



APPENDIX A SUB-TEAM UPDATE

Stuart Van Horn, P.E.
Chief, Water Quality Bureau

Technical Oversight Committee
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TOC Direction to Sub-team

June 27, 2017: Appendix A Sub-team meeting held; continued progress on the following directives:

- Evaluate **incorporation of S-356** to the Shark River Slough compliance calculation, as appropriate.
- Evaluate **incorporation of G-737 and S-328** to the Taylor Slough and Coastal Basins compliance calculation, as appropriate.



S-356 / Shark River Slough (SRS):

Progress

Purpose: Methodology being contemplated to **estimate portion of flow at S356 that is *from the WCAs*** that proposes to use open channel (USGS) flow data in the L-31N Canal

Meeting Focus:

- Uncertainty of flow data
- Uncertainty of TP collection and laboratory analysis variability
- Potential impact on certainty of future compliance results

Status:

- SFWMD provided flow ratings and draft uncertainty analysis of flow ratings to team for SRS structures S-333, S-334, and S-356
- USACE has obtained field measurements and flow equation derivations for open channel flow sites in the L-31N Canal

S-356 / Shark River Slough (SRS):

Next Steps

- USACE proposes to document flow rating and uncertainty for flows from south to north in the L-31N Canal (toward S-356)
- USACE to provide existing USGS flow rating and uncertainty information for the S-12 structures, as available
- SFWMD to pursue quantification of TP concentration uncertainty (both sampling replicates and lab uncertainty)



Taylor Slough and Coastal Basins (TSCB): Progress

Purpose: Assess monitoring and compliance reporting needs based upon Florida Bay Initiative/Taylor Slough Headwaters project, which is modifying surface water flows to TSCB

Meeting Focus:

- Establish interim reporting mechanisms and plan for future evaluation of compliance reporting
- Ensure flow and TP monitoring is adequate to support reporting and evaluation needs (i.e. 1-page monitoring agreement)

Status:

- SFWMD initiated monitoring at G-737 and S-328 locations and synchronized sampling to facilitate compliance evaluation
- Interim reporting to Technical Oversight Committee proposed in format similar to Shark River Slough with 3 alternative methods

Taylor Slough and Coastal Basins (TSCB): Interim Reporting

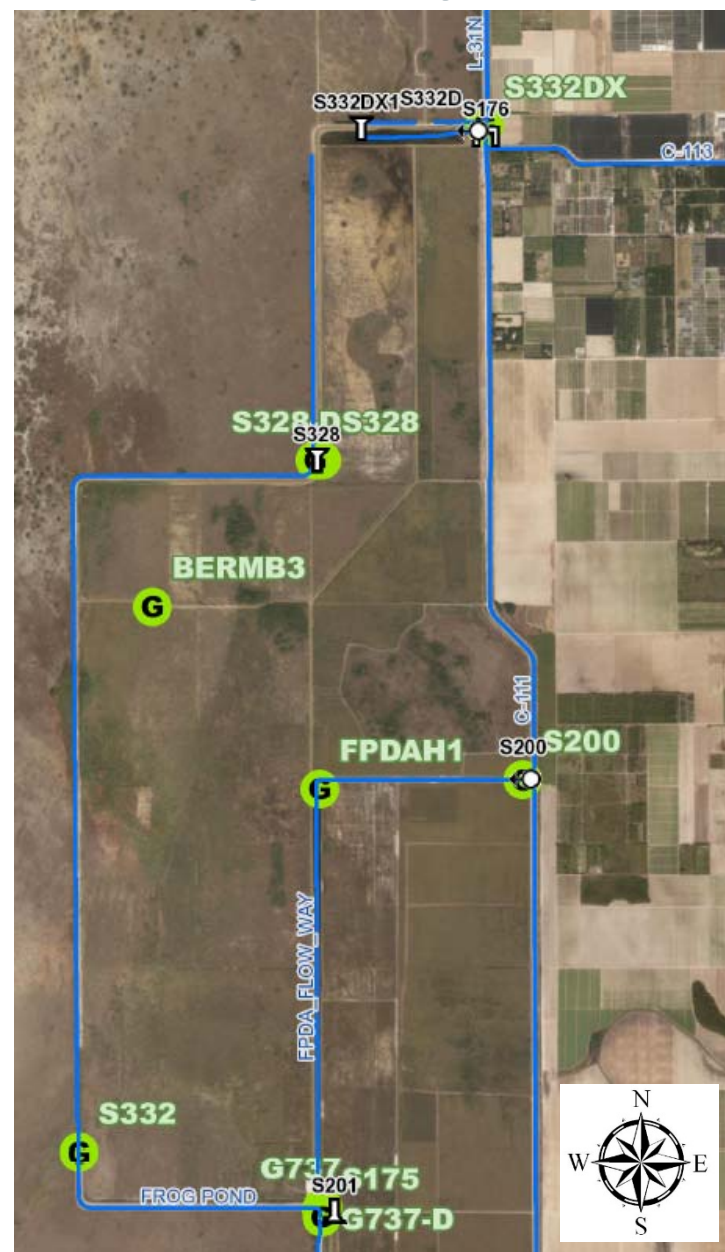
Three alternative methods of TP FWMC proposed for interim reporting to the Technical Oversight Committee:

*TP x Flow at each site / Total Flow**

1. S332D + S18C
(current method)
2. S332D + S18C + G737
3. [S332D – S332DX1 – S328]
+ S328 + G737 + S18C

**Method 3 exception:*

TP(S332D) x Flow(S332D–S332DX1–S328)



Taylor Slough and Coastal Basins (TSCB): Next Steps

- SFWMD to develop a TSCB data tracking spreadsheet for the 3 alternative methods similar to what is currently produced for SRS
- Flows were initiated June 2017 through G-737 to Taylor Slough; These 2nd Quarter 2017 provisional results will be presented at next regular TOC meeting (October 2017?)
- S-328 has not discharged; Operation depends upon construction features (canal plugs) and water levels; Earliest discharge late August 2017?
- TP samples will continue to be collected weekly along with continuous flow monitoring; The 3 TCSB alternative methods will be tracked quarterly and TP/flow data will be made available on an ongoing basis

Questions?

SFWMD Monitoring of S-328 (S-332D Detention Area Cell 1 Outflow)

The S-328 water control structure consists of eight (8) manually-operable gated 60-inch in diameter culverts. It is in the L-31W levee at the southwest corner of Cell 1 of the S-332D detention area. The structure discharges water from Cell 1 into the L-31W borrow canal (adjacent to Everglades National Park).

Water Quality Monitoring

SFWMD will collect grab samples on the upstream and downstream sides of the S-328 structure on a weekly basis beginning the week of July 3-7, 2017 and for an initial period of two years.

Parameters measured will include total phosphorus (TP), ortho-phosphate and physical parameters (temperature, total suspended solids, pH, dissolved oxygen and specific conductance). The SFWMD laboratory will analyze the samples and report results on a priority basis. Preliminary data may be available approximately one week after sampling and will be made available to interested staff for review. The SFWMD will also make the data available, after undergoing normal QA data validation procedures, through DBHydro generally within a month after collection. The water quality monitoring data is intended to be used for reporting and evaluation purposes associated with FDEP Emergency Order #9 "Emergency Authorization to Operate the S-332B, S-332C, and S-332D Pump Stations and Appurtenant Structures" issued to the USACE and for tracking progress with the Taylor Slough and Coastal Basins long-term limit and goal for discharges into Everglades National Park established under the Everglades Settlement Agreement (Appendix A). At the end of the initial two-year period, the water quality monitoring will be revisited and appropriate reductions or modifications will be implemented based on guidance from the Everglades Technical Oversight Committee charged with tracking progress with the Everglades Settlement Agreement Appendix A requirements.

Hydrologic Monitoring

Stage levels will be measured using pressure sensor probes on both the headwater and tailwater side of the S-328 structure. These probes will record stage data at 15-minute intervals and store this data locally on-site. The headwater probe will be secured through a PVC or metal pipe attached to the existing catwalk at the structure. The tailwater probe will be secured through a PVC or metal pipe that is attached to the existing staff gauge or other in-water structure. For a minimum of the initial 8 weeks with recorded positive flow at S-328, SFWMD staff will retrieve the data and confirm calibration of the sensors (accomplished by comparing the current sensor readings to the existing staff gauges) on a bi-weekly frequency (once every two weeks). After the initial 8-week operational period at S-328, SFWMD staff will retrieve the data and confirm sensor probe calibration once per month. Any gate operations (gate height and time of opening and closing) during the month will be recorded by SFWMD at the time of gate position changes. Preliminary stage and gate operations data will first be uploaded to the SFWMD's internal database and will be made available to interested staff for review. The SFWMD FLOW program will automatically compute preliminary discharge rates through the culvert(s) associated with gate openings. After undergoing QA/QC data validation, the stage, gate, and flow data will be made available in DBHydro within two weeks after collection. Stage data from the pressure sensor probes, gate opening information, and computed S-328 flows will continue to be provided by SFWMD for continued S-328 operations until implementation of MWD Increment 3 (Combined Operations Plan [COP]) begins. Currently COP is anticipated to begin no later than 31 December 2019. Data collected by SFWMD will be used to evaluate

the need for continued hydrological monitoring at the S-328 structure, with future monitoring requirements identified within the COP monitoring plan.

