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 (LOTSD), Lake Istokpoga Regulation Schedule Modification (LIRS)*

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

Lead Agency: USACE / SFWMD

Authority: WRDA 2000 *(Initially Authorized Project – "W");* WRDA 2000 *(Programmatic Authority < $25 M) - OPEs: LIRS, LOTSD;* 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/year average 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) – Includes 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 the Corps planning process the LOW Project Tentatively Selected Plan (TSP) consists of <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 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).*

The Taylor Creek portion of the Lake Okeechobee Water Retention Phosphorus Removal project (Project) has been transferred to the sponsor (SFWMD) who accepted the project and assumed O&M Authority by letter dated 2 May 2011.

The Nubbin Slough portion of the Project is undergoing additional construction by the sponsor sediment transport issues. The project will be completed and transferred to the sponsor for operation and maintenance at the end of FY 2012.

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).

3) **A reservoir in the Lake Istokpoga basin –** A 5,416-acre reservoir is proposed for the C-40A and C-41A sub-basins and to 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.
4) **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.
5) **Restoring a wetland in Paradise Run** - A 3,730-acre wetland restoration site is planned for the ecologically significant confluence (under pre-development conditions) of Paradise Run, oxbows of the Kissimmee River, and Lake Okeechobee. Restored, it would re-establish 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.

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

Current Status: This project is "on hold" at the request of the sponsor. The date to revise and complete the PIR has been tentatively delayed until October of 2015.

SFWMD is pursuing a 4,000-acre Taylor Creek Reservoir as part of the Northern Everglades Project (Task Force ID #1112). But it was on hold pending the Northern Everglades Feasibility Study of the Taylor Creek/Nubbin Slough basin.

Est. Cost: $ 2,089,000,000

Project Schedule:

TBD	Construction start estimated.
TBD	Construction completed.

Detailed Project Budget Information (rounded):

Lake Okeechobee Watershed	Expenditures Thru 2011
USACE	$16,136,000
SFWMD	$26,174,000
Total	$42,310,000

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

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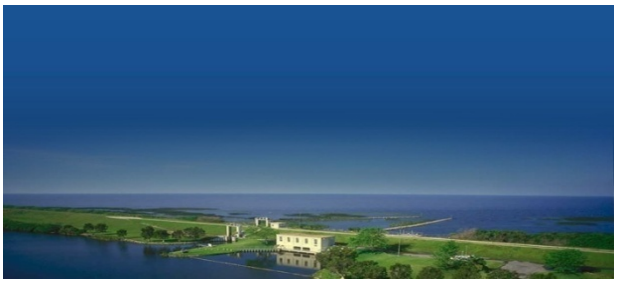
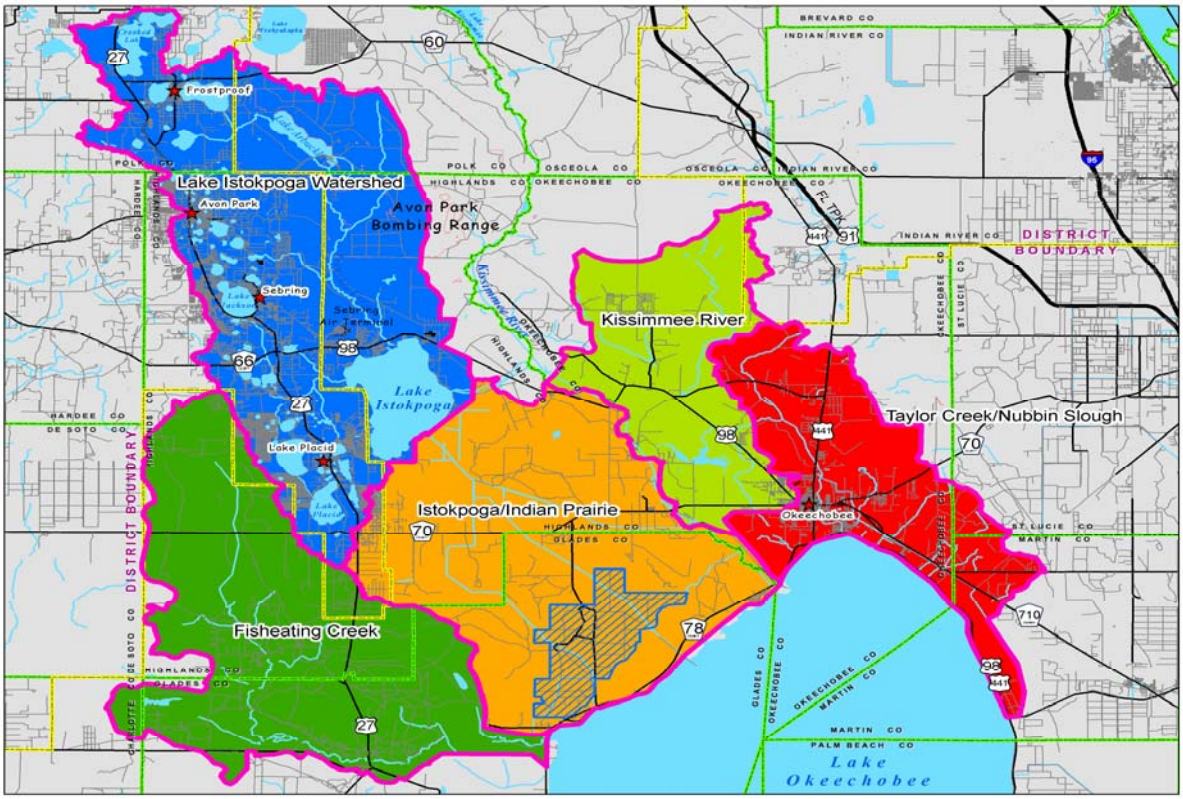
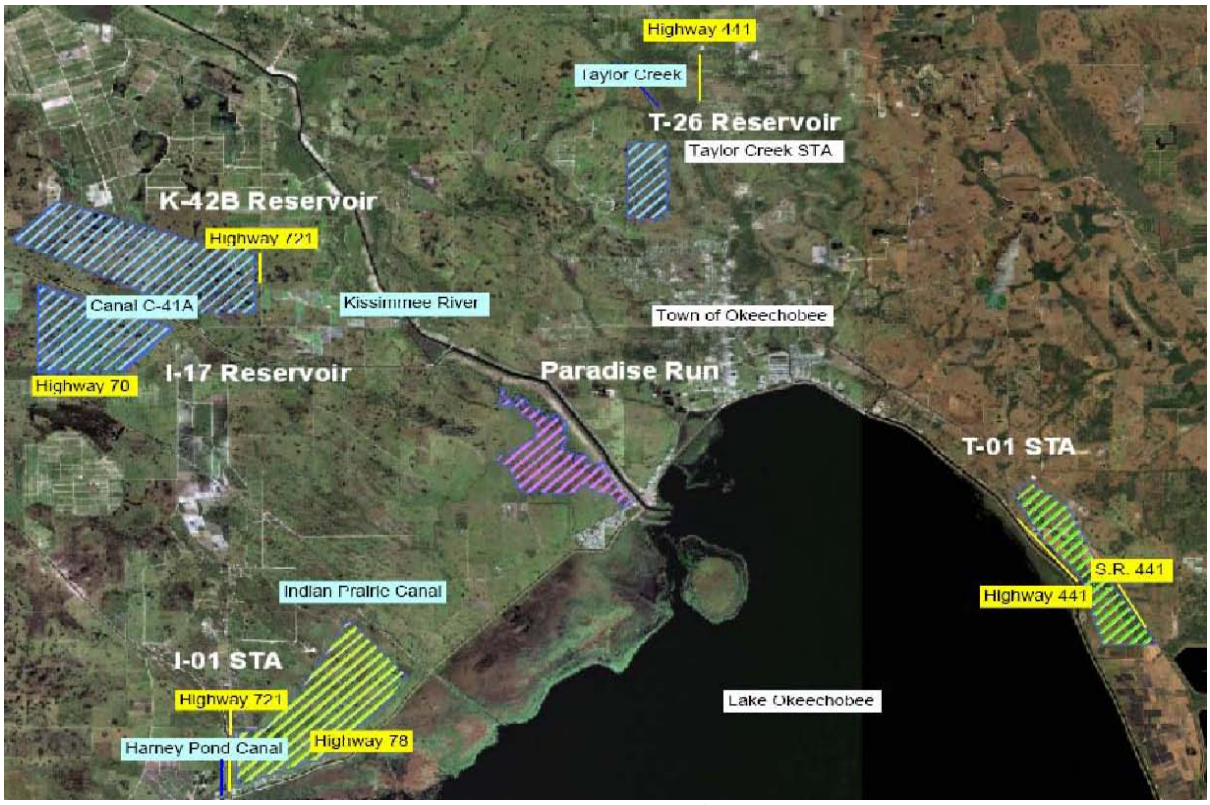
Source: Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy) (1999).* Cost estimate information is updated to reflect current price levels in October 2011 dollars. Actual expenditures include all federal expenditures through FY11 (Sept. 2011) and sponsor verified and approved in kind credit through 4th quarter FY11.




Lake Istokpoga Watershed
Avon Park Bombing Range
Kissimmee River
Taylor Creek/Nubbin Slough
Istokpoga/Indian Prairie
Fisheating Creek
DISTRICT BOUNDARY
Lake Istokpoga
Lake Okeechobee
Frostproof
Avon Park
Sebring
Lake Placid
Okeechobee


Highway 441
Taylor Creek
T-26 Reservoir
Taylor Creek STA
K-42B Reservoir
Highway 721
Canal C-41A
Kissimmee River
Town of Okeechobee
Highway 70
I-17 Reservoir
Paradise Run
T-01 STA
S.R. 441
Highway 441
Indian Prairie Canal
I-01 STA
Highway 721
Lake Okeechobee
Harney Pond Canal
Highway 78