

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
 Leah Reidenbach, Rick Bartleson PhD, & Matt Depaolis - SCCF (Sanibel-Captiva Conservation Foundation)

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **July 5 – 11, 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 **1272 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 1500 cfs and has been in the optimal flow envelope (750 – 2100 cfs; RECOVER 2020) for 16 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 or when cyanobacteria blooms are present near S-77.

USACE Action: On 7/9/22 the USACE reduced target flows at the W.P. Franklin Lock and Dam (S-79) to 7-day average pulse release of 750 cfs from the previous target of 1000 cfs. If target flows exceed 750 cfs from local basin runoff, releases from the Lake at the Julian Keen Jr Lock and Dam (S-77) will not occur.

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **1,549 AF** with **0 AF** to the Caloosahatchee through **S-77**, **311 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 **7,548 AF** (5,601 AF from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1) with a total backflow volume of **1,947 AF** from **S310**, **C10A**, and **S308**. Water conservation areas received flows of **5,062 AF**, **5,798 AF**, and **10,548 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **27,527 AF**.

Lake Level: 12.97 ft (Base Flow sub-band)

Last Week: 12.87 ft

Last Year: 13.30 ft

Lake Okeechobee Inflow: 414 cfs

Lake Okeechobee Outflow: 337 cfs

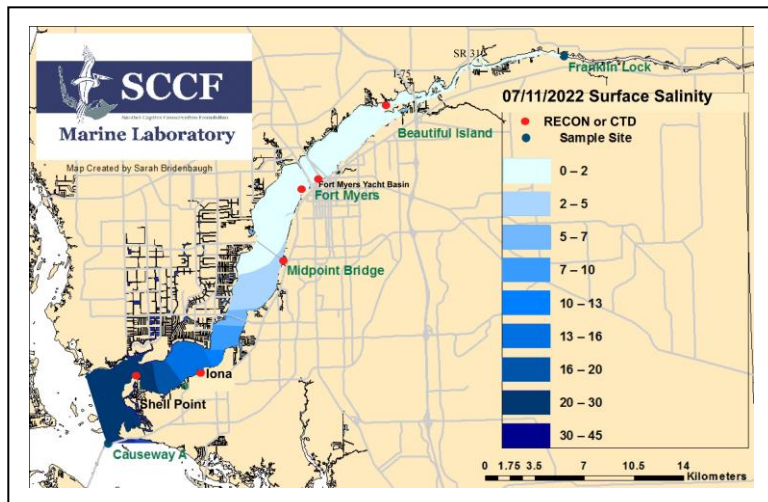
Weekly Rainfall Total:

WP Franklin \geq 0.29"

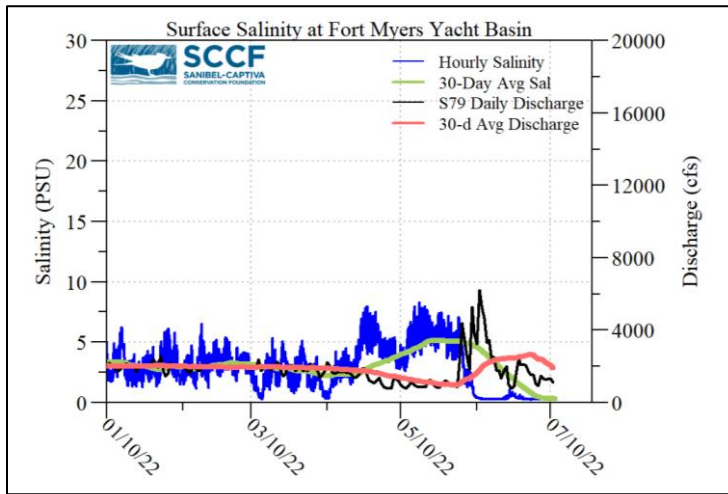
Ortona \geq 1.23"

Moore Haven \geq 0.29"

7-Day Lake Recession Rate: +0.10 ft/week



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
7/5/22	933	167	0
7/6/22	1495	294	0
7/7/22	1336	195	0
7/8/22	1267	147	0
7/9/22	1285	149	0
7/10/22	1332	277	0
7/11/22	1253	323	0
7-day avg	1272	222	0



Light Penetration				
Site	25% I _z Target Values		Turbidity Target Values	
	meters		NTU	
Fort Myers	0.92 ^m	> 1	2.1	< 18
Shell Point	1.11 ^c	>2.2	2.0	< 18
Causeway	2.47 ^m	> 2.2	0.6	< 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.
^m measured, ^c calculated

Cyanobacteria Status: On 7/11/22 sampling for cyanobacteria by the Lee County Environmental Lab reported the presence of *Planktothrix*, *Dolichospermum*, and *Limnospira* at the **Alva Boat Ramp** as yellow-green scum along the shore and ramp and *Microcystis* at the **Davis Boat Ramp** as sparse specks.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was 0.4 psu, within the suitable range for tape grass.

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

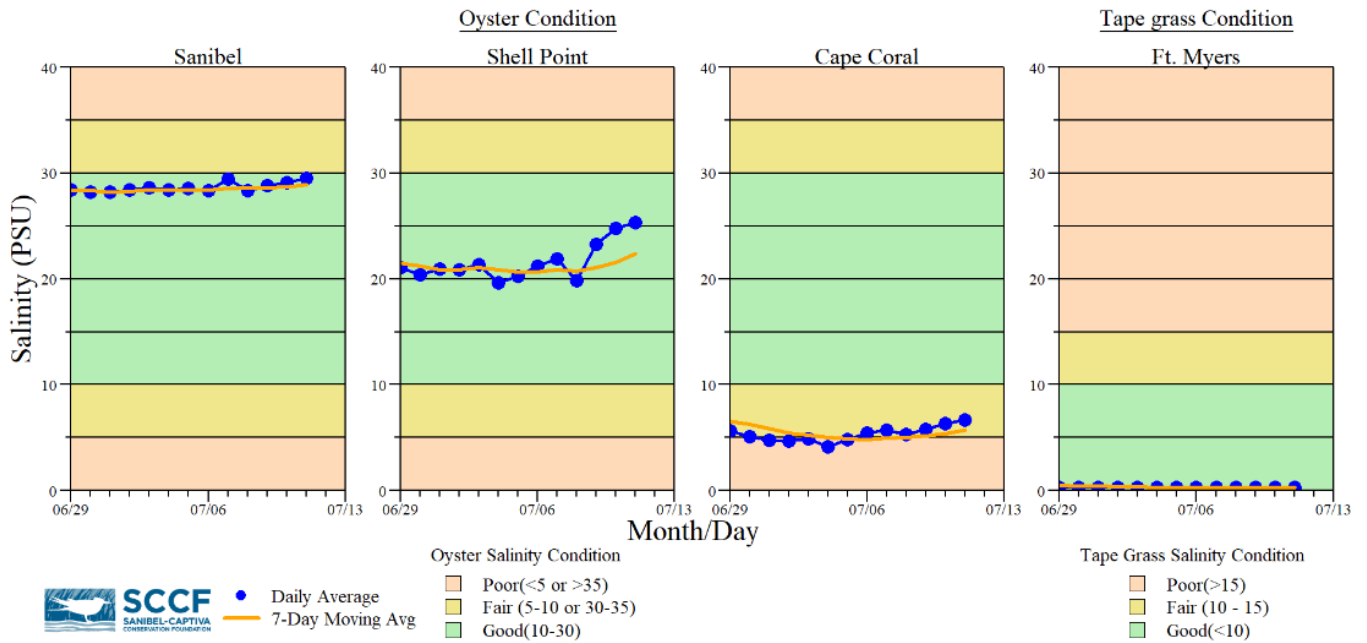
Water Quality Conditions

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]	1.6 – 6.3	286	-----
Fort Myers Yacht Basin	0.3 – 0.3 [0.3 – 0.6]	5.6 – 7.4	283	-----
Shell Point	9.5 – 31 [10 – 30]	3.8 – 7.0	111	3.5
McIntyre Creek	25.4 – 29.0 [24.7 – 26.9]	1.8 – 10.6	-----	-----
Tarpon Bay	25.5 – 32.2 [24.2 – 31.5]	3.6 – 11.7	-----	-----
Wulfert Flats	25.6 – 27.2 [25.3 – 26.1]	3.3 – 8.9	-----	3.2 – 22.1

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 7/8/22, the FWC reported that the red tide organism, *Karenia brevis* was not observed in Southwest Florida.

Wildlife Impacts: In the past week (7/5 – 7/11), the CROW wildlife hospital on Sanibel received 1 toxicosis patient: 1 aninga (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 7/11/22 at 1:19 PM on a falling tide (Low tide: -0.52 ft @ 6:52 PM). [Lighthouse Beach Park Virtual Tour.](#)