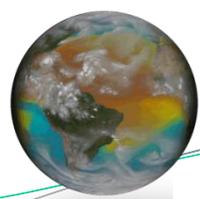


# 2016-17 Winter Outlook - Will the Drought Persist?

November 2016

Eric Boldt  
Warning Coordination Meteorologist  
National Weather Service

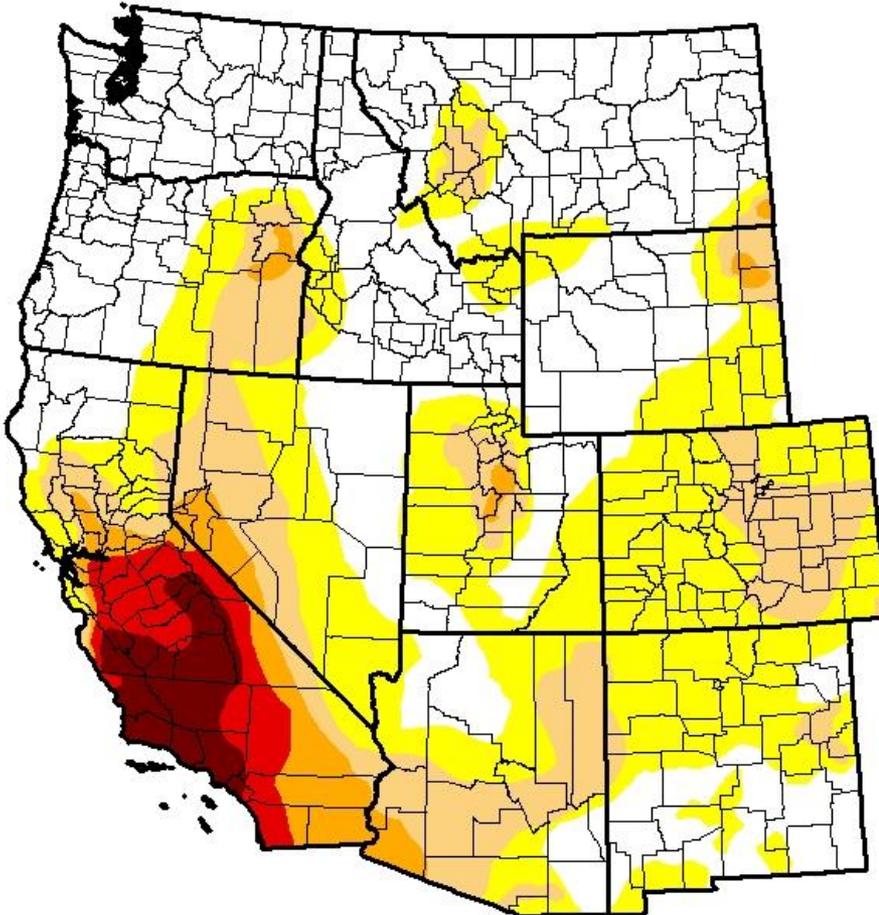




# Drought Monitor

## U.S. Drought Monitor West

**November 8, 2016**  
(Released Thursday, Nov. 10, 2016)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	44.17	55.83	24.68	9.71	5.73	2.81
<b>Last Week</b> <i>11/1/2016</i>	44.71	55.29	25.26	11.18	5.73	2.81
<b>3 Months Ago</b> <i>8/9/2016</i>	24.25	75.75	33.74	13.20	6.09	2.81
<b>Start of Calendar Year</b> <i>12/29/2015</i>	33.17	66.83	45.07	29.30	15.92	6.85
<b>Start of Water Year</b> <i>9/27/2016</i>	27.78	72.22	30.95	13.45	5.77	2.81
<b>One Year Ago</b> <i>11/10/2015</i>	27.94	72.06	53.31	38.65	21.46	6.85

### 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.

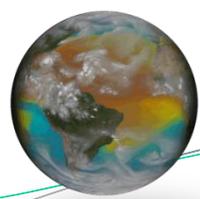
### Author:

Deborah Bathke  
National Drought Mitigation Center

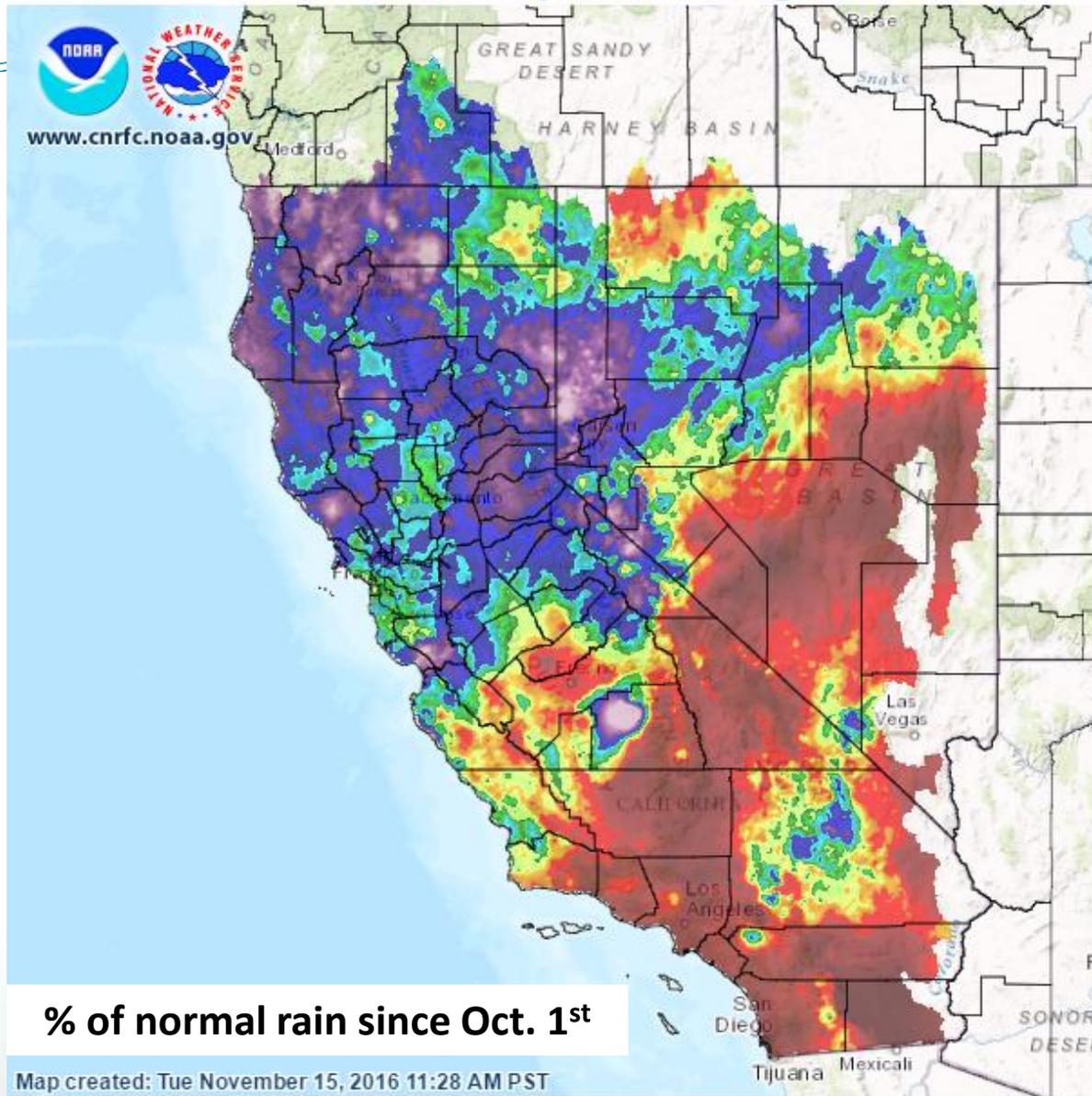


<http://droughtmonitor.unl.edu/>

# Water Year-to-Date Precip % of Average - Nov 2016



www.cnrfc.noaa.gov

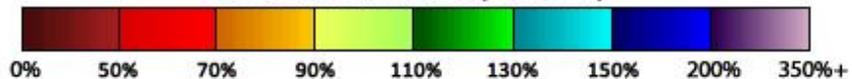


**% of normal rain since Oct. 1<sup>st</sup>**

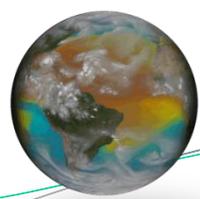
Map created: Tue November 15, 2016 11:28 AM PST

Valid: Mon Nov 14 2016 at 04:00 AM PST

**Percent of Normal (Gridded)**



ENSO Update

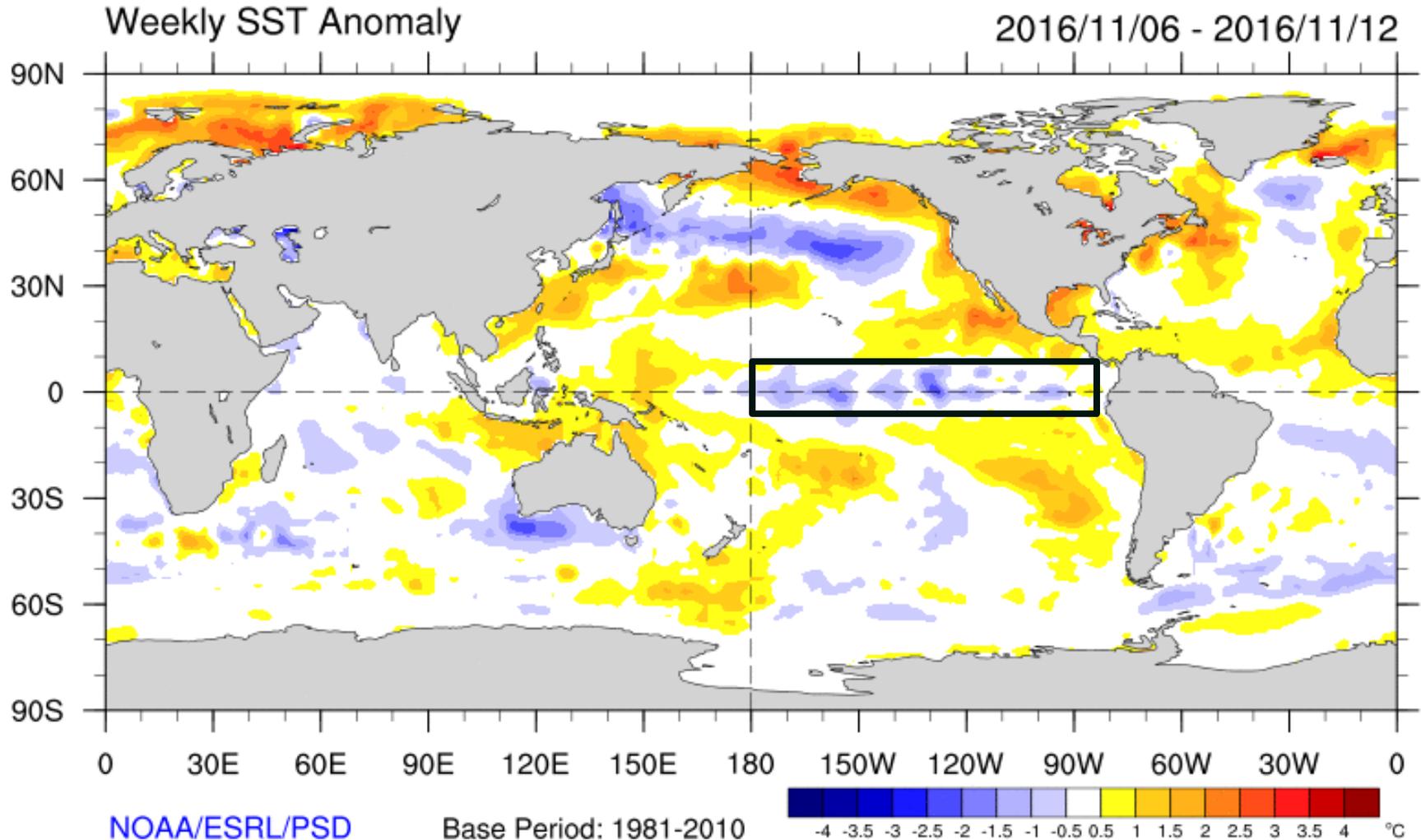


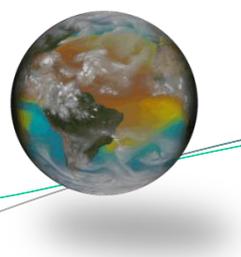
# **Weak La Niña is likely this winter**



# Sea Surface Temperature Anomaly

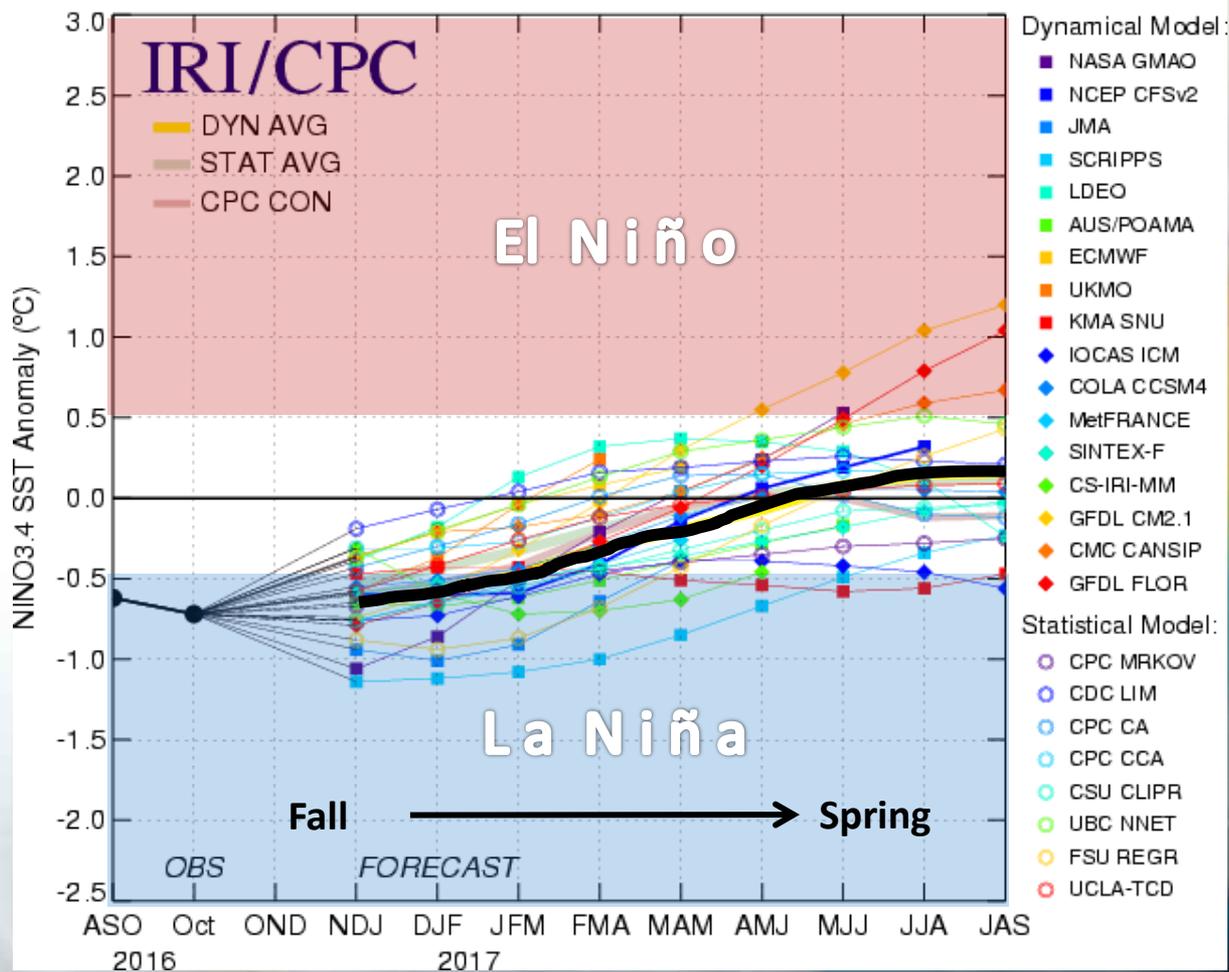
*Cooler water across the Central Pacific - latest 3.4 Region reading is  $-0.7^{\circ}\text{C}$*

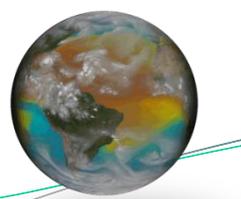




# El Niño Southern Oscillation Predictions

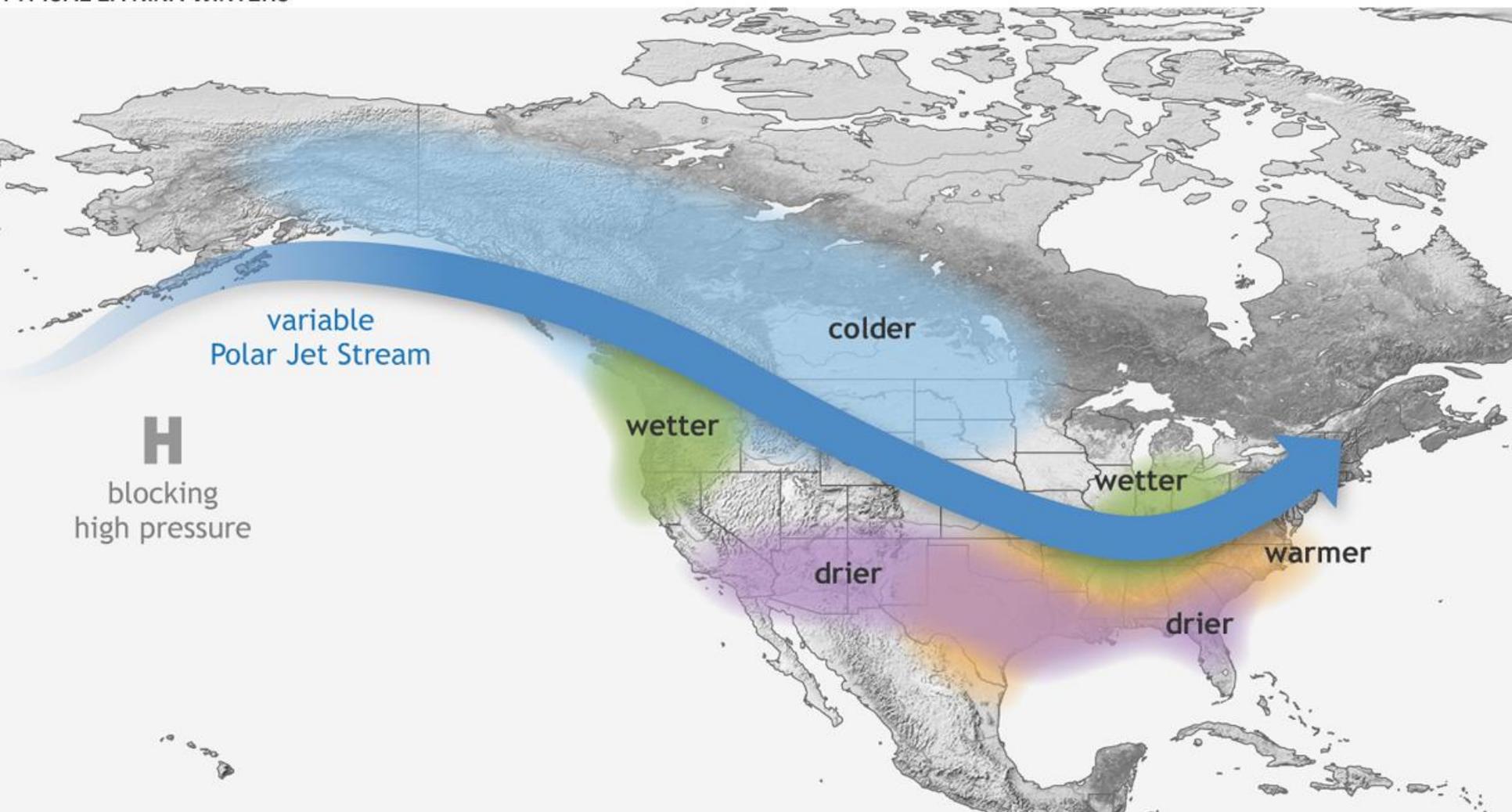
Mid-Nov 2016 Plume of Model ENSO Predictions





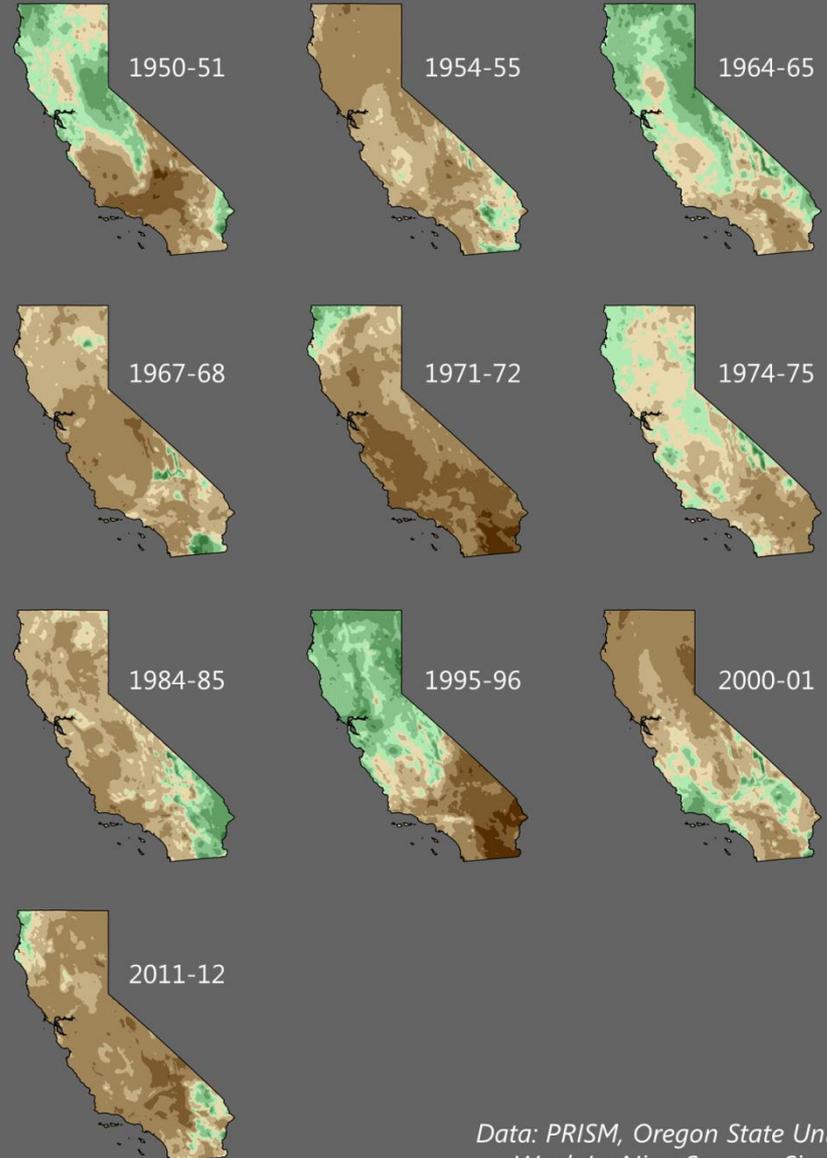
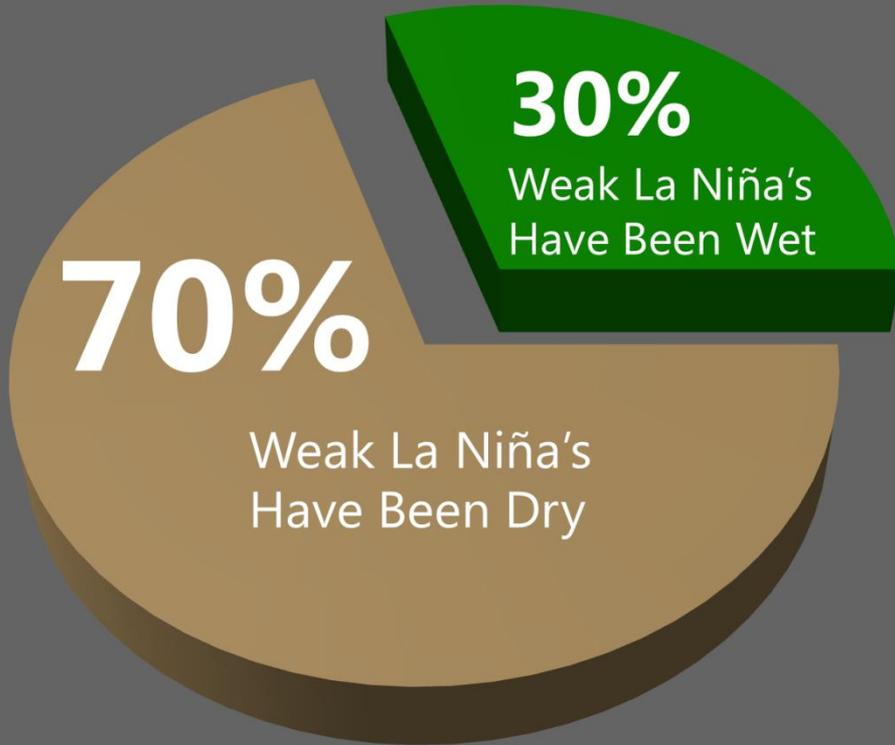
# Typical La Niña Impacts

TYPICAL LA NIÑA WINTERS

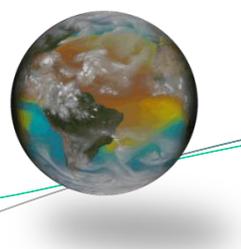


# Weak La Niña and California Precipitation

Statewide Summary

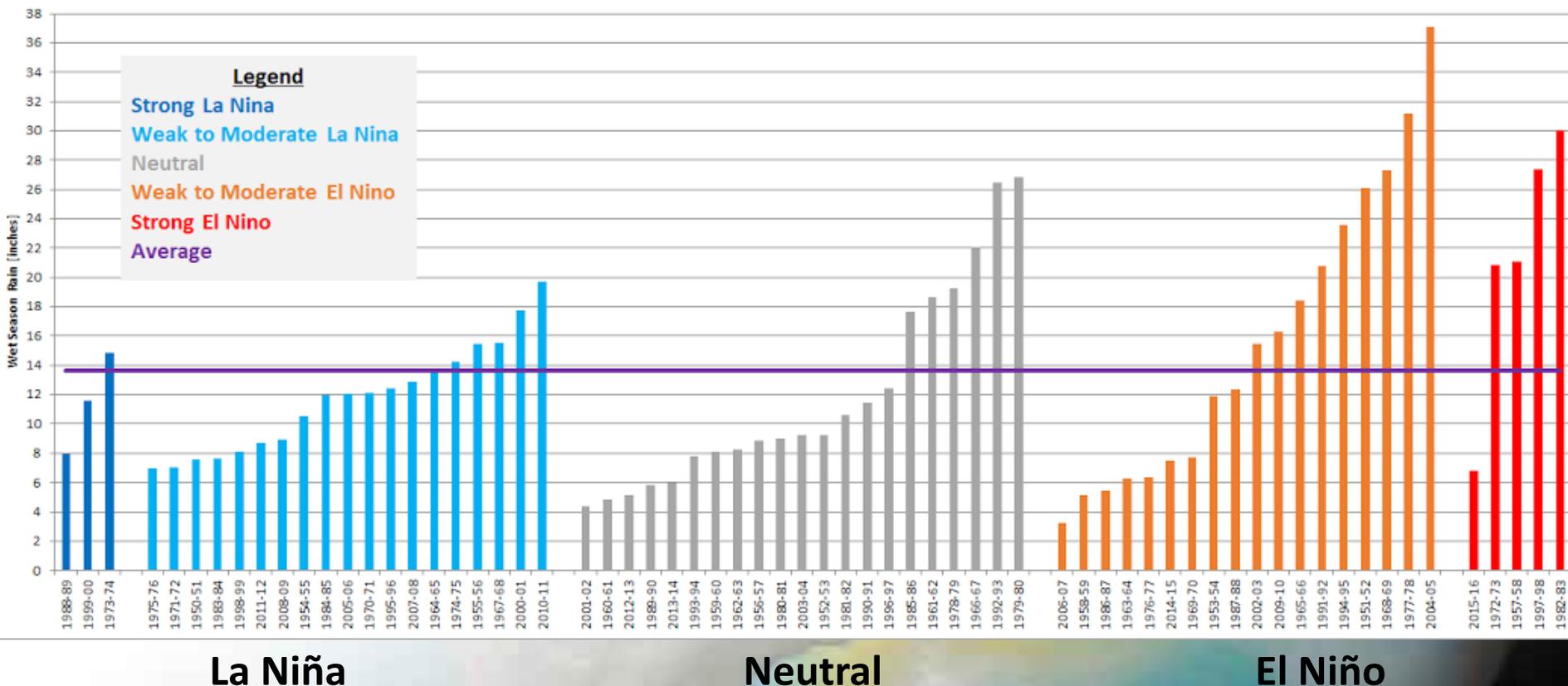


Data: PRISM, Oregon State University  
Weak La Niña Seasons Since 1950



# Downtown Los Angeles Rainfall by ENSO-Type

Downtown Los Angeles Wet Season Rainfall, by ENSO-Type



La Niña

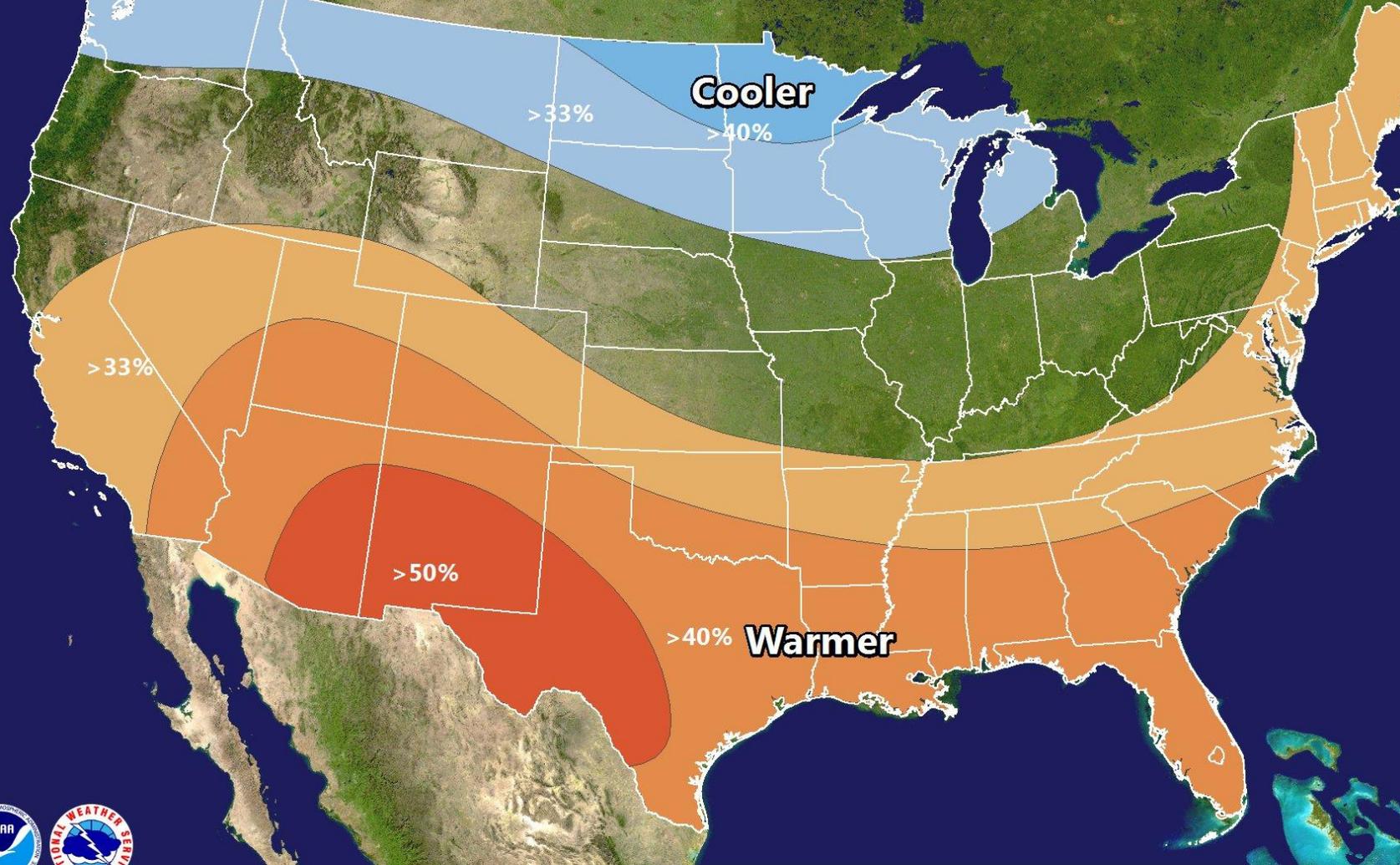
Neutral

El Niño

About 72 percent of weak to moderate La Niña's have been drier than normal

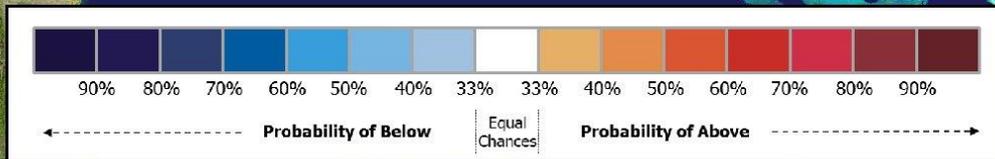
# Three-Month Temperature Outlook

Jan-Feb-Mar 2017



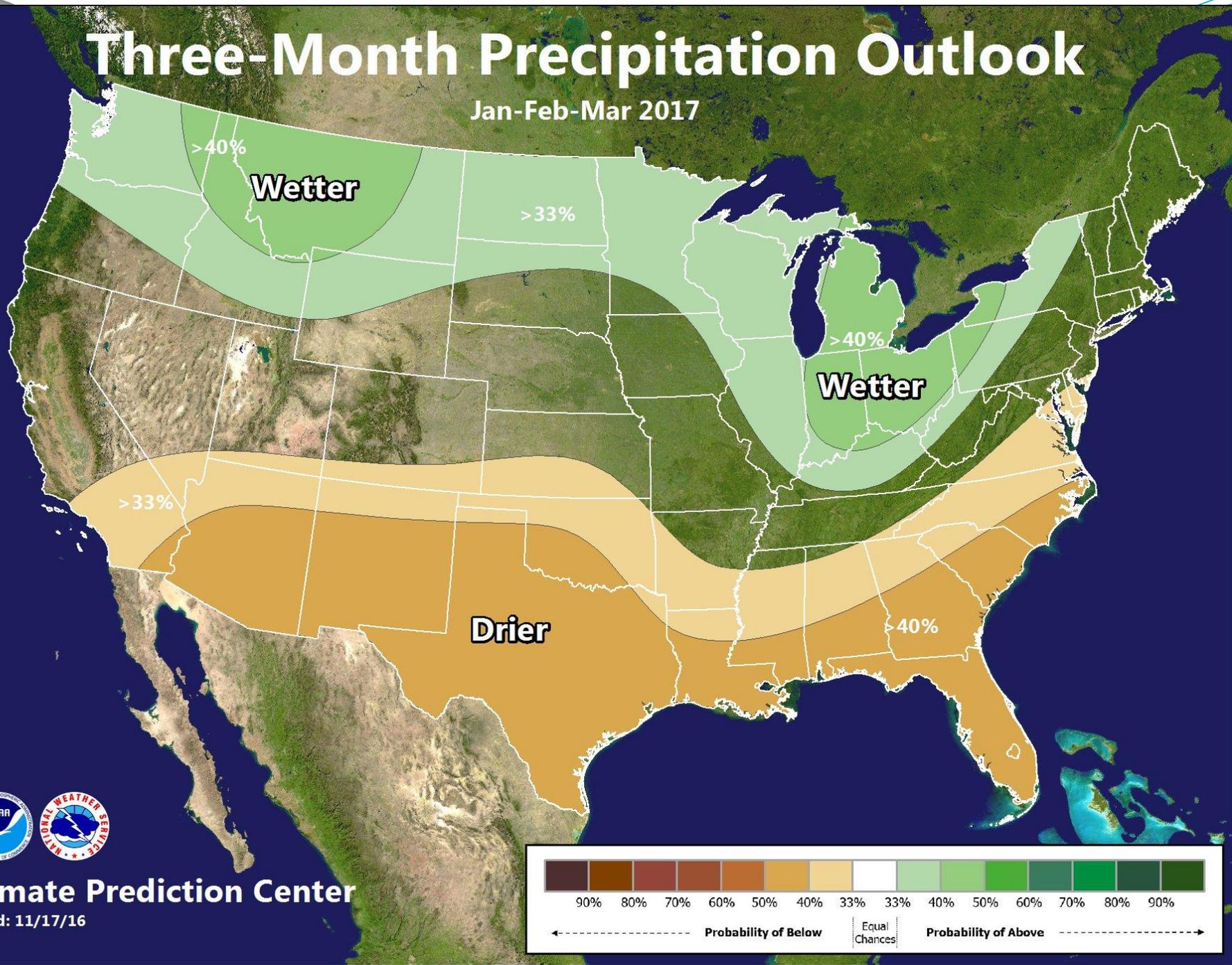
Climate Prediction Center

Issued: 11/17/16



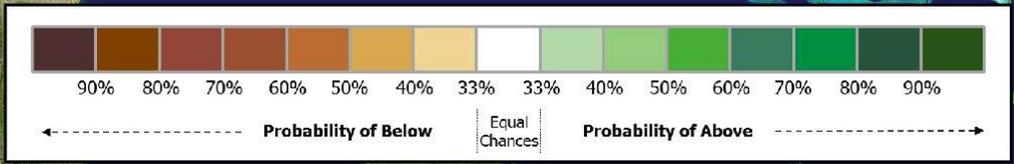
# Three-Month Precipitation Outlook

Jan-Feb-Mar 2017



Climate Prediction Center

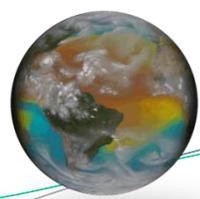
Issued: 11/17/16



# Be Prepared!

- **EVEN DURING A DROUGHT** - It only takes one intense downpour to rapidly create mud and debris flows near recent burn areas.
- A series of storms with thunderstorms typically brings a higher threat of flooding to southern California
  - **Typically associated with an Atmospheric River - a.k.a., Pineapple Express**
- A La Niña could be wet, but the odds favor below normal rainfall totals for southern CA this winter





# Thank You!

**Eric Boldt**

**805-988-6623**

**eric.boldt@noaa.gov**

**[weather.gov/losangeles](http://weather.gov/losangeles)**

**[weather.gov/losangeles/mobile](http://weather.gov/losangeles/mobile)**



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