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 18- 24, 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 **2,133 cfs** at **S-79** with a 7-day average of **1,734 cfs (81%)** coming from the lake at **S-77. The 14-day moving average flow at S-79 was 2,146 cfs** and has been in the stress flow envelope (2,100- 2,600 cfs; RECOVER 2020) for 5 days after 5 days in the **optimum flow envelope** (750- 2,100 cfs). **The 14-day moving average flow at S-77 was 1,683 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 through February-April 2025. 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 **54,563 AF** with **24,126 AF** to the Caloosahatchee through **S-77**, **8,682 AF** to the St. Lucie canal through **S-308** and **21,755 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **8,481 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1. Water conservation areas received flows of **1,929 AF**, **-1,722 AF**, and **9,143 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **4,281 AF.**
***Data missing from S-310 and L-8 from 2/18/25- 2/24/25.**

Lake Level: 13.73 (Zone D2) **Last Week**: **14.04 ft** **Last Year: 16.28**

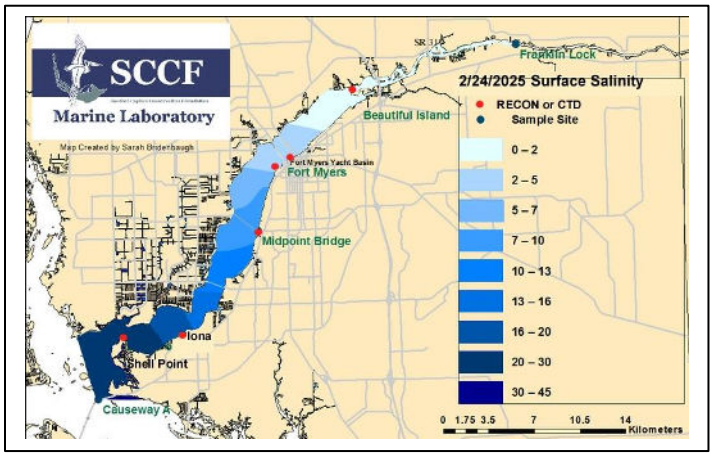
7-Day Lake Recession Rate: -0.31 ft/week

Lake Okeechobee Inflow: 429 cfs **Lake Okeechobee Outflow: 2,790 cfs**

Weekly Rainfall Total: **WP Franklin: 1.64"** **Ortona: 1.25"** **Moore Haven: 1.37"**

Cyanobacteria Status: On 2/24/25, sampling for cyanobacteria by the Lee County Environmental Lab reported no visible cyanobacteria across all sites.

Red Tide: On 2/21/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected in 37 samples collected from Florida over the past week. In Southwest Florida, *K. brevis* was observed at background to very low concentrations in Pinellas County, very low and low concentrations in Hillsborough County, background to low concentrations in and offshore of Manatee County, background to high concentrations in and offshore of Sarasota County, background and low concentrations offshore of Charlotte County, background concentrations offshore of Collier County, and background to medium concentrations offshore of Monroe County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.8	> 1	4.3	< 18
Shell Point	1.6	>2.2	1.8	< 18
Causeway	3.3	> 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 3.2 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. Small diatoms and the dinoflagellate *Blixaea* were the dominant phytoplankton in SCCF's inshore and beach samples during the week.

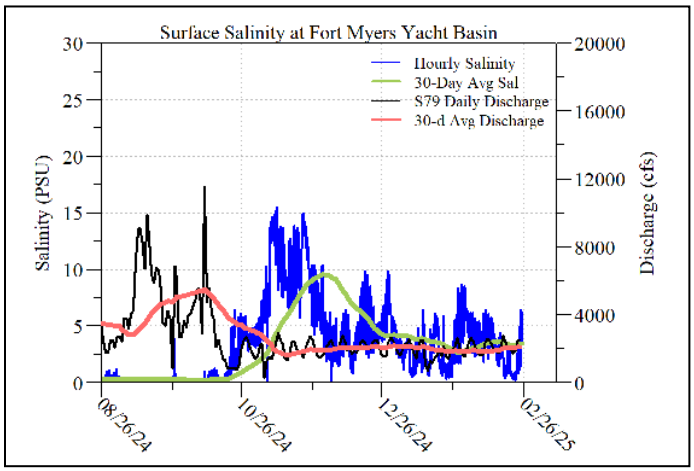
Water Quality Conditions:

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 - 0.3 [0.2 - 0.3]	ND	140	7.0	70.6 - 79.2
Fort Myers Yacht Basin	0.2- 6.6 [0.4- 5.8]	ND	ND	ND	64.1 – 76.5
Shell Point	12 - 32 [16 - 32]	5.6 – 7.2	60	2.08	66.8– 77.5
McIntyre Creek	27.7 – 33.4 [28.9 – 33.6]	3.4 – 6.2	23.0 – 47.8	1.1 – 2.2	63.5 – 77.4
Tarpon Bay	25.8 – 33.8 [28.7 – 34.4]	5.5 – 8.7	17.2 – 94.7	0.9 – 1.9	64.9 – 76.2
Wulfert Flats	ND [29.5 – 32.7]	ND	-------	ND	ND

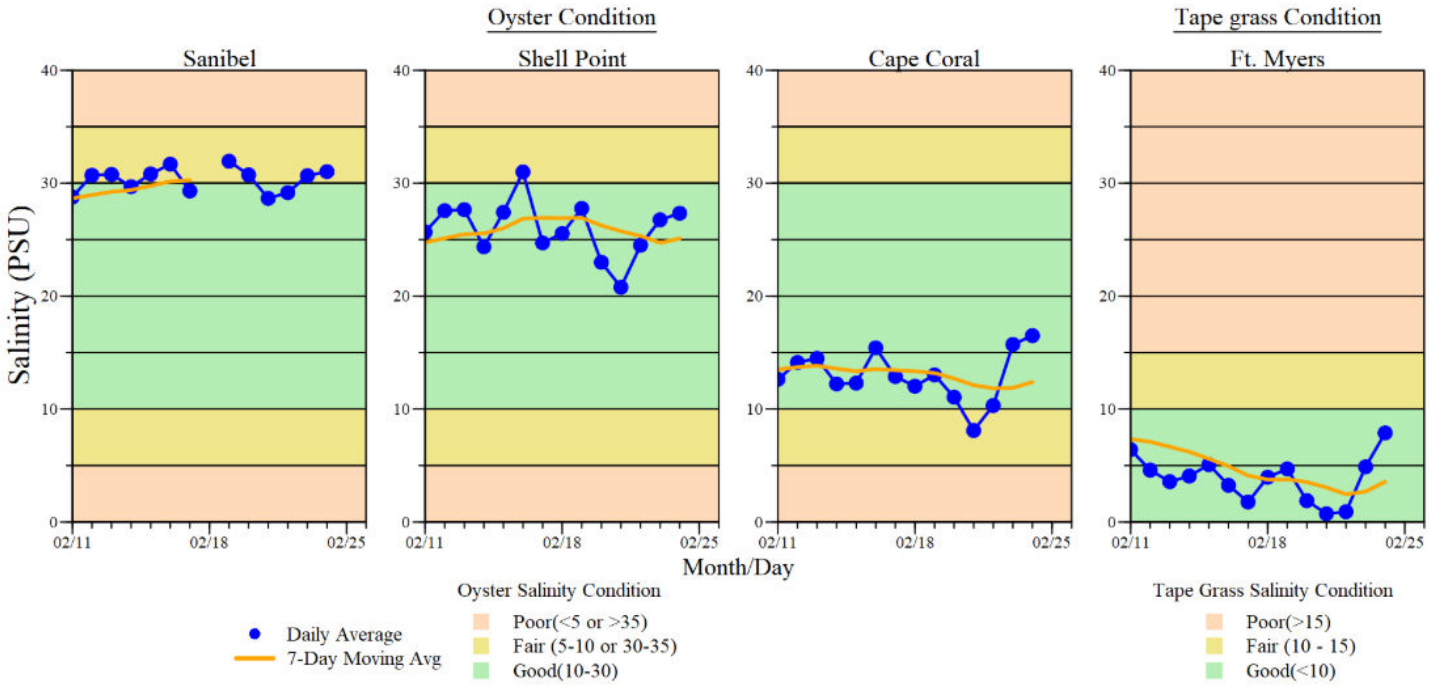
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single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

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) as a precautionary closure 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)
2/18/25	2374	2039	1886
2/19/25	1964	1745	1920
2/20/25	2074	1261	1458
2/21/25	1722	1204	1429
2/22/25	1877	1385	1776
2/23/25	2397	1611	1857
2/24/25	2526	1855	1812
7-day avg	**2133**	**1586**	**1734**



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