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: **November 26- December 2, 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 **1,834 cfs** at **S-79** with a 7-day average of **1,571 cfs (86%)** coming from the lake at **S-77. The 14-day moving average flow** at **S-79 is 1,930 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **39 days**. **The 14-day moving average flow** at **S-77** was **1,540 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.

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 the USACE initiate the process to begin non-harmful Recovery Operations for Lake Okeechobee as described in LOSOM as soon as possible to increase the likelihood of success this dry season. The District will continue to monitor system conditions throughout the system and coordinate with USACE as needed. 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 **43,848 AF** with **18,492 AF** to the Caloosahatchee through **S-77**, **26 AF** to the St. Lucie canal through **S-308** and **25,330 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **19,611 AF** (**19,611 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **3,718 AF**, **369 AF**, and **0 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **20,138 AF.**
***Data missing from S-77 & S-80 on 12/2, S-310 from 11/26- 12/2 & L-8 from 11/26- 12/2.**

Lake Level: 15.76 (Zone D1) **Last Week**: **15.90 ft** **Last Year: 16.03 ft**

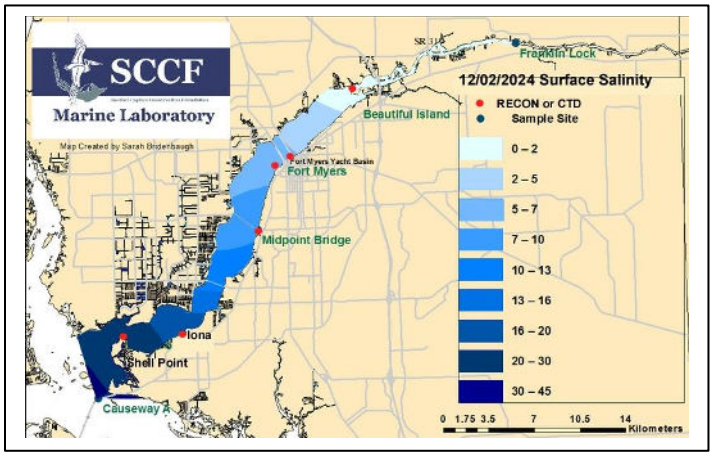
7-Day Lake Recession Rate: -0.14 ft/week

Lake Okeechobee Inflow: 1,351 cfs **Lake Okeechobee Outflow: 3,262 cfs**

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

Cyanobacteria Status: On 12/2/24, sampling for cyanobacteria by the Lee County Environmental Lab reported no visible cyanobacteria across all sites.

Red Tide: On 11/26/24, the FWC reported that the red tide organism, *Karenia brevis*, was detected in 73 samples collected from Florida's Gulf Coast over the past week. In Southwest Florida, *K. brevis* was observed at background to low concentrations in Pinellas County, medium concentrations in Hillsborough County, very low to medium concentrations in Manatee County, background to high concentrations in Sarasota County, and low concentrations in Charlotte County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.6	> 1	2.2	< 18
Shell Point	1.1	>2.2	1.2	< 18
Causeway	2.5	> 2.2	1.4	< 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 23 psu, in the optimal range for oysters but below optimal for seagrass. A variety of large diatoms were present in in SCCF Sanibel beach water samples.

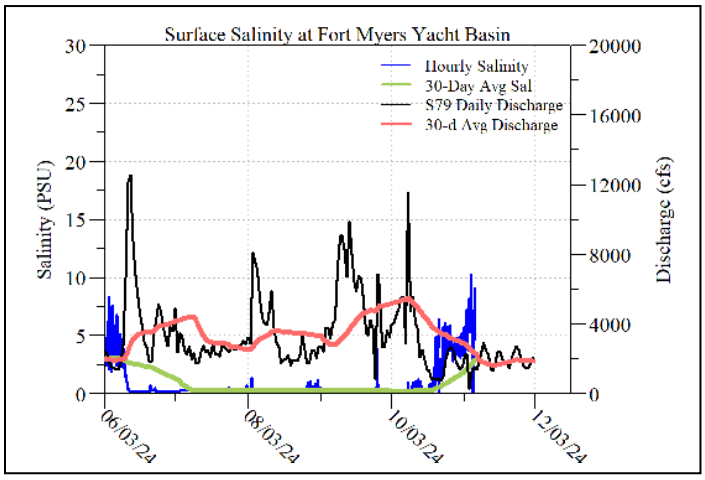
Water Quality Conditions:

Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	0.9 - 1.7 [1.1 - 2.9]	4.8 – 6.2	185	7.8	69.8–77.0
Fort Myers Yacht Basin	[ND]	ND	ND	ND	ND
Shell Point	14 -31 [17 -33]	6.1– 8.2	95	3.3	64.8 -73.2
McIntyre Creek	ND [ND]	ND	ND	ND	ND
Tarpon Bay	26.7 – 31.6 [29.8 – 34.6]	4.9 – 7.6	33.1 – 55.2	1.3 – 2.9	63.0 – 74.3
Wulfert Flats	ND [ND]	ND	ND	ND	ND

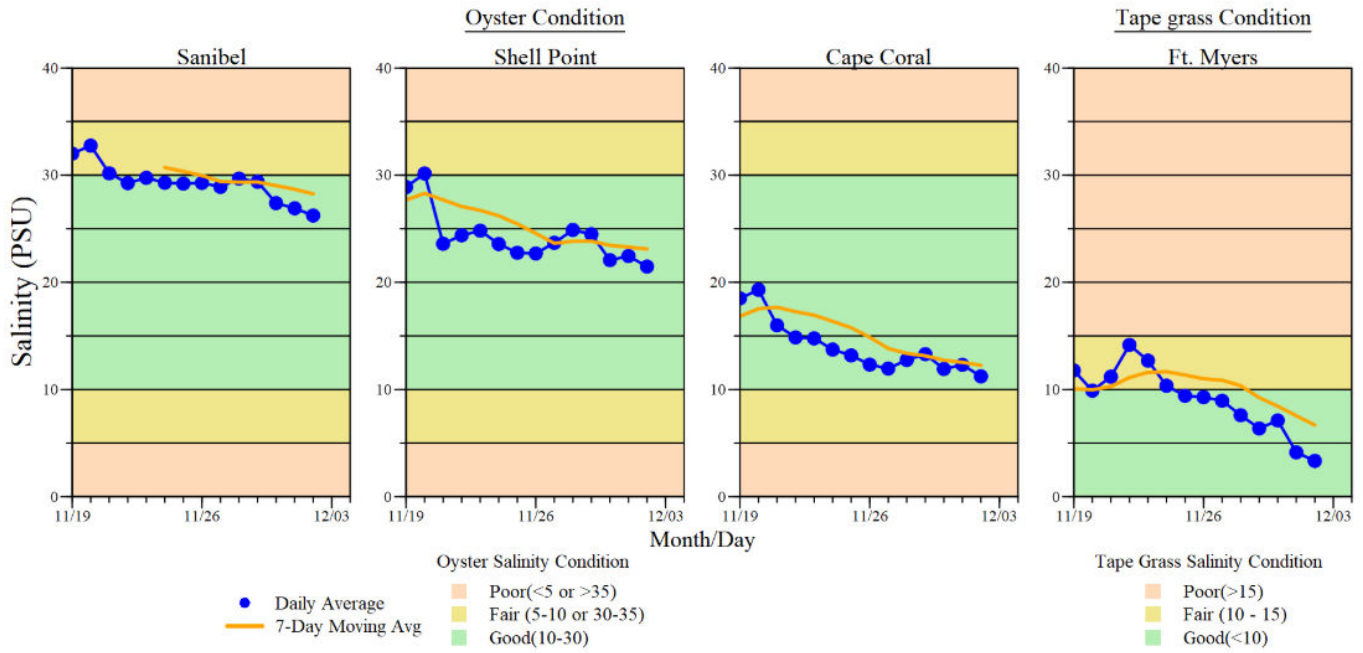
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single 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 **8 patients** with suspected red tide/toxicosis: 1 juvenile brown pelican (deceased), 1 adult white pelican (deceased), 1 juvenile double-crested cormorant (deceased), 3 adult laughing gulls (all still in care) and 2 adult laughing gulls (deceased).

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1; Aquaculture Lease and Public Reef) are **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 **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)
11/26/24	2531	1806	2258
11/27/24	1990	1453	2276
11/28/24	1564	1201	1754
11/29/24	1444	971	1036
11/30/24	1516	1002	896
12/1/24	1707	1363	1125
12/2/24	2086	1580	1651
7-day avg	**1834**	**1339**	**1571**



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 12/2/24 at 12:14 PM on a rising tide (-0.1 ft)