

Project Name: C-43 Water Quality Treatment and Testing Project
Project ID: 1519
Lead Agency: South Florida Water Management District
Authority: Chapter 373, Florida Statutes
Funding Source: State Funds

Strategic Plan Goal(s) Addressed: 1.B.1

Measurable Output(s): ~1,335-acre Water Quality Treatment and Testing Facility

Project Synopsis: In 2007, the Florida legislature enacted the Northern Everglades and Estuaries Protection Program (NEEPP; Section 373.4595, Florida Statutes), which expands the Lake Okeechobee Protection Act to the entire Northern Everglades system, including the Lake Okeechobee watershed as well as the Caloosahatchee and St. Lucie rivers and estuaries. The C-43 Water Quality Treatment and Testing Project (C43-WQTP) is included in the Caloosahatchee River Watershed Protection Plan, as required under NEEPP. The South Florida Water Management District and Lee County are partnering in developing this project near the Caloosahatchee River in the C-43 Basin to investigate optimization of wetland-based strategies for nitrogen removal from Caloosahatchee River surface water. Overall, the project goals are to design, build and operate a test facility that will effectively remove and reduce total nitrogen loads to the Caloosahatchee River Estuary, is based on sound science, and is implementable and cost-effective on larger scales and applicable to other South Florida estuaries

Current Status: In late 2012, a conceptual design for a testing facility was completed which estimated the testing facility to take six years to complete design and testing. In October 2015, the District executed an agreement with FDEP using Federal Clean Water Act Section 319 (h) grant funds for the incremental design and construction of the testing facility (Phase I). The Phase I demonstrations involve quantifying biologically available dissolved oxygen (BDON) through bioassays and studying mesocosms to assess potential surface water nitrogen removal rates using different plant communities and hydrologic loading rates. Collectively, this information will inform the Phase II demonstrations, which will be focused on scaling up the most cost-effective mesocosm treatments. In December 2014, the District procured a consultant for the final design and construction of the mesocosms. The District also entered into a contract with the Florida International University in November 2014 for conducting a study to help determine the bioavailability of nitrogen in C-43 surface water. Phase I mesocosm construction is scheduled for completion in June 2015; the next step of this phase will be two and half years of operations, maintenance and monitoring.

Total Estimated Project Cost: \$1.7M (for Phase I demonstrations); future demonstrations - TBD

Project Schedule: Start Date: September 2007
 Finish Date: 2019 (Phase I)

Detailed Project Budget Information

2007	2008	2009	2010	2011	2012**	2013*	2014*	2015*	2016*	Total
\$0	\$817	\$746,000	\$709,943	\$2,655	\$96,436	\$72,028	\$0	\$344,116	\$931,780	\$2,903,775

Data Source: All expenses in JI50 and JI51, Funded Programs 100078 (FY2007-FY11), 100769 (FY12-FY14), and 100911 (FY14-FY16).

* Total and projected expenditures including personnel services as of June 7, 2016, per SFWMD fiscal year (October 1st through September 30th)

** Revised from \$53,580 on 6/7/2016 to include personnel services to be consistent with all other years reported figures.

Hyperlink:

http://www.sfwmd.gov/portal/page/portal/pg_grp_sfwmd_sfer/portlet_prevreport/2016_sfer_final/v1/chapters/v1_ch10.pdf

Contact: Stacey Ollis, SFWMD

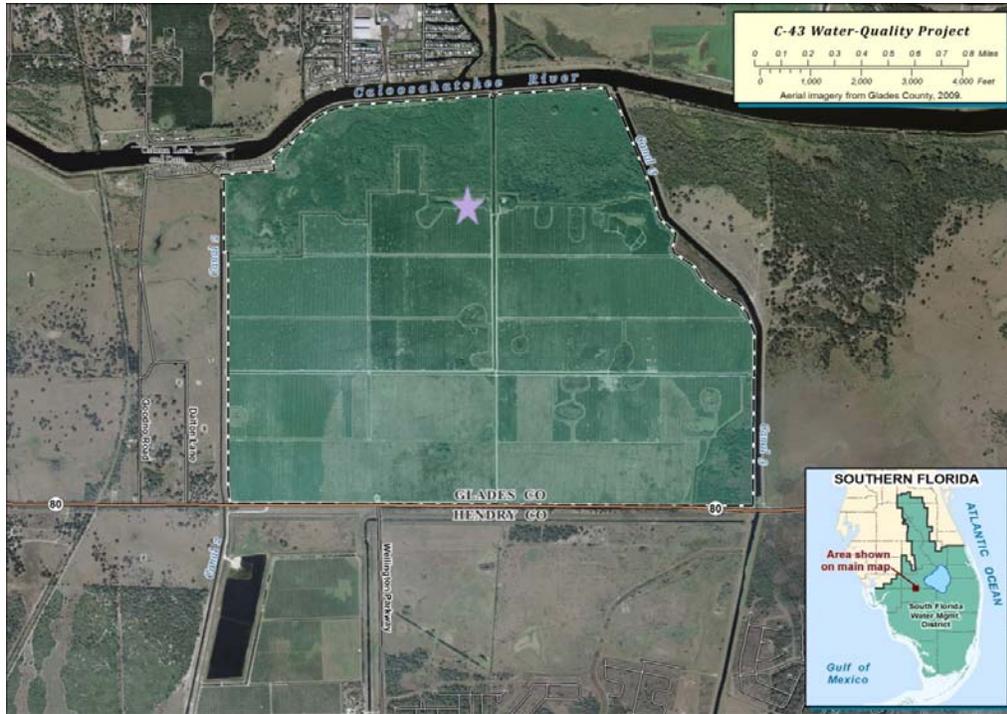


Figure 1. Location map for the C-43 Water Quality Treatment and Testing Project.

[Note: ★ depicts location of Phase I mesocosm demonstrations.]