

Regional Climate Perspective

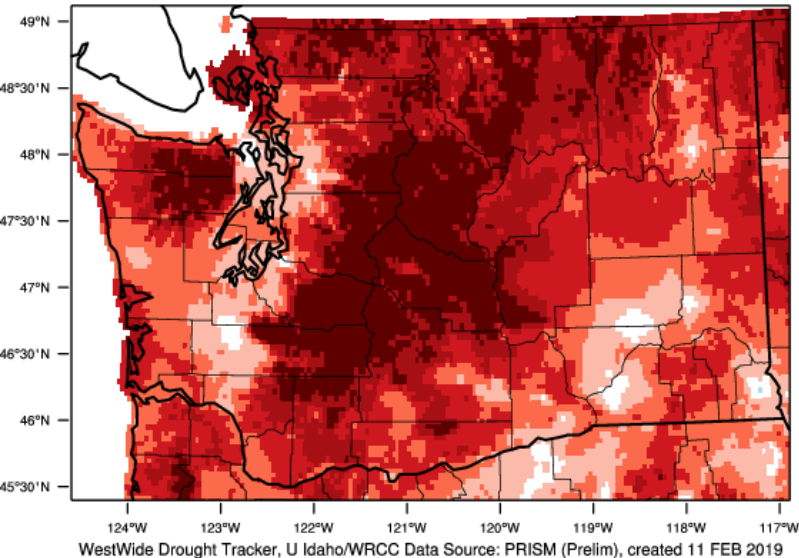
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Office of the Washington State Climatologist
Joint Institute for the Study of Atmosphere and Ocean
University of Washington
15 February 2019

2019 Water Year

Temperature

Washington - Mean Temperature

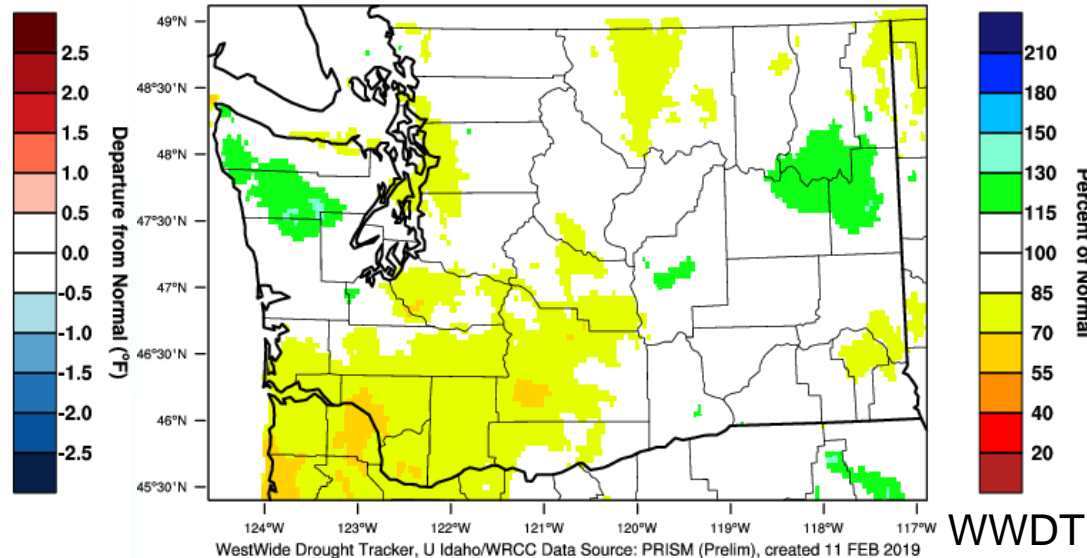
October-January 2019 Departure from 1981-2010 Normal



Precipitation

Washington - Precipitation

October-January 2019 Percent of 1981-2010 Normal

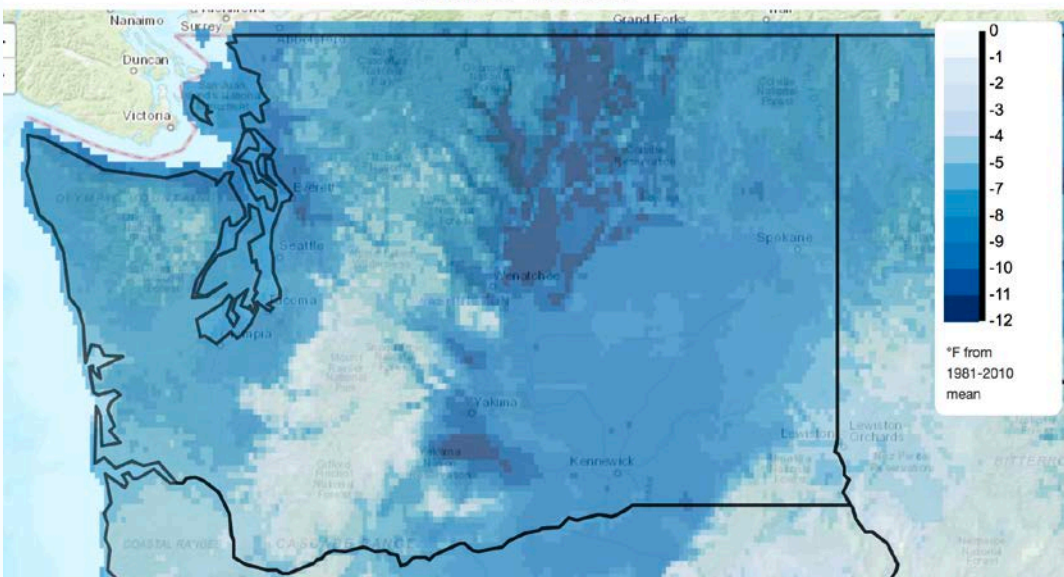


- Average temperatures tied for 12th warmest Oct-Jan (since 1895): 1.9°F above normal
 - Tied with 1988/89, 1991/92, 2015/16
- Middle of the pack in terms of precipitation: -2.50" below normal averaged statewide

February

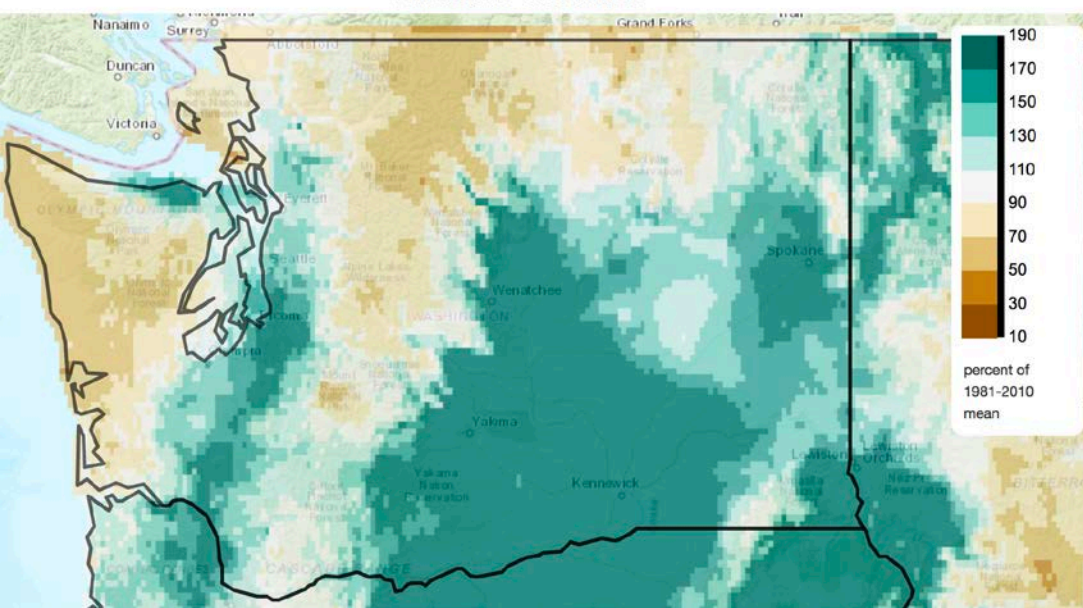
Mean Daily Temperature Anomaly, Last 15 Days

2019/01/29 - 2019/02/12

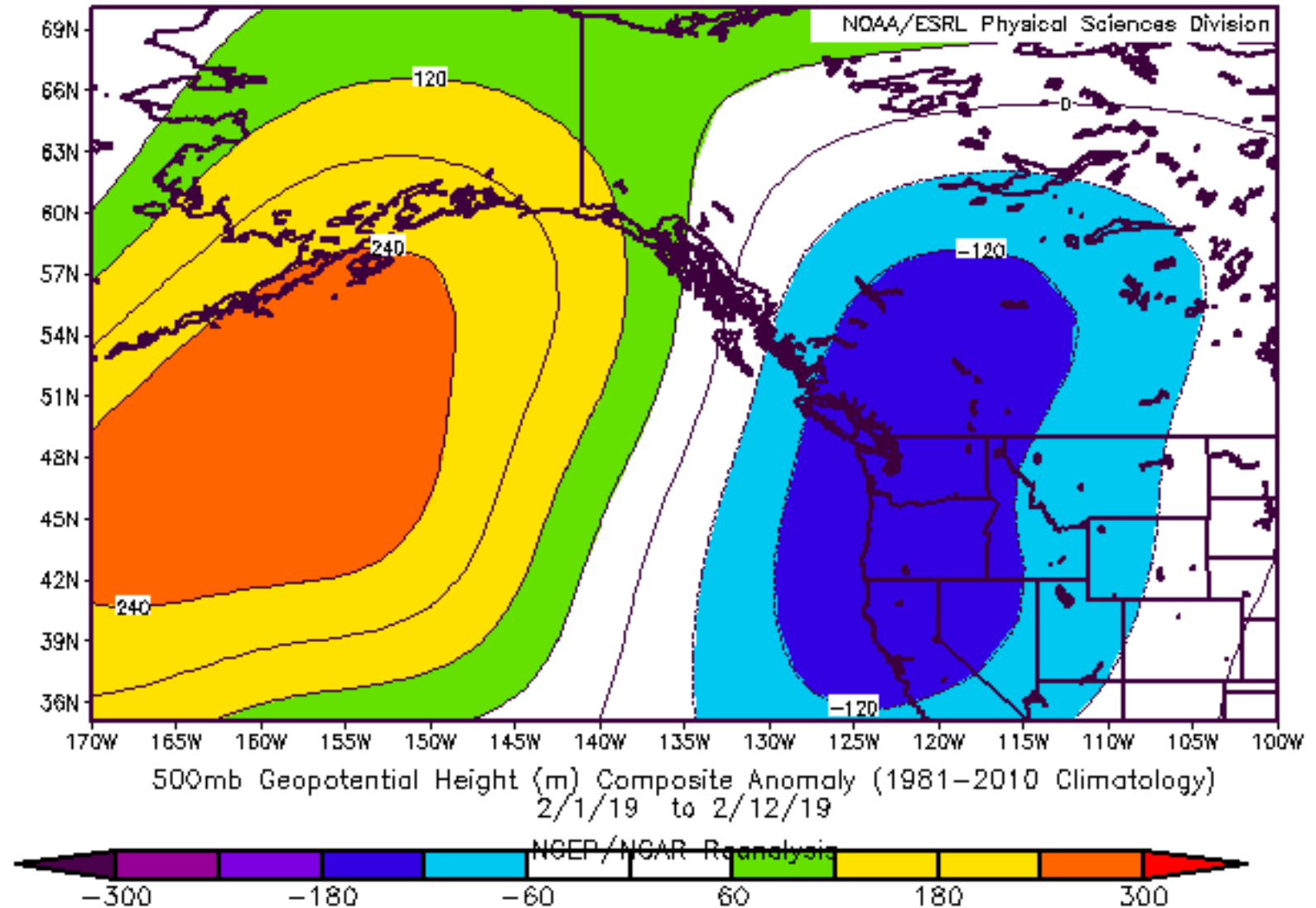


Total Precipitation Anomaly, Last 15 Days

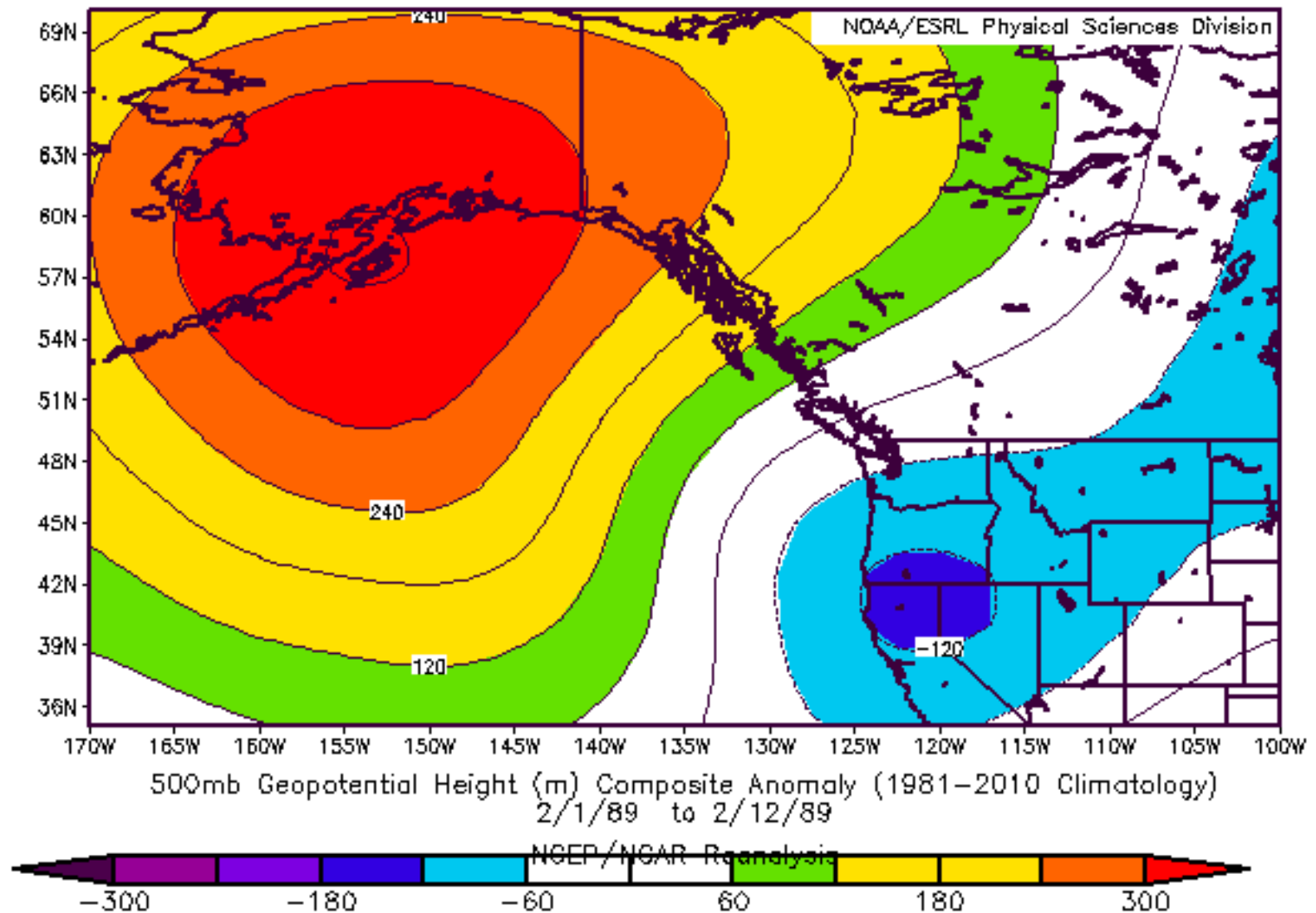
2019/01/29 - 2019/02/12



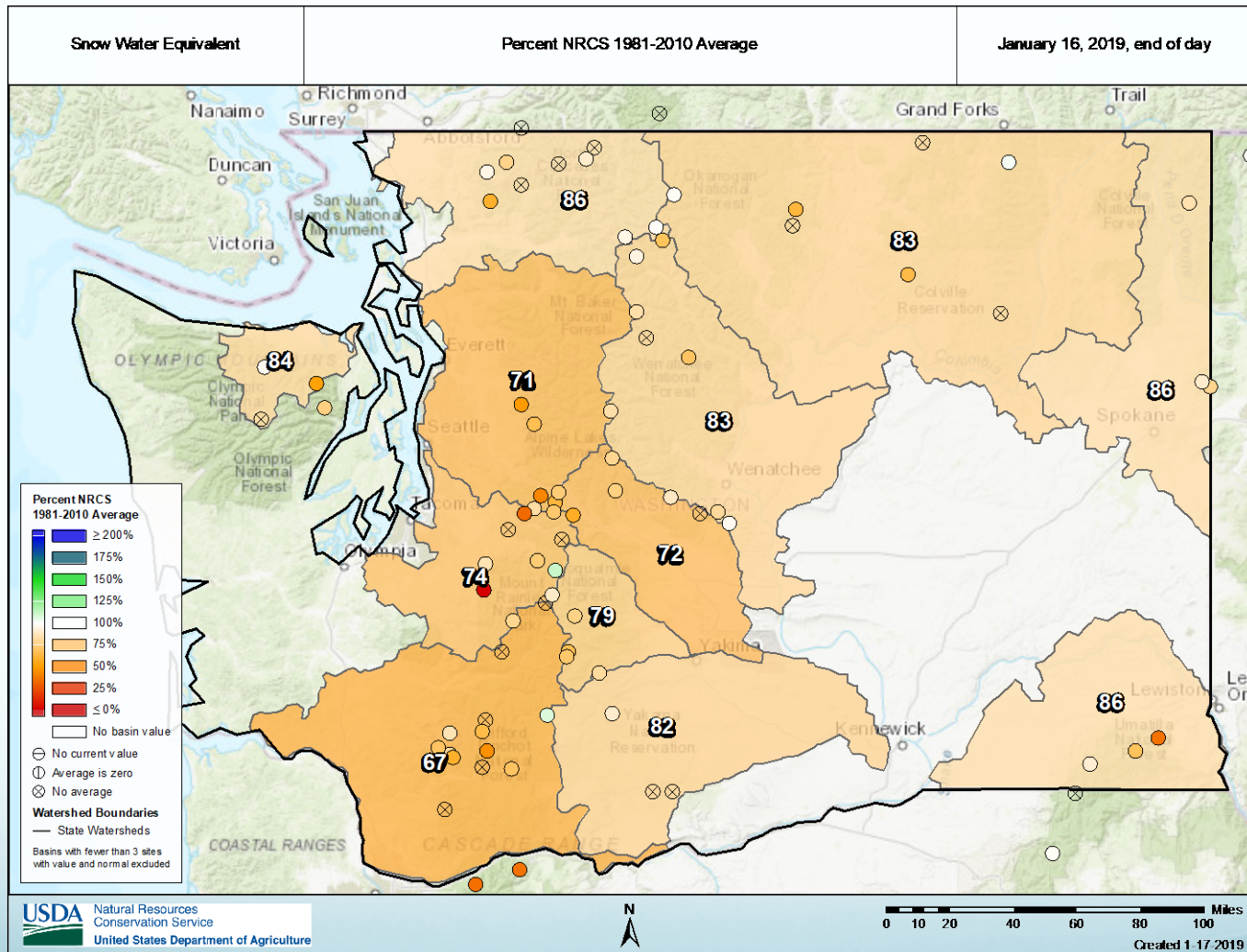
- Lowland snow
 - 4th snowiest month on record for SeaTac (20.2")
 - Nowhere near a record for Spokane (19.5")
- 24-hr snowfall record of 31.5" at Snoqualmie Pass (ending at 6 am on 2/13)
 - Since 1973
 - 80" in 5 days



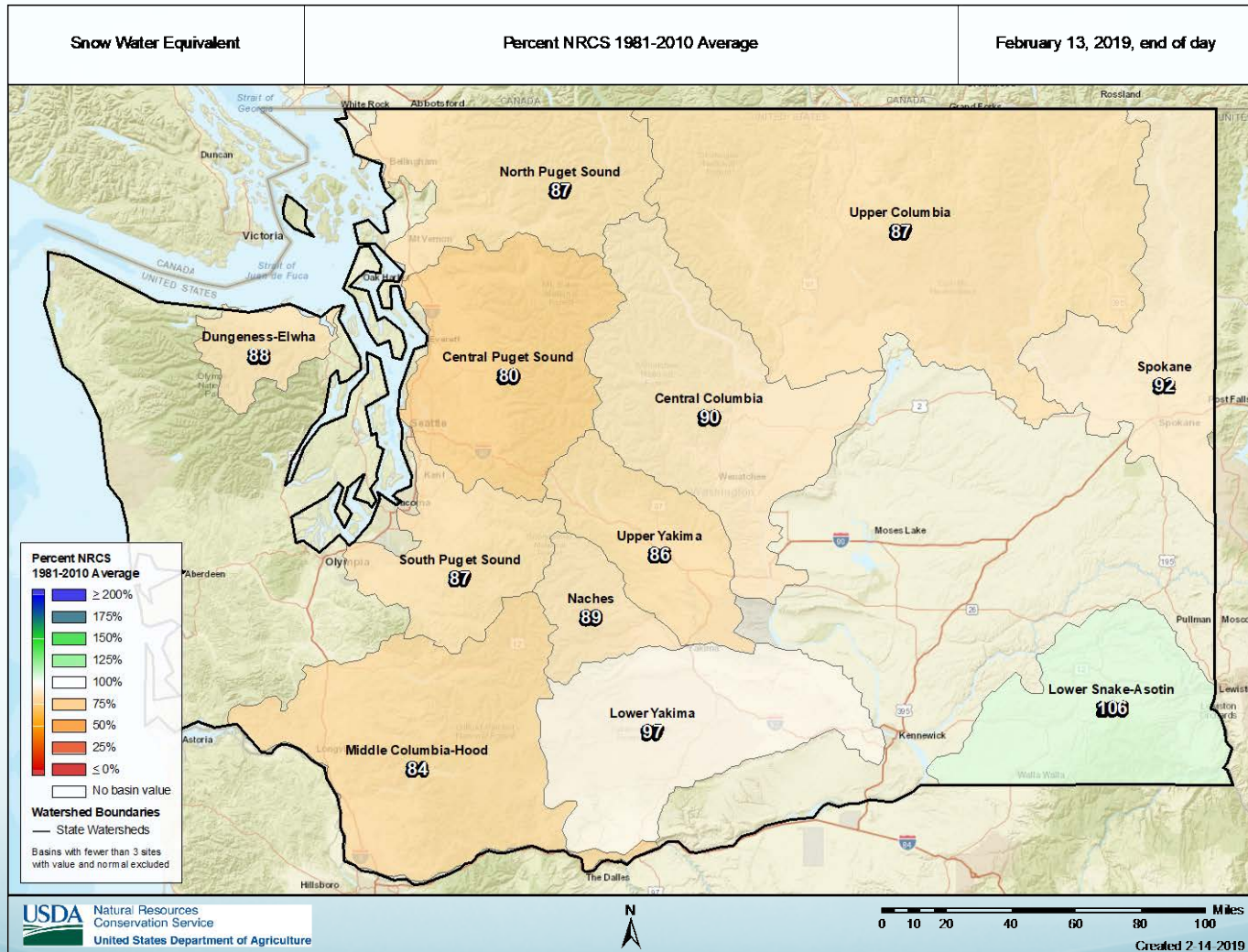
1-12 Feb 1989



Jan 16 SWE



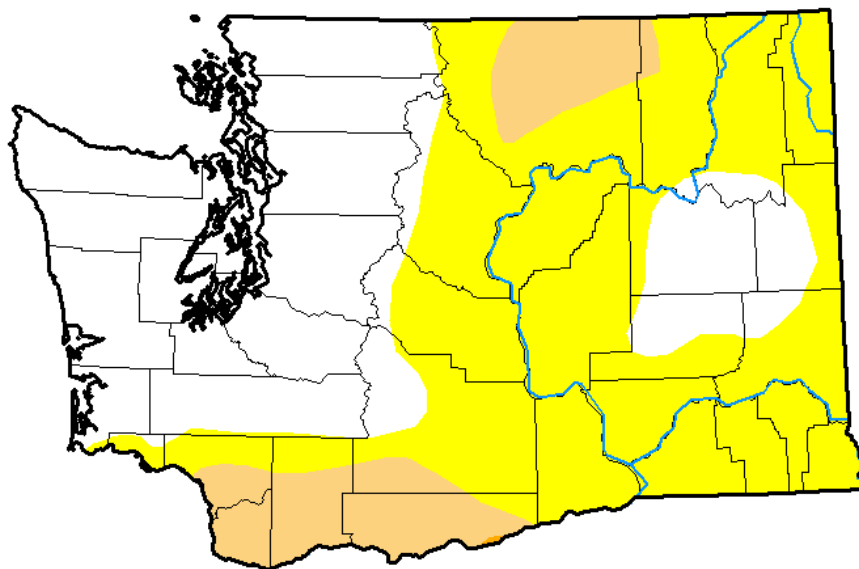
Feb 13 SWE



US Drought Monitor

U.S. Drought Monitor Washington

February 12, 2019
(Released Thursday, Feb. 14, 2019)
Valid 7 a.m. EST



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:

Richard Tinker
CPC/NOAA/NWS/NCEP

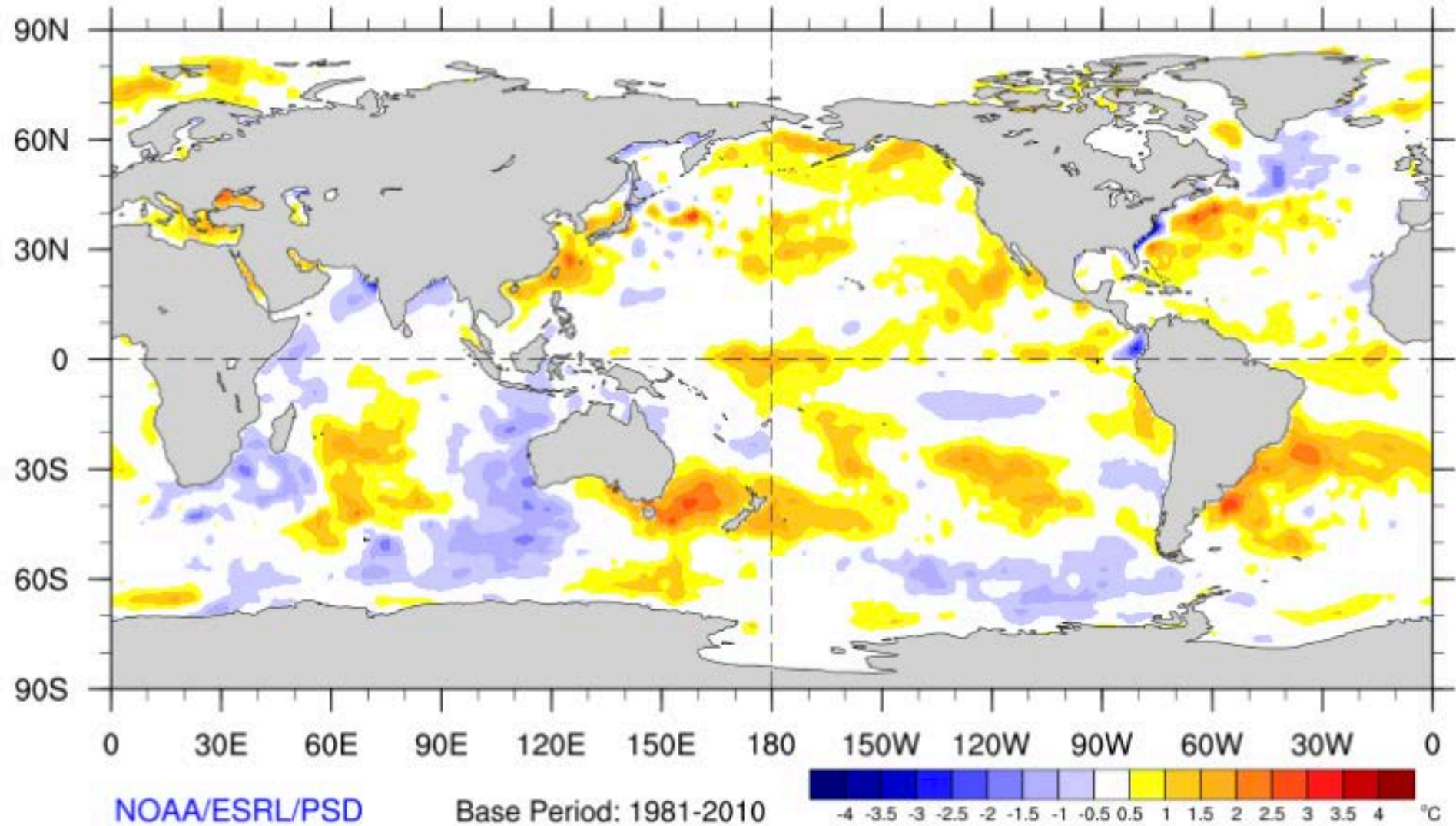


<http://droughtmonitor.unl.edu/>

Recent Global SST Anomalies

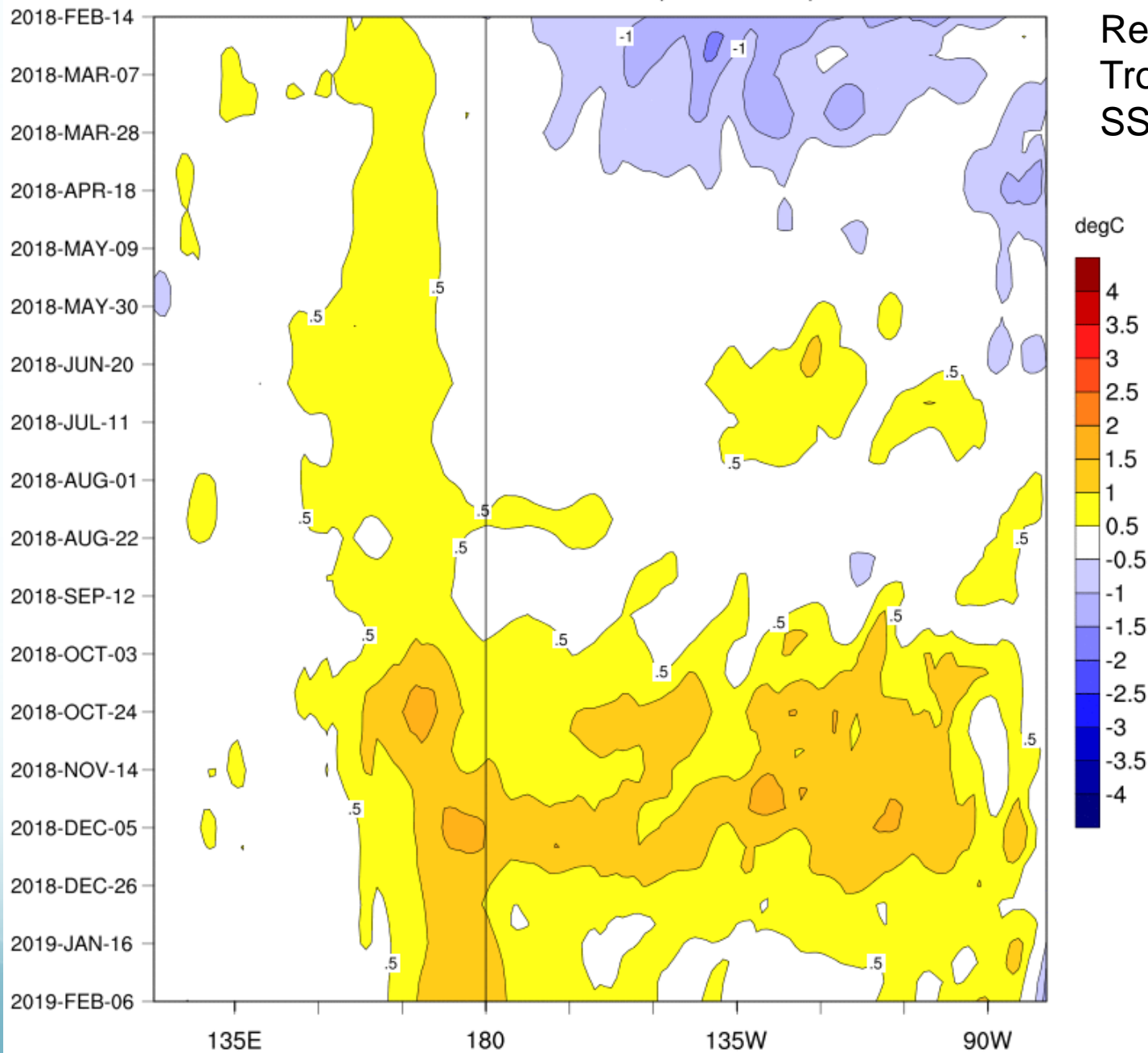
Weekly SST Anomaly

2019/02/03 - 2019/02/09

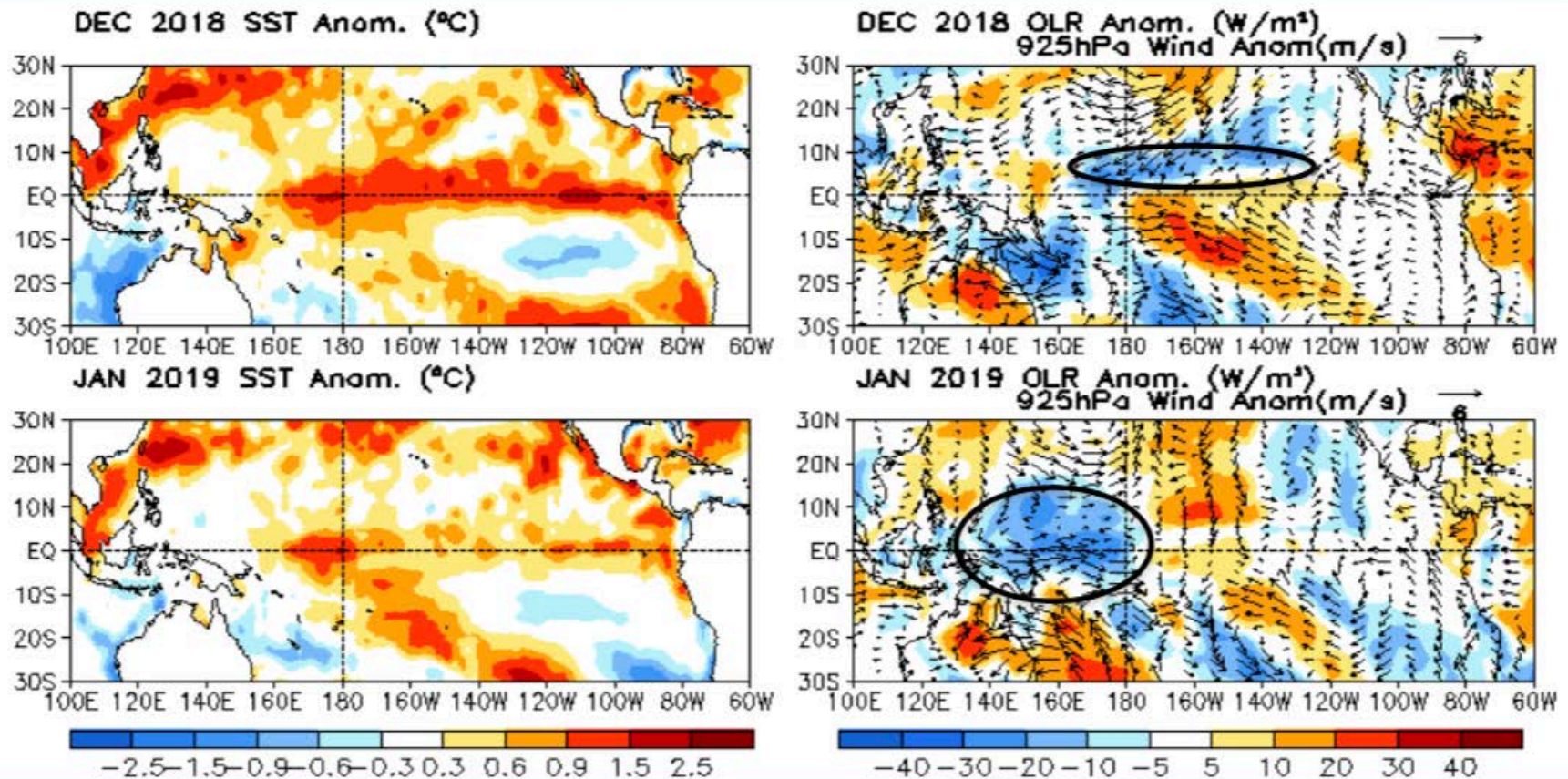


SST Anomalies (3.5N-3.5S)

Recent Evolution of Tropical Pacific SST Anomalies



Recent SST & Outgoing Longwave Radiation (Deep Convection) Anomalies

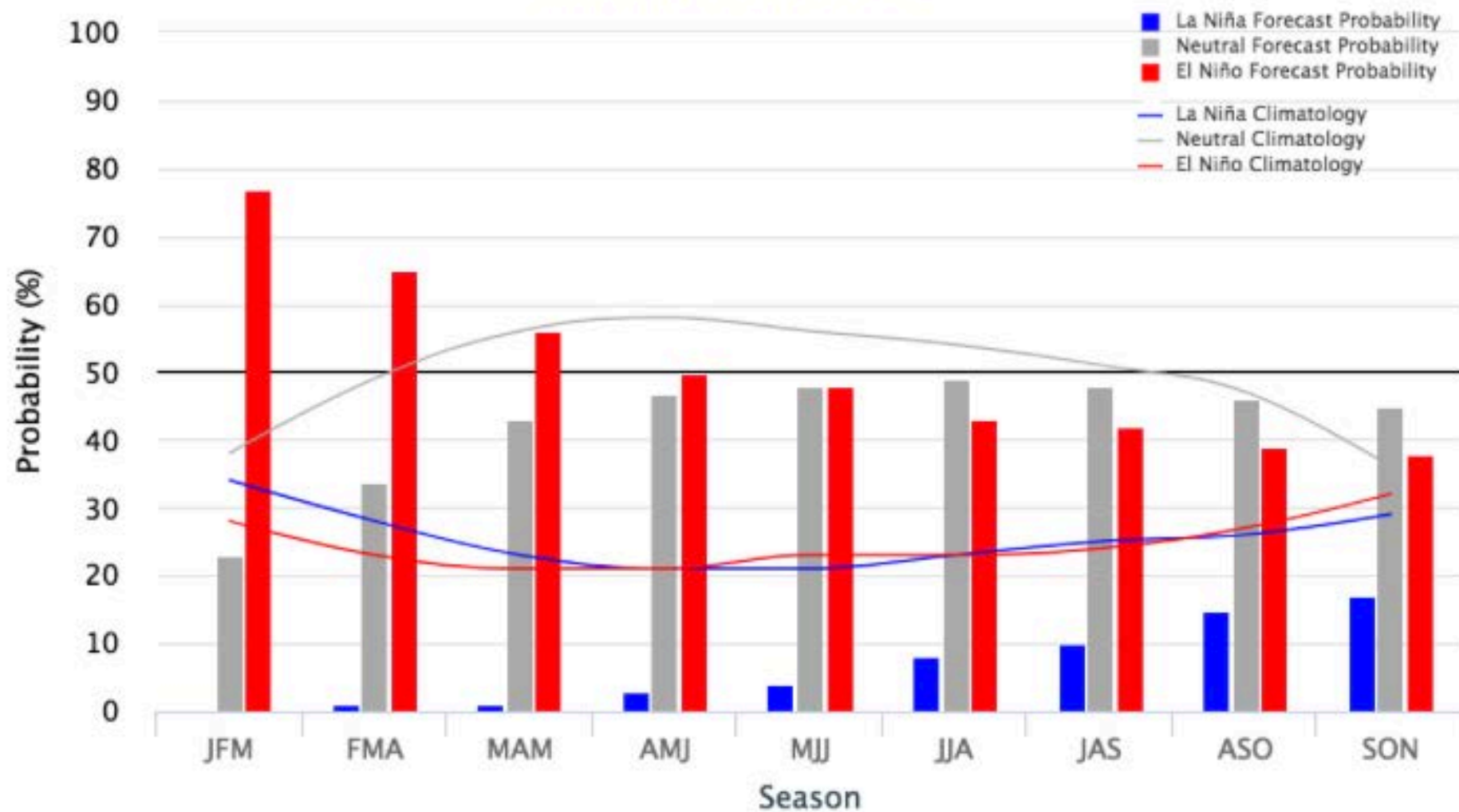


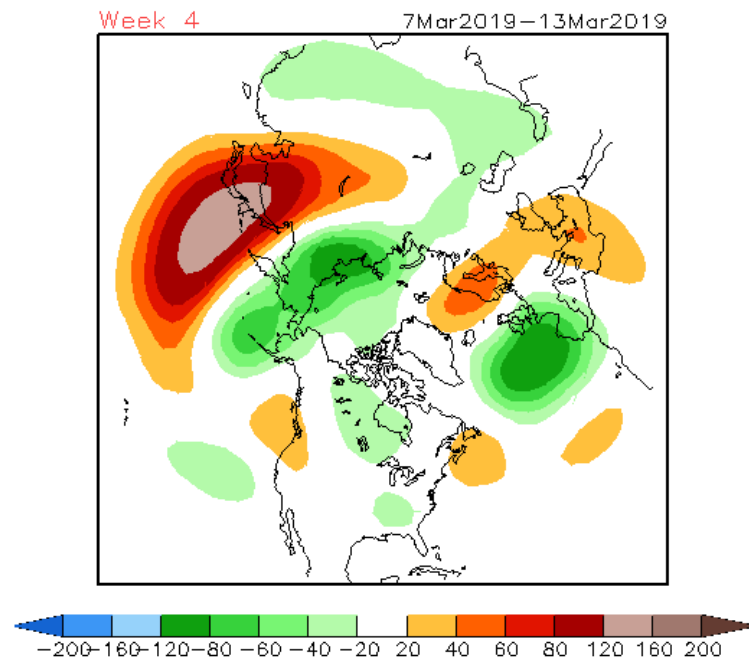
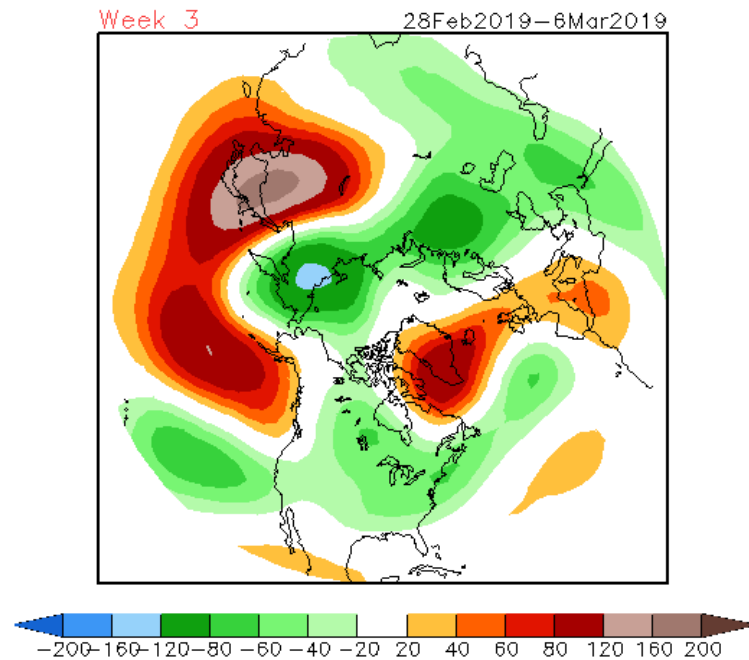
- According to ENSO Diagnostic Discussion released on Feb 14, 2019, **ENSO-conditions** presented in Jan 2019 since enhanced convection expanded near the Dateline and equatorial Southern Oscillation index was negative (-0.6 standard deviations).

Early-February 2019 CPC/IRI Official Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly

Neutral ENSO: -0.5°C to 0.5°C

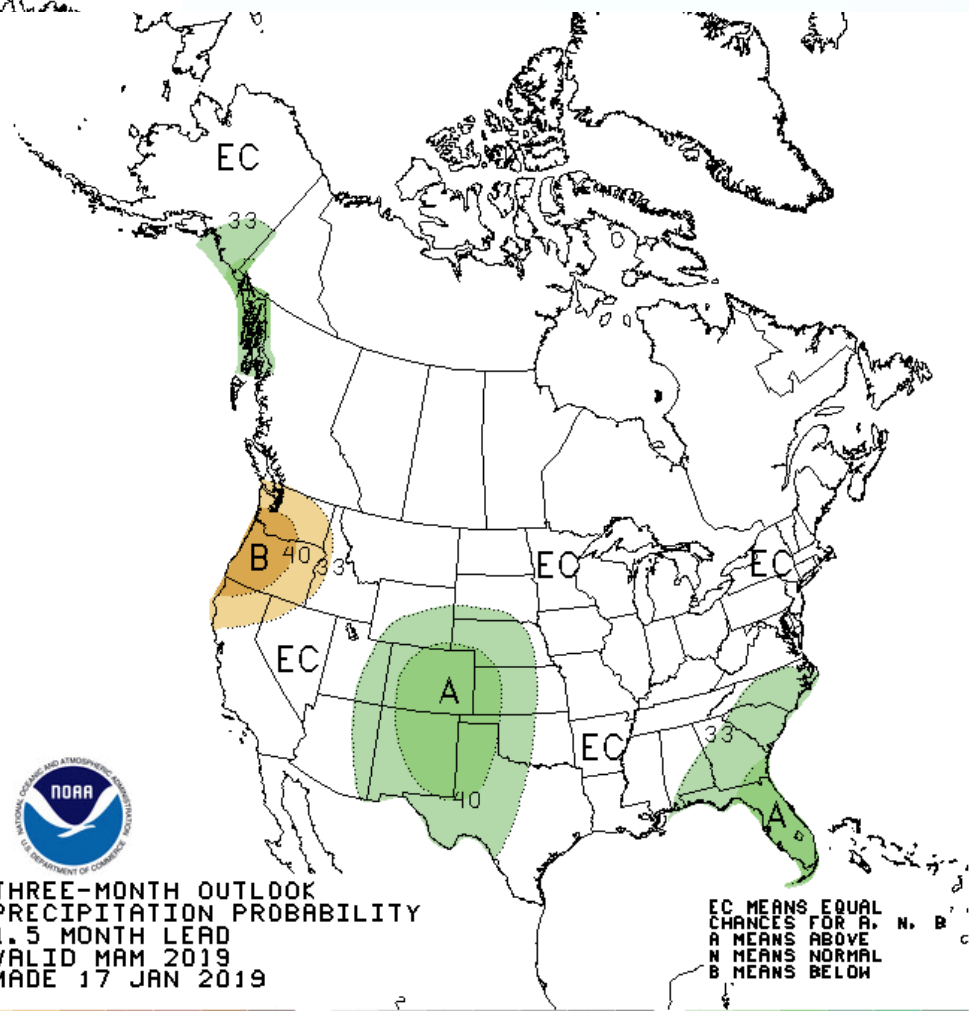
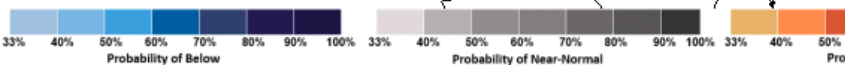
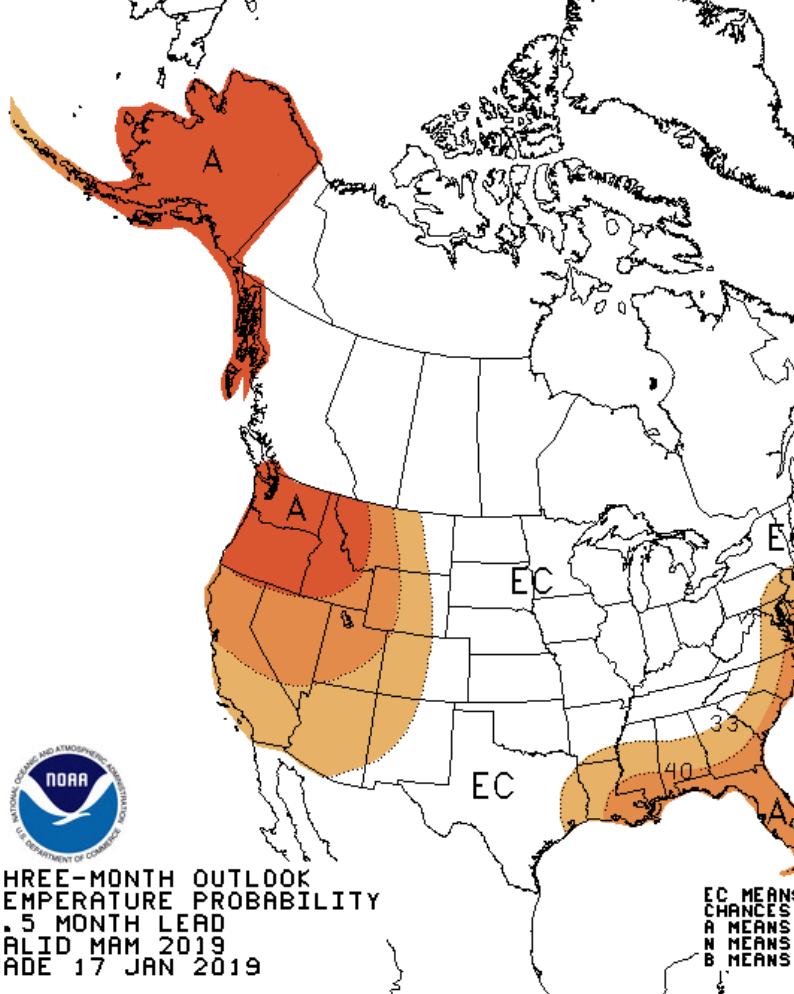




Latest Set of Week 3-4 Forecasts from CFSv2

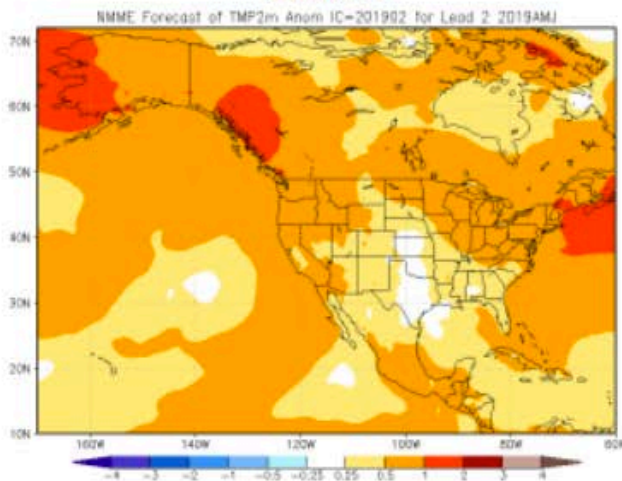
Anomalously high
500 hPa Z over the
NE Pacific early
fading away late:
Mostly colder
than normal for WA
state early, dry in the
north and wet in the
south for US west coast

NOAA/CPC Forecasts

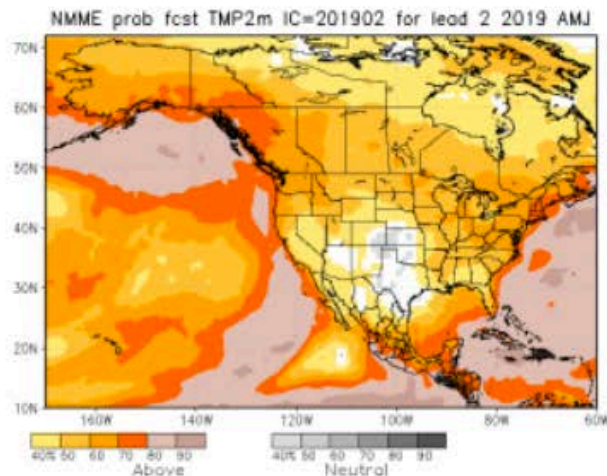


Climate Model Projections for AMJ 2019 Temperature

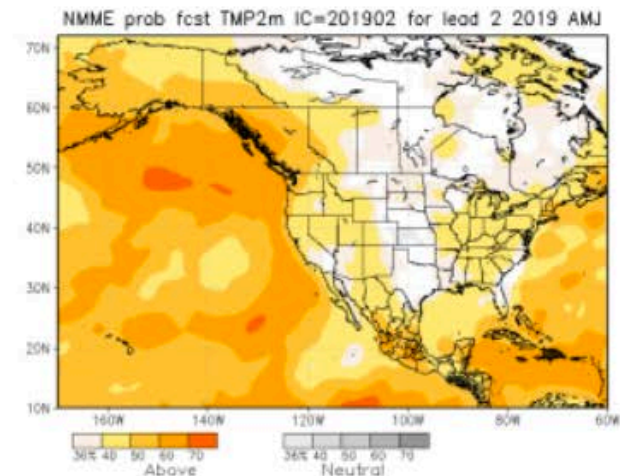
NMME



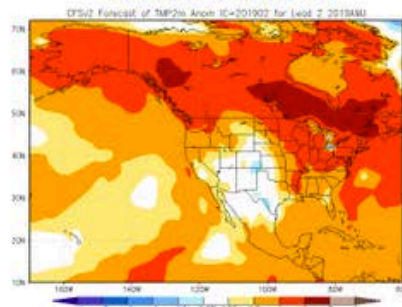
Prob fcst



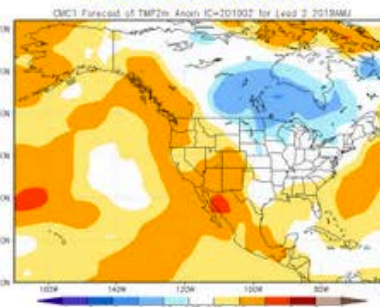
PAC calib. prob fcst



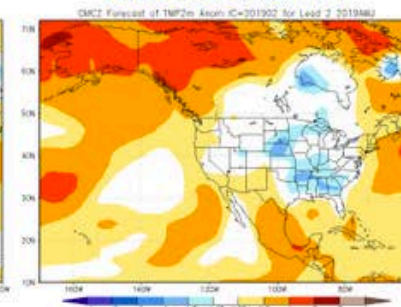
NCEP CFSv2



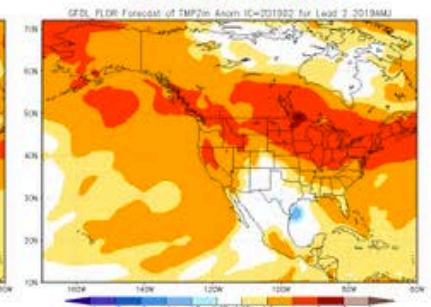
CMC1 CanCM3



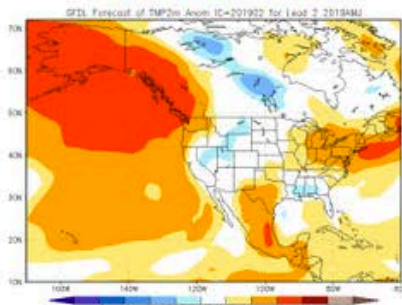
CMC2 CanCM4



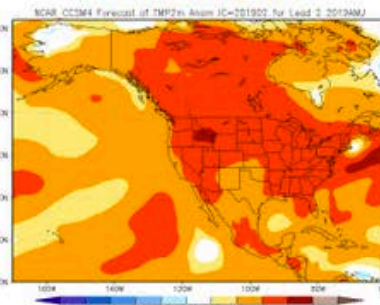
GFDL FLOR



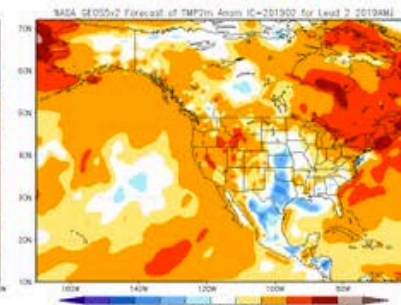
GFDL CM2.1



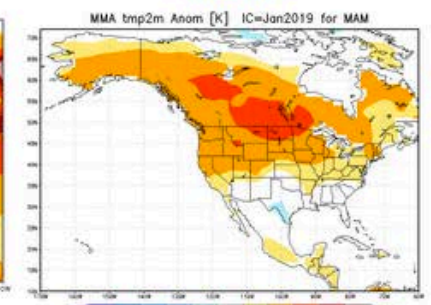
NCAR CCSM4



NASA GEOS5v2



IMME



Final Remarks

- 2019 water year has been on the warm and dry side overall, with **considerable** sub-seasonal variability
- The snowpack has recovered nicely in the last couple of weeks
- El Nino's effect on our seasonal weather fizzled out due to lack of the usual atmospheric response
- The recent cold snap does not have any long-term portents; anomalous warmth quite likely in spring and summer of 2019
- The snows of early February 2019 caught us with egg on our shorts; forecasting the weather on extended time scales is no cinch