

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 - City of Sanibel
 Lesli Haynes & Lisa Kreiger - Lee County
 Harry Phillips & Maya Robert - City of Cape Coral
 Leah Reidenbach, Rick Bartleson, Ph.D., & James Evans – SCCF (Sanibel-Captiva Conservation Foundation)

Subject: Caloosahatchee & Estuary Condition Report

Reporting Period: **September 1 – 7, 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 **1,927 cfs at S-79, due to west basin runoff, with a 7-day average of 0 cfs coming from the lake at S-77.** Water quality and clarity around Sanibel remains good.

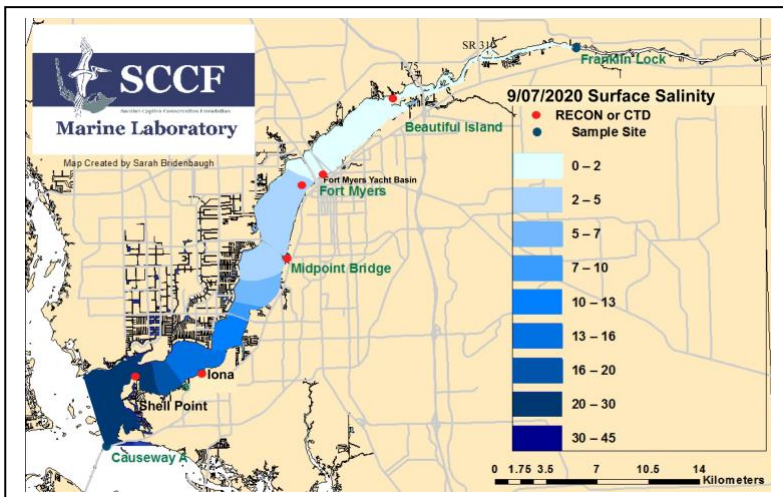
Recommendation: To maintain optimum salinities in the estuary and avoid damaging high flows during the wet season, we request 7-day average flows be maintained between **750 – 2,100 cfs at S-79.** This is consistent with the 2020 RECOVER optimum flow envelope for the Caloosahatchee estuary.

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

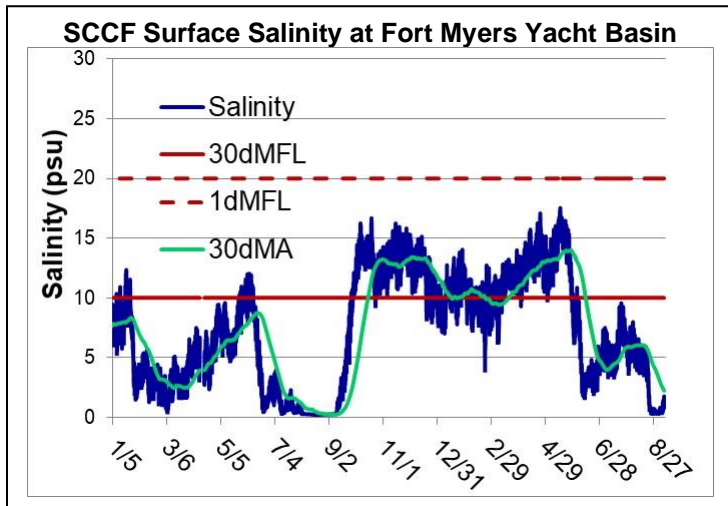
Lake Flows: In the past 7 days, **960 AF** was discharged from Lake Okeechobee, with **43 AF** to the Caloosahatchee through **S-77**, **36 AF** to the St. Lucie River through **S-308** and **881 AF** to the **EAA** through **S-352.** There was a net backflow of **1,177 AF** at **S-310**, and a backflow of **2,317 AF** at the **L-8 canal.** Water conservation areas received flows of **8,864 AF**, **14,319 AF**, and **3,673 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received an average of **1,757 AF** per day on 9/2 – 9/7*.

*missing data on 9/1 due to equipment malfunction

Lake Okeechobee Level: 14.61 ft (Low Sub Band) Last week: 14.31 ft
Lake Okeechobee Inflow: 7,086 cfs Lake Okeechobee Outflow: -343 cfs
Weekly Rainfall Total: WP Franklin 1.14" Ortona 1.98" Moore Haven 1.72"



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
9/1/2020	1931	608	0
9/2/2020	3223	741	0
9/3/2020	1622	171	0
9/4/2020	1819	198	0
9/5/2020	1632	188	0
9/6/2020	1471	149	0
9/7/2020	1791	244	0
7 day avg	1927	328	0



Site	Light Penetration		Turbidity	Target Values
	25% I _z	Target Values		
	meters		NTU	
Fort Myers	0.54	> 1	4.9	< 18
Shell Point	1.17	>2.2	1.7	< 18
Causeway	1.88	> 2.2	1.9	< 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 9/8/20, sampling by the Lee County Environmental Lab reported no cyanobacteria in the Caloosahatchee.

Upstream of S-79/Franklin Conditions: On 9/8/20 the Olga Water Treatment plant reported chlorides of **44 mg/l**, apparent color **318 CU** and turbidity **0.92 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 **2.2 psu**, within the suitable range for tape grass.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was **23 psu**, within the optimal range for oysters.

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 – 0.3 [0.2 – 0.4]	2.7 – 4.0	-----	-----
Fort Myers Yacht Basin	0.3 – 0.7 [0.5 – 6.0]	3.4 – 5.4	321	4.9
Shell Point	12 – 30 [11 – 32]	3.1 – 6.8	137	1.7
McIntyre Creek	22.9 – 30.2	1.5 – 8.2	8.2 – 15.1	2.5 – 5.2
Tarpon Bay	26.1 – 30.3	3.1 – 8.4	13.1 – 23.6	2.8 – 8.8
Wildlife Drive	24. – 31.1	0.5 – 8.4	-----	2.7 – 19.1
Wulfert Flats	-----	-----	-----	-----

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

Red Tide: On 9/4/20 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.



Minor accumulation of drift algae just north/west of Silver Key on Sanibel Island on 9/8/20. Photo: SCCF