

Options to Reduce High Volume Freshwater Flows to the St. Lucie and Caloosahatchee Estuaries and Move More Water from Lake Okeechobee to the Southern Everglades

An Independent Technical Review by the University of Florida



GEER, Coral Springs, April 2017

Background

- The 2014 Florida Senate requested that the UF Water Institute conduct an independent technical assessment to
 - review existing documents, plans, projects
 - identify constraints to implementing plans and projects
 - identify options to reduce high freshwater flows to SLE and CE, and increase flow from LOK to the Everglades
 - No new research or modeling was done

Technical Review Team Members

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Review Team Findings

- Relief to the estuaries and the ability to move more water south of Lake Okeechobee can be accomplished using existing technology.
- The solution is to create enormous increases in storage and treatment of water north, south, east and west of the lake – beyond what currently is planned.
- Currently authorized and planned storage and treatment projects are insufficient to achieve the CERP goals.
- The path forward requires significant, consistent long-term investment in the infrastructure of the South Florida hydrologic system.

SFWMD Estimates of Needed Storage

400,000 acre-feet within the Caloosahatchee River watershed. (CRWPP)

170,000 acre-ft C43 reservoir under construction

Note: Increasing height of water in Lake Okeechobee by 1 ft provides ~450,000 acre-ft of storage



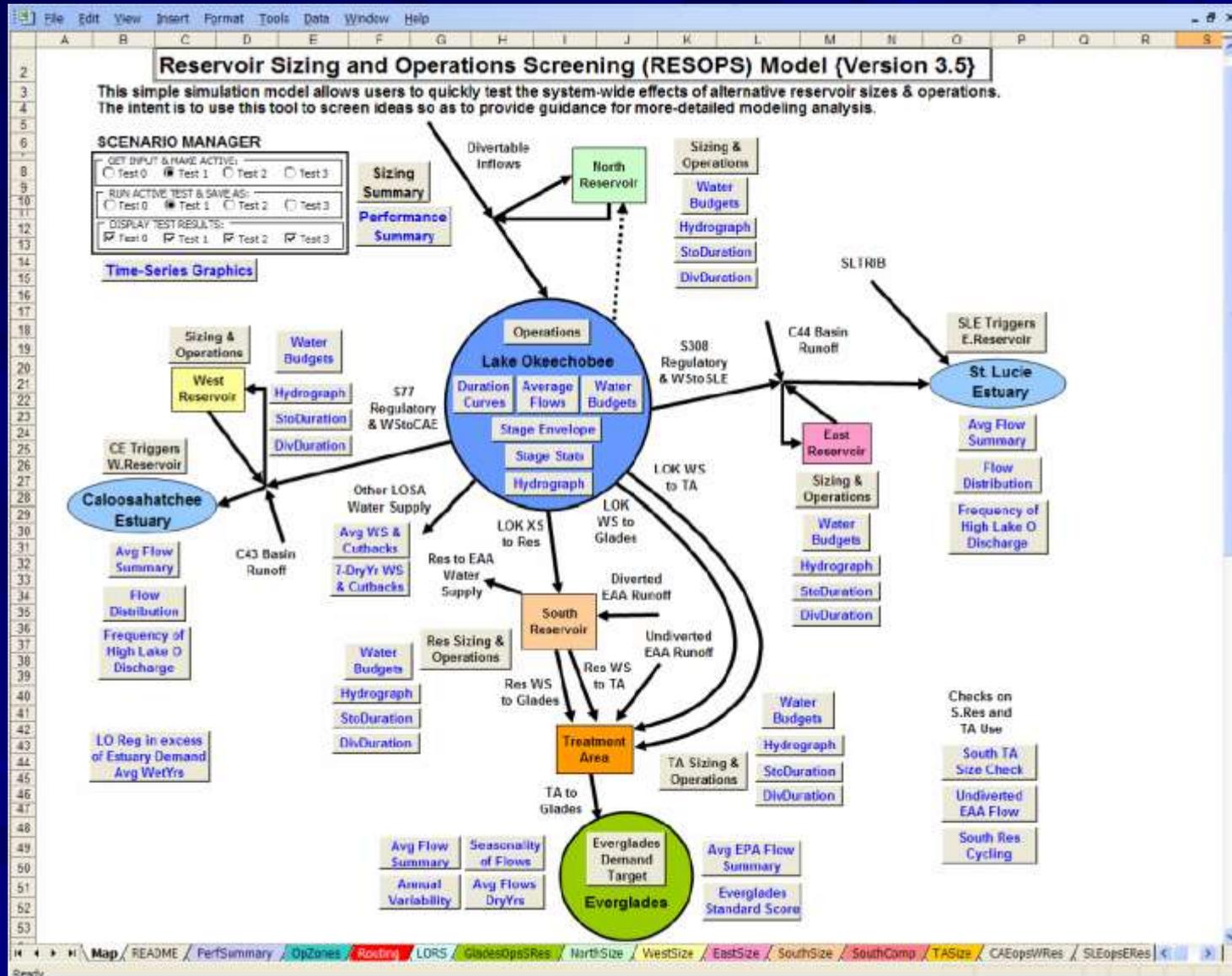
200,000 acre-feet within the St. Lucie River watershed. (SLRWPP)

50,600 acre-ft C44 reservoir under construction

1,000,000 acre-feet distributed N and S of Lake Okeechobee. (NEPP)

172,000 acre-ft FEBs under construction/planned S of Lake

1,000,000 Ac Ft – North or South?

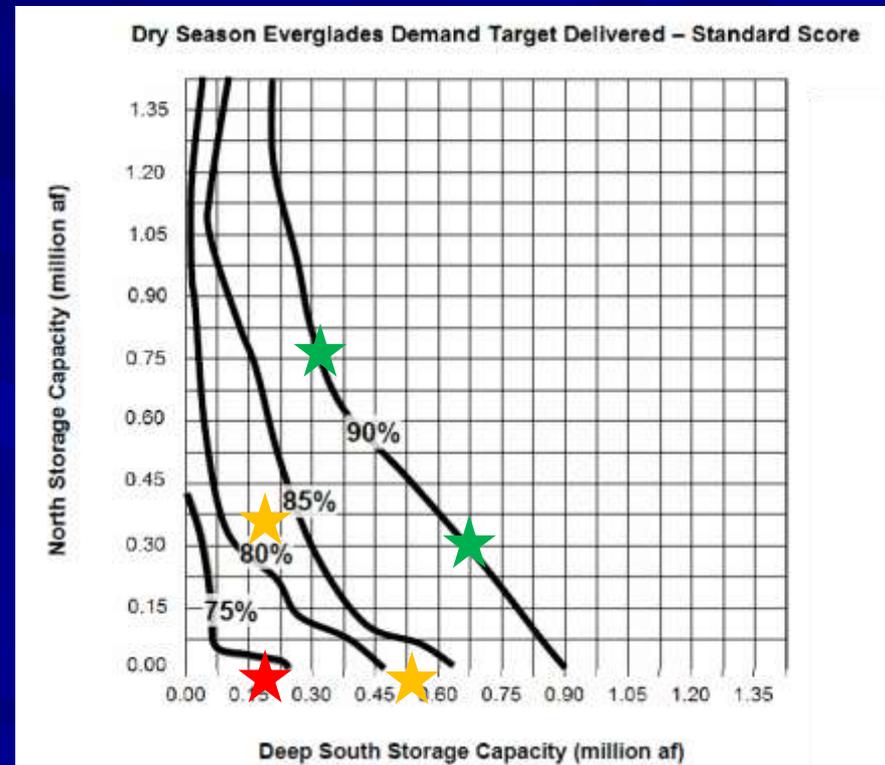
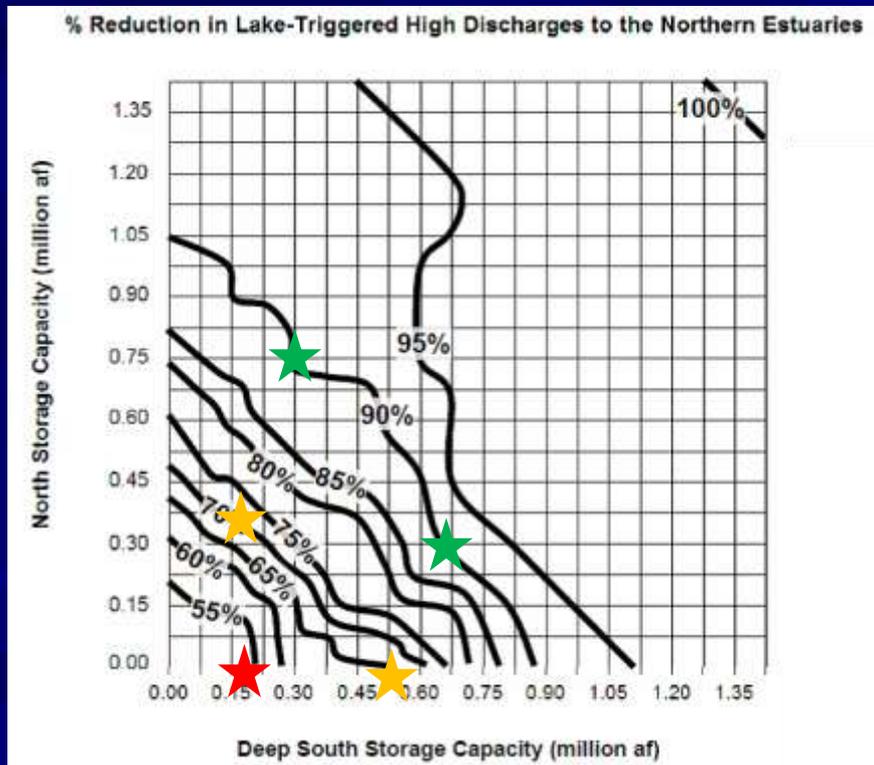


(SFWM D 2009)

What combinations of north-south storage achieve goals?

Reducing Estuary Discharge

Rehydrating Everglades



Results based on SFWMD RESOPS Screening Model (SFWMD, 2009)

What Path Forward?

- Accelerate existing projects.
- Begin working on revised LO schedule in concert with HH Dike Rehabilitation.
- Provide storage and treatment north of lake.
- Provide additional storage, treatment and conveyance south of lake.
- Consider deep-well disposal of water as an emergency measure.

Subsequent Recommendations from NAS Committee in 2016

A system-wide analysis of the potential future state of the Everglades ecosystem needs to be conducted, in light of great short-fall in storage and revised hydrologic targets.

A five-year CERP update, called for in the Programmatic Regulations, is long overdue.

This update should include scenario analyses of storage options AND effects of climate change.

Need not impede ongoing or planned construction

Thank You



Karl Havens