

NOVEMBER 2022

BIG CYPRESS BASIN HYDROLOGIC REPORT



SUMMARY OF HYDROLOGIC CONDITIONS IN THE BIG CYPRESS BASIN

November 2022

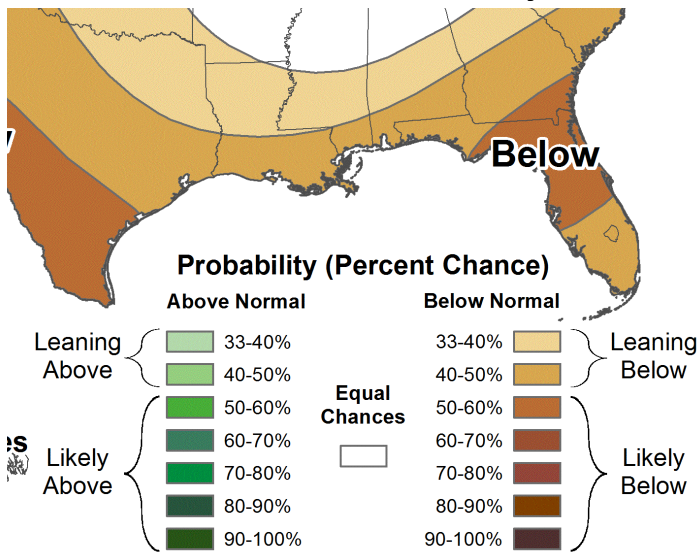
SUMMARY

With the onset of Hurricane Nicole forming off the Atlantic late in the season, forecasts projected the potential for heavy rainfall throughout the Big Cypress Basin (BCB). In preparation for Hurricane Nicole, the Basin slightly lowered the system but remained in water conservation mode to allow for additional storage. As the storm took a more northerly track, Hurricane Nicole brought only light scattered showers and the system transitioned back to the upper levels of water conservation mode.

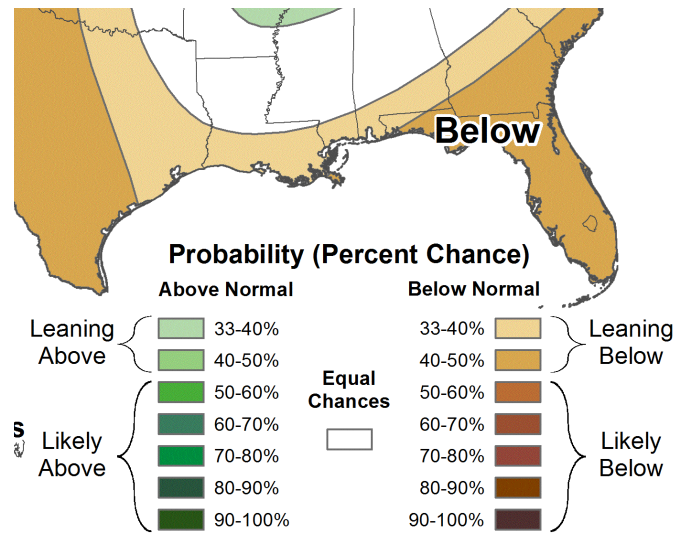
La Nina conditions continued in the Pacific Ocean which contributed to the drier than average weather throughout the month. November 30th marked the end of hurricane season with 14 named storms and weather for the month was typical. Rainfall for November fell slightly below average and the cumulative rainfall for the year remained above the annual average.

The system continues to operate within the normal ranges of water conservation mode. Canal levels for November remained mostly at or above the 75th percentile while some of the canal reaches continued to recede as is typical for dry season.

December — February



February — April



BCB RAINFALL

As measured by twenty-four (24) reporting stations (ref. **Figures 1, 2, Table 1**), the basin-wide November monthly average was **1.4 inches (74% of normal)**, which is below the average 1.9 inches typically collected.

Based on collected gauge and radar data, the rainfall distribution across the Basin was fairly uniform. The remainder of the Basin generally received 1 to 2 inches of rainfall. The month's lowest gauge total was collected at COCO3 (Site R-18), which received **0.68 inches**. This month's highest rainfall was recorded at Freedom Park (Site R-4), which received **3.66 inches**. The rainfall totals and their distribution across the BCB/Lower West Coast are shown on **Figure 3**.

BCB CANAL SYSTEMS

All of the BCB canals remain in water conservation mode for November with the exception of briefly lowering the canals slightly in preparation for Hurricane Nicole. Post Hurricane the canals were restored to their respective water conservation mode operational ranges. Most of the water levels remained at or above the 75th percentile throughout November and continued to hold steady into December. (**Figure 4**).

- **GOLDEN GATE SYSTEM**

Control structures in the Golden Gate Main canal system remain in water conservation mode. All water control structures continue active discharges although the volume of water moving downstream continues to decrease throughout the month (ref **Figure 5A & 5B**).

- **COCOHATCHEE SYSTEM**

All portions of the Cocohatchee system remain in water conservation mode and fully closed throughout November. Water levels continue to recede but remain at or above normal dry season operational ranges (ref **Figure 6A, 6B, 6C, & 6D**).

- **FAKA UNION SYSTEM**

All areas of Faka Union remain in water conservation mode with all structures fully closed throughout November. Water levels continued to recede in all reaches of the canal with FU4S and FU1 below the 75th percentile and FU5 above the 75th percentile (ref **Figure 7A & 7B**).

- **HENDERSON CREEK SYSTEM**

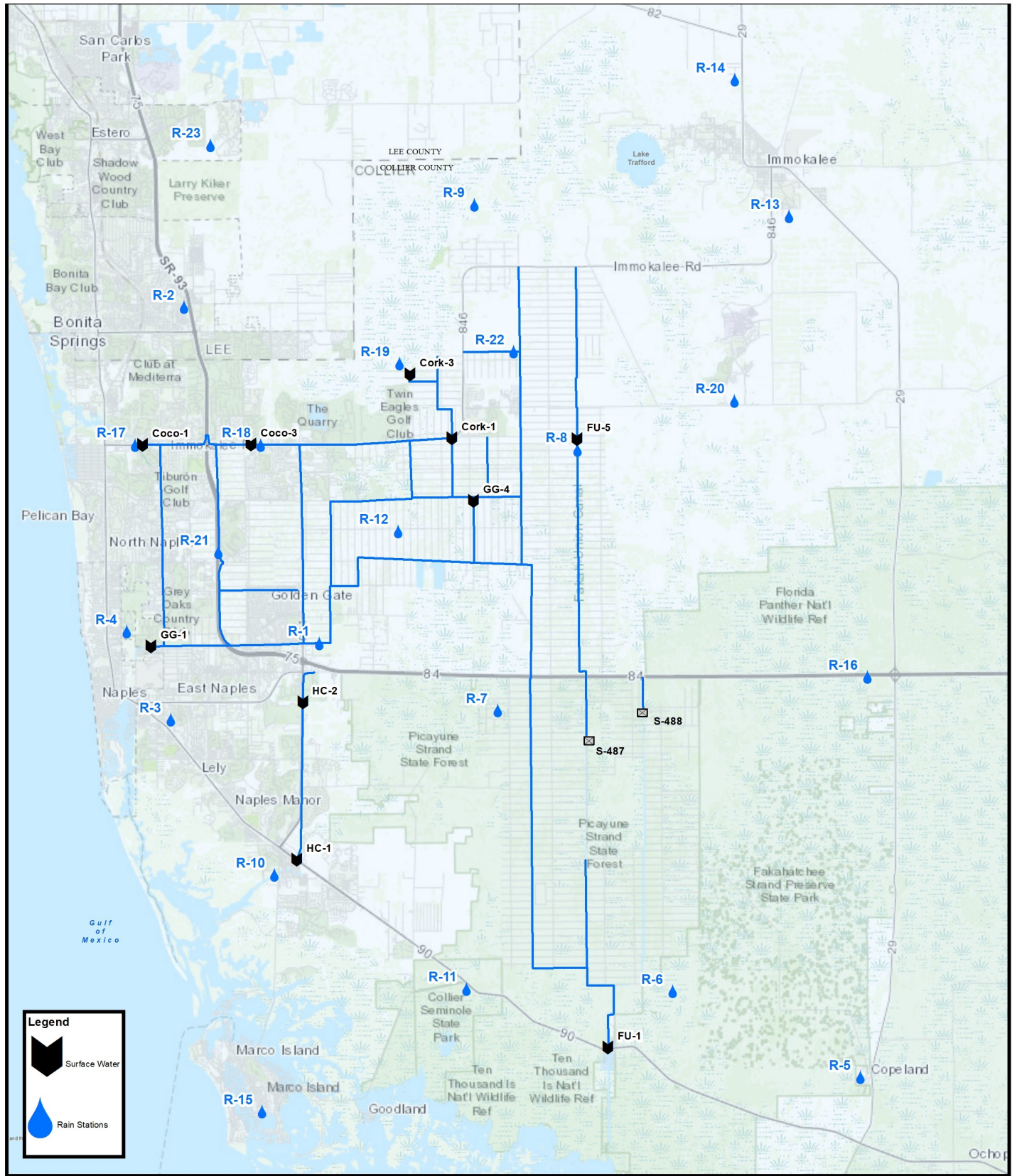
Both control structures in Henderson Creek remain closed throughout November and stopped discharging. As the month began levels were normal, however water levels continued the annual dry season recession at both structures (ref **Figure 8A & 8B**).

- **CORKSCREW SWAMP**

Figure 10 shows the historical trends for Corkscrew, Bird Rookery, and the Cork 3 structure at the 2022 corresponding levels. All surface water monitoring sites remained at normal ranges and ended the month at or near the 75th percentile. Water levels upstream of CORK2 and CORK3 are being maintained as high as possible. Recent upgrades at CORK2 allow water levels to be maintained well above historical levels. In addition, recent upgrades provide flow estimates through the structure where daily average flows are only 2 to 4 cfs through CORK2 as the month ended. Lake Trafford levels remain above the 75th percentile as November ended.

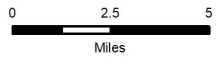
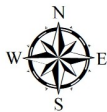
BIG CYPRESS BASIN & LOWER WEST COAST GROUNDWATER LEVELS

The current reporting (12/01/2022) for the Lower West Coast [LWC] indicate decreasing groundwater trends for November. All reporting wells remain in the normal (green) indicator levels except for Naples (C1004-R) which is below normal (yellow). Most wells are above average for the end of November with some above the 75th percentile (ref. **Table 2**).



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

FIGURE 1

Hydrologic Station Map

Collier County, Florida



**TABLE 1
RAINFALL REPORT - NOVEMBER 2022
DISTRICT/BASIN RAINFALL STATIONS
(ALL NUMBERS ARE IN INCHES)**

STATION INDEX NO.	STATION NAME	NOVEMBER 2022	LONG TERM MONTHLY AVERAGE	MONTHLY DIFFERENCE	CALENDAR YEAR 2022 CUMULATIVE TOTAL	AVERAGE CALENDAR YEAR TO DATE	YEAR TO DATE DIFFERENCE
R-1	GG#3	0.73	1.71	-0.98	78.37	61.95	16.42
R-2	BONITA SPRINGS WATER PLANT	0.88	1.81	-0.93	58.56	50.58	7.98
R-3	COLLIER COUNTY COURTHOUSE	2.00	2.08	-0.08	64.07	51.92	12.15
R-4	FREEDOM PARK	3.66	1.76	1.90	58.18	57.68	0.50
R-5	FAKAHATCHEE STRAND HQ	0.70	1.89	-1.19	56.89	58.10	-1.21
R-6	DAN HOUSE PRAIRIE	1.80	2.32	-0.52	60.32	51.18	9.14
R-7	SGGE WEATHER STATION	1.08	1.56	-0.48	82.25	59.05	23.20
R-8	FAKA UNION #5	1.09	1.96	-0.87	71.87	60.96	10.91
R-9	CORKSCREW SWAMP NORTH END	1.05	1.36	-0.31	61.68	49.67	12.01
R-10	ROOKERY BAY HQ	1.65	1.60	0.05	61.33	54.27	7.06
R-11	COLLIER SEMINOLE STATE PARK	1.93	2.27	-0.34	56.13	55.78	0.35
R-12	G.G. FIRE STATION	1.00	1.93	-0.93	70.42	57.45	12.97
R-13	IMMOKALEE LANDFILL	1.07	2.24	-1.17	60.68	51.18	9.50
R-14	IFAS	2.50	1.97	0.53	62.14	48.74	13.40
R-15	MARCO R.O. PLANT	1.81	2.15	-0.34	47.46	52.00	-4.54
R-16	FAKAHATCHEE STRAND NORTH END	1.69	2.20	-0.51	57.01	58.63	-1.62
R-17	COCO#1	1.14	1.70	-0.56	49.62	48.11	1.51
R-18	COCO#3	0.68	1.25	-0.57	56.06	54.95	1.11
R-19	BIRD ROOKERY	0.96	2.02	-1.06	67.38	60.72	6.66
R-20	AVE MARIA	0.78	2.16	-1.38	49.48	52.76	-3.28
R-21	I75W2	1.68	1.76	-0.08	68.67	58.76	9.91
R-22	GG#7	1.23	2.20	-0.97	74.49	55.83	18.66
R-23	FPWX	1.32	2.23	-0.91	57.19	53.17	4.02
R-24	DSOTO10	0.98	New Site	New Site	New Site	No Historical Data	

AVERAGES	1.39	1.92	-0.53	62.18	54.93	7.25
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BCB ANNUAL RAINFALL
MONTHLY AVERAGE & HISTORICAL AVERAGE TRENDS
(FROM BCB RAINFALL GAUGE DATA)

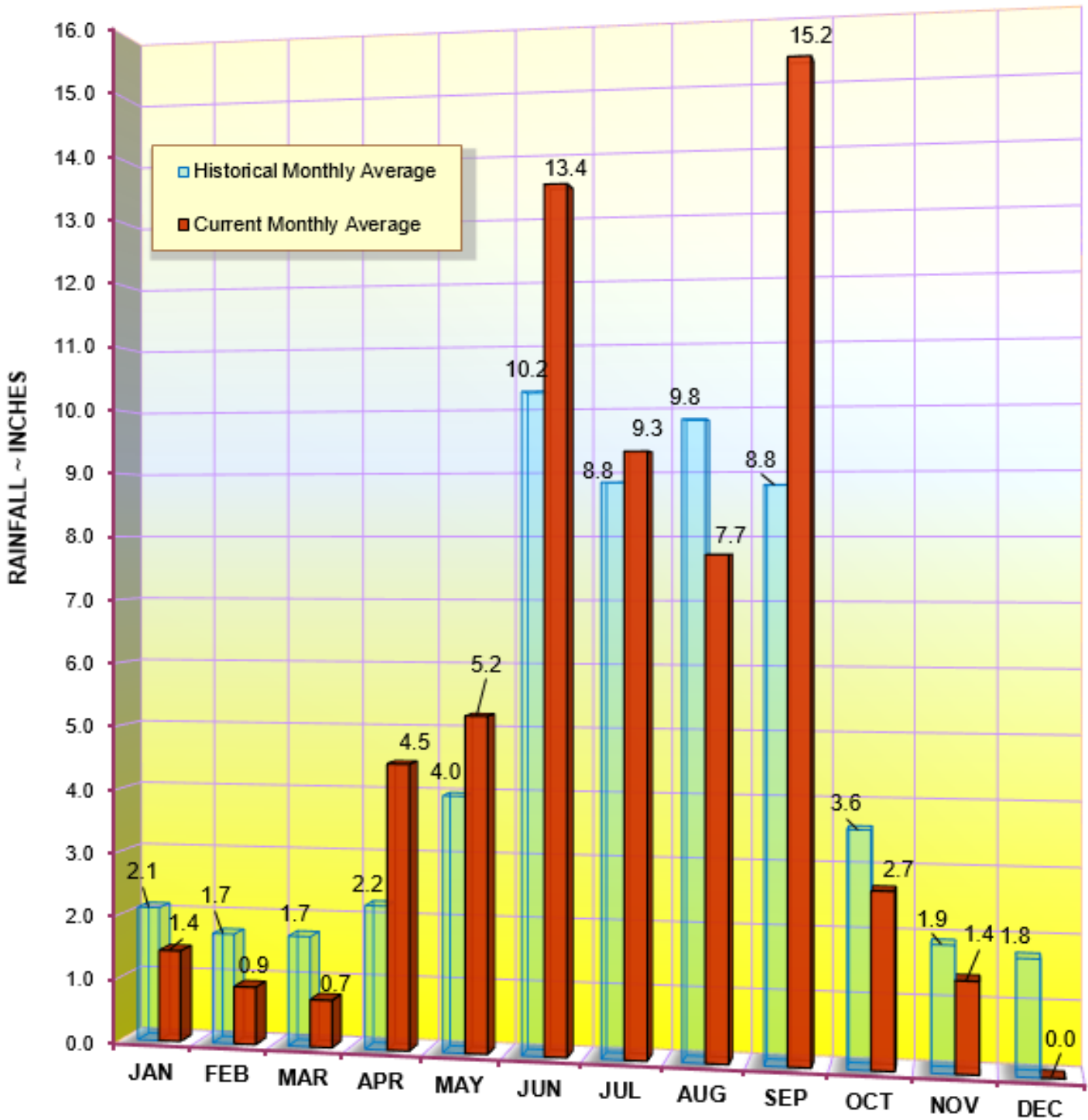


FIGURE 2
BCB GAUGE RAINFALL
MONTHLY AVERAGES THROUGH NOVEMBER 2022

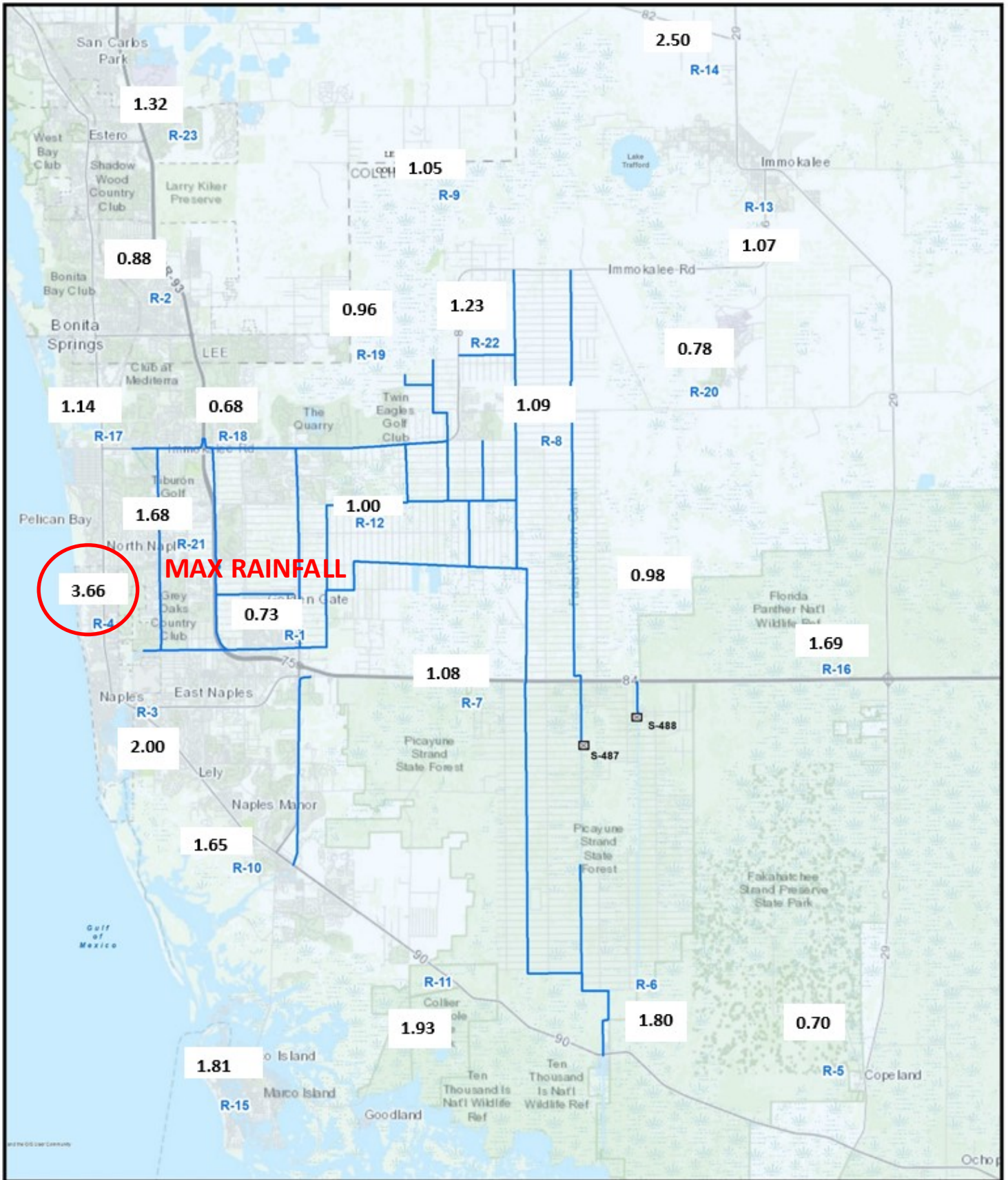
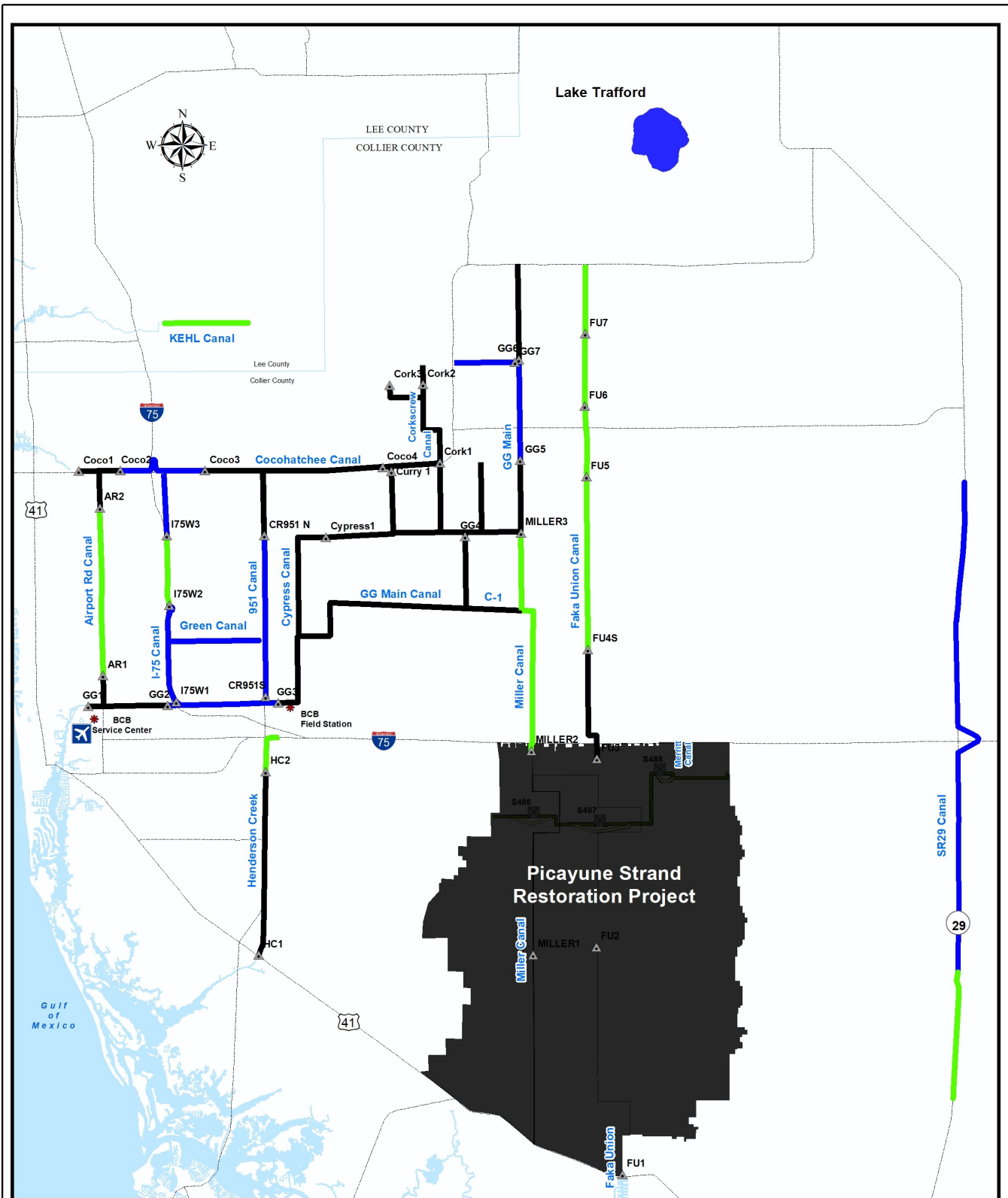
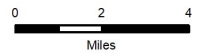
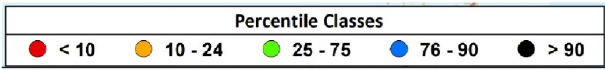


FIGURE 3
BCB RAINFALL DISTRIBUTION
NOVEMBER 2022



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* Based on period of record for each canal reach



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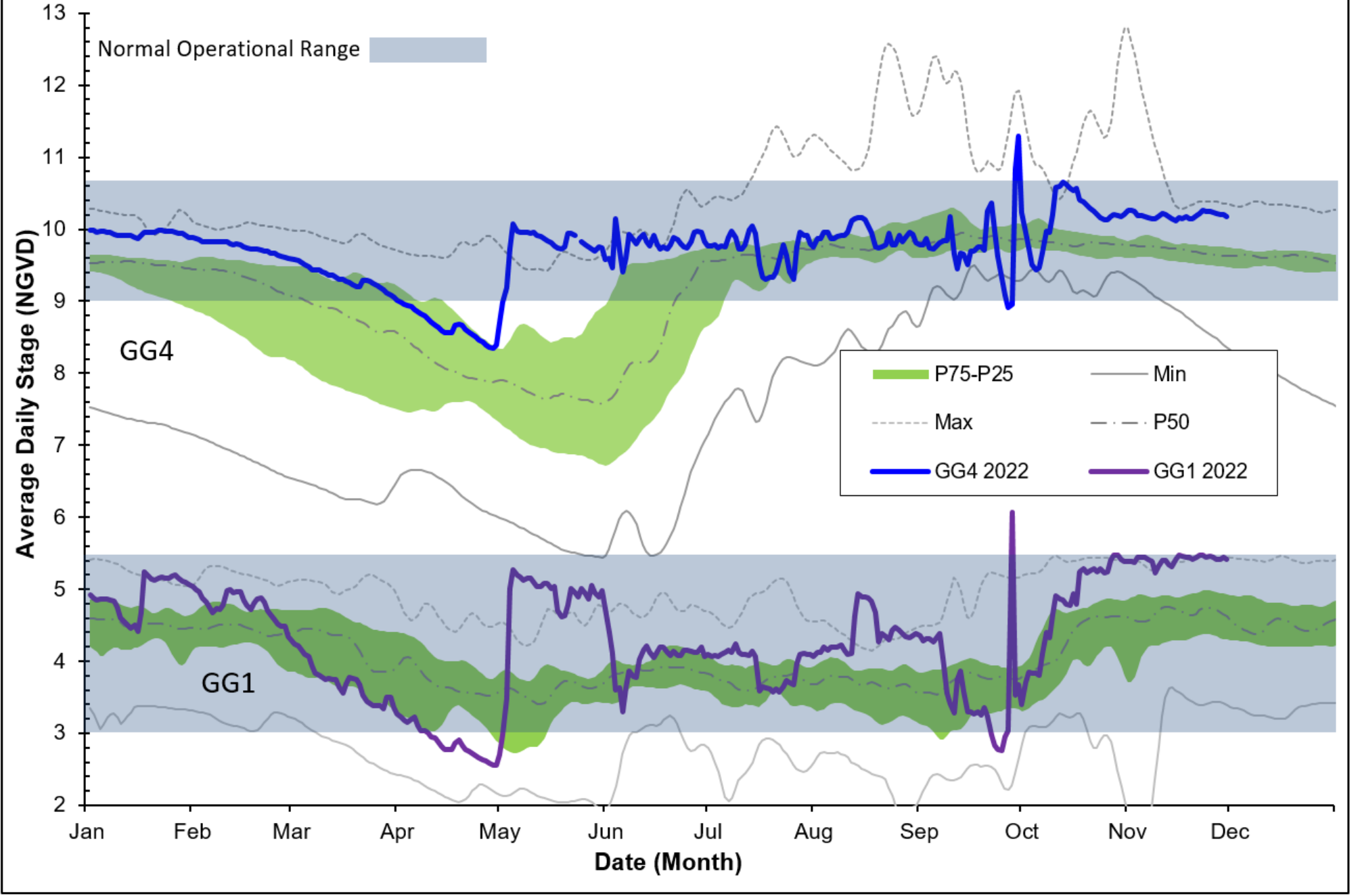
BCB Conditions Index
 12/5/22
 Urban Collier County, Florida



SFWMD_FU_12/5/22

FIGURE 4

Golden Gate Canal Historic Average Daily Headwater Percentiles



Cocohatchee Canal Historic Average Daily Headwater Percentiles

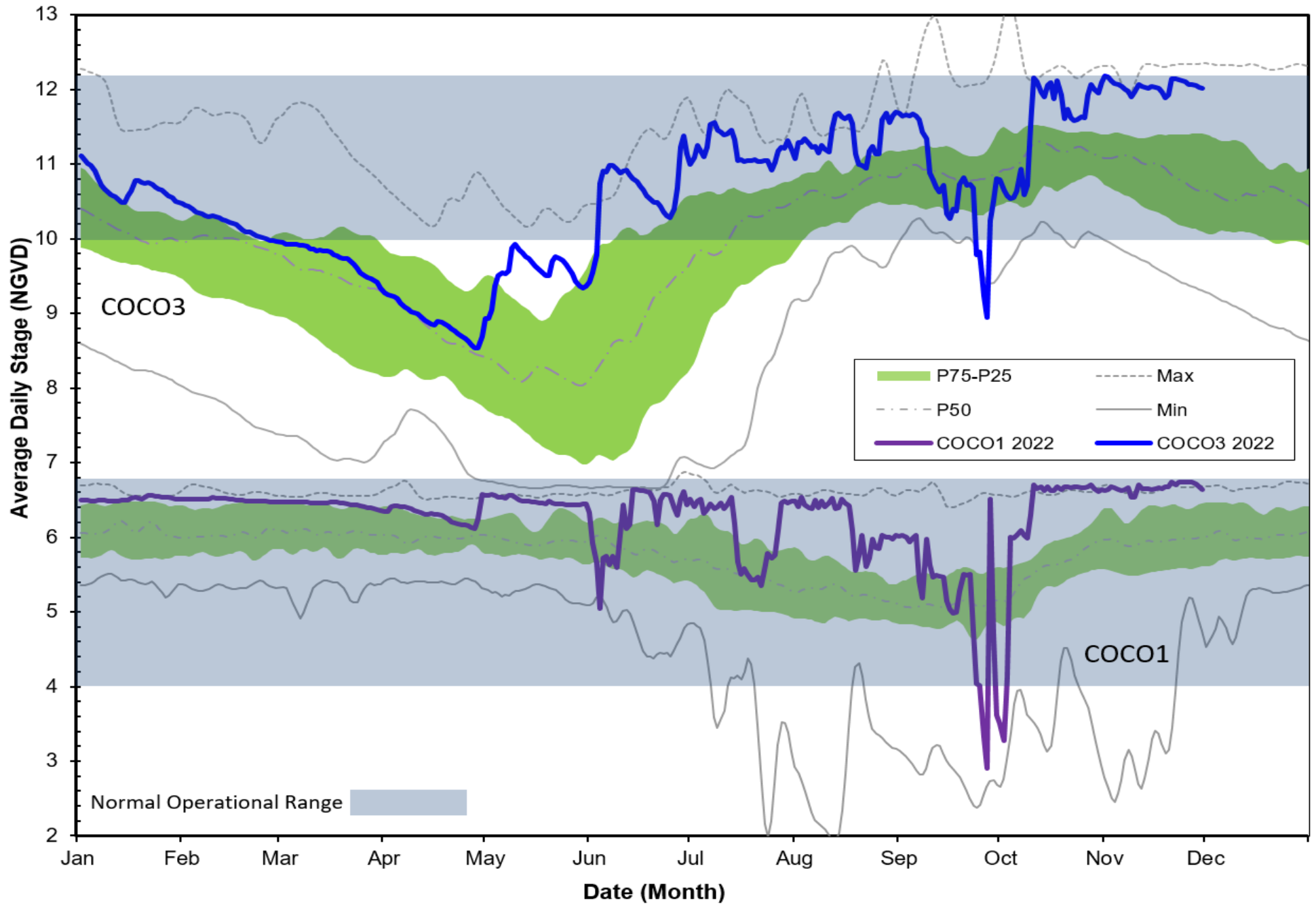


Figure 6C - CORK1 Historic Average Daily Headwater Percentiles (1989-2020)

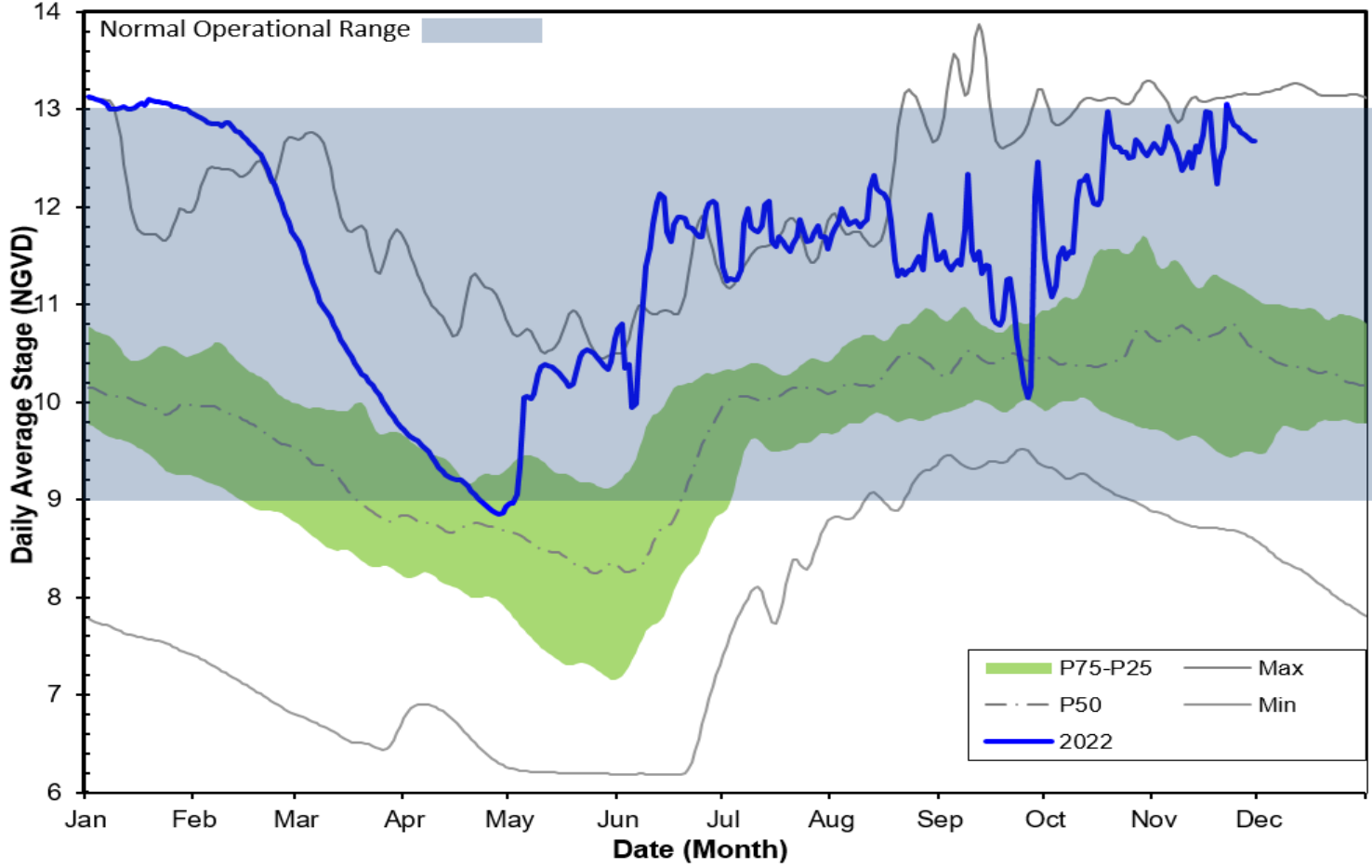
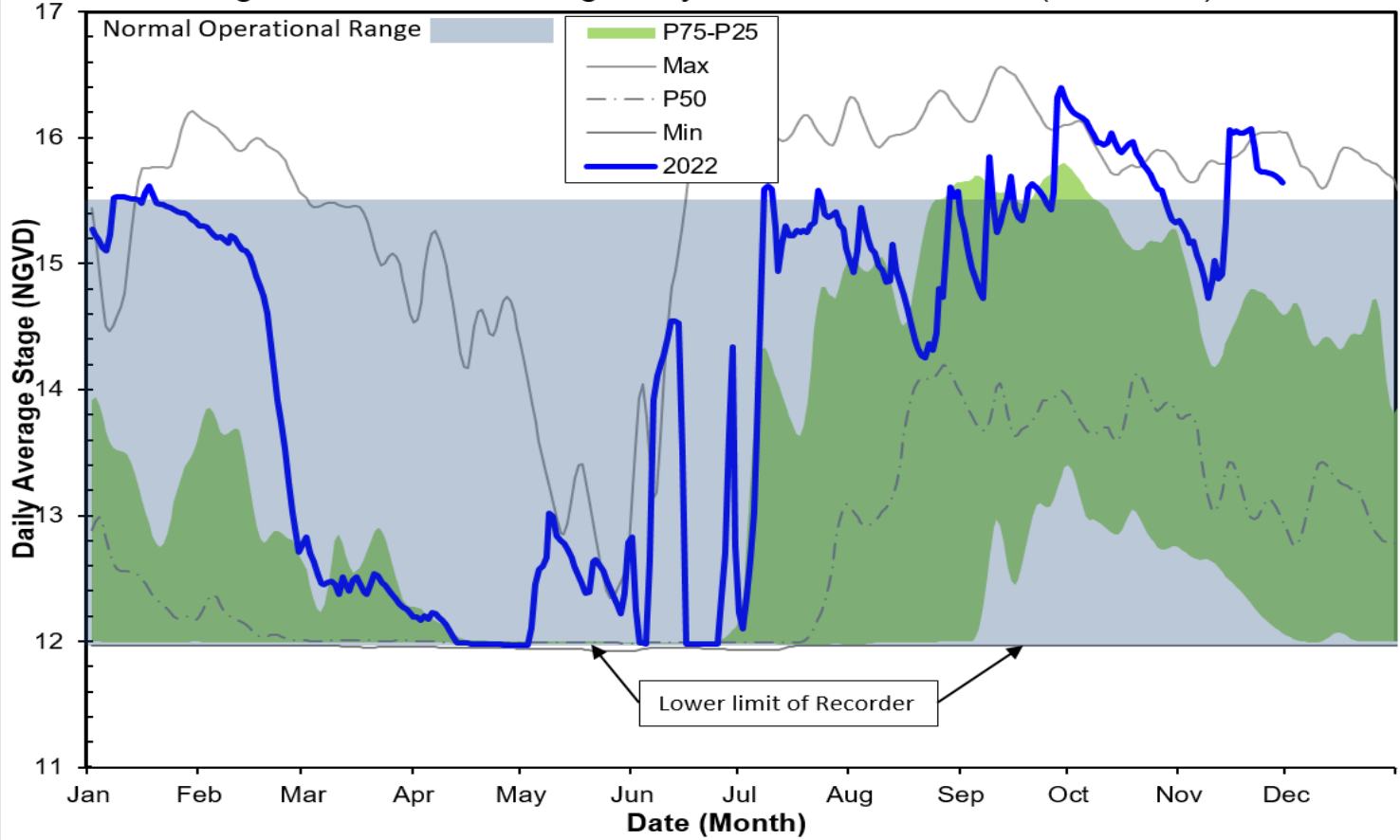
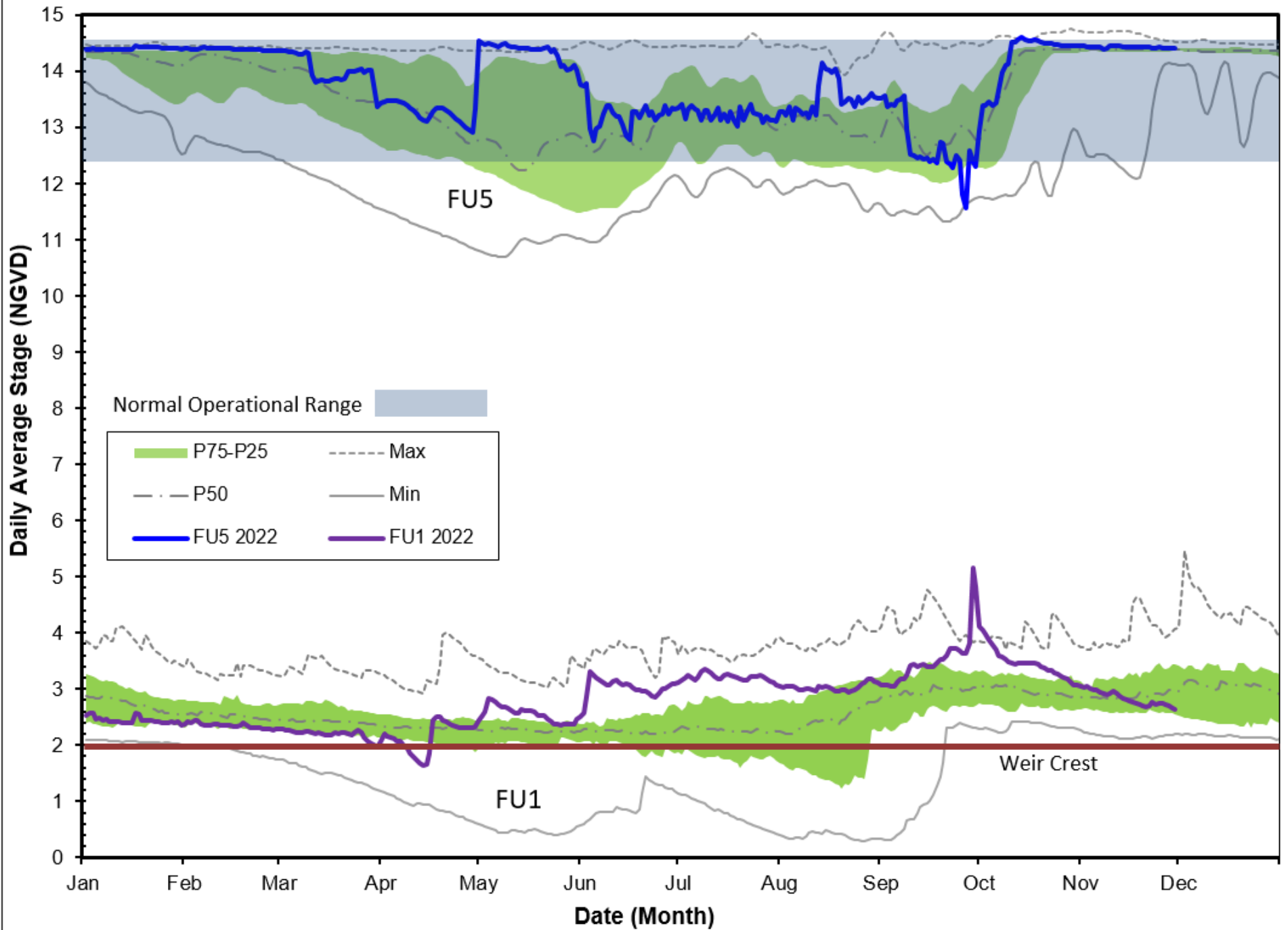


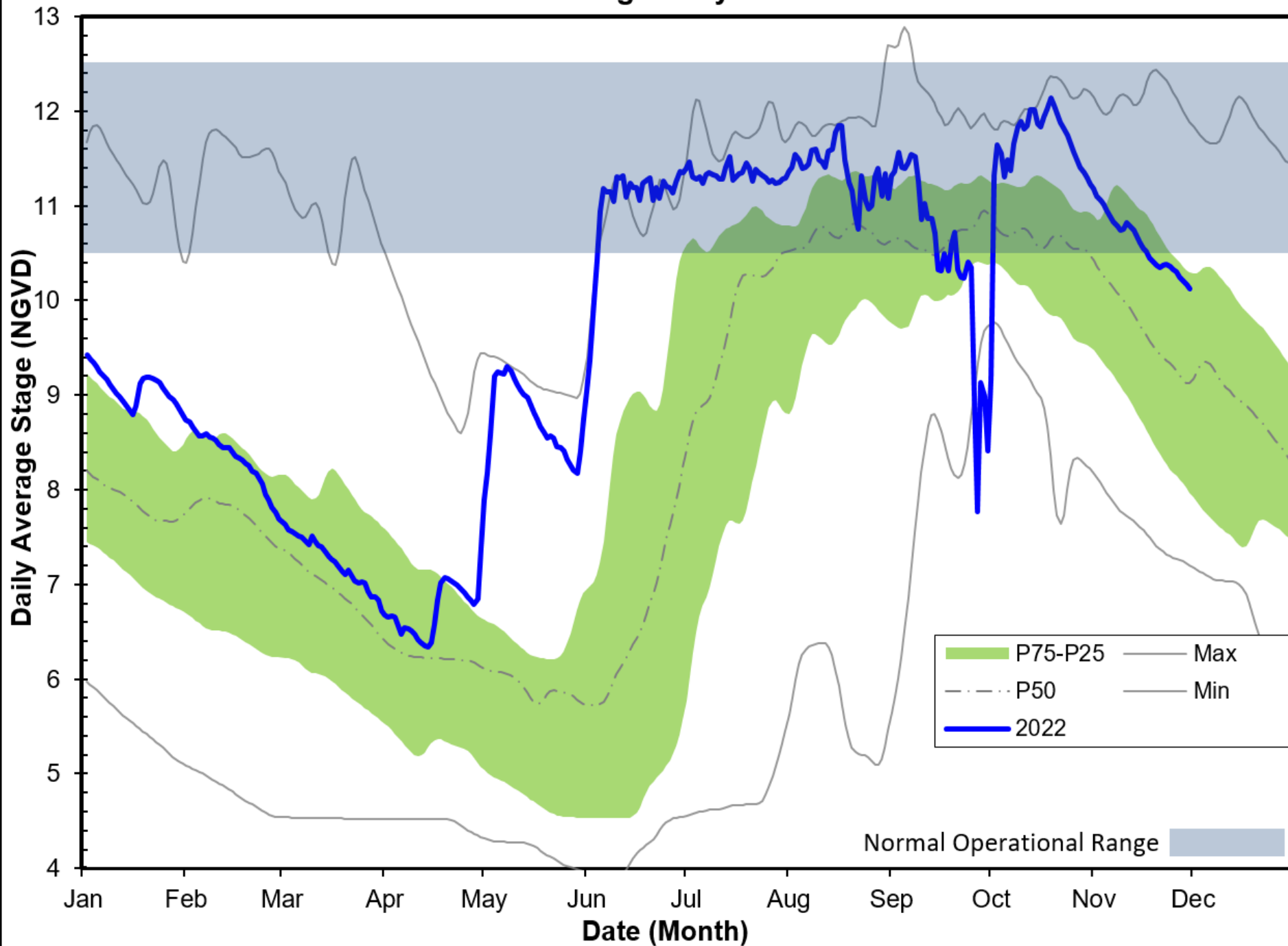
Figure 6D - CORK3 Average Daily Headwater Percentiles (2004-2020)

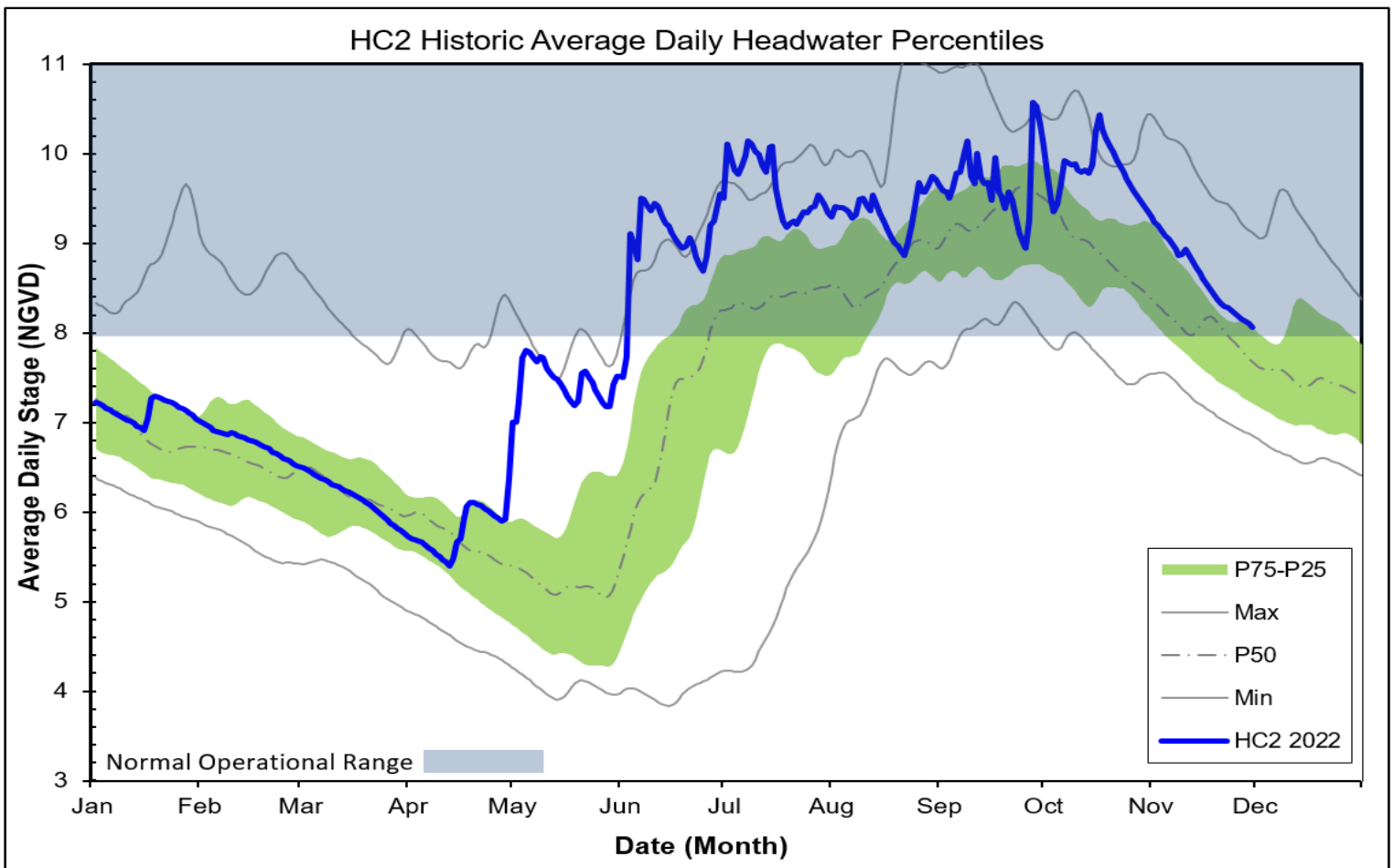
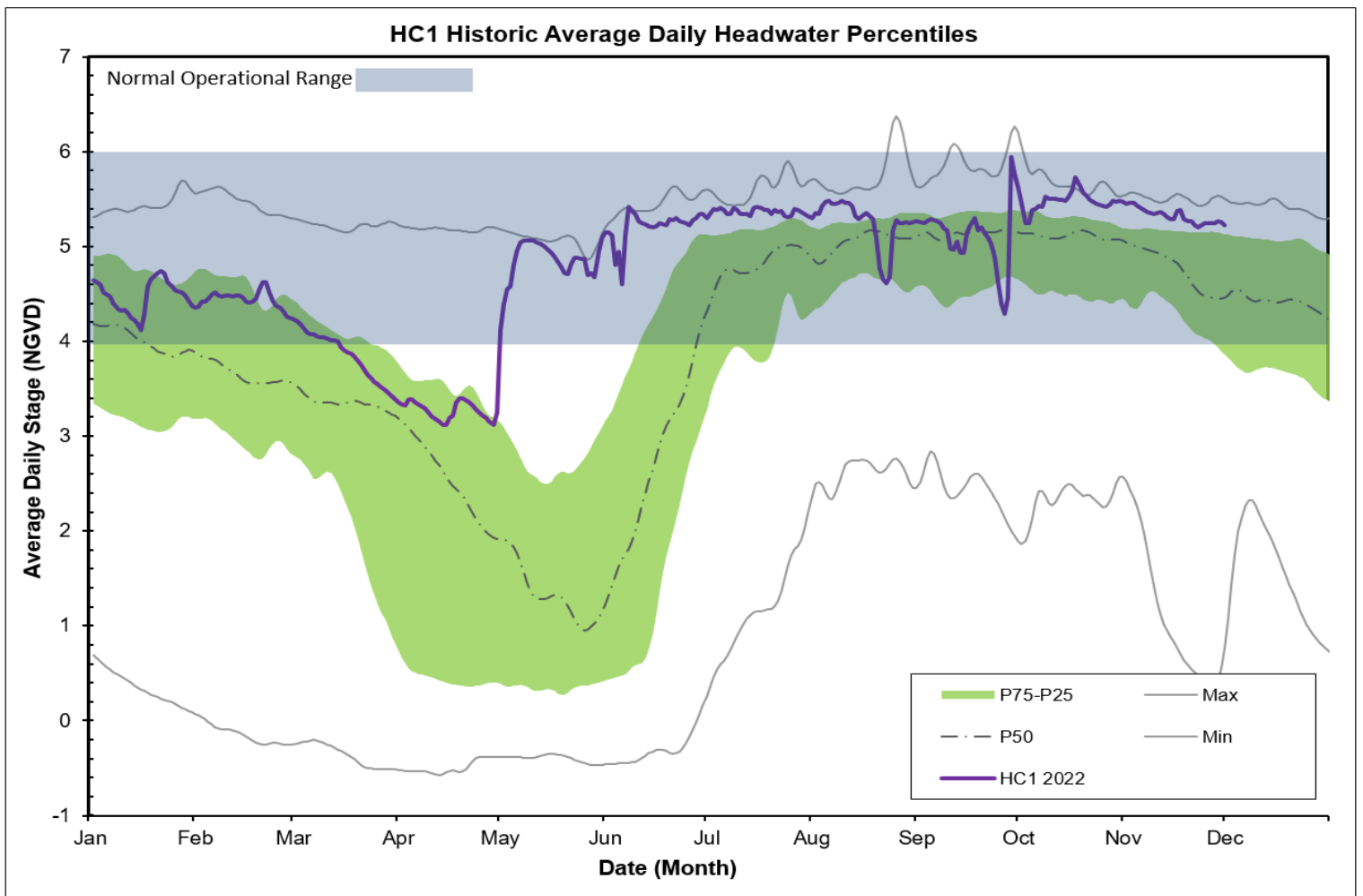


Faka Union Canal Historic Average Daily Headwater Percentiles



FU4S Historic Average Daily Water Percentiles





WATER CONDITIONS SUMMARY - November 2022
SELECTED STATIONS for BCB AREA / SW FLORIDA

Last Reading Date :		December 1, 2022					
Previous Period Reading Date:		November 1, 2022					
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	-0.07	34.18	34.11	↓	GREEN
C-1004R	Naples	Lower Tamiami Aquifer	-2.70	4.60	1.90	↓	YELLOW
C-1224	Marco Lakes	Lower Tamiami Aquifer	-0.24	4.62	4.38	↓	GREEN
C-948R	Golden Gate	Mid Hawthorn Aquifer	-0.48	31.36	30.88	↓	
C-951R	Golden Gate	Lower Tamiami Aquifer	-0.74	5.97	5.23	↓	
L-2194	Bonita Springs	Sandstone Aquifer	-2.35	8.97	6.62	↓	GREEN
L-2195	Bonita Springs	Surficial Aquifer System	-1.70	13.16	11.46	↓	GREEN
L-738	Bonita Springs	Lower Tamiami Aquifer	-2.45	3.67	1.22	↓	GREEN

TABLE 2
BCB WATER CONDITIONS SUMMARY
November 2022

BIG CYPRESS BASIN

NOVEMBER 2022

GROUNDWATER LEVEL DAILY TRENDS COMPARED TO HISTORICAL AVERAGE

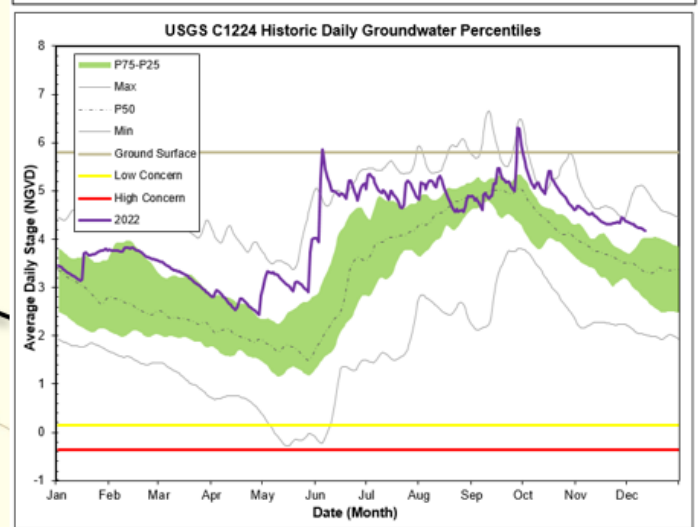
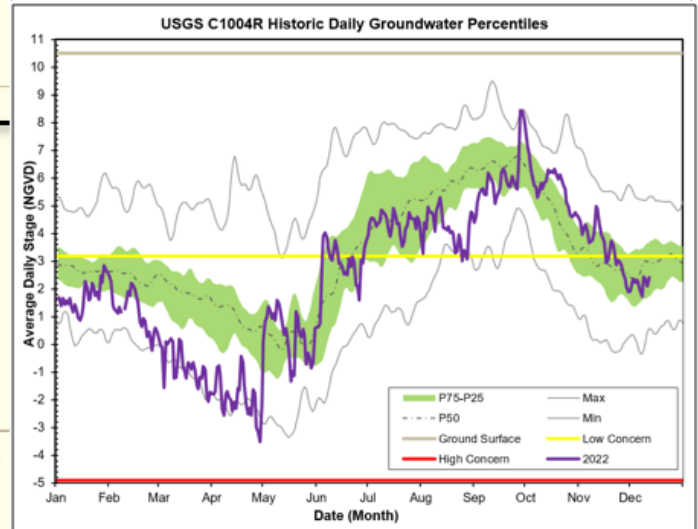
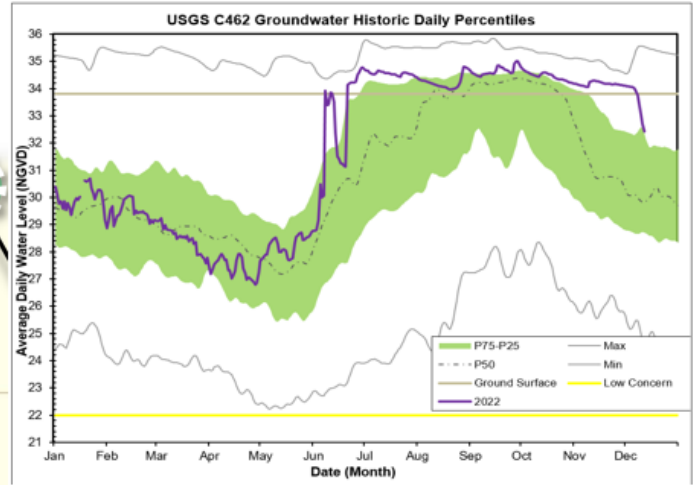
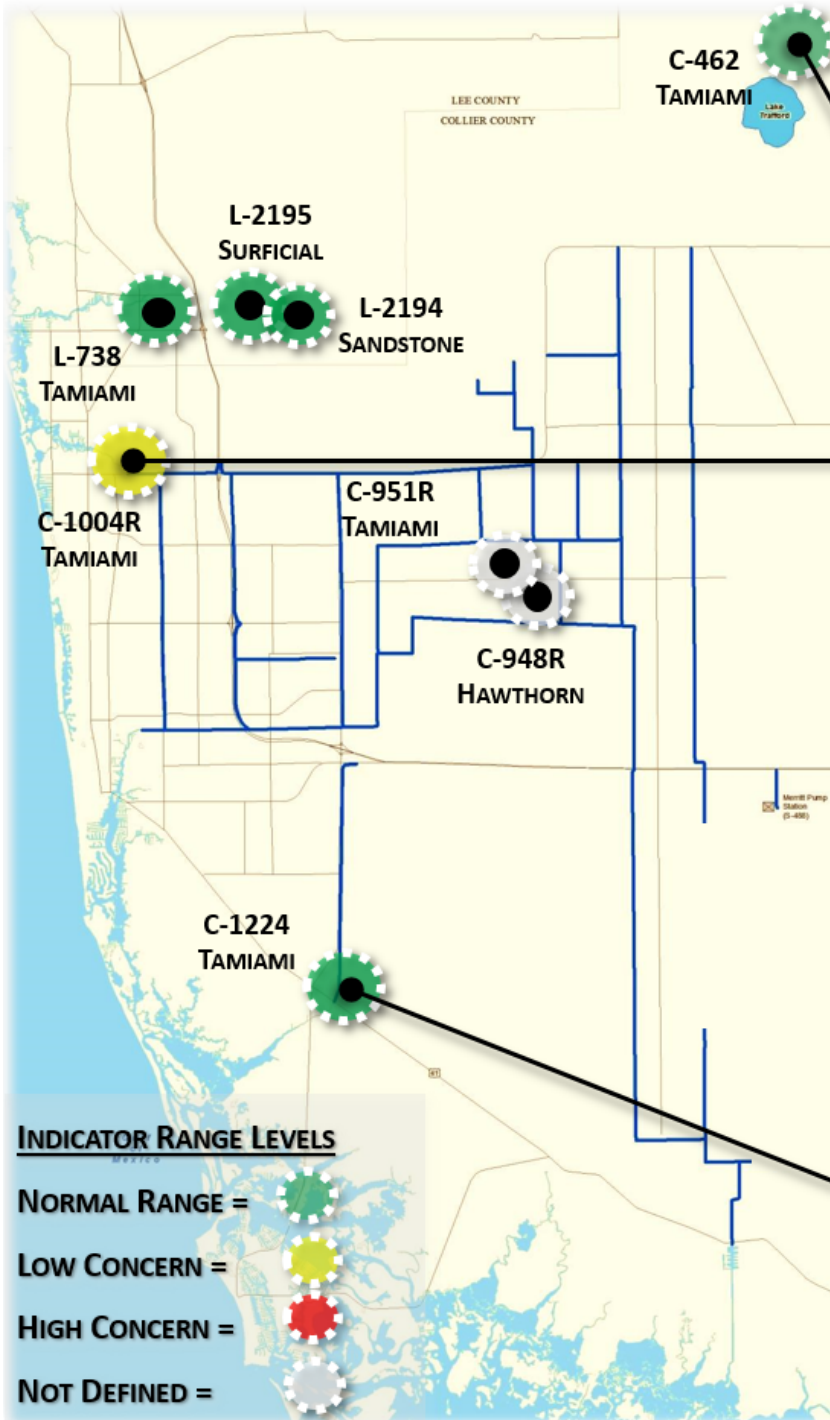


FIGURE 9

Lake Trafford Historic Daily Water Level Percentiles (1941-2021)

