

Everglades Monitoring Report

prepared for

U.S. Department of the Interior

by

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This report updates calculations of phosphorus limits & levels, BMP performance, and other aspects pertaining to the State/Federal Consent Decree based upon data available from SFWMD as of January 11, 1999.

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Everglades Monitoring Report - Summary

01/12/99

Inflow Phosphorus Limits - Shark River Slough

Results for 12-Month Pd:	9710	thru	9809		
Basin Total Flow	737.6	kac-ft/yr			
<u>Variable</u>	<u>Observed</u>	<u>Interim Target</u>	<u>Interim Limit</u>	<u>Longterm Target</u>	<u>Longterm Limit</u>
Flow-weighted Mean Conc.	9.8	7.7	10.7	7.4	9.2
Frequency > 10 ppb (%)	55.6	27.0	48.1	-	-

Inflow Phosphorus Limits - ENP Taylor Slough & Coastal Basins

Results for 12-Month Pd:	9710	thru	9809		
Basin Total Flow	294.0	kac-ft/yr			
<u>Variable</u>	<u>Observed</u>	<u>Longterm Target</u>	<u>Longterm Limit</u>		
Flow-Weighted-Mean Conc	10.5	5.8	11.0		
Frequency > 10 ppb (%)	32.1	12.1	53.1		

Marsh Phosphorus Levels - Loxahatchee National Wildlife Refuge

Last Sampling Date	10/13/98				
Stage	16.74 ft	Stations Sampled:	10 / 14		
<u>Variable</u>	<u>Observed</u>	<u>Interim Target</u>	<u>Interim Limit</u>	<u>Longterm Target</u>	<u>Longterm Limit</u>
Geometric Mean P (ppb)	8.49	6.2	10.1	5.3	8.6
Summary for 12-Month Period		11/12/97	to	10/13/98	
No. of Sampling Rounds	12				
Interim Limit Exceeded	1				
Longterm Limit Exceeded	1				

Phosphorus Load Reductions - Everglades Agricultural Area

Results for 12-Month Period Ending:	199806				
Total Rainfall	inches	47.4	Load Reductions:		
Adjusted Rainfall	inches	43.6	Last 12 Months		10%
Observed Load	mtons	139.2	Last 36 Months		56%
Target Load	mtons	116.4	Last Water Year*		34%
Limit Load	mtons	172.6	Last 3 Water Years*		55%
Runoff	inches	24.2			
Flow-Wtd-Mean Conc	ppb	106.9	* Water Years End April 30		

EAA Runoff Volume Reductions - BMP Replacement Water Rule

Current Water Year	1998	Ending September 30		
Rainfall	48.9 inches	5-yr % South		97.1%
1-Yr Runoff Reduction	3.4%	5-yr Runoff Reduction		11.1%

Performance of Everglades Nutrient Removal Project

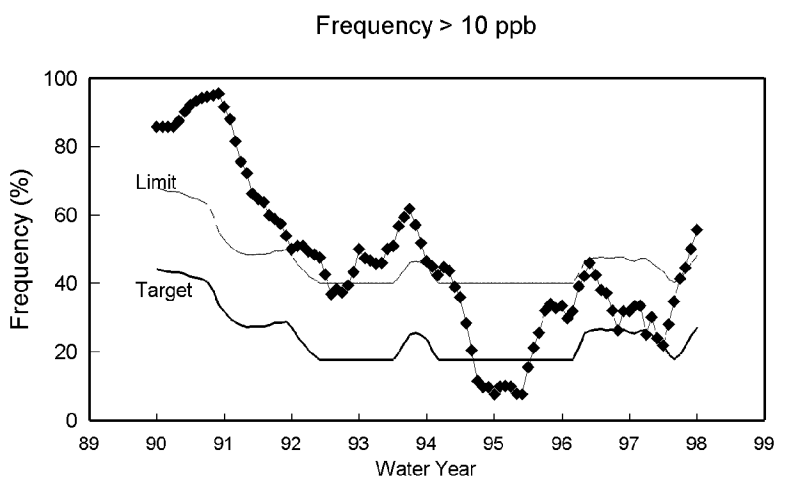
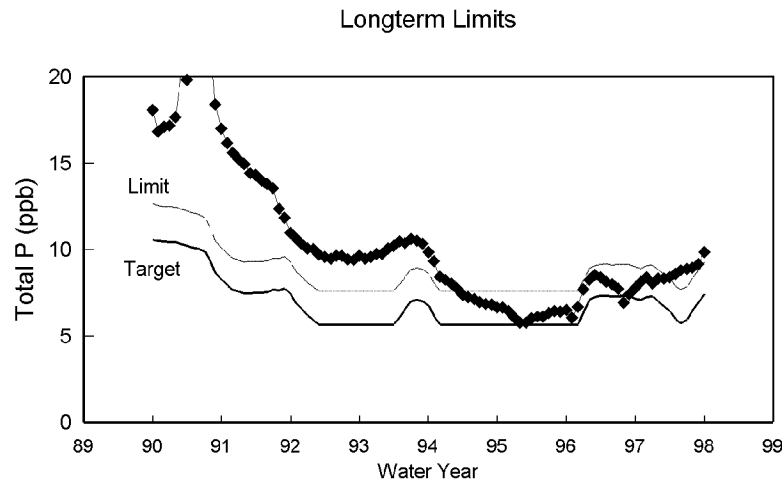
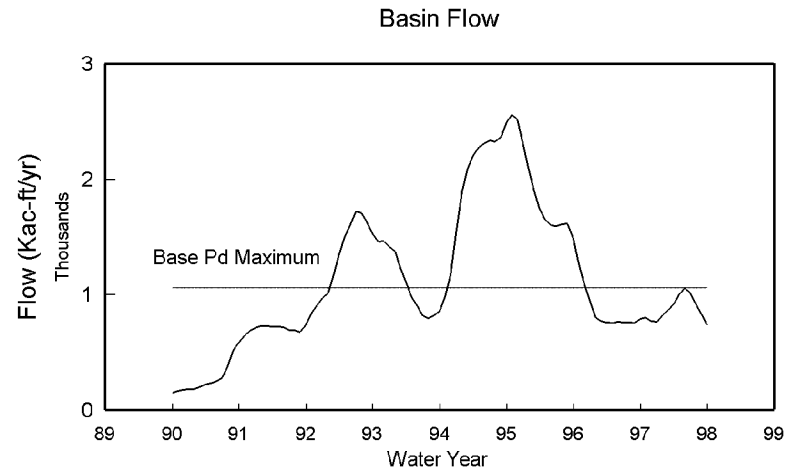
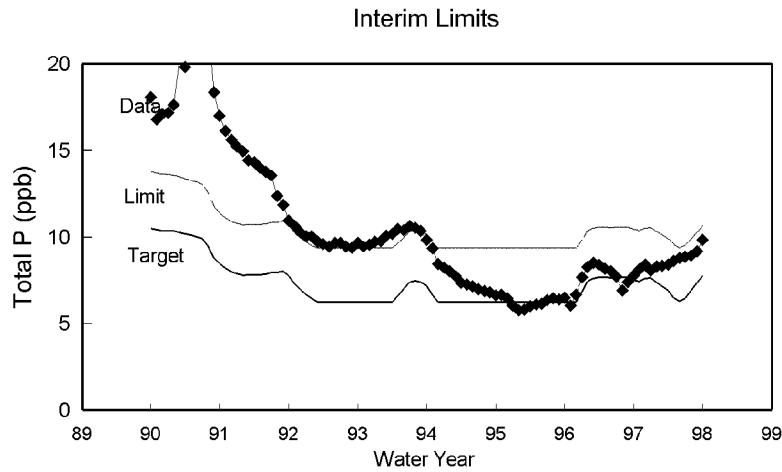
Update	9809	Months of Operation	50		
	1 Month	3 Month	1 Year	Cumulative	
Water Load	m/yr	5.5	6.1	7.5	10.0
Inflow Conc	ppb	121.4	99.3	119.7	112.2
Outflow Conc	ppb	17.5	16.1	20.8	21.7
Load Reduc	%	84%	82%	83%	81%
Load Reduc	g/m2-yr	0.57	0.51	0.74	0.90
Settling Rate	m/yr	10.7	11.1	13.1	16.4

Inflow Phosphorus Limits

ENP Shark River Slough Combined Inflows from S12A, S12B, S12C, S12D, & S333

01/12/99

12-Month Period:	9710	thru	9809	Sample Dates	27				
		Observed	Target	Limit		Flow	Basin	Base Pd	Sampled
Flow-Wtd-Mean Conc. (Interim)	9.8	9.8	7.7	10.7	ppb		737.6	1061.3	50.4
Flow-Wtd-Mean Conc. (Long-term)	9.8	9.8	7.4	9.2	ppb				
Frequency > 10 ppb (Guideline)	55.6	55.6	27.0	48.1	%				



12-Month Rolling Statistics, Water Years Ending September 30

Inflow P Limits

**ENP Taylor Slough & Coastal Basins
Combined Inflows from S18C, S332, & S175**

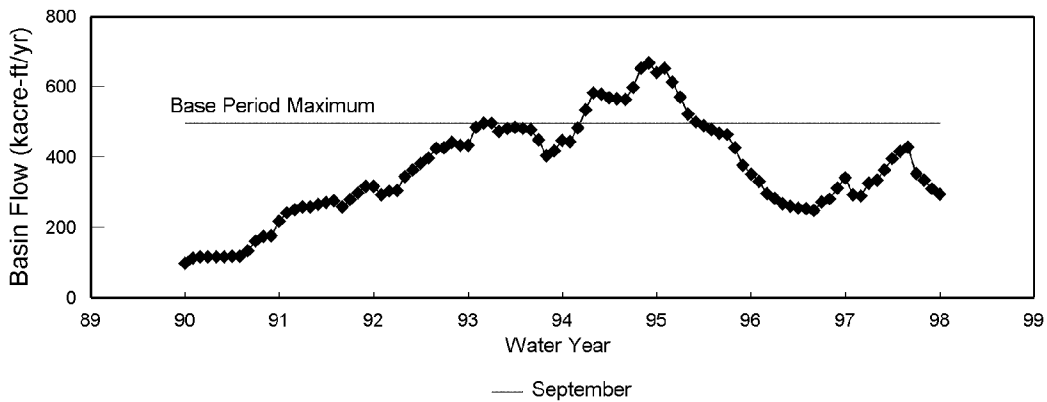
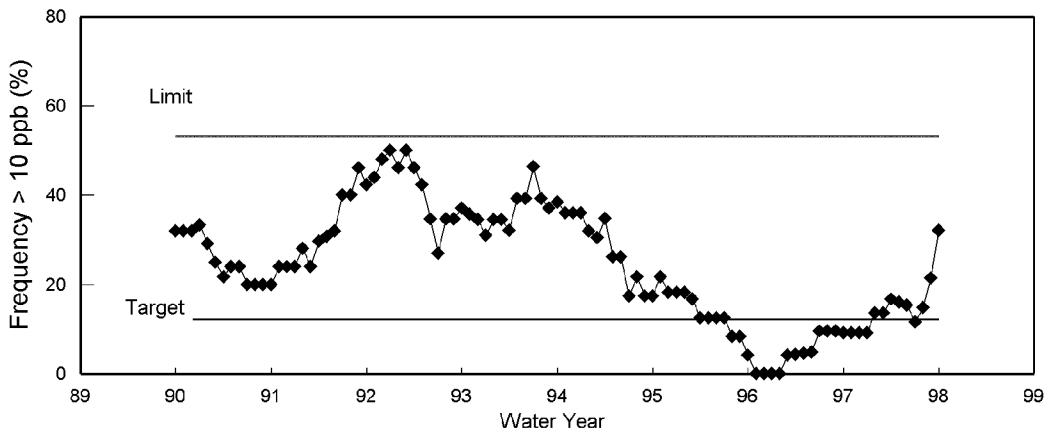
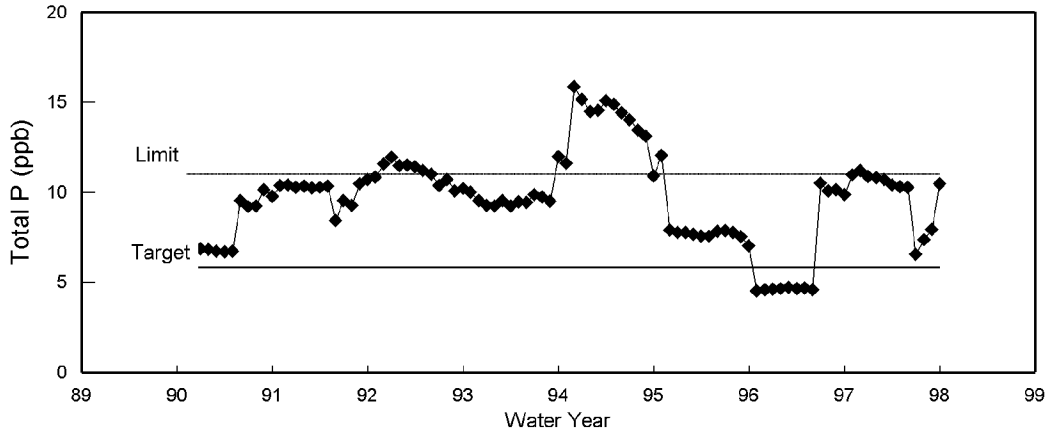
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Results for 12-Month Pd: 9710 thru 9809

Basin Total Flow 294.0 kac-ft/yr Sample Dates: 28
 Sampled Flow 20.8 kac-ft/yr

Variable	Units	Observed	Target	Limit	
Flow-Wtd-Mean Conc.	ppb	10.5	5.8	11.0	OK
Frequency > 10 ppb	%	32.1	12.1	53.1	OK

Longterm Limits



12-Month Rolling Values, Water Years Ending September 30

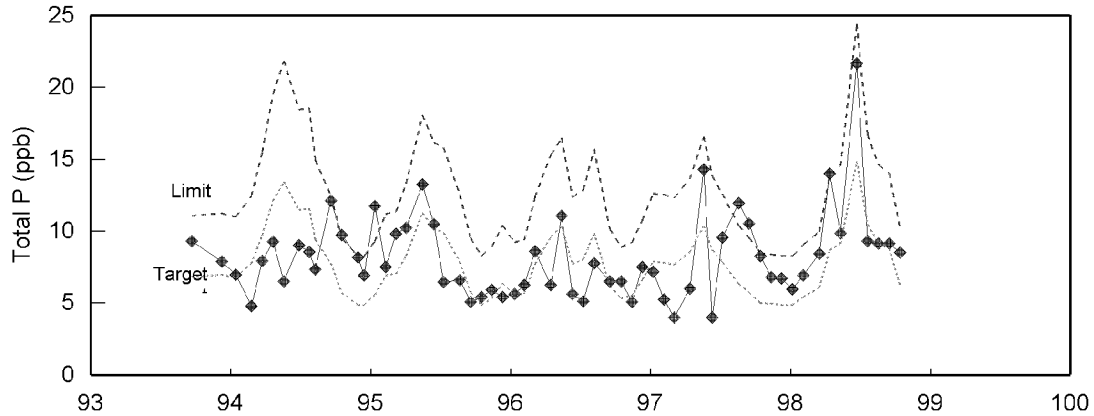
Marsh Phosphorus Levels

Loxahatchee National Wildlife Refuge

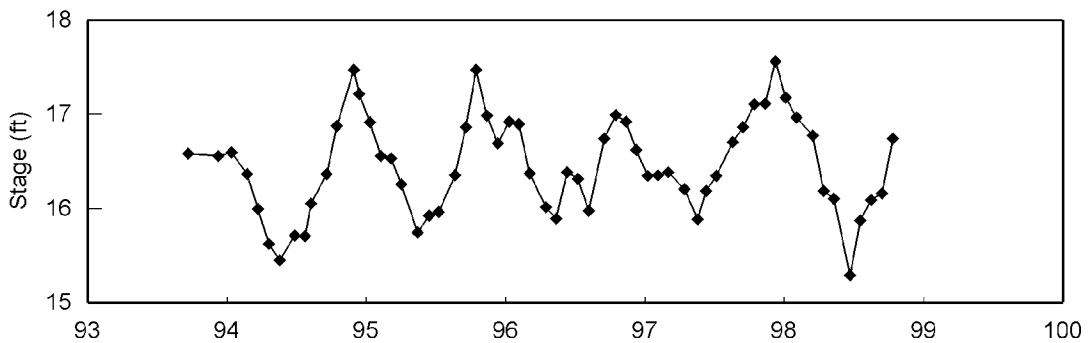
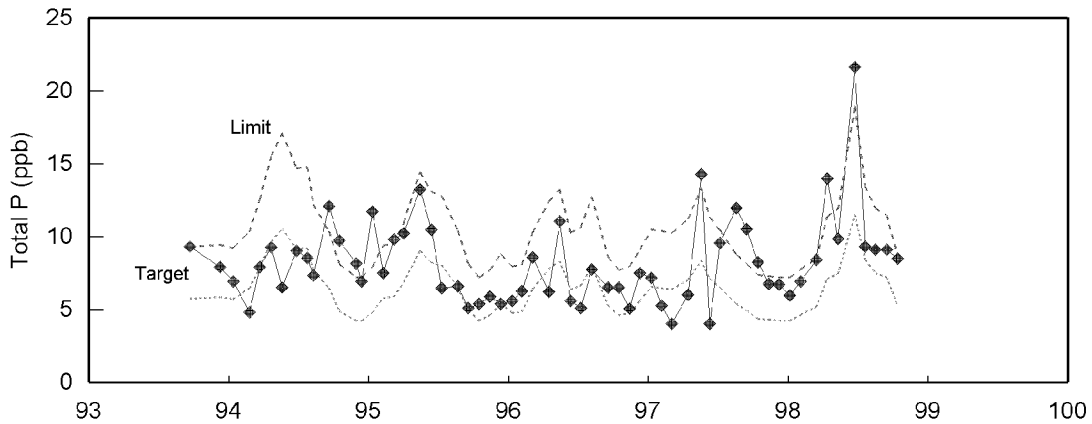
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Last Sampling Date	10/13/98	<u>Summary for Last 12 Months</u>	
Stage	16.74 ft	First Date	11/12/97
Stations Sampled	10 out of 14	Last Date	10/13/98
Geometric Mean TP	8.5 ppb	Number of Sampling Event	12
Standard Error	0.5 ppb	Interim Limit Exceeded	1
Median TP	9.0 ppb	Longterm Limit Exceeded	1
Interim Target	6.2 ppb		
Interim Limit	10.1 ppb	OK	Data Set--> SFWMD
Longterm Target	5.3 ppb		
Longterm Limit	8.6 ppb	OK	

Interim Limits



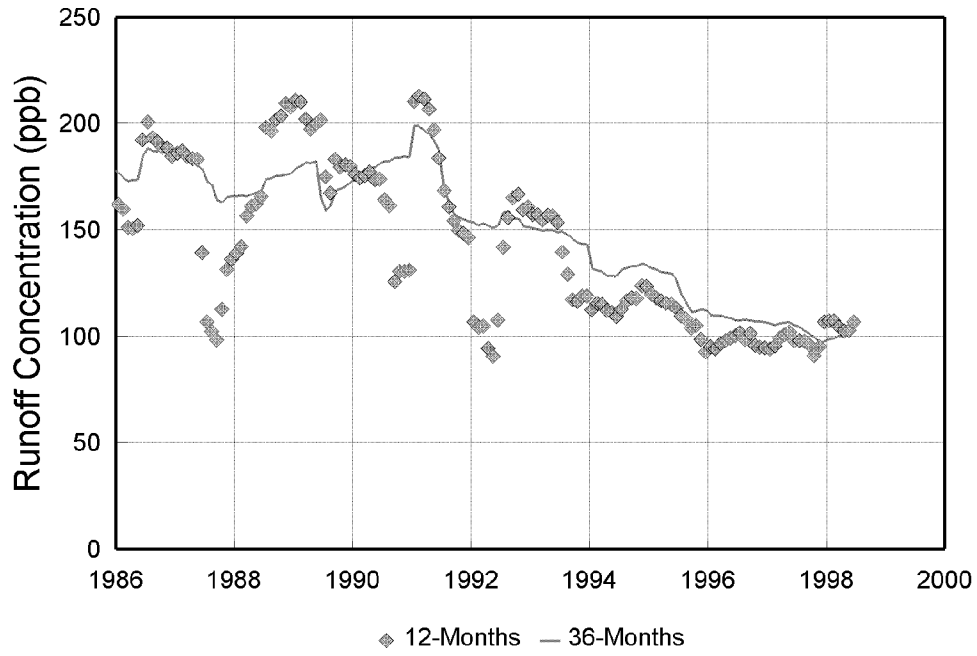
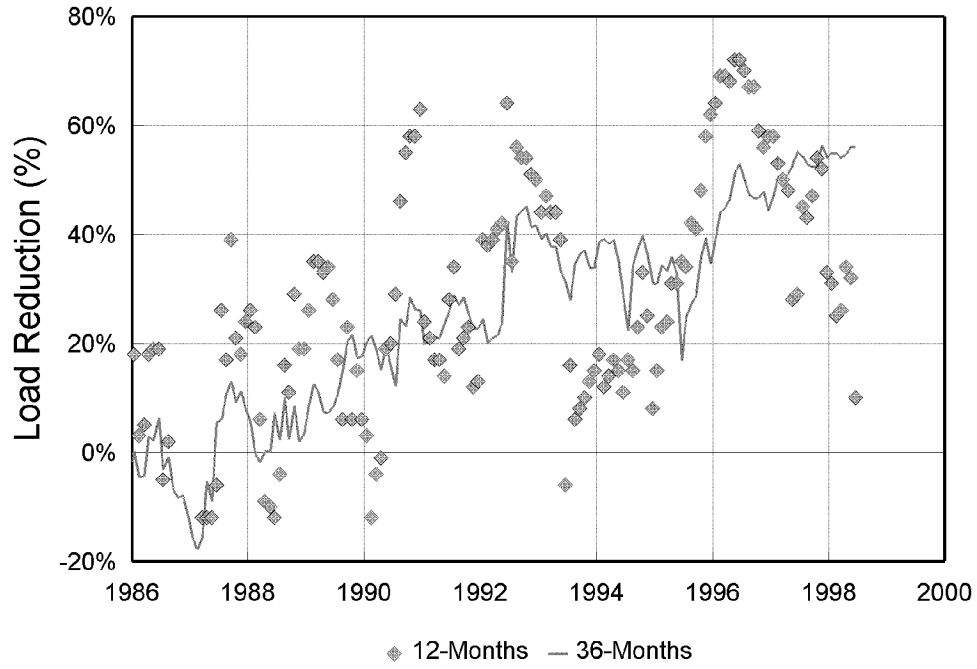
Longterm Limits



Note: Results for June 1998 would not be considered in determining compliance because stage was below 15.42 ft

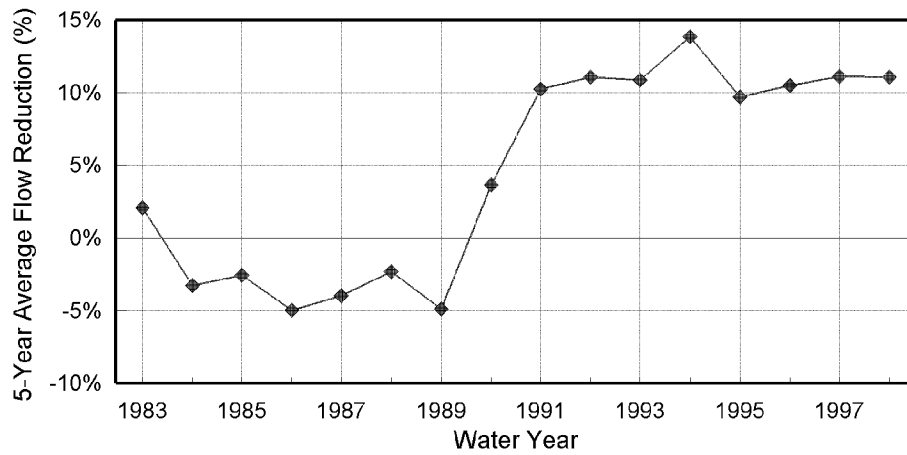
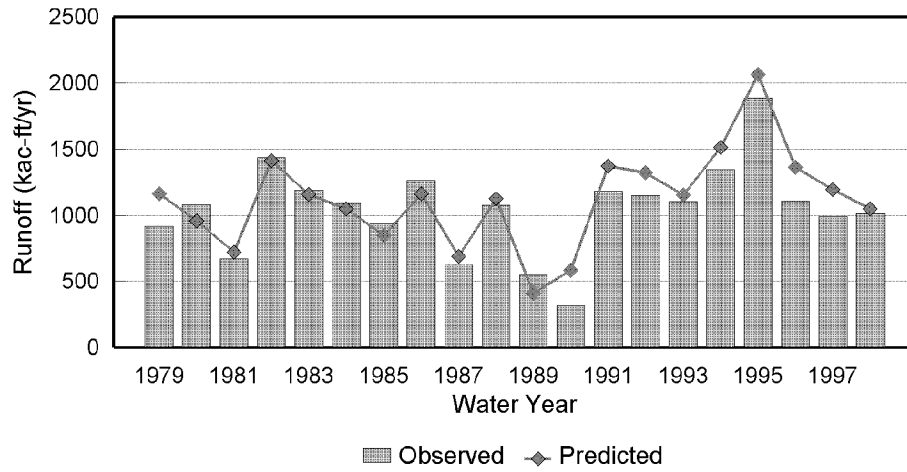
EAA Basin Tracking

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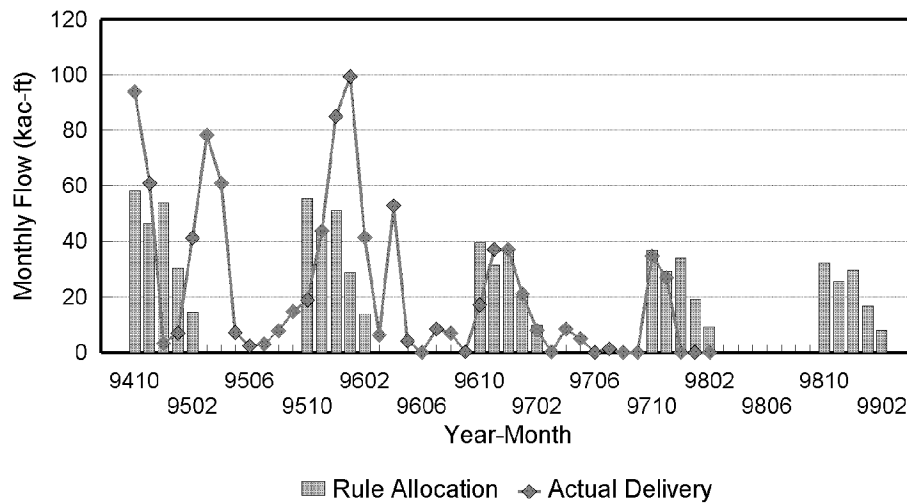


EAA Runoff Volumes

BMP Replacement Water Rule



Deliveries from Lake Okeechobee to WCA's



Water Years Ending September 30

Everglades Nutrient Removal Project

Monthly Time Series

Updated Thru 9809

01/12/99

