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: **May 27- June 2, 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 **571 cfs** at **S-79** with a 7-day average of **215 cfs** (38%) coming from the lake at **S-77. The 14-day moving average flow at S-79 was 501 cfs** and has been **below the optimum flow envelope** (<750 cfs) for **36 days. The 14-day moving average flow at S-77 was 388 cfs.**

Recommendation: We request that flows to the Caloosahatchee at S-79 be within the optimum flow envelope to best support estuarine health during the onset of the wet season. Given the reduced flow schedule with a lake release target of 250 cfs and additional flows expected to be supplemented by basin runoff, we request that modeling continue to account for realized vs projected precipitation as it impacts S-79 flows. In the event basin runoff does not supplement S-79 flows to reach the optimum flow envelope, we request that additional releases from S-77 be made to achieve optimum flows of 750- 2,100 cfs at S-79.

USACE Action: Lake Okeechobee stage is in the lower portion of Zone D (Zone D3 of the PA25 simulation) of the LOSOM regulation schedule. ENSO-neutral conditions are present and is favored during the summer. The District will continue to monitor conditions in the estuaries, as well as the systemwide conditions, as the wet season progresses. With the initiation of the wet season, and the termination of Recovery Operations, Normal Lake Operations will resume pursuant to the considerations in LOSOM as informed by PA25. To maintain favorable salinity levels in the estuaries and begin to conserve water, it is recommended that flow targets for the Caloosahatchee Estuary should rely on rainy season basin flows to ensure the delivery of the Minimum Flow and Level, but pursuant to LOSOM's PA25 use Lake Okeechobee flows from S-77 to ensure S-79 flows remain above a targeted steady release of 250 cfs; flow targets for the St. Lucie Estuary and Lake Worth Lagoon should remain at 0 cfs consistent with Normal Operations within Zone D. The District will continue to monitor salinity conditions in the estuaries and water supply conditions throughout the system as the wet season progresses to assess future operational recommendations.

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **7,078 AF** with **3,053 AF** to the Caloosahatchee through **S-77**, **-1,421 AF** to the St. Lucie canal through **S-308** and **5,446 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **11,474 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1. Water conservation areas received flows of **2,168 AF**, **1,374 AF**, and **123 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **230 AF.**
***Data missing from S-310 and L-8 on 5/27/25- 6/2/25.**

Lake Level: 10.97 ft (Zone D3) **Last Week**: **10.94 ft** **Last Year: 12.86 ft**

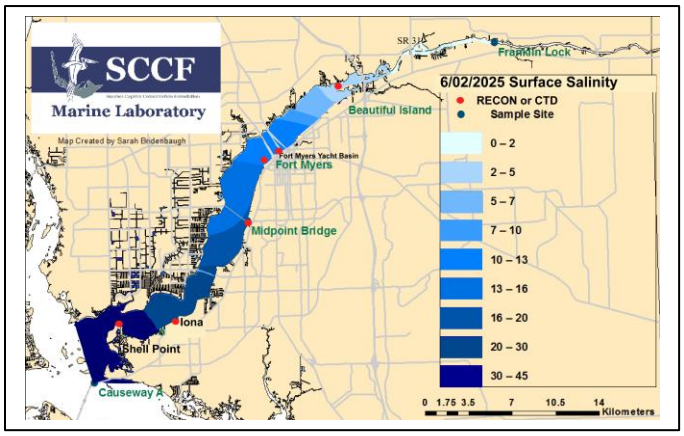
7-Day Lake Recession Rate: +0.03 ft/week

Lake Okeechobee Inflow: 1,332 cfs **Lake Okeechobee Outflow: 312 cfs**

Weekly Rainfall Total: **WP Franklin: 2.29"** **Ortona: 3.19"** **Julian Keen Jr.: 2.06"**

Cyanobacteria Status: On 6/2/25, sampling for cyanobacteria by the Lee County Environmental Lab reported abundant concentrations of *Dolichospermum, Microcystis* and *Aphanizomenon* at the **Alva Boat Ramp**, appearing as streaks with accumulation. Abundant *Dolichospermum*, *Microcystis* and cyano filaments were reported **upstream of the Franklin Locks**, appearing as streaks with accumulation. Specks of *Dolichospermum* and cyano filaments were visible at the **Davis Boat Ramp.**

Red Tide: On 5/30/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected at background concentrations in one sample from Northwest Florida; collected offshore of Okaloosa County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	1.3	> 1	2.0	< 18
Shell Point	2.0	>2.2	1.4	< 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.*

Upper Estuary Conditions: The 30-day moving average surface salinity at the Fort Myers Yacht Basin was **12 psu**, in the stress range for tape grass (10- 15 psu; RECOVER 2020) and has been **over 10 psu for 17 days**. The weekly average was 12 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**.

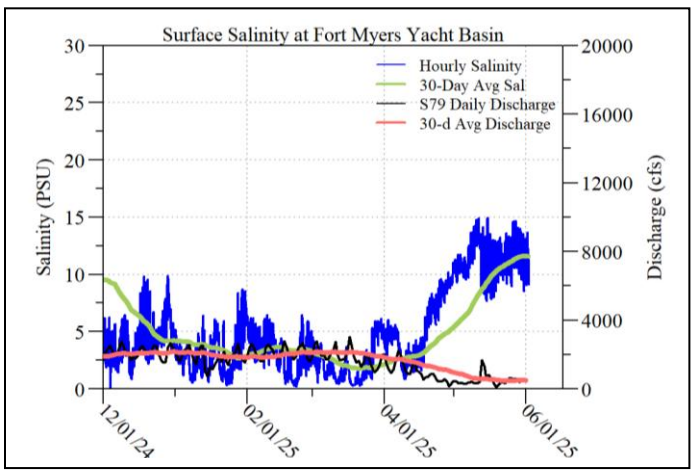
Water Quality Conditions:

Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	2.9 – 5.5 [2.2 – 5.2]	1.7 – 5.7	105	7.5	85.5 – 92.8
Fort Myers Yacht Basin	8.7 – 15 [6.1 – 12]	-------	63	3.8	82.5 – 90.4
Shell Point	29 – 36 [24 – 36]	4.3 – 7.7	21	1.6	84.0 – 90.7
McIntyre Creek	33.5 – 36.9 [34.3 – 35.9]	1.0 – 5.0	14.6 – 45.4	0.9 – 2.8	80.2 – 92.0
Tarpon Bay	34.2 – 36.8 [34.4 – 36.8]	2.6 – 7.0	6.1 – 24.8	0.6 – 5.2	81.7 – 91.1
Wulfert Flats	34.2 – 36.2 [35.5 – 36.6]	1.8 – 7.6	-------	3.5 – 16.8	81.7 – 92.1

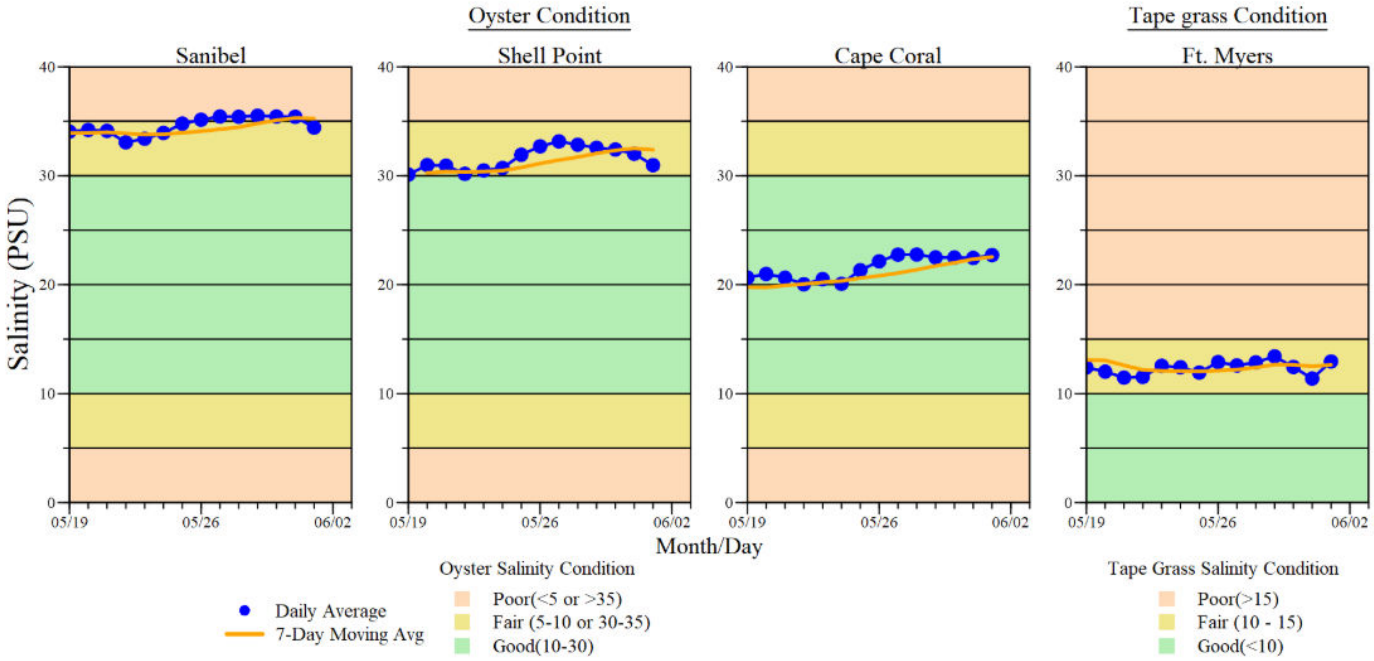
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single 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 **1 patient** with suspected red tide/toxicosis: 1 adult common gallinule (deceased). SCCF documented 1 sea turtle stranding in the past week, a loggerhead on Captiva (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) as of 5/30/25 as a precautionary measure due to the presence of *Pseudo- nitzschia*. SHA #6222 (North Matlacha Pass) is **OPEN** as of 4/15/25. SHA #6232 (South Matlacha Pass) is **OPEN** as of 3/21/25.



USACE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
5/27/25	577	315	356
5/28/25	567	171	0
5/29/25	412	214	278
5/30/25	502	337	297
5/31/25	526	335	29
6/1/25	538	336	312
6/2/25	875	261	232
7-day avg	**571**	**281**	**215**



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 6-2-25 at 12:22 PM on a slack tide (1.7 ft).