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: **January 7- 13, 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 **2,141 cfs** at **S-79** with a 7-day average of **1,812 cfs (85%)** coming from the lake at **S-77. The 14-day moving average flow at S-79 was 2,102 cfs** and has been in the **stress flow envelope** (2,100- 2,600 cfs; RECOVER 2020) for **3 days** after **8 days** in the **optimum flow envelope** (750- 2,100 cfs). **The 14-day moving average flow at S-77 was 1,730 cfs.**

Recommendation: We ask the USACE to structure recovery flows 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. The current climate outlook is for ENSO-neutral with La Niña favored to develop during November 2024-January 2025 (ENSO- increased likelihood of below normal dry season rainfall north of the Lake). The District recommends the USACE continue non-harmful Recovery Operations for Lake Okeechobee as described in LOSOM to increase the likelihood of success this dry season. The District will continue to monitor 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 **79,160 AF** with **25,195 AF** to the Caloosahatchee through **S-77**, **12,099 AF** to the St. Lucie canal through **S-308** and **41,866 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **18,134 AF** (**18,134 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **2,458 AF**, **3,288 AF**, and **2,101 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **11,899 AF.**
***Data missing from S-310 and L-8 from 1/7/25- 1/13/25.**

Lake Level: 14.76 (Zone D1) **Last Week**: **14.98 ft** **Last Year: N/A**

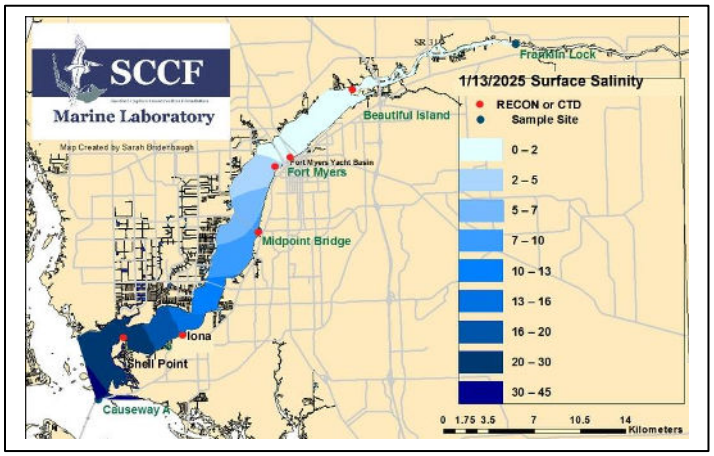
7-Day Lake Recession Rate: -0.22 ft/week

Lake Okeechobee Inflow: 1,259 cfs **Lake Okeechobee Outflow: 5,756 cfs**

Weekly Rainfall Total: **WP Franklin: 0.00"** **Ortona: 0.07"** **Moore Haven: 0.00"**

Cyanobacteria Status: On 1/13/25, sampling for cyanobacteria by the Lee County Environmental Lab reported *Microcystis* and *Dolichospermum* as **present** at the **Davis Boat Ramp** as streaks with some accumulation along the seawall and **upstream of the Franklin Locks,** appearing as light streaks along the Lock.

Red Tide: On 1/10/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected in 86 samples collected from the Gulf Coast of Florida over the past week. In Southwest Florida, *K. brevis* was observed at background to low concentrations in Pinellas County, background to medium concentrations in Manatee County, background to high concentrations in Sarasota County, background to high concentrations in Charlotte County, **background to medium concentrations in Lee County**, and very low to medium concentrations in Collier County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.7	> 1	4.0	< 18
Shell Point	1.1	>2.2	2.2	< 18
Causeway	3.0	> 2.2	2.0	< 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 the weekly average was 2.1 psu.

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. Low to very low concentrations of *Karenia* were present in SCCF water samples from Sanibel's southern beaches 1/3/25-1/13/25. Diatoms and other dinoflagellates were usually dominant in beach water samples.

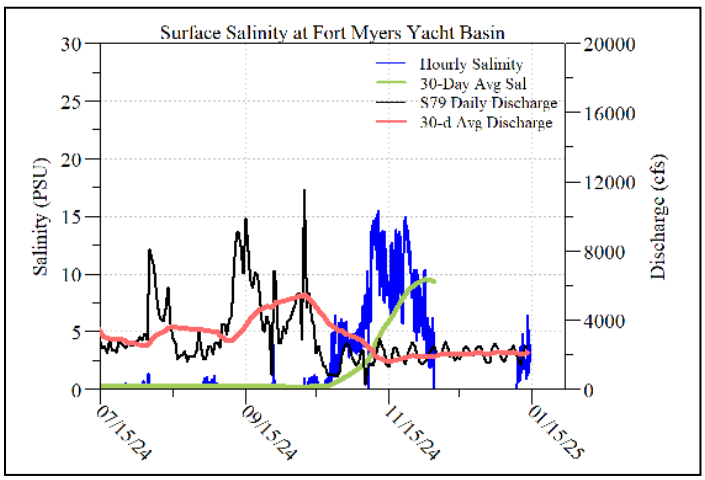
Water Quality Conditions:

Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	0.2 - 0.5 [0.3 - 0.7]	6.6– 8.1	168	6.2	65.8–72.1
Fort Myers Yacht Basin	0.6- 6.4 [ND]	ND	ND	ND	56.5 - 65.1
Shell Point	13-32 [12 -31]	7.2– 8.6	79	3.0	57.5- 66.8
McIntyre Creek	29.6 – 31.4 [26.3 – 29.9]	4.4 – 6.7	33.1 – 50.7	0.8 – 2.1	55.7 – 67.4
Tarpon Bay	26.3 – 33.2 [24.1 – 31.7]	5.0 – 8.9	21.8 – 55.7	1.1 – 2.2	56.3 – 66.1
Wulfert Flats	ND [ND]	ND	ND	ND	ND

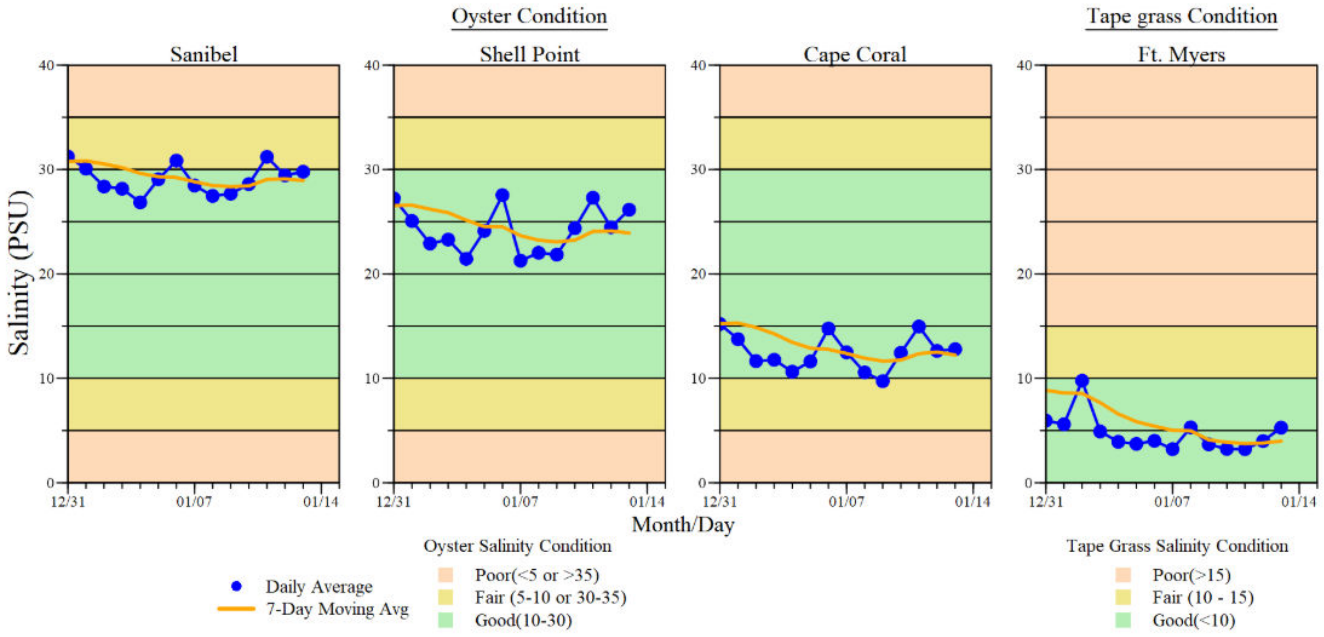
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single 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 **3 patients** with suspected red tide/toxicosis: 1 juvenile double-crested cormorant (still in care), 1 adult brown pelican (still in care) and 1 adult royal tern (deceased). Additional wildlife impacts from partners at the Sanibel- Captiva Conservation Foundation included 2 stranded sea turtles (1 loggerhead & 1 green, both deceased), 10+ fish (mullet and catfish) and multiple species of crabs and eels deceased on shore.

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1; Aquaculture Lease and Public Reef) is **CLOSED** due to the presence of *Karenia brevis* as of 11/06/24. SHA #6222 (North Matlacha Pass) is **CLOSED** as a precautionary closure due to the presence of *Karenia brevis* as of 1/05/25. SHA #6232 (South Matlacha Pass) is **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)
1/7/25	2580	1953	2687
1/8/25	2153	1661	2274
1/9/25	1705	1457	1285
1/10/25	1422	1439	1529
1/11/25	2104	1179	1068
1/12/25	2496	1774	1719
1/13/25	2528	2143	2121
7-day avg	**2141**	**1658**	**1812**



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

Red drift algae on Sanibel Island beach on 1-13-25.

Water clarity at Lighthouse Beach Park on 1-13-25 at 1:36 PM on a rising tide (0.0 ft).

Various wildlife impacts across Sanibel and Captiva islands from 1/7/25- 1/13/25.

Deceased moray eel.

Deceased black drum.

Deceased double-crested cormorant.

Deceased black scoter.