

# Lake Okeechobee System Operating Manual

## POST Iteration 2 Modeling Evaluation

*Sanibel-Captiva Conservation Foundation*

*Conservancy of Southwest Florida*

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Average annual regulatory flows (QFC flow tag; CRE: S77; SLE: S308) and stress and damaging events based on RECOVER salinity envelope 14-day event counts for Caloosatchee and St Lucie estuaries.

Summarized Data							Percent Different from FWO				
Estuary	Alt	Regulatory Flows (kacft/yr)	Stress Events From LOK <sup>3</sup>	Stress Events From Basin <sup>3</sup>	Damaging Events From LOK <sup>4</sup>	Damaging Events From Basin <sup>4</sup>	Regulatory Flows (kacft/yr)	Stress Events From LOK <sup>3</sup>	Stress Events From Basin <sup>3</sup>	Damaging Events From LOK <sup>4</sup>	Damaging Events From Basin <sup>4</sup>
CRE <sup>1</sup>	NA25 <sup>2</sup>	528	183	118	186	173					
	ECBr	515	190	153	205	225	-2.5	3.8	29.7	10.2	30.1
	CC	578	289	89	156	174	9.5	57.9	-24.6	-16.1	0.6
SLE <sup>1</sup>	NA25 <sup>2</sup>	187	148	210	142	428					
	ECBr	231	162	186	160	432	23.0	9.5	-11.4	12.7	0.9
	CC	72	13	308	17	469	-61.7	-91.2	46.7	-88.0	9.6

<sup>1</sup> CRE: Caloosahatchee Estuary; SLE: St Lucie Estuary; <sup>2</sup> NA25 = Future without project (FWO)

<sup>3</sup> Stressful Flows:

CRE:  $\geq 2100$  cfs &  $< 2600$  cfs

SLE:  $\geq 1400$  cfs &  $< 1700$  cfs

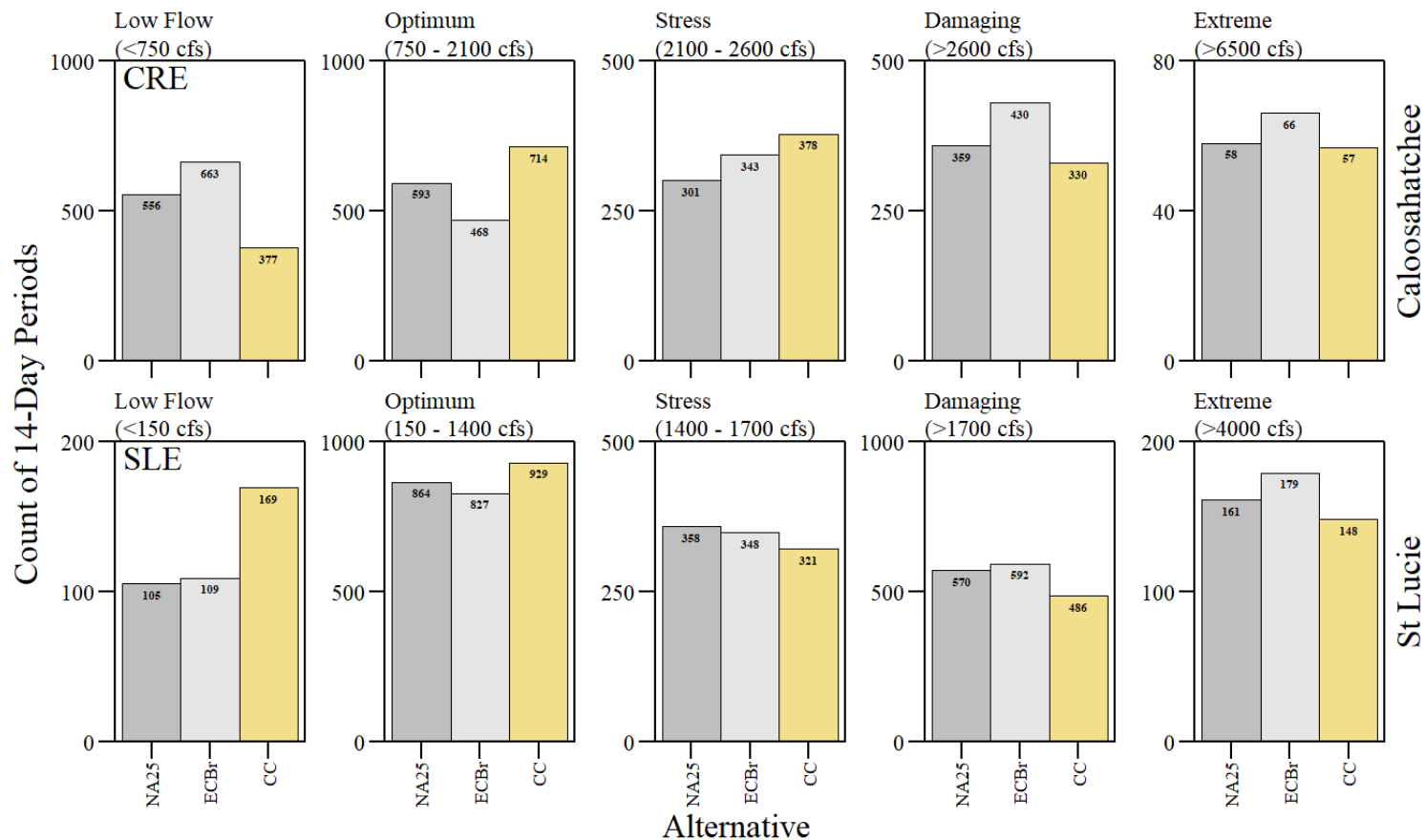
<sup>4</sup> Damaging Flows:

CRE:  $> 2600$  cfs

SLE:  $> 1700$  cfs

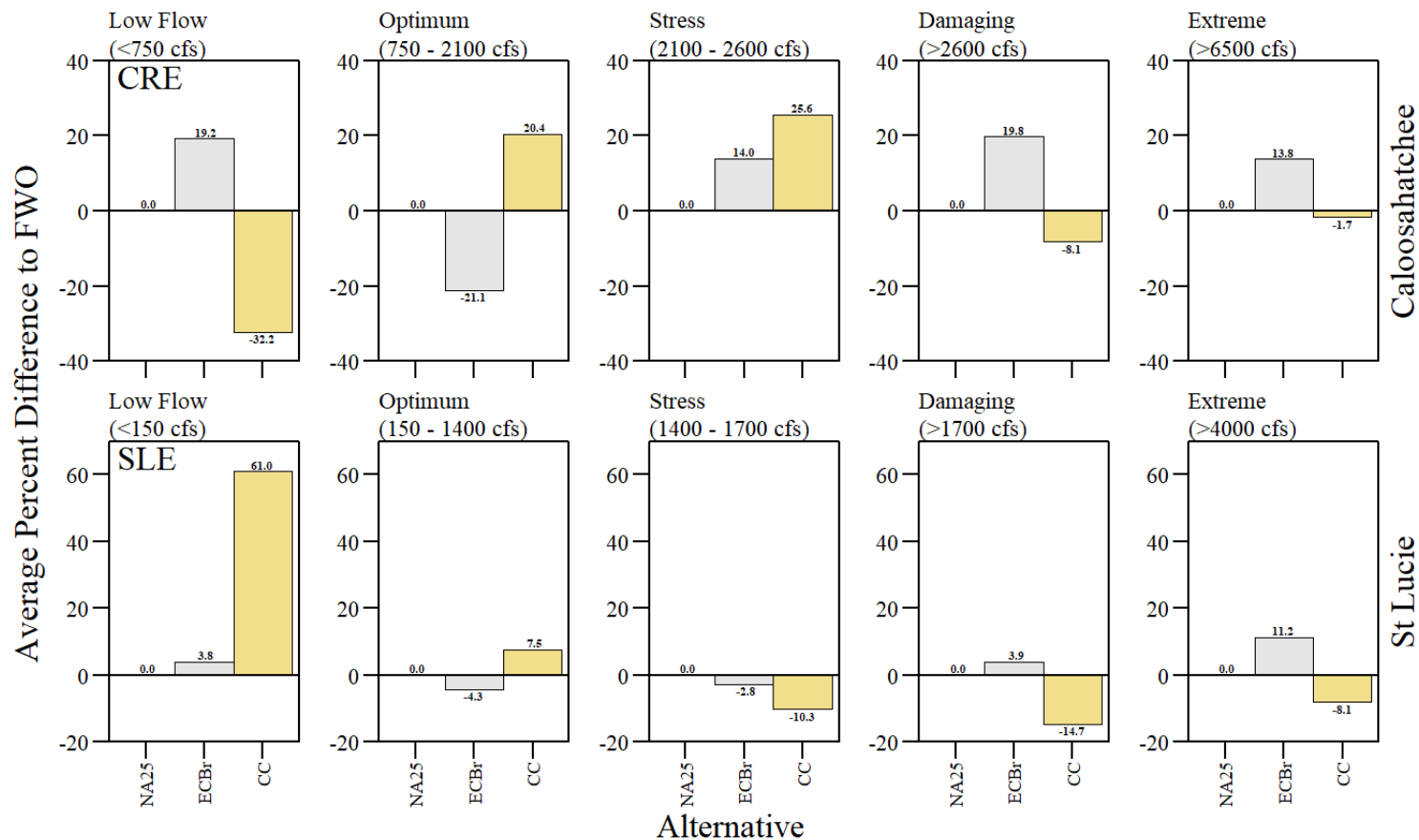
**Data Source:** USACE and SFWMD Interagency Modeling Center

# RECOVER Metric



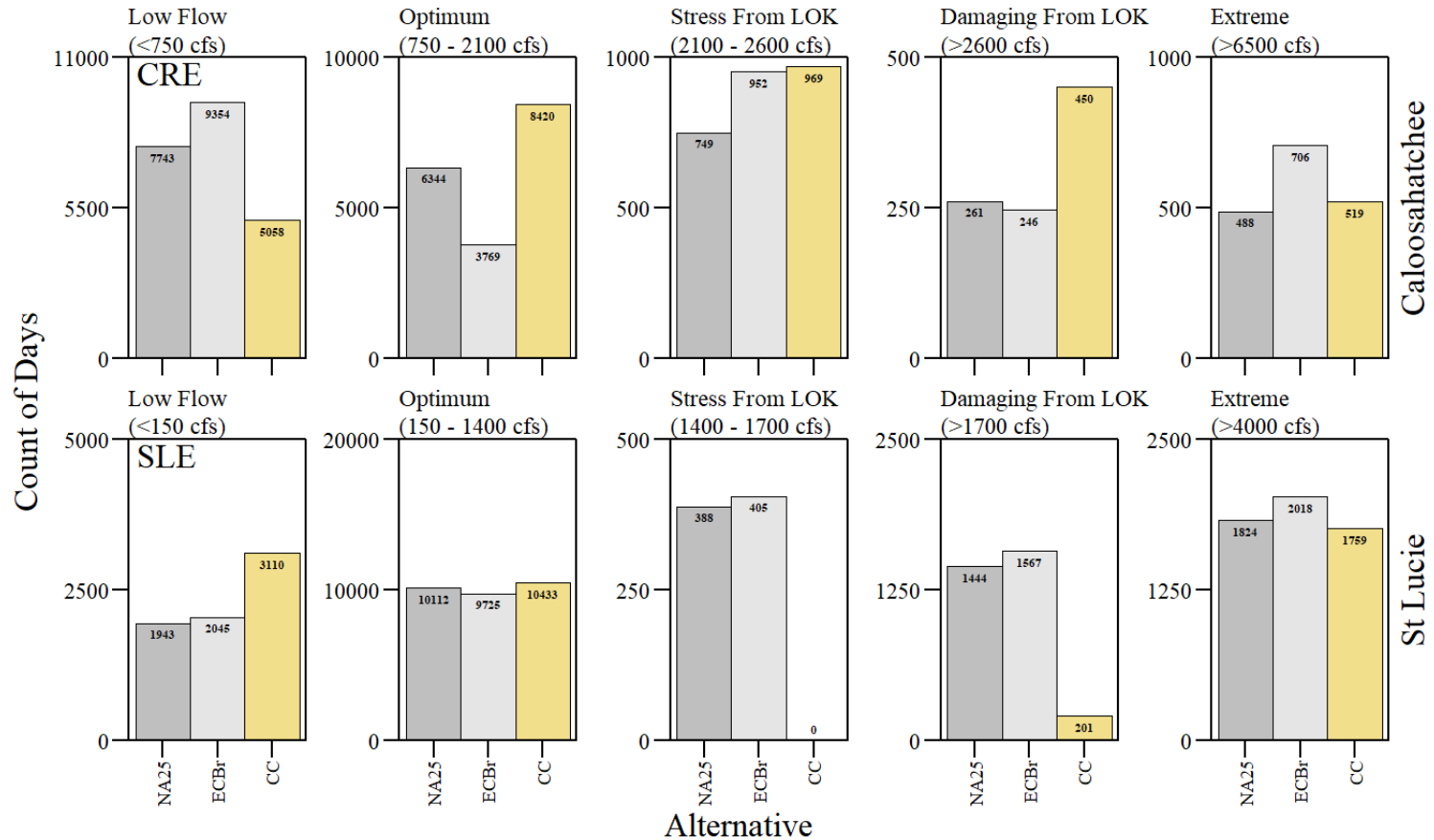
RECOVER salinity envelope evaluation during the simulation period of record for Caloosahatchee (top) and St Lucie (bottom) estuaries.

# RECOVER Metric



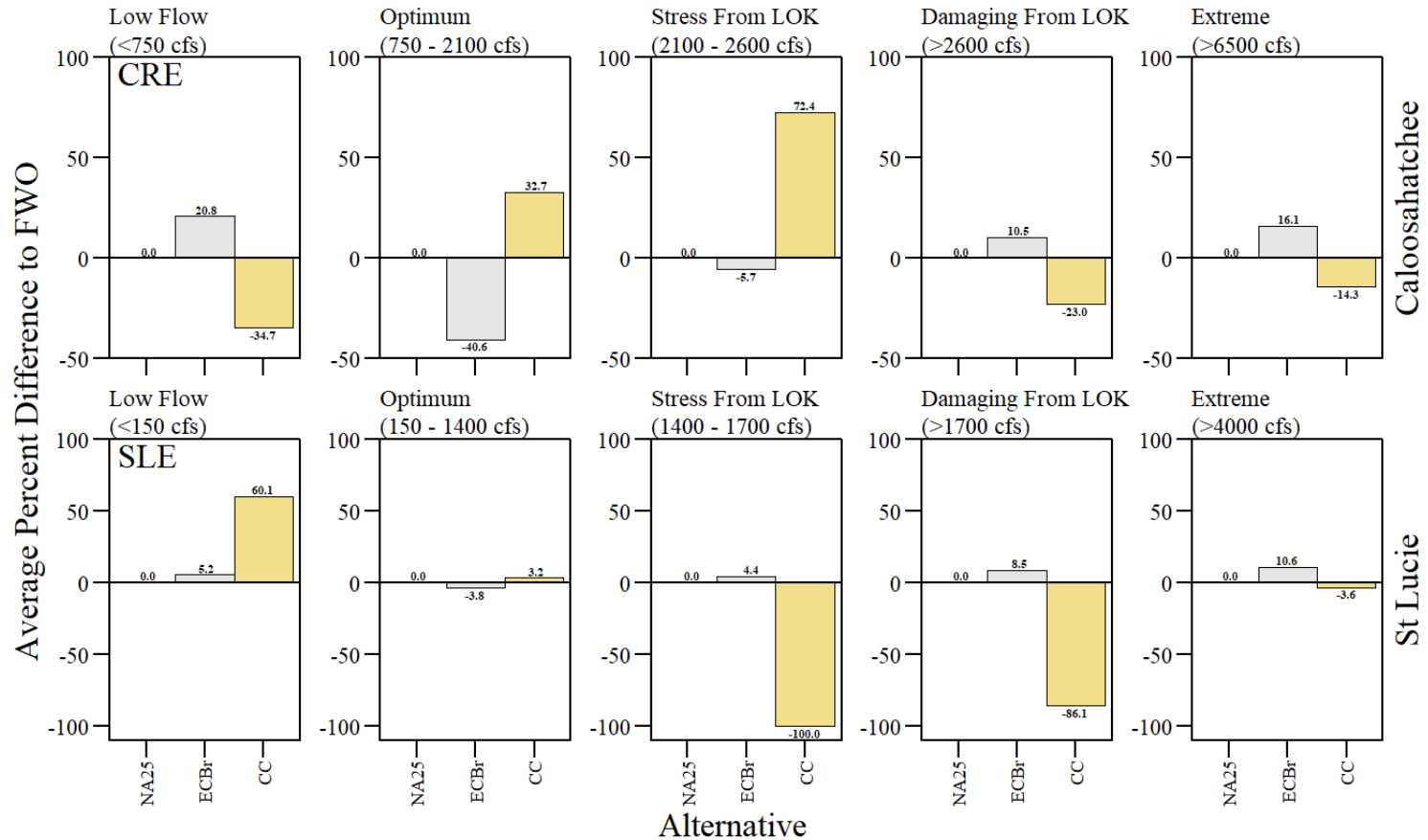
RECOVER salinity envelope evaluation relative to FWO (NA25) during the simulation period of record for Caloosahatchee (top) and St Lucie (bottom) estuaries.

# Daily Metric



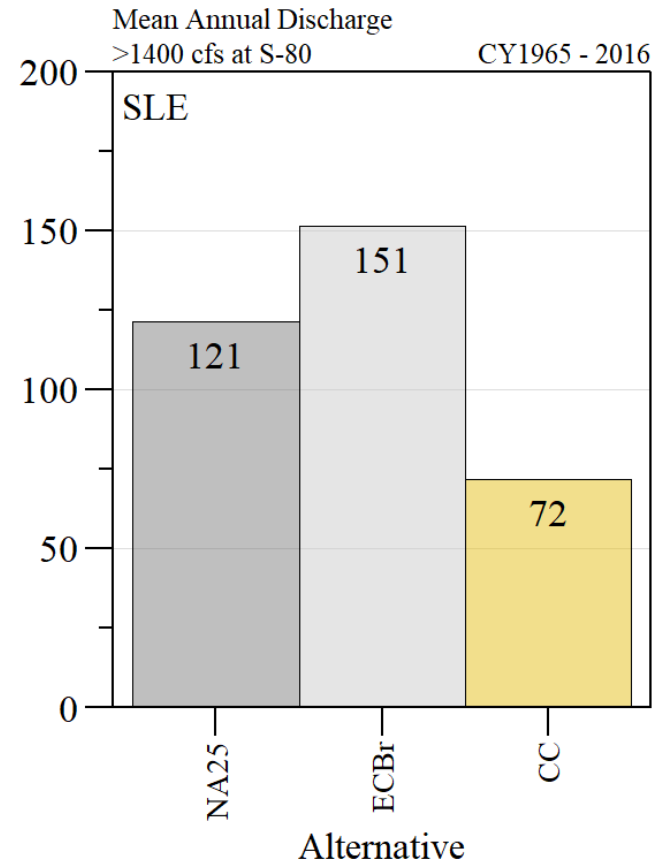
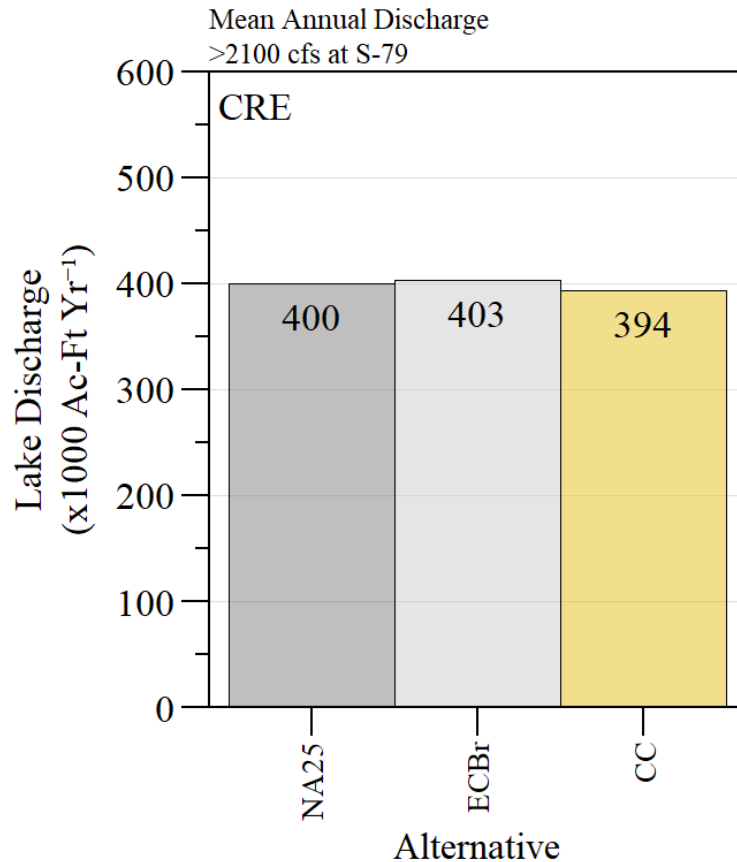
Daily salinity envelope evaluation during the simulation period of record for Caloosahatchee (top) and St Lucie (bottom) estuaries.

# Daily Metric



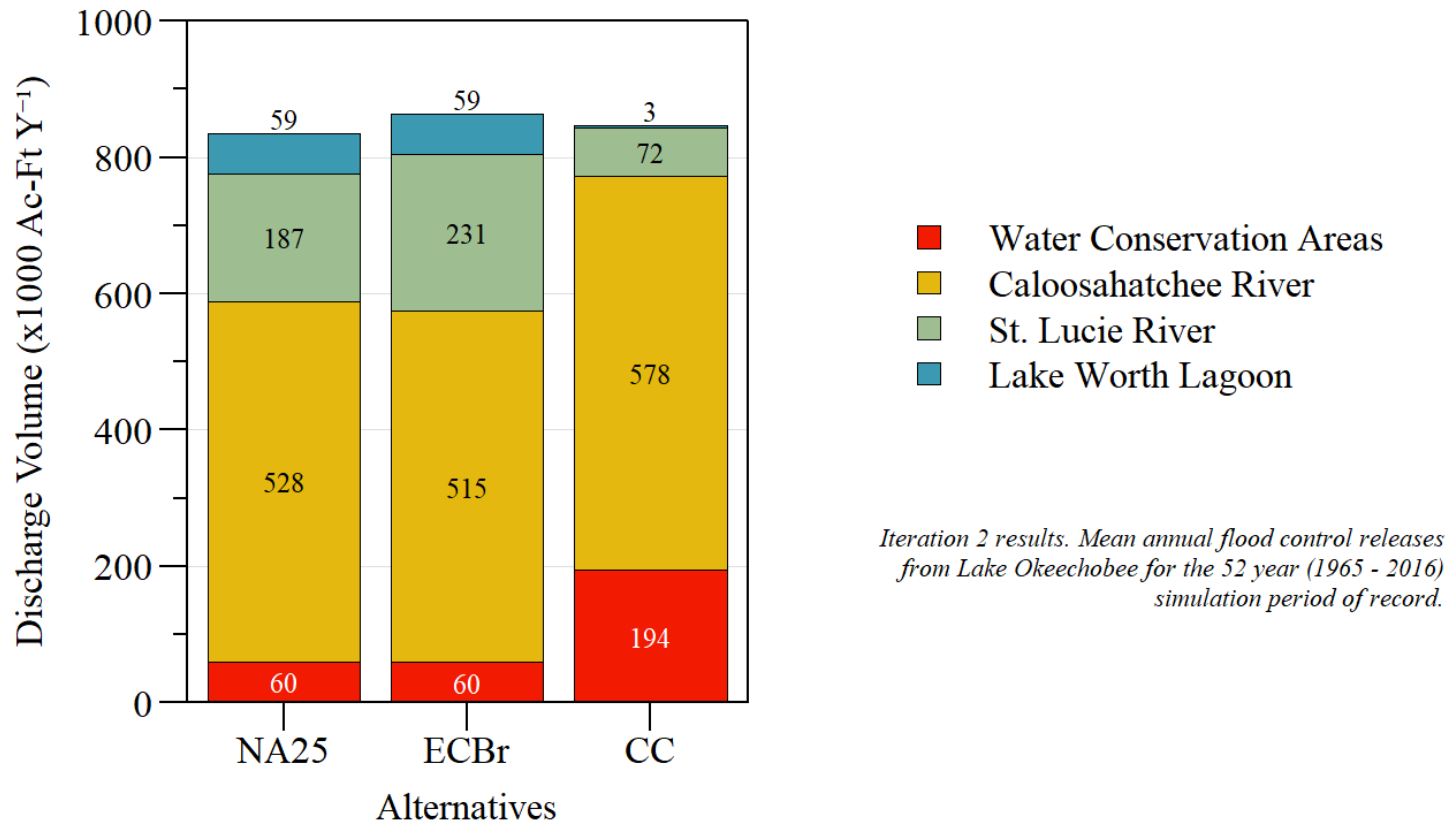
Daily salinity envelope evaluation relative to FWO (NA25) during the simulation period of record for Caloosahatchee (top) and St Lucie (bottom) estuaries.

# Lake Discharges



Average annual lake discharge volume over the simulation period of record when stress and damaging discharge at S79 and S80, respectively.

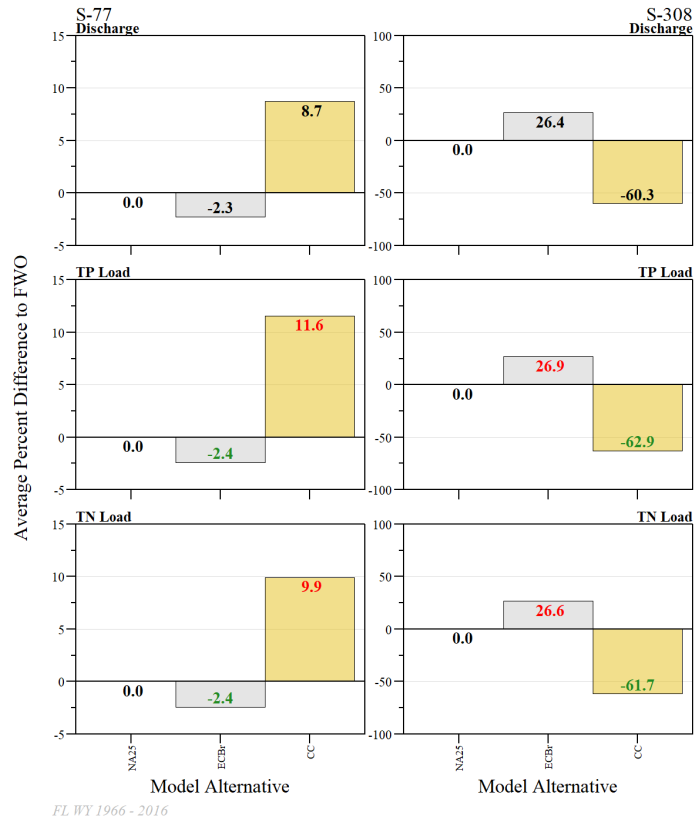
# Flood control discharges



Average annual flood control discharges from Lake Okeechobee to Water Conservation Areas and Northern Estuaries over the simulation period of record.



# Load



Average percent difference from FWO (NA25) for discharge and estimated nutrient loads over the May 1965 - April 2016 (FL WY 1966 - 2016) period of simulation.