



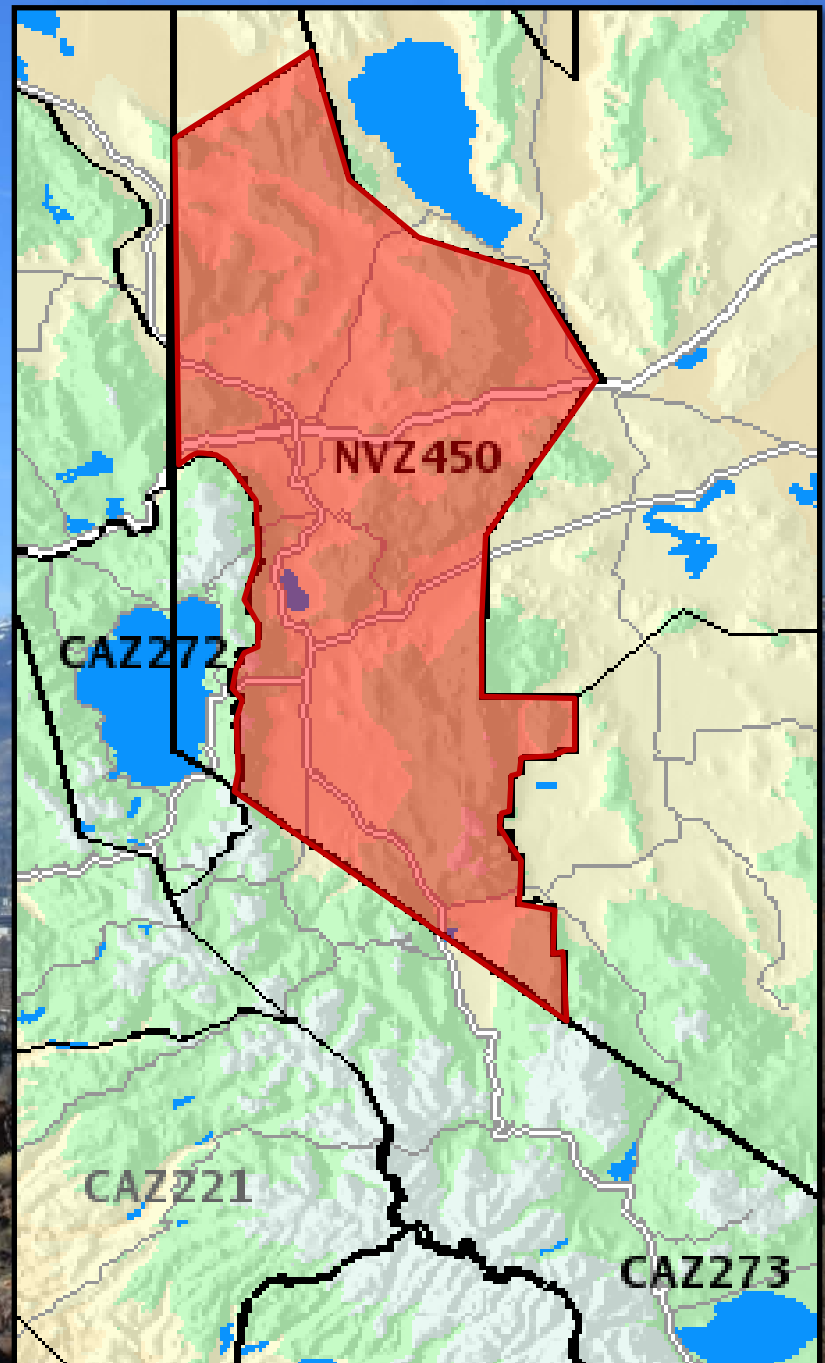
# Fall/Winter Outlook 2015

National Weather Service - Reno  
[Zach.Tolby@NOAA.Gov](mailto:Zach.Tolby@NOAA.Gov)

King Fire - September 17<sup>th</sup> 2014

# Fire Weather Zone 450

## Western Nevada Sierra Front





# **Reno National Weather Service**

## **Fire Weather Program**

<b>Fire Weather Forecast</b>	<b>2/day</b>	<b>Year-round</b>
<b>Spot Weather Forecasts</b>	<b>24/7</b>	<b>Year-round</b>
<b>Fire Danger Ratings</b>		<b>Year-Round</b>
<b>Dedicated Fire Weather Desk</b>	<b>7a-4p</b>	<b>Fire Season</b>
<b>Incident Meteorologists</b>	<b>Type 1,2</b>	<b>Fire Season</b>
<b>Fire Weather Training Classes</b>		<b>Fall/Spring</b>





# Red Flag Criteria

- Warnings **24-48 hours** in advance.
- Wind gusts greater than **30 mph**.
- Humidity below **15%**.
- Both of these conditions are expected for **3 hours** or more.

**Clear Acre Fire – August 18<sup>th</sup> 2008**

# Red Flag Criteria

- Dry Thunderstorms covering more than **15%** of a Fire Weather Zone
- Dry thunderstorms typically have outflow gusts up to **60** mph or more.
- Thunderstorms much less common during fall and winter.





# Typical Fall Weather

- Typically mild and dry with chances for either **wet or dry cold fronts** during October and November.
- Season ending event would be rainfall of around **0.25"**
- **Season ending events typically average around October 15<sup>th</sup>, but can be as late as January.**

# Typical Fall Weather

KRNO October, 2015										
Date	Observed Low (F)	Observed High (F)	Normal Low (F)	Normal High (F)	Record Low (F)	Year	Record High (F)	Year	Observed Precipitation (inches)	Record Precipitation (inches)
1	51	62	44	76	21	1950	93	2010	.47	.54 1972
2	50	73	43	76	22	1971	90	2012	0	.45 1939
3	45	77	43	75	20	1973	90	1980	.20	.32 1918
4	51	68	43	75	20	1973	89	1987	.10	1.09 2010
5	48	73	42	74	20	1969	89	1980	0	1.06 1993
6	48	79	42	74	18	1969	88	1996	0	.40 1916
7	49	80	42	73	22	1962	87	2014	0	.09 1956
8	56	85	41	73	21	1968	91	1965	0	.42 1944
9	52	92	41	72	19	1961	92	2015	0	.07 1925
10	50	88	41	72	16	1973	88	2015	0	.19 1924
11	49	85	40	72	21	1973	86	1991	0	.48 1910
12	48	87	40	71	19	1969	87	2015	0	.12 1987
13	50	89	40	71	22	1942	89	2015	0	1.46 1962
14	50	87	39	70	18	1960	87	2015	0	.15 1918
15	52	83	39	70	21	1968	89	1991	0	.24 1969
16	56	75	39	69	18	1965	85	1991	0	.61 1934
17	50	64	38	69	10	1893	87	1973	.07	.49 2010
18	48	65	38	68	19	1966	86	1988	.01	.33 1972
Average	50.2	78.4	38.9	69.3					0.85 Normal = 0.51	



# Fall - High Wind Events

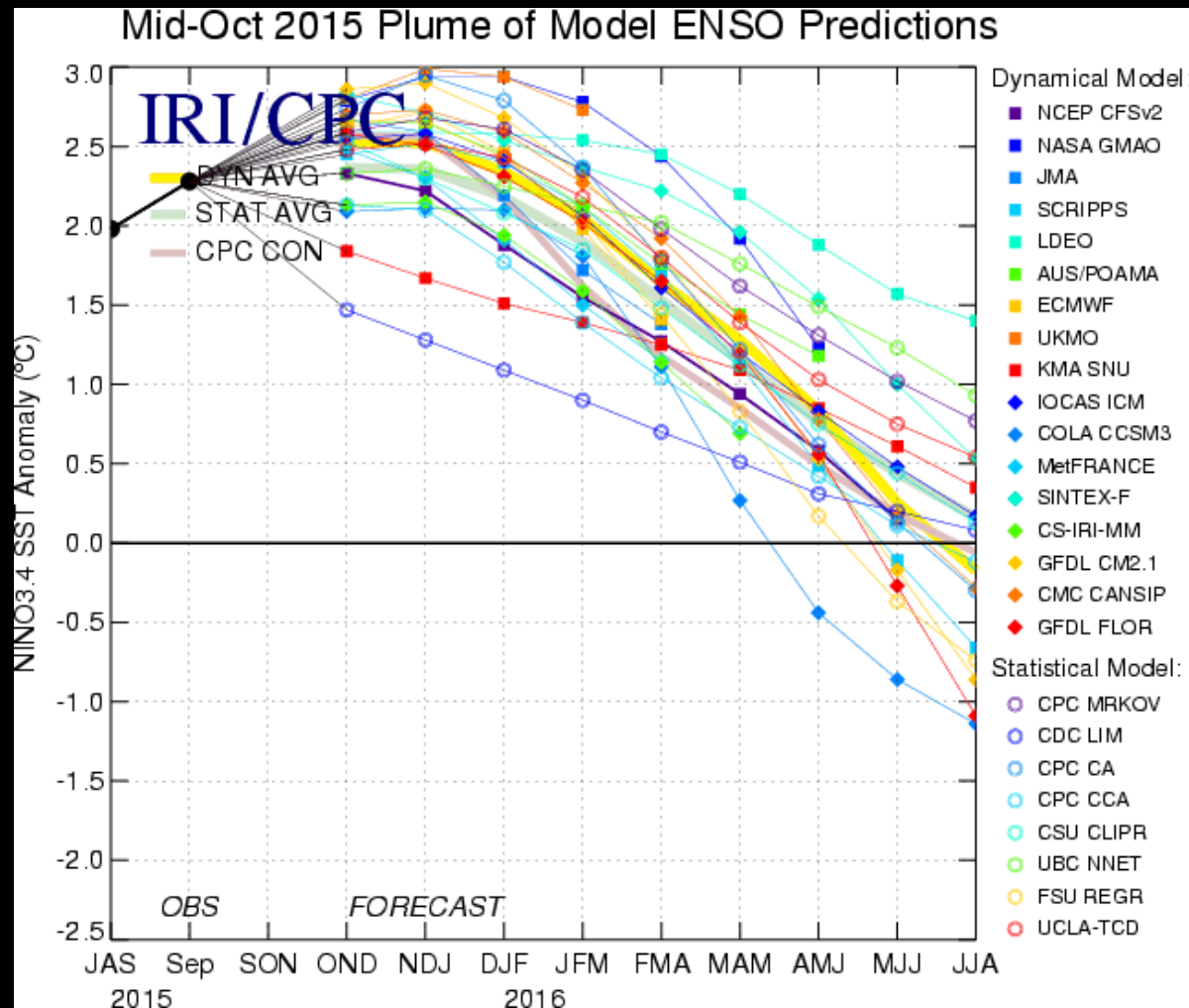
- High wind events can happen in the late Fall.
- Humidity only 45%, but winds were gusting to 80 MPH!



**Caughlin Fire – November 18<sup>th</sup> 2011**



# El Nino – What can we Expect?



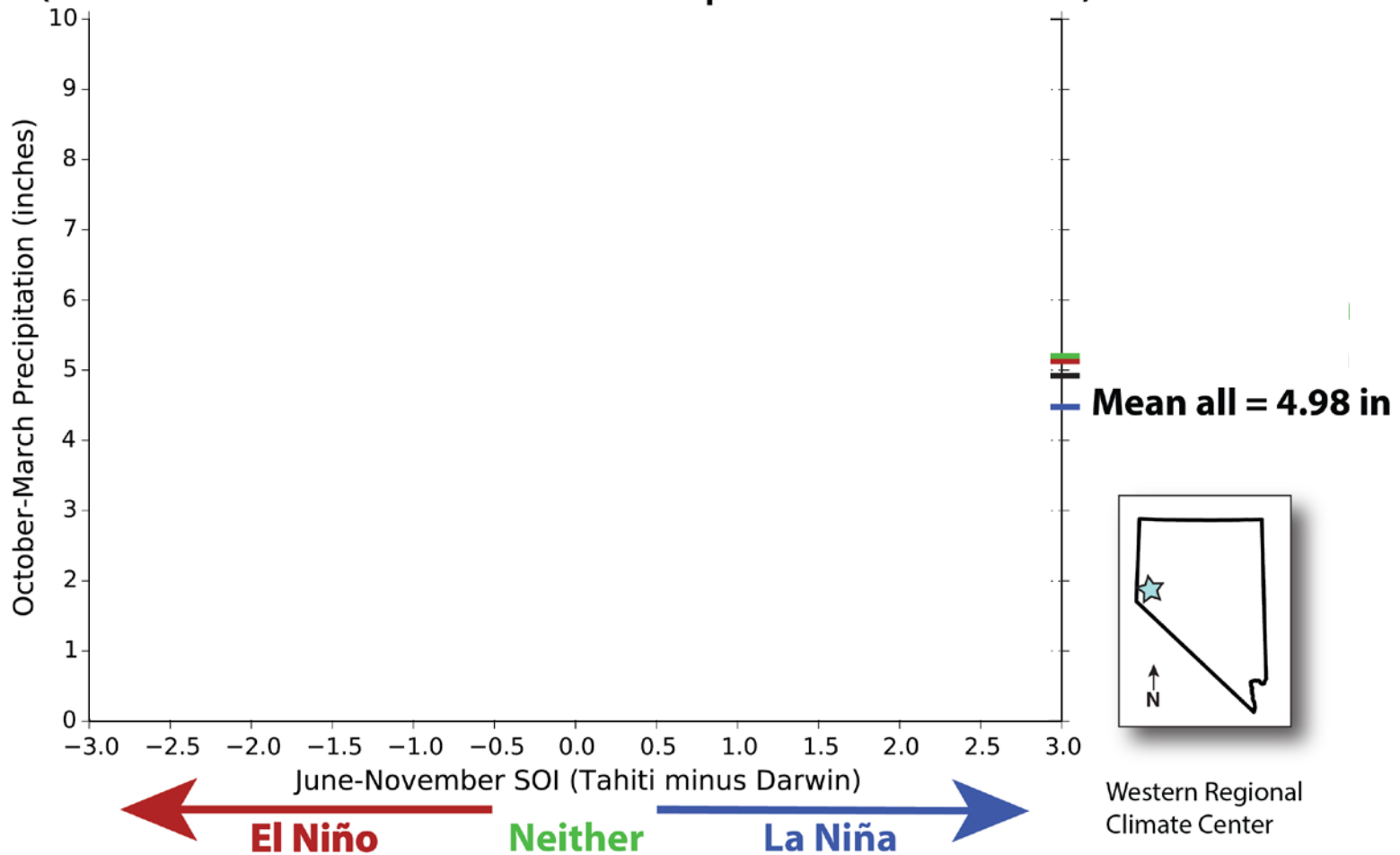
**98% chance El Niño will continue through winter 2015-16**

**Peak late fall/early winter**

**El Niño will gradually weaken through spring 2016**

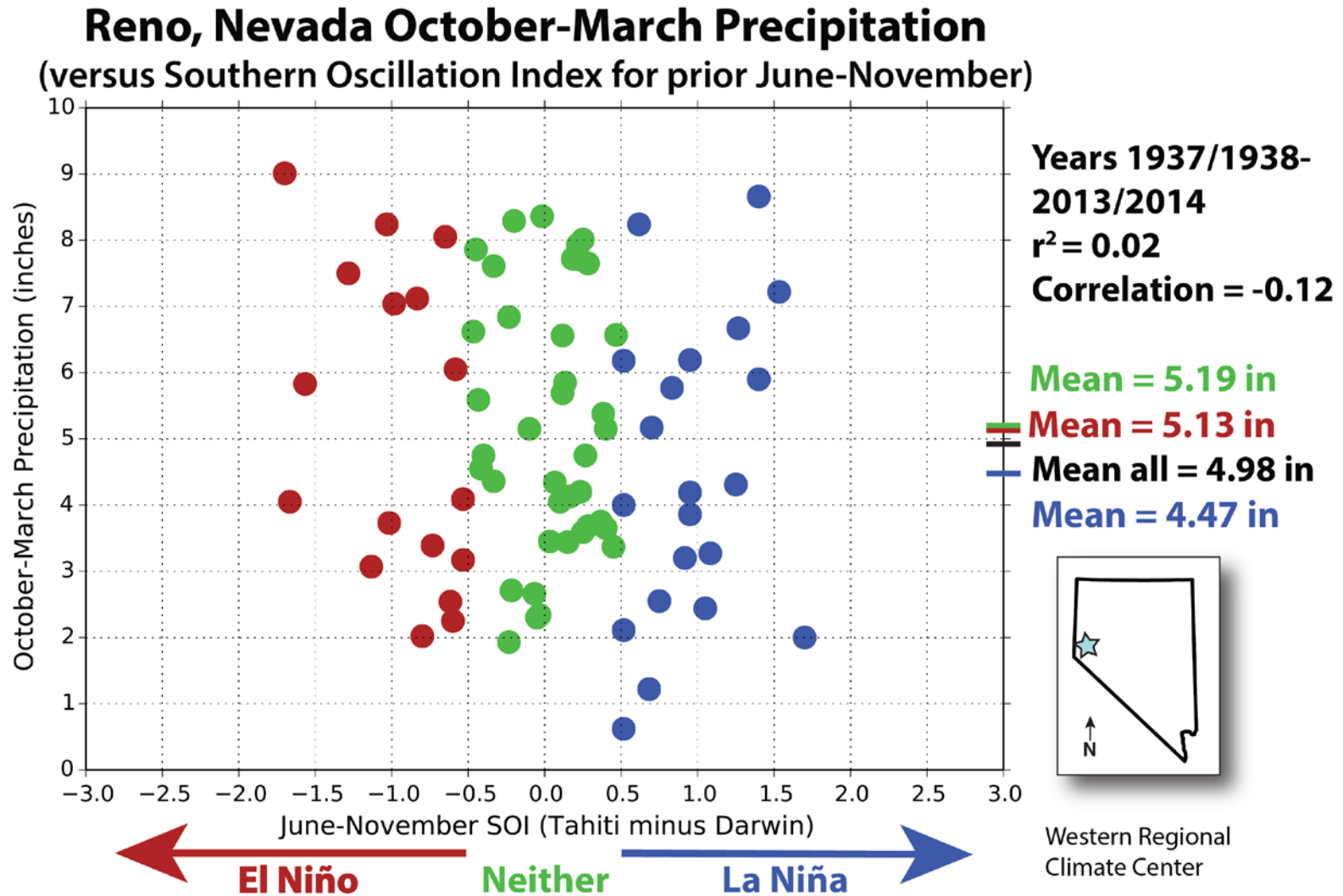
# What does El Niño mean for Reno?

**Reno, Nevada October-March Precipitation**  
(versus Southern Oscillation Index for prior June-November)





# What does El Niño mean for Reno?



# What about a strong El Niño?

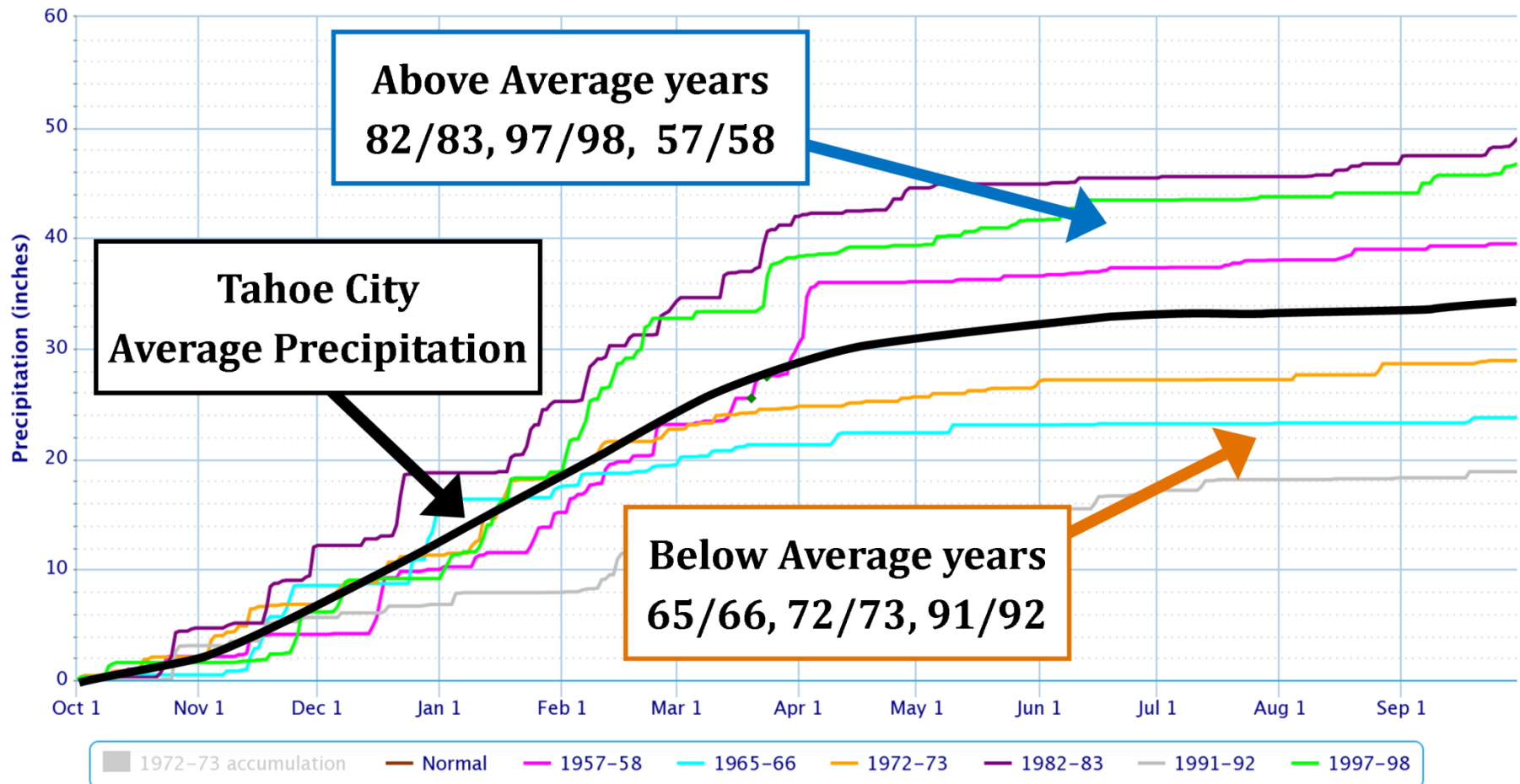
## Accumulated Precipitation - Tahoe City, CA





# What about a strong El Niño?

## Accumulated Precipitation - Tahoe City, CA



# What about a strong El Niño?

## California Precipitation During Prior “Strong” El Niño Events

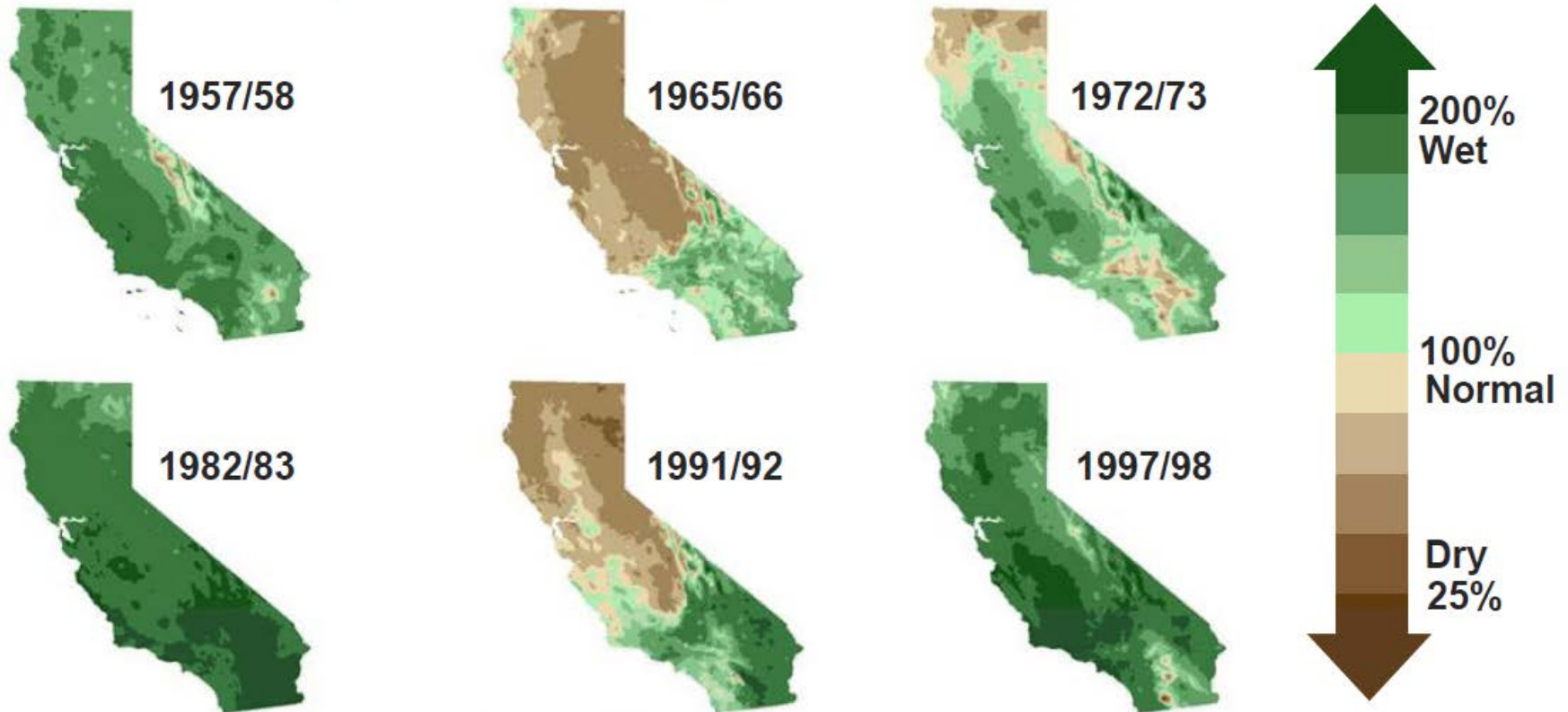


Image courtesy of NWS Sacramento Data: PRISM, OSU



# What about a strong El Niño?

## California Precipitation During Prior “Strong” El Niño Events

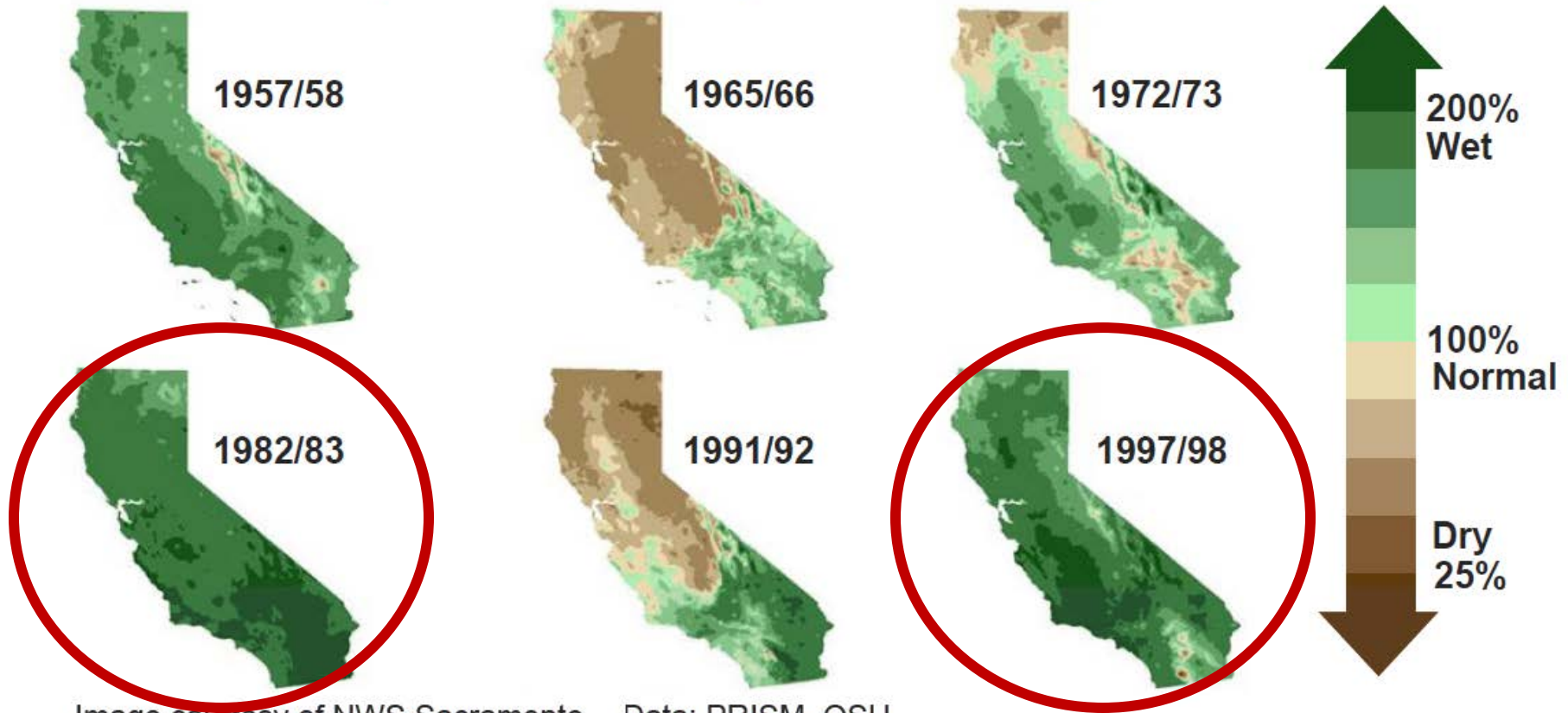
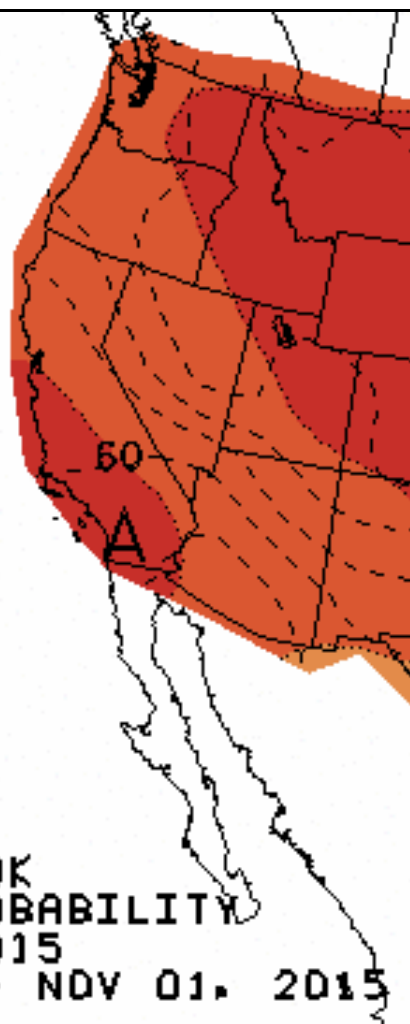


Image courtesy of NWS Sacramento Data: PRISM, OSU

# Forecast for late October

## Temperature - October



8-14 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 18 OCT 2015  
VALID OCT 26 - NOV 01, 2015

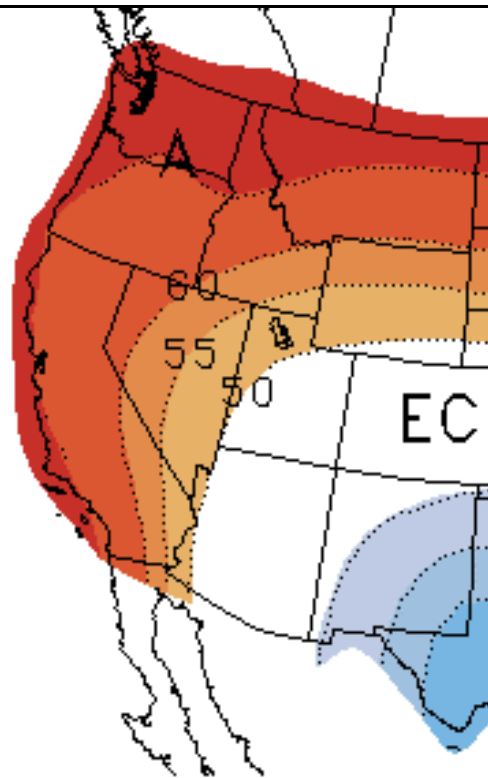
## Precipitation - October



8-14 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 18 OCT 2015  
VALID OCT 26 - NOV 01, 2015

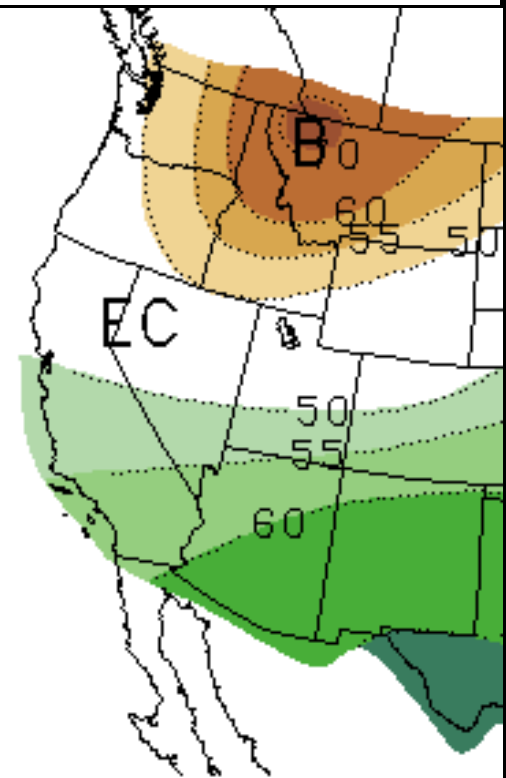
# Forecast for early Winter

## Temperature - NDJ



THREE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.5 MONTH LEAD  
VALID NDJ 2015  
MADE 15 OCT 2015

## Precipitation - NDJ

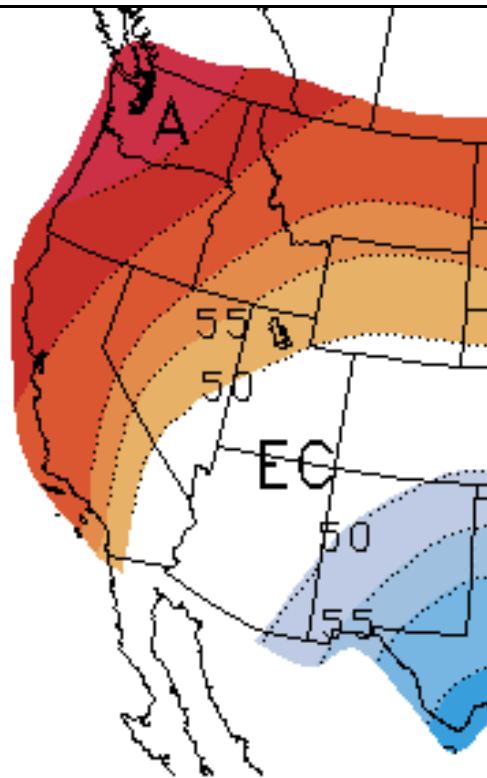


THREE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
0.5 MONTH LEAD  
VALID NDJ 2015  
MADE 15 OCT 2015



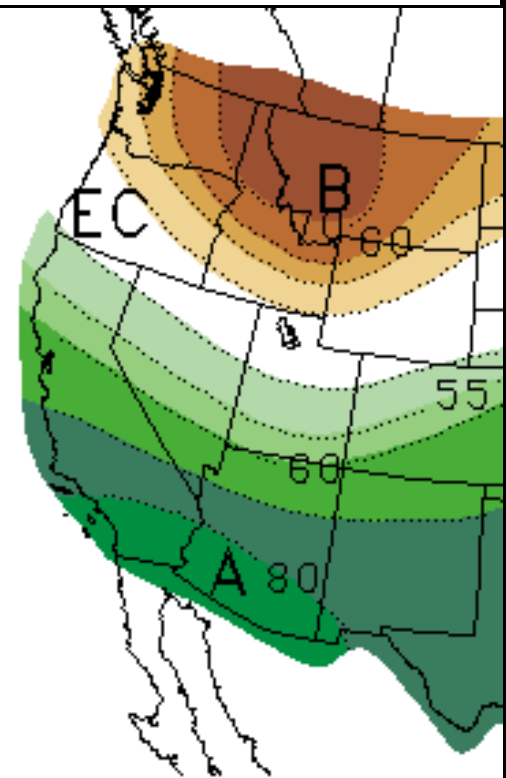
# Forecast for late Winter

## Temperature - JFM



THREE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
2.5 MONTH LEAD  
VALID JFM 2016  
MADE 15 OCT 2015

## Precipitation - JFM



THREE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
2.5 MONTH LEAD  
VALID JFM 2016  
MADE 15 OCT 2015

# Key Takeaways

- **Fire weather** could be a concern if we see an extended dry period.
- Very strong El Niño **decreases the chance of a dry winter**, but no guarantees.
- Forecast is slightly tilted toward above average precipitation, especially **mid/late winter**.
- Snow levels could be **above long term averages**.

# Weather.Gov/Reno



## Questions?

[Zach.Tolby@NOAA.Gov](mailto:Zach.Tolby@NOAA.Gov)

