MEMORANDUM

To: USACE Colonel James L. Booth, Major Cory Bell, Richard McMillen, 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
Harry Phillips & Maya Robert - City of Cape Coral
Allie Pecenka, Rick Bartleson PhD & Matt Depaolis- Sanibel-Captiva Conservation Foundation
In coordination with Lee County

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **June 11- 17, 2024**

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: Flow to the Caloosahatchee Estuary had a 7-day average of **8,067 cfs** at **S-79** with a 7-day average of **138 cfs (2%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 4,878 cfs and has been in the damaging flow envelope** (>2,600 cfs, RECOVER 2020) for **5 days** after **1 day** in the **stress** flow envelope and **57 days** in the **optimum** flow envelope. The 14-day moving average flow at S-77 was **857 cfs.**

Recommendation: With the onset of the rainy season and predictions for increased Atlantic storm intensity in the upcoming hurricane season, we ask the Army Corps to remain reactive to changing conditions in Lake Okeechobee and the Caloosahatchee River and estuary to support the ecological health of this system. In addition, we request a pause in releases from Lake Okeechobee to the CRE for as long as basin runoff from prolonged rainfall in Southwest Florida pushes these flows above RECOVER targets.

USACE Action: With Lake Okeechobee stage in the Base Flow Sub-band, Part D of the 2008 LORS suggests "S-79 up to 450 cfs and S-80 up to 200 cfs."

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **1,631 AF*** with **1,889 AF** to the Caloosahatchee through **S-77**, **-1,560 AF** to the St. Lucie canal through **S-308**, **1,302 AF** through the **L8 canal**, and **0 AF** to the EAA through **S-351**, **S-352**, and **S-354***. The total net inflow to the Lake was **55,636 AF** (**55,636 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **20,434 AF**, **28,416 AF**, and **13,613 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **7,922 AF.**
***Data missing from S-78 on 6/17, S-310 from 6/11- 6/17, S-354 from 6/11- 6/17 and S-80 from 6/13- 6/14.**

Lake Level: 13.39 ft (Low Sub-Band) **Last Week**: **12.63 ft** **Last Year: 14.12 ft**

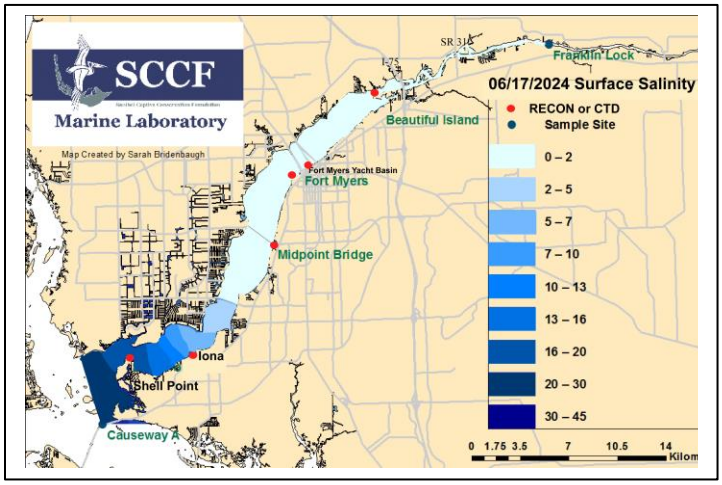
7-Day Lake Recession Rate: +0.76 ft/week

Lake Okeechobee Inflow: 5,053 cfs **Lake Okeechobee Outflow: 8 cfs**

Weekly Rainfall Total: **WP Franklin: 7.50"** **Ortona: 8.61"** **Moore Haven: 5.45"**

Cyanobacteria Status: On 6/17/24, sampling for cyanobacteria by the Lee County Environmental Lab reported that *Dolichospermum, Microcystis* and cyano filaments were observed in **moderately abundant** concentrations at the **Davis Boat Ramp** as streaks with wind-driven accumulation along the seawall and as **present** upstream of the **Franklin Locks** with wind-driven accumulation along the Lock/shore. *Dolichospermum and Microcystis* were **moderately abundant** at **Midpoint Bridge Park**.

Red Tide: On 6/14/24, the FWC reported that the red tide organism, *Karenia brevis*, was observed at background concentrations in one sample collected in Southwest Florida over the past week, offshore of Sarasota County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	0.7	> 1	3.5	< 18
Shell Point	1.1	>2.2	2.4	< 18
Causeway	2.7	> 2.2	2.5	< 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.*

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was 2.6 psu, within the suitable range for tape grass.

Lower Estuary Conditions: The average salinity at Shell Point RECON was 18 psu, in the optimal range for oysters but below optimal for seagrass. Salinities were dropping below 2 psu at Shell Point and *Halophila decipiens* was washing up on Bunche Beach on 6/13/24.

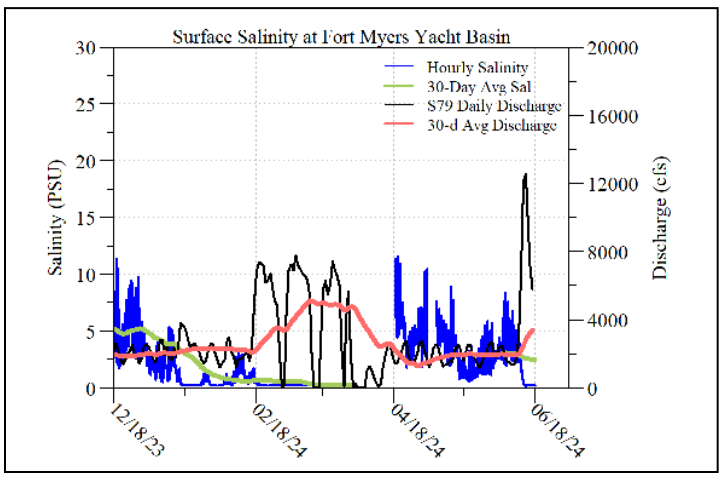
Water Quality Conditions:

Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	0.2 – 0.3 [0.2 – 0.5]	0.4 – 4.8	117 – 182	7.8	81.5 – 91.7
Fort Myers Yacht Basin	0.2 – 4.8 [2.0 – 8.6]	2.8– 6.0	108 – 163	5.0	81.6 – 90.6
Shell Point	1.8 – 33 [17 – 34]	3.9 – 7.4	27.0 – 150	1.6	81.8 – 90.2
McIntyre Creek	19.4 – 34.1 [27.9 – 31.6]	1.8 – 11.0	20.4 – 65.3	1.4 – 9.1	81.4 – 89.8
Tarpon Bay	19.9 – 35.3 [30.4 – 34.5]	2.7 – 7.4	14.1 – 74.2	1.2 – 11.4	81.5 – 89.2
Wulfert Flats	18.8 – 32.8 [29.4 – 31.0]	2.3 – 9.1	-------	2.5 – 33.5	82.0 – 90.0

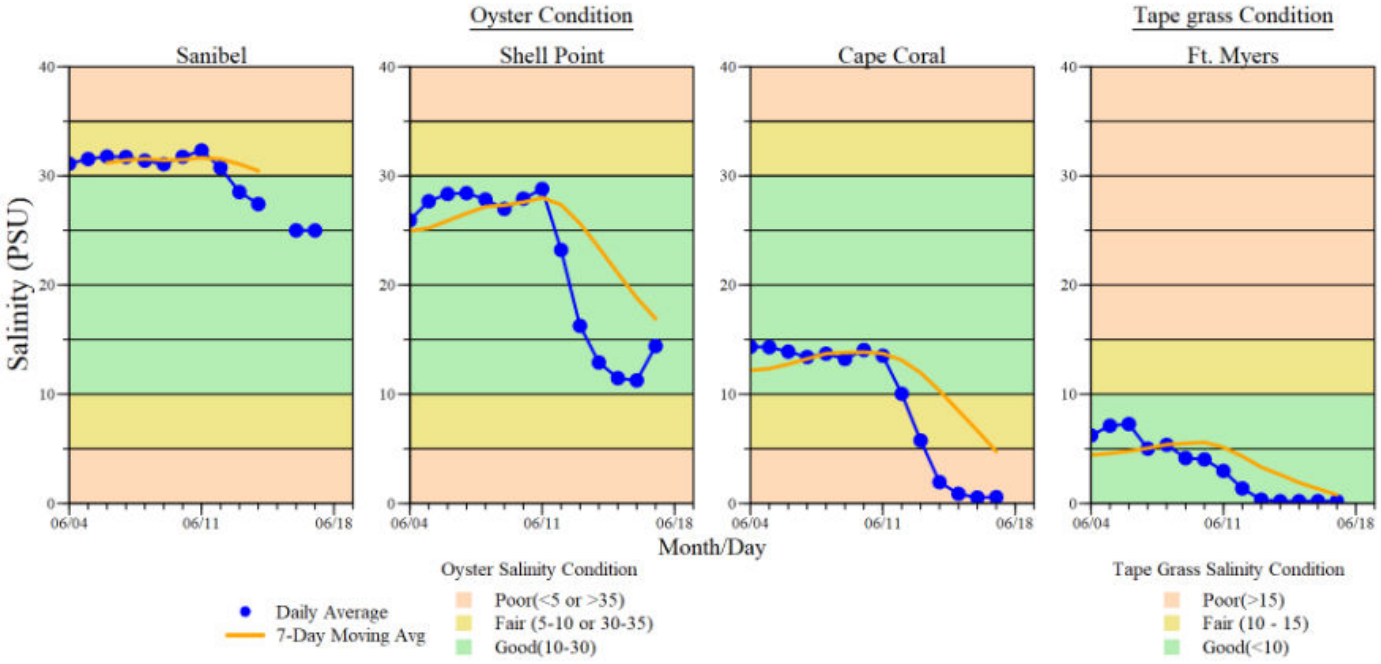
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single sonde lower and surface layer or surface grab lab measurement
------- no data

Wildlife Impacts: In the past week, the CROW wildlife hospital on Sanibel admitted 0 patients with suspected red tide/ toxicosis.

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1) is **CLOSED** by the Florida Department of Agriculture and Consumer Services (FDACS) as of 6/10/24 as a precautionary closure due to increased HAB cell counts. SHA's 6222 (Pine Island Sound Section 2) and 6232 (Pine Island Sound Section 3) are **CLOSING** as of 6/13/24 due to rainfall.



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
6/11/24	2807	1539	694
6/12/24	6680	2662	236
6/13/24	12168	4293	0
6/14/24	12569	5266	0
6/15/24	9286	4750	0
6/16/24	7142	3746	0
6/17/24	5814	3215	33
7-day avg	8067	3639	138



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.

*Ft. Myers sensor is in the lower strata

Large concentrations of *Halophila* and *Hypnea* at Bunche Beach, Fort Myers on 6/13/24.

Water clarity at Lighthouse Beach Park on 6/17 at 1:53 PM on a falling tide (1.2 ft).