



SETTLEMENT AGREEMENT QUARTERLY REPORT

January – March 2017

Jonathan P. Madden, P.E.

Section Leader

Compliance Assessment & Reporting Section

Water Quality Bureau

Technical Oversight Committee

July 18, 2017



SUMMARY

Month	Geometric Mean TP Concentration (ppb)	Long-term Level (ppb)	Mean Stage (feet NGVD 29)	Number of Samples	
Arthur R. Marshall Loxahatchee National Wildlife Refuge					
Jan 2017	7.1	9.3	16.57	13	
Feb 2017	4.4	9.6	16.52	13	
Mar 2017	5.7	10.8	16.28	12	
12-Month Period Ending	Total Flow (kac-ft)	12-Month FWM TP Concentration (ppb)	Long-term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb	
				Guideline	Observed
Everglades National Park – Shark River Slough – <i>PROVISIONAL DATA and RESULTS</i>					
Jan 2017	1231.0 (1234.8)	6.9 (6.9)	7.6 (7.6)	40.1 (40.1)	11.5 (11.5)
Feb 2017	1040.5 (1044.3)	7.3 (7.3)	7.7 (7.7)	40.6 (40.5)	11.5 (11.5)
Mar 2017	824.2 (828.0)	7.7 (7.7)	8.8 (8.8)	45.7 (45.6)	12.0 (11.5)
Everglades National Park – Taylor Slough and Coastal Basins					
Jan 2017	384.1	5.0	11.0	53.1	0.0
Feb 2017	370.2	5.1	11.0	53.1	0.0
Mar 2017	349.2	5.1	11.0	53.1	0.0

Method 1 (left values) computed as $S12s+(S333+S355A+S355B-S334)$

Method 2 (values in parentheses) computed as $S12s+(S333+S355A+S355B+S356-S334)$

Neither method excludes S334 flow from the total flow for long-term limit calculations.

Refuge TP Compliance Tracking

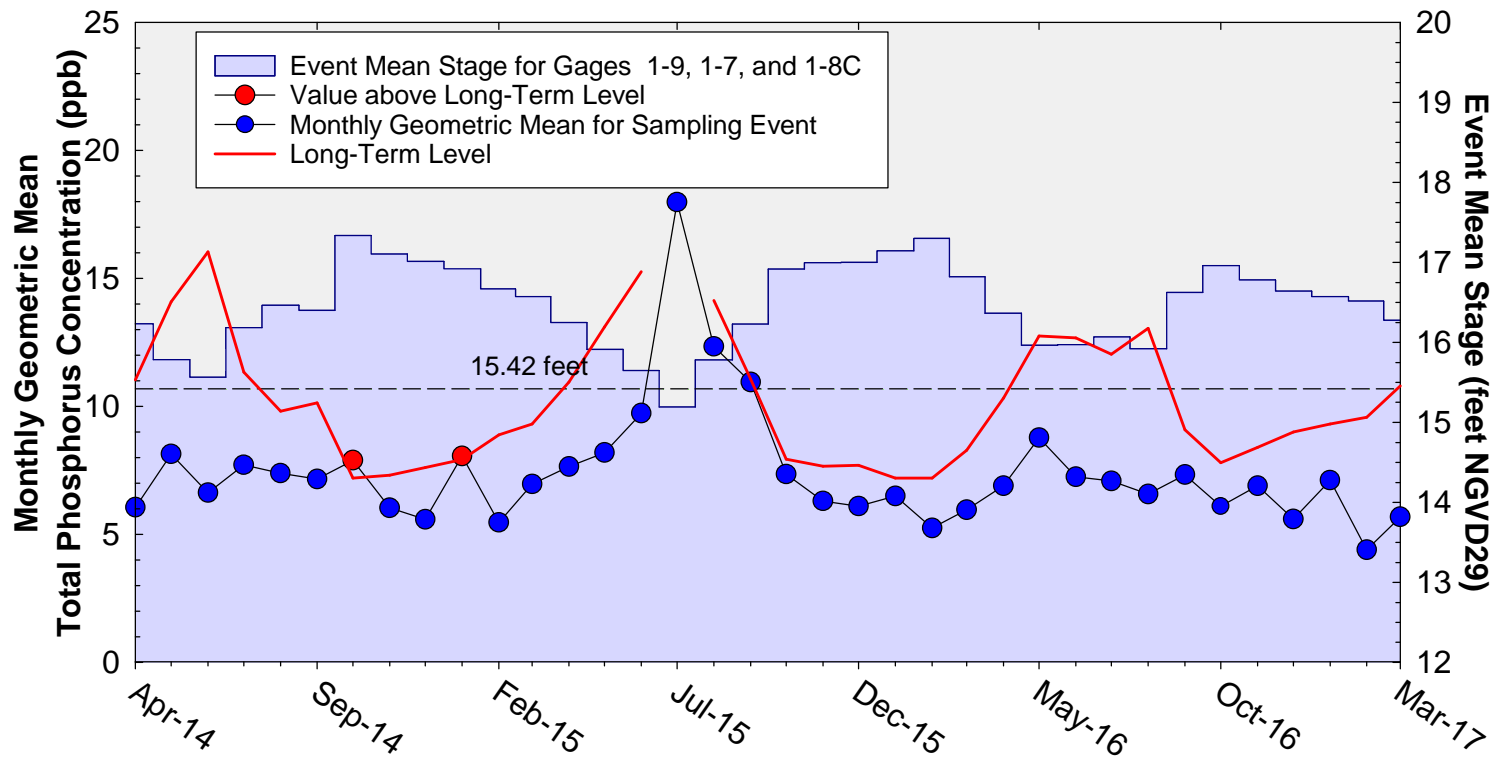
For January – June 2017

(April – June 2017 values are preliminary)

Month	Geometric Mean TP Concentration (ppb)	Long-Term Level (ppb) Effective 12/31/2006	Average Stage (feet NGVD 29)	Number of Samples
Jan-2017	7.1	9.3	16.57	13
Feb-2017	4.4	9.6	16.52	13
Mar-2017	5.8	10.8	16.28	12
Apr-2017	6.5	12.1	16.06	7
May-2017	8.3	11.4	16.17	13
Jun-2017	7.9	7.9	16.93	14

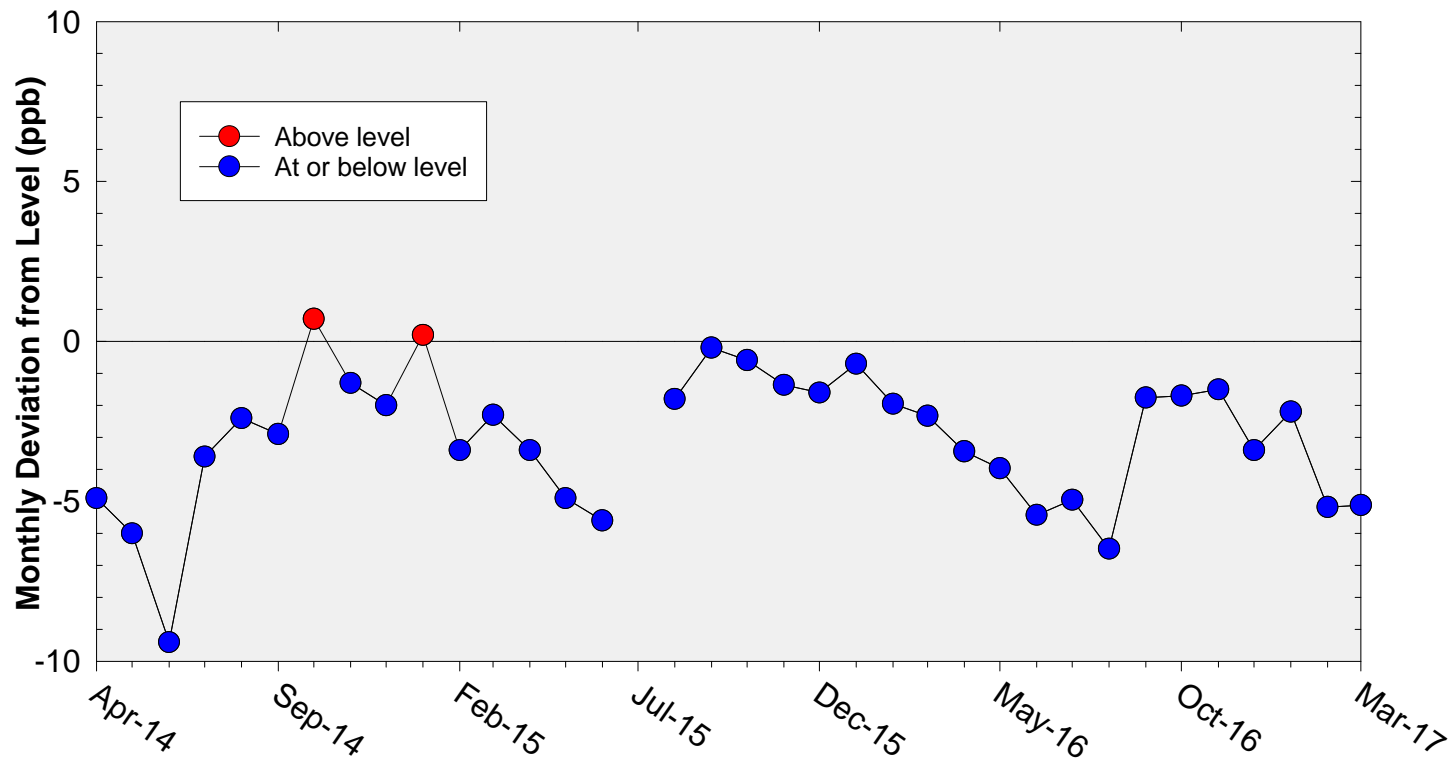
A.R.M Loxahatchee National Wildlife Refuge

Monthly Total Phosphorus Geometric Mean Concentrations



A.R.M Loxahatchee National Wildlife Refuge

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



Shark River Slough TP Concentration Compliance Tracking (October 2016–March 2017 Flow Data are Provisional)

12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration (ppb)	Long-Term Limit (ppb) <i>Effective 12/31/2006</i>	Percent of Sampling Events Greater than 10 ppb	
				Guideline	Observed
Feb 2016 - Jan 2017	1231.0 (1234.8)	6.9 (6.9)	7.6 (7.6)	40.1 (40.1)	11.5 (11.5)
Mar 2016 - Feb 2017	1040.5 (1044.3)	7.3 (7.3)	7.7 (7.7)	40.6 (40.5)	11.5 (11.5)
Apr 2016 - Mar 2017	824.2 (828.0)	7.7 (7.7)	8.8 (8.8)	45.7 (45.6)	12.0 (11.5)

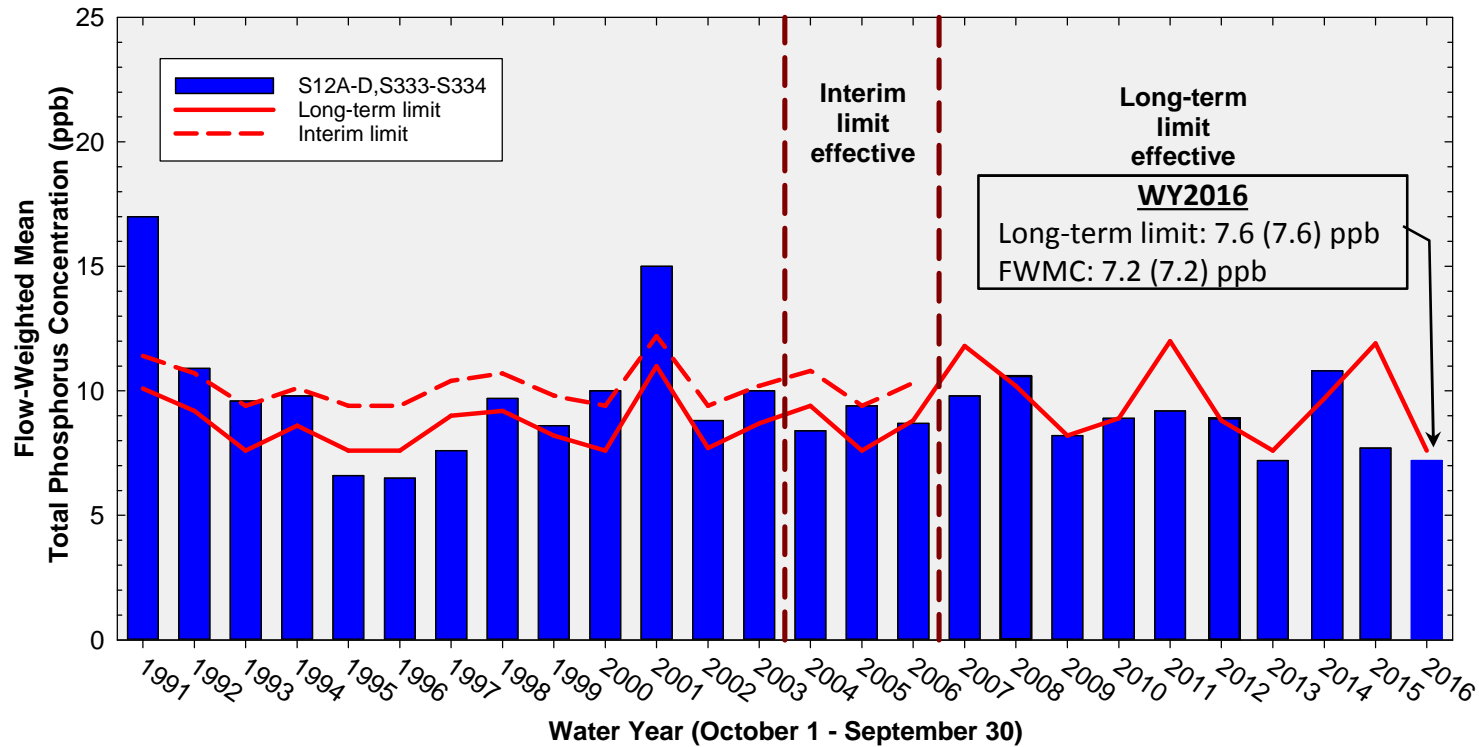
Shark River Slough PROVISIONAL RESULTS:

Method 1 (left values) FWMC computed as $S_{12s} + (S_{333} + S_{355A\&B} - S_{334})$ and

Method 2 (in parenthesis) FWMC computed as $S_{12s} + (S_{333} + S_{355A\&B} + S_{356} - S_{334})$ using all flow and TP grabs on bi-weekly compliance sampling dates.

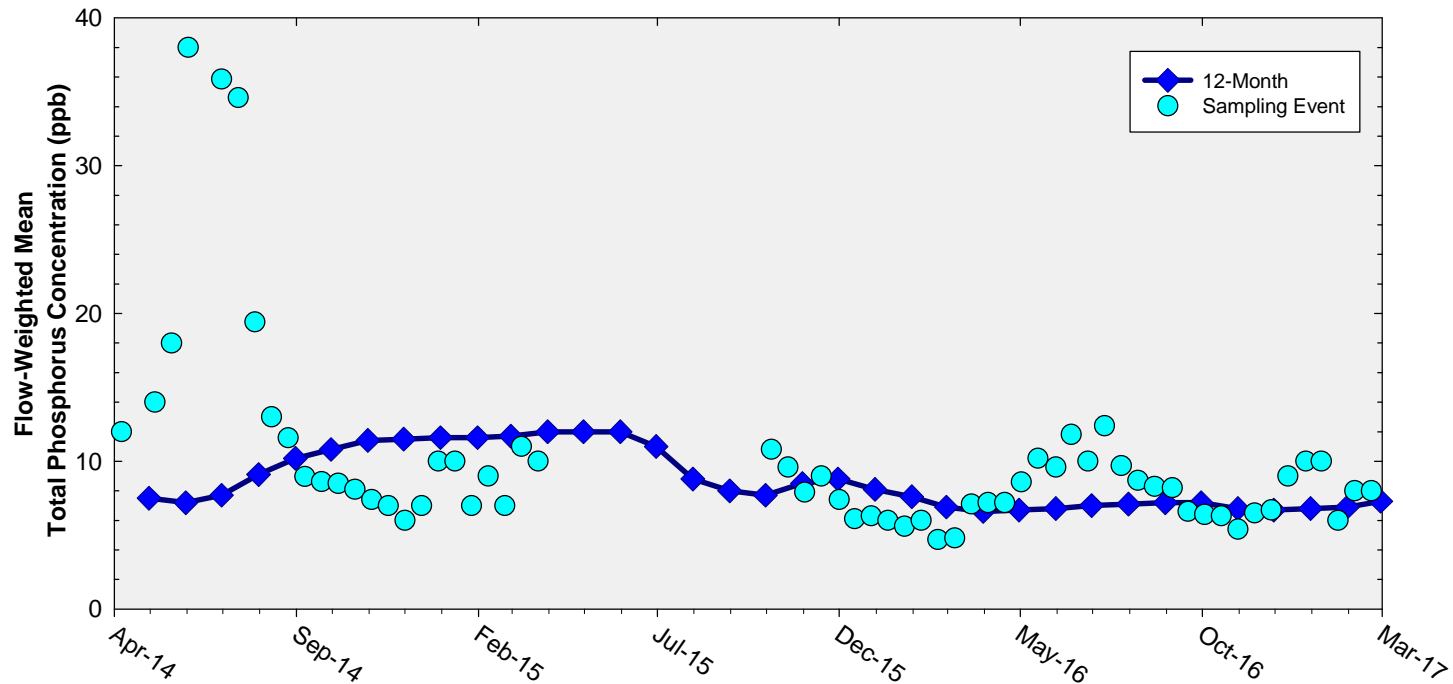
Neither method excludes S334 flow from the flow for long-term limit calculations.

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



Water year (12-month) FWMC compared to the TP interim and long-term limits

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

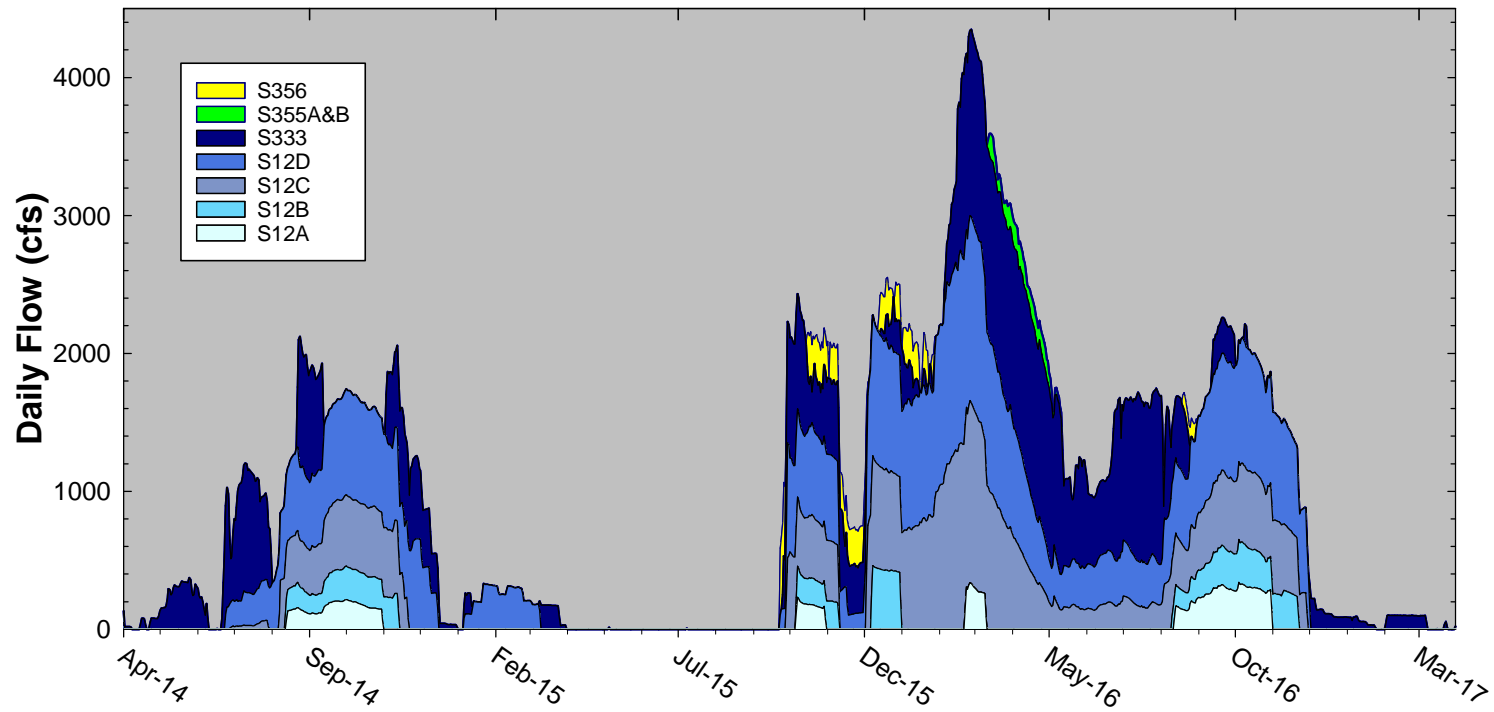


The composite TP concentration and 12-month FwMC at the end of each month for each sampling event

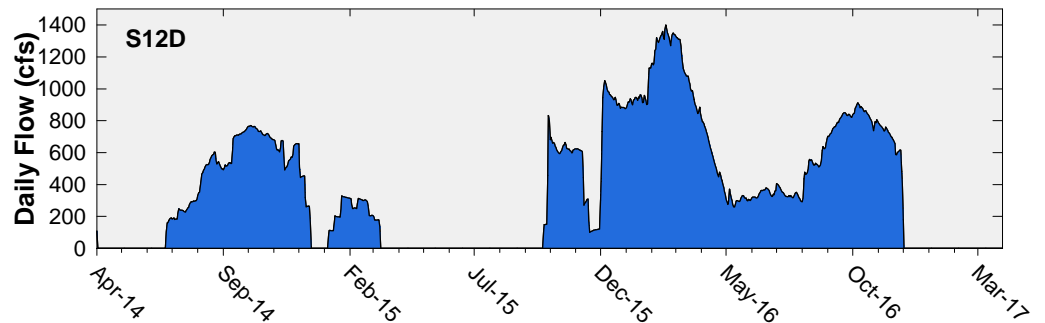
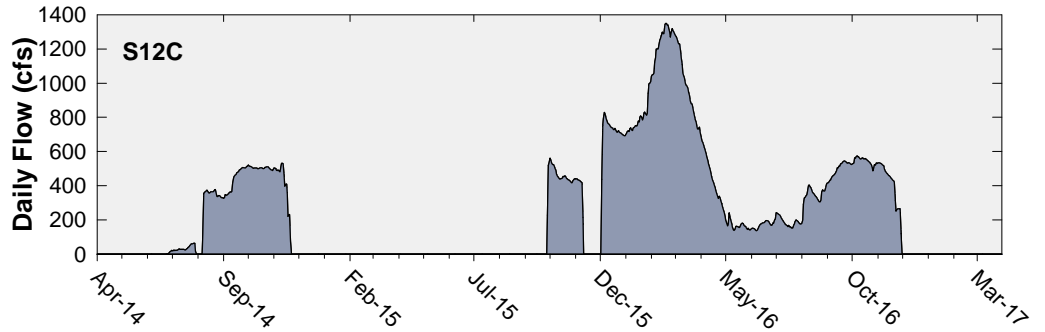
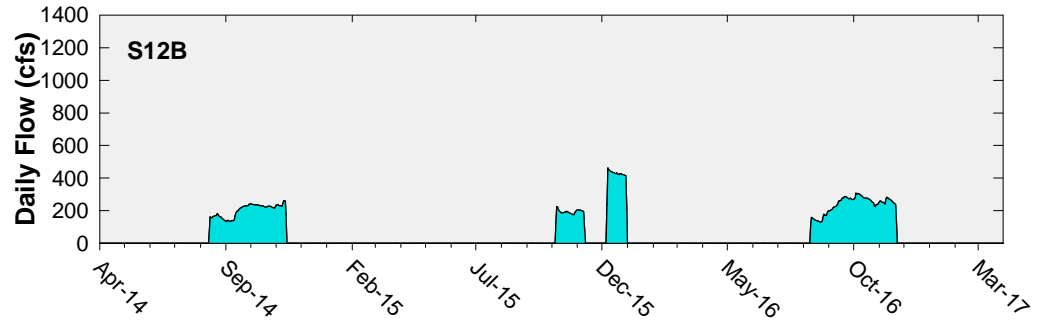
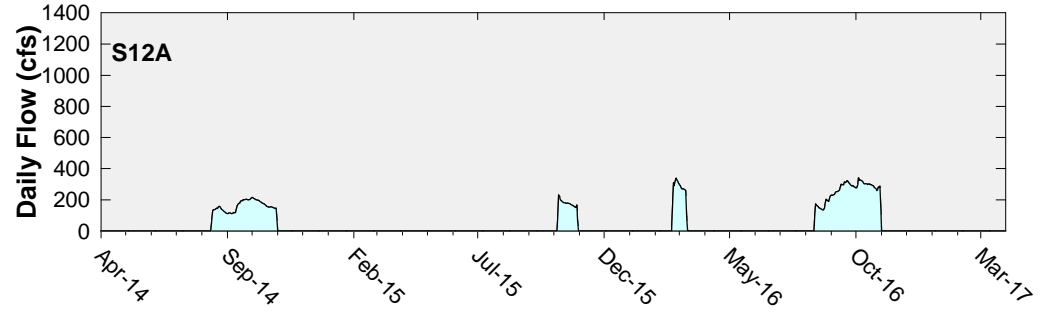
Note: Method 1 results illustrated

Shark River Slough Daily Flows

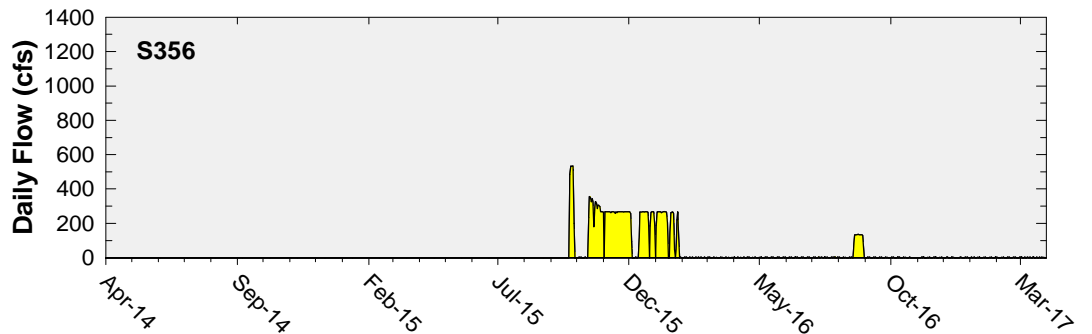
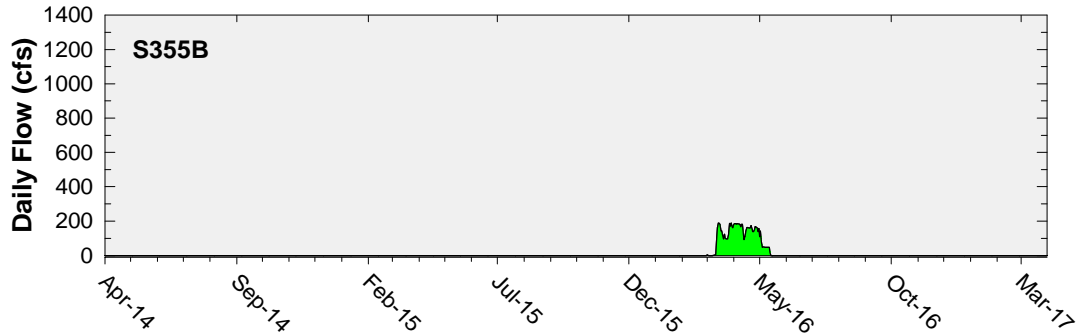
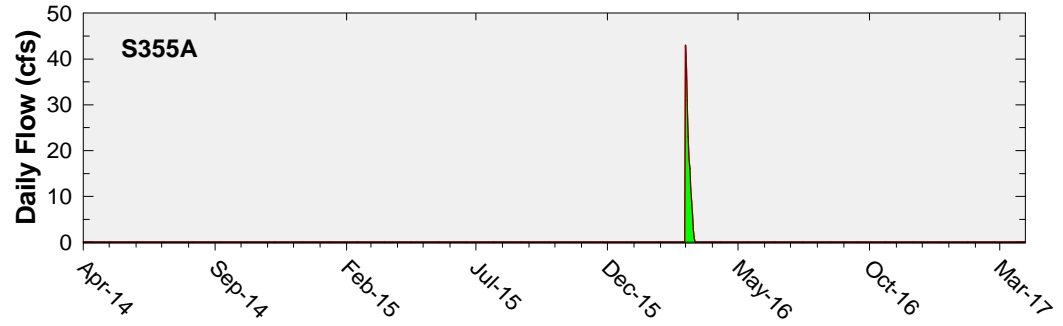
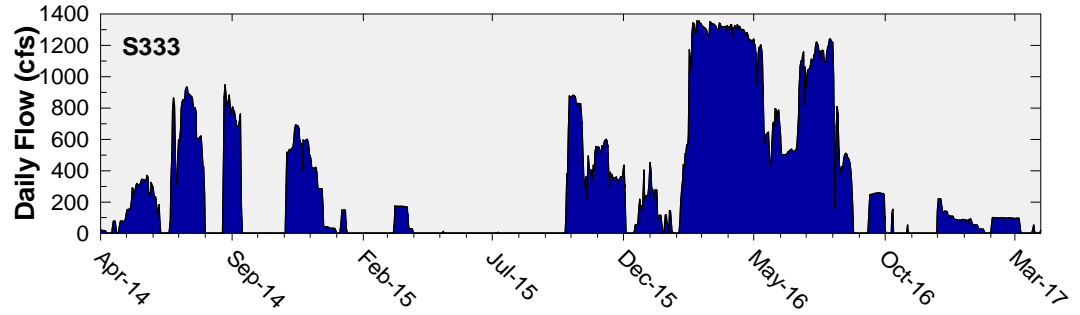
(Flow Data from October 1, 2016 are Provisional)



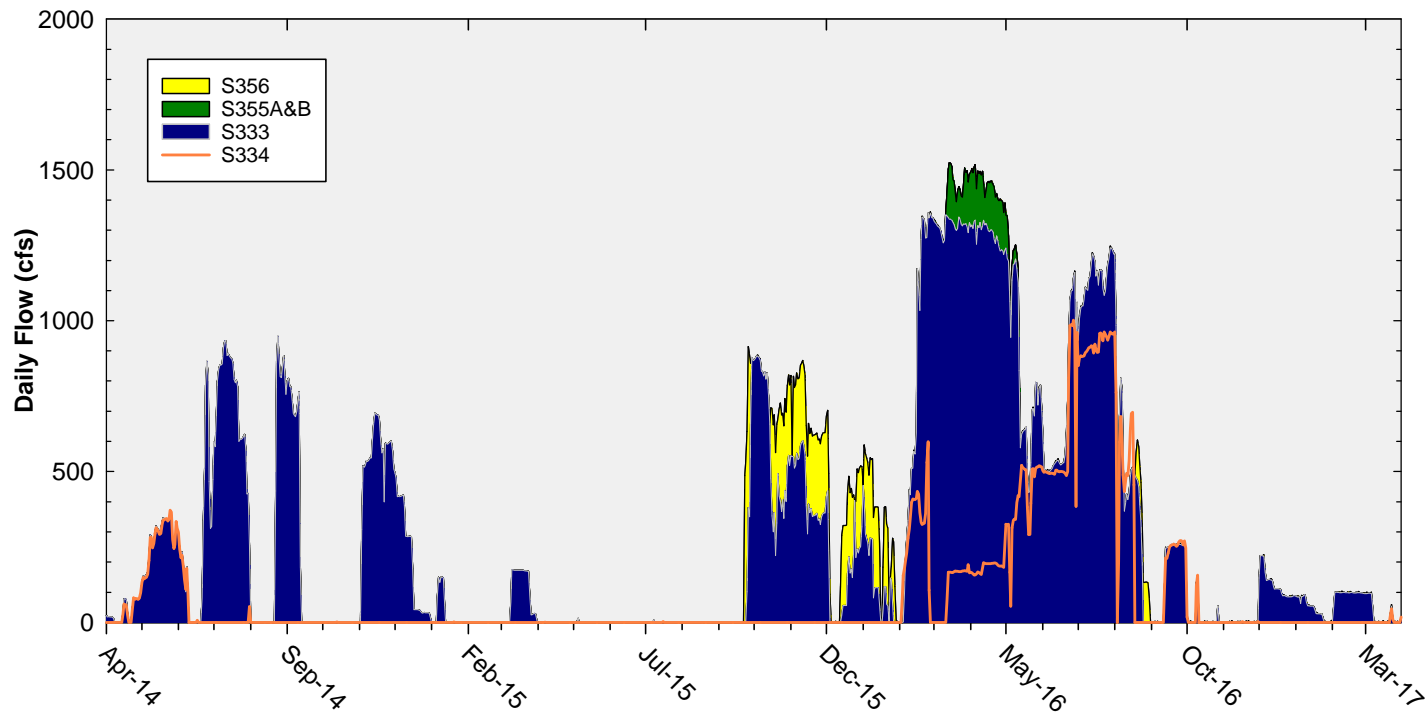
Daily Flows at S12 Structures to Shark River Slough



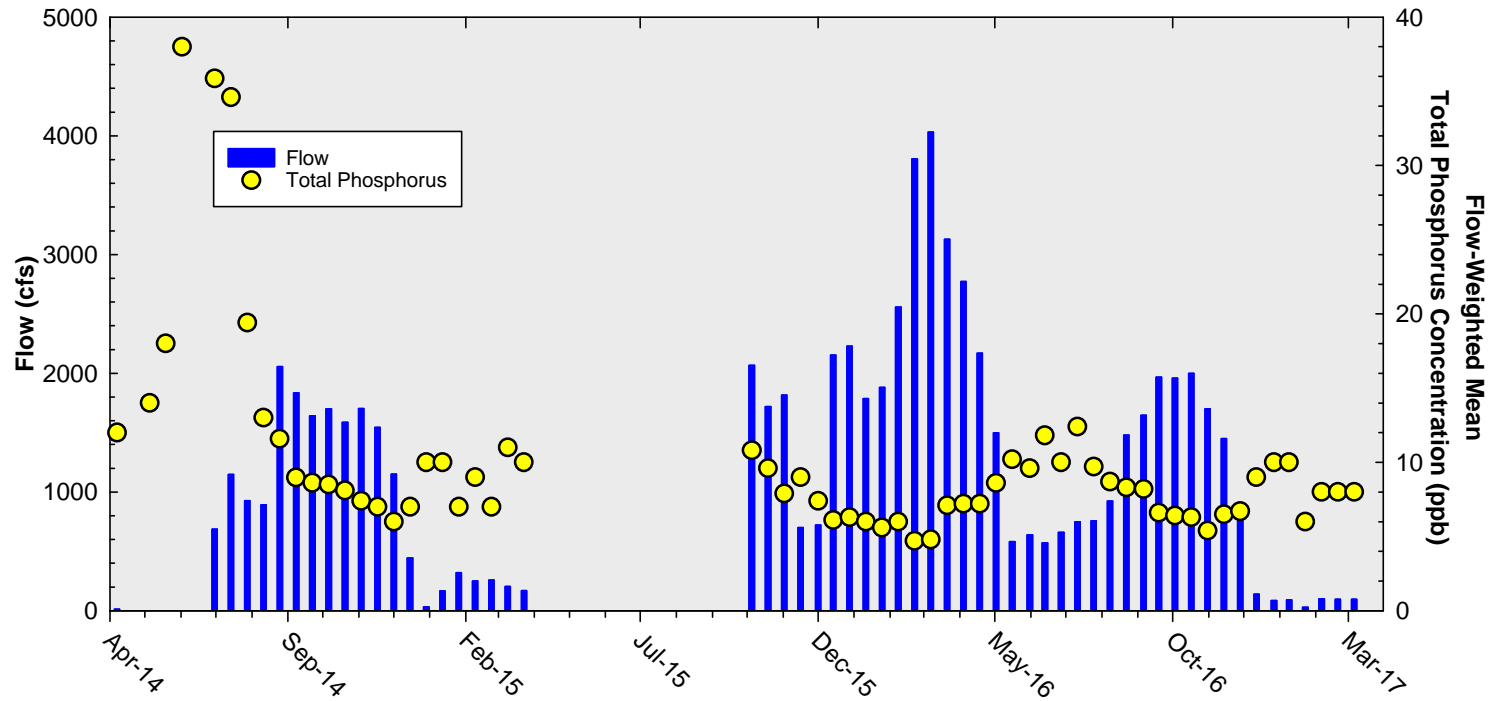
Daily Flows at Individual Inflow Structures to Shark River Slough



Daily Flows Into and Out from the L-29 Canal



Shark River Slough Sampling Event Flow and FWMC



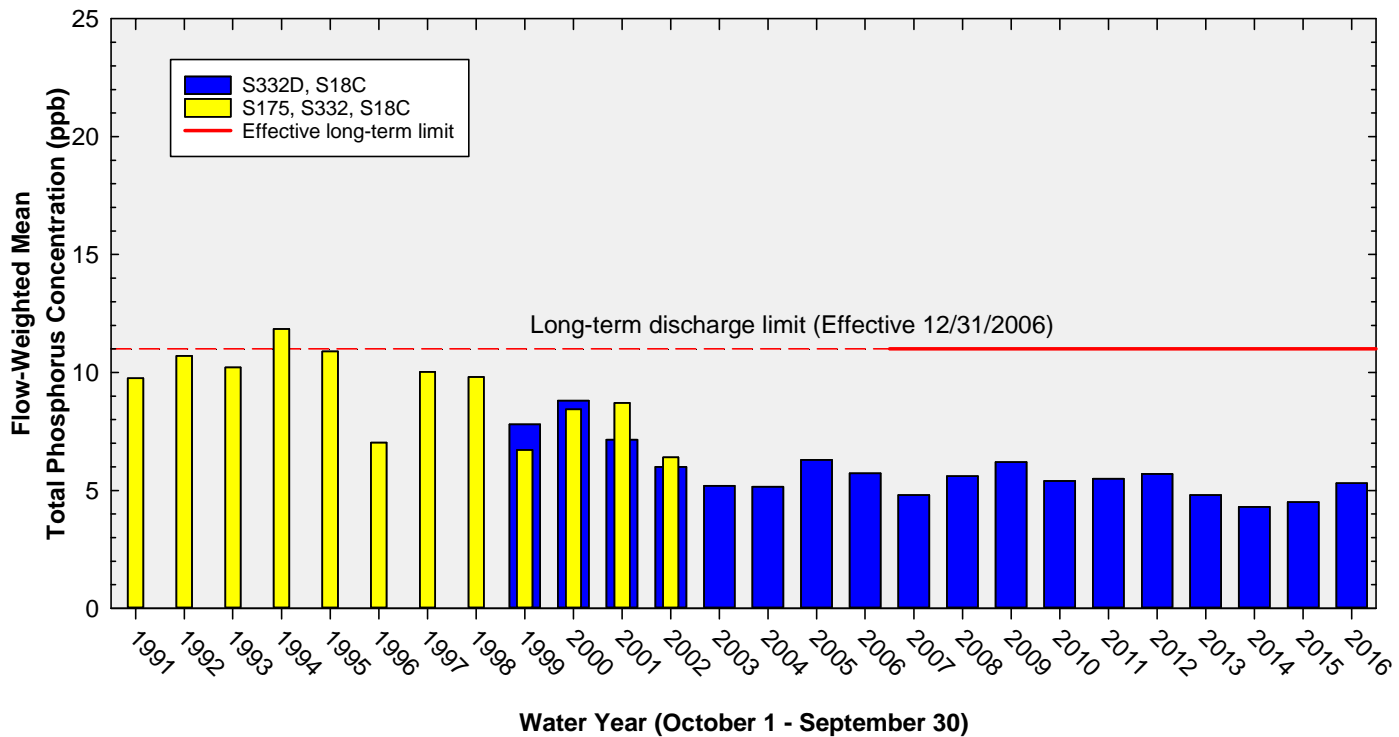
Flow at Shark River Slough structures and the corresponding TP FWMCs for individual sampling events

Note: Method 1 results illustrated

Taylor Slough and Coastal Basins TP Concentration Compliance Tracking

12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration (ppb)	Long-Term Limit (ppb) <i>Effective 12/31/2006</i>	Percent of Sampling Events Greater than 10 ppb	
				Guideline	Observed
Feb 2016 - Jan 2017	384.1	5.0	11.0	53.1	0.0
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Annual Flow-Weighted Mean Concentrations Inflows to the ENP through Taylor Slough and Coastal Basins

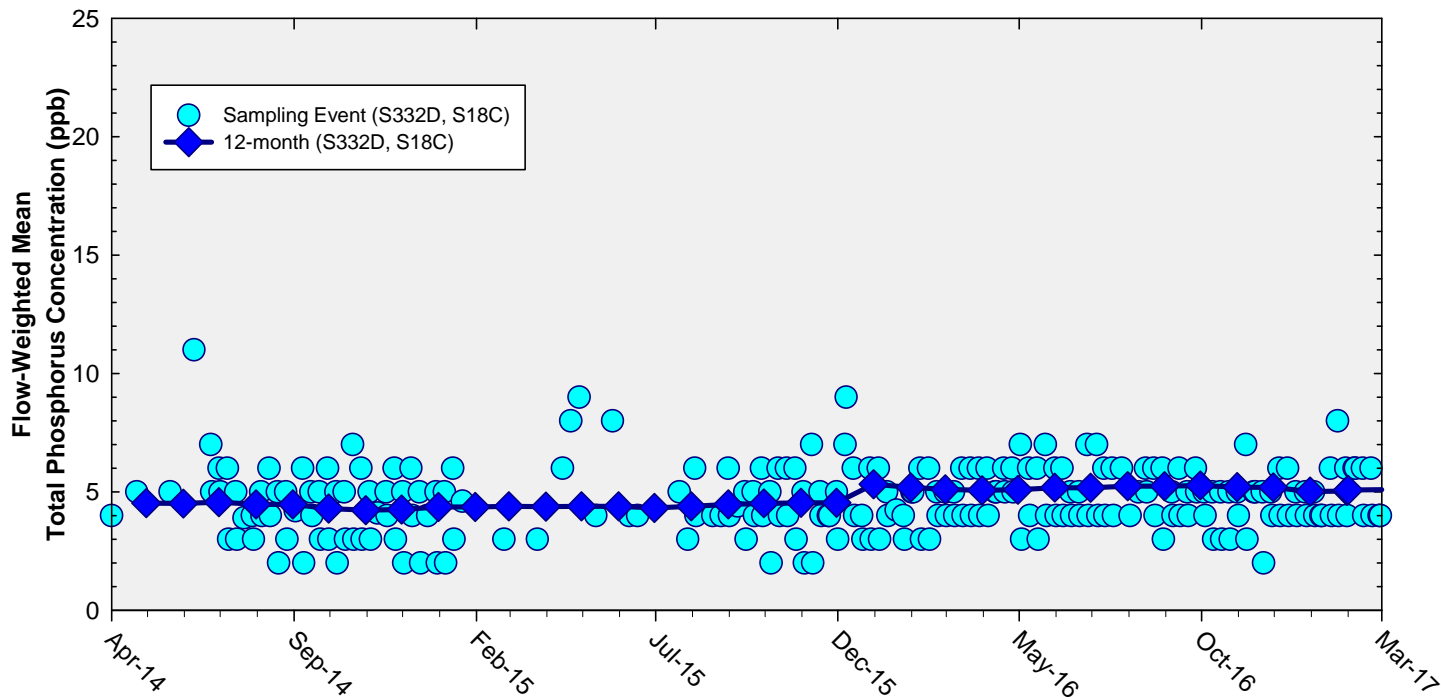


The 12-month FWMC at the end of each water year compared to the 11 ppb long-term TP limit

Note: Blue bars show S332D, S18C, & S174 until September 2007 when S174 was plugged.

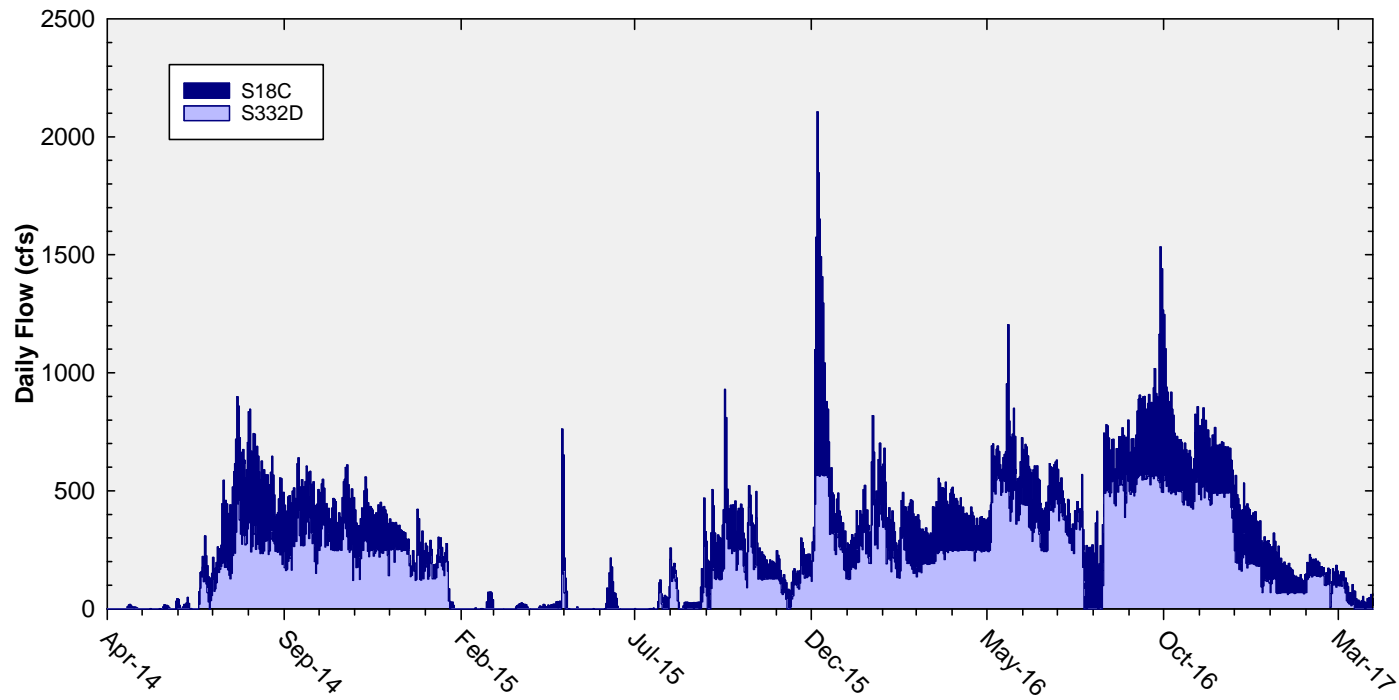
Flow-Weighted Mean Concentrations

Inflows to the ENP through Taylor Slough and Coastal Basins

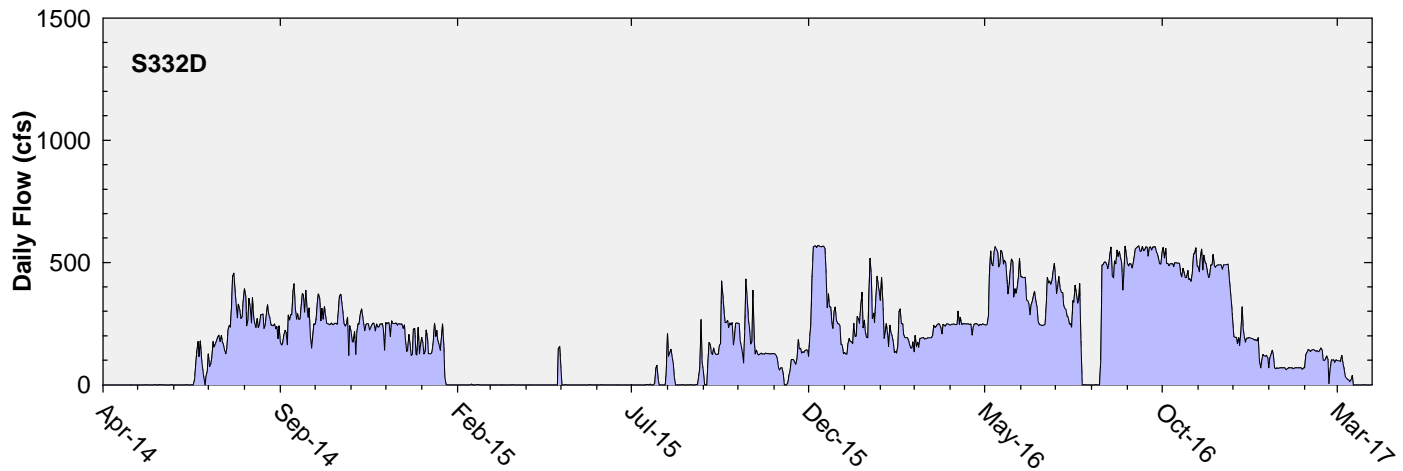
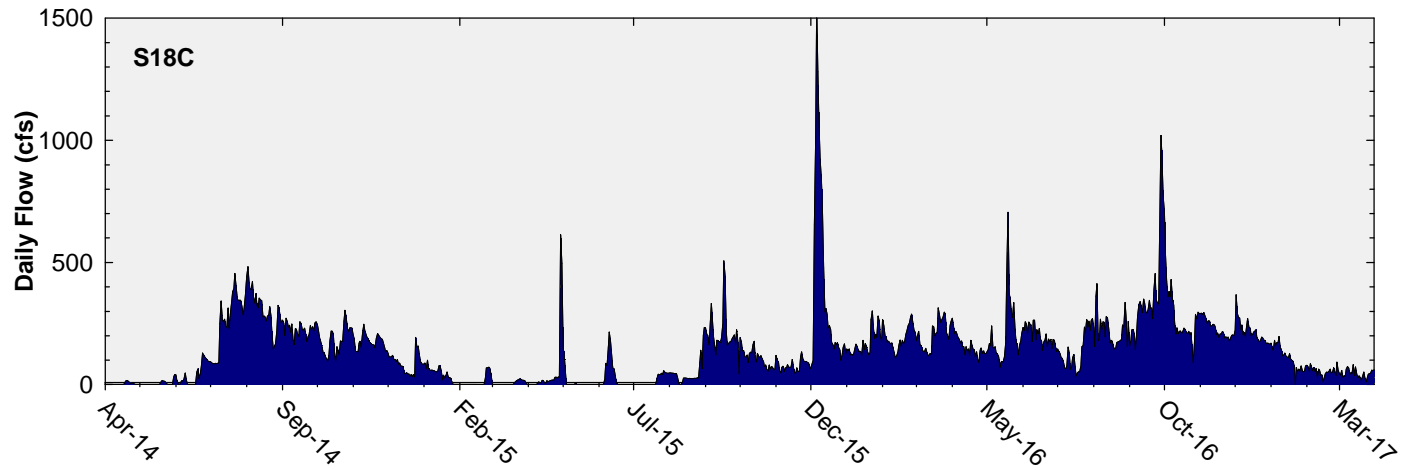


The 12-month FWMC at the end of each month and the composite TP concentration for each sampling event

Daily Flows at Taylor Slough and Coastal Basins Structures into ENP

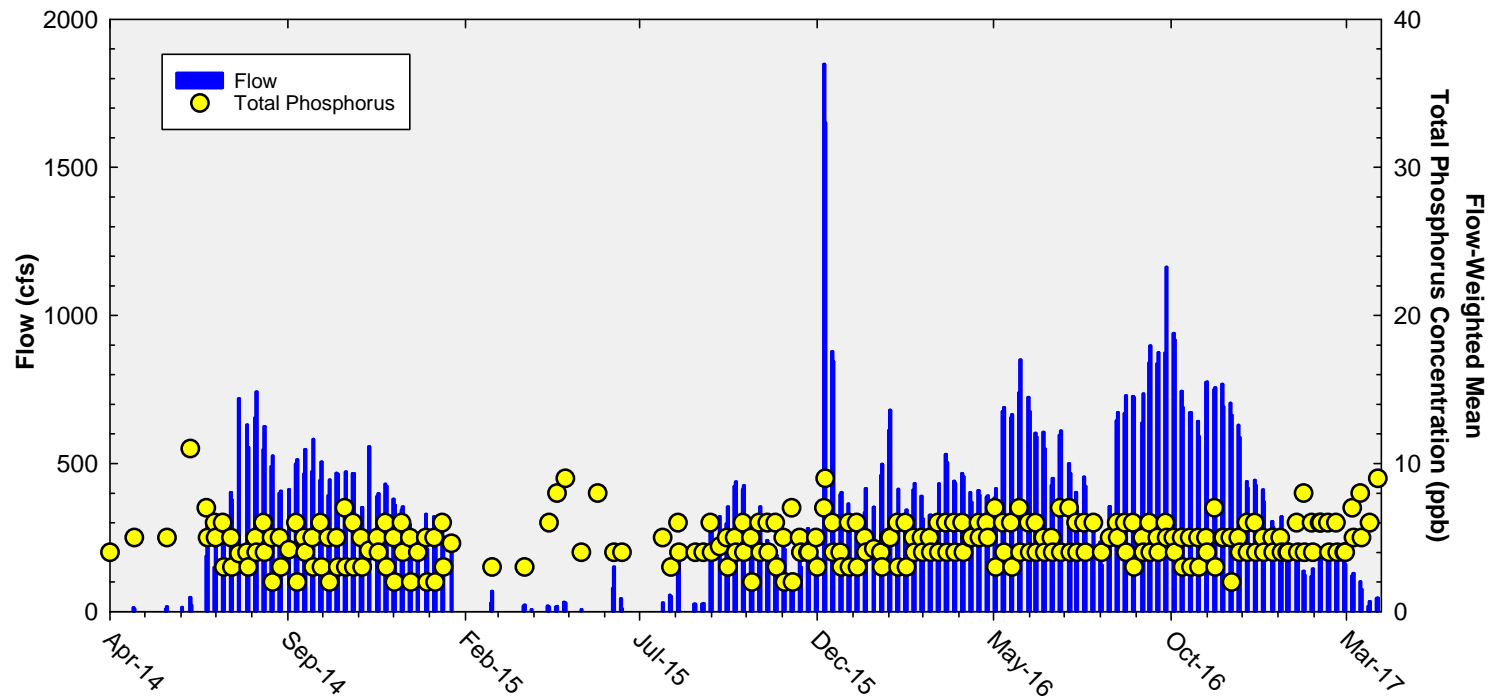


Daily Flows at Individual Taylor Slough and Coastal Basins Structures into ENP



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

Thank You

