

# April 2014 Weather Digest

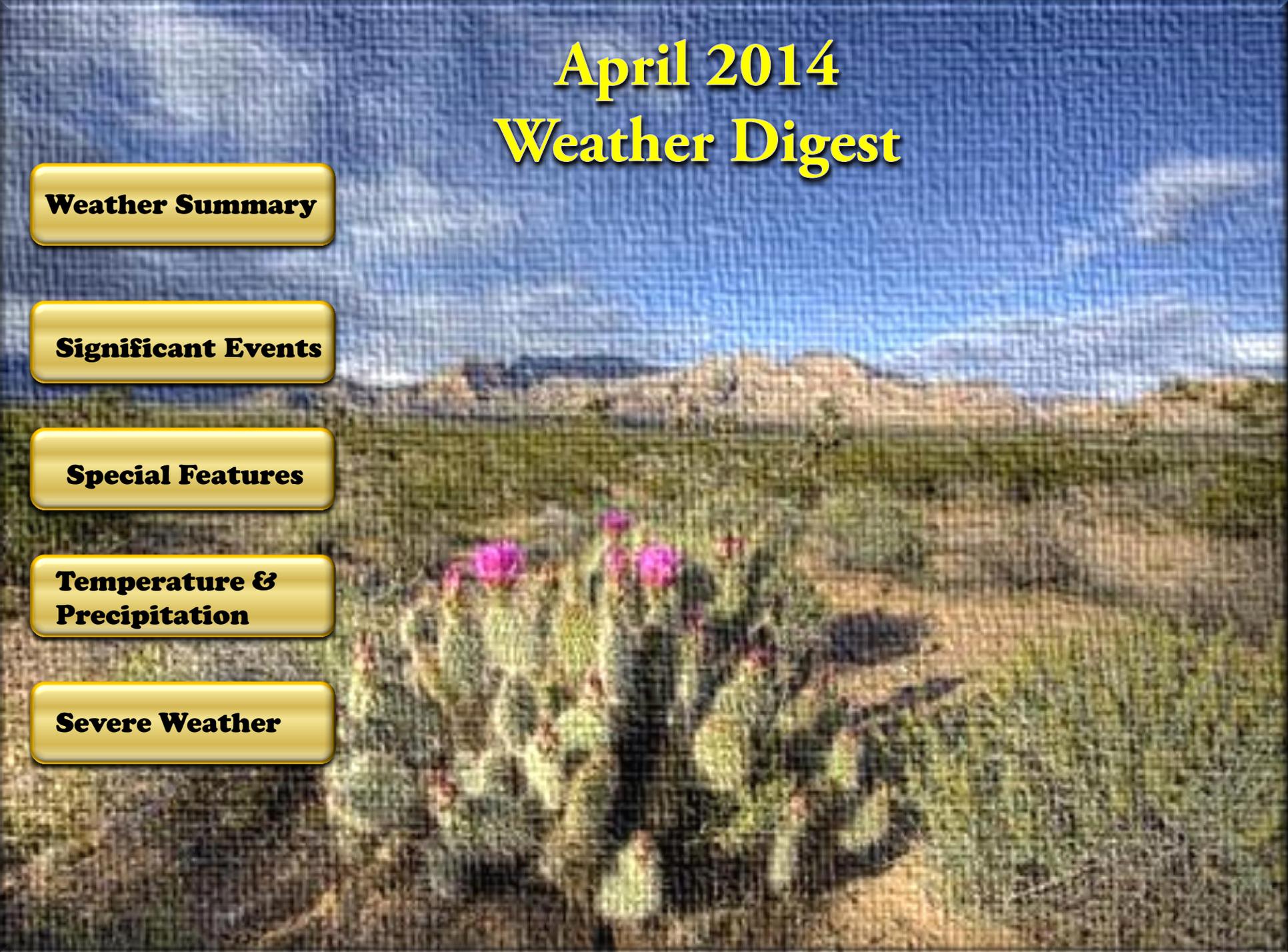
**Weather Summary**

**Significant Events**

**Special Features**

**Temperature &  
Precipitation**

**Severe Weather**



# April 2014 Weather Summary

April 2014 turned out to be a fairly normal overall. Temperatures around southern New Mexico and West Texas were about normal to slightly above. Precipitation, as usual, was really spotty but in general, above normal rainfall fell over El Paso and Hudspeth Counties, along with most of Otero County excepting the mountains. Much of Sierra County and the Black Range were also above normal. All other areas were below normal.

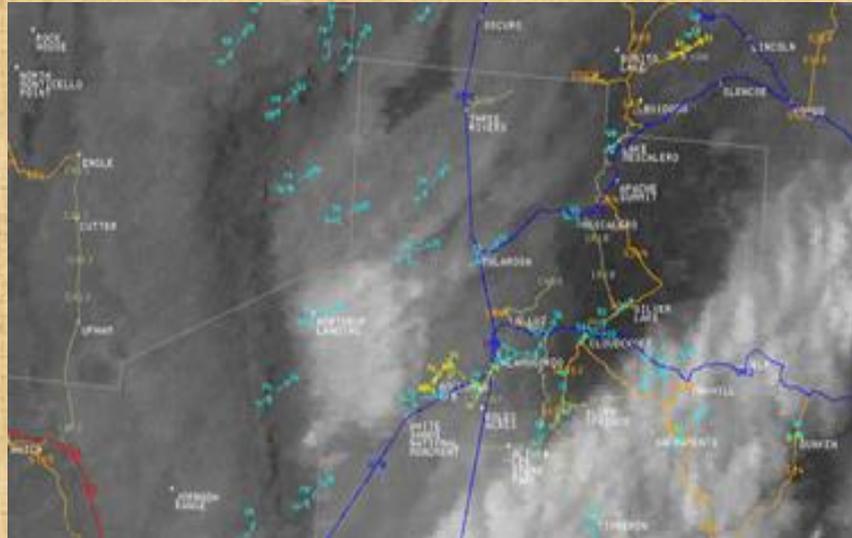
Perhaps the biggest single weather event of the month was the thunderstorm outbreak on April 19<sup>th</sup>. A deep upper level trough moved across Arizona on the 19<sup>th</sup> with moisture levels well above normal. This storm brought heavy rainfall and moderate to large hail over much of El Paso and eastern Hudspeth Counties. Several areas of east and northeast El Paso reported over one inch of rain along with hail of one-half to one inch. The hail fell so deep in some places that drains and arroyos were clogged by the hail.

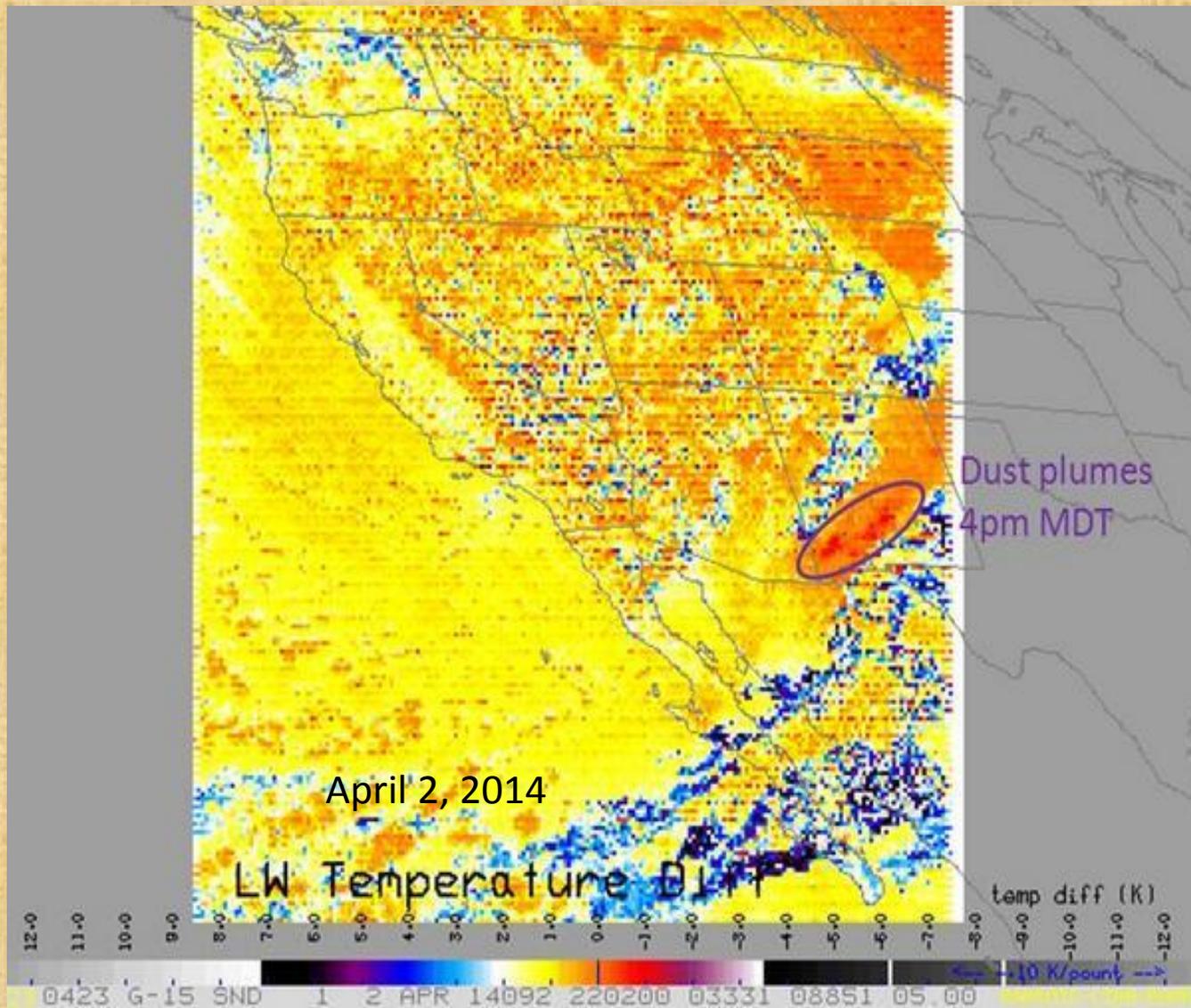
Dust storms are still plentiful in April, but normally begin to decrease in frequency. This April saw several wind and dust storms, with the main events occurring on the 2<sup>nd</sup>, 12<sup>th</sup>, and the 26<sup>th</sup>.

A couple of short lived heat waves occurred in April, the first hitting on the 9<sup>th</sup>-11<sup>th</sup> with near record heat, and the second one on the 21<sup>st</sup> and 22<sup>nd</sup> with well above normal temperatures.

# Significant Events

The notable events list for April began in earnest with a wind and dust storm on the 2<sup>nd</sup>. Peak winds around the area ranged from 40 to 60 mph, with gusts as high as 80 mph over exposed and channeled areas. Blowing dust was relatively widespread and the Tularosa Basin/US 54 experienced blowing gypsum off the White Sands National Monument.





# Significant events-continued

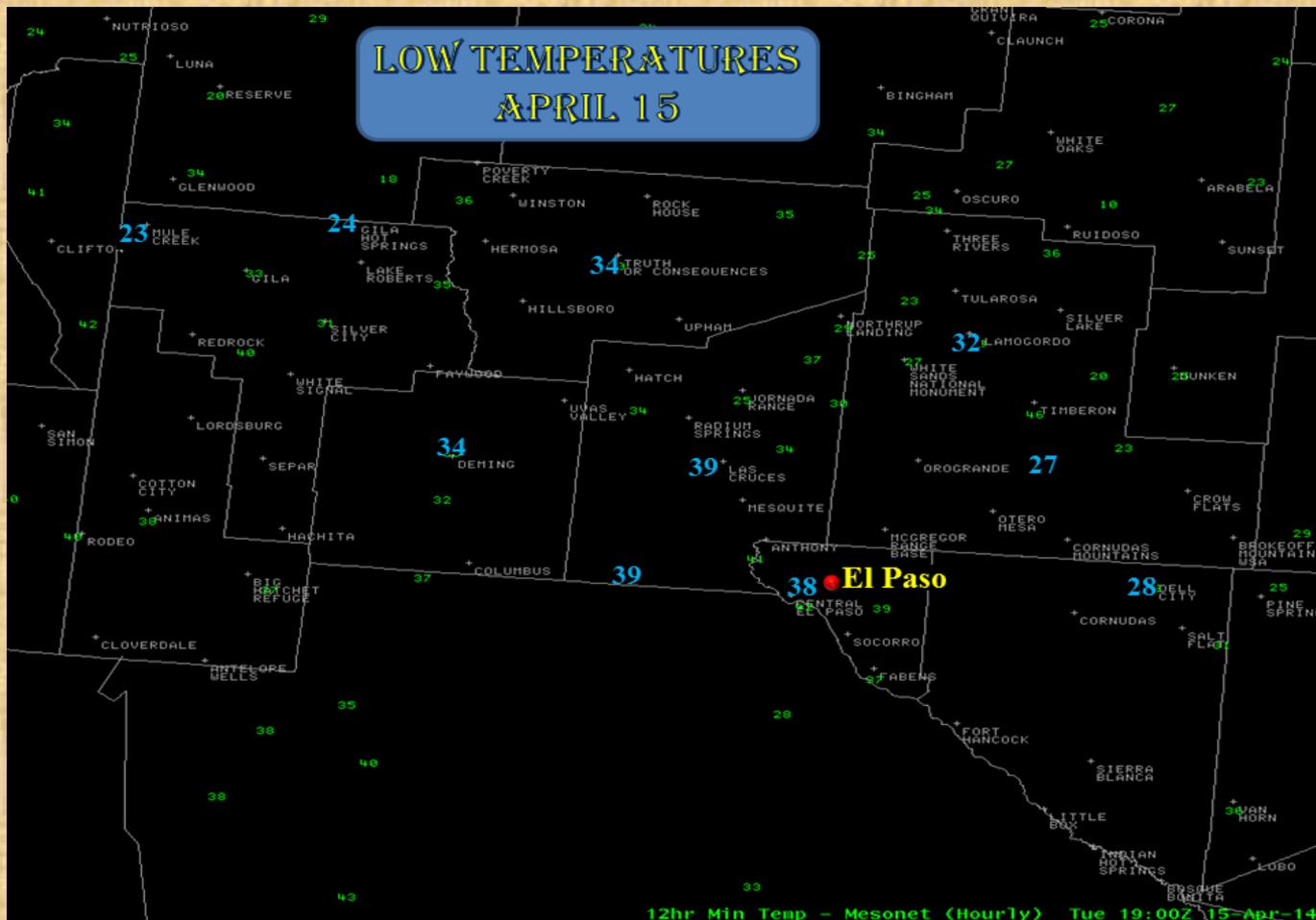
A brief heat waded hit the area on the 9<sup>th</sup>-12<sup>th</sup> as a broad ridge of high pressure aloft, combined with weak lee side troughing over eastern New Mexico, built over the desert southwest. High temperatures approached record levels in many areas with Cloudcroft breaking their daily high on the 9<sup>th</sup> with a temperature of 68F. El Paso airport did not break any records but the high of 88F degrees on the 10<sup>th</sup> came within 4 degrees of tying the record. During this stretch of heat several wildfires developed, including one near Sunspot in the Lincoln National Forest. Several small fires were also reported in the Gila Wilderness Area.



**Bensen Wildfire near Sunspot**

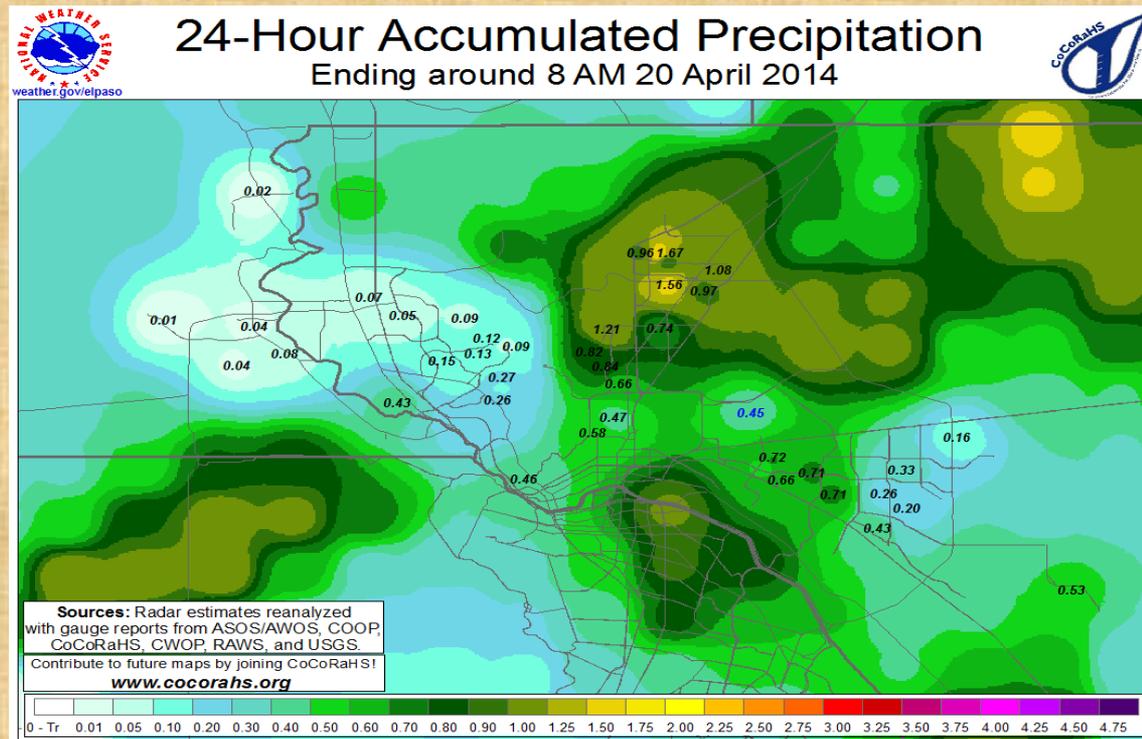
# Significant events-continued

On the 15<sup>th</sup>, following a sharp trough passage and cold front the previous day, near record cold temperatures with areas of freezing occurred. Most mountain locales experienced a late freeze and many lowland locations also briefly froze. El Paso's low of 38F missed a daily record by 4 degrees.

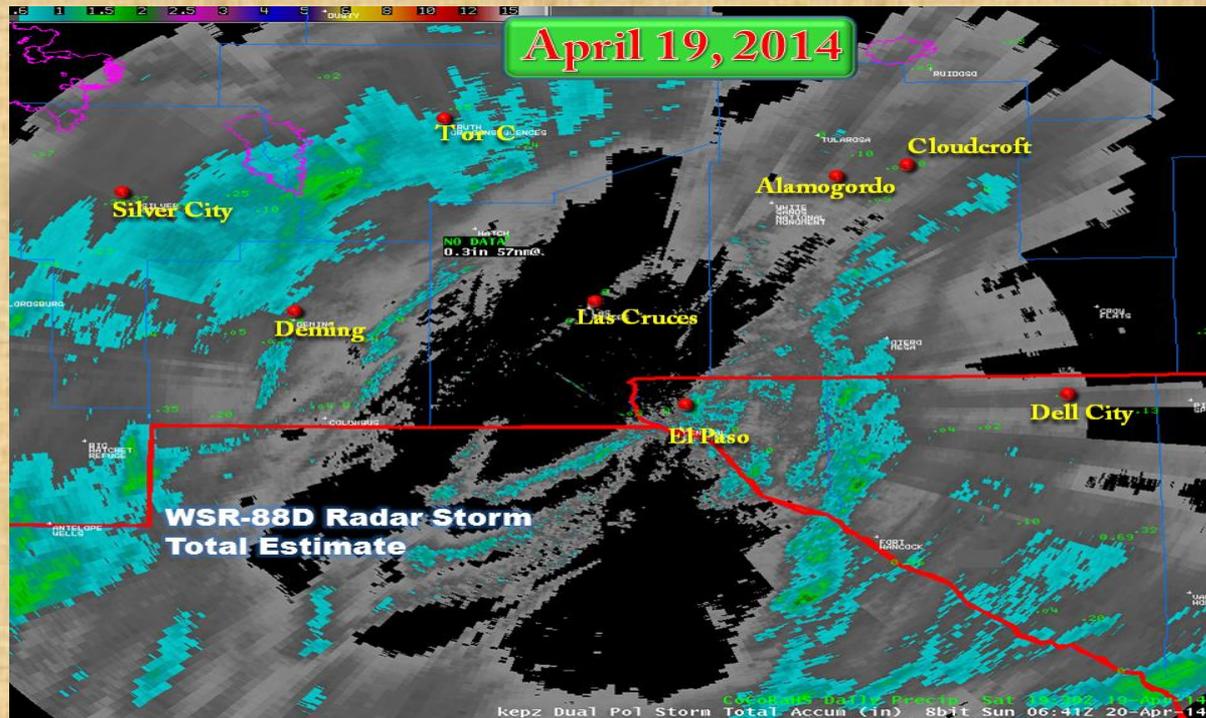
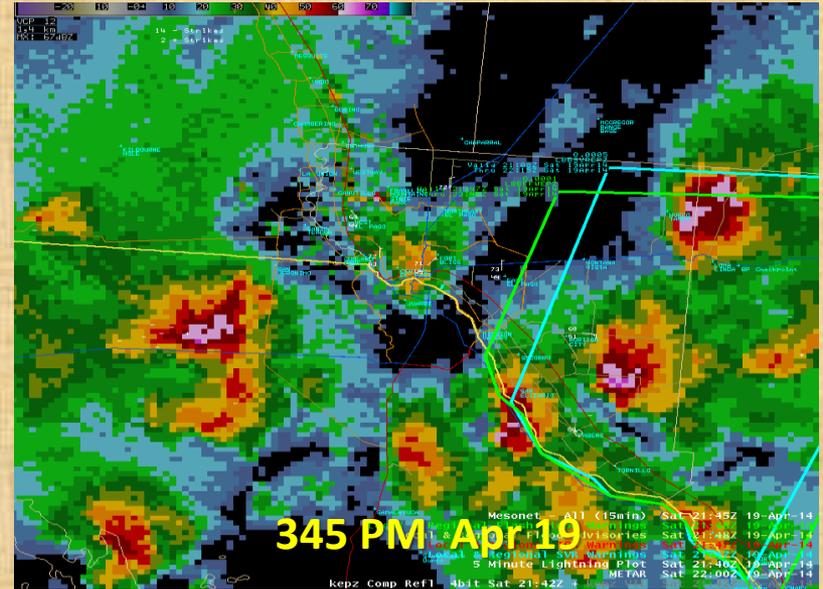
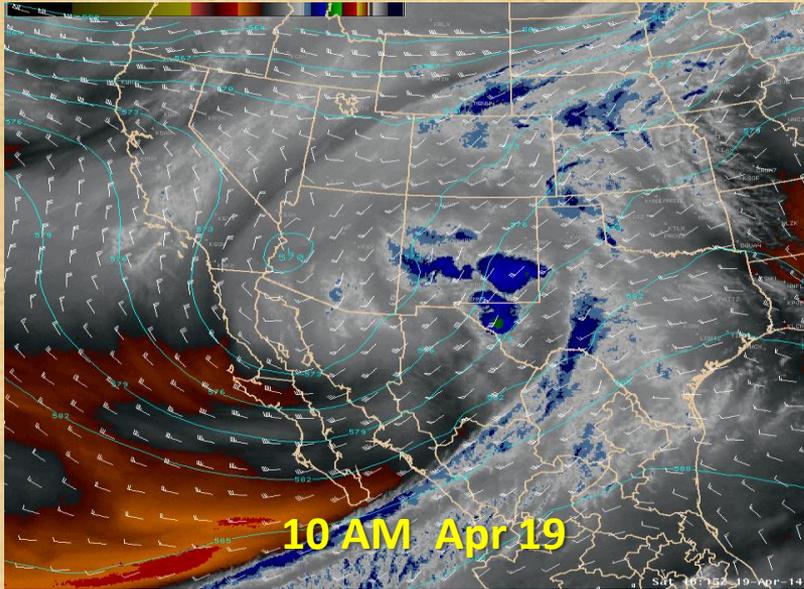


# Significant events-continued

A typical trait of April and Spring around the Borderland is an outbreak of thunderstorms and a few severe storms. This April was no different. On the 19<sup>th</sup>, a deep upper level trough moved over Arizona. Abnormally high moisture crept in with the trough, greatly destabilizing the atmosphere. This system dropped rain and areas of hail over large areas east of the Rio Grande Valley and also over the Black Range and Sierra County. Of great impact was the El Paso metro area east of the Franklin Mountains (See M. Hardiman's full storm report [here](#)). Heavy rain fell over many parts of east El Paso, with over 1.5 inches reported in a few areas.



Here is a look at satellite and radar images of the storm.



Pictures from the storm.



More pictures from the storm.

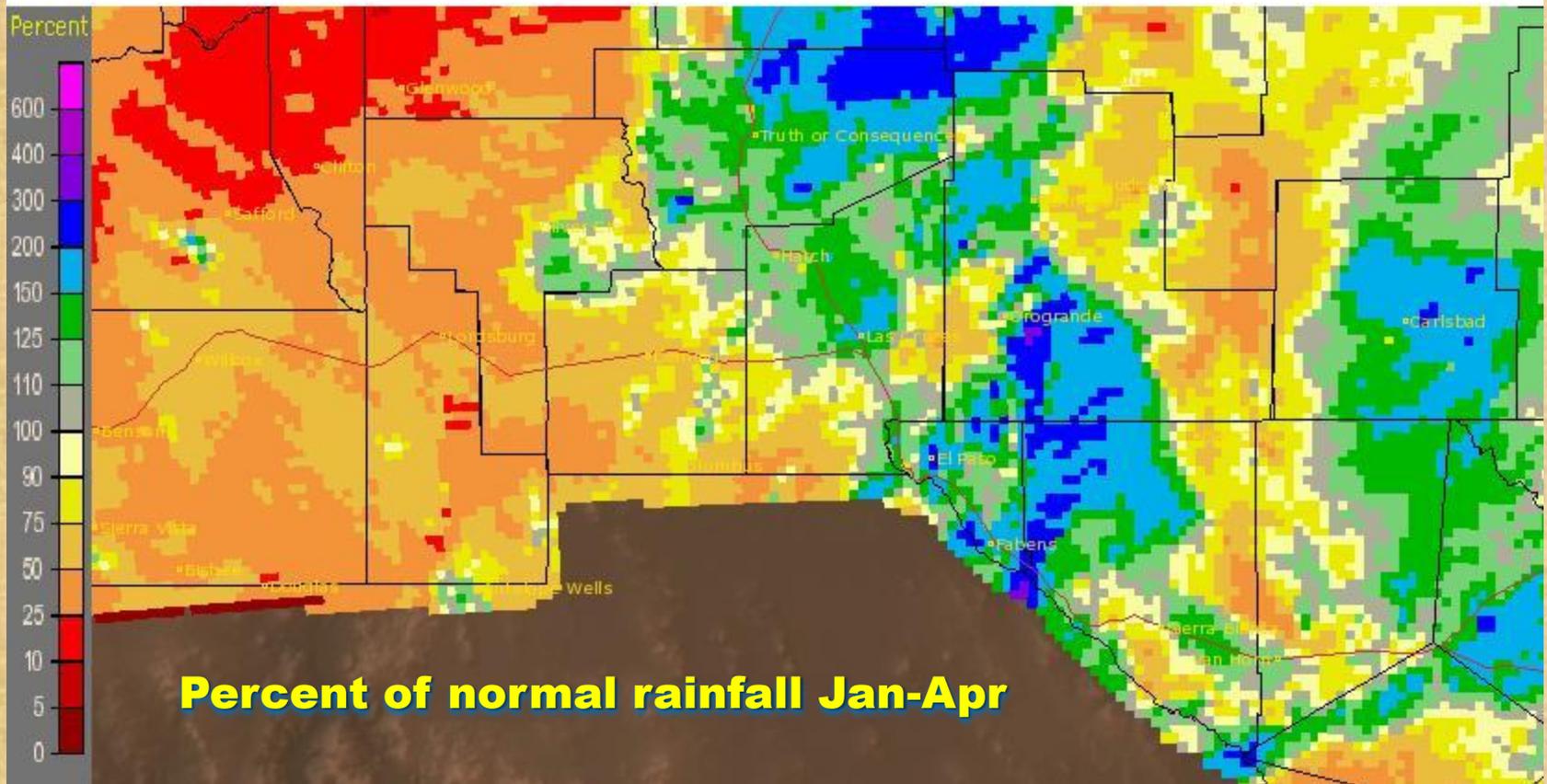


# Special Features

Drought update- As of April 4<sup>th</sup>, an El Niño Watch was in effect. ENSO neutral is expected for the northern Hemisphere for this spring, with about a 50% chance of a minimal El Niño developing during this summer and fall.

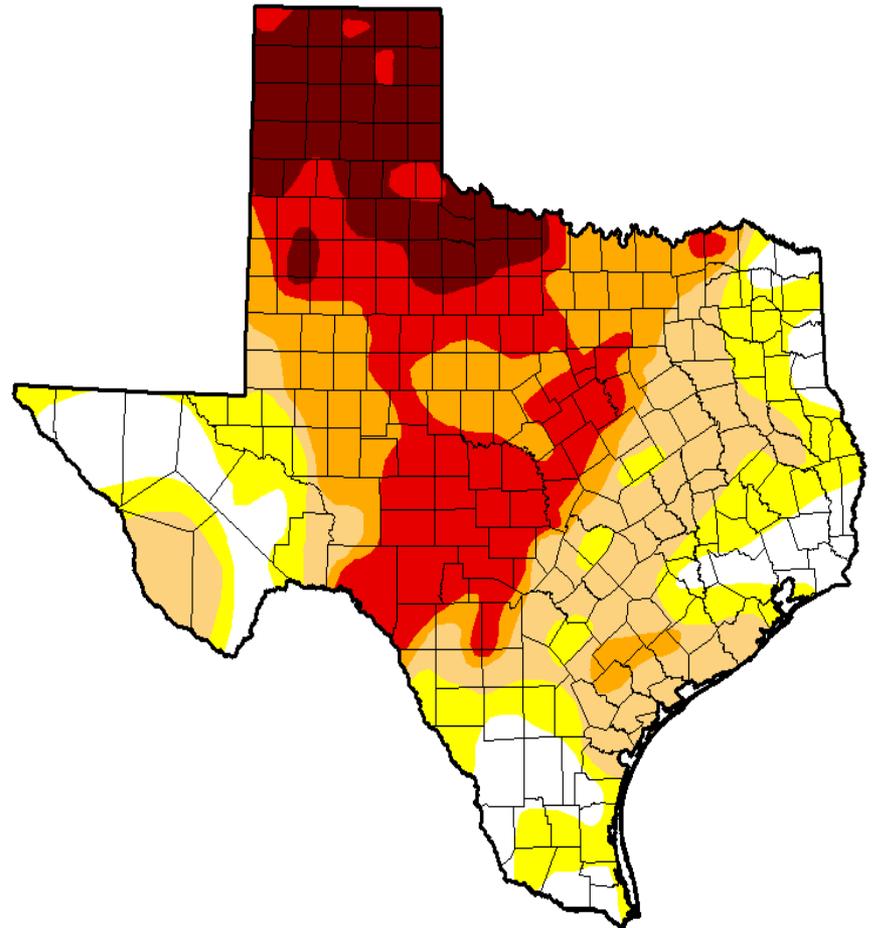
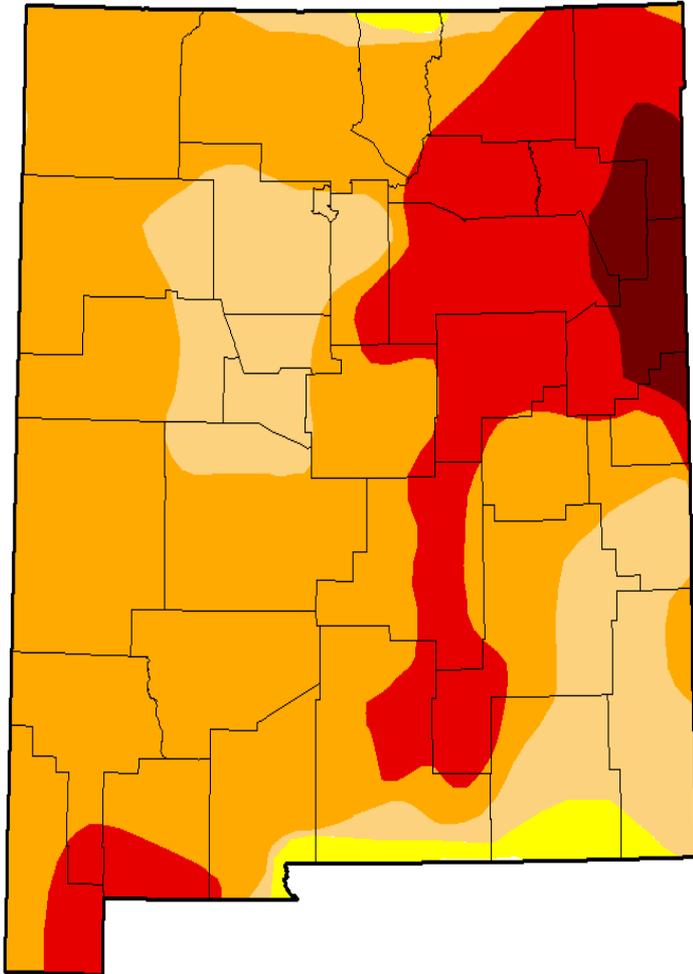
Year-to-date percent of normal rainfall summary:

El Paso, TX (EP2): Current 90-Day Percent of Normal Precipitation  
Valid at 4/25/2014 1200 UTC- Created 4/25/14 19:55 UTC

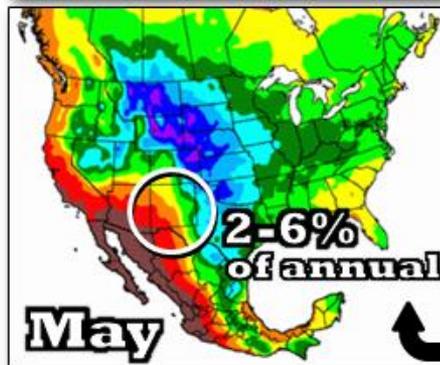
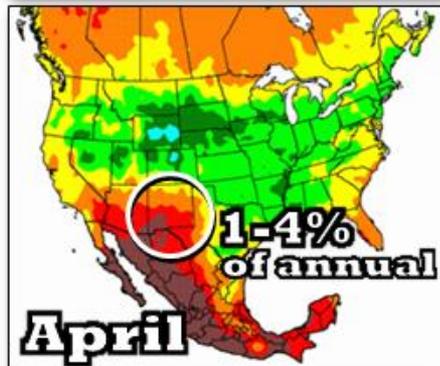
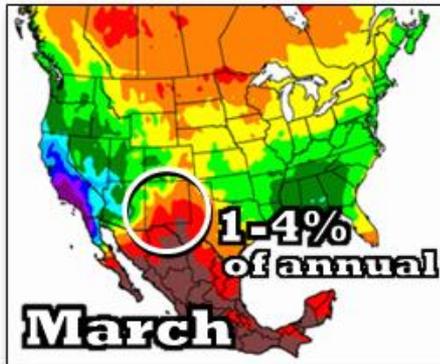


# Current drought conditions as of April 22<sup>nd</sup>

- Abnormally Dry – D0
- Moderate Drought – D1
- Severe Drought – D2
- Extreme Drought – D3
- Exceptional – D4



# Forecast drought conditions through May 2014

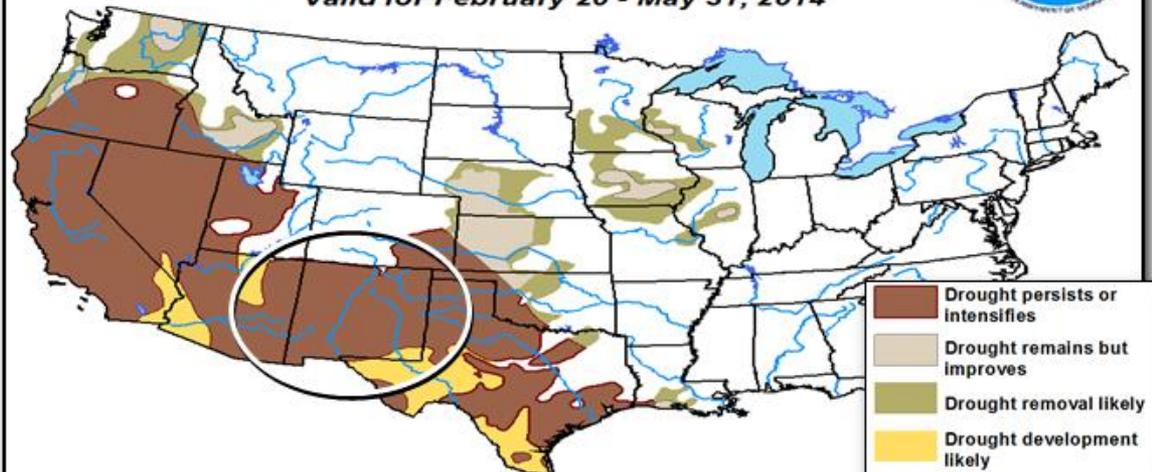


## Dry Times Ahead

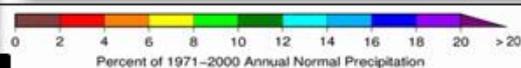


We are heading toward spring. Historically the driest time of the year across the southwest. The charts to the left show the percentage of the total annual rainfall that falls each month (only about 10% for the 3-month period). SW drought conditions may worsen.

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

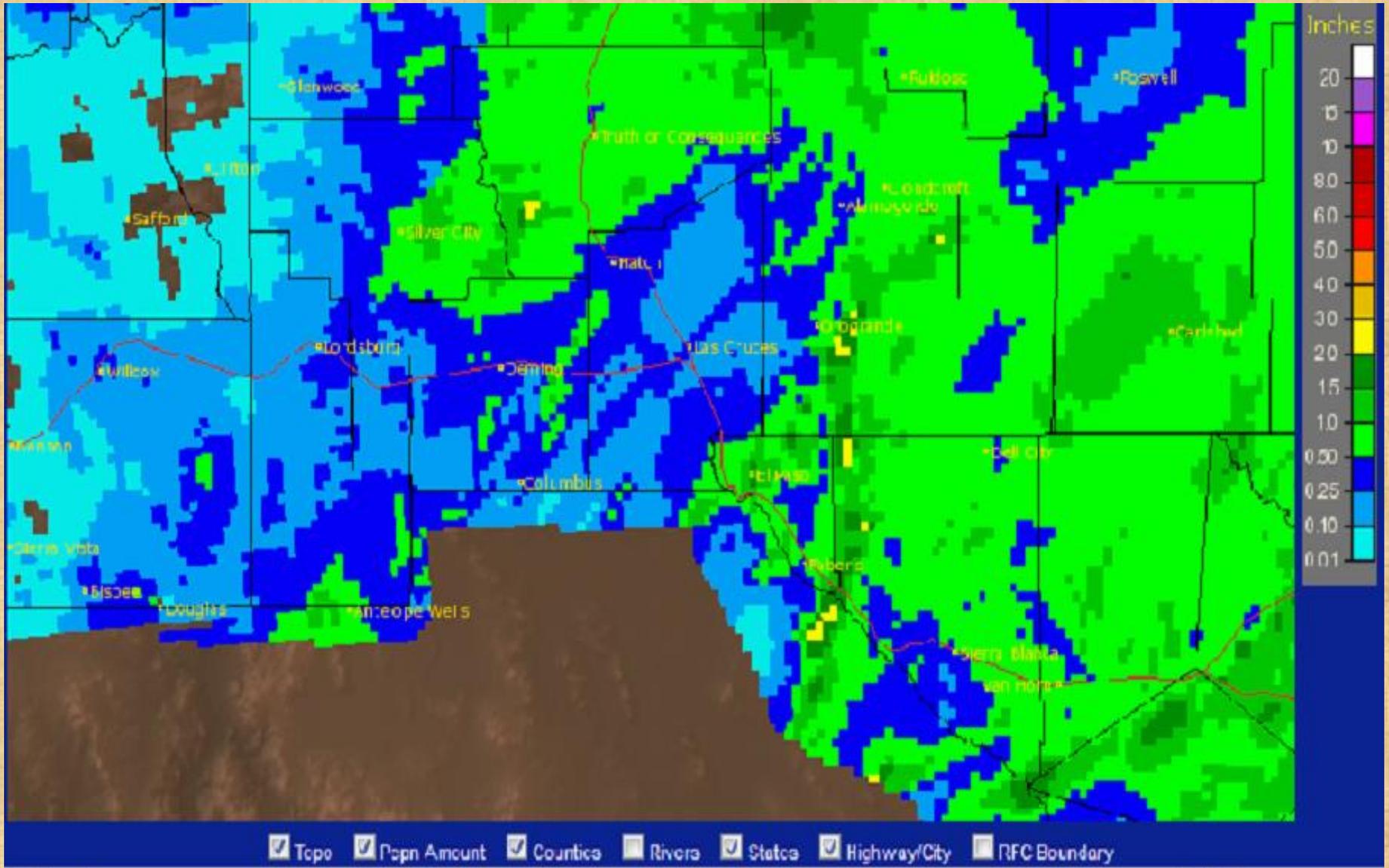


Author: Adam Allgood, Climate Prediction Center, NOAA  
[http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.html)

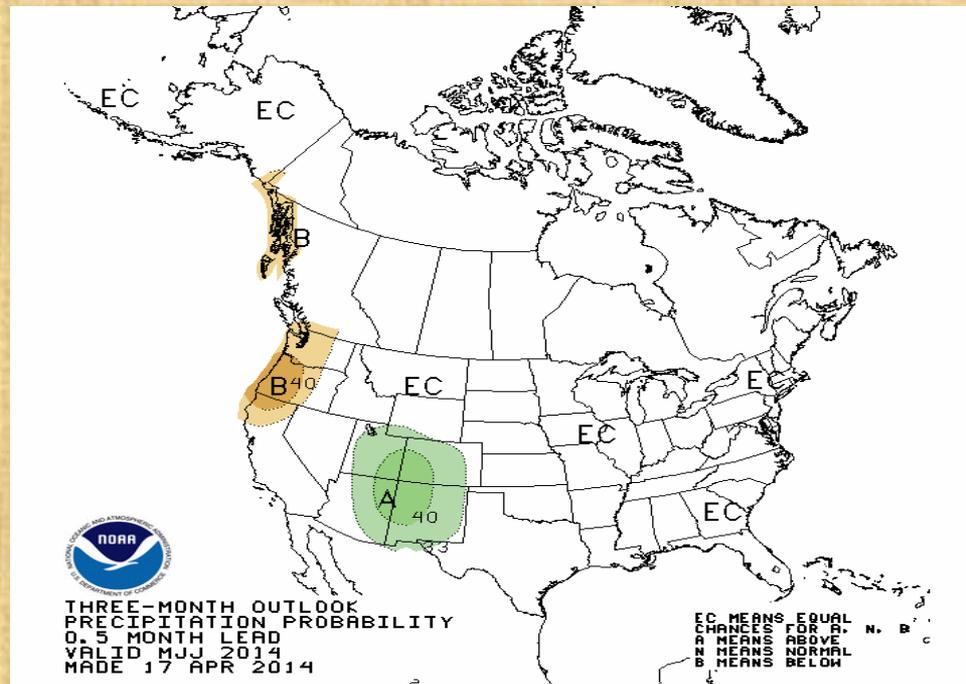


# Temperature and precipitation

Here is the radar estimated precipitation for April

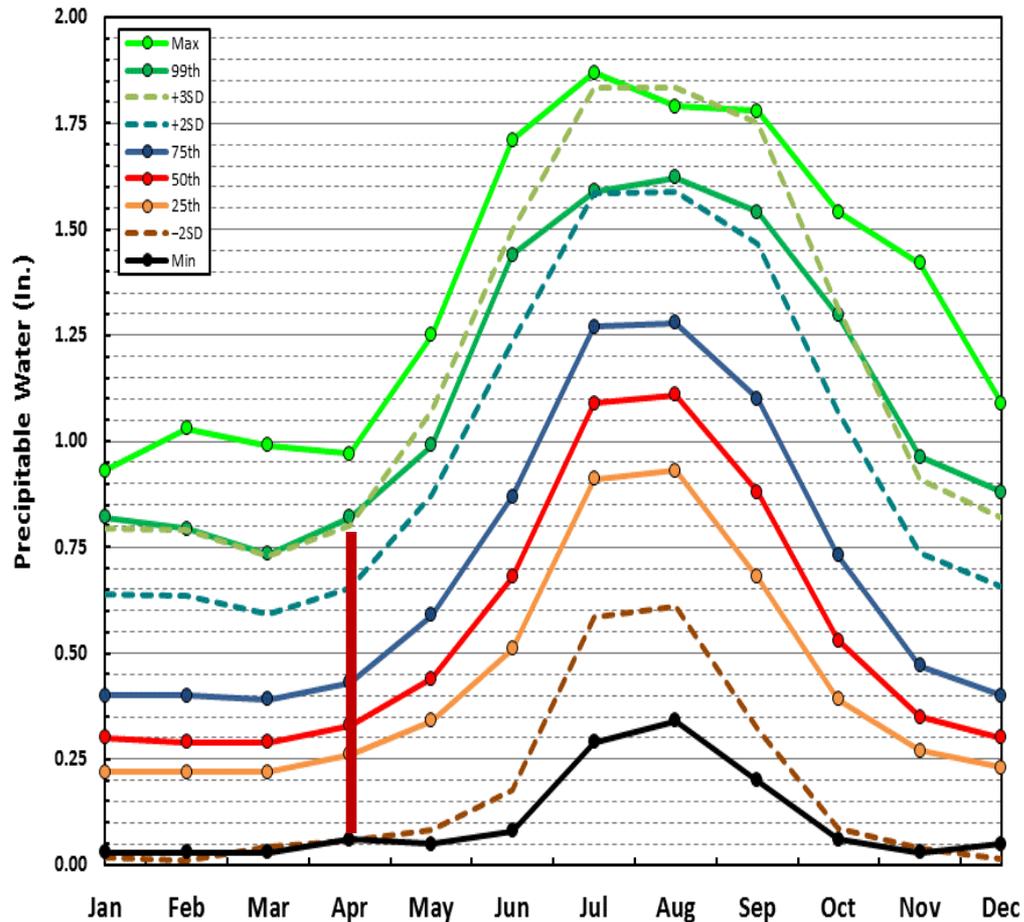


# May Through July Precipitation Outlook



If this verifies... this would certainly be good news for our current drought situation.

1948–2013 EPZ/ELP Surface–300-mb Precipitable Water



**APRIL 2014  
A MONTH  
OF ATMOSPHERIC  
WATER EXTREMES  
AT EL PASO TEXAS**

$$W = \frac{1}{g} \int_{p_1}^{p_2} x dp,$$

Total precipitable water  $W$  is the condensed value of the integrated sum of all the water vapor contained in a column of unit cross section extending from the earth's surface ( $p_1 \sim 888$  mb at el Paso) to a pressure level  $p_2$  (300 mb for all practical purposes).  $X$  is the mixing ratio of the water vapor and  $g$  is the acceleration of gravity.

Our atmosphere went from very dry to very wet in 9 days.

**KEPZ RADIOSONDE MEASURED  
.09 INCHES  
April 10 2014  
Percentile= 3**

**KEPZ RADIOSONDE MEASURED  
.77 INCHES  
April 19 2014  
Percentile= 93**

# APRIL RECAP

Mo. Ave.  
66.0°

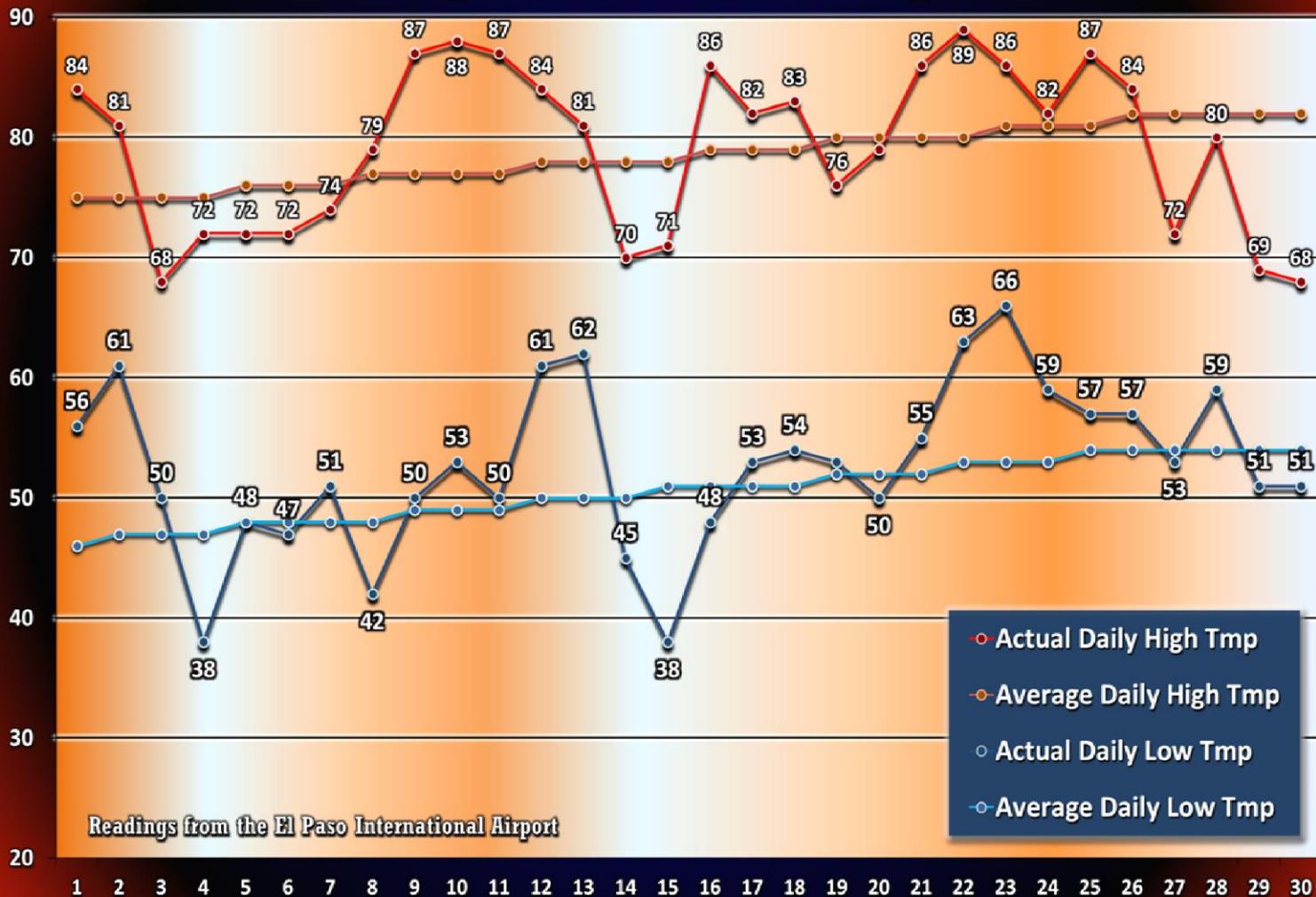
Ave. Hi.  
79.3°

Ave. Lo.  
52.7°

Departure  
from  
Normal  
+1.4°

Historical  
Rank  
28<sup>th</sup>  
hottest  
(of 127)

## El Paso - April 2014 Temperatures



Mo. Max. 89°

Mo. Min. 38°



NWS EL PASO AREA

# Severe Weather Reports

<b>Date/Time</b>	<b>Location</b>	<b>Event</b>
April 2 1:50 pm	San Augustin Pass	80 mph
April 2 1:58 pm	11 NE Mescalero	61 mph
April 2 4:15 pm	Northrup Strip	60 mph
April 2 9:00 pm	10 NNE El Paso	64 mph
April 19	3 NNE El Paso	1.56 inches of rain
April 19	5 N El Paso	1.67 inches of rain
April 19 3:03 pm	18 SW Deming	0.88 inch hail
April 19 2:45 pm	2 SSE Tornillo	0.75 inch hail
April 19 4:18 pm	Hueco Tanks	0.75 inch hail
April 19	Tammen Ranch-Hudspeth Co.	2.80 inches of rain
April 19	20 N Ft. Hancock-Hudspeth Co.	2.00 inches of rain
April 19	2 NW El Paso	1.21 inches of rain
April 19 2:40 pm	6 SE Tornillo	1.00 inch hail
April 19 4:15 pm	3 NNW El Paso	0.75 inch hail
April 19	10 NNE El Paso	1.56 inches of rain

# Severe Weather Reports-continued

<b>Date/Time</b>	<b>Location</b>	<b>Event</b>
April 19 3:53 pm	2 WNW Fort Bliss	0.7 inch hail
April 19 4:16 pm	4 NW El Paso	0.7 inch hail
April 19 2:45 pm	6 ESE Tornillo	1.75 inch hail
April 19	Hillsboro	0.80 inches of rain
April 19	6 S Caballo	0.92 inches of rain
April 26 615 pm	San Augtine Pass	90 mph
April 26 1130 pm	NE El Paso	76 mph
April 26 703 am	1 mi W of WSMR Main Post	71 mph
April 26 332 pm	8 NNW of Rodeo Hidalgo County	68 mph
April 26 350 pm	16 NNW Northrup Strip	65 mph
April 26 629 pm	Biggs Army Air Field	63 mph
April 26 350 pm	16 NNW Northrup Strip	65 mph
April 26 735 pm	Sunspot New Mexico	63 mph
April 26 500 pm	3 E Deming	61 mph
April 26 635 pm	Las Cruces Airport	53 mph

**Blowing Dust**  
**04/26/2014**

**Sunland Park Racetrack  
and Casino**

**El Paso electric Power Plant  
West el Paso**

