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 7, 2025

SUBJECT: Weekly Environmental Conditions for Systems Operations

Summary

Weather Conditions and Forecast

Wednesday afternoon, a cold front will likely stall in north Florida or southern Georgia, promoting scattered to numerous showers and thunderstorms north and west of Lake Okeechobee with localized heavy rainfall late Wednesday afternoon into early evening, especially over the northern Kissimmee Valley. On Thursday, scattered showers and thunderstorms are again likely north and west of Lake Okeechobee, especially over the northern Kissimmee Valley. Over the weekend, daily afternoon showers and thunderstorms focused north and west of Lake Okeechobee are forecast. A cold front is expected to move slowly reaching the SFWMD early next week. When it does, there is an increasing likelihood of widespread, very heavy rainfall -- potentially delivering the highest two-day rainfall totals in quite some time. The strong signal for widespread, heavy rainfall early next week suggests that meaningful drought relief may finally be on the horizon for portions of the SFWMD. For the week ending next Tuesday morning, total rainfall across the SFWMD remains likely to be above to much 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 May 4, 2025, was 280 cfs at S-65 and 200 cfs at S-65A, respectively. Mean weekly water depth on the Kissimmee River floodplain decreased by 0.01 feet to 0.21 feet. The weekly average concentration of dissolved oxygen in the Kissimmee River increased from 5.2 mg/L the previous week to 6.3 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 9.86 feet NAVD88 (11.17 ft NGVD29) on May 4, 2025, which was 0.27 feet lower than the previous week and 1.28 feet lower than a month ago. Average daily inflows (excluding rainfall) decreased slightly from 230 cfs the previous week to 170 cfs. Average daily outflows (excluding evapotranspiration) decreased slightly from 4,220 cfs the previous week to 3,970 cfs. The most recent non-obscured satellite image from April 30, 2025, suggests moderate cyanobacteria activity in and around

Fisheating Bay, and along the northwest shoreline. Routine water quality monitoring showed 2 of 9 samples were dominated by Microcystis, although none had detectable toxin levels. Three of the 32 sites sampled for chlorophyll *a* had concentrations >40 µg/L. The May 1 wading bird survey counted 8,385 birds across 19 flocks seen actively foraging around the Lake.

Estuaries

Total inflow to the St. Lucie Estuary averaged 208 cfs over the past week with no flow coming from Lake Okeechobee. Mean salinities increased at the US1 Bridge and AIA Bridge sites and decreased at the HR1 site. Salinity in the middle estuary was in the optimal range (10-25) for adult eastern oysters.

Total inflow to the Caloosahatchee Estuary averaged 413 cfs over the past week with 264 cfs coming from Lake Okeechobee. Over the past week, salinities increased at all sites within the estuary. Salinities were in the optimal range (0-10) for tape grass in the upper estuary. 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 May 4, 2025, 9,600 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 is approximately 347,800 ac-feet. The total amount of inflows to the STAs in WY2025 is approximately 1,216,000 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 Migratory Bird Treaty Act protected nests. 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 and STA-5/6.

Everglades

Over the past week, rates of stage recession slowed down across most of the Everglades Protection Area (EPA). In previous weeks, WCA-3A—an important region for wading bird foraging as the dry season progresses—has experienced recession rates that were too fast to maintain depths needed for wading bird foraging throughout the nesting season. However, this week following a rain event, recession rates were reduced in this region, which is beneficial for wading birds, helping to maintain water depths needed for optimal foraging habitat. If the rate of dry-down returns to previous conditions, deteriorating foraging conditions could return throughout the EPA. Poor stork and white ibis nesting success is expected as below average depths, and the rapid decline of suitable foraging habitat will most likely lead 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 also remain outside of harmful thresholds. Special regulations were issued last week for low water in WCA-3A North, limiting public use.

Supporting Information

Kissimmee Basin

Upper Kissimmee

On May 4, 2025, mean daily lake stages were 54.5 feet NAVD88 (0.6 feet below schedule) in East Lake Toho, 51.3 feet NAVD88 (0.6 feet below schedule) in Lake Toho, and 47.6 feet NAVD88 (3.0 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 4, 2025, mean weekly discharge was 280 cfs at S-65 and 200 cfs at S-65A, respectively. Mean weekly discharge from the Kissimmee River was 220 cfs and 170 cfs at S-65D and S-65E, respectively (**Table KB-2**). Mean weekly headwater stages were 45.2 feet NAVD88 at S-65A and 24.4 feet NAVD88 at S-65D. Mean weekly river channel stage decreased by 0.5 feet to 30.2 feet NAVD88 (**Figure KB-4**). Mean weekly water depth on the Kissimmee River floodplain decreased by 0.01 feet to 0.21 feet (**Table KB-2**, **Figure KB-5**). The weekly average concentration of dissolved oxygen in the Kissimmee River increased from 5.2 mg/L the previous week to 6.3 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 of 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)[a]	Schedule Type[b]	Sunday Schedule Stage (feet NAVD88)	Sunday Departure from Regulation (feet)	
							5/4/25	*4/27/25*
Lakes Hart and Mary Jane	S-62	LKMJ	0	58.6	R	59.0	-0.4	-0.4
Lakes Myrtle, Preston and Joel	S-57	S-57	0	59.1	R	59.3	-0.2	-0.1
Alligator Chain	S-60	ALLI	7	61.8	R	61.7	0.1	0.1
Lake Gentry	S-63	LKGT	20	59.2	R	59.1	0.1	0.1
East Lake Toho	S-59	TOHOE	6	54.5	R	55.1	-0.6	-0.8
Lake Toho	S-61	TOHOW S-61	10	51.3	R	51.9	-0.6	-0.7
Lakes Kissimmee, Cypress and Hatchineha	S-65	KUB011 LKIS5B	280	47.6	T	50.6	-3.0	-2.8

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.

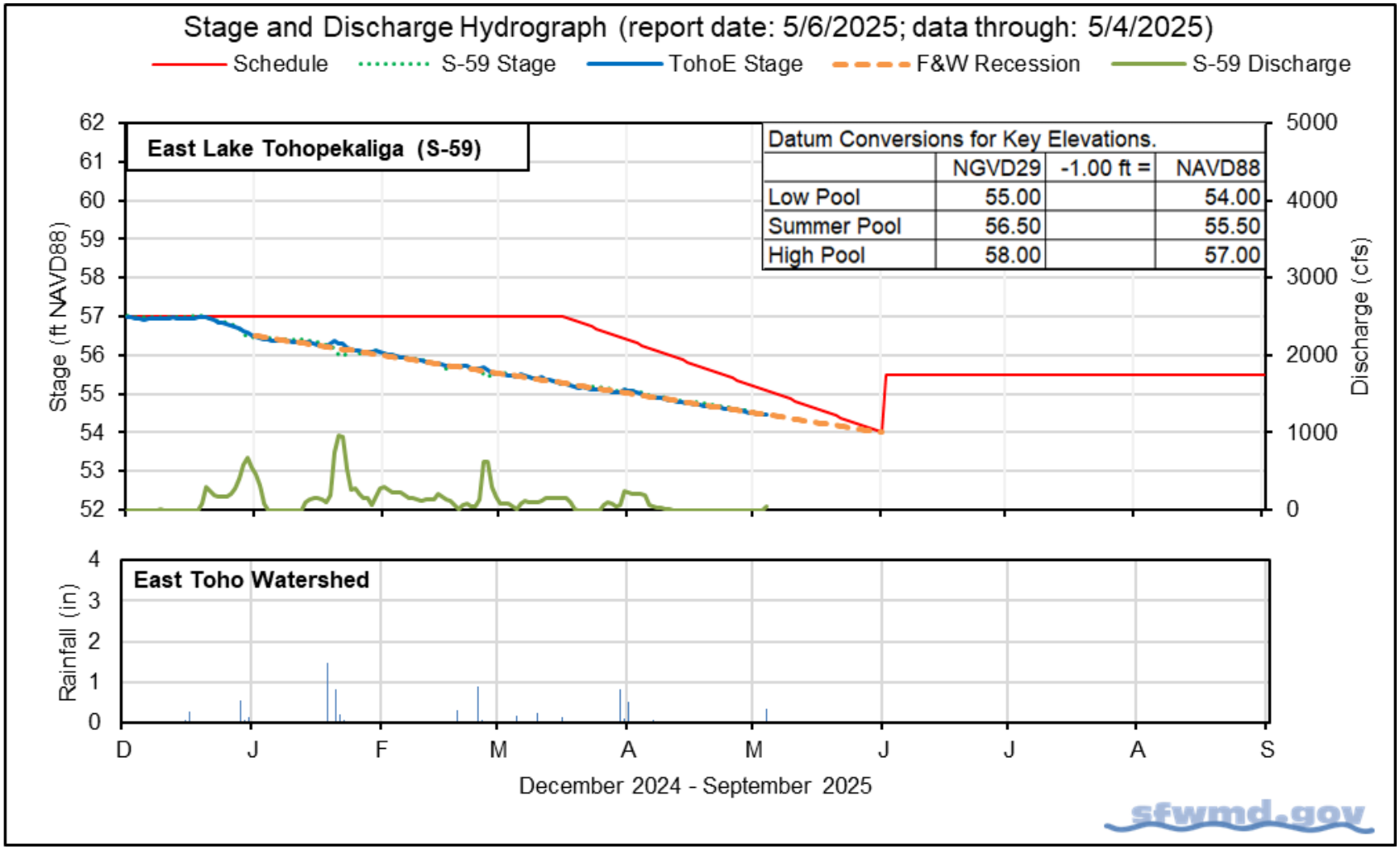


Figure KB-1. East Lake Toho regulation schedule, stage, discharge, and rainfall.

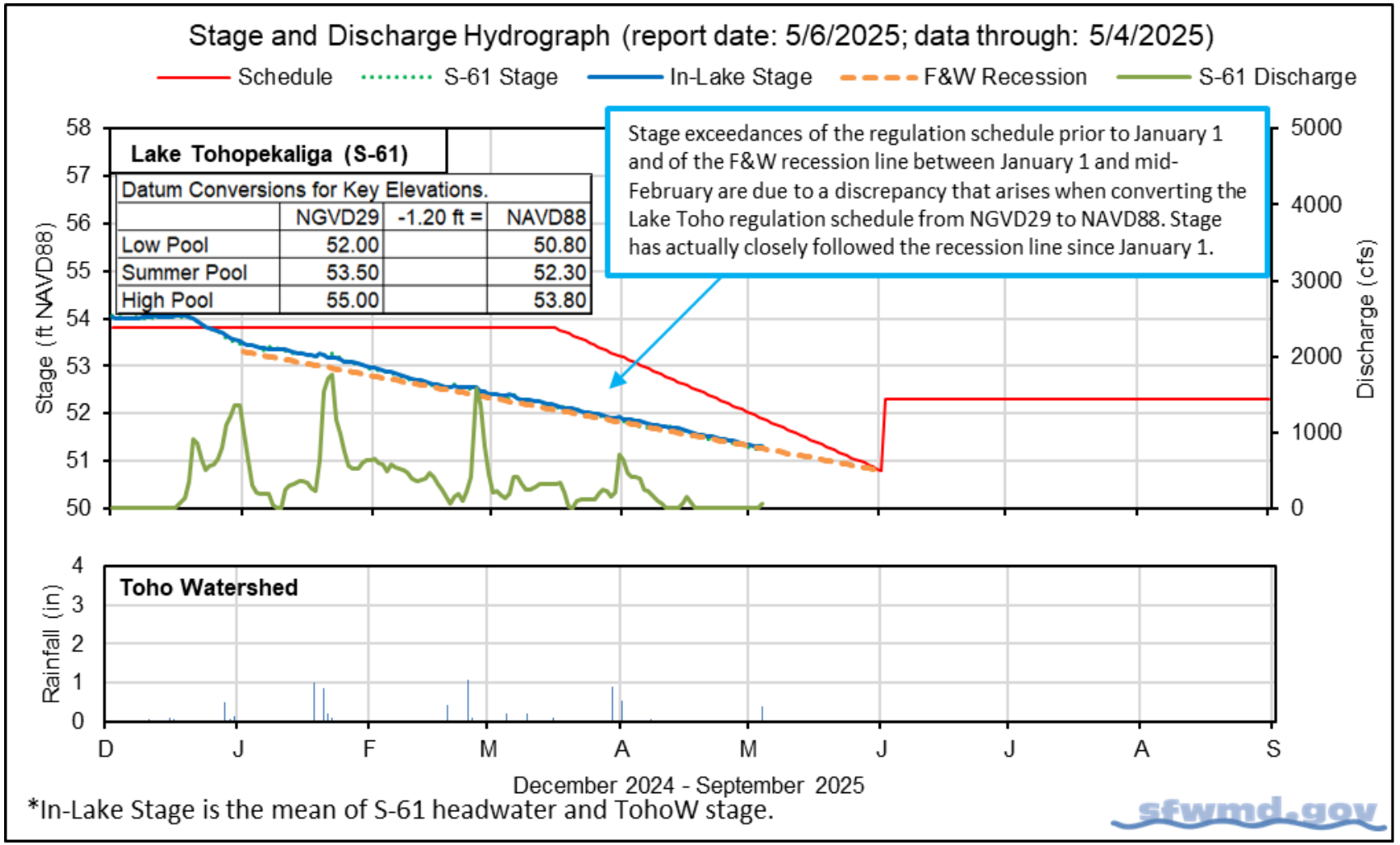


Figure KB-2. Lake Toho regulation schedule, stage, discharge, and rainfall.

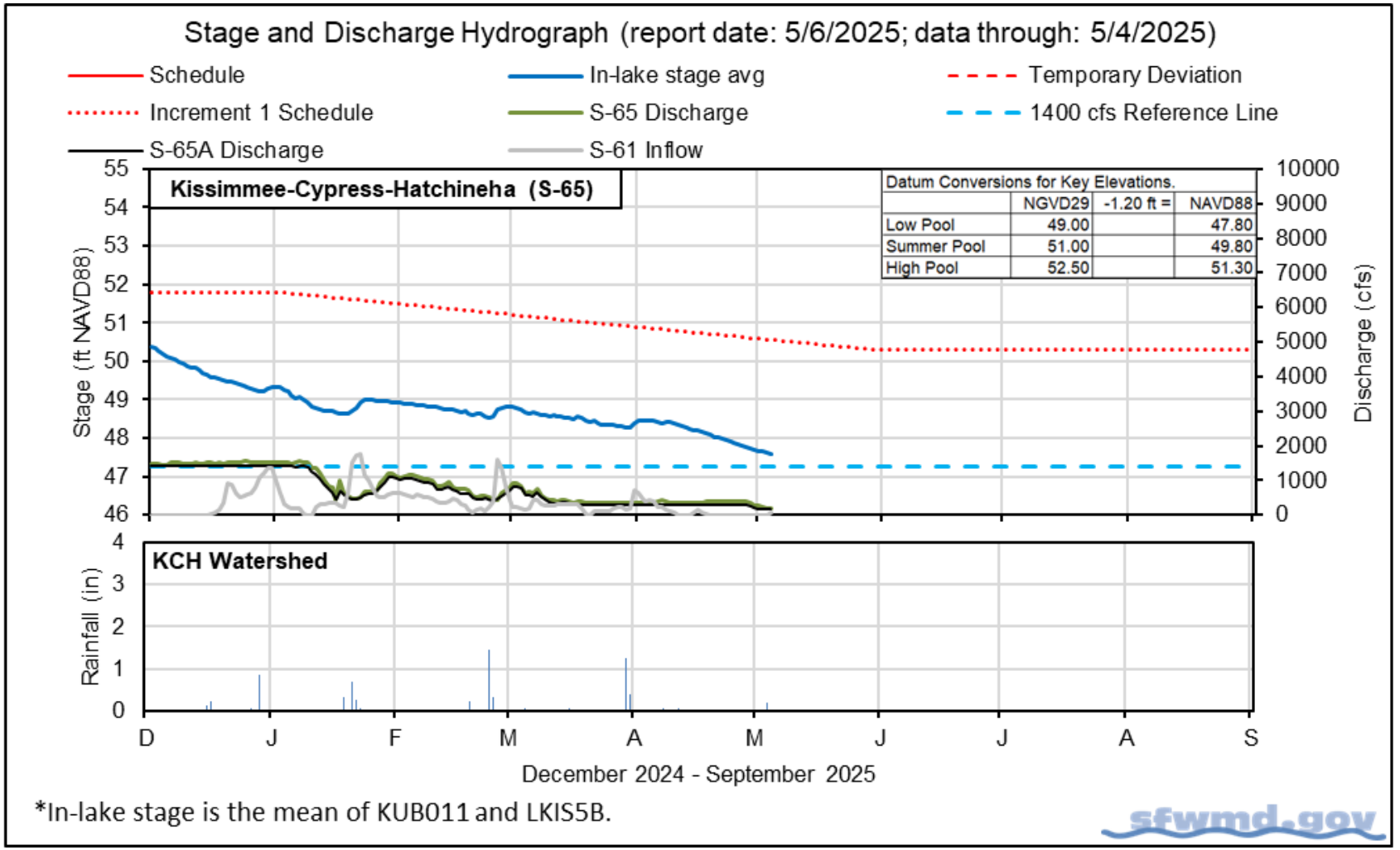


Figure KB-3. Lakes Kissimmee, Cypress and Hatchineha regulation schedule, stage, discharge, and rainfall.

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			
		5/4/25	5/4/25	4/27/25	4/20/25	4/13/25
Discharge	S-65	210	280	390	370	370
Discharge	S-65A[a]	160	200	310	310	310
Headwater Stage (feet NAVD88)	S-65A	45.2	45.2	45.2	45.2	45.3
Discharge	S-65D[b]	140	220	300	300	300
Headwater Stage (feet NAVD88)	S-65D[c]	24.6	24.4	24.6	24.6	24.6
Discharge (cfs)	S-65E[d]	82	170	230	260	260
Discharge (cfs)	S-67	0	0	0	0	0
Dissolved Oxygen (mg/L) [e]	Phase I, II/III river channel	6.1	6.3	5.2	5.9	7.3
River channel mean stage (feet NAVD88) [f]	Phase I river channel	29.8	30.2	30.7	30.7	30.8
Mean depth (feet) [g]	Phase I floodplain	0.21	0.21	0.22	0.23	0.26

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).

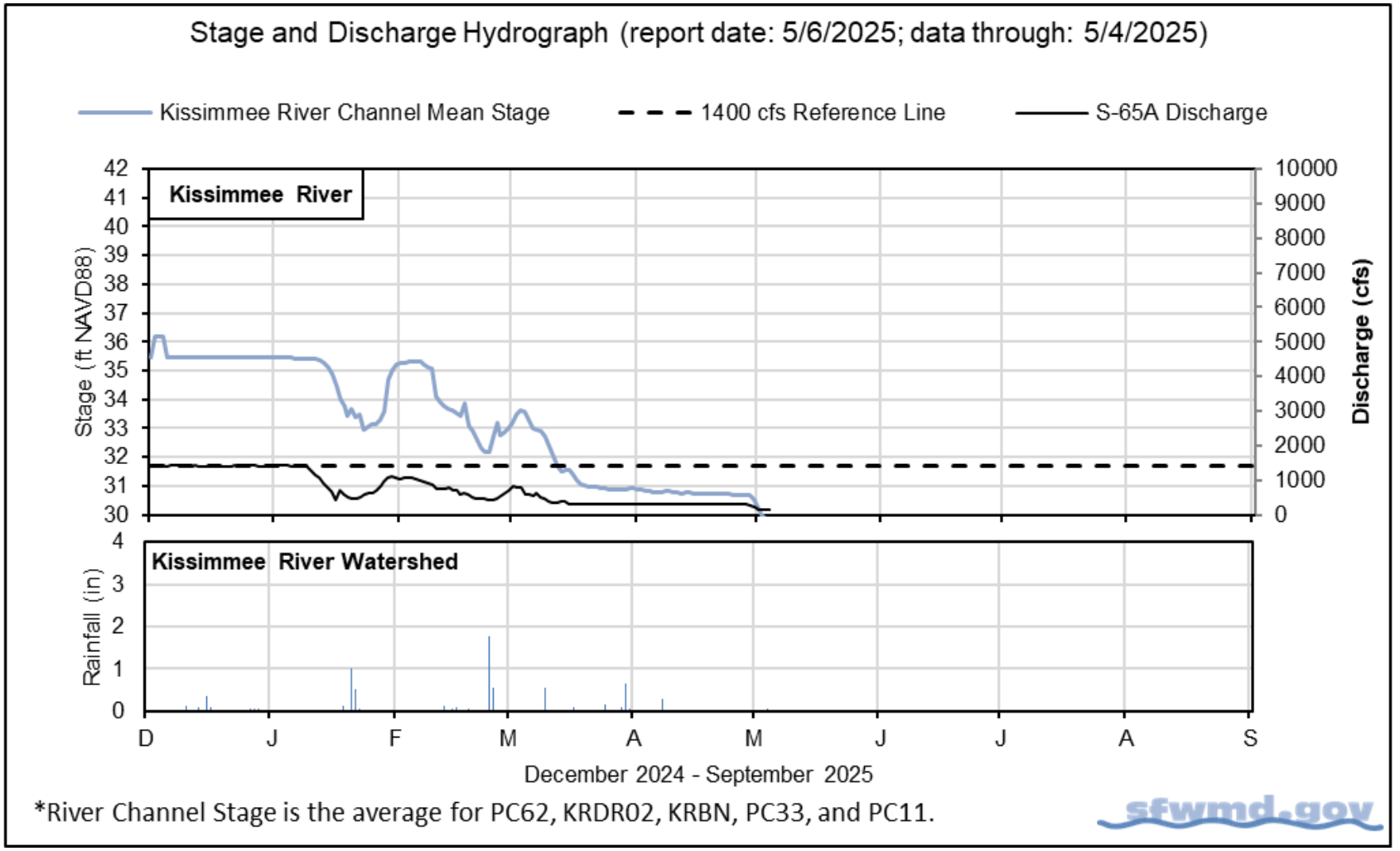


Figure KB-4. Kissimmee River stage, discharge, and rainfall.

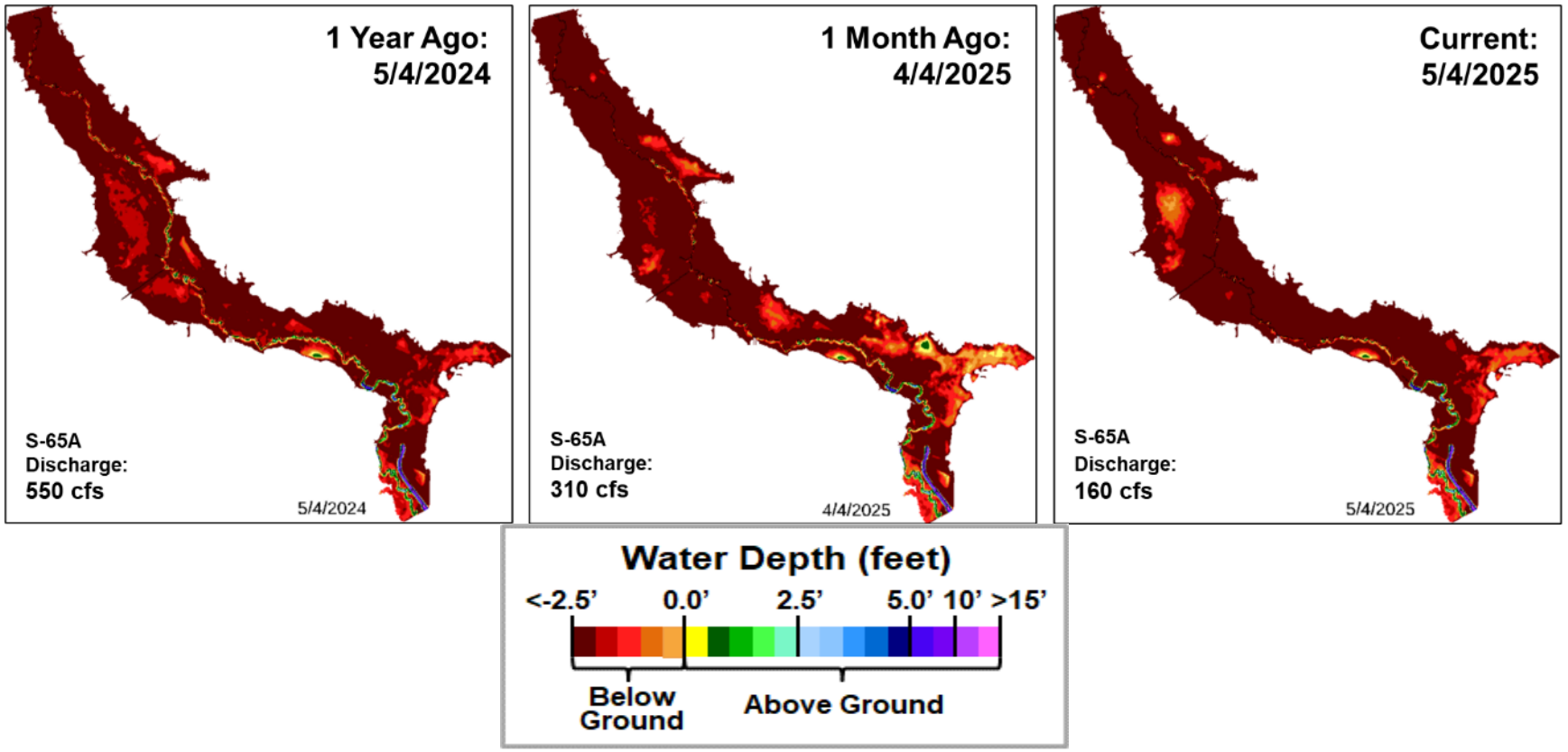


Figure KB-5. Phase I-II-III area Kissimmee River floodplain water depths (from left to right) one year ago, one month ago, and current.

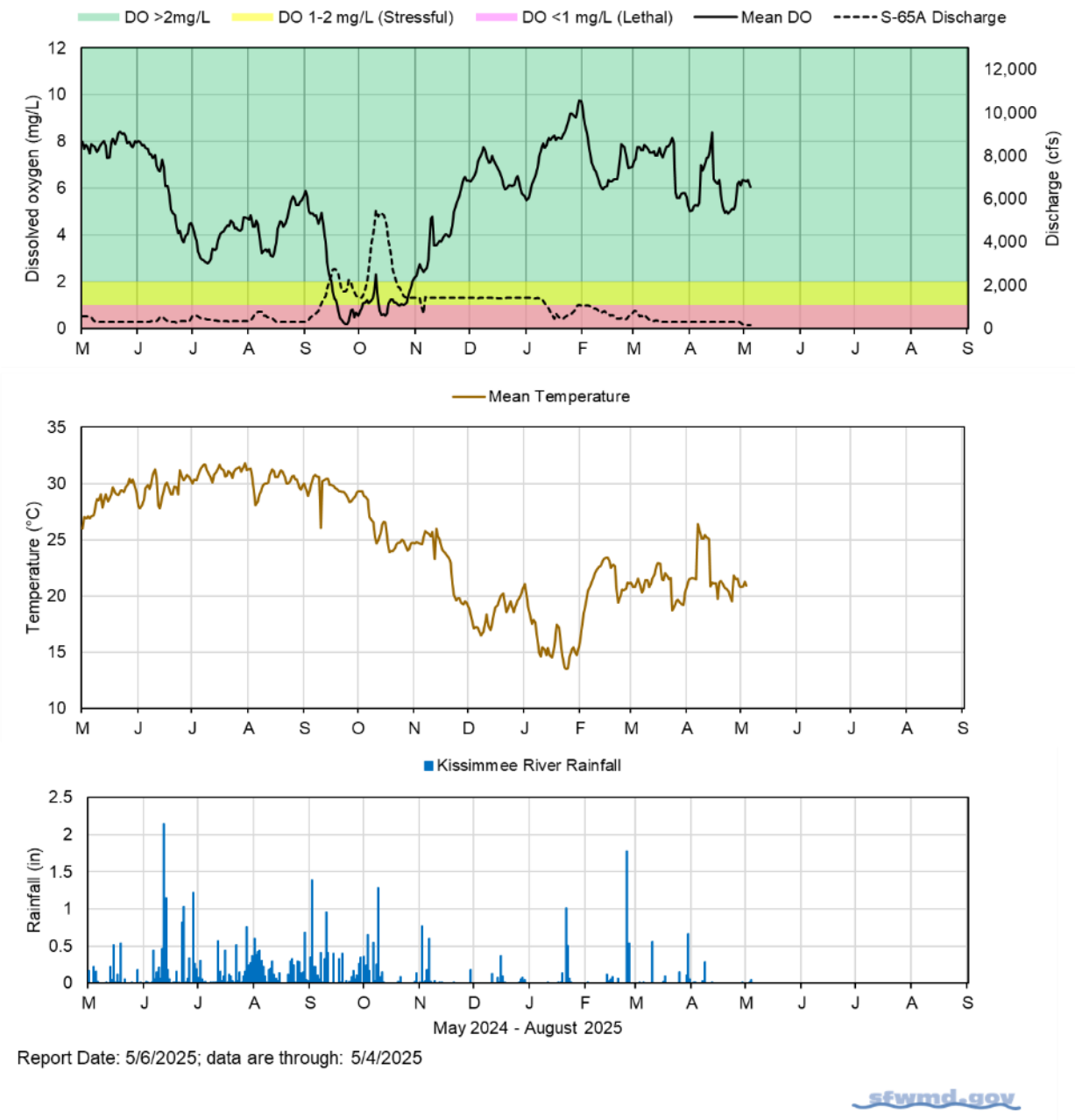


Figure KB-6. Kissimmee River channel mean daily dissolved oxygen concentration (mg/L), S-65A discharge (cfs), temperature (°C) and rainfall (inches). Dissolved oxygen (DO) and temperature are mean daily values averaged for PC62, KRDR02, KRBN, PC33, PC11, PD62R, and PD42R with an average of five stations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

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

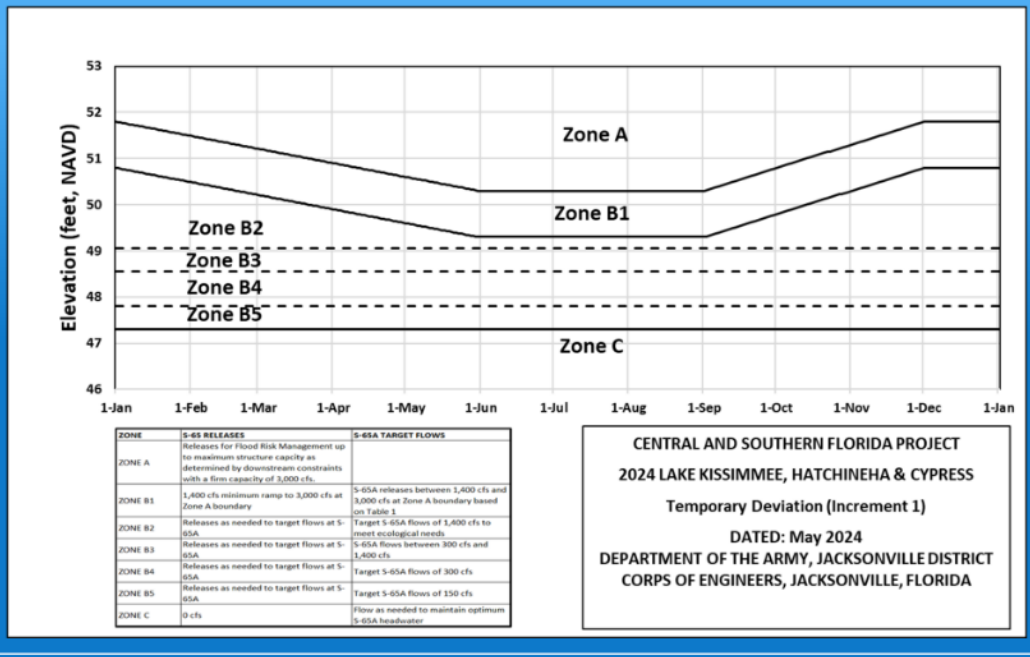
HRS Increment 1 Temporary Deviation Discharge Plan for S-65/S-65A

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



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

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

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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Slide Revised 7/29/2024

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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 9.86 feet NAVD88 (11.17 ft NGVD29) on May 4, 2025, which was 0.27 feet lower than the previous week and 1.28 feet lower than a month ago (**Figure LO-1**). Lake stage is in Zone D of the regulation schedule, 0.28 feet above the Water Shortage Management Band, (**Figure LO-2**) and at the bottom limit of the recovery ecological envelope (**Figure LO-3**). According to NEXRAD, 0.22 inches of rain fell directly over the Lake during the previous week.

Average daily inflows (excluding rainfall) decreased slightly from 230 cfs the previous week to 170 cfs. The only inflow came from the Kissimmee River via the S-65E structure (170 cfs). Average daily outflows (excluding evapotranspiration) decreased slightly from 4,220 cfs the previous week to 3,970 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 April 30, 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**).

The most recent routine water quality and phytoplankton monitoring sampling trips occurred on April 14-16, 2025. Provisional phytoplankton results showed 2 of the 9 phytoplankton communities were dominated by *Microcystis*, though none had detectable toxin levels. Of the 32 sites sampled for water quality parameters, 10 had chlorophyll *a* concentration between 20-40 µg/L, and 3 had concentrations >40 µg/L (**Figure LO-7**). Turbidity values and dissolved inorganic nitrogen levels decreased slightly compared to the March samples, particularly in the shallower nearshore regions (**Figure LO-8**).

The latest wading bird survey of the 2025 season occurred on May 1. Approximately 8,385 birds across 19 flocks were seen actively foraging around the Lake (**Figure LO-9**). This is approximately twice the 5-year moving average.

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

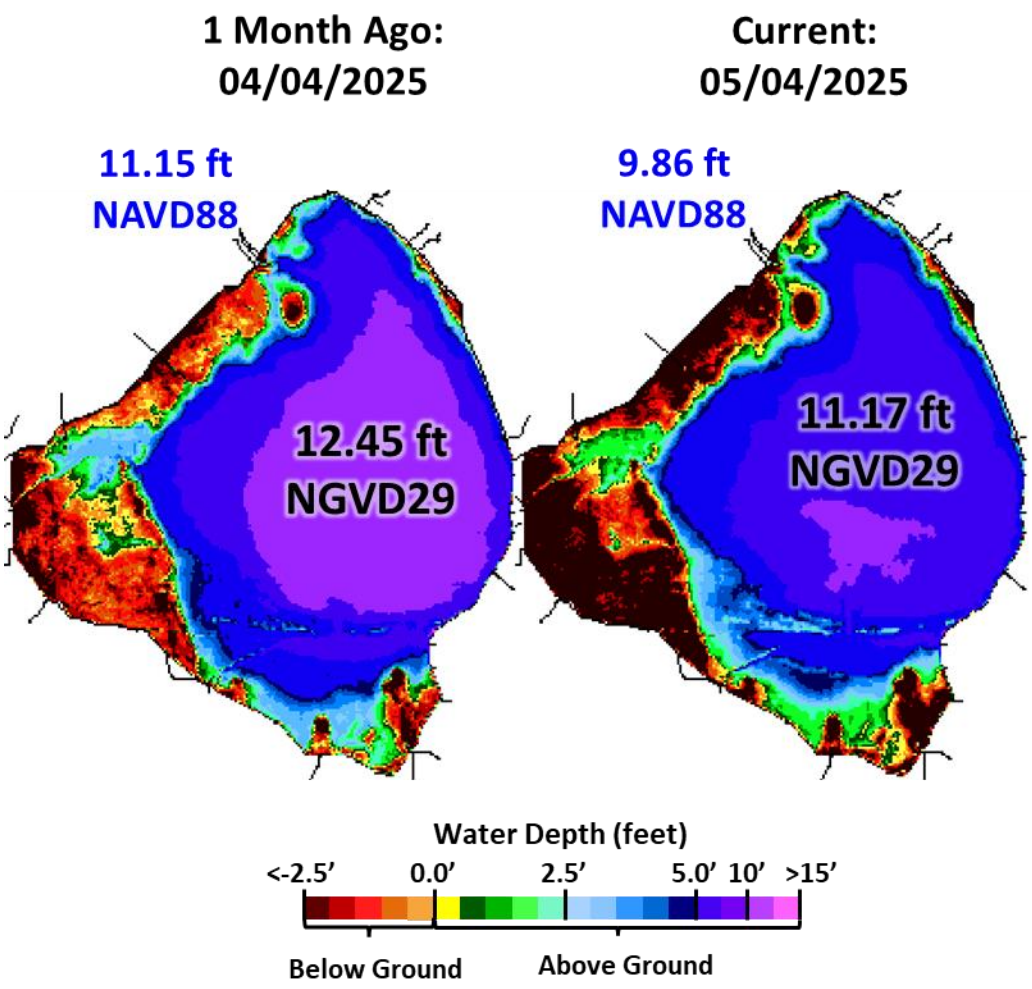

Figure LO-1. Lake Okeechobee water depth estimates based on South Florida Water Depth Assessment Tool (SFWDAT).

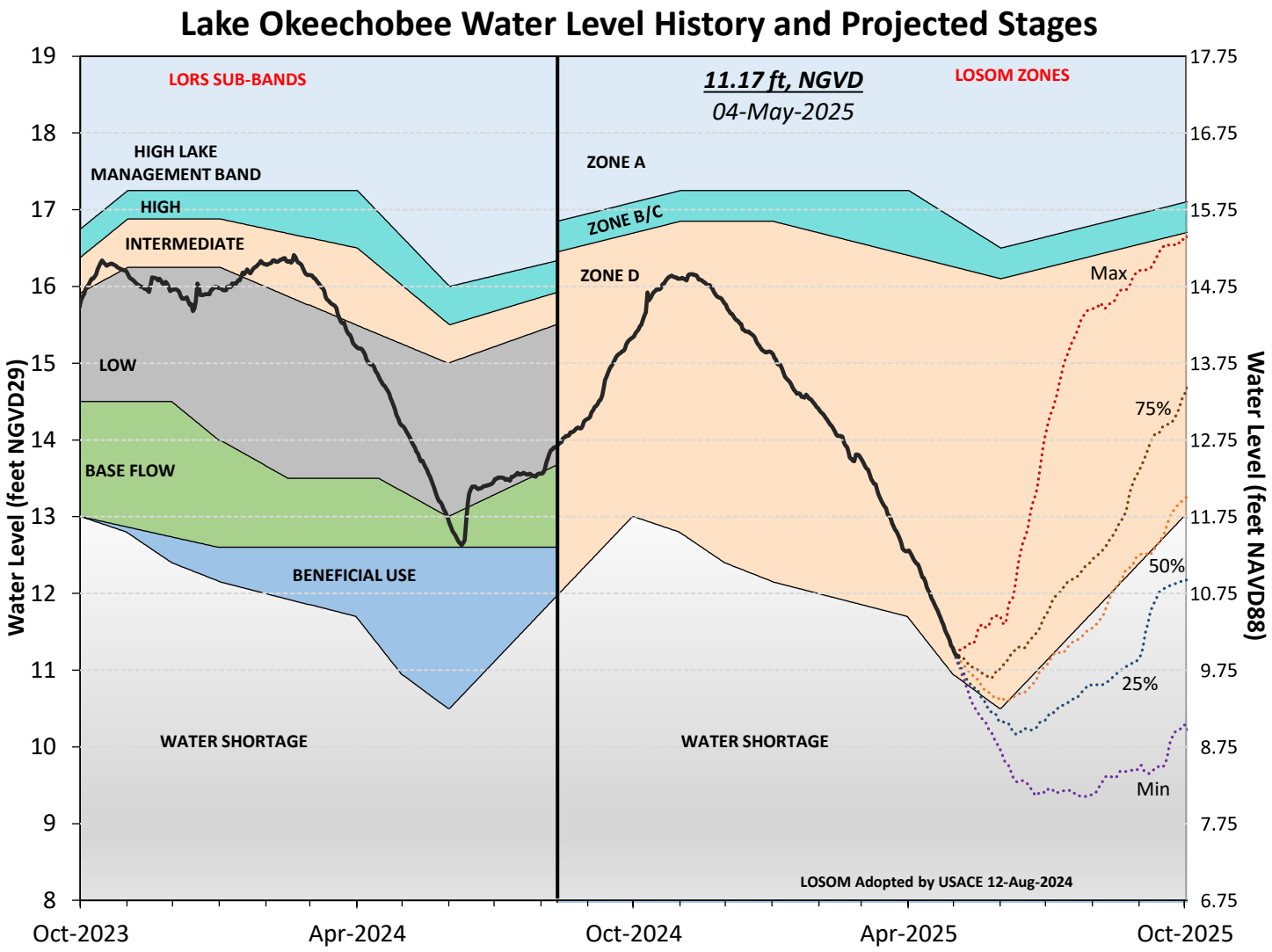

Figure LO-2. Recent Lake Okeechobee stages with projected stages based on a dynamic position analysis. Note: stages are in NGVD29, approximate NAVD88 values are shown for reference.

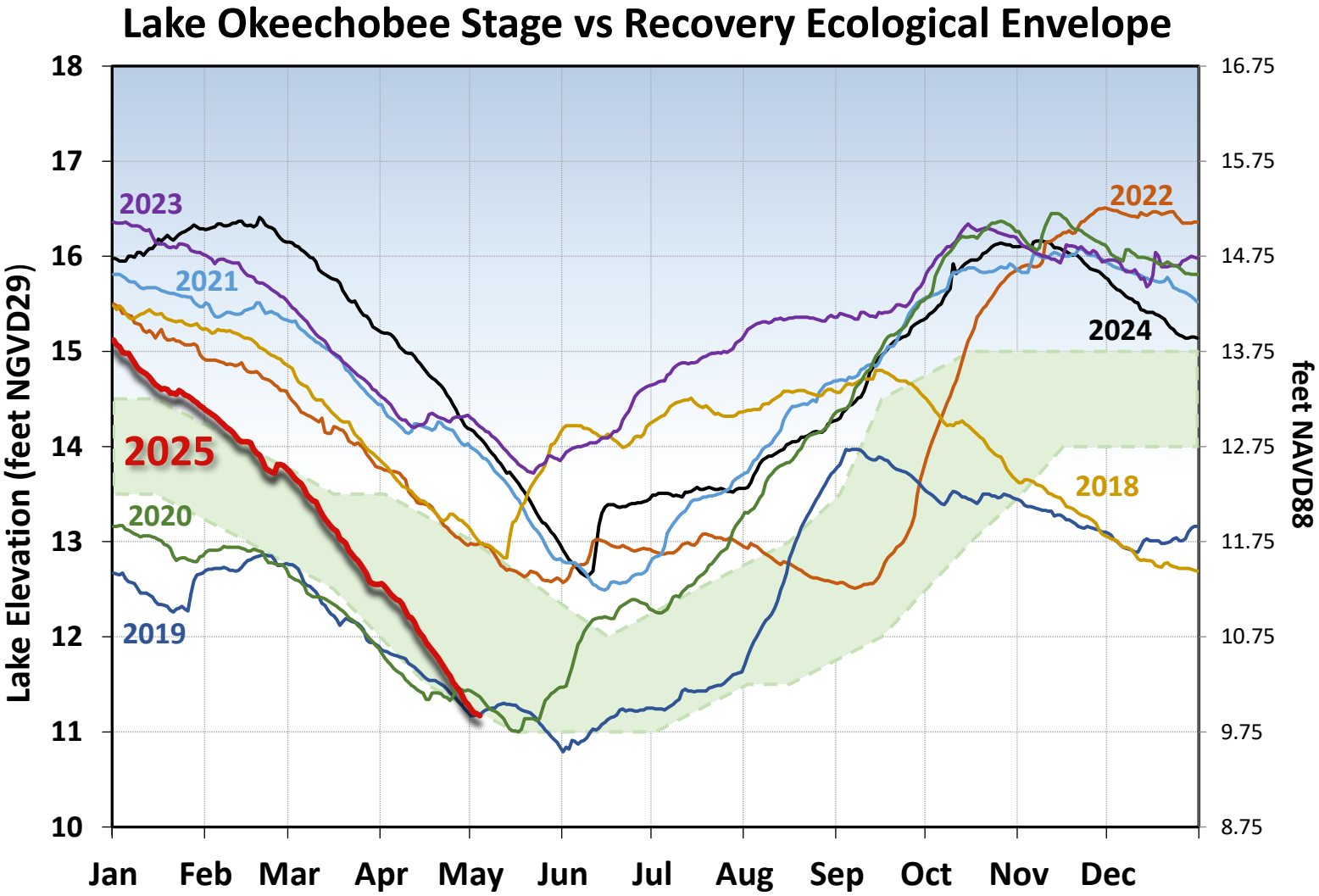

Figure LO-3. The current and seven prior year's annual stage hydrographs for Lake Okeechobee in comparison to the recovery envelope (light green). A shift from the normal ecological envelope to the recovery envelope occurred because the 30-day minimum lake stage (elevations exposed for at least 30 days,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

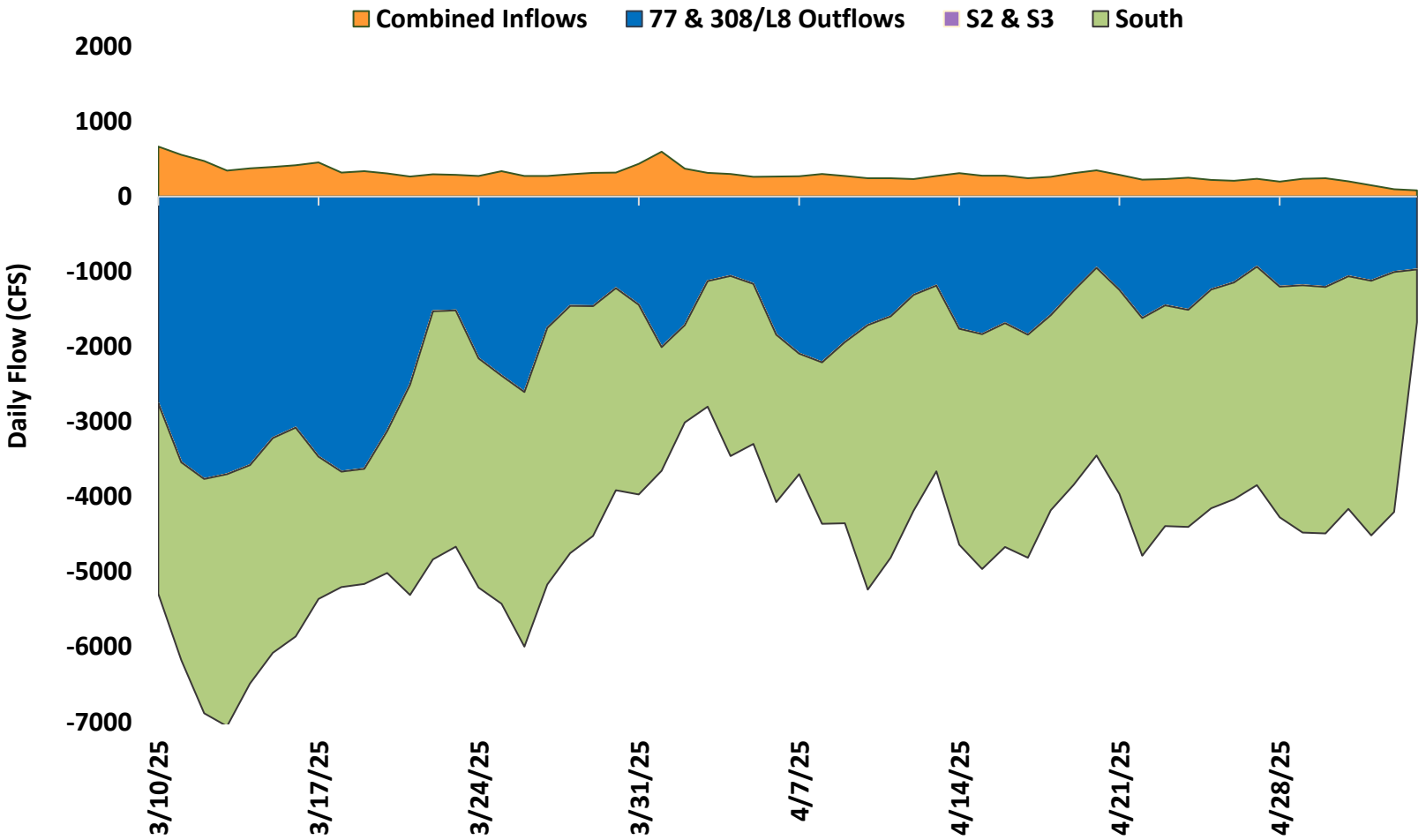

Figure LO-4. Major inflows (orange) to and outflows east and west (blue) from Lake Okeechobee. Outflows south are shown in green. Flows into Lake Okeechobee from the L-8 canal through S-271 (formerly Culvert 10A) or from the C-44 canal through the S-308 are included as inflows. Conversely, flows from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

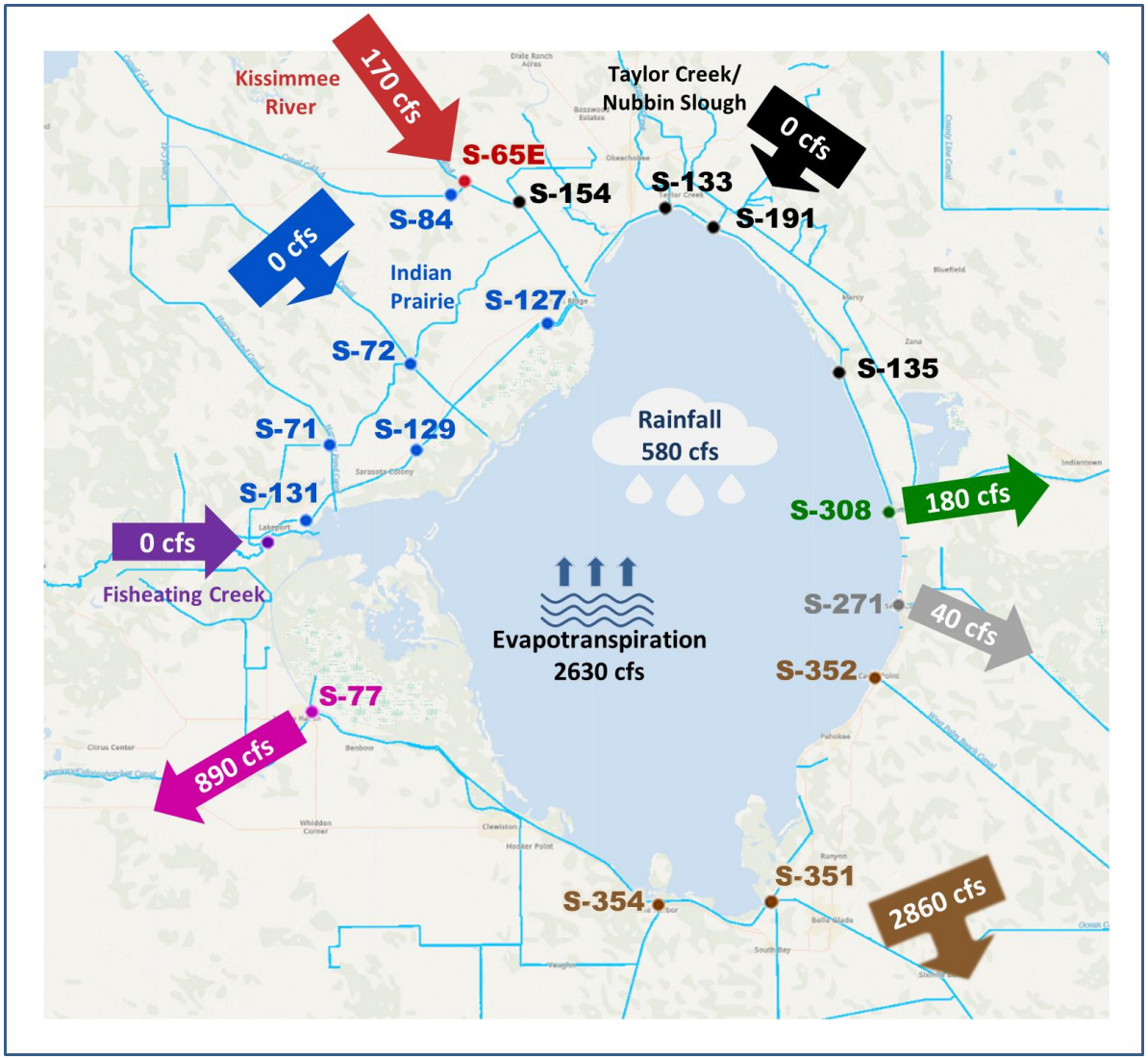

Figure LO-5. Inflows into Lake Okeechobee from Indian Prairie basins, Taylor Creek/Nubbin Slough, Kissimmee River and Fisheating Creek, and outflows to the west via S-77, to the east via S-308, to the south via S-351, S-352, S-354, and to southeast via S-271 (formerly Culvert 10A) for the week of April 28 – May 4, 2025.

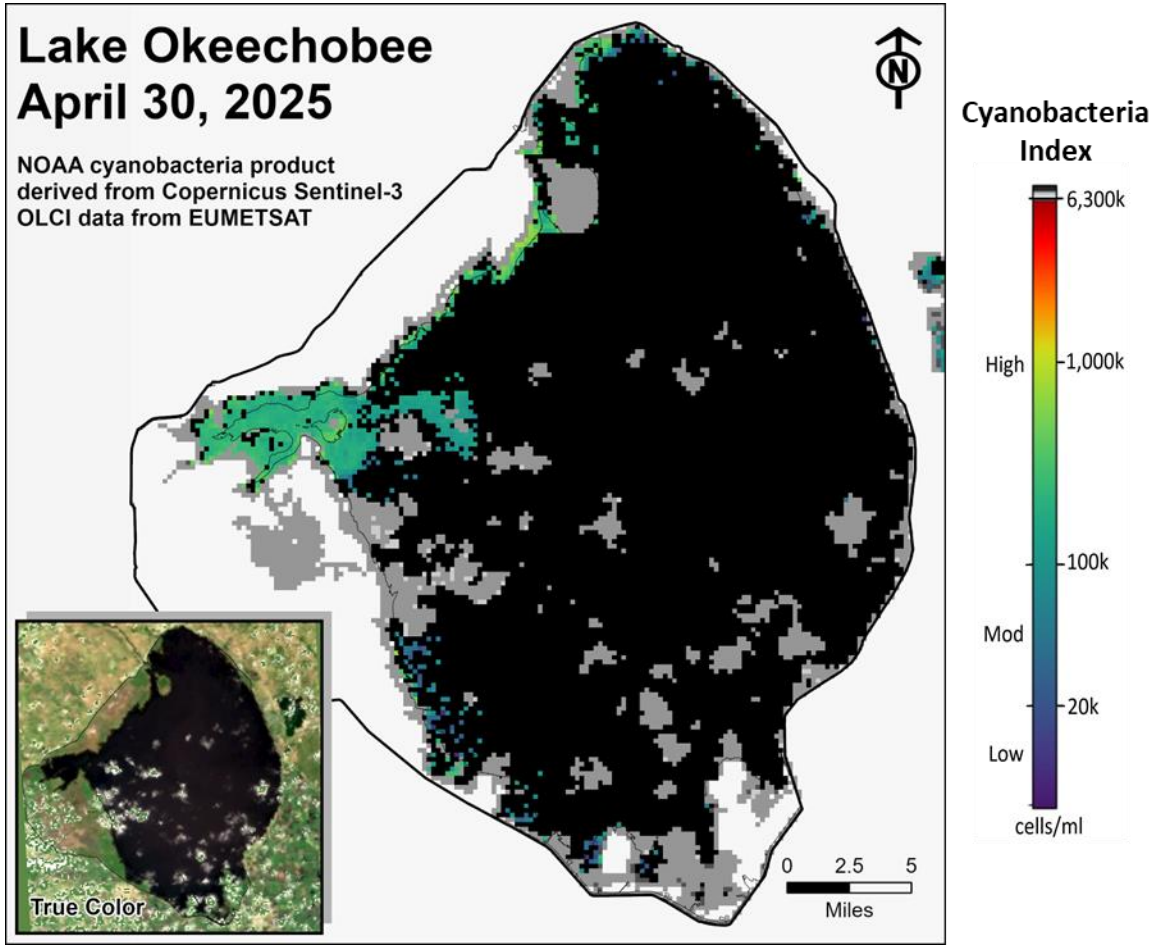

Figure LO-6. Cyanobacteria bloom index level on Lake Okeechobee, based on NOAA's harmful algal bloom monitoring system. Gray color indicates cloud cover. *Provisional NOAA image, subject to change*.

Collection Date: April 14-16, 2025

Station	CHL*a* (ug/L)	TOXIN (ug/L)	TAXA
FEBIN	35.0		
FEBOUT	15.0		
KISSR0.0	10.9	BDL	*mixed*
L005	36.7	BDL	*mixed*
LZ2	24.0	BDL	*mixed*
KBARSE	11.3		
RITTAE2	18.4	BDL	*mixed*
PELBAY3	10.4		
POLE3S	24.6		
LZ25A	12.1		
PALMOUT	19.6	BDL	*Microcys*
PALMOUT1	8.2		
PALMOUT2	7.8		
PALMOUT3	5.7		
POLESOUT	38.5	BDL	*Microcys*
POLESOUT1	37.3		
POLESOUT2	14.4		
POLESOUT3	17.2		
EASTSHORE	29.9		
NES135	52.3		
NES191	27.3		

Station	CHL*a* (ug/L)	TOXIN (ug/L)	TAXA
L001	29.5		
L004	20.0		
L006	5.9		
L007	6.5		
L008	8.9		
LZ30	6.5	BDL	*mixed*
LZ40	5.6		
CLV10A	13.0	BDL	*mixed*
NCENTER	53.7		
S308C	13.3	BDL	*mixed*
S77	40.1		

- SFWMD considers >40 µg/L Chlorophyll *a* (Chl*a*) an algal bloom
- BDL – Below Detectable Limit of **0.25** µg/L
- ND – No Dominant taxa
- P – Pending (white squares)
- NS – Not Sampled
- Station bold font – crew observed possible BGA
- Chlorophyll *a* analyzed by SFWMD
- Toxin and Taxa analyzed by FDEP:
  Microcys = Microcystis; Raphidio = Raphidiopsis; Planktol = Planktolyngbya; Dolicho = Dolichospermum; Pseud = Pseudanabaena; Cylindro = Cylindrospermopsis

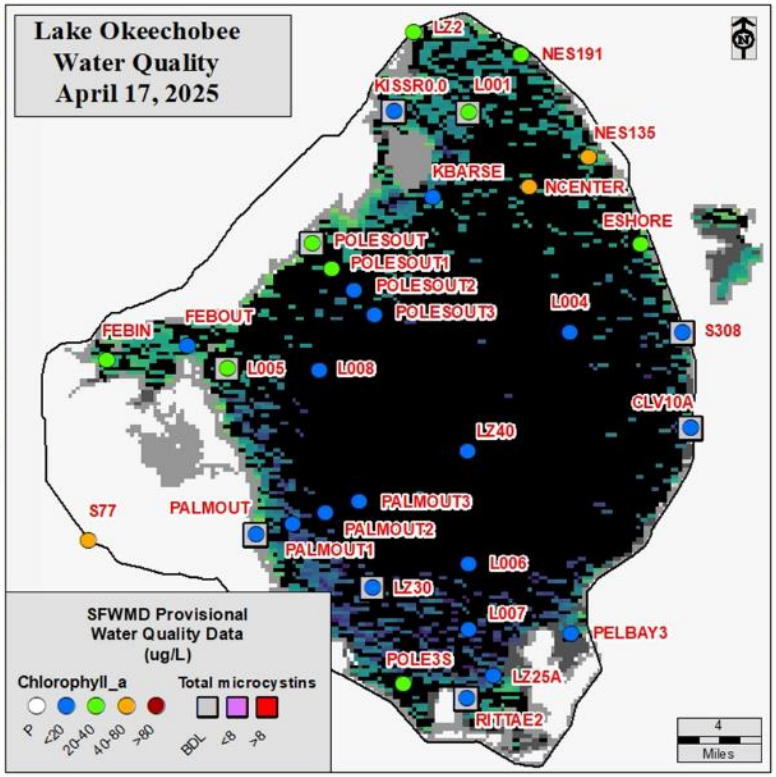

Figure LO-7. Dominant taxa, total microcystin (µg/L) and chlorophyll *a* (µg/L) concentration data from April 14-16, 2025. Sampling locations, chlorophyll *a*, and total microcystin concentrations are overlaid on the April 17, 2025 image from NOAA's harmful algal bloom monitoring system. Gray color indicates cloud cover.

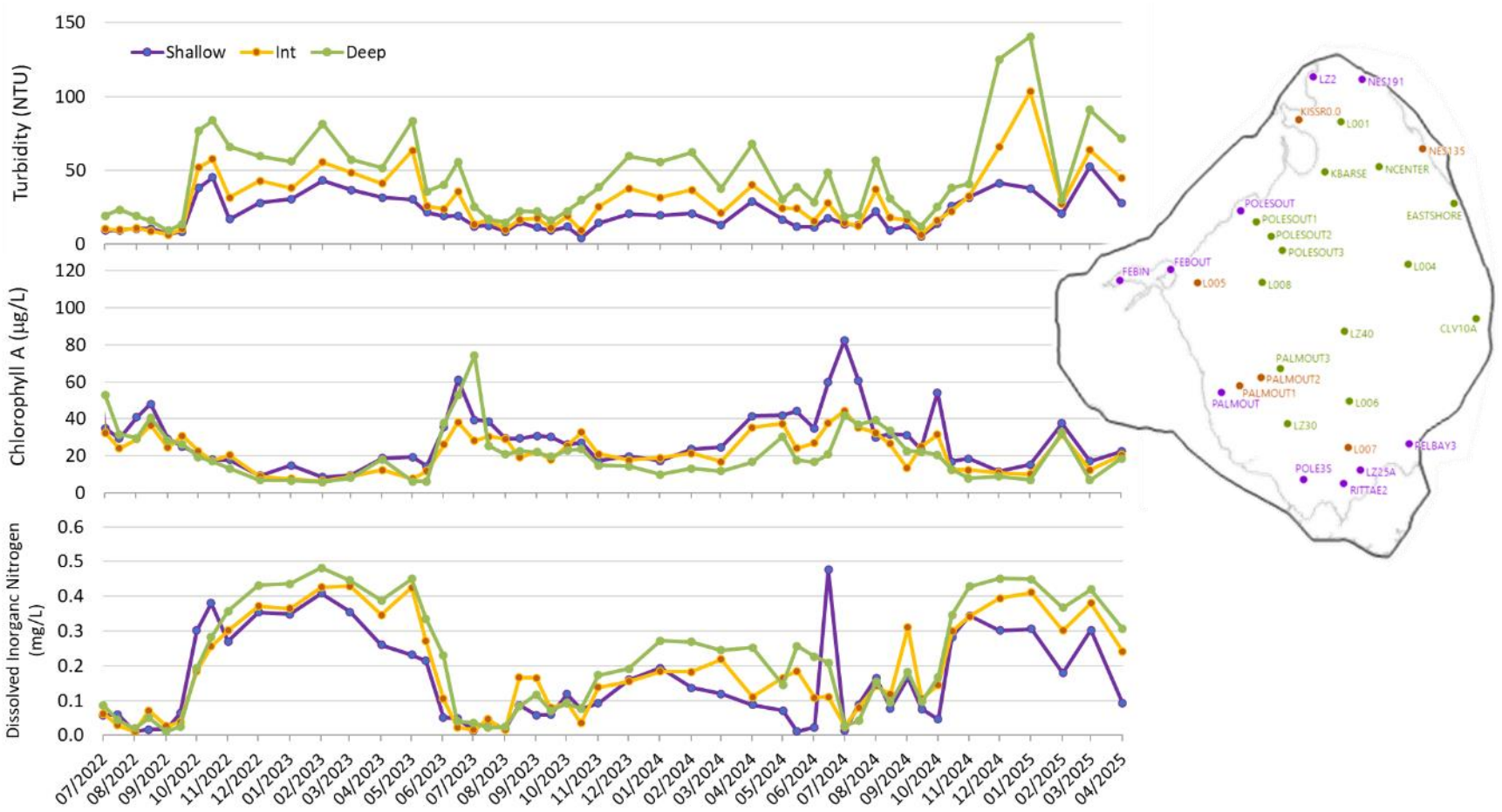

Figure LO-8. Select water quality parameters from July 2022 to the most recent sampling on April 14-16, 2025. Graphs show mean turbidity, chlorophyll *a*, and dissolved inorganic nitrogen values from sites in shallow, intermediate and deep portion of the lake. Inset map shows the locations of the different sampling sites.

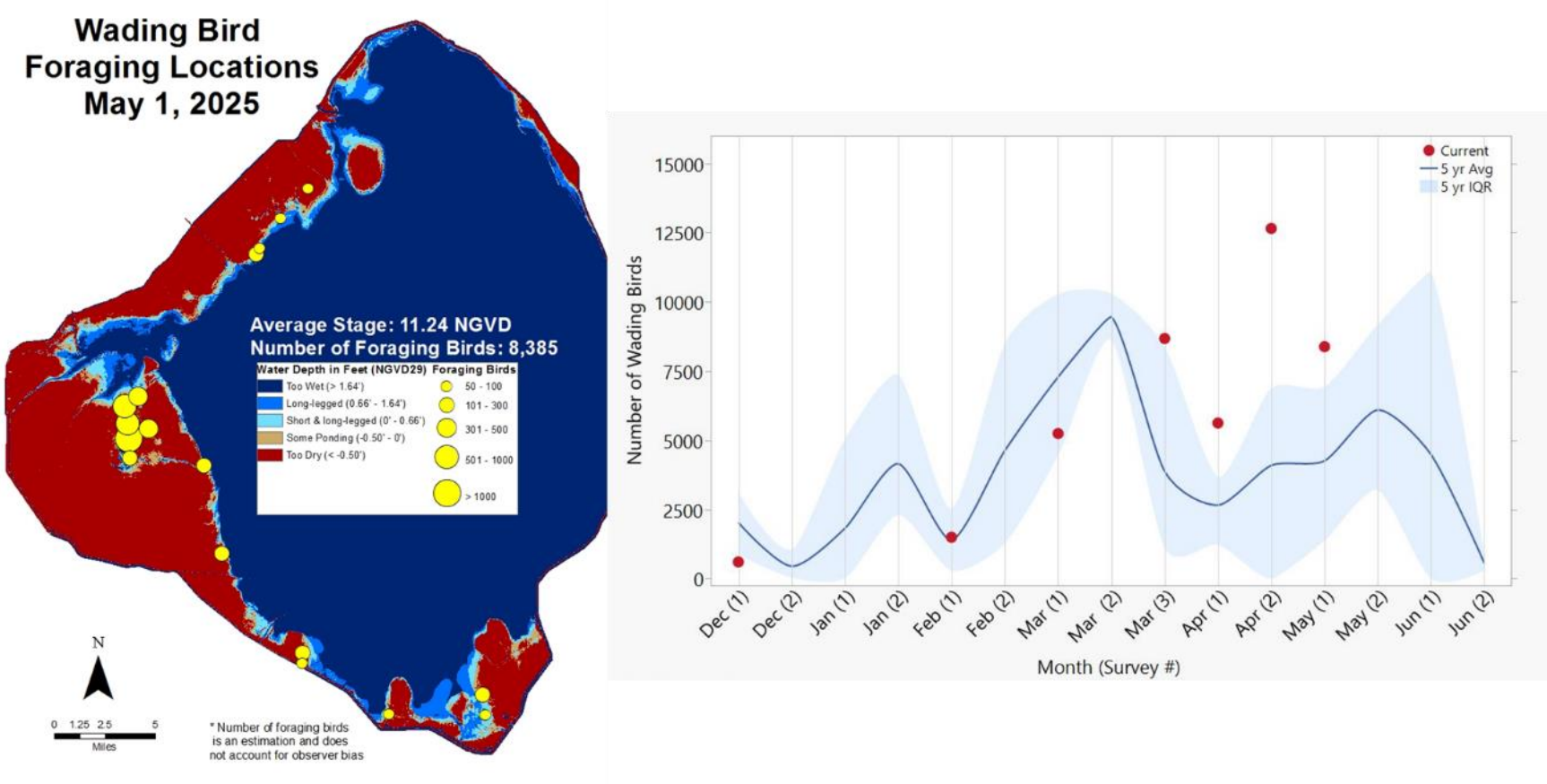

Figure LO-9. Results from the wading bird survey flight conducted on May 1, 2025. Map graphic indicates location of flocks and approximate abundance of actively foraging wading birds on Lake Okeechobee. Graph compares the current seasons wading bird counts (red dots) to the mean and interquartile ranges from the preceding 5 years of surveys.

Estuaries

St. Lucie Estuary

Over the past week, mean total inflow to the St. Lucie Estuary was 208 cfs (**Figures ES-1** and **ES-2**), and the previous 30-day mean inflow was 116 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 the US1 Bridge and A1A Bridge site and decreased at HR1 sites (**Table ES-1** and **Figure ES-3**). The seven-day moving average of the surface and bottom salinities at the US1 Bridge was 23.9. 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 413 cfs (**Figures ES-6** and **ES-7**), and the previous 30-day mean inflow was 935 cfs. For comparison, the historical provisional mean inflows from the contributing areas are shown in **Figure ES-7**.

Over the past week, salinities increased at all 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 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[1]) 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 4.0 or lower and the 30-day moving average surface salinity to be 3.2 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.

[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 May 2, 2025, that *Karenia brevis*, the Florida red tide dinoflagellate, was not observed 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.

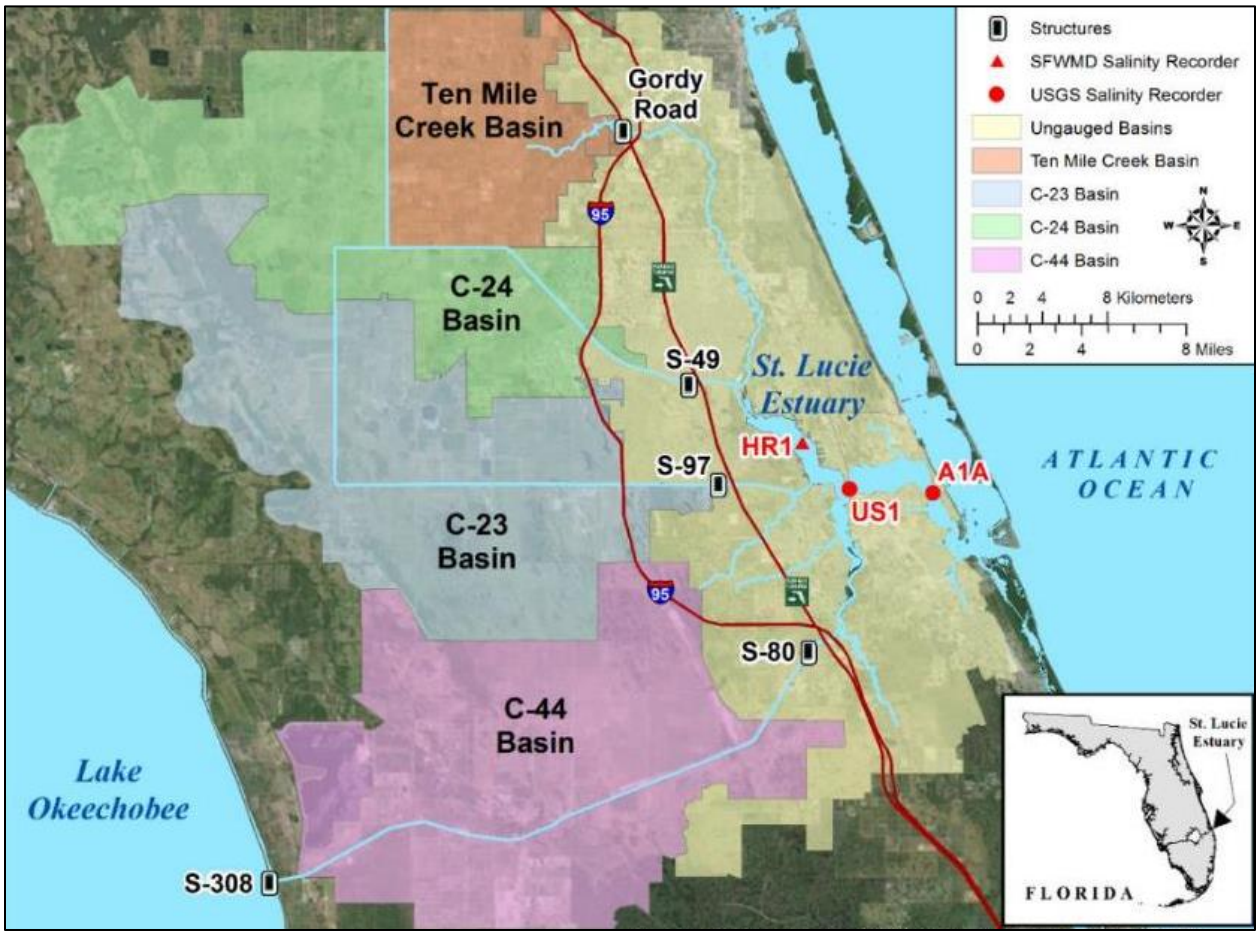

Figure ES-1. Basins, water control structures and salinity monitoring sites in the St. Lucie Estuary.

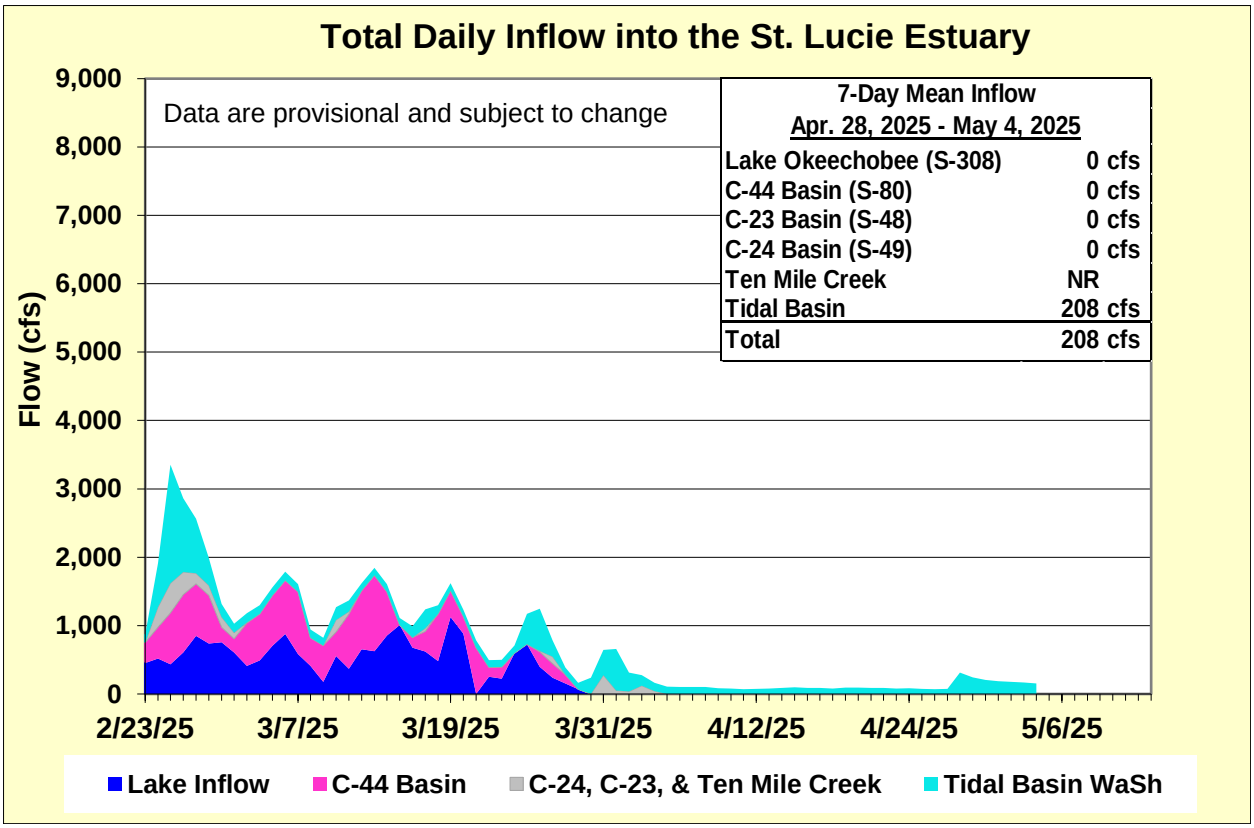

Figure ES-2. Total daily inflows from Lake Okeechobee and runoff from the C-44, C-23, C-24, Ten Mile Creek, and Tidal Basins into the St. Lucie Estuary.

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)	**15.9** (16.3)	**20.9** (18.9)	10.0 – 25.0
US1 Bridge	**23.6** (21.9)	**23.9** (22.1)	10.0 – 25.0
A1A Bridge	**30.4** (29.9)	**31.4** (31.6)	10.0 – 25.0

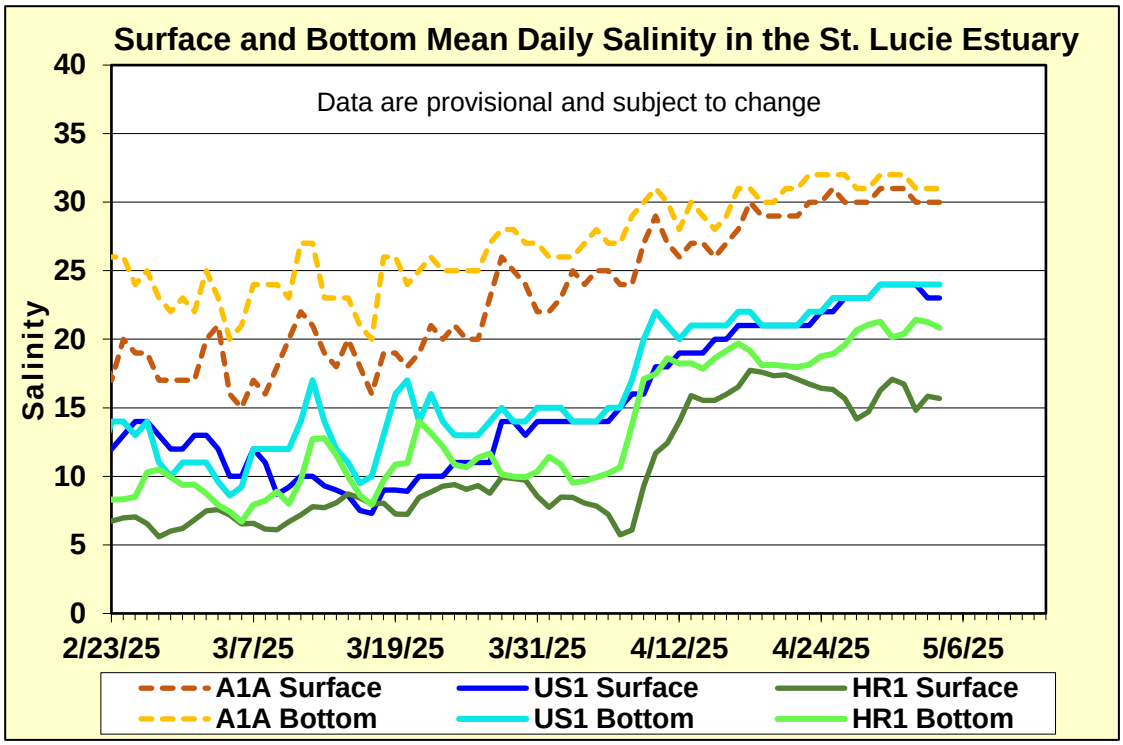

Figure ES-3. Mean daily salinity at the A1A, US1, and HR1 sites in the St. Lucie Estuary.

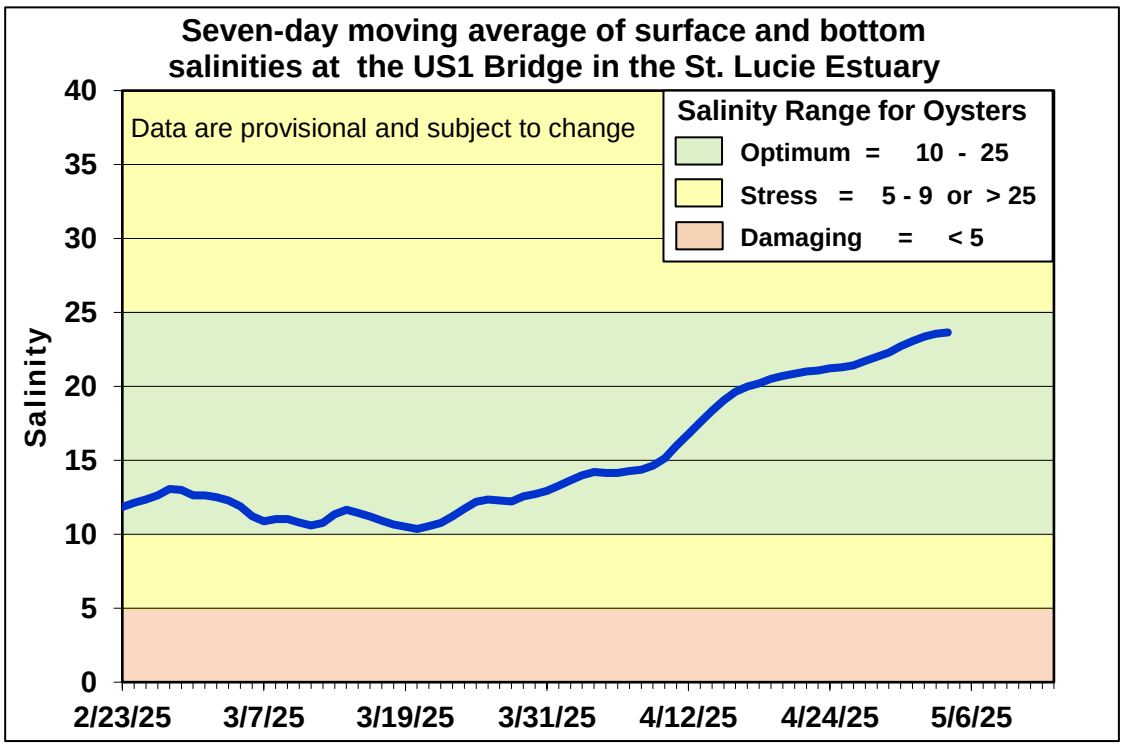

Figure ES-4. Seven-day moving average of the surface and bottom salinities at the US1 Bridge in the St. Lucie Estuary.

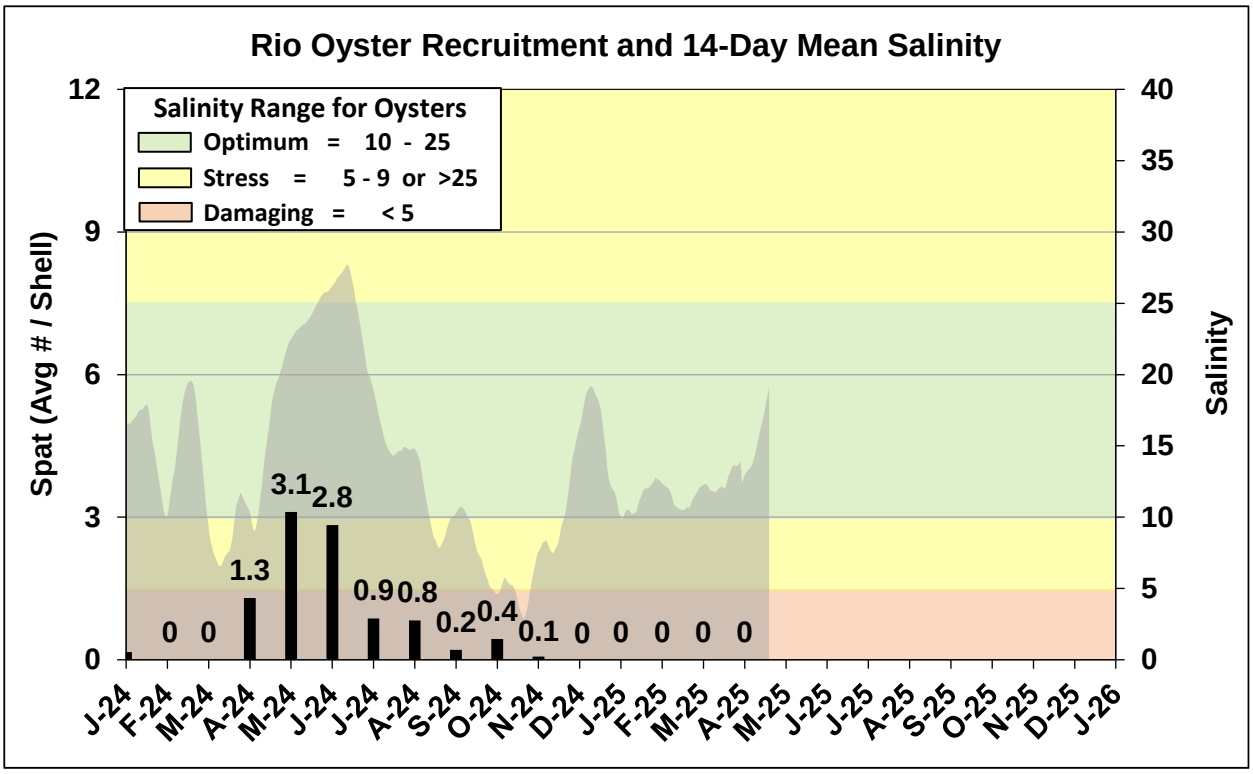

Figure ES-5. Mean oyster recruitment at the Rio oyster monitoring station and 14-day mean salinity at US1 Bridge.

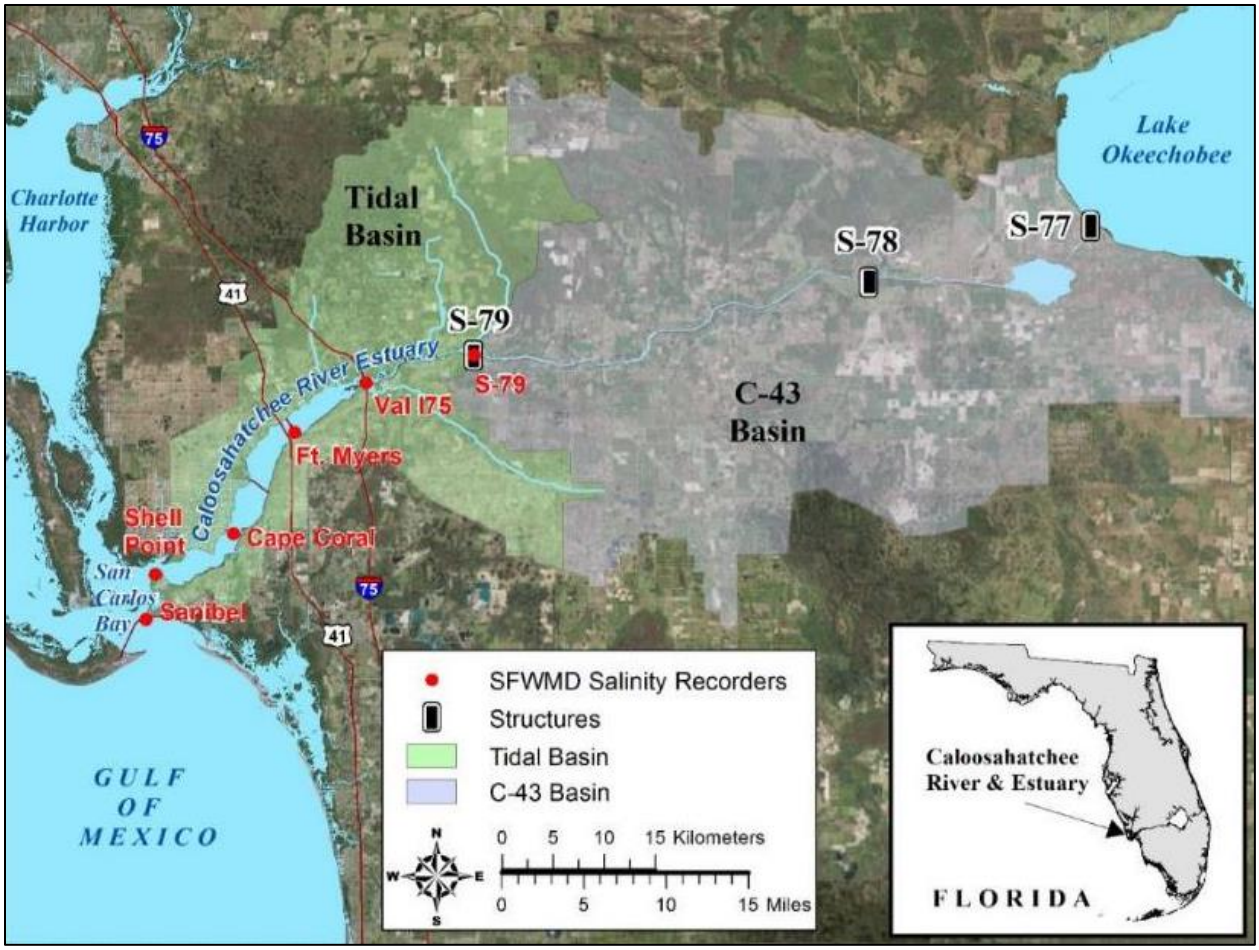

Figure ES-6. Basins, water control structures, and salinity monitoring sites in the Caloosahatchee River Estuary.

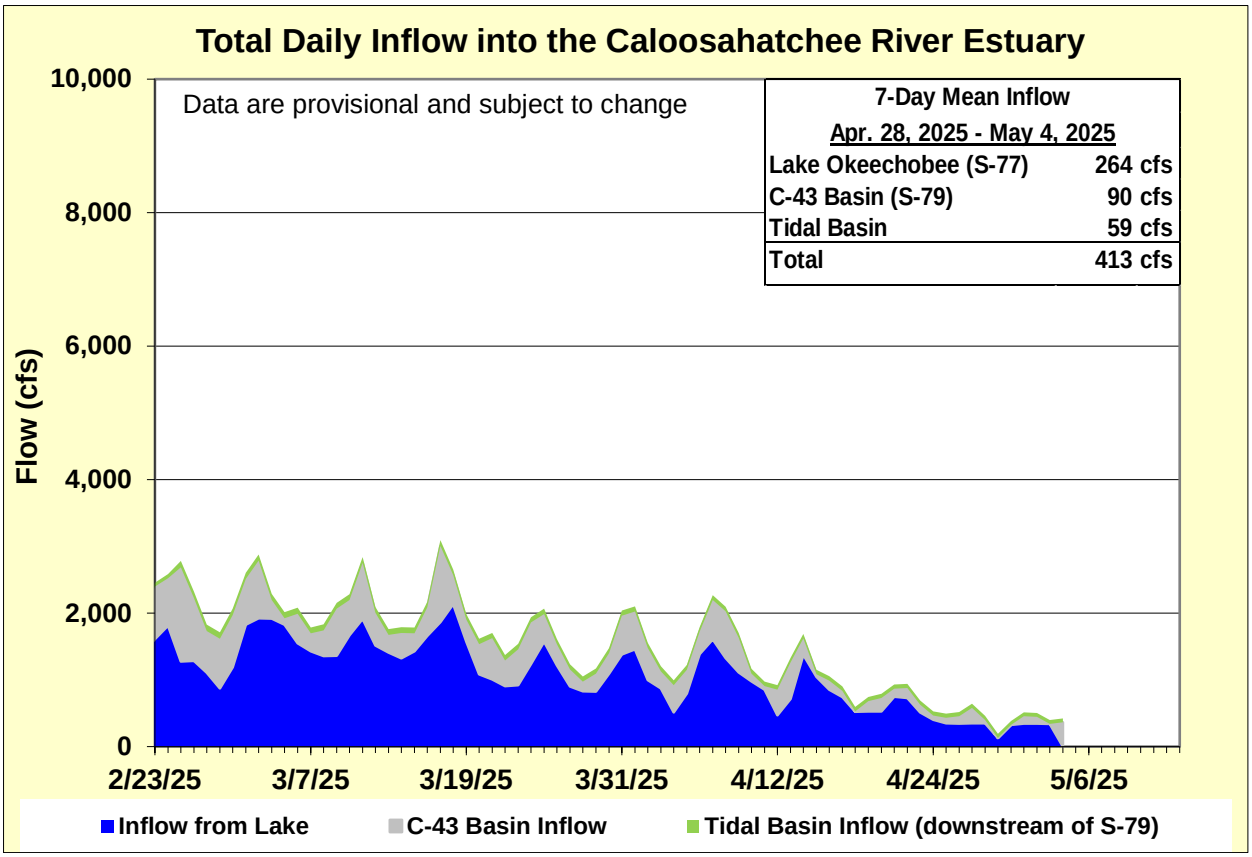

Figure ES-7. Total daily inflows from Lake Okeechobee, and runoff from the C-43 and Tidal basins into the Caloosahatchee River Estuary.

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)	**3.5** (2.4)	**3.6** (2.5)	0.0 – 10.0
Val I-75	**4.0** (2.0)	**4.6** (3.4)	0.0 – 10.0
Fort Myers Yacht Basin	**10.5** (8.0)	**13.1** (12.0)	0.0 – 10.0
Cape Coral	**19.8** (16.4)	**21.7** (18.8)	10.0 – 25.0
Shell Point	**32.6** (30.6)	**33.1** (31.1)	10.0 – 25.0
Sanibel	**35.0** (33.7)	**35.4** (34.4)	10.0 – 25.0

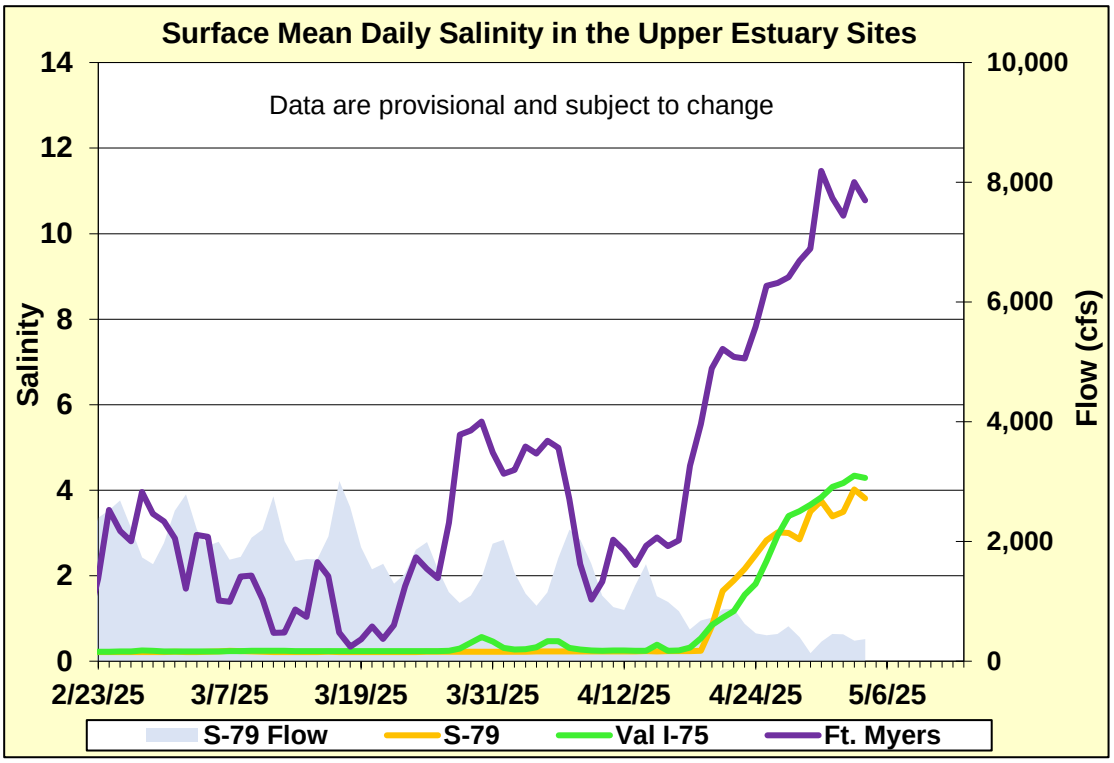

Figure ES-8. Mean daily salinity at upper Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.

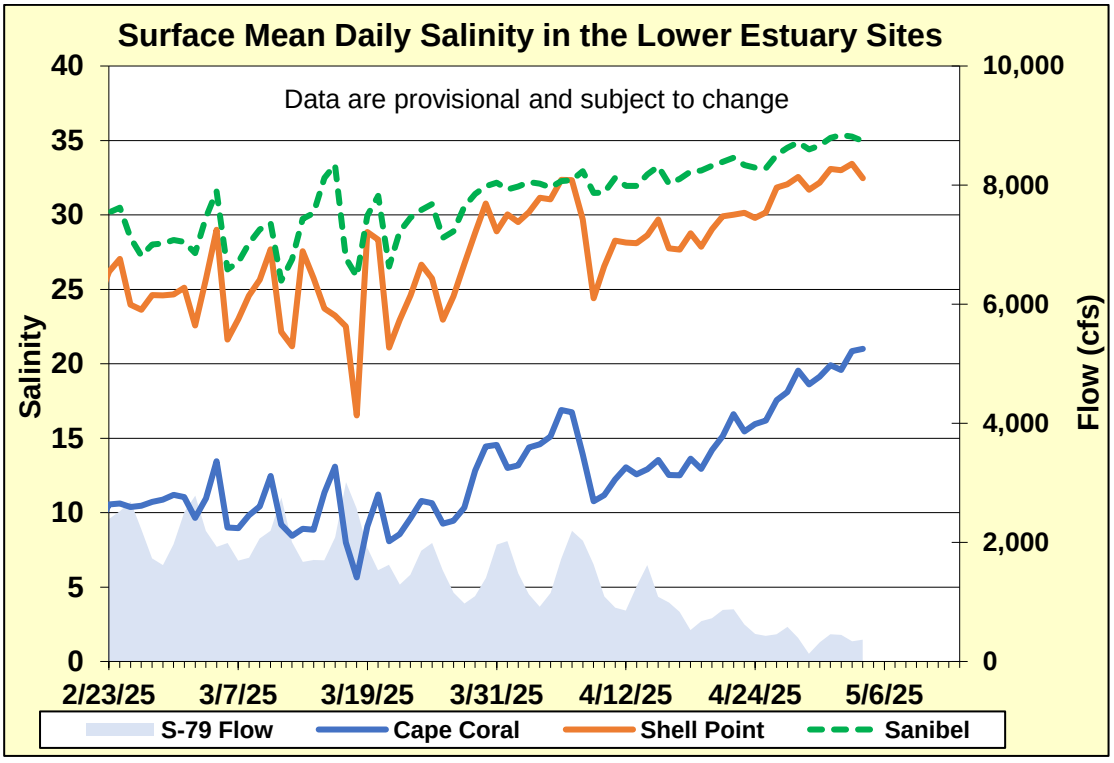

Figure ES-9. Mean daily surface salinity at lower Caloosahatchee River Estuary monitoring sites and mean daily flow at S-79.

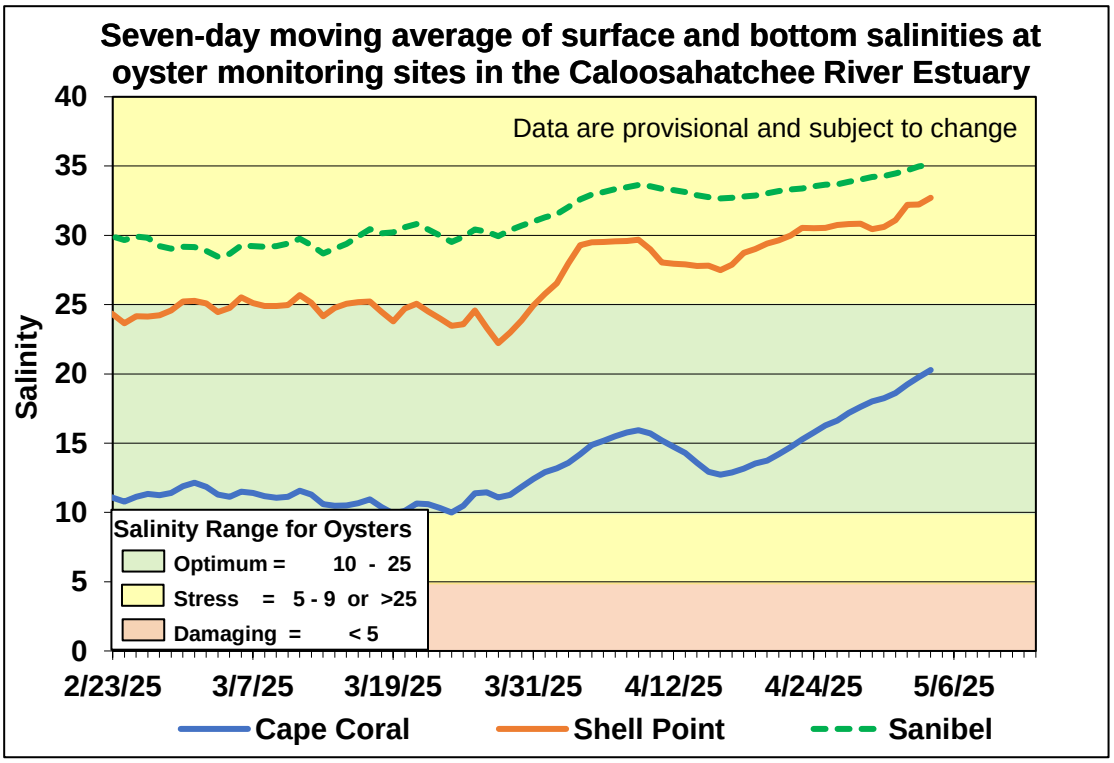

Figure ES-10. Seven-day moving average of surface and bottom salinities at Cape Coral, Shell Point, and Sanibel monitoring sites in the Caloosahatchee River Estuary.

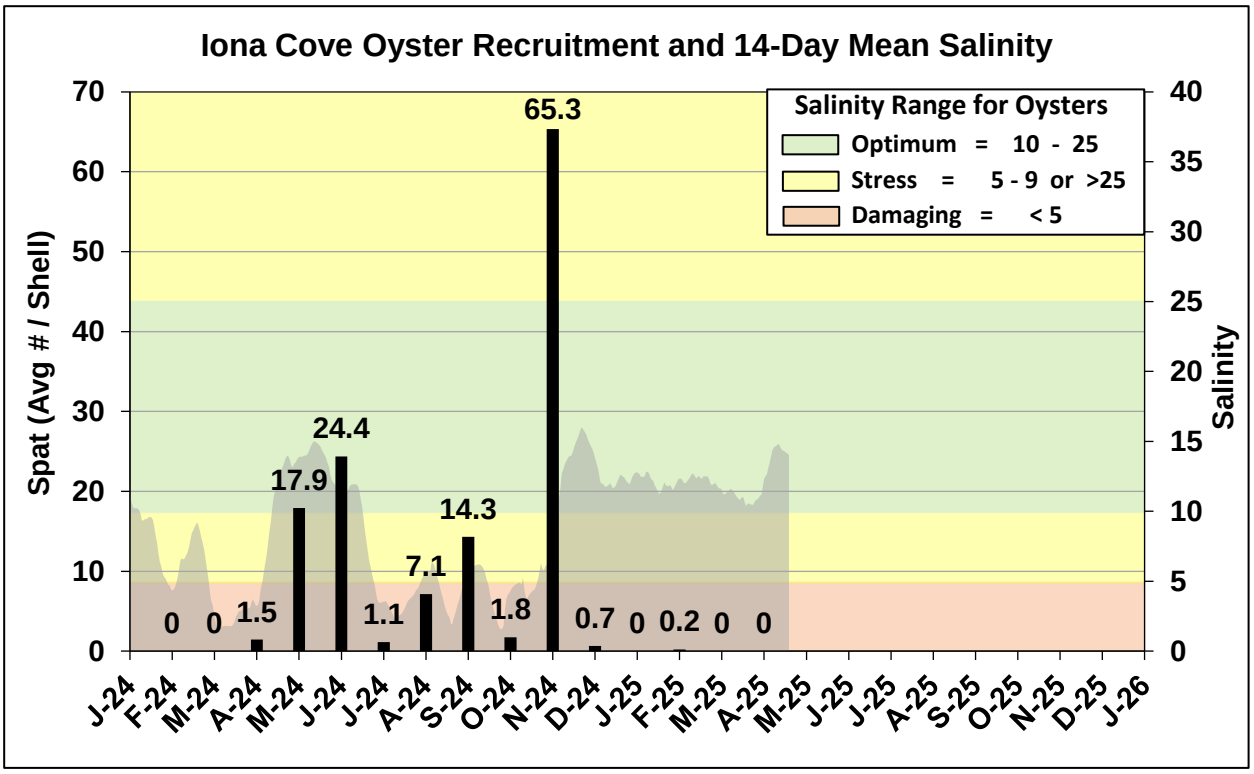

Figure ES-11. Mean oyster recruitment at the Iona Cove oyster monitoring station and 14-day mean salinity at Cape Coral.

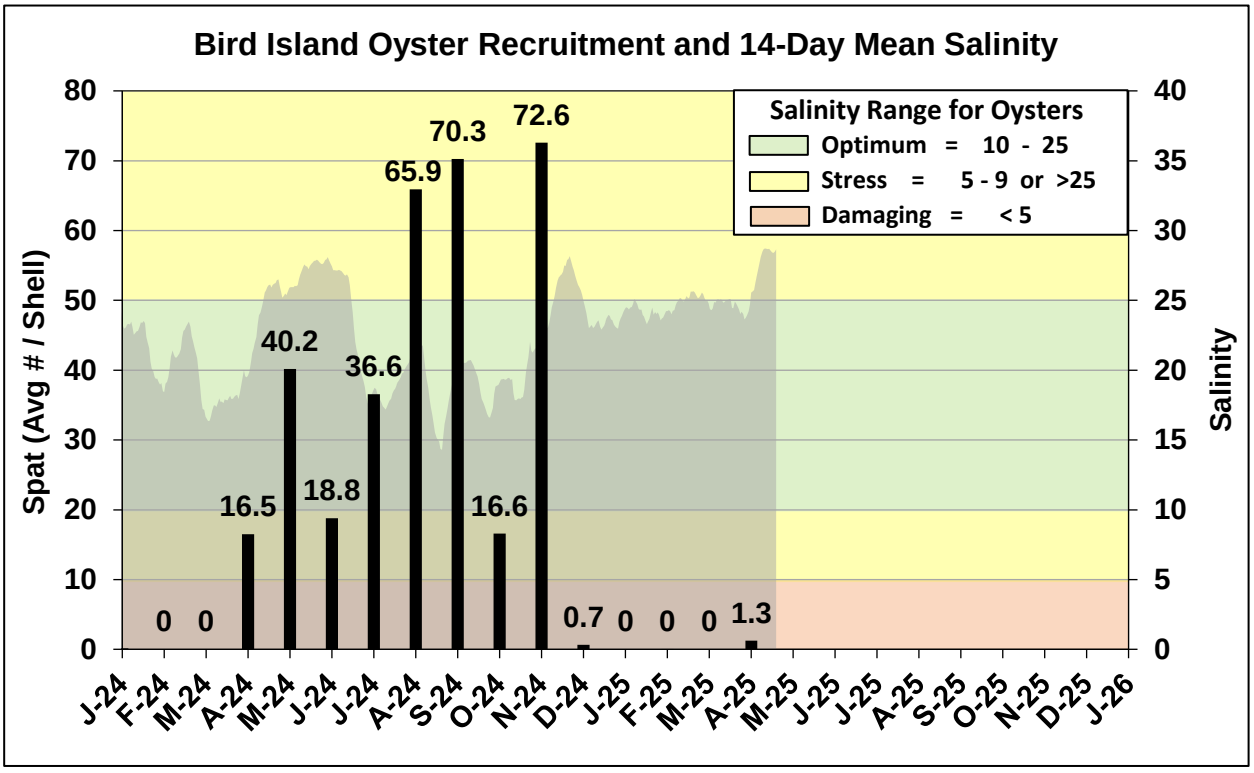

Figure ES-12. Mean oyster recruitment at the Bird Island oyster monitoring station and 14-day mean salinity at Shell Point.

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	4.0	3.2
B	650	52	3.1	3.0
C	1000	52	2.1	2.6
D	1200	52	1.6	2.5

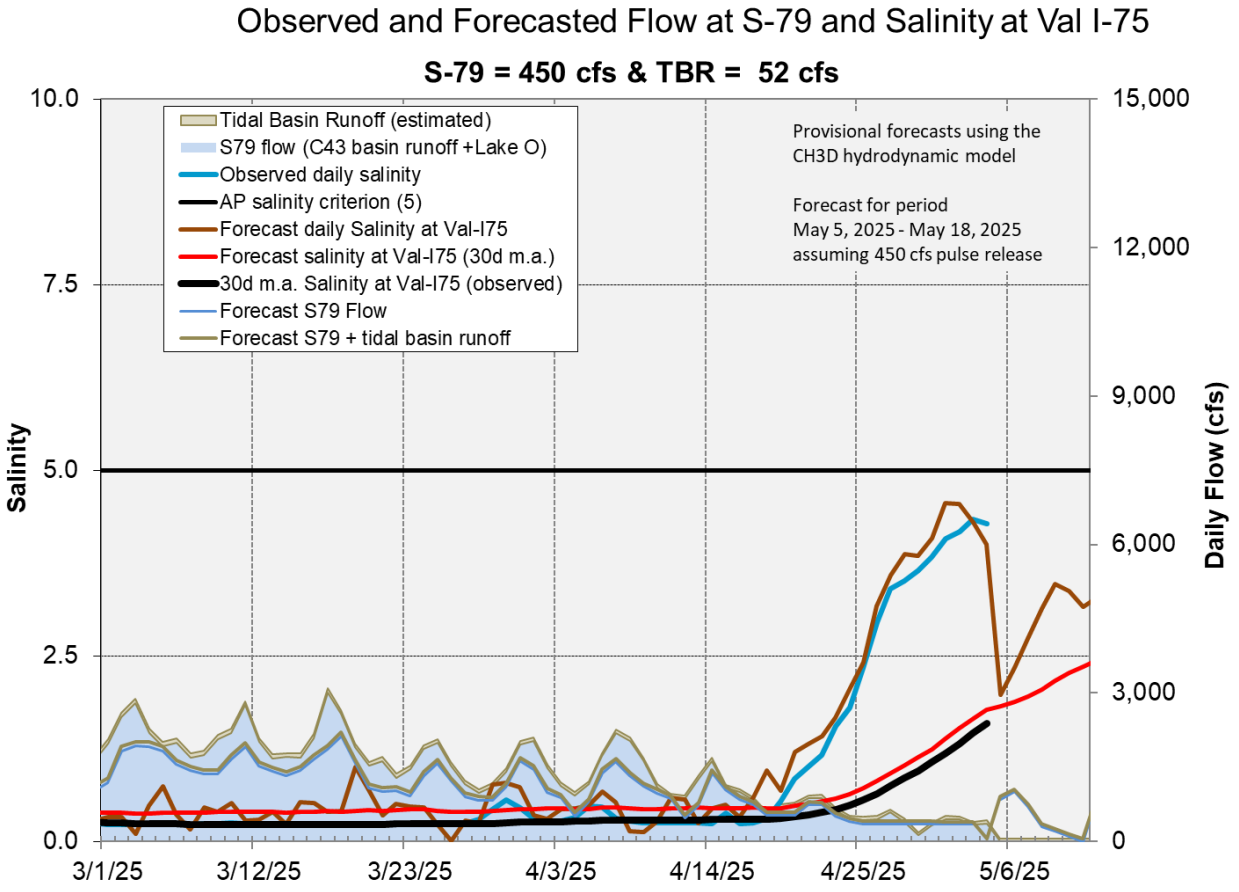

Figure ES-13. Surface salinity forecast at the Val I-75 site assuming a 450 cfs pulse release at S-79.

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: 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^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 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^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 4/30/2025): ~1,216,000 ac-ft
- Lake Okeechobee releases to FEBs/STAs
  - 4/28/2025 to 5/4/2025: ~9,600 ac-ft
  - WY2025: ~347,800 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

Estimated Inflow and Outflow Volumes
Water Year 2025 *Includes preliminary data*

	Total Inflow (acre-feet)	Total Outflow (acre-feet)
STA-1E	94,800	78,600
STA-1W	157,400	156,000
STA-2	271,900	267,800
STA-3/4	513,500	499,300
STA-5/6	178,400	210,700

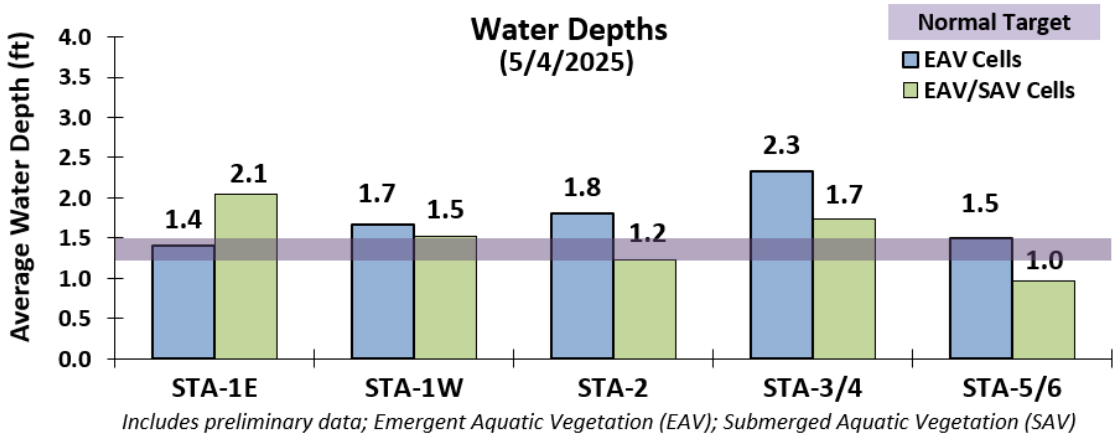

Figure S-1. STA depths and flow volumes

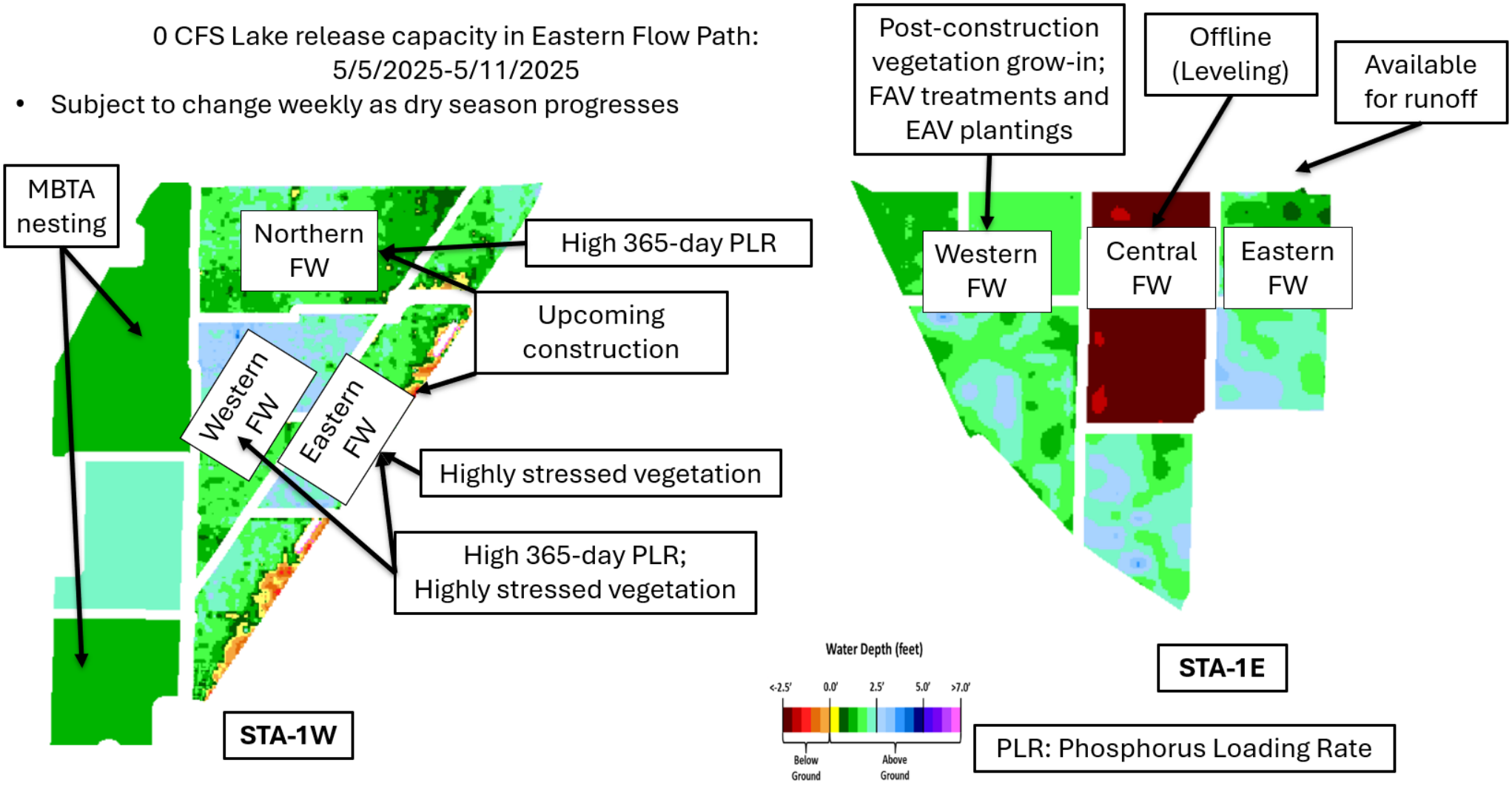

Figure S-2. Eastern Flow Path Weekly Status Report

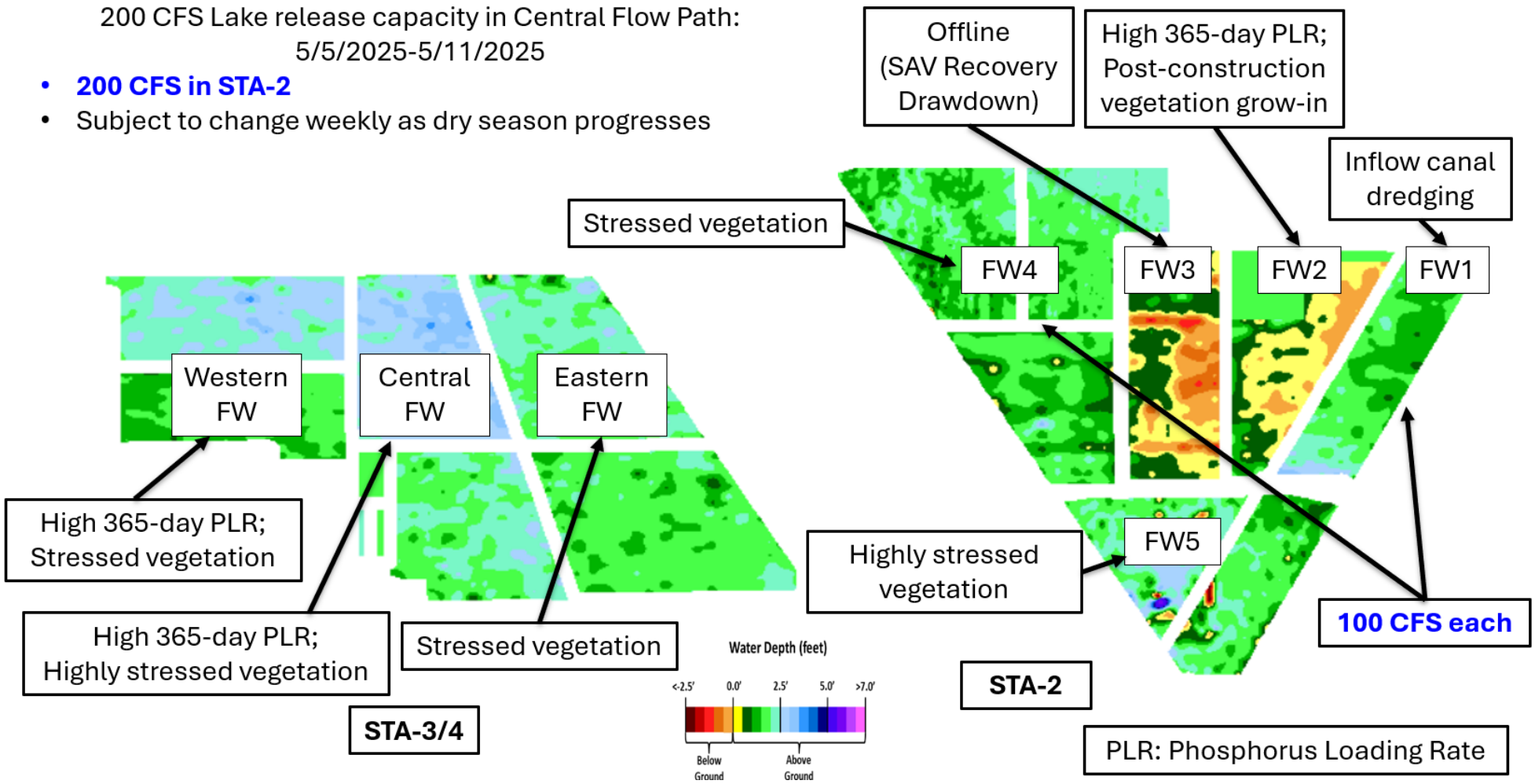

Figure S-3. Central Flow Path Weekly Status Report

100 CFS Lake release capacity in Western Flow Path:
5/5/2025-5/11/2025

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

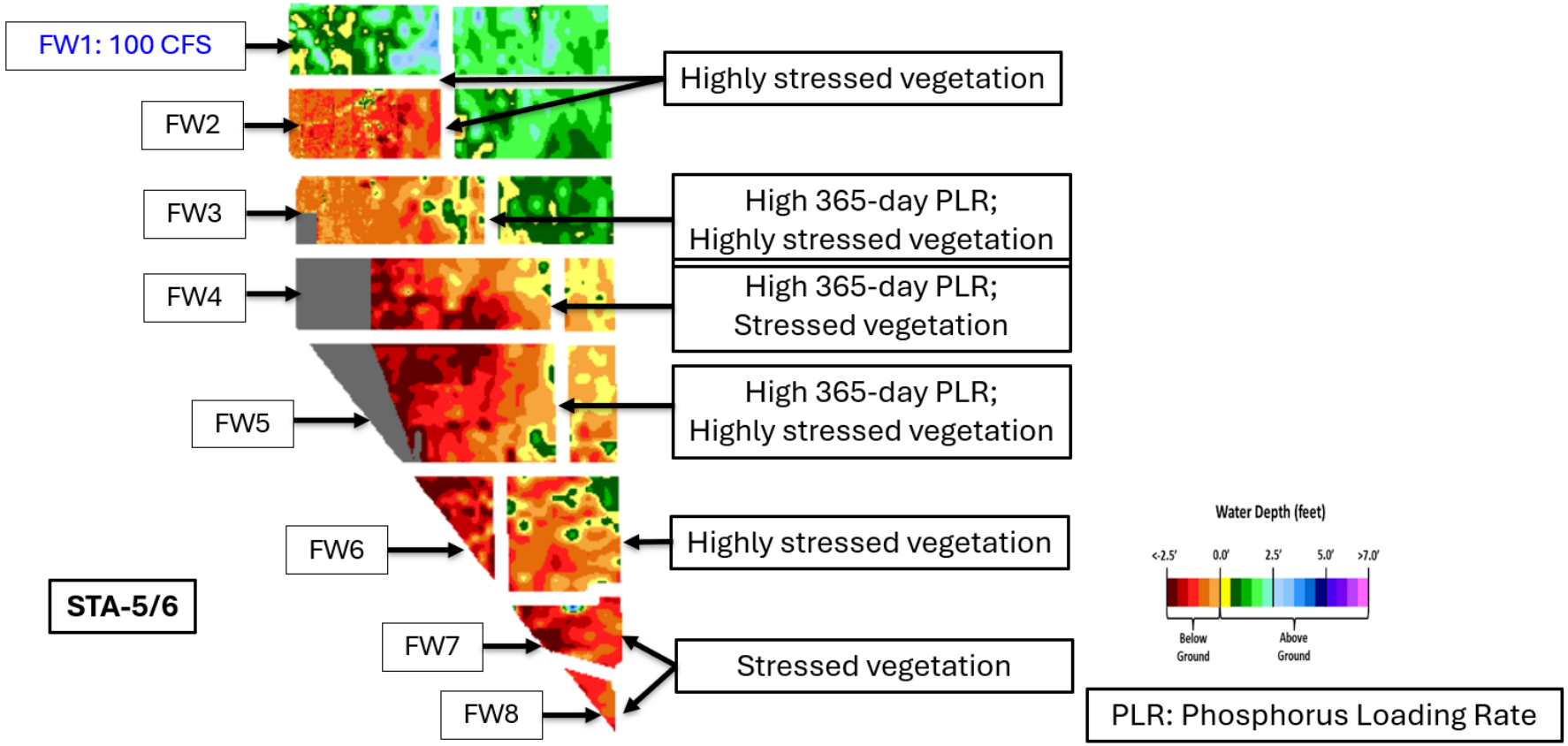

Figure S-4. Western Flow Path Weekly Status Report

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

About 0.5 inches of rain fell across the entirety of the Everglades Protection Area (EPA). WCA-1: Stage increased slightly toward the regulation line, with the 1-8C gauge falling below the A1 zone regulation line by 0.58 feet on Sunday, May 4, 2025. WCA-2A: A steep recession continues at gauge S11B, flattening out toward the end of the week. The stage on Sunday was 1.71 feet below the water supply line. WCA-3A: The 3 Gauge Average recession rate continues to recede at a rate faster than the slope of the Zone A line but reversed towards the end of the week. Stages were below the regulation line by 0.92 feet on Sunday. WCA-3A North: Stage at Gauge 62 (NW corner) has started to exhibit a flattening of the slope and increased toward the end of the week; the regulation line was 1.98 feet below the Upper Schedule on Sunday. See figures **EV-1** through **EV-4**.

Water Depths

The SFWDAT model output for May 5, 2025, illustrates conditions drying down quickly across the northern portions of all WCAs. WCA-3A North and most of WCA-2A are now below ground (verified by aerial survey). Conditions are continuing to dry out in WCA-3A South and Central; a reduction in suitable wading bird foraging habitat is happening quickly. Most of the 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 below ground indicating lack of connectivity to the coast and Florida Bay. 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 0.23 feet. Changes ranged from −0.44 feet at EPSW in the southern ENP panhandle to −0.04 feet at CT50R in the south C-111 area (**Figure EV-7 and Figure EV-8**). 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 9.2 inches compared to before the Florida Bay initiative (starting in 2017), a decrease of 3.7 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 2.70 feet, respectively.

Average Florida Bay salinity was 36.8, an increase of 1.7 from last week. Salinity changes ranged from −0.8 at Buoy Key (BK) in the western region to +4.4 at Joe Bay (JB) in the eastern nearshore region (**Figure EV-7**). Salinity is above the estimated average for 1900 and within the WY2001-2016 Interquartile Range (IQR) for all three regions, nearing 75th percentile in the eastern region (**Figure EV-9**). Average Florida Bay salinity remains above its recent average (WY1993-2016) for this time of year by 1.5, an increase of 1.0 relative to last week's comparison.

Salinity at the Taylor River (TR) station in the mangrove zone (tracked for the Florida Bay MFL) was 26.7. The 30-day moving average was 16.8 (**Figure EV-10**), an increase of 3.6 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 242,988 acre-feet, a decrease of 6,743 acre-feet from last week (**Figure EV-10**).

Average rainfall across Taylor Slough and Florida Bay was approximately 0.22 inches over the past week, based on the 18 gauges used for this report. Rainfall ranged from 0.00 inches at Buoy and Johnson Keys to 1.63 inches at P37 in central Taylor Slough (**Figure EV-11**). Wind directions and speeds in Florida Bay ranged from 5.0 mph S on May 4th to 18.0 mph SE also on May 4th (**Figure EV-11**).

Average daily flow from the five major creeks totaled −461 acre-feet, with net negative flows over the past week. Total daily creek flow ranged from −1693 acre-feet on May 3rd to 434 acre-feet on April 29th (**Figure EV-12**). Average daily flow was 3,360 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 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	0.56	−0.11
WCA-2A	0.53	−0.17
WCA-2B	0.38	−0.27
WCA-3A	0.44	+0.02
WCA-3B	0.65	−0.07
ENP	0.55	+0.00

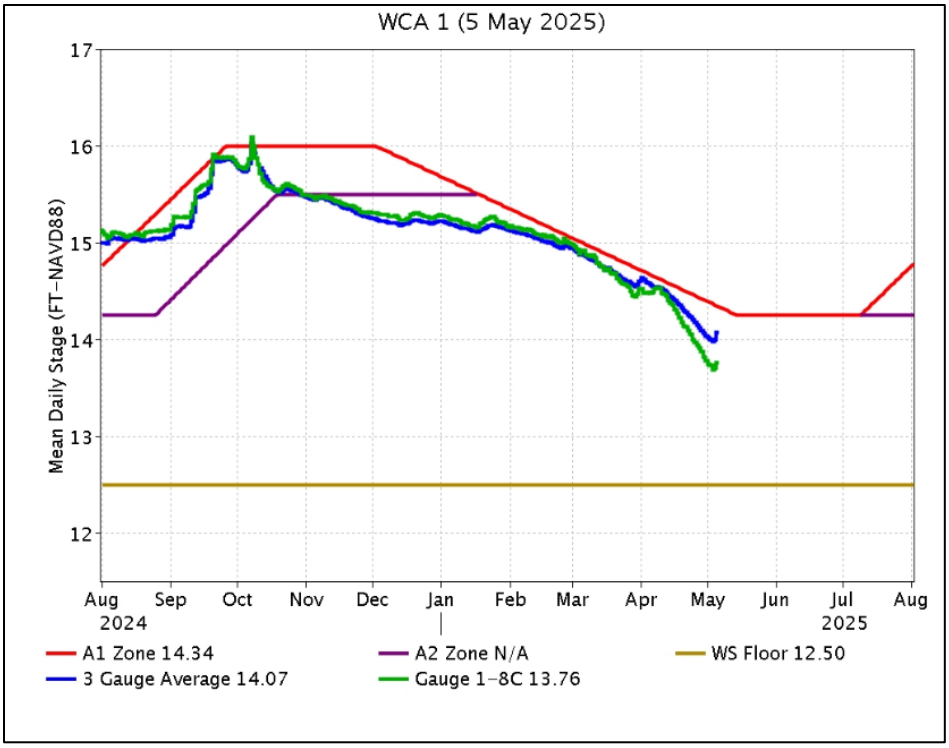

Figure EV-1. WCA-1 stage hydrographs and regulation schedule.

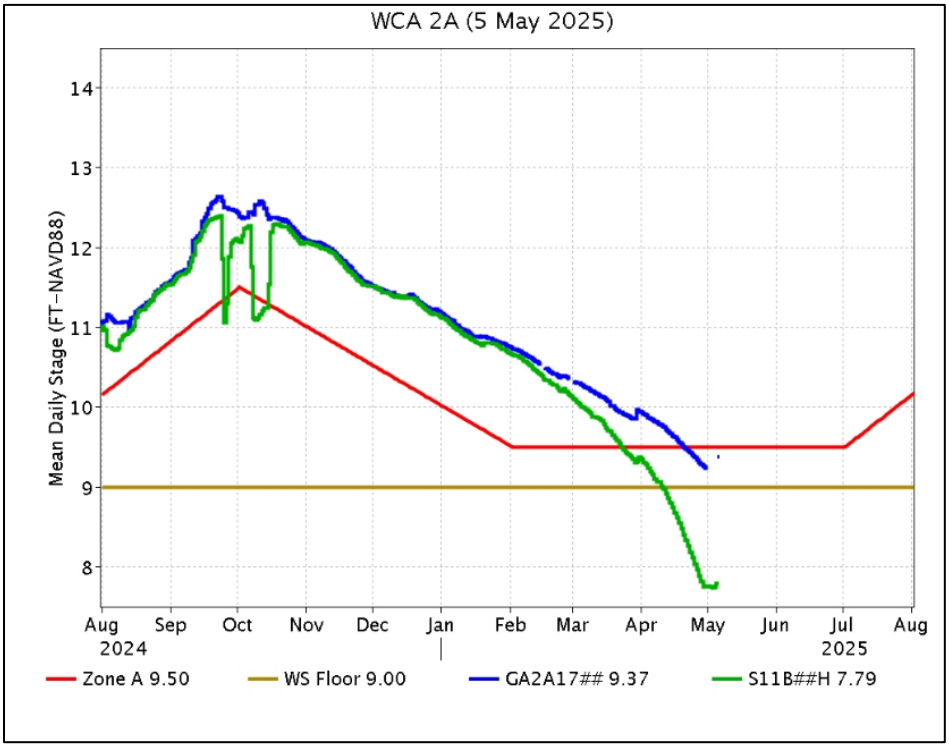

Figure EV-2. WCA-2A stage hydrographs and regulation schedule.

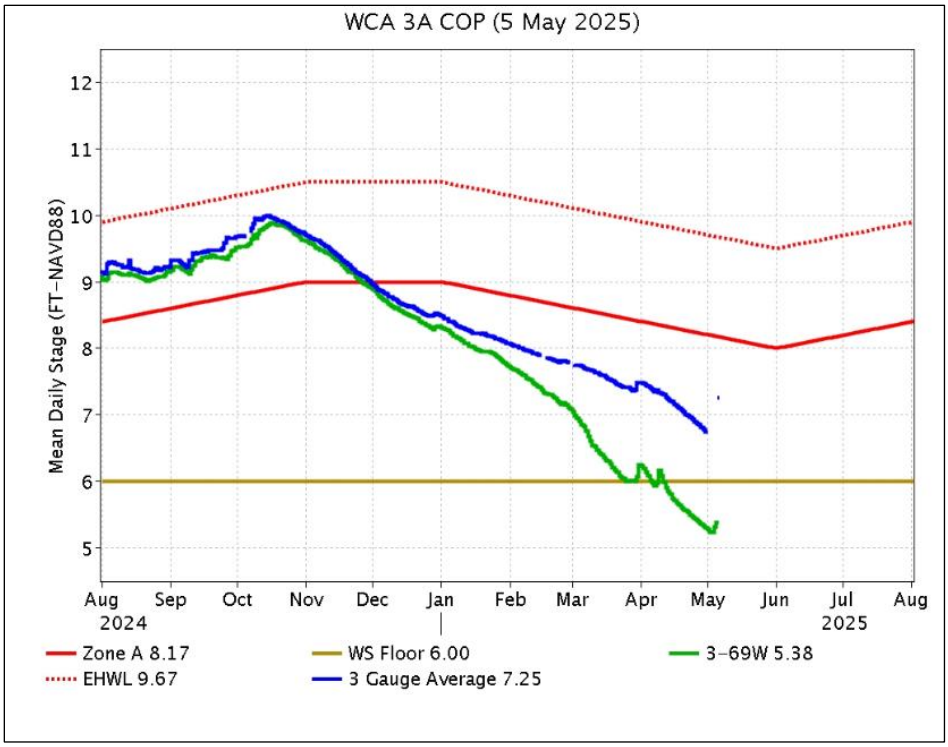

Figure EV-3. WCA-3A stage hydrographs (three-gauge average, 3-69W) and regulation schedule.

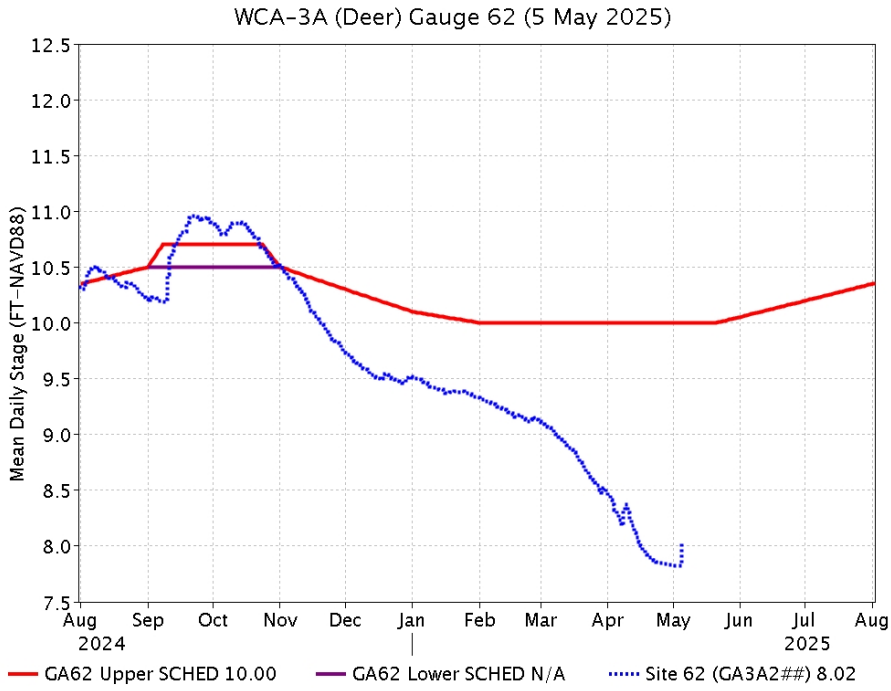

Figure EV-4. WCA-3A stage hydrograph (Deer gauge; Site 62) and GA62 regulation schedule.

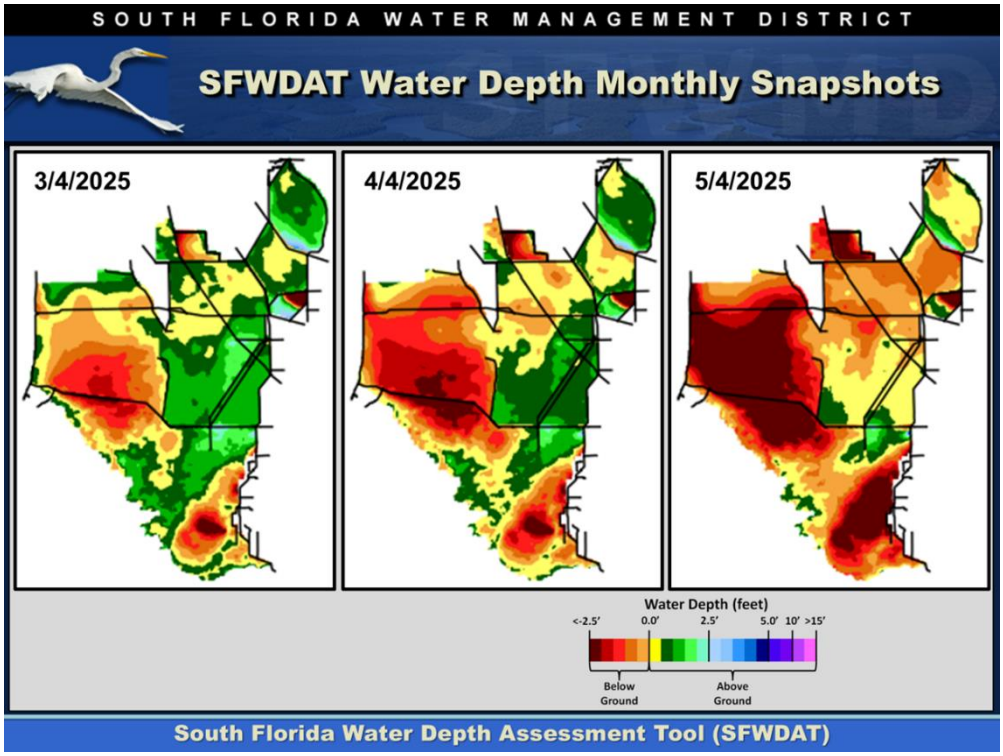

Figure EV-5. Everglades water depths from two months ago (left), one month ago (center) and present (right), based on SFWDAT.

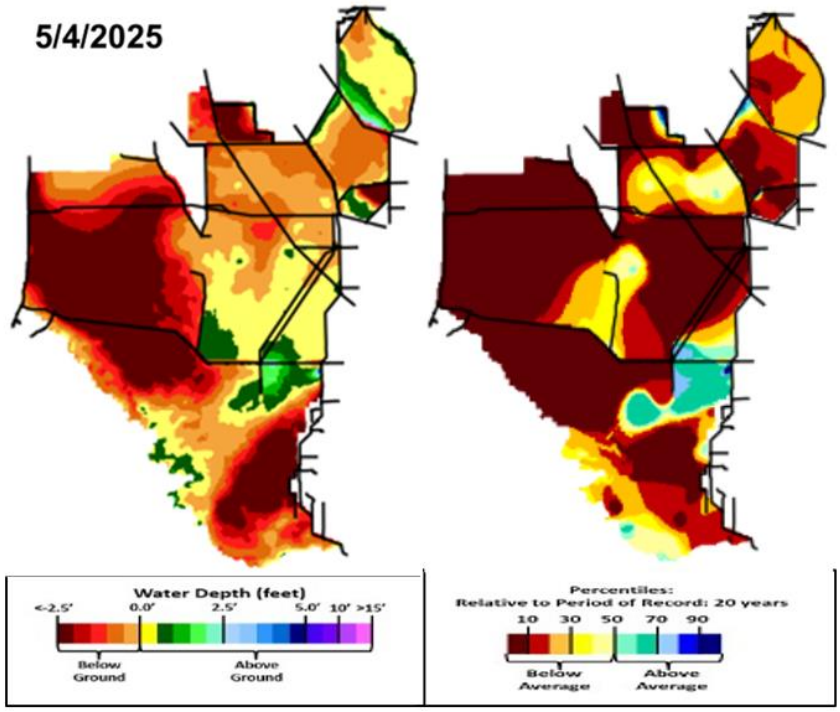

Figure EV-6. Present water depths (April 27, 2025) compared to the day of year average over the previous 20 years.

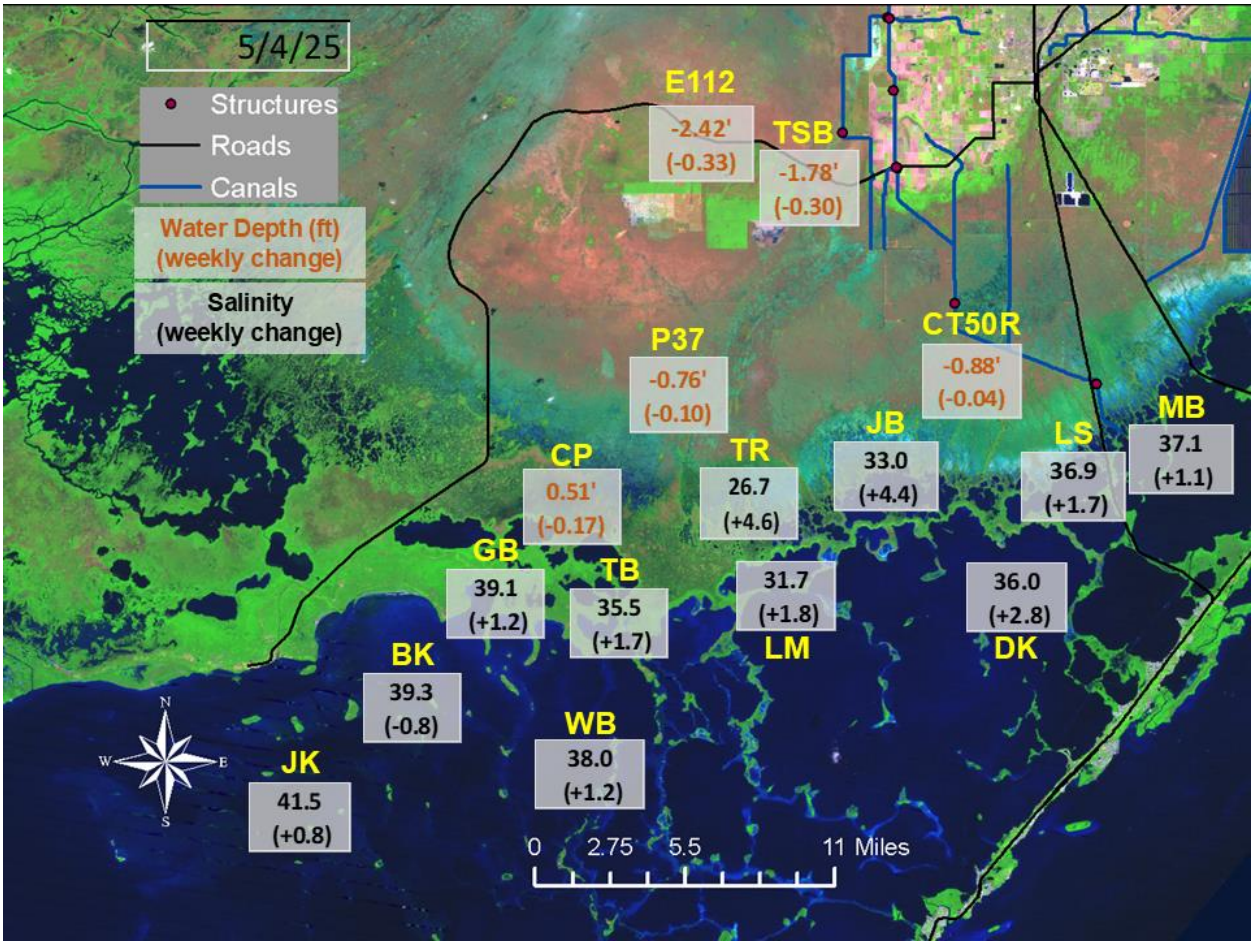

Figure EV-7. Taylor Slough water depths and Florida Bay salinities with changes since a week ago.

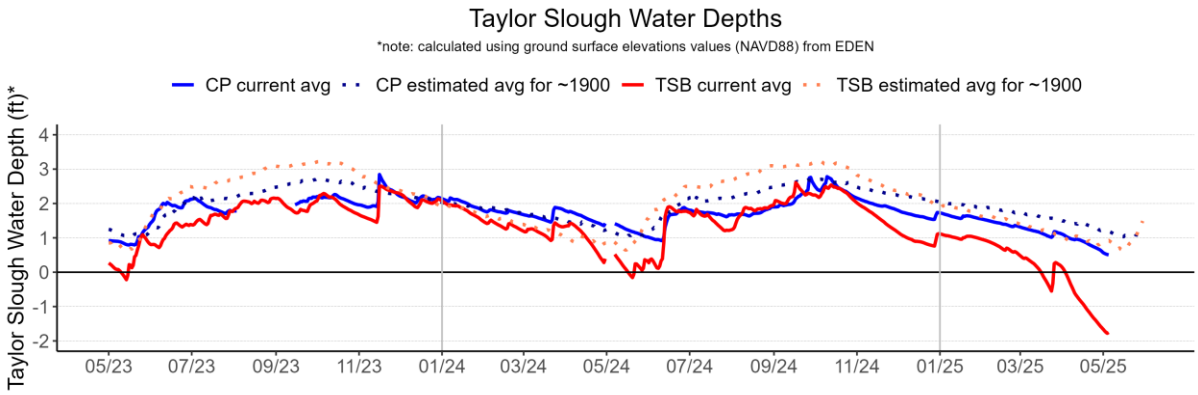

Figure EV-8. Taylor Slough water depth time series for Taylor Slough Bridge (TSB; northern slough) and Craighead Pond (CP; southern slough).

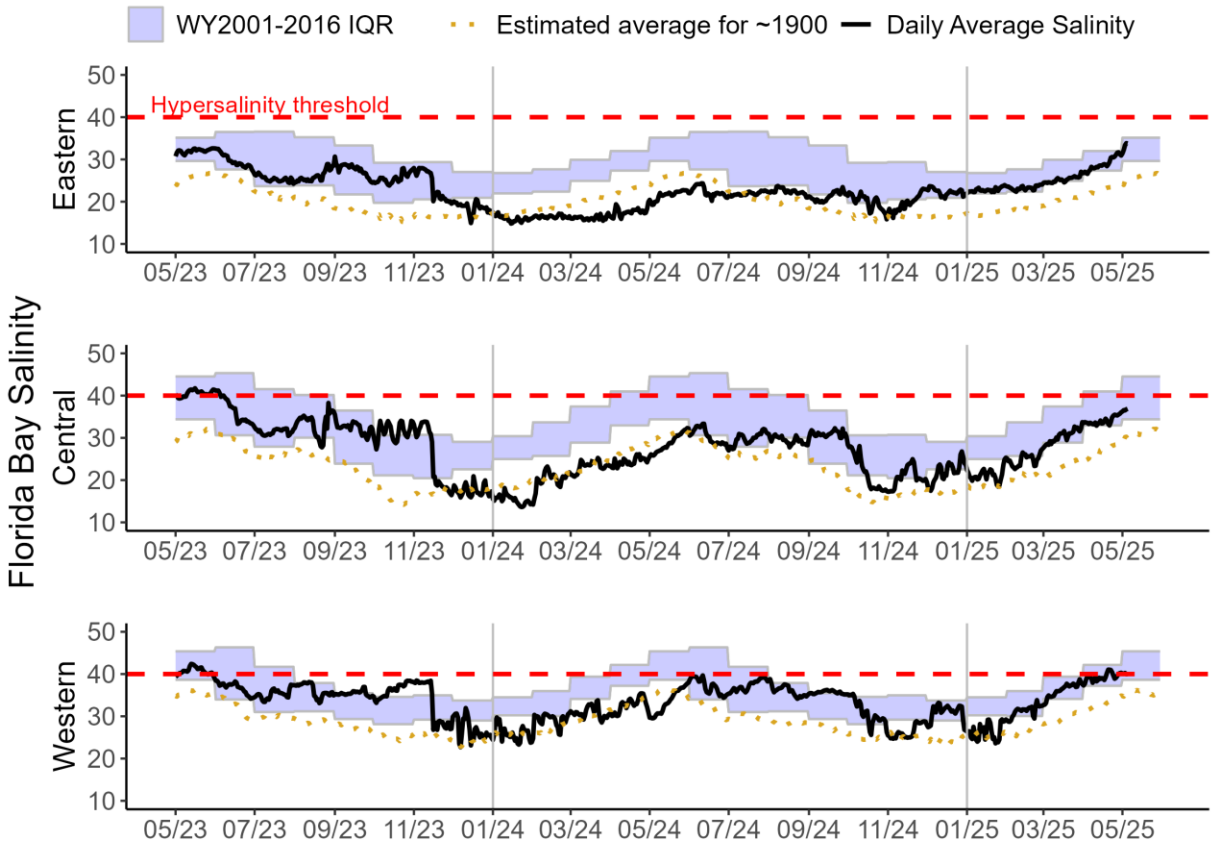

Figure EV-9. Eastern (top panel), Central (middle panel) and Western (bottom panel) Florida Bay daily average salinities with WY2001-2016 interquartile (25-75 percentile) ranges (IQR) and estimated historical daily average salinities. The hypersalinity threshold indicates the level at which salinities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

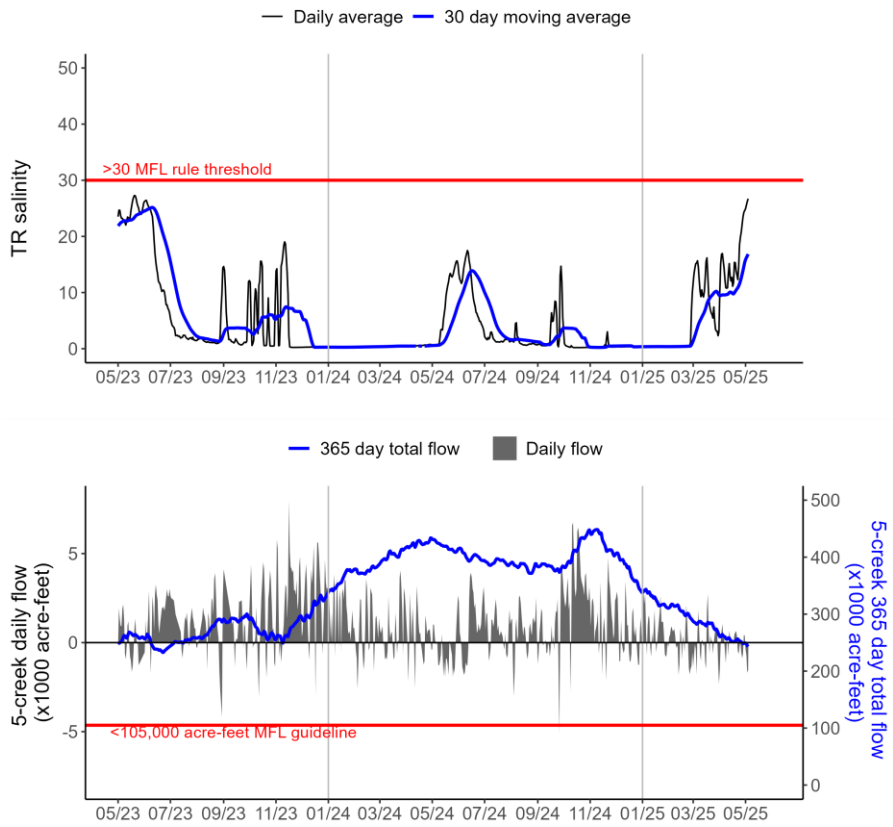

Figure EV-10. Salinity at Taylor River (TR; top) and creek inflow to Florida Bay (bottom) from the five major creeks (McCormick Creek, Taylor River, Mud Creek, Trout Creek, and West Highway Creek). The 30-day moving average salinity and 365-day total creek flow are tracked for the Florida Bay MFL criteria.

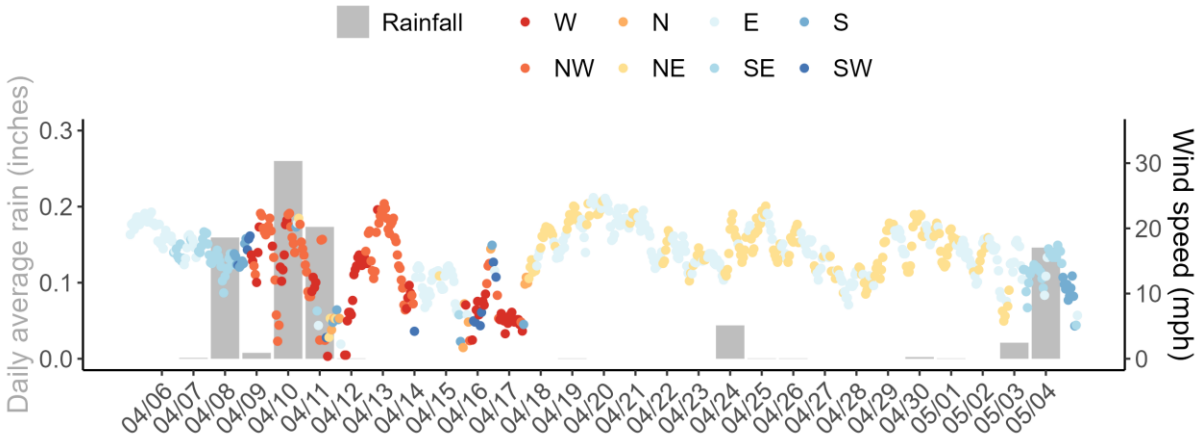

Figure EV-11. Daily average rain across Taylor Slough and Florida Bay, along with hourly average wind speed and direction (measured at Long Key) in Florida Bay over the past four weeks.

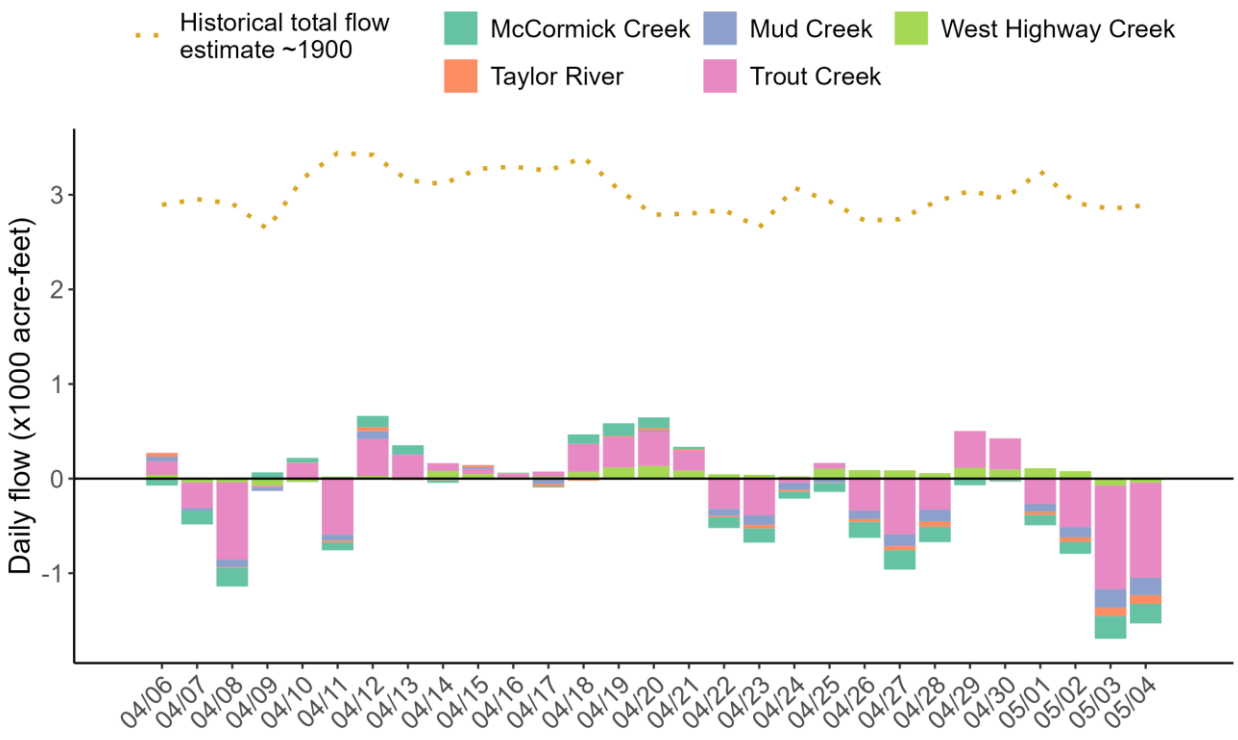

Figure EV-12. Daily average creek flow summed between five creeks with estimated historical daily flow over the past four weeks.

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

SFWMD Everglades Ecological Recommendations, May 5, 2025 (red is new)			
	Weekly change	Recommendation	Reasons
WCA-1	Stage decreased by 0.11 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.
WCA-2A	Stage decreased by 0.17 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.
WCA-2B	Stage decreased by 0.27 feet	Recession rate of less than 0.12 feet per week.	Protect within basin and downstream habitat and wildlife.
WCA-3A NE	Stage decreased by 0.08 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.
WCA-3A NW	Stage decreased by 0.02 feet	Recession rate of less than 0.06 feet per week.	
Central WCA-3A S	Stage increased by 0.07 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.
Southern WCA-3A S	Stage increased by 0.13 feet		
WCA-3B	Stage decreased by 0.22 feet	Recession rate of less than 0.12 feet per week.	Protect within basin wildlife.
ENP-SRS	Stage decreased by 0.07 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 −0.44 feet to −0.04 feet	Move water southward as possible.	When available, provide freshwater to promote water movement.
FB- Salinity	Salinity changes ranged from −0.8 to +4.4	Move water southward as possible.	When available, provide freshwater to promote water movement.