

Regional Climate Perspective

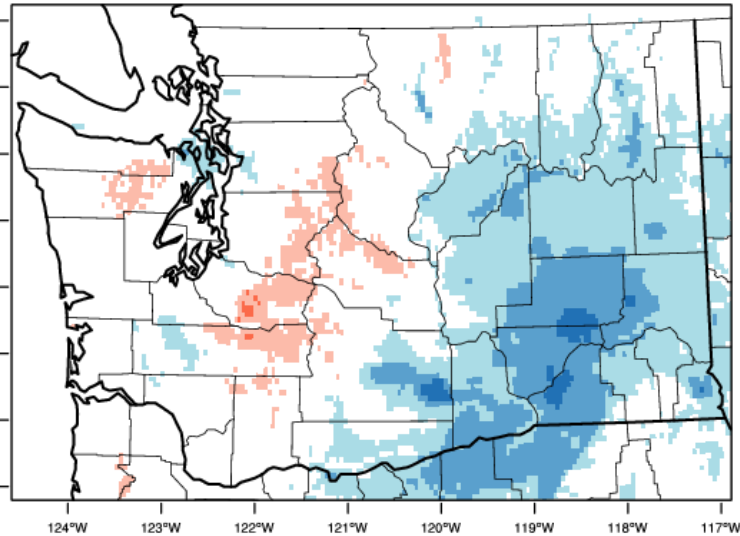
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Joint Institute for the Study of Atmosphere and Ocean
University of Washington
9 May 2019

2019 Water Year

Temperature

Washington - Mean Temperature

October-April 2019 Departure from 1981-2010 Normal

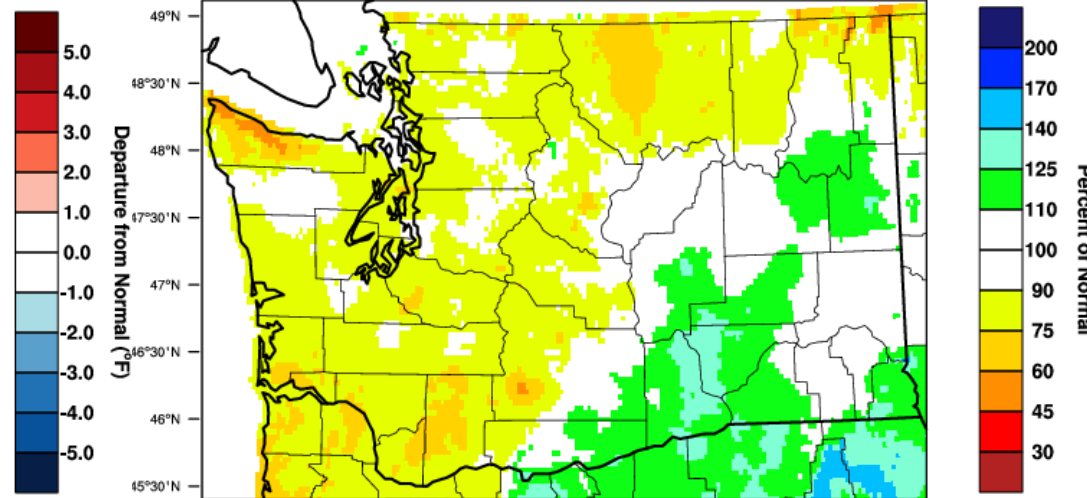


WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 7 MAY 2019

Precipitation

Washington - Precipitation

October-April 2019 Percent of 1981-2010 Normal



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 7 MAY 2019

WWDT

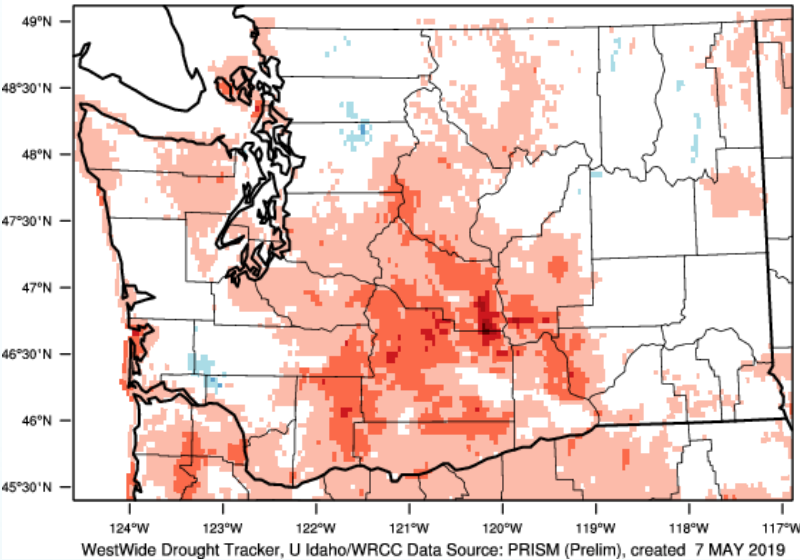
- Average Oct-Apr temperatures statewide near-normal (-0.6°F below normal) with regional variability
- Below normal Oct-Apr precipitation averaged statewide ($-5.00''$ below normal)

April 2019

Temperature

Washington - Mean Temperature

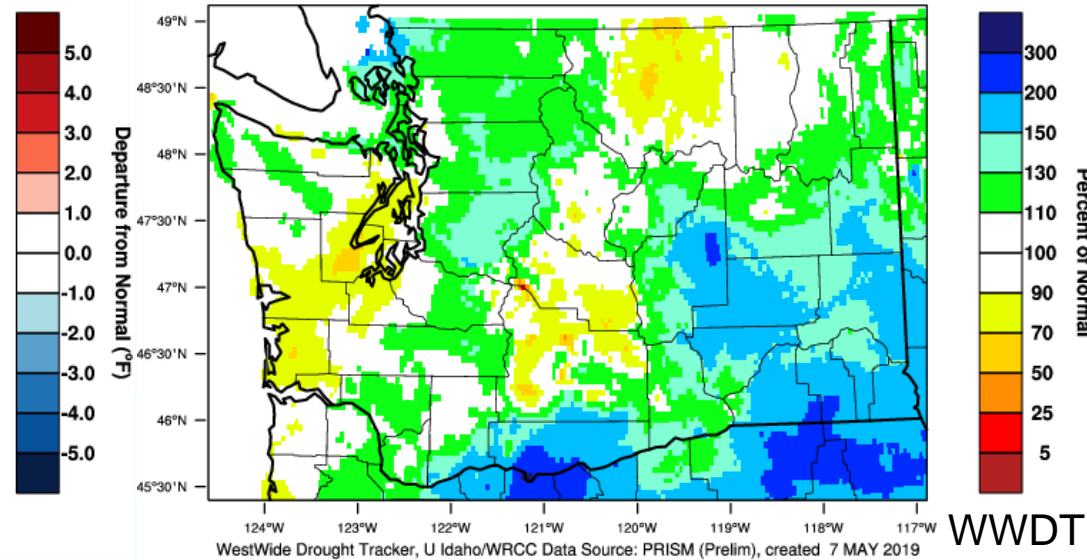
April 2019 Departure from 1981-2010 Normal



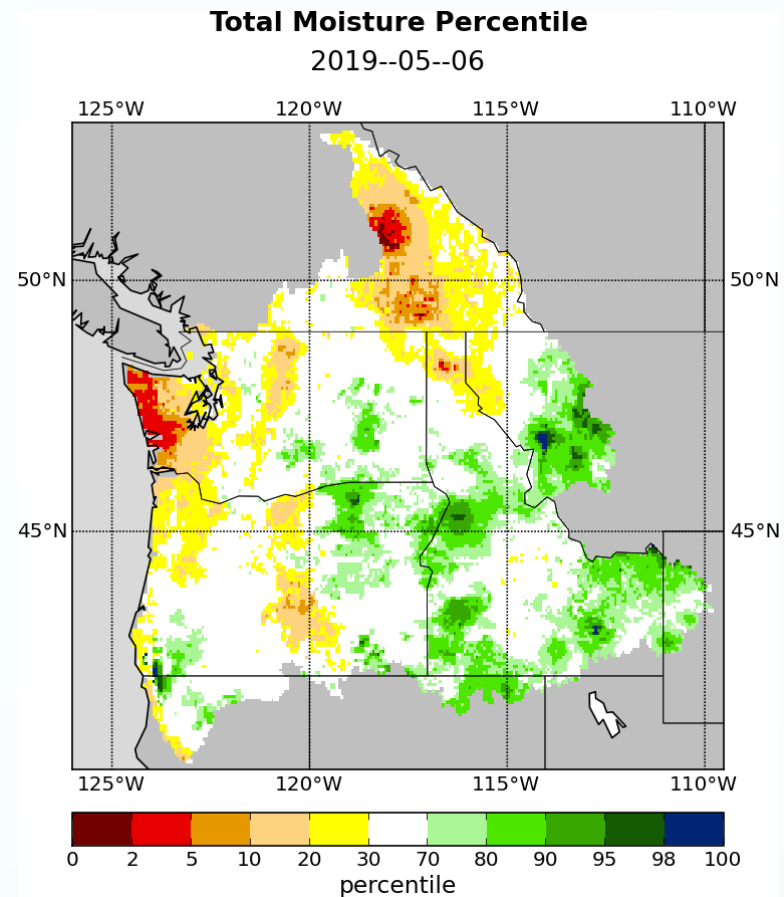
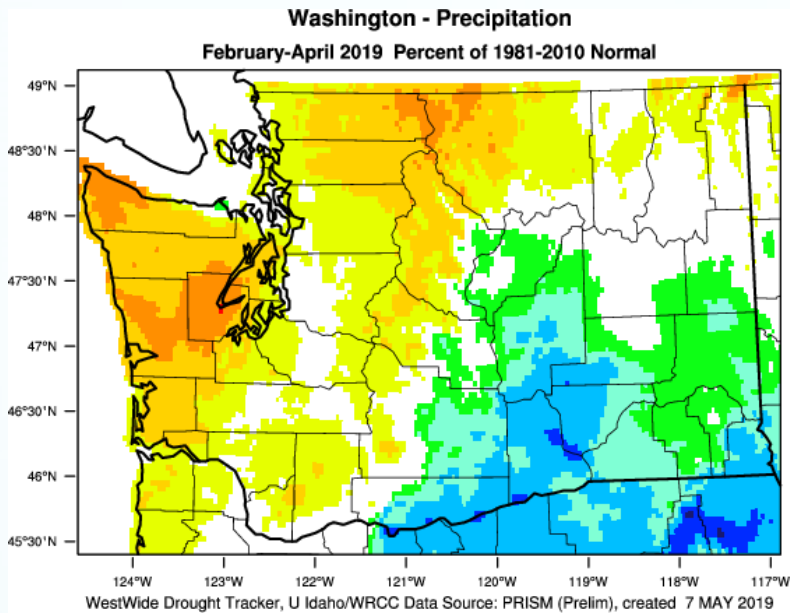
Precipitation

Washington - Precipitation

April 2019 Percent of 1981-2010 Normal



- Statewide, near-normal average April temperatures but on the warmer side (+0.9°F)
- Above normal April precipitation averaged statewide (+0.40") with some dry areas



- Late winter/spring very dry on the Peninsula and north central WA
- Extremely low percentiles of total moisture on coast



Ryderwood Precipitation

Climate Dashboard

Ryderwood, wa (46.3765° N, 123.0437° W)

(since Oct 1)
Current Water Year

**Total
Precipitation**
39.5 inches

DEPARTURE FROM NORMAL (PERCENT OF NORMAL)

-10.8 inches (78.5 %)

PERCENTILE

Much below normal
(Bottom 10%)

(since Jan 1)
Current Calendar Year

**Total
Precipitation**
19 inches

DEPARTURE FROM NORMAL (PERCENT OF NORMAL)

-7 inches (73.2 %)

PERCENTILE

Much below normal
(Bottom 10%)

(since Mar 8)
Last 60 Days

**Total
Precipitation**
6.6 inches

DEPARTURE FROM NORMAL (PERCENT OF NORMAL)

-3.4 inches (65.7 %)

PERCENTILE

Much below normal
(Bottom 10%)

(since Oct 1)
Current Water Year

**Average
Temperature**
43.7 °F

DEPARTURE FROM NORMAL

-0.5 °F

PERCENTILE

Near Normal

Last year: 52.1"

Last year: 25.5"

Last year: 10.8"

NW Climate Toolbox, Data Source: gridMET

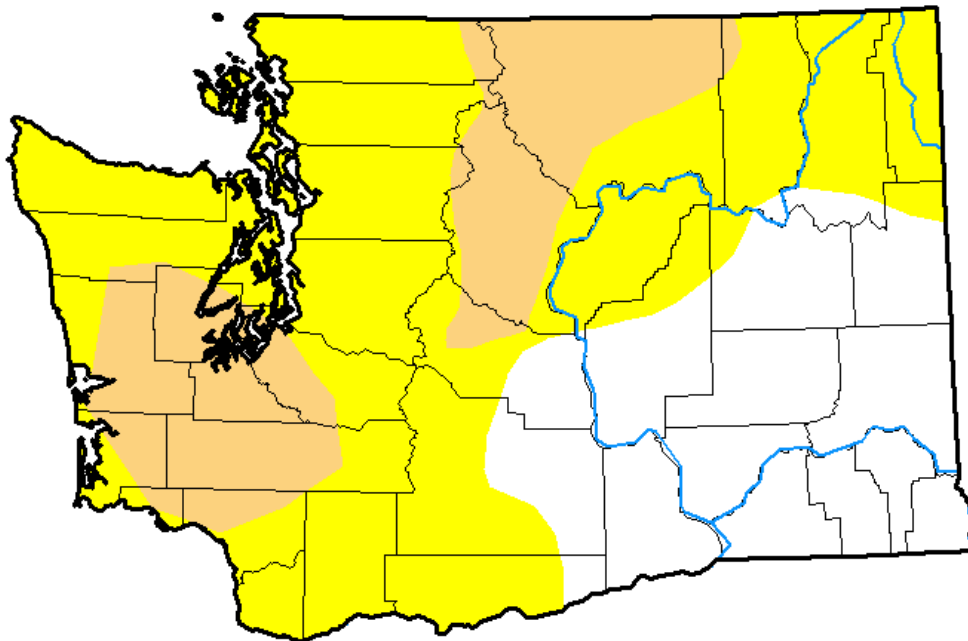
US Drought Monitor

U.S. Drought Monitor Washington






May 7, 2019

(Released Thursday, May. 9, 2019)

Valid 8 a.m. EDT



Intensity:

-  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. See accompanying text summary for forecast statements.

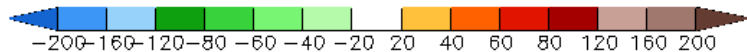
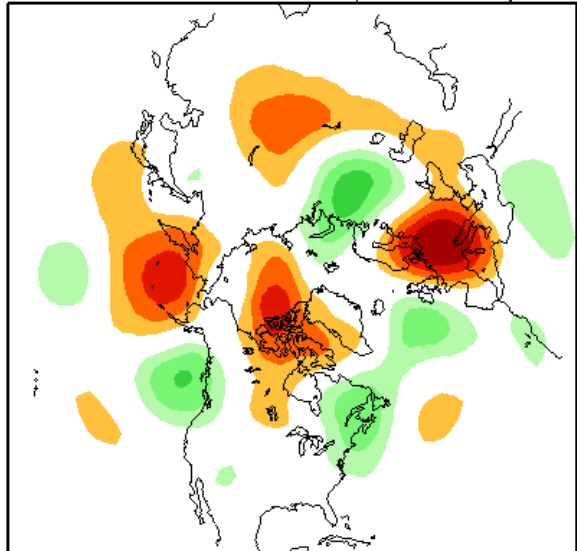
Author:

Curtis Riganti
National Drought Mitigation Center

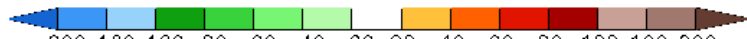
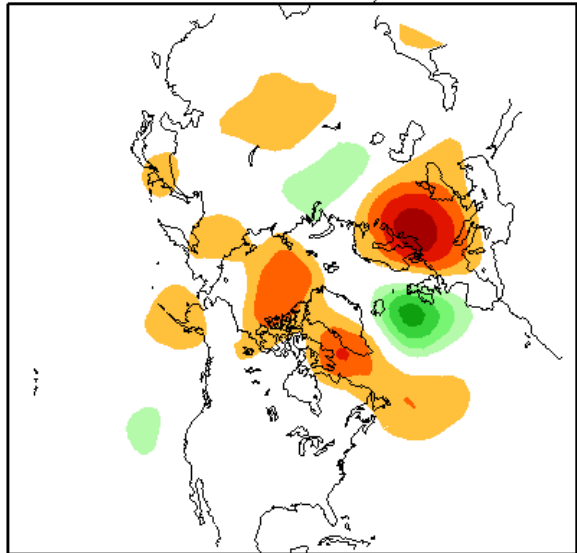


<http://droughtmonitor.unl.edu/>

Week 3 22May2019–28May2019



Week 4 29May2019–4Jun2019

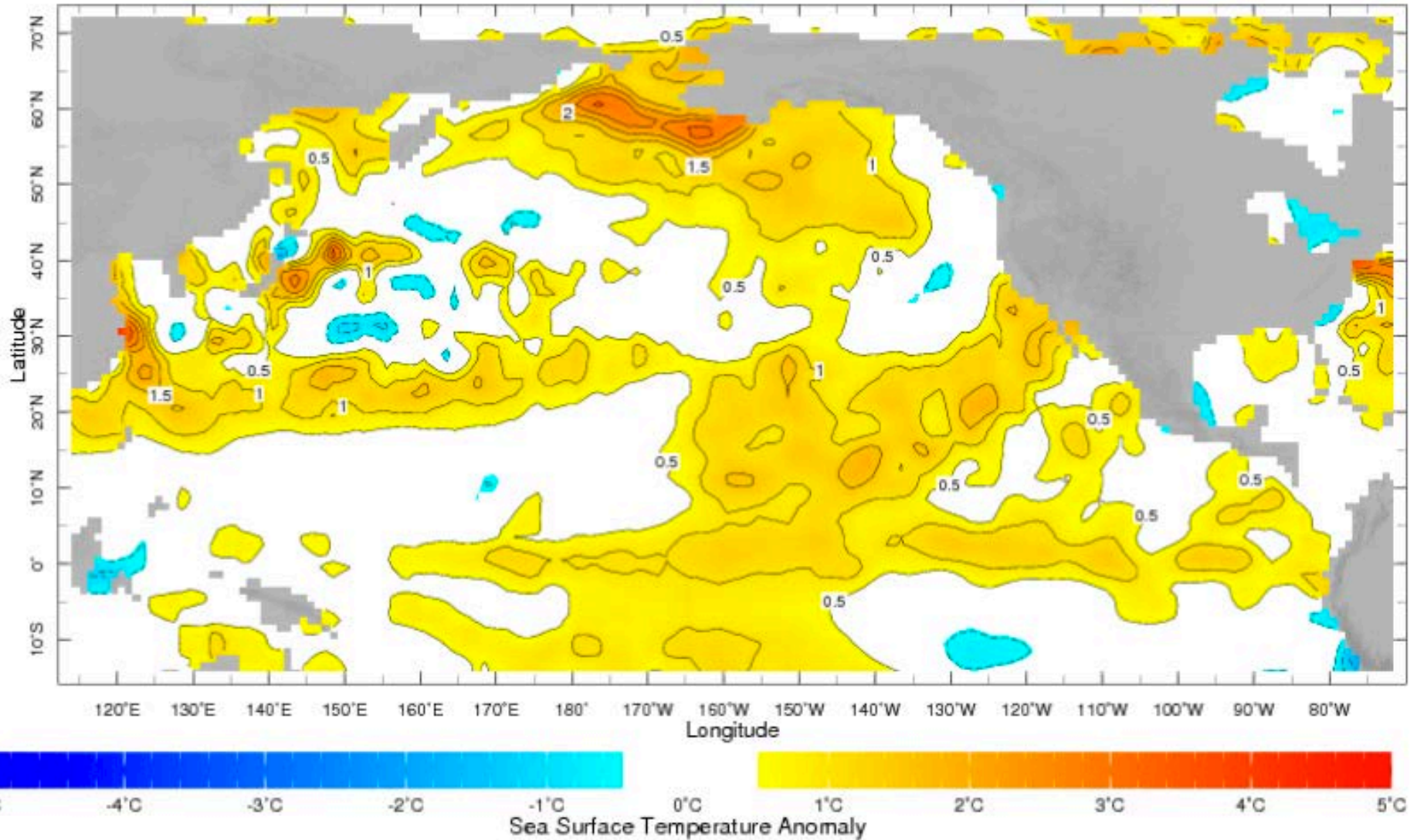


Latest Set of Week 3-4 Forecasts from CFSv2

Anomalously low 500 hPa Z offshore of the Pac NW early and nothing special late:
For WA state mostly cooler and wetter than normal early followed by rather typical weather

Recent Pacific SST Anomalies

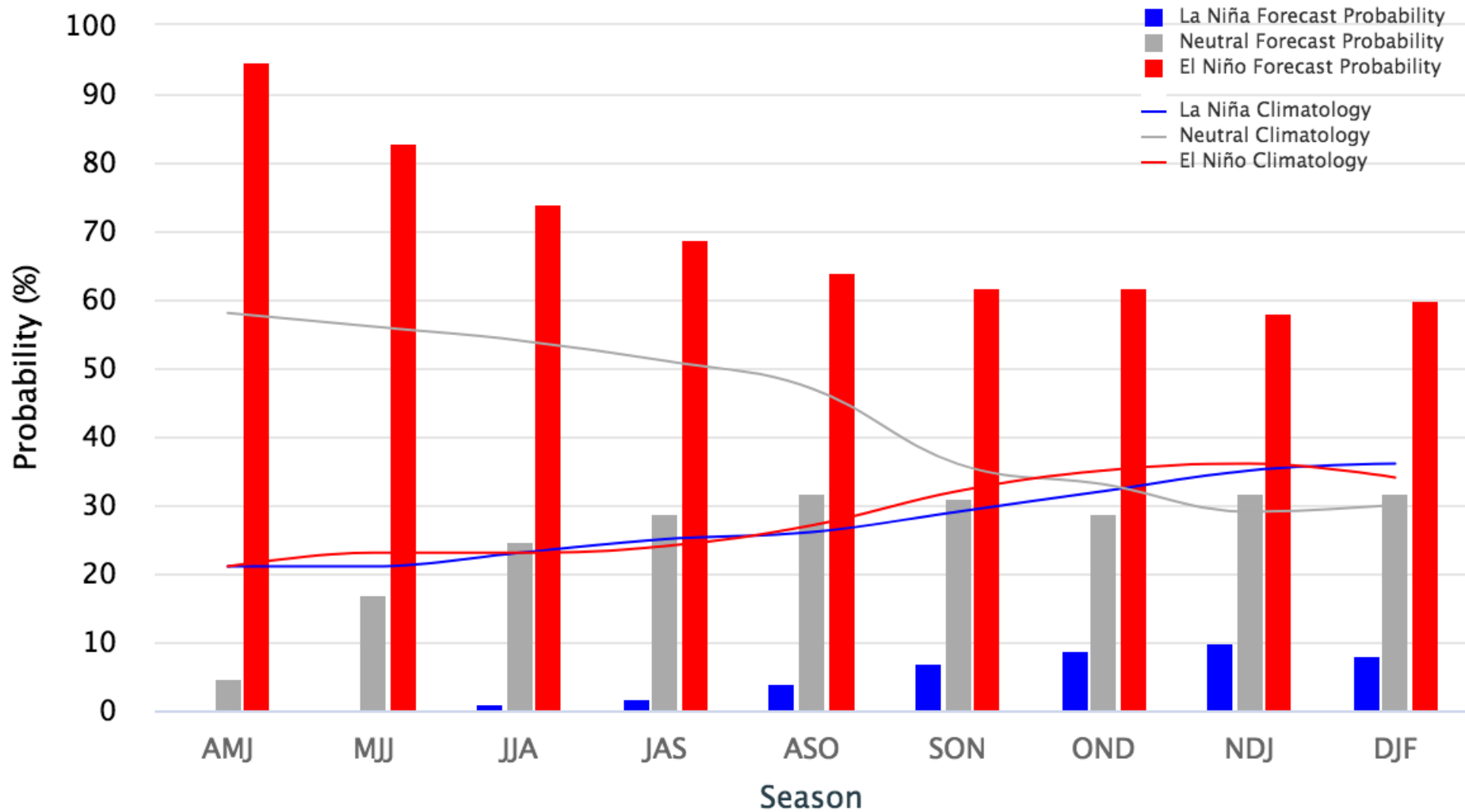
1 May 2019



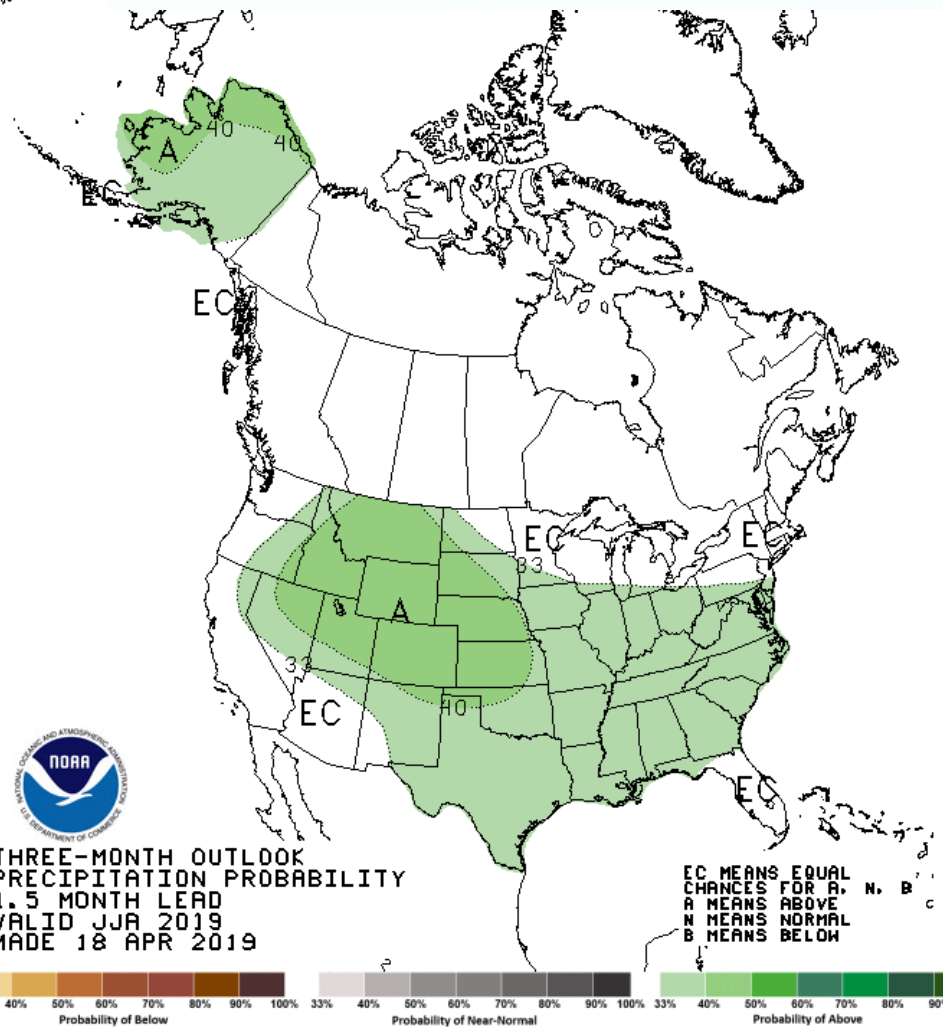
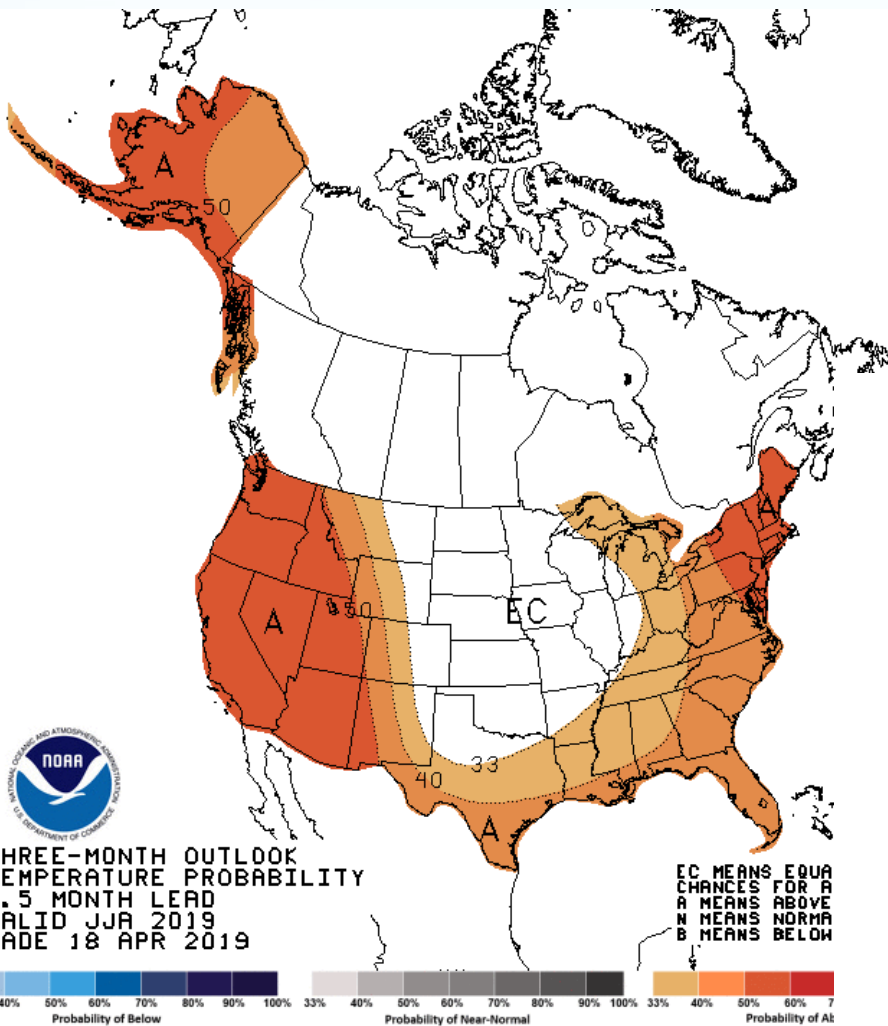
Mid-April 2019 IRI/CPC Model-Based Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly

Neutral ENSO: $-0.5\text{ }^{\circ}\text{C}$ to $0.5\text{ }^{\circ}\text{C}$

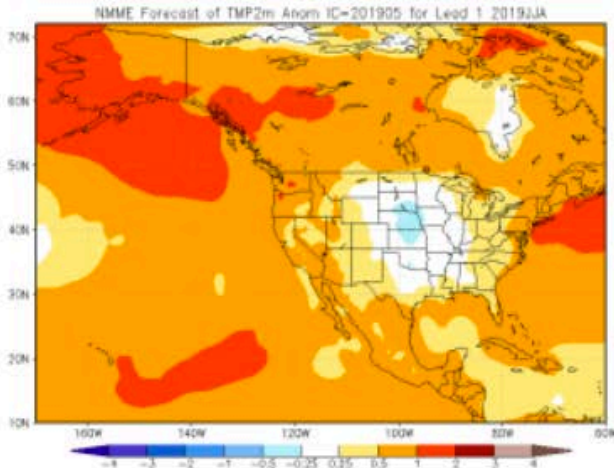


NOAA/CPC Forecasts for Jun-Aug

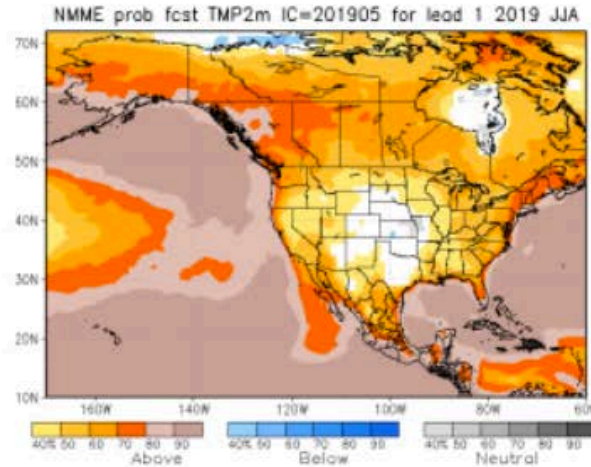


Climate Model Projections for JJA 2019 Temperature

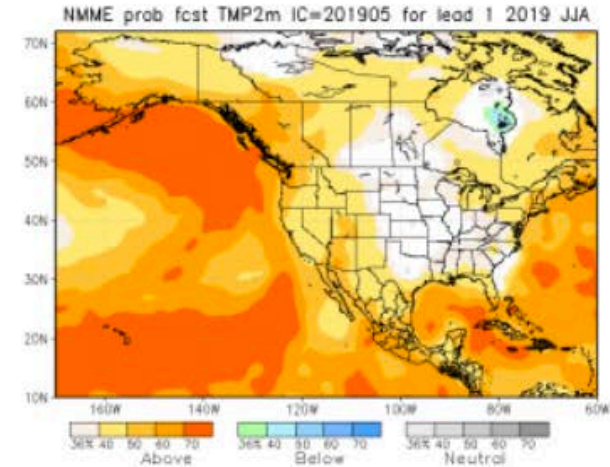
NMME



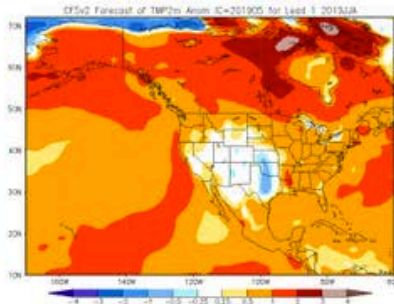
Prob fcst



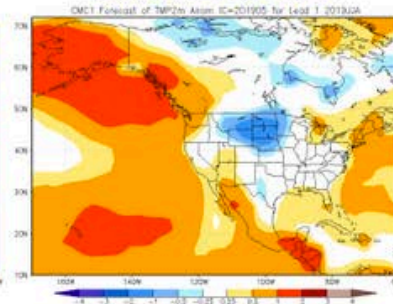
PAC calib. prob fcst



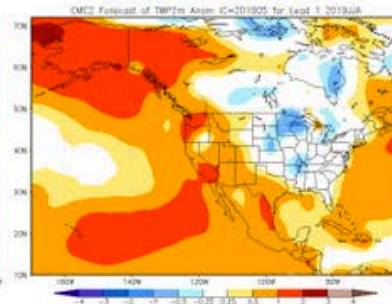
NCEP CFSv2



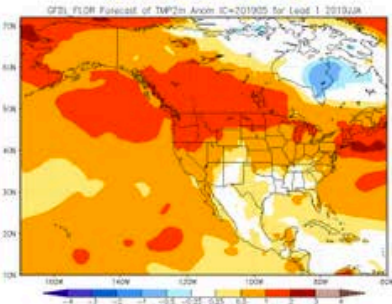
CMC1 CanCM3



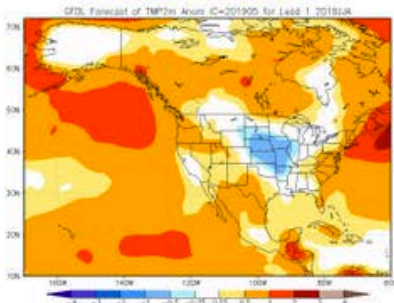
CMC2 CanCM4



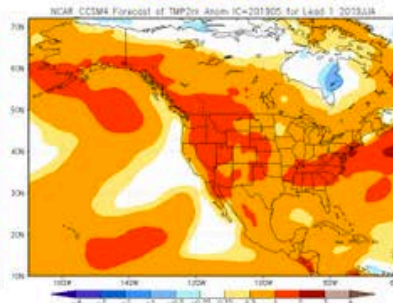
GFDL FLOR



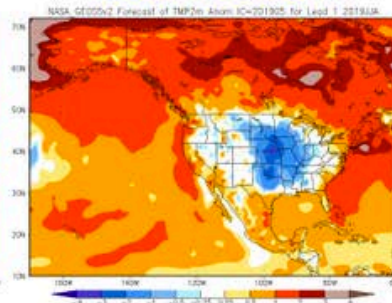
GFDL CM2.1



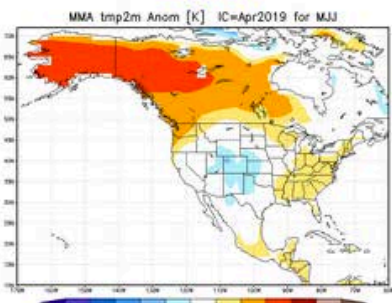
NCAR CCSM4



NASA GEOS5v2



IMME



NOAA's CFS Model Suggests a Circulation Pattern that would Occasionally Deliver Monsoonal Moisture from the Desert SW to the Pacific NW

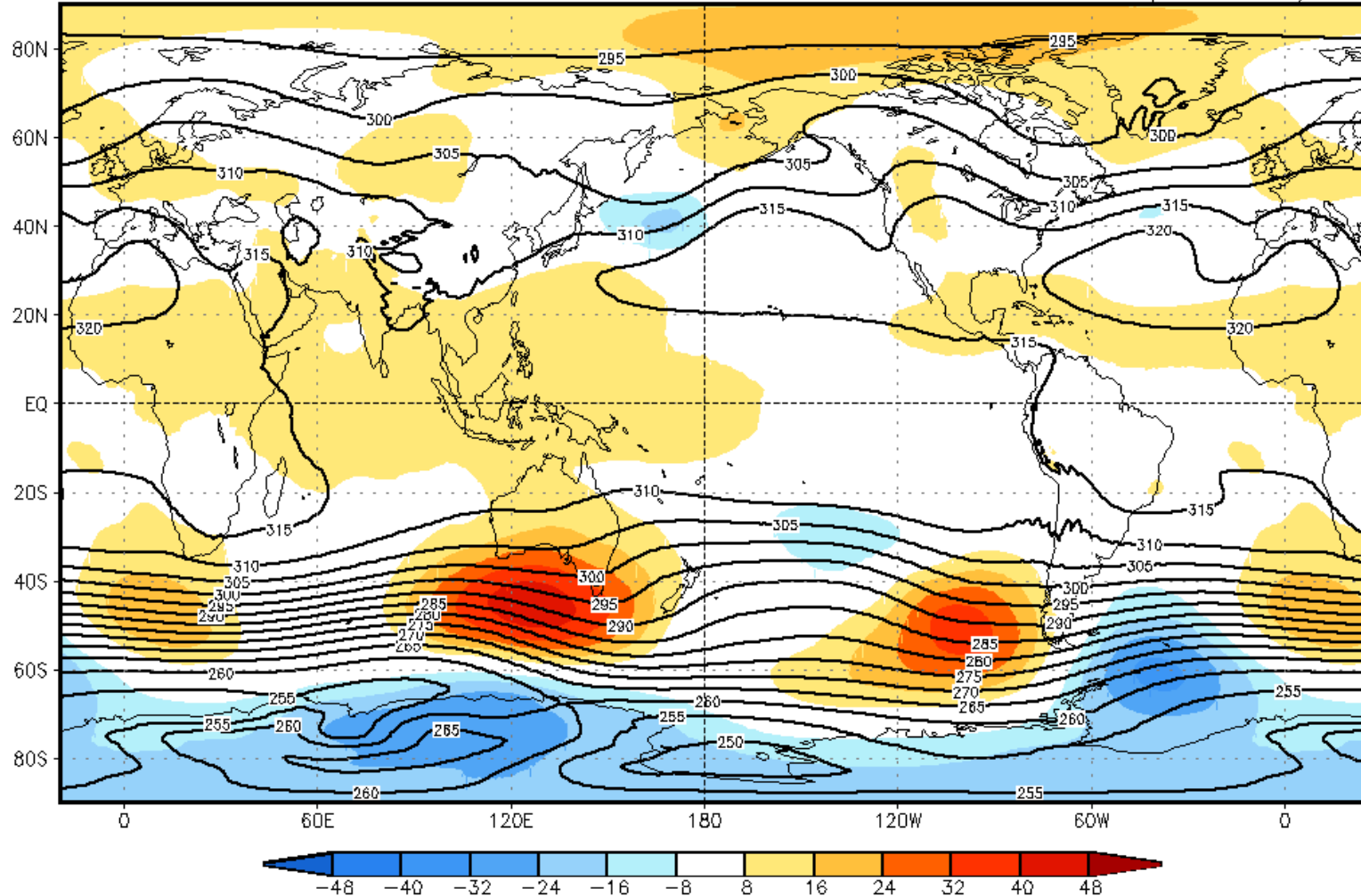


CFSv2 monthly z700 anomalies (m; shaded) and total (dm; contours)

NWS/NCEP/CPC

Jul 2019

Initial conditions: 28Apr2019–7May2019



Final Remarks

- My tomato plants appear to be rather happy, even if most of us are not exactly jumping for joy
- The water year has been dry with near-normal temperatures overall
- May is starting out warm and dry, but some precipitation is liable to return by mid-month
- El Niño a little bit more likely to continue, with the possibility of strengthening still up in the air
- Still anticipating a summer on the warm side due to multi-year trends and climate model output; no clear signal with respect to precipitation