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: **May 7- 13, 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 **1,603 cfs** at **S-79** with a 7-day average of **1,933 cfs (100%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 1,825 cfs and has been in the optimum flow envelope** (750 – 2,100 cfs) for **28 days**. The 14-day average flow at S-77 was **2,037 cfs.**

Recommendation: On April 13, The Army Corps began targeting a 7-day average pulse release schedule of 2,000 cfs at W.P. Franklin Lock and Dam (S-79) and 0 cfs St. Lucie Lock and Dam (S-80). 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 recommend the Corps develop and implement a long-term strategy, equitable to all stakeholders, to decrease lake levels.

USACE Action: With Lake Okeechobee stage within the Low Sub-band, the Tributary Hydrologic Conditions in the Normal category, the Seasonal Lake Okeechobee Net Inflow outlook in the Wet category, and the Multi-Seasonal Lake Okeechobee Net Inflow Outlook in the Wet category, Part D of the 2008 LORS suggests "S-79 up to 3,000 cfs and S-80 up to 1,1170 cfs." On 4/13/24 the USACE began targeting a 7-day average pulse release schedule of 2,000 cfs at W.P. Franklin Lock and Dam (S-79) and 0 cfs St. Lucie Lock and Dam (S-80).

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **56,337 AF*** with **15,313 AF** to the Caloosahatchee through **S-77**, **18 AF** to the St. Lucie canal through **S-308**, **1,211 AF** through the **L8 canal**, and **39,795 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **4,953 AF** (**4,953 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **997 AF**, **7,066 AF**, and **129 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **3,467 AF.**
***Data missing for S-77 from 5/11- 5/13, S-78 on 5/13, S-310 from 5/7- 5/13, S-354 from 5/10- 5/11 and S-80 from 5/8- 5/9.**

Lake Level: 13.77 ft (Low Sub-Band) **Last Week**: **14.06 ft** **Last Year: 13.95 ft**

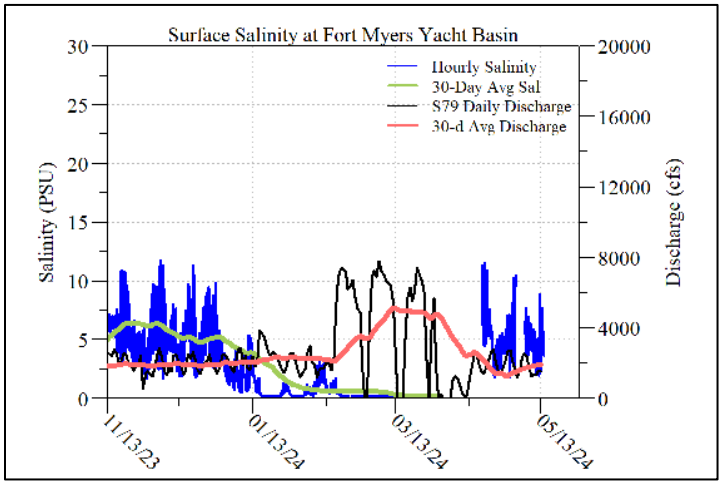
7-Day Lake Recession Rate: -0.29 ft/week

Lake Okeechobee Inflow: 257 cfs **Lake Okeechobee Outflow: 2,412 cfs**

Weekly Rainfall Total: **WP Franklin: 0.00"** **Ortona: 0.00"** **Moore Haven: 0.30"**

Cyanobacteria Status: On 5/13/24 sampling for cyanobacteria by the Lee County Environmental Lab reported **moderately abundant** *Microcystis* and *Dolichospermum* upstream of the **Franklin Locks** as streaks with some accumulation along the lock/ shore. *Microcystis* and *Dolichospermum* were **present** at the **Alva Boat Ramp,** appearing as specks.

Red Tide: On 5/10/24, the FWC reported that the red tide organism, *Karenia brevis*, was not observed in samples collected statewide over the past week.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	0.8	> 1	2.2	< 18
Shell Point	1.3	>2.2	1.0	< 18
Causeway	3.5	> 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 5.2 psu, within the suitable range for tape grass.

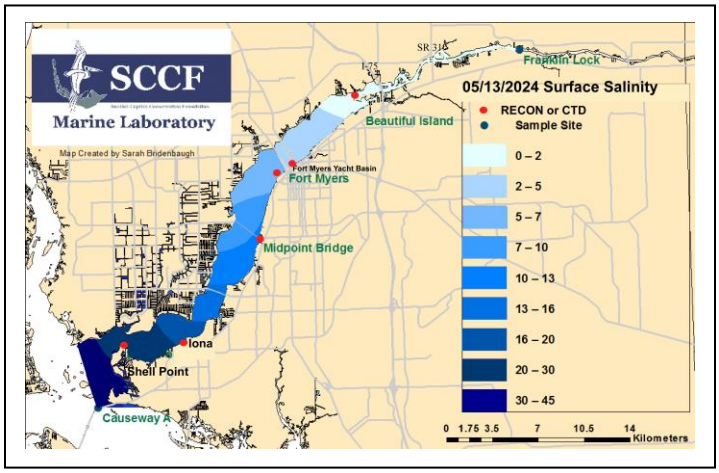
Lower Estuary Conditions: The average salinity at Shell Point RECON was 28 psu, in the optimal range for oysters and seagrass.

Water Quality Conditions:

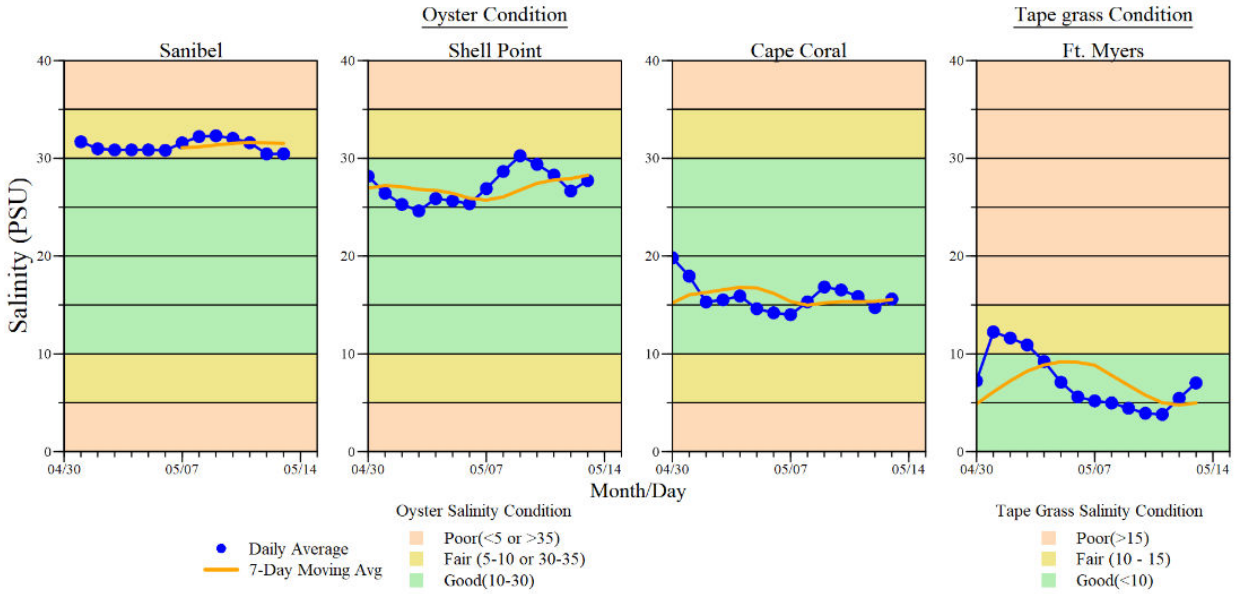
Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	0.4 – 0.7 [0.3- 1.1]	3.6 - 8.2	134 – 142	7.1	81.6 - 90.0
Fort Myers Yacht Basin	2.0 – 9.1 [ND]	3.2 - 7.8	116 – 139	4.7	83.4 - 87.9
Shell Point	17 – 34 [16 – 34]	4.7 – 7.2	27.5 – 128	1.4	82.1 – 87.0
McIntyre Creek	31.2 – 33.8 [30.7 – 32.3]	2.5 – 9.8	26.0 – 71.3	1.3 – 4.4	82.3 – 88.9
Tarpon Bay	32.2 – 35.2 [30.4 – 32.8]	-------	10.9 – 58.4	0.7 – 1.8	82.9 – 87.3
Wulfert Flats	31.6 – 33.4 [31.4 – 32.2]	-------	-------	0.6 – 4.9	82.9 – 88.5

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
[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 2 patients with suspected red tide/toxicosis: 1 adult great egret and 1 juvenile double-crested cormorant (both still in care).



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
5/7/2024	2383	1902	2476
5/8/2024	1799	1336	2020
5/9/2024	1237	1033	1551
5/10/2024	1339	1030	1684
5/11/2024	1353	1239	NR
5/12/2024	1591	1337	NR
5/13/2024	1521	1348	NR
7-day avg	**1603**	**1318**	**1933**



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