SETTLEMENT AGREEMENT QUARTERLY REPORT

January – March 2020

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Technical Oversight Committee

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sfwmd.gov

SUMMARY

Month	Geometric Mean TP Concentration (ppb)	Long-Term Level (ppb)	Mean Stage (ft NGVD29)	Number of Samples
Arthur R. Marshall Loxahatchee National Wildlife Refuge				
Jan 2020	4.8	8.7	16.73	14
Feb 2020	5.8	8.6	16.73	14
Mar 2020	5.2	8.9	16.66	14

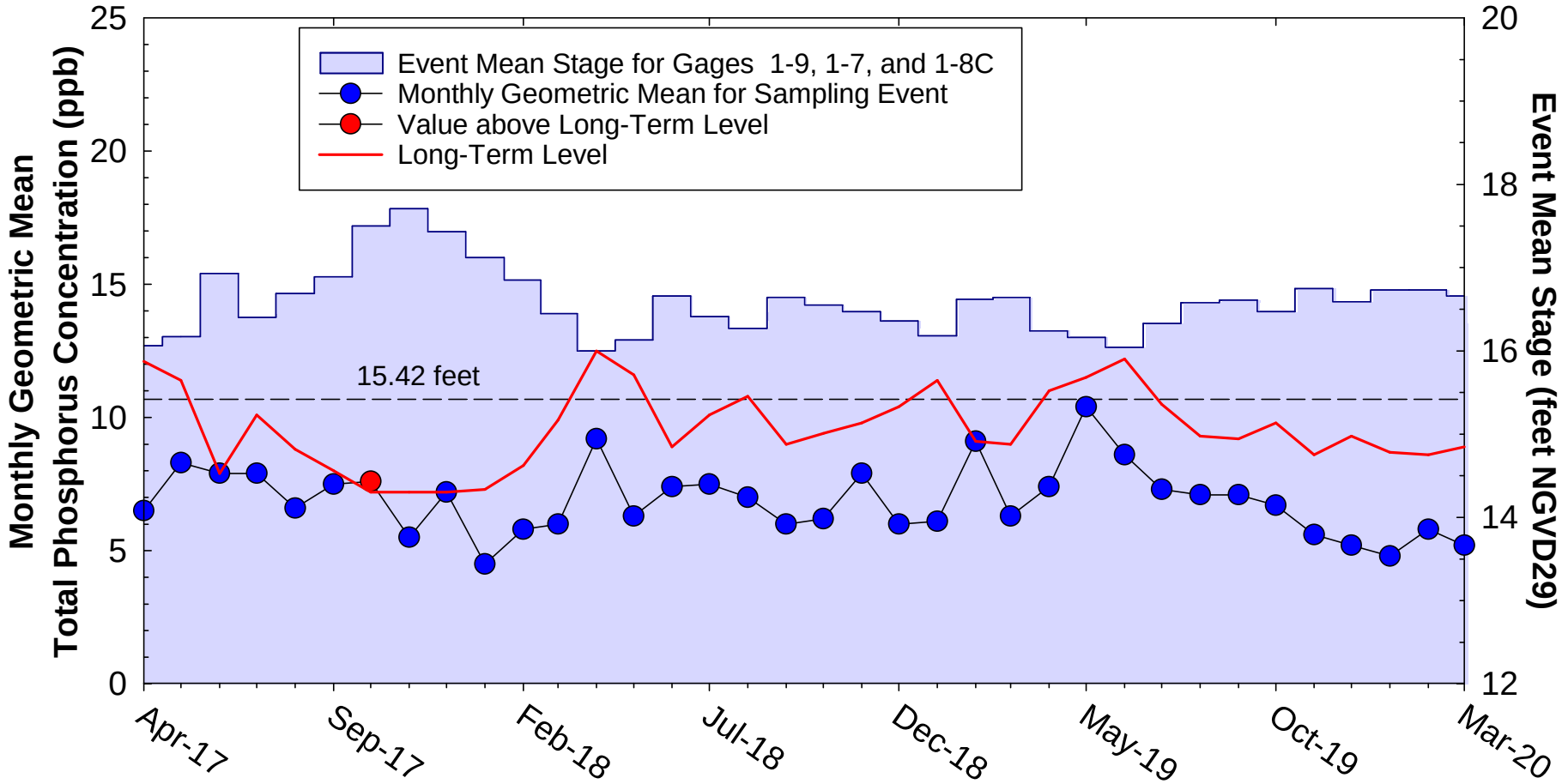
12-Month Period Ending	Total Flow (kac-ft)	12-Month TP FWMC (ppb)	Long-Term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb	
				Guideline	Observed
Everglades National Park – Shark River Slough – *PROVISIONAL DATA and RESULTS*					
Jan 2020	622.2 (739.2)	10.4 (9.5)	9.9 (9.2)	51.4 (48.0)	57.1 (50.0)
Feb 2020	598.5 (715.5)	10.4 (9.5)	10.0 (9.4)	52.1 (48.7)	55.0 (47.6)
Mar 2020	570.2 (687.3)	10.0 (9.2)	10.1 (9.5)	53.0 (49.5)	52.4 (43.5)
Everglades National Park – Taylor Slough and Coastal Basins					
Jan 2020	242.3 (255.6, 253.8)	5.3 (5.2, 4.9)	11.0	53.1	1.9 (1.9, 1.9)
Feb 2020	249.4 (262.9, 261.1)	5.3 (5.2, 5.0)	11.0	53.1	1.9 (1.9, 1.9)
Mar 2020	248.7 (262.3, 260.5)	5.3 (5.2, 5.0)	11.0	53.1	1.9 (1.9, 1.9)

SRS - Method 1 (left values) computed as S12s+(S333+S355A+S355B-S334) and 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.

TS and CB - Method 1 (left values) computed as S332D+S18C, Method 2 (first values in parentheses) computed as S332D+S18C+G737, and Method 3 as (S332D-S332DX1–S328)+S328+G737+S18C.

A.R.M Loxahatchee National Wildlife Refuge

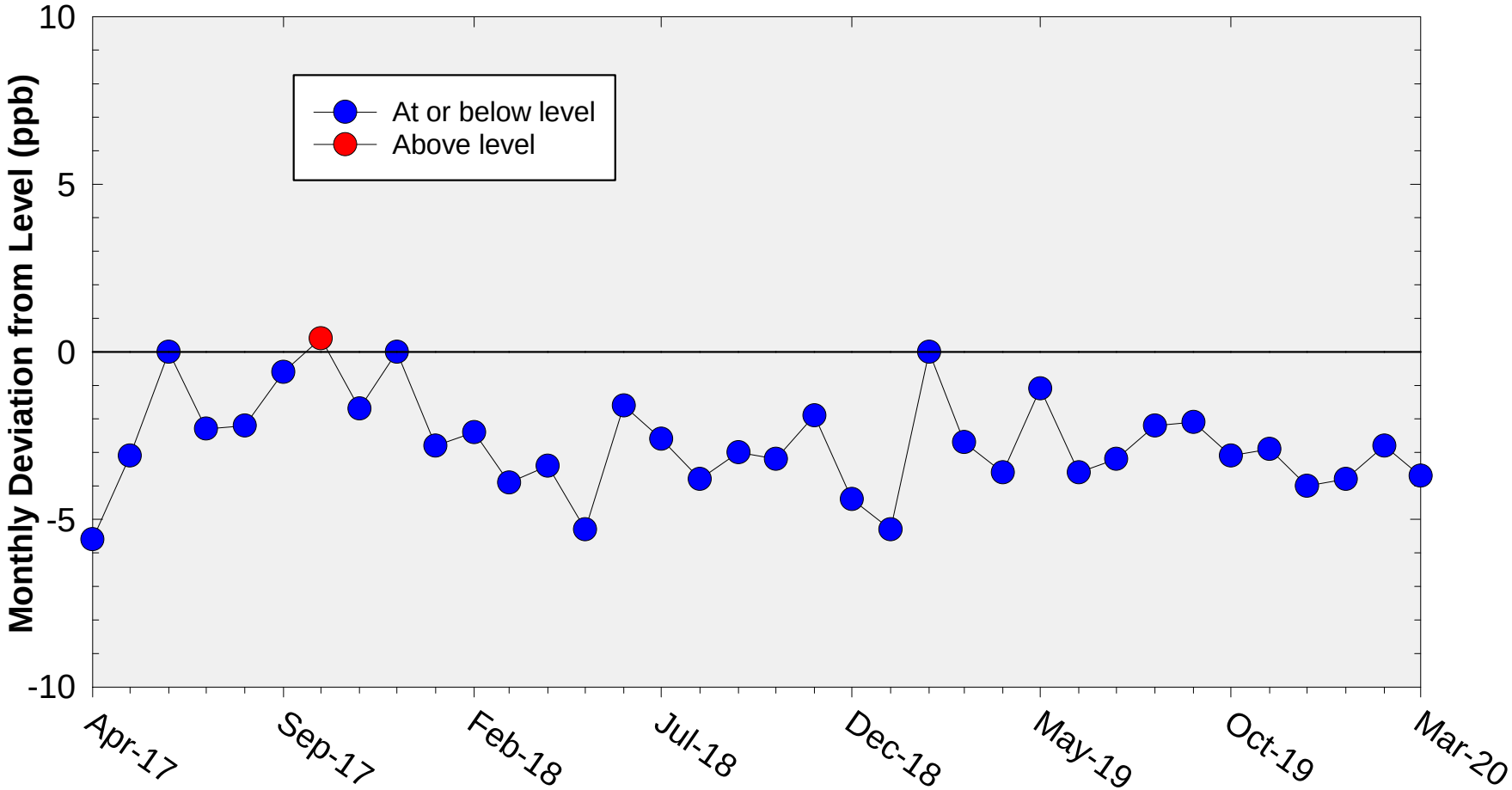
Monthly Total Phosphorus Geometric Mean Concentrations



36-Month Average TP Geometric Mean = 6.9 ppb

A.R.M Loxahatchee National Wildlife Refuge

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



36-Month Average TP geometric mean = 2.7 ppb below the Long-Term Level

Refuge TP Compliance Tracking

For January – July 2020

Month	Geometric Mean TP Concentration (ppb)	Long-Term Level (ppb) Effective 12/31/2006	Average Stage (feet NGVD29)	Number of Samples
1st Quarter 2020 Compliance Tracking				
Jan-2020	4.8	8.7	16.73	14
Feb-2020	5.8	8.6	16.73	14
Mar-2020	5.2	8.9	16.66	14
Preliminary Data Outlook				
Apr-2020	8.2	11.2	16.21	11
May-2020	6.5	14.0	15.79	6
Jun-2020	7.9	11.2	16.20	12
Jul-2020	6.2	11.6	16.15	12

Shark River Slough
TP Concentration Compliance Tracking

October 2019 to March 2020 Flow Data for S12s 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	
				Guideline	Observed
Feb 2019 - Jan 2020	622.2 (739.2)	10.4 (9.5)	9.9 (9.2)	51.4 (48.0)	57.1 (50.0)
Mar 2019 - Feb 2020	598.5 (715.5)	10.4 (9.5)	10.0 (9.4)	52.1 (48.7)	55.0 (47.6)
Apr 2019 - Mar 2020	570.2 (687.3)	10.0 (9.2)	10.1 (9.5)	53.0 (49.5)	52.4 (43.5)

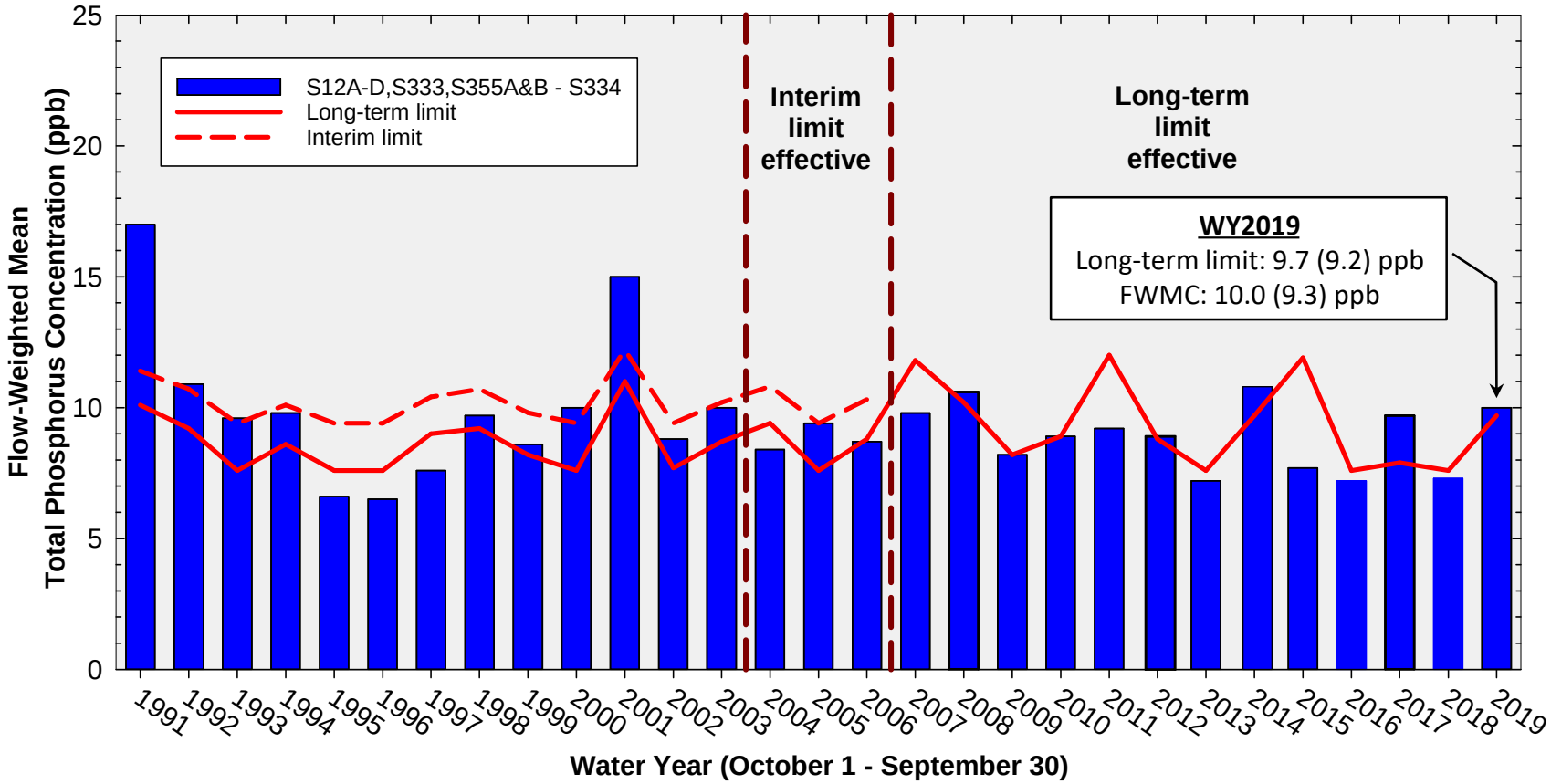
Shark River Slough PROVISIONAL RESULTS:

Method 1 (left values) FWMC computed as S12s+(S333+S355A&B-S334) and Method 2 (in parenthesis) FWMC computed as S12s+(S333+S355A&B+S356-S334) 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

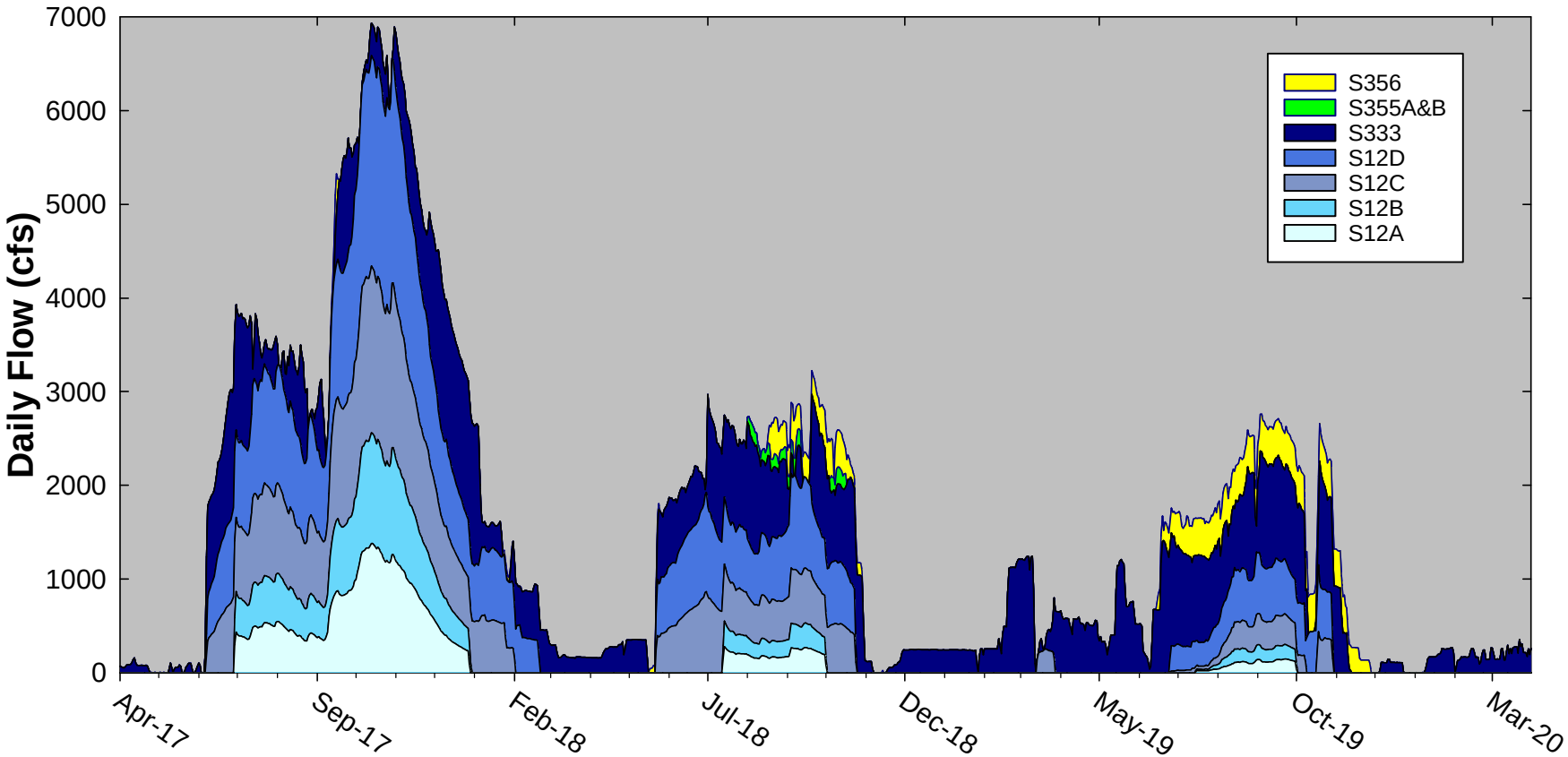
Inflows to ENP through Shark River Slough



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

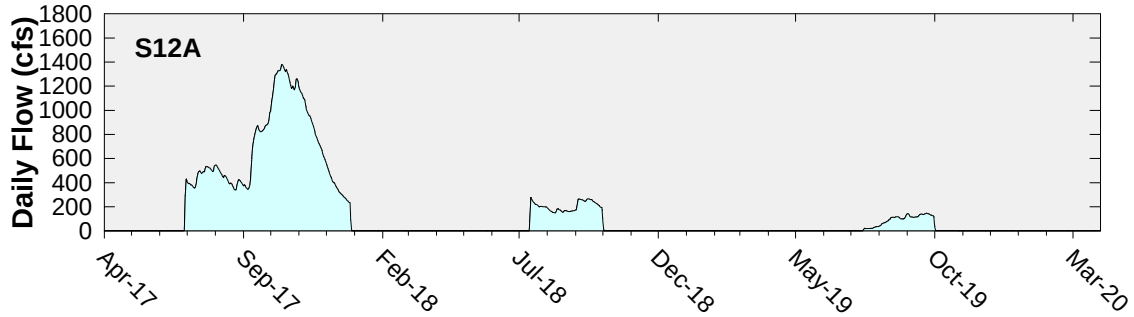
Shark River Slough Structure Daily Flows

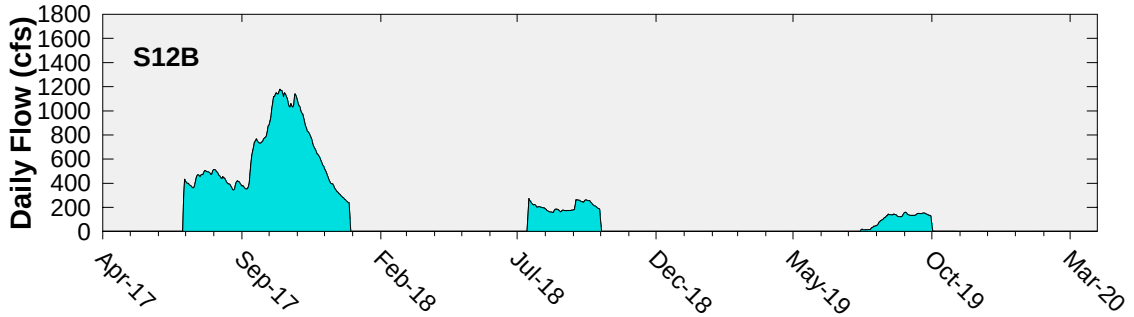
October 2019 to March 2020 Flow Data for S12s are Provisional.

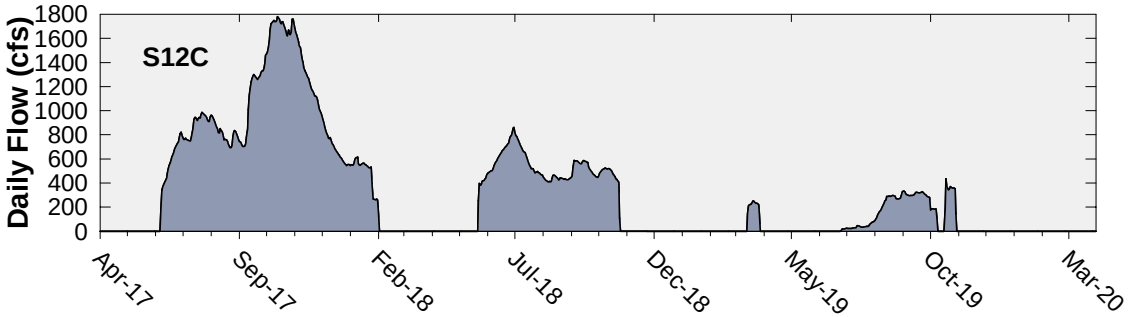


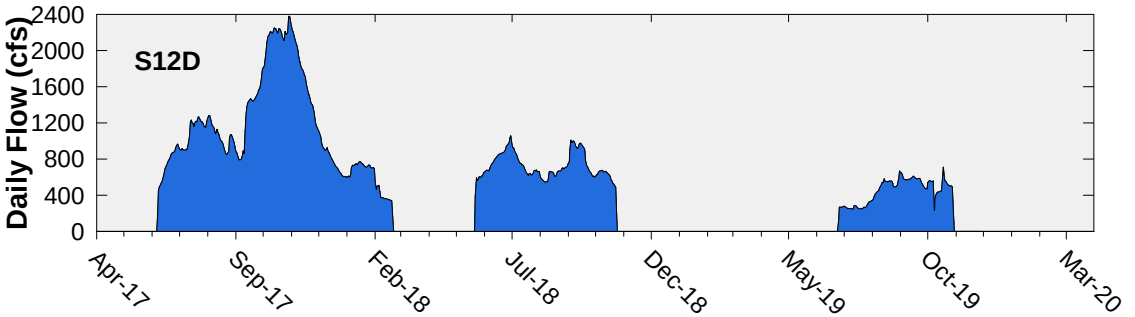
Daily Flows at S12 Structures to Shark River Slough

(October 2019 to March 2020 Flow Data for S12s are Provisional.)

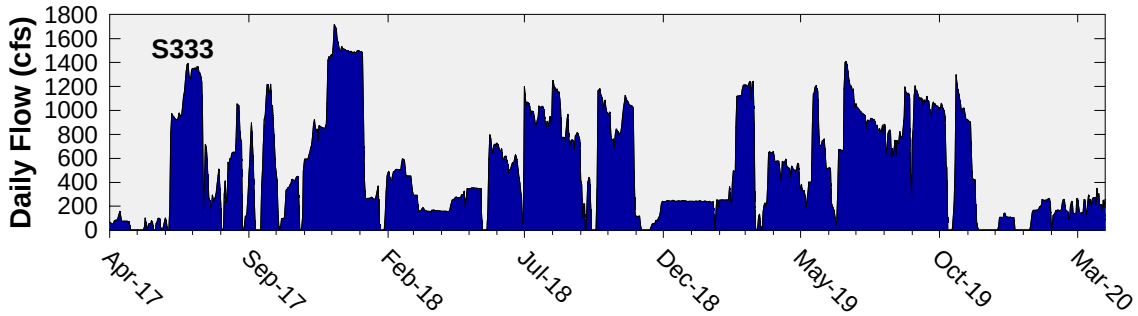


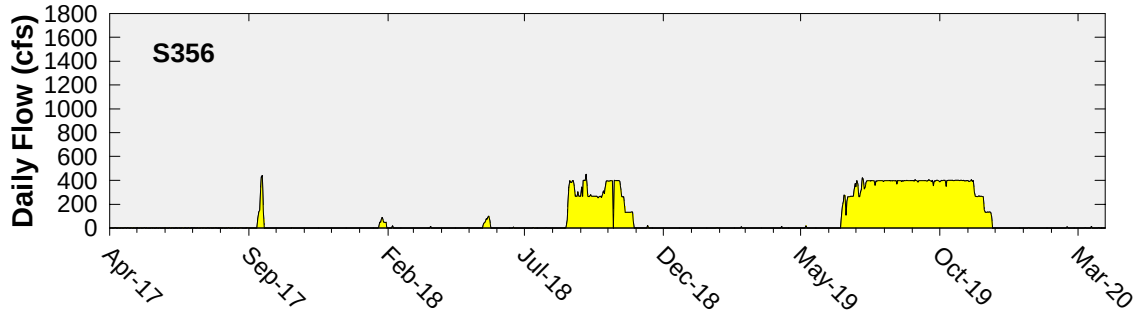


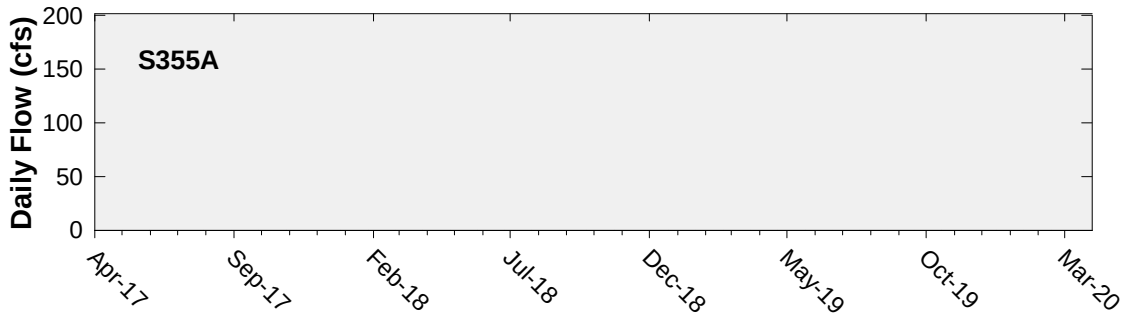


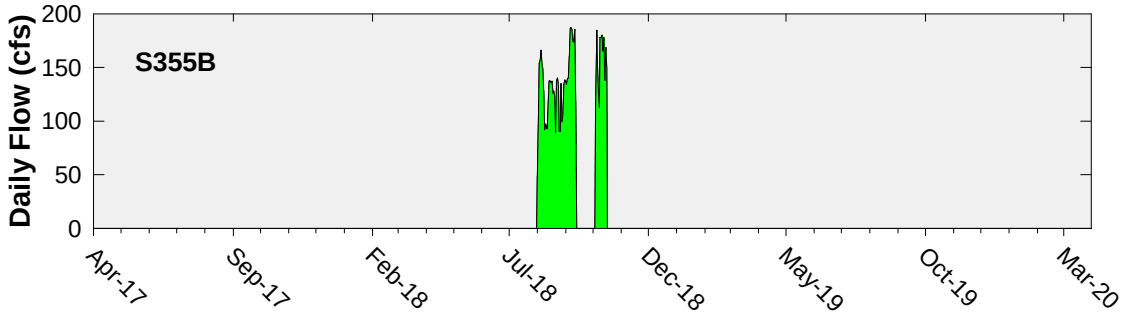


Daily Flows at Individual Inflow Structures to Shark River Slough

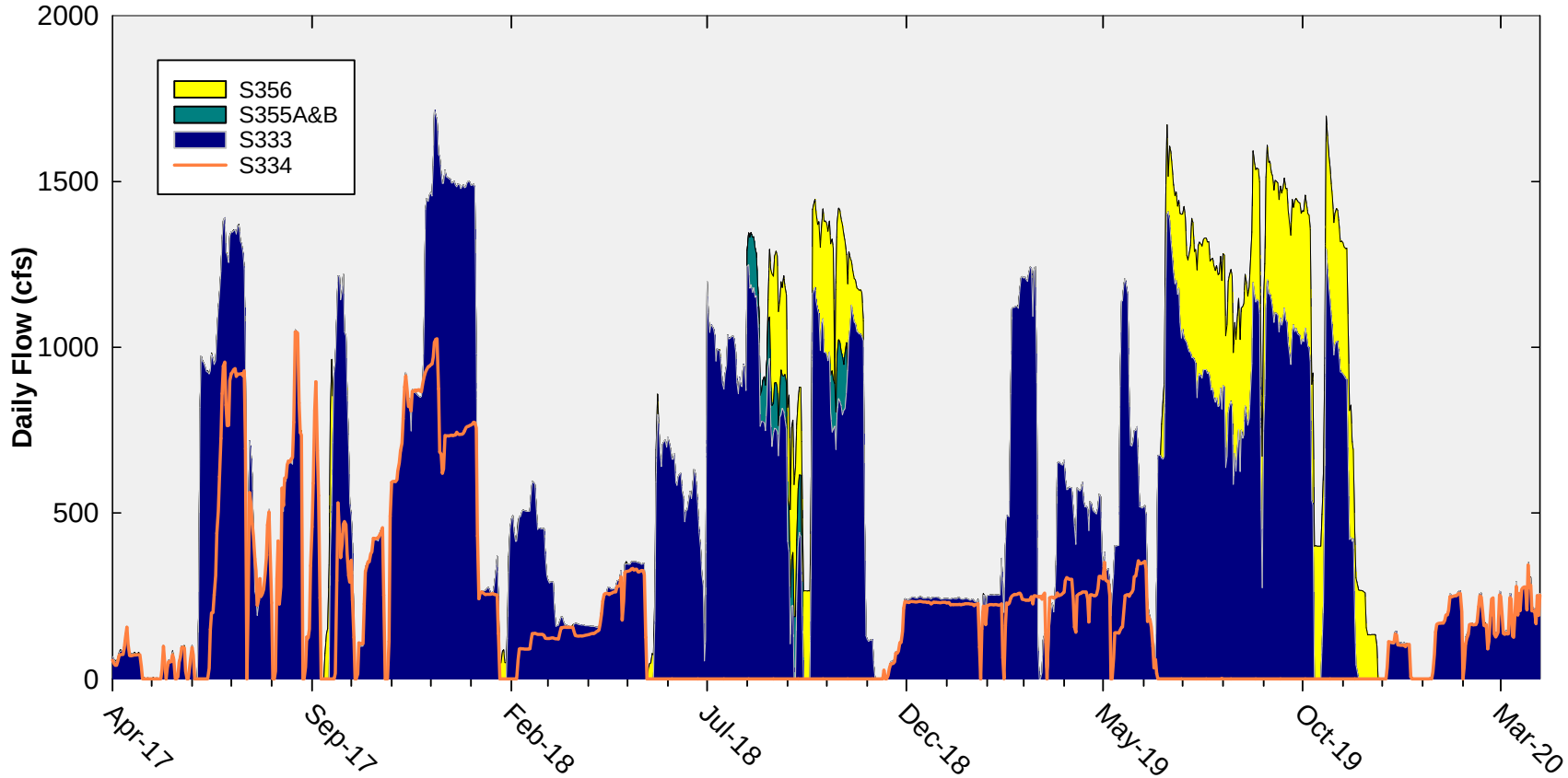




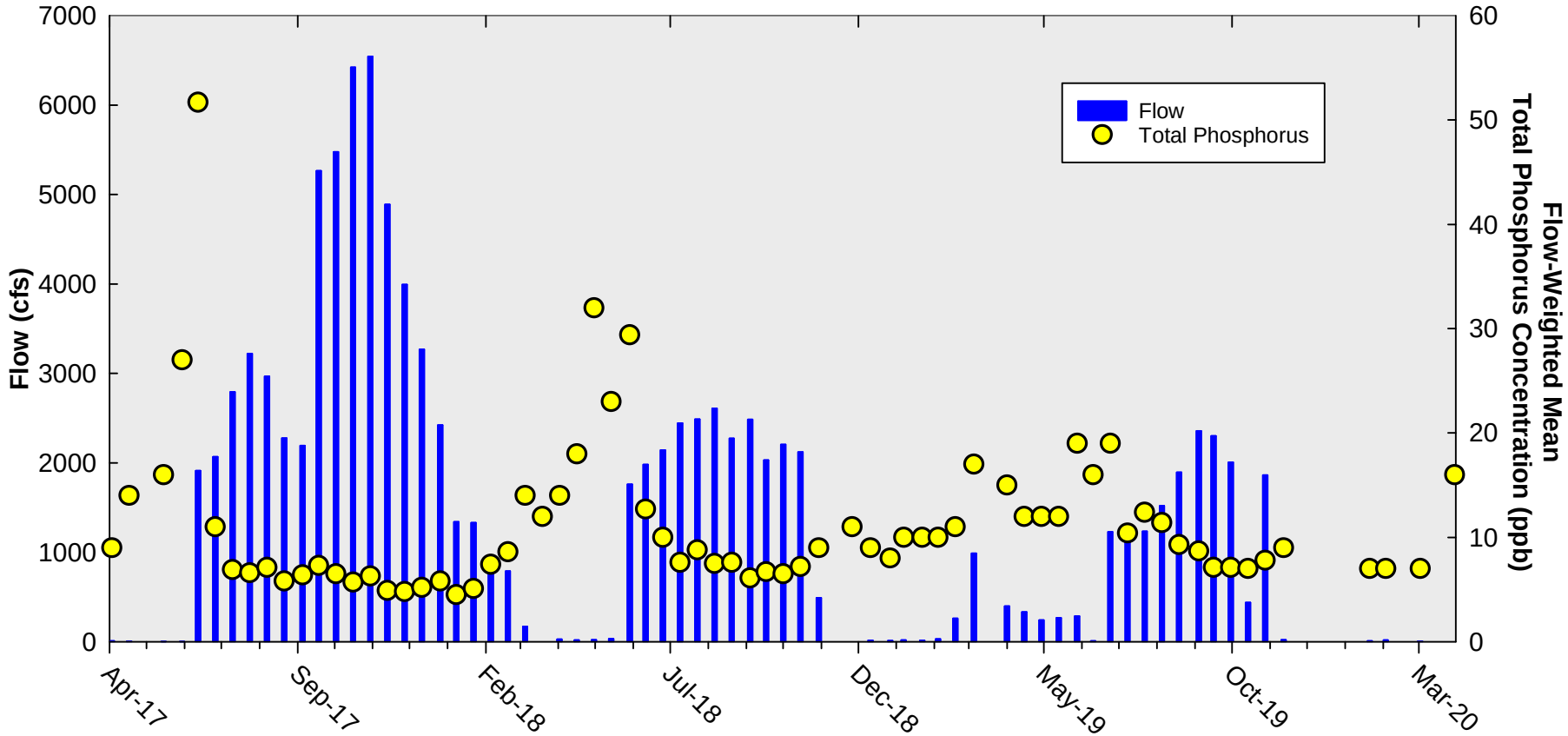




Daily Flows Into Shark River Slough through S333, S355A&B, and S356 and Out through S334



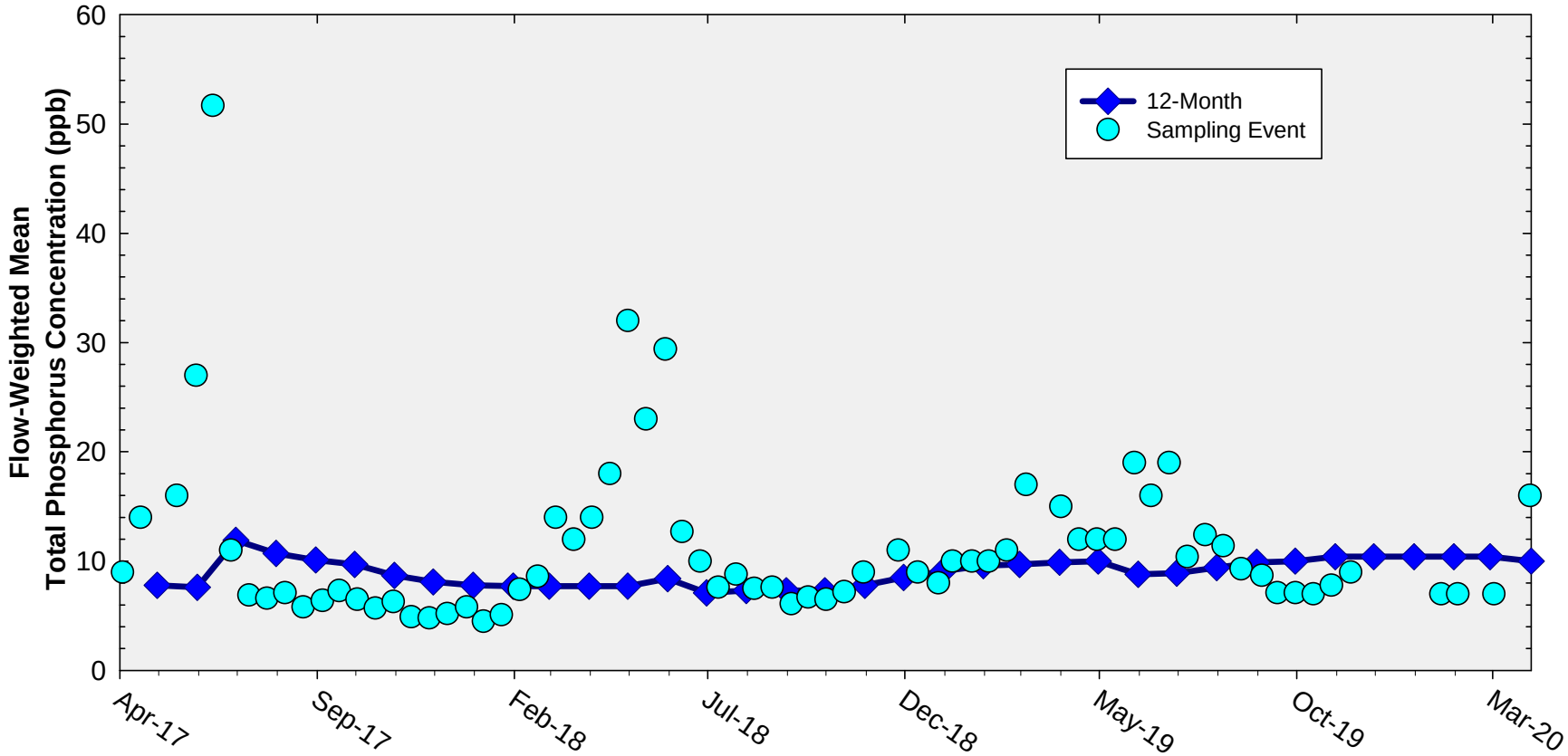
Shark River Slough
Sampling Event Flow and FWMC



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

Note: Method 1 results illustrated. October 2019 to March 2020 Flow Data for S12s are Provisional.

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. October 2019 to March 2020 Flow Data for S12s are Provisional.

Taylor Slough and Coastal Basins

TP Concentration Compliance Tracking

12-Month Period	Total Flow in kac-ft	Flow-Weighted Mean TP Concentration in ppb LTL = 11.0 ppb Effective 12/31/2006	Observed Percent of Sampling Events Greater than 10 ppb Guideline = 53.1%
Feb 2019 - Jan 2020	242.3 (255.6, 253.8)	5.3 (5.2, 4.9)	1.9 (1.9, 1.9)
Mar 2019 - Feb 2020	249.4 (262.9, 261.1)	5.3 (5.2, 5.0)	1.9 (1.9, 1.9)
Apr 2019 - Mar 2020	248.7 (262.3, 260.5)	5.3 (5.2, 5.0)	1.9 (1.9, 1.9)

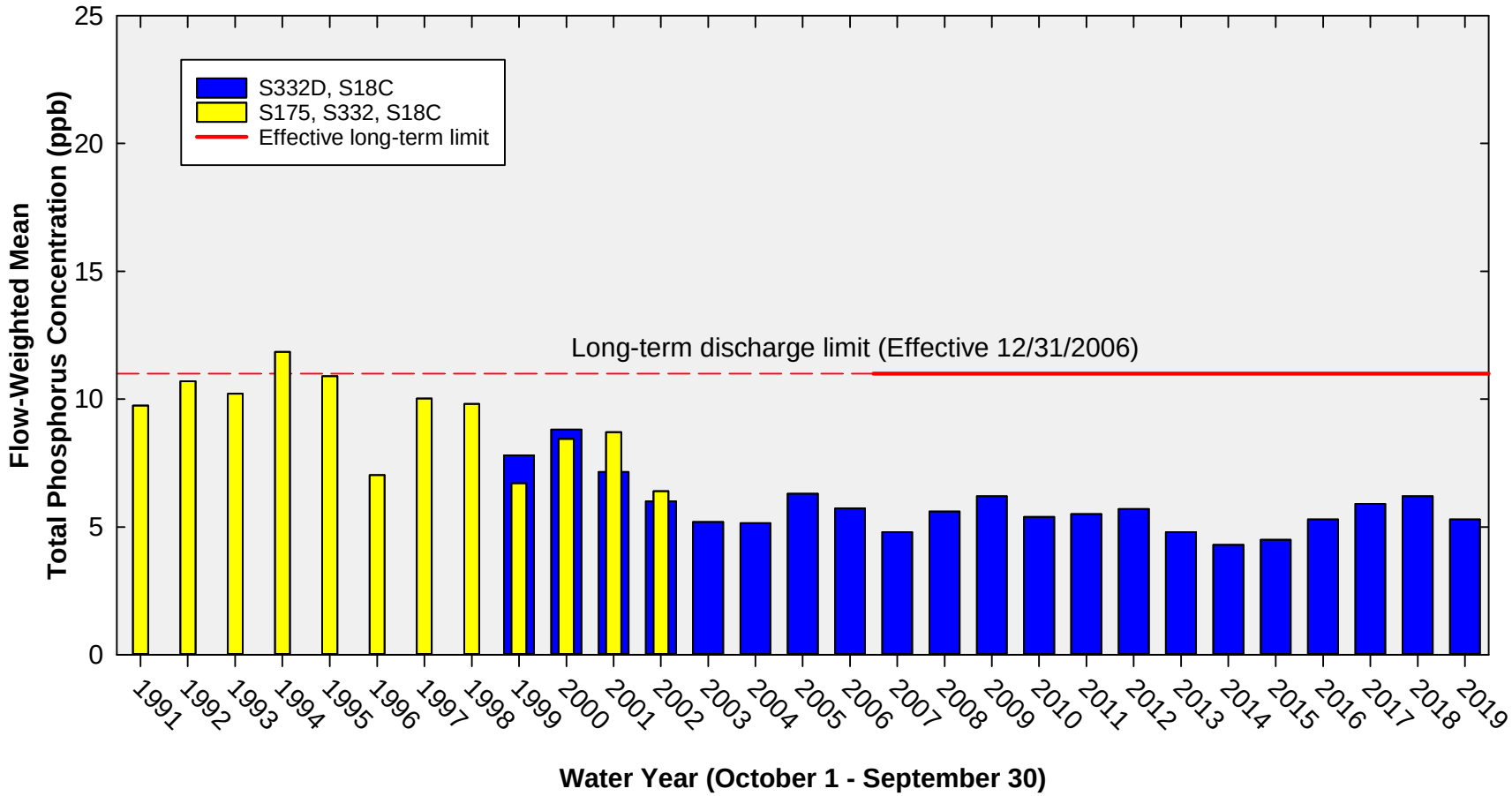
Method 1 (S332D+S18C) results are the left most values.

Method 2 (S332D+S18C+G737) results are the first values in parentheses.

Method 3 [(S332D-S332DX1–S328)+S328+G737+S18C] results are the second values in parentheses.

Annual Flow-Weighted Mean Concentrations

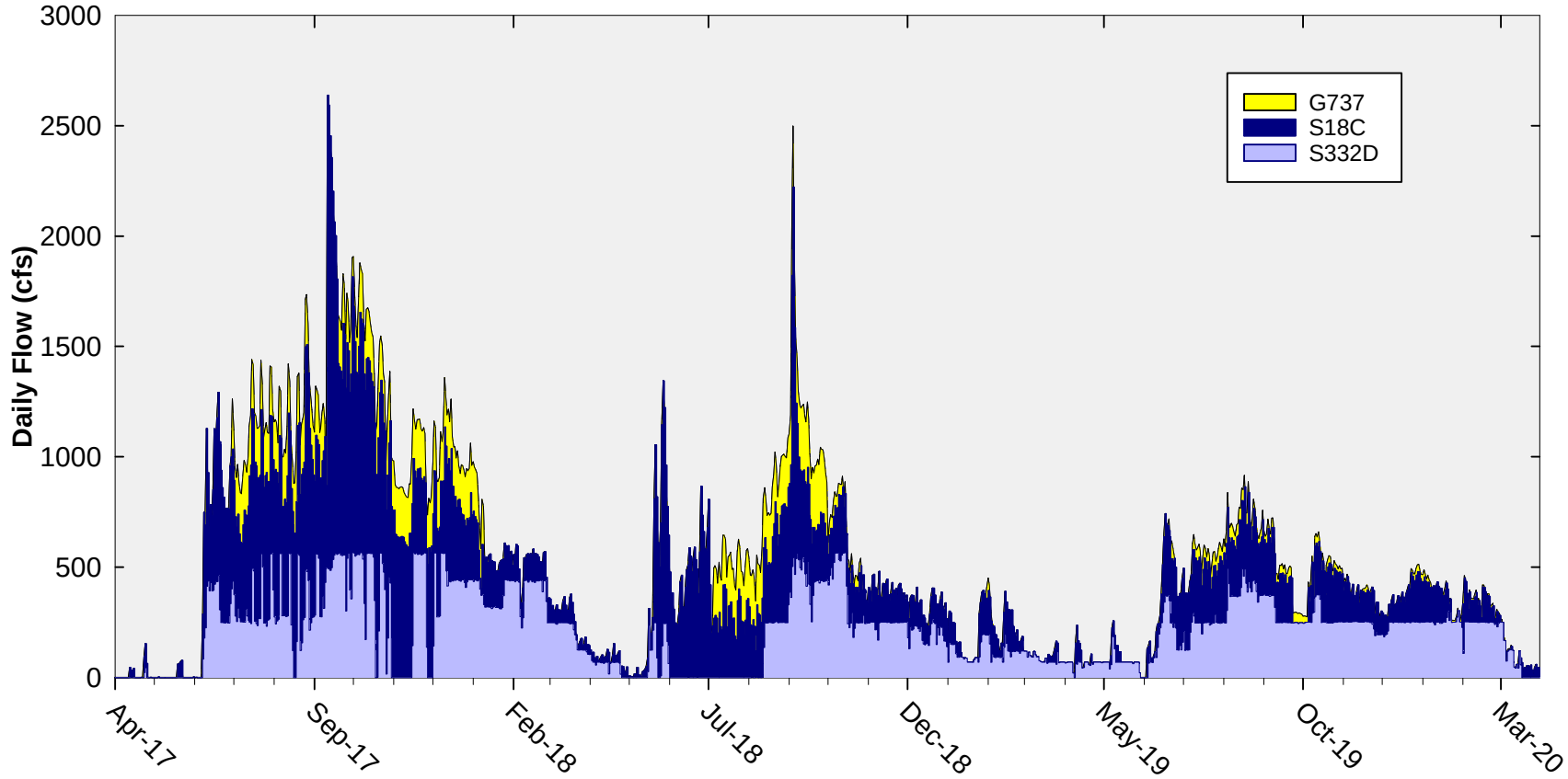
Inflows to the ENP through Taylor Slough and Coastal Basins



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

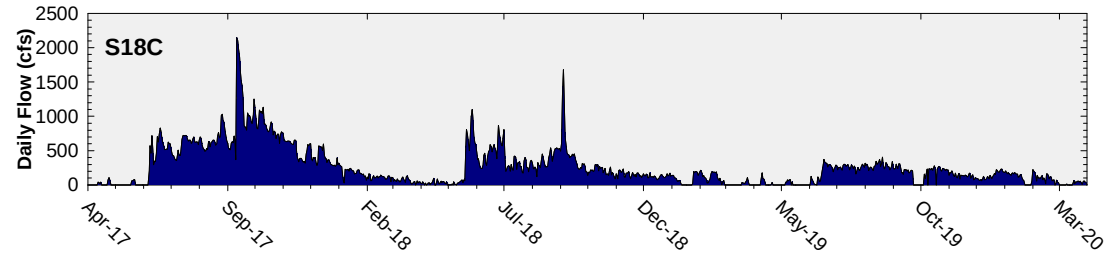
Note: Blue bars show S332D, S18C, & S174 until September 2007 when S174 was plugged.

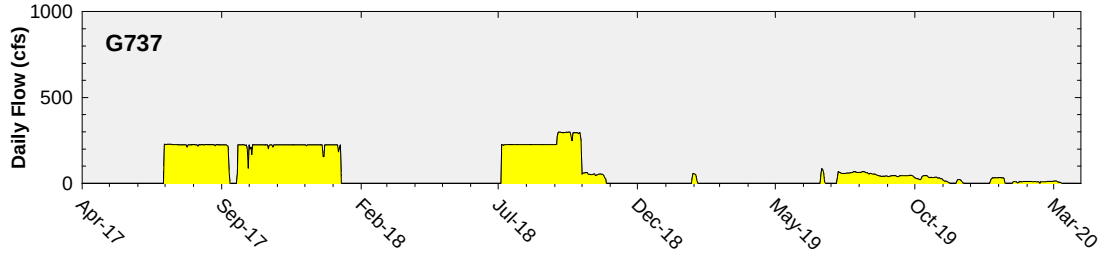
Daily Flows at Taylor Slough and Coastal Basins Structures into ENP

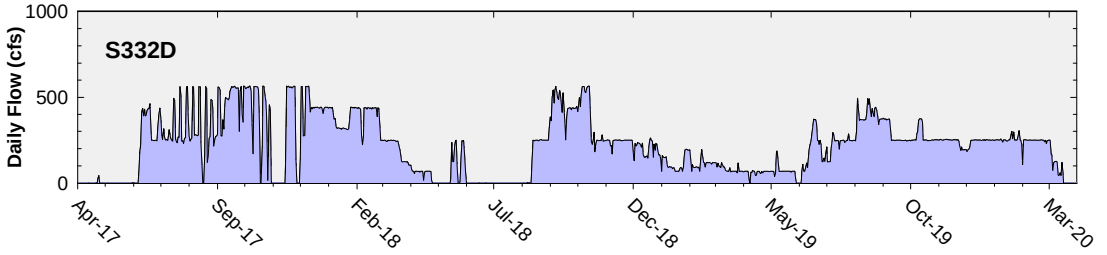


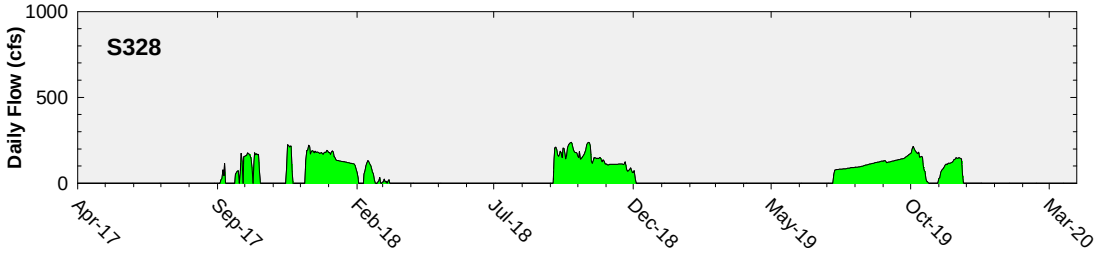
Note: Daily flow data are missing for S18C from September 23 to September 30, 2019.

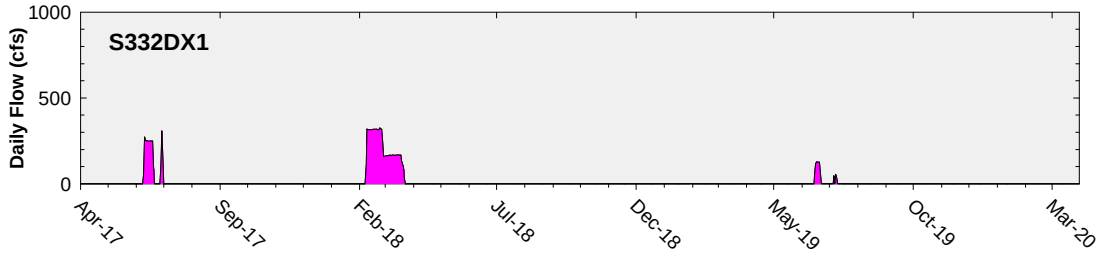
Daily Flows at Individual Taylor Slough and Coastal Basins Structures into ENP



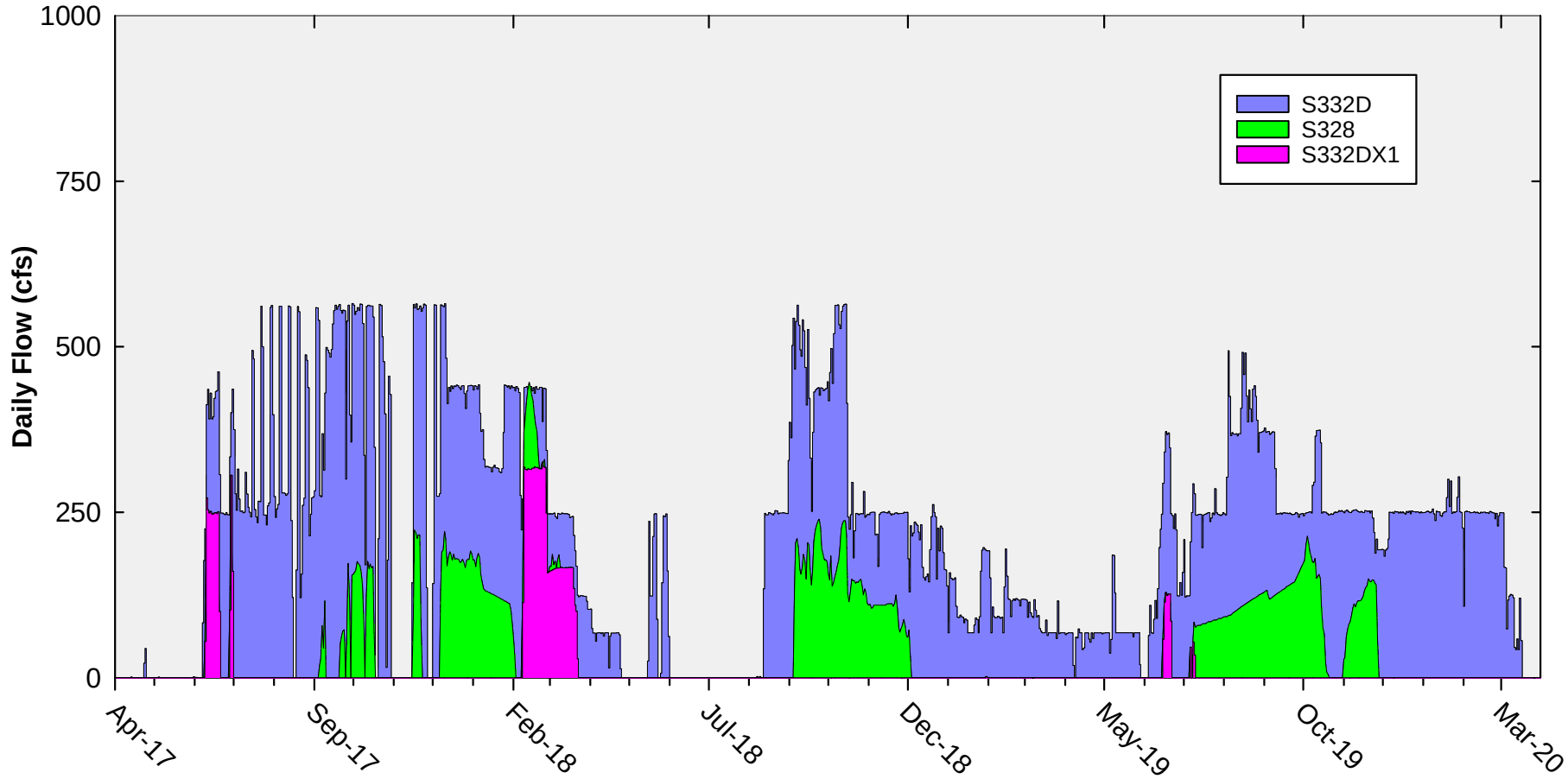






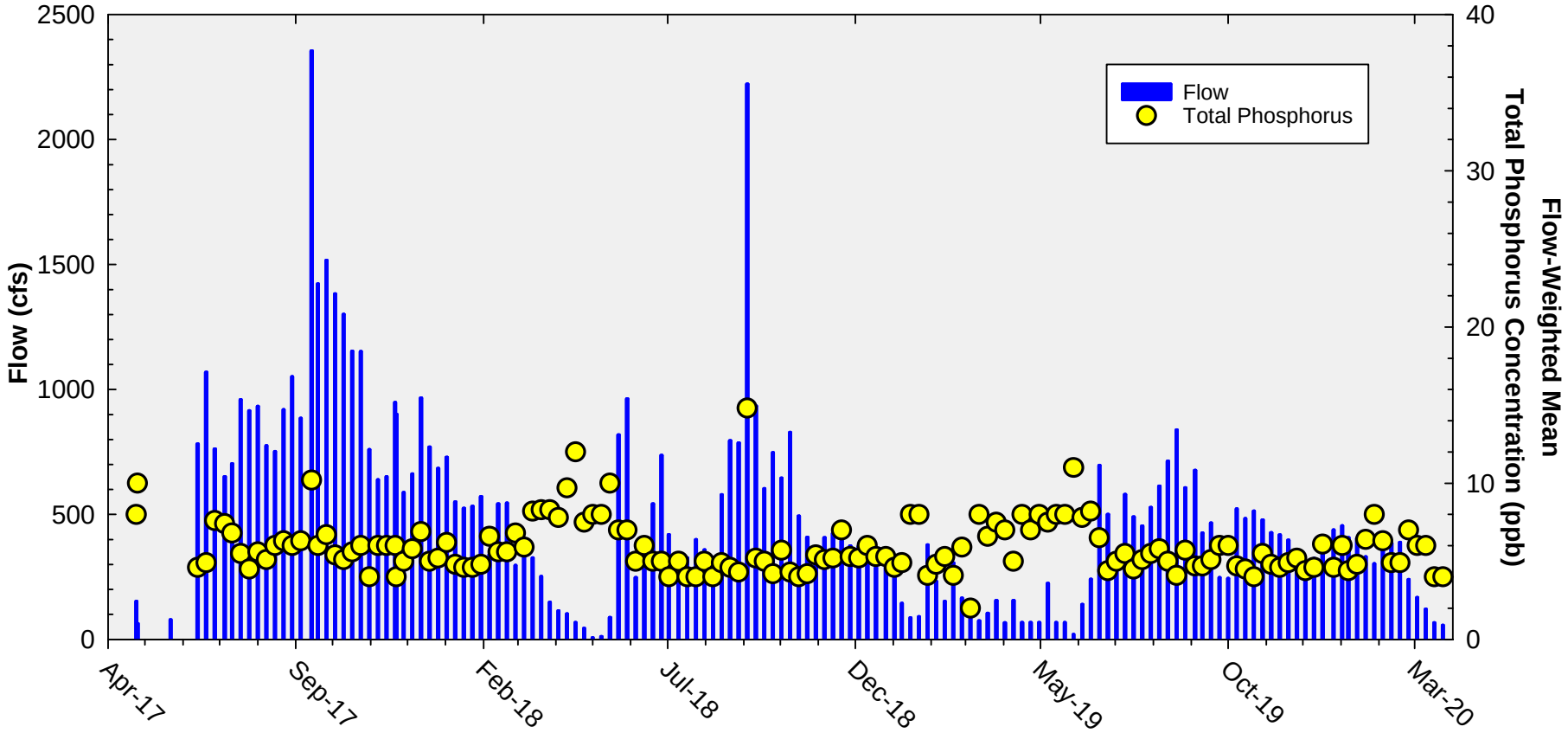


Daily Flows Into and Out of C-111 Detention Area



Taylor Slough and Coastal Basins

Sampling Event Flow and FWMC

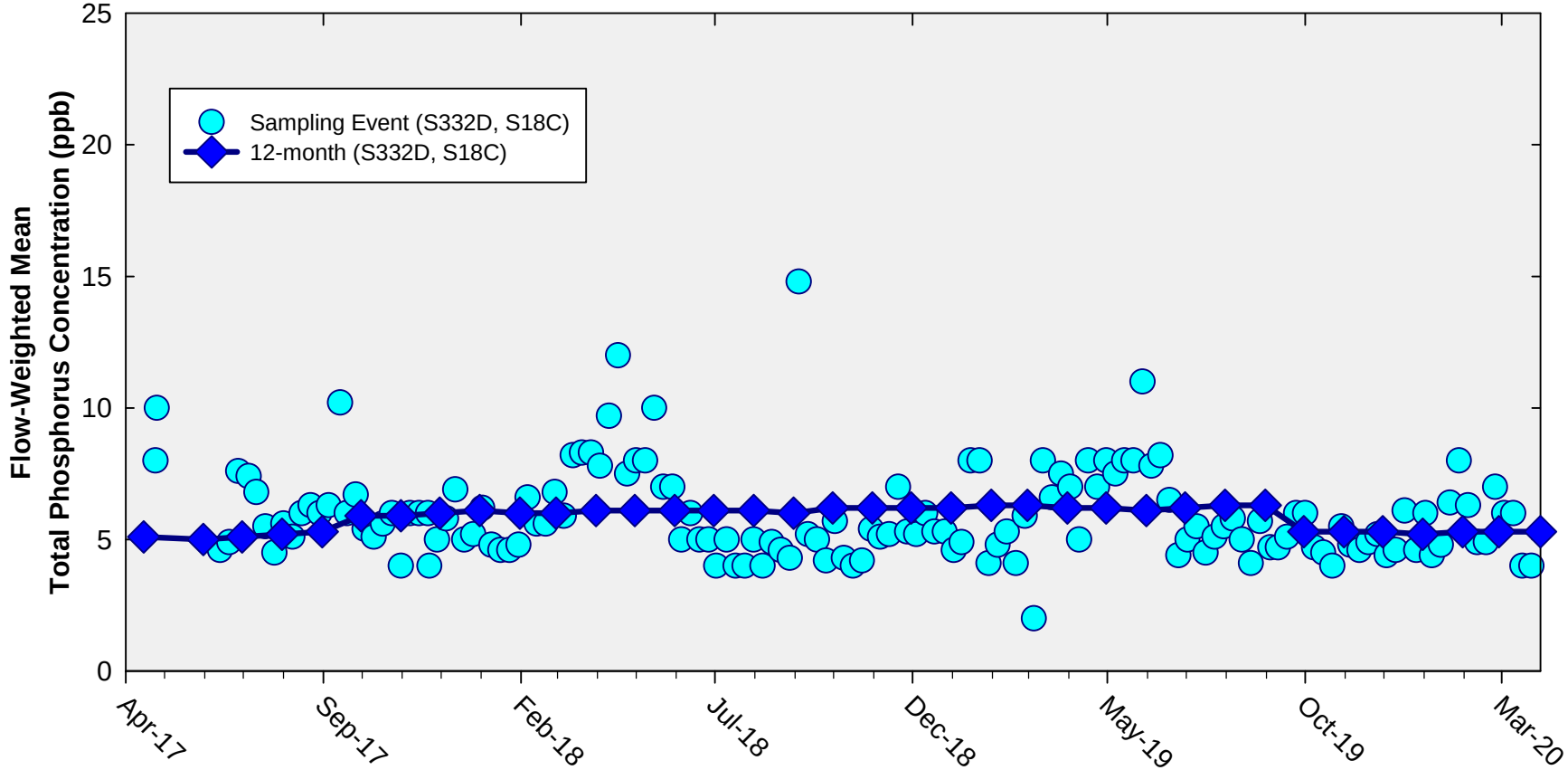


Flow at Taylor Slough and Coastal Basins structures and the corresponding TP FWMCs for individual sampling events

Note: Method 1 results illustrated.

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

Note: Method 1 results illustrated.


Thank You