INDIAN PRAIRIE - L-59W BASIN TECHNICAL SHEET

Subwatershed: Indian Prairie			
Basin: **L-59W**	**Flow Issues[1]:** **Maybe**	**Water Quality Issues[2]:** **Maybe**	

Monitored Structure(s): G74

Inflow loads:

Acreage: 6,596

Percentage of Subwatershed Acreage: 2%

Percentage of Lake Okeechobee Watershed: 0.2%

[1]Flow Issues:

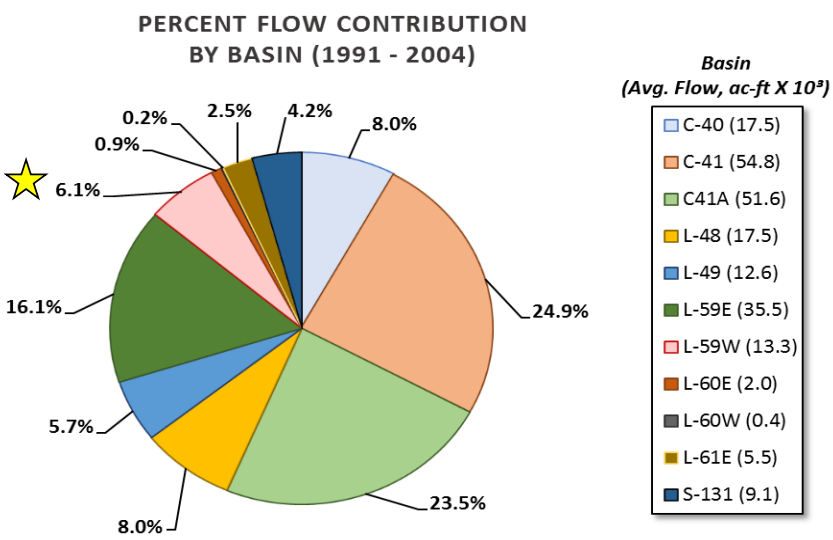
-Prior to WY1995 flows were estimated and no flow measurements were collected between WY1995 and WY2003; therefore, comparisons cannot be made between the pre and post-protection plan periods.

-There appeared to be increases in flow between pre and post-protection plans periods but unable to determine if this increase is due to the missing or estimated flow measurements in the pre-protection plan period or another factor.

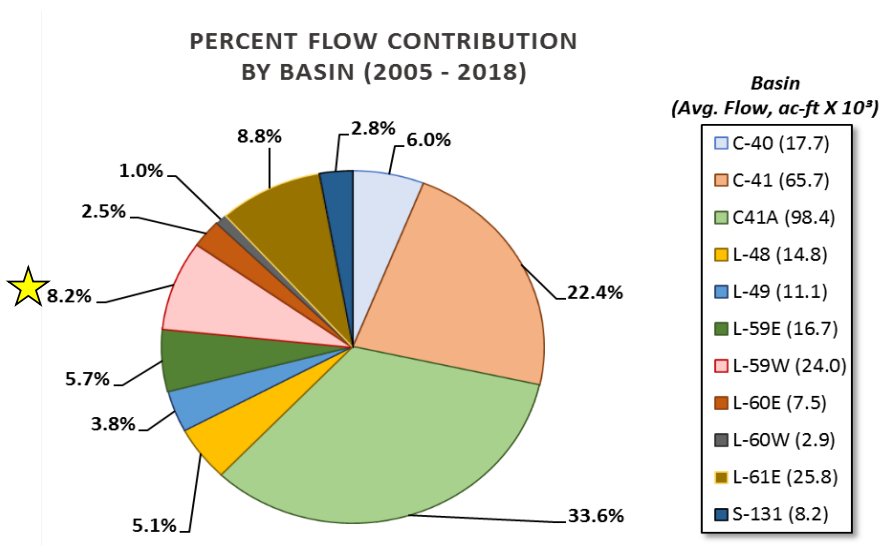
[2]Water Quality Issues:

-There appeared to be increases in total phosphorus (TP) flow-weighted mean concentrations (FWMC) and loads between pre and post-protection plans periods but unable to determine if this increase is due to the missing or estimated flow measurements in the pre-protection plan period or another factor.

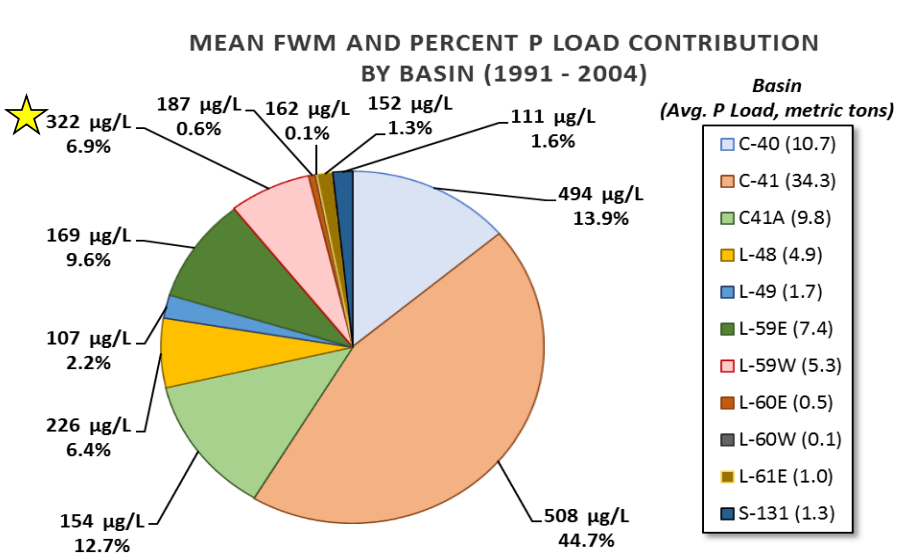
Pre-Protection Plan Flows



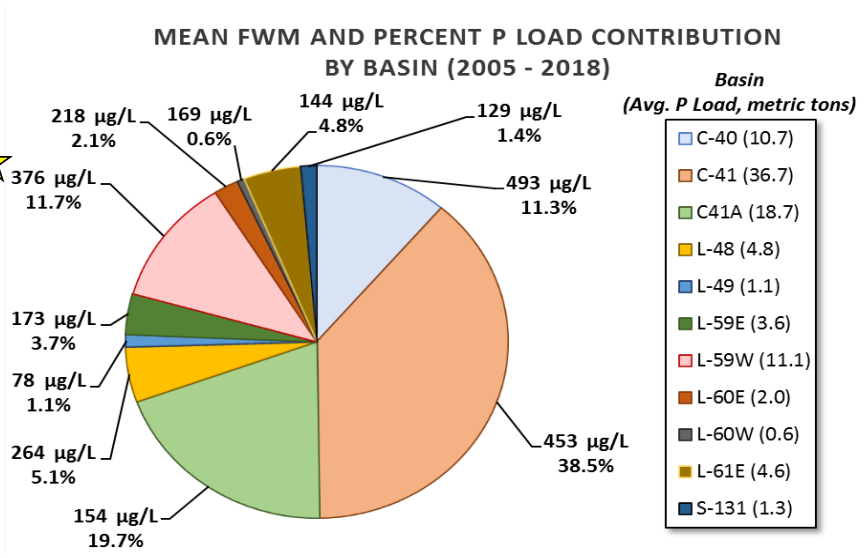
Post-Protection Plan Flows



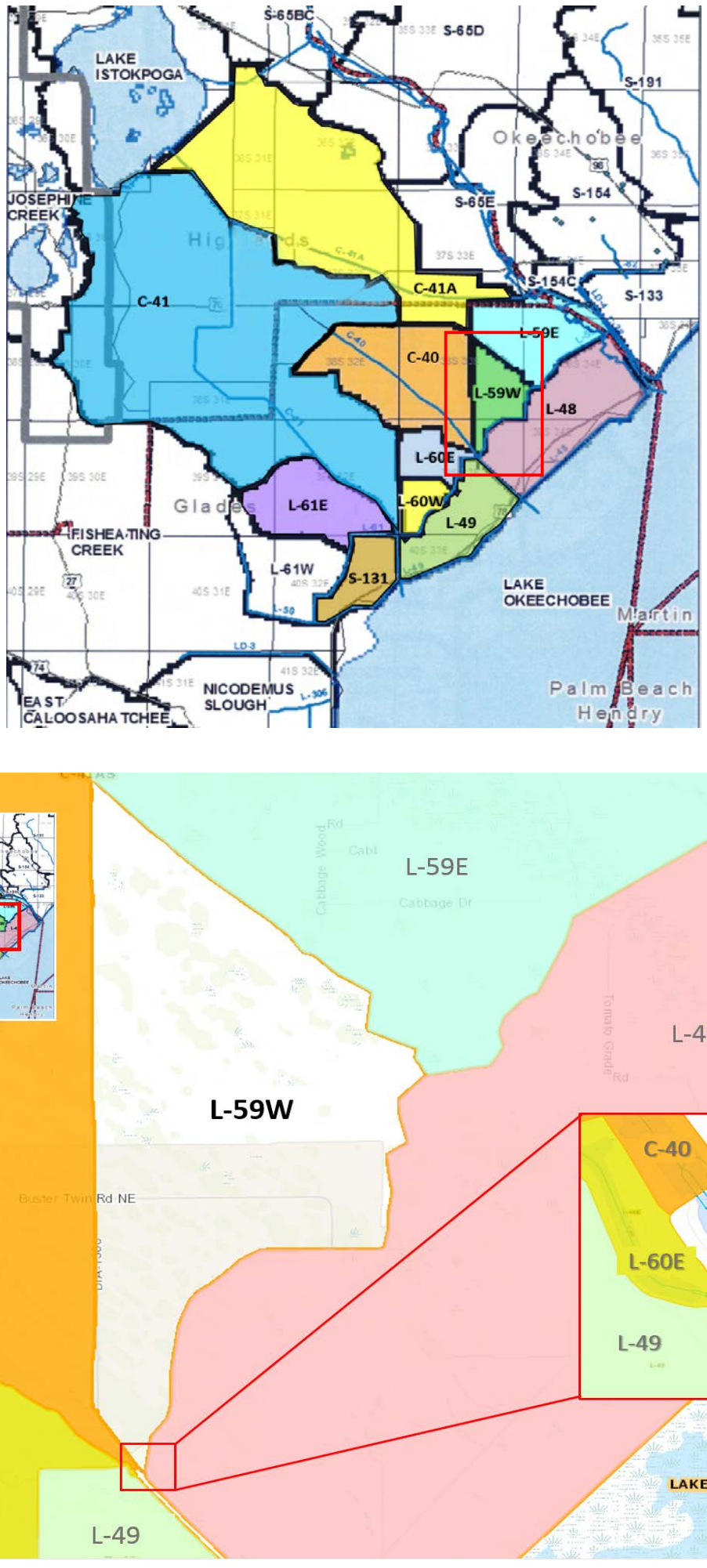
Pre-Protection Plan Loads



Post-Protection Plan Loads



L-59W BASIN - MAP



L-59W BASIN - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	21,156	13,328	23,951	
Avg. Load (mt/yr)	9.59	5.30	11.12	
FWMC (ug/L)	367	322	376	
Avg. UAL (lbs/acre/yr)	3.20	1.77	3.72	
Medians				**Mann-Whitney Results p-values[3]**
Median Flow (acft/yr)	23,292	8,546	25,450	0.1950
Median Load (mt/yr)	8.18	1.87	9.56	0.1650
Median FWMC (ug/L)	259.40	183	286	0.1950
Median UAL (lbs/acre/yr)	2.73	0.62	3.20	0.1793

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
L-59W Basin	35.1%	0.089	3.81	592	0.368	70.2%	-0.200	-44.29	1356	0.126	0.0%	0.200	60.19	720	0.095

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
L-59W Basin	35.1%	0.067	0.19	98	0.515	70.2%	-0.125	-3.42	110	0.348	0.0%	0.155	3.06	91	0.202

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
L-59W Basin	46.4%	0.034	1	211	0.795	70.2%	0.275	7	98	0.434	22.6%	-0.178	-6	289	0.231

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.