

EAST LAKE OKEECHOBEE SUBWATERSHED TECHNICAL SHEET			
Subwatershed: East Lake Okeechobee			
Basins:	C44 & L8	Flow Issues ¹ : NO	Water Quality Issues ² : NO

Monitored Structure(s): S308, C-10A

Inflow loads: Lake Okeechobee

Acreage: 239,103

Percentage of Subwatershed Acreage: N/A

Percentage of Lake Okeechobee Watershed: 6.9%

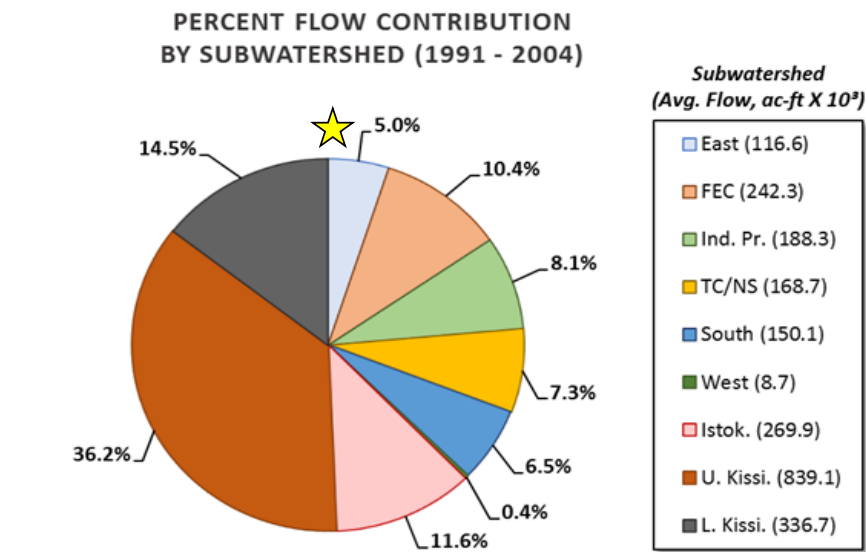
¹Flow Issues:

- This subwatershed discharges to Lake Okeechobee, the St. Lucie River, and to the southeast away from Lake Okeechobee. Flow and load evaluations were conducted based only on that portion of flow that discharges from the East Lake Okeechobee subwatershed into Lake Okeechobee. This subwatershed discharges into the Lake via structures S-308 (C44 basin) and C10A (L8 basin).
- Of the 9 subwatersheds, the East Lake Okeechobee subwatershed is responsible for only 4.5% of average annual flow contribution to Lake Okeechobee during the post-protection plan period. There was not a statistically significant difference between the pre and post-protection plan periods (116,606 to 107,928 acft/year). No statistically significant trends for flow were detected in the periods evaluated.

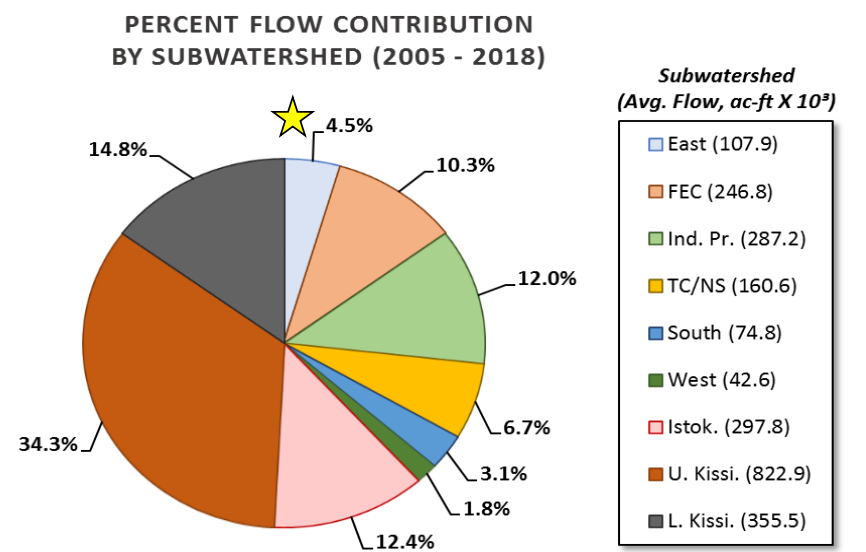
²Water Quality Issues:

- Of the 9 subwatersheds, the East Lake Okeechobee subwatershed is the third lowest contributor of total phosphorus (TP) to Lake Okeechobee, responsible for only 4.3% of phosphorus loads discharged to the Lake during the post-protection plan period. While a statistically significant increasing trend in flow-weighted mean TP concentration (FWMC) was detected for the period of record (WY1991-WY2018), the sen slope is relatively small and no statistically significant trends were found for FWMC during the pre or post-protection plan periods.
- There was not a statistically significant difference in TP loads from the pre to the post-protection plan period. Also, no statistically significant trends were found for TP loads for any of the periods evaluated.

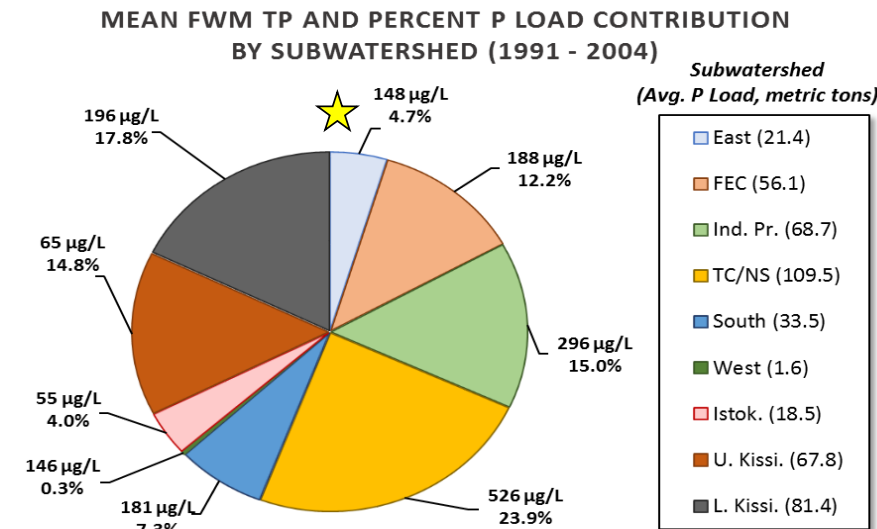
Pre-Protection Plan Flows



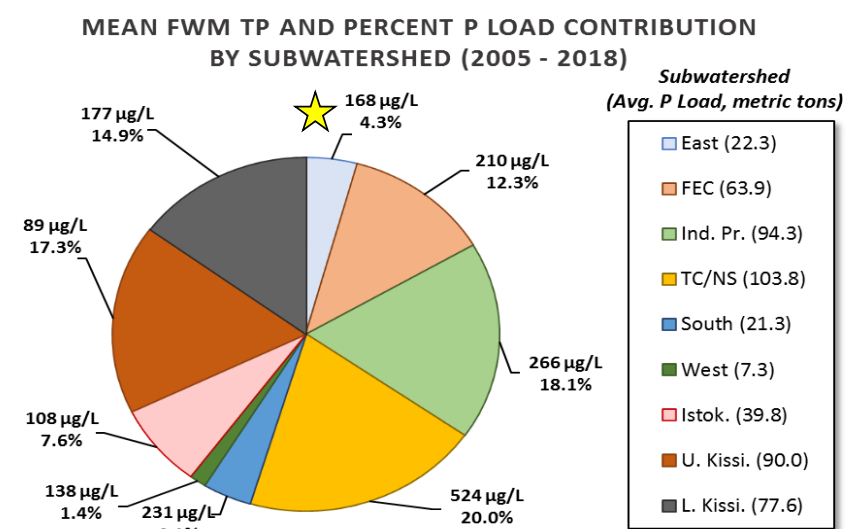
Post-Protection Plan Flows



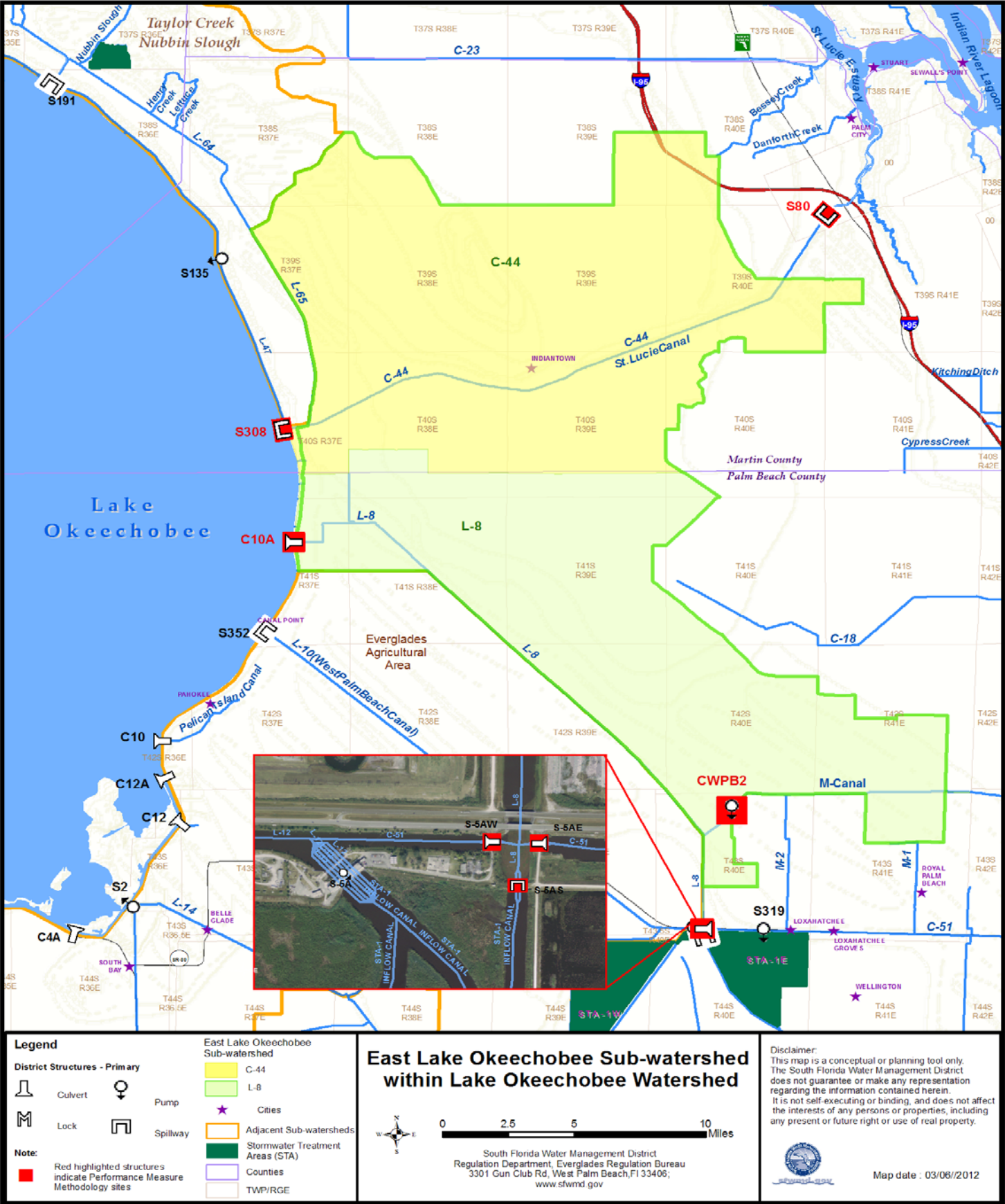
Pre-Protection Plan Loads



Post-Protection Plan Loads



EAST LAKE OKEECHOBEE SUBWATERSHED - MAP



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EAST LAKE OKEECHOBEE SUBWATERSHED - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	112,267	116,606	107,928	
Avg. Load (mt/yr)	21.80	21.36	22.30	
FWMC (ug/L)	157	148	168	
Avg. UAL (lbs/acre/yr)	0.20	0.20	0.21	
Medians				Mann-Whitney Results p-values ³
Median Flow (acft/yr)	84,345	94,929	78,860	0.3827
Median Load (mt/yr)	15.80	18.80	15.40	0.7828
Median FWMC (ug/L)	153	127	162	0.0846
Median UAL (lbs/acre/yr)	0.15	0.18	0.14	0.6958
Highlighted cells indicate statistical significance				

³The Mann-Whitney test is a non-parametric test alternative to the two sample t-test. It is used to test the equality around the central tendency of two data sets (pre-protection plan period and post-protection plan period). A p-value of less than 0.05 indicates that a significant difference between pre-protection plan period and post-protection plan period exists. A comparison of the median values identifies which period is higher. A median is a value at the mid-point of a distribution of observed data.

Sub-watershed East - Seasonal Kendall τ Results for Total Monthly Flow (ac-ft) by Basin over Three Water Year Ranges

Sub-watershed/ <i>Basin</i>	1991-2018					1991-2004					2005-2018				
	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value
East	0.0%	-0.050	-8	2318	0.499	0.0%	-0.137	-74	3612	0.223	0.0%	-0.018	0	1865	0.870

Sub-watershed East - Seasonal Kendall τ Results for Total Monthly P Load (kg) by Basin over Three Water Year Ranges

Sub-watershed/ <i>Basin</i>	1991-2018					1991-2004					2005-2018				
	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value
East	0.0%	-0.006	0.00	333	0.942	0.0%	-0.090	-2.66	323	0.441	0.0%	-0.020	-0.67	348	0.854

Sub-watershed East - Seasonal Kendall τ Results for Monthly FWM TP (μ g/L) by Basin over Three Water Year Ranges

Sub-watershed/ <i>Basin</i>	1991-2018					1991-2004					2005-2018				
	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value	% Missing Months	Kendall's τ	Sen Slope	Intercept	p-value
East	12.8%	0.252	3	97	0.003	14.3%	0.154	3	88	0.244	11.3%	0.034	1	152	0.727

Italic red font cells indicate statistical significance

Note: The Seasonal Kendall Tau analyzes data for monotonic trends (consistent upward or downward trend) and accounts for seasonality. Typically monthly data are used to identify seasons. Probability values (p-values) are derived from the tau-statistic which identifies the direction of the trend. A p-value less than 0.05 detects statistically significant trends for a period of interest. The Sen Slope provides an indication of the magnitude of the observed trend.

EAST LAKE OKEECHOBEE SUBWATERSHED - MONTHLY DATA AND SKT TRENDS

