SOUTH FLORIDA WATER MANAGEMENT DISTRICT

APRIL 2025

BIG CYPRESS BASIN HYDROLOGIC REPORT

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SUMMARY OF HYDROLOGIC CONDITIONS IN THE BIG CYPRESS BASIN

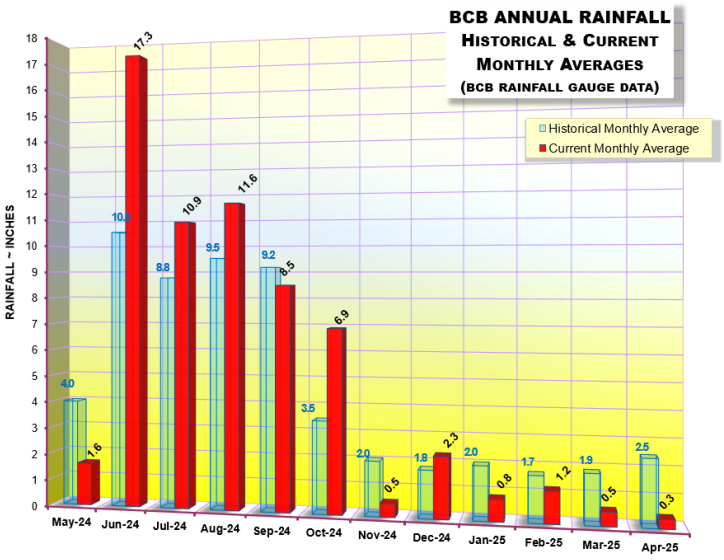
APRIL 2025

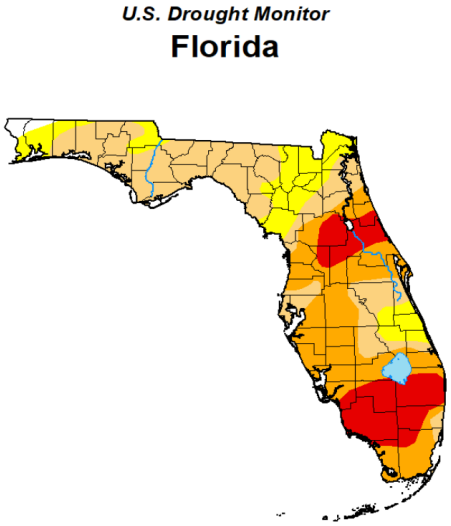
SUMMARY

The unusually dry “dry season” continued through April 2025 in the Big Cypress Baisn (BCB). The basin wide average rainfall recorded in April was only 0.34 inches, just 14% of normal. This makes April 2025 one of the driest Aprils in the last 30 years, coming close to the 0.30 inches which fell in April 1998.

As of the end of April, 2025, the U.S. Drought Monitor listed Collier County in condition D3 - Extreme Drought. The drought condition has worsened from March due to an April rainfall deficit of 2.2 inches. Since January 1st, the rainfall deficit stands at 5.3 inches.

Water Year 2024-2025





April 29, 2025
(Released Thursday, May. 1, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	1.26	98.74	82.20	46.75	16.87	0.00
Last Week 04-22-2025	6.36	93.64	51.79	33.33	4.86	0.00
3 Months Ago 01-28-2025	38.30	61.70	16.76	0.00	0.00	0.00
Start of Calendar Year 01-07-2025	10.12	89.88	29.22	0.00	0.00	0.00
Start of Water Year 10-01-2024	94.54	5.46	0.00	0.00	0.00	0.00
One Year Ago 04-30-2024	73.32	26.68	8.98	0.00	0.00	0.00

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

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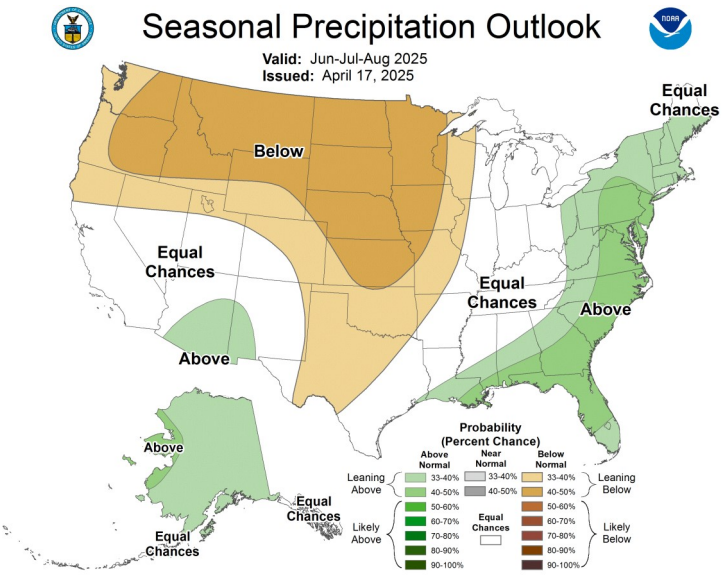
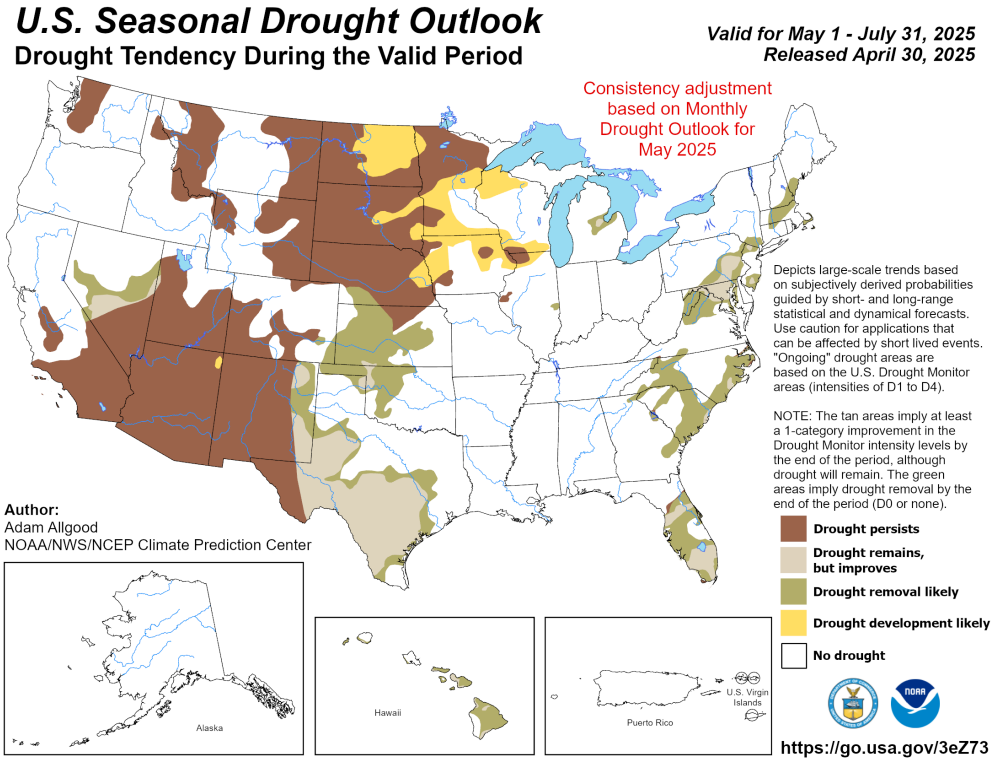
droughtmonitor.unl.edu

Though the 2024/2025 dry season rainfall has been extremely low, canal levels have held up remarkably well due to the operation of the system in water conservation regimens after the passing of Hurricane Milton on October 10, 2024. Nonetheless, due to the prolonged dry conditions, water levels in the Basin canals have steadily declined over the past months. Some areas are clearly showing the impact of the extended dry conditions, though many Basin canals are still operating between the 25th and 75th percentile of their historic levels.

Despite the steady decline in water levels, there is room for optimism as the wet season approaches. La Niña conditions ended during April and the equatorial Pacific Ocean returned to El Niño/Southern Oscillation neutral (ENSO-neutral) condition. ENSO-neutral conditions are expected to persist through the summer, and are often associated with near normal precipitation levels. NOAA’s Seasonal Precipitation Outlook reflects this expectation, and shows a slightly elevated probability that the Basin will receive above normal rainfall for the three-month period of June through August 2025.



Due to the higher probability of above normal precipitation over the next few months, NOAA's U.S. Seasonal Drought Outlook anticipates that drought conditions will remain, but improve, through July 31, 2025. The formal ending of drought conditions may take time due to the significant rainfall deficit, and multiple rainfall events may be required to bring water levels back to their normal wet season ranges. The forecast persistence of ENSO-Neutral Conditions through the summer may increase the opportunity for above normal rainfall in the upcoming wet season and result in a gradual easing of drought conditions .



Looking forward into May, Basin structures will continue to be operated to capture and conserve as much rainfall as possible, until wet season rains return, and canal water levels return to their normal wet season ranges. Once water levels have recovered to wet season ranges – and the dry season is officially ended – structure operations will transition to flood control regimens .

APRIL 2025 BCB RAINFALL

The Basin-wide rain gauge monthly average rainfall was **0.34** inches, well below the historical monthly average of 2.5 inches (14% of historical) (**Figures 1, 2, 3 Table 1**). The rainfall distribution varied highly by location, with the highest value of 1.38 inches recorded at Station R-16 (FAKAHATCHEE STRAND NORTH END). The northwest portion of the Basin received the lowest rainfall totals with the lowest value of 0.02 inches recorded at R-23 (FPWX). **Figure 3a** shows the average rainfall for each of the Basin's watersheds based on gauge adjusted radar (Raindar). The Barron River Basin received the highest Raindar rainfall with a 0.83 inch areal average across the watershed, and the lowest was the East Naples Basin with an average of just 0.13 inches. The BCB's total areal weighted average Raindar rainfall was 0.39 inches, which closely corresponds to the rain gauge average value of 0.34 inches. The Raindar totals and their locality distribution across the BCB/Lower West Coast are shown on **Figure 4**.

BIG CYPRESS BASIN CANAL SYSTEMS

For the month of April, BCB structures continued to be operated in water conservation mode to retain as much water as possible and promote groundwater recharge. Rainfalls which fell in April were extremely minor and did not require any adjustment or operation of water control structures. The lack of impactful rainfall let to a continued decline in canal water levels basin wide. By the end of April, the

majority of BCB canals were between the 25th and 50th percentile; with some locations dropping below the 25th percentile; and a few dropping below the 10th percentile. The Faka Union Canal upstream of FU5 continued to fare well, however, with canal the water level still at the 75th percentile as of the end of the month. (**Figure 4a**).

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. No discharge occurred from GG1 to the Gordon River during the month of April, and no opportunity existed to implement conservation pumping at Airport Road Canal or CR951 Canal. As a result of the dry conditions, Airport Road Canal water levels dropped to below the 10th percentile by the end of April. Segments of the Golden Gate system (GG Main between GG2 and GG3; CR951 Canal; and upstream of GG5) dropped to below the 25th percentile by the end of the month. Other locations in the Golden Gate main Canal (such as GG1 and GG4) were operating between the 25th and 50th percentile at the end of April. (**Figure 5**)

COCOHATCHEE SYSTEM

The Cocohatchee Canal system was maintained in water conservation mode through the month of April and all structures remained fully closed. As the month concluded, water levels in the lower portion of the canal system (COCO1) dropped below the 10th percentile while the remainder of the system (except CORK2) operated between the 25th and 50th percentile (**Figures 6A, 6B, & 6C**). By late in April, water levels at CORK3 reach the bottom of the sensor's ability to measure, as typically happens in a drier than normal dry season. Due to operational changes enacted in the prior water year, headwater levels at CORK2 remained between the 50th and 75th percentile at the end of April. (**Figures 6A, 6B, & 6C**).

FAKA UNION SYSTEM

All areas of the Faka Union canal remained in water conservation operations with all structures fully closed during the month of April. Water levels upstream of FU5 began to decline in April and were at the 75th percentile by the end of the month. Stages downstream of FU5 continued their recession and fell below the 25th percentile between FU4S and FU5. Downstream of FU4S, the canal is currently operating between the 25th and 50th percentile. No pumping occurred in April at the Faka Union pump station (S487). Downstream of Picayune Strand , the water level immediately upstream of FU1 (the fixed crest weir just north of U.S. Highway 41) continued its seasonal decline until king tides in late April caused an increase in stage due to tidal overtopping of the fixed crest weir. (**Figure 7A & 7B**).

HENDERSON CREEK SYSTEM

As with the other BCB canals, water control structures in the Henderson Creek system continued to be operated to conserve water. Canal levels upstream of HC2 dipped to just below the 25th percentile by the end of April, while levels between HC1 and HC2 continued to operate slightly above the 50th percentile (**Figure 8A & 8B**). Both control structures remained fully closed and no water was released downstream through the HC1 structure in the month of April.

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 continuing water level recession during April, due to a lack of rainfall combined with the seasonal increase in evapotranspiration. By the end of April, the water level at CORK3 had declined below the lower range of the sensor – as is common late in the dry season – resulting in a "flatlining" of the water level at 10.65 NAVD. Water levels at Bird Rookery (BRDROOK) and Corkscrew (CRKSWPS) declined to between the 10th and 25th percentile. No discharge has occurred through CORK2 since January, and continued operations of CORK2 above its historical dry season regimen provided no noticeable benefit in limiting water level recession rates in Corkscrew Swamp. As **Figure 11** shows, Lake Trafford also continues its seasonal recession, and was approaching the 25th percentile by the end of April.

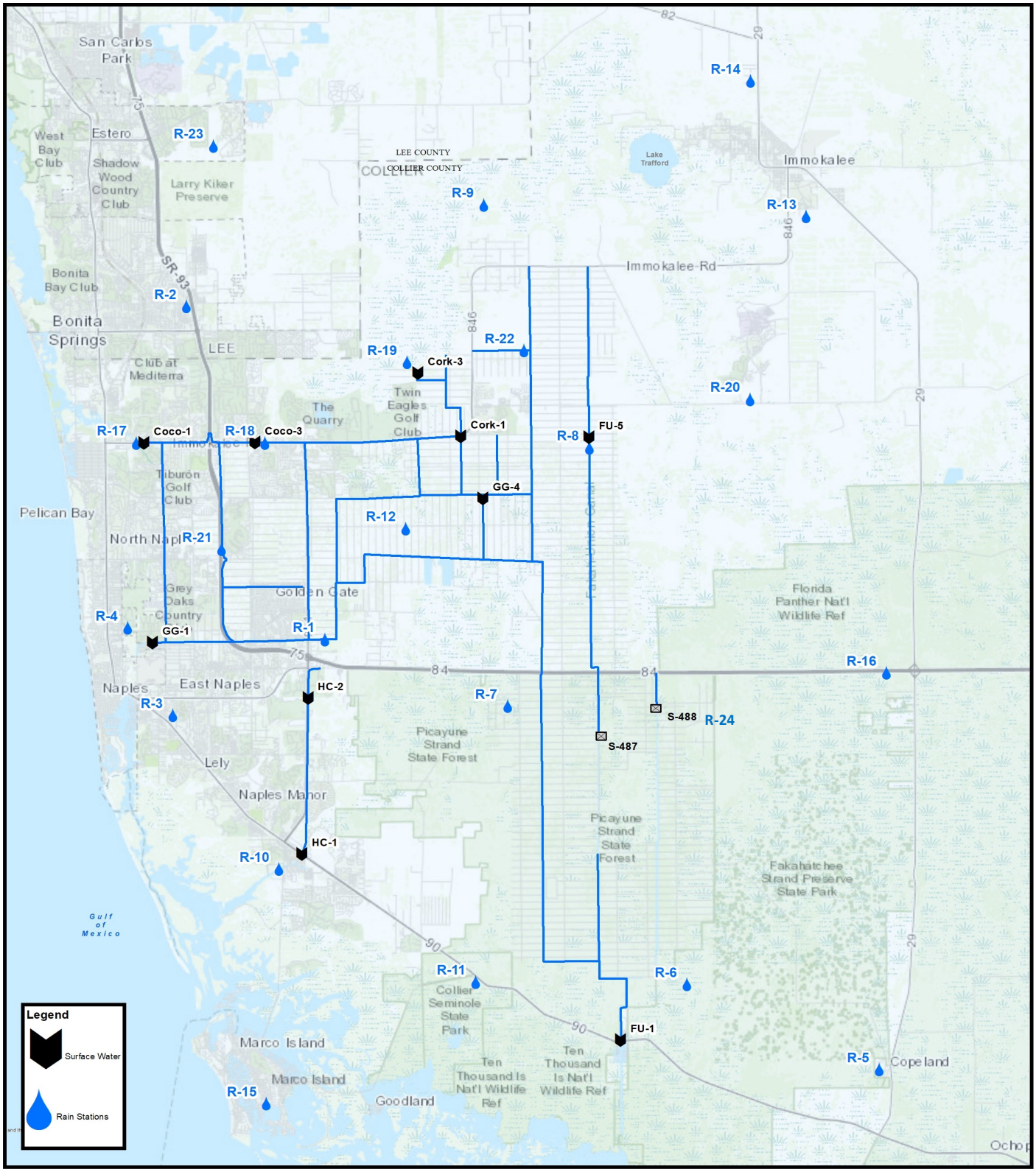
Figures 12 and Figure 13 show the locations for Southern Corkscrew (SOCREW) sites 1 through 6, all of which are combination surface and groundwater monitoring wells. The charts on these figures , as well as the historical trends for SOCREW1 and SOCREW2. Both SOCREW1 and SOCREW2 ended the month just at approximately the 25th percentile. The SOCREW sites 3, 4, 5 and 6 are newer sites and only have a period of record for approximately 2.5 years, so there is not adequate data to complete a statistical analysis.

BIG CYPRESS BASIN & LOWER WEST COAST GROUNDWATER LEVELS

For the Lower West Coast [LWC], the water levels in the groundwater monitoring stations continued their decline in April, with the recession rate varying based upon location (**Table 2 and Figure 9**). C-462, north of Lake Trafford, dropped below the 50th percentile but remains well above the level of low concern. C-1224, on Henderson Creek, also dropped below the 50th percentile in April, but it too remains well above the level of low concern. C1004R, on the Cocohatchee Canal, continued its downward trend and ended the month near its historical low. Though near its historical low, C1004R remains approximately 2 feet above the level of high concern.

L-738 a Tamiami Aquifer well in Bonita Springs continued its steady recession, and by mid-April reached the historic minimum level for that date. The downward trend continued through the second half of the month and the water level reached the level of high concern by month's end. The last time this well reached the level of high concern was in mid-May 2023. As occurred in 2023, it is anticipated that the water level will rebound quickly once wet season rains return. L-2194, a Sandstone Aquifer well in Bonita Springs, also dropped into the level of high concern in April, and is too trending near historical minimums. Though within the area of high concern, L-2194 is not heavily relied upon for water supply and is similarly anticipated to rebound quickly when the wet season rains return. L-2195, a surficial aquifer well in Bonita Springs is faring better than other nearby wells, and is currently at approximately the 25th percentile. Though the water level dropped into the level of low concern in April, the rate of recession trendline for this well indicates that the water level should not drop into the level of high concern until sometime in June, by which time wet season rains should have begun to recharge the aquifer.

FIGURE 1



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

Hydrologic Station Map

Collier County, Florida

UPDATED July 2021

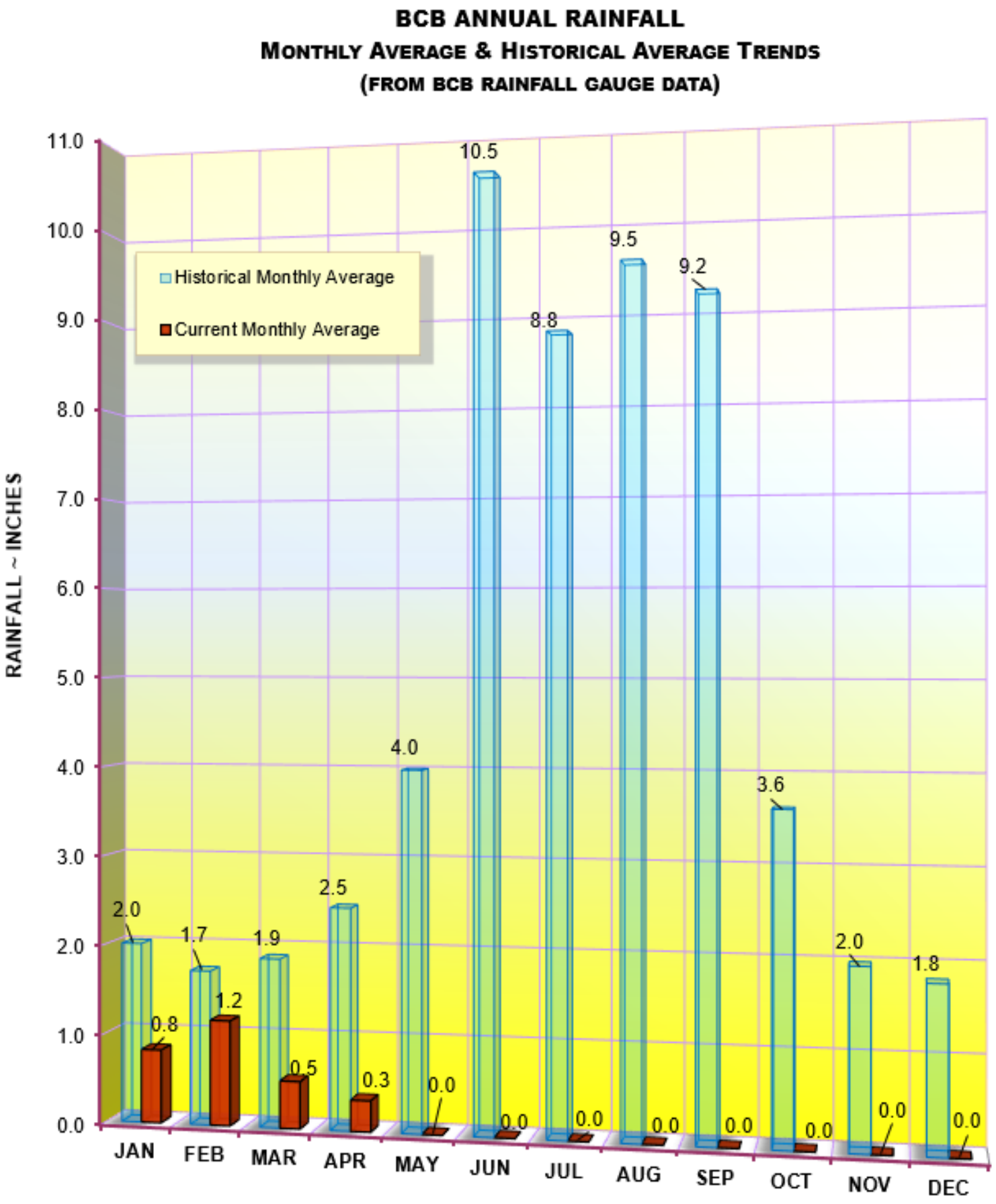
Hydrologic_map_Jan_2016.mxd

TABLE 1

RAINFALL REPORT - APRIL 2025
DISTRICT/BASIN RAINFALL STATIONS
(ALL NUMBERS ARE IN INCHES)

STATION INDEX NO.	STATION NAME	Apr-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	0.16	2.63	-2.47	1.25	7.78	-6.53
R-2	BONITA SPRINGS WATER PLANT	0.07	1.95	-1.88	3.67	8.12	-4.45
R-3	COLLIER COUNTY COURTHOUSE	0.11	2.34	-2.23	1.92	8.12	-6.20
R-4	FREEDOM PARK	0.30	2.08	-1.78	2.46	7.38	-4.92
R-5	FAKAHATCHEE STRAND HQ	0.42	2.27	-1.85	2.65	8.16	-5.51
R-6	DAN HOUSE PRAIRIE	0.07	2.29	-2.22	2.97	6.97	-4.00
R-7	PSRP WEATHER STATION	0.42	2.82	-2.40	2.72	7.69	-4.97
R-8	FAKA UNION #5	0.21	2.80	-2.59	3.55	8.89	-5.34
R-9	CORKSCREW SWAMP NORTH END	0.10	2.14	-2.04	2.55	7.39	-4.84
R-10	ROOKERY BAY HQ	0.49	2.20	-1.71	1.97	7.57	-5.60
R-11	COLLIER SEMINOLE STATE PARK	0.27	2.39	-2.12	3.61	7.94	-4.33
R-12	G.G. FIRE STATION	0.19	2.44	-2.25	3.14	8.45	-5.31
R-13	IMMOKALEE LANDFILL	0.43	2.33	-1.90	4.35	8.70	-4.35
R-14	IFAS	0.57	2.36	-1.79	3.03	8.97	-5.94
R-15	MARCO R.O. PLANT	1.00	2.30	-1.30	3.17	8.65	-5.48
R-16	FAKAHATCHEE STRAND NORTH END	1.38	3.02	-1.64	3.67	9.96	-6.29
R-17	COCO#1	0.05	1.99	-1.94	2.37	7.67	-5.30
R-18	COCO#3	0.24	2.37	-2.13	2.50	7.52	-5.02
R-19	BIRD ROOKERY	0.14	2.13	-1.99	3.20	6.51	-3.31
R-20	AVE MARIA	1.07	2.53	-1.46	3.54	8.79	-5.25
R-21	I75W2	0.16	2.18	-2.02	2.36	6.54	-4.18
R-22	GG#7	0.28	2.40	-2.12	3.08	7.05	-3.97
R-23	FPWX	0.02	2.39	-2.37	2.38	8.05	-5.67
R-24	DSOTO10	0.12	4.75	-4.63	2.91	10.34	-7.43
	AVERAGES	0.34	2.46	-2.12	2.88	8.05	-5.17

FIGURE 2


BCB ANNUAL RAINFALL
MONTHLY AVERAGE & HISTORICAL AVERAGE TRENDS
(FROM BCB RAINFALL GAUGE DATA)
RAINFALL ~ INCHES
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Historical Monthly Average
Current Monthly Average
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
2.0
0.8
1.7
1.2
1.9
0.5
2.5
0.3
4.0
0.0
10.5
0.0
8.8
0.0
9.5
0.0
9.2
0.0
3.6
0.0
2.0
0.0
1.8
0.0

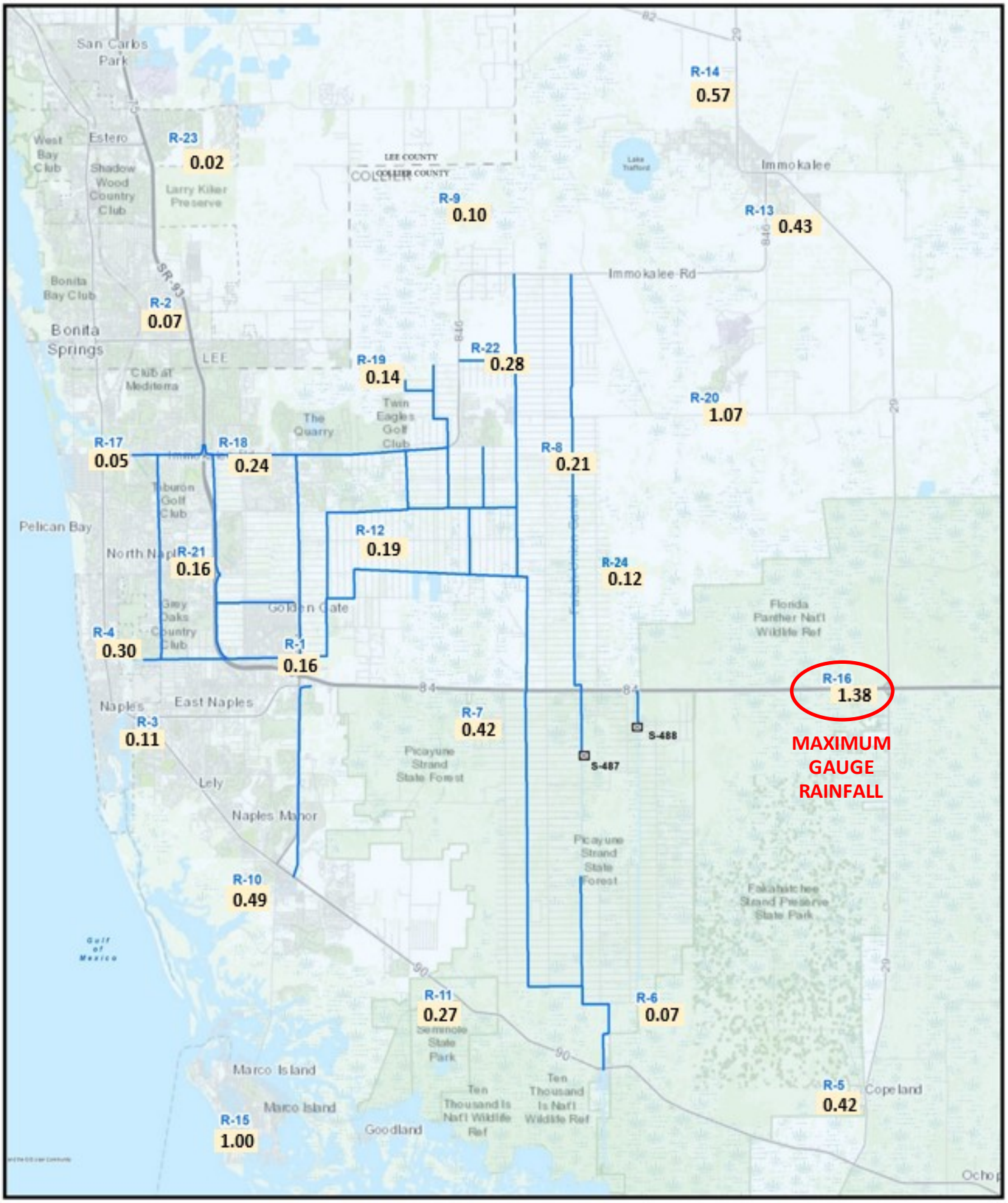
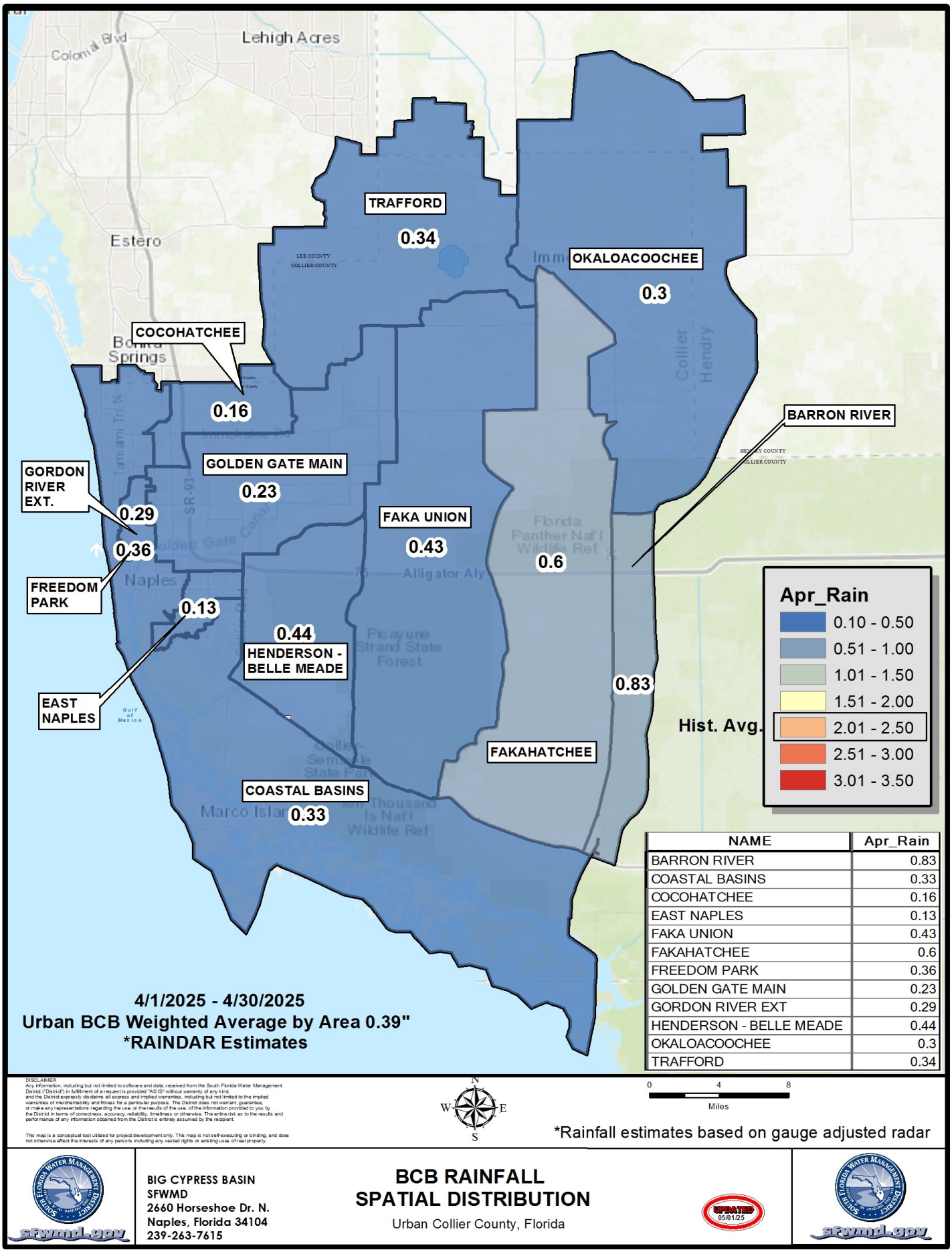
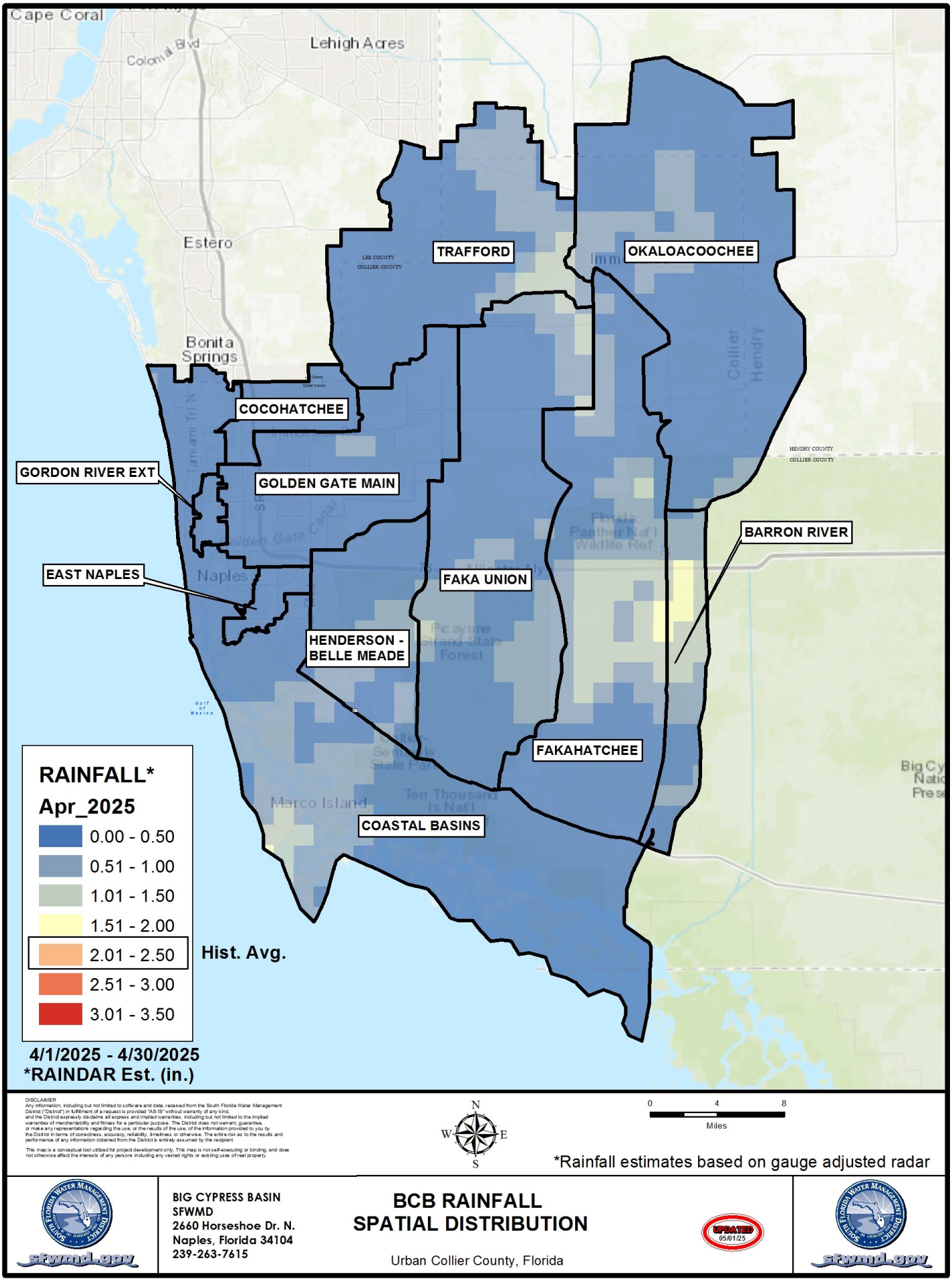


FIGURE 3
BCB RAINFALL DISTRIBUTION
APRIL 2025



NAME	Apr_Rain
BARRON RIVER	0.83
COASTAL BASINS	0.33
COCOHATCHEE	0.16
EAST NAPLES	0.13
FAKA UNION	0.43
FAKAHATCHEE	0.6
FREEDOM PARK	0.36
GOLDEN GATE MAIN	0.23
GORDON RIVER EXT	0.29
HENDERSON - BELLE MEADE	0.44
OKALOACOOCHEE	0.3
TRAFFORD	0.34

APRIL 2025—FIGURE 3a



*Rainfall estimates based on gauge adjusted radar

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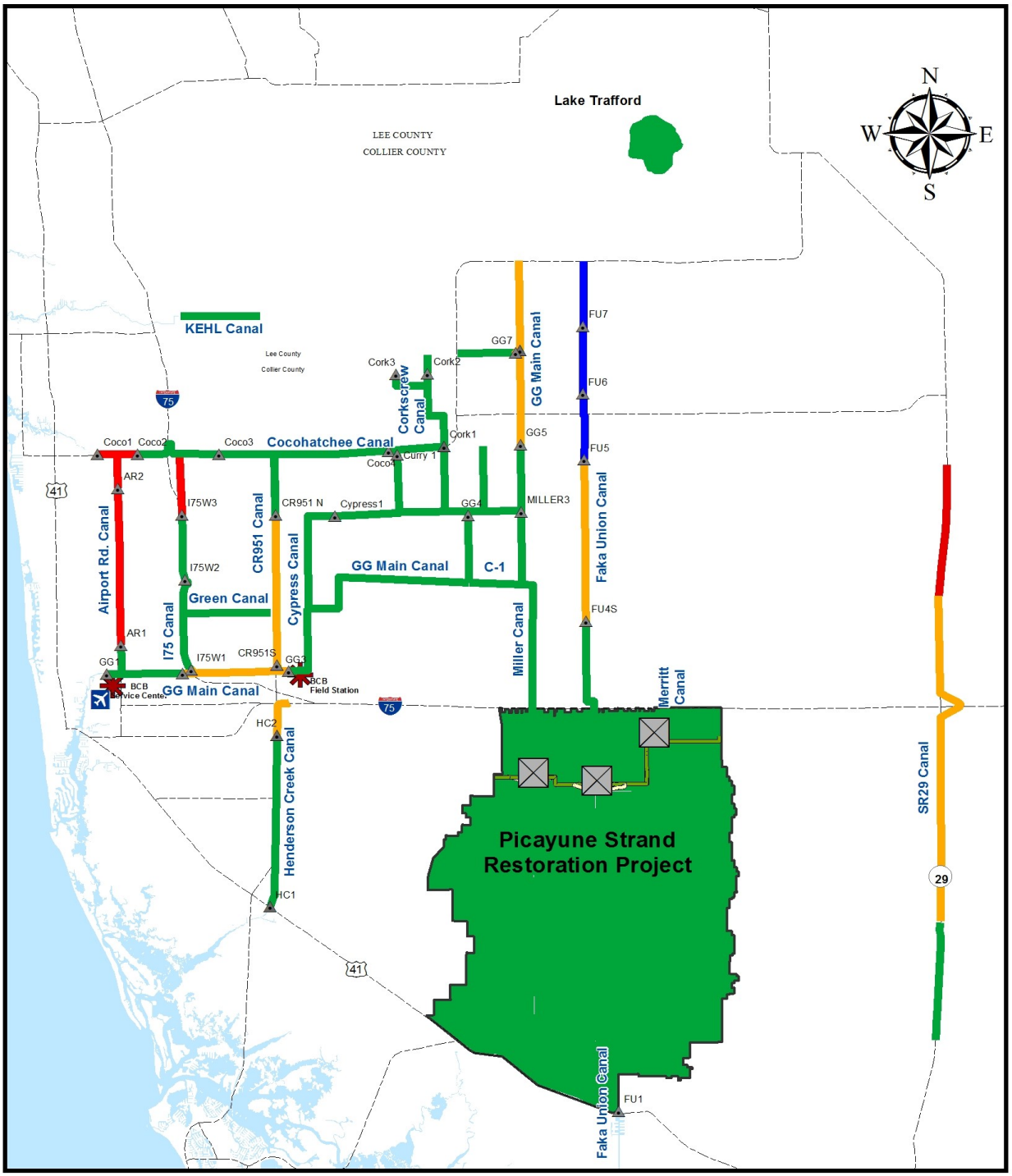
BCB RAINFALL SPATIAL DISTRIBUTION

Urban Collier County, Florida

UPDATED 05/01/25

APRIL 2025—FIGURE 4



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

* Based on period of record for each canal reach

0 2.5 5
Miles

BIG CYPRESS BASIN
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2660 Horseshoe Dr. N.
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BCB Conditions Index 4/30/25

Urban Collier County, Florida

UPDATED 04/30/25

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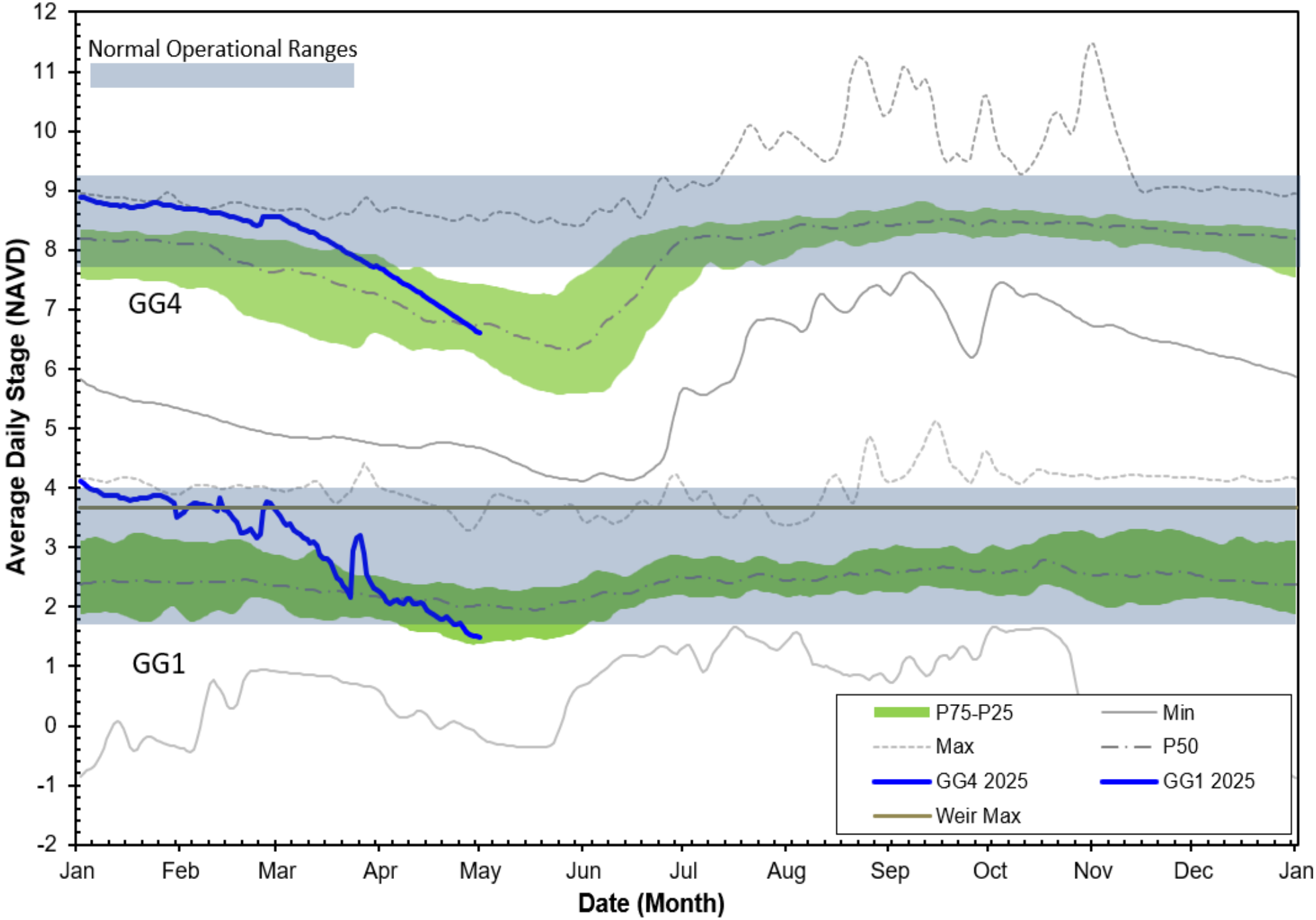
FIGURE 4a

Figure 5 Golden Gate Canal Historic Average Daily Headwater Percentiles



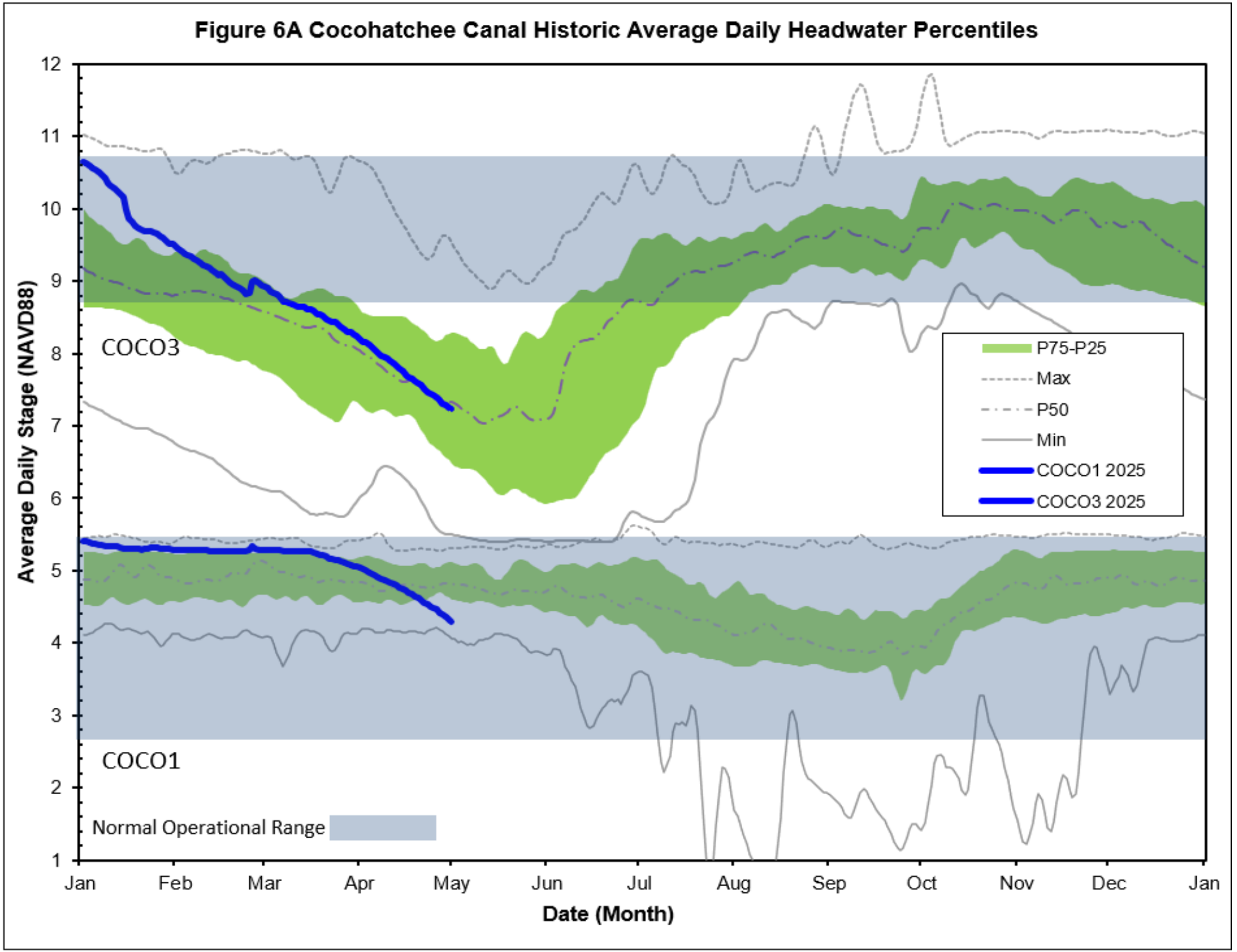


Figure 6A Cocohatchee Canal Historic Average Daily Headwater Percentiles
Average Daily Stage (NAVD88)
Date (Month)
COCO3
COCO1
Normal Operational Range
P75-P25
Max
P50
Min
COCO1 2025
COCO3 2025
12
11
10
9
8
7
6
5
4
3
2
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan

Figure 6B - CORK1 Historic Daily Headwater Percentiles

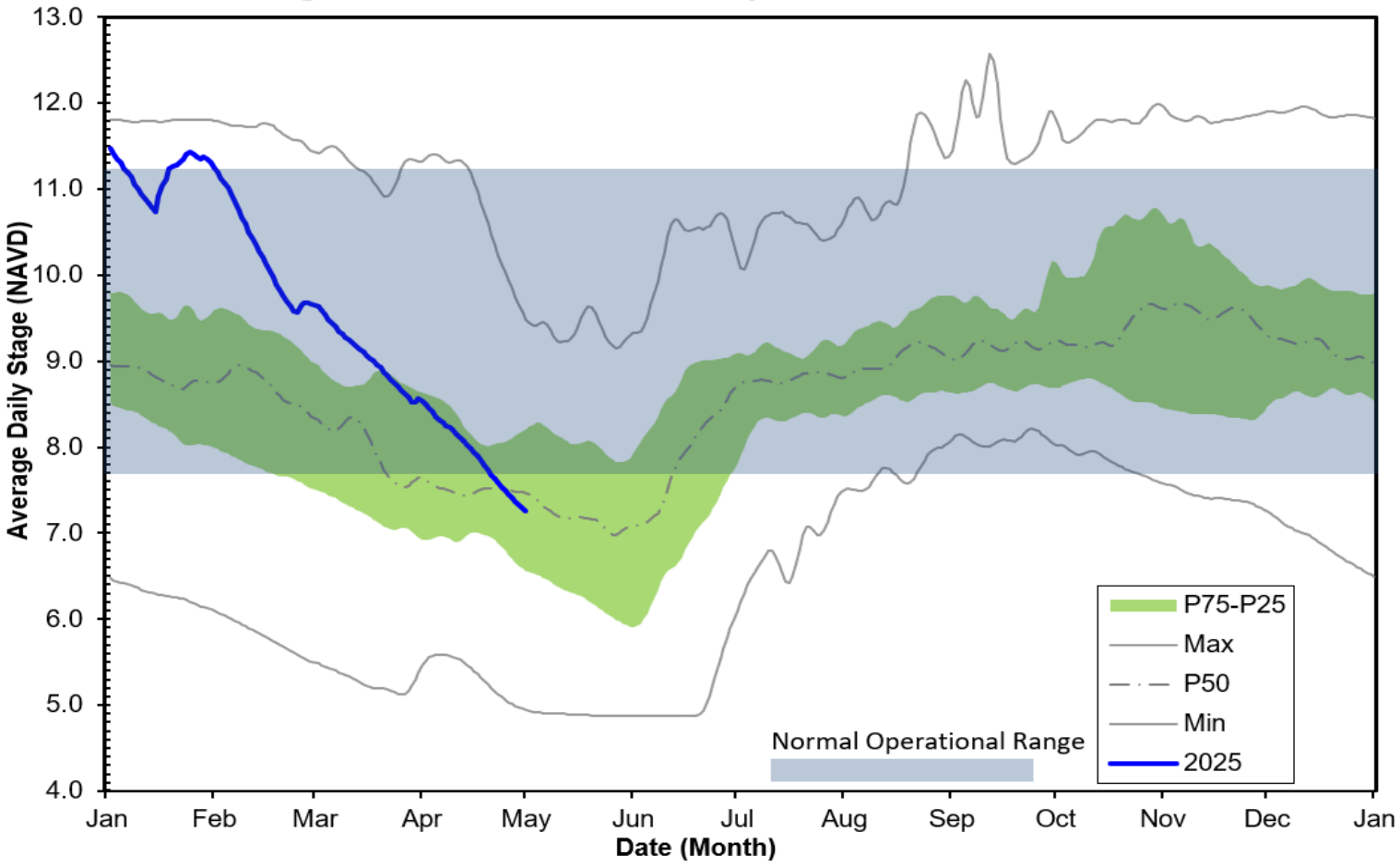
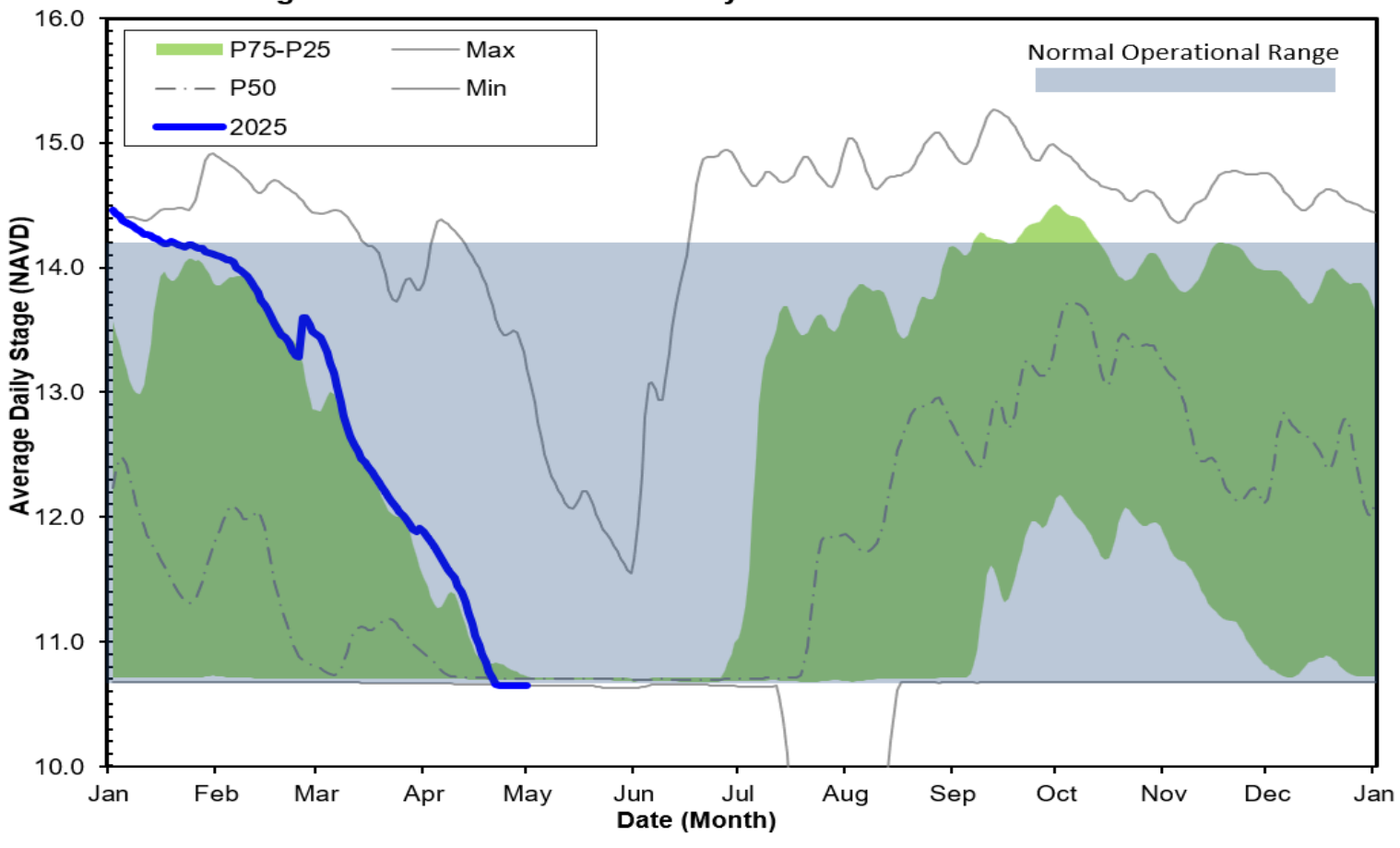


Figure 6C - CORK3 Historic Daily Headwater Percentiles



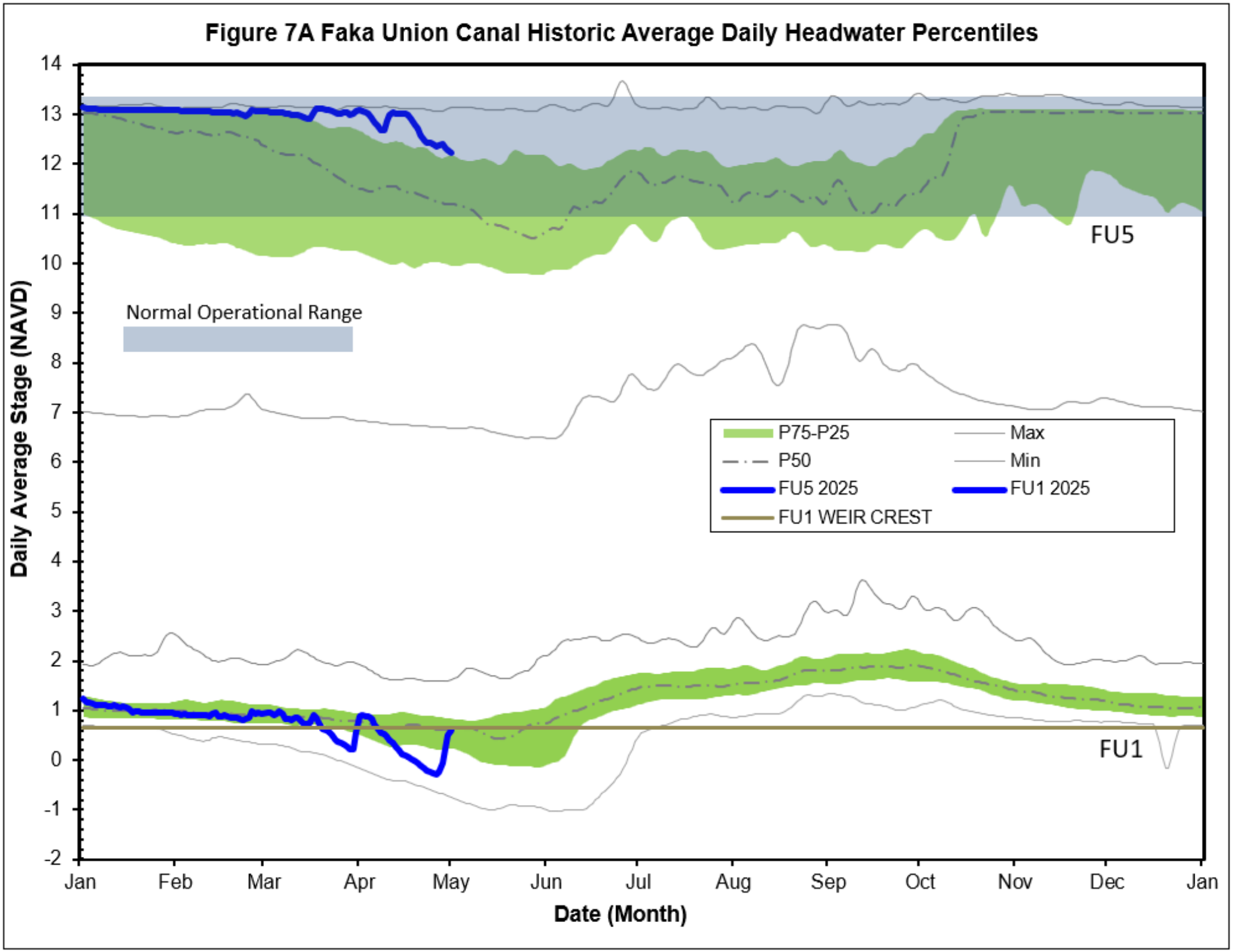


Figure 7A Faka Union Canal Historic Average Daily Headwater Percentiles
Daily Average Stage (NAVD)
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
Normal Operational Range
FU5
FU1
P75-P25
P50
FU5 2025
FU1 WEIR CREST
Max
Min
FU1 2025
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Date (Month)

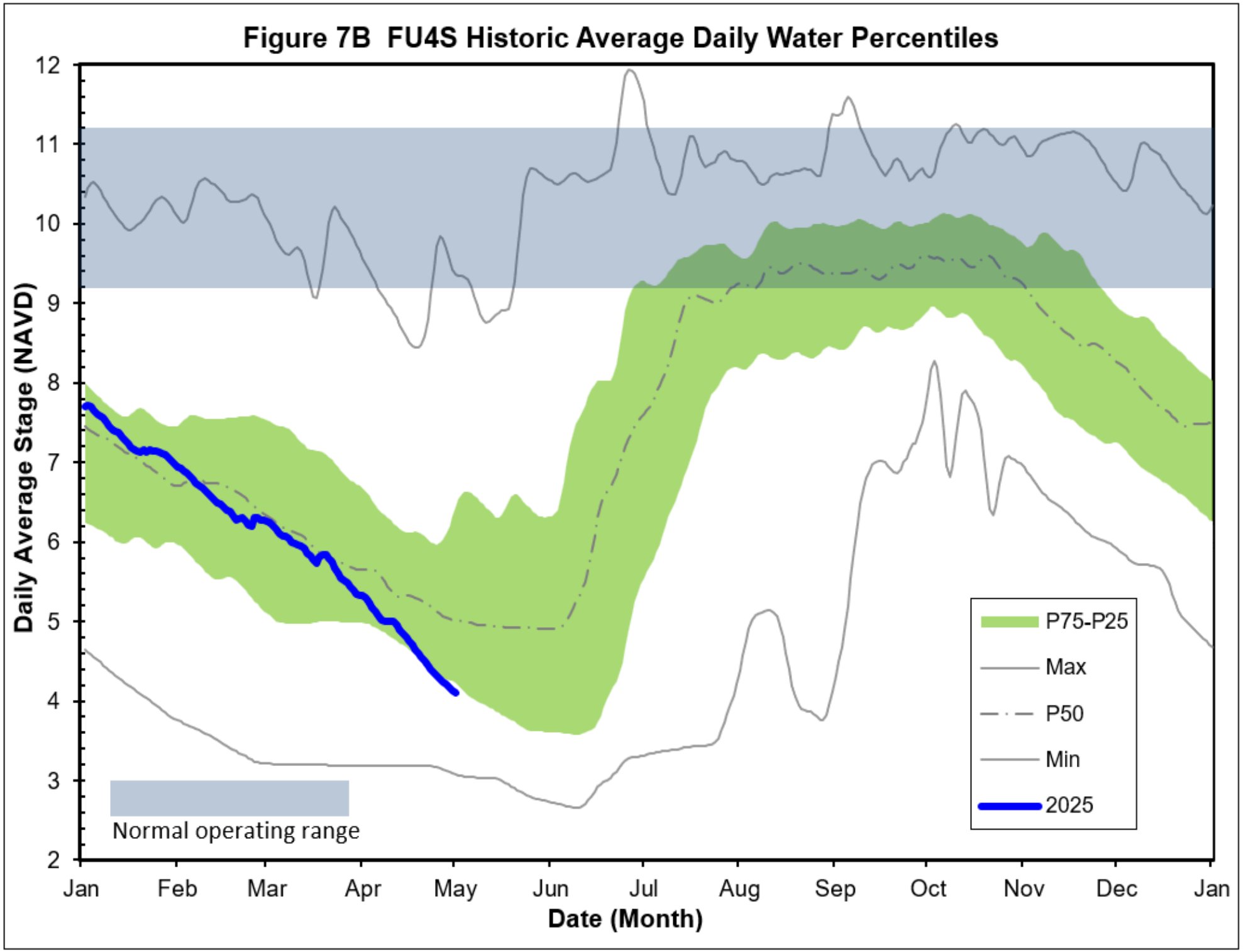


Figure 7B FU4S Historic Average Daily Water Percentiles
Daily Average Stage (NAVD)
12
11
10
9
8
7
6
5
4
3
2
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Date (Month)
P75-P25
Max
P50
Min
2025
Normal operating range

Figure 8A - HC1 Historic Average Daily Headwater Percentiles

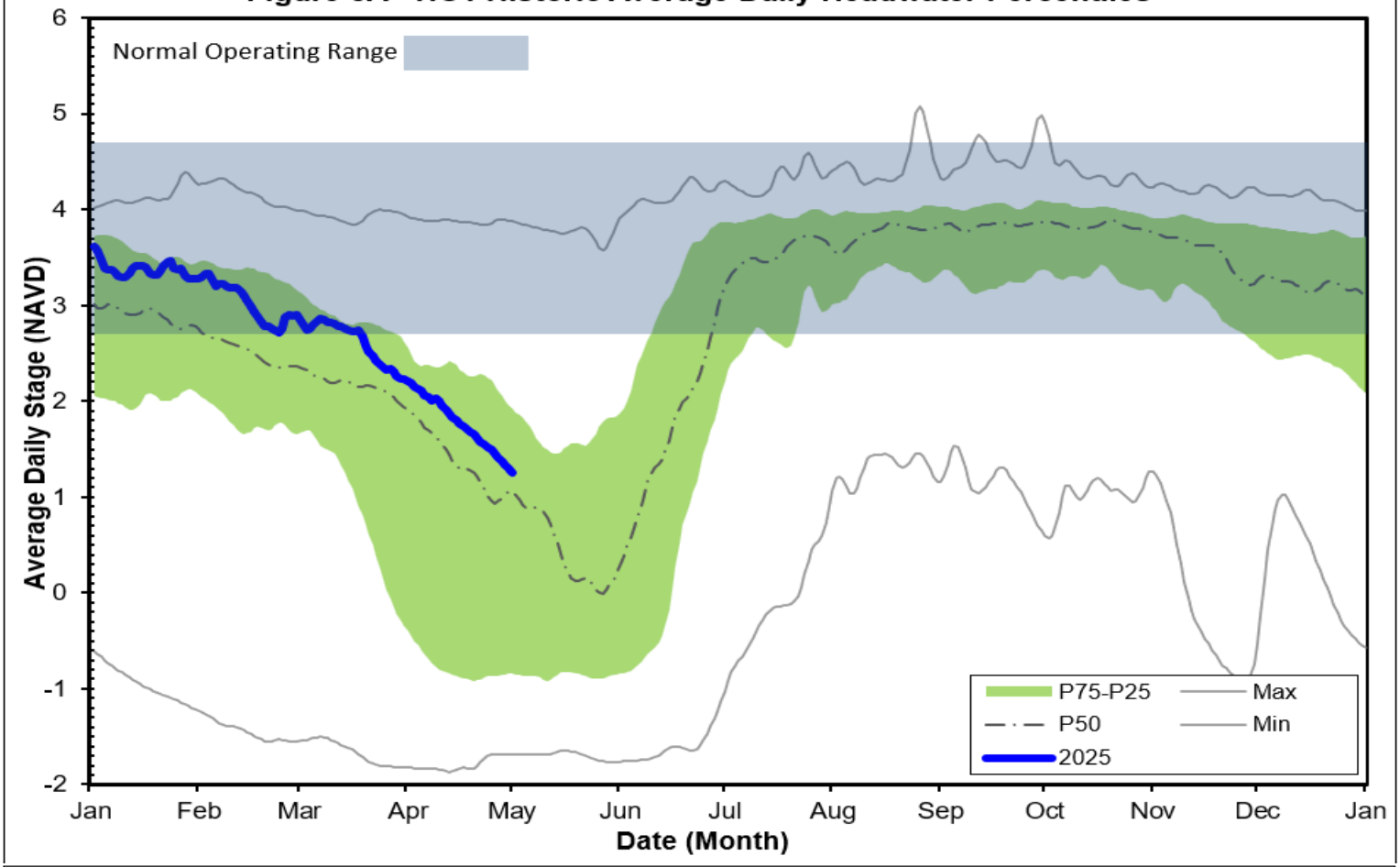
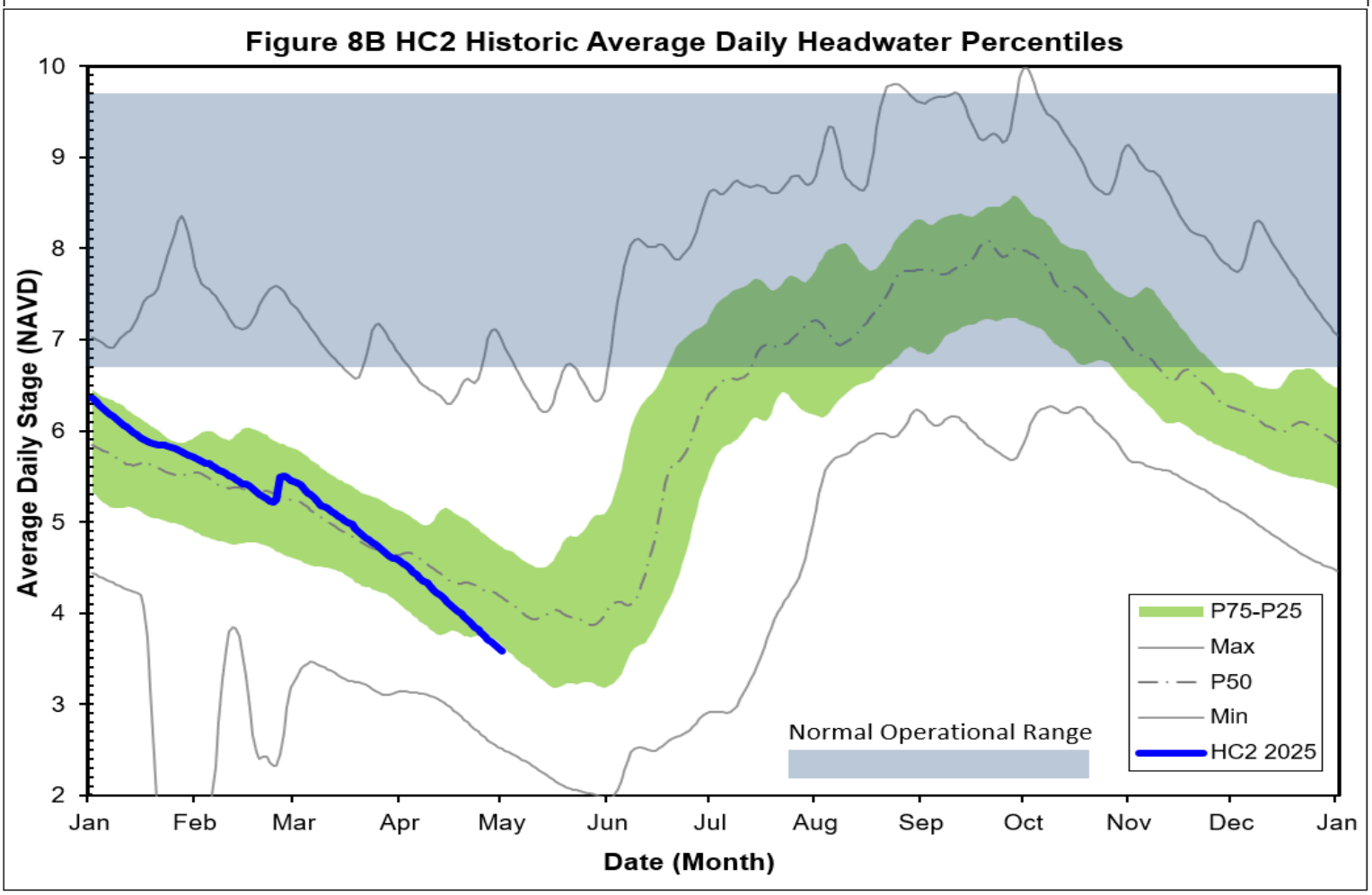


Figure 8B HC2 Historic Average Daily Headwater Percentiles



Last Reading Date :		April 30, 2025					
Previous Period Reading Date:		March 31, 2025					
STATION INDEX NO.	WELL LOCATION	WELL / AQUIFER - TYPE	CHANGE (from previous date)	PREVIOUS LEVEL	CURRENT LEVEL (ft)	DIRECTION OF CHANGE	CONCERN INDICATOR
ALL INDICATOR LEVELS SHOWN IN FT-NGVD							
C-462	Immokalee	Lower Tamiami Aquifer	-1.33	27.03	25.70	↓	GREEN
C-1004R	Naples	Lower Tamiami Aquifer	-2.78	-1.25	-4.03	↓	YELLOW
C-1224	Marco Lakes	Lower Tamiami Aquifer	-0.93	1.56	0.63	↓	GREEN
C-948R	Golden Gate	Mid Hawthorn Aquifer	-0.28	27.35	27.07	↓	
C-951R	Golden Gate	Lower Tamiami Aquifer	-2.21	0.16	-2.05	↓	
L-2194	Bonita Springs	Sandstone Aquifer	-3.09	-1.38	-4.47	↓	RED
L-2195	Bonita Springs	Surficial Aquifer System	-1.02	7.00	5.98	↓	YELLOW
L-738	Bonita Springs	Lower Tamiami Aquifer	-3.01	-4.60	-7.61	↓	RED

TABLE 2
BCB WATER CONDITIONS SUMMARY
APRIL 2025

BIG CYPRESS BASIN

APRIL 2025

GROUNDWATER LEVEL DAILY TRENDS COMPARED TO HISTORICAL AVERAGE

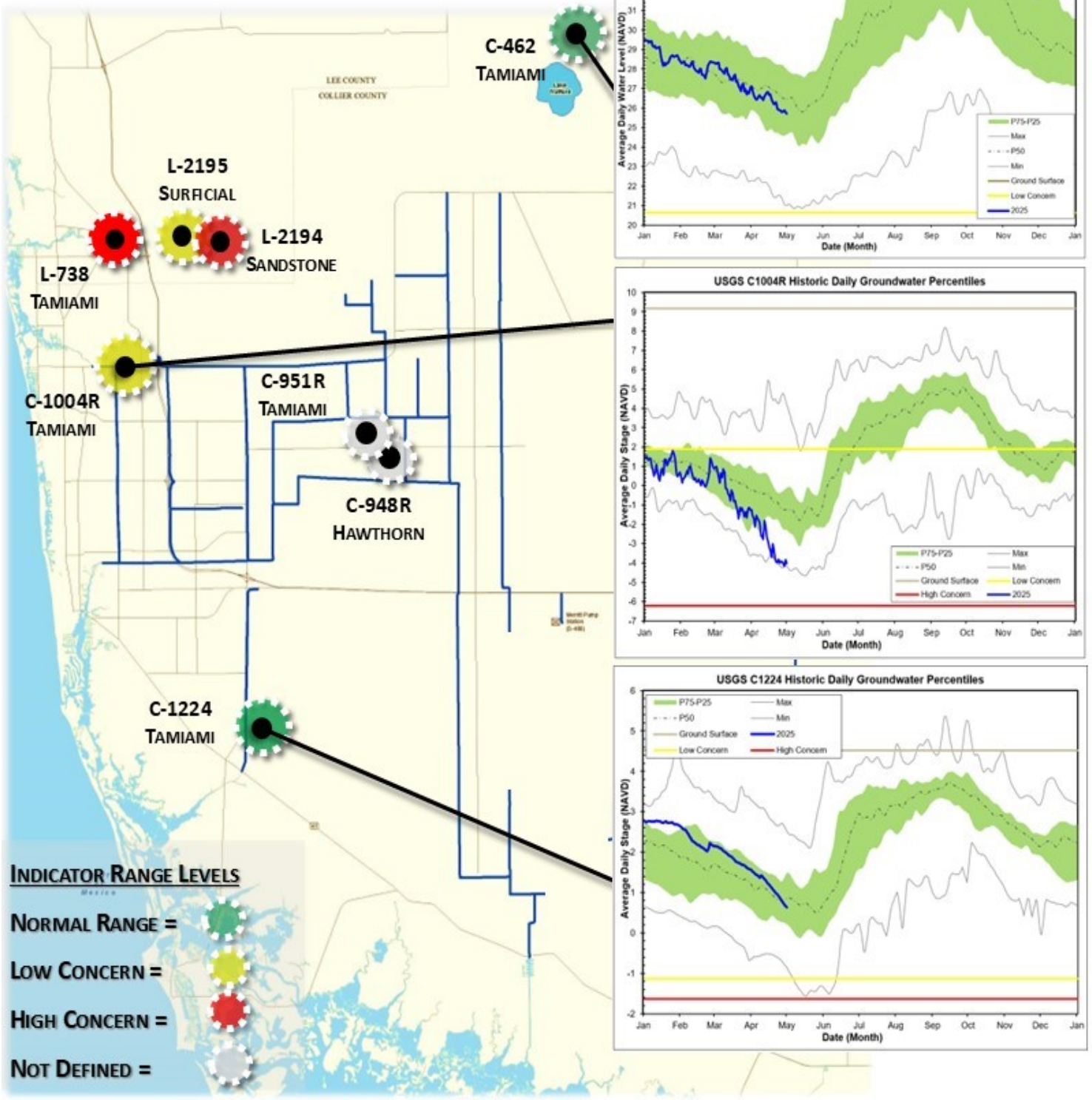


FIGURE 9

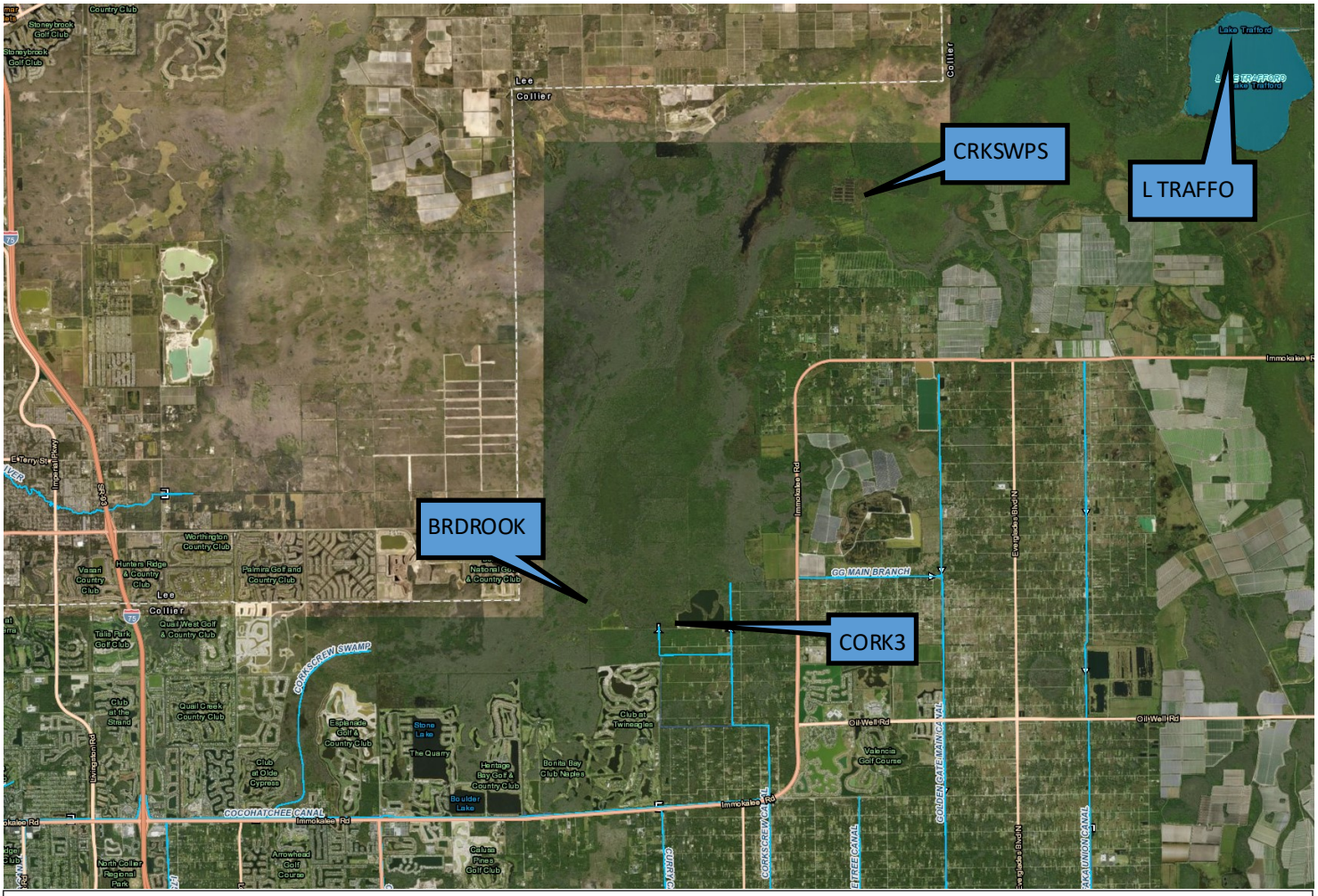


Figure 10-Corkscrew Historic Average Daily Headwater Percentiles (1984-2024)

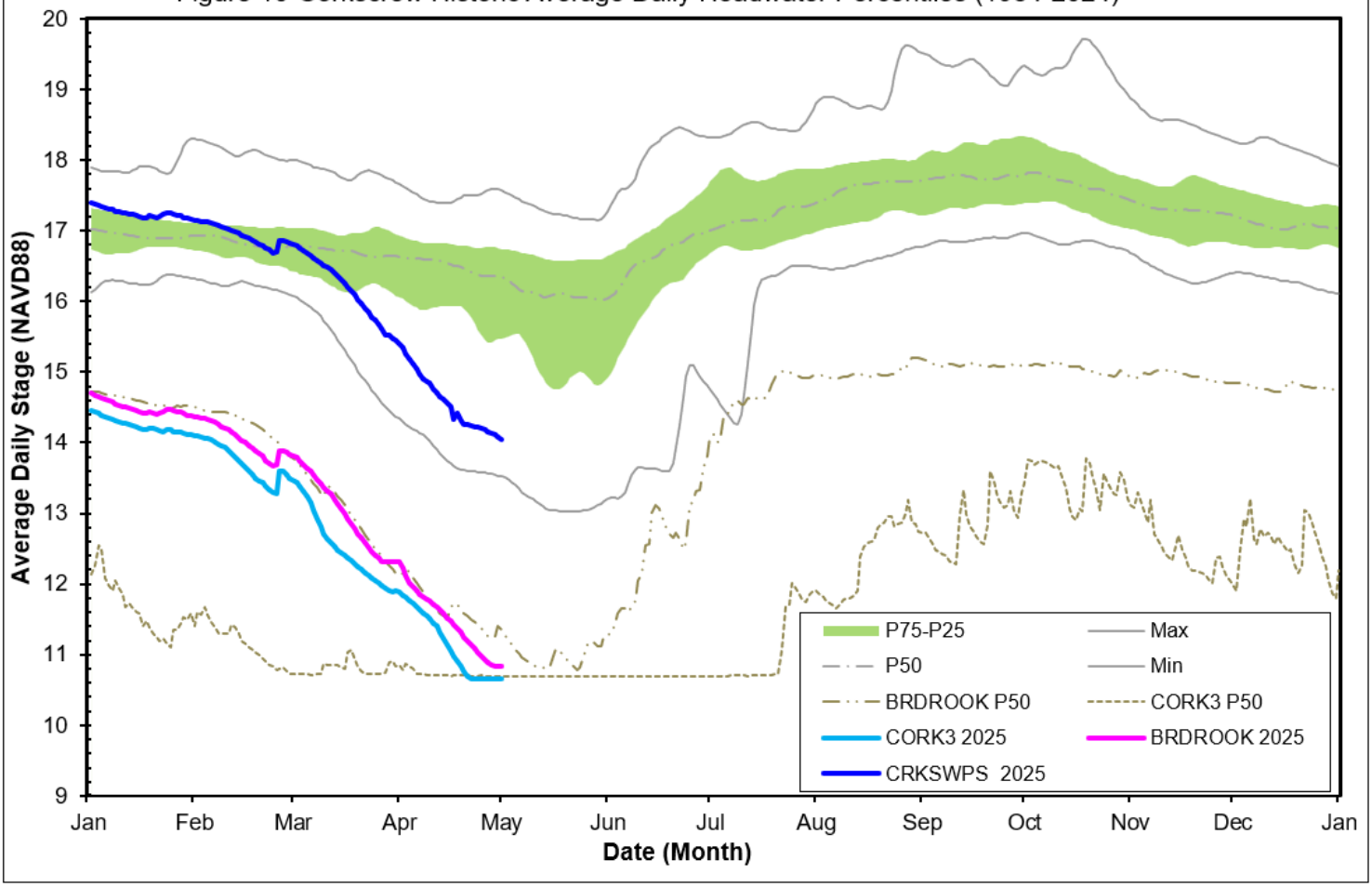
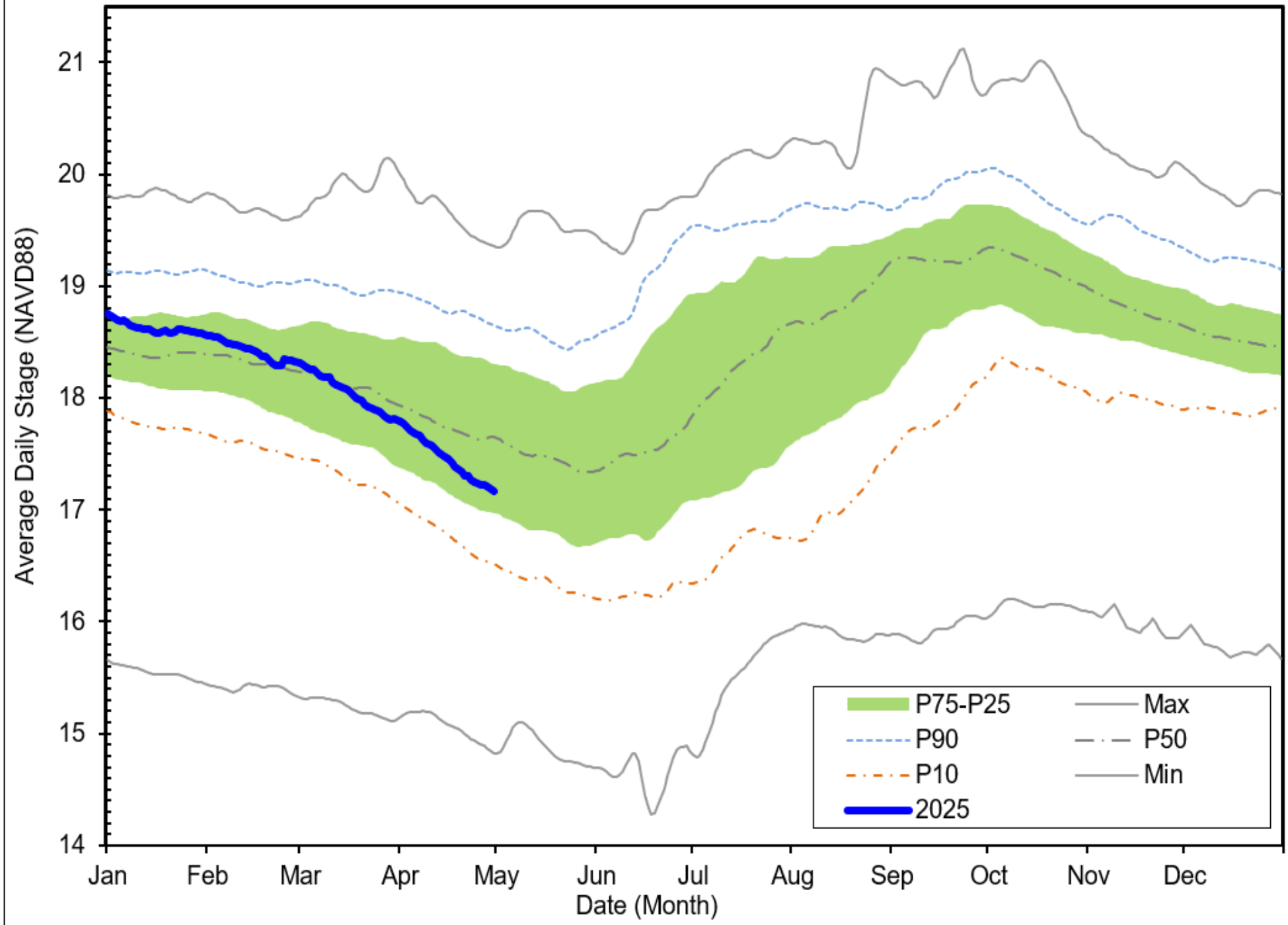


Figure 11 Lake Trafford Historic Daily Headwater Percentiles (1941 - 2024)



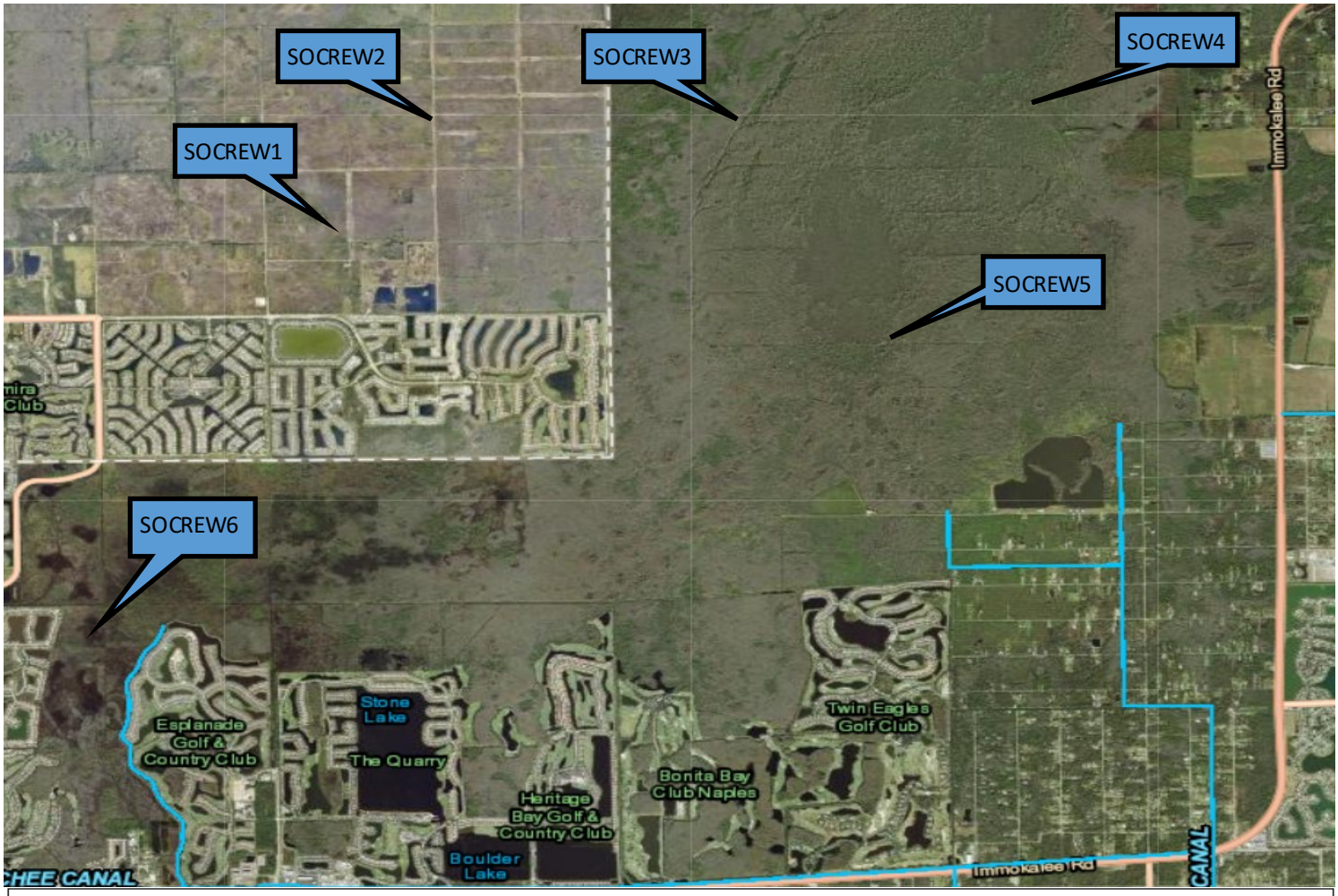
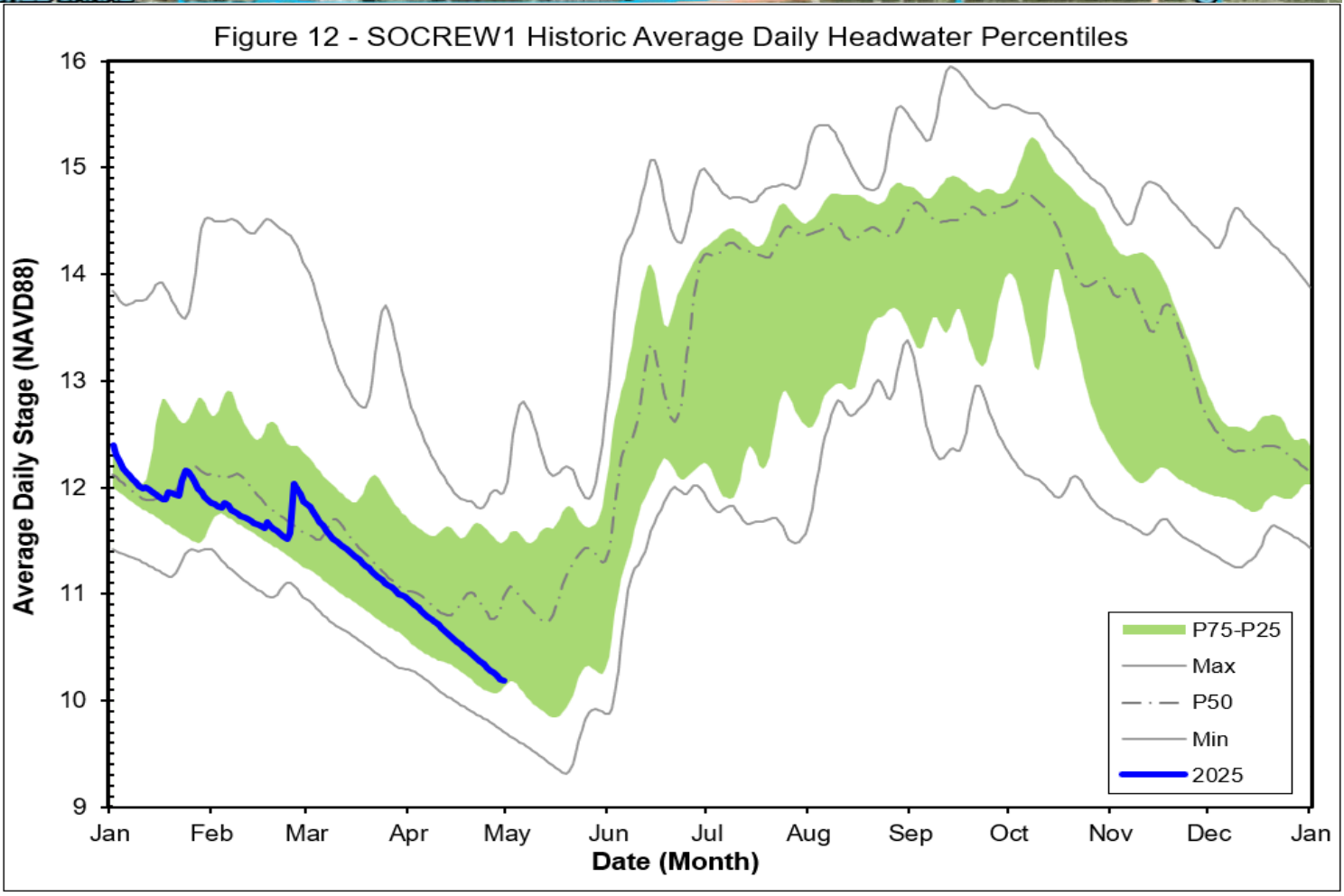


Figure 12 - SOCREW1 Historic Average Daily Headwater Percentiles



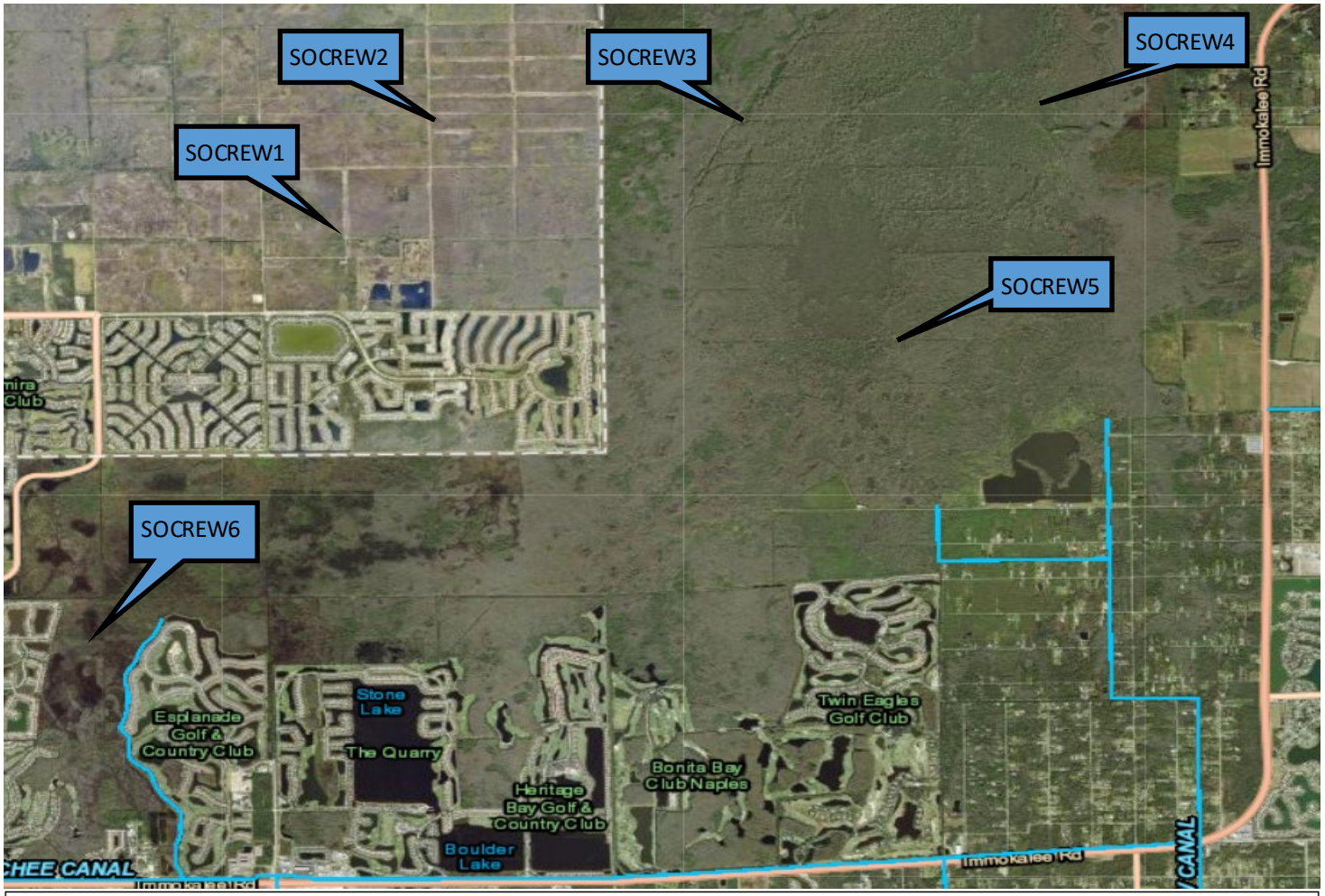


Figure 13 - SOCREW2 Historic Average Daily Headwater Percentiles