

# Winter 2013-2014

Erin Boyle  
Service Hydrologist  
NWS Tucson, AZ  
Pima County LDIG Meeting  
March 12, 2014



# Winter Season Highlights

- \*Very different from last year
- \*This Winter: **Warmest on Record** and 15<sup>th</sup> Driest
- \*2012-2013 Winter: 40<sup>th</sup> Coldest and 39<sup>th</sup> Wettest
- \*0.84” Precipitation (-1.89”)
- \*Average Monthly Temp 56.9°F (+3.7°F)
- \*Water Year (Oct-Feb): 3.06” Precipitation (-1.13”)

Last Winter

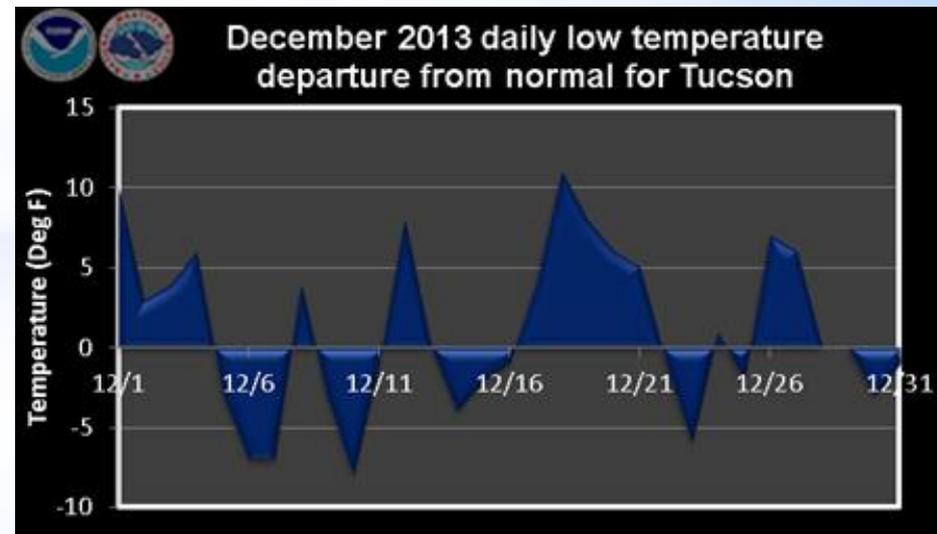
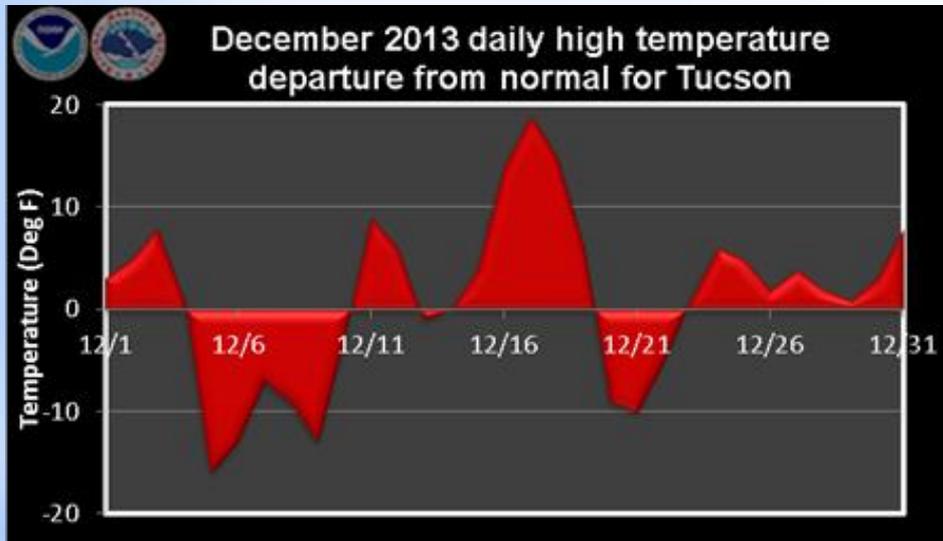


This Winter

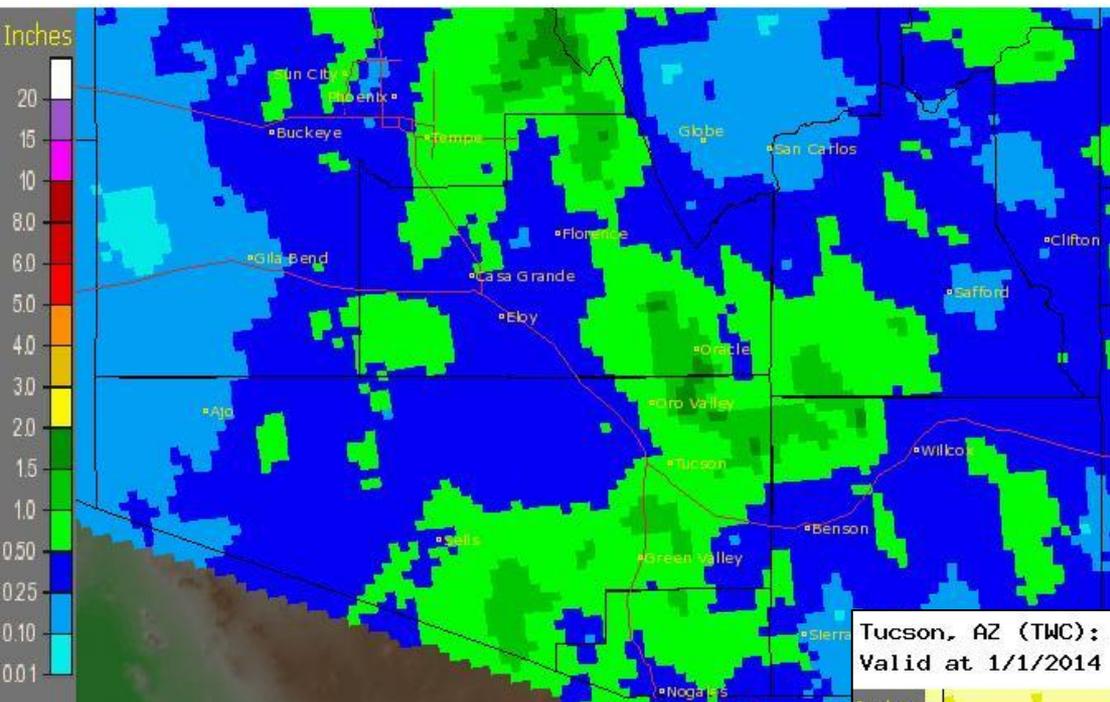


# DECEMBER 2013

- \* 31<sup>th</sup> Warmest and 49<sup>th</sup> Wettest
- \* Average Monthly Temp 53.2°F (+1.3°F)
- \* 0.83” Rainfall (-0.10”)

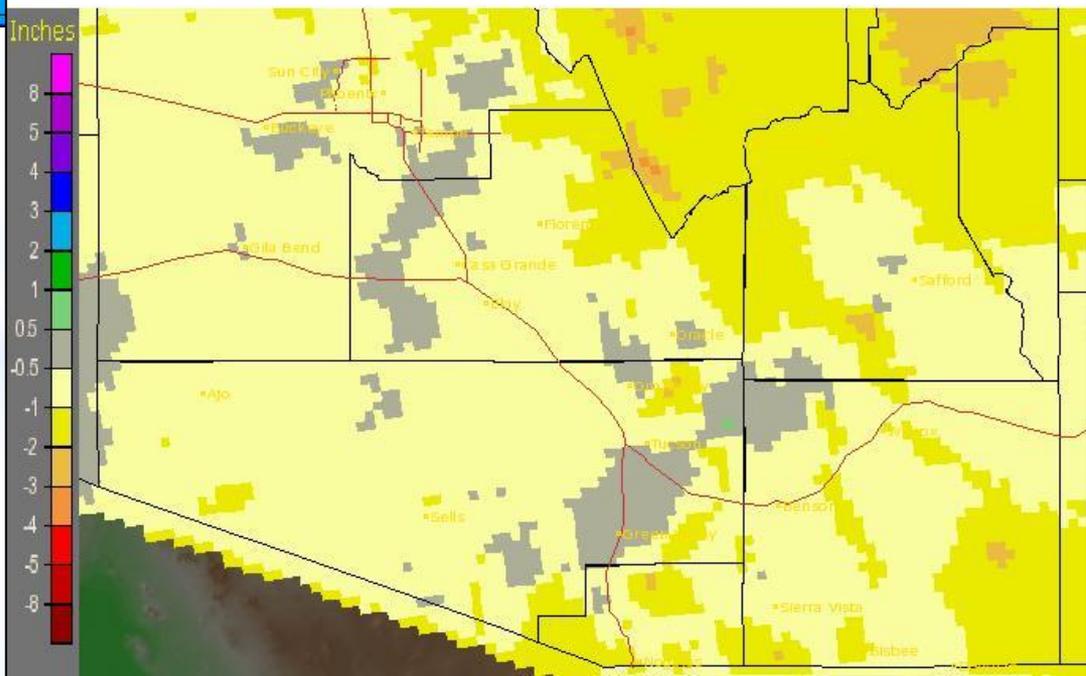


Tucson, AZ (TWC): December, 2013 Monthly Observed Precipitation  
Valid at 1/1/2014 1200 UTC- Created 1/29/14 0:52 UTC



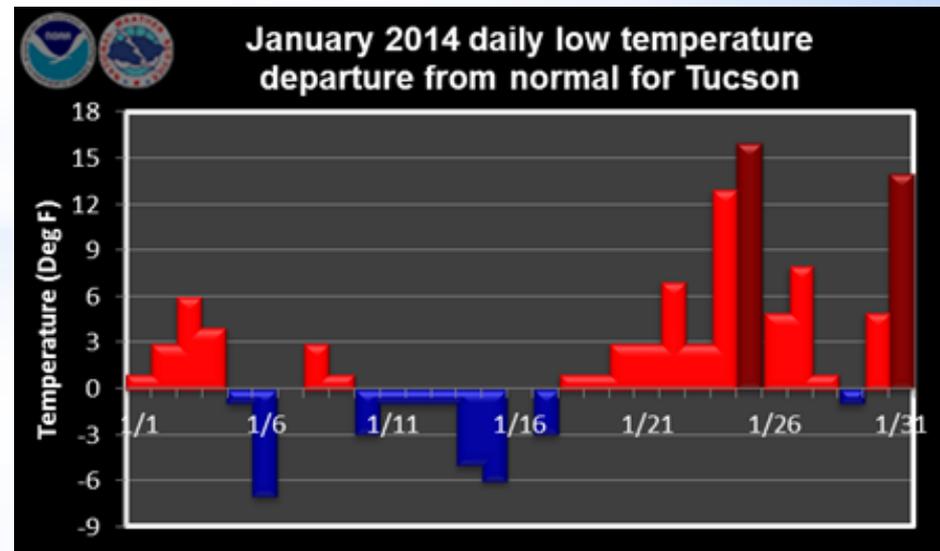
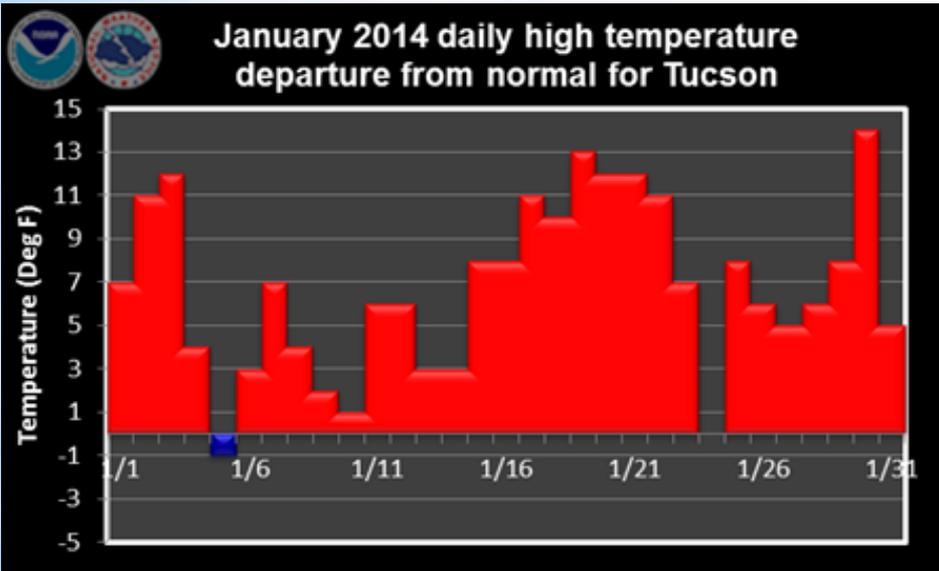
# DECEMBER 2013

Tucson, AZ (TWC): December, 2013 Monthly Departure from Normal Precipitation  
Valid at 1/1/2014 1200 UTC- Created 1/29/14 0:53 UTC

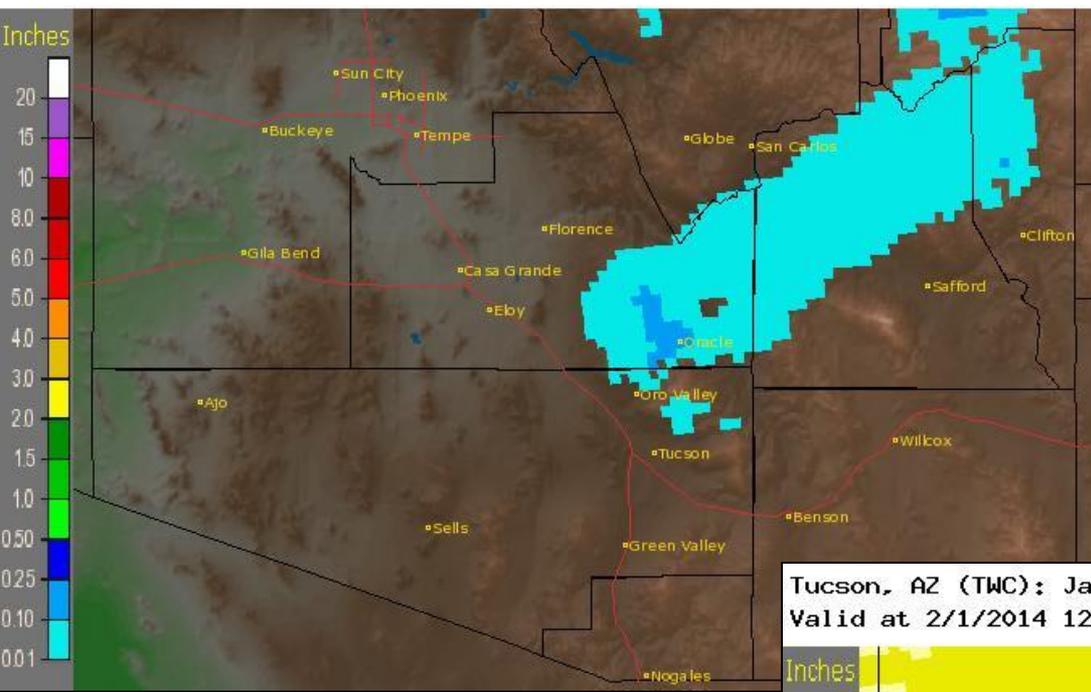


# JANUARY 2014

- \* 3<sup>RD</sup> Warmest and 6<sup>th</sup> Driest
- \* Trace of Rainfall (-0.94")
- \* 42 consecutive days of no measurable rain
- \* Average Monthly Temp 57.3°F (+4.7°F)

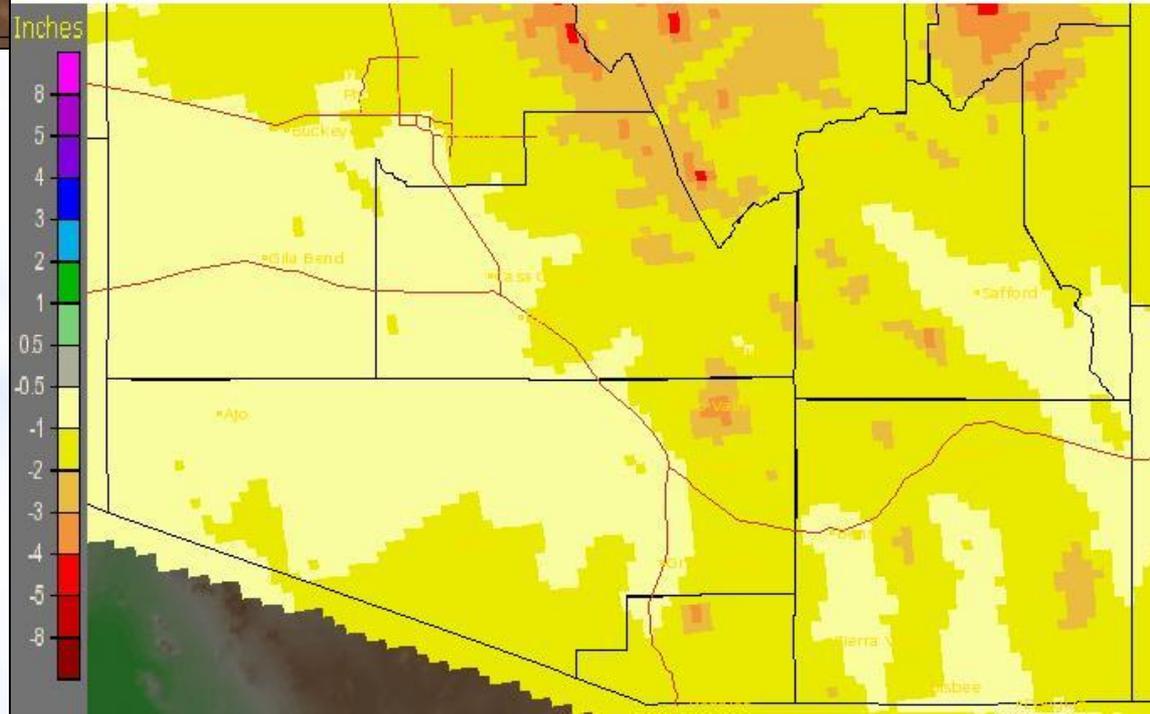


Tucson, AZ (TWC): January, 2014 Monthly Observed Precipitation  
Valid at 2/1/2014 1200 UTC- Created 2/3/14 23:34 UTC



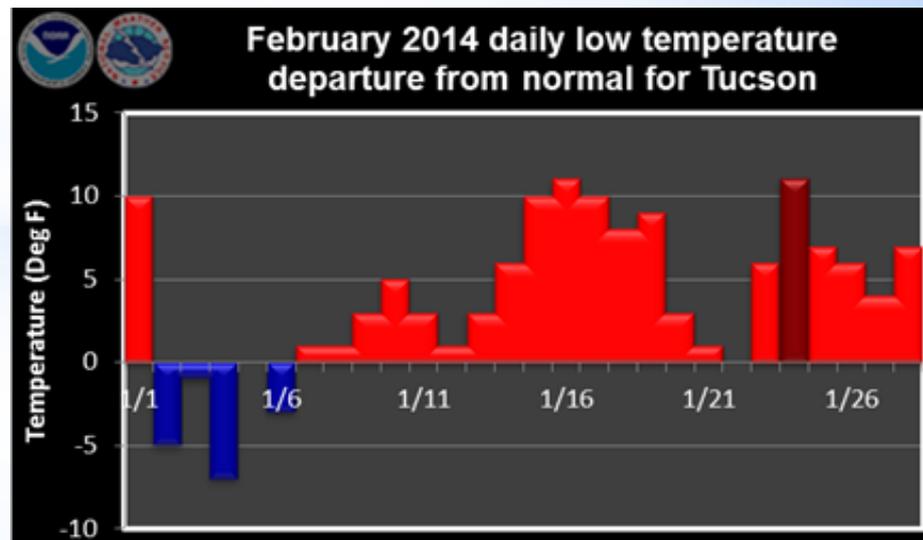
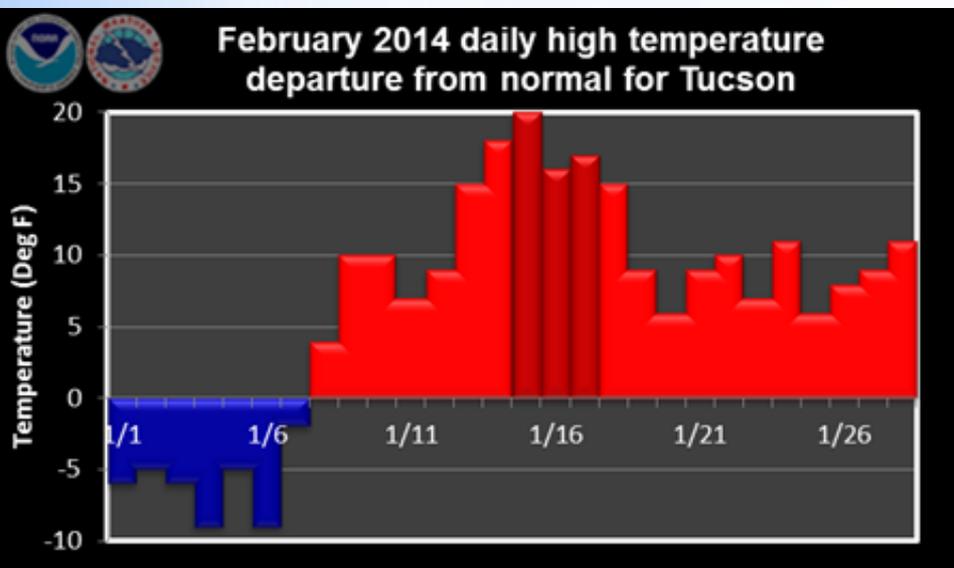
# JANUARY 2014

Tucson, AZ (TWC): January, 2014 Monthly Departure from Normal Precipitation  
Valid at 2/1/2014 1200 UTC- Created 2/3/14 21:39 UTC

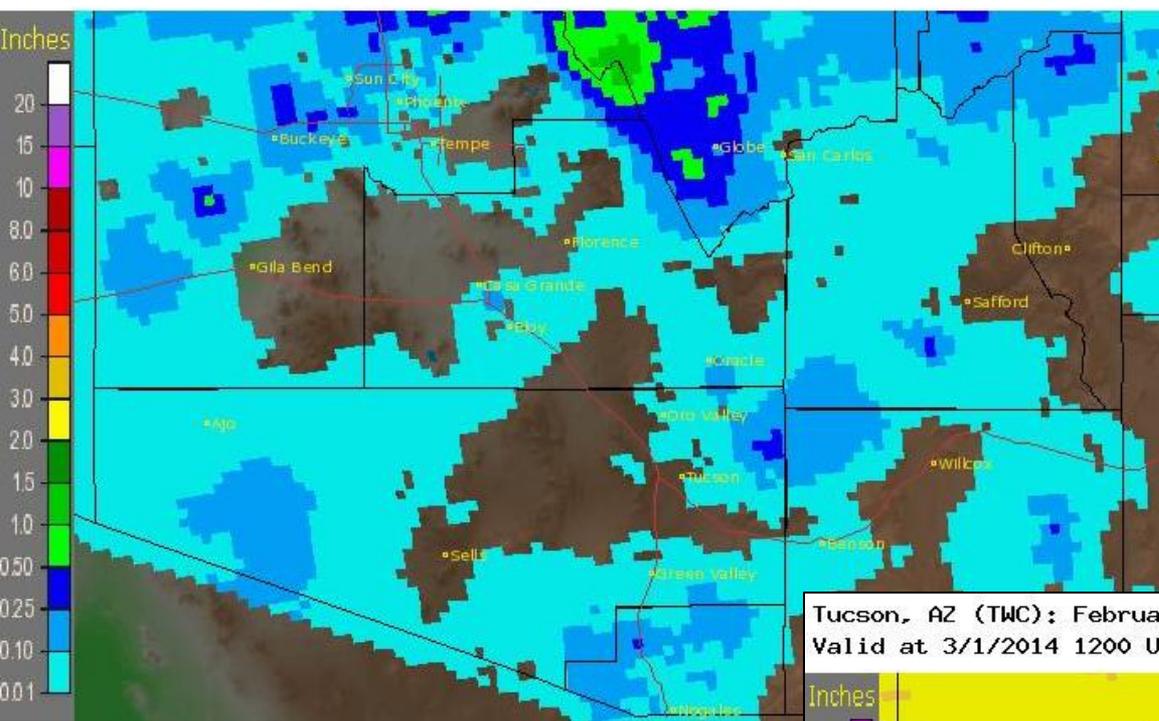


# FEBRUARY 2014

- \* 2<sup>nd</sup> Warmest and 11<sup>th</sup> Driest
- \* 0.01" Precipitation (-0.85")
- \* Average Monthly Temp 60.6°F (+5.3°F)

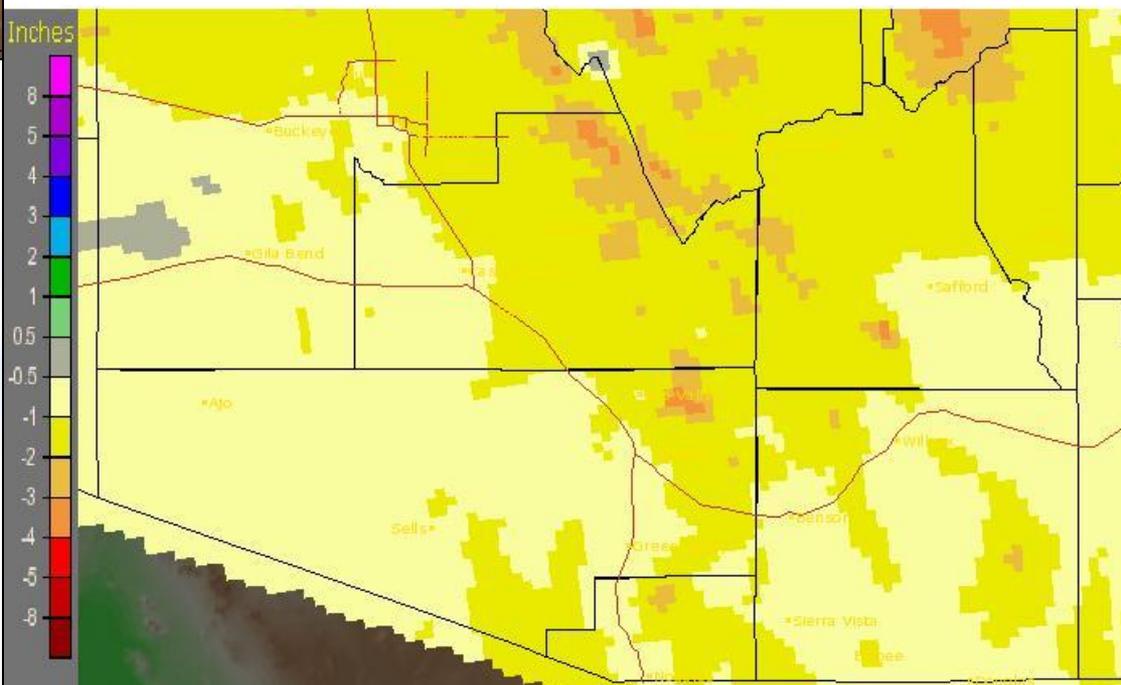


Tucson, AZ (TWC): February, 2014 Monthly Observed Precipitation  
Valid at 3/1/2014 1200 UTC- Created 3/3/14 23:34 UTC



# FEBRUARY 2014

Tucson, AZ (TWC): February, 2014 Monthly Departure from Normal Precipitation  
Valid at 3/1/2014 1200 UTC- Created 3/3/14 23:36 UTC



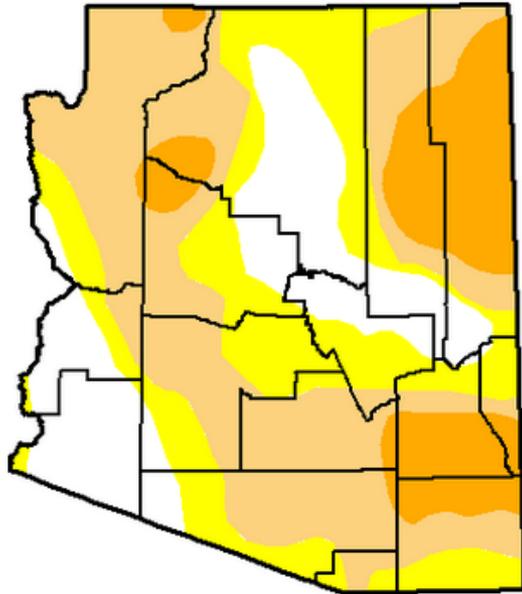
# Drought Conditions

## Drought Severity

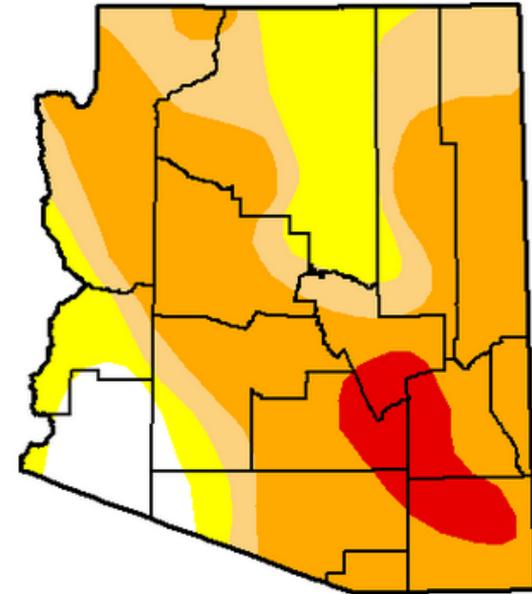
D0 - Abnormally Dry  
 D1 Drought - Moderate

D2 Drought - Severe  
 D3 Drought - Extreme

D4 Drought - Exceptional



December 3, 2013



February 25, 2014

Statistics

Time Series

Narrative

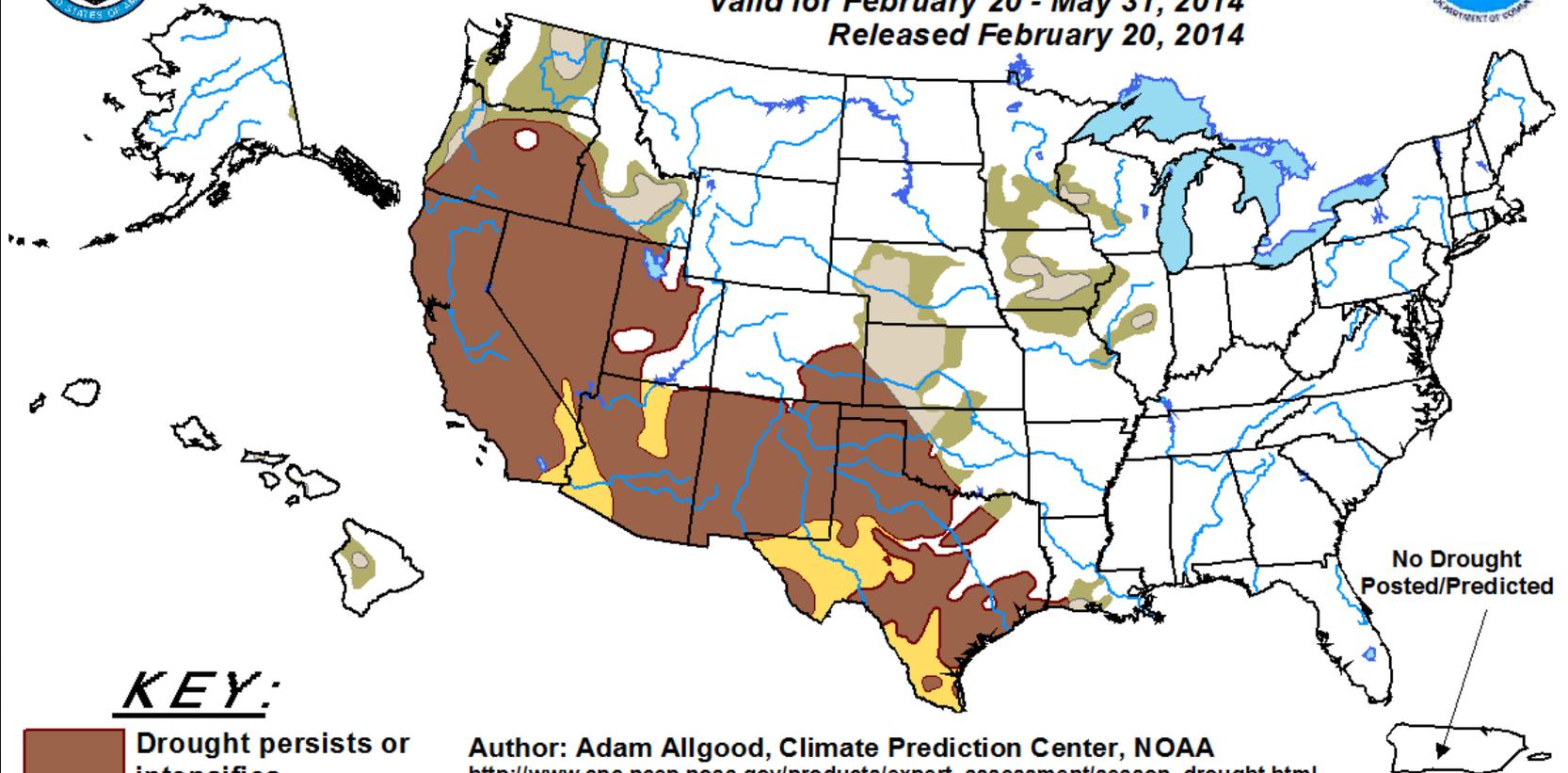
**Statistics type:**  Traditional (D0-D4, D1-D4, etc.)  Categorical (D0, D1, etc.)

Week	Nothing	D0-D4	D1-D4	D2-D4	D3-D4	D4
12/3/2013	20.72	79.28	53.58	16.32	0	0
2/25/2014	6.18	93.82	77.24	57.2	7.04	0

# Drought Conditions



## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period *Valid for February 20 - May 31, 2014* *Released February 20, 2014*



### KEY:

-  Drought persists or intensifies
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely

Author: Adam Allgood, Climate Prediction Center, NOAA

[http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.html)

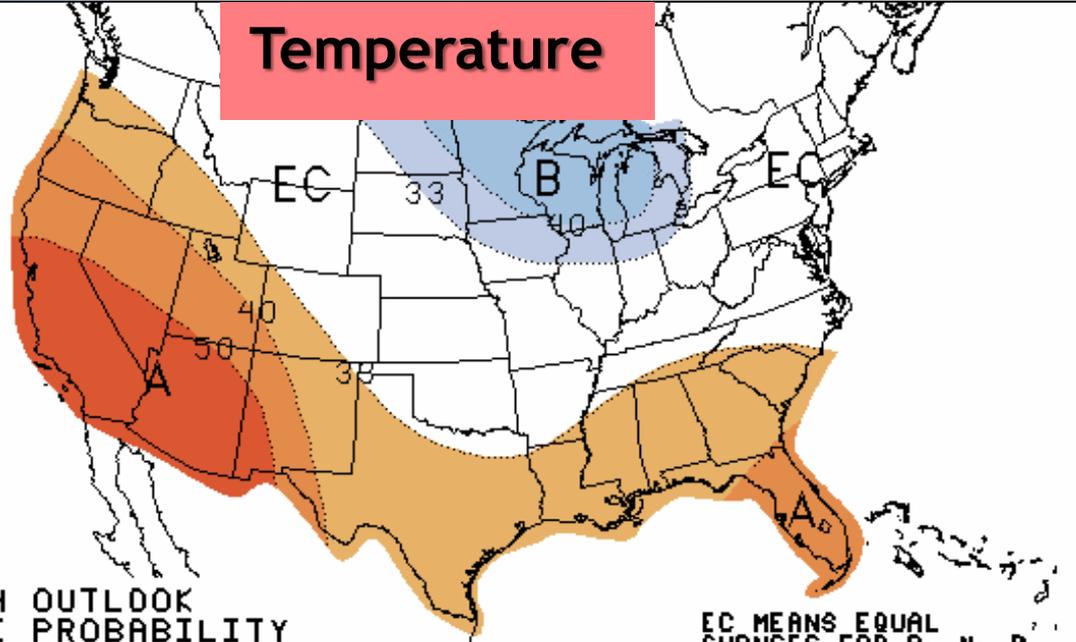
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity).

For weekly drought updates, see the latest U.S. Drought Monitor.

NOTE: The tan area areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain.

The Green areas imply drought removal by the end of the period (D0 or none)

# Temperature

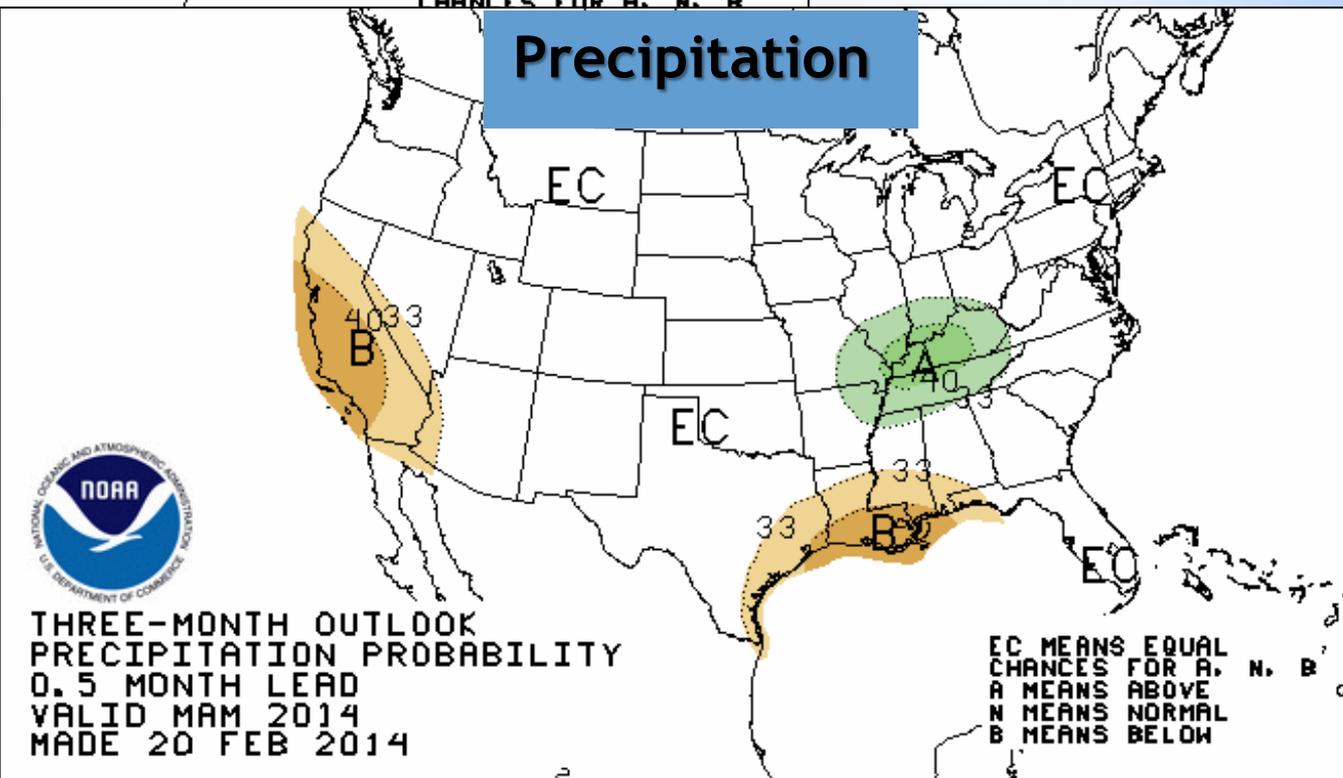


THREE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.5 MONTH LEAD  
VALID MAM 2014  
MADE 20 FEB 2014

EC MEANS EQUAL CHANCES FOR A, N, B

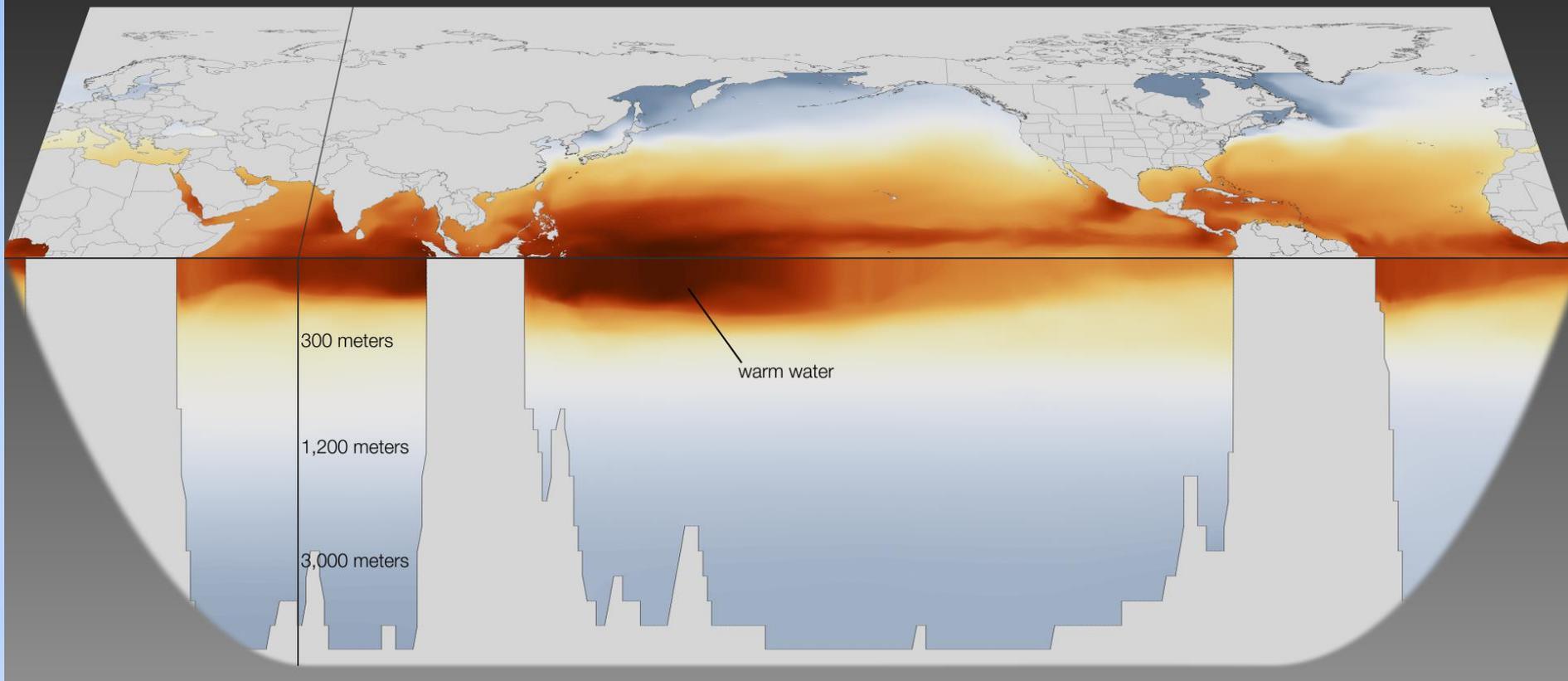
# March - May Outlook

# Precipitation



THREE-MONTH OUTLOOK  
PRECIPITATION PROBABILITY  
0.5 MONTH LEAD  
VALID MAM 2014  
MADE 20 FEB 2014

EC MEANS EQUAL CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW



## NWS Climate Prediction Center

- Issued an El Niño Watch
- ENSO-neutral expected to continue in Northern Hemisphere through Spring 2014
- ~50% chance of El Niño developing during Summer or Fall
- Monitoring very warm water in Western Pacific that is moving eastward and will likely warm the Eastern Pacific in coming months.



# SE AZ Weather Spotter Training



Date	Time	Location
April 26th	2:00 PM	U of A Campus, ENRB Room 253 520 North Park Ave., <b>Tucson</b>
May 13th	6:30 PM	U of A Campus, ENRB Room 253 520 North Park Ave., <b>Tucson</b>
May 14th	6:30 PM	Marana Operations Center 5100 W. Ina Road, <b>Marana</b>
May 24th	2:00 PM	Oro Valley Town Library 1305 West Naranja, <b>Oro Valley</b>
May 29th	6:30 PM	Sahuarita Town Hall Council Chambers 375 W. Sahuarita Center Way, <b>Sahuarita</b>