Florida Fish and Wildlife Conservation Commission Meeting

Moving Water to Florida Bay

July 11, 2017
Ernie Marks
Everglades Policy and Coordination

L-31 W Canal looking west
Florida Bay depends on freshwater inputs
45% comes directly from rainfall
55% from run-off
Dry conditions District-wide
Very dry over Everglades National Park
Taylor Slough and Florida Bay 25 to 35 inches of rain
About half of the average annual rainfall

- 25-35 inches compared to 50-60 inches (wet year)
South Dade Study: Two Goals

- Identify options to reduce flood risks in urban and agricultural areas
- Provide much-needed water to natural areas
Study Area

EVERGLADES NATIONAL PARK

8.5 Square Mile Area

HOME SteAD

Biscayne Bay
Project Features to Move Water South to Florida Bay
September 2016

- Seal S-332D Discharge Basin
- Modify S-327 Weir
- Operate S-328
- Vegetation Management
- 10 Plugs in L-31W Canal
- Install Levee & Weir
- Increase pump capacity
- Connect Canals
Discharge Basin Sealing

Location of Sheet Pile and Tremie Concrete to Seal Discharge Basin
Modify S-332D High Head Cell Weir

S-327 High Head Weir, looking west towards ENP, after partial removal
Operate S-328 to Deliver Water to Taylor Slough

Looking east - S-332D Flowway

Looking west from L-31W Canal towards ENP
Ten Plugs in L-31W Canal
L-31W Canal Plugs

Plug F Looking South
100% Complete

Plug G Looking West (submerged)

Plug H Looking West

Plug J Looking North
100% Complete

Plug A Looking Northwest
30% Complete
Vegetation Management

- Remove vegetation along C-111 Canal south of S-18C
- Remove or cut roads within Aerojet facility
- Mechanical clearing of vegetation in S-200 and S-199 header channels
- Mechanical clearing of vegetation in S-357 Flowway
- Controlled Burn at Frog Pond Detention Area
L-31W Canal Levee and Weir
Modify C-111 Spreader Canal Project

- Two pump stations: S-199 and S-200
- Pull water from C-111 Canal
  - Modified operations in March 2016 as recommended by South Dade Study
    - Lower ranges, seasonal variation
  - Completed design to increase pump capacity
Connect Canals: G-737 Structure

Scraping to Cap Rock and Excavating Sump Area

Culverts from C-200 to L-31W Canal/L-31W Canal Plug G

At S-328 & G-737
- Stage, Flow, Water Quality

In Taylor Slough
- Macrophytes, Floc, Epiphytic periphyton, marsh water quality, periphyton biomass, oxygen, stage and flow direction, fish and invertebrates throw traps and drift fences, soil and vegetation mapping
### South Dade Study/Florida Bay Improvements

#### Project Schedule

<table>
<thead>
<tr>
<th>Project Features</th>
<th>Permit and Approvals</th>
<th>Construction Substantial Completion/Operation</th>
</tr>
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<tbody>
<tr>
<td>Modify S-332D High Head Weir (S-327)</td>
<td>✓ June 2016</td>
<td>✓ July 2016</td>
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<tr>
<td>Operate S-328 structure</td>
<td>✓ March 2017</td>
<td>July 2017</td>
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<tr>
<td>Connect canals C-200 to L-31W (G-737)</td>
<td>✓ January 2017</td>
<td>✓ April 2017</td>
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<tr>
<td>Rebuild L-31W levee and weir</td>
<td>✓ December 2016</td>
<td>September 2017</td>
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<tr>
<td>Plugs in L-31W Canal at D &amp; E</td>
<td>✓ December 2016</td>
<td>July 2017</td>
</tr>
<tr>
<td>Plugs in L-31W Canal at A, B, C</td>
<td>✓ December 2016</td>
<td>September 2017</td>
</tr>
<tr>
<td>Seal S-332D discharge basin</td>
<td>✓ December 2016</td>
<td>September 2017</td>
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<tr>
<td>Increase S-200 and S-199 pump capacity</td>
<td>✓ December 2016</td>
<td>February 2018</td>
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<tr>
<td>Vegetation Management</td>
<td>N/A</td>
<td>Ongoing</td>
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