

TAYLOR CREEK/NUBBIN SLOUGH SUBWATERSHED TECHNICAL SHEET			
Subwatershed:	Taylor Creek/Nubbin Slough (TC/NS)		
Basins:	S-133, S-135, S-154 (NEEPP Priority Basin), S-154C, S-191 (NEEPP Priority Basin)	Flow Issues ¹ : NO	Water Quality Issues ² : YES

Monitored Structure(s): S133, S135, S154, S154C, S191

Inflow loads: None

Acreage: 197,795

Percentage of Subwatershed Acreage: N/A

Percentage of Lake Okeechobee Watershed: 5.7%

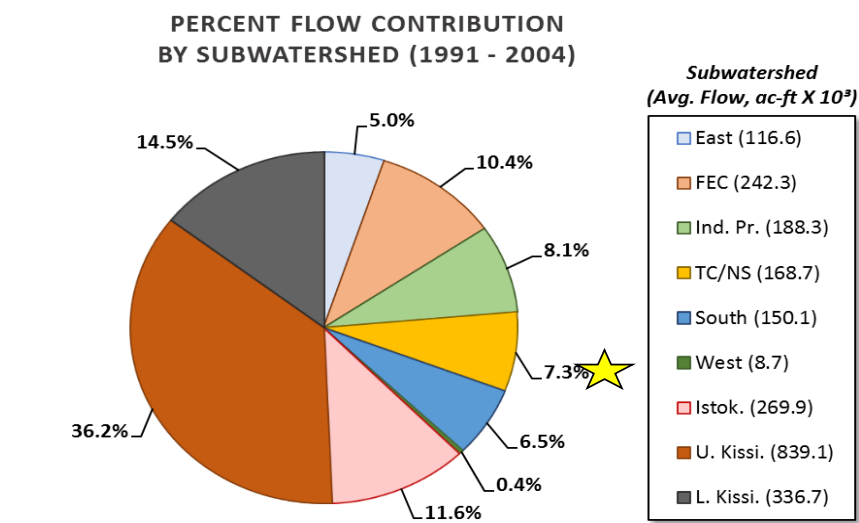
¹Flow Issues:

- S-154C: Flow measurements were not collected consistently at the S-154C structure until 10/1/98; as such the data included in the SKT analysis starts on this date. Flow measurements were collected by manually recorded observation until 5/12/08 and have since been collected using a CR10 (Campbell Scientific Inc. Measurement and Control Module).
- Flow measurement changes occurred in the S-154C Basin during the pre and post protection plan period.
- The flows appeared to stay consistent as there was no significant difference between the pre and post protection-plan periods.
- The basins within this subwatershed are known to have “flashy” runoff volumes.
- Suggest trying to ease peak flows utilizing existing features to divert a portion of runoff to existing projects.

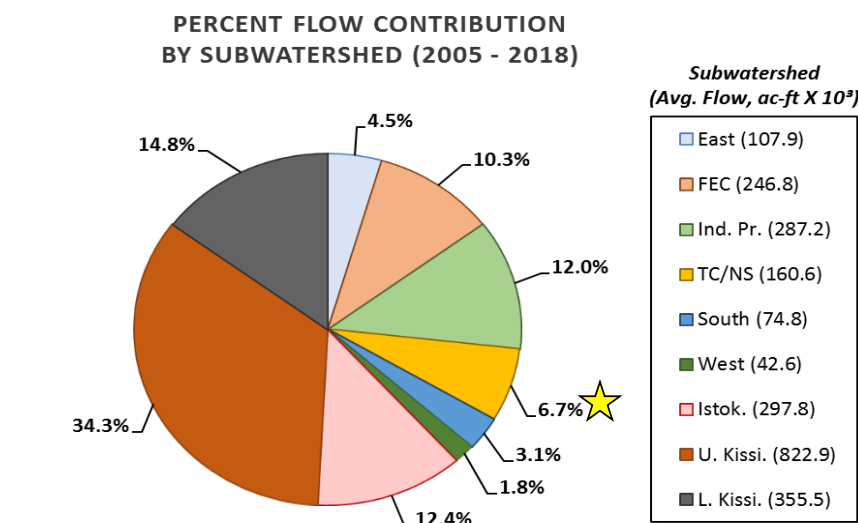
²Water Quality Issues:

- There is a significant decreasing trend for loads and total phosphorus (TP) flow-weighted mean concentrations (FWMC) for the period of record WY1991-WY2018, but the TP levels remain high and TCNS contributes 20% of the total load to lake.
- This subwatershed has high TP FWMC (524 µg/L during the post-protection plan period) and a high TP unit area load (1.16 lbs/acre during the post-protection plan period) compared to other areas of the Lake Okeechobee Watershed.

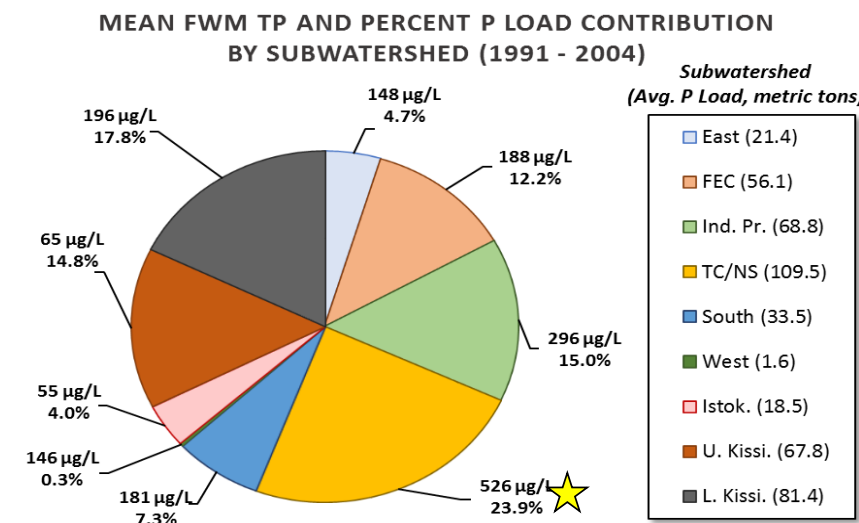
Pre-Protection Plan Flows



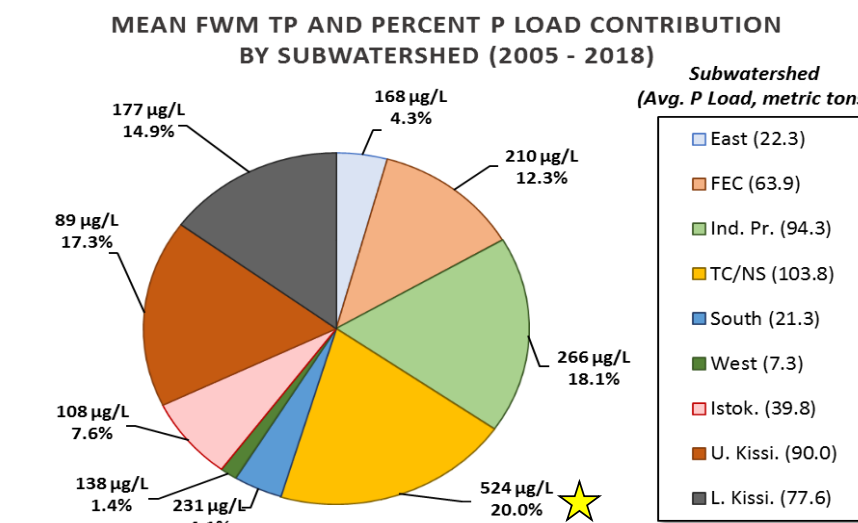
Post-Protection Plan Flows

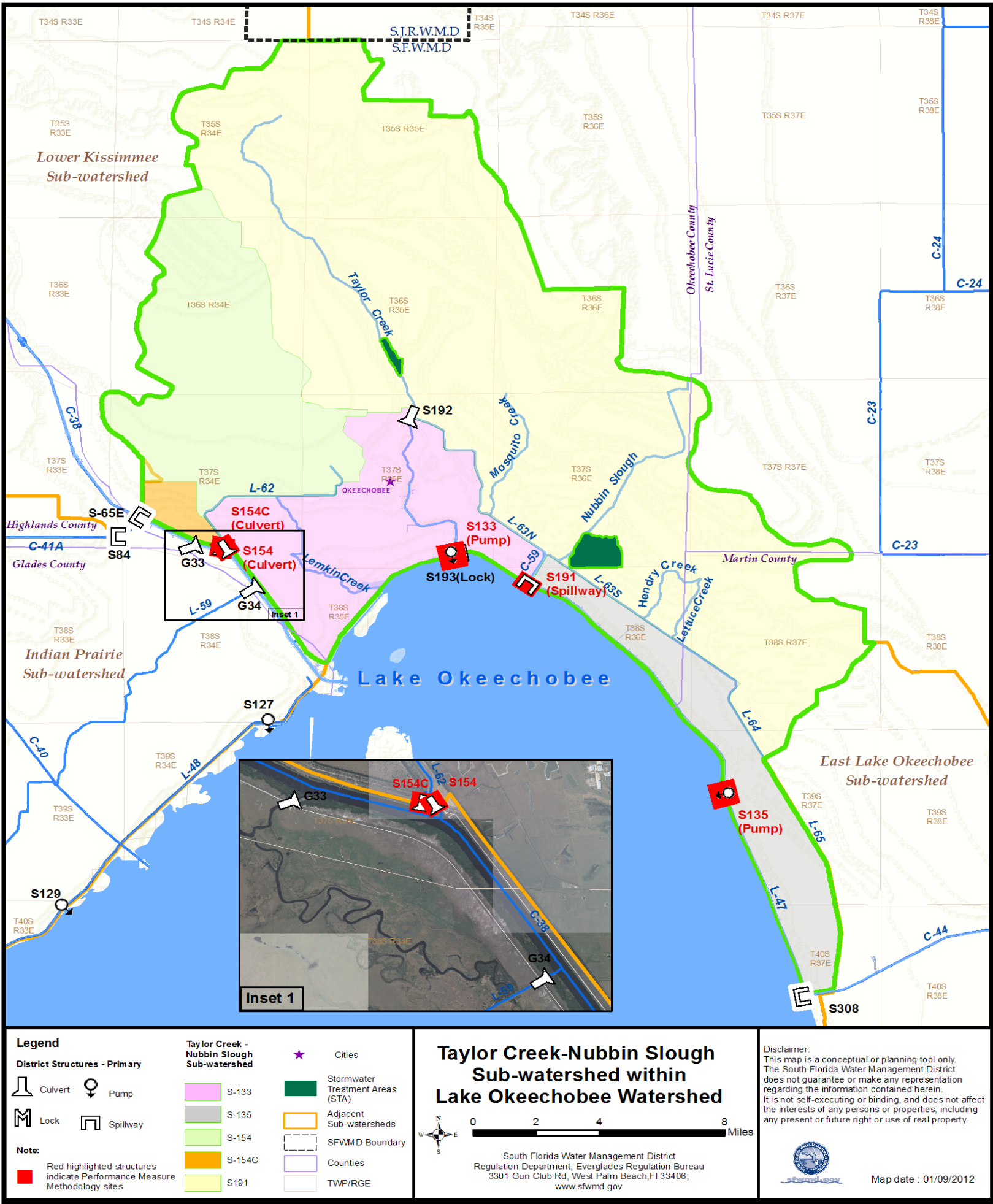


Pre-Protection Plan Loads



Post-Protection Plan Loads





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TC/NS SUBWATERSHED - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	164,668	168,717	160,618	
Avg. Load (mt/yr)	106.68	109.52	103.83	
FWMC (ug/L)	525	526	524	
Avg. UAL (lbs/acre/yr)	1.19	1.22	1.16	
Medians				Mann-Whitney Results p-values ³
Median Flow (acft/yr)	166,983	143,225	169,102	1.0000
Median Load (mt/yr)	102.30	105.40	98.50	0.8183
Median FWMC (ug/L)	514	504	520	0.9268
Median UAL (lbs/acre/yr)	1.14	1.18	1.10	0.8183
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 Taylor Creek/Nubbin Slough - 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
<i>Taylor Creek/Nubbin Slough</i>	0.0%	-0.136	-82	5497	0.099	0.0%	-0.079	-112	6589	0.532	0.0%	0.104	38	2765	0.358

Sub-watershed Taylor Creek/Nubbin Slough - 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
<i>Taylor Creek/Nubbin Slough</i>	0.0%	-0.173	-30.63	2116	0.031	0.0%	-0.108	-69.79	3029	0.361	0.0%	0.055	1.20	779	0.621

Sub-watershed Taylor Creek/Nubbin Slough - 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
<i>Taylor Creek/Nubbin Slough</i>	5.7%	-0.133	-4	409	0.041	4.8%	-0.081	-5	426	0.425	6.5%	-0.053	-3	356	0.561

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.

TC/NS SUBWATERSHED - MONTHLY DATA AND SKT TRENDS

