## Technical Oversight Committee March 1, 2011

## SETTLEMENT AGREEMENT REPORT

October - December 2010

#### Stuart Van Horn

Section Leader, Routine and Compliance Reporting Restoration Sciences Department

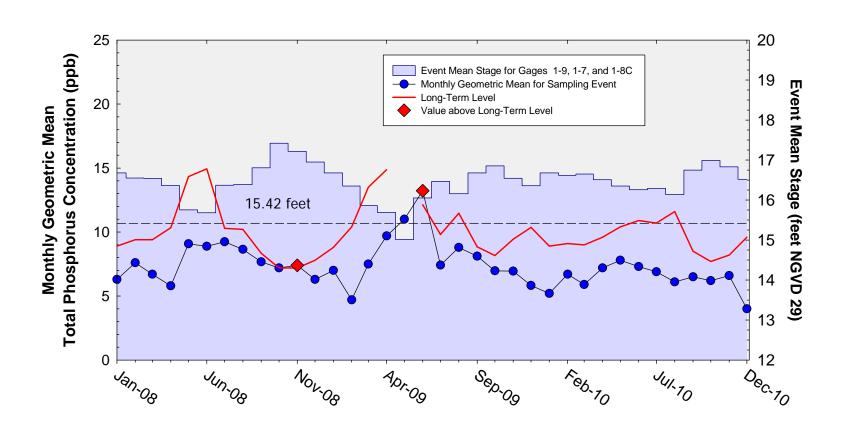


#### **SUMMARY**

Month			netric Mean Long-ter entration (ppb) (pp			_		Number of Samples		
Arthur R. Marshall Loxahatchee National Wildlife Refuge										
Oct-2010			6.2	7.7		16.99		14		
Nov-2010			6.6		2		16.83		14	
Dec-2010			4.0 9.		6	16.52		13		
12-Month Period Ending  Total		l Flow	12-Month Flow-weighted Mean		Long-term Limit		Percent of Sampling Events Greater than 10 ppb			
		ic-ft)	TP Concentra		(pp	(ppb)		е	Observed	
Everglade	Everglades National Park – Shark River Slough									
Oct-2010	75	57.3	9.0		9.1	I	47.5		50.0	
Nov-2010	74	12.5	9.0		9.2	2	47.9		46.2	
Dec-2010	73	39.1	9.0		9.2		48.0		46.2	
Everglades National Park – Taylor Slough and Coastal Basins										
Oct-2010	34	19.1	5.5	5	11.	0	53.1		0.0	
Nov-2010	10 328.9		5.5		11.	0	53.1		0.0	
Dec-2010	283.3		5.4		11.	0	53.1		0.0	



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

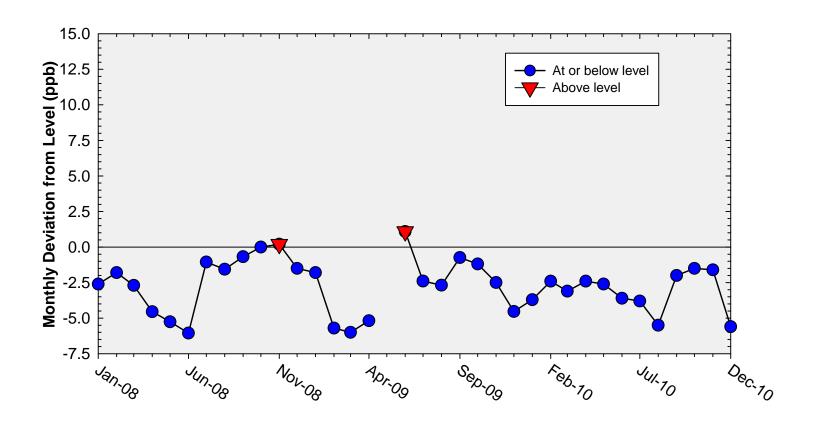


Note: Long-term level was not applicable for May 2009 (average stage < 15.42 ft).



#### 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 2009 (average stage < 15.42 ft).



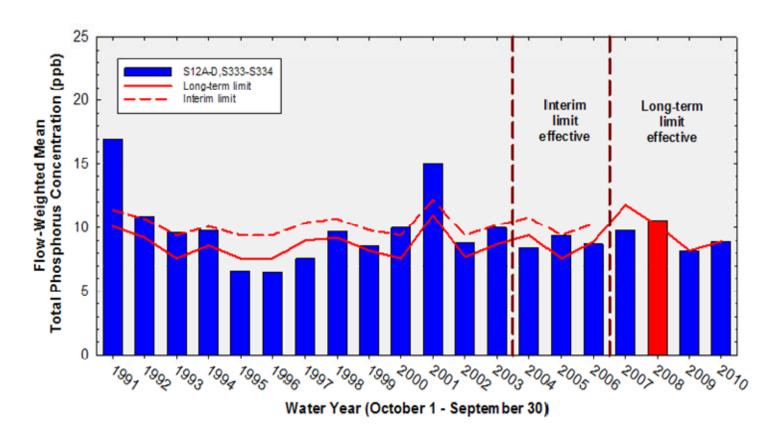
## Refuge TP Compliance Tracking for October 2010 – February 2011

Month	Geometric Mean TP Concentration (ppb)	Long-Term Level (ppb) Effective 12/31/2006	Average Stage (ft NGVD 29)	Number of Samples
Oct-2010	6.2	7.7	16.99	14
Nov-2010	6.6	8.2	16.83	14
Dec-2010	4.0	9.6	16.52	13
Jan-2011	5.1	10.7	16.29	10
Feb-2011	6.0	11.3	16.19	10

Note: January and February 2011 values are preliminary.



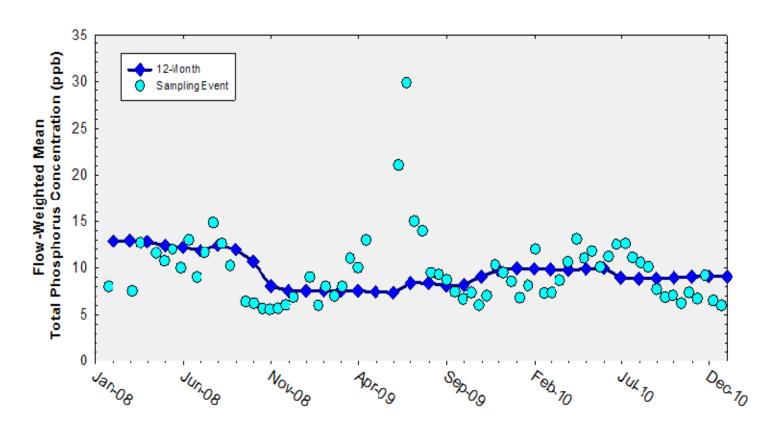
## Annual Flow-weighted Mean Concentrations Inflows to ENP through Shark River Slough



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



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

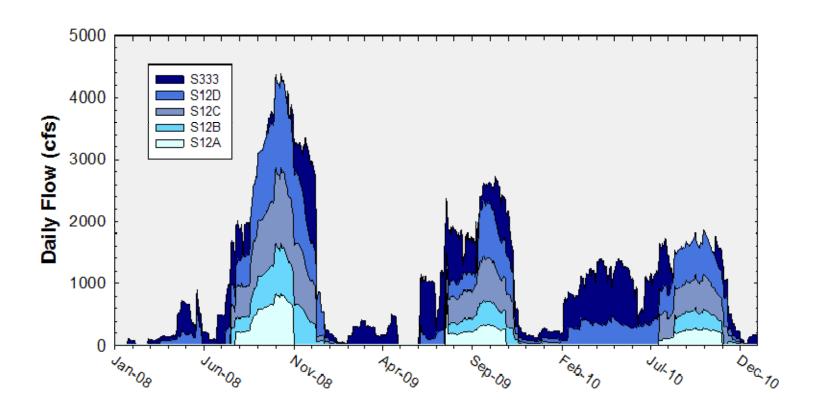


# Shark River Slough TP Concentration Compliance Tracking for October 2010 – December 2010

12-Month	Total Flow	Flow-Weighted Mean TP	Long-Term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb		
Period	(kac-ft)	Concentration (ppb)	Effective 12/31/2006	Guideline	Observed	
Nov 2009 - Oct 2010	757.3	9.0	9.1	47.5	50.0	
Dec 2009 - Nov 2010	742.5	9.0	9.2	47.9	46.2	
Jan 2010 - Dec 2010	739.1	9.0	9.2	48.0	46.2	

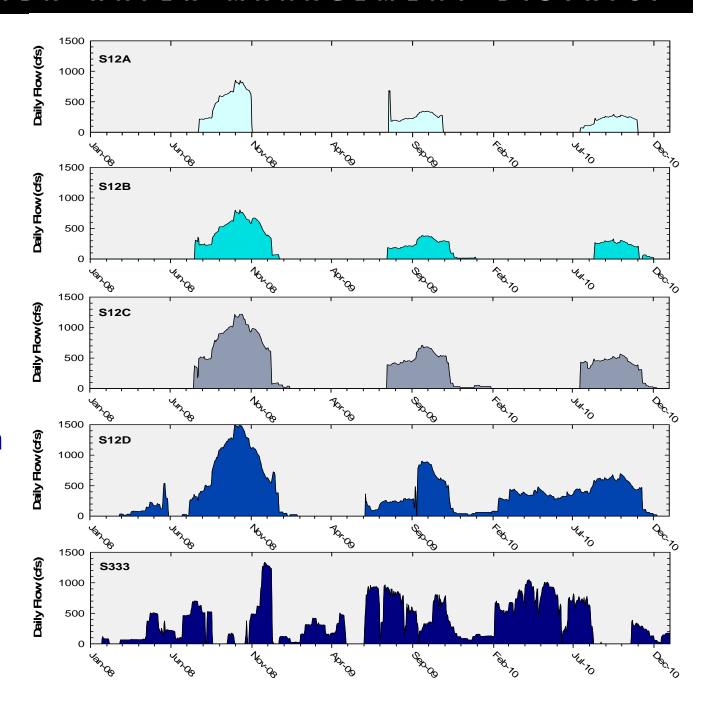


#### **Shark River Slough Daily Flows**



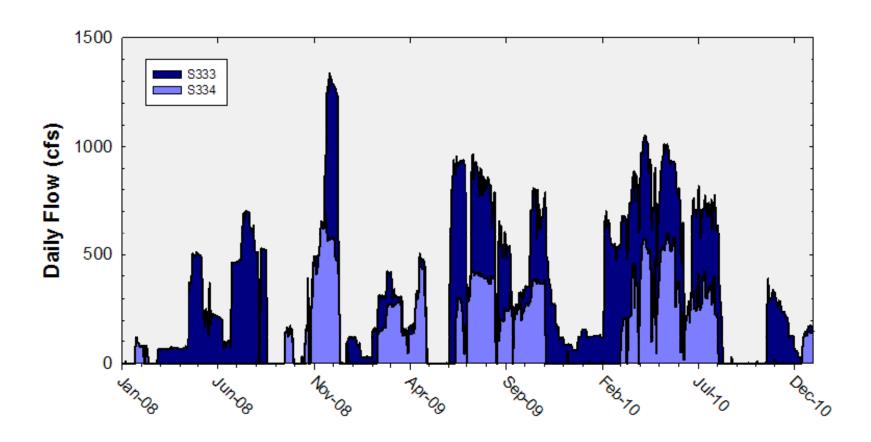


Daily Flows at individual inflow structures to Shark River Slough



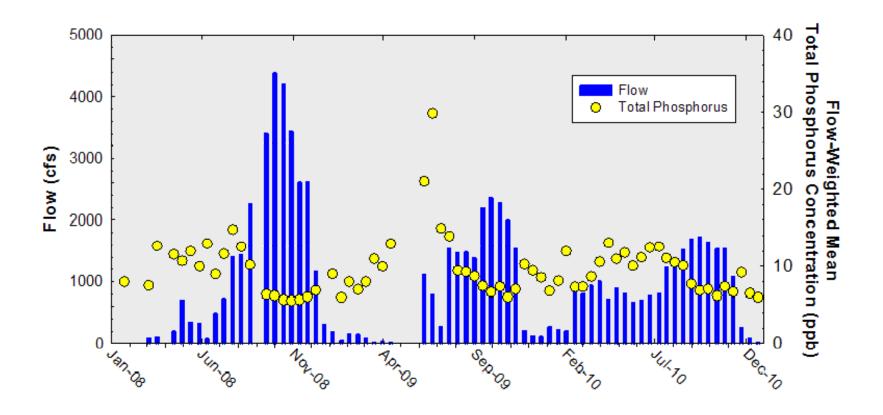


#### Daily Flows at S333 and S334





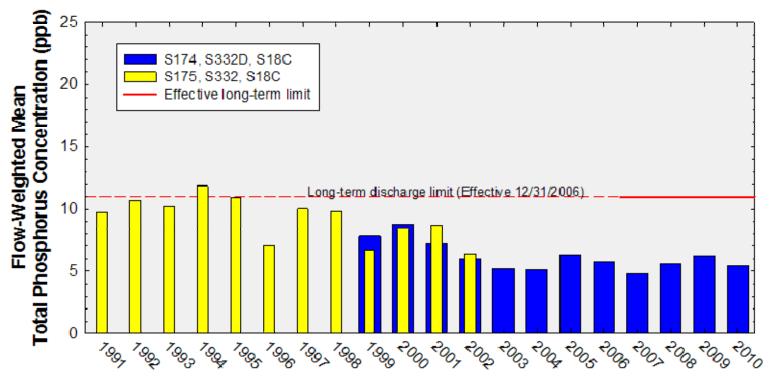
## Shark River Slough Sampling Event Flow and FWMC



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



## Annual Flow-Weighted Mean Concentrations Inflows to the ENP through Taylor Slough and Coastal Basins

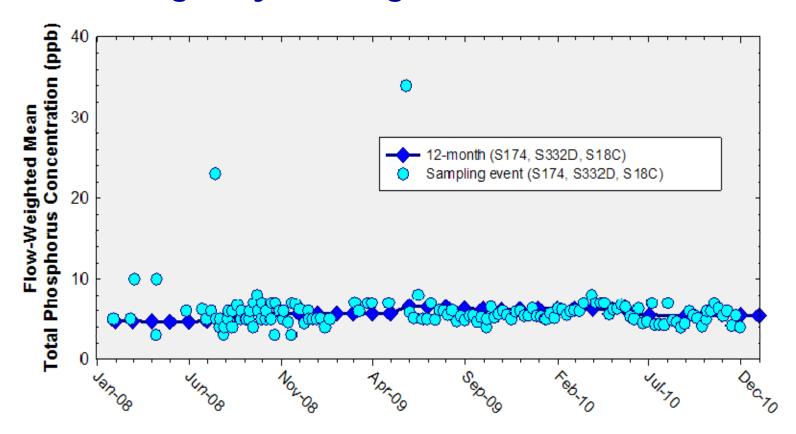


Water Year (October 1 - September 30)

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



## 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

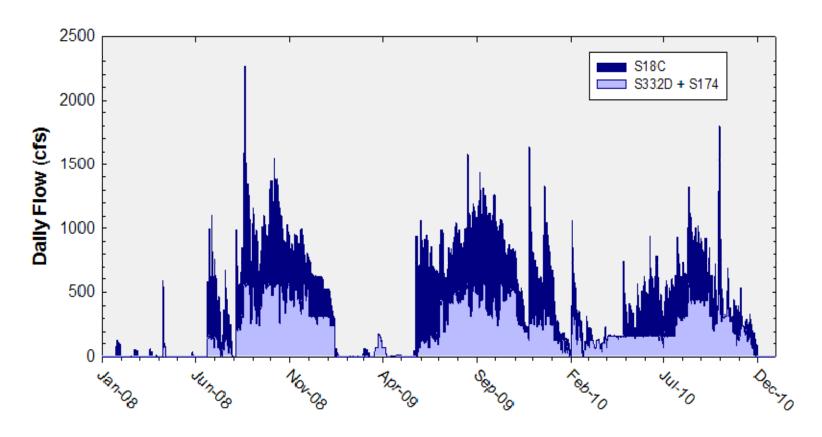


# Taylor Slough and the Coastal Basins TP Concentration Compliance Tracking for October 2010 – December 2010

12-Month	Total Flow	Flow-Weighted Mean TP	Long-Term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb	
Period	(kac-ft)	Concentration (ppb)	Effective 12/31/2006	Guideline	Observed
Nov 2009 - Oct 2010	349.1	5.5	11.0	53.1	0.0
Dec 2009 - Nov 2010	328.9	5.5	11.0	53.1	0.0
Jan 2010 - Dec 2010	283.3	5.4	11.0	53.1	0.0



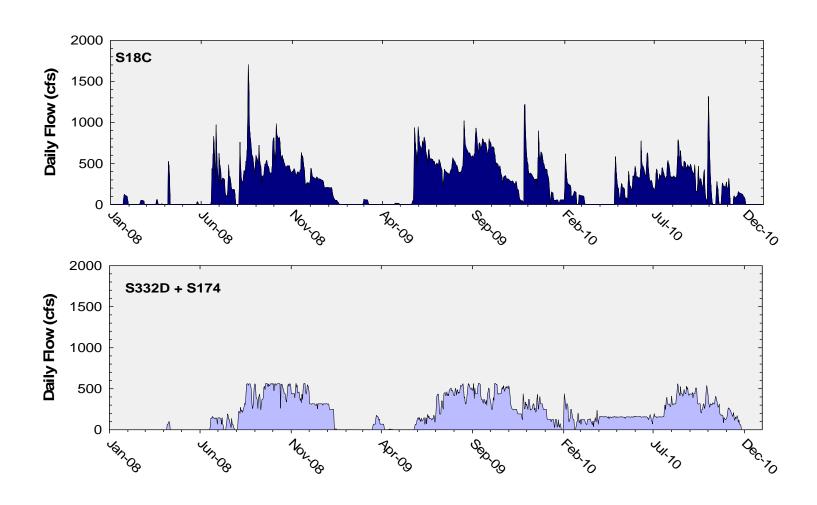
#### **Taylor Slough and Coastal Basins Daily Flows**



Daily flows into Everglades National Park through Taylor Slough and Coastal Basins

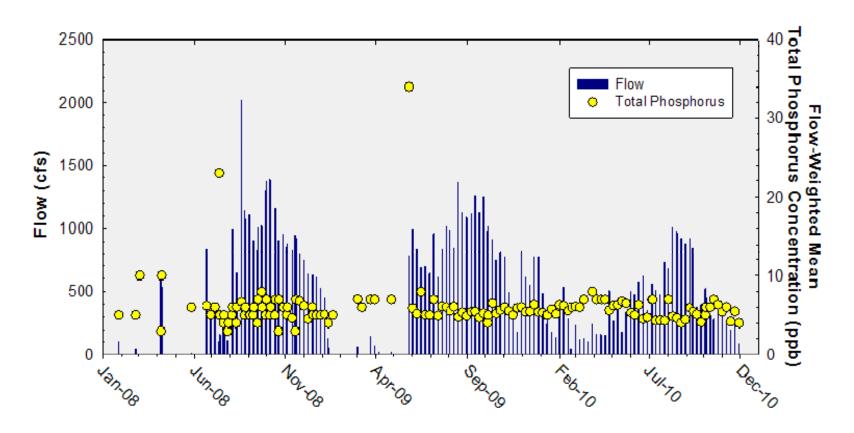


## Daily Flows at individual Taylor Slough and Coastal Basins structures into the ENP





#### 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

