

### SETTLEMENT AGREEMENT REPORT

January - March 2014

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Section Leader

Compliance Assessment & Reporting Section
Water Quality Bureau

Technical Oversight Committee
July 29, 2014
Revised on October 17, 2014

Revised on October 17, 2014 to correct the legend on slide 5.



#### **SUMMARY**

Month			etric Mean htration (ppb)  Long-term Level (ppb)			Mean Stage (feet NGVD 29)		Number of Samples		
Arthur R.	Arthur R. Marshall Loxahatchee National Wildlife Refuge									
Jan 2014			5.2	10.1		16.41		12		
Feb 201	Feb 2014		7.4 9.		1	16.61		14		
Mar 20:	Mar 2014		6.1	9.	.7 16		.6.49 1		14	
12-Month Period Ending Tota		l Flow	Flow-weight		ited Mean Long-tern		m Limit Grea		of Sampling Events ter than 10 ppb	
		c-ft)							Observed	
Everglades National Park – Shark River Slough										
Jan 2014	The quarterly flow and TP data for this table is posted separately on the TOC website. The annual									
Feb 2014	compliance result will be published in this report for the 12-month flow-weighted mean TP concentration									
Mar 2014	for the federal water year ending on September 30 when the final approved flow data is available.									
Everglades National Park – Taylor Slough and Coastal Basins										
Jan 2014	23	3.2	4.6	;	11.	0	53.1		1.3	
Feb 2014	24	l5.1	4.5	;	11.	0	53.1		0.0	
Mar 2014	24	l6.7	4.5	j	11.	0	53.1		0.0	



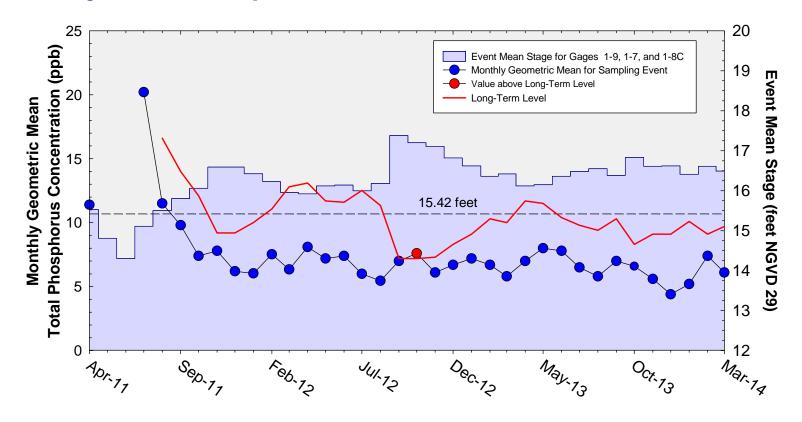
### Refuge TP Compliance Tracking For January 2014 – June 2014

Month	Geometric Mean TP Concentration (ppb)	Long-Term Level (ppb) Effective 12/31/2006	Average Stage (feet NGVD 29)	Number of Samples
Jan-2014	5.2	10.1	16.41	12
Feb-2014	7.4	9.1	16.61	14
Mar-2014	6.1	9.7	16.49	14
Apr-2014	6.1	11.0	16.23	12
May-2014	8.1	14.1	15.79	9
Jun-2014	6.6	16.0	15.56	6

Note: April to June 2014 values are preliminary.



### A.R.M Loxahatchee National Wildlife Refuge Monthly Total Phosphorus Geometric Mean Concentrations

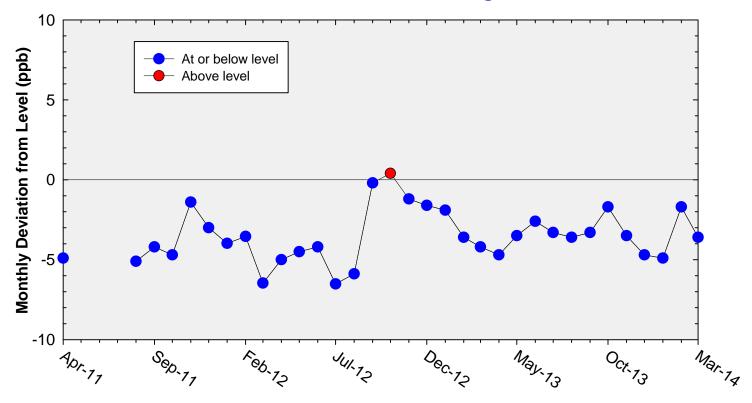


Note: Long-term level was not applicable for May 2011, June 2011, and July 2011 (sampling day average stages < 15.42 ft).



### A.R.M Loxahatchee National Wildlife Refuge

Deviation of monthly geometric mean total phosphorus concentrations with calculated long-term levels



Note: Long-term level was not applicable for May 2011, June 2011, and July 2011 (sampling day average stages < 15.42 ft).



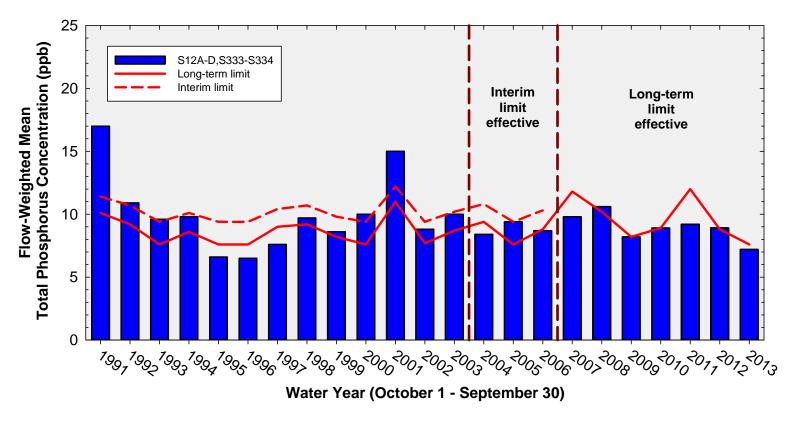
## Shark River Slough TP Concentration Compliance Interim Tracking for January 2014 – March 2014

(October 2013 – March 2014 Flow Data for \$12s are Provisional)

12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration (ppb)	Long-Term Limit (ppb) Effective 12/31/2006	Percent of Sampling Events Greater than 10 ppb		
rcillu				Guideline	Observed	
Feb 2013 - Jan 2014	976.7	7.2	8.0	42.0	26.1	
Mar 2013 - Feb 2014	1005.3	7.3	7.9	41.3	26.1	
Apr 2013 - Mar 2014	1044.8	7.4	7.7	40.5	25.0	



## Annual Flow-weighted Mean Concentrations Inflows to ENP through Shark River Slough

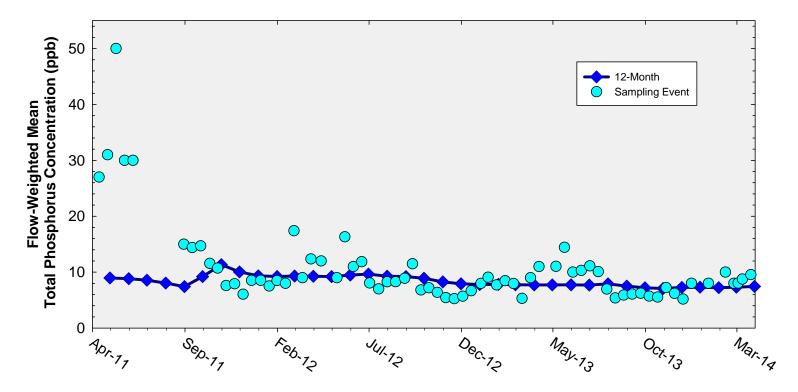


12-month FWMC at the end of each water year compared to the TP interim and long-term limits



## Flow-Weighted Mean Concentrations Inflows to ENP through Shark River Slough

(October 2013 - March 2014 Flow Data for \$12s are Provisional)

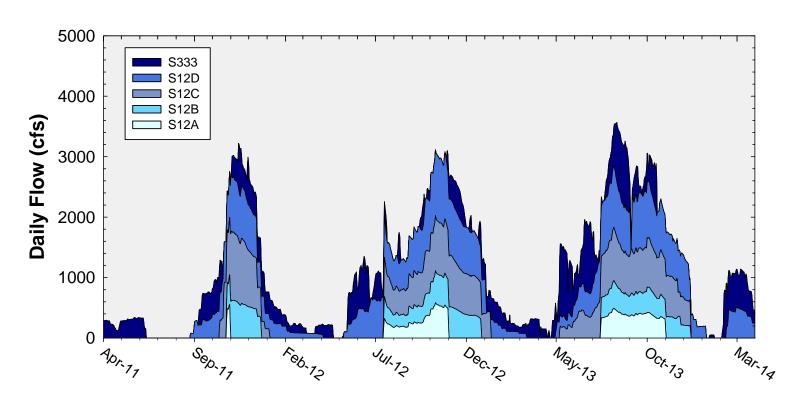


12-month FWMC at the end of each month and the composite TP concentration for each sampling event



### **Shark River Slough Daily Flows**

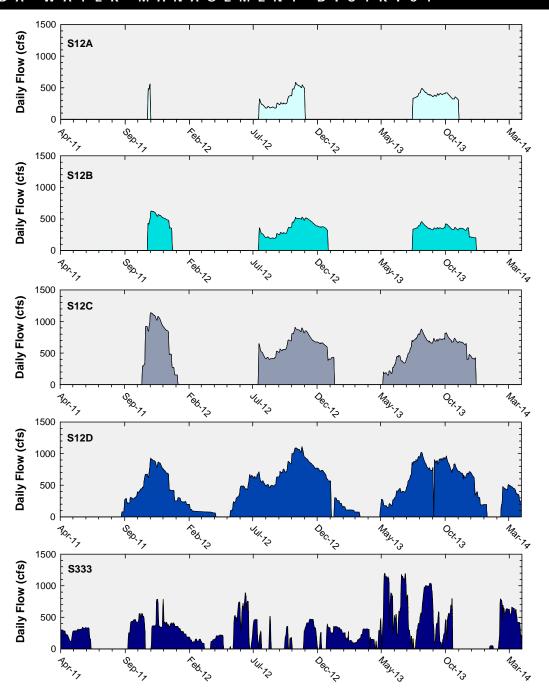
(October 2013 - March 2014 Flow Data for \$12s are Provisional)





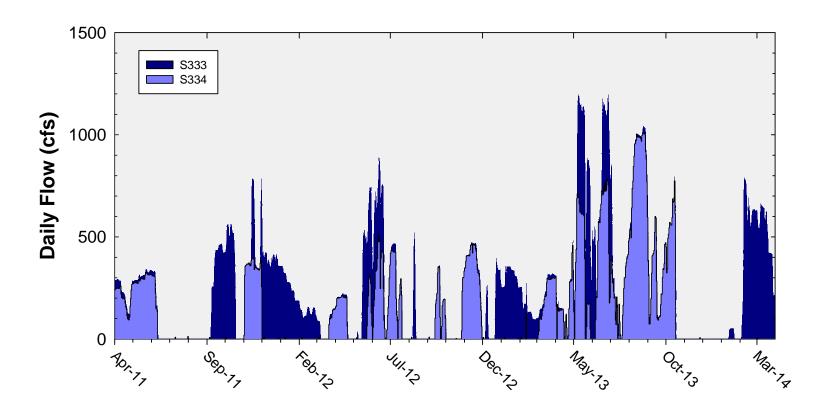
# Daily Flows at individual inflow structures to Shark River Slough

(October 2013 – March 2014 Flow Data for S12s are Provisional)





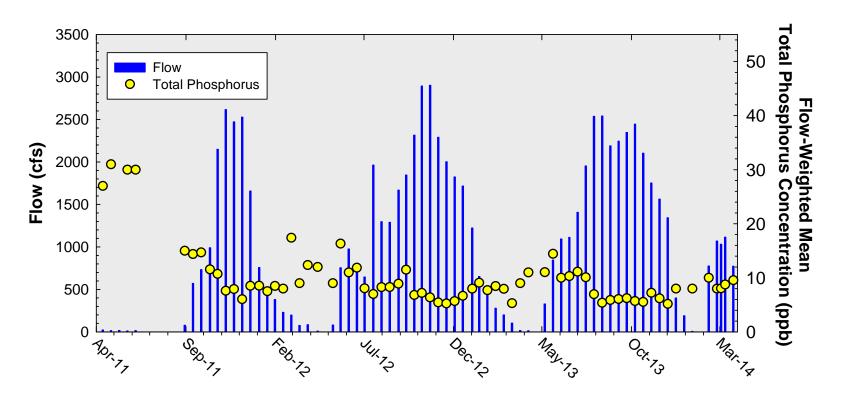
### Daily Flows at S333 and S334





## Shark River Slough Sampling Event Flow and FWMC

(October 2013 – March 2014 Flow Data for \$12s are Provisional)



Flow at Shark River Slough structures and the corresponding TP FWMCs for individual sampling events



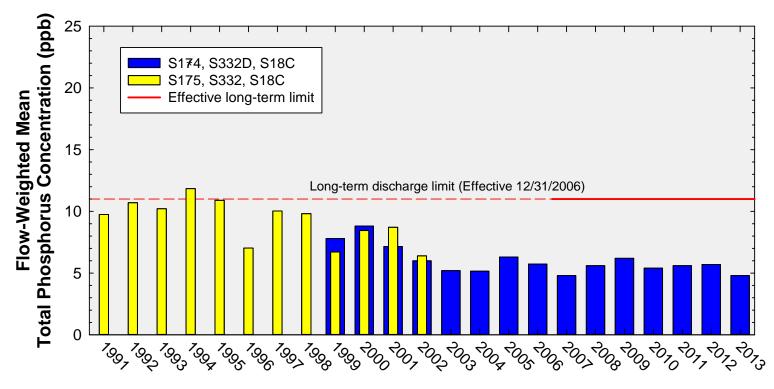
# Taylor Slough and Coastal Basins TP Concentration Compliance Tracking for January 2014 – March 2014

12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration (ppb)	Long-Term Limit (ppb) Effective 12/31/2006	Percent of Sampling Events Greater than 10 ppb	
1 51104				Guideline	Observed
Feb 2013 - Jan 2014	233.2	4.6	11.0	53.1	1.3
Mar 2013 - Feb 2014	245.1	4.5	11.0	53.1	0.0
Apr 2013 - Mar 2014	246.7	4.5	11.0	53.1	0.0



### **Annual Flow-Weighted Mean Concentrations**

Inflows to the ENP through Taylor Slough and Coastal Basins



Water Year (October 1 - September 30)

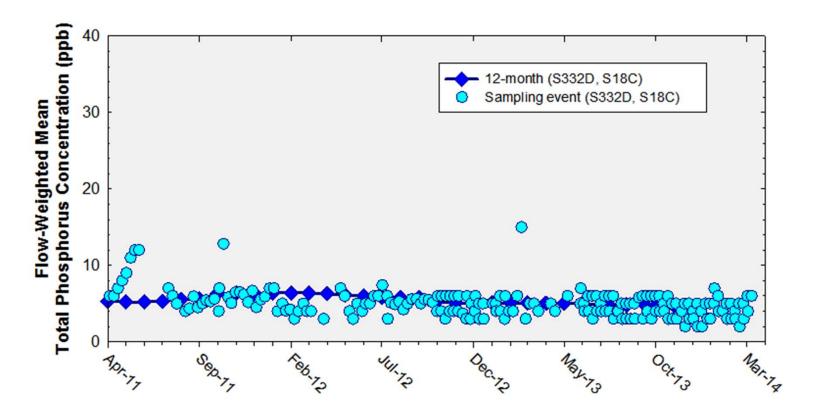
The 12-month FWMC at the end of each water year compared to the 11 ppb long-term TP limit

\* S174 was plugged in September 2007



### Flow-Weighted Mean Concentrations

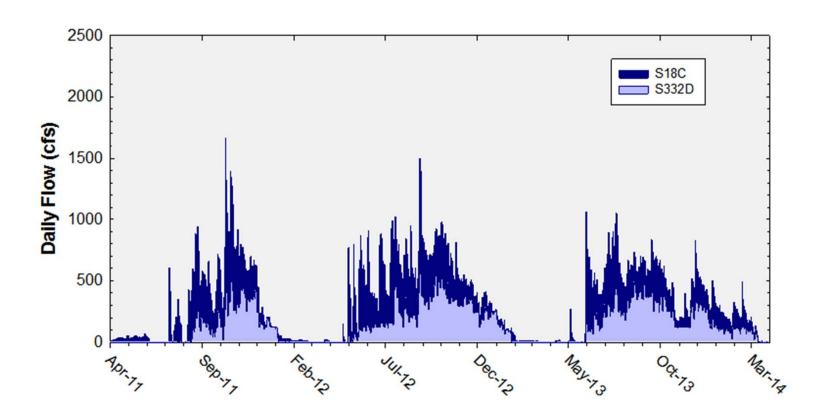
Inflows to the ENP through Taylor Slough and Coastal Basins



The 12-month FWMC at the end of each month and the composite TP concentration for each sampling event

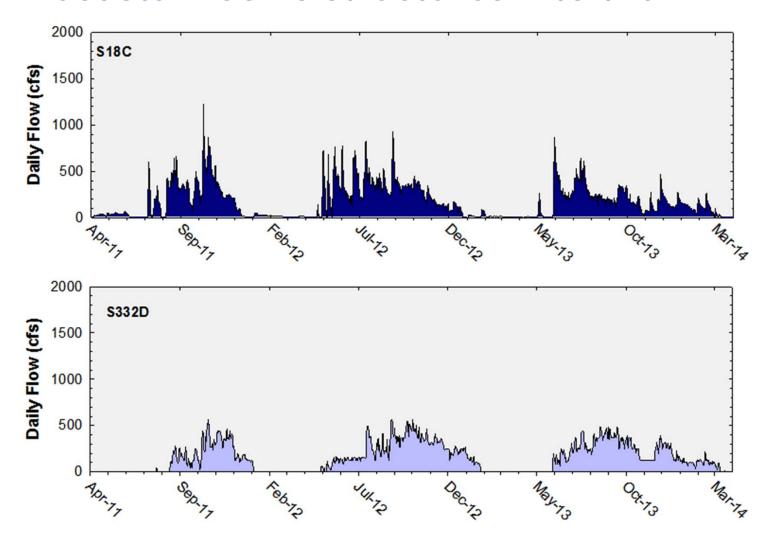


## Daily Flows at Taylor Slough and Coastal Basins structures into the ENP



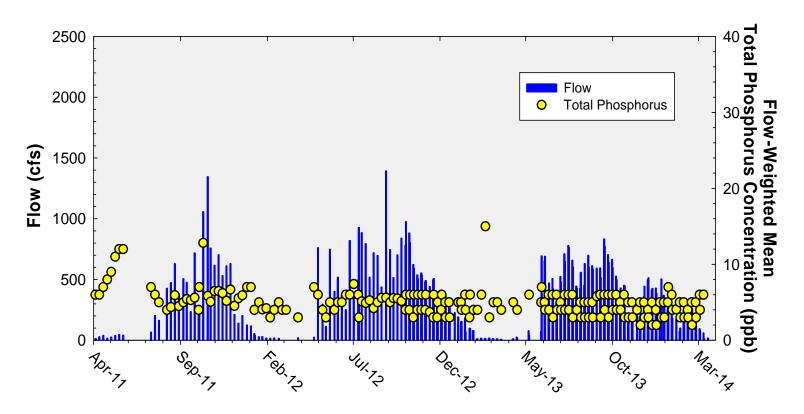


## Daily Flows at individual Taylor Slough and Coastal Basins structures into the ENP





## Taylor Slough and Coastal Basins Sampling Event Flow and FWMC



Flow at Taylor Slough and Coastal Basins structures and the corresponding TP FWMCs for individual sampling events



