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 5- 11, 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 **1,633 cfs** at **S-79** with a 7-day average of **945 cfs (58%)** coming from the lake at **S-77. The 14-day moving average flow** at **S-79 is 1,785 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **18 days**. **The 14-day moving average flow** at **S-77** was **1,216 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 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 **16,831 AF** with **13,324 AF** to the Caloosahatchee through **S-77**, **50 AF** to the St. Lucie canal through **S-308** and **3,457 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **49,111 AF** (**49,111 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **1,207 AF**, **6,263 AF**, and **0 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **32,241 AF.**
***Data missing for S-310 & L-8 from 11/5- 11/11 and for S-80 from 11/6- 11/7.**

Lake Level: 16.15 (Zone D1) **Last Week**: **16.10 ft** **Last Year: 15.99 ft**

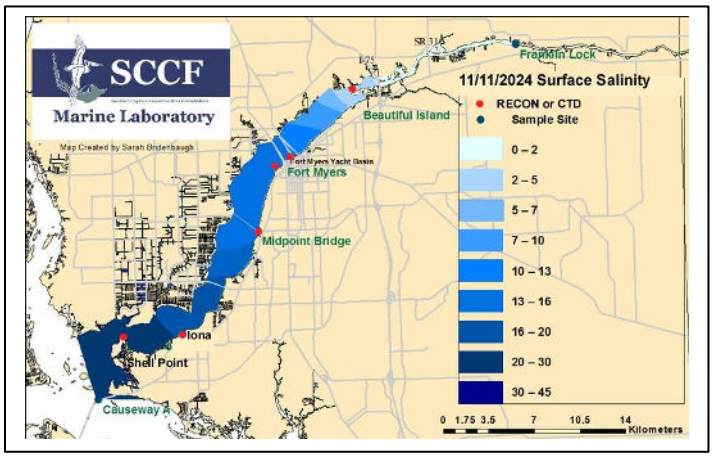
7-Day Lake Recession Rate: +0.05 ft/week

Lake Okeechobee Inflow: 2,838 cfs **Lake Okeechobee Outflow: 2,340 cfs**

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

Cyanobacteria Status: On 11/12/24, sampling for cyanobacteria by the Lee County Environmental Lab reported *Microcystis* as **present** upstream of the **Franklin Locks**, appearing as green scum-lines along the Lock.

Red Tide: On 11/8/24, the FWC reported that the red tide organism, *Karenia brevis*, was detected in **56 samples** collected from Florida's Gulf Coast over the past week. *K. brevis* was observed at background to low concentrations in Pinellas County, very low to low concentrations in Manatee County, **background to low concentrations** in Sarasota, Charlotte, and **Lee** counties, and background concentrations in one sample collected from Collier County. In Northwest Florida over the past week, *K. brevis* was observed at background and very low concentrations in Franklin County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.6	> 1	2.1	< 18
Shell Point	1.4	>2.2	2.0	< 18
Causeway	3.0	> 2.2	1.8	< 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, but he salinity rose above 10 psu, which is above optimal for tape grass.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was 28 psu, in the optimal range for oysters and seagrass. *Karenia was present* in SCCF Sanibel beach water samples only on 11/5/24. A bloom of *Navicula* (>2,000,000 cells/L) was present on a Captiva beach on 11/5 and 11/6/24. Diatom biomass at the Sanibel and Captiva beaches dropped after 11/6/24.

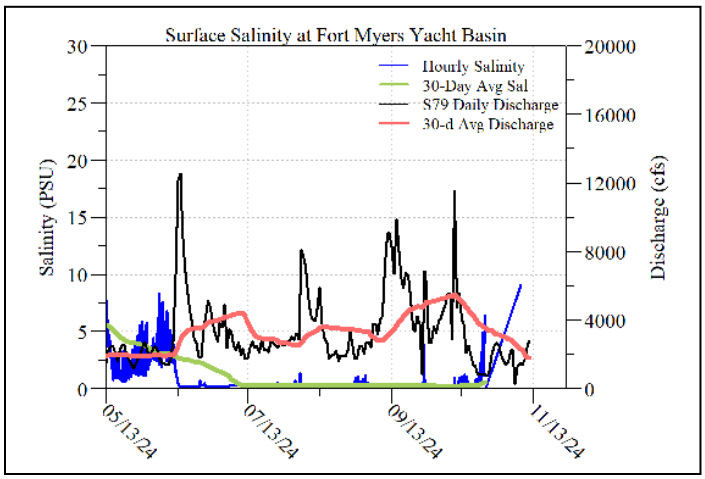
Water Quality Conditions:

Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	0.5 - 2.8 [0.3 – 0.9]	3.7 – 6.1	190	7.5	79.7– 84.2
Fort Myers Yacht Basin	[ND]	ND	ND	ND	ND
Shell Point	16 - 33 [13 – 32]	4.8 – 7.0	60	3.5	76.3 - 80.5
McIntyre Creek	[ND]	ND	33.4 – 74.4	2.4 – 5.0	ND
Tarpon Bay	28.6 – 33.1 [23.8 - 32.4]	4.3 – 6.8	19.8 – 45.1	1.2 – 4.4	77.4 – 81.2
Wulfert Flats	[ND]	ND	ND	ND	ND

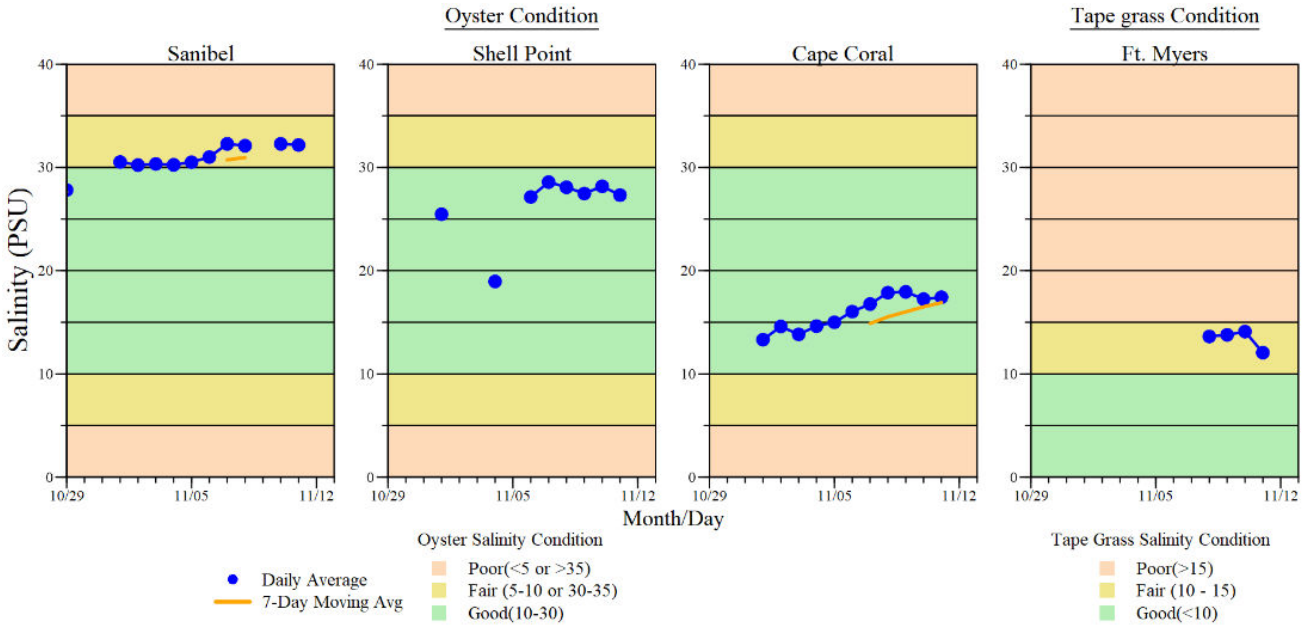
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single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

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1; Aquaculture Lease and Public Reef) are **OPEN** and closing at sunset as a precaution 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)
11/5/24	288	277	343
11/6/24	1288	713	534
11/7/24	1496	876	699
11/8/24	1387	644	565
11/9/24	1711	751	978
11/10/24	2326	1917	2045
11/11/24	2936	1539	1452
7-day avg	**1633**	**960**	**945**



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