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 ³	Stress Events From Basin ³	Damaging Events From LOK ⁴	Damaging Events From Basin ⁴	Regulatory Flows (kacft/yr)	Stress Events From LOK ³	Stress Events From Basin ³	Damaging Events From LOK ⁴	Damaging Events From Basin ⁴
CRE 1	NA25 ²	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 1	NA25 ²	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

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

CRE: $\geq 2100 \text{ cfs } \& < 2600 \text{ cfs}$ SLE: $\geq 1400 \text{ cfs } \& < 1700 \text{ cfs}$

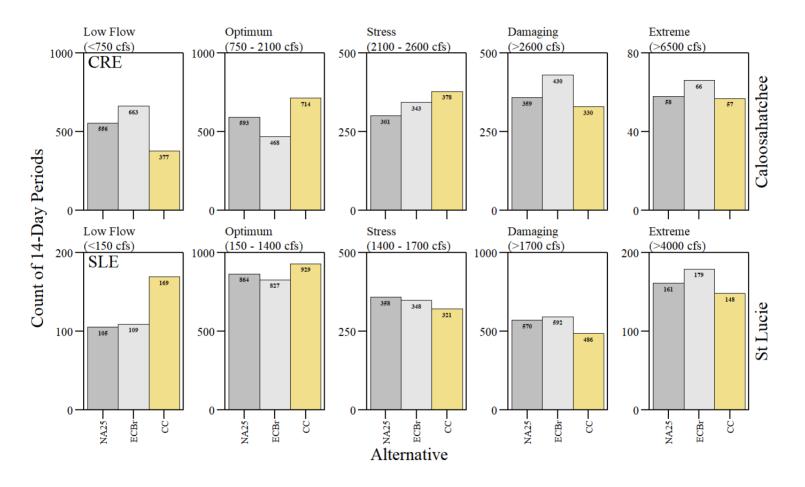
⁴Damaging Flows:

CRE: > 2600 cfs SLE:> 1700 cfs

Data Source: USACE and SFWMD Interagency Modeling Center

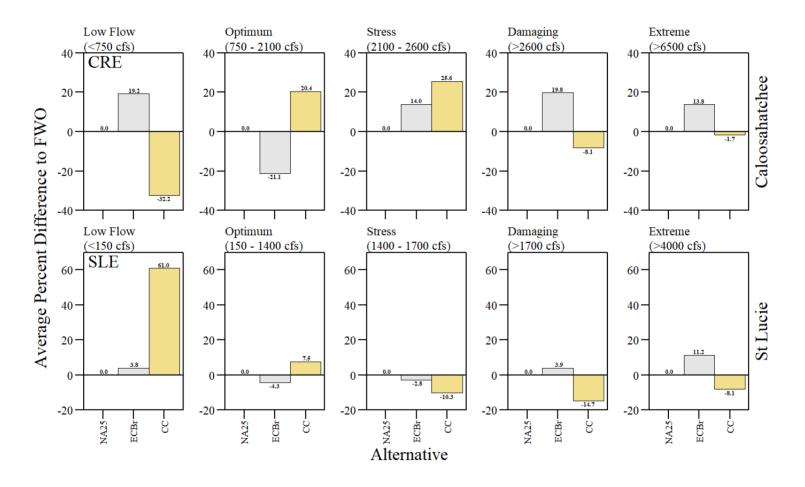
³ Stressful Flows:

RECOVER Metric



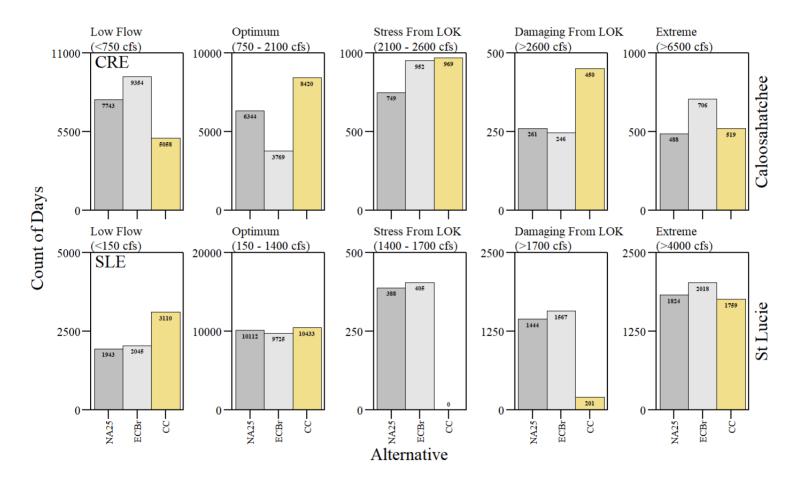
RECOVER salinity envelope evaluation during the simulation period of record for Caloosahatchee (top) and St Lucie (bottom) estuaries.

RECOVER Metric



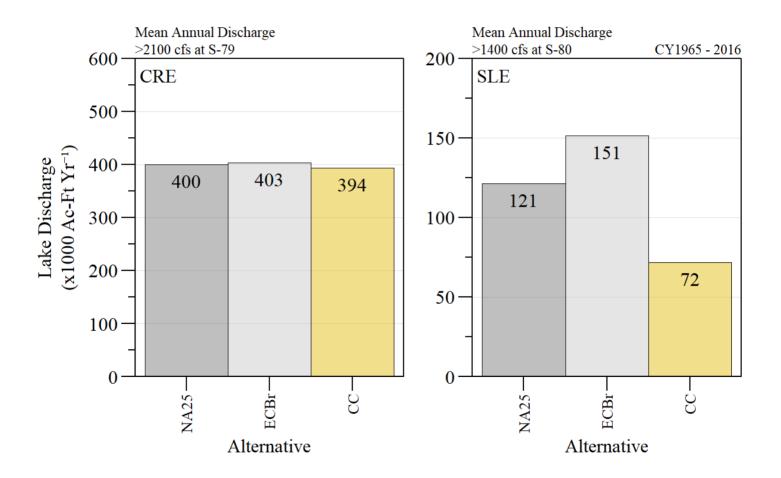
RECOVER salinity envelope evaluation relative to FWO (NA25) during the simulation period of record for Caloosahatchee (top) and St Lucie (bottom) estuaries.

Daily Metric



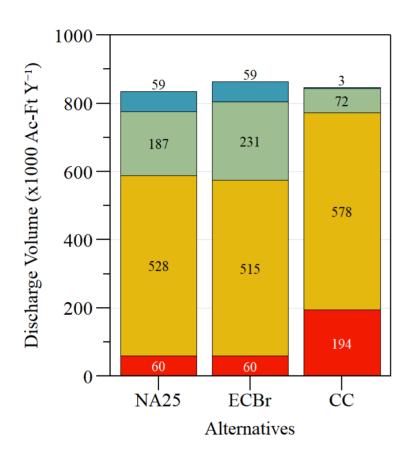
Daily salinity envelope evaluation during the simulation period of record for Caloosahatchee (top) and St Lucie (bottom) estuaries.

Lake Discharges



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

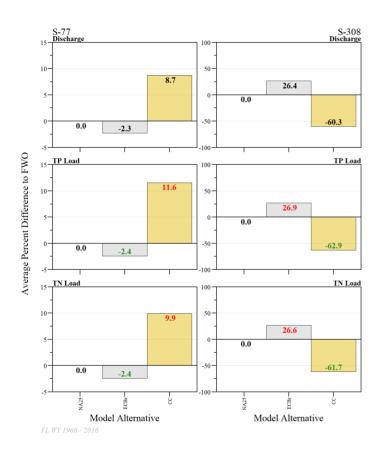
Flood control discharges



- Water Conservation Areas
- Caloosahatchee River
- St. Lucie River
- Lake Worth Lagoon

Iteration 2 results. Mean annual flood control releases from Lake Okeechobee for the 52 year (1965 - 2016) 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.