

Extended Hydrologic Outlook

October 11, 2022

- The Climate Prediction Center (CPC) is forecasting equal chances of above normal, normal and below normal rainfall for October through December.
- La Niña is favored to continue through winter 2022-23, with a 91% chance in September-November, decreasing to a 54% chance in January-March 2023.
- 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

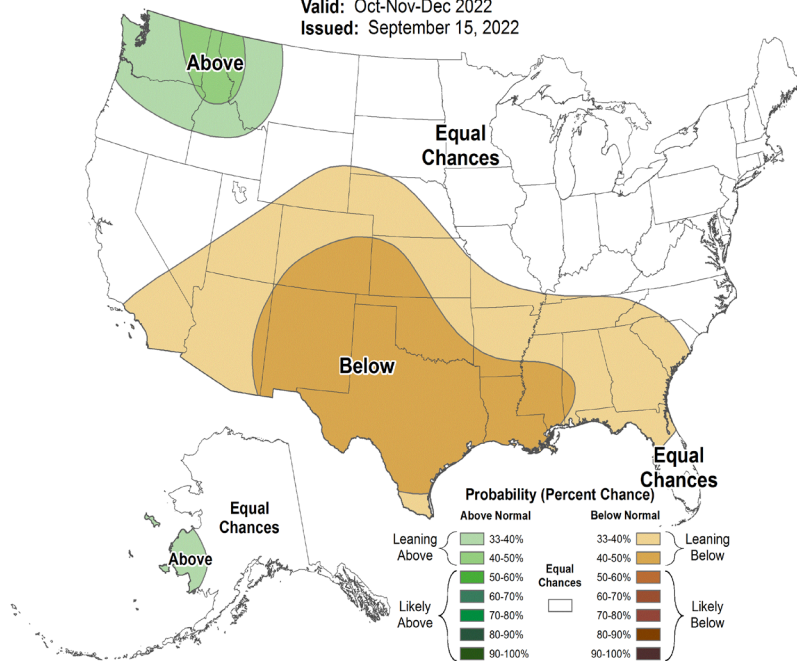
October - December 2022

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

Precipitation

Seasonal Precipitation Outlook

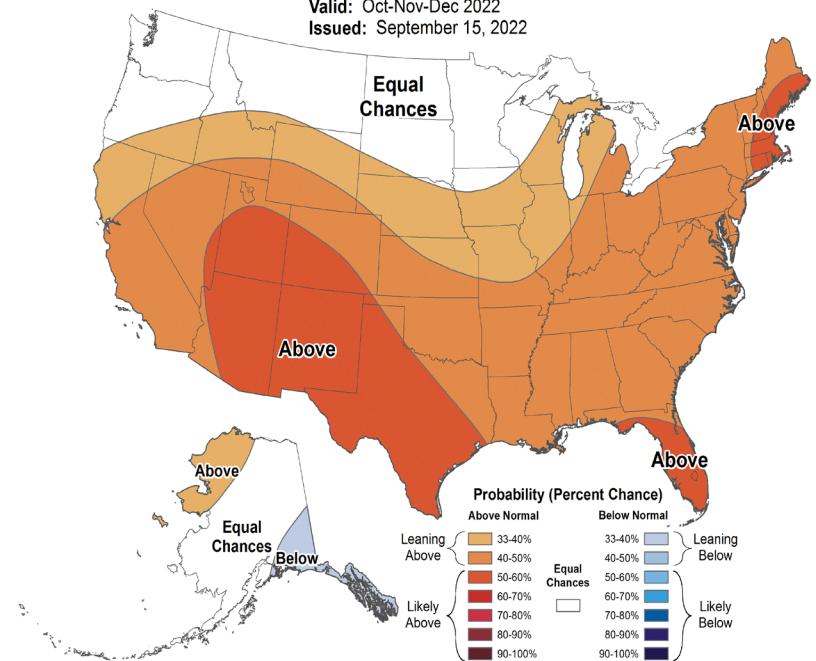
Valid: Oct-Nov-Dec 2022
Issued: September 15, 2022



Temperature

Seasonal Temperature Outlook

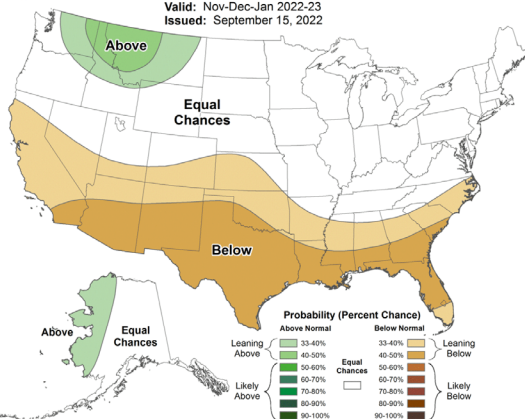
Valid: Oct-Nov-Dec 2022
Issued: September 15, 2022





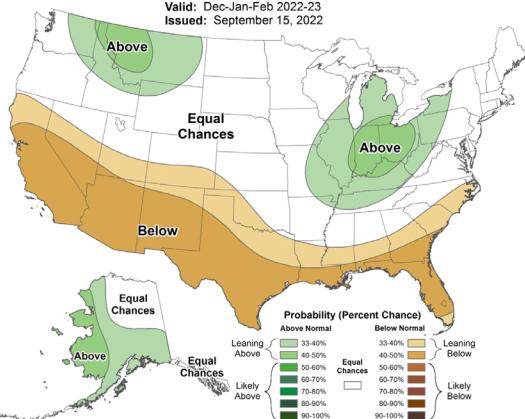
Seasonal Precipitation Outlook

Valid: Nov-Dec-Jan 2022-23
Issued: September 15, 2022



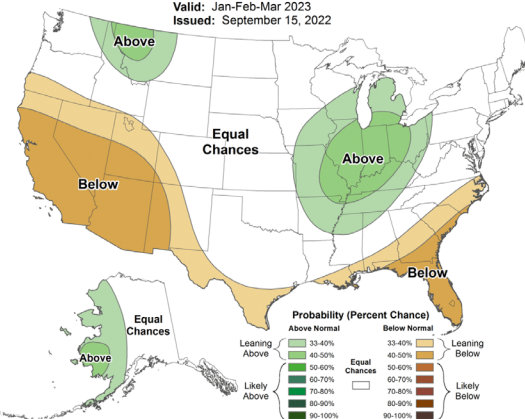
Seasonal Precipitation Outlook

Valid: Dec-Jan-Feb 2022-23
Issued: September 15, 2022



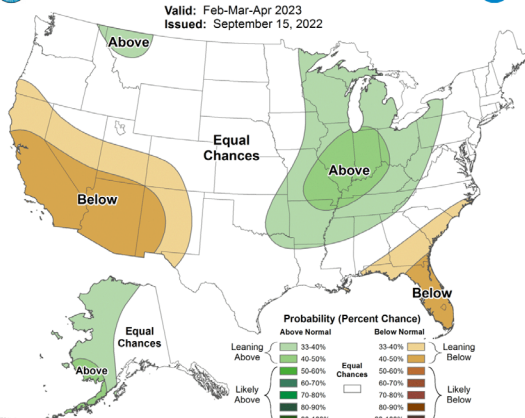
Seasonal Precipitation Outlook

Valid: Jan-Feb-Mar 2023
Issued: September 15, 2022



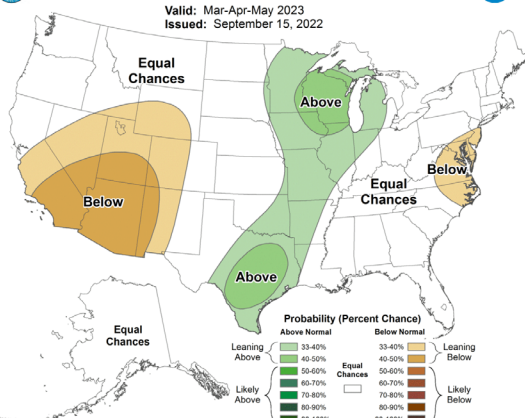
Seasonal Precipitation Outlook

Valid: Feb-Mar-Apr 2023
Issued: September 15, 2022



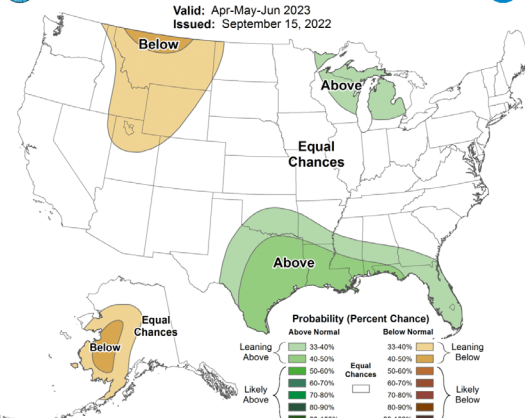
Seasonal Precipitation Outlook

Valid: Mar-Apr-May 2023
Issued: September 15, 2022



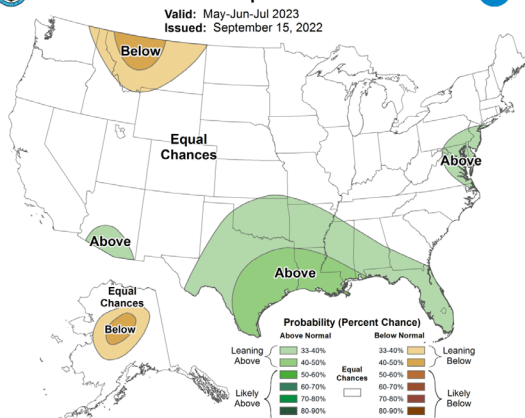
Seasonal Precipitation Outlook

Valid: Apr-May-Jun 2023
Issued: September 15, 2022



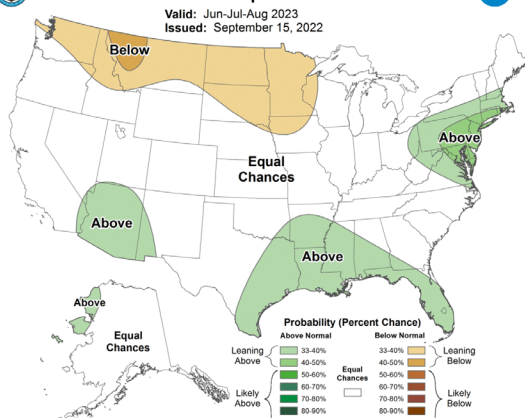
Seasonal Precipitation Outlook

Valid: May-Jun-Jul 2023
Issued: September 15, 2022



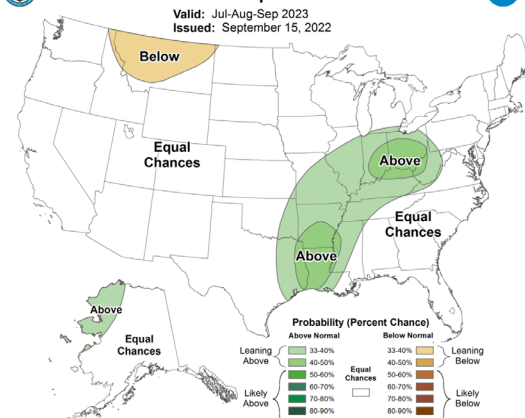
Seasonal Precipitation Outlook

Valid: Jun-Jul-Aug 2023
Issued: September 15, 2022



Seasonal Precipitation Outlook

Valid: Jul-Aug-Sep 2023
Issued: September 15, 2022



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

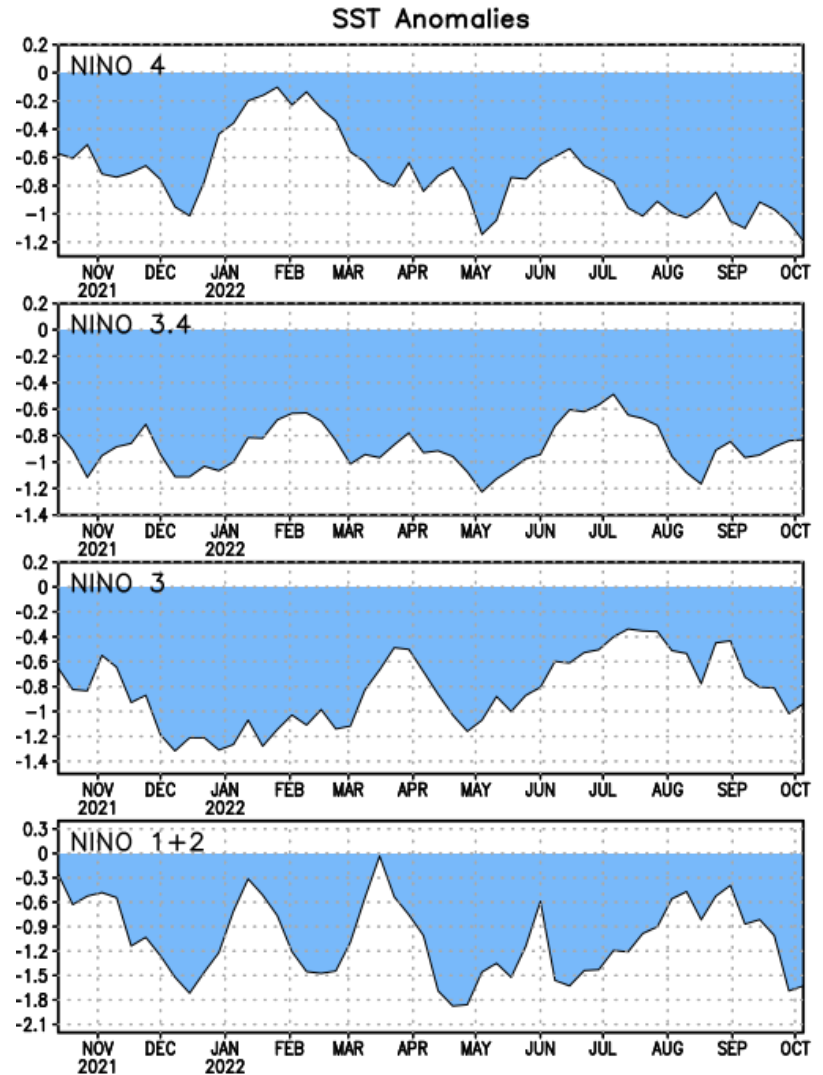
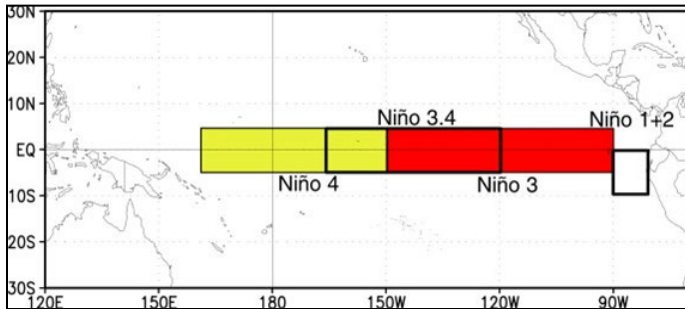
Atlantic Multidecadal Oscillation (AMO)

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

Niño Region SST Departures (°C) Recent Evolution

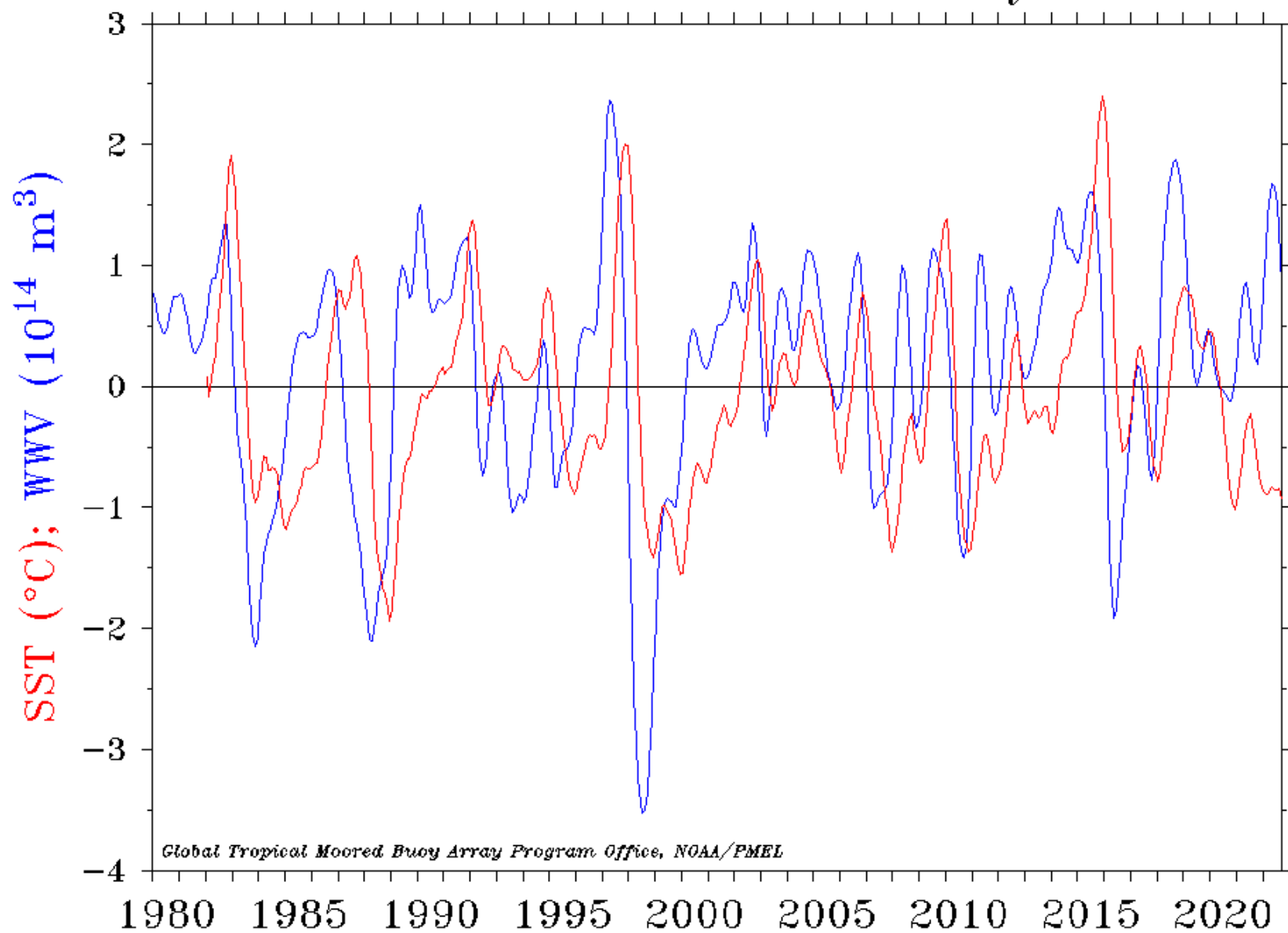
The latest weekly SST departures are:

Niño 4	-1.2°C
Niño 3.4	-0.8°C
Niño 3	-0.9°C
Niño 1+2	-1.6°C

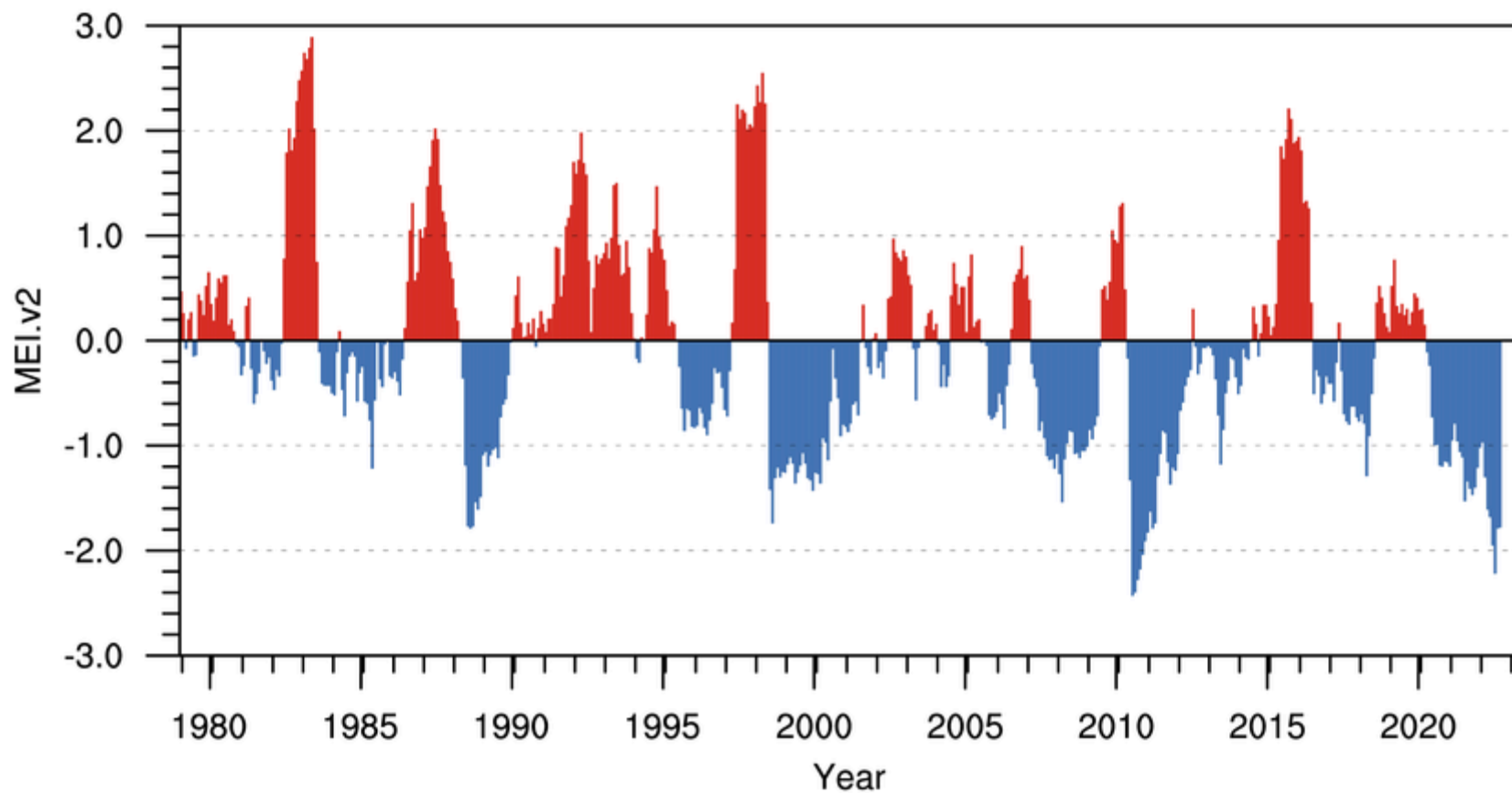


This weekly sea surface temperature data is based on OISSTv2.1 (Huang et al., 2021).

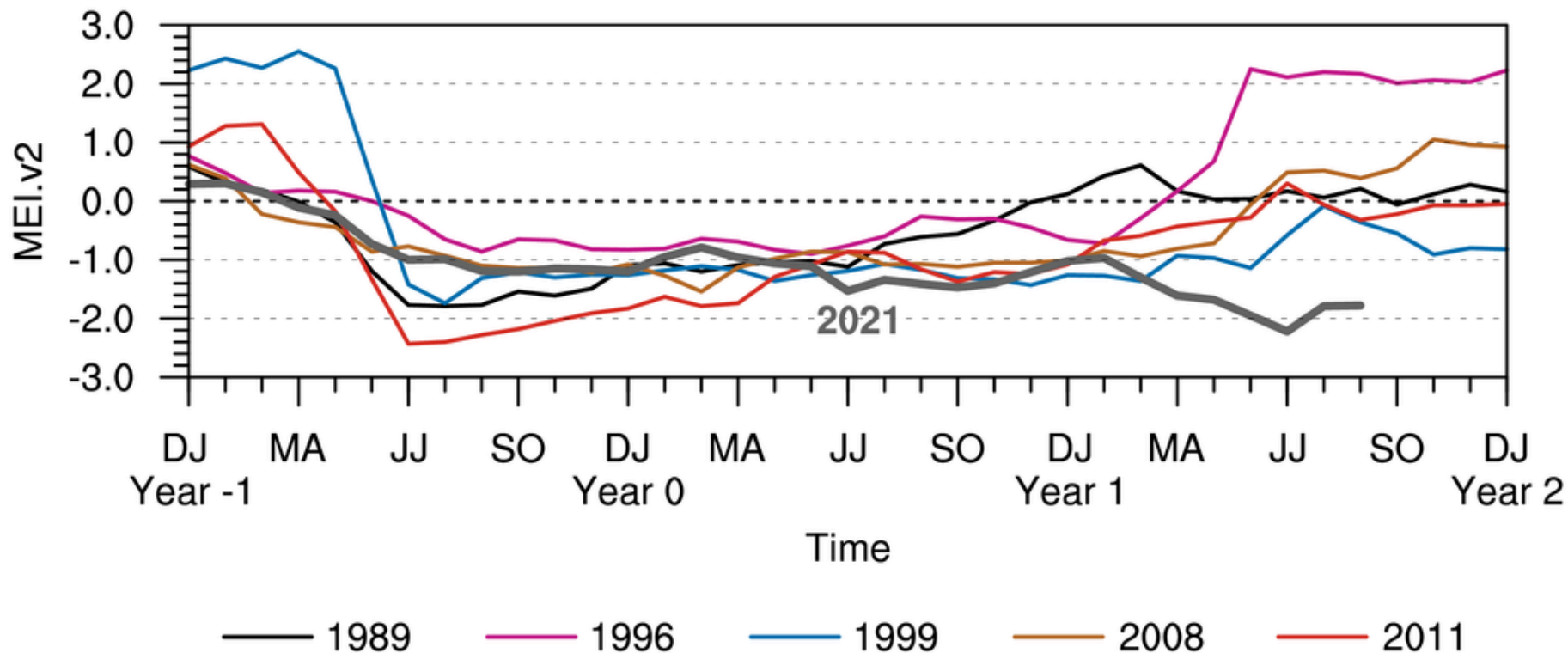
Warm Water Volume (5°N–5°S, 120°E–80°W) and NINO 3.4 SST Anomaly



Multivariate ENSO Index Version 2

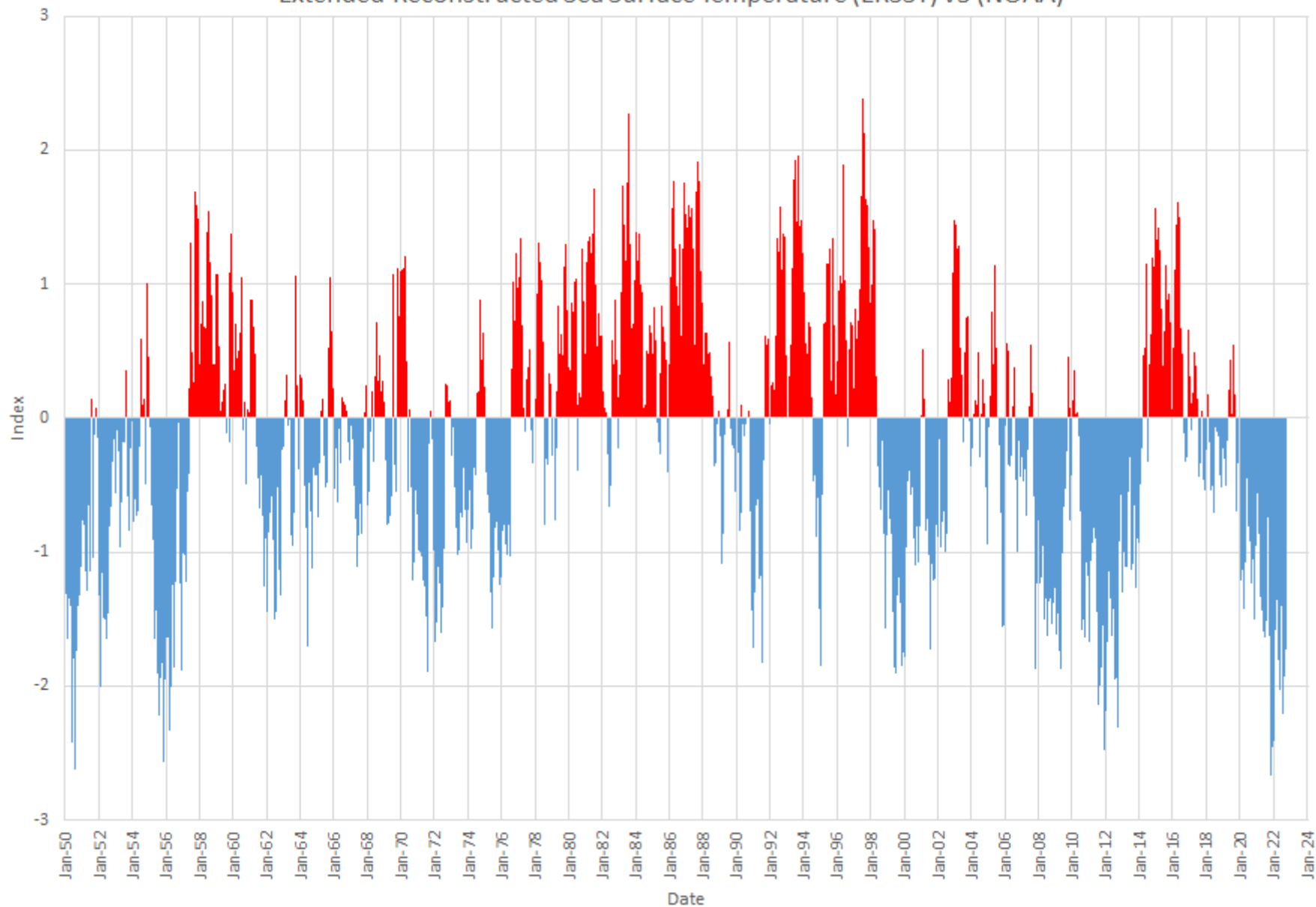


MEI.v2 Evolution of Current ENSO Event in Historical Context

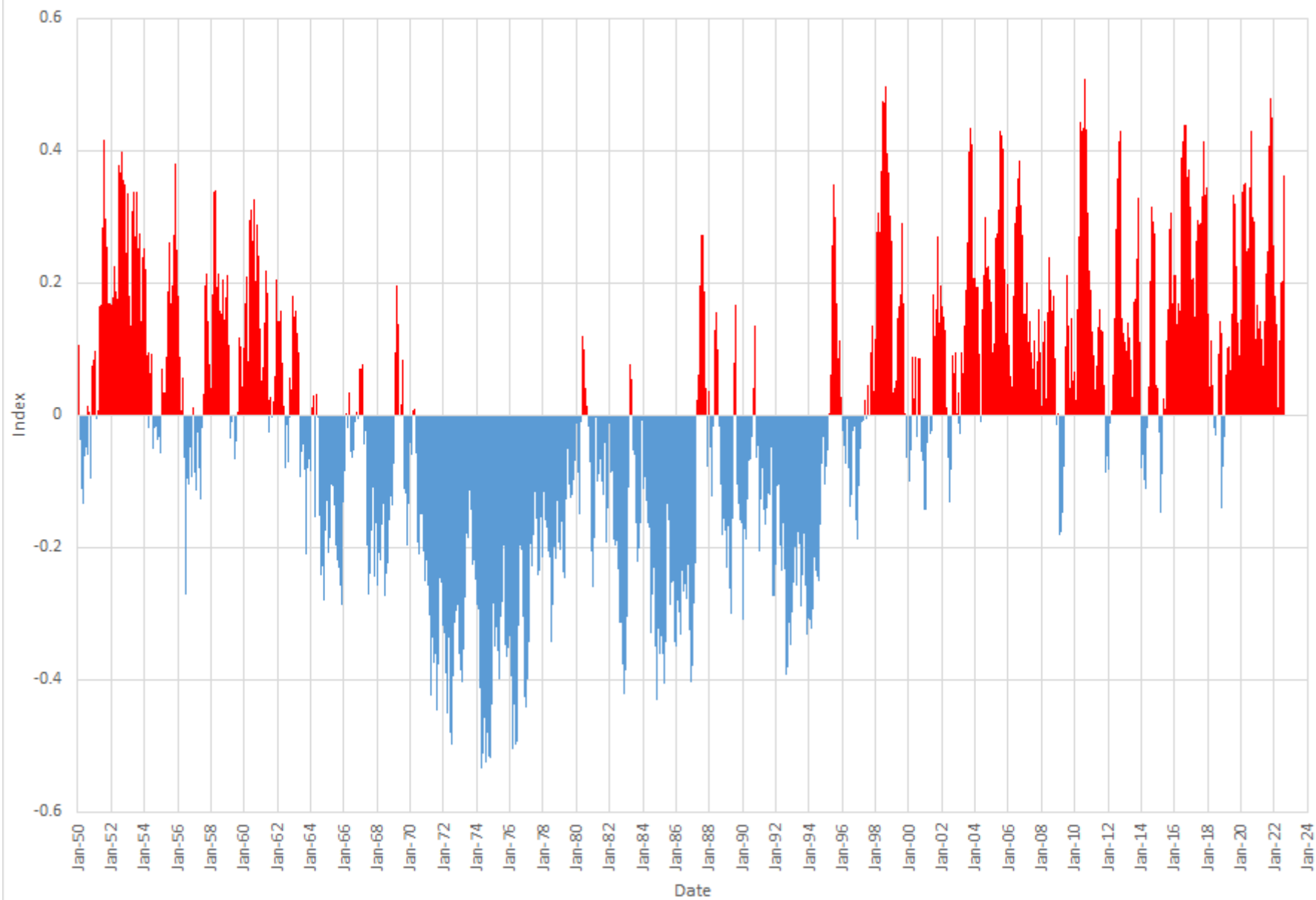


Pacific Decadal Oscillation

Extended Reconstructed Sea Surface Temperature (ERSST) v5 (NOAA)



Index of the North Atlantic Temperatures (AMO) from Kaplan Extended SST V2 (NOAA)



2022 Tropical Update



COLORADO STATE UNIVERSITY FORECAST OF ATLANTIC HURRICANE ACTIVITY FROM SEPTEMBER 29–OCTOBER 12, 2022 AND OUTLOOK FOR OCTOBER-NOVEMBER CARIBBEAN ACCUMULATED CYCLONE ENERGY

September 29-October 12

Parameter	Definition	Probability in Each Category
Above-Normal	Upper Tercile (>12 ACE)	55%
Normal	Middle Tercile (4–12 ACE)	40%
Below-Normal	Lower Tercile (<4 ACE)	5%

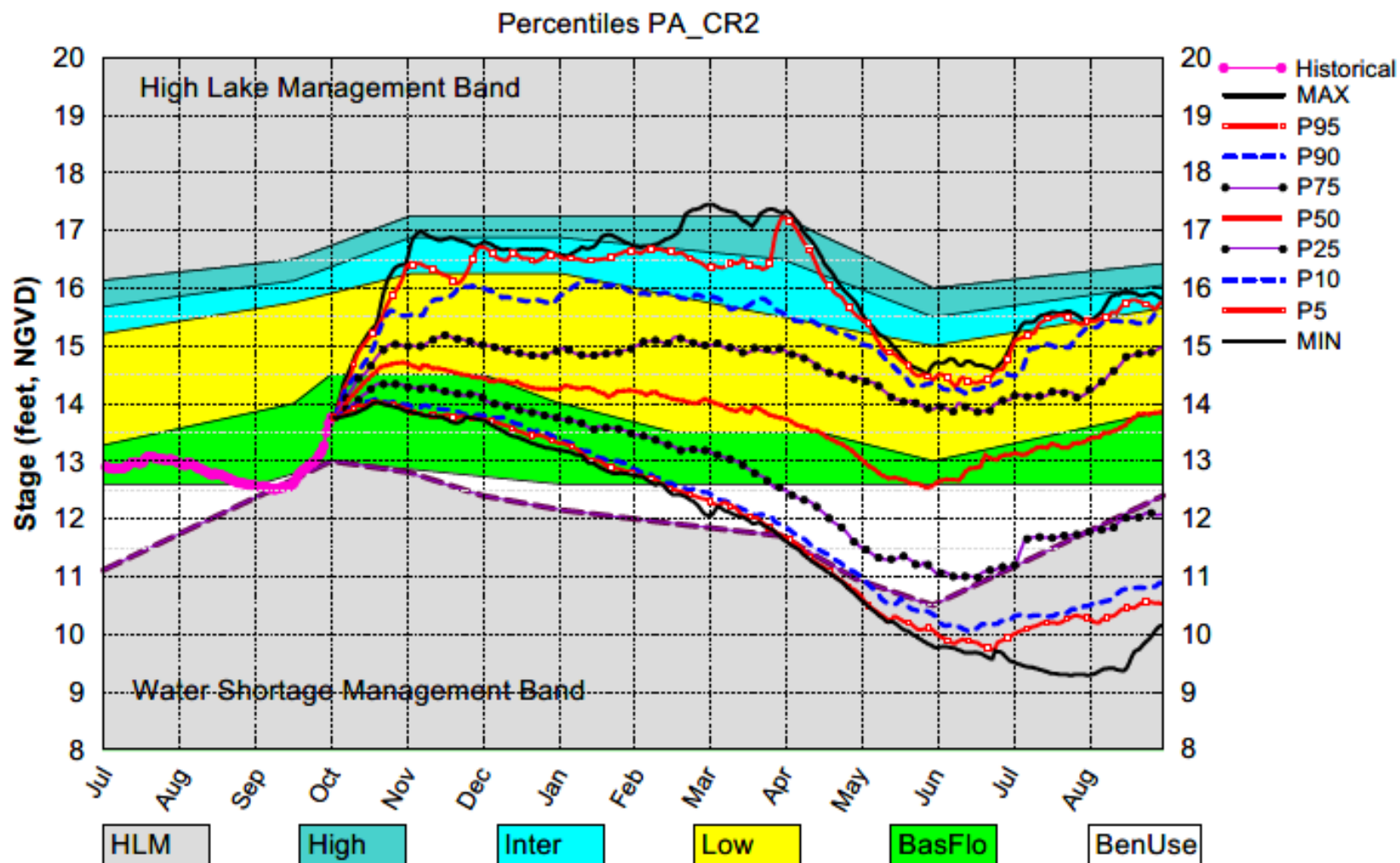
October-November Caribbean Accumulated Cyclone Energy (10^4 kt²)

The final forecast for October-November Caribbean ACE in 2022 is 15, which is well above the average and median ACE for the two-month period.

October DPA Assumptions

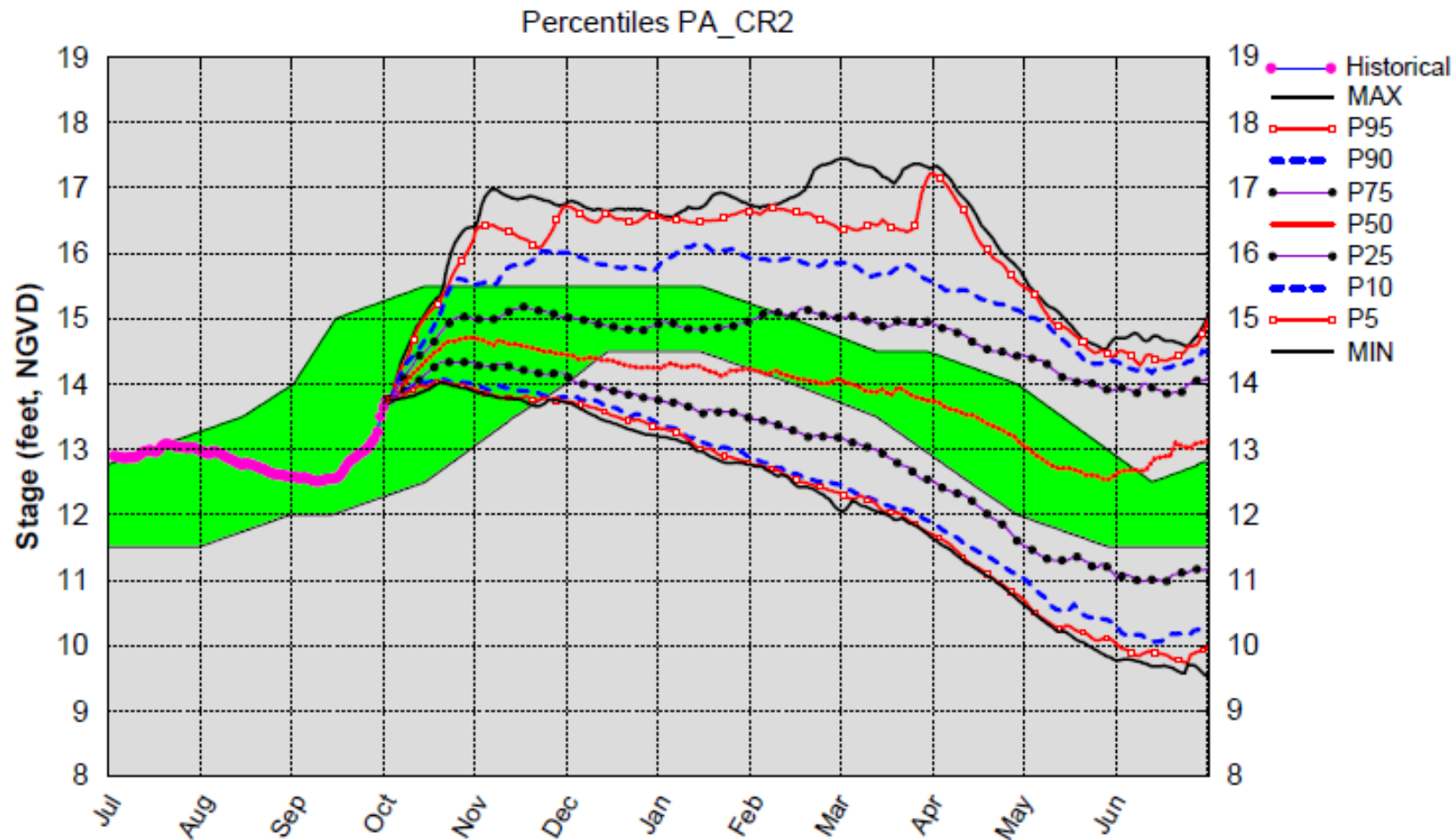
- The October 1, 2022 Dynamic Position Analysis (DPA) simulation is based on historical climatic conditions spanning the period 1965-2005. This DPA posting is made with the South Florida Water Management Model (SFWMM) v6.7.4 (Tamiami Trail) which includes the following improvement(s):
 - Improvements to include the Combined Operational Plan (COP)
- The October 1, 2022 DPA resets the initial stages for Lake Okeechobee (LOK) and the Water Conservation Areas (WCAs) on September 1st of each year of the DPA simulation and conditions the simulation to real time data during September to achieve real time stages on October 1st for LOK and WCAs.
- The Lake Okeechobee operations follow the Lake Okeechobee Regulation Schedule (LORS2008). Modeling assumptions are consistent with modeling performed for LORS2008 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 flowways under operation. STA depths are maintained to a minimum of 6 inches using Lake Okeechobee releases.

Lake Okeechobee SFWMM October 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

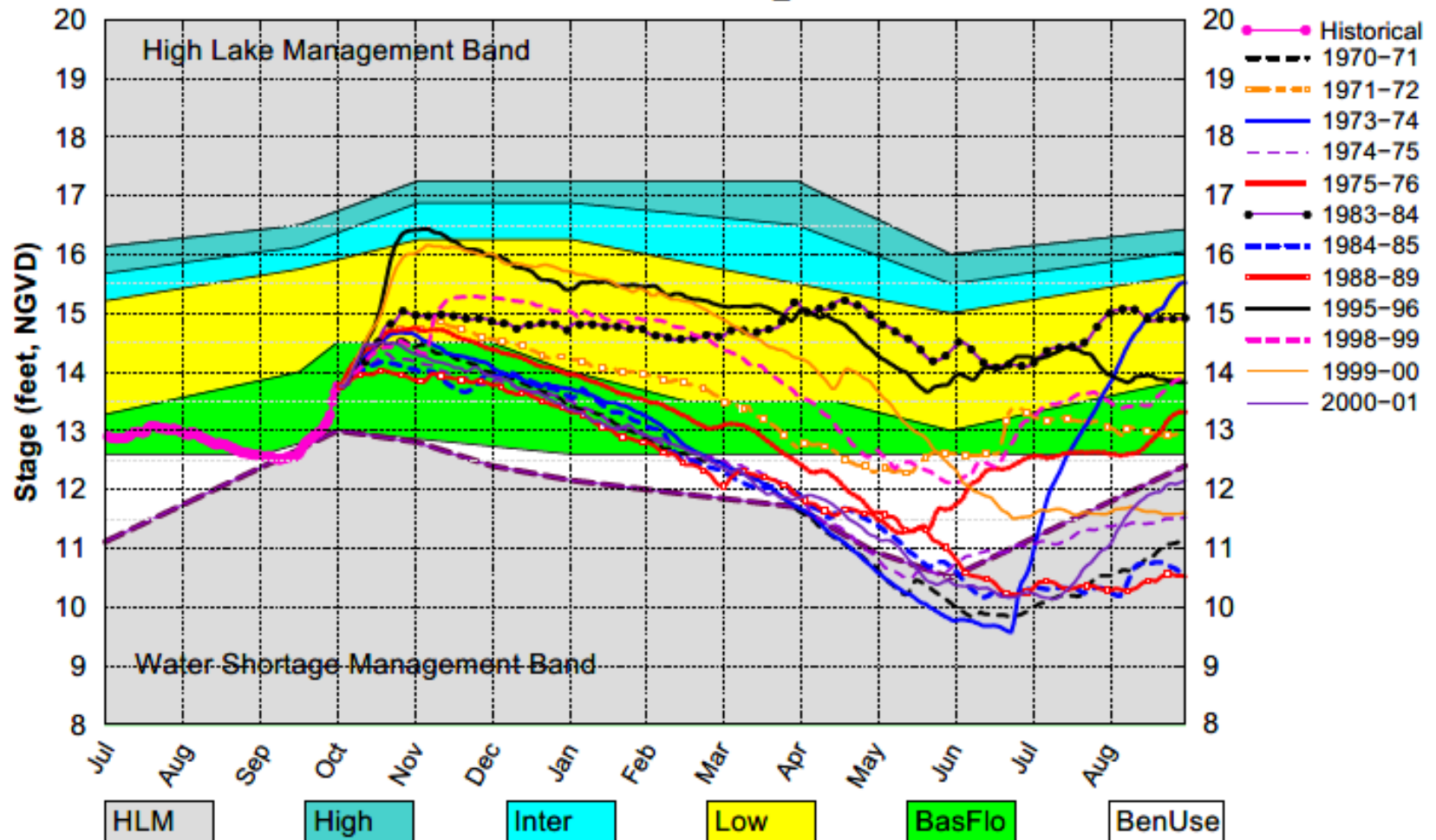
Lake Okeechobee SFWMM October 2022 Position Analysis



(See assumptions on the Position Analysis Results website)

Lake Okeechobee SFWMM October 2022 Position Analysis

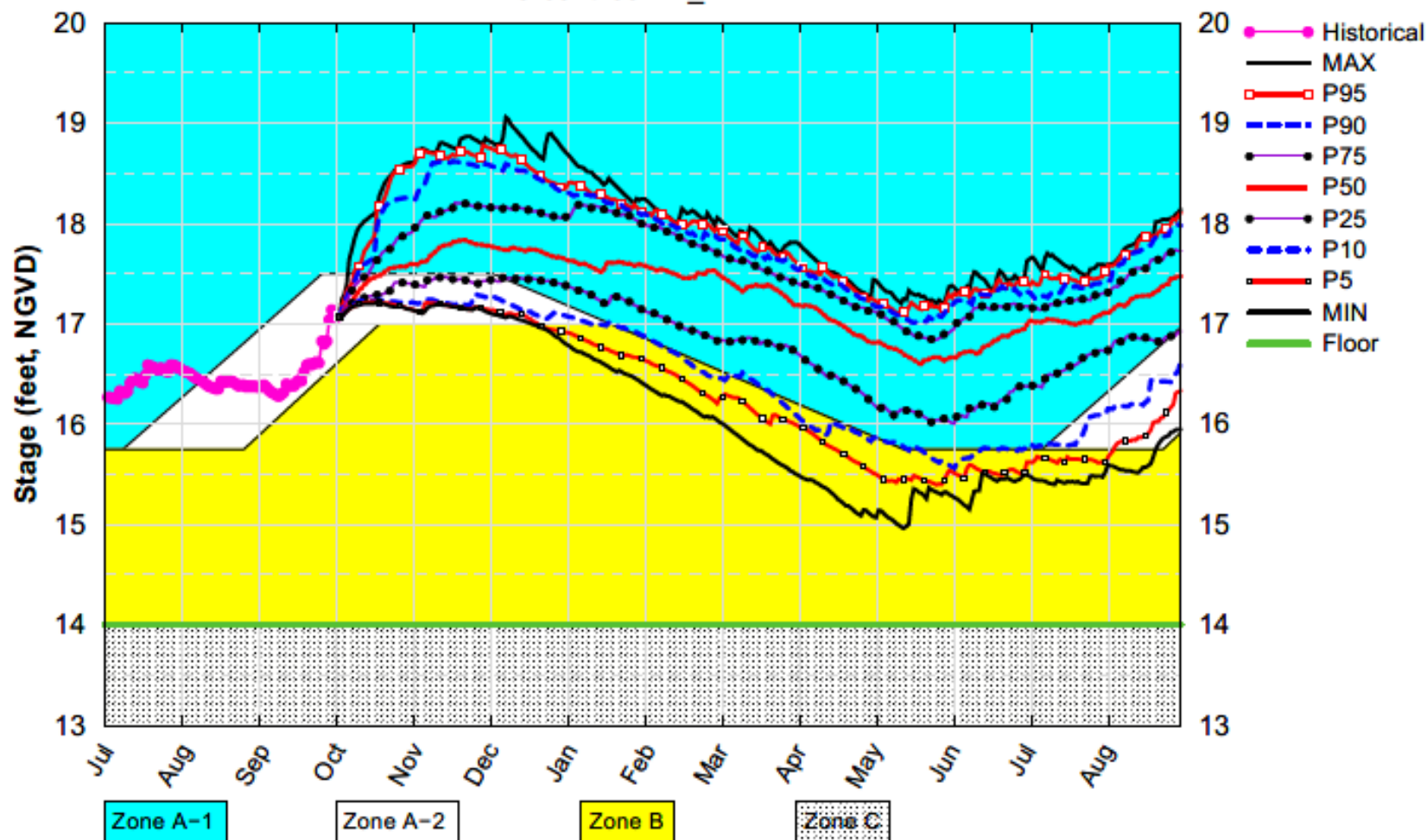
All La Nina Years Plot PA_CR2



(See assumptions on the Position Analysis Results website)

WCA1 SFWMM October 2022 Position Analysis

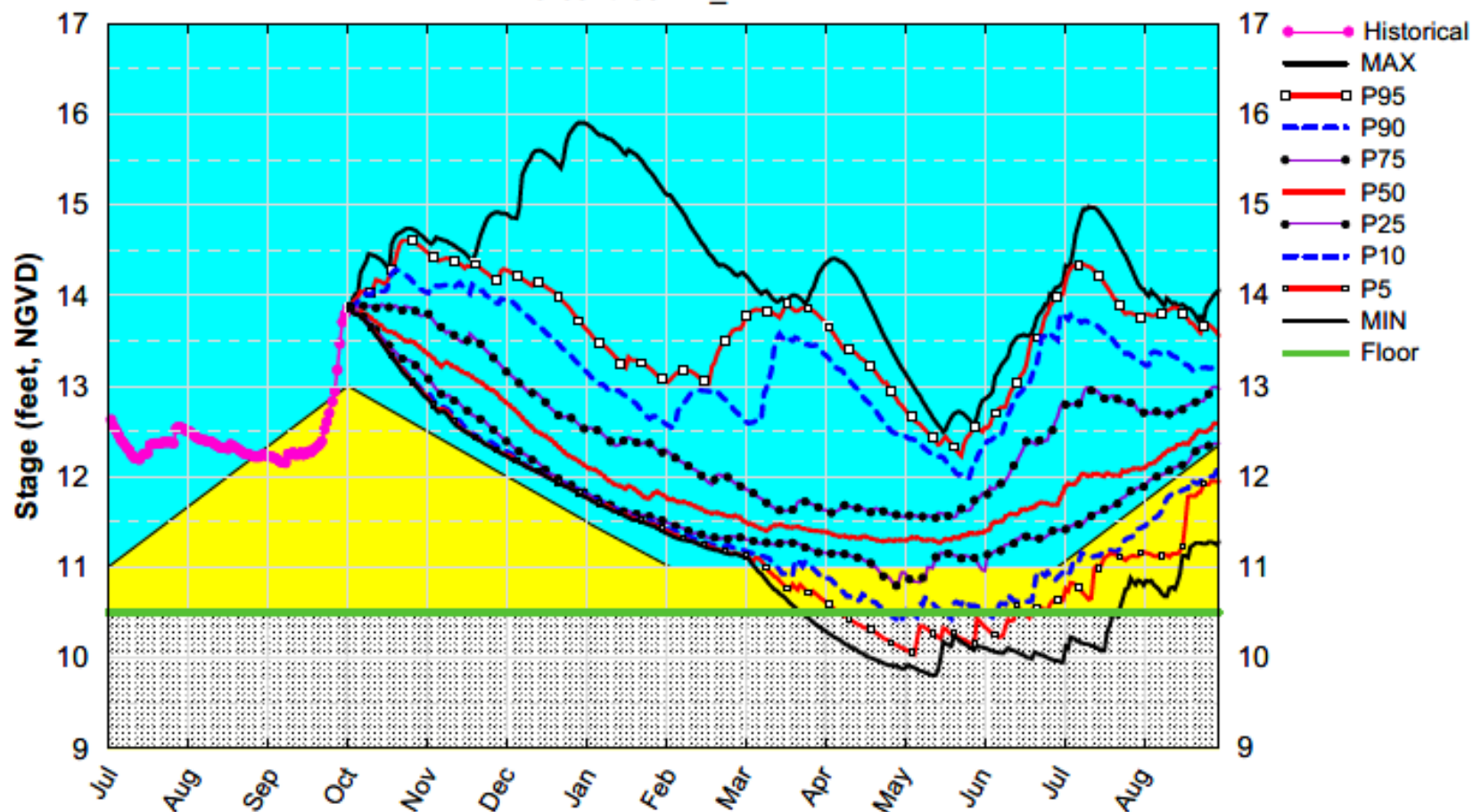
Percentiles PA_DPA4



(See assumptions on the Position Analysis Results website)

WCA2A SFWMM October 2022 Position Analysis

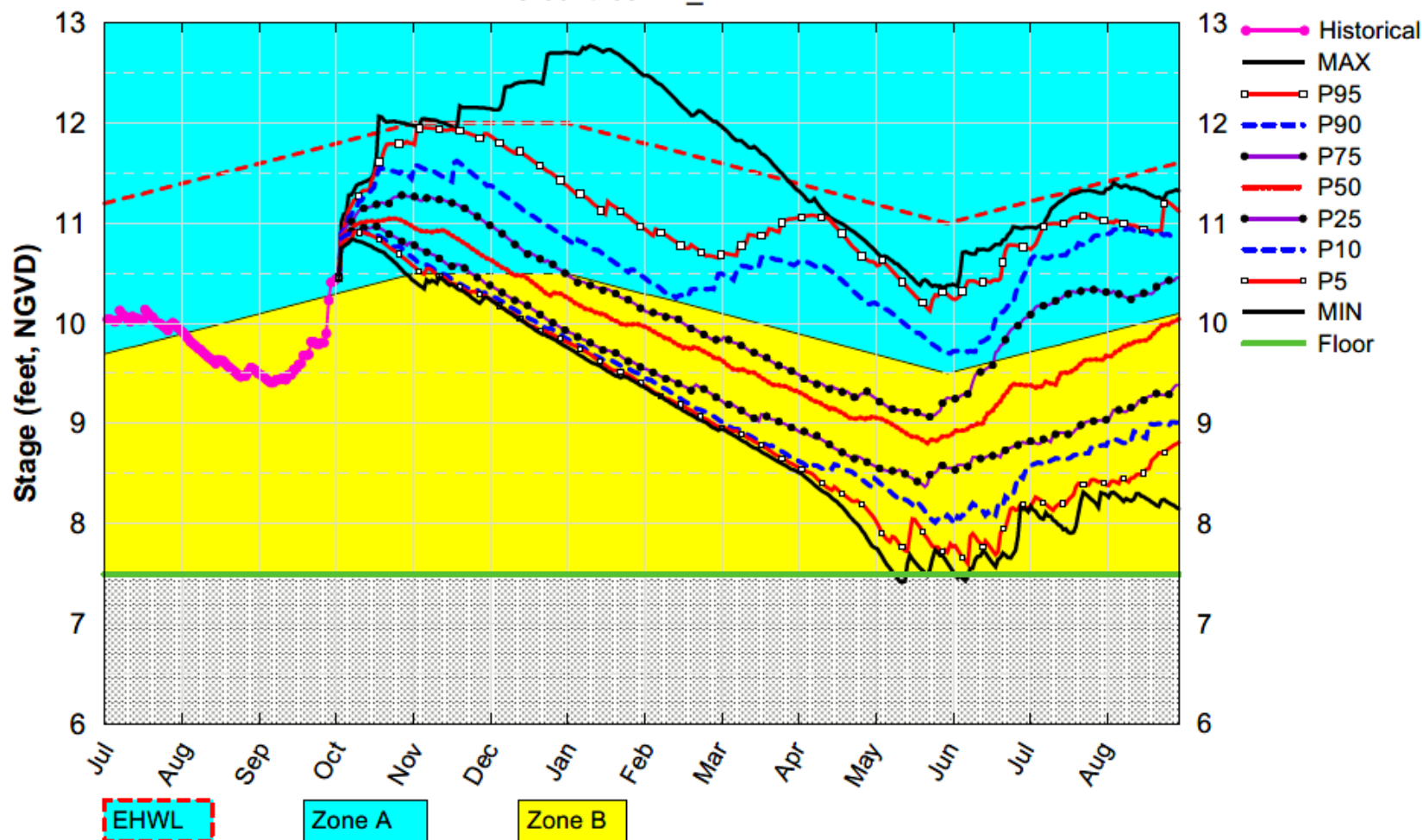
Percentiles PA_DPA4



(See assumptions on the Position Analysis Results website)

WCA3A SFWMM October 2022 Position Analysis

Percentiles PA_DPA4



(See assumptions on the Position Analysis Results website)