INDIAN PRAIRIE - C-41 BASIN TECHNICAL SHEET

Subwatershed: Indian Prairie			
Basin: C-41		**Flow Issues[1]:** NO	**Water Quality Issues[2]:** YES

Monitored Structure(s): S-71

Inflow loads: Lake Istokpoga

Acreage: 112,880

Percentage of Subwatershed Acreage: 41%

Percentage of Lake Okeechobee Watershed: 3.3%

[1]Flow Issues:

- The proportion of load and flows generated among C-40, C-41, C-41A is not known. It is currently estimated by an algebraic equation.

- The flow increased between pre and post-protection plan periods but it was not statistically significant and there were no statistically significant trends in any period.

- Flow and load estimates were based on samples and measurements taken at major structures within the regional system.

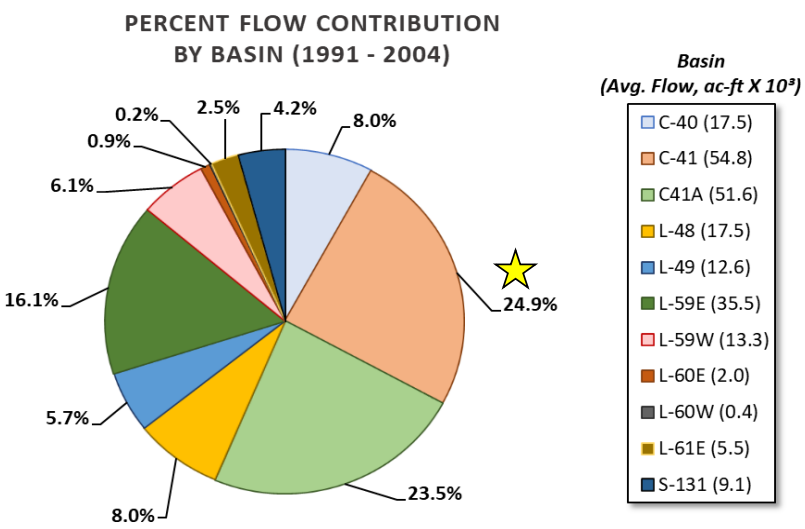
[2]Water Quality Issues:

- The TP flow-weighted mean concentrations (FWMC) were among the highest of all basins (453 µg/L during the post-protection plan period) relative to other areas in this subwatershed.

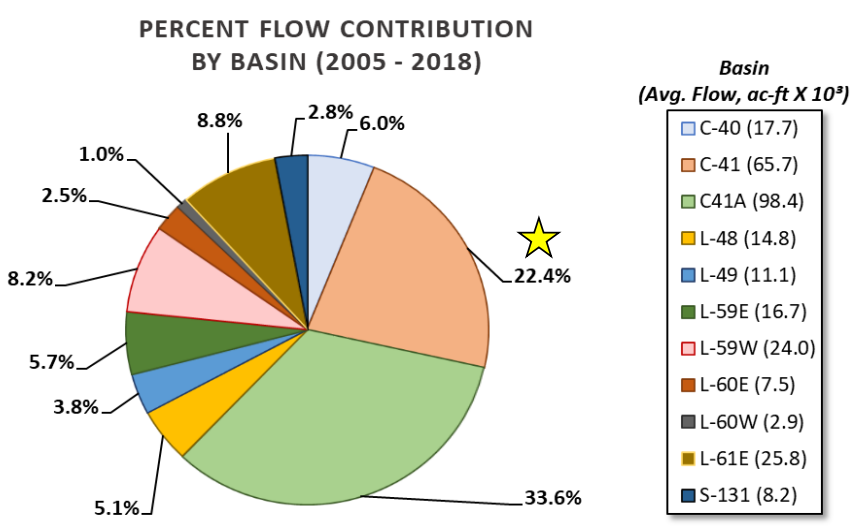
- This basin had the largest contribution of TP load to the subwatershed during both the pre and post-protection plan periods.

-There was a slight decrease (not statistically significant) in the TP flow-weighted mean concentrations (FWMC) between the pre and post-protection plan periods.

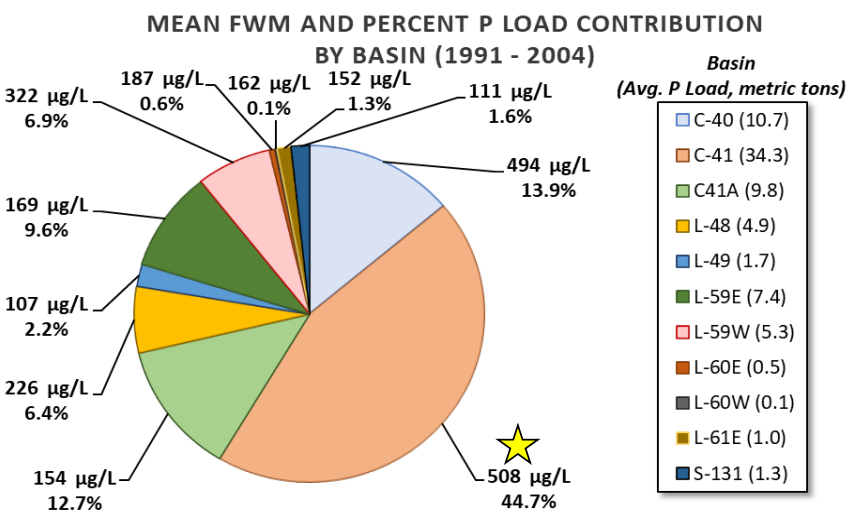
Pre-Protection Plan Flows



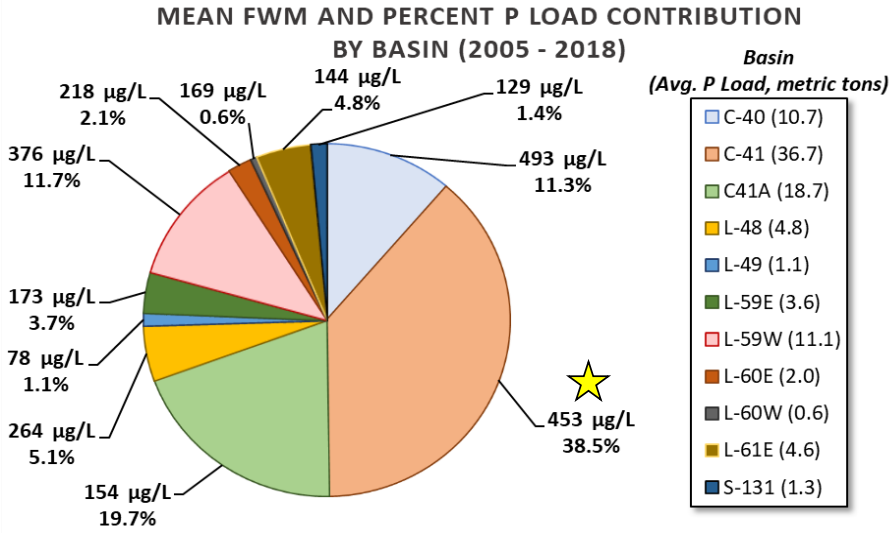
Post-Protection Plan Flows



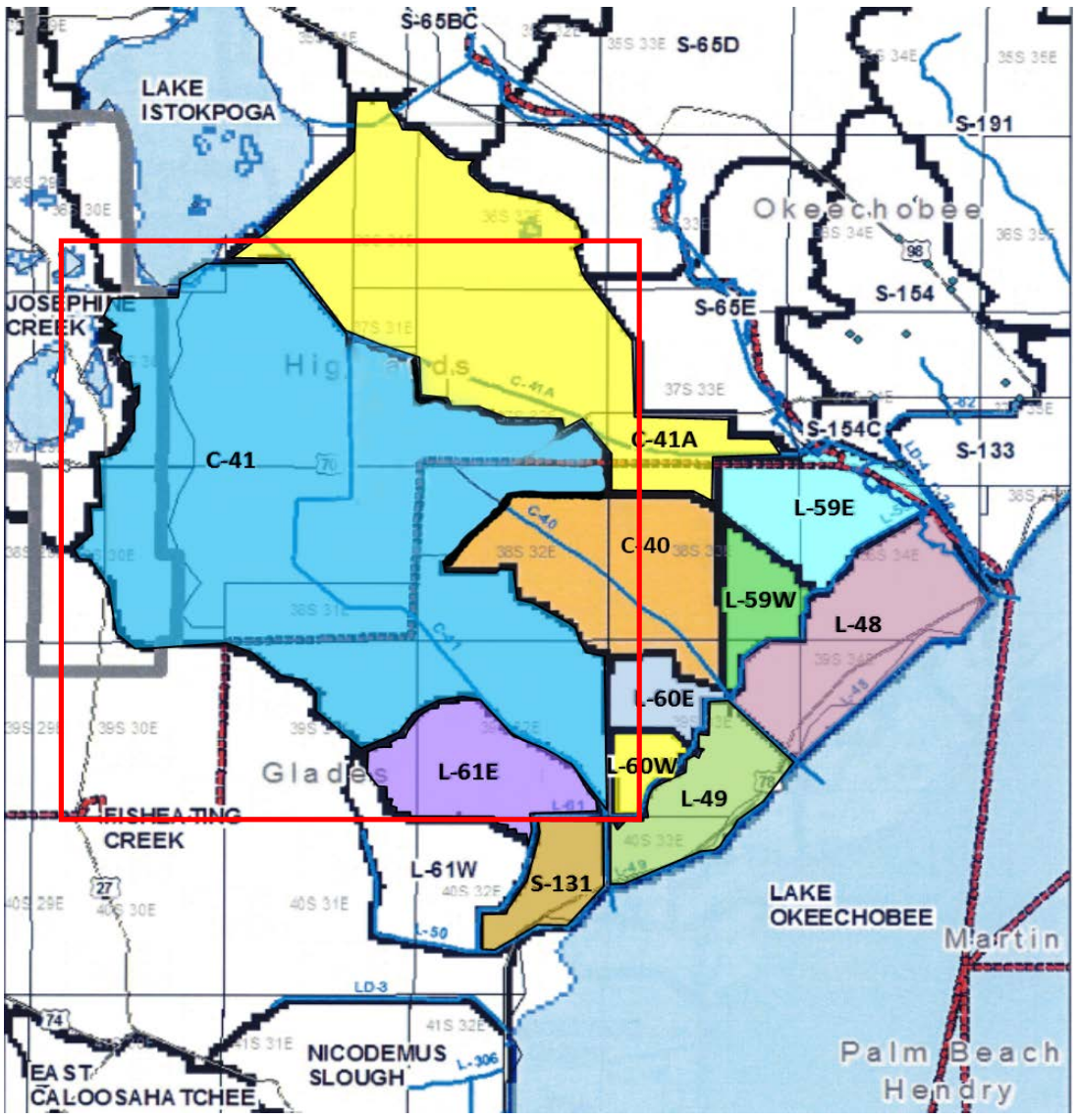
Pre-Protection Plan Loads

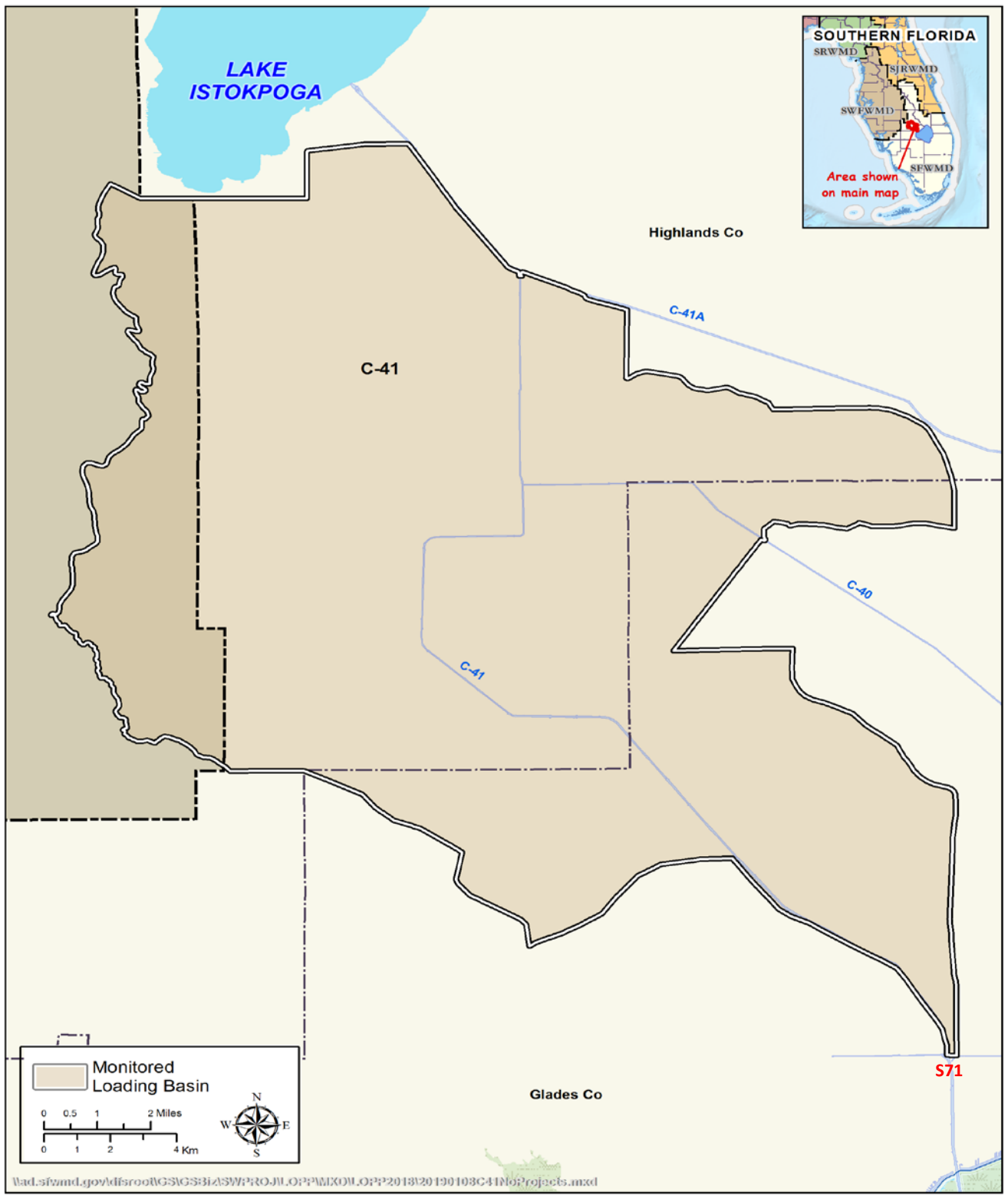


Post-Protection Plan Loads



C-41 BASIN - MAP





C-41 BASIN - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	60,252	54,816	65,687	
Avg. Load (mt/yr)	35.51	34.33	36.69	
FWMC (ug/L)	478	508	453	
Avg. UAL (lbs/acre/yr)	0.69	0.67	0.72	
Medians				**Mann-Whitney Results p-values[3]**
Median Flow (acft/yr)	58,049	58,049	59,177	0.4907
Median Load (mt/yr)	32.75	32.41	35.72	0.7132
Median FWMC (ug/L)	491.13	513	458	0.4213
Median UAL (lbs/acre/yr)	0.64	0.64	0.70	0.7131

Highlighted cells indicate statistical significance

[3]The 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 Indian Prairie - Seasonal Kendall τ Results for Total Monthly Flow (ac-ft) by Basin over Three Water Year Ranges

Sub-watershed/*Basin*	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
C-41 Basin	1.8%	0.049	22.36	1269	0.246	2.4%	-0.004	-0.81	1918	0.961	1.2%	0.135	88.72	580	0.070

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

Sub-watershed/*Basin*	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
C-41 Basin	1.8%	-0.047	-3.36	542	0.331	2.4%	0.002	0.00	681	0.987	1.2%	0.071	4.21	229	0.166

Sub-watershed Indian Prairie - Seasonal Kendall τ Results for Monthly FWM TP (µg/L) by Basin over Three Water Year Ranges

Sub-watershed/*Basin*	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
C-41 Basin	40.2%	0.064	2	341	0.381	40.5%	0.245	18	241	0.058	39.9%	-0.062	-4	407	0.471

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.

C-41 BASIN - MONTHLY DATA AND SKT TRENDS