MEMORANDUM

To: USACE Colonel James L. Booth, LTC Todd F. Polk, Richard McMillen, Kim Taplin, 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
James Evans, Leah Reidenbach, & Rick Bartleson PhD - SCCF (Sanibel-Captiva Conservation Foundation)

Subject: Caloosahatchee & Estuary Conditions Report

Reporting Period: **June 7 – 13, 2022**

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: Flows to the Caloosahatchee Estuary had a 7-day average of **4335 cfs** at **S-79** with a 7-day average of **0 cfs (0%)** coming from the lake at **S-77**. **The 14-day moving average flow at S-79 is 3876 cfs and has been in the damaging flow envelope (>2600 cfs; RECOVER 2020) for 5 days.**

Recommendation: Local basin runoff into the Caloosahatchee is averaging more than 2,100 cfs at S-79. We request that the Corps cease flow from S-77 until watershed flows drop within the optimal flow range (750 – 2,100 cfs; RECOVER 2020).

USACE Action: On 6/3/22 the USACE announced that Port Mayaca Lock and Dam (S-308) and Julian Keen Lock and Dam (S-77) will be closed during Tropical Cyclone One and all local basin runoff will be passed through downstream structures to tide, suspending the current weekly release target of 1,000 cfs at S-79 to the Caloosahatchee. USACE has not scheduled regular lake releases through the S-80 since Spring of 2021. Any release decisions made after the storm will be communicated prior to execution.

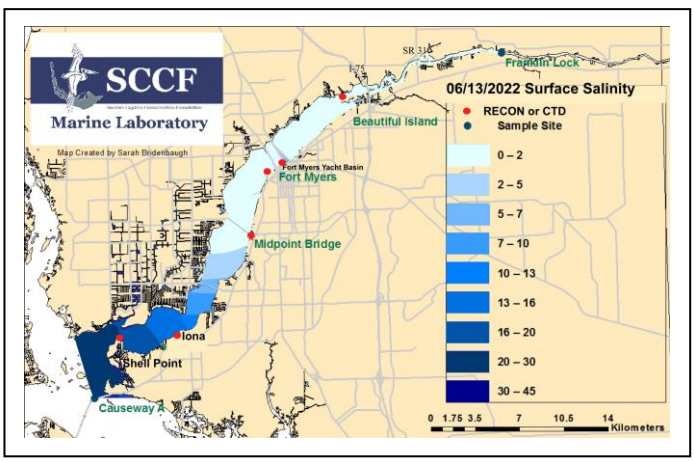
Lake Flows: In the past 7 days the total outflow from Lake Okeechobee was **0 AF** with **0 AF** to the Caloosahatchee through **S-77**, **0 AF** through **S-310** in Clewiston, and **0 AF** to the EAA through **S-351**, **S-352**, and **S-354**. The total net inflow to the Lake was **14,613 AF** (8,987 AF from Fisheating Creek, S-71, S-72, S-84s, S-65EX, and S-65EX1) with a total backflow volume of **5,626 AF** from **S310, C10A, and S308**. Water conservation areas received flows of **31,624 AF**, **47,528 AF**, and **11,671 AF** at **WCA1, WCA2, and WCA3**, respectively. Everglades National Park received **2,180 AF**.

Lake Level: 13.02 ft (Base Flow sub-band) **Last Week**: **12.75 ft** **Last Year: 12.51 ft**

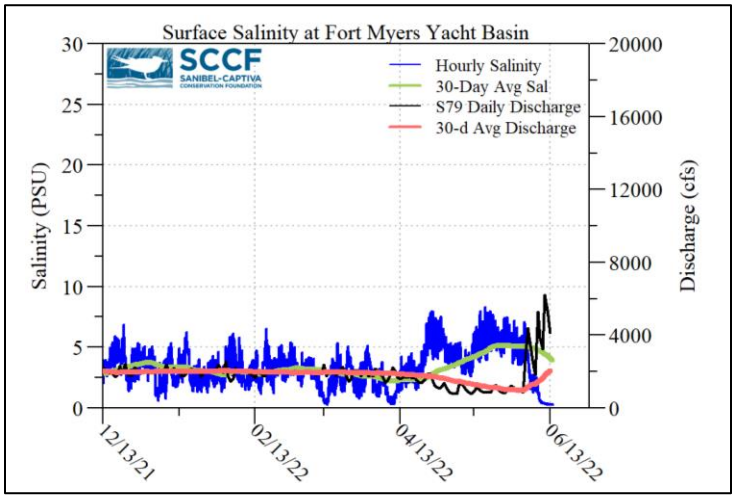
Lake Okeechobee Inflow: **1665 cfs** **Lake Okeechobee Outflow: 0 cfs**

Weekly Rainfall Total: **WP Franklin** ≥ 1.12" **Ortona** ≥ 4.21" **Moore Haven** ≥ 4.03"

7-Day Lake Recession Rate: 0.27 ft/week



ACOE Daily Reports			
Date	**S79 Flow (cfs)**	**S78 Flow (cfs)**	**S77 Flow (cfs)**
6/7/22	**1815**	**1141**	**0**
6/8/22	**5288**	**1578**	**0**
6/9/22	**3820**	**1789**	**0**
6/10/22	**3220**	**1246**	**0**
6/11/22	**6203**	**2384**	**0**
6/12/22	**5349**	**2500**	**0**
6/13/22	**4650**	**2067**	**0**
7-day avg	**4335**	**1815**	**0**



Light Penetration

Site	25% Iz	Target Values	Turbidity	Target Values
	meters		NTU	
Fort Myers	ND	> 1	ND	< 18
Shell Point	1.28[c]	>2.2	1.8	< 18
Causeway	1.76[c]	> 2.2	0.8	< 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.*
[m] measured, [c] calculated

Cyanobacteria Status: On 6/13/22 sampling for cyanobacteria by the Lee County Environmental Lab reported **the presence** of cyanobacteria at the **Alva Boat Ramp** and **Davis Boat Ramp** as sparse specks. *Microcystis* and *Dolichospermum* were **moderately abundant** at **North Shore Park** with specks and accumulation onshore.

Upper Estuary Conditions: The 30-day average surface salinity at the Fort Myers Yacht Basin was 4.3 psu, within the suitable range for tape grass.

Lower Estuary Conditions: The average salinity at Shell Point RECON was 20 psu, within the optimal range for oysters. *Coscinodiscus* was abundant (90,000 cells/L) at the Causeway on 6/13/22.

Water Quality Conditions

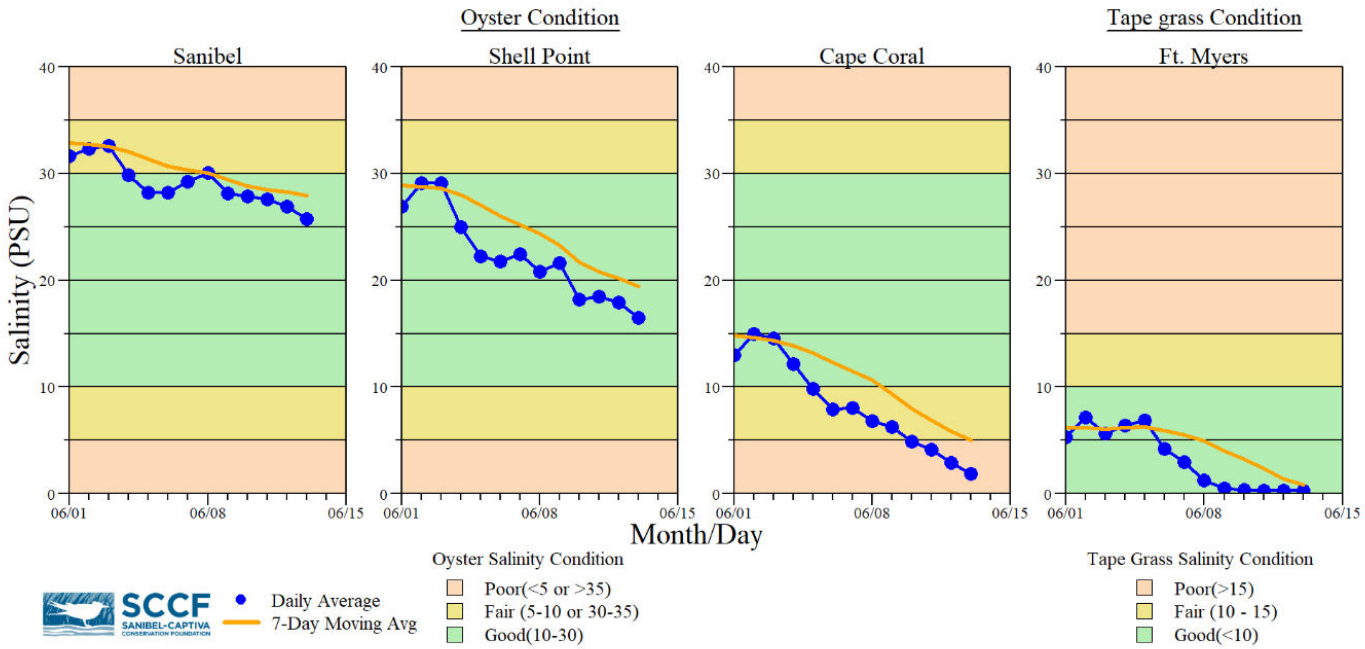
Monitor Site	Salinity (psu)[a] [previous week]	Diss O_2 (mg/L)[b]	FDOM (qsde)[c]	Chlorophyll (µg/L)[d]
Beautiful Island	0.2 – 0.3 [0.3 – 1.3]	-------	205	-------
Fort Myers Yacht Basin	0.3 - 2.7 [1.6 – 6.5]	-------	199	-------
Shell Point	7.9 – 30 [13 – 34]	3.7 – 6.9	100	3.3
McIntyre Creek	25.4 – 30.3 [19.4 – 33.2]	2.6 – 11.1	-------	-------
Tarpon Bay	25.0 – 32.3 [26.5 – 34.8]	3.8 – 9.0	-------	-------
Wulfert Flats	------- [-------]	-------	-------	-------

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

Red Tide: On 6/10/22, the FWC reported that the red tide organism, *Karenia brevis* was observed at very low concentrations offshore of Lee County, background concentrations in Collier County, and background concentrations offshore of Monroe County.

Wildlife Impacts: In the past week (6/6 – 6/11), the CROW wildlife hospital on Sanibel received 3 toxicosis patients: 1 black crowned night heron (still at CROW), 1 brown pelican (still at CROW), and 1 anhinga (died).

Shellfish Advisory: Shellfish harvest area **#6222/6232 Pine Island Sound Section 2 and 3 Shellfish Harvest Area (Matlacha Pass)** was **RE-OPENED** by the Florida Department of Agriculture and Consumer Services as of **6/10/22.**



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.

Data are provisional and subject to change.

Water clarity at Lighthouse Beach Park on 6/13/22 at 2:49 PM on a falling tide (High tide: 3.43 ft @ 10:56 AM). Lighthouse Beach Park

Manatee grass was washed up on most of the beaches on Sanibel on 6/13/22. *City of Sanibel.*