

Lake Okeechobee System Operating Manual

Iteration 3 - Phase 2 Batch Analysis

Sanibel-Captiva Conservation Foundation

Conservancy of Southwest Florida

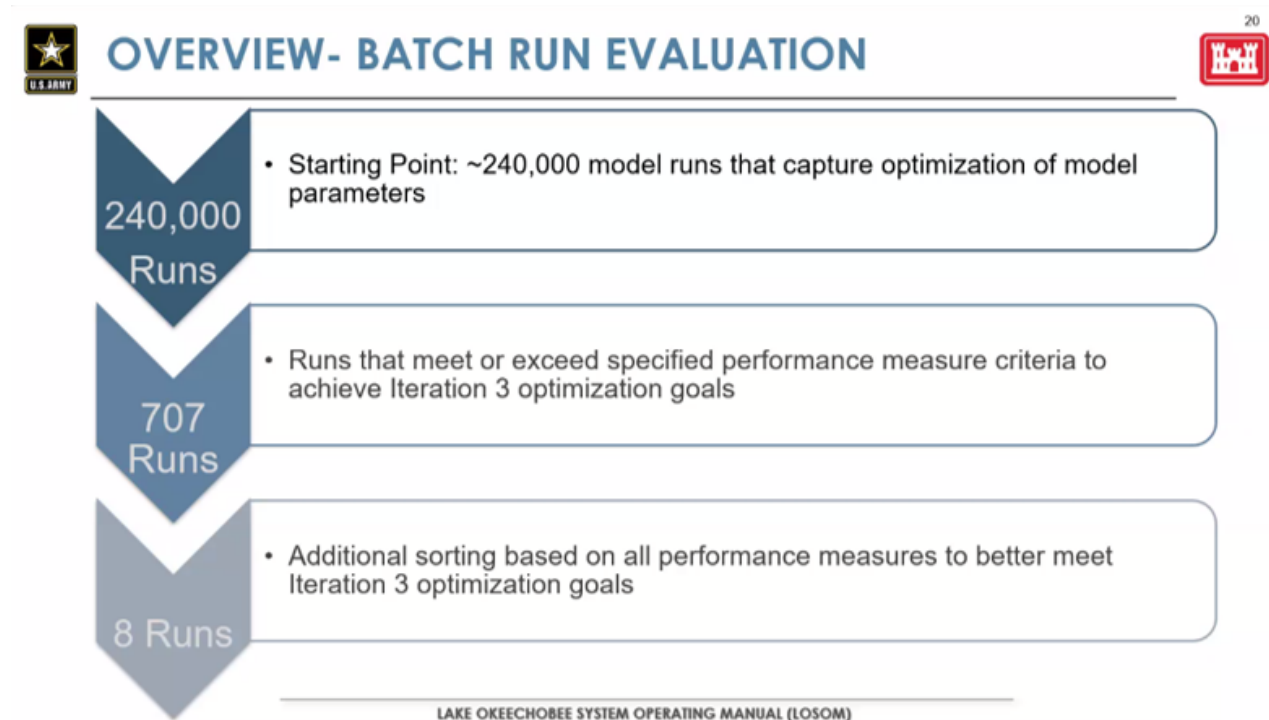
DRAFT - October 22, 2021
(Updated: October 29, 2021)



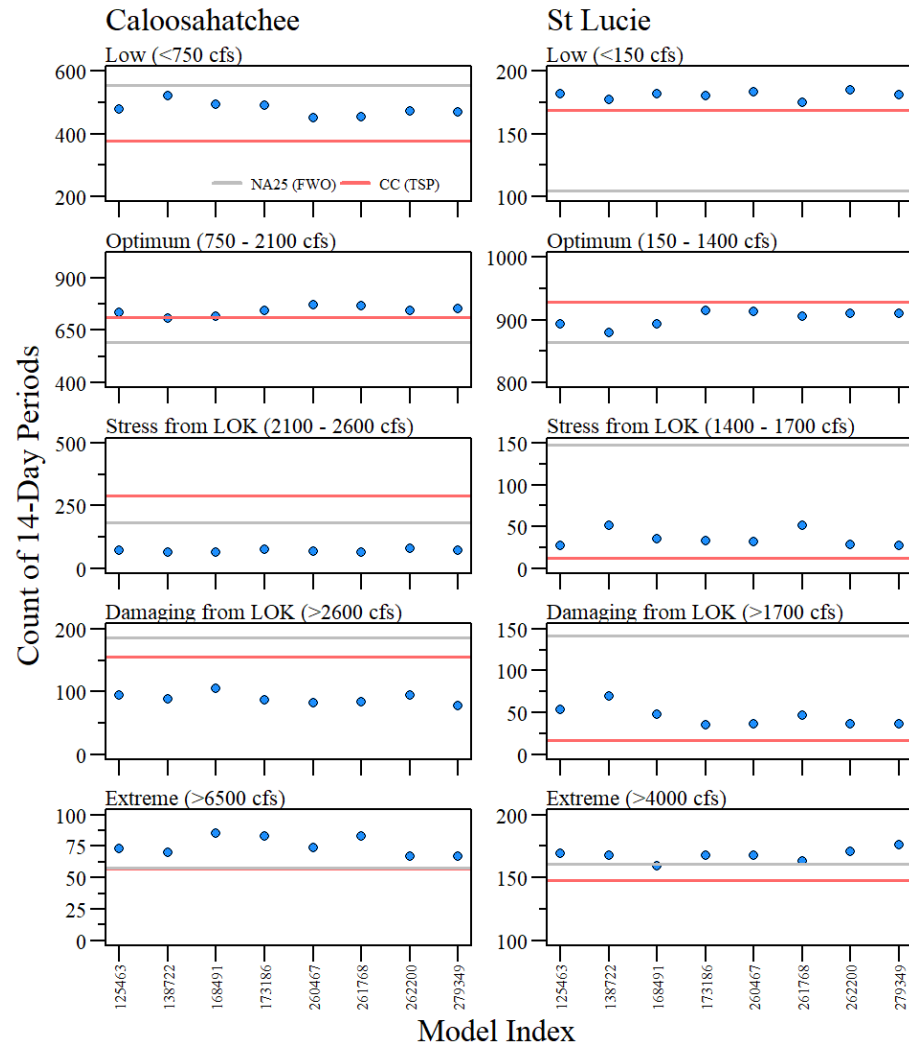
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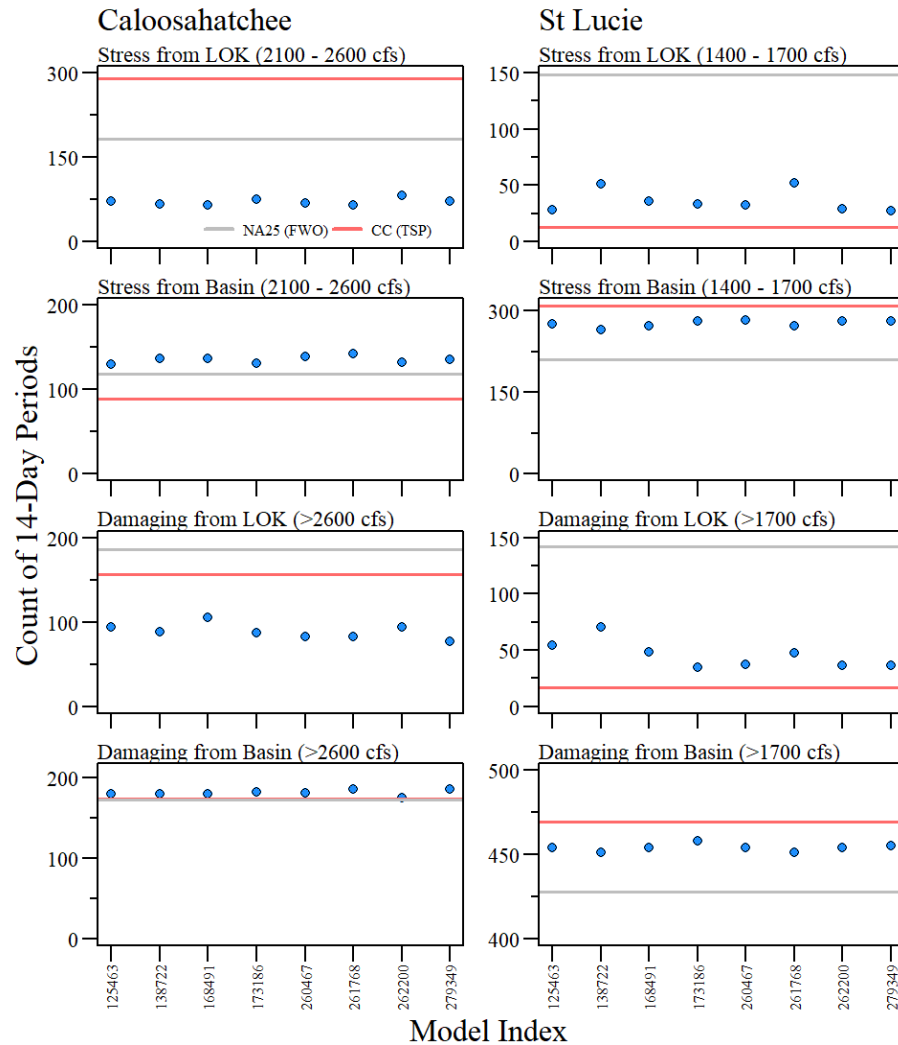
Evaluation of model runs presented to PDT by USACE 2021-10-26



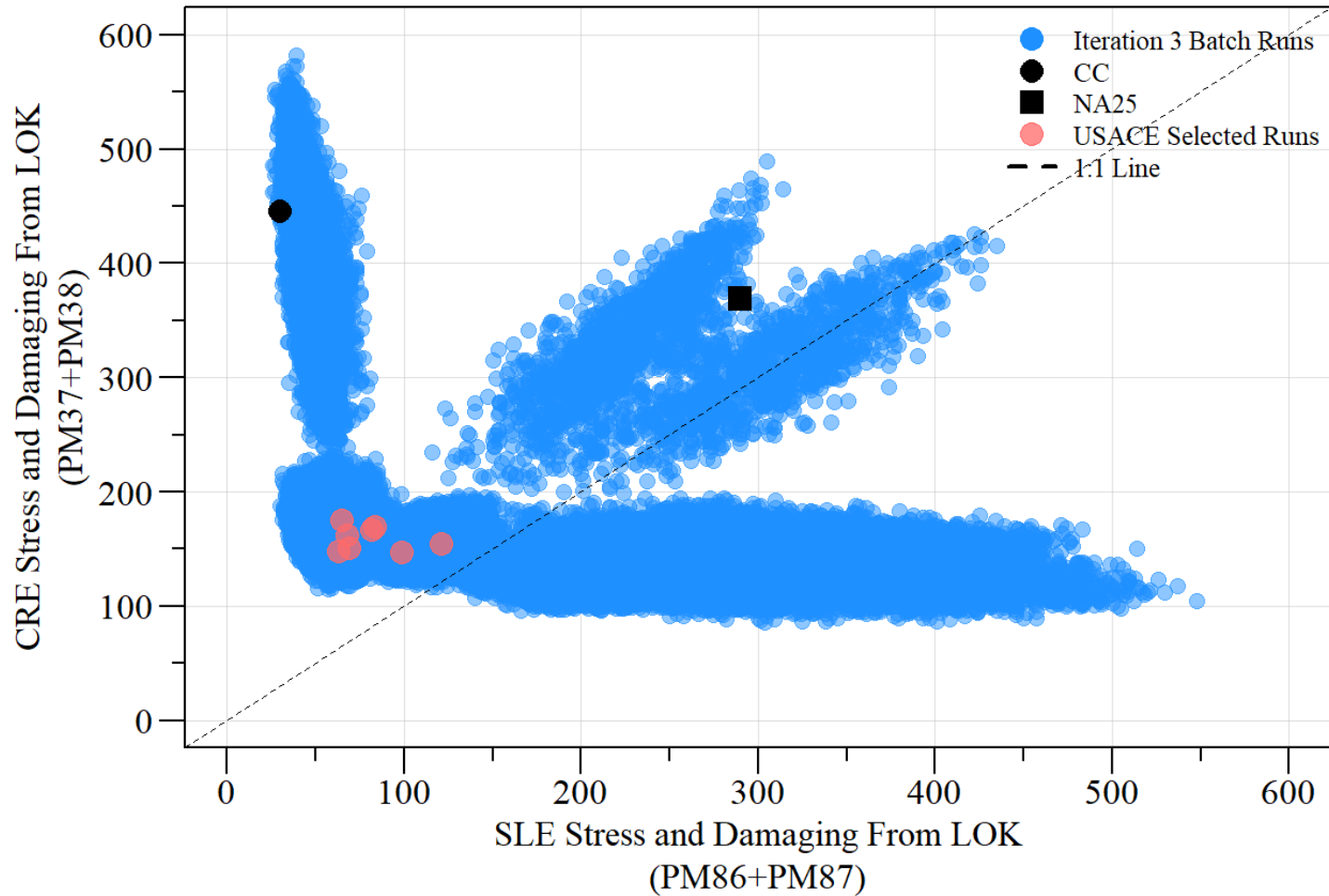
Iteration 3 - Phase 2



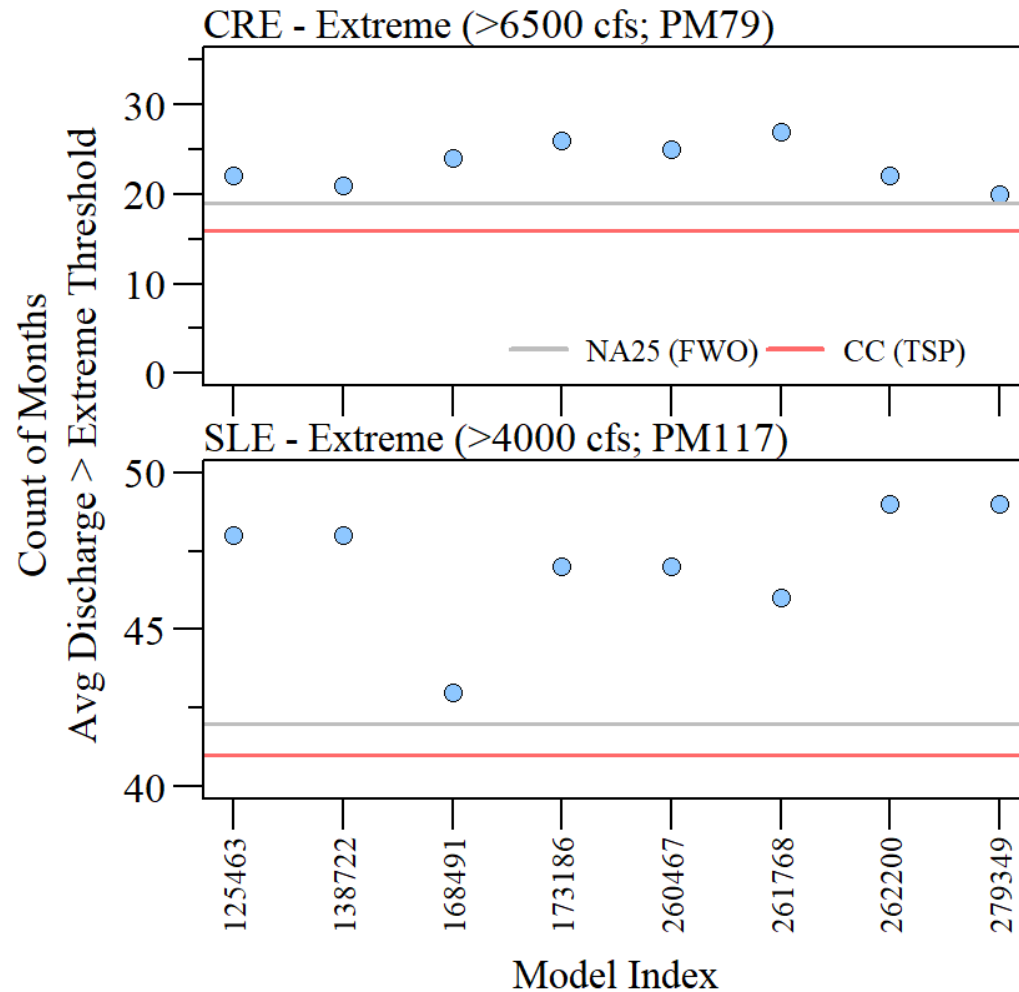
Iteration 3 - Phase 2



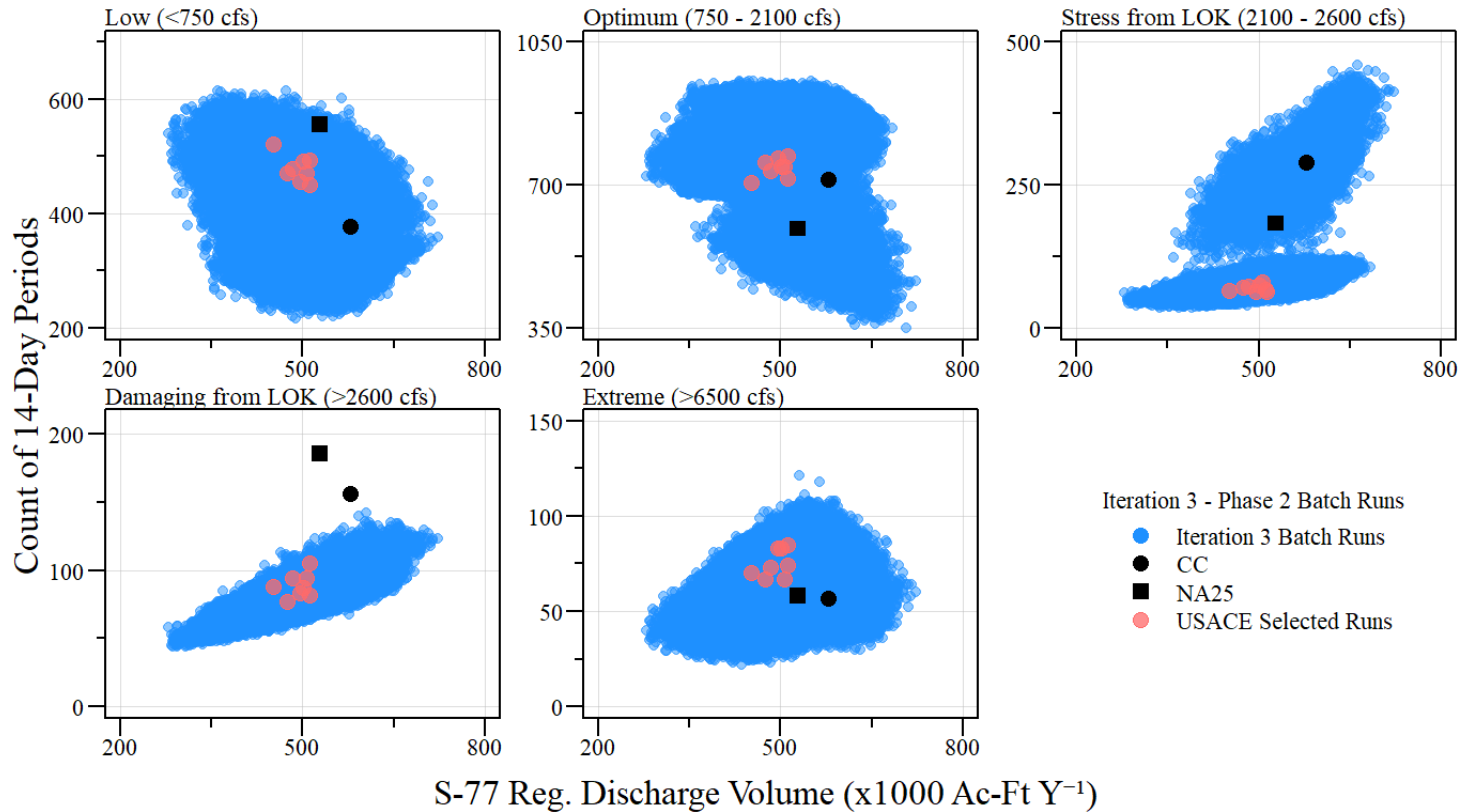
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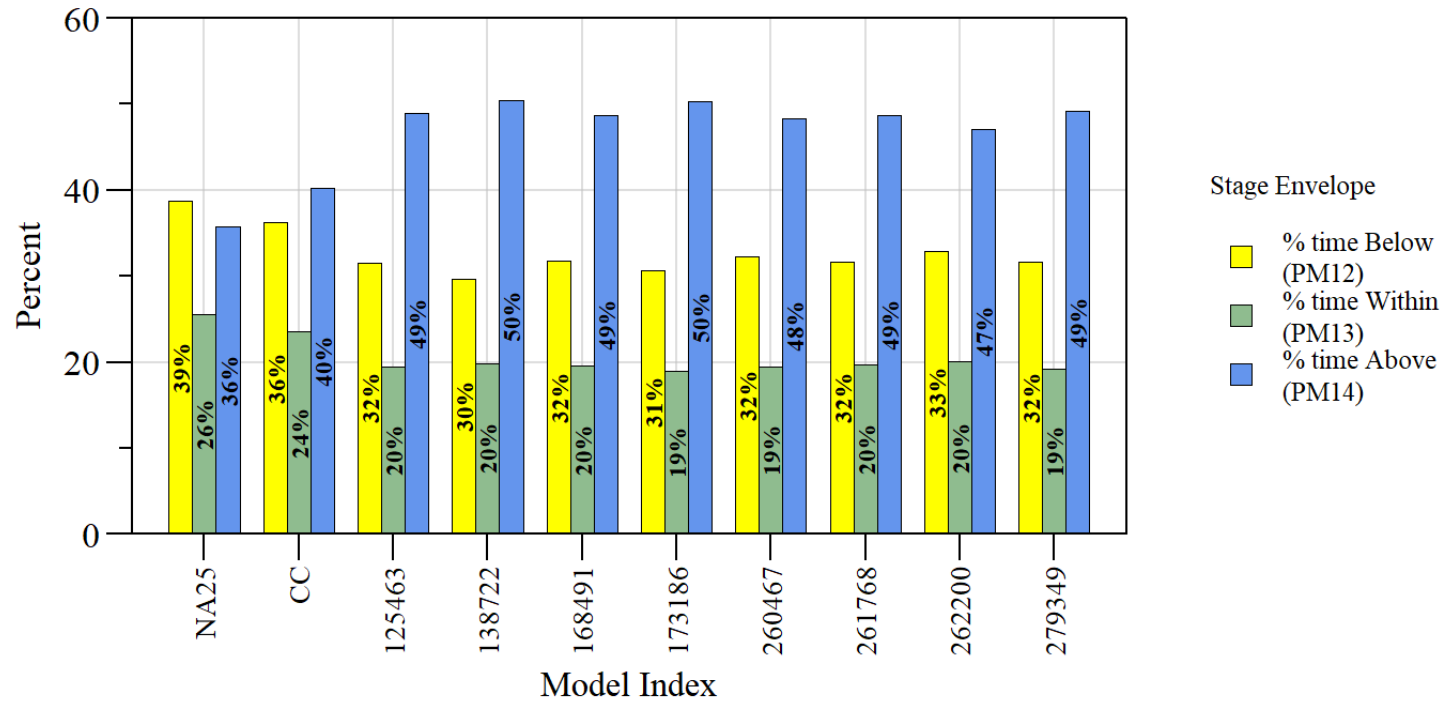
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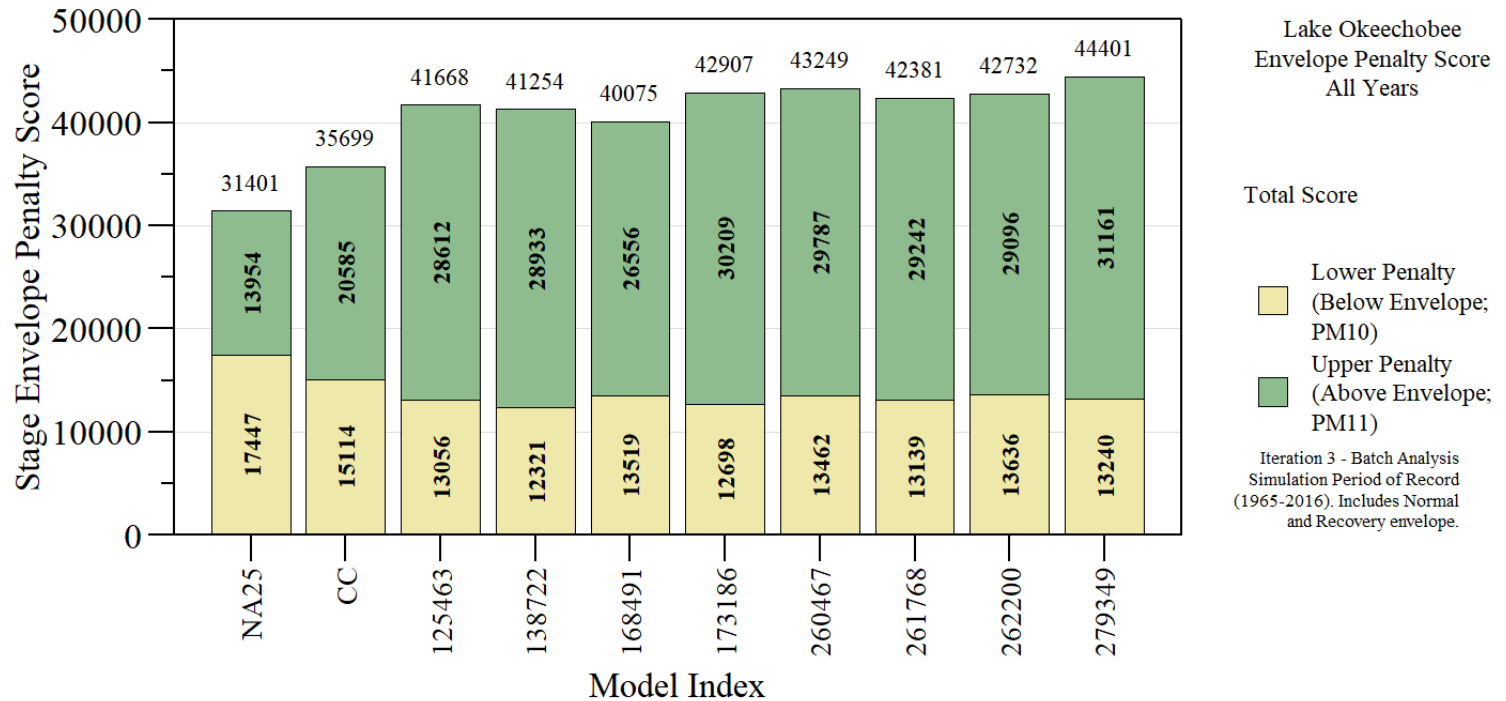
Iteration 3 - Phase 2



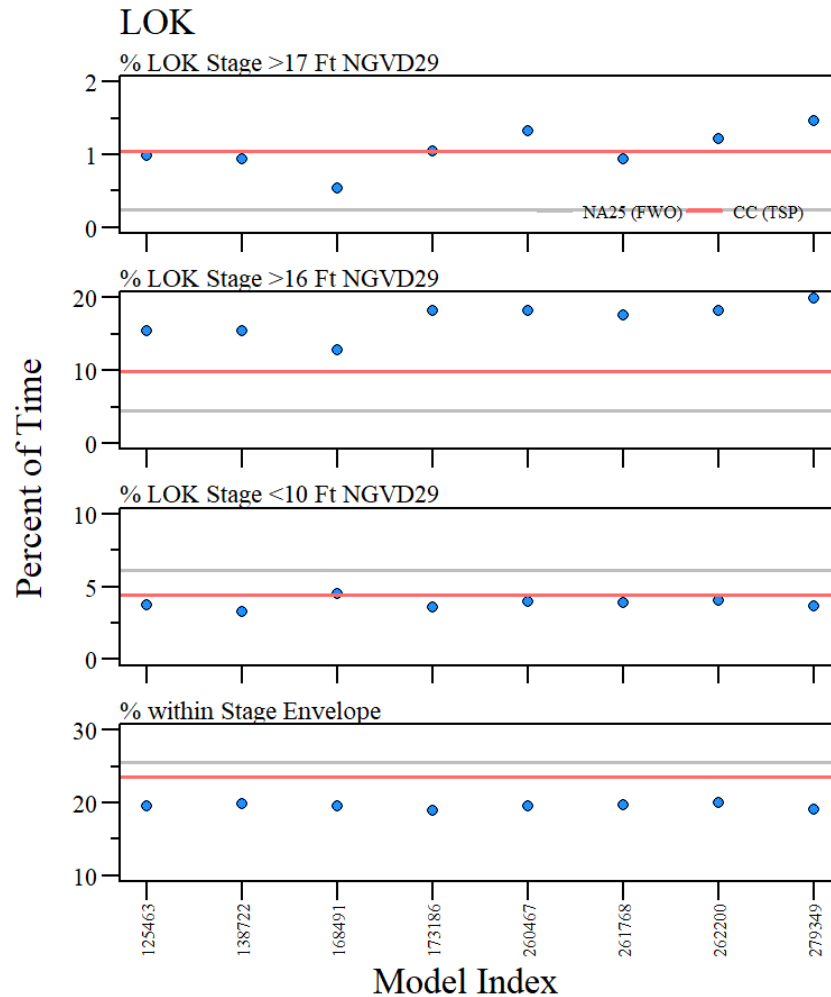
Iteration 3 - Phase 2



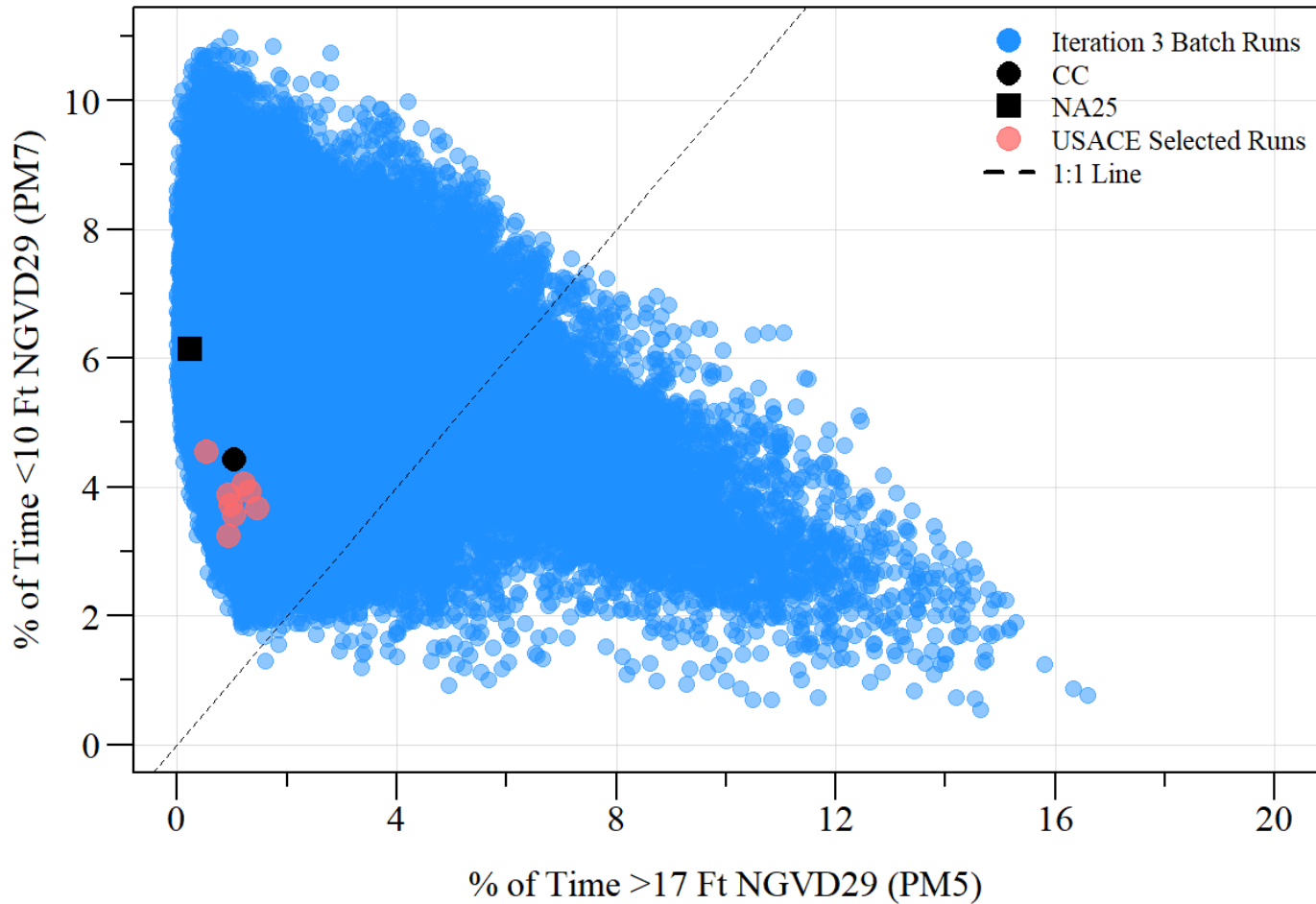
Iteration 3 - Phase 2



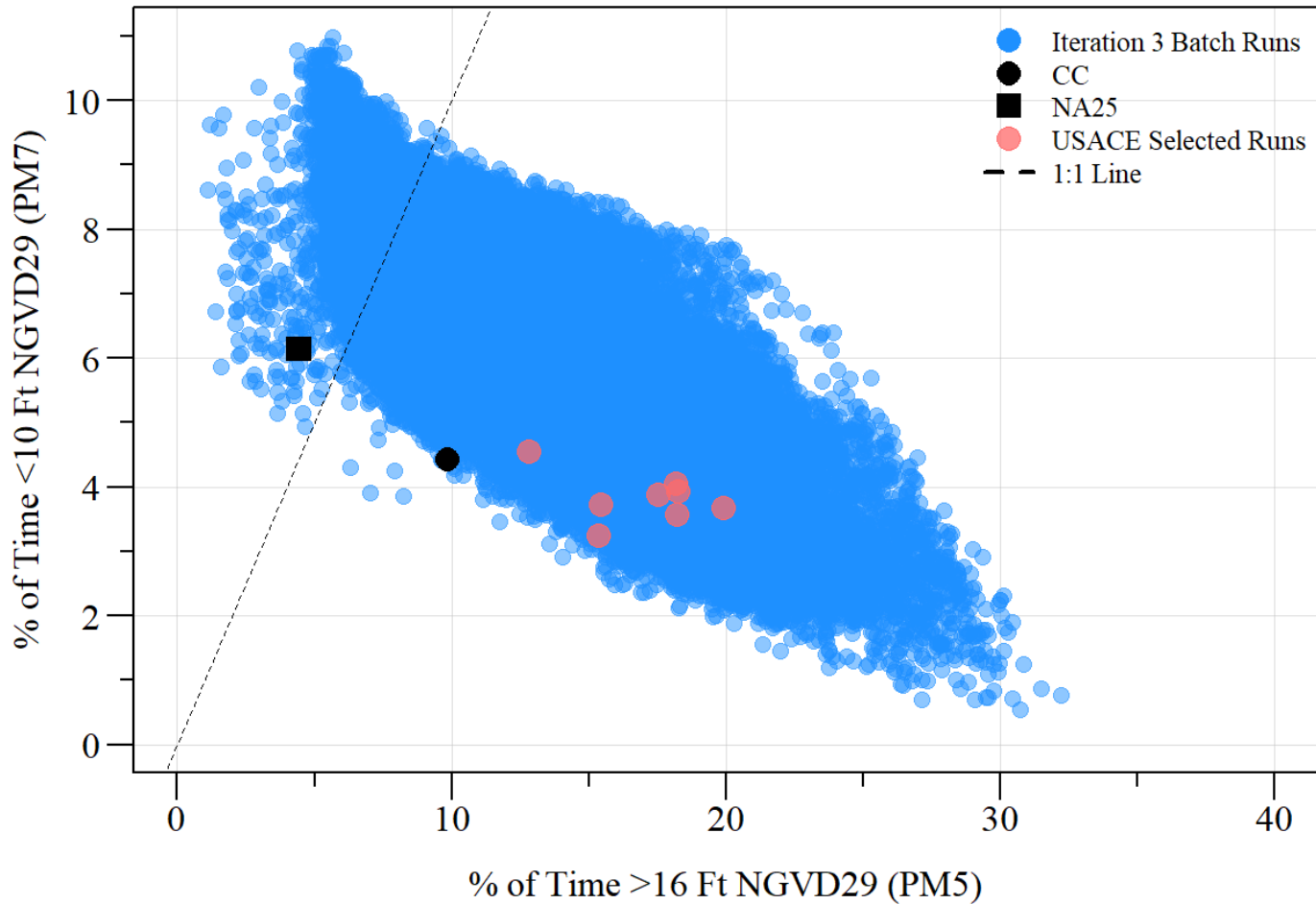
Iteration 3 - Phase 2



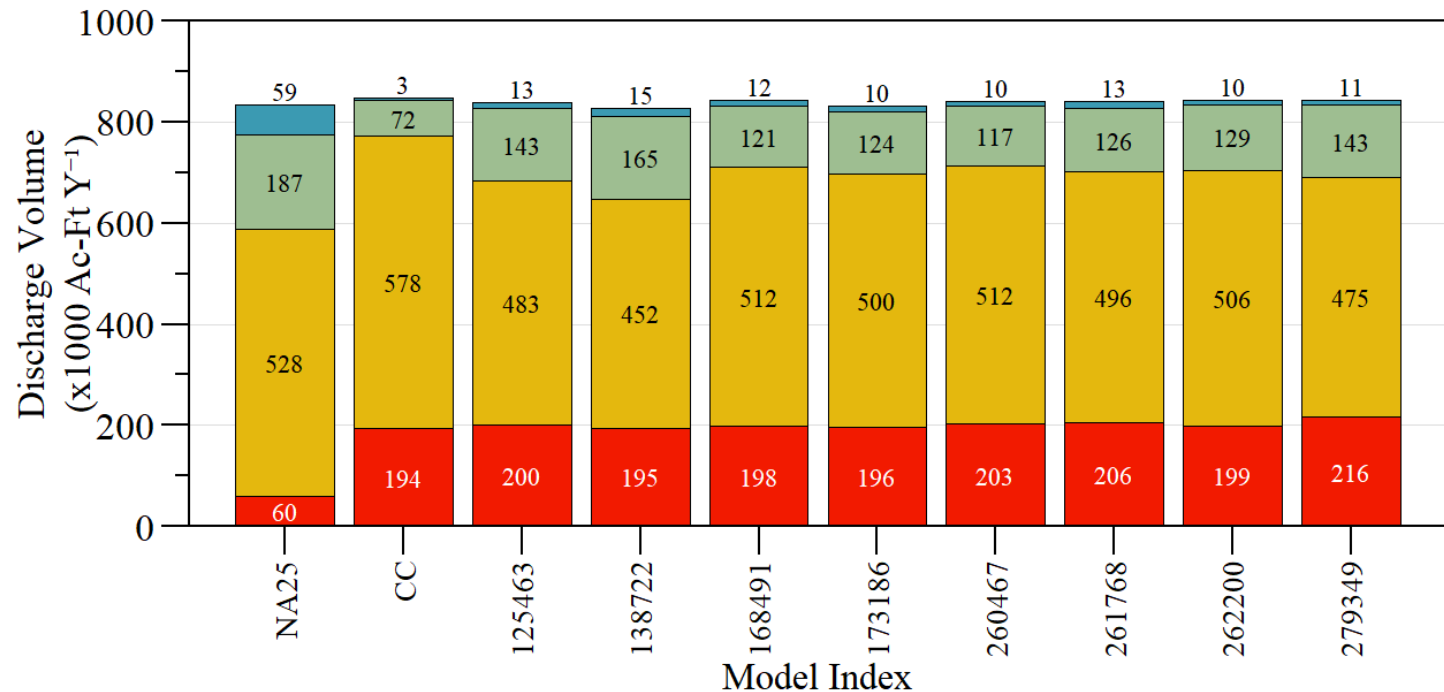
Iteration 3 - Phase 2



Iteration 3 - Phase 2



Iteration 3 - Phase 2



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

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

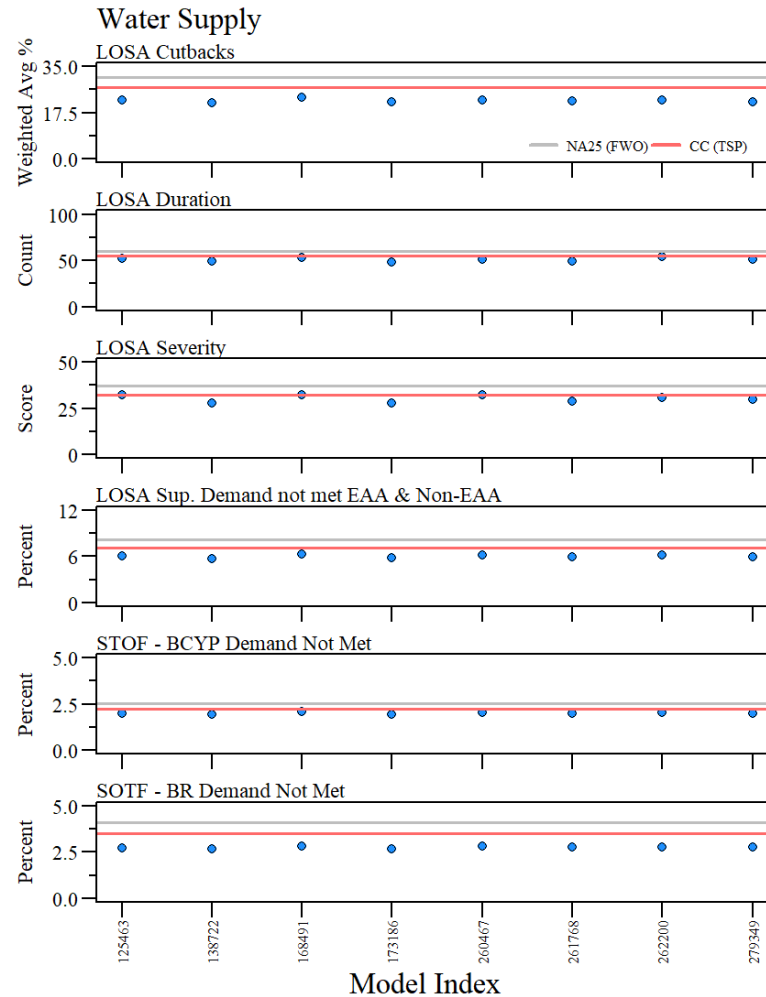
Iteration 3 - Phase 2

Descript2	Model Index								
	CC	125463	138722	168491	173186	260467	261768	262200	279349
CRE - Low (PM30)	-32.2	-14.0	-6.1	-11.2	-11.7	-19.1	-18.2	-15.3	-15.5
CRE - Optimum (PM31)	20.4	23.9	18.9	20.9	25.6	30.0	29.2	25.6	27.3
CRE - Stress from LOK (PM37)	57.9	-60.7	-63.9	-65.0	-59.0	-62.8	-65.0	-55.7	-61.2
CRE - Damaging from LOK (PM38)	-16.1	-49.5	-52.7	-43.5	-53.2	-55.9	-55.4	-49.5	-58.6
CRE - Extreme (PM36)	-1.7	25.9	20.7	46.6	43.1	27.6	43.1	15.5	15.5
SLE - Low (PM80)	61.0	73.3	68.6	73.3	71.4	74.3	66.7	76.2	72.4
SLE - Optimum (PM81)	7.5	3.5	1.7	3.5	5.8	5.7	4.9	5.3	5.3
SLE - Stress from LOK (PM86)	-91.2	-81.1	-65.5	-75.7	-77.7	-78.4	-64.9	-80.4	-81.8
SLE - Damaging from LOK (PM87)	-88.0	-62.0	-50.7	-66.2	-75.4	-73.9	-66.9	-74.6	-74.6
SLE - Extreme (PM85)	-8.1	5.0	4.3	-1.2	4.3	4.3	1.2	6.2	9.3
S308 Regulatory Flow (PM88)	-61.7	-23.6	-12.0	-35.6	-33.6	-37.4	-32.8	-31.0	-23.9
S77 Regulatory Flow (PM40)	9.5	-8.4	-14.3	-2.9	-5.2	-3.1	-6.1	-4.2	-10.1
CRE MFL (PM39)	0.0	-10.0	0.0	-10.0	0.0	-10.0	-10.0	-20.0	-10.0
LOK MFL (PM20)	-22.2	-22.2	-22.2	-11.1	-22.2	-11.1	-11.1	-11.1	-11.1
LOK - Total Stage Envelope Penalty (PM10+PM11)	13.7	32.7	31.4	27.6	36.6	37.7	35.0	36.1	41.4

Percent Difference relative to FWO (NA25)

“Balance is not a passive resting place—it takes work, balancing the giving and the taking...” — Robin Wall Kimmerer

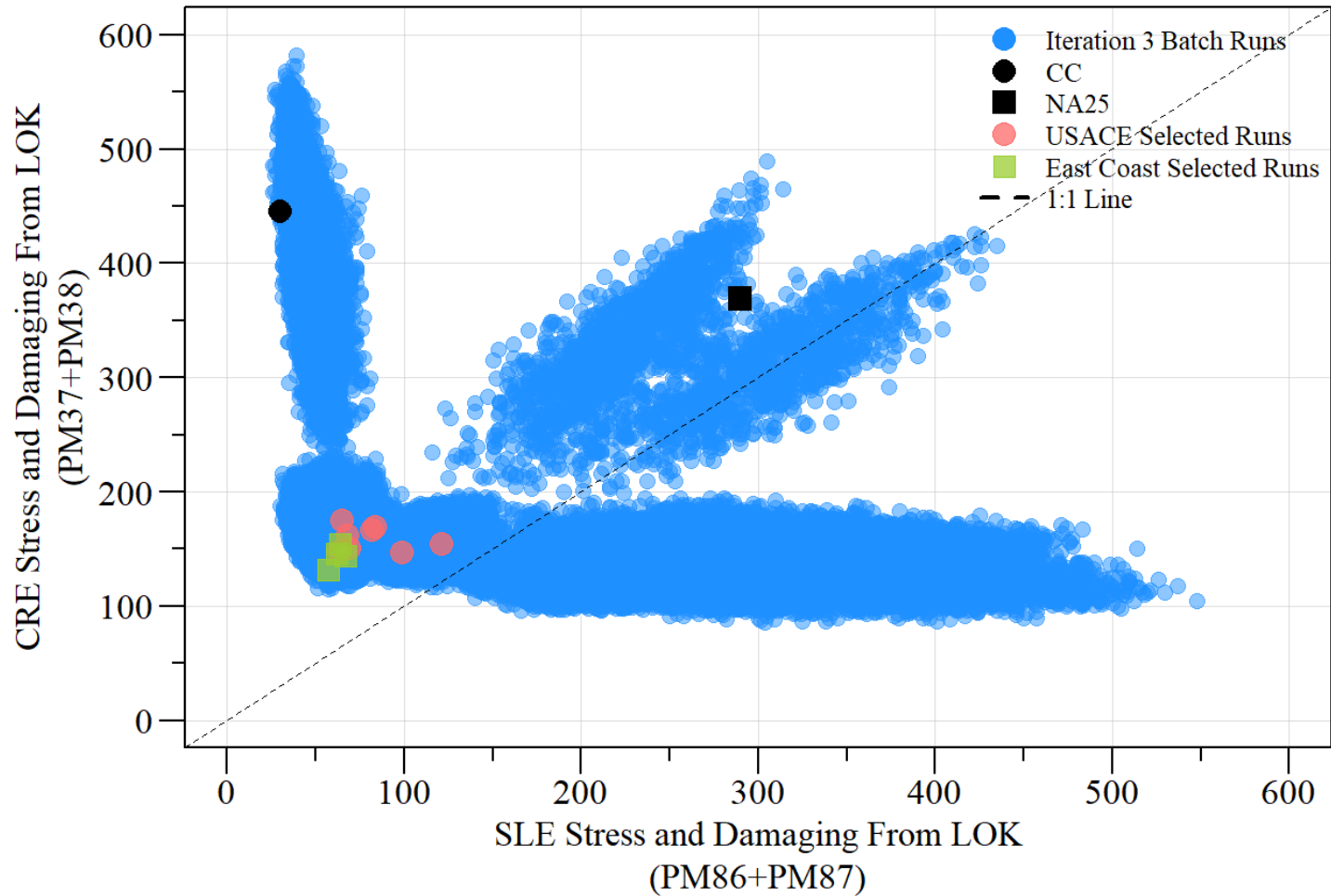
Iteration 3 - Phase 2



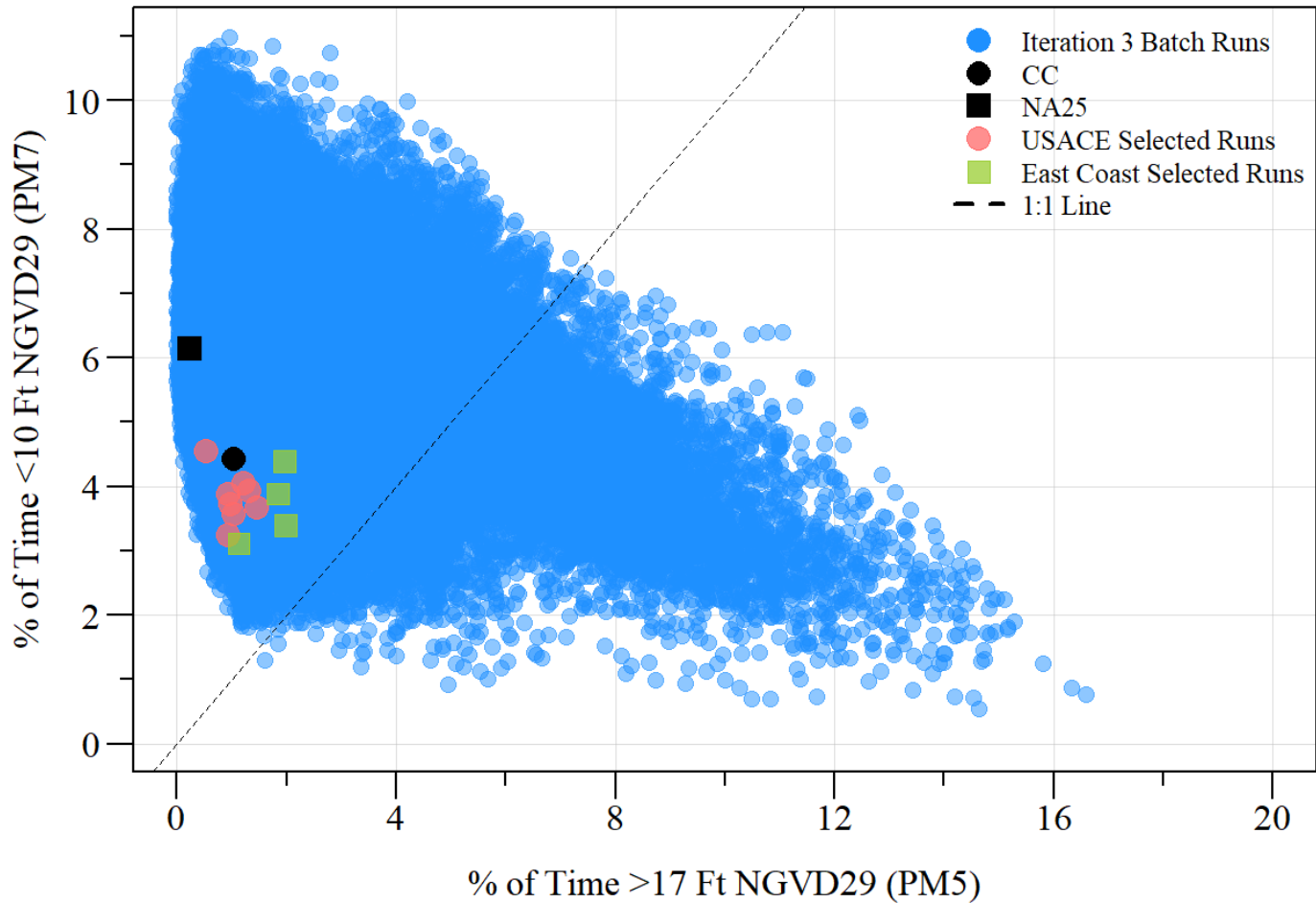
East Coast Stakeholder Selected Plans

Model Index: 273238, 121211, 142495, 128556

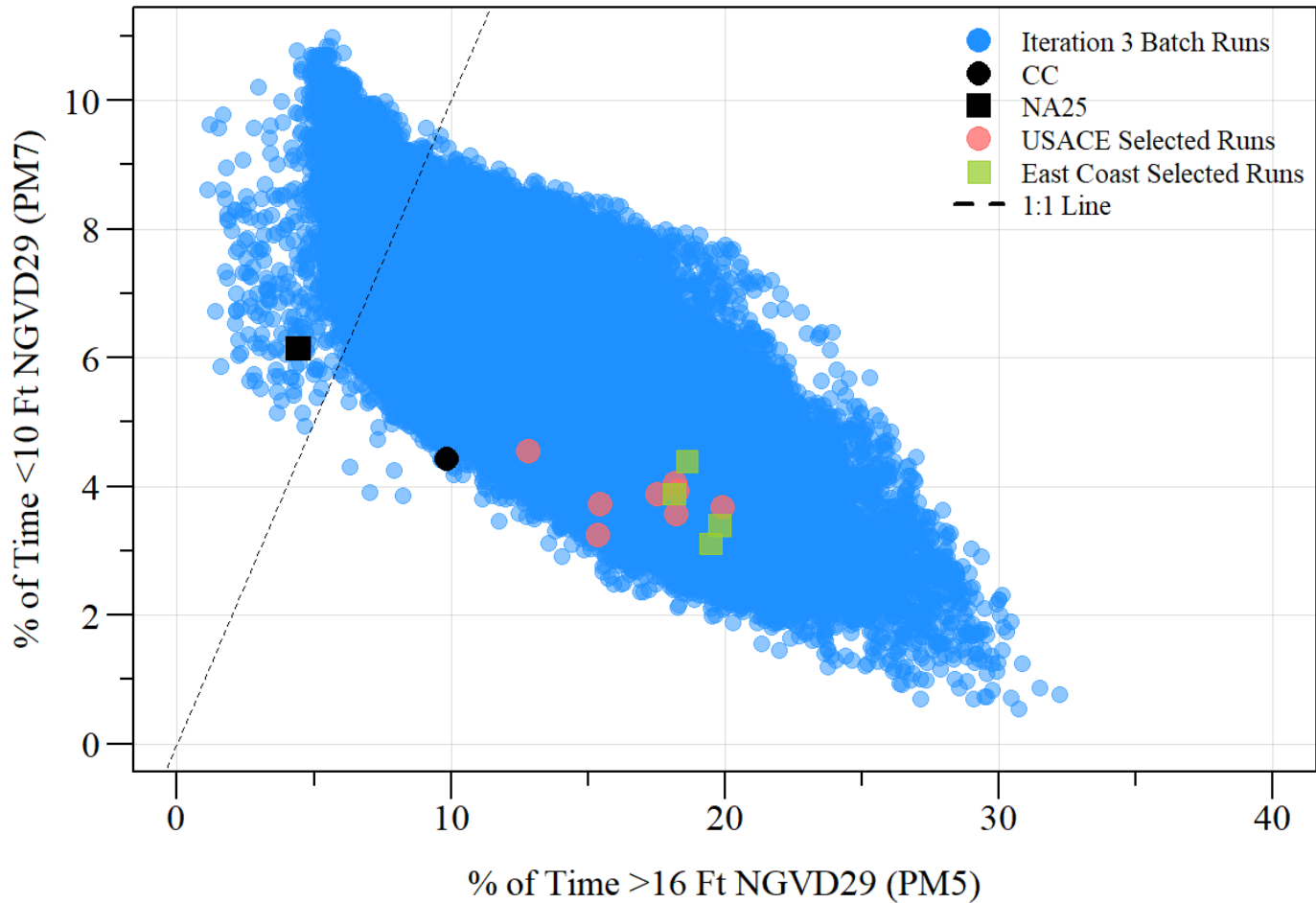
Iteration 3 - Phase 2



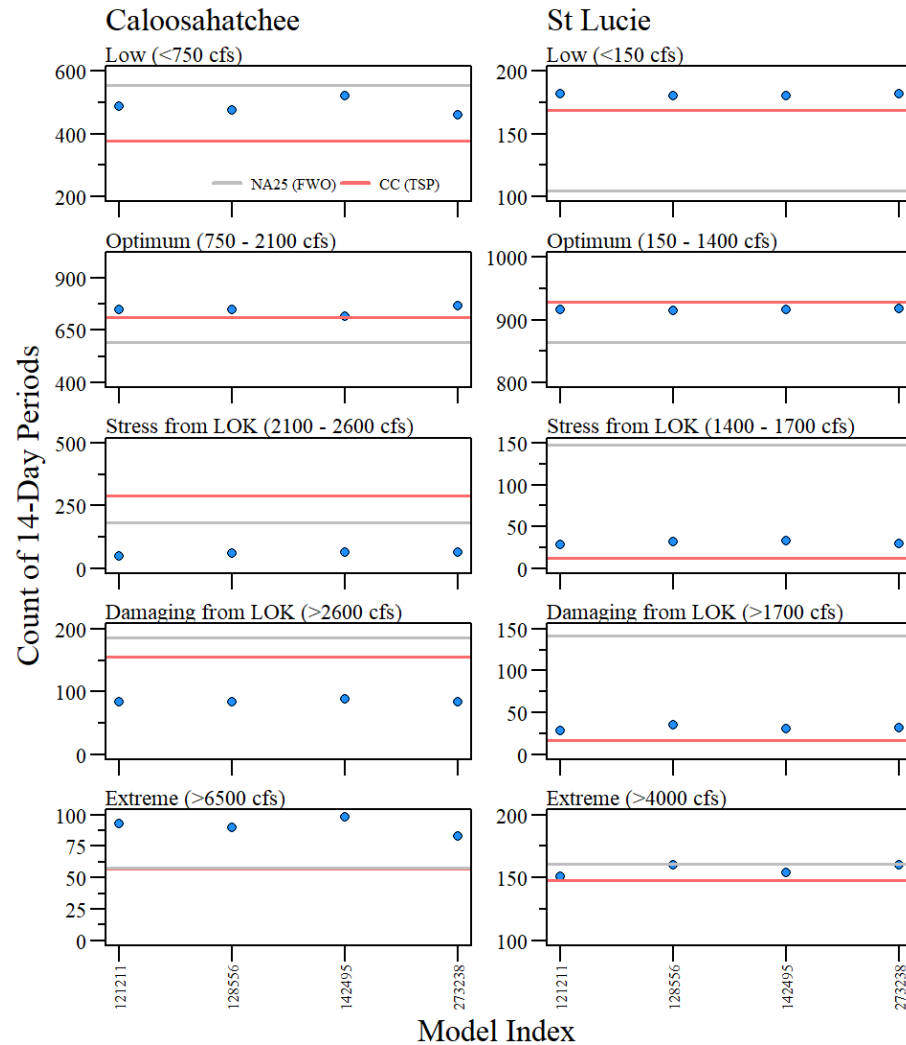
Iteration 3 - Phase 2



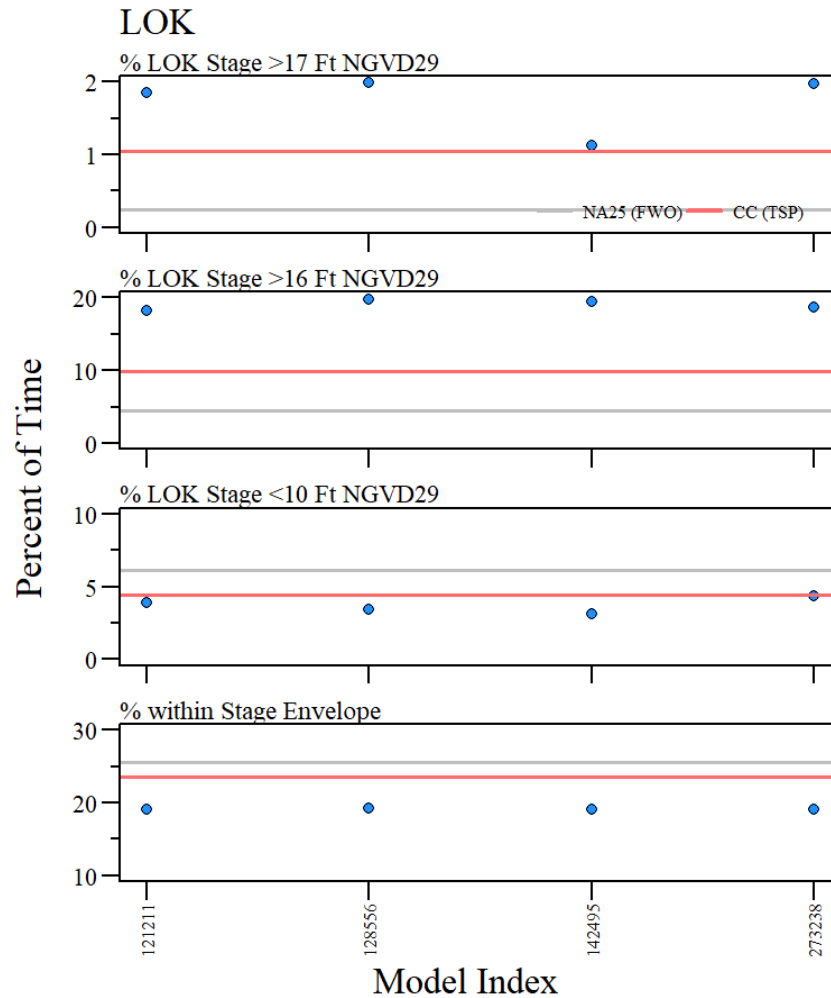
Iteration 3 - Phase 2



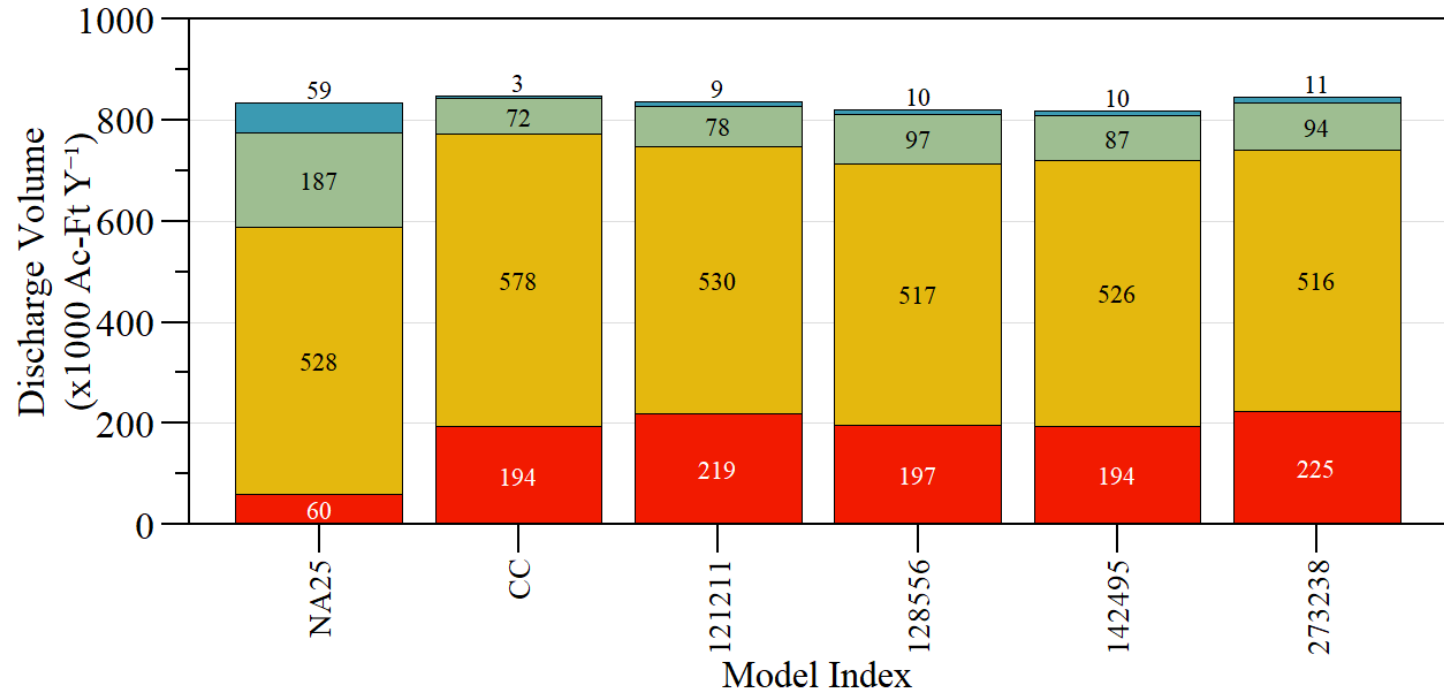
Iteration 3 - Phase 2



Iteration 3 - Phase 2



Iteration 3 - Phase 2



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

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

Iteration 3 - Phase 2

Descript2	Model Index				
	CC	121211	128556	142495	273238
CRE - Low (PM30)	-32.2	-12.2	-14.7	-6.5	-17.3
CRE - Optimum (PM31)	20.4	26.3	26.1	20.6	29.3
CRE - Stress from LOK (PM37)	57.9	-73.2	-67.2	-64.5	-65.6
CRE - Damaging from LOK (PM38)	-16.1	-55.4	-54.8	-52.2	-55.4
CRE - Extreme (PM36)	-1.7	60.3	55.2	69.0	43.1
SLE - Low (PM80)	61.0	73.3	71.4	71.4	73.3
SLE - Optimum (PM81)	7.5	6.0	5.8	6.0	6.1
SLE - Stress from LOK (PM86)	-91.2	-80.4	-78.4	-77.7	-79.7
SLE - Damaging from LOK (PM87)	-88.0	-80.3	-75.4	-78.2	-77.5
SLE - Extreme (PM85)	-8.1	-6.2	-0.6	-4.3	-0.6
S308 Regulatory Flow (PM88)	-61.7	-58.3	-48.1	-53.4	-49.9
S77 Regulatory Flow (PM40)	9.5	0.4	-2.0	-0.3	-2.3
CRE MFL (PM39)	0.0	10.0	-10.0	0.0	0.0
LOK MFL (PM20)	-22.2	-11.1	-11.1	-22.2	-11.1
LOK - Total Stage Envelope Penalty (PM10+PM11)	13.7	40.7	42.9	40.0	42.8

Percent Difference relative to FWO (NA25)

Iteration 3 - Phase 2 (USACE & East Coast)

Descript2	Model Index												
	CC	125463	138722	168491	173186	260467	261768	262200	279349	121211	128556	142495	273238
CRE - Low (PM30)	-32.2	-14.0	-6.1	-11.2	-11.7	-19.1	-18.2	-15.3	-15.5	-12.2	-14.7	-6.5	-17.3
CRE - Optimum (PM31)	20.4	23.9	18.9	20.9	25.6	30.0	29.2	25.6	27.3	26.3	26.1	20.6	29.3
CRE - Stress from LOK (PM37)	57.9	-60.7	-63.9	-65.0	-59.0	-62.8	-65.0	-55.7	-61.2	-73.2	-67.2	-64.5	-65.6
CRE - Damaging from LOK (PM38)	-16.1	-49.5	-52.7	-43.5	-53.2	-55.9	-55.4	-49.5	-58.6	-55.4	-54.8	-52.2	-55.4
CRE - Extreme (PM36)	-1.7	25.9	20.7	46.6	43.1	27.6	43.1	15.5	15.5	60.3	55.2	69.0	43.1
SLE - Low (PM80)	61.0	73.3	68.6	73.3	71.4	74.3	66.7	76.2	72.4	73.3	71.4	71.4	73.3
SLE - Optimum (PM81)	7.5	3.5	1.7	3.5	5.8	5.7	4.9	5.3	5.3	6.0	5.8	6.0	6.1
SLE - Stress from LOK (PM86)	-91.2	-81.1	-65.5	-75.7	-77.7	-78.4	-64.9	-80.4	-81.8	-80.4	-78.4	-77.7	-79.7
SLE - Damaging from LOK (PM87)	-88.0	-62.0	-50.7	-66.2	-75.4	-73.9	-66.9	-74.6	-74.6	-80.3	-75.4	-78.2	-77.5
SLE - Extreme (PM85)	-8.1	5.0	4.3	-1.2	4.3	4.3	1.2	6.2	9.3	-6.2	-0.6	-4.3	-0.6
S308 Regulatory Flow (PM88)	-61.7	-23.6	-12.0	-35.6	-33.6	-37.4	-32.8	-31.0	-23.9	-58.3	-48.1	-53.4	-49.9
S77 Regulatory Flow (PM40)	9.5	-8.4	-14.3	-2.9	-5.2	-3.1	-6.1	-4.2	-10.1	0.4	-2.0	-0.3	-2.3
CRE MFL (PM39)	0.0	-10.0	0.0	-10.0	0.0	-10.0	-10.0	-20.0	-10.0	10.0	-10.0	0.0	0.0
LOK MFL (PM20)	-22.2	-22.2	-22.2	-11.1	-22.2	-11.1	-11.1	-11.1	-11.1	-11.1	-11.1	-22.2	-11.1
LOK - Total Stage Envelope Penalty (PM10+PM11)	13.7	32.7	31.4	27.6	36.6	37.7	35.0	36.1	41.4	40.7	42.9	40.0	42.8

Percent Difference relative to FWO (NA25)