

# Extended Hydrologic Outlook

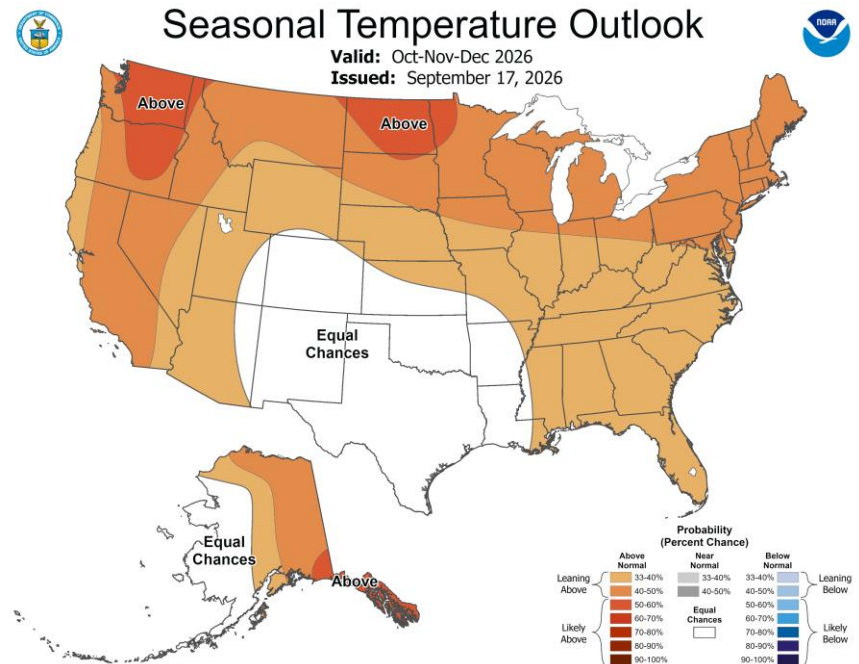
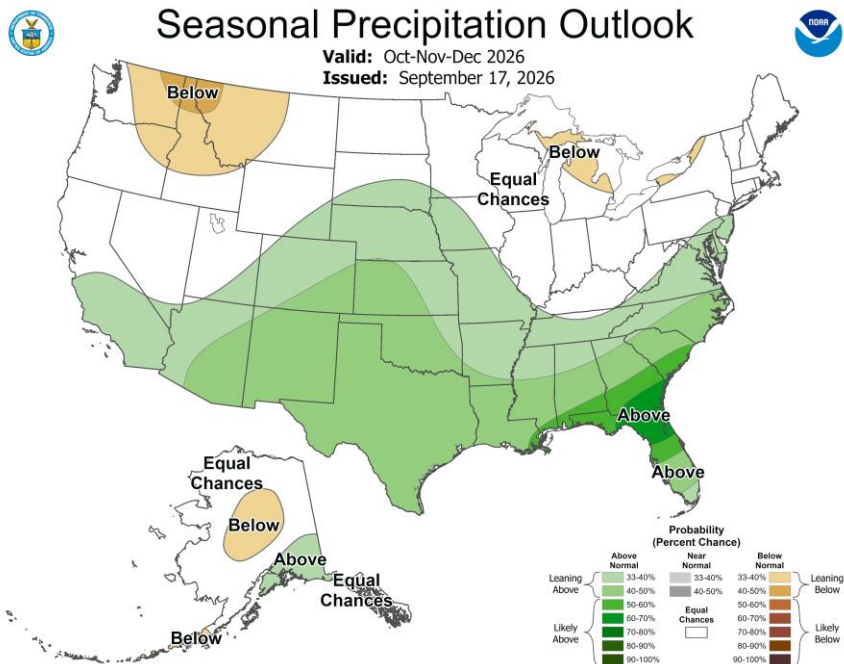
September 21, 2026

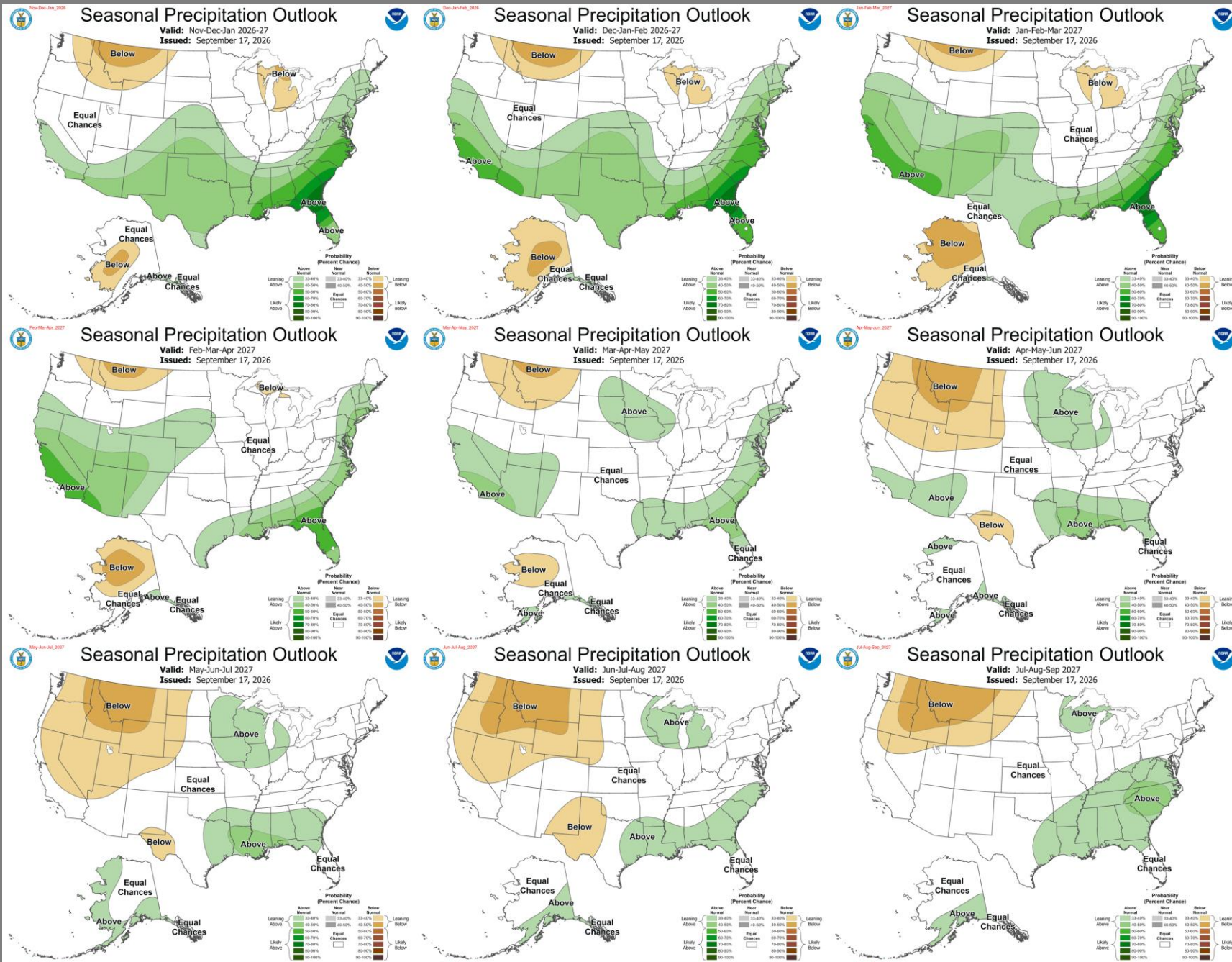
- The Climate Prediction Center (CPC) is forecasting above normal rainfall for October through December.
- El Niño conditions are present and strengthening, with a greater than 90% chance of a very strong event during the fall and winter 2026-27.
- Atlantic Multidecadal Oscillation (AMO) is currently in the warm phase:
  - Average annual inflow to Lake Okeechobee is nearly 50% greater during the warm phase compared to the cold phase.

# U. S. Seasonal Outlooks

September - November 2026

The seasonal outlooks combine the effects of long-term trends, soil moisture, and, when appropriate, ENSO.





# Teleconnections to South Florida

Climate anomalies being related to each other at large distances:

## El Niño Southern Oscillation (ENSO)

- El Niño increases the chances of a wetter-than-normal dry season and decreased tropical activity; La Niña increases the chances of a drier-than-normal dry season and increased tropical activity (both have most influence in south Florida from November through March)

## Pacific Decadal Oscillation (PDO)

- Increases variations in south Florida dry season rainfall, positive leads to more El Niño events, negative leads to more La Niña events
- The current PDO is negative

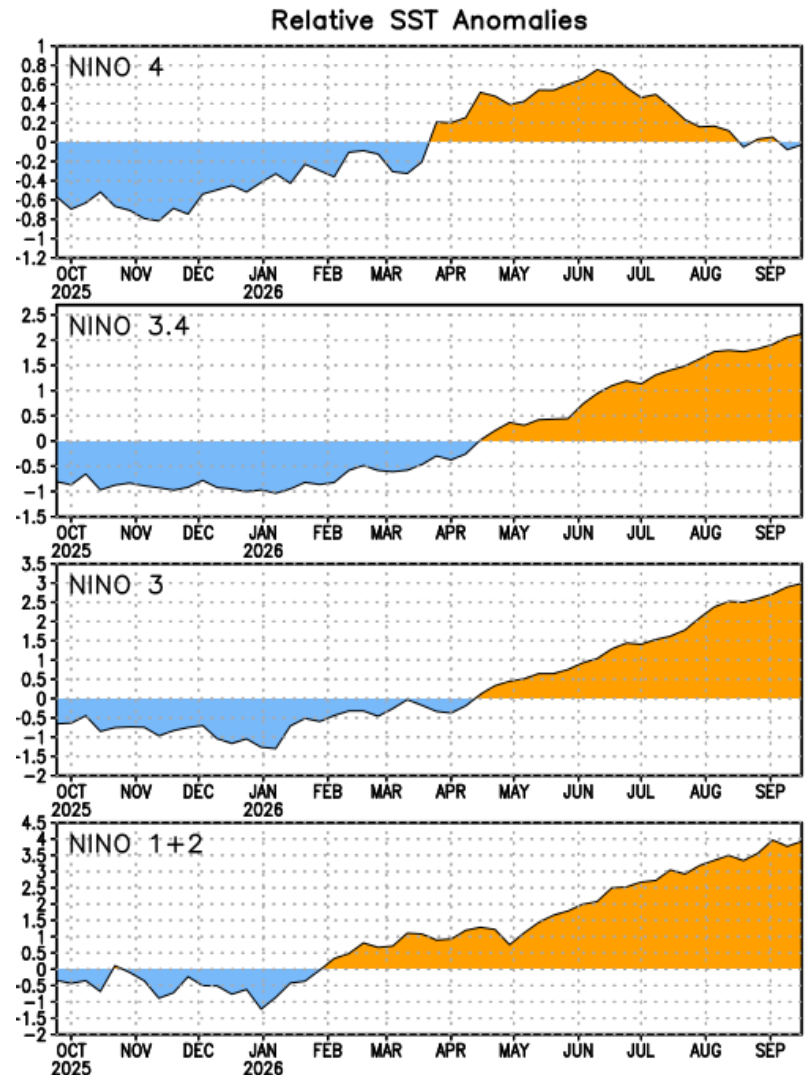
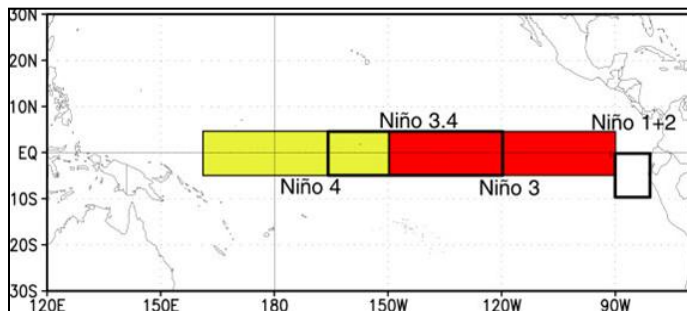
## Atlantic Multidecadal Oscillation (AMO)

- Average annual inflow to Lake Okeechobee is nearly 50% greater during the warm phase compared to the cold phase of the AMO, easterly flow toward south Florida affected by phase
- The AMO is currently in the warm phase

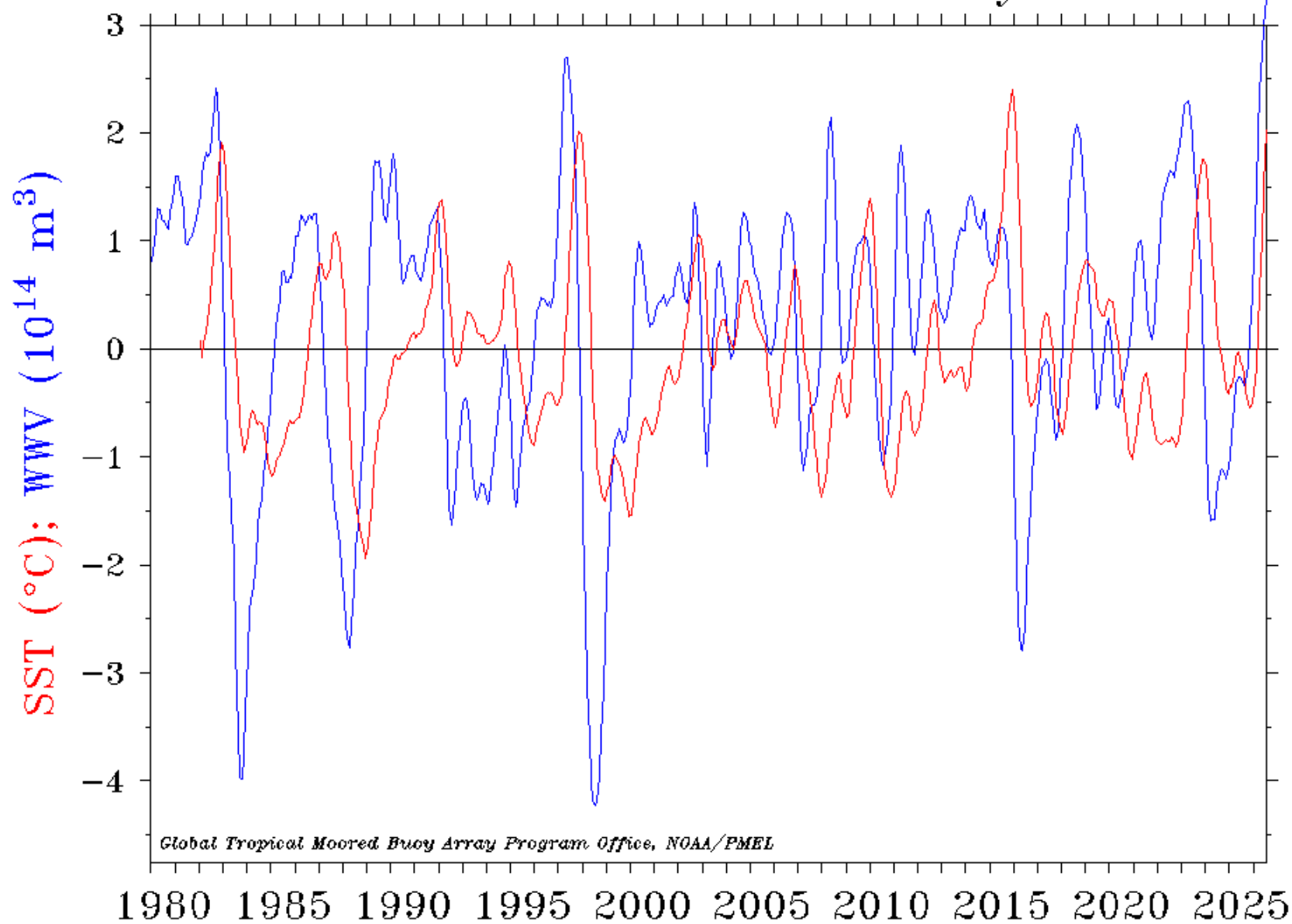
# Niño Region SST Departures (°C) Recent Evolution

The latest weekly SST departures are:

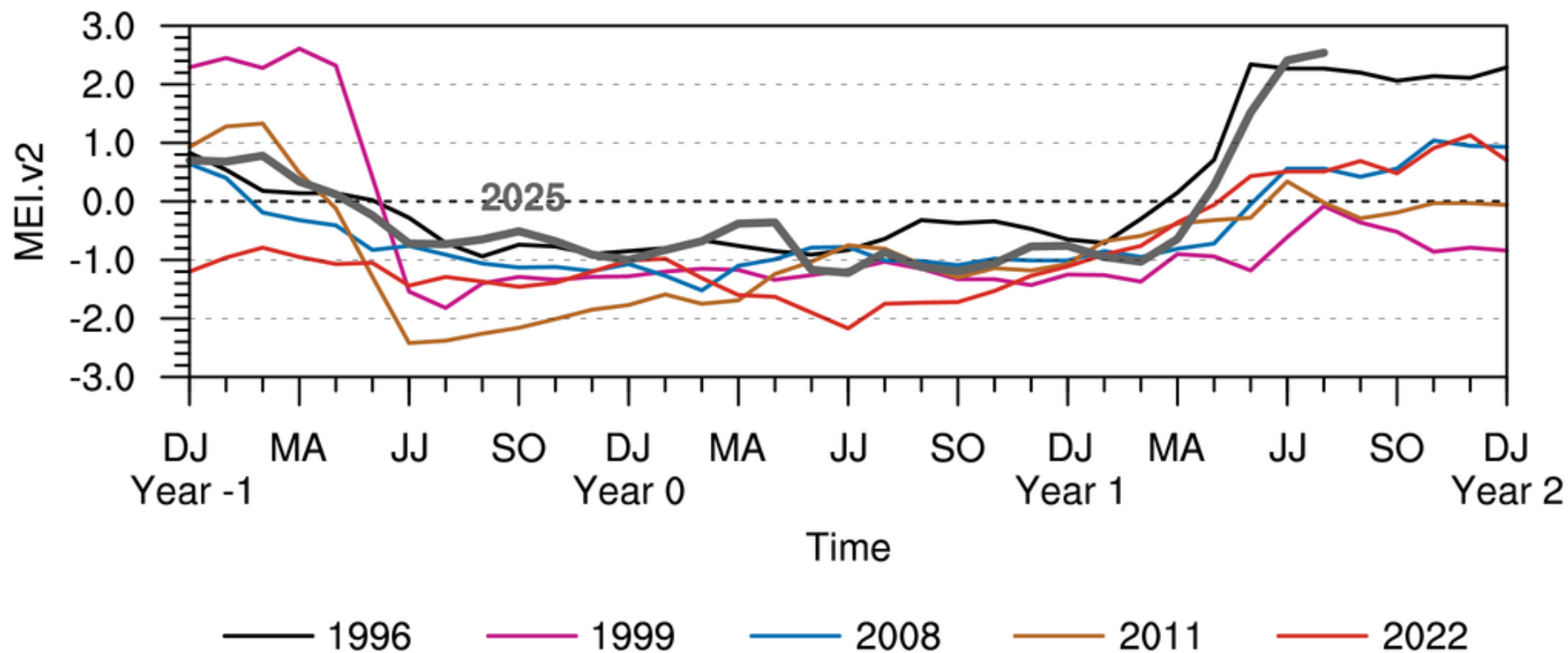
|          |       |
|----------|-------|
| Niño 4   | 0.0°C |
| Niño 3.4 | 2.1°C |
| Niño 3   | 3.0°C |
| Niño 1+2 | 3.9°C |



# Warm Water Volume (5°N–5°S, 120°E–80°W) and NINO 3.4 SST Anomaly



## MEI.v2 Evolution of Current ENSO Event in Historical Context



# 2026 Tropical Outlook

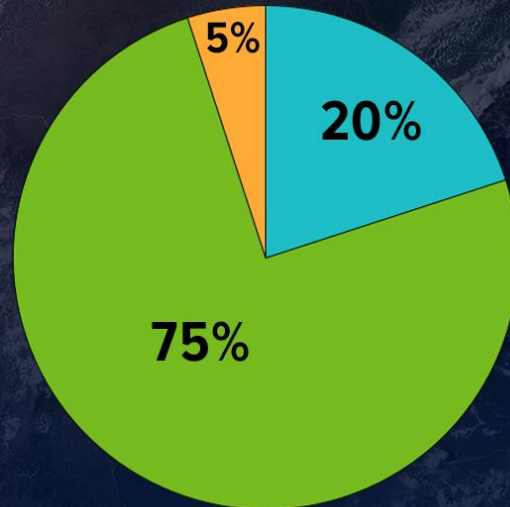




# 2026 Atlantic Hurricane Season Outlook

August 6 update

## Season Probability



 Above Normal  Near Normal  Below Normal

## Named Storms

7 - 13

## Hurricanes

2 - 6

## Major Hurricanes

0 - 2

Be prepared: visit [hurricanes.gov](https://hurricanes.gov) and follow NOAA's @NWS and @NHC\_Atlantic on X.

August 2026

### ATLANTIC BASIN SEASONAL HURRICANE FORECAST FOR 2026

| Forecast Parameter and 1991-2020<br>Average (in parentheses) | Issue Date<br>9 April<br>2026 | Issue Date<br>10 June<br>2026 | Issue Date<br>8 July<br>2026 | Issue Date<br>5 August<br>2026 | Observed Thru<br>4 August<br>2026 | Remainder of<br>Season<br>Forecast |
|--------------------------------------------------------------|-------------------------------|-------------------------------|------------------------------|--------------------------------|-----------------------------------|------------------------------------|
| Named Storms (NS) (14.4)                                     | 13                            | 11                            | 9                            | 9                              | 2                                 | 7                                  |
| Named Storm Days (NSD) (69.4)                                | 55                            | 45                            | 35                           | 35                             | 3.75                              | 31.25                              |
| Hurricanes (H) (7.2)                                         | 6                             | 5                             | 4                            | 4                              | 0                                 | 4                                  |
| Hurricane Days (HD) (27.0)                                   | 20                            | 15                            | 12                           | 12                             | 0                                 | 12                                 |
| Major Hurricanes (MH) (3.2)                                  | 2                             | 2                             | 1                            | 1                              | 0                                 | 1                                  |
| Major Hurricane Days (MHD) (7.4)                             | 5                             | 4                             | 2                            | 2                              | 0                                 | 2                                  |
| Accumulated Cyclone Energy (ACE) (123)                       | 90                            | 70                            | 50                           | 50                             | 3                                 | 47                                 |
| ACE West of 60°W (73)                                        | 50                            | 35                            | 25                           | 25                             | 3                                 | 22                                 |
| Net Tropical Cyclone Activity (NTC) (135%)                   | 100                           | 80                            | 60                           | 60                             | 5                                 | 55                                 |

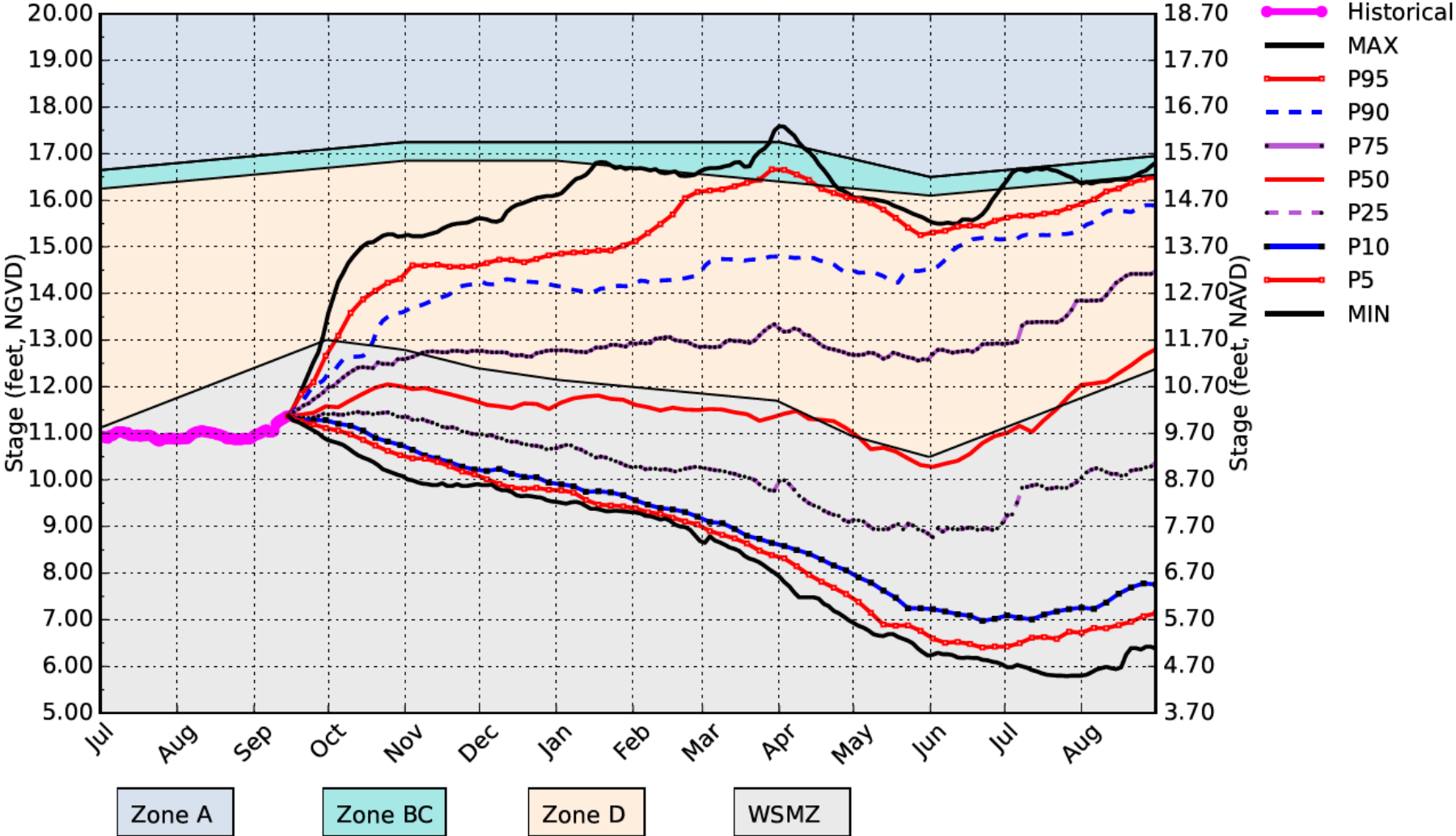
- Well below-normal activity
- High potential for a moderate/strong El Niño for the peak of hurricane season (increased levels of tropical Atlantic vertical wind shear)
- Sea surface temperatures across the Caribbean and tropical Atlantic are slightly above their long-term averages

## September 15, 2026 DPA Assumptions

- The September 15, 2026 Dynamic Position Analysis (DPA) simulation is based on historical climatic conditions spanning the period 1965-2016. This DPA posting is made with the South Florida Water Management Model (SFWMM) v7.3.6.
- The September 15, 2026 DPA resets the initial stages for Lake Okeechobee (LOK) and the Water Conservation Areas (WCAs) on September 1<sup>st</sup> of each year of the DPA simulation and conditions the simulation to real time data during August to achieve real time stages on September 15<sup>th</sup> for LOK and WCAs.
- The Lake Okeechobee operations follow the Lake Okeechobee System Operating Manual (LOSOM). Modeling assumptions are consistent with modeling performed for LOSOM Supplemental Environmental Impact Statement (SEIS).
- LOK Temporary Forward Pump operations will be in place, whenever necessary, to improve water supply deliveries from LOK under low LOK stages.
- STA surface area values are modified to reflect current flow ways under operation. STA depths are maintained to a minimum of 6 inches using Lake Okeechobee releases.
- Lake Okeechobee Water Shortage Management (LOWSM) is included in the simulation which reflects the currently approved 40E-21 and 40E-22 water shortage rules.
- The SFWMM attempts to make 350 cfs deliveries to the Caloosahatchee estuary while under water shortage management, this results in most low flow days realizing the full 350 cfs while some days are limited due to Lake Okeechobee backflow occurring on the same day. While further investigation is taking place, this simulation provides consistent deliveries on most days when the estuary is under 350 cfs.

# Lake Okeechobee SFWMM September 15 2026 Position Analysis

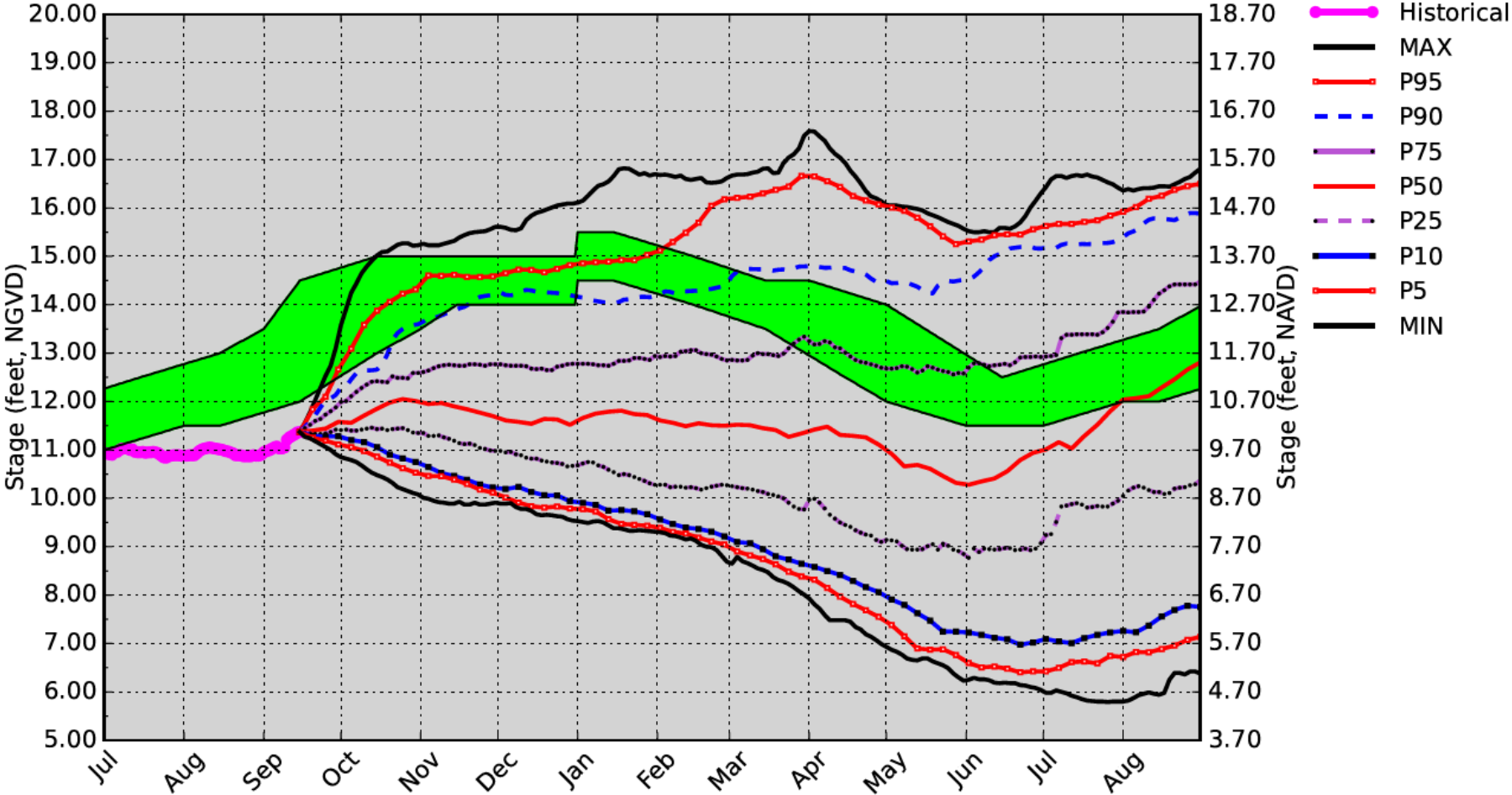
Percentiles PA



(See Assumptions on the Operational Planning Website)

# Lake Okeechobee SFWMM September 15 2026 Position Analysis

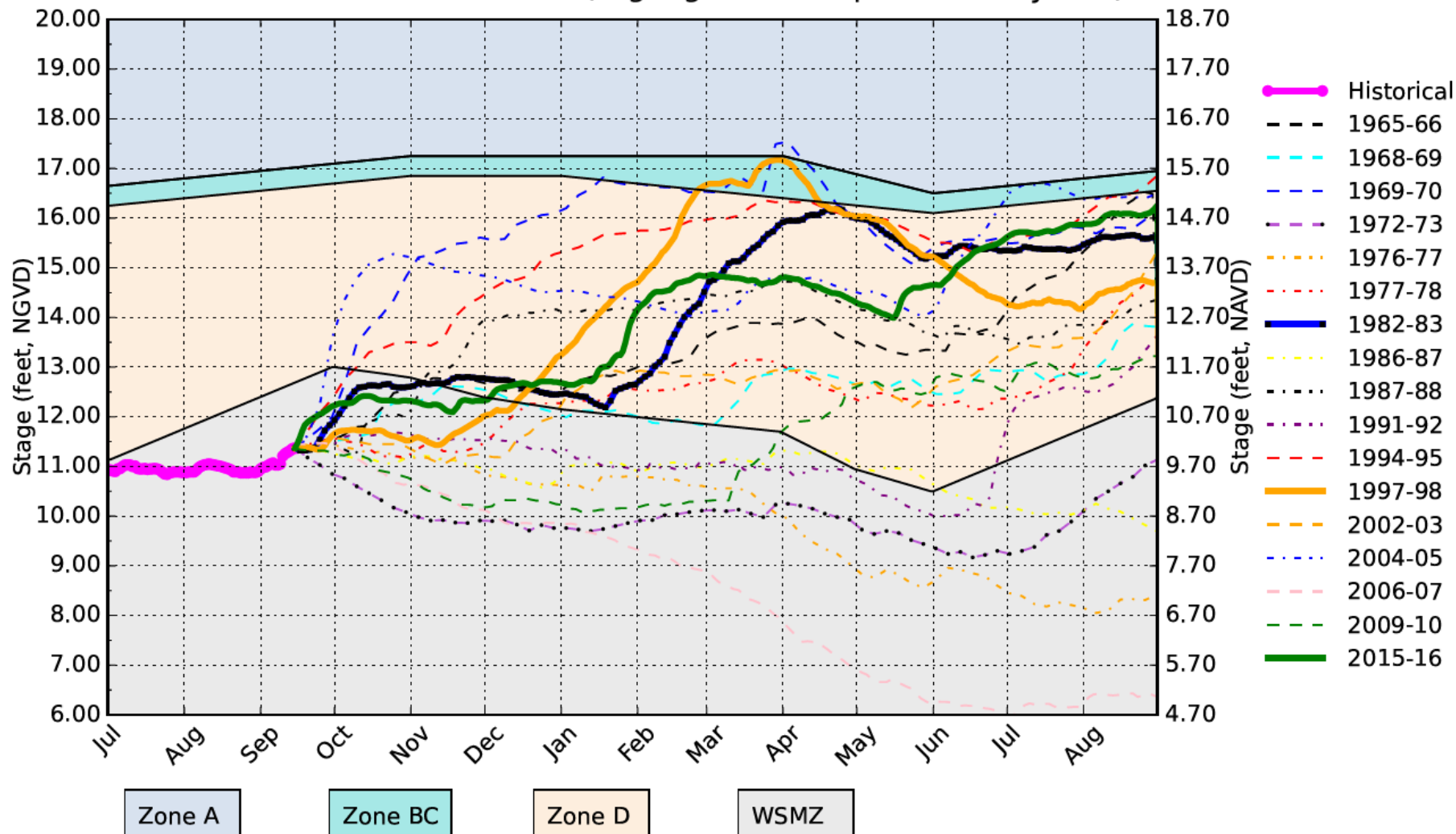
Percentiles PA with Ecological Envelopes



(See Assumptions on the Operational Planning Website)

# Lake Okeechobee SFWMM September 15 2026 Position Analysis

All El Nino Years Plot PA (Highlights are super El Nino years)

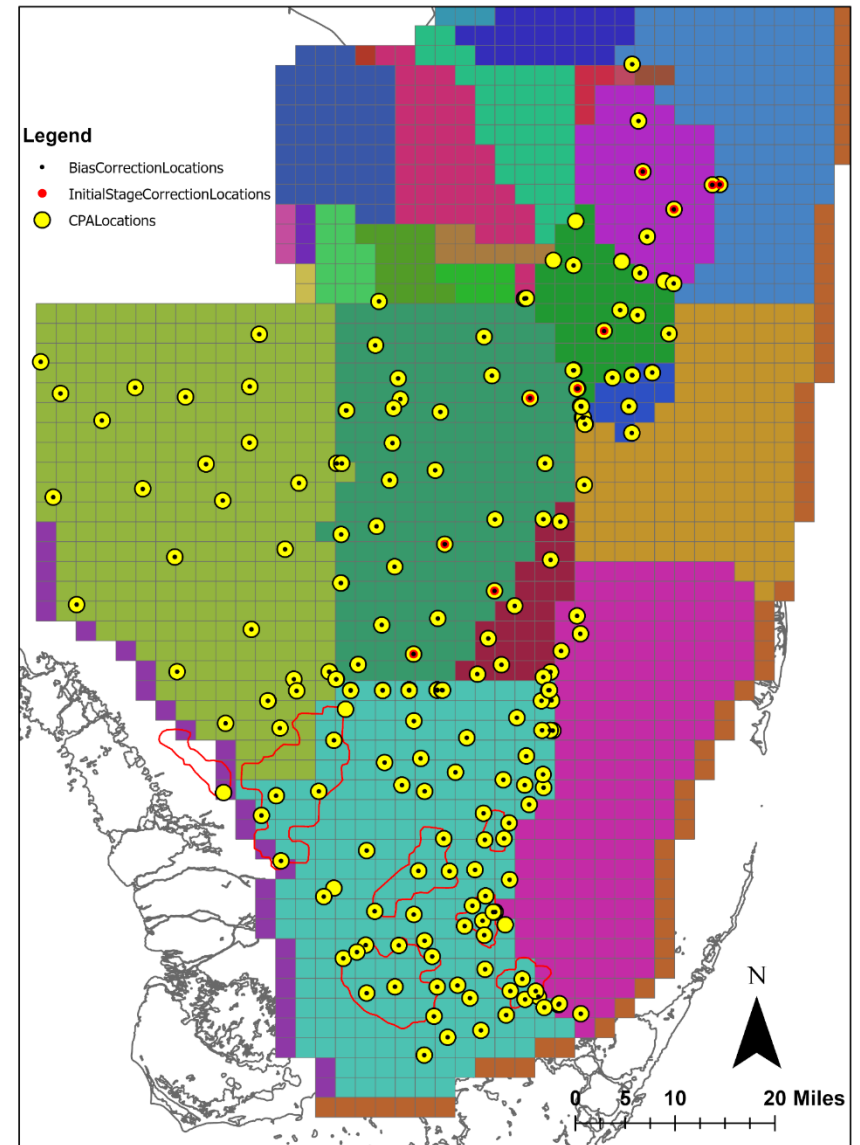


(See Assumptions on the Operational Planning Website)

# Conditional Position Analysis Overview

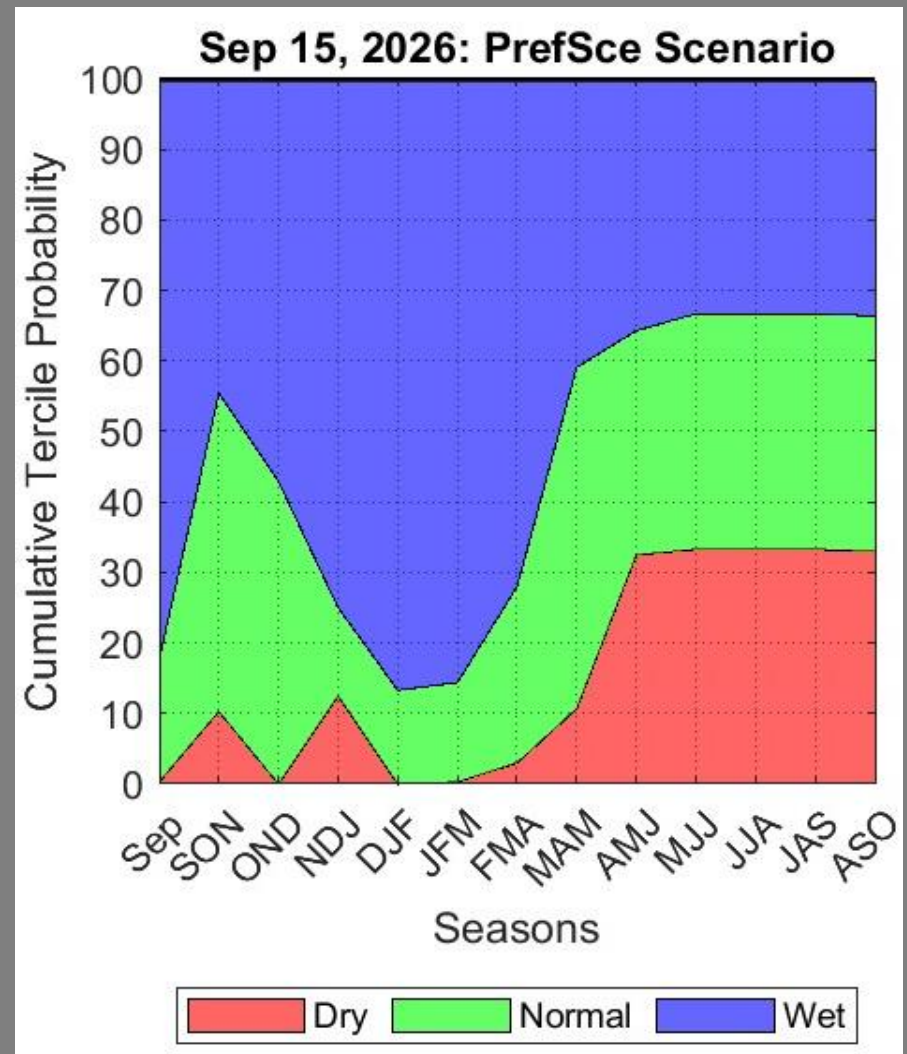
- CPA is a stochastic framework that transforms stages obtained from Dynamic Position Analysis (DPA) based on forecasted rainfall conditions over the next twelve months (Ali, 2016).
- CPA depends on DPA - DPA stage outputs are used as inputs to CPA. DPA uses a physically based model (SFWMM) to forecast stages progression over 1 year from the currently observed stages using 52-years of historical rainfall.
- 3 rainfall outlook scenarios (climatological, CPC, and Preferred Scenario) are used to compare potential stage outlooks.
- CPA is implemented for 200+ locations in the Everglades including Lake Okeechobee.

Conditional Position Analysis (CPA) Gage Locations

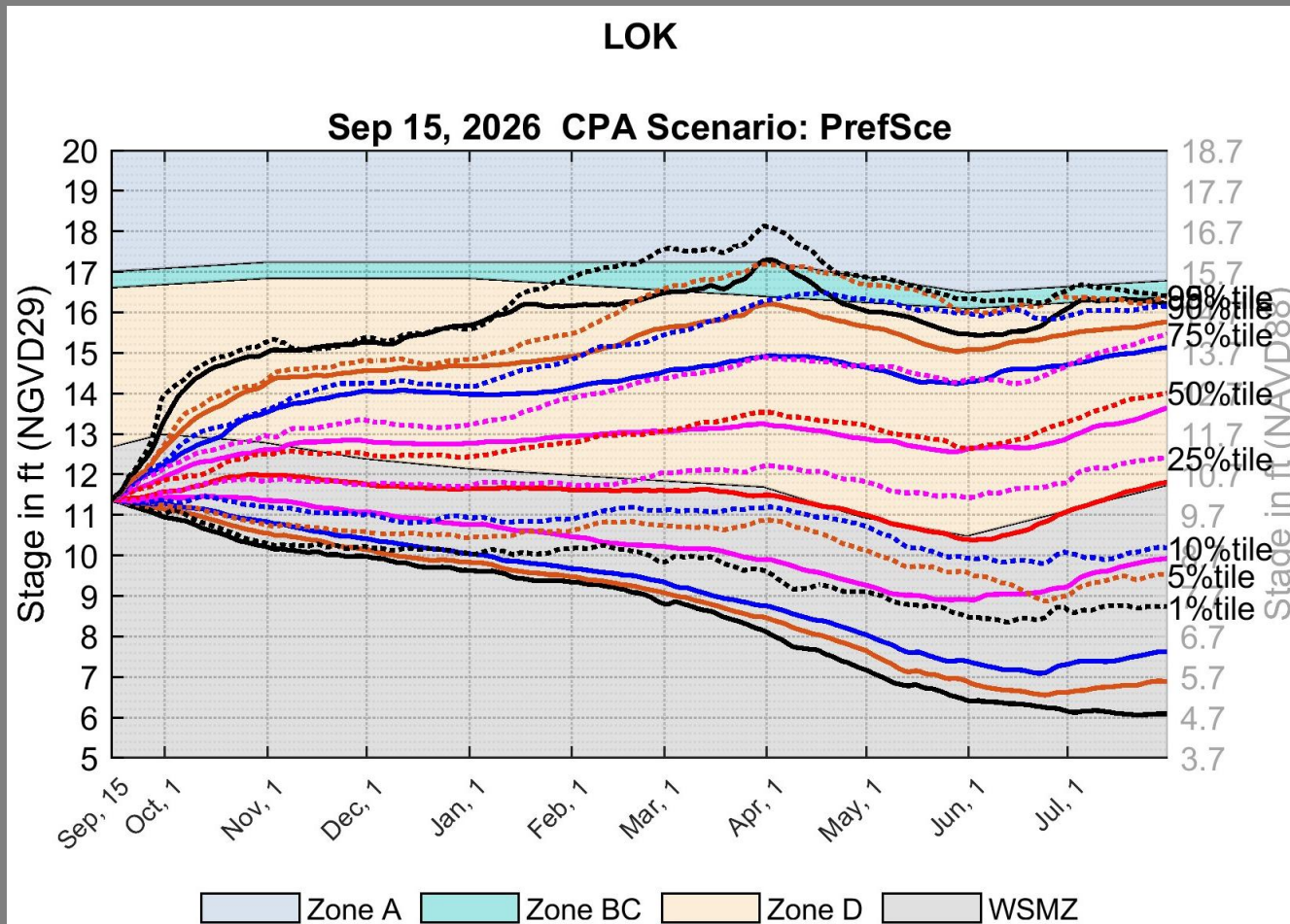


# September 15, 2026 CPA: Preferred Rainfall Scenario

Seasonal rainfall probabilities are calculated based on historical data and projected Relative Oceanic Nino-3.4 Index (RONI) published by the CPC. Seasonal tercile probabilities of the remaining days of the first season are estimated from the average of RONI published by the CPC and QPF produced by WMD, WPC, ECMWF HRES, and 100 ECMWF ensembles, in combination with historical rainfall data during 1991–2020. The remaining days of first month's tercile probabilities are derived only from the QPF estimates generated by WMD, WPC, ECMWF HRES, and 100 ECMWF ensembles, in combination with historical rainfall data during 1991–2020.



Lake Okeechobee – The CPA implementation shows all percentile lines shift upward by about 0.06 to 0.52 feet relative to the corresponding DPA percentile lines at the beginning of the dry season on November 1, 2026. Under the Preferred Scenario (PrefSce), the median (50th percentile), 75th, and 25th percentile traces project stages of 12.49 feet NGVD29 (11.19 feet NAVD88), 12.94 feet NGVD29 (11.64 feet NAVD88), and 11.84 feet NGVD29 (10.54 feet NAVD88), respectively, at the start of the dry season in November 2026.



Solid lines → Climatological Scenario/DPA

Dotted lines → CPA Scenario: PrefSce