

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 25 – 31, 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 **2,427 cfs at S-79**, mostly due to west basin runoff, with a 7-day average of **116 cfs coming from the lake at S-77**. Water quality and clarity around Sanibel remains good.

Recommendation: 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: Since 5/8/20, the Corps has been conducting pulse releases to the Caloosahatchee from Lake Okeechobee at a 7-day average flow of **650 cfs at S-79** and releasing **no water** to the St. Lucie estuary at **S-80**.

Lake Flows: In the past 7 days, **3,102 AF** was discharged from Lake Okeechobee, with **1,616 AF** to the Caloosahatchee through **S-77**, **11 AF** to the St. Lucie River through **S-308** and **1,475 AF** to the **EAA** through **S-352 and S-354**. There was a net backflow of **579 AF** at **S-310**, and a backflow of **2,474 AF** at the **L-8 canal**. Water conservation areas received flows of **14,841 AF**, **18,710 AF**, and **5,502 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received an average of **1,651 AF** per day on 8/25 – 8/26*.

*missing data on 8/27/20 – 8/31/20 due to equipment malfunction

Lake Okeechobee Level: 14.34 ft (Low Sub Band)

Last week: 14.13 ft

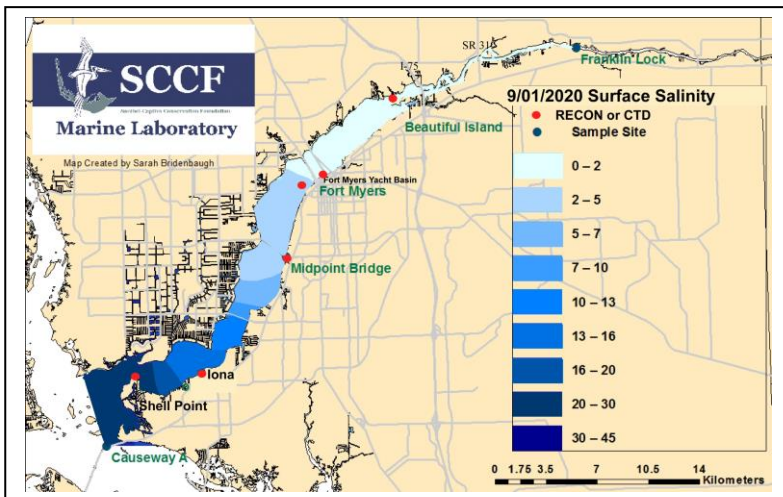
Lake Okeechobee Inflow: 7,329 cfs

Lake Okeechobee Outflow: -134 cfs

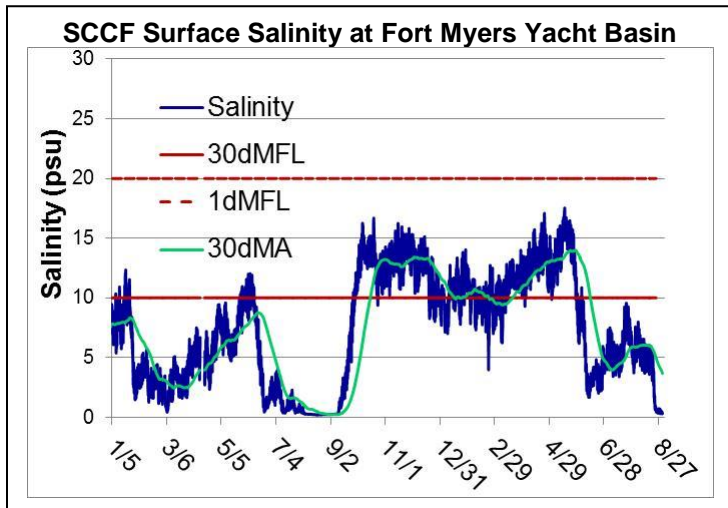
Weekly Rainfall Total: WP Franklin 0.84"

Ortona 0.28"

Moore Haven 2.13"



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
8/25/2020	3630	787	139
8/26/2020	3563	546	565
8/27/2020	2594	558	105
8/28/2020	1799	196	0
8/29/2020	2055	0	0
8/30/2020	1872	400	0
8/31/2020	1479	348	0
7 day avg	2427	405	116



Site	Light Penetration		Turbidity NTU	Target Values
	25% I _z meters	Target Values		
Fort Myers	0.49	> 1	2.9	< 18
Shell Point	1.14	>2.2	2.5	< 18
Causeway	1.71	> 2.2	3.5	< 5

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.

Cyanobacteria Status: On 9/01/20, sampling by the Lee County Environmental Lab reported the presence of the cyanobacteria species *Microcystis* at the Davis Boat Ramp and Midpoint Bridge Park.

Upstream of S-79/Franklin Conditions: On 9/1/20 the Olga Water Treatment plant reported chlorides of **47 mg/l**, apparent color **296 CU** and turbidity **0.75 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 **3.7 psu**, within the suitable range for tape grass.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was **24 psu**, within the optimal range for oysters and seagrass.

Water Quality Conditions:

Monitor Site	Salinity (psu) ^a [previous week]	Diss O ₂ (mg/L) ^b	FDOM (qsde) ^c	Chlorophyll (µg/L) ^d
Beautiful Island	0.2 – 0.4 [0.2 – 1.4]	2.3 – 4.3	448	2.6 – 2.9
Fort Myers	0.3 – 0.7 [0.5 – 8.2]	3.8 – 8.0	378	7.5
Shell Point	11 – 32 [-----]	3.2 – 7.6	120	2.2
McIntyre Creek	-----	-----	-----	-----
Tarpon Bay	28.7 - 33.4	3.2 – 9.0	6.9 – 38.8	3.2 – 22.7
Wildlife Drive	28.0 – 30.3	0.5 – 9.8	-----	2.1 – 15.2
Wulfert Flats	28.4 – 30.1	3.9 – 9.0	-----	4.3 – 43.2

Red values are outside of the preferred range.
^a Salinity target values: BI < 5, FM < 10, SP = 25 – 32
^b Dissolved O₂ target values: all sites > 4
^c FDOM target values: BI < 70, FM < 70, SP < 11
^d Chlorophyll: BI < 11, FM < 11, SP < 11

Beach Conditions: On 8/29/20, a *Trichodesmium* bloom was observed nearshore adjacent to Lighthouse Beach Park on Sanibel.

Red Tide: On 8/28/20 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 red tide symptoms.



Trichodesmium bloom near
Lighthouse Beach Park on 8/29/20.
Photo: City of Sanibel