

FISHEATING CREEK BASIN TECHNICAL SHEET			
Subwatershed:	Fisheating Creek		
Basin:	Fisheating Creek	Flow Issues ¹ : MAYBE	Water Quality Issues ² : YES

Monitored Structure(s): FECSR78

Inflow loads: None

Acreage: 298,713

Percentage of Subwatershed Acreage: 94%

Percentage of Lake Okeechobee Watershed: 8.7%

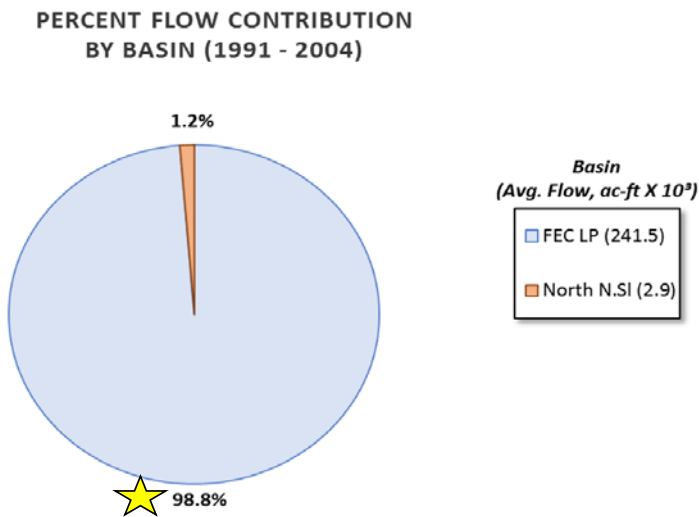
¹Flow Issues:

- Flow measurements did not start at FECSR78 until WY1998. Prior to WY1998, flow was measured at Palmdale which is 12 miles upstream. To account for this change, data from the L-61W plus the Palmdale location were used for flows and loads for the period prior to WY1998 for the statistical analysis in this technical sheet.
- The flow is not monitored at a structure at the Fisheating Creek Basin. Monitoring is located within a flood plain, therefore it is not known if all flows are accounted for in the Fisheating Creek Basin. Suggest looking at individual flow readings at Palmdale and Lakeport to investigate.
- There were no statistically significant trends detected.
- It should be noted that there was a change in flow measurement methods during the period of record for the Fisheating Creek Basin.

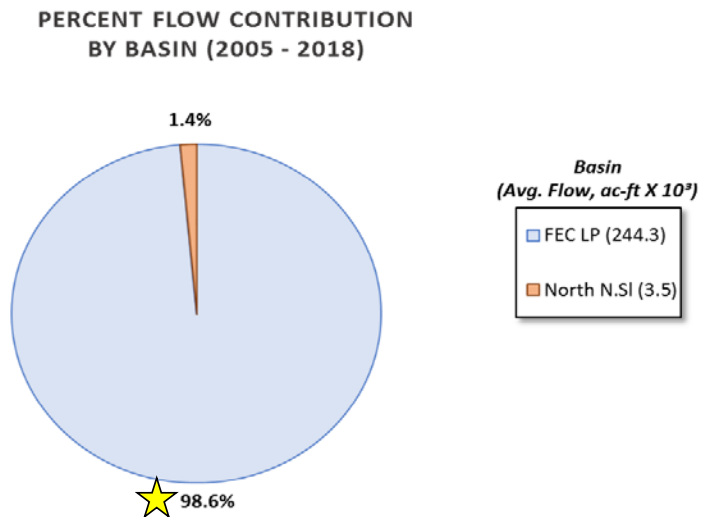
²Water Quality Issues:

- The total phosphorus (TP) flow-weighted mean concentrations (FWMC) of 211 µg/L in post-protection plan period is relatively high.
- While there are no statistically significant trends in FWMC or TP loads, both had increasing slopes in all three periods. And there was an increase in FWMC and TP load between the pre and post-protection plan period, although it was not significant.

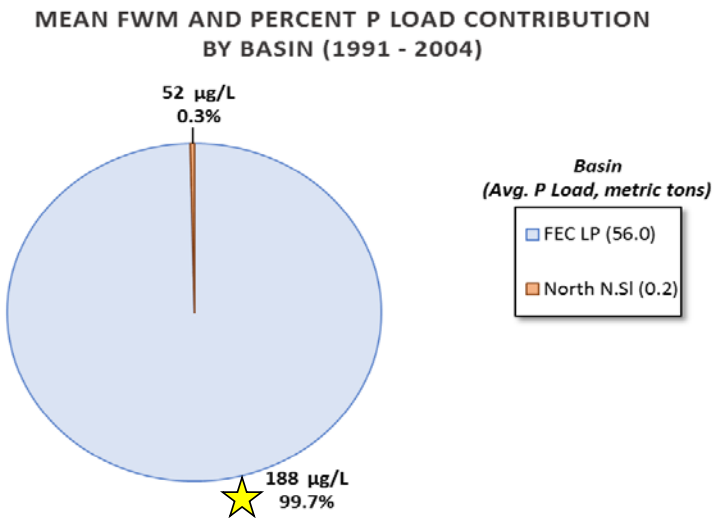
Pre-Protection Plan Flows



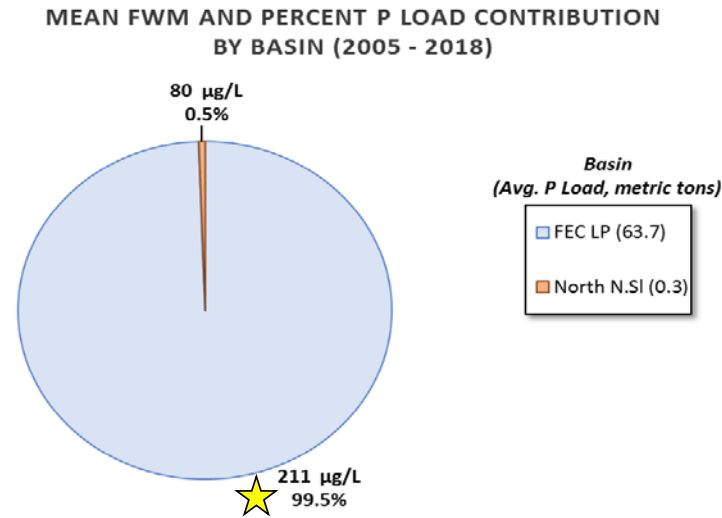
Post-Protection Plan Flows



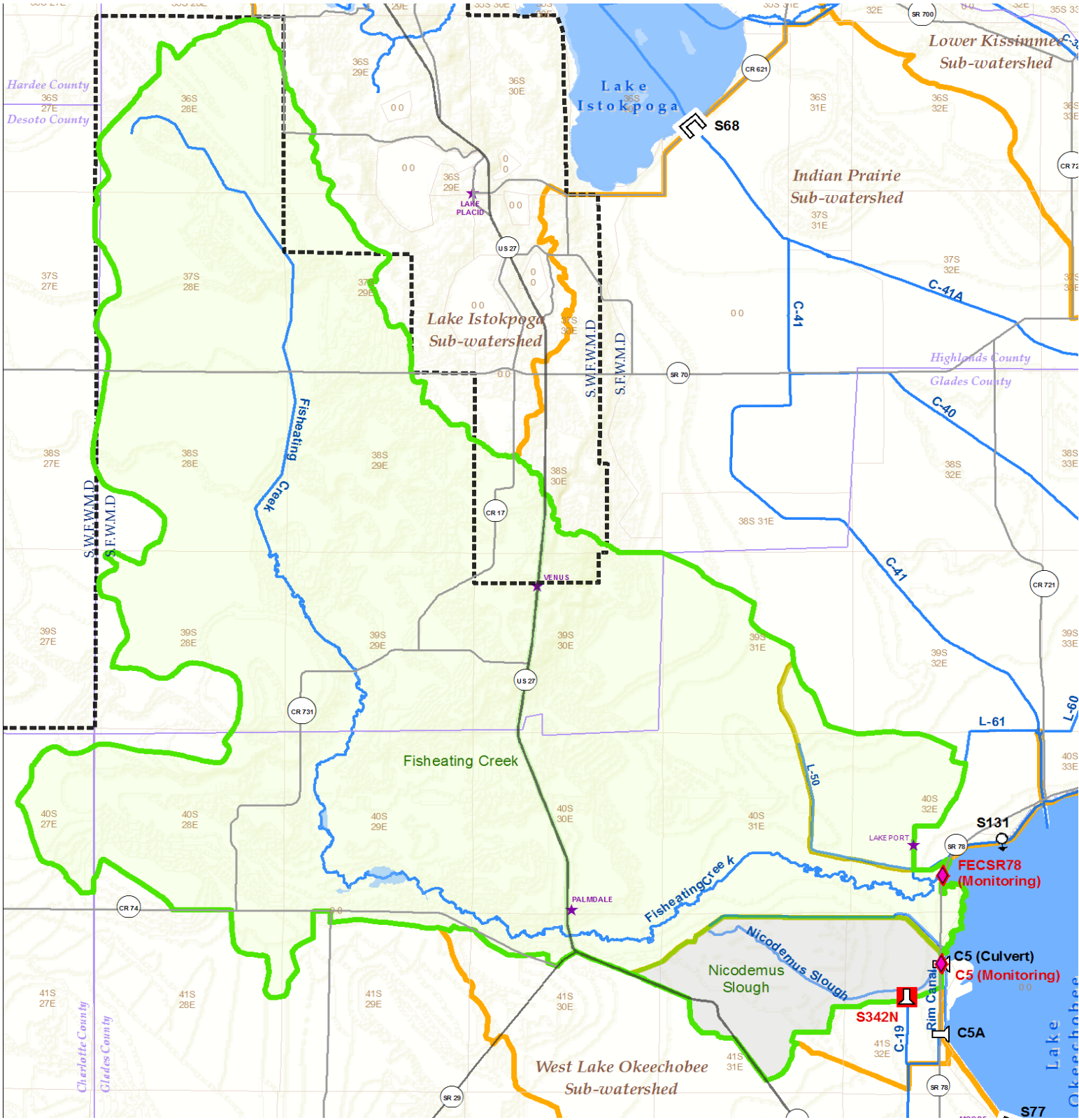
Pre-Protection Plan Loads



Post-Protection Plan Loads



FISHEATING CREEK BASIN - MAP



FISHEATING CREEK BASIN - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	242,870	241,464	244,276	
Avg. Load (mt/yr)	59.86	56.03	63.69	
FWMC (ug/L)	200	188	211	
Avg. UAL (lbs/acre/yr)	0.44	0.41	0.47	
Medians				Mann-Whitney Results p-values ³
Median Flow (acft/yr)	213,574	216,190	213,574	0.8183
Median Load (mt/yr)	48.35	46.40	67.76	0.3346
Median FWMC (ug/L)	193.00	170.5	205	0.3345
Median UAL (lbs/acre/yr)	0.36	0.34	0.50	0.3452
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 Fisheating Creek - 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
Fisheating Creek (LakePort)	0.0%	0.012	6.85	6054	0.877	0.0%	0.174	283.54	5403	0.141	0.0%	0.022	25.83	5796	0.855

Sub-watershed Fisheating Creek - 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
Fisheating Creek (LakePort)	0.0%	0.031	3.58	890	0.691	0.0%	0.211	46.00	523	0.096	0.0%	0.009	2.56	1001	0.941

Sub-watershed Fisheating Creek - 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
Fisheating Creek (LakePort)	0.6%	0.089	1	116	0.183	1.2%	0.159	3	111	0.138	0.0%	0.039	1	120	0.689

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.

FISHEATING CREEK BASIN - MONTHLY DATA AND SKT TRENDS

