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 14- 20, 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 **1,314 cfs** at **S-79** with a 7-day average of **1,093 cfs (83%)** coming from the lake at **S-77. The 14-day moving average flow at S-79 was 1,728 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **7 days** after **3 days** in the **stress flow envelope** (2,100- 2,600 cfs). **The 14-day moving average flow at S-77 was 1,453 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 La Niña and is expected to persist through February-April 2025. 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 **63,040 AF** with **15,159 AF** to the Caloosahatchee through **S-77**, **11,588 AF** to the St. Lucie canal through **S-308** and **36,293 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **15,726 AF** (**15,726 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **4,547 AF**, **4,583 AF**, and **3,441 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **9,784 AF.**
***Data missing from S-310 and L-8 from 1/14/25- 1/20/25.**

Lake Level: 14.60 (Zone D1) **Last Week**: **14.76 ft** **Last Year: N/A**

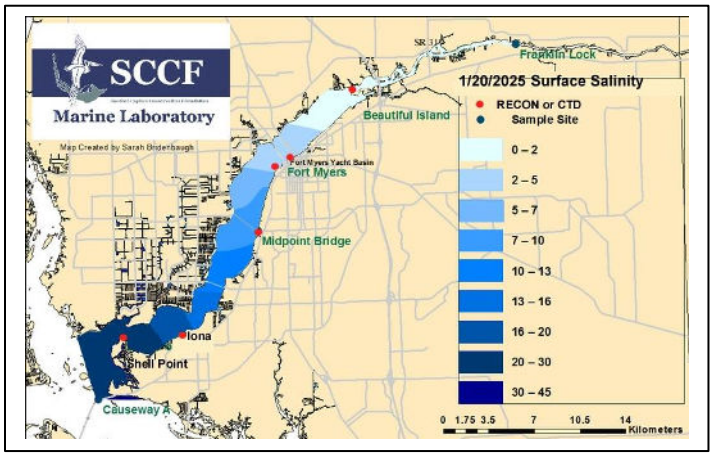
7-Day Lake Recession Rate: -0.16 ft/week

Lake Okeechobee Inflow: 864 cfs **Lake Okeechobee Outflow: 4,138 cfs**

Weekly Rainfall Total: **WP Franklin: 0.55"** **Ortona: 0.60"** **Moore Haven: 0.66"**

Cyanobacteria Status: On 1/21/25, sampling for cyanobacteria by the Lee County Environmental Lab reported *Microcystis* and *Dolichospermum* as **present** at the **Davis Boat Ramp**, appearing as light streaks.

Red Tide: On 1/15/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected in 98 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, medium concentrations in Hillsborough County, very low 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 and offshore of both Lee and Collier counties**, and medium concentrations offshore of Monroe County.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.7	> 1	4.0	< 18
Shell Point	1.3	>2.2	2.2	< 18
Causeway	3.1	> 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 weekly average average surface salinity at the Fort Myers Yacht Basin was 3.0 psu.

Lower Estuary Conditions: The weekly average salinity at the Shell Point RECON was 25 psu, in the optimal range for oysters and seagrass. Very low concentrations of *Karenia* were present in SCCF water samples from Sanibel's southern beaches during the week. Small diatoms, such as *Thallasiosira*, *Odontella* and Cylindrothecids, were dominant in the beach water samples.

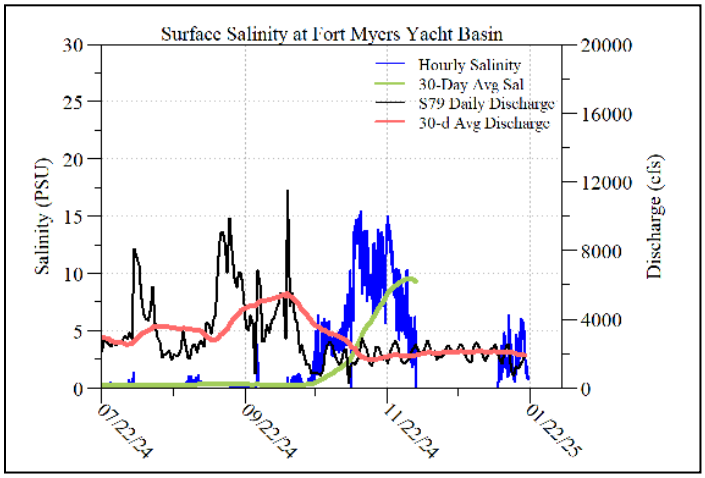
Water Quality Conditions:

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 - 0.6 [0.2 - 0.5]	6.8 – 7.9	160	6.0	67.0 – 74.2
Fort Myers Yacht Basin	0.6 - 6.1 [0.6 - 6.4]	ND	ND	ND	61.2 - 68.8
Shell Point	14 - 32 [13 - 32]	7.1– 8.4	75	3.2	61.3 - 67.3
McIntyre Creek	ND [29.6 – 31.4]	ND	24.8 – 50.4	1.1 – 2.2	ND
Tarpon Bay	27.9 – 33.2 [26.3 – 33.2]	6.8 – 9.4	17.8 – 49.6	1.0 – 2.2	60.3 – 68.1
Wulfert Flats	27.9 – 29.8 [ND]	6.1 – 8.9	-------	3.5 – 10.9	62.6 – 68.9

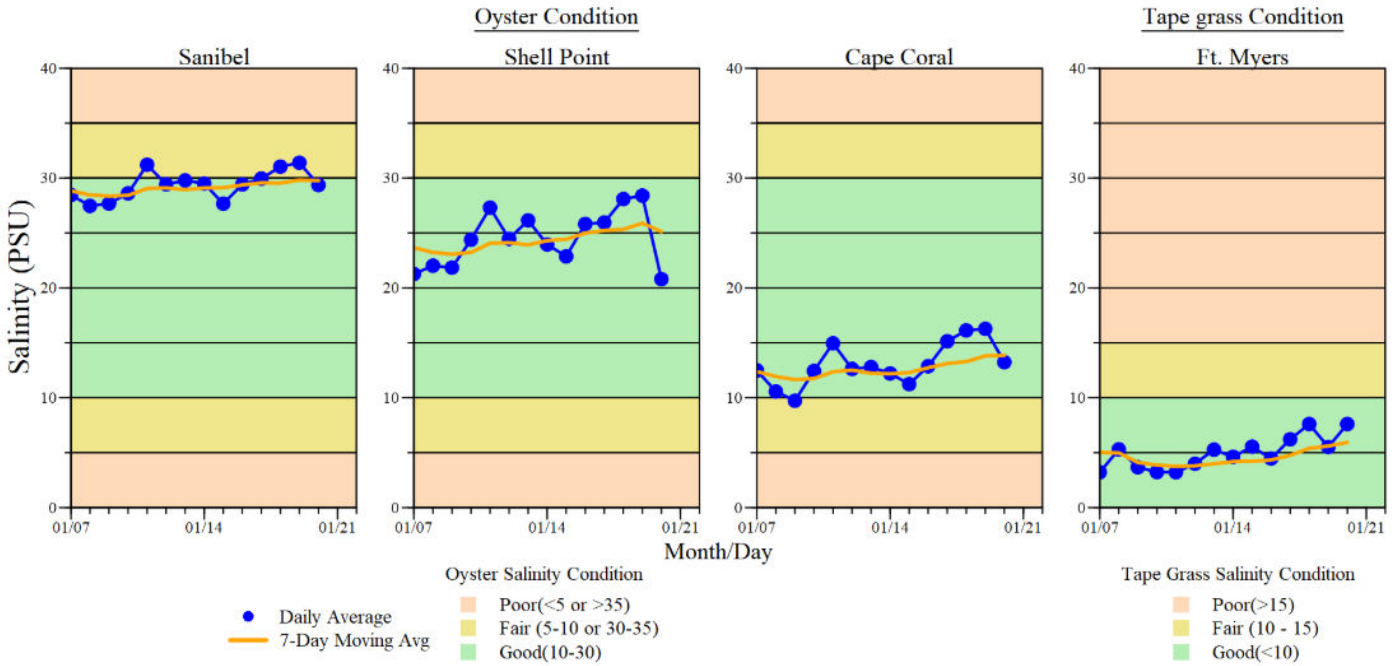
Red values are outside of the preferred range.
[a] Salinity target values: BI < 5, FM < 10, SP = 10 – 30
[b] Dissolved O_2 target values: all sites > 4
[c] FDOM target values: BI < 70, FM < 70, SP < 11
[d] Chlorophyll target values: BI < 11, FM < 11, SP < 11
[f] Temperature target values: < 90
[s] Single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

Wildlife Impacts: In the past week, the CROW wildlife hospital on Sanibel admitted **4 patients** with suspected red tide/toxicosis: 2 juvenile brown pelicans (both still in care), 1 juvenile double-crested cormorant (deceased) and 1 adult osprey (deceased).

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)
1/14/25	1074	1188	1134
1/15/25	708	741	949
1/16/25	1267	588	718
1/17/25	1158	1076	1105
1/18/25	1428	1404	1250
1/19/25	1605	1497	1222
1/20/25	1960	1713	1275
7-day avg	**1314**	**1172**	**1093**



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