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 12- 18, 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 **2,008 cfs** at **S-79** with a 7-day average of **1,489 cfs (74%)** coming from the lake at **S-77. The 14-day moving average flow** at **S-79 is 1,821 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **25 days**. **The 14-day moving average flow** at **S-77** was **1,217 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 **30,998 AF** with **20,806 AF** to the Caloosahatchee through **S-77**, **49 AF** to the St. Lucie canal through **S-308** and **10,143 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **32,035 AF** (**32,035 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **272 AF**, **1,542 AF**, and **157 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **30,150 AF.**
***Data missing for S-310 & L-8 from 11/12- 11/18.**

Lake Level: 16.05 (Zone D1) **Last Week**: **16.15 ft** **Last Year: 16.11 ft**

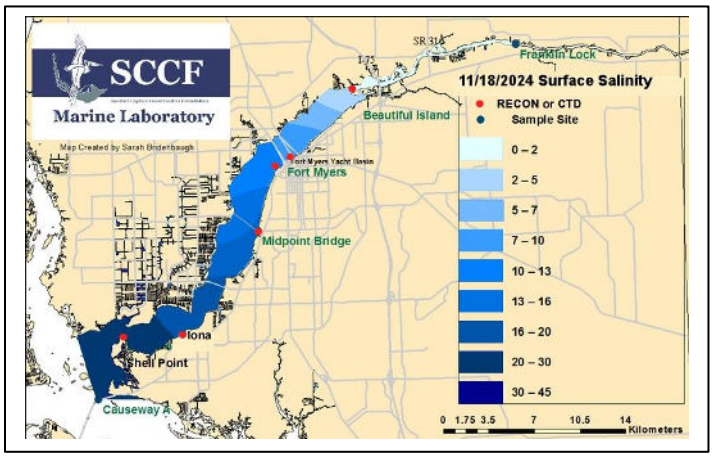
7-Day Lake Recession Rate: -0.10 ft/week

Lake Okeechobee Inflow: 2,036 cfs **Lake Okeechobee Outflow: 2,118 cfs**

Weekly Rainfall Total: **WP Franklin: 0.50"** **Ortona: 0.30"** **Moore Haven: 0.74"**

Cyanobacteria Status: On 11/18/24, sampling for cyanobacteria by the Lee County Environmental Lab reported *Microcystis* as **present** at the **Davis Boat Ramp**, appearing as sparse specks.

Red Tide: On 11/15/24, the FWC reported that the red tide organism, *Karenia brevis*, was detected in **74 samples** collected from Southwest Florida over the past week. *K. brevis* was observed at background to medium concentrations in and offshore of Pinellas County, low and medium concentrations in Hillsborough County, background to medium concentrations in Manatee County, background to medium concentrations in and offshore of Sarasota and Charlotte counties, **very low and medium concentrations in Lee County**, and background and very low concentrations offshore of Collier County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.6	> 1	2.4	< 18
Shell Point	1.6	>2.2	2.0	< 18
Causeway	2.9	> 2.2	2.4	< 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 27 psu, in the optimal range for oysters and seagrass. An SCCF sample at Captiva Pass had very low Karenia concentrations and over 1 million diatoms/L with Navicula dominant.

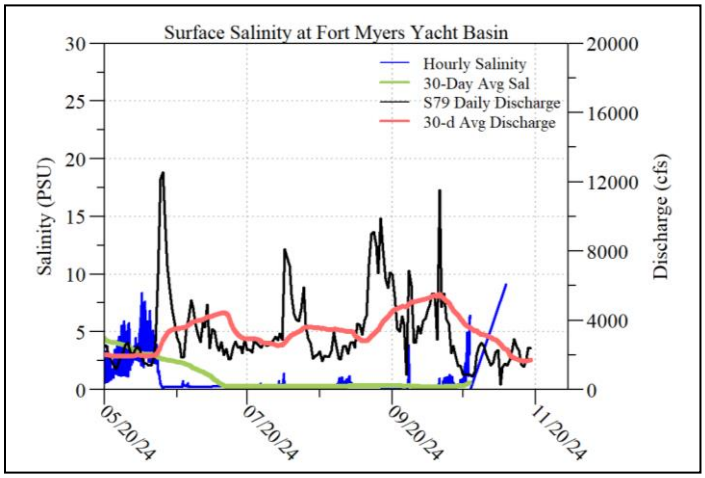
Water Quality Conditions:

Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	1.5- 4.0 [0.5 - 2.8]	3.8 – 5.7	180	8.5	76.3– 84.3
Fort Myers Yacht Basin	[ND]	ND	ND	ND	ND
Shell Point	19 - 33 [16 - 33]	5.4– 6.6	66	2.5	73.8 - 81.5
McIntyre Creek	[ND]	ND	41.1 – 62.0	2.6 – 6.6	ND
Tarpon Bay	30.1 – 33.9 [28.6 – 33.1]	4.2 – 6.3	16.7 – 43.7	1.3 – 3.3	73.6 – 81.5
Wulfert Flats	[ND]	ND	ND	ND	ND

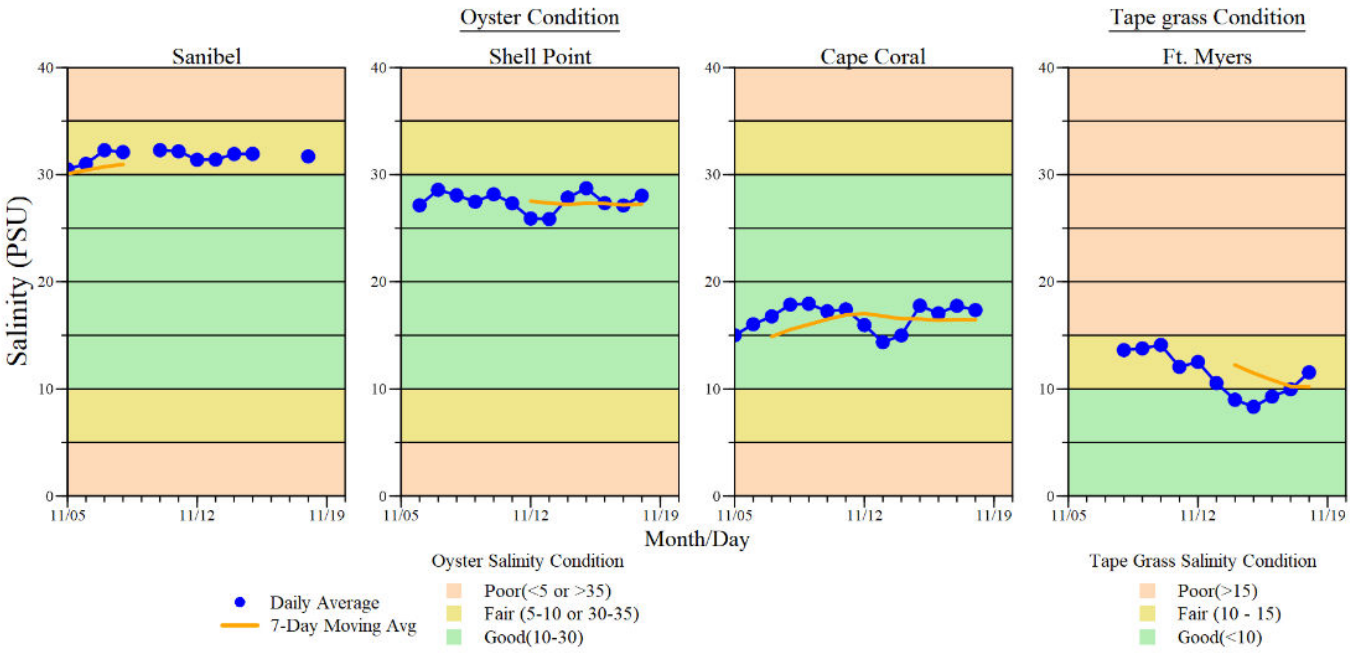
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single 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 **8 patients** with suspected red tide/toxicosis: 1 adult laughing gull (still in care), 2 adult sanderlings (1 still in care, 1 deceased), 1 adult fish crow (still in care), 1 juvenile double-crested cormorant (still in care) and 3 adult double-crested cormorants (2 still in care, 1 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)
11/12/24	2494	1565	1464
11/13/24	2230	1606	2118
11/14/24	1427	994	1284
11/15/24	1312	797	731
11/16/24	1791	1268	1187
11/17/24	2406	1643	1780
11/18/24	2395	1793	1860
7-day avg	**2008**	**1381**	**1489**



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 11/18/24 at 12:43 PM on a rising tide (-0.2 ft)