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 & Leah Reidenbach - Sanibel-Captiva Conservation Foundation
In coordination with Lee County

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **April 30 – May 6, 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 **2,047 cfs** at **S-79** with a 7-day average of **1,988 cfs (97%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 2,039 cfs and has been in the optimum flow envelope** (750 – 2,100 cfs) for **21 days**. The 14-day average flow at S-77 was **2,090 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). While we are supportive of this decision, we remain concerned with the high lake stage, the efficacy of the dry season strategy to reduce lake levels, and the potential for high-volume releases this summer/ fall. We ask the Army Corps to remain reactive to changing conditions in Lake Okeechobee and the Caloosahatchee River and estuary, and adjust flows as needed 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 Normal category, and the Multi-Seasonal Lake Okeechobee Net Inflow Outlook in the Normal category, Part D of the 2008 LORS suggests "S-79 up to 450 cfs and S-80 up to 200 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 **56,490 AF*** with **27,732 AF** to the Caloosahatchee through **S-77**, **0 AF** to the St. Lucie canal though **S-308**, **1,254 AF** though the **L8 canal**, and **27,504 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **7,990 AF** (**7,990 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **232 AF**, **6436 AF**, and **216 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **5,685 AF.**
***Data missing for S-310 from 4/30- 5/6, S-78 on 4/30 & 5/2, S-351 on 4/30, and S-80 on 5/3 & 5/6.**

Lake Level: 14.06 ft (Low Sub-Band) **Last Week**: **14.28 ft** **Last Year: 14.16 ft**

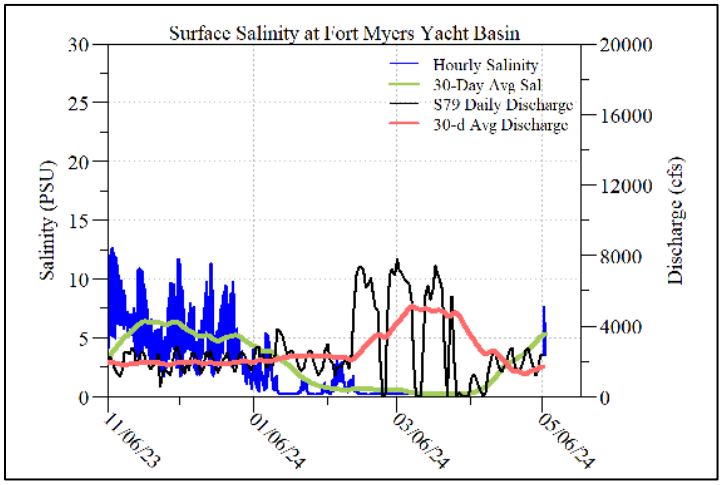
7-Day Lake Recession Rate: -0.22 ft/week

Lake Okeechobee Inflow: 504 cfs **Lake Okeechobee Outflow: 4,272 cfs**

Weekly Rainfall Total: **WP Franklin: 0.26"** **Ortona: 0.00"** **Moore Haven: 0.20"**

Cyanobacteria Status: On 5/6/24 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* was **present** at the **Alva Boat Ramp** and **Davis Boat Ramp**, appearing as specks.

Red Tide: On 5/3/24, 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	2.6	< 18
Shell Point	1.3	>2.2	1.2	< 18
Causeway	3.5	> 2.2	3.0	< 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 4.5 psu, within the suitable range for tape grass.

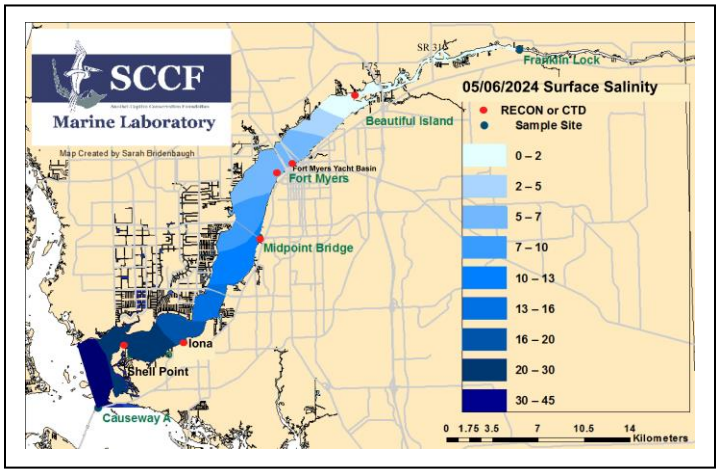
Lower Estuary Conditions: The average salinity at Shell Point RECON was 27 psu, in the optimal range for oysters and seagrass.

Water Quality Conditions:

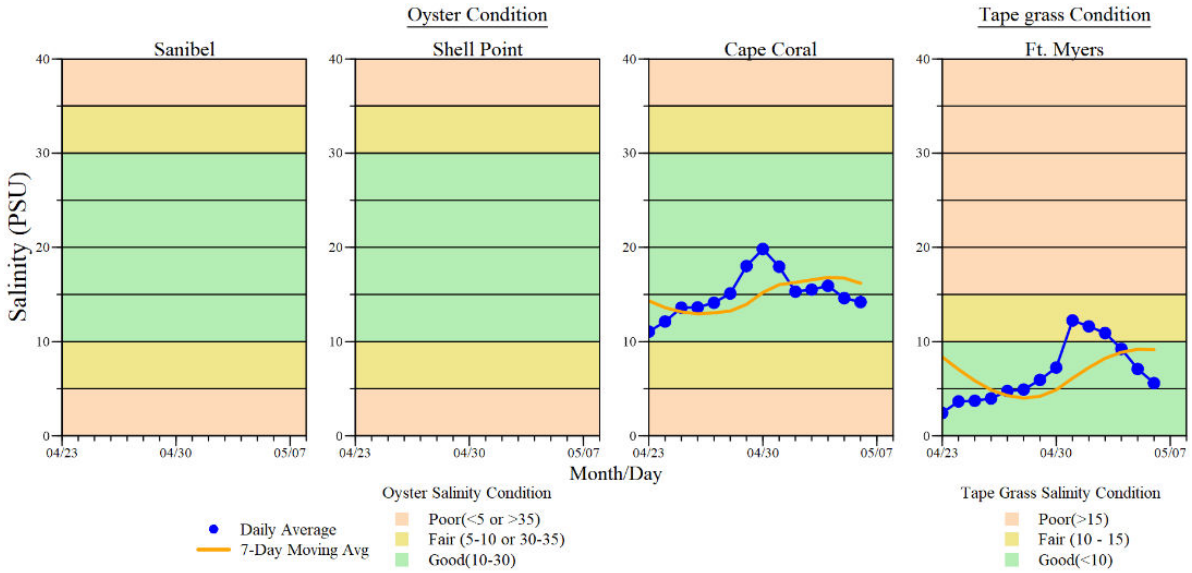
Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	0.3- 1.1 [0.3- 0.9]	-------	133 – 149	7.8	77.3 – 84.8
Fort Myers Yacht Basin	ND [1.8 – 7.2]	-------	93.5 – 138	5.4	ND
Shell Point	16 – 34 [15 – 34]	5.4 – 8.3	27.5 – 128	1.2	75.6 – 84.6
McIntyre Creek	30.7 – 32.3 [30.2 – 33.8]	2.2 – 12.8	38.0 – 70.3	1.1 – 2.9	76.3 – 88.4
Tarpon Bay	30.4 – 32.8 [30.6 – 34.5]	1.4 – 7.1	21.5 – 37.1	0.8 – 2.5	77.1 – 86.3
Wulfert Flats	31.4 – 32.2 [-------]	-------	-------	2.3 – 16.0	77.0 – 87.3

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 3 patients with suspected red tide/toxicosis: 1 adult ruddy turnstone (deceased), 1 adult laughing gull (deceased) and 1 juvenile double-crested cormorant (still in care).



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
4/30/24	2738	2106	2855
5/1/24	2158	1499	2065
5/2/24	1717	1315	1750
5/3/24	1195	810	1298
5/4/24	1609	1058	1287
5/5/24	2352	1735	2196
5/6/24	2558	1913	2468
7-day avg	**2047**	**1491**	**1988**



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

Floating mats of *Dapis pleousa* near the west side of Pine Island.

Water clarity at Lighthouse Beach Park on 5/6/24 at 2:08 PM on a falling tide (2 ft).