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)*
Measurable Output(s):

- 46,000 acre-feet reservoir

April 1999 (Restudy) Project Synopsis: Projects elements were listed separately in the original concept as 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: During the plan formulation process, the six CERP elements listed above and identified in the Yellow Book (1999) were combined into a single project. WRDA 2000 authorized the preparation of a PIR for the project.

The overall project area of 730 square miles is located in northeastern portions of Palm Beach County and Southern Martin County. The project purpose is to capture and store excess water that is currently discharged to the Lake Worth Lagoon and the Loxahatchee Estuary. L-8 Basin drainage will be captured in the L-8 Canal and routed to the L-8 reservoir during the wet season to reduce inland drainage and

damaging pulses of freshwater to the coast. During the dry season the stored water will be routed around Grassy Waters Preserve to the Loxahatchee Slough and then on to the Loxahatchee River to restore a hydrologic regime more natural to the region. Stored water will also be routed to the City of West Palm Beach for water supply which will reduce the reliance on Grassy Waters Preserve.

SFWMD has the technical lead on the project. As a result of the FSM completed in 2004, two of the six separable features were removed from the project scope: C-51 and C-17 Pumping and Treatment. This decision was made due to lack of stakeholder support and insufficient available real estate in the area. Since the FSM, SFWMD has been modeling project components to develop an array of alternatives. Selection of the Tentatively Selected Plan is anticipated in FY10 with an AFB briefing in early 2011.

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

- **L-8 and Associated Basins (C-18 and C-51))** - 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 distribution 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 intermittent stormwater releases to downstream estuaries and 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 them 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).

- **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.

Early constructed elements of Flowway 1 (G-160, G-161, M-canal widening) will also be evaluated. In addition, the planning process will examine 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: On 1 April 2010, the PDT agreed upon a final array of alternatives. The team is currently in the process of optimizing the locally preferred plan to improve the cost/benefit ratio. Additionally, water quality modeling is still ongoing. Pending model output and completion of alternative optimizations, it is anticipated that the tentatively selected plan (TSP) will be selected in June 2010.

Following selection of the TSP, SFWMD and their AE will complete the draft AFB package. The package will undergo USACE review and revision and then be forwarded for USACE Agency Technical Review (ATR)/SFWMD Technical Review Board (TRB) review. The Alternative Formulation Briefing (AFB) is tentatively scheduled for early 2011, pending completion of the draft AFB package.

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. A Pre-Partnership Crediting Agreement (PPCA) is under negotiation to consider the potential for USACE cost-share on items already constructed such as the L-8 Reservoir. Items included in the PPCA will be determined after TSP selection.

The full capacity of the reservoir will become available with construction of the final pump station and inflow structure.

Est. Cost: $ 615,714,000

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 2009**
USACE	$4,446,951
SFWMD	$6,938,154
Total	**$11,385,105**

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

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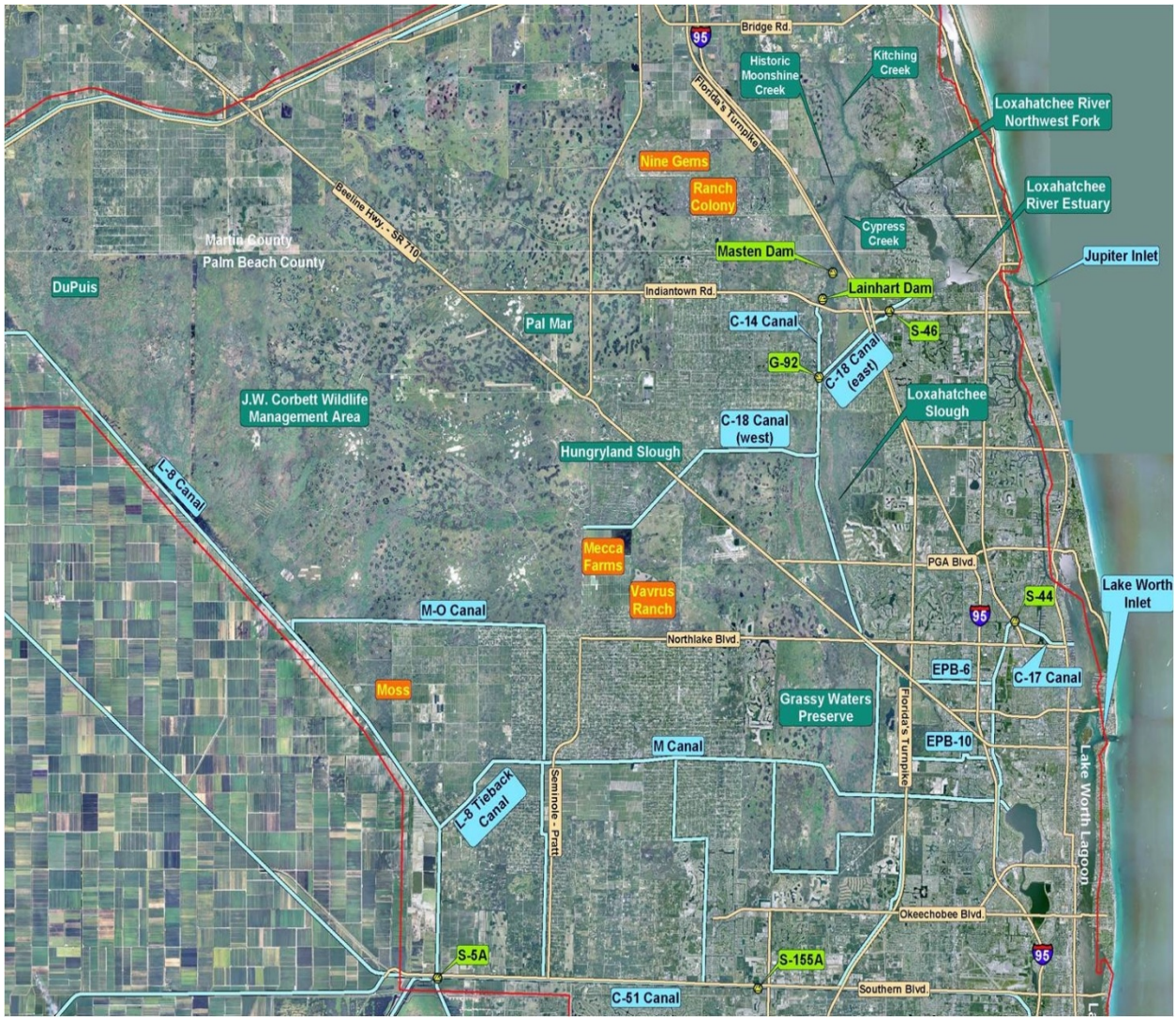
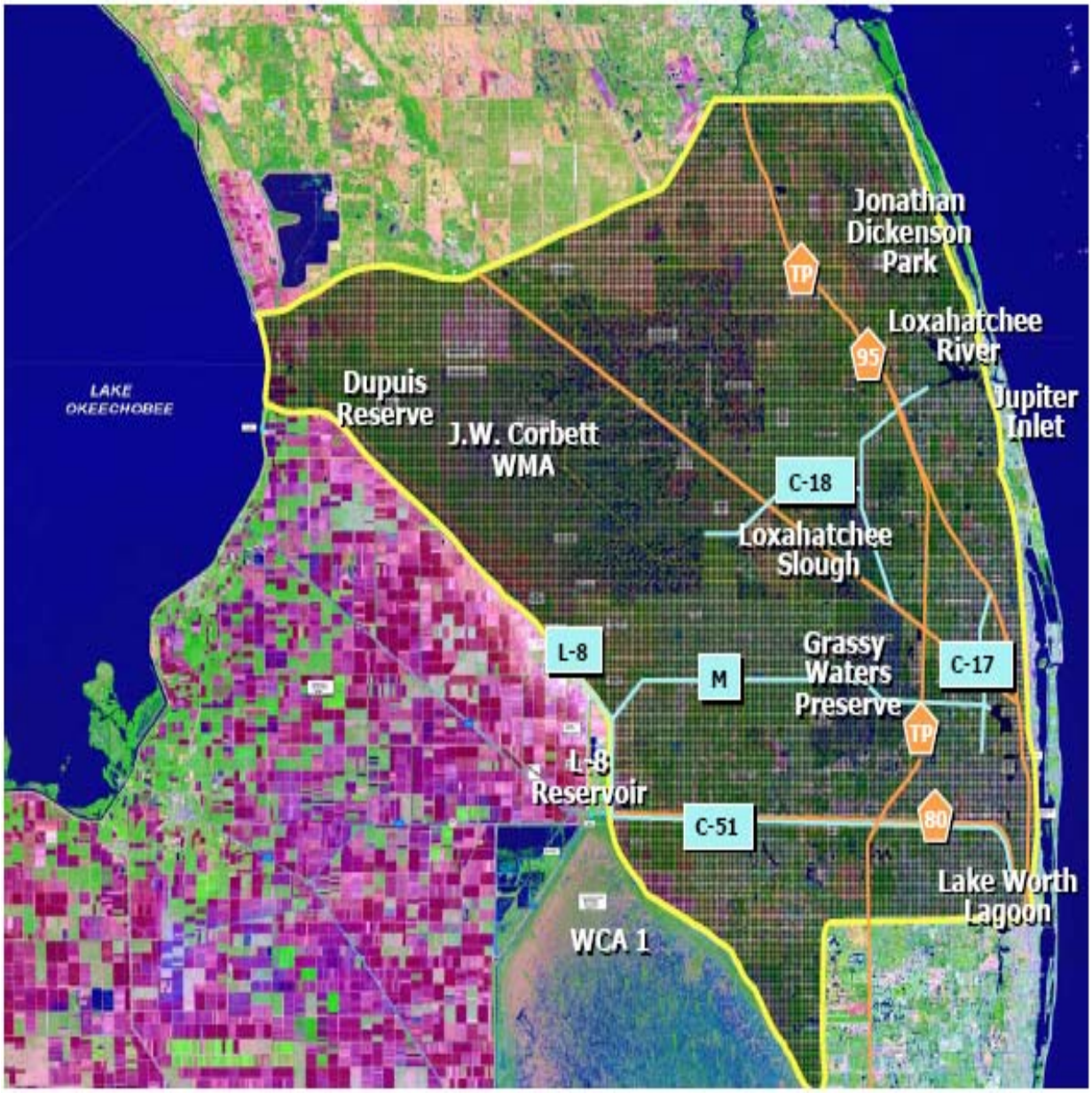
Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999)*. Cost estimate information is updated to reflect current price levels in October 2009 dollars. Actual expenditures include all federal expenditures through FY09 (Sept, 2009) and sponsor verified and recorded in kind credit through 4th quarter FY07. Schedule is updated based on the approved *Integrated Delivery Schedule Through 2020* (February 10, 2010).

Additional Information:




Jonathan Dickenson Park
TP
Loxahatchee River
95
LAKE OKEECHOBEE
Dupuis Reserve
J.W. Corbett WMA
Jupiter Inlet
C-18
Loxahatchee Slough
L-8
M
Grassy Waters Preserve
C-17
TP
L-8 Reservoir
C-51
80
Lake Worth Lagoon
WCA 1