

JULY 2014

Weather Digest

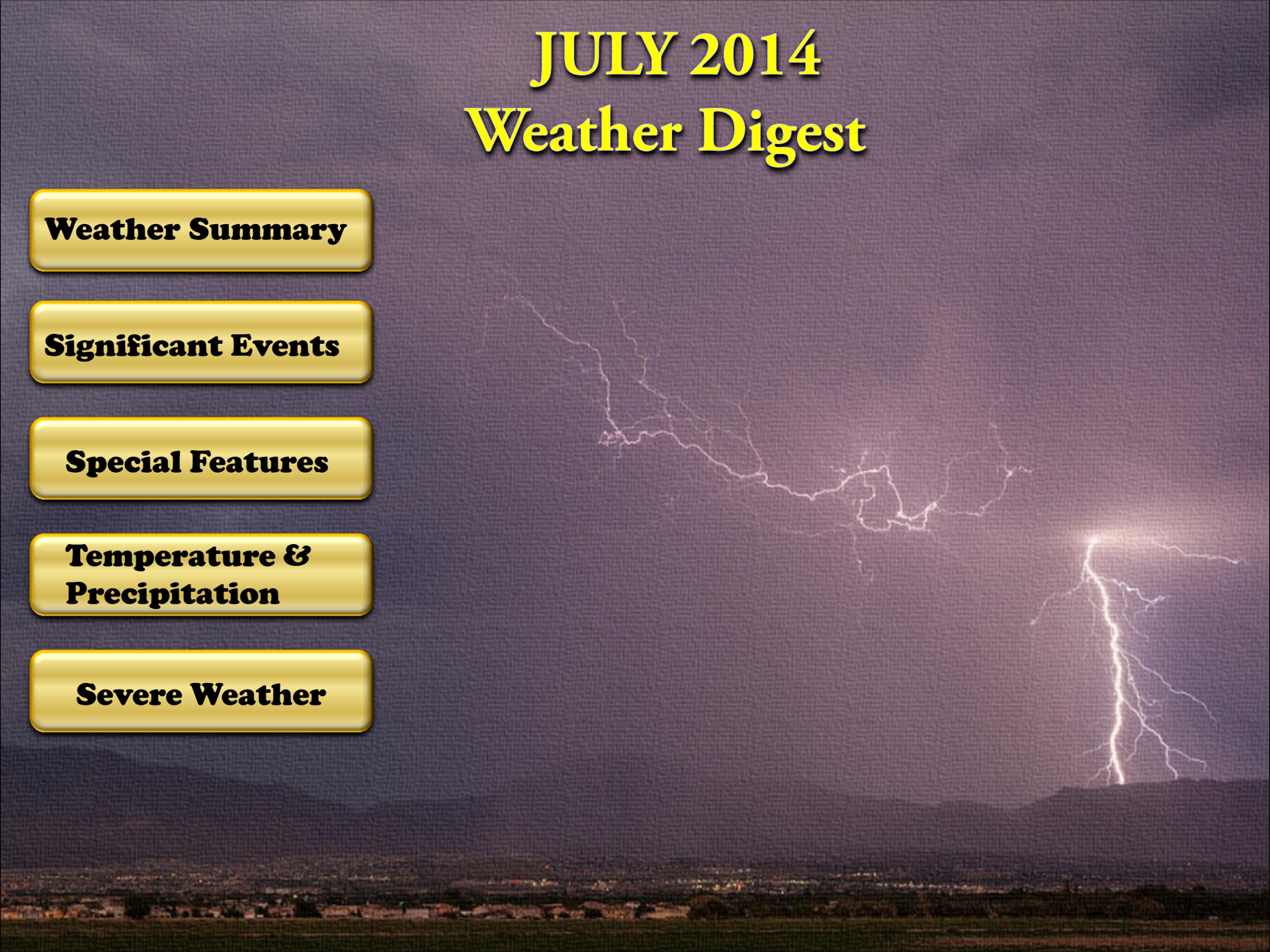
Weather Summary

Significant Events

Special Features

**Temperature &
Precipitation**

Severe Weather



JULY 2014 Weather Summary

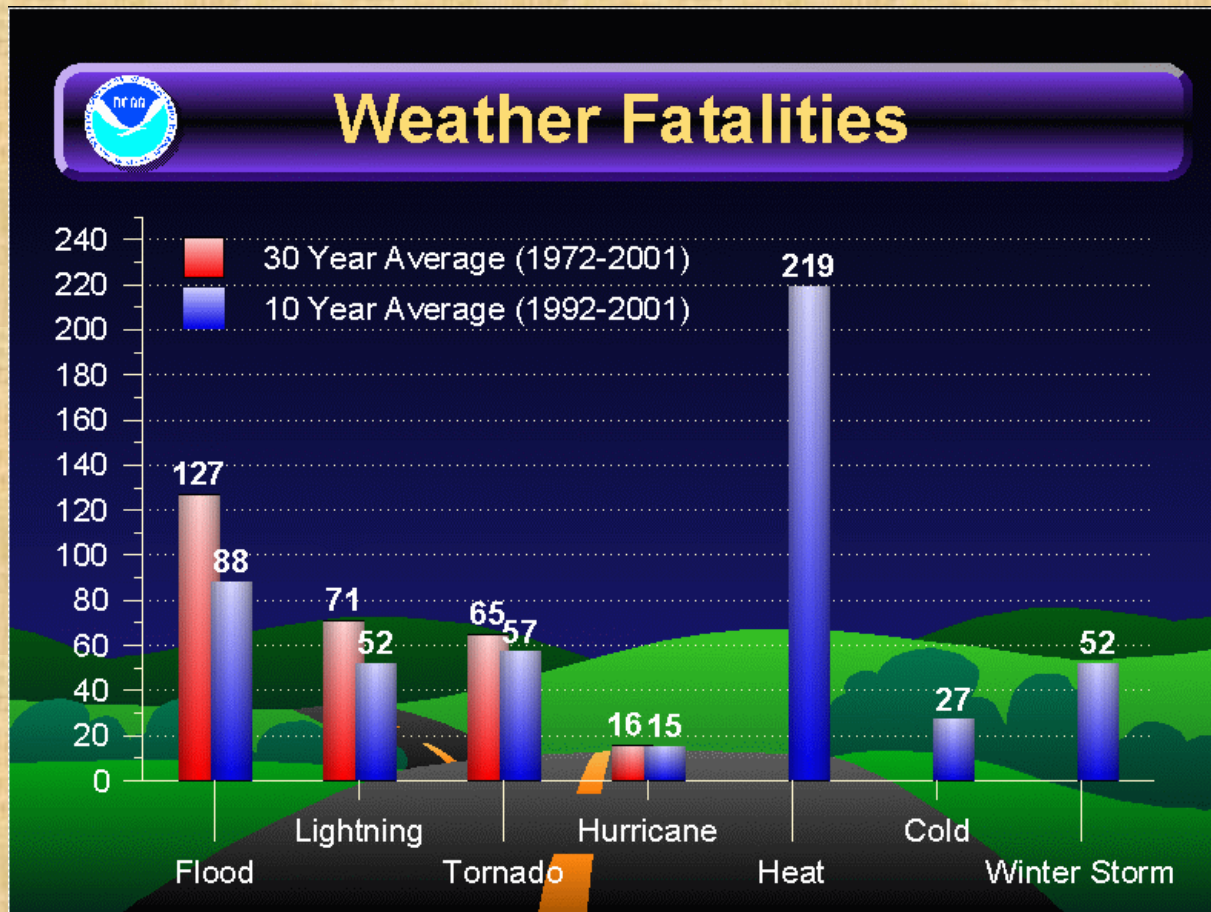
July 2014 nicely exemplified the problem of our two killer weather hazards across the nation (and at home here in the Borderland): Heat and Flash Floods. July started with near normal temperatures but after the first week of July humidity increased significantly and the temperatures did not drop like they usually do. Though temperatures were not record setting, humidity was high with moisture moving in at low levels. The combination of high temperatures and humidity made the temperatures feel much warmer than indicated. The residents of west Texas and southern New Mexico are used to somewhat cooler temperatures when the humidity rises-instead we were treated to conditions more closely associated with east Texas.

Storms during this period gravitated more to the severe, with a significant number of high winds reported, with several instances of winds approaching or exceeding 60 mph. Of course with the winds came the blowing dust , or haboobs as they are known as. Travel along roads was impacted by these haboobs.

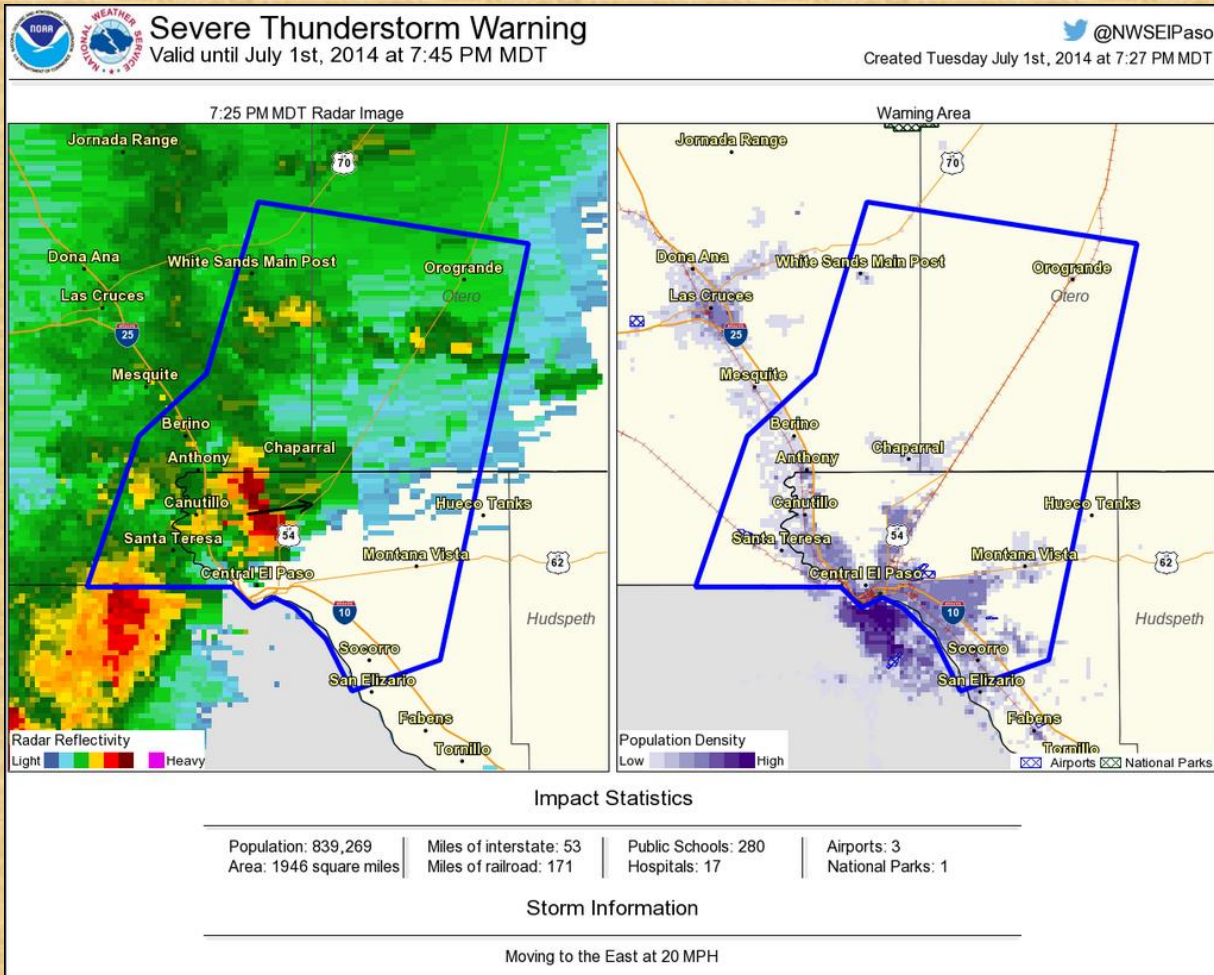
Towards the middle of the month the monsoon pattern finally developed and much of the area began receiving significant rain. As is usually the case, the severe storms diminished and heavy rainfall and flooding became the major impact. Helping jump start this period of rain was a backdoor cool front that moved in from the east. This brought even more low level moisture and instability and fueled widespread thunderstorms. The Silver, Signal and Whitewater/Baldy burn scars received their fair share of rain but as of the end of the month no significant problems were reported with flooding or mudslides.

Looking at temperatures around the area, average temperatures for July ran about 1 to 2 degrees above normal. Due to the humidity, night time low temperatures remained quite warm and, no doubt, led to air conditioners working overtime. Rainfall, as usual, was heaviest across the Sacramento and Black Range mountains, with reports of 5 to 10 inches common. However in terms of above normal monthly rain, some of the desert areas including the Tularosa Basin, Sierra Lakes Region and central Dona Ana County, were the leaders with 300% to 500% of normal rainfall recorded. Dry areas in terms of percent of normal included most of the main core of El Paso, southern Luna County, and most areas west of the Continental Divide.

Heat and flooding are the two big weather killers. You can find both in the Borderland during the summer!



July started off with a BANG!



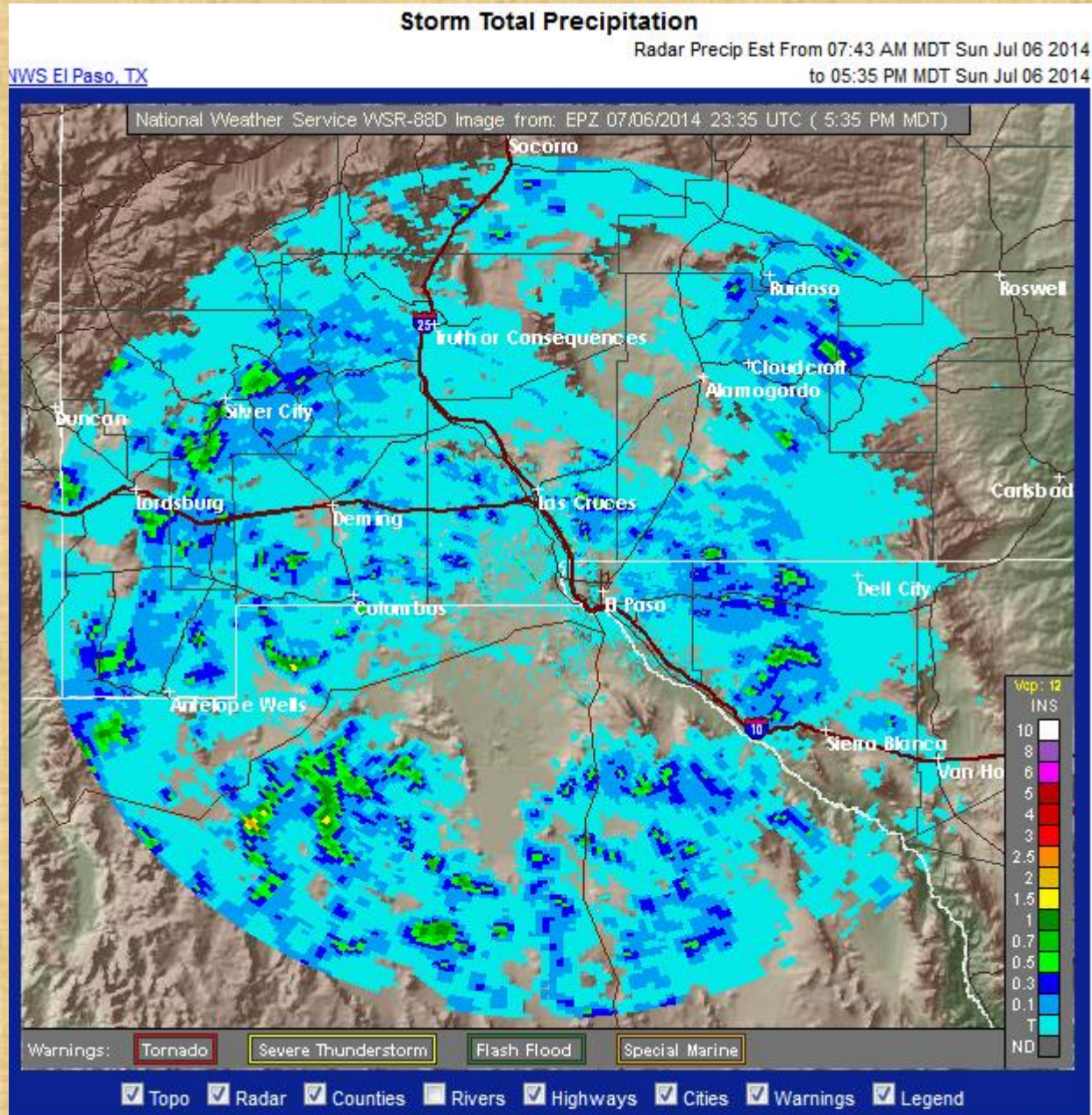
Haboob moving over downtown El Paso



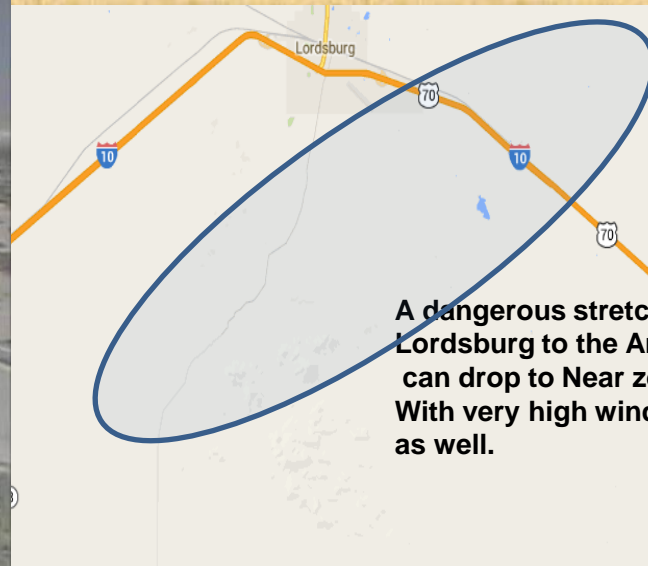
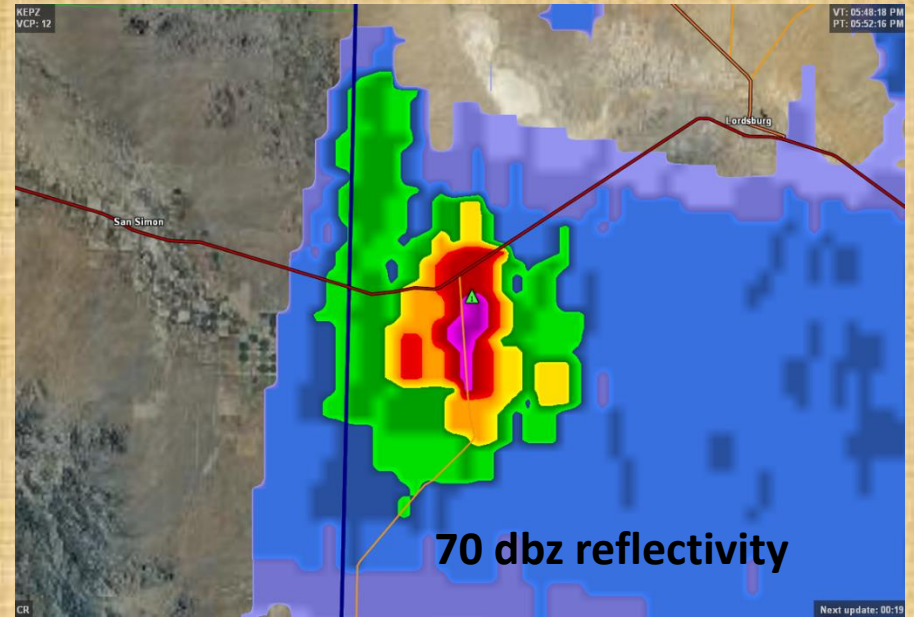
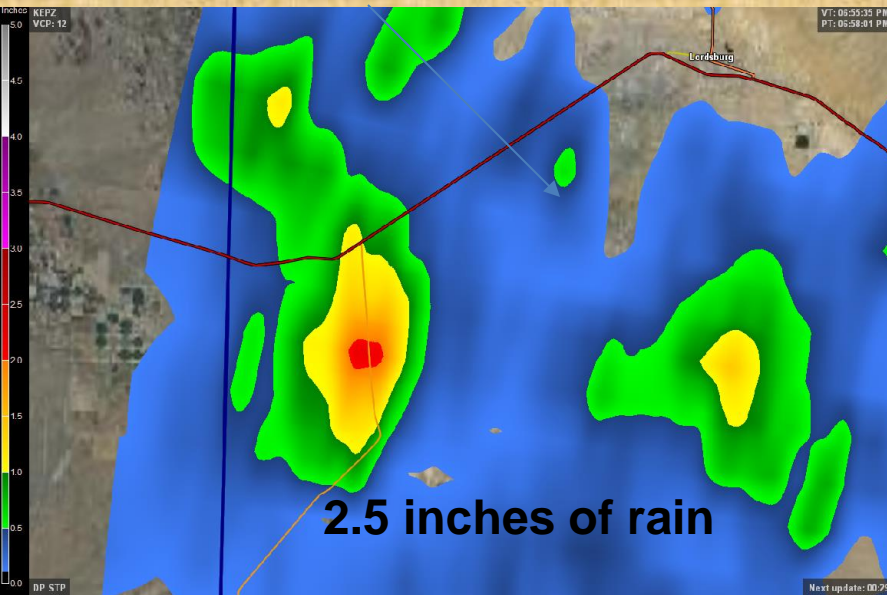
July 17

Taken from Ranger Peak looking SW

July 6 total radar estimated precipitation...the doughnut hole!

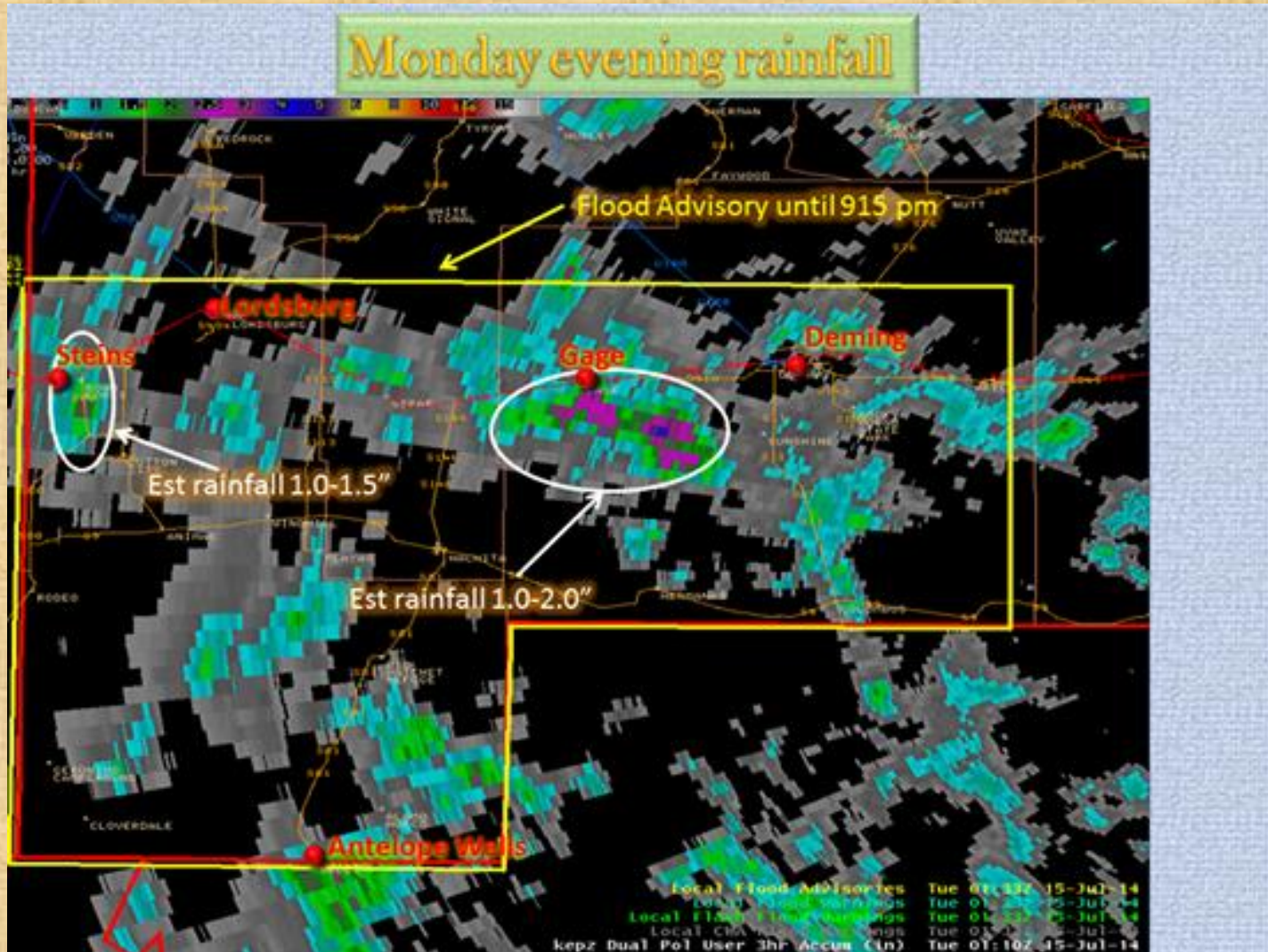


Steins New Mexico July 14 > 2" rain and winds over 60 mph



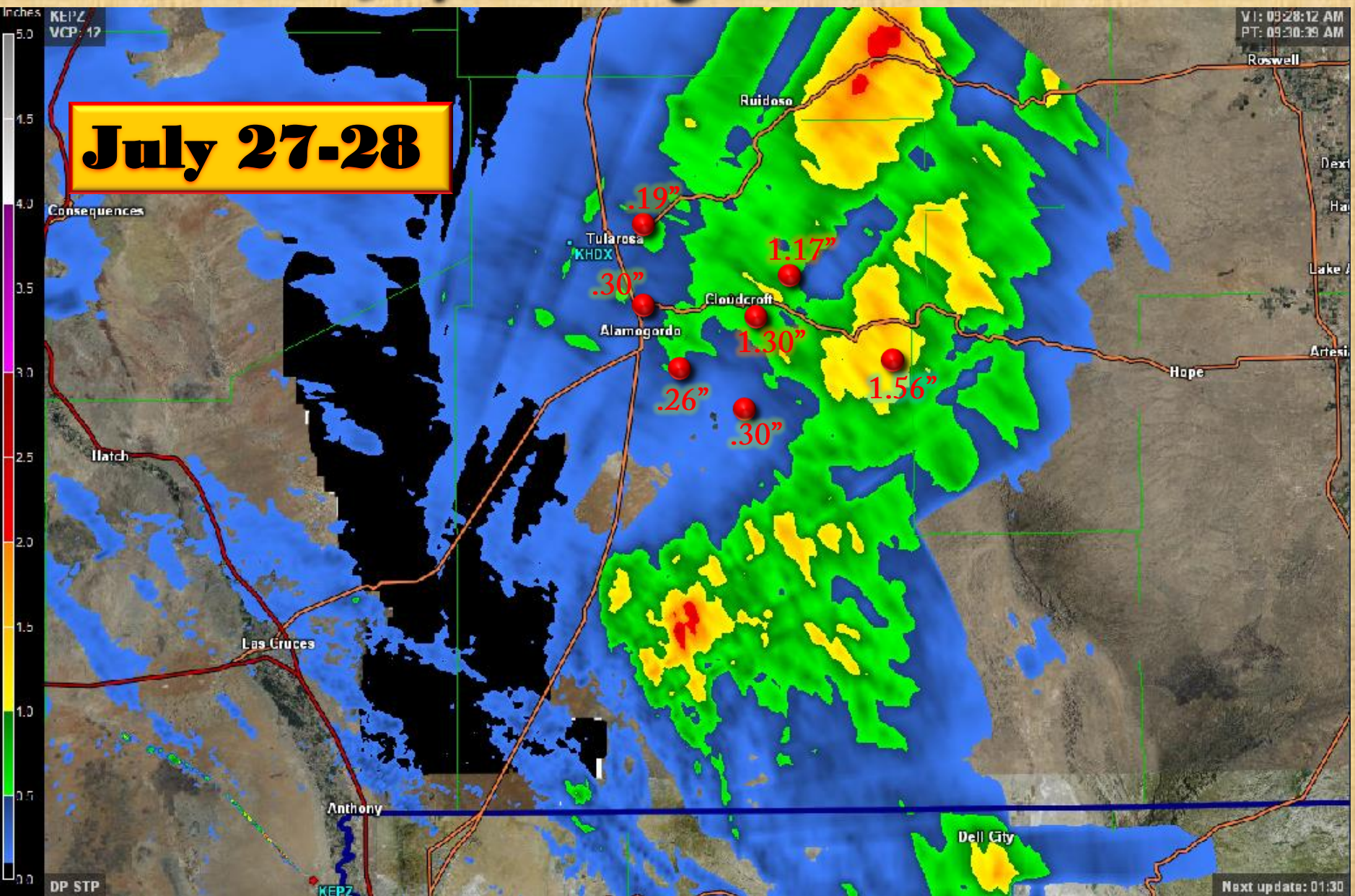
A dangerous stretch of highway (I 10) west of Lordsburg to the Ariz. State Line. Visibility rapidly can drop to Near zero in dust or heavy rain With very high winds. Hail can coat the roadway as well.

Significant Events (continued)




Flood Advisories (like this one on July 15) and Flash Flood Warnings are more common than Severe Thunderstorm Warnings in July.

July 2014 Significant Events



Typical spotty nature of heavy convective precipitation in the monsoon

July 14 between Steins and Lordsburg



Dust and rain reducing visibility!

An aerial photograph of a multi-lane highway stretching into the distance. The road surface is dark, and the surrounding landscape is flat and arid. The sky is overcast and grey, with a thick layer of dust or rain obscuring the horizon. A few vehicles are visible on the road, and a single orange traffic light is visible on the right shoulder.

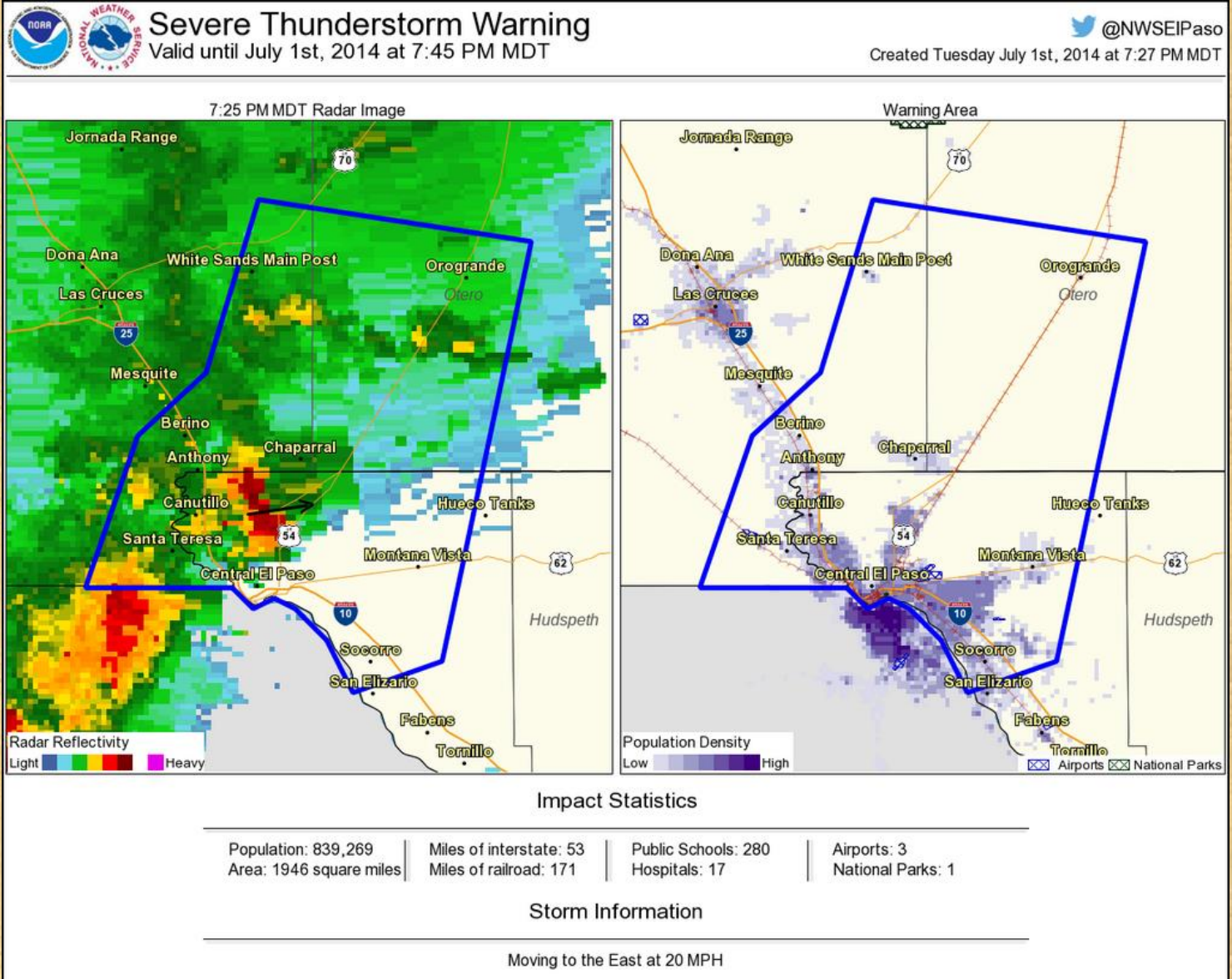
A few minutes later
and lights out!

Steins Web Cam!



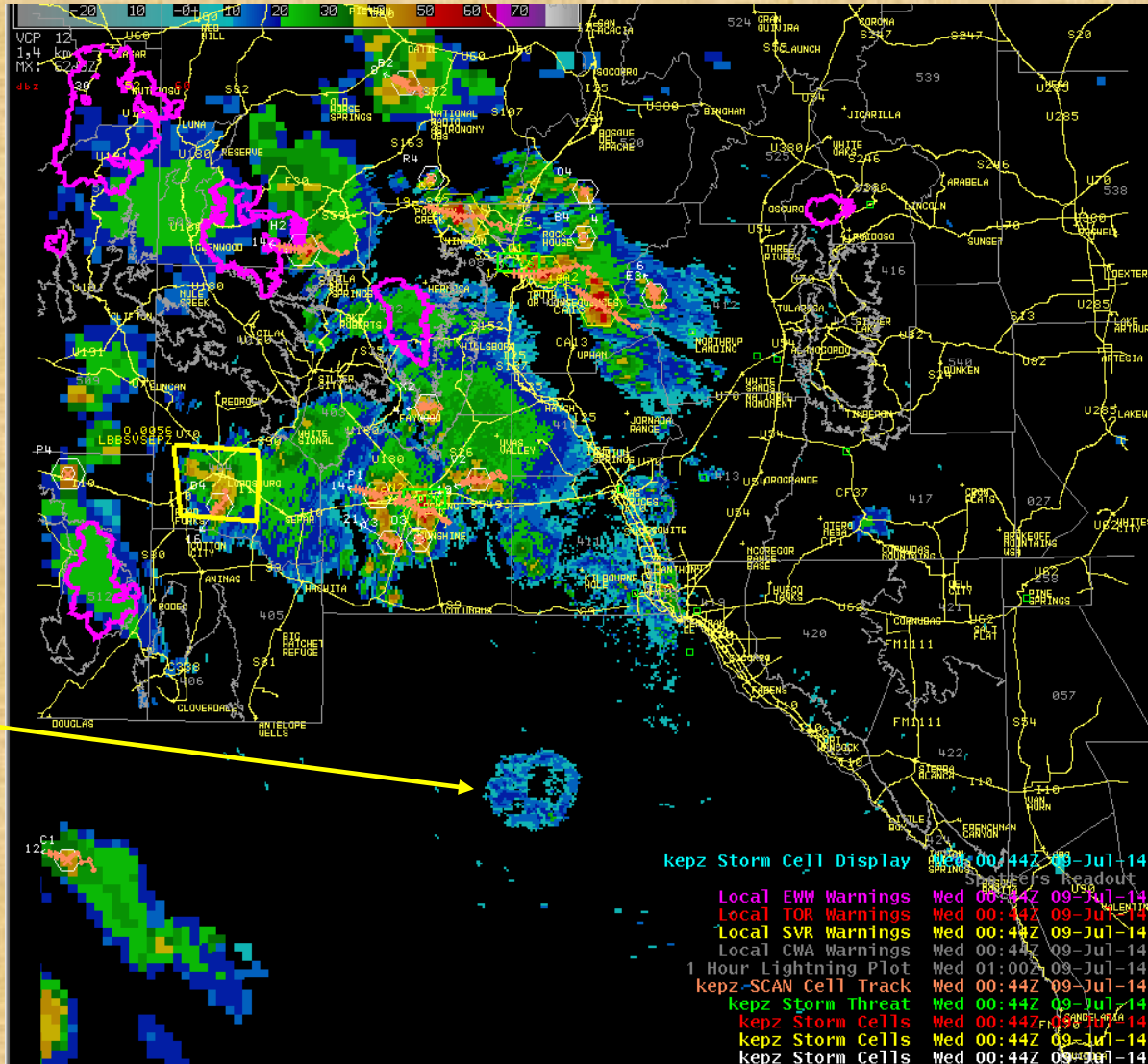
Special Features

July 1
Starts out
With
A bang



Storms and Bats coexist on the Radar July 14.

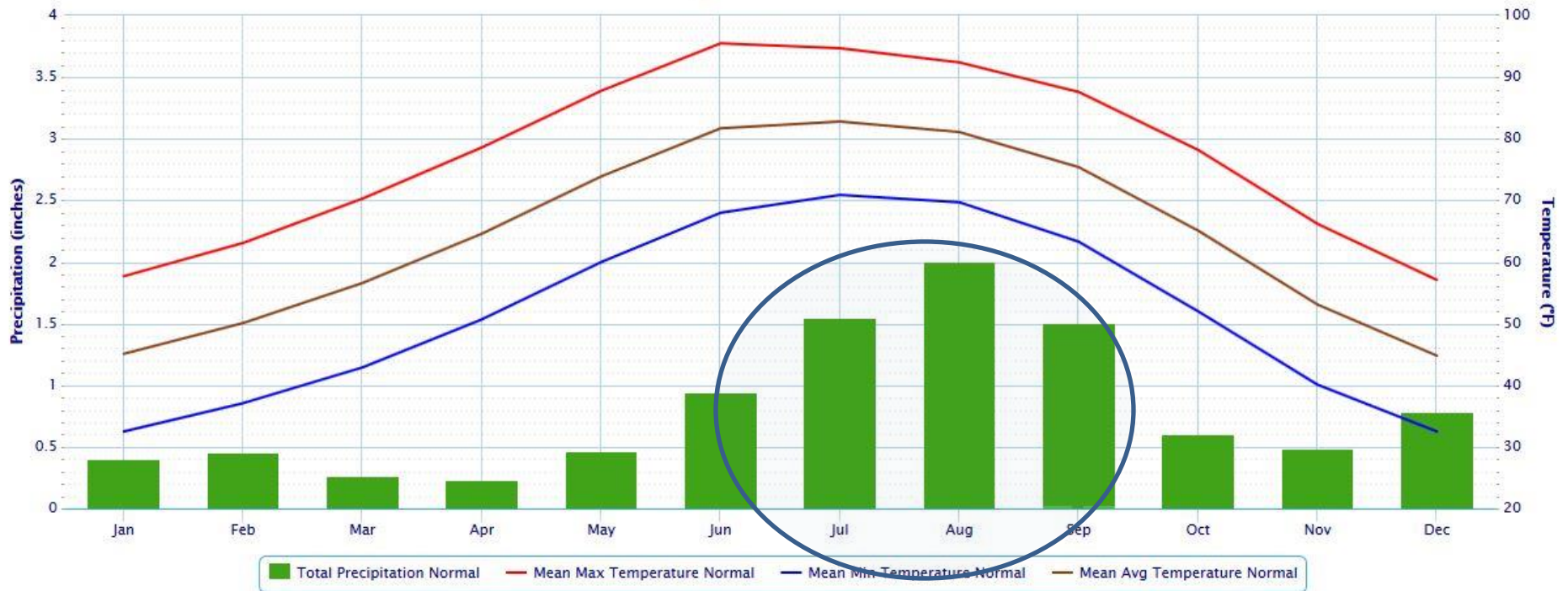
Bats



Our Monsoon season...vital as it produces about 50% of our annual precipitation.

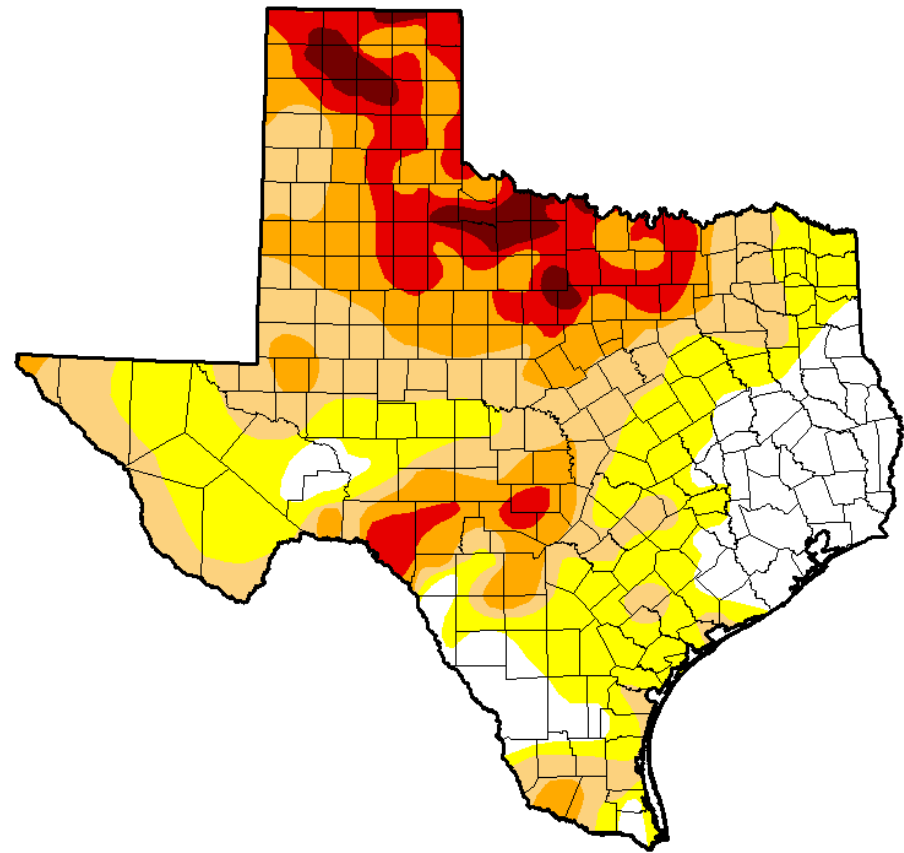
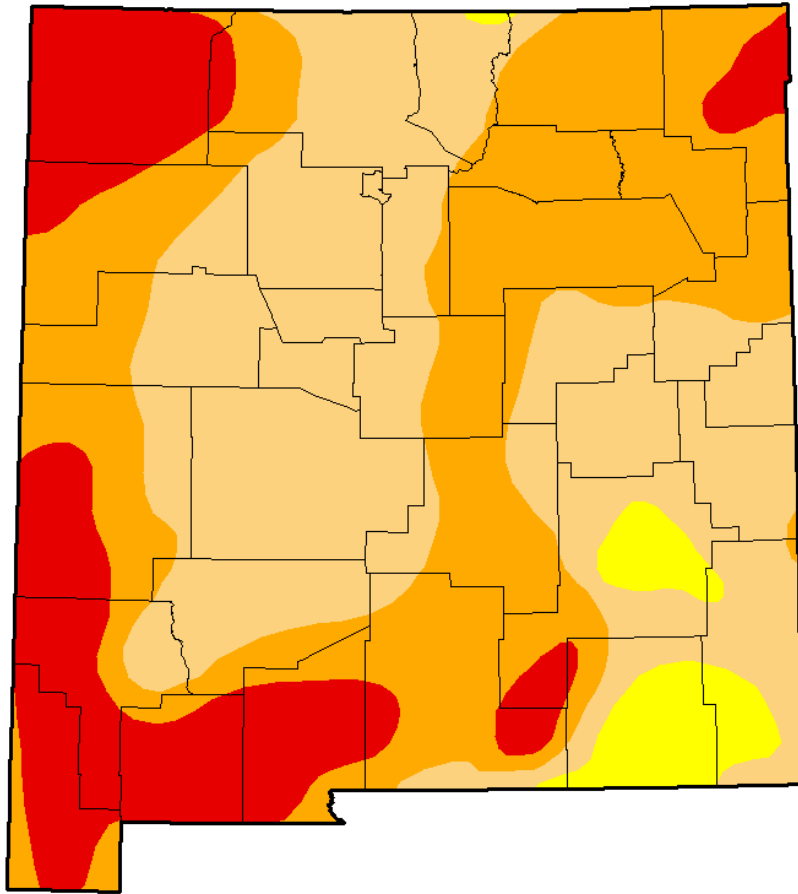
Monthly Climate Normals (1981-2010) - EL PASO INTL AP, TX

Click and drag to zoom to a shorter time interval



Current drought conditions as of July 29

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



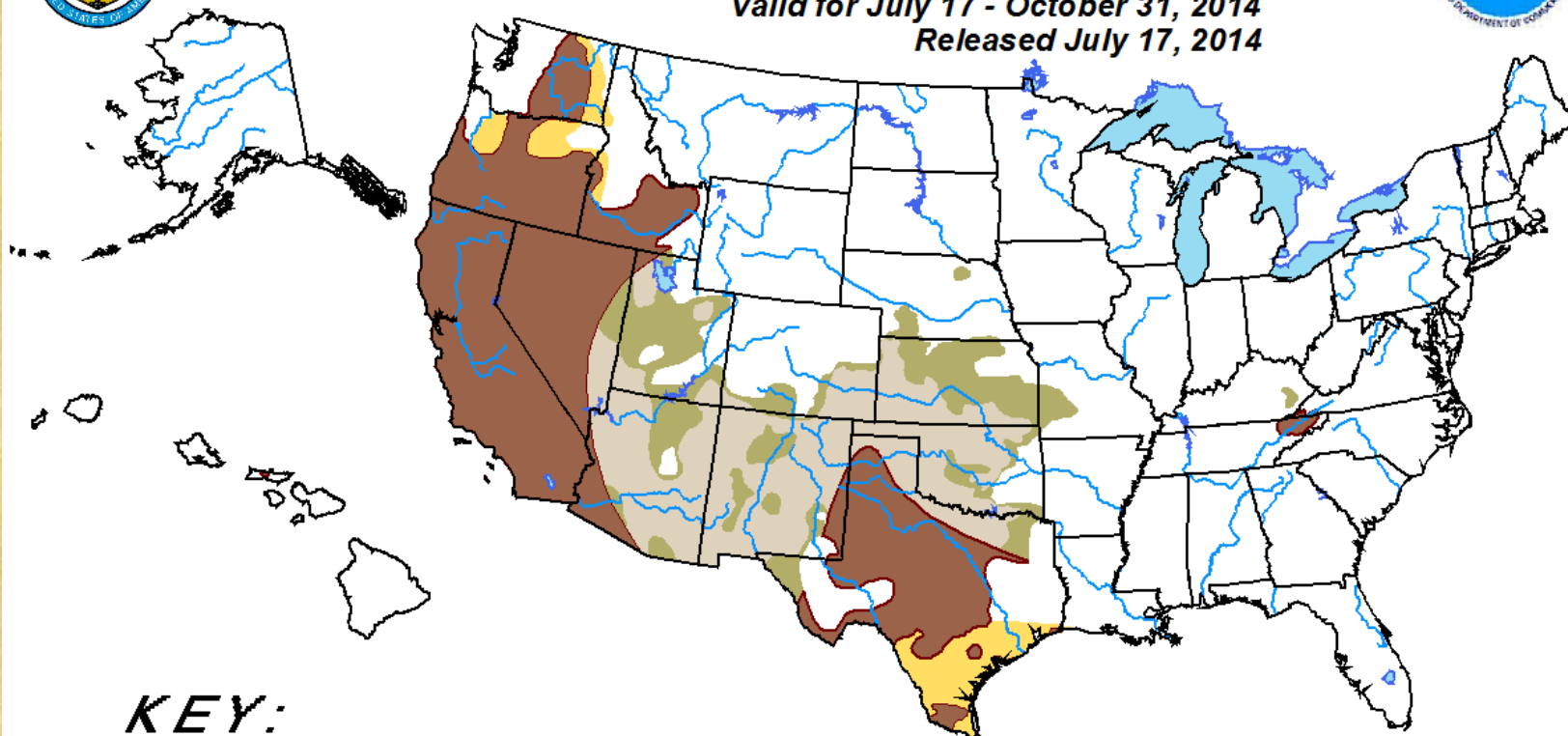


U.S. Seasonal Drought Outlook





Drought Tendency During the Valid Period

Valid for July 17 - October 31, 2014

Released July 17, 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

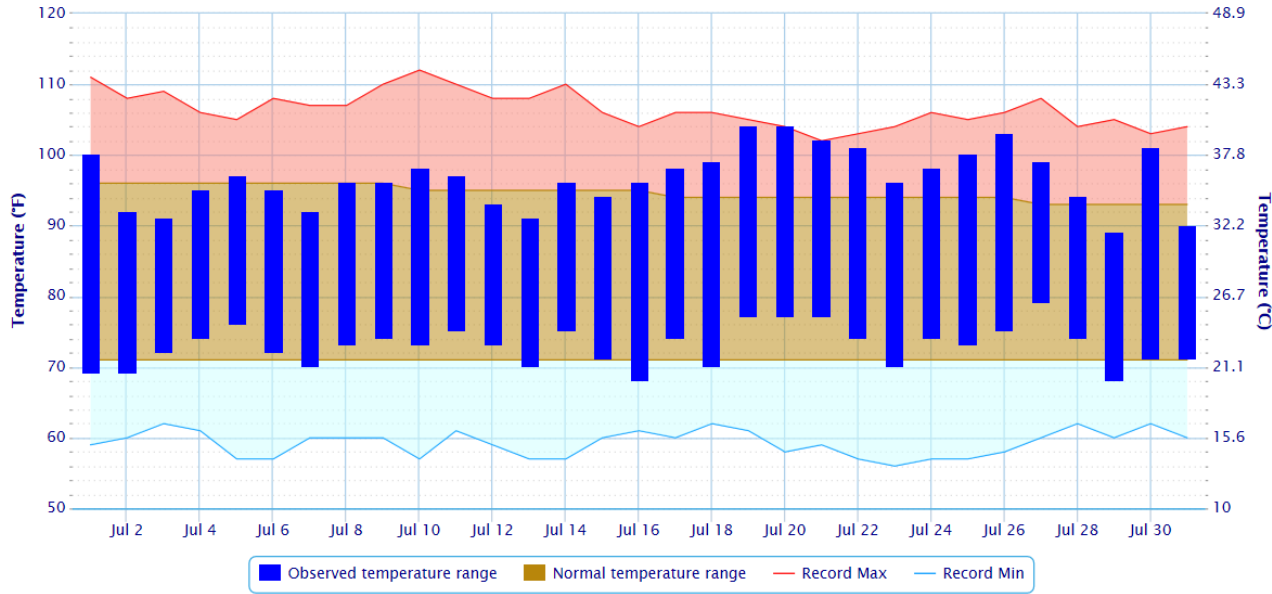
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- 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)

Daily Temperature Data – El Paso Area, TX (ThreadEx)

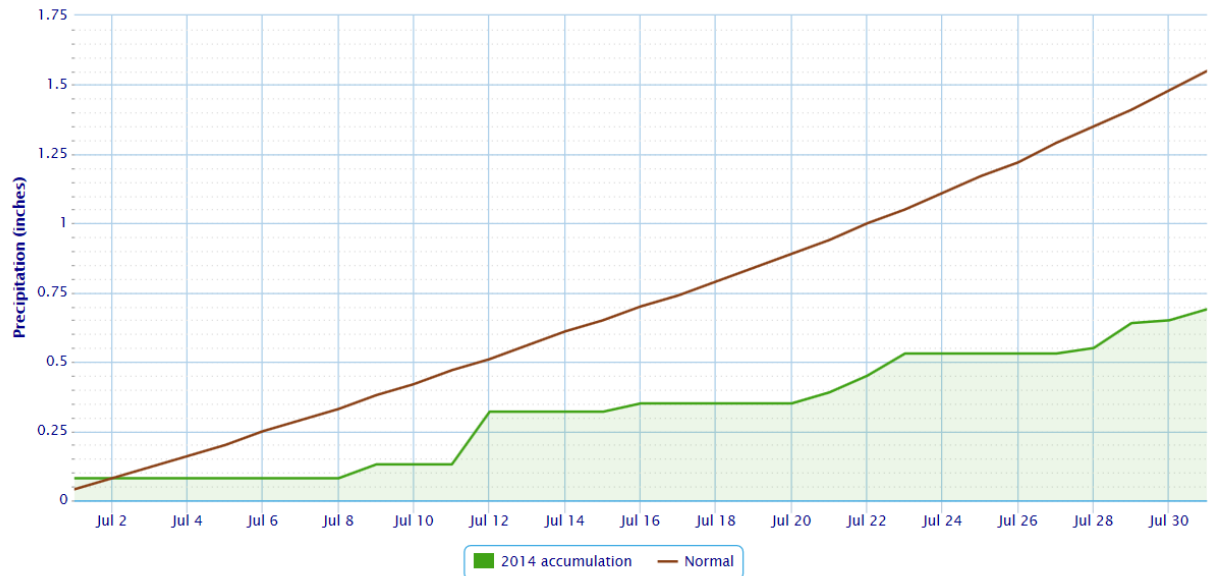
Period of Record – Max temperature: 1887-01-01 to 2014-08-01; Min temperature: 1879-01-01 to 2014-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



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Accumulated Precipitation – EL PASO INTL AP, TX

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



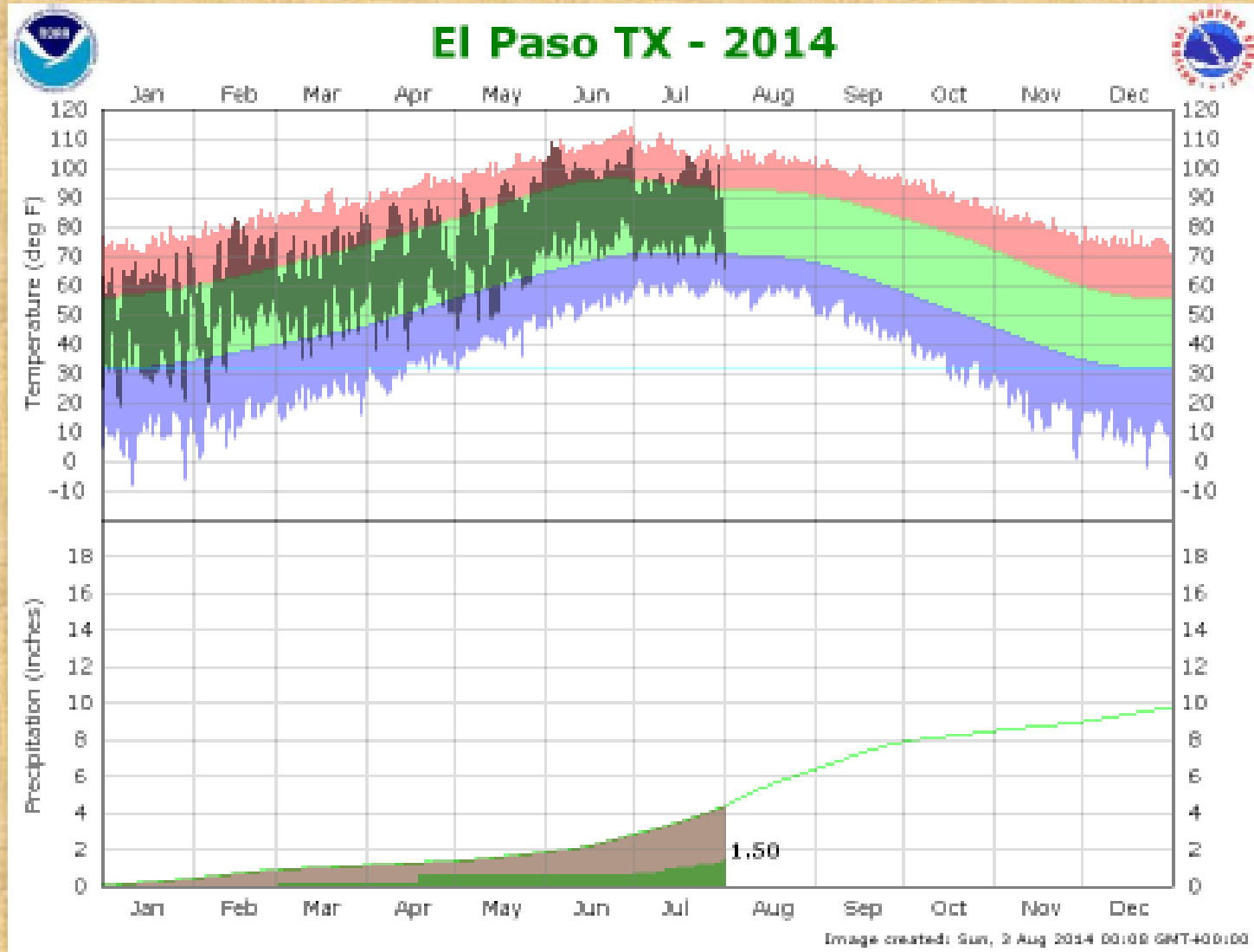
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Climatological Data for EL PASO INTL AP, TX - July 2014
 Click column heading to sort ascending, click again to sort descending.

Date	Max Temperature	Min Temperature	Avg Temperature	Avg Temperature Departure	HDD	CDD	Precipitation	Snowfall	Snow Depth
2014-07-01	100	69	84.5	1.0	0	20	0.08	0.0	0
2014-07-02	92	69	80.5	-3.0	0	16	0.00	0.0	0
2014-07-03	91	72	81.5	-2.0	0	17	0.00	0.0	0
2014-07-04	95	74	84.5	1.0	0	20	T	0.0	0
2014-07-05	97	76	86.5	3.0	0	22	0.00	0.0	0
2014-07-06	95	72	83.5	0.1	0	19	T	0.0	0
2014-07-07	92	70	81.0	-2.4	0	16	0.00	0.0	0
2014-07-08	96	73	84.5	1.1	0	20	0.00	0.0	0
2014-07-09	96	74	85.0	1.7	0	20	0.05	0.0	0
2014-07-10	98	73	85.5	2.3	0	21	T	0.0	0
2014-07-11	97	75	86.0	2.8	0	21	0.00	0.0	0
2014-07-12	93	73	83.0	-0.1	0	18	0.19	0.0	0
2014-07-13	91	70	80.5	-2.6	0	16	T	0.0	0
2014-07-14	96	75	85.5	2.5	0	21	0.00	0.0	0
2014-07-15	94	71	82.5	-0.4	0	18	T	0.0	0
2014-07-16	96	68	82.0	-0.8	0	17	0.03	0.0	0
2014-07-17	98	74	86.0	3.2	0	21	0.00	0.0	0
2014-07-18	99	70	84.5	1.8	0	20	0.00	0.0	0
2014-07-19	104	77	90.5	7.9	0	26	0.00	0.0	0
2014-07-20	104	77	90.5	7.9	0	26	T	0.0	0
2014-07-21	102	77	89.5	7.0	0	25	0.04	0.0	0
2014-07-22	101	74	87.5	5.1	0	23	0.06	0.0	0
2014-07-23	96	70	83.0	0.7	0	18	0.08	0.0	0
2014-07-24	98	74	86.0	3.7	0	21	0.00	0.0	0
2014-07-25	100	73	86.5	4.3	0	22	0.00	0.0	0
2014-07-26	103	75	89.0	6.8	0	24	0.00	0.0	0
2014-07-27	99	79	89.0	6.9	0	24	0.00	0.0	0
2014-07-28	94	74	84.0	2.0	0	19	0.02	0.0	0
2014-07-29	89	68	78.5	-3.5	0	14	0.09	0.0	0
2014-07-30	101	71	86.0	4.1	0	21	0.01	0.0	0
2014-07-31	90	71	80.5	-1.4	0	16	0.04	0.0	0
Sum	2997	2258	-	-	0	622	0.69	0.0	-
Average	96.7	72.8	84.8	2.0	-	-	-	-	0.0
Normal	94.7	70.9	82.8	-	0	552	1.55	0.0	-

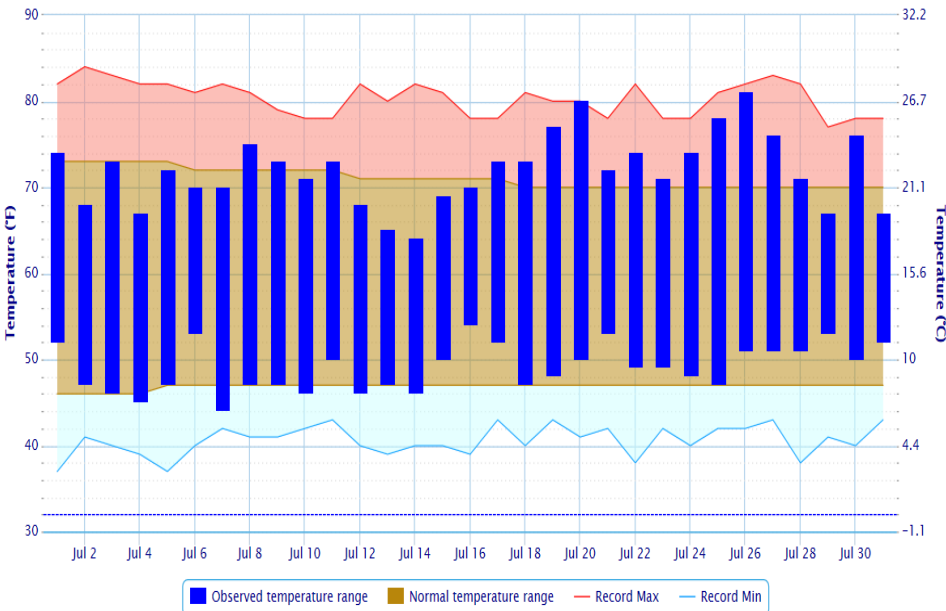
8 days \geq 100 (July). 104 tied record 7/20 28 days so far 2014

July 2014...Cooler and Wetter than June
Thanks to the onset of the North American Monsoon.



Daily Temperature Data - CLOUDCROFT, NM

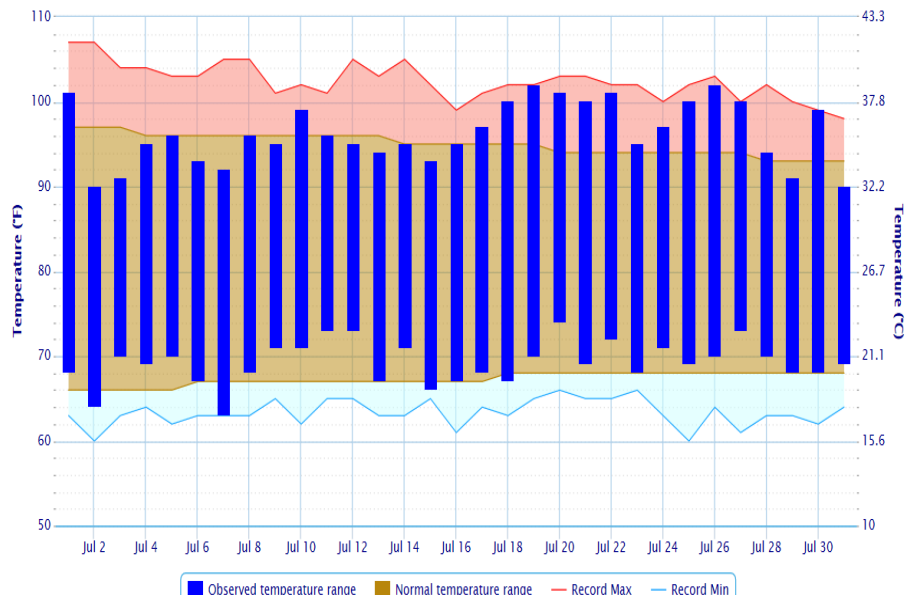
Period of Record - 1987-09-01 to 2014-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



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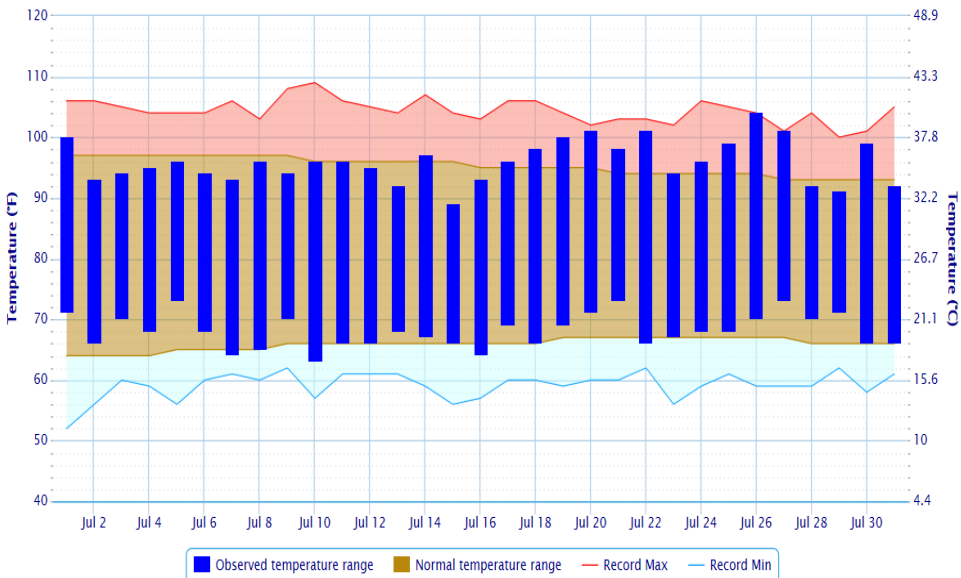
Daily Temperature Data - SANTA TERESA AP, NM

Period of Record - 2002-02-25 to 2014-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



Daily Temperature Data - DEMING MUNI AP, NM

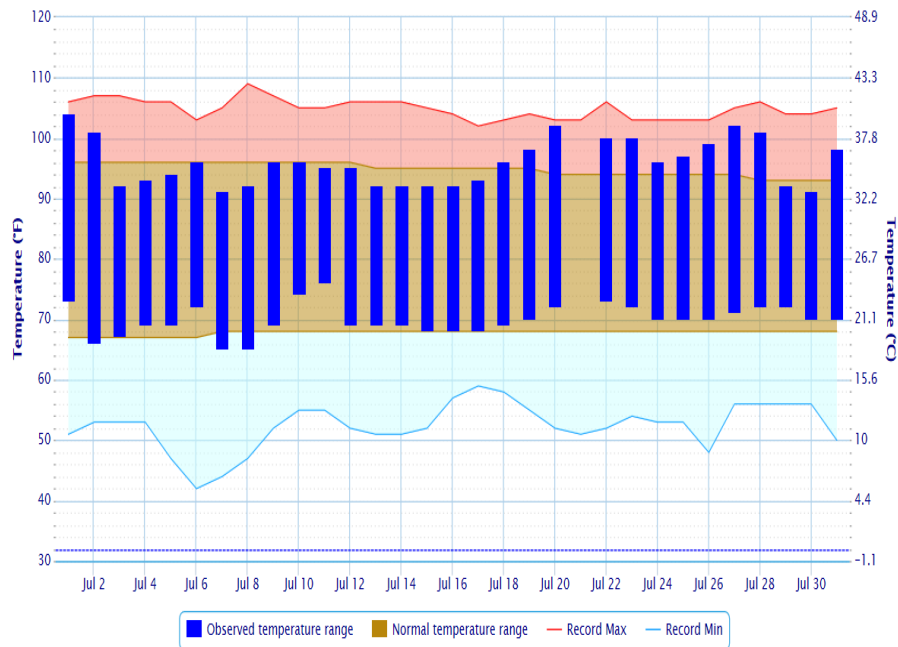
Period of Record - Max temperature: 1961-04-07 to 2014-08-01; Min temperature: 1961-04-08 to 2014-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



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Daily Temperature Data - STATE UNIV, NM

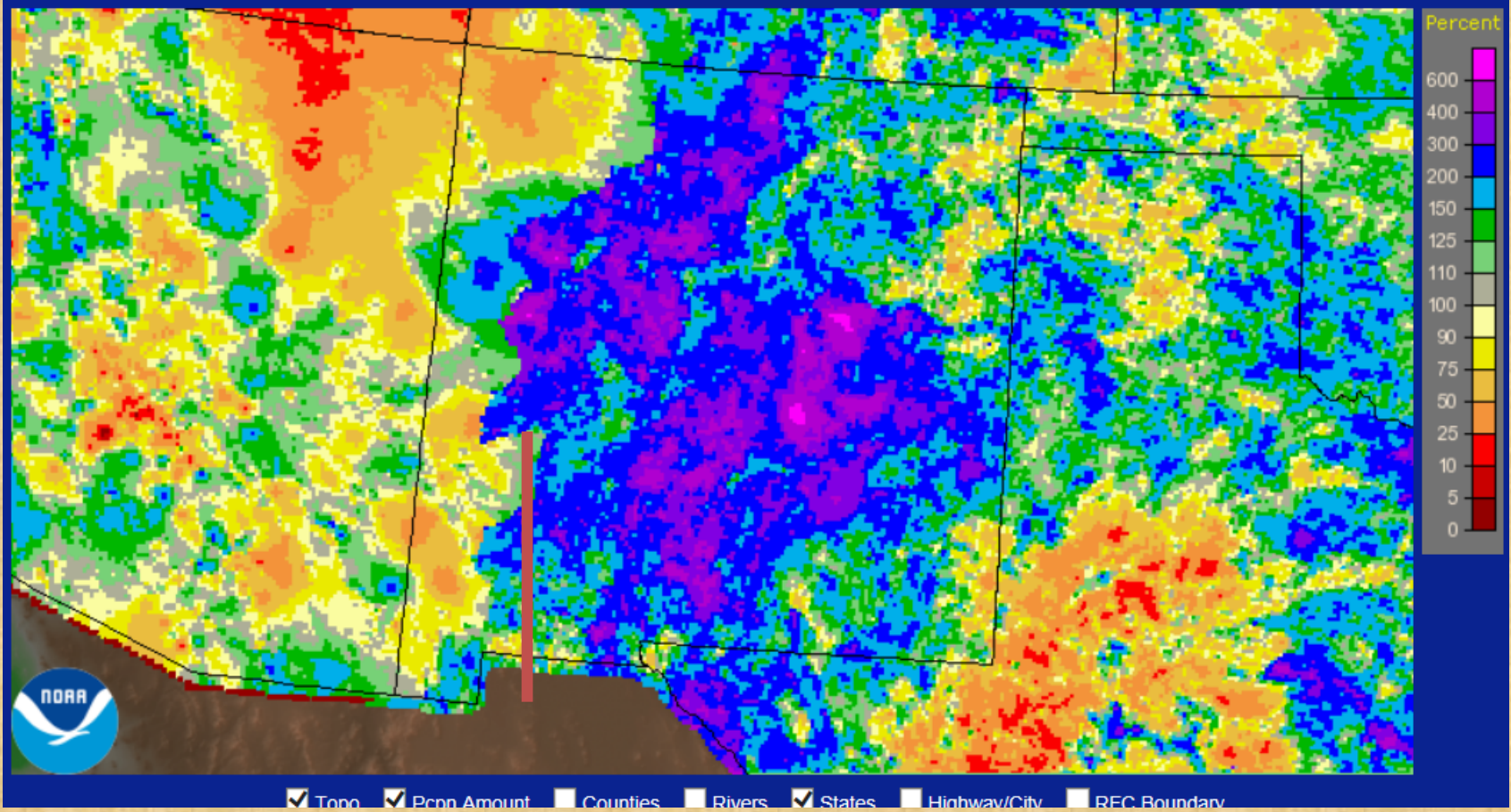
Period of Record - 1892-01-01 to 2014-08-02. Normals period: 1981-2010. Click and drag to zoom chart.



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July 2014 Radar Rainfall Estimate (Percent of normal)

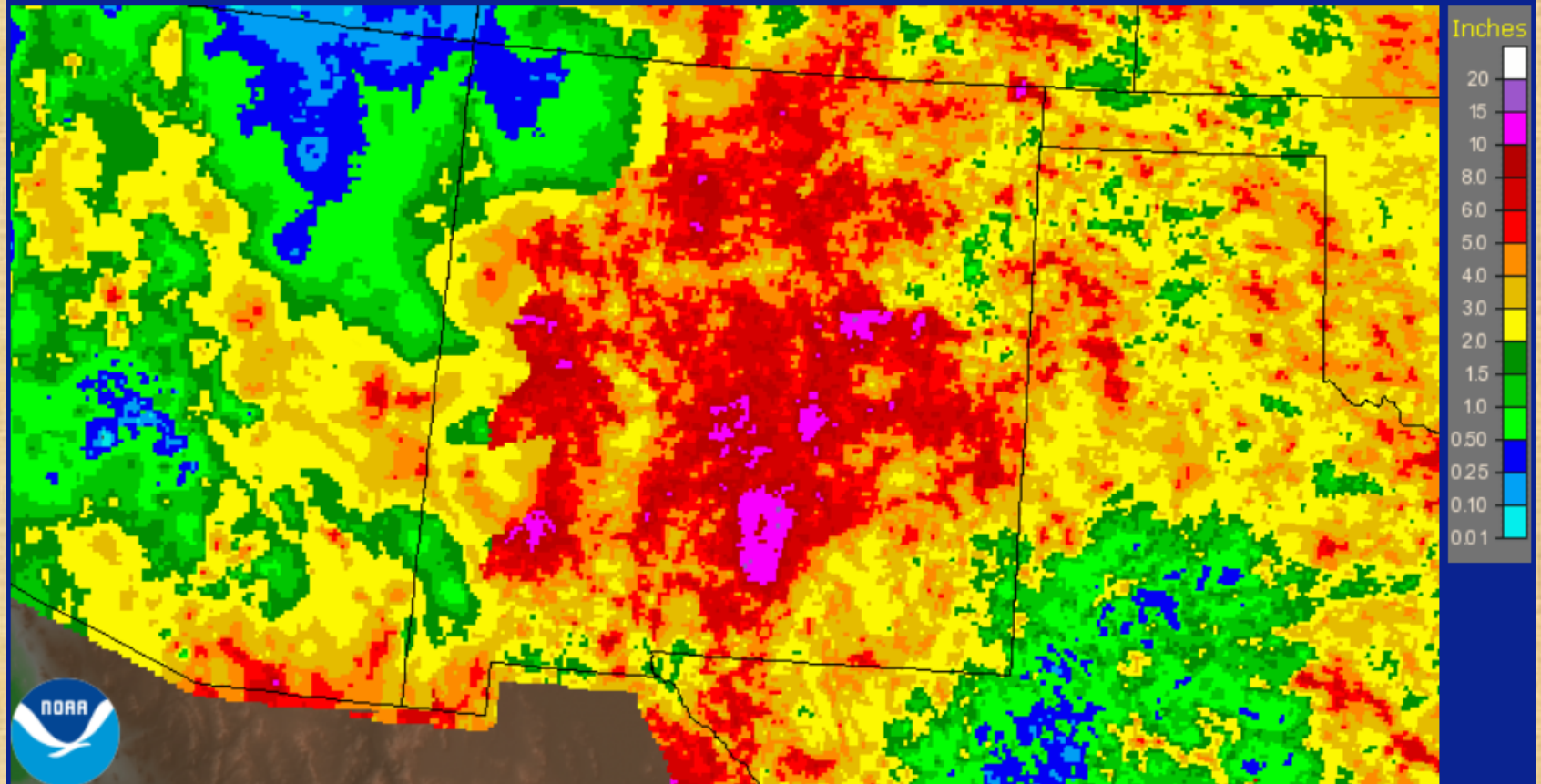
New Mexico: July, 2014 Monthly Percent of Normal Precipitation
Valid at 8/1/2014 1200 UTC - Created 8/3/14 0:06 UTC



Not so good west of the Continental Divide.

July 2014 Radar Rainfall Estimate

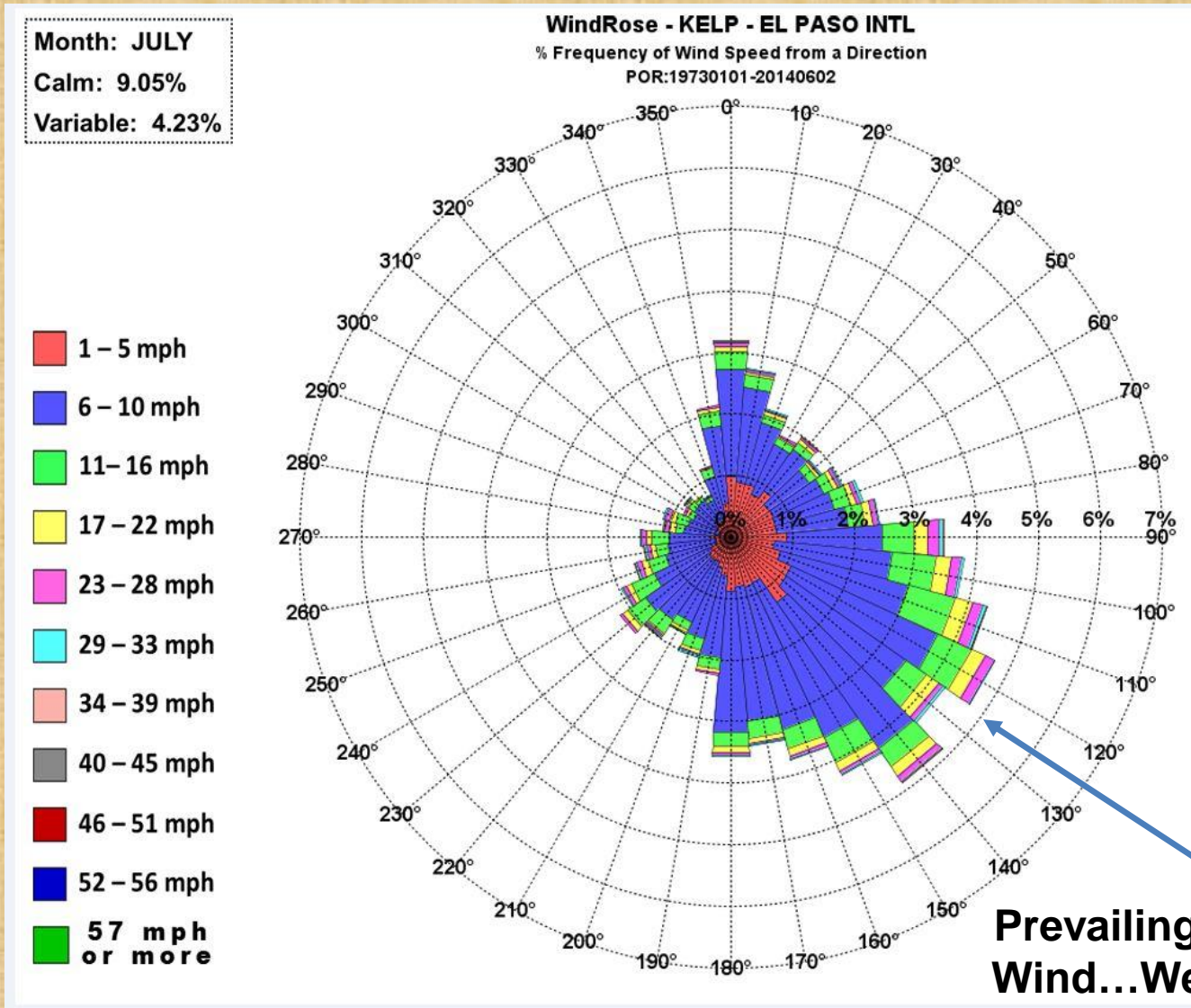
New Mexico: July, 2014 Monthly Observed Precipitation
Valid at 8/1/2014 1200 UTC - Created 8/3/14 0:06 UTC



Topo Pcpn Amount Counties Rivers States Highway/City REC Boundary

Special Features

<http://www.srh.noaa.gov/epz/?n=elpwindrosedata>



**Normal
July
Winds
1973-
2013**

**Prevailing Southeast
Wind...Wet Monsoon
Fingerprint**



CB dropping rain just east of the Franklins as seen from the NWS WFO in Santa Teresa, NM. Our upper air release site is also pictured here.

A daily thunderstorm is almost a sure bet in Cloudcroft, New Mexico this time of year.





July 30...Flooding just N of Las Cruces. July ending on a very wet note.

“Hill” a very small community just north of Las Cruces. 2-4 feet of water flooded homes and a historic church.



Dona Ana Road

Select Severe Weather Reports July 2014

Date/Time	Location	Event
7/01/2014 517 PM	3 N LAS CRUCES	0.75 INCH HAIL
7/01/2014 520 PM	HURLEY-GRANT CO	59 MPH CONVECTIVE GUST
7/01/2014 533 PM	2 NE NMSU LAS CRUCES	1.50 INCH HAIL
7/01/2014 551 PM	2 NNE NMSU LAS CRUCES	1.00 INCH HAIL
7/01/2014 547 PM	4 NE LAS CRUCES	56 MPH CONVECTIVE GUST
7/01/2014 551 PM	2 NNE NMSU LAS CRUCES	60 MPH CONVECTIVE GUST
7/01/2014 615 PM	SAN AUGUSTIN PASS	66 MPH CONVECTIVE GUST
7/01/2014 630 PM	1 SE WSMR MAIN POST	60 MPH CONVECTIVE GUST
7/01/2014 640 PM	CONDON FIELD	57 MPH CONVECTIVE GUST
7/01/2014 700 PM	10 NE LAS CRUCES	55 MPH CONVECTIVE GUST
7/01/2014 717 PM	LAS CRUCES-PICACHO HILLS	FLOODING
7/01/2014 718 PM	TWIN PEAKS-DONA ANA CO	60 MPH CONVECTIVE GUST
7/01/2014 719 PM	FORT BLISS	64 MPH CONVECTIVE GUST
7/13/2014 209 PM	TULAROSA	0.50 INCH HAIL
7/14/2014 604 PM	8 NE STEINS-HIDALGO CO	60 MPH CONVECTIVE GUST

Select Severe Weather Reports July 2014

Date/Time	Location	Event
7/15/2014 720 AM	ANTELOPE WELLS-HIDALGO CO	FLOODING
7/17/2014 846 PM	ALAMOGORDO	60 MPH CONVECTIVE GUST
7/28/2014 503 PM	SUNSPOT-OTERO CO	0.50 INCH HAIL
7/29/2014 514 PM	SAN LORENZO-GRANT CO	FLOODING
7/30/2014 541 PM	TIMBERON	0.88 INCH HAIL
7/31/2014 153 AM	OROGRANDE	FLOODING