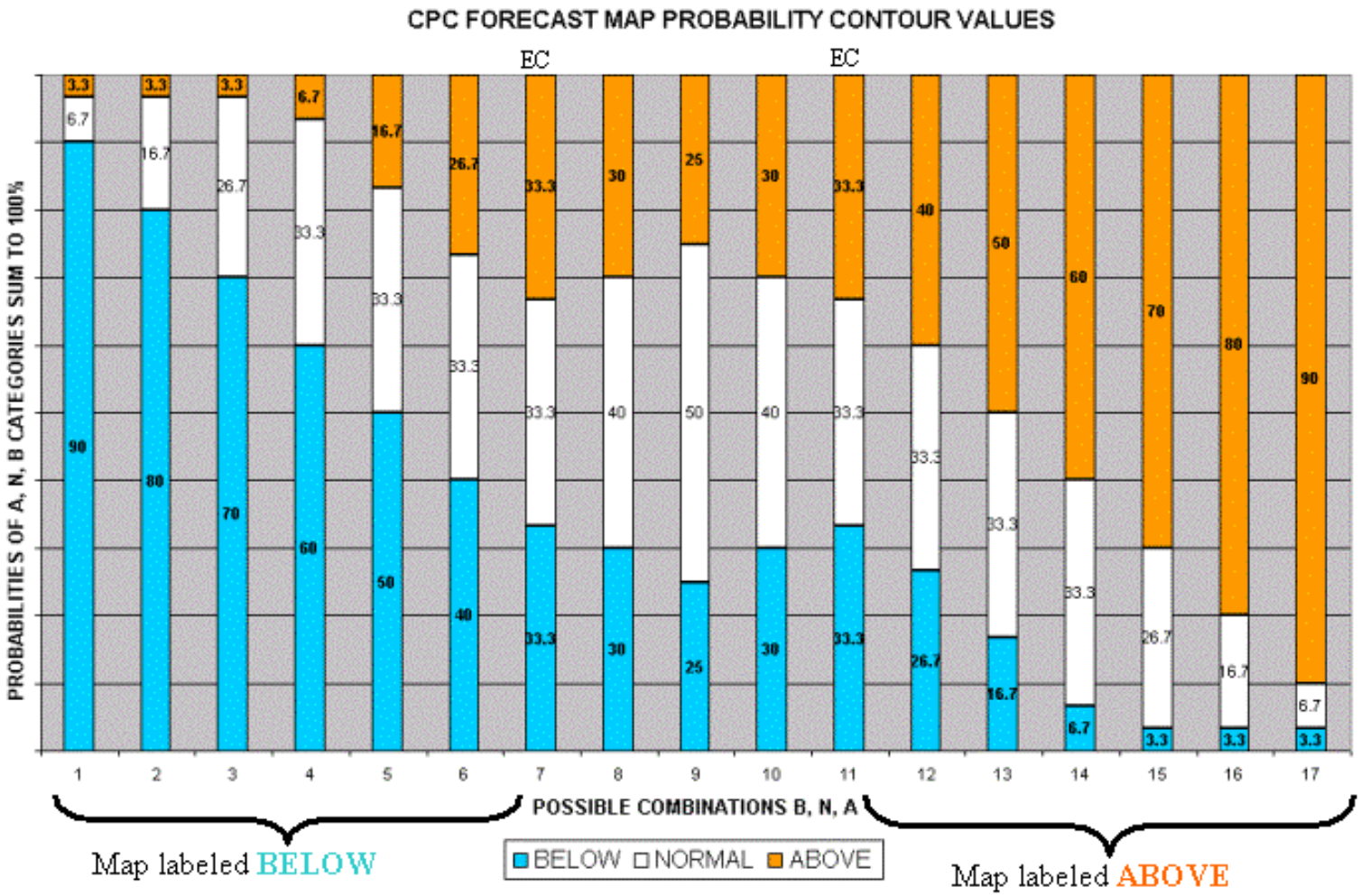
Interpreting and using CPC outlooks

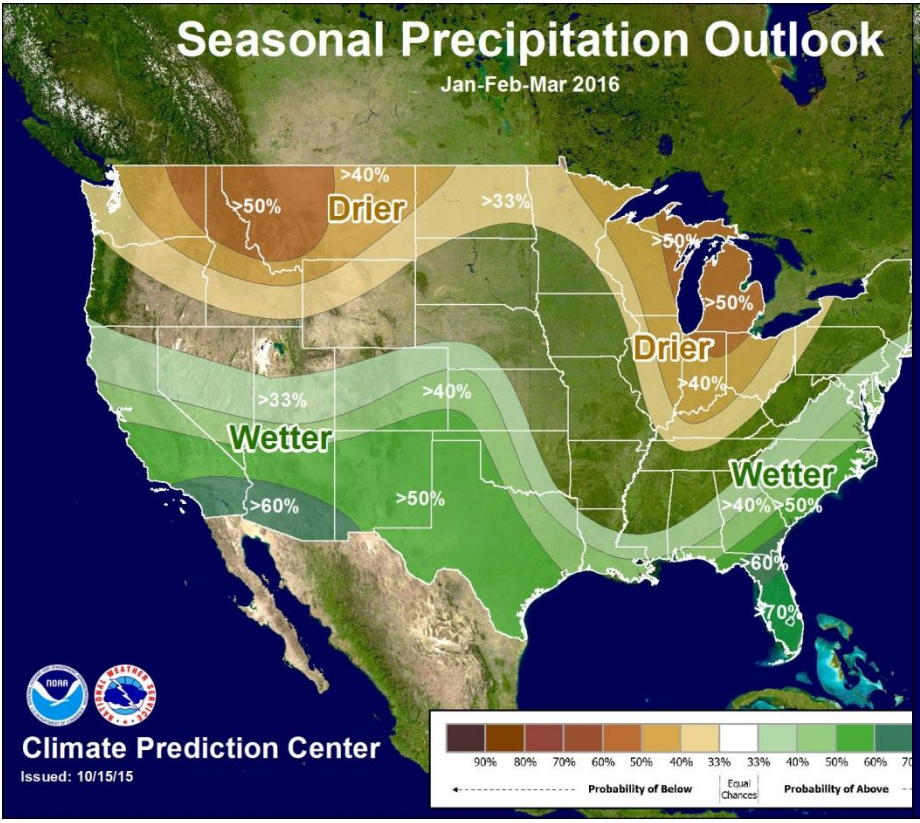
Possible combinations of A, N, B for probability lines on CPC forecast maps.
Combinations 8, 9, 10 are rarely used.

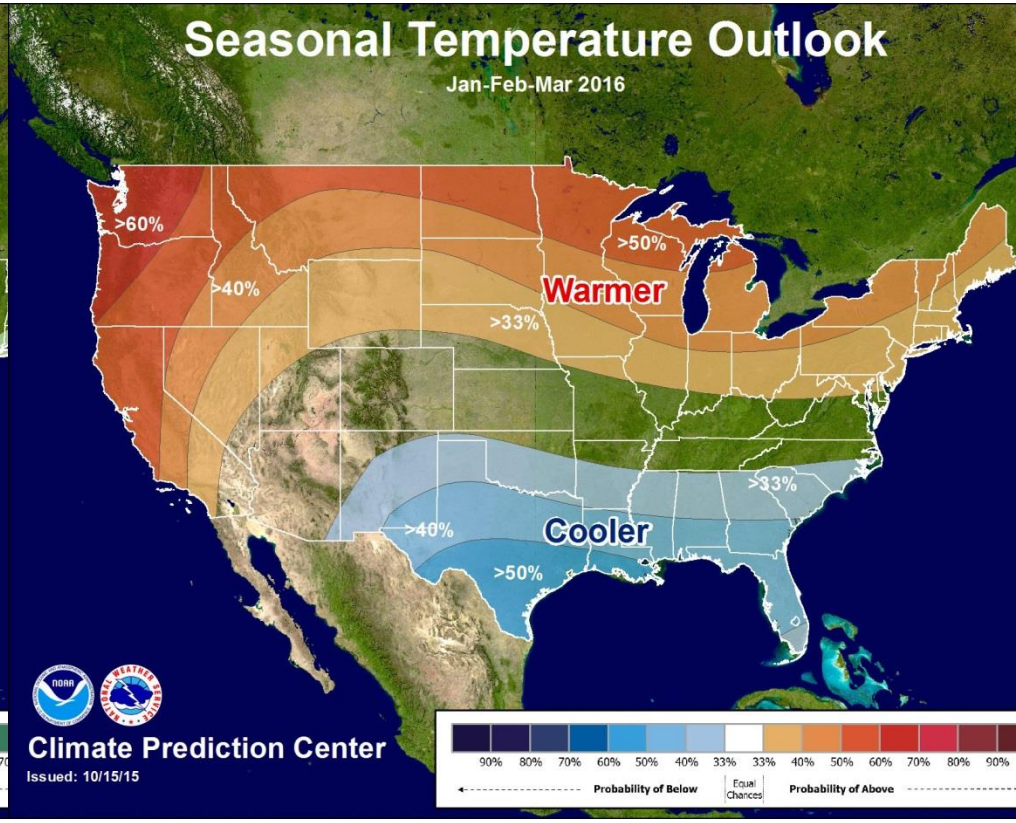


Alex Tardy and Roger Pierce
National Weather Services

Winter Outlook 2015-16

issued October 15

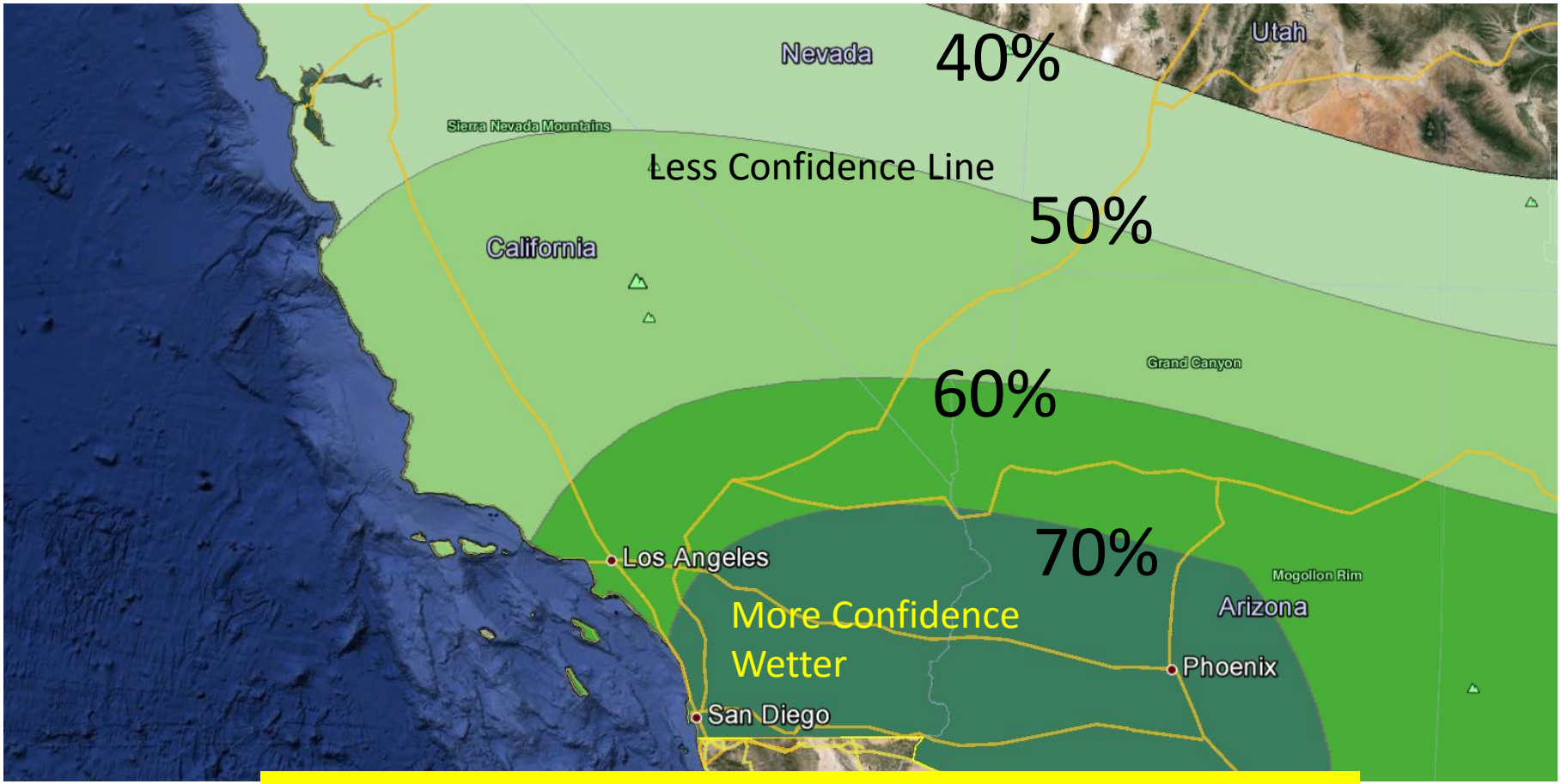




Southern California

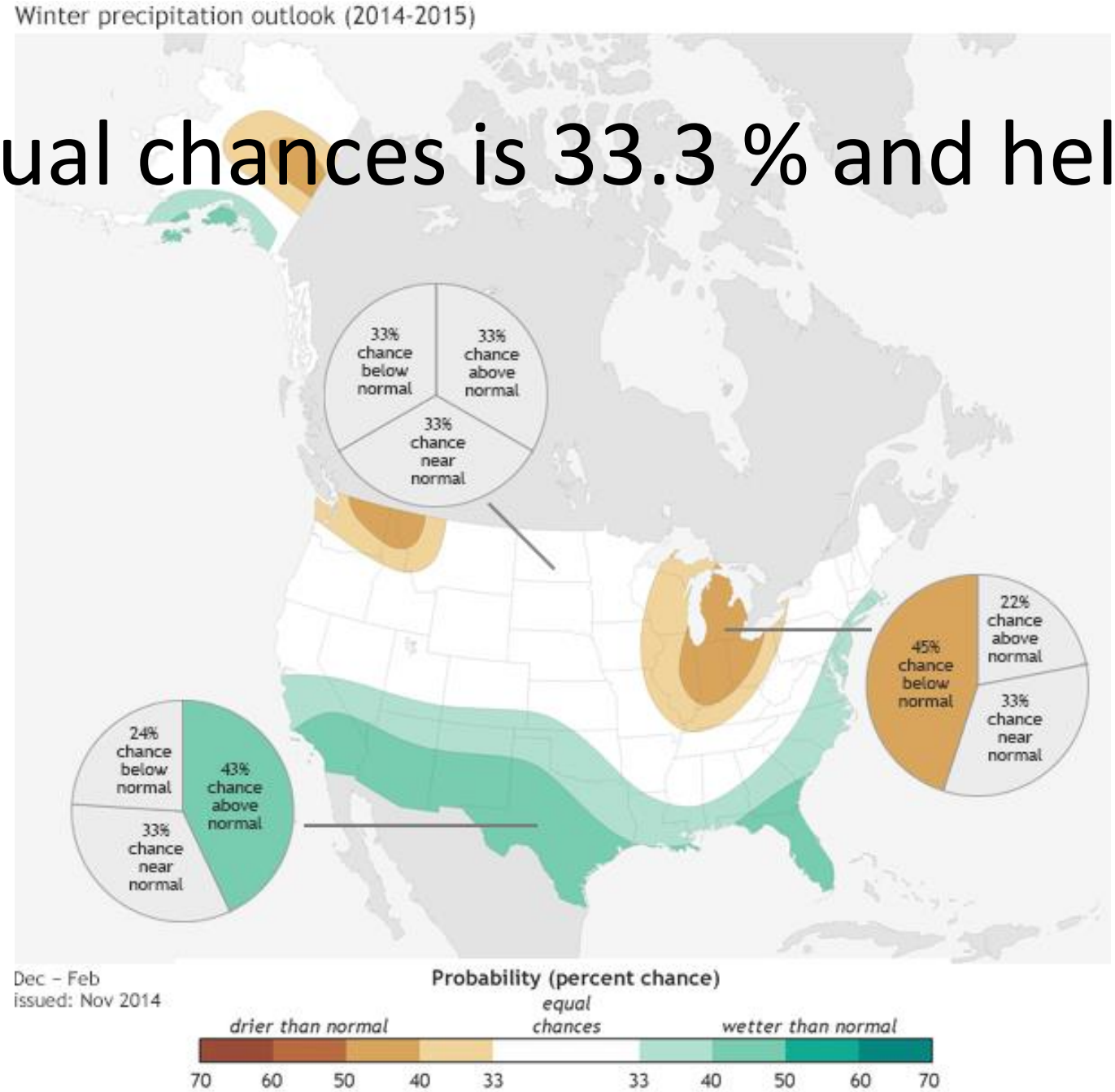
January to March

Precipitation

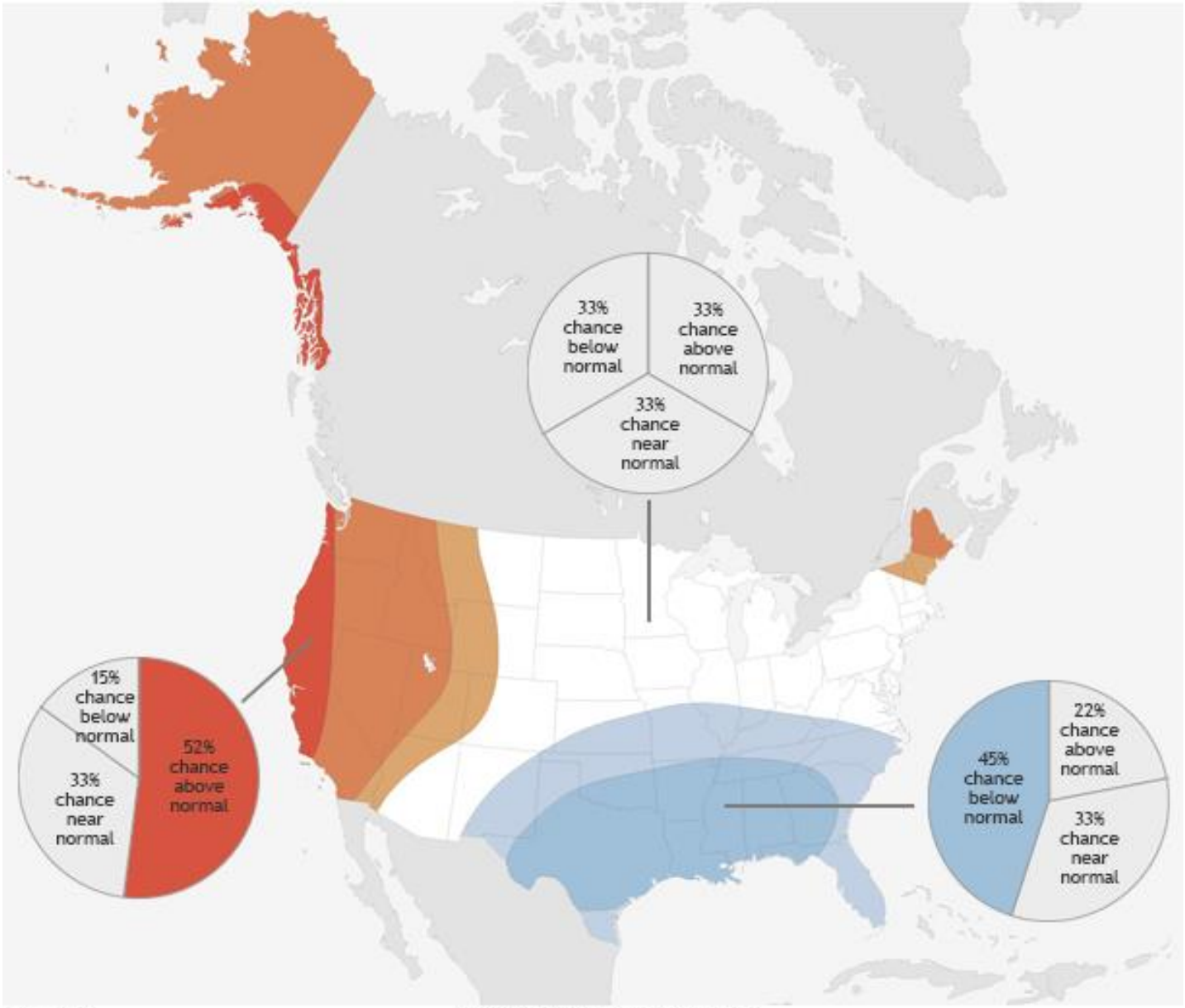


70 percent likely above normal and 3.3 percent below normal
26.7 percent normal (average)

Equal chances is 33.3 % and held



Winter temperature outlook (2014-2015)



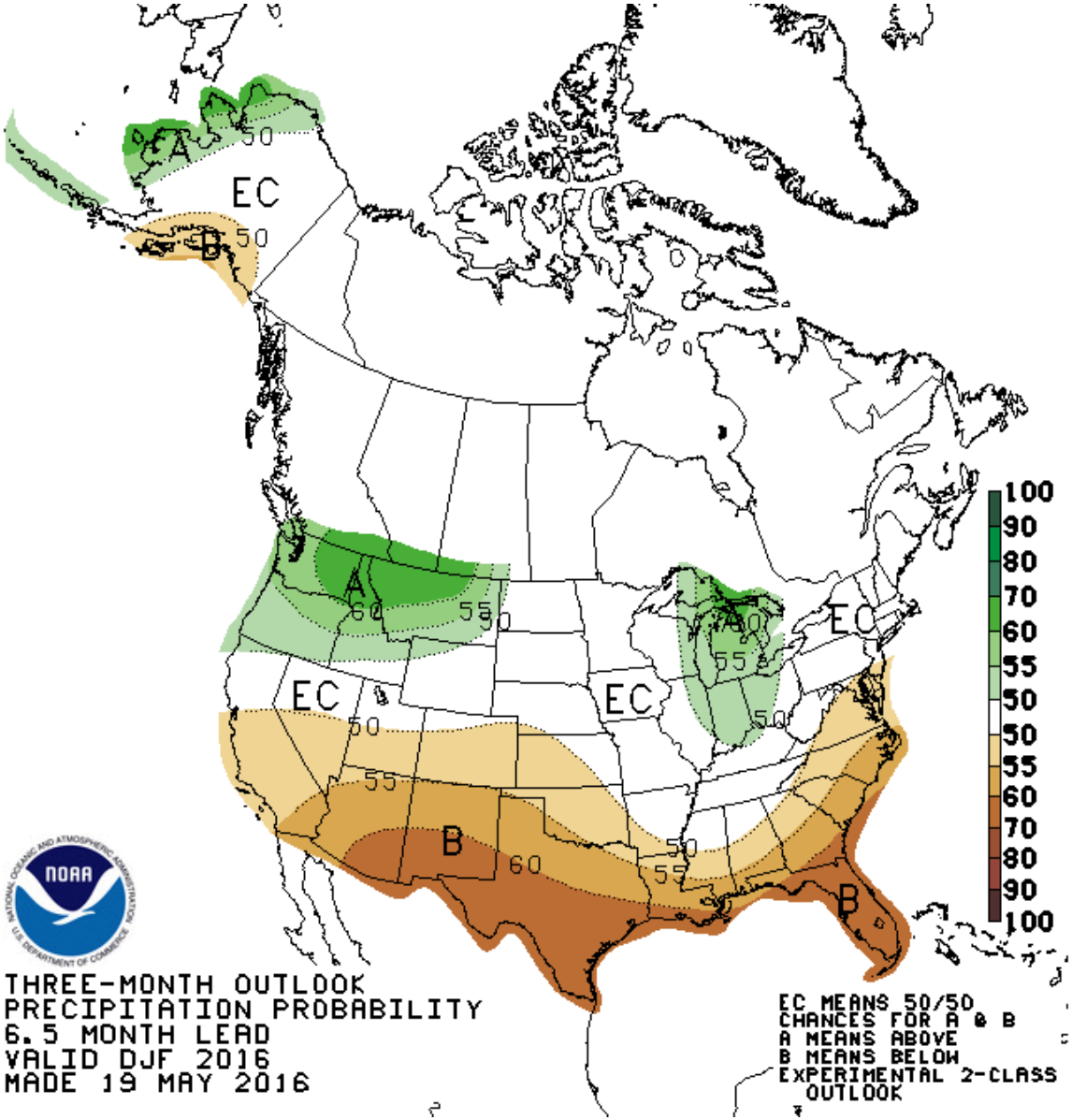
Dec – Feb
issued: Nov 2014

Probability (percent chance)

cooler than normal — *equal chances* — *warmer than normal*

70 60 50 40 33 33 40 50 60 70

2-class outlooks
equal chances is 50-50 (percent)



Summary of El Nino

- El Nino conditions are the unusual warming of the Sea Surface Temperatures in the Pacific Ocean along the equator (occurs every 3 to 7 years) after trade winds are weakened
- An El Nino can take the normal Jet Stream from Oregon and bring it south across Southern California for much of the winter and spring months
- El Nino can result in a pattern that brings a series of stormy periods in the winter and spring months, but not a particular storm
- Strong (2.3 °C running mean, same as 97-98) El Nino is present and strengthening slowly through Fall
- El Nino at the strong phase correlates to above normal precipitation in southern California but not necessarily the whole state
- Currently it is the strongest El Nino on record (2.4 °C in the center)
- Above normal precipitation and frequent storms are expected for southern California with the best chance from December through March
- Santa Ana winds still occur in El Nino years (Santa Ana's peak in December)
- Moderate snow levels (not the tropical high snow events and not the artic air mass)
- The "blob" warm waters can enhance rainfall rates (more unstable)
- El Nino can impact the jet stream to bring more frequent storms during the wet season but not necessarily stronger storms (not just the Pineapple Express or Atmospheric River)
- Some of the wettest months have been El Nino years but individual large precipitation events have occurred in non- El Nino and La Nina years (such as January 1993 and December 2010)
- El Nino does not guarantee above normal precipitation and there have been several dry or average years in California during El Nino
- Drought will continue since 4-year deficits are 1 to 2 seasons missed and the entire state will need much above normal precipitation and above normal snowpack

Impacts and Actions

- Flooding (river, urban, small stream) from repeated storms and saturated soils (not necessarily major storms) – locations may not have flooded for 5 to 25 years
- Beach and coastal erosion from repeated elevated surf and wind
- Clean storm drains and gutters, remove debris that can cause back-ups, contact city public works for road and drainage changes, check your tire tread, known alternate routes, check areas with historical flood impacts and have emergency supplies
- Check fire station locations for sand bags and they may not be provided with sand
- If you live near a slope, downstream of known debris flows or a fire burn scar (excessive rain will saturate soil and could cause steeper slopes move earth)
- Check your home owners insurance to see if it covers FLOODS
- Are you in a Flood Plain? http://gis.bam.water.ca.gov/bam/
- Download the FEMA flood plain app by Atkins