



Office of the Washington State Climatologist



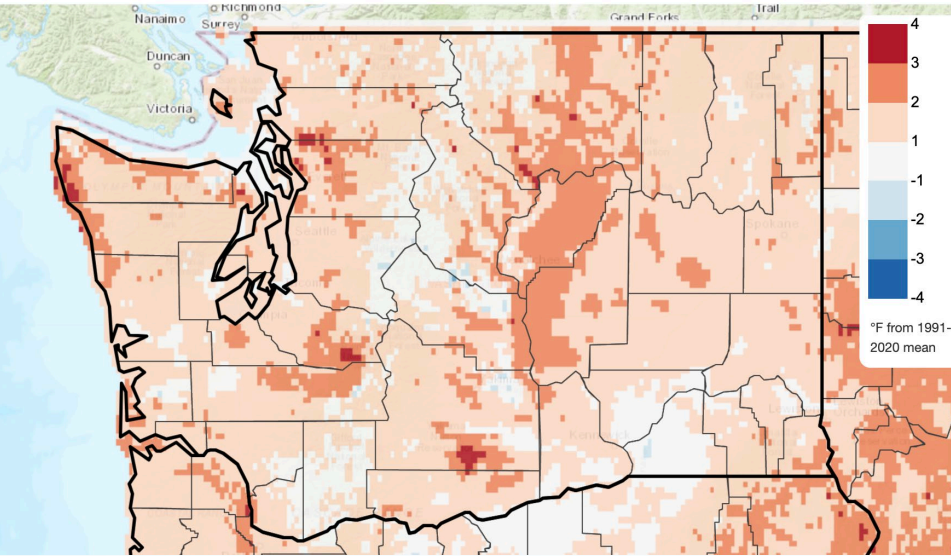
Current Conditions and Seasonal Outlook

Karin Bumbaco & Nick Bond
Office of the Washington State Climatologist
Climate Impacts Group
University of Washington
27 March 2024

Water Year 2024

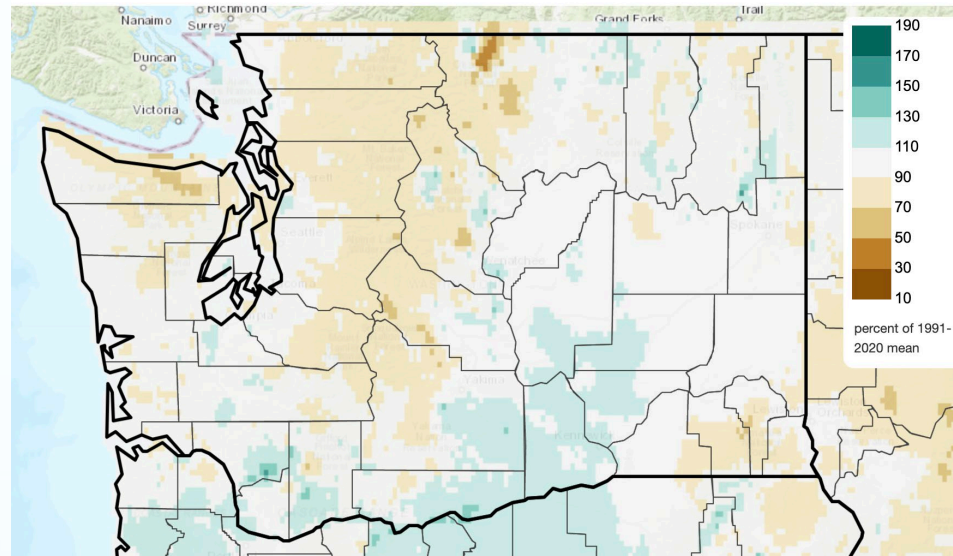
Temperature

Mean Daily Temperature Anomaly, Since Oct 1st
2023/10/01 - 2024/03/24



Precipitation

Total Precipitation Anomaly, Since Oct 1st
2023/10/01 - 2024/03/24



Climate Toolbox

- Averaged statewide, Oct-Feb temperature tied as the 10th warmest (+1.7°F)*
- Averaged statewide, Oct-Feb precipitation was 90% of normal (-2.69")

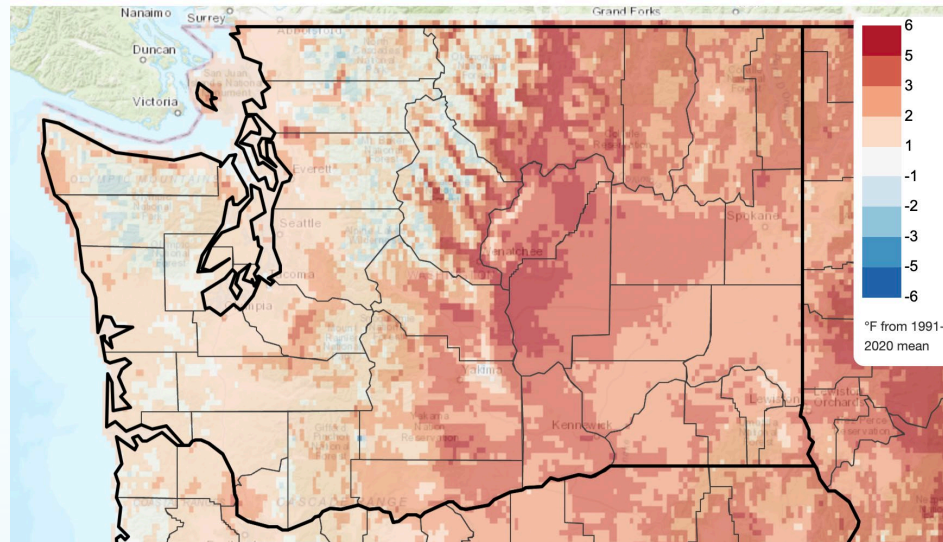
*Records since 1895; 1991-2020 normal

February 2024

Temperature

Mean Daily Temperature Anomaly, Last Full Month

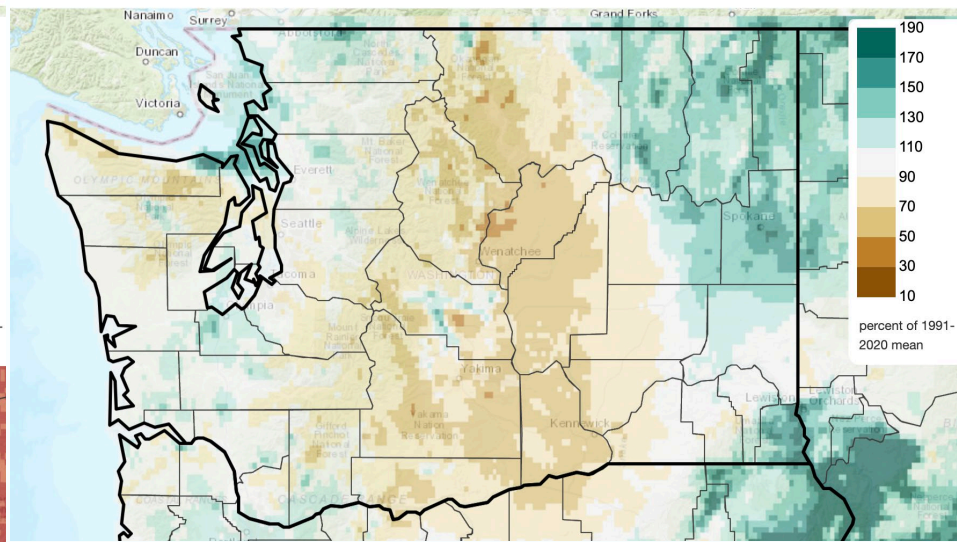
2024/02/01 - 2024/02/29



Precipitation

Total Precipitation Anomaly, Last Full Month

2024/02/01 - 2024/02/29



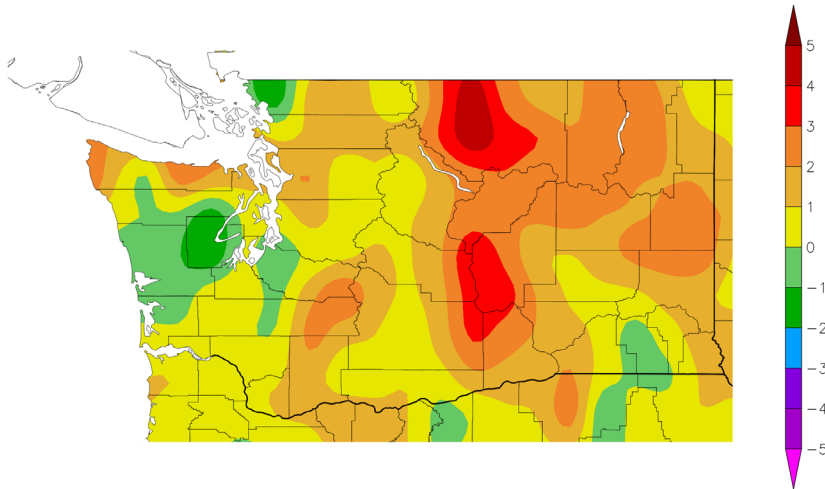
Climate Toolbox

- Averaged statewide, February was the 19th warmest (+2.6 °F) on record*
- Averaged statewide, February precipitation was the 20th driest (63% of normal; -1.60")

*Records since 1895; 1991-2020 normal

March 2024 so far

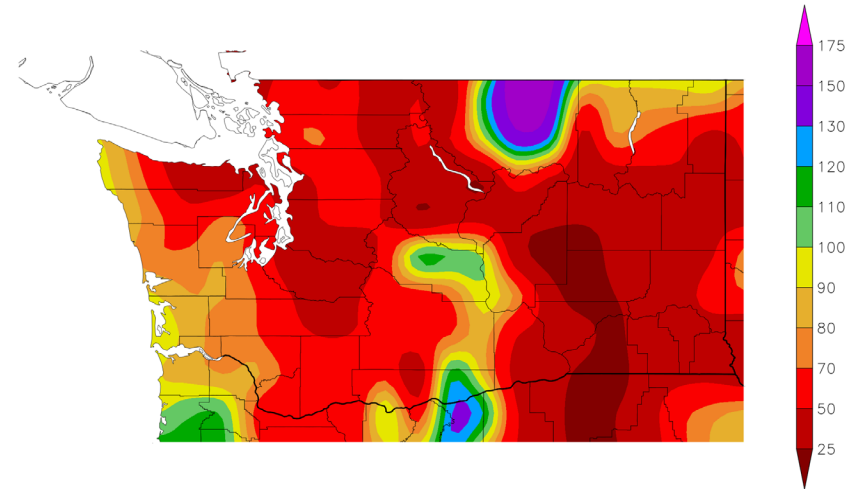
Departure from Normal Temperature (F)
3/1/2024 - 3/24/2024



Generated 3/25/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
3/1/2024 - 3/24/2024



Generated 3/25/2024 at HPRCC using provisional data.

NOAA Regional Climate Centers

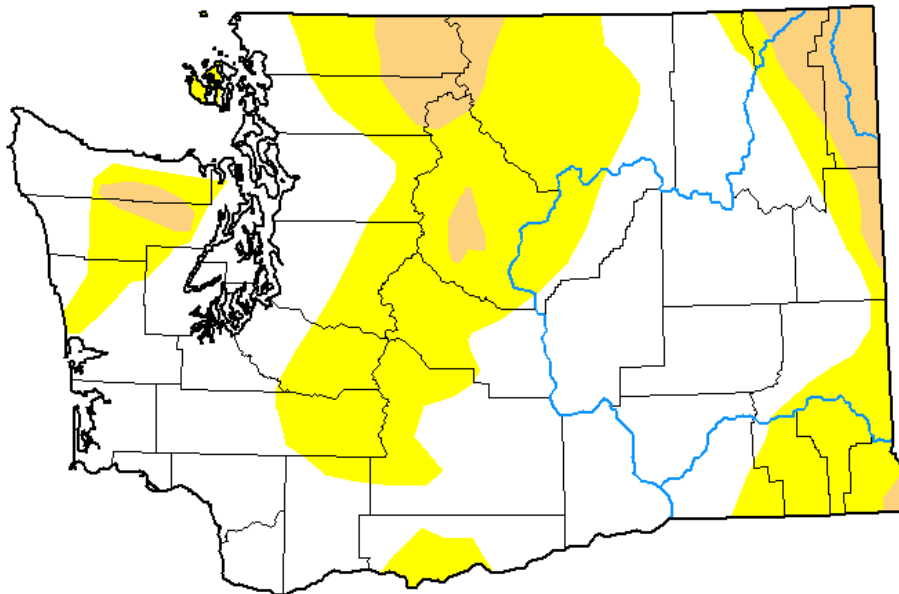
U.S. Drought Monitor

U.S. Drought Monitor Washington







March 19, 2024

(Released Thursday, Mar. 21, 2024)

Valid 8 a.m. EDT



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

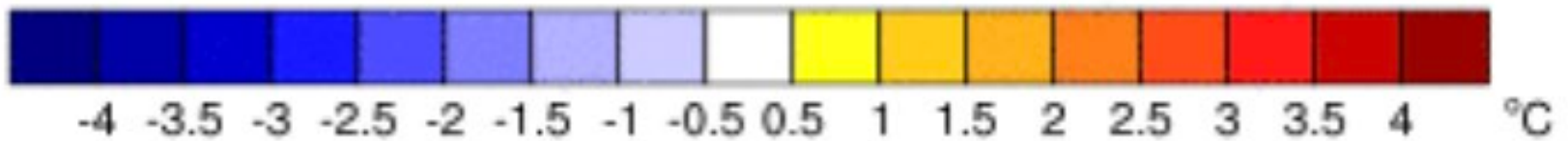
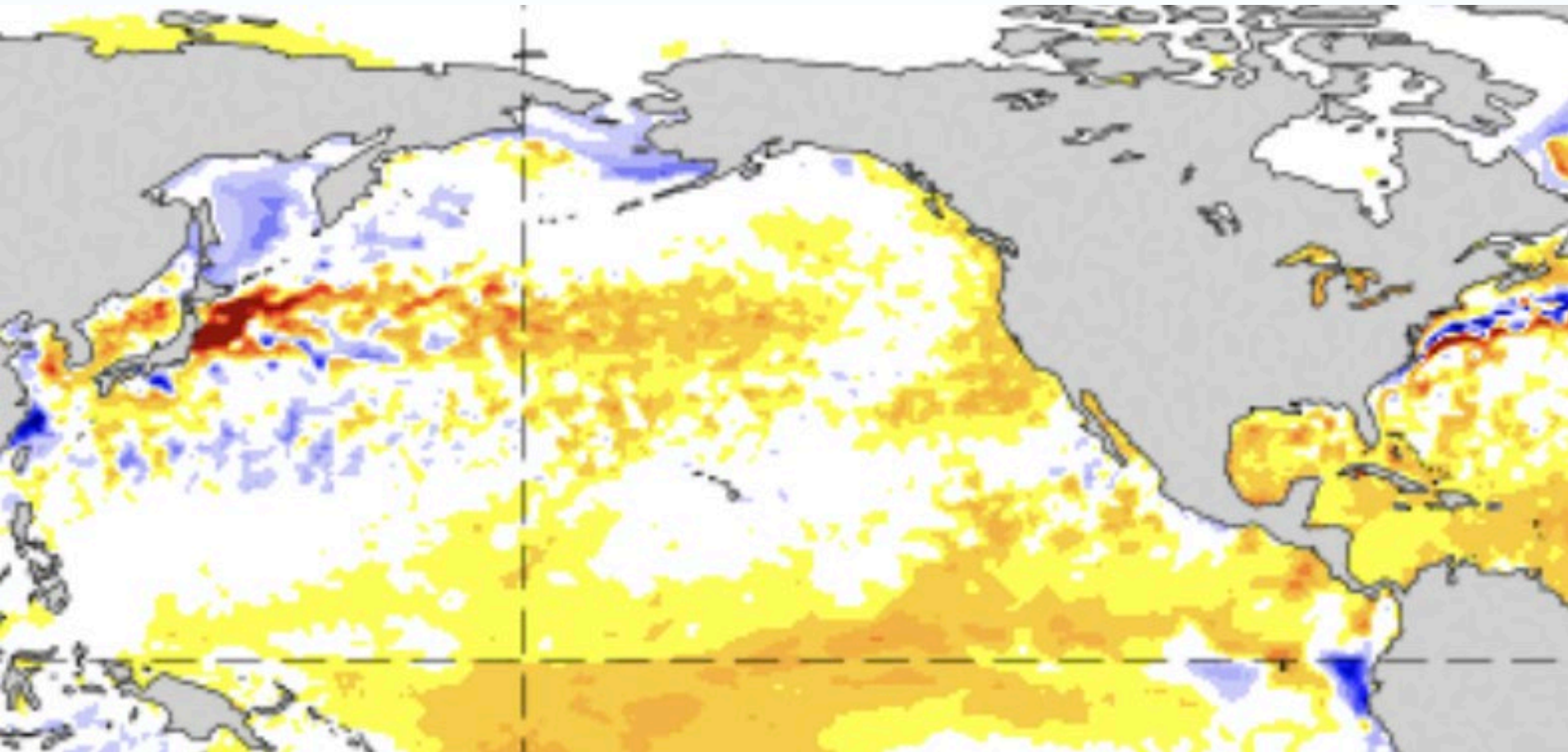
Author:

Brad Rippey
U.S. Department of Agriculture



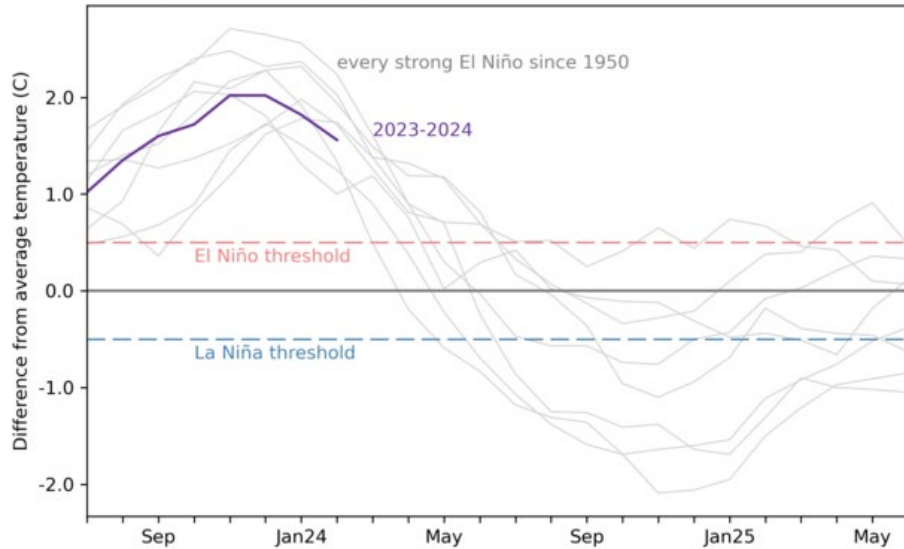
droughtmonitor.unl.edu

Sea Surface Temperature Anomalies: 17-23 Mar 2024



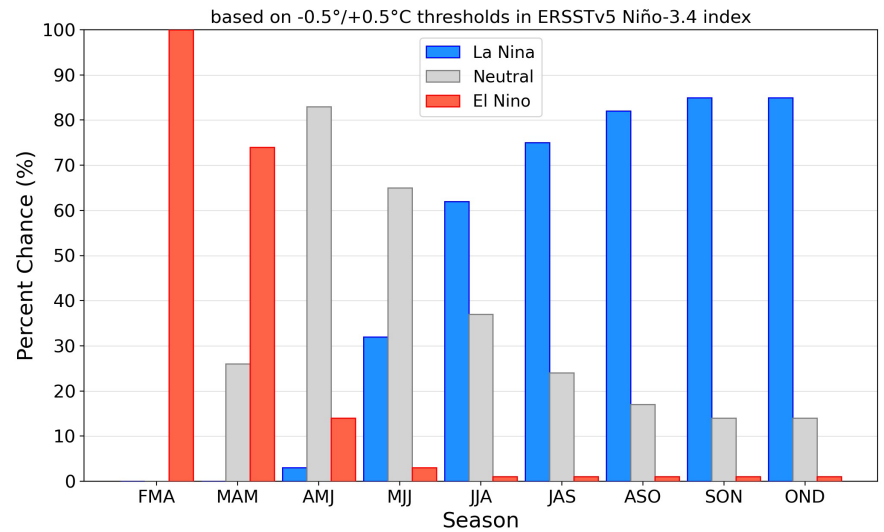
The passing of El Niño (no services are planned)

Monthly sea surface temperature Niño3.4 Index values



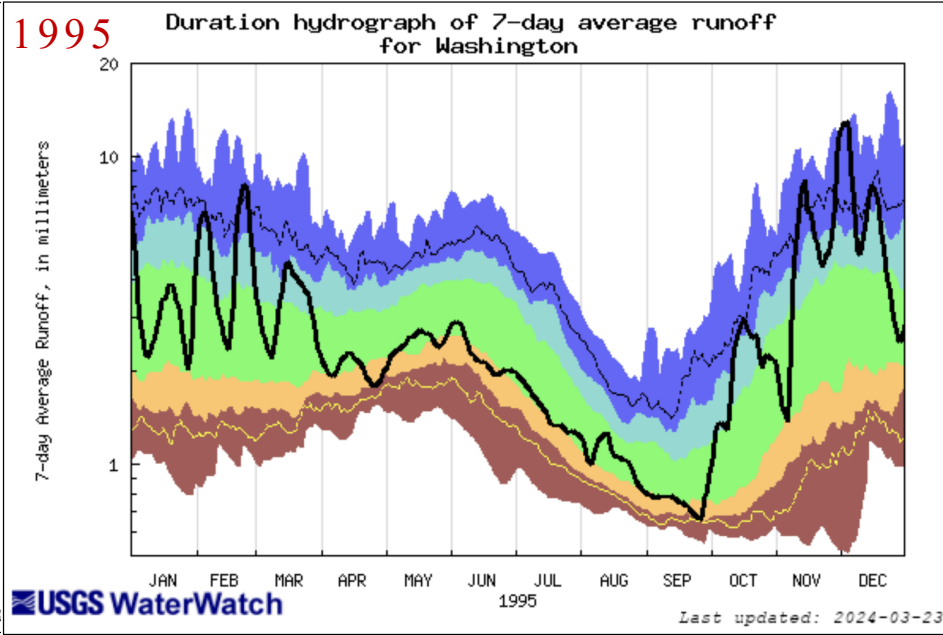
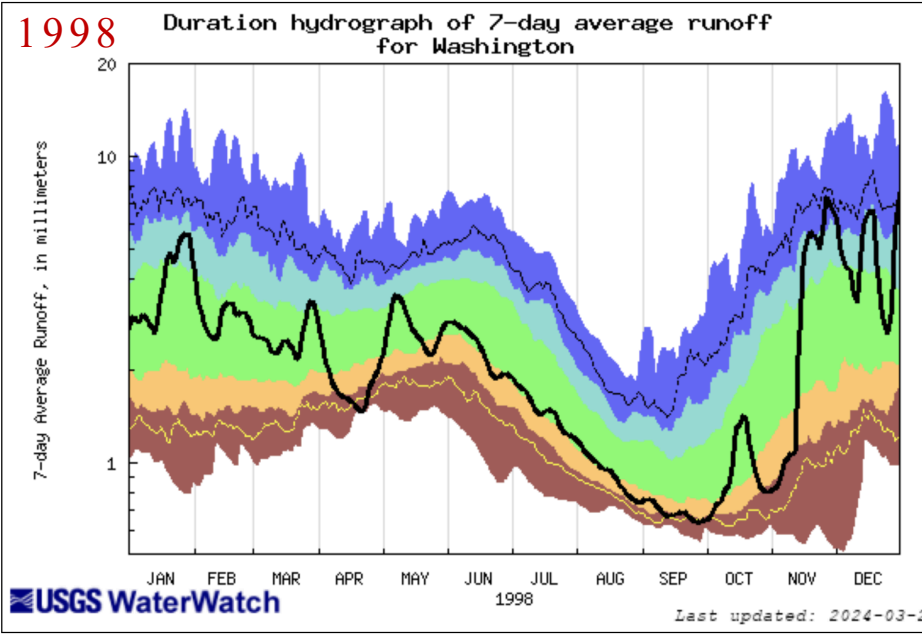
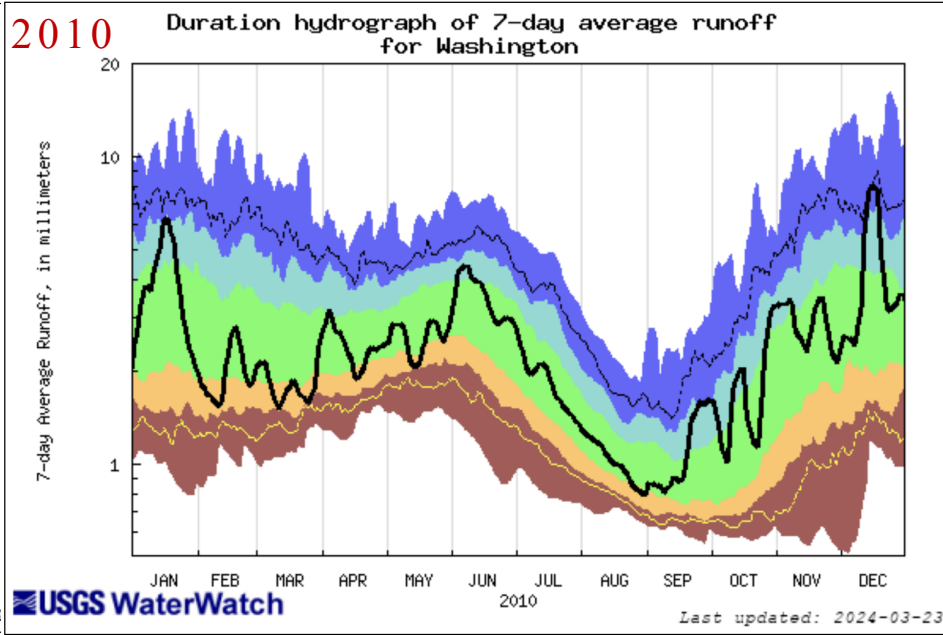
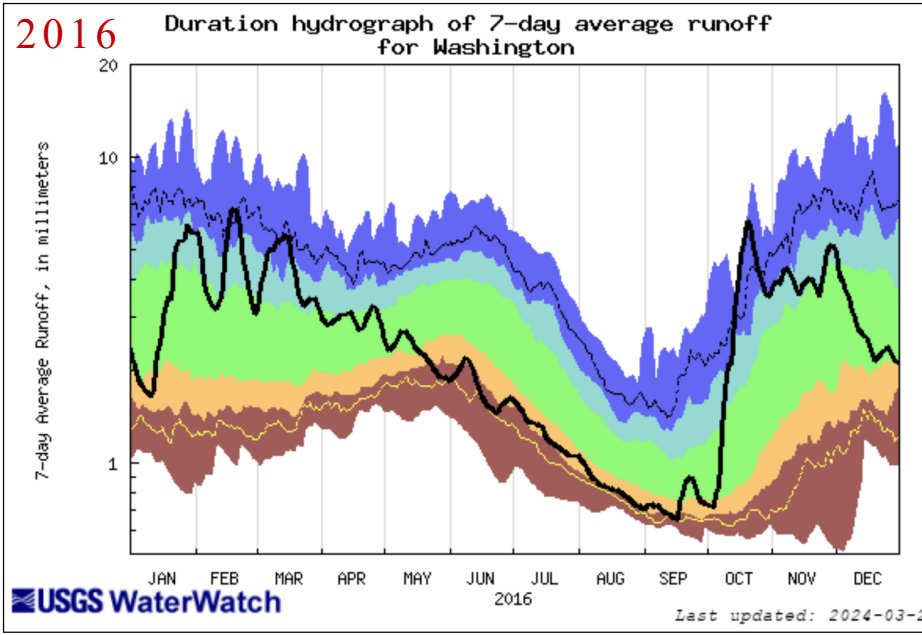
ENSO Blog: Mar 14

Official NOAA CPC ENSO Probabilities (issued Mar. 2024)

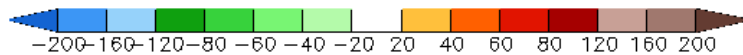
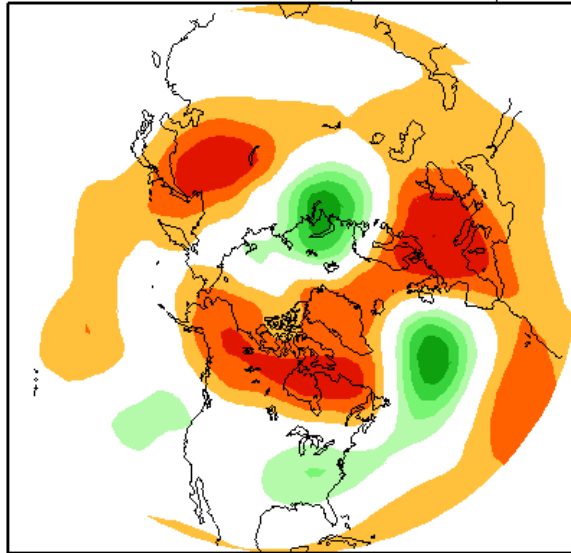


Quick
weakening
expected

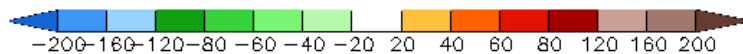
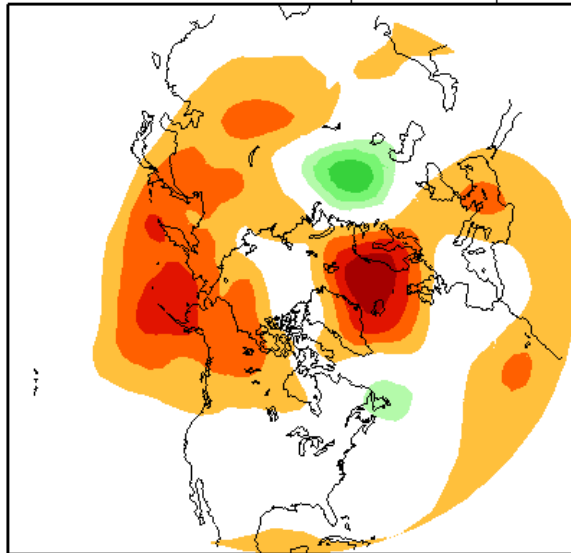
WA State 7-day Hydrographs: Previous 4 Strong El Niño to La Niña Years



Week 3 8Apr2024-14Apr2024



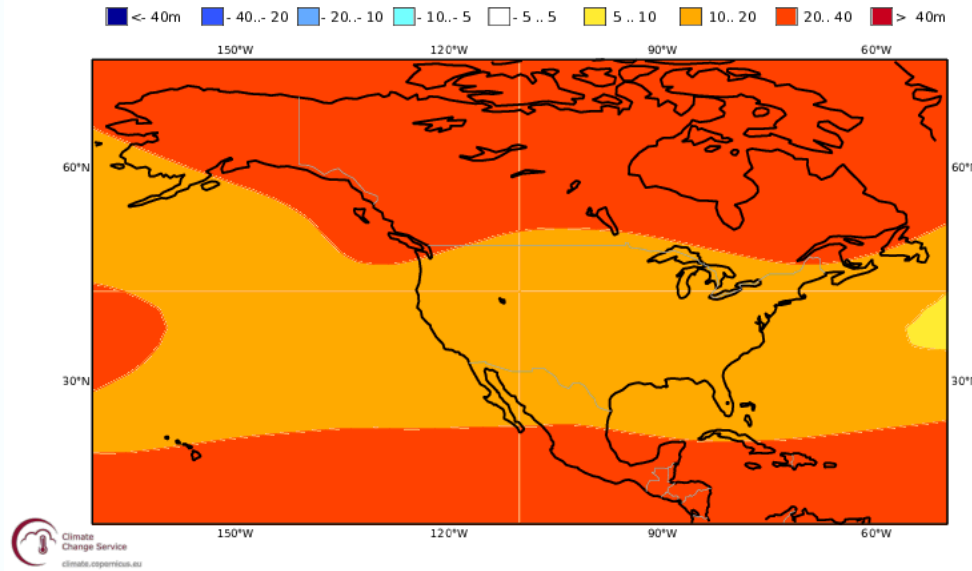
Week 4 15Apr2024-21Apr2024



The predicted ridge to our north implies that our spring 2024 will come in like a lamb

500 hPa Z

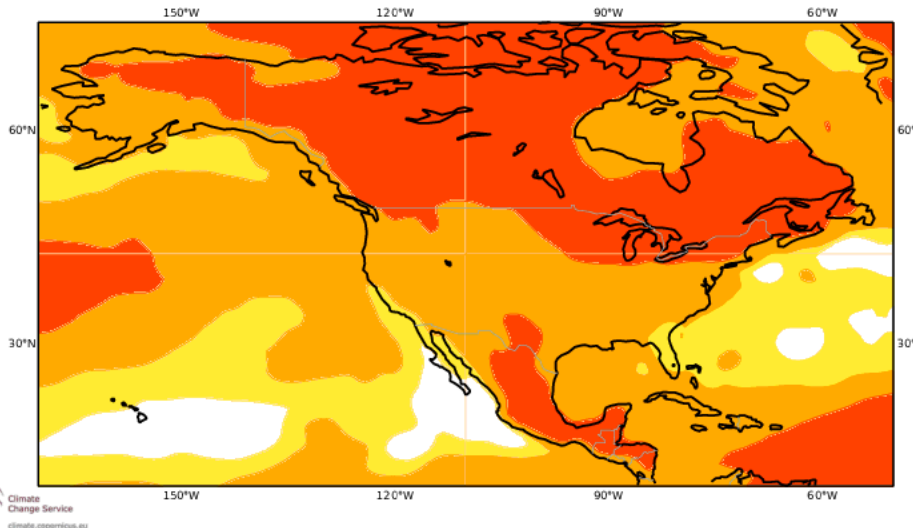
IMME Anomalies Apr-Jun 2024



2 meter T_{air}

Legend for 2 meter T_{air} anomalies (°C):

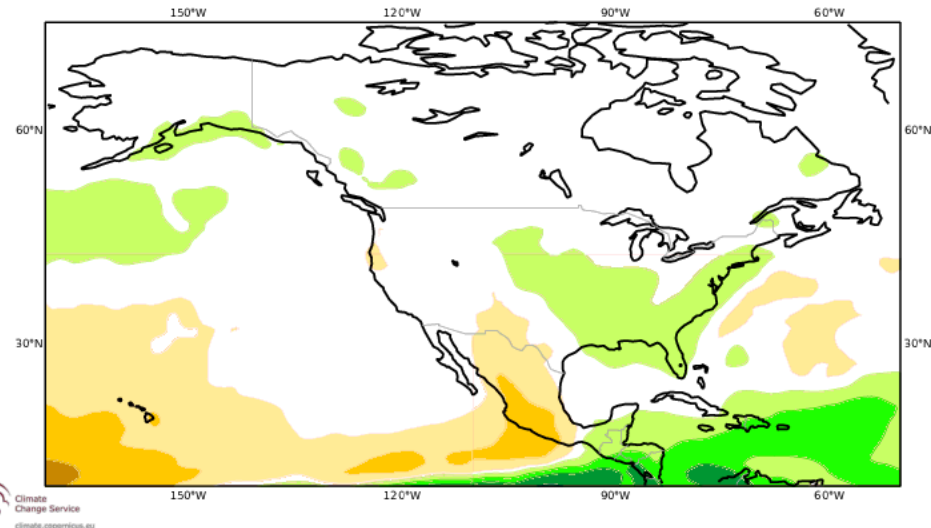
- <-2.0°C
- 2.0..-1.0
- 1.0..-0.5
- 0.5..-0.2
- 0.2..0.2
- 0.2..0.5
- 0.5..1.0
- 1.0..2.0
- > 2.0°C



Precipitation

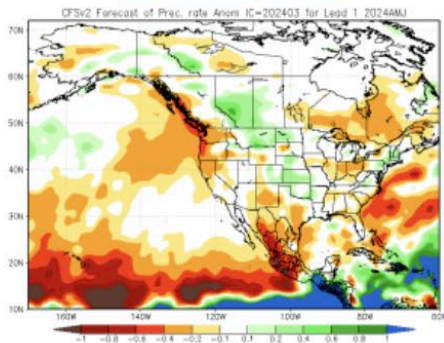
Legend for Mean precipitation anomalies (mm):

- <-200mm
- 200..-100
- 100..- 50
- 50..-10
- 10..10
- 10..50
- 50..100
- 100..200
- > 200mm

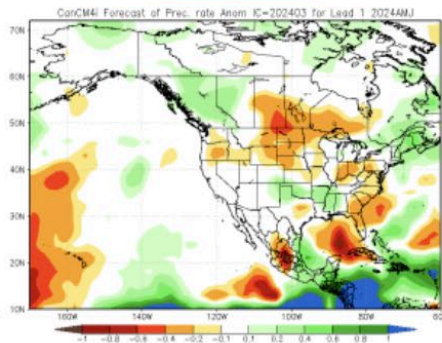


NMME Climate Model Projections for WA State during Apr-Jun 2024: Considerable Diversity/ Lack of Predictability

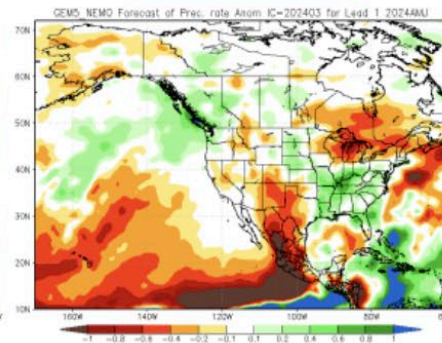
NCEP CFSv2



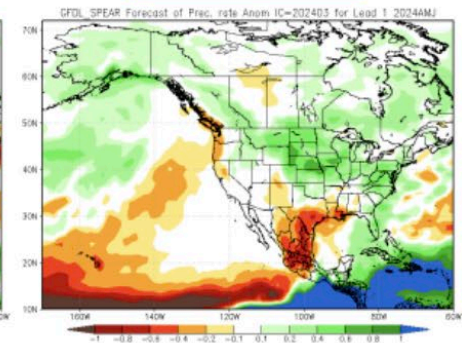
CanCM4i



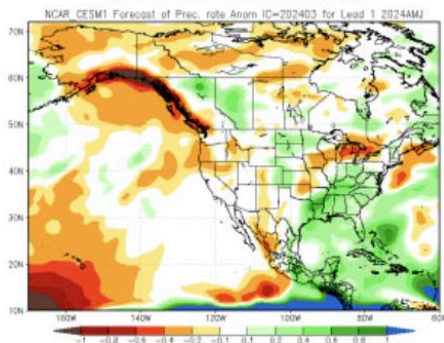
GEM5 NEMO



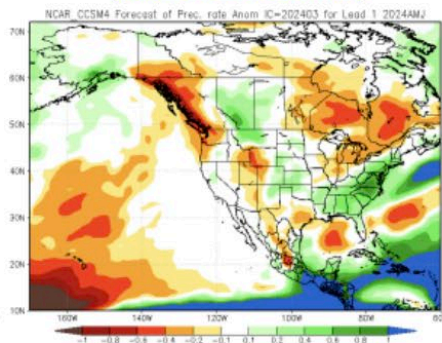
GFDL SPEAR



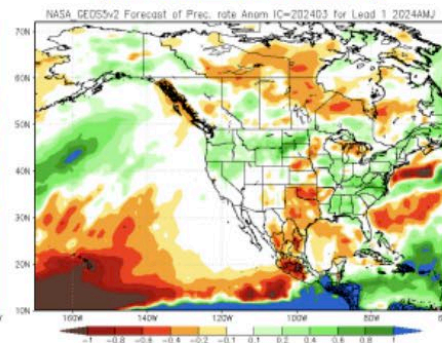
NCAR CESM1



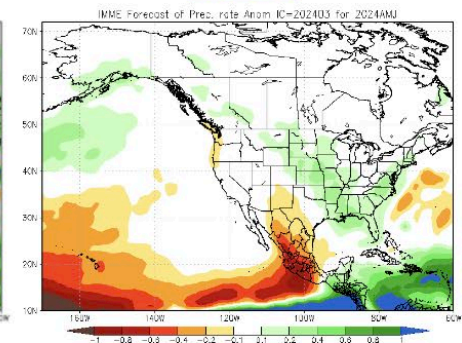
NCAR CCSM4



NASA GEOS5v2

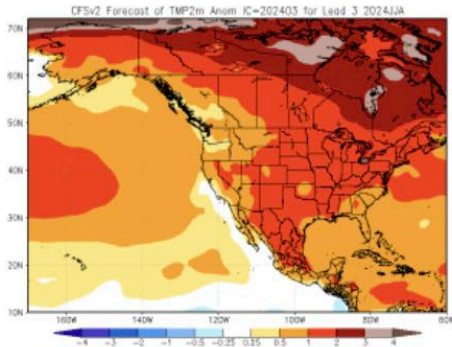


IMME

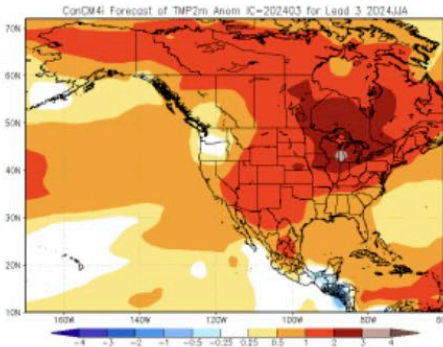


Individual Climate Model Projections of Summer (JJA) Temperature Anomalies

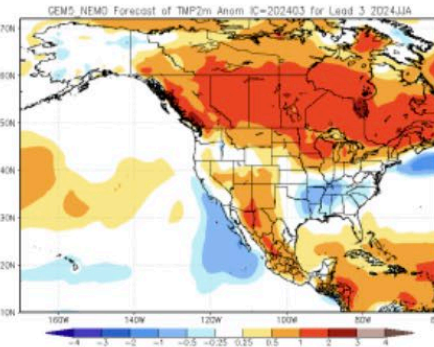
NCEP CFSv2



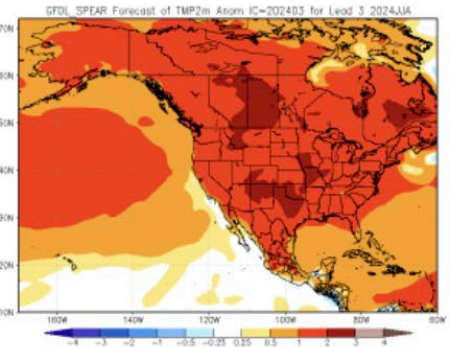
CanCM4i



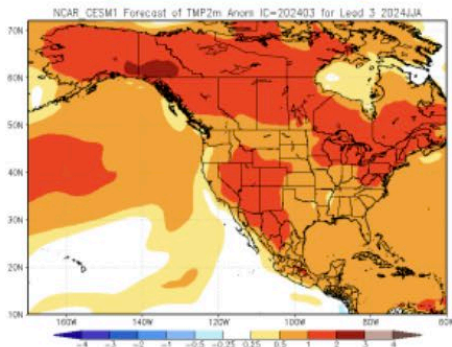
GEM5 NEMO



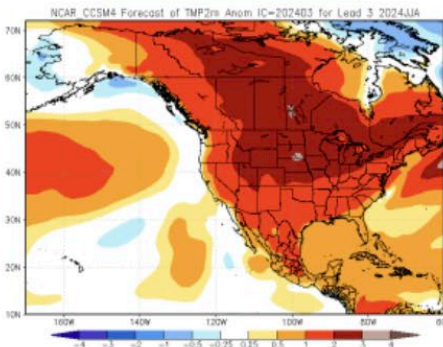
GFDL SPEAR



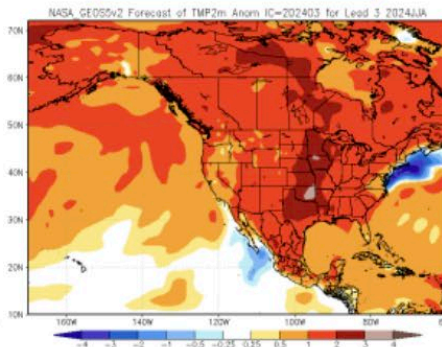
NCAR CESM1



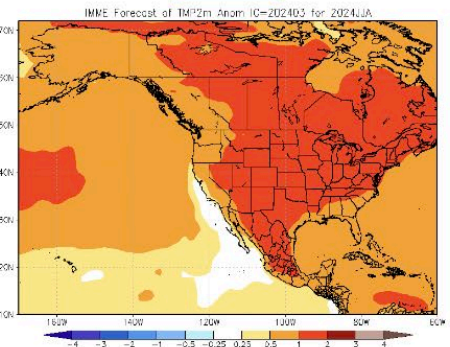
NCAR CCSM4



NASA GEOS5v2

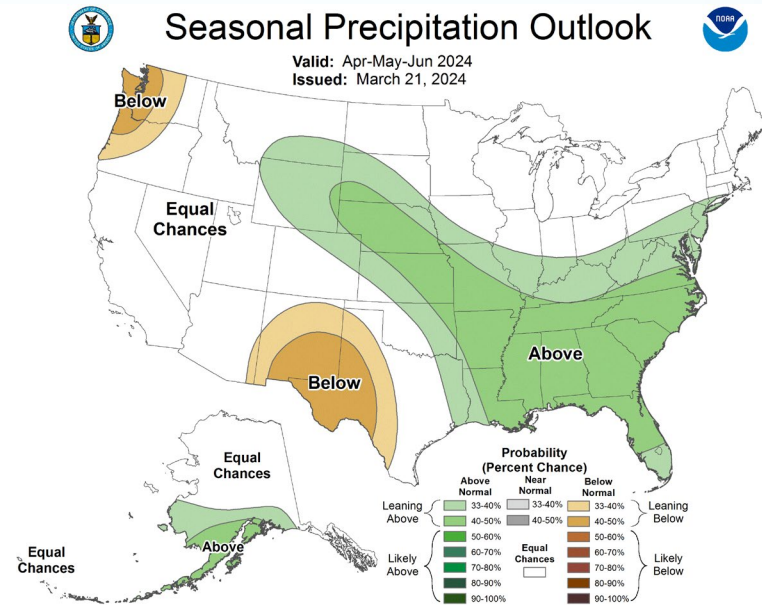
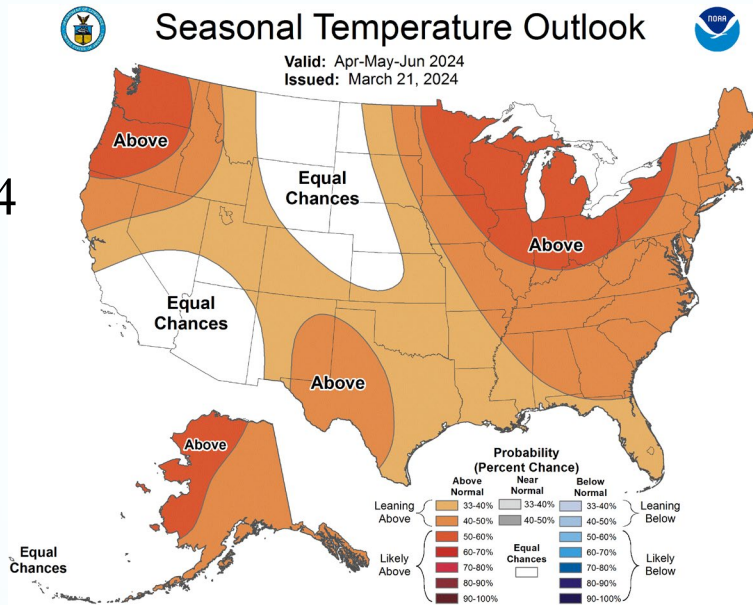


IMME

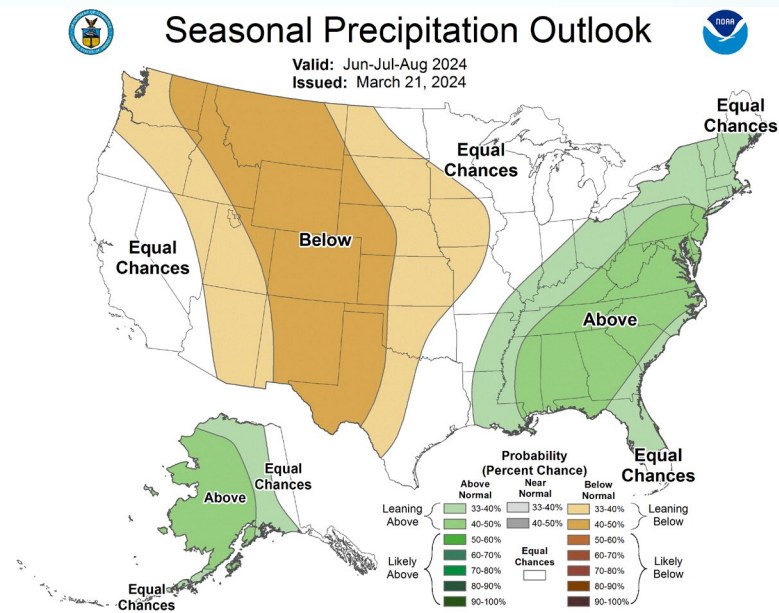
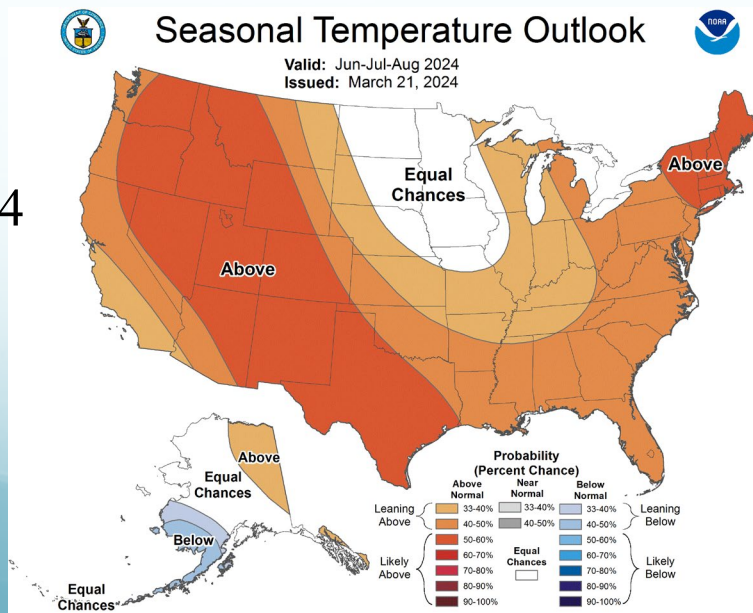


NOAA Climate Center Prediction Outlooks for Spring and Summer 2024

Apr-Jun 2024



Jun-Aug 2024

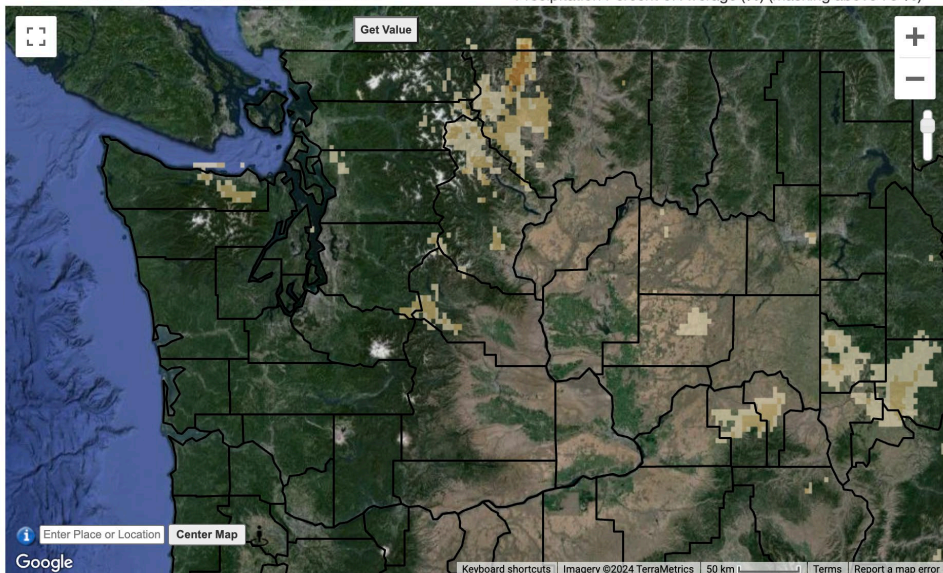
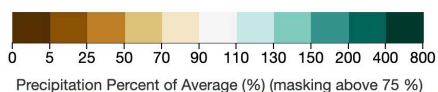


Summary

- 2024 water year has had above normal temperatures and below normal precipitation for a majority of WA state
- El Niño is fading with La Niña on the horizon
- It is unlikely that there will be an early spring miracle for our mountain snowpack
- The upcoming spring and summer are apt to be warm relative to 1991-2020 norms
- Spring 2024 precipitation totals might be OK; slightly elevated odds for a dry summer

Precipitation Percent Of Average (gridMET)

2024-01-01 to 2024-03-22, Total, vs. 1991 - 2020

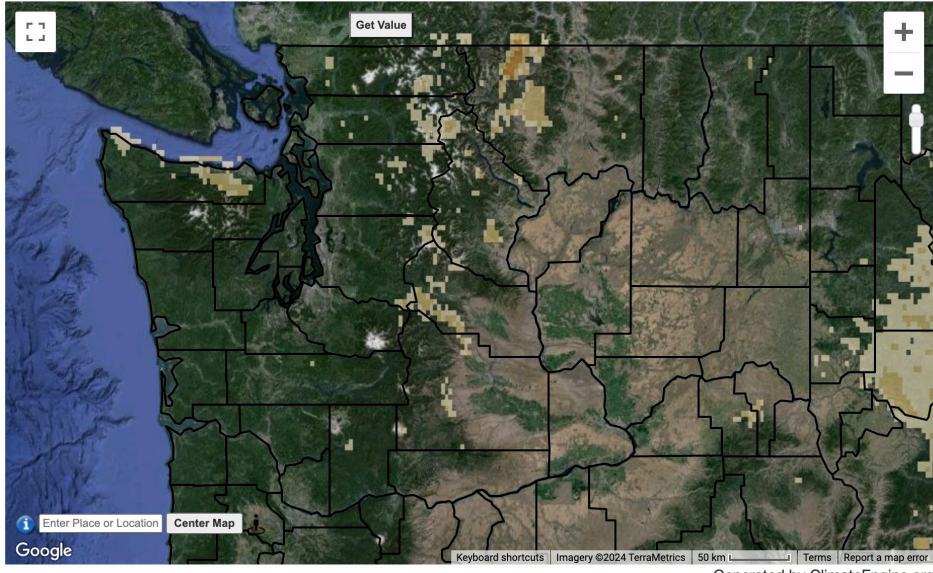
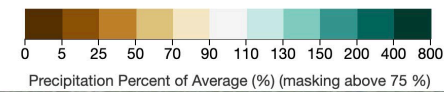


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Precipitation Percent Of Average (gridMET)

2023-10-01 to 2024-03-22, Total, vs. 1991 - 2020



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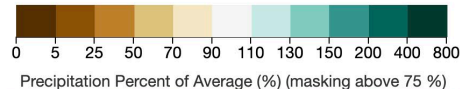
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Since Jan 1

Since Oct 1

Precipitation Percent Of Average (gridMET)

2023-03-23 to 2024-03-22, Total, vs. 1991 - 2020



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Previous 12 months