

**Project Name:** C&SF: CERP Indian River Lagoon – South (IRLS)  
*C-23/C-24/C-25/Northfork and Southfork Storage Reservoirs (UU P1 & UU P2) and C-44 Basin Storage Reservoir (B)*

**Project ID:** 1101 (CERP Project WBS # 07)

**Lead Agency:** USACE / SFWMD

**Authority:** WRDA 2000; WRDA 2007; (“C-44 Basin Storage Reservoir (B)” was a WRDA 2000 Initially Authorized Project; uncompleted portions were de-authorized in WRDA 2007 when the broader IRL-S project was authorized for construction)

**Funding Source:** Federal/State

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

**Measurable Output(s):**

- 130,000 acre-feet reservoir storage (12,000 acres of above-ground storage)  
(C-23/24 N: 43,920 ac-ft; C-23/24 S: 48,900 ac-ft; C-44: 33,150 ac-ft; C-25: 5,176 ac-ft)
- 9,000 acres of manmade wetlands (C-23/24: 2,363 acres; C-44: 6,000 acres; C-25: 142 acres)
  - 122 metric tons/yr. phosphorus expected load reduction
  - 475 metric tons/yr. nitrogen load expected reduction
- 99,781 acres of habitat improvement/restoration and additional water storage
  - Mosaic: 95,230 acres natural upland/wetlands habitat
    - Allapattah: 42,348 acres
    - Palmar: 17,143 acres
    - Cypress Complex: 32,639 acres
    - North Fork: 3,100 acres (flood plain preservation)
  - Aquatic Habitat: 4,551 acres in St. Lucie River and Estuary
    - Benthic: 2,650 acres
    - Submerged: 922 acres aquatic vegetation restoration  
90 acres artificial submerged vegetation habitat
- 889 acres or more of oyster habitat (muck removal at 1.8 ft = 7.9 M yd<sup>2</sup>)

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

**Current Project Synopsis:** This project is located in the Martin, St. Lucie, and Okeechobee counties. The C-44 storage area feature, to initiate construction in August 2011, was one of the initially authorized projects for implementation in WRDA 2000, was recommended by the Chief of Engineers in August 2004, and finally authorized by the Congress in WRDA 2007 as one of the components in the IRL-S.

Since that time, the combined cost for the IRL-S project was estimated at \$1.365 billion when the entire project was authorized for construction in WRDA 2007, dependent on appropriations from Congress. Based on the feasibility study and the PIR, and further refinements, the entire IRL-S project is expected to include the following components:

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- Construction and operation of an additional 12,000 acres of above-ground storage and their connecting canals, control structures, levees and pumps to capture water from the C-44, C-23, C-24 and C-25 canals.
- Construction and operation of four new storm water treatment areas to reduce sediment, phosphorus, and nitrogen going to the St. Lucie River estuary and the lagoon. STAs are planned for each of the basins: C-44 basin (1), C-23/24 basin (2) and C-25 basin (1) reducing damaging effects of watershed runoff
- Restoration of the upland/wetland mosaic with ditch plugging, berm construction, and periodic fire maintenance at three locations.
- Redirection of water from the C-23/24 basin to the Northfork of the St. Lucie River attenuating freshwater flows to the estuary.
- Muck removal from the north and south forks of the St. Lucie River and the middle estuary reducing nutrients (nitrogen and phosphorus). Oyster shell, reef balls, and artificial submerged aquatic vegetation near muck removal sites will be added for habitat improvement.

**Current Status:**

The first of three contracts for the construction of the C-44 Reservoir and STA was awarded in July 2011 for Troup Indiantown. Construction is scheduled for completion in March 2014 and includes canals, access roads, culverts, and bridgework. The first of two PPAs was executed in September 2010 with a total project cost estimate of approximately \$1.133B (October 2010 price level). The second PPA for a total estimated amount of approximately \$732.3M (October 2010 price level) will be negotiated in the following years. The Construction Phasing, Transfer, and Warranty Plan was executed in August 2010. Contract for P&S conversion and redesign of reservoir embankment protection, reservoir associated structures, and the discharge canal is currently in procurement process and will be awarded in FY 2012, with scheduled construction contract award in the fourth quarter of FY 2014.

**Est. Cost:** \$ 2,070,860,000

**Project Schedule:**

- 2011 C-44 reservoir construction begins
- 2020 (after) C-23/24 north and south reservoirs construction begins
- 2020 (after) C-25 reservoir and STA construction begins
- 2020 (after) Allapattah complex construction begins
- 2020 (after) Palmar complex construction begins
- 2020 (after) Cypress Creek / Trail Ridge complex construction begins
- 2020 (after) Muck removal & artificial habitat construction begins
- 2020 (after) North fork land acquisition (flood plain restoration) begins

**Detailed Project Budget Information(Rounded):**

<b>IRLS</b>	<b>Expenditures Thru FY 2011</b>
USACE	\$21,712,999
SFWMD	\$417,943,629
<b>Total</b>	<b>\$439,656,628</b>

**Hyperlinks:** [http://www.evergladesplan.org/pm/projects/proj\\_07\\_irl\\_south.cfm](http://www.evergladesplan.org/pm/projects/proj_07_irl_south.cfm)

C-44 State expedited

[https://my.sfwmd.gov/portal/page?\\_pageid=1855,2831854,1855\\_2831665&\\_dad=portal&\\_schema=PORTAL&navpage=prjc44](https://my.sfwmd.gov/portal/page?_pageid=1855,2831854,1855_2831665&_dad=portal&_schema=PORTAL&navpage=prjc44)

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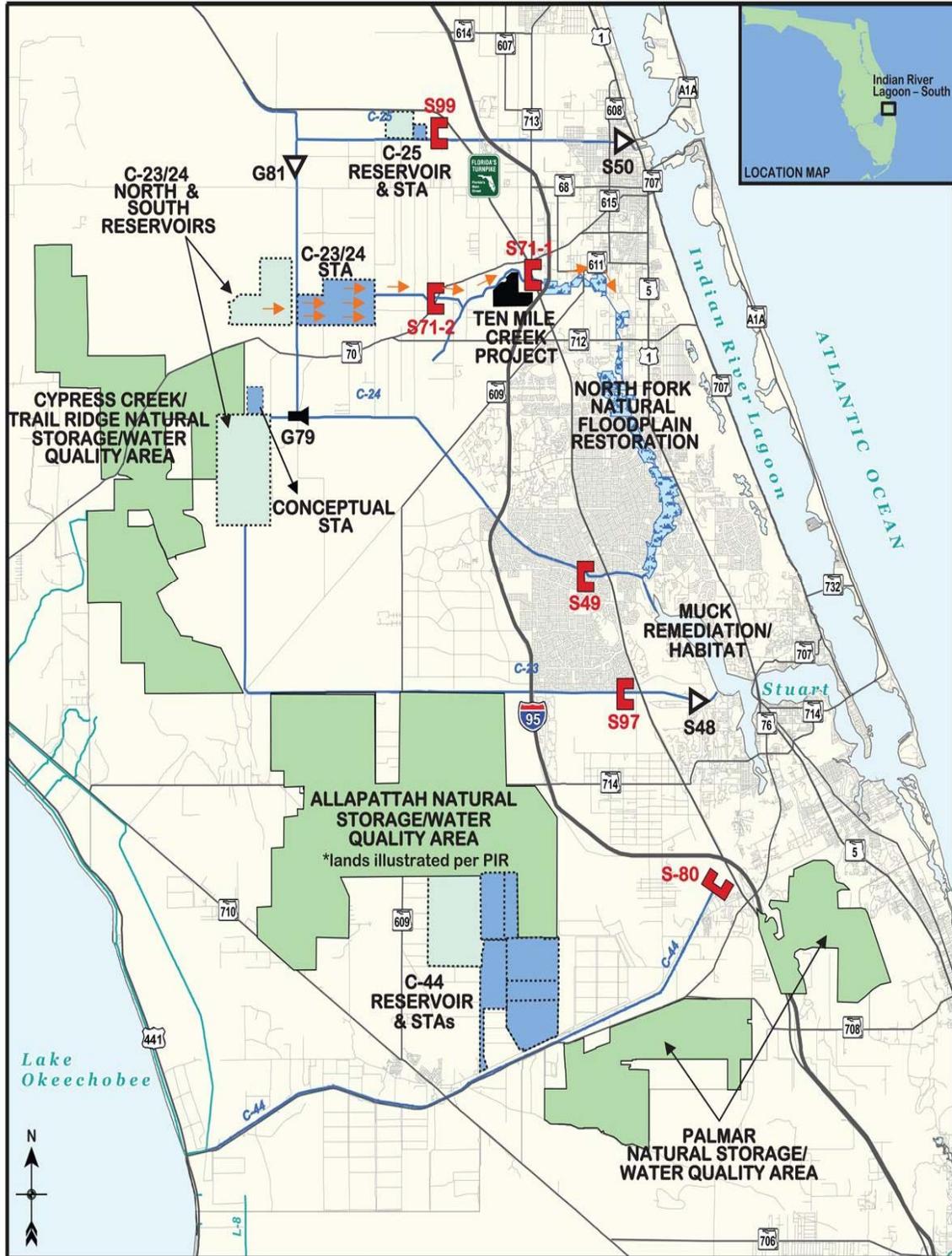
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Sue Ray, Chief Engineer and C-44 Project Manager, SFWMD  
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**Source:** Original project description summarized from the *Central and Southern Florida Project Comprehensive Review Study (Restudy)* (1999). Cost estimate and current project status includes information summarized from the *Central and Southern Florida Project Indian River Lagoon – South Final Integrated Project Implementation Report (PIR) and Environmental Impact Statement (EIS)* (2004) and is updated to reflect current price levels in October 2009 dollars; along with the authorization in WRDA 2007. Current status was provided by the project manager. Actual expenditures include all federal expenditures through FY11 (Sept, 2011) and sponsor verified and approved in kind credit through 4th quarter FY11.

**Additional Information:** *(see next page)*

# Indian River Lagoon – South





View of intake canal, western side of C-44 RSTA, pre-construction looking south toward Citrus Boulevard.



View of C133 canal, eastern of C-44 RSTA, pre-construction looking north from Citrus Boulevard.

**Program Name:** Infrastructure  
**Project Name:** C&SF: CERP - Indian River Lagoon South - C-23/C-24/  
C-25/Northfork and Southfork Storage Reservoirs (UU) and C-44 Basin Storage  
Reservoir (B) - Project includes C-44 (St. Lucie Canal) Reservoir / Stormwater  
Treatment Area (STA)  
**Project ID:** 1101A (CERP Project WBS #07)  
**Lead Agency:** SFWMD  
**Authority:** C-44 initially authorized in WRDA 2000;  
Memorandum of Agreement Regarding Acceleration of the CERP  
WRDA 2007  
**Funding Source:** State and Federal

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

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

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

**Current Status:** Plans and specifications for the C-44 Reservoir and STA were part of the early-start work by the SFWMD and were completed in 2007 and updated in 2008. The design for the C-23/C-24 STA component was suspended in mid-2009 so that the agencies could concentrate on converting the C-44 design documents to the appropriate format for USACE procurement. Beginning in May 2010, the SFWMD initiated construction for two project-related items that are considered to be relocation efforts. These included the C-132 and northern C-133 canal modifications and Troup Indiantown Water Control District temporary modifications. These construction efforts are complete. The USACE Contract 1, which includes the Intake Canal, Project Access Road, C-133 Canal and Citrus Boulevard improvement was awarded by USACE in September 2011 with a Notice To Proceed issued in October 2011. SFWMD completed the construction to address agrochemical impacted soils within the USACE Contract 1 boundary in May 2011. Execution of the IRL-S Project Partnership Agreement to establish the legal partnership on construction of the project was completed in August 2010.

**Total Estimated Project Cost:** \$450,000,000 (without land)

**Actual Construction Start Date:** May 2010 (SFWMD contract)  
**Scheduled Construction Start Date:** October 2011 (USACE contract)  
**Scheduled Project Completion Date:** September 2020

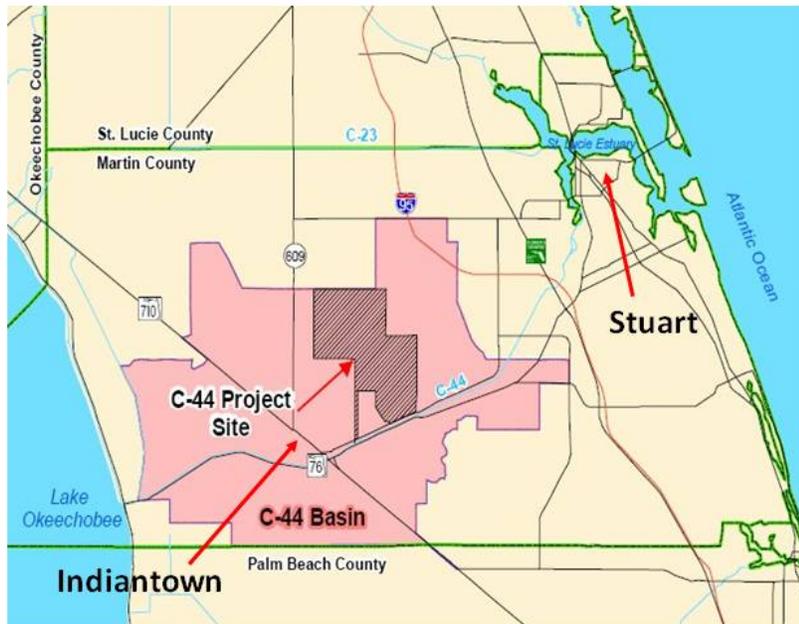
**Actual Expenditures to date by SFWMD:**

	Thru 2008	2009	2010	2011	2012	Total
SFWMD	\$31,355,063	\$108,156	\$1,785,915	\$6,698,912	\$1,300,000	\$41,248,046

**Hyperlink:**

[http://my.sfwmd.gov/portal/page/portal/pg\\_grp\\_sfwmd\\_sfer/portlet\\_prevreport/2011\\_sfer/v3/chapters/v3\\_ch2.pdf](http://my.sfwmd.gov/portal/page/portal/pg_grp_sfwmd_sfer/portlet_prevreport/2011_sfer/v3/chapters/v3_ch2.pdf)

**Contact:** Sue Ray [sray@sfwmd.gov](mailto:sray@sfwmd.gov)



C-44 Project site location maps shown above.



This is the Troup Indiantown Water Control District Temporary Configuration Site 5  
Temporary pumping facilities



Photos of the Troup Indiantown Water Control District Temporary Configuration Site 1 Temporary pumping facilities.

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Photo of the Northern C-132/133 Canals Project's C-133 Canal looking north.



Photo of the Intake Canal/Road Preliminary Work Project's construction of the roadbed.



Artist's rendering of the C-44 Reservoir/STA Project looking from the southeast corner of the reservoir at the inflow pump station, with STAs to the east.