Lake Okeechobee System Operating Manual

Iteration 3 - Phase 2 Batch Analysis

Sanibel-Captiva Conservation Foundation

Conservancy of Southwest Florida

DRAFT - November 16, 2021 (Updated: November 18, 2021)





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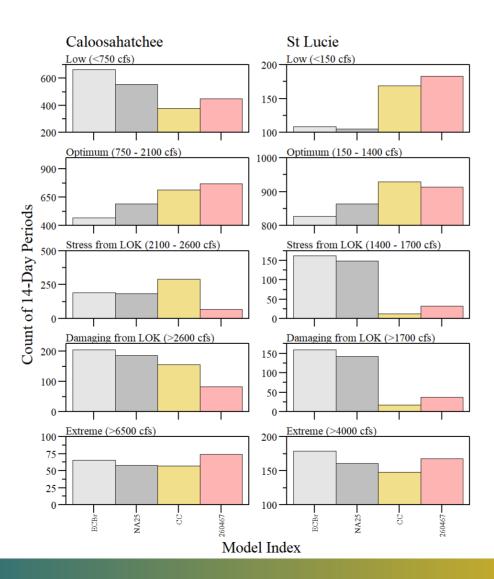
Iteration 3 - Phase 2

	Model Index	
Performance Measure	СС	260467
CRE - Low (PM30)	-32.2	-19.1
CRE - Optimum (PM31)	20.4	30.0
CRE - Stress from LOK (PM37)	57.9	-62.8
CRE - Damaging from LOK (PM38)	-16.1	-55.9
CRE - Extreme (PM36)	-1.7	27.6
SLE - Low (PM80)	61.0	74.3
SLE - Optimum (PM81)	7.5	5.7
SLE - Stress from LOK (PM86)	-91.2	-78.4
SLE - Damaging from LOK (PM87)	-88.0	-73.9
SLE - Extreme (PM85)	-8.1	4.3
CRE - Months >6500 cfs (PM79)	-15.8	31.6
SLE - Months >4000 cfs (PM117)	-2.4	11.9
S308 Regulatory Flow (PM88)	-61.7	-37.4
S77 Regulatory Flow (PM40)	9.5	-3.1
LOK - Total Stage Envelope Penalty (PM10+PM11)	13.7	37.7

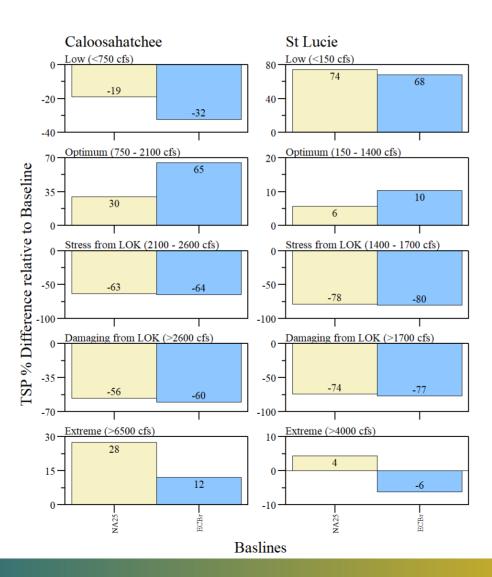
Percent Difference relative to FWO (NA25)

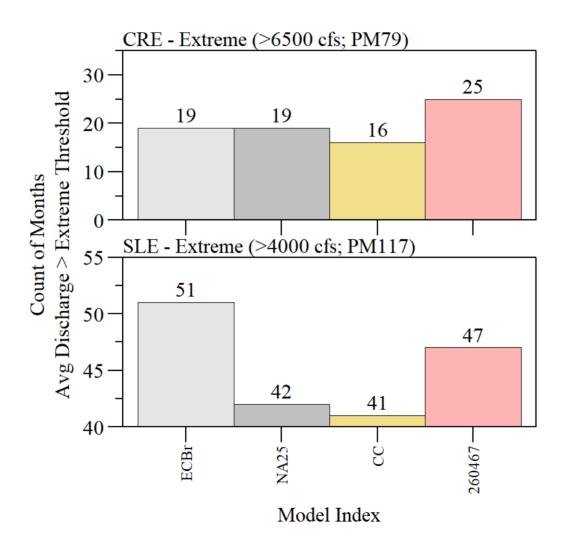
- The selected plan (Model Index 260467) provides substantial reduction in SLE regulatory discharges, SLE stress and damaging from the Lake salinity envelope counts.
- This plan also increases CRE optimum and reduces CRE stress and damaging from the Lake salinity envelope counts.

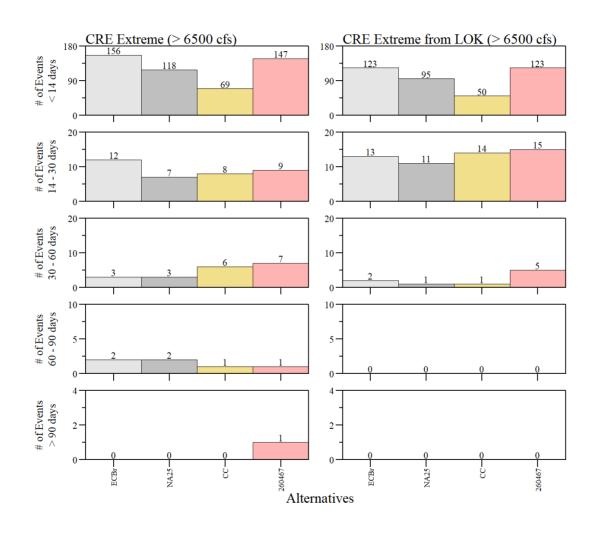
Salinity Envelope

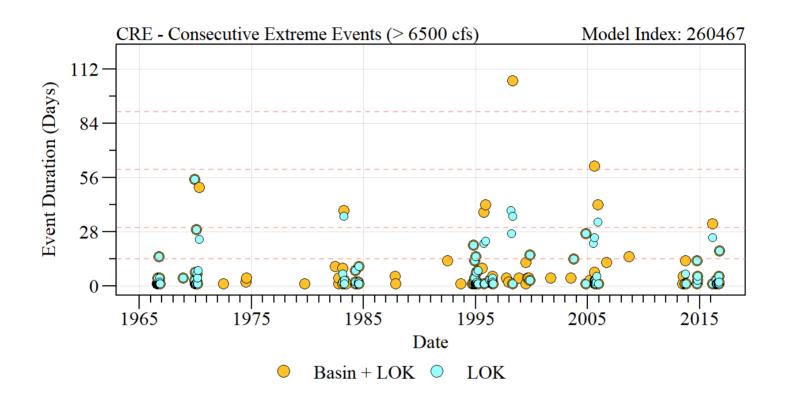


Salinity Envelope - Baselines



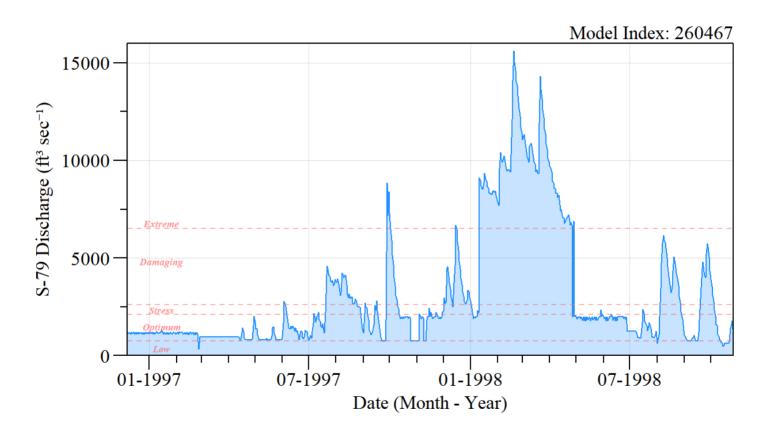


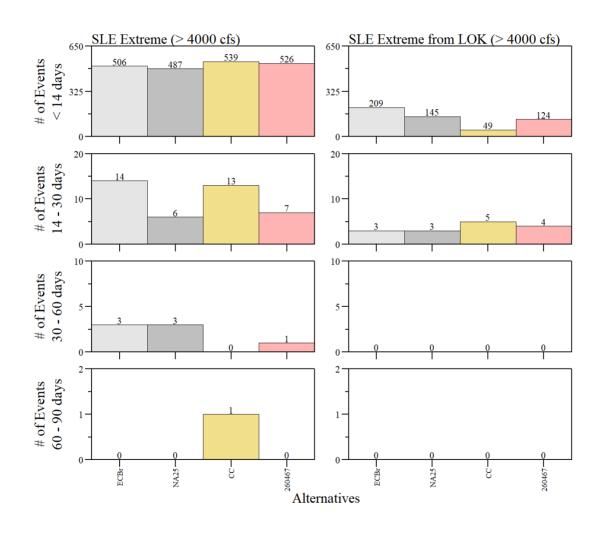




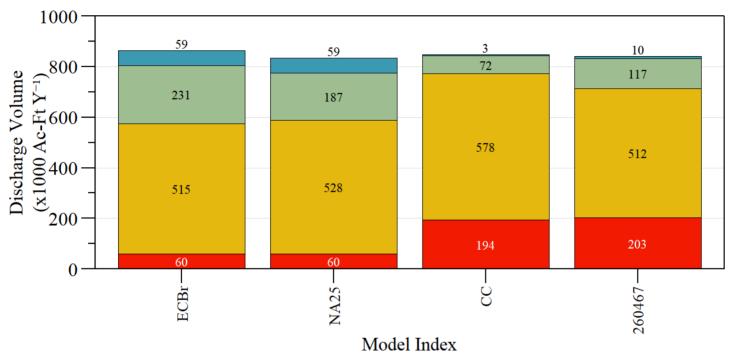
- Based on daily discharges >6500 cfs
- Can have more counts of LOK events/duration than Basin + LOK (see event >90 days)

• Example of >90 Day (106 days) extreme event observed in the simulation period of record.





Regulatory Discharges

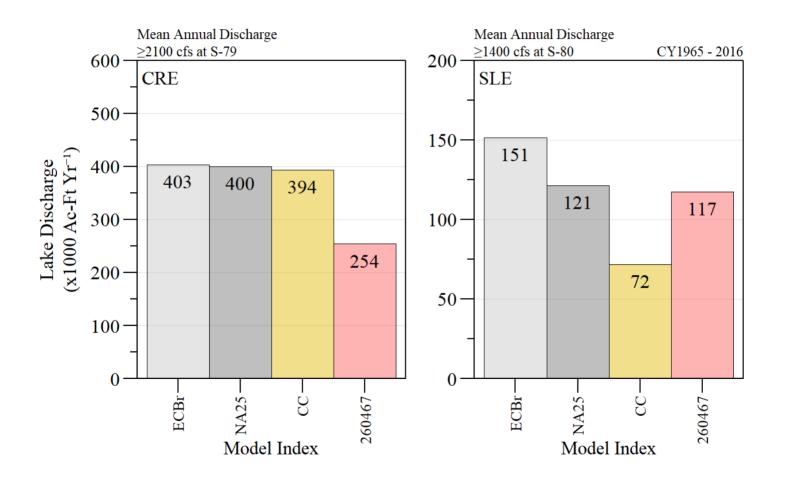


- Water Conservation Areas (PM21)
- Caloosahatchee River (PM40)
- St. Lucie River (PM88)
- Lake Worth Lagoon (PM118)

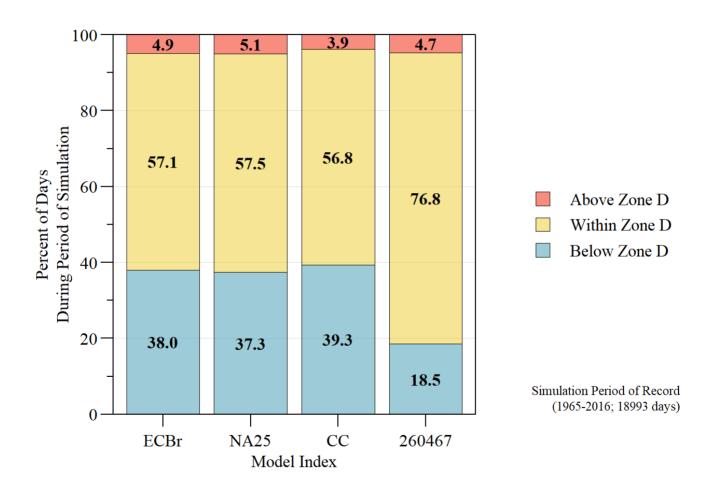
Iteration 3 screened batch results with TSP.

Mean annual flood control releases
from Lake Okeechobee for the 52 year (1965 - 2016)
simulation period of record.

Regulatory Discharges

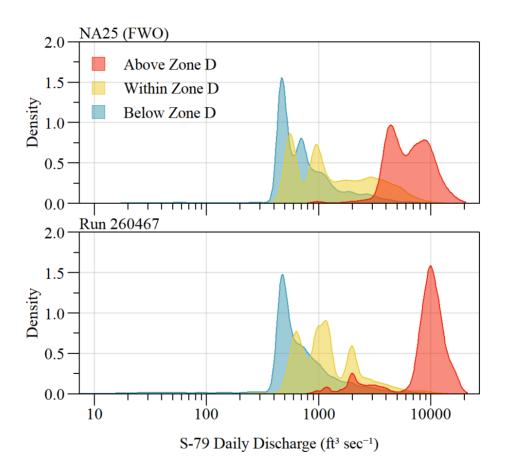


Lake Okeechobee Regulation Schedule



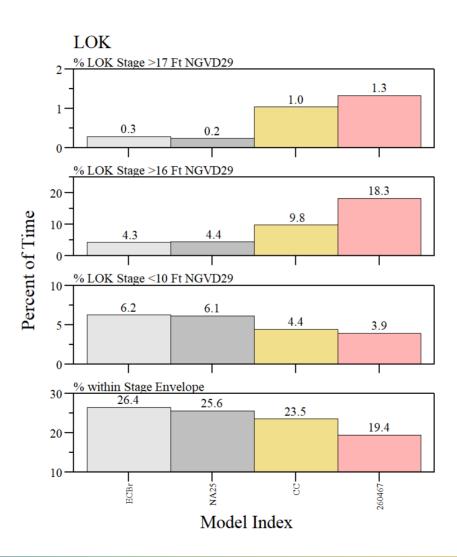
Percent of time above, within, and below Zone D of the regulation schedule.

Lake Okeechobee Regulation Schedule

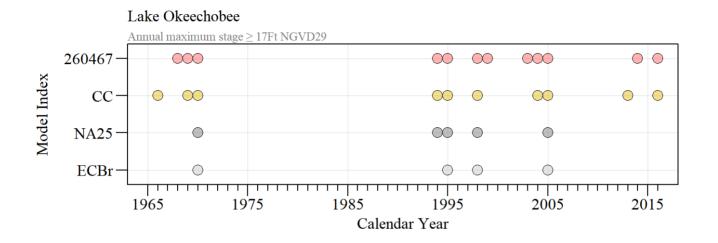


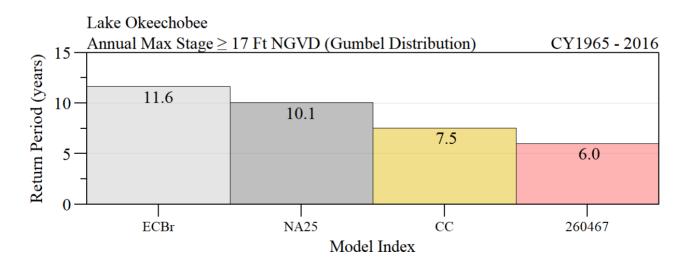
Distribution of daily discharges relative to above, within, and below Zone D of the regulation schedule.

Lake Okeechobee



Lake Okeechobee





Lake Okeechobee - High Stage Events

