Extended Hydrologic Outlook
September 8, 2025

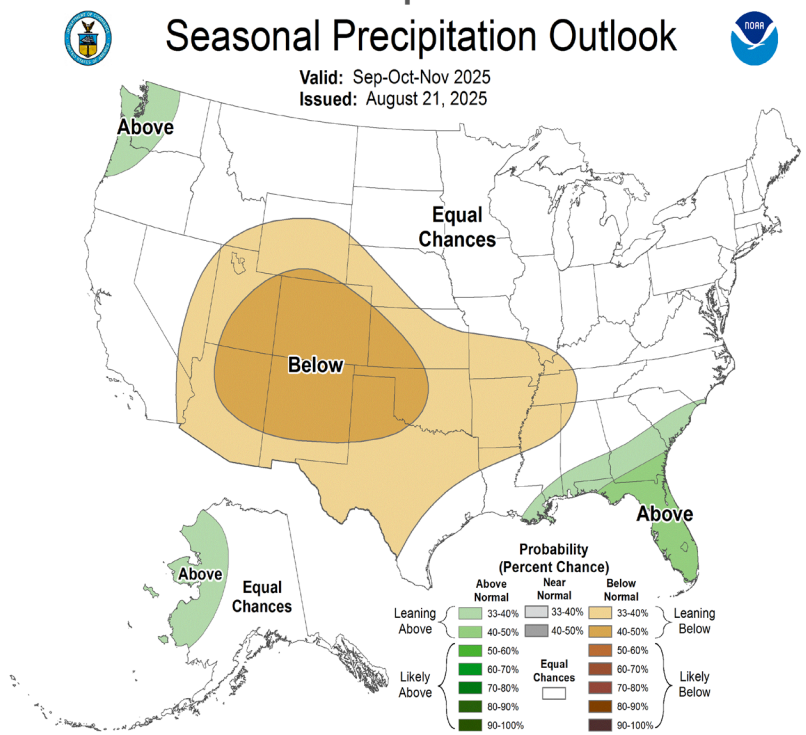
- The Climate Prediction Center (CPC) is forecasting above normal rainfall for September through November.
- ENSO-neutral is most likely through the late summer 2025 (56% chance in August-October). Thereafter, a brief period of La Niña conditions is favored in the fall and early winter 2025-26 before reverting to ENSO-neutral.
- 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

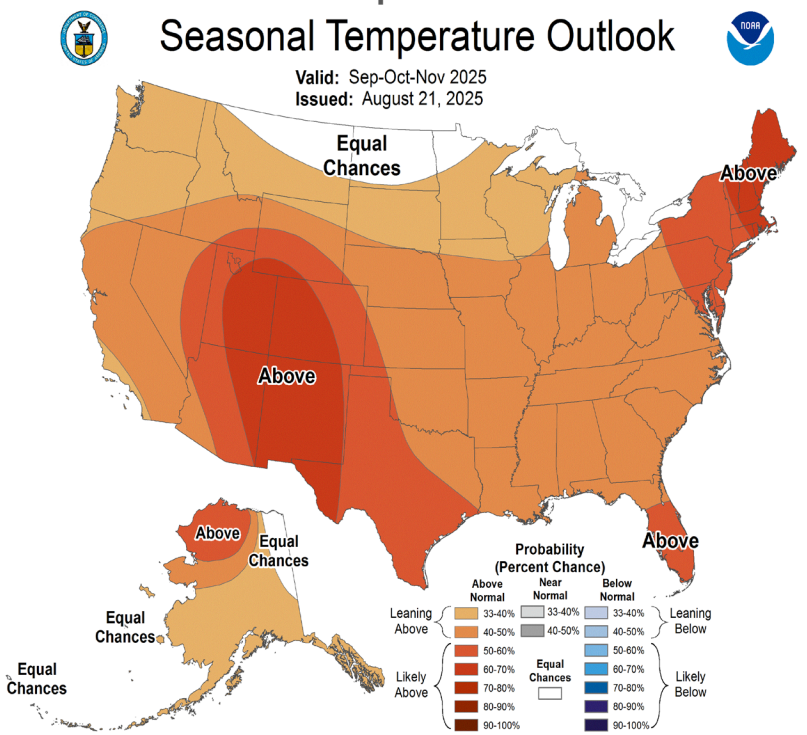
September-November 2025

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

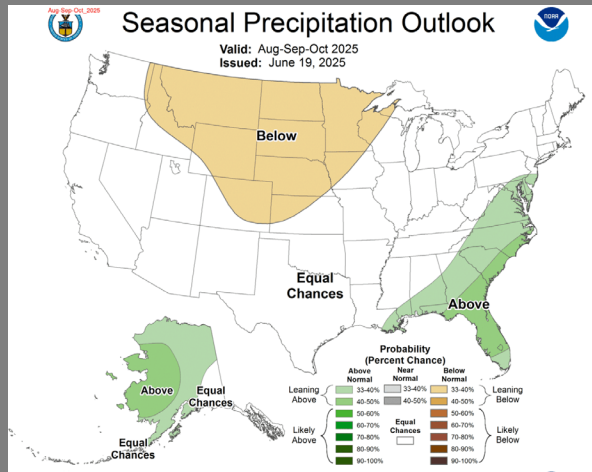
Precipitation

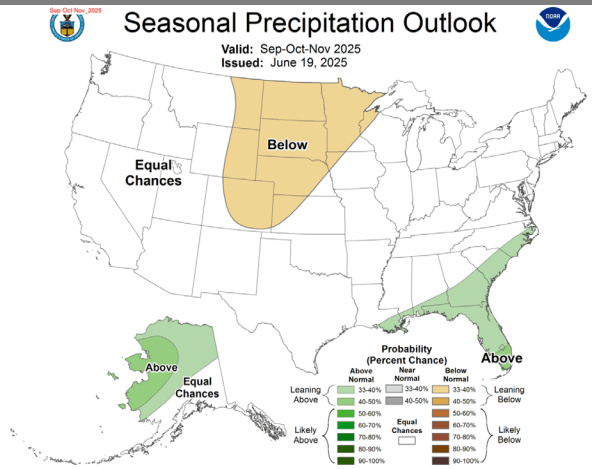


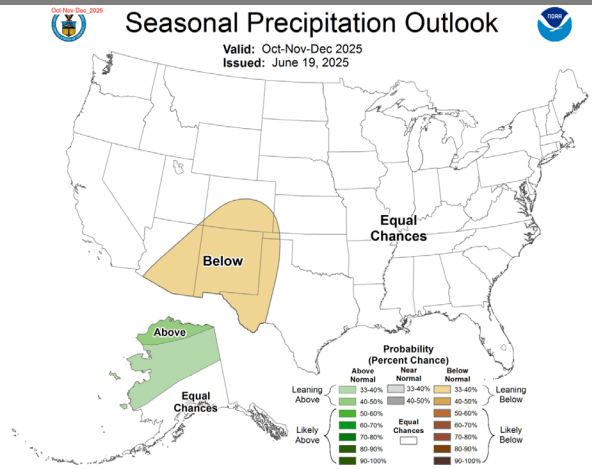
Temperatur

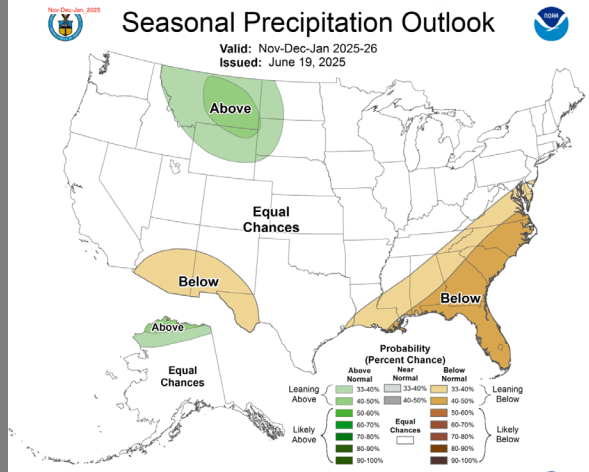


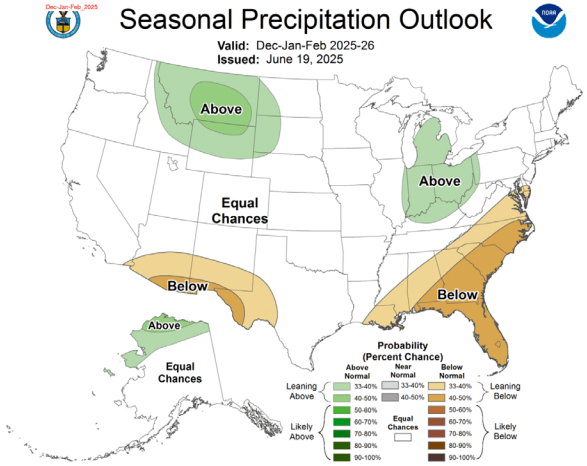
Prepared by: Climate Prediction Center/NCEP

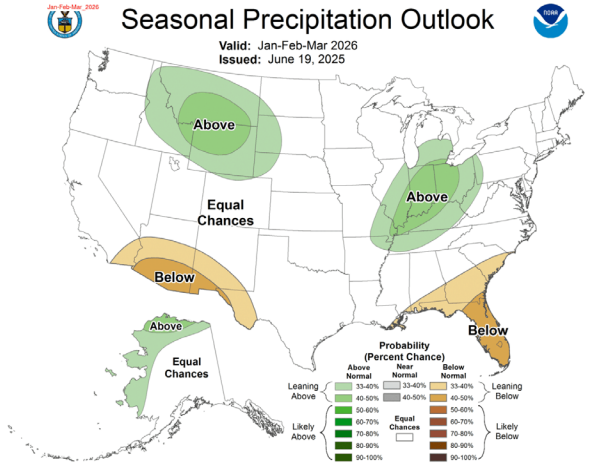


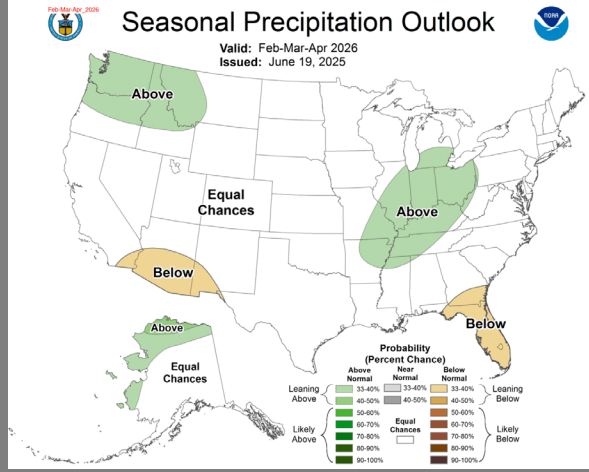


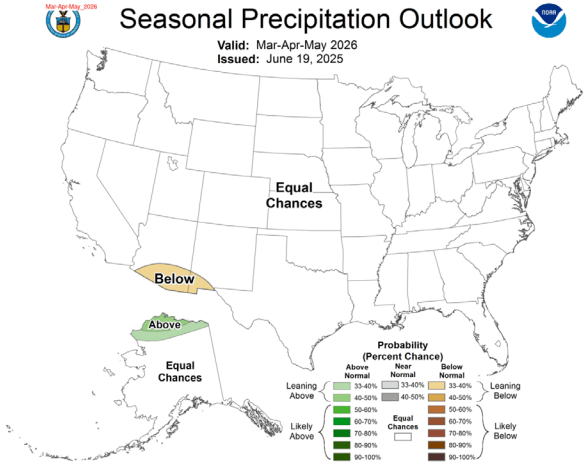


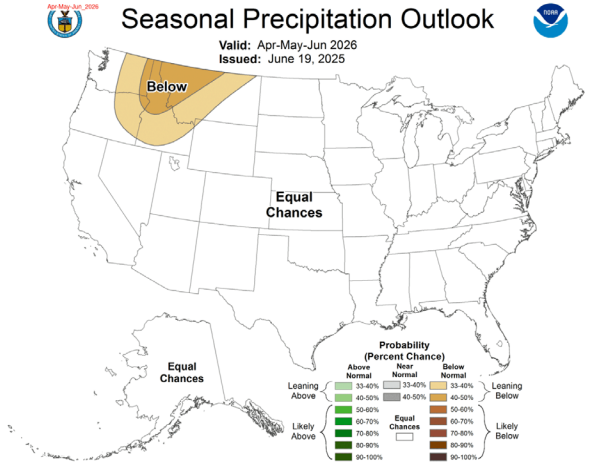












Teleconnections to South Florida

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

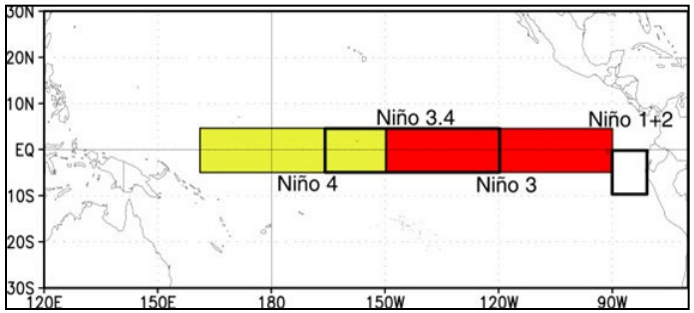
Atlantic Multidecadal Oscillation (AMO)

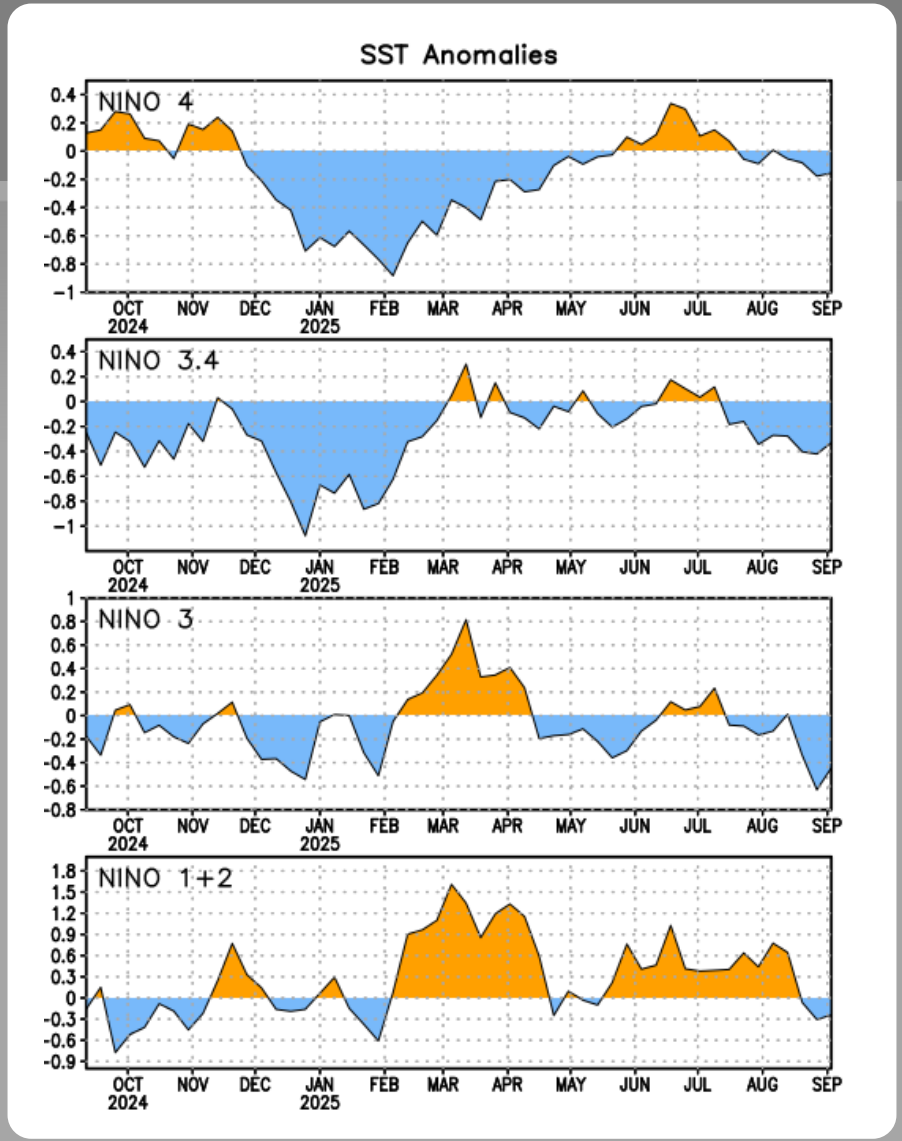
- Average annual inflow to Lake Okeechobee is nearly 50% greater during the warm phase compared to the cold phase of the AMO, easterly flow toward south Florida affected by phase
- The AMO is currently in the warm phase

Niño Region SST Departures (ºC) Recent Evolution

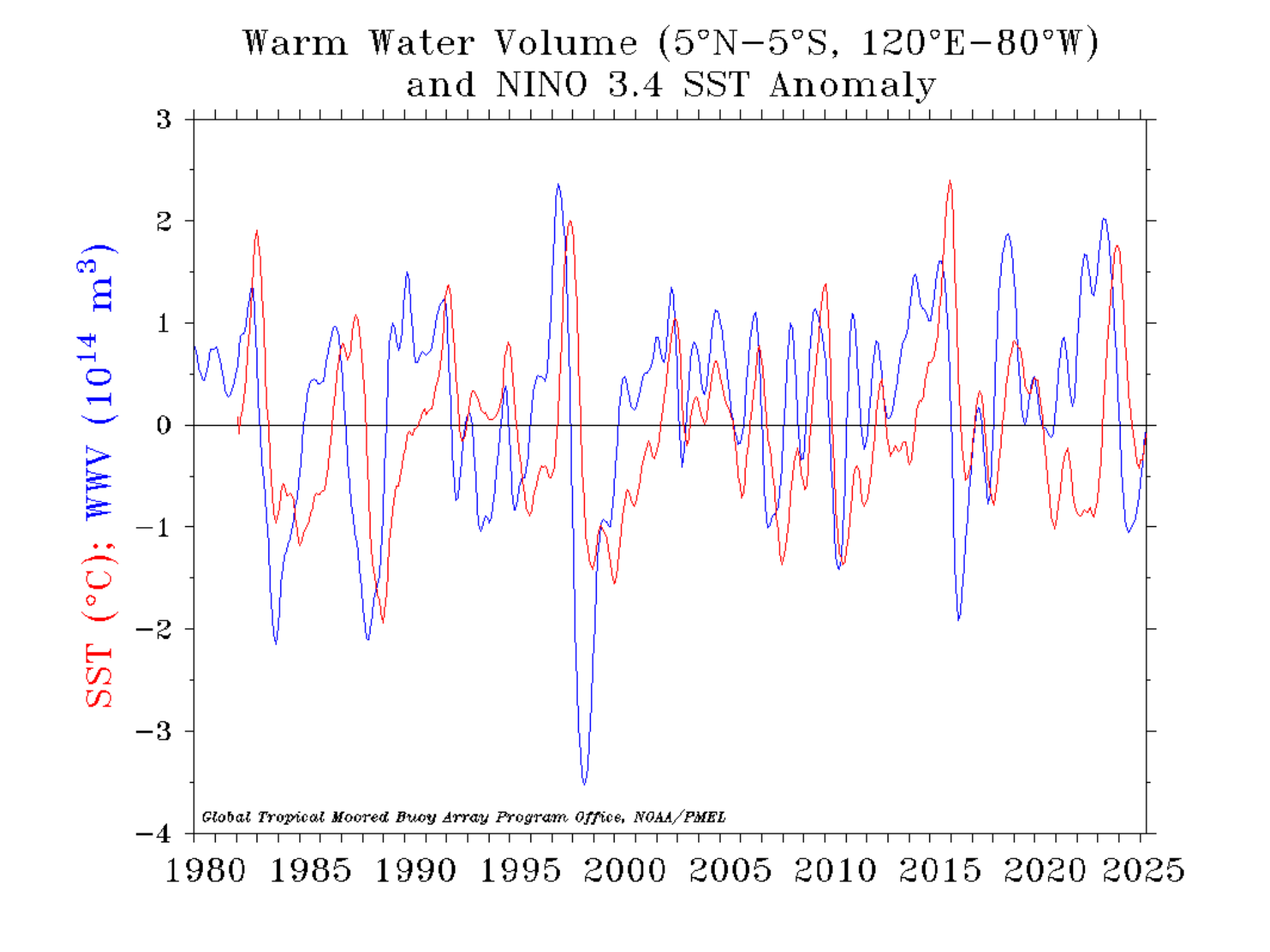
The latest weekly SST departures are:

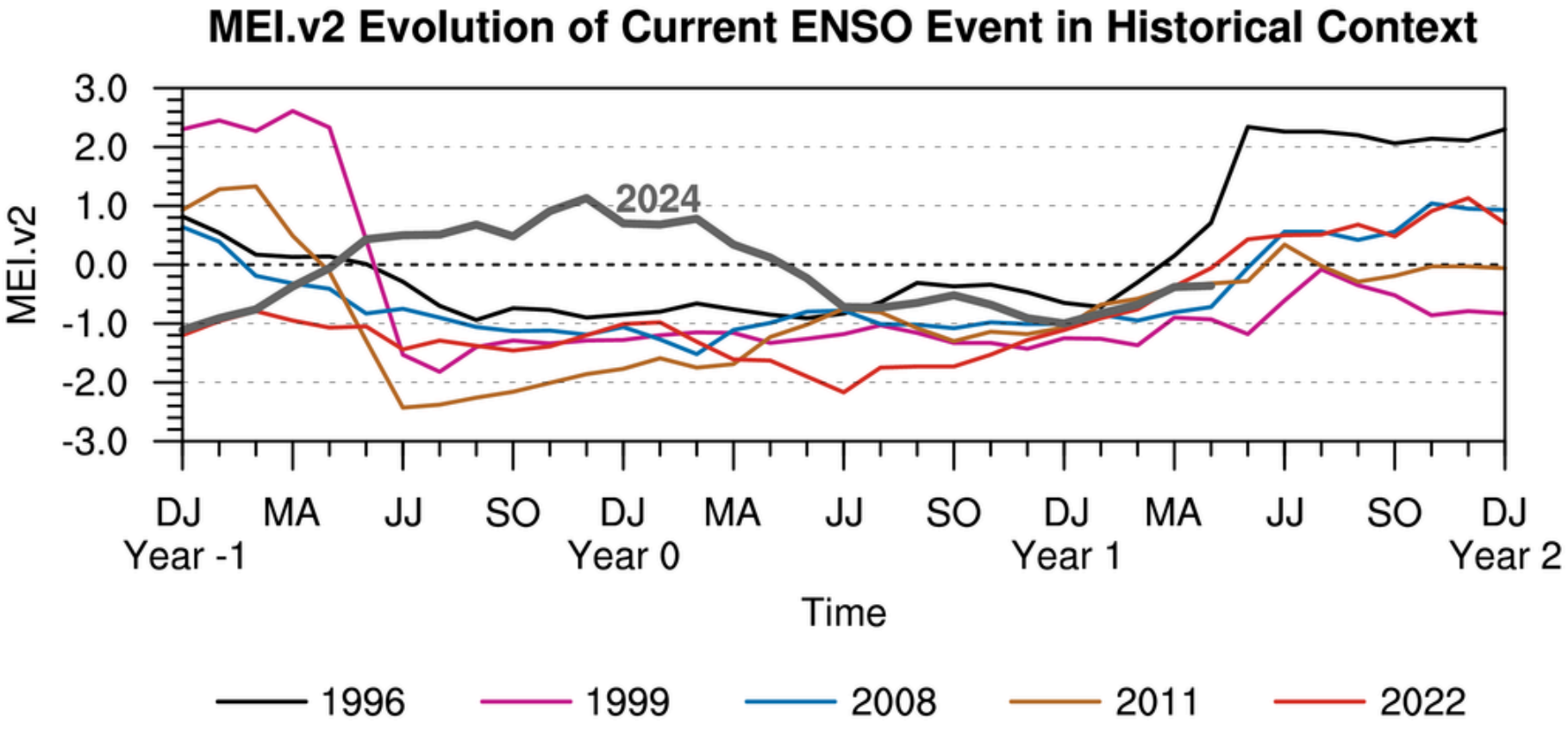
Niño 4	-0.2ºC
Niño 3.4	-0.3ºC
Niño 3	-0.4ºC
Niño 1+2	-0.2ºC





Prepared by: Climate Prediction Center/NCEP


Warm Water Volume (5°N–5°S, 120°E–80°W)
and NINO 3.4 SST Anomaly
SST (°C); WWV (10^{14} m^3)
3
2
1
0
−1
−2
−3
−4
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
Global Tropical Moored Buoy Array Program Office, NOAA/PMEL



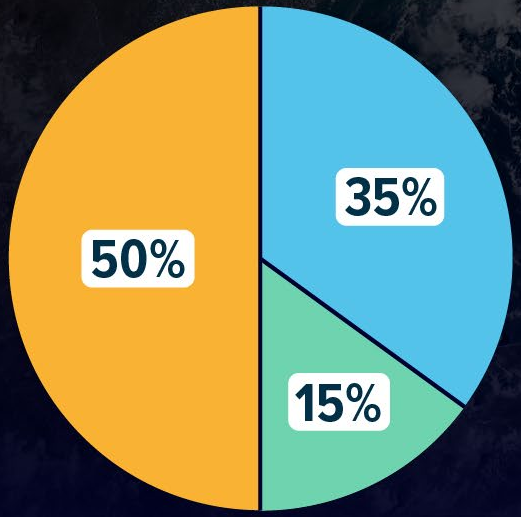
Prepared by: NOAA Physical Sciences Laboratory

2025 Tropical Outlook Updates

2025 Atlantic Hurricane Season Outlook

August 7 Update

Season Probability



Above Normal | Near Normal | Below Normal

Named Storms
13 - 18

Hurricanes
5 - 9

Major Hurricanes
2 - 5

Be prepared: Visit hurricanes.gov and follow NOAA's @NWS and @NHC_Atlantic on X. August 2025

Source: National Oceanic and Atmospheric Administration

ATLANTIC BASIN SEASONAL HURRICANE FORECAST FOR 2025

Forecast Parameter and 1991-2020 Average (in parentheses)	Issue Date 3 April 2025	Issue Date 11 June 2025	Issue Date 9 July 2025	Issue Date 6 August 2025	Observed Thru 5 August 2025	Remainder of Season Forecast
Named Storms (NS) (14.4)	17	17	16	16	4	12
Named Storm Days (NSD) (69.4)	85	85	80	80	4.5	75.5
Hurricanes (H) (7.2)	9	9	8	8	0	8
Hurricane Days (HD) (27.0)	35	35	30	30	0	30
Major Hurricanes (MH) (3.2)	4	4	3	3	0	3
Major Hurricane Days (MHD) (7.4)	9	9	8	8	0	8
Accumulated Cyclone Energy (ACE) (123)	155	155	140	140	3	137
ACE West of 60°W (73)	93	93	87	87	3	84
Net Tropical Cyclone Activity (NTC) (135%)	165	165	145	145	9	136

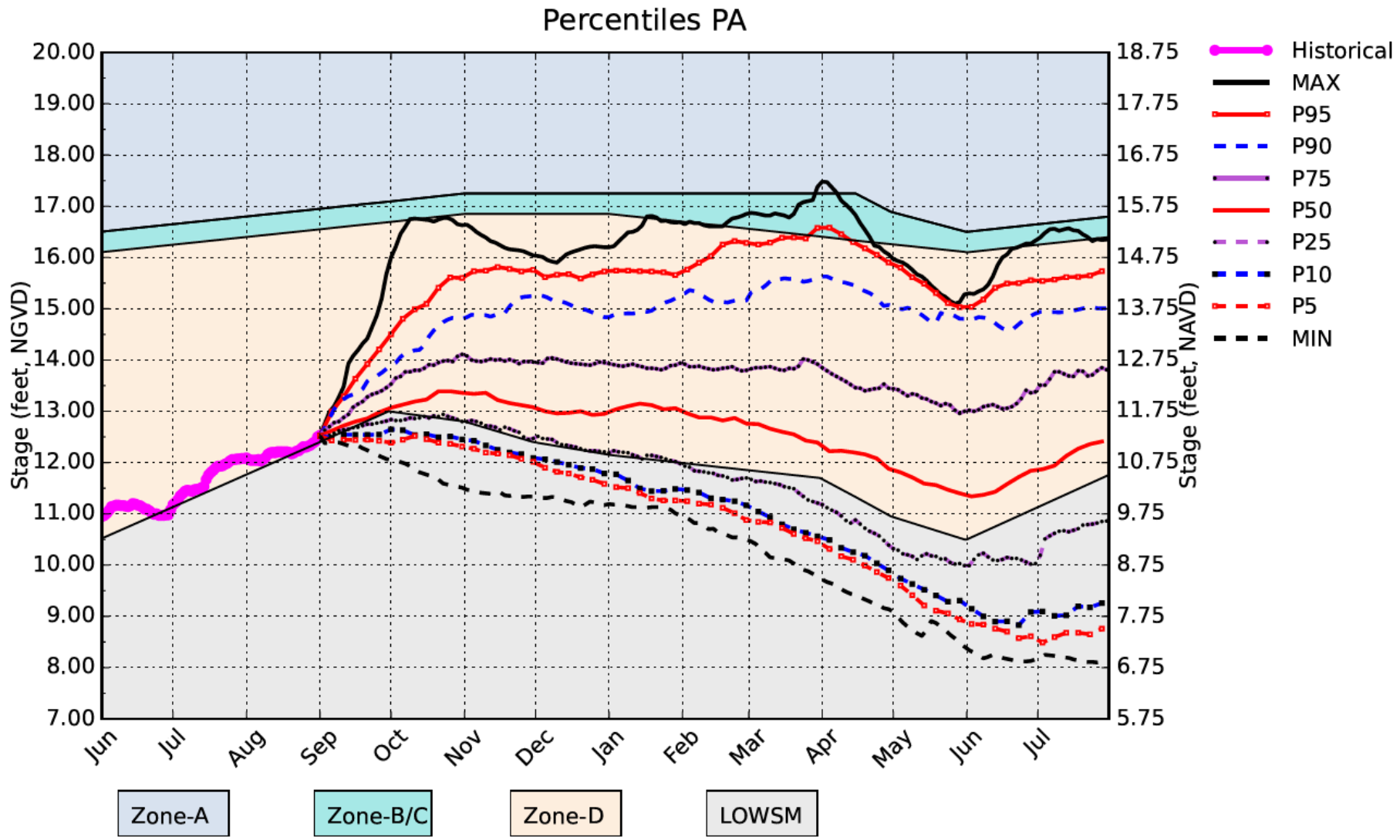
- Slightly above-normal activity
- Observed and predicted high levels of Caribbean shear contribute to lower-than-normal confidence with outlook
- Multiple indicators anticipate likely cool ENSO neutral conditions during the peak of the Atlantic hurricane season
- Sea surface temperatures across the eastern and central Atlantic have anomalously warmed over the past few weeks and are now somewhat warmer than normal
- Warm sea surface temperatures and ENSO neutral conditions typically provide a more conducive dynamic and thermodynamic environment for hurricane formation and intensification

Source: Colorado State University (Tropical Meteorology Project)

September 1, 2025 DPA Assumptions

- The September 1, 2025 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) v7.3.4.
- The September 1, 2025 DPA resets the initial stages for Lake Okeechobee (LOK) and the Water Conservation Areas (WCAs) on August 1st of each year of the DPA simulation and conditions the simulation to real time data during August to achieve real time stages on September 1st 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.

Lake Okeechobee SFWMM September 2025 Position Analysis



(See Assumptions on the Operational Planning Website)

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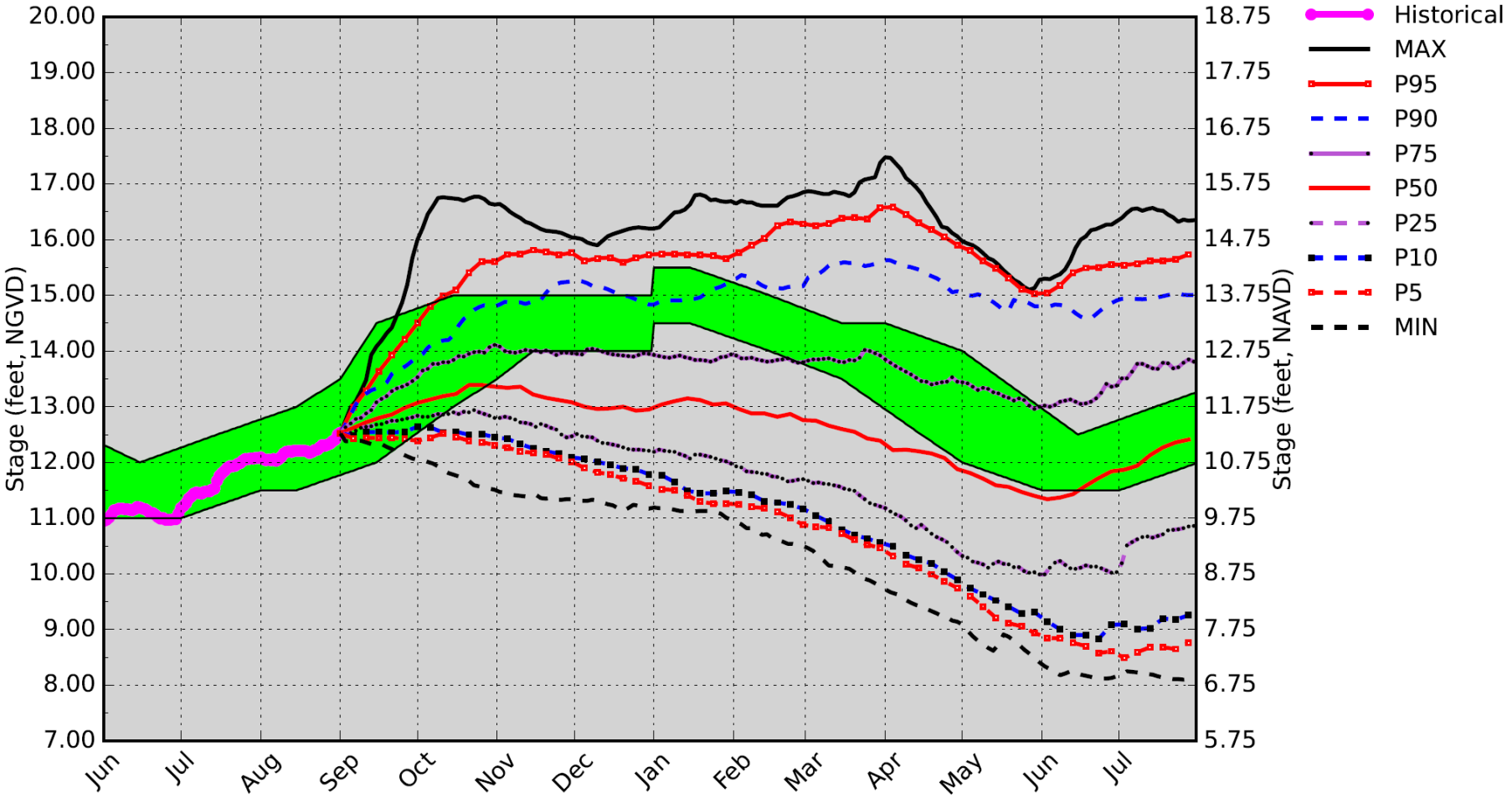
Lake Okeechobee SFWMM September 2025 Position Analysis

Percentiles PA with Ecological Envelopes



(See Assumptions on the Operational Planning Website)

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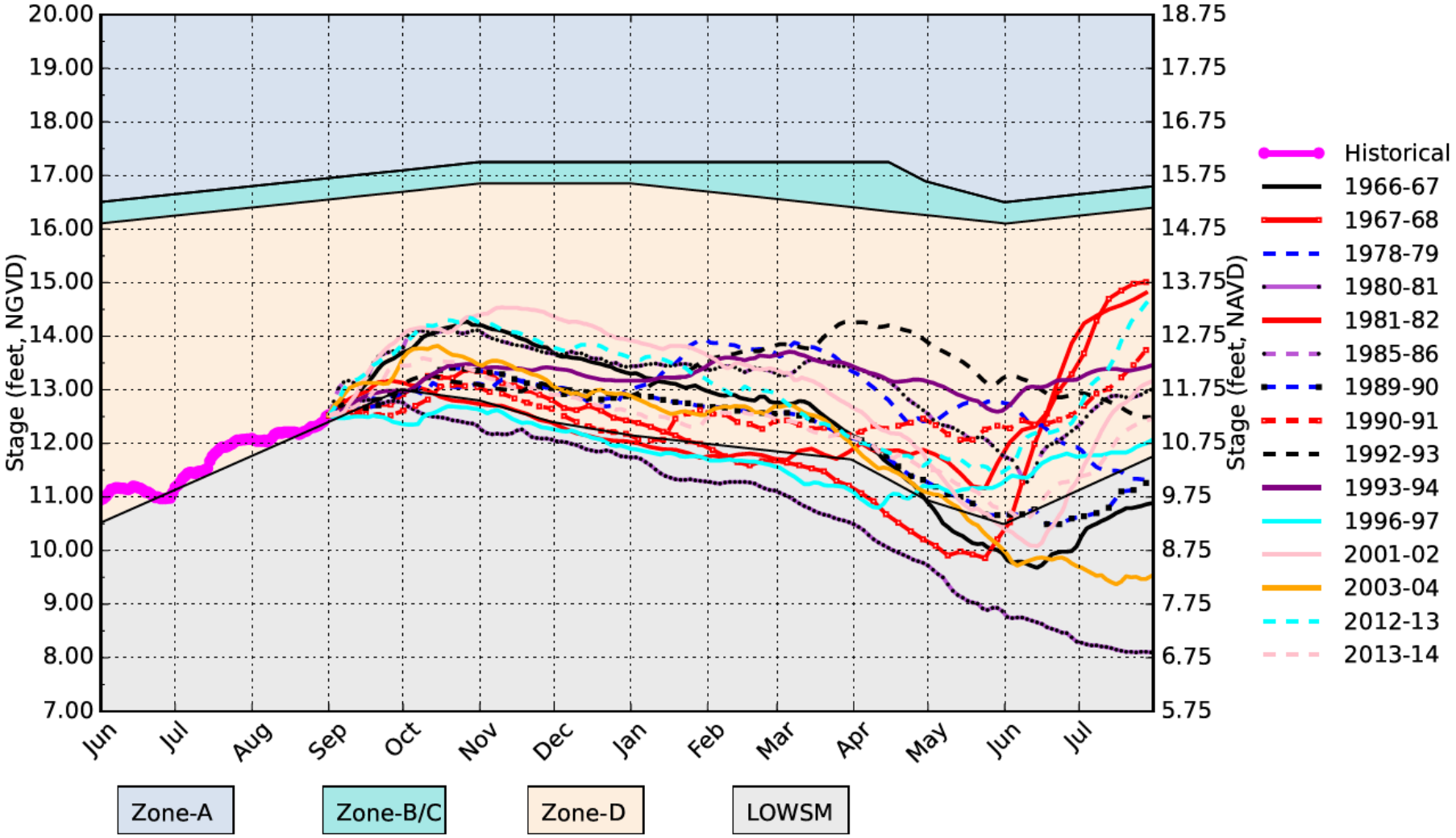
Lake Okeechobee SFWMM September 2025 Position Analysis

All ENSO Neutral Years Plot PA



(See Assumptions on the Operational Planning Website)

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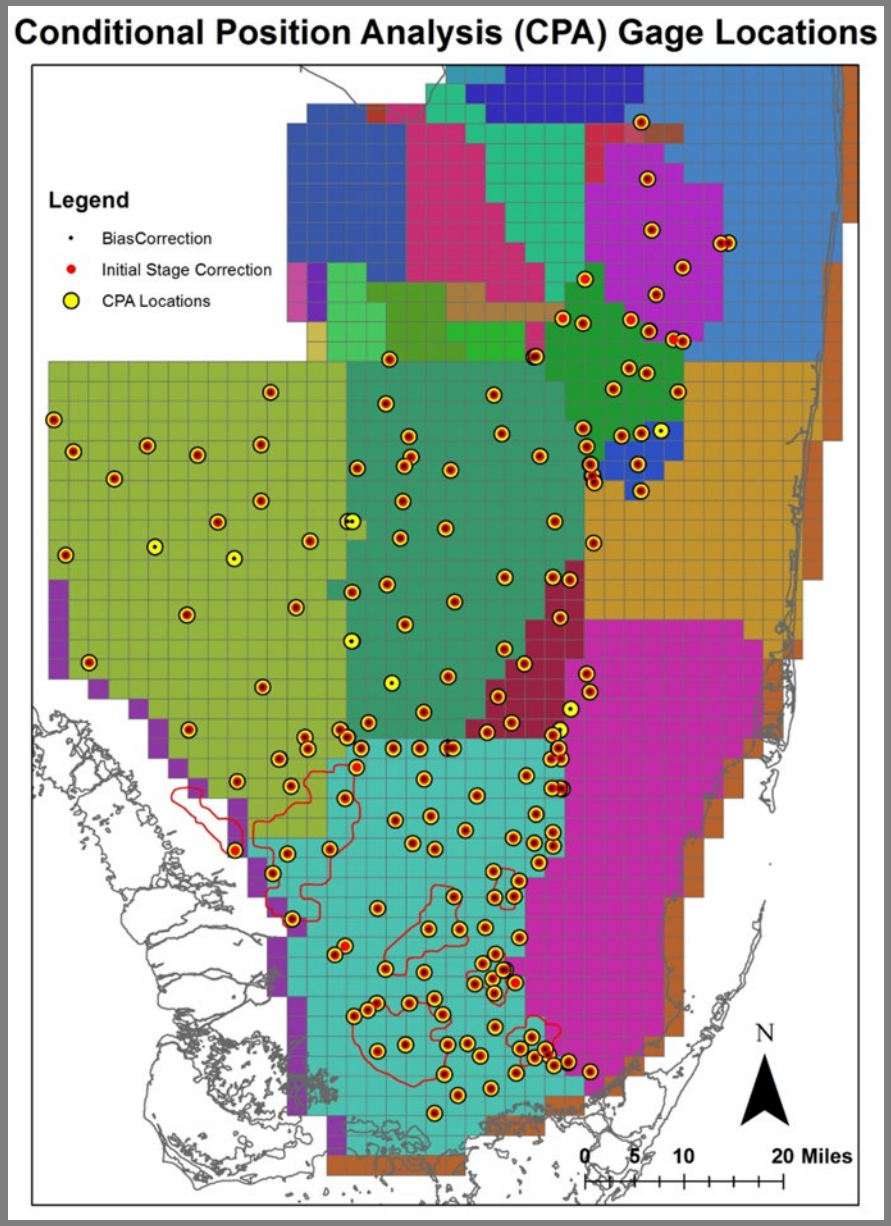
Conditional Position Analysis Overview

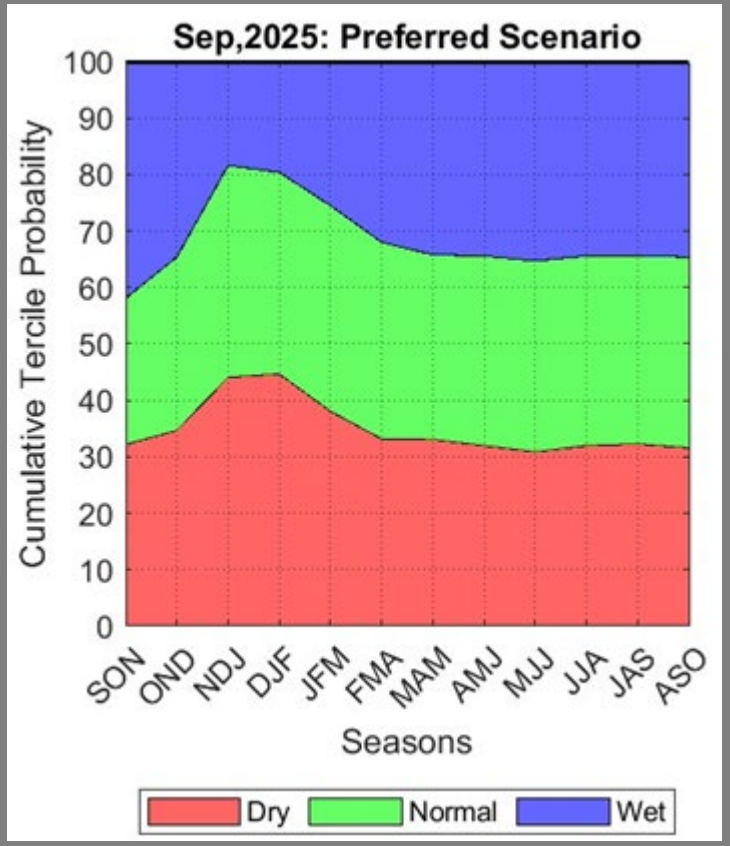
- CPA is a stochastic framework that transforms stages obtained from Dynamic Position Analysis (DPA) based on forecasted rainfall conditions over the next twelve months (Ali, 2016).
- DPA stage outputs are used as inputs to CPA.
- CPA is implemented for Lake Okeechobee and 200+ locations in the Everglades.



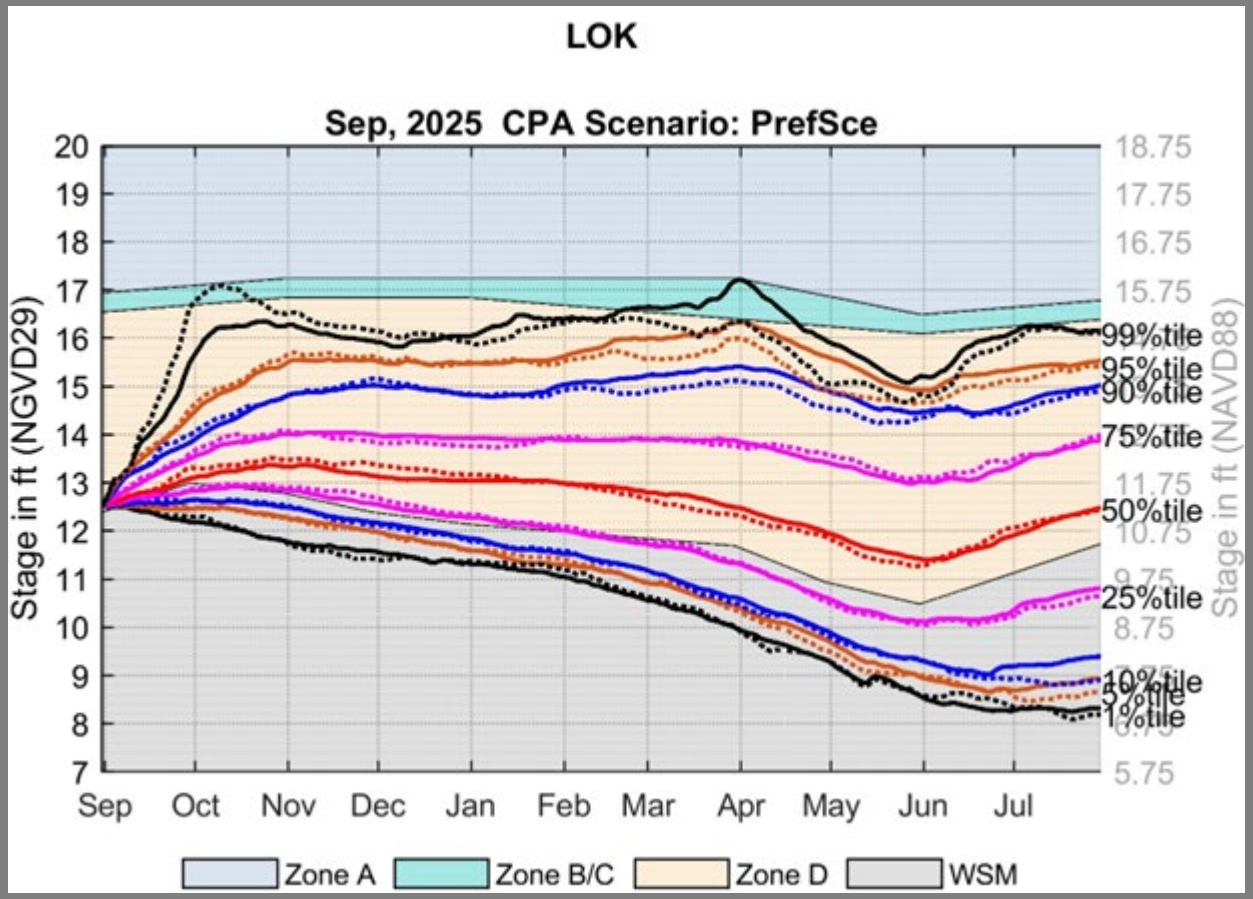
September 2025 CPA: Preferred Rainfall Scenario

Rainfall probabilities are calculated based on historical data and projected Niño-3.4 Index published by CPC. Preferred Scenario directly captures ENSO strength and is typically more aggressive in terms of shifts from Climatological probabilities compared to CPC.

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/strengths/index.php



Lake Okeechobee – CPA implementation shows the majority of percentile lines shift upward from the respective DPA percentile lines by ~0.1 to 0.2 ft at the start of the dry season in November 2025. Under PrefSce, the median trace projects a stage of approximately 13.5 ft NGVD29 (12.25 ft NAVD88). By the start of the next wet season (May 2026), the median trace of CPA shifts downward by ~0.1 ft from the DPA median line.



Solid lines → Climatological Scenario/DPA Dotted lines → CPA Scenario: PrefSce