

Taylor Creek Stormwater Treatment Area (STA)



Location:	Okeechobee County. The STA is located on SFWMD lands at the Grassy Island Ranch site along the banks of Taylor Creek
Subwatershed:	Taylor Creek/Nubbin Slough
Basin:	S-191
Purpose:	Retain stormwater runoff and reduce phosphorus (P) from the Taylor Creek Subwatershed. The STA is divided into two cells in series and is expected to treat about 10% of the water flow in Taylor Creek.
Project Operation Start:	June 2008
Considerations/Update:	<ul style="list-style-type: none">▪ Facility operation was suspended for 1.5 years while repairing the culvert at the outfall structure. Activities resumed in September 2010.▪ Unable to maintain desirable vegetation for P uptake due to inconsistent availability of inflows to Cell 1. Dry out causes total phosphorus (TP) spikes upon reflooding.▪ Low inflows and low TP concentrations to the STA have resulted in reversals in recent years. As the wetland continues to receive TP loads, it is expected that further enrichment of the soil would result in further decline in STA performance. To address this issue, the hydraulic loading rate was reduced (reduce inflow pumping by running only one pump) in WY2017. Additional vegetation enhancements, operational strategies, and physical/mechanical strategies were discussed as potential options to improve performance and minimize reversals but may need further discussion and feasibility evaluation.▪ Current conditions in the subwatershed differ from those used for design purposes.

Parameter	2011 LOWCP Update	Designed ¹	Built/Observed ²	Comments
Project Area (acres)	142	142	142	Effective treatment area for the constructed STA is 118 acres. That is, the flow path that contains the treatment vegetation. The anticipated average TP reduction was estimated during the design phase.
Annual TP removal (mt/yr)	0.3	2.0	1.0	
Flow (ac-ft)	NA	8,674	< 6,000	
TP FWMC (µg/l)	NA	492	318	
Construction Cost ¹	\$3,045,097	NA	\$4,401,952	This does not include land acquisition (\$186,719) or non construction costs (design, construction management, and engineering during construction - \$2,605,790)
Annual Average O&M ³	\$310,399	NA	\$150,000	

NA: Not available

Notes:

¹ Goforth 2005 and Stanley Consultants, Inc., 2003

² Data collected from 2008 through 2018

³ Only District costs are provided. USACE costs are not covered herein.