SETTLEMENT AGREEMENT REPORT

WY2017 Annual Shark River Slough Compliance

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Section Leader
Compliance Assessment & Reporting Section
Water Quality Bureau

Technical Oversight Committee
May 1, 2018
### SUMMARY

<table>
<thead>
<tr>
<th>Month</th>
<th>Geometric Mean TP Concentration (ppb)</th>
<th>Long-term Level (ppb)</th>
<th>Mean Stage (feet NGVD29)</th>
<th>Number of Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul 2017</td>
<td>7.9</td>
<td>10.1</td>
<td>16.40</td>
<td>13</td>
</tr>
<tr>
<td>Aug 2017</td>
<td>6.6</td>
<td>8.8</td>
<td>16.69</td>
<td>14</td>
</tr>
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<td>Sep 2017</td>
<td>7.5</td>
<td>8.0</td>
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### Arthur R. Marshall Loxahatchee National Wildlife Refuge

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### Everglades National Park - Shark River Slough

<table>
<thead>
<tr>
<th>12-Month Period Ending</th>
<th>Total Flow (kac-ft)</th>
<th>12-Month TP FWMC (ppb)</th>
<th>Long-term Limit (ppb)</th>
<th>Percent of Sampling Events Greater than 10 ppb</th>
</tr>
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<tbody>
<tr>
<td>Jul 2017</td>
<td>768.2 (772.0)</td>
<td>10.7 (10.7)</td>
<td>9.1 (9.1)</td>
<td>47.2 (47.1)</td>
</tr>
<tr>
<td>Aug 2017</td>
<td>871.9 (872.7)</td>
<td>10.1 (10.1)</td>
<td>8.5 (8.5)</td>
<td>44.5 (44.5)</td>
</tr>
<tr>
<td>Sep 2017</td>
<td>1,010.6 (1,014.8)</td>
<td>9.7 (9.7)</td>
<td>7.9 (7.8)</td>
<td>41.2 (41.1)</td>
</tr>
</tbody>
</table>

### Everglades National Park - Taylor Slough and Coastal Basins

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<th>12-Month Period Ending</th>
<th>Total Flow (kac-ft)</th>
<th>12-Month TP FWMC (ppb)</th>
<th>Long-term Limit (ppb)</th>
<th>Percent of Sampling Events Greater than 10 ppb</th>
</tr>
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<tr>
<td>Jul 2017</td>
<td>322.1 (336.4, 329.9)</td>
<td>5.2 (5.2, 5.2)</td>
<td>11.0</td>
<td>53.1</td>
</tr>
<tr>
<td>Aug 2017</td>
<td>346.6 (374.6, 368.2)</td>
<td>5.3 (5.3, 5.3)</td>
<td>11.0</td>
<td>53.1</td>
</tr>
<tr>
<td>Sep 2017</td>
<td>383.3 (420.1, 413.7)</td>
<td>5.9 (5.9, 6.0)</td>
<td>11.0</td>
<td>53.1</td>
</tr>
</tbody>
</table>

**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 $(S332D-S332DX1-S328)+S328+G737+S18C$. 
# Shark River Slough

## TP Concentration Compliance Tracking

<table>
<thead>
<tr>
<th>12-Month Period</th>
<th>Total Flow (kac-ft)</th>
<th>Flow-Weighted Mean TP Concentration (ppb)</th>
<th>Long-Term Limit (ppb) Effective 12/31/2006</th>
<th>Percent of Sampling Events Greater than 10 ppb</th>
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<tbody>
<tr>
<td></td>
<td>Guideline</td>
<td>Observed</td>
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<td>Aug 2016 - Jul 2017</td>
<td>768.2 (772.0)</td>
<td>10.7 (10.7)</td>
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<td>47.2 (47.1)</td>
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<td>Sep 2016 - Aug 2017</td>
<td>871.9 (872.7)</td>
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<td>8.5 (8.5)</td>
<td>44.5 (44.5)</td>
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<td>Oct 2016 - Sep 2017</td>
<td>1,010.6 (1,014.8)</td>
<td>9.7 (9.7)</td>
<td>7.9 (7.8)</td>
<td>41.2 (41.1)</td>
</tr>
</tbody>
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Shark River Slough PROVISIONAL RESULTS:
- Method 1 (left values) FWMC computed as \( S12s + (S333+S355A&B-S334) \)
- 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

Water Year (October 1 - September 30)

Long-term limit effective

WY2017
Long-term limit: 7.9 (7.8) ppb
FWMC: 9.7 (9.7) ppb
Shark River Slough Daily Flows

Daily Flow (cfs)

- S356
- S355A&B
- S333
- S12D
- S12C
- S12B
- S12A

Daily Flows at S12 Structures to Shark River Slough
Daily Flows
at
Individual Inflow Structures
to Shark River Slough
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
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
Thank You