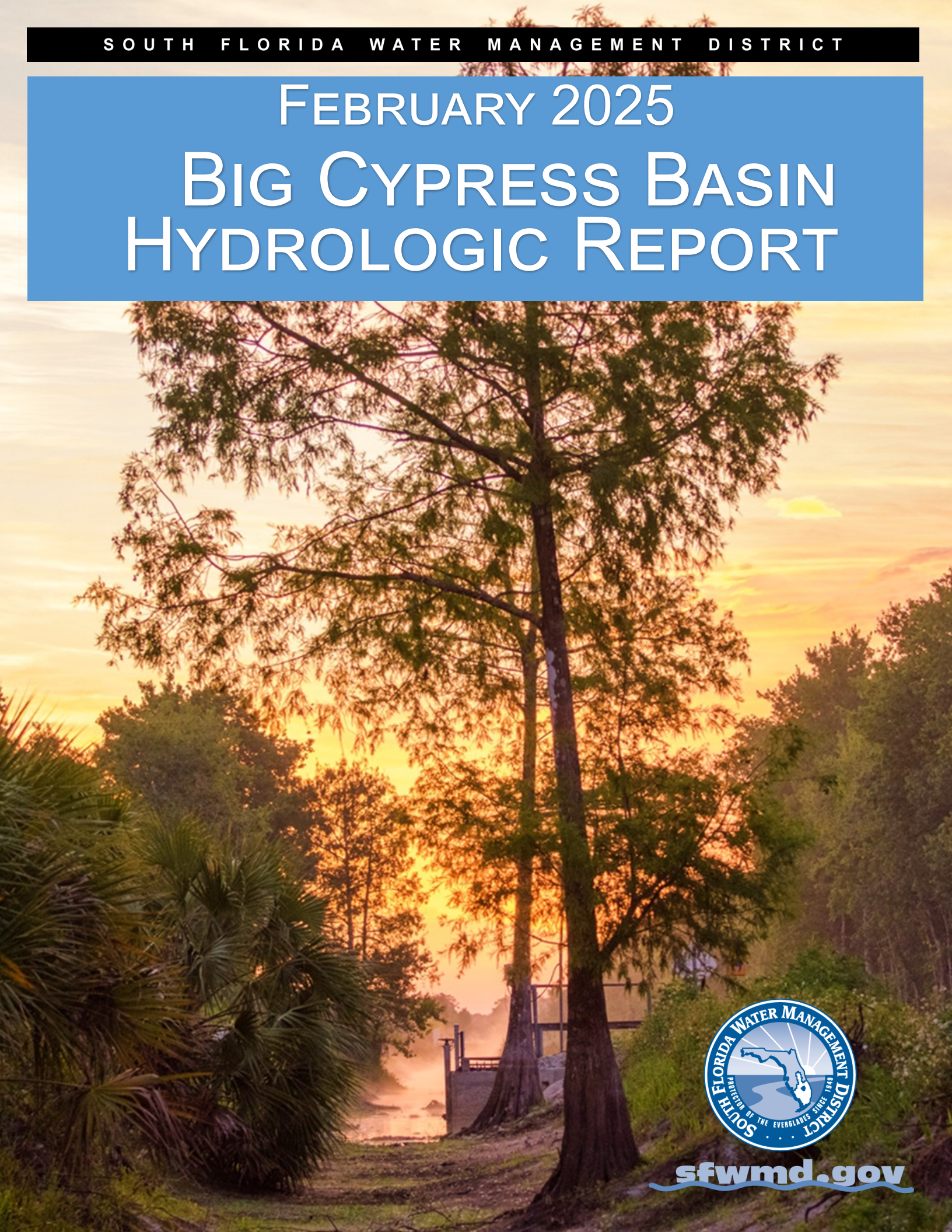
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

FEBRUARY 2025

BIG CYPRESS BASIN HYDROLOGIC REPORT



sfwmd.gov

SUMMARY OF HYDROLOGIC CONDITIONS IN THE BIG CYPRESS BASIN

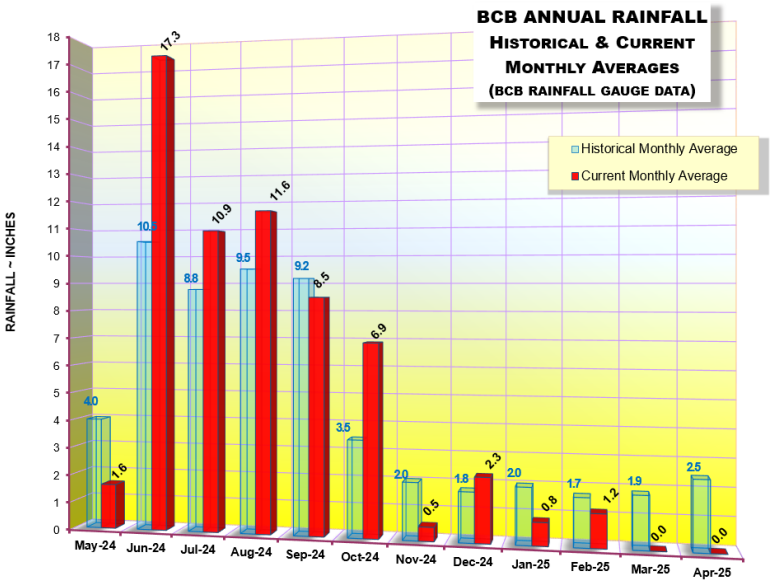
February 2025

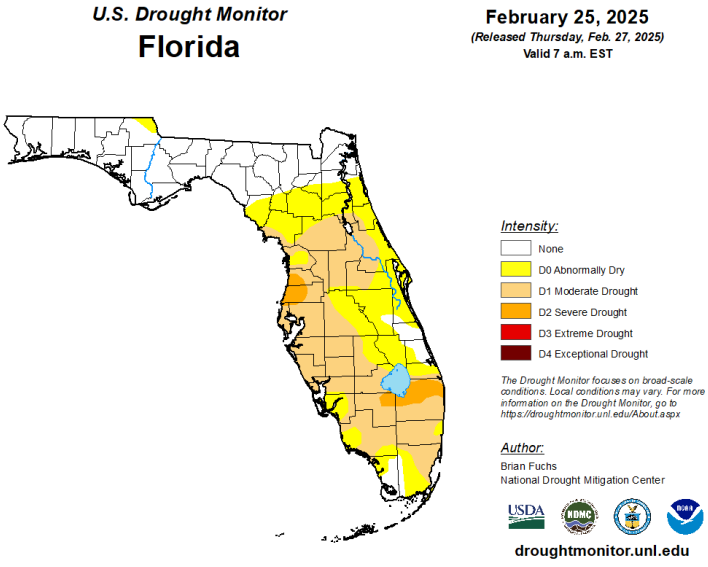
SUMMARY

The Big Cypress Basin (Basin) began the dry season after the passing of Hurricane Milton on October 9, 2024. By the end of October, the Basin had accumulated an 11-inch rainfall surplus for the water year, driven by a higher than normal wet season precipitation; most notably in June and October 2024. The above normal wet season rainfall allowed the Basin to enter the dry season with canal levels at the top of their ranges.

La Niña conditions emerged in the tropical Pacific in December 2024 and have persisted through the end of February. This continuing La Niña condition likely played a major role in the drier than normal conditions experienced by the Basin over the last few months.

Water Year 2024-2025

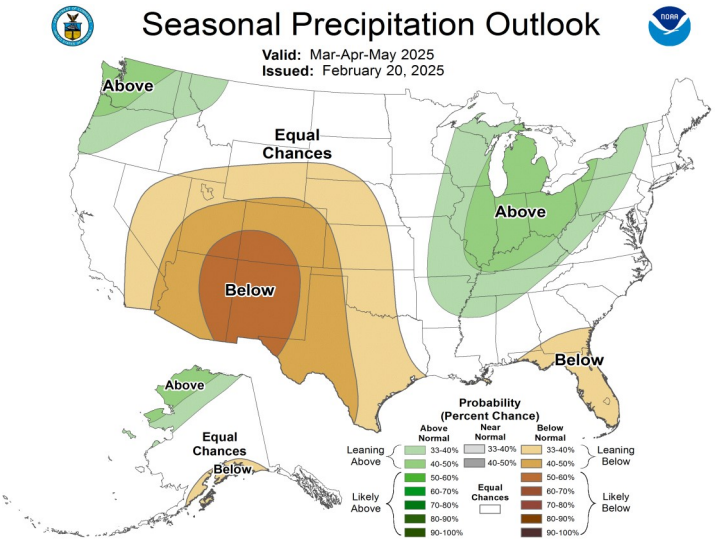




The Basin received an average of 1.24 inches of rainfall in February; 0.48 inches less (72%) than the long-term monthly average of 1.72 inches. Additionally, virtually all of February's rainfall occurred during a single event on February 24th. Of the past four months, only December saw an average rainfall total. Despite starting the dry season with a full canal system, the drier than normal conditions have led to a steady decline in canal water levels.

Given the persistence of lower than average rainfalls, by the end of February, Collier County was classified as having abnormally dry to moderate drought conditions, as reported by the US Drought Monitor.

NOAA's three month seasonal outlook for March, April and May predicts drier than normal conditions over Florida. In consideration of the current canal recession rate and the below normal forecast rainfall, the Basin will continue to operate the system to capture and conserve as much rainfall as possible in the month of March.



FEBRUARY 2025 BCB RAINFALL

The Basin-wide monthly rainfall average for the month of February 2025 was 1.24 inches; below the historical monthly average of 1.72 inches (72% of historical) (**Figures 1, 2, Table 1**). Almost all of this 1.24 inches occurred during a single rain event on February 24, 2025. Note that the R1 GG#3 gauge was non-operational on February 24th and did not record the rainfall event. Due to the site's lack of gauge data for this rainfall event, the February 2025 rainfall for R-1 GG#3 was estimated to be 1.35", based on the gauge adjusted radar value for the Golden Gate Main basin, as shown on Figure 3a.

The rainfall distribution across the Basin varied noticeably by location. The highest recorded gauge measured rainfall was 1.68 inches at R-2 BONITA SPRINGS WATER PLANT, and the lowest recorded gauge measured rainfall was 0.80 inches at R-16 FAKAHATCHEE STRAND NORTH END.

Figure 3a shows the average rainfall for each of the Basin's watersheds based on gauge adjusted radar. The East Naples basin received the highest estimated rainfall with **1.71 inches** areal average across its watershed, while the Coastal Basin received the lowest estimated rainfall at **0.92 inches** across its watershed. The Basin's total areal weighted average rainfall was **1.16 inches**. The rainfall totals and their distribution across the BCB/Lower West Coast are shown on **Figures 3, 3a** and **4**.

BCB CANAL SYSTEMS

For all of February, the canals were maintained in water conservation mode to hold as much water as possible to promote groundwater recharge. The February 24th rainfall, while helpful, was insufficient to trigger structure operations, due to the prevailing dry conditions and available canal capacity. Though structure operations were not required, the February 24th rainfall did briefly pause the seasonal recession of canal water levels.

The system ended February generally within the 25th to 75th percentile as illustrated in **Figure 4A**, with some portions of the system exceeding the 75% percentile level despite the prevailing dry conditions. Water levels, however, are anticipated to continue to recede in March due to the forecast continuance of dry conditions.

GOLDEN GATE SYSTEM

As is standard operating procedure during dry season, control structures in the Golden Gate Main canal system were managed to conserve as much water as possible to promote groundwater re-charge. The February 24th rainfall helped to slightly rebound water levels in the Golden Gate System, allowing water conservation pumping operations to be resumed at the Airport Road canal and C.R. 951 canal. This conservation pumping captures water which would otherwise be released to the Gordon River over the GG1 weir. Conservation pumping will be stopped once overflow of the GG1 weir ceases due to recession of the canal water level. As of the end of February, the Golden Gate system was generally operating between the 25th to 75th percentile with some areas (GG1 and GG4) above the 75% percentile (ref **Figure 5**)

COCOHATCHEE SYSTEM

All portions of the Cocohatchee system remain in water conservation mode and structures are fully closed. Canal stages remain within normal operating levels and above the 50th percentile. Though canal levels moderately rebounded due to the February 24th rainfall, they have resumed their normal recession rates for this time of year (ref **Figure 6A, 6B, & 6C**).

FAKA UNION SYSTEM

All areas of the Faka Union canal remain in water conservation operations with all structures fully closed. Water levels upstream of FU5 are holding near the top of their operating range, however, the stages downstream of FU5 continue to recede and are closely trending near the 50th percentile. The water level immediately upstream of FU1 (the fixed crest weir just U.S. Highway 41) saw a modest bump in stage as a result of the February 24th rainfall, but has since resumed its seasonal recession. It is anticipated that flow will cease overtopping FU1 in mid to late March (ref **Figure 7A & 7B**).

HENDERSON CREEK SYSTEM

Both control structures in Henderson Creek remained fully closed. The February rainfall helped slow down the receding trends. No discharges were made to Rookery Bay from HC1 while water levels for HC1 and HC2 remain above the historical 50th percentile for February (ref **Figure 8A & 8B**).

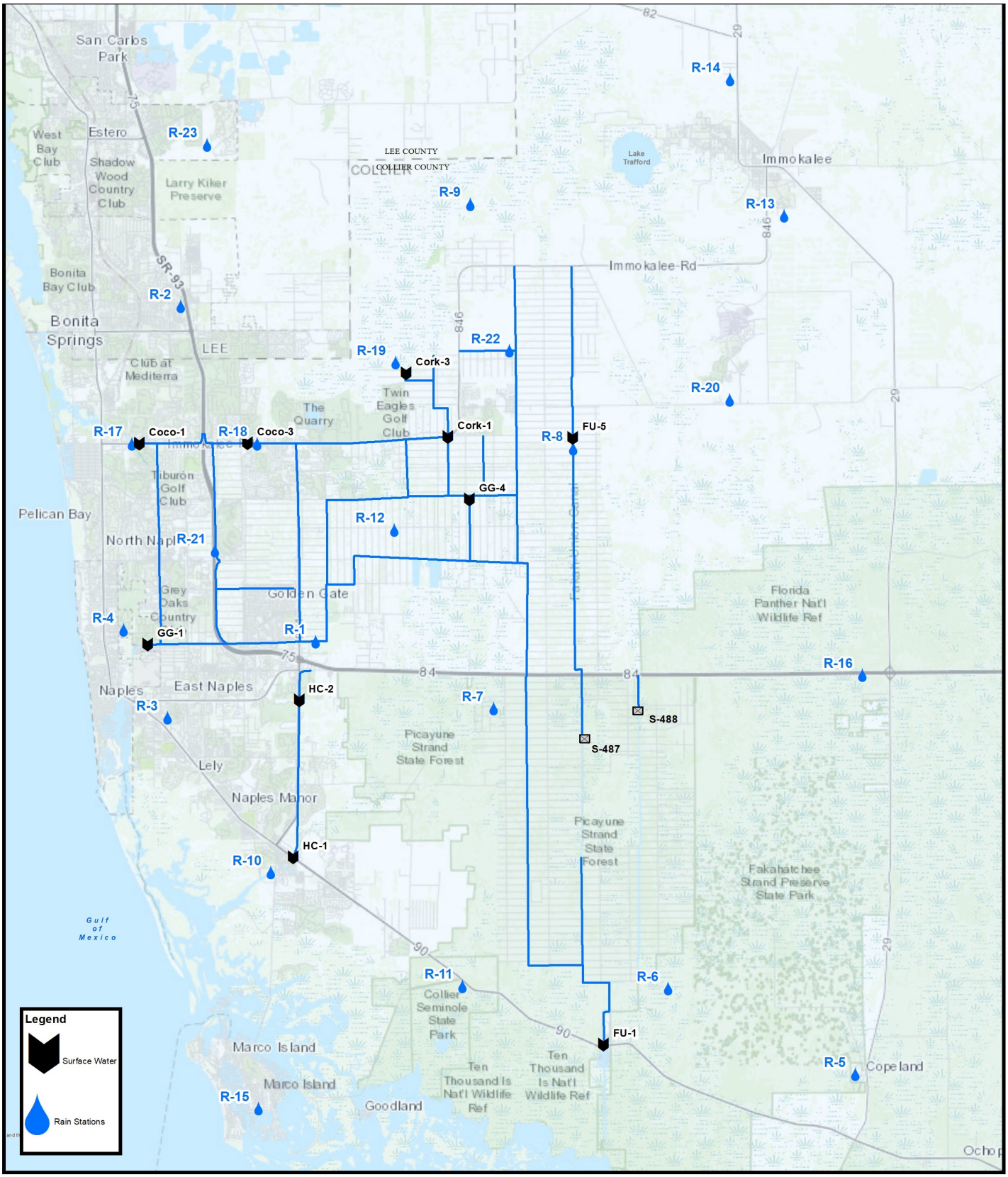
CORKSCREW SWAMP

Figure 10 shows the historical trends for Corkscrew, Bird Rookery, and the Cork 3 structure and the 2025 corresponding levels. All three sites experienced gradual recession rates and remain slightly below or at the 50th percentile through the end of February. As the month ended, operations continued in the Corkscrew Canal to maximize water conservation. In **Figure 11**, Lake Trafford is receding faster than last year, following the 50th percentile trend for the month of February.

.

BIG CYPRESS BASIN & LOWER WEST COAST GROUNDWATER LEVELS

For the Lower West Coast [LWC], the majority of the groundwater monitoring stations remain at or above the 50th percentile (ref **Figure 9**). There were no observed decreases in the Lower Tamiami aquifer for the LWC. With the late February rainfall, groundwater recession rates were slowed as illustrated for monitoring wells C-1004R, C-1224 and C-482. The great majority of the system is receding within the expected historical normal ranges for the dry season, and remains at or above the 50th percentile.



BIG CYPRESS BASIN
SFWMD
2660 Horseshoe Dr. N.
Naples, Florida 34104
239-263-7615

FIGURE 1
Hydrologic Station Map

Collier County, Florida

UPDATED July 2021

TABLE 1
RAINFALL REPORT - FEBRUARY, 2025
DISTRICT/BASIN RAINFALL STATIONS
(ALL NUMBERS ARE IN INCHES)

STATION INDEX NO.	STATION NAME	Feb-25	LONG TERM MONTHLY AVERAGE	MONTHLY DIFFERENCE	CALENDAR YEAR 2025 CUMULATIVE TOTAL	AVERAGE CALENDAR YEAR TO DATE	YEAR TO DATE DIFFERENCE
R-1	GG#3	1.35	1.40	-0.05	2.04	4.03	-1.99
R-2	BONITA SPRINGS WATER PLANT	1.68	1.92	-0.24	3.36	3.93	-0.57
R-3	COLLIER COUNTY COURTHOUSE	0.93	1.93	-1.00	1.59	3.82	-2.23
R-4	FREEDOM PARK	0.99	1.30	-0.31	1.63	3.88	-2.25
R-5	FAKAHATCHEE STRAND HQ	0.94	1.88	-0.94	1.44	3.64	-2.20
R-6	DAN HOUSE PRAIRIE	1.44	1.51	-0.07	1.89	3.08	-1.19
R-7	SGGE WEATHER STATION	1.29	1.63	-0.34	1.81	3.40	-1.59
R-8	FAKA UNION #5	1.62	1.82	-0.20	2.71	4.62	-1.91
R-9	CORKSCREW SWAMP NORTH END	1.23	1.68	-0.45	2.15	3.60	-1.45
R-10	ROOKERY BAY HQ	0.83	1.78	-0.95	1.34	3.82	-2.48
R-11	COLLIER SEMINOLE STATE PARK	1.20	1.66	-0.46	1.98	3.51	-1.53
R-12	G.G. FIRE STATION	1.36	1.83	-0.47	2.21	3.83	-1.62
R-13	IMMOKALEE LANDFILL	1.31	1.80	-0.49	2.65	3.98	-1.33
R-14	IFAS	1.03	2.01	-0.98	2.11	3.98	-1.87
R-15	MARCO R.O. PLANT	0.83	1.95	-1.12	1.47	4.40	-2.93
R-16	FAKAHATCHEE STRAND NORTH END	0.80	2.12	-1.32	1.59	4.49	-2.90
R-17	COCO#1	1.40	1.84	-0.44	2.11	3.65	-1.54
R-18	COCO#3	1.38	1.88	-0.50	2.19	3.64	-1.45
R-19	BIRD ROOKERY	1.38	1.29	0.09	2.40	3.03	-0.63
R-20	AVE MARIA	1.15	1.77	-0.62	1.92	3.97	-2.05
R-21	I75W2	1.33	1.32	0.01	2.01	3.06	-1.05
R-22	GG#7	1.29	1.33	-0.04	2.34	2.96	-0.62
R-23	FPWX	1.46	1.74	-0.28	2.09	3.59	-1.50
R-24	DSOTO10	1.57	1.89	-0.32	2.36	3.52	-1.16
	AVERAGES	1.24	1.72	-0.48	2.06	3.73	-1.67

Note: Station R-1 GG#3, was estimated at 1.35”

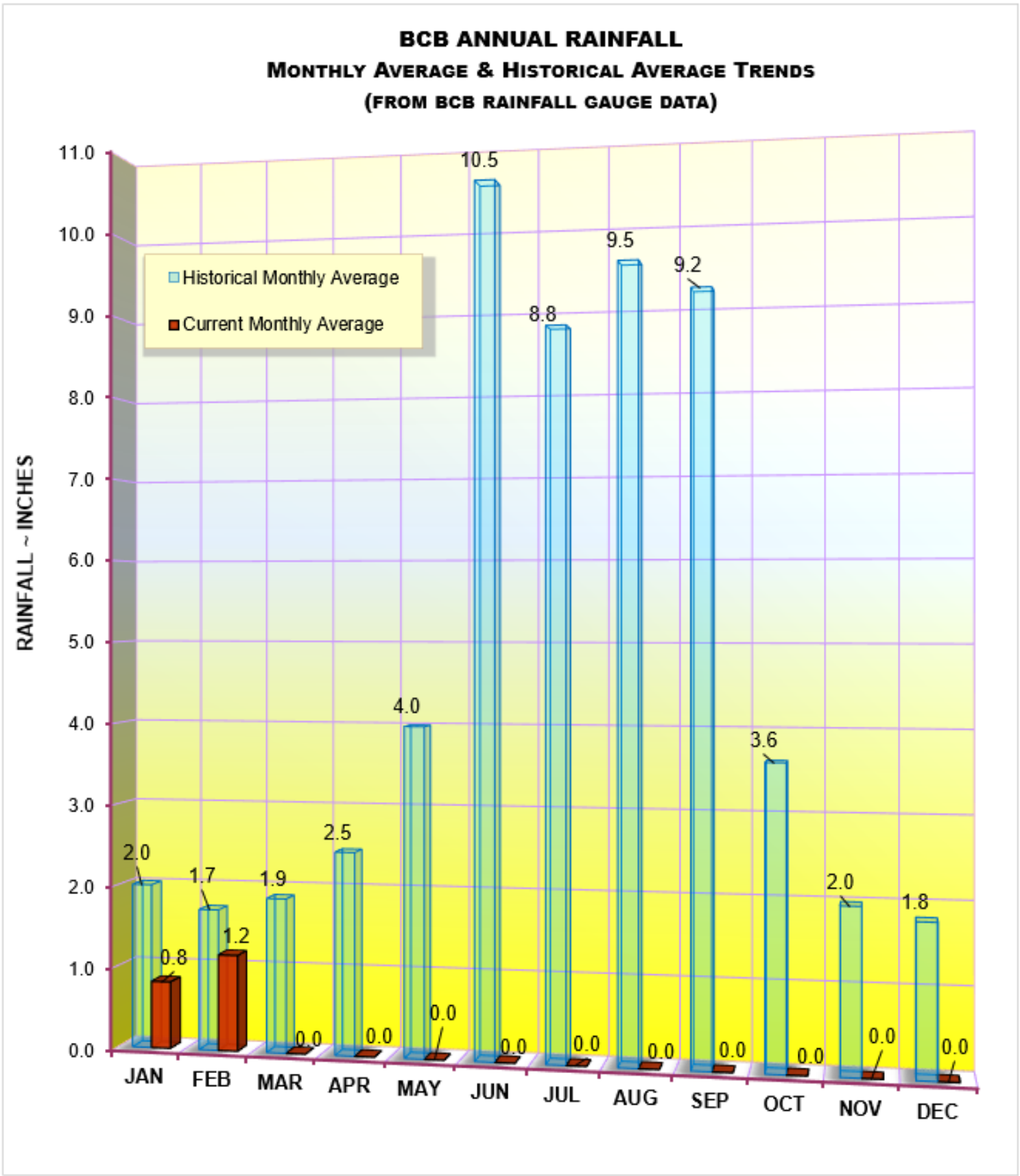
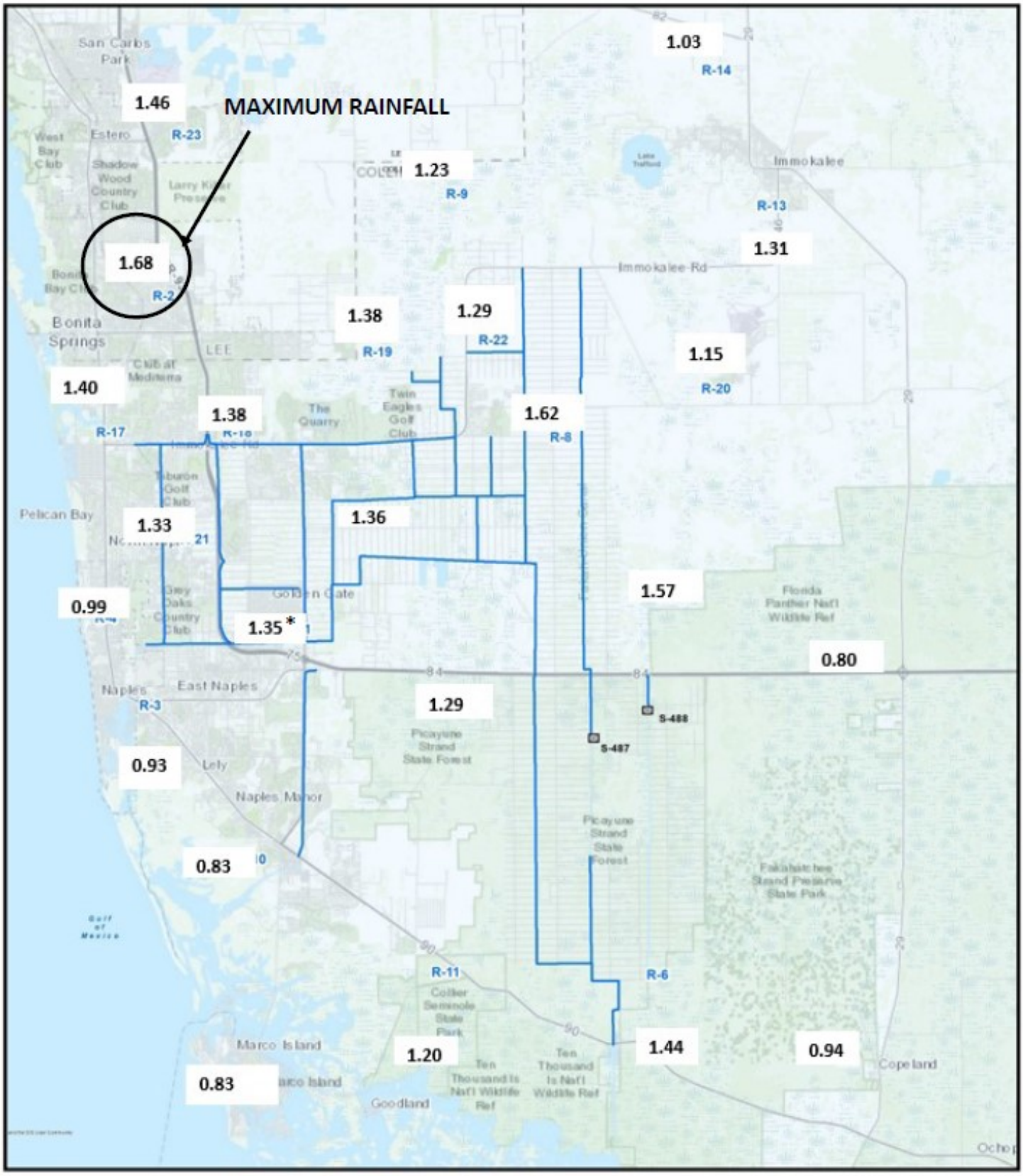


FIGURE 2
BCB GAUGE RAINFALL
MONTHLY AVERAGES THROUGH FEBRUARY 2025



* Station R-1 GG#3, was estimated at 1.35"

FIGURE 3
BCB RAINFALL DISTRIBUTION
FEBRUARY 2025

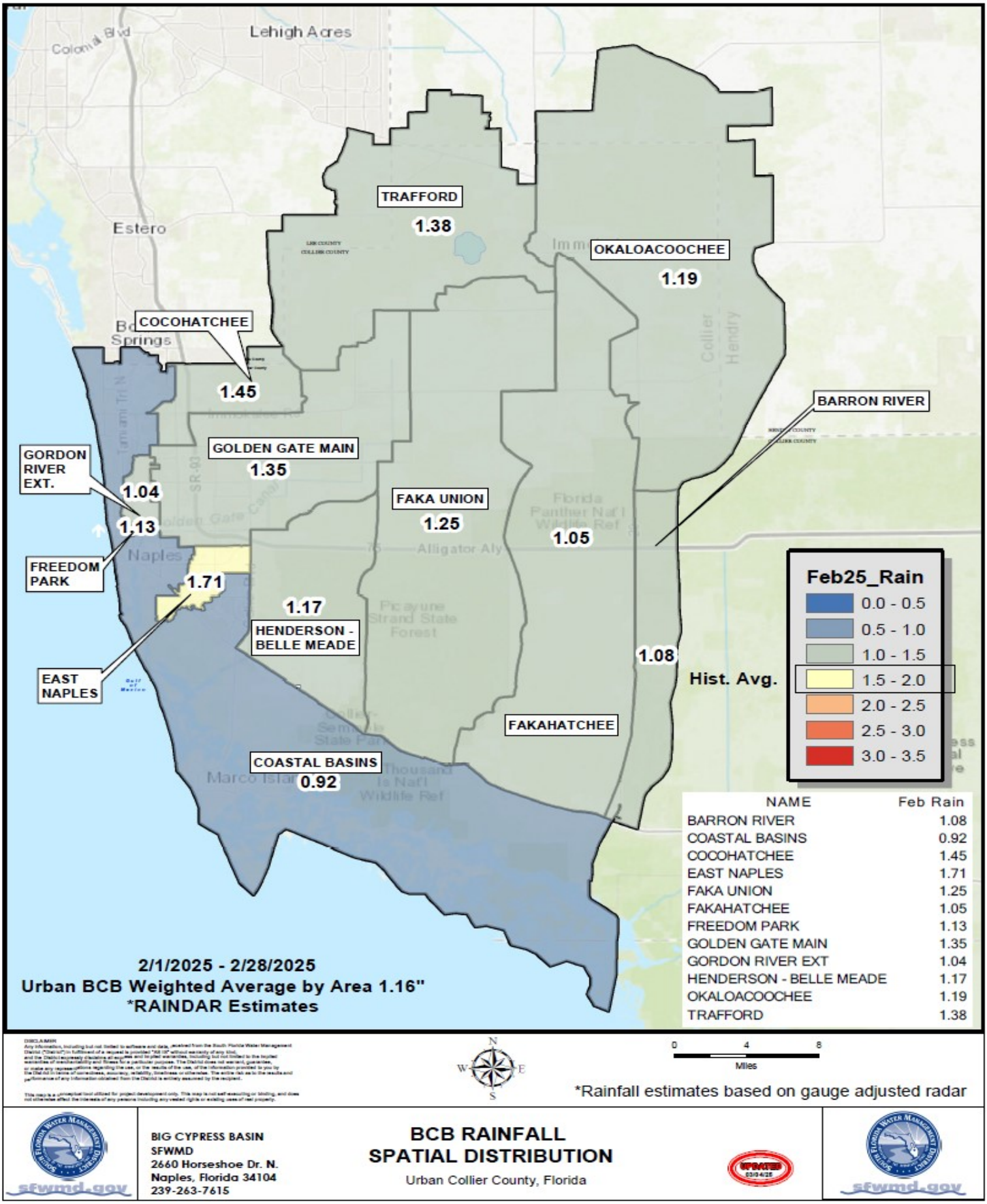


FIGURE 3a - FEBRUARY 2025

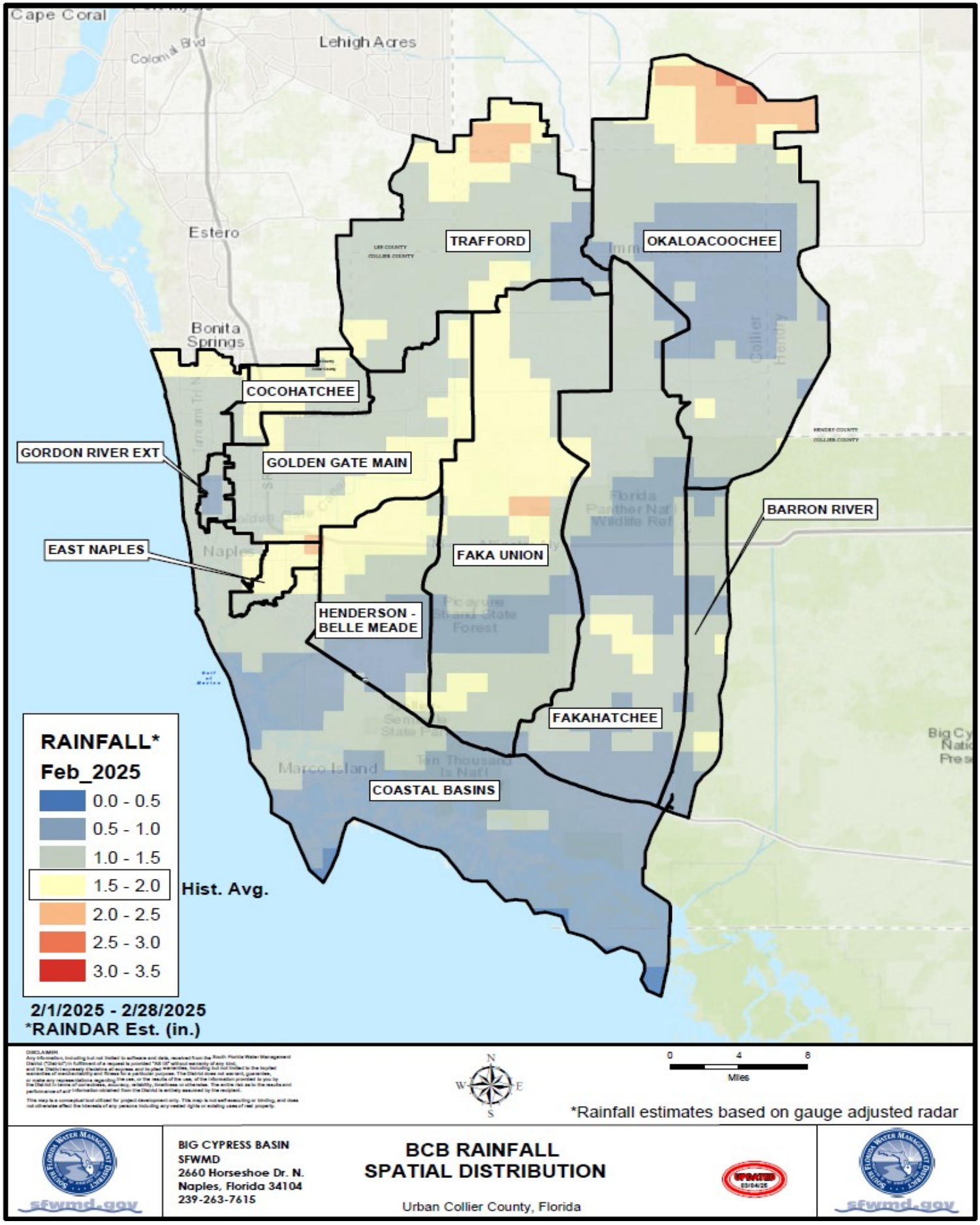
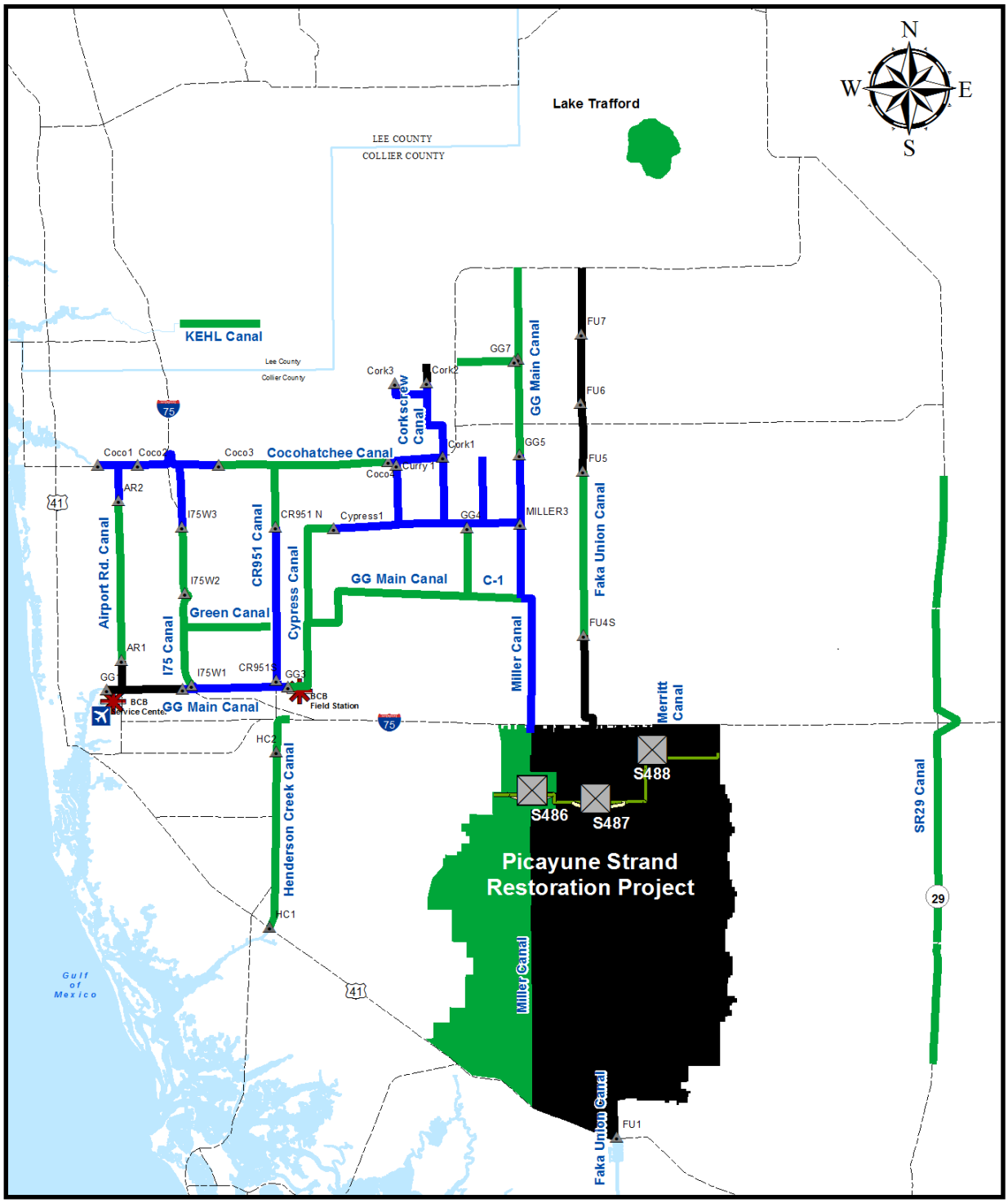


FIGURE 4 - FEBRUARY 2025



DISCLAIMER
Any information, including but not limited to software and data, received from the South Florida Water Management District ("District") in fulfillment of a request is provided "AS IS" without warranty of any kind, and the District expressly disclaims all express and implied warranties, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. The District does not warrant, guarantee, or make any representations regarding the use, or the results of the use, of the information provided to you by the District in terms of correctness, accuracy, reliability, timeliness or otherwise. The entire risk as to the results and performance of any information obtained from the District is entirely assumed by the recipient.

This map is a conceptual tool utilized for project development only. This map is not self-executing or binding, and does not otherwise affect the interests of any persons including any vested rights or existing uses of real property.

Percentile Classes				
< 10	10 - 24	25 - 75	76 - 90	> 90

0 2.5 5
Miles

* Based on period of record for each canal reach

BIG CYPRESS BASIN
SFWMD
2660 Horseshoe Dr. N.
Naples, Florida 34104
239-263-7615

BCB Conditions Index 2/28/25

Urban Collier County, Florida

UPDATED 02/28/25

sfwmd.gov

FIGURE 4A - FEBRUARY 2025

Figure 5 Golden Gate Canal Historic Average Daily Headwater Percentiles

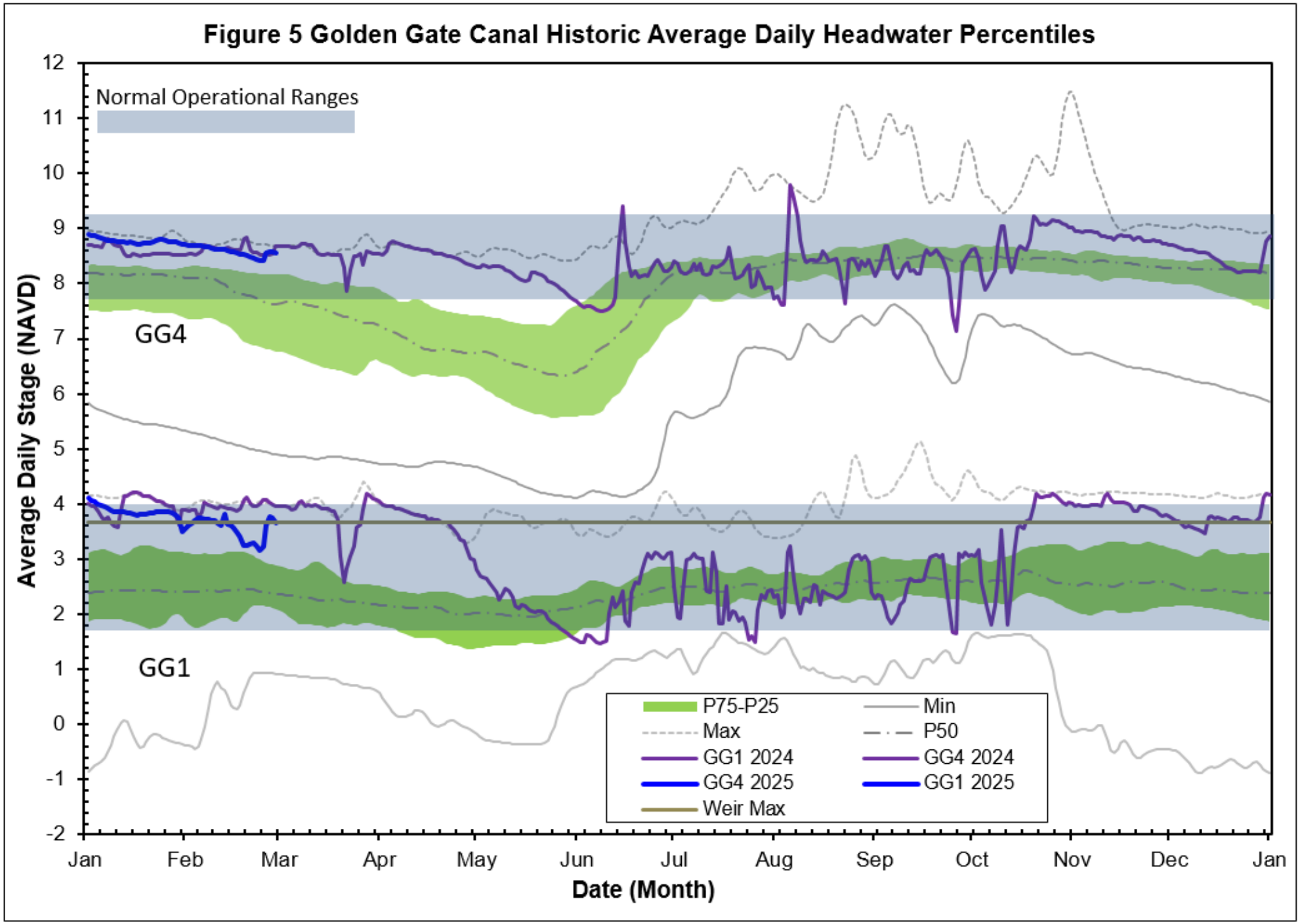
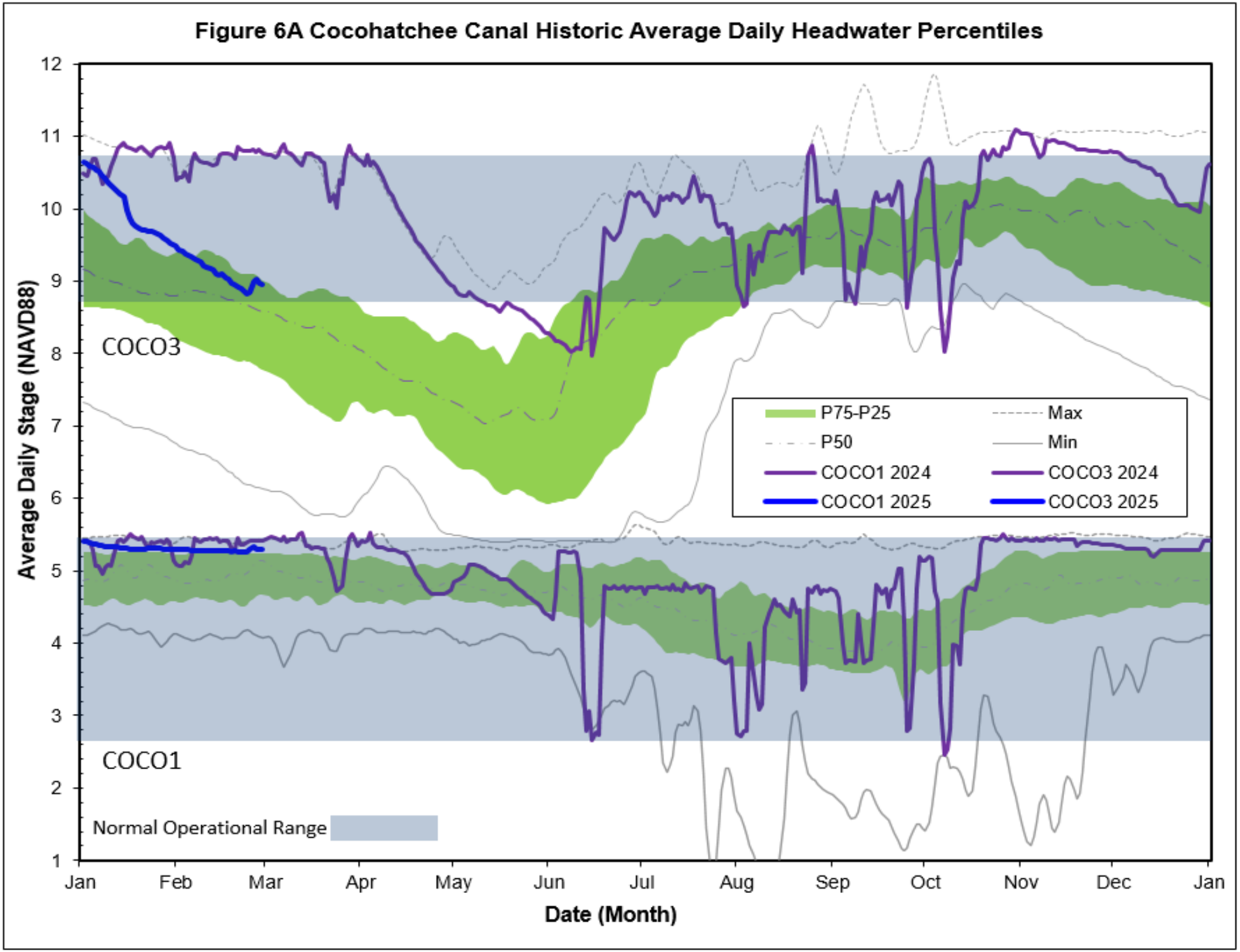


Figure 6A Cocohatchee Canal Historic Average Daily Headwater Percentiles



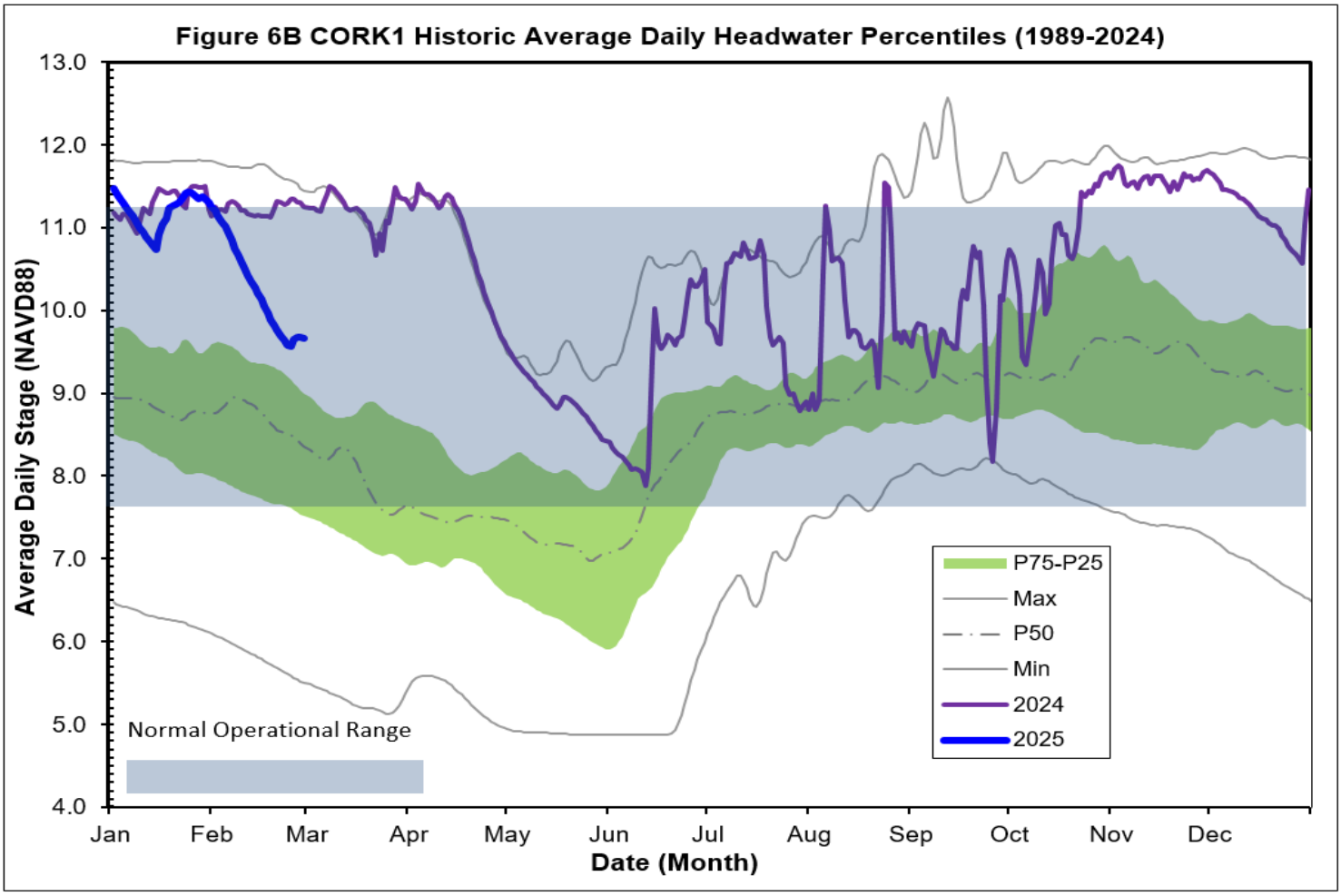


Figure 6B CORK1 Historic Average Daily Headwater Percentiles (1989-2024)
Average Daily Stage (NAVD88)
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Date (Month)
Normal Operational Range
P75-P25
Max
P50
Min
2024
2025

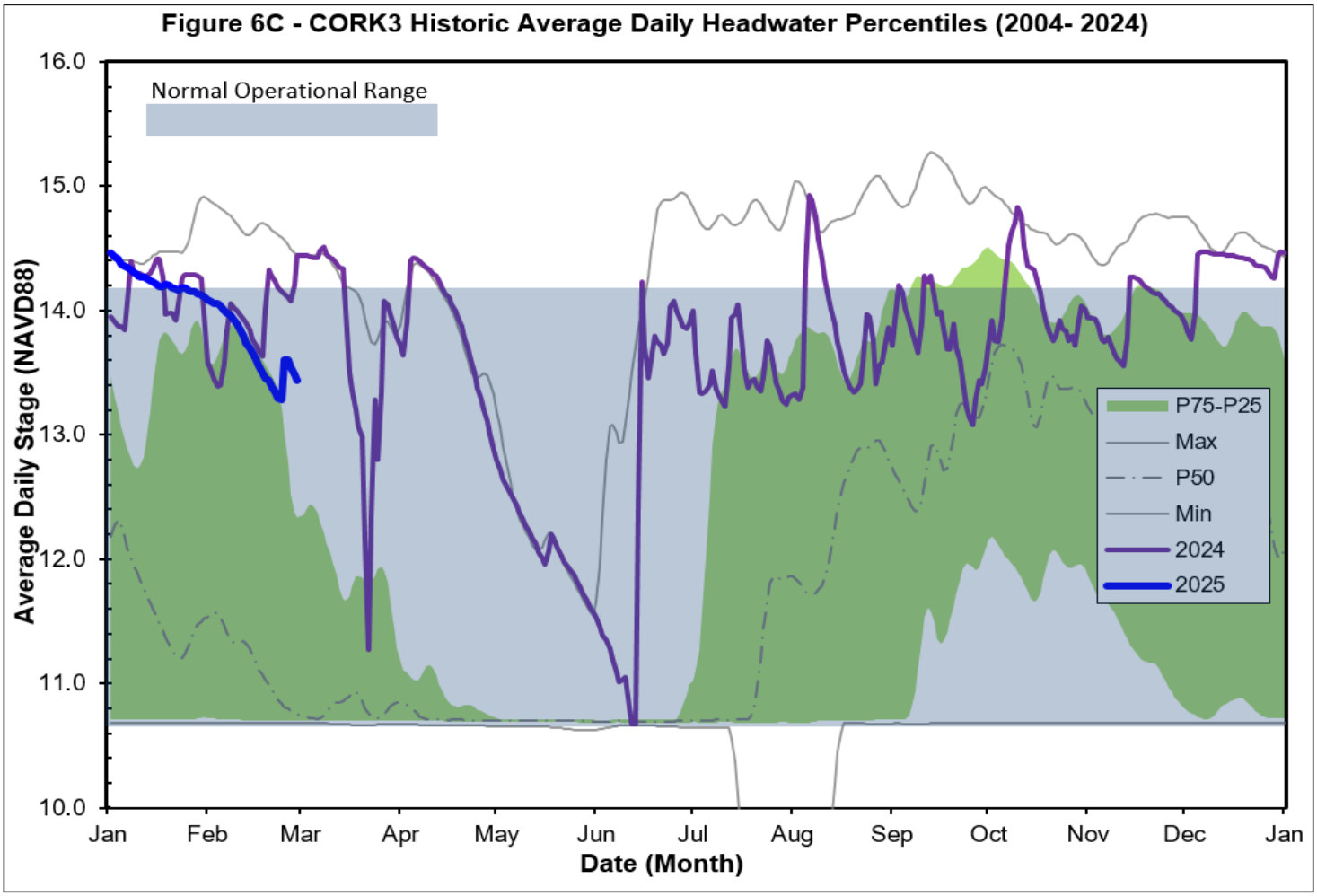
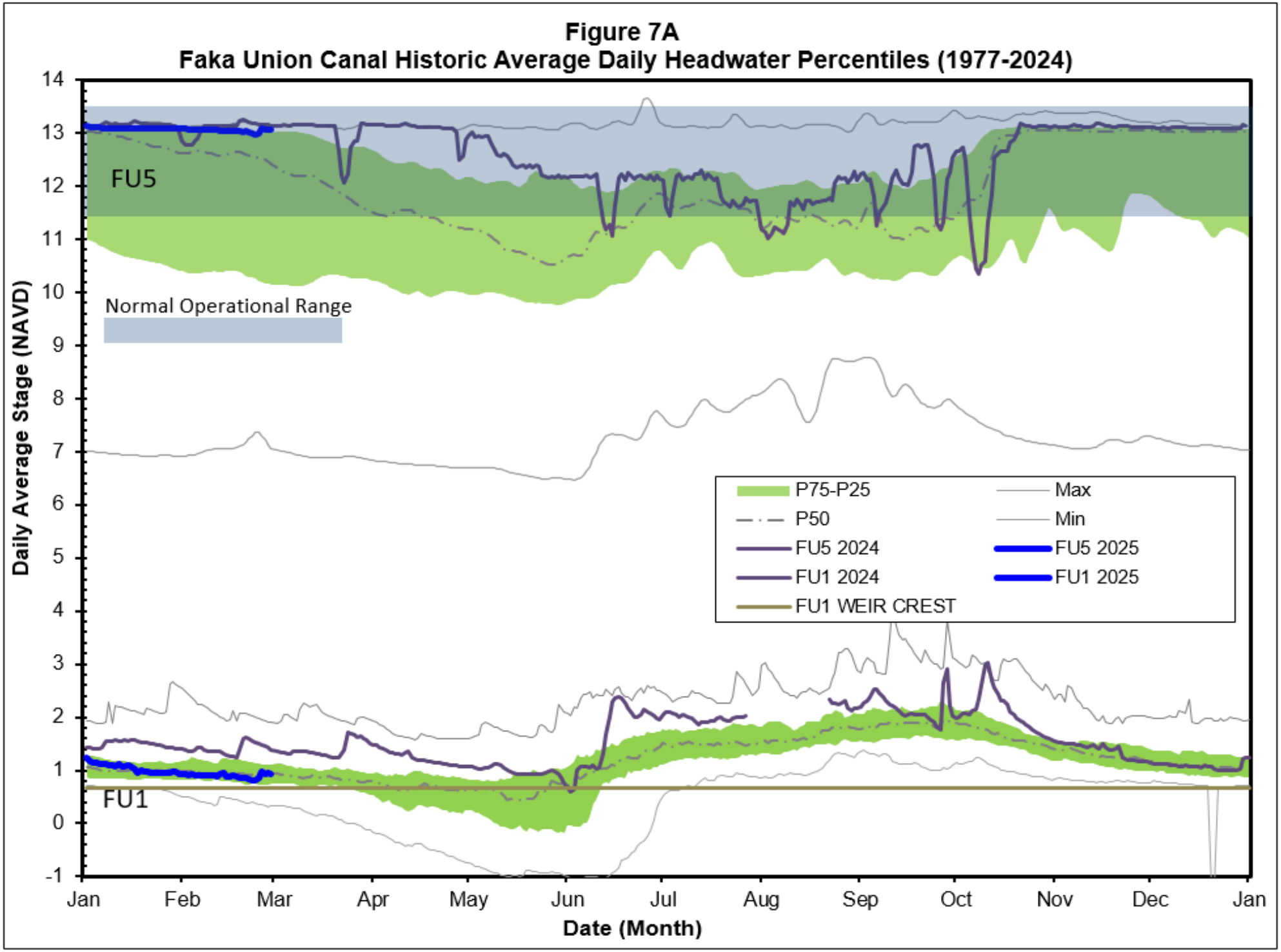


Figure 6C - CORK3 Historic Average Daily Headwater Percentiles (2004- 2024)
Average Daily Stage (NAVD88)
16.0
15.0
14.0
13.0
12.0
11.0
10.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Date (Month)
Normal Operational Range
P75-P25
Max
P50
Min
2024
2025

Figure 7A
Faka Union Canal Historic Average Daily Headwater Percentiles (1977-2024)



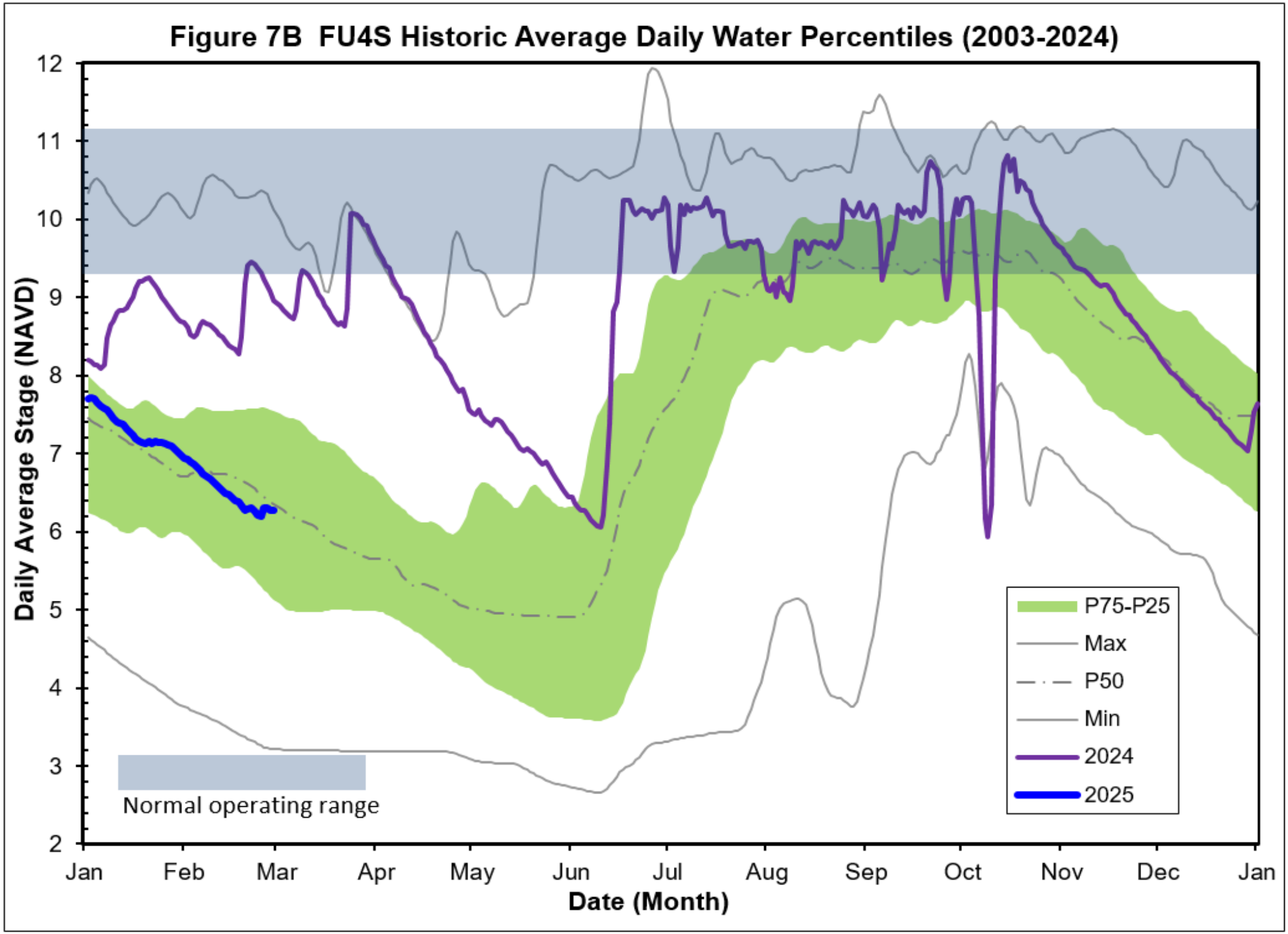


Figure 7B FU4S Historic Average Daily Water Percentiles (2003-2024)
Daily Average Stage (NAVD)
12
11
10
9
8
7
6
5
4
3
2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Date (Month)
Normal operating range
P75-P25
Max
P50
Min
2024
2025

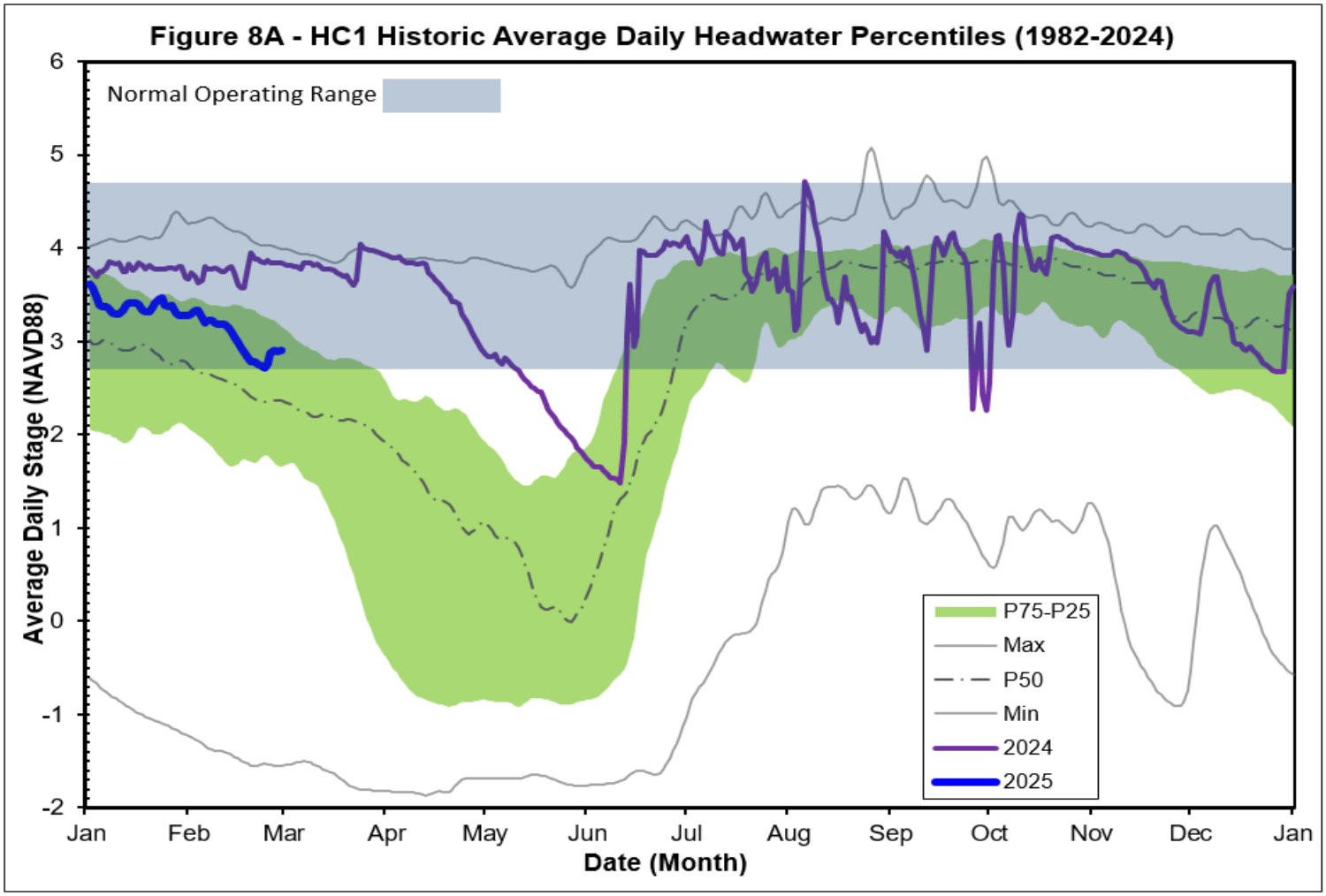


Figure 8A - HC1 Historic Average Daily Headwater Percentiles (1982-2024)
Normal Operating Range
Average Daily Stage (NAVD88)
6
5
4
3
2
1
0
-1
-2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Date (Month)
P75-P25
Max
P50
Min
2024
2025

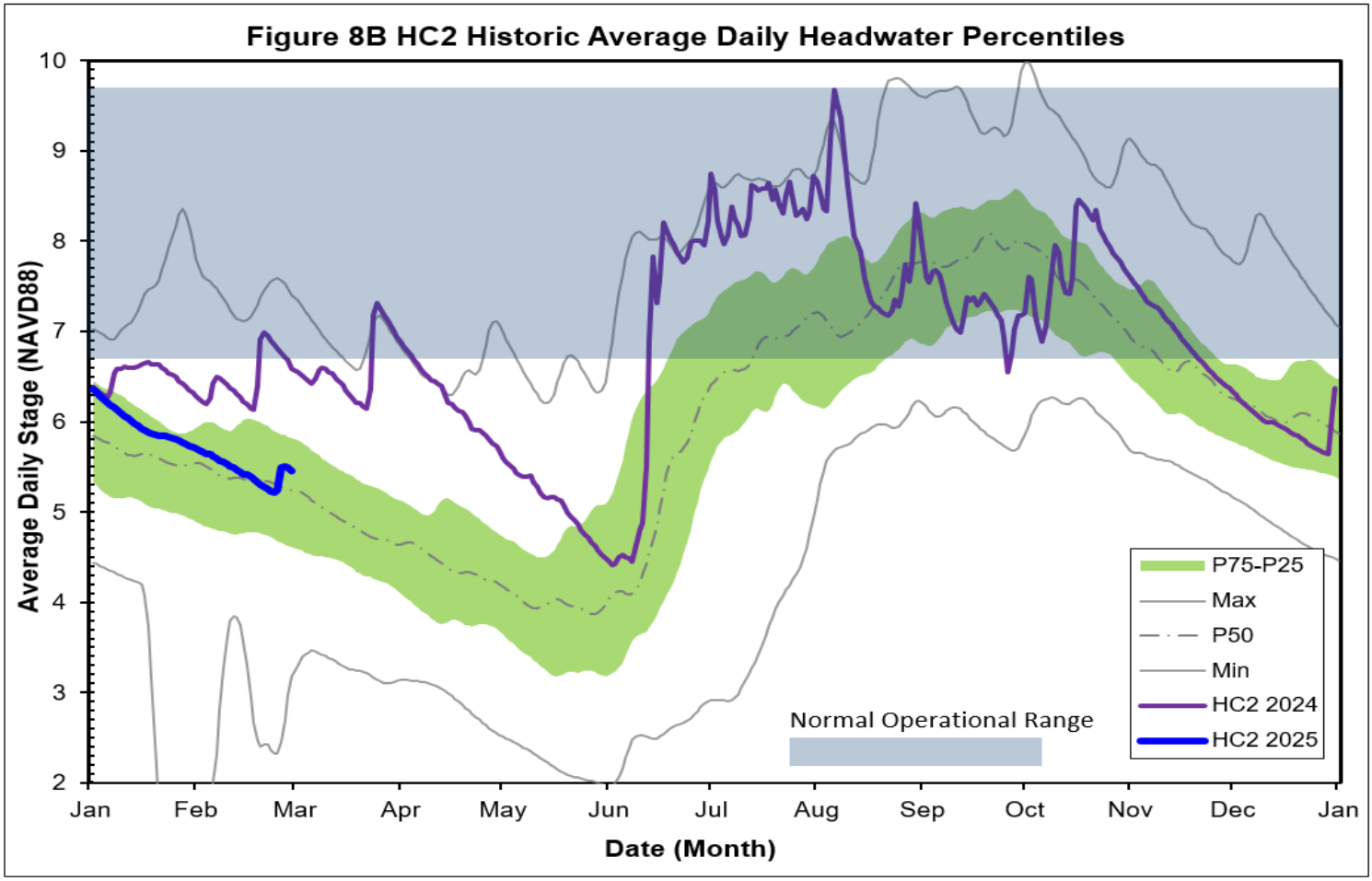


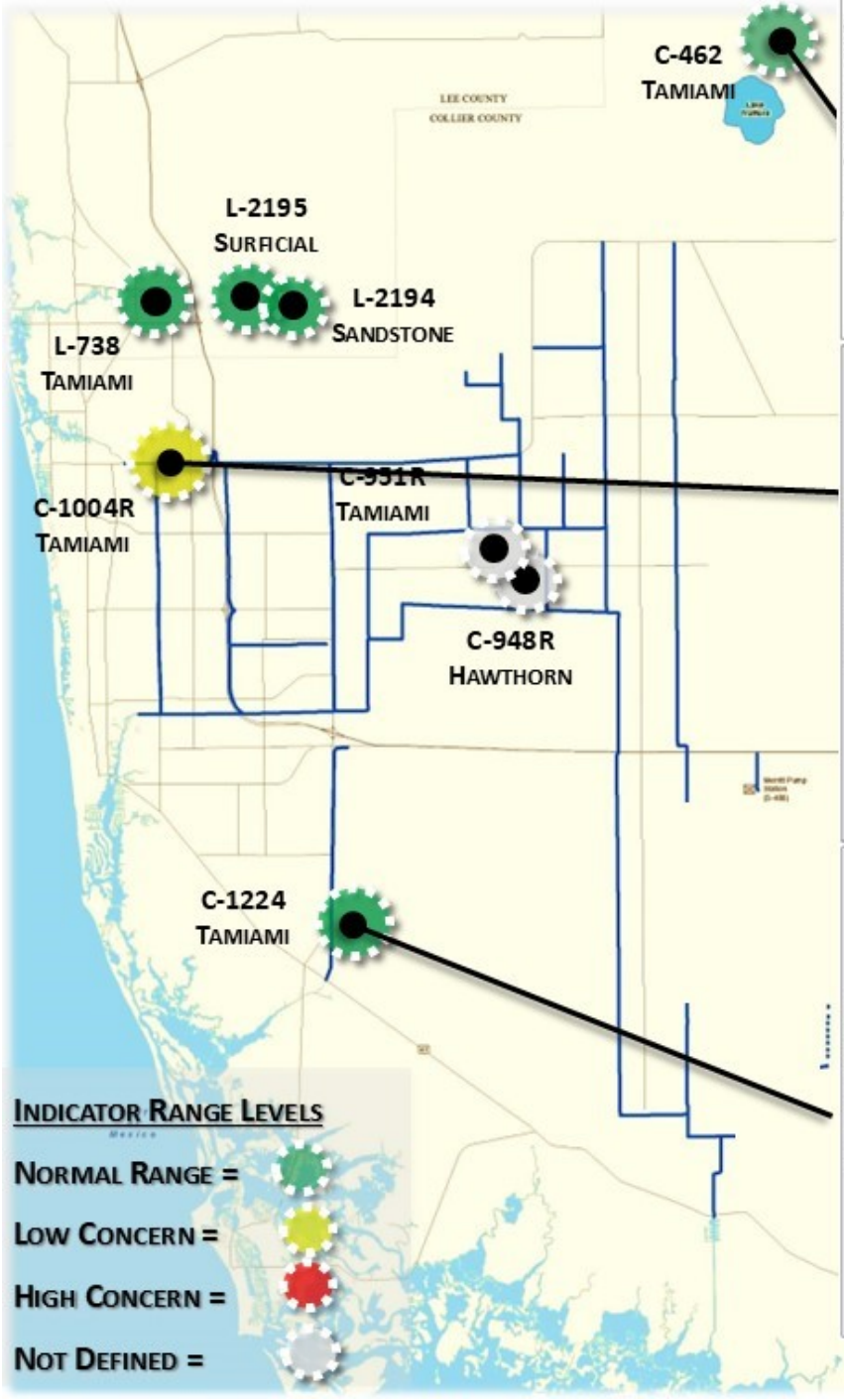
Figure 8B HC2 Historic Average Daily Headwater Percentiles
Average Daily Stage (NAVD88)
10
9
8
7
6
5
4
3
2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Date (Month)
Normal Operational Range
P75-P25
Max
P50
Min
HC2 2024
HC2 2025

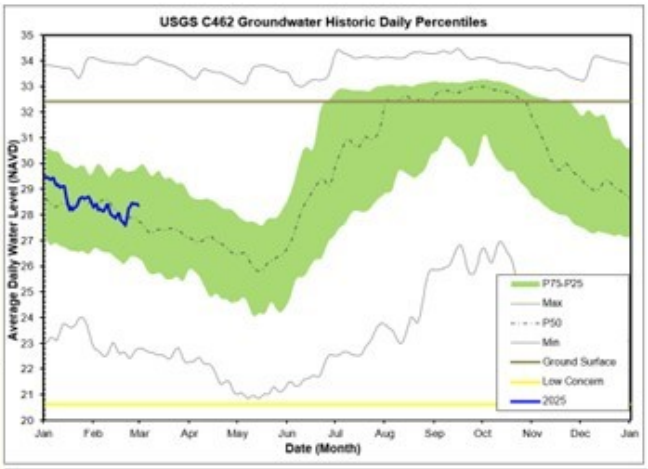
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

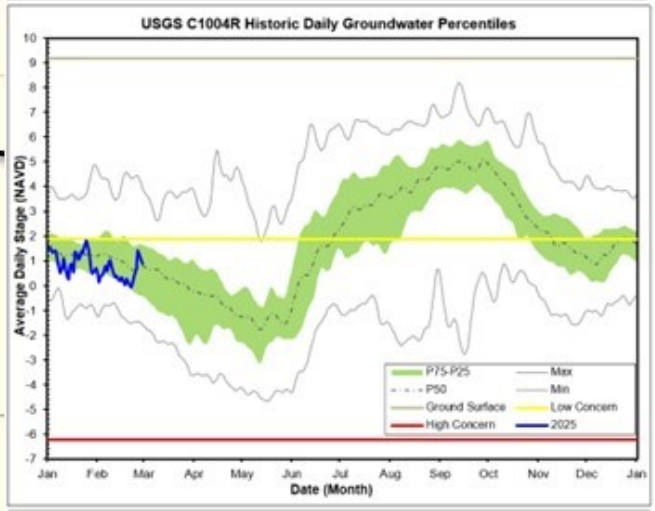
BIG CYPRESS BASIN

FEBRUARY 2025

GROUNDWATER LEVEL DAILY TRENDS COMPARED TO HISTORICAL AVERAGE







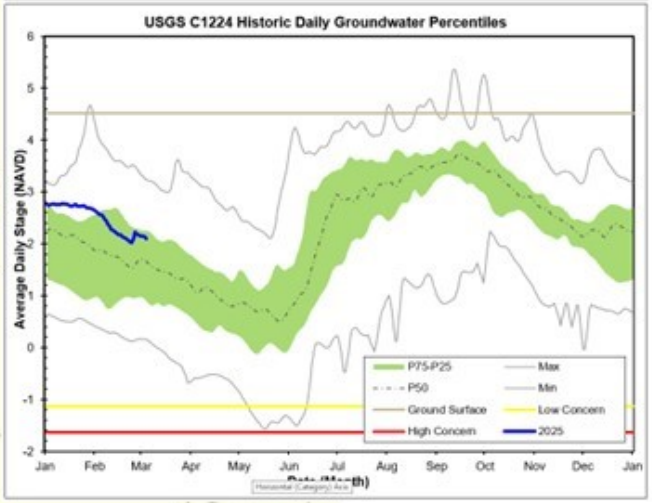


FIGURE 9

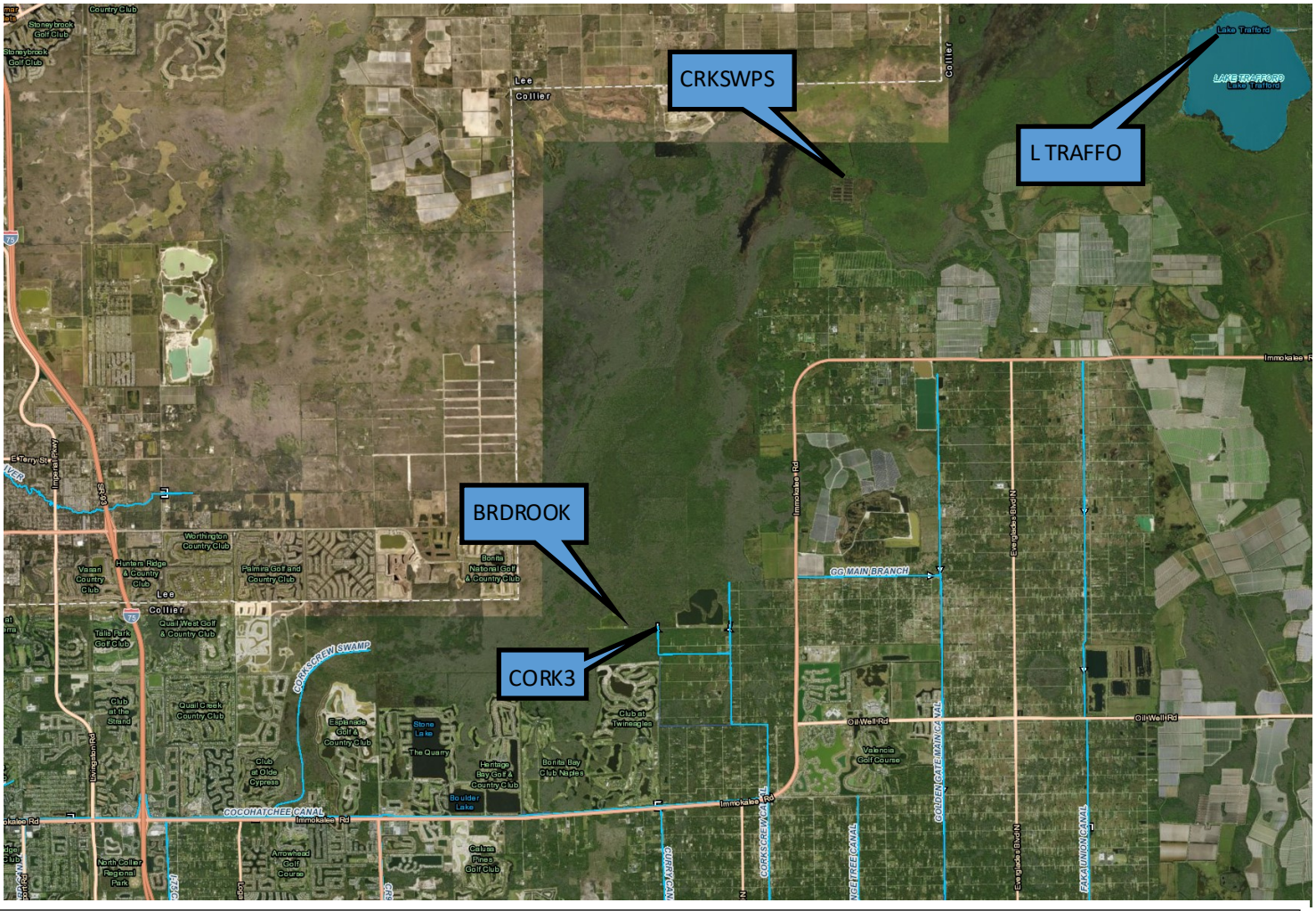


Figure 10-Corkscrew Historic Average Daily Headwater Percentiles (1984-2024)

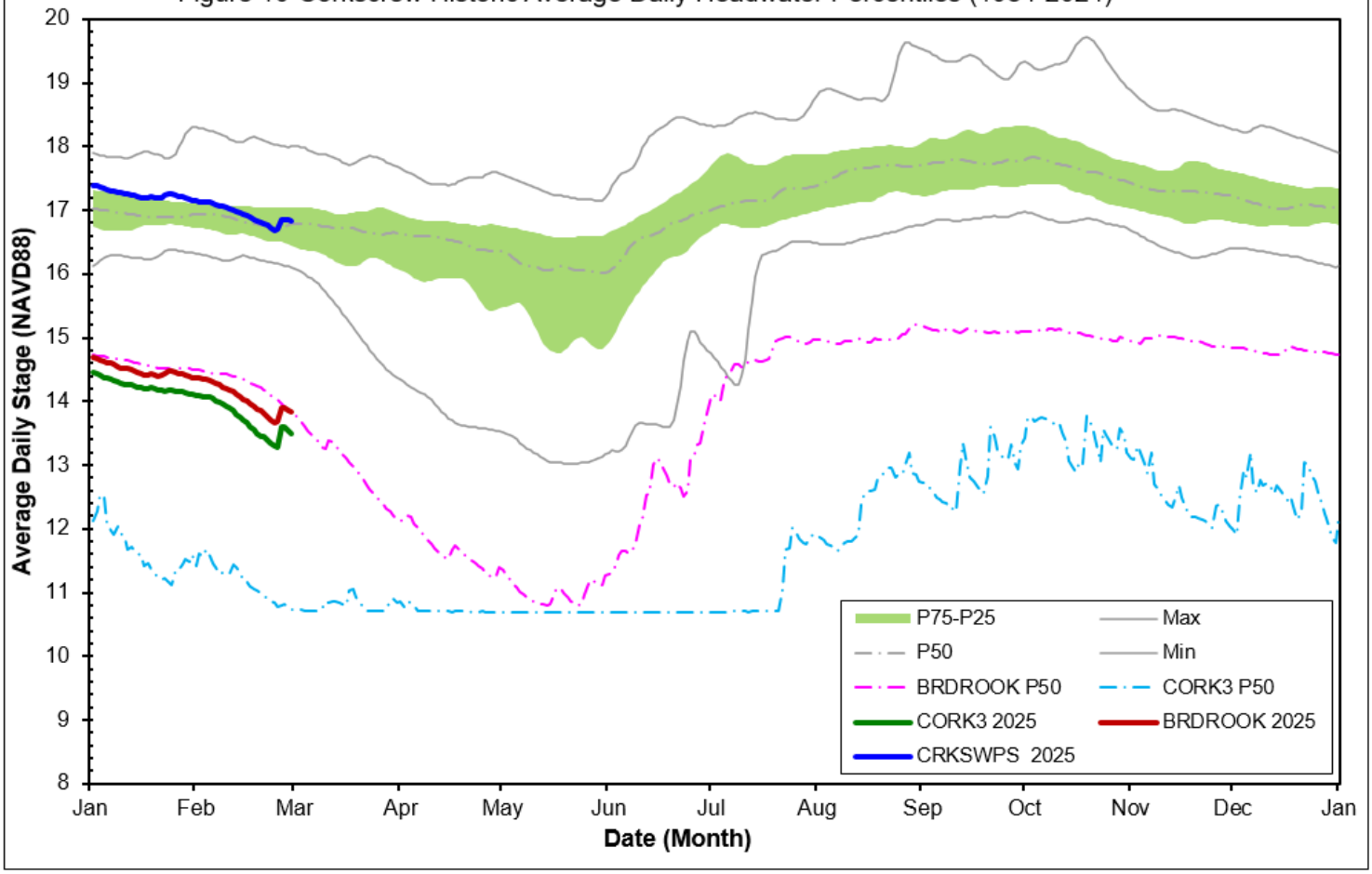


Figure 11 Lake Trafford Historic Average Daily Headwater Percentiles (1941-2024)