

MEMORANDUM

To: USACE Colonel James L. Booth, LTC Todd F. Polk, Richard McMillen, Kim Taplin, SFWMD Governing Board, Executive Director Drew Bartlett, Jennifer Reynolds, Lawrence Glenn, DEP Secretary Shawn Hamilton

From: Periodic Scientists Conference Call Participants
 Kevin Godsea & Avery Renshaw - 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: **June 28 – July 4, 2022**

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 Conditions Summary: Flows to the Caloosahatchee Estuary had a 7-day average of **1728 cfs** at **S-79** with a 7-day average of **0 cfs (0%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 1606 cfs and has been in the optimal flow envelope (750 – 2100 cfs; RECOVER 2020) for 9 days.**

Recommendation: We encourage the Corps to maintain flows within the RECOVER 2020 optimal flow envelope of 750 – 2,100 cfs at S-79 for the Caloosahatchee Estuary. Flows from the Lake should be suspended when local basin runoff exceeds 2,100 cfs at S-79 and when cyanobacteria blooms are present near S-77.

USACE Action: On 6/3/22 the USACE announced that Port Mayaca Lock and Dam (S-308) and Julian Keen Lock and Dam (S-77) will be closed during Tropical Cyclone One and all local basin runoff will be passed through downstream structures to tide, suspending the current weekly release target of 1,000 cfs at S-79 to the Caloosahatchee. USACE has not scheduled regular lake releases through the S-80 since Spring of 2021. Any release decisions made after the storm will be communicated prior to execution.

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **671 AF** with **0 AF** to the Caloosahatchee through **S-77**, **102 AF** through **S-310** in Clewiston, and **0 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **12,327 AF** (7,448 AF from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1) with a total backflow volume of **4,879 AF** from **S310**, **C10A**, and **S308**. Water conservation areas received flows of **5,714 AF**, **9,090 AF**, and **9,505 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **26,087 AF**.

Lake Level: 12.87 ft (Base Flow sub-band)

Last Week: 12.92 ft

Last Year: 12.87 ft

Lake Okeechobee Inflow: 658 cfs

Lake Okeechobee Outflow: 0 cfs

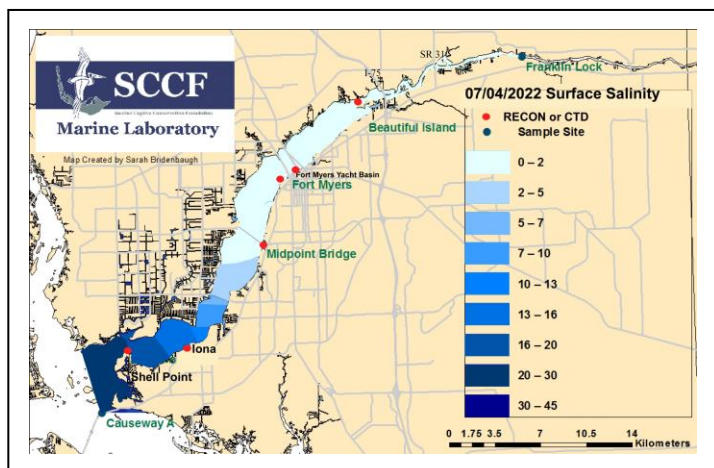
Weekly Rainfall Total:

WP Franklin ≥ 1.90"

Ortona ≥ 1.61"

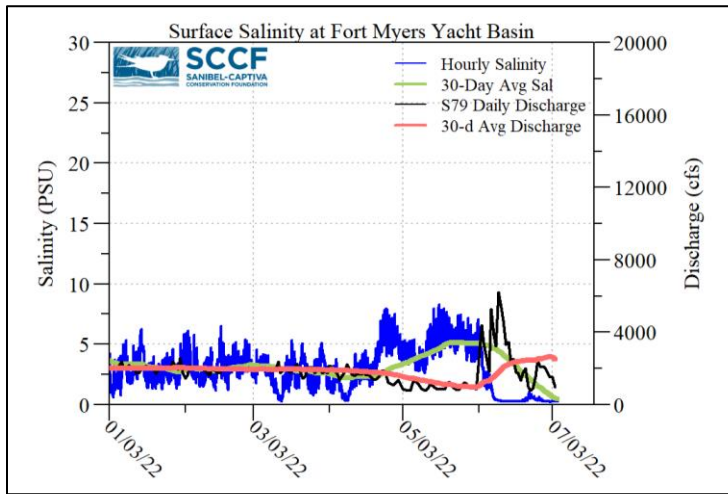
Moore Haven ≥ 4.06"

7-Day Lake Recession Rate: -0.05 ft/week



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
6/28/22	2062	293	NR
6/29/22	2133	294	NR
6/30/22	2043	297	0
7/1/22	1751	297	0
7/2/22	1508	294	0
7/3/22	1530	109	0
7/4/22	1067	0	NR
7-day avg	1728	226	0

NR: No report



Light Penetration				
Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	ND	> 1	ND	< 18
Shell Point	1.17 ^c	>2.2	1.2	< 18
Causeway	2.53 ^m	> 2.2	0.3	< 5

25% Iz is the depth (z) where irradiance (I) is 25% of surface irradiance. Target values indicate the depth of light penetration needed for healthy seagrass.
^m measured, ^c calculated

Cyanobacteria Status: On 7/5/22 sampling for cyanobacteria by the Lee County Environmental Lab reported **moderately abundant** *Dolichospermum*, *Microcystis* and cyanobacterial filaments at the **Davis Boat Ramp** with visible streaks and some accumulation along the seawall. No cyanobacteria were present upstream of the Franklin Locks. However, the area has been experiencing a dinoflagellate bloom for the past few weeks.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was 0.5 psu, within the suitable range for tape grass.

Lower Estuary Conditions: The average salinity at Shell Point RECON was 21 psu, within the optimal range for oysters, but below optimal for seagrass.

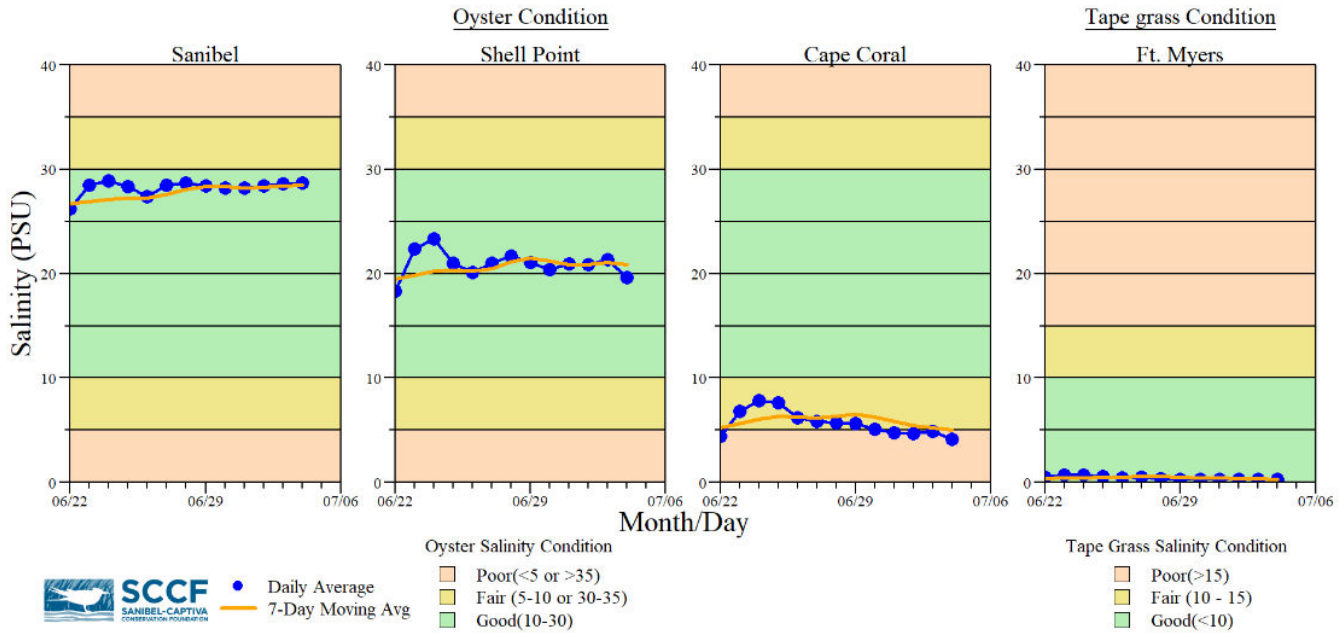
Water Quality Conditions

Monitor Site	Salinity (psu) ^a [previous week]	Diss O ₂ (mg/L) ^b	FDOM (qsde) ^c	Chlorophyll (µg/L) ^d
Beautiful Island	0.3 – 0.3 [0.3 – 0.3]	2.4 - 8.3	331	-----
Fort Myers Yacht Basin	0.3 – 0.6 [0.3 – 0.5]	5.9 - 7.5	232	-----
Shell Point	10 – 30 [10 – 29]	3.6 – 6.5	119	3.3
McIntyre Creek	24.7 – 26.9 [22.5 – 26.4]	2.2 – 8.9	-----	-----
Tarpon Bay	24.2 – 31.5 [23.8 – 29.2]	4.2 – 9.0	-----	-----
Wulfert Flats	25.3 – 26.1 [-----]	3.1 – 7.3	-----	3.6 – 17.5

Red values are outside of the preferred range.
^a Salinity target values: BI < 5, FM < 10, SP = 10 – 30
^b Dissolved O₂ target values: all sites > 4
^c FDOM target values: BI < 70, FM < 70, SP < 11
^d Chlorophyll target values: BI < 11, FM < 11, SP < 11
^e Single sonde lower and surface layer or surface grab lab measurement
 ----- no data

Red Tide: On 7/1/22, the FWC reported that the red tide organism, *Karenia brevis* was observed at background concentrations offshore of Hillsborough County.

Wildlife Impacts: In the past week (6/27 – 7/4), the CROW wildlife hospital on Sanibel received 1 toxicosis patient: 1 green sea turtle (died).



Daily average bottom salinity data for the last 14-days from sampling locations within the tidal Caloosahatchee River Estuary relative to oyster health (Sanibel, Shell Point and Cape Coral) and tape grass (*Vallisneria americana*) health (Ft. Myers only) conditions.

Data are provisional and subject to change.



Water clarity at Lighthouse Beach Park on 7/5/22 at 2:06 PM on a rising tide (Low tide: 1.41 ft @ 11:40 AM). [Lighthouse Beach Park Virtual Tour.](#)