MEMORANDUM

To: USACE Colonel Brandon L. Bowman, Major Cory Bell, Richard McMillen, SFWMD Governing Board, Executive Director Drew Bartlett, Jennifer Reynolds, Lawrence Glenn, DEP Secretary Alexis Lambert

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
Allie Pecenka, Rick Bartleson PhD & Matt Depaolis- Sanibel-Captiva Conservation Foundation

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **March 25- 31, 2025**

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 **1,446 cfs** at **S-79** with a 7-day average of **1,507 cfs** coming from the lake at **S-77. The 14-day moving average flow at S-79 was 1,598 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **20 days**. **The 14-day moving average flow at S-77 was 1,563 cfs.**

Recommendation: We ask the USACE to structure releases to the Caloosahatchee to maintain average daily salinities within the RECOVER 2020 optimum salinity envelopes for oysters (10–25 psu), shoal grass (15-45 psu), and tape grass (0-9 psu). In addition to maintaining appropriate salinities throughout the river & estuary, these flows will allow for the continued recession of Lake Okeechobee, furthering the goals outlined in lake recovery operations.

USACE Action: Lake Okeechobee stage is in the lower portion of Zone D (Zone D3 of the PA25 simulation) of the LOSOM regulation schedule. The current climate outlook is for La Niña and ENSO-neutral is favored to develop in April. The District has been monitoring conditions in the estuaries given the initiation of the spawning season. As such, the District recommends that USACE should continue non-harmful Recovery Operations for Lake Okeechobee as described in LOSOM and implement a reduction in flows to the estuaries. It is recommended that flow targets for the Caloosahatchee Estuary should be 1,400 cfs, flow targets for the St. Lucie Estuary should be stepped down to 0 cfs, and the flow target for the Lake Worth Lagoon should be 0 cfs. The District will continue to monitor water supply conditions throughout the system as the dry season progresses. The USACE should continue to track Red Tide and Blue Green Algae conditions, and should conditions change during this operational period, the USACE should look to reassess releases as needed.

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **64,324 AF** with **18,199 AF** to the Caloosahatchee through **S-77**, **3,603 AF** to the St. Lucie canal through **S-308** and **42,522 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **3,972 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1. Water conservation areas received flows of **89 AF**, **123 AF**, and **4,610 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **367 AF.**
***Data missing from S-310 and L-8 from 3/25/25- 3/31/25 and from S-77 on 3/31/25.**

Lake Level: 12.56 (Zone D3) **Last Week**: **12.83 ft** **Last Year: 15.22**

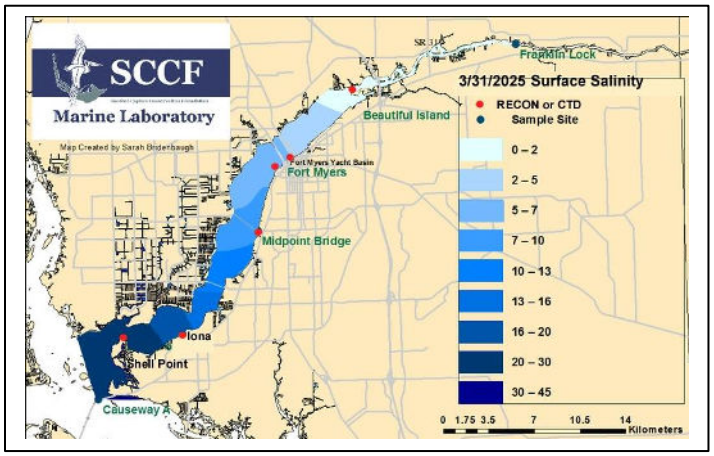
7-Day Lake Recession Rate: -0.27 ft/week

Lake Okeechobee Inflow: 276 cfs **Lake Okeechobee Outflow: 3,833 cfs**

Weekly Rainfall Total: **WP Franklin: 0.10"** **Ortona: 1.22"** **Moore Haven: 0.89"**

Cyanobacteria Status: On 3/31/25, sampling for cyanobacteria by the Lee County Environmental Lab reported **sparse specks** of *Microcystis* and *Aphanizomenon* at the Davis Boat Ramp.

Red Tide: On 3/28/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected at background concentrations in only one sample from Northwest Florida. In Southwest Florida over the past week, *K. brevis* was **not observed.**



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.8	> 1	4.0	< 18
Shell Point	1.7	>2.2	2.6	< 18
Causeway	3.8	> 2.2	2.0	< 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 2.1 psu, in the range for tape grass.

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

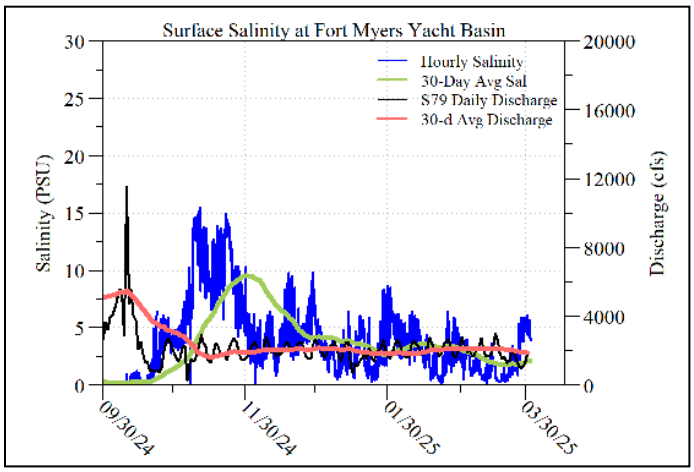
Water Quality Conditions:

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 -1.7 [0.3- 0.3]	3.7 – 6.9	135	6.8	75.6 - 83.7
Fort Myers Yacht Basin	0.9 - 6.3 [0.5 - 3.8]	ND	ND	ND	72.1– 79.2
Shell Point	16 - 34 [15 - 33]	5.3 – 6.9	60	1.3	70.8– 77.6
McIntyre Creek	30.8 – 33.5 [31.5 – 34.5]	2.2 – 6.0	20.0 – 40.6	0.9 – 1.9	71.2 – 81.6
Tarpon Bay	30.6 – 35.1 [29.6 – 35.0]	3.2 – 8.5	6.5 – 20.5	0.9 – 2.0	71.5 – 80.5
Wulfert Flats	31.6 – 34.5 [ND]	4.6 – 8.4	-------	1.5 – 9.8	71.8 – 81.1

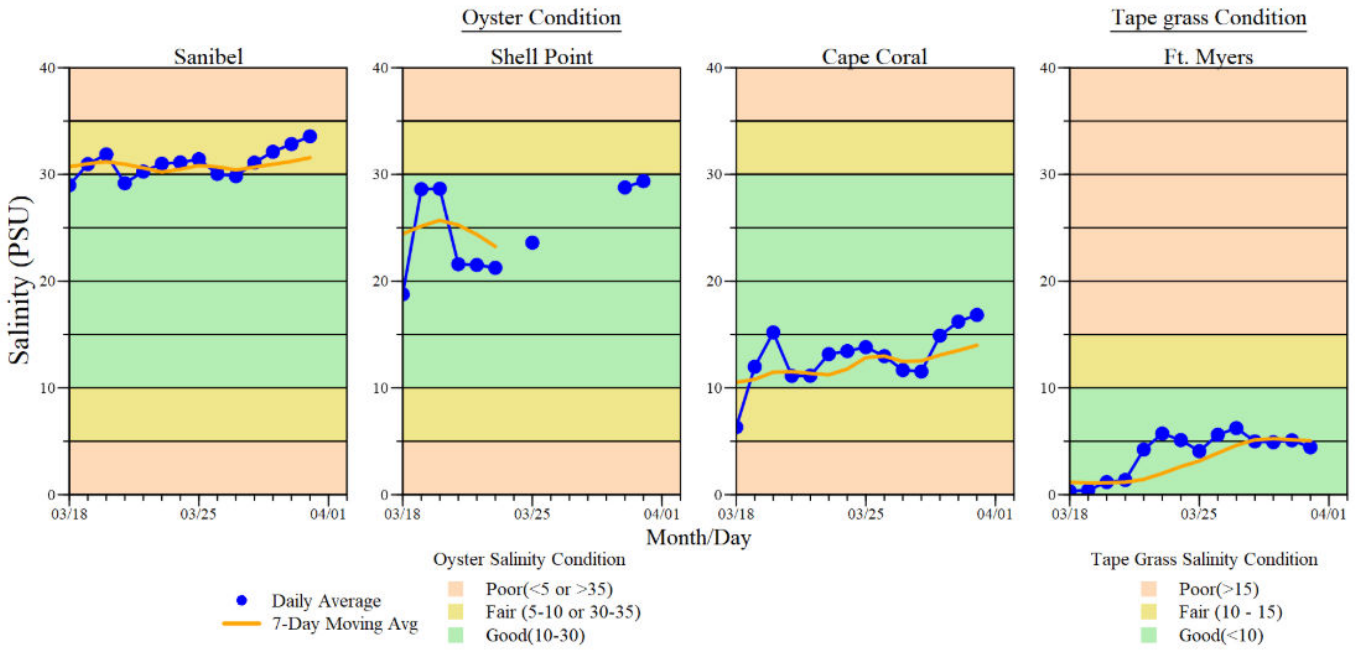
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single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

Wildlife Impacts: In the past week, the CROW wildlife hospital on Sanibel admitted **4 patients** with suspected red tide/toxicosis: 1 adult royal tern (deceased), 2 adult brown pelicans (still in care) and 1 juvenile bald eagle (deceased).

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1; Aquaculture Lease and Public Reef) is **CLOSED** by the Florida Department of Agriculture and Consumer Services (FDACS) due to the presence of *Karenia brevis* as of 11/06/24. SHA #6222 (North Matlacha Pass) is **OPEN** as of 3/13/25. SHA #6232 (South Matlacha Pass) is **OPEN** as of 3/21/25.



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
3/25/25	1989	1576	2217
3/26/25	1536	1218	2028
3/27/25	1156	902	1402
3/28/25	974	831	1254
3/29/25	1097	828	1167
3/30/25	1404	1097	1101
3/31/25	1965	1621	1381
7-day avg	**1446**	**1153**	**1507**



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 3-31-25 at 1:50 PM on a slack tide (3.2 ft).