

INDIAN PRAIRIE - S-131 BASIN TECHNICAL SHEET

Subwatershed: Indian Prairie		
Basin: S-131	Flow Issues¹: No	Water Quality Issues²: No

Monitored Structure(s): S131

Inflow loads:

Acreage: 7,122

Percentage of Subwatershed Acreage: 3%

Percentage of Lake Okeechobee Watershed: 0.2%

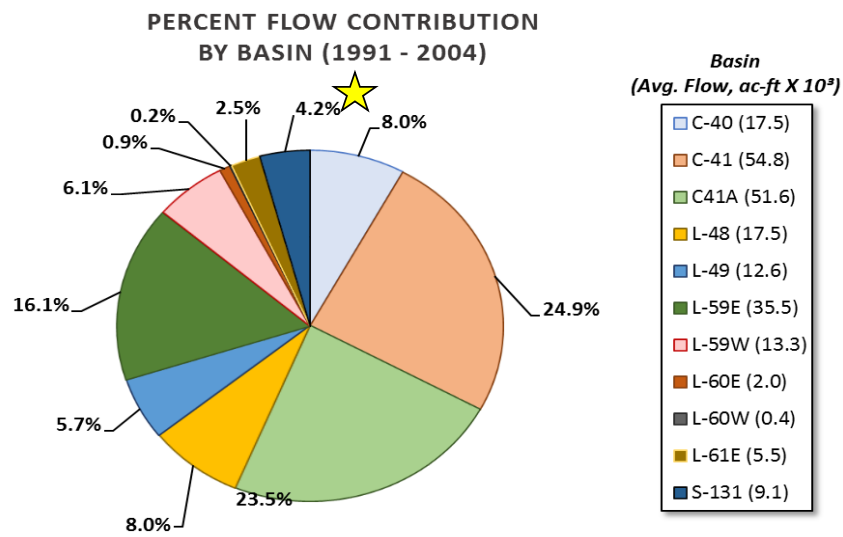
¹Flow Issues:

- There was a decrease in flow between pre and post-protection plan periods, but it was not statistically significant.
- No statistically significant trends in flow.
- Flow and load estimates were based on samples and measurements taken at major structures within the regional system.

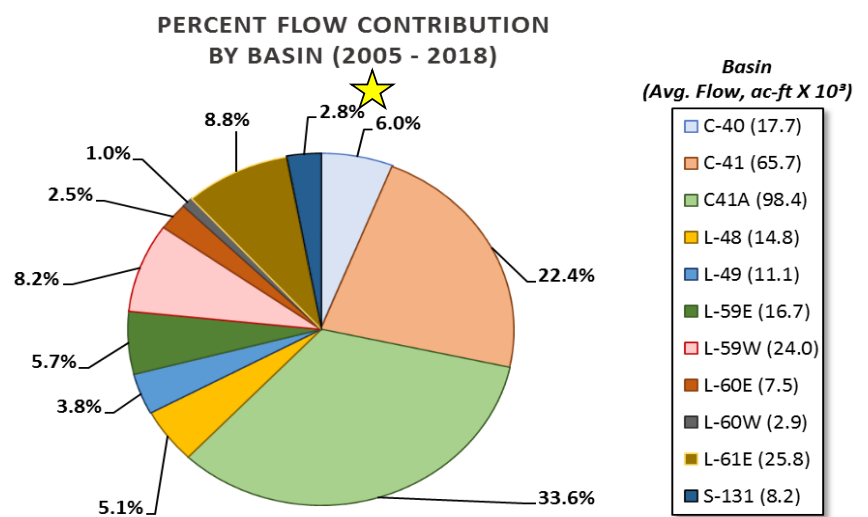
²Water Quality Issues:

- Although there was a slight increase in total phosphorus (TP) flow-weighted mean concentrations (FWMC), between the pre and post-protection plan periods, the TP concentration is relatively low (129 µg/L) and this basin has a small contribution to the subwatershed (1.4% of the TP loads during the post-protection plan period).
- There were no statistically significant trends in TP FWMC or loads.

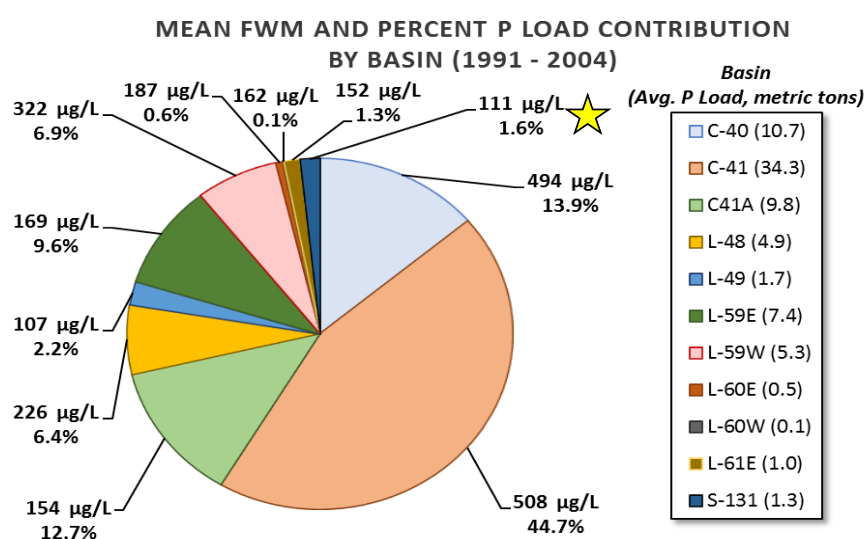
Pre-Protection Plan Flows



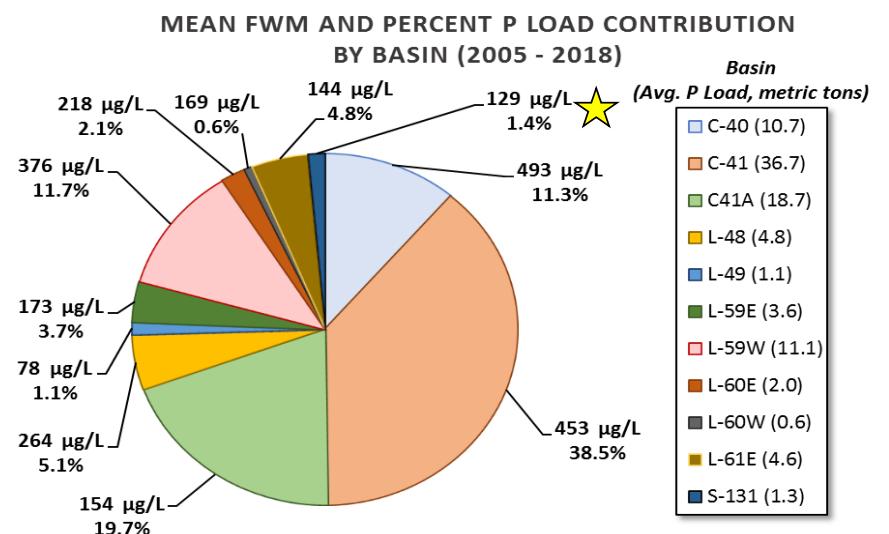
Post-Protection Plan Flows



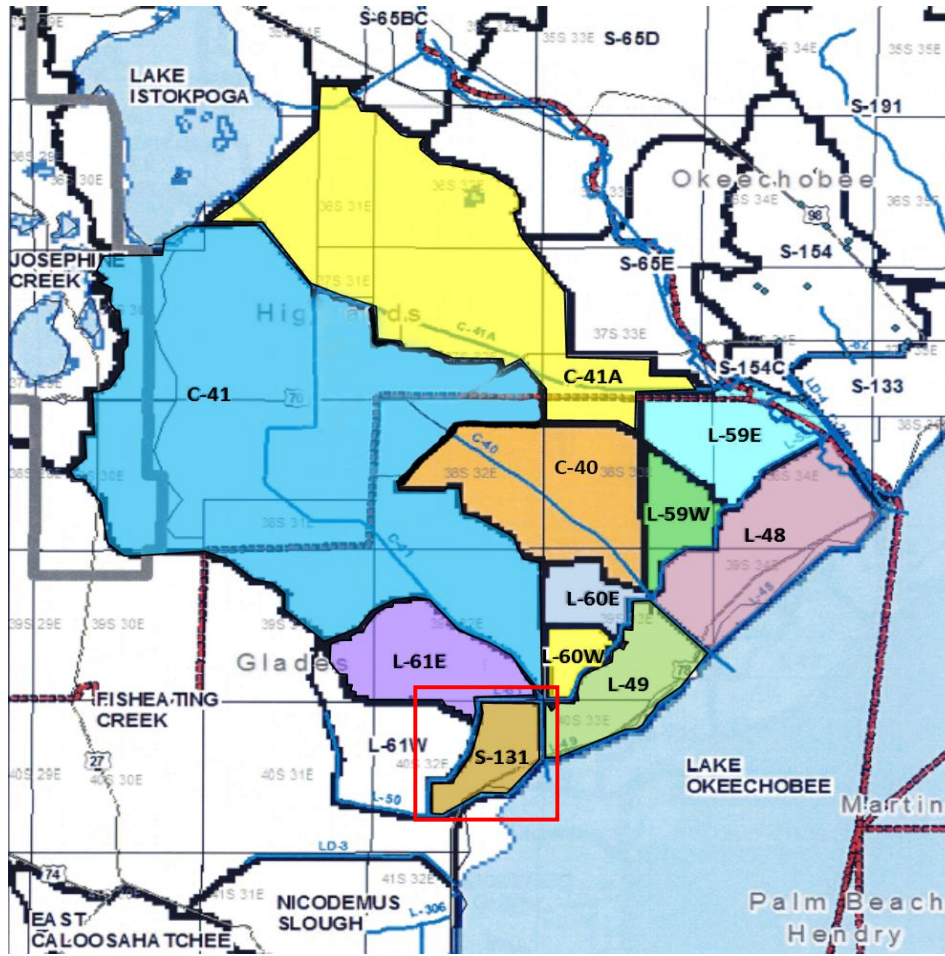
Pre-Protection Plan Loads



Post-Protection Plan Loads



S-131 BASIN - MAP



S-131 BASIN - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	8,678	9,147	8,209	
Avg. Load (mt/yr)	1.28	1.25	1.31	
FWMC (ug/L)	119	111	129	
Avg. UAL (lbs/acre/yr)	0.43	0.45	0.40	
Medians				Mann-Whitney Results p-values³
Median Flow (acft/yr)	8,989	9,952	7,156	0.3581
Median Load (mt/yr)	1.14	1.23	1.07	0.5813
Median FWMC (ug/L)	105.00	107.5	100	0.7381
Median UAL (lbs/acre/yr)	0.36	0.43	0.33	0.1810

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 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
<i>S-131 Basin</i>	0.0%	-0.094	-3.00	358	0.282	0.0%	0.041	0.69	516	0.761	0.0%	0.031	0.00	214	0.802

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
<i>S-131 Basin</i>	0.0%	-0.093	-0.27	40	0.302	0.0%	0.094	1.69	44	0.492	0.0%	0.022	0.00	18	0.861

Sub-watershed Indian Prairie - Seasonal Kendall τ Results for Monthly FWM TP ($\mu\text{g/L}$) 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
<i>S-131 Basin</i>	24.1%	-0.073	0	106	0.469	19.6%	0.239	3	90	0.107	28.6%	-0.257	-4	107	0.091

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.

S-131 BASIN - MONTHLY DATA AND SKT TRENDS

