

FISHEATING CREEK - NICODEMUS SLOUGH NORTH BASIN TECHNICAL SHEET			
Subwatershed:	Fisheating Creek		
Basin:	Nicodemus Slough North	Flow Issues ¹ :	NO
		Water Quality Issues ² :	NO

Monitored Structure(s): CULV5

Inflow loads: None

Acreage: 19,329

Percentage of Subwatershed Acreage: 6%

Percentage of Lake Okeechobee Watershed: 0.6%

¹Flow Issues:

- The flow measurement data did not start until 2008. According to Cheol Mo the data are erratic. Prior to WY1995 flows were estimated. No measurements from WY1995-WY2008. WY2008 flow measurements began. The USACE is began working on Culvert 5 in WY2017 and the discharge is blocked.

- The contribution from this basin is minimal to the Fisheating Creek subwatershed.

- The Nicodemus Slough Project covers the majority of the acreage in this basin.

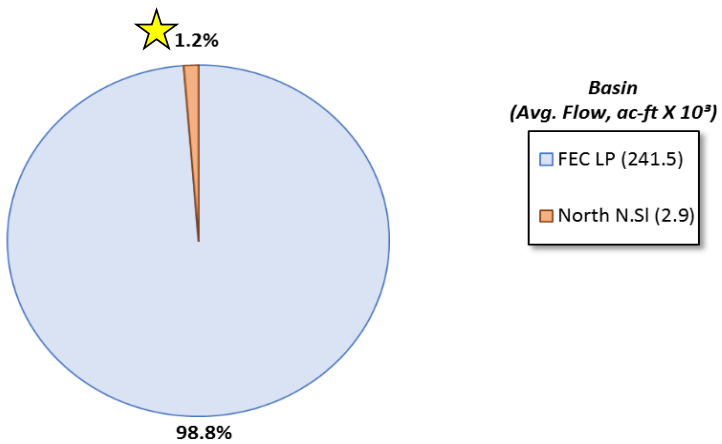
²Water Quality Issues:

- The contribution from this basin is minimal to the Fisheating Creek subwatershed (0.5% of loads in the post-Protection Plan period).

- The Nicodemus Slough Project covers the majority of the acreage in this basin.

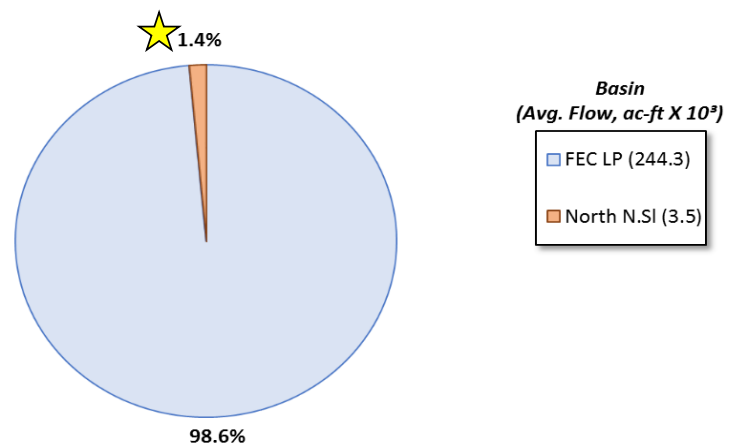
Pre-Protection Plan Flows

PERCENT FLOW CONTRIBUTION BY BASIN (1991 - 2004)



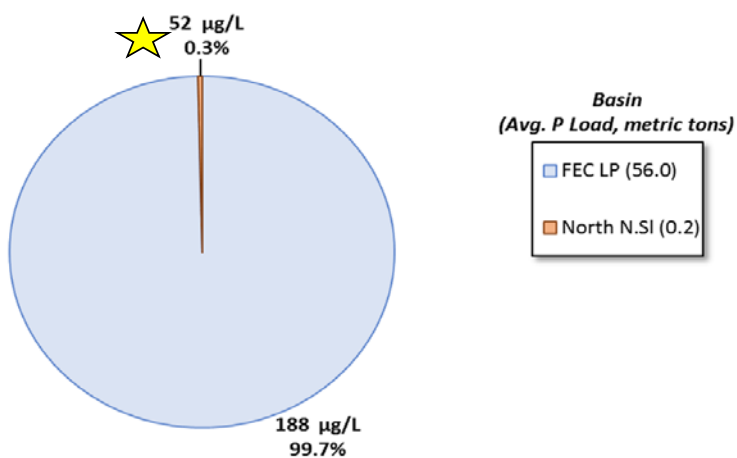
Post-Protection Plan Flows

PERCENT FLOW CONTRIBUTION BY BASIN (2005 - 2018)



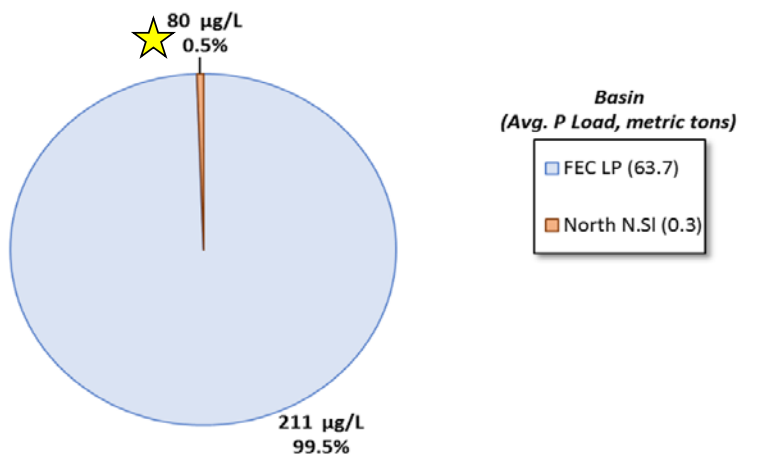
Pre-Protection Plan Loads

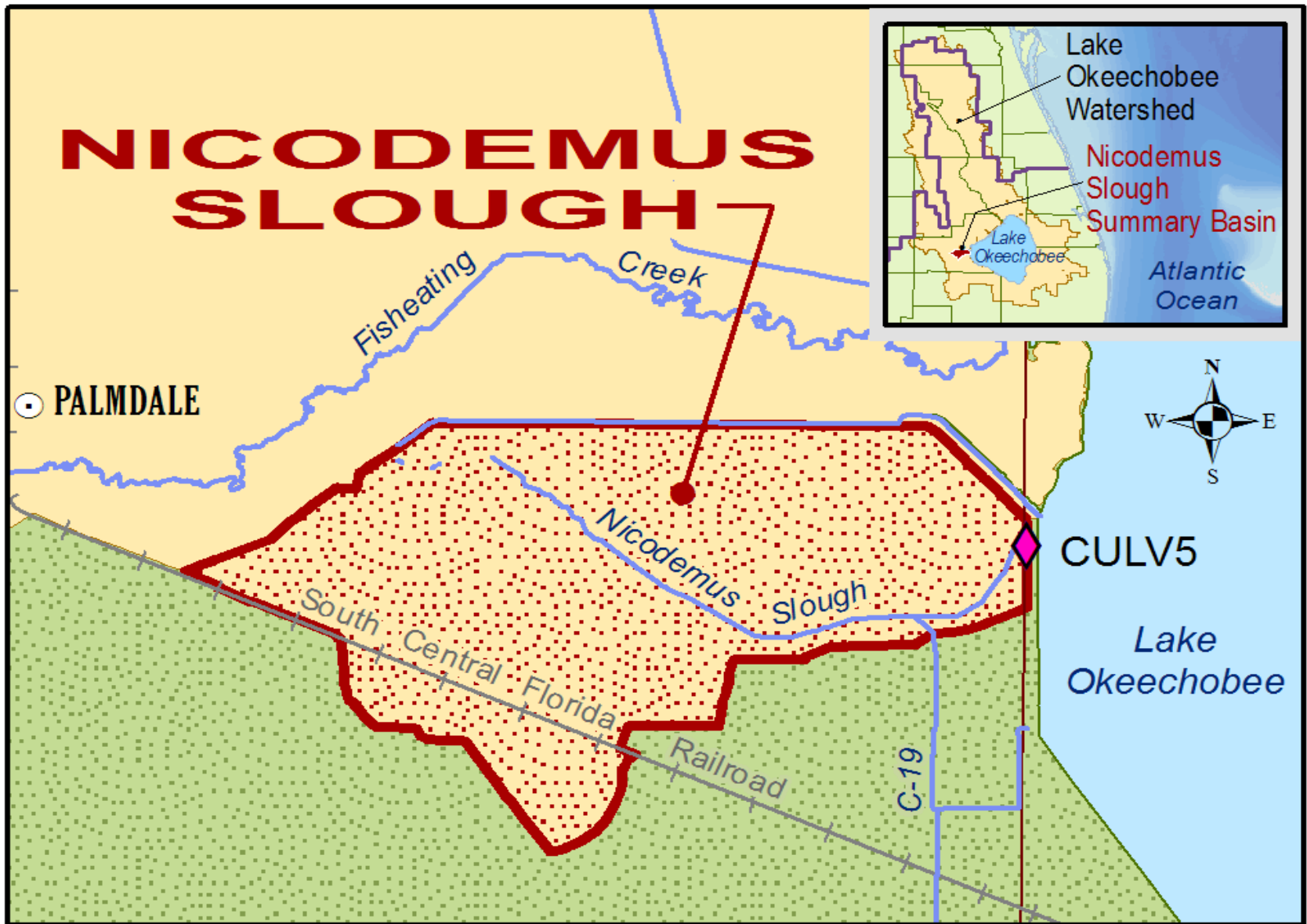
MEAN FWM AND PERCENT P LOAD CONTRIBUTION BY BASIN (1991 - 2004)



Post-Protection Plan Loads

MEAN FWM AND PERCENT P LOAD CONTRIBUTION BY BASIN (2005 - 2018)





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NICODEMUS SLOUGH NORTH BASIN - STATISTICS

Summary Statistics				
	Period of Record	Pre-Protection Plan	Post-Protection Plan	
	WY1991-WY2018	WY1991-WY2004	WY2005-WY2018	
Averages				
Avg. Flow (acft/yr)	3,331	2,888	3,508	
Avg. Load (mt/yr)	0.30	0.19	0.35	
FWMC (ug/L)	73	52	80	
Avg. UAL (lbs/acre/yr)	0.03	0.02	0.04	
Medians				Mann-Whitney Results p-values³
Median Flow (acft/yr)	2,136	3,348	639	0.3220
Median Load (mt/yr)	0.22	0.22	0.23	0.8880
Median FWMC (ug/L)	61.37	51	92	0.0660
Median UAL (lbs/acre/yr)	0.03	0.03	0.03	0.9428

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
Nicodemus Slough North (C5)	54.8%	-0.338	-1.38	20	0.019	76.2%	-0.250	-11.90	351	0.162	33.3%	-0.085	0.00	0	0.178

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
Nicodemus Slough North (C5)	54.8%	-0.333	-0.25	4	<0.001	76.2%	-0.458	-3.53	41	0.076	33.3%	-0.077	0.00	0	0.214

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
Nicodemus Slough North (C5)	76.8%	0.190	1	45	0.332	76.2%	-0.500	-8	102	0.003	77.4%	-0.200	-11	171	0.415

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.