MEMORANDUM

To: USACE Colonel James L. Booth, LTC Todd F. Polk, 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
Lesli Haynes & Lisa Kreiger - Lee County
Harry Phillips & Maya Robert - City of Cape Coral
Leah Reidenbach, Rick Bartleson PhD, Matt Depaolis & Allie Pecenka - Sanibel-Captiva Conservation Foundation

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **February 6 – 12, 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 **1,900 cfs** at **S-79** with a 7-day average of **1,029 cfs (54%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 1,895 cfs and has been in the optimum** flow envelope (750 – 2,100 cfs; RECOVER 2020) for **11 days**.

Recommendation: The prolonged high lake stage is having long-term negative impacts on the health of Lake Okeechobee. With El Niño conditions currently bringing above average rainfall this dry season, lowering the lake prior to the 2024 rainy season will prove to be challenging. Time is of the essence; we encourage the Corps to start managing Lake Okeechobee to reduce lake levels while maintaining optimum flows and use all available outlets to prevent damaging discharges to the estuaries.

USACE Action: With Lake Okeechobee stage in the Intermediate Sub-band, the Tributary Hydrologic conditions in the Wet category, Part D of the 2008 LORS suggests up to 4,000 cfs at S-77 and 1,800 cfs at S-80. On 6/10/23 the USACE increased releases from Lake Okeechobee to the Caloosahatchee Estuary from the W.P. Franklin Lock and Dam (S-79) to 2,000 cfs. Releases to the St. Lucie Estuary (S-80) remain at 0 cfs.

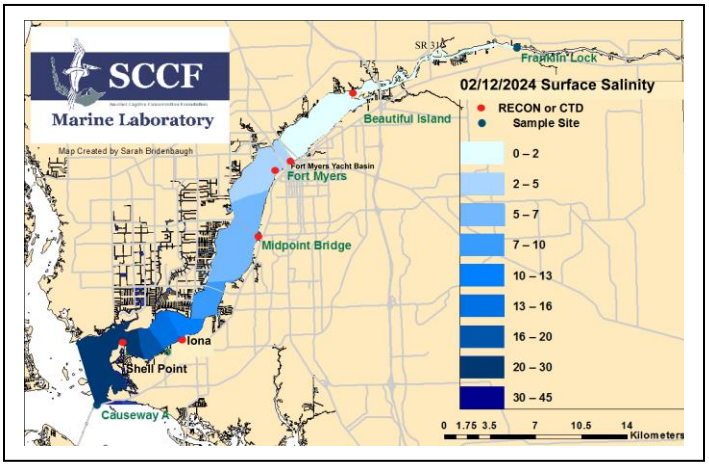
Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **23,327 AF*** with **14,956 AF** to the Caloosahatchee through **S-77**, **73 AF** to the St. Lucie canal though **S-308**, **16 AF** through **S-310*** in Clewiston, **534 AF** though the **L8 canal**, and **7,750 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **46,982 AF** (**46,980 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1) and **2 AF** from the **L8 canal**. Water conservation areas received flows of **3,600 AF**, **4,501 AF**, and **5,366 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **19,793 AF**.***Data missing for S-310 on 2/8/24 – 2/12/24.**

Lake Level: 16.37 ft (Intermediate Sub-Band) **Last Week**: **16.32 ft** **Last Year: 15.87 ft**

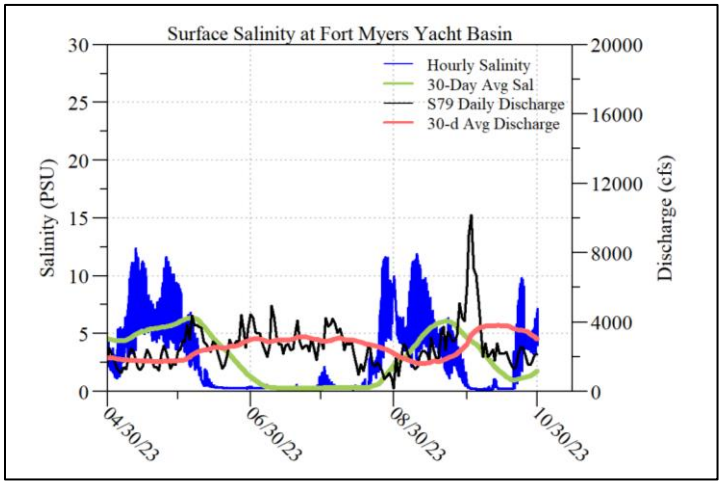
7-Day Lake Recession Rate: -0.05 ft/week

Lake Okeechobee Inflow: 3,462 cfs **Lake Okeechobee Outflow: 719 cfs**

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



ACOE Daily Reports			
Date	**S79 Flow (cfs)**	**S78 Flow (cfs)**	**S77 Flow (cfs)**
2/6/24	2976	1556	1502
2/7/24	2107	1610	1346
2/8/24	1875	705	648
2/9/24	1203	NR	456
2/10/24	1676	896	1005
2/11/24	1702	944	1127
2/12/24	1760	988	1118
7-day avg	**1900**	**1117**	**1029**



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	0.6	> 1	1.8	< 18
Shell Point	ND	>2.2	ND	< 18
Causeway	2.5	> 2.2	3.0	< 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.*

Cyanobacteria Status: On 2/12/24 sampling for cyanobacteria by the Lee County Environmental Lab reported that no cyanobacteria were observed on the Caloosahatchee.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was 0.6 psu, within the suitable range for tape grass.

Lower Estuary Conditions: The average salinity at Shell Point RECON was 23 psu, in the optimal range for oysters but below optimal for seagrass.

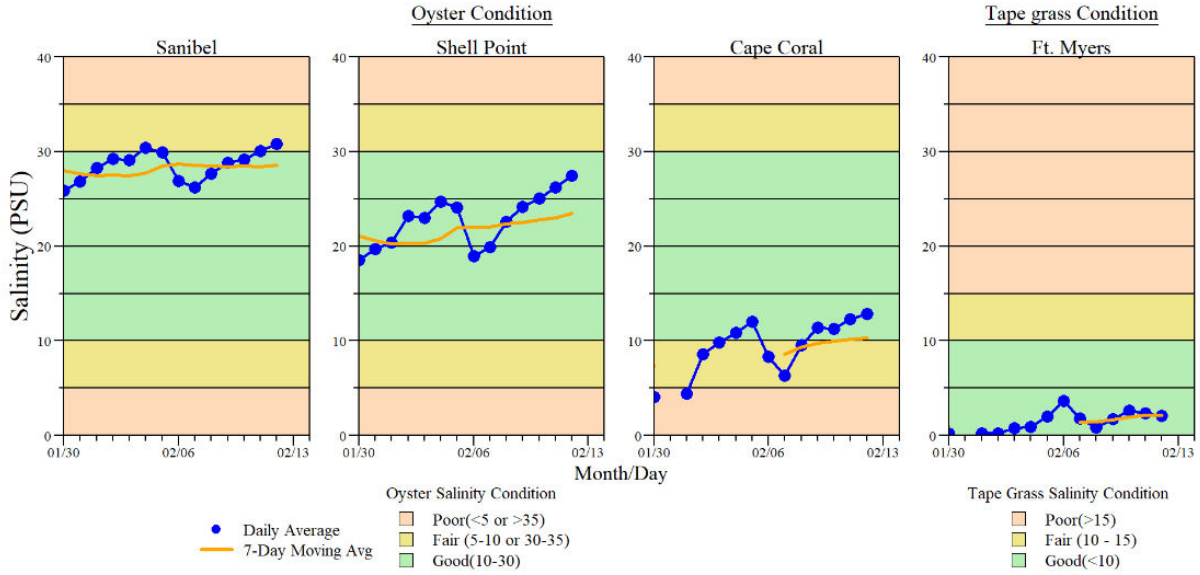
Water Quality Conditions:

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 – 0.3 [0.2 – 0.2]	6.1 – 7.4	-------	-------	67.4 – 76.3
Fort Myers Yacht Basin	0.2 – 3.3 [0.2 – 1.6]	7.3 – 8.6	166 – 237	6.5	62.2 – 71.7
Shell Point	9.9 – 32.0 [8.9 – 32]	6.5 – 8.0	-------	-------	62.5– 70.4
McIntyre Creek	25.0 – 31.6 [27.5 – 31.5]	3.6 – 7.8	-------	-------	58.5 – 72.7
Tarpon Bay	25.4 – 33.0 [26.4 – 33.3]	5.8 – 7.7	22.2 – 68.7	1.1 – 15.0	60.6 – 67.1
Wulfert Flats	------- [29.7 – 32.9]	-------	-------	-------	-------

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
[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 2 patients with suspected red tide/toxicosis: 1 juvenile herring gull (transferred for continued rehab) and 1 adult anhinga (still at CROW).

Red Tide: On 2/9/24, the FWC reported that the red tide organism *Karenia brevis* was observed at background concentrations in one sample from the Florida East Coast over the past week. In Southwest Florida over the past week, *K. brevis* was not observed.



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 2/14/24 at 1:18 PM on a rising tide (1.8 ft).