# Extended Hydrologic Outlook
# April 12, 2022

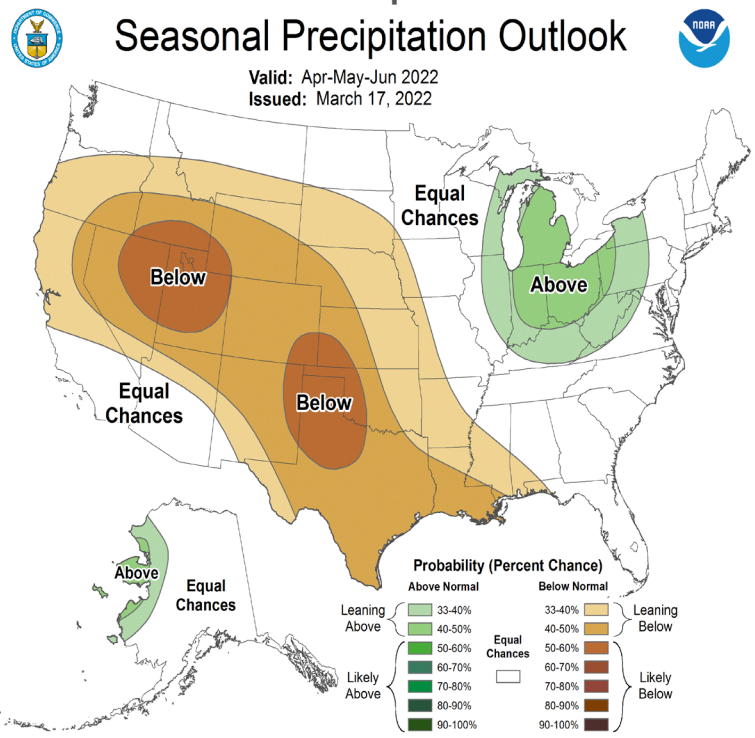
- The Climate Prediction Center (CPC) is forecasting equal chances of above normal, normal or below normal rainfall for April through June.
- La Niña is present and favored to continue into the summer (53% chance during June-August 2022), with a 40-50% chance of La Niña or ENSO-neutral thereafter.
- 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

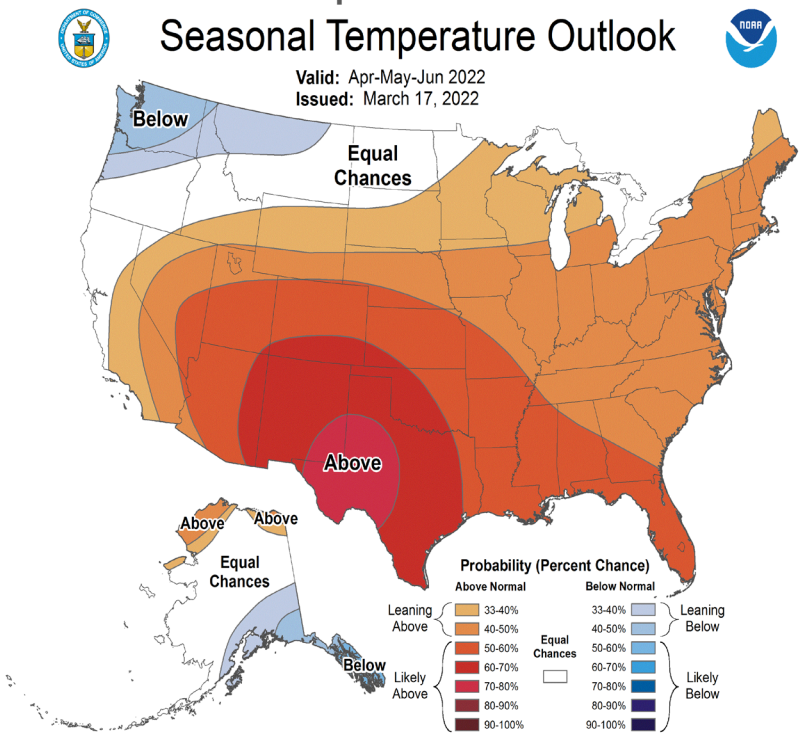
## April - June 2022

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

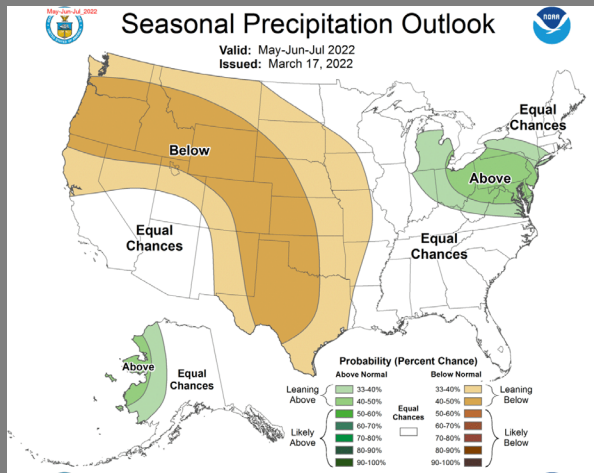
### Precipitation

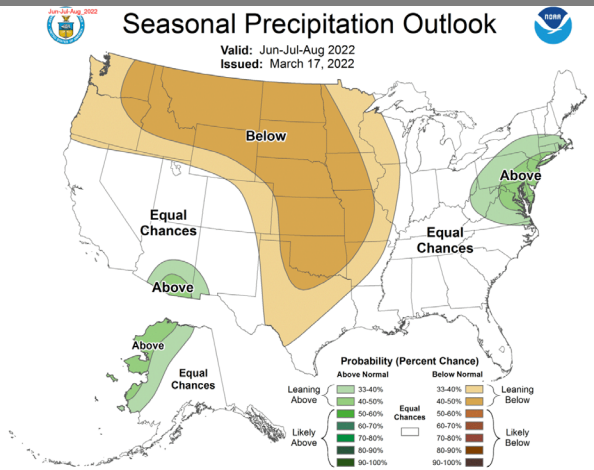


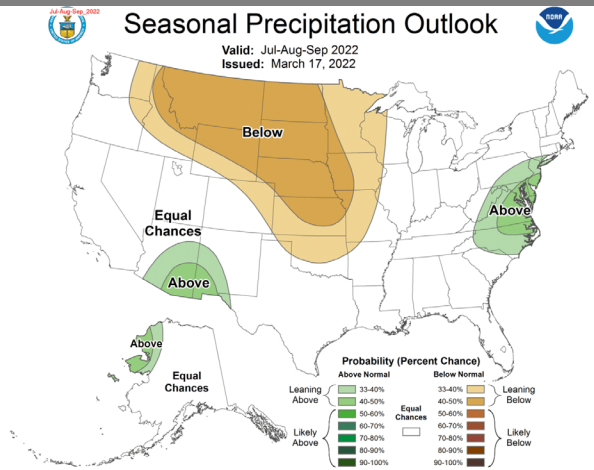

### Temperature

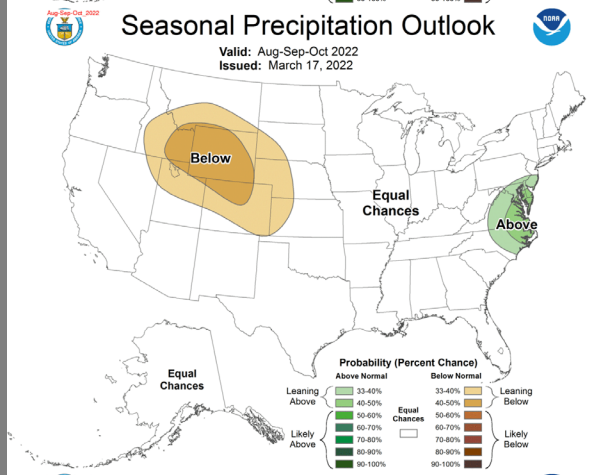


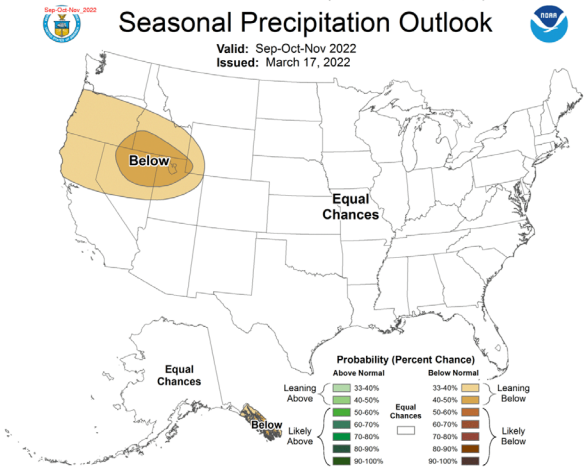

Prepared by: Climate Prediction Center/NCEP

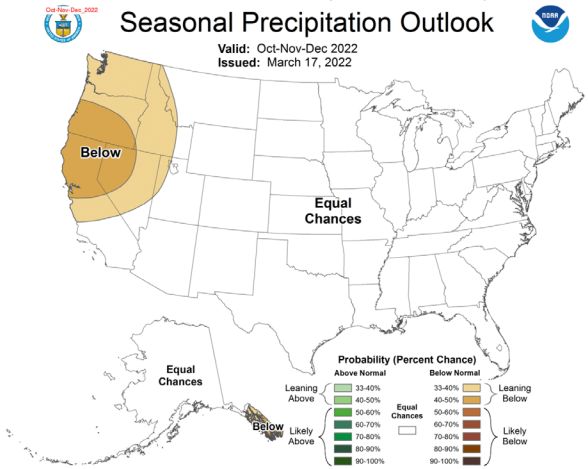


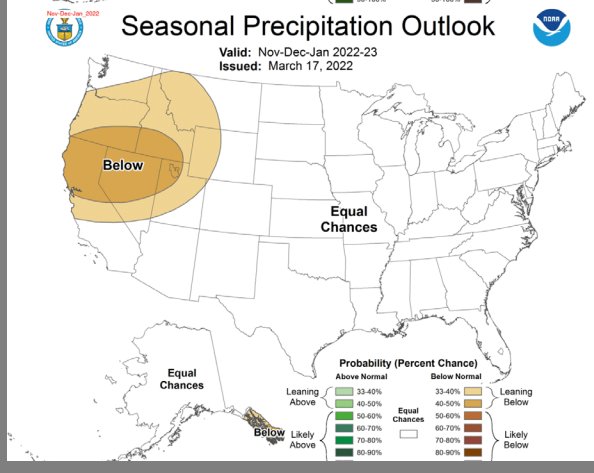



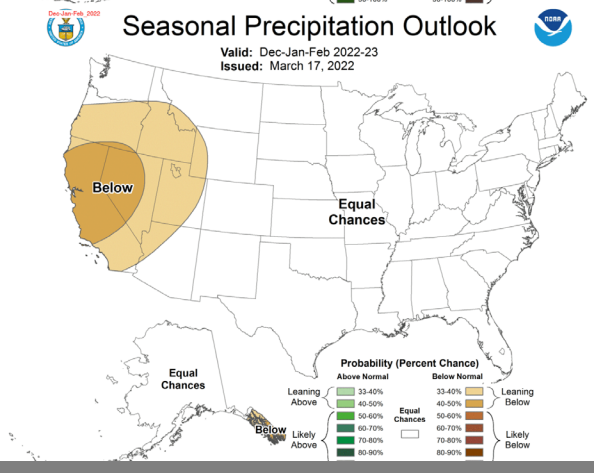



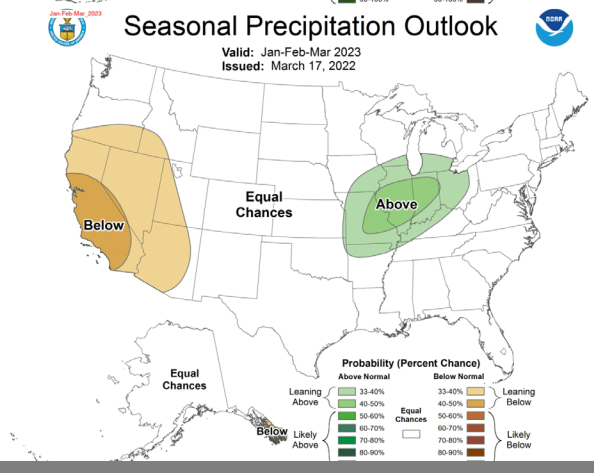




Prepared by: Climate Prediction Center/NCEP

# 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**

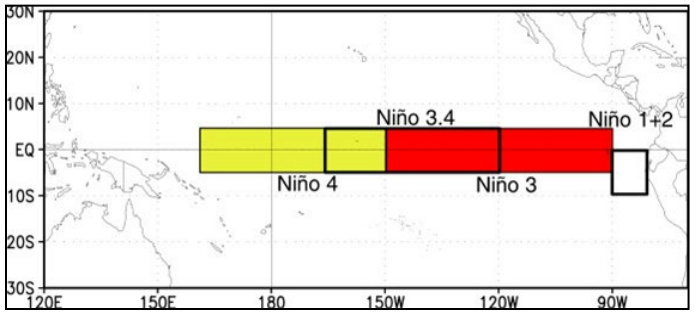
**Atlantic Multidecadal Oscillation (AMO)**

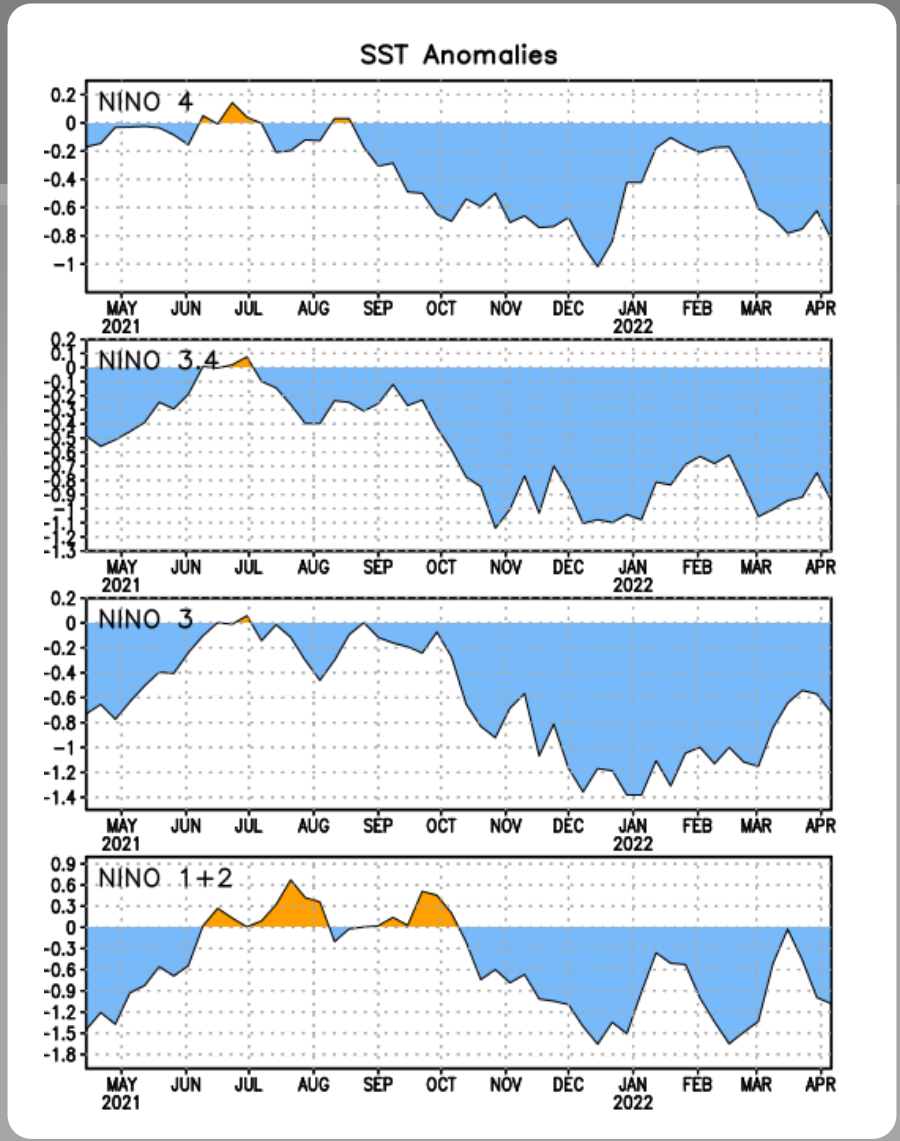
- **Average annual inflow to Lake Okeechobee is nearly 50% greater during the warm phase compared to the cold phase of the AMO, easterly flow toward south Florida affected by phase**

# Niño Region SST Departures (ºC) Recent Evolution

The latest weekly SST departures are:

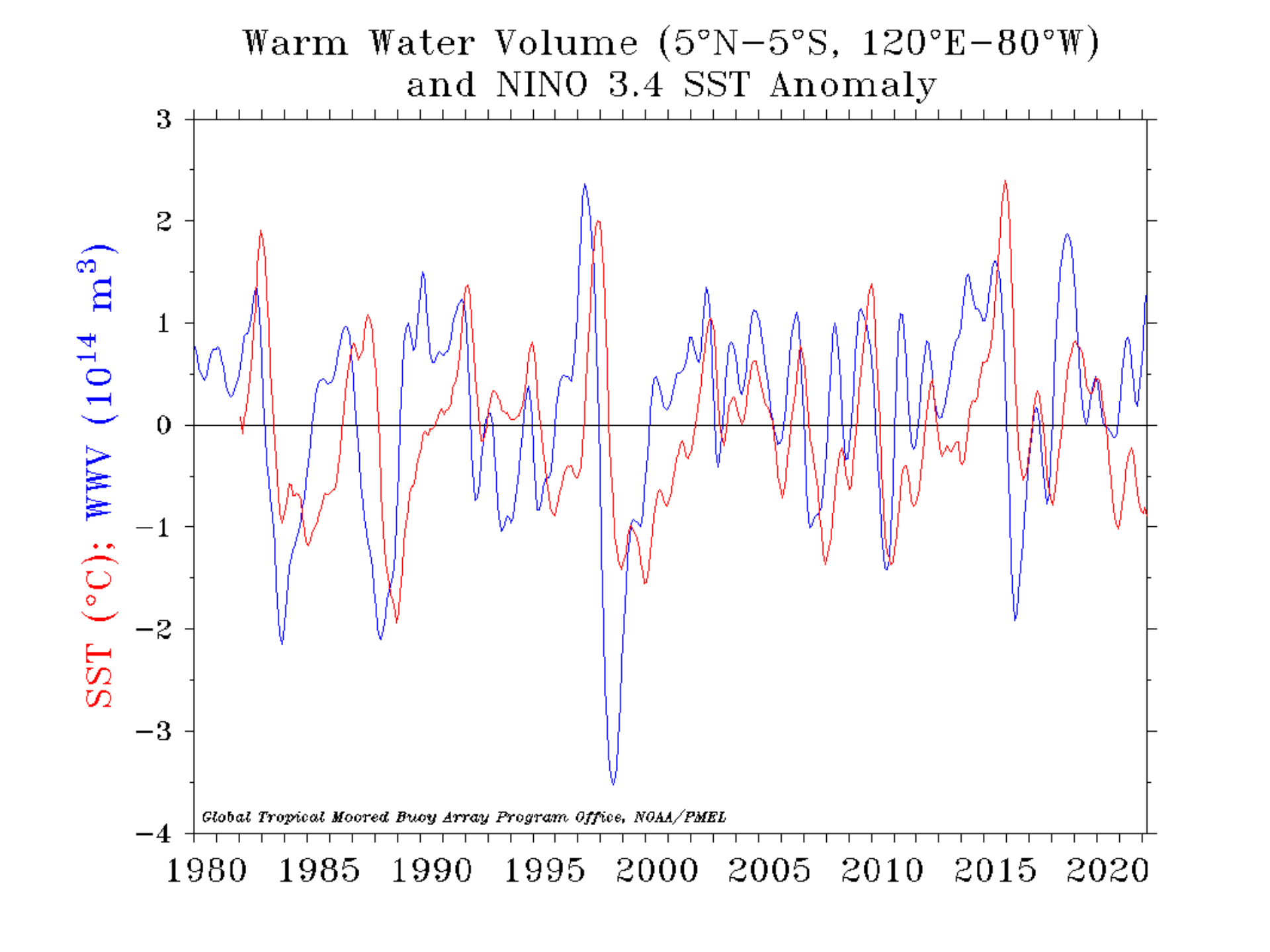
| | |
|---|---|
| Niño 4 | -0.8ºC |
| Niño 3.4 | -0.9ºC |
| Niño 3 | -0.7ºC |
| Niño 1+2 | -1.1ºC |

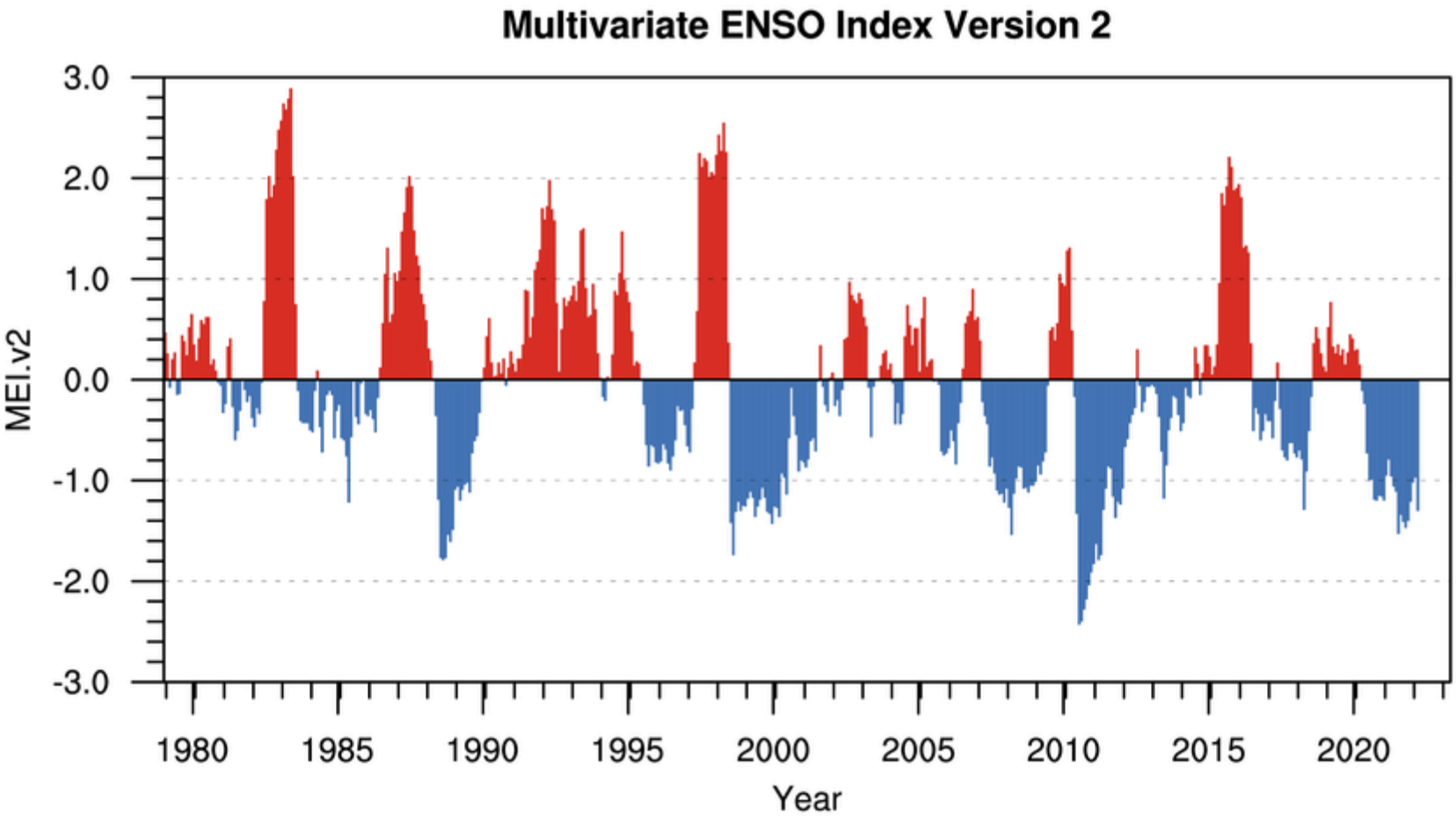


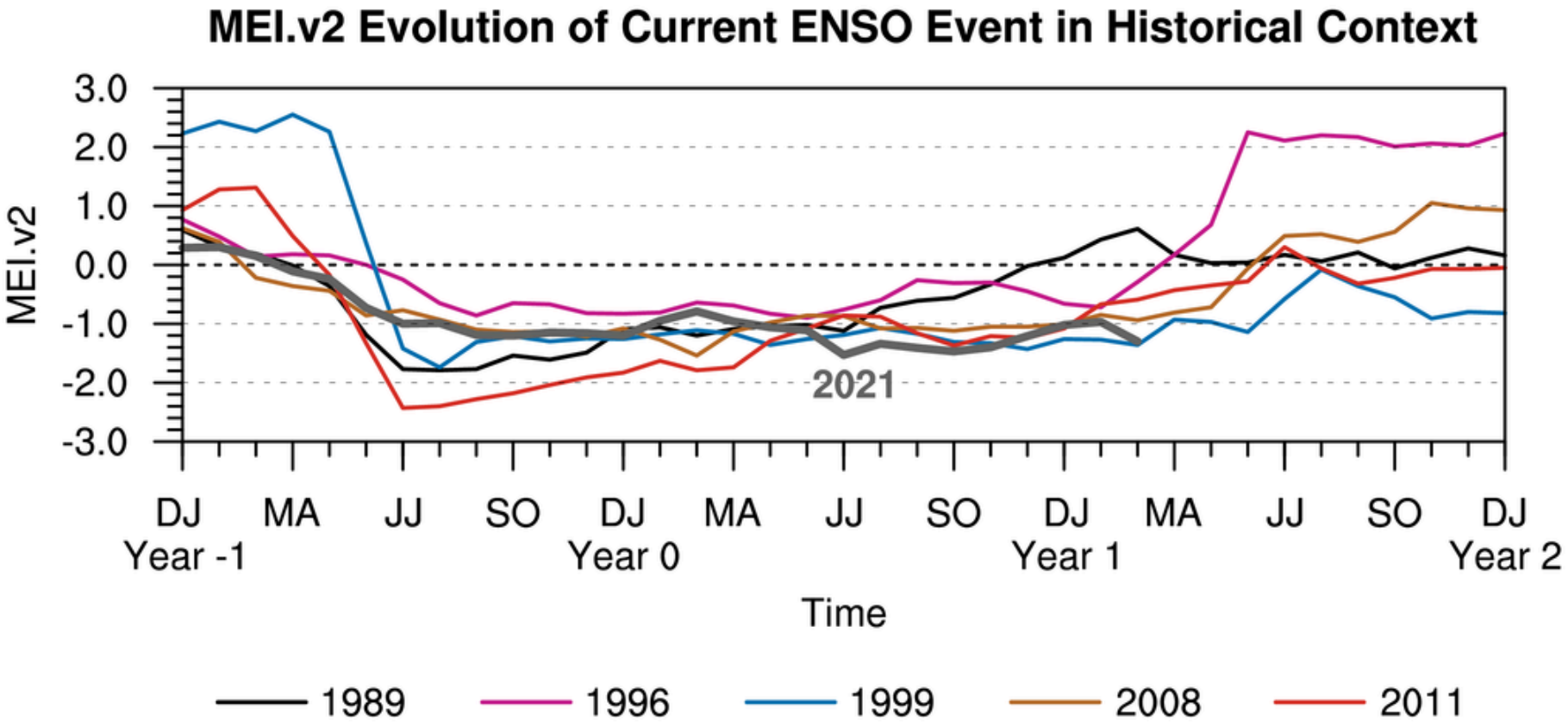

This weekly sea surface temperature data is based on OISSTv2.1 (Huang et al., 2021).

Prepared by: Climate Prediction Center/NCEP

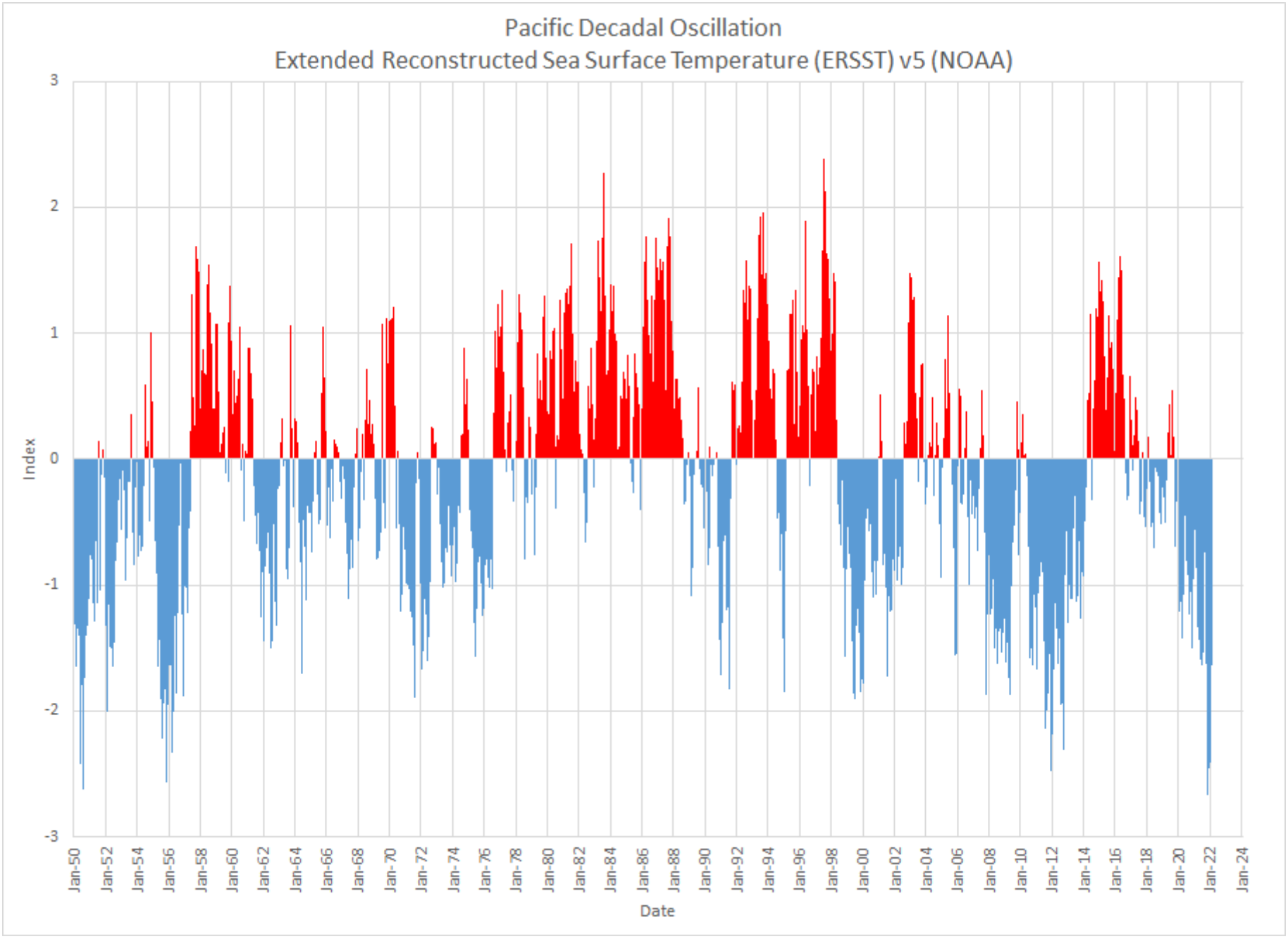

Warm Water Volume (5°N–5°S, 120°E–80°W)
and NINO 3.4 SST Anomaly
SST (°C); WWV ($10^{14}$ $m^3$)
3
2
1
0
−1
−2
−3
−4
1980
1985
1990
1995
2000
2005
2010
2015
2020
Global Tropical Moored Buoy Array Program Office, NOAA/PMEL

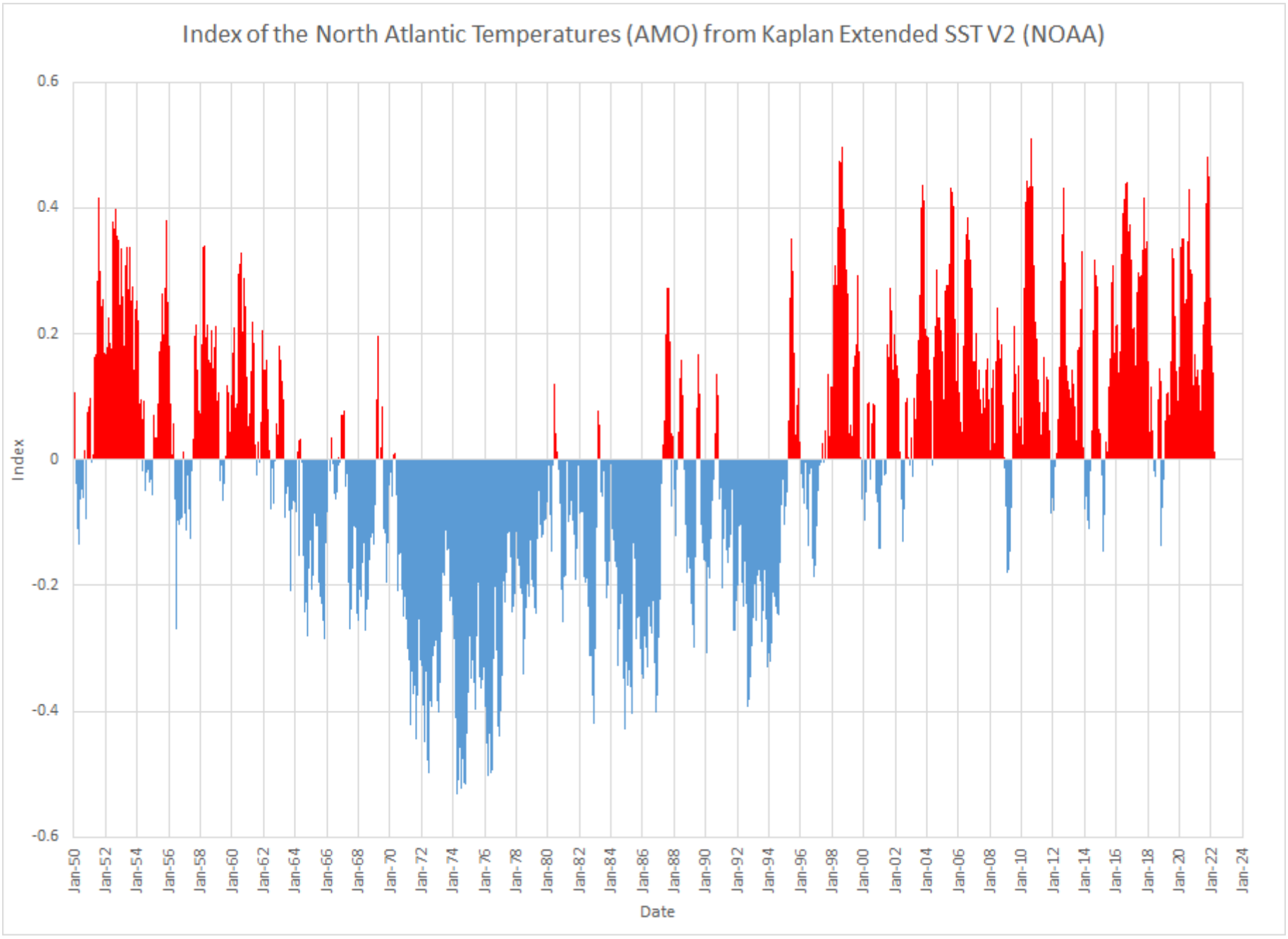



Prepared by: NOAA Physical Sciences Laboratory




Prepared by: NOAA Physical Sciences Laboratory

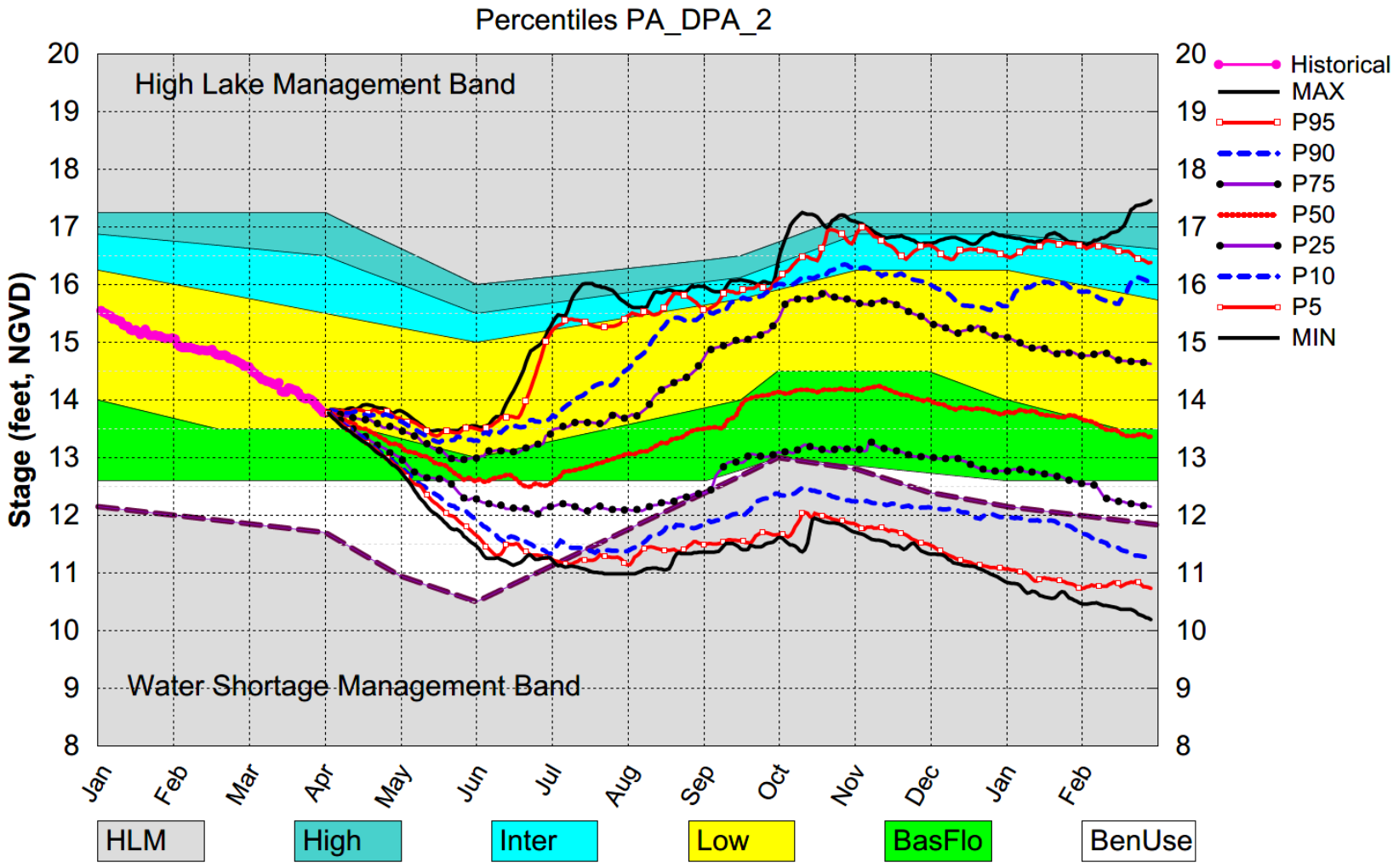

Pacific Decadal Oscillation
Extended Reconstructed Sea Surface Temperature (ERSST) v5 (NOAA)
Index
3
2
1
0
-1
-2
-3
Jan-50
Jan-52
Jan-54
Jan-56
Jan-58
Jan-60
Jan-62
Jan-64
Jan-66
Jan-68
Jan-70
Jan-72
Jan-74
Jan-76
Jan-78
Jan-80
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Date


Index of the North Atlantic Temperatures (AMO) from Kaplan Extended SST V2 (NOAA)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Index
Jan-50
Jan-52
Jan-54
Jan-56
Jan-58
Jan-60
Jan-62
Jan-64
Jan-66
Jan-68
Jan-70
Jan-72
Jan-74
Jan-76
Jan-78
Jan-80
Jan-82
Jan-84
Jan-86
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Date

# April DPA Assumptions

- The April 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 April 1, 2022 DPA resets the initial stages for Lake Okeechobee (LOK) and the Water Conservation Areas (WCAs) on March 1st of each year of the DPA simulation and conditions the simulation to real time data during March to achieve real time stages on April 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.

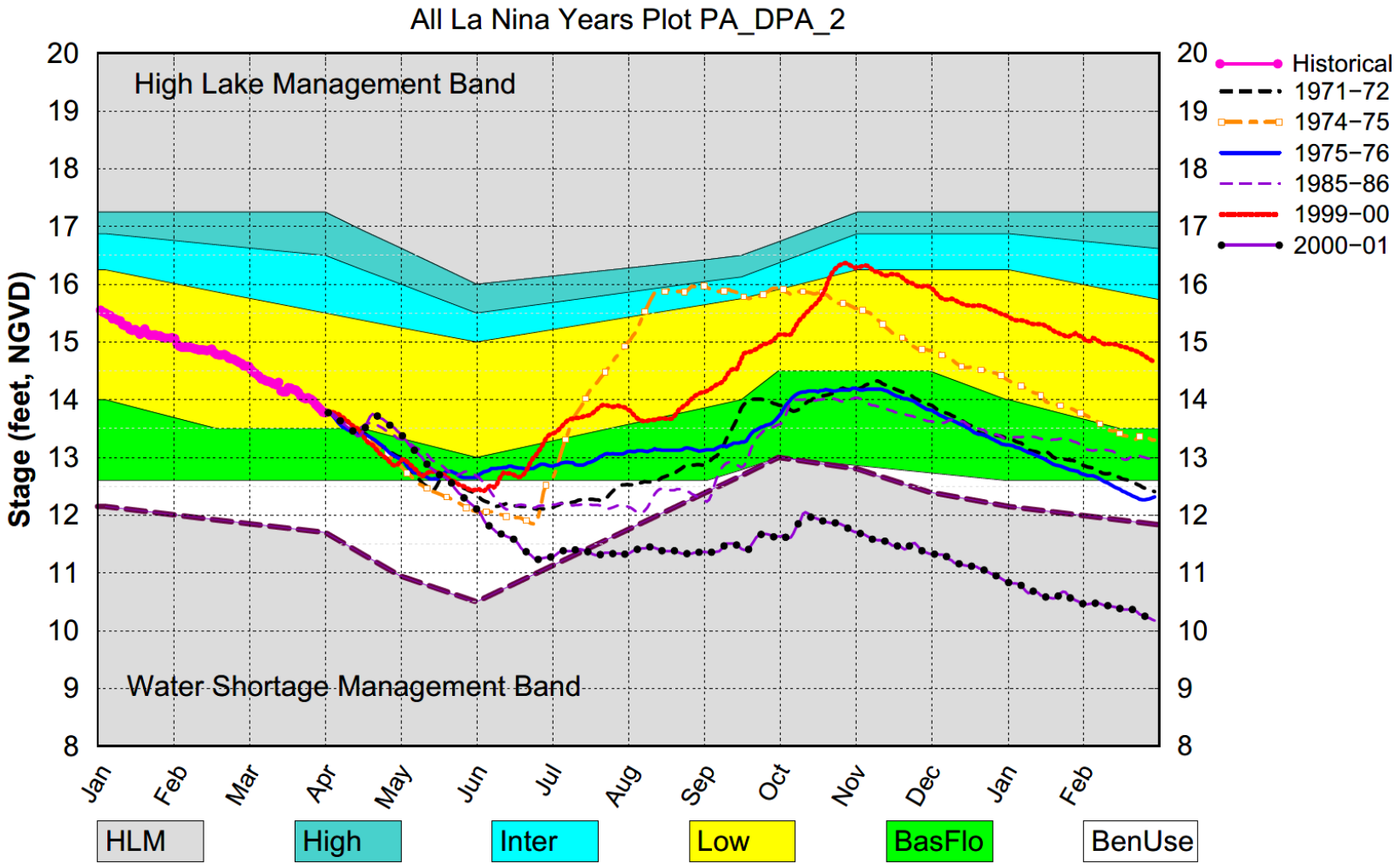
# Lake Okeechobee SFWMM April 2022 Position Analysis




(See assumptions on the Position Analysis Results website)

Sat Apr 9 15:42:07 2022

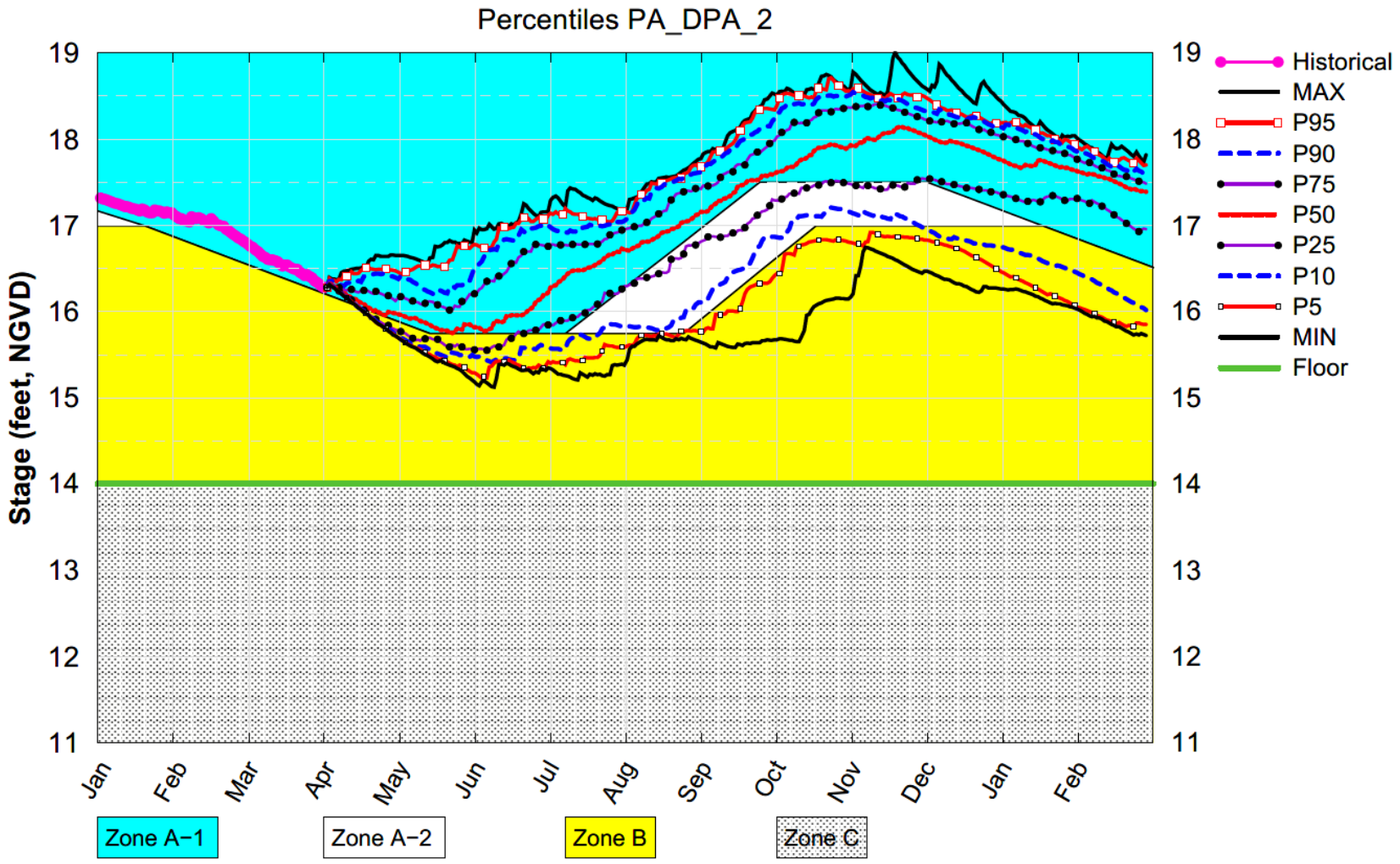
# Lake Okeechobee SFWMM April 2022 Position Analysis




(See assumptions on the Position Analysis Results website)

Sat Apr 9 10:34:13 2022

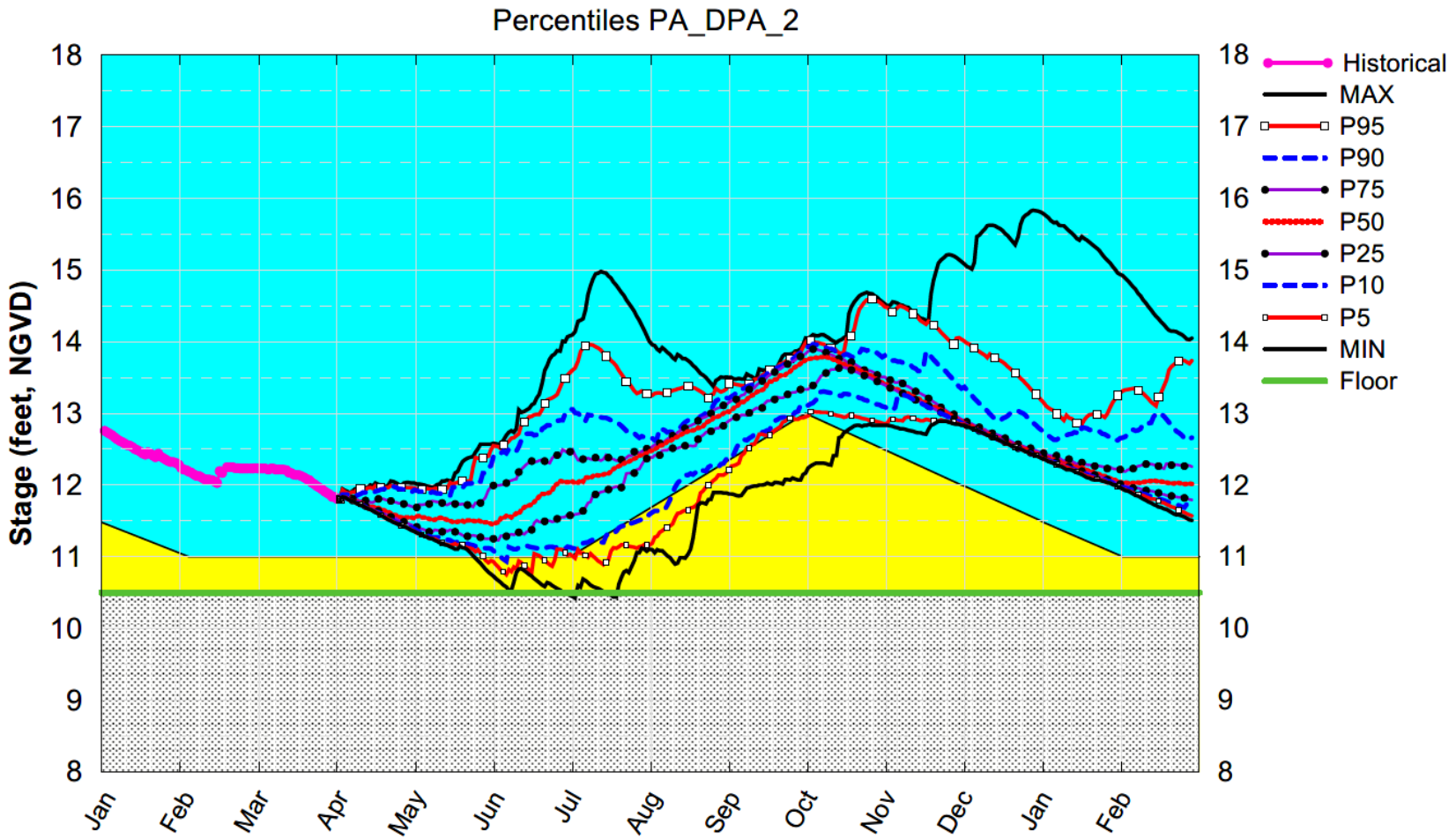
# WCA1 SFWMM April 2022 Position Analysis




(See assumptions on the Position Analysis Results website)

Mon Apr 11 14:21:57 2022

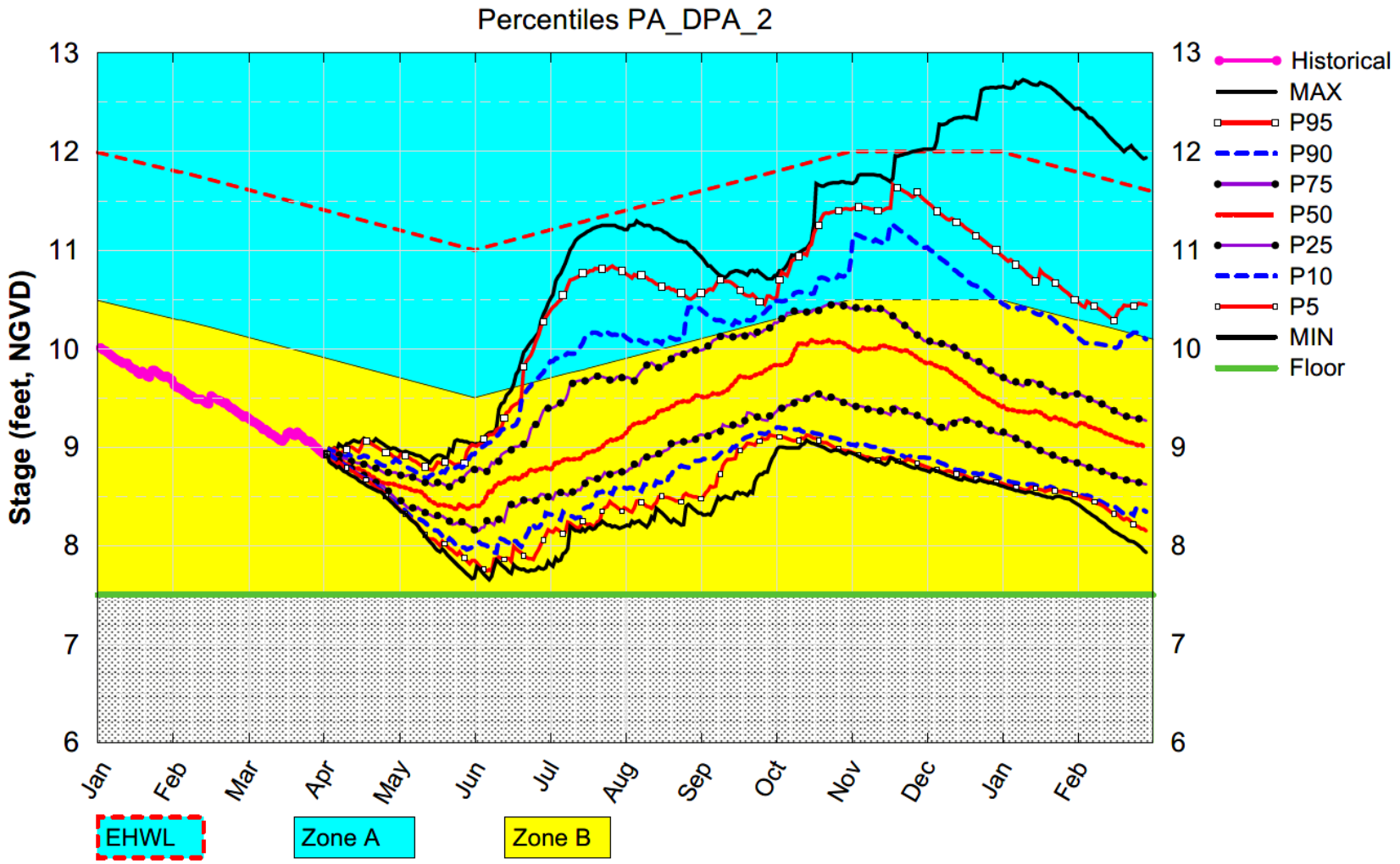
# WCA2A SFWMM April 2022 Position Analysis




(See assumptions on the Position Analysis Results website)

Mon Apr 11 14:19:44 2022

# WCA3A SFWMM April 2022 Position Analysis




(See assumptions on the Position Analysis Results website)

Mon Apr 11 14:17:48 2022