Historic Perspective

STA Performance

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Quarterly Communications
Meeting on the Long-Term Plan for Achieving Water Quality Goals for Everglades Protection Area Tributary Basins

August 22, 2012
## Influencing Weather Conditions

<table>
<thead>
<tr>
<th>Extreme Weather Condition</th>
<th>Designation Symbol</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hurricane</td>
<td></td>
<td>WY2005 (Hurricanes Frances &amp; Jeanne), WY2006 (Hurricane Wilma)</td>
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<tr>
<td>Tropical Storm</td>
<td></td>
<td>WY2007 (TS Ernesto), WY2009 (TS Fay)</td>
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</tbody>
</table>
STA-1E

- '07: Begin Acme Basin B redirect to C-51
- '10: SAV Decline (Cells 6,4N, 4S)
- '05: Emergency operations & cell hydration
- '06-07: EFW Off-line (Corps PSTA)
- '09-10: EFW Off-line (Structure Repairs)
- '10-11: WFW Off-line (Rehabilitation)
- '12: WFW briefly Off-line (Vegetation Management)

Phosphorus & Hydraulic Loading Rates

- FWM TP (ppb)
- Inflow FWM (ppb)
- Outflow FWM (ppb)
- TP Loading Rate (g/m²/yr)
- Hydraulic Loading Rate (cm/day)
STA-1W

'03: Large inflows (Lake Okeechobee Regulatory releases)

'03-04: NFW Off-line (LR Berm construction)

'07-08: Off-line EFW (LTP) & WFW (Rehab)

'04-07: N & W FWs Off-line (Rehab & LTP enhancements)

'10: SAV Decline Cells 2B, 4, 5B

'06: STA-1E Operational
STA-3/4

Phosphorus & Hydraulic Loading Rates

FWM TP (ppb)

STA-3/4

’06, ’08-10, : Cell 1B
Phased Vegetation Conversion

’04-05: CFW Off-line
(vegetation conversion)

’05-07: WFW Off-line
(LTP, vegetation conversion)

’06: PSTA Implementation
Project completed

’10-12: Cell 1A depths lowered
for Vegetation Management

Phosphorus & Hydraulic Loading Rates

Inflow FWM (ppb)

Outflow FWM (ppb)

TP Loading Rate (g/m²/yr)

Hydraulic Loading Rate (cm/day)
Lessons Learned

- Create vegetation strips to protect SAV
- Implement Drought Contingency Plan
- Manage Vegetation plantings/inoculations & exotic vegetation control
- Alleviate hydraulic short-circuiting
  - Plugs
  - Grading
  - Planting

Vegetation strip planted with bulrush in STA-1W
Lessons Learned (Continued)

• Develop diagnostic tools & Operation approaches
  – Create cross-functional teams
  – Utilize weekly/monthly/annual loading dashboard sheets
  – Prioritize inflows based on vegetation & loading rates
  – Develop Water Depth Application Tool (WDAT)
QUESTIONS?

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