SFWMD Program and Project Update

Working Group/ Science Coordination Group Meeting

December 4, 2019

Megan Jacoby, Principal Federal Policy Analyst
Ecosystem Restoration & Capital Projects
SOUTH FLORIDA ECOSYSTEM RESTORATION PROJECTS
C-44 Reservoir & STA

- **SFWMD Projects:**
  - S-404 Spillway - complete
  - Pump Station – complete
  - STA – construction completion expected
    - 2019 for Cells 1-3
    - 2020 for Cells 4-6

- **USACE Project:**
  - Reservoir – construction completion expected 2021
C-43 Reservoir

- State began construction in 2015
  - Package 1: Preload and Demolition – Complete
  - Package 2: Construction of S-476 (195 cfs) Pump Station completion – April 2019
  - Package 3: S-470 (1500 cfs) Pump Station completion - Spring 2022
  - Package 4: Civil works completion – 2023
CEPP - Old Tamiami Trail Removal Project

- Removal of approximately 6 miles of Old Tamiami Trail between Everglades National Park “Shark Valley Visitor Center” and the L-67 Extension Canal
- Currently under design by SFWMD
- Construction anticipated to begin early 2020
- Schedule for removal will take up to 22 months to complete
1,150 gated spillway
- Provides additional capacity to existing S-333 spillway
Currently under construction. Expected completion June 2020
Operations to be evaluated and defined during development of the Combined Operating Plan (COP)
Expedited site investigations of Miami and North New River Canal Conveyance began in December of 2018
  - Survey & Geotechnical investigations
  - Hydrology & Hydraulics Modeling
  - Construction expected early 2020

Expedited design of the A-2 STA
  - Geotechnical Data Report for Inflow/Outflow Canal Draft Survey Drawings and Report currently under review
  - Inflow/Outflow Canal design under review and expected to be complete January 2020
  - STA Preliminary Design on track for March 2020
  - Construction expected January 2021
Biscayne Bay Coastal Wetlands

- Deering Estate – complete
- L-31E:
  - L-31E culverts – complete
  - Design of S-709 underway
- Cutler Wetlands reinitiated
design update October 2018
- Phase 2 Project
  Management Plan under
development
Stormwater Treatment Areas (STAs)

Permitted STA Area
1994: 4,000 acres
1999: 9,000 acres
2000: 18,000 acres
2003: 35,000 acres
2004: 40,000 acres
2006: 45,000 acres
2012: 57,000 acres
All STAs Performance Comparison by Water Year (WY)

- Phosphorus reduction throughout all STAs is ~80%
- Quantity and timing of water delivery can impact STA performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Inflow (K acre-feet)</th>
<th>Lake Releases (K acre-feet)</th>
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<tbody>
<tr>
<td>WY2015</td>
<td>1,364</td>
<td>586</td>
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<tr>
<td>WY2016</td>
<td>1,329</td>
<td>291</td>
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<td>WY2017</td>
<td>1,090</td>
<td>249</td>
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<tr>
<td>WY2018</td>
<td>1,616</td>
<td>160</td>
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<tr>
<td>WY2019</td>
<td>1,438</td>
<td>470</td>
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Restoration Strategies: Key Projects

- STA-5/6 Earthwork ~1,182 acres
- STA-1W Exp. #1 ~4,600 acres
- STA-1W Exp. #2 ~1,600 acres
- STA-3/4
- STA-2
- STA-1W
- STA-1E
- L-8 FEB ~45,000 ac-ft
- L-8 Divide Structure (G-541)
- S-375 Expansion (G-716)
- STA-1E Repairs & Modifications ~990 acres
- C-139 FEB ~11,000 ac-ft
- G-341 Related Conveyance Improvements
L-8 Flow Equalization Basin (FEB) (Eastern Flowpath)

- Designed to improve performance of STA-1E and STA-1W
- Unique geology allows for underground storage reservoir
- 800 acres by 58 feet deep = ~ 45,000 acre-feet of storage
- Completed June 2017
S-375 Expansion (G-716)  
(Eastern Flowpath)

- Designed to expand flow capacity of connection between STA-1E east and west distribution cells
- Completed April 2017
STA-1W Expansion #1
(Eastern Flowpath)

- Designed to assist STA-1W and STA-1E
- 4,300 acres of additional stormwater treatment area
- Initiated construction in 2016
- Initial flooding and optimization began January 2019
STA-1W Expansion #2
(Eastern Flowpath)

- Designed to assist STA-1W and STA-1E
- 1,600 acres of additional treatment area
- Design began October 2018
- Currently in final design stage
A-1 Flow Equalization Basin (FEB)  
(Central Flowpath)

- Designed to improve performance of STA-2 and STA-3/4
- 15,000 acres by 4 feet deep = ~ 60,000 acre-feet of storage
- Completed July 2015
- Operational Testing and Monitoring Phase complete July 2018

**WY2019**

- Inflow Volume 380,918 acre-feet
- Inflow P Conc. 106 ppb
- Outflow P Conc. 14 ppb
- P Load Reduction 90%

**COMPLETED**
G-341 Related Conveyance Improvements (Central Flowpath)

- Bolles East (L-16) Canal Segments 1 and 2 (~2.2 miles) and Duda Road Bridge construction complete
- Segment 3 (~3.2 miles) is near completion
- Segment 4 is in construction
G-341 Related Conveyance Improvements – Excavation of Segment 3
Western Flowpath

- C-139 FEB
  - Design activities began in October 2018
- STA 5/6 Earthwork Improvements
  - Construction in progress

STA-5/6 Cell 3A
STA-5/6 Cell 2A

Future C-139 FEB
STA -5/6
State restoration project Phase 2
State restoration project Phase 1
DISCUSSION