

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 Conditions Report

Reporting Period: **September 8 – 14, 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.

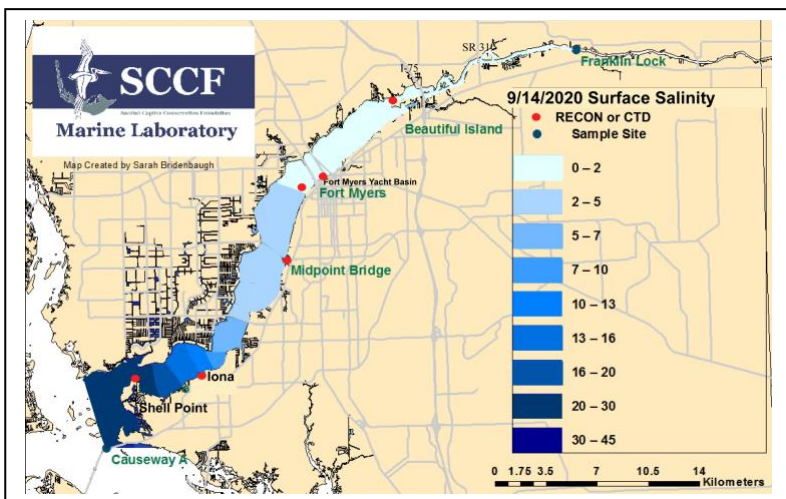
Caloosahatchee Condition Summary: Flows to the Caloosahatchee estuary had a 7-day average of **4,252 cfs at S-79, due to west basin runoff, with a 7-day average of 0 cfs coming from the lake at S-77**. Sanibel received 10.1 inches of rain 9/11 – 9/15 with wind gusts up to 33 mph resulting in increased watershed runoff and greatly diminished water clarity. Increased watershed runoff from the West Basin in the Caloosahatchee caused a large freshwater plume with high CDOM 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.

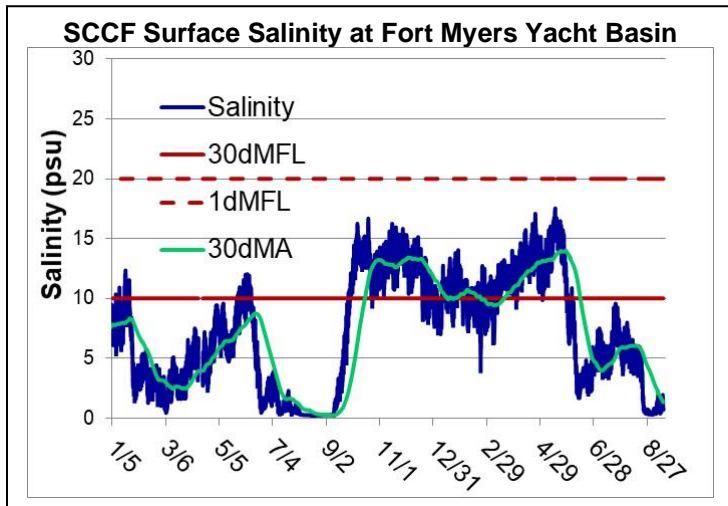
USACE Action: Since 5/8/20 to present, the Corps has been conducting pulse releases to the Caloosahatchee from Lake Okeechobee at a 7-day average of **650 cfs at S-79** and releasing **no water** to the St. Lucie estuary at **S-80**.

Lake Flows: In the past 7 days, **59 AF** was discharged from Lake Okeechobee, with **37 AF** to the Caloosahatchee through **S-77**, **22 AF** to the St. Lucie River through **S-308** and **0 AF** to the **EAA**. There was a backflow of **1,274 AF** at **S-310**, and a backflow of **6,499 AF** at the **L-8 canal**. Water conservation areas received flows of **20,948 AF**, **34,348 AF**, and **6,052 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **25,357 AF**

Lake Okeechobee Level: 14.95 ft (Low Sub Band) Last week: 14.61 ft
Lake Okeechobee Inflow: 7,555 cfs **Lake Okeechobee Outflow:** -320 cfs
Weekly Rainfall Total: WP Franklin 0.91" Ortona 4.57" Moore Haven 2.73"



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
9/8/2020	2465	440	0
9/9/2020	3481	1157	0
9/10/2020	5585	2136	0
9/11/2020	5314	2078	0
9/12/2020	3139	1345	0
9/13/2020	3928	801	0
9/14/2020	5852	877	0
7 day avg	4252	1262	0



Site	Light Penetration		Turbidity	Target Values
	25% I _z	Target Values		
	meters		NTU	
Fort Myers	0.48	> 1	4.4	< 18
Shell Point	0.99	>2.2	2.6	< 18
Causeway	0.46	> 2.2	82	< 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 9/15/20, sampling by the Lee County Environmental Lab reported no cyanobacteria in the Caloosahatchee.

Upstream of S-79/Franklin Conditions: On 9/15/20 the Olga Water Treatment plant reported chlorides of **40 mg/l**, apparent color **210 CU** and turbidity **1.75 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 **1.3 psu**, within the suitable range for tape grass.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was **22 psu**, within the optimal range for oysters.

Water Quality Conditions:

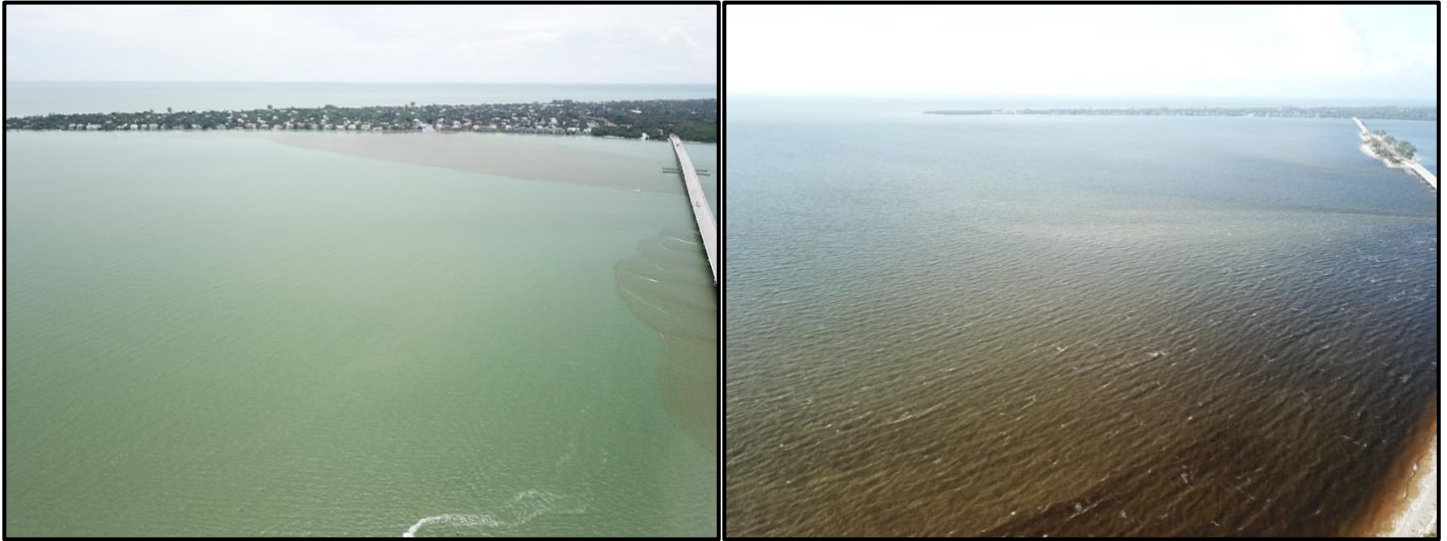
Monitor Site	Salinity (psu) ^a [previous week]	Diss O ₂ (mg/L) ^b	FDOM (qsde) ^c	Chlorophyll (µg/L) ^d
Beautiful Island	0.2 – 0.2 [0.2 – 0.3]	2.3 – 5.4	-----	6.6
Fort Myers Yacht Basin	0.4 – 1.9 [0.3 – 1.8]	2.4 – 6.6	383	6.8
Shell Point	8.1 – 33 [12 – 30]	2.8 – 5.9	150	2.2
McIntyre Creek	23.2 – 28.3	2.2 – 8.7	5.7 – 21.9	2.4 – 10.3
Tarpon Bay	22.5 – 33.4	2.3 – 6.5	10.4 – 15.0	2.1 – 16.0
Wildlife Drive	8.4 – 25.6	1.0 – 8.2	-----	2.1 – 22.7
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 9/11/20 FWC reported that the red tide organism, *Karenia brevis*, was observed at background concentrations in one sample collected offshore of Pinellas County and one sample collected offshore of Hillsborough County. [Click here for the FWC status of red tide.](#)

Shellfish Advisory: Shellfish harvest area #6222/6232 Pine Island Sound (Section 2 & 3 Matlacha Pass North and South are **CLOSED** by the Florida Department of Agriculture and Consumer Services (FDACS) as of 9/14/20 due to excessive rainfall.

Wildlife Impacts: The past week CROW, the wildlife hospital on Sanibel, received 2 patients with toxicosis symptoms, 2 white ibis came in together (both died).



Freshwater runoff is high in CDOM on 9/15/20 (top left) and 9/16/20 (top right). Two juvenile red knots (center of bottom photo) foraging in moderate accumulations of red drift algae near South Seas Resort on Captiva Island. Photos: SCCF.