

**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  
 Holly Milbrandt & Dana Dettmar - City of Sanibel  
 Lesli Haynes & Lisa Kreiger - Lee County  
 Harry Phillips & Maya Robert - City of Cape Coral  
 James Evans, Leah Reidenbach, & Rick Bartleson PhD - SCCF (Sanibel-Captiva Conservation Foundation)

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **September 22 – 28, 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.

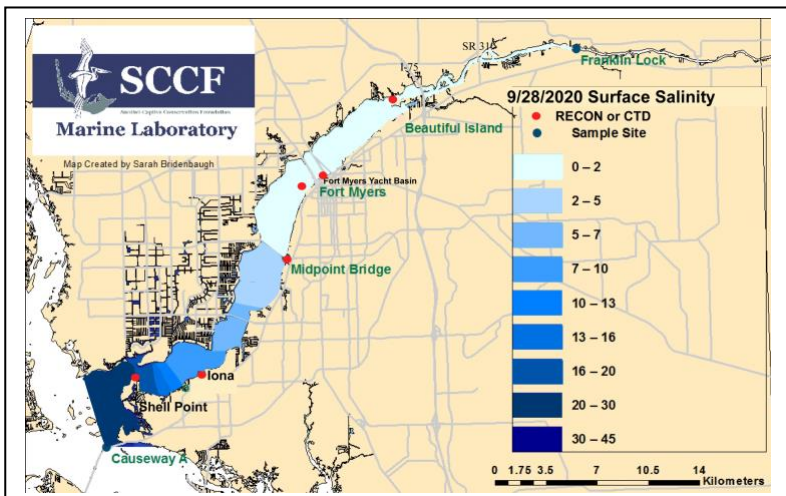
**Caloosahatchee Condition Summary:** Flows to the Caloosahatchee estuary had a 7-day average of **3,243 cfs at S-79, due to west basin runoff, with a 7-day average of 0 cfs coming from the lake at S-77. No water was released to the St. Lucie estuary at S-80.** With sustained flows >2,600 cfs at S-79 we expect low salinities may cause harm to marine organisms in the lower estuary. Water clarity is improving in San Carlos Bay.

**Recommendation:** We request no freshwater releases from Lake Okeechobee until watershed flows drop below 2,100 cfs. **Once flows drop below 2,100 cfs, 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:** The scheduled Lake Okeechobee discharge allows for releases up to 3,000 cfs at S-79 and up to 1,170 cfs at S-80.

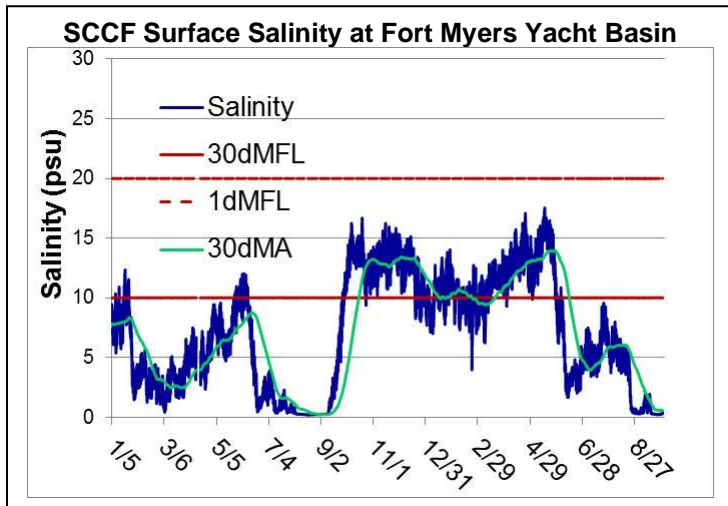
**Lake Flows:** In the past 7 days, **11,427 AF** was discharged from Lake Okeechobee, with **45 AF** to the Caloosahatchee through **S-77**, **55 AF** to the St. Lucie River through **S-308**, **875 AF** through **S-310** in Clewiston, and **10,453 AF** to the **EEA** through **S-351**, **S-352**, and **S-354**. There was an average daily backflow of **352 AF** at the **L-8 canal** on 9/22 – 9/25\*. Water conservation areas received flows of **17,040 AF**, **32,222 AF**, and **3,818 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **21,150 AF**.  
 \*missing data on 9/26 – 9/28, daily average reported

**Lake Okeechobee Level:** 15.47 ft (Low sub-band) Last week: 15.18 ft  
**Lake Okeechobee Inflow:** 9,346 cfs Lake Okeechobee Outflow: 1,116 cfs  
**Weekly Rainfall Total:** WP Franklin 0.80" Ortona 2.04" Moore Haven 1.46"



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
9/22/2020	5498	857	0
9/23/2020	4328	889	0
9/24/2020	3324	332	0
9/25/2020	2509	147	0
9/26/2020	2103	209	0
9/27/2020	2512	783	0
9/28/2020	2426	619	0
<b>7 day avg</b>	<b>3243</b>	<b>548</b>	<b>0</b>

**14-day moving average for flows at S-79: 4,054 cfs**  
**RECOVER flow envelope: Damaging (>2,600)**  
**Days with 14-day ma in flow envelope: 17**



Light Penetration

Site	25% I <sub>z</sub>	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	0.49	> 1	3.0	< 18
Shell Point	0.85	>2.2	1.0	< 18
Causeway	1.38	> 2.2	1.6	< 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 9/29/20, sampling by the Lee County Environmental Lab reported no cyanobacteria in the Caloosahatchee.

**Upstream of S-79/Franklin Conditions:** On 9/29/20 the Olga Water Treatment plant reported chlorides of **45 mg/l**, apparent color **202 CU** and turbidity **1.30 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 **0.6 psu**, within the suitable range for tape grass.

**Lower Estuary Conditions:** The weekly average salinity at the Shell Point RECON was **20 psu**, within the optimal range for oysters.

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	0.1 – 0.2 [0.2 – 0.3]	1.9 – 3.7	-----	3.1
Fort Myers Yacht Basin	0.2 – 0.6 [0.2 – 0.7]	3.7 – 7.0	378	9.5
Shell Point	3.6 – 29 [4.4 – 30]	3.7 – 6.7	194	2.9
McIntyre Creek	22.1 – 27.1	1.9 – 9.2	13.5 – 21.2	2.3 – 14.4
Tarpon Bay	20.9 – 31.1	3.7 – 9.0	10.2 – 35.1	2.3 – 17.0
Wildlife Drive	24.7 – 27.3	0.6 – 11.4	-----	0.5 – 19.0
Wulfert Flats	-----	-----	-----	-----

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 9/25/20 FWC reported that the red tide organism, *Karenia brevis*, was not observed in samples collected statewide over the past week. [Click here for the FWC status of red tide.](#)

**Wildlife Impacts:** The past week CROW, the wildlife hospital on Sanibel, received no patients with toxicosis symptoms.