

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, PhD - Sanibel Captiva Conservation Foundation

Subject: Caloosahatchee & Estuary Condition Report

Reporting Period: **Jul 14 – July 20, 2020**

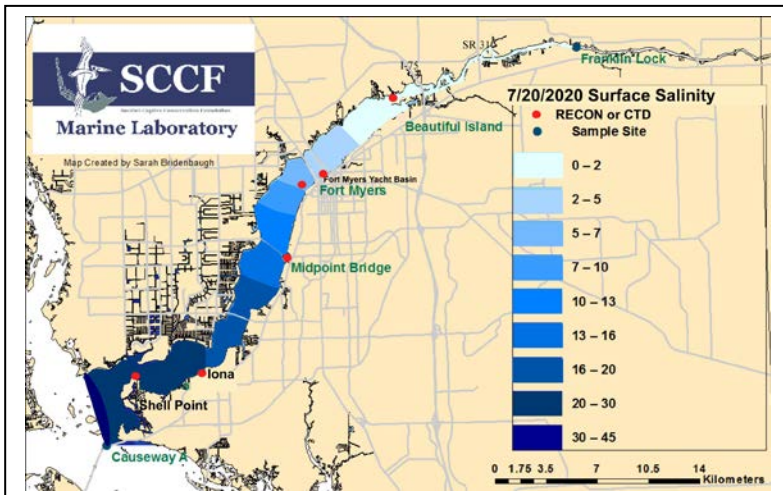
This report provides a scientific assessment of Caloosahatchee River and Estuary conditions and how these conditions affect the health, productivity, and function of the system.

Caloosahatchee Condition Summary: Flows to the Caloosahatchee estuary had a 7-day average of **951 cfs at S-79, within the optimum flow envelope of 750 – 2,100 cfs for the maintenance of healthy salinity levels throughout the estuary.** Water clarity around Sanibel and Cape Coral looks good. Light amounts of Red drift algae were reported between Bowman’s Beach and Tarpon Bay Beach.

USACE Action: On 5/8/20 the Corps announced it will continue 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** will remain at **zero cfs.**

Recommendation: In order to maintain optimum salinities in the estuary and avoid damaging high flows during the wet season, we request the District maintain flows between **750 – 2,100 cfs at S-79 over a 7-day average.** This is consistent with the 2020 RECOVER optimum flow envelopes for the Caloosahatchee estuary.

Lake Okeechobee Level:	12.75 ft (Base Flow Sub Band)	Last week: 12.53 ft
Lake Okeechobee Inflow:	4,593 cfs	Lake Okeechobee Outflow: No report due to missing discharge data at S 77 or S 308
Weekly Rainfall Total:	WP Franklin 1.73" Ortona 1.12" Moore Haven 0.65"	
Salinity Beautiful Island:	0.4 – 2.0 psu (SCCF RECON 3 days)	Previous week 0.4 – 0.7
Salinity Fort Myers:	3.4 - 6.3 psu (SCCF Surface FM Yacht Basin)	Previous week 4.0 – 7.5 psu
Salinity Shell Point:	18 – 33 psu (SCCF RECON)	Previous week 22 – 33 psu

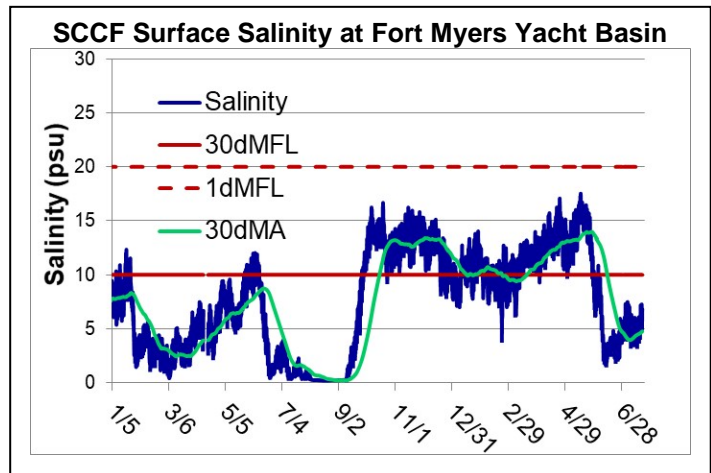


Salinity (psu)			
	Current Values	Target Values	High/Low
Beautiful Is	0.4 – 2.0	>5	In range
Fort Myers	ND	<10 psu	ND
Shell Point	18 – 33	25 - 32 psu	In range
Light (25% I _z depth meters)			
Fort Myers	ND	1 meter	ND
Shell Point	1.95	2.2 meters	Low
Causeway	2.83	2.2 meters	In range

25% I_z is the depth (z) where irradiance (I) is 25% of surface irradiance. Target values indicate the depth of light penetration needed for healthy seagrass.

Lake Flows: In the past 7 days, **2,158 AF** was discharged to the Caloosahatchee thru **S-77** and **0 AF** to the **EAA**. There was no record of flow for 5 out of 7 days from the St. Lucie estuary through **S-308**. A backflow of **307 AF** at the **L-8 canal**, and a flow of **1,352 AF** thru **S-310**. Water conservation areas received flows of **5,294 AF**, **17,8529 AF**, and **10,628 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **17,671 AF**.

ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
7/14/2020	942	293	69
7/15/2020	774	298	210
7/16/2020	943	524	198
7/17/2020	1100	602	207
7/18/2020	1133	633	210
7/19/2020	957	407	111
7/20/2020	808	495	72
7 day avg	951	465	154



Cyanobacteria Status: On 7/21/20 sampling by the Lee County Environmental Lab reported the presence of the cyanobacteria species **Microcystis** at the **Alva Bridge**, **Franklin Locks upstream** and at the **Davis Boat Ramp**.

Upstream of S-79/Franklin Conditions: On 7/21/20 the Olga Water Treatment plant reported chlorides of **59 mg/l**, apparent color **152 CU** and turbidity **0.49 NTU**. No visible algae was observed at the plant intake the past week. The plant is online running at 1400 GPM.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was **4.9 psu**, within the suitable range for tape grass.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was **26 psu**, within 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	29.2 – 33.4	2.7 – 8.2	-----	2.1 – 6.5
Tarpon Bay	30.2 – 33.9	2.9 – 8.5	5.6 – 14.3	2.4 – 9.1
Wildlife Drive	30.2 – 33.7	0.5 – 10.7	-----	2.6 – 16.1
Wulfert Flats	30.9 – 34.1	2.9 – 10.6	-----	4.2 – 51.6

Red Tide: On 7/17/20 FWC reported that the red tide organism, *Karenia brevis*, was present at background concentrations in Southwest Florida. Patchy *Trichodesmium* blooms were present at trace levels in four near shore SWFL samples (from Pinellas, Hillsborough and Charlotte Counties). [Click here for the FWC status of red tide.](#)

Wildlife Impacts: The past week CROW, the wildlife hospital on Sanibel, had no patients to report.

Site	Chlorophyll (µg/L)	fDOM (qse)	Turbidity (NTU)	Target Values		
				Chl (µg/L)	fDOM (qse)	Turbidity (NTU)
Fort Myers	ND	ND	ND	< 11	< 70	< 18
Shell Point	ND	ND	ND	< 11	< 70	< 18
Causeway	3.9	13.2	1.7	< 11	< 11	< 5