

A large cypress tree stands prominently in the center of the image, its trunk and branches silhouetted against a vibrant sunset sky. The sky is filled with warm, golden light, and the sun is visible as a bright orb on the right side. In the background, a body of water is visible, with a small structure or bridge partially obscured by the tree. The foreground is filled with lush greenery, including palm trees and other tropical plants. A blue text box is overlaid on the top left corner of the image.

HYDROLOGIC REPORT  
BIG CYPRESS BASIN —  
SOUTH FLORIDA WATER  
MANAGEMENT DISTRICT

MARCH 2019

# SUMMARY OF HYDROLOGIC CONDITIONS IN THE BIG CYPRESS BASIN

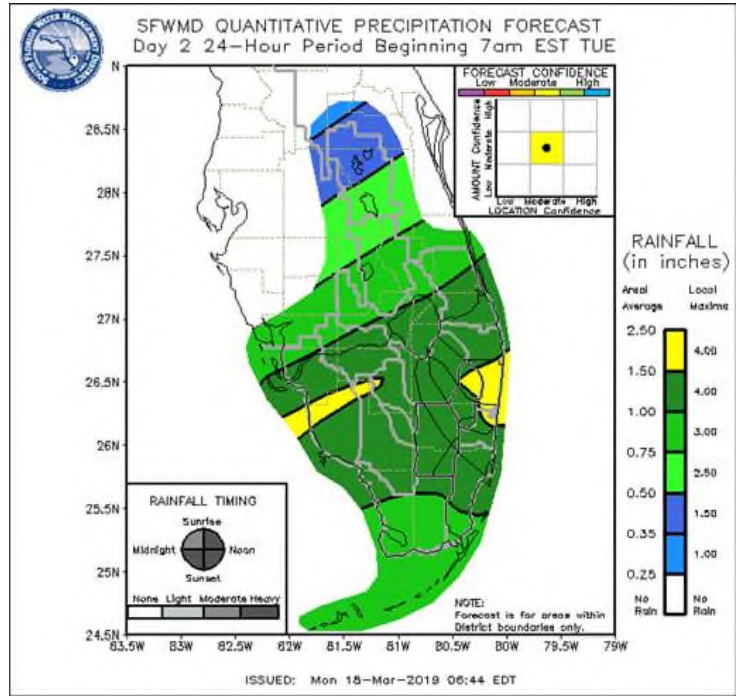
March 2019

## SUMMARY

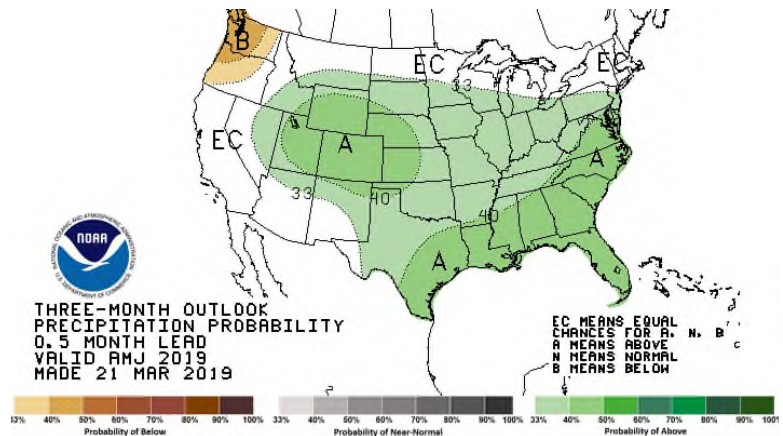
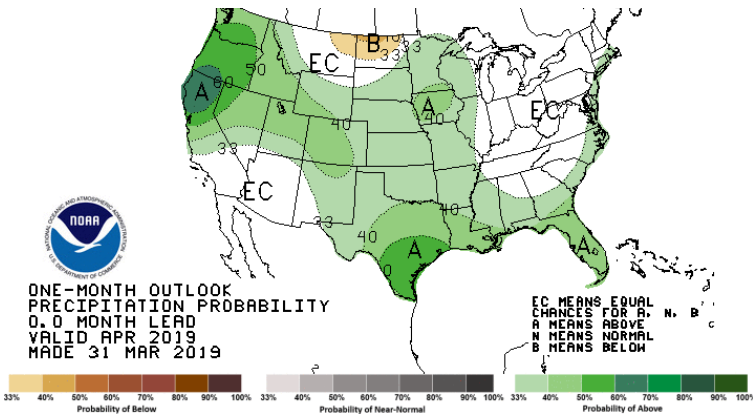
March was a fairly average month in terms of rainfall for the Basin. March rainfall came in at around 80% of average for the month, however 2019 so far is above average at 133% of normal. The majority of the rain fell in one event near the middle of the month. The event was forecasted to be fairly significant in terms of areal average rainfall in the 2.5 - 4.0 inch range as seen in the forecast graphic. Some canals in the Basin were reduced to lower stages in preparation for this event. The rain event did occur although not with as much vigor as predicted. Following the event, canals were all brought back to their high dry season criteria.

Nine of the ten structures reported are near the upper band of the upper quartile or at historical high levels and the remaining one (HC1) is maintaining levels just below the 50th percentile.

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



Also, the 3 month long term forecast continues to show higher than normal chances for above average rainfall for April, May, and June (see below).



Area groundwater levels have generally trended downward during March. All but one reporting well (C-1004R) is still reporting in the green concern indicator.

## BCB RAINFALL

March was slightly below average in terms of rainfall and at about 80% of normal. As measured by twenty-two (22) reporting stations (ref. **Figures 1, 2, Table 1**), the basin-wide monthly average was **1.67 inches**, which is 80% of the normal 2.06 inches typically collected.

Based on collected gage data, rainfall distribution across all BCB localities was mixed in March. The month's highest total was collected at Collier County Courthouse (Site R-3), which received **2.81 inches**,

and the lowest at Bonita Springs Water Plant Site R-2) with **0.9 inches**. **Figure 10** shows the historical trends for Corkscrew, Bird Rookery, and Cork 3 structure and the 2019 corresponding levels. The rainfall totals and their locality distribution across the BCB/ Lower West Coast are shown on **Figure 3**.

### **BCB CANAL SYSTEMS**

For all but a couple days, all of the canals were maintained in dry season operations. Most canals showed an increase in water levels with the mid-month rain event. As evapotranspiration increased towards the end of the month, canal levels began to decrease. Levels in Corkscrew Swamp responded to the rain events, but levels continue to decrease and approach the 75th percentile (ref **Figure 10**).

- **GOLDEN GATE SYSTEM**

The Golden Gate Main canal levels recovered to historic high levels throughout March (ref **Figure 5A & 5B**). As March ended, flow continued over GG1 at historically high levels which allowed back-pump operations at Airport Road Canal and CR951 Canal to restart and maintain the high end of dry season levels.

- **COCOHATCHEE SYSTEM**

The addition of the new Curry Canal structure continues to assist in holding water levels near record high levels (ref **Figure 6A, 6B, 6C, & 6D**). COCO1, COCO3, and CORK1 all ended March at or above historical levels as a result of the wet month and the addition of the Curry structure.

- **FAKA UNION SYSTEM**

This system continues to exceed the 75th percentile and the water level restarted its downward trend after the rain event ended (ref **Figure 7A & 7B**). The downward trend is expected to continue, but is on track to stay above the 50th percentile until the close of dry season.

- **HENDERSON CREEK SYSTEM**

Henderson Creek continues to run in dry season operations. Water levels in upper watershed continue to be maintained in the upper quartiles. The lower watershed recovered as the maintenance work was completed upstream of HC1. (ref **Figure 8A & 8B**).

### **BIG CYPRESS BASIN & LOWER WEST COAST GROUNDWATER LEVELS**

The current reporting (04/01/2019) for the Lower West Coast [LWC] notes that all but one groundwater wells decreased but remain near historic averages for the middle of dry season. By the end of March, only one (C-1004R) of the six reporting wells was below the normal concern indicator (green color) (ref. **Table 2**).

All reported wells in **Table 2** show an average decrease of 1.4 feet. L-738 recorded the highest decrease of 2.41 feet, and C-1224 was the only well to increase at 0.07 feet (ref. **Table 2, Figure 9**).

BIG CYPRESS BASIN

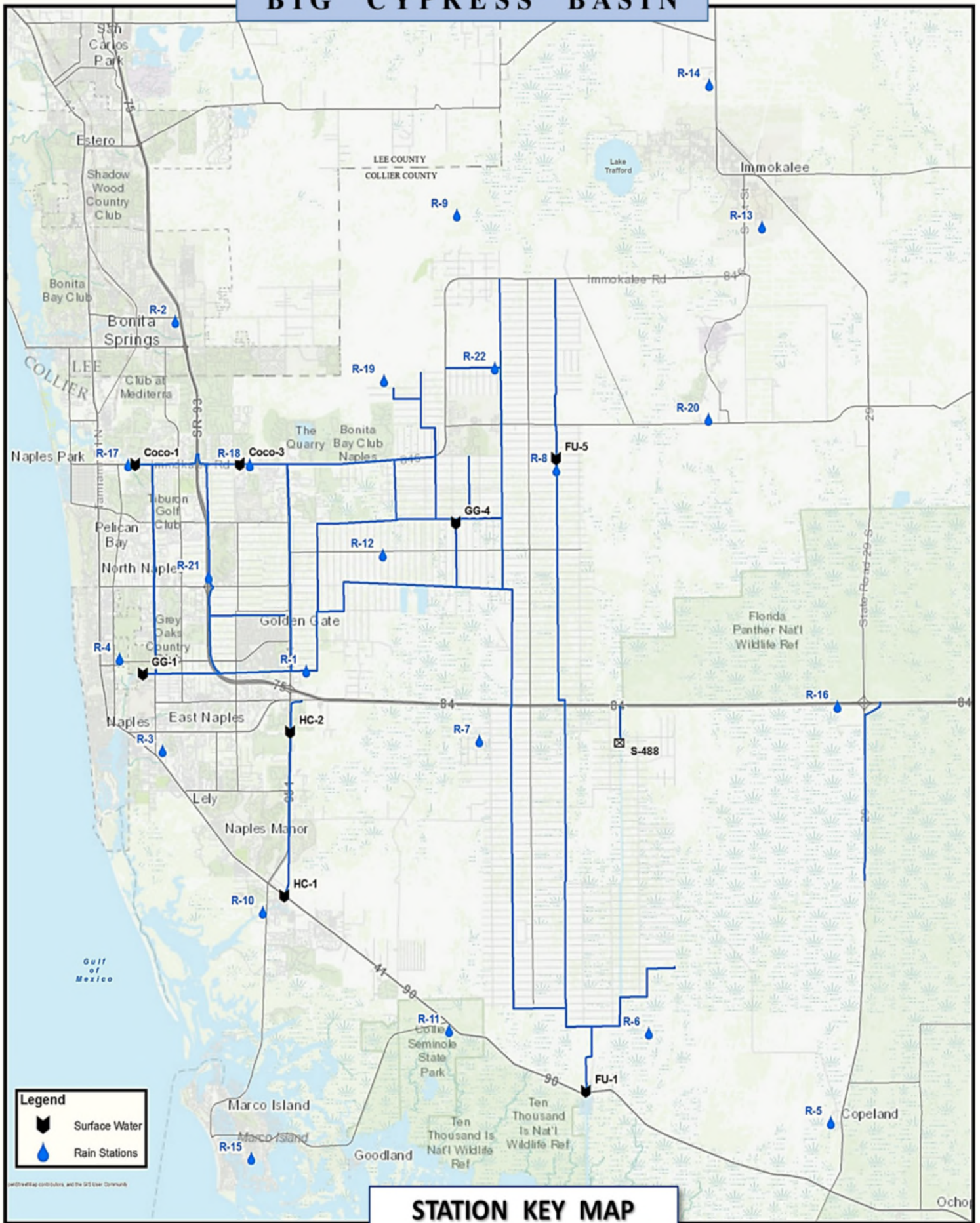


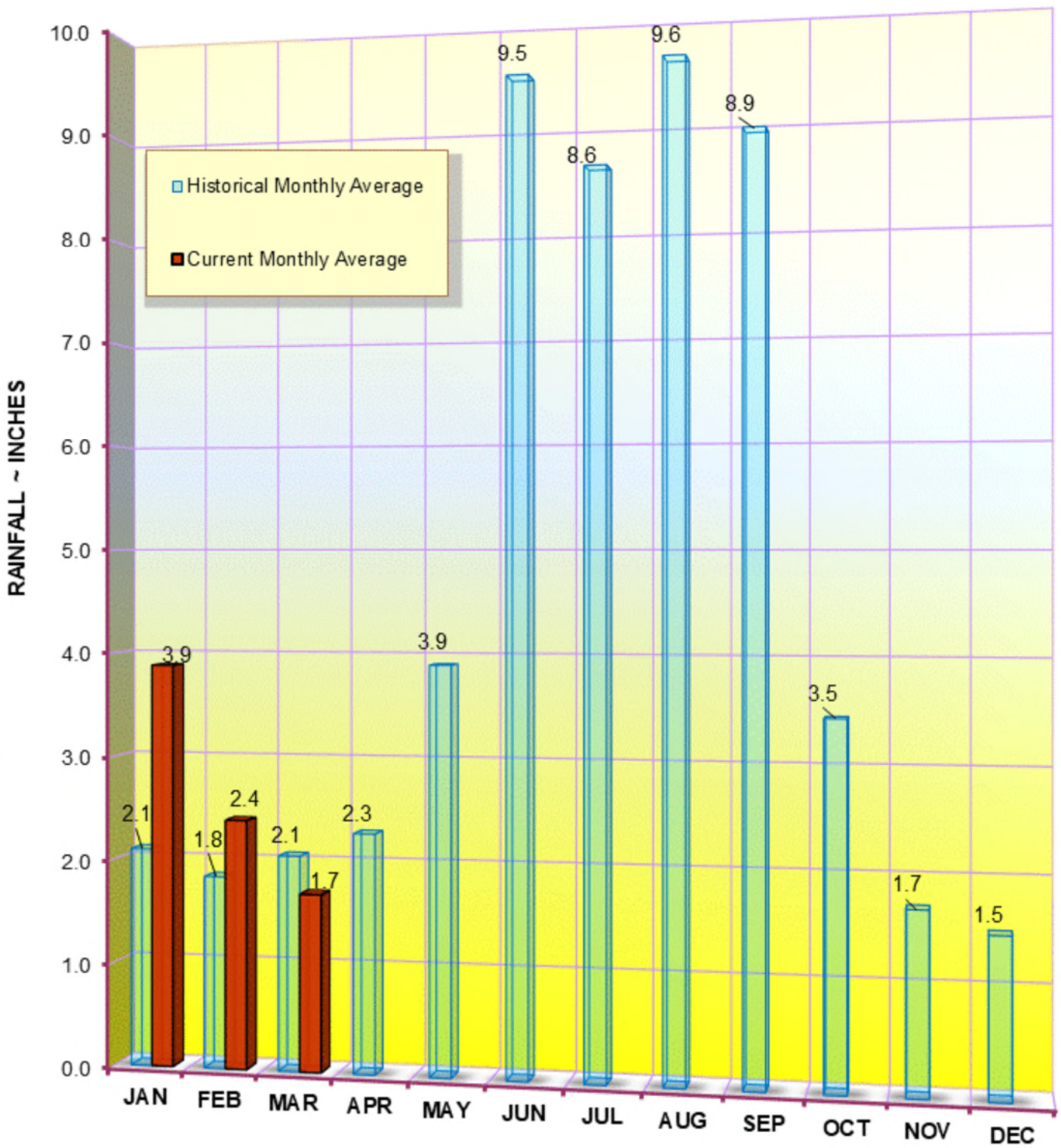
FIGURE 1

**TABLE 1**  
**RAINFALL REPORT - MARCH 2019**  
**DISTRICT/BASIN RAINFALL STATIONS**

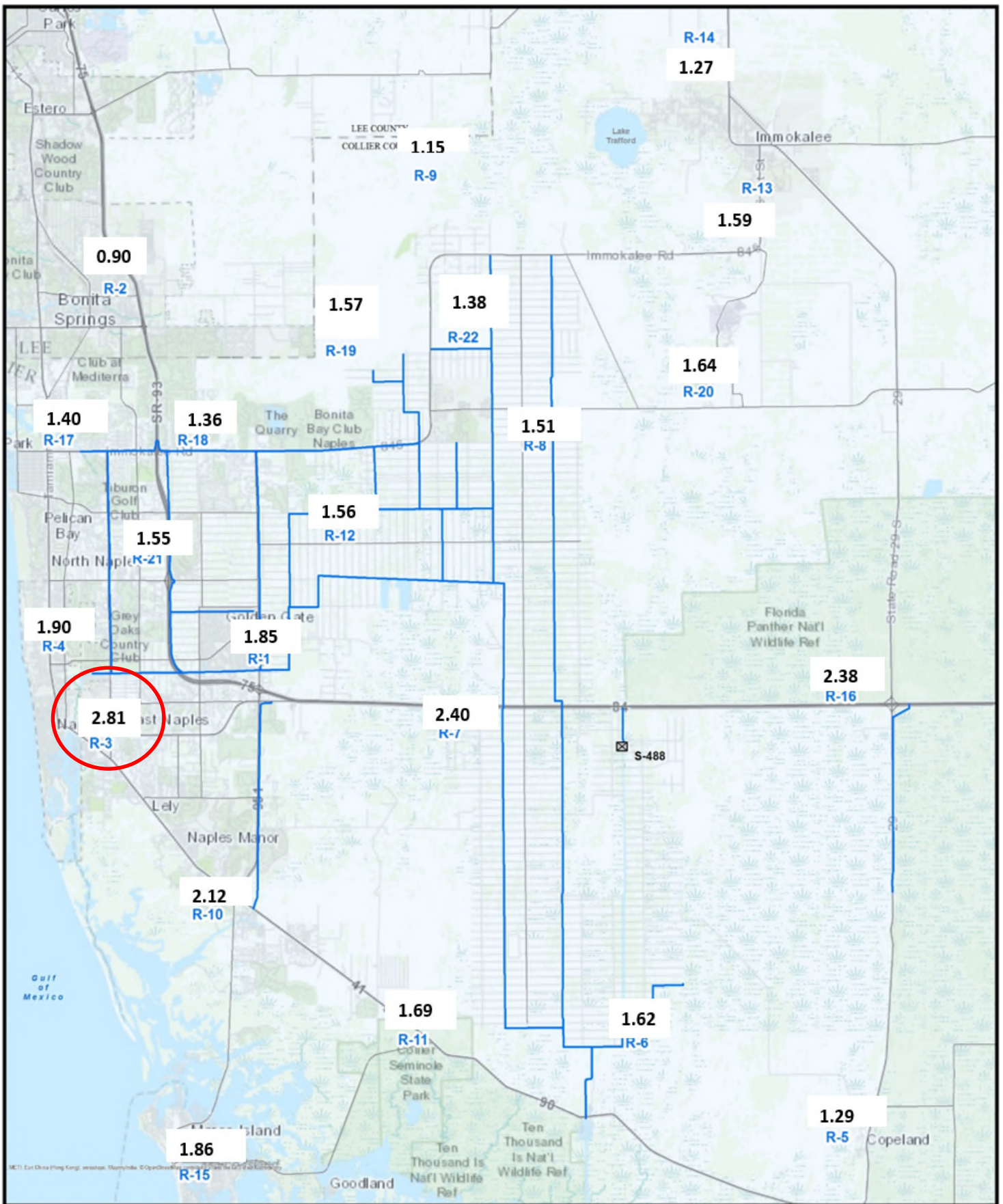
(ALL NUMBERS ARE IN INCHES)

| STATION INDEX NO. | STATION NAME                 | MARCH 2019 | LONG TERM MONTHLY AVERAGE | MONTHLY DIFFERENCE | CALENDAR YEAR 2019 CUMULATIVE TOTAL | AVERAGE CALENDAR YEAR TO DATE | YEAR TO DATE DIFFERENCE |
|-------------------|------------------------------|------------|---------------------------|--------------------|-------------------------------------|-------------------------------|-------------------------|
| R-1               | GG#3                         | 1.85       |                           | New Site           | 8.26                                | No Historical Data            |                         |
| R-2               | BONITA SPRINGS WATER PLANT   | 0.90       | 2.42                      | -1.52              | 7.26                                | 6.45                          | 0.81                    |
| R-3               | COLLIER COUNTY COURTHOUSE    | 2.81       | 1.98                      | 0.83               | 9.00                                | 5.87                          | 3.13                    |
| R-4               | FREEDOM PARK                 | 1.90       | 1.24                      | 0.66               | 6.76                                | 6.25                          | 0.51                    |
| R-5               | FAKAHATCHEE STRAND HQ        | 1.29       | 2.37                      | -1.08              | 6.18                                | 6.11                          | 0.07                    |
| R-6               | DAN HOUSE PRAIRIE            | 1.62       | 1.64                      | -0.02              | 7.27                                | 4.80                          | 2.47                    |
| R-7               | SGGE WEATHER STATION         | 2.40       | 1.47                      | 0.93               | 7.94                                | 4.78                          | 3.16                    |
| R-8               | FAKA UNION #5                | 1.51       |                           | New Site           | 8.16                                | No Historical Data            |                         |
| R-9               | CORKSCREW SWAMP NORTH END    | 1.15       | 1.73                      | -0.58              | 9.88                                | 5.33                          | 4.55                    |
| R-10              | ROOKERY BAY HQ               | 2.12       | 1.56                      | 0.56               | 6.72                                | 5.62                          | 1.10                    |
| R-11              | COLLIER SEMINOLE STATE PARK  | 1.69       | 2.13                      | -0.44              | 7.62                                | 5.74                          | 1.88                    |
| R-12              | G.G. FIRE STATION            | 1.56       | 2.30                      | -0.74              | 7.83                                | 6.19                          | 1.64                    |
| R-13              | IMMOKALEE LANDFILL           | 1.59       | 2.63                      | -1.04              | 9.11                                | 6.72                          | 2.39                    |
| R-14              | IFAS                         | 1.27       | 2.81                      | -1.54              | 8.30                                | 6.84                          | 1.46                    |
| R-15              | MARCO R.O. PLANT             | 1.86       | 2.03                      | -0.17              | 7.26                                | 6.61                          | 0.65                    |
| R-16              | FAKAHATCHEE STRAND NORTH END | 2.38       | 2.51                      | -0.13              | 10.06                               | 7.14                          | 2.92                    |
| R-17              | COCO#1                       | 1.40       | 2.20                      | -0.80              | 7.86                                | 5.88                          | 1.98                    |
| R-18              | COCO#3                       | 1.36       | 1.57                      | -0.21              | 7.94                                | 5.27                          | 2.67                    |
| R-19              | BIRD ROOKERY                 | 1.57       |                           | New Site           | 7.53                                | No Historical Data            |                         |
| R-20              | AVE MARIA                    | 1.64       | 2.47                      | -0.83              | 9.92                                | 6.57                          | 3.35                    |
| R-21              | I75W2                        | 1.55       |                           | New Site           | 6.85                                | No Historical Data            |                         |
| R-22              | GG#7                         | 1.38       |                           | New Site           | 7.70                                | No Historical Data            |                         |
| AVERAGES          |                              | 1.67       | 2.06                      | -0.39              | 7.97                                | 6.01                          | 1.96                    |

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

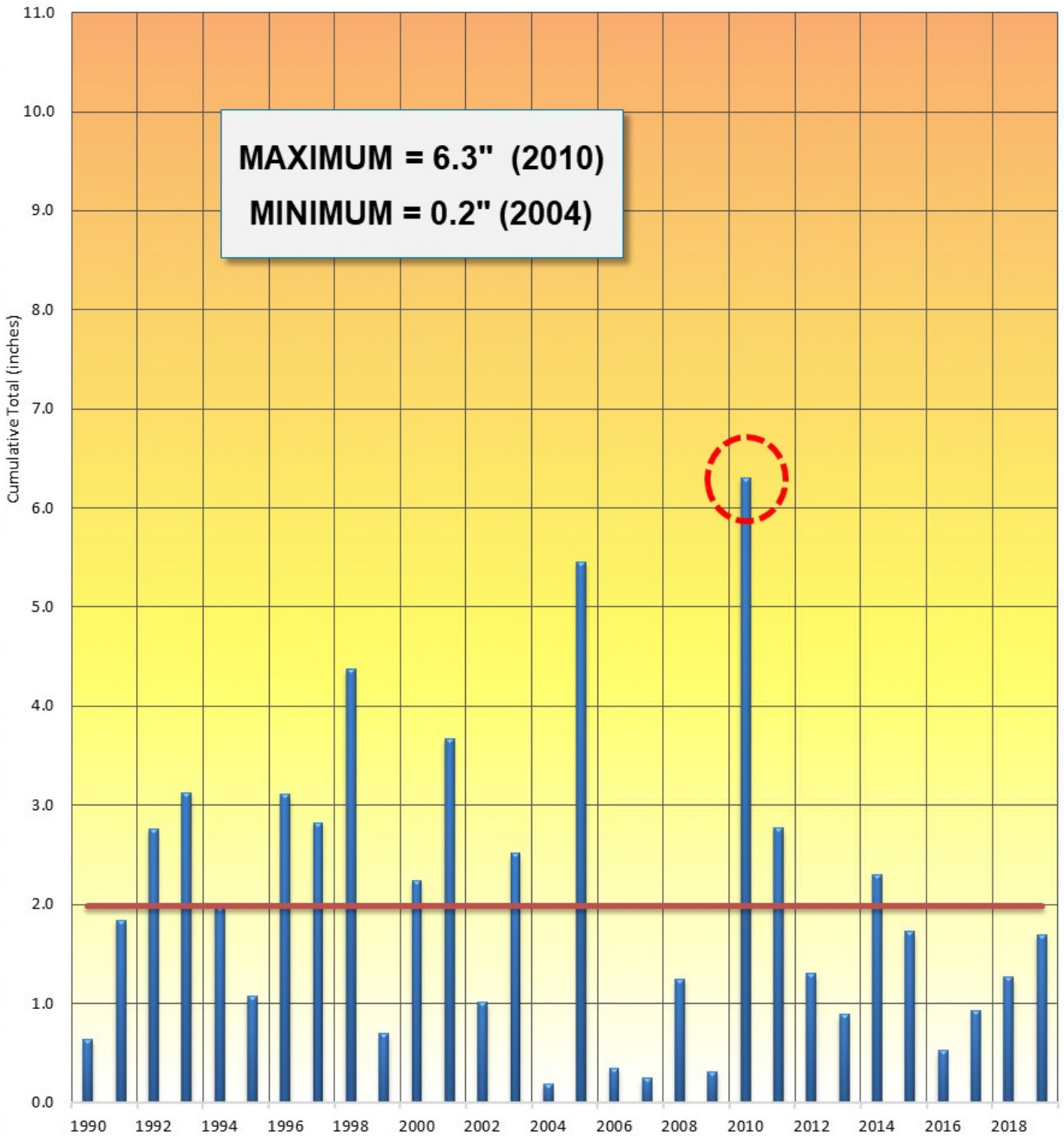


**FIGURE 2  
BCB GAGE RAINFALL  
MONTHLY AVERAGES THROUGH FEBRUARY 2019**



**FIGURE 3**  
**BCB RAINFALL DISTRIBUTION**  
**MARCH 2019**

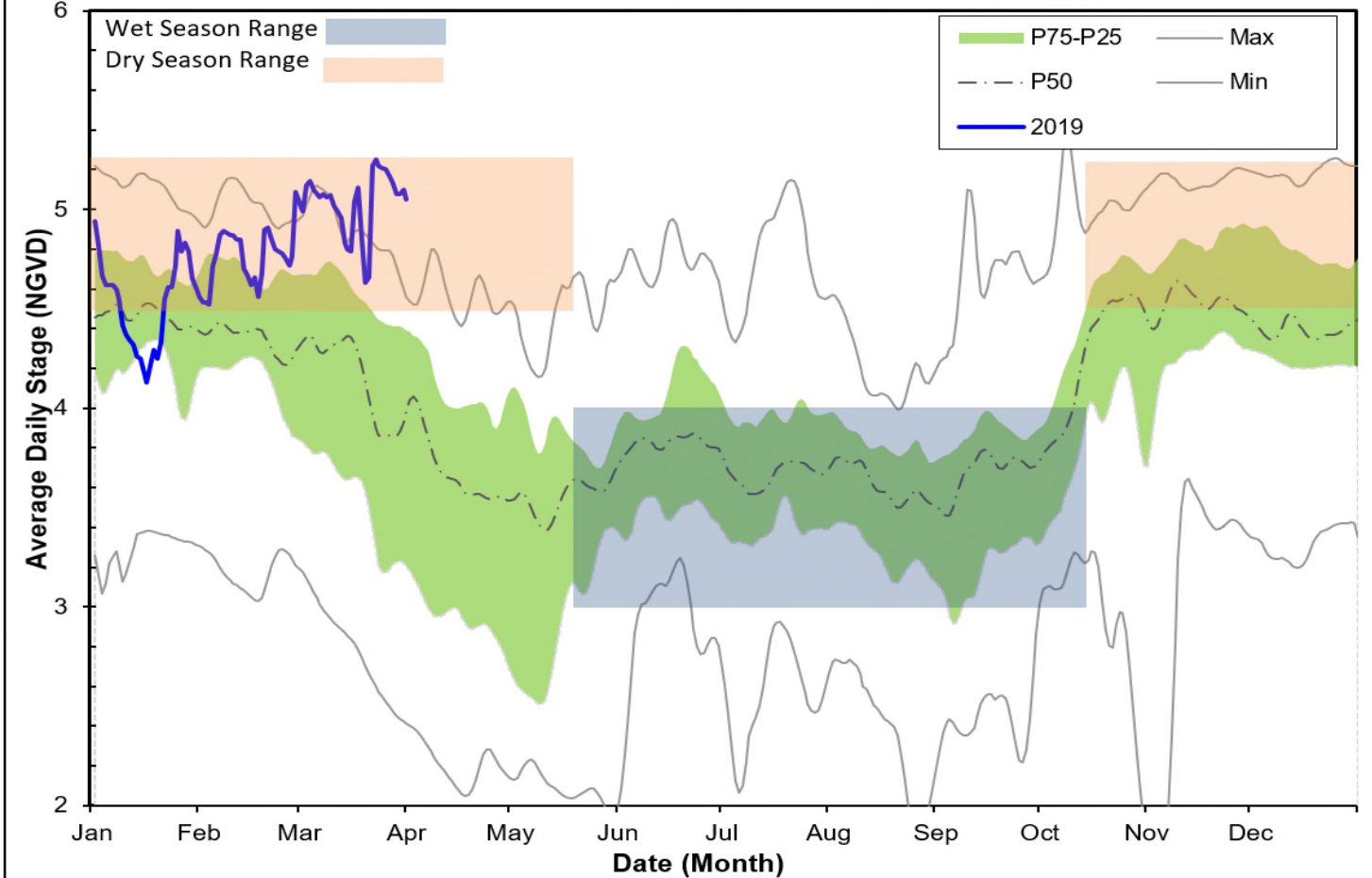
# BCB MARCH RAINFALL Period (1990 ~ 2019)



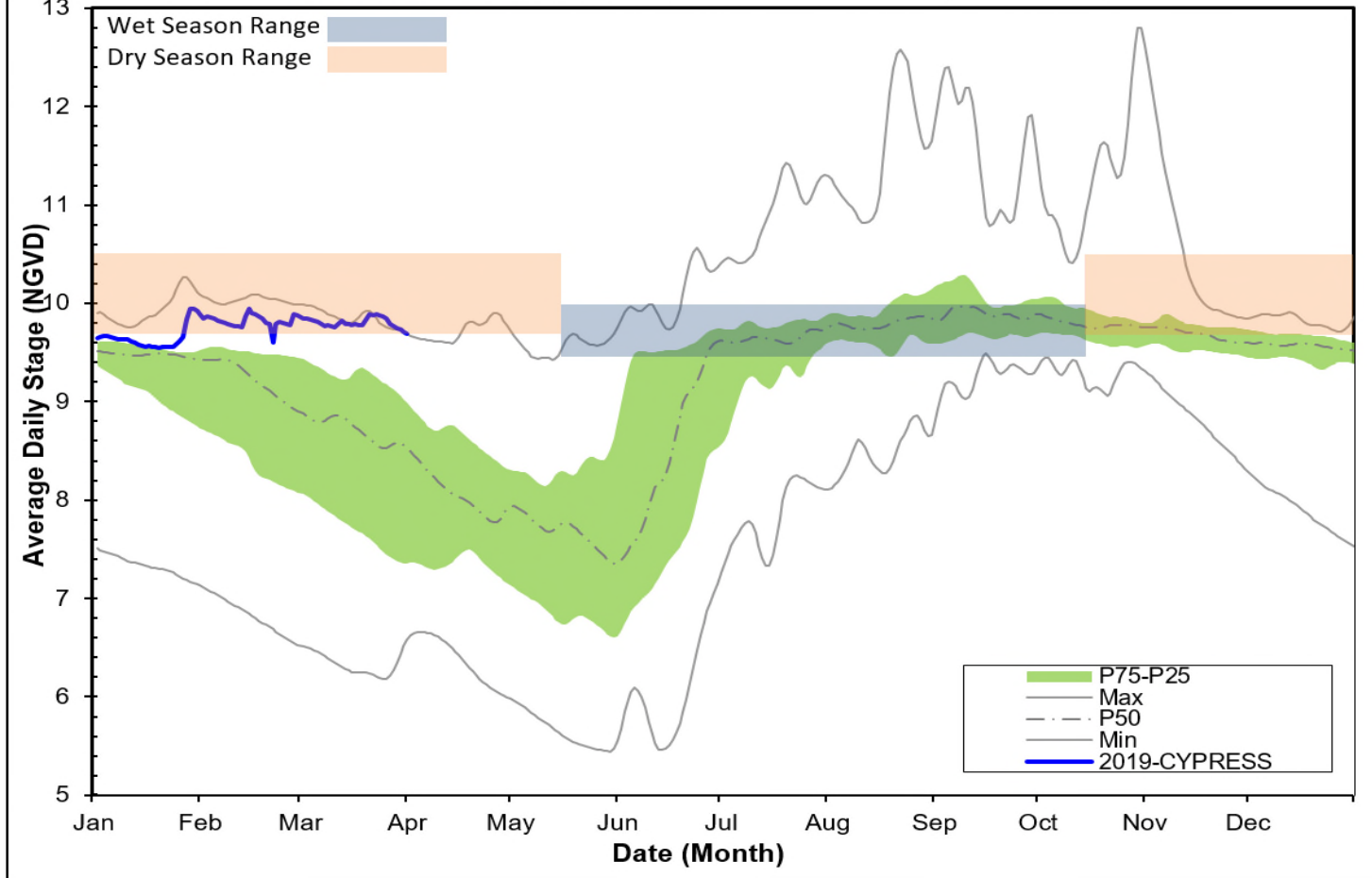
**FIGURE 4**  
**BCB MONTHLY AVERAGE RAINFALL**



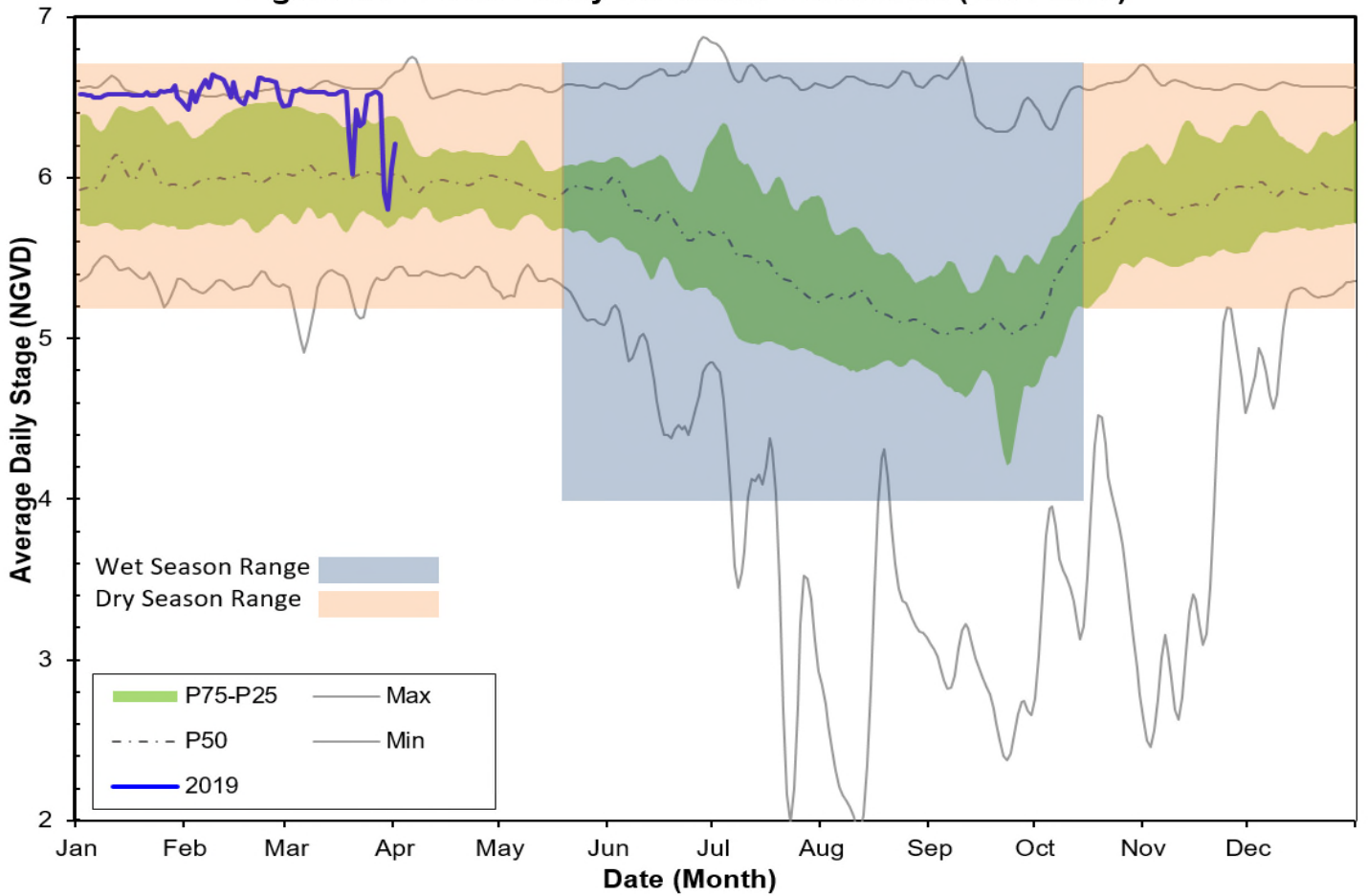
**Figure 5A - GG1 Daily Headwater Percentiles (2004-2018)**



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



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



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

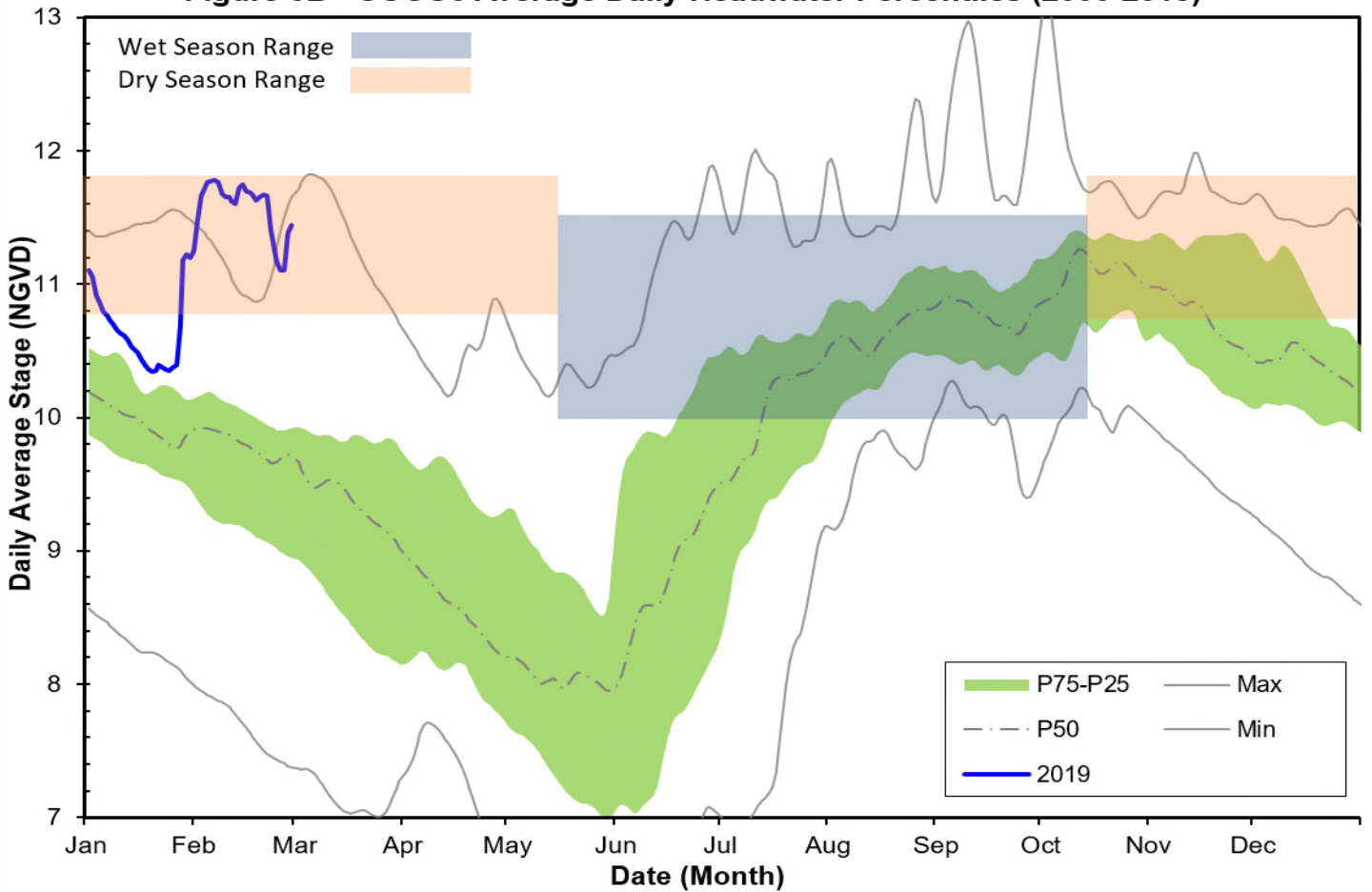


Figure 6C - CORK1 Average Daily Headwater Percentiles (1989-2018)

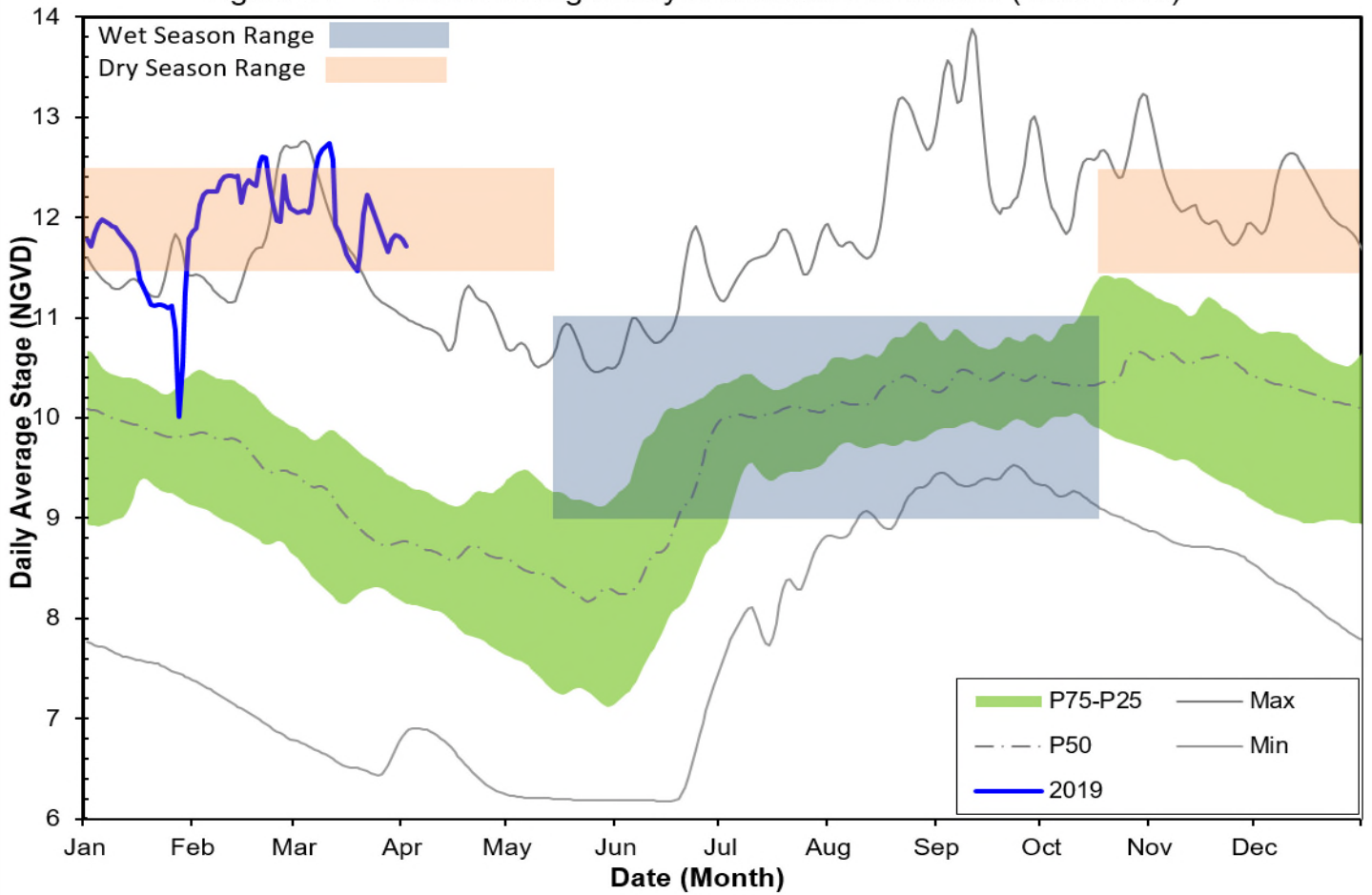
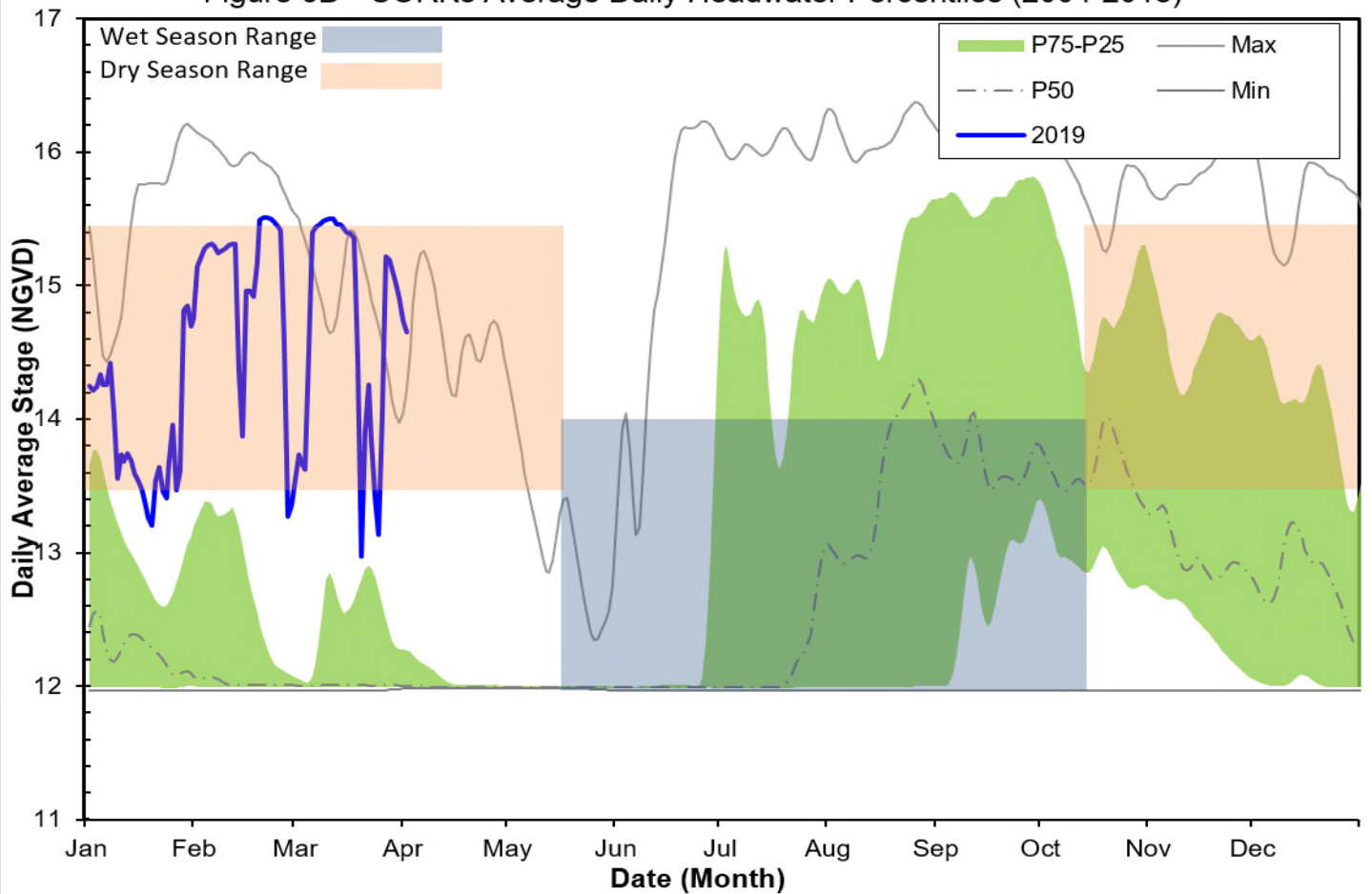
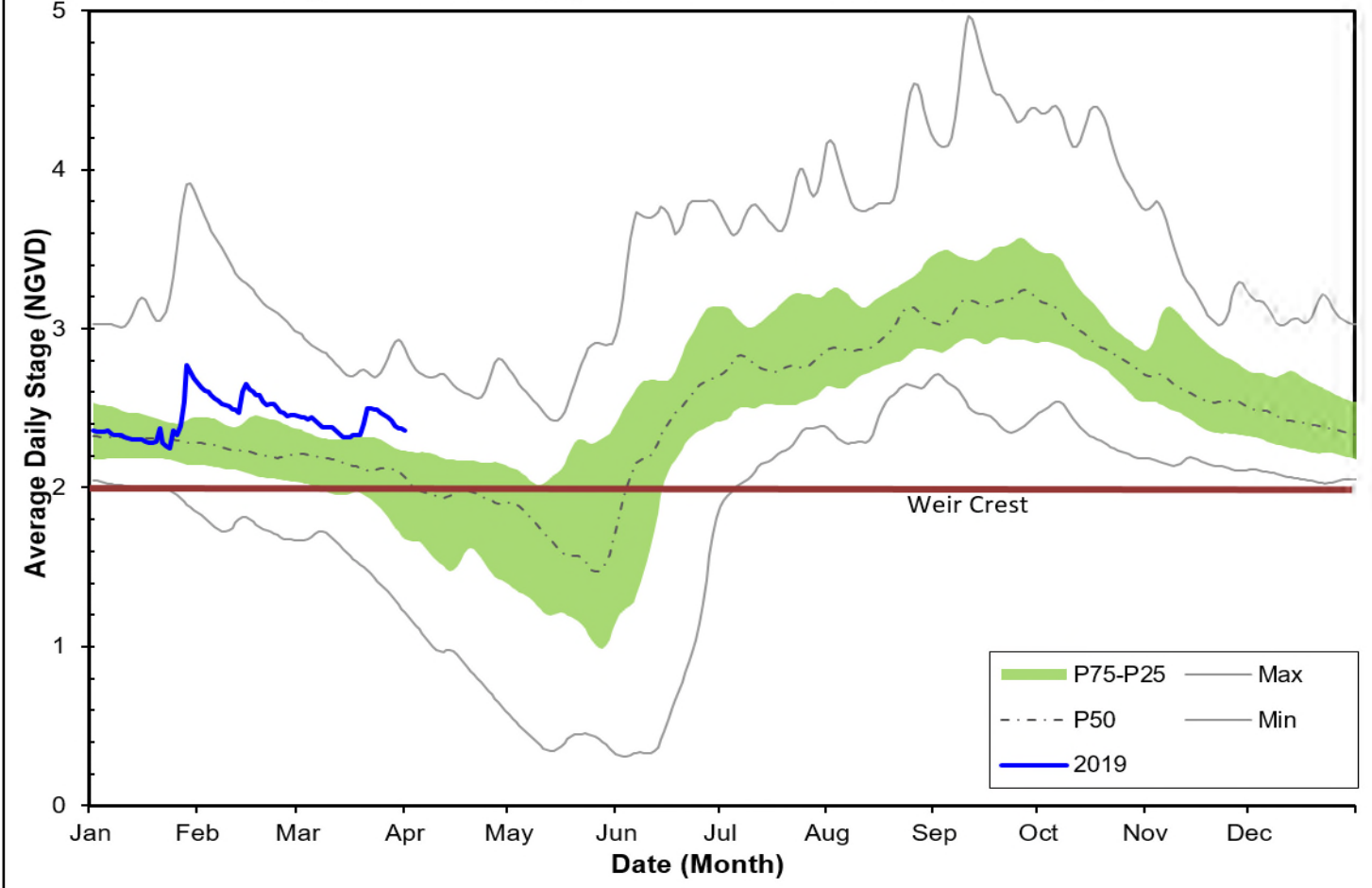


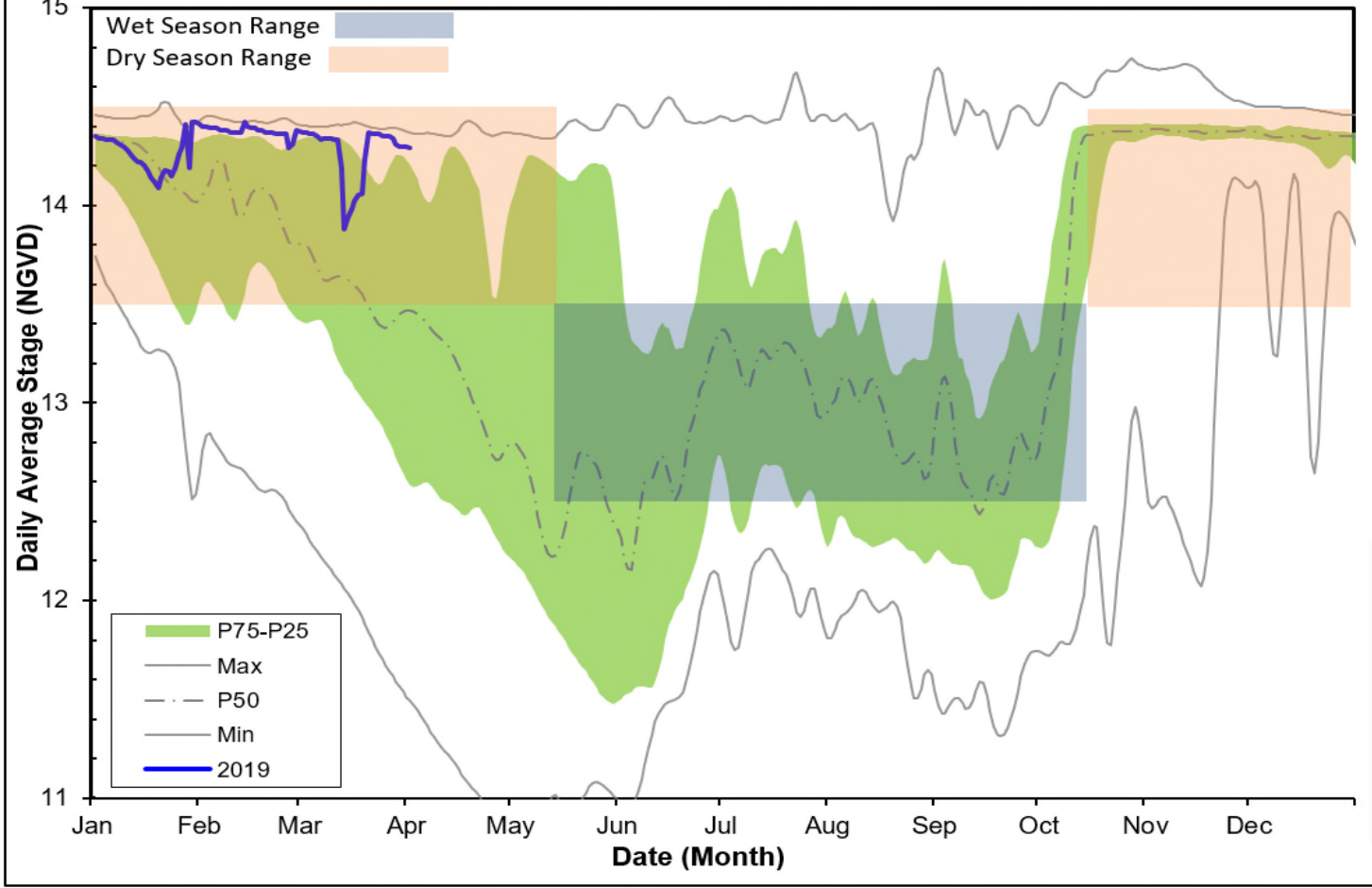
Figure 6D - CORK3 Average Daily Headwater Percentiles (2004-2018)



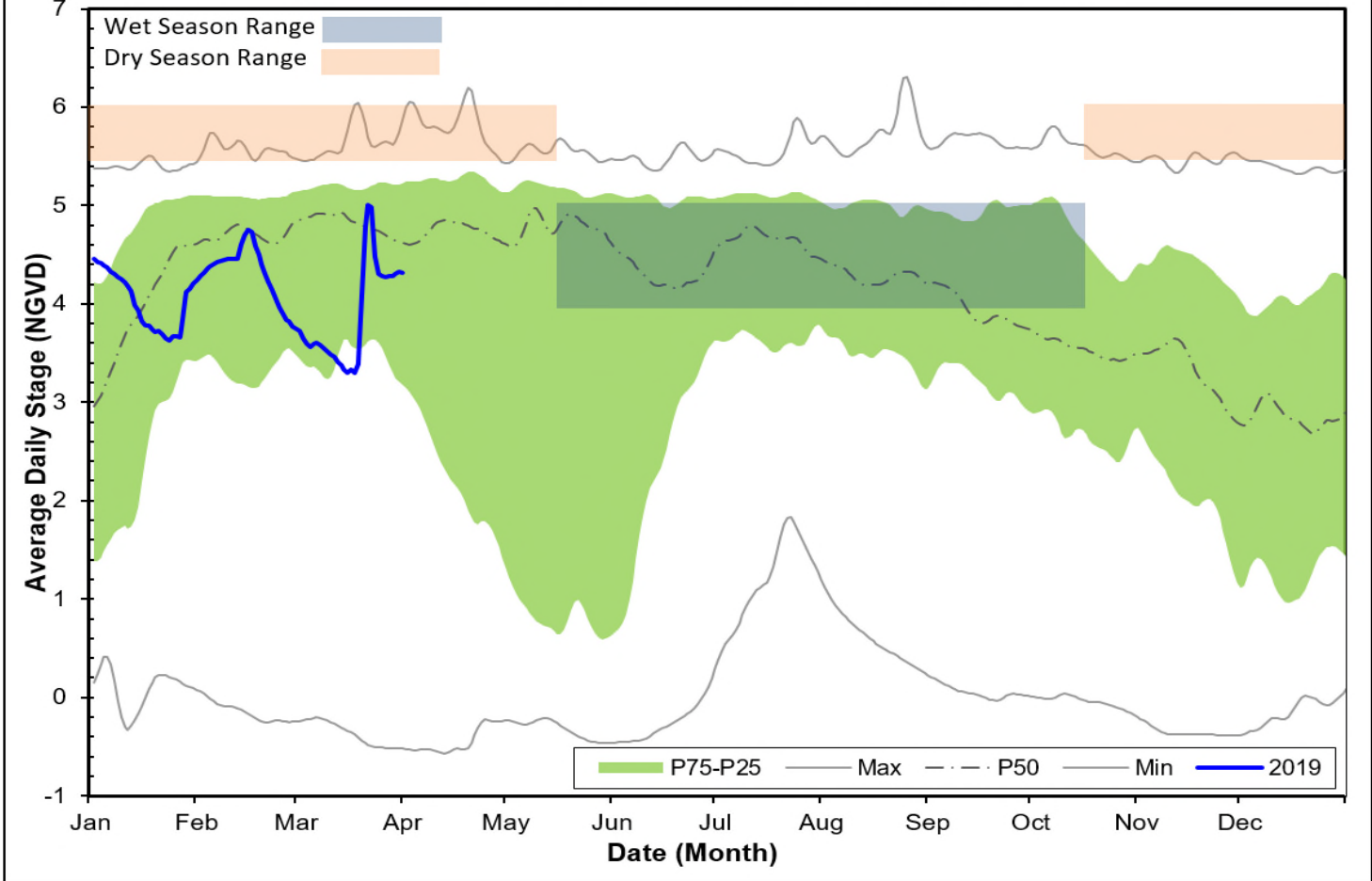
**Figure 7A - FU1 Daily Headwater Percentiles (1984-2018)**



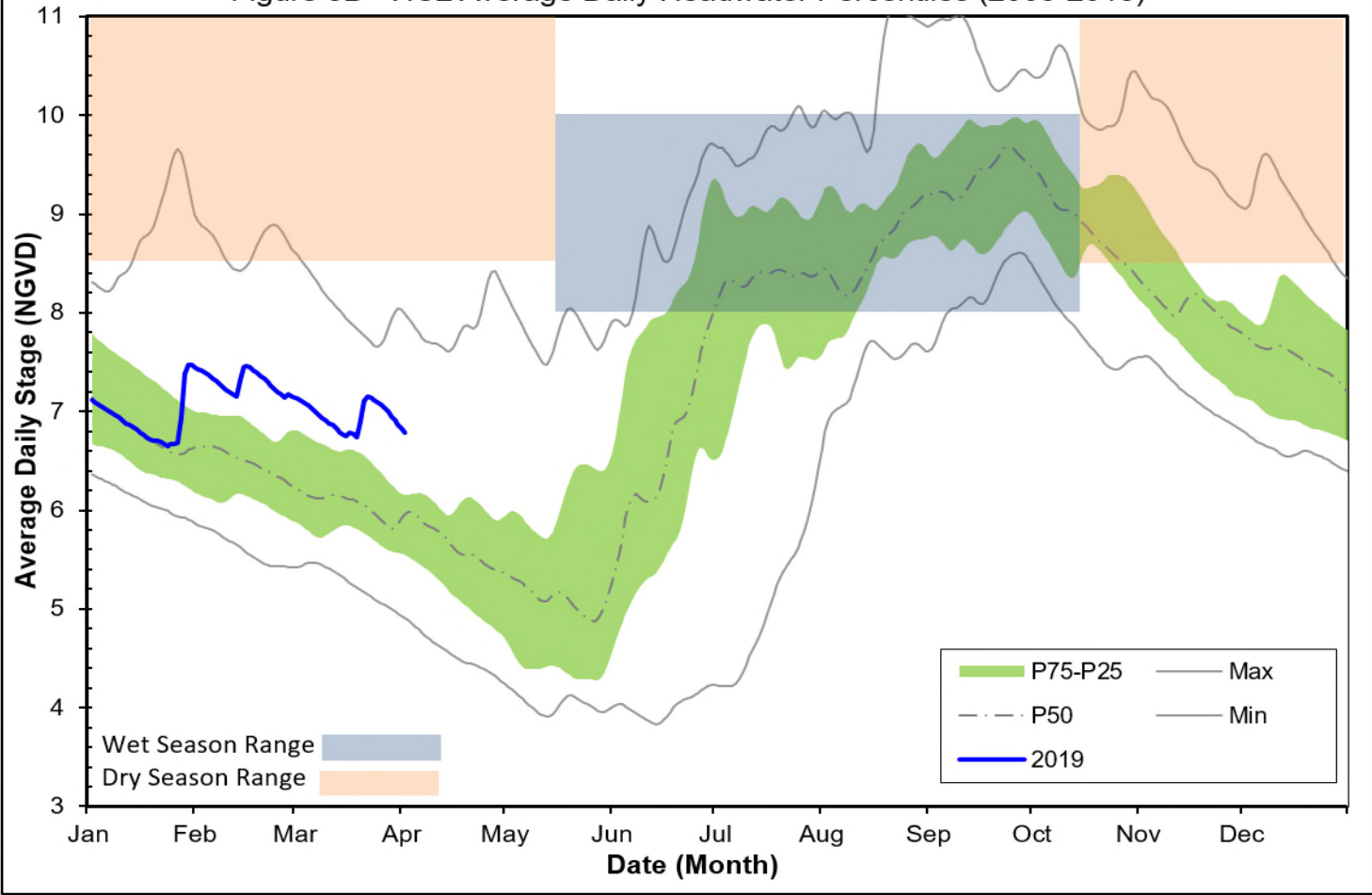
**Figure 7B - FU5 Average Daily Headwater Percentiles (2003-2018)**



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



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



**WATER CONDITIONS SUMMARY - March 2019**

**SELECTED STATIONS for BCB AREA / SW FLORIDA**

| Last Reading Date :                   |                | April 1, 2019            |                             |                |                    |                     |                   |
|---------------------------------------|----------------|--------------------------|-----------------------------|----------------|--------------------|---------------------|-------------------|
| Previous Period Reading Date:         |                | March 3, 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    | -1.85                       | 30.55          | 28.70              | ↓                   | GREEN             |
| C-1004R                               | Naples         | Lower Tamiami Aquifer    | -2.16                       | 3.49           | 1.33               | ↓                   | YELLOW            |
| C-1224                                | Marco Lakes    | Lower Tamiami Aquifer    | 0.07                        | 3.71           | 3.78               | ↑                   | GREEN             |
| L-2194                                | Bonita Springs | Sandstone Aquifer        | -0.94                       | 2.77           | 1.83               | ↓                   | GREEN             |
| L-2195                                | Bonita Springs | Surficial Aquifer System | -1.30                       | 10.85          | 9.55               | ↓                   | GREEN             |
| L-738                                 | Bonita Springs | Lower Tamiami Aquifer    | -2.41                       | 1.61           | -0.80              | ↓                   | GREEN             |

**TABLE 2  
BCB WATER CONDITIONS SUMMARY  
MARCH 2019**

BIG CYPRESS BASIN

MARCH 2019

GROUNDWATER LEVEL DAILY TRENDS COMPARED TO HISTORICAL AVERAGE

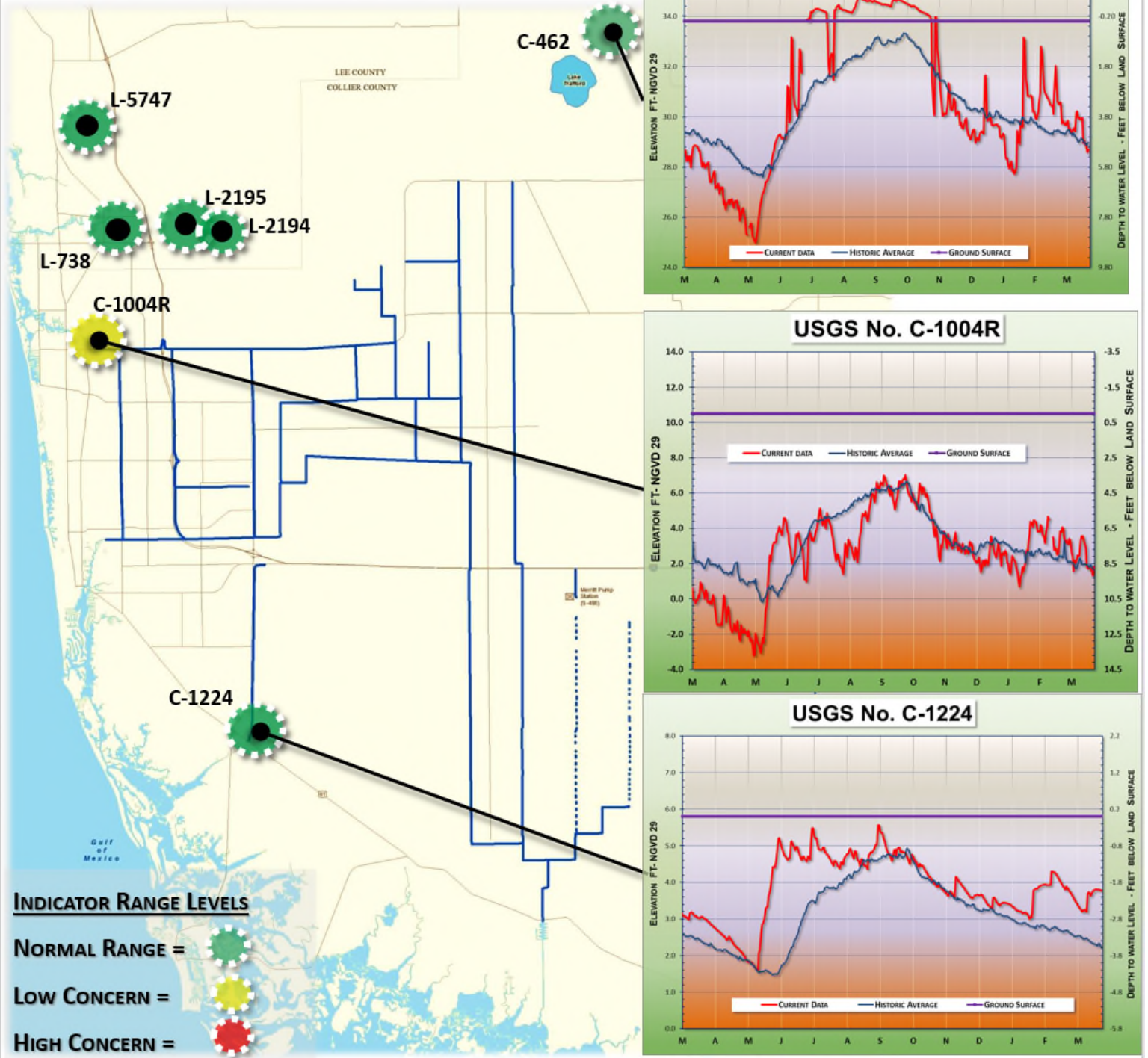


FIGURE 9

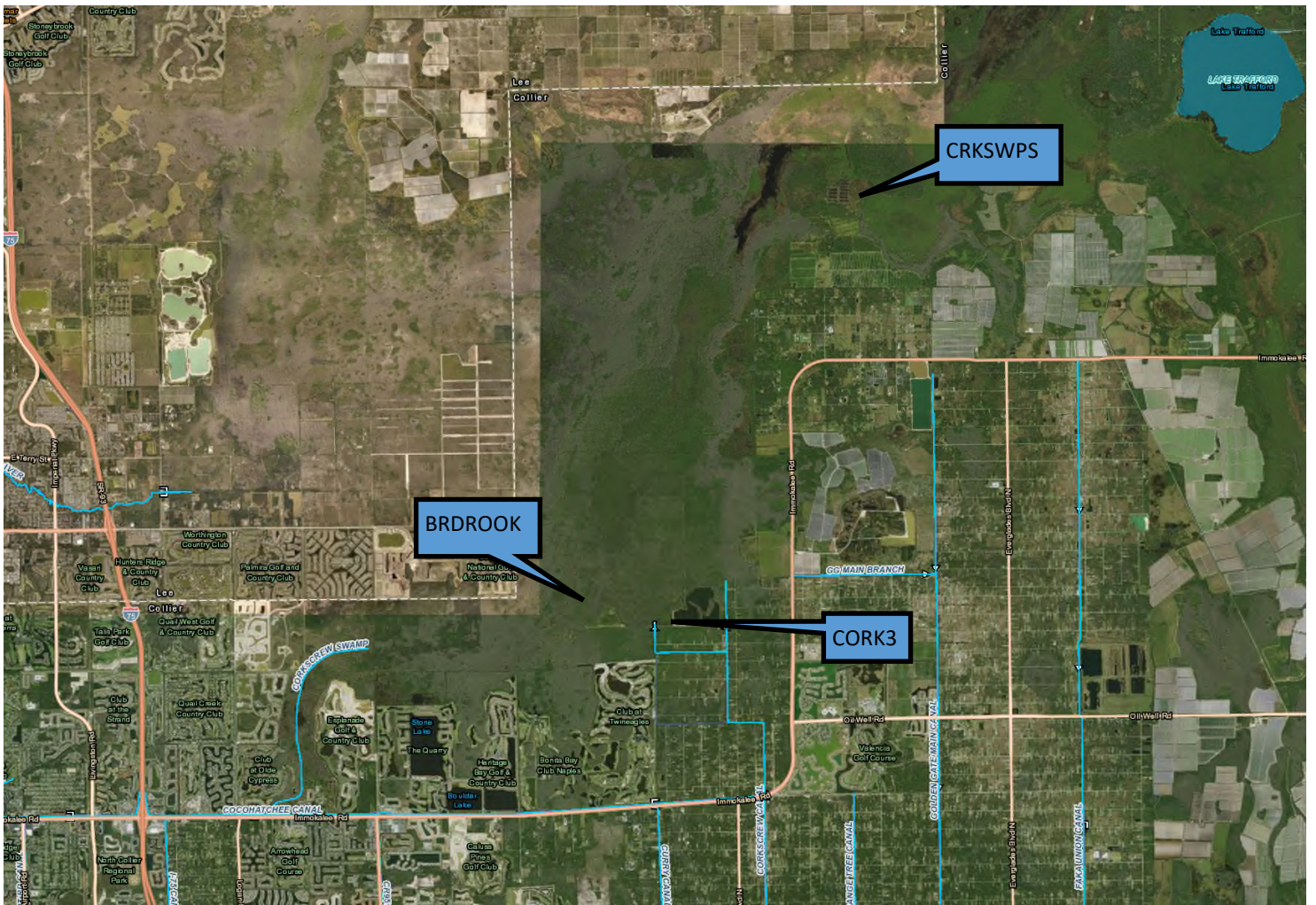


Figure 10 - Corkscrew Average Daily Headwater Percentiles (1984-2018)

