

# Montana Water Policy Interim Committee

September 2-3, 2015

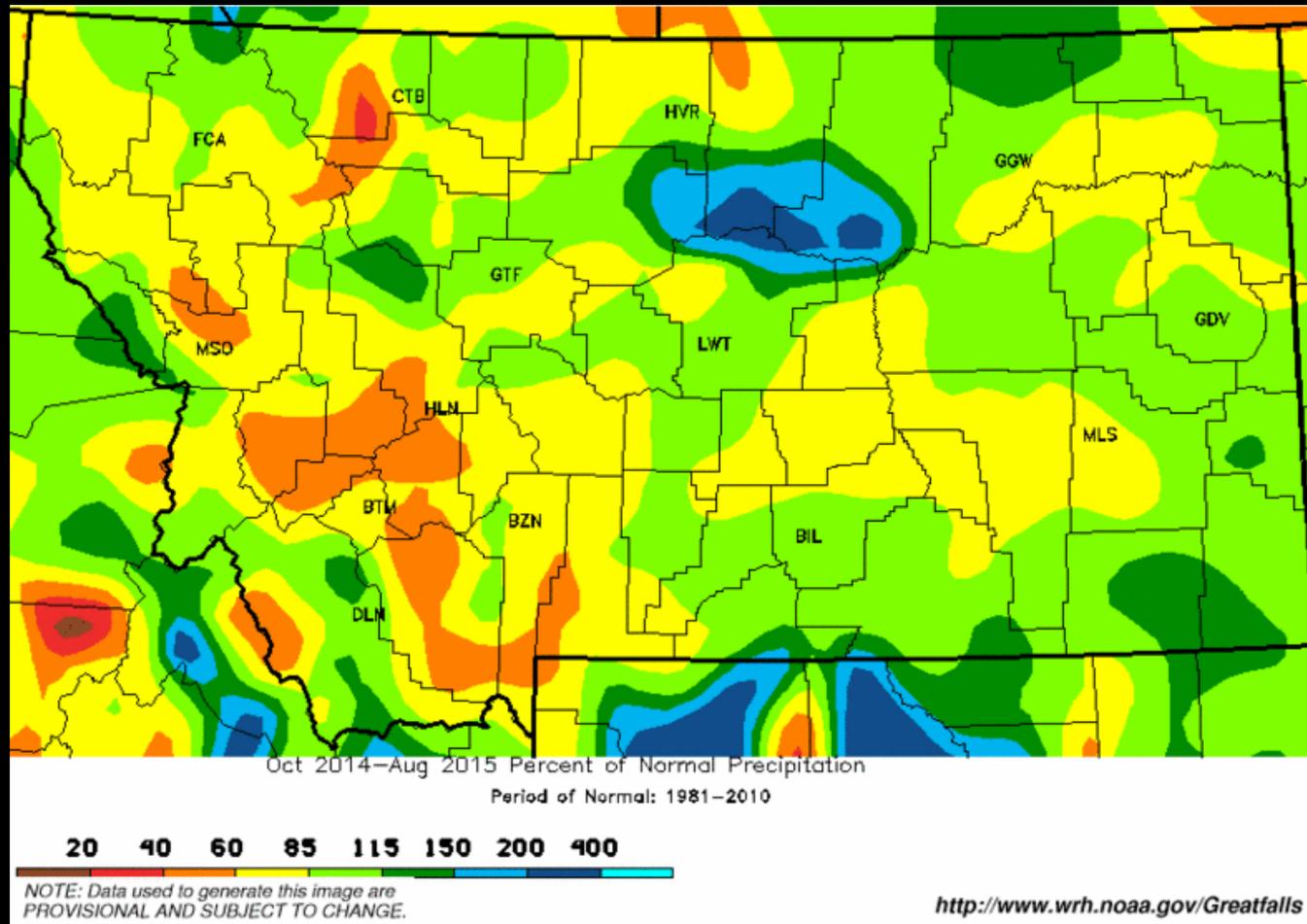
National Weather Service

*Gina Loss – Service Hydrologist*



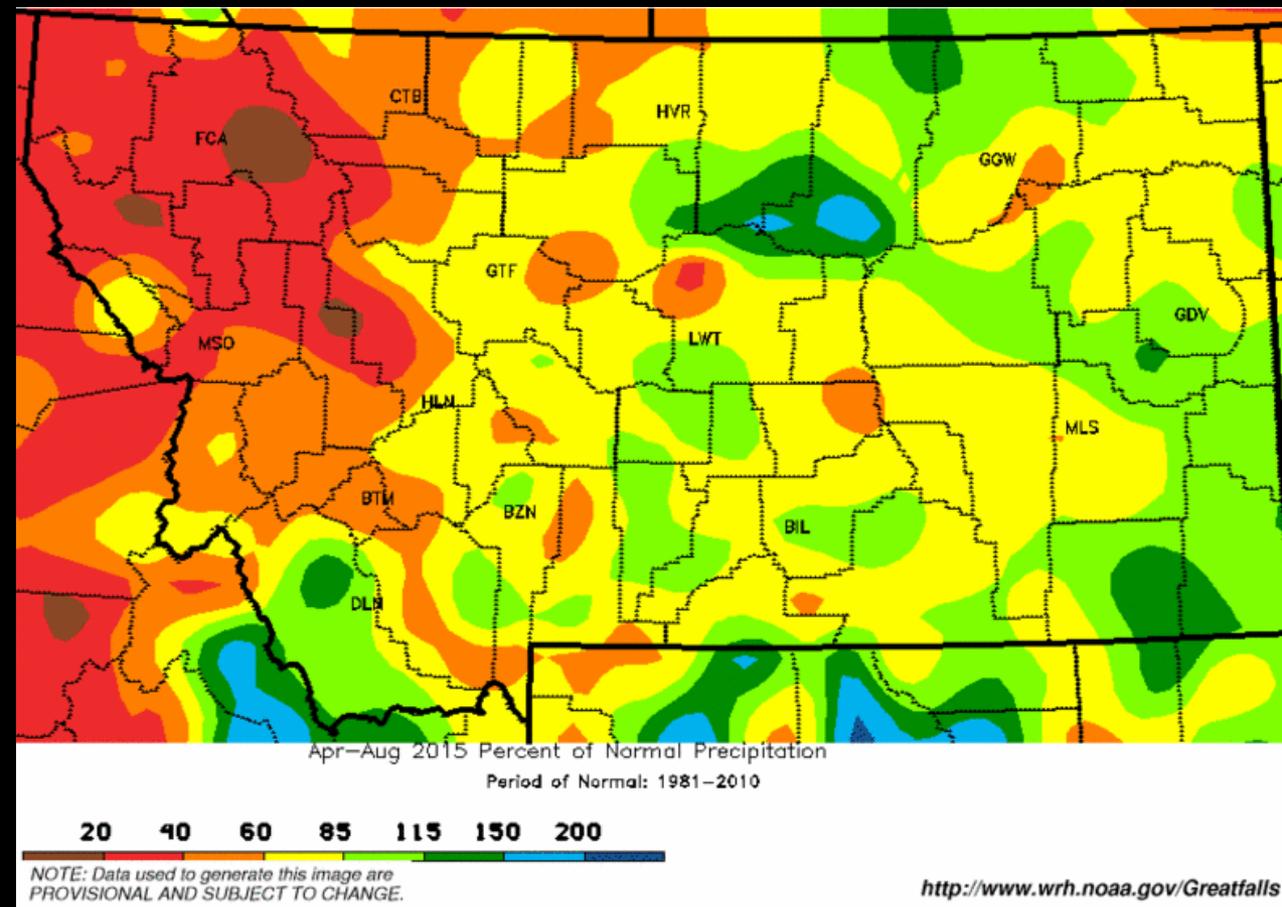
# Percent of Normal Precipitation Water Year 2015

- October - August
- Mostly near to below average
- Areas west, southwest, north-central seeing areas well below average
- Area in central Montana well above average



# Percent of Normal Precipitation Crop Year

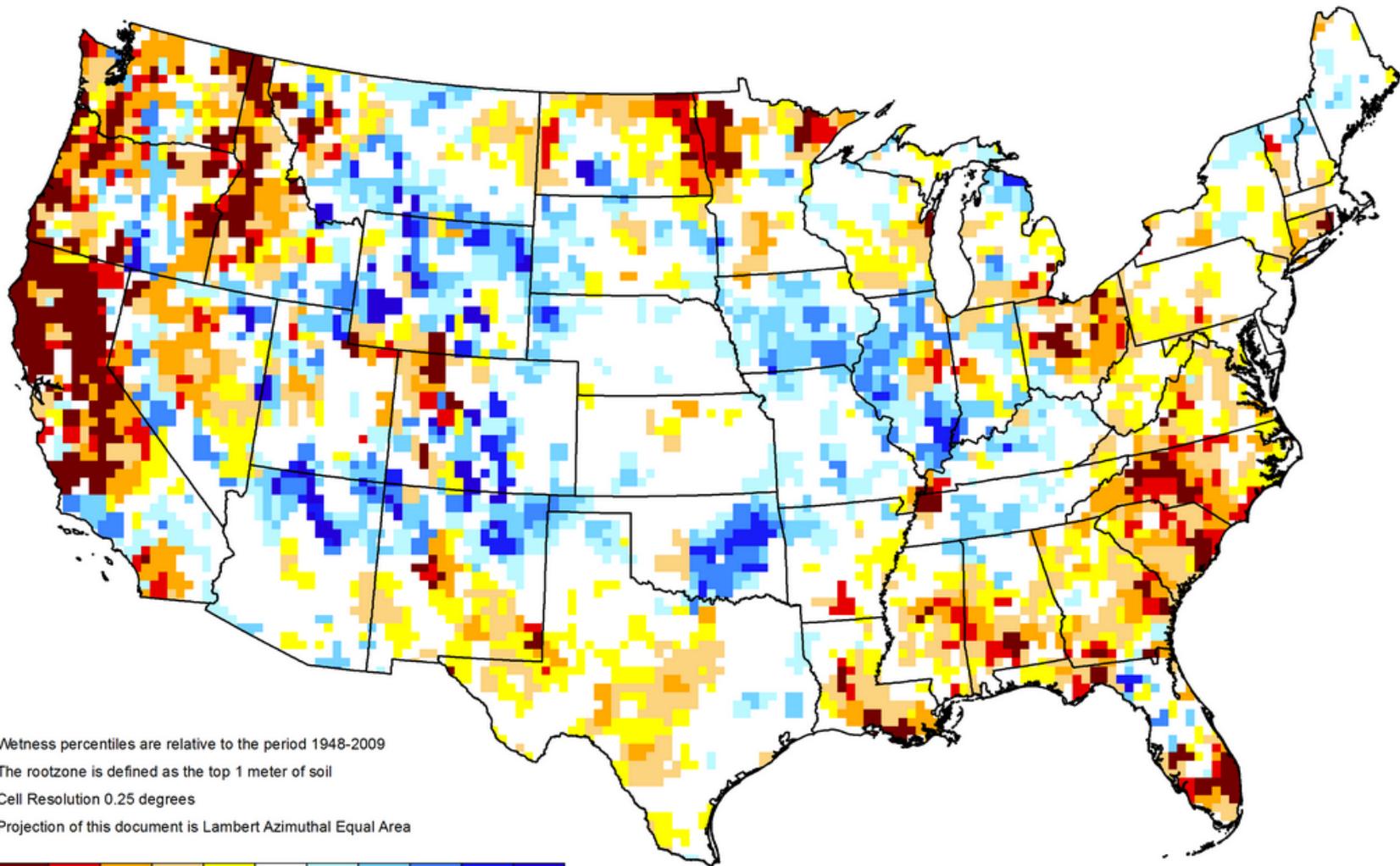
- April - August
- West and north-central ... large areas well below average
- Remainder of state... mostly near to below average





# GRACE-Based Root Zone Soil Moisture Drought Indicator

August 17, 2015



Wetness percentiles are relative to the period 1948-2009  
The rootzone is defined as the top 1 meter of soil  
Cell Resolution 0.25 degrees  
Projection of this document is Lambert Azimuthal Equal Area



<http://drought.unl.edu/MonitoringTools/NASAGRACEDataAssimilation.aspx>

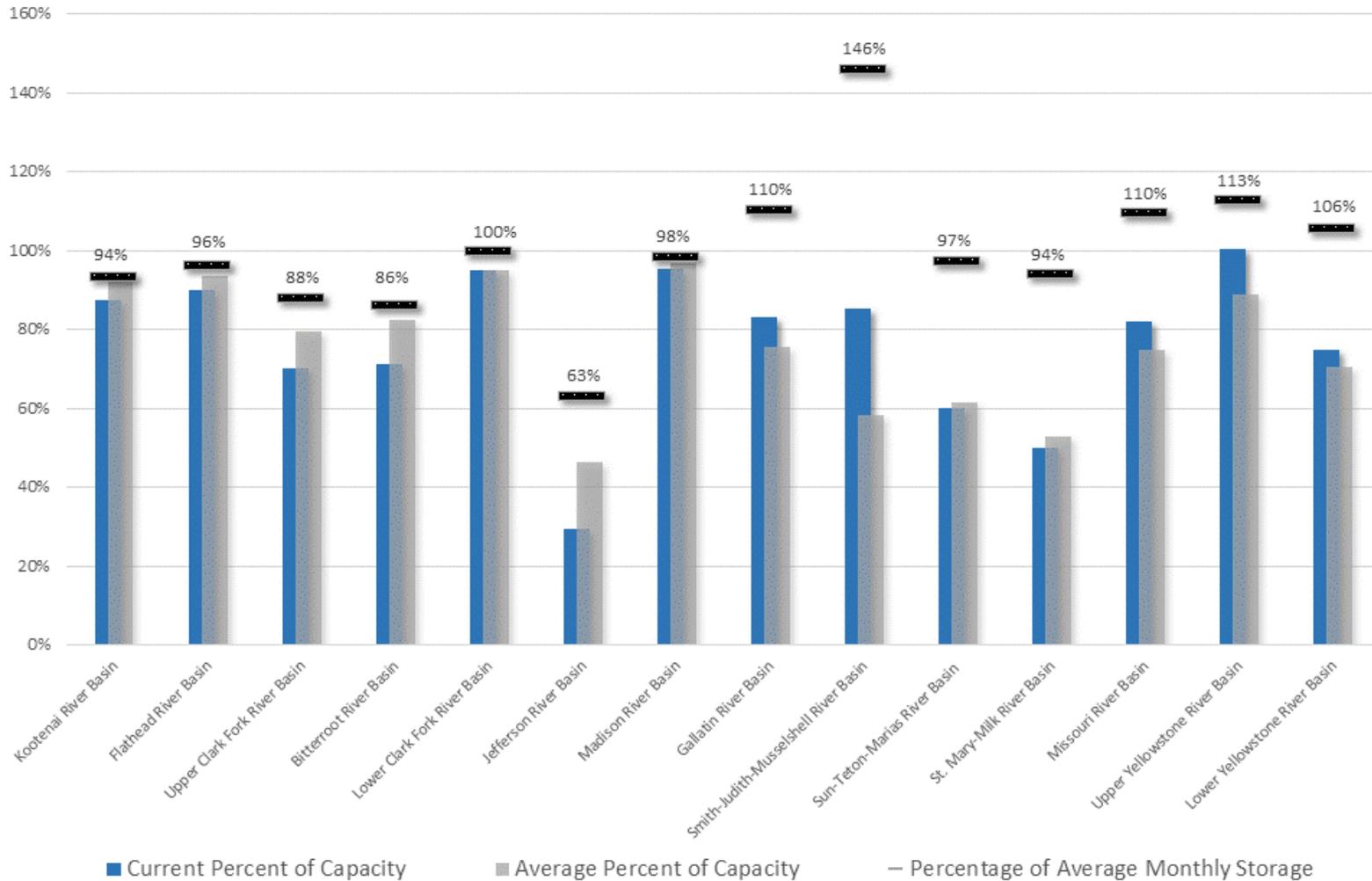


# Reservoir Storage

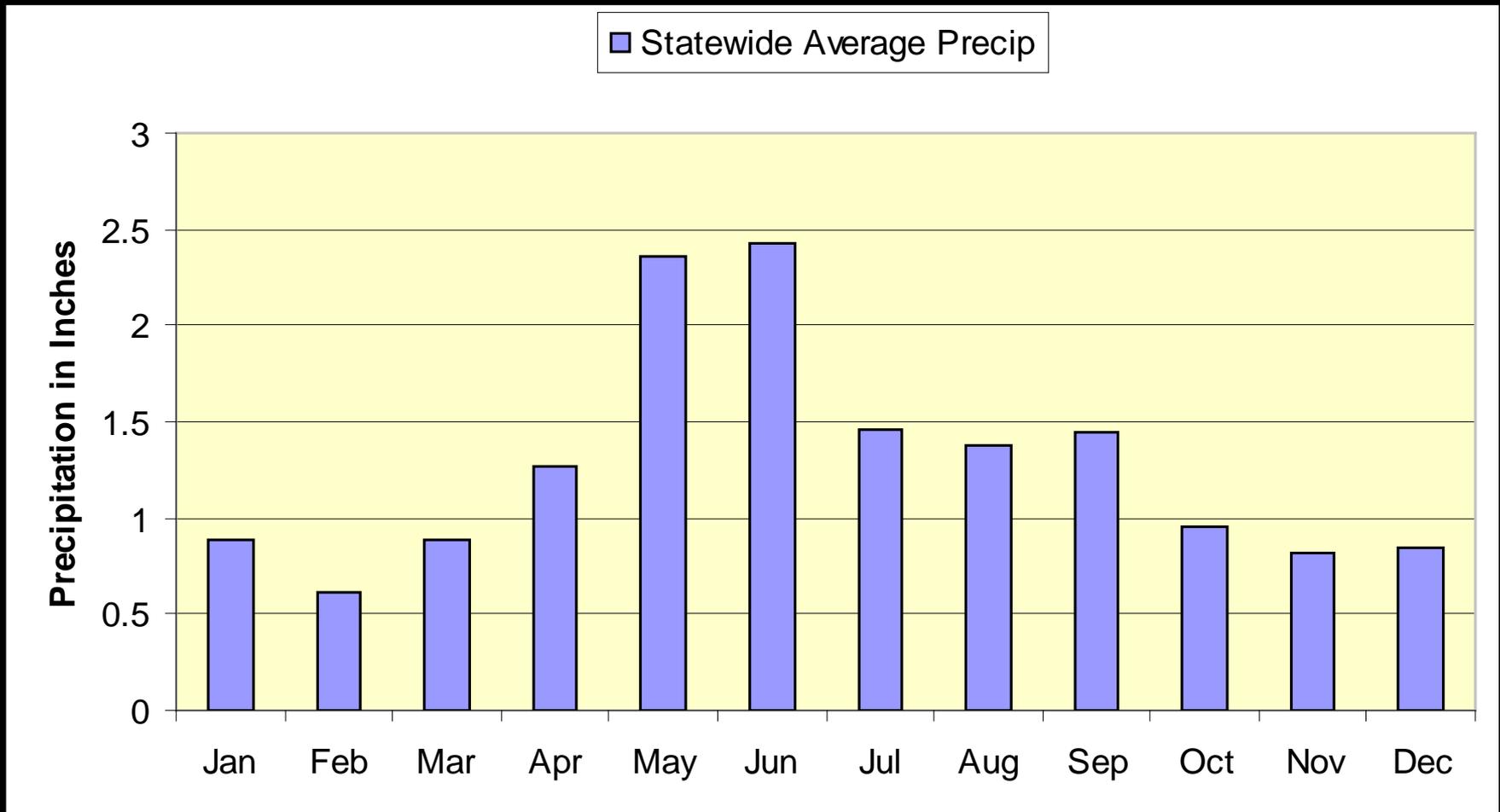
August 1, 2015



Montana River Basins: Basin-Wide Reservoir Storage  
as of  
8/1/2015

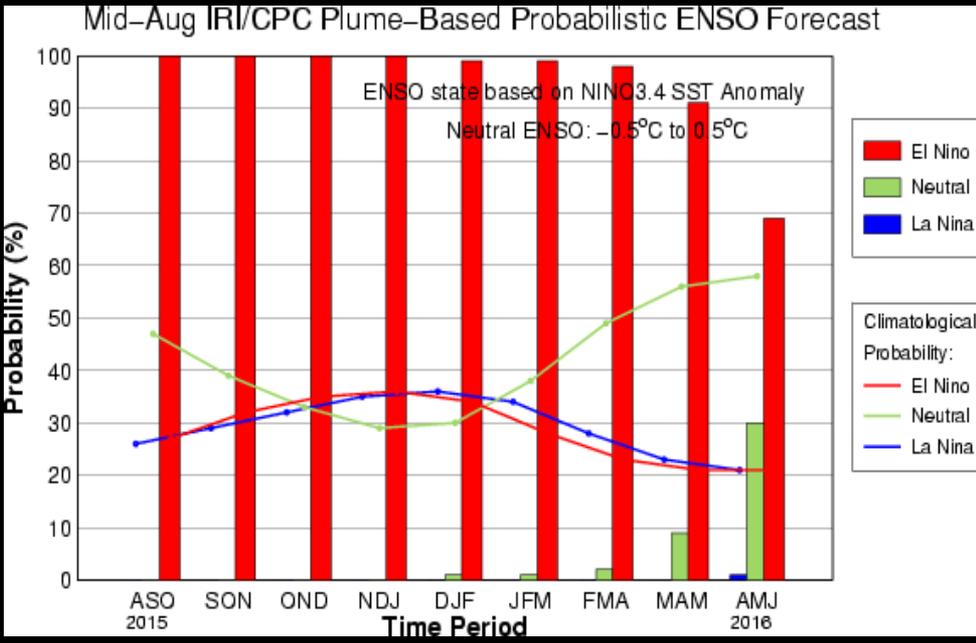
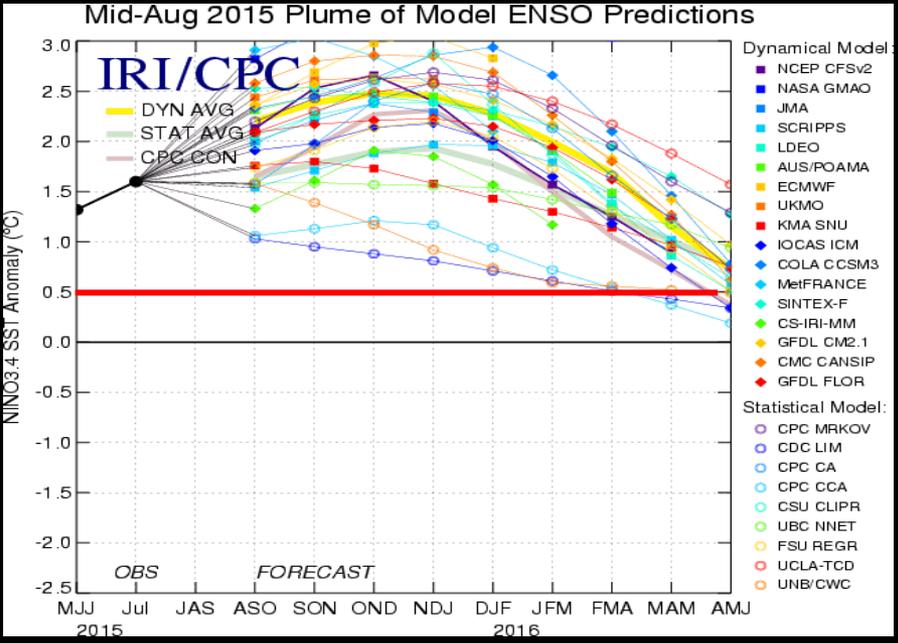
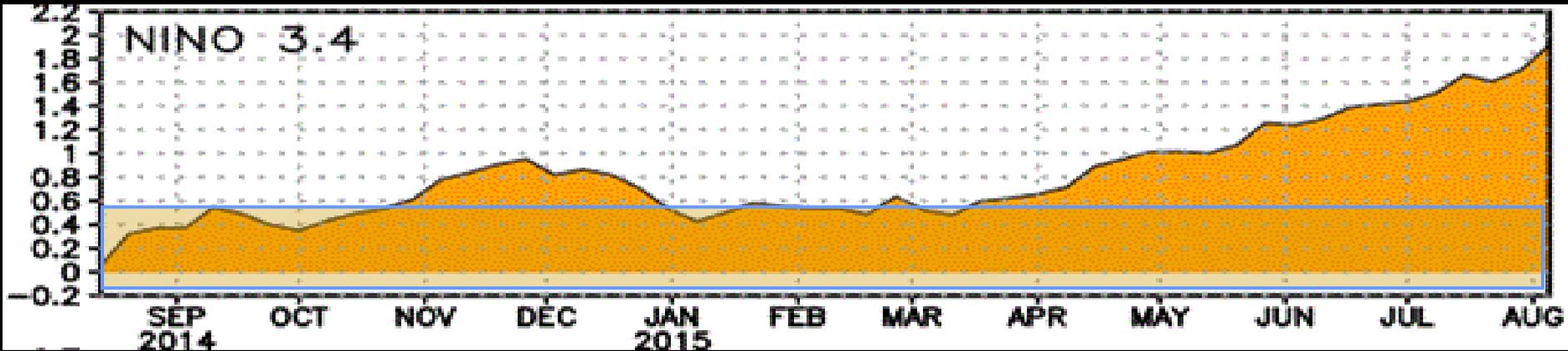


# Statewide Average Precipitation



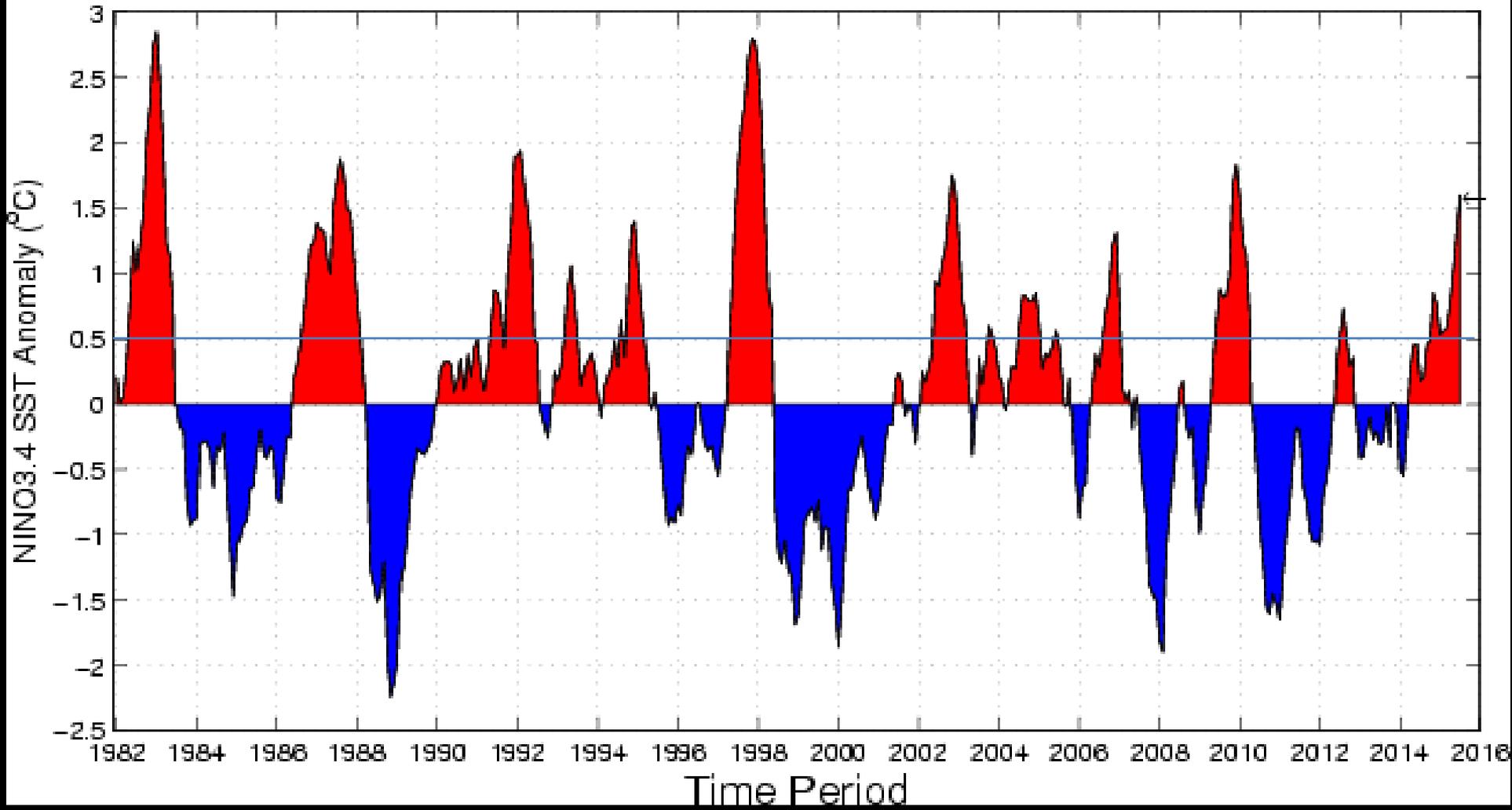
# El Niño / La Niña

*El Niño Advisory: >90% chance continues through winter, 85% chance last into spring*



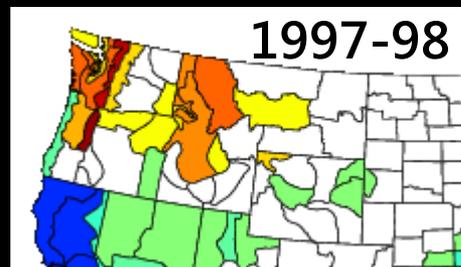
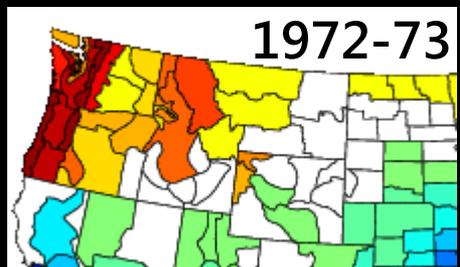
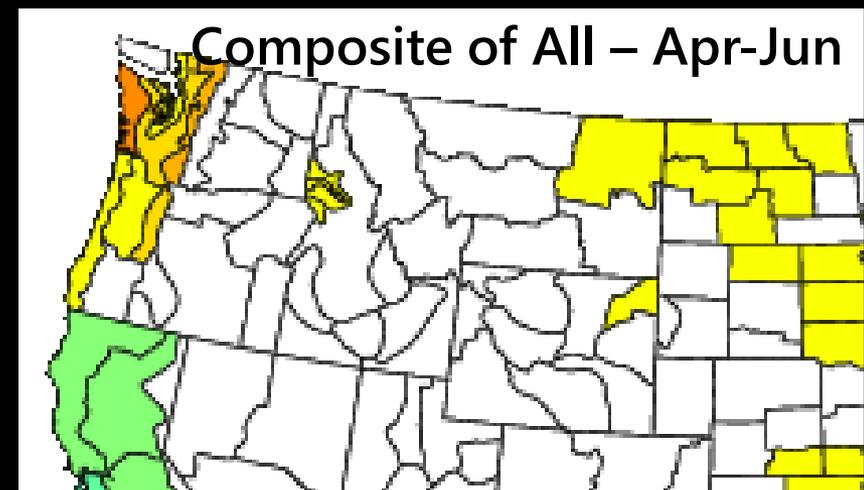
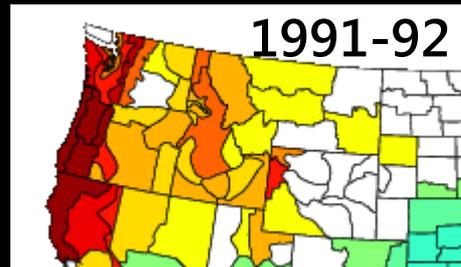
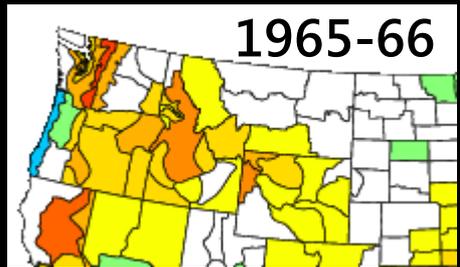
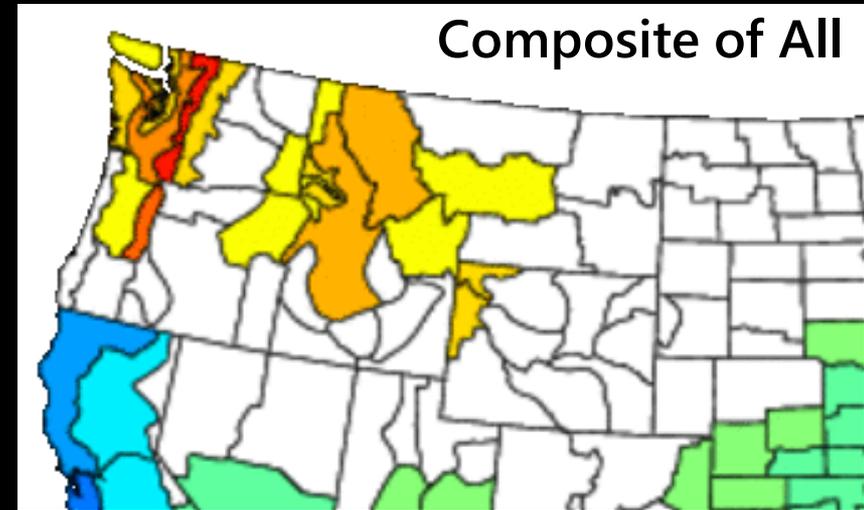
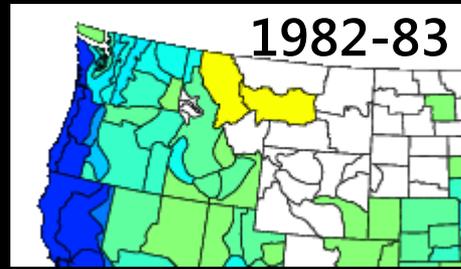
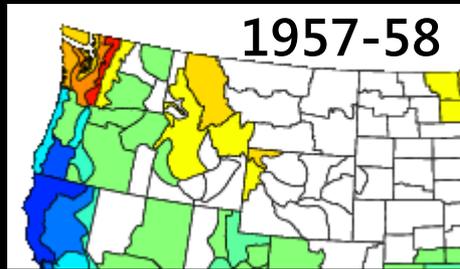
# Historical Sea Surface Temperature Anomaly

## Historical NINO3.4 Sea Surface Temperature Anomaly



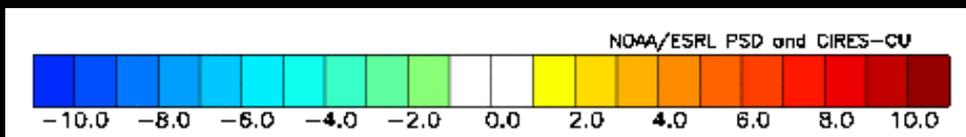
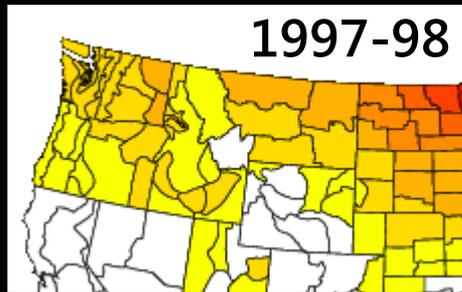
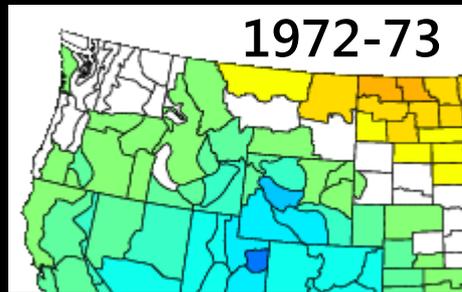
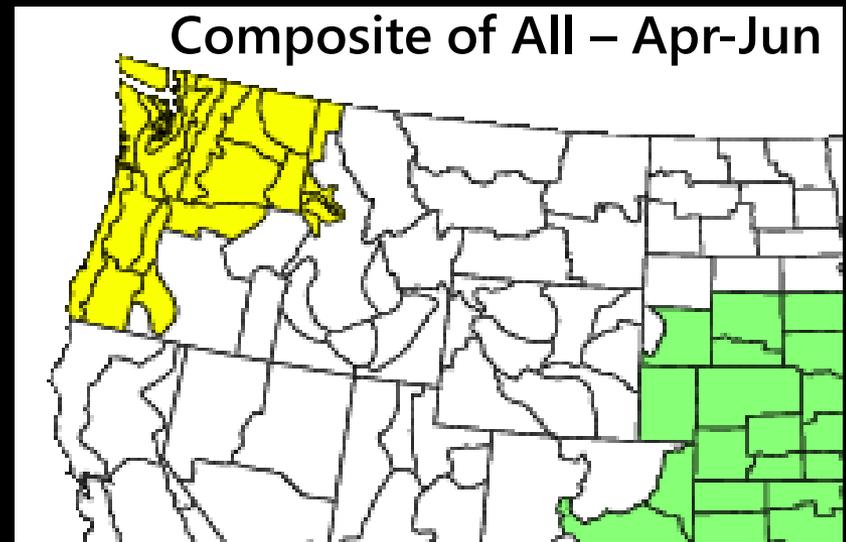
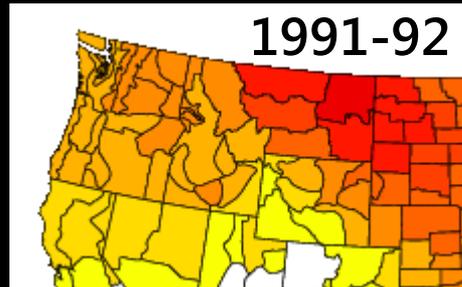
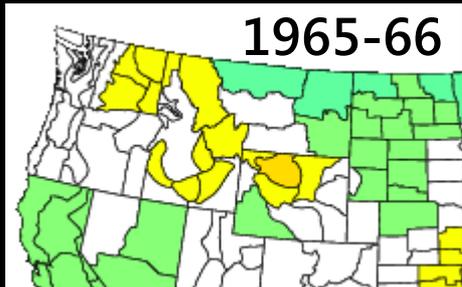
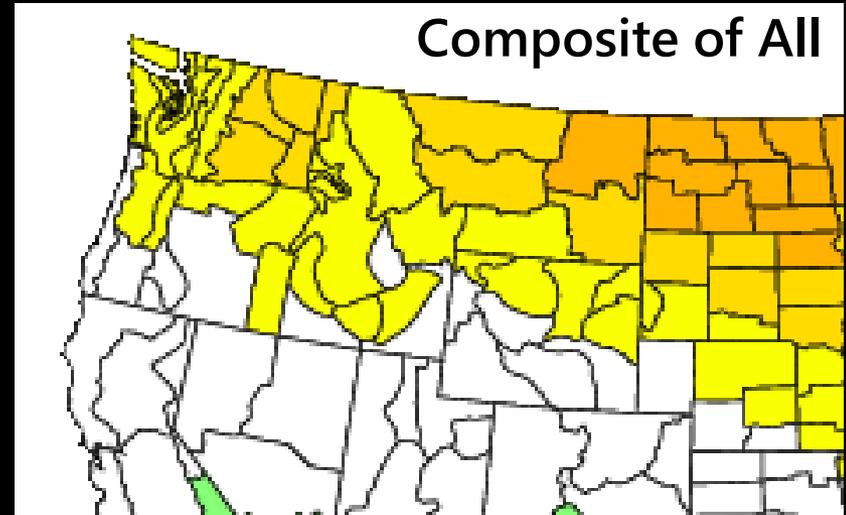
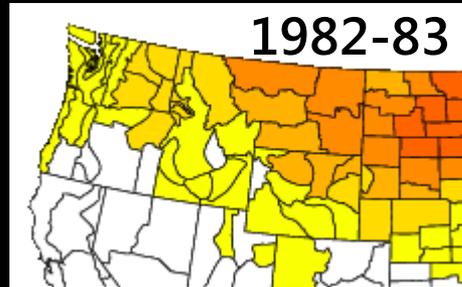
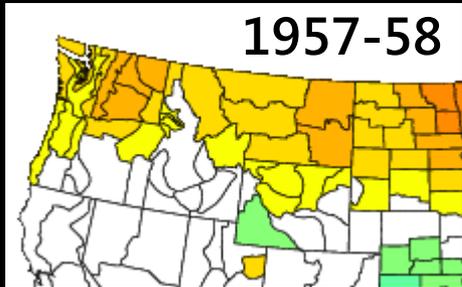
# Precipitation Anomalies

## Strong El Niño Years – November-March

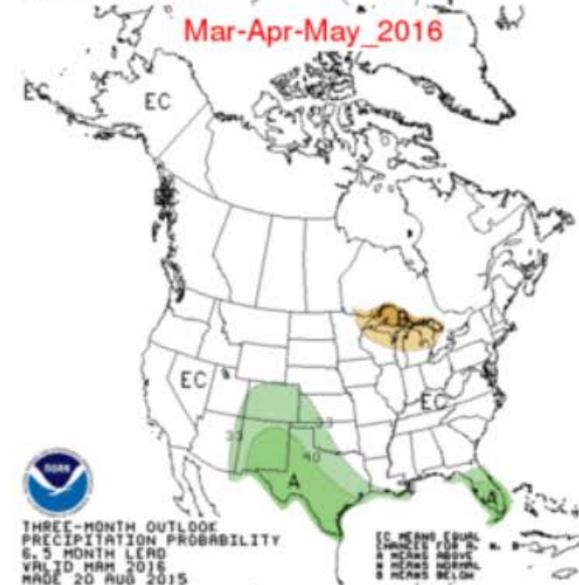
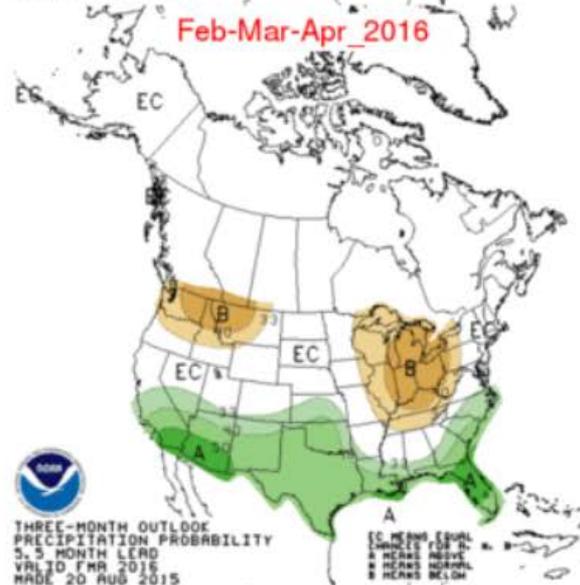
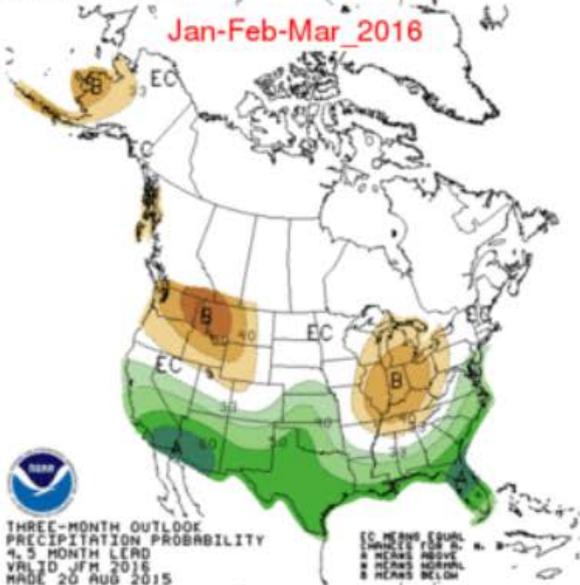
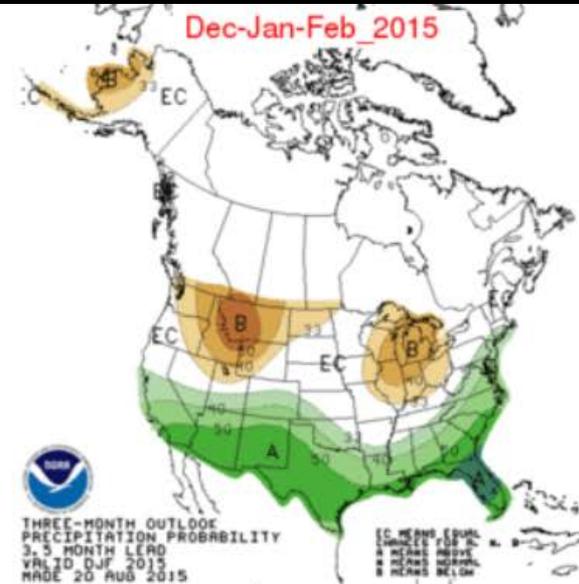
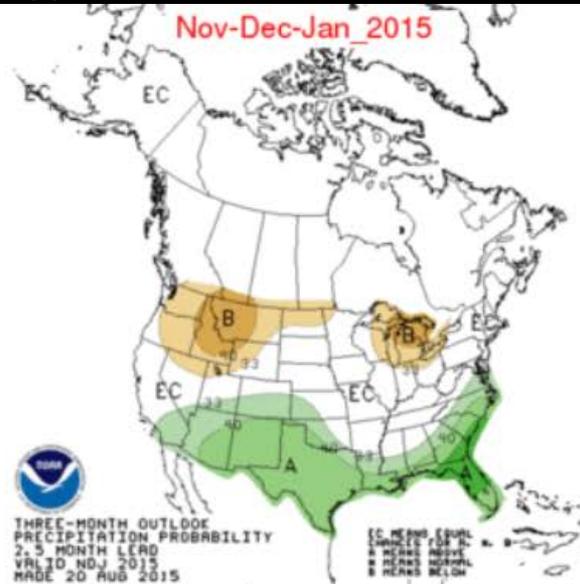
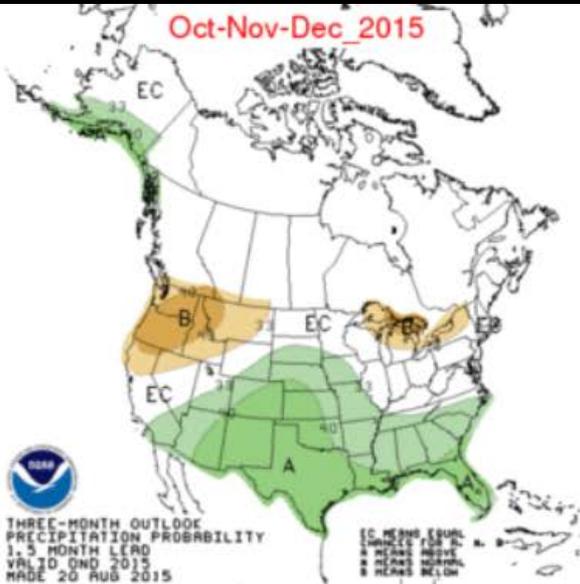


# Temperature Anomalies

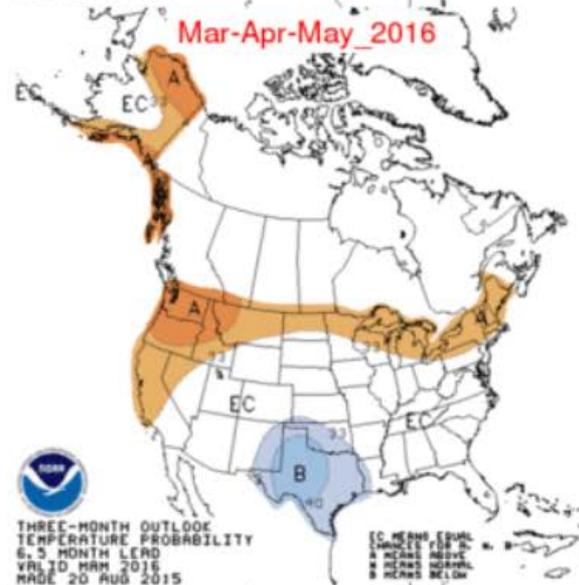
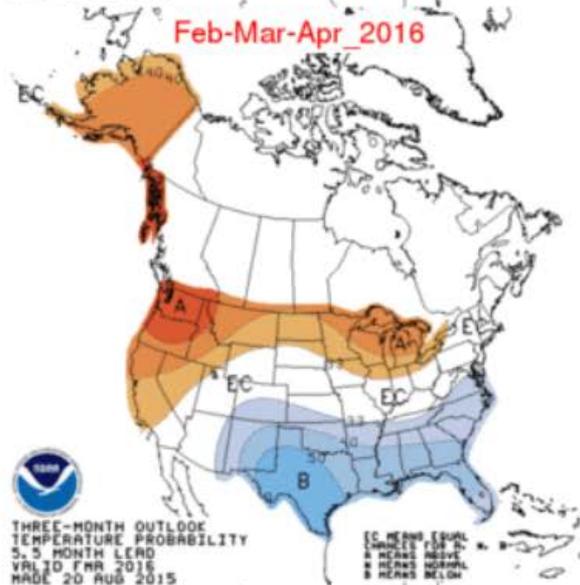
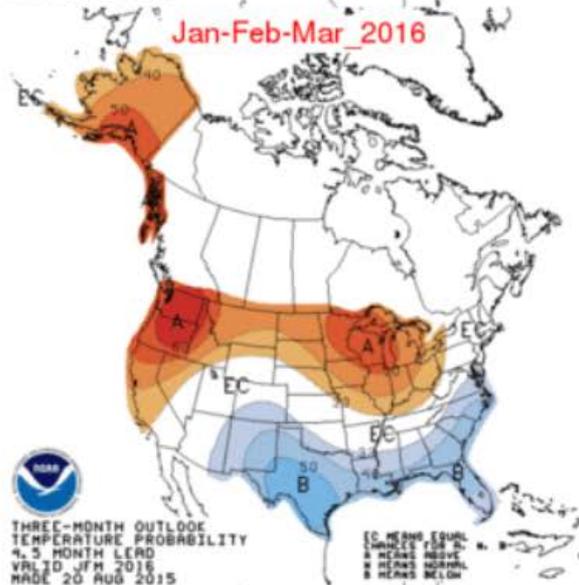
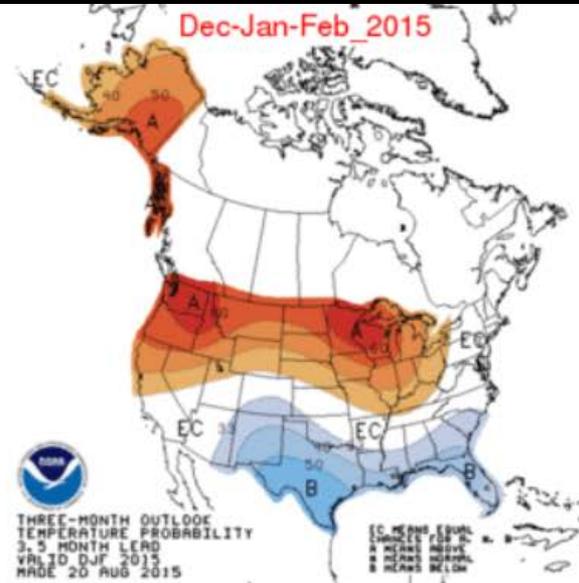
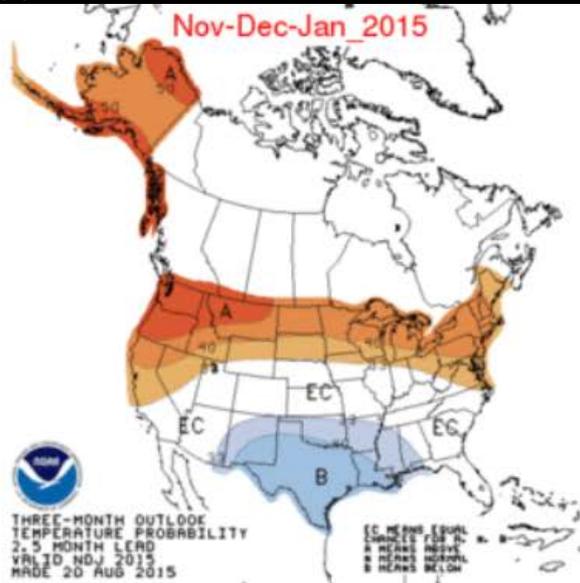
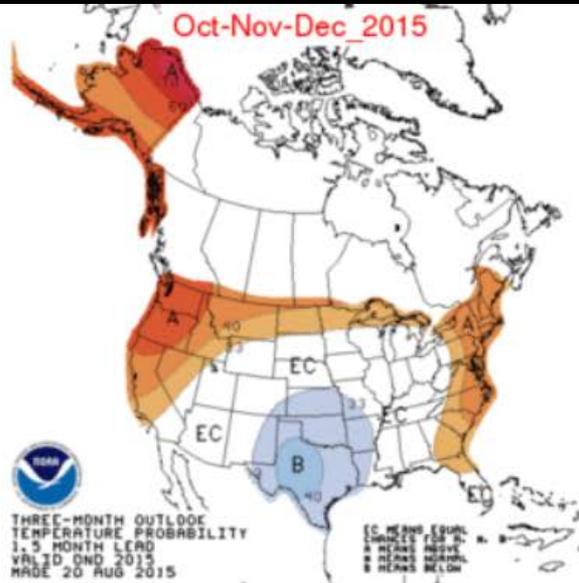
## Strong El Niño Years – November-March



# Precipitation Outlooks



# Temperature Outlooks



[weather.gov](https://weather.gov)

[weather.gov/greatfalls](https://weather.gov/greatfalls)

[weather.gov/missoula](https://weather.gov/missoula)

[weather.gov/glasgow](https://weather.gov/glasgow)

[weather.gov/billings](https://weather.gov/billings)

