



SETTLEMENT AGREEMENT QUARTERLY REPORT

January – March 2021

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Compliance Assessment & Reporting Section

Water Quality Bureau

Technical Oversight Committee

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sfwmd.gov

SUMMARY

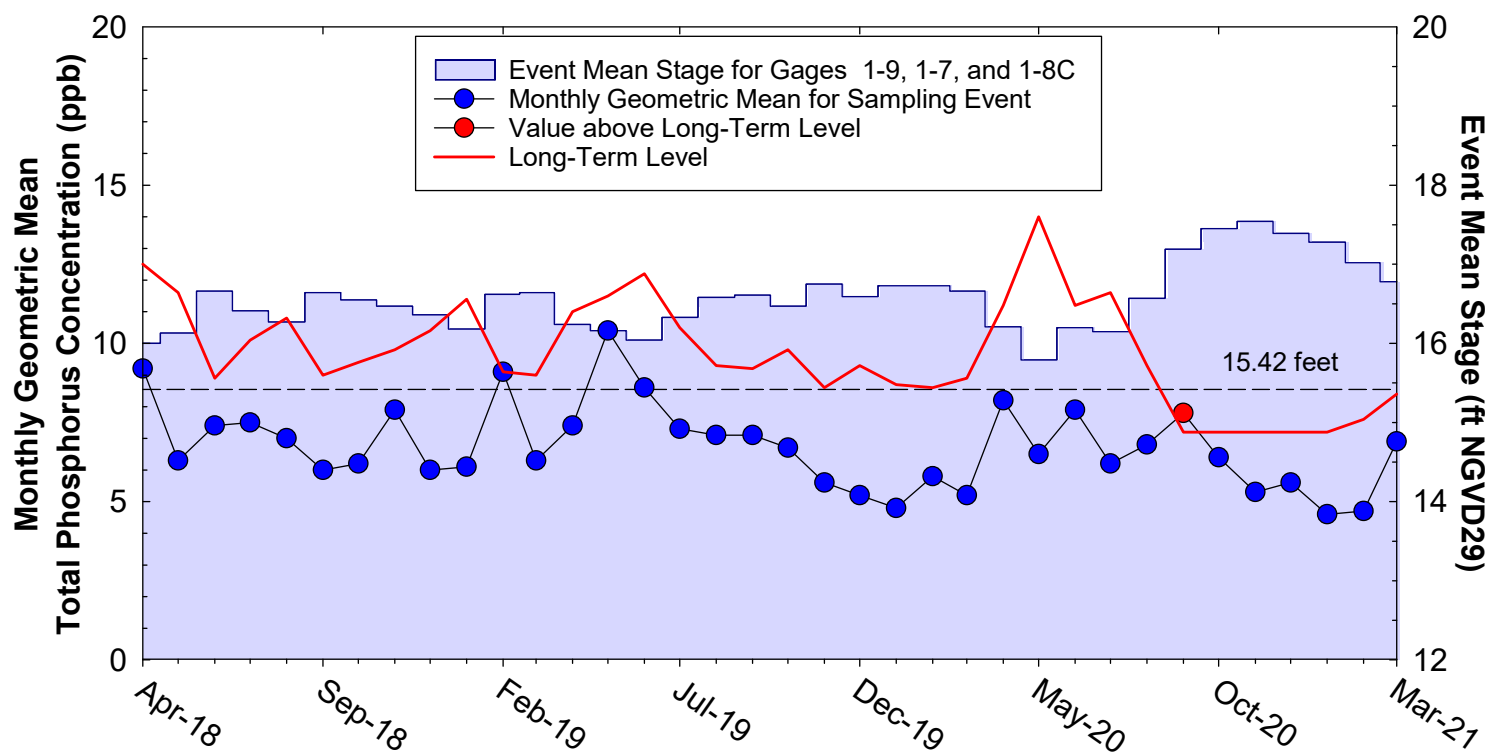
Month	Geometric Mean TP Concentration (ppb)		Long-Term Level (ppb)	Mean Stage (ft NGVD29)	Number of Samples	
Arthur R. Marshall Loxahatchee National Wildlife Refuge						
Jan 2021	4.6		7.2	17.28	14	
Feb 2021	4.7		7.6	17.02	14	
Mar 2021	6.9		8.4	16.78	14	
12-Month Period Ending	Total Flow (kac-ft)	12-Month TP FWMC (ppb)	Long-Term Limit (ppb)	Percent of Sampling Events Greater than 10 ppb		
				Guideline	Observed	
Everglades National Park – Shark River Slough – <i>PROVISIONAL DATA and RESULTS</i>						
Jan 2021	1,689.8	7.2	7.6	40.1	30.4	
Feb 2021	1,818.3	7.2	7.6	40.1	29.2	
Mar 2021	1,914.0	7.4	7.6	40.1	28.0	
Everglades National Park – Taylor Slough and Coastal Basins						
Jan 2021	460.4	5.8	11.0	53.1	4.3	
Feb 2021	463.6	5.7	11.0	53.1	4.3	
Mar 2021	466.4	5.7	11.0	53.1	4.2	

SRS - computed as $S12s + [S333 + S333N + S355A + S355B + \min(S356, S335) - S334]$. S334 flow is not excluded from the total flow for long-term limit calculations.

TS and CB – computed as $(S332D - S332DX1 - S328) + S328 + G737 + S18C$.

A.R.M Loxahatchee National Wildlife Refuge

Monthly Total Phosphorus Geometric Mean Concentrations

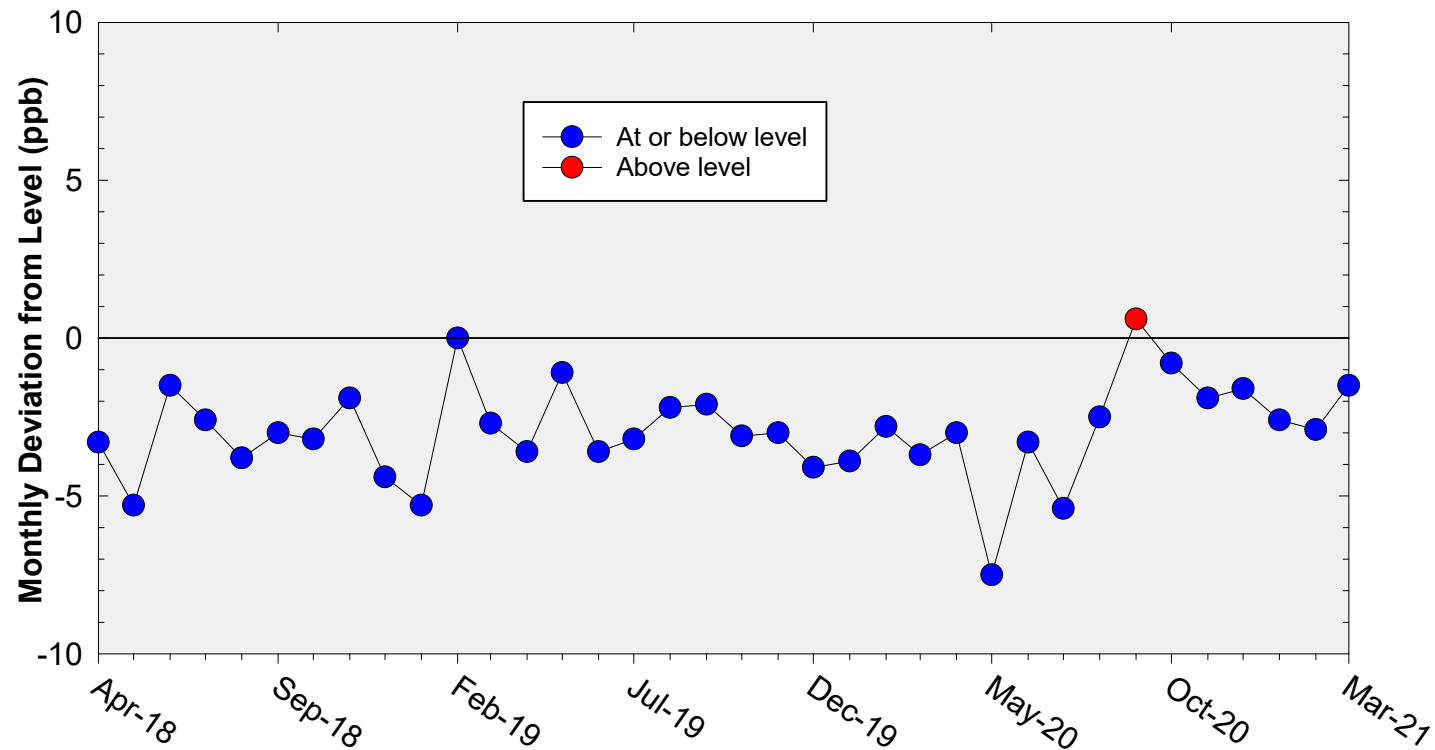


36-Month Average TP Geometric Mean = 6.8 ppb

36-Month Average TP Long-term Level is = 9.7 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 = 2.9 ppb below the Long-Term Level

Refuge TP Compliance Tracking

For January – July 2021

Month	Geometric Mean TP Concentration (ppb)	Long-Term Level (ppb) Effective 12/31/2006	Average Stage (feet NGVD29)	Number of Samples
4th Quarter 2020 Compliance Tracking				
Jan-2021	4.6	7.2	17.28	14
Feb-2021	4.7	7.6	17.02	14
Mar-2021	6.9	8.4	16.78	14
Preliminary Data Outlook				
Apr-2021	6.1	10.8	16.27	11
May-2021	8.7	12.4	16.02	9
Jun-2021	7.6	16.3	15.54	5
Jul-2021	11.1	12.5	16.00	8

Note: 17.14 ft NGVG29 was used for the long-term level calculation for January 2021.

Shark River Slough TP Concentration Compliance Tracking

WY2021 (October 2020 to March 2021) Flow Data for S12s are Provisional.

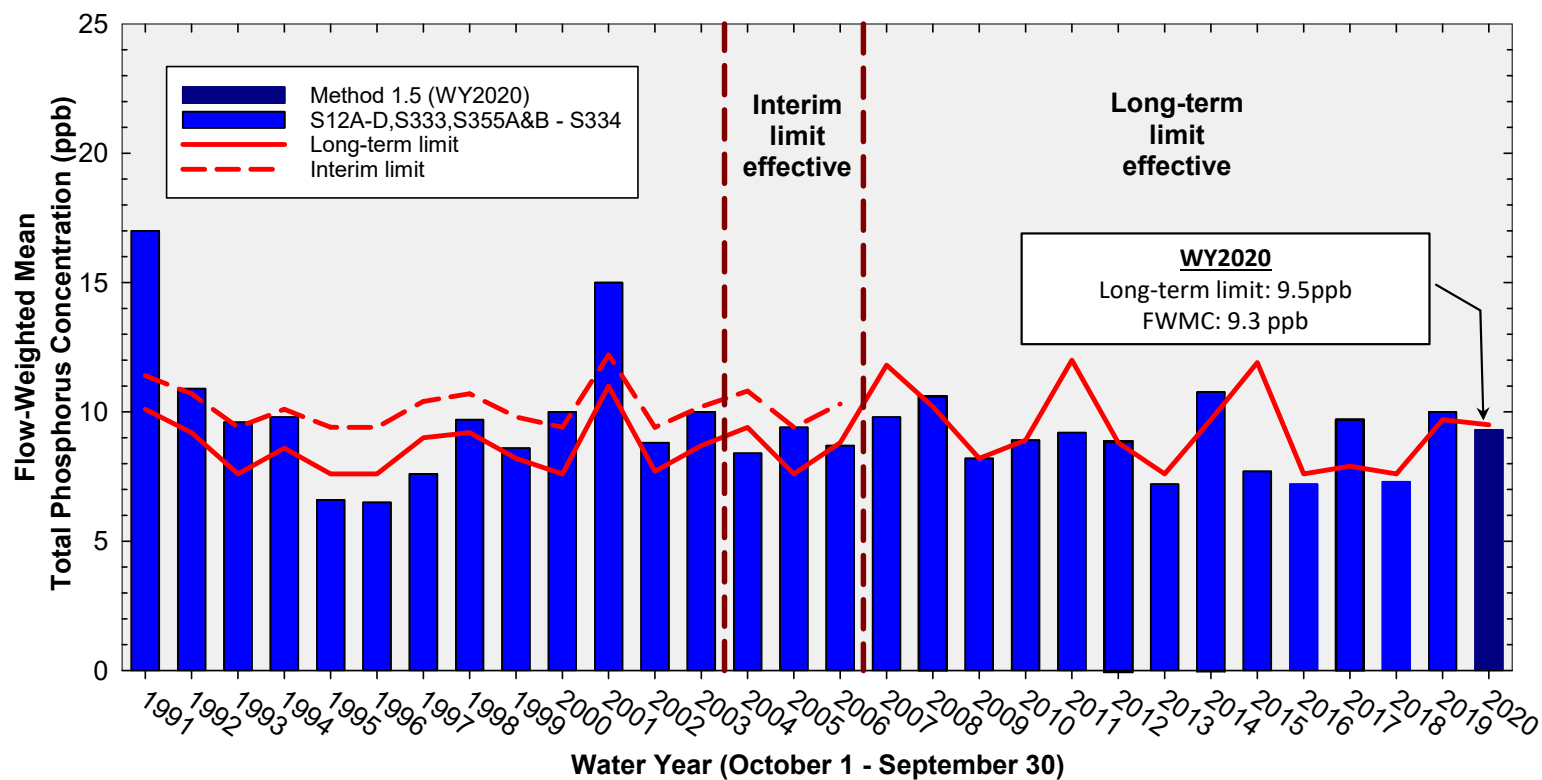
12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration (ppb)	Long-Term Limit (ppb) <i>Effective 12/31/2006</i>	Percent of Sampling Events Greater than 10 ppb	
				Guideline	Observed
Feb 2020 - Jan 2021	1,689.8	7.2	7.6	40.1	30.4
Mar 2020 - Feb 2021	1,818.3	7.2	7.6	40.1	29.2
Apr 2020 - Mar 2021	1,914.0	7.4	7.6	40.1	28.0

Shark River Slough PROVISIONAL RESULTS:

FWMC computed as S12s + [S333 + S333N + S355A + S355B + minimum of (S356, S335) – S334] using all flow and TP grabs on bi-weekly compliance sampling dates.

S334 flow was not excluded from the flow for long-term limit calculations.

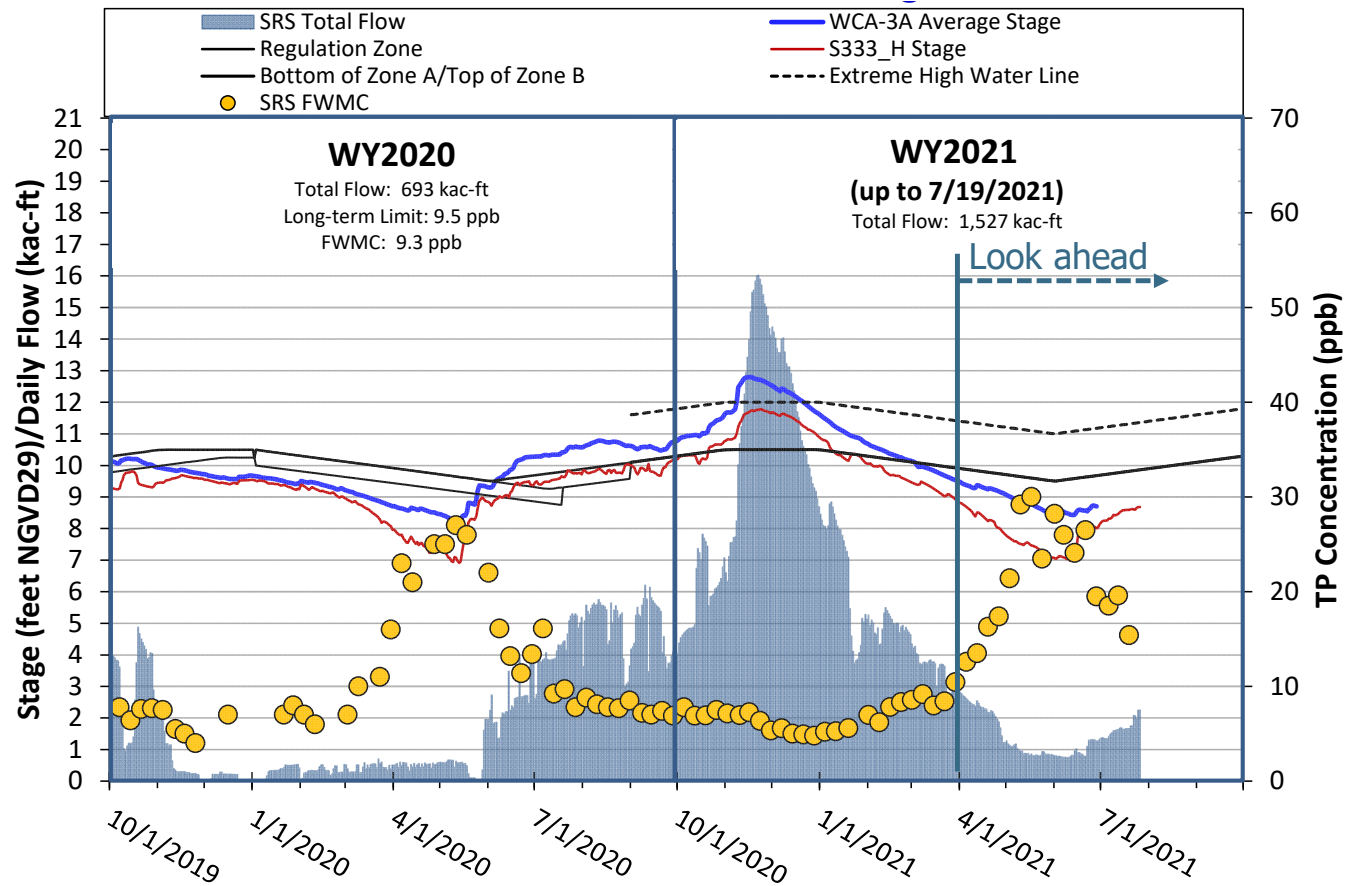
Annual Flow-weighted Mean Concentrations Inflows to ENP through Shark River Slough



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

WY2020 & 2021* Stage, Flow, and TP FWMC

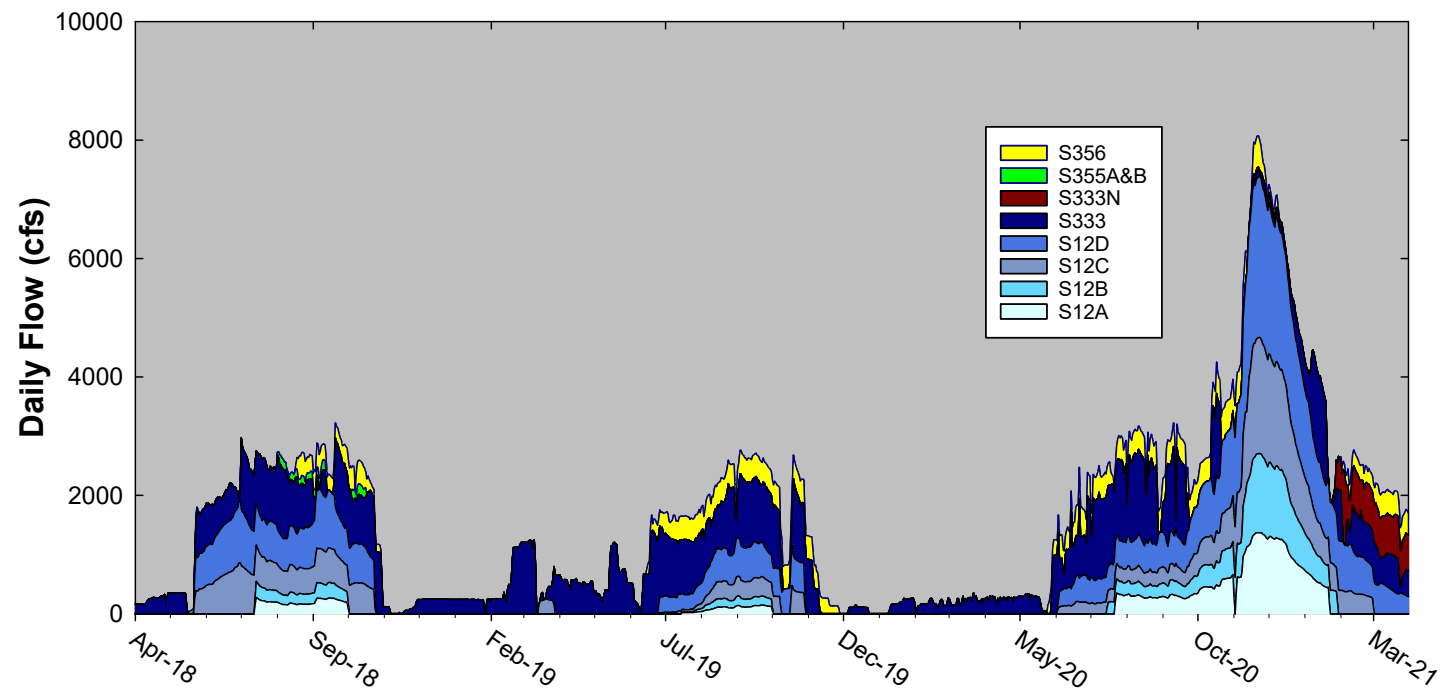
Inflows to ENP through Shark River Slough



* Partial WY2021 Data is Provisional

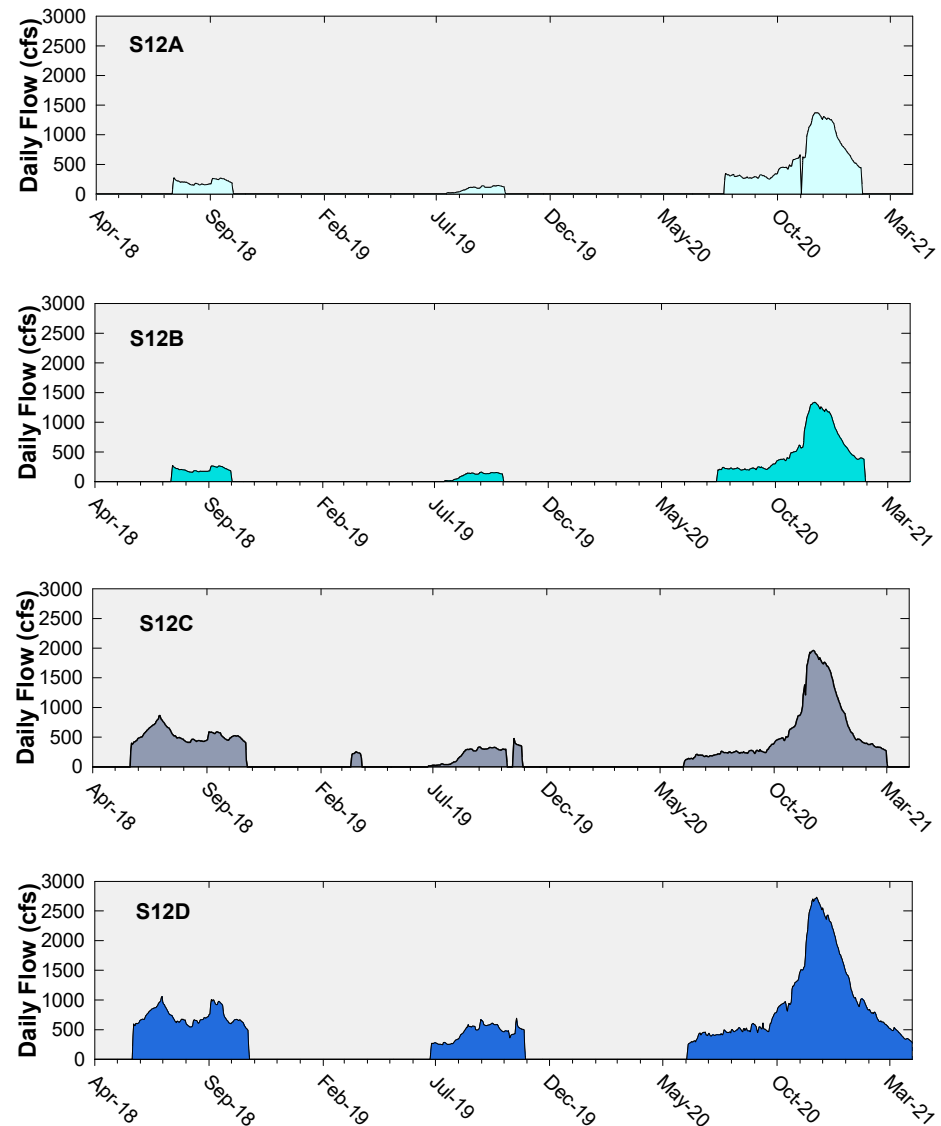
Shark River Slough Structure Daily Flows

WY2021 (October 2020 to March 2021) Flow Data for S12s are Provisional.

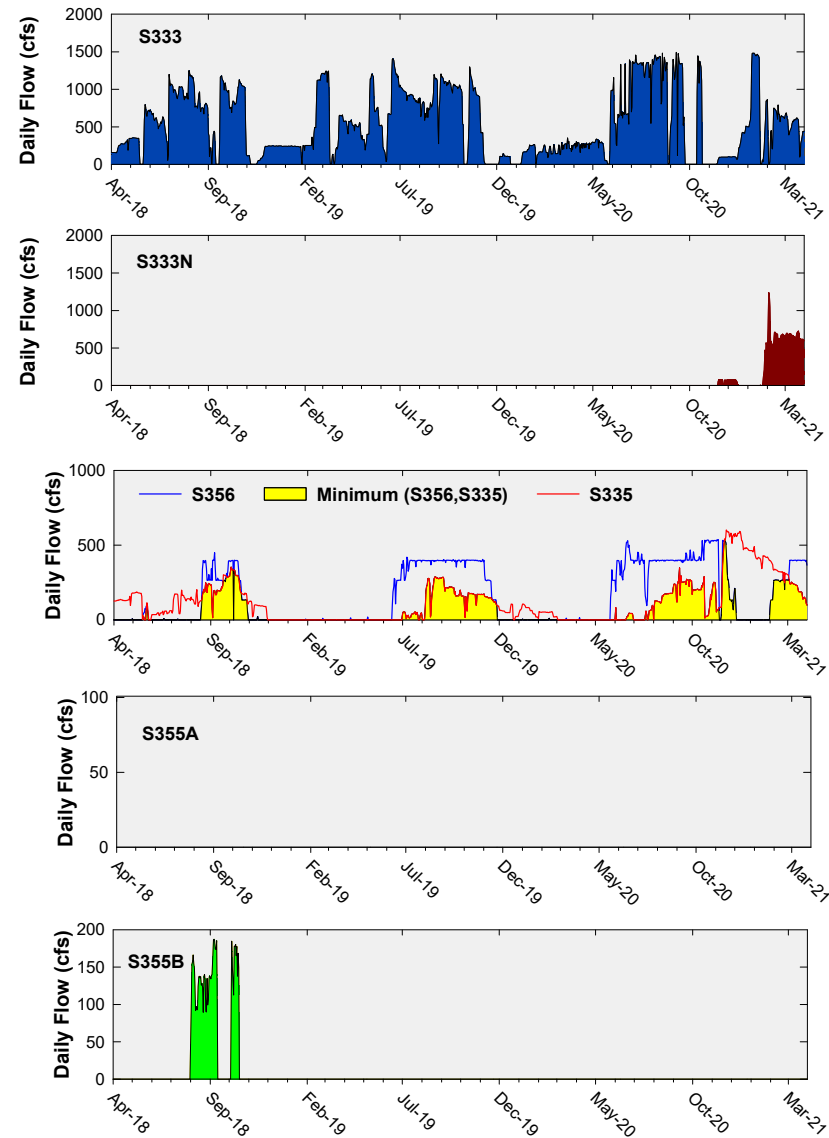


Daily Flows at S12 Structures to Shark River Slough

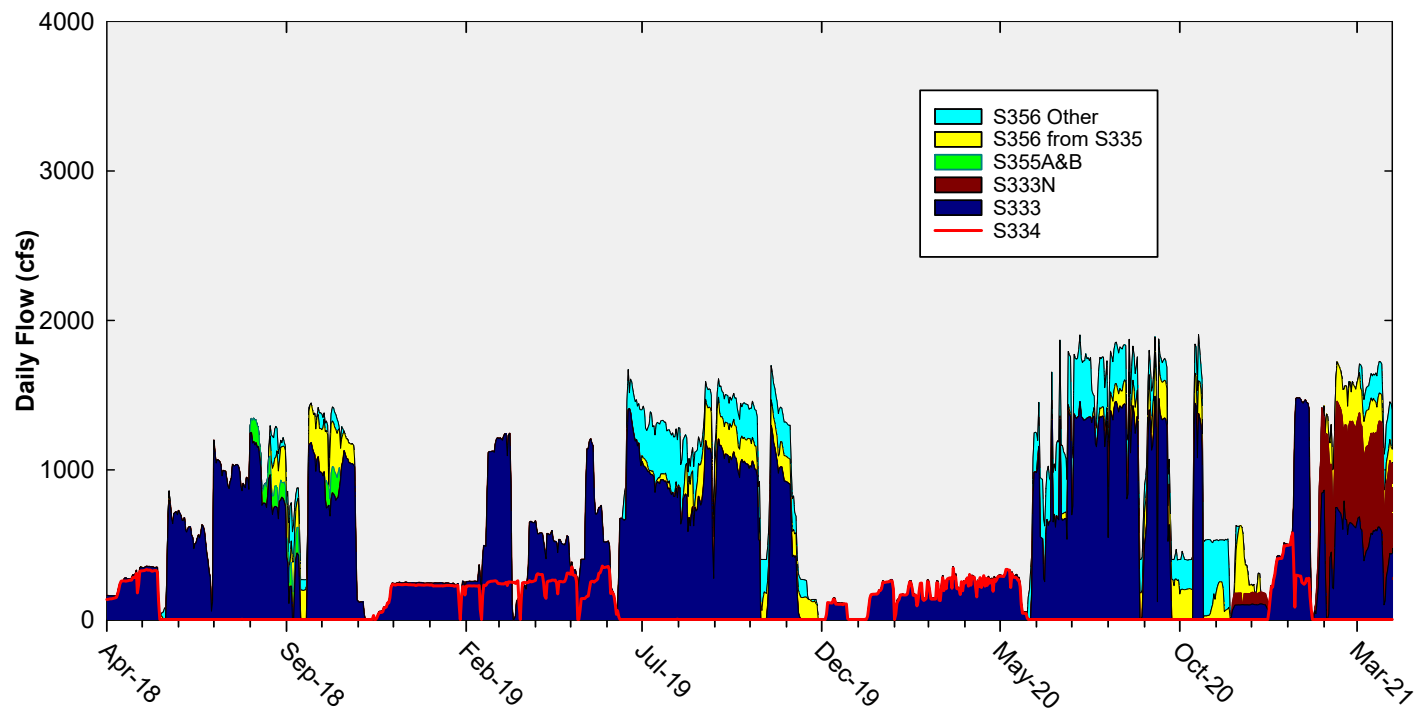
**WY2021 (October to March 2021) Flow
Data for S12s are Provisional.**



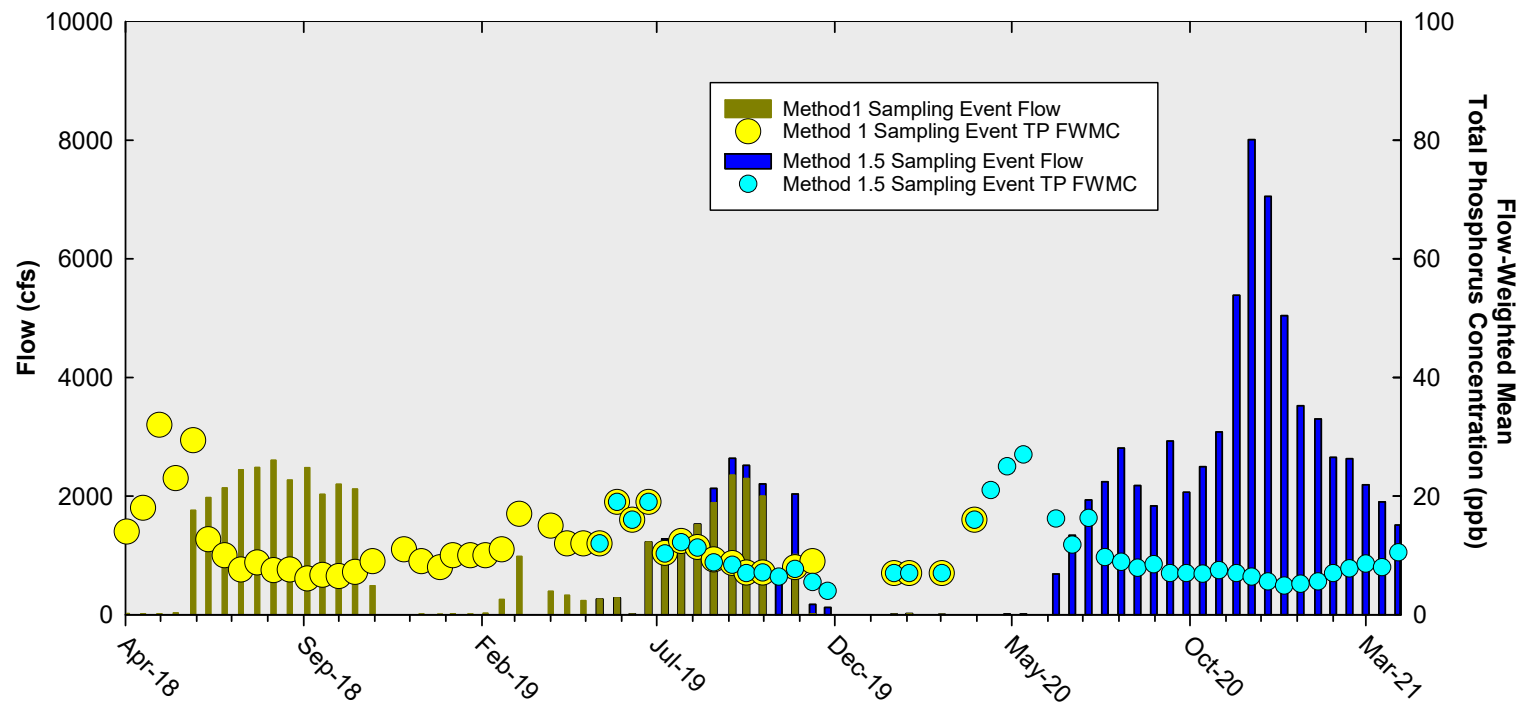
Daily Flows at Individual Inflow Structures to Shark River Slough



Daily Flows Into Shark River Slough through S333&S333N, S355A&B, and S356 and Out through S334



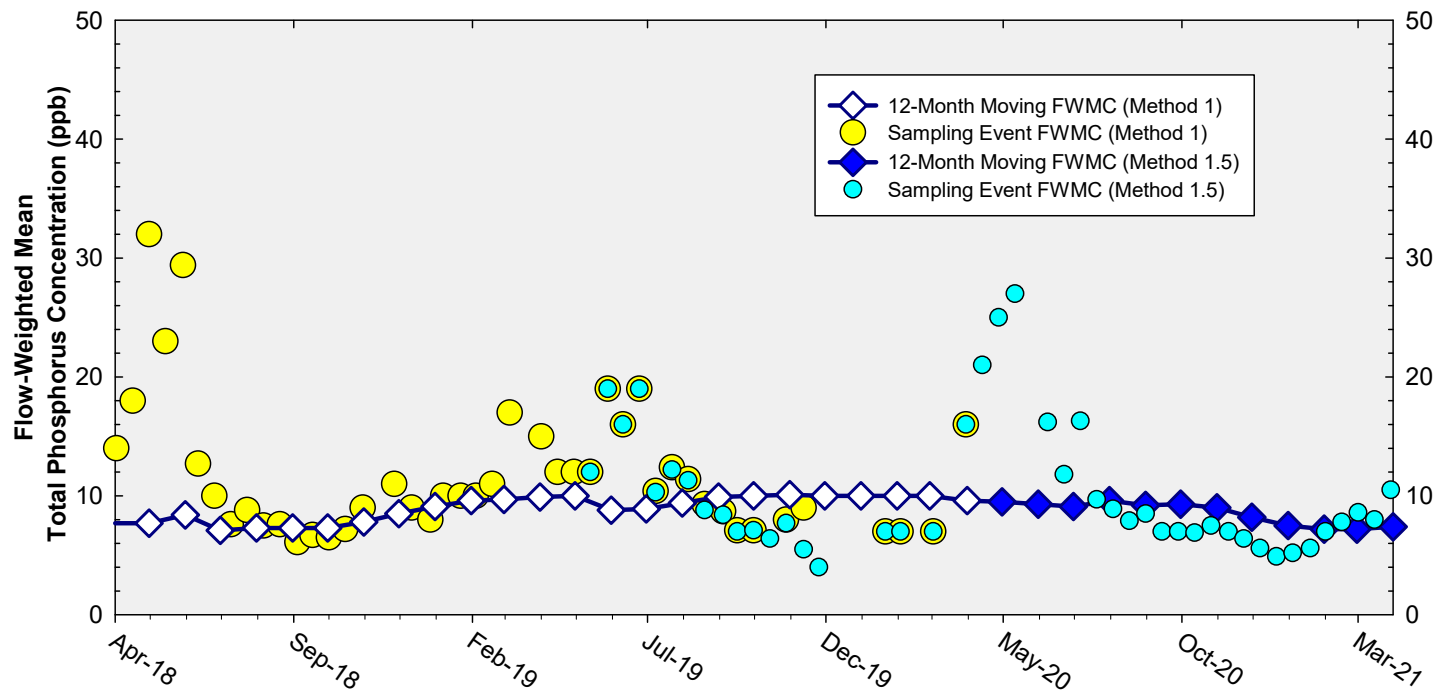
Shark River Slough Sampling Event Flow and FWMC



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

Note: October to March 2021 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

October to March 2021) Flow Data for S12s are Provisional.

Taylor Slough and Coastal Basins

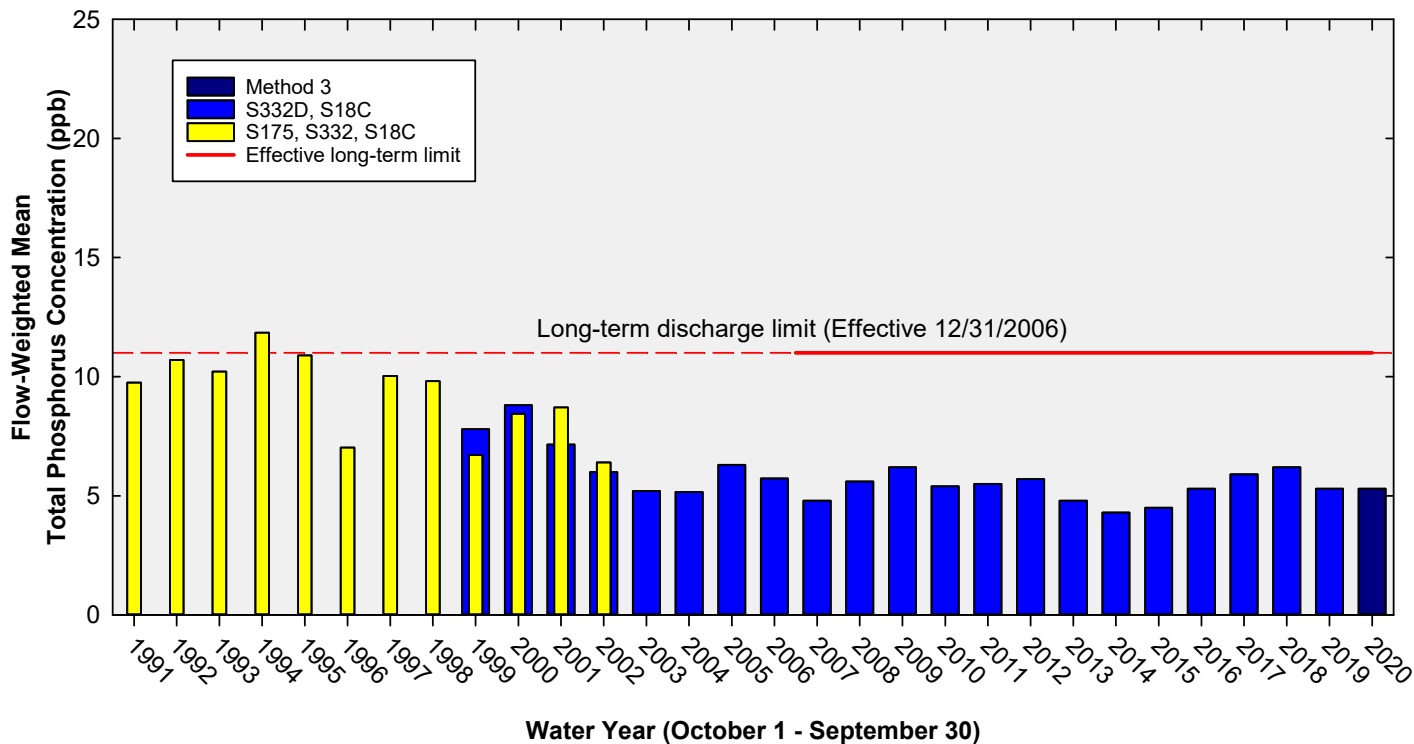
TP Concentration Compliance Tracking

12-Month Period	Total Flow (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 2020 - Jan 2021	460.4	5.8	4.3
Mar 2020 - Feb 2021	463.6	5.7	4.3
Apr 2020 - Mar 2021	466.4	5.7	4.2

FWMC computed as $[(S332D-S332DX1-S328)+S328+G737+S18C]$ using all flow and TP grabs on weekly compliance sampling.

Total flow is $(S332D-S332DX1)+G737+S18C]$

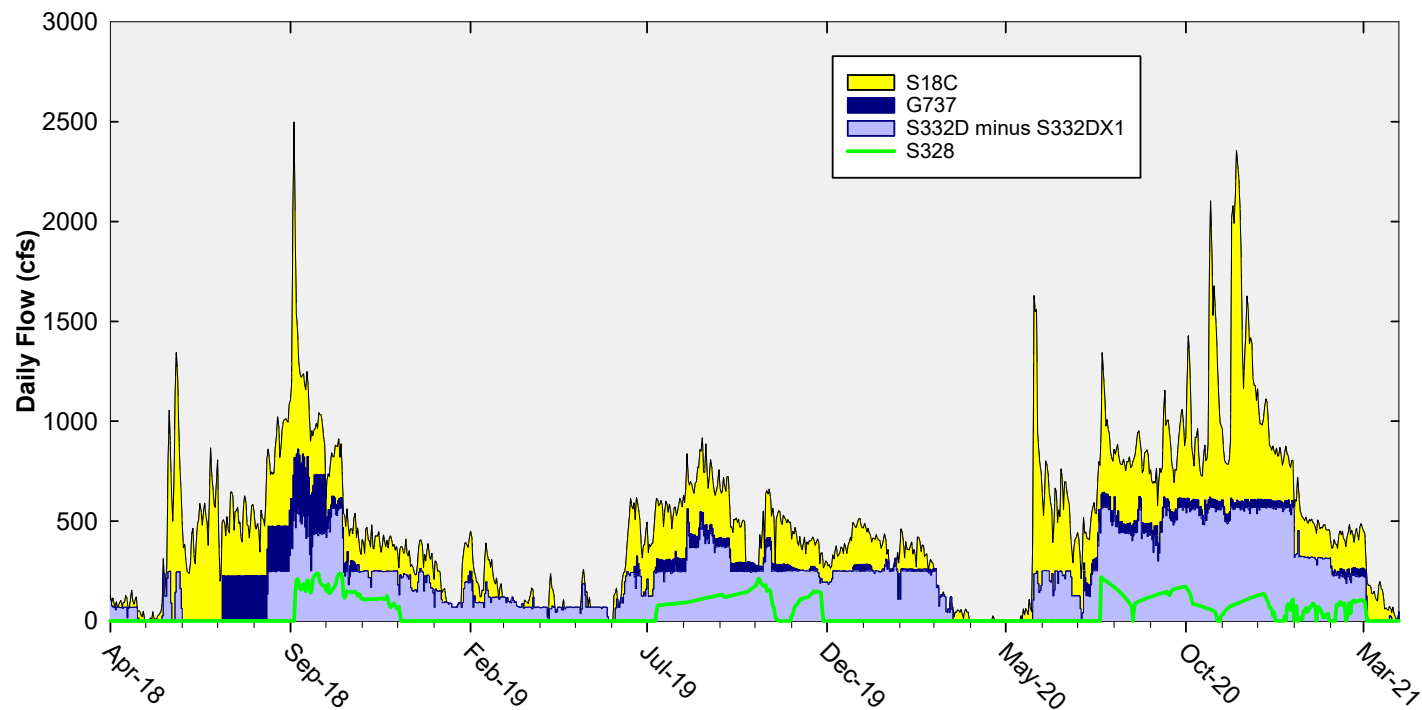
Annual Flow-Weighted Mean Concentrations Inflows to the ENP through Taylor Slough and Coastal Basins



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

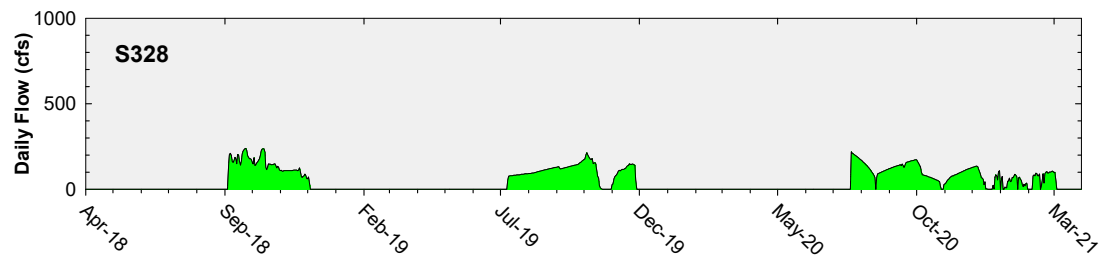
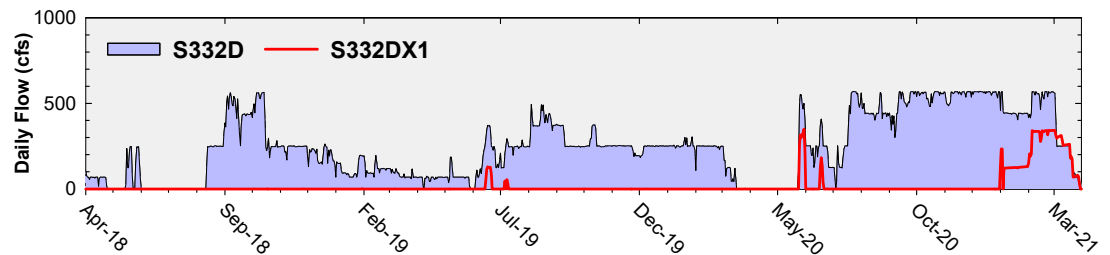
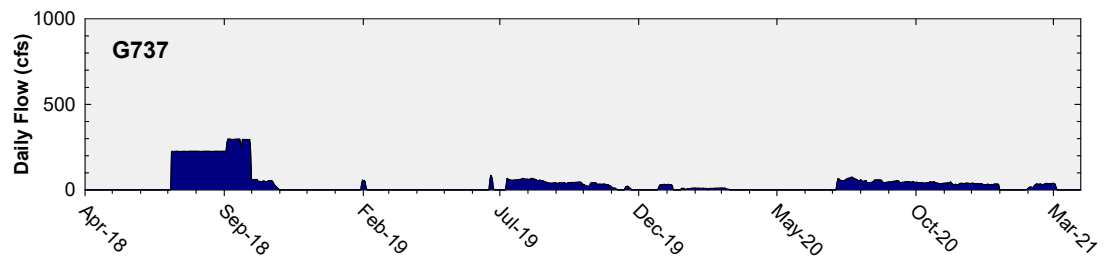
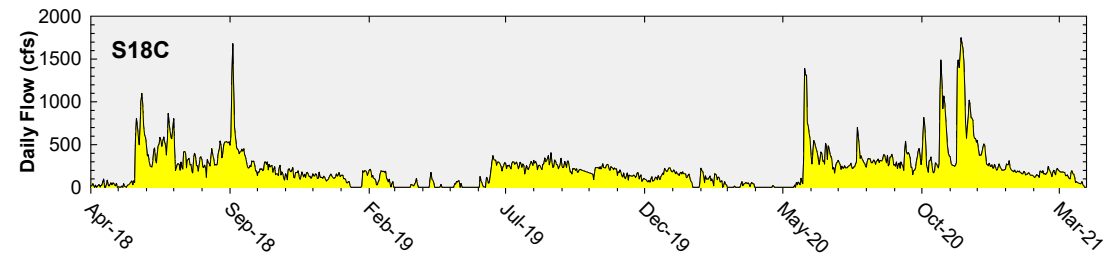
Note: Blue bars show S332D, S18C, & S174 until September 2007 when S174 was plugged.

Daily Flows at Taylor Slough and Coastal Basins Structures into ENP

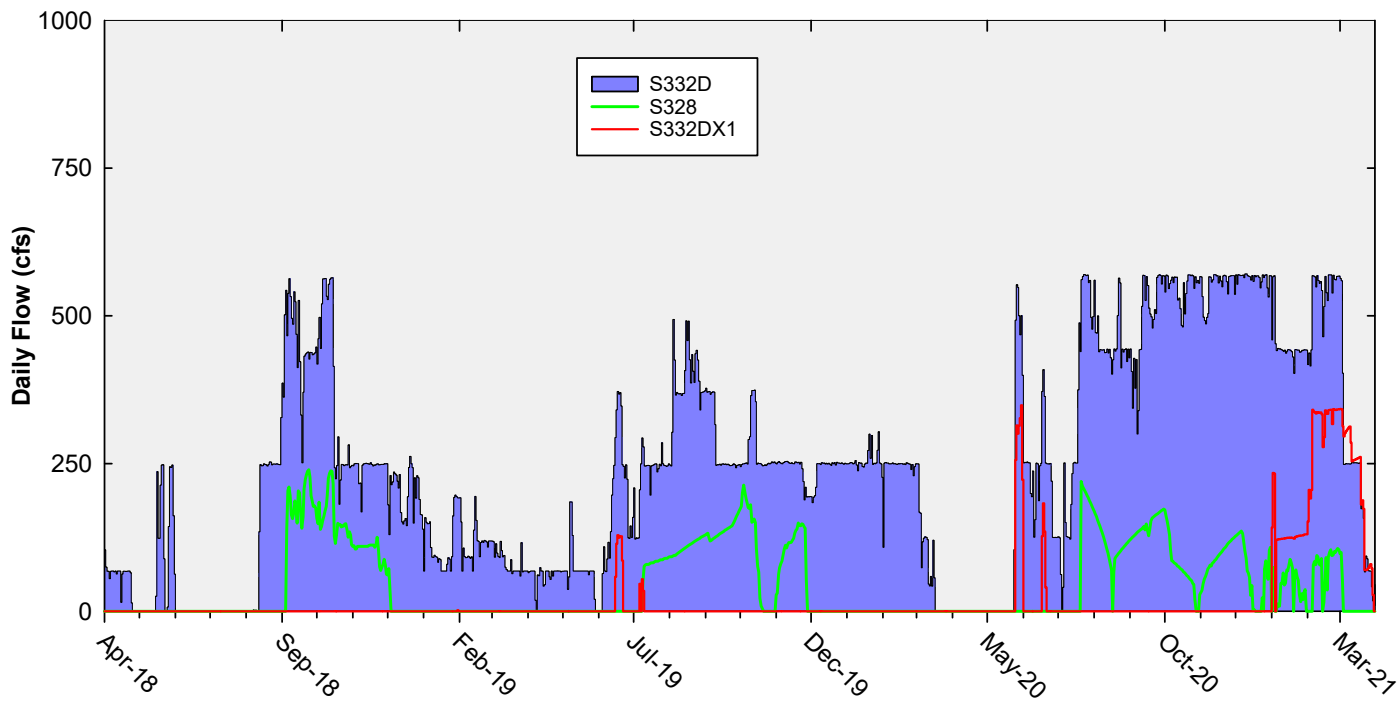


Note: Daily flow data are missing for S18C from September 23 to October 4, 2019.

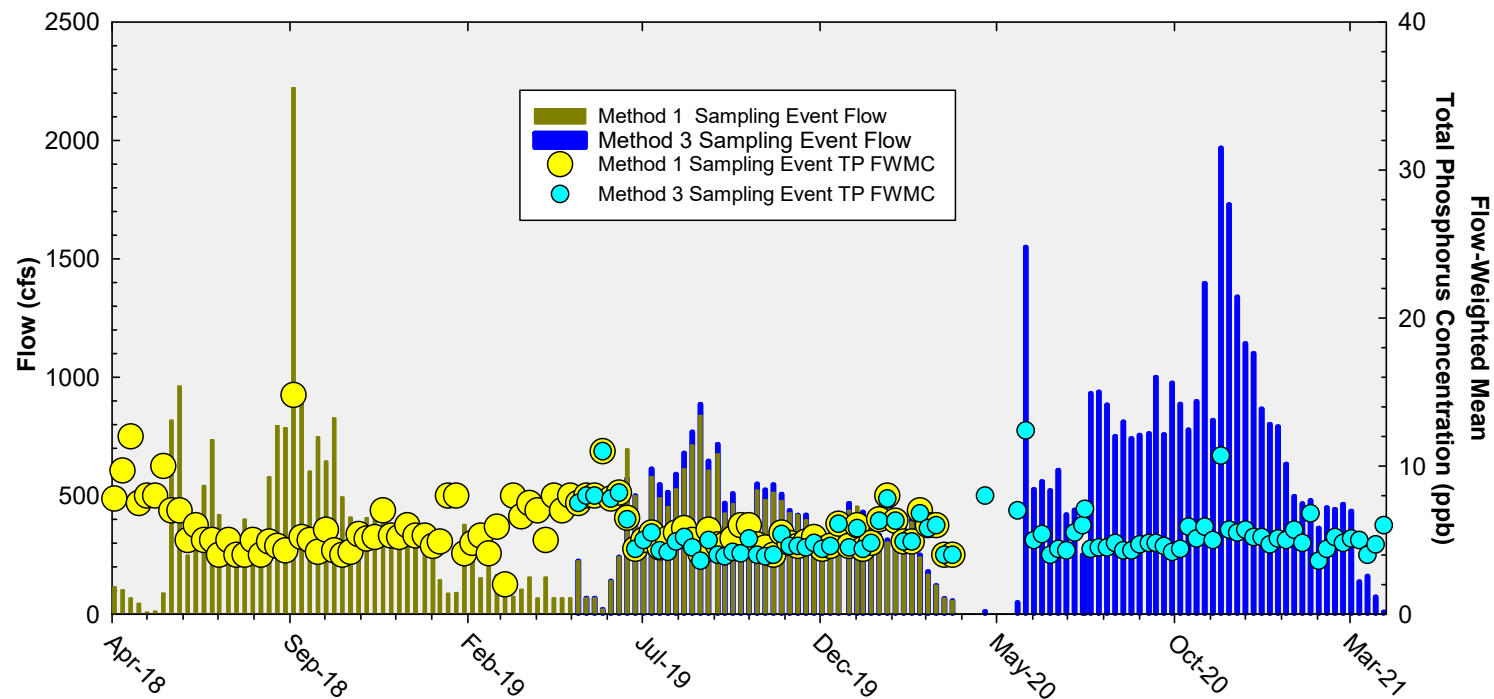
Daily Flows at Individual Taylor Slough and Coastal Basins Structures



Daily Flows Into and Out of C-111 Detention Area



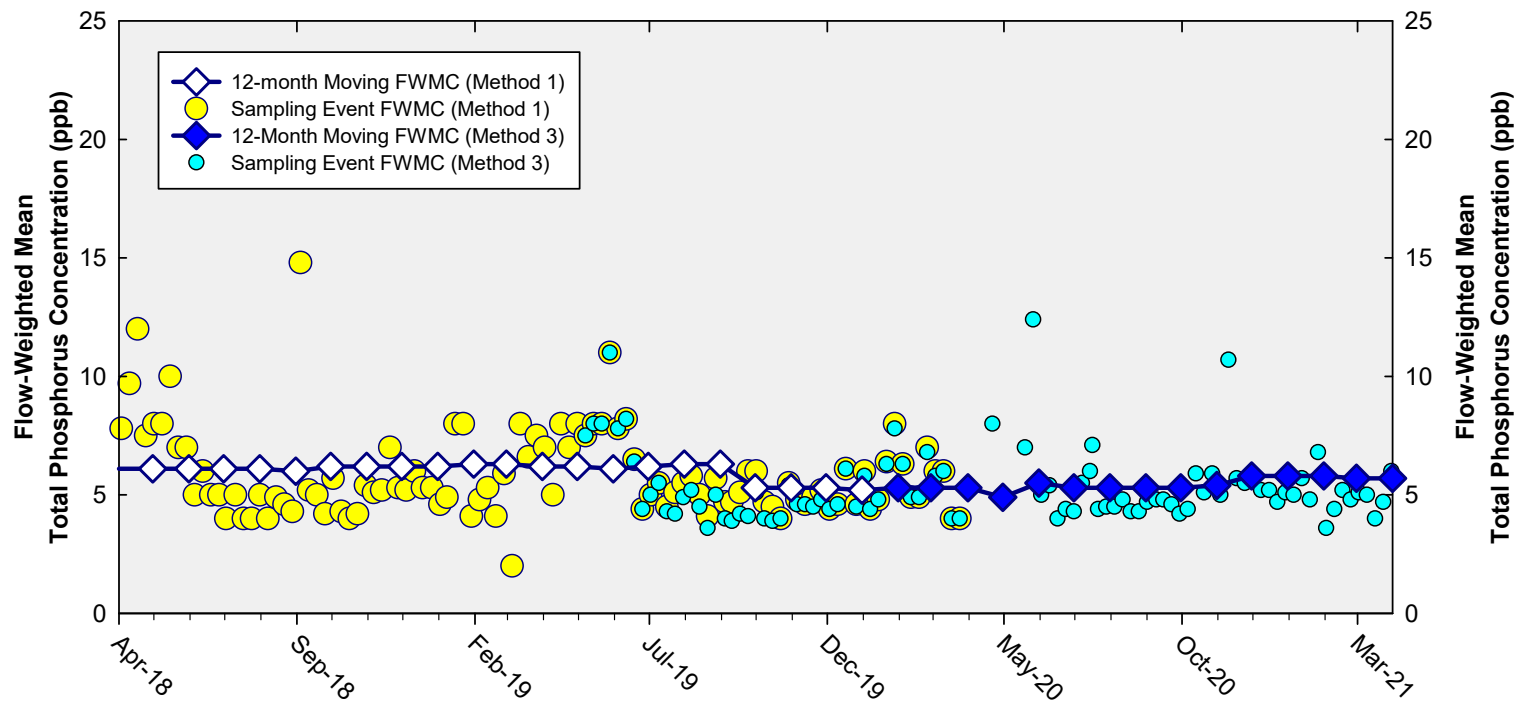
Taylor Slough and Coastal Basins Sampling Event Flow and FWMC



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

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

Thank You

