MEMORANDUM

To: USACE Colonel Brandon L. Bowman, Major Cory Bell, Richard McMillen, SFWMD Governing Board, Executive Director Drew Bartlett, Jennifer Reynolds, 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 PhD- City of Cape Coral

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **April 29- May 5, 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 **342 cfs** at **S-79** with a 7-day average of **859 cfs** (100%) coming from the lake at **S-77. The 14-day moving average flow at S-79 was 446 cfs** and has been **below the optimum flow envelope** (<750 cfs) for **8 days** after being in the optimum flow envelope (750- 2,100 cfs; RECOVER 2020) for **47 days**. **The 14-day moving average flow at S-77 was 984 cfs.**

Recommendation: The current flow target of 500 cfs at S-79 is below the RECOVER 2020 optimum flow envelope and salinities are continuing to rise quickly in the Caloosahatchee estuary, threatening the health of indicator species like oysters and tape grass. Damages to these populations take decades to recover from, including oysters which are currently in a critical spawning period. We ask that S-79 be managed to ensure actual and projected flows are aligning, as actual flows have been consistently lower than posted flow schedules, driving weekly averages under the MFL and creating damaging salinity levels. The CRE is in a vulnerable position and cannot withstand flows being dropped any lower. We ask that flows at S-79 be within the optimum envelope of 750-2,100 cfs to preserve the health of the estuary and all species inhabiting it. Finally, we request more timely communication with local stakeholders ahead of further decision making on S-79 flow schedules, especially while decisions that will impact the estuary for years to come are being made rapidly.

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 continues to monitor conditions in the estuaries, as well as the systemwide conditions, as the dry season progresses. 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 ensure the delivery of the Minimum Flow and Level via a targeted steady release of 500 cfs over a 7-day period, 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 **51,087 AF** with **11,910 AF** to the Caloosahatchee through **S-77**, **2,460 AF** to the St. Lucie canal through **S-308** and **36,717 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **2,371 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1. Water conservation areas received flows of **492 AF**, **1,334 AF**, and **46 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **22 AF.**
***Data missing from S-310 and L-8 on 4/29/25- 5/5/25, S-78 on 5/4/25- 5/5/25, S-80 on 5/5/25 and ENP on 5/4/25- 5/5/25.**

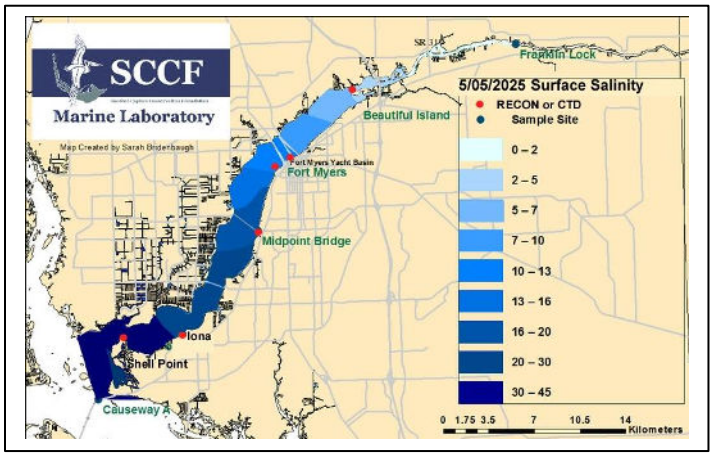
Lake Level: 11.17 (Zone D3) **Last Week**: **11.44 ft** **Last Year: 14.06 ft**

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

Lake Okeechobee Inflow: 82 cfs **Lake Okeechobee Outflow: 1,642 cfs**

Weekly Rainfall Total: **WP Franklin: 0.85"** **Ortona: 0.05"** **Moore Haven: 0.30"**

Cyanobacteria Status: On 5/5/25, sampling for cyanobacteria by the Lee County Environmental Lab reported **abundant** streaks and some accumulation of primarily *Dolichospermum* and some *Microcystis* at the **Alva Boat Ramp**. Some specks of cyanobacteria were observed **upstream of the Franklin Locks.**



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	1.2	> 1	3.3	< 18
Shell Point	1.8	>2.2	2.2	< 18
Causeway	4.3	> 2.2	1.5	< 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.*

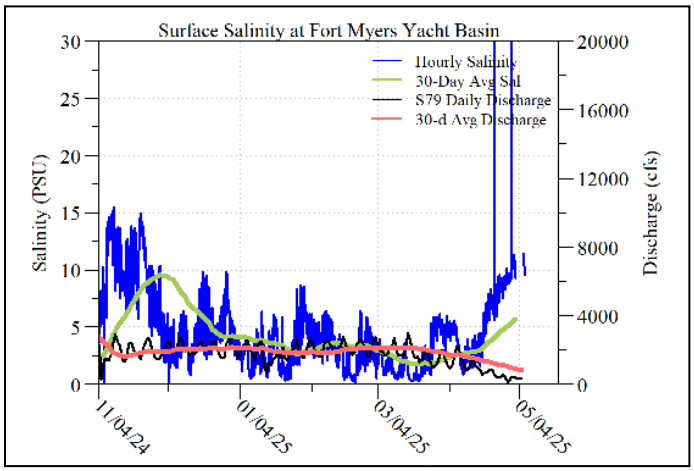
Red Tide: On 5/2/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected at background concentrations in two samples from Southwest Florida; offshore of Sarasota and Collier counties.
Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was 5.1 psu, in the range for tape grass and the daily average rose to 11 psu.
Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was **32 psu**, in the optimal range for seagrass, but **above optimal for oysters**. *Pseudo-nitzschia* concentrations in samples on 4/30/25 from the causeway and Pine Island Sound contained 138,000 and 25 million cells per liter respectively.

Water Quality Conditions:

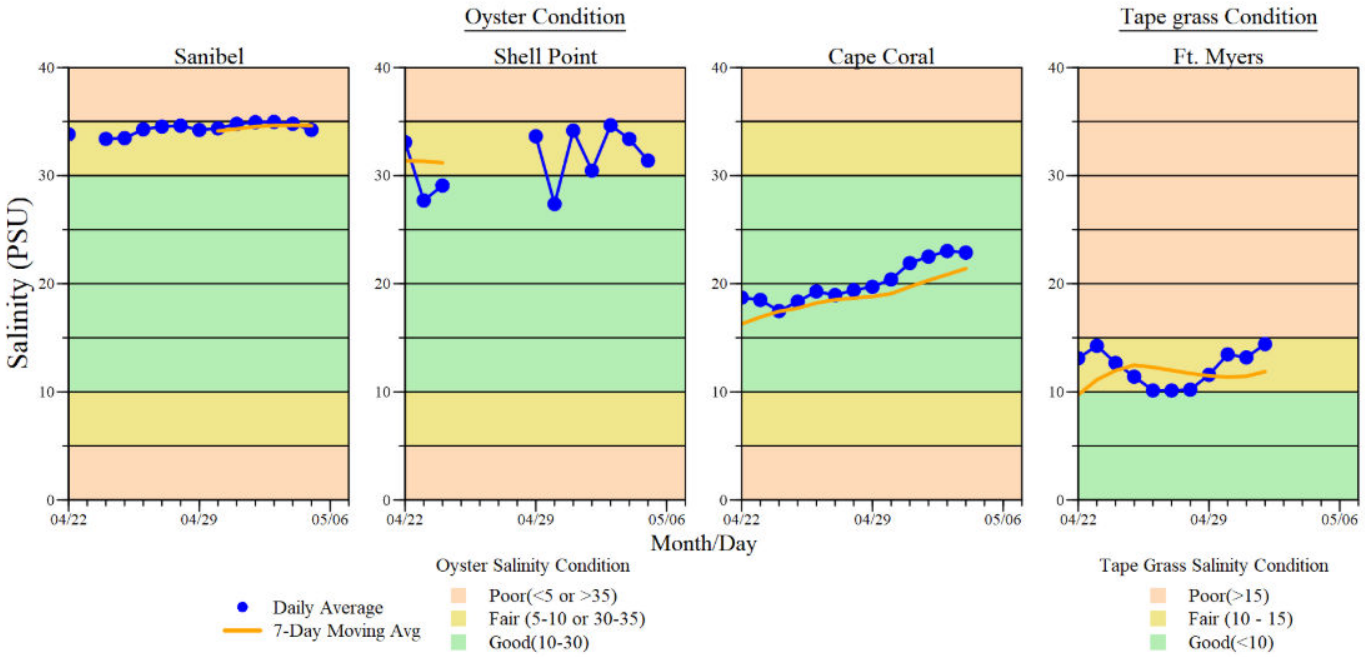
Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	3.3 – 6.1 [0.8 – 4.7]	4.0– 7.3	120	7.5	79.9 – 86.3
Fort Myers Yacht Basin	6.1 – 12 [1.6 – 9.8]	4.2– 7.0	70	3.0	77.5 – 85.0
Shell Point	25 – 36 [22 – 36]	5.3 – 7.6	35	2.1	79.2 – 83.1
McIntyre Creek	33.9 – 35.2 [33.3 – 34.9]	1.3 – 6.7	18.3 – 37.4	0.7 – 1.9	78.4 – 84.9
Tarpon Bay	34.7 – 36.2 [33.9 – 36.0]	3.8 – 7.9	8.3 – 22.6	0.6 – 2.3	79.1 – 84.0
Wulfert Flats	34.5 – 35.4 [34.1 – 35.0]	3.0 – 7.9	-------	2.3 – 11.0	78.1 – 85.8

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 **1 patient** with suspected red tide/toxicosis: 1 juvenile brown pelican (deceased). SCCF reported **1** deceased loggerhead sea turtle on Captiva.
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)
4/29/25	132	351	1052
4/30/25	326	349	932
5/1/25	457	347	872
5/2/25	447	346	916
5/3/25	340	344	798
5/4/25	368	NR	744
5/5/25	324	NR	700
7-day avg	**342**	**347**	**859**



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 5-5-25 at 1:37 PM on a falling tide (1.8 ft).