

**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 04 – 10, 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 **1,220 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 and Cape Coral remains good with flows at S-79 in the optimal range. During the past week there has been light to moderate amounts of red drift macroalgae on Sanibel beaches.

**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, **289 AF** was discharged from Lake Okeechobee, with **29 AF** to the Caloosahatchee thru **S-77, 0 AF** to the **EAA** and **316 AF** thru **S-310.** There was a backflow of **4,605 AF** from the St. Lucie estuary through **S-308,** and a backflow of **5,588 AF** at the **L-8 canal.** Water conservation areas received flows of **7,484 AF, 25,571 AF,** and **13,133 AF** at **WCA1, WCA2, and WCA3,** respectively. Everglades National Park received **23,729 AF.**

Lake Okeechobee Level: **13.70 ft (Low Sub Band)**

Last week: **13.33 ft**

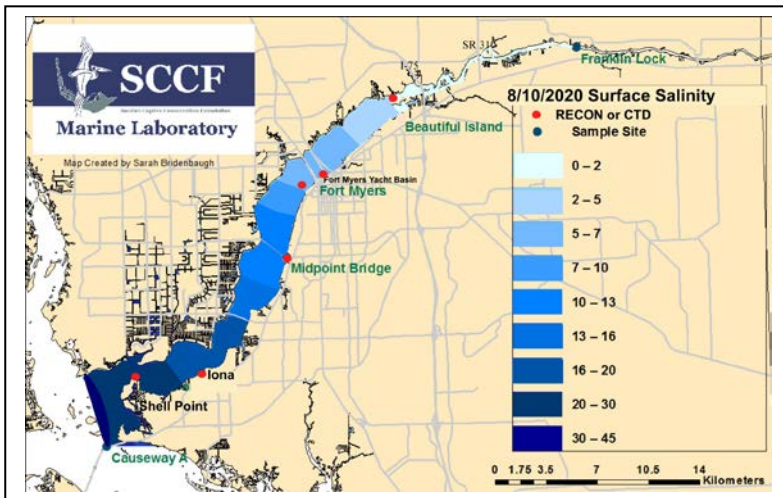
Lake Okeechobee Inflow: **8,978 cfs**

Lake Okeechobee Outflow: **--- cfs**

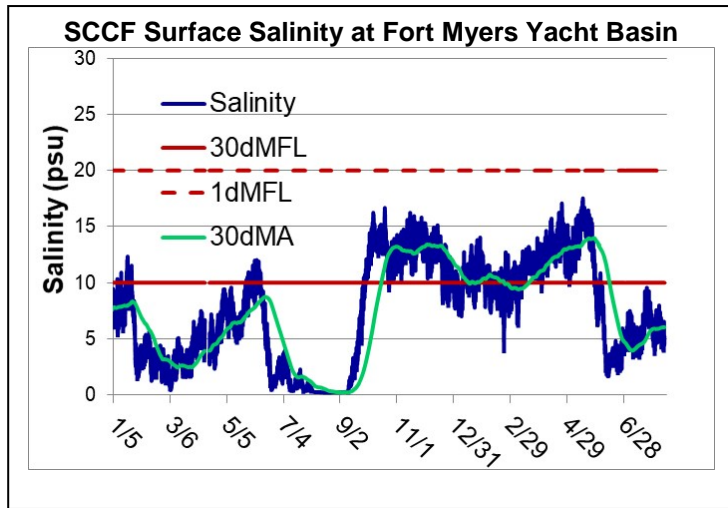
Weekly Rainfall Total: WP Franklin **3.89"**

Ortona **1.79"**

Moore Haven **1.47"**



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
8/4/2020	743	265	0
8/5/2020	765	217	0
8/6/2020	1367	146	0
8/7/2020	1402	147	0
8/8/2020	1392	148	0
8/9/2020	1171	92	0
8/10/2020	1698	110	0
<b>7 day avg</b>	<b>1220</b>	<b>161</b>	<b>0</b>



Site	Light Penetration		Turbidity	Target Values
	25% I <sub>z</sub>	Target Values		
	meters		NTU	
Fort Myers	0.61	> 1	1.4	< 18
Shell Point	1.42	>2.2	1.2	< 18
Causeway	2.10	> 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 8/11/20 sampling by the Lee County Environmental Lab reported the presence of the cyanobacteria species *Microcystis* at the Alva Bridge, the Davis Boat Ramp and on the upstream side of the WP Franklin Lock.

**Upstream of S-79/Franklin Conditions:** On 8/11/20 the Olga Water Treatment plant reported chlorides of 63 mg/l, apparent color 129 CU and turbidity 0.72 NTU. No visible algae were reported at the plant intake the past week. The plant is offline.

**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	0.7 – 2.6 [0.9 – 2.2]	4.0 – 6.4	-----	-----
Fort Myers	5.9 – 11 [3.7 – 7.6]	3.8 – 7.9	275	17
Shell Point	17 – 32 [18.0 – 33]	2.9 – 5.4	86.7	1.2
McIntyre Creek	28.4 – 30.9	1.8 – 8.1	-----	1.5 – 2.8
Tarpon Bay	29.7 – 32.8	2.4 – 7.7	8.2 – 14.5	2.1 – 7.6
Wildlife Drive	25.3 – 32.0	0.5 – 8.1	-----	2.3 – 18.4
Wulfert Flats	23.3 – 31.8	2.4 – 9.8	-----	3.0 – 19.9

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 target values: BI < 11, FM < 11, SP < 11

**Red Tide:** On 8/7/20 FWC reported that the red tide organism, *Karenia brevis*, was observed at background concentrations in one sample from Manatee 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 3 patients with red tide symptoms: 1 black skimmer, 1 mottled duck, and 1 laughing gull. 3 died.



Accumulation of red drift macroalgae on the west end of Sanibel on 8/7/20. Photo: SCCF Staff.