

INDIAN PRAIRIE - L-59E BASIN TECHNICAL SHEET

Subwatershed: Indian Prairie		
Basin: L-59E	Flow Issues¹: Maybe	Water Quality Issues²: Maybe

Monitored Structure(s): G33, G34

Inflow loads:

Acreage: 12,589

Percentage of Subwatershed Acreage: 5%

Percentage of Lake Okeechobee Watershed: 0.4%

¹Flow Issues:

- Prior to WY1995 flows were estimated and no flow measurements were collected between WY1995 and WY2001. Then flows were measured beginning in WY2002.

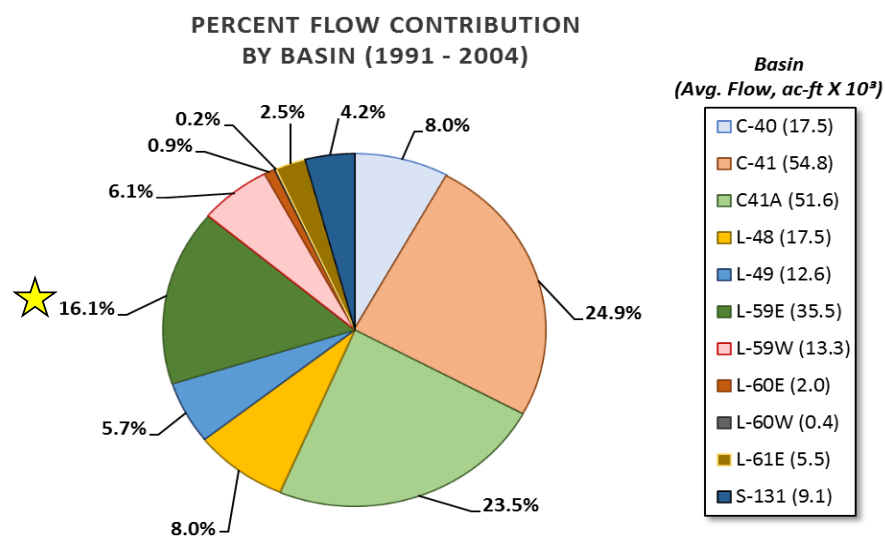
- May need to review flows between pre-and post-protection plan periods to see if changes in flow measurement methods occurred affected results' comparability.

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

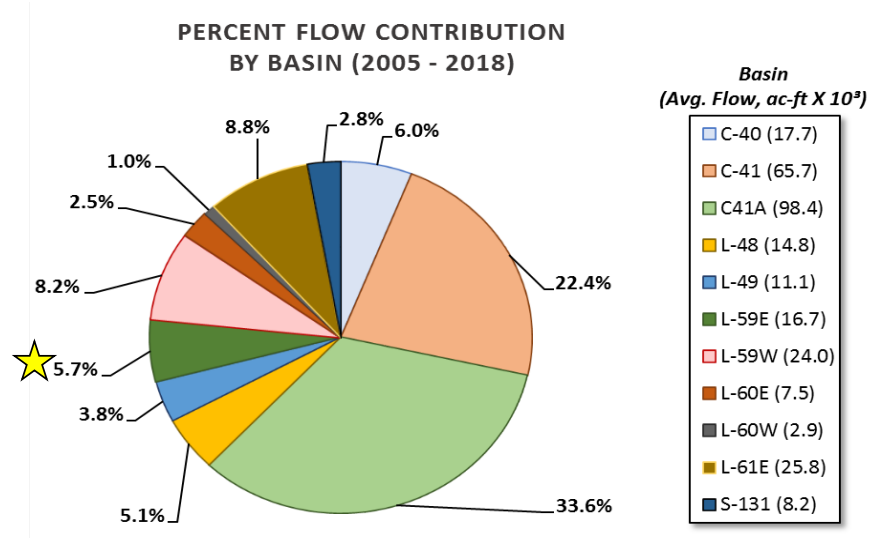
²Water Quality Issues:

- There were no statistically significant trends in total phosphorus (TP) flow-weighted mean concentrations (FWMC).

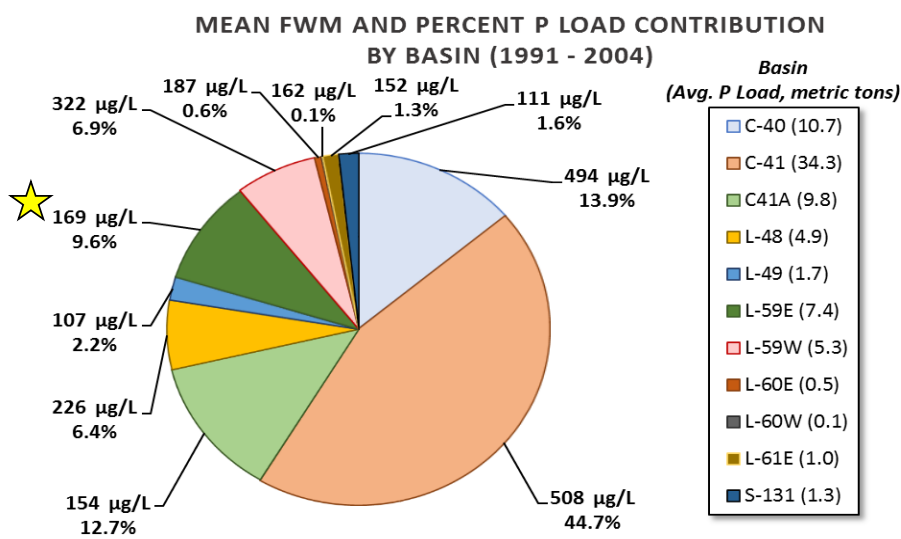
Pre-Protection Plan Flows



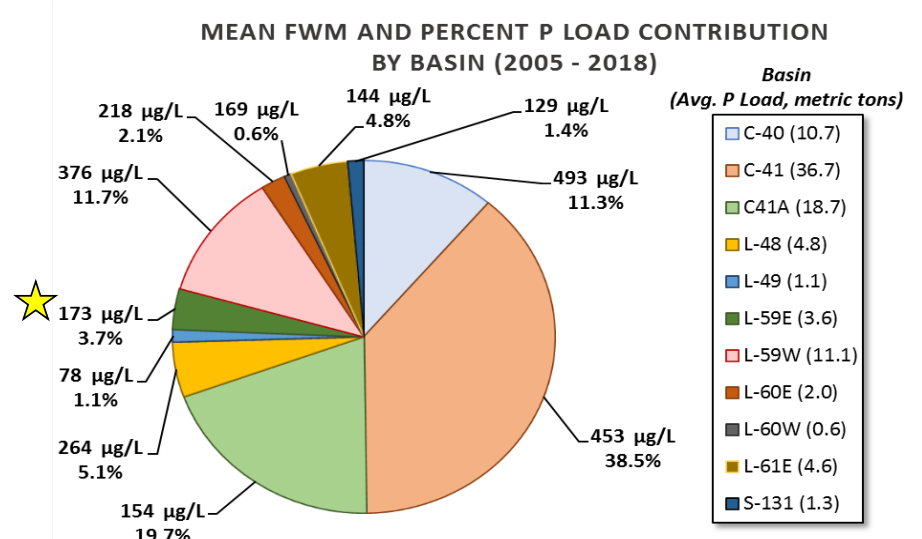
Post-Protection Plan Flows



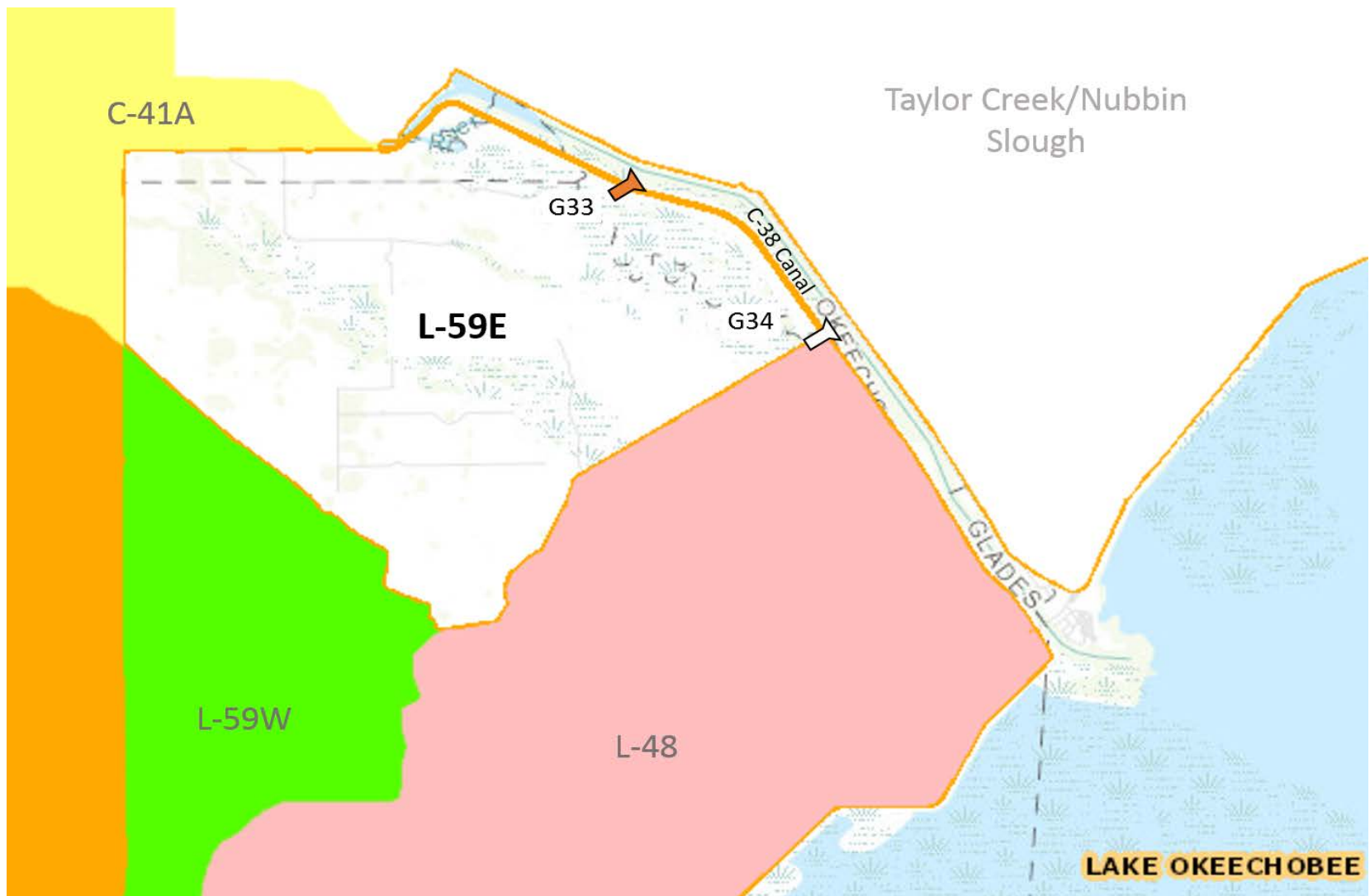
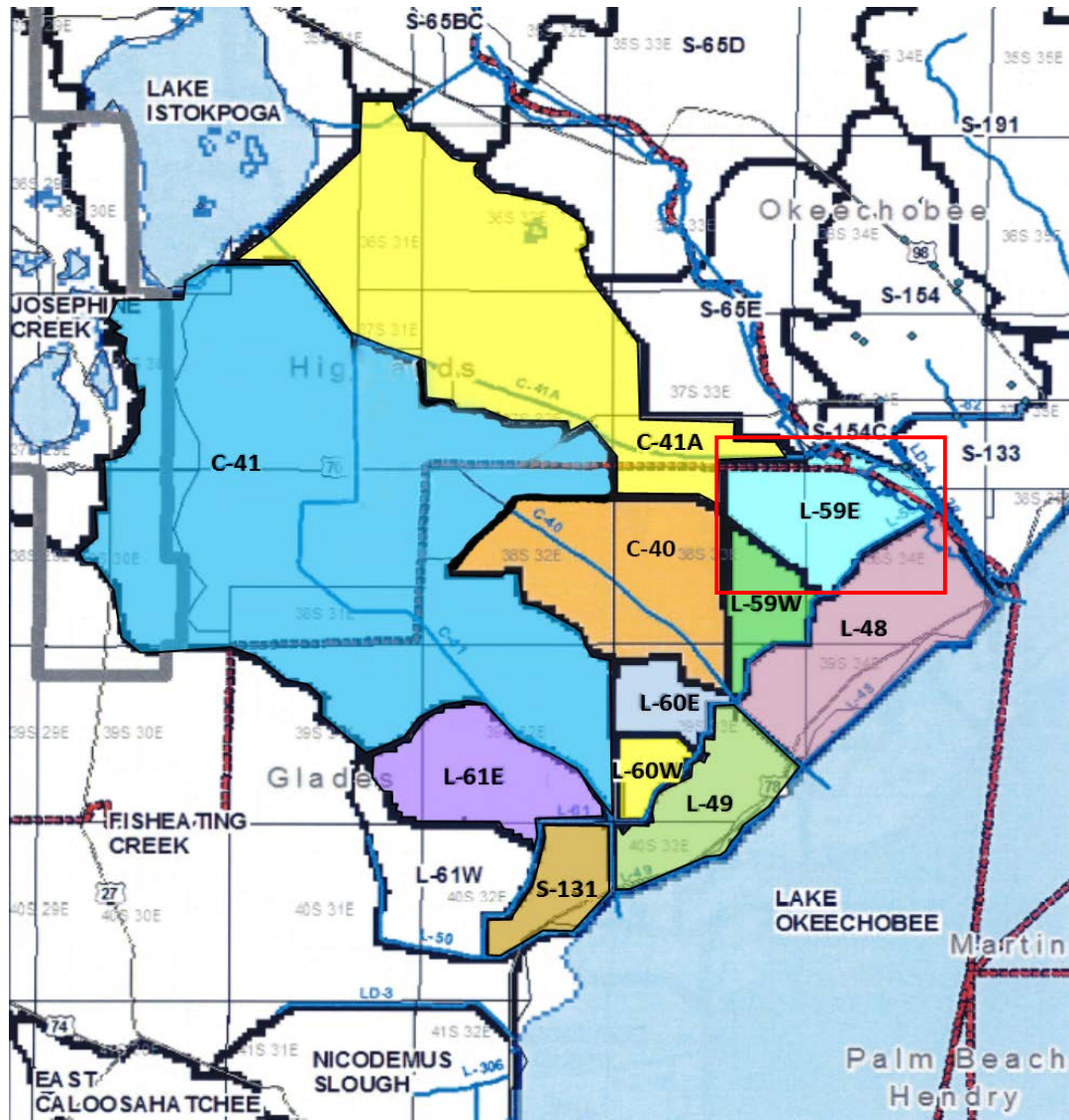
Pre-Protection Plan Loads



Post-Protection Plan Loads



L-59E BASIN - MAP



L-59E BASIN - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	22,986	35,489	16,734	
Avg. Load (mt/yr)	4.84	7.39	3.56	
FWMC (ug/L)	171	169	173	
Avg. UAL (lbs/acre/yr)	0.89	1.29	0.67	
Medians				Mann-Whitney Results p-values³
Median Flow (acft/yr)	6,374	6,683	4,232	0.1357
Median Load (mt/yr)	1.36	2.64	0.64	0.1172
Median FWMC (µg/L)	168.22	173	168	0.3219
Median UAL (lbs/acre/yr)	0.28	0.46	0.11	0.1654

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>L-59E Basin (G33+G34)</i>	<i>29.2%</i>	<i>-0.260</i>	<i>-14.84</i>	<i>362</i>	<i>0.020</i>	58.3%	0.365	180.80	-666	0.092	0.0%	0.026	0.00	0	0.811

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>L-59E Basin (G33+G34)</i>	<i>29.2%</i>	<i>-0.284</i>	<i>-3.33</i>	<i>73</i>	<i>0.012</i>	58.3%	0.306	38.54	-49	0.180	0.0%	0.027	0.00	0	0.801

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
<i>L-59E Basin (G33+G34)</i>	<i>56.5%</i>	<i>-0.277</i>	<i>-4</i>	<i>217</i>	<i>0.048</i>	58.3%	-0.282	-6	229	0.226	54.8%	-0.176	-6	170	0.334

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.