

**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: **July 7 – July 13, 2020**

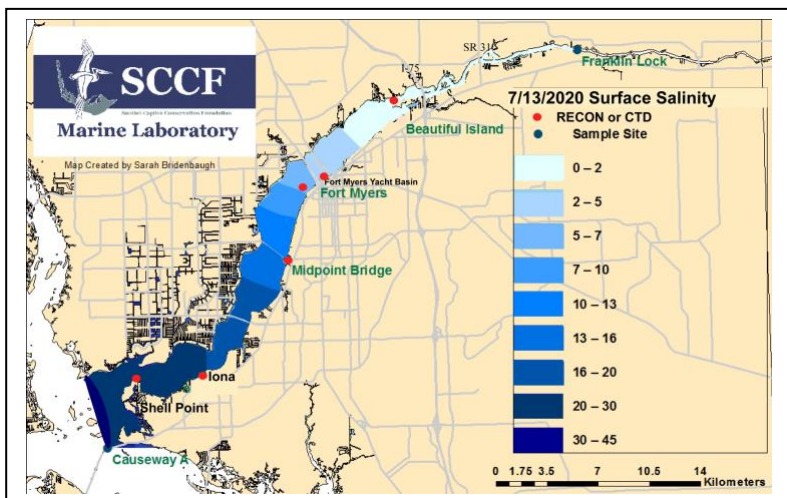
This report provides a scientific assessment of Caloosahatchee River and Estuary conditions and how these conditions affect the health, productivity, and function of the system.

**Caloosahatchee Condition Summary:** Flows to the Caloosahatchee estuary had a 7-day average of **808 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. Red drift algae was reported at Bowman’s Beach and between Tarpon Bay Road and Lighthouse Beach Park.

**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.

<b>Lake Okeechobee Level:</b>	<b>12.53 ft (Beneficial Use Sub Band)</b>	<b>Last week: 12.32 ft</b>
<b>Lake Okeechobee Inflow:</b>	<b>3,001 cfs</b>	<b>Lake Okeechobee Outflow: -413 cfs</b>
<b>Weekly Rainfall Total:</b>	WP Franklin <b>1.54"</b> Ortona <b>1.43"</b>	Moore Haven <b>0.40"</b>
<b>Salinity Beautiful Island:</b>	<b>0.4 – 0.7 psu (SCCF RECON 3 days)</b>	<b>Previous week ND</b>
<b>Salinity Fort Myers:</b>	<b>4.0 – 7.5 psu (SCCF Surface FM Yacht Basin)</b>	<b>Previous week 4.0 – 7.5 psu</b>
	<b>ND (SCCF RECON)</b>	<b>Previous week ND</b>
<b>Salinity Shell Point:</b>	<b>22 – 33 psu (SCCF RECON)</b>	<b>Previous week 19 – 33 psu</b>

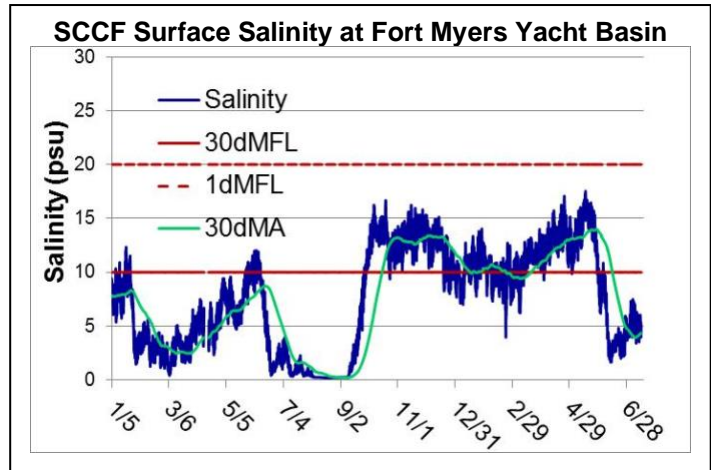


<b>Salinity (psu)</b>			
	<b>Current Values</b>	<b>Target Values</b>	<b>High/Low</b>
<b>Beautiful Is</b>	<b>0.4 – 0.7</b>	<b>&lt; 5 psu</b>	<b>In range</b>
<b>Fort Myers</b>	<b>ND</b>	<b>&lt;10 psu</b>	<b>ND</b>
<b>Shell Point</b>	<b>22 – 33</b>	<b>25 - 32 psu</b>	<b>In range</b>
<b>Light (25% I<sub>z</sub> depth meters)</b>			
<b>Fort Myers</b>	<b>ND</b>	<b>1 meter</b>	<b>ND</b>
<b>Shell Point</b>	<b>1.42</b>	<b>2.2 meters</b>	<b>Low</b>
<b>Causeway</b>	<b>2.51</b>	<b>2.2 meters</b>	<b>In range</b>

*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.*

**Lake Flows:** In the past 7 days, a net **5,202 AF** was discharged from Lake Okeechobee, with **3,974 AF** to the Caloosahatchee thru **S-77** and **1,228 AF** to the **EAA**. There was a backflow of **4,859 AF** from the St. Lucie estuary through **S-308**, a backflow of **952 AF** at the **L-8 canal**, and a backflow of **786 AF** thru **S-310**. Water conservation areas received flows of **4,342 AF**, **12,679 AF**, and **2,174 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **14,105 AF**.

ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
7/7/2020	878	328	305
7/8/2020	868	326	341
7/9/2020	893	321	359
7/10/2020	752	192	384
7/11/2020	619	147	368
7/12/2020	765	248	241
7/13/2020	882	295	0
<b>7 day avg</b>	<b>808</b>	<b>265</b>	<b>285</b>



**Cyanobacteria Status:** On 7/14/20 sampling by the Lee County Environmental Lab reported the presence of the cyanobacteria species *Microcystis* at the Alva Bridge and moderately abundant *Microcystis* at the Davis Boat Ramp.

**Upstream of S-79/Franklin Conditions:** On 7/14/20 the Olga Water Treatment plant reported chlorides of **61 mg/l**, apparent color **135 CU** and turbidity **0.83 NTU**. No visible algae were reported 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 **5.5 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 <sub>2</sub> (mg/L)	FDOM (qsde)	Chlorophyll (µg/L)
McIntyre Creek	30.5 – 33.1	2.0 – 8.3	-----	1.6 – 16.9
Tarpon Bay	31.0 – 33.2	3.2 – 8.6	7.4 – 65.7	3.5 – 18.5
Wildlife Drive	29.0 – 32.2	0.5 – 9.5	-----	0.5 – 6.3
Wulfert Flats	29.4 – 33.9	2.0 – 10.6	-----	1.0 – 11.5

**Red Tide:** On 7/10/20 FWC reported that the red tide organism, *Karenia brevis*, was not observed in samples collected statewide over the past week. Patchy *Trichodesmium* blooms appear to have moved south and east (offshore of Monroe County). [Click here for the FWC status of red tide.](#)

**Wildlife Impacts:** The past week CROW, the wildlife hospital on Sanibel, had no patients with red tide symptoms. SCCF staff reported one green sea turtle stranding.

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	1.8	86.7	1.2	< 11	< 70	< 18
Causeway	5.9	31.8	3.1	< 11	< 11	< 5



Red drift algae accumulated in the wrack line near (A) Olde Middle Gulf Road and (B) Tarpon Bay Road on 07/10/20. Photos: City of Sanibel.