

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) the Bird Drive Recharge Area. These three components will 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. During the Corps planning process, evaluation of existing and future without project conditions was necessary as the Yellow Book description was limited. Detailed planning, design, and pilot studies [CERP L-31N (L-30) Seepage Management Pilot] 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: ENPSM is on hold pending the results of the L-31N Seepage Management Pilot project. ENPSM is expected to resume plan formulation efforts in 2013.

ENPSM will need 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. 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.

Est. Cost: \$ 485,662,000

Project Schedule:

2014 Construction begins.
2016 Construction physically completed.

Detailed Project Budget Information (rounded):

ENP Seepage Mgt.	Expenditures Thru FY 2009
USACE	\$2,648,513
SFWMD	\$220,117
Total	\$2,868,630

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

Contact: Tiphanie Jinks, Project Manager, Everglades Division, USACE
(904) 232-1548, Tiphanie.C.Jinks@usace.army.mil

Maura Merkal, Project Manager, SFWMD
(561) 681-2583 x3719, mmerkal@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 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: (see next page)

