Regional Climate Perspective

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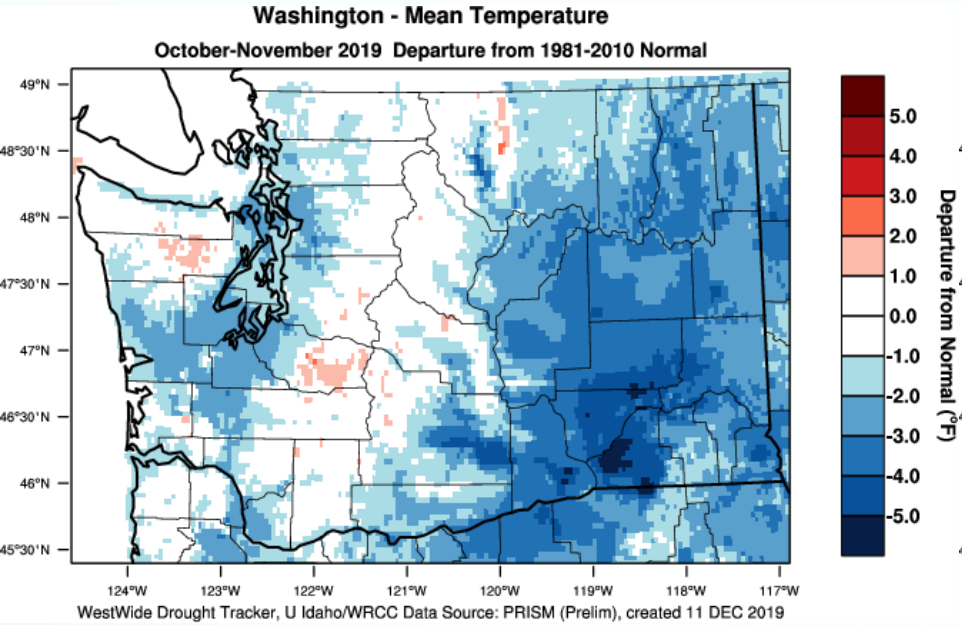
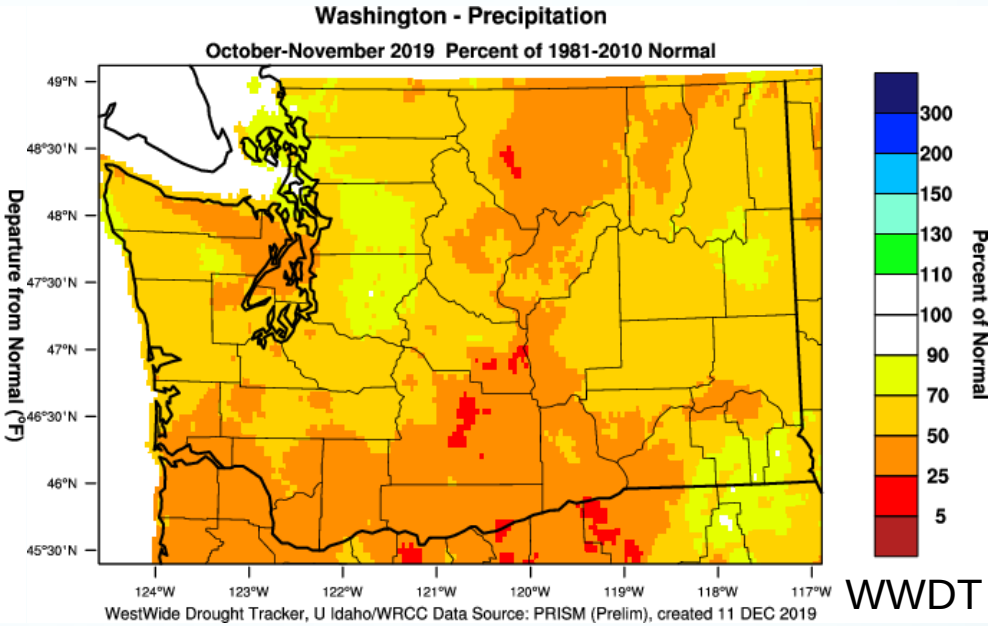
13 December 2019

2020 Water Year

Temperature



Precipitation



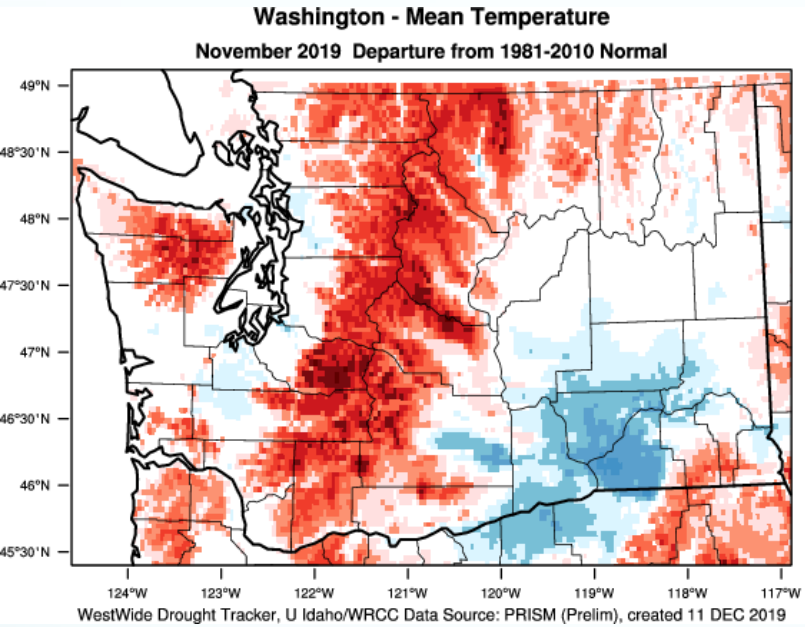
WWDT

- Much below normal temperatures for some regions, but averaged statewide, only 1.5°F below normal (still in the bottom 10th percentile*)
- Averaged statewide, WY 2020 precipitation is the 15th driest* on record (-4.72”; 55% of normal)

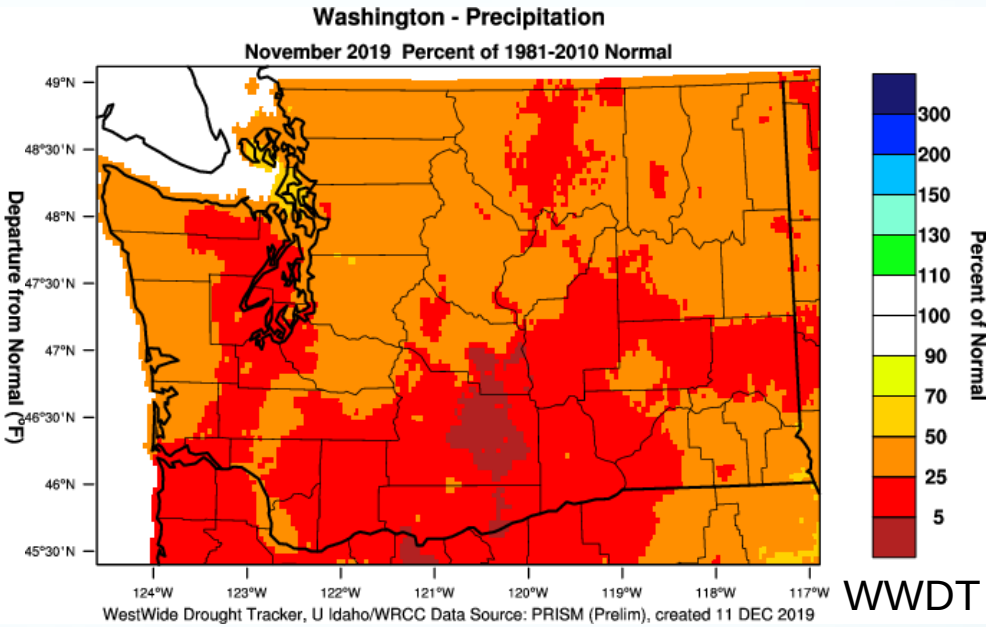
*records since 1895

November 2019

Temperature



Precipitation



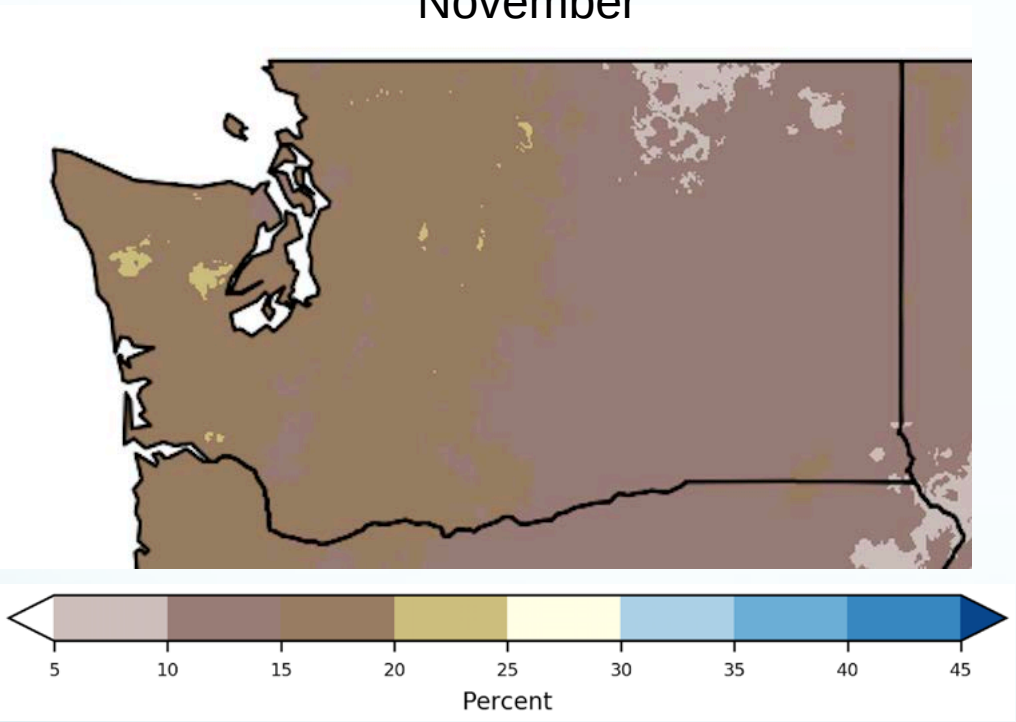
WWDT

- Near-normal to above normal temperatures, particularly in the mountains
- Averaged statewide, November was the 5th driest* on record (-4.85”; 28% of 1981-2010 normal)

*records since 1895

November 2019

Percent of Average Annual Precipitation
November



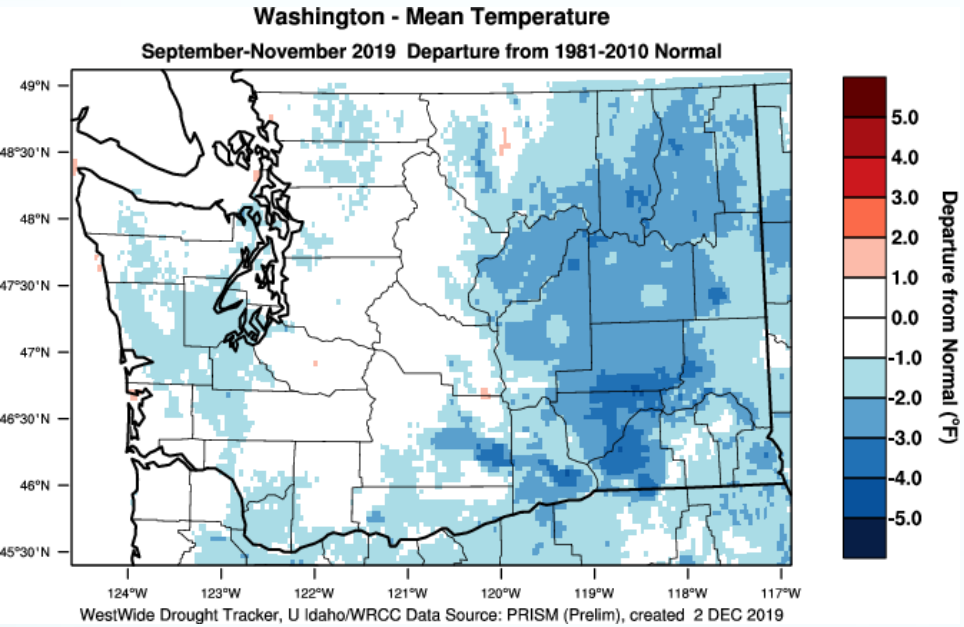
Station	November Total Precipitation (in)	Rank	Record (Amount; Year)	Records Began
Hoquiam	3.46"	2	2.51"; 1976	1953
Goldendale	0.08"	3	0.03"; 1936	1909*
Yakima	0.04"	3	T; 1990 & 1976	1946
Olympia	1.74"	3	1.37"; 1976	1941
Walla Walla	0.57"	3	0.50"; 1976 & 1952	1949
Wenatchee	0.11"	3	0.03"; 1976	1931
Cle Elum	0.25"	3	0.10"; 1929	1899
SeaTac AP	1.71"	4	0.74"; 1976	1945
Quillayute	6.69"	5	4.41"; 1976	1966
Bellingham AP	2.10"	6	1.37"; 1952	1949
Ephrata AP	0.13"	6 (tie)	T; 2004 & 1976	1949
Ritzville	0.36"	7	0.18"; 1939	1906

Table 1: November precipitation records for a selection of WA stations. *1972-1994 is missing from the Goldendale record.

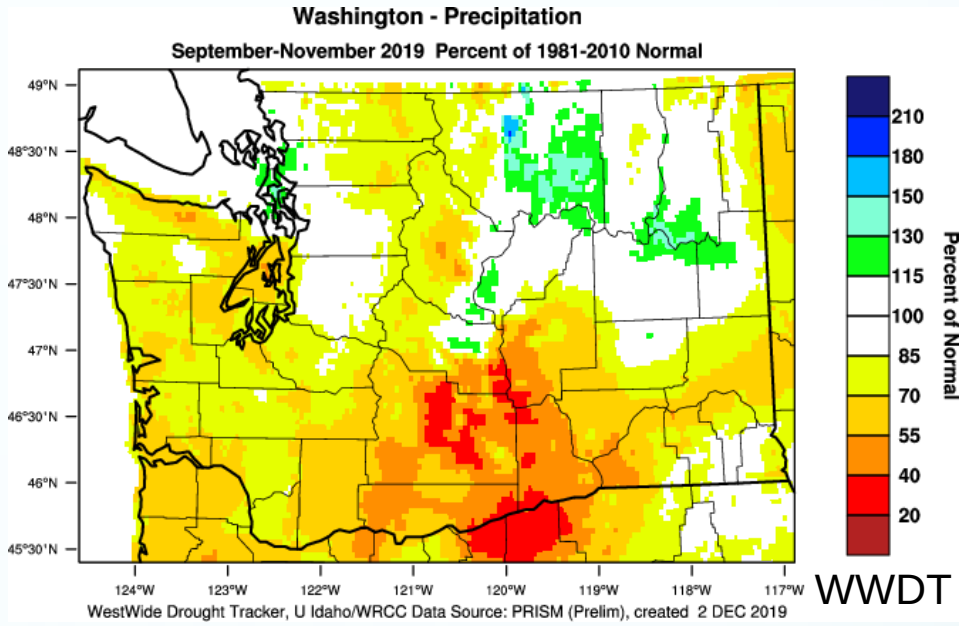
- 15-20% of the annual precipitation in western WA and the Cascades falls in November (the wettest month of the year, climatologically)

September-November 2019

Temperature



Precipitation



WWDT

- Averaged statewide, September tied as the 10th wettest on record (since 1895) with 226% of normal
- But Sept-Nov still mostly dry

US Drought Monitor

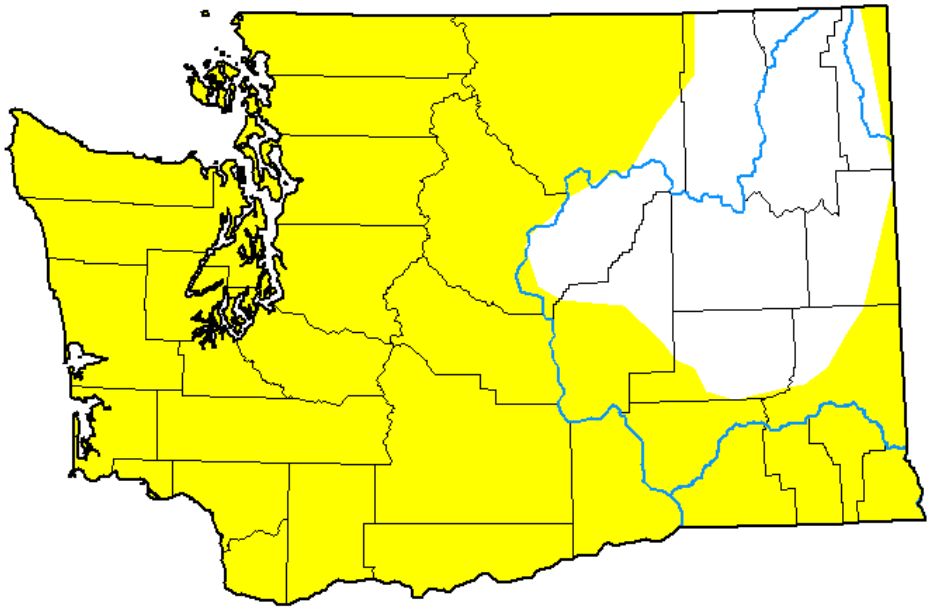
U.S. Drought Monitor

Washington

December 10, 2019

(Released Thursday, Dec. 12, 2019)

Valid 7 a.m. EST



Intensity:

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

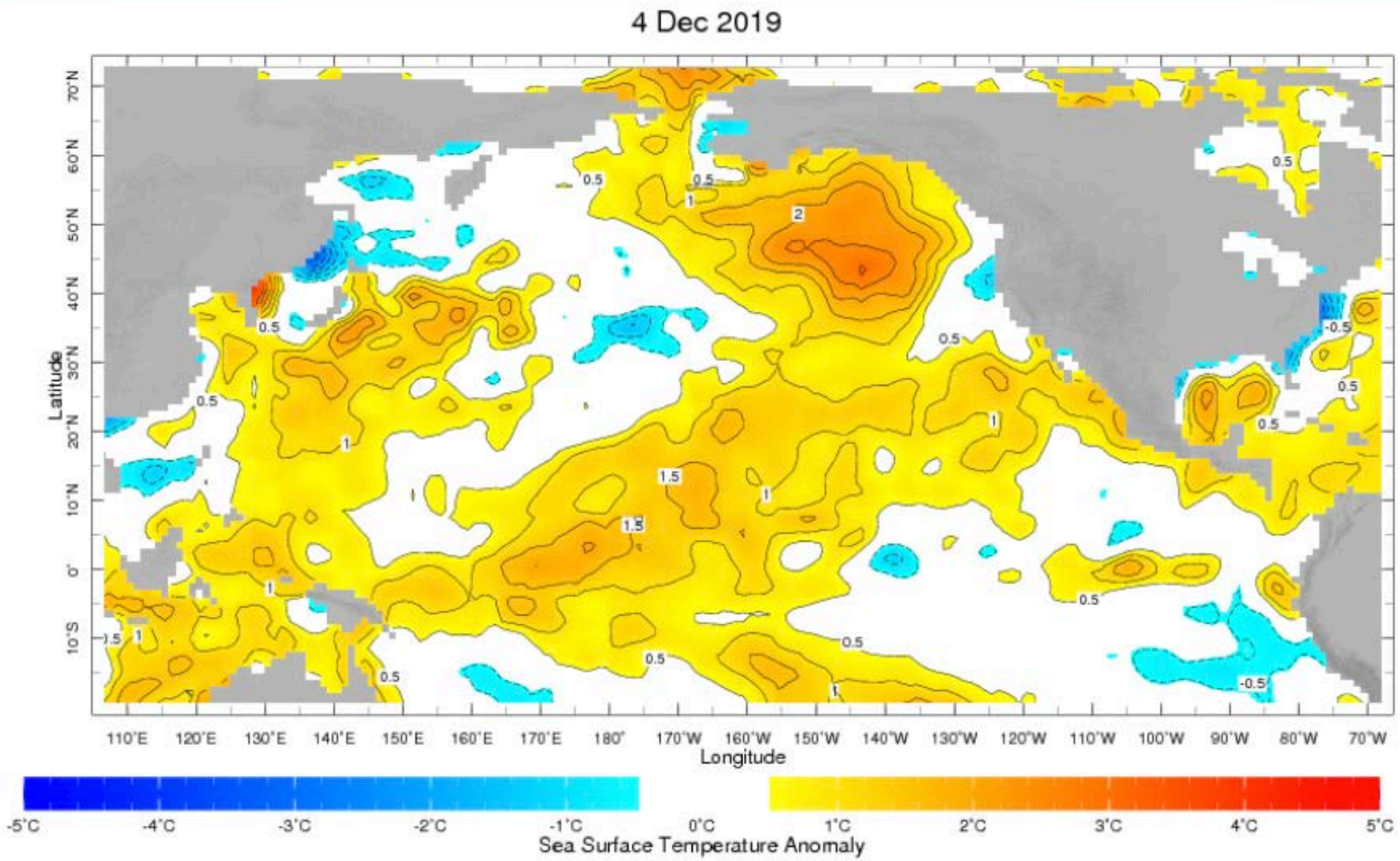
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

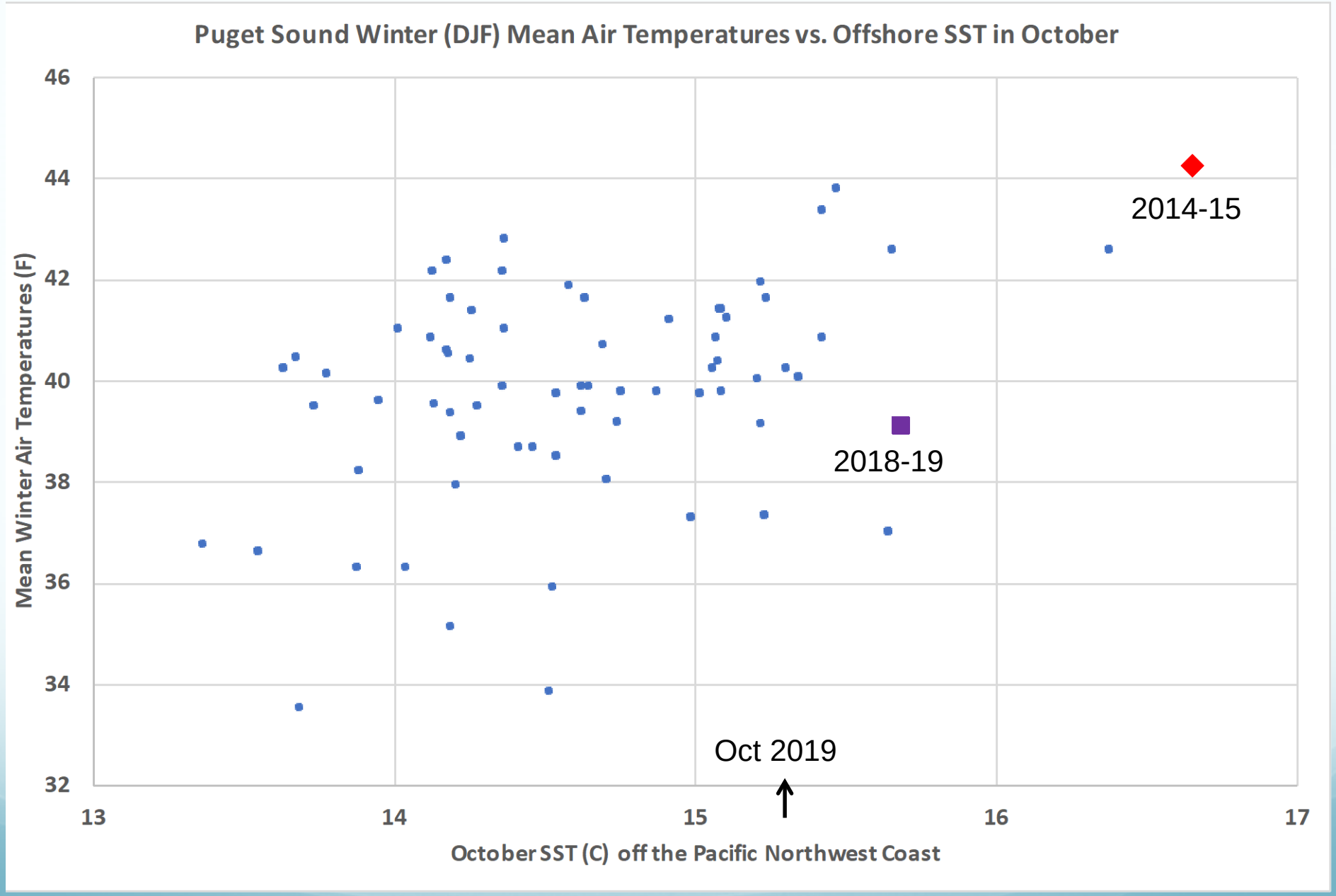
Author:

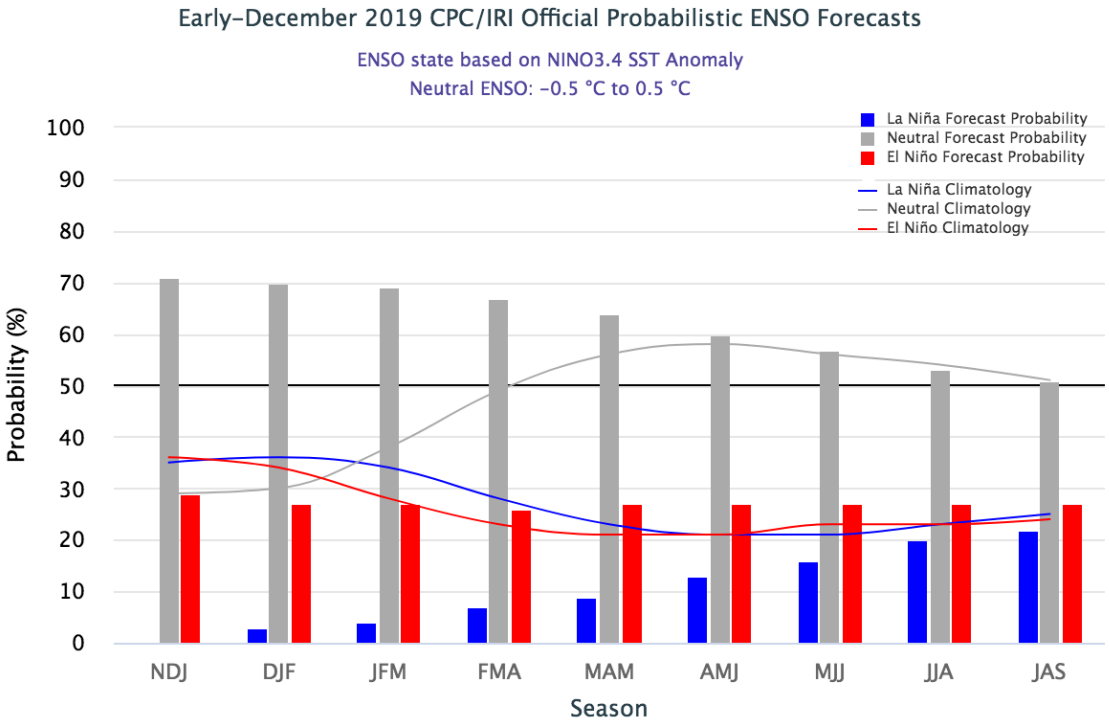
Deborah Bathke
National Drought Mitigation Center

droughtmonitor.unl.edu

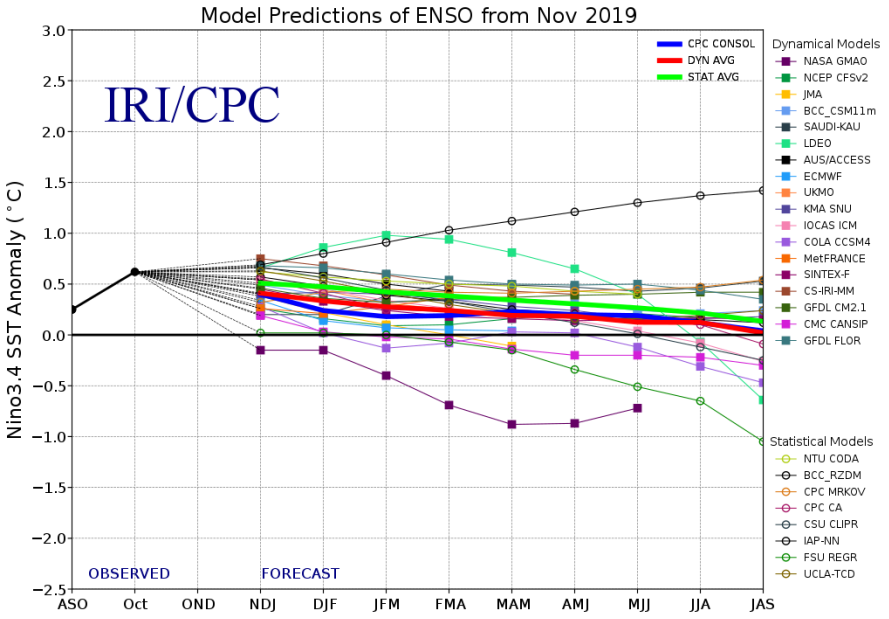
Sea Surface Temperature Anomalies in Early December 2019

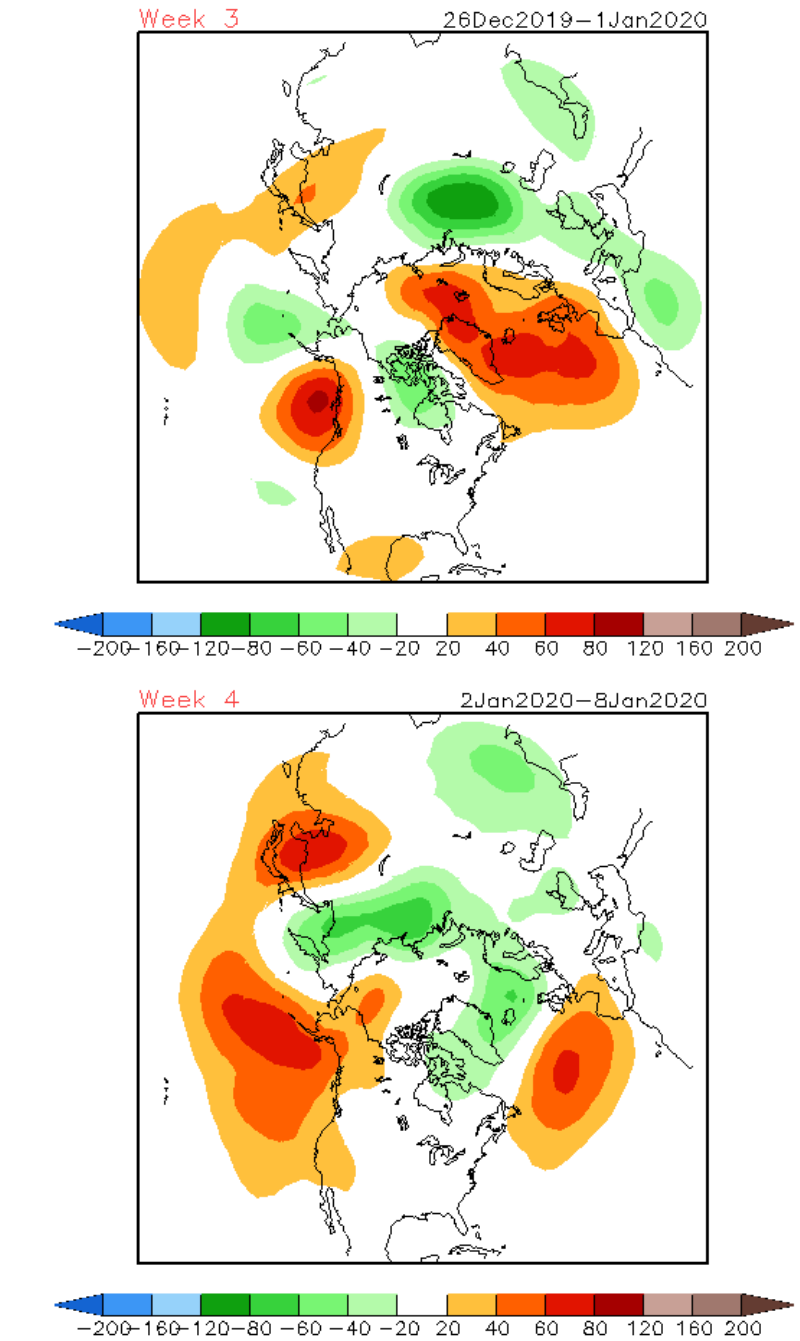



Puget Sound Winter (DJF) Mean Air Temperatures vs. Offshore SST in October
Mean Winter Air Temperatures (F)
46
44
42
40
38
36
34
32
13
14
15
16
17
October SST (C) off the Pacific Northwest Coast
2014-15
2018-19
Oct 2019



El Niño/La Niña Forecasts Indicate Elevated Odds of Near-Neutral Conditions



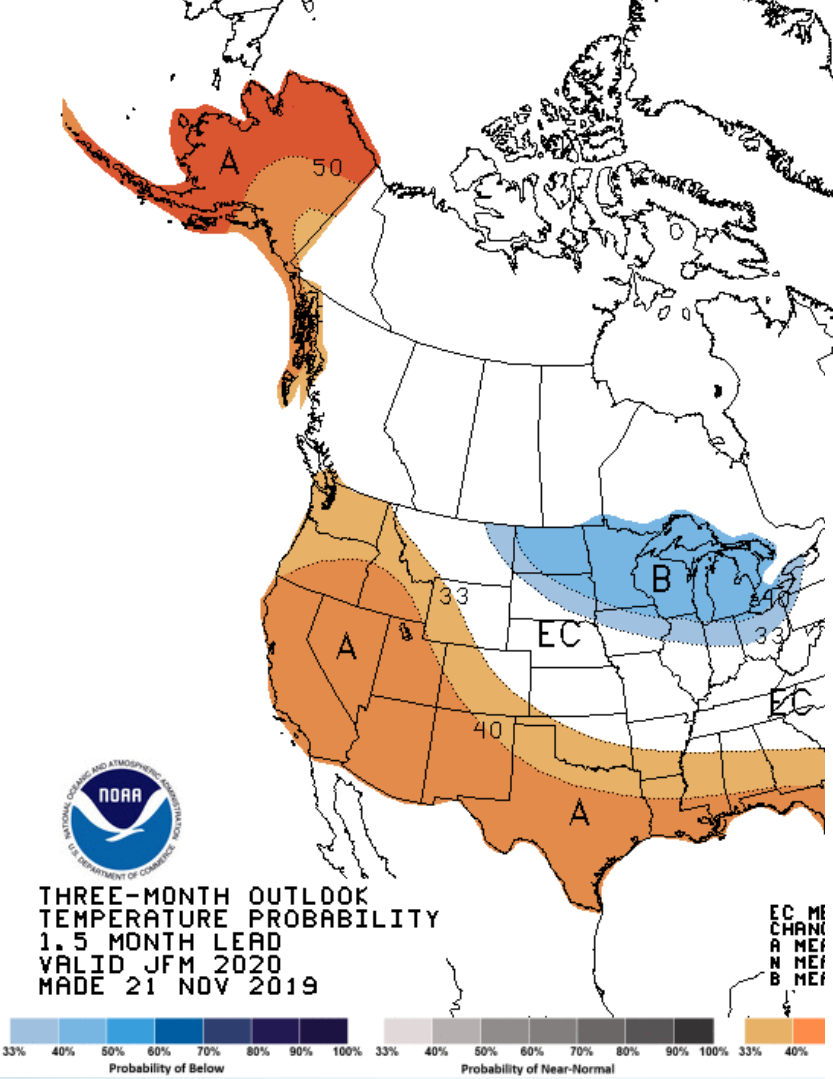


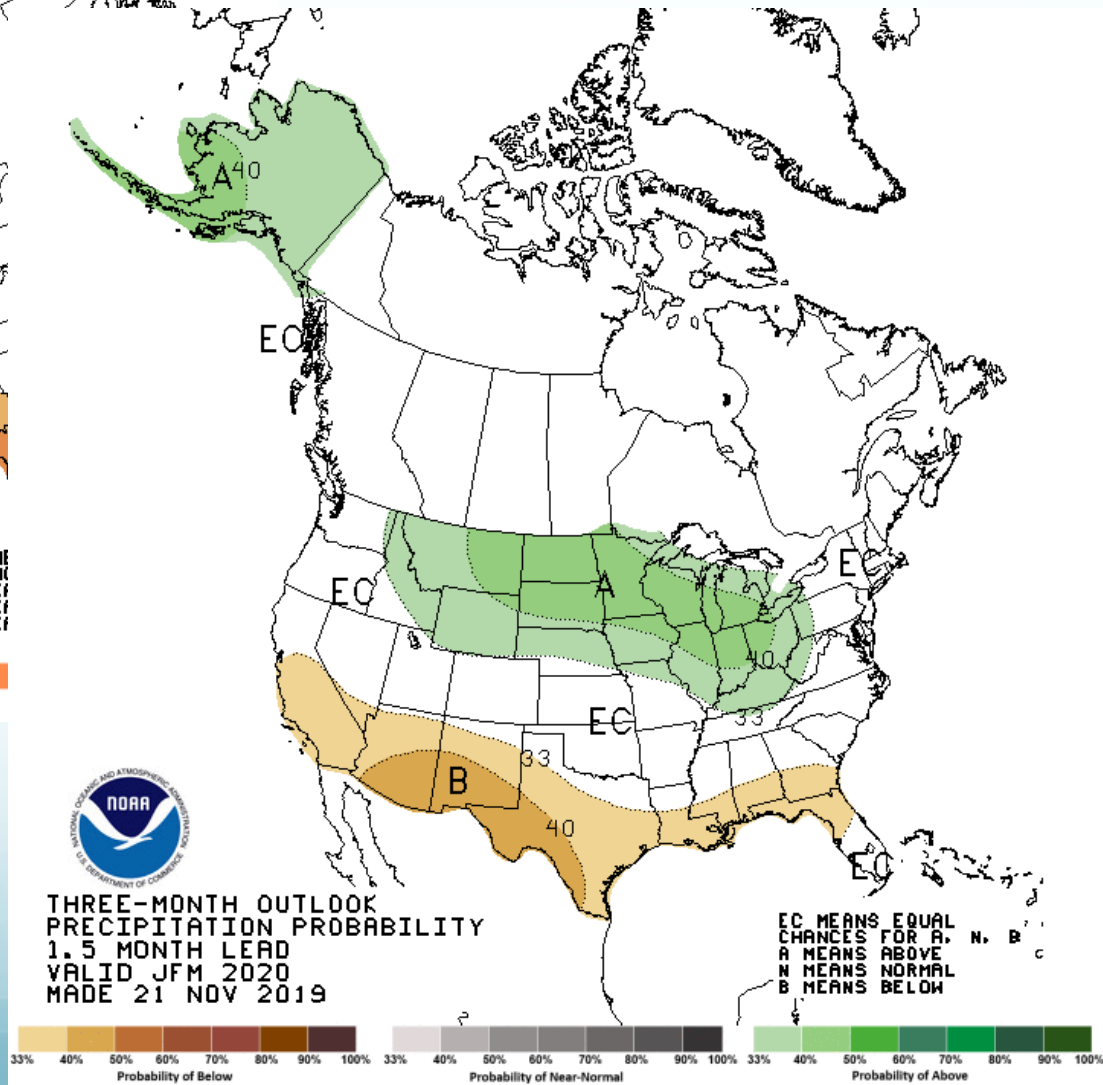
Latest Set of Week 3-4 Forecasts from CFSv2

Anomalously high 500 hPa Z over NE Pacific extending into Pacific NW: Dry for WA, especially on west side of Cascade Mountains.

Favors continued warming of offshore waters

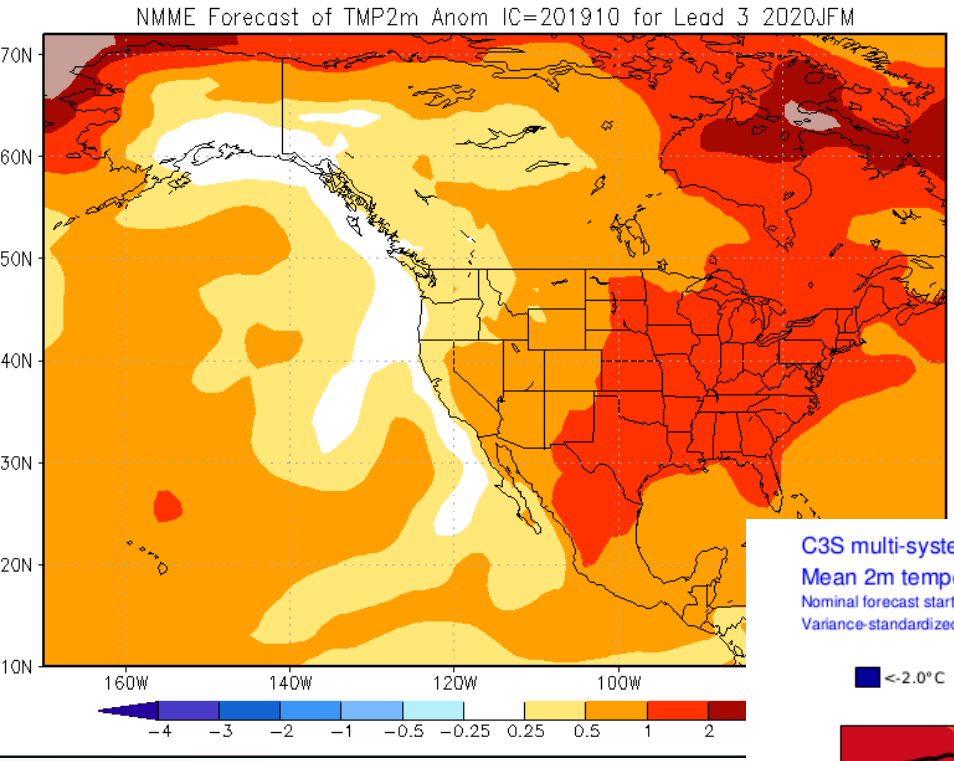
NOAA/CPC Forecasts for Jan-Mar



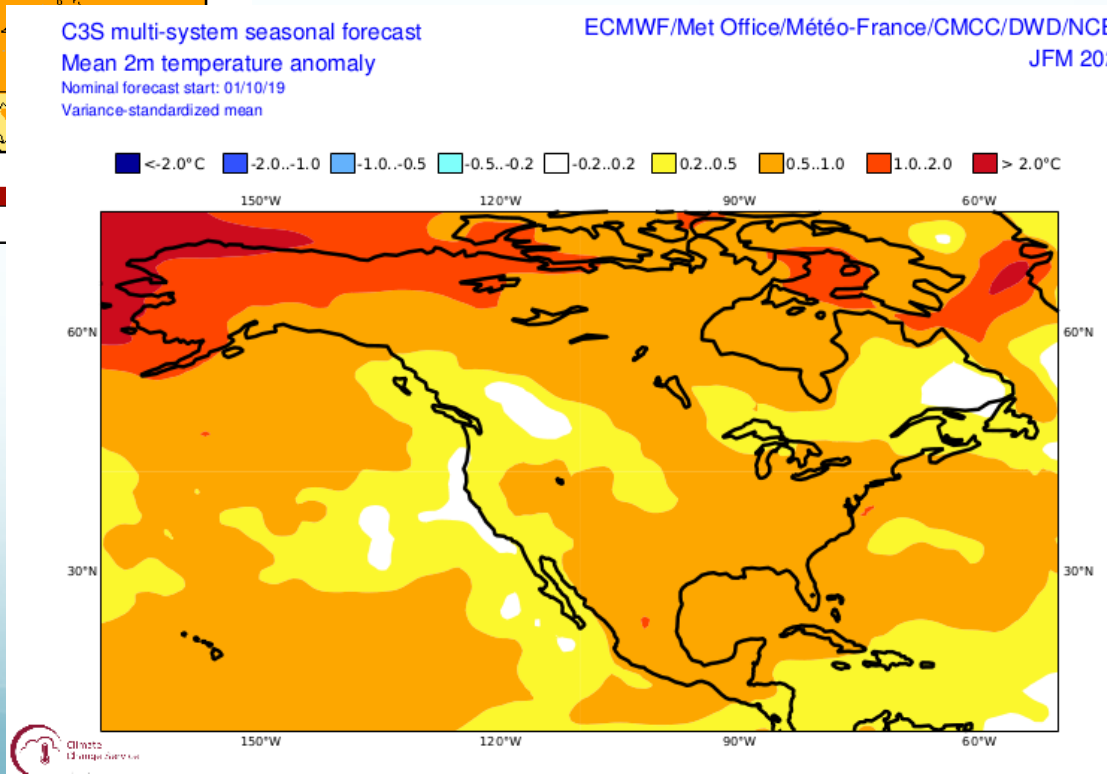


Climate Model Ensemble Projections for JFM Temperature from Oct 2019

NMME

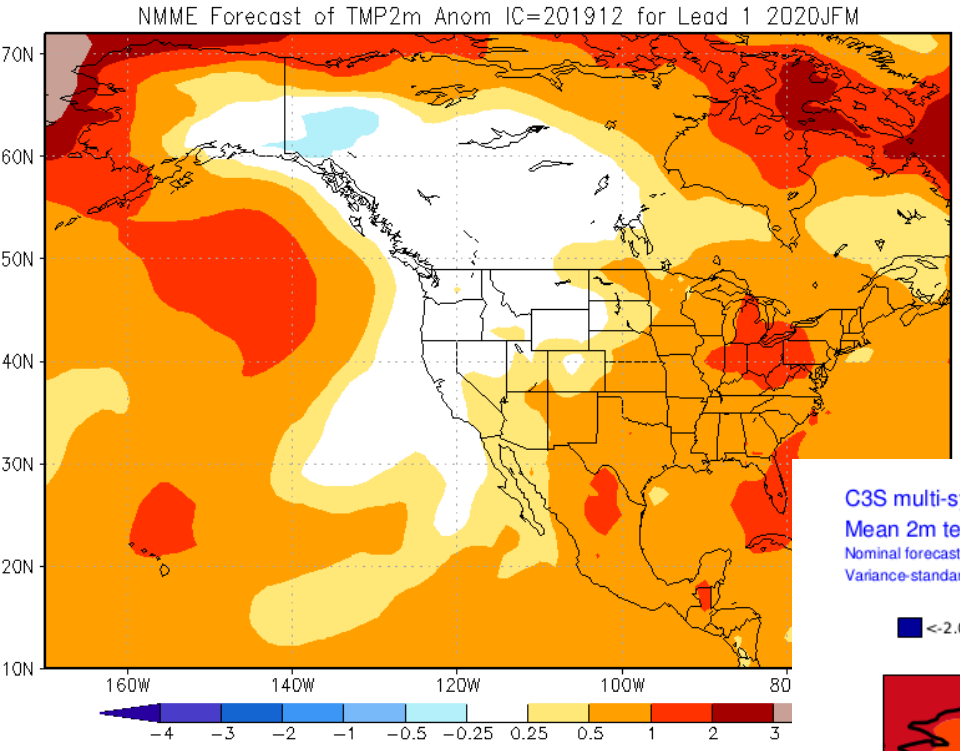


IMME



Climate Model Ensemble Projections for JFM Temperature from Dec 2019

NMME



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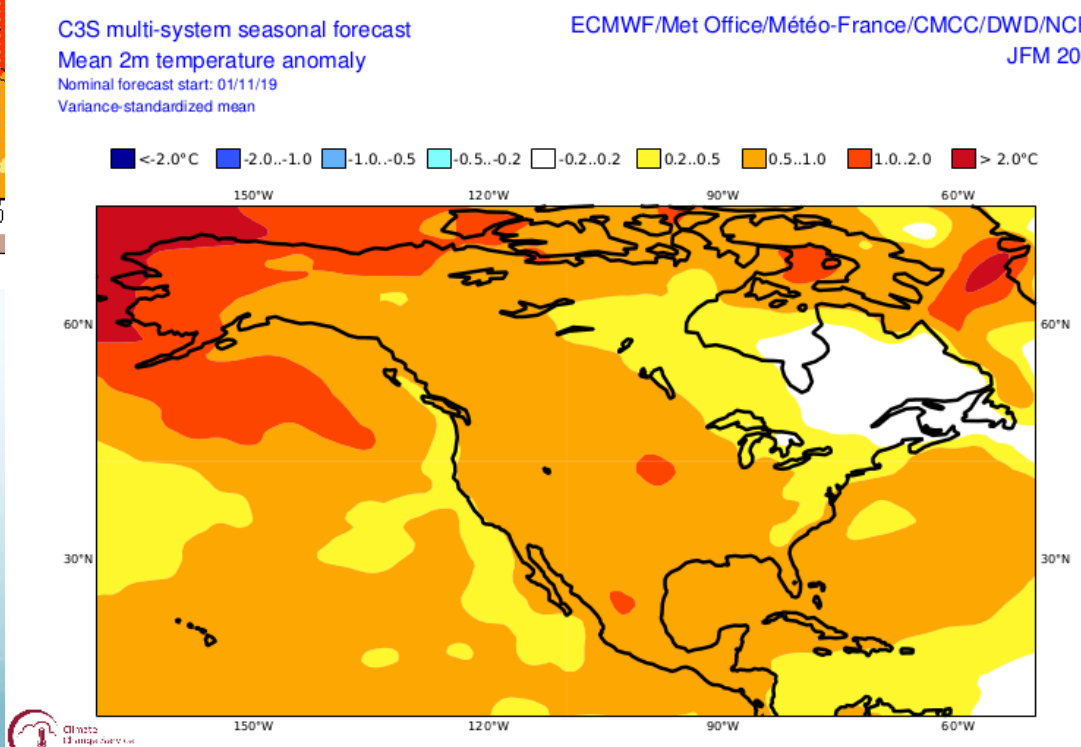
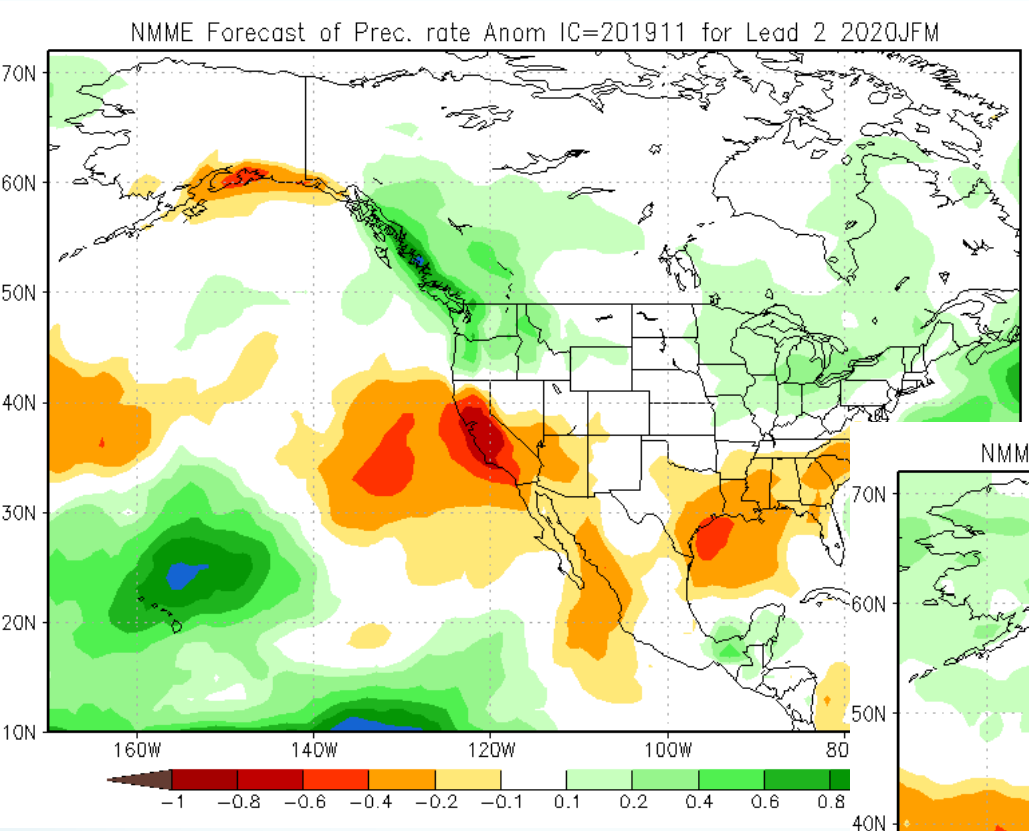
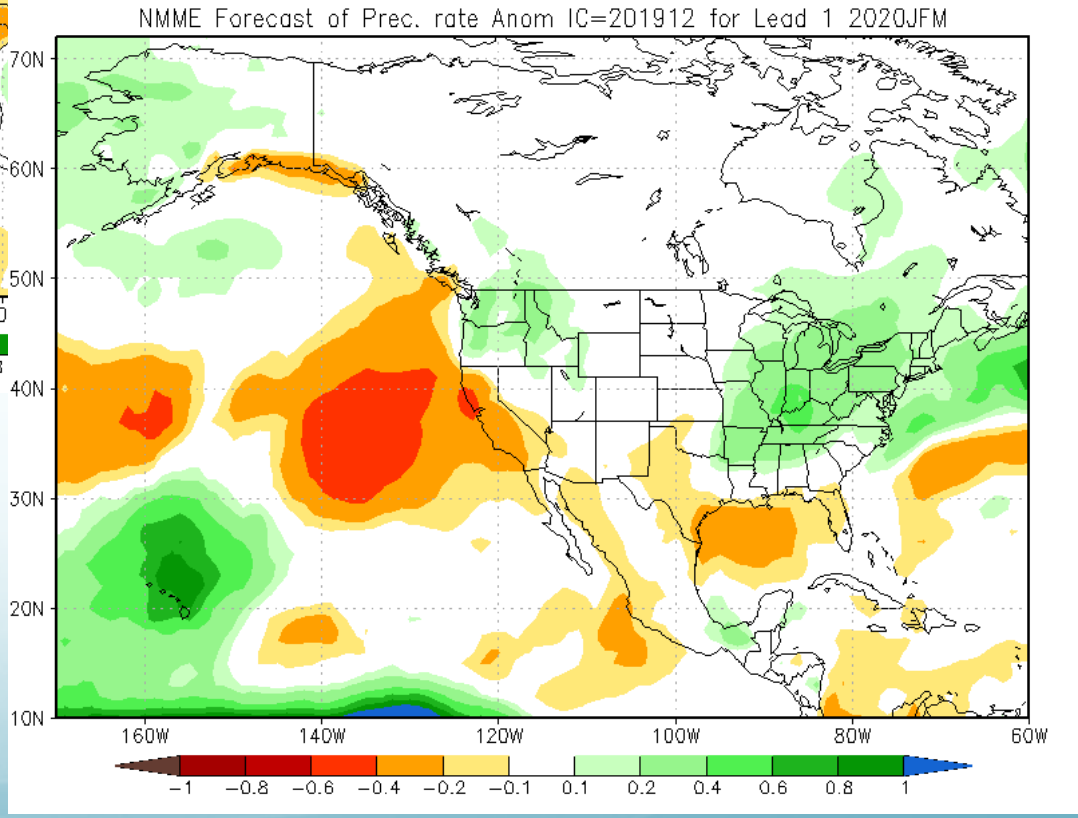


November Model Runs

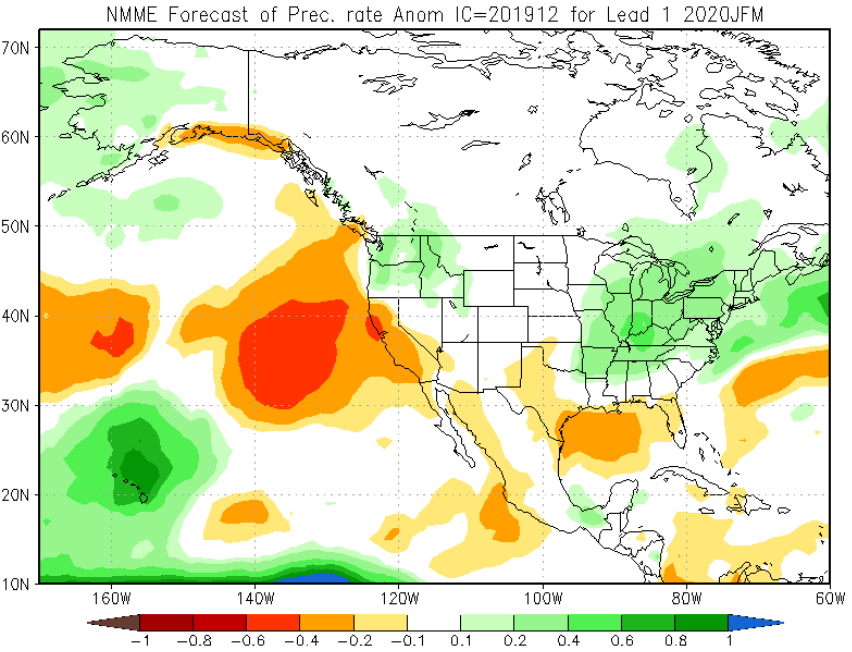


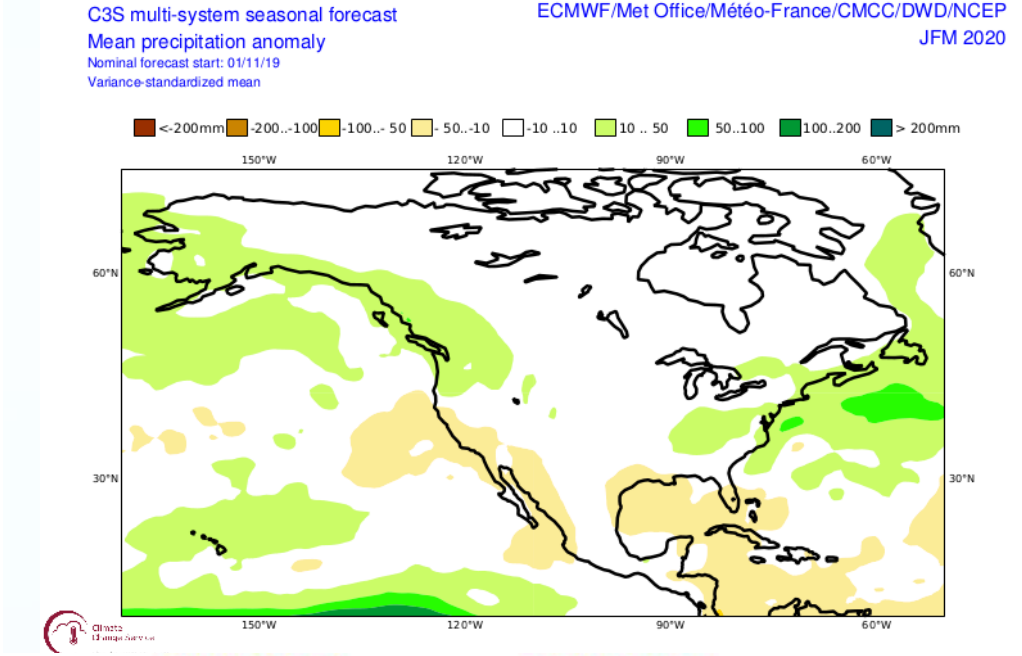
Latest Simulations Indicate Weaker Wet Anomalies for the PNW during Late Winter

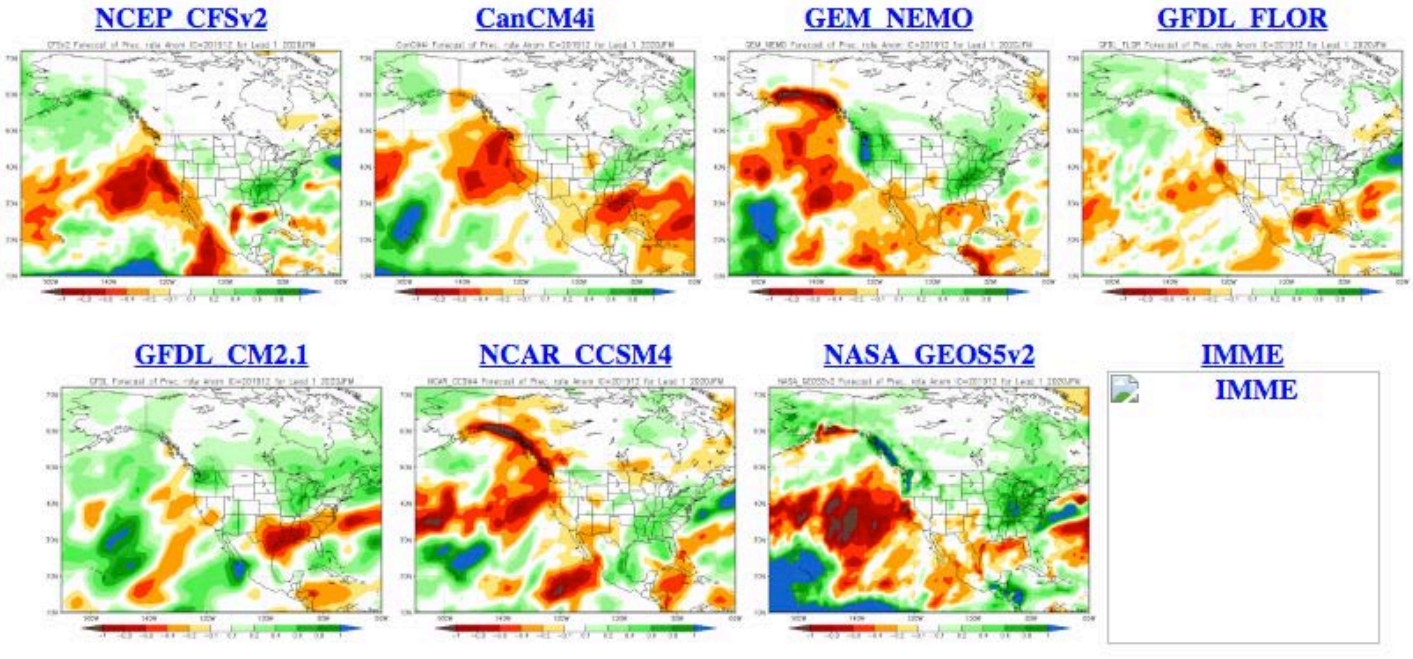
December Model Runs



Variation among Models: Precipitation







Final Remarks

- Water year 2020 has started dry; even adding in our wet September produces precipitation deficits over most of the state
- November precipitation was remarkably low (5th driest; 28% of normal) during an important month for precip (10-20% of annual depending on the location)
- ENSO not liable to be a significant player in the climate system during the upcoming fall and winter
- Expecting temperatures in the near-normal to moderately above normal due to multi-year trends and climate model output; considerable uncertainty with respect to precipitation
- It is probably premature to begin digging a pit toilet in the back yard but it may be prudent to stake one out