Extended Hydrologic Outlook
May 5, 2025

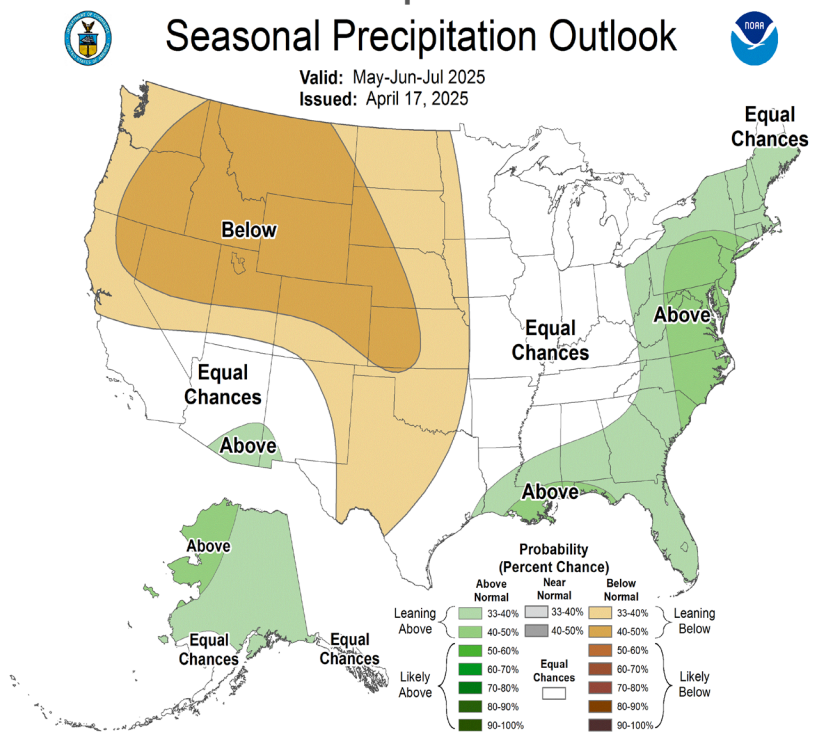
- The Climate Prediction Center (CPC) is forecasting above normal rainfall for May through July.
- ENSO-neutral is favored during the summer, with a greater than 50% chance through August-October 2025
- Atlantic Multidecadal Oscillation (AMO) is currently in the warm phase:
  - Average annual inflow to Lake Okeechobee is nearly 50% greater during the warm phase compared to the cold phase.

U. S. Seasonal Outlooks

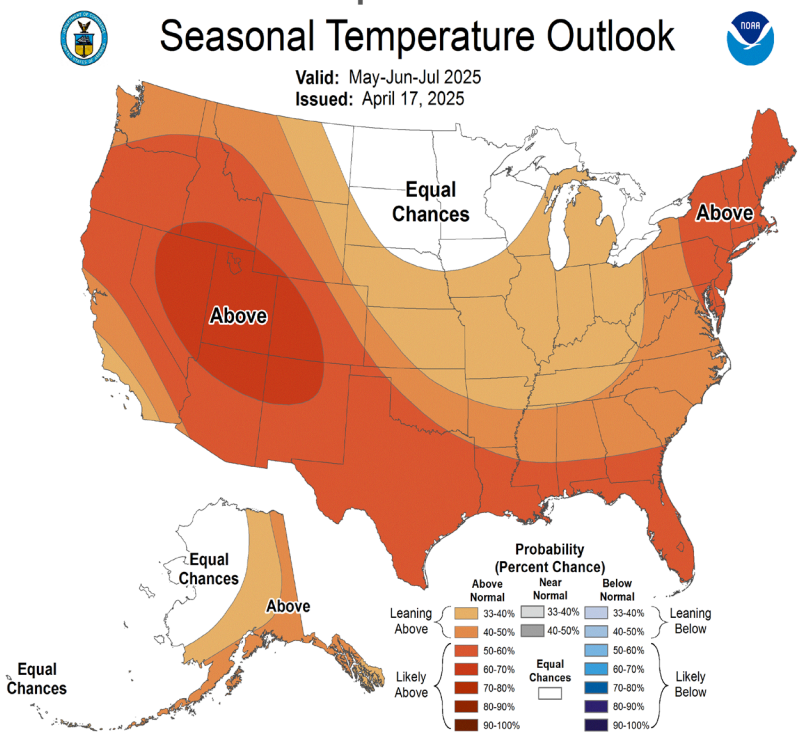
May-July 2025

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

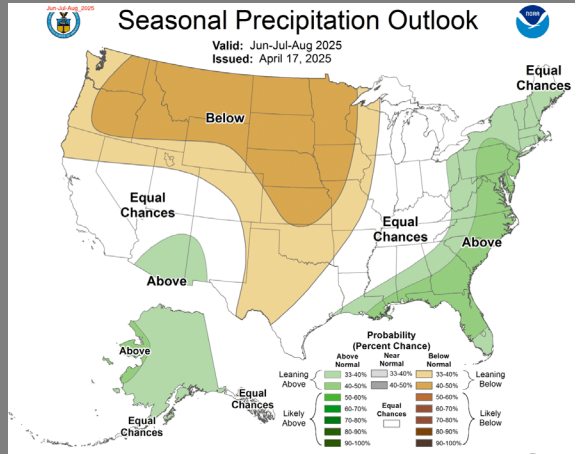
Precipitation

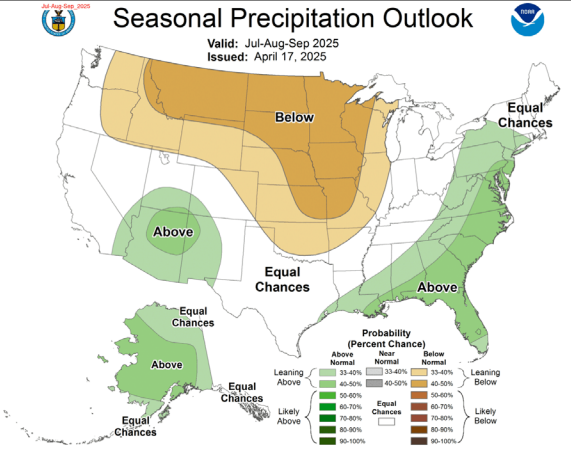


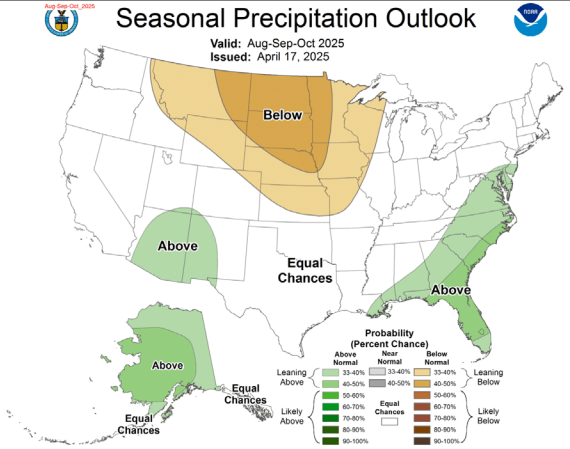
Temperature

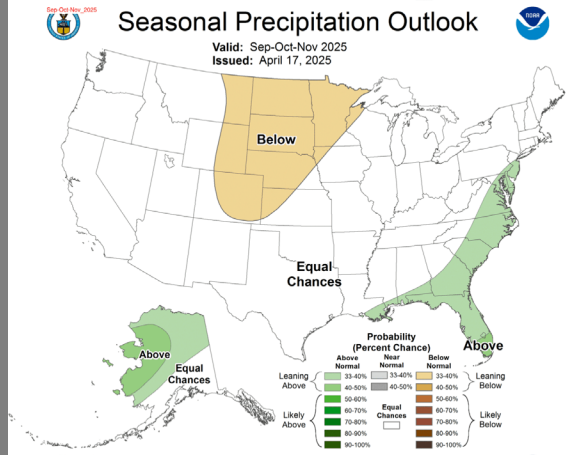


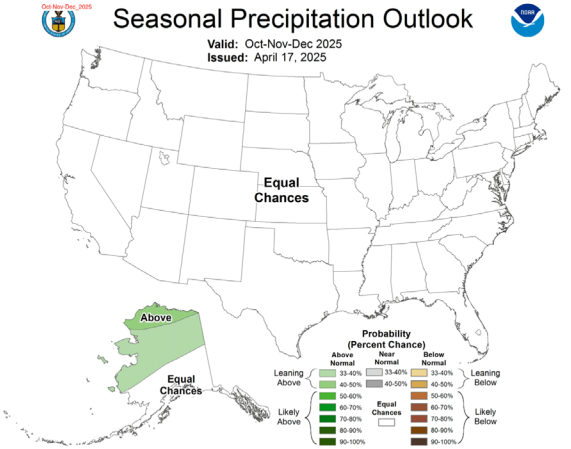
Prepared by: Climate Prediction Center/NCEP

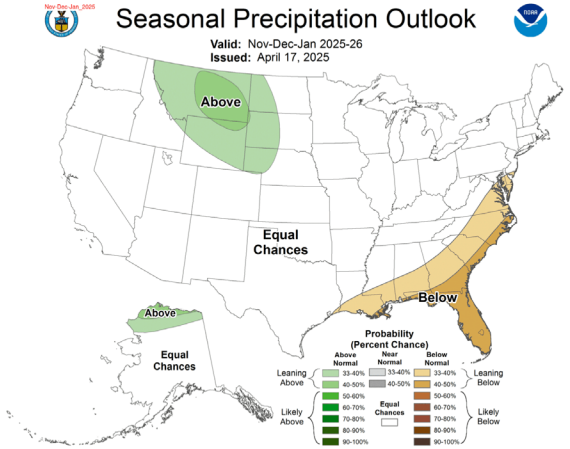


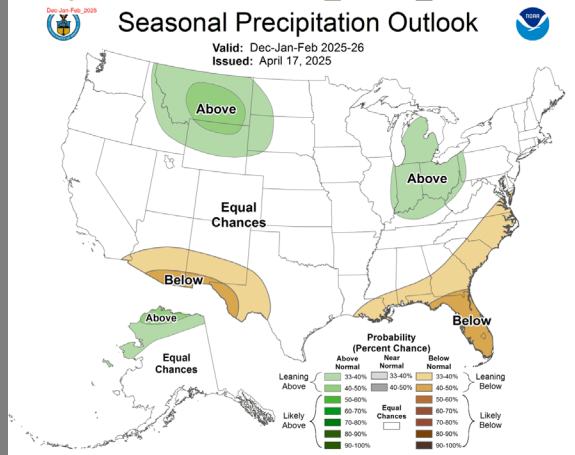


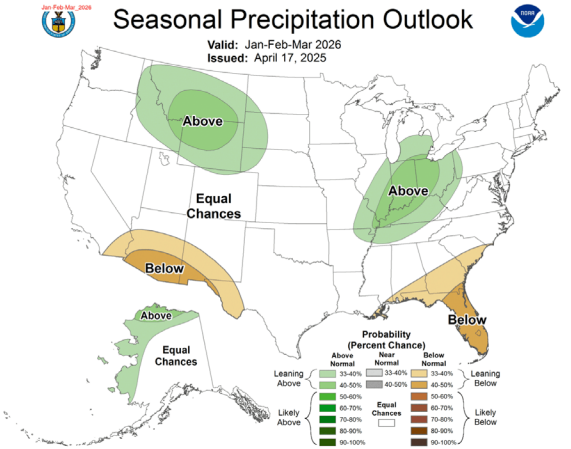


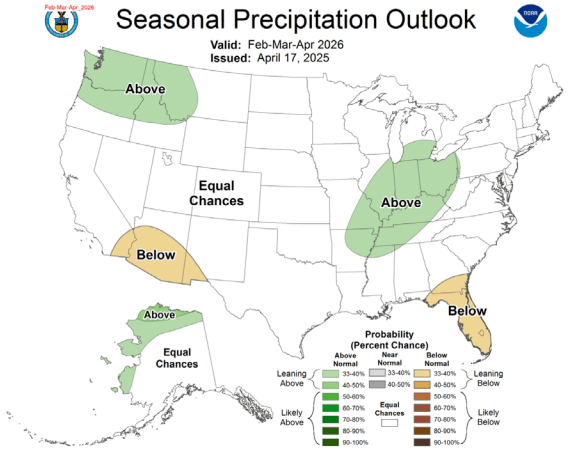












Prepared by: Climate Prediction Center/NCEP

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

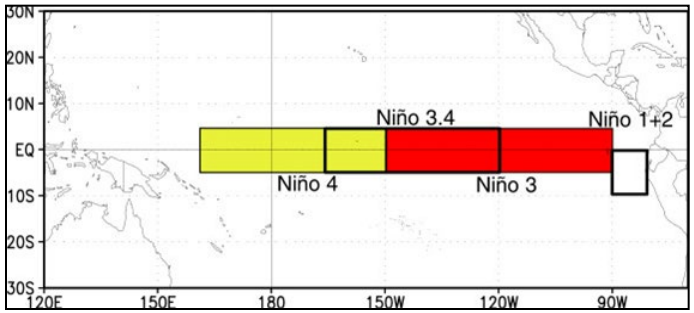
Atlantic Multidecadal Oscillation (AMO)

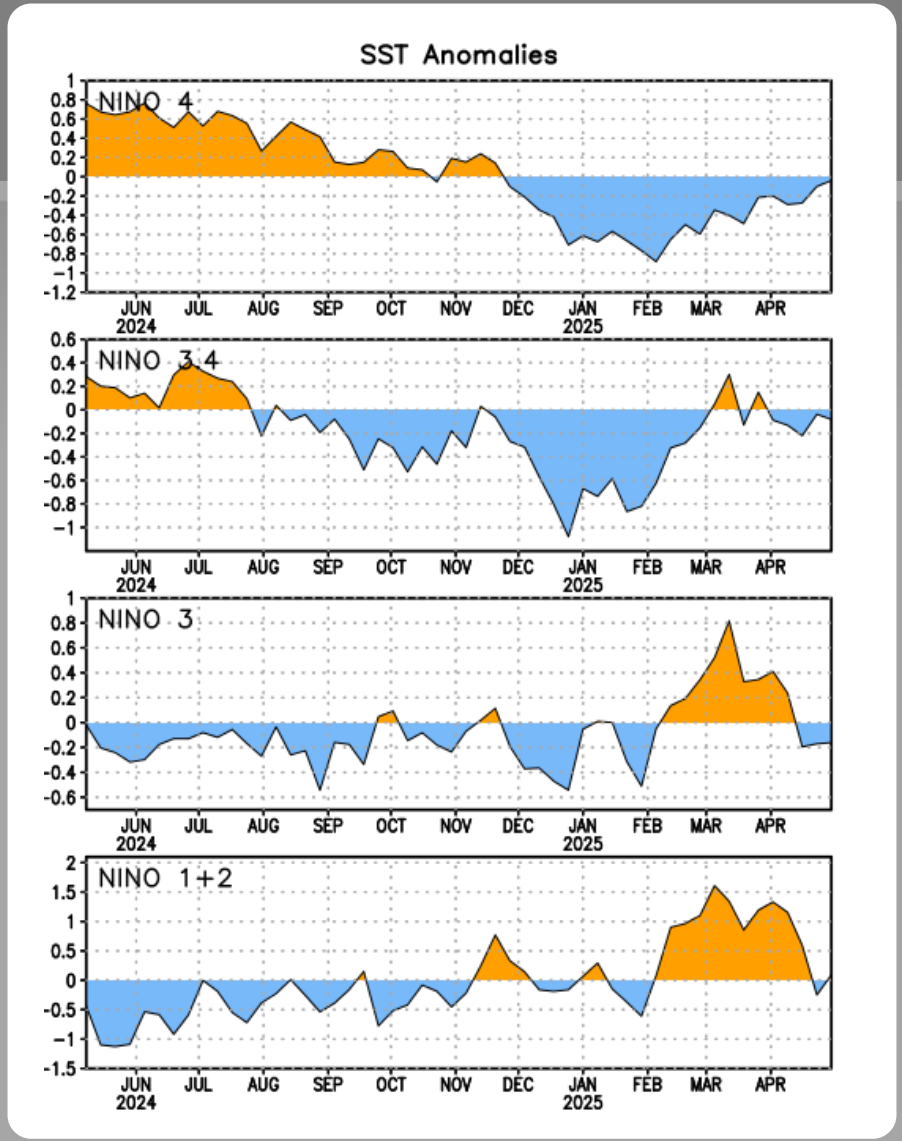
- Average annual inflow to Lake Okeechobee is nearly 50% greater during the warm phase compared to the cold phase of the AMO, easterly flow toward south Florida affected by phase
- The AMO is currently in the warm phase

Niño Region SST Departures (ºC) Recent Evolution

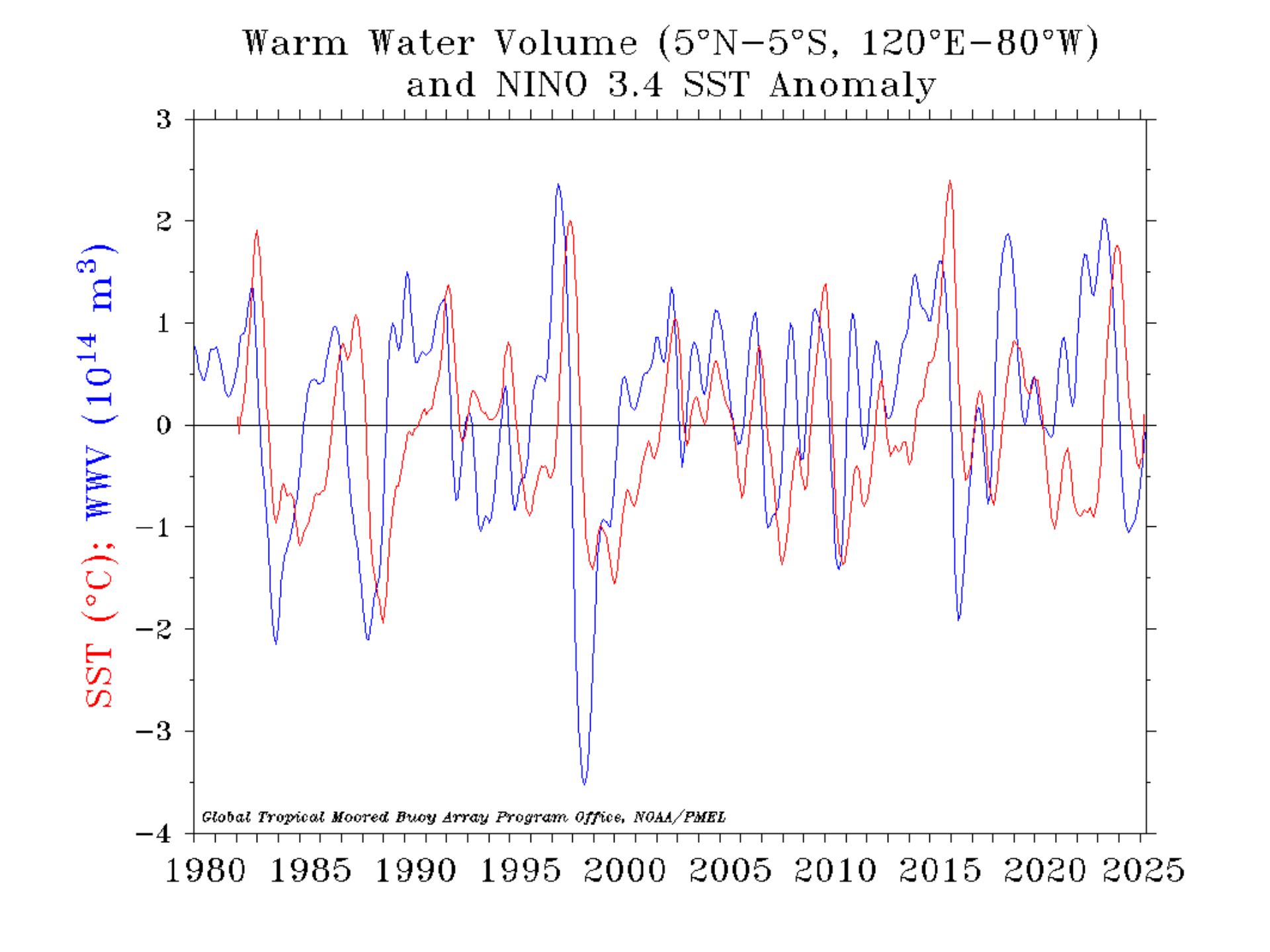
The latest weekly SST departures are:

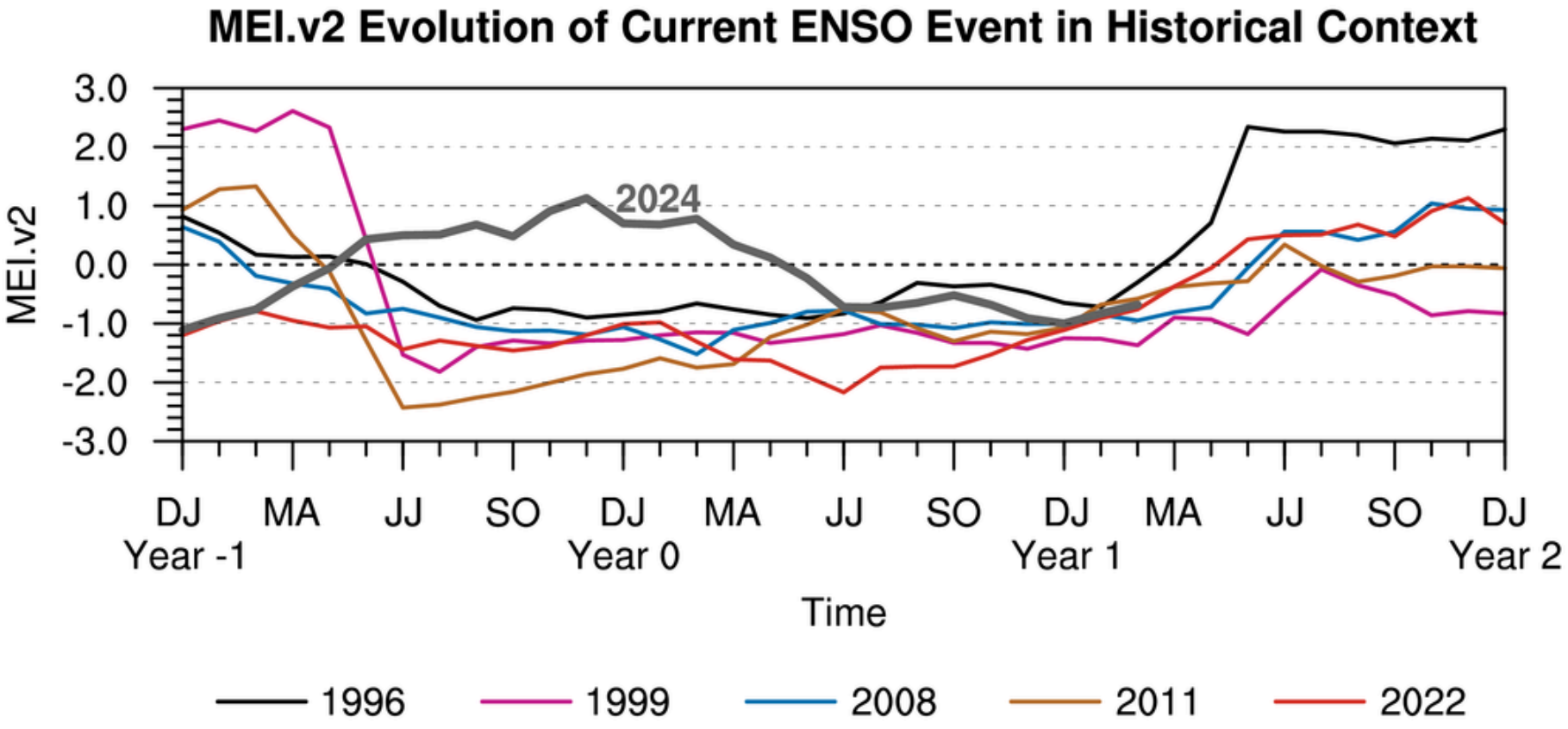
Niño 4	0.0ºC
Niño 3.4	-0.1ºC
Niño 3	-0.2ºC
Niño 1+2	0.1ºC





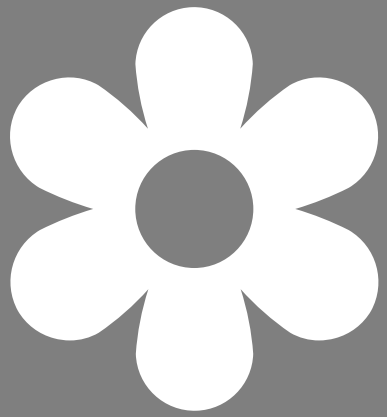
Prepared by: Climate Prediction Center/NCEP


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

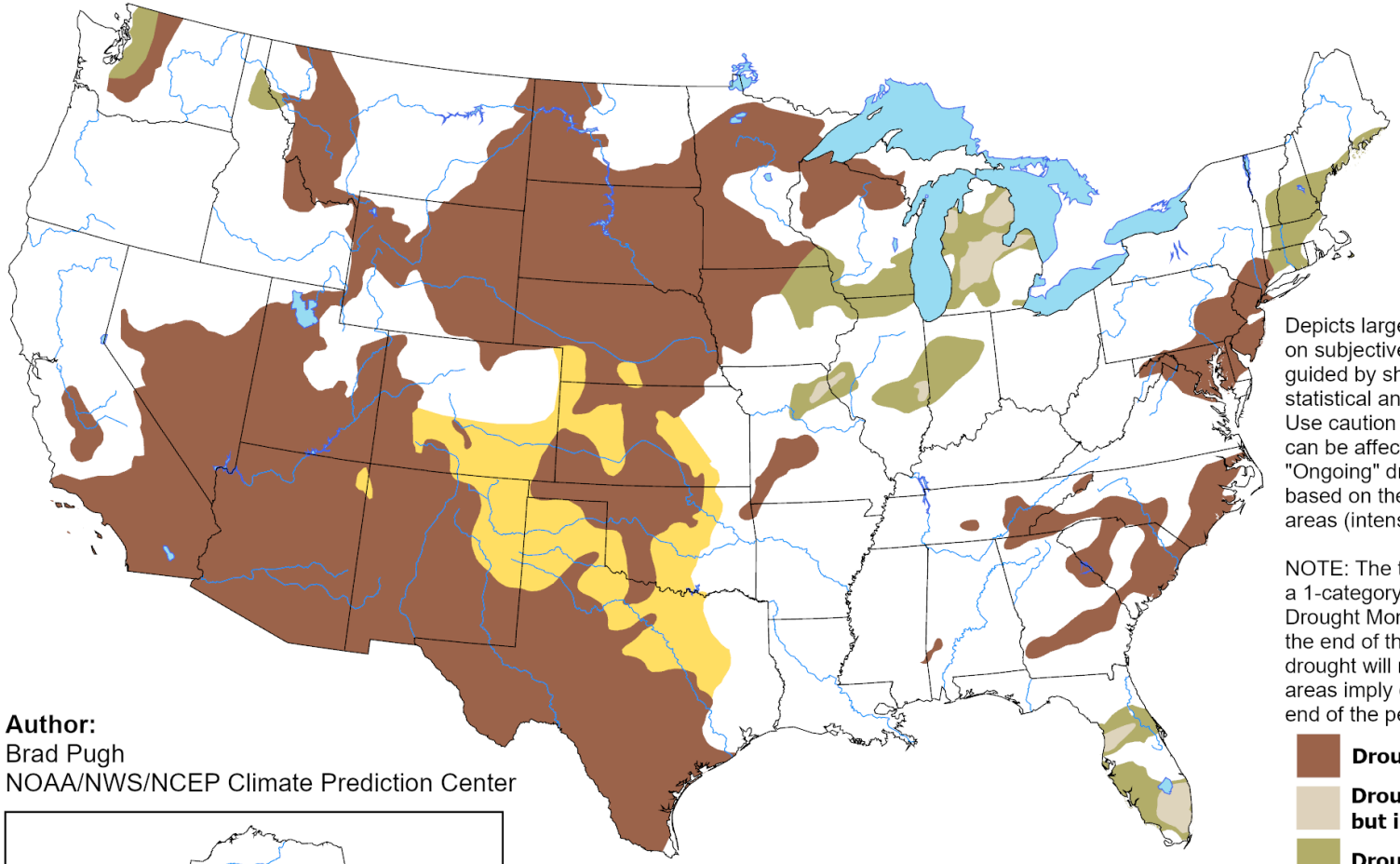
2025 Spring Outlook



U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for March 20 - June 30, 2025
Released March 20, 2025

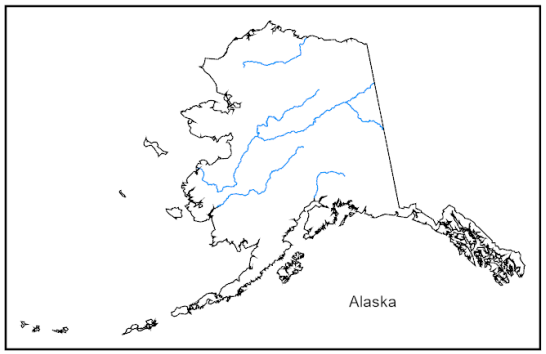


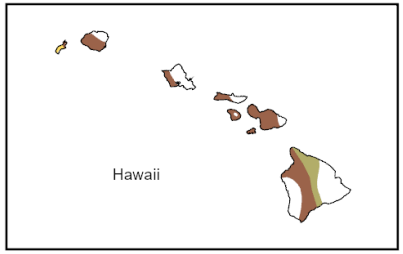
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

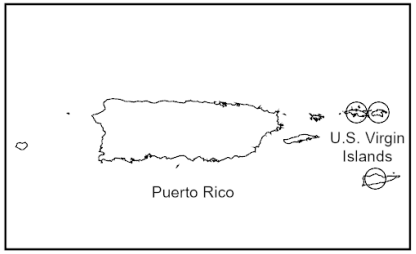
NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- **Drought persists**
- **Drought remains, but improves**
- **Drought removal likely**
- **Drought development likely**
- **No drought**

Author:
Brad Pugh
NOAA/NWS/NCEP Climate Prediction Center







https://go.usa.gov/3eZ73

Prepared by: NOAA

2025 CSU Tropical Outlook

ATLANTIC BASIN SEASONAL HURRICANE FORECAST FOR 2025

Forecast Parameter and 1991–2020 Average (in parentheses)	Issue Date 3 April 2025
Named Storms (NS) (14.4)	17
Named Storm Days (NSD) (69.4)	85
Hurricanes (H) (7.2)	9
Hurricane Days (HD) (27.0)	35
Major Hurricanes (MH) (3.2)	4
Major Hurricane Days (MHD) (7.4)	9
Accumulated Cyclone Energy (ACE) (123)	155
ACE West of 60°W (73)	93
Net Tropical Cyclone Activity (NTC) (135%)	165

- Above-normal activity
- Uncertainty as to what the phase of ENSO will be this summer and fall
- Sea surface temperatures across the eastern and central Atlantic are generally warmer than normal, but not as warm as they were last year
- A warmer-than-normal tropical Atlantic combined with likely ENSO neutral (or potential La Niña) conditions typically provides a more conducive dynamic and thermodynamic environment for hurricane formation and intensification
- Next update: June 11, 2025

Source: Colorado State University (Tropical Meteorology Project)

May 2025 DPA Assumptions

- **The May 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 May 1, 2025 DPA resets the initial stages for Lake Okeechobee (LOK) and the Water Conservation Areas (WCAs) on April 1st of each year of the DPA simulation and conditions the simulation to real time data during April to achieve real time stages on May 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 Recovery Operations

Starting December 7, 2024 the US Army Corps of Engineers (USACE) - Jacksonville District began releases under Lake Okeechobee Recovery Operations. The goal of recovery is to lower lake levels before the onset of the wet season to allow for recovery of lake ecology.

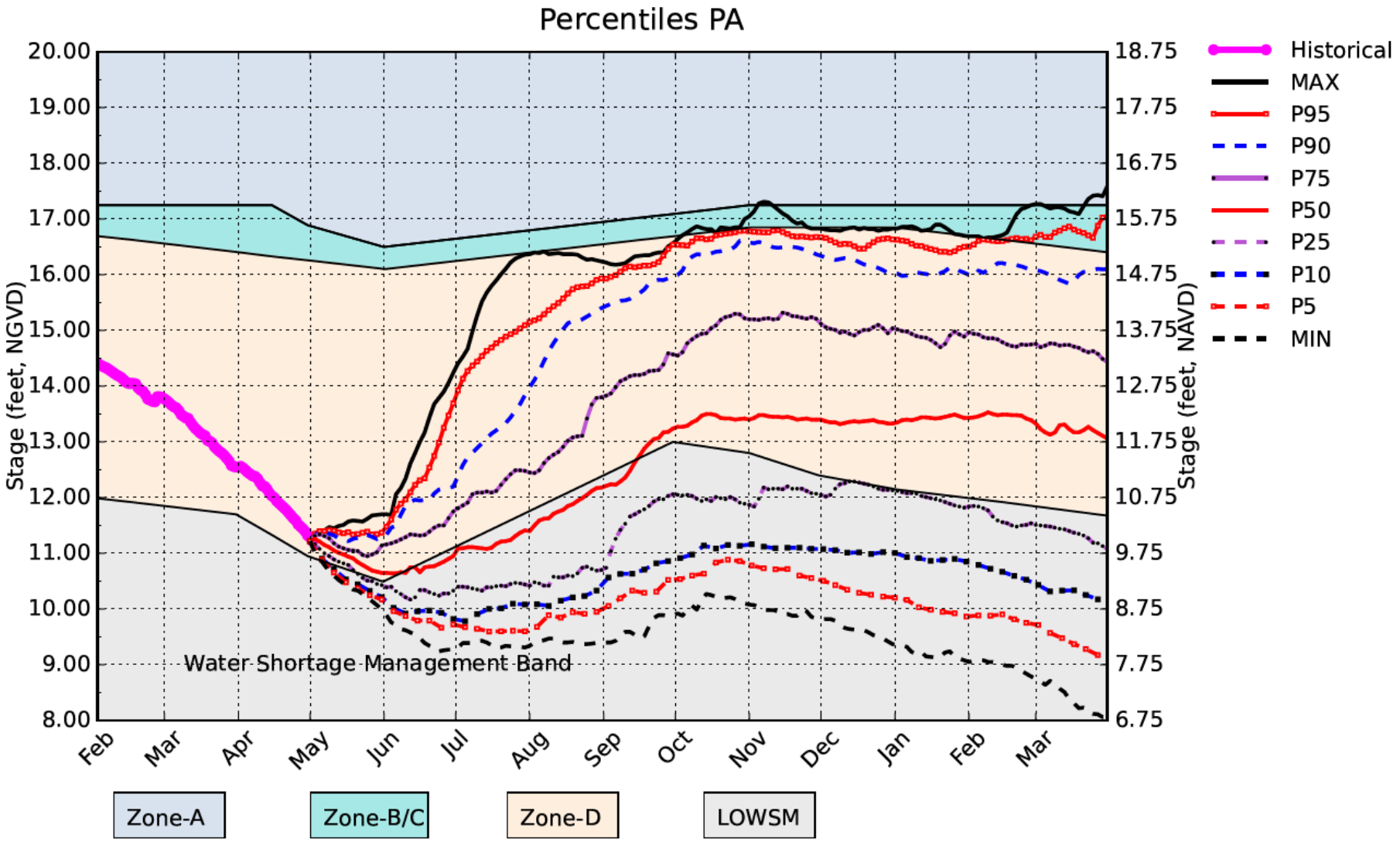
SFWMM model assumptions for the May 1, 2025 DPA:

- **Recovery operations start at the beginning of the DPA simulation and end May 31st.**

  Lake Okeechobee releases:

  - **650 cfs at S-79 to the Caloosahatchee River Estuary (CRE)**
  - **0 cfs at S-80 to the St. Lucie Estuary (SLE)**
  - **Maximum practicable releases south**

Lake Okeechobee SFWMM May 2025 Position Analysis



(See assumptions on the Position Analysis Results website)

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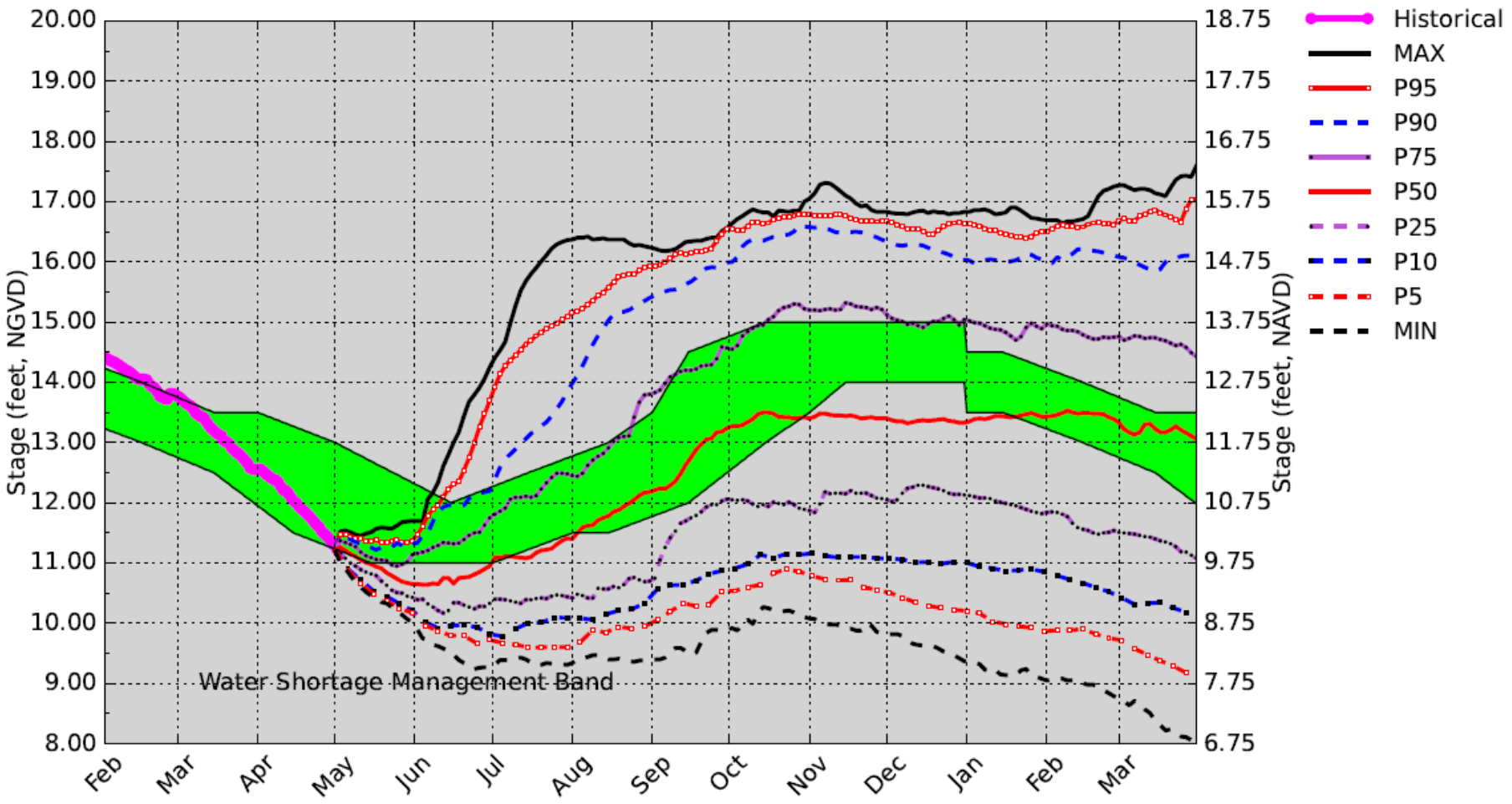
Lake Okeechobee SFWMM May 2025 Position Analysis



(See assumptions on the Position Analysis Results website)

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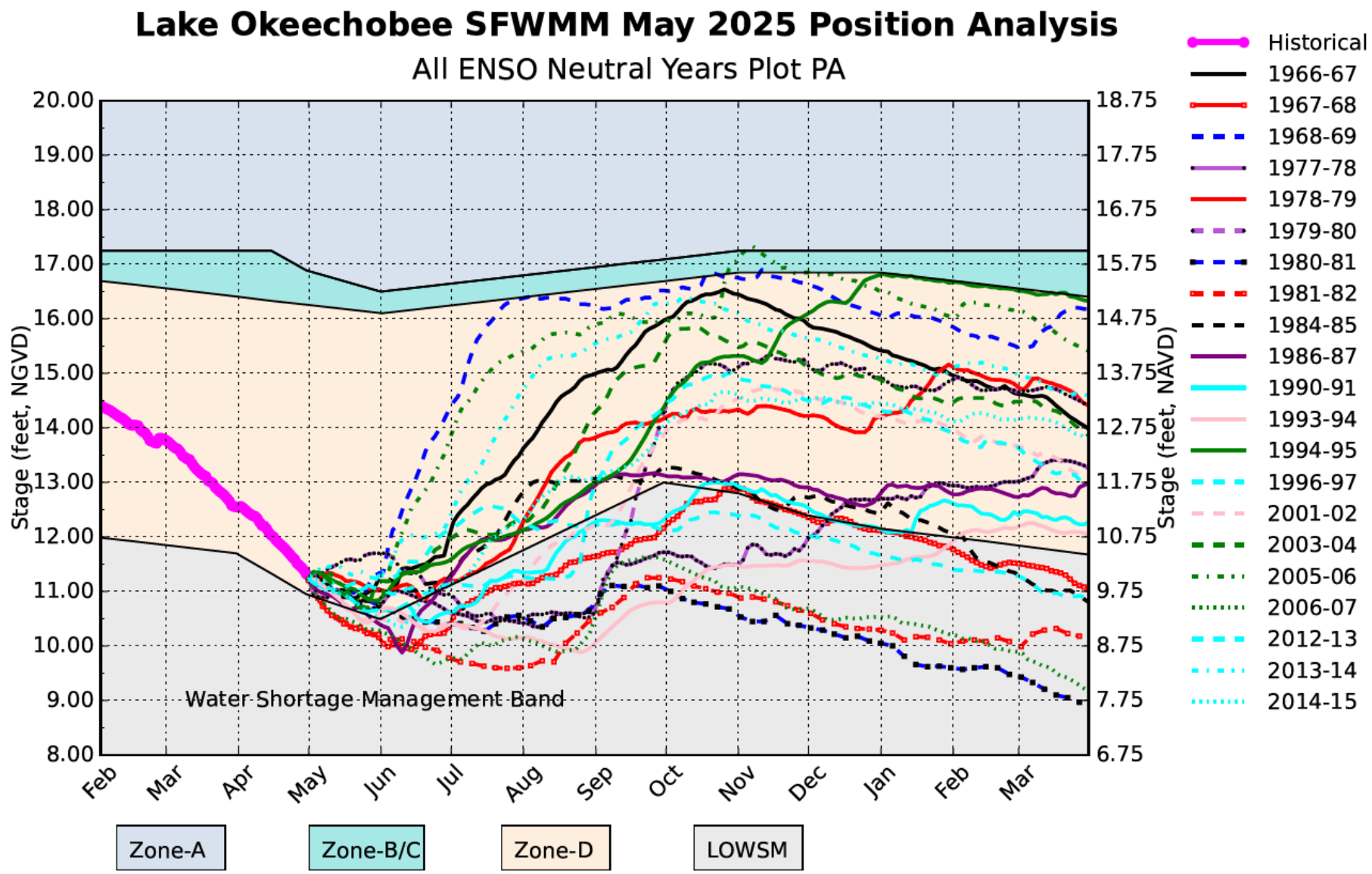

(See assumptions on the Position Analysis Results website)

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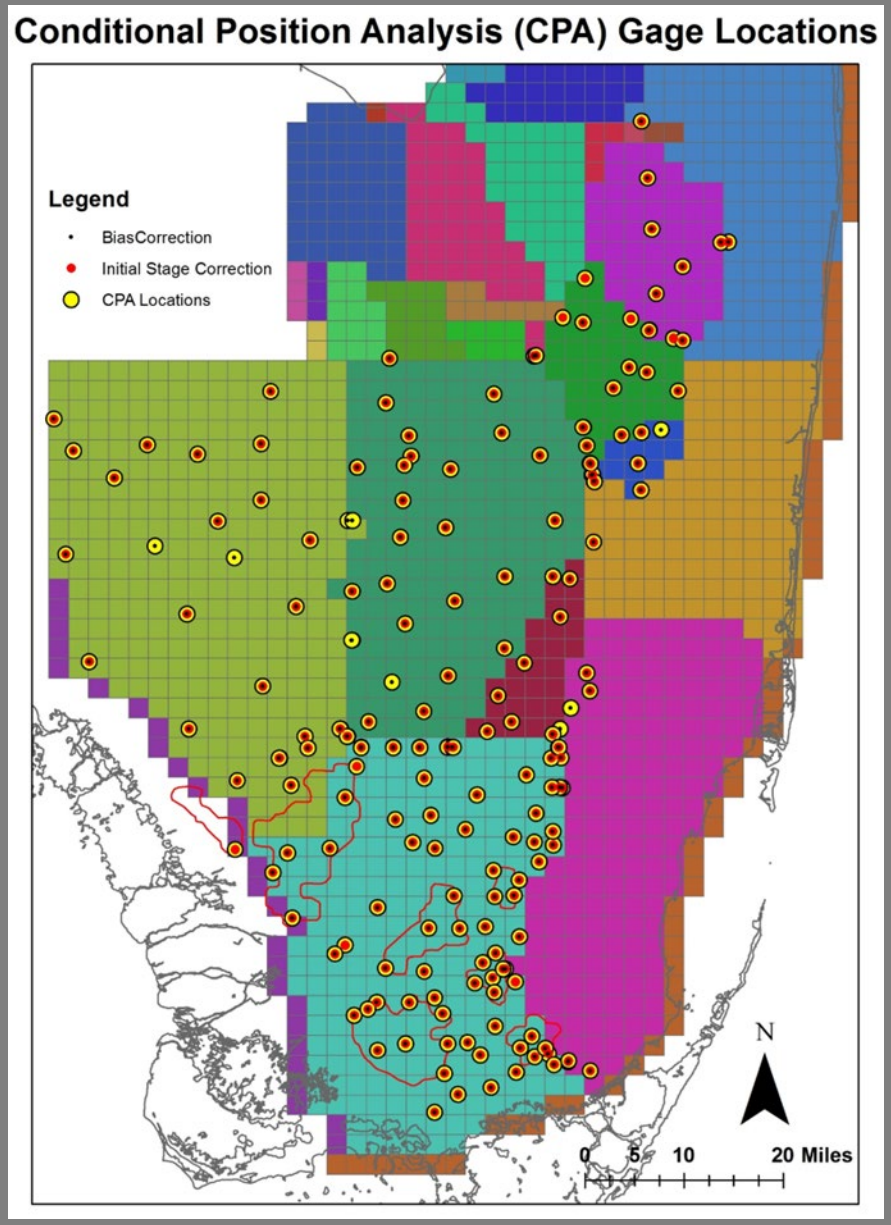
Conditional Position Analysis Overview

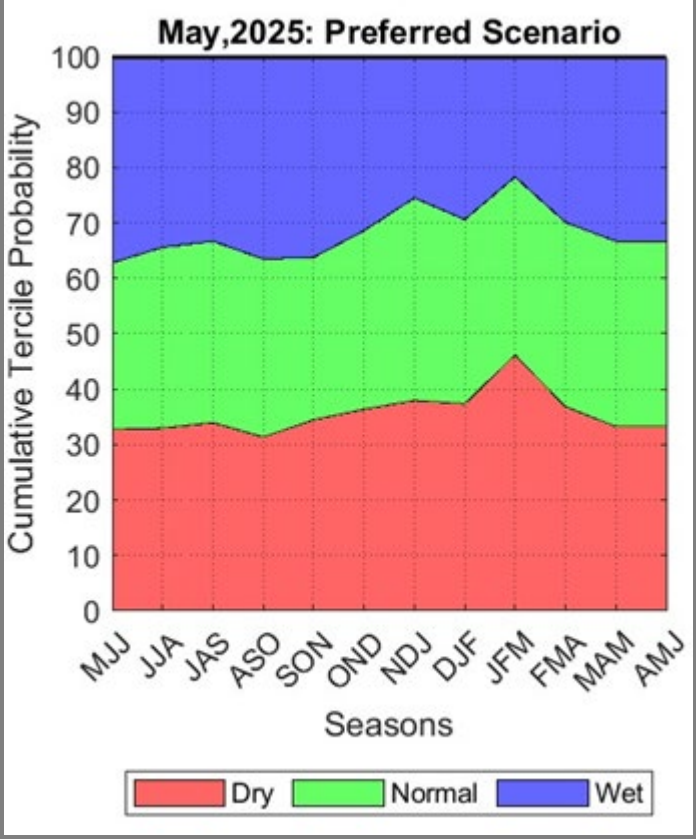
- CPA is a stochastic framework that transforms stages obtained from Dynamic Position Analysis (DPA) based on forecasted rainfall conditions over the next twelve months (Ali, 2016).
- DPA stage outputs are used as inputs to CPA.
- CPA is implemented for Lake Okeechobee and 200+ locations in the Everglades.



May 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 – LOSOM RO CPA implementation shows that all percentile lines shift down from the respective DPA percentile lines by ~0.05 to 0.1 ft by the end of May 2025. Under PrefScenario median trace projected stage is at ~10.6 ft NGVD, a 0.05 ft downward shift from LOSOM RO DPA.