

# July 2020 Weather Digest



# July 2020 Weather Summary

July typically is the beginning of the Monsoon season and this July, the Monsoon season began in the first week of the month as the upper flow pattern switched from our dominant westerly flow to south or east flow. Moisture for July was hit or miss as is most often the case in the summer. Most of the area from the Rio Grande Valley east was near to slightly above normal, while to the west much of the area was below normal. The first half of the month remained quite dry, but we finally got a tropical plume of moisture over the area much of the second half of the month, thus allowing precipitation to approach normal levels.

Temperatures were above normal for the majority of the area. As mentioned above, since the first half of the month was abnormally dry this would also mean that the first half of the month was abnormally hot. High temperatures were well above normal with many lowland sites recording long stretches of triple digit heat. El Paso recorded a high of 110 degrees on the 13th, which was only four degrees below the all time record. The tropical moisture reaching the area the last half of the month is what finally lowered our temperatures back to or slightly below normal.

# July 2020 Weather Summary, cont'd

Looking ahead to August, we can expect lower temperatures although the humidity quite often negates the benefits of slight cooling of temperatures. The average high temperature at El Paso on the 1st is 93 degrees, cooling to 91 degrees on the last day of the month. We continue to lose daylight; with 13 hours 39 minutes of daylight on the first, falling to 12 hours 48 minutes on the last day of August. Our full moon for the month will be on the 3rd, also known as the Sturgeon Moon, while our new moon will occur on the 18th.

**July 6 Storm near Jornada**



**July 16 Storm near Lordsburg**



**July 14 Storm near Dona Ana**



**July 22 Storm near Santa Teresa**



**July Thunderstorm**



©20 Greg Duenas

**July 7 Thunderstorm**



**July 16 Lightning El Paso**



**July 22 Lightning Santa Teresa**



**July 18 Sunrise El Paso/Juarez**



**July 31 Rainbow**



**July 24 Funnel Cloud near Rodeo**



**July 24 Funnel Thunderstorm El Paso**



**July 18 Sunrise El Paso/Juarez**



**July 25 Thunderstorm Las Cruces**



**July 25 Lightning El Paso**



**July 25 Thunderstorm Santa Teresa**



# July 19 Comet Neowise



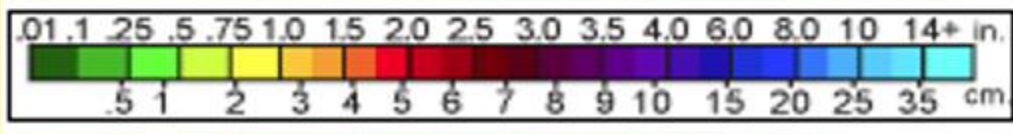
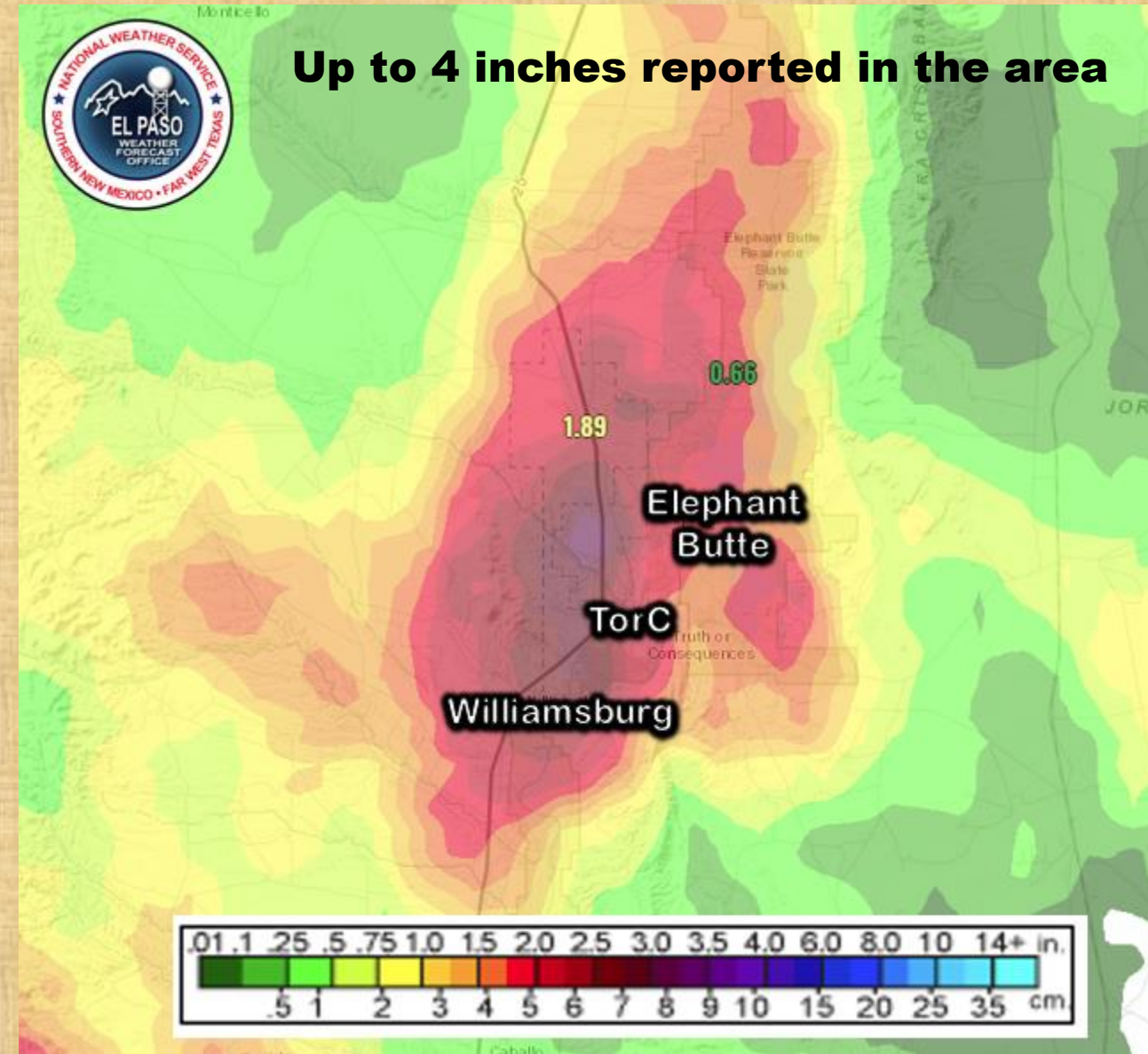
*Pam Dorner*



# July 26 Heavy Rain T or C area



**Up to 4 inches reported in the area**



# **ENSO Alert System Status: La Niña Watch**

## **ENSO Alert System**

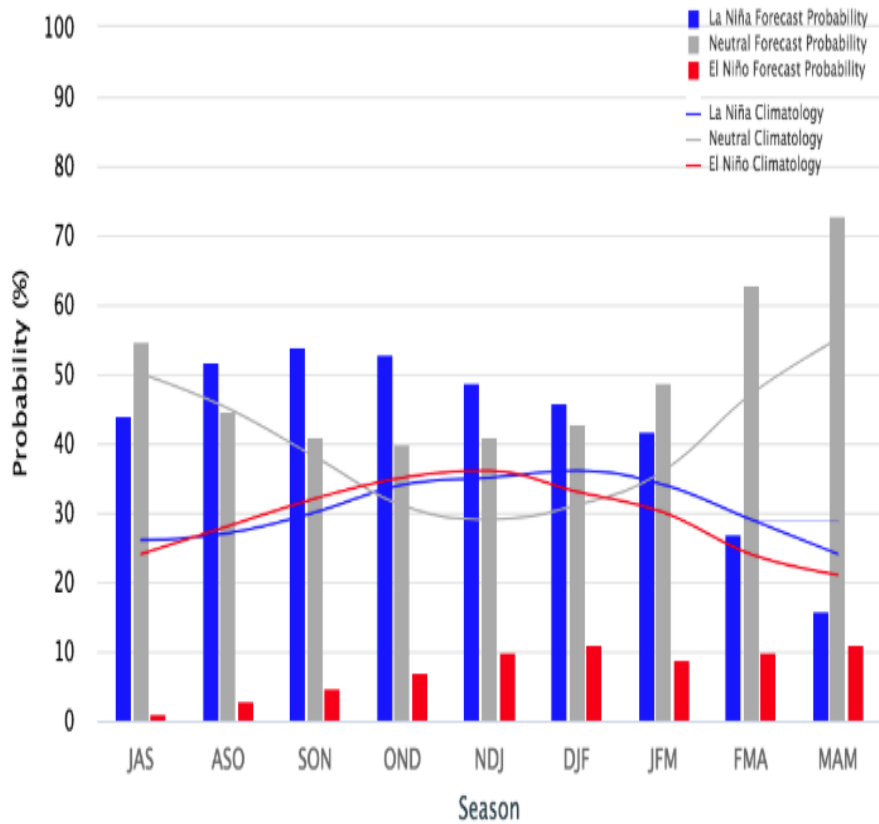
- **El Niño or La Niña Watch:** Issued when conditions are favorable for the development of El Niño or La Niña conditions in the next six months.
- **El Niño or La Niña Advisory:** Issued when El Niño or La Niña conditions are observed and expected to continue.

# ENSO Forecast

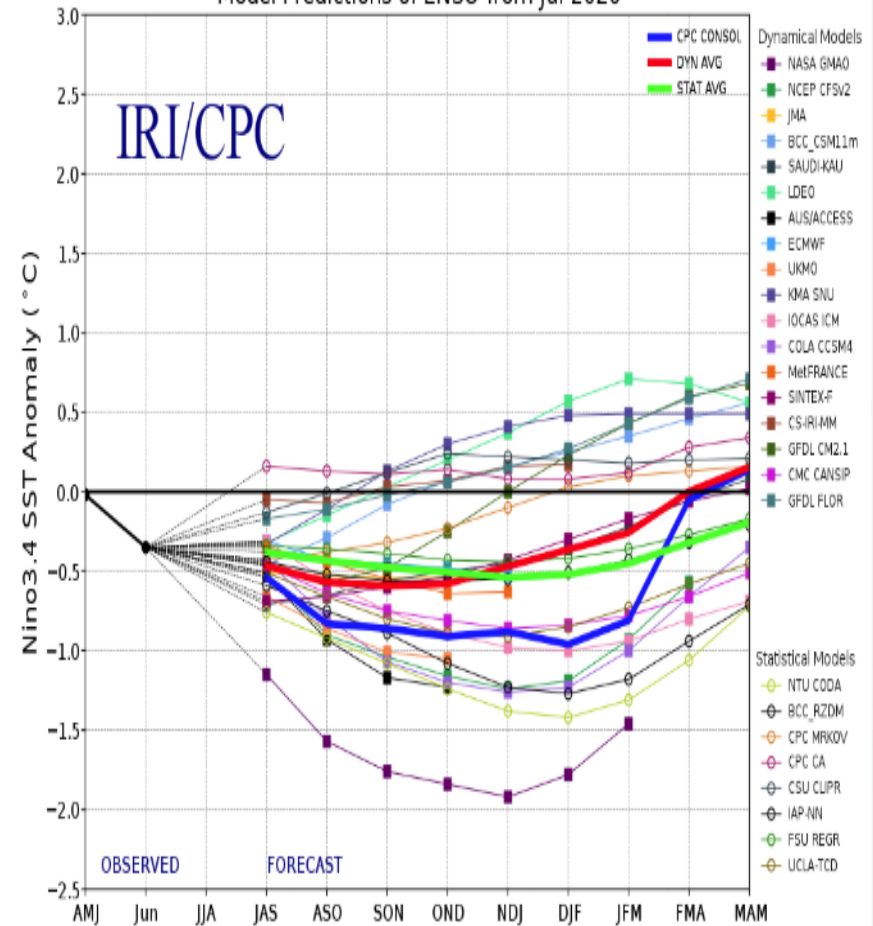
ENSO is now in a neutral phase and is expected to remain that way into this winter

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

ENSO state based on NINO3.4 SST Anomaly  
Neutral ENSO:  $-0.5^{\circ}\text{C}$  to  $0.5^{\circ}\text{C}$



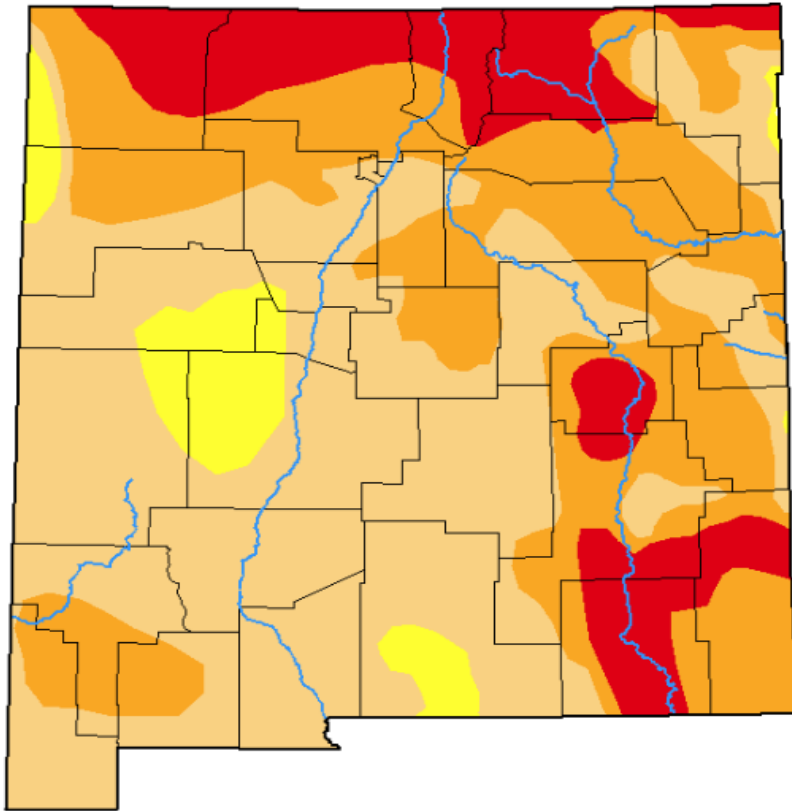
Model Predictions of ENSO from Jul 2020



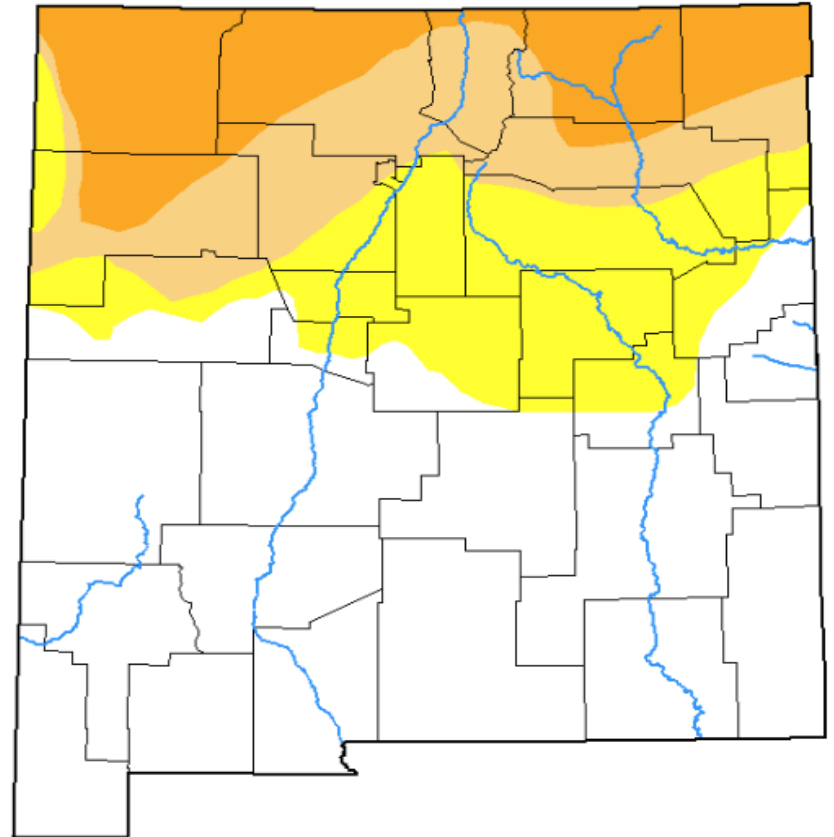
# Current drought conditions for New Mexico and 3 month change

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

**July 28, 2020**








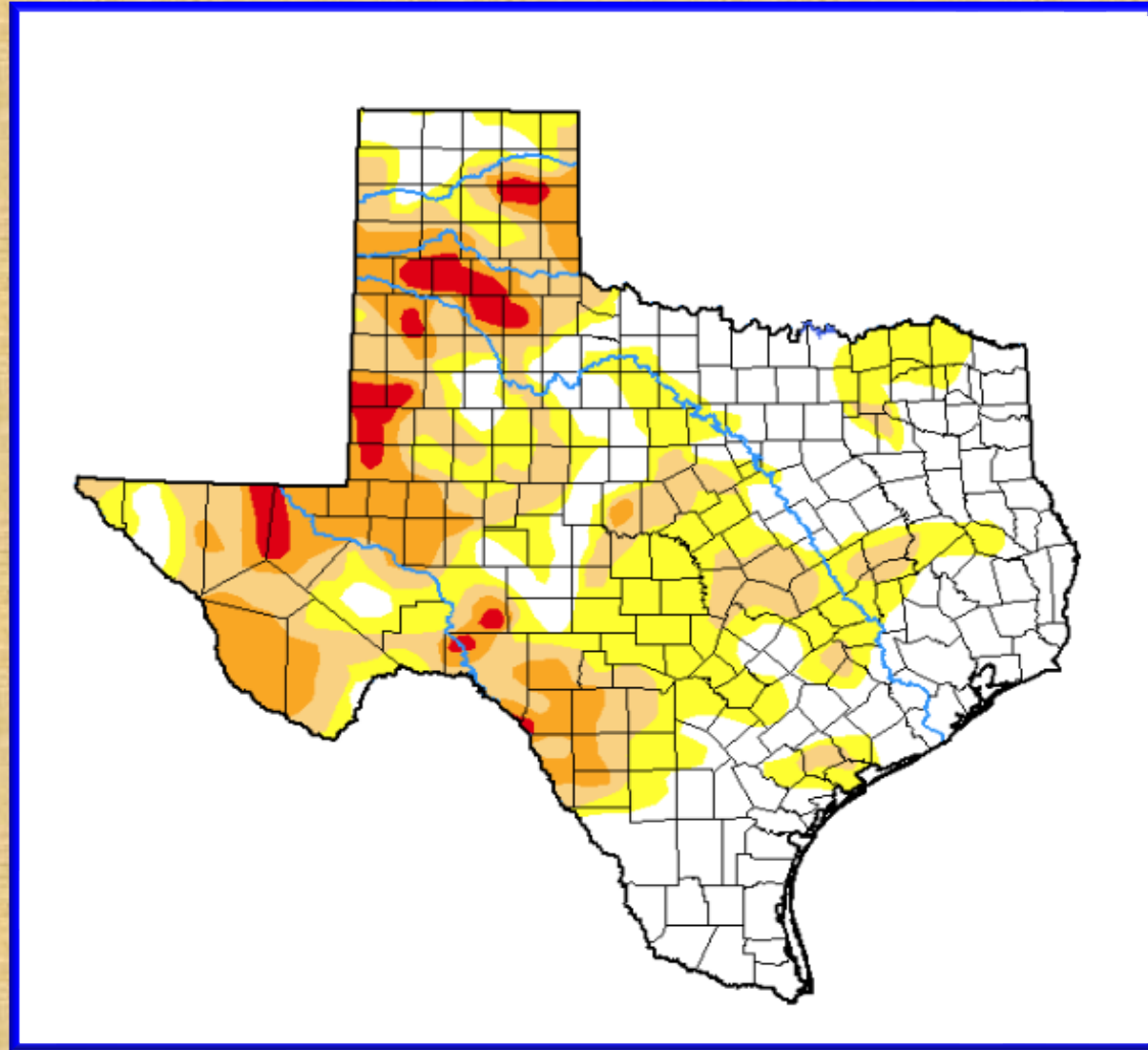
**April 28, 2020**



# Current drought conditions for Texas as of July 28, 2020

Intensity:

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



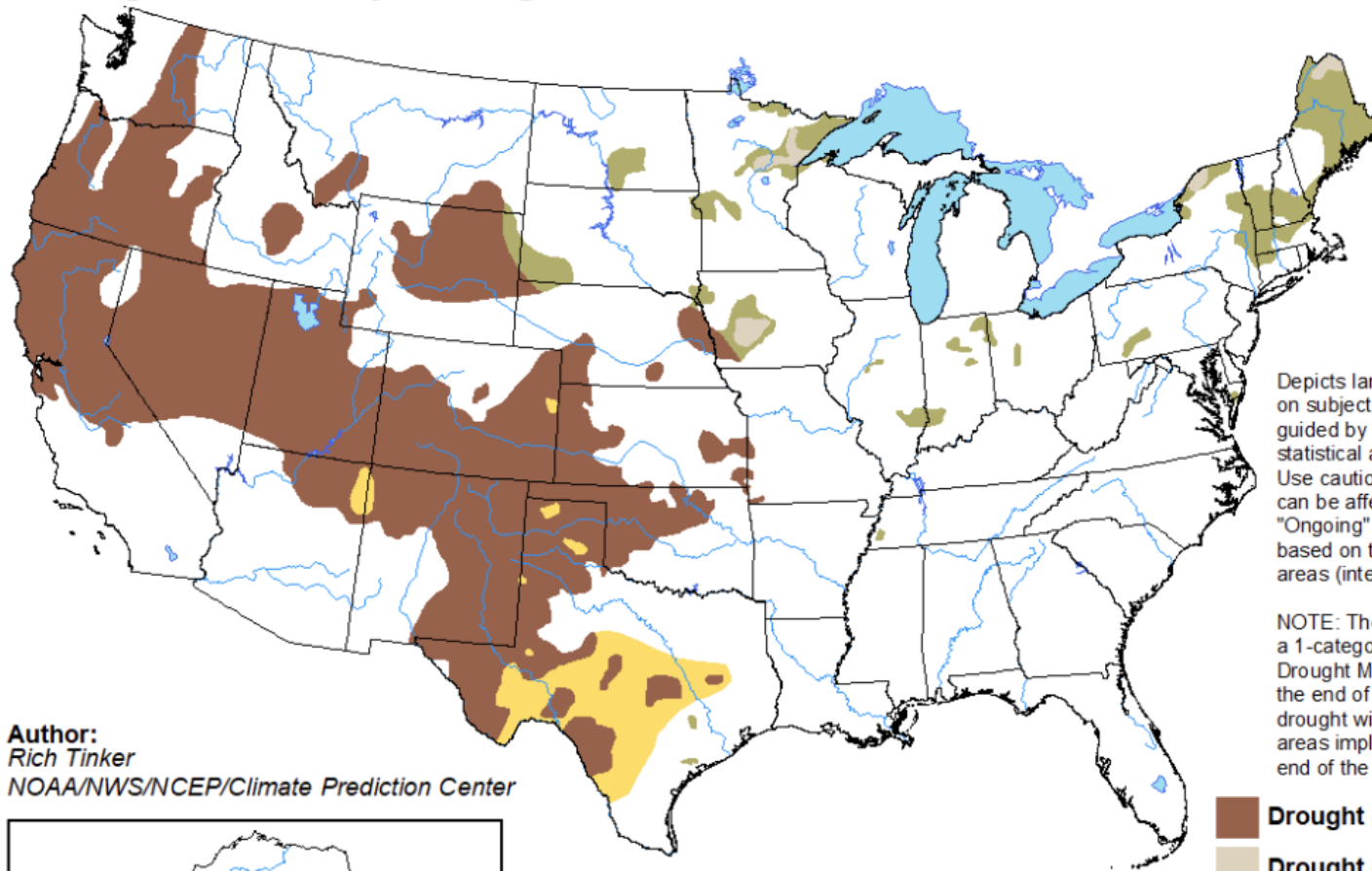
**Build your own custom slider maps here at:**

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

# U.S. Seasonal Drought Outlook

## Drought Tendency During the Valid Period





Valid for July 16 - October 31, 2020  
Released July 16



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:  
Rich Tinker  
NOAA/NWS/NCEP/Climate Prediction Center

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

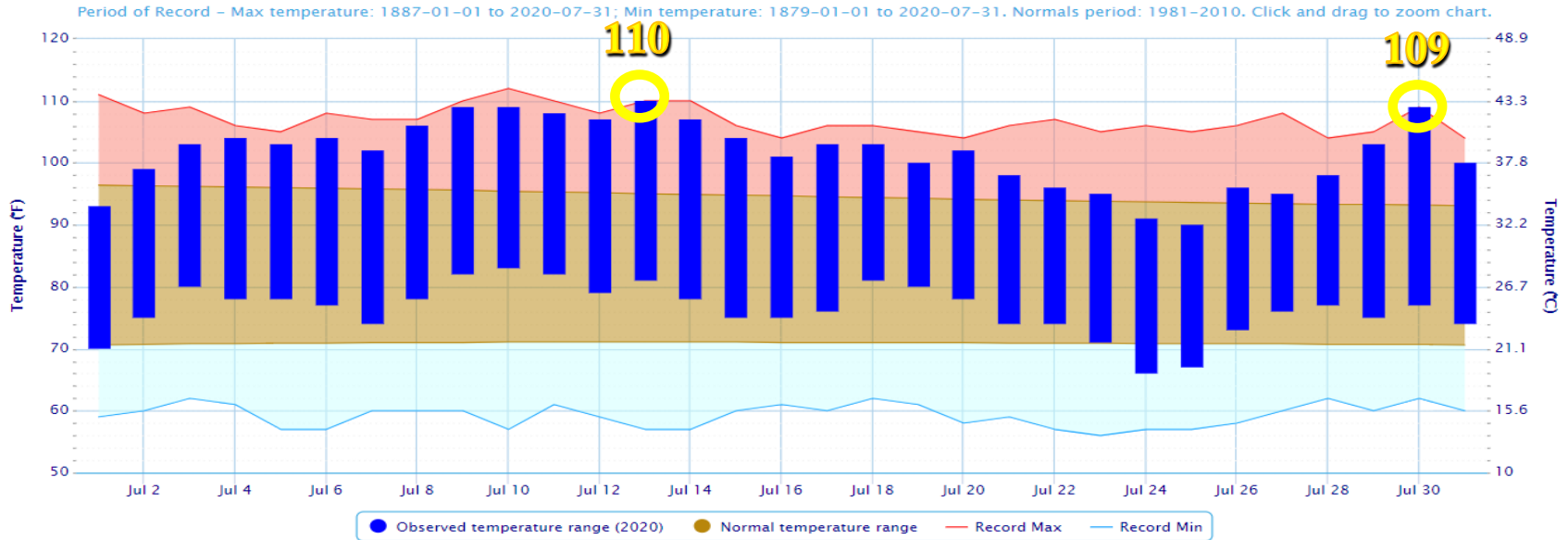


<http://go.usa.gov/3eZ73>

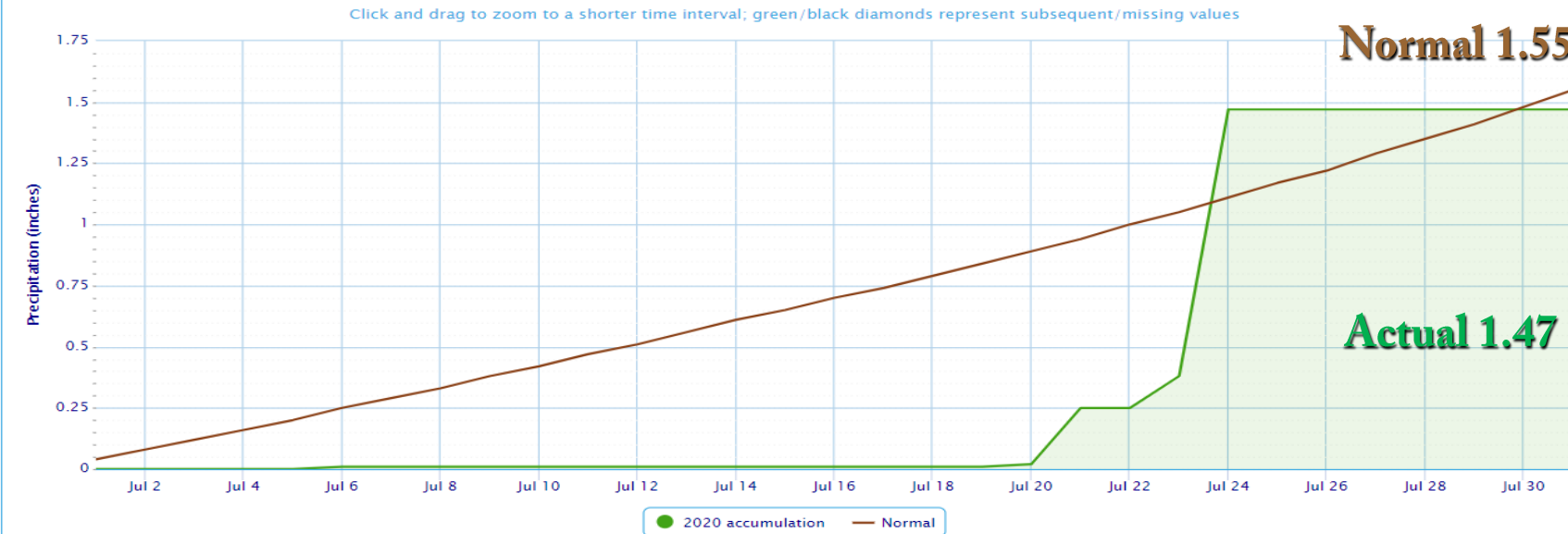
# Temperature and precipitation data for July 2020 in El Paso

○ = record

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



Accumulated Precipitation – El Paso Area, TX (ThreadEx)



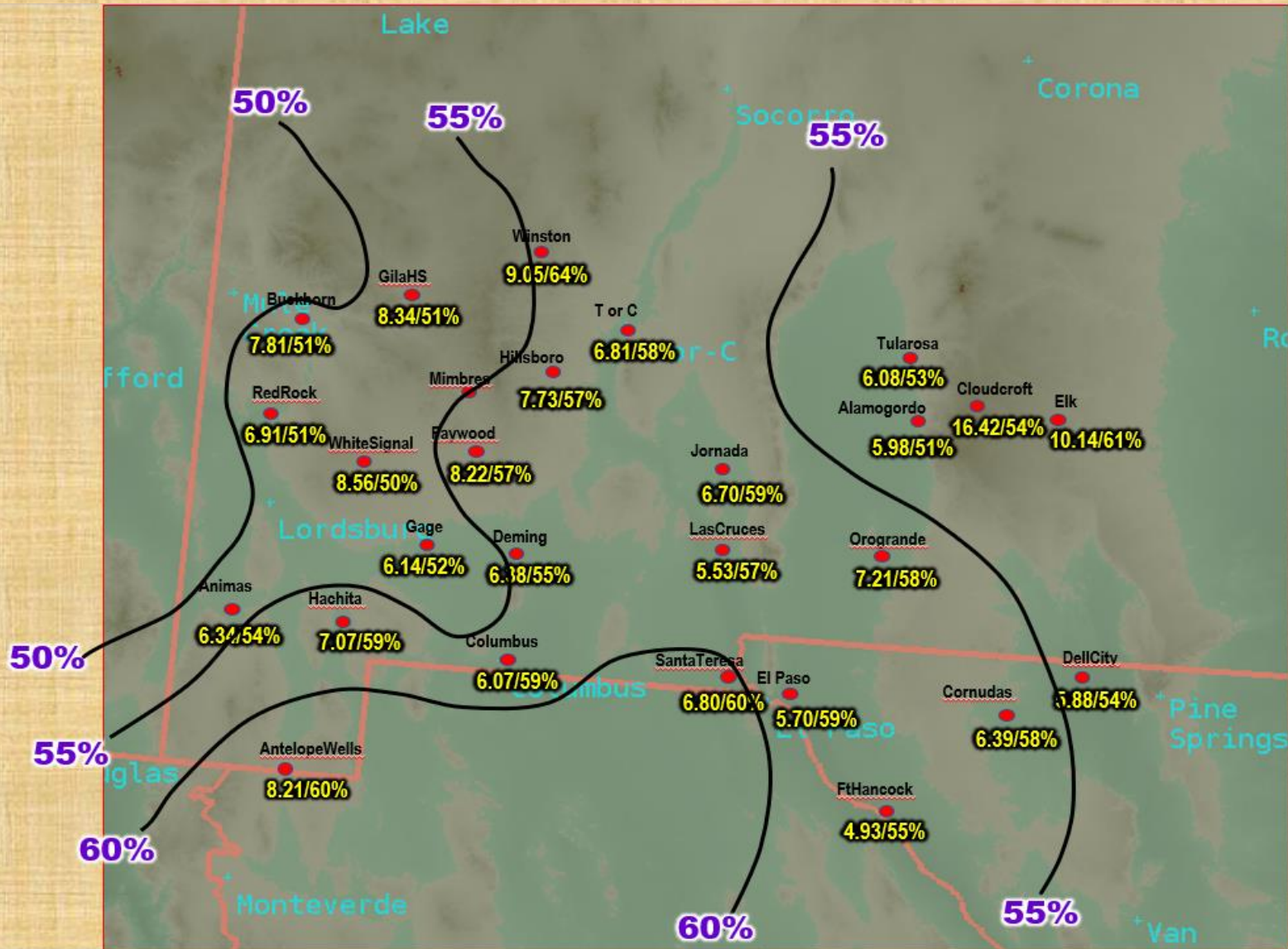
# **Tracking the 2020 Monsoon Season across the El Paso Forecast Area**

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 Mexican Monsoon 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 two-thirds of our rain appears. The 29C criteria was reached on about July 27.

The position of this 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)

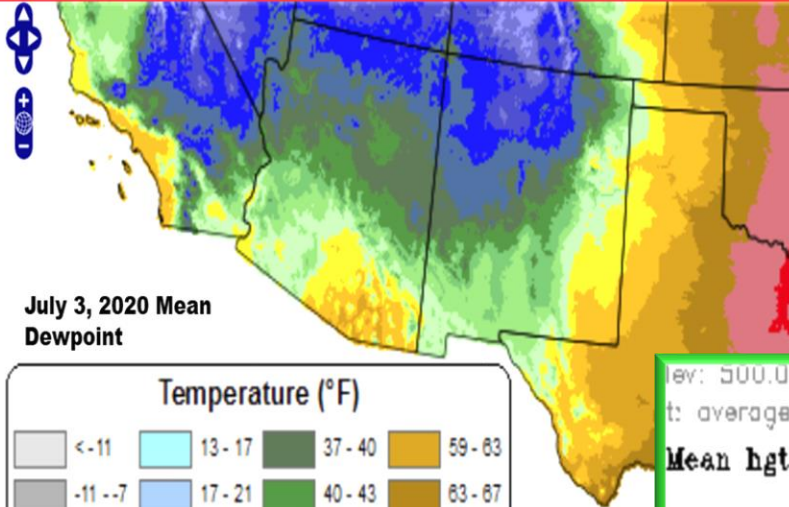


# Tracking the 2020 Monsoon Season across the El Paso Forecast Area



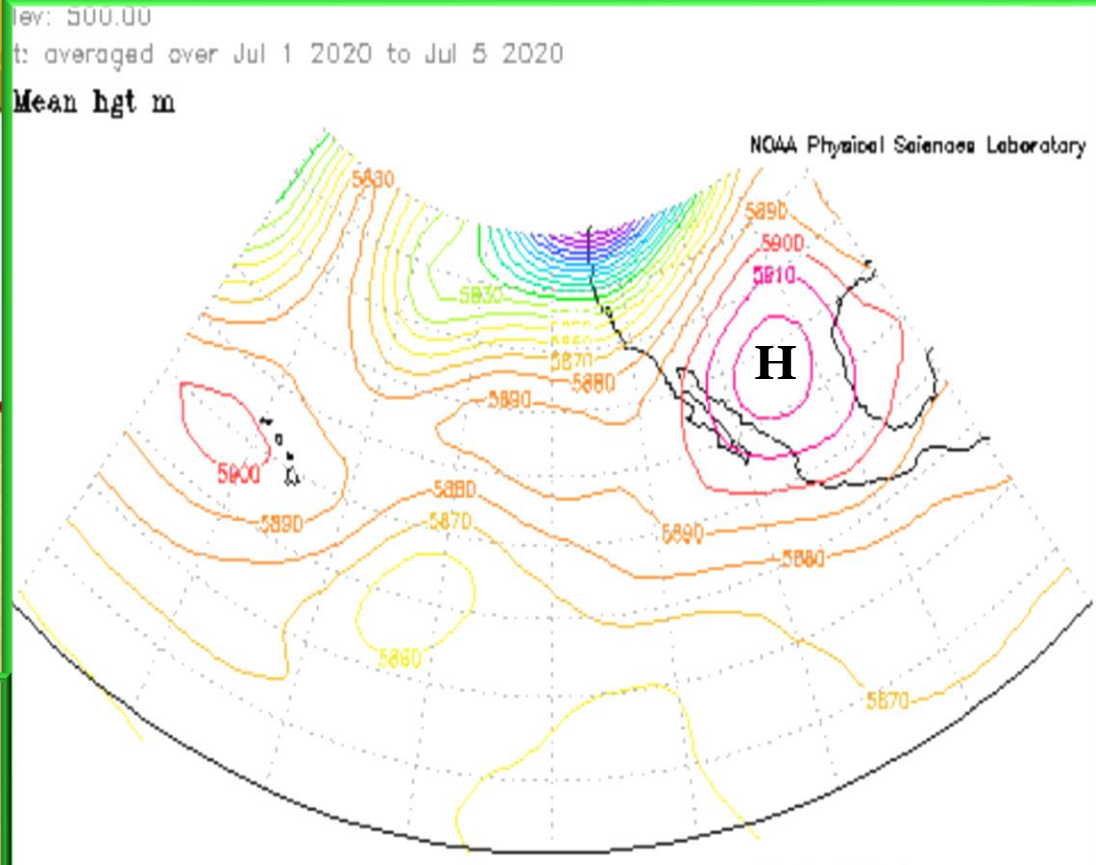
**Percent of annual precipitation falling during the monsoon season (Jun 15 – Sep 30)**

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



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

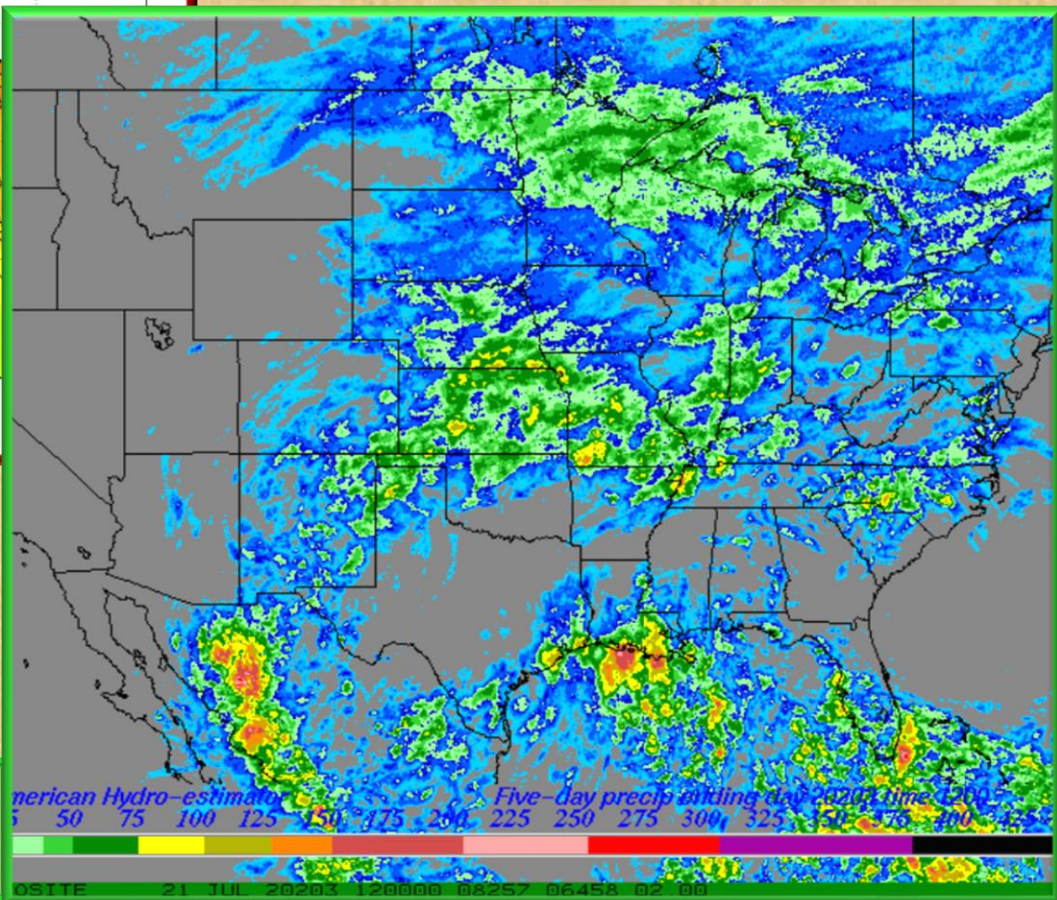
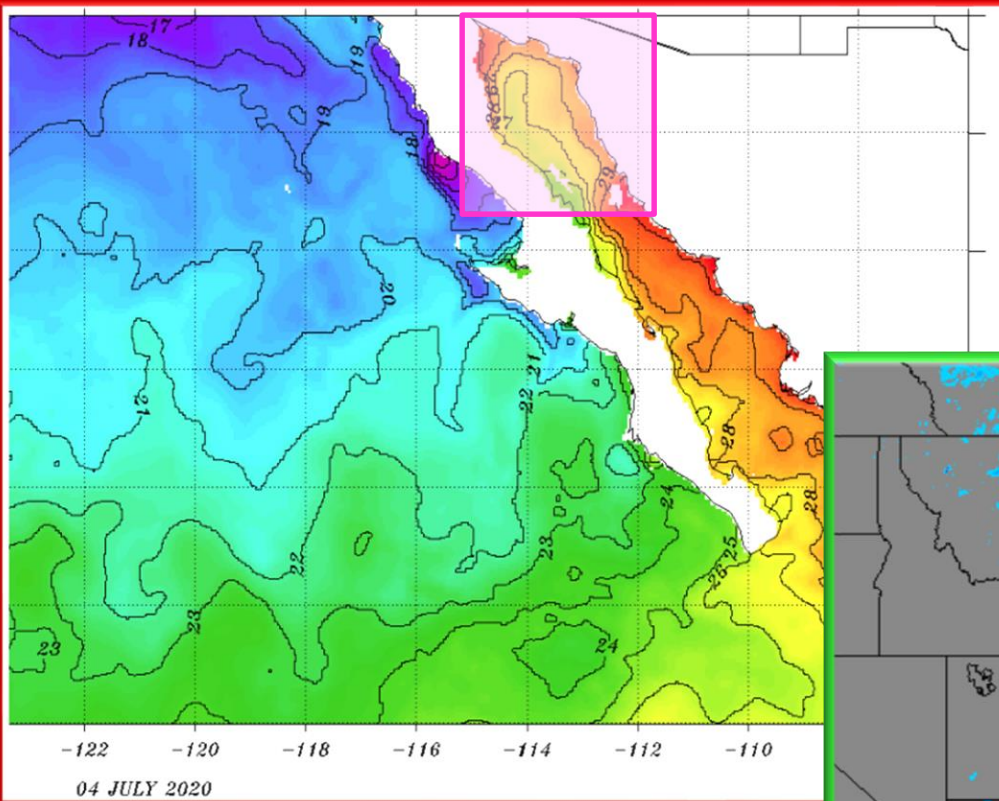
Temperature (°F)			
< -11	13 - 17	37 - 40	59 - 63
-11 --7	17 - 21	40 - 43	63 - 67
-7 - -3	21 - 25	43 - 46	67 - 71
-3 - 1	25 - 28	46 - 49	71 - 75
1 - 5	28 - 31	49 - 52	75 - 79
5 - 9	31 - 34	52 - 55	> 79
9 - 13	34 - 37	55 - 59	



By July 5 North American Monsoon High reaches the Desert Southwest

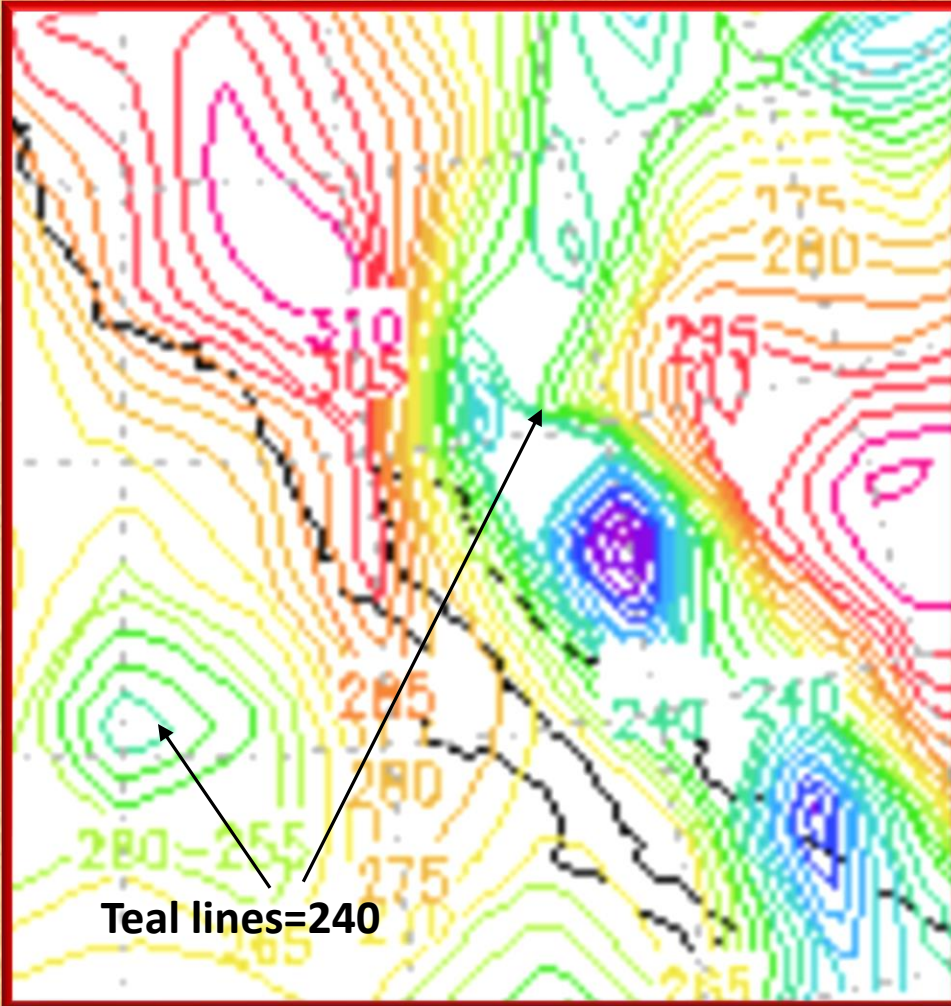
# Tracking the 2020 Monsoon Season across the El Paso Forecast Area. Fig. 2

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

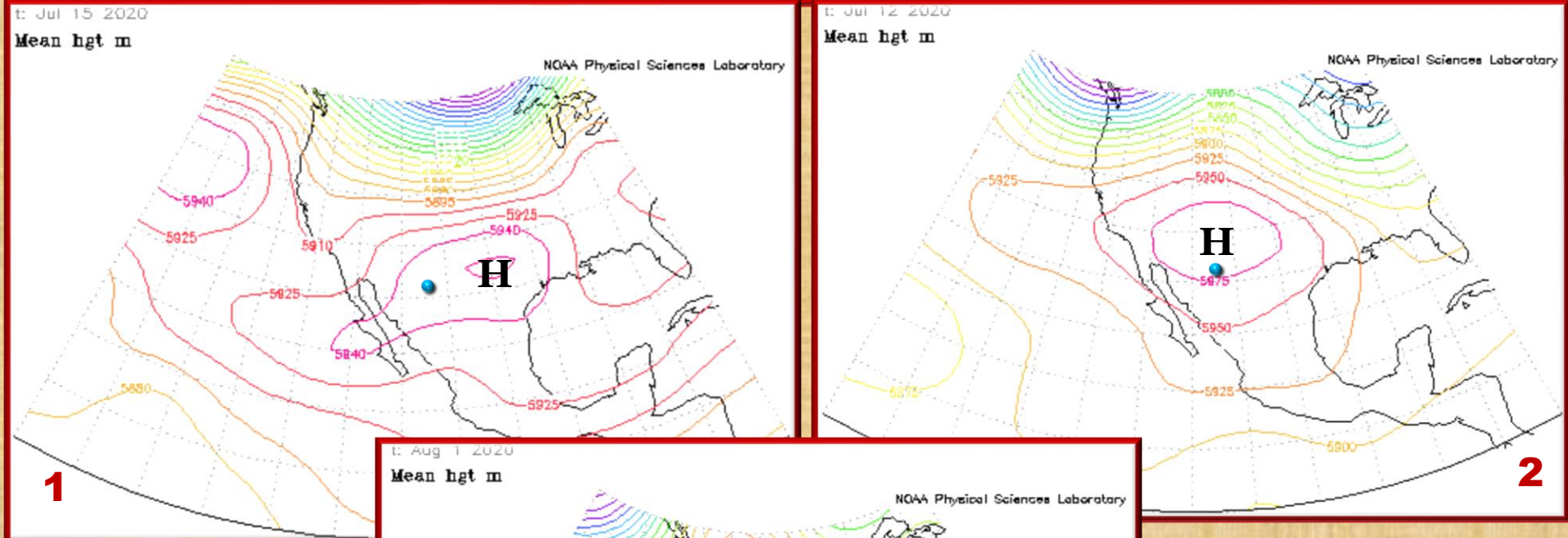
# Tracking the 2020 Monsoon Season across the El Paso Forecast Area. Fig. 3



July 13 – Outgoing Longwave Radiation (OLR) diminishes to less than 240 W/m<sup>2</sup>. Thick clouds and anvil tops from thunderstorms diminish the OLR values, often indicative of the monsoon moisture and thunderstorms moving into the area.

# Tracking the 2020 Monsoon Season across the El Paso Forecast Area. Fig. 4

Position of NAM upper high determines our rainfall potential. Blue dot represents El Paso.



**No. 1** High center east of New Mexico. Often brings ample tropical moisture and widespread heavy rain and flooding to the area

**No. 2** High center over New Mexico. Often brings very hot temperatures and little if any rain (usually limited to the mountains).

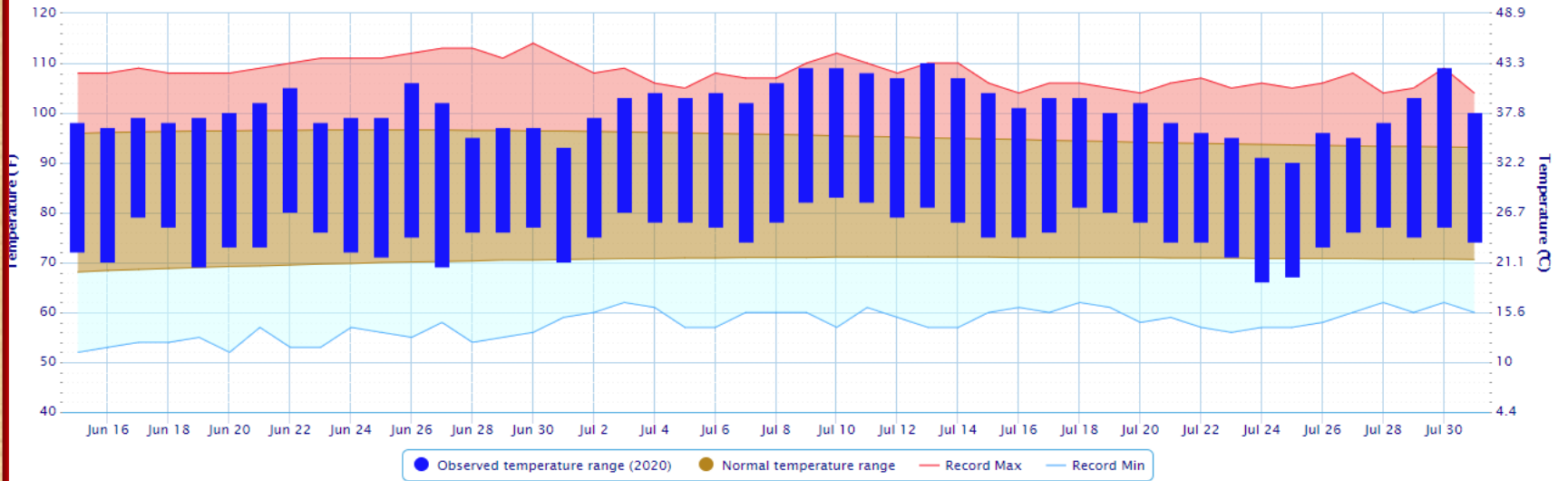
**3**

**No. 3** High center west of New Mexico. Often brings scattered storms with hit and miss heavy rains and large hail and strong wind potential.

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

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

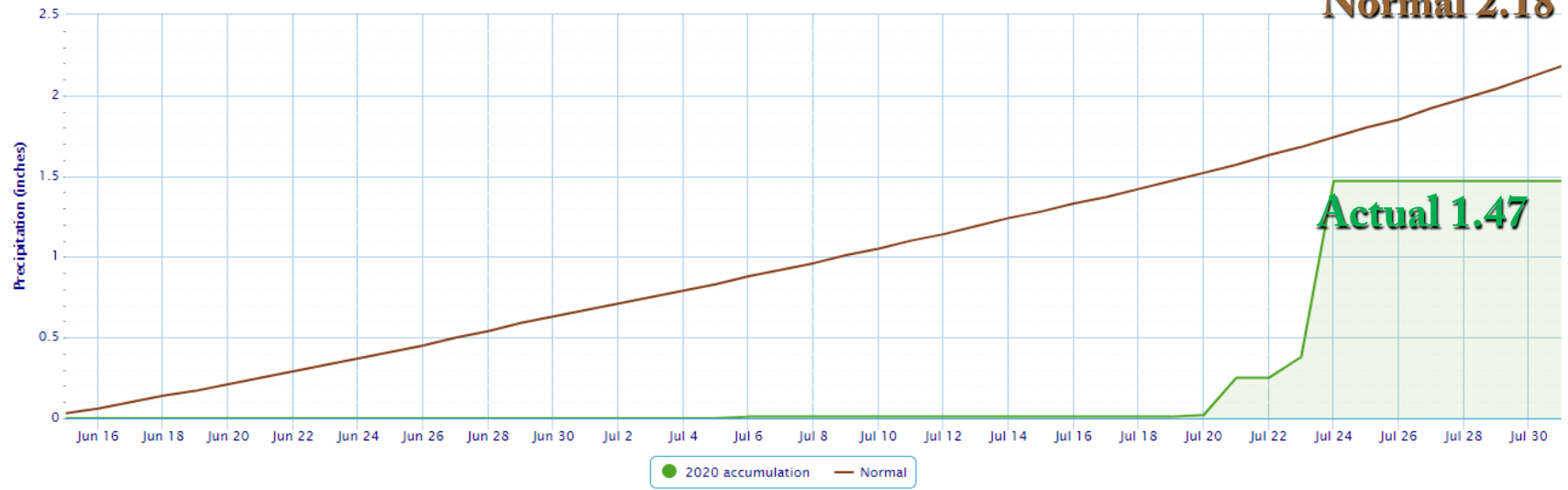
Period of Record – Max temperature: 1887-01-01 to 2020-08-01; Min temperature: 1879-01-01 to 2020-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



Powered by ACIS

Accumulated Precipitation – El Paso Area, TX (ThreadEx)

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

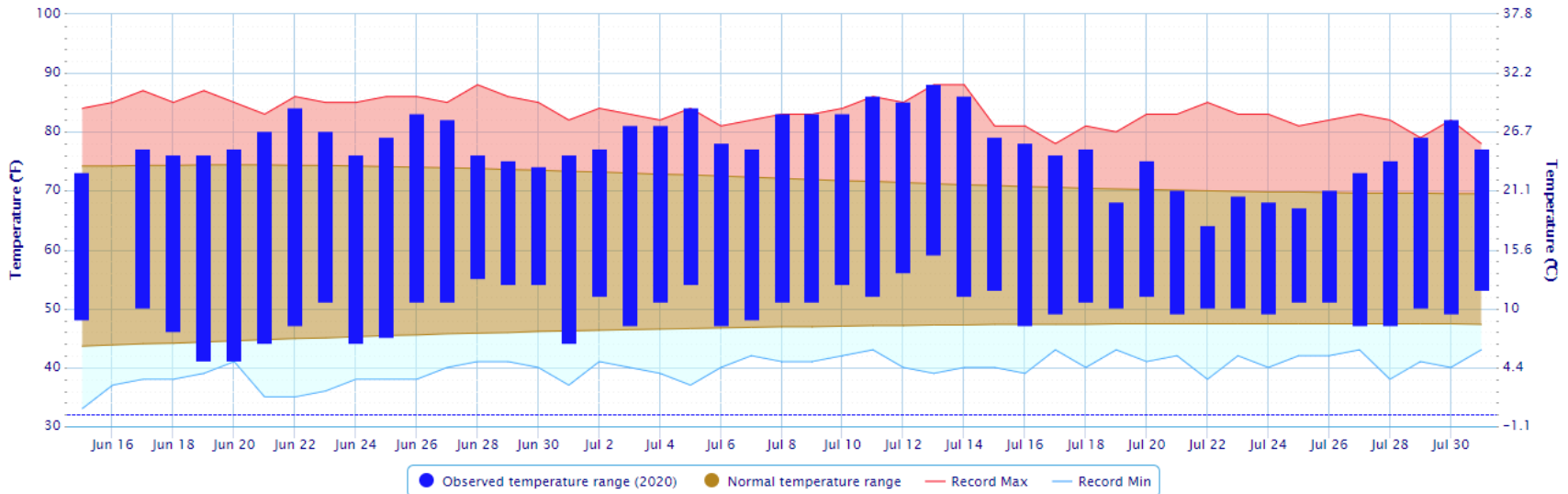


Powered by ACIS

# Temperature and precipitation data through July 31 for the 2020 Monsoon Season in Cloudcroft

Daily Temperature Data – CLOUDCROFT, NM

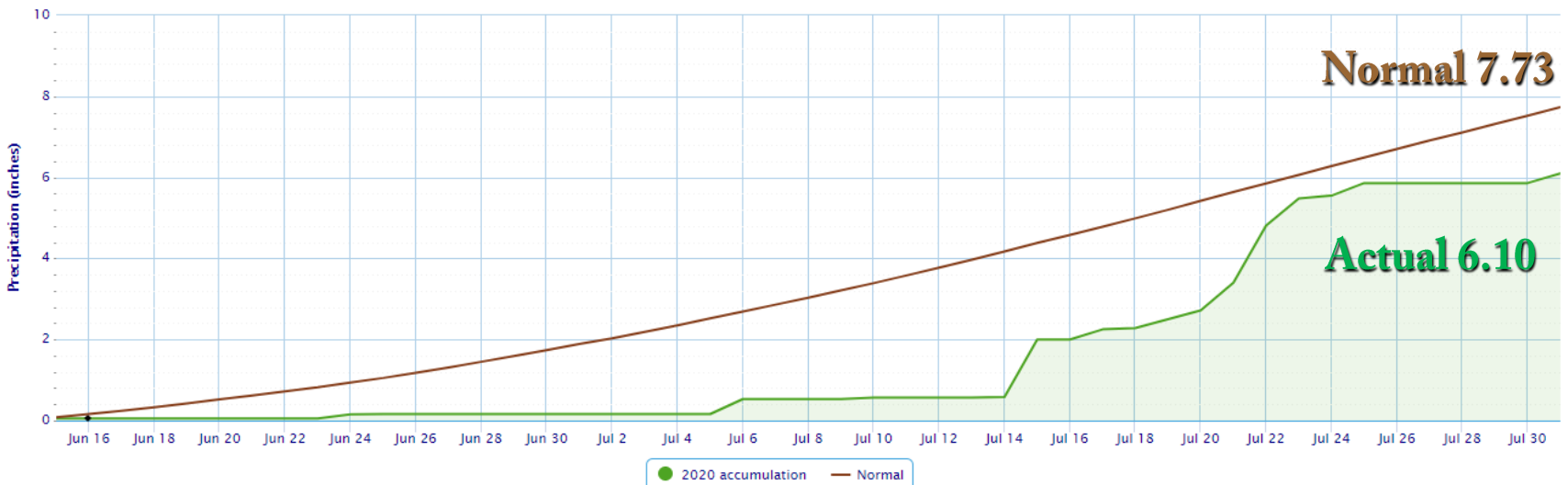
Period of Record – 1987–09–01 to 2020–08–01. Normals period: 1981–2010. Click and drag to zoom chart.



Powered by ACIS

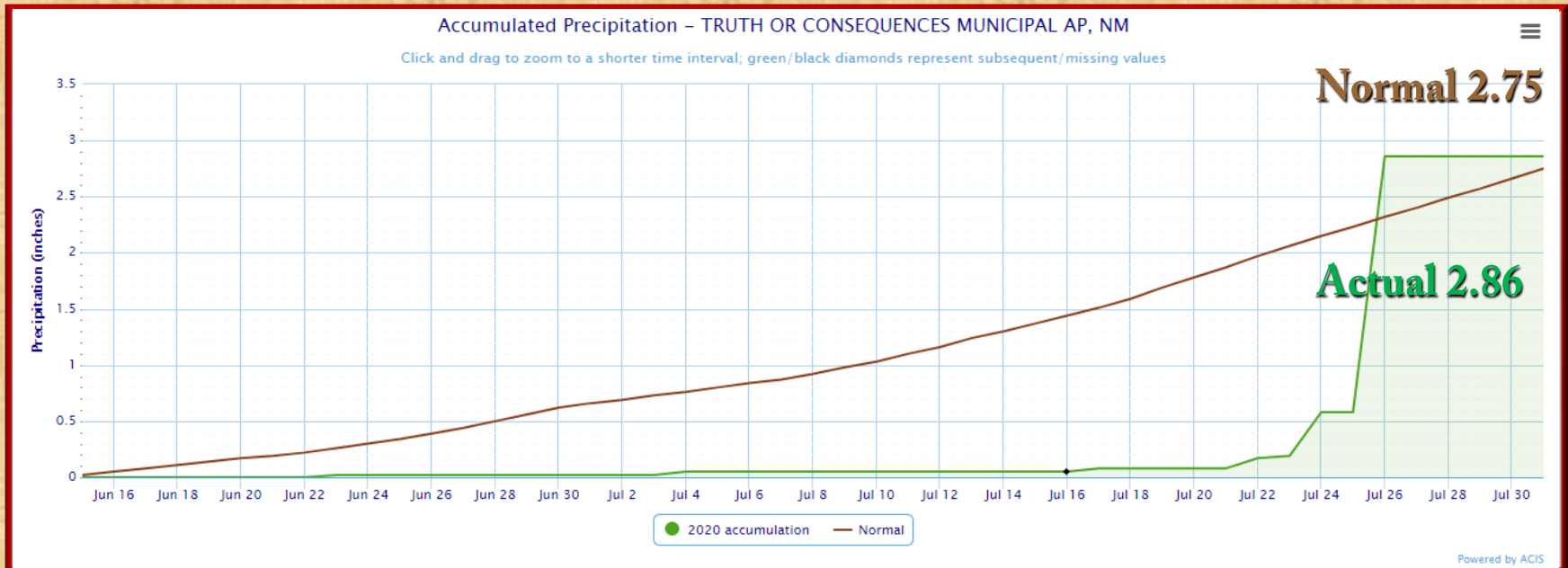
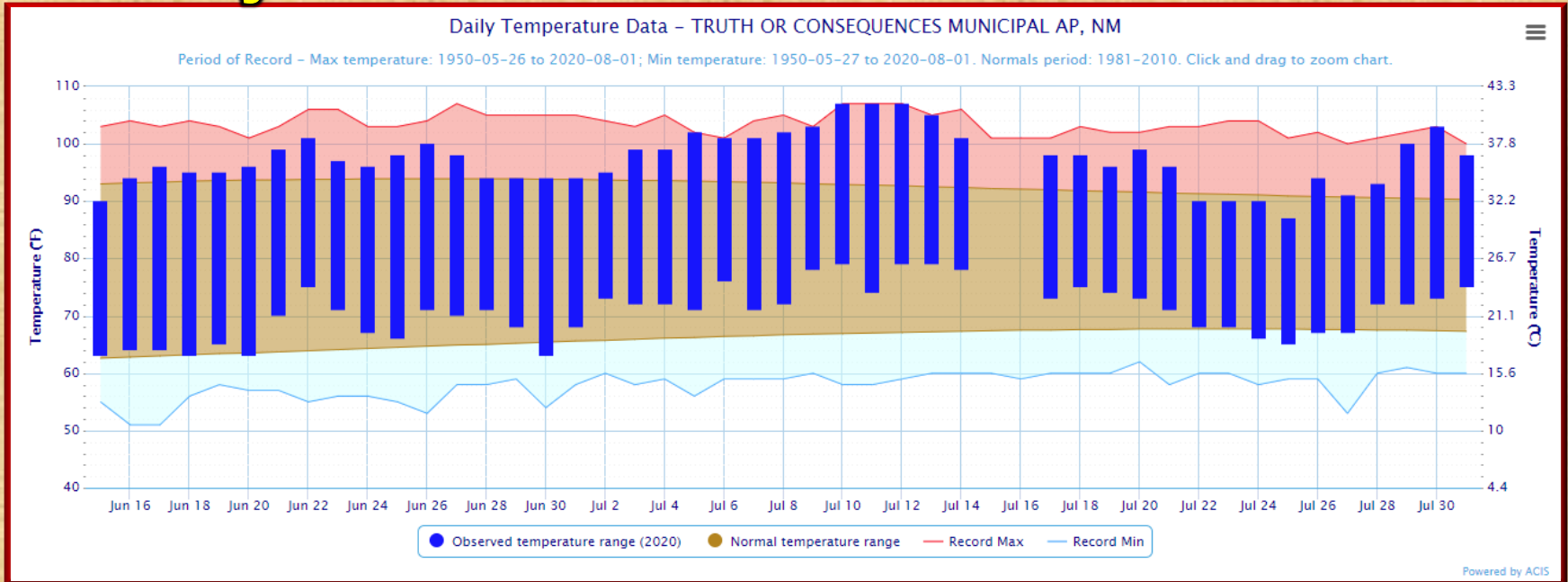
Accumulated Precipitation – CLOUDCROFT, NM

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



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

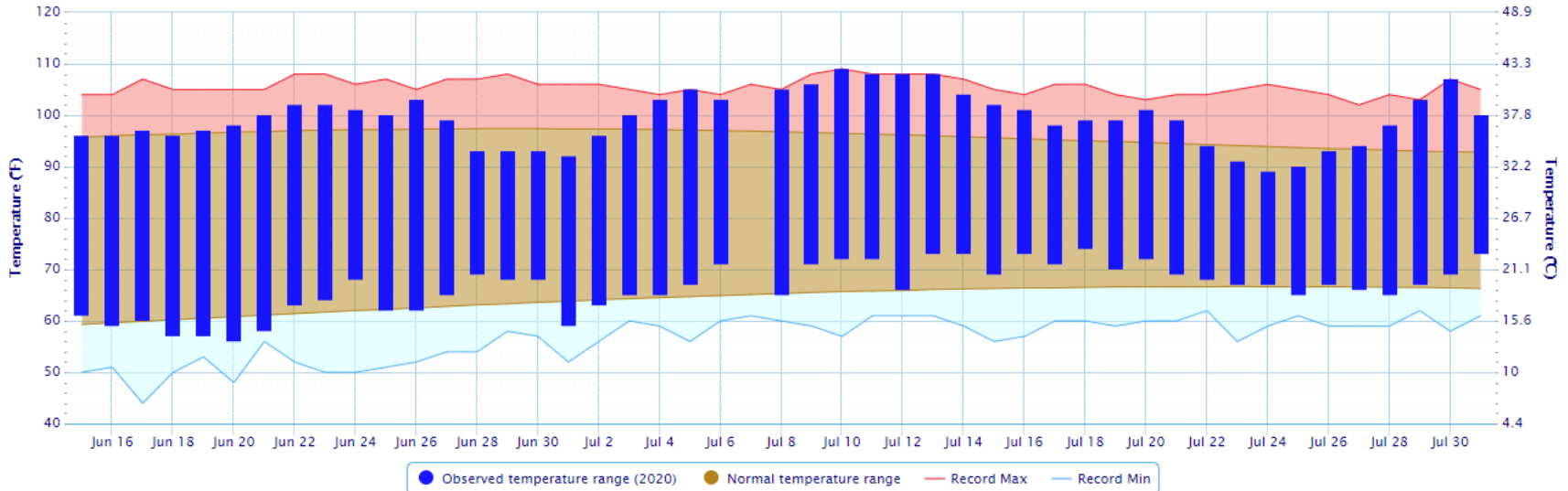




# Temperature and precipitation data through July 31 for the 2020 Monsoon Season in Deming

Daily Temperature Data – DEMING MUNICIPAL AP, NM

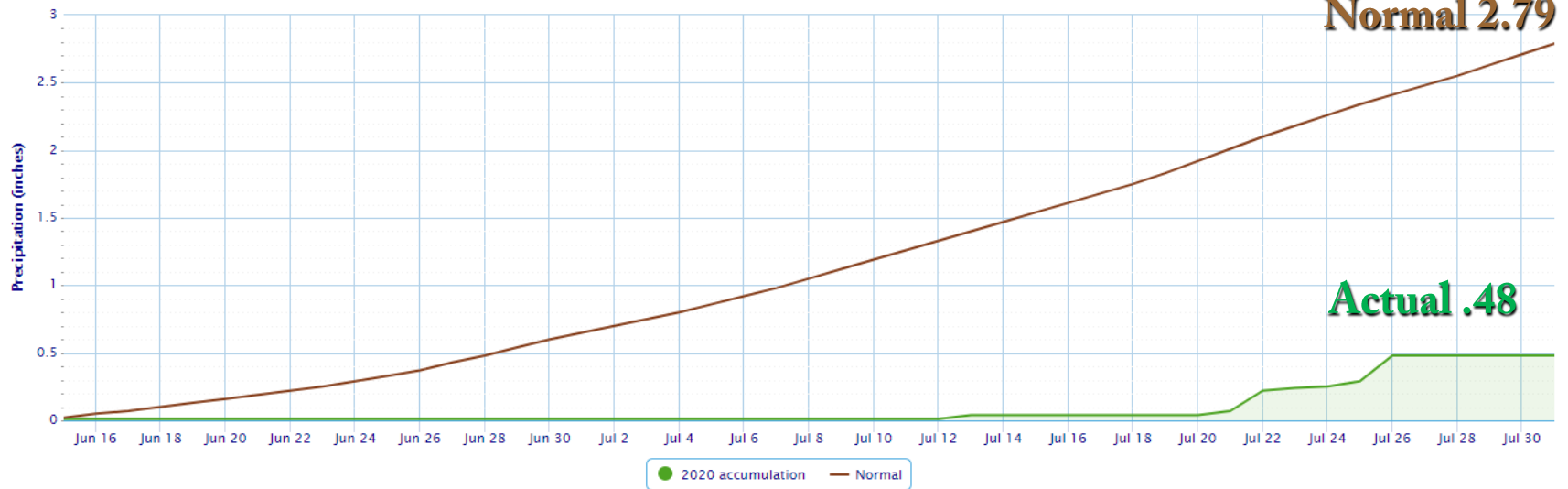
Period of Record – Max temperature: 1961–04–07 to 2020–08–01; Min temperature: 1961–04–08 to 2020–08–01. Normals period: 1981–2010. Click and drag to zoom chart.



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Accumulated Precipitation – DEMING MUNICIPAL AP, NM

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

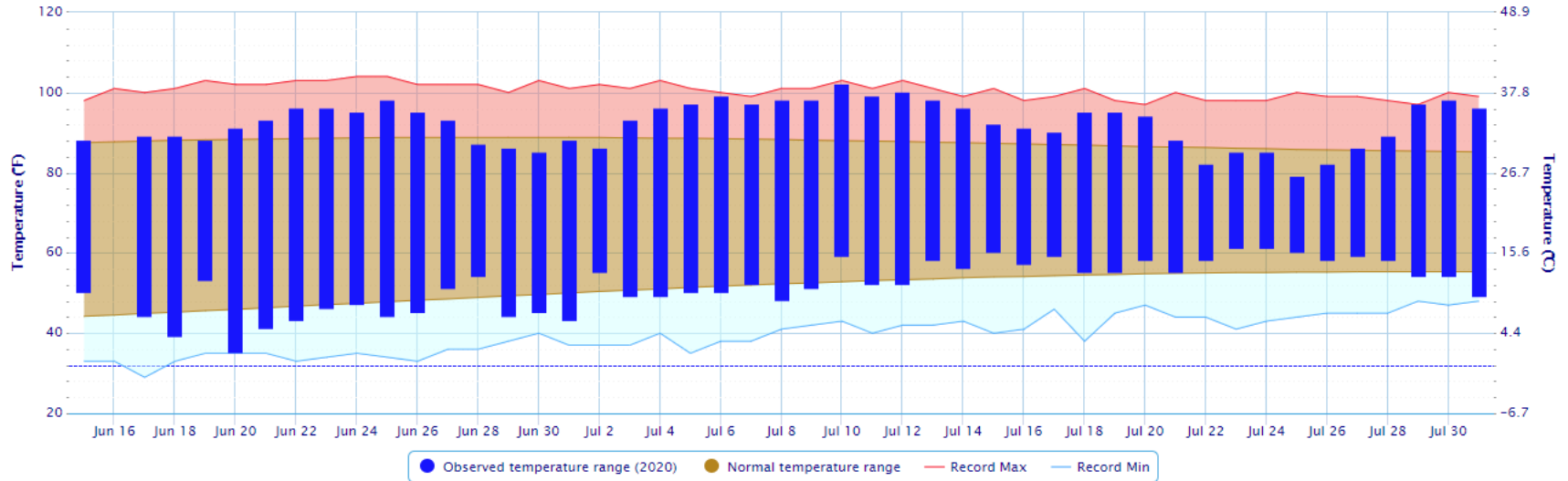


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# Temperature and precipitation data through July 31 for the 2020 Monsoon Season in Gila Hot Springs

Daily Temperature Data – GILA HOT SPRINGS, NM

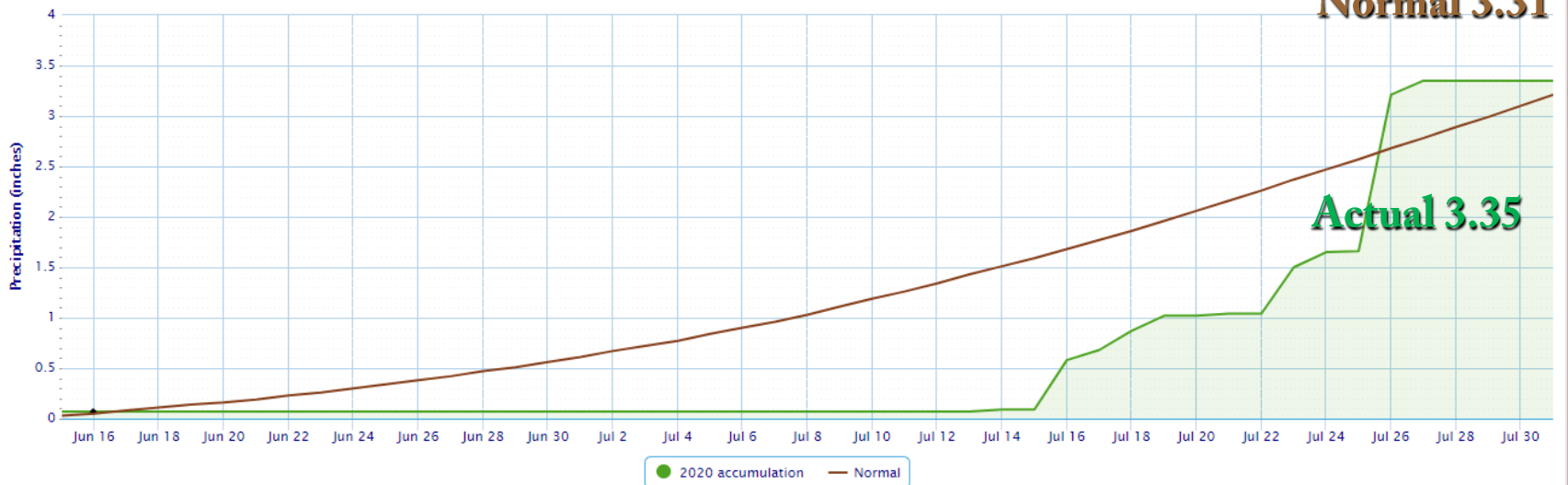
Period of Record – 1957-05-24 to 2020-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



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Accumulated Precipitation – GILA HOT SPRINGS, NM

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

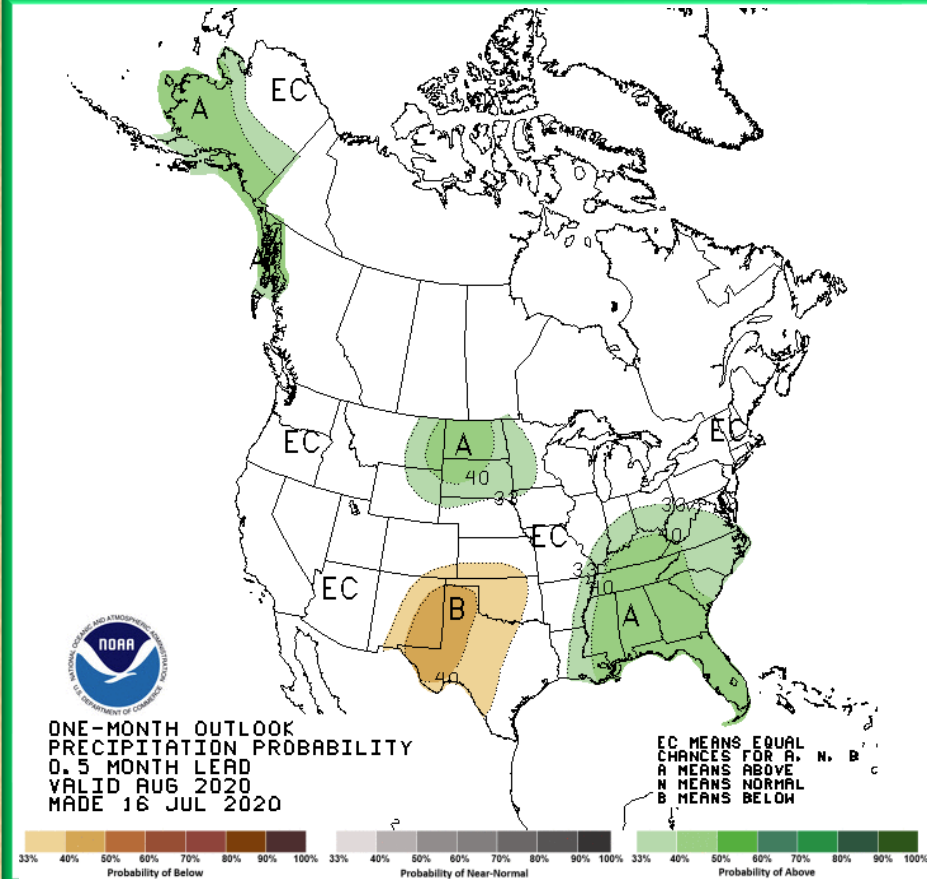
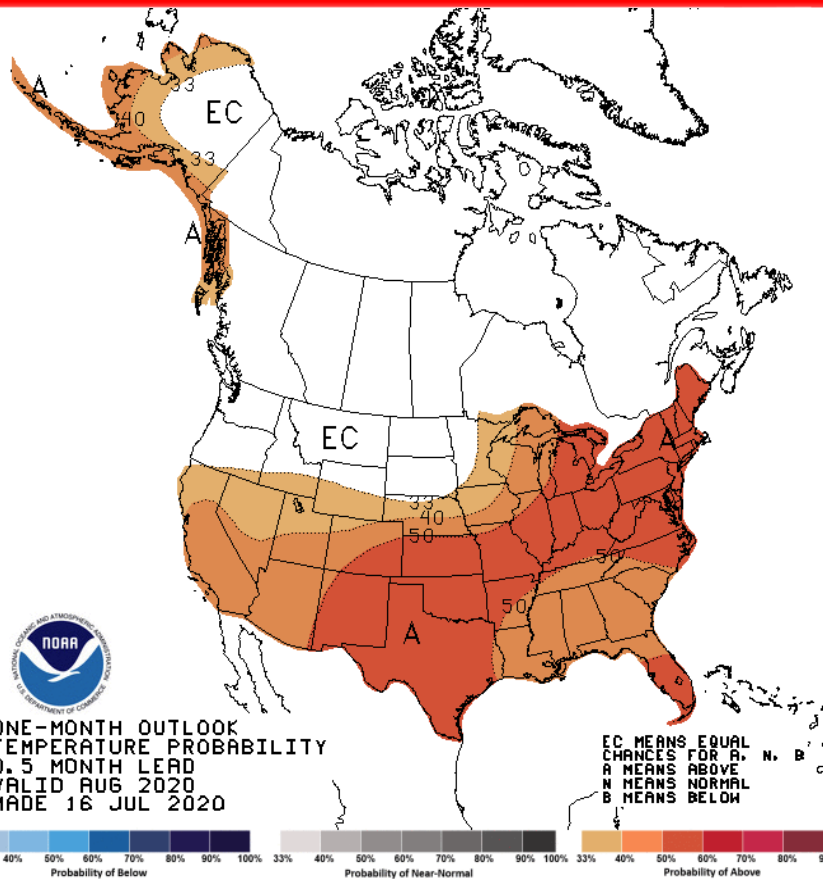


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# Temperature and precipitation outlook for August 2020

## Temperature

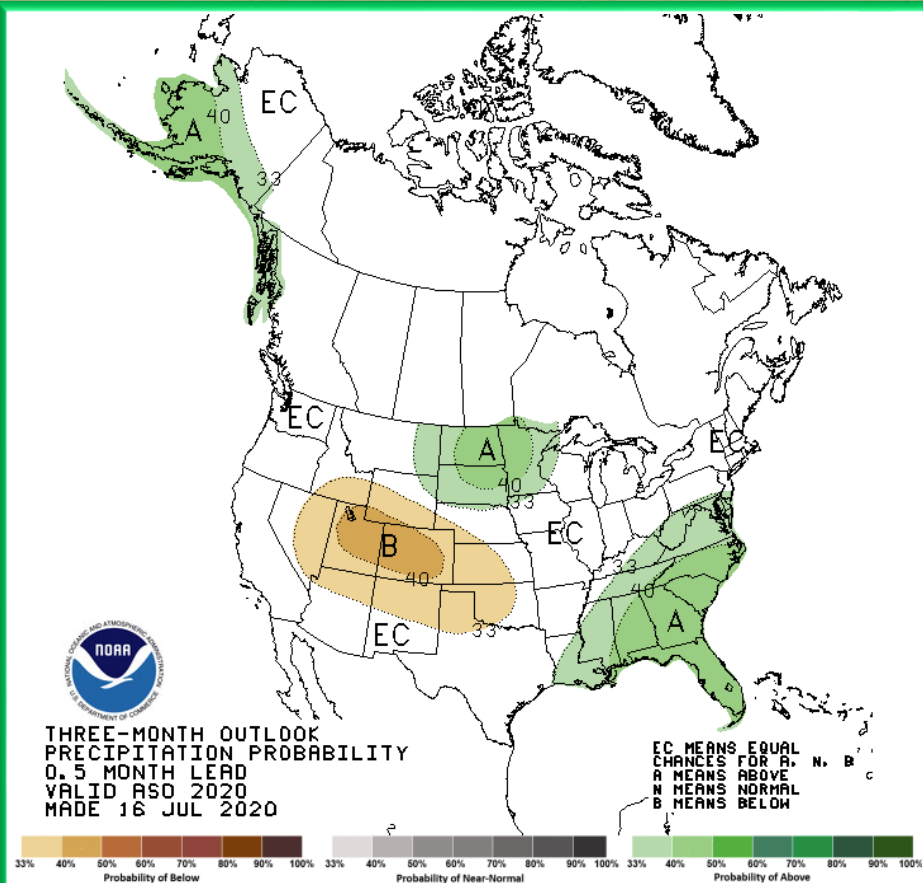
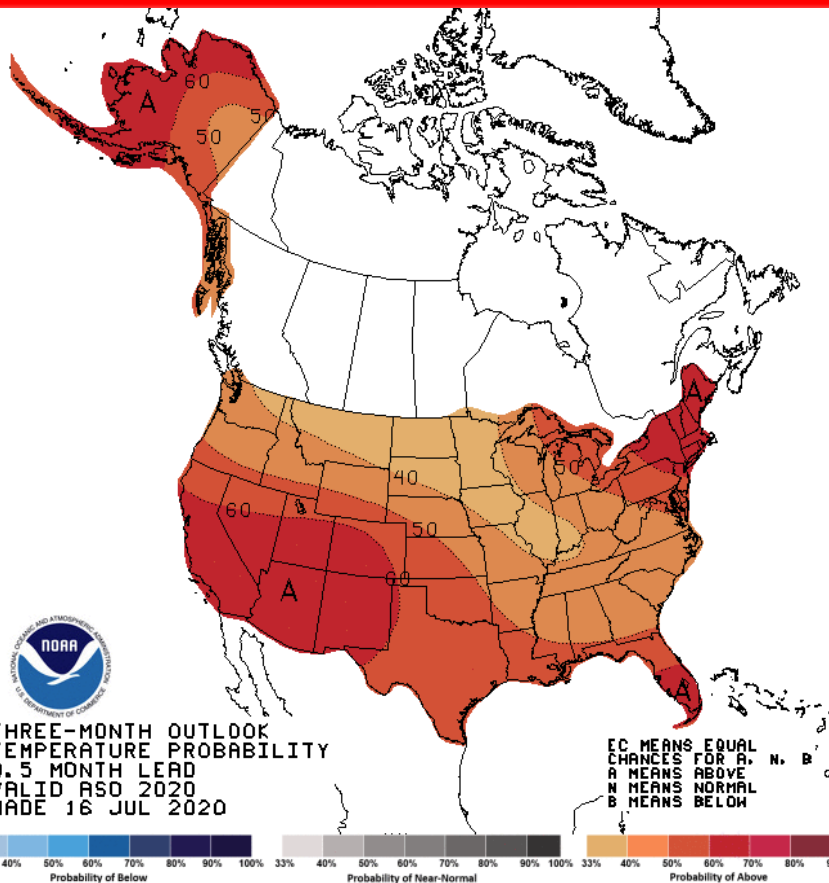
## Precipitation



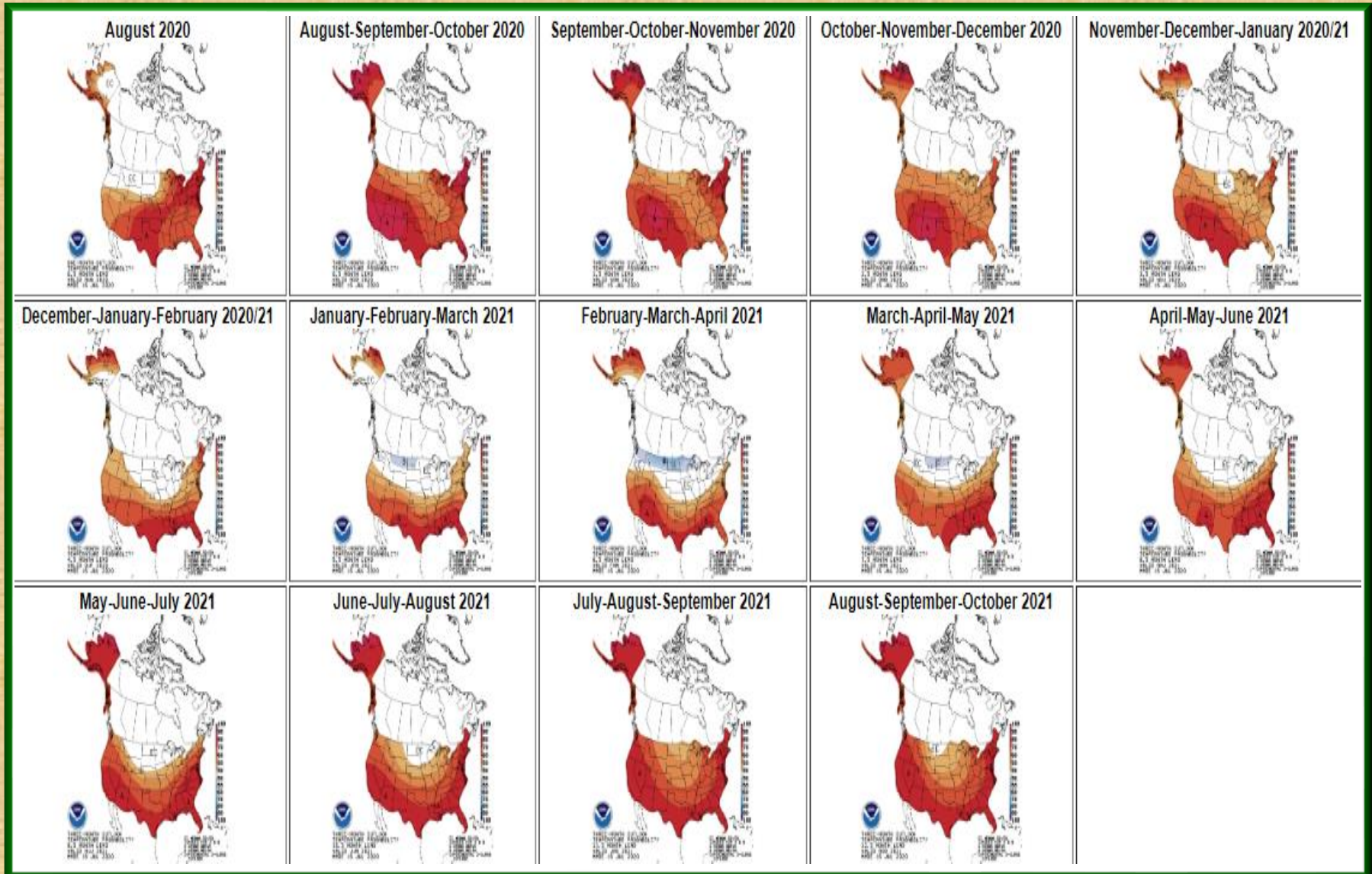
# Temperature and precipitation outlook For August-October 2020

## Temperature

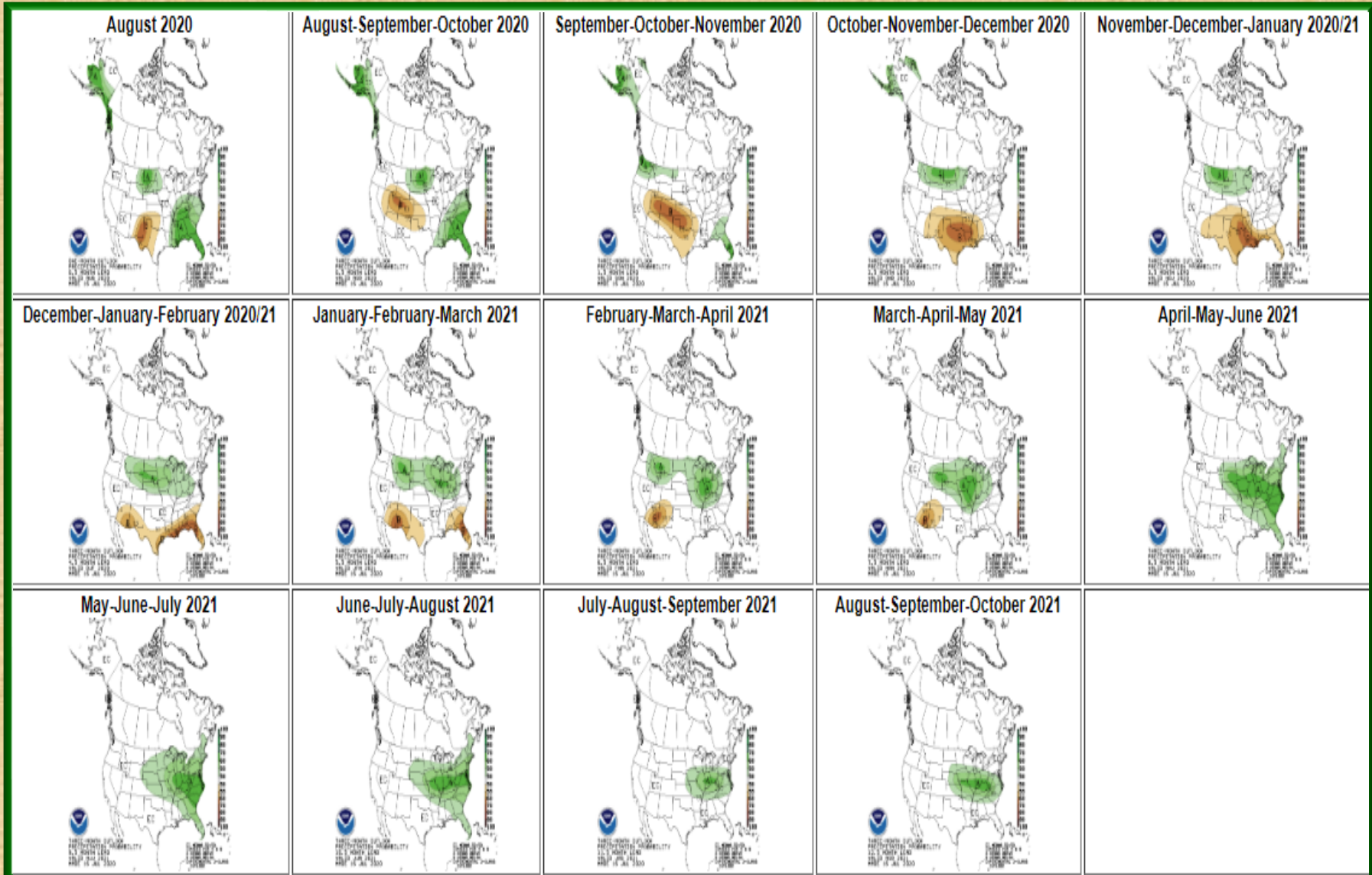
## Precipitation



# Temperature Outlook Through October 2021

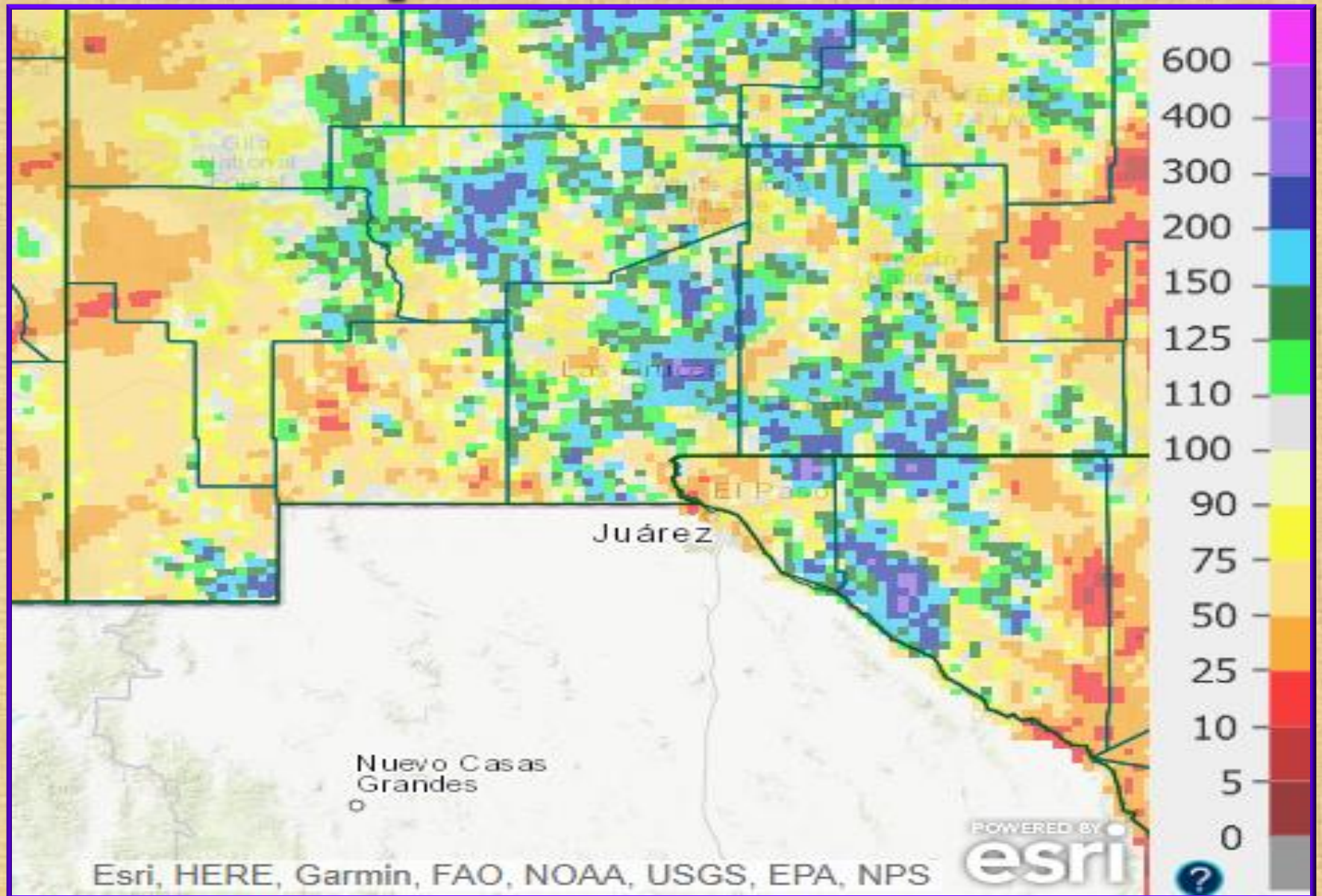


# Precipitation Outlook Through October 2021



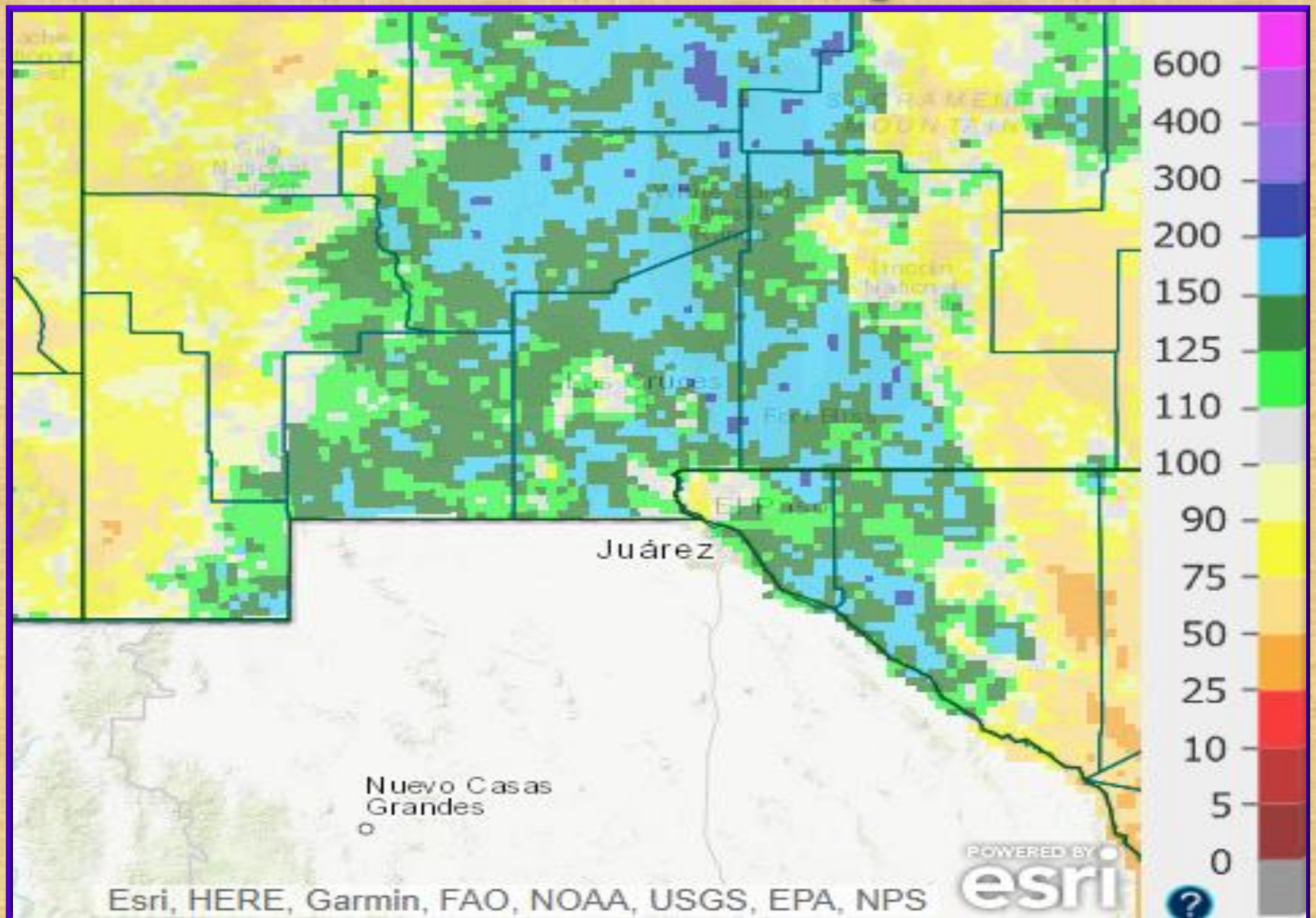


# July 2020 radar rainfall estimate percent of normal





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

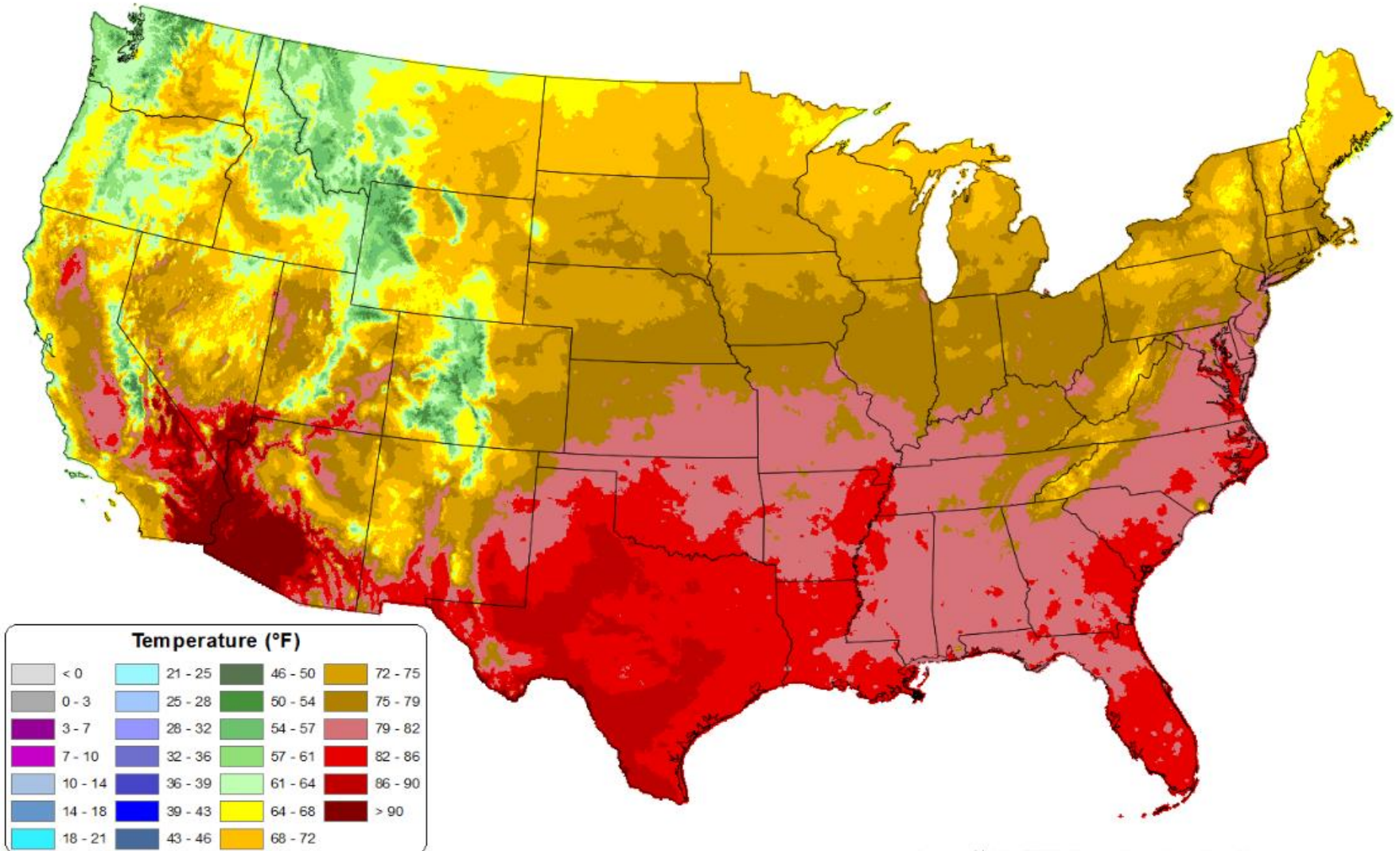


# Average Daily Mean Temperature for July 2020

**Average Daily Mean Temperature: Jul 2020**

Period ending 7 AM EST 31 Jul 2020

(Map created 02 Aug 2020)

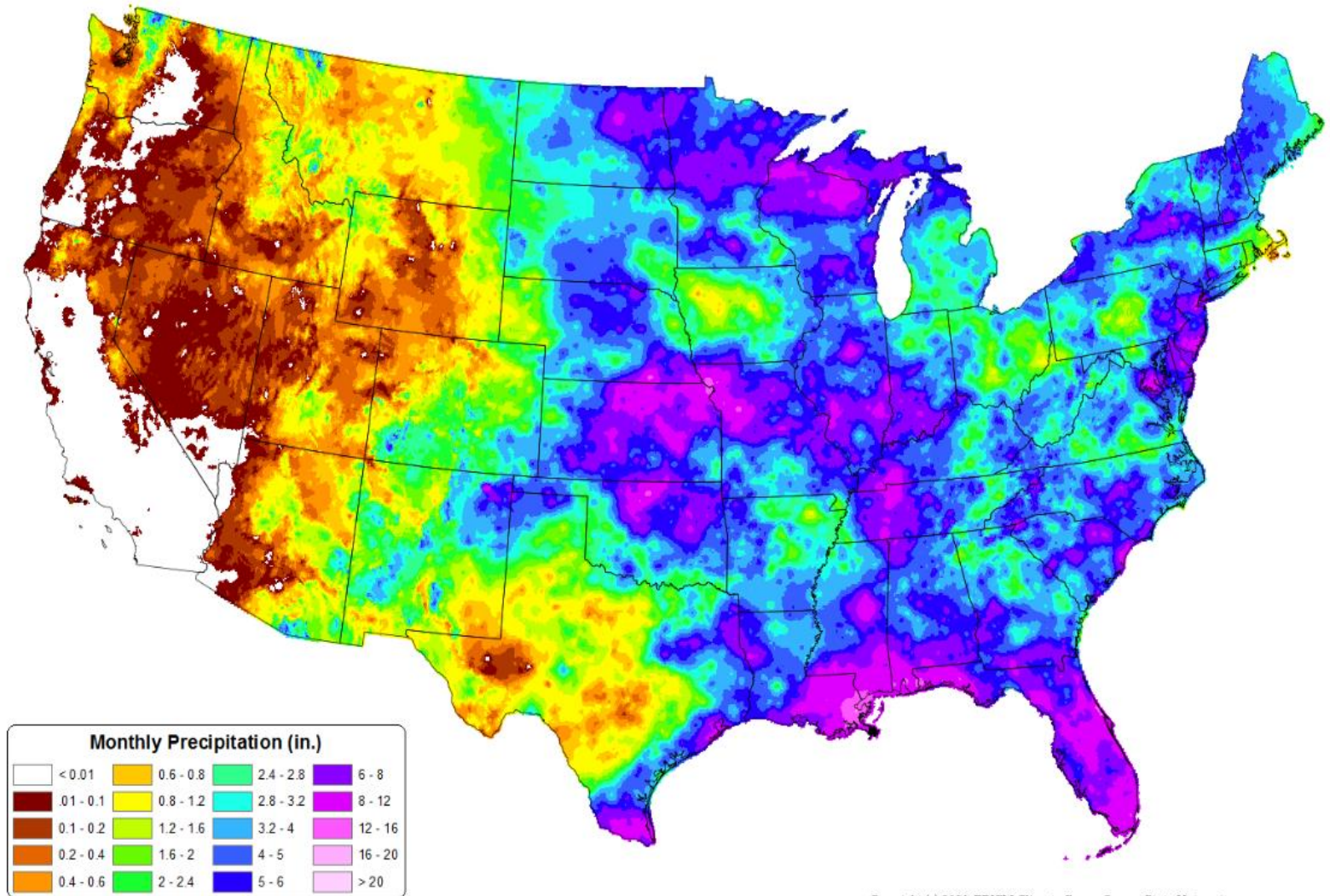


# Total Precipitation for July 2020

## Total Precipitation: Jul 2020

Period ending 31 Jul 2020

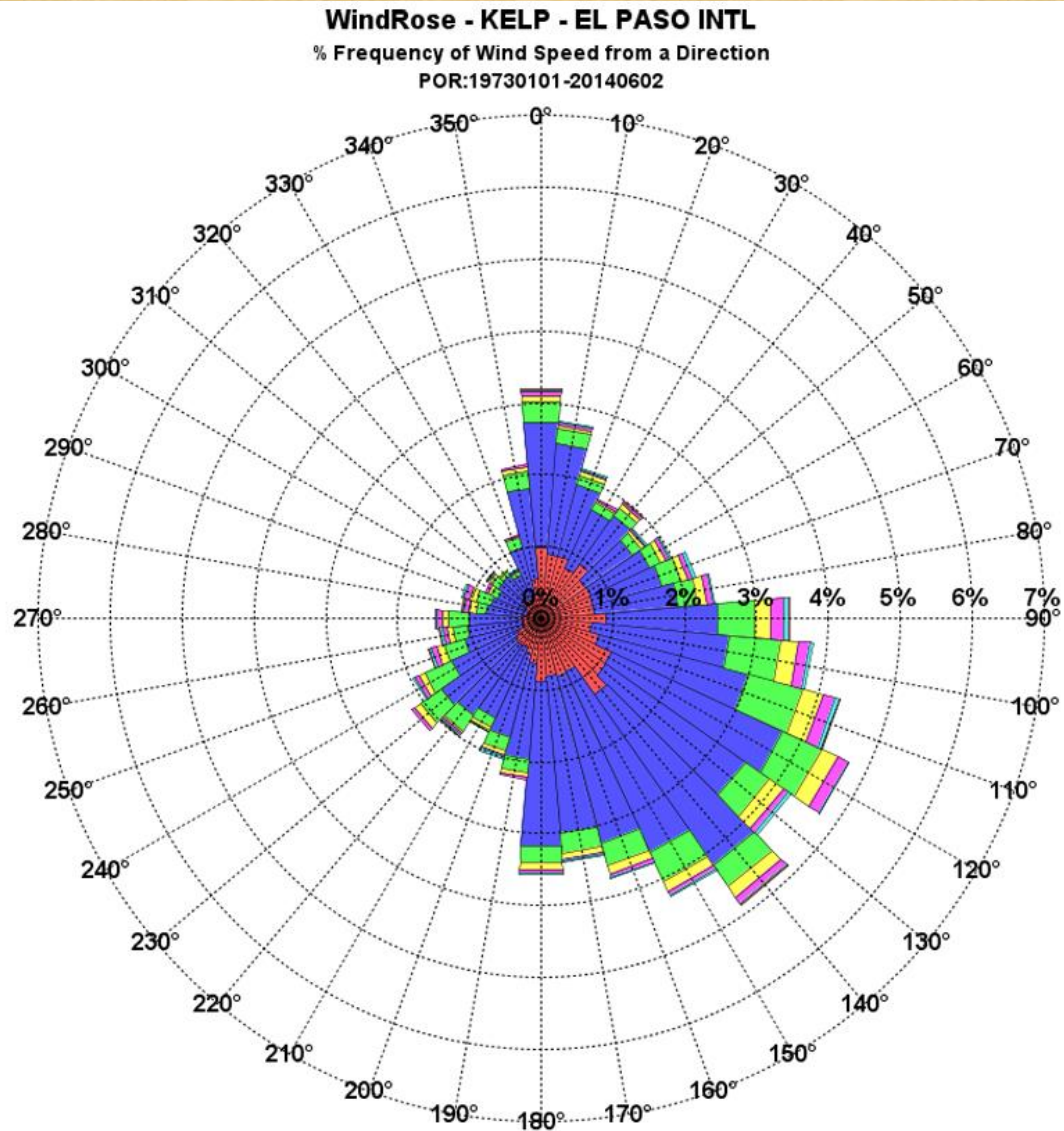
(Map created 02 Aug 2020)



# Special Features

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

Month: JULY  
Calm: 9.05%  
Variable: 4.23%



# Selected weather reports July 2020

<b>Date/Time</b>	<b>Location (County)</b>	<b>Event</b>
JULY 7 445 PM	TULAROSA 19NW-OTERO	66 MPH PEAK GUST
JULY 7 901 PM	SANTA TERESA 5NW-DONA ANA	59 MPH PEAK GUST
JULY 23 200 PM	ACALA-HUDSPETH	60 MPH PEAK GUST
JULY 23 933 AM	CLOVERDALE-HIDALGO	1.20 INCHES RAIN 24 HR
JULY 23 900 PM	HILLSBORO-SIERRA	1.38 INCHES RAIN 24 HR
JULY 24 1100 AM	RODEO-HIDALGO	FUNNEL CLOUD
JULY 26 630 PM	T OR C-SIERRA	4.10 INCH HEAVY RAIN
JULY 31 640 PM	DRIPPING SPRINGS-DON ANA	1.19 INCH HEAVY RAIN

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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**Monthly Weather Digest**  
[Weather.gov > El Paso, TX > Monthly Weather Digest](#)

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: Hudspeeth, Grant, Luna, Sierra, Doña Ana and Otero and the following counties in Texas: El Paso and Hudspeeth.

weather.gov/epz

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

**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.**

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

