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 Shawn Hamilton

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
Harry Phillips & Maya Robert - City of Cape Coral
Allie Pecenka, Rick Bartleson PhD & Matt Depaolis- Sanibel-Captiva Conservation Foundation
In coordination with Lee County

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **October 29- November 4, 2024**

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 **1,938 cfs** at **S-79** with a 7-day average of **1,487 cfs (77%)** coming from the lake at **S-77. The 14-day moving average flow** at **S-79 is 1,735 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **11 days** after **47 days** in the **damaging flow envelope** (>2,600 cfs). **The 14-day moving average flow** at **S-77** was **1,135 cfs.**

Recommendation: We ask the USACE to structure pulsed releases 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, as we are entering a season conducive to red tide and harmful algal blooms.

USACE Action: Lake Okeechobee stage is in the upper third of Zone D (Zone D1 of the PA25 simulation) of the LOSOM regulation schedule, above the ecological envelope. The current climate outlook is for ENSO-neutral with La Niña favored to develop during September-November (ENSO- increased likelihood of below normal dry season rainfall north of the Lake). The District recommends USACE implements a non-harmful release from Lake Okeechobee to the Caloosahatchee Estuary with an average discharge of 2,000 cfs (7-day pulse) as measured at the S-79 structure, zero lake releases to the St. Lucie Estuary and zero lake releases to the Lake Worth Lagoon. 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 **28,836 AF** with **19,242 AF** to the Caloosahatchee through **S-77**, **33 AF** to the St. Lucie canal through **S-308** and **9,561 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **44,488 AF** (**44,488 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **531 AF**, **4,700 AF**, and **2,230 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **38,092 AF.**
***Data missing for S-77 on 11/4, for S-310 & L-8 from 10/29- 11/4 and for Istokpoga, S-65E, S-65EX1 & pump inflows on 10/29.**

Lake Level: 16.10 (Zone D1) **Last Week**: **16.12 ft** **Last Year: 16.09 ft**

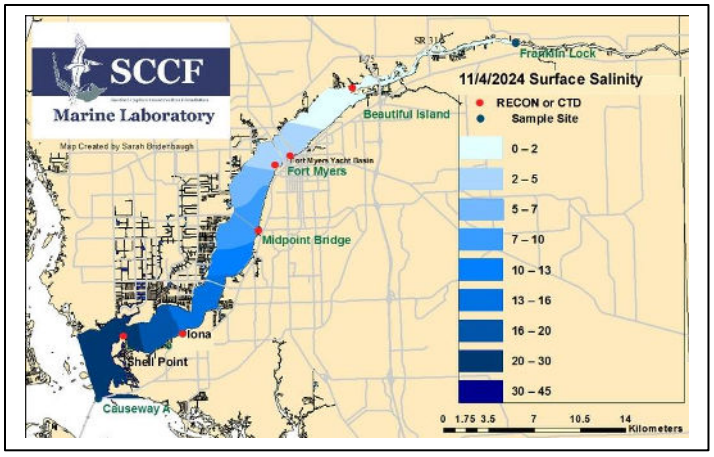
7-Day Lake Recession Rate: -0.02 ft/week

Lake Okeechobee Inflow: 3,963 cfs **Lake Okeechobee Outflow: 2,521 cfs**

Weekly Rainfall Total: **WP Franklin: 0.31"** **Ortona: 0.00"** **Moore Haven: 0.00"**

Cyanobacteria Status: On 11/4/24, sampling for cyanobacteria by the Lee County Environmental Lab reported *Microcystis* as **present** at the **Alva Boat Ramp**, appearing as specks.

Red Tide: On 11/1/24, the FWC reported that the red tide organism, *Karenia brevis*, was detected in **76 samples from Southwest Florida** over the past week. *K. brevis* was observed at background to medium concentrations in and offshore of Pinellas County, very low to low concentrations in and offshore of Manatee County, background to high concentrations in and offshore of Sarasota County, background to high concentrations in and offshore of Charlotte County, **very low to medium concentrations in and offshore of Lee County**, background to medium concentrations offshore of Collier County, and background concentrations offshore of Monroe County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.6	> 1	2.6	< 18
Shell Point	1.2	>2.2	2.5	< 18
Causeway	2.9	> 2.2	2.2	< 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 data for the 30-day average surface salinity at the Fort Myers Yacht Basin was not available.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was 22 psu, in the optimal range for oysters but below optimal for seagrass. Diatoms were abundant in nearshore SCCF water samples around Sanibel and Captiva and *Karenia* were at background levels. A bloom of *Navicula* (100,000 cells/L) was present on the Gulf side of Captiva on 11/1/24.

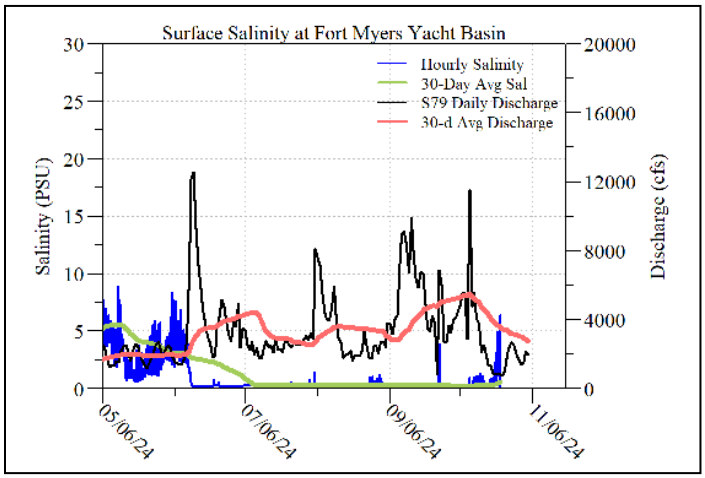
Water Quality Conditions:

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 – 0.9 [0.3 – 0.6]	4.5 – 6.1	185	7.5	77.7– 84.6
Fort Myers Yacht Basin	[ND]	ND	ND	ND	ND
Shell Point	13 – 32 [13 – 29]	4.9 – 7.3	93	3.8	75.1 - 79.7
McIntyre Creek	[ND]	ND	56.0 – 90.5	3.8 – 11.2	ND
Tarpon Bay	23.8 - 32.4 [20.5 - 27.3]	4.6 – 6.9	22.9 – 71.8	1.3 – 5.1	74.8 – 78.7
Wulfert Flats	[ND]	ND	ND	ND	ND

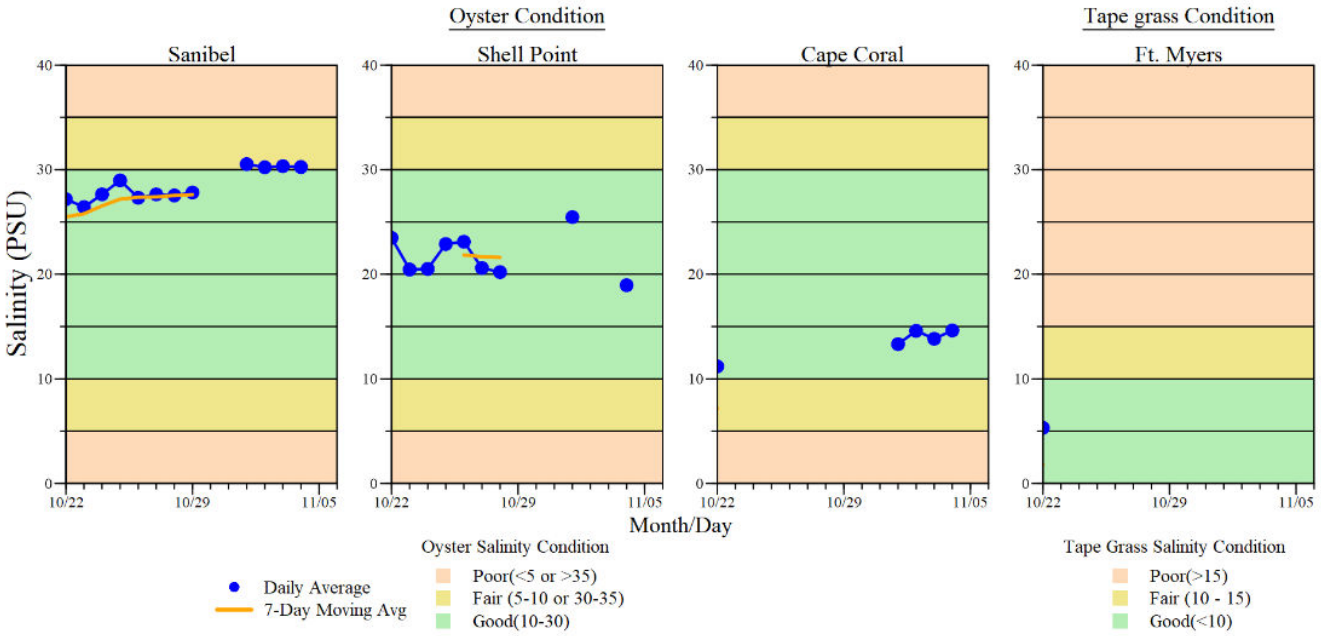
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single sonde lower and surface layer or surface grab lab measurement
------- no data

Wildlife Impacts: In the past week, the CROW wildlife hospital on Sanibel admitted 2 patients with suspected red tide/toxicosis: 1 juvenile double-crested cormorant (transferred facilities) and 1 juvenile laughing gull (deceased).

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1; Aquaculture Lease and Public Reef), SHA #6222 (Pine Island Sound Sec. 2) and SHA #6232 (Pine Island Sound Sec. 3) are **OPEN** by the Florida Department of Agriculture and Consumer Services (FDACS) as of 11/01/24.



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
10/29/24	2486	1505	2437
10/30/24	1993	1164	2448
10/31/24	1667	1021	1310
11/1/24	1398	743	889
11/2/24	1566	644	871
11/3/24	2168	1308	1656
11/4/24	2286	820	800
7-day avg	**1938**	**1029**	**1487**



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 11/6/24 at 3:55 PM on a rising tide (0.7 ft).