MEMORANDUM

To: USACE Colonel James L. Booth, 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: **June 18- 24, 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 **3,052 cfs** at **S-79** with a 7-day average of **112 cfs (1%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 5,560 cfs and has been in the damaging flow envelope** (>2,600 cfs, RECOVER 2020) for **12 days.** The 14-day moving average flow at S-77 was **77 cfs.**

Recommendation: With the onset of the rainy season and predictions for increased Atlantic storm intensity in the upcoming hurricane season, we ask the Army Corps to remain reactive to changing conditions in Lake Okeechobee and the Caloosahatchee River and estuary to support the ecological health of this system. In addition, we request a pause in releases from Lake Okeechobee to the CRE for as long as basin runoff from prolonged rainfall in Southwest Florida pushes these flows above RECOVER targets.

USACE Action: With Lake Okeechobee stage in the Low Sub-band, the Tributary Hydrologic Conditions in the Very Wet category, Lake stage more than 1.0 ft below the Intermediate Sub-band, and the Multi-seasonal Lake Okeechobee Net Inflow Outlook in the Wet category, Part D of the 2008 LORS suggests "S-79 up to 3,000 cfs and S80 up to 1,170 cfs".

Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **1,004 AF*** with **262 AF** to the Caloosahatchee through **S-77**, **-18 AF** to the St. Lucie canal through **S-308**, **760 AF** through the **L8 canal**, and **0 AF** to the EAA through **S-351**, **S-352**, and **S-354***. The total net inflow to the Lake was **16,162 AF** (**16,162 AF** from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1). Water conservation areas received flows of **21,920 AF**, **46,459 AF**, and **22,705 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **8,874 AF.**
***Data missing from S-78 on 6/22, S-310 & S-354 from 6/18- 6/24, S-80 from 6/22- 6/24, ENP on 6/19, 6/20 & 6/23 and FEC, Istokpoga, S-65E and S-65EX1 on 6/23.**

Lake Level: 13.39 ft (Low Sub-Band) **Last Week**: **13.39 ft** **Last Year: 14.44 ft**

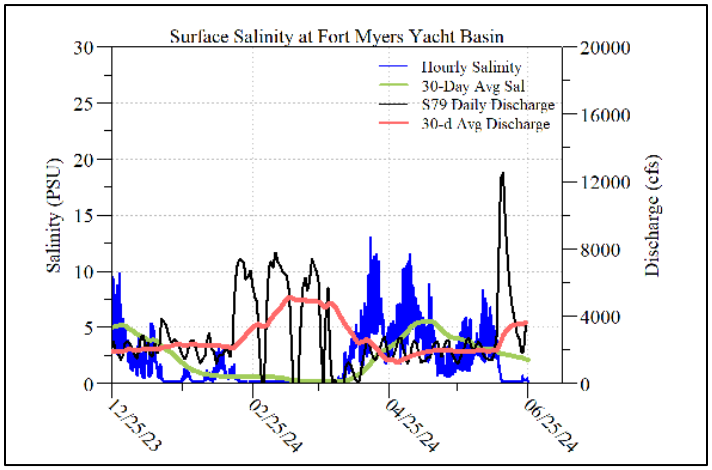
7-Day Lake Recession Rate: -0.00 ft/week

Lake Okeechobee Inflow: 722 cfs **Lake Okeechobee Outflow: 0 cfs**

Weekly Rainfall Total: **WP Franklin: 1.63"** **Ortona: 1.72"** **Moore Haven: 1.11"**

Cyanobacteria Status: On 6/24/24, sampling for cyanobacteria by the Lee County Environmental Lab reported **moderately abundan**t *Microcystis* and *Dolichospermum* upstream of the **Franklin Locks** as streaks with some wind-driven accumulation along the Lock/ shore. *Microcystis* was **present** at **Midpoint Bridge Park** as specks with wind-driven accumulation along the shore.

Red Tide: On 6/21/24, the FWC reported that the red tide organism, *Karenia brevis*, was not observed in samples collected statewide over the past week.



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	0.7	> 1	3.1	< 18
Shell Point	1.1	>2.2	1.3	< 18
Causeway	3.5	> 2.2	3.9	< 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 30-day average surface salinity at the Fort Myers Yacht Basin was 2.3 psu, within the suitable range for tape grass.

Lower Estuary Conditions: The average salinity at Shell Point RECON was 21 psu, in the optimal range for oysters but below optimal for seagrass. Salinities dropped below 3 psu at Shell Point on 6/17/24. Moderate amounts of macroalgae washed onto Bunche Beach on 6/21 and Sanibel beaches on 6/24/24.

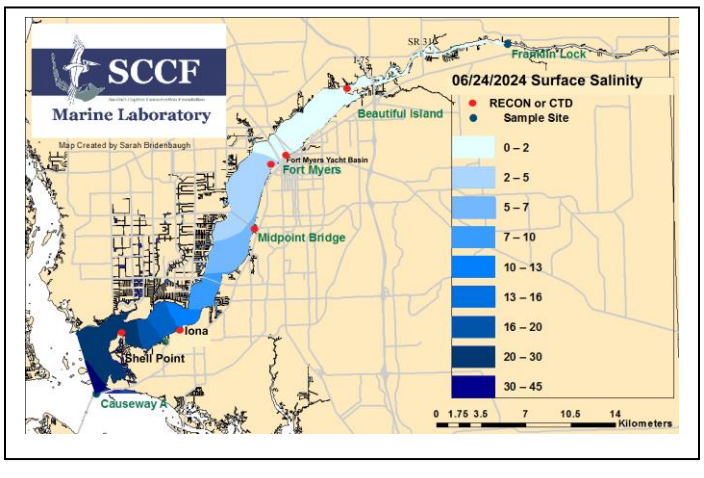
Water Quality Conditions:

Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]	Temperature (°F)
Beautiful Island	0.2 – 0.2 [0.2 – 0.3]	0.4 – 4.8	171 – 200	9.0	83.3 – 89.6
Fort Myers Yacht Basin	0.2 – 0.7 [0.2 – 4.8]	2.9– 7.3	134 – 177	4.4	82.7 – 90.2
Shell Point	2.4 – 31 [1.8 – 33]	3.7 – 9.0	8.00 – 150	2.9	82.1 – 87.0
McIntyre Creek	21.6 – 26.6 [19.4 – 34.1]	1.6 – 7.1	47.5 – 67.2	2.5 – 24.4	81.8 – 88.8
Tarpon Bay	20.8 – 31.4 [19.9 – 35.3]	2.2 – 14.1	23.6 – 66.8	1.7 – 15.9	82.3 – 88.5
Wulfert Flats	19.1 – 25.8 [18.8 – 32.8]	2.6 – 8.8	-------	7.3 – 42.8	81.9 – 89.2

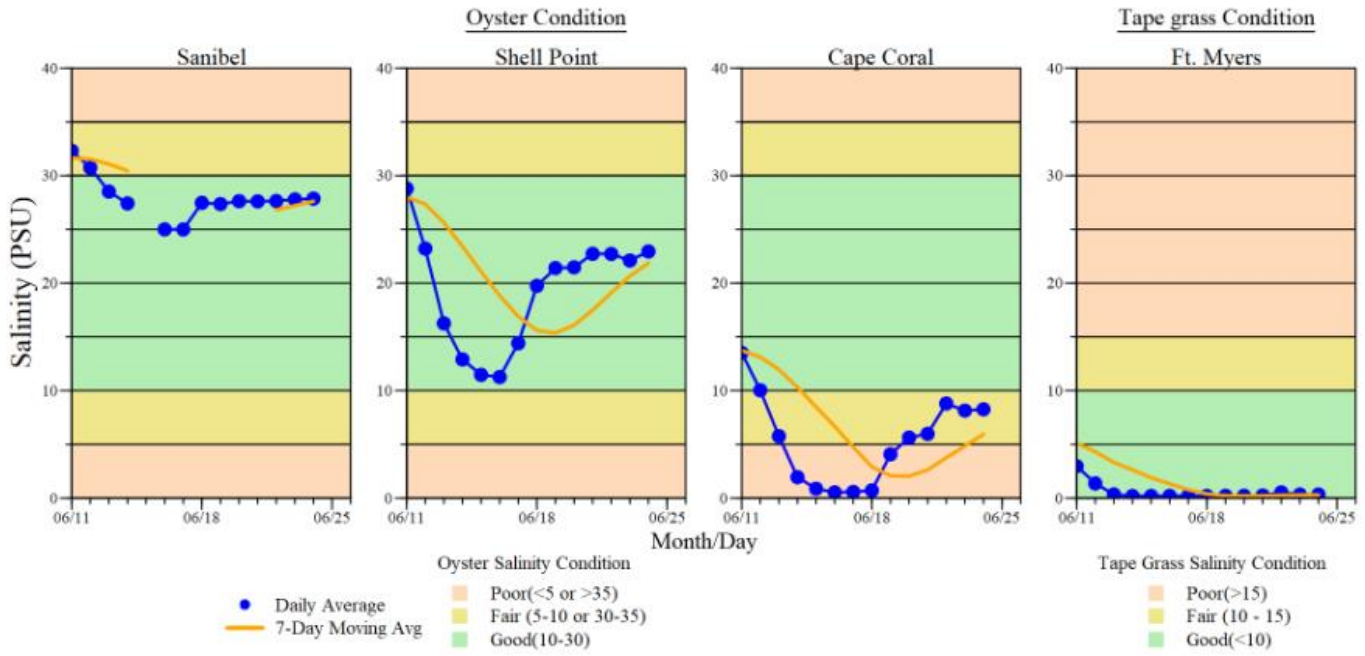
Red values are outside of the preferred range.
[a] **Salinity target values: BI < 5, FM < 10, SP = 10 – 30**
[b] **Dissolved O_2 target values: all sites > 4**
[c] **FDOM target values: BI < 70, FM < 70, SP < 11**
[d] **Chlorophyll target values: BI < 11, FM < 11, SP < 11**
[f] **Temperature target values: < 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 4 patients with suspected red tide/ toxicosis: 1 fledgling Wilson's plover (still in care), 1 adult royal tern (still in care), 1 adult anhinga (still in care) and 1 adult laughing gull (deceased).

Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1) is **CLOSED** by the Florida Department of Agriculture and Consumer Services (FDACS) as of 6/10/24 due to presence of hazardous biotoxin levels. SHA's 6222 (Pine Island Sound Sec. 2) and 6232 (Pine Island Sound Sec. 3) are **CLOSED** as of 6/13/24 due to rainfall.

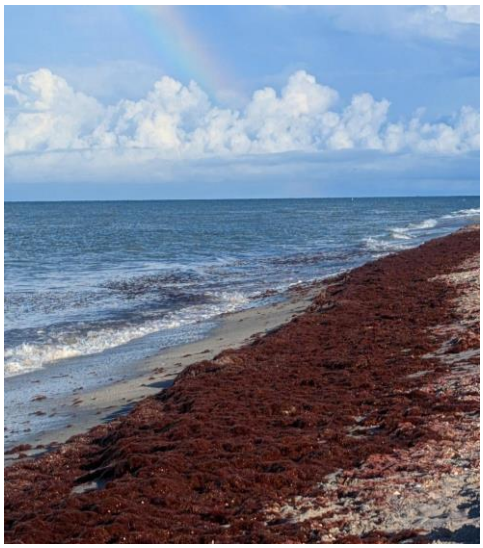


ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
6/18/24	4616	2520	0
6/19/24	3850	2071	0
6/20/24	2999	1607	0
6/21/24	2666	1072	0
6/22/24	1856	857	0
6/23/24	1897	863	0
6/24/24	3483	1399	112
7-day avg	**3052**	**1484**	**16**



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



Hypnea, Agardhiella and Gracilariaon on the South end of Sanibel Island on 6/23 & 6/24/24.

Water clarity at Lighthouse Beach Park on 6/24 at 1:06 PM on a rising tide (3.5 ft).