

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 21- 27, 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 **1,717 cfs** at **S-79** with a 7-day average of **1,962 cfs (114%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 1,972 cfs and has been in the optimum flow envelope** (750 – 2,100 cfs) for **43 days**. The 14-day average flow at S-77 was **2,021 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 Dry 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 **72,714 AF*** with **27,261 AF** to the Caloosahatchee through **S-77**, **35 AF*** to the St. Lucie canal through **S-308**, **1,071 AF** through the **L8 canal**, and **44,347 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **3,368 AF (3,368 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **0 AF**, **1,550 AF**, and **351 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **547 AF**.
*Data missing for S-310 from 5/21- 5/27 and S-354 from 5/21- 5/22.

Lake Level: 13.19 ft (Low Sub-Band)

Last Week: 13.52 ft

Last Year: 13.90 ft

7-Day Lake Recession Rate: -0.33 ft/week

Lake Okeechobee Inflow: 194 cfs

Lake Okeechobee Outflow: 5,089 cfs

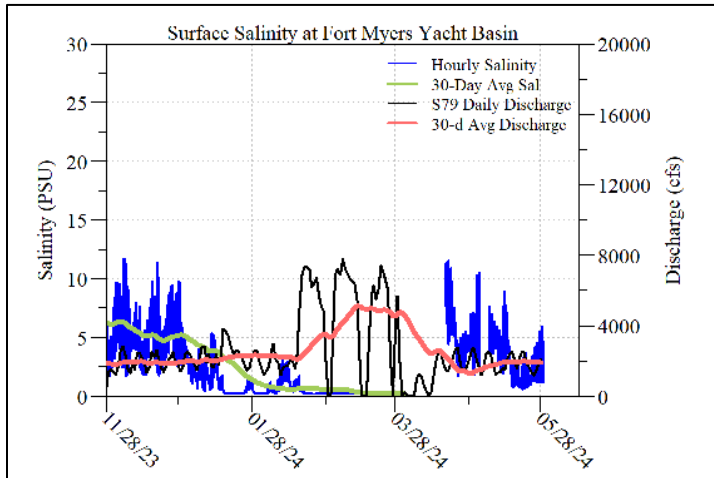
Weekly Rainfall Total: WP Franklin: 0.37"

Ortona: 0.00"

Moore Haven: 0.00"

Cyanobacteria Status: On 5/28/24, sampling for cyanobacteria by the Lee County Environmental Lab reported **moderately abundant** *Dolichospermum*, *Microcystis* and cyano filaments at the **Alva Boat Ramp** as streaks and some small clumps and upstream of the **Franklin Locks** as streaks with some accumulation along the lock. Some streaks of *Dolichospermum* and *Microcystis* were present at the **Davis Boat Ramp**.

Red Tide: On 5/24/24, 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% I _z	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	0.8	> 1	5.0	< 18
Shell Point	1.3	>2.2	1.1	< 18
Causeway	3.4	> 2.2	2.0	< 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.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was 4.1 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	0.2 – 0.3 [0.2 – 0.6]	2.7 – 6.5	130 – 138	7.5	87.2 - 91.9
Fort Myers Yacht Basin	0.8 – 5.7 [0.6 – 7.9]	2.4 - 7.6	111 – 137	7.5	84.8 - 89.7
Shell Point	16 – 34 [16 – 34]	4.8 – 7.8	25.0 – 120	1.6	84.6– 89.4
McIntyre Creek	-----	-----	-----	-----	-----
Tarpon Bay	-----	-----	-----	-----	-----
Wulfert Flats	-----	-----	-----	-----	-----

Red values are outside of the preferred range.

^a Salinity target values: BI < 5, FM < 10, SP = 10 – 30

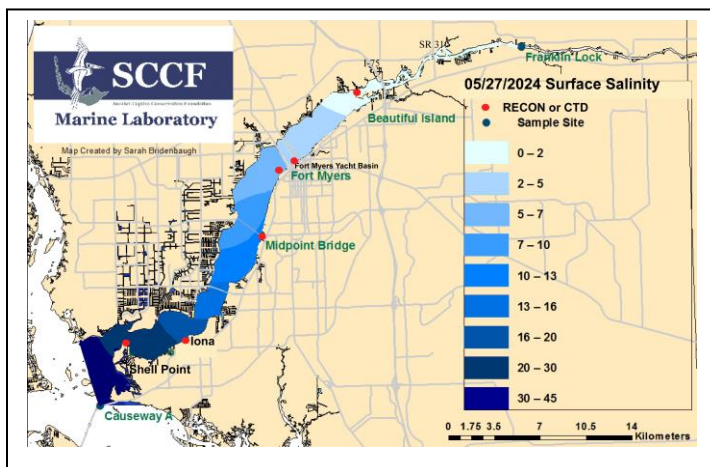
^b Dissolved O₂ target values: all sites > 4

^c FDOM target values: BI < 70, FM < 70, SP < 11

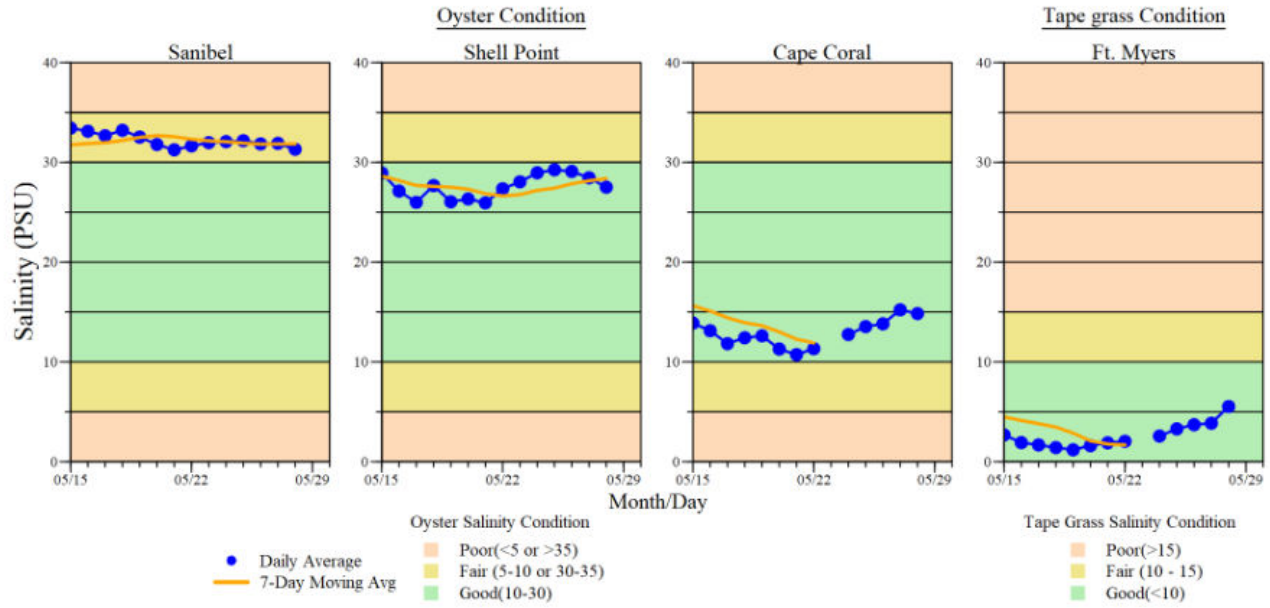
^d Chlorophyll target values: BI < 11, FM < 11, SP < 11

^s Single sonde lower and surface layer or surface grab lab measurement

----- no data



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
05/21/24	2538	2066	2560
05/22/24	1913	1583	2179
05/23/24	1681	1350	1885
05/24/24	1391	1031	1839
05/25/24	1176	1127	1615
05/26/24	1505	1316	1818
05/27/24	1813	1320	1839
7-day avg	1717	1399	1962



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



Water clarity at Lighthouse Beach Park on 5/30 at 1:08 PM on a rising tide (1.6 ft).