Integrating Everglades Science for Restoration

Christopher McVoy

GEER

Naples

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The views presented here are those of the author and not official positions of the SFWMD.

(On Vacation!)
A subjective list of key aspects

Differences between current and predrainage:

- hydrology
- landscape pattern
- faunal distributions
Average Monthly Flow Distribution

- Current (1431 kaf/yr)
- NSRSMv3.3 (2125 kaf/yr)

Cumulative Frequency Distribution of Annual Everglades Flow

- Current (1431 kaf/yr)
- NSRSMv3.3 (2125 kaf/yr)
“Ever Views”
Aligned with Landscape Directionality

Points along Transects closest to LECSA Centroids within a 1 1/2 mile buffer
**Water Depth Viewing Window**

Transect L1 for Pre-drainage NSRSMv3.3

- **N.WCA3A**
- **Alligator Alley**
- **WCA3A**
- **Tallahassee Trail**
- **ENP**

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

*Script used: depth_transsects.scr*

*Filename: depth_transsects_L1_NSRSMv3.3_ANIM.agr*
Water Depth Viewing Window
Transect L2 for Pre-drainage NSRSMV3.3

Elevation, Feet NGVD

Distance in Miles

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

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 natural ground surface.
Known Post-drainage Changes to the R&S landscape

- Loss of directionality (horiz.)
- Loss of sloughs (horiz.)
- Changes in slough veg. (resist.)
- Loss of ridge height (vert.)
- Loss of tree island height (vert.)
Landscape pattern trajectories
Strong potential for regional restoration:

**Water Depth Viewing Window**

Transect L1 for Scenario Deco_nsrsm_60_40_ANIM

- **RSM_PCB1 Ground Elev**
- **RSM_PCB1 Water Level**

- **Ground Elevation**
- **Water Level**
- **Tree Island Head Elevations**

*Within the ridge & slough landscape, ground elevation = slough bottom.*

For other landscapes, ground elevation = average model ground surface.
Treatment and flows - challenging
A Thought Experiment
A Thought Experiment

A Pound of Flesh
Conclusions

1) We have strong pictures of predrainage hydrology, vegetation, landscape pattern
2) Fair understanding of predrainage faunal distributions
3) Increasing understanding of differences between current and predrainage hydrology, vegetation and landscapes
4) Observed Ridge and Slough landscape changes match well with theoretical geomorphological studies
5) Landscape (habitat) protection a clear priority, but need to reconcile with current faunal distributions
6) Need to integrate historical and predictive trajectory analysis
7) Phasing
8) Still need a more unified Restoration Vision.