

## 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 21- 27, 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 **1,827 cfs** at **S-79** with a 7-day average of **1,022 cfs (56%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 was 1,571 cfs** and has been in the **optimum flow envelope** (750- 2,100 cfs; RECOVER 2020) for **14 days**. **The 14-day moving average flow at S-77 was 1,058 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 and consider the proximity of active algal blooms in their decision-making processes, specifically the active and on-going red tide bloom off the coast of Southwest Florida. Onshore winds have shifted a dense patch of the bloom closer to the coast over the past week. Wildlife impacts and human respiratory impacts are being reported on and surrounding the islands of Sanibel and Captiva, along with water discoloration indicative of red tide noted in aerial photography offshore.

**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 **40,774 AF** with **14,324 AF** to the Caloosahatchee through **S-77**, **10,528 AF** to the St. Lucie canal through **S-308** and **15,922 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **15,825 AF** (**15,726 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **2,717 AF**, **5,372 AF**, and **7,794 AF** at **WCA1**, **WCA2**, and **WCA3**, respectively. Everglades National Park received **8,206 AF**.

\*Data missing from S-310 and L-8 from 1/21/25- 1/27/25 and from S-80 on 1/27/25.

**Lake Level: 14.53 (Zone D1)**

**Last Week: 14.60 ft**

**Last Year: 16.33**

**7-Day Lake Recession Rate: -0.07 ft/week**

**Lake Okeechobee Inflow: 699 cfs**

**Lake Okeechobee Outflow: 3,878 cfs**

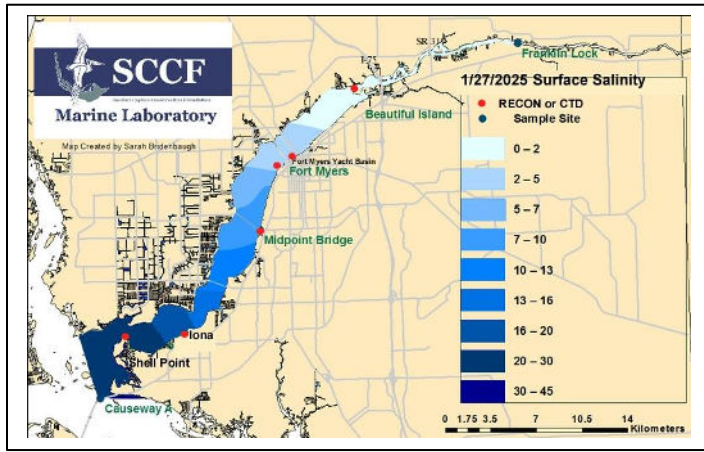
**Weekly Rainfall Total: WP Franklin: 0.41"**

**Ortona: 0.67"**

**Moore Haven: 1.21"**

**Cyanobacteria Status:** On 1/27/25, sampling for cyanobacteria by the Lee County Environmental Lab reported no visible cyanobacteria across all sites.

**Red Tide:** On 1/24/25, the FWC reported that the red tide organism, *Karenia brevis*, was detected in 27 samples collected from Florida's Gulf Coast. In Southwest Florida, *K. brevis* was observed at background to low concentrations in and offshore of Pinellas County, background to medium concentrations in Manatee County, background to low concentrations in Sarasota County, medium concentrations in Charlotte County, and **very low to medium concentrations in Lee County**.



Light Penetration				
Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Beautiful Is	0.7	> 1	4.7	< 18
Shell Point	1.2	>2.2	1.6	< 18
Causeway	3.1	> 2.2	1.5	< 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 1.8 psu.

**Lower Estuary Conditions:** The weekly average salinity at the Shell Point RECON was 24 psu, in the optimal range for oysters but below optimal for seagrass. Very high concentrations of *Karenia* were present in SCCF water samples from Sanibel’s southern beaches on 1/26 and 1/27/25.

**Water Quality Conditions:**

Monitor Site	Salinity (psu) <sup>a</sup> [previous week]	Diss O <sub>2</sub> (mg/L) <sup>b</sup>	FDOM (qsde) <sup>c</sup>	Chlorophyll (µg/L) <sup>d</sup>	Temperature (°F)
Beautiful Island	0.2 - 0.5 [0.2 - 0.6]	6.9 – 8.6	158	6.3	62.1 – 74.2
Fort Myers Yacht Basin	0.3 - 6.9 [0.6 - 6.1]	ND	ND	ND	53.6 - 63.3
Shell Point	13 - 32 [14 - 32]	7.1– 9.2	75	3.3	53.8 - 67.1
McIntyre Creek	[ND]	ND	-----	-----	-----
Tarpon Bay	[27.9 – 33.2]	-----	-----	-----	-----
Wulfert Flats	[27.9 – 29.8]	-----	-----	-----	-----

Red values are outside of the preferred range.

<sup>a</sup> Salinity target values: BI < 5, FM < 10, SP = 10 – 30

<sup>b</sup> Dissolved O<sub>2</sub> target values: all sites > 4

<sup>c</sup> FDOM target values: BI < 70, FM < 70, SP < 11

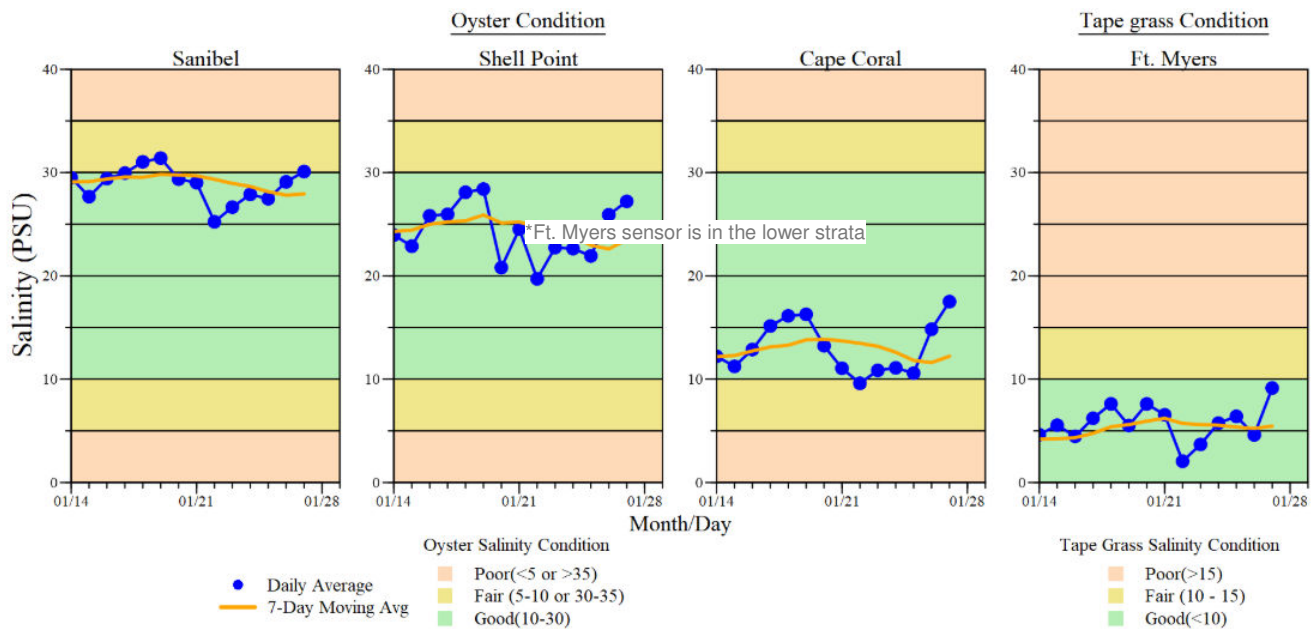
<sup>d</sup> Chlorophyll target values: BI < 11, FM < 11, SP < 11

<sup>f</sup> Temperature target values: < 90

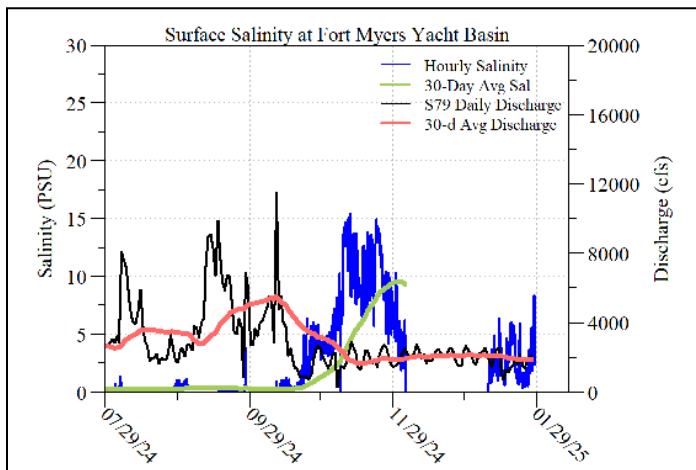
<sup>s</sup> Single sonde lower and surface layer or surface grab lab measurement  
ND: no data

**Wildlife Impacts:** In the past week, the CROW wildlife hospital on Sanibel admitted **3 patients** with suspected red tide/toxicosis: 2 juvenile brown pelicans (both deceased) and 1 adult snowy egret (deceased). Multiple instances of fish kills have been reported over the past week on Sanibel and Captiva islands, likely due to the presence of *Karenia brevis*.

**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.



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.



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
1/21/25	1576	1611	1175
1/22/25	2189	1422	821
1/23/25	1560	1232	635
1/24/25	1395	1720	906
1/25/25	1916	1599	931
1/26/25	2007	1648	922
1/27/25	2149	2173	1766
<b>7-day avg</b>	<b>1827</b>	<b>1629</b>	<b>1022</b>



Water clarity from Lighthouse Beach Park on 1-27-29 at 2:46 PM on a rising tide (1.2 ft).



Aerial imagery offshore of Sanibel Island on 1-27-25, courtesy of Ralph Arwood & Calusa Waterkeeper.



*Gracilaria* algae on Sanibel Island on 1-27-25.



Deceased spotted seatrout, mullet and pufferfish on Sanibel Island on 1-27-25.

