Shark River Slough – Operational Exploration for Ongoing Discussion

Technical Oversight Committee meeting
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Donatto Surratt, PhD
Everglades National Park

Short-term operational considerations

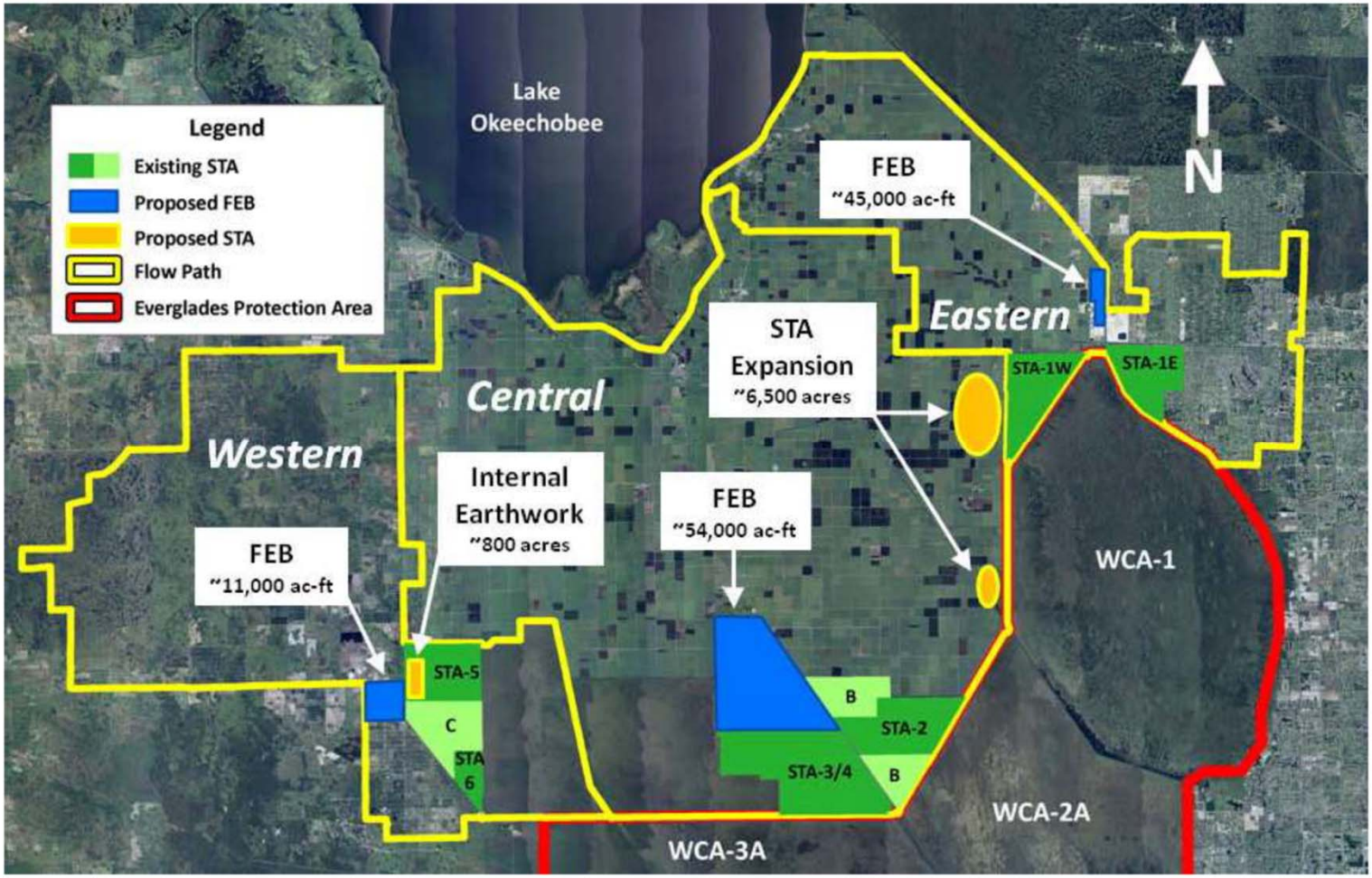
- TP concentrations increase during low stages coupled with moderate to high flow rates
- Maintaining stages near the 9.2 ft threshold while flowing allows TP levels to remain elevated
- TP concentrations may be reduced by:
  - Shifting flows from S333 to S333N given less organic matter in L67A
  - Dredging upstream of S333 in the L29
  - Armoring the canal embankment at the headwater of S333
  - Implementing COP AM water quality strategies
  - Raising the sill at S333
- Utilizing physical based modeling to understand sill and dredging influence should be consider

COP Adaptive Management Options

- S333 low stage delivery window
  - Reduce flow through S333 <150 cfs when S333_H stage drops below 8.2 to 8.5 ft
  - Keep flows ≤150 cfs until S333_H increased above 9.2 ft
  - Flow above the 150 cfs required by the Rainfall formula maybe diverted to the S12s or held for release to NESRS later in the wet season
- Divert 25% of S12D flow to S12C
- Reduce dry season recession rates in WCA3A to allow stages in L29 to stay higher going into the wet season

Long-term operational considerations

- Achieving compliance with WQBEL through **Restoration Strategies**



Other related long-term operational considerations

- Increase flows to ENP to achieve levels envisioned in **CERP** (ALT D13R): > 1,300 kac-ft annually
  - Capture existing water losses through seepage and discharge to tide from WCA2 and WCA3
- Improved water quality from the Western Basin
- Establish mechanisms to provide low, continuous flow volumes throughout the dry season
- Decompartmentalization as envisioned in **CEPP** and **CERP**
- Modification of the L67A flow path as contemplated in **CERP**
- Improved water exchange between marsh and canal as proposed in **Modified Water Deliveries** and **CERP**

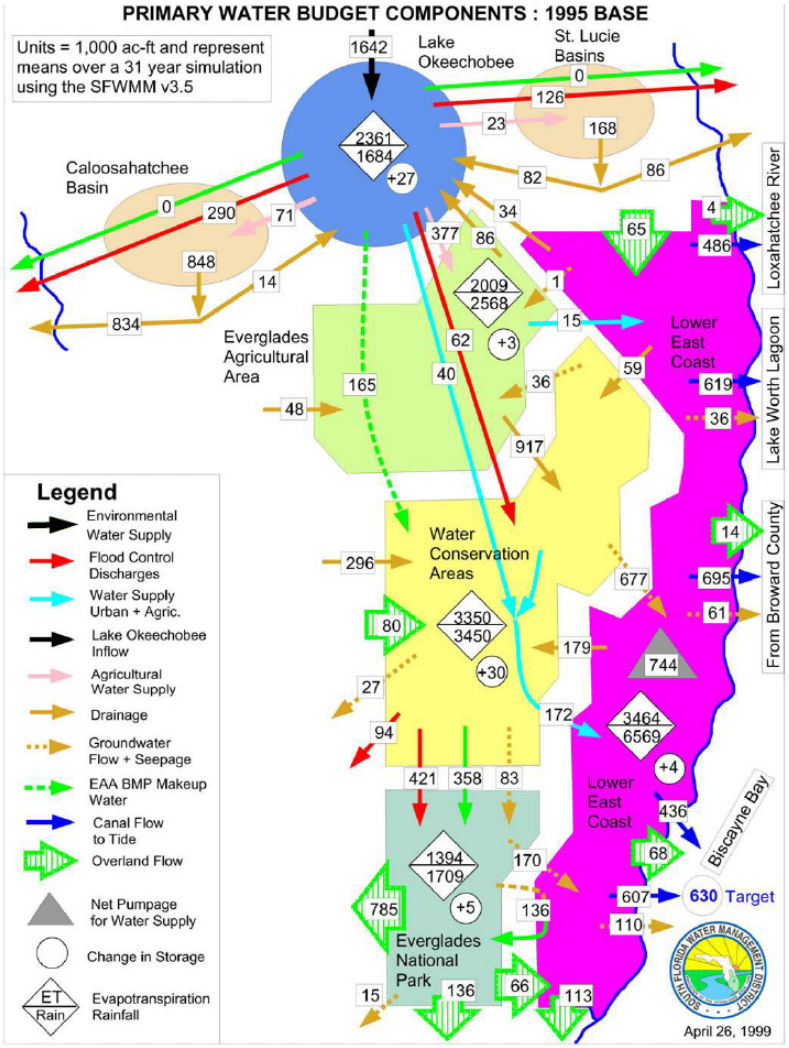


FIGURE 2-2. Primary water budget components for a 31-year simulation of the SFWMD model using the structures in place in 1995 (the "1995 Base" case of the Restoration Plan). It is considered by restoration managers to reflect the typical "current condition" of the system.
SOURCE: Available online at *http://www.sfwmd.gov/org/pld/restudy/hpm/frame1/maps/mapdir/95BSR/WBUD/95BSR.pdf.*

WY	Flow (kac-ft)
2006	814
2007	**290**
2008	**562**
2009	948
2010	810
2011	**247**
2012	818
2013	1,153
2014	**649**
2015	**267**
2016	1,445
2017	1,011
2018	1,732
2019	**654**

Re-engineering water storage in the Everglades: Risks and Opportunities (2005): 1995 BASE

- SRS base conditions aimed to deliver 862 kac-ft/yr
- Since WY2006, average annual volume has been 814 kac-ft
- Since WY2016, under the MDW field test, flows have increased to an annual average of 1,211 kac-ft/yr

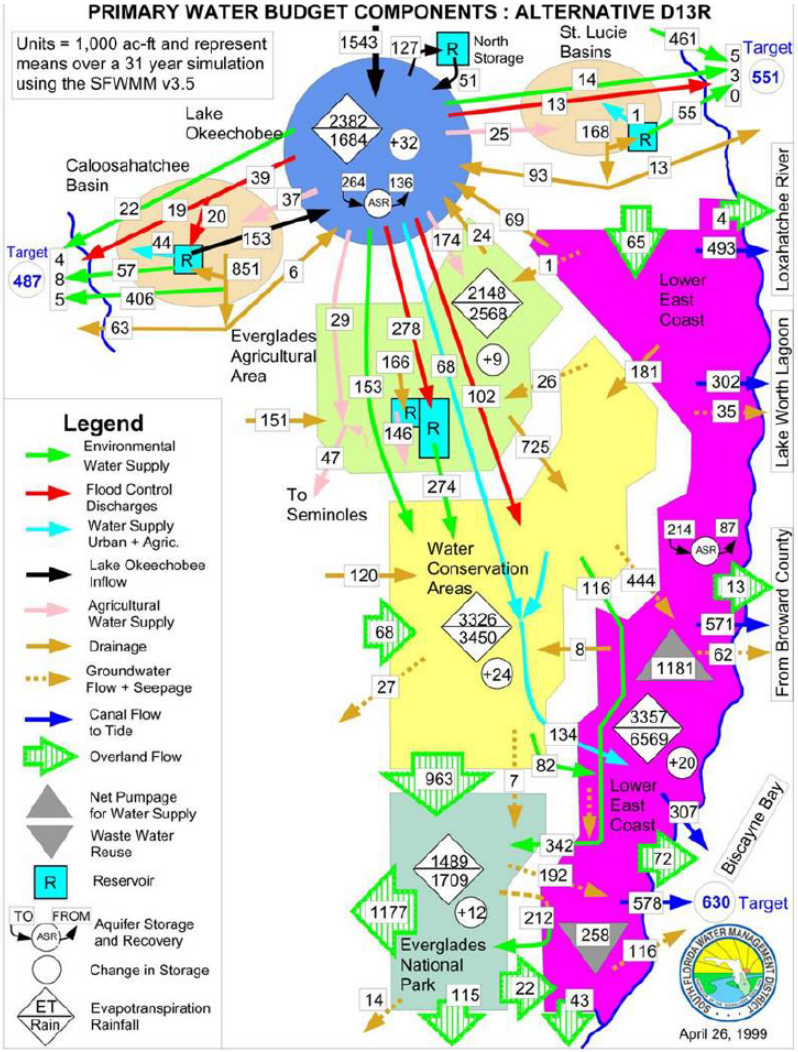


FIGURE 2-3. Primary water budget components for the June 1998 model run D13R of the Restoration Plan. This is a simulation using the same 31-year climatic record (1965–1991) as the 1995 (and 2050) Base simulations, but using projected 2050 land use and water demands and assuming the Restoration Plan and other related projects have been implemented. There are very slight differences in the flows in this figure and the flows in Table 2-1, which is based on a slightly updated (November 1998) version of

Re-engineering water storage in the Everglades: Risks and Opportunities (2005): ALT D13R

- SRS should deliver 1,305 kac-ft/yr
- Since WY2006, this has been accomplished twice and resulted in compliance with Appendix A for SRS

The Ask

Given the short-term operational considerations

- Dredging, S333N operations, armoring the canal, COP AM

- Establish follow-up meeting among TOC agencies regarding operational considerations
  - Appendix A subteam?
  - Other forums?