Water Storage and Everglades Restoration

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(for Robert Johnson, ENP)

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GEER
Outline

- Pre-drainage Everglades
- CERP
- River of Grass / RECOVER “New Science”
- CEPP
- CERP / LOWP
Regional Water Balance

Who We Are and What We Do
Boreal Patterned Fen

Everglades Ridge & Slough
The Ridge and Slough Landscape

“We have plenty of water at present, go along with a great deal of ease.”
(Col. Harney, 1840)

“...saw-grass ridges alternating with open leads of water running approximately in a southeastern direction...”
(E.W. Chadwick, surveyor, 1907)
Ridge & Slough Landscape

Pattern
(plan view)

Microtopography
(x-section)
* Within the ridge & sough landscape, ground elevation = slough bottom.
For other landscapes, ground elevation = average model ground surface.
**Water Depth Viewing Window**

Transect L1 for Scenario RSM_PCB1_GLD_rev_4848

*Within the ridge & slough landscape, ground elevation = slough bottom. For other landscapes, ground elevation = average model ground surface.*

Script used: depth_transects.scr  
Filename: depth_transects_L1_RSM_PCB1_GLD_rev_4848.agr
Landscape pattern trajectories
<table>
<thead>
<tr>
<th></th>
<th>Storage (kAc-ft)</th>
<th>Flow (kAc-ft yr⁻¹)</th>
<th>Buffering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-drain</td>
<td>Lots!</td>
<td>Lots!</td>
<td></td>
</tr>
<tr>
<td>CERP</td>
<td>N250+S360+ASR</td>
<td>+300</td>
<td>Buffered</td>
</tr>
<tr>
<td>ROG</td>
<td>1500-2000</td>
<td>+500</td>
<td></td>
</tr>
<tr>
<td>CEPP</td>
<td>S 120</td>
<td>+200</td>
<td>Dry Ssn</td>
</tr>
<tr>
<td>CERP/LOWP</td>
<td>N + ASR</td>
<td>+250-400</td>
<td></td>
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</tbody>
</table>
Reasons Suggesting More Storage Needed

- Flow uncertainties
- Water Quality issues - P
- Water Quality issues - Ca
- ASR uncertainties
- Climate Change uncertainty