

**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: **August 11 – 17, 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.

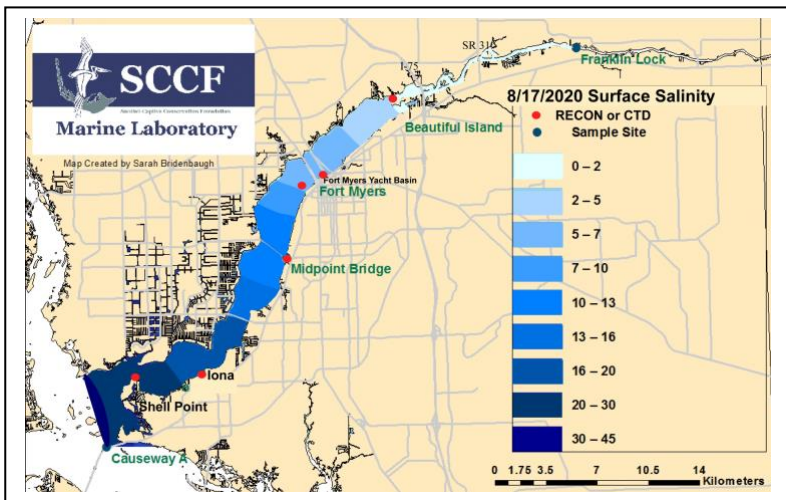
**Caloosahatchee Condition Summary:** Flows to the Caloosahatchee estuary had a 7-day average of **1,093 cfs at S-79, within the optimum flow envelope of 750 – 2,100 cfs for the maintenance of healthy salinity levels throughout the estuary.** Water quality and clarity around Sanibel remains good with flows at S-79 in the optimal range.

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

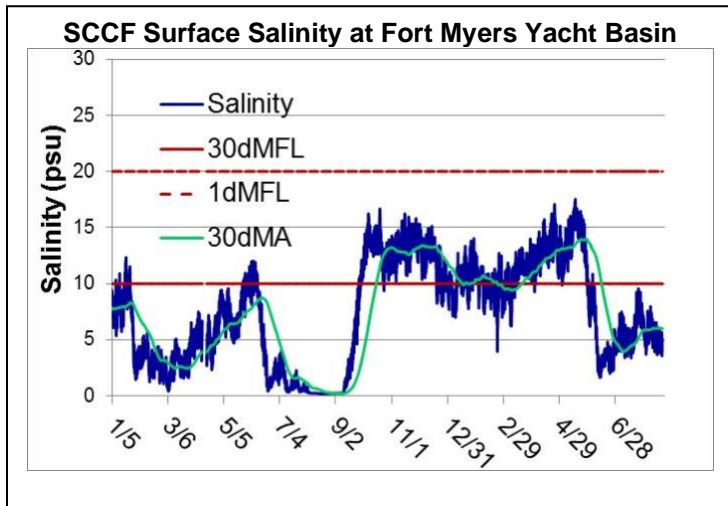
**USACE Action:** On 5/8/20 the Corps announced it will continue pulse releases to the Caloosahatchee from Lake Okeechobee at a 7-day average of **650 cfs at S-79.** Releases to the St. Lucie estuary at **S-80** will remain at **zero cfs.**

**Lake Flows:** In the past 7 days, **7,798 AF** was discharged from Lake Okeechobee, with **5,053 AF** to the Caloosahatchee thru **S-77**, **1,259 AF** to the **EAA** and **1,486 AF** thru **S-310**. There was a backflow of **1,169 AF** from the St. Lucie estuary through **S-308**, and a backflow of **4,605 AF** at the **L-8 canal**. Water conservation areas received flows of **11,949 AF**, **13,793 AF**, and **6,817 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **24,084 AF**.

**Lake Okeechobee Level:** 13.86 ft (Low Sub Band) Last week: 13.70 ft  
**Lake Okeechobee Inflow:** 5,577 cfs **Lake Okeechobee Outflow:** -289 cfs  
**Weekly Rainfall Total:** WP Franklin 0.44" Ortona 0.70" Moore Haven 0.97"



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
8/11/2020	1,046	40	0
8/12/2020	1,227	0	549
8/13/2020	1,092	0	309
8/14/2020	848	0	515
8/15/2020	1,112	272	496
8/16/2020	1,351	364	504
8/17/2020	972	399	147
<b>7 day avg</b>	<b>1,093</b>	<b>154</b>	<b>360</b>



Light Penetration				
Site	25% I <sub>z</sub>	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	-----	> 1	-----	< 18
Shell Point	1.33	>2.2	1.3	< 18
Causeway	1.98	> 2.2	2.0	< 5

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

**Cyanobacteria Status:** On 8/18/20 sampling by the Lee County Environmental Lab reported the presence of the cyanobacteria species *Microcystis* at the Alva Bridge.

**Upstream of S-79/Franklin Conditions:** On 8/11/20 the Olga Water Treatment plant reported chlorides of **57 mg/l**, apparent color **143 CU** and turbidity **1.47 NTU**. No visible algae were reported at the plant intake the past week. The plant is online at 1400 GPM.

**Upper Estuary Conditions:** The 30-day average surface salinity at the Fort Myers Yacht Basin was **6.0 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 and seagrass.

**Water Quality Conditions:**

Monitor Site	Salinity (psu) <sup>a</sup> [previous week]	Diss O <sub>2</sub> (mg/L) <sup>b</sup>	FDOM (qsde) <sup>c</sup>	Chlorophyll (µg/L) <sup>d</sup>
Beautiful Island	0.6 – 1.6 [0.7 – 2.6]	4.1 – 6.6	-----	3.9-5.8
Fort Myers	3.6 – 6.5 [5.9 – 11]	3.1 – 6.7	-----	-----
Shell Point	17 – 32 [17 – 32]	2.9 – 5.4	96.7	0.7- 2.7
McIntyre Creek	29.2 – 30.5	2.1 – 8.2	-----	1.9 – 12.2
Tarpon Bay	28.9 – 32.8	1.8 – 8.3	8.5 – 21.3	3.3 – 13.1
Wildlife Drive	28.4 – 31.7	0.5 – 11.4	-----	3.2 – 23.7
Wulfert Flats	23.1 – 30.7	3.3 – 9.4	-----	3.4 – 19.3

Red values are outside of the preferred range.  
<sup>a</sup> Salinity target values: BI < 5, FM < 10, SP = 25 – 32  
<sup>b</sup> Dissolved O<sub>2</sub> target values: all sites > 4  
<sup>c</sup> FDOM target values: BI < 70, FM < 70, SP < 11  
<sup>d</sup> Chlorophyll: BI < 11, FM < 11, SP < 11

**Red Tide:** On 8/14/20 FWC reported that the red tide organism, *Karenia brevis*, was observed at low concentrations in one sample from Charlotte County over the past week. [Click here for the FWC status of red tide.](#)

**Wildlife Impacts:** The past week CROW, the wildlife hospital on Sanibel, had **5 patients with red tide symptoms: 2 double crested cormorants (1 died and 1 still at CROW), 1 laughing gull (still at CROW), and 1 black skimmer (died) and 1 white ibis (died).**



The blue-green algae *Trichodesmium* was observed on 8/12/20 approximately 8 miles offshore of Sanibel. Photo: Lee County Natural Resources.