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: March 26, 2025

SUBJECT: Weekly Environmental Conditions for Systems Operations

Summary

Weather Conditions and Forecast

A nearly stationary front over the south-central SFWMD will move southward by Wednesday afternoon ushering in a dry, stable air mass. Apart from some shallow moisture arriving along the east coast Wednesday morning or afternoon, a dry weather pattern will take hold. Very breezy easterly winds will develop late Thursday through Saturday. Sunday afternoon and evening will see potentially widespread coverage of rainfall. However, the extent will depend on a disturbance moving over the southeastern U.S. Once the disturbance departs late Sunday, the primary forcing for heavy rain will diminish. Lingering shallow moisture and daytime surface heating on Monday next week could support widely scattered to scattered afternoon rainfall, mainly over the interior and eastern SFWMD. For the week ending next Tuesday morning, total rainfall across the SFWMD could be above normal.

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 March 23, 2025, was 370 cfs at S-65 and 310 cfs at S-65A, respectively. Mean weekly water depth on the Kissimmee River floodplain decreased by 0.05 feet to 0.25 feet. The weekly average concentration of dissolved oxygen in the Kissimmee River increased from 7.8 mg/L the previous week to 8.2 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 11.52 feet NAVD88 (12.83 ft NGVD29) on March 23, 2025, which was 0.30 feet lower than the previous week and 0.94 feet lower than a month ago. Average daily inflows (excluding rainfall) decreased slightly from 460 the previous week to 330 cfs. Average daily outflows (excluding evapotranspiration) decreased from 5,700 cfs the previous week to 4,750 cfs. The most recent non-obscured satellite image from March 22, 2025, suggests low bloom activity in some nearshore regions of Lake Okeechobee.

Estuaries

Total inflow to the St. Lucie Estuary averaged 1,026 cfs over the past week with 512 cfs flow coming from Lake Okeechobee. Salinities increased at HR1 and US1 Bridge sites and decreased at US1 Bridge. Salinity in the middle estuary was in the optimal range (10-25) for adult eastern oysters.

Total inflow to the Caloosahatchee Estuary averaged 1,995 cfs over the past week with 1,358 cfs coming from Lake Okeechobee. Mean surface salinities remained below 1 at S-79 and Val I-75, and decreased at all remaining sites in the estuary. Salinities were in the optimal range (0-10) for tape grass in the upper estuary. Salinities were in the optimal range (10-25) for adult eastern oysters at Cape Coral and Shell Point, and in the upper stressed range (>25) at Sanibel.

Stormwater Treatment Areas

For the week ending Sunday, March 23, 2025, 12,000 ac-ft of Lake Okeechobee water was delivered to the FEBs/STAs. The total amount of Lake releases sent to the FEBs/STAs in WY2025 (since May 1, 2024) is approximately 287,400 ac-ft. The total amount of inflows to the STAs in WY2025 is approximately 1,160,000 ac-ft. 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-1W Northern Flow-way, STA-2 Flow-ways 2 and 4, and STA-3/4 Eastern Flow-way for vegetation management activities. 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, STA-3/4, and STA-5/6.

Everglades

Last week, most recession rates across the Everglades Protection Area (EPA) were within the good or fair range with a couple locations now falling in the poor range. WCA-3A—an important region for wading bird foraging as the dry season progresses—continues to experience recession rates that are too fast to maintain depths needed for wading bird foraging throughout the nesting season. WCA-3A North hit the stage target of 9.4’ NGVD29 at gauge 63 on March 23, 2025, shown to support nesting at the Alley North Colony. Conditions are currently favorable to support wood stork nesting effort. However, as the current rate of dry-down is expected to result in deteriorating foraging conditions throughout the EPA, we expect poor stork and white ibis nesting success as the lack of foraging habitat may lead to nest abandonment. Slower recession rates in these areas would improve nesting prospects for both wood storks and white ibis. Meanwhile, water depths in Taylor Slough and salinities in Florida Bay remain well-positioned for this point in the dry season. Florida Bay’s minimum flows and levels (MFL) metrics also remain well outside of harmful thresholds.

Biscayne Bay

Total inflow to Biscayne Bay averaged 31 cfs, and the previous 30-day mean inflow averaged 138 cfs. The seven-day mean salinity was 30.4 at BBCW8 and 34.5 at BBCW10, both within the ideal salinity range for estuarine organisms in this region (salinity less than 35). Data were provided by Biscayne National Park.

Supporting Information

Kissimmee Basin

Upper Kissimmee

On March 23, 2025, mean daily lake stages were 55.1 feet NAVD88 (1.6 feet below schedule) in East Lake Toho, 52.0 feet NAVD88 (1.5 feet below schedule) in Lake Toho, and 48.4 feet NAVD88 (2.6 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 March 23, 2025, mean weekly discharge was 370 cfs at S-65 and 310 cfs at S-65A, respectively. Mean weekly discharge from the Kissimmee River was 340 cfs and 290 cfs at S-65D and S-65E, respectively (**Table KB-2**). Mean weekly headwater stages were 45.3 feet NAVD88 at S-65A and 12.3 feet NAVD88 at S-65D. Mean weekly river channel stage decreased by 0.2 feet to 31.8 feet NAVD88 (**Figure KB-4**). Mean weekly water depth on the Kissimmee River floodplain decreased by 0.05 feet to 0.25 feet (**Table KB-2**, **Figure KB-5**). The weekly average concentration of dissolved oxygen in the Kissimmee River increased from 7.8 mg/L the previous week to 8.2 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**). Maintain at least minimum flow (250-300 cfs) at S-65A.

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)[a]	Schedule Type[b]	Sunday Schedule Stage (feet NAVD88)	Sunday Departure from Regulation (feet)	
							3/23/25	*3/16/25*
Lakes Hart and Mary Jane	S-62	LKMJ	3	59.3	R	59.8	-0.5	-0.4
Lakes Myrtle, Preston and Joel	S-57	S-57	1	59.8	R	59.8	0.0	0.0
Alligator Chain	S-60	ALLI	0	62.6	R	62.8	-0.2	-0.3
Lake Gentry	S-63	LKGT	0	60.2	R	60.2	0.0	-0.1
East Lake Toho	S-59	TOHOE	38	55.1	R	56.7	-1.6	-1.8
Lake Toho	S-61	TOHOW S-61	130	52.0	R	53.5	-1.5	-1.6
Lakes Kissimmee, Cypress and Hatchineha	S-65	KUB011 LKIS5B	370	48.4	T	51.0	-2.6	-2.6

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.

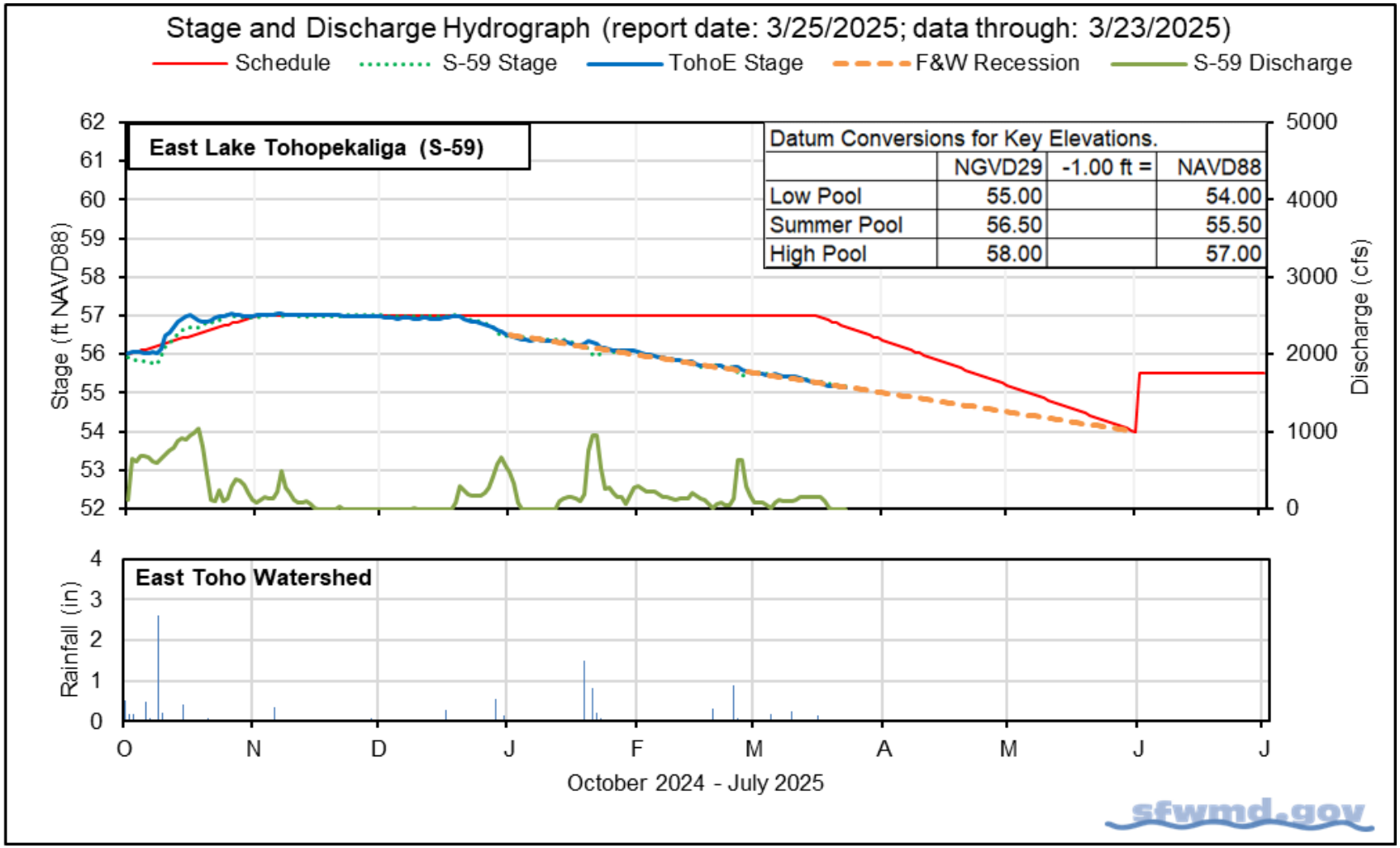


Figure KB-1. East Lake Toho regulation schedule, stage, discharge, and rainfall.

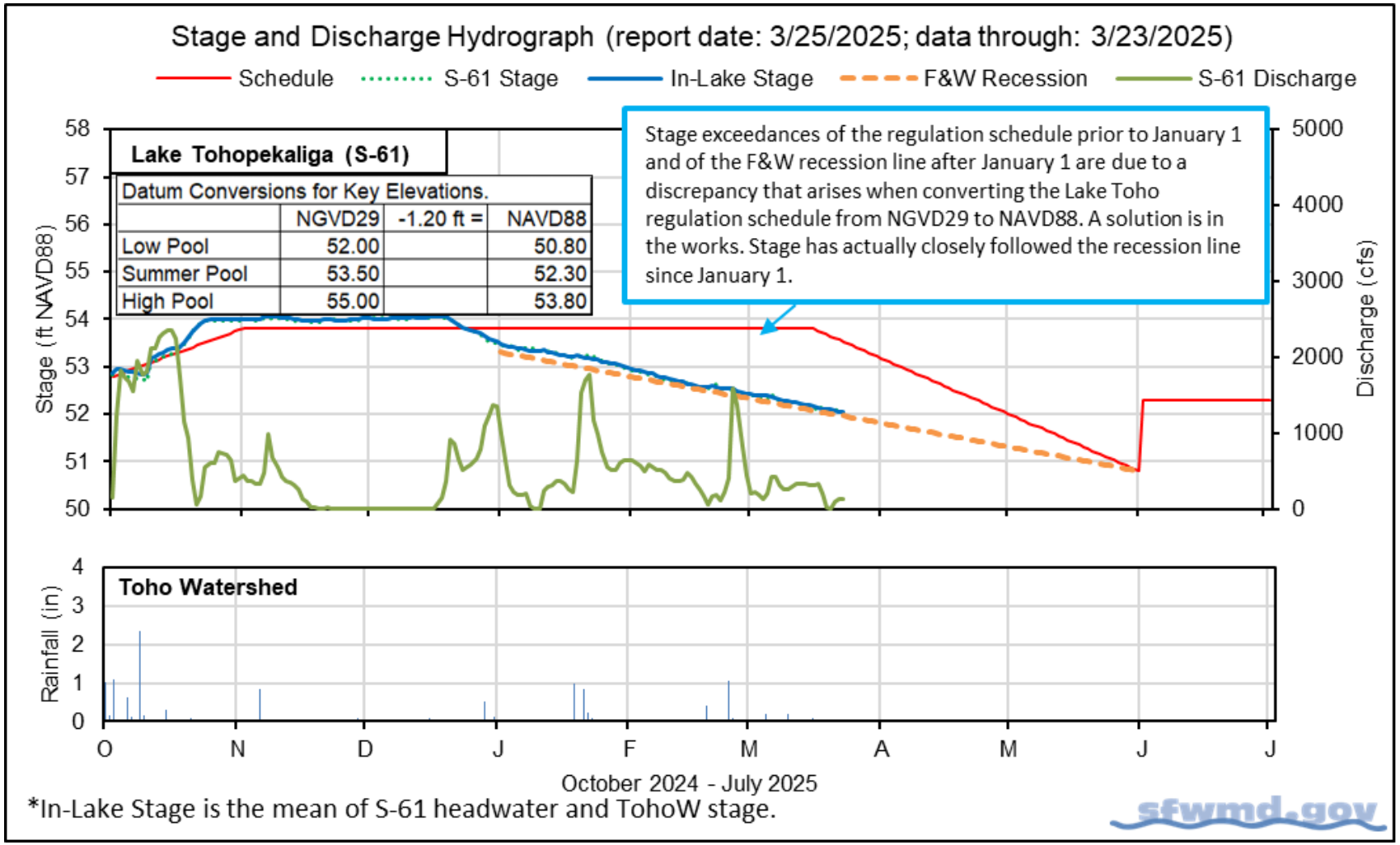


Figure KB-2. Lake Toho regulation schedule, stage, discharge, and rainfall.

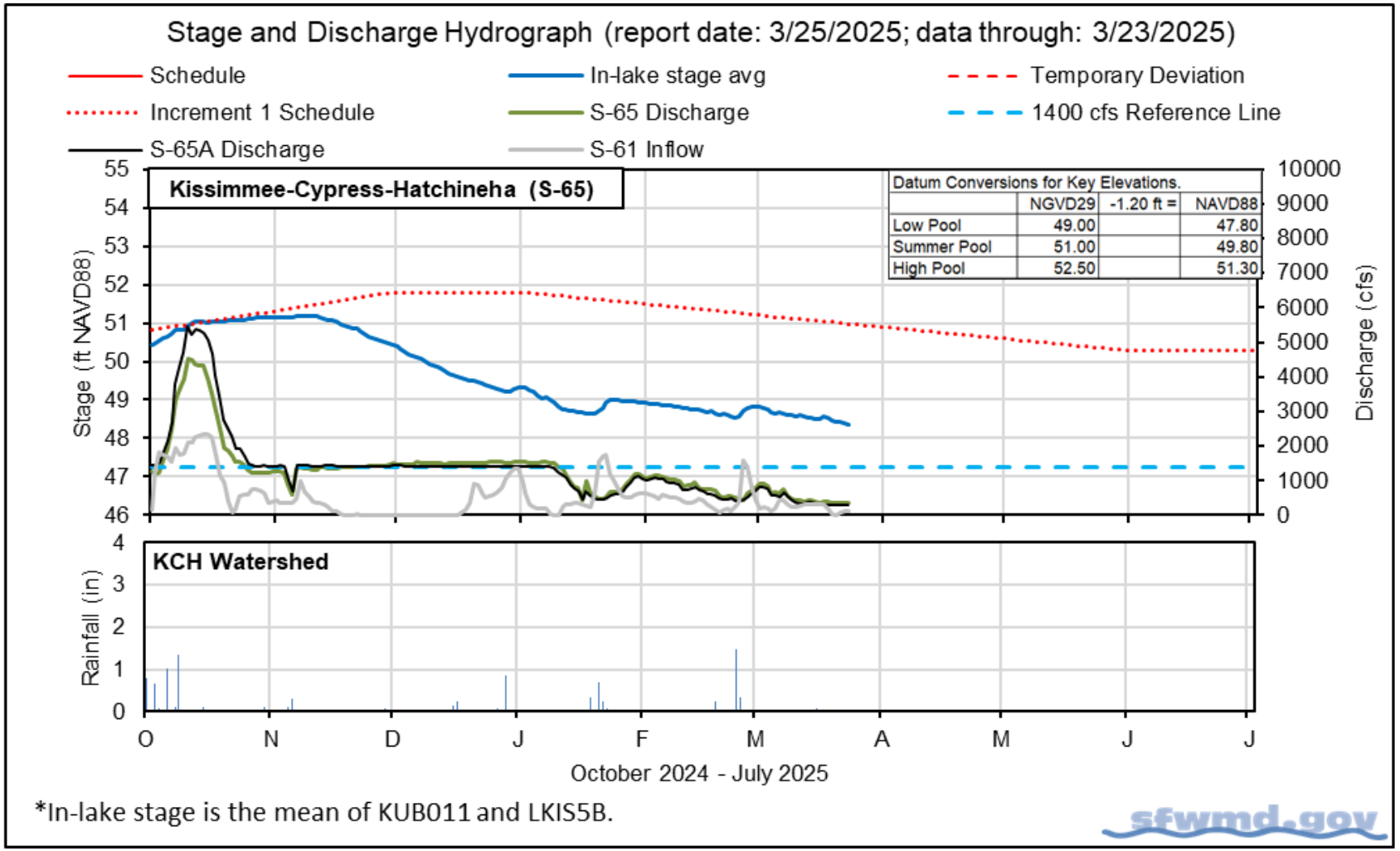


Figure KB-3. Lakes Kissimmee, Cypress and Hatchineha regulation schedule, stage, discharge, and rainfall.

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			
		3/23/25	3/23/25	3/16/25	3/9/25	3/2/25
Discharge	S-65	360	370	410	660	700
Discharge	S-65A[a]	310	310	350	590	620
Headwater Stage (feet NAVD88)	S-65A	45.3	45.3	45.2	45.2	45.2
Discharge	S-65D[b]	300	340	500	760	690
Headwater Stage (feet NAVD88)	S-65D[c]	12.2	12.3	12.3	12.3	24.6
Discharge (cfs)	S-65E[d]	280	290	420	600	590
Discharge (cfs)	S-67	0	0	0	0	0
Dissolved Oxygen (mg/L) [e]	Phase I, II/III river channel	8.3	8.2	7.8	7.7	7.2
River channel mean stage (feet NAVD88) [f]	Phase I river channel	32.2	31.8	32.0	33.2	33.0
Mean depth (feet) [g]	Phase I floodplain	0.23	0.25	0.30	0.33	0.31

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).

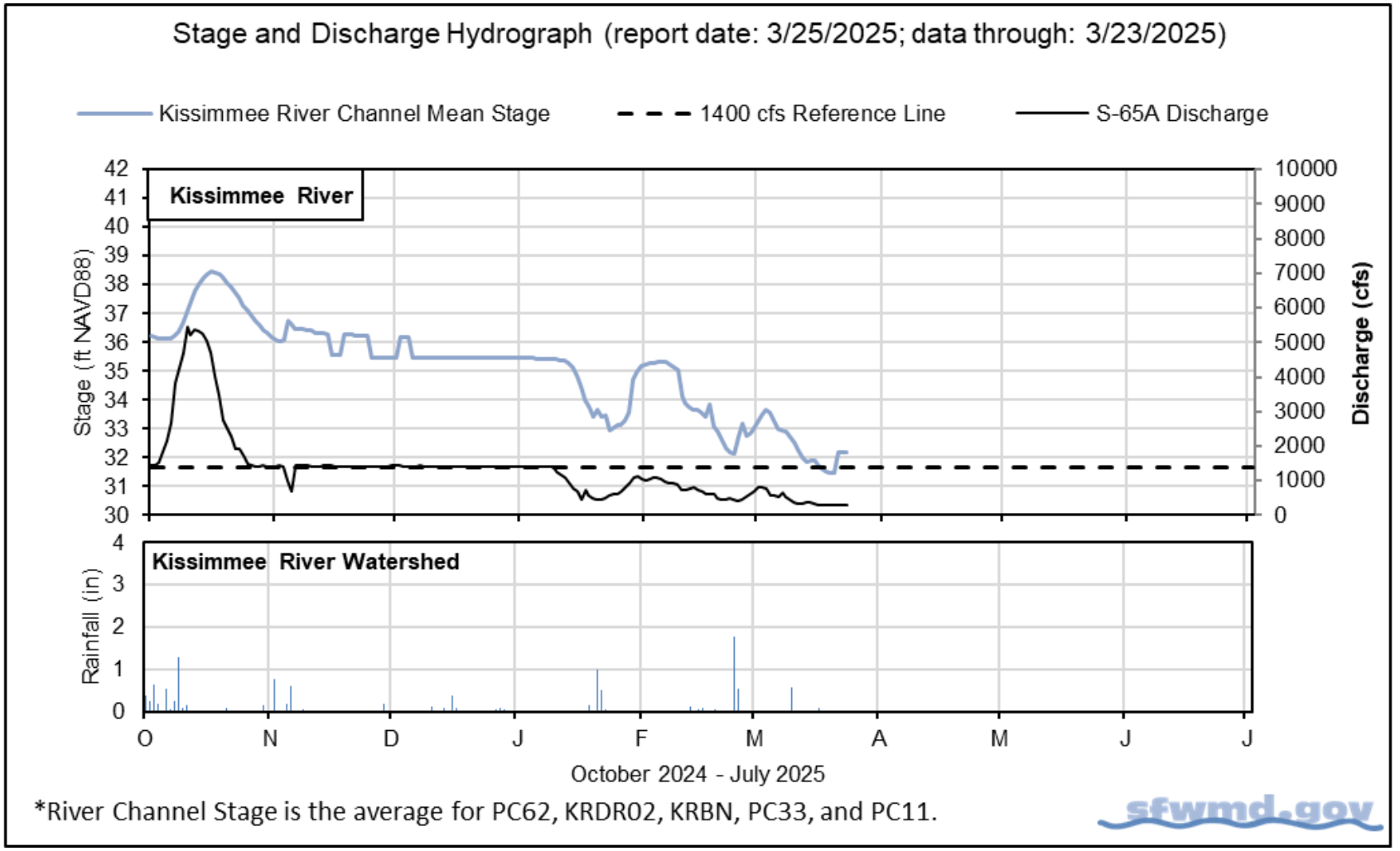


Figure KB-4. Kissimmee River stage, discharge, and rainfall.

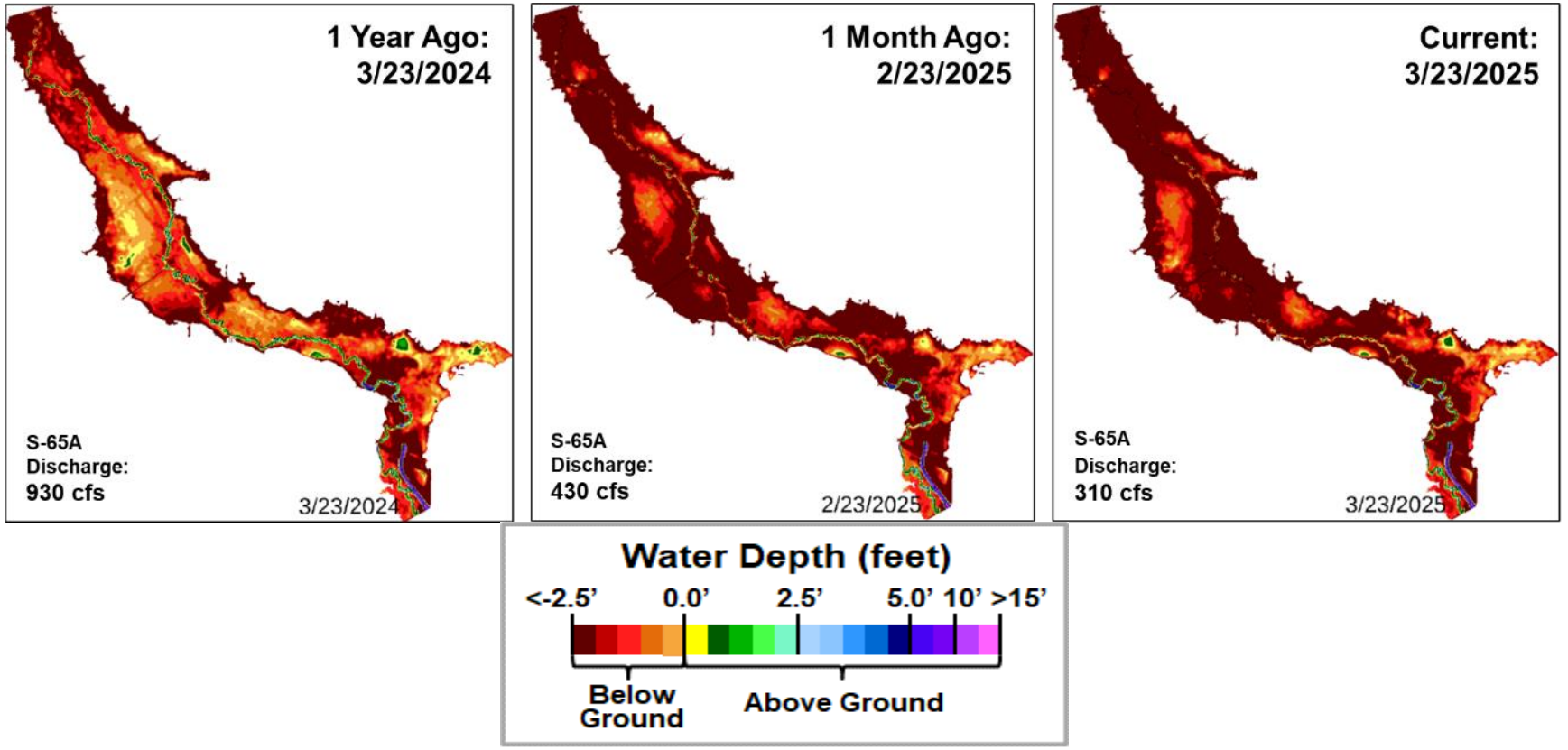


Figure KB-5. Phase I-II-III area Kissimmee River floodplain water depths (from left to right) one year ago, one month ago, and current.

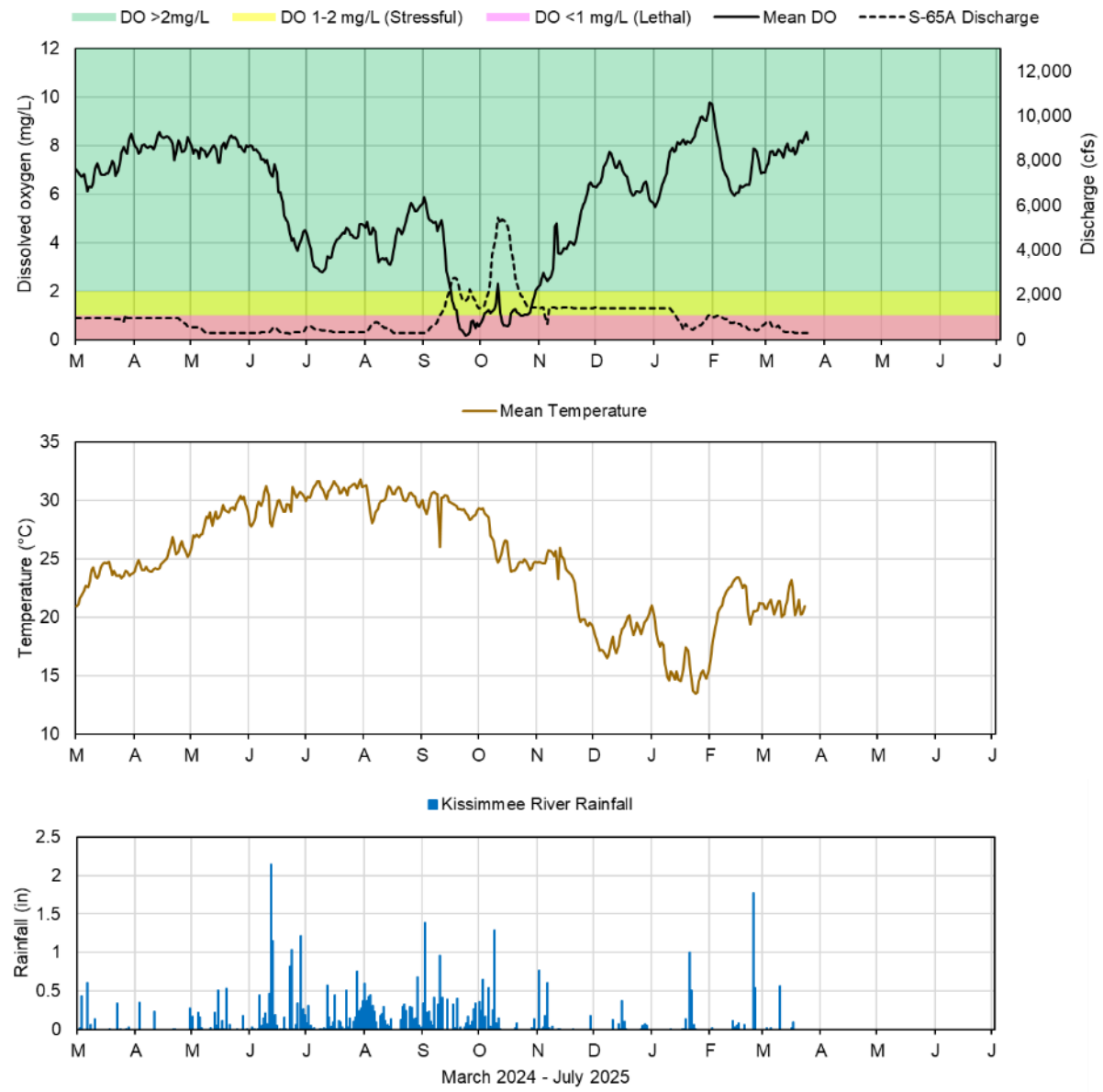


Figure KB-6. Kissimmee River channel mean daily dissolved oxygen concentration (mg/L), S-65A discharge (cfs), temperature (°C) and rainfall (inches). Dissolved oxygen (DO) and temperature are mean daily values averaged for PC62, KRDR02, KRBN, PC33, PC11, PD62R, and PD42R with an average of five stations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

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

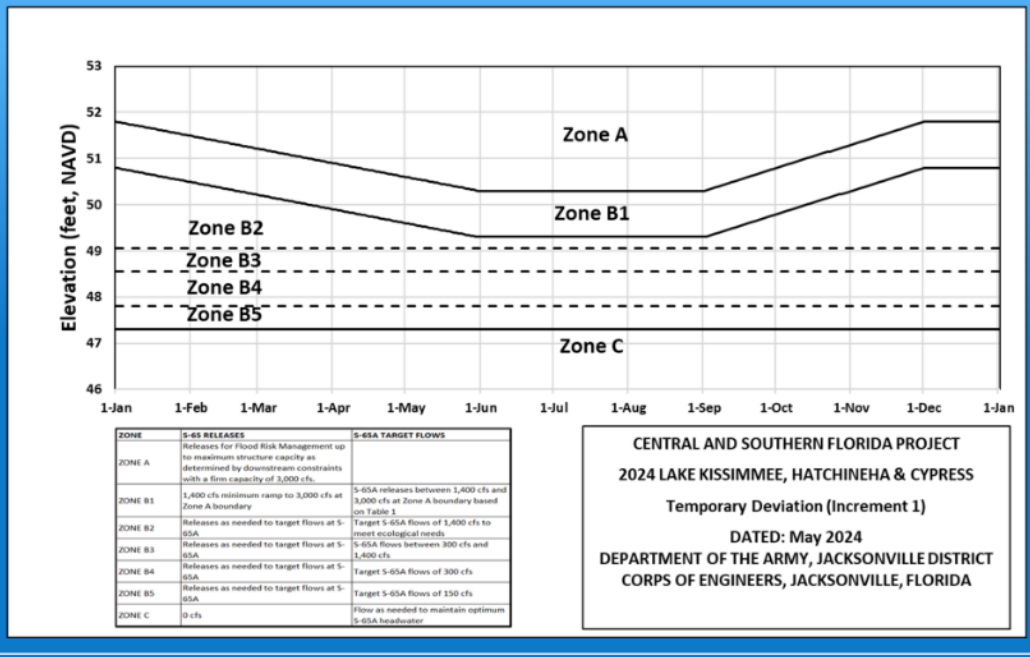
HRS Increment 1 Temporary Deviation Discharge Plan for S-65/S-65A

Discharge Guidance for Increment I Temporary Deviation Discharge Plan		
ZONE	**S-65 RELEASES**	**S-65A TARGET FLOWS**
ZONE A	Releases for Flood Risk Management up to maximum structure capcity 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 Chane 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



Other Considerations

- When possible, limit lake ascension rate in the Jun 1 - Aug 15 window to 0.25 ft per 7 days in Lakes Kissimmee, Cypress, Hatchineha (S-65), East Toho (S-59) and Toho (S-61).
- If outlook is for extreme dry conditions meet with KB staff to discuss modifications to this plan.

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

Lake Okeechobee

Lake Okeechobee stage was 11.52 feet NAVD88 (12.83 ft NGVD29) on March 23, 2025, which was 0.30 feet lower than the previous week and 0.94 feet lower than a month ago (**Figure LO-1**). Lake stage is in Zone D of the regulation schedule (**Figure LO-2**) and is in the recovery ecological envelope (**Figure LO-3**). According to NEXRAD, 0.44 inches of rain fell directly over the Lake during the previous week.

Average daily inflows (excluding rainfall) decreased slightly from 460 cfs the previous week to 330 cfs. The largest single inflow came from the Kissimmee River via the S-65E structure (290 cfs). Average daily outflows (excluding evapotranspiration) decreased from 5,700 cfs the previous week to 4,750 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 March 22, 2025, NOAA's Harmful Algal Bloom Monitoring System suggests low bloom activity in some nearshore regions of Lake Okeechobee (**Figure LO-6**).

The provisional results from the March 3-5, 2025, routine water quality sampling trips showed an elevation in turbidity compared to the low values seen in February (**Figure LO-7**). The increased turbidity was likely due to stronger recent winds and coincided with a decrease in chlorophyll *a* concentration and a slight increase in dissolved inorganic nitrogen (**Figure LO-7**).

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

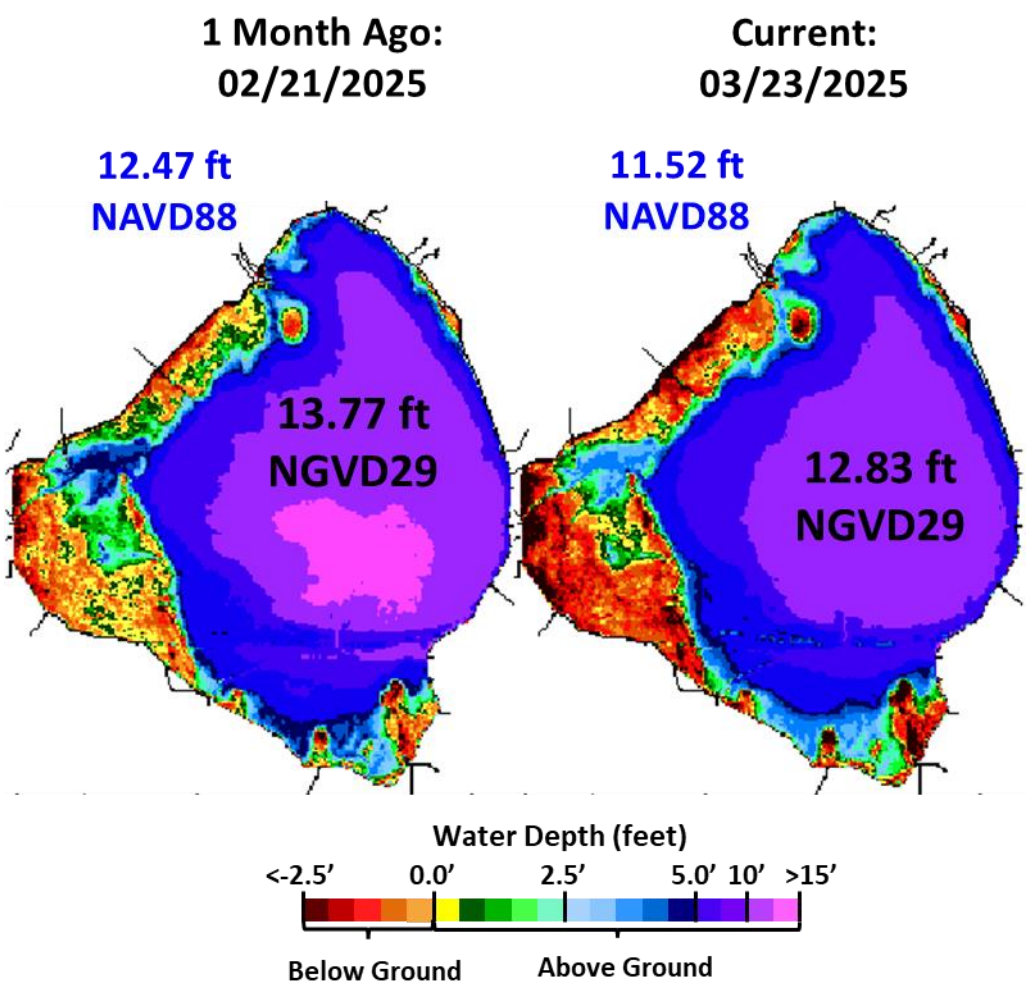

Figure LO-1. Lake Okeechobee water depth estimates based on South Florida Water Depth Assessment Tool (SFWDAT).

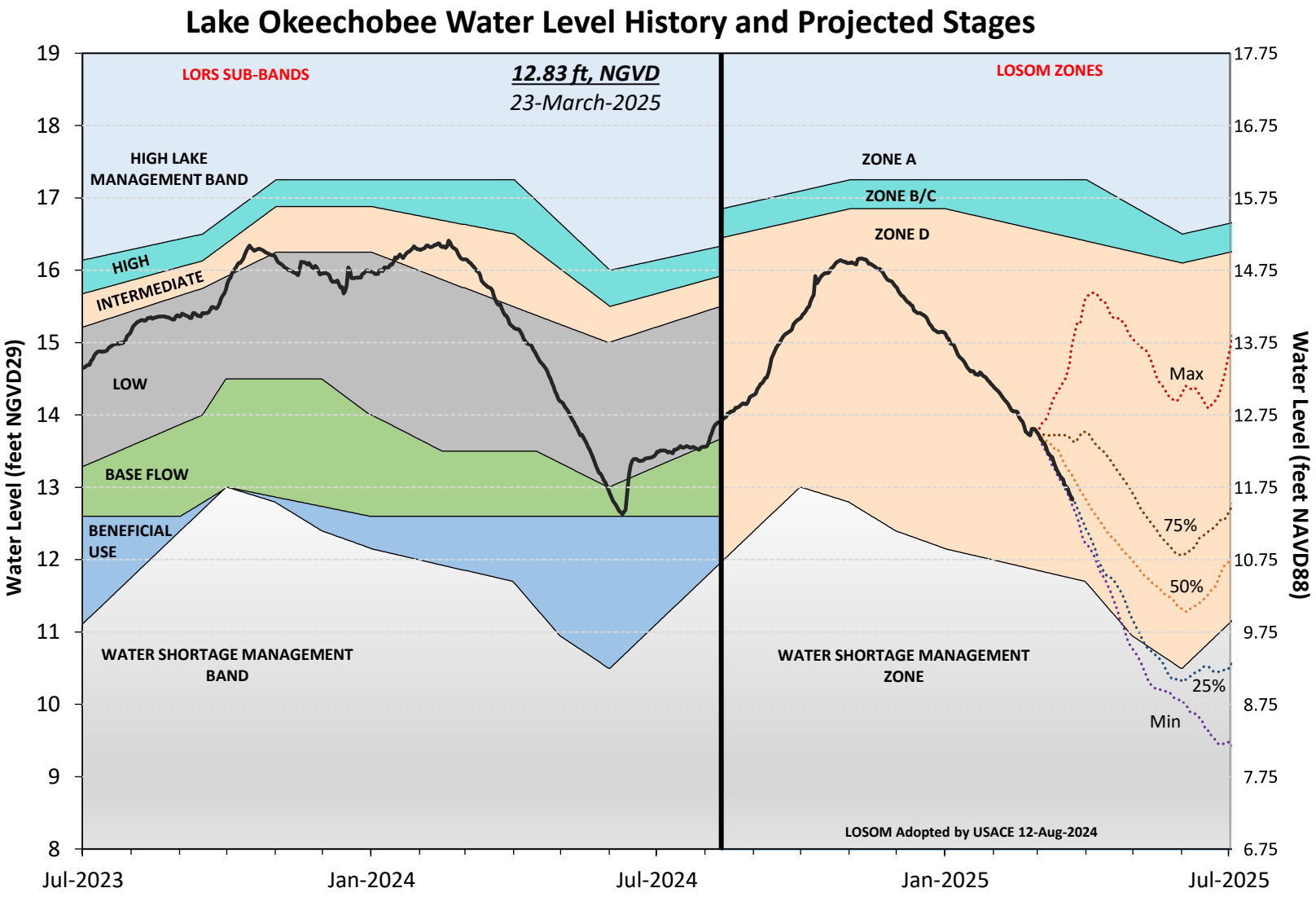

Figure LO-2. Recent Lake Okeechobee stages with projected stages based on a dynamic position analysis.
Note: stages are in NGVD29, approximate NAVD88 values are shown for reference.

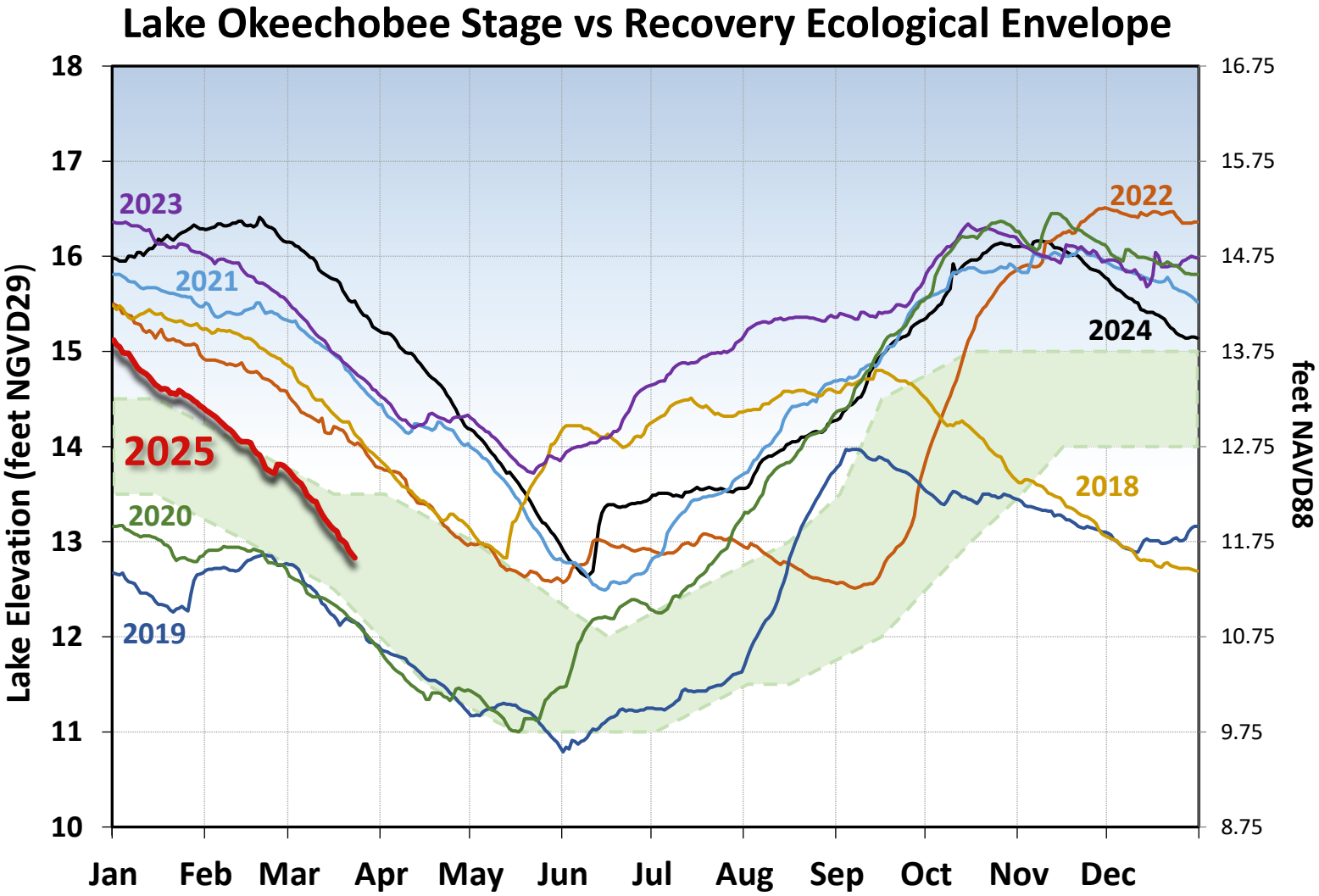

Figure LO-3. The current and seven prior year's annual stage hydrographs for Lake Okeechobee in comparison to the recovery envelope (light green). A shift from the normal ecological envelope to the recovery envelope occurred because the 30-day minimum lake stage (elevations exposed for at least 30 days,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

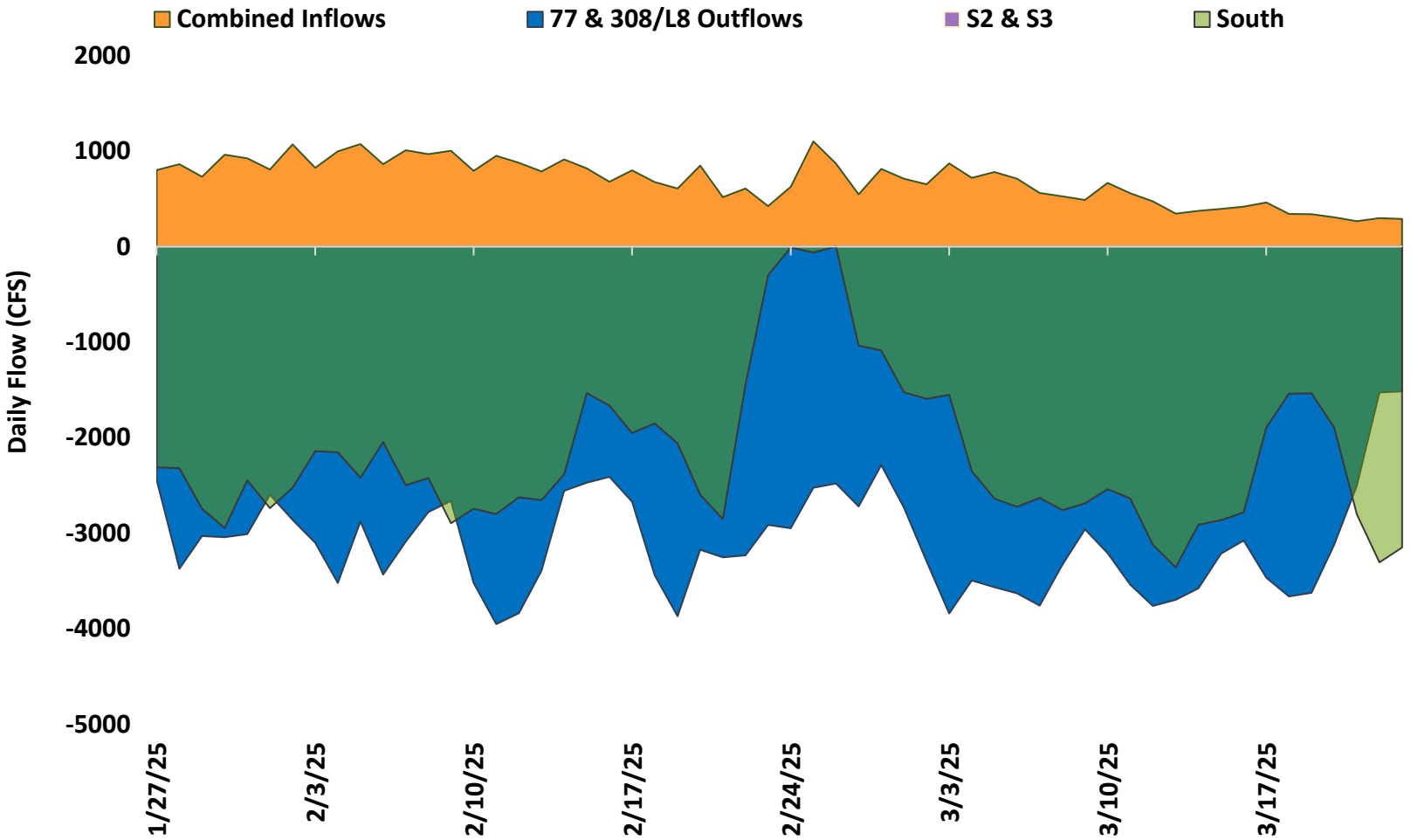

Figure LO-4. Major inflows (orange) to and outflows east and west (blue) from Lake Okeechobee. Outflows south are shown in green. Flows into Lake Okeechobee from the L-8 canal through S-271 (formerly Culvert 10A) or from the C-44 canal through the S-308 are included as inflows. Conversely, flows from 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.

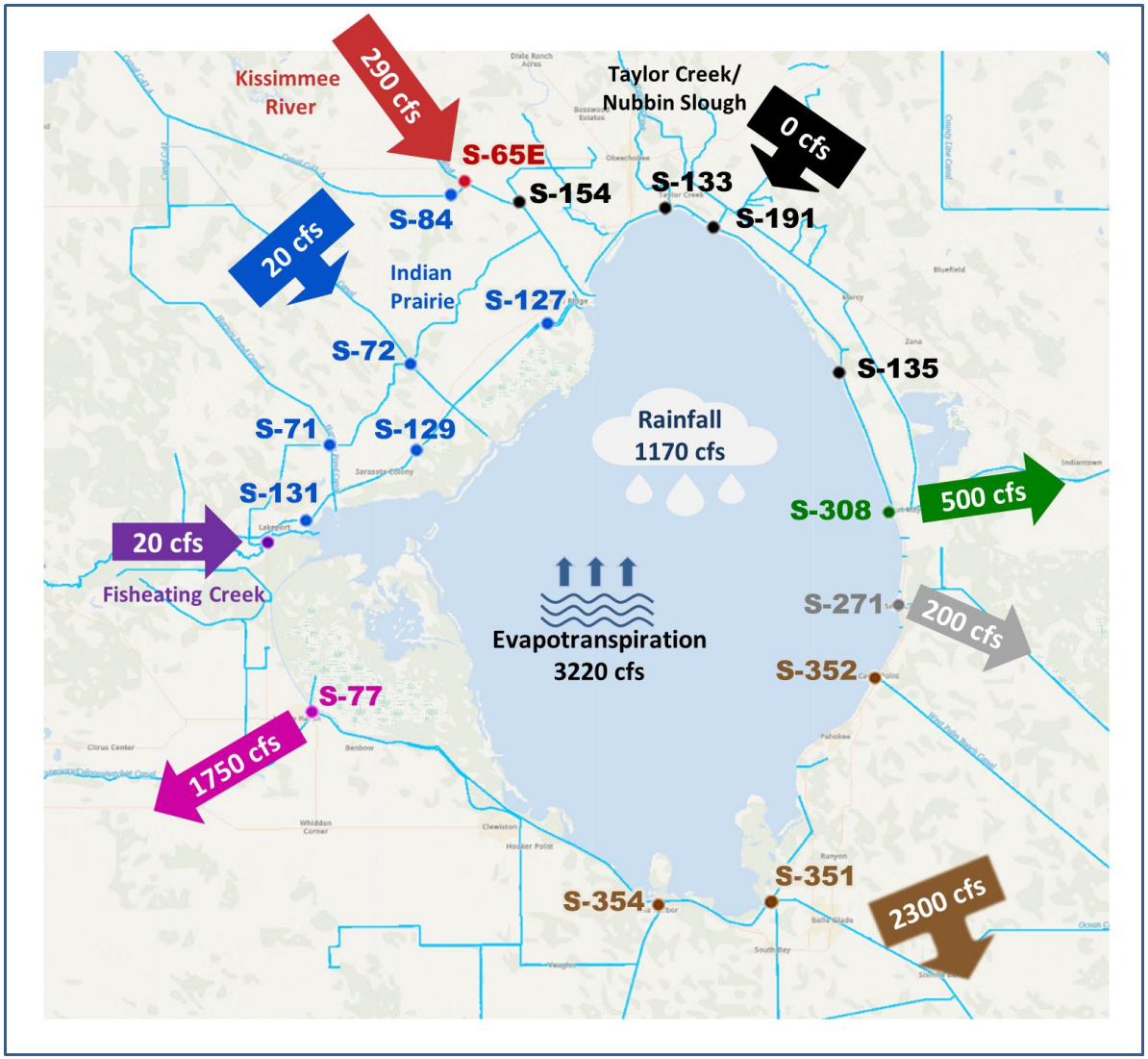

Figure LO-5. Inflows into Lake Okeechobee from Indian Prairie basins, Taylor Creek/Nubbin Slough, Kissimmee River and Fisheating Creek, and outflows to the west via S-77, to the east via S-308, to the south via S-351, S-352, S-354, and to southeast via S-271 (formerly Culvert 10A) for the week of March 17 - 23, 2025.

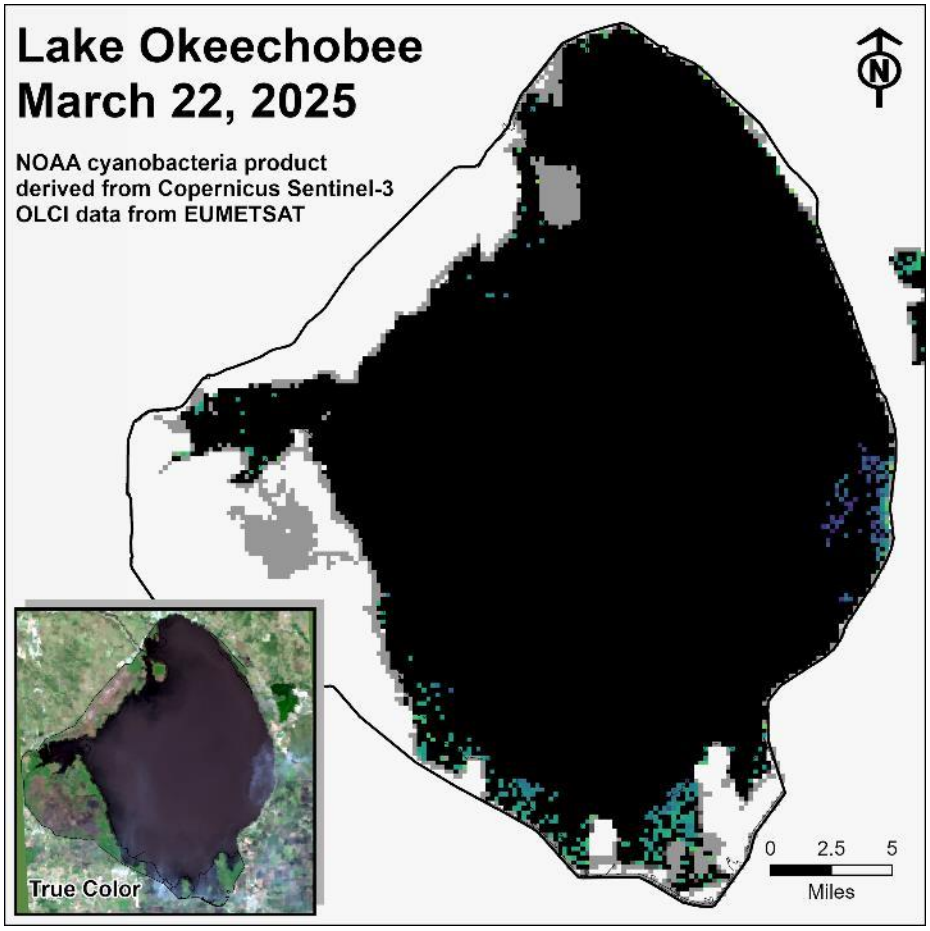

Figure LO-6. Cyanobacteria bloom index level on Lake Okeechobee, based on NOAA's harmful algal bloom monitoring system. Gray color indicates cloud cover. *Provisional NOAA image, subject to change*.

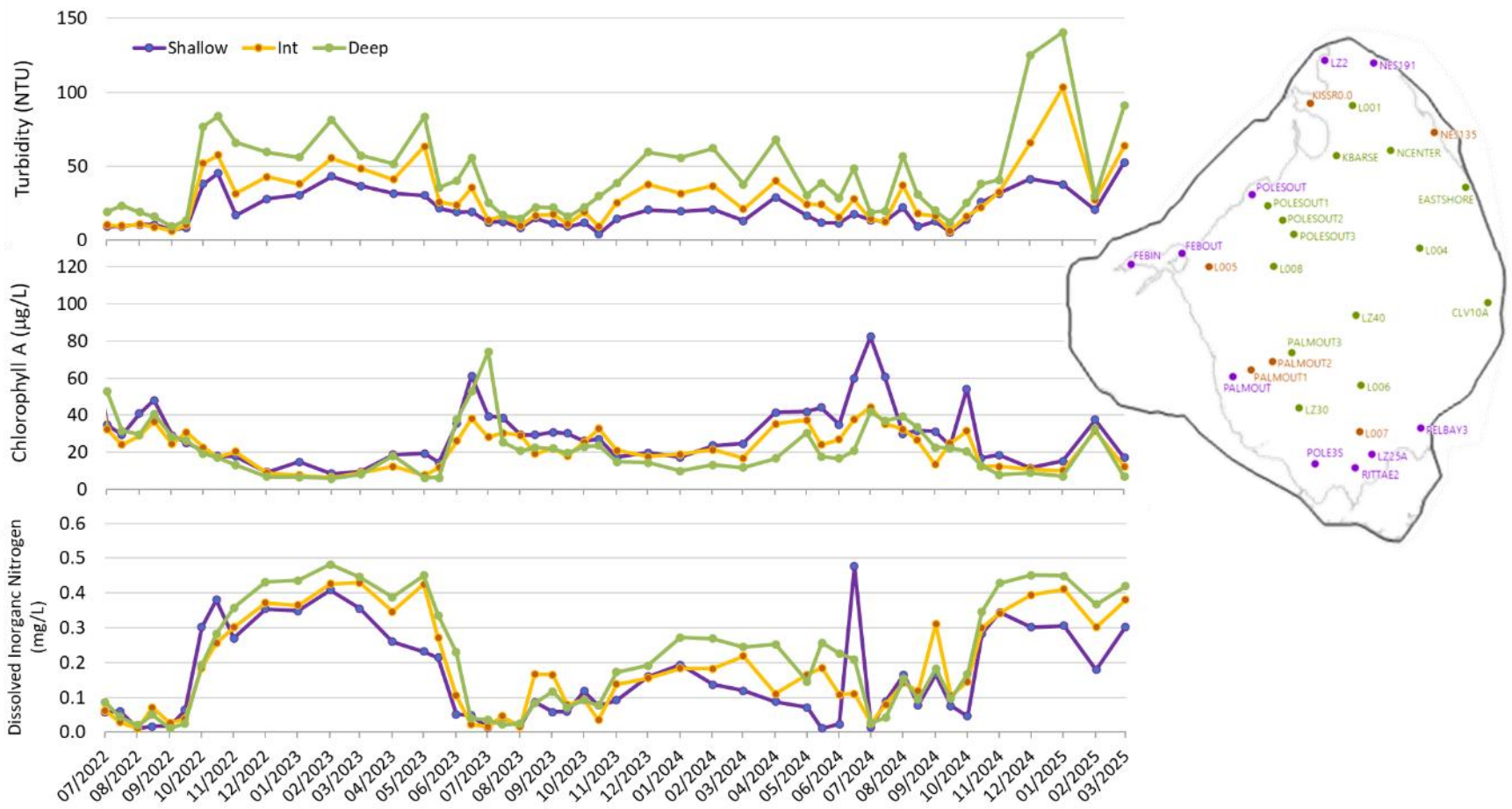

Figure LO-7. Select water quality parameters from July 2022 to the most recent sampling on March 3-5, 2025. Graphs show mean turbidity, chlorophyll *a*, and dissolved inorganic nitrogen values from sites in shallow, intermediate and deep portion of the lake. Inset map shows the locations of the different sampling sites.

Estuaries

St. Lucie Estuary

Over the past week, mean total inflow to the St. Lucie Estuary was 1,026 cfs (**Figures ES-1** and **ES-2**), and the previous 30-day mean inflow was 849 cfs. For comparison, the historical provisional mean inflows from the contributing areas are shown in **Figure ES-2**.

Over the past week, surface salinities increased at the HR1 and US1 Bridge sites and decreased at the 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 14.1. 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) was 0 spat/shell, indicating spawning in the SLE has not started as of early February (**Figure ES-5**).

Caloosahatchee River Estuary

Over the past week, mean total inflow to the Caloosahatchee River Estuary was 1,995 cfs (**Figures ES-6** and **ES-7**), and the previous 30-day mean inflow was 2,134 cfs. For comparison, the historical provisional mean inflows from the contributing areas are shown in **Figure ES-7**.

Over the past week, surface salinities remained below 1 at S-79 and Val I-75 and decreased at the remaining sites in 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 in the upper estuary. The seven-day mean salinity values were within the optimal range for adult eastern oysters at Cape Coral and Shell Point and in the stressed range at Sanibel (**Figure ES-10**). The mean larval oyster recruitment rate reported by the FWRI was 0.2 spat/shell at Iona Cove, indicating spawning may be starting at Iona Cove. At Bird Island, mean recruitment rates remained at 0 spat/shell indicating spawning at that location has not started as of early February (**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[1]) coupled with a linear reservoir model for the tidal basin. Model scenarios included pulse releases at S-79 ranging from 450 to 2,000 cfs, with estimated tidal basin inflows of 73 cfs. Model results from all scenarios predict daily salinity to be 0.4 or lower and the 30-day moving average surface salinity to be 0.4 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.

[1] Qui, 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 March 21, 2025, that *Karenia brevis*, the Florida red tide dinoflagellate, was not observed at bloom concentrations in any samples collected within the District region over the past week.

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.

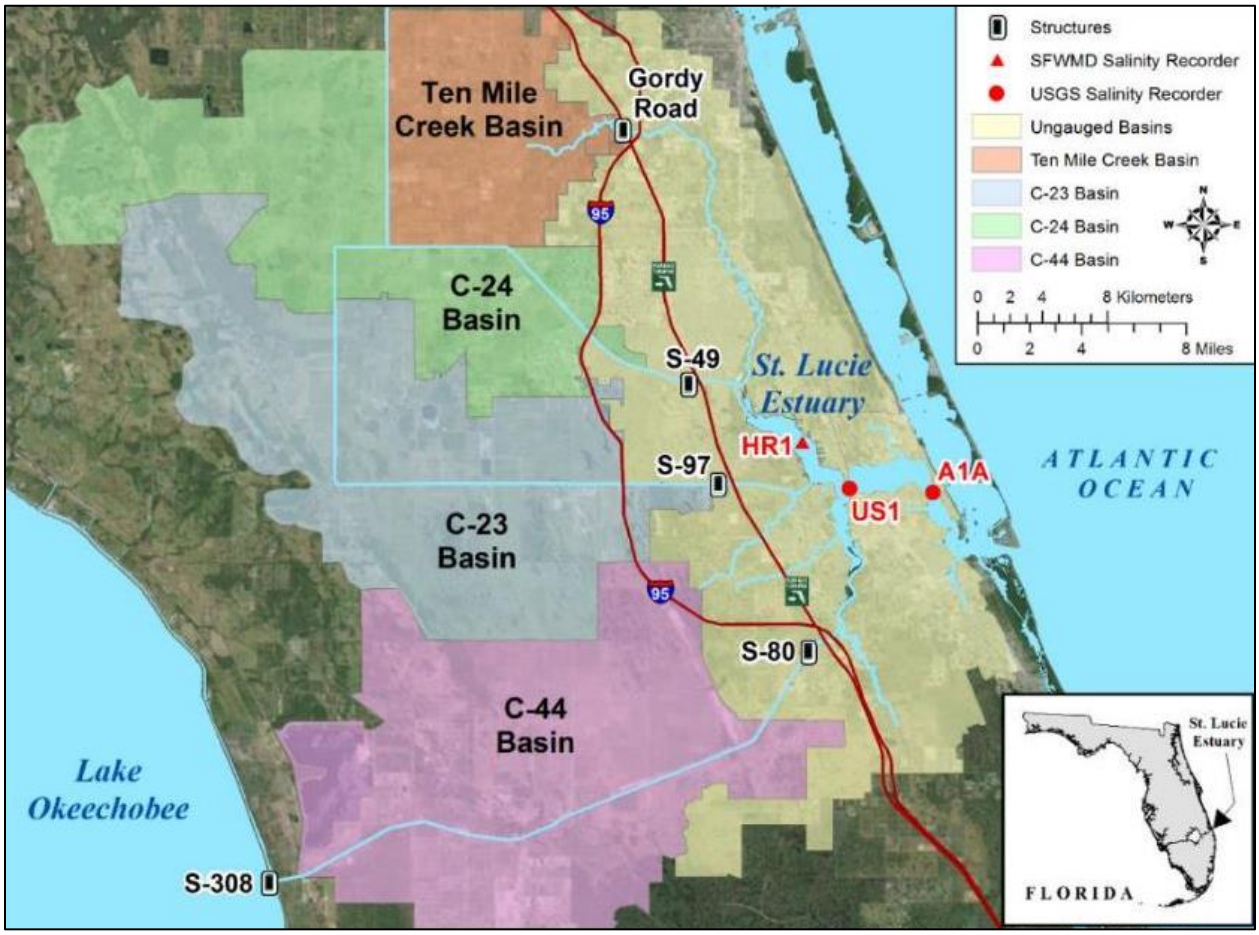

Figure ES-1. Basins, water control structures and salinity monitoring sites in the St. Lucie Estuary.

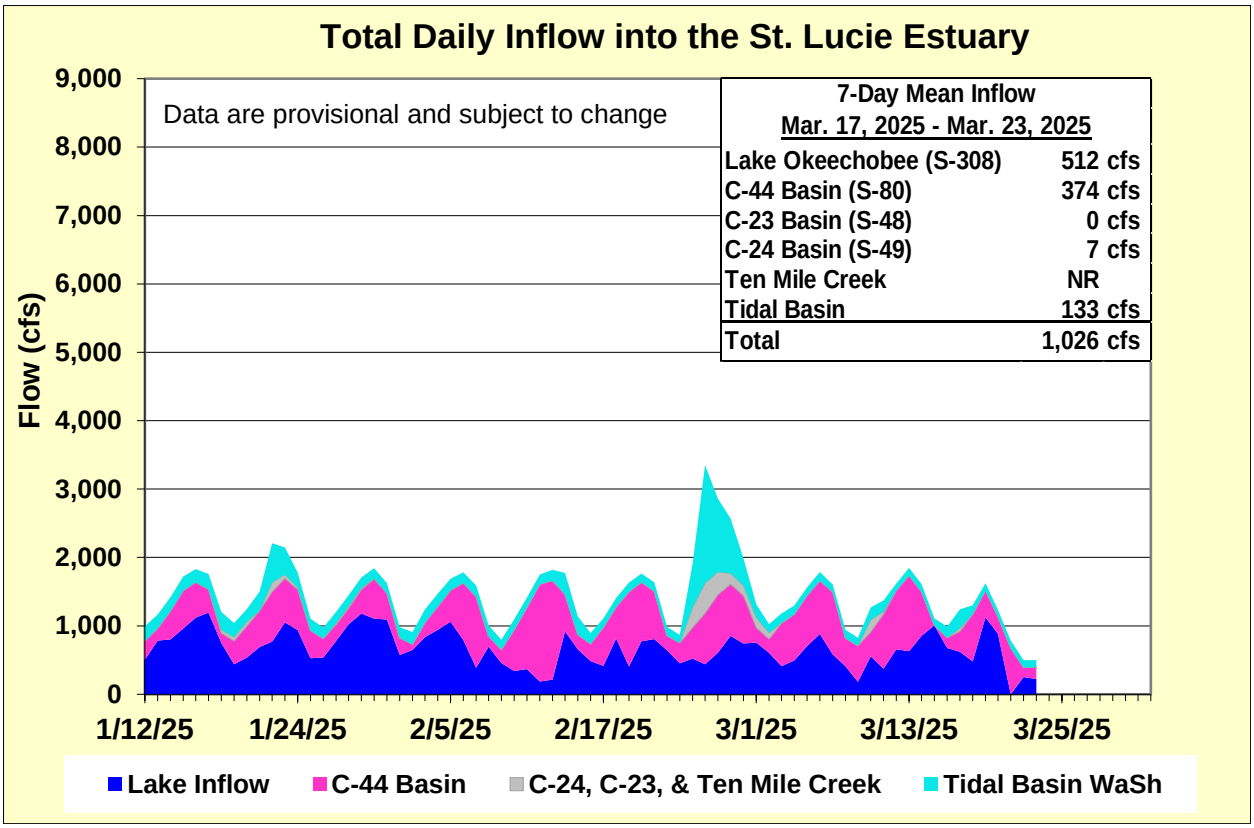

Figure ES-2. Total daily inflows from Lake Okeechobee and runoff from the C-44, C-23, C-24, Ten Mile Creek, and Tidal Basins into the St. Lucie Estuary.

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)	**8.2** (7.8)	**11.3** (10.5)	10.0 – 25.0
US1 Bridge	**13.3** (13.1)	**14.9** (13.0)	10.0 – 25.0
A1A Bridge	**18.9** (19.7)	**24.6** (23.9)	10.0 – 25.0

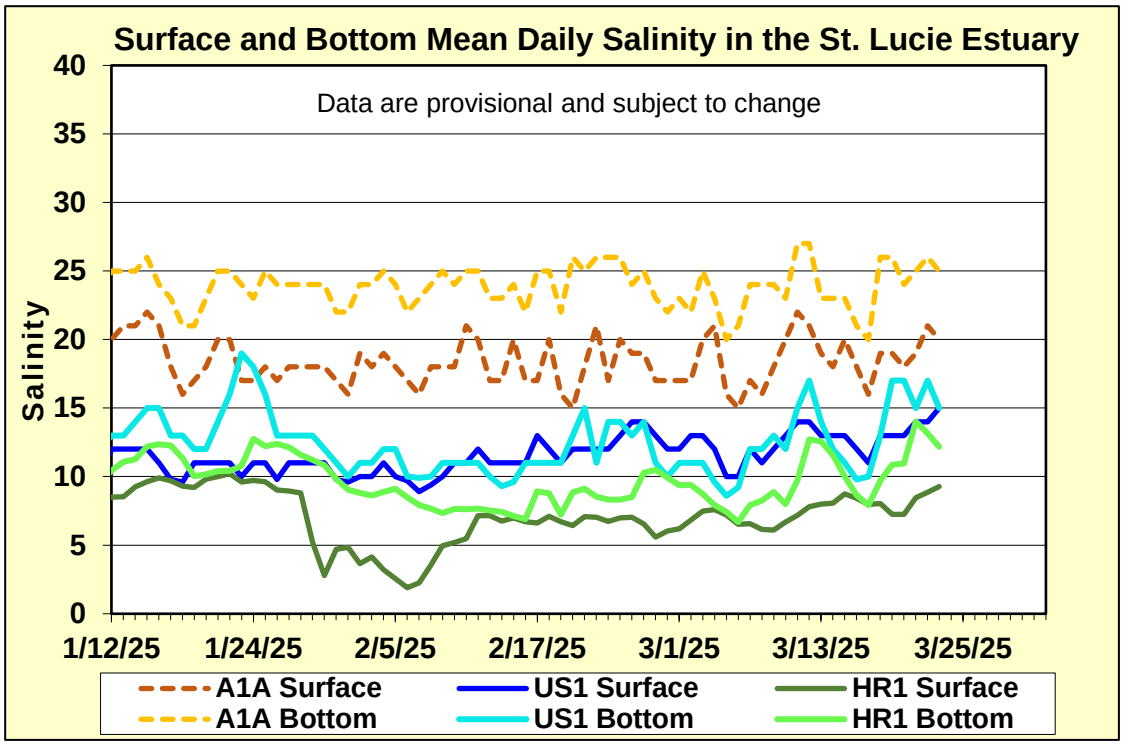

Figure ES-3. Mean daily salinity at the A1A, US1, and HR1 sites in the St. Lucie Estuary.

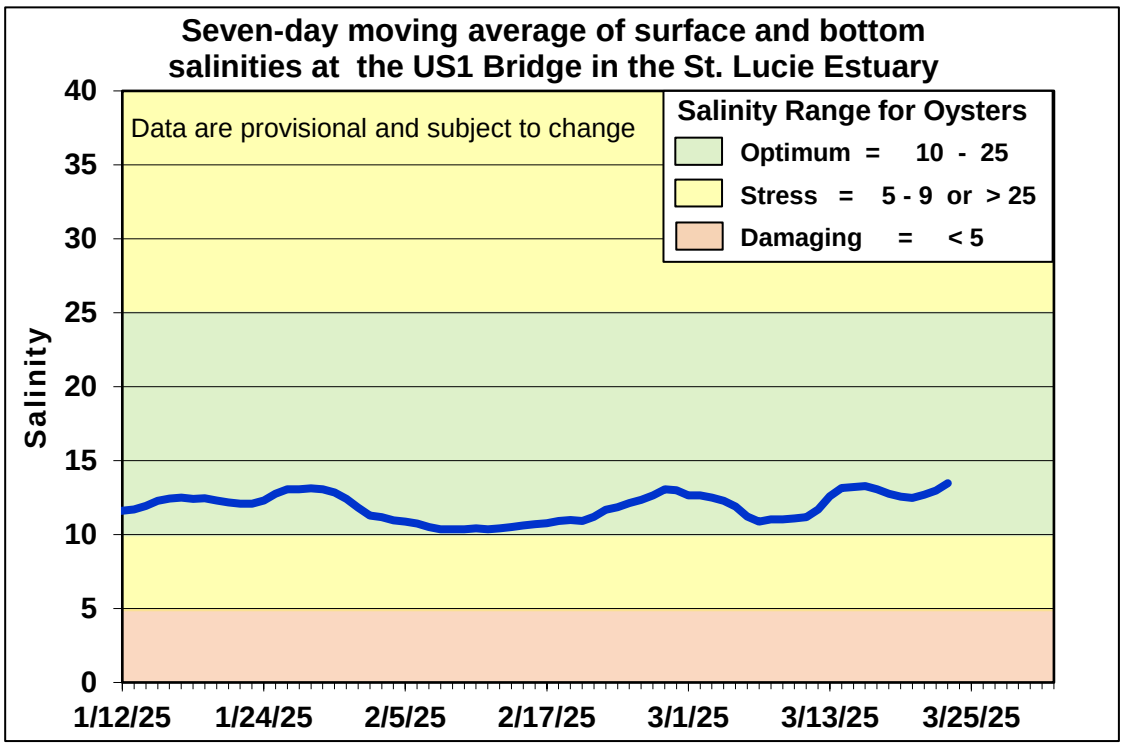

Figure ES-4. Seven-day moving average of the surface and bottom salinities at the US1 Bridge in the St. Lucie Estuary.

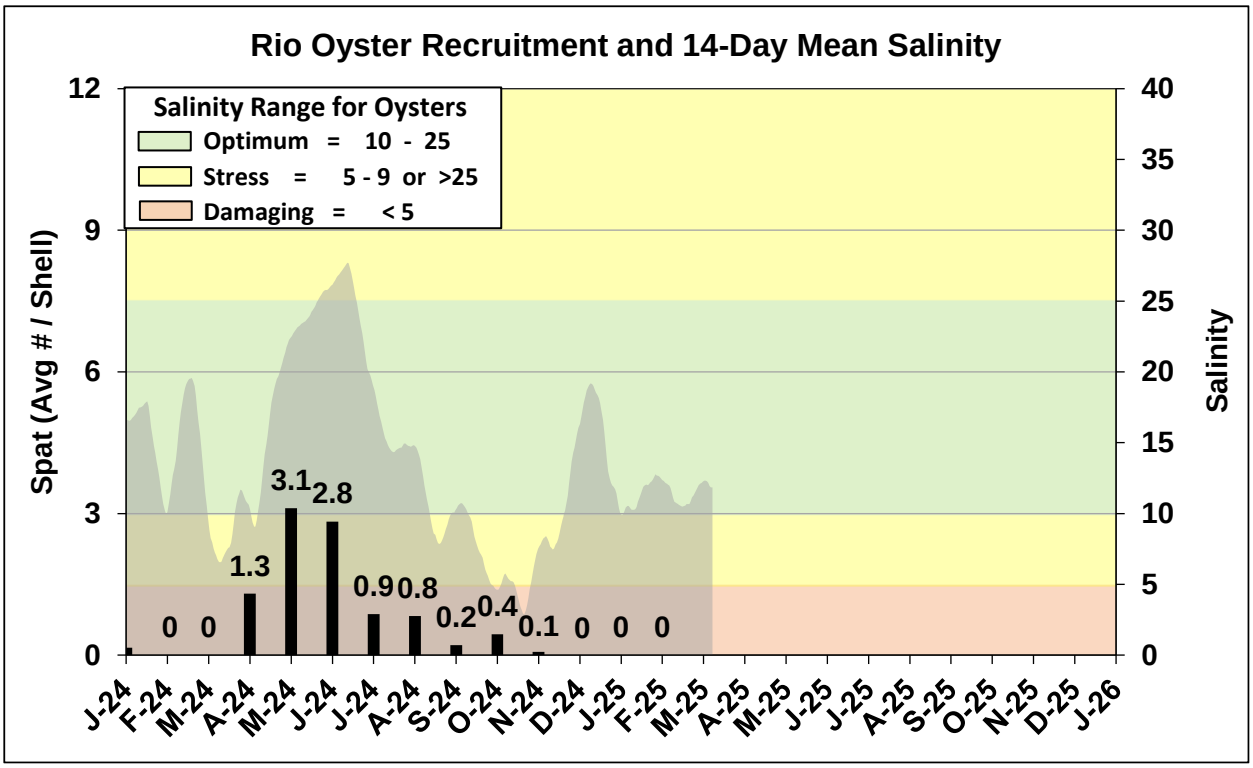

Figure ES-5. Mean oyster recruitment at the Rio oyster monitoring station and 14-day mean salinity at US1 Bridge.

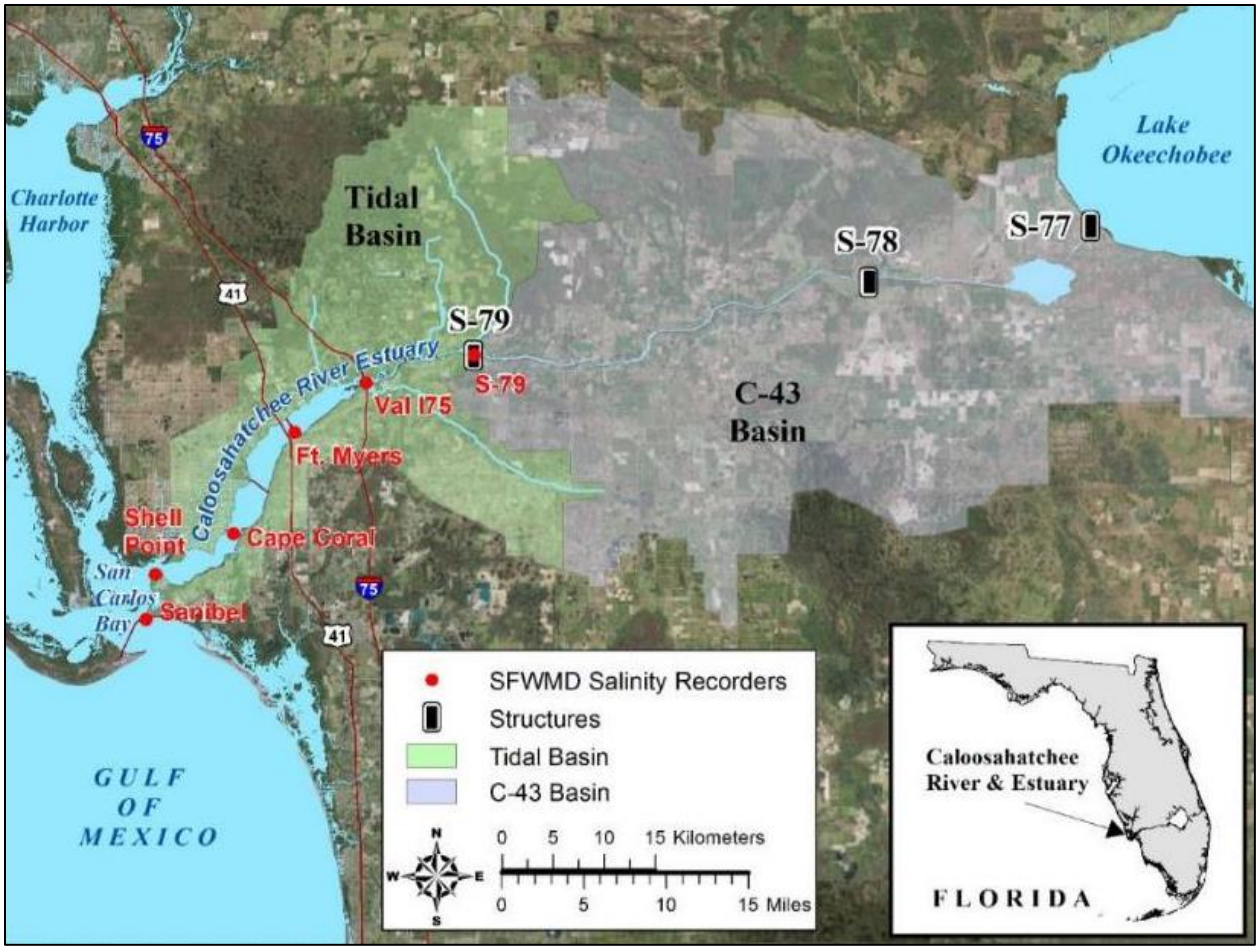

Figure ES-6. Basins, water control structures, and salinity monitoring sites in the Caloosahatchee River Estuary.

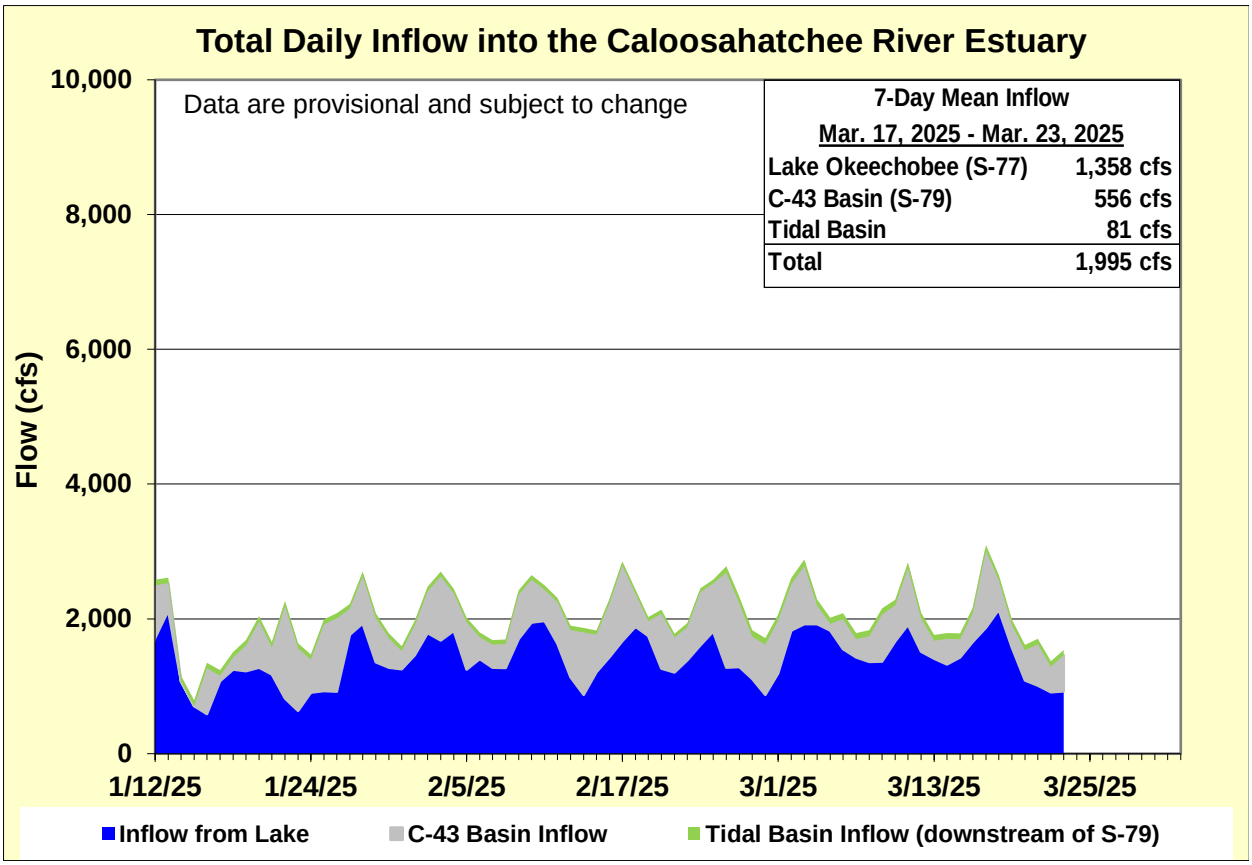

Figure ES-7. Total daily inflows from Lake Okeechobee, and runoff from the C-43 and Tidal basins into the Caloosahatchee River Estuary.

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)	**0.2** (0.2)	**0.2** (0.2)	0.0 – 10.0
Val I-75	**0.2** (0.2)	**0.2** (0.2)	0.0 – 10.0
Fort Myers Yacht Basin	**0.8** (1.3)	**2.0** (1.4)	0.0 – 10.0
Cape Coral	**8.6** (10.3)	**11.4** (11.6)	10.0 – 25.0
Shell Point	**23.6** (24.5)	**23.4** (26.0)	10.0 – 25.0
Sanibel	**28.5** (29.7)	**30.6** (31.2)	10.0 – 25.0

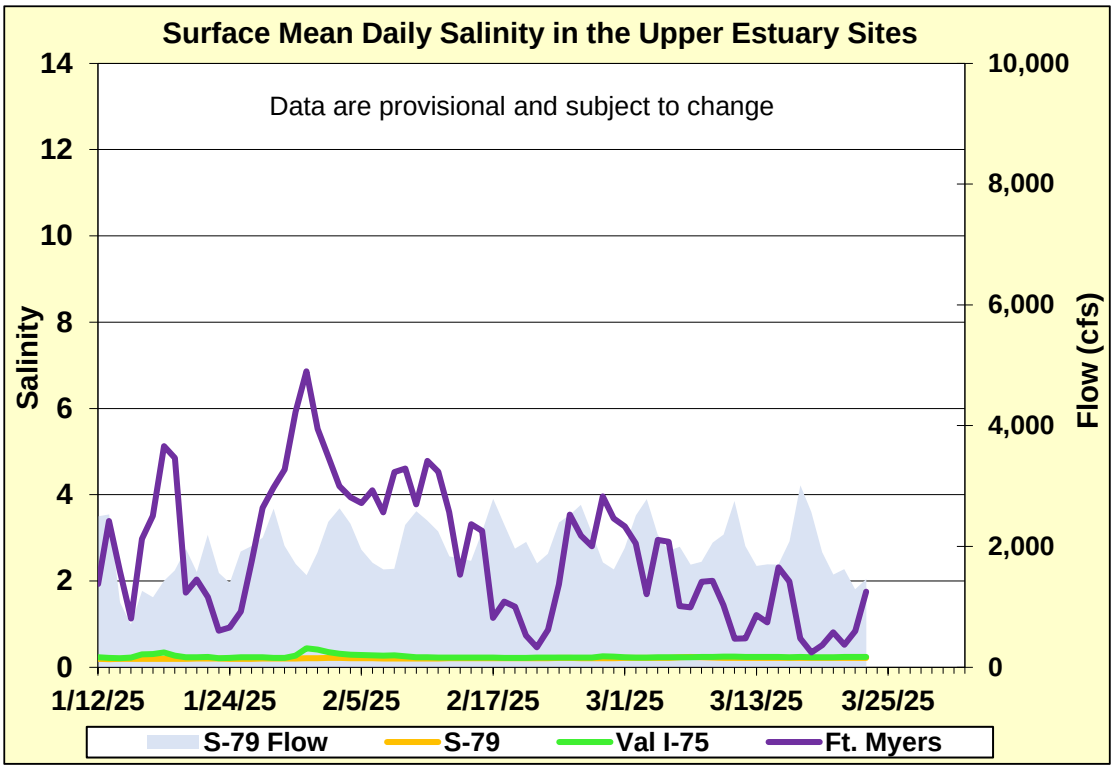

Figure ES-8. Mean daily salinity at upper Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.

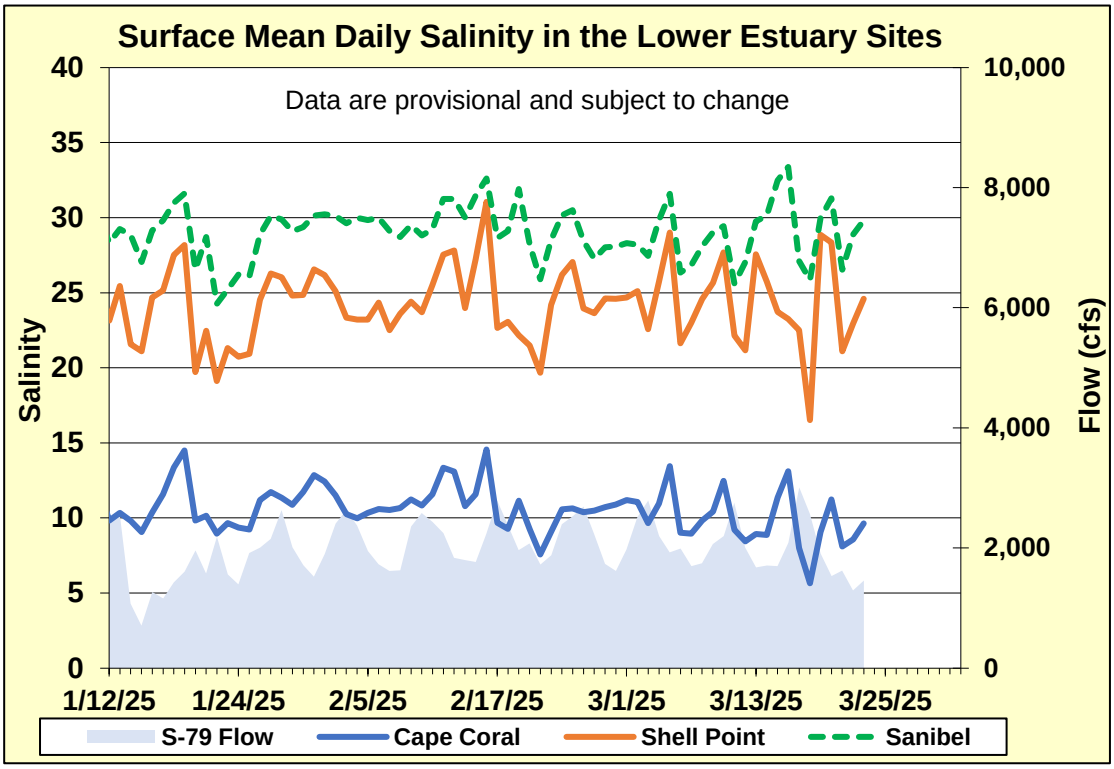

Figure ES-9. Mean daily surface salinity at lower Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.

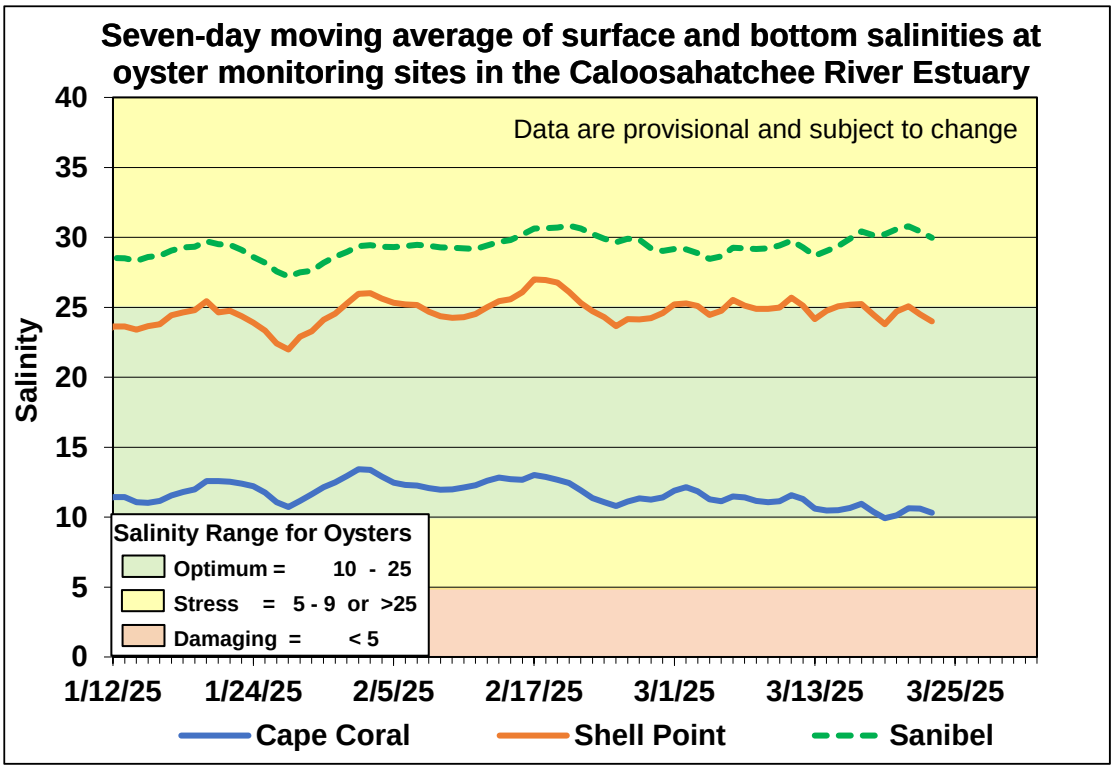

Figure ES-10. Seven-day moving average of surface and bottom salinities at Cape Coral, Shell Point, and Sanibel monitoring sites in the Caloosahatchee River Estuary.

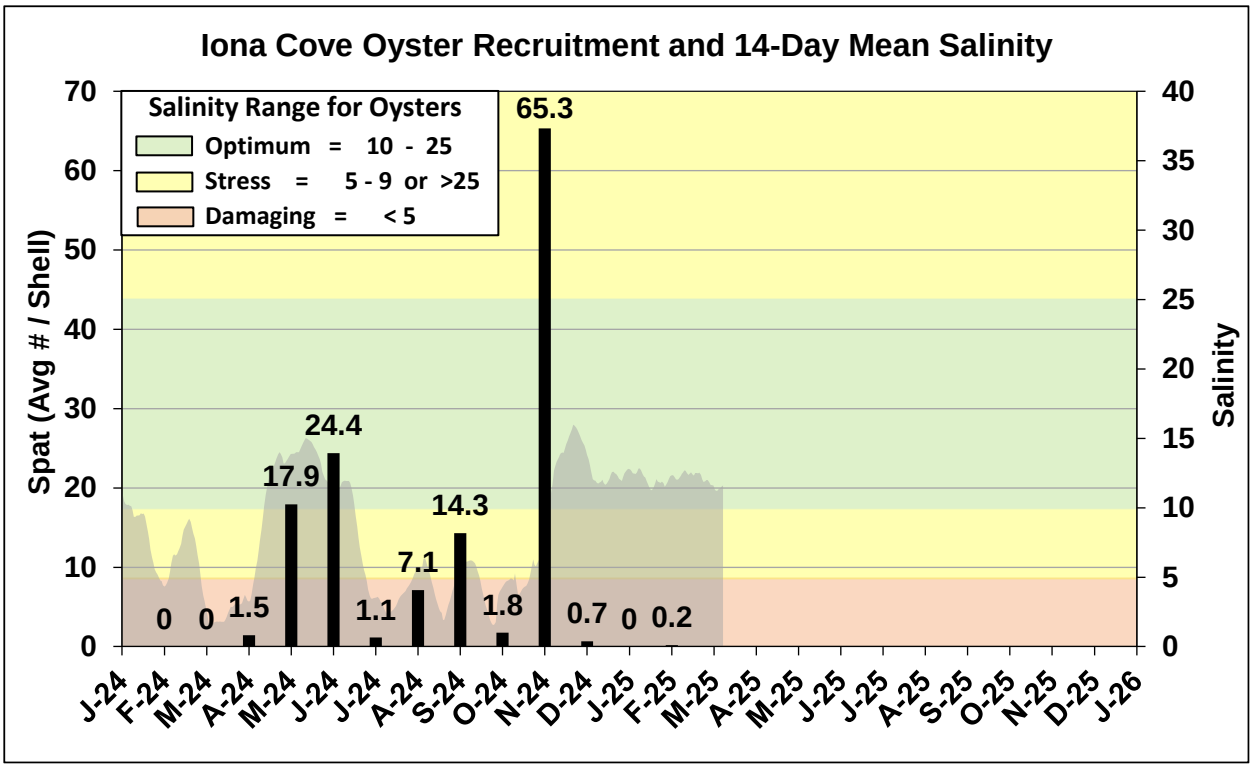

Figure ES-11. Mean oyster recruitment at the Iona Cove oyster monitoring station and 14-day mean salinity at Cape Coral.

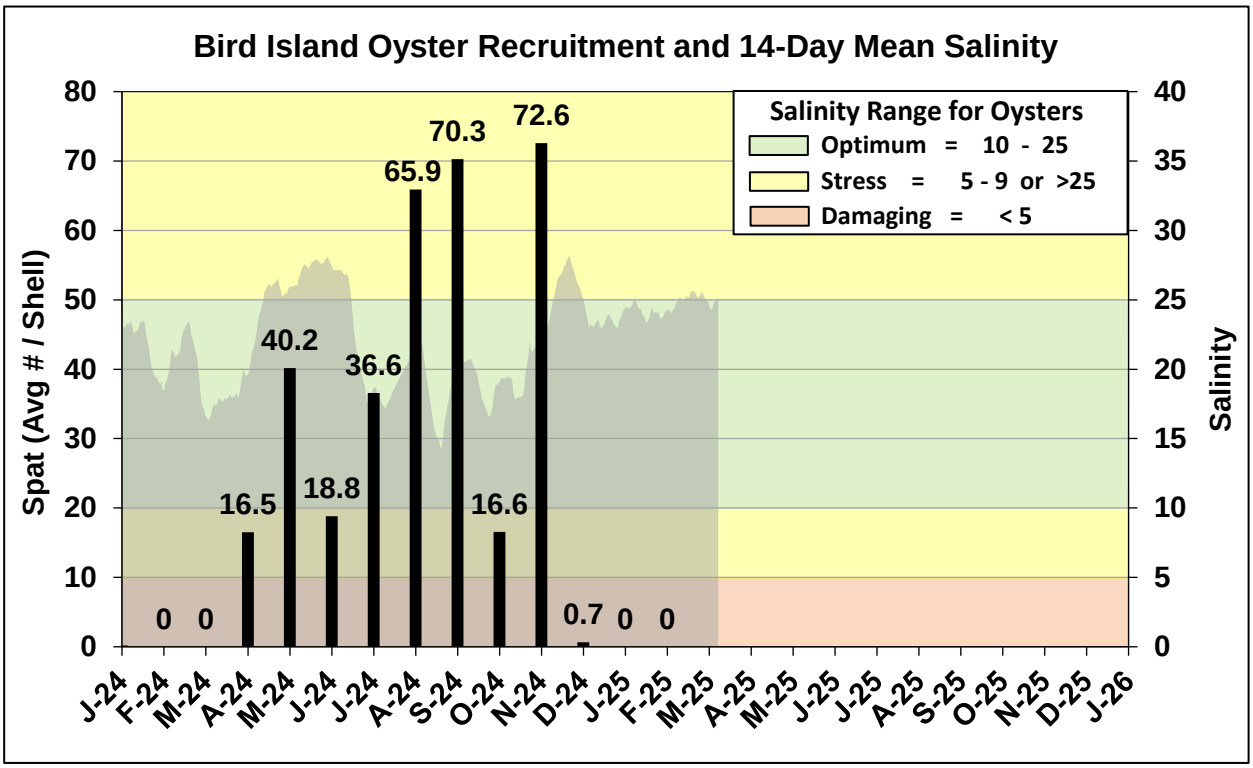

Figure ES-12. Mean oyster recruitment at the Bird Island oyster monitoring station and 14-day mean salinity at Shell Point.

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	73	0.4	0.4
B	650	73	0.3	0.4
C	1200	73	0.3	0.4
D	2000	73	0.3	0.4

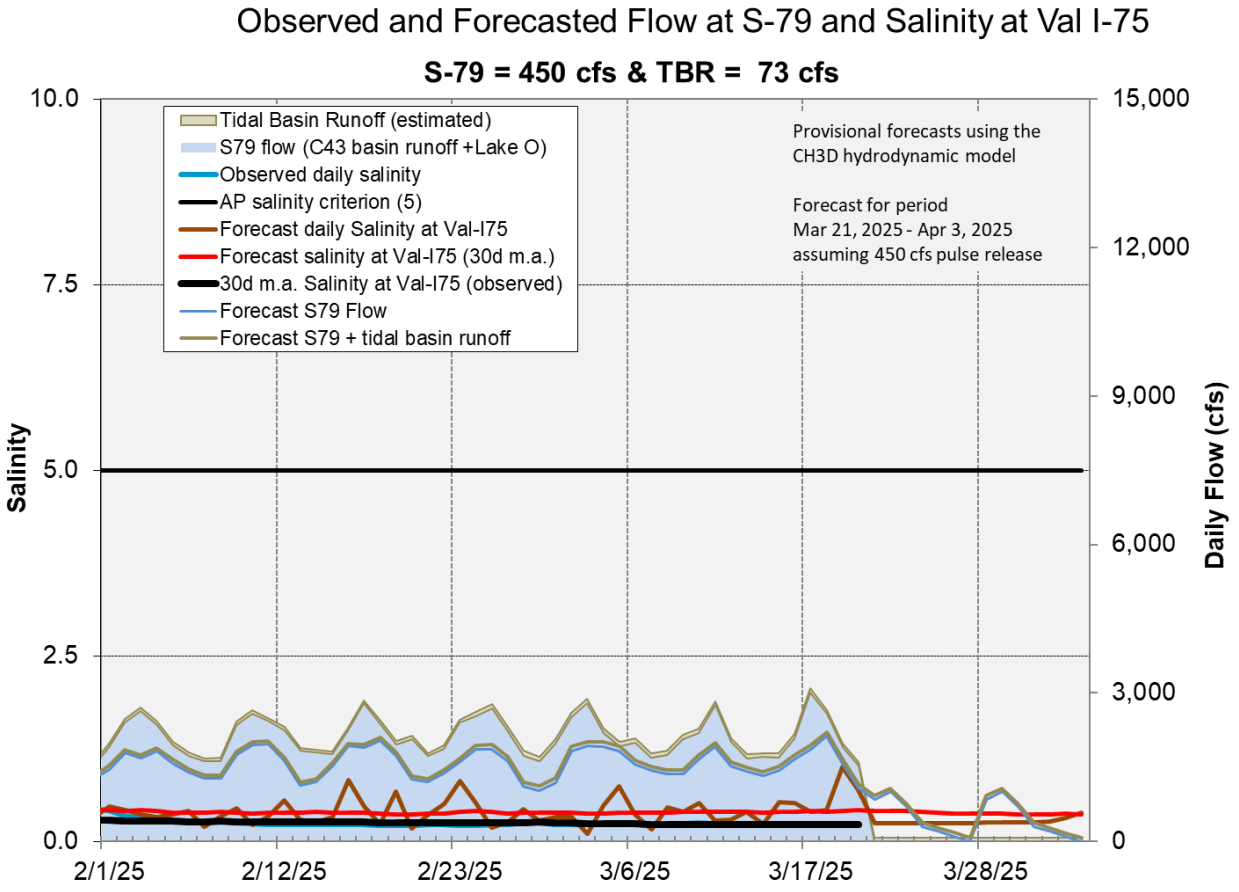

Figure ES-13. Surface salinity forecast at the Val I-75 site assuming a 450 cfs pulse release at S-79.

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^2/year (**Figure S-2**).

STA-1W: An operational restriction is in place in the Northern Flow-way for vegetation management activities. Treatment cells are near target stage. Vegetation in the Western and Eastern flow-ways is highly stressed. The 365-day PLR for the Eastern Flow-way is below 1.0 g/m^2/year. The 365-day PLRs for the Western and Northern Flow-ways are high (**Figure S-2**).

STA-2: STA-2 Flow-way 3 is offline for a SAV recovery drawdown. Operational restrictions are in place in Flow-ways 2 and 4 for vegetation management activities. 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^2/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^2/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 targets 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^2/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 WY2025 inflows to STAs (5/1/2024 to 3/23/2025): ~1,160,000 ac-ft
- Lake Okeechobee releases to FEBs/STAs
  - 3/17/2025 to 3/23/2025: ~12,000 ac-ft
  - WY2025: ~287,400 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

Estimated Inflow and Outflow Volumes
Mar. 17 – Mar. 23, 2025 *Includes preliminary data*

	Total Inflow (acre-feet)	Total Outflow (acre-feet)
STA-1E	700	0
STA-1W	2,900	100
STA-2	0	100
STA-3/4	8,700	8,900
STA-5/6	0	0

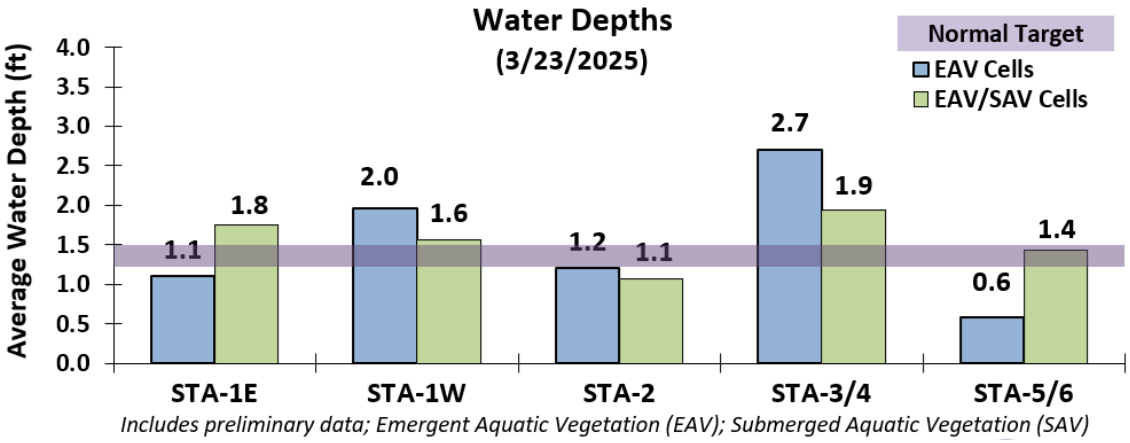

Figure S-1. STA depths and flow volumes

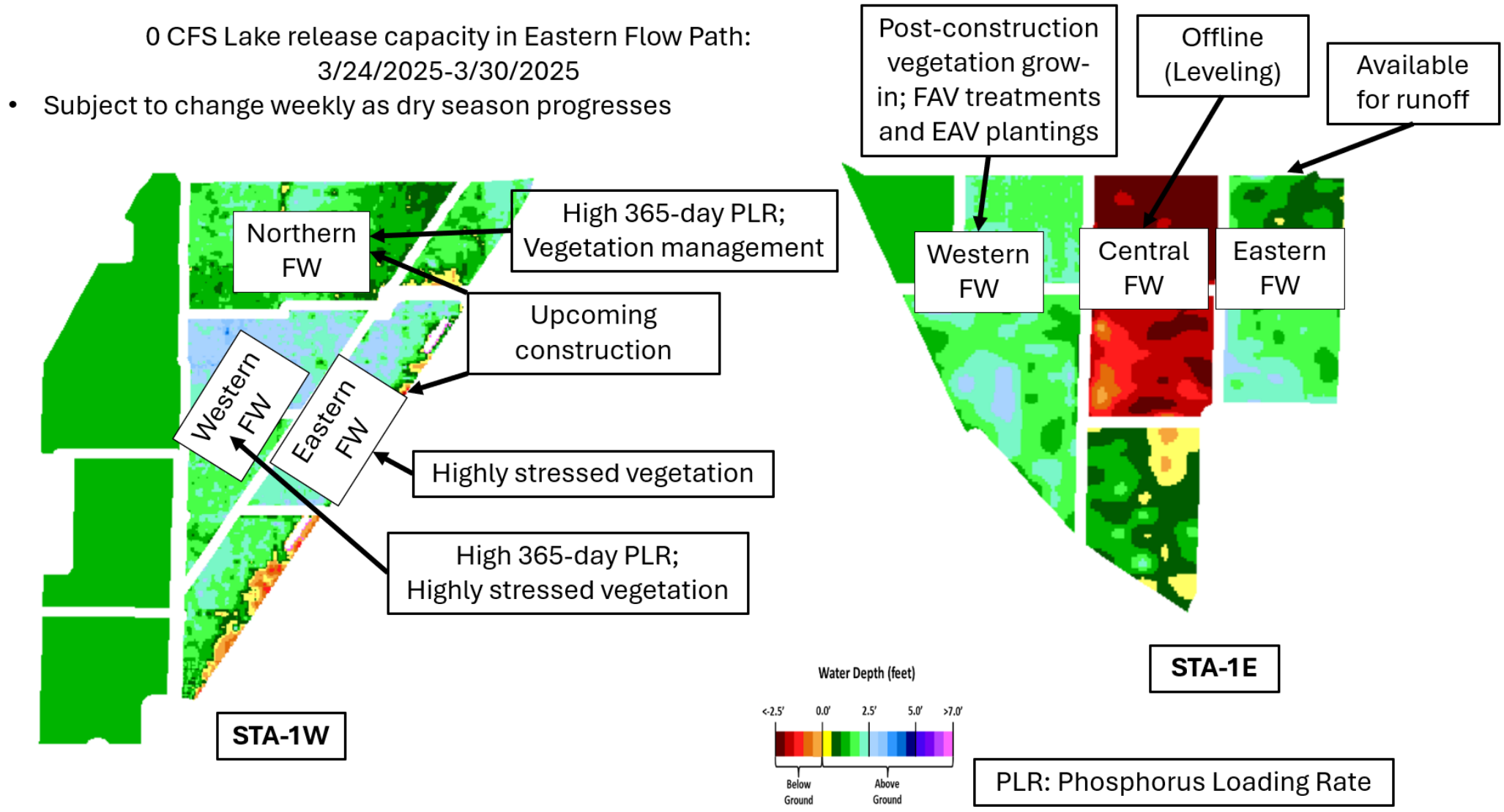

Figure S-2. Eastern Flow Path Weekly Status Report

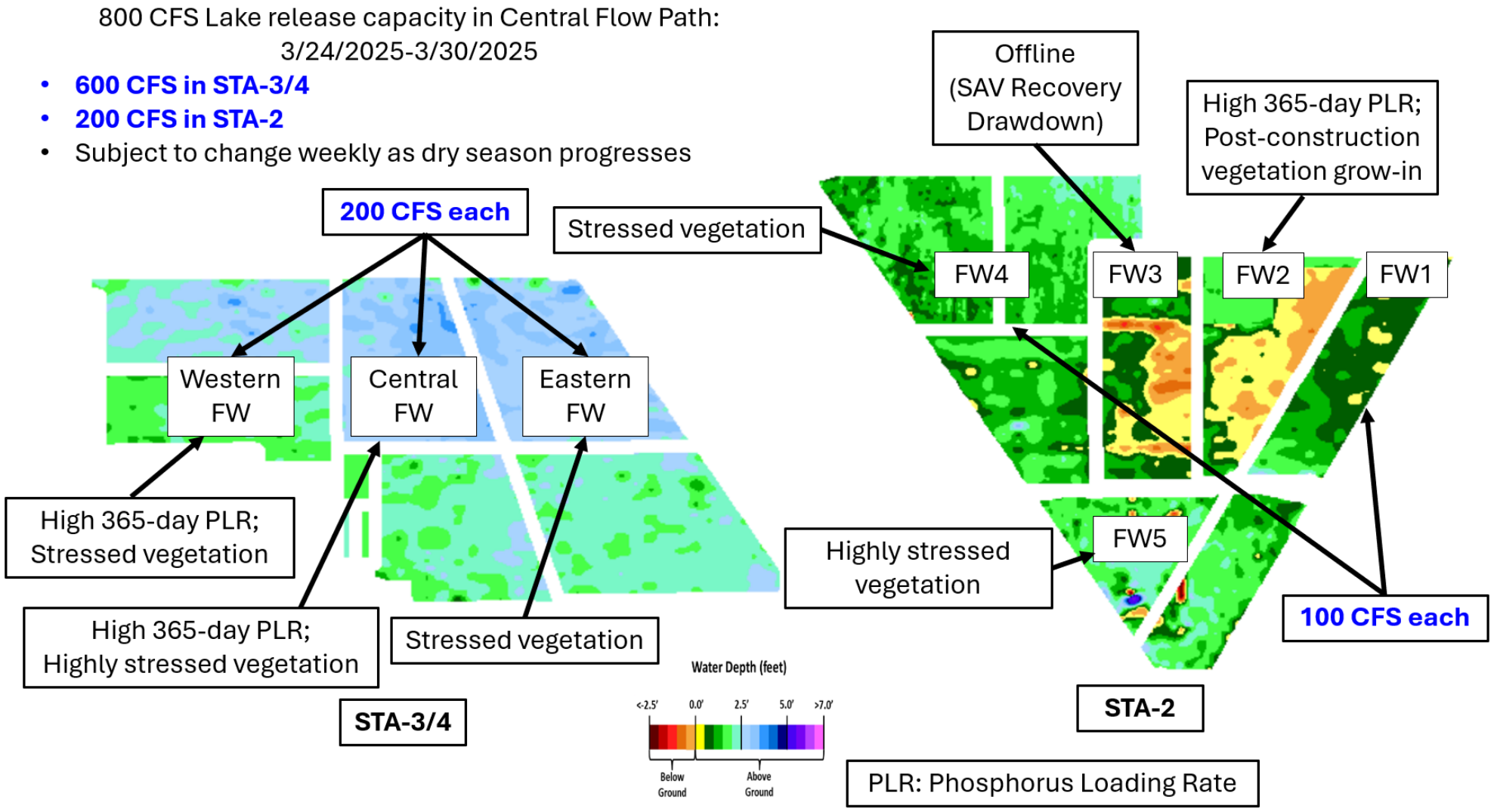

Figure S-3. Central Flow Path Weekly Status Report

100 CFS Lake release capacity in Western Flow Path:
3/24/2025-3/30/2025

- **100 CFS in STA-5/6**
- Subject to change weekly as dry season progresses

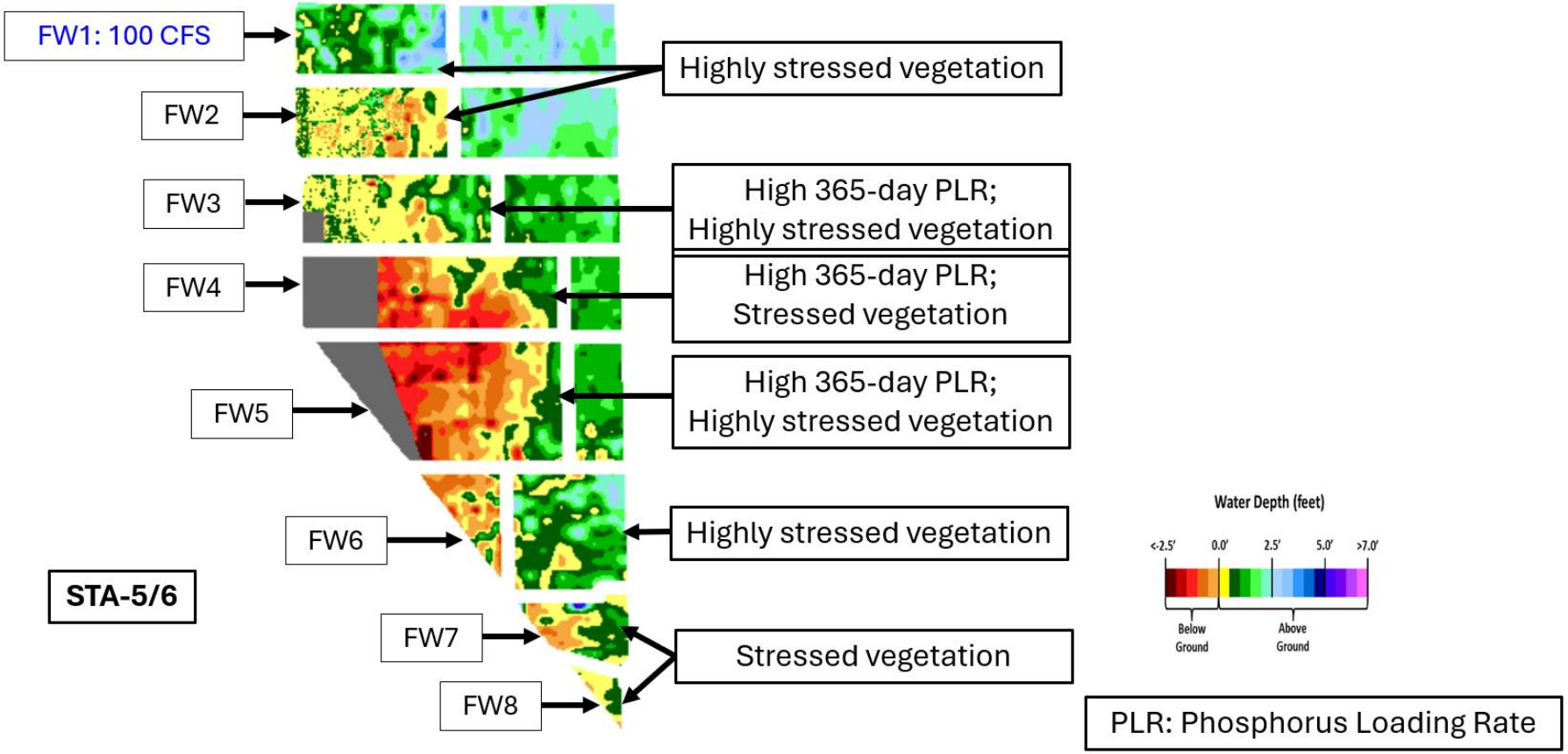

Figure S-4. Western Flow Path Weekly Status Report

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, µg/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

Very little rain fell throughout the Everglades Protection Area (EPA) with only WCA-1 and Everglades National Park (ENP) receiving a minor amount of rainfall. WCA-1: Stage remained just below the A1 zone regulation line in the Refuge with the 3-gauge average falling below by 0.17 on Sunday, March 23, 2025. WCA-2A: Stage continued a recession at gauge S11B and on Sunday was right at the Zone A line at 9.50 feet. WCA-3A: Recession rate at gauge 3-69W remains receding at a rate slightly faster than the slope of the Zone A line, and stages were below the regulation line by 2.4 feet on Sunday. WCA-3A North: Stage at Gauge 62 (NW corner) continues to recede away from the regulation line and was 1.36 feet below the Upper Schedule on Sunday. See figures **EV-1** through **EV-4**.

Water Depths

The SFWDAT model output for March 23, 2025, illustrates shallower conditions across the northern portions of all WCAs. WCA-3A North continues to dry out and is now at the soil surface across most of that sub-basin except in the southeast corner near the Alley North colony. The ponded conditions in southern WCA3A remain absent and that region is now well below average stage. Most of the Big Cypress Basin is now below soil surface, significantly so near the Tamiami trail. Hydrologic connectivity within the western sloughs of ENP is now absent in the west, very diminished in the east at Taylor Slough and remains favorable to flows south in Shark River Slough (SRS). Compared to average water levels for the last 20 years conditions in WCA-3A South are below the 10th percentile in the central and eastern half of that sub-basin, and well below average across the majority. The Big Cypress region is also below the 10th percentile. In the northern portions of WCA-1 and WCA-2A conditions are well below average with some areas below the 10th percentile. SRS remains above the 70th percentile and Taylor slough falls below the 40th percentile. See figures **EV-5** through **EV-6**.

Taylor Slough and Florida Bay

All stages across Taylor Slough decreased over the past week, with an average decrease of 0.32 feet. Changes ranged from −0.92 feet at E112 in the northern slough to −0.11 feet at EPSW in the C-111 area (**Figure EV-7 and Figure EV-8**). Taylor Slough water levels remain just above the recent average (WY1993-2016) for this time of year by 0.3 inches compared to before the Florida Bay initiative (starting in 2017), a decrease of 4.3 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 0.55 and 1.65 feet, respectively.

Average Florida Bay salinity was 30.9, an increase of 0.6 from last week. Salinity changes ranged from −1.3 at Terrapin Bay (TB) in the central nearshore region to +2.2 at Garfield Bight (GB) in the western nearshore region (**Figure EV-7**). Salinity is above the estimated average for 1900 and at the WY2001-2016 Interquartile Range (IQR) 25th percentile in the eastern region, and within the IQR in the central and western regions (**Figure EV-9**). Average Florida Bay salinity remains just above its recent average (WY1993-2016) for this time of year by 0.3, an increase of 0.2 relative to last week's comparison.

Salinity at the Taylor River (TR) station in the mangrove zone (tracked for the Florida Bay MFL) was 6.1. The 30-day moving average was 9.5 (**Figure EV-10**), an increase of 2.1 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 284,290 acre-feet, an increase of 4,899 acre-feet from last week (**Figure EV-10**).

No rain was recorded at any of the 18 gauges across Taylor Slough and Florida Bay (**Figure EV-11**). Wind directions and speeds in Florida Bay ranged from 0.4 mph NW on March 21st to 27.7 mph NW on March 18th (**Figure EV-11**).

Average daily flow from the five major creeks totaled 740 acre-feet, with net positive flows over the past week. Total daily creek flow ranged from −635 acre-feet on March 20th to 2,744 acre-feet on March 18th (**Figure EV-12**). Average daily flow was 2,372 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 upcoming wading bird nesting at the Alley North colony in WCA-3A North is critical to the overall ecology of the region. Continuing to support a below average recession rate in this region (S-150) will be beneficial to wading bird nesting success at this Colony, made more ecologically important as wading birds have experienced poor nesting the last three years. Also of concern for wading bird nesting is the condition 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 is at a good position as we continue into the dry season and will continue to benefit from maintaining freshwater input to the system when available. Maintaining higher water depths 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	<0.01	−0.08
WCA-2A	0.00	−0.17
WCA-2B	0.00	−0.20
WCA-3A	0.00	−0.15
WCA-3B	0.00	−0.10
ENP	0.00	−0.12

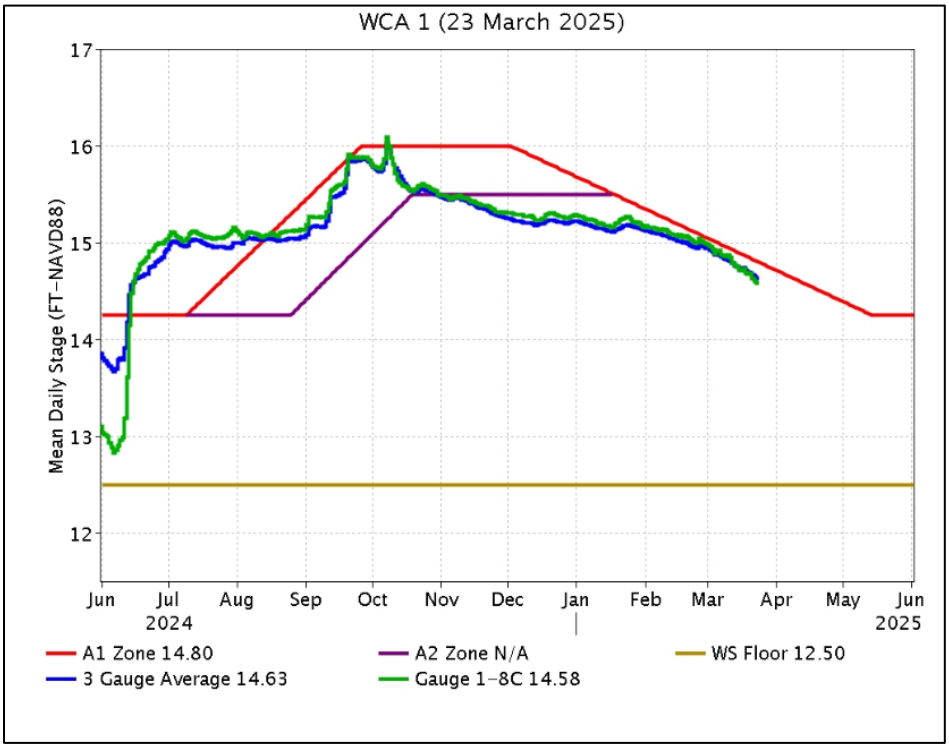

Figure EV-1. WCA-1 stage hydrographs and regulation schedule.

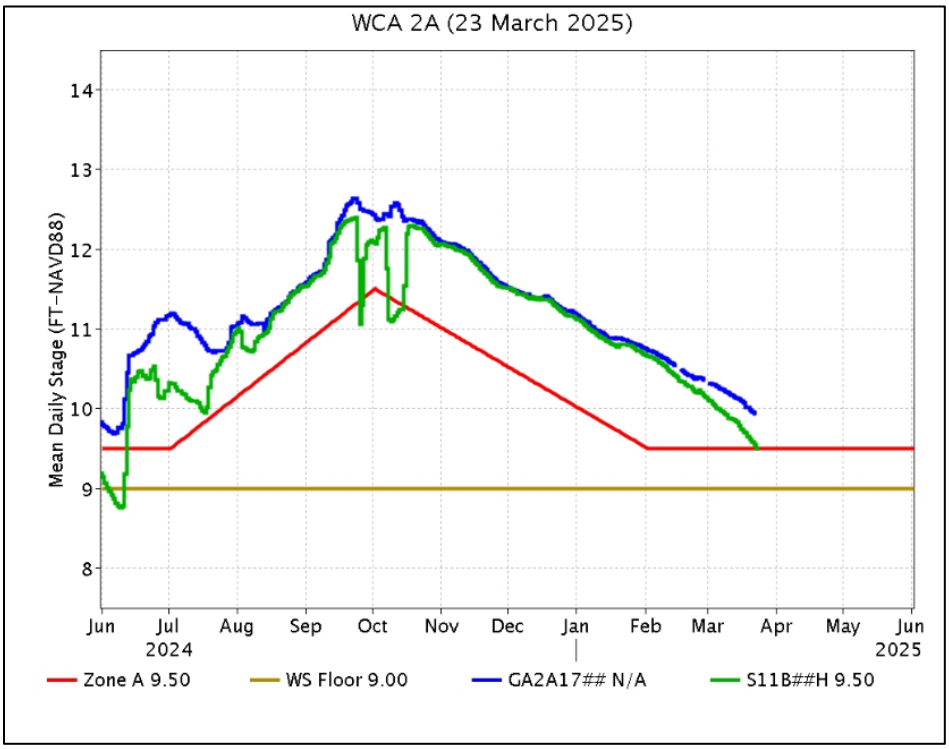

Figure EV-2. WCA-2A stage hydrographs and regulation schedule.

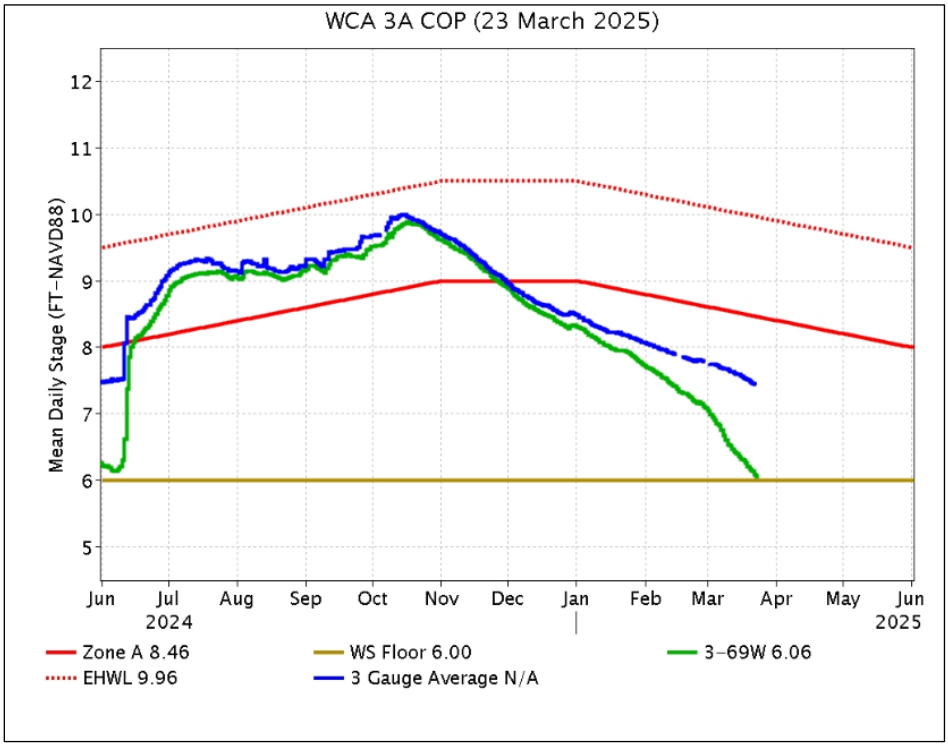

Figure EV-3. WCA-3A stage hydrographs (three-gauge average, 3-69W) and regulation schedule.

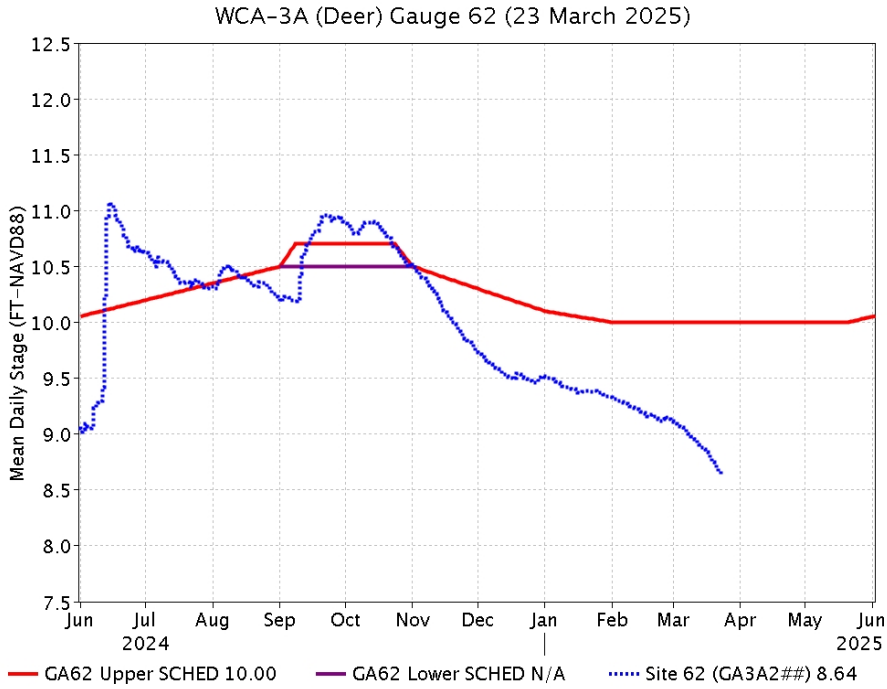

Figure EV-4. WCA-3A stage hydrograph (Deer gauge; Site 62) and GA62 regulation schedule.

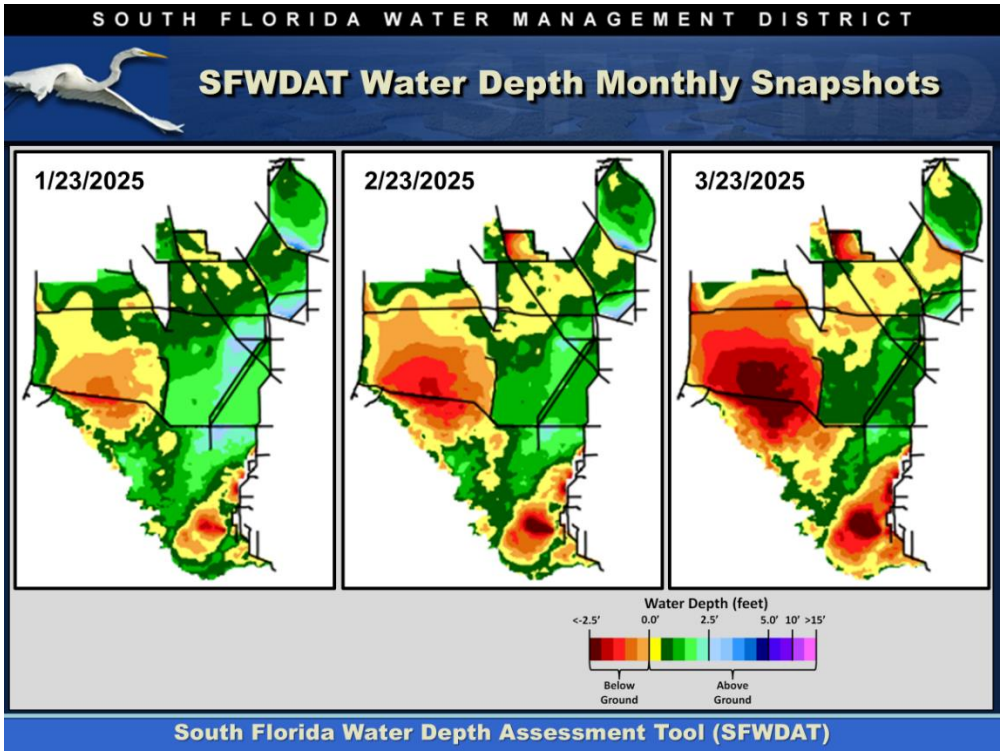

Figure EV-5. Everglades water depths from two months ago (left), one month ago (center) and present (right), based on SFWDAT.

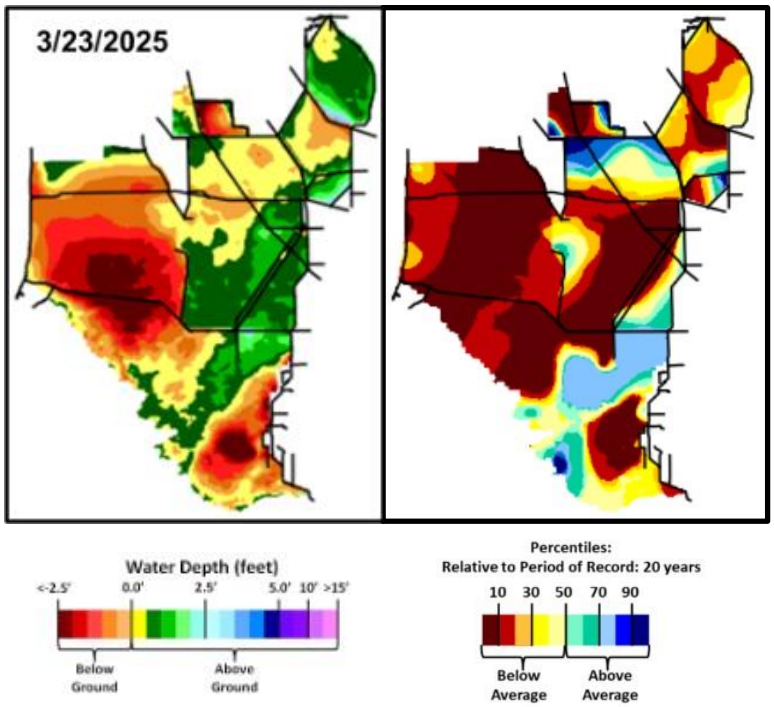

Figure EV-6. Present water depths (March 23, 2025) compared to the day of year average over the previous 20 years.

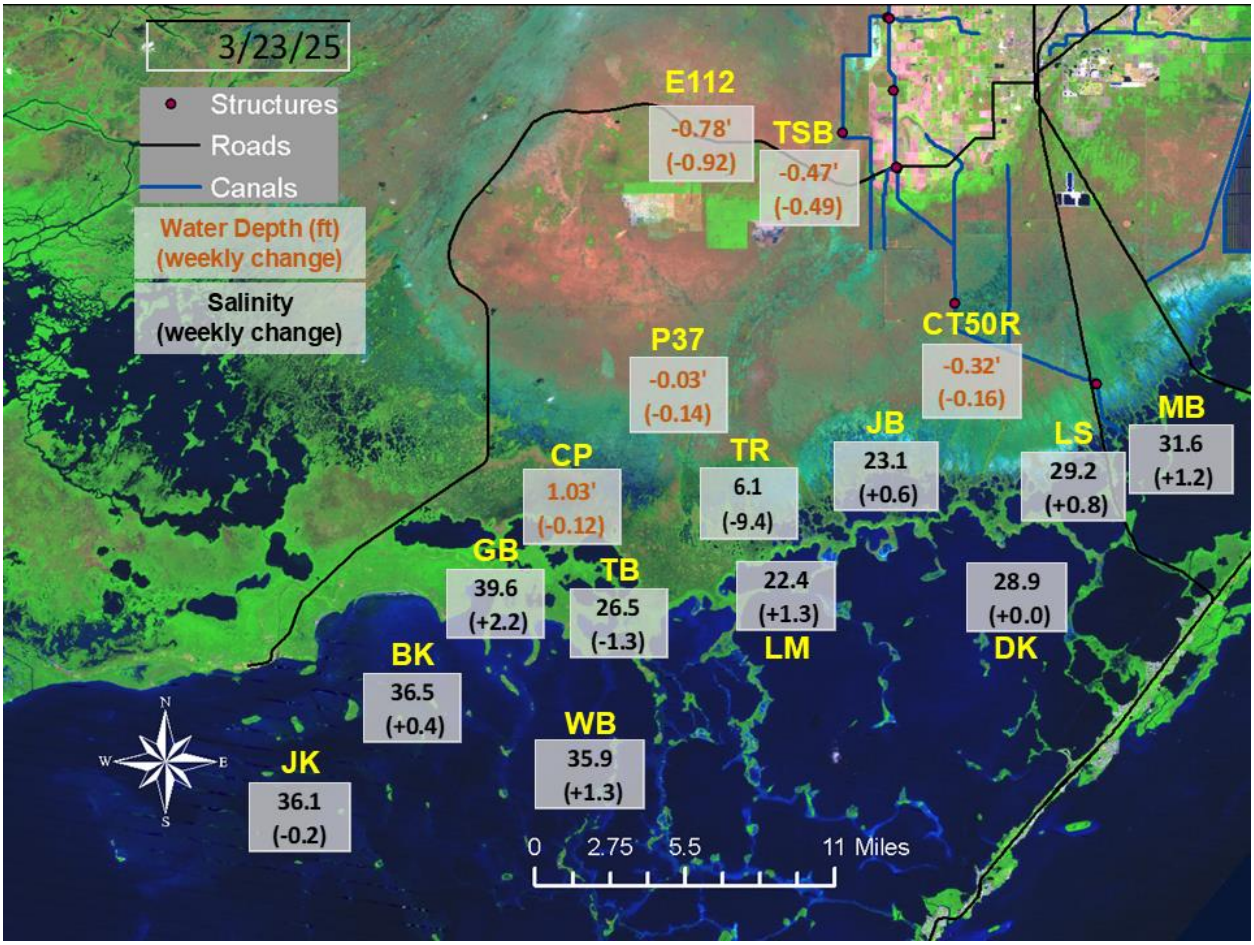

Figure EV-7. Taylor Slough water depths and Florida Bay salinities with changes since a week ago.

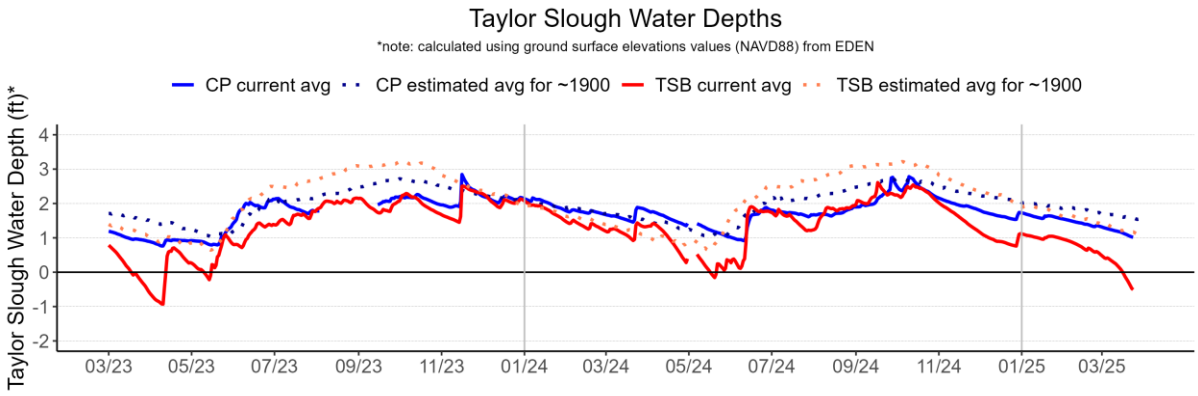

Figure EV-8. Taylor Slough water depth time series for Taylor Slough Bridge (TSB; northern slough) and Craighead Pond (CP; southern slough).

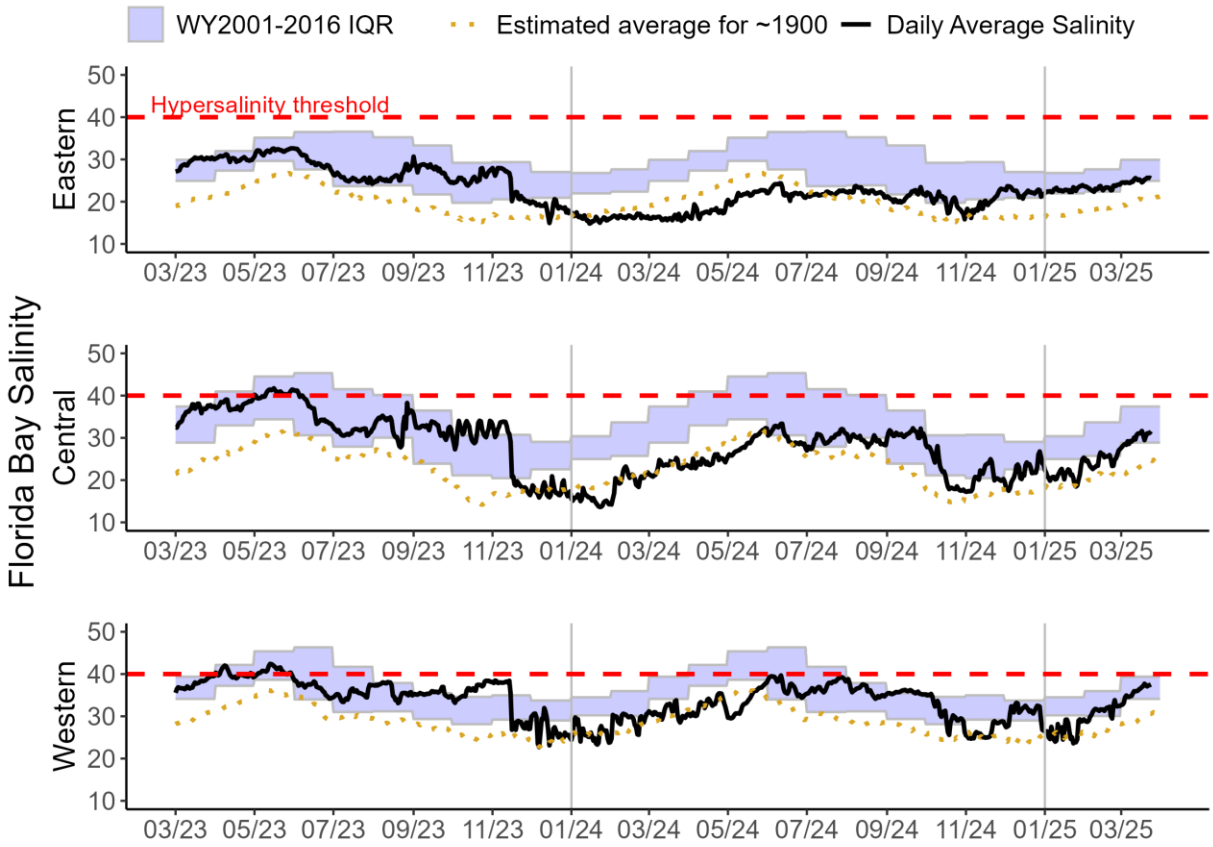

Figure EV-9. Eastern (top panel), Central (middle panel) and Western (bottom panel) Florida Bay daily average salinities with WY2001-2016 interquartile (25-75 percentile) ranges (IQR) and estimated historical daily average salinities. The hypersalinity threshold indicates the level at which salinities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

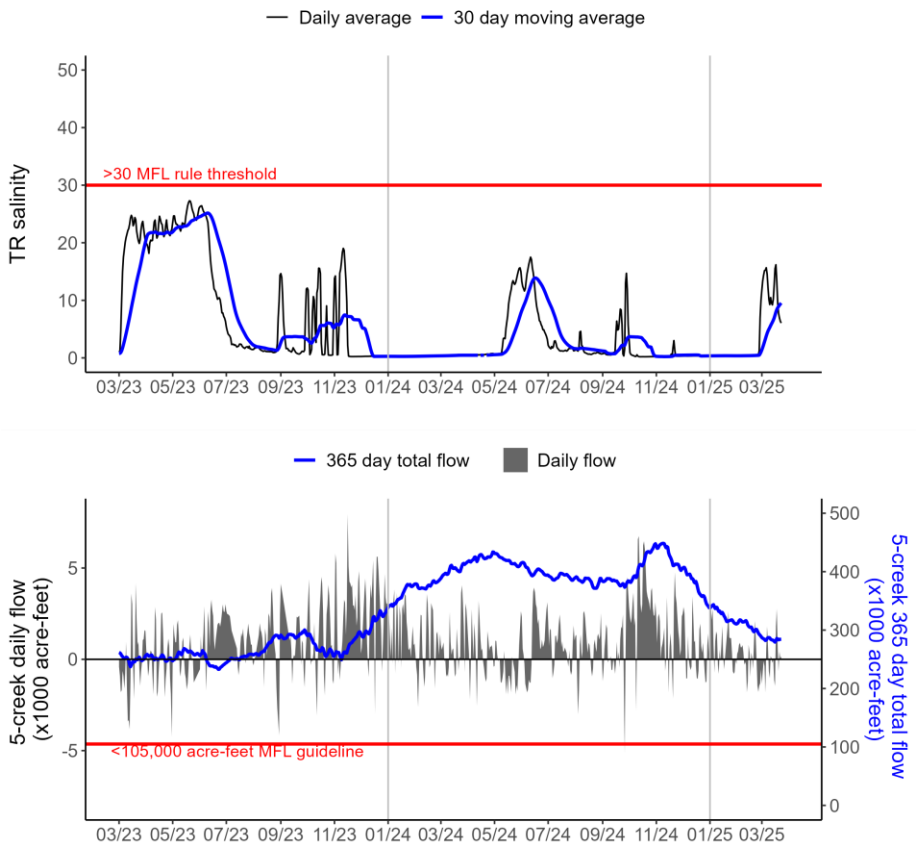

Figure EV-10. Salinity at Taylor River (TR; top) and creek inflow to Florida Bay (bottom) from the five major creeks (McCormick Creek, Taylor River, Mud Creek, Trout Creek, and West Highway Creek). The 30-day moving average salinity and 365-day total creek flow are tracked for the Florida Bay MFL criteria.

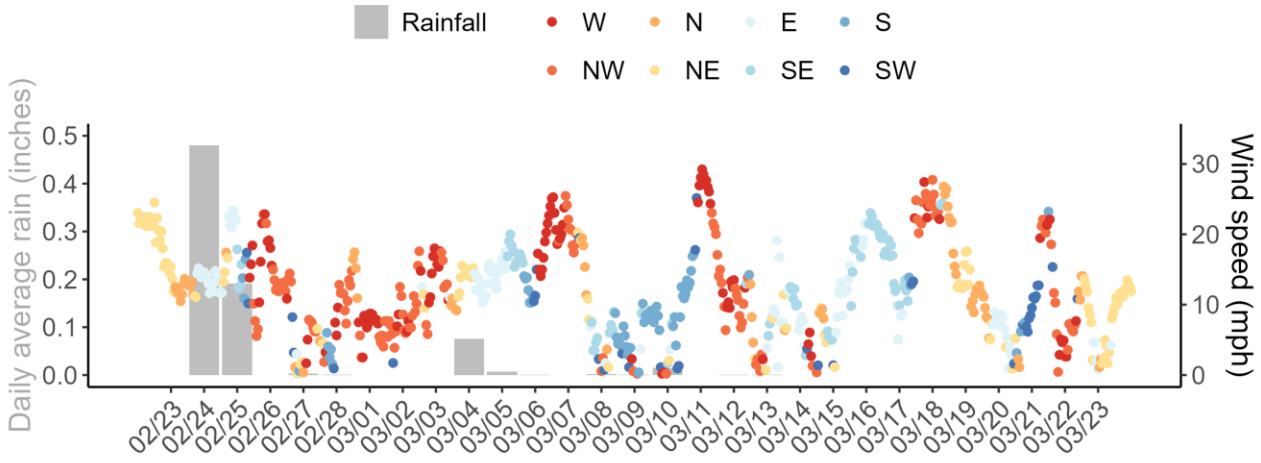

Figure EV-11. Daily average rain across Taylor Slough and Florida Bay, along with hourly average wind speed and direction (measured at Long Key) in Florida Bay over the past four weeks.

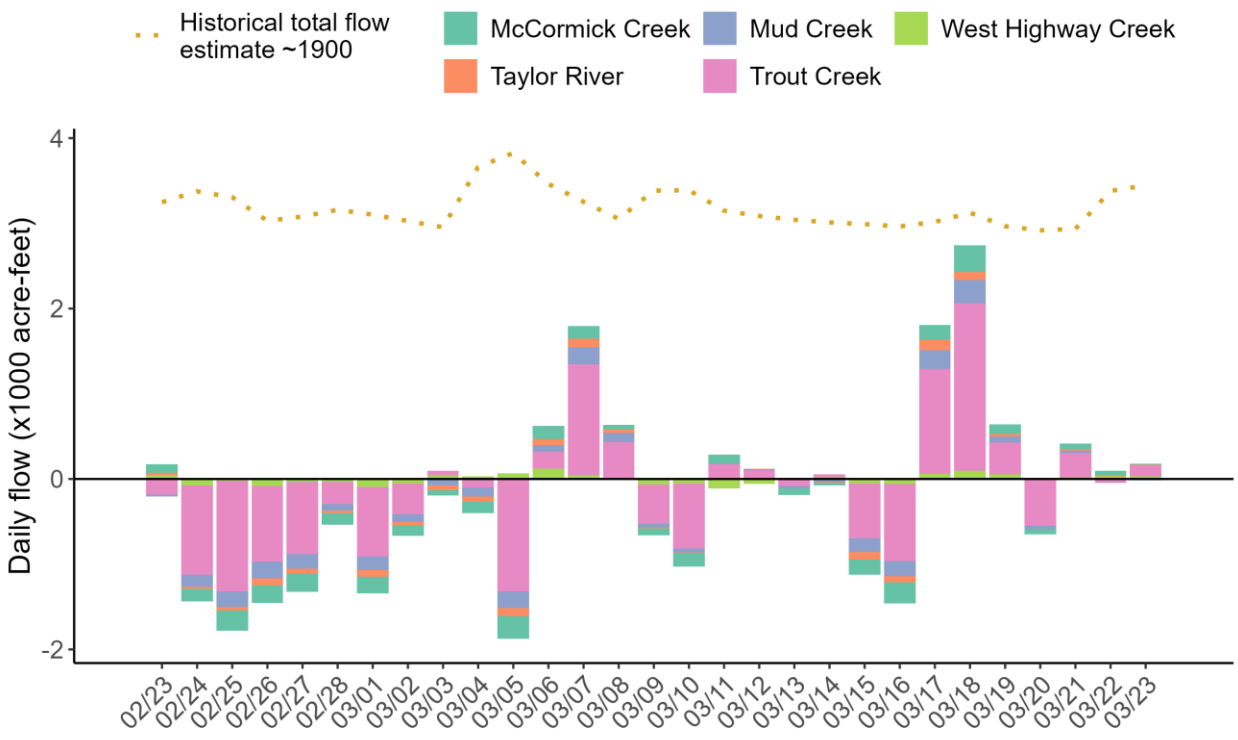

Figure EV-12. Daily average creek flow summed between five creeks with estimated historical daily flow over the past four weeks.

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

SFWMD Everglades Ecological Recommendations, March 23, 2025 (red is new)			
	Weekly change	Recommendation	Reasons
WCA-1	Stage decreased by 0.08 feet	Recession rate of less than 0.06 feet per week.	Protect within basin and downstream habitat and wildlife.
WCA-2A	Stage decreased by 0.17 feet	Recession rate of less than 0.12 feet per week.	Protect within basin and downstream habitat and wildlife.
WCA-2B	Stage decreased by 0.20 feet	Recession rate of less than 0.12 feet per week.	Protect within basin and downstream habitat and wildlife.
WCA-3A NE	Stage increased by 0.13 feet	Recession rate of less than 0.06 feet per week.	Protect within basin and downstream habitat and wildlife.
WCA-3A NW	Stage decreased by 0.19 feet	Recession rate of less than 0.06 feet per week.	
Central WCA-3A S	Stage decreased by 0.15 feet	Recession rate of less than 0.06 feet per week.	Protect within basin and downstream habitat and wildlife.
Southern WCA-3A S	Stage decreased by 0.11 feet		
WCA-3B	Stage decreased by 0.10 feet	Recession rate of less than 0.12 feet per week.	Protect within basin wildlife.
ENP-SRS	Stage decreased by 0.12 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.
Taylor Slough	Stage changes ranged from −0.92 feet to -0.12 feet	Move water southward as possible.	When available, provide freshwater to promote water movement.
FB- Salinity	Salinity changes ranged from –1.3 to +2.2	Move water southward as possible.	When available, provide freshwater to promote water movement.

Biscayne Bay

As shown in **Figure BB-1**, mean total inflow to Biscayne Bay was 31 cfs, and the previous 30-day mean inflow was 138 cfs. The seven-day mean salinity was 30.4 at BBCW8 and 34.5 at BBCW10, both within the ideal salinity range for estuarine organisms in this region (salinity less than 35). Data were provided by Biscayne National Park.

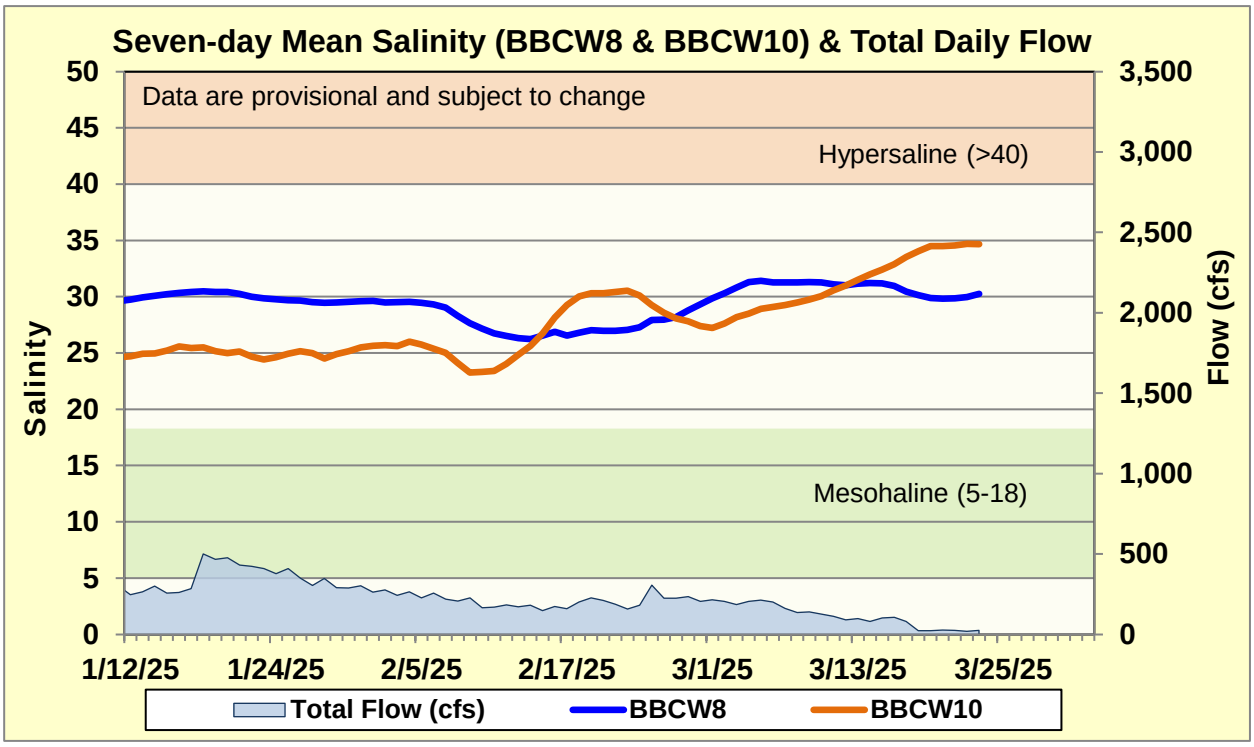

Figure BB-1. Seven-day mean salinity at BBCW8 and BBCW10 and total daily flow in Biscayne Bay. Total daily flow was calculated using flow from structures S20G, S20F, S21, S21A, S123, and S700P.