

SETTLEMENT AGREEMENT REPORT

WY2019 Annual Shark River Slough Compliance

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Technical Oversight Committee May 5, 2020

SUMMARY

Month		Geometric Mean TP Concentration (ppb)		Long-Term Level (ppb)		Mean Stage (feet NGVD29)		Number of Samples				
Arthur R. Marshall Loxahatchee National Wildlife Refuge												
Jul 2019	7.3		10.5		16.3			14				
Aug 2019	Aug 2019 7.1		9.3		16.58		14					
Sep 2019	Sep 2019 7.1		9.2		16.61		14					
12-Month	Total Flow			Long-Term Limi		Percent of Sampling Even Greater than 10 ppb						
Period Ending	(kac-ft)		(ppb)		(ppb)	Guideline		Observed				
Everglades National Park – Shark River Slough												
Jul 2019	707.7 (780.9)		9.4 (8.9)	9.	4 (9.0)	48.9 (46.9)		50.0 (45.8)				
Aug 2019	666.5 (755.3)		9.9 (9.2)	9.	6 (9.1)	50.1 (47.6)		54.2 (50.0)				
Sep 2019	654.1 (748.5)		10.0 (9.3)	9.	7 (9.2)	50.5 (47.8)		52.0 (48.0)				
Everglades National Park — Taylor Slough and Coastal Basins												
Jul 2019	257.3 (294.8, 293.0)	6	.3 (6.1, 5.9)		11.0			3.8 (3.8, 3.8)				
Aug 2019	266.2 (293.1, 291.3)	6	.3 (6.2, 5.9)		11.0	53.1		3.8 (3.8, 3.8)				
Sep 2019*	237.8 (250.4, 248.6)	5	.3 (5.2, 4.9)		11.0	53.1		1.9 (1.9, 1.9)				

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.



Shark River Slough TP Concentration Compliance Tracking

12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration	Long-Term Limit (ppb) Effective	Percent of Sampling Events Greater than 10 ppb		
		(ppb)	12/31/2006	Guideline	Observed	
Aug 2018 - Jul 2019	707.7 (780.9)	9.4 (8.9)	9.4 (9.0)	48.9 (46.9)	50.0 (45.8)	
Sep 2018 - Aug 2019	666.5 (755.3)	9.9 (9.2)	9.6 (9.1)	50.1 (47.6)	54.2 (50.0)	
Oct 2018 - Sep 2019	654.1 (748.5)	10.0 (9.3)	9.7 (9.2)	50.5 (47.8)	52.0 (48.0)	

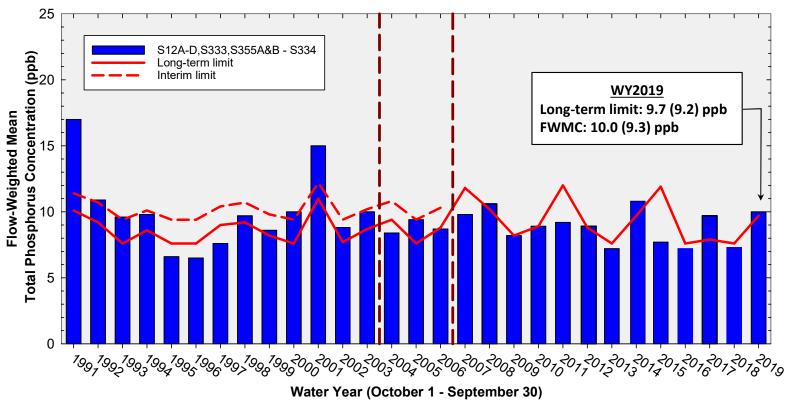
Method 1 (left values) FWMC computed as S12s+(S333+S355A&B-S334) and Method 2 (in parenthesis) FWMC computed as S12s+(S333+S355A&B+S356-S334) using all flow and TP grabs on bi-weekly compliance sampling dates.

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



Annual Flow-weighted Mean Concentrations

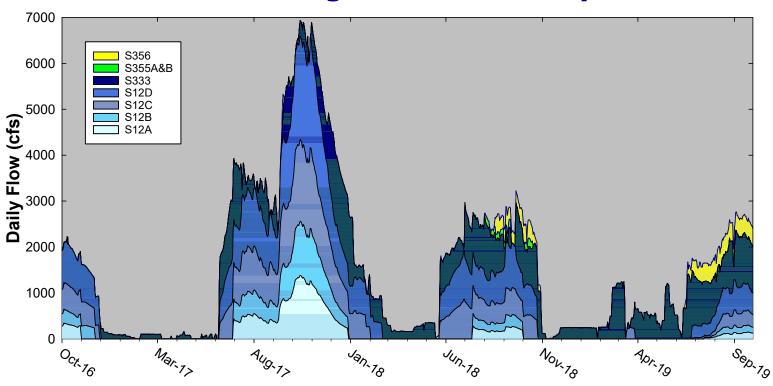
Inflows to ENP through Shark River Slough



Water year FWMC compared to the TP interim and long-term limits

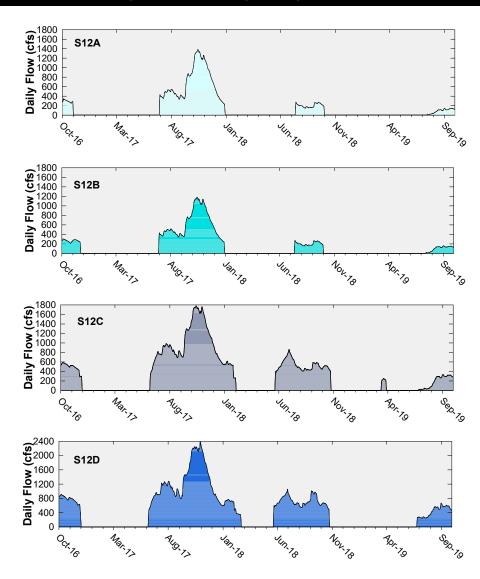


Shark River Slough Structure Daily Flows



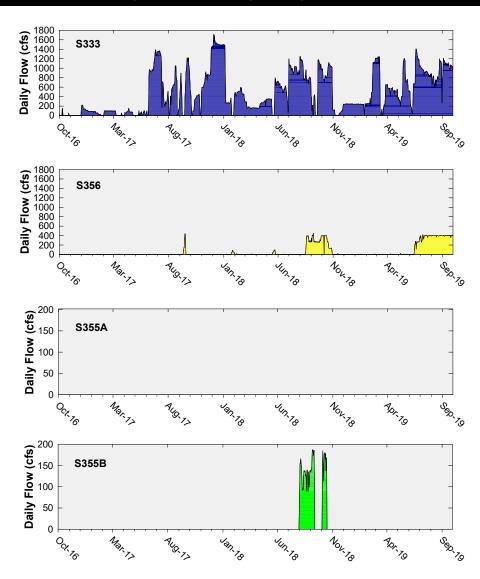


Daily Flows at S12 Structures to Shark River Slough



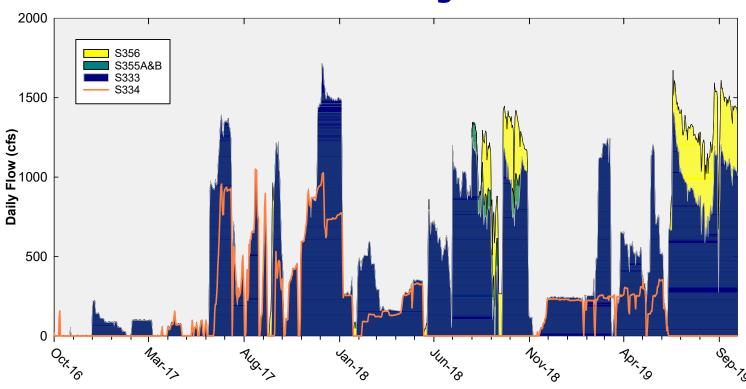


Daily Flows
at
Individual Inflow
Structures
to Shark River Slough





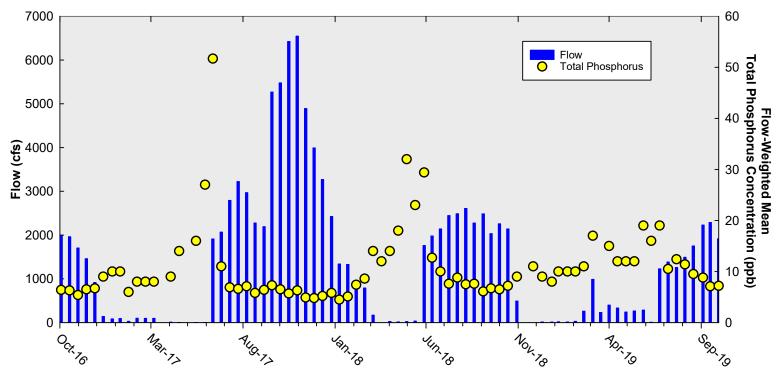
Daily Flows Into Shark River Slough through S333, S355A&B, and S356 and Out through S334





Shark River Slough

Sampling Event Flow and FWMC

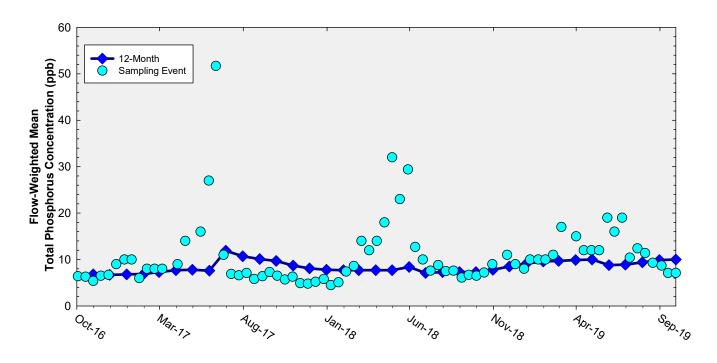


Flow to Shark River Slough and the corresponding TP FWMCs for individual sampling events

Note: Method 1 results illustrated



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



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

