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: **February 25- March 3, 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 **2,220 cfs** at **S-79** with a 7-day average of **1,442 cfs (65%)** coming from the lake at **S-77. The 14-day moving average flow at S-79 was 2,177 cfs** and has been in the **stress flow envelope** (2,100- 2,600 cfs; RECOVER 2020) for 12 days after 5 days in the **optimum flow envelope** (750- 2,100 cfs). **The 14-day moving average flow at S-77 was 1,588 cfs.**

Recommendation: We ask the USACE to structure recovery flows to the CRE in a format that will benefit the ecology of the ecosystems and align with RECOVER 2020 optimum flow targets of 750- 2,100 cfs measured at S-79. We also ask that the USACE continue to monitor the proximity of active algal blooms to Southwest Florida in their decision-making processes.

USACE Action: Lake Okeechobee stage is in the middle third of Zone D (Zone D2 of the PA25 simulation) of the LOSOM regulation schedule. The current climate outlook is for La Niña and is expected to persist in the near-term. The District will continue to monitor conditions in the estuaries in anticipation of the onset of spawning season. The District recommends the USACE should continue non-harmful Recovery Operations for Lake Okeechobee as described in LOSOM while looking to implement potential reductions in flows starting in March of this year based on estuarine conditions and climate forecasts. 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 **42,965 AF** with **20,120 AF** to the Caloosahatchee through **S-77**, **8,815 AF** to the St. Lucie canal through **S-308** and **14,030 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **10,212 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1. Water conservation areas received flows of **246 AF**, **-1,740 AF**, and **9,409 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **3,132 AF.**
***Data missing from S-310 and L-8 from 2/25/25- 3/3/25.**

Lake Level: 13.70 (Zone D2) **Last Week**: **13.73 ft** **Last Year: 16.11**

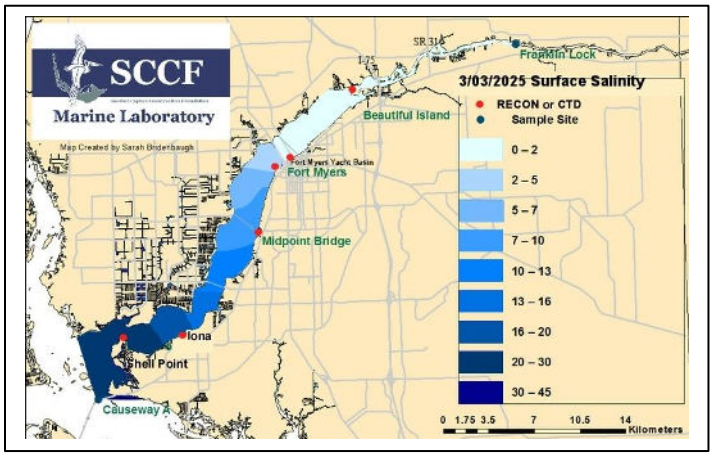
7-Day Lake Recession Rate: -0.03 ft/week

Lake Okeechobee Inflow: 653 cfs **Lake Okeechobee Outflow: 4,341 cfs**

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

Cyanobacteria Status: On 3/3/25, sampling for cyanobacteria by the Lee County Environmental Lab reported *Microcystis* and *Dolichospermum* as **present upstream of the Franklin Locks**, appearing as light streaks with some accumulation along the seawall.

Red Tide: On 2/28/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected in 46 samples collected from Florida's Gulf Coast. In Southwest Florida, *K. brevis* was observed at background to very low concentrations in and offshore of Pinellas County, background to low concentrations in and offshore of Hillsborough County, background to low concentrations in and offshore of Manatee County, background to low concentrations offshore of Sarasota County, background to very low concentrations in and offshore of Charlotte County, **background concentrations in Lee County**, and background concentrations offshore of Monroe County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.8	> 1	4.5	< 18
Shell Point	1.5	>2.2	1.8	< 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 2.8 psu, in the range for tape grass.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was 24 psu, in the optimal range for oysters but below optimal for seagrass. Phytoplankton biomass was low and small *Skeletonema* chains were the dominant phytoplankton in SCCF's beach samples during the week.

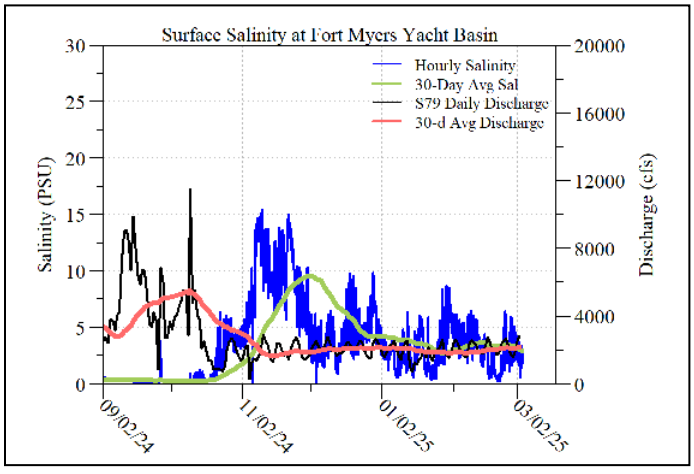
Water Quality Conditions:

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 - 0.5 [0.2 - 0.3]	ND	135	6.0	74.0 - 78.9
Fort Myers Yacht Basin	0.8- 5.1 [0.2- 6.6]	ND	ND	ND	68.9 – 74.8
Shell Point	16 – 32 [12 - 32]	6.4 – 7.5	85	2.7	68.8– 73.0
McIntyre Creek	27.4 – 30.7 [27.7 – 33.4]	2.9 – 5.6	33.9 – 53.9	1.0 – 2.0	66.8 – 74.6
Tarpon Bay	27.4 – 30.2 [25.8 – 33.8]	5.6 – 8.5	29.2 – 73.1	0.8 – 3.4	67.4 – 73.7
Wulfert Flats	ND [ND]	ND	-------	ND	ND

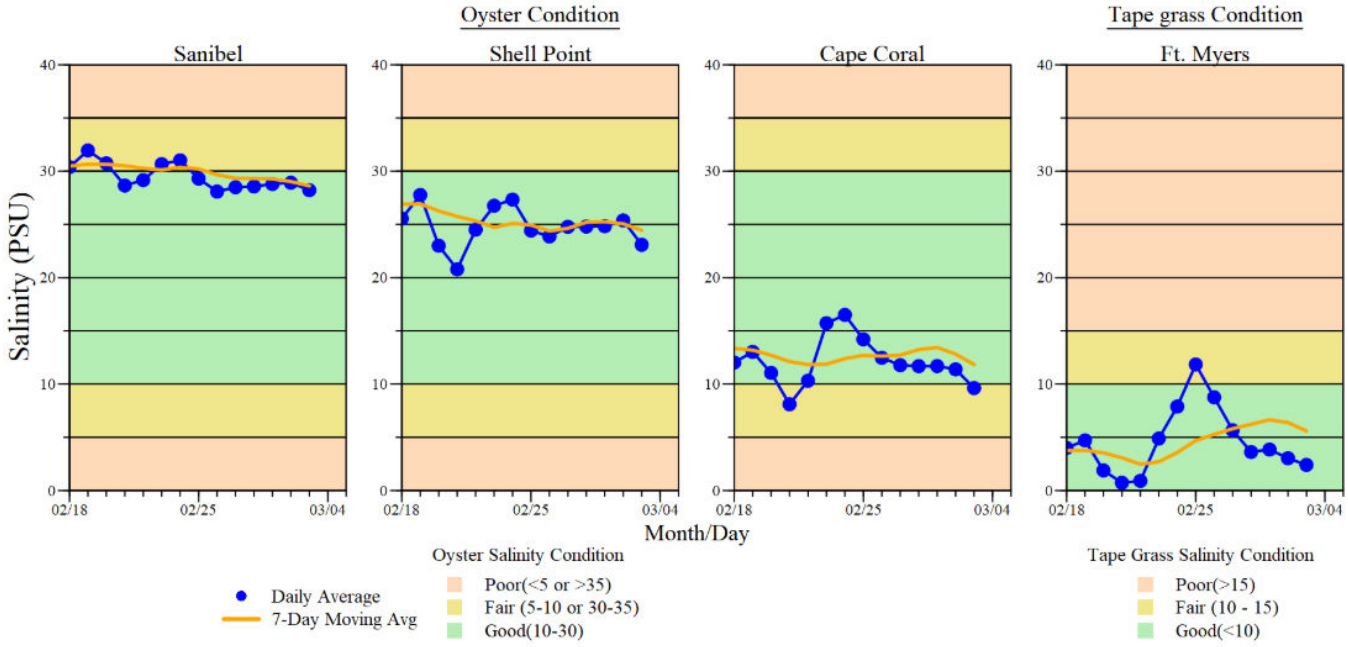
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single 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 **10 patients** with suspected red tide/toxicosis: 1 adult sandwich tern (deceased), 4 juvenile double-crested cormorants (1 deceased, 3 still in care), 4 adult royal terns (2 deceased, 2 still in care) and 1 juvenile royal tern (still in care).

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1; Aquaculture Lease and Public Reef) is **CLOSED** due to the presence of *Karenia brevis* as of 11/06/24. SHA #6222 (North Matlacha Pass) and SHA #6232 (South Matlacha Pass) are **CLOSED** by the Florida Department of Agriculture and Consumer Services (FDACS) due to the presence of *Karenia brevis* as of 1/30/25.



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
2/25/25	2687	1858	1276
2/26/25	2228	1625	1288
2/27/25	1735	1108	1166
2/28/25	1619	1033	874
3/1/25	1972	1193	1198
3/2/25	2512	1829	1865
3/3/25	2787	1924	2426
7-day avg	**2220**	**1510**	**1442**



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 3-3-25 at 1:45 PM on a slack tide (2.5 ft).