

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: **October 6 – 12, 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 **2,604 cfs at S-79**, due to west basin runoff, with a 7-day average of **0 cfs coming from the lake at S-77**. The 14-day moving average flow is **3,338 cfs** and has been in the **damaging flow envelope (>2600 cfs; RECOVER 2020) for the past 31 days**. With sustained flows >2,600 cfs at S-79, we expect low salinities to cause harm to marine organisms in the lower estuary. **Flows to the St. Lucie estuary at S-80 had a 7-day average of 432 cfs, with no water releases directly from the Lake at S-308.**

Recommendation: As the Lake continues to rise, we thank the Corps for taking a cautious, day to day approach to limit additional damaging flows to the Caloosahatchee. Recognizing the current high basin runoff, the approaching dry season, and the forecasted La Niña with drier than normal dry season conditions, we respectfully 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 LORS 2008 guidance allows for releases up to 4,000 cfs at S-77 and up to 1,800 cfs at S-80. For the past 7-days, there have been no direct Lake releases to the estuaries from S-77 or S-308.

Lake Flows: In the past 7 days, **12,305 AF** were discharged from Lake Okeechobee, with **89 AF** to the Caloosahatchee through **S-77**, **37 AF** to the St. Lucie River through **S-308**, **167 AF** through **S-310** in Clewiston, and **12,012 AF** to the **EAA** through **S-351**, **S-352**, and **S-354**. There was a backflow of **699 AF** at the **L-8 canal**. Water conservation areas received flows of **16,281 AF**, **14,682 AF**, and **19,042 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **26,351 AF**.

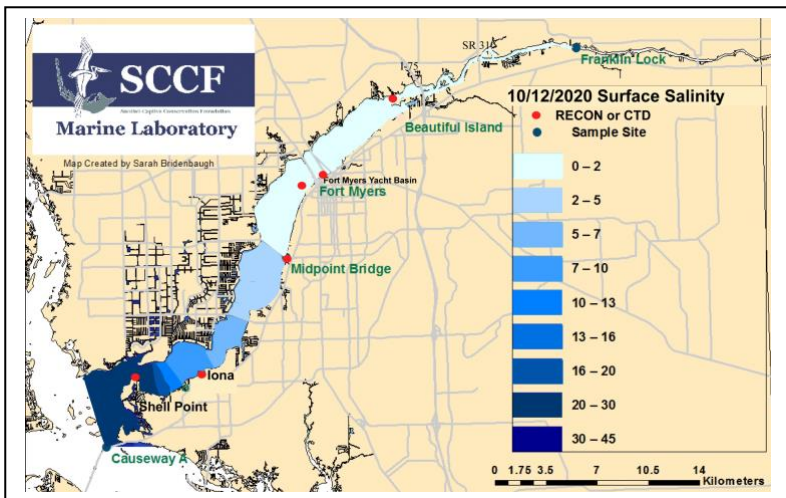
Lake Okeechobee Level: 16.18 ft (intermediate sub-band)

Last Week: 15.86 ft

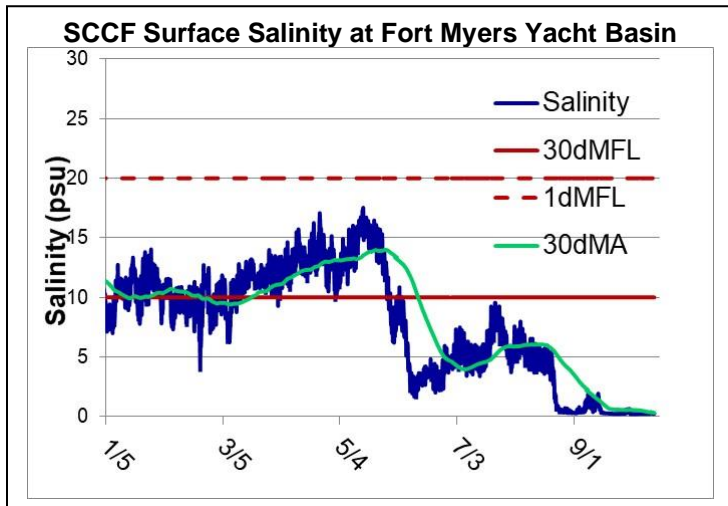
Lake Okeechobee Inflow: 8,705 cfs

Lake Okeechobee Outflow: 860 cfs

Weekly Rainfall Total: WP Franklin **0.28"** Ortona **0.67"** Moore Haven **≥0.22"**



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
10/6/2020	3870	2144	0
10/7/2020	3448	1325	0
10/8/2020	2427	1319	0
10/9/2020	2378	790	0
10/10/2020	2906	443	0
10/11/2020	2331	990	0
10/12/2020	866	236	0
7 day avg	2604	1035	0



Light Penetration

Site	25% I _z	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	0.73	> 1	2.5	< 18
Shell Point	1.28	>2.2	1.4	< 18
Causeway	2.05	> 2.2	2.1	< 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 10/13/20, sampling by the Lee County Environmental Lab reported no cyanobacteria in the Caloosahatchee.

Upstream of S-79/Franklin Conditions: On 10/13/20 the Olga Water Treatment plant reported chlorides of **45 mg/l**, apparent color **242 CU** and turbidity **2.13 NTU**. No visible algae were reported at the plant intake the past week. The plant is online at **1800 GPM**.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was **0.3 psu**, within the suitable range for tape grass.

Lower Estuary Conditions: Light levels were very low near the Causeway in San Carlos Bay due to dissolved organic matter. The salinity at Shell Point RECON was 22, within the suitable 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 [0.1 – 0.2]	2.2 – 3.3	-----	-----
Fort Myers Yacht Basin	0.2 – 0.2 [0.2 – 0.7]	4.6 – 6.8	450	8.6
Shell Point	7.0 – 30	4.7 – 8.2	195	4.8
McIntyre Creek	21.1 – 30.6	2.8 – 8.6	3.2 – 16.0	1.4 – 4.1
Tarpon Bay	22.6 – 32.3	3.0 – 8.4	7.8 – 27.6	0.6 – 7.1
Wildlife Drive	21.3 – 25.3	1.0 – 10.4	-----	1.7 – 16.5
Wulfert Flats	23.5 – 29.9	2.8 – 9.2	-----	2.5 – 37.0

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 10/9/20 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.](#)

Shellfish Advisory: Shellfish harvest area #6222/6232 Pine Island Sound Section 2/3 (Matlacha Pass North and South) Shellfish Harvest Area is **OPEN** by the Florida Department of Agriculture and Consumer Services (FDACS) as of 10/8/20.

Wildlife Impacts: The past week CROW, the wildlife hospital on Sanibel, received **9 patients with toxicosis symptoms**. 6 Muscovy ducks (6 died), 1 mottled duck (died), and 2 double crested cormorants (1 died, 1 still at CROW).