

August 2020 Weather Digest



August 2020 Weather Summary

Hot and dry is the only way to describe the weather in August, as the month turned out to be one of the hottest August months on record. Very low rainfall totals for the month also exacerbated developing drought conditions. Most sites across the Borderland were about 4 to 7 degrees above normal with the average daily temperature. August 2020 was the warmest ever in El Paso for the month, with an average daily temperature of 88.3 degrees. There were very few stormy days during the month. One of them was on the first day of the month when several storms across southern New Mexico produced strong wind gusts. The other day of note was on the 23rd when a strong, fast moving storm moved through the Las Cruces area. This storm produced brief but torrential rainfall, and wind gusts of 70 to 85 mph. Several utility poles and structures in Las Cruces were damaged due to these winds.

August also turned out to be quite dry, with the large majority of the area well below normal for rainfall. The percent of normal rainfall map shows most of the area at only 10 to 50 percent of normal. Only a few isolated areas, mostly in Otero County, were able to reach normal rainfall levels as they received a few heavy thunderstorm rains. Southern New Mexico went from a surplus of moisture and no drought conditions in May to a large deficit and drought conditions of moderate to severe by the end of August.

August 2020 Weather Summary, cont'd

Looking ahead to September, temperatures will continue their slow cool down. The average high temperature at El Paso on the 1st is 91 degrees, while by the 30th the average high is down to 83 degrees. Daylight shrinks from 12 hours and 45 minutes on the first day to 11 hours and 49 minutes on the final day of the month. The Autumn Equinox occurs in September and this year it occurs on the 22nd at 730am MDT. This begins the astronomical Fall season (meteorological Fall begins September 1). For the moon fans out there, the full moon will occur on September 2. This is variously known as the Corn or Fruit Moon. The new moon will appear on the 17th.

August 8 Storm near Las Cruces



August 7 Thunderstorm near Las Cruces



August 23 Thunderstorm wind damage in Las Cruces



August Lightning



**August 25 Smoky Sunset at
Santa Teresa**



**August 31 Thunderstorm
in Las Cruces**



ENSO Alert System Status: La Niña Watch

ENSO Alert System

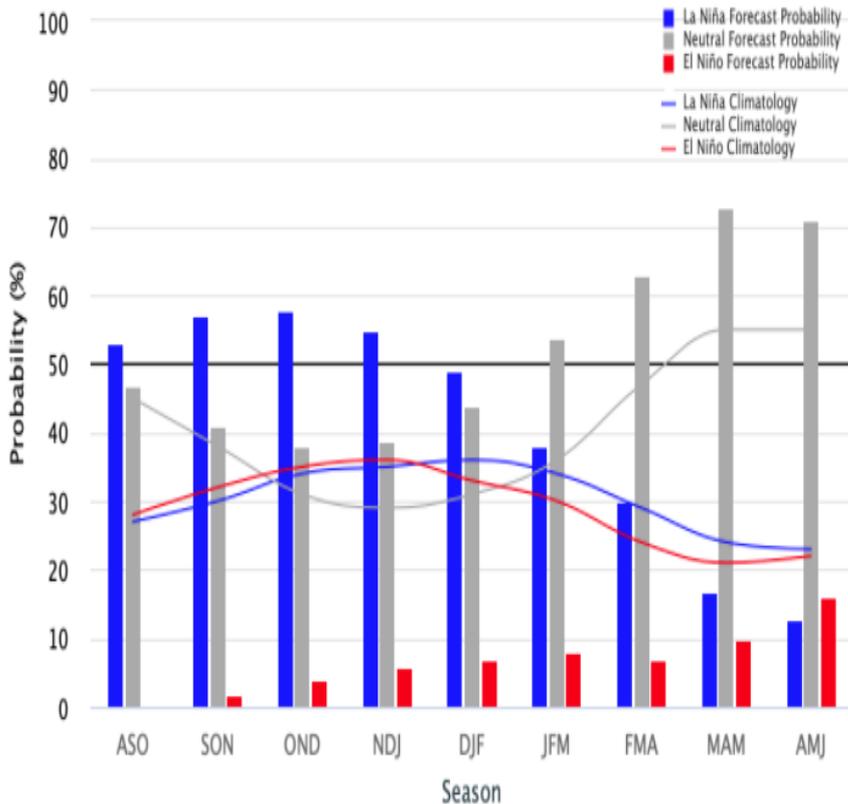
- **El Niño or La Niña Watch:** Issued when conditions are favorable for the development of El Niño or La Niña conditions in the next six months.
- **El Niño or La Niña Advisory:** Issued when El Niño or La Niña conditions are observed and expected to continue.

ENSO Forecast

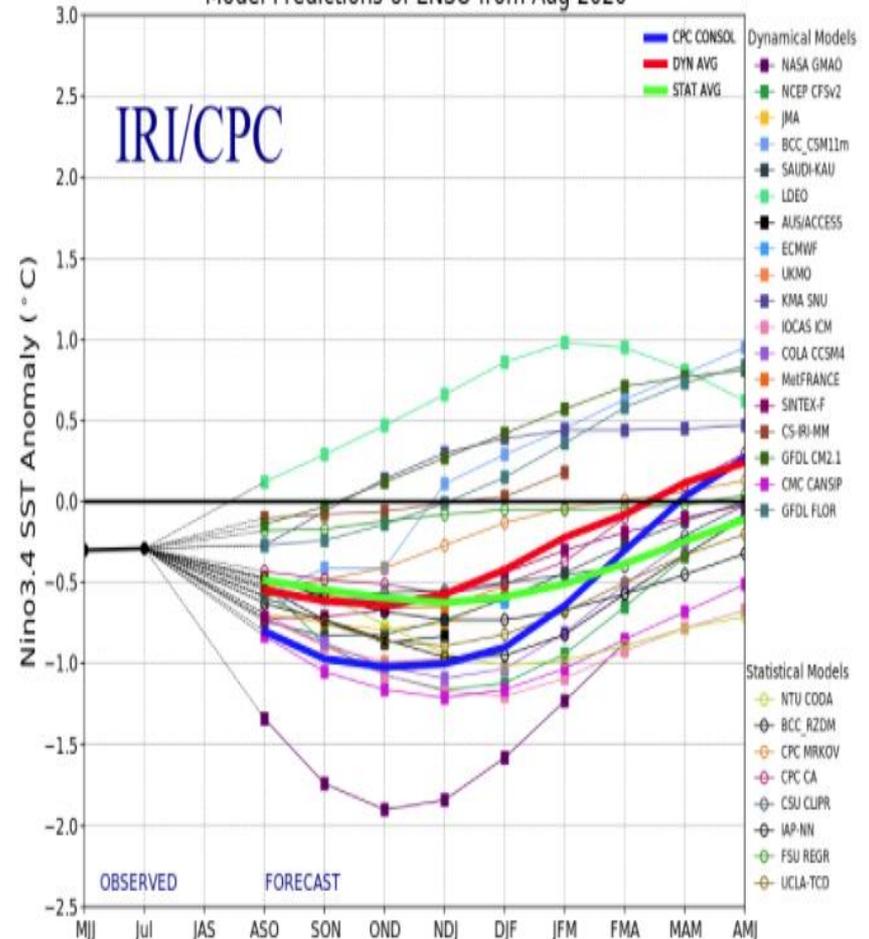
ENSO is now in a weak La Niña phase and is expected to remain that way into this winter

Mid-August 2020 IRI/CPC Model-Based Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: -0.5 °C to 0.5 °C



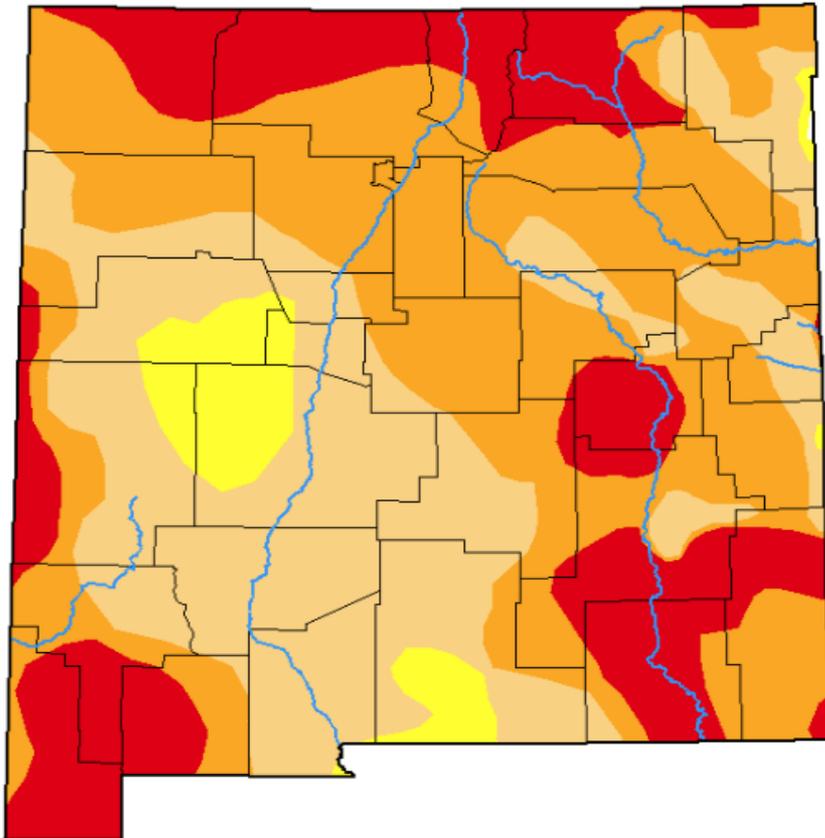
Model Predictions of ENSO from Aug 2020



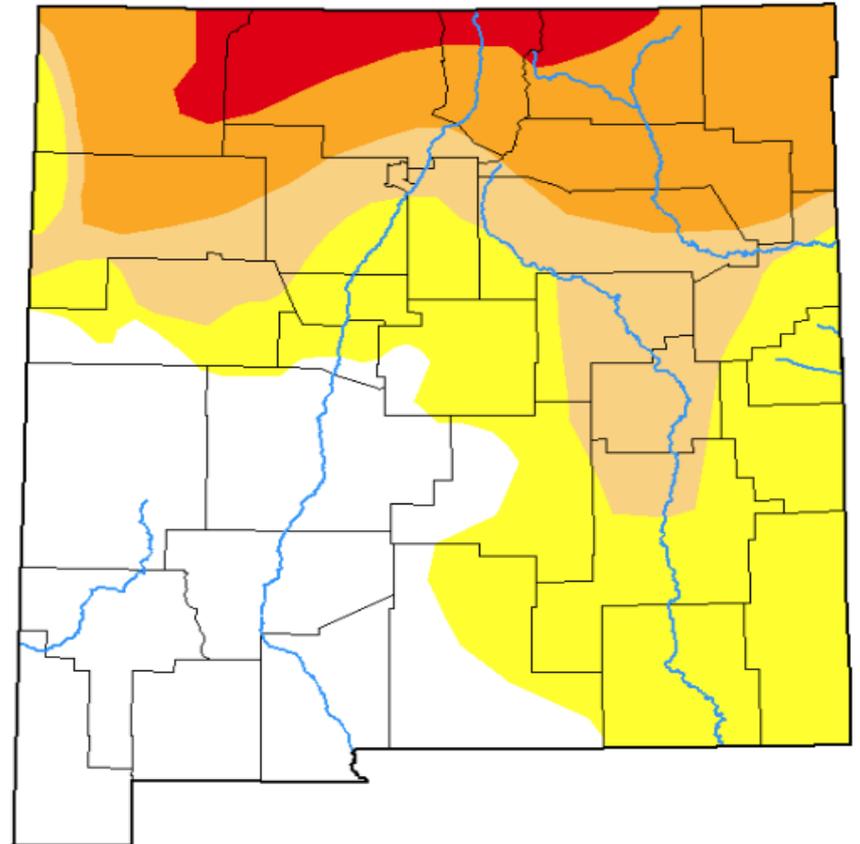
Current drought conditions for New Mexico and 3 month change

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

August 25, 2020



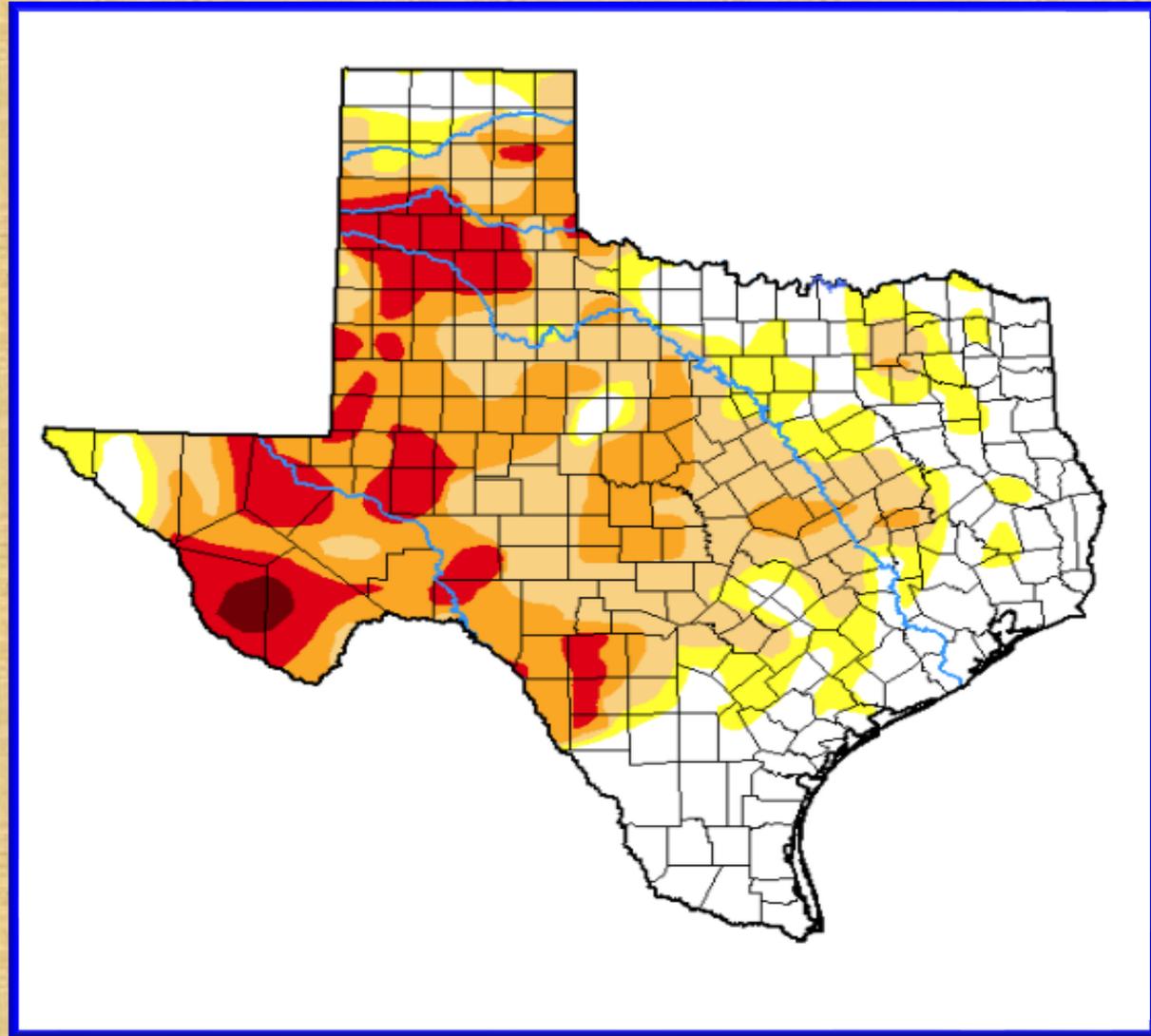
May 26, 2020



Current drought conditions for Texas as of August 25, 2020

Intensity:

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



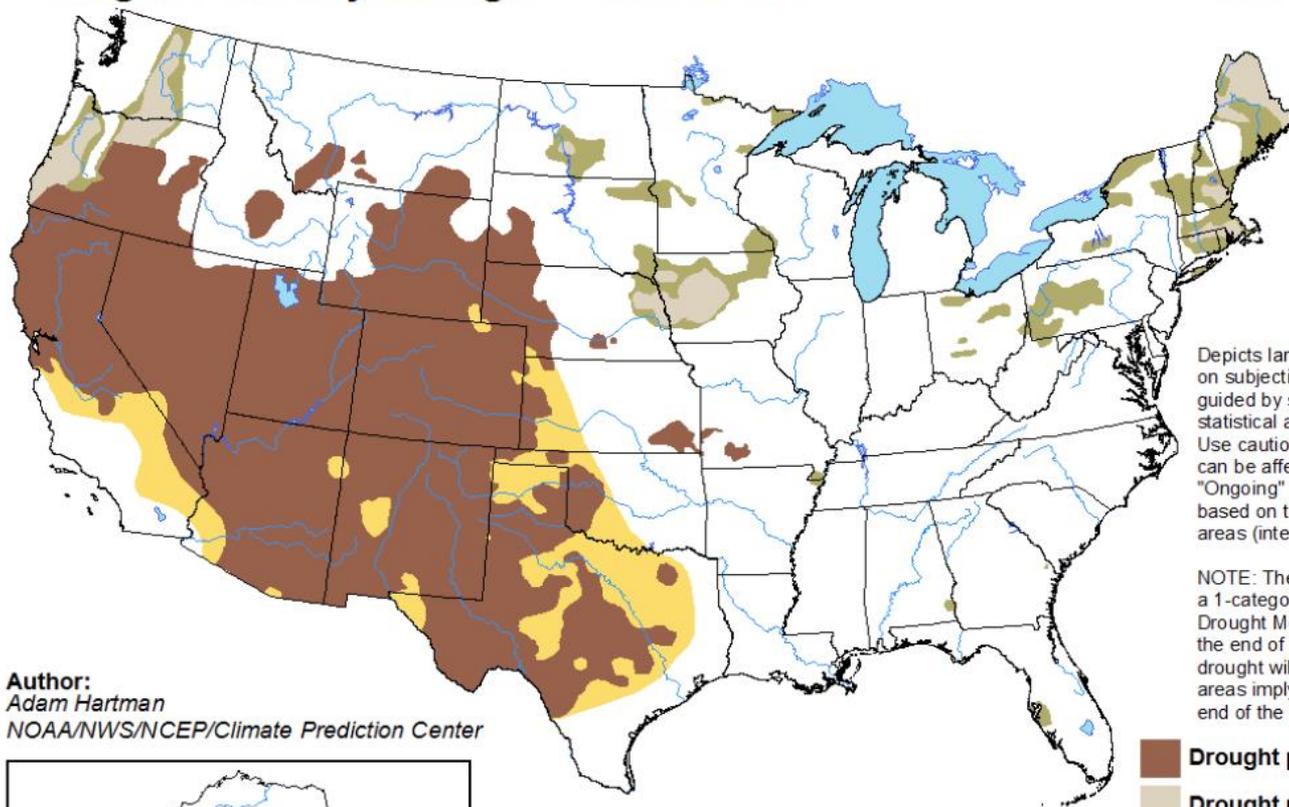
Build your own custom slider maps here at:

<http://droughtmonitor.unl.edu/Maps/ComparisonSlider.aspx>

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

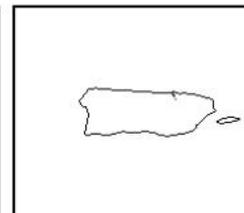
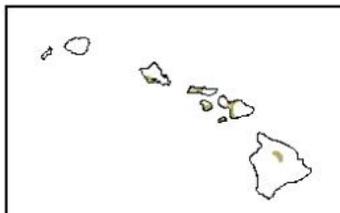
Valid for August 20 - November 30, 2020
Released August 20



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan 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).

Author:
Adam Hartman
NOAA/NWS/NCEP/Climate Prediction Center



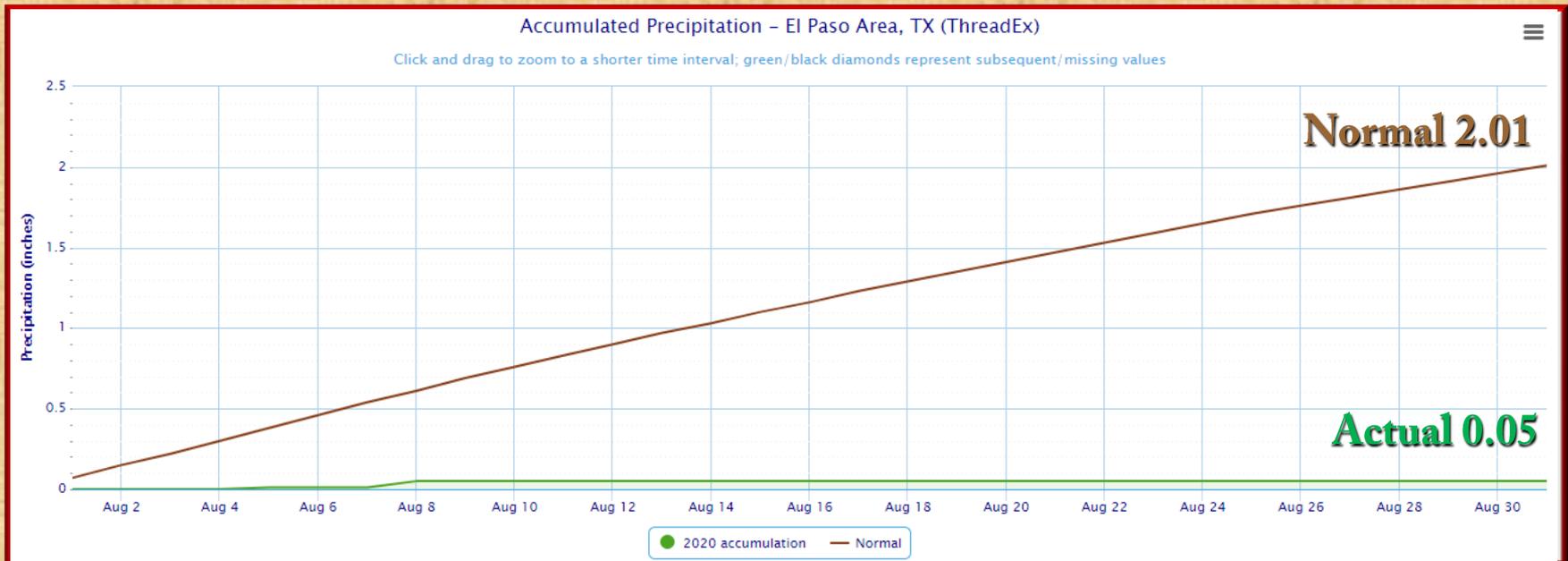
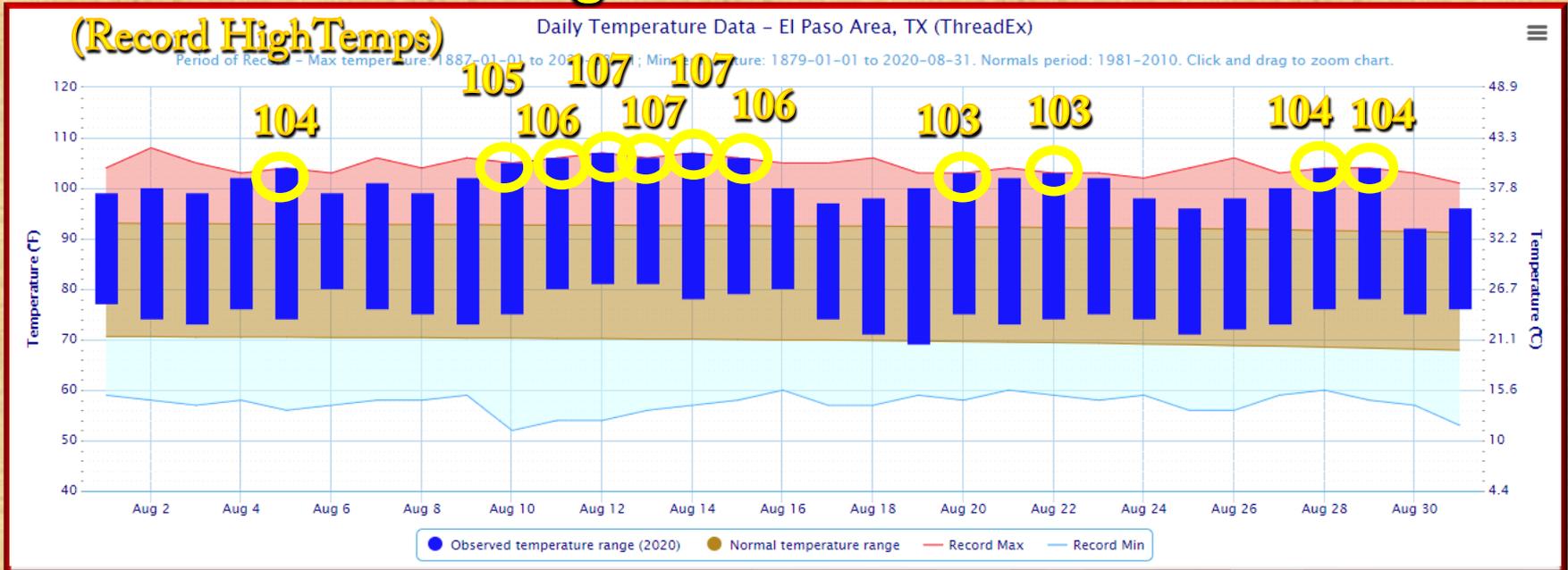
-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/3eZ73>

Temperature and precipitation data for August 2020 in El Paso

○ = record



Tracking the 2020 Monsoon Season across the El Paso Forecast Area

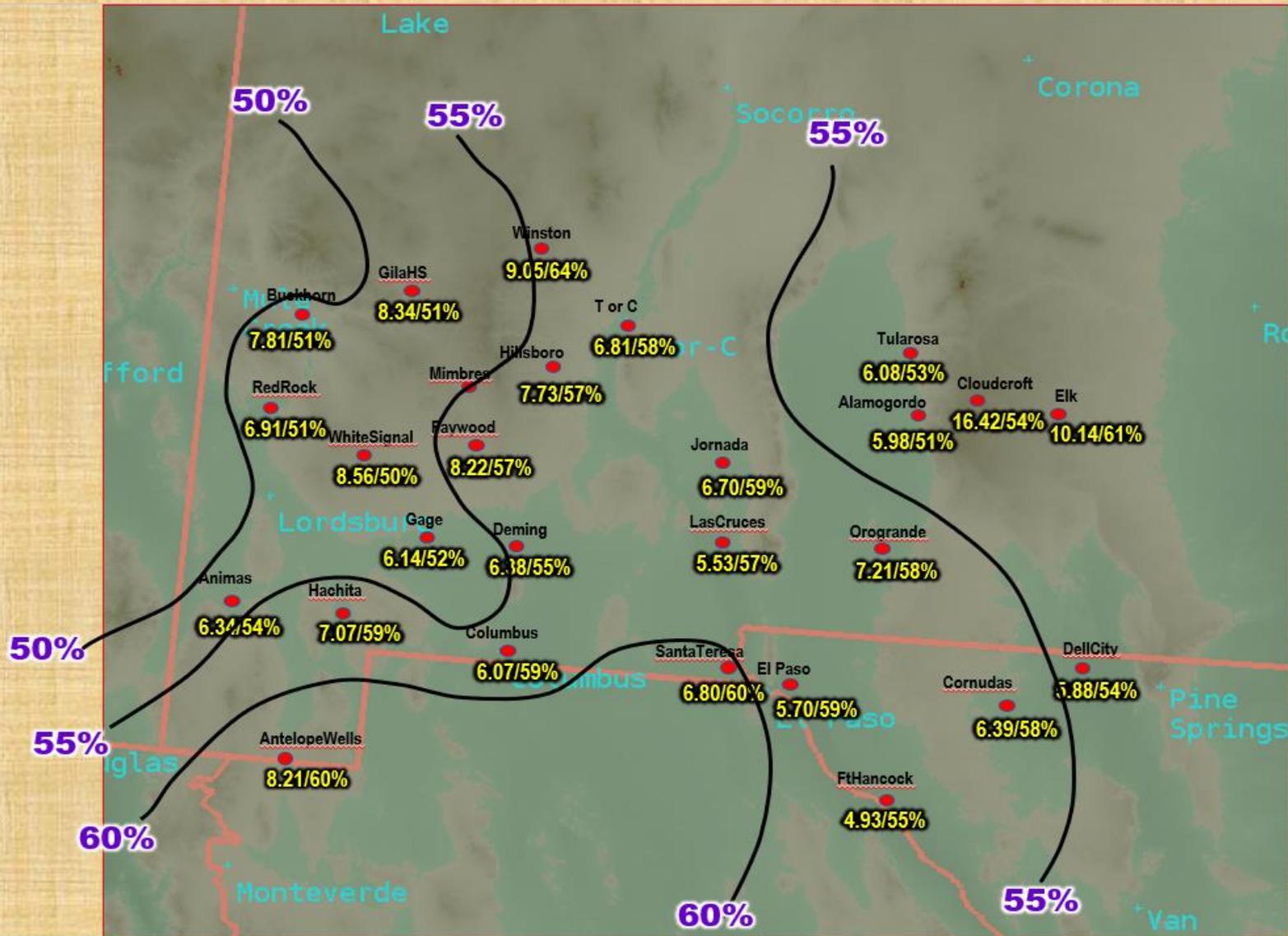
The monsoon season started over northwest Mexico in late June (June 27-30). The monsoon season for New Mexico and far west Texas often follows within one to two weeks of this date. Most of our monsoon ingredients were in place by early July. Looking at the charts below, several research studies have found these values to strongly correlate with the onset of the North American Monsoon (NAM) and/or onset of heavier monsoon precipitation. By July 3, dewpoints in the 50s (Fig. 1) became established over southern New Mexico, and by the next day July 4, sea surface temperatures in the northern Gulf of California (GOC) became predominantly 26C or greater (Fig. 2). Studies have shown that the monsoon usually begins 3-5 days after this warming to 26C. By July 5 the North American Monsoon (NAM) high pressure was centered over northern Mexico and southern New Mexico (Fig. 1), one of the more important factors of the monsoon onset. Thus our monsoon seasonal pattern began in the period from about July 3 to July 7. Of note, studies have shown that before the sea surface temperatures of the northern GOC reach 29C, only about one-third of our monsoon rainfall has occurred. After the 29C is reached, on average, two-thirds of our rain then falls. The 29C criteria was reached on about July 27.

The position of the NAM high will determine rainfall potential for the remainder of the monsoon season (see immediate preceding slide). We often confuse the monsoon ending with the shifting position of the NAM upper high. The basic overall pattern remains the same: mid latitude storm track/jet stream remain well north of our area; broad upper ridge of high pressure extending from Bermuda High west across the Gulf States and over to the Desert Southwest and the eastern Pacific. The key is to where the NAM upper high sets up. Its position is constantly moving, though often remaining in one relative spot for 3-5 days. (Fig. 4)

Tracking the 2020 Monsoon Season (cont'd)

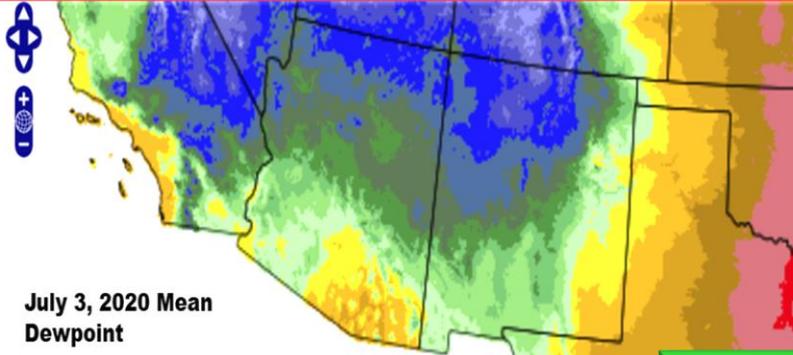
What began as a quiet beginning to the monsoon season with respect to rainfall, has turned into a very poor rainfall season. Drought conditions have worsened, which does not happen often during the summer monsoon season. It's going to take an abnormally wet September just to get the area back to near normal.

Tracking the 2020 Monsoon Season across the El Paso Forecast Area

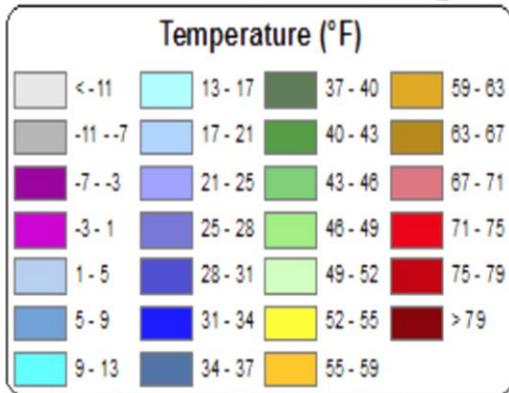


Percent of annual precipitation falling during the monsoon season (Jun 15 – Sep 30)

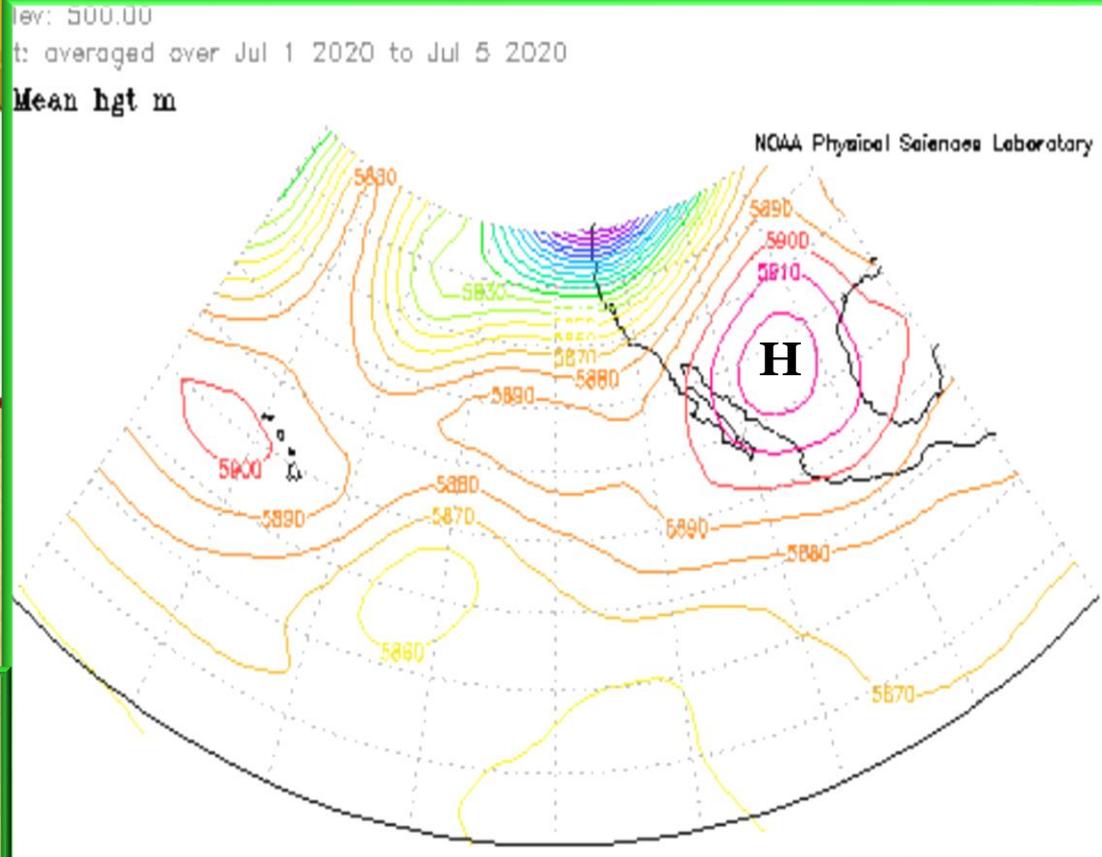
Tracking the 2020 Monsoon Season across the El Paso Forecast Area. Fig 1



July 3, 2020 Mean Dewpoint



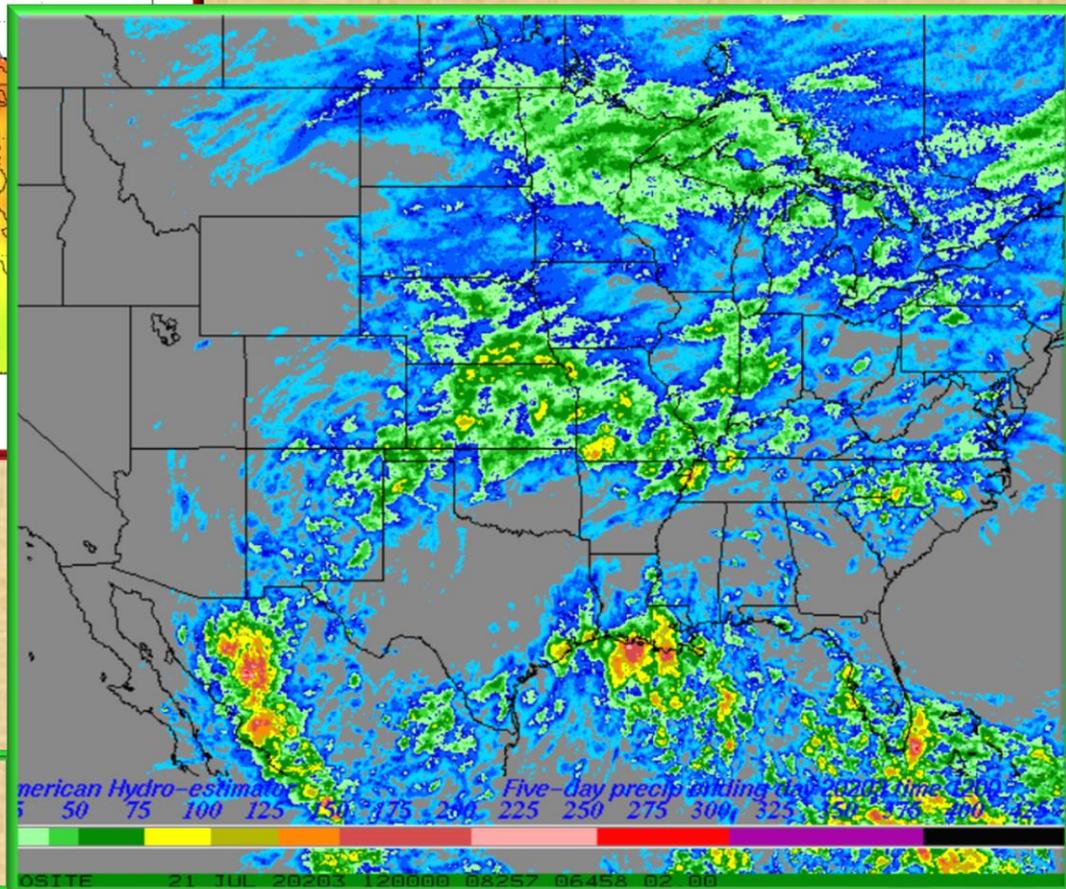
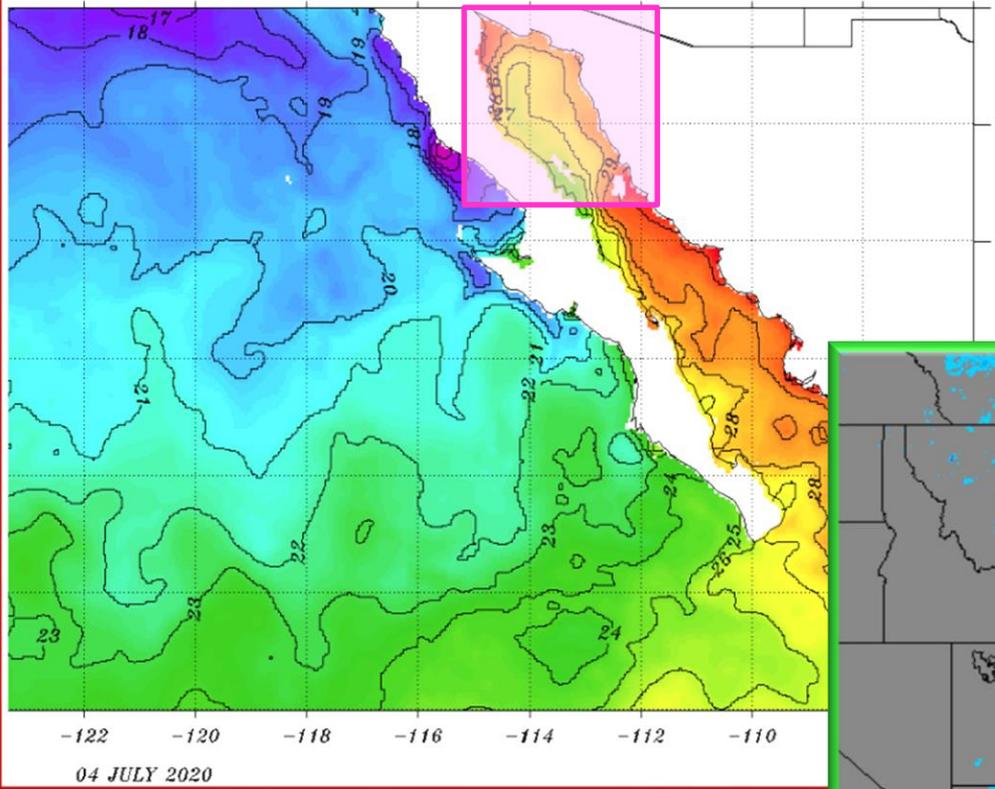
July 3 – Dewpoints reach into the 50s across the area



By July 5 North American Monsoon High reaches the Desert Southwest

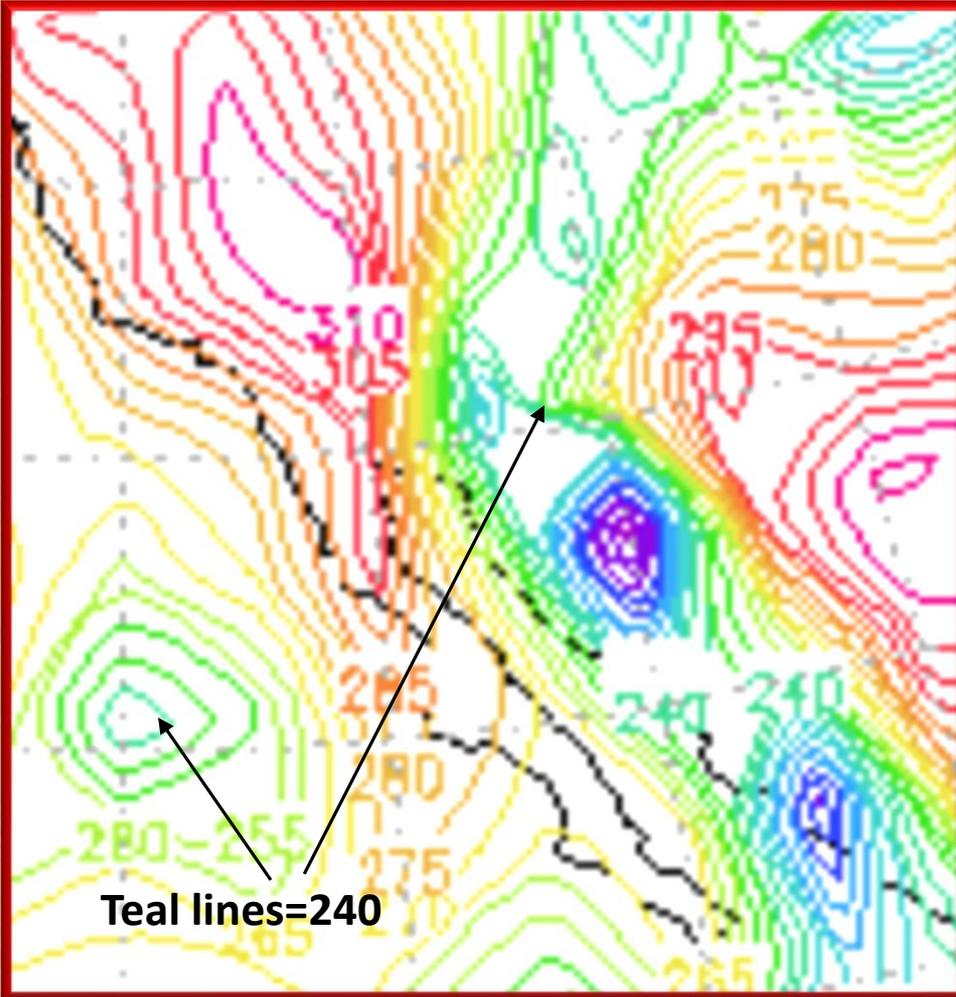
Tracking the 2020 Monsoon Season across the El Paso Forecast Area. Fig. 2

July 4 – Sea surface temperatures in the northern Gulf of California reach 26C deg (79F)



By July 15-20 the first area wide Monsoon precipitation occurs

Tracking the 2020 Monsoon Season across the El Paso Forecast Area. Fig. 3



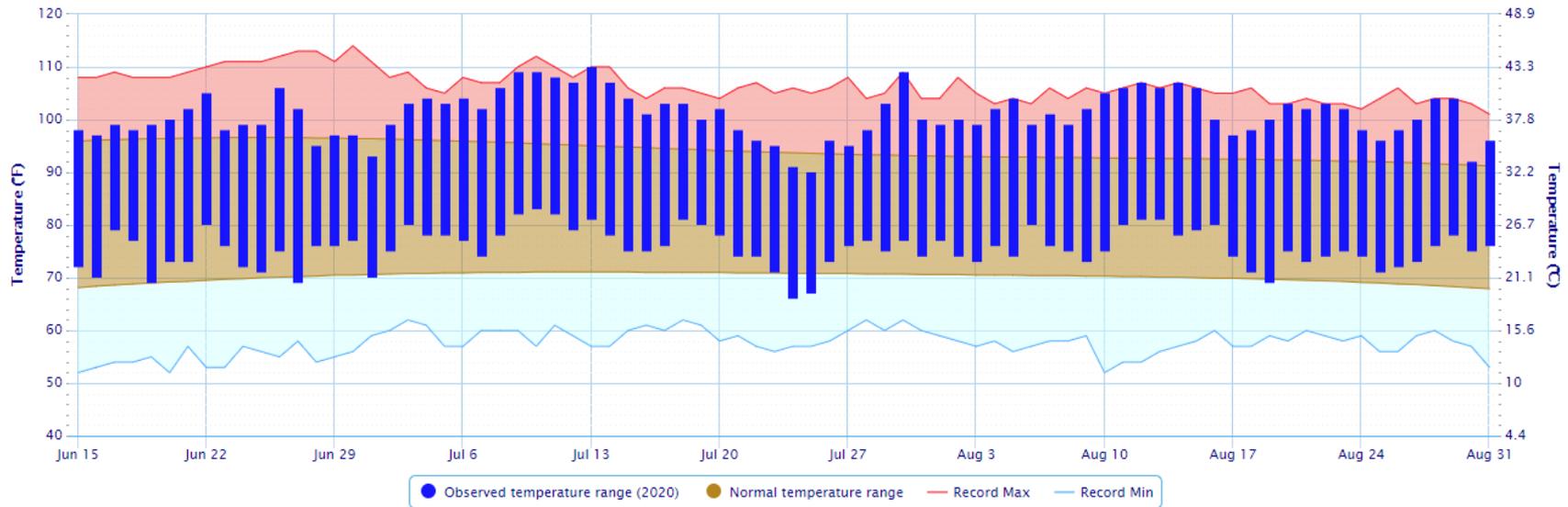
July 13 – Outgoing Longwave Radiation (OLR) diminishes to less than 240 W/m². Thick clouds and anvil tops from thunderstorms diminish the OLR values, often indicative of the monsoon moisture and thunderstorms moving into the area.

Teal lines=240

Temperature and precipitation data through August 31 for the 2020 Monsoon Season in El Paso

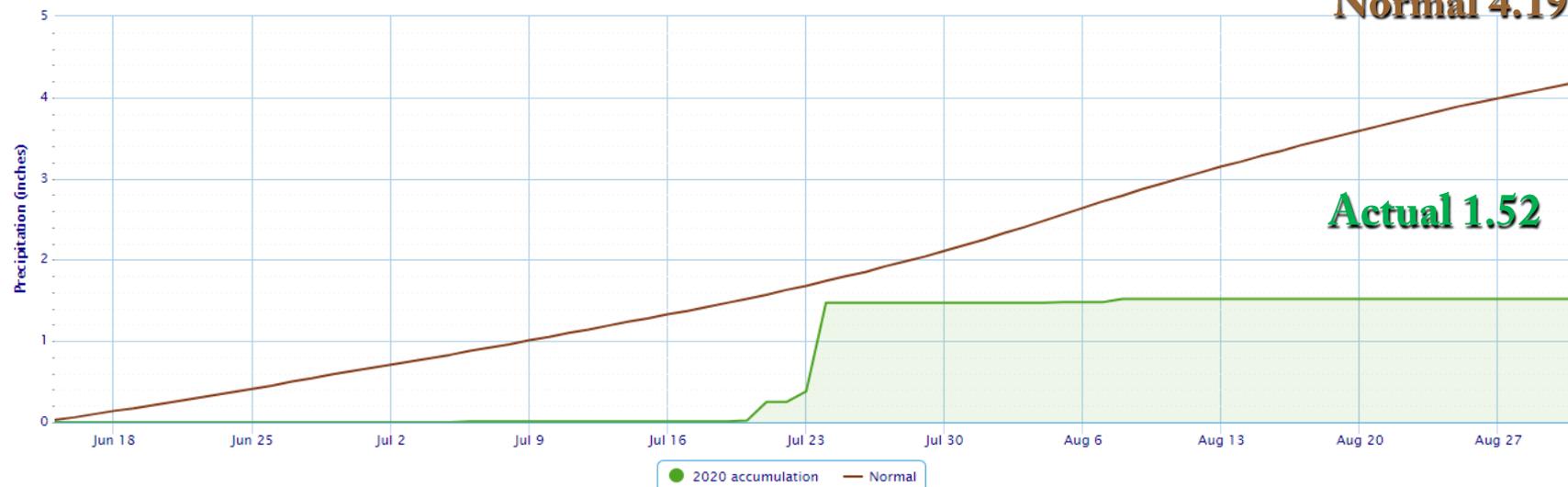
Daily Temperature Data – El Paso Area, TX (ThreadEx)

Period of Record – Max temperature: 1887-01-01 to 2020-09-01; Min temperature: 1879-01-01 to 2020-09-01. Normals period: 1981-2010. Click and drag to zoom chart.

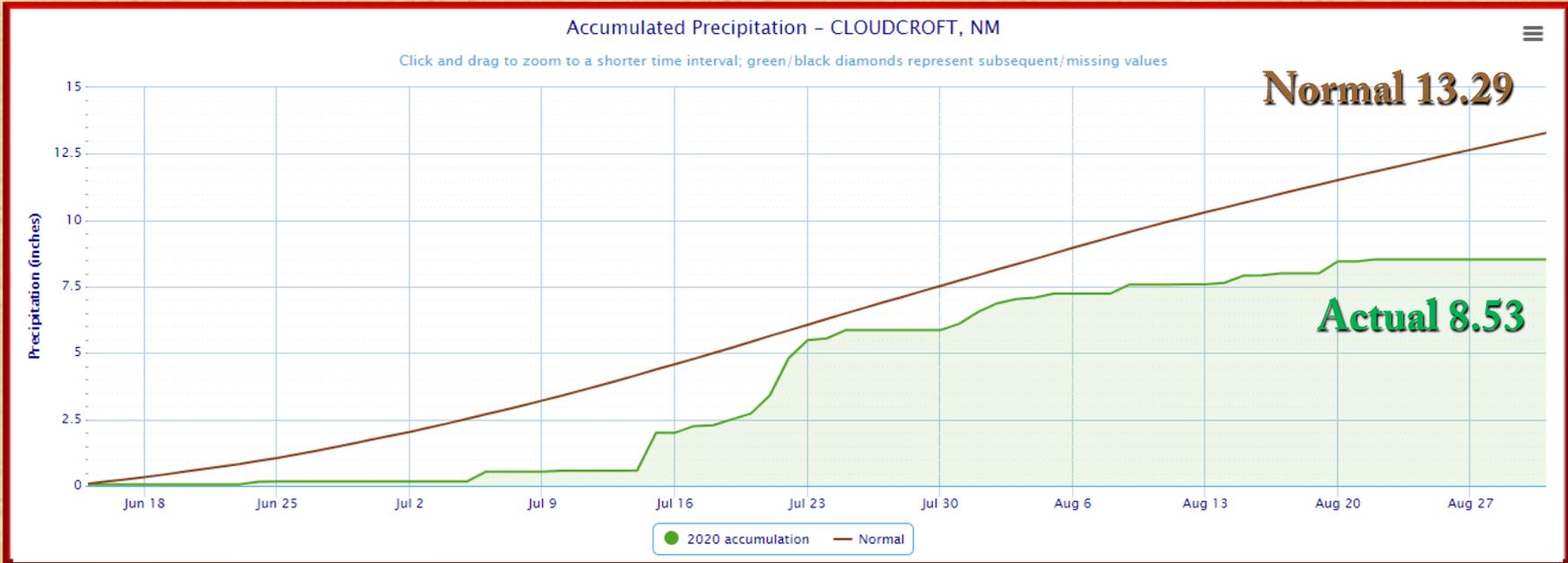
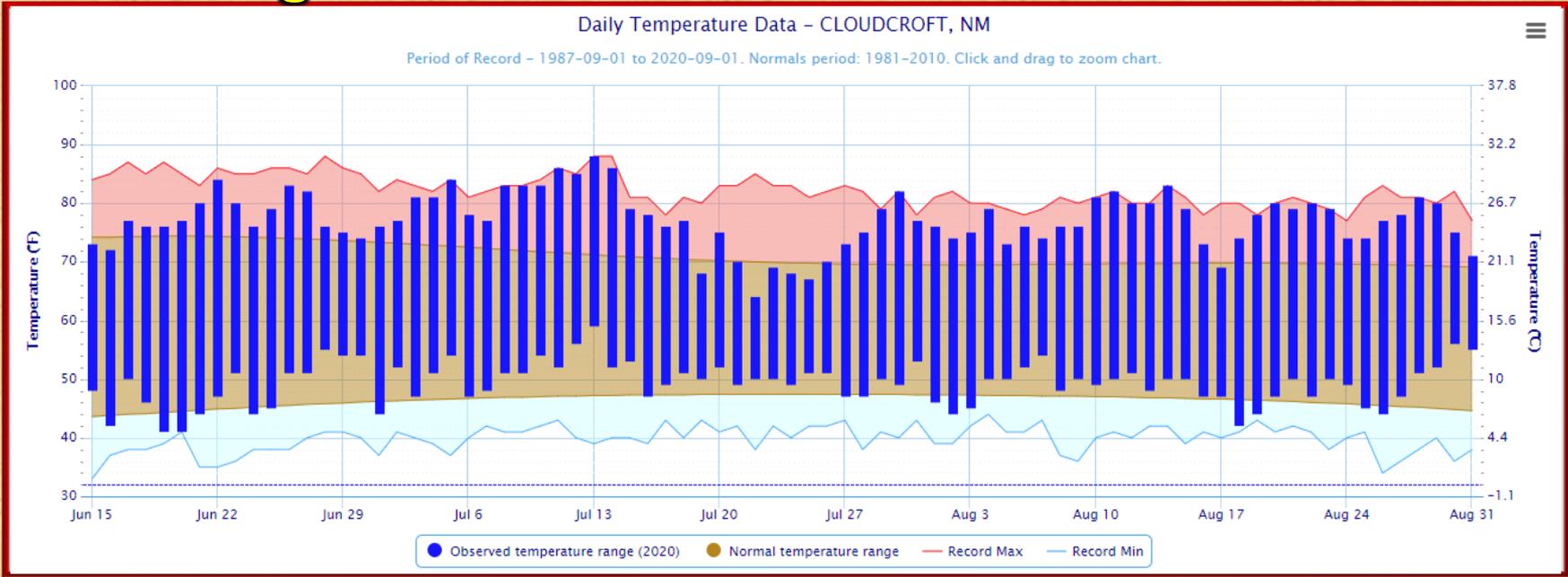


Accumulated Precipitation – El Paso Area, TX (ThreadEx)

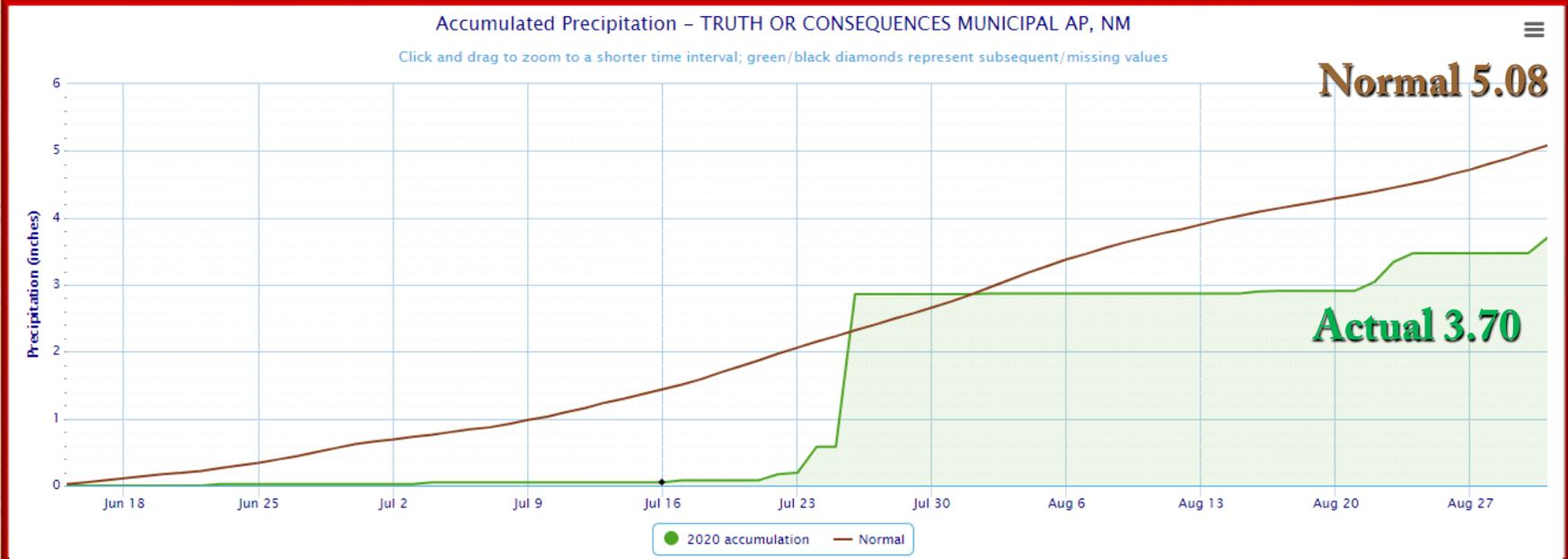
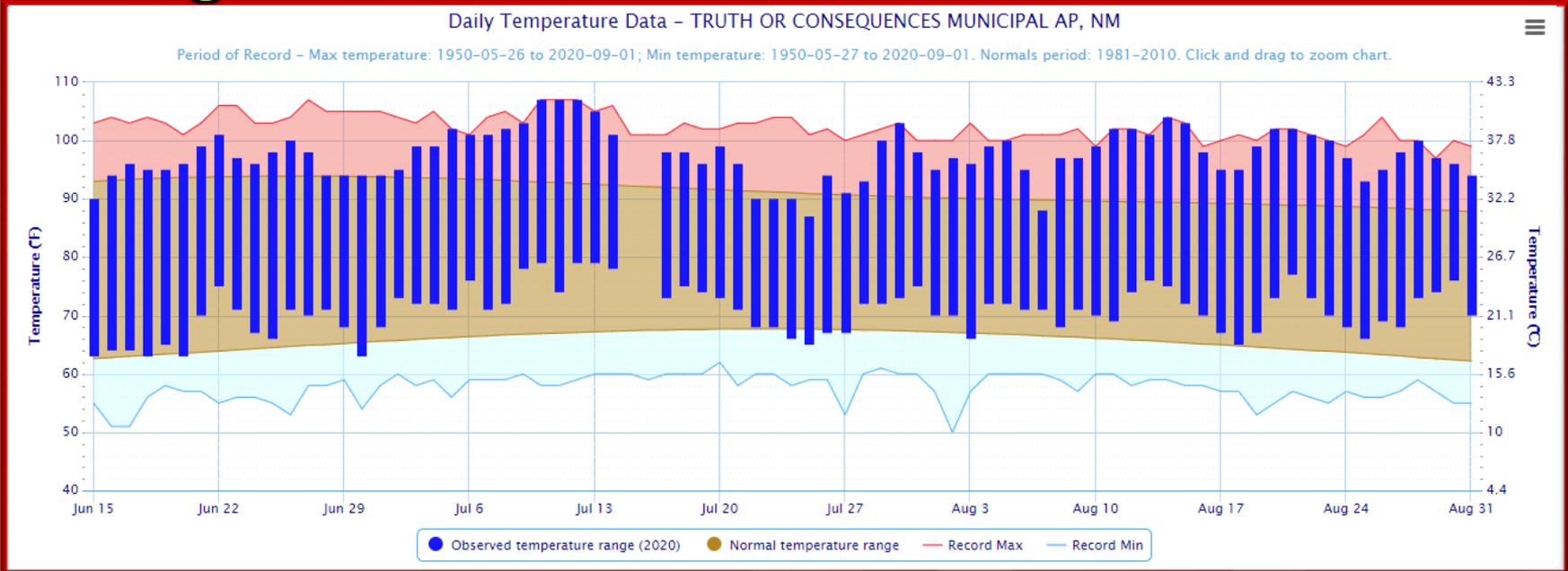
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Temperature and precipitation data through August 31 for the 2020 Monsoon Season in



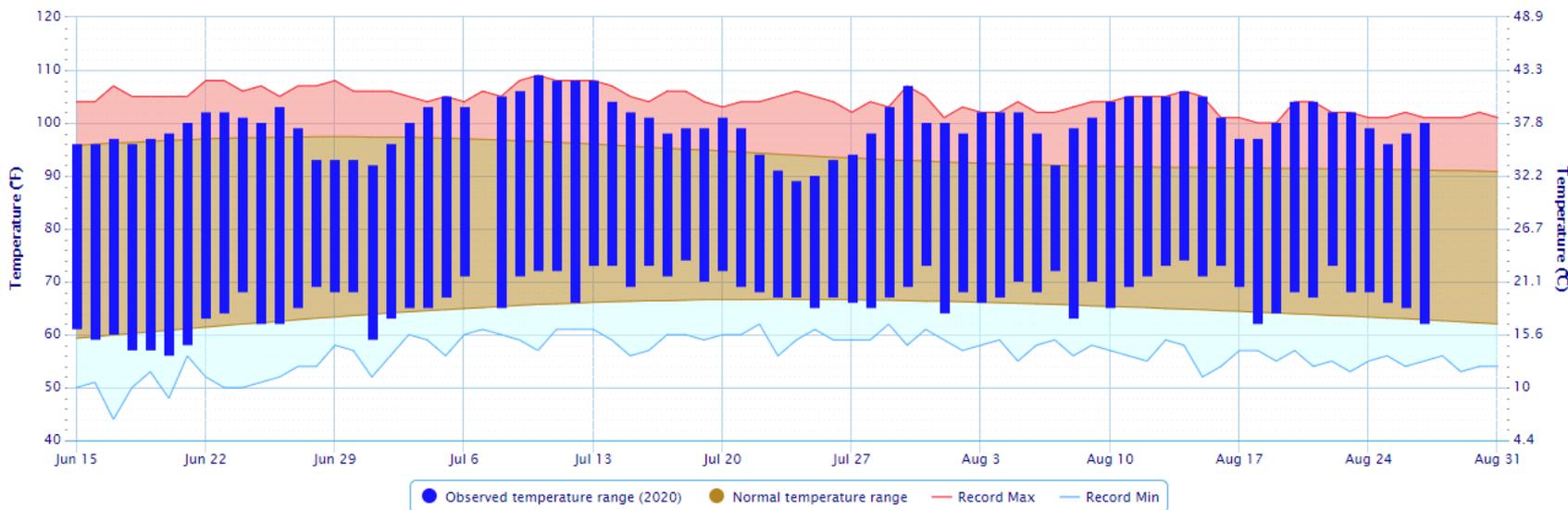
Temperature and precipitation data through August 31 for the 2020 Monsoon Season in T or C



Temperature and precipitation data through August 31 for the 2020 Monsoon Season in Deming

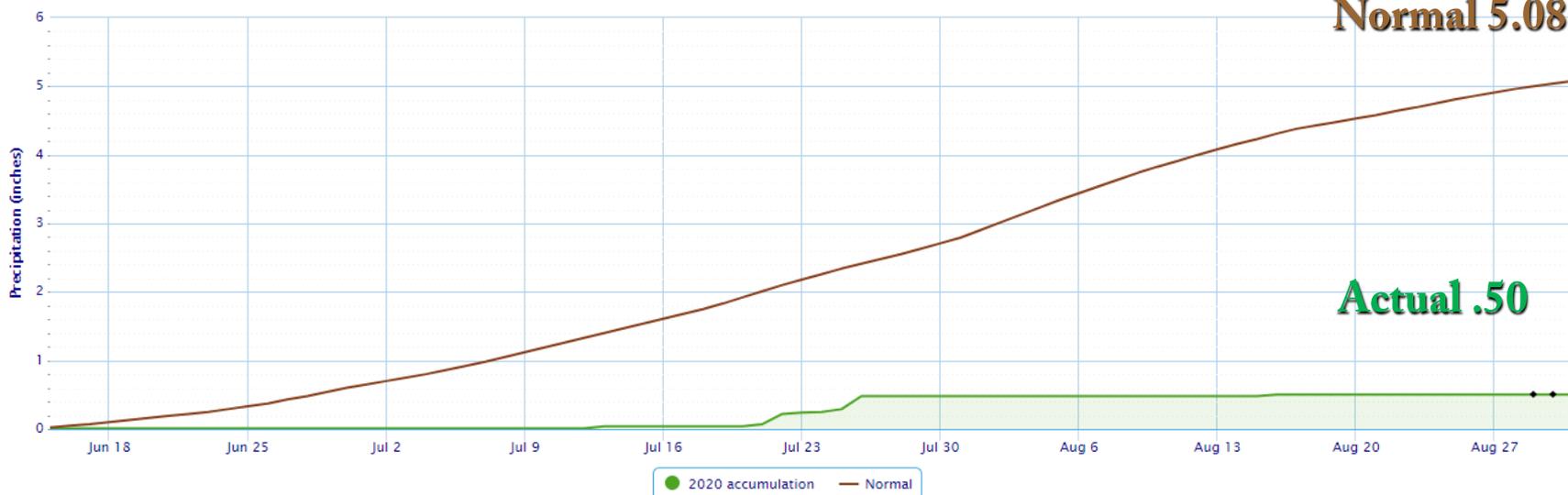
Daily Temperature Data – DEMING MUNICIPAL AP, NM

Period of Record – Max temperature: 1961-04-07 to 2020-08-27; Min temperature: 1961-04-08 to 2020-08-27. Normals period: 1981-2010. Click and drag to zoom chart.



Accumulated Precipitation – DEMING MUNICIPAL AP, NM

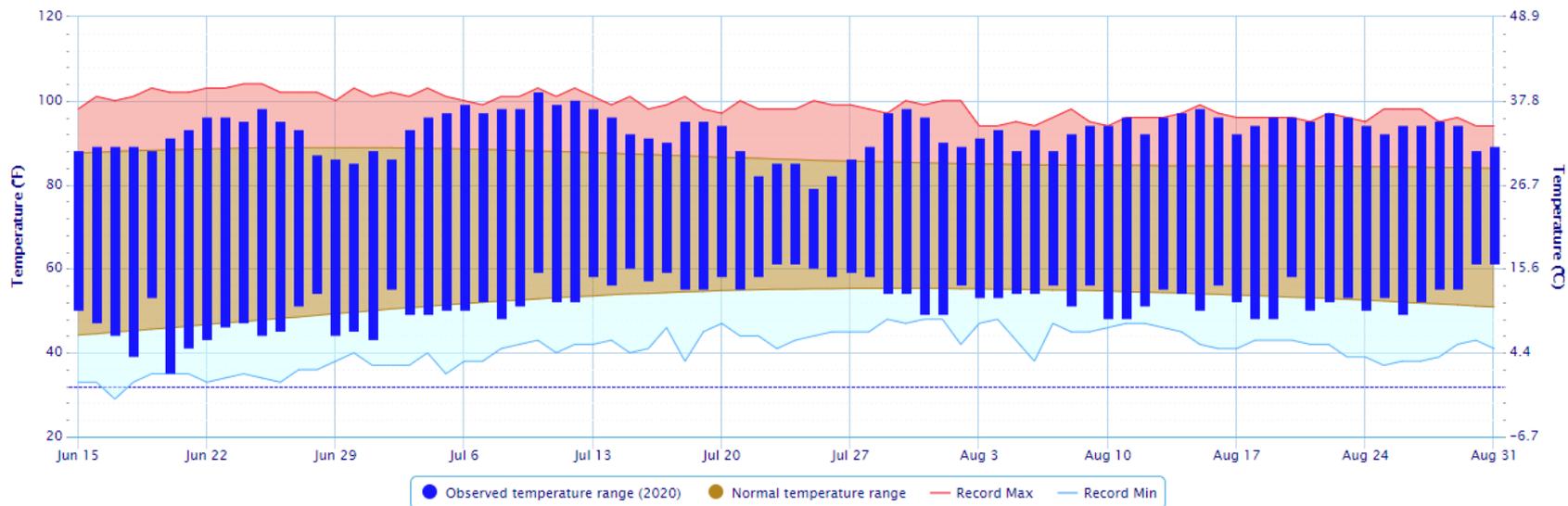
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Temperature and precipitation data through August 31 for the 2020 Monsoon Season in Gila Hot Springs

Daily Temperature Data - GILA HOT SPRINGS, NM

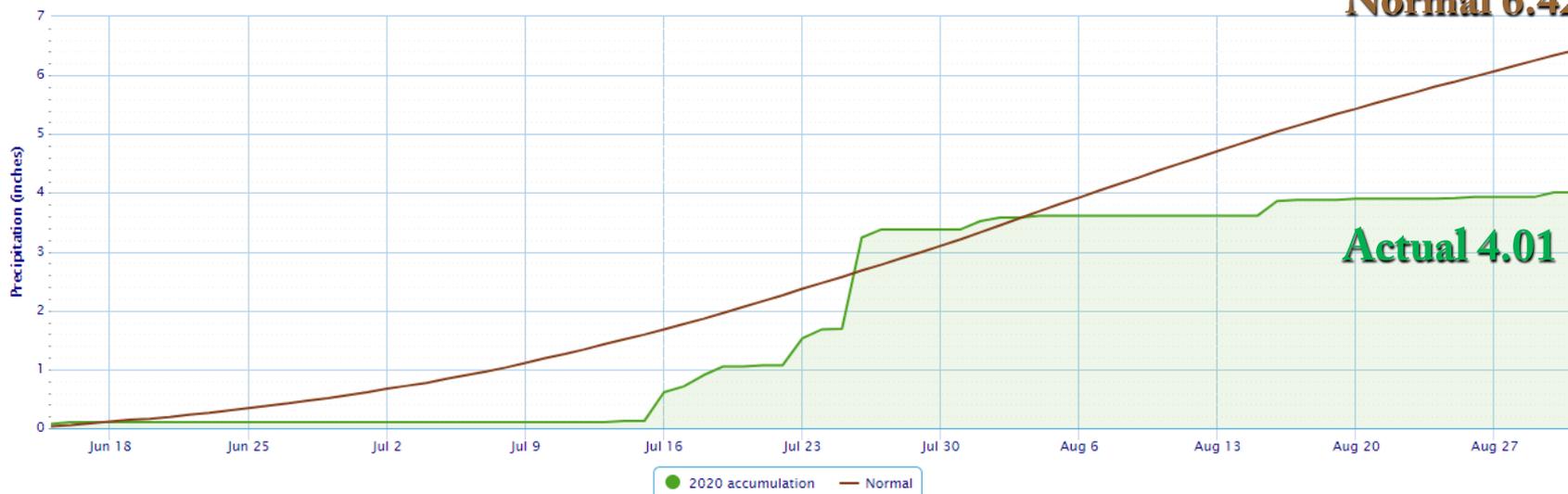
Period of Record - 1957-05-24 to 2020-09-01. Normals period: 1981-2010. Click and drag to zoom chart.



Accumulated Precipitation - GILA HOT SPRINGS, NM

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

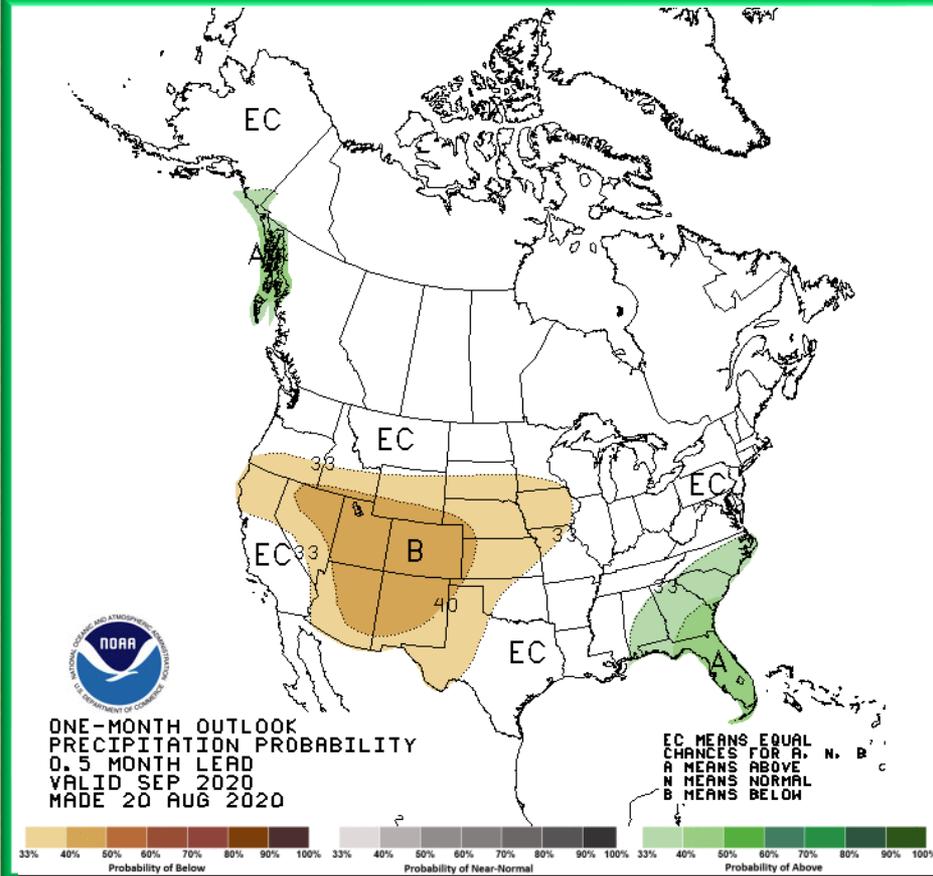
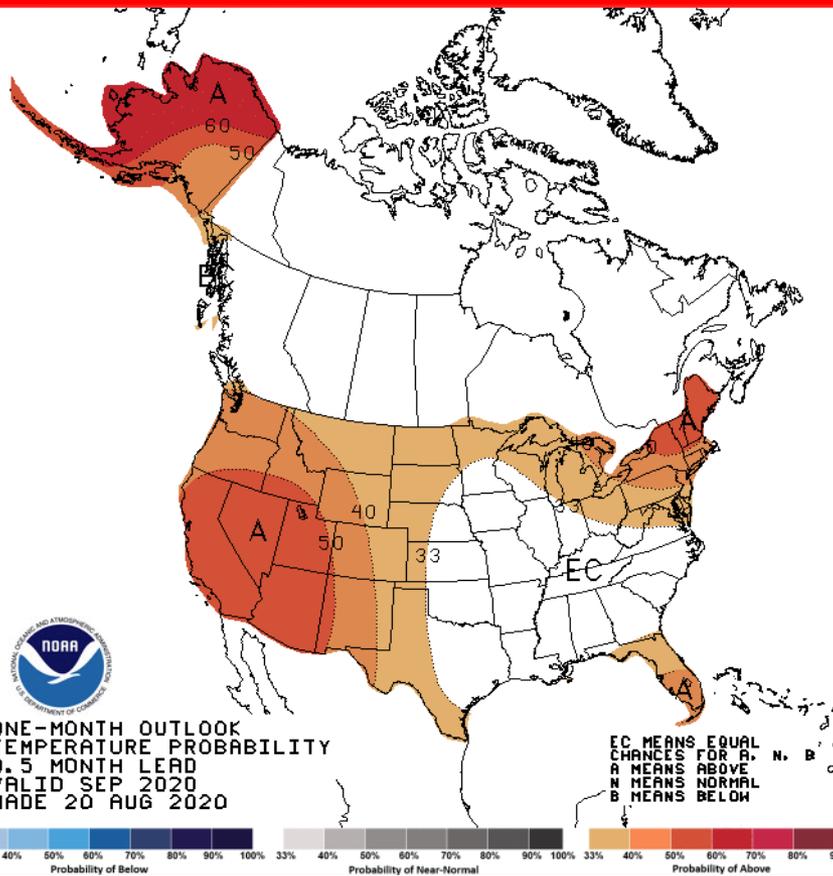
Normal 6.42



Temperature and precipitation outlook for September 2020

Temperature

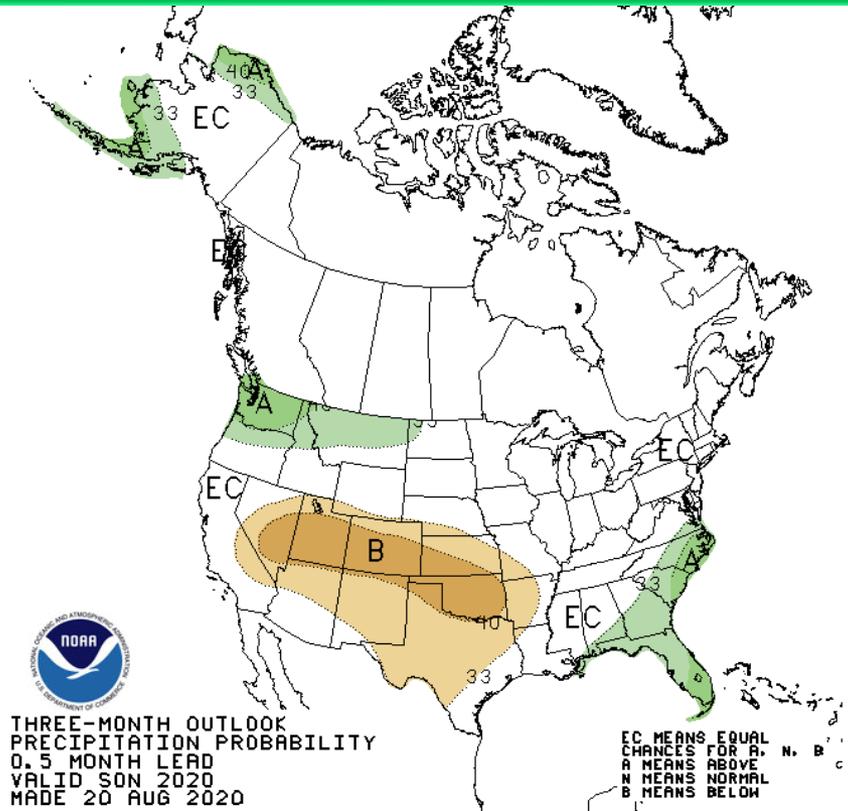
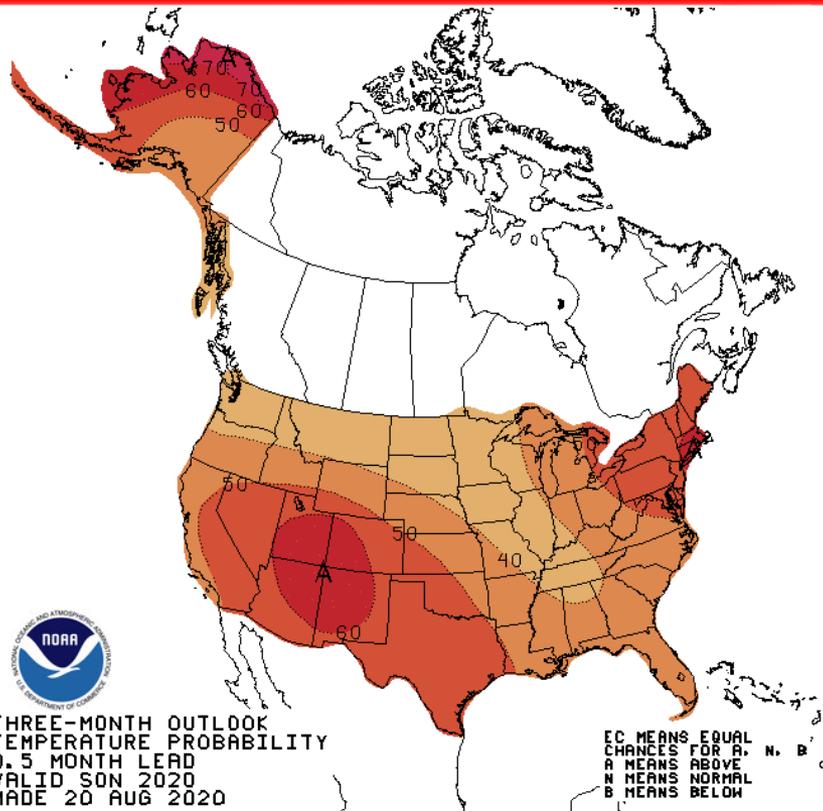
Precipitation



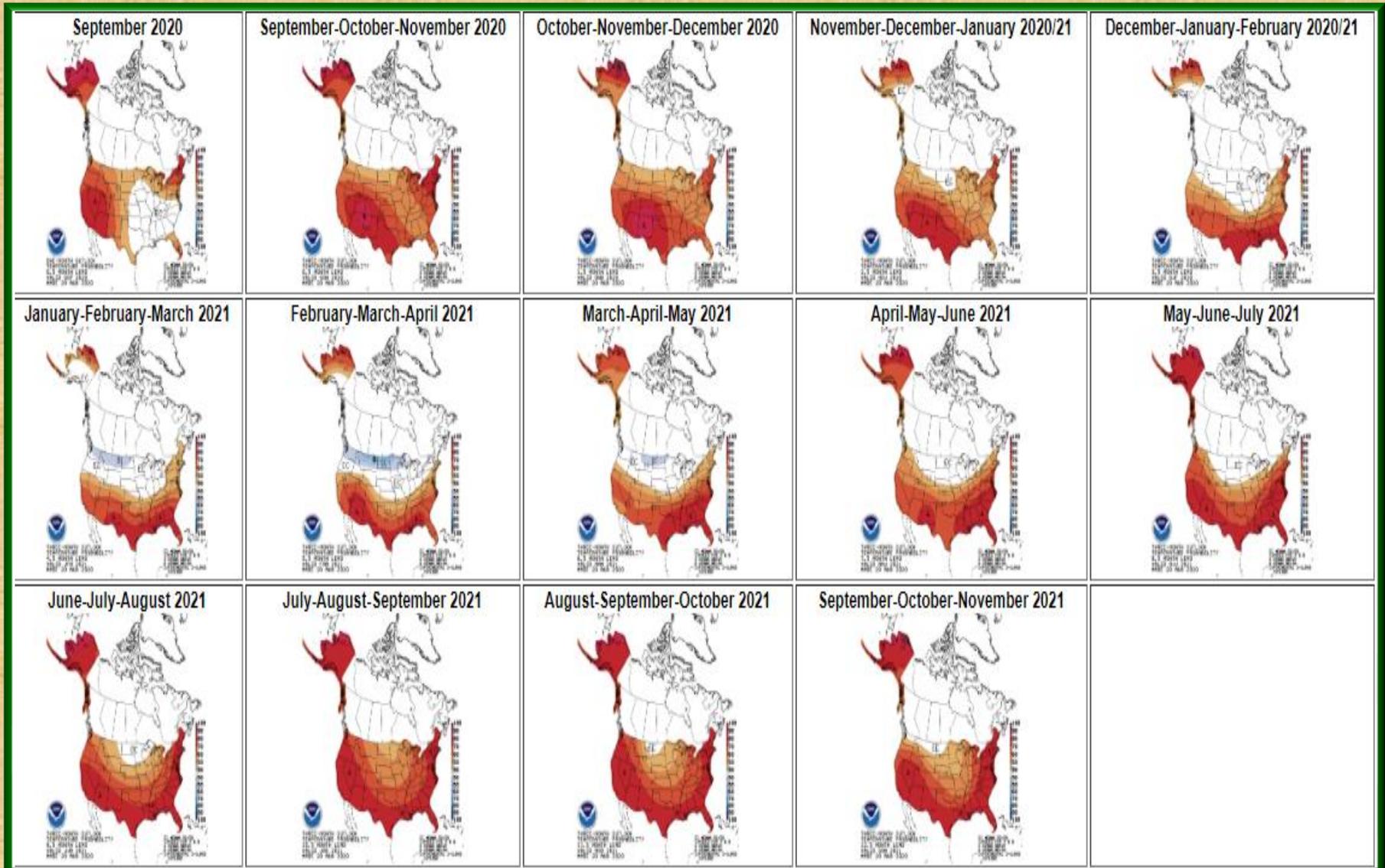
Temperature and precipitation outlook For September-November 2020

Temperature

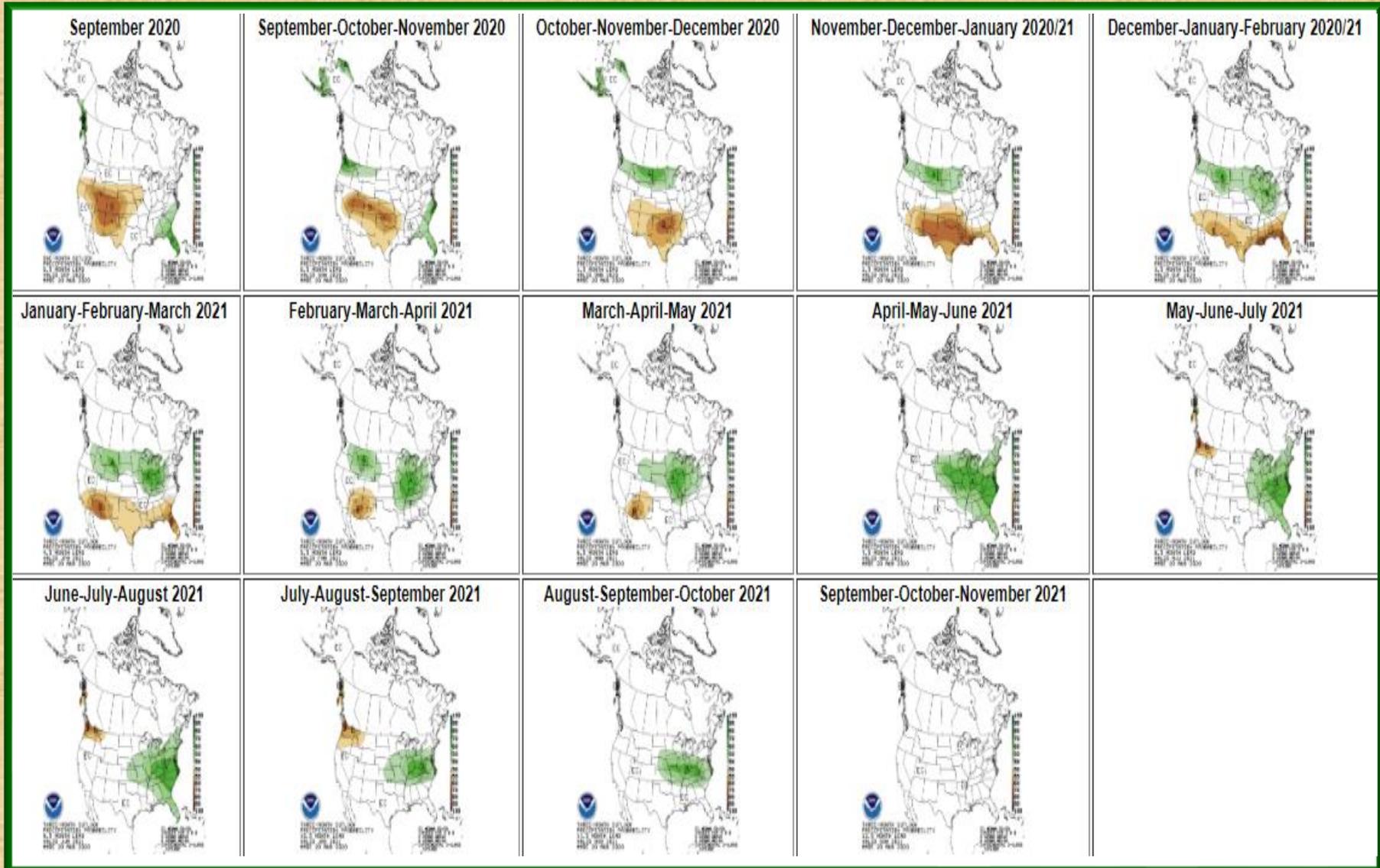
Precipitation



Temperature Outlook Through November 2021

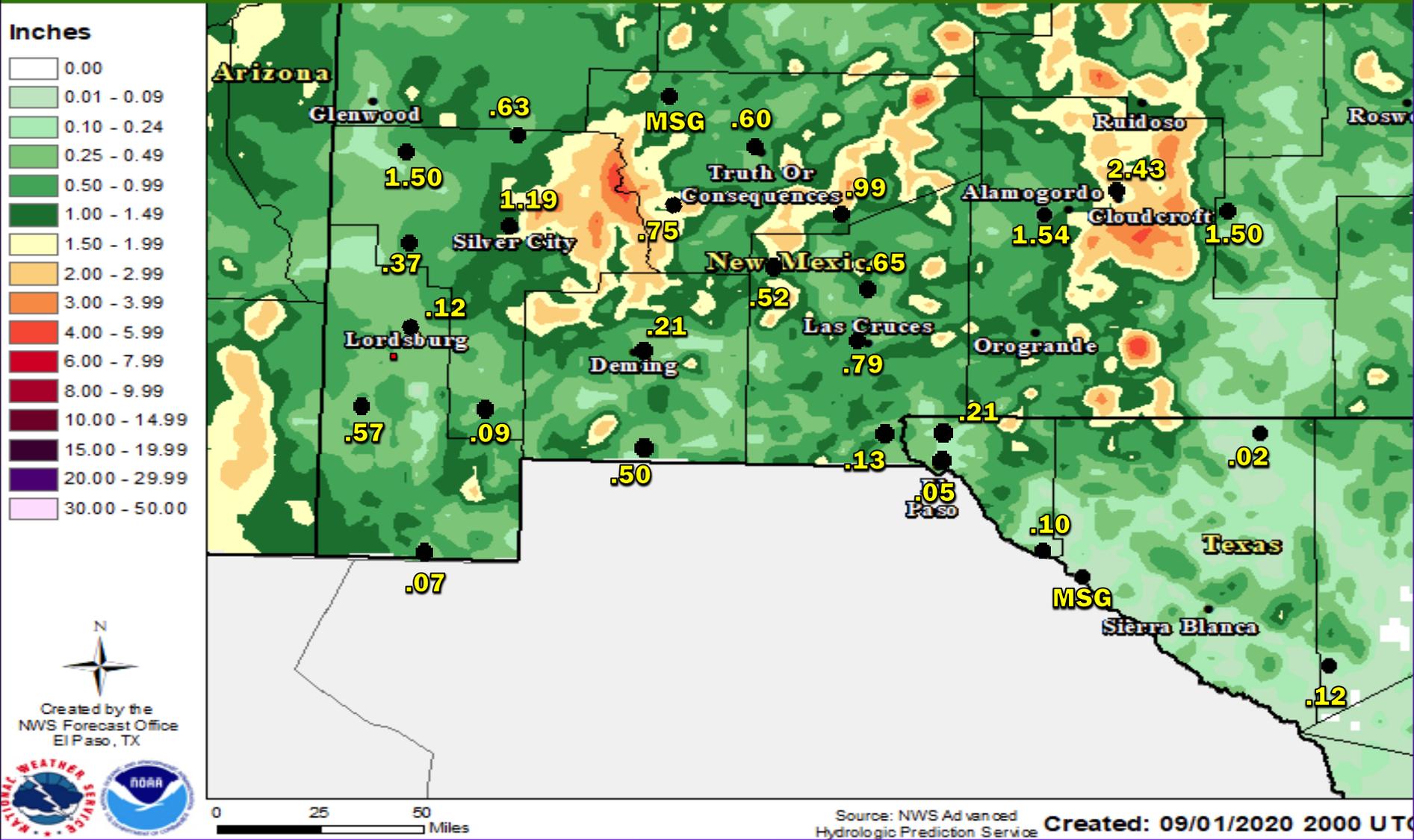


Precipitation Outlook Through November 2021

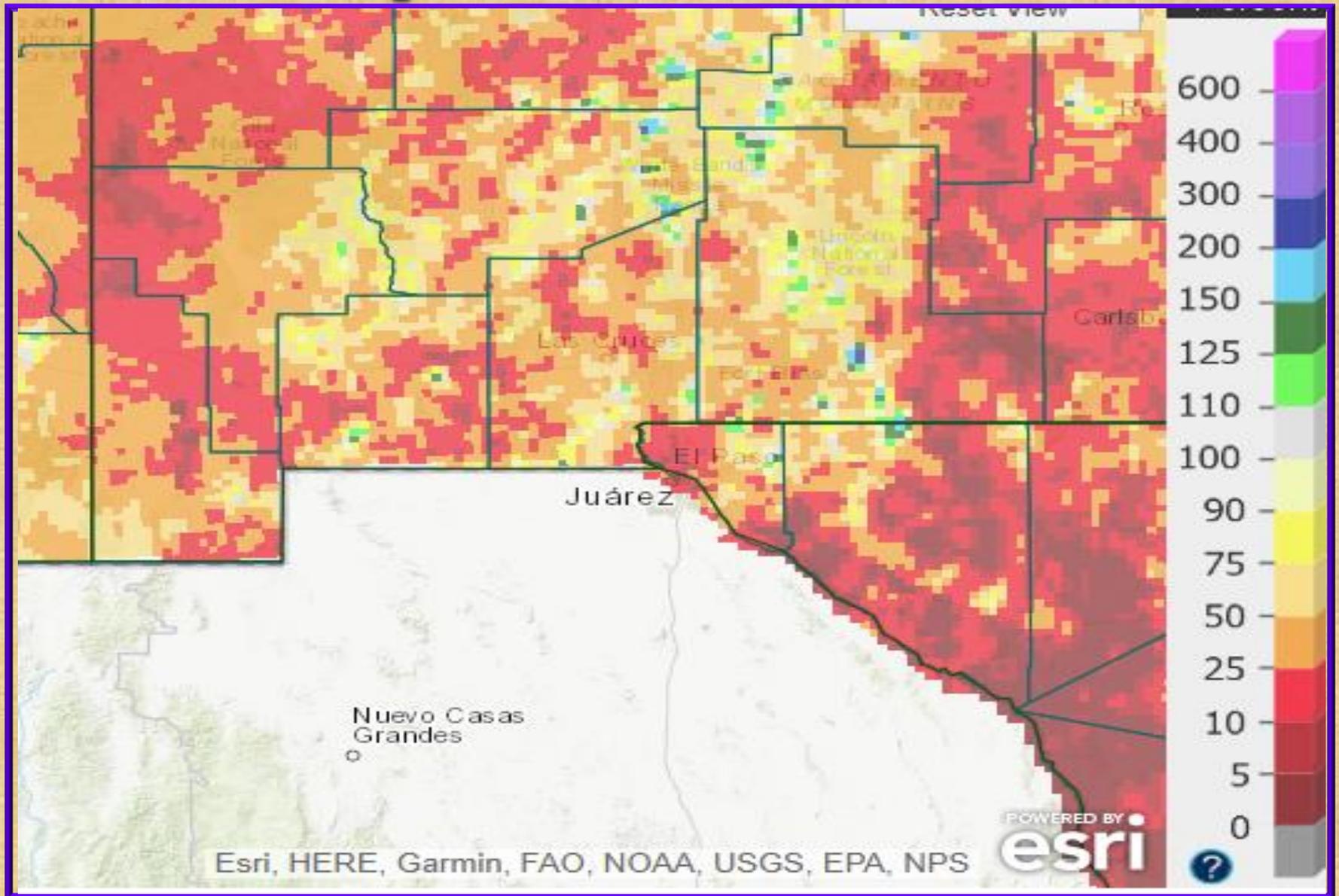


August 2020 radar rainfall estimate with surface rainfall reports

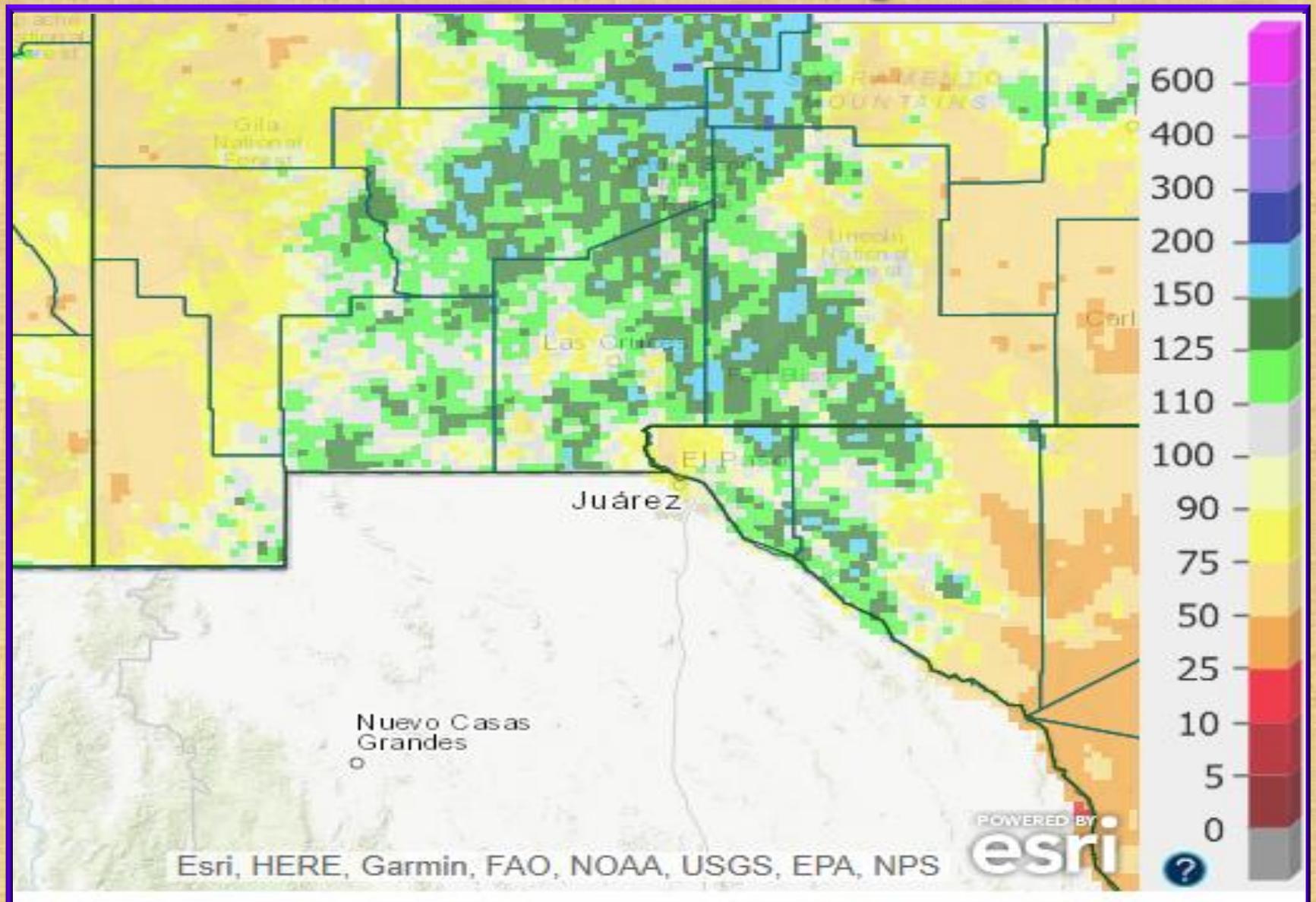
Total Monthly Precipitation - August 2020



August 2020 radar rainfall estimate percent of normal



Radar rainfall estimate percent of normal for the Water Year (Oct 1 to present)

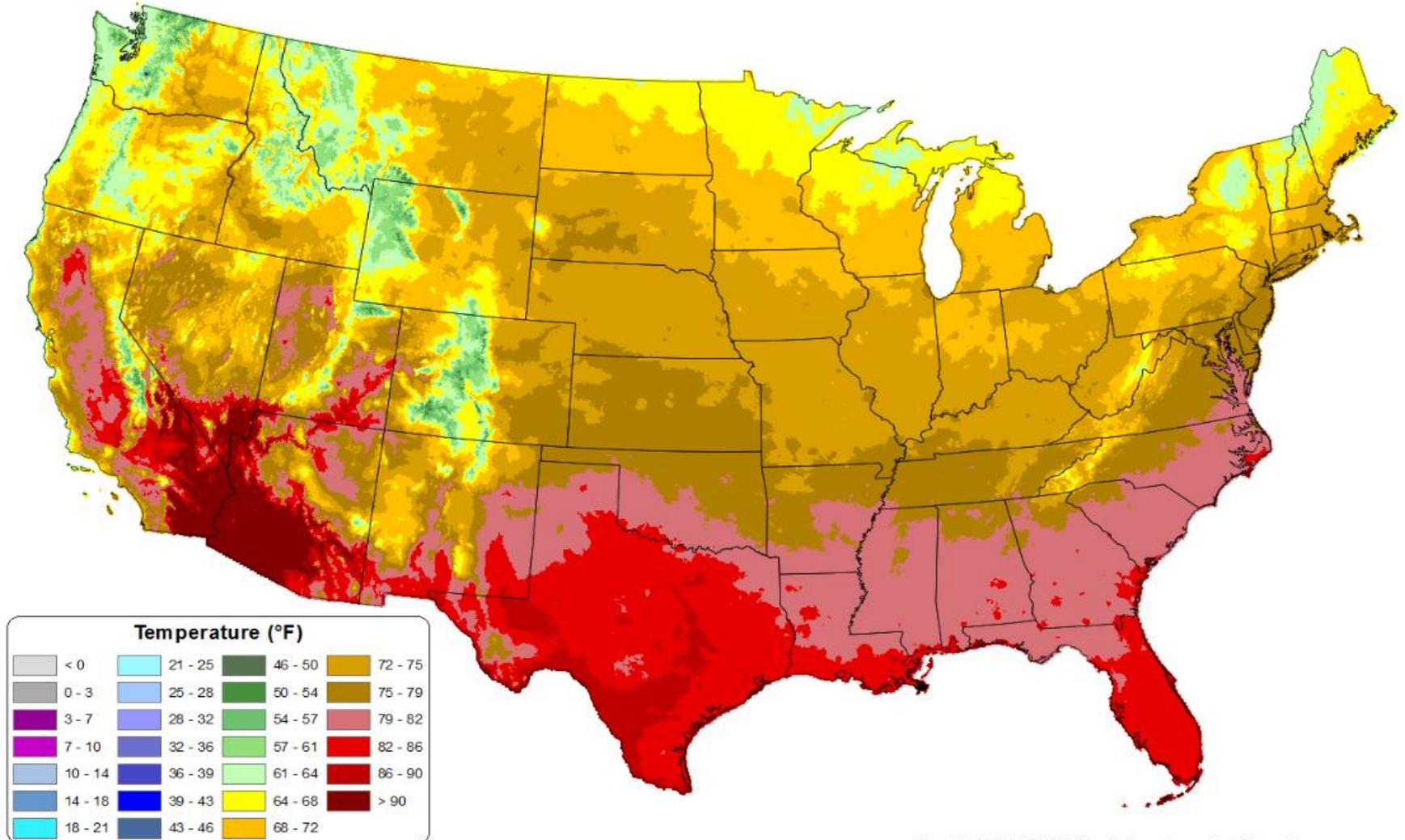


Average Daily Mean Temperature for August 2020

Average Daily Mean Temperature: Aug 2020

Period ending 7 AM EST 31 Aug 2020

(Map created 02 Sep 2020)

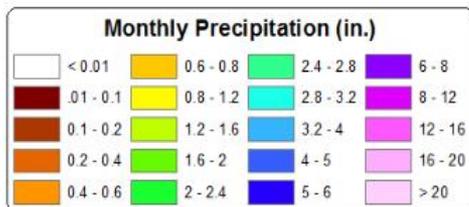
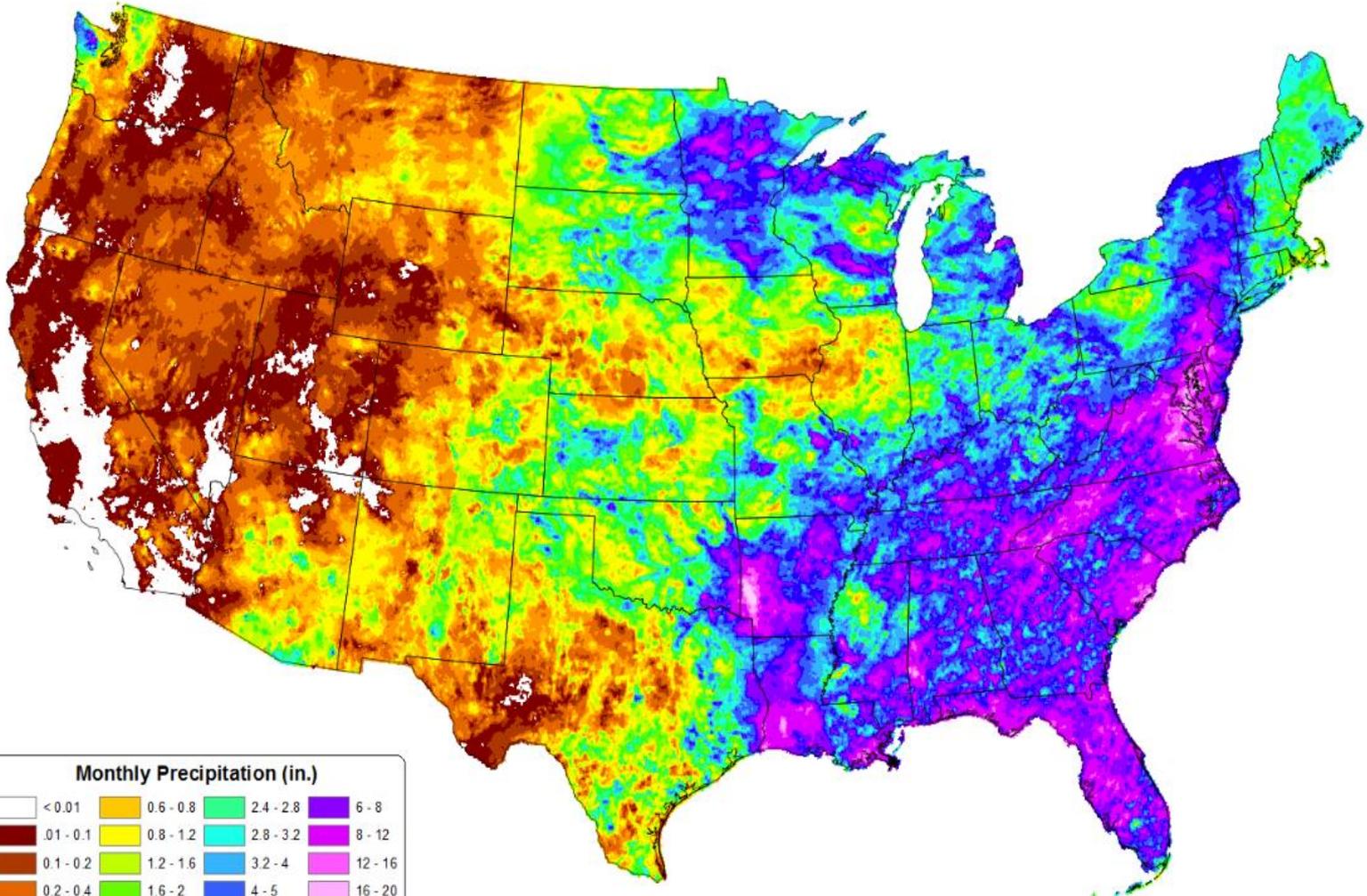


Total Precipitation for August 2020

Total Precipitation: Aug 2020

Period ending 31 Aug 2020

(Map created 02 Sep 2020)



Selected weather reports August 2020

Date/Time	Location (County)	Event
AUGUST 1 625 PM	LORDSBURG 10SW-HIDALGO	62 MPH PEAK GUST
AUGUST 1 109 AM	FORT BLISS-EL PASO	61 MPH PEAK GUST
AUGUST 1 755 PM	TULAROSA 6NW-OTERO	60 MPH PEAK GUST
AUGUST 1 300 AM	CHAPARRAL-DONA ANA	57 MPH PEAK GUST
AUGUST 23 700 PM	LAS CRUCES 4NE-DONA ANA	83 MPH PEAK GUST

Local forecast by "City, St" or ZIP code
 Enter location ...
[Location Help](#)

Heavy Rain and Flash Flooding Possible Over Parts of the Eastern United States
 Heavy rainfall is expected over portions of the eastern United States through Thursday. Flooding and flash flooding will be possible in some areas. Click the "Read More" link for excessive rainfall forecasts from the Weather Prediction Center. [Read More >](#)

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NWS El Paso
[Weather.gov > El Paso, TX](#)

El Paso, TX
 Weather Forecast Office

Current Hazards Current Conditions Radar Forecasts Rivers and Lakes Climate and Past Weather **Local Programs**

Today

Wednesday
 Warmer with a Few Afternoon Storms
 Weather Forecast Office
 El Paso, TX
 September 27, 2016 4:43 PM

Local forecast by "City, St" or ZIP code
 Enter location ...
[Location Help](#)

Heavy rain expected across the Mid-Atlantic region and central Appalachians.
 Heavy rainfall is possible over portions of the eastern United States today, with the highest risk across the Mid-Atlantic and central Appalachians. Click the "Read More" link for excessive rainfall forecasts from the Weather Prediction Center. Afternoon showers and thunderstorms are possible over portions of the Southwest and southern Rockies through Friday. [Read More >](#)

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El Paso, TX
 Weather Forecast Office

Current Hazards Current Conditions Radar Forecasts Rivers and Lakes Climate and Past Weather **Local Programs**

Southern New Mexico and Far West Texas has a variety of weather from month to month. Conditions can range from extreme drought, to heavy flooding rains, from record breaking heat to bone chilling cold. Below you will find past weather highlights from the area that the NWS office in Santa Teresa NM covers. This area includes the following counties in New Mexico: Hudspeth, Grant, Luna, Sierra, Doña Ana and Otero and the following counties in Texas: El Paso and Hudspeth.

weather.gov/epz

Don't Forget-Current and past issues of our Weather Digest are available on our website at <http://www.weather.gov/epz/>

Just click on "Local Programs>Weather Digest", then choose which month's Digest to view. Also, though discontinued, don't forget to check out our back issues of Southwest Weather Bulletin.

WEATHER DIGESTS AND BULLETINS	
Weather Digest	Southwest Weather Bulletins
January	2005 Spring Fall
February	2006 Spring Fall
March	2007 Spring Fall
April	2008 Spring Fall
May	2009 Spring Fall
June	2010 Spring Fall
July	2011 Spring Fall
August	2012 Spring Fall
September	2013 Spring Fall
October	2014 Spring Fall
November	
December	

**NWS DOPPLER RADAR
WATCHING THE MONSOON SKIES
OVER EL PASO 24/7**

