

Disclaimer: Information contained in the report addresses environmental conditions only and is not the official South Florida Water Management District operations recommendation or decision.

## **M E M O R A N D U M**

**TO:** John Mitnik, Assistant Executive Director, Executive Office Staff

**FROM:** SFWMD Staff Environmental Advisory Team

**DATE:** May 14, 2025

**SUBJECT:** Weekly Environmental Conditions for Systems Operations

### **Summary**

#### **Weather Conditions and Forecast**

An unseasonably dry air mass is entering the western portions of the SFWMD and is expected to reach the southern areas by Wednesday morning. With this pattern in place, little to no rainfall is anticipated, aside from a few light isolated showers that may form over the northern interior during the afternoon Wednesday. Heading into the weekend, a stabilizing mid-level atmosphere will effectively suppress any chance for rainfall through the weekend. Daytime high temperatures could climb up to 95°F in many places, leading to very high rates of evapotranspiration. Overall, little to no precipitation is expected anywhere across the SFWMD for the week 1 forecast period ending next Tuesday morning. Looking further ahead, the three leading ensemble models are in good agreement that this dry pattern, with much below-average rainfall, is likely to persist into the week 2 period ending May 26.

#### **Kissimmee**

Releases were made as needed from East Lake Toho and Lake Toho to continue snail kite nesting season stage recessions to reach low pool by June 1, 2025. Weekly average discharge on May 11, 2025, was 210 cfs at S-65 and 160 cfs at S-65A, respectively. Mean weekly water depth on the Kissimmee River floodplain increased by 0.05 feet to 0.27 feet. The weekly average concentration of dissolved oxygen in the Kissimmee River decreased from 7.7 mg/L the previous week to 7.5 mg/L, which is above both the potentially lethal level of 1.0 mg/L and the stressful level of 2.0 mg/L (**Figure KB-6**).

#### **Lake Okeechobee**

Lake Okeechobee stage was 9.71 feet NAVD88 (11.01 ft NGVD29) on May 11, 2025, which was 0.15 feet lower than the previous week and 1.19 feet lower than a month ago. Average daily inflows (excluding rainfall) decreased slightly from 170 cfs the previous week to 110 cfs. Average daily outflows (excluding evapotranspiration) decreased from 3,990 cfs the previous week to 2,080 cfs. The most recent non-obscured satellite image from May 8, 2025, suggests moderate cyanobacteria activity in and around Fisheating Bay and along the northwest shoreline.

## **Estuaries**

Total inflow to the St. Lucie Estuary averaged 124 cfs over the past week with no flow coming from Lake Okeechobee. Mean surface salinities increased at HR1 and US1 Bridge sites and decreased slightly at A1A Bridge site. Salinity in the middle estuary was in the optimal range (10-25) for adult eastern oysters.

Total inflow to the Caloosahatchee Estuary averaged 395 cfs over the past week with 259 cfs coming from Lake Okeechobee. Over the past week, salinities decreased slightly at S-79 and Shell Point, increased at other sites within the estuary. Salinities were in the optimal range (0-10) for tape grass at S-79 and Val I-75, and greater than the optimal range (>10) at Ft. Myers. Salinities were in the optimal range for adult oysters at Cape Coral and in the stressed range at Shell Point and Sanibel.

## **Stormwater Treatment Areas**

For the week ending Sunday, May 11, 2025, 9,200 ac-ft of Lake Okeechobee water was delivered to the FEBs/STAs. The total amount of Lake releases sent to the FEBs/STAs in WY2026 is approximately 13,800 ac-feet. The total amount of inflows to the STAs in WY2026 is approximately 18,000 ac-feet. STA cells are near or above target stage except STA-5/6 EAV cells that are below target stage. STA-1E Central Flow-way is offline for construction activities, and STA-2 Flow-way 3 is offline for a SAV recovery drawdown. Operational restrictions are in effect in STA-1E Western Flow-way, STA-2 Flow-ways 2 and 4, and STA-3/4 Eastern Flow-way for vegetation management activities. An additional restriction is in place in STA-2 Flow-way 1 for inflow canal dredging. STA-1W Cells 6 and 8 and STA-2 Cell 3 contain nests of Migratory Bird Treaty Act protected species. This week, if LOSOM Recovery Operations to lower the lake level recommends Lake releases to the WCAs and conditions allow, releases will be sent to STA-2.

## **Everglades**

With two consecutive weeks of above average rainfall, stage change from Sunday, May 4, 2025, to May 11th in the Everglades Protection Area (EPA) was mixed with some areas receding while others ascended. In previous weeks, WCA-3A — an important region for wading bird foraging in the late dry season — has experienced recession rates that were too fast to maintain depths needed for wading bird foraging throughout the nesting season. However, recent rains meant a reduction in recession rates and ascension in this region, beneficial for wading birds by helping to maintain water depths needed for optimal foraging habitat and nest success. If the rate of dry-down returns to previous conditions, we expect to see deteriorating foraging conditions throughout the EPA. Poor stork and white ibis nesting success is expected as below average depths and the rapid decline of suitable foraging habitat is leading to nest abandonment. Moderate rain input and slower recession rates in these areas would improve nesting prospects for both wood storks and white ibis. Meanwhile, salinities in Florida Bay remain well-positioned for this point in the dry season. Florida Bay's minimum flows and levels (MFL) metrics remain outside of harmful thresholds, but salinities at Taylor River are trending towards the threshold there.

## Supporting Information

### Kissimmee Basin

#### *Upper Kissimmee*

On May 11, 2025, mean daily lake stages were 54.4 feet NAVD88 (0.4 feet below schedule) in East Lake Toho, 51.2 feet NAVD88 (0.4 feet below schedule) in Lake Toho, and 47.7 feet NAVD88 (2.8 feet below the Increment 1 Temporary Deviation schedule) in Lakes Kissimmee-Cypress-Hatchineha (KCH) (**Table KB-1, Figures KB-1-3**).

#### *Lower Kissimmee*

For the week ending May 11, 2025, mean weekly discharge was 210 cfs at S-65 and 160 cfs at S-65A, respectively. Mean weekly discharge from the Kissimmee River was 160 cfs and 110 cfs at S-65D and S-65E, respectively (**Table KB-2**). Mean weekly headwater stages were 45.3 feet NAVD88 at S-65A and 24.5 feet NAVD88 at S-65D. Mean weekly river channel stage decreased by 0.8 feet to 29.4 feet NAVD88 (**Figure KB-4**). Mean weekly water depth on the Kissimmee River floodplain increased by 0.05 feet to 0.27 feet (**Table KB-2, Figure KB-5**). The weekly average concentration of dissolved oxygen in the Kissimmee River decreased from 7.7 mg/L the previous week to 7.5 mg/L (**Table KB-2, Figure KB-6**).

#### *Water Management Recommendations*

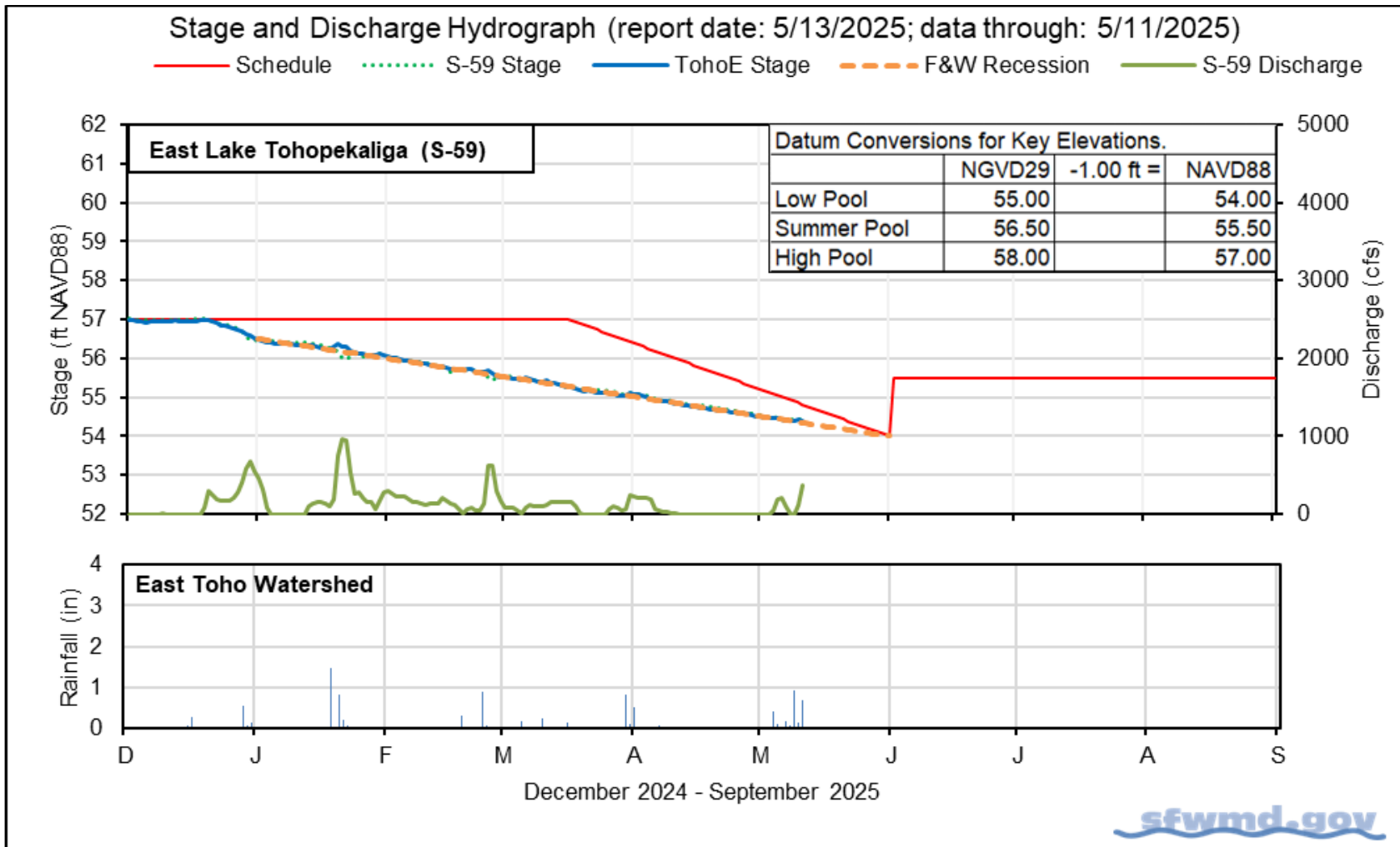
Continue the stage recessions in East Lake Toho and Lake Toho lakes to reach their low pools on June 1, 2025. Follow the Headwaters Revitalization Schedule (HRS) Increment 1 Temporary Deviation Discharge Plan for S-65/S-65A (**Figure KB-7**). Target flows at S-65A at 150 cfs while KCH stage remains within Zone B5 of the Increment 1 Discharge Plan.

**Table KB-1.** Average discharge for the preceding seven days, Sunday's average daily stage and Sunday's average daily departure from Kissimmee Chain of Lakes (KCOL) flood regulation lines or temporary schedules. All data are provisional.

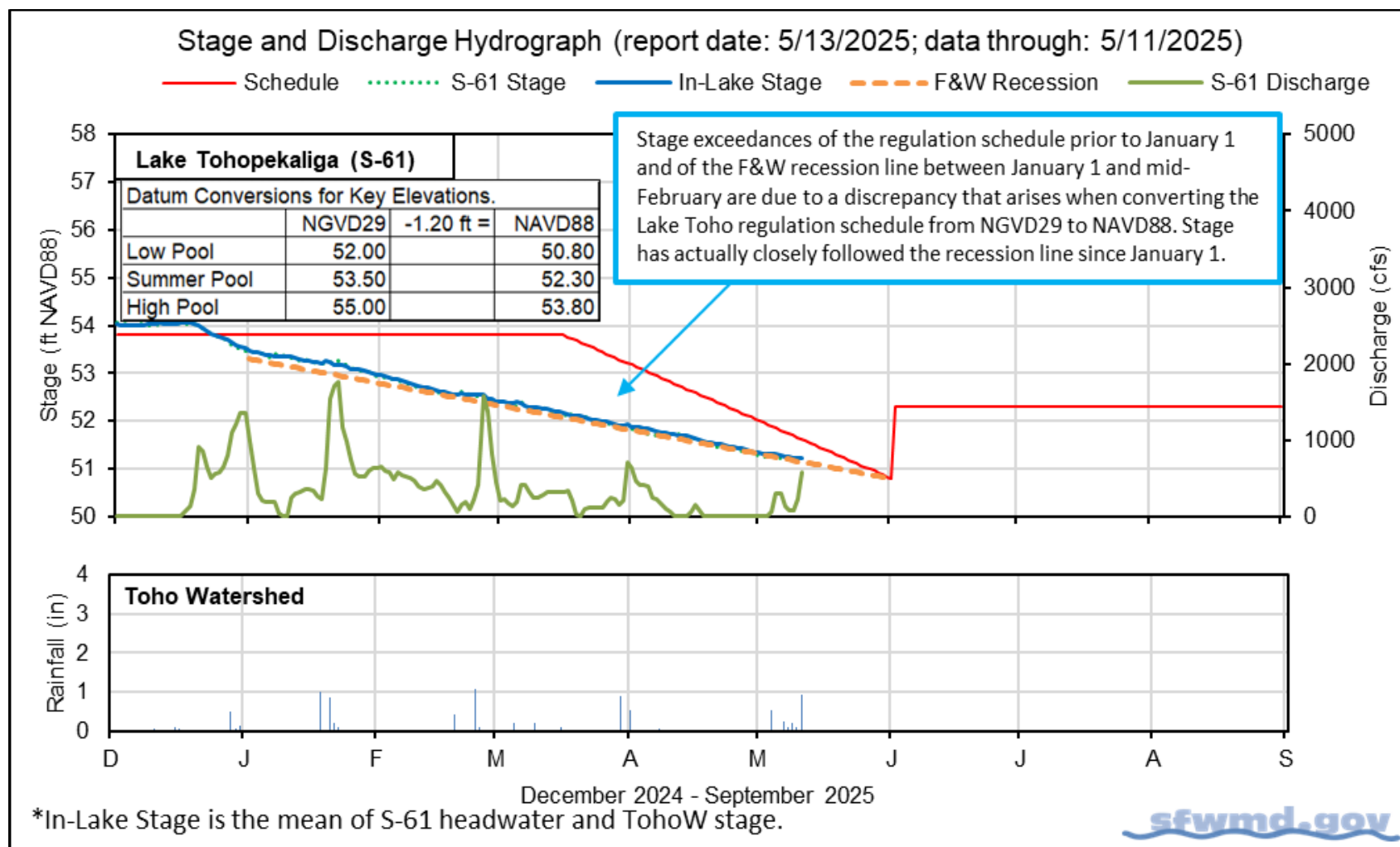
Water Body	Structure	Stage Monitoring Site	Weekly (7-Day) Average Discharge (cfs)	Sunday Lake Stage (feet NAVD88) <sup>a</sup>	Schedule Type <sup>b</sup>	Sunday Schedule Stage (feet NAVD88)	Sunday Departure from Regulation (feet)	
							5/11/25	5/4/25
Lakes Hart and Mary Jane	S-62	LKMJ	4	58.7	R	58.8	-0.1	-0.4
Lakes Myrtle, Preston and Joel	S-57	S-57	0	59.1	R	59.2	-0.1	-0.2
Alligator Chain	S-60	ALLI	120	61.5	R	61.6	-0.1	0.1
Lake Gentry	S-63	LKGT	170	58.9	R	59.0	-0.1	0.0
East Lake Toho	S-59	TOHOE	140	54.4	R	54.8	-0.4	-0.6
Lake Toho	S-61	TOHOW S-61	250	51.2	R	51.6	-0.4	-0.6
Lakes Kissimmee, Cypress and Hatchineha	S-65	KUB011 LKIS5B	210	47.7	T	50.5	-2.8	-3.0

a. Names of in-lake monitoring sites and structures used to determine lake stage. If more than one site is listed, an average is reported.

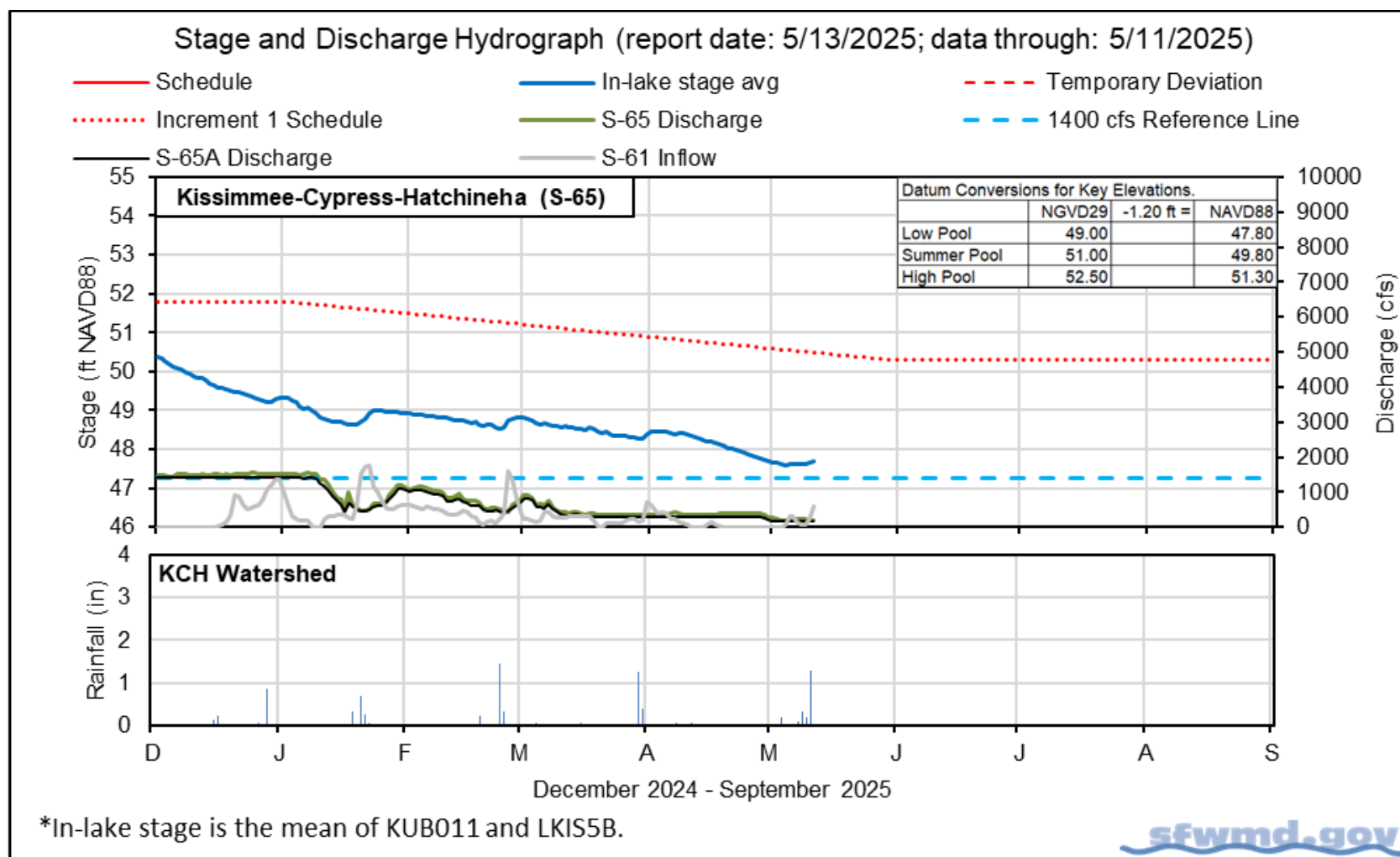
b. A: projected recession line; R: USACE regulation schedule; S: temporary recession target line; T: temporary schedule; NA: not applicable or not available.



**Figure KB-1.** East Lake Toho regulation schedule, stage, discharge, and rainfall.



**Figure KB-2.** Lake Toho regulation schedule, stage, discharge, and rainfall.



**Figure KB-3.** Lakes Kissimmee, Cypress and Hatchineha regulation schedule, stage, discharge, and rainfall.

**Table KB-2.** One- and seven-day average discharge and stage at Lower Kissimmee basin structures, river channel dissolved oxygen concentrations and water depths in the Phase I area floodplain. All data are provisional.

Metric	Location	Sunday Daily Average	Weekly Average for Previous Seven Day Periods			
		5/11/25	5/11/25	5/4/25	4/27/25	4/20/25
Discharge	S-65	190	210	280	390	370
Discharge	S-65A <sup>a</sup>	160	160	200	310	310
Headwater Stage (feet NAVD88)	S-65A	45.3	45.3	45.2	45.2	45.2
Discharge	S-65D <sup>b</sup>	160	160	220	300	300
Headwater Stage (feet NAVD88)	S-65D <sup>c</sup>	24.6	24.5	24.4	24.6	24.6
Discharge (cfs)	S-65E <sup>d</sup>	79	110	170	230	260
Discharge (cfs)	S-67	0	0	0	0	0
Dissolved Oxygen (mg/L) <sup>e</sup>	Phase I, II/III river channel	6.9	7.5	7.7	7.4	8.0
River channel mean stage (feet NAVD88) <sup>f</sup>	Phase I river channel	28.8	29.4	30.2	30.7	30.7
Mean depth (feet) <sup>g</sup>	Phase I floodplain	0.33	0.27	0.22	0.22	0.23

a. Combined discharge from main and auxiliary structures.

b. Combined discharge from S-65D, S-65DX1, and S-65DX2.

c. Average stage from S-65D and S-65DX1.

d. Combined discharge from S-65E and S-65EX1.

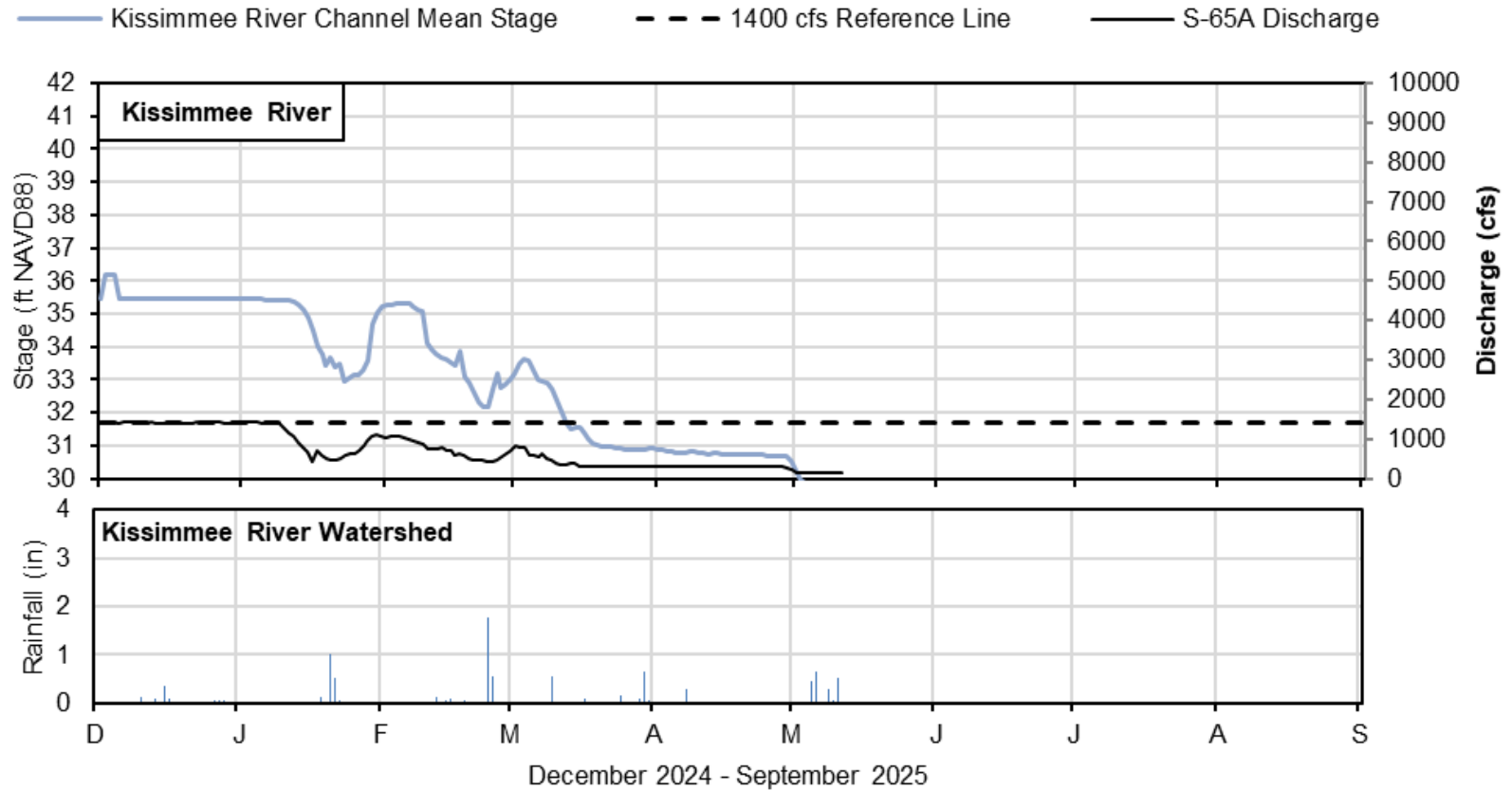
e. Dissolved oxygen is the average of values from sondes KRBN, PC62, PC33, PD62R, and PD42R.

f. Mean of five river channel stations (PC62, KRDR02, KRBN, PC33, PC11) in the Phase I area.

g. One-day spatial average obtained from the South Florida Water Depth Assessment Tool (SFWDAT).



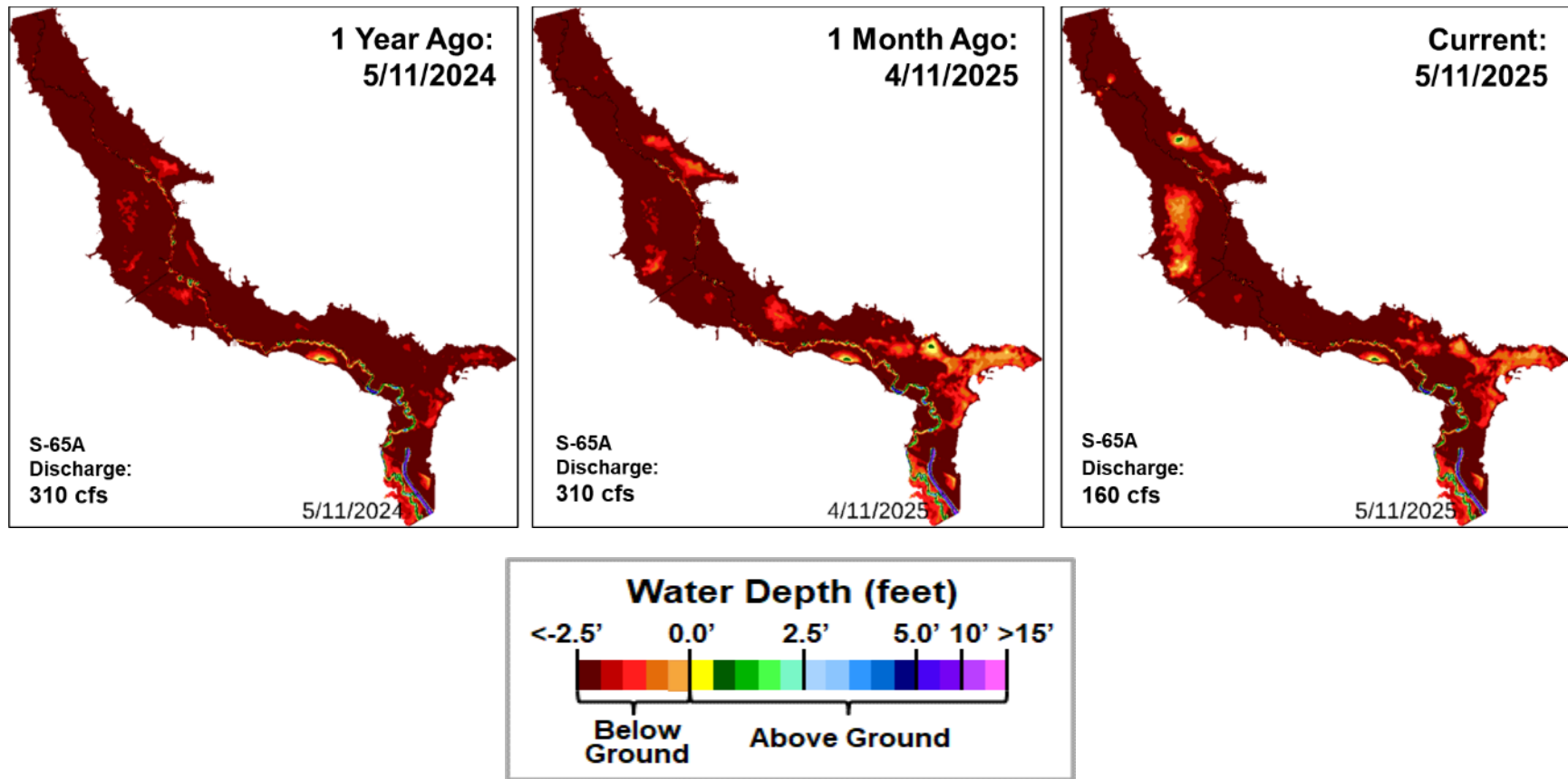
Stage and Discharge Hydrograph (report date: 5/13/2025; data through: 5/11/2025)



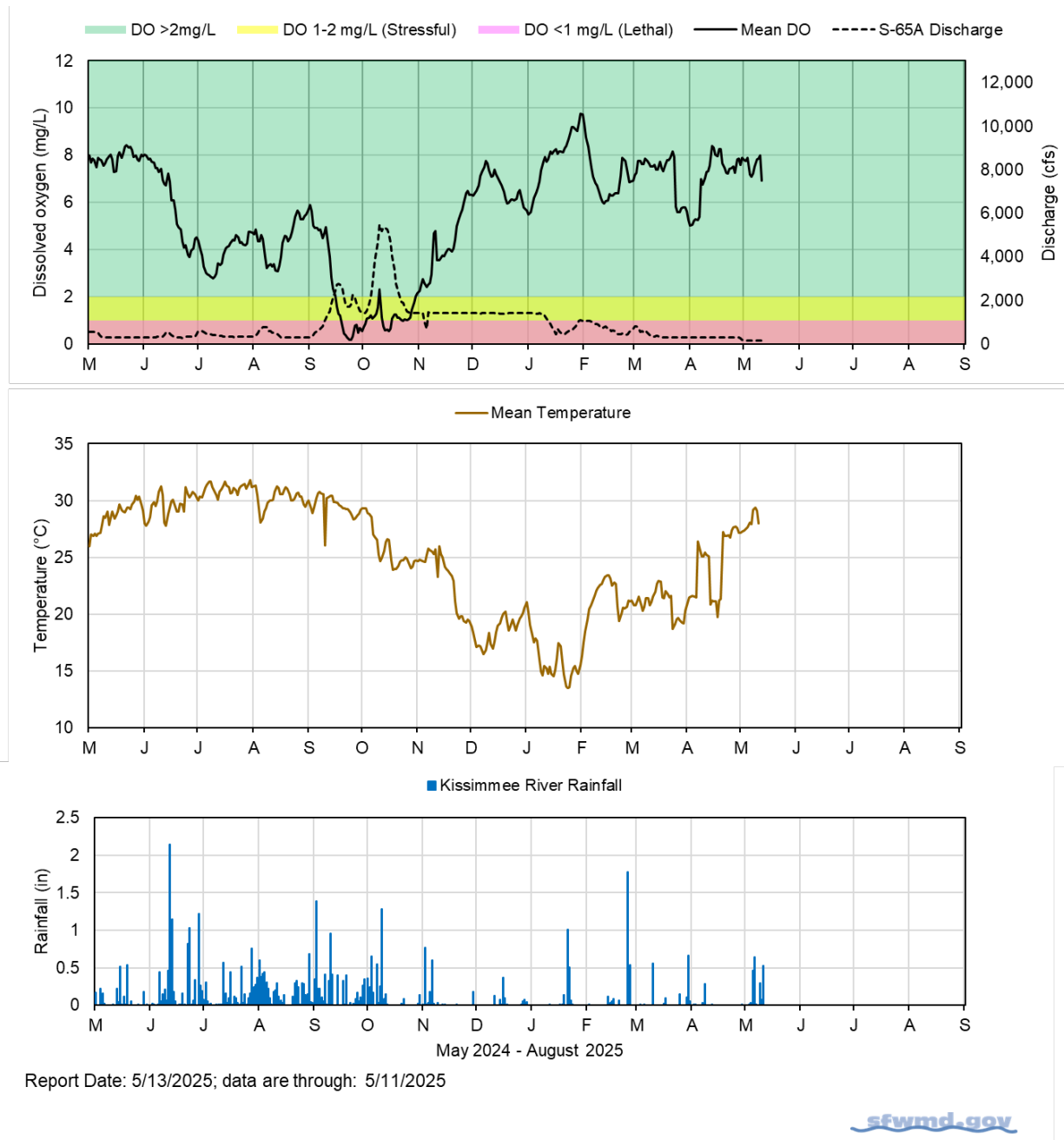
\*River Channel Stage is the average for PC62, KRDR02, KRBN, PC33, and PC11.

[sfwmd.gov](http://sfwmd.gov)

**Figure KB-4.** Kissimmee River stage, discharge, and rainfall.



**Figure KB-5.** Phase I-II-III area Kissimmee River floodplain water depths (from left to right) one year ago, one month ago, and current.



**Figure KB-6.** Kissimmee River channel mean daily dissolved oxygen concentration (mg/L), S-65A discharge (cfs), temperature (°C) and rainfall (inches). Dissolved oxygen (DO) and temperature are mean daily values averaged for PC62, KRDR02, KRBN, PC33, PC11, PD62R, and PD42R with an average of five stations reporting this week. Rainfall values are daily totals for Kissimmee River (Pool BCD) AHED watershed.

# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

## HRS Increment 1 Temporary Deviation Discharge Plan for S-65/S-65A

**Discharge Guidance for Increment 1 Temporary Deviation Discharge Plan**

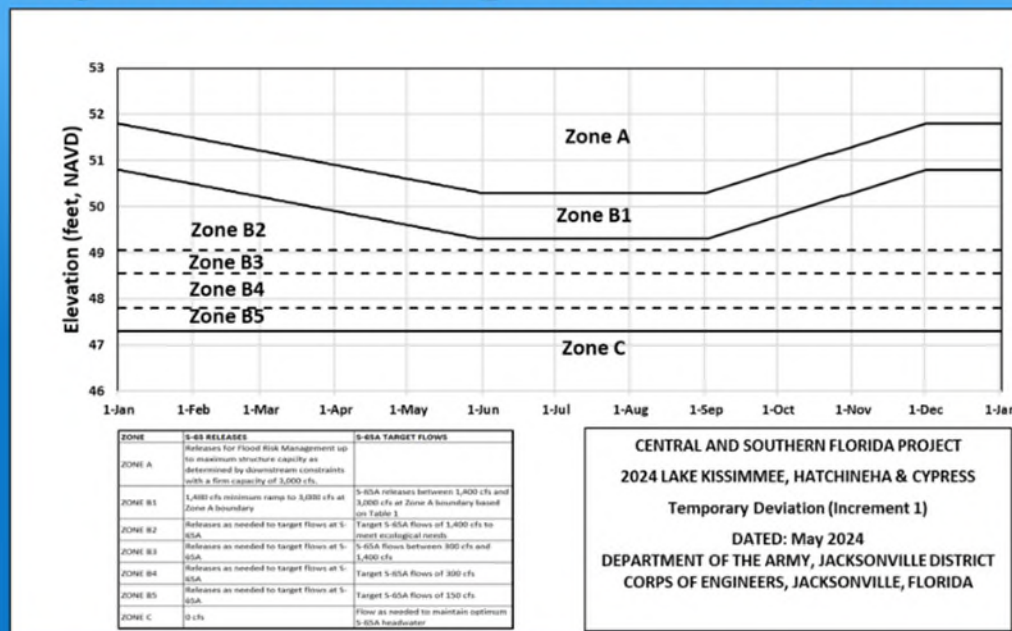
ZONE	S-65 RELEASES	S-65A TARGET FLOWS
ZONE A	Releases for Flood Risk Management up to maximum structure capacity as determined by downstream constraints with a firm capacity of 3,000 cfs.	
ZONE B1	1,400 cfs minimum ramp to 3,000 cfs at Zone A boundary	S-65A releases between 1,400 cfs and 3,000 cfs at Zone A boundary based on Table 1
ZONE B2	Releases as needed to target flows at S-65A	Target S-65A flows of 1,400 cfs to meet ecological needs
ZONE B3	Releases as needed to target flows at S-65A	S-65A flows between 300 cfs and 1,400 cfs
ZONE B4	Releases as needed to target flows at S-65A	Target S-65A flows of 300 cfs
ZONE B5	Releases as needed to target flows at S-65A	Target S-65A flows of 150 cfs
ZONE C	0 cfs	Flow as needed to maintain optimum S-65A headwater

**Table KB-3. Maximum Rate of Change Limits for S-65A**

MAXIMUM Release Rate of Change Limits for S-65A. In general recommended rates of change will be slower than shown in this table.

Q (cfs)	Maximum rate of INCREASE (cfs/day)	Maximum rate of DECREASE (cfs/day)
0-300	50	-50
301-650	75	-75
651-1400	150	-150
1401-3000	300	-600
>3000	1000	-2000

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**CENTRAL AND SOUTHERN FLORIDA PROJECT  
2024 LAKE KISSIMMEE, HATCHINEHA & CYPRESS  
Temporary Deviation (Increment 1)**

**DATED: May 2024  
DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT  
CORPS OF ENGINEERS, JACKSONVILLE, FLORIDA**

Slide Revised 7/29/2024

**Figure KB-7.** Headwaters Revitalization Schedule (HRS) Increment 1 Temporary Deviation Discharge Plan for S-65/S-65A.

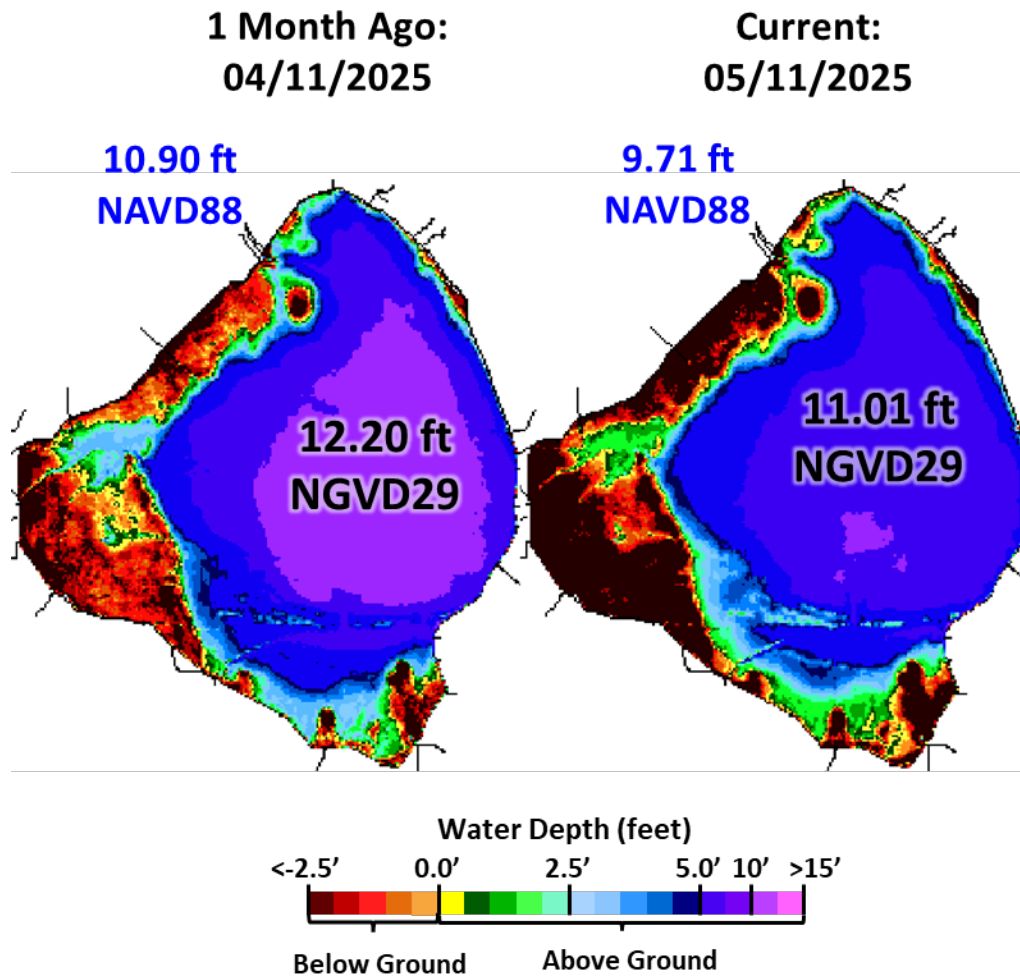
## Lake Okeechobee

Lake Okeechobee stage was 9.71 feet NAVD88 (11.01 ft NGVD29) on May 11, 2025, which was 0.15 feet lower than the previous week and 1.19 feet lower than a month ago (**Figure LO-1**). Lake stage is in Zone D of the regulation schedule, 0.22 feet above the Water Shortage Management Band, (**Figure LO-2**) and 0.06 feet below the bottom limit of the recovery ecological envelope (**Figure LO-3**). According to NEXRAD, 0.63 inches of rain fell directly over the Lake during the previous week.

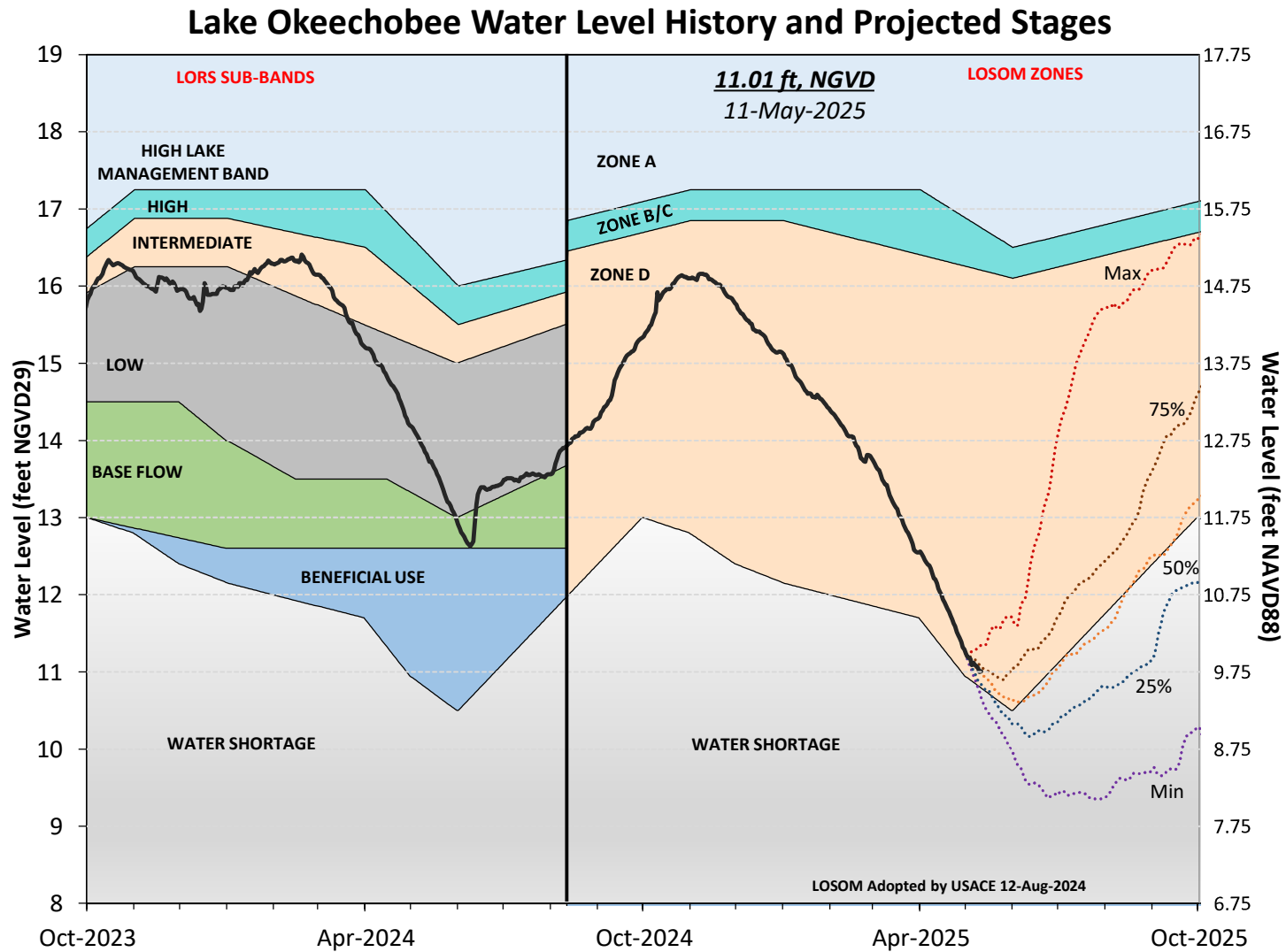
Average daily inflows (excluding rainfall) decreased slightly from 170 cfs the previous week to 110 cfs. The main inflow came from the Kissimmee River via the S-65E structure (110 cfs). Average daily outflows (excluding evapotranspiration) decreased from 3,990 cfs the previous week to 2,080 cfs. **Figures LO-4 and LO-5** show the combined average daily inflows and outflows for the Lake over the past eight weeks, and average inflows and outflows last week, respectively.

In the most recent non-obscured satellite image from May 8, 2025, NOAA's Harmful Algal Bloom Monitoring System suggests moderate cyanobacteria activity in and around Fisheating Bay, and along the northwest shoreline (**Figure LO-6**).

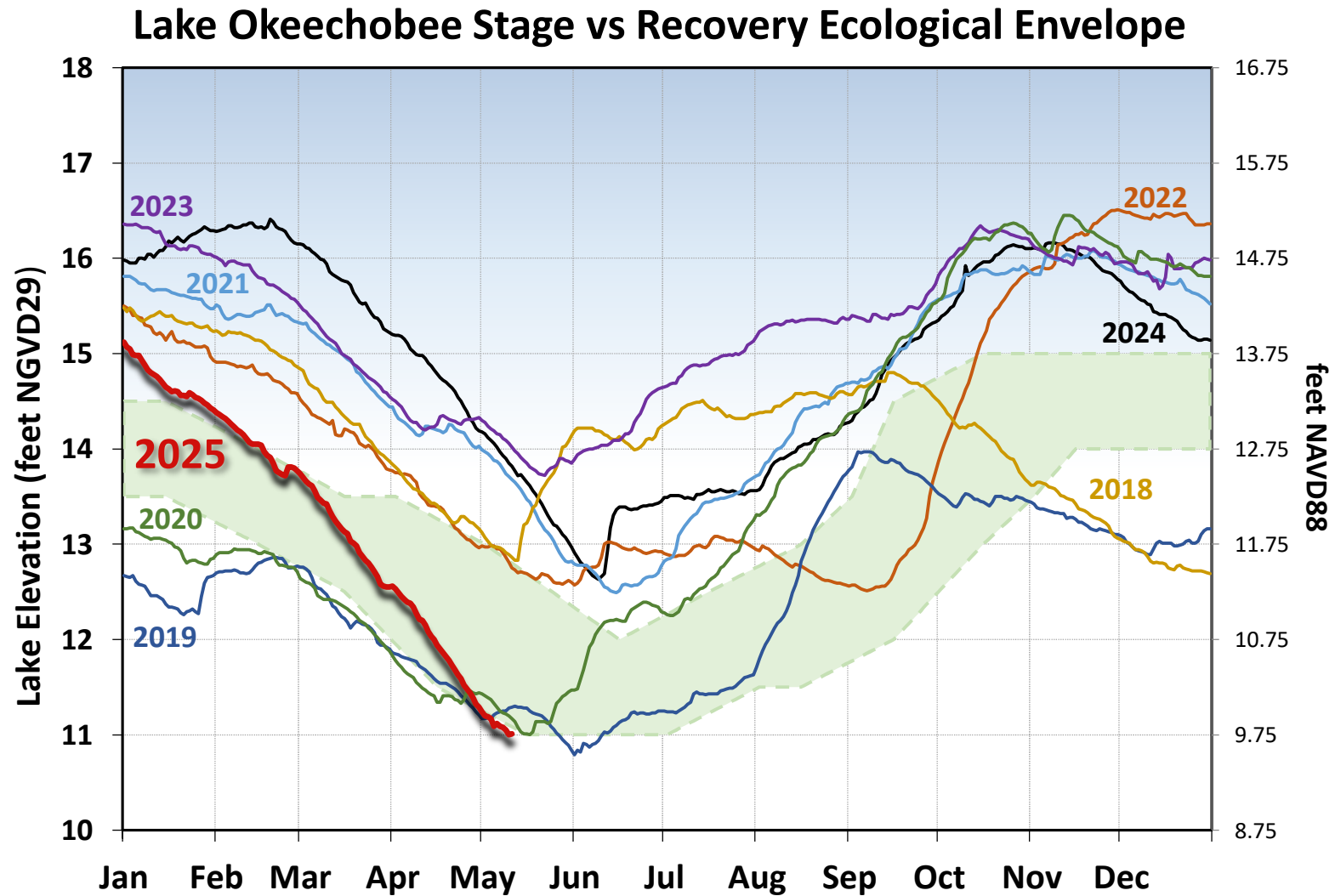
Note: All data presented in this report are provisional and are subject to change.



**Figure LO-1.** Lake Okeechobee water depth estimates based on South Florida Water Depth Assessment Tool (SFWDAT).

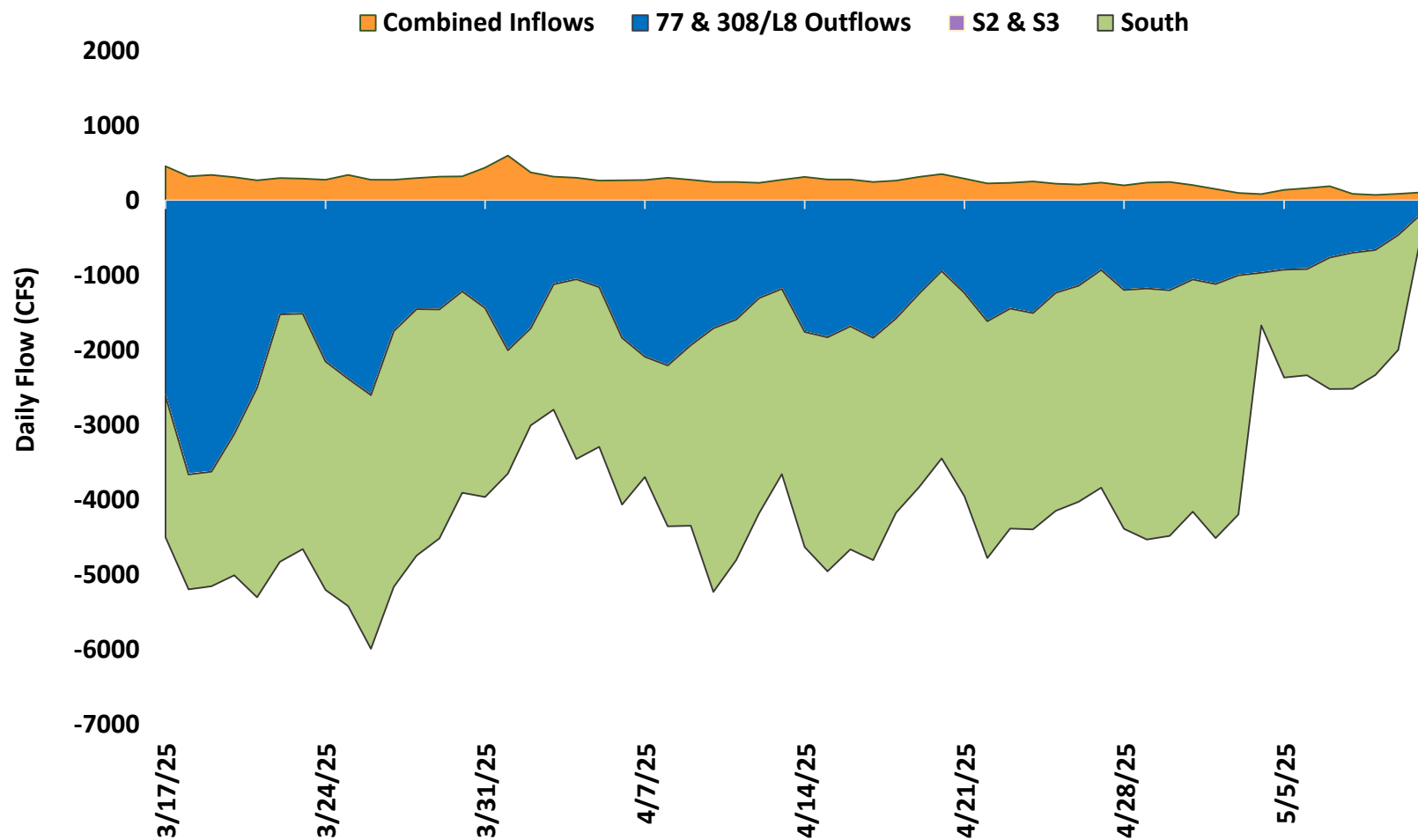


**Figure LO-2.** Recent Lake Okeechobee stages with projected stages based on a dynamic position analysis.  
Note: stages are in NGVD29, approximate NAVD88 values are shown for reference.

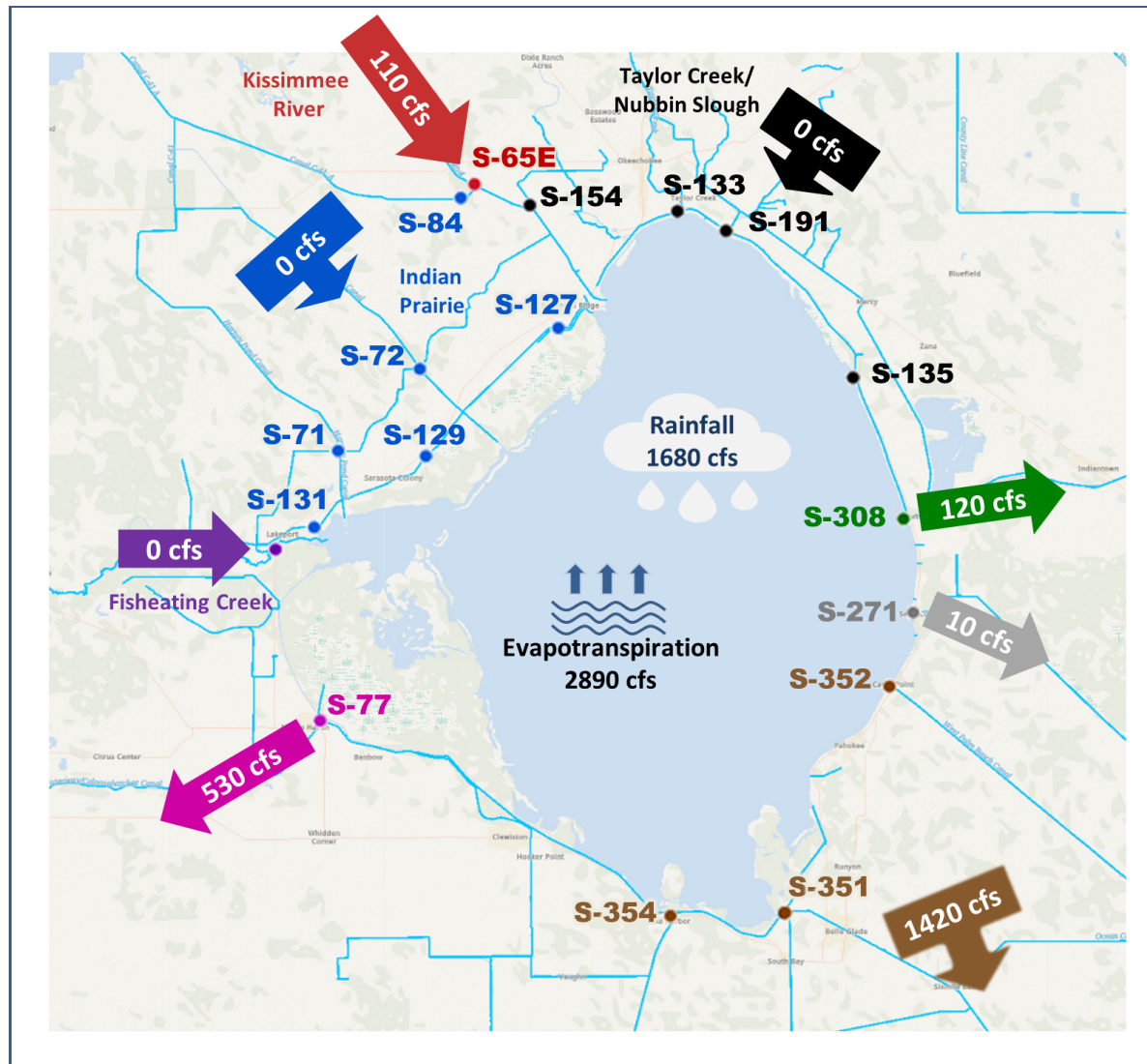


**Figure LO-3.** The current and seven prior year's annual stage hydrographs for Lake Okeechobee in comparison to the recovery envelope (light green). A shift from the normal ecological envelope to the recovery envelope occurred because the 30-day minimum lake stage (elevations exposed for at least 30 days, nonconsecutively) in the June 1 – July 31, 2023, window was >13 ft NGVD29 (11.75 ft NAVD88).

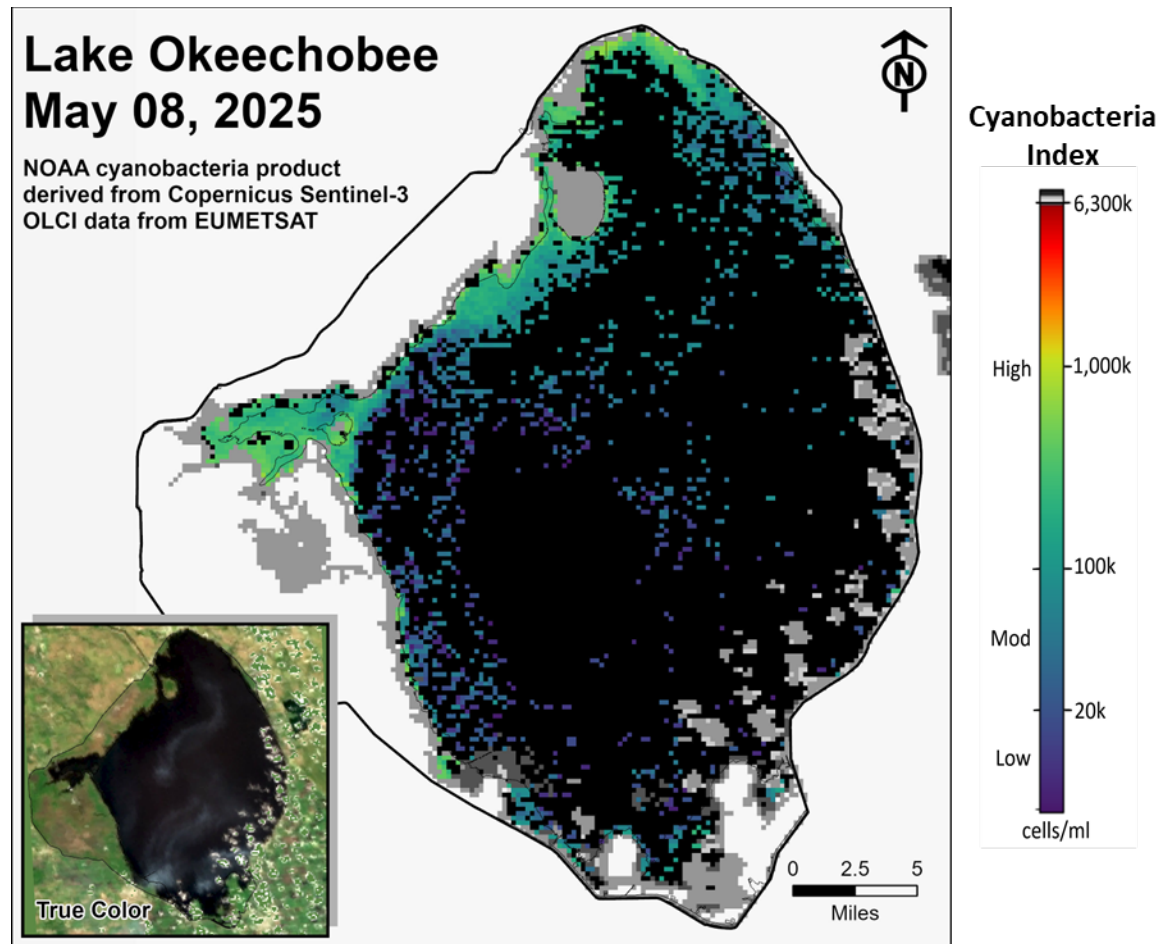




**Figure LO-4.** Major inflows (orange) to and outflows east and west (blue) from Lake Okeechobee. Outflows south are shown in green. Flows into Lake Okeechobee from the L-8 canal through S-271 (formerly Culvert 10A) or from the C-44 canal through the S-308 are included as inflows. Conversely, flows from Lake Okeechobee into the L-8 or C-44 canals are included with outflows. Inflows are shown as positive values; outflows are negative. Outflows through the S-77 (Caloosahatchee) and S-308 (C-44 Canal) structures are based on downstream gauges to include flows to lock openings for navigation.



**Figure LO-5.** Inflows into Lake Okeechobee from Indian Prairie basins, Taylor Creek/Nubbin Slough, Kissimmee River and Fisheating Creek, and outflows to the west via S-77, to the east via S-308, to the south via S-351, S-352, S-354, and to southeast via S-271 (formerly Culvert 10A) for the week of May 5 – 11, 2025.



**Figure LO-6.** Cyanobacteria bloom index level on Lake Okeechobee, based on NOAA's harmful algal bloom monitoring system. Gray color indicates cloud cover. \*Provisional NOAA image, subject to change\*.

## Estuaries

### ***St. Lucie Estuary***

Over the past week, mean total inflow to the St. Lucie Estuary was 124 cfs (**Figures ES-1 and ES-2**), and the previous 30-day mean inflow was 123 cfs. For comparison, the historical provisional mean inflows from contributing areas are shown in **Figure ES-2**.

Over the past week, surface salinities increased at HR1 and US1 Bridge sites and decreased slightly at A1A Bridge site (**Table ES-1 and Figure ES-3**). The seven-day moving average of the surface and bottom salinities at the US1 Bridge was 24.0. Salinity conditions in the middle estuary were estimated to be within the optimal range for adult eastern oysters (**Figure ES-4**). The mean larval oyster recruitment rate reported by the Fish and Wildlife Research Institute (FWRI) for April was 0 spat/shell at Rio, indicating spawning in the SLE has not started as of late March (**Figure ES-5**).

### ***Caloosahatchee River Estuary***

Over the past week, mean total inflow to the Caloosahatchee River Estuary was 395 cfs (**Figures ES-6 and ES-7**), and the previous 30-day mean inflow was 653 cfs. For comparison, the historical provisional mean inflows from the contributing areas are shown in **Figure ES-7**.

Over the past week, salinities decreased slightly at S-79 and Shell Point, increased at other sites within the estuary (**Table ES-2 and Figures ES-8 and ES-9**). The seven-day mean salinities (**Table ES-2**) were in the optimal range (0-10) for tape grass at S-79 and Val I-75, and greater than the optimal range (>10) at Ft. Myers. The seven-day mean salinity values were within the optimal range for adult eastern oysters at Cape Coral and in the upper stressed range at Shell Point and Sanibel (**Figure ES-10**). The mean larval oyster recruitment rate reported by the FWRI for April was 0 spat/shell at Cove and was 1.3 spat/shell at Bird Island. The low spat count at Bird Island suggests that spawning activity has likely just begun as of late March. Recruitment rates are expected to increase over the coming month as the spawning season progresses (**Figures ES-11 and ES-12**).

Surface salinity at Val I-75 was forecast for the next two weeks using an autoregression model (Qiu and Wan, 2013<sup>1</sup>) coupled with a linear reservoir model for the tidal basin. Model scenarios included pulse releases at S-79 ranging from 450 to 1,200 cfs, with estimated tidal basin inflows of 52 cfs. Model results from all scenarios predict daily salinity to be 5.0 or lower and the 30-day moving average surface salinity to be 4.6 or lower at Val I-75 at the end of the two-week period (**Table ES-3 and Figure ES-13**). This keeps predicted salinities in the upper estuary within the optimal salinity range (0-10) for tape grass.

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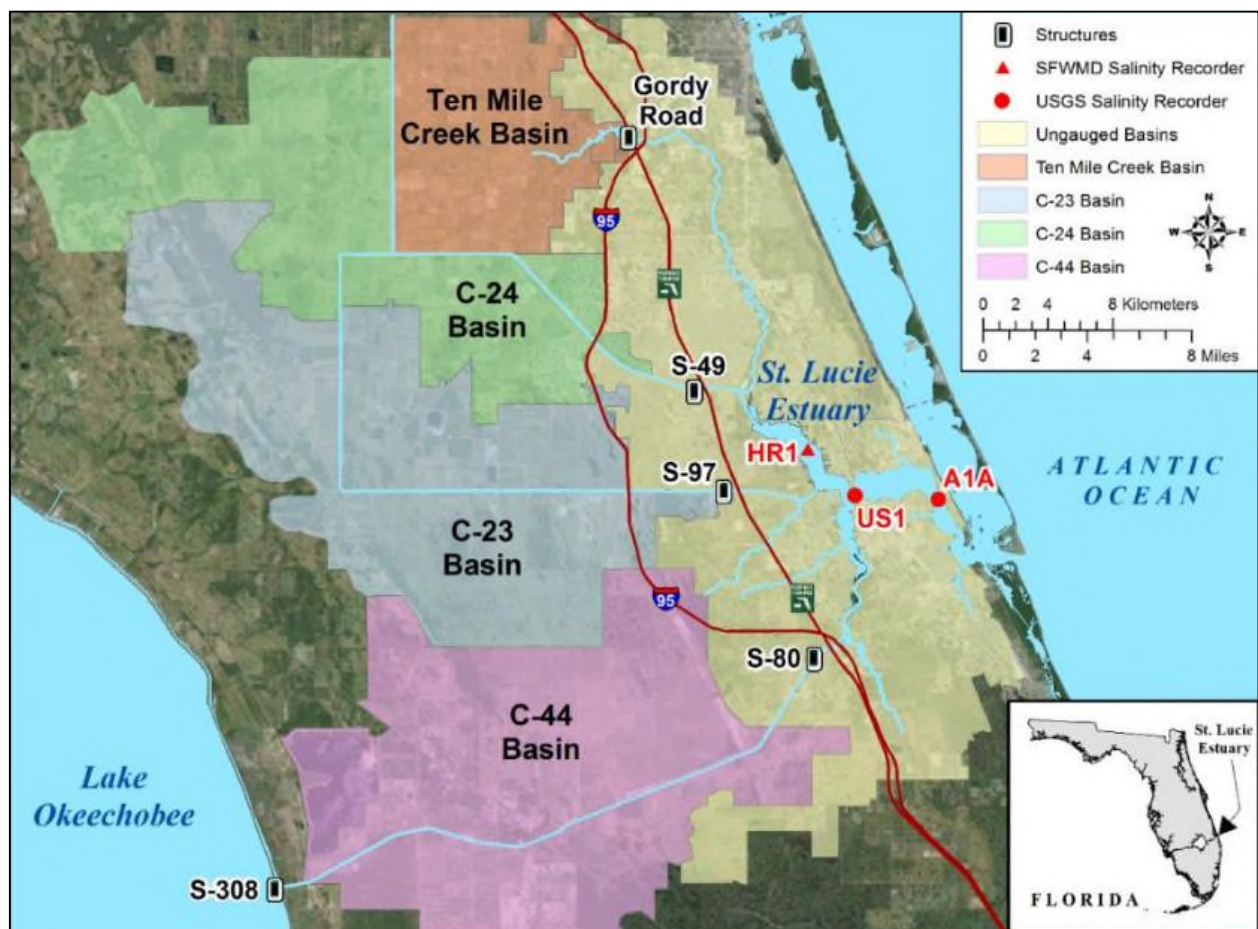
<sup>1</sup> Qiu, C., and Y. Wan. 2013. Time series modeling and prediction of salinity in the Caloosahatchee River Estuary. *Water Resources Research* 49:5804-5816.

## Red Tide

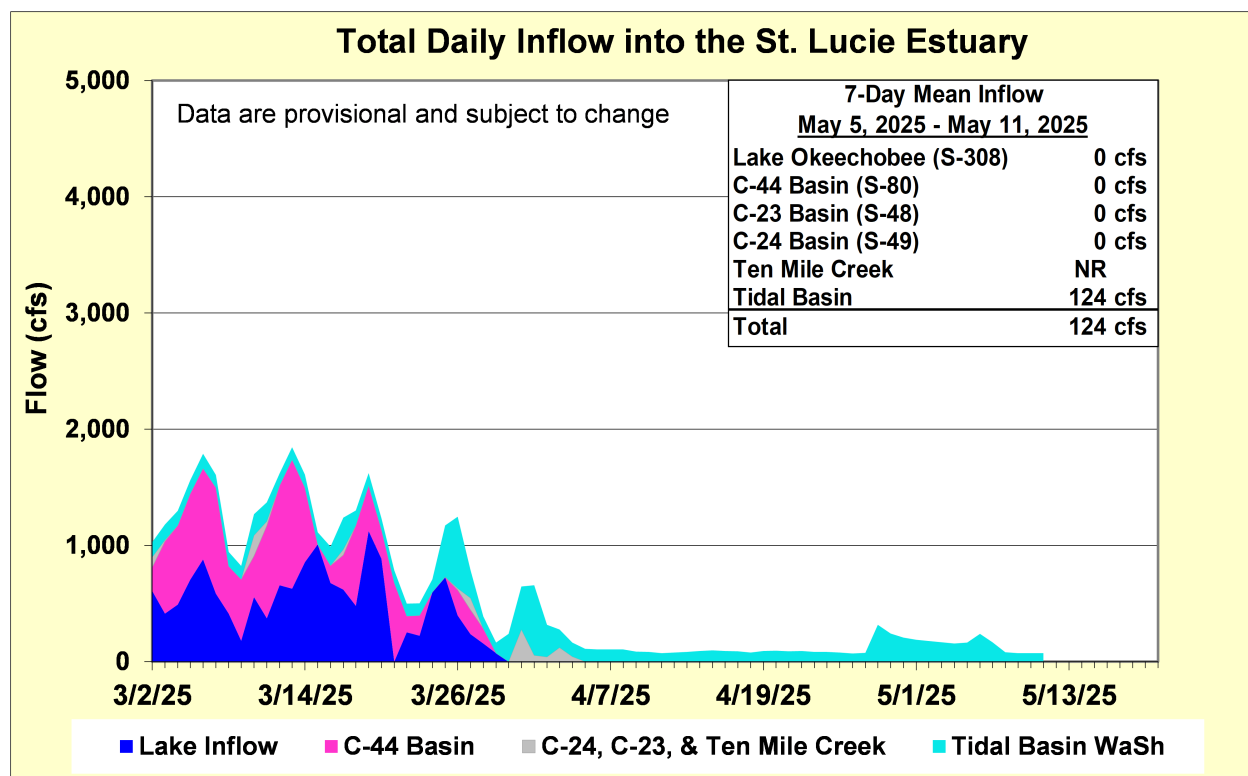
The FWRI reported on May 9, 2025, that *Karenia brevis*, the Florida red tide dinoflagellate, was not observed at bloom concentrations in any samples collected within the District region.

## Water Management Recommendations

Lake stage is in Zone D. Current climatological and hydrological conditions are normal. The LOSOM release guidance suggests up to 2,100 cfs release at S-79 to the Caloosahatchee River Estuary and up to 1,400 cfs total to S-80, S-97, S-49, and Gordy Road combined to the St. Lucie Estuary.



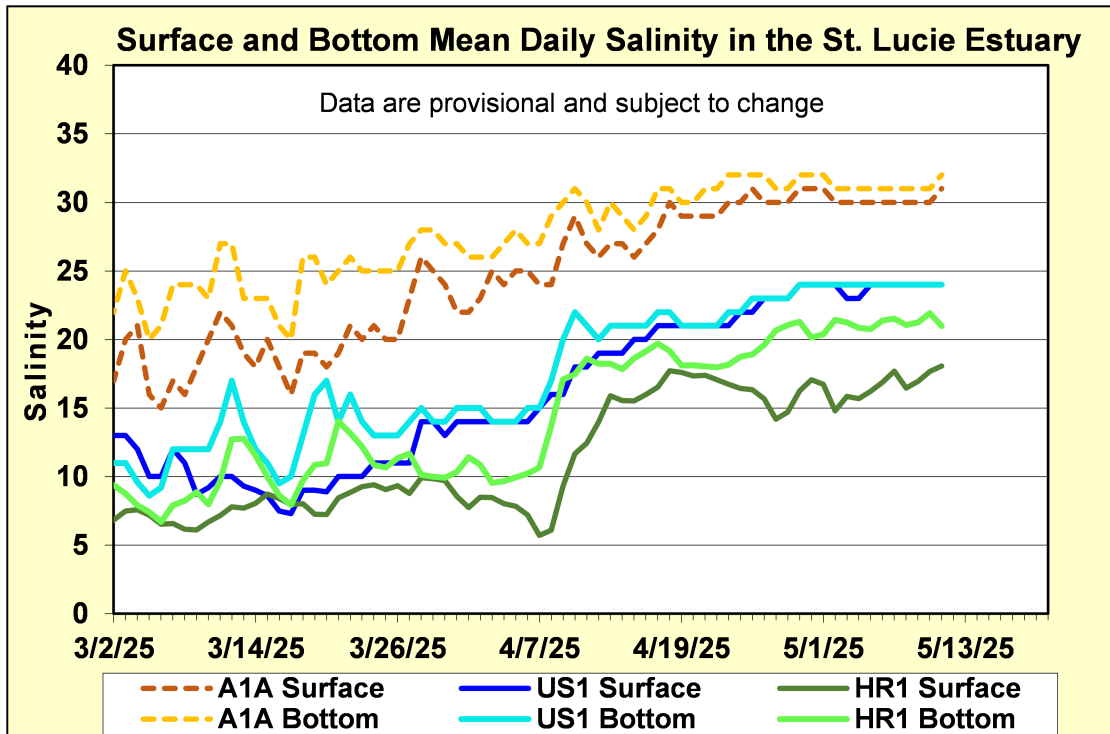
**Figure ES-1.** Basins, water control structures and salinity monitoring sites in the St. Lucie Estuary.



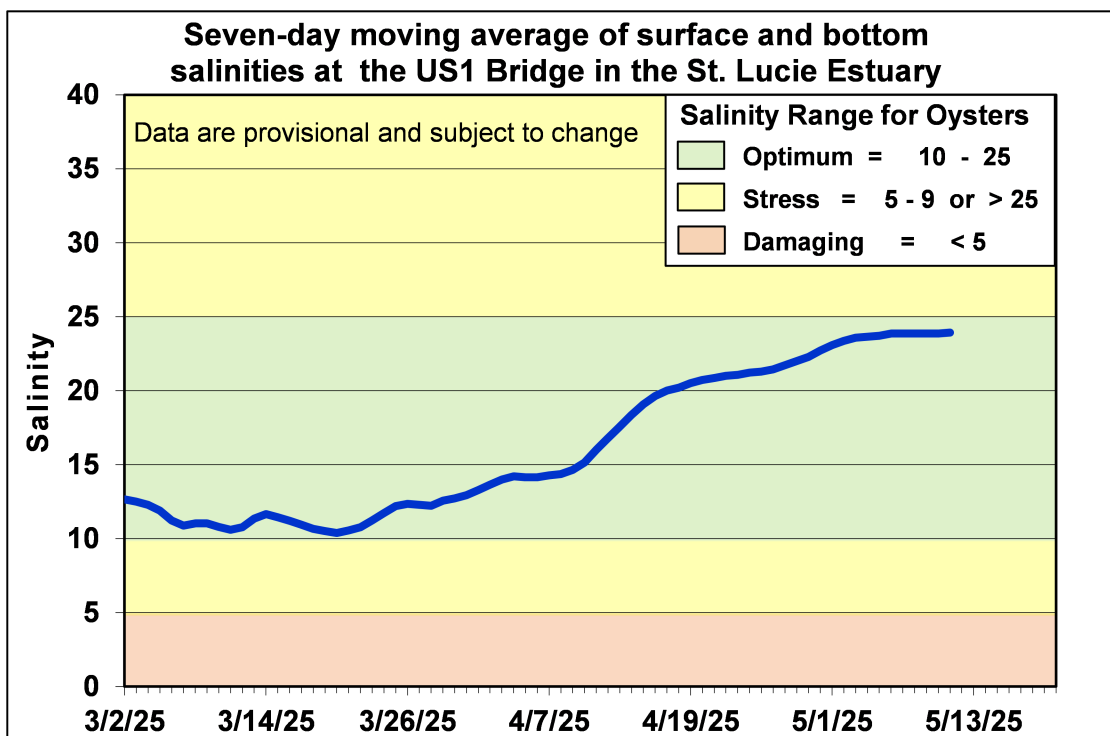
**Figure ES-2.** Total daily inflows from Lake Okeechobee and runoff from the C-44, C-23, C-24, Ten Mile Creek, and Tidal Basins into the St. Lucie Estuary.

**Table ES-1.** Seven-day mean salinity at oyster monitoring sites in the St. Lucie Estuary. Current means are in bold font; previous week's means are in parentheses. The envelope reflects the optimum salinity range for adult eastern oysters (*Crassostrea virginica*) in the estuary. Data are provisional.

Sampling Site	Surface	Bottom	Optimum Envelope
HR1 (North Fork)	<b>17.1</b> (15.9)	<b>21.3</b> (20.9)	10.0 – 25.0
US1 Bridge	<b>24.0</b> (23.6)	<b>24.0</b> (23.9)	10.0 – 25.0
A1A Bridge	<b>30.1</b> (30.4)	<b>31.1</b> (31.4)	10.0 – 25.0

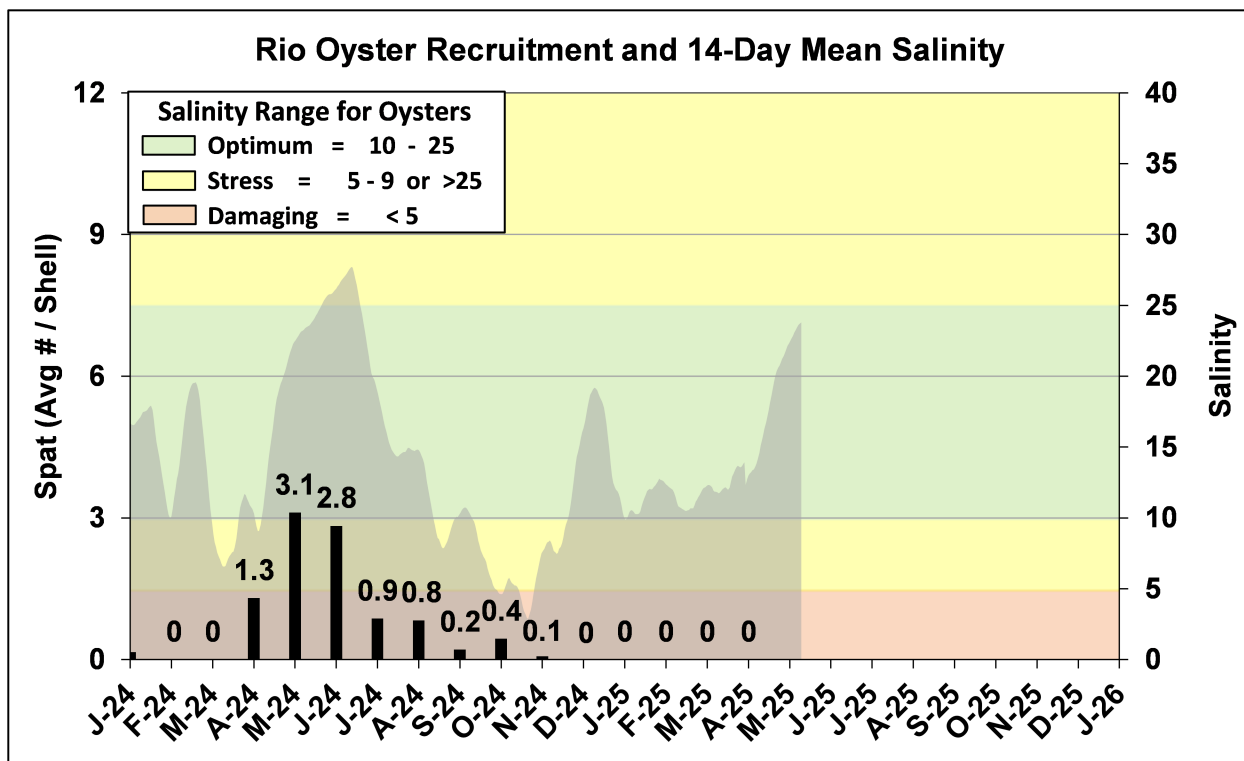


**Figure ES-3.** Mean daily salinity at the A1A, US1, and HR1 sites in the St. Lucie Estuary.



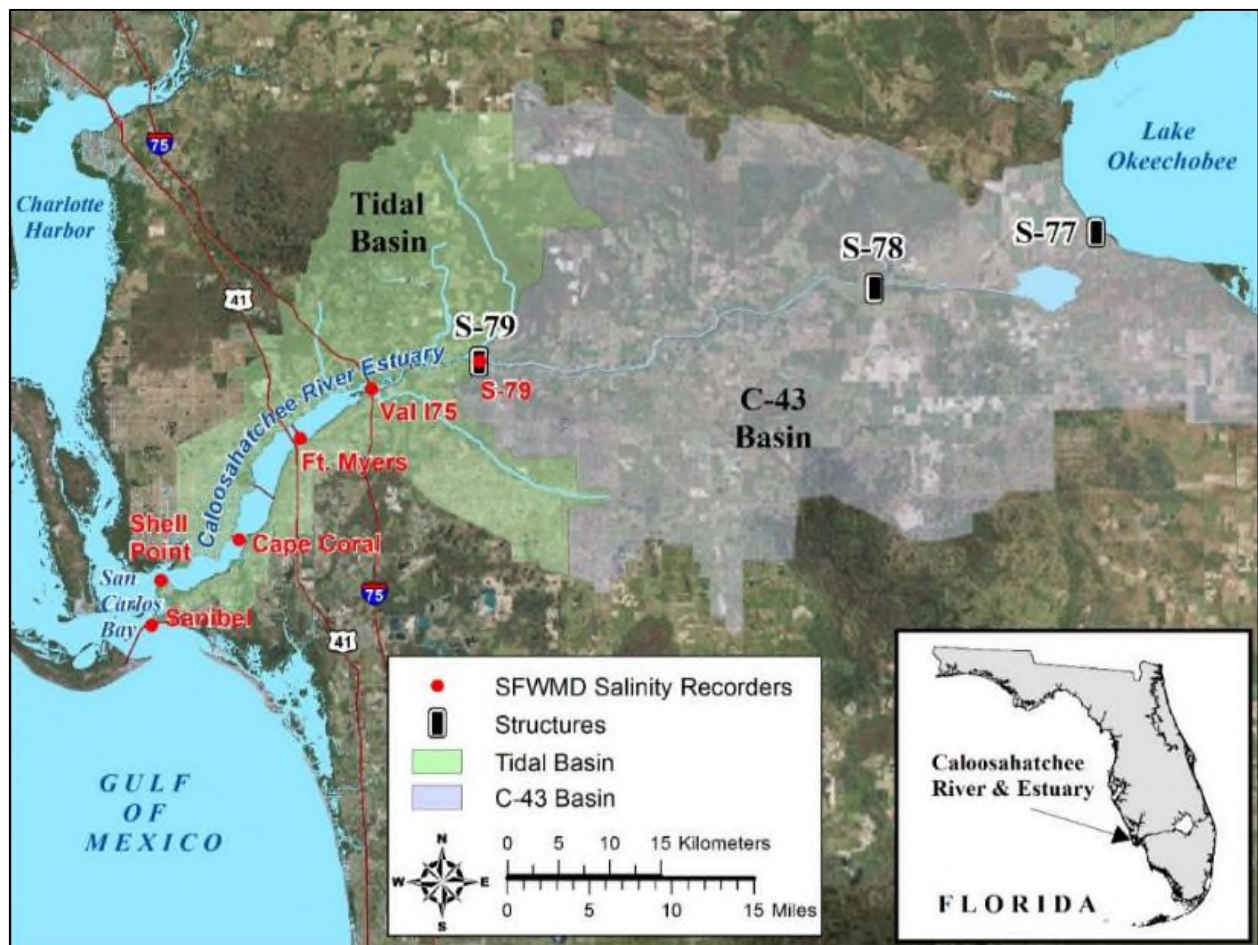
**Figure ES-4.** Seven-day moving average of the surface and bottom salinities at the US1 Bridge in the St. Lucie Estuary.



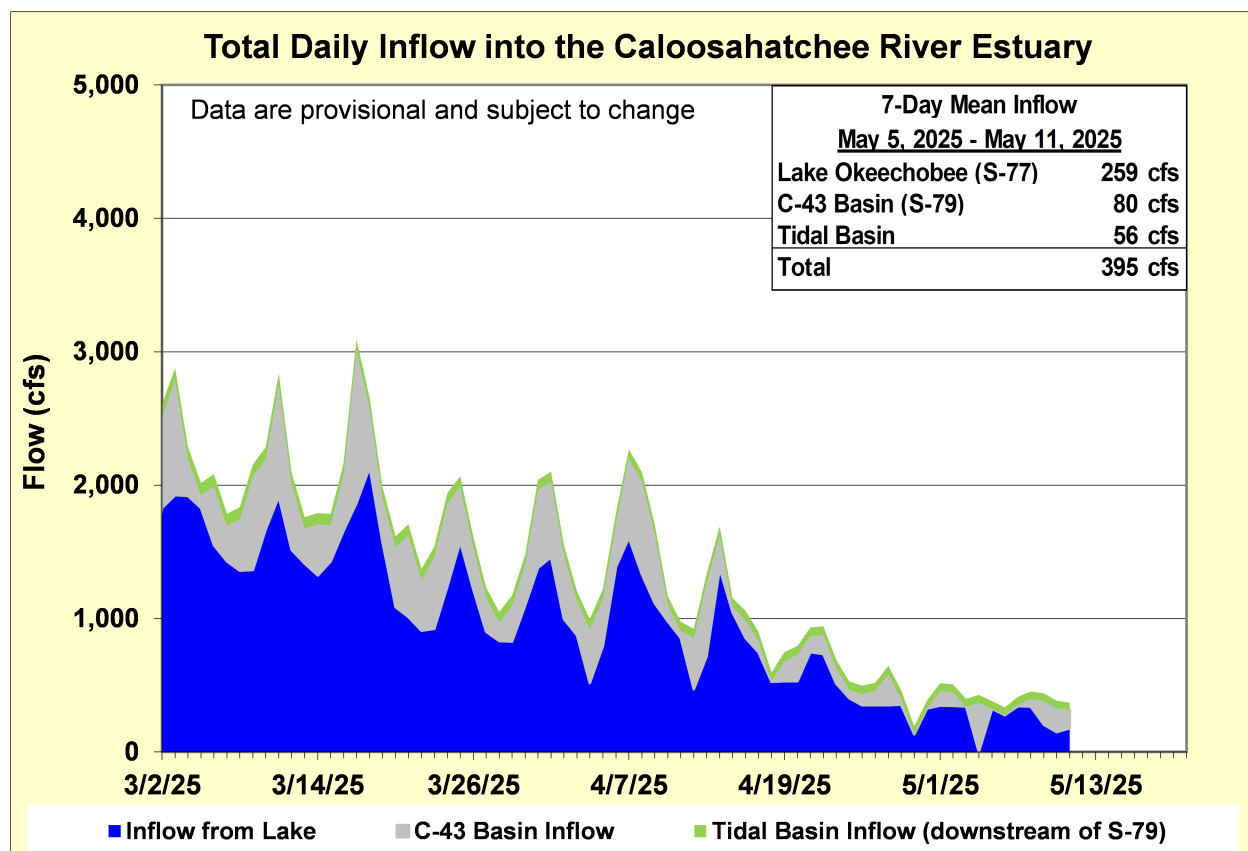


**Figure ES-5.** Mean oyster recruitment at the Rio oyster monitoring station and 14-day mean salinity at US1 Bridge.





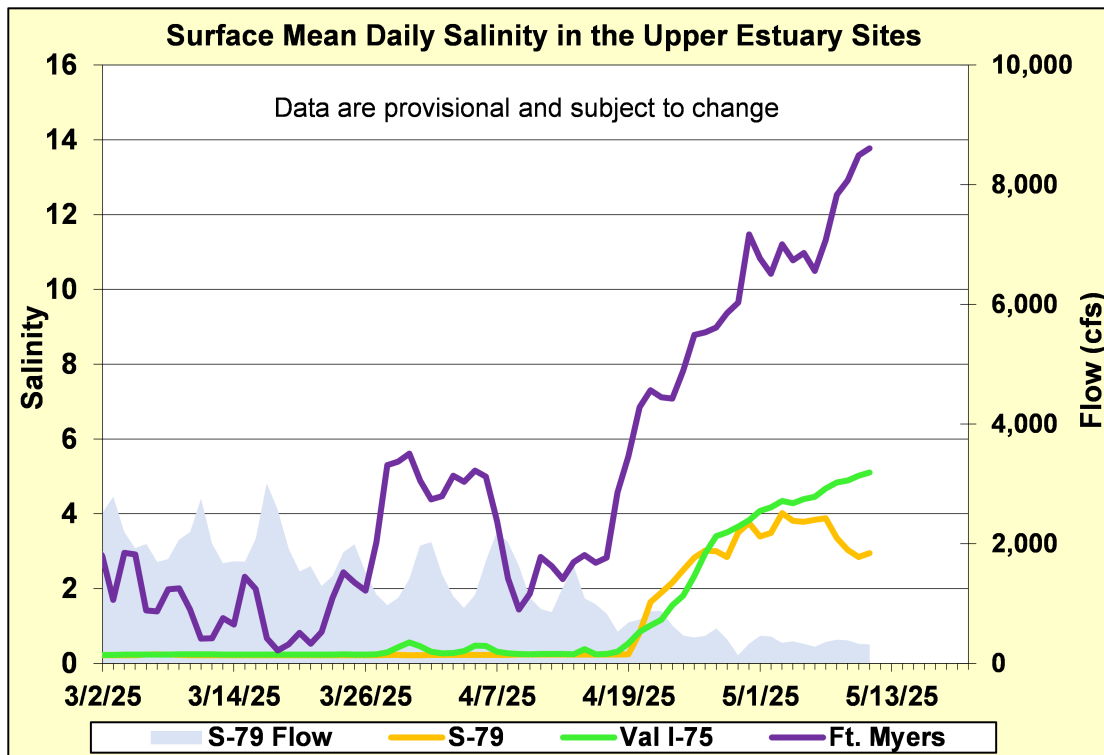
**Figure ES-6.** Basins, water control structures, and salinity monitoring sites in the Caloosahatchee River Estuary.



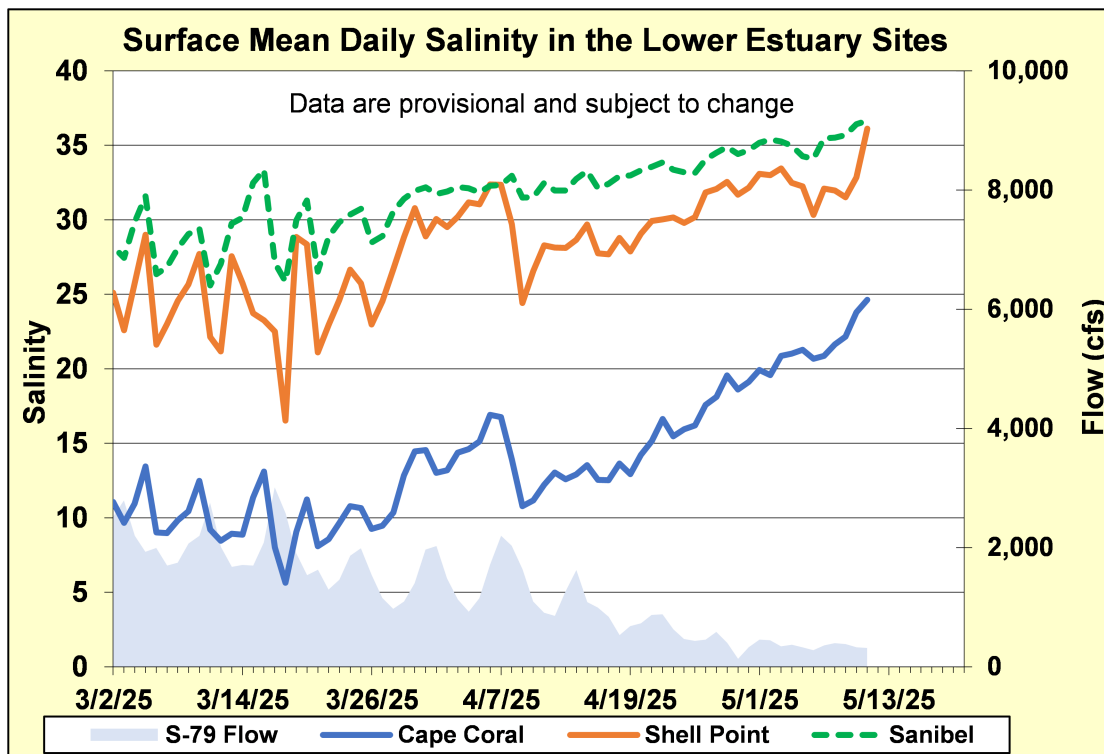
**Figure ES-7.** Total daily inflows from Lake Okeechobee, and runoff from the C-43 and Tidal basins into the Caloosahatchee River Estuary.

**Table ES-2.** Seven-day mean salinity at six monitoring sites in the Caloosahatchee River Estuary. Current means are in bold font; previous week's means are in parentheses. The envelope in the upper estuary sites is for the protection of tape grass and the envelope in the lower estuary is the optimum salinity range for adult eastern oysters (*Crassostrea virginica*). Data are provisional.

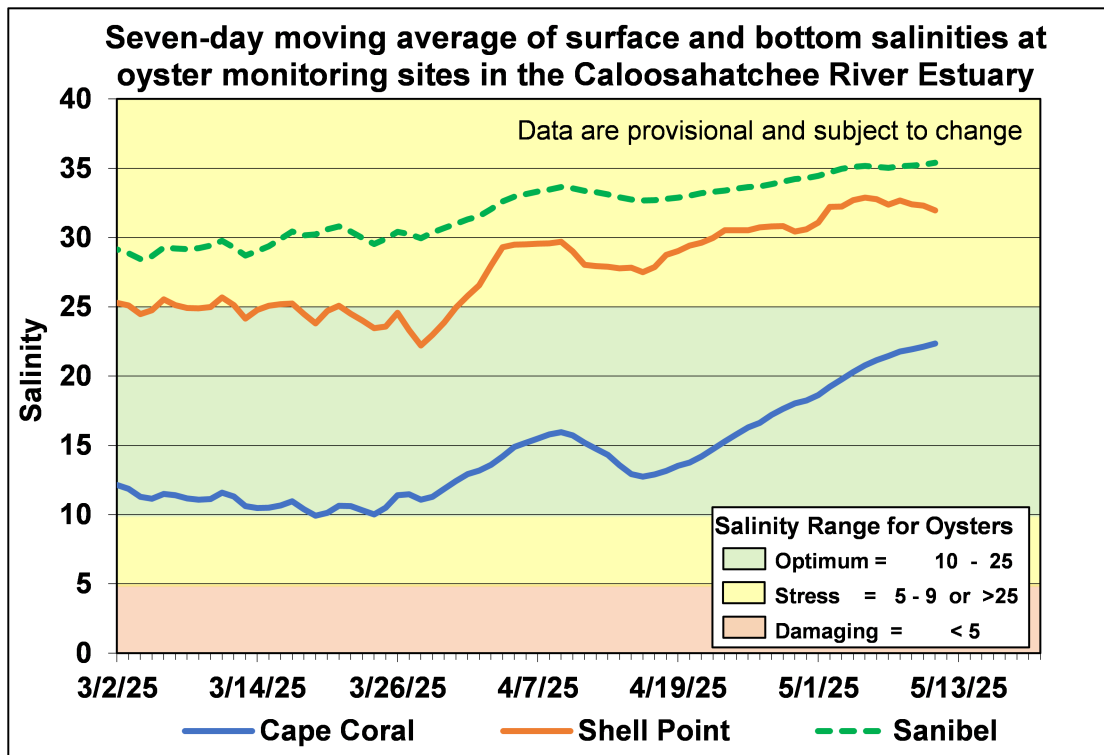
Sampling Site	Surface	Bottom	Optimum Envelope
S-79 (Franklin Lock)	<b>3.4</b> (3.5)	<b>3.4</b> (3.6)	0.0 – 10.0
Val I-75	<b>4.8</b> (4.0)	<b>5.3</b> (4.6)	0.0 – 10.0
Fort Myers Yacht Basin	<b>12.2</b> (10.5)	<b>13.4</b> (13.1)	0.0 – 10.0
Cape Coral	<b>22.1</b> (19.8)	<b>23.3</b> (21.7)	10.0 – 25.0
Shell Point	<b>32.4</b> (32.6)	<b>31.6</b> (33.1)	10.0 – 25.0
Sanibel	<b>35.4</b> (35.0)	<b>35.8</b> (35.4)	10.0 – 25.0



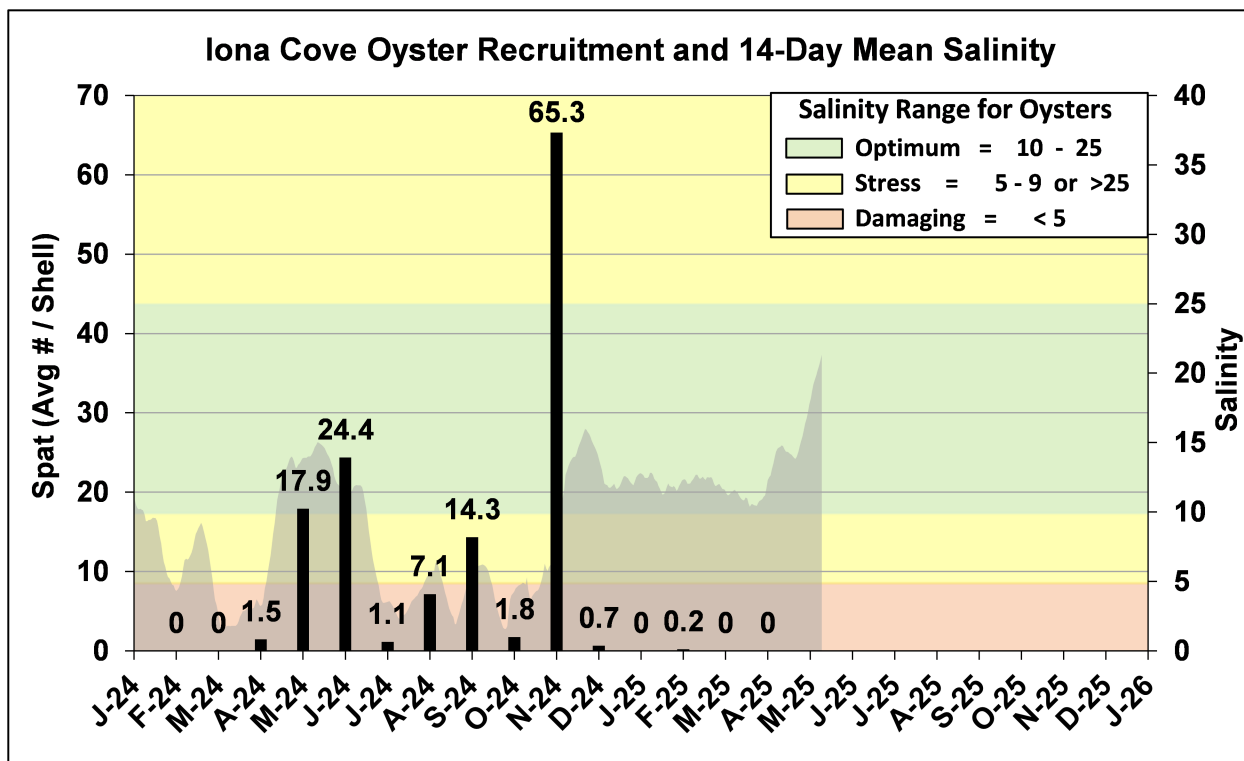
**Figure ES-8.** Mean daily salinity at upper Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.



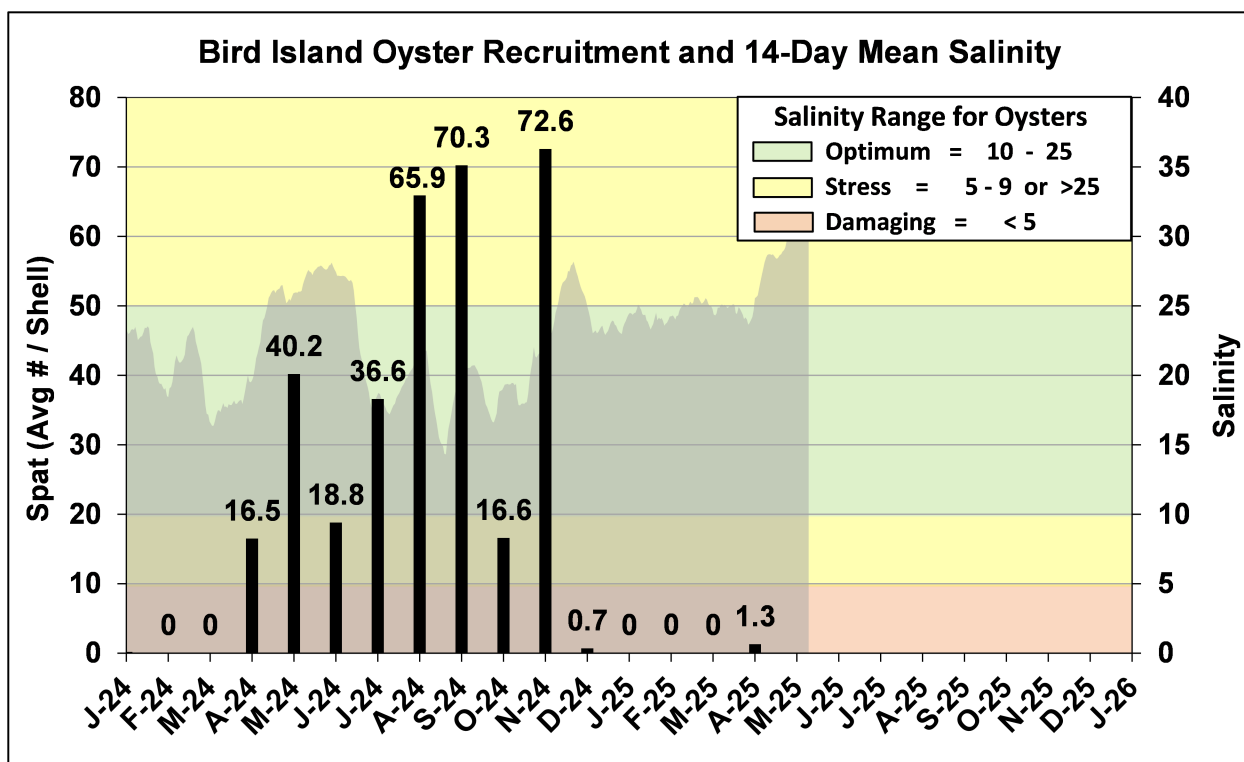
**Figure ES-9.** Mean daily surface salinity at lower Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.



**Figure ES-10.** Seven-day moving average of surface and bottom salinities at Cape Coral, Shell Point, and Sanibel monitoring sites in the Caloosahatchee River Estuary.



**Figure ES-11.** Mean oyster recruitment at the Iona Cove oyster monitoring station and 14-day mean salinity at Cape Coral.

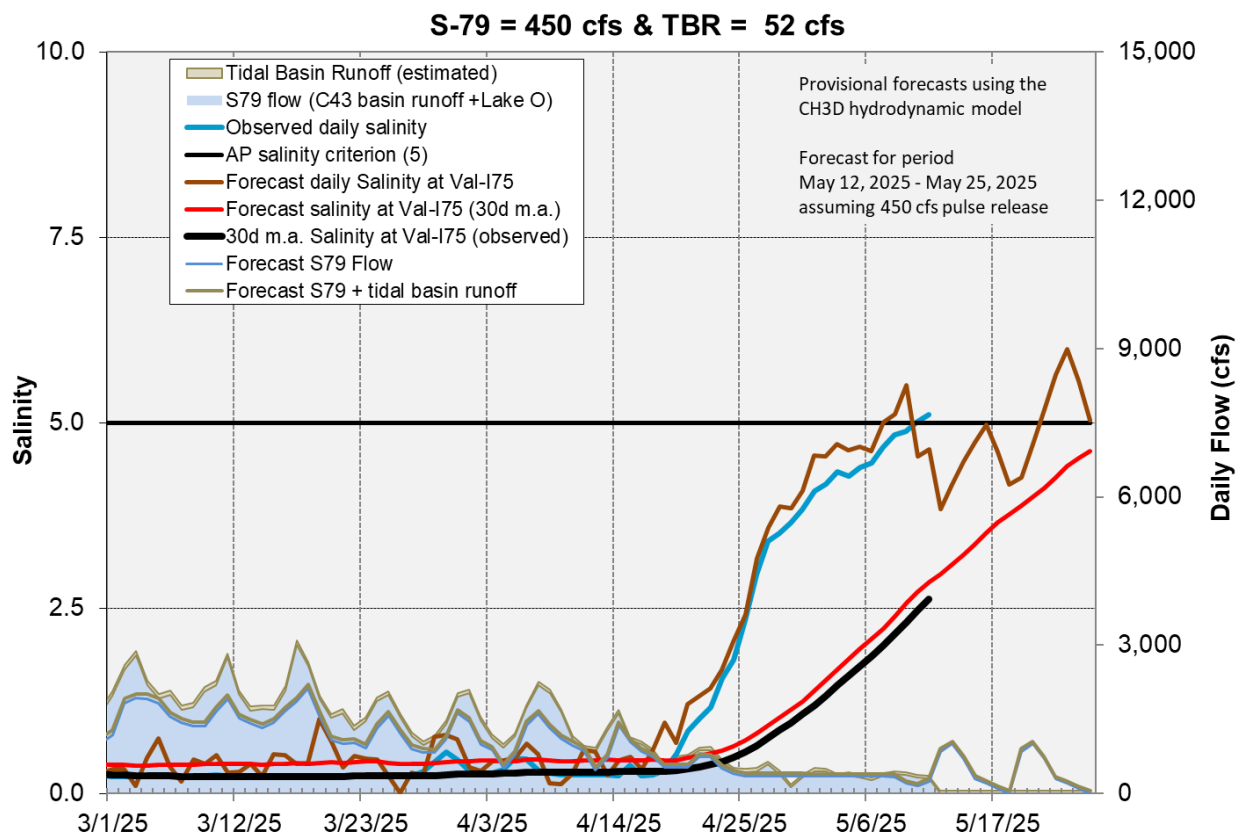


**Figure ES-12.** Mean oyster recruitment at the Bird Island oyster monitoring station and 14-day mean salinity at Shell Point.

**Table ES-3.** Predicted salinity at Val I-75 in the Caloosahatchee River Estuary at the end of the forecast period for various S-79 flow release scenarios.

Scenario	Simulated S-79 Flow (cfs)	Tidal Basin Runoff (cfs)	Daily Salinity	30-Day Mean Salinity
A	450	52	5.0	4.6
B	650	52	4.0	4.4
C	750	52	3.5	4.3
D	1,000	52	2.8	4.0
E	1,200	52	2.1	3.8

### Observed and Forecasted Flow at S-79 and Salinity at Val I-75



**Figure ES-13.** Surface salinity forecast at the Val I-75 site assuming a 450 cfs pulse release at S-79.

## Stormwater Treatment Areas

**STA-1E:** STA-1E Central Flow-way is offline for construction activities. An operational restriction is in place in the Western Flow-way for post-construction vegetation grow-in. Online treatment cells are near target stage. The 365-day PLR for the Western Flow-way is below 1.0 g/m<sup>2</sup>/year (**Figure S-2**).

**STA-1W:** Cells 6 and 8 contain nests of Migratory Bird Treaty Act protected species. Treatment cells are near target stage. Vegetation in the Western and Eastern flow-ways is highly stressed. The 365-day PLRs for the Eastern, Western, and Northern Flow-ways are high (**Figure S-2**).

**STA-2:** STA-2 Flow-way 3 is offline for a SAV recovery drawdown and contains nests of Migratory Bird Treaty Act protected species. Operational restrictions are in place in Flow-ways 2 and 4 for vegetation management activities. An additional restriction is in place for inflow canal dredging in Flow-way 1. Online treatment cells are near target stage. Vegetation in Flow-ways 2 is stressed and in 5 is highly stressed. The 365-day PLRs for Flow-ways 1, 4, and 5 are below 1.0 g/m<sup>2</sup>/year. The 365-day PLR for Flow-way 2 is high (**Figure S-3**).

**STA-3/4:** An operational restriction is in place in the Eastern Flow-way for post-drawdown vegetation grow-in. Treatment cells are near or above target stage. Vegetation in the Central Flow-way is highly stressed. The 365-day PLR for the Eastern Flow-way is below 1.0 g/m<sup>2</sup>/year. The 365-day PLRs for the Central and Western Flow-ways are high (**Figure S-3**).

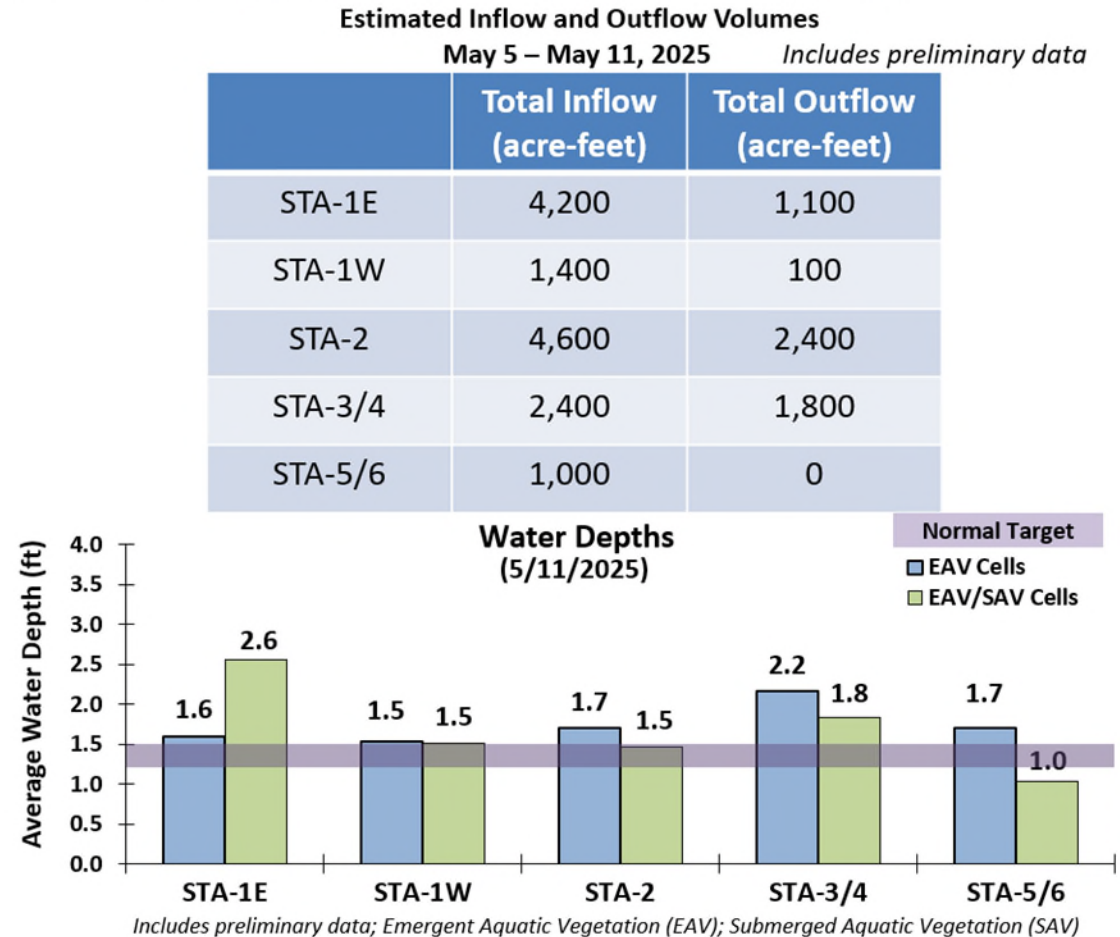
**STA-5/6:** Treatment cells are near or below target stage. All treatment cells have highly stressed or stressed vegetation conditions. The 365-day PLRs for Flow-ways 1, 2, 6, 7, and 8 are below 1.0 g/m<sup>2</sup>/year, and the 365-day PLRs for Flow-ways 3, 4, and 5 are high. (**Figure S-4**).

For definitions on STA operational language see glossary following figures



# Everglades Stormwater Treatment Areas - STAs

- Total WY2026 inflows to STAs (5/1/2025 to 5/11/2025): ~18,000 ac-ft
- Lake Okeechobee releases to FEBs/STAs
  - 5/5/2025 to 5/11/2025: ~9,200 ac-ft
  - WY2026: ~13,800 ac-ft
- Extensive vegetation management activities underway to address stressed and highly stressed vegetation in EAV cells
- Most treatment cells are near or above target water depth except STA-5/6 EAV cells which are below target

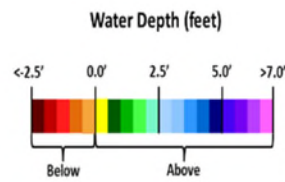
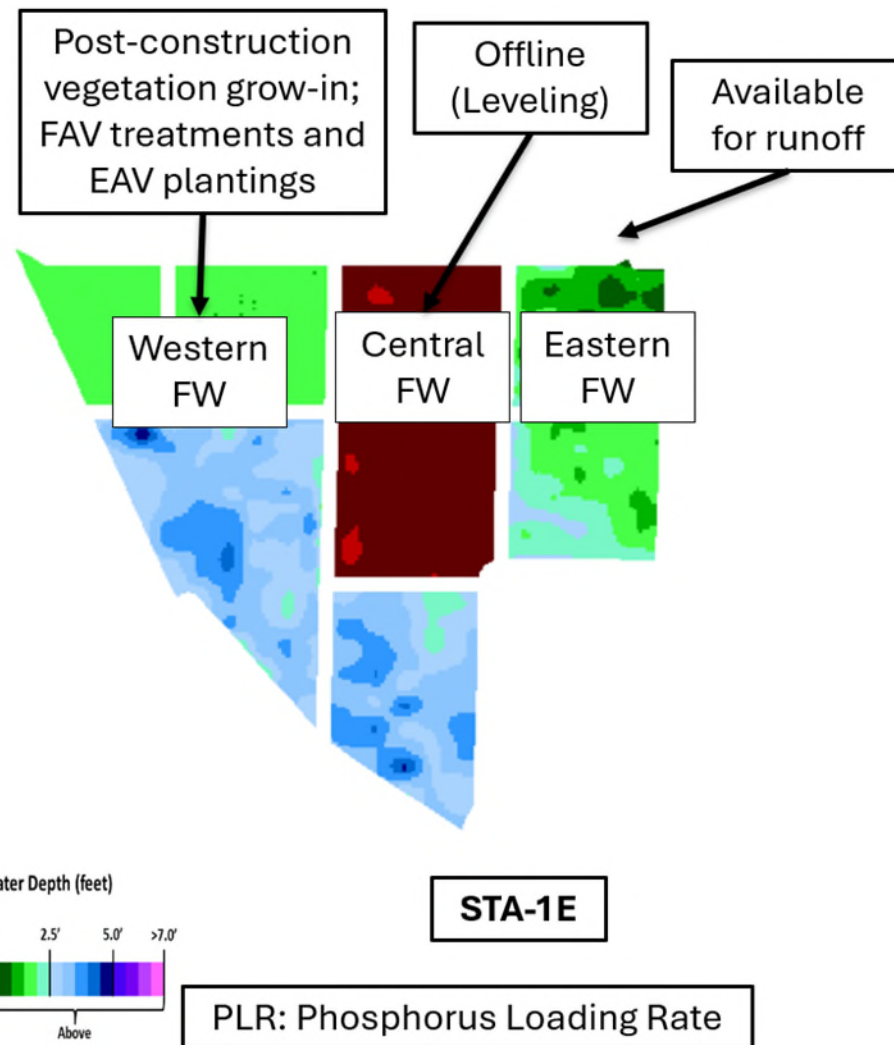
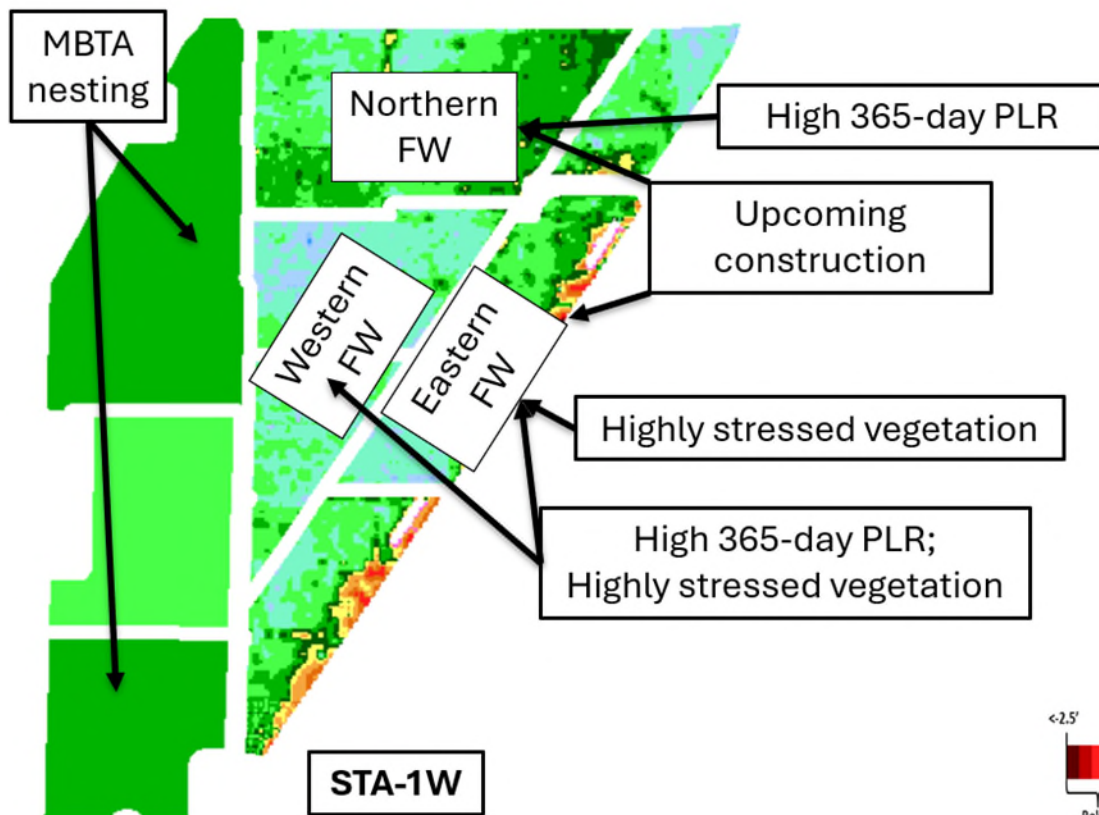


**Figure S-1.** STA depths and flow volumes



0 CFS Lake release capacity in Eastern Flow Path:  
5/12/2025-5/18/2025

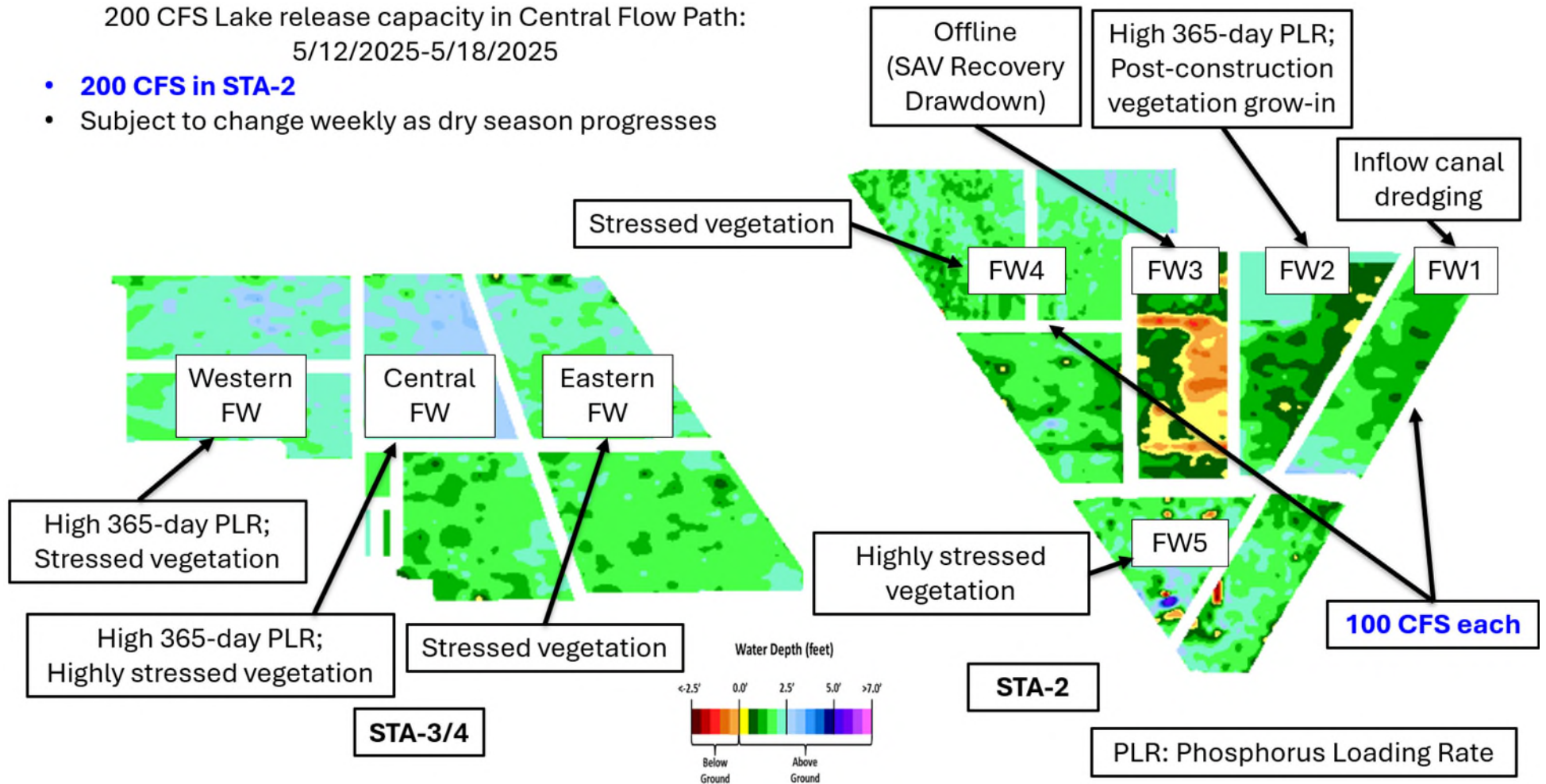
- Subject to change weekly as dry season progresses



**Figure S-2.** Eastern Flow Path Weekly Status Report

200 CFS Lake release capacity in Central Flow Path:  
5/12/2025-5/18/2025

- **200 CFS in STA-2**
- Subject to change weekly as dry season progresses



**Figure S-3.** Central Flow Path Weekly Status Report

0 CFS Lake release capacity in Western Flow Path:  
5/12/2025-5/18/2025

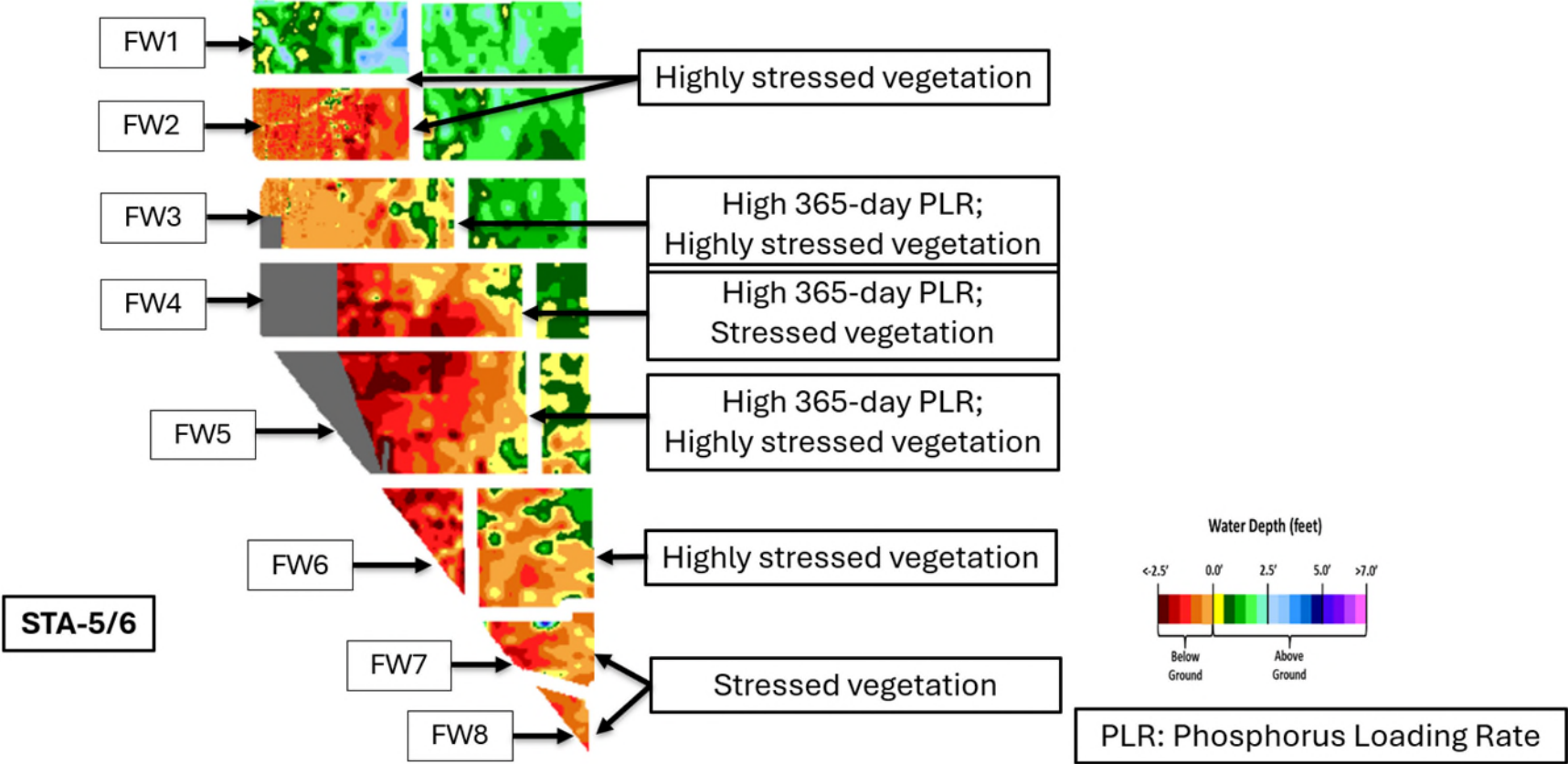


Figure S-4. Western Flow Path Weekly Status Report

### Basic Concepts and Definitions for STA Weekly Status Report

- **Inflow:** Sum of flow volume at all inflow structures to an STA.
- **Lake Inflow:** Portion of the STA total inflow volume that originates from Lake Okeechobee.
- **Outflow:** Sum of flow volume at outflow structures from an STA.
- **Total Phosphorus (TP):** Total mass of phosphorus in all its forms; including particulate, dissolved, etc.
- **Inflow Concentration:** TP concentration is the mass of TP in micrograms per liter of water,  $\mu\text{g/L}$  or ppb. Inflow concentration refers to the flow-weighted mean TP from all inflow structures over a period of time.
- **Outflow Concentration:** The flow-weighted mean TP from all outflow structures over a period of time. The outflow concentration represents the reduction of inflow TP achieved by STA treatment of the inflow water.
- **WQBEL:** The STA outflow concentration that is required upon completion of the Restoration Strategies projects by December 2025. The outflow concentration shall not exceed 13 ppb as an annual flow weighted mean in more than 3 out of 5 water years on a rolling basis and shall not exceed 19 ppb as an annual flow weighted in any water year.
- **Flow-Way (FW):** One or more treatment cells connected in series. Cells typically have emergent aquatic vegetation (EAV) in the front portion of the flow-way followed by a mix of EAV and submerged aquatic vegetation (SAV)
- **Vegetation Status:** Healthy means the vegetation condition is good and will allow the STA to perform as designed. Stressed means the vegetation is showing signs of poor health, such as browning or areas of vegetation die-off, or the cell contains undesirable vegetation such as floating exotic vegetation requiring treatment. The TP reduction capability of the STA is affected when the vegetation condition is poor.
- **Phosphorus Loading Rate (PLR):** Mass of inflow TP in grams, divided by total treatment area of STA in square meters, per year. In general, a 365-day value of less than 1.0 is needed for an STA to perform optimally. A PLR of 2.0 is considered very high and a PLR of 3.0 is considered extremely high. The TP reduction capability of the STA is affected when the PLR is high, very high and extremely high.
- **Online:** Online status means the FW can receive and treat inflow.
- **Online with Restriction:** The FW can receive and treat inflow, but the amount of flow or water level may be limited temporarily. For example, a vegetation rehabilitation effort may require reduced flows through an area while the new plants are establishing, or nesting by protected species may require a certain water level not to be exceeded.
- **Offline:** The FW is unable to receive and treat inflow due to repairs, construction, or other prohibitive reasons.
- **Depth:** Difference between the average surface water level in a cell and the average ground elevation in that cell. Target depths, or depths between flow events, are between 1.25 ft to 1.5 ft. As depth approaches or drops below zero, an increasing percentage of the cell is considered dry and STA conditions deteriorate. An increase in depth above target depth is expected with increasing flow. However, as depth increases much above the target depth and is sustained over a period of time, it can be detrimental to vegetation health and overall STA treatment performance.
- **Note:** The data provided in this summary report were developed using a combination of provisional and quality-assured flow and water quality data. In some cases, best professional judgment was used to estimate missing data and revise questionable data. Values provided are not considered final but are appropriate for use in STA operational decision-making.

## **Everglades**

### ***Water Conservation Area***

#### ***Regulation Schedules***

Rainfall was well above average across the entire Everglades Protection Area (EPA) last week. WCA-1: Stage at the 1-8C gauge on Sunday, May 4, 2025, was below the A1 zone regulation line by 0.58 feet. WCA-2A: S11B stage remained below the water supply line on Sunday at 1.1 feet below. WCA-3A: The 3 Gauge Average remains well below the Zone A regulation line. Stages were below that line by 1.05 feet on Sunday. WCA-3A North: Stage at Gauge 62 (NW corner) remains below the Upper Schedule regulation line, on Sunday stage was 1.97 feet below that line. See figures **EV-1** through **EV-4**.

#### ***Water Depths***

The SFWDAT model output for May 11, 2025, illustrates the very dry current conditions across the EPA when compared to last month. There is very little water left in the WCAs. Conditions are continuing to dry out in WCA-3A South and Central; a reduction in suitable wading bird foraging habitat is happening quickly. Big Cypress Basin is significantly below soil surface. Hydrologic connectivity within the sloughs of Everglades National Park (ENP) have diminished, with Shark River and Taylor Slough now showing below ground conditions indicating lack of connectivity to the coast and Florida Bay. See figures **EV-5** through **EV-6**.

#### ***Taylor Slough and Florida Bay***

Stage changes varied across Taylor Slough over the past week, with an average decrease of 0.03 feet. Changes ranged from -0.14 feet at CT50R in the southeast ENP region to +0.06 feet at E112 and P37 in the north and Central region, respectively (**Figure EV-8 and Figure EV-9**). The Taylor Slough Bridge (TSB) stage remains below ground, which is indicative of a lack of water at the head of Taylor Slough. Taylor Slough water levels remain below the recent average (WY1993-2016) for this time of year by 7.7 inches compared to before the Florida Bay initiative (starting in 2017), a decrease of 1.5 inches relative to last week's comparison. The Craighead Pond (CP) and Taylor Slough Bridge (TSB) stages remain below the estimated average for 1900 by 0.69 and 2.48 feet, respectively.

Average Florida Bay salinity was 37.76, an increase of 0.96 from last week. Salinity changes ranged from -0.5 at Duck Key (DK) in the western region to +3.3 at Taylor River (TR) in the central nearshore region (**Figure EV-8**). Salinity is above the estimated average for 1900 and within the WY2001-2016 Interquartile Range (IQR) for all three regions, nearing 75<sup>th</sup> percentile in the eastern region (**Figure EV-10**). Average Florida Bay salinity remains above its recent average (WY1993-2016) for this time of year by 1.28, a decrease of 0.22 relative to last week's comparison.

Salinity at the Taylor River (TR) station in the mangrove zone (tracked for the Florida Bay MFL) was 30.0. The 30-day moving average was 20.60 (**Figure EV-11**), an increase of 3.8 from last week. The 365-day moving sum of flow from the five major creeks



(McCormick Creek, Taylor River, Mud Creek, Trout Creek, West Highway Creek) was 242,813 acre-feet, a decrease of 175 acre-feet from last week (**Figure EV-11**).

Average rainfall across Taylor Slough and Florida Bay was approximately 0.03 inches over the past week, based on the 18 gauges used for this report. Rainfall ranged from 0.00 inches at 10 stations to 0.15 inches at Highway Creek (**Figure EV-12**). Wind directions and speeds in Florida Bay ranged from 5.0 mph SE on May 5<sup>th</sup> to 22.0 mph SE also on May 11<sup>th</sup> (**Figure EV-12**).

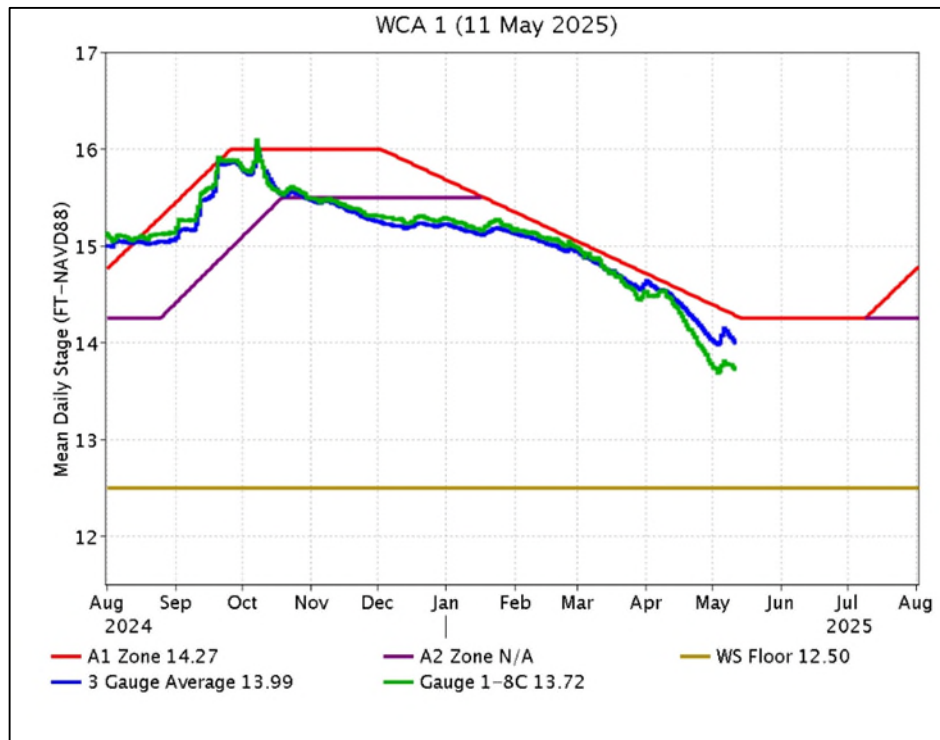
Average daily flow from the five major creeks totaled –649 acre-feet, with net negative flows over the past week. Total daily creek flow ranged from –1,268 acre-feet on May 10<sup>th</sup> to 151 acre-feet on May 7<sup>th</sup> (**Figure EV-13**). Average daily flow was 3,650 acre-feet below estimated historical levels (circa 1900).

### ***Implications for water management***

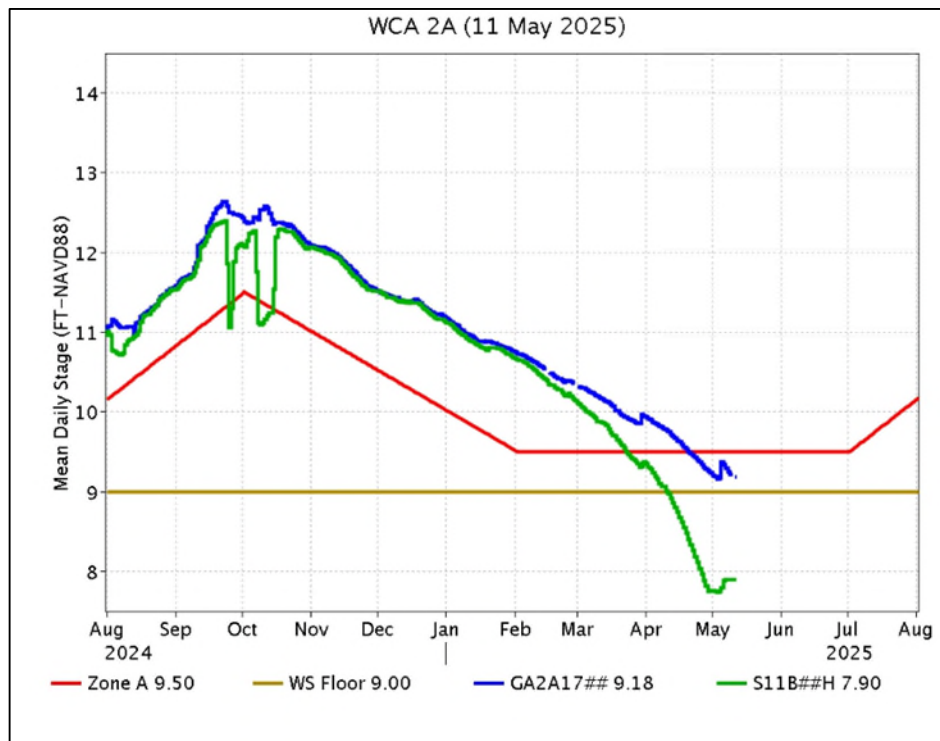
The ecology of the Everglades benefits from recession rates from 0.0 to 0.12 feet per week this time of year, with an ecologically ideal rate near 0.06 given the ongoing drier than average rainfall amounts that are predicted. Maintaining a hydroperiod supportive of wading bird nesting in WCA-3A is critical as wading birds have had below average nesting success for the last three years. A concern for wading bird nesting are the conditions in WCA-3A South where stages are quickly approaching the soil surface; hydroperiods that stretch into the late dry season in this region are very beneficial in sustaining wading bird foraging and nesting in the EPA. Florida Bay salinity remains in a good position as the dry season progresses and will continue to benefit from maintaining freshwater input to the system when available. Maintaining hydroperiods by increasing inflow and minimizing outflow of WCA-3A can be beneficial to the success of wading bird nesting in the EPA. Conserving water in WCA-3A might be a concern if Florida Bay salinities are seen to rise rapidly and approach hypersalinity. The current favorable salinity levels in Florida Bay may provide an opportunity to deliver broader landscape-wide ecological benefits across the EPA while balancing ecological priorities. Individual regional recommendations can be found in **Table EV-2**.

**Table EV-2.** Previous week's rainfall and water depth changes in Everglades basins.

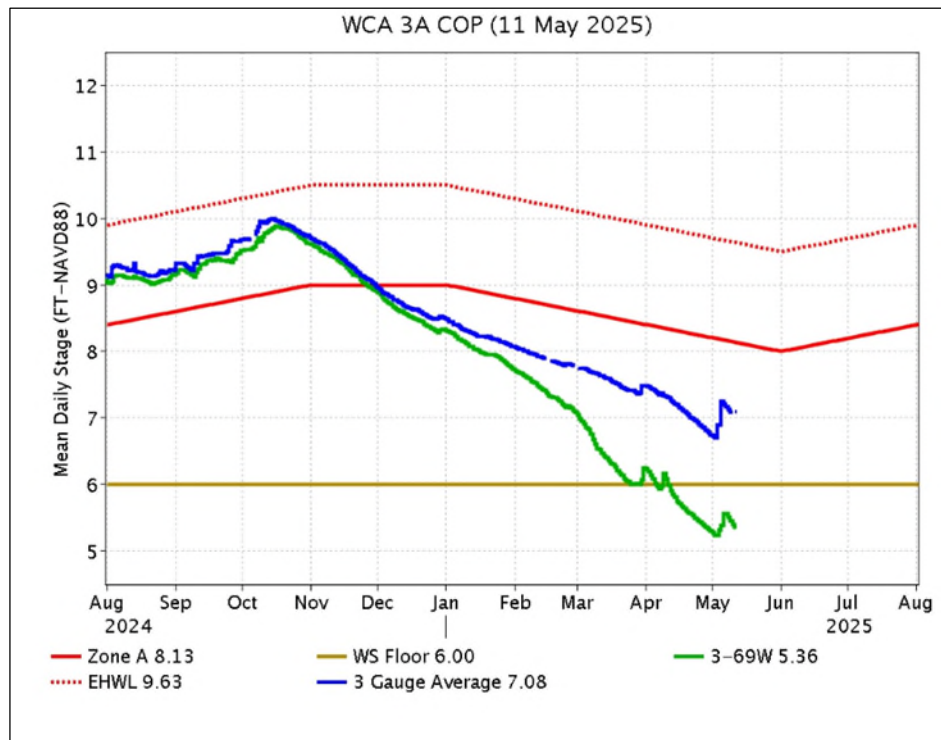
Everglades Region	Rainfall (inches)	Stage change (feet)
WCA-1	1.33	–0.05
WCA-2A	1.91	–0.02
WCA-2B	1.96	+0.13
WCA-3A	1.78	+0.15
WCA-3B	1.36	–0.23
ENP	1.89	+0.02



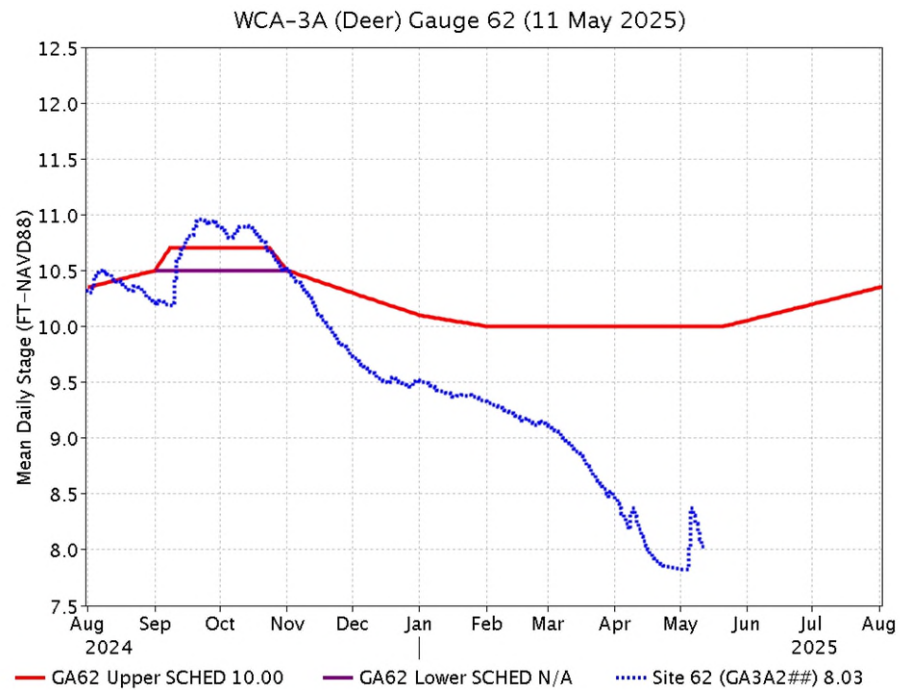
**Figure EV-1.** WCA-1 stage hydrographs and regulation schedule.



**Figure EV-2.** WCA-2A stage hydrographs and regulation schedule.

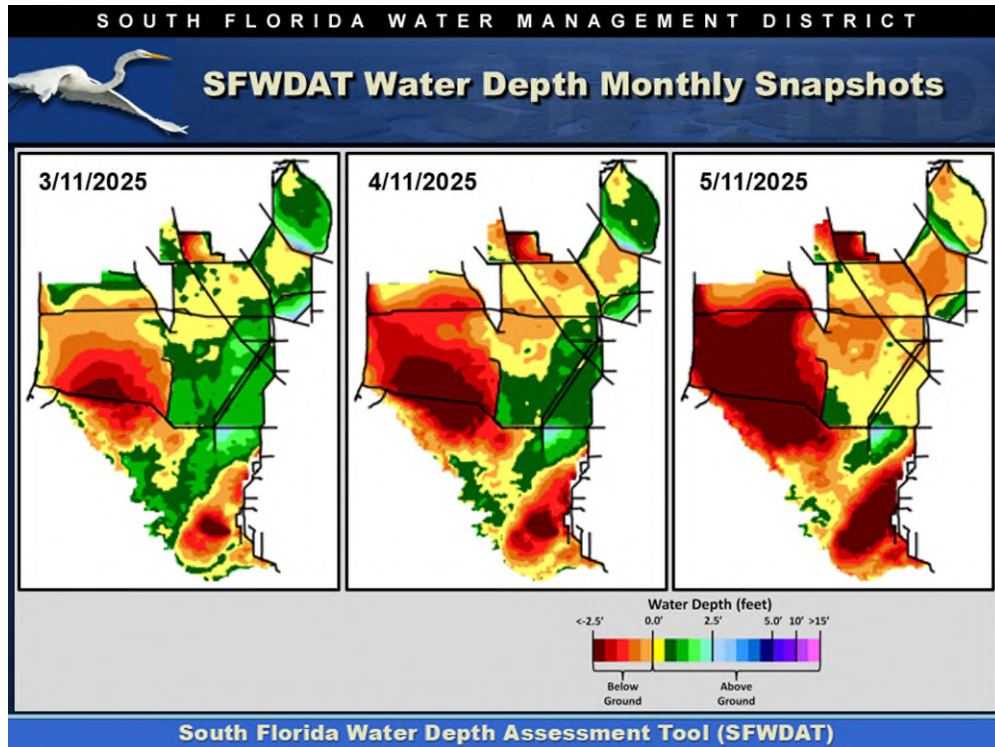


**Figure EV-3.** WCA-3A stage hydrographs (three-gauge average, 3-69W) and regulation schedule.

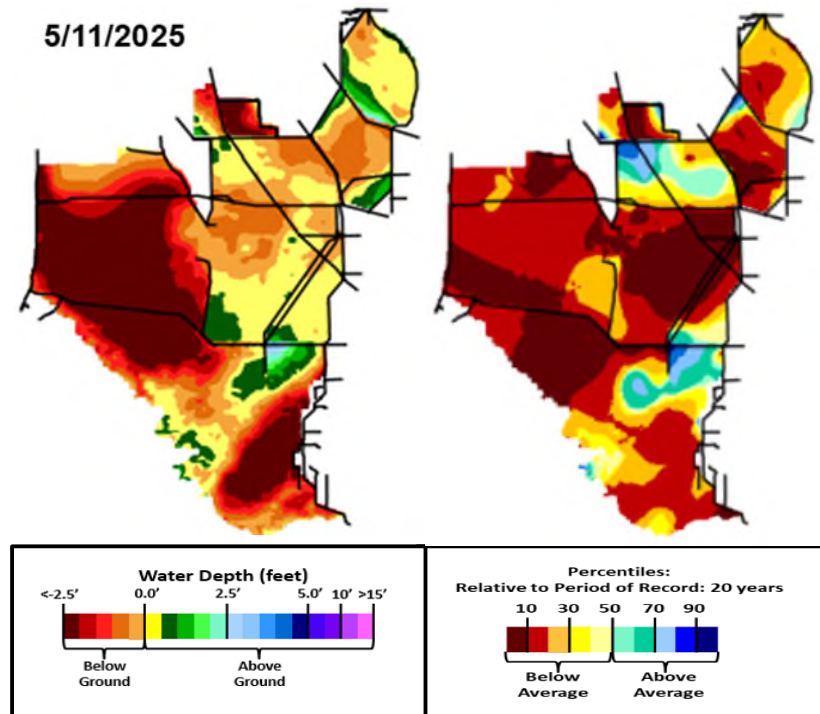


**Figure EV-4.** WCA-3A stage hydrograph (Deer gauge; Site 62) and GA62 regulation schedule.

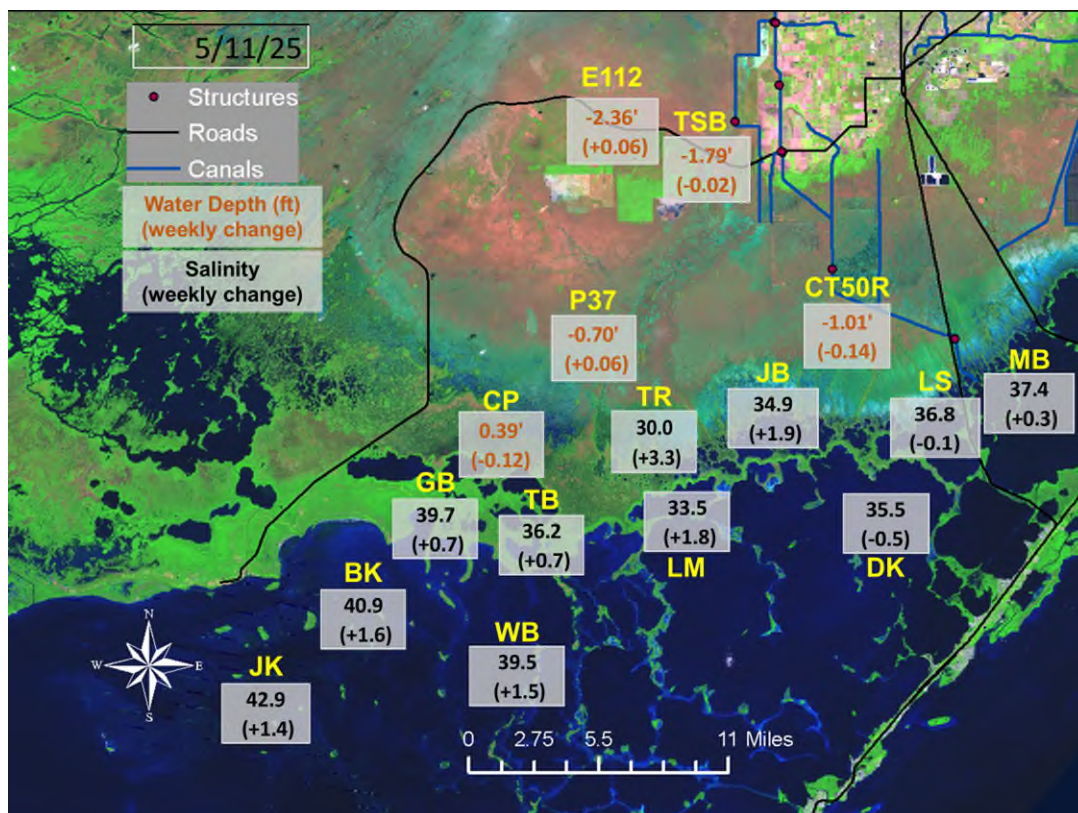




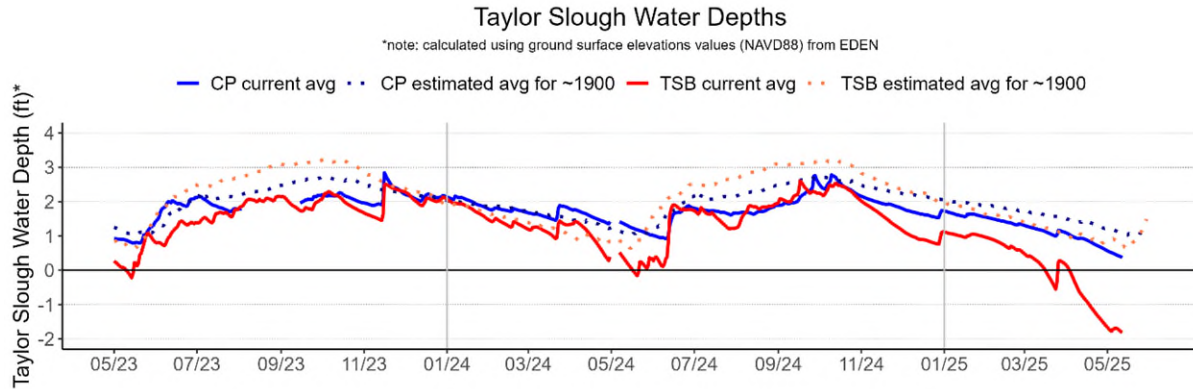
**Figure EV-5.** Everglades water depths from two months ago (left), one month ago (center) and present (right), based on SFWDAT.



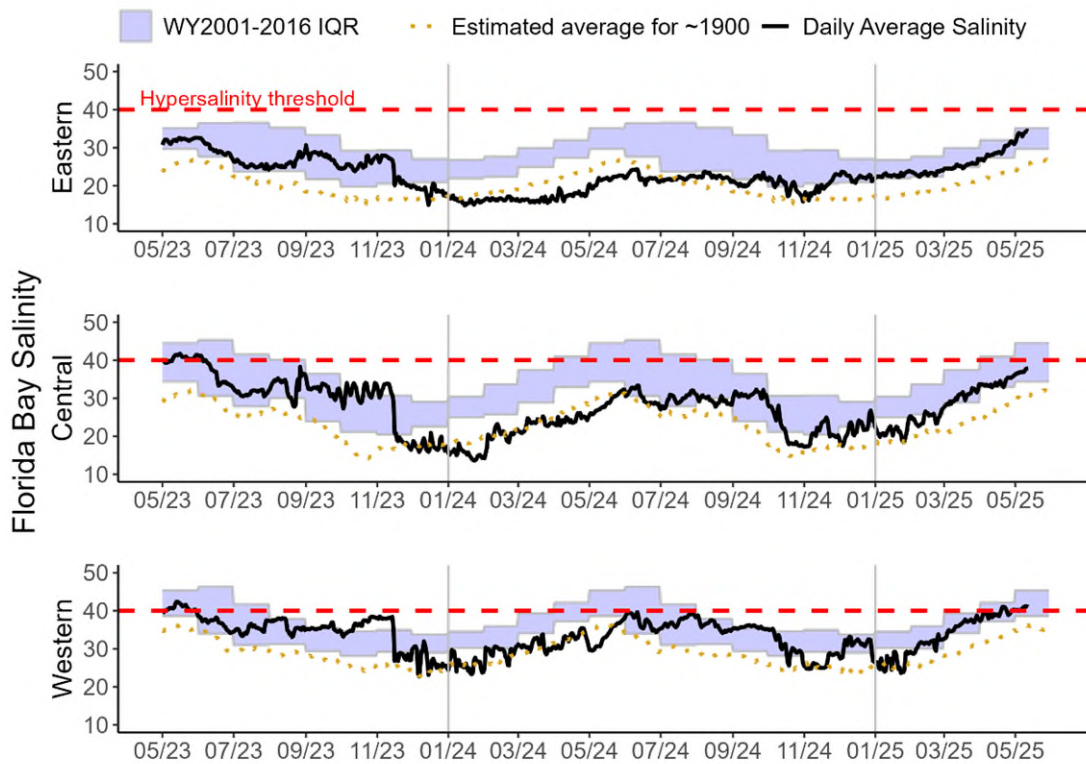
**Figure EV-6.** Present water depths (May 11, 2025) compared to the day of year relative to average (percentile) over the previous 20 years.



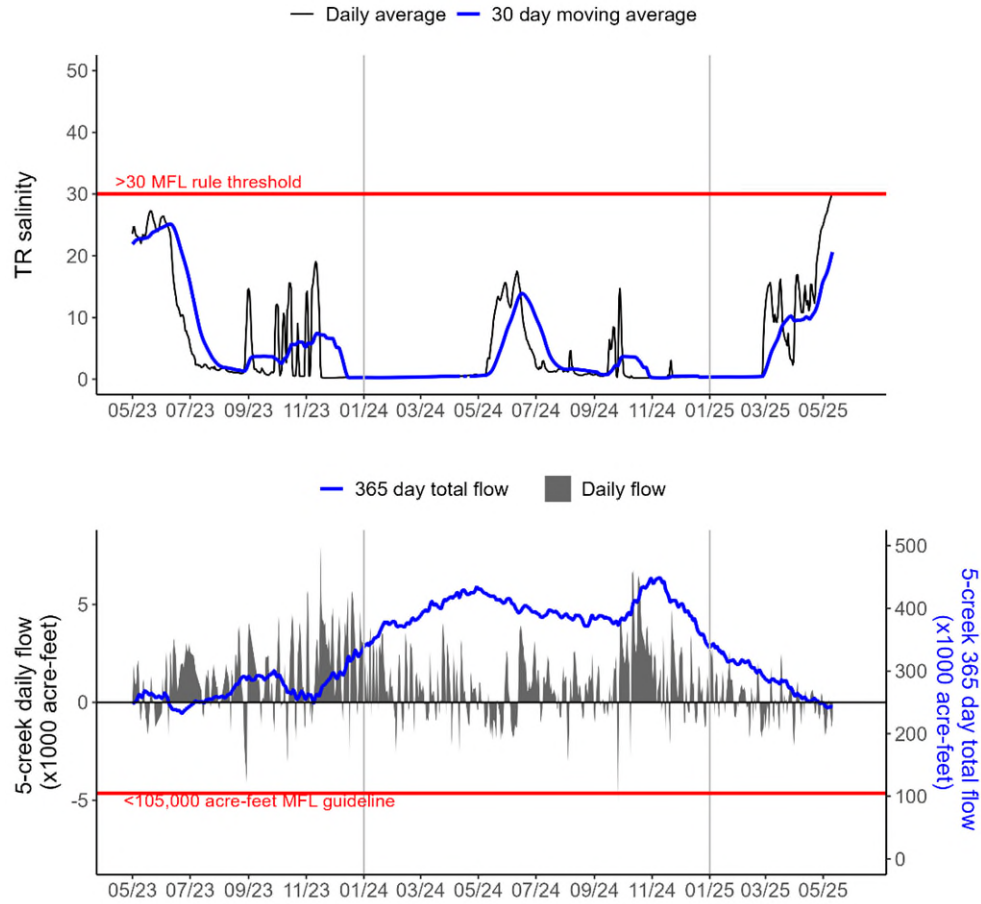
**Figure EV-7.** Taylor Slough water depths and Florida Bay salinities with changes since a week ago.



**Figure EV-8.** Taylor Slough water depth time series for Taylor Slough Bridge (TSB; northern slough) and Craighead Pond (CP; southern slough).

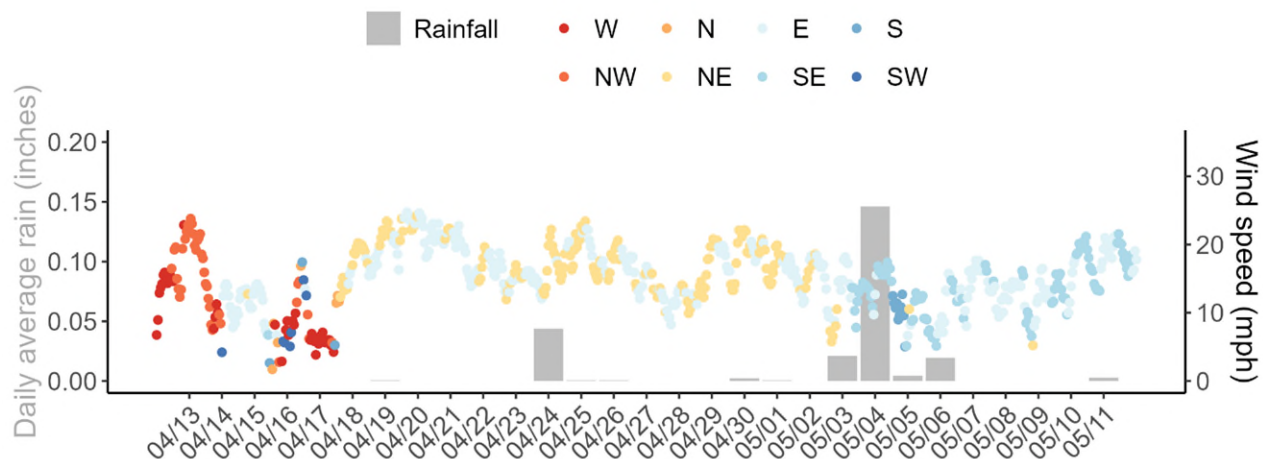


**Figure EV-9.** Eastern (top panel), Central (middle panel) and Western (bottom panel) Florida Bay daily average salinities with WY2001-2016 interquartile (25-75 percentile) ranges (IQR) and estimated historical daily average salinities. The hypersalinity threshold indicates the level at which salinities start to become harmful to seagrass.

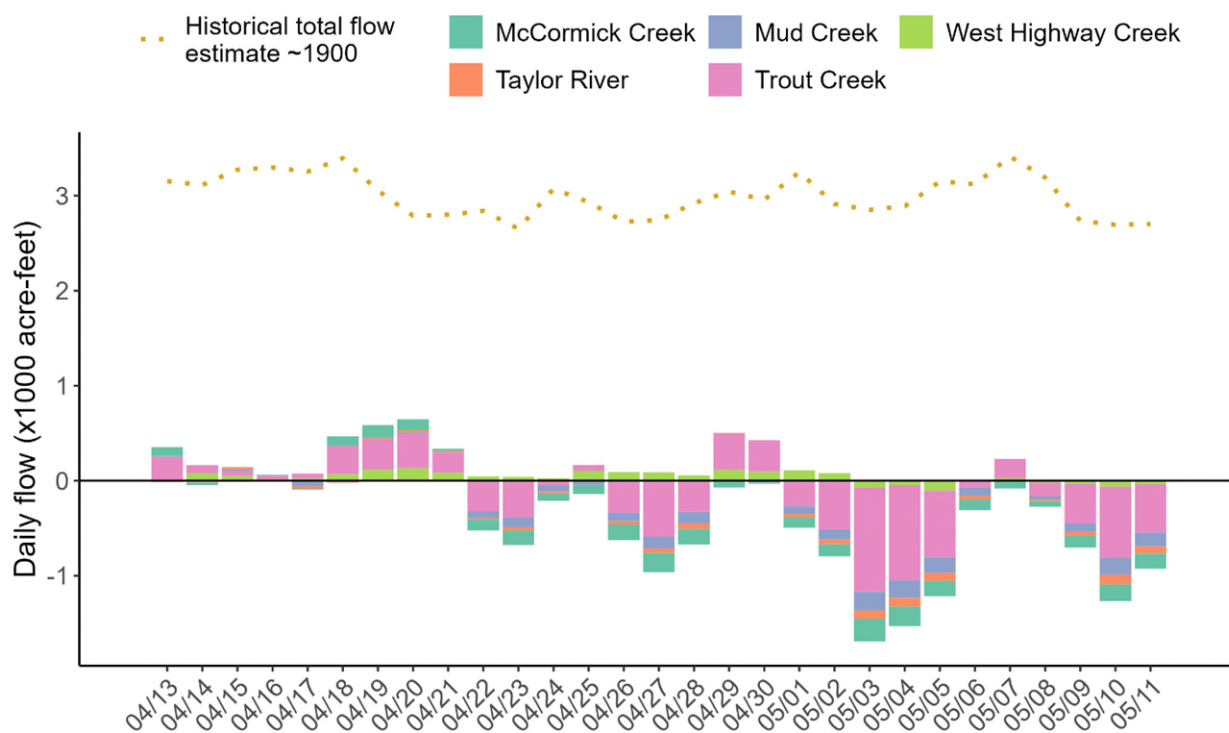


**Figure EV-10.** Salinity at Taylor River (TR; top) and creek inflow to Florida Bay (bottom) from the five major creeks (McCormick Creek, Taylor River, Mud Creek, Trout Creek, and West Highway Creek). The 30-day moving average salinity and 365-day total creek flow are tracked for the Florida Bay MFL criteria.





**Figure EV-11.** Daily average rain across Taylor Slough and Florida Bay, along with hourly average wind speed and direction (measured at Long Key) in Florida Bay over the past four weeks.



**Figure EV-12.** Daily average creek flow summed between five creeks with estimated historical daily flow over the past four weeks.

**Table EV-2.** Weekly water depth changes and water management recommendations

<b>SFWMD Everglades Ecological Recommendations, May 13, 2025 (red is new)</b>			
	Weekly change	Recommendation	Reasons
<b>WCA-1</b>	Stage decreased by 0.05 feet	Recession rate of less than 0.06 feet per week.	Protect within basin and downstream habitat and wildlife. Preserving suitable wading bird foraging habitat throughout the nesting season.
<b>WCA-2A</b>	Stage decreased by 0.02 feet	Recession rate of less than 0.06 feet per week.	Protect within basin and downstream habitat and wildlife. Preserving suitable wading bird foraging habitat throughout the nesting season.
<b>WCA-2B</b>	Stage increased by 0.13 feet	Recession rate of less than 0.12 feet per week.	Protect within basin and downstream habitat and wildlife.
<b>WCA-3A NE</b>	Stage increased by 0.43 feet	Recession rate of less than 0.06 feet per week.	Protect within basin and downstream habitat and wildlife. Preserving suitable wading bird foraging habitat throughout the nesting season.
<b>WCA-3A NW</b>	Stage decreased by 0.18 feet	Recession rate of less than 0.06 feet per week.	
<b>Central WCA-3A S</b>	Stage increased by 0.05 feet	Recession rate of less than 0.06 feet per week.	Protect within basin and downstream habitat and wildlife. Preserving suitable wading bird foraging habitat throughout the nesting season.
<b>Southern WCA-3A S</b>	Stage decreased by 0.08 feet		
<b>WCA-3B</b>	Stage decreased by 0.23 feet	Recession rate of less than 0.12 feet per week.	Protect within basin wildlife.
<b>ENP-SRS</b>	Stage increased by 0.02 feet	Make discharges to ENP according to COP and TTFF protocol while adaptively considering upstream and downstream ecological conditions.	Protect within basin and upstream habitat and wildlife.
<b>Taylor Slough</b>	Stage changes ranged from -0.14 feet to +0.06 feet	Move water southward as possible.	When available, provide freshwater to promote water movement.
<b>FB- Salinity</b>	Salinity changes ranged from -0.5 to +3.3	Move water southward as possible.	When available, provide freshwater to promote water movement.