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 25 - July 1, 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 **3,937 cfs** at **S-79** with a 7-day average of **127 cfs coming from the lake at** S-77**. The 14-day moving average flow at S-79 is 3,495 cfs and has been in the damaging flow envelope** (> 2600 cfs; RECOVER 2020) for **19 days**.

Recommendation: With the onset of the rainy season and predictions for increased Atlantic storm intensity in the ongoing 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 the Army Corps to continue to refrain from releasing while we are above the optimal flow envelope.

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 **1,767 AF** with **1,767 AF** to the Caloosahatchee through **S-77**, and **0 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **11,472 AF** (9,445 AF from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1) with a total backflow volume of **2,027 AF** from **C10A**.

Lake Level: 13.49 ft (Low Sub-Band) **Last Week**: **13.39 ft** **Last Year: 14.64 ft**

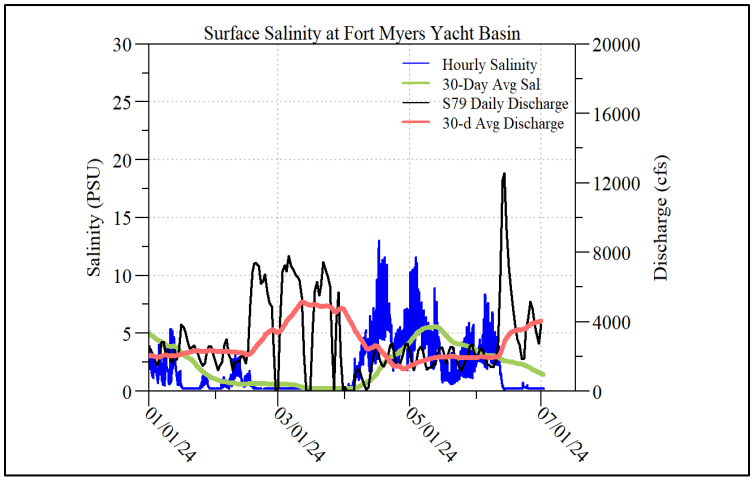
7-Day Lake Recession Rate: +0.10 ft/week

Lake Okeechobee Inflow: 1812 cfs **Lake Okeechobee Outflow: 212 cfs**

Weekly Rainfall Total: **WP Franklin: 3.05"** **Ortona: 1.00"** **Moore Haven: 2.63"**

Cyanobacteria Status: Data unavailable this week.

Red Tide: On 6/28/24, 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	0.6	> 1	3.0	< 18
Shell Point	1.1	>2.2	1.6	< 18
Causeway	2.7	> 2.2	3.2	< 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 1.7 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 5 psu at Shell Point on two days. Moderate amounts of macroalgae were washing onto Sanibel beaches until 6/29/24.

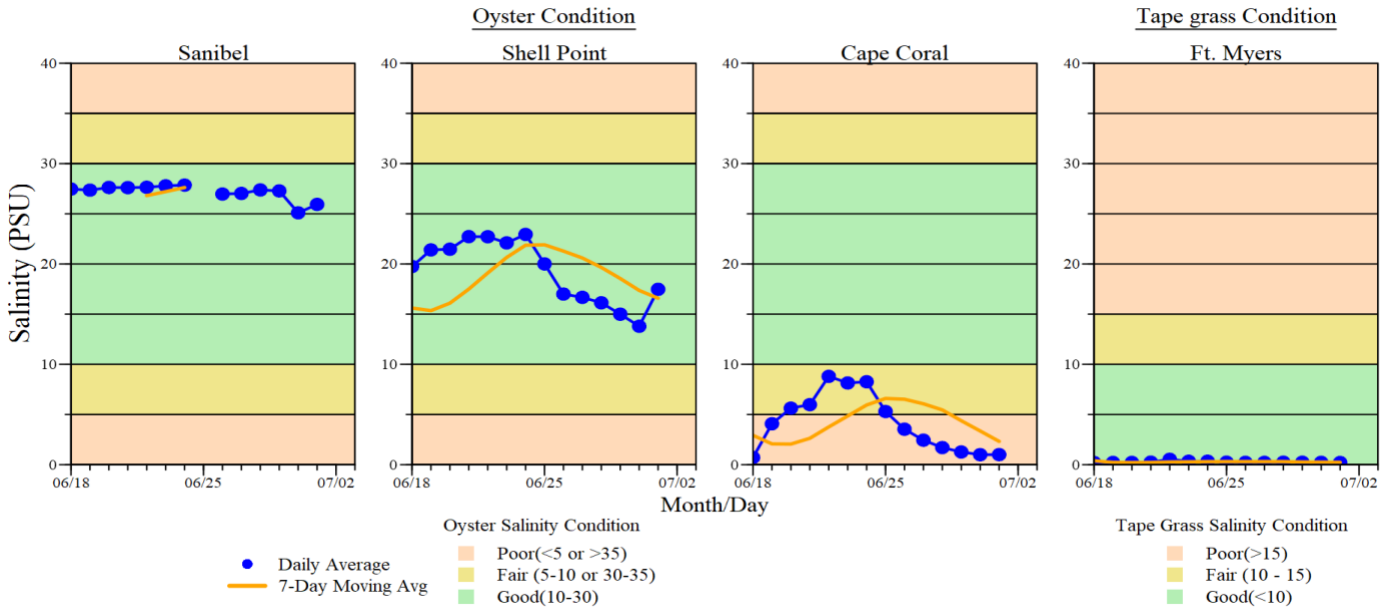
Water Quality Conditions:

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 – 0.2]	ND	186 – 216	8.9	85.9 – 90.9
Fort Myers Yacht Basin	0.2 – 0.6 [0.2 – 0.7]	2.4– 8.2	135 – 208	6.0	83.0 – 90.5
Shell Point	4.4 – 30 [2.4 – 31]	2.5 – 6.8	17.50 – 166	1.8	84.6 – 89.8
McIntyre Creek	[21.6 – 26.6]	n/a	----	----	----
Tarpon Bay	[20.8 – 31.4]	n/a	----	----	----
Wulfert Flats	[19.1 – 25.8]	n/a	----	----	----

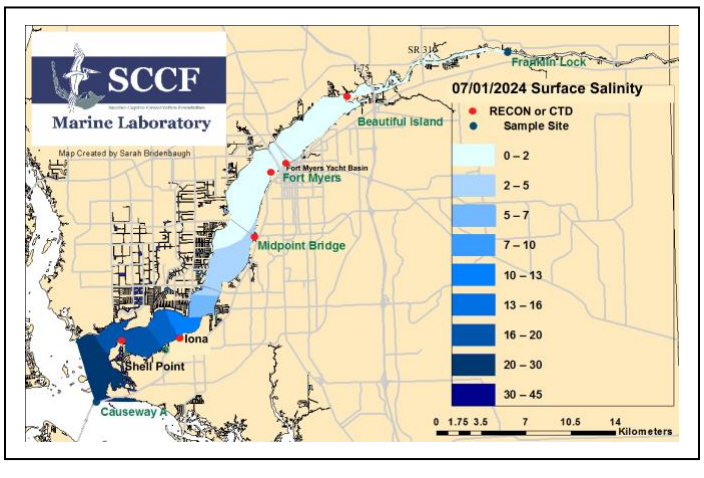
Red values are outside of the preferred range.
[a] **Salinity target values: BI < 5, FM < 10, SP = 10 – 30**
[b] **Dissolved O_2 target values: all sites > 4**
[c] **FDOM target values: BI < 70, FM < 70, SP < 11**
[d] **Chlorophyll target values: BI < 11, FM < 11, SP < 11**
[f] **Temperature target values: < 90**
[s] **Single sonde lower and surface layer or surface grab lab measurement**

Wildlife Impacts: In the past week, the CROW wildlife hospital on Sanibel admitted 1 juvenile Anhinga with suspected red tide/toxicosis. The anhinga died within 24 hours of admittance.

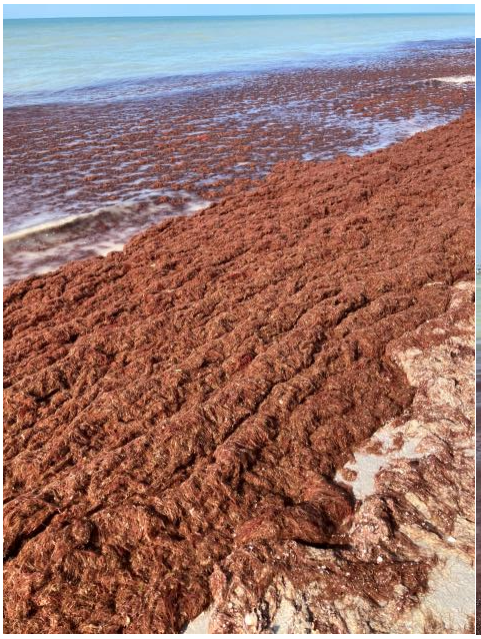
Shellfish Advisory: Shellfish harvest area #6212 (Pine Island Sound Section 1) is **CLOSED** by the Florida Department of Agriculture and Consumer Services (FDACS) as of 6/10/24 due to presence of hazardous biotoxin levels. SHA's 6222 (Pine Island Sound Sec. 2) and 6232 (Pine Island Sound Sec. 3) will **REOPEN** at sunrise on 7/3/2024.

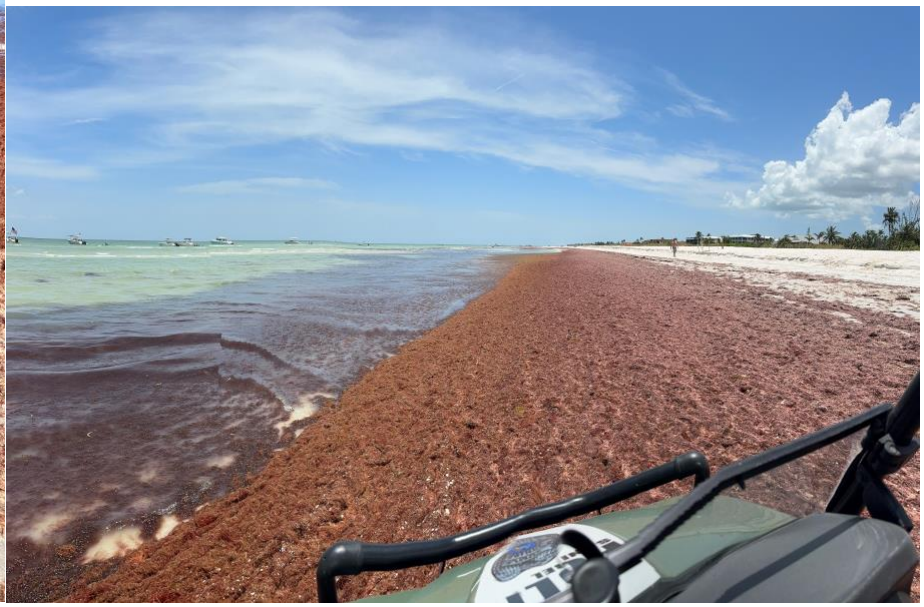


Daily average bottom salinity data for the last 14-days from sampling locations within the tidal Caloosahatchee River Estuary relative to oyster health (Sanibel, Shell Point and Cape Coral) and tape grass (*Vallisneria americana*) health (Ft. Myers only) conditions.



ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
6/25/24	4174	1823	150
6/26/24	5170	2137	91
6/27/24	4736	2396	0
6/28/24	3757	1976	0
6/29/24	3156	1313	448
6/30/24	2737	1600	130
7/1/24	3832	1743	72
7-day avg	**3937**	**1855**	**127**





Agardhiella on the East end (near Light House Beach) and South end of Sanibel Island on 6/28/ and 6/29/24