

# *Cross-Cut Budget*

## *Task Force Working Document*

*Fiscal Year 2008*  
*South Florida Ecosystem Restoration Program*

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# *Section 1.0*

## *Overview*

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## **Section 1.0: Introduction**

### **Section 1.1: Overview**

The information in this document is reported by the members of the South Florida Ecosystem Restoration Task Force and Working Group and compiled by the Office of the Executive Director. It consists of three sections. Section 1.0 provides an overview and includes summary tables for the federal and state budget requests.

Section 2.0 provides detailed information concerning the federal aspects of Everglades Ecosystem restoration projects and funding. Section 2.1 addresses the Comprehensive Everglades Restoration Plan (CERP) projects and funding, and Section 2.2 addresses non-CERP projects and funding. The base program and operational funding requests for some federal agencies are not included in the document.

Section 3.0 provides detailed information concerning state restoration projects and funding. Section 3.1 addresses CERP projects and funding, and Section 3.2 addresses non-CERP restoration projects and funding. The Fiscal Year (FY) 2007-08 totals shown represent estimates for the South Florida Water Management District (SFWMD). When finalized the FY 2007-08 actual budget totals will be posted on the website [www.sfrestore.org](http://www.sfrestore.org).

### **Section 1.2: Federal and State of Florida Funding Summary Tables**

The following tables provide a summary of the detailed funding information found in Sections 2.0 and 3.0 of this document. Table 1 includes budget information provided by federal members and Table 2 includes budget information for the State of Florida.

The funding for the federal agencies and SFWMD reflects a fiscal year that begins on October 1 and ends on September 30 of each year. The funding for other state agencies reflects a fiscal year that starts on July 1 and ends on June 30 of each year.

**TABLE 1: FEDERAL FUNDING SUMMARY (ACTUAL \$)**

<b>EVERGLADES ECOSYSTEM RESTORATION PROJECTS</b>	<b>FY 2001 Enacted</b>	<b>FY 2002 Enacted</b>	<b>FY 2003 Enacted</b>	<b>FY 2004 Enacted</b>	<b>FY 2005 Enacted</b>	<b>FY 2006 Enacted</b>	<b>FY 2007 Enacted</b>	<b>FY 2008 Requested</b>
<b>COMPREHENSIVE EVERGLADES RESTORATION PROGRAM (CERP)</b>								
USACE- CERP (Part of Central and Southern Florida) <sup>1</sup>	21,747,000	27,961,000	37,062,000	39,063,000	64,446,000	62,610,000 <sup>2</sup>	64,000,000	64,000,000
USDOI - NPS CERP	2,497,000	5,544,000	5,513,000	5,463,000	5,213,000	5,174,000	5,212,000	4,731,000
USDOI - FWS CERP	651,000	3,351,000	3,329,000	3,309,000	3,304,000	3,269,000	3,269,000	3,269,000
<b>NON- COMPREHENSIVE EVERGLADES RESTORATION PROGRAM (CERP)</b>								
USACE - Central and Southern Florida (excluding CERP) <sup>3,4</sup>	56,182,000	64,949,000	49,983,000	64,906,000	8,029,000	9,126,000	6,447,000	26,588,000
USACE - Critical Projects <sup>3,4</sup>	20,485,000	19,876,000	19,526,000	14,760,000	25,813,000	11,880,000	8,289,000	4,310,000
USACE-Kissimmee River Restoration <sup>3,4</sup>	19,961,000	25,846,000	23,727,000	17,616,000	17,871,000	13,042,000	50,264,000	32,502,000
USACE - Biscayne Bay <sup>3</sup>	543,000	240,000	200,000	0	74,000	0	0	0
USACE- Modified Water Deliveries <sup>4</sup>						34,650,000	35,000,000	35,000,000
USDA - ARS	4,193,000	4,846,900	5,216,800	5,415,100	6,101,000	4,908,600	4,941,000	3,784,300
USDA- NRCS	5,297,000	37,752,000	21,376,000	23,580,000	62,539,337 <sup>5</sup>	61,505,271 <sup>5</sup>	5,143,335	13,240,175
US Department of Commerce - NOAA	4,264,000	4,065,000	4,065,000	4,359,000	4,389,000	3,000,000	3,000,000	3,000,000 <sup>10</sup>
USDOI - NPS Park Management	23,389,000	23,635,000	23,874,000	23,991,000	25,266,000	25,832,000	26,377,000	28,991,000
USDOI - South Florida Ecosystem Restoration Task Force	1,316,000	1,325,000	1,320,000	1,308,000	1,290,000	1,286,000	1,307,000	1,324,000
USDOI - NPS Modified Water Deliveries	8,980,000	35,199,000 <sup>6</sup>	9,935,000	12,830,000	7,965,000	24,962,000 <sup>7</sup>	13,330,000	14,526,000
USDOI - NPS Land Acquisition (management)	2,075,000	2,800,000	2,782,000	1,800,000	1,500,000	690,000	500,000	500,000
USDOI - NPS Land Acquisition Grants to Florida	11,974,000	15,000,000	15,421,000	(5,000,000) <sup>8</sup>	0	0	0	0
USDOI - NPS Critical Ecosystem Studies Initiative	6,194,000	4,000,000	3,974,000	3,937,000	3,882,000	3,840,000	3,864,000	3,910,000
USDOI - FWS Ecological Services	2,554,000	2,554,000	2,537,000	2,523,000	2,518,000	2,516,000	2,521,000	2,516,000
USDOI - FWS Refuges and Wildlife	3,706,000	3,706,000	3,682,000	9,784,000	4,787,000	4,086,000	4,086,000	4,086,000
USDOI - FWS Migratory Birds						101,000	101,000	101,000

<b>NON-CERP PROJECTS/PROGRAMS</b>	<b>FY 2001 Enacted</b>	<b>FY 2002 Enacted</b>	<b>FY 2003 Enacted</b>	<b>FY 2004 Enacted</b>	<b>FY 2005 Enacted</b>	<b>FY 2006 Enacted</b>	<b>FY 2007 Enacted</b>	<b>FY 2008 Requested</b>
USDOJ - FWS Law Enforcement	636,000	636,000	632,000	628,000	627,000	619,000	619,000	619,000
USDOJ - FWS Fisheries	100,000	100,000	99,000	98,000	99,000	95,000	95,000	95,000
USDOJ - FWS Land Acquisition	10,975,000	8,500,000	2,484,000	0	740,000	0	0	1,044,000
USDOJ - USGS - Integrated Research, Planning and Interagency Coordination	8,553,000	8,636,000	7,847,000	7,847,000	7,738,000	7,771,000	7,042,062	5,706,000
USDOJ - BIA	396,000	396,000	393,000	539,000	536,000	382,000	382,000	396,000
US EPA	4,582,000	4,666,800	3,352,100	3,139,600	2,882,300	3,439,400	3,541,900	2,150,000 <sup>9</sup>
<b>CERP Total (USACE and USDOJ)</b>	<b>24,895,000</b>	<b>36,856,000</b>	<b>45,904,000</b>	<b>47,835,000</b>	<b>72,963,000</b>	<b>71,053,000</b>	<b>72,481,000</b>	<b>72,000,000</b>
<b>Non-CERP Subtotal (USACE and USDOJ)</b>	<b>178,019,000</b>	<b>217,398,000</b>	<b>168,416,000</b>	<b>157,028,000</b>	<b>108,735,000</b>	<b>140,878,000</b>	<b>160,224,062</b>	<b>162,214,000</b>
<b>Non-CERP Subtotal (Other Federal Agencies)</b>	<b>18,336,000</b>	<b>51,330,700</b>	<b>34,009,900</b>	<b>36,493,700</b>	<b>75,911,637</b>	<b>72,853,271</b>	<b>16,626,235</b>	<b>22,174,475</b>
<b>Non-CERP Total (All Federal Agencies)</b>	<b>196,355,000</b>	<b>268,728,700</b>	<b>202,425,900</b>	<b>193,521,700</b>	<b>184,646,637</b>	<b>213,731,271</b>	<b>176,850,297</b>	<b>184,388,475</b>
<b>TOTAL CERP AND NON CERP (USACE AND USDOJ)</b>	<b>202,914,000</b>	<b>254,254,000</b>	<b>214,320,000</b>	<b>204,863,000</b>	<b>181,698,000</b>	<b>211,931,000</b>	<b>232,705,062</b>	<b>234,214,000</b>
<b>TOTAL CERP AND NON CERP (ALL FEDERAL AGENCIES)</b>	<b>221,250,000</b>	<b>305,584,700</b>	<b>248,329,900</b>	<b>241,356,700</b>	<b>257,609,637</b>	<b>284,784,271</b>	<b>249,331,297</b>	<b>256,388,475</b>

Note: Base program and operational funding requests for the U.S. Environmental Protection Agency, U.S. Department of Commerce, U.S. Department of Agriculture, and the U.S. Army Corps of Engineers are not included in the information provided within this Cross-Cut Budget Working Document.

**Footnotes:**

<sup>1</sup> USACE CERP activities are funded under the Central and Southern Florida Project (C&SF). <sup>2</sup> USACE FY 2006 Enacted reflects reductions for rescission and congressionally directed funding for the C&SF Upper St. Johns River project.

<sup>3</sup> Enacted numbers for USACE reflect reductions for any rescissions, but do not account for reductions due to savings and slippage.

<sup>4</sup> Beginning with the FY 2006 Budget Request these projects are now included as part of one Corps of Engineers line item referred to as the "South Florida Everglades Ecosystem Restoration" Program.

<sup>5</sup> Enacted numbers for FY 2005 and FY 2006 reflect additional Emergency Watershed Protection Program funding due to hurricanes.

<sup>6</sup> Reflects \$19,199,000 for construction and \$16,000,000 for land acquisition.

<sup>7</sup> Includes the transfer of \$17 million in unobligated balances from the NPS Federal Land Acquisition Account to NPS Construction to further the Modified Water Deliveries project.

<sup>8</sup> Reflects the transfer of \$5,000,000 in prior year balances from the USDOJ - NPS Land Acquisition Account to the USDOJ-FWS Resource Management Account.

<sup>9</sup> FY 2007 Enacted funding for US EPA is an estimate based on the FY 2007 President's Request of \$3,541,900.

<sup>10</sup> 2008 numbers for NOAA are based on 2007 funding levels.

**TABLE 2: STATE OF FLORIDA FUNDING SUMMARY TABLE (ACTUAL \$)**

<b>EVERGLADES ECOSYSTEM RESTORATION PROJECTS</b>	<b>FY 2000-01 Enacted</b>	<b>FY 2001-02 Enacted</b>	<b>FY 2002-03 Enacted</b>	<b>FY 2003-04 Enacted</b>	<b>FY 2004-05 Enacted</b>	<b>FY 2005-06 Enacted</b>	<b>FY 2006-07 Enacted</b>	<b>2007-08 Request</b>
<b>COMPREHENSIVE EVERGLADES RESTORATION PROGRAM (CERP)</b>								
Florida Department of Environmental Protection	89,619,051	90,380,949	150,279,126	105,586,702	128,972,634	128,637,628	136,615,473	102,093,964
Florida Fish and Wildlife Conservation Commission	315,000	411,000	409,000	419,000	336,359	336,359	0	0
South Florida Water Management District	32,773,071 <sup>1</sup>	91,708,816 <sup>1</sup>	133,284,645 <sup>1</sup>	107,887,469 <sup>1</sup>	101,119,569 <sup>1</sup>	253,715,473 <sup>1</sup>	507,980,226 <sup>1</sup>	722,000,000 <sup>2</sup>
<b>NON- COMPREHENSIVE EVERGLADES RESTORATION PROGRAM (CERP)</b>								
Florida Department of Agriculture/Consumer Services	24,700,000	7,608,917	15,523,202	16,215,100	8,531,378	5,132,269	6,928,051 <sup>3</sup>	10,500,000 <sup>3</sup>
Florida Department of Community Affairs	31,830,000	15,314,720	51,580,680	29,781,074	31,349,633	23,340,316	24,252,571 <sup>4</sup>	TBA <sup>5</sup>
Florida Department of Environmental Protection	135,422,927	72,654,344	109,393,692	92,364,834	102,222,540	176,467,770	408,365,782	203,236,072
Florida Fish and Wildlife Conservation Commission	17,271,000	19,681,000	21,306,000	25,729,000	27,466,653	27,579,153	27,579,153	28,682,319
Florida Department of Transportation	16,104,000	4,931,000	10,528,832	1,940,300	7,905,314	5,400,000	14,375,043	6,376,406
South Florida Water Management District	268,873,786 <sup>1</sup>	395,314,127 <sup>1</sup>	372,701,387 <sup>1</sup>	381,868,047 <sup>1</sup>	299,820,508 <sup>1</sup>	316,312,557 <sup>1</sup>	478,050,397 <sup>1</sup>	520,000,000 <sup>2</sup>
<b>CERP SUBTOTAL:</b>	<b>122,707,122</b>	<b>182,500,765</b>	<b>283,972,771</b>	<b>213,893,171</b>	<b>230,428,562</b>	<b>382,689,460</b>	<b>644,595,699</b>	<b>824,093,964</b>
<b>NON-CERP SUBTOTAL:</b>	<b>494,201,713</b>	<b>515,504,108</b>	<b>581,033,793</b>	<b>547,898,355</b>	<b>477,296,026</b>	<b>554,232,065</b>	<b>959,550,997</b>	<b>768,794,797</b>
<b>STATE OF FLORIDA FUNDING TOTAL:</b>	<b>616,908,835</b>	<b>698,004,873</b>	<b>865,006,564</b>	<b>761,791,526</b>	<b>707,724,588</b>	<b>936,921,525</b>	<b>1,604,146,696</b>	<b>1,592,888,761</b>

**Footnotes:**

<sup>1</sup> Reflects SFWMD adopted budget appropriations less any state and federal funds.

<sup>2</sup> Since the publication date of each year's Cross-Cut Budget precedes the budget cycle for the SFWMD, the FY 2006-07 totals shown represents estimates. When FY 2006-07 budget totals are available, they will be posted on the website link to the Cross-Cut Budget 2007 Working Document at [www.sfrestore.org](http://www.sfrestore.org). The same information will also be included in the FY 2008 Cross-Cut Budget document.

<sup>3</sup> The number reflected does not include Forestry's contribution for FY 2006-07 AND FY 2007-08.

<sup>4</sup> These numbers are through April 2006.

<sup>5</sup> These figures are the Florida Communities Trust grants that are awarded to local governments in the South Florida Ecosystem. They can only be identified and calculated after the June 30 close of each Fiscal Year. Since this is a statewide competitive grant program, an estimate of these figures prior to June 30 is not possible.

## *Section 2.0*

# *Federal Everglades Ecosystem Restoration Projects and Funding*

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## **Section 2.1: Federal Comprehensive Everglades Restoration Plan (CERP) Projects and Funding (\$72,000,000)**

### **U.S. Army Corps of Engineers (Corps) (\$64,000,000)**

Congress authorized the CERP in the Water Resources Development Act (WRDA) of 2000. The objective of the program is to restore, protect, and preserve the South Florida Ecosystem, while providing for other water related needs of the region. The CERP includes numerous projects that work together to achieve the plan's restoration goals. WRDA 2000 requires the completion of Project Implementation Reports (PIRs) for these projects. The PIRs provide further information on plan formulation and evaluation, engineering and design, estimated benefits and costs, and environmental effects of planned restoration activities. They serve to bridge the gap between the conceptual level of detail contained in the CERP and the detailed design plans and specifications required to proceed with construction.

From a project perspective, the major focus of the Corps' Fiscal Year (FY) 2008 activities include continuation of detailed design on completed PIRs; continuation of detailed design on pilot projects, including the installation and testing of Aquifer Storage and Recovery Pilot Projects and preparation of Pilot Project Design Reports that contain the technical analyses needed to implement the pilot projects; continuation of PIRs and three ongoing feasibility studies; and continuation of project adaptive assessment and monitoring activities used to monitor the effects of projects as they are implemented.

From a program perspective, FY 2008 CERP activities include continuation of Restoration Coordination and Verification (RECOVER), an inter-agency scientific group charged with system-wide assessments of planned and completed projects as well as with programmatic level activities. RECOVER's science-based activities include evaluation and assessment on the performance of the CERP, review of the effects that other restoration projects may have on CERP, and provision of a system-wide perspective throughout the restoration process. Other program level activities include continued reassessment of project sequencing to optimize delivery of benefits, public outreach and involvement, and environmental and economic equity program efforts.

Finally, in recognition of the State of Florida's announcement that it will advance design and construction work on certain CERP components, the Corps will continue to work with the state to ensure that work performed meets federal design and construction standards and is consistent with planned federal activities.

### **U.S. Department of the Interior (DOI) - National Park Service (NPS) (\$4,731,000)**

CERP projects will have significant effects on Big Cypress National Preserve (BCNP), Biscayne National Park (BNP), and Everglades National Park (ENP). The NPS continues to concentrate on projects that are essential to the restoration of federal lands in South Florida. The NPS actively participates in the Project Development Teams for such projects including seepage management in the L-30/L-31N Canals, early features in the Water Conservation Area (WCA) 3 Decompartamentalization and Sheetflow Enhancement, the C-111 North Spreader, and the

Biscayne Bay Coastal Wetlands. The NPS will begin work on the CERP Water Quality Feasibility Study, which is intended to optimize the design and operation of CERP features to achieve water quality restoration targets. The NPS also supports work on important foundation projects that are critical precursors to CERP.

To support these project-level activities, the NPS, in cooperation with other federal, state, and local partners, is implementing a Monitoring and Assessment Plan for CERP, which will provide the information to determine the ecological effects and overall restoration success of CERP projects. Additionally the NPS will continue to participate in RECOVER.

Finally the NPS will participate in DOI's formal requirements on programmatic activities including: guidance memoranda to formalize how CERP projects will be built, operated, and evaluated; interim goals that will be used to track restoration progress and provide five-year status reports to Congress; and the identification of the appropriate quantity, timing, and distribution of water that will be produced, and pursuant to federal and state law, dedicated and managed for the natural system.

**U.S. Department of the Interior: U.S. Fish and Wildlife Service (FWS) (\$3,269,000)**

The FY 2008 request for CERP Implementation will support approximately 30 Full Time Employees that actively serve on planning teams for all CERP and non-CERP restoration projects initiated by the Corps. This will enable the FWS to fulfill its Trust Resource responsibilities under the Endangered Species Act (ESA), Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, and other statutes as part of the restoration effort. The FWS is an integral planning partner in formulating alternatives, designing, assessing and monitoring the separate CERP project components during its implementation. The FWS is also responsible for providing environmental expertise to the Corps of Engineers and the South Florida Water Management District (SFWMD) to guide Everglades restoration at a system-wide scale.

In FY 2008, the FWS will participate in the development and execution of the following projects: WCA-3 Decompartmentalization and Sheetflow Enhancement, the Combined Structural and Operational Plan, Everglades Agricultural Area Reservoir, Lake Okeechobee Watershed, C-43 Reservoir, Indian River Lagoon, Water Preserve Areas, Picayune Strand Restoration Project, North Palm Beach County - Part 1, Everglades National Park Seepage Management and other major restoration projects. These activities will include assistance in plan formulation and ecological benefit analysis, ESA section 7 consultation, recovery plan implementation, restoration and management activities on DOI lands, CERP project planning, preparation of Fish and Wildlife Coordination Act Reports, system-wide water quality improvement, land acquisition, migratory bird and fisheries conservation, and a myriad of multi-agency planning, science and outreach efforts. As a recognized leader in the science of ecosystem restoration, the FWS participates as the biological and ecological experts, and an integral planning partner in CERP to ensure that ecosystem benefits are maximized consistent with long-term CERP project goals. The FWS will design features and project components that maximize natural resource benefits through active participation throughout the restoration planning process.

## **Section 2.2: Federal Non-CERP Everglades Ecosystem Restoration Projects and Funding (\$184,388,475)**

### **U.S. Army Corps of Engineers (\$98,400,000)**

#### **Central and Southern Florida Project (C&SF) (\$26,588,000)**

*NOTE: The \$26,588,000 indicated above does not reflect \$64,000,000 in funding requested for CERP projects, which is reported in Section 2.1.*

- ***South Dade County, C-111 Project***

This project consists of modifications to the C&SF Project to provide more natural hydrologic conditions in Taylor Slough and to minimize damaging flood releases to Barnes Sound/Manatee Bay, while maintaining flood protection for adjacent agricultural lands. The FY 2008 activities include the continued design and construction of the S-331 command building, continued construction of the Southern Detention Area and continued engineering and design of remaining detention areas and culverts, canal backfilling, water quality monitoring, levee vegetative removal, and formulation of the Combined Structural and Operating Plan.

- ***Manatee Pass Gates Project***

This project consists of alternative structural modifications to 23 existing water control structures and locks in the C&SF Project to reduce or eliminate manatee fatalities associated with lock operation. FY 2008 activities include completion of construction and installation of detection devices to prevent entrapment of this endangered species.

- ***West Palm Beach Canal, Canal-51/Stormwater Treatment Area 1 -East (C-51/ STA 1E) Project***

This project consists of design and construction of the C-51/STA 1E project to provide flood control for the western C-51 basin, provide water quality enhancement, and to restore a portion of the historic Everglades flows. FY 2008 activities include continued monitoring on the field test of the Periphyton Storm Water Treatment Area (PSTA) within the STA-1E and final construction of L-40 canal improvements. Results of the field test are expected to clarify the benefits of full implementation of PSTA technology at STA-1E in future years.

### **Everglades and South Florida Ecosystem Restoration Critical Projects (\$4,310,000)**

This program involves the implementation of "critical restoration projects" authorized in Section 528 of WRDA 1996. FY 2008 activities include continuing construction on the Seminole Big Cypress project.

### **Kissimmee River Restoration (\$32,502,000)**

This project involves restoring the historic habitat in much of the Kissimmee River floodplain and restoring water-level fluctuations and seasonal discharges from Lakes Kissimmee, Cypress, and Hatchineha in the upper basin. The FY 2008 activities include completion of construction, continuing construction on Reach 4 backfill, continuation of plans and specifications on remaining components, and completing a re-evaluation report to evaluate further reducing peak flows to Lake Okeechobee and additional aquatic ecosystem benefits.

### **Modified Water Deliveries (MWD) to Everglades National Park (\$35,000,000)**

The MWD involves construction of modifications to the C&SF Project water management system and related operational changes to provide improved water deliveries to ENP. The project consists of structural features with the intended purpose of restoring conveyance between WCAs north of ENP and the Shark River Slough within the Park. It will also provide flood mitigation to the 8.5 Square Mile Area, a residential area adjacent to the Park expansion boundary in the East Everglades. The FY 2008 activities include initiation of construction on the Tamiami Trail (Eastern Segment) to improve historic flow of Shark River Slough to ENP project and continued design of the conveyance and seepage features.

### **U.S. Department of Agriculture - Agricultural Research Service (ARS)**

#### **(\$3,784,300)**

ARS conducts an integrated research program that addresses the needs of agriculture and complements the CERP. The goal of the research is to develop and transfer improved scientific technologies and enhanced management strategies that control invasive exotic species and assure the continued economic integrity of agriculture. Four major areas of research support South Florida restoration and agriculture: hydrology and water quality, improved crop/animal production systems, biological control of invasive species, and decision support systems/model development. Individual projects supporting these priority areas are as follows:

#### **Hydrology and Water Quality**

##### ***Nutrient, Pesticide, and Water Management for Horticultural Crops (\$283,100)***

The Horticultural and Breeding Research Unit at Fort Pierce, Florida, conducts research to improve water conservation and water quality associated with the irrigation of field and container-grown horticultural crops. Research objectives of the project are: to determine the fate and transport of nutrients and pesticides used and the potential for contamination of aquatic environments; to develop management practices that reduce losses of nutrients and pesticides into water resources; and to assess the potential of aquatic plants and algal species to purify horticultural runoff of excess nutrients and pesticides. Major accomplishments include determining nutrient loading from ornamental nursery operations in South Florida, providing information on the affects of alkalinity level on nutrient runoff; and determining how shoot pruning in citrus and container-grown crops affect plant nutrition and the potential for nutrient runoff.

- ***Atmospheric Processes of Agricultural Pollutants that Affect Air and Water in South Florida (\$152,100)***

The Environmental Quality Laboratory in Beltsville, Maryland, in cooperation with the University of Florida, SFWMD, and NPS, conducts research to determine atmospheric loadings of nutrients and pesticides to sensitive ecosystem. Air quality sampling sites, maintained and operated by ARS, have been established in BNP near Homestead, Florida, and in West Palm Beach, Florida. These measurements complement water quality research and toxicity testing by the National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service (NOS) scientists in the St. Lucie Estuary and Florida Bay areas. Results showed that numerous pesticides and several degradation products were detected in surface water samples; whereas, fewer pesticides were observed in the rain.

### **Improved Crop/Animal Production Systems**

- *Environmentally Friendly Forage-Livestock Systems for the Subtropical U.S.A. (\$193,000)*

The Beef Cattle Research Unit in Brooksville, Florida, conducts research to develop better forages and grazing practices that will improve the profitability of beef cattle production as well as protect water quality for the subtropical areas of the United States. Major findings have shown that cattle congregation sites in beef cattle operations are not nutrient-rich; and, therefore, are not likely to contribute significant nutrient loadings to surface and groundwater supplies under south Florida conditions.

- *Soil Conservation For Sustainable Sugarcane Production (\$234,500)*

The Sugarcane Field Station in Canal Point, Florida, develops high-yielding, disease-resistant sugarcane cultivars. A new project focuses on: determining soil carbon dynamics under a range of water-table depths and agronomic practices; determining the potential for sugarcane to increase soil organic matter; and developing methods to monitor soil organic matter oxidation potential for different water-table depths. Major accomplishments include demonstrating that raising water to 6 inches below the soil surface and flooding up to three inches above the soil surface reduces microbial activity and soil loss; consequently, farmers may not have to flood soils to prevent soil loss and reduce soluble phosphorus runoff to the Everglades.

### **Biological Control of Invasive Species**

- *Development and Evaluation of Biological Control agents for Invasive Species Threatening the Everglades and other Natural and Managed Systems (\$2,282,800)*

The ARS Invasive Plant Research Laboratory in Fort Lauderdale, Florida, and its satellite lab in Gainesville, Florida, conduct research to identify and collect natural enemies for control of melaleuca and other invasive pest plants; evaluate biological control agents for control of melaleuca and other exotic plant species in a risk analysis context; obtain approval for release of host specific natural enemies; and develop biological based integrated weed management strategies that are efficient, economical, and environmentally sound. The use of biological control agents that is integrated with other control methods has been included in a comprehensive management plan, called TAME Melaleuca (crafted by scientists and natural resource managers from ARS, NPS, SFWMD, the Corps, the Florida Department of Environmental Protection, and many South Florida county governments), for attacking invasive species problems. Research will continue to develop management strategies and biological control agents that are also efficient, economical, and environmentally sound. Current funding related to Everglades restoration totals \$2,012,200 in Florida and \$270,600 in Australia and Southeast Asia.

### **Decision Support Systems/ Model Development**

- *Water Management Evaluation in Regions with High Water Table (\$638,800)*

The Subtropical Horticultural Research Unit in Miami, Florida has two main objectives: to develop and evaluate a comprehensive, agricultural decision-support computer model to improve water quality under high water-table conditions, and to develop guidelines and recommendations for agricultural management practices for improving water quality under high water-table management conditions. The Everglades Agro-

Hydrology Model, developed in cooperation with the Corps and U.S. Geological Survey (USGS), is being used by the SWMD and The University of Florida Tropical Research and Education Center for selection of Best Management Practices in flood prone areas; and this model has been linked with the south Florida regional model for use in future planning of CERP activities.

### **U.S. Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS) (\$13,240,175)**

The NRCS provides technical assistance on a voluntary basis to private landowners and operators, Indian Tribes, and others for the planning of conservation practices and installation of needed conservation management systems with the goal of achieving natural resource sustainability.

NRCS provides assistance to livestock and dairy producers in applying Best Management Practices, which include waste management systems, to reduce off-farm nutrient discharges. A special effort in the EAA and C-139 basin assists land users to meet the requirements of the State of Florida's 1994 Everglades Forever Act (EFA) to reduce phosphorus loading into the Everglades Protection Area. Other areas of assistance are provided on private and tribal lands to restore wetlands, improve wildlife habitat, and control invasive exotic plant species. Financial assistance is provided through a variety of USDA Farm Bill Programs. NRCS also operates Mobile Irrigation Laboratories in partnership with other governmental agencies to help users reduce irrigation water use and nutrient loading to receiving waters.

### **Farm Security and Rural Investment Act of 2002**

- ***Environmental Quality Incentives Program (EQIP) (\$5,273,615)***  
EQIP provides farmers and ranchers with financial and technical assistance to install or implement structural and management practices on agricultural lands that will improve or maintain the health of natural resources in the area including water quality. Congress is in the process of passing a new Farm Bill. The President's Proposal for the 2007 Farm Bill would combine the Wildlife Habitat Incentives Program (WHIP) with the Environmental Quality Incentives Program. The WHIP encourages the creation of high quality wildlife habitats that support wildlife populations on wetland, riparian, upland, and aquatic habitat on agricultural lands.
- ***Wetlands Reserve Program (WRP) (\$5,486,560)***  
The WRP provides the opportunity to landowners to receive financial incentives to restore or enhance wetlands and improve wildlife habitat in exchange for retiring marginal land from agriculture production. Under the President's Proposal for the 2007 Farm Bill the WRP would be enhanced and expanded. The enrollment cap would expand from 2.3 million acres to 3.5 million acres with an annual goal of enrolling 250,000 acres. The easement function of the Emergency Watershed Program and the WRP would be combined into one WRP. Mandatory funding of more than \$2 billion would be added to the program.

- ***Private Lands Protection Program (\$2,480,000)***

For the 2007 Farm Bill the President proposes that the Farm and Ranch Lands Protection Program be combined with the Grassland Reserve Program to form the new Private Lands Protection Program which protects working agricultural land from conversion to non-agricultural uses through the purchase of conservation easements in partnership with local and state governments, Indian Tribes, and non-governmental organizations.

**U.S. Department of Commerce - National Oceanic and Atmospheric Administration (NOAA) (\$3,000,000)**

NOAA provides science, monitoring, and modeling projects critical to implementing and assessing the CERP and other portions of the South Florida Ecosystem restoration effort. NOAA supports the only portion of the ecosystem restoration effort exclusively devoted to monitoring, restoring, and managing the coastal portions of the South Florida Ecosystem. These projects will provide information critical to the design and implementation of inland restoration projects and to the evaluation of the downstream impacts of restoration activities on coastal resources. This information will allow project managers to efficiently monitor the results of restoration projects on downstream resources, and make adjustments, if necessary, through the adaptive management process.

While many NOAA programs support an integrated effort among federal, tribal, state and nongovernmental partners to halt the degradation of the South Florida Ecosystem, the following NOAA projects directly support CERP implementation.

***South Florida Ecosystem Modeling/National Ocean Service (NOS) (\$1,000,000)***

NOS and partners have funded several years of research to gain a sufficient understanding of processes in and around Florida Bay and the Florida Keys National Marine Sanctuary (FKNMS) so that a predictive capability could be established to assess the impacts of alternative management strategies for the restoration of the Everglades on these water bodies. In FY 2008 NOS will fund competitive proposals to utilize and build upon this research to support development of quantitative, coupled, management-relevant ecosystem models that will provide specific outcomes (e.g. water quality measures, seagrass distribution, etc.) for water diversion scenarios. This work will be conducted with complementary efforts being overseen by other federal and state agencies.

***Interdisciplinary Coastal Oceanographic Observations / Oceanic and Atmospheric Research (\$1,000,000)***

Almost all of the replumbing and inland restoration efforts will ultimately affect the flow of water, nutrients, and other elements to coastal bays and estuaries. Understanding the impacts of replumbing water flow from inland areas to coastal systems, as part of the restoration effort, is critical to determine overall success. FY 2008 funding will support a suite of research and monitoring activities in South Florida coastal waters downstream of major restoration projects, such as the FKNMS, Florida Bay, and Biscayne Bay.

***Restoration Science and Assessment /National Marine Fisheries Service (NMFS) (\$1,000,000)***

NMFS will continue research in FY 2008 that defines the impact of inland restoration efforts and changing freshwater inflow on Florida Bay and other South Florida natural systems. These funds will be used to assess the impacts of changing freshwater runoff patterns on inshore and coastal habitats and associated fishery resources. Projects to be supported in FY 2008 include continued work on impacts of freshwater on pink shrimp recruitment in Florida Bay, factors affecting the distribution of snapper/grouper larvae in various Florida Bay habitats, and factors impacting the distribution and health of coral species in coastal waters adjacent to Florida Bay (including elkhorn and staghorn corals, species proposed for protection under the ESA). Ongoing visual assessments of reef fish along the Florida Keys reef tract (including reefs of the FKNMS) will also be continued.

Additionally, NOAA will participate in various management activities, including the South Florida Ecosystem Restoration Task Force, the Working Group, and the Science Coordination Group; the Water Resources Advisory Commission of the SFWMD; and the Program Management Committee (PMC) for the Florida Bay and Adjacent Marine Systems Science Program.

**U.S. Department of the Interior (DOI) - National Park Service (\$49,251,000)**

**Park Management (\$28,991,000)**

- ***Big Cypress National Preserve (\$6,471,000)***

NPS will continue to support mandated programs such as the protection, inventory, and monitoring of ten threatened and endangered species (Florida Panther, Cape Sable Sparrow, Florida Manatee, etc.) and a large hydrology program that includes restoration of sheet flow to the ENP and the Ten Thousand Islands. Additional mandated programs include special uses such as oil exploration/production, 3,000 acres of cattle leases, the largest recreational hunting wildlife management area in South Florida, implementation of the largest recreational off-road vehicle program in the 48 States, and 11 Native American (Seminole and Miccosukee) villages on Preserve lands. The Preserve also supports the largest prescribed fire program in the NPS; visitor and resources protection of 728,000 acres of predominately backcountry areas; maintenance of 47 employee housing units, two major visitor support facilities, public utility systems, seven primitive campgrounds, and 66 miles of roads; and management of 394 known archeological sites.

The natural resources management program will continue to collect baseline data in formats that are compatible with interagency regional hydrologic and community/species-based models, control non-native plants, protect threatened and endangered species, mitigate visitor impacts, and manage funds to support direct inventory/monitoring of resources and a geographic information system.

- ***Biscayne National Park (BNP) (\$3,790,000)***

FY 2008 funding will support BNP area management activities promoting public use, mitigation, and efforts to address impacts associated with urban sprawl, four solid waste landfills, and a nuclear power facility. All of these threats are located along the park's

western boundary, and are "upstream" with respect to surface- and ground-water flow into the park.

BNP performs other area management activities associated with the protection of the park's natural, cultural, and historic resources as well as maintenance of park facilities. BNP protects 173,000 acres of marine resources that include the largest living coral reef system in the NPS, 8 known terrestrial cultural sites, 40 known submerged cultural sites, and approximately 20 historic structures and 2 national historic districts within a boundary that has unlimited access points. BNP maintains 3 developed islands and 1 mainland site that include 6 harbors/docking facilities, 2 campgrounds, 6 picnic areas, approximately 10 miles of trails, 6 residences, an environmental education camp, and a major visitor center.

Current natural resources management will continue to protect coral reefs and seagrass beds, monitor water quality, document and mitigate impacts due to visitor and commercial uses, control exotic vegetation, and monitor at least eight threatened and endangered species. Special efforts are applied to prevent and restore extensive damage to seagrass beds and coral reefs from boat groundings.

- ***Dry Tortugas National Park (\$1,476,000)***

Funding in FY 2008 will support operations of this 65,000-acre marine and historical national park located 70 miles west of Key West. Current funding will continue a preservation and maintenance program for Fort Jefferson. Efforts will continue this year to document and recommend management strategies for submerged cultural resources. These efforts are supported by park staff, with overall technical direction provided by the NPS Submerged Cultural Resources Unit.

- ***Everglades National Park (\$17,254,000)***

Funding for ENP in FY 2008 will support area management activities including operations, natural resources management, planning, maintenance, and ecosystem restoration. The park continues to attract significant national and international attention as a symbol of the effort to restore the Everglades and of the balance being sought in striving to secure south Florida's future. With over 1.5 million acres of fragile wilderness immediately adjacent to approximately 6 million people, and over 1.5 million visitors each year, ENP has special challenges. The park has extensive outreach programs to the local community and sustains a large backcountry/wilderness operation.

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

ENP remains one of the most ecologically complex parks in the nation. Florida Bay is continuing to experience dramatic changes, including striking alterations between hypo-

and hyper-salinity, increased turbidity, seagrass die-offs, and persistent and increasing spreads of algae blooms. Exotic plants have and are continuing to replace native plant communities in EVER and adjacent natural areas.

### **South Florida Ecosystem Restoration Task Force (Task Force) (\$1,324,000)**

Funding in FY 2008 will support the operations of the Task Force and the Office of the Executive Director (OED), which is responsible for coordinating and integrating the activities of the participating federal, state, local, and tribal agencies involved in the Everglades Ecosystem Restoration Program and for reporting to Congress on restoration programs and funding requirements. WRDA 1996 directs the Task Force to implement procedures to facilitate public participation in the advisory process; to maintain records and make the proceedings of meetings available for public inspection; and to submit biennial reports to Congress, summarizing the activities of the Task Force, the policies, strategies, projects, and priorities developed or implemented, and the progress made toward the restoration. In subsequent Congressional guidance, the Task Force was also directed to develop, implement, and maintain an outcome-oriented strategic plan; an improved process for resolving conflicts/disputes; and a comprehensive strategy for federal land acquisition projects.

In FY 2008, OED will continue its coordination role and related reporting activities in support of the Task Force, Working Group, and Science Coordination Group initiatives, projects, priorities, and programs. This will include the coordinating, tracking, and monitoring of all aspects of CERP implementation; producing the biennial update of the strategic plan as required by the Congress; reporting progress and accomplishments on Goals 1, 2, and 3 of the strategic plan; maintaining a tracking system for annual updates of the land acquisition strategy; engaging, as necessary, in the established dispute resolution process; implementing activities associated with the Task Force plan to coordinate science; and the annual updating of restoration project sheet information (Integrated Financial Plan) that includes a synopsis, start and end date, and cost estimate for each project.

### **Everglades Research (\$3,910,000)**

Since its inception in 1997, the Critical Ecosystem Studies Initiative (CESI) has been the primary investment by DOI to provide scientific information to advise restoration decision-making and to guide its own land management responsibilities for South Florida Ecosystem restoration.

The CESI planned activities for FY 2008 include:

- Prepare to update the DOI Science Plan in Support of Ecosystem Restoration, Preservation, and Protection in South Florida, in collaboration with FWS, USGS, and the OED.
- Continue development of decision support tools that define and support Everglades restoration including restoration success indicators (with a focus on CERP Interim Goals), Geographic Information System tools for evaluating land management policies, and biological/physical database development and dissemination.
- Continue development of simulation modeling studies that link hydrology, water quality, and ecological responses with a focus on (1) models that link the marsh sheetflow, sediment transport, and landscape-scale vegetation patterns, and (2) predicting the effects of freshwater flows on estuarine salinity and productivity.
- Continue critical long-term monitoring projects that support restoration assessments,

such as the comprehensive fish and macro-invertebrate monitoring program, marsh water level/water quality and flow monitoring, monitoring of threatened and endangered species, and sampling vegetation communities that are most likely to be impacted by implementation of the Modified Water Deliveries, C-111, and CERP projects.

- Implement shorter-term hydrological and ecological monitoring projects in the DOI units in southwest Florida to define baseline conditions and indicators to measure the success of future restoration actions.
- Continue basic research projects contributing to our understanding of (1) fire affects as management tools in the control of invasive/exotic vegetation, (2) paleoecological and physiological studies of the impacts of reduced water flow on the estuarine communities, (3) the impacts of increased freshwater flow and nutrient input on marsh community structure and trophic interactions, and (4) the breeding and dispersal dynamics of the Cape Sable Seaside Sparrow in the smaller subpopulations of the eastern Everglades to identify opportunities to increase survivability through adaptive management.

### **Modified Water Deliveries Project (MWD) (\$14,526,000)**

The MWD project is authorized by Section 104 of the Everglades National Park Protection and Expansion Act of 1989. This project involves construction of modifications to the C&SF Project water management system and related operational changes to provide improved water deliveries to EVER. The NPS requests a total of \$14.526 million for the MWD project for FY 2008. As indicated on page 10, the 2008 budget request for the Corps includes \$35 million for this project.

The current status and plans for FY 2008 are described below:

- The purpose of the 8.5 Square Mile Area component is to provide flood mitigation to an agricultural and urban area adjacent to ENP due to the higher water levels in the area resulting from the construction of the MWD's restoration features.
- The purpose of the Conveyance and Seepage Control component is to convey water through reservoirs upstream of ENP into the Shark Slough drainage basin of ENP more consistent with historic hydrologic conditions. In addition, these project features will also return project-induced increased seepage from the project area to ENP in order to maintain flood protection to adjacent areas.
- The purpose of the Tamiami Trail (U.S. 41) component is to modify the existing highway in a manner consistent with the increased water flows and levels resulting from the conveyance components of the MWD. Detailed design was initiated in FY 2006 and completed in FY 2007. Construction is scheduled to be initiated in FY 2007.
- The purpose of Project Implementation Support is to provide funding for needed ENP and Corps personnel, conduct environmental monitoring, develop improved operational plans, and complete the needed modifications to the Osceola Camp flood mitigation features. FY 2008 activities will include the continuation of personnel support and environmental monitoring and construction of the Osceola Camp modifications.

The completion of the MWD project is required prior to the construction of certain components of the CERP.

**Land Acquisition Management (\$500,000)**

Funding in FY 2008 will be used to administer the federal land acquisition program in South Florida to enable completion of land acquisition and to meet the schedule established by DOI.

**U.S. Department of the Interior: Fish and Wildlife Service (\$8,461,000)**

***Resource Management -Ecological Services (\$2,516,000)***

These funds will allow the FWS to continue coordination and partnering with NPS, USGS, Tribal governments, state agencies and private organizations involved in the restoration of the South Florida Ecosystem. These funds for 2008 will also enable the FWS to continue implementing the Multi-Species Recovery Plan, which provides a blueprint for protecting, conserving, and managing the threatened and endangered fish and wildlife resources. The FWS is undertaking a comprehensive habitat based strategy for restoration and recovery of species.

The FWS will continue its activities consulting with the Corps, NPS and other federal agencies relative to those agency activities that potentially affect federally listed species. The FWS continues its historically active role in reviewing applications for impacts on wetlands under the Corps of Engineer's Regulatory Program. In addition to the analysis of direct, indirect, and cumulative impacts, we need to ensure that private development proposals are compatible with the CERP. The acceleration of planning and building several CERP components will require careful review of applications by the local sponsor (mainly the SFWMD) through the Corps' regulatory process. In 2008, the FWS will continue consultation with the Corps on the CERP, as well as other ongoing or new federal projects. Further, the FWS will evaluate the potential need to list additional species pursuant to the ESA, and develop cooperative agreements with landowners for the protection and conservation of listed species through Candidate Conservation Agreements, Safe Harbor Agreements, and Habitat Conservation Plans.

Also included in this program category, the South Florida Coastal Habitat Restoration Program actively forms partnerships with other federal and state agencies, local governments, non-governmental entities, and private property owners to implement "on-the-ground" restoration projects as well as to conduct research, monitoring and public outreach activities. The Coastal Program complements the larger, more comprehensive South Florida Ecosystem Restoration Initiative by implementing immediate "on-the-ground" actions designed to protect, conserve, and restore coastal living resources. For the past several years, the importance of "on-the-ground" restorative actions has been reflected by the distribution of half of the Coastal Program's budget toward actual habitat restoration.

In Fiscal Year 2007, the FWS will address new Corps project starts and continue to be actively involved in threatened and endangered species consultation and recovery, private land partnerships, environmental contaminant reviews, coastal restoration projects, preparation of Fish and Wildlife Coordination Act Reports, system-wide water quality improvement, and a myriad of multi-agency planning, science and outreach efforts. The FWS will ensure that ecosystem benefits are maximized consistent with Everglades Restoration goals. The role of the FWS will support and advance adaptive management and the principal goals of Everglades Restoration.

***Resource Management- Refuges and Wildlife (\$4,086,000)***

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

***Resource Management - Law Enforcement (\$619,000)***

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

***Resource Management - Fisheries (\$95,000)***

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

***Resource Management - Migratory Birds (\$101,000)***

While coordinating with the Service's South Florida Ecological Services Field Office and the Arthur R. Marshall Loxahatchee National Wildlife Refuge, the Division of Migratory Birds works cooperatively with the Florida Fish and Wildlife Conservation Commission (FWC) and the SFWMD to provide technical expertise relative to MBTA implications on the various CERP projects, especially for Avian Protection Plans and management of invasive exotic species such as the purple swamphen. Effective implementation of CERP with the above partners, the Corps, and the NPS, and others is critical to restoring water quantity, quality, timing, and distribution for the benefit of people, migratory birds, and other wildlife and their habitats.

***Land Acquisition (\$1,044,000)***

The FY 2008 request for land acquisition is necessary to acquire lands in National Key Deer Refuge essential to endangered and threatened species conservation in South Florida. Lands acquired will complement CERP implementation and will further the overall goals of Everglades restoration. Keystone listed species benefiting from these land acquisition initiatives include: endangered Key deer, endangered sea turtle, West Indian manatee and others.

**U.S. Department of the Interior - U.S. Geological Survey (USGS)**  
**Everglades Restoration - Integration Research, Planning, and Interagency**  
**Coordination (\$5,706,000)**

Funding in FY 2008 will support the USGS, through its Priority Ecosystems Science activities, in continuing to provide planning, research, and interagency coordination efforts needed for Everglades restoration in accordance with the terms of the Memorandum of Understanding between the USGS, FWS, and NPS. This coordinated science effort allows the DOI bureaus to leverage resources, maximize the value of federal research funds, and ensure that the best available research products and monitoring and assessment tools are developed to meet the priority needs in the Everglades. In FY 2005 the USGS, in partnership with the FWS and NPS, updated the Department's Everglades science plan to better identify emerging science needs. The revised science plan was then used as the basis for the selection of new studies which were initiated in FY 2006 and 2007.

USGS activities provide a fundamental understanding of ecosystem process, structure, and function. A significant part of USGS activities is to integrate the ecosystem science through continued development of decision support tools. This is accomplished through continued development and improvement of integrative models, including hydrologic models, ecological models, chemical models, and geographic and landscape models. In support of the revised science plan, the USGS will continue high-priority work that includes long-term hydrologic monitoring, coastal salinity monitoring, continued development and enhancement of ecological models, adaptive assessment, and development of simulation-based decision support tools. These tools will be used in planning and implementing CERP projects.

**U.S. Department of the Interior- Bureau of Indian Affairs - (\$396,000)**

Funds will be used for continuing efforts to restore the South Florida Ecosystem within the lands of the Seminole and Miccosukee Tribes. Each Tribe can request \$198,000 within its tribal base funding allocation to conduct research, studies, and planning on water quality and distribution systems, ecosystem development and management, and planning for compliance with the ESA in stormwater areas on the Seminole and Big Cypress reservations.

**U.S. Environmental Protection Agency (EPA) (\$2,150,000)**

EPA priorities for restoring and protecting the South Florida Ecosystem in FY 2008 include working with the State of Florida to adopt and implement water quality standards for phosphorus for the Everglades Ecosystem; supporting development of Total Maximum Daily Loads for the Lake Okeechobee watershed; assisting the State of Florida and the SFWMD in evaluating the appropriateness of Aquifer Storage and Recovery technology as a key element of the restoration strategy for South Florida; updating and implementing the South Florida Wetlands Conservation Strategy to include protecting and restoring critical wetland habitats in the face of tremendous growth and development pressures; continuing to implement the comprehensive monitoring program (water quality, coral reef, and seagrass), special studies, data management, and public education components of the Florida Keys National Marine Sanctuary Water Quality Protection Program as required by the National Marine Sanctuaries Program Amendments Act of 1992; and protecting coral reef ecosystems of southeast Florida by reducing land-based sources of pollution on a watershed scale, including controlling discharges from point sources.

## *Section 3.0*

# *State of Florida Everglades Ecosystem Restoration Projects and Funding*

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## **Section 3.1: State of Florida Comprehensive Everglades Restoration Plan (CERP) Projects and Funding (\$824,093,964)**

### **Florida Department of Environmental Protection (FDEP) (\$102,093,964)**

The implementation of the CERP, in partnership with the SFWMD, tribes, other state, federal, and local agencies and environmental groups, is a high priority for the FDEP.

The FDEP administers the Save Our Everglades Trust Fund. The State has bonding authority, if needed, to fund Florida's commitment to Everglades restoration. The 2007/2008 Florida Legislature appropriated \$100 million to fund the State's share of CERP.

The FDEP's Tallahassee Office of Ecosystem Projects (Office of the Secretary) and the Water Quality Standards and Special Projects Program (Division of Water Resource Management) estimates costs of \$326,678 and \$1,182,286 respectively to oversee the Everglades Forever Act (EFA) and CERP implementation in FY 2007/2008. The FDEP's Southeast Florida District office in West Palm Beach and South Florida District in Fort Myers estimate expenditures of approximately \$560,000 and \$25,000 respectively in support of CERP project and other South Florida related restoration activities in FY 2007/2008.

### **South Florida Water Management District (SFWMD) (\$722,000,000)**

The SFWMD is the local sponsor for the majority of the over 50 projects included in the CERP. Planning and design is currently underway on many of these projects. The focus of the SFWMD's efforts during FY 2007-08 will be on continued work in partnership with the Corps on planning and design efforts associated with completion of PIRs and detailed design for several CERP projects that comprise the Acceler8 program. The SFWMD will also continue construction on several Acceler8 projects during this period.

The SFWMD is also engaged in acquisition of lands needed for CERP and other Everglades restoration projects. Current efforts are focused on acquisition of lands needed for the Lake Okeechobee Watershed Project, the Herbert Hoover Dike Rehabilitation Project, as well as CERP projects identified for early implementation. Approximately 99% of the lands for the Acceler8 initiative have been acquired.

In addition to these project efforts, the SFWMD is partnering with the Corps on several programmatic efforts that are necessary for implementation of the CERP. These programmatic activities include: implementation of public outreach and environmental and economic equity plans; development of a Master Recreation Plan for the CERP; implementation of RECOVER, including a system-wide monitoring plan and an adaptive assessment program; and continued operation of the interagency modeling center to support CERP projects.

## **Section 3.2: State of Florida Non-CERP Everglades Ecosystem Restoration Projects and Funding (\$768,794,797)**

### **Florida Department of Agriculture and Consumer Services (FDACS) (\$10,500,000)**

The FDACS, through its Office of Agriculture Water Policy, addresses water issues relating to agriculture and ecosystem restoration. The FDACS is responsible for addressing agriculture non-point source water pollution and for implementing Total Maximum Daily Load (TMDL) in water bodies and segments statewide. Lake Okeechobee is the first recipient of a TMDL in Florida and the FDACS has implemented a program in the Lake's basin to deal with agriculture non-point sources. The FDACS also plays an important role in the management of public lands through its Division of Forestry. The Division is the lead managing agency on the Picayune State Forest (Southern Golden Gate Estates and Belle Meade) and is the state agency responsible for wildfire suppression and prevention, and forest protection in South Florida.

### **Department of Community Affairs (DCA) (TBA\*)**

DCA's Florida Communities Trust provides grants to local governments to acquire conservation, recreation, and green space lands in the 16 counties within the boundaries of the SFWMD. The DCA also participates on the South Florida Ecosystem Restoration Working Group and its committees, providing expertise on comprehensive land use planning, growth management, affordable housing, disaster relief, and hazard mitigation.

*\*These figures are the Florida Communities Trust grants that are awarded to local governments in the South Florida Ecosystem. They can only be identified and calculated after the June 30 close of each Fiscal Year. Since this is a statewide competitive grant program, an estimate of these figures prior to June 30 is not possible.*

### **Florida Department of Environmental Protection (FDEP) (\$203,236,072)**

The FDEP's non-CERP South Florida Ecosystem restoration priorities include implementation of the EFA, the Lake Okeechobee Protection Program, the Lake Okeechobee and Estuary Recovery (LOER) Program (in cooperation with the SFWMD), land acquisition for conservation purposes and funds to support the Indian River Lagoon Initiative and Issue Team and St. Lucie River Issues Team.

The Lake Okeechobee Protection Plan is a comprehensive plan to accelerate the restoration and recovery of Lake Okeechobee started in 2000 was expanded by the Florida Legislature in FY 07/08 to include the protection and restoration of the Northern Everglades including the Lake Okeechobee watershed and the Caloosahatchee and St. Lucie estuaries. The Florida Legislature appropriated \$94 million in FY 07/08 to:

Implement projects identified in Phase I of the Lake Okeechobee Protection Plan identified in section 373.4595 (3)(b), F.S.; the development of the Phase II Technical Plan identified on section 373.4595 (3)(b), F.S.; and the acquisition of lands needed for restoration (\$49 million).

Implement project components which benefit the hydrology, water quality, and aquatic habitats of the Caloosahatchee and St. Lucie watersheds; including project components in the Lake Okeechobee watershed; for the planning, design and engineering of a stormwater treatment areas in association with the C-43 reservoir, including work necessary to complete

the Phase II Project Implementation Report; and for the acquisition of lands needed for restoration (\$30 million).

Implement pilot projects that are cost-effective biologically based, hybrid wetland/chemical and other innovative nutrient control technologies pursuant to section 373.4595 (3) (b), F.S. (\$5 million).

Implement projects within the Caloosahatchee River watershed identified for the purposes of improving the hydrology, water quality and aquatic habitats (\$5 million)

Implement projects within the St. Lucie River watershed identified for the purposes of improving the hydrology, water quality and aquatic habitats (\$5 million).

The Florida Legislature has also appropriated \$13,500,000 for the Indian River Lagoon Initiative, \$3,717,028 for the Indian River Lagoon Issue Team and \$5,700,000 for the St. Lucie River Issues Team.

The Florida Legislature also appropriated \$3,500,000 for the Lake Worth Lagoon Restoration project and the Loxahatchee River Preservation Initiative received \$3,254,000.

In the newly passed Fiscal Year 2007-2008 budget, the Florida Legislature appropriated \$5.2 million to the Department to increase protection for Florida's marine resources. The appropriations include \$3.2 million for the Florida Oceans and Coastal Resources Council and \$2 million for the Osborne Reef tire removal project.

The Florida Legislature set aside \$3.2 million for the Florida Oceans and Coastal Resources Council, a group established by the Legislature in 2005 to develop priorities for ocean and coastal research and establish a statewide ocean research plan. The research plan will focus on water quality research, ocean and coastal systems research and tools and technology research.

Priorities will include:

- Real-time statewide information that guides water quality management, navigation and hazard response, and marine resource management.
- Monitoring programs that relate nutrients and living resources to human activities, to provide cost effective resource management programs improving oceans and human health.
- Map and characterize the seafloor and coast, including the distribution and abundance patterns of coastal marine organisms.
- Understand linkages between ocean and coastal habitats and the living marine resources that they support.
- Evaluate, improve and implement more effective strategies for protecting and restoring ocean and coastal habitats.
- Develop integrated coastal and ocean observing systems and integrated data management and prediction programs.

The remaining \$2 million is dedicated to the project removing waste tires from the Osborne Reef off the coast of Broward County. This innovative project combines support from local, state

and federal agencies to remove and recycle or dispose of tires from the artificial reef. Approximately 2 million tires covering 34 acres were placed in 60-70 feet deep water about 1.3 miles off the beach of Ft. Lauderdale in the 1970s to create artificial reefs. Under the direction of Broward County, the U.S. Navy will dive to recover tires and DEP will explore available recycling opportunities for tires, including being used as fuel for power plants.

Launched in 1999, Florida Forever is the largest conservation program of its kind in the world. The ten-year, \$3 billion program permanently protects environmentally sensitive land, vital waterways, and important cultural and historical landmarks. The Crist/Kottkamp FY 2007/2008 budget is recommending \$300 million to continue the acquisition of lands vital to the preservation and conservation of Florida's natural resources.

The FDEP also anticipates the funding of \$38,325,718 FY 2007-2008 to acquire non-CERP conservation lands in South Florida.

In addition, the FDEP supports: water quality improvement programs for Section 303d, Clean Water Act, listed water bodies; ecosystem restoration project management; regulatory, watershed planning, and coordination activities; research and monitoring; and aquatic plant control. The FDEP's budget for FY 2007/2008 has projected funding of approximately \$42,956,354 for the following activities in South Florida:

- Aquatic and upland exotic/invasive plant control (\$20,000,000 )
- State park operations and management (\$18,011,812 )
- Mercury research and monitoring (\$300,000 )
- Coastal and aquatic managed areas (\$3,844,542 )
- TMDL Program (\$800,000 )

**Florida Fish and Wildlife Conservation Commission (FWC) (\$28,682,319)**

In 2006 and 2007 the Commission began reevaluating the manner in which it prioritizes its participation in all South Florida Ecosystem Restoration-partnered activities including the CERP. The FWC continues to participate in planning the CSOP and in RECOVER activities. Among its non-CERP conservation activities, the FWC manages approximately 20 wildlife management areas, 4 of which lie within the historic footprint of the Everglades ridge and slough system. These include the Everglades and Francis S. Taylor Wildlife Management Area (Water Conservation Areas 2 and 3 - 671,831 acres), Holey Land Wildlife Management Area (35,350 acres), and Rotenberger Wildlife Management Area (28,760 acres), for which the FWC spent approximately \$800,000 to manage during the past year. In addition, the FWC manages the freshwater fisheries in Lake Okeechobee, Lake Istokpoga, and the Kissimmee Chain of Lakes and regulates marine fisheries in state marine waters. The Fish and Wildlife Research Institute conducts studies on freshwater, upland, and marine resources, including those related to South Florida Ecosystem restoration. The FWC is also actively implementing the State Wildlife Legacy Initiative, which includes listed species in South Florida.

**Florida Department of Transportation (FDOT) (\$6,376,406)**

The FDOT is a leader among transportation agencies in the nation for protecting wildlife and redesigning roadways to restore natural water flow to over-drained areas. The FDOT is also a leader in providing funding and technical assistance to plan and implement greenways and

trails. Many of these programs have been implemented in South Florida, particularly the Big Cypress Swamp (Interstate 75/Alligator Alley), Tamiami Trail, and U.S. 1 to the Florida Keys. The FDOT also funds wildlife and habitat mitigation efforts ranging from seagrass restoration in the Indian River lagoon, sea turtle lighting along the southeast coast, to the purchase of panther habitat in southwest Florida.

The FDOT's planned funding for South Florida Ecosystem restoration during FY 2007-08 is \$6,376,406 and includes:

- Exotic and endangered/threatened plant survey (\$30,000)
- Research to determine the effectiveness of wildlife crossings (\$90,000)
- Mitigation maintenance and monitoring (\$155,000)
- Removal of exotic vegetation (\$2,525,000)
- Design of wildlife and wetland mitigation (\$750,000)
- Construction of wildlife and wetland mitigation (\$2,826,406)

### **South Florida Water Management District (\$520,000,000)**

The SFWMD is implementing the Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area (Long-Term Plan) including the structural and vegetation enhancements to the Everglades Construction Project (ECP) as required by the 2003 amendments to the EFA. Critical initiatives underway include design, construction and start-up operations of over 18,000 acres of additional stormwater treatment areas for removing phosphorus from inflows to the Everglades. Additionally, the SFWMD works closely with the FDEP and other state, federal, and tribal governments on other non-CERP programs to restore and protect the South Florida Ecosystem.

Significant effort will also be expended on initiating the Lake Okeechobee and Estuary Recovery (LOER) Program. As part of LOER, the SFWMD and the State will expand water storage areas, construct treatment marshes, and expedite environmental management initiatives to enhance the ecological health of the lake and downstream coastal estuaries. While LOER projects have been conceptually identified, detailed design will continue to be the main focus of efforts during FY 2007-08.

The SFWMD's priority non-CERP South Florida Ecosystem restoration and protection projects for FY 2007-08 include:

- Implementation of provisions in the EFA: water quality restoration in the Everglades Protection Area through implementation of the ECP and the Long-Term Plan; and implementation of the Everglades Program control of exotic plants, research and monitoring, and regulation.
- Restoration of the Kissimmee River and floodplain (in cooperation with the Corps) through land acquisition (completed in FY 2006), construction (backfilling 22 miles of canal and opening 9 miles of remnant river channel), and a comprehensive ecological evaluation program.
- Implementation of the Lake Okeechobee Protection Program (in cooperation with FDACS, FDEP, and the Corps) which is focused on restoration and protection of the lake

by: reducing nutrient loading; controlling the spread of nuisance and exotic plants; restoring isolated wetlands; and addressing extreme high and low water levels.

- Restoration of the southern Everglades and Florida Bay, in cooperation with the Corps and ENP, through the C-111 South Dade and MWD to ENP Projects, land acquisition, and operational changes to restore natural water flows to ENP and Florida Bay.
- Updates and implementation of regional water supply plans.
- Acquisition, management, and mitigation of lands needed for ongoing and future non-CERP restoration projects and for conservation and protection of critical habitat.
- Implementation of Critical Restoration Projects in cooperation with the Corps.
- Restoration of coastal ecosystems through pollutant load reduction and habitat restoration.
- Restoration of wetlands and associated upland buffer habitat in the Kissimmee Chain of Lakes, Indian River Lagoon, and Loxahatchee River basins (in cooperation with the USDA- NRCS).
- Operation and maintenance of the flood control system that includes over 200 primary water control structures, 43 pump stations, approximately 1,800 miles of canals and levees, and 2,000 secondary structures which control inflows from secondary sources into the SFWMD's primary system.

The Florida Legislature also requires the SFWMD to: manage water and related land resources; promote conservation, development, and use of surface and groundwater for reasonable beneficial uses; manage dams, impoundments, and other "Works of the District" to provide water storage; prevent flood and soil erosion damage; maintain navigable rivers and harbors; and promote outdoor recreation on publicly owned lands.

In addition to ecosystem restoration projects, the SFWMD expends a significant amount of staff time and contract dollars toward implementation of restoration program support activities such as land management, control of invasive exotic plants, research and monitoring, environmental resource permitting, and intergovernmental coordination.

# *Section 4.0*

## *Agency Contacts*

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