

Watershed Phosphorus Source Control Projects



Location:	Glades County
Subwatershed:	Taylor Creek/Nubbin Slough
Basin:	S-191, S-133, and S-154
Purpose:	Reduce phosphorus exports to Lake Okeechobee in the four priority basins (S-65D, S-65E, S-154, and S-191).
Project Operation Start:	Programs started in 2001 and all projects were completed on or before 2011
Considerations/Update:	<ol style="list-style-type: none"> 1. State funding was provided under the Lake Okeechobee Watershed Phosphorus Control Programs for construction of total phosphorus (TP) reduction projects located mainly in the four priority basins identified in the Lake Okeechobee Watershed Construction Project – Phase I. 2. Average annual TP load reduction from all implemented and completed projects was estimated to be 26 metric tons (WY2010).

Project Category	Project Name	2011 LOWCP Update Estimated Annual TP Load Reduction (mt) ¹	2011 SFER TP Load Reduction (mt)
Phosphorus Source Control Grant Program ²	QED – McArthur Farms 3	6.02	NA
	Davie-Dairy Cooling Pond	0.39	
	Evans Properties – Bassett Grove	0.13	
	OUA-Ousley	0.22	
	Solid Waste Authority	2.32	
Dairy Best Available Technology (Dairy BATS) ³	Milking “R”	1.60	NA
	Davie Dairy 1 and 2	0.10	
Isolated Wetland Restoration Project ⁴	Kirton Ranch	0.81	NA
	Nubbin Slough Area A Restoration	0.39	
	Eckerd Youth Center	0.40	
	Lemkin Creek	0.12	
Former Dairy Remediation ⁵	Mattson	0.37	No discharges
	McArthur 5	1.05	No discharges
	Candler	0.06	No discharges

NA: Not available

¹ It was reported that these projects will provide an average annual TP load reduction of 26 mt.

² This program funded the early implementation of projects that have the potential for reducing P exports to Lake Okeechobee from the watershed. The program originally consisted of 13 projects that began in 2001 and varied in size and complexity.

³ Projects consisted of (a) capturing stormwater runoff (especially from all the high nutrient pasture areas), (b) reusing the runoff onsite in current operations if possible, and (c) if off-site discharge was necessary, chemically treating the stormwater with alum prior to its release. These projects were operated and monitored from 2004 through 2008. The Dairy BAT has been converted to an Hybrid Wetland Treatment Technology (HWTT) and is still operational.

⁴ The isolated wetlands program was intended to enhance and restore wetlands, reduce TP discharge and attenuate peak stormwater runoff by increasing regional water storage. There is insufficient data to evaluate project benefits. However, based on available data, these created and/or restored wetlands were net exporters of TP during the periods they were monitored. The 65-acre Lemkin Creek isolated wetland has continuously provided additional treatment to the treated water discharged from the Lemkin/Wolff Ditch HWTT systems. Monitoring data for the other three isolated wetlands is very sparse and mostly limited to event monitoring during the initial year of the project and was limited due to budgetary constraints.

⁵ This remediation project of former dairies was initiated to reduce stormwater TP load from these properties by implementing remedial alternatives identified in Agricultural Nutrient Management Assessments (AGNMA) to minimize TP discharges from these sites. The remedial practices consisted of runoff retention from old High-Intensive Areas (HIAs), amendment of high-phosphorus soils, and reduction of stormwater flow off-site via minor impoundments. Water quality monitoring for TP concentration reductions during flow events was conducted for one year following construction completion. Regional drought conditions during the implementation of remediation practice of some of these projects influenced the TP load reduction calculated during the monitoring period.