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
With contributions from Harry Phillips & Maya Robert - City of Cape Coral

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **April 15- 21, 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 **818 cfs** at **S-79** with a 7-day average of **1,243 cfs** (100%) coming from the lake at **S-77. The 14-day moving average flow at S-79 was 1,081 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **34 days**. **The 14-day moving average flow at S-77 was 1,337 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). The weekly average salinity collected at Shell Point was 29 psu, above the optimal range for oysters, and we are concerned about maintaining the required salinities for the estuary with the current schedule of a 650 cfs pulse.

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 recognizing that there is a higher chance to achieve Recovery targets. To maintain favorable salinity levels in the estuaries and begin to conserve water, it is recommended that flow targets for the Caloosahatchee Estuary should be 650 cfs, flow targets for the St. Lucie Estuary should remain at 0 cfs, and the flow target for the Lake Worth Lagoon should remain at 0 cfs. The District will continue to monitor salinity conditions in the estuaries and water supply conditions throughout the system as the dry season progresses to assess future operational recommendations.

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **59,116 AF** with **17,250 AF** to the Caloosahatchee through **S-77**, **3,174 AF** to the St. Lucie canal through **S-308** and **38,692 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **3,954 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1. Water conservation areas received flows of **161 AF**, **1,639 AF**, and **549 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **220 AF.**
***Data missing from S-310 and L-8 from 4/15/25- 4/21/25 and from S-80 from 4/17/25- 4/18/25.**

Lake Level: 11.75 (Zone D3) **Last Week**: **12.08 ft** **Last Year: 14.64 ft**

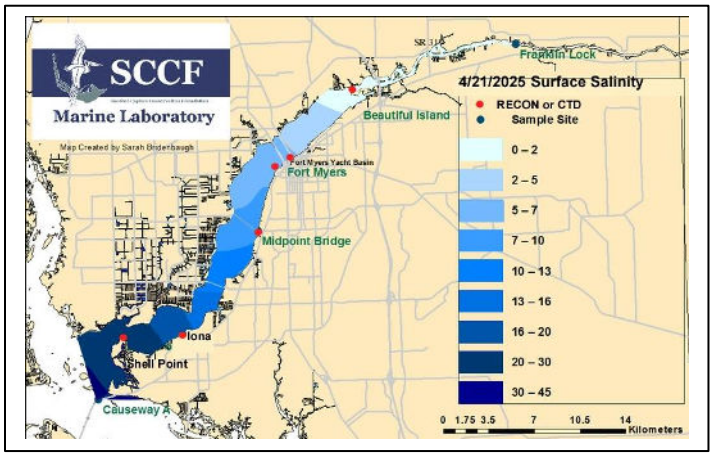
7-Day Lake Recession Rate: -0.33 ft/week

Lake Okeechobee Inflow: 326 cfs **Lake Okeechobee Outflow: 3,446 cfs**

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

Cyanobacteria Status: On 4/14/25, sampling for cyanobacteria by the Lee County Environmental Lab reported a very slight accumulation of *Microcystis* **upstream of the Franklin locks**.

Red Tide: On 4/11/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected at **background concentrations** in one sample from **Northwest Florida.**



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.8	> 1	3.5	< 18
Shell Point	1.5	>2.2	1.9	< 18
Causeway	4.3	> 2.2	1.3	< 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 2.7 psu, in the range for tape grass.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was 29 psu, in the optimal range for seagrass, but above optimal for oysters.

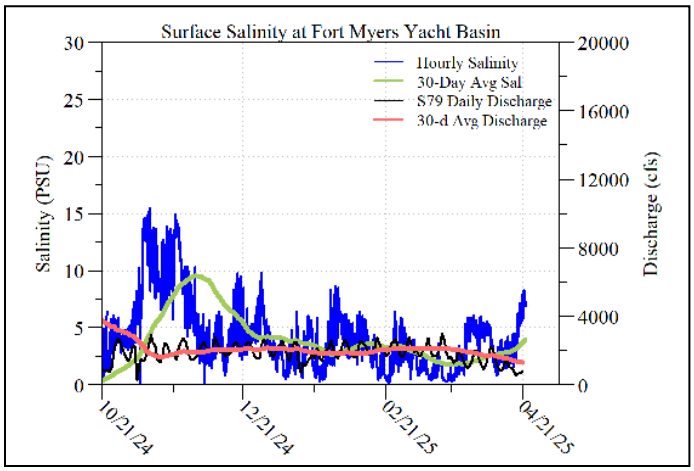
Water Quality Conditions:

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 – 1.5 [0.3 – 1.0]	3.9– 8.1	122	9.8	77.3 – 83.9
Fort Myers Yacht Basin	1.6 - 8.4 [1.9 - 6.2]	ND	ND	ND	73.6 – 81.5
Shell Point	19 - 35 [17 - 36]	6.0 – 7.7	50	1.9	72.3 – 79.5
McIntyre Creek	32.9 – 36.0 [34.9 – 36.4]	2.9 – 6.1	18.7 – 33.5	0.8 – 1.9	73.0 – 80.0
Tarpon Bay	32.5 – 35.6 [34.1 – 36.0]	4.9 – 8.4	13.4 – 25.7	0.9 – 2.1	73.4 – 79.6
Wulfert Flats	33.8 – 36.5 [35.3 – 36.5]	4.2 – 9.0	-------	1.7 – 9.0	72.5 – 80.4

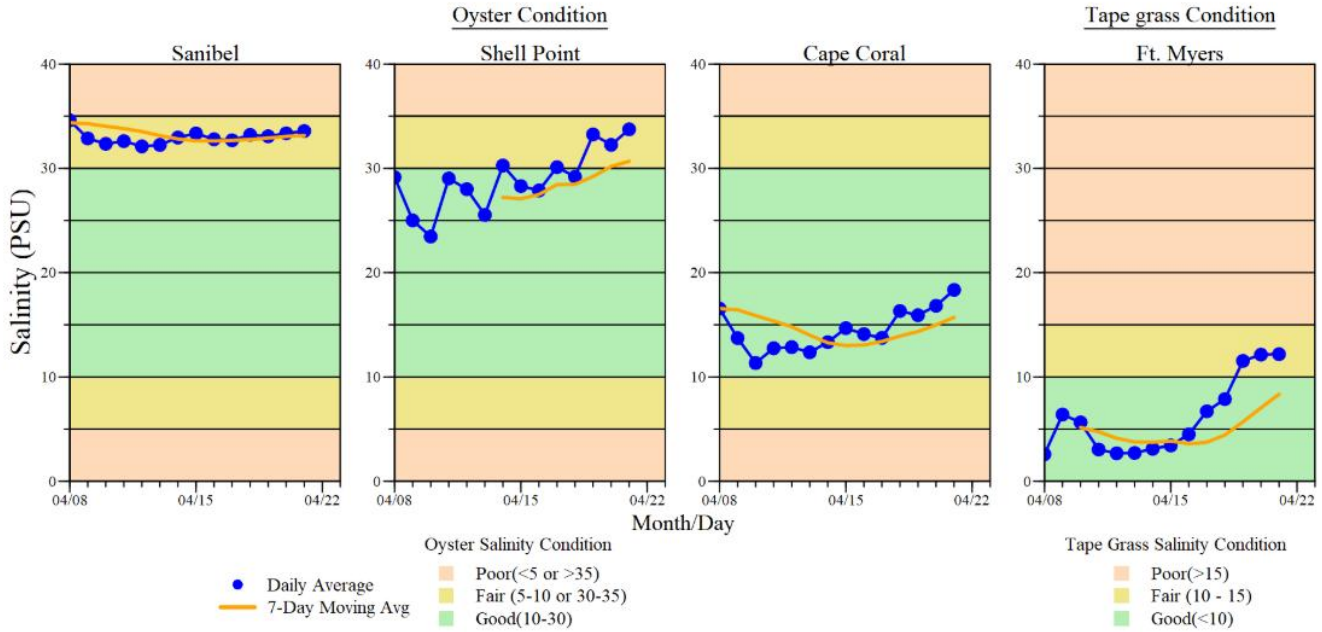
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single 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 adult white ibis (deceased) and 1 juvenile double-crested cormorant.

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1; Aquaculture Lease and Public Reef) is **OPEN** by the Florida Department of Agriculture and Consumer Services (FDACS) as of 4/3/25. SHA #6222 (North Matlacha Pass) is **OPEN** as of 4/15/25. 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)
4/15/25	1086	1048	1472
4/16/25	991	854	1506
4/17/25	835	747	1510
4/18/25	530	525	1262
4/19/25	682	529	1092
4/20/25	730	531	808
4/21/25	869	749	1052
7-day avg	**818**	**712**	**1243**



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