Lake Okeechobee System Operating Manual

Iteration 3 - Phase 2 Batch Analysis

Sanibel-Captiva Conservation Foundation

Conservancy of Southwest Florida

DRAFT - November 16, 2021

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Iteration 3 - Phase 2

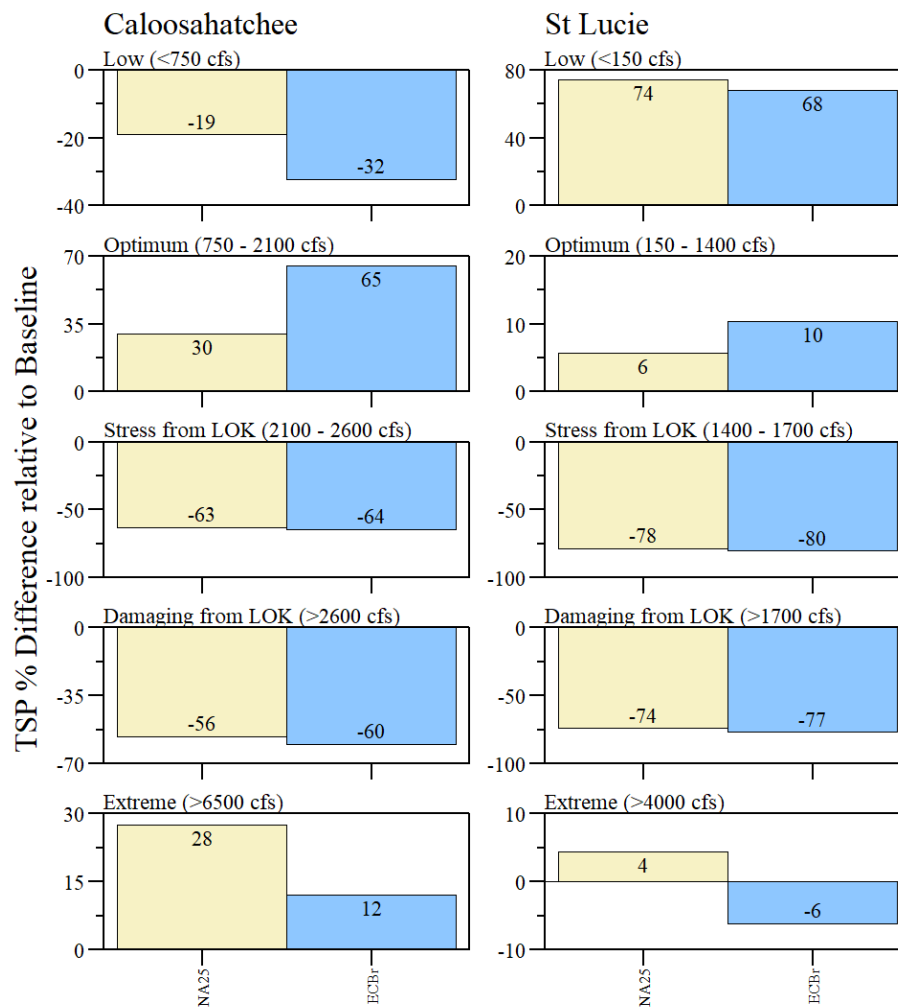| Performance Measure	CC	Model Index 260467
CRE - Low (PM30)	-32.2	-19.1
CRE - Optimum (PM31)	20.4	30.0
CRE - Stress from LOK (PM37)	57.9	-62.8
CRE - Damaging from LOK (PM38)	-16.1	-55.9
CRE - Extreme (PM36)	-1.7	27.6
SLE - Low (PM80)	61.0	74.3
SLE - Optimum (PM81)	7.5	5.7
SLE - Stress from LOK (PM86)	-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.
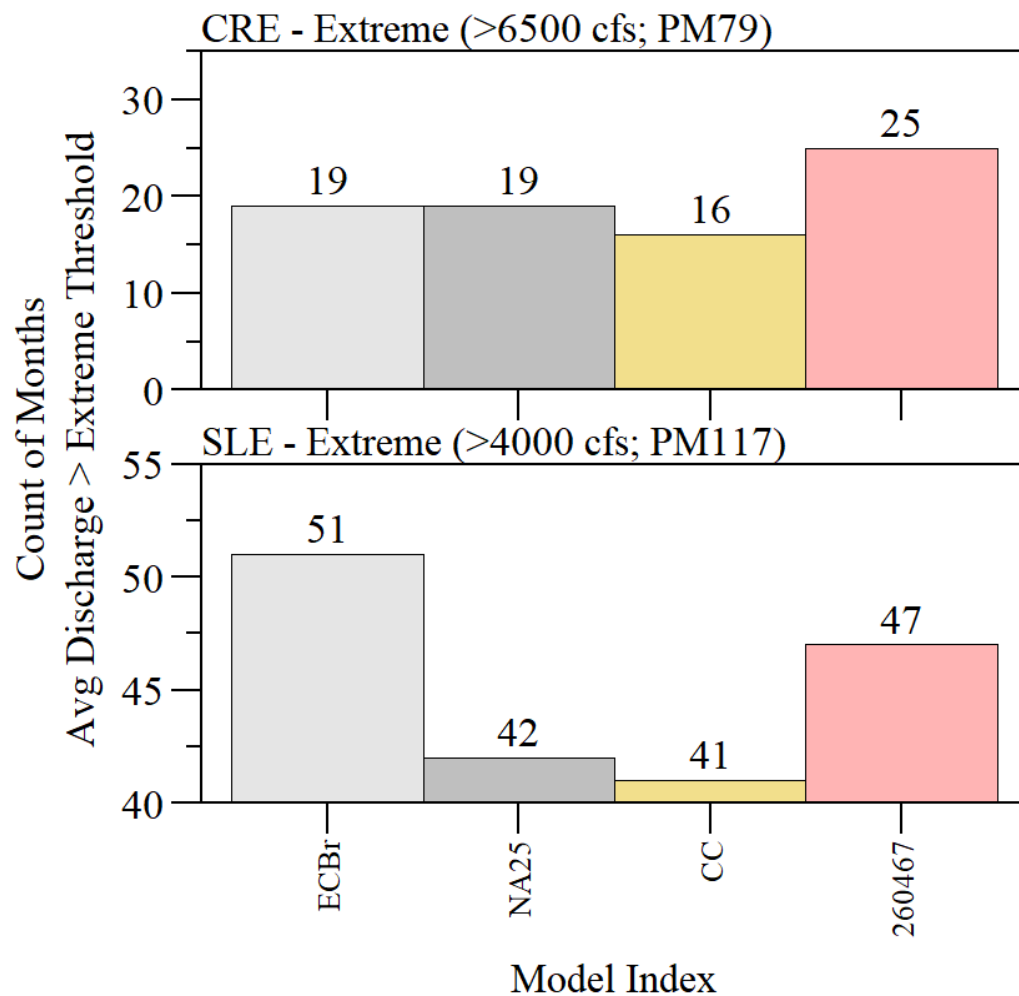
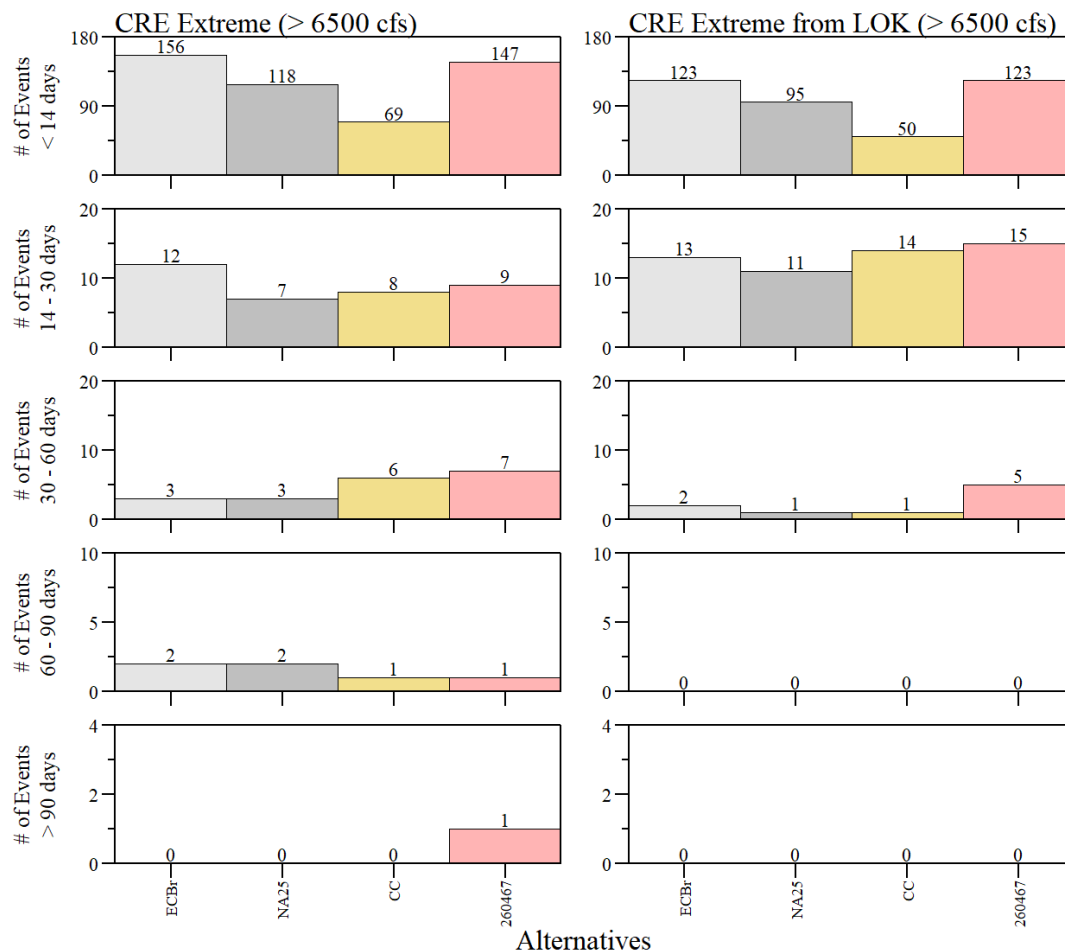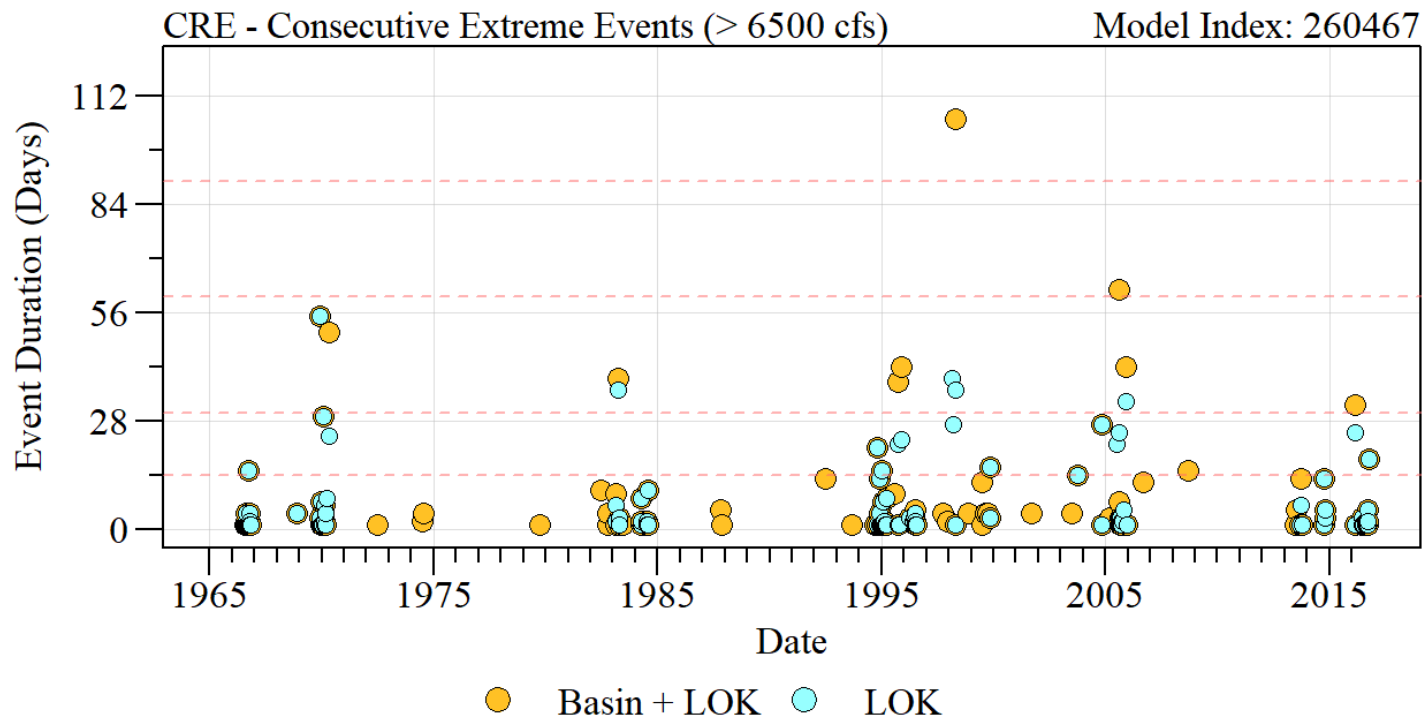# Salinity Envelope
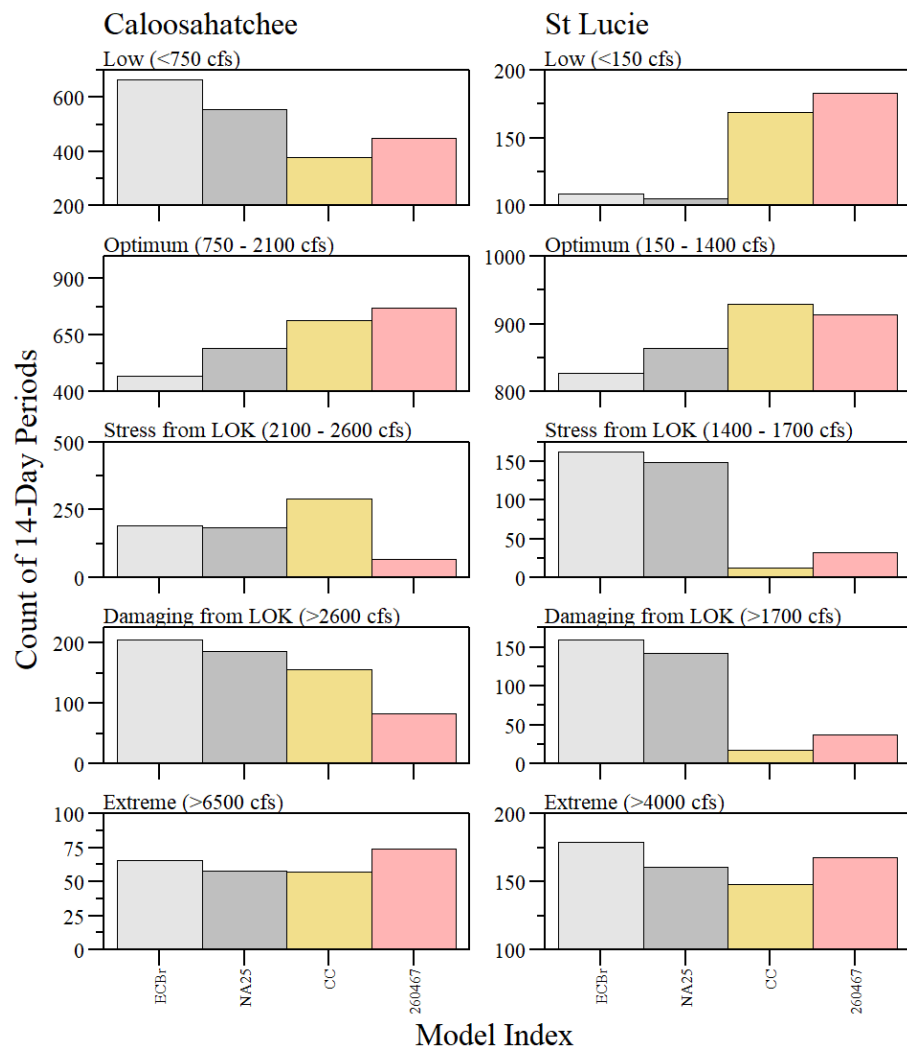
Salinity Envelope - Baselines

Salinity Envelope - Extreme Discharges

CRE - Extreme (>6500 cfs; PM79)

SLE - Extreme (>4000 cfs; PM117)

Count of Months
Avg Discharge > Extreme Threshold

Model Index

Salinity Envelope - Extreme Discharges

Salinity Envelope - Extreme Discharges
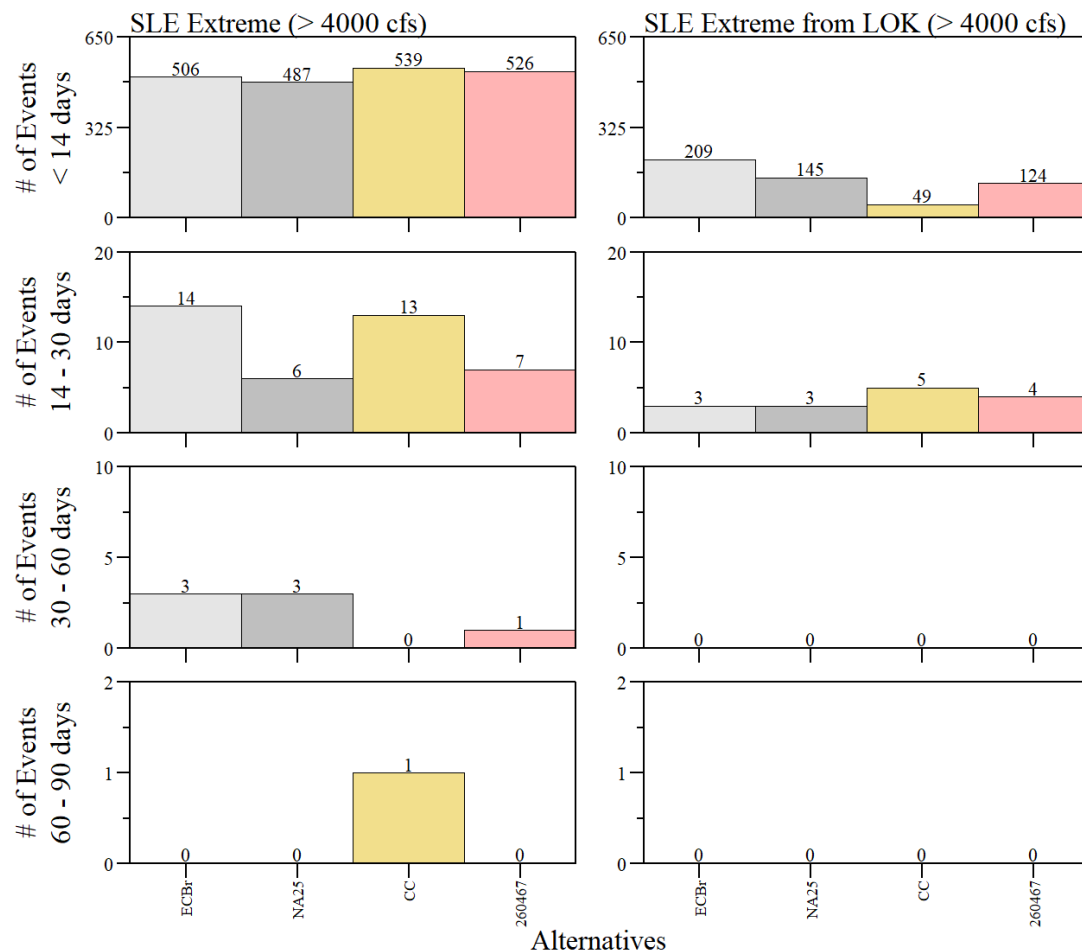

CRE - Consecutive Extreme Events (> 6500 cfs) — Model Index: 260467
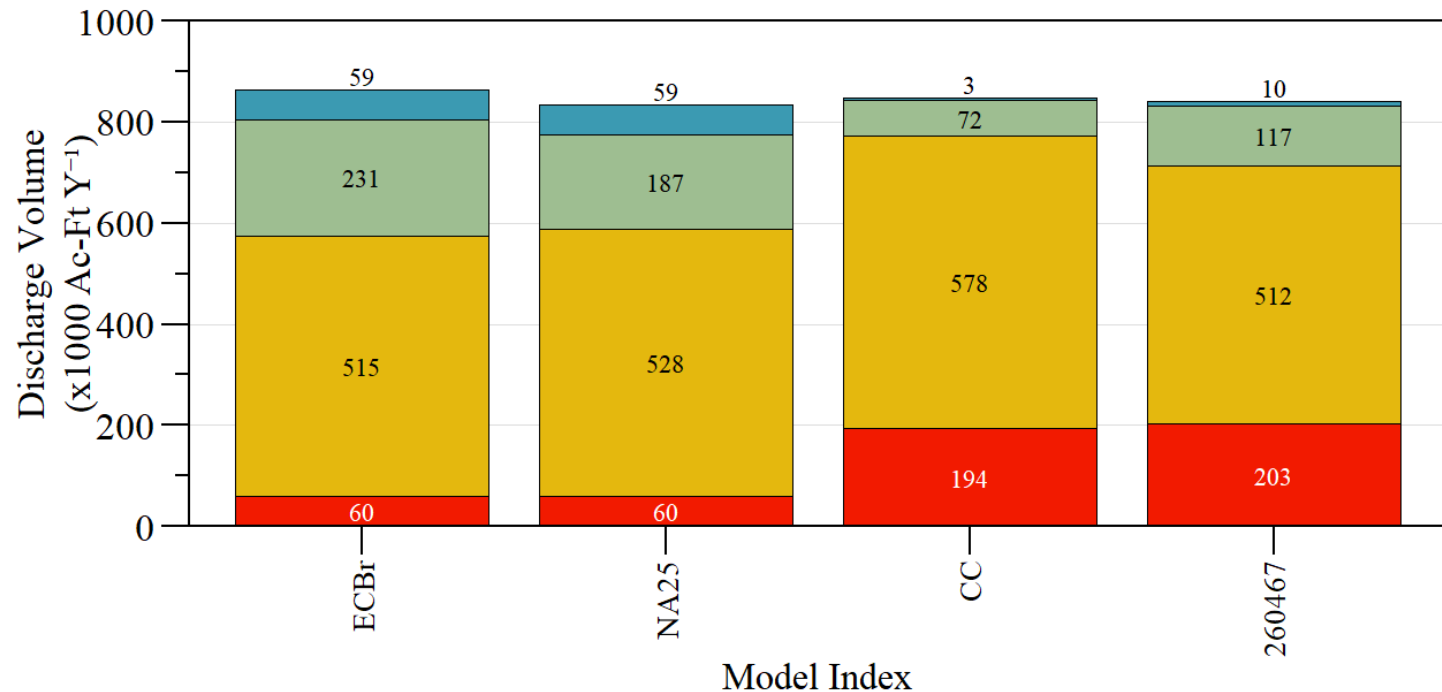
Legend: Basin + LOK, LOK

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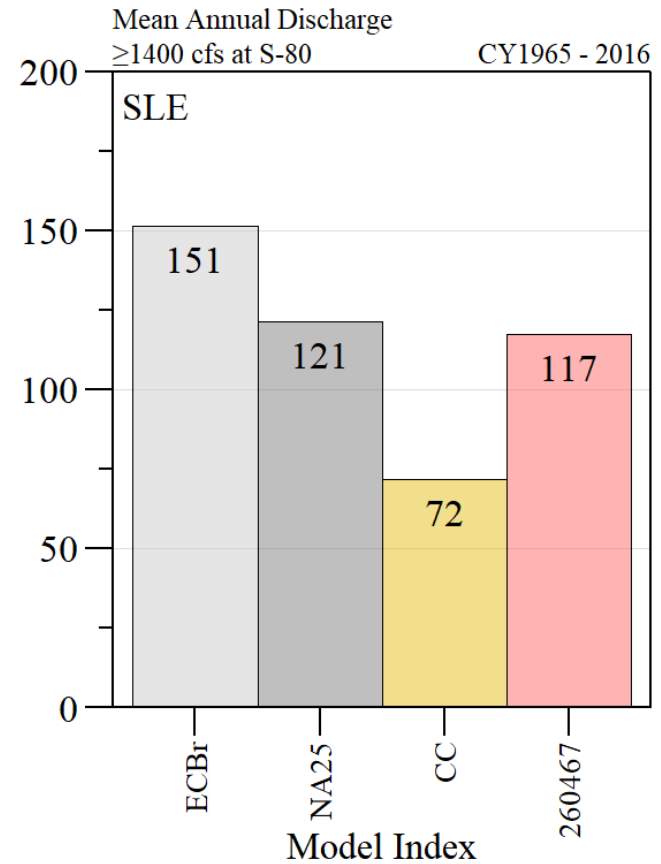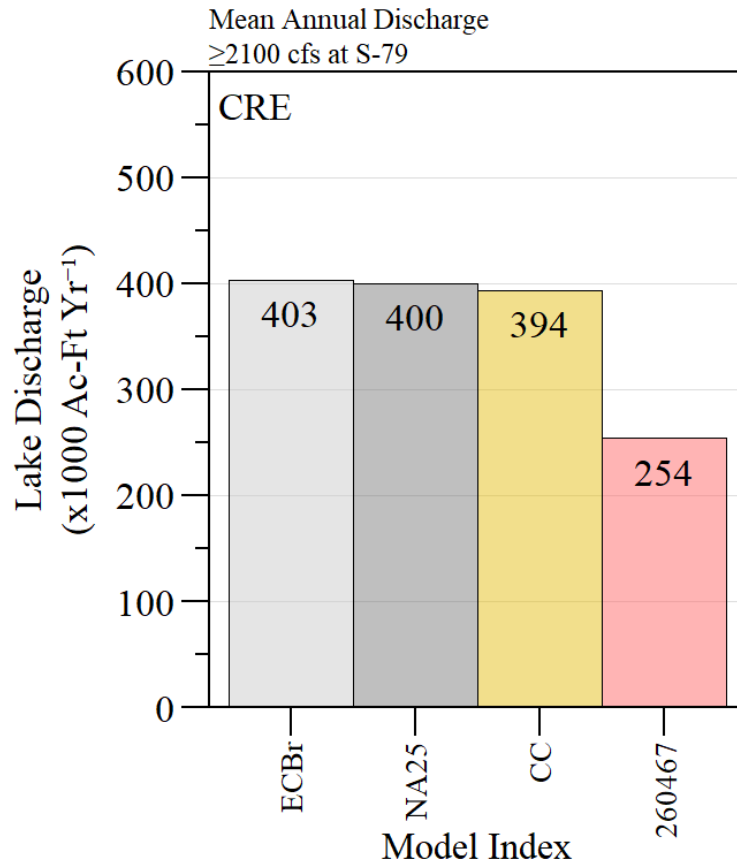
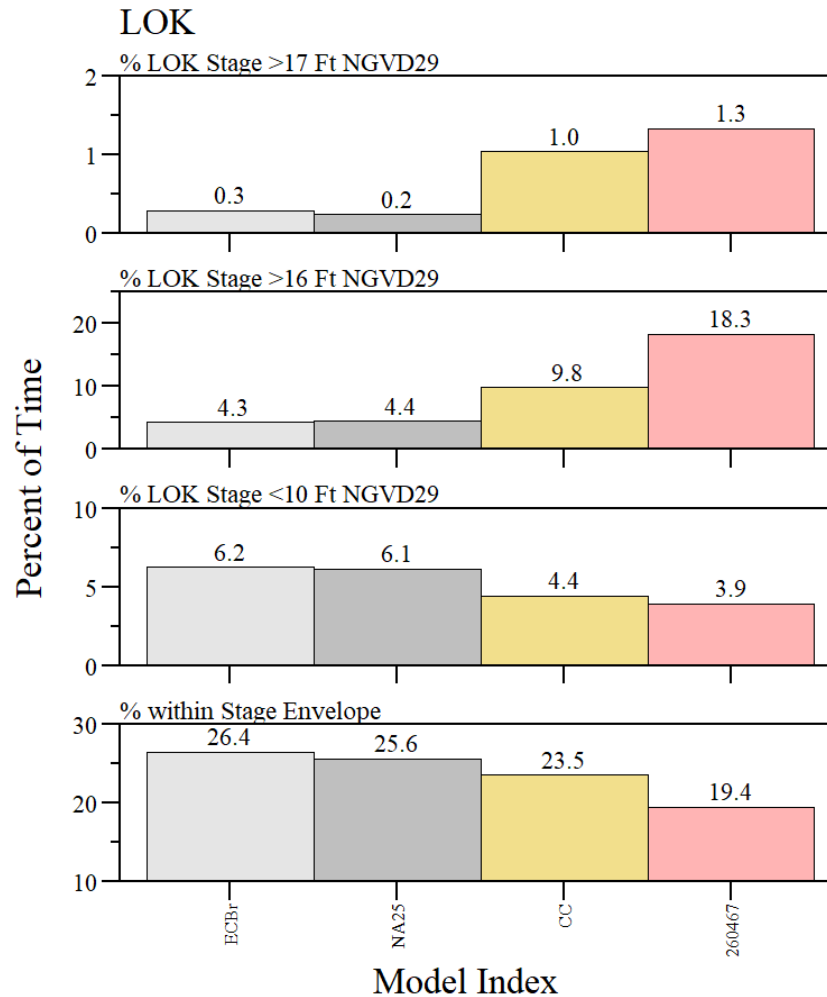# Salinity Envelope - Extreme Discharges

Regulatory Discharges

Iterations 3 screened batch results with TSP.
Mean annual flood control releases
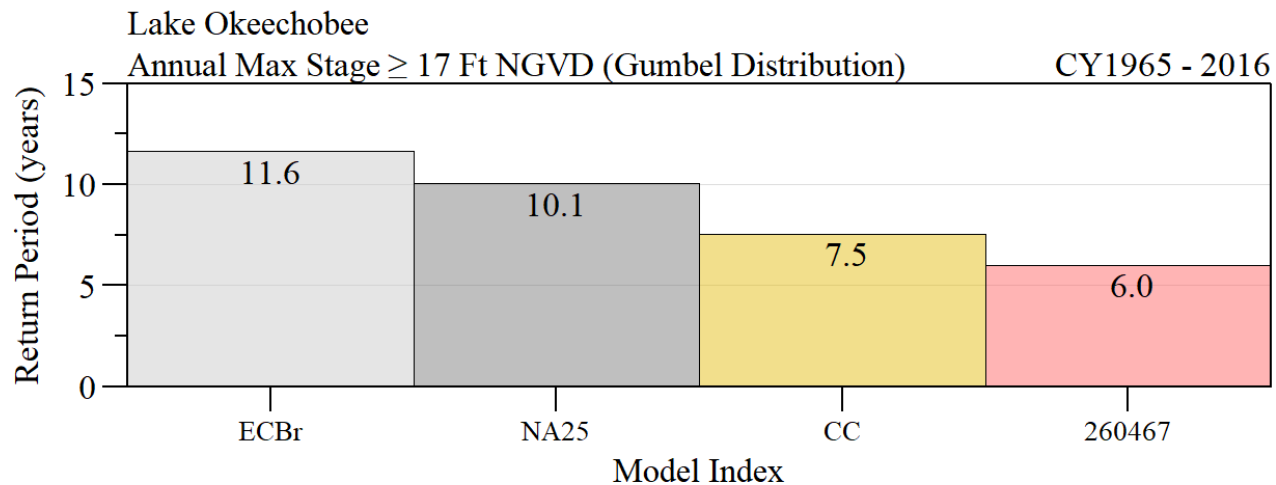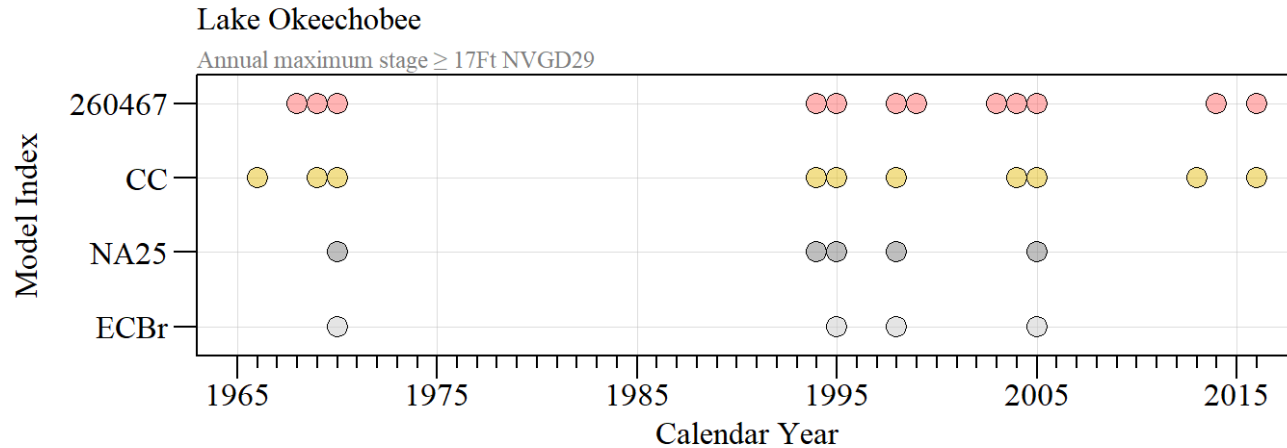from Lake Okeechobee for the 52 year (1965 - 2016)
simulation period of record.

Regulatory Discharges

Mean Annual Discharge ≥2100 cfs at S-79 — CRE

Mean Annual Discharge ≥1400 cfs at S-80 — SLE — CY1965 - 2016

Lake Okeechobee

Lake Okeechobee

Lake Okeechobee
Annual maximum stage ≥ 17Ft NVGD29

Lake Okeechobee
Annual Max Stage ≥ 17 Ft NGVD (Gumbel Distribution)   CY1965 - 2016

Lake Okeechobee - High Stage Events