



JUNE 2019

HYDROLOGIC REPORT
BIG CYPRESS BASIN —
SOUTH FLORIDA WATER
MANAGEMENT DISTRICT

SUMMARY OF HYDROLOGIC CONDITIONS IN THE BIG CYPRESS BASIN

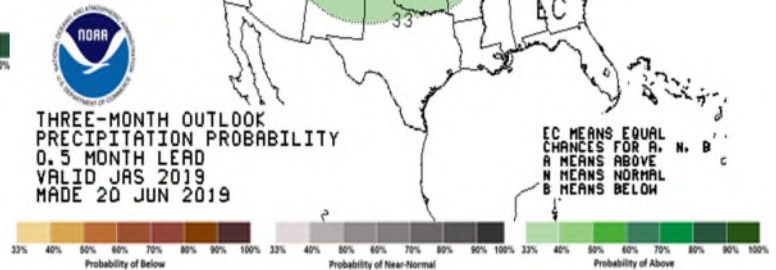
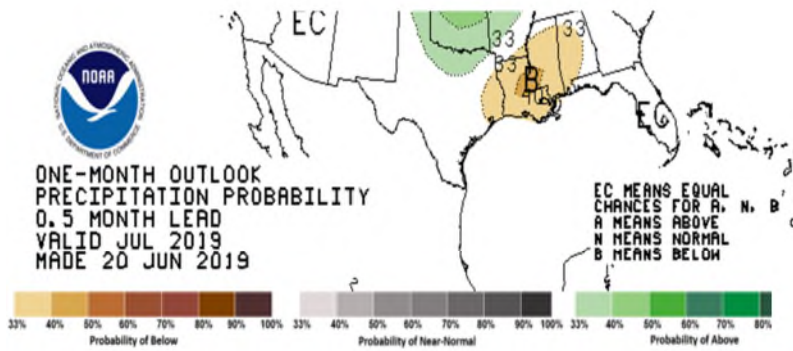
June 2019

SUMMARY

Wet season conditions developed across the Big Cypress Basin throughout June as compared to May. A typical summer daily pattern of scattered afternoon and evening thunderstorms accounted for June rainfall. As the month ended, rainfall totals across the Basin were just above the historic average coming in at 10.3 inches. As expected, canal and groundwater levels increased throughout the Basin and most are around the 50th percentile. BCB canal operations have all remained under wet season criteria during June.

Meteorologists are anticipating equal chances for above or below average rainfall for the next 30 days (see left).

Also, the 3 month long term forecast continues the equal chances for above or below average rainfall for all of Florida (see below).



BCB RAINFALL

June was just above average in terms of rainfall reporting and at about 105% of normal. As measured by twenty-two (22) reporting stations (ref. **Figures 1, 2, Table 1**), the basin-wide monthly average was **10.27 inches**, which is 105% of the normal 9.73 inches typically collected.

Based on collected gauge data, rainfall distribution across all BCB localities showed higher levels of rainfall in the middle region of the basin from the southwest (Marco Island) to north (Bird Rookery). The coastal areas and far eastern areas had smaller totals. The month's highest total was collected at Rookery Bay (Site R-10), which received **15.64 inches**. The lowest rainfall was recorded at two stations Ave Maria (Site R-20) and GG-7 (Site R-22) with **7.24 inches**. **Figure 10** shows the historical trends for Corkscrew, Bird Rookery, and Cork 3 structure and the 2019 corresponding levels which are all converging on the 50th percentile line. The rainfall totals and their locality distribution across the BCB/ Lower West Coast are shown on **Figure 3**.

BCB CANAL SYSTEMS

All of the canals were maintained in wet season operations and some were operated at the high end of wet season range during a lull in summer rainfall. Levels in Corkscrew Swamp responded to the rain events, and levels started their summer ascension and are near the 50th percentile except CORK3 which came alive and increased at the end of the month. (ref **Figure 10**).

- **GOLDEN GATE SYSTEM**

The Golden Gate Main canal levels have all increased to wet season levels and are now

maintained in the normal operation range (ref **Figure 5A & 5B**). Some water supply releases were made from GG2 which is the cause of the water level spikes at GG1.

- **COCOHATCHEE SYSTEM**

The Cocohatchee system is running in wet season range given the average rainfall. COCO3 responded to recent rainfall and is above the 75th percentile but still well within normal operations (ref **Figure 6A, 6B, 6C, & 6D**).

- **FAKA UNION SYSTEM**

Operations in the Faka Union system were all moved to wet season levels. FU1 is near the 75th percentile while the remaining operable structures are near the midpoint of wet season levels (ref **Figure 7A & 7B**).

- **HENDERSON CREEK SYSTEM**

Henderson Creek levels responded to June rains and are well within wet season levels. HC1 releases downstream have been very muted even though levels are above the 50th percentile. Water levels in upper watershed have responded well with the rainfall and operations have been reduced to allow the adjacent wetlands to become saturated (ref **Figure 8A & 8B**).

BIG CYPRESS BASIN & LOWER WEST COAST GROUNDWATER LEVELS

The current reporting (07/09/2019) for the Lower West Coast [LWC] notes that water levels in all groundwater wells increased but remain near historic averages, except for C-1224 which is near the 75th percentile, for early wet season. By the end of June, all six reporting wells are in the green concern indicator (ref. **Table 2**).

All reported wells in **Table 2** show an average water level increase of 4.4 feet. L-2194 recorded the highest increase of 6.3 feet, and C-1224 had the smallest increase of 2.17 feet, although its above the 75th percentile and is nearly equal to the nearby HC1 canal level (ref. **Table 2, Figure 9**).

BIG CYPRESS BASIN

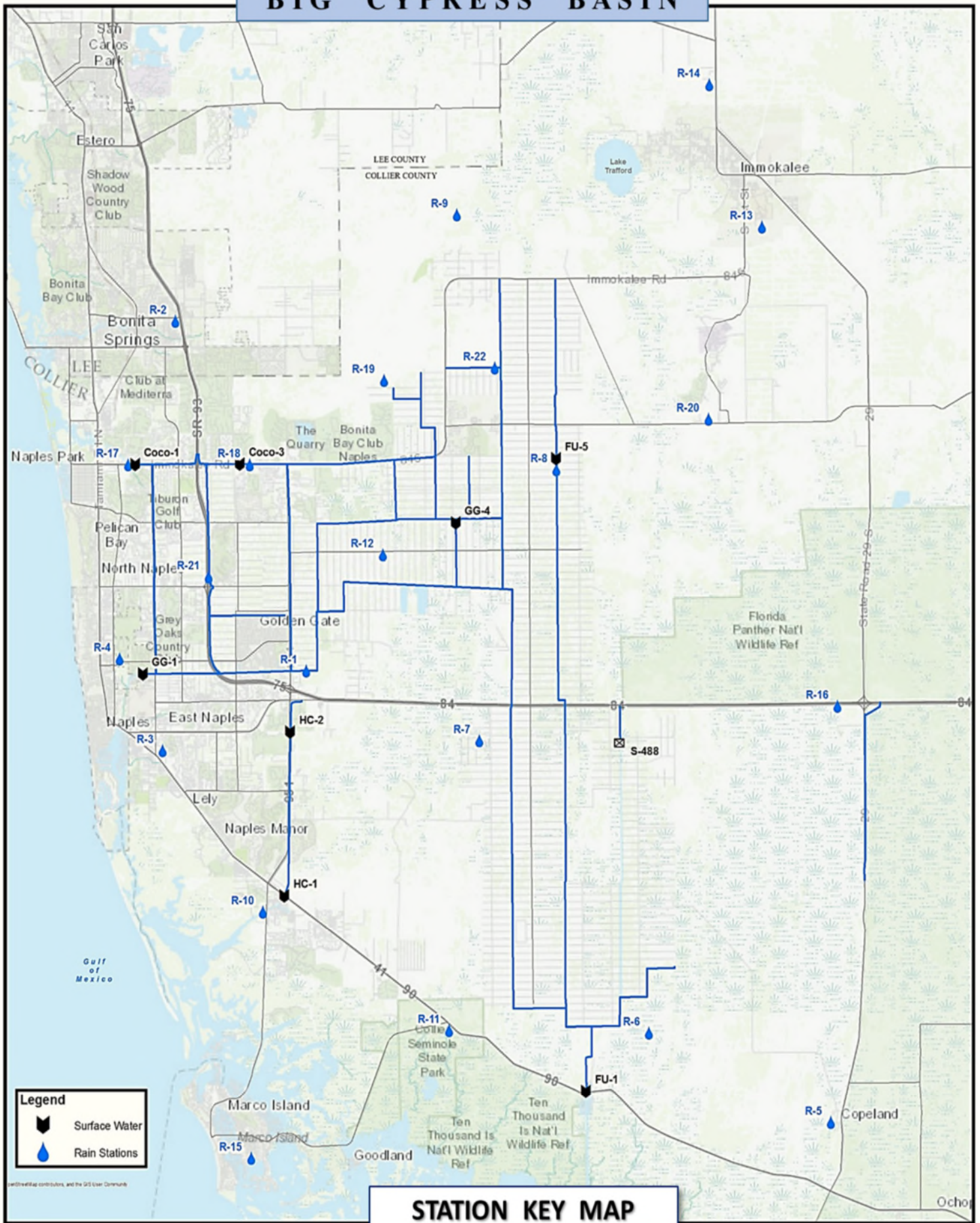


FIGURE 1

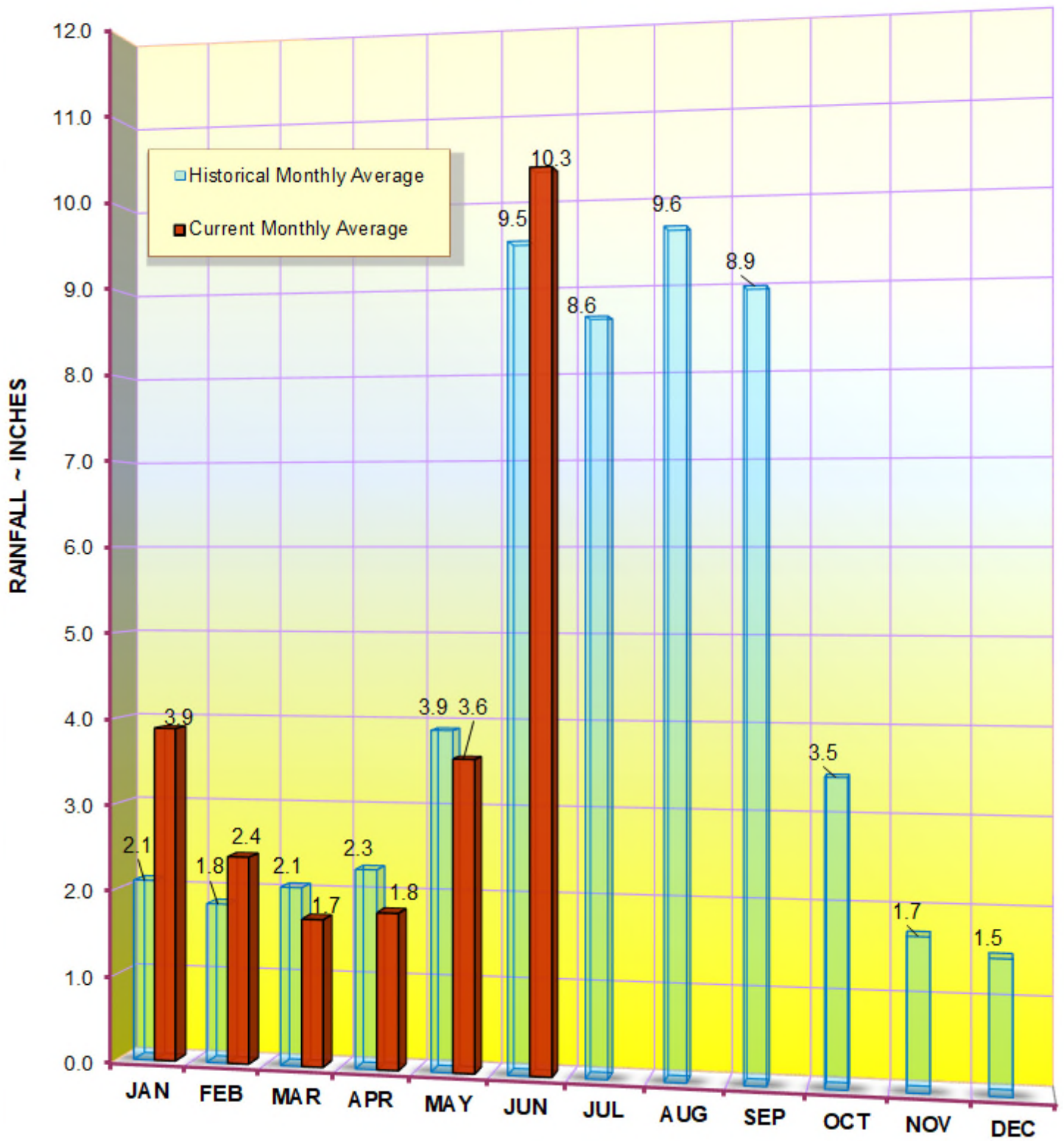
TABLE 1
RAINFALL REPORT - JUNE 2019
DISTRICT/BASIN RAINFALL STATIONS

(ALL NUMBERS ARE IN INCHES)

STATION INDEX NO.	STATION NAME	JUNE 2019	LONG TERM AVERAGE FOR THIS MONTH	MONTHLY DIFFERENCE	CALENDAR YEAR 2019 CUMULATIVE TOTAL	AVERAGE CALENDAR YEAR TO DATE	YEAR TO DATE DIFFERENCE
R-1	GOLDEN GATE #3	11.85	14.18	-2.33	25.71	28.33	-2.62
R-2	BONITA SPRINGS WATER PLANT	7.32	8.46	-1.14	18.30	20.31	-2.01
R-3	COLLIER COURTHOUSE	9.78	8.24	1.54	26.98	20.05	6.93
R-4	FREEDOM PARK	7.41	9.26	-1.85	20.31	21.88	-1.57
R-5	FAKAHATCHEE STRAND HQ	8.57	11.08	-2.51	20.33	24.35	-4.02
R-6	DAN HOUSE PRAIRIE	9.07	8.82	0.25	23.74	19.31	4.43
R-7	SGGE WEATHER STATION	14.51	11.06	3.45	29.74	22.94	6.80
R-8	FAKA UNION #5	10.27		New Site	22.51	No Historical Data	
R-9	CORKSCREW SWAMP NORTH END	7.32	11.91	-4.59	23.11	22.74	0.37
R-10	ROOKERY BAY HQ	15.64	9.55	6.09	26.55	20.73	5.82
R-11	COLLIER SEMINOLE STATE PARK	11.43	9.87	1.56	23.51	21.57	1.94
R-12	G.G. FIRE STATION	12.44	9.94	2.50	23.57	22.60	0.97
R-13	IMMOKALEE LANDFILL	10.09	8.79	1.30	24.73	22.28	2.45
R-14	IFAS	8.68	8.86	-0.18	24.83	22.06	2.77
R-15	MARCO R.O. PLANT	15.41	8.82	6.59	27.57	21.02	6.55
R-16	FAKAHATCHEE STRAND NORTH END	9.63	10.63	-1.00	23.05	25.89	-2.84
R-17	COCO#1	8.44	8.32	0.12	22.67	18.89	3.78
R-18	COCO#3	9.73	8.36	1.37	21.58	19.27	2.31
R-19	BIRD ROOKERY	14.73		New Site	26.06	No Historical Data	
R-20	AVE MARIA	7.24	8.98	-1.74	24.54	22.59	1.95
R-21	I75W2	9.08		New Site	20.13	No Historical Data	
R-22	GG#7	7.24		New Site	20.14	No Historical Data	

AVERAGES	10.27	9.73	0.54	23.62	22.05	1.58
----------	-------	------	------	-------	-------	------

**BCB ANNUAL RAINFALL
MONTHLY AVERAGE & HISTORICAL AVERAGE TRENDS
(FROM BCB RAINFALL GAGE DATA)**



**FIGURE 2
BCB GAUGE RAINFALL
MONTHLY AVERAGES THROUGH JUNE 2019**

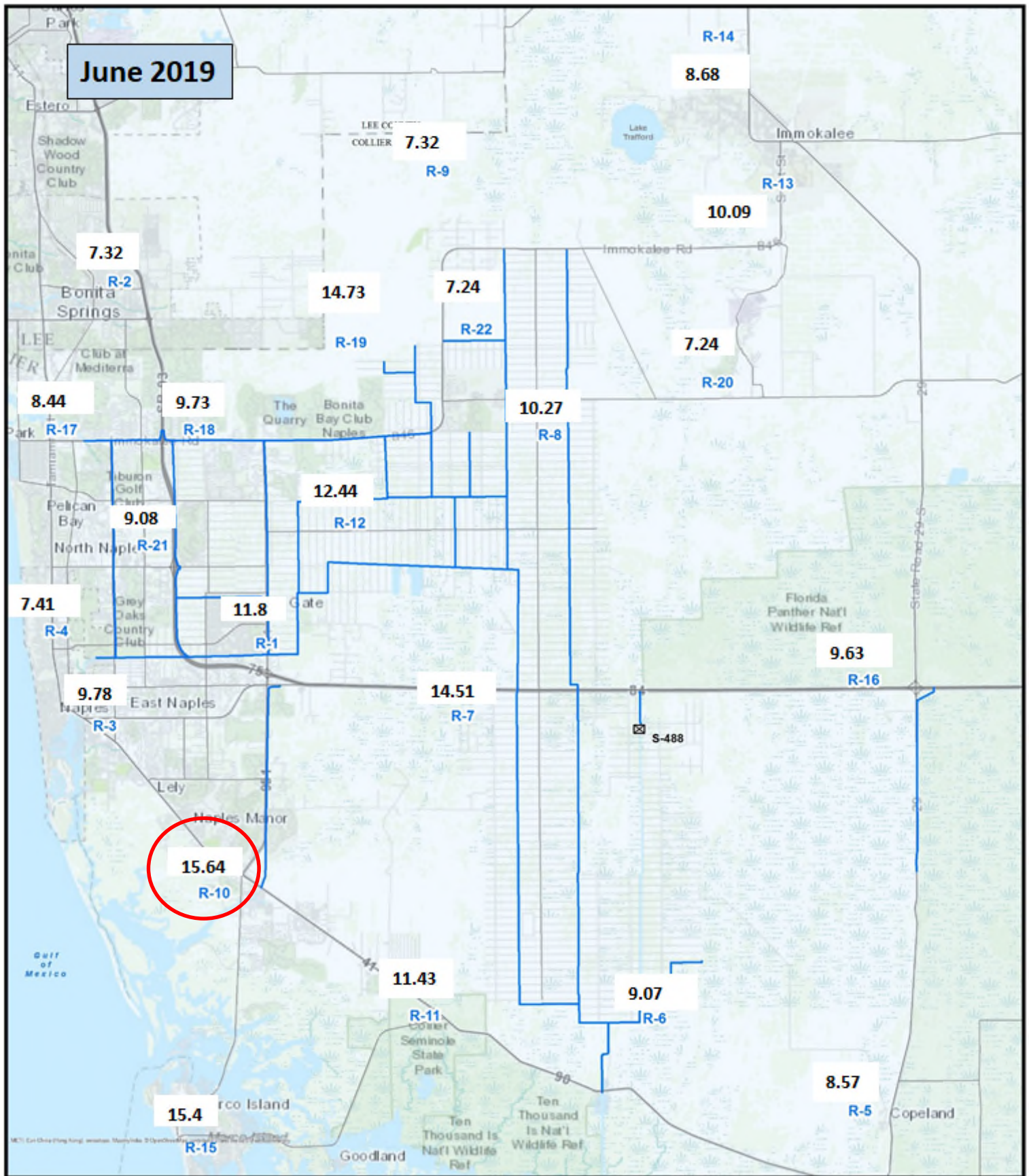


FIGURE 3
BCB RAINFALL DISTRIBUTION
JUNE 2019

BCB JUNE RAINFALL
Period (1990 ~ 2019)

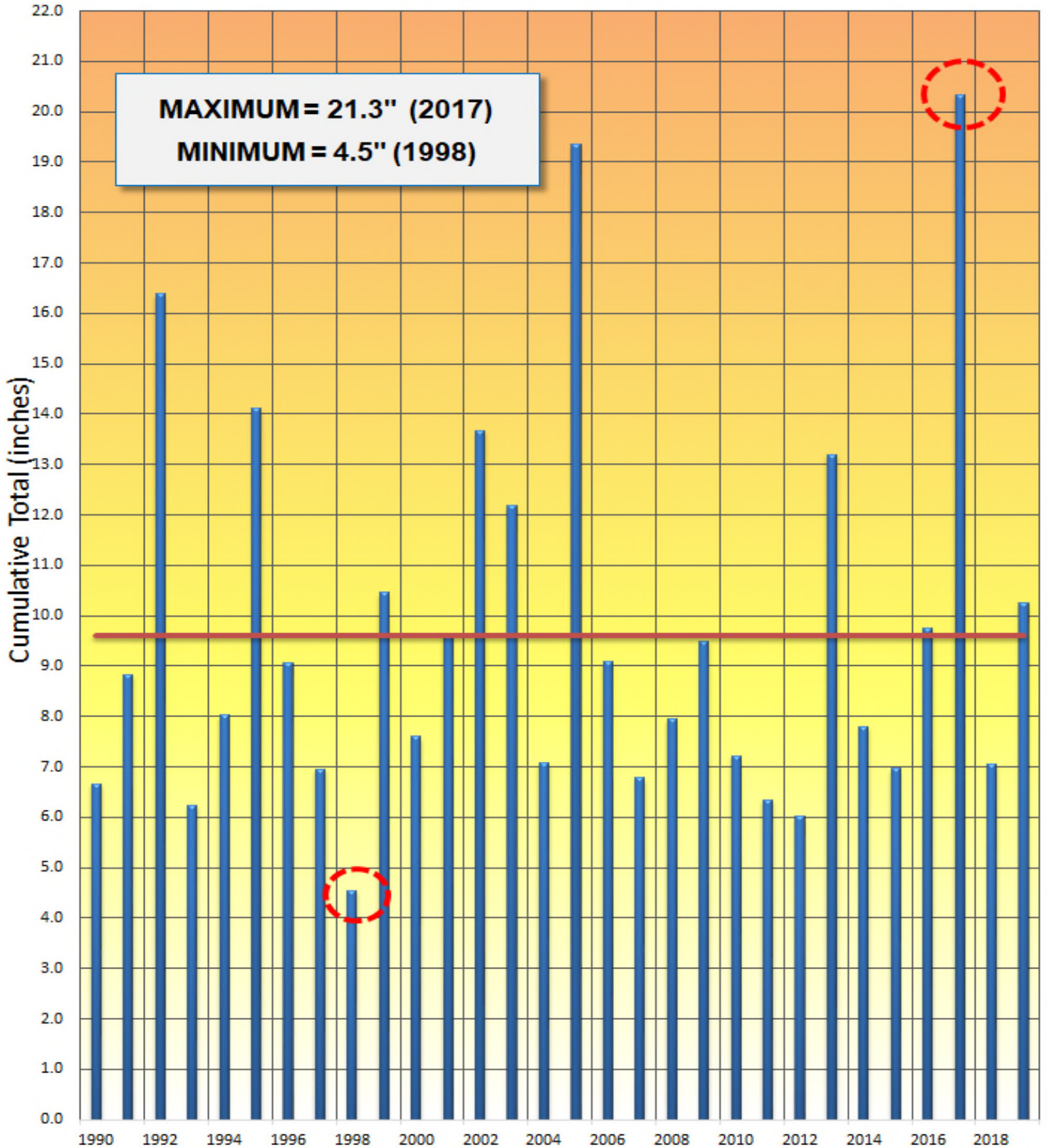


FIGURE 4
HISTORICAL TRENDS
(PERIOD OF RECORD: 1990—2019)

Figure 5A - GG1 Historic Average Daily Headwater Percentiles (2004-2018)

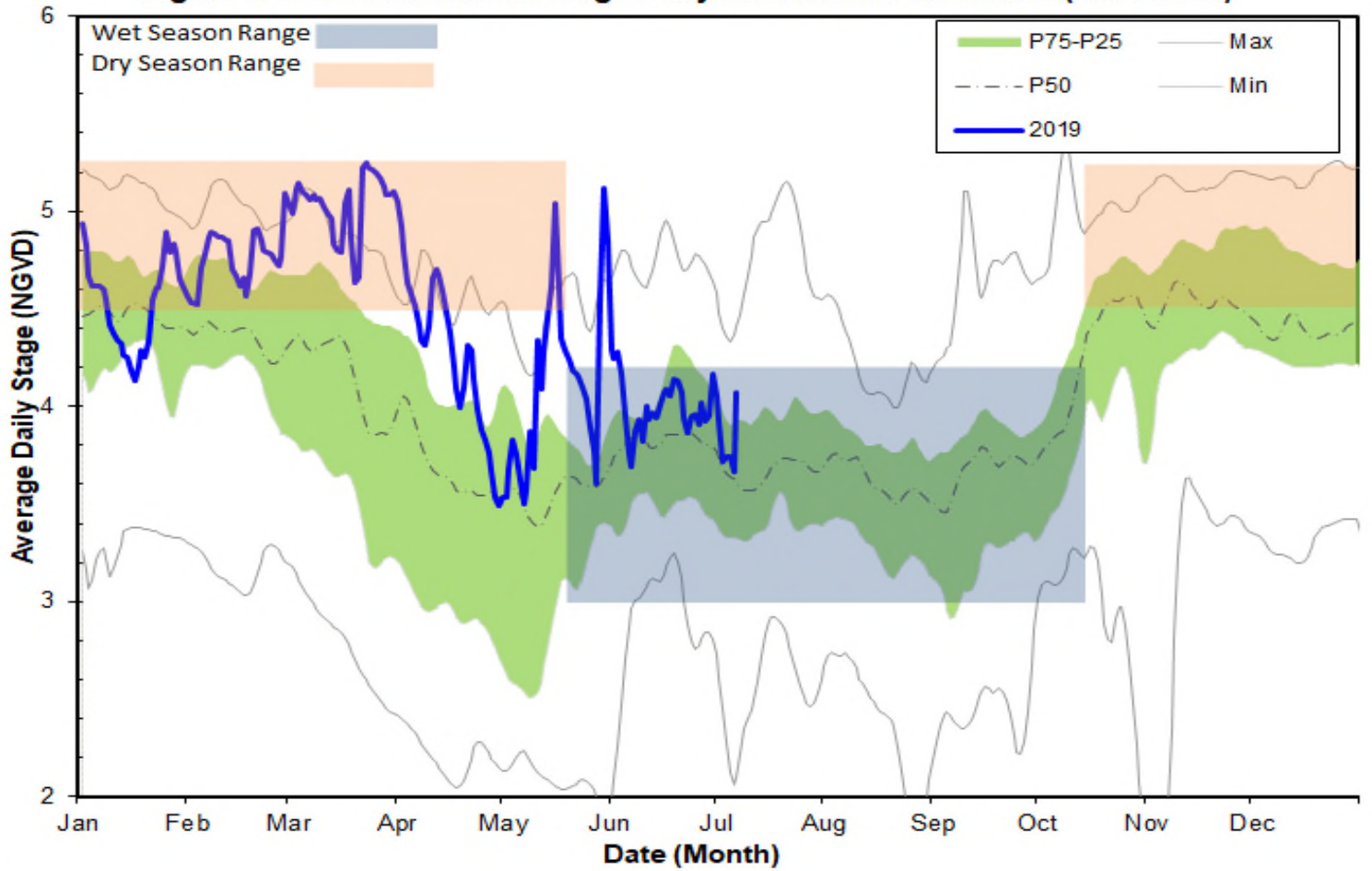


Figure 5B - GG4 Historic Average Daily Headwater Percentiles (1994-2017)

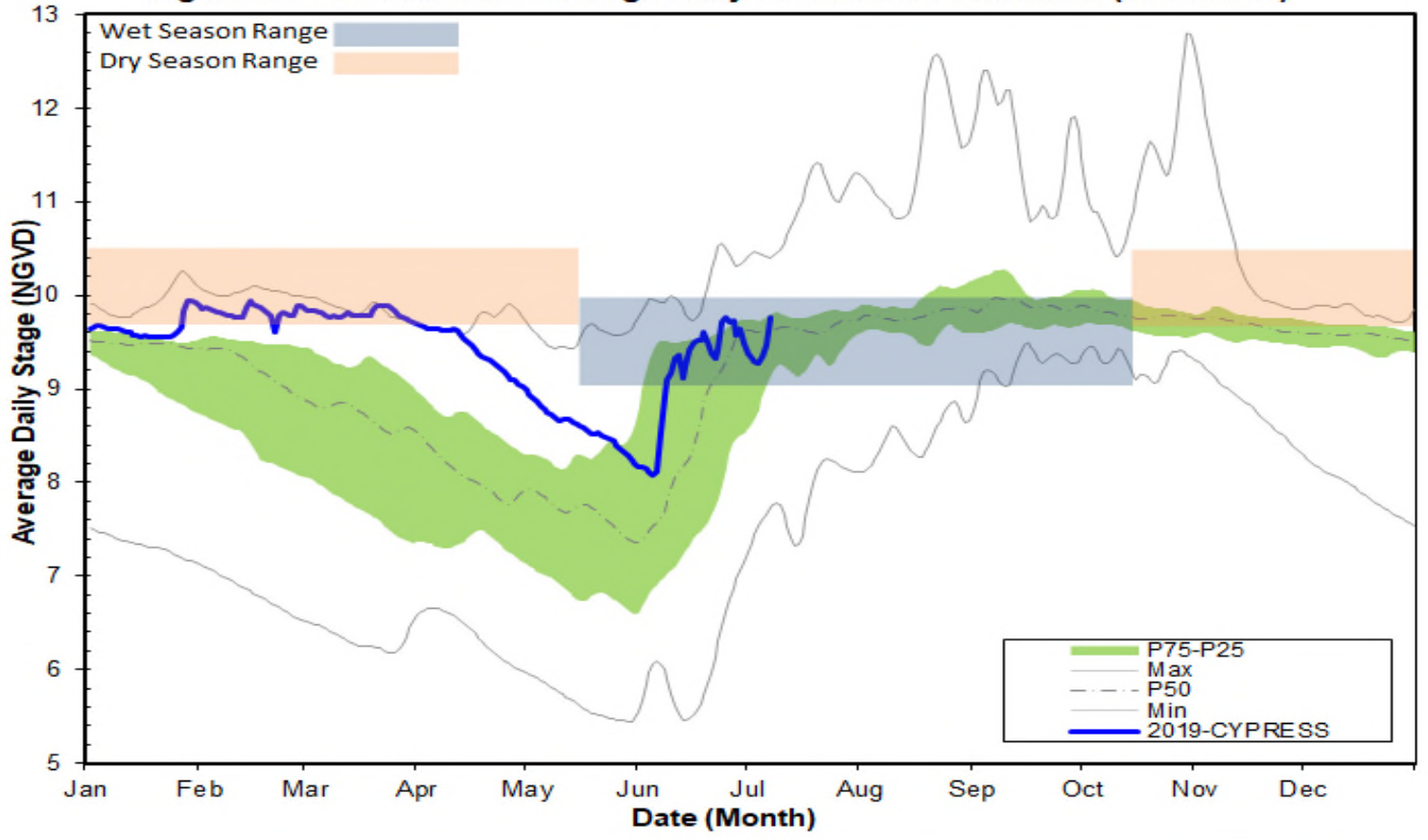


Figure 6A - COCO1 Historic Daily Headwater Percentiles (1994-2018)

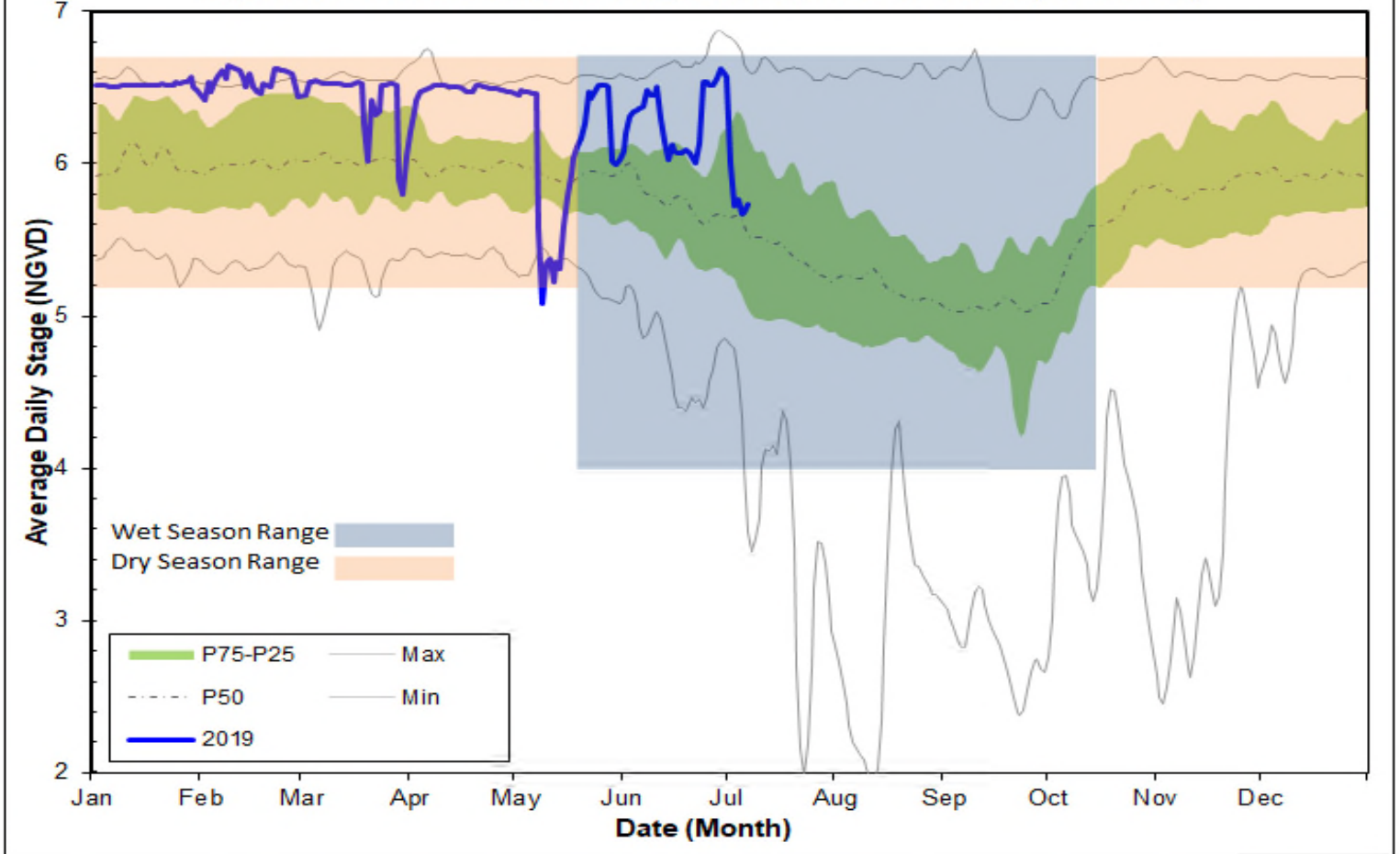


Figure 6B - COCO3 Historic Average Headwater Percentiles (2000-2018)

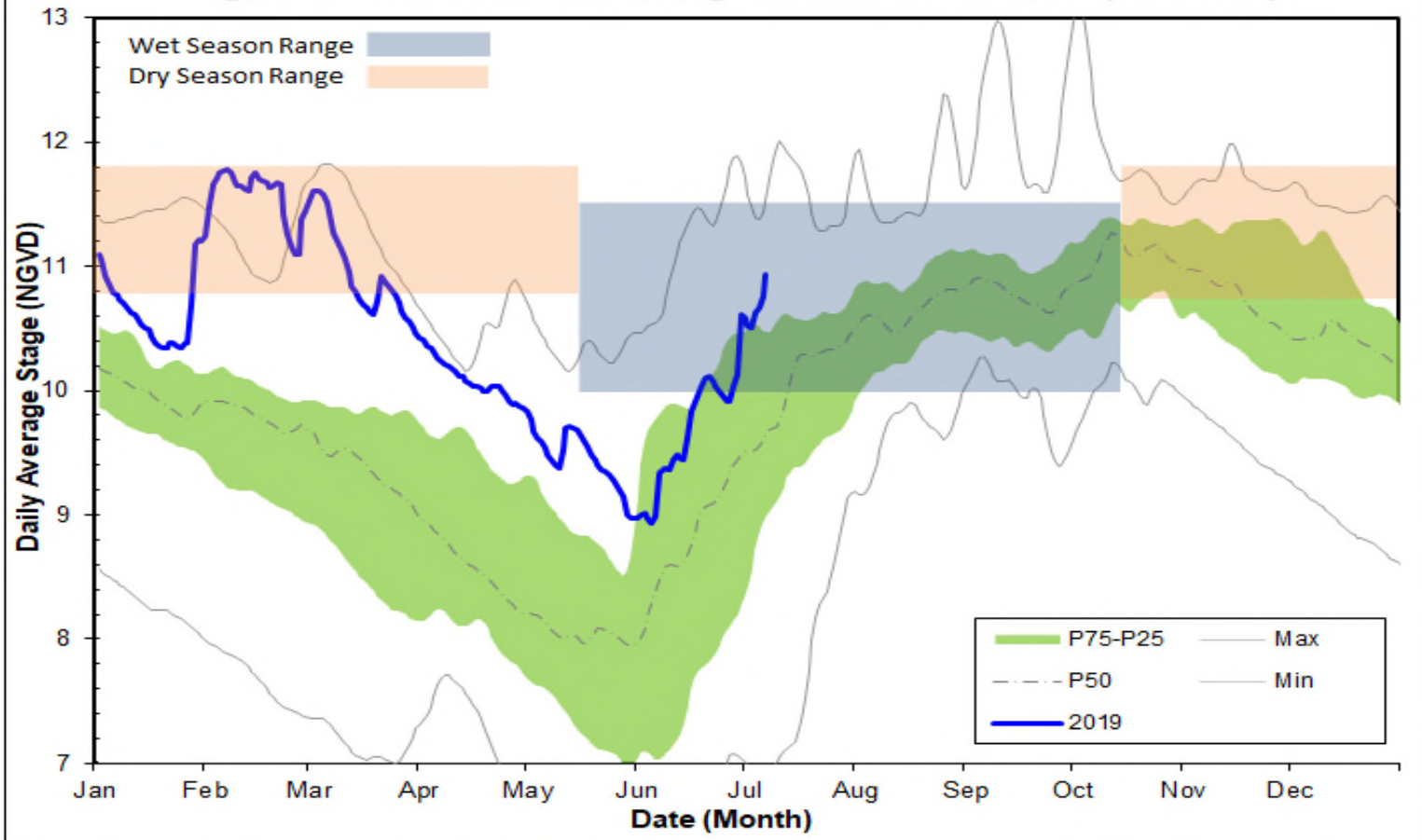


Figure 6C - CORK1 Historic Average Daily Headwater Percentiles (1989-2018)

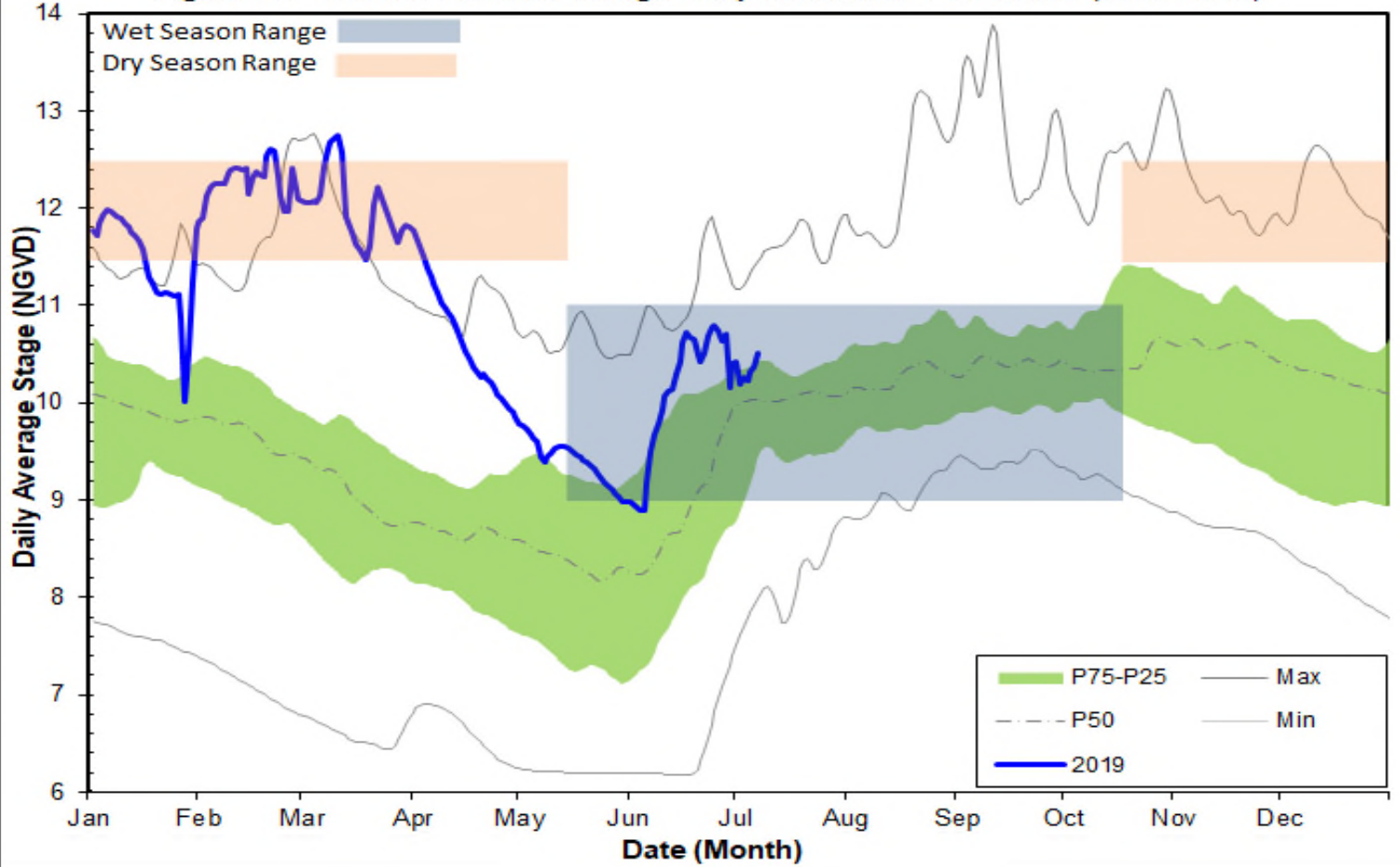


Figure 6D - CORK3 Average Daily Headwater Percentiles (2004-2018)

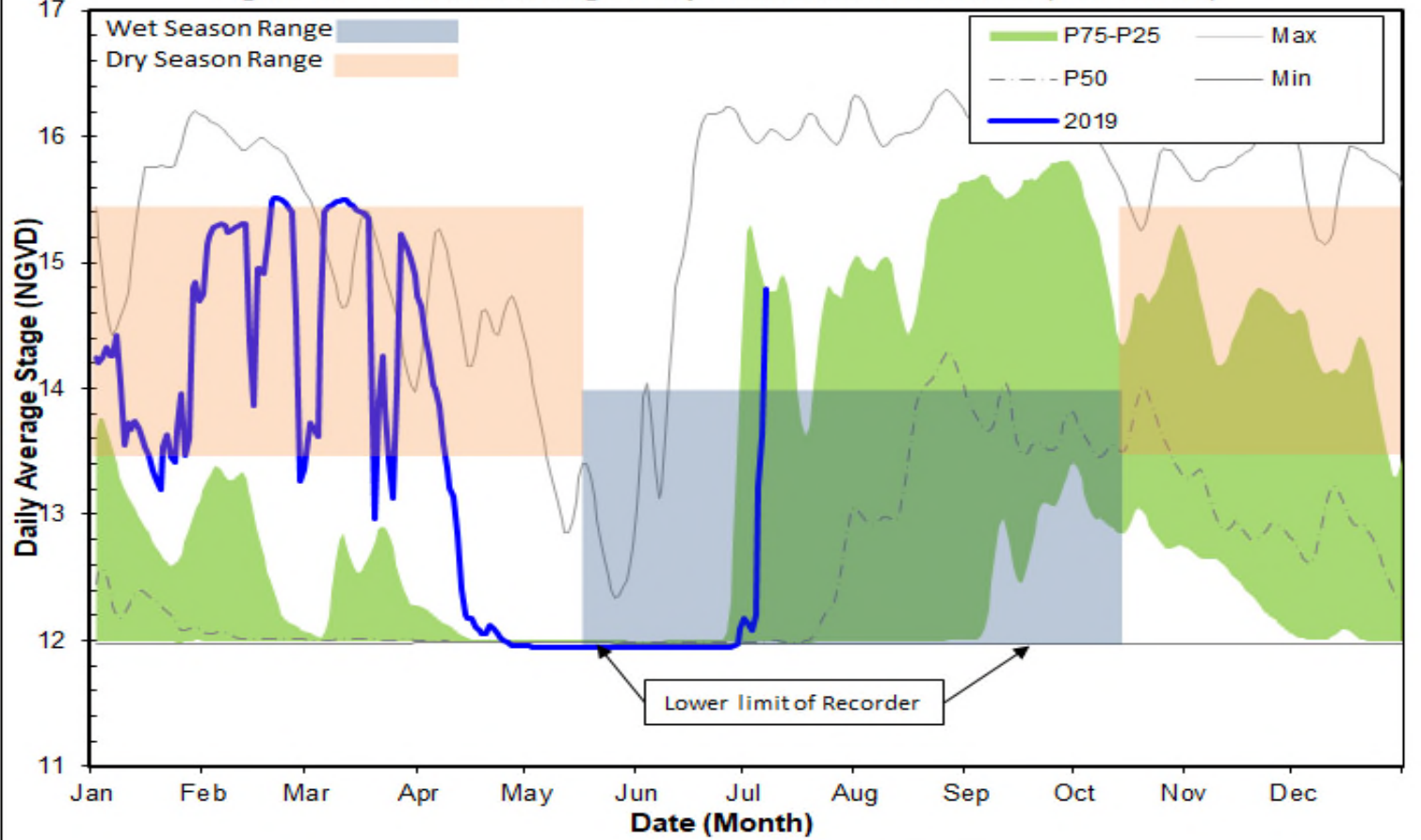


Figure 7A - FU1 Historic Average Daily Headwater Percentiles (1984-2018)

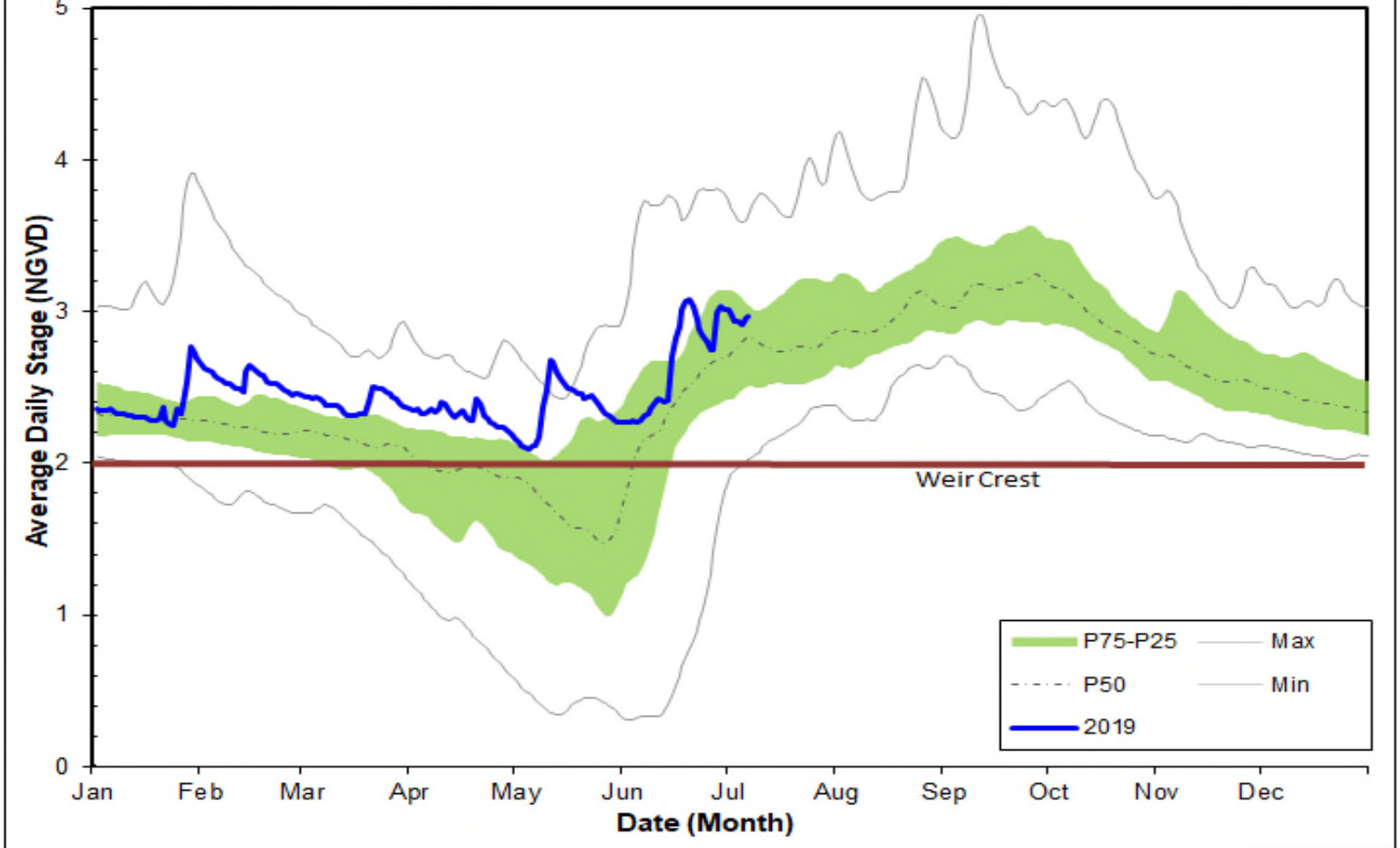


Figure 7B-FU5 Historic Average Daily Headwater Percentiles (2003-2018)

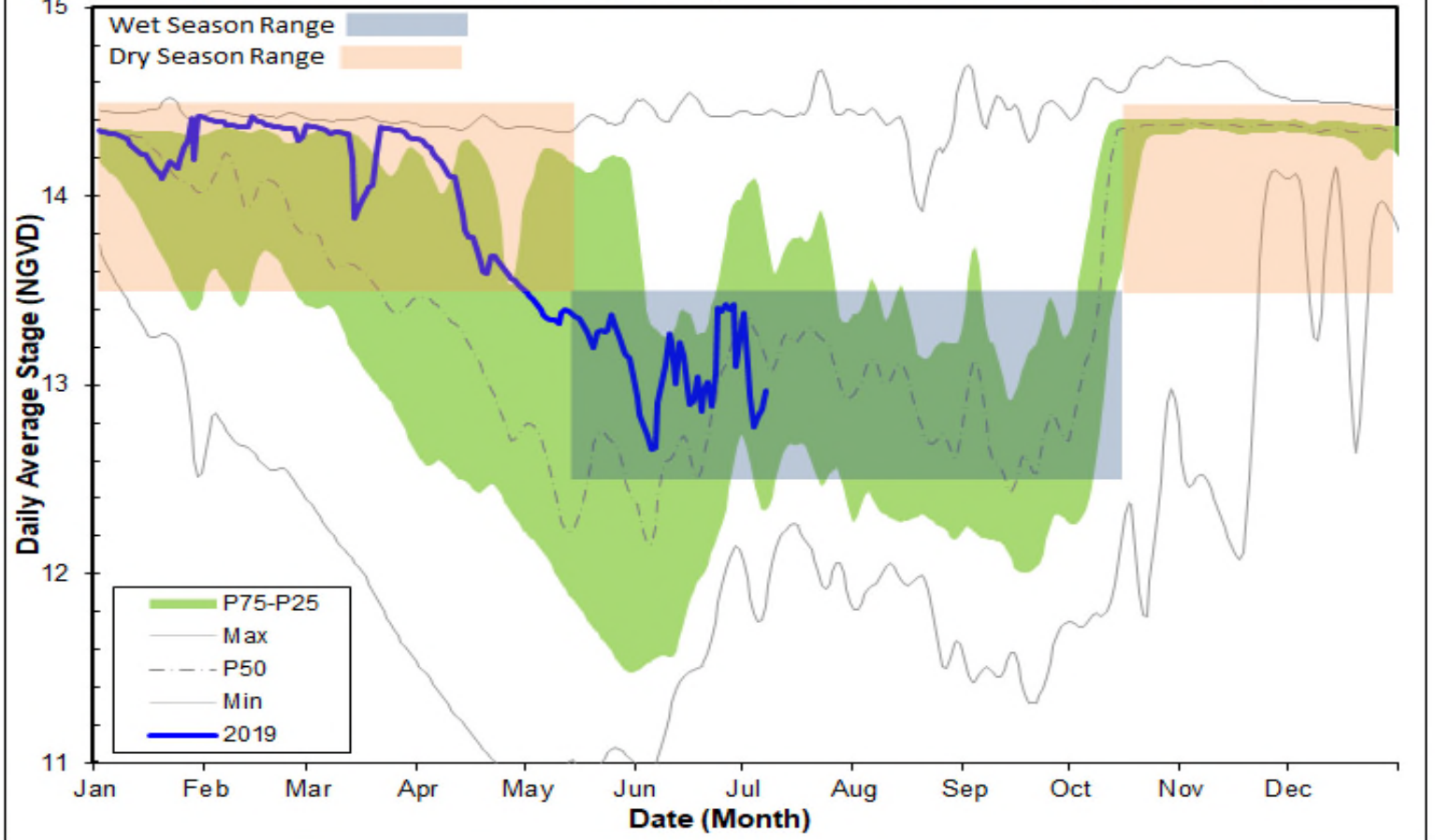


Figure 8A - HC1 Historic Average Daily Headwater Percentiles (1997-2018)

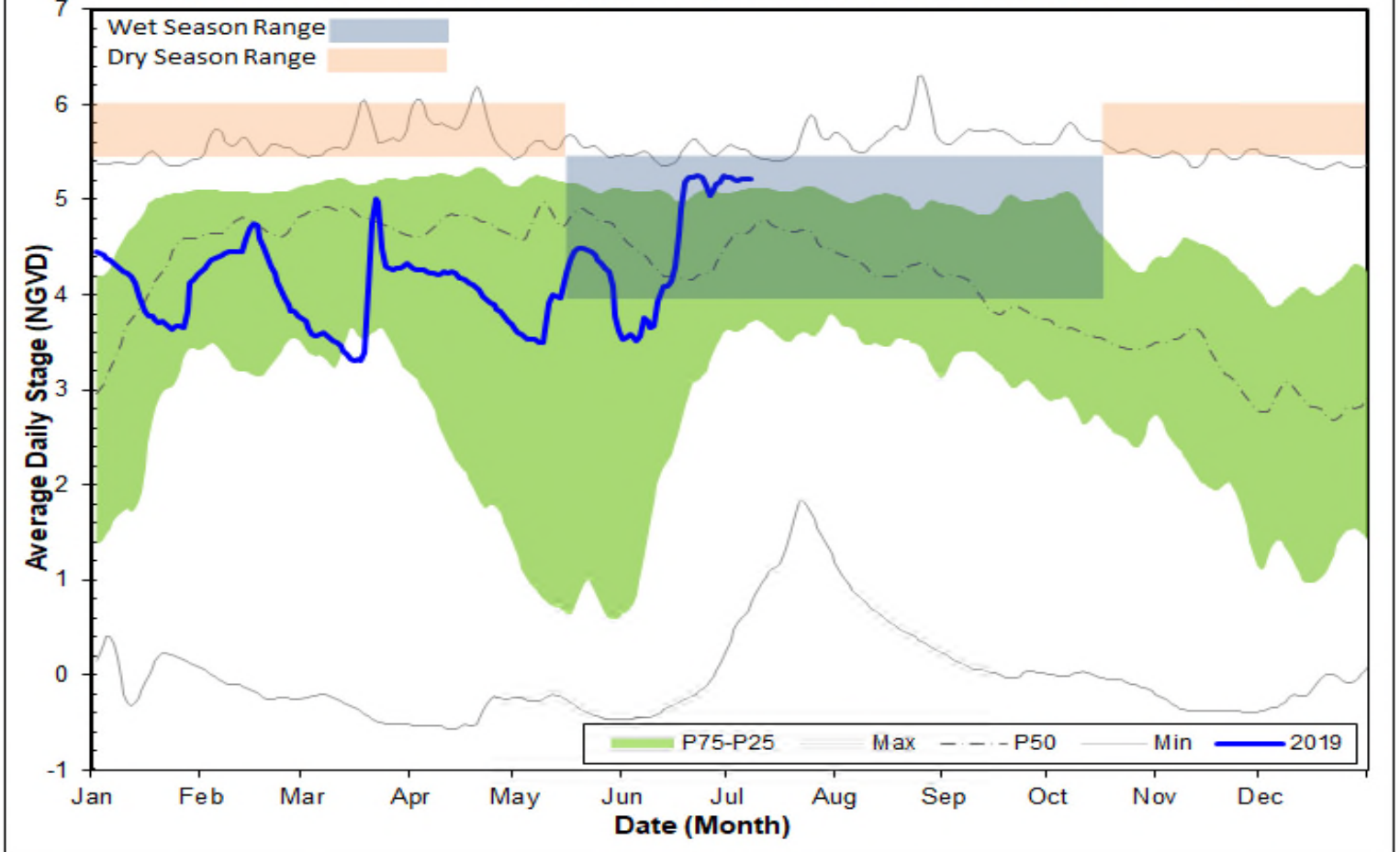
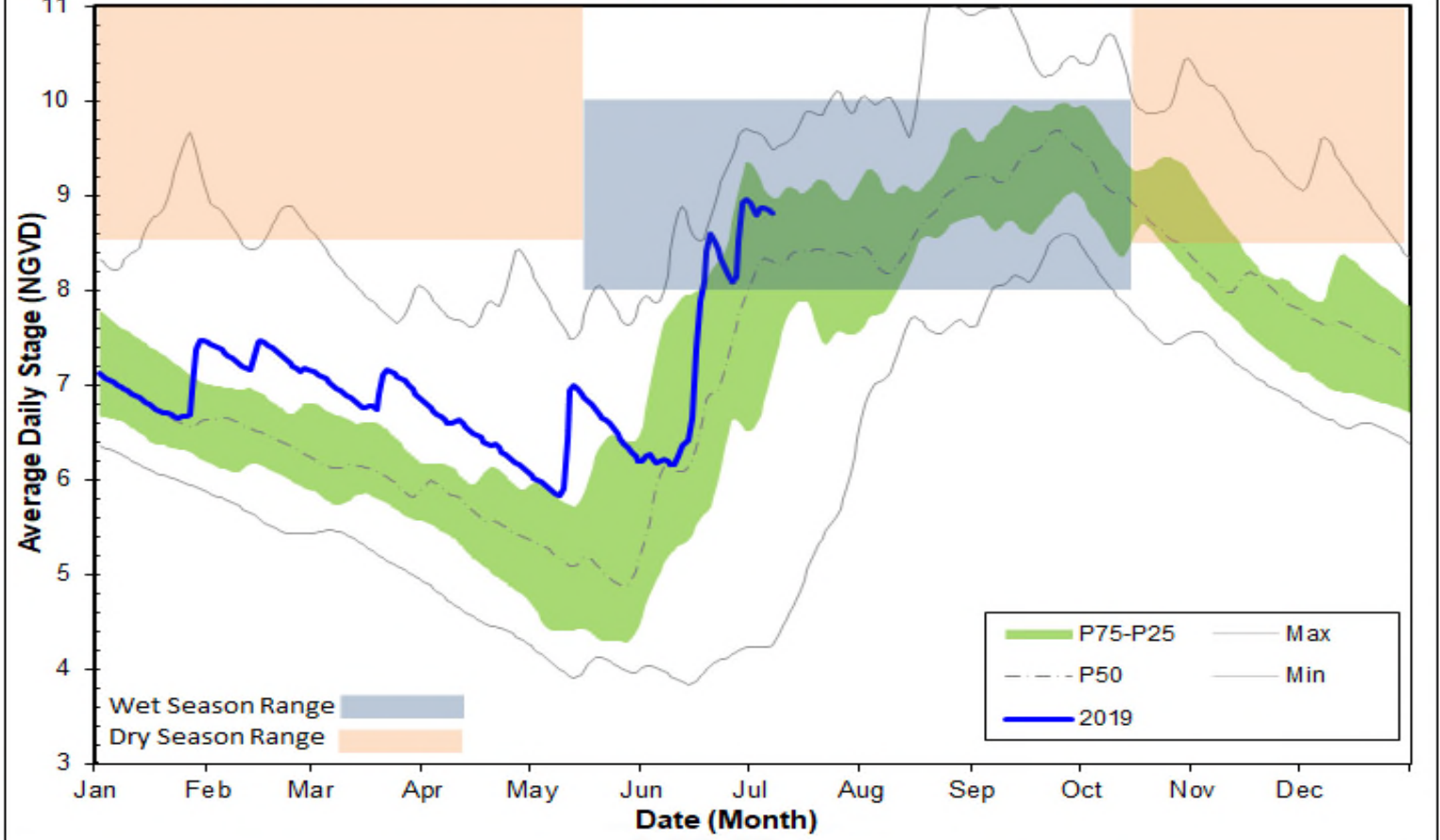


Figure 8B - HC2 Historic Average Daily Headwater Percentiles (2005-2018)



WATER CONDITIONS SUMMARY - June 2019
SELECTED STATIONS for BCB AREA / SW FLORIDA

Last Reading Date :		July 9, 2019					
Previous Period Reading Date:		June 1, 2019					
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	4.41	28.26	32.67	↑	GREEN
C-1004R	Naples	Lower Tamiami Aquifer	5.30	-0.36	4.94	↑	GREEN
C-1224	Marco Lakes	Lower Tamiami Aquifer	2.17	2.82	4.99	↑	GREEN
L-2194	Bonita Springs	Sandstone Aquifer	6.30	-0.01	6.29	↑	GREEN
L-2195	Bonita Springs	Surficial Aquifer System	2.76	8.28	11.04	↑	GREEN
L-738	Bonita Springs	Lower Tamiami Aquifer	5.60	-2.83	2.77	↑	GREEN

TABLE 2
BCB WATER CONDITIONS SUMMARY
JUNE 2019

BIG CYPRESS BASIN

JUNE 2019

GROUNDWATER LEVEL DAILY TRENDS COMPARED TO HISTORICAL AVERAGE

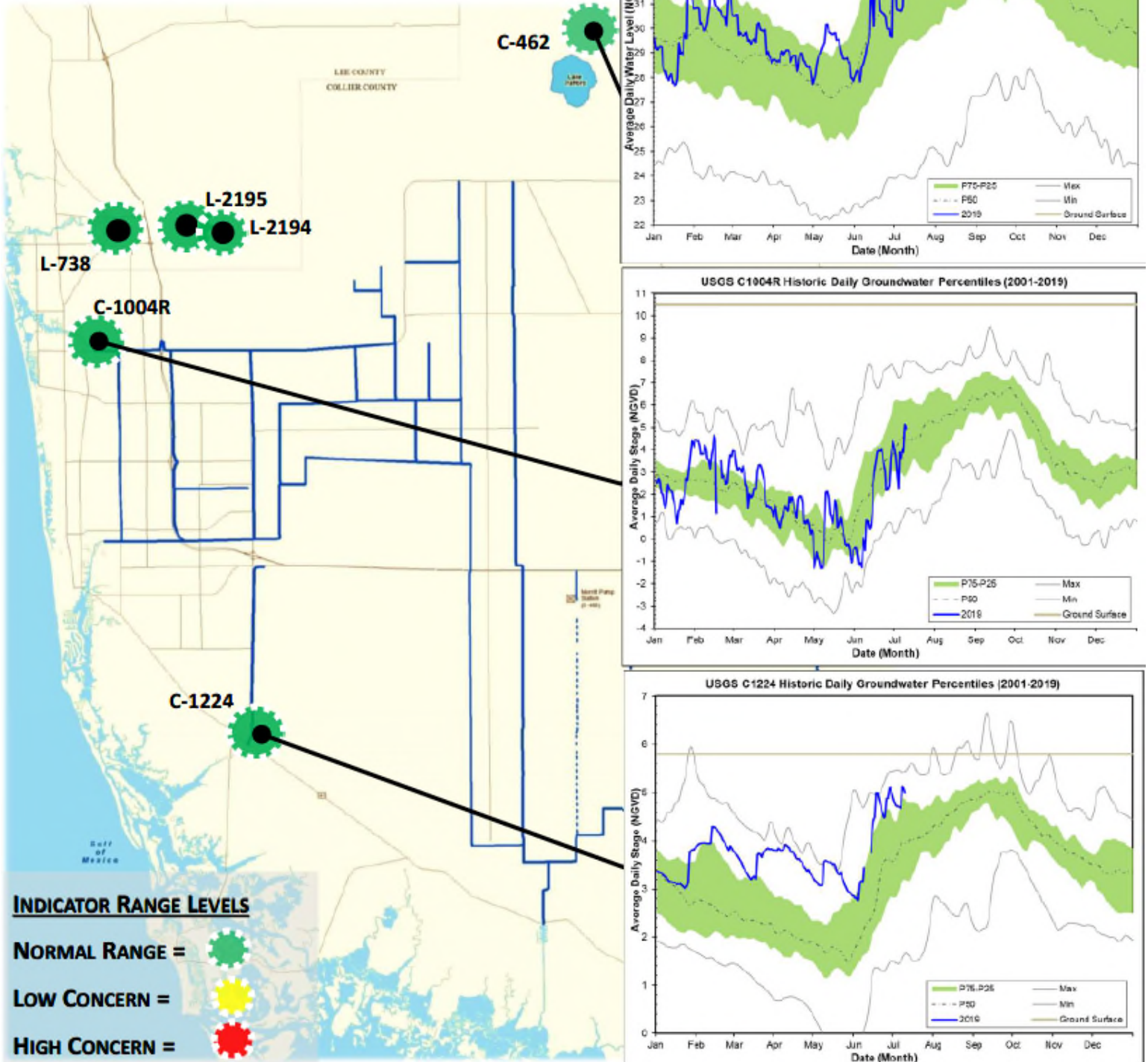


FIGURE 9

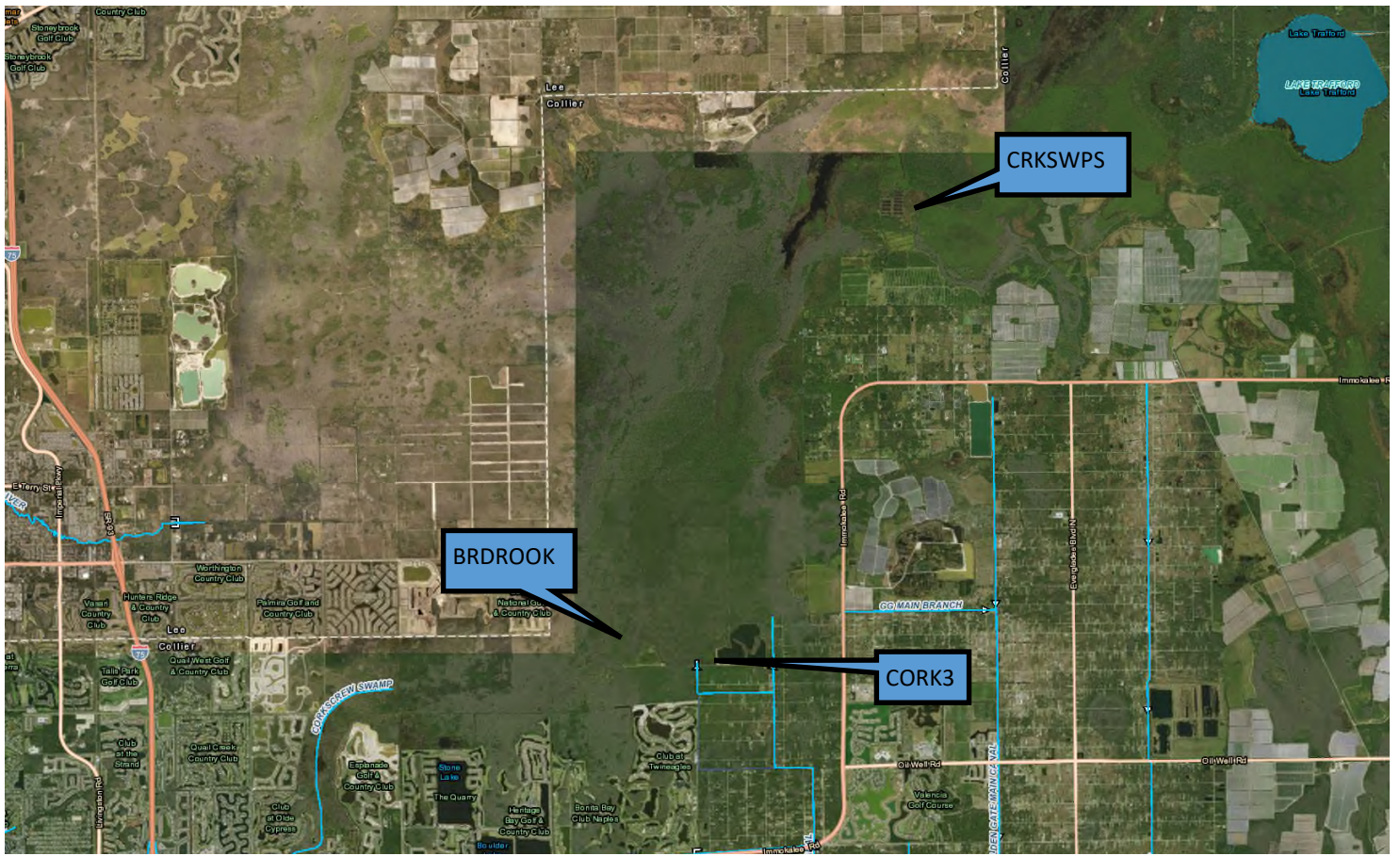


Figure 10-Corkscrew Historic Average Daily Headwater Percentiles(1984-2018)

