

MEMORANDUM

To: USACE Colonel Andrew D. Kelly, LTC Todd F. Polk, Richard McMillen, Kim Taplin, SFWMD Governing Board, Executive Director Drew Bartlett, Jennifer Reynolds, Lawrence Glenn, DEP Secretary Noah Valenstein

From: Periodic Scientists Conference Call Participants
 Kevin Godsea & Jeremy Conrad - J.N. "Ding" Darling National Wildlife Refuge (NWR) Complex
 James Evans & Holly Milbrandt - City of Sanibel
 Lesli Haynes & Lisa Kreiger - Lee County
 Harry Phillips & Maya Robert – City of Cape Coral
 Leah Reidenbach & Rick Bartleson, Ph.D.-Sanibel Captiva Conservation Foundation

Subject: Caloosahatchee & Estuary Condition Report

Reporting Period: **May 19 – 25, 2020**

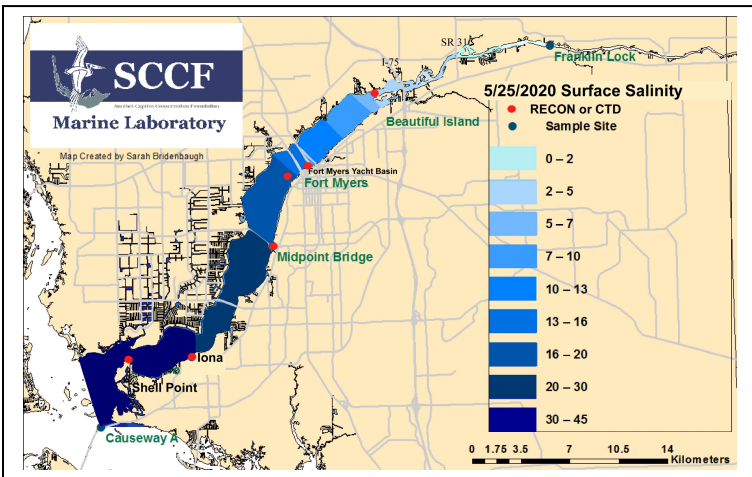
This report provides a scientific assessment of Caloosahatchee River and Estuary conditions and how these conditions affect the health, productivity, and function of the system.

Caloosahatchee Condition Summary: Caloosahatchee estuary salinities remain high despite recent rainfall and increased flows to a 7-day average of 818 cfs at S-79. The Caloosahatchee estuary continues to need flows to reduce salinities throughout the estuary.

USACE Action: On 5/8/20 the Corps continued pulse releases to the Caloosahatchee from Lake Okeechobee at a 7-day average of 650 cfs at S-79. Releases to the St. Lucie estuary at S-80 remain at zero cfs.

Recommendation: Caloosahatchee estuary salinities remain high. We request the District maintain targeted flows of 650 cfs at S-79 over a 7-day average. Additional water is needed to lower salinity levels throughout the estuary to protect the remaining western edge of tape grass habitat in the upper estuary and oysters and seagrass in the lower estuary.

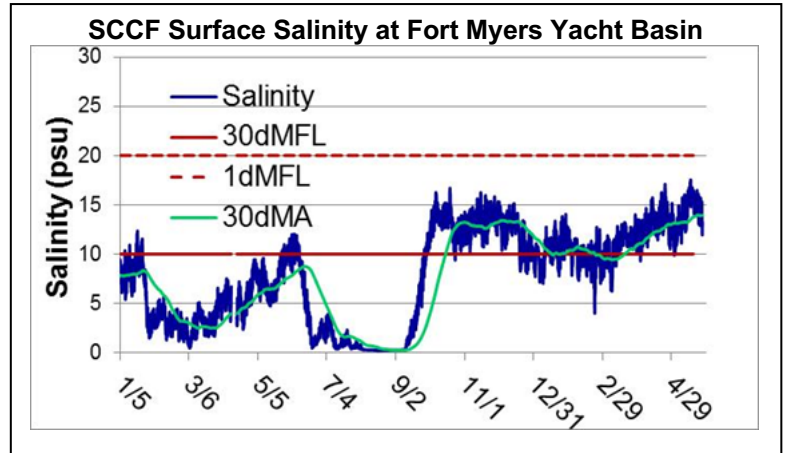
Lake Okeechobee Level:	11.24 ft. (Beneficial Use Sub Band)	Last week: 11.14 ft.
Lake Okeechobee Inflow:	1573 cfs	Lake Okeechobee Outflow: -192 cfs
Weekly Rainfall Total:	WP Franklin 2.48" Ortona 4.78"	Moore Haven 4.27"
Salinity Beautiful Island:	5.0 – 9.6 psu (SCCF RECON)	Previous week 5.6 – 11 psu
Salinity Fort Myers:	12 – 16 psu (SCCF Surface FM Yacht Basin)	Previous week 12 – 18 psu
	16 – 19 psu (SCCF RECON)	Previous week 17 – 21 psu
Salinity Shell Point:	27 – 35 psu (SCCF RECON)	Previous week 27 – 35 psu



Salinity (psu)			
	Current Value	Sustainable Range	High/Low
Beautiful Is	5.0 – 9.6	< 5 psu	High
Fort Myers	16 – 19	<10 psu	High
Shell Point	27 – 35	25 - 32 psu	High
Light (25% I _z depth meters)			
Fort Myers	0.85	1 meter	Low
Shell Point	2.33	2.2 meters	In Range
Causeway	2.63	2.2 meters	In Range

Lake Flows: In the past 7 days **2,268 AF** of water was discharged from Lake Okeechobee. Flows to the Caloosahatchee estuary at S-79 during the past 7 days averaged **818 AF**. A backflow of **12,533 AF** occurred at S-308, a net backflow of **131 AF** occurred at the L8 canal, and a backflow of **1,104 AF** occurred at S-310. The EAA, south of the lake, received **1,044 AF** from Lake O at S-352. Water conservation areas received flows of **10,864 AF**, **5,889 AF**, and **5,070 AF** at WCA1, WCA2, and WCA3, respectively. Everglades National Park received **0** flows.

ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
5/19/2020	642	309	231
5/20/2020	323	236	16
5/21/2020	466	296	43
5/22/2020	995	444	-23
5/23/2020	1175	922	69
5/24/2020	894	600	177
5/25/2020	1228	933	140
7 day Avg	818	534	93



Cyanobacteria Status: Sampling by Lee County Environmental Lab on 5/19/20 reported presence of cyanobacteria species *Dolichospermum*, *Microcystis*, and nostocalean filaments at the Alva bridge, upstream side of the WP Franklin Lock, and the Davis Boat Ramp

Upstream of S-79/Franklin Conditions: The Lee County Olga Water Treatment plant will be offline until further notice.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was **14 psu, above the optimal level for tape grass**. This moving average has been above 10 psu for 28 of the past 30 weeks.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was **32 psu, above the optimal range for oysters**.

J.N. "Ding" Darling NWR:

Monitor Site	Salinity	Dissolved O ₂ (mg/L)	FDOM (qsde)	Chlorophyll (µg/L)
McIntyre Creek	-----	-----	4.2 – 12.0	-----
Tarpon Bay	34.3 – 35.4	3.4 – 7.5	3.4 – 10.4	1.8 – 13.9
Wildlife Drive	33.2 – 37.6	0.5 – 8.4	-----	1.1 – 11.5

Red Tide: On 5/22/20 FWC reported red tide, *Karenia brevis*, was present at background concentrations in Manatee County: [Click here for the FWC status of red tide](#)

Wildlife Impacts: The past week CROW, the wildlife hospital on Sanibel, **treated 1 mottled duck with red tide symptoms (still at CROW)**.

Caloosahatchee Stations	Chlorophyll (µg/L)	fDOM (qse)	Turbidity (NTU)	25% I _z depth (meters)
Target Values	< 11	CE <70 SCB <11	CE < 18 SCB < 5	CE = 1 m SCB = 2.2m
Fort Myers	4.4	183	2.8	0.85
Shell Point	1.8	18.8	1.5	2.33
Causeway	4.4	1.5	2.8	2.63

Target light penetration:
 Caloosahatchee Estuary (CE) = 1 meter
 San Carlos Bay (SCB) = 2.2 meters
 25% I_z is the depth (z) where irradiance (I) is 25% of surface irradiance.