the Plan is needed. MAP, Part 1: *Monitoring and Supporting Research* was refined in 2009 by incorporating information from the 2006 and 2007 System Status Reports (SSRs) and lessons learned during development of the MAP, Part 2: *2006 Assessment Strategy for the MAP*. Lessons included organizing monitoring and assessment data via hypothesis clusters rather than a single hypothesis; assessment across geographic module boundaries; and the importance of a comprehensive data management system to adequately assess and report system-wide monitoring results. Revisions utilized the conceptual ecological model approach, while retaining a focus on long-term system-wide monitoring and assessment and incorporating flexible AM principles to address project-level monitoring.

System Status Report (SSR): The SSR, released in 2007, was the first comprehensive technical assessment of monitoring data developed by the RECOVER Assessment Team using data collected by the MAP. Because few CERP projects had been implemented at this time, the 2007 SSR provides estimates of pre-CERP conditions of ecosystem indicators monitored by the MAP, in conjunction with data from other sources. The SSR also identifies potential management actions that may be necessary to adjust CERP to achieve its goals and objectives. Lessons learned from this effort are guiding ongoing refinement of the assessment process and the 2009 SSR.

CERP AM Strategy and ***AM Integration Guide*** An interagency team lead by RECOVER is defining CERP Adaptive Management (AM) including development of an overall strategy for integrating AM into CERP (CERP AM Strategy) and documentation about how and when AM should be used. Following release of the CERP AM Strategy in 2006, development of guidance was the next step in fully implementing the CERP AM program. The draft CERP AM Guidance Manual underwent agency and public review and comment from mid-September to mid-October 2008. Work is underway to address comments received and further develop a CERP AM Integration Guide (Guide). The Guide identifies the activities and processes needed to implement CERP AM at the project and program levels and identifies how these activities are integrated with the USACE planning process. The Guide also provides the rationale for, and importance of, the CERP AM Program and identifies the parties responsible for implementing each activity.

Est. Cost: $145,936,000

Detailed Project Budget Information (in $1,000s):

AAM	Expenditures Thru FY 2008
USACE	$26,163,000
SFWMD	$22,257,000
Total	$48,420,000

Hyperlinks: http://www.evergladesplan.org/pm/recover/assess_team_ssr_2007.aspx
http://www.evergladesplan.org/pm/program_docs/adaptive_mgmt.aspx
http://www.evergladesplan.org/pm/pm_docs/adaptive_mgmt/091208_am_guid_manual_v2- 1.pdf

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Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999)* and WRDA 2000. Cost estimate information is updated to reflect current price levels in October 2008 dollars. Additional information provided from the Monitoring and Assessment Plan (2008) and the RECOVER team.

Project Name: C&SF: CERP Biscayne Bay Coastal Wetlands (FFF) (OPE)
Project ID: 2309 (CERP Project WBS # 28)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 2-A.3

Measurable Output(s): 1,695 acres of restored wetlands

- Saltwater wetlands, acres of lift = 1,242
- Freshwater wetland, acres of lift = 453
- Sensitivity analysis provides a range from 453 to 1,219, depending upon seepage rate used for the calculation. *(Lower number is used in the final CBEEM analysis).*

April 1999 (Restudy) Project Synopsis: Includes pump stations, spreader swales, stormwater treatment areas, flow ways, levees, culverts, and backfilling canals located in southeast Miami-Dade County and covers 13,600 acres from the Deering Estate at C-100C, south to the Florida Power and Light Turkey Point power plant, generally along L-31E. The component Biscayne Bay Coastal Canals as modeled in D-13R and the Critical Project on the L-31E Flowway Redistribution are smaller components of the Biscayne Bay Coastal Wetlands feature.

Current Project Synopsis: The goal is to improve the ecological health of Biscayne Bay (including freshwater wetlands, tidal creeks and near-shore habitat) by adjusting the quantity, quality, timing, and distribution of freshwater entering Biscayne Bay and Biscayne National Park. The primary means to accomplish this goal is through the redistribution of freshwater flow and the expansion and restoration of wetlands adjacent to southwestern Biscayne Bay (in Miami-Dade County) to maintain sustainable biological communities. Potential sources of water will be identified and evaluated to determine their ability to provide the target flows. The project will also enhance recreational opportunities.

The project will capture, treat, and redistribute freshwater runoff from the watershed into Biscayne Bay, creating more natural water deliveries, expanding spatial extent and connectivity of coastal wetlands, and providing improved recreational opportunities in Biscayne Bay and adjacent wetlands. Redistributing, through a spreader system, available surface water entering the area from regional canals will replace lost overland flow and partially compensate reduced groundwater seepage. The proposed changes for freshwater flow are expected to restore or enhance freshwater wetlands, tidal wetlands, and near shore bay habitat. Diversion of canal discharges into coastal wetlands is expected not only to reestablish productive nursery habitat all along the shoreline but also to reduce the abrupt freshwater discharges that are physiologically stressful to fish and benthic invertebrates in the bay near canal outlets. Improving salinity distribution near the shoreline with sustained lower-than-seawater salinities in tidal wetlands can help to reestablish productive nursery habitat for shrimp and shellfish.

Current Status: An Adaptive Management strategy, Regional Evaluation and Monitoring Plan review has been completed. An alternative formulation briefing (AFB) was held December 2007. In February 2008, it was decided to divide the project into two phases and a guidance memorandum from USACE headquarters was received in April 2008. Phase I consists of design and construction of two essential components, Deering Estate Flowway and Cutler Ridge Wetlands, to restore the quantity, quality, timing, and distribution of freshwater to Biscayne Bay and estuary and Biscayne National Park. Miami- Dade

County already constructed a portion of the proposed Deering Estate Flowway. The PDT completed a draft Project Implementation Report (PIR) for Phase I and is finishing up Agency Technical Review. Cost updates are complete and the draft Statement of Work for Independent External Peer Review was submitted to the PCX.

The SFWMD had been advancing the design and construction of Phase 1 as a state expedited project. However, construction is to be done by USACE starting in 2011 per SFWMD/USACE management discussions. SFWMD reviewed an existing BBCW land acquisition agreement to determine if they had a binding commitment to rehydrate certain BBCW wetland areas prior to 2011.

December 2008, the SFWMD (citing budget constraints) rescinded a prior decision that prohibited development in 6,400 acres of critical wetlands along Biscayne Bay, from Southwest 152nd Street in Palmetto Bay to Biscayne National Park; and reconsidered permit applications to build on coastal wetlands set aside for restoration in South Dade. 580 acres for this project were still held privately. Cutler Properties (owning 136 acres on the SE corner of SW 184th Street and Old Cutler Road) had previously applied in 2005 to build 400 residential units on the site's westernmost 42 acres (non- wetlands or less-pristine wetlands) and planned to set aside the remaining 96 acres for wetlands preservation (likely no public access). Cutler Properties sued in August 2008, over how much the SFWMD should pay to acquire the land, delaying the permit to build. A separate 2009 trial will address dissimilar appraisals for the 377 acres, east of Southwest 87th Avenue from 224th to 232nd Streets, owned by Cutler Bay Venture.

The draft PIR is scheduled for publication in the Federal Register mid-September, 2009. A Civil Works Review Board is targeted for June 2010 for the final PIR/NEPA. The Assistant Secretary of the Army (CW) submission to Congress is expected in 2011; along with BCOE of the final plans and specs.

Est. Cost: $431,804,000 (Phase 1 and 2)

Project Schedule:

2010	Phase 1 construction begun.
2012	Phase 1construction physically complete.
TBD	Phase 2

Detailed Project Budget Information (rounded):

BBCW (Phase 1 & 2)	**Expenditures Thru FY 2008**
USACE	$8,801,000
SFWMD	$1,805,000
Total	**$10,606,000**

Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_28_biscayne_bay.cfm
https://my.sfwmd.gov/portal/page?_pageid=1855,2830400,1855_2830186&_dad=portal&_schema=PORTAL&navpage=prjbisbay

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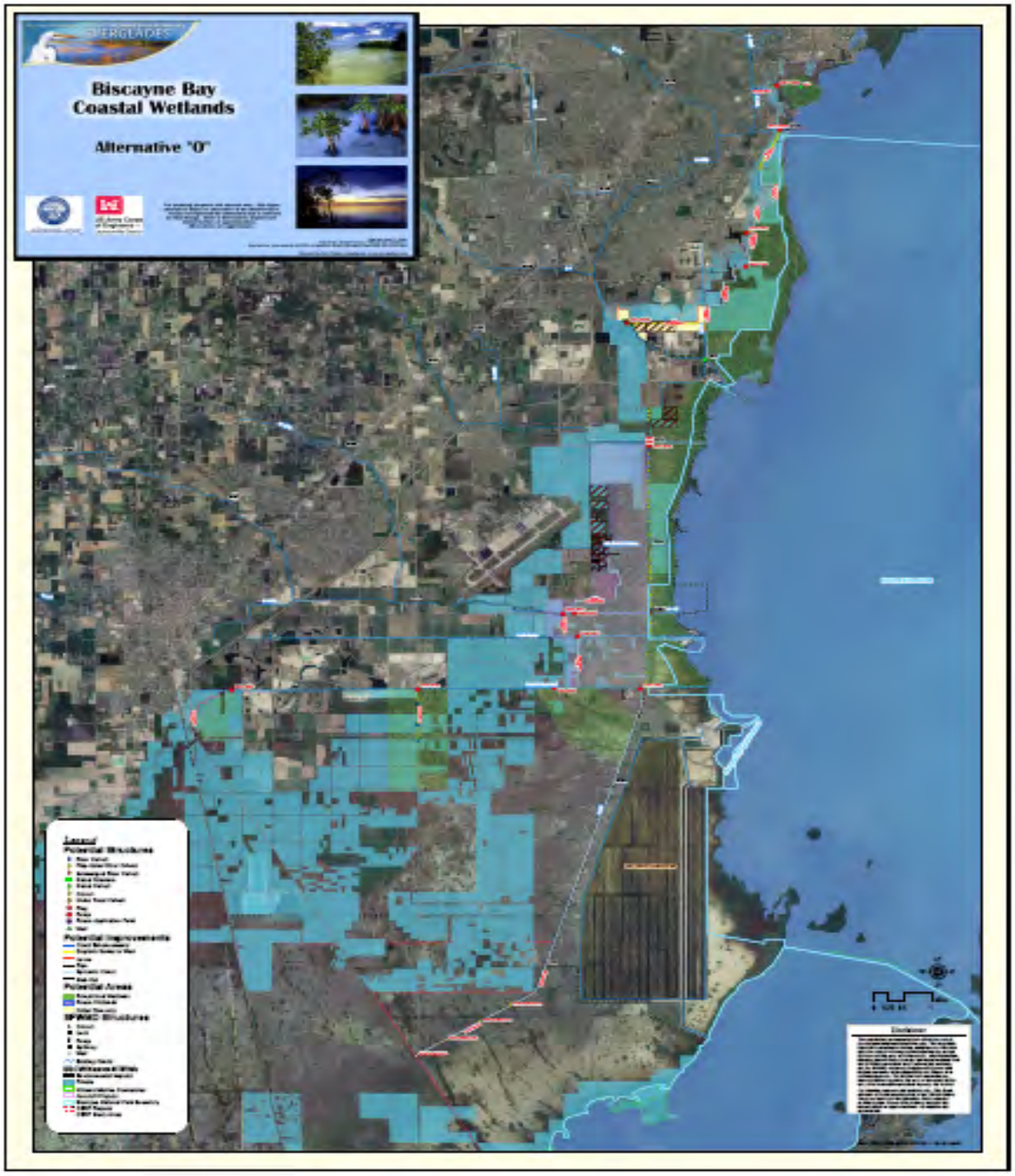
Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Current status information summarized from draft PIR and AFB briefing documentation. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:



Project Name: C&SF: CERP C-111 Spreader Canal (WW)
C-*111 Spreader Canal - Western Project (PIR 1)* and *Eastern Project (PIR 2)*
Project ID: 2310 (CERP Project WBS # 29)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Initially Authorized Project)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 2-A.3

Measurable Output(s): Increased Flows to Florida Bay via Taylor Slough – acreage TBD.

April 1999 (Restudy) Project Synopsis: Modify the existing flow of water to more closely resemble that of historical pre-drainage conditions. Proposed modifications will improve deliveries and enhance the connectivity and sheetflow in the Model Lands and Southern Glades areas, reduce wet season flows in C-111, and decrease potential flood risk in the lower south Miami-Dade County area.

This is to be accomplished by constructing a spreader canal, to evenly distribute water currently lost to tide via the existing canal. Features include construction, removal or modifications of: levees, canals, pump stations, water control structures, and stormwater treatment. The feature enhances the C&SF C-111 (South Dade) project initial design that pumps water from the C-111 and the C-111E Canals into a constructed STA, prior to discharge in the Southern Everglades and Model Lands. Pump station S-332E will be enlarged, the canal extended under U.S. Highway 1 and Card Sound Road, and the southern reach of the C-111 canal will be filled in along with removal of structures S-18C and S-197.

Current Project Synopsis: C-111 N Spreader Canal (WW) is one of the initially authorized projects under WRDA 2000. Past dredging of the C-111 canal redirected water flows to the east, reducing flow through Taylor Slough into the northern Florida Bay impacting fisheries and ecology. A Project Management Plan (PMP) aimed to reduce water loss through the canal system and restore flows was initially approved in 2002. As part of the Corps planning process, alternative plans were reviewed. This project will be implemented via two Project Implementation Reports (PIRs) and Alternative 2-D was proposed for the first part. Project objectives are:

- Restore the quantity, timing and distribution of water delivered to Florida Bay via Taylor Slough to levels nearest, as possible, to the pre-drainage model runs.
- In the Southern Glades and Model Lands, hydroperiods will be improved to optimal levels to support historical vegetation (as near as is possible to pre-drainage model runs); and hydropatters will be restored to historical sloughs with associated tributaries.
- Return coastal zone salinity levels in western Florida Bay (as close as possible to pre-drainage scenario model runs) by restoring upstream water levels in eastern Everglades National Park.

The "Western" (PIR 1) project includes the 590-acre Frog Pond detention area and 225 cfs pump station; creating a mound of groundwater to the south and west, by preventing groundwater seepage to the east and improving water deliveries (quantity, timing and distribution) to Eastern Florida Bay. The recommended plan also includes a second 225 cfs pump station to increase water stage in the Aerojet Canal, which further prevents groundwater seepage to the east.

An "Eastern" (PIR 2) project replaces existing portions of the lower C-111 canal with a spreader canal to enhance sheetflow to Florida Bay, and restoration efforts within the Southern Glades and Model Lands.

Current Status: The Tentatively Selected Plan (TSP) for PIR 1 was recommended in October 2007 to increase flows thru Taylor Slough into Florida Bay. An Alternative Formulation Briefing was held in April 2008.

During initial scoping, an Integrated Design Document Report/Environmental Assessment (DDR/EA) was prepared for a "**Design Test**" project. The integrated report received public comments between August and September, 2008. The design test survey and hydraulic design were completed in 2008 and the scope of work for the test was completed in January, 2009. The test will assist in determining, based on the amount of water available for the spreader canal, the most appropriate alignment to maximize ecological restoration without adversely impacting privately owned lands. Design monitoring and testing provide information for the planning of future C-111 Spreader Canal Project features.

Prior to the River of Grass land proposal (2008), the SFWMD was designing the broader 'Western PIR' as a state expedited project with construction planned for September 2009. USACE HQ reviewed the alternative analysis and provided guidance on the cost and benefit portion and RE analysis on boundary conditions. Modeling on alternatives 1C, 1D, 2D short, 2D long, 3D and 6D determined a 'selected plan'. The Draft Project Implementation Report and Draft Environmental Impact Statement (DPIR/DEIS) for the C-111 Spreader Canal (western project) was published in the Federal Register April 24, 2009 and made available for public comments and library access thru June 23, 2009. The final is expected in July.

A public meeting was held May 11, 2009 in Homestead. Hydroperiods and hydropatterns within wetlands of the Southern Glades and Model Lands will be improved by construction of a new operable water control structure in the lower C-111 Canal, incremental operational changes at existing structure S-18C, changes in operations at the existing S-20 structure, construction of a plug at existing structure S-20A, and installation of ten earthen plugs in the C-110 Canal. A formal Civil Works Review Board and the environmental Record of Decision (ROD) for a 404 permit are expected later in 2009. For the USACE to complete construction, the Committee on Transportation and Infrastructure (House of Representatives) and the Committee on Environmental and Public Works (Senate) need to approve by resolution the final PIR. Additionally, federal appropriations, state Water Reservations and the execution of a Project Partnership Agreement between sponsors must be in place.

Est. Cost: $131,252,000

Project Schedule:

2009	Two year Design Test begun.
2010	Design Test disassembled.
TBD	Western, Part 1 PIR
TBD	Eastern, Part 2 PIR

Detailed Project Budget Information (rounded):

C-111 Spreader Canal	Expenditures Thru FY 2008
USACE	$6,527,000
SFWMD	$1,849,000
Total	**$8,376,000**

Hyperlinks: http://www.evergladesplan.org/pm/projects/proj_29_c111.cfm

https://my.sfwmd.gov/portal/page?_pageid=1855,2830405,1855_2830734&_dad=portal&_schema=PORTAL&navpage=prjc111

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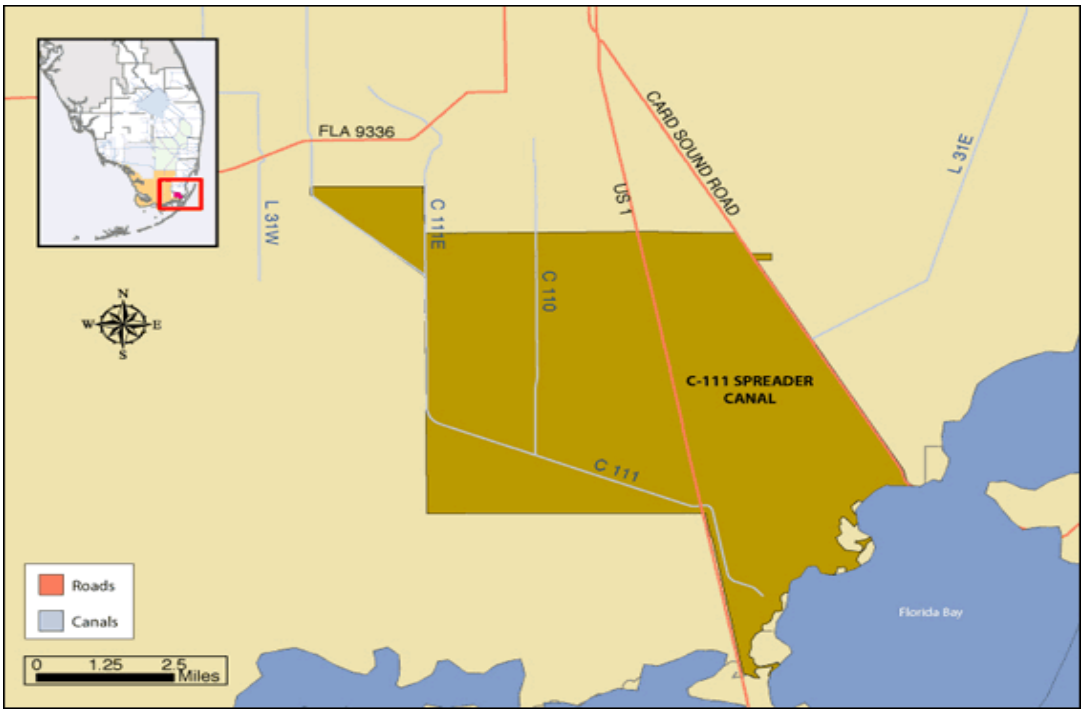
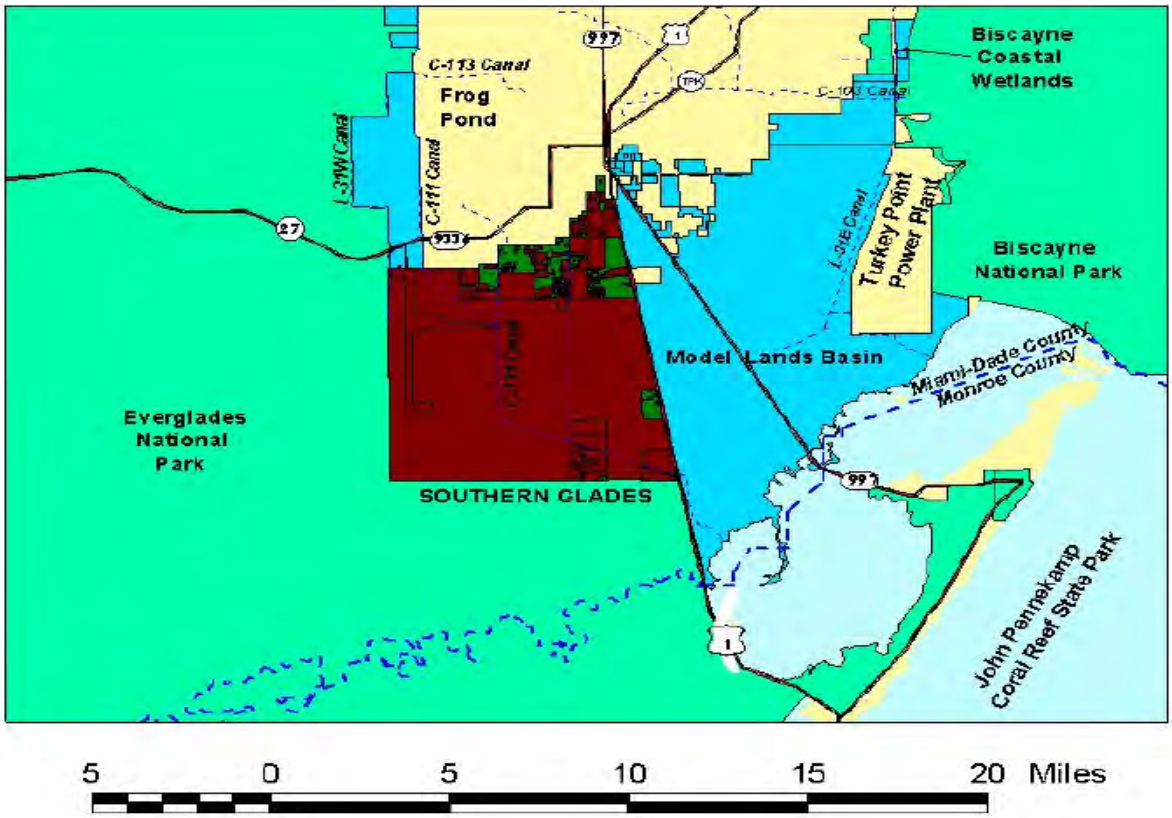
Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Other information is summarized from the PMP, Tentatively Selected Plan and AFB presentation. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information:





Program Name: South Florida Ecological Services Office, Threatened and Endangered Species Program
Project Name: South Florida Multi-Species Recovery Plan
Project ID: 2402
Lead Agency: USFWS
Authority: Endangered Species Act of 1973 (16 U.S.C. 1531-1543)
Funding Source: No specific funding source, part of base funding for agency/organizations and further incorporated into agency/organization budgets to extent practical

Strategic Plan Goal(s) Addressed: Primary: **2.A.4** Secondary: **2.A.1**

Measurable Output(s): Number of species delisted, number of species reclassified to threatened, number of species status stable or improving

Project Synopsis: A Multi-Species Recovery Plan (MSRP) for the threatened and endangered species of south Florida was completed in May 1999. This document was prepared to fulfill a major element of the South Florida Ecosystem Restoration Initiative. It contains information on the biology, ecology, status, trends, management, and recovery actions for 68 federally listed species that occur in south Florida, as well as the ecology and restoration needs of 23 natural communities in this region. Implementation of the MSRP is underway through the work of the Service and their many Federal, State, and non-governmental partners. The MSRP implementation schedule was completed in 2007. The implementation schedule prioritizes recovery actions in the MSRP, as well as providing time and cost estimates for those actions. Participants to complete those actions are identified. In Fiscal Year 2009, one species (Small's milkpea) was found to have a status of "improving". Nine species were considered to have a status of "stable"; these included Florida panther, Key deer, Lower Keys marsh rabbit, rice rat, American crocodile, four-petal pawpaw, Garber's spurge, beach jacquemontia, and Florida ziziphus. A total of 25 species had a status of "uncertain". Eight species were considered to have a status of "declining". The revision of the Florida panther recovery plan was completed on November 1, 2008. The Service is in the process of revising the Key deer recovery plan.

The Service is working with partners to initiate, continue, or complete recovery actions in the MSRP for a multitude of species. Research, monitoring, and/or habitat restoration are being conducted for the following species: Florida panther, Key deer, Key Largo cotton mouse, Key Largo woodrat, Lower Keys marsh rabbit, southeastern beach mouse, West Indian manatee, Audubon's crested caracara, Cape Sable seaside sparrow, Everglade snail kite, Florida grasshopper sparrow, Florida scrub jay, piping plover, wood stork, American crocodile, bluetail mole skink, sand skink, Schaus swallowtail butterfly, crenulate lead-plant, Florida bonamia, deltoid spurge, pygmy fringe-tree, pigeon wings, Avon Park harebells, Garret's mint, scrub mint, Lakela's mint, scrub blazingstar, papery whitlow-wort, Key tree cactus, tiny polygala, wireweed, sandlace, scrub plum, and Florida ziziphus.

Cost: Total: $386,112,000 (does not include all amounts for habitat acquisition, management, or restoration because those tasks are expressed as costs per acre and could not be determined at this time)

Project Schedule:
Start Date: 1999
Finish Date: TBD

Estimated Cost of Recovery
Includes the estimated cost of accomplishing all recovery actions in the MSRP. These costs were calculated as totals per community for the multiple species that occur within each community. Costs for land acquisition, management, and restoration will be more accurately determined as the MSRP is implemented.

Detailed Project Budget Information (in thousands)

	FY 2005	FY 2006	FY 2007	FY 2008	Balance to complete	Total
Federal	$3,002.5[a]	$5,219.2 [a]	$3,345.8 [a]	$2,370.8 [a]	$372,173.7[b]	
State						
Tribal						
Local						
Other						
Total	**$3,002.5[a]**	**$5,219.2 [a]**	**$3,345.8 [a]**	**$2,370.8 [a]**	**$372,173.7[b]**	**$386,112[c]**

[a]Amounts obtained from the South Florida Ecological Services Office's recovery expenditures report to Congress

[b]Total is rough estimate based upon the 1999 South Florida Multi-Species Recovery Plan and the precise amount of dollars has not been updated recently

[c]Does not include all amounts for habitat acquisition, management, or restoration because those tasks are expressed as costs per acre and could not be determined at this time

Contact: Dana Hartley (772) 562-3909

Program Name: Infrastructure
Project Name: WCA 2A Regulation Schedule Review
Project ID: 2403
Lead Agency: USACE
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Revised Schedule

April 1999 (Restudy) Project Synopsis: The purpose of the project is to evaluate the feasibility of modifying operational standards for WCA 2A to benefit its fish and wildlife resources, without adversely impacting the area's ability to satisfy its flood control and water supply purposes.

Current Status: The study can be implemented with existing operational and maintenance authority. It will be conducted in coordination with the Everglades Rain-Driven Operations and can be funded through ongoing O&M appropriations for the Corps of Engineers.

Est. Cost: TBD

Project Schedule: TBD

Detailed Project Budget Information (rounded):

Budget information is unavailable, as project has not begun.

Hyperlinks*:* http://www.saj.usace.army.mil/h2o/reports/r-wca2.html
http://www.saj.usace.army.mil/h2o/reports/r-sitrep.html

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Project Name: C&SF: Manatee Pass Gates
(Construction of Modifications to the C&SF Project features for the Protection of Manatees)
Project ID: 2404
Lead Agency: USACE / SFWMD
Authority: ER 1130-2-540, Environmental Stewardship Operations and Maintenance Policies, 15 November 1996; EP 1130-2-540, Environmental Stewardship Operations and Maintenance Guidance and Procedures, revised 30 November 2001; the Marine Mammal Protection Act of 1972; the Endangered Species Act of 1973 (as Amended) and the approved water control plans and manuals for the Central and Southern Florida Project; Section 203 Flood Control Act (1948) and Section 203 of the Flood Control Act (1958) addresses cost-sharing.
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other – supports 2-A.3

Measurable Output(s): Structural modifications and operational changes for species protection

Project History: The West Indian manatee is provided protection under the Endangered Species Act of 1973, making it against the law to "harm, harass, kill" etc. any of these animals. After boats, the "operations of spillways and locks are cited as the second leading cause of human related manatee mortalities". Protection of the manatees at water control structures is a part of the long range recovery goals of the Florida Manatee Recovery Plan required by the Marine Mammal Protection Act (1972), to maintain "the health and stability of the marine ecosystem" and to determine and maintain manatee numbers at "optimum sustainable population" in the southeastern United States.

In the *Central and Southern Florida Project Comprehensive Review Study* (Restudy) section 4.9.1.5 of the Restudy, the Manatee Protection Project is described as follows: "The West Indian manatee (*Trichechus manatus*) is listed as a federally endangered species and is one of the most endangered species in Florida. As a response to recent manatee mortality trends associated with water control structures, this project will provide operational changes and implement the installation of a manatee protection system at seven sector gates at navigational locks near Lake Okeechobee. The beneficial outcome of this project will be the reduction of risk, injury, and mortality of the manatee. The seven sector gates include S-193 at Okeechobee and S-310 at Clewiston on Lake Okeechobee; St. Lucie Lock and Port Mayaca Lock on the St. Lucie Canal; and Moore Haven Lock, Ortona Lock, and W. P. Franklin Lock on the Caloosahatchee River.

The mechanism proposed would use hydro acoustic and pressure sensitive devices that will immediately stop the gates when an object is detected between the closing gates. These systems will transmit an alarm and signal to stop the gate movement when a manatee is detected. When an object or manatee activates the gate sensors, the gate will stop and open approximately six inches to release a manatee. As a result, a manatee will be able to travel between the open gates. After the gate opens, the operator can fully close the gate unless an object remains between the gates. Then the opening process will repeat the cycle as the sensors are activated again. Due to these structural modifications, manatees will be at a significantly less risk as they encounter locks with sector gate."

Current Project Synopsis: The purpose of this project is to develop and install Manatee Protection Devices on vertical lift gates and sector gates at specific navigation and flood control structures.

The project consists of alternative structural modifications to 23 existing water control structures and locks in the C&SF Project to reduce or eliminate manatee mortalities, associated with their operation. The project is being implemented in two phases; the first phase addresses the addition of pressure sensitive devices at water control structures. These devices will reverse the gate closure if a foreign object is detected. The second phase includes acoustic devices at selected sector gate water control structures.

Current Status: A Project Cooperation Agreement (PCA) for Phase 2 was signed in January, 2005 for six sector gates. Installation of acoustic devices at the first, Ortona Lock (S-78) (Bid Year 1) is completed. Acoustical device installation for Moore Haven (S-77) and Port Mayaca (S-308B) (Option Year 1) contracts were awarded in August 2007. Installation of the manatee protection system (MPS) at Moore Haven Lock (S-77) was postponed; and instead, a contract for installation of another MPS at St. Lucie Lock (S-80) (not in the PCA) was awarded in April 2008, with construction scheduled in June concurrent with Port Mayaca (S-308B), in order to minimize lock closures for boating along the canal. .

Task Orders for subsequent sector gates and acoustic devices for W.P. Franklin Lock (S-79) and Taylor Creek Lock (S-193) were awarded in 2009. As of June 2009, five lock sensor systems were still behind due to delivery delays. Three separate companies build, waterproof and install the equipment. However, four of these are expected to be installed by September 2009. Work on the sixth system at S-310, near Clewiston (between HHD and L-9), is scheduled to begin in 2010. Funding a 7th system, will likely require an amendment to the PCA.

Operation, maintenance, repair, replacement, and rehabilitation responsibilities for each structure differ between Non-Federal and Federal sponsors based on their location.

Est. Cost: $18,600,000
(Different cost-sharing parameters exist for each gate, based on modification requests and the PCA)

Project Schedule:

2001	Start
2010	Finish

Detailed Project Budget Information (rounded):

Manatee Pass Gates	Expenditures Thru FY 2008
USACE	$13,319,000
SFWMD	$2,200,000
Total	$15,519,000

Hyperlink: http://www.saj.usace.army.mil/pd/manatee1.htm

http://www.evergladesplan.org/pm/pm_docs/prog_regulations/som/v1_app_b.pdf

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (1999).* Current status information was provided by the project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Program Name: Infrastructure
Project Name: Loxahatchee Impoundment Landscape Assessment (LILA)
Project ID: 2305
Lead Agency: SFWMD / USFWS A.R.M. Loxahatchee NWR

Strategic Plan Goal(s) Addressed: 2.A.3

Measurable Output(s): Reports outlining quantitative targets for CERP performance measures. Educational kiosk.

Project Synopsis: The objective of LILA is to support CERP by defining hydrologic regimes that sustain a healthy Everglades Ridge and Slough ecosystem and reduce uncertainty in predicting the ecosystem response. LILA will address the effects of water depth, hydro period, and flow rate on wading birds, tree islands, marsh plant communities, marsh fishes and invertebrates, and peat soils. In addition, LILA supports refuge and CERP public outreach by providing opportunities to observe ongoing investigations and results. It will provide educational opportunities through on-site demonstrations, kiosks as well as a forum for discussion of restoration designs.

Project Schedule:
Start Date: 2002
Finish Date: 2012

Detailed Project Budget Information (1000s)

	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Total**
Federal	60	10	10	10	10	50	10	2,060
State	338	361	197.5	488	348		471	2,903.5
Tribal								
Local								
Other								
Total	**398**	**371**	**207.5**	**498**	**358**	**50**	**481**	**4,963.5**

***$1,900,000 is contribution of land 64 acres**

Hyperlink: N/A
Contact: Rolf E. Olson (561) 735-6022

Program Name: Invasive Exotic Species Management
Project Name: Monitoring the Effects of Repeated Aerial Herbicide Application on *Lygodium microphyllum* and Native Vegetation.
Project ID: 2501
Lead Agency: University of Florida, U.S. Fish and Wildlife Service (FWS)
Cooperating Agencies: South Florida Water Management District (SFWMD)

Goal(s) Addressed: 2-B.1

Measurable Output(s): Project acres treated, actual infested acres treated, herbicide amounts utilized, herbicide treatment cost per acre, *Lygodium* aerial treatment costs per acre, herbicide (s) efficacy, short- and long-term evaluation of treatment effectiveness, impacts to *Lygodium* and native species, non-target herbicide damage assessment, enhancement of inventory, monitoring and aerial control methodologies for *Lygodium*, assessment of success, etc.

Project Synopsis: Test the effectiveness of aerial application of two different herbicides, metsulfuron methyl and glyphosate, at two rates, to dense infestations of *Lygodium,* and assess treatment effectiveness and impacts to *Lygodium* and native plant species on 45 northern Everglades tree islands in Water Conservation Area 1 (the Refuge).

Current Status: Final report in preparation; all field work completed.

Cost:
Total
$220,000

Project Development	N/A
Land Acquisition	N/A
Implementation Unknown	N/A
Operations and Maintenance Unknown	N/A

Project Schedule:
Proposed Start Date: July 2005
Finish Date: July 2009

Detailed Project Budget Information ($1000s)

	Thru 2008	2009	2010	2011	2012	2013	Balance to complete	Total
Federal	325	35						360
State								
Tribal								
Local								
Other								
Total	**325**	**35**						**360**

Hyperlink: N/A
Contact: Gayle Martin (561) 732-3684 and Jeff Hutchinson, UFL

Program Name: South Florida Water Management District Invasive Species Management
Project name: Invasive exotic plants control in terrestrial and aquatic natural systems
Project ID: 2502
Lead Agency: SFWMD

Strategic Plan Goal(s) Addressed: 2.B.1

Measurable Output(s): Implementation of invasive species management plans as a coordinated program, including inter-agency collaboration; reduction of total acreage for all priority invasive plant species; attainment of maintenance control for invasive exotic plants such as hydrilla, waterhyacinth, waterlettuce, Brazilian pepper, Australian pine, Old World climbing fern.

Project Synopsis:
The SFWMD continues to coordinate with other agencies to implement the melaleuca management plan for south Florida. Maintenance control has been achieved for melaleuca within Water Conservation Areas (WCA)-2A, 3A, 3B, and many acquisition areas along the eastern Everglades, the Florida Keys, and Lake Okeechobee.

Old World climbing fern continues to be problematic in many SFWMD-managed lands, but some progress has been made. The SFWMD is actively treating outlier populations of Old World climbing fern within WCA-3A and WCA-3B in coordination with ongoing tree island invasive plant surveys. Sustained control efforts on other conservation lands (e.g., Kissimmee River basin, Treasure Coast region) are beginning to move Old World climbing fern infestations to lower levels. Continued implementation of control programs, consistent with the Old World climbing fern management plan, is necessary to reverse the expansion of this invasive plant.

The SFWMD continues to maintain waterlettuce and waterhyacinth at maintenance control levels in most natural water bodies under its jurisdiction. Other species, including hydrilla, West Indian marsh grass, torpedograss, limpograss, and Wright's nutrush remain problematic in the Kissimmee Chain of Lakes region. The SFWMD is increasing control efforts for these species in collaboration with FDEP. The SFWMD also continues to focus on regionally-problematic species such as downy rosemyrtle (pinelands in northeastern region), shoebutton ardisia (eastern Everglades), and South American watergrass (Lake Okeechobee).

Cost: Total $11,819,000
Project Development **N/A**
Land Acquisition N/A
Implementation
Operations and maintenance $11.6 million per year

Project Schedule:
Start Date: 2007
Finish Date: TBD

Detailed Project Budget Information ($1000)

	2007	2008	2009	2010	2011	Balance to complete	Total
Federal	135*						135
State	11,684						11,684
Local							
Total	**11,819**						**11,819**

*USDA grant funds (TAME)
Contact: LeRoy Rodgers, SFWMD, (561) 682-5044

Program Name: South Florida Water Management District Invasive Species Management
Project Name: Invasive Species Research and Information Exchange
Project ID: 2503
Lead Agency: SFWMD

Strategic Plan Goal(s) Addressed: 2.B.1

Measurable Output(s): Development of new management approaches for invasive plants through applied research and information exchange between cooperators; development of management plans for priority invasive species; educational outreach to the general public on invasive species prevention;

Project Synopsis: The SFWMD continues to conduct and fund research programs in herbicide development, management techniques, and biological control of priority invasive plants and animals. Herbicide evaluations are improving the chemical control efficacy for Old World climbing fern, downy rosemyrtle, hydrilla, torpedograss, limpograss, South American watergrass, and Brazilian pepper.
Other research has focused on factors contributing to the invasiveness of priority species such as Old World climbing fern, management techniques to optimize control strategies (e.g., prescribed burning, flooding), and ongoing funding to biological control research institutions for melaleuca, Old World climbing fern, Brazilian pepper, and bromeliad weevil.

The SFWMD continues to collaborate with other agencies on education and outreach. Recent programs include the distribution of notification cards for Burmese pythons and invasive plant identification cards.

There is still a large gap in acquiring sufficient funding to implement the multi-species control program with multi-agency integration. However, governmental agencies and other entities have formed a cooperative invasive species management area (CISMA) for the Everglades region. The Everglades CISMA has acheived early results in improving implementation of regional control strategies, including early detection and rapid response activities. For example, collaborative efforts to reduce localized populations of the sacred ibis and kripa, a newly discovered invasive plant in South Florida mangrove, have been very successful.

Cost: Total
Project Development **N/A**
Land Acquisition N/A
Implementation $5,000,000 per year for 15 years
Operations and maintenance $2,000,000 per year thereafter for maintenance control
Project Schedule:
Start Date: 2007
Finish Date: TBD

Detailed Project Budget Information ($1000)

	2007	2008	2009	2010	2011	Balance to complete	Total
State							
Local	90						90
Total	90						90

*The SFWMD also funds several biological control programs with USDA/ARS, which should be identified on their project sheets
Contact: LeRoy Rodgers, SFWMD, (561) 682-5044

Program Name: Invasive Exotic Species Management
Project Name: Develop and implement a FWS Florida Invasive Species Strike Team
Project ID: 2504
Lead Agency: U.S. Fish and Wildlife Service (FWS)

Goal(s) Addressed: 2-B.1

Measurable Output(s): Project acres treated, actual infested acres treated, herbicide amounts utilized, prioritized lists of invasive plants and animals, modify or enhanced control methods, funding totals and invasive exotic plant species targeted, implementation of inventory and monitoring methodologies for invasive plants and animals, treatment effectiveness, assessment of success, etc.

Project Synopsis: Secure and appropriate Congressional funding to develop and implement a highly mobile FWS Invasive Species Strike Team (2-member) to rapidly respond to, and control incipient or newly established infestations of highly invasive exotic species (plants and animals) occurring on National Wildlife Refuges (NWRs) in Florida. The Region 4 Invasive Species Strike Team (R4 ISST) will provide administration, funding and oversight support for projects involving control and treatment of moderate and dense infestations of invasive exotic plants utilizing highly specialized and experienced exotic plant contractors on SE and Florida NWRs. In addition, the R4 ISST will provide technical assistance to Florida and SE NWRs, and refuge managers concerning invasive species identification, control and management, and lastly, will represent the interest of the FWS on associated invasive species task forces or working groups, i.e., NEWTT and FIATT.

Current Status: Fully operational and implemented; assuming recurring Congressional cyclical funding; project funding/species targeted referenced in 'EcoStems'.

Cost:
Total
≥ $5 million
Project Development N/A
Land Acquisition N/A
Implementation Unknown
N/A
Operations and Maintenance Unknown N/A

Project Schedule:
Proposed Start Date: October 1, 2003
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	Thru 2008	2009	2010	2011	2012	2013	Balance to complete	Total
Federal	2,890	978	494	494	494	494		5,844
State								
Tribal								
Local								
Other								
Total	**2,890**	**978**	**494**	**494**	**494**	**494**		**5,844**

Hyperlink: N/A
Contact: William G. Thomas, Jr (239) 472-1100 x 248

Project Name: C&SF: CERP Melaleuca Eradication and Other Exotic Plants (OPE)
Project ID: 2505 (CERP Project WBS # 95)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Primary: 2-B.1

Measurable Output(s): Increase effectiveness of biological control technologies

April 1999 (Restudy) Project Synopsis: Includes: (1) upgrading and retrofitting the current quarantine facility in Gainesville, and (2) large-scale rearing of approved biological control organisms for release at multiple sites within the south Florida ecosystem. The purpose of this feature is to increase the effectiveness of biological control technologies to manage Melaleuca and other invasive exotic species.

Current Project Synopsis: The primary benefits of this project include preventing the expansion of invasive exotic plant species into natural areas, and reducing coverage and density of invasive exotic species. Secondary benefits include promoting the re-establishment of native plants, restoring native habitat for native bird and wildlife species, and reducing stressors on rare, threatened and endangered species.

The Design Agreement between the USACE and the SFWMD was amended 29 July 2004 to include the Melaleuca and Other Exotic Plants– Implement Biological Controls project. The Project Management Plan was approved 28 Jan 2005 and work began on a PIR focused on the mass rearing and controlled release of biological agents to control Melaleuca, Brazilian pepper, Australian pine, and Old World Climbing Fern throughout South Florida. Due to size, this project may be authorized by the Secretary of the Army under the WRDA 2000 Programmatic Authority without additional congressional authorization. Design and construction of the upgrade work needed at the existing Gainesville quarantine facility was postponed due to the lack of non-Federal funding on behalf of the sponsor.

Current Status: The Alternative Formulation Briefing was held March 10, 2008 and the Adaptive Management Strategy was developed in coordination with RECOVER. A draft PIR was submitted to HQ for policy review and concurrent public review. External review and public workshops were held in February 2009 in Davie at the U.S.D.A. Research Laboratory and another at the SWFWMD office in Fort Myers. NEPA should be finished by the end of June 2009.

Alternative 3 (inoculate all test areas with approved biocontrol agents and construct mass rearing annex) is recommended as the preferred alternative for melaleuca and Australian pine control. This alternative involves releasing insects at a few locations within each project site containing the target invasive plants, and relies on natural dispersal by the insects to achieve full coverage.

Alternative 9 (inundate all test areas with approved biocontrol agents and construct mass rearing annex) is recommended as the preferred alternative to control Brazilian pepper and Old World climbing fern. The invasive plants are inundated with insects, which will be released at many more sites in the project area.

Final Implement Biological Controls PIR is targeted to be published in the Federal Register August 2009.

Est. Cost: $16,700,000

Project Schedule:

2011 Construction Begins

Detailed Project Budget Information (rounded):

Melaleuca	**Expenditures Thru FY 2008**
USACE	$1,431,000
SFWMD	$42,000
Total	**$1,473,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_95_melaleauca.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Current status is summarized from the PMP (2005). Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009).

Additional Information: Melaleuca trees, (*Melaleuca quinquenervia*), known as punk trees or paperbark tea trees, are native to Australia. There, melaleuca is planted in parks, valued by beekeepers, and is attractive to birds and bats. Because of development, melaleuca trees in some parts of Australia are the subject of conservation efforts. In the Everglades, however, melaleuca is a pest, where the trees grow into immense forests, virtually eliminating all other vegetation becoming a "river of trees", a completely alien habitat to the plants and animals that have evolved to live in the glades. Melaleuca grows in terrestrial as well as in completely aquatic situations. During the 50 years since its introduction, melaleuca has taken over hundreds of thousands of acres of Everglades producing huge quantities of seeds, which become small trees. Herbicides are proving to be somewhat effective, but purposely-set management fires (and lightning-started fires) apparently help spread the seeds and trees. Recently, biological control insects have been released against melaleuca, but it will take time before biocontrol results are known. *SOURCE: University of Florida/IFAS Center for Aquatic Plants*.

Program Name: Invasive Exotic Species Management
Project Name: Aquatic and Upland Invasive Plant Management
Project ID: 2508 (Formerly Project ID 2608)
Lead Agency: Florida Fish and Wildlife Commission
Authority: Chapter 369, F.S.
Funding Source:

Strategic Plan Goal(s) Addressed: 2.B.2

Measurable Output(s): Acres of upland and aquatic invasive plants controlled[1]

Acres Controlled:

Aquatics Program	48282
Uplands Program	181,300

Project Synopsis: The Bureau of Invasive Plant Management is the lead agency in Florida responsible for coordinating and funding two statewide programs controlling invasive aquatic and upland plants on public conservation lands and waterways throughout the state. The aquatic plant management program designs, funds, coordinates, and contracts invasive non-native aquatic plant control efforts in Florida's 1.25 million acres of public waters. The upland plant management program coordinates and funds invasive plant removal projects on 11 million acres of public conservation lands, which include federal, state, and local government owned lands.

Cost:	TBD
Total (operations and maintenance):	
Aquatics Program	$30,547,718(FY 2008)
Uplands Program	$11,667,640(FY 2008)

Project Schedule:
Start Date: annual
Finish Date: continuous

Detailed Project Budget Information (1000s):

	2002	2003	2004	2005	2006	2007	2008
Federal	400	795.5	944	676.9	675.2	800.0	800.0
State[2]	20,536.9	28,038.3	22,122.8	29,747.7	38,434.6	38,434.6	40,234,647
Tribal	0	0	0	0	0		
Local	54.3	255.7	129	0	0		
Other	0	0	0	0	0		
Total	**20,991.3**	**29,089.5**	**23,195.8**	**30,424.6**	**39,109.8**	**39,234.6**	**41,034.647**

[1]Within the 16-county SFWMD region during the previous state fiscal year
[2]Includes $1 million match from SFWMD for melaleuca control

Hyperlink: http://www.dep.state.fl.us/lands/invaspec/index.htm
Contact: Greg Jubinsky 850-245-2821

Program Name: Invasive Exotic Species Management
Project Name: Exotic Species Removal
Project ID: 2509 (Formerly Project ID 2605)
Lead Agency: Seminole Tribe of Florida/BIA
Authority: Tribal Resolution

Strategic Plan Goal(s) Addressed: 2.B.2

Measurable Output(s): Eradication and control of exotic species.

Project Synopsis:
Control growth of exotic species on the Big Cypress and Brighton reservations.

Cost:
Total $988,000
Project Development
Land Acquisition
Implementation
Operations and maintenance

Project Schedule:
Start Date: 1998
Finish Date: 2014

Detailed Project Budget Information (1000s)

	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**Balance to complete**	**Total**
Federal	30	60	30	30	30	10	10	10	10	.5	213.5	434
State												0
Tribal	20	70	70	70	70	2	2	2	10	1.5	236.5	554
Total	**50**	**130**	**100**	**100**	**100**	**12**	**12**	**12**	**20**	**2.0**	**450**	**988**

Hyperlink: N/A
Contact: Craig Tepper 954-965-4380, Seminole Tribe of Indians

Project Name: Casuarina Biological Control Agents
Project ID: 2601
Lead Agency: U.S. Department of Agriculture – Agricultural Research Service
Authority: ARS

Strategic Plan Goal(s) Addressed: Primary: 2.B.3

Measurable Output(s): Number Biological Control Agents Developed and Released Against Melaleuca

Project Synopsis. Biological control agents have the potential of providing greater efficiency and improved economy. Ultimately, they may prove to be the only truly effective large-scale means of reversing and halting the effects of *Casuarina* spp. (Australian pine) on the South Florida habitat. Most effective agents tend to be discovered in that portion of the invasive species' native range that genetically corresponds most closely to the plant populations being targeted for control. However, several species of *Casuarina* have each been imported into Florida multiple times. Recently completed genetic analysis has confirmed the presence of three species, as well as at least one (and possibly two) hybrids. Preliminary surveys in Australia show that hundreds of species attack these *Casuarinas* species, but funding for host range trials has suffered during the recent economic downturn. Ultimately, this project consists of releasing and redistributing biological control agents that have been approved through the federal regulatory process for use against Australian pine in the United States.

Cost: Total:
Project Development:
Land Acquisition: $0 – long term lease with University of Florida
Implementation:
Operations and maintenance: not yet included in budget

Project Schedule:
Start Date: 2004
First Agent released: 2012
Finish Date: TBD

Detailed Project Budget Information

	2006	2007	2008	2009	Balance to complete	Total
Federal						
State						
Tribal						
Local						
Other						
Total						**TBD**

Point of Contact: Ted Center, 954-475-6543 (USDA – ARS)

Project Name: Melaleuca Biological Control Agents
Project ID: 2602
Lead Agency: U.S. Department of Agriculture – Agricultural Research Service
Authority: ARS

Strategic Plan Goal(s) Addressed: Primary: 2.B.3

Measurable Output(s): Number Biological Control Agents Developed and Released Against Melaleuca

Project Synopsis. Biological control agents have the potential of providing greater efficiency and improved economy. Ultimately, they may prove to be the only truly effective large-scale means of reversing and halting the effects of *Melaleuca quinquenervia* on the South Florida habitat. Thus far four insects have been released, three of which have established persistent populations in Florida. Reductions in reproductive output and seedling survival at select sites has demonstrated the value of this approach. This project consists of the redistribution of existing agents, as well as the release and redistribution of additional agents as they are approved through the federal regulatory process for use against Melaleuca in the United States.

Cost: Total:
Project Development:
Land Acquisition: $0 – long term lease with University of Florida
Implementation:
Operations and maintenance: not yet included in budget

Project Schedule:
Start Date: 1986
First Agent released: 1997
Second Agent released: 2003
Third Agent released: 2006
Fourth Agent released: 2008
Fifth Agent released: 2011
Sixth Agent released: 2014
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	2008	2009	2010	Balance to complete	Total
Federal					
State					
Tribal					
Local					
Other					
Total					**TBD**

Point of Contact: Ted Center, 954-475-6543 (USDA – ARS)

Project Name: Lygodium Biological Control Agents
Project ID: 2603
Lead Agency: U.S. Department of Agriculture – Agricultural Research Service
Authority: ARS

Strategic Plan Goal(s) Addressed: Primary: 2.B.1

Measurable Output(s): Number Biological Control Agents Developed and Released Against Melaleuca

Project Synopsis. Biological control agents have the potential of providing greater efficiency and improved economy. Ultimately, they may prove to be the only truly effective large-scale means of reversing and halting the effects of *Lygodium microphyllum* (Old World climbing fern) on the South Florida habitat. Thus far three agents have been released against *Lygodium* in south Florida, two of which have established persistent populations at a very limited number of sites.This project consists of distributing existing agents throughout the south Florida landscape, as well as releasing and redistributing additional biological control agents as they are approved through the federal regulatory process for use against the Old World climbing fern in the United States.

Cost: Total:
Project Development:
Land Acquisition: $0 – long term lease with University of Florida
Implementation:
Operations and maintenance: not yet included in budget

Project Schedule:
Start Date: 1996
First Agent released: 2005
Second Agent released: 2008
Third Agent released: 2008
Fourth Agent released: 2011
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	2008	2009	2010	Balance to complete	Total
Federal					
State					
Tribal					
Local					
Other					
Total					**TBD**

Point of Contact: Ted Center, 954-475-6543 (USDA – ARS)

Program Name: Invasive Species removal
Project Name: Eradication of Gambian Pouch Rat
Project ID: 2700
Lead Agency: FDACS
Cooperating Agencies: USFWS, SFWMD

Goal(s) Addressed: 2.B.3

Measurable Output(s): Eradication of Giant Gambian Pouched Rat (GPR)

Project Synopsis: In February 2006, a pilot eradication project was initiated on Crawl Key where Giant Gambian pouched rats were documented in 2005. In June 2006, USDA-APHIS WS deployed 94 bait stations. Supplemental trapping was done to obtain rats for radio telemetry. From January to May, 2007, 1,000 bait stations were placed throughout Grassy Key hammock and residential areas. In March 2007, 20 Gambian pouched rats were trapped for the USDA APHIS National Wildlife Research Center (NWRC) for studies of more effective attractants and third generation rodenticides.

In May 2007 the eradication effort commenced with the pre-baiting of roughly 600 stations around the periphery of the core GPR infestation area. As of January 2008, direct baiting and post-baiting monitoring has resulted in the removal of 39 GPRs from Grassy Key and surrounding areas. A few GPRs remained in areas that could not be accessed, but these properties were recently acquired by government agencies allowing access for monitoring and trapping by USDA-WS. Zero rats have been documented since two months prior to 12-June-2009. USDA-WS continues to monitor for GPRs using 60 motion-activated cameras and 318 live traps. A 'rat hotline' has been established and when a report is confirmed, the 'hot spot' area (s) is/are saturated with zinc phosphide baits to further ensure complete removal. At the end of FY09, FWS Washington, Invasive Species Management Branch awarded USDA-WS $50,000 to ensure monitoring and trapping continues to detect and eliminate all surviving GPRs. This funding will enable USDA-WS to carry the project through the end of FY11 and eliminate any remaining GPRs.

Cost:
Total $75,000
Project Development
Land Acquisition
Implementation Unknown
Operations and maintenance Unknown

Project Schedule:
Start Date: 2006
Finish Date: 2011

Detailed Project Budget Information ($1000s)

	2006	2007	2008	2009	2010	2011	Total
Federal		60	10	50			120
State	15	15	15	15	15		75
Tribal							
Local							
Other							
Total	**15**	**75**	**25**	**65**	**15**		**195**

Contact: Art Roybal, USFWS, (772) 562-3909 ext. 317 or
Bill Thomas, Jr, USFWS, (239) 472-1100 x 248

Program Name: CERP Comprehensive Planning Initiative
Project Name: Analysis of Land Use Patterns Surrounding CERP Projects
Project ID: 3100
Lead Agency: Department of Community Affairs
Authority: Growth Management Act, Chapter 163, II, Florida Statutes

Strategic Plan Goal(s) Addressed: 3.A.1

Measurable Output(s): Identification of the number and character of possible conflicts or opportunities for adaptive management that the local governments and the water management agencies may face as a result of the current Future Land Use designations surrounding CERP projects.

Project Synopsis: Analyze the Future Land Uses identified in local government comprehensive plans in those areas surrounding CERP projects, particularly with respect to conservation and agricultural lands. The analyses may include consideration of the potential impacts of the future land uses on project hydrology, quality of surface and ground waters within the project footprint, changes in vegetation communities, effectiveness of buffers, and any recreational or habitat values

Based on a mix of project types, sizes and locations, the following CERP projects and their corresponding political jurisdictions were selected as pilots:

1. C 1-11 Spreader Canal
2. Biscayne Bay Coastal Wetlands
3. IRL-C-23-24 South Reservoir
4. Lake Okeechobee Aquifer Storage and Recovery (ASR)

Up-to-date Future Land Use Maps surrounding each of the four CERP pilot projects will be collected from the respective local government and entered into a Geographic Information System (GIS), along with project footprints and associated project data. Depending on the conflicts and management opportunities identified, model language or guiding principles may be scripted that could be adopted into the local comprehensive plans of the applicable pilot jurisdictions. Local governments may be educated about prospective land use impacts and opportunities surrounding the CERP projects; the project designers and managing entities will be informed about the land use context for each pilot project.

Cost: Total: - $2,000
Project Development: - $2,000
Land Acquisition: - N/A
Implementation - N/A
Operations and maintenance – N/A

Project Schedule:
Start Date: January 1, 2008
Finish Date: December 31, 2010

Detailed Project Budget Information ($000)

	Thru 2008	2009	2010	2011	2012	Balance to complete	Total
Federal			**$2**			**0**	**$2**
State			**in-kind - TBD**			**in-kind - TBD**	**in-kind - TBD**
Tribal							
Local							
Other							
Total			**$2**				**$2**

Contact: Craig Diamond, Chief of State Planning, Department of Community Affairs, 2555 Shumard Oak Blvd., Tallahassee, FL 32399-2100
Hyperlink: **http://dca.state.fl.us**

Program Name: Florida Greenways and Trails Program
Project Name: Florida Keys Overseas Heritage Trail
Project ID: 3200 (Formerly Project ID 3301)
Lead Agency: Office of Greenways and Trails
Authority: Florida Department of Environmental Protection

Strategic Plan Goal(s) Addressed: 3.A.2

Florida Keys Overseas Heritage Trail Vision
The Florida Keys Overseas Heritage Trail (FKOHT) is being developed by the FDEP/OGT, the Florida Department of Transportation (FDOT) and Monroe County as a world-class, multi-use bicycle and pedestrian facility that will traverse the Florida Keys from Key Largo to Key West. A recreational greenway, that upon completion, will include an integrated system of educational kiosks, roadside picnic areas, scenic overlooks, fishing piers, water access points, and bicycle and jogging paths serving both residents and visitors to the Florida Keys. The FKOHT will link communities by providing a safe and continuous multi-use path, offer an alternative form of transportation, help mitigate congestion, promote health opportunities, and provide a mechanism for the preservation and use of the historic Flagler Railroad Bridges. The trail will also provide outstanding educational opportunities for both residents and visitors to learn about the unique history of the Florida Keys and the importance of sustainable development, by offering cultural, historical and ecological interpretation, as users traverse the historical railroad bridges and the many conservation areas between Key Largo and Key West.

Measurable Output(s): Miles of trails: Existing 44.4 ocean side/33.9 bay side,

A recreational greenway, that upon completion, will include an integrated system of educational kiosks, roadside picnic areas, scenic overlooks, fishing piers, water access points, and bicycle and jogging paths serving both residents and visitors to the Florida Keys.

Project Synopsis:
Trail Planning and Development
Spurred by concerns in the community for the future of the Old Keys Bridges and under Executive Order, the "Old Keys Bridge Task Force" report was presented to then Governor Lawton Chiles in 1997, outlining recommendations for the old Flagler Railroad bridges as a linear greenway. A similar report had been presented in 1938, to then Governor Fred Cone by the Road and Toll Authority, the State Forestry Department and the National Park Service outlining the creation of a linear park from Key Largo to Key West. In 1998, Clean Florida Keys rallied enough local support to prepare a Florida Keys Overseas Heritage Trail Conceptual plan published in January 1999, and a Florida Keys Overseas Heritage Trail Action plan published in November 1999. With a combination of local citizen support, the Rails To Trails, National Park Service, Greenways and Trails, Monroe County, the Florida Department of Environmental Protection, the Florida Department of Transportation and many other agencies, the Florida Keys Overseas Heritage Trail Master Plan was approved in August 2000. Monroe County passed a resolution in 2000, approving allocation of enhancement funding to the project and a Memorandum of Understanding (MOU) was signed allowing the coordination, planning and implementation of the FKOHT as a joint effort between the FDEP, Monroe County, and the FDOT. Direct support for the 106-mile long multi-use recreational trail and facilities is one of the primary features of the Scenic Highway Corridor Management Plan Goals and Objectives, the Corridor Management Plan (CMP), the Florida Keys Overseas Heritage Trail Master Plan, the Scenic Highway Interpretive Master Plan. In addition, the FKOHT was nominated as a National Recreational Trail in 1994 and has designated all 23 remaining historical Flagler Railroad Bridges on the National Registry of Historic Places. Recently completed signage plan and environmental plan provide a look and mechanism for reviewing the trail corridor as one entity rather than multiple separate segments.

A Memorandum of Agreement was signed in August 2001, by the FDEP/OGT to maintain FDOT right-of-way where the trail will be designed and built. The FDEP/OGT maintains a 50-year lease on all 23 historical bridges from State of Florida, Division of State Lands.

Cost:
Total:
$51,249,155
Project Development:
The FDOT work program and the FDEP/OGT implementation plan outline a progression of design and build projects that will construct the Florida Keys Overseas Heritage Trail over the next six years. Construction of the FKOHT is funded in the FDOT Five Year Work Program using enhancement funds for the segments between historic bridges. Additional funding is being sought to retrofit the remaining historical bridges and fishing platforms. The FDEP/OGT is certified by the FDOT to design and build projects under the Local Agency Program (LAP) using enhancement funds.

Operations and maintenance
There are currently 78.3 miles of existing bike path. There are twenty-three bridges comprising fourteen miles of trail in various stages of completion and funding. The City of Key West currently maintains an agreement with the Office of Greenways and Trails on maintenance of the existing sections throughout the City. The Village of Islamorada signed an agreement in 2003 and the City of Marathon is in the process of developing agreements for maintenance and trail planning. The FDEP/OGT is responsible for the maintenance of the trail in accordance with the agreement established between FDOT and the FDEP/OGT and currently maintains 78.3 miles of trail.

Project Schedule: See table below:
TABLE 1

Location	Length		MM	O/S Trail	B/S Trail
	Ocean Side	Bay Side			
Key West	4.1	4.1	1-4.1		
Cow Key Channel	0.1	0.1	4.1-4.2		
Stock Island		1.3	4.2-5.5		
Boca Chica Channel	1		5.5-6.5	FY 10/11	
Boca Chica Key			6.5-9.5	FY 10/11	
Rockland Channel	0.2		9.5-9.7	FY 10/11	
Big Coppitt Key	1	1	9.7-11.3	9.7-10.7	9.8-10.8
Shark Channel	0.1		11.3-11.4		
"Saddlebunch 5 Key"	1		11.4-12.4		
Saddlebunch No. 5 Ch	0.2		12.4-12.6		
"Saddlebunch 4 Key"	0.3		12.6-12.9		
Saddlebunch No. 4 Ch	0.2		12.9-13.1		
"Saddlebunch 3 Key"	1.1		13.1-14		
Saddlebunch No. 3 Ch	0.1		14-14.1		
"Saddlebunch 2 Key"	0.4		14.1-14.5		
Saddlebunch No. 2 Ch	0.3		14.6-14.9		
"Saddlebunch 1 Key"	0.2		14.9-15.5		

Lower Sugarloaf Channel	0.1		15.5-15.6		
"Harris Fill"			15.6-16.6		
Harris Channel			16.6-16.7	FY 10/11	
Lower Sugarloaf Key			16.7-17.6	FY 10/11	
Harris Gap Channel			17.6-17.7	FY 10/11	
"Harris Gap Fill"			17.7-17.8	FY 10/11	
North Harris Channel			17.8-17.9	FY 10/11	
Park Key			17.9-18.7	FY 10/11	
Park Channel	0.1		18.7-18.8	FY 10/11	
Upper Sugarloaf Key			18.8-20.2	FY 10/11	
Bow Channel	0.3		20.2-20.5	FY 10/11	
Cudjoe Key			20.5-23	FY 10/11	
Kemp Channel	0.6		23-23.6	FY 10/11	
Summerland Key	0.5		23.6-25.4	24.5-25	
Niles Channel	1		25.4-26.4		
Ramrod Key			26.4-27.5	FY 09/10	
Torch-Ramrod Channel			27.5-27.6	FY 09/10	
Middle Torch Key			27.6-28	FY 09/10	
Torch Channel			28-28.1	FY 09/10	
Little Torch Key			28.1-28.7	FY 09/10	
South Pine Channel		0.1	28.7-28.8	FY 09/10	
"Pine Channel Fill"			28.8-29.4	FY 09/10	
North Pine Channel			29.4-29.5	FY 09/10	
Big Pine Key		1.5	29.5-33	FY 09/10	29.5-31
Spanish Harbor Channel			33-33.6	FY 11/12	
Spanish Harbor Keys			33.6-35.3	FY 11/12	
Bahia Honda Channel			35.3-36.6	FY 11/12	
Bahia Honda Key			36.6-38.4	FY 11/12	
Ohio-Bahia Honda Ch		0.1	38.4-38.5	FY 11/12	
Ohio Key			38.5-38.9	FY 11/12	
Missouri-Ohio Channel		0.2	38.9-39.1	FY 11/12	
Missouri Key			39.1-39.4	FY 11/12	
Little Duck-Missouri Ch		0.1	39.4-39.5	FY 11/12	
Little Duck Key			39.5-40	FY 11/12	
7 Mi Bridge			40-46.8		
Old 7 Mile Bridge		0.7	40-40.7		
Pigeon Key Bridge		0.2	44.8-46.8		45-46.8
Vaca Key (Marathon)		6	47-53		
Vaca Cut			53-53.1		
Grassy Key		5.5	53.1-60.5		53-58.5
Toms Harbor Channel	0.2		60.5-60.7	FY 09/10	

Duck Key			60.7-61.5	FY 09/10	
Toms Harbor Cut	0.2		61.5-61.7	FY 09/10	
Conch Keys			61.7-63.1	FY 09/10	
Long Key Bridge	2.2		63.1-65.3		
Long Key	3.5		65.3-70.9	65-68.5	
Channel 5	0.5		70.9-71.9		
Craig Key			71.9-72.8		
Channel 2	0.3		72.8-73.1		
Lower Matecumbe Key		4	73.1-77.5		73.5-77.5
Lignumvitae Channel			77.5-77.7		
"Lignumvitae Fill"	0.2	0.2	77.7-77.9		
Indian Key Channel			77.9-78.3		
Indian Key Fill	0.8	0.8	78.3-79.1		
Tea Table Channel			79.1-79.2		
Tea Table Fill	0.4	0.4	79.2-79.6		
Tea Table Relief Channel			79.6-79.7		
Upper Matecumbe Key	4	4	79.7-83.7		
Whale Harbor Channel			83.7-83.8		
Windley Key			83.8-85.5		
Snake Creek			85.5-85.6		
Plantation Key	3.5	3.5	85.6-90.8	86.5-91	86.5-91
Tavernier Creek	0.1	0.1	90.8-90.9		
Key Largo	15.6		90.9-106.5		
Total Miles	44.4	33.9			

Detailed Project Budget Information–

	Thru 2003	2004	2005	2006	2007
	7,117,682	7,438,159	2,499,932	5,811,768	1,036,128
	2008	2009	2010	2011	2012
	2,875,486	10,300,000	9,700,000	900,000	3,570,000
Total	51,249,155				

Hyperlink: **http://www.dep.state.fl.us/gwt/**
Contact: Anthony Knott (305) 853-3571
Project 3200 Florida Keys Overseas Heritage Trail Page 4 of 4

Program Name: Florida Greenways and Trails Program
Project Name: Lake Okeechobee Scenic Trail
Project ID: 3201 (Formerly Project ID 3102)
Lead Agency: Office of Greenways and Trails
Authority: Department of Environmental Protection

Strategic Plan Goal(s) Addressed: 3.A.2

Measurable Output(s): Designated miles of trails

Project Synopsis: The LOST will consist of an 11 foot wide paved trail on top of the Herbert Hoover Dike that will have a 3 foot wide grassed shoulder on the lake side. It will accommodate pedestrians, backpackers, bicyclists, equestrians, sightseers, naturalists, skaters, picnickers, campers and fishermen. The trail will be approximately 110 miles long.

Cost:
Total:
$27,000,000
Project Development:
Land Acquisition:
Implementation:
Operations and maintenance: $ 100,000 a year when completed

Project Schedule:
Start Date: 7/1/03
DOT Segment One is complete between the Kissimmee River and the St. Lucie Canal (26 miles)
DOT Segment Two is completed between Moore Haven and Pahokee (36 miles)
OGT/DOT SR78 3-mile Segment in Fisheating Creek area (2.5 of 3 miles completed)
Finish Date: Completion date will depend on monies from D.E.P.

Detailed Project Budget Information (1000s)

	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Balance to complete**	**Total**
Federal	5,600	6,900							12,500
State					**1,000	***1,000	*500	****12,000	14,500
Tribal									
Local									
Other									
Total	5,600	6,900			1,000	1,000	*500	**12,000**	**27,000**

*FY 08/09: Original allocation reduced from $1,000,000 to $500,000
** Combined with DOT funding to construct 2.5 miles of the 3 mile trail segment adjacent to SR78 where no levee exists along Fisheating Creek.
*** Taylor Creek pedestrian bridge to eliminate a break in trail connectivity. Muct be constructed at sailboat clearance height.
**** DOT cost per mile 6 years ago was $210,000/mile. Balance to complete is currently based on an estimate of $250,000/mile.

Hyperlink: http://www.dep.state.fl.us/gwt/
Contact: FDEP

Program Name: Florida Greenways and Trails
Project Name: Florida Greenways and Trails Program
Project ID: 3202
Lead Agency: FDEP-Florida Office of Greenways and Trails
Authority: Acquisition: Florida Forever Act, Section 259.105, Florida Statutes
Designation: Chapter 260, F.S.; 62S-1.400, 62S-1.450, F.A.C
Funding Source: Florida Forever

Strategic Plan Goals(s) Addressed: 3.A.2

Measurable Output(s): Target 10,000 acres

Project Synopsis: The Florida Office of Greenways and Trails is guiding a statewide initiative to create a system of greenways and trails connecting communities and conservation areas. When completed the trail system will connect one end of the state to the other, from Key West to Pensacola. The Florida Forever Act authorizes a land acquisition program for the statewide trail system. This is a competitive program that provides funding for local and regional land acquisition projects that will facilitate the establishment of a statewide system of greenways and trails. The primary mission of this program is to facilitate the establishment of a statewide system of greenways and trails for recreation and conservation purposes. Once acquired, the property is owned by the Board of Trustees of the Internal Improvement Trust Fund (Governor and Cabinet) and managed by the state, regional and local governments.

The Office of Greenways and Trails Designation Program encourages voluntary partnerships in conservation, development, and management of greenways and trails, provides recognition for individual components of the system and the partners involved, and raises public awareness of the conservation and recreation benefits of greenways and trails. The criteria for a designated land or waterway are that it must (1) protect and/or enhance natural, recreational, cultural or historic resources and (2) either provide linear open space or a hub or site, or promote connectivity between or among conservation lands, communities, parks, other recreational facilities, cultural sites, or historic sites.

Cost: Total: 4.5 million for land acquisition (statewide)
No direct cost to the state for designation
Land Acquisition $4.5 million (statewide)

Project Schedule:
Start Date: 2000
Finish Date: 2009

South Florida Acres
Through Fiscal Year 2003 227,094 acres plus 75 linear miles
Through Fiscal Year 2004 298,774 acres plus 147 linear miles (add 71,680 acres & 72 linear miles)
In 06/07, an additional 179 acres and 24 miles of designated greenways & trails in South Florida
Through Fiscal Year 2008 – 2 Blueway systems were designated in South Florida. One in Lee County and one in Charlotte County. The estimated "acreage" for these Blueway systems is 79,400 acres or 440 miles of paddling trails.
Detailed Project Budget Information (1000s)

	FY 04-05	FY 05-06	FY 06-07	FY 07-08	Total
State	174	497.372	280	0	
Total	**174**	**497.372**	**280**	**0**	**4,500**

Hyperlink: http://www.dep.state.fl.us/gwt/
Contact: Heather Pence (designations) 850-245-2052, Cindy Radford (acquisitions) 850-245-2052

Program Name: Watershed Management Assistance
Project Name: Technical Assistance to Seminole and Miccosukee Indian Reservations
Project ID: 3300 (Formerly Project ID 3201)
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46 & Public Law 566

Strategic Plan Goal(s) Addressed: 3.A.2

Measurable Output(s): Target 107,000 Acres

Project Synopsis: From a watershed management perspective, assist the Seminole and Miccosukee Indian Reservations to plan and implement resource management systems on a voluntary basis to reduce nutrient loading. Assistance will be provided to each agricultural producer, at the direction of the Tribal Councils, to assist in their planning, design, application, cost shared installation and management of BMP's that will improve water quality and the ecological integrity of the landscape.

Cost:

Total (projected through 2006)	$15,000,000	
Project Development		
Land Acquisition		
Implementation		
Operations and maintenance		
Management		$15,000,000

Project Schedule:
Start Date: 1998
Finish Date: 2011

Detailed Project Budget Information (1000s)

	Through 2006	**2007**	**2008**	**2009**	**Balance to Complete**	**Total**
Federal	$478	00	00	$00	$14522	$15,000
State						
Tribal						
Local						
Other						
Total	**$478**	**$00**	**$00**	**$00**	**$14522**	**$15,000**

Hyperlink: N/A
Contact: Edward Wright – 561-248-3540 (USDA – NRCS)

Program Name: Agricultural Assistance
Project Name: 2008 Farm Bill
Project ID: 3301 (Formerly Project ID 3202)
Lead Agency: Natural Resources Conservation Service
Authority: Food, Conservation, and Energy Act of 2008 (Farm Bill)
Funding Source:

Strategic Plan Goal(s) Addressed: 3.A.2

Measurable Output(s): Acres Enrolled in 2008 Farm Bill Programs

Project Synopsis: The 2008 Farm Bill responds to a broad range of emerging natural resource challenges faced by farmers and ranchers, including soil erosion, wetlands, wildlife habitat, and farmland protection. Private landowners will benefit from a portfolio of voluntary assistance, including cost-share, land rental, incentive payments, and technical assistance. The 2008 Farm Bill places a strong emphasis on the conservation of working lands, ensuring that land remain both healthy and productive. The assistance includes the design, layout and consultation services associated with the conservation practice application or management guidance provided. Technical assistance is targeted towards nutrient management, water quality, and water conservation concerns associated with animal feeding, livestock grazing operations and fruit and crop production within the Everglades Ecosystem. As of 2009, a total of 59,278 acres in the sixteen-county South Florida region were enrolled in these and other Farm Bill Conservation Programs at an obligated cost of $64,624,000.

Cost:
Total: $150,000,000
Project Development:
Land Acquisition:
Implementation:
Operations and maintenance:

Project Schedule:
Start Date: 2009
Finish Date: 2012

Detailed Project Budget Information (1000's)

	Through 2009	**2010**	**2011**	**2012**	**Balance to Complete**	**Total**
Federal	$64,624	$	$	$	$85,376	150,000
State						
Tribal						
Local						
Other						
Total	**$ 64,624**	**$**	**$**	**$**	**$85,376**	**$150,000**

Hyperlink: http://www.nrcs.usda.gov/programs/farmbill/2008/index.html
Contact: Edward Wright – (561) 248-3540 (USDA – NRCS)

Program Name: CERP Comprehensive Planning Initiative
Project Name: Consideration of Land Use Policies and Planning by Local Governments with CERP
Project ID: 3400
Lead Agency: Department of Community Affairs
Authority: Growth Management Act, Chapter 163, II, Florida Statutes

Strategic Plan Goal(s) Addressed: To ensure that Goals, Objectives and Policies of local government comprehensive plans take into consideration the CERP and that local decisions about land uses and capital improvements in the vicinity of these projects are consistent with the long term objectives of CERP.

Measurable Output(s): How many local government plans either incorporate CERP projects into their Future Land Use Maps or reflect the existence of CERP projects and principles into the Goals, Objectives or Policies of their local comprehensive plans.

Project Synopsis: The Department of Community Affairs (DCA) will (1) complete a baseline survey of local governments with CERP projects within or adjoining their jurisdictions and (2) determine how many jurisdictions currently contain Goals, Objectives or Policies in their local comprehensive plans that reflect CERP. Once these baselines are determined, the DCA will encourage staff planners and local government planning departments about the importance of considering these projects in their land use decision-making through the compilation of model policy language and education.

Cost: Total: - $2,000
Project Development: - $2,000
Land Acquisition: - N/A
Implementation - N/A
Operations and maintenance – N/A

Project Schedule:
Start Date: January 1, 2008
Finish Date: December 31, 2010

Detailed Project Budget Information ($000)

	Thru 2008	2009	2010	2011	2012	Balance to complete	Total
Federal			**$2**			**0**	**$2**
State			**in-kind - TBD**			**in-kind - TBD**	**in-kind - TBD**
Tribal							
Local							
Other							
Total			**$2**				**$2**

Contact: Craig Diamond, Chief of State Planning, Department of Community Affairs, 2555 Shumard Oak Blvd., Tallahassee, FL 32399-2100

Hyperlink: http://dca.state.fl.us

Program Name: C&SF: CERP PLA/Public Outreach and Assistance
Program ID: 3502
Lead Agency: USACE / SFWMD
Authority: WRDA 2000; Design Agreement, WRDA *2007 (specific authorized funding)*

Strategic Plan Goal(s) Addressed: 3-A.5

Measurable Output(s): Development and distribution of educational materials through various printed and electronic media including brochures, newsletters, kiosks, CDs, radio, television, and the internet. Conduct and engage public in regular meetings.

April 1999 (Restudy) Program Synopsis: The Restudy listed guidelines for implementing CERP and stated that outreach and public involvement efforts were an integral part of the process and would continue throughout the planning, design, construction, monitoring, and implementation of CERP. The objective of all outreach activities was to ensure that the public is informed about the Plan and that its implementation is reflective of the input received from stakeholders and the public throughout the project's implementation.

Current Program Synopsis: Public outreach is a critical part of CERP. Its two primary components -- involvement and information -- continue to play a key role in the CERP implementation effort. The primary objectives of outreach are to (1) keep the public informed of the status of the program or project and key issues associated with restoration implementation, and (2) provide effective mechanisms for public participation in the restoration plan development. A *CERP Public Outreach Program Management Plan* approved in 2001 describes these outreach goals, objectives, and tasks in more detail.

Since 2001, the USACE and SFWMD have implemented an ongoing multi-faceted public outreach program for the CERP. Outreach strategies seek two-way communication with all public sectors to broaden understanding and to instill a sense of stewardship among all south Floridians and visitors. Two separate and simultaneous levels of public outreach have been employed:

Program-level outreach. This involves long-term, system-wide issues at an overarching program level such as general outreach, RECOVER, environmental equity and other CERP issues that span the life of the 30+ year plan.

Project-level outreach. This involves targeted outreach for the 50+ specific CERP components: the individual reservoirs, underground storage wells, filtering wetlands, and other local project features. A custom outreach plan is developed for each individual CERP project. While program and project outreach activities are considered separate, there is often a great overlap of materials, tools and techniques. The same overarching CERP messages apply to both program and project level outreach activities.

A broad array of outreach involvement and information programs has been developed to include the general public, minority groups, small businesses, and specific stakeholder audiences. The program has included public meetings and workshops; news media relations; creative and unusual information products; environmental education; print, electronic and Internet materials; and many other programs and products to ensure the public is engaged and involved in CERP. The main focus of the outreach efforts is the 16-county central and south Florida region, the area most affected by CERP. However, outreach activities and products also reach people throughout the state of Florida, nation and world.

A few highlights of this very diverse outreach program from the past two years follow:

Current Status (July 2006 – June 2008):

- Distributed at least 600,000 newspaper inserts, brochures, CDs, promotional items, and other materials about CERP.
- Continued with a successful environmental education curriculum – The Journey of Wayne Drop to the Everglades. Distributed 44,000 student booklets in English and 10,000 each in Spanish and Creole. Created a coloring book, animal mobile, and bulletin board characters to support the curriculum, and put all resources online for free download.
- Began development of Panther Study curriculum for elementary and middle school students.
- Continued with the *Livin' with the Waters* comic series, about a black family living in south Florida and learning about the Everglades. New products included comic installments, activity book, ruler, bookmark and screensaver.
- Developed a new information campaign – *Name That CERP Sound* – to raise awareness about wildlife of the Everglades. Included an interactive game, Web products, buttons, a screensaver and a tray liner.
- Prepared special materials for Haitian Americans about CERP, including a new poster and bookmark and related media campaign in 2008.
- Continued to translate materials into both Spanish and Creole, as needed.
- Distributed 10 issues of an electronic newsletter about Everglades outreach activities.
- Launched a new newsletter in 2008, *Everglades Report*, about projects, science, policy and other efforts of the Corps of Engineers to protect and restore central and south Florida's ecosystem.
- Maintained a network of six touch-screen kiosks in public places throughout the 16-county CERP area. Thousands of people use the interactive kiosks each year to learn about the Everglades. The complete presentation is available in Spanish; the introduction in Creole in some kiosks.
- Held more than 45 public meetings or workshops for CERP and related topics.
- Distributed more than 60 news releases for CERP and related topics.
- Continued with a pre-recorded toll-free phone line, 1-877-CERP-USA, that is updated often with meetings and outreach activities.
- Participated in at least 70 community events with staff, display and materials. Bilingual staff members often were present.
- Held Earth Day events in 2007 and 2008, with elementary school students in south Florida creating more than 3,900 individual artworks on the Everglades. Associated special events were held in regional malls and movie theaters.
- Held Earth Day event in 2009 in the City of Pahokee, targeting Glades Community residents and school children. Art work of local school children displayed at the community marina in an effort to increase awareness of the role Lake Okeechobee plays in the Everglades ecosystem and the Comprehensive Everglades Restoration Plan.

- Participated in state and national science teachers' conferences to raise awareness of the elementary school curriculum on the Everglades, produced by the Corps of Engineers.
- Organized and participated in events for small businesses to better understand the federal contracting process to participate in CERP.
- Participated in Service Disabled Veterans Small Business Outreach Program by presenting the South Florida Ecosystem Restoration program and the latest information on FY 2009 and American Recovery and Reinvestment Act funding.
- Updated the official CERP Web site with current information, including many of these public information products. Presentations are available in Spanish and Creole.

WRDA 2007 amended section 601 (k) of WRDA 2000 to support those requirements with an allowance for the Secretary to expend up to $3,000,000 per fiscal year (beginning after September 30, 2004) for public outreach, education and business assistance.

Hyperlink: http://www.evergladesplan.org/pm/progr_outreach.aspx

Contact: Nanciann Regalado, Strategic Communication & Outreach Program Manager, USACE (904) 232-3904, Nanciann.E.Regalado@usace.army.mil

Program Name: SFWMD Outreach Program
Project Name: Outreach
Project ID: 3503
Lead Agency: SFWMD

Strategic Plan Goal(s) Addressed: 3-A.5 Increase community understanding of ecosystem restoration

Measurable Output(s): Public Meetings, Stakeholders Meetings, Schools and Teacher Education, Workforce Development, Symposiums, Media Exposure, Groundbreakings, Special Events, Awards and Recognitions, Everglades Video Clips, Small Business Enterprises

Project Synopsis: The South Florida Water Management District continues to participate with the USACE, and other agencies/major stakeholders and general public in various outreach activities, as listed above, to increase the understanding of ecosystem restoration.

Total Estimated Project Cost: Ongoing

Project Schedule:
Start Date: Ongoing
Finish Date: Ongoing

Actual Expenditures to Date by SFWMD:

	2004	2005	2006	2007	2008	2009	Total to Date
SFWMD	431,190	417,334	680,871	247,300	224,466	83,799	2,084,960

Hyperlink: N/A
Contact: Deena Reppen, Deputy Executive Director, Gov. and Public Affairs, SFWMD, 561-682-6232

Program Name: Flood Protection
Project Name: C-4 Flood Mitigation Projects
Project ID: 3600
Lead Agency: South Florida Water Management District
Authority: FEMA/DCA

Strategic Plan Goal(s) Addressed: 3.B.1

Measurable Output(s): Improve conveyance and level of service protection in the C-4 Basin

Project Synopsis:
The following projects are complete:

1. S-25B Forward Pump Station
2. S-26 Forward Pump Station
3. C-4 Phase 1 Impoundment (G-420 & G-421)
4. C-4 Phase 2 Impoundment (G-422)
5. Sweetwater Linear Berm and Safety Fence
6. Belen Conveyance Improvements

The following projects are scheduled in near future (Phase 3):

1. Sweetwater Gravity Wall (Land Acquisition in-process)
2. Belen Gravity Wall (Land Acquisition complete)
3. Miami-Dade Gravity Wall (Initial survey commenced)
4. Updated C-4 Basin Model

Sweetwater Gravity Wall: This work involves the construction of a gravity wall along the north side of the C-4 Canal within the city limits of Sweetwater. The north berm will be raised from a low elevation of 6.0 feet (NGVD) to an elevation of 8.0 feet (NGVD). This will prevent canal overflows into the city during high canal stages and allow for a pumping system being implemented by the city to provide flood protection. The project area is from SW 97th Avenue to SW 107th Avenue.

Belen Gravity Wall: This work involves the construction of a gravity wall along the north side of the C-4 Canal from the Florida Turnpike to SW 132nd Ave. The north berm will be raised to elevation 8.0 feet (NGVD). This will prevent canal overflows into the adjacent area during high canal stages and allow for a pumping system being implemented by Miami-Dade County to provide flood protection.

Miami-Dade Gravity Wall: This work may involve the construction of a gravity wall along the north side of the C-4 Canal from SW 97th Ave to the Palmetto Expressway. The north berm will be raised to elevation 8.0 feet (NGVD). This will prevent canal overflows into the adjacent area during high canal stages and allow for a pumping system being implemented by Miami-Dade County to provide flood protection. This area was identified as having low canal bank elevations which would need to be improved for the above improvements to be utilized. The segment was not originally included in the C-4 Flood Mitigation Plan. Currently, this two-mile segment is being surveyed to determine the specific areas where a gravity wall will be needed. Land acquisition costs for this phase have not been determined.

Updated C-4 Basin Model: The Miami River Model originally developed in 2002 is being updated to include surface/groundwater interactions. Additionally, the updated model results will be utilized to determine operations criteria for the two impoundment pump stations, the municipal pump stations, and the S-25B Forward Pump Station.

Project Schedule:

Start Date: January 2005
Finish Date: March 31, 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Planning & Design											
Real Estate											
Construction											

Actual Expenditures To Date by SFWMD

	Exp thru 2005	2006	2007	2008	2009
Federal	140	45	4,083		
SFWMD	0	0		600	0
State	0	0			
Total	**140**	**45**	**4,083**	**600**	**0**

Contact: Greg Coffelt, SFWMD, (561) 242-5520 x4033

Program Name: Infrastructure
Project Name: Herbert Hoover Dike Rehabilitation (HHD)
Project ID: 3700
Lead Agency: USACE
Authority: Central and Southern Florida (C&SF) Project for Flood Control and Other Purposes in the Flood Control Act of 1948, 1954, 1958, 1960, 1965 and 1968; Authorization in 1970 under Section 201 of the Flood Control Act of 1965; the Water Resources Development Acts of 1986, 1988, 1990, 1992, 1996, 2007; and the Rivers and Harbors Act of 1930. WRDA 2007 *(report requirement and authorization)*
Funding Source: USACE

Strategic Plan Goal(s) Addressed: 3-B.2

Measurable Output(s): 143 miles of rehabilitated dike for adequate levels of flood protection

Project Synopsis: The Herbert Hoover Dike system consists of approximately 143 miles of levees surrounding Lake Okeechobee, with 19 culverts, hurricane gates and other water control structures. The first embankments around Lake Okeechobee were constructed by local interest from sand and muck, circa 1915. Hurricane tides overtopped the original embankments in 1926 and 1928 causing over 3,000 deaths. The River and Harbor Act of 1930 authorized the construction of 67.8 miles of levee along the south shore of the lake and 15.7 miles of levee along the north shore. The U. S. Army Corps of Engineers (USACE) constructed the levees between 1932 and 1938 with crest heights ranging from +32 to +35 feet, NGVD.

A major hurricane in 1947 prompted the need for additional flood protection work. As a result, Congress passed the Flood Control Act of 1948 authorizing the first phase of the Central and South Florida (C&SF) Project, a comprehensive plan to provide flood protection and other water control benefits in central and south Florida. By the late 1960's the new dike system was completed, raising the elevation of the levees to +41 feet, NGVD. This provides protection to the Standard Project Flood level, approximately an event occurring once in 935 years. However, investigations conducted in the 1980's and early 1990's of the dike system's potential seepage and stability problems resulted in the identification of two major areas of concern: the seepage and embankment stability at the culvert locations, and the problematic foundation conditions of the dike. During high water events, piping is experienced thru the levee. In 1999, the Corps developed a plan to rehabilitate the HHD and the plan was approved in 2000. This rehabilitation work covers the entire dike. Areas of work are defined as Reaches 1 – 8, with Reach 1 further divided into four sub-reaches, A through D (figure 1).

The Preferred Alternative design offers the best technology in industry to reduce seepage and piping immediately along the dike alignment as well as to offer stability and protection in the long-term. The cutoff wall will block any pre-existing pipes and defects in the embankment foundation, while the landside rehabilitation feature will serve to provide stability to the dike by reducing uplift pressures caused by seepage. The landside rehabilitation feature may consist of one or more of the following: a seepage berm, relief trench, relief well, sand drain, or soil replacement wedge. The landside rehabilitation feature will be determined based on the specific hydrogeologic conditions of the project site.

Current Status: Construction activities are ongoing within HHD Reaches 1A and 1D and include full scale production of cut-off wall within these reaches. The construction of the Seepage Berm in Reach 1A is nearing completion as final punch list items are being finished. Bids have been received and an award package is being prepared for the Reach 1D Quarry fill package. Detailed design activities within Reach 1 include: land side rehabilitation designs and structural solutions for reaches 1A, 1B, 1C and 1D, preparation of construction task order packages for Reach 1 cut-off wall and designs for culvert removal (C-14) in Reach 1A. Cut-off wall installation task orders#2, #3 and #4 are in full scale production. The USACE is responsible for culvert upgrades and permit requests.

NEPA activities include a Supplemental Environmental Impact Statement for Reach 1A land side design and structural solutions scheduled in early 2010; and completion of a supplemental Environmental Impact Statement for Reach 1 B, C and D land side rehabilitation and structural solution features in the spring of 2010.

WRDA 2007 authorized funding ($1.5 M) for the Secretary to publish a supplemental report to the Major Rehabilitation Report for the HHD system approved by the Chief of Engineers in November 2000. The supplemental MRR is to include the review by the SFWMD in April 2006, evaluate conditions of the HHD system, identify additional flood risks and evaluate the potential for integrating Corps projects for flood protection, potential for water storage north of the lake and analyze other features also contained in the CERP. Action items have been coordinated through USACE HQ. A Major Rehabilitation Report (MRR), for Reaches 2 and 3 activities, is expected to be in final draft in January 2010 and finalized by June 2010. The MRR includes development of system alternatives, risk assessment and associated filed work data collection.

Est. Cost: $991,100,000

Project Schedule:
2009 Contract options for Reach 1 A and D cut-0ff wall awarded.
Reach 1D quarry fill contract awarded.
Reach1A, 1B, 1C; landside and structural solutions geotechnical/drainage designs complete.
2010 MRR for Reaches 2 and 3 completed.
Award cut-off wall construction task orders in Reach 1B and 1C.
Award construction task order for removal of Culvert 14.
NEPA requirements Reach 1A, 1B, 1C and 1D Landside design and structural solutions.
2014 Reach 1 construction complete.
2017 Reaches 2 and 3 construction complete.
2023 All Reaches complete.

Detailed Project Budget Information (rounded):

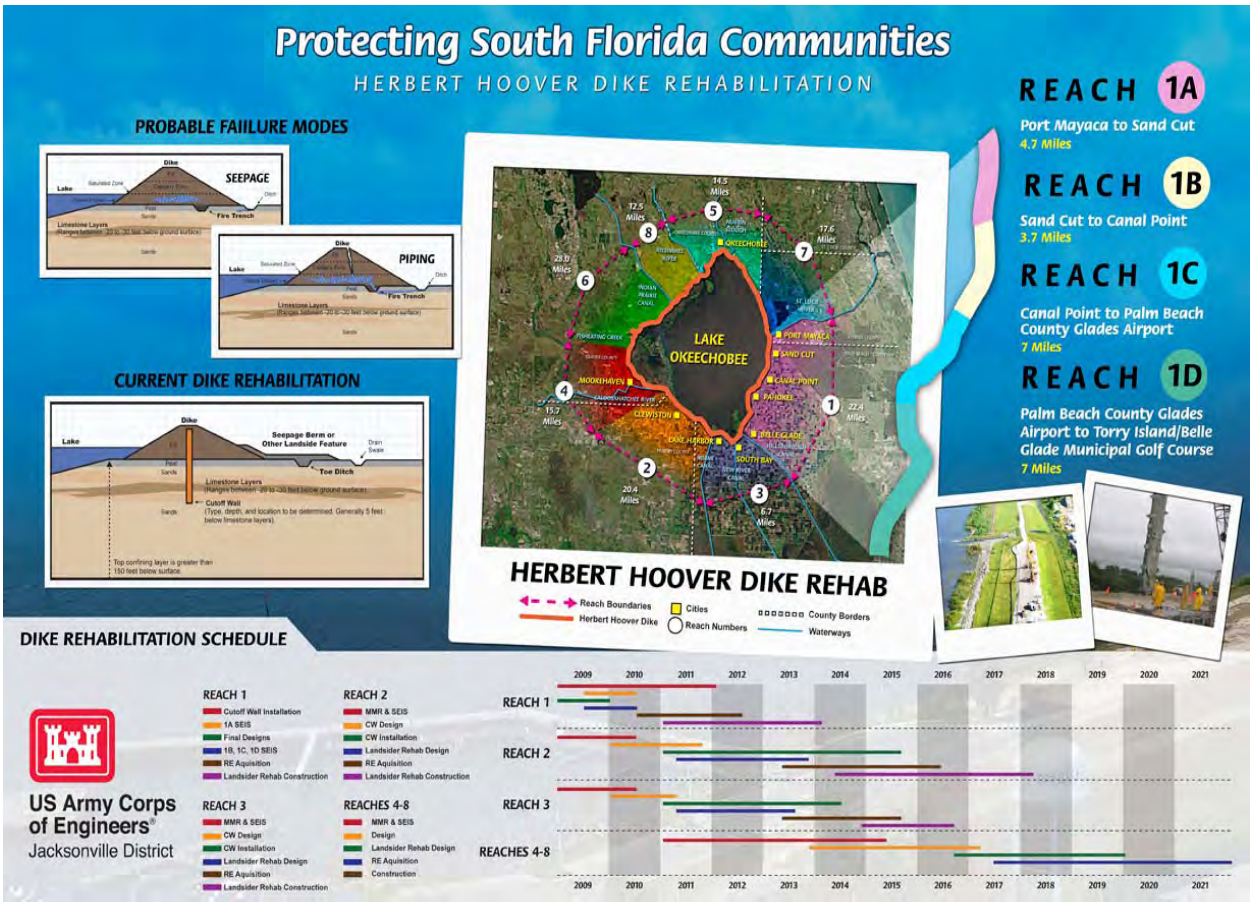
HHD	Expenditures Thru FY 2008
USACE	$64,867,000
SFWMD	N/A
Total	$64,867,000

Hyperlink: http://www.saj.usace.army.mil/Divisions/Everglades/Branches/HHDProject/index.htm

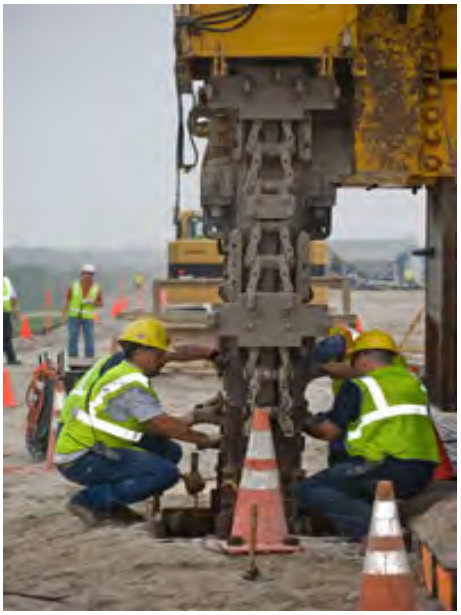
Contact: Mike Rogalski, Chief Herbert Hoover Dike Branch, USACE
(904) 232-1460, Michael.B.Rogalski@usace.army.mil

Source: MRR description is excerpted from WRDA 2007. Current status and estimate was provided by the project manager. Cost estimate information is updated to reflect current price levels in October 2008 dollars. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (as of June 5, 2009) and the current project schedule.

Additional Information:



Rehabilitation Design Landslide Feature Alternatives:



Program Name: Water Supply Planning
Project Name: Regional water supply plans (*LEC Plan, LWC Plan, UEC Plan, KB Plan*)
Project ID: 3800 (Formerly Project ID 3704)
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes

Strategic Plan Goal(s) Addressed: 3.C.1

Measurable Output(s): Water made available through Alternative Water Supply (AWS) Program is reported separately as Project ID: 3900.

Project Synopsis: Updates of the Upper East Coast, Kissimmee Basin, Lower East Coast, and Lower West Coast Water Supply Plans were approved in 2006 and early 2007. The updated plans reflect the requirements of the Water Resource Protection and Sustainability Program, created during the 2005 state legislative session. The Water Resource Protection and Sustainability Program requires a higher level of water supply planning coordination between the water management districts and local governments and ensures that permitted water supply and potable water facilities are available before new development is approved.

The legislation requires that water supply plans provide specific details concerning alternative water supply (AWS) projects. Local governments may select and incorporate these AWS projects into their comprehensive plans, implementing a work plan for building needed facilities. Alternatively, local governments may recommend AWS options, if they provide sufficient information about funding and water to be produced.

Each regional water supply plan includes a water resource development chapter. Water resource development projects support and enhance water supply development projects, but often do not by themselves yield specific quantities of water. For example, hydrologic investigations and groundwater monitoring and modeling provide important information on aquifer characteristics, such as hydraulic properties and water quality. All of these efforts are useful in developing an appropriate facility design, identifying the safe yield and evaluating the economic viability of water supply development projects.

Because water resource development projects often cross planning region boundaries or are conducted District-wide and usually do not produce water, the projects are not discussed individually in this document.

Cost:	**Total Cost*+**
Regional water supply plans	$ 17,542,000

*Excludes: costs associated with CERP, and costs of alternative water supply projects, which are reported separately.
+ Source: The *2008 South Florida Environmental Report, Volume II, Chapter 5: Water Supply*

Contacts: John Mulliken, SFWMD, 561-682-6649, Cynthia Gefvert, SFWMD, 561-682-2610

Project Name: C&SF: CERP South Miami-Dade Reuse (BBB)
Project ID: 3900 (CERP Project WBS # 98)
Lead Agency: USACE / Miami-Dade County
Authority: Not authorized
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 3-C.2

Measurable Output(s): 131 million gallons per day advanced WWTP

April 1999 (Restudy) Project Synopsis: Includes a plant expansion to produce superior, advanced treatment of wastewater from the existing South District Wastewater Treatment Plant (WWTP) located north of the C-1 Canal in Miami-Dade County. In order to attain the superior level of treatment, construction of an add-on pretreatment and membrane treatment system to the existing secondary treatment facility will be necessary. The initial design of this feature assumed the plant would have a capacity of 131 million gallons per day.

Current Project Synopsis: The purpose is to provide additional water supply to the South Biscayne Bay and Coastal Wetlands Enhancement Project. Detailed analyses will be required to determine the quality and quantity of water needed to meet the ecological goals and objectives of Biscayne Bay. Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters (Biscayne Bay).

Current Status: Due to the water quality issues associated with discharging reclaimed water into Biscayne National Park, an *Outstanding Florida Water,* such as potential failures of the treatment system and the limited ability to control contaminant inputs to the sanitary sewer system serving the treatment facility, other sources of water to provide required freshwater flows to southern and central Biscayne Bay should be investigated before pursuing the reuse facility as a source. If, more appropriate sources are not available, the reuse project will be initiated by determining the parameters of concern, the necessary wastewater treatment requirements, and the appropriate treatment technology to be implemented. This project has not yet begun.

Est. Cost: $480,211,000

Project Schedule: TBD

Detailed Project Budget Information (rounded):

South Miami-Dade Reuse	**Expenditures Thru FY 2008**
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_98_south_miami.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP West Miami-Dade Reuse (HHH)
Project ID: 3901(CERP Project WBS # 97)
Lead Agency: USACE / Miami-Dade County
Authority: Not authorized
Funding Source: Federal/County

Strategic Plan Goal(s) Addressed: 3-C.2

Measurable Output(s): 100 million gallons/day advanced WWTP; report

WRDA 1996: Conduct reconnaissance study to determine Federal interest in using West Dade, FL reuse facility to improve water quality in, and increase supply of surface water to, Everglades to enhance fish and wildlife habitat.
April 1999 Project Synopsis: Superior water quality treatment features will be based on appropriate pollution load reduction targets necessary to protect downstream receiving surface waters. The initial design assumed a potential discharge volume of 100 million gallons per day from the wastewater treatment plant.

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

This feature includes a wastewater treatment plant expansion to produce superior, advanced treatment of wastewater from a future West Miami-Dade Wastewater Treatment Plant (WWTP) to be located in the Bird Drive Basin in Miami-Dade County. This project adheres to the original concept described in the Restudy.

Current Status: The final configuration of these facilities will be determined through more detailed planning and design to be completed in the ongoing West Dade Water Reuse Feasibility Study authorized in Section 413 of the Water Resources Development Act of 1996. This project has not yet begun.

Est. Cost: $581,306,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

West Miami-Dade Reuse	Expenditures Thru FY 2008
USACE	$0
SFWMD	$0
Total	**$0**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_97_west_miami.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars. Current status is summarized from the PMP (2005).

Project Name: C&SF: CERP Wastewater Reuse Technology Pilot
Project ID: 3902 (CERP Project WBS # 37)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(pilot project)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: **Primary:** 3-C.2 **Secondary:** 2-A.3

Measurable Output(s): 3,500 acres of wetlands restored and created

April 1999 (Restudy) Project Synopsis: The original concept addresses water quality issues associated with discharging reclaimed water into natural areas such as the West Palm Beach Water Catchment Area, Biscayne National Park, and the Bird Drive Basin as well as determine the level of superior treatment and the appropriate methodologies for that treatment. A series of studies will be conducted to help determine the level of treatment needed.

Current Project Synopsis: Pilot facilities will be constructed to determine the ecological effects of using superior, advanced treated reuse water to replace and augment freshwater flows to Biscayne Bay and to determine the level of superior, advanced treatment required to prevent degradation of freshwater and estuarine wetlands and Biscayne Bay. The constituents of concern in wastewater will be identified and the ability of superior, advanced treatment to remove those constituents will be determined.

In addition, a pilot facility will be constructed to treat wastewater from the east central regional wastewater treatment facility using improved wastewater treatment processes to remove nitrogen and phosphorus. After treatment, the wastewater will be used to restore 1,500 acres of wetlands and to recharge wetlands surrounding the city of West Palm Beach's well field. A portion of the treated wastewater will be used to recharge a residential lake system surrounding the city's well field and a Palm Beach County well field.

Besides serving as a pilot project for wetlands-based water reclamation, this feature will reduce a portion of the city's dependence on surface water from Lake Okeechobee during dry or drought events. Another approximately 2,000 acres of wetlands would be created or restored. Other benefits include aquifer recharge and replenishment, reduction of water disposed in deep injection wells and a reduction of stormwater discharge to tide.

Current Status: This project adheres to the original concept outlined in the Restudy. This project is planned for in the future; and has not yet begun.

Est. Cost: $39,158,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

Wastewater Reuse Technology Pilot	Expenditures Thru FY 2008
USACE	$1,208,000
SFWMD	$668,000
Total	$1,876,000

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_37_wastewater_pilot.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:

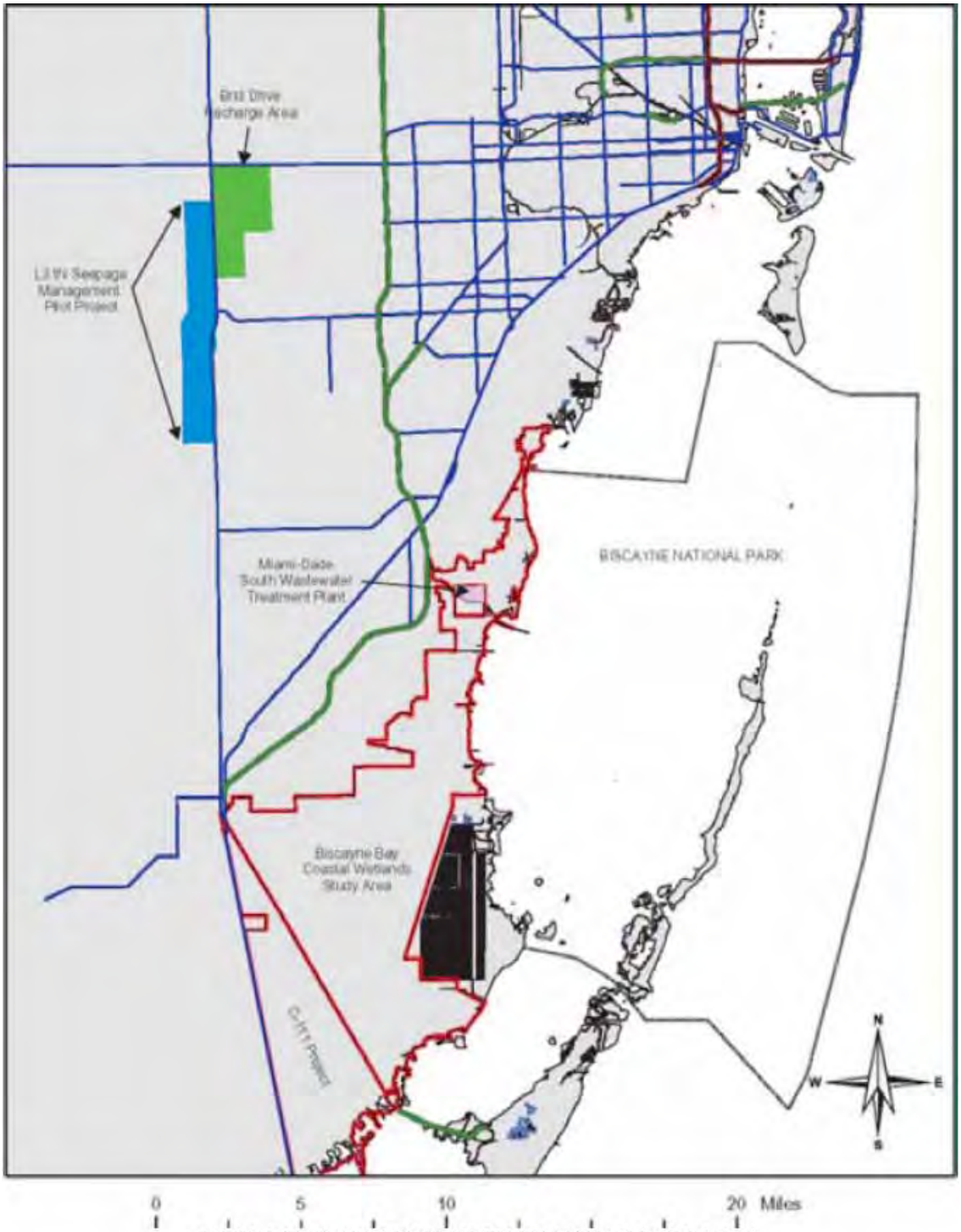


FIGURE B-1: PRELIMINARY PROJECT STUDY AREA

Program Name: Alternative Water Supply
Project Name: Alternative Water Supply Grant
Project ID: 4000 (Formerly Project ID 3900)
Lead Agency: SFWMD
Authority: Chapter 373.1961, Florida Statutes

Strategic Plan Goal(s) Addressed: 3.C.3

Measurable Output(s): 78 MGD added to water supply system district-wide by end of FY09

Project Synopsis: SFWMD began a program of cooperative funding with local governments and other entities for the development of alternative water supply systems in 1986. The FY2009 budget, included $27.5 million in AWS funding for local government and other partners of which $4.25 million was provided by the State. Forty-one projects were selected, and thirty-five are slated to be complete by the end of FY09 increasing water supply by 27 MGD.

Cost: $TBD
Total:
Project Development:
Land Acquisition:
Implementation:
Operations and maintenance:

Project Schedule:
Start Date: 1996
Finish Date: Ongoing/ annual grants

Detailed Project Budget Information ($1000)

	Exp Thru 1999	2002	2003	2004	2005	2006	2007	2008	2009	On-going
SFWMD	27,950	3,900	4,006	4,800	6,000	43,100	36,000	31,200	27,500	N/A
Total	**27,950**	**3,900**	**4,006**	**4,800**	**6,000**	**43,100**	**36,000**	**31,200**	**27,500**	**TBD**

Hyperlink: N/A
Contact: Jane Bucca (561) 682-6791

Program Name: Agriculture
Project Name: BMPs for Agriculture
Project ID: 4101
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46
Funding Source:

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Nutrient Load Reduction

Project Synopsis: This project provides for technical assistance to landowners and managers of agricultural lands. The goals of this project are to encourage the adoption and implementation of Best Management Practices (BMPs) that will provide for sustainable agriculture within the Everglades ecosystem that is both ecologically and economically sound. Comprehensive resource management plans are developed with the farmer/rancher to achieve their management objectives, while meeting federal, state, regional and local environmental quality criteria and standards (TMDLs).

Cost
Total:
$160,278,000
Project Development:
Land Acquisition:
Implementation:
Operations and maintenance:

Project Schedule:
Start Date: 1997
Finish Date: 2011

Detailed Project Budget Information (1000s)

	Through 2006	2007	2008	2009	Balance to Complete	Total
Federal	$32,521	$4,710	$4,100	$6,700	$112,247	$160,278
State	$27,935	$8,150	$6,000	$3,000	$26,320	$71,405
Tribal						
Local						
Other						
Total	**$60,456**	**$12,860**	**$10,100**	**$9,700**	**$138,567**	**$231,683**

Hyperlink: N/A
Contact: Edward Wright – 561-248-3540 (USDA-NRCS)

Program Name: Soils
Project Name: Monitoring of Organic Soils in the Everglades
Project ID: 4102
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46
Funding Source:

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Resource Assessment

Project Synopsis: This project will produce an assessment of the amount of accretion and/or subsidence that has occurred on organic soils throughout the Everglades region. ARS and IFAS have initiated work within the Everglades Agricultural Area (EAA) based upon observations taken every 5-year from 1913 – 1978. The goal of this project is to expand this assessment to the entire Everglades ecosystem, in an effort to provide scientists and land managers a tool to ascertain the effects from hydrologic condition changes upon the organic soil resource.

Cost:
Total:
$1,236,000
Project Development:
Land Acquisition:
Implementation:
Operations and maintenance: $1,236,000

Project Schedule:
Start Date: 1998
Finish Date: 2017

Detailed Project Budget Information ($1000)

	Thru 1999	**2005**	**2006**	**2007**	**2008**	**Balance to complete**	**Total**
Federal	25					1,211	1,236
State	11						
Tribal							
Local							
Other							
Total	**36**					**1,211**	**1,236**

Hyperlink: N/A
Contact: Tom Weber 352-338-9535 (USDA – NRCS)

Program Name: Soil Survey
Project Name: Soil Survey Update for the Everglades Agricultural Area
Project ID: 4103
Lead Agency: Natural Resources Conservation Service
Authority: Public Law 46
Funding Source:

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Acres Mapped

Project Synopsis: This project will produce an updated comprehensive soil survey of the Everglades Agricultural Area (EAA). The project is designed to produce a spatial representation of the soils on approximately 700,000 acres, and a detailed description of each soil's profile. The current soil survey is over 20 years old. Significant changes have occurred due to organic soil subsidence and changes in landscape features. This project will provide an effective conservation planning tool for on-farm decision making that will contribute to over-all ecosystem restoration efforts.

Cost:
Total:
$2,100,000
Project Development:
$2,100,000
Land Acquisition:
Implementation:
Operations and maintenance:

Project Schedule:
Start Date: 2007
Finish Date: 2012

Detailed Project Budget Information ($1000)

	2007	**2008**	**2009**	**Balance to complete**	**Total**
Federal				2,100	2,100
State					
Tribal					
Local					
Other					
Total				**2,100**	**2,100**

Hyperlink: N/A
Contact: Tom Weber 352-338-9535 (USDA – NRCS)

Program Name: Soil Survey
Project Name: Soil Survey for Everglades National Park, Big Cypress, National Preserve, and Water Conservation Areas
Project ID: 4104
Lead Agency: NRCS
Authority: PL-46
Funding Source:

Strategic Plan Goal(s) Addressed: **Primary** :Other

Measurable Output(s): Acres Mapped

Project Synopsis: This project will produce a comprehensive soil survey of Everglades National Park, Big Cypress National Preserve, and the Water Conservation Areas. The project is designed to produce a spatial representation of the soils on approximately 2,000,000 acres, and a detailed description of each soil's profile. Currently there is not a detailed soil survey available to land managers, modelers and planners. This project will provide an effective correlation/association tool for land managers, modelers and planners to identify, restore, and sustain natural ecological communities.

Cost:
Total:
$6,000,000
Project Development:
$6,000,000
Land Acquisition:
Implementation:
Operations and maintenance:

Project Schedule:
Start Date: 2007
Finish Date: 2013

Detailed Project Budget Information ($1000s)

	2009	2010	2011	2013	Balance to complete	Total
Federal					$6,000	6,000
State						
Tribal						
Local						
Other						
Total						

Hyperlink- N/A
Contact: Tom Weber –352-338-9535 USDA – NRCS

Project Name: C&SF: CERP Flows to NW and Central WCA 3A (II) (RR)
Modify G-404 Pump Station (II), Flow to NW and Central Water Conservation Area 3A (RR)
Project ID: 4105 (CERP Project WBS # 11)
Lead Agency: USACE / SFWMD
Authority: WRDA 2000 *(Programmatic Authority <$25 M)*
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Increased flows to WCA 3A

April 1999 (Restudy) Project Synopsis: Relocation and modifications to pump stations and development of a spreader canal system located in the northwest corner and west-central portions of Water Conservation Area 3A in western Broward County. Additional flows will be directed to the northwest corner and west central portions of Water Conservation Area 3A by increasing the capacity of the G-404 pump station, currently a part of the Everglades Construction Project, and increasing the capacity and relocating the S-140 pump station. A spreader canal system at S-140 will reestablish sheetflow to the west-central portion of Water Conservation Area 3A.

Current Project Synopsis: The purpose of this feature is to increase environmental water supply availability, increase depths and extend wetland hydropatterns in the northwest corner and west-central portions of Water Conservation Area 3A. If additional water quality treatment is determined to be required as a result of future detailed planning and design work, existing facilities would be modified to provide the necessary treatment. Water quality treatment of flows is assumed to be provided by the Everglades Construction Project and water quality treatment strategies developed to fulfill the Non-Everglades Construction Project requirements of the Everglades Forever Act.

Current Status: This project adheres to the original concept outlined in the Restudy, but has dependencies on the Everglades Construction project. This project has not yet begun.

Est. Cost: $40,308,000

Project Schedule:
TBD

Detailed Project Budget Information (rounded):

Flows to NW and Central	Expenditures Thru FY 2008
USACE	$59,000
SFWMD	$7,000
Total	**$66,000**

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_11_flow_nw_central.cfm

Contact: Pauline Acosta, Everglades Section Chief, Everglades Division, USACE
(904) 232-3878, Pauline.M.Acosta@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

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COMPLETED PROJECTS

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Program Name: Restoration Program: Hydrological Restoration, Habitat and Species
Project Name: Kissimmee Prairie Ecosystem
Project ID: 1305
Lead Agency: Florida Department of Environmental Protection/South Florida Water Management District
Authority: CARL/Save Our Rivers

Strategic Plan Goal(s) Addressed: 1.A.3 and 2.A.1

Measurable Output(s): 38,282 Acres Acquired

Project Synopsis: This project involves acquisition and restoration of wetland and dry prairie habitat in Okeechobee County. The SFWMD and FDEP purchased 38,282 acres of land in 1997 for conservation as the Kissimmee Prairie State Preserve. Restoration has been initiated on the Preserve as well as the adjacent 7,315-acre Ordway-Whittell Kissimmee Prairie Sanctuary owned and managed by the National Audubon Society. The project will restore 13,100 acres of wetlands that were over drained or over impounded by agricultural activities. In addition, the project will enhance another 2,625 acres of wetlands and 9,500 acres of associated dry prairie habitat. Restoration will be accomplished by removing 39.3 miles of ditches and dikes to return sheet flow across the land. Enhancement will include removal of unwanted or invasive vegetation from wetland and dry prairie habitats.

The purpose of the land acquisition project is to preserve the unique wetland and dry prairie habitats that were in agriculture and cattle land use and, using a five-year federal grant, restore and enhance these lands. Approximately 5,000 acres of the project hydraulically linked with the Kissimmee River will be reconnected, thereby restoring wetland habitat to regain historical biological diversity. The remaining 40,000 acres of the project in the project area contain extensive wetland habitats and excellent examples of the dry-prairie community type, which is recognized by the Florida Natural Areas Inventory as endangered at state and global levels. Because of the conversion of similar lands to citrus and improved pasture throughout central Florida, the Kissimmee Prairie Ecosystem, in combination with the adjacent Air Force's Avon Park Bombing Range and Audubon's Kissimmee Prairie Sanctuary, will form the largest region of dry prairie in public ownership in the State. Its preservation is the most important step in the recovery of the federally endangered Florida grasshopper sparrow. The endangered whooping crane, Everglades snail kite, and the woodstork utilize the habitats of the project area. Protection of these lands will also provide habitat for the following threatened species: southern bald eagle, Audubon's caracara, Florida scrub jay, and the eastern indigo snake. In addition, the project area contains habitat that supports over 800 species of plants and animals. **This project has been completed.**

Cost: Total: Project size 38,282 acres.
38,282 acres have been acquired at a cost of $22 million

Project Schedule:
Start Date: 1996
Finish Date: 1997

Detailed Project Budget Information ($1000s)

	Through 2003	2004	2005	2006	2007	2008	Total
Federal							
State	22,000						22,000
Total	**22,000**						**22,000**

Hyperlink: N/A
Contact: John Outland (850) 245-2089

Program Name: Infrastructure
Project Name: E&SF Critical Projects – East Coast Canal Structures (C-4)
Project ID: 1406
Lead Agency: USACE / SFWMD
Authority: WRDA 1996

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Water control structures

Project History: This project calls for the construction of a gated water control structure (S-380) on the C-4 canal in Dade County, Florida. This structure will be located immediately southeast of the Pennsuco Wetlands.

Project Synopsis: The purpose of the structure is to maintain stages to create and preserve wetlands as well as aquifer recharge.

Current Status: **COMPLETED 2003**

Cost: $3,683,000

Project Schedule:
Start Date: 1999
Finish Date: 2003

Detailed Project Budget Information (rounded):

East Coast Canal Structures (C-4)	Expenditures Thru FY2008
USACE	$1,901,000
SFWMD	$1,836,000
Total	**$3,737,000**

Hyperlink: http://www.saj.usace.army.mil/projects/proj1.htm

Contact: Karen Tippett, Program Execution Branch Chief
(904) 232-1061, Karen.S.Tippett@usace.army.mil

Program Name: Infrastructure
Project Name: C&SF: **Indian River Lagoon Feasibility Study**
Project ID: 1428
Lead Agency: USACE / SFWMD
Authority: WRDA 1996

Strategic Plan Goal(s) Addressed: Other supports 3-C.1

Measurable Output(s): Reports

Project History: The purpose of the study is to investigate making structural and operational modifications to the C&SF Project to improve the quality of the environment, improve protection of the aquifer, and improve the integrity, capability, and conservation of urban and agricultural water supplies and other water related purposes. The product of this study is a regional plan for addressing the water resource problems and opportunities of the St. Lucie River and Estuary and Indian River Lagoon watersheds in Martin and St. Lucie Counties.

Project Synopsis: The initial Indian River Lagoon South Feasibility Study was completed in October 2002 and a Project Implementation Report was completed in March 2004.

Current Status: **COMPLETED 2002**

Est. Cost: $6,150,000

Project Schedule:
1996 Start
2002 Completed

Detailed Project Budget Information (rounded):

	Total Expenditures
USACE	$3,075,000
SFWMD	$3,075,000
Total	**$6,150,000**

Hyperlink: http://www.evergladesplan.org/pm/studies/irl_south.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464 Jeffery.D.Couch@usace.army.mil

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: Chapter 298 Districts/Lease 3420 Improvements
Project ID: 1700
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Extent of reduction of total phosphorus entering Lake Okeechobee.

Project Synopsis: South Florida Water Management District funded works of the Chapter 298 District (East Beach Water Control District, East Shore Water Control District, South Shore Drainage District and South Florida Conservancy District) for the design and construction of these diversion works as described in the Everglades Forever Act. South Florida Water Management District also funded works of the Lessee of Lease No. 3420 (Closter Farms) for the design and construction of diversion works described in the Everglades Forever Act. The primary objective of these improvements is to reduce total phosphorus loads discharged directly to Lake Okeechobee. **All projects are complete and are in operation.**

*** Cost (Estimate):** Total: $ 24,115,521
(1) Project Development: $ 779,995
Land Acquisition: $ -
(2) Implementation: $ 23,335,526
Operations and Maintenance:$ -

Project Schedule: Completion Date:September 2005

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Implementation						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	$24,115,521	-	-	-	-	-	$24,115,521
Other							
Total	$24,115,521	-	-	-	-	-	$24,115,521

(5) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.
(6) Project Development includes Design Phase [contracts & staff costs] costs.
(7) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Infrastructure
Project Name: E&SF: Critical Projects - **Western C-11 Water Quality Treatment**
Project ID: 1703 (CERP Project # WBS 486)
Lead Agency: USACE / SFWMD
Authority: WRDA 1996
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Gated spillway structure; pump station

Project History: This project will construct 500-cfs seepage pump station (S-9A) and spillway (S-381) in Canal C-11 to separate clean seepage from urban run-off waters and pump the clean water back into Water Conservation Area 3A.

Project Synopsis: The purpose of this project is to improve the quality and timing of stormwater discharges to the Everglades Protection Area from the Western C-11 Basin located in south central Broward County. The S-9 pump station currently pumps untreated urban and agricultural stormwater runoff from the Western C-11 Basin directly into Water Conservation Area 3A. The project involves construction of a gated control structure on C-11 to divide western seepage waters (i.e., clean water) from the eastern runoff waters in C-11 canal (i.e., polluted water) and construction of an additional pumping station adjacent to S-9 to pump clean seepage back into the Everglades Protection Area. Both features will be remotely controlled using sponsor-installed telemetry.

Construction of pump station S-9A was completed in August 2002. Construction of a re-designed spillway (S-381) was completed in 2005. The initial audit of original construction contract termination for spillway S-381 was completed in September 2003. The second audit phase began in February 2004. The Obermeyer construction contract has been physically complete and was in the closeout phase.

Current Status: **COMPLETED 2006**

Cost: $18,066,000

Project Schedule:
1997 Start
2006 Finish

Detailed Project Budget Information (rounded):

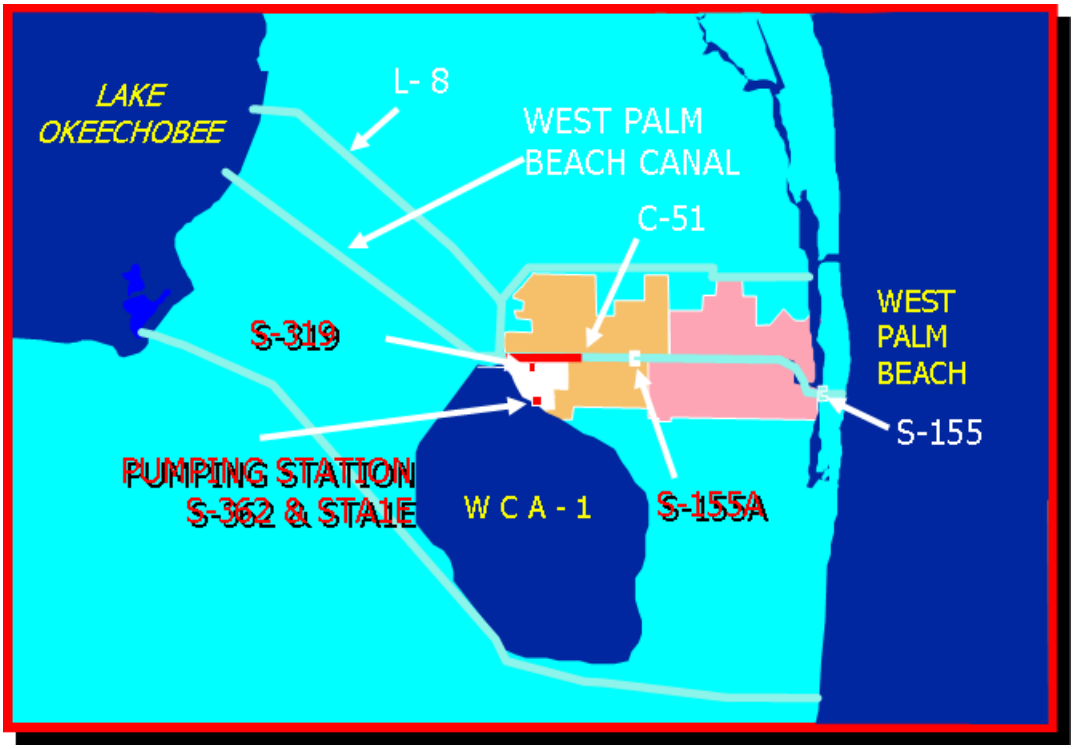
Western C-11 Water Quality Treatment	Expenditures Thru FY2008
USACE	$9,096,000
SFWMD	$8,897,000
Total	$17,993,000

Hyperlink: http://www.saj.usace.army.mil/projects/newrpt.htm

Contact: Karen Tippett, Program Execution Branch Chief
(904) 232-1061, Karen.S.Tippett@usace.army.mil.

Source: Detailed budget and schedule information based on the FY07 budget submission to OMB and updated to reflect current price levels in October 2006 dollars.

Additional Information:



Program Name: Infrastructure
Project Name: Everglades National Park Water and Wastewater
Project ID: 1705
Lead Agency: National Park Service

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Number of water and wastewater systems that are rehabilitated or replaced

Project Synopsis: This project will rehabilitate or replace 28 water and wastewater systems in two districts of Everglades National Park. A large percentage of the existing water and wastewater systems within the park were constructed over 35 years ago when the public health and environmental standards were not as fully evolved as they are today. While originally constructed to code, all of the systems are in non compliance with environmental regulations and standards for operating a public water supply. This rehabilitation effort would modify or replace all of the existing systems with new systems that offer the full level of public health and environmental protection that present day standards require. The final result will be potable water systems properly designed to provide safe, clean water and wastewater that is sufficiently treated to fully protect the fragile water resources within Everglades National Park. **This project has been completed.**

Cost:
Total
$18,965,000

Project Schedule:
Start Date: 1997
Finish Date: 2006

	1997	1998	1999	2000	2001	2002	2003	2004
Construction								

Detailed Project Budget Information ($1,000)

	Thru 1999	**2000**	**2001**	**2002**	**2003**	**2004**	**Balance to complete**	**Total**
Federal	3,516	1,894	2,883	4,192	4,594	286	1,600	18,965
State								
Tribal								
Local								
Other								
Total	**3,516**	**1,894**	**2,883**	**4,192**	**4,594**	**286**	**1,600**	**18,965**

Hyperlink: **N/A**
Contact: Michael Jester, 305 242 7771

Program Name: Restoration Program: Water Quality, Habitat & Species
Project Name: Lake Okeechobee Sediment Removal Feasibility Study and Pilot Project
Project ID: 1708
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source:

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Recommendation Regarding Sediment Removal from Lake Okeechobee

Project Synopsis: The goal of this project was to analyze alternatives and determine the best method of sediment management to reduce internal phosphorus loading in Lake Okeechobee. The Feasibility Study addressed alternatives such as sediment removal, processing, disposal, chemical treatment, and/or sealing sediment to achieve the project goal. The goal of the Feasibility Study was achieved using an objective methodology that allowed for review and input by experts and stakeholders throughout the study process. A pilot test of a state-of-the-art sediment removal/treatment technology train was conducted in parallel with the Feasibility Study. The pilot test included sediment removal, de-watering, treatment, and a pilot water quality treatment system. The results of the pilot test were incorporated into the Feasibility Study.

The results for the feasibility study indicated that once the TMDL is met the annual frequency of algal blooms would decrease to below a 15% annual probability of a bloom occurrence (from a current annual likelihood of approximately 20%) by 2015 and 10% by 2028. Under this "no in-lake action" alternative, steady-state lake recovery conditions would be achieved approximately 35 years from the point that external loads are reduced to the inflow load of 140 metric tons. Dredging did not prove feasible, while chemical treatment might be of value under limited conditions.

Cost:

Total	$955,069
Project Development	$955,069
Land Acquisition	N/A
Implementation	N/A
Operations and Maintenance	N/A

Project Schedule:
Start Date: 6/1/00
Finish Date: 6/1/03 (**Completed 04/03**)

Detailed Project Budget Information ($1000)

	Thru 1999	2000	2001	2002	2003	Balance to complete	Total
State		0	287.5	280.8	386.7		955.1
Tribal							
Local							
Other							
Total			**287.5**	**280.8**	**386.7**		**955.1**

Hyperlink: N/A
Contact: Don Nuelle (561) 682-6743

Program Name: Restoration Program: Water Quality, Habitat & Species
Project Name: Lake Okeechobee Tributary Sediment Removal Pilot Project
Project ID: 1709
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: SFWMD Ad Valorem; EPA 319

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Reduction in phosphorus loads from the Lettuce Creek drainage basin to Lake Okeechobee.

Project Synopsis: This project provides a direct comparison between two sediment removal technologies, namely, a continuous deflective separation (CDS) unit and a tributary sediment trap (TST) to determine if particulate phosphorus loading to Lake Okeechobee from Lettuce Creek drainage basin may be reduced using either of two pre-selected technologies. This project also examines the feasibility of sediment removal in a tributary as a method of reducing phosphorus loading to Lake Okeechobee. The effectiveness of the two technologies is being evaluated over a 12-month monitoring period. Initial monitoring results have indicated poor removal efficiencies for phosphorus by both units. Upon evaluation of the physical characteristics of the particles in the Lettuce Creek water, it was hypothesized that the settling velocities of the particles are too slow to allow capture of the particulate phosphorus within the relatively short residence times provided by the two units. Additional sediment management techniques are being investigated to examine if the effectiveness of these units can be improved by enhancing the settling velocity of the particles. The effectiveness of each system will be quantified using both a concentration-based and mass balance approach. The economic viability of each technology will be evaluated by comparing the present worth cost (20-yr) per kilogram of sediment and phosphorus removed by each system. If one of the tested sediment trap methods is found effective, landowners in the watershed will be encouraged to use it. The District will also use the technology wherever possible on District facilities. **This project has been completed.**

Cost:
Total
$440,000
Project Design (Phase I)
$93,728
Construction, Installation and Calibration of Monitoring Instruments (Phase II) $210,940
Post Sediment Removal Monitoring and Measuring Effectiveness of the Project (Phase III)$135,332

Project Schedule: Start Date: October 2000Completion Date: June 2004

	10/2000	08/2001	01/2002	04/2002	05/2002	06/2004
Project Design						
Construction and Installation						
Monitoring and Project Evaluation						

Detailed Project Budget Information ($1000)

	2000-2001	**2001-2002**	**2002-2003**	**2003-2004**	**Balance to complete**	**Total**
Federal EPA	59.5	87.1	23.4			170
State SFWMD	71	136.6	42.4	20		270
Total	**130.5**	**223.7**	**65.8**	**20**		**440**

Contact: Odi Villapando (561) 682-2936

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: S-5A Basin Runoff Diversion Works
Project ID: 1713
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Reduce phosphorus levels before it enters the Everglades Protection Area (EPA).

Project Synopsis: S-5A Basin Runoff Diversion Works is located in western Palm Beach County at the confluence of the Hillsboro and Ocean Canals in the Everglades Agricultural Area (EAA). The project diverts flow from the S-5A Basin into STA-2 for treatment. This project included enlargement of approximately 17 miles of the Hillsboro and Ocean Canals in approximately 2001 and the construction of a water control structure (G-341) which was completed in June 2005.

*** Cost (Estimate):** Total: $ 14,233,758
(1) Project Development: $ 408,815
Land Acquisition: $ 1,902,688
(2) Implementation: $ 11,298,233
Operations and Maintenance:$ 624,022

Project Schedule:
Completion Date: June 2005

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

*** Detailed Project Budget Information**

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	$13,536,252	$49,892	$51,387	$53,314	$54,913	$488,000	$14,233,758
Tribal							
Local							
Other							
Total	$13,536,252	$49,892	$51,387	$53,314	$54,913	$488,000	$14,233,758

(8) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.
(9) Project Development includes Design Phase [contracts & staff costs] costs.
(10) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Restoration Program: Hydrological Restoration, Water Quality
Project Name: STA-1 Inflow and Distribution Works
Project ID: 1719
Lead Agency: South Florida Water Management District
Authority: Florida's Everglades Forever Act

Strategic Plan Goal(s) Addressed: Getting the Water Right

Measurable Output(s): Reduce phosphorus levels in outflows from the STAs as directed in the Everglades Forever Act.

Project Synopsis: STA-1 Inflow and Distribution Works is located in Western Palm Beach County, just north of the Water Conservation Area No. 1 (Loxahatchee National Wildlife Refuge). This project redirects the discharge from S-5A Pump Station via the L-40 and L-7 Borrow Canals to STA-1 West and STA-1 East. The project scope includes the construction of four water control structures (G-300, G-301, G-302, G-311), and associated bypass canals, a separation levee extending from L-7 to L-40 and an inflow canal and perimeter levee leading to the STA-1W project.

*** Cost (Estimate):** Total: $ 12,679,955
(1) Project Development: $ 1,090,618
(2) Implementation: $ 11,589,337
Operations and Maintenance:$ Included with STA-1 West

Project Schedule:
Completion Date: September 2005 (including structure G-311, inflow structure for STA-1E)

	FY 1994 - FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 - FY 2016
Project Development						
Land Acquisition						
Implementation						
Operations and Maintenance						

* Detailed Project Budget Information

	Actual FY 1994-05	Projected FY 2006	Projected FY 2007	Projected FY 2008	Projected FY 2009	Balance to complete	Total
Federal							
State	$12,679,955	-	-	-	-	-	$12,679,955
Tribal							
Local							
Other							
Total	$12,679,955	-	-	-	-	-	$12,679,955

(11) Cost data reflects actual inception-to-date expenditures through September 30, 2005 and current preliminary cost estimate projections.

(12) Project Development includes Design Phase [contracts & staff costs] costs.
(13) Implementation includes all Construction [contracts & contingency] and Construction Management [contracts & staff costs] costs.

Contact: Steve Poonaisingh, (561) 682-2934

Program Name: Land Acquisition
Project Name: Babcock Ranch
Project ID: 2102
Lead Agency: Florida Department of Environmental Protection
Authority: Florida Forever Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 73,542 Acres acquired

Project Synopsis: The Babcock Ranch project consists of approximately 91,361 acres in Charlotte and Lee counties. Acquisition of would assist in the creation of a wildlife corridor that would span from Lake Okeechobee to the Gulf of Mexico. The majority of the project area consists of mesic flatwoods with the center of the project dominated by Telegraph Swamp. This ten thousand acre swamp drains most of the project area. Portions of the project provide habitat for the endangered red-cockaded woodpecker, crested caracara, and numerous other plants and animals. The project is proposed primarily as a less-than-fee simple acquisition a portion of the project will be acquired in full fee title. The evaluation team visited the project on September 25, 2001.

The majority of the Babcock Ranch project lies in southeastern Charlotte County; a small part extends into northeastern Lee County. It is contiguous with Fred C. Babcock-Cecil M. Webb Wildlife Management Area (Babcock-Webb WMA) for approximately 6 miles (mostly Babcock Family Reserve portion; proposed Curry Lake conservation easement is contiguous for 0.75 mile) on the west, Fisheating Creek Florida Forever project for approximately 3 miles on the east, and Caloosahatchee Regional Park for approximately 1.5 miles on the south. Bright Hour Watershed conservation easement is situated approximately 12 miles to the north, Hall Ranch Florida Forever project (contiguous with Babcock-Webb WMA) is contiguous with the Babcock Family Reserve portion for approximately 3 miles (it is ca. 4 miles to the northwest of the proposed Curry Lake conservation easement), Hickey Creek Mitigation Park Wildlife and Environmental Area is located less than 1.5 miles to the south, Moya Sanctuary is located less than 1 mile east of the southeast boundary of the proposal, and the Caloosahatchee Ecoscape Florida Forever project and Okaloacoochee Slough State Forest lie 10.5 miles and 15 miles, respectively, to the southeast. **This project has been completed.**

Cost: Total: Project size is 73,542 acres. 73,542 acres have been acquired at a cost of $ 350,000,000
Project Development
Land Acquisition: 0 acres remaining to be acquired.
Implementation
Operations and maintenance

Project Schedule:
Start Date: 2001
Finish Date: Upon completion

Detailed Project Budget Information ($1000)

	Thru 2007	**2008**	**2009**	**2010**	**Balance to complete**	**Total**
Federal						
State*	308,461					
Tribal						
Local	41,538					
Total	**350,000**					**TBD**

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project name: Cayo Costa
Project ID: 2110
Lead Agency: FDEP
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 1,954 Acres acquired

Project Synopsis: The project area, involving 1,954 acres, includes Cayo Costa and North Captiva, both part of a small chain of barrier islands that provide protection for Charlotte Harbor, one of Florida's most productive estuaries. The natural communities within the project are in excellent condition and have high species diversity; some may be unique to these islands. This project contains several archaeological and historical sites. Cayo Costa Island is subdivided into small lots and is threatened by rapid residential development. **This project has been completed.**

Cost: Total: Project size 1,954. All acres acquired at a cost of $28,337,346
Project Development
Land Acquisition:
Implementation
Operations and maintenance

Project Schedule:
Start Date: 1980
Finish Date: 2004

Detailed Project Budget Information (1000s)

	Thru 2004	**2005**	**2006**	**2007**	**2008**	**Total**
Federal						
State	$28,337					28,337
Tribal						
Local						
Other						
Total	**$28,337**					**28,337**

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Dupuis Reserve Land Acquisition
Project ID: 2116
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 21,875 Acres

Project Synopsis: The Dupuis Reserve encompasses 21, 875 acres in northwestern Palm Beach and southwestern Martin Counties. The property is interspersed with numerous ponds, wet prairies, cypress domes, pine flatwoods, and remnant Everglades marsh. Dupuis is actively managed by the District and the Florida Fish and Wildlife Conservation Commission. Numerous public use opportunities are available, including hiking, horseback riding, hunting, fishing, and bicycling. Total project acreage is 21,875 acres. **This project has been completed.**

Cost: Total $23,016,601
Project Development N/A
Land Acquisition $23,016,601
Implementation N/A
Operations and Maintenance N/A

Project Schedule:
Start Date: 1985
Finish Date: 1986

Detailed Project Budget Information ($1000)

	Through 1999	2000	2001	Balance to Complete	Total
Federal					
State	23,016.601				23,016.601
Tribal					
Local					
Other					
Total	**23,016.601**				**23,016.601**

Contact: Wanda Caffie-Simpson, (561) 682-6445

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Land Acquisition
Project name: Frog Pond/L31N
Project ID: 2123
Lead Agency: Florida Department of Environmental Protection
Authority: CARL Program

Strategic Plan Goal(s) Addressed: 2.A.1

Measurable Output(s): 10,450 Acres acquired

Project Synopsis: Lands border Everglades National Park and are considered critical to the Park's ecosystem, particularly Shark River Slough. The project's water storage capacity helps to prevent excessive flooding and serves as a recharge area for well fields in South Dade. The area is highly vulnerable to development pressure. **This project has been completed.**

Cost: Total: Project size 10,450 acres. 11,126 acres have been acquired at a cost of $102,872,897
Project Development
Land Acquisition: 0 acres remaining to be acquired.
Implementation
Operations and maintenance

Project Schedule:
Start Date: 1982
Finish Date: Upon completion

Detailed Project Budget Information (1000s)

	Thru 2007	**Total**
Federal	4,700	
State*	98,172	
Tribal		
Local		
Other		
Total	**102,872**	**102,872**
Adjusted Total**	**19,997.038**	

**State expenditures may include local government contributions on CARL, Florida Forever, FCT and SOR projects.*
*** A portion of the acres and costs on this project sheet overlap with Project ID 1300 in Goal 1. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: John Outland (850) 245-2089

Program Name: Land Acquisition
Project Name: Lake Walk-in-Water Land Acquisition
Project ID: 2130
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 4,009 Acres

Project Synopsis: The Lake Walk-in-Water project covers land between the northeast shore of lake Weohyakapka (Walk-in-Water) and SR60. The retirement communities of Nalcrest and Fedhaven border the property to the west and the community of Indian Lake Estates lies to the south. The project has extensive frontage along SR60 and Lake Water-in-Water and contains a large expanse of dry prairie, interspersed with small, isolated depression marshes a very large basin marsh along the highway, and large pine stands that have grown back since being logged in the 1920s. In 1999, the District and Polk County partnered to make the initial 4,000 acre purchase. The project is historically significant Town of Sumica. Polk County actively manages the property with financial assistance from the District. The total project acreage is 4,009 acres and all have been acquired. **This project has been completed.**

Cost: TotalSFWMD does not make cost projections on SOR projects
Project Development N/A
Land AcquisitionSFWMD does not make cost projections on SOR projects
Implementation N/A
Operations and Maintenance N/A

Project Schedule:
Start Date: 1995
Finish Date: 1998

Detailed Project Budget Information (1000s)

	Thru 1999	2000	2001	Balance to Complete	Total
Federal					
State	$1,975				$1,975
Tribal					
Local	$1,975				$1,975
Other					
Total	**$3,950**				**3,950**

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: Loxahatchee River Land Acquisition
Project ID: 2131
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Restore, Preserve and Protect the Natural Habitat and Species

Measurable Output(s): Target 1,936 Acres

Project Synopsis: This 1,936-acre project connects to the southern end of Jonathan Dickinson State Park, and contains lands in Palm Beach and Martin Counties. The project includes the historic floodplain of the Northwest Fork of the Loxahatchee River, a National Wild and Scenic River.

The purpose of this project is to protect the outstanding natural and cultural values of Florida's first federally designated Wild and Scenic River. Public ownership of this property will prevent direct disruption of surface and groundwater flows to the northwest Fork, and increase minimum flows to the Loxahatchee River, which will affect downstream movement of the saltwater wedge during dry conditions. A total of 1,914 acres are in public ownership; the District has acquired 1,547 acres and Palm Beach County owns 367 acres within the project area. **This project has been completed.**

Project is completed.

Cost: Total $13,074,703
Project Development N/A
Land Acquisition $13,074,703
Implementation N/A
Operations and Maintenance N/A

Project Schedule:
Start Date: 1984
Finish Date: 2001

Detailed Project Budget Information ($1000)

	Thru 1999	2000	2001	Balance to Complete	Total
Federal					
State	$11,927.120				$11,927.120
Tribal					
Local	$1,147.583				$1,147.583
Other					
Total	**$13,074.703**				**$13,074.703**

Additional information available at www.sfwmd.gov under the heading "Major Projects"
Contact: Wanda Caffie-Simpson, (561) 682-6445

Program Name: Land Acquisition
Project Name: Nicodemus Slough Land Acquisition
Project ID: 2137
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Primary: 2.A.1

Measurable Output(s): Target 2,231 Acres

Project Synopsis: Nicodemus Slough consists of wet prairie, broadleaf marsh, and prairie hammock south of the Herbert Hoover Dike (LD-3) and west of State Road 78. Until recently, the construction of the Herbert Hoover Dike, coupled with the maintenance of lower stages in Lake Okeechobee, resulted in a shortened hydroperiod and general lowering of water levels in Nicodemus Slough. This in turn altered vegetative patterns on the property and allowed the spread of transition and upland species. **This project has been completed.**

Cost:	Total	$1,894,501
	Project Development	N/A
	Land Acquisition	$1,894,501
	Implementation N/A	
	Operations and Maintenance	N/A

Project Schedule:
Start Date: 1981
Finish Date: 1988

Detailed Project Budget Information (1000s)

	Thru 1999	2000	2001	Balance to Complete	Total
Federal					
State	$1,894.5				$1,894.5
Tribal					
Local					
Other					
Total	**$1,894.5**				**$1,894.5**

Contact: Wanda Caffie-Simpson, (561) 682-6445
Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Land Acquisition
Project Name: South Fork St. Lucie River Land Acquisition
Project ID: 2153
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Restore, Preserve and Protect the Natural Habitat and Species

Measurable Output(s): Target 184 Acres

Project Synopsis: This project includes 184 acres on the western shore of the upper South Fork St. Lucie River. The property begins approximately 0.75 miles south of State Road 76 and extends approximately 1.25 miles southward.

The purpose of this project is to protect the integrity of the river corridor. River water quality is best maintained when river corridor lands remain in their natural state and are restored and managed to enhance the natural community quality. Prescribed fire has successfully been used as the main restoration tool to improve the condition of degraded communities on this property. Responsibility for management of land is divided between the Department of Environmental Protection and Martin County. **This project has been completed.**

Project is completed.

Cost: Total $2,480,000

Project Development	N/A
Land Acquisition	$2,480,000
Implementation	N/A
Operations and Maintenance	N/A

Project Schedule:
Start Date: 1995
Finish Date: 1996

Detailed Project Budget Information (1000s)

	Thru 1999	Total
Federal		
State	$2,480	$2,480
Tribal		
Local		
Other		
Total	**$2,480**	**$2,480**
Adjusted Total	**0**	

*** A portion of the acres and costs on this project sheet overlap with Project ID 1101 in Goal 1. The Adjusted total compensates for this overlap by allocating the appropriate costs to this project.*

Contact: Wanda Caffie-Simpson, (561) 682-6445
Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Land Acquisition
Project Name: Tibet-Butler Preserve Land Acquisition
Project ID: 2157
Lead Agency: South Florida Water Management District
Authority: Save Our Rivers (SOR)

Strategic Plan Goal(s) Addressed: Restore, Preserve and Protect the Natural habitat and Species

Measurable Output(s): Acres Acquired

Project Synopsis: The Preserve covers 439 acres along the southwest shore of Lake Tibet-Butler in Orange County. The vegetative communities include bay swamp, pine flatwoods, cypress swamp, and smaller areas of xeric oak and freshwater marsh. The Tibet-Butler Preserve site includes approximately 4,000 feet of shoreline on Lake Tibet. Orange County Parks and Recreation Department manages Tibet-Butler Preserve as an environmental education facility. **This project has been completed**.

Cost: Total $3,601,900
Land Acquisition $3,601,900

Project Schedule:
Start Date: 1988
Finish Date: 1999

Detailed Project Budget Information (1000s)

	Through 1999	**2000**	**Balance to Complete**	**Total**
Federal				
State	$3,601.9			$3,601.9
Tribal				
Local				
Other				
Total	**$3,601.9**			**$3,601.9**

Contact: Wanda Caffie-Simpson, (561) 682-6445

Additional information available at www.sfwmd.gov under the heading "Major Projects"

Program Name: Land Acquisition
Project Name: Yamato Scrub
Project ID: 2161
Lead Agency: FDEP
Authority: Florida Forever

Strategic Plan Goal(s) Addressed: Primary: 2.A.1 Secondary:

Measurable Output(s): Target 207 Acres

Project Synopsis: Predominantly natural communities here are sand pine scrub and scrubby flatwoods. The species richness of the scrub is considered higher than that of any other scrub on the southeast coast. A bargain shared project. **This project has been completed.**

Cost: Total: Project size 207 acres all acquired
Project Development
Land Acquisition: 207 acres acquired at a cost of $25,932,850
Implementation
Operations and maintenance

Project Schedule:
Start Date: 1992
Finish Date: 1996

Detailed Project Budget Information (1000)

	Thru 1999	**2000**	**2001**	**Balance to complete**	**Total**
Federal					
State	17,500				17,500
Tribal					
Local	8,432.8				8,432.8
Other					
Total	**25,932.8**				**25,932.8**

Contact: John Outland (850) 245-2089

Project Name: C&SF: CERP Strazzulla Wetlands (OPE)
Project ID: 2300 (CERP Project WBS # 39)
Lead Agency: USACE / SFWMD
Authority: Not authorized
Funding Source: Federal/DOI (WRDA 2000)/State

Strategic Plan Goal(s) Addressed: 2-A.3

Measurable Output(s): An increase of 3,335 acres of habitat extent and connectivity

April 1999 (Restudy) Project Synopsis: Includes water control structures and the acquisition of 3,335 acres located in Palm Beach County. The expansion of wetlands will act as a buffer between higher water stages to the west and lands to the east that must be drained.

Current Project Synopsis: The purpose of this feature is to provide a hydrological and ecological connection to the Loxahatchee National Wildlife Refuge and expand the spatial extent of protected natural areas. This land will act as a buffer between higher water stages to the west and lands to the east that must be drained. This increase in spatial extent will provide habitat connectivity for species that require large un-fragmented tracts of land for survival.

WRDA 2000 dictated that the Federal share for land acquisition in the Loxahatchee National Wildlife Refuge, including the Strazzulla tract, should be funded through the budget of the Department of the Interior.

The project adheres to the original concept outlined in the Restudy.

Current Status: The project has been suspended due to it's potential to impact lands with a significant amount of cultural resources.

Est. Cost: $81,101,000

Project Schedule:
Project closed

Detailed Project Budget Information (rounded):

Strazzulla Wetlands	Expenditures Thru FY 2008
USACE	$355,000
SFWMD	$143,000
Total	$498,000

Hyperlink: http://www.evergladesplan.org/pm/projects/proj_39_strazzulla.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Project Name: C&SF: CERP Winsberg Farm Wetlands Restoration (OPE)
Project ID: 2301 (CERP Project # WBS 91)
Lead Agency: USACE / Palm Beach County's Water Utilities District (PBCWUD)
Authority: WRDA 2000 *(Programmatic Authority < $25 M)*
Funding Source: Federal/County

Strategic Plan Goal(s) Addressed: Primary: 2-A.3

Measurable Output(s): 114 acres of improved wetlands

April 1999 (Restudy) Project Synopsis: The Winsberg Farm wetlands project was included in the Restudy as an "Other Project Element". Projects in the "Other Project Element" category were determined to be consistent with Restudy planning objectives and have a Federal interest, but were too small in scale to evaluate from a system-wide perspective. The original concept for this feature includes the construction of a 175-acre wetland east of Loxahatchee Wildlife Preserve in Palm Beach County using water that would normally be lost to deep well injection or any future beneficial use.

Current Project Synopsis: The project involves restoration of approximately 114 acres of wetlands on former agricultural lands. Wetlands would reduce the amount of treated wastewater coming from the Palm Beach County's Water Utilities District (PBCWUD) Southern Region Water Reclamation Facility (SRWRF) lost to deep injection wells by further treating and recycling the water. Treated wastewater will instead be reused to recharge the local aquifer system, create a new ecologically significant wildlife habitat and extend the function of the nearby Wakodahatchee Wetland. The initial configuration would include a Phase 1 design and construction with approximately 72 acres of wetlands created in the western half of the project. The remaining 42 acres of the project on the eastern half , considered Phase 2, would work similarly. As a result of the real estate purchase agreement (175 acres) made in 2003 between PBCWUD, the non-federal sponsor, and the Winsberg family, PBCWUD completed construction of Phase 1 in 2004. It included 72 acres of wetlands, plus a parking lot, visitor center, and recreational access features and was completed without Federal funds. The local sponsor refers to this portion of the project as "Green Cay Wetlands".

The Tentatively Selected Plan (TSP) identified in 2005 and presented at AFB, is configured assuming constant inflow of water to maintain continuous inundation. Refinements during the formulation process provide for the project to be located on approximately 165 acres of farmland just east of the Southern Region Water Reclamation Facility (SRWRF). Approximately 114 of the 165 acres would be hydrated using treated wastewater from the SRWRF resulting in the creation of a wetland system approximately three times the size of the adjacent Wakodahatchee Wetlands, and its location and proximity would leverage the recently created ecosystem restoration benefits by expanding the constructed wetland into an integrated system having even greater regional significance. Water levels will be allowed to fluctuate seasonally, within a 1- to 2-foot range throughout the entire project, in response to the natural seasonal variation of rainfall. This variation in the depth of project hydration will influence the growth and distribution of various plant species within the wetland area.

Effluent enters the site from the western half of the project (Phase 1). To circulate flow throughout the project, several control structures and pumps would be integrated in various locations and can be operated to allow flow in three ways:

1. To the eastern half of the project (Phase 2), or
2. Circulate flow in the eastern half of the project by a 15-hp recirculation pump, or
3. Send flow to deep well injection by a 250-hp discharge pump in the event pool elevations rise beyond a set point due to direct rainfall.

A draft PIR was completed in February 2008 and released for public and agency comment. The draft report recommended credit for PBCWUD's share of the project, and was submitted to the Secretary of the Army to authorize Federal funds to construct the Phase 2 portion of the project (approximately 42 acres to be constructed to the same design elevations as Phase 1).

Current Status: During summer 2008, the sponsor declined to continue support of the project in part based on the requirement made to revise embankment heights to the new Federal standards and the need to remove landscaping on sections of the Phase 1 embankment that would otherwise sacrifice its structural integrity. Such a removal was also viewed as potentially impacting existing habitats or disrupting to public recreational use. Without a non-Federal sponsor, formal communications and project close out will be announced by Public Notice in September, 2009.

Est. Cost: $17,102,000

Project Schedule:

2009 Project Closed.

Detailed Project Budget Information (rounded):

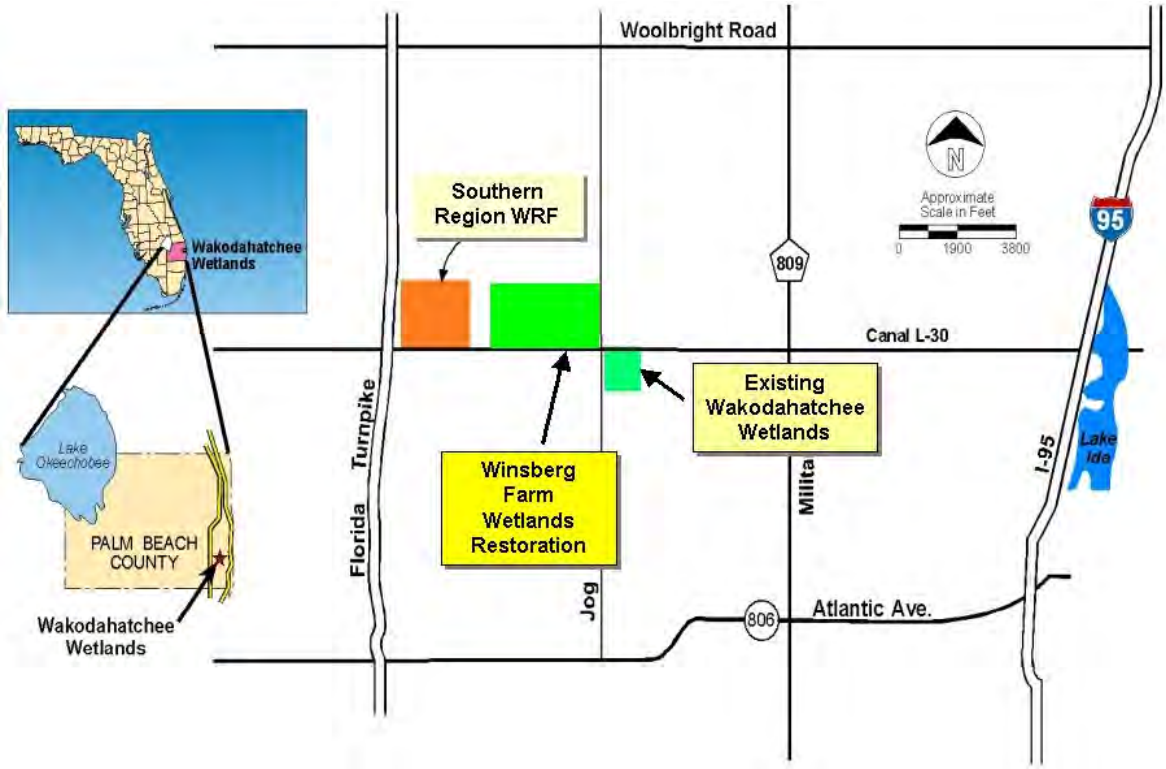
Winsberg Farms Restoration	**Expenditures Thru FY 2008**
USACE	$1,827,000
SFWMD	$1,978,000
Total	**$3,805,000**

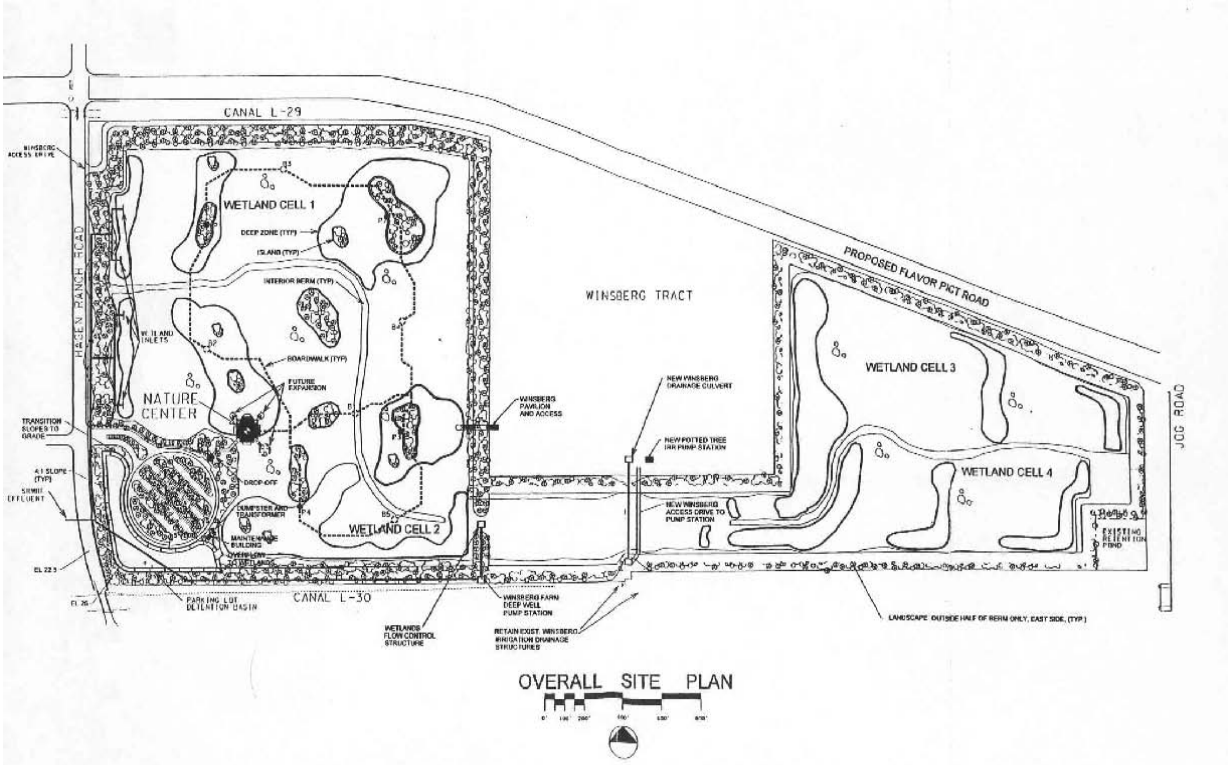
Hyperlink: http://www.evergladesplan.org/pm/projects/proj_91_winsberg.cfm

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2008 dollars.

Additional Information:





Project Name: C&SF: **S-169/Nine Mile Canal Basin**
Project ID: 2311
Lead Agency: USACE / SFWMD
Authority: Central and Southern Florida Project; Section 203 Flood Control Act (1948)
Funding Source: Federal/State

Strategic Plan Goal(s) Addressed: 2-A.3

Measurable Output(s): Improved structures

Current Project Synopsis: The S-169 project, located in Hendry County, was to include enlarging culverts, an access bridge, converting 5 flap-gates telemetric-controlled gates, stabilizing canal banks, replacing two pump stations and installing a manatee protection barrier. This effort was related to high water stages of HHD that required operational discharges and an effort to moderate discharges to an industrial canal used for agricultural purposes.

Current Status: A draft General Reevaluation Report/EA (2005) was completed, but was discontinued. The study phase was also completed. A determination was made that the project had "no further Federal interest". The project is in the process of being 'closed out' later in 2009.

Est. Cost: $ 13,600,000 *for the original project*

Project Schedule:

2001 Start
2009 Discontinued; Closeout completed.

Detailed Project Budget Information (rounded):

S-169/Nine Mile	Expenditures Thru 2008
USACE	$1,200,000
SFWMD	$0
Total	**$1,200,000**

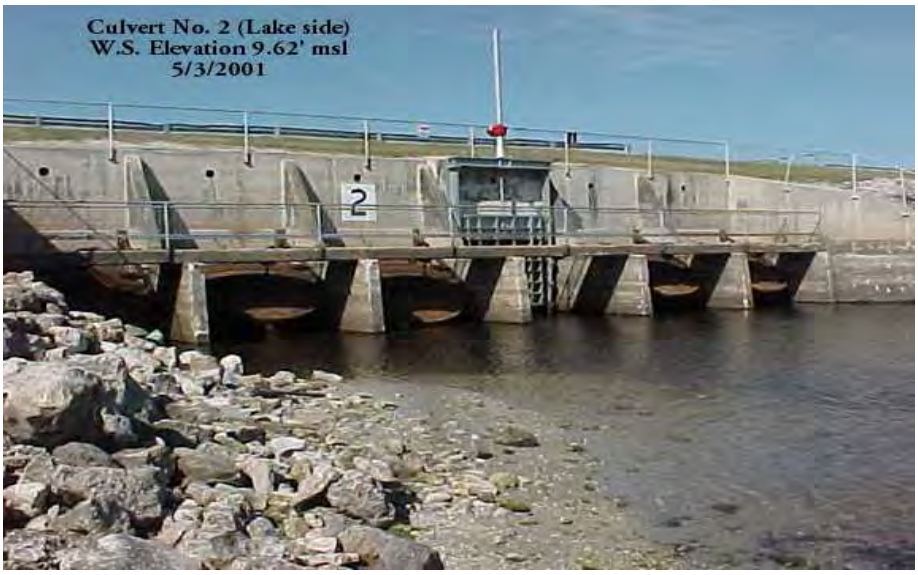
Hyperlink:

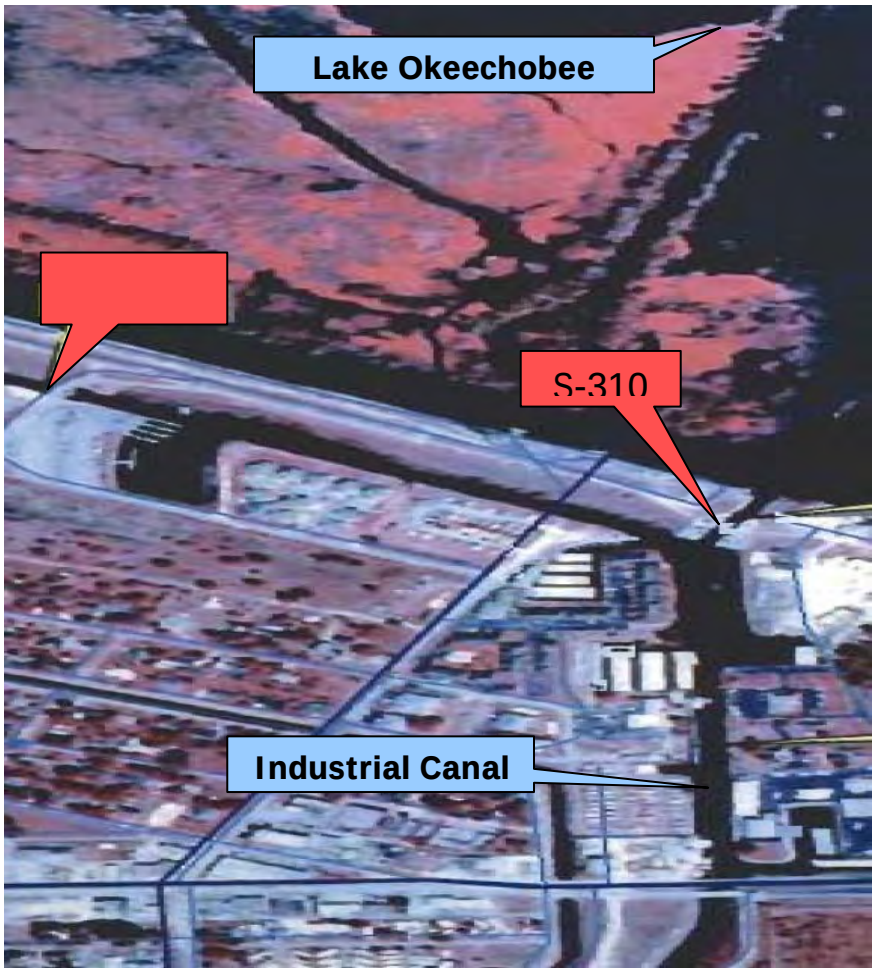
http://www.saj.usace.army.mil/Divisions/Planning/Branches/Environmental/DOCS/OnLine/Hendry/CSFlaFloodCtrl/ACOE60038_S-169-CDversion.pdf

Contact: Jeff Couch, Okeechobee Section Chief, Everglades Division, USACE
(904) 232-1464, Jeffery.D.Couch@usace.army.mil

Source: Original project description is summarized from the *DRAFT General Reevaluation Report and Environmental Assessment (2005).* Initial cost estimate was based on the GRR description and was last calculated for inflation in October 2007 dollars.

Additional Information:





Program Name: Invasive Exotic Species Management
Project Name: Estero Bay Aquatic Preserve and Buffer Enhancement and Exotic Removal Project
Project ID: 2604
Lead Agency: FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Authority: Chapter 403, Florida Statutes
Funding Source:

Strategic Plan Goal(s) Addressed: 2.B.2

Measurable Output(s): Acres of exotic plants removed

Project Synopsis:
I. Melaleuca removal: Treatment, removal, monitoring and follow-up treatment of 708 acres of Melaleuca within the 10,405 acre Estero Bay Preserve State Park – **PROJECT COMPLETED**

II. Dog Key Exotic Removal: Treatment, removal, monitoring and follow-up treatment of exotic vegetation on Dog Key, a 24 acre island within the Estero Bay Aquatic Preserve and part of the Estero Bay State Buffer Preserve with documented Calusa Indian middens/mounds – **PROJECT COMPLETED**

Cost: Total: $1.05 million

Project Development:
I. Melaleuca Removal – The initial aerial treatment of 708 acres of melaleuca was completed through funding by the Bureau of Invasive Plant Management (BIPM) at a cost of approximately $100,000.00. Only the heavily infested monoculture areas were treated, leaving untreated buffers around native plant communities. It will be necessary to hand treat these buffer areas and any unsuccessful initial treatment areas. It is anticipated that $600,000.00 will be needed for this work. Monitoring and follow-up treatment of this large-scale treatment still needs funding. Smoke from a prescribed fire within these treatment areas (dead) would be a major problem in the Estero development area so actual removal of dead or live trees off site would be preferable. In this case, costs could exceed the $600,000.00 figure.

Implementation:
I - initial treatment completed in 2001. On the ground treatment of the buffer areas (edges of the treated areas) and any unsuccessful treatment areas should also occur toward the end of 2001 or beginning of 2002. Monitoring and follow-up treatment to continue through 2004 at an estimated cost of $300,000.00.
Operations and maintenance: Total =2,852 acres treated at a cost $1,129,214
Estimated at $40,000.00 through 2004.

Project Schedule:
Start Date: 1998
Finish Date: 2004

Detailed Project Budget Information (1000s)

	Thru 2003	2004	2005	Balance to complete	Total
Federal					
State	$538.5	$28.6	$20.5		
Tribal					
Local					
Other					
Total	**$538.5**	**$28.6**	**$20.5**		**$587.6**

Hyperlink: N/A
Contact: N/A

Program Name: Invasive Exotic Species Management
Project Name: Melaleuca Quarantine Facility
Project ID: 2701
Lead Agency: U.S. Department of Agriculture – Agricultural Research Service *(here for reference only)*
Authority: ARS
Funding Source: DOI and DOA

Strategic Plan Goal(s) Addressed: 2-B.3

Measurable Output(s): Number Biological Agents Approved. Biological control agents for effectively reversing and halting the effects of non-native species on the South Florida habitat.

Project History: *Melaleuca quinquenervia* (Melaleuca) is an invasive, exotic tree that has proliferated in Florida for approximately 100 years and now occupies more than 400,000 acres of wetland, riparian and, to a lesser degree, agricultural, systems in the state. Melaleuca is competitively superior to most, if not all, native plants and rangeland grasses, with infestations resulting in degradation of native wildlife habitats and waterways, including portions of the Everglades National Park, and of the limited grazing lands in South Florida. Biological control agents have the potential of providing greater efficiency and improved economy. Ultimately, they may prove to be the only truly effective large-scale means of reversing and halting the effects of non-native species on the South Florida habitat.

Project Synopsis: This project consists of constructing a quarantine facility to enable the testing of candidate organisms for biological control and reversal of the spread of exotic plant species. Construction of the quarantine facility was completed after receiving an additional contribution of about $500K by USDA-ARS and $400K from the South Florida Water Management District. USDA took occupancy of the facility on 19 Jan 2005. It opened March 2005 and had its dedication ceremony April 8, 2005. Minor punch list items were finished up at that time. Design problems and shoddy construction by the contractor of some critical subsystems are hampering full use of the quarantine areas but funding for needed repairs has not been identified. Due to a lack of Operations & Maintenance funding, a full staffing could not be achieved ($350K/yr .estimated need).

Current Status: **COMPLETED 2005**

Cost: $7,100,000 Land Acquisition: $ 0 (long term lease - University of Florida)

Project Schedule:
1997 Start
2005 Finish

Detailed Project Budget Information (rounded):

Melaleuca Quarantine	**Total Expenditures**
Federal	$6,700,000
State	$400,000
Total	**$7,100,000**

Hyperlink: http://www.ars.usda.gov/is/pr/2005/050408.2.htm
Contact: Ted Center, (954) 475-0541 (USDA – ARS)

Program Name: Infrastructure
Project Name: E&SF: Critical Projects - **Florida Keys Carrying Capacity**
Project ID: 4100
Lead Agency: USACE / FDCA
Authority: WRDA 1996

Strategic Plan Goal(s) Addressed: Other

Measurable Output(s): Report

Project History: The carrying capacity study/analysis will develop information that will improve decision-making regarding development approvals and infrastructure investments, and its impact on the ecology and natural system in the Florida Keys and Florida Bay.

Project Synopsis: The development of a decision-making tool will provide a comprehensive basis for coordinating and strengthening water and land related planning efforts by local, state and federal agencies. The Study was completed March 2003.

Current Status: **COMPLETED 2003**

Cost: $6,000,000

Project Schedule:
1997 Start
2003 Finish

Detailed Project Budget Information ($1000)

Florida Keys Carrying Capacity	Thru 2008
USACE	$3,000,000
FDCA	$3,000,000
Total	**$6,000,000**

Hyperlink: http://www.saj.usace.army.mil/projects/proj4.htm

Contact: Karen Tippett, Program Execution Branch Chief
(904) 232-1061, Karen.S.Tippett@usace.army.mil

Program Name: Management
Project name: Floridan Aquifer Restoration
Project ID: 1707
Lead Agency: USDA - NRCS
Authority: PL-46

Strategic Plan Goal(s) Addressed: Primary: Other

Measurable Output(s): Reduced Aquifer Contamination

Project Synopsis: Saline aquifer water will cause well casings to corrode and eventually leak causing cross aquifer contamination caused by artesian flow from the Floridan. This project seeks to permanently decommission irrigation wells via plugging in St. Lucie County in order to reduce saline water from the Floridan Aquifer by leaking well casings transferring groundwater into the surficial aquifer used for drinking. This project has been put on hold due to a lack of funding.

Cost:
Total:
$900,000
Project Development
Land Acquisition
Implementation $900,000
Operations and maintenance:

Project Schedule:
Start Date: 2002
Finish Date: TBD

Detailed Project Budget Information ($1000s)

	Thru 2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Federal	$50	$100	$100					$250
State	$150	$150	$150					$450
Tribal								
Local								
Other	$100	$50	$50					$200
Total	**$300**	**$300**	**$300**					**$900**

Hyperlink: N/A
Contact: Donna Smith – 772-467-9779 USDA – NRCS