

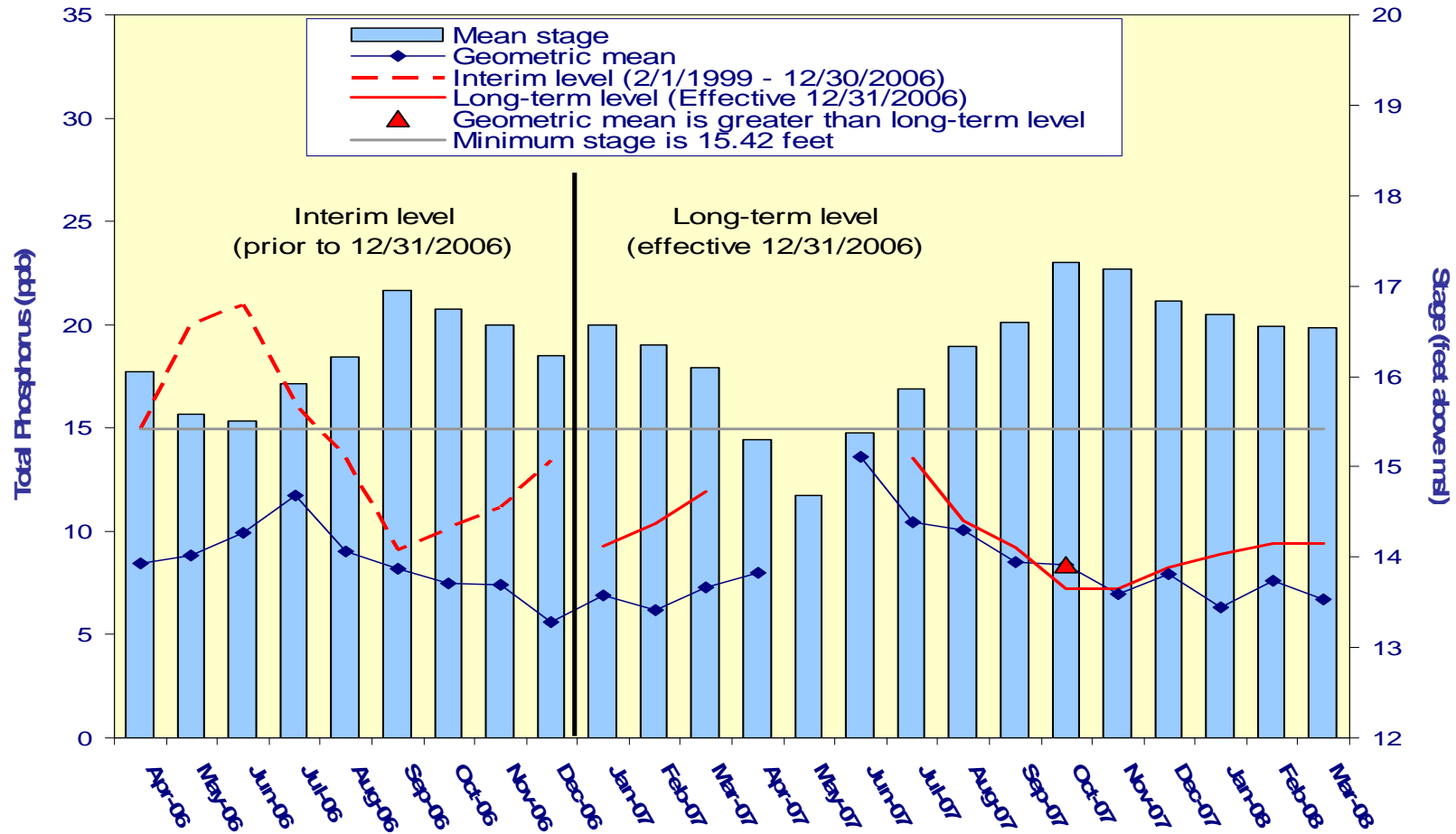
# Settlement Agreement

January - March 2008

Prepared for the  
Technical Oversight Committee

May 20, 2008

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



**Loxahatchee  
National Wildlife  
Refuge**

**Total Phosphorus  
Compliance  
Tracking**

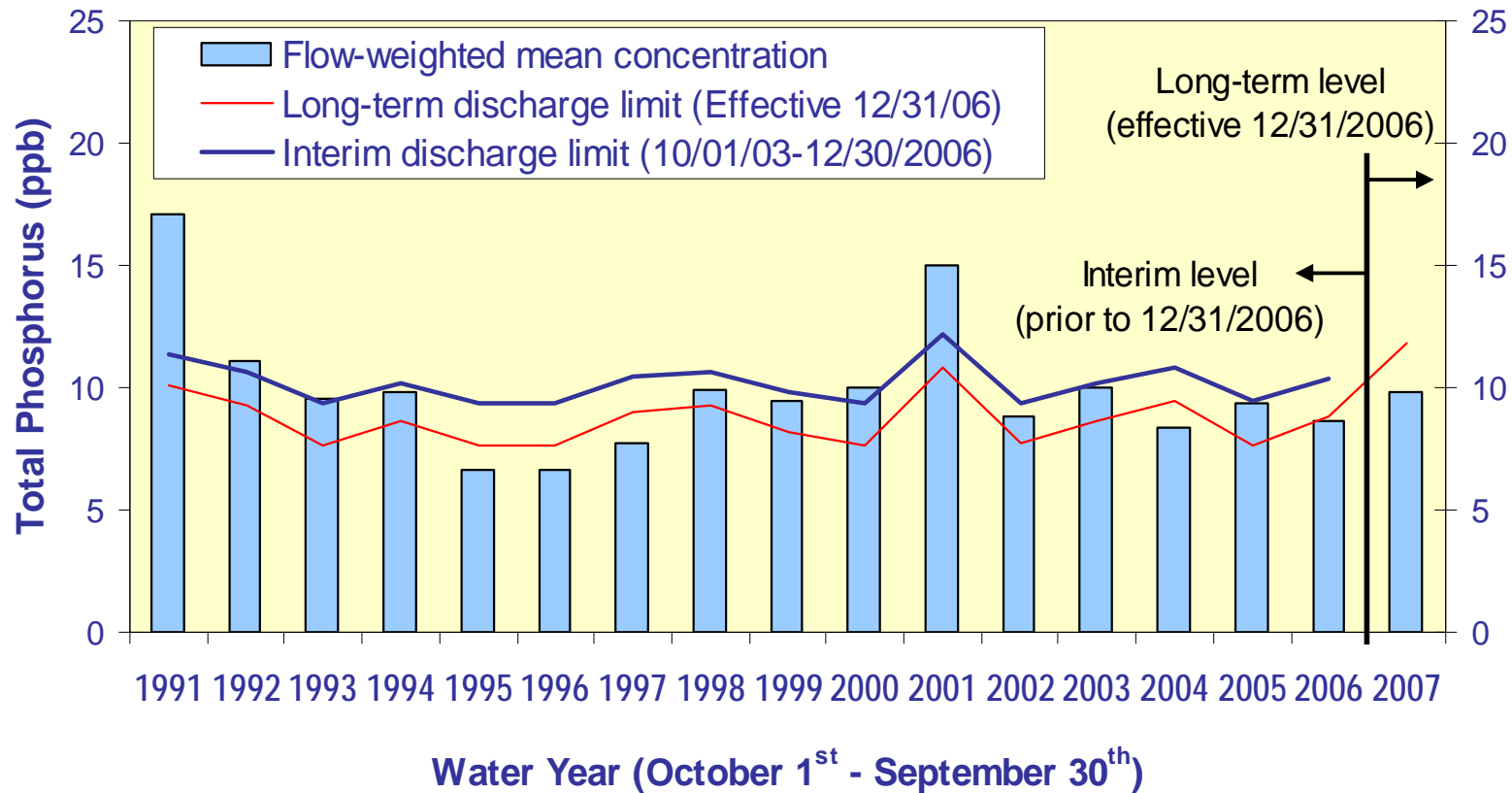
Month - Year	Geometric Mean Concentration	Interim Level <sup>a</sup> (ppb)	Long-Term Level <sup>a</sup> (ppb)	Average Stage <sup>b</sup> (ft NGVD)	Number of TP Samples	Number of Stage Measurements
	(ppb)	Effective 2/1/99-12/30/06	Effective 12/31/06			
Apr-2006	8.4	14.9	12.2	16.05	12	3
May-2006	8.8	20.1	15.9	15.58	10	3
Jun-2006	9.9	21.0	16.5	15.51	5	3
Jul-2006	11.7	16.1	13.0	15.92	9	3
Aug-2006	9.0	13.5	11.1	16.22	11	3
Sep-2006	8.2	9.1	7.8	16.96	14	3
Oct-2006	7.5	10.1	8.6	16.74	14	3
Nov-2006	7.4	11.1	9.4	16.56	14	3
Dec-2006	5.6	13.4	11.0	16.23	11	3
Jan-2007	6.9	11.1	9.3	16.57	14	3
Feb-2007	6.2	12.6	10.4	16.34	13	3
Mar-2007	7.3	14.5	11.8	16.10	10	3
Apr-2007	8.0	N/A	N/A	15.30	3	3
May-2007	n/a	N/A	N/A	14.68	0	3
Jun-2007	13.6	N/A	N/A	15.37	4	3
Jul-2007	10.4	16.8	13.5	15.86	13	3
Aug-2007	10.1	12.7	10.5	16.33	13	3
Sep-2007	8.5	10.9	9.2	16.59	14	3
Oct-2007	8.4	8.3	7.2	17.26	14	3
Nov-2007	7.0	8.3	7.2	17.19	14	3
Dec-2007	7.9	9.6	8.2	16.84	14	3
Jan-2008	6.3	10.5	8.9	16.68	14	3
Feb-2008	7.6	11.2	9.4	16.55	14	3
Mar-2008	6.7	11.2	9.4	16.54	14	3

## Refuge TP Compliance Tracking for January 2008 – April 2008

Month - Year	Geometric Mean Concentration	Interim Level (ppb)	Long-Term Level (ppb)	Average Stage (ft NGVD)	Number of TP Samples	Number of Stage Measurements
	(ppb)	Effective 2/1/99-12/30/06	Effective 12/31/06			
Jan-2008	6.3	10.5	8.9	16.68	14	3
Feb-2008	7.6	11.2	9.4	16.55	14	3
Mar-2008	6.7	11.2	9.4	16.54	14	3
Apr-2008	5.8	12.5	10.3	16.36	14	3

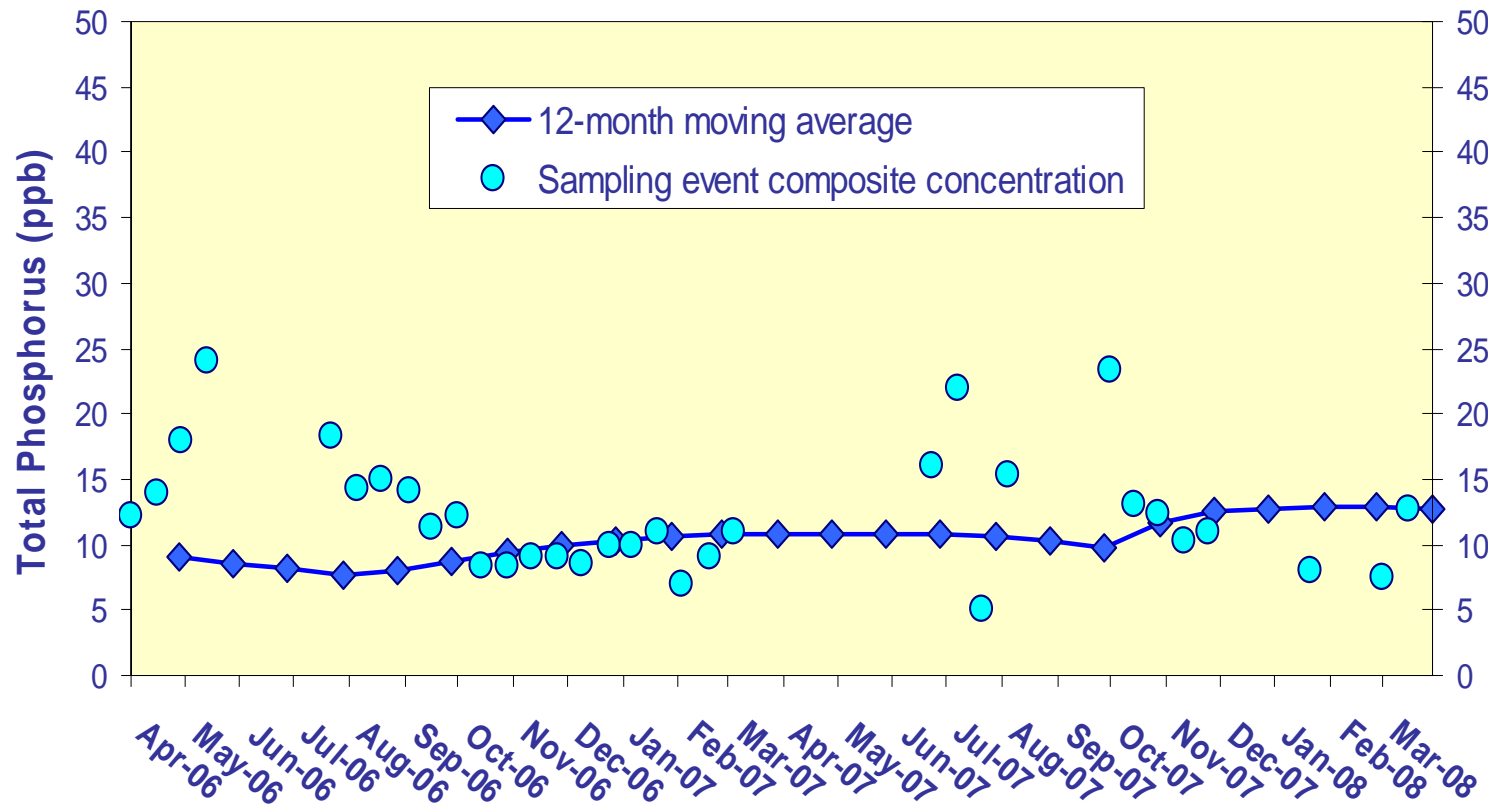
April 2008 values are preliminary.

## 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**

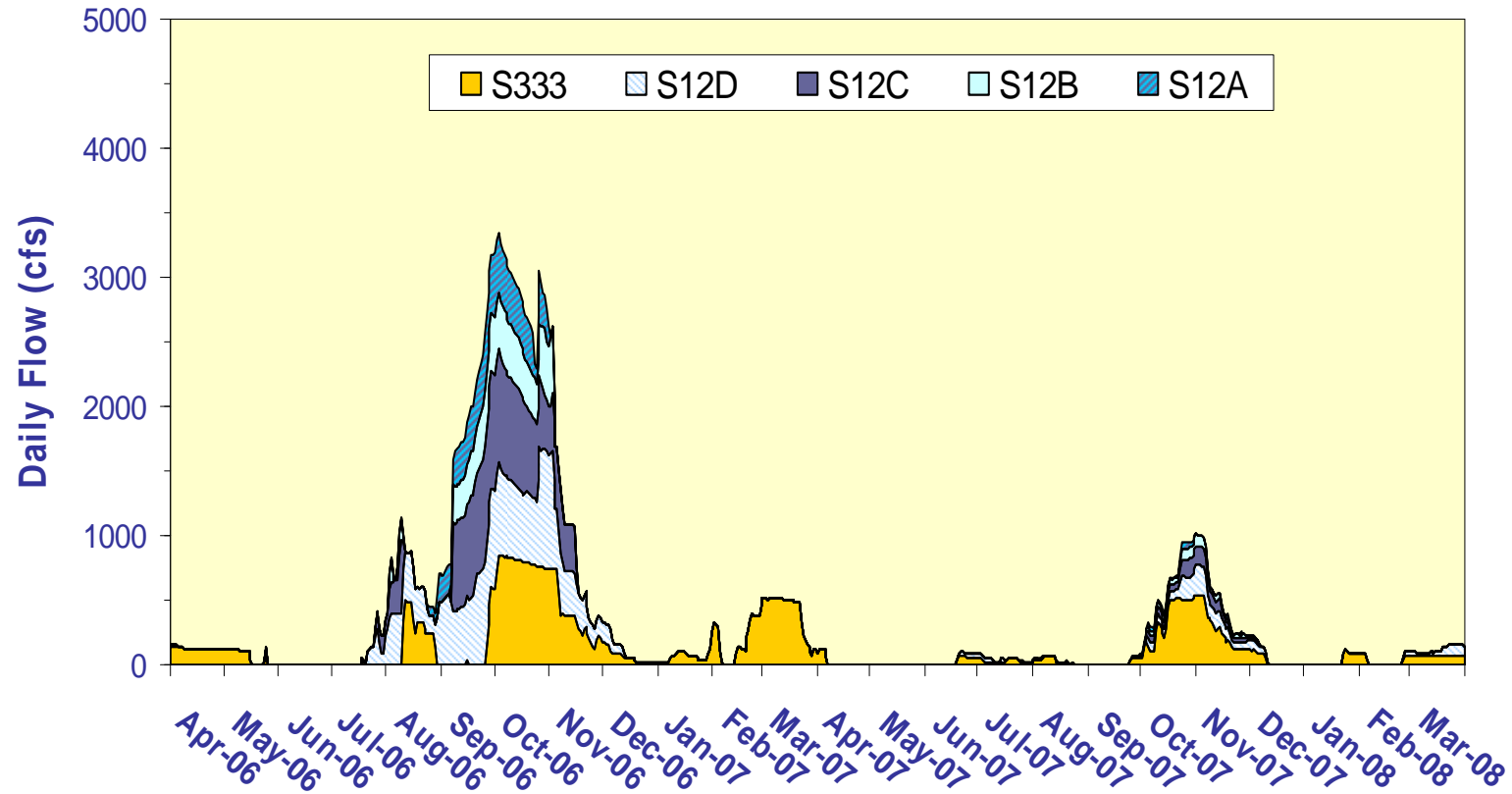
12-Month Period	Total Flow (kac-ft)	TP Flow Weighted Mean (ppb)	Interim Limit (ppb)	Long-Term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb	
			Effective 10/1/03-12/30/06	Effective 12/31/06	( <b>%</b> )	
					Guideline	Observed
5/1/2005 - 4/30/2006	1436.1 <sup>a</sup>	9.0	9.4	7.6	40.1	34.8
6/1/2005 - 5/31/2006	1395.5 <sup>a</sup>	8.5	9.4	7.6	40.1	31.8
7/1/2005 - 6/30/2006	1326.6 <sup>a</sup>	8.2	9.4	7.6	40.1	25.0
8/1/2005 - 7/31/2006	1113.3 <sup>a</sup>	7.7	9.4	7.6	40.1	26.3
9/1/2005 - 8/31/2006	914.7 <sup>b</sup>	8.1	9.9	8.3	43.5	36.8
10/1/2005 - 9/30/2006	814.1 <sup>b</sup>	8.7	10.3	8.8	46.0	45.0
11/1/2005 - 10/31/2006	779.6 <sup>b</sup>	9.5	10.5	9.0	46.9	50.0
12/1/2005 - 11/30/2006	642.8 <sup>b</sup>	10.0	11.1	9.7	50.8	50.0
1/1/2006 - 12/31/2006	507.9 <sup>b</sup>	10.3	11.8	10.5	55.0	50.0
2/1/2006 - 1/31/2007	446.1 <sup>b</sup>	10.7	12.1	10.9	57.0	55.0
3/1/2006 - 2/28/2007	442.4 <sup>c</sup>	10.8	12.1	10.9	57.2	52.4
4/1/2006 - 3/31/2007	456.0 <sup>c</sup>	10.8	12.0	10.8	56.7	57.1
5/1/2006 - 4/30/2007	449.5 <sup>c</sup>	10.8	12.1	10.8	56.9	52.6
6/1/2006 - 5/31/2007	445.5 <sup>c</sup>	10.7	12.1	10.9	57.1	47.1
7/1/2006 - 6/30/2007	447.6 <sup>c</sup>	10.8	12.1	10.8	57.0	50.0
8/1/2006 - 7/31/2007	444.6 <sup>c</sup>	10.6	12.1	10.9	57.1	47.4
9/1/2006 - 8/31/2007	401.0	10.3	12.3	11.1	58.6	44.4
10/1/2006 - 9/30/2007	289.7	9.8	13.0	11.8	62.6	37.5
11/1/2006 - 10/31/2007	147.9	11.7	13.8	12.7	67.9	50.0
12/1/2006 - 11/30/2007	121.2	12.6	13.9	12.8	68.9	62.5
1/1/2007 - 12/31/2007	118.2	12.8	14.0	12.8	69.1	71.4
2/1/2007 - 1/31/2008	115.8	12.9 <sup>d</sup>	14.0	12.9	69.2	69.2
3/1/2007 - 2/29/2008	106.8	12.9 <sup>d</sup>	14.0	12.9	69.5	81.8
4/1/2007 - 3/31/2008	88.9	12.8 <sup>d</sup>	14.1	13.0	70.2	75.0

## Shark River Slough TP Concentration Compliance Tracking for January 2008 – March 2008

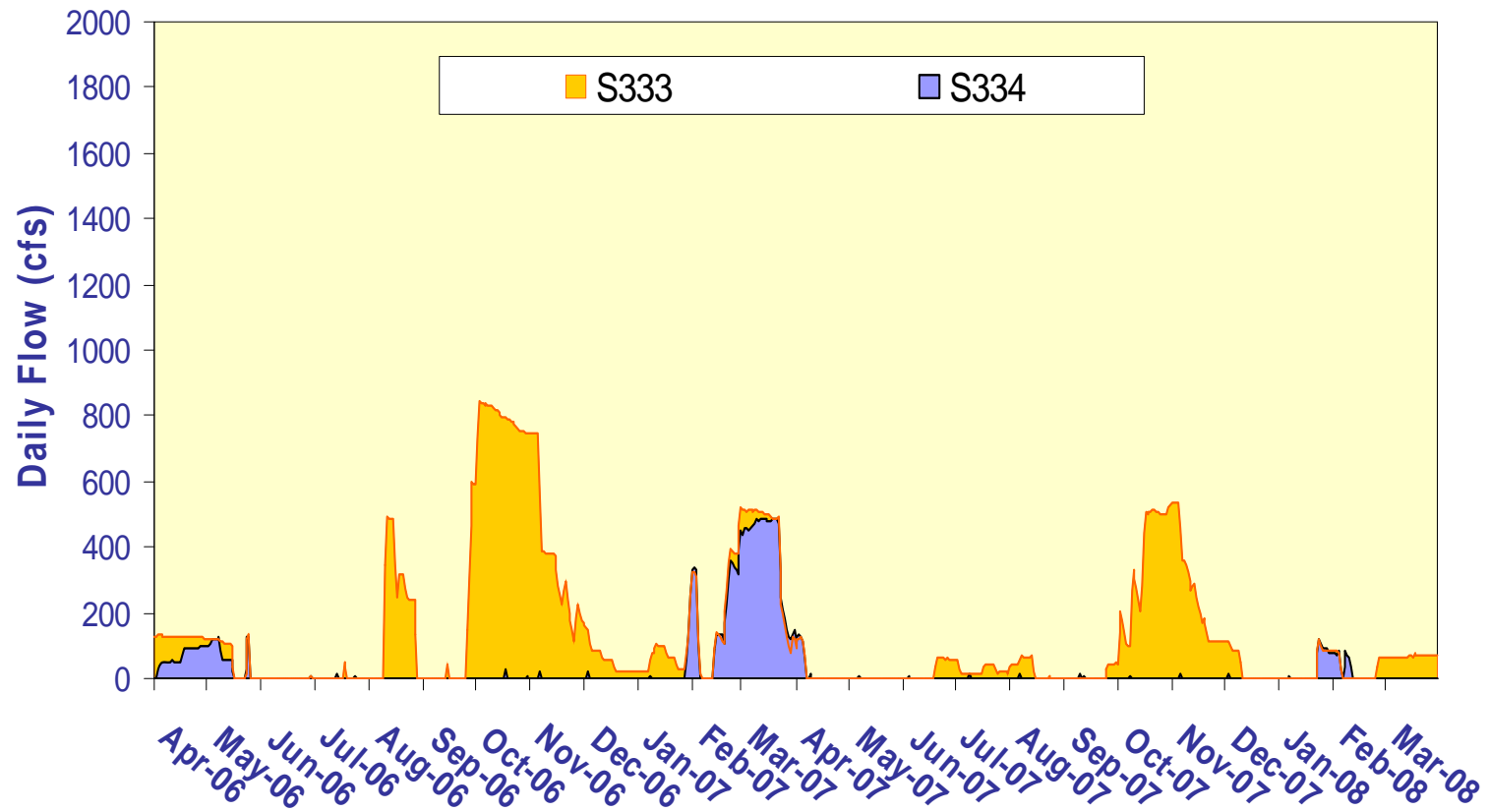
12-Month Period	Total Flow (kac-ft)	TP Flow Weighted Mean (ppb)	Interim Limit (ppb)	Long-Term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb	
			Effective	Effective	(%)	
			10/1/03-12/30/06	12/31/06	Guideline	Observed
2/1/2007 - 1/31/2008	115.8	12.9	14.0	12.9	69.2	69.2
3/1/2007 - 2/29/2008	106.8	12.9	14.0	12.9	69.5	<b>81.8</b>
4/1/2007 - 3/31/2008	88.9	12.8	14.1	13.0	70.2	<b>75.0</b>



## Shark River Slough Daily Flows by Structure

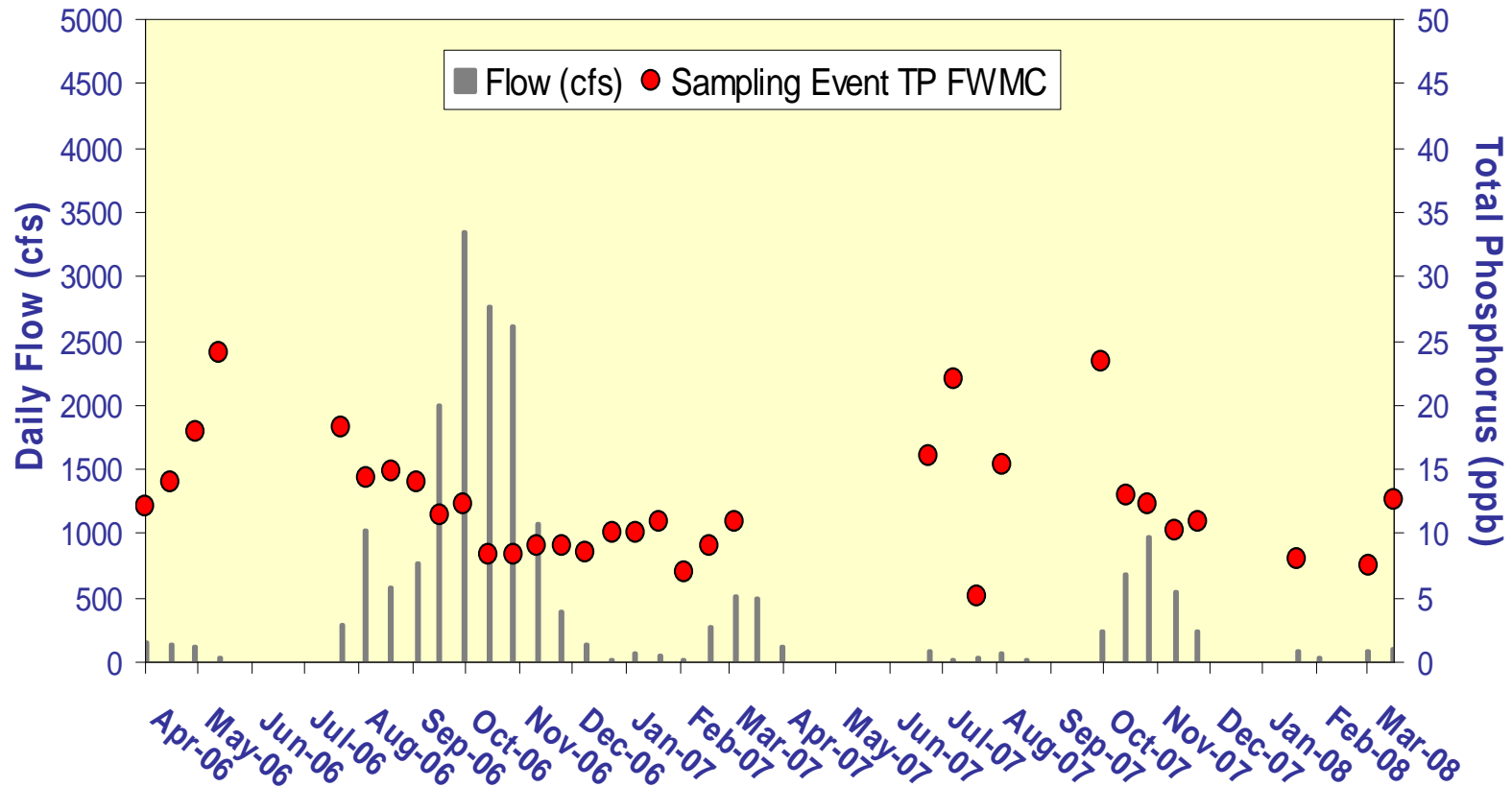


## Daily flow at S333 and S334



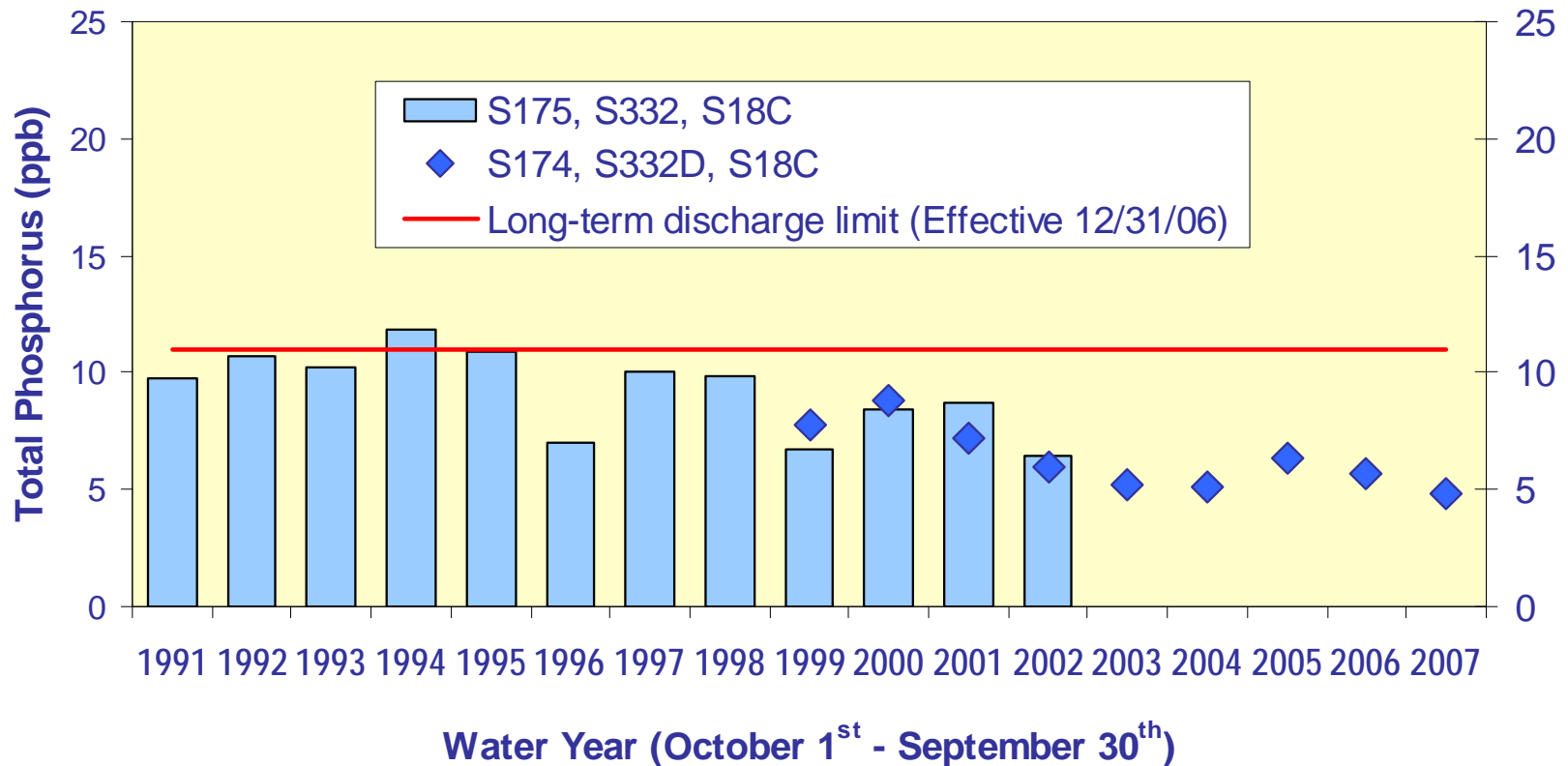
## Shark River Slough

### Sampling Event Daily Flows and FWMC



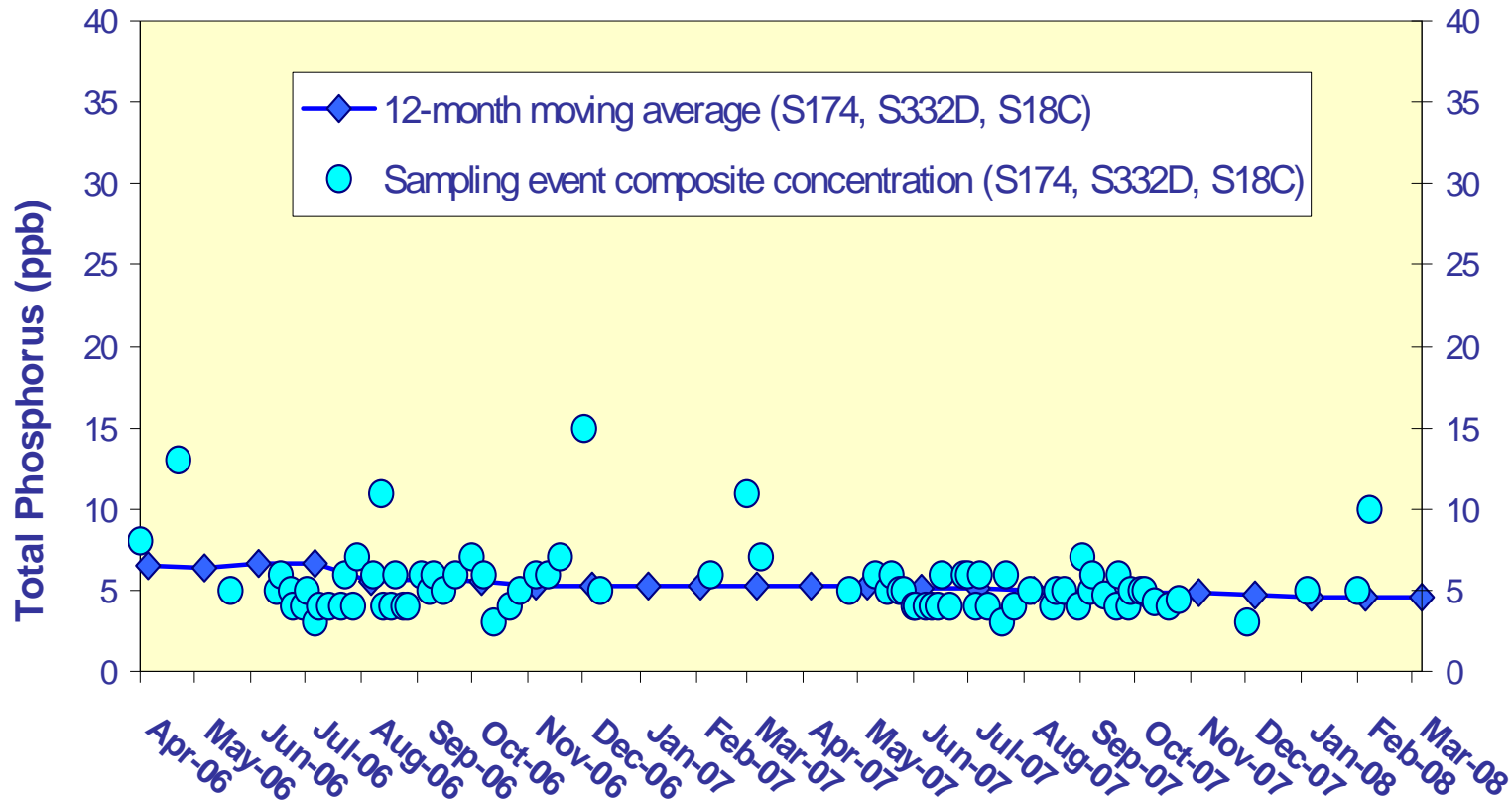
Daily flow at Shark River Slough structures and the corresponding TP FWMCs for individual sampling events.

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



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

## TP Flow-Weighted Mean Concentrations Inflows to the ENP through Taylor Slough and the 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

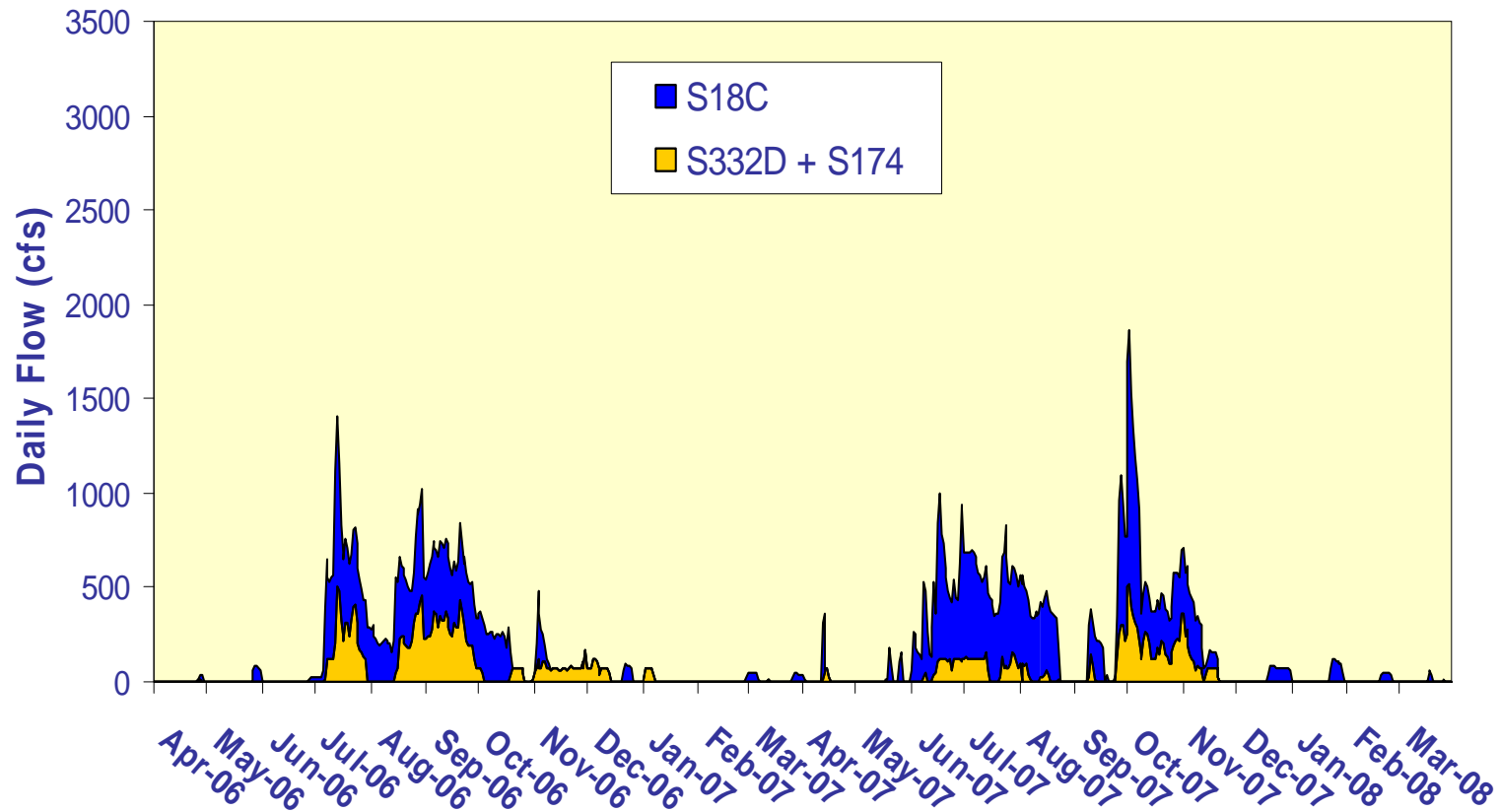
## Compliance Tracking

12-Month Period	Total Flow (kac-ft)	TP Flow Weighted Mean (ppb)	Long-Term Limit (Effective 12/31/06) (ppb)	Percent of Sampling Events Greater than 10 ppb	
				(%)	
				Guideline	Observed
5/1/2005 - 4/30/2006	351.5	6.5	11.0	53.1	10.4
6/1/2005 - 5/31/2006	343.7	6.4	11.0	53.1	4.5
7/1/2005 - 6/30/2006	295.5	6.7	11.0	53.1	4.9
8/1/2005 - 7/31/2006	280.0	6.6	11.0	53.1	4.5
9/1/2005 - 8/31/2006	227.0	5.5	11.0	53.1	2.2
10/1/2005 - 9/30/2006	<b>207.4</b>	<b>5.7</b>	<b>11.0</b>	<b>53.1</b>	<b>4.1</b>
11/1/2005 - 10/31/2006	179.5	5.6	11.0	53.1	3.9
12/1/2005 - 11/30/2006	158.8	5.3	11.0	53.1	3.9
1/1/2006 - 12/31/2006	137.4	5.2	11.0	53.1	6.0
2/1/2006 - 1/31/2007	127.6	5.2	11.0	53.1	6.4
3/1/2006 - 2/28/2007	125.4	5.2	11.0	53.1	7.0
4/1/2006 - 3/31/2007	123.8	5.2	11.0	53.1	10.0
5/1/2006 - 4/30/2007	125.4	5.2	11.0	53.1	10.0
6/1/2006 - 5/31/2007	126.1	5.2	11.0	53.1	7.5
7/1/2006 - 6/30/2007	153.0	5.1	11.0	53.1	6.5
8/1/2006 - 7/31/2007	153.4	5.1	11.0	53.1	6.4
9/1/2006 - 8/31/2007	143.6	5.0	11.0	53.1	6.4
10/1/2006 - 9/30/2007	<b>120.8</b>	<b>4.8</b>	<b>11.0</b>	<b>53.1</b>	<b>4.6</b>
11/1/2006 - 10/30/2007	150.5	4.8	11.0	53.1	4.2
12/1/2006 - 11/30/2007	155.8	4.8	11.0	53.1	4.3
1/1/2007 - 12/31/2007	154.8	4.7	11.0	53.1	2.3
2/1/2007 - 1/31/2008	155.5	4.6	11.0	53.1	2.6
3/1/2007 - 2/29/2008	156.1	4.6	11.0	53.1	2.5
4/1/2007 - 3/31/2008	155.4	4.6	11.0	53.1	0.0

## Taylor Slough and the Coastal Basins TP Concentration Compliance Tracking For January 2008 – March 2008

12-Month Period	Total Flow (kac-ft)	TP Flow Weighted Mean (ppb)	Long-Term Limit (Effective 12/31/06) (ppb)	Percent of Sampling Events Greater than 10 ppb (%)	
				Guideline	Observed
2/1/2007 - 1/31/2008	155.5	4.6	11.0	53.1	2.6
3/1/2007 - 2/29/2008	156.1	4.6	11.0	53.1	2.5
4/1/2007 - 3/31/2008	155.4	4.6	11.0	53.1	0.0

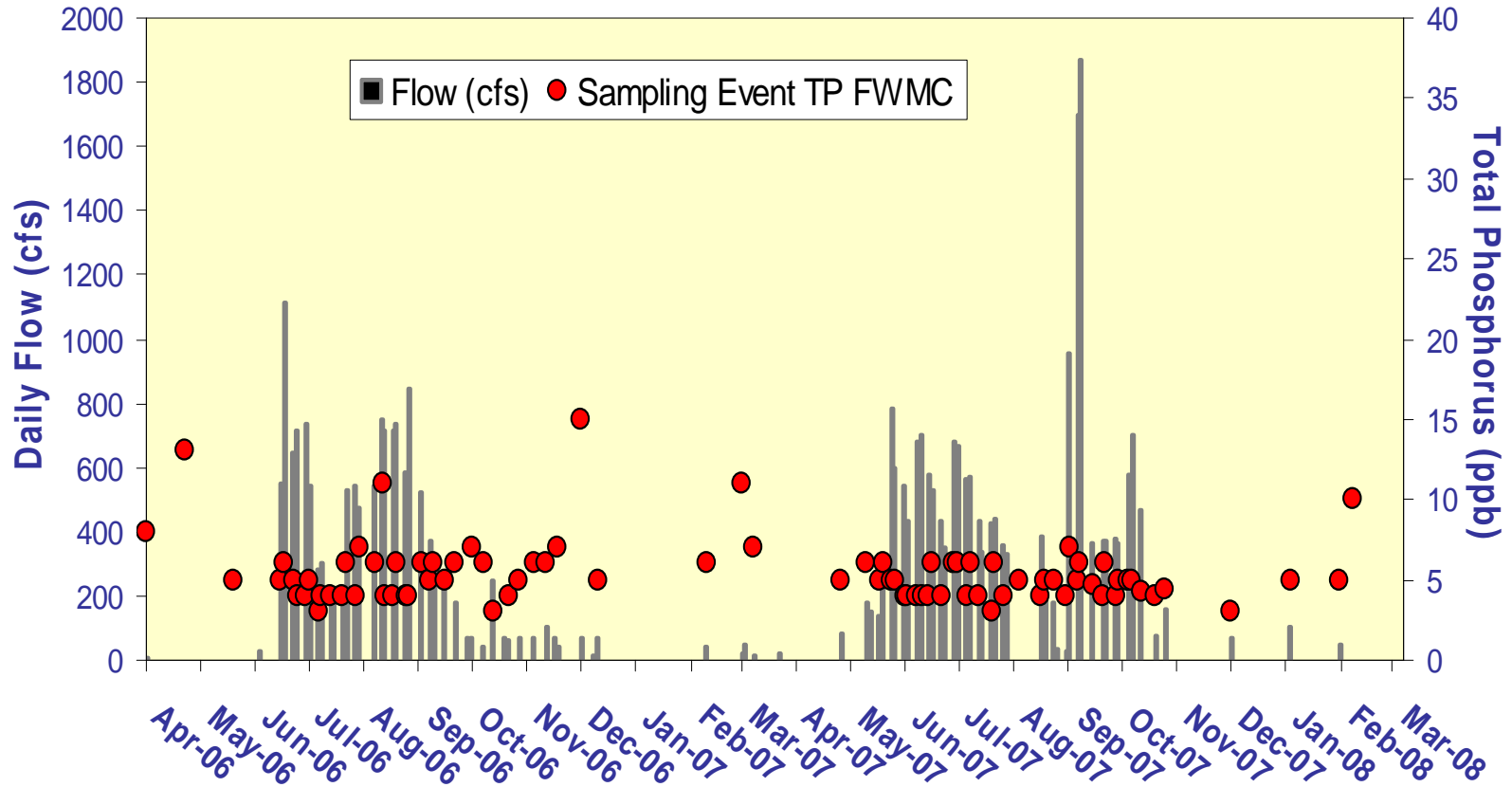
## Taylor Slough and S18C Daily Flows



Daily flows into Everglades National Park through Taylor Slough and S18C.



## Taylor Slough and S18C Sampling Event Flows and FWMC



Daily flows at Taylor Slough structures and S18C and the corresponding TP for individual sampling events.