

# MEMORANDUM

To: USACE Colonel Andrew D. Kelly, LtC Todd F. Polk, Richard McMillen, Kim Taplin, SFWMD Governing Board, Executive Director Drew Bartlett, LtC Jennifer Reynolds, Lawrence Glenn, DEP Secretary Noah Valenstein

From: Periodic Scientists Conference Call Participants  
 Paul Tritaik & Jeremy Conrad - J.N. "Ding" Darling National Wildlife Refuge (NWR) Complex  
 James Evans & Holly Milbrandt - City of Sanibel  
 Lesli Haynes & Lisa Kreiger - Lee County  
 Harry Phillips & Maya Robert – City of Cape Coral  
 Rae Ann Wessel & Rick Bartleson, Ph.D.-Sanibel Captiva Conservation Foundation

Subject: Caloosahatchee & Estuary Condition Report

Reporting Period: **March 3 - 9, 2020**

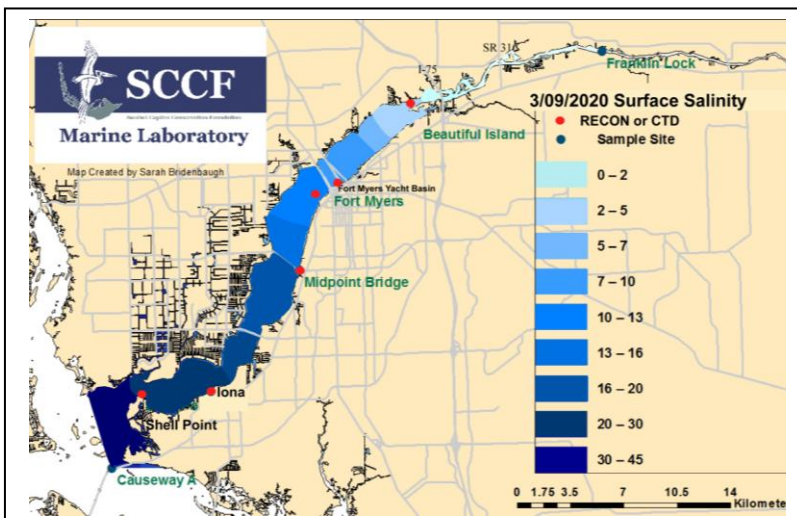
This report provides a scientific assessment of Caloosahatchee River and Estuary conditions and how these conditions affect the health, productivity and function of the system.

**Caloosahatchee Condition Summary:** Caloosahatchee estuary flows decreased to an average of **547 cfs at S-79** the past week. **The Caloosahatchee estuary needs to maintain flows to moderate salinities in the estuary.**

**USACE Action:** The Corps continued pulse releases to the Caloosahatchee from Lake Okeechobee at a 7-day average of **650 cfs at S-79**. Releases to the St. Lucie estuary at **S-80** remain at **zero cfs**.

**Recommendation:** The Caloosahatchee needs freshwater flows to lower salinity levels to support/ protect the remaining western edge of tapegrass habitat. If cut backs are needed to conserve lake water levels we ask they be applied equally to all water users, not just the Caloosahatchee estuary.

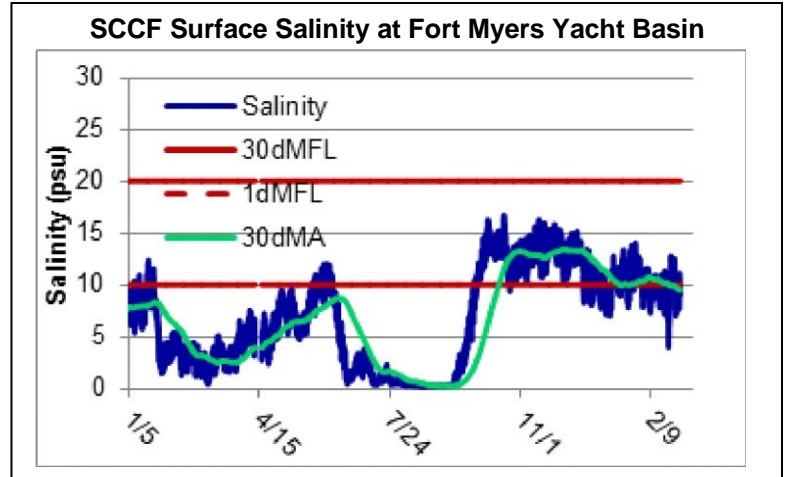
<b>Lake Okeechobee Level:</b>	<b>12.42 ft. (Beneficial Use Sub Band)</b>	<b>Last week: 12.62 ft.</b>
<b>Lake Okeechobee Inflow:</b>	<b>874 cfs</b>	<b>Lake Okeechobee Outflow: 3,077 cfs</b>
<b>Weekly Rainfall:</b>	WP Franklin <b>0"</b> Ortona <b>0.05"</b>	Moore Haven <b>0"</b>
<b>Salinity Beautiful Island:</b>	<b>2.5 - 4.4 psu (SCCF RECON)</b>	<b>Previous week 2.5- 5.0 psu</b>
<b>Salinity Fort Myers:</b>	<b>7.6 - 16 psu (SCCF RECON)</b>	<b>Previous week 9.6- 18 psu</b>
<b>Salinity Shell Point:</b>	<b>21 – 32 psu (SCCF RECON)</b>	<b>Previous week 23 – 32 psu</b>



Salinity (psu)			
	Current Value	Sustainable Range	High/Low
Beautiful Is	2.5 - 4.4	< 5 psu	In Range
Fort Myers	7.6 - 16	<10 psu	High
Shell Point	21 – 32	25 - 32 psu	In Range
Light (25% I <sub>z</sub> depth meters)			
Fort Myers	0.70	1 meter	Low
Shell Point	1.64	2.2 meters	Low
Causeway	2.10	2.2 meters	Low

**Lake Flows:** The past 7 days **50,911 AF** of water was discharged from Lake Okeechobee; **18%** to the Caloosahatchee thru **S-77**, **12%** to the **St Lucie at S-308**, **62%** was discharged south to the **EAA**, **4%** to the **L8** and a **net 4%** to **S-310**.

ACOE Daily Reports			
Date	S79 Flow (cfs)	S78 Flow (cfs)	S77 Flow (cfs)
3/3/2020	486	299	651
3/4/2020	206	298	548
3/5/2020	149	296	507
3/6/2020	244	294	514
3/7/2020	702	353	579
3/8/2020	976	701	836
3/9/2020	1066	817	988
<b>7 day Avg</b>	<b>547</b>	<b>437</b>	<b>660</b>



**Cyanobacteria Status:** In the Caloosahatchee, Lee County Environmental Lab sampling on 3/10/20 reported **presence of cyanobacteria *Microcystis*, *Dolichospermum* and *Planktothrix* at the Alva Boat Ramp, *Microcystis* and *Dolichospermum* upstream of the Franklin Lock and at the Davis Boat Ramp.** Samples from Alva and the Locks were sent to DEP for analysis.

**Upstream of S-79/Franklin Conditions:** The Lee County Olga Water Treatment plant will be offline until further notice.

**Upper Estuary Conditions:** The 7 day and 30 day average salinity at the Fort Myers Yacht Basin were **9.8** and **9.4 psu**, below the harmful level for tape grass.

**Lower Estuary Conditions:** The average salinity at the Shell Point RECON was **29 psu**, above the optimal range for oysters.

**J.N. "Ding" Darling NWR:**

Monitor Site	Salinity	Diss O2 (mg/L)	FDOM (qsde)	Chlorophyll (µg/L)
McIntyre Creek	31.4 – 34.1	3.4 – 10.8	6.8 – 14.7	1.2 – 35.6
Tarpon Bay	31.2 – 33.1	3.9 – 7.5	0.0 – 3.23	4.5 – 84.1

**Red Tide:** On 3/6/20 FWC reported no red tide, *Karenia brevis* observed in Southwest Florida the past week.

**Shellfish Advisory:** Shellfish harvest area #6212 Pine Island Sound Section 1 remains **CLOSED**, by the Florida Department of Agriculture and Consumer Services (FDACS) since 10/15/19, due to red tide, *Karenia brevis*.

**Wildlife Impacts:** The past week CROW, the wildlife hospital on Sanibel received and is treating **1 brown pelican**.

**Manatees:** The past week, Manatee Park staff reported **up to 75 manatees observed** in the warm water discharge from FPL in the Orange River and canal. River water temps ranged from **75 - 85° F**.

Caloosahatchee Stations	Chlorophyll (µg/L)	fDOM (qse)	Turbidity (NTU)	25% Iz depth (meters)
Target Values	< 11	CE <70 SCB <11	CE < 18 SCB < 5	CE = 1 m SCB = 2.2m
Fort Myers	6.8	240	1.9	0.70
Shell Point	2.6	60.8	1.9	1.64
Causeway	1.4	21.9	2.1	2.10

Target light penetration: CE- Caloosahatchee Estuary = 1 m  
 SCB- San Carlos Bay = 2.2 meters  
 Definition of 25% Iz: z where I is 25% of surface I.  
 I = irradiance, z = depth