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
©2020 Greg Dueñas


July 7 Thunderstorm


July 16 Lightning El Paso


July 22 Lightning Santa Teresa

July 18 Sunrise El Paso/Juarez

July 31 Rainbow

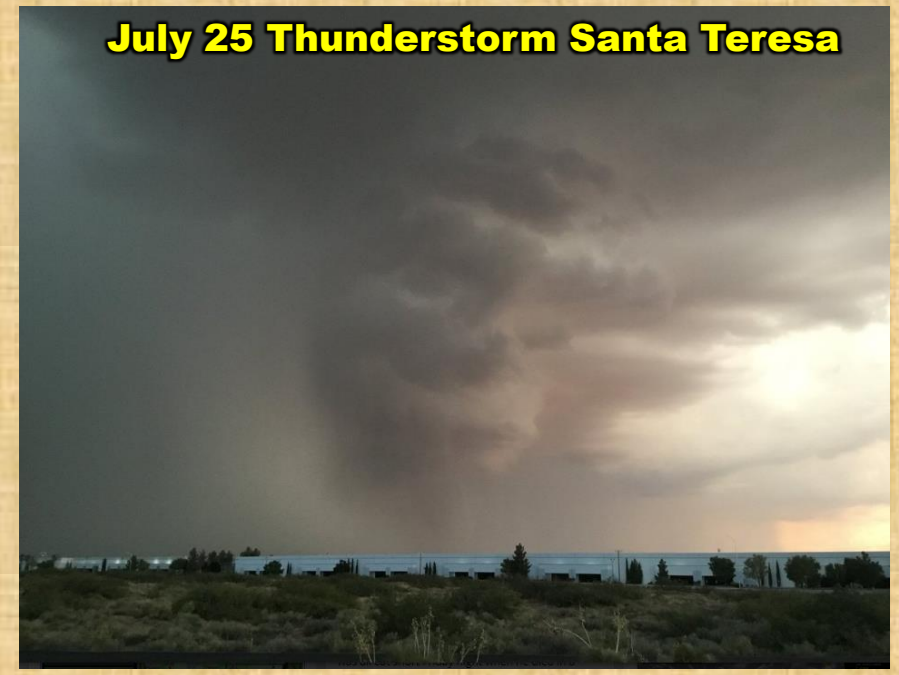
July 24 Funnel Cloud near Rodeo

July 24 Funnel Thunderstorm El Paso


July 18 Sunrise El Paso/Juarez

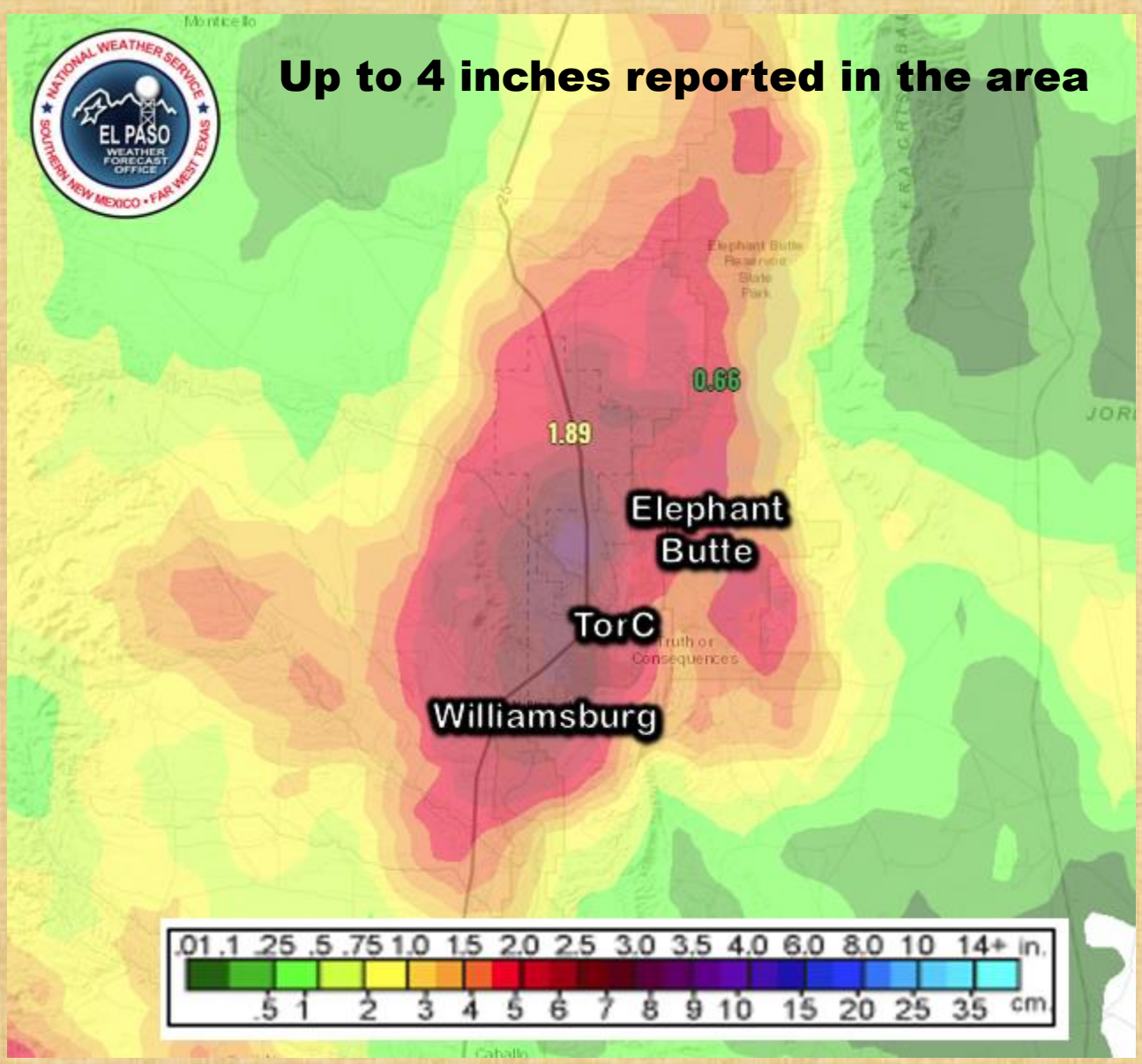

July 25 Thunderstorm Las Cruces


July 25 Lightning El Paso


July 25 Thunderstorm Santa Teresa

July 19 Comet Neowise

July 26 Heavy Rain T or C area



ENSO Alert System Status: La Niña Watch

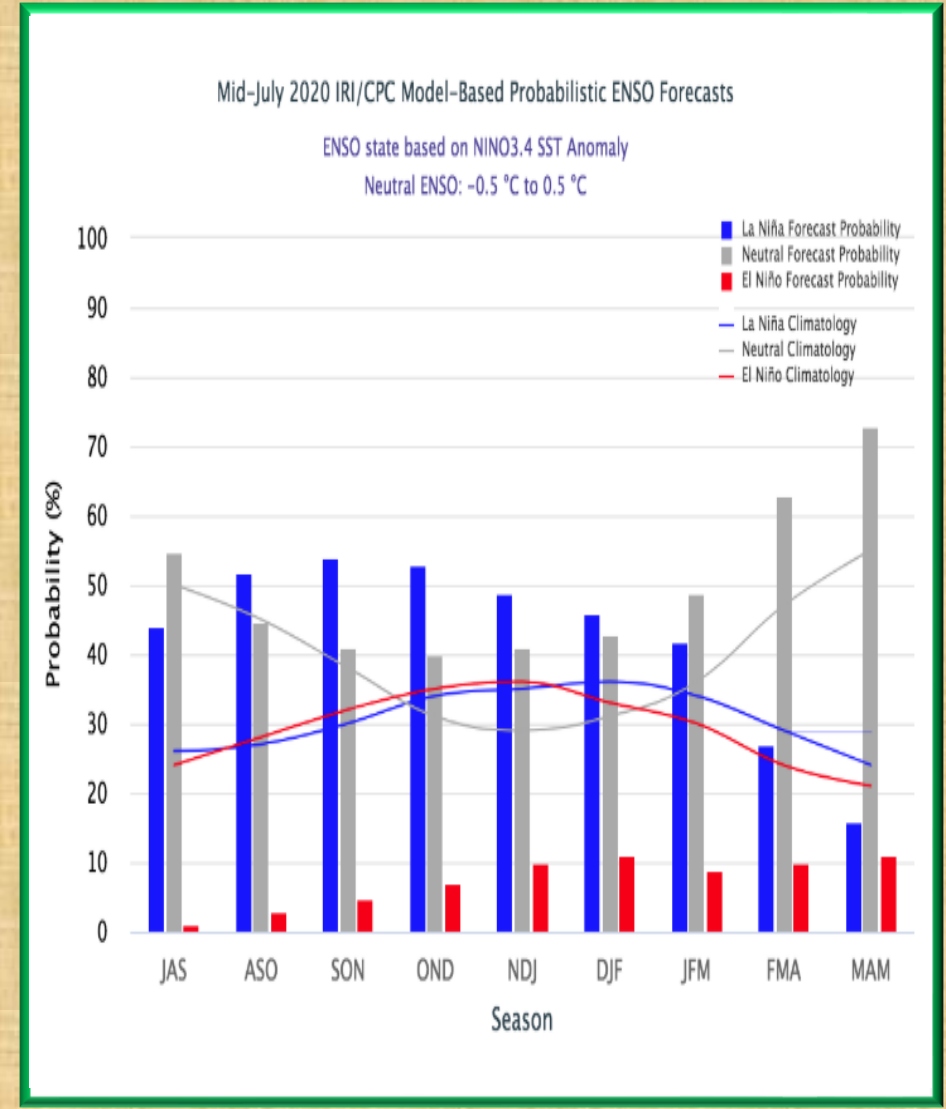
ENSO Alert System

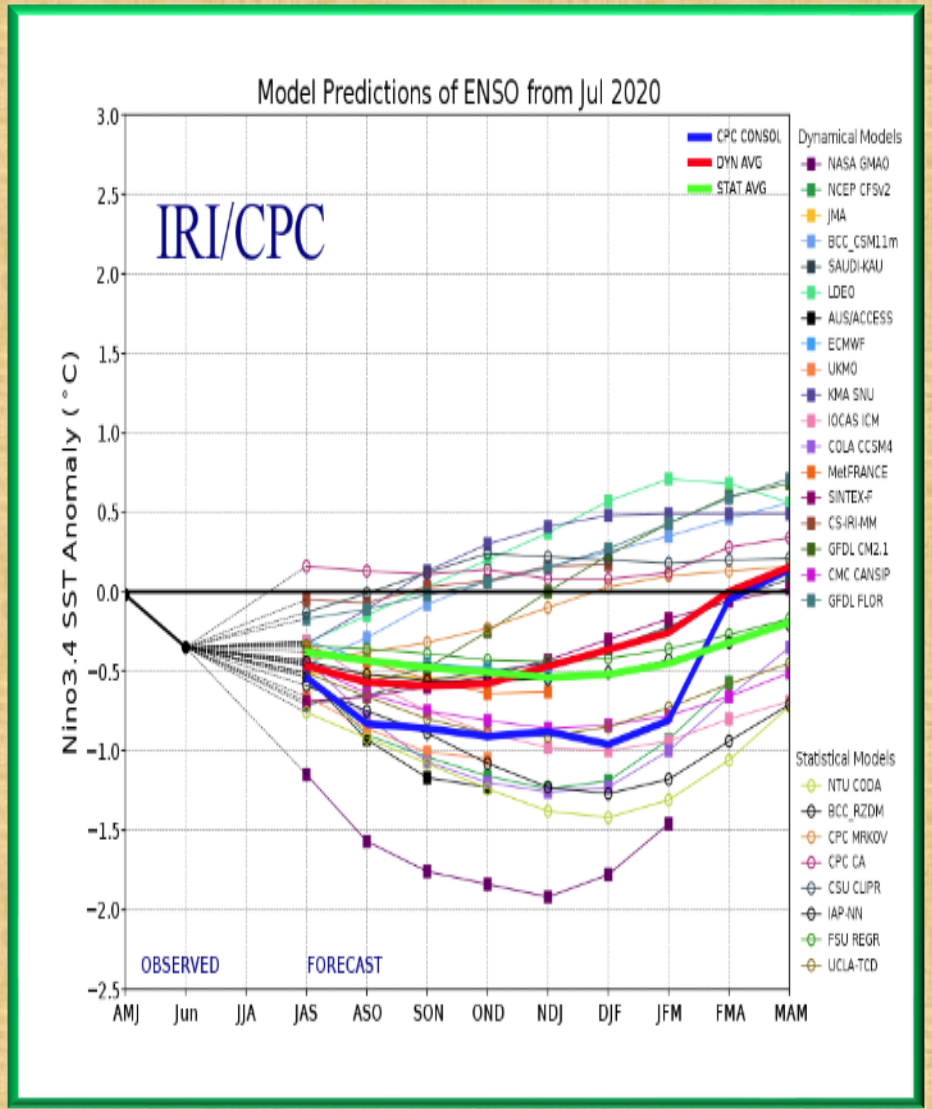
- El Niño or La Niña Watch: Issued when conditions are favorable for the development of El Niño or La Niña conditions in the next six months.

- 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

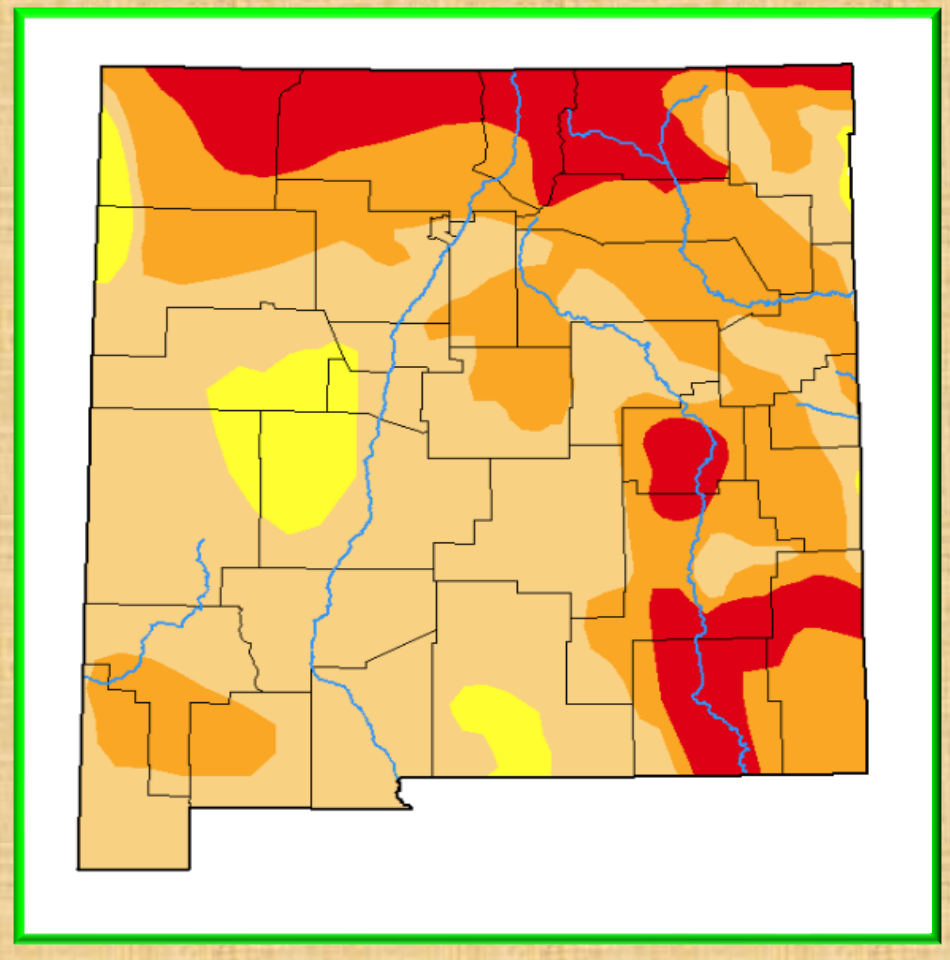




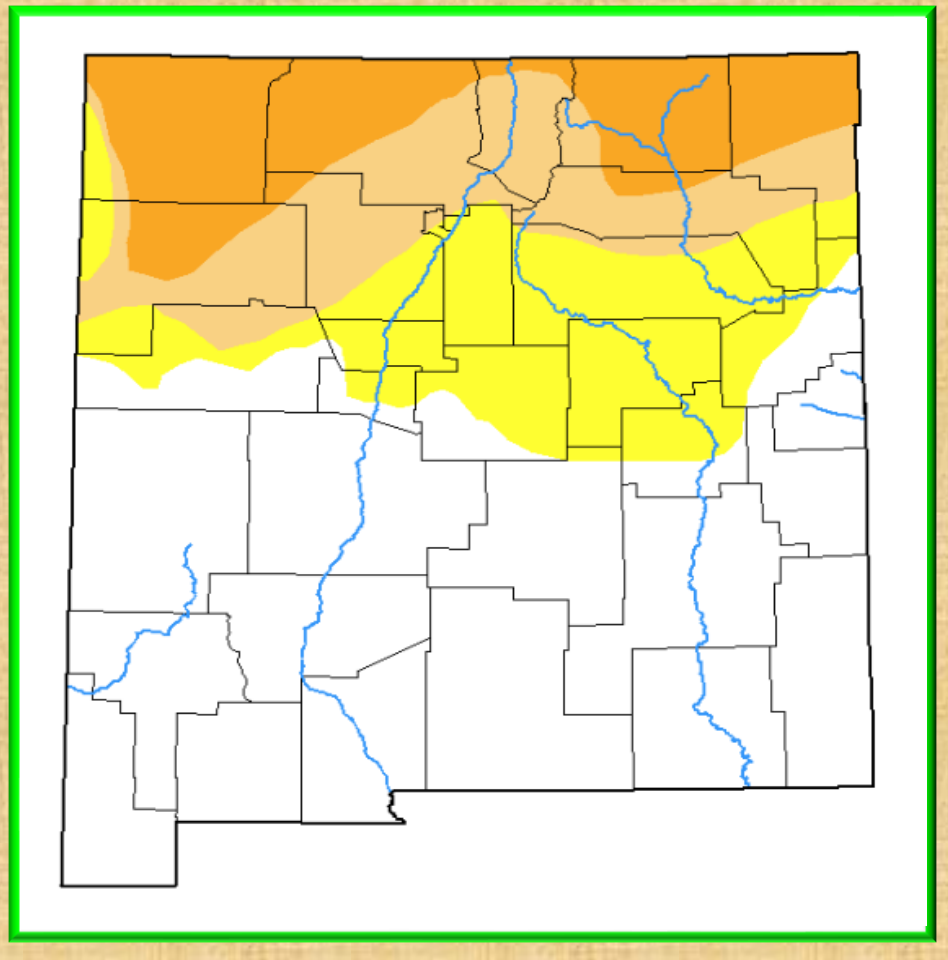
Current drought conditions for New Mexico and 3 month change

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

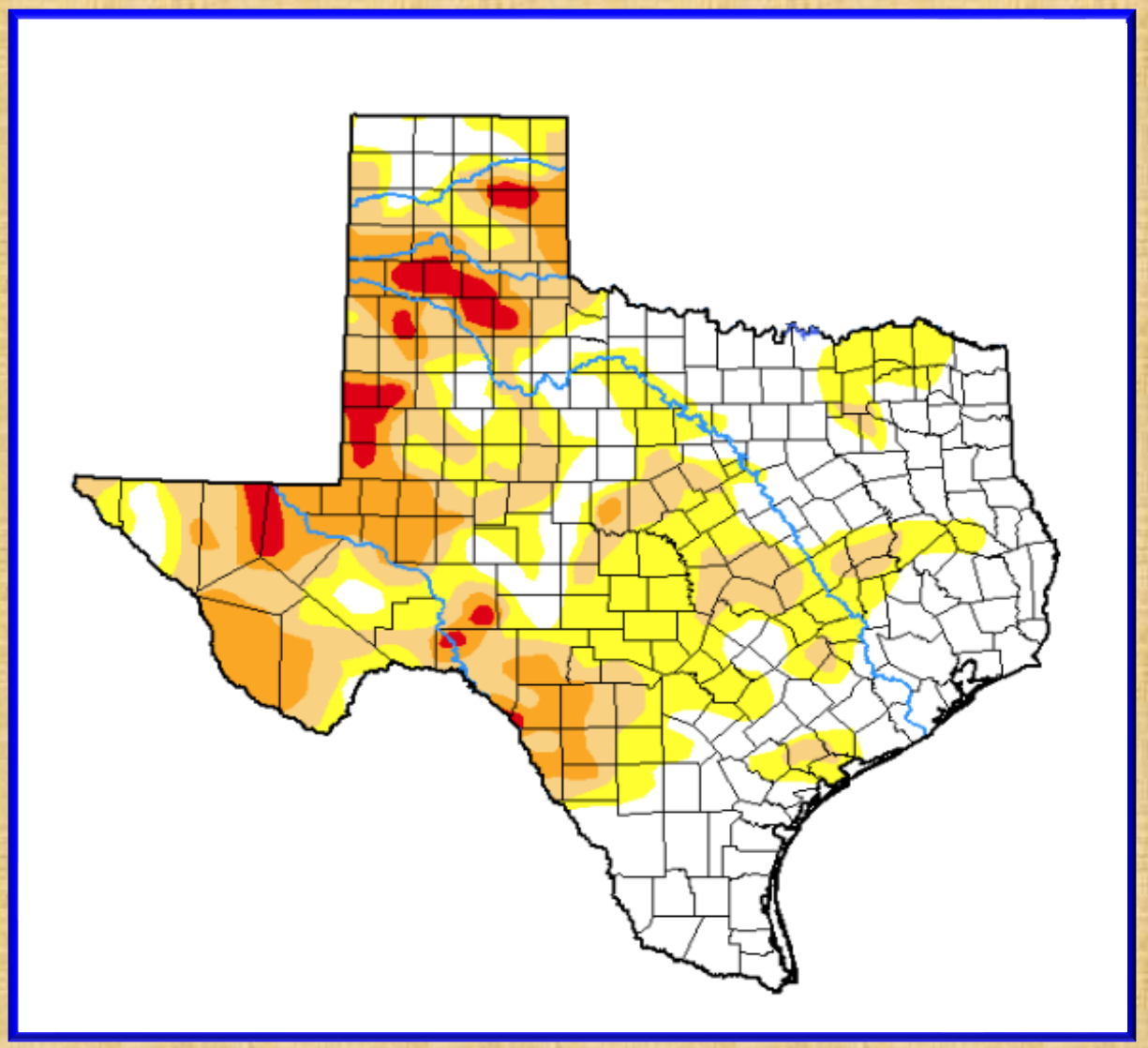
July 28, 2020



April 28, 2020



Current drought conditions for Texas as of July 28, 2020



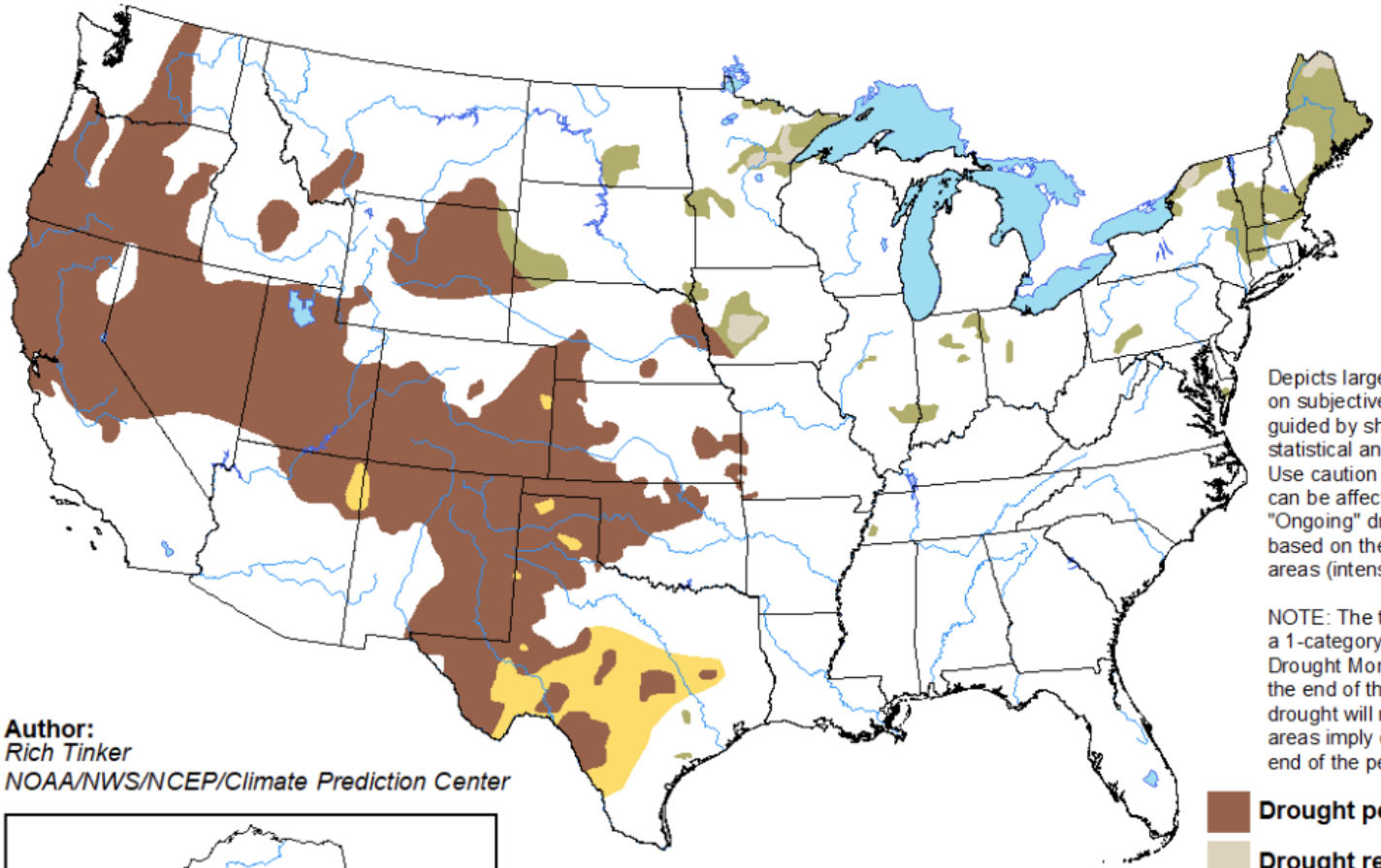
Build your own custom slider maps here at:

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

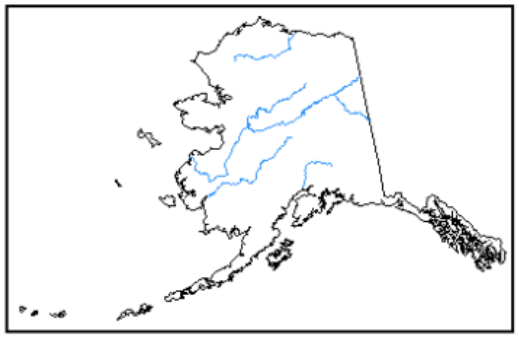


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

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

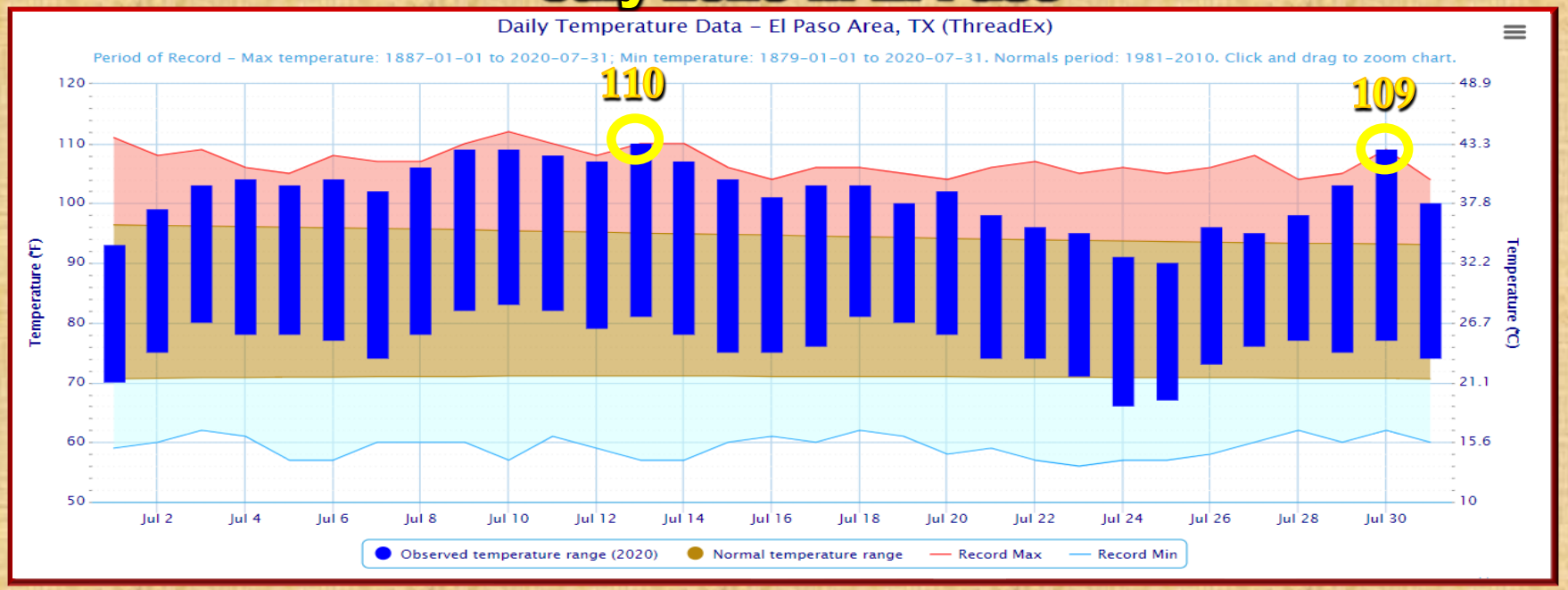
Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

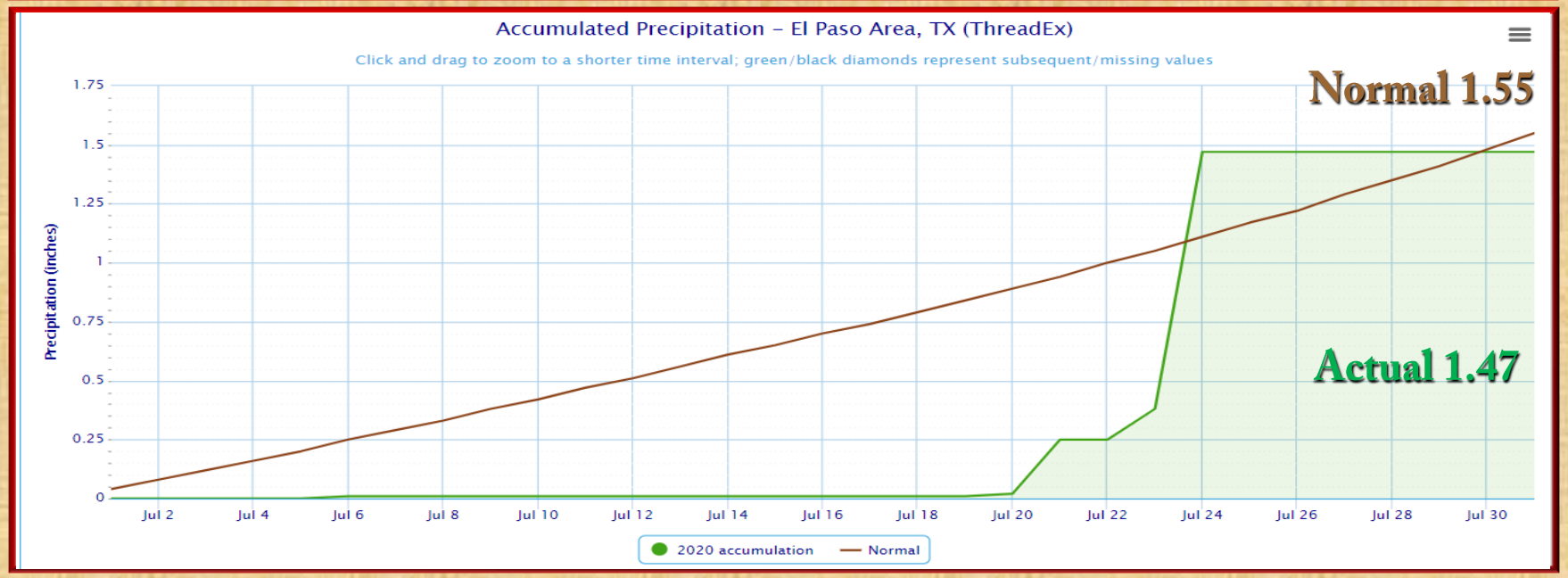


http://go.usa.gov/3eZ73

Temperature and precipitation data for July 2020 in El Paso

= record



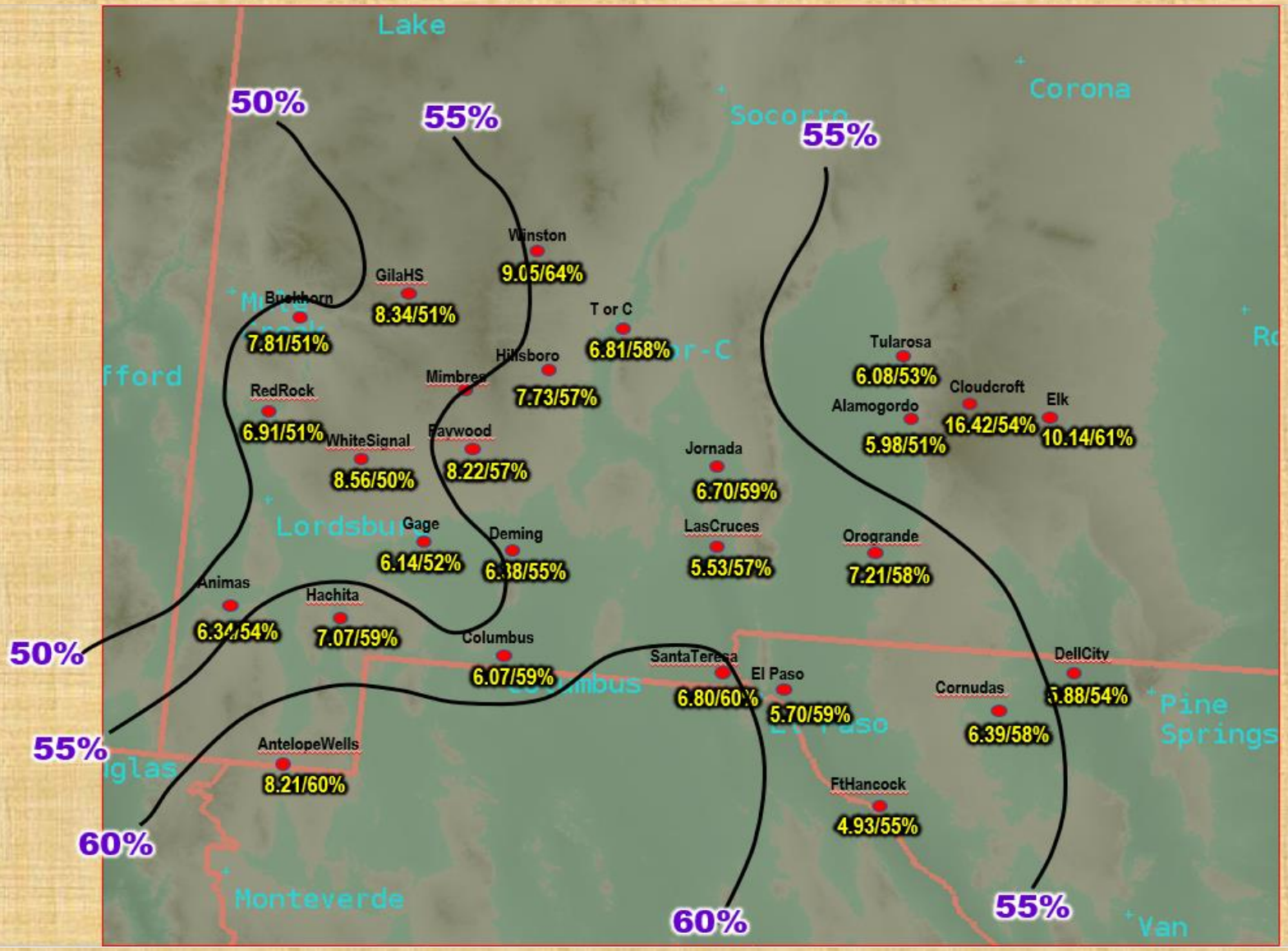


Tracking the 2020 Monsoon Season across the El Paso Forecast Area

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

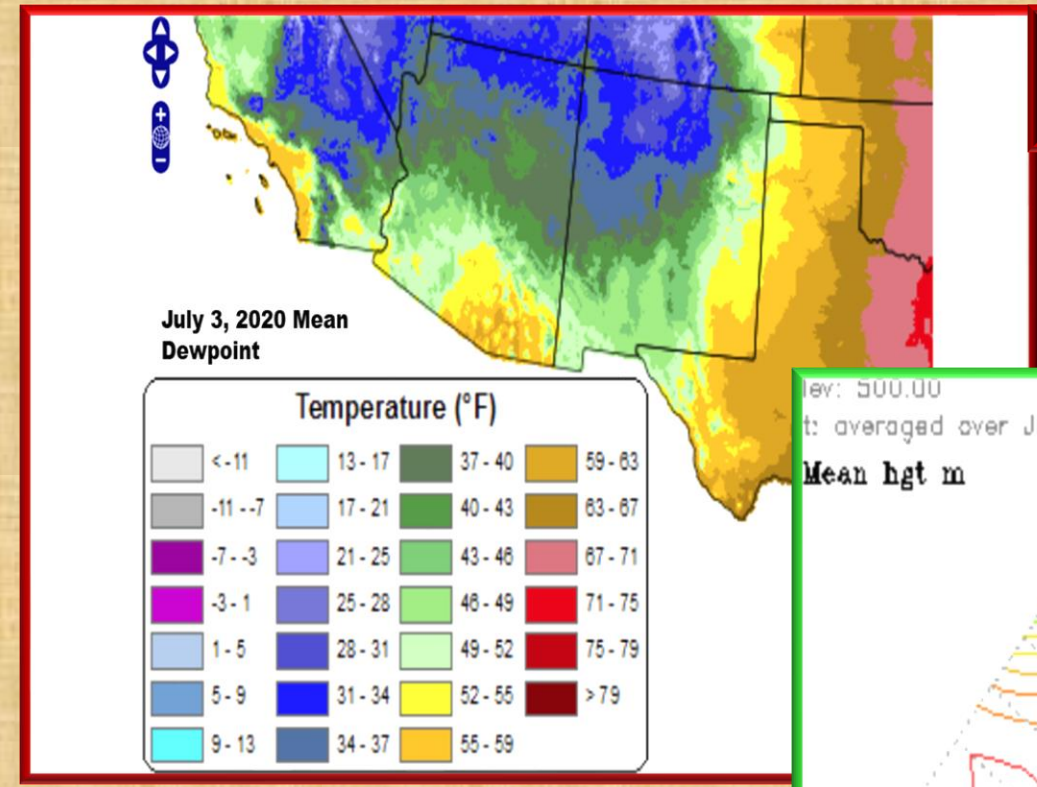
The position of this high will determine rainfall potential for the remainder of the monsoon season (see immediate preceding slide). We often confuse the monsoon ending with the shifting position of the NAM upper high. The basic overall pattern remains the same: mid latitude storm track/jet stream remain 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

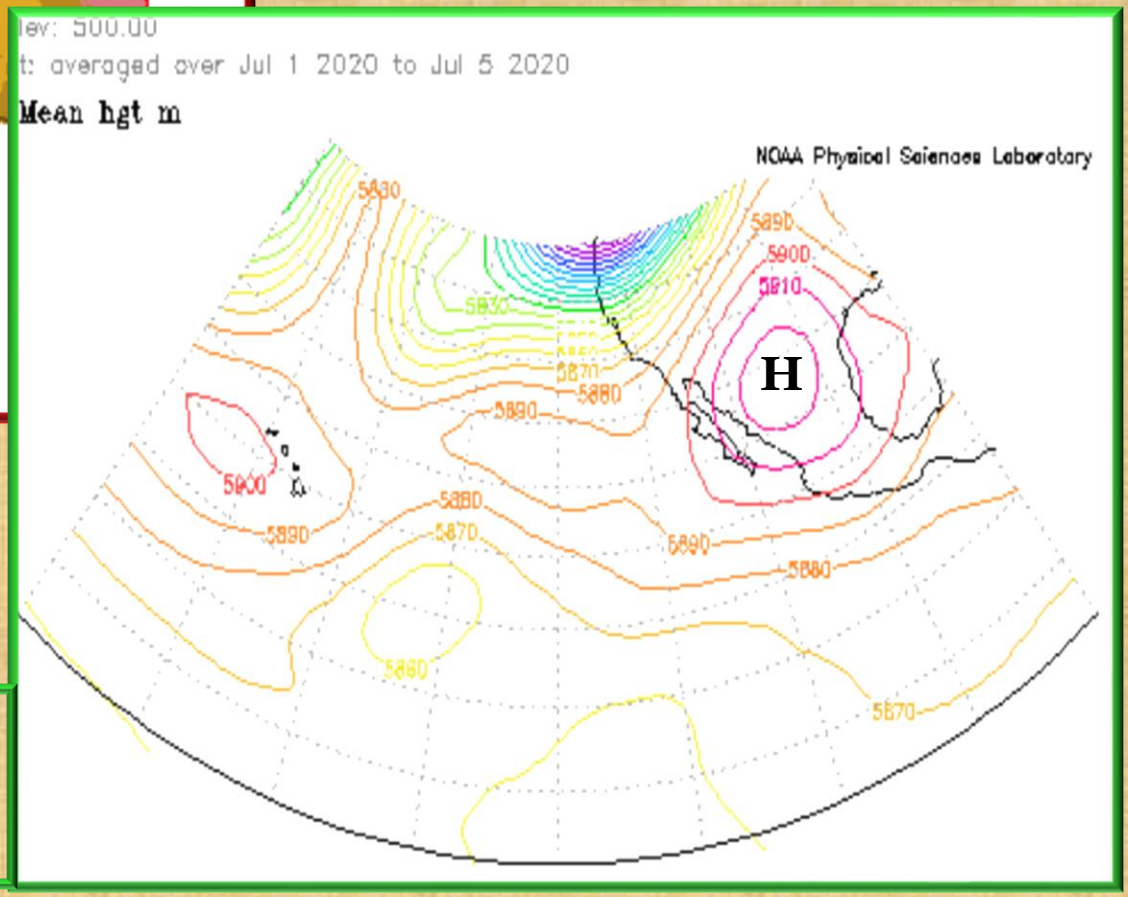


Percent of annual precipitation falling during the monsoon season (Jun15 – Sep 30)

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

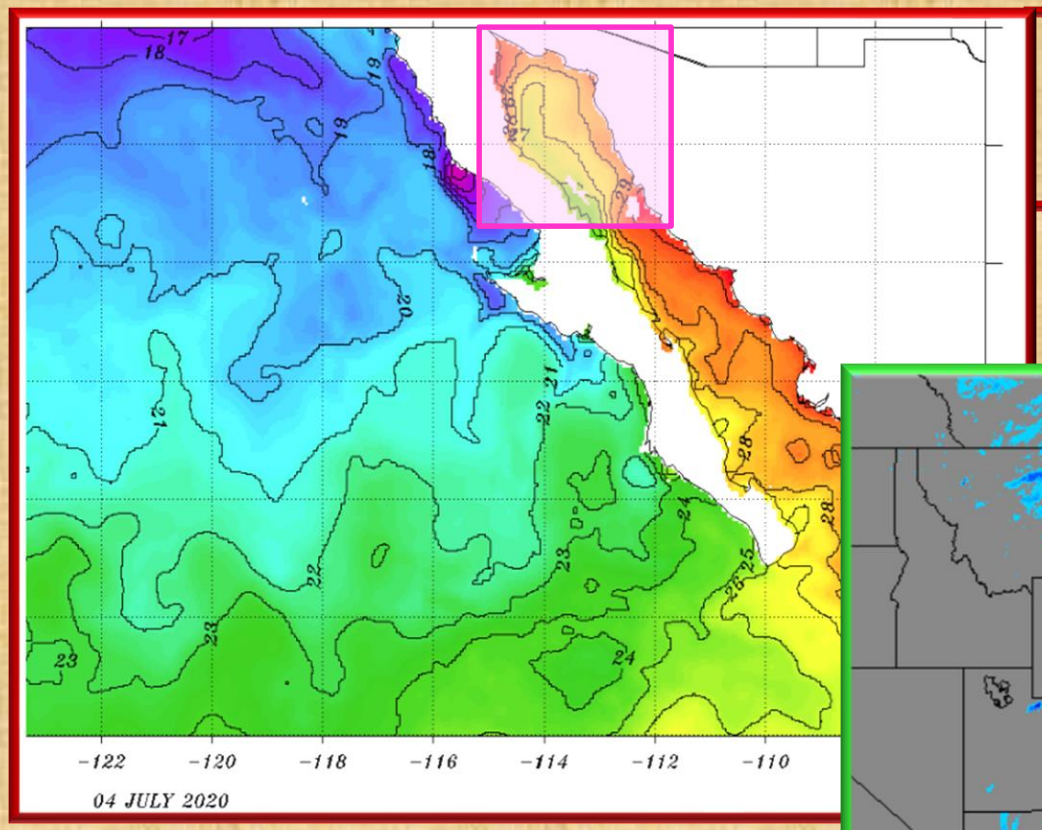


July 3 – Dewpoints reach into the 50s across the area

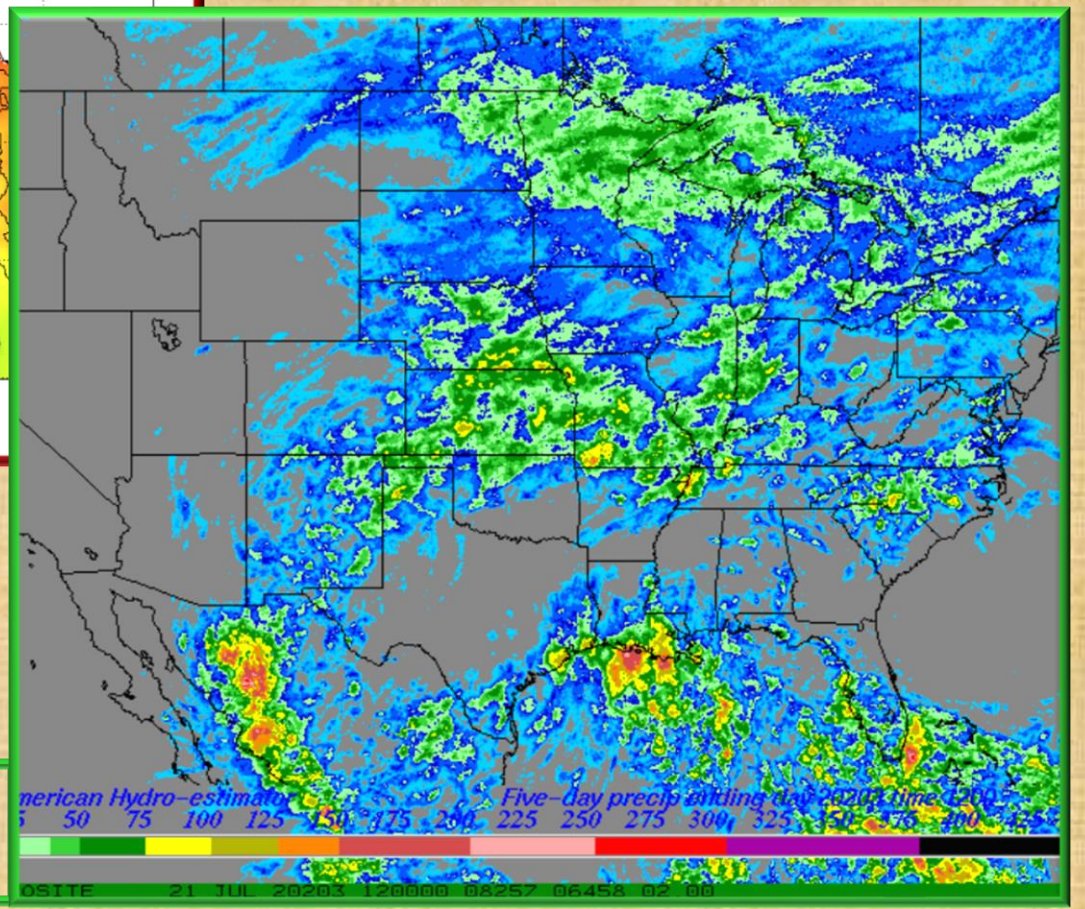


By July 5 North American Monsoon High reaches the Desert Southwest

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

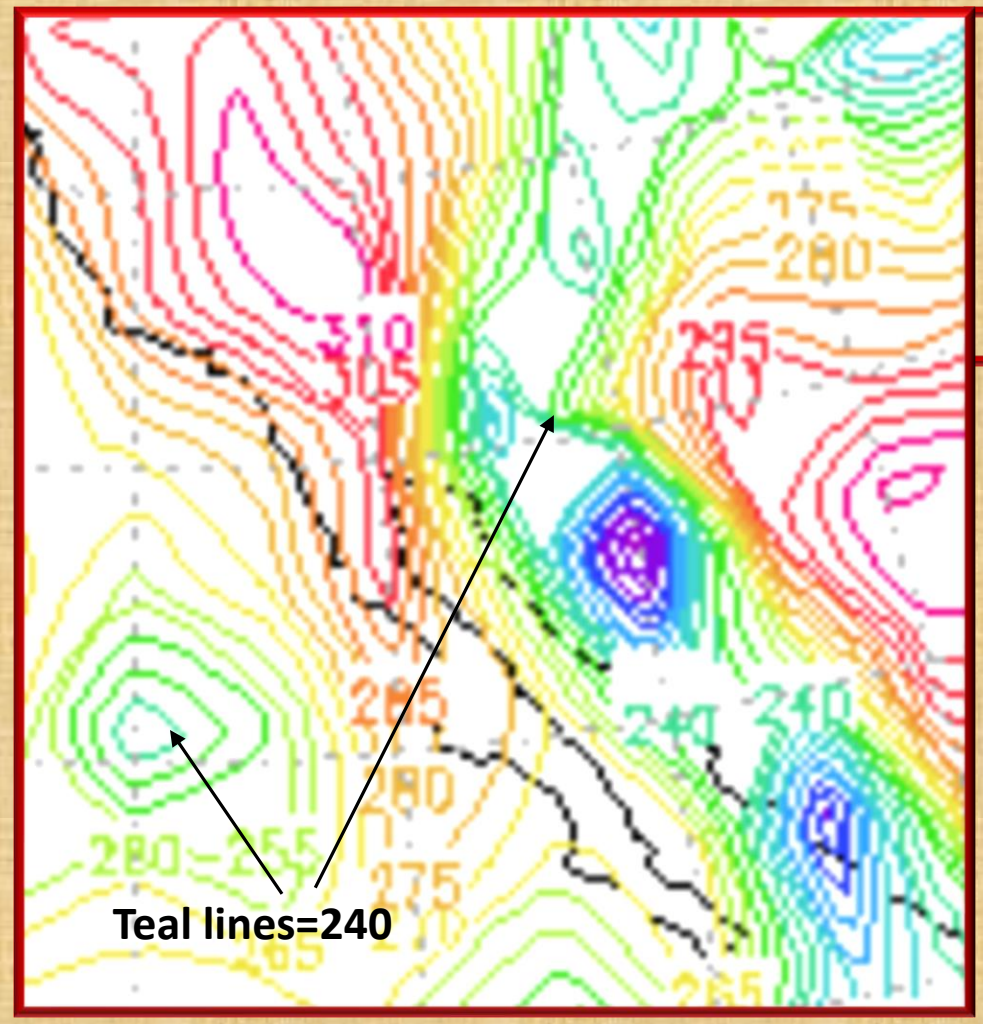


July 4 – Sea surface temperatures in the northern Gulf of California reach 26C deg (79F)



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

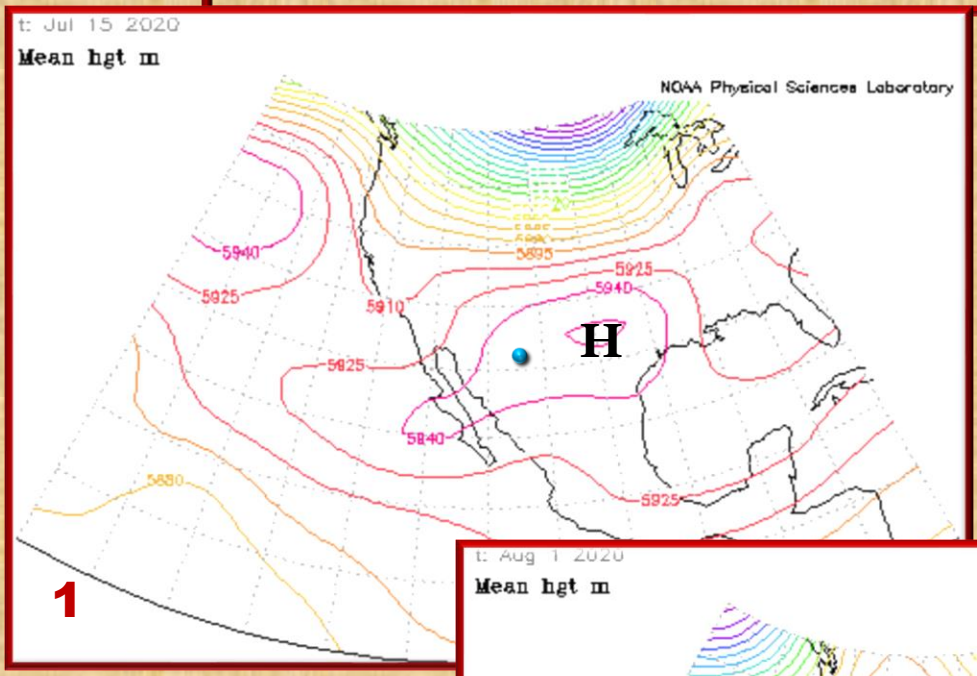
Tracking the 2020 Monsoon Season across the El Paso Forecast Area. Fig. 3

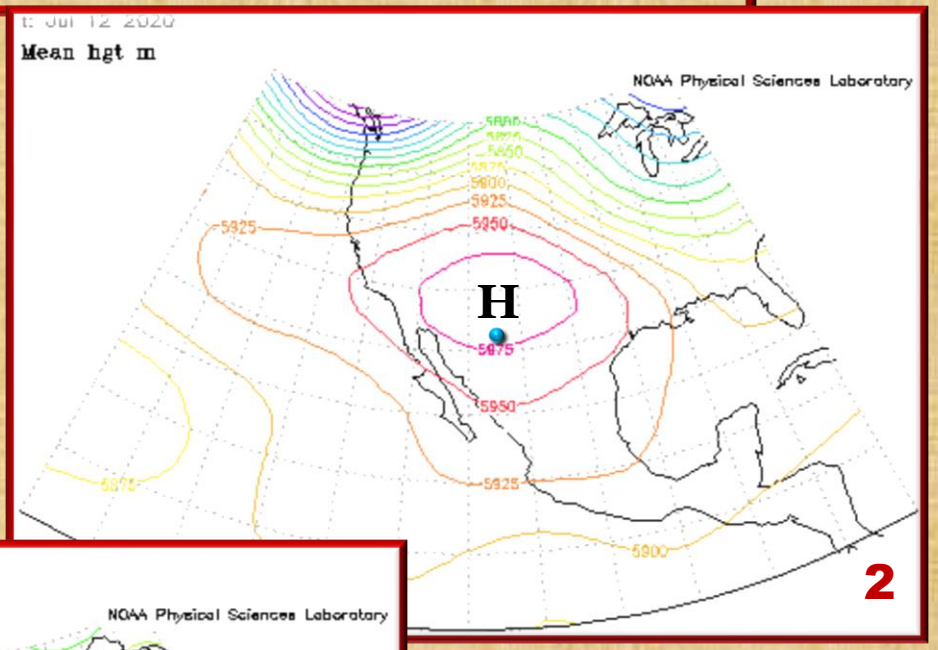


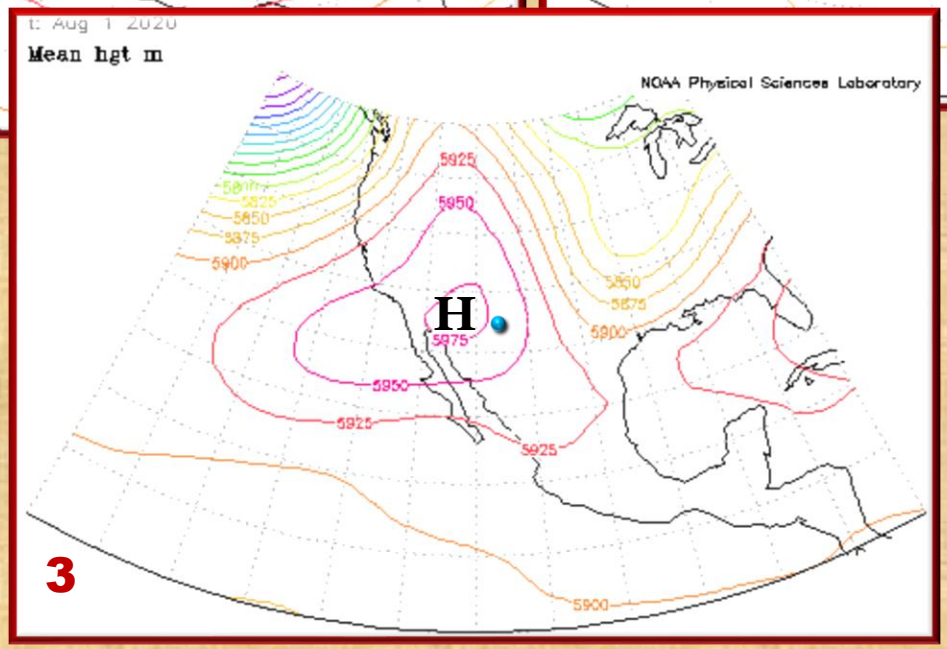
July 13 – Outgoing Longwave Radiation (OLR) diminishes to less than 240 W/m^2 Thick clouds and anvil tops from thunderstorms diminish the OLR values, often indicative of the monsoon moisture and thunderstorms moving into the area.

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.





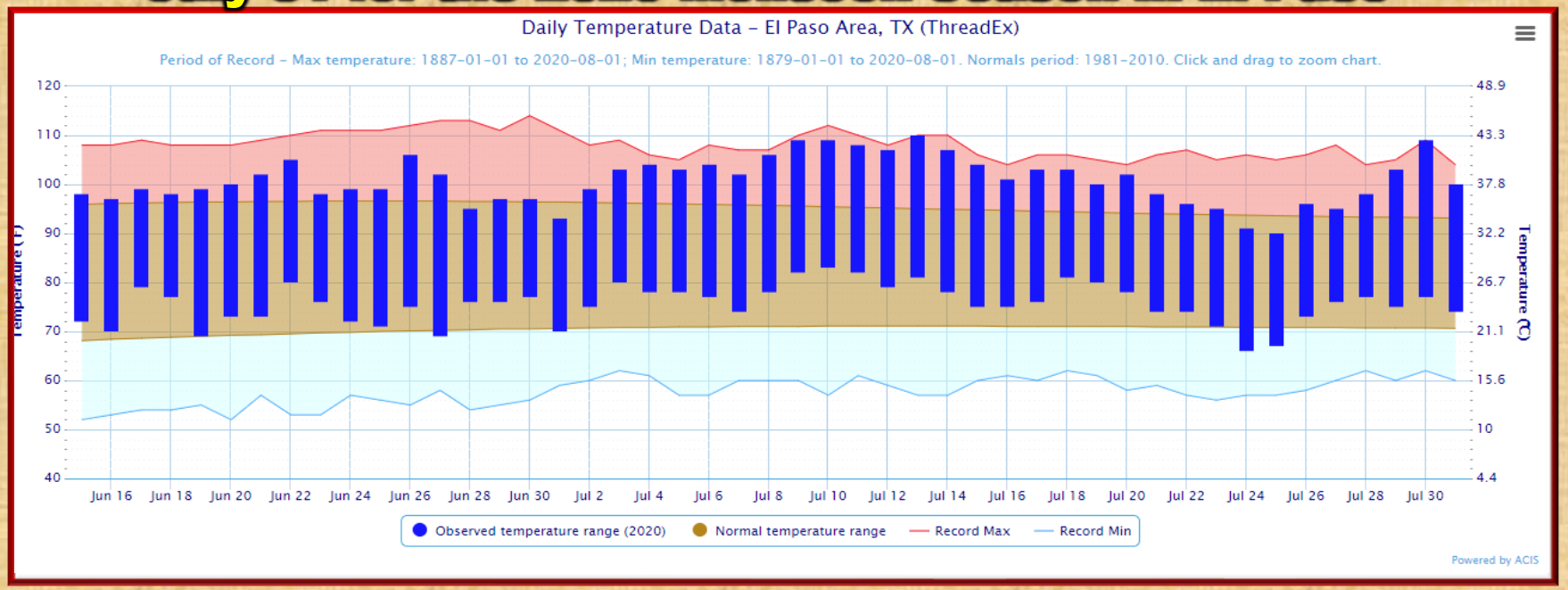


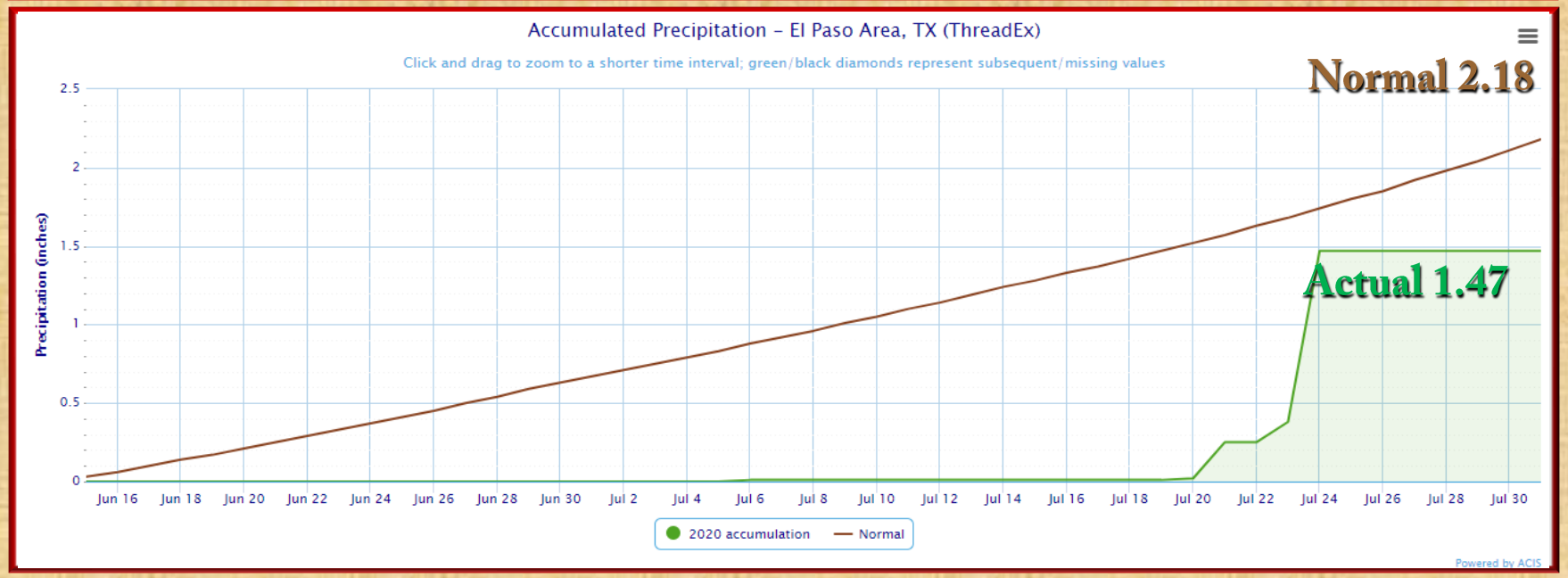
No. 1 High center east of New Mexico. Often brings ample tropical moisture and widespread heavy rain and flooding to the area

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

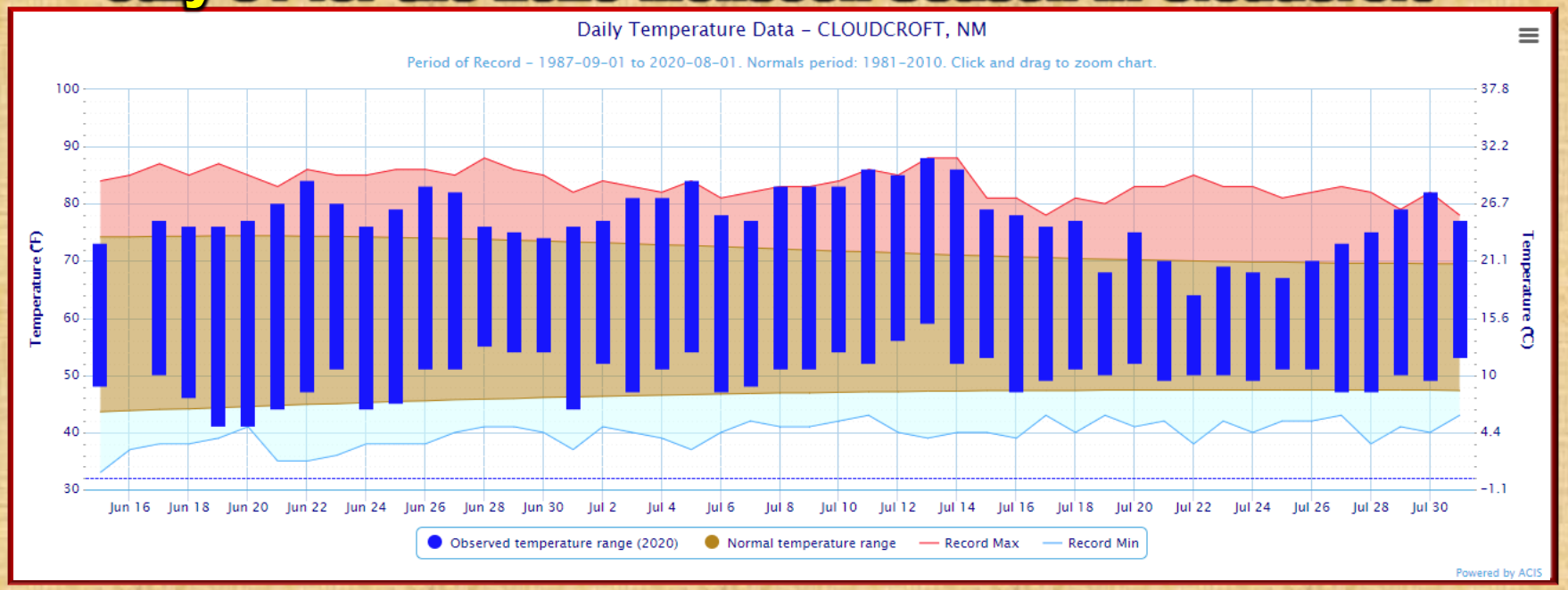
No. 3 High center west of New Mexico. Often brings scattered storms with hit and miss heavy rains and large hail and strong wind potential.

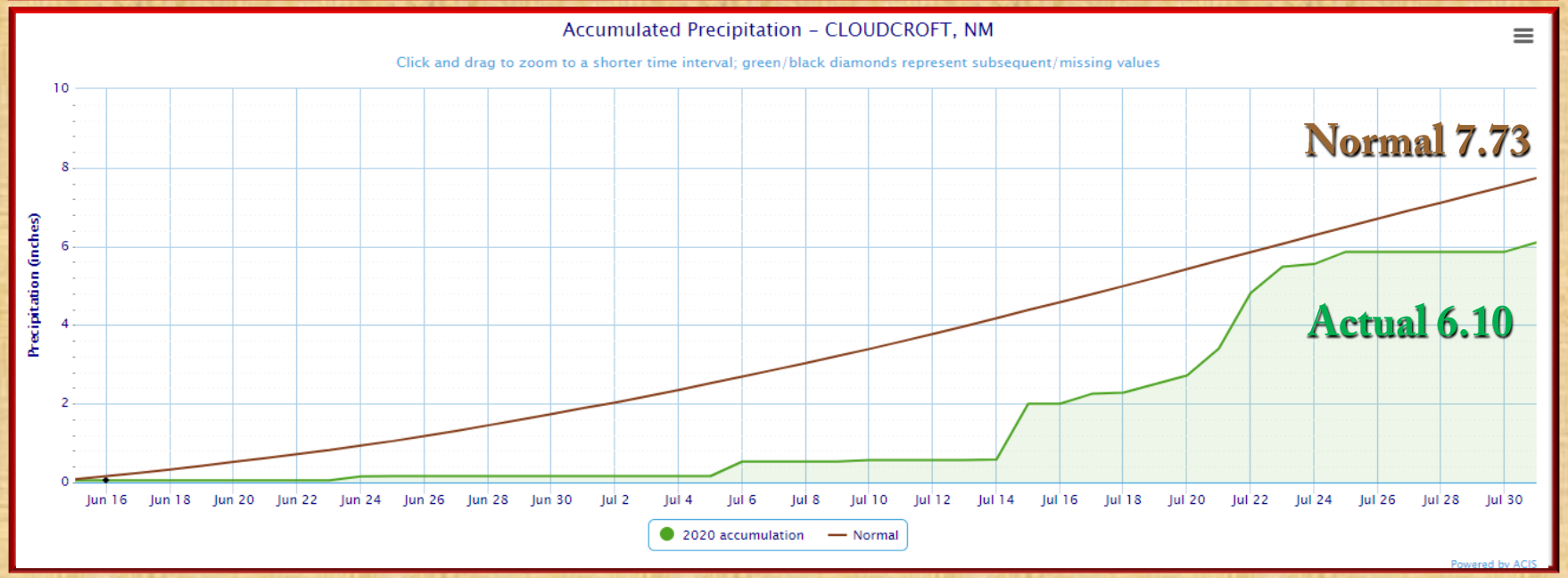
Temperature and precipitation data through July 31 for the 2020 Monsoon Season in El Paso



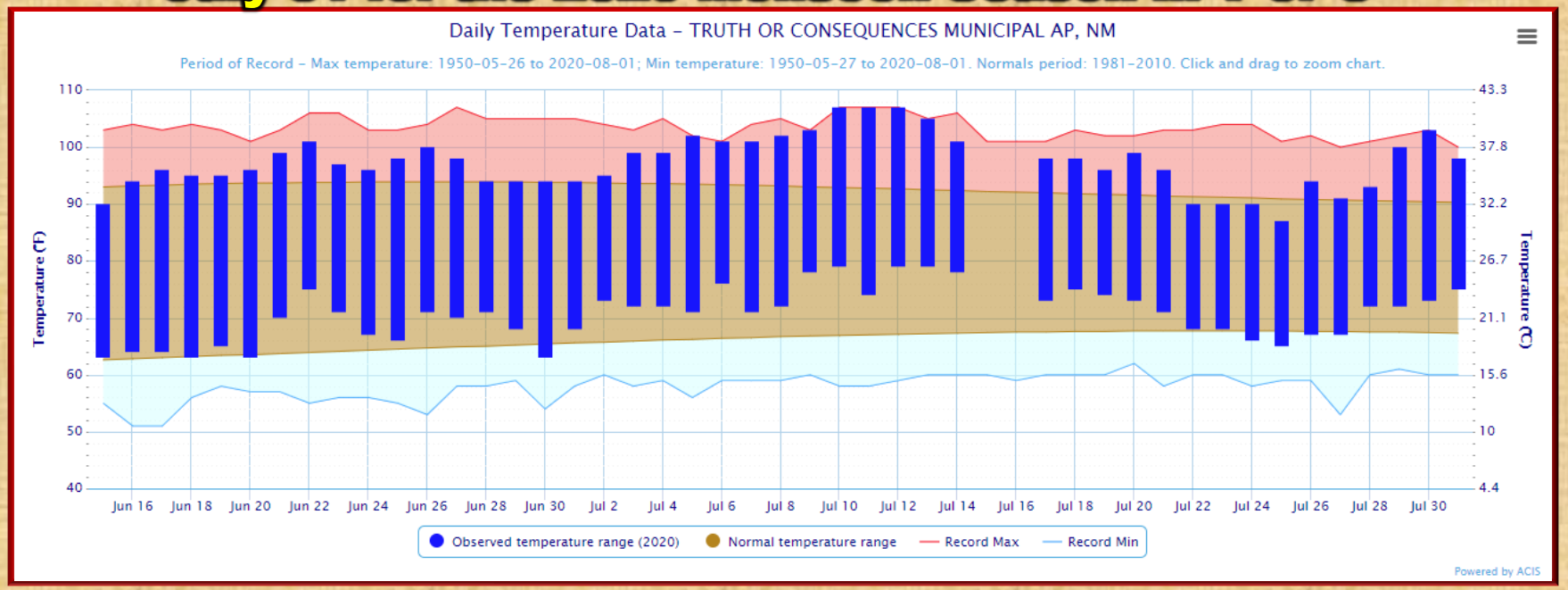


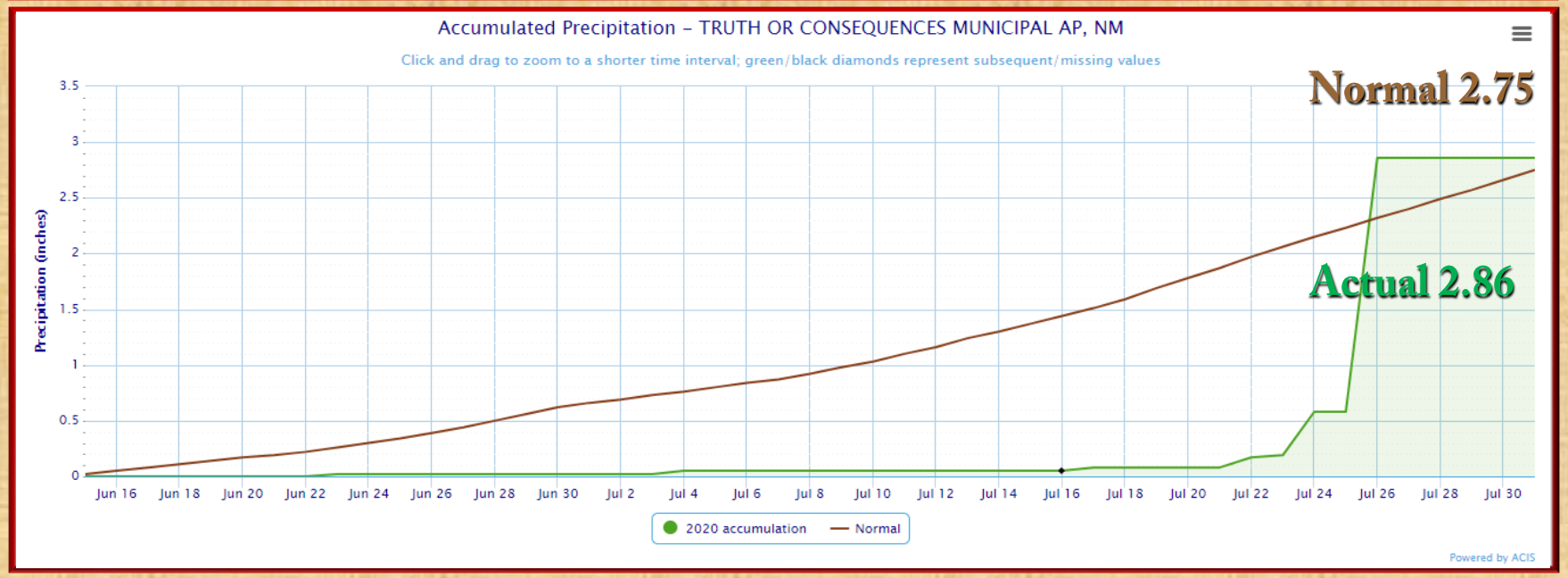
Temperature and precipitation data through July 31 for the 2020 Monsoon Season in Cloudcroft



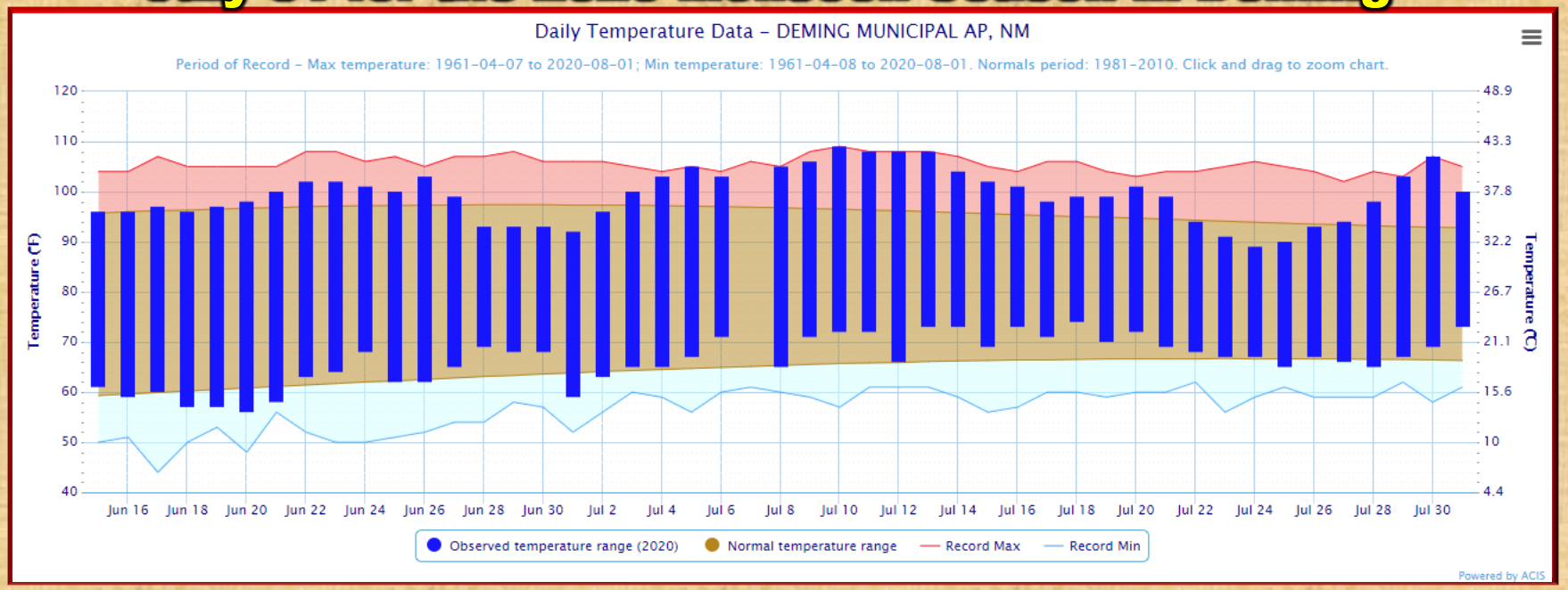


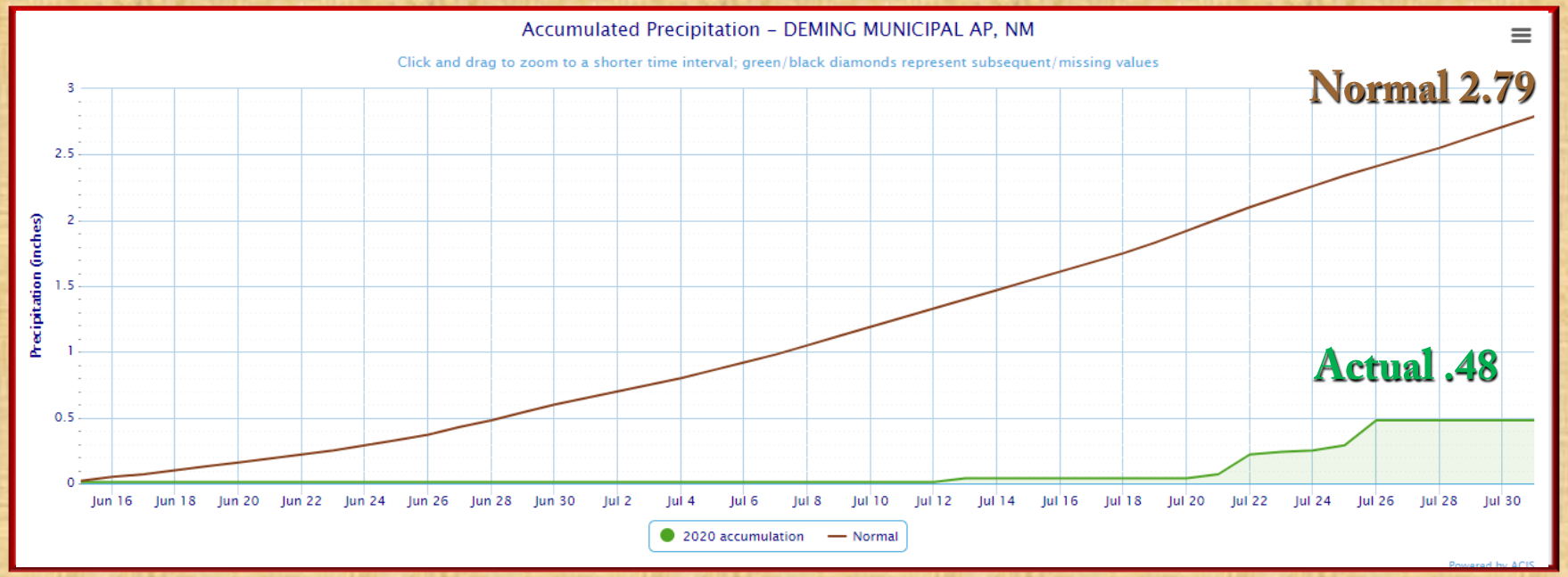
Temperature and precipitation data through July 31 for the 2020 Monsoon Season in T or C



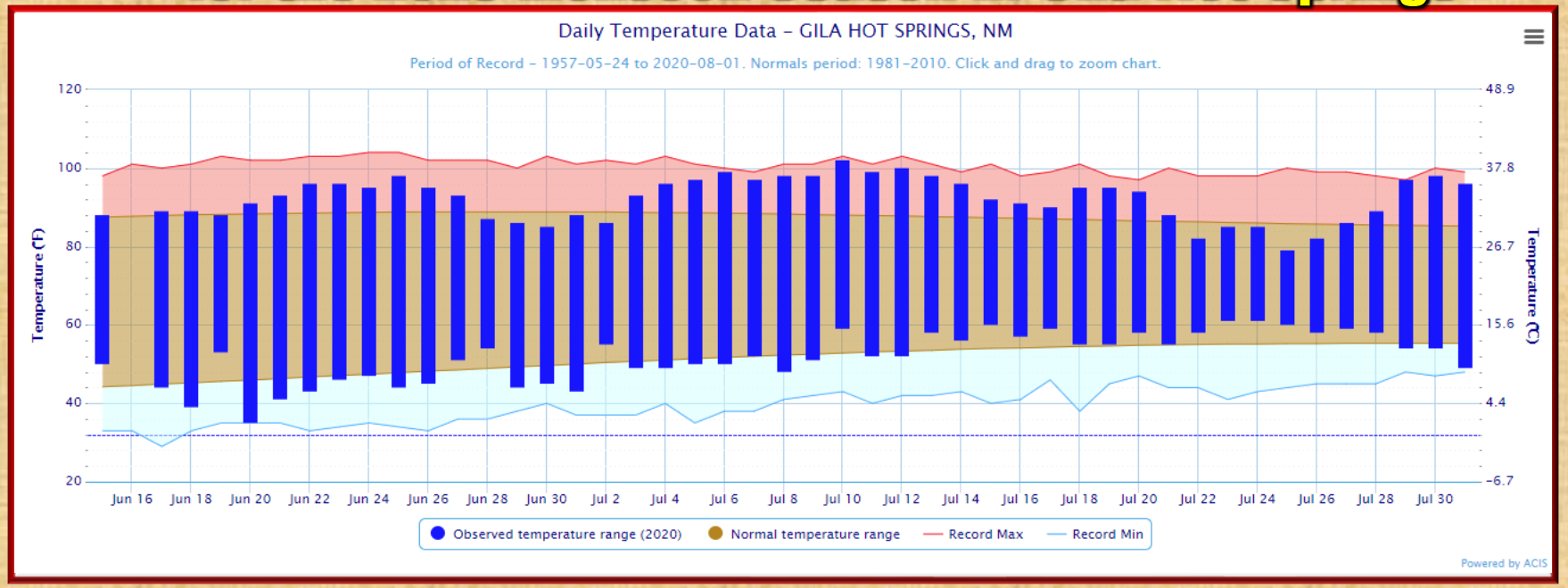


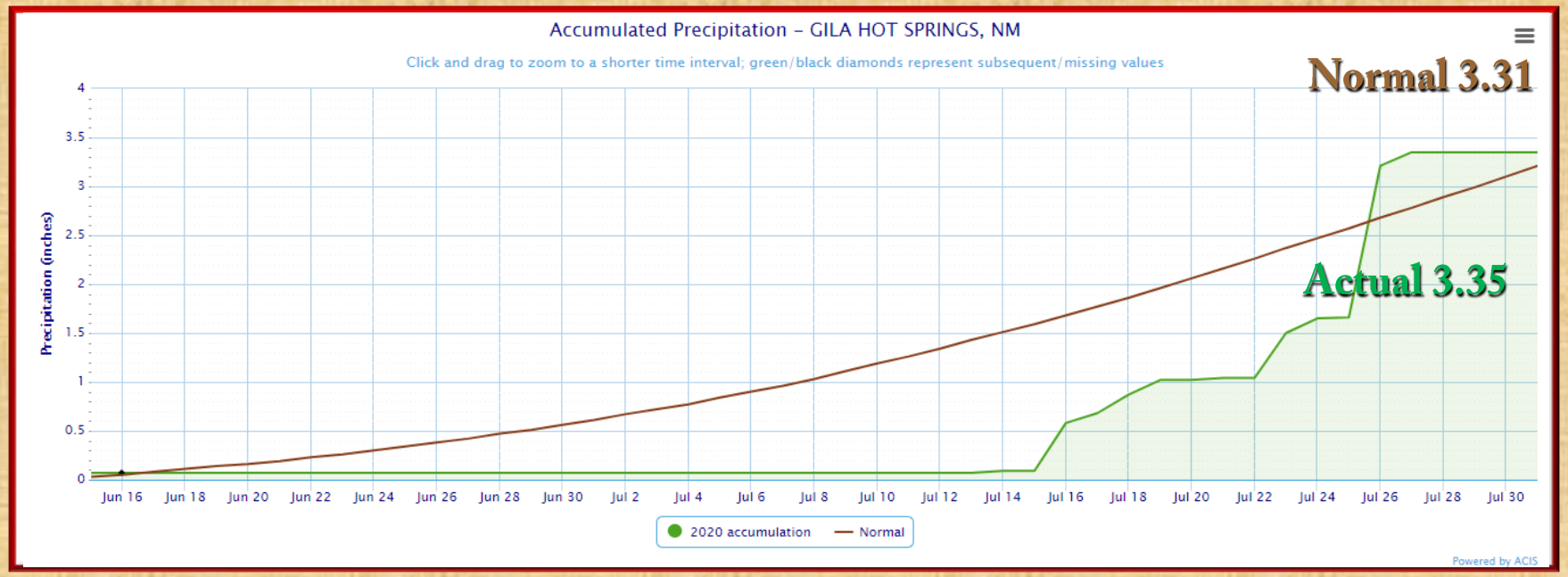
Temperature and precipitation data through July 31 for the 2020 Monsoon Season in Deming





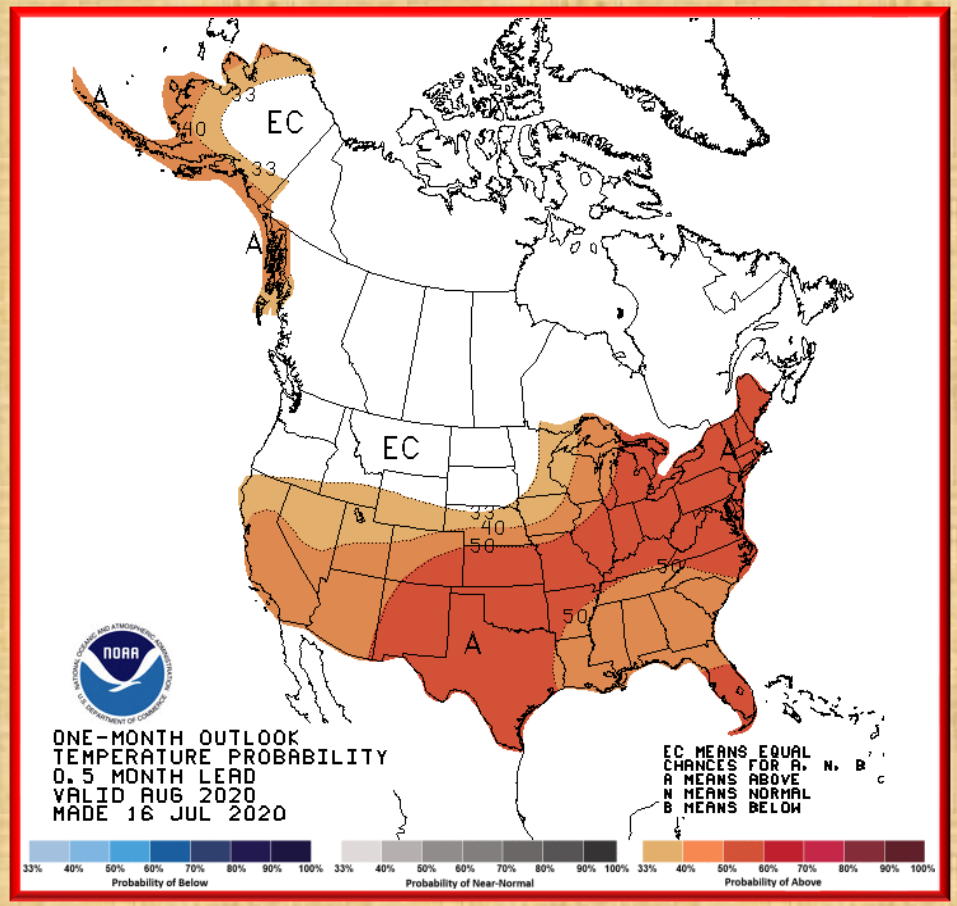
Temperature and precipitation data through July 31 for the 2020 Monsoon Season in Gila Hot Springs



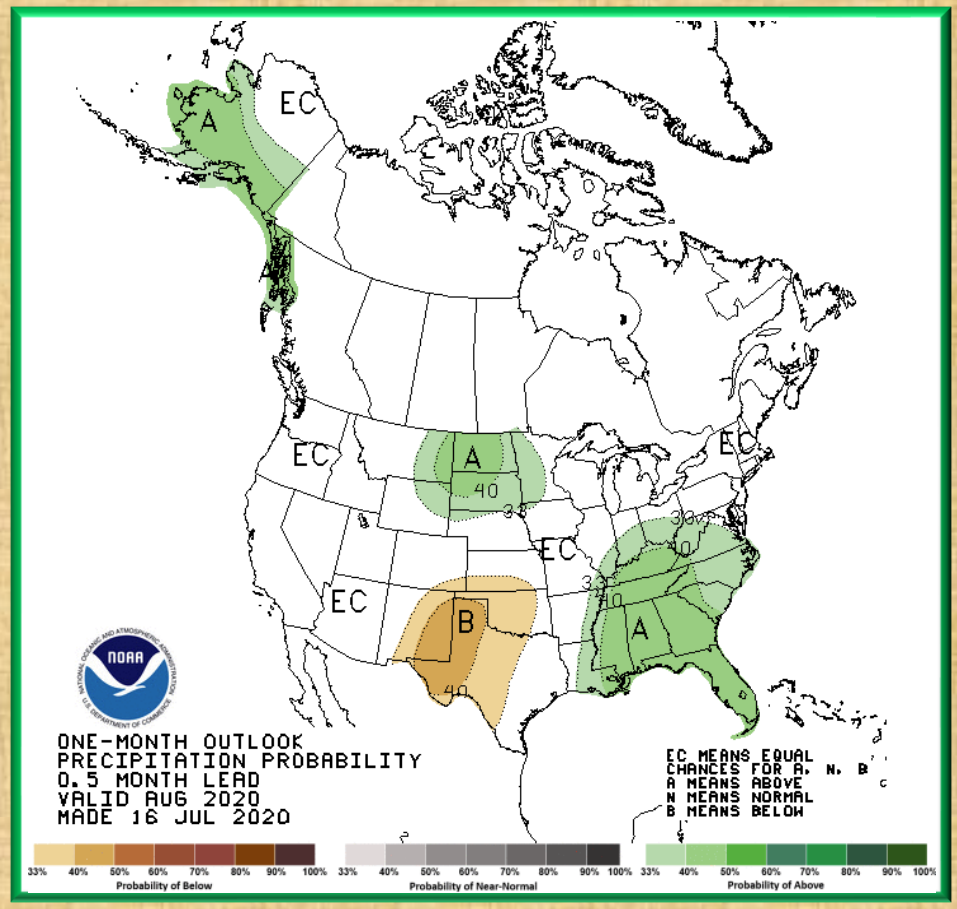


Temperature and precipitation outlook for August 2020

Temperature

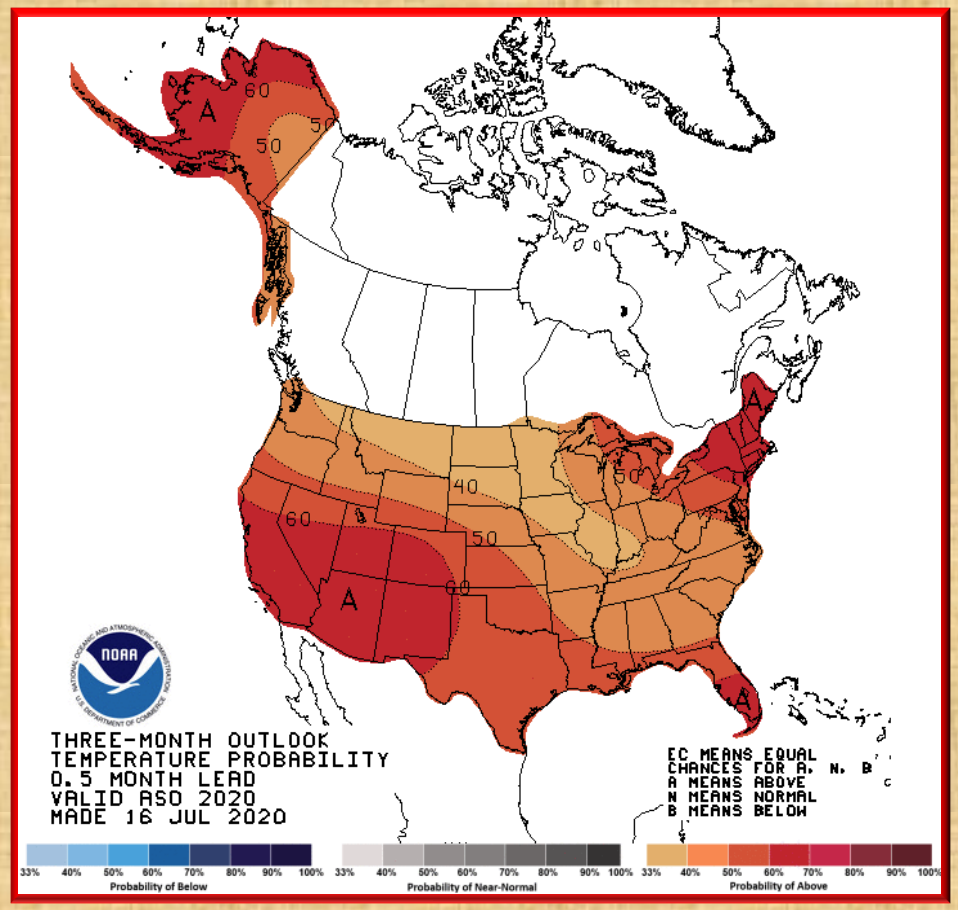


Precipitation

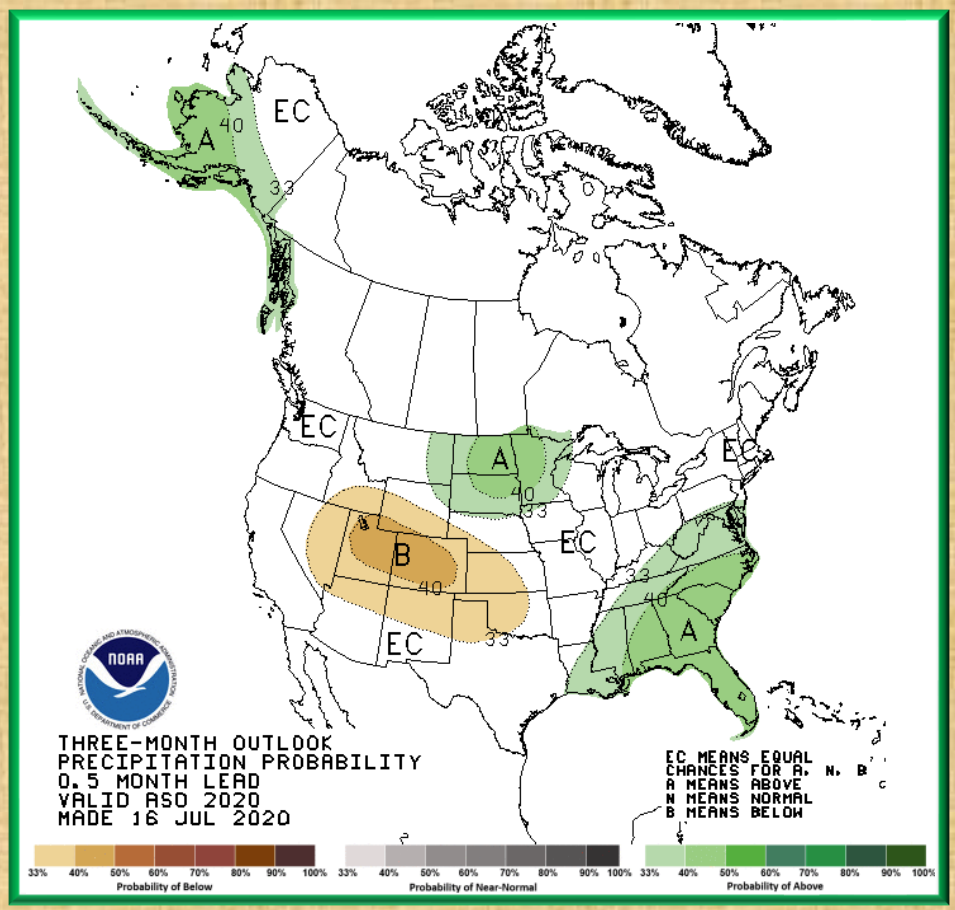


Temperature and precipitation outlook For August-October 2020

Temperature

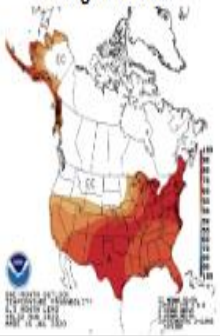


Precipitation



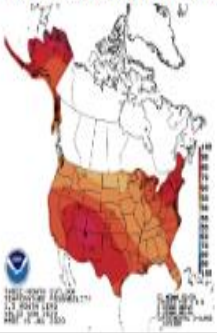
Temperature Outlook Through October 2021

August 2020

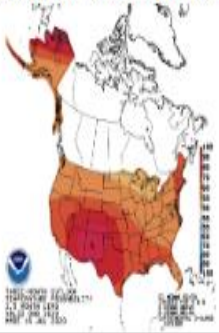


August-September-October 2020

September-October-November 2020

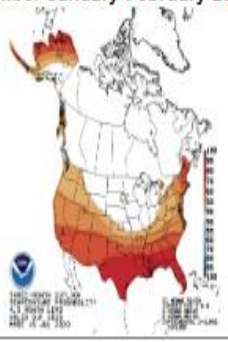


October-November-December 2020

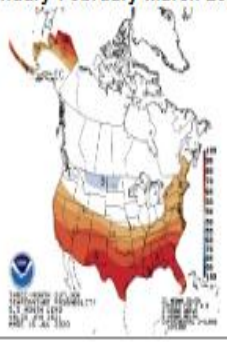


November-December-January 2020/21

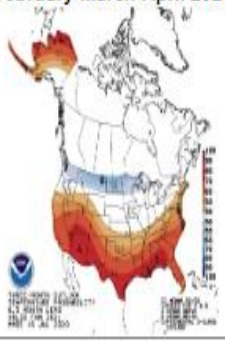
December-January-February 2020/21



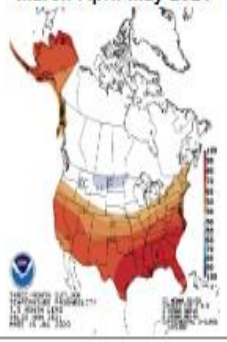
January-February-March 2021



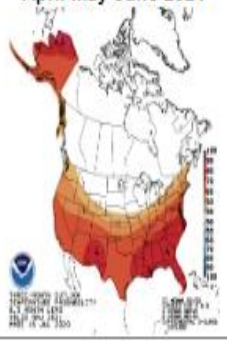
February-March-April 2021



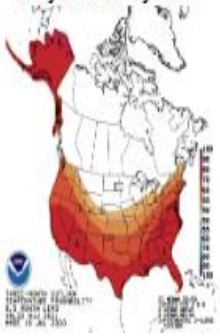
March-April-May 2021



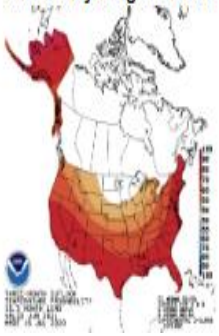
April-May-June 2021



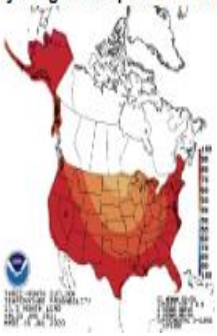
May-June-July 2021



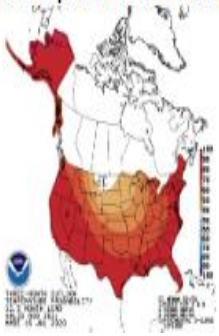
June-July-August 2021



July-August-September 2021

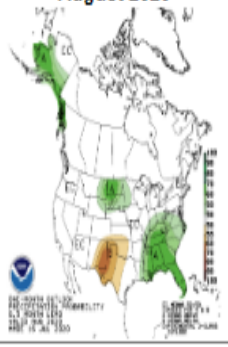


August-September-October 2021

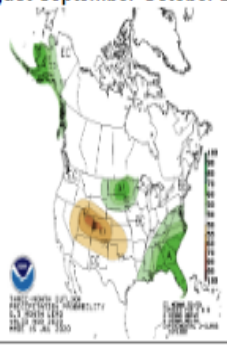


Precipitation Outlook Through October 2021

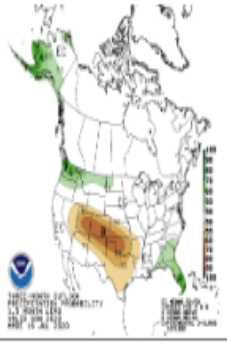
August 2020



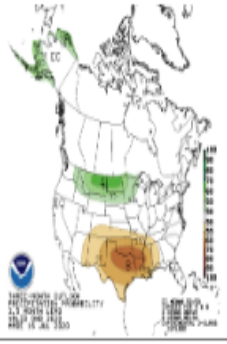
August-September-October 2020



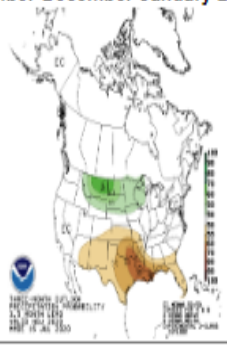
September-October-November 2020



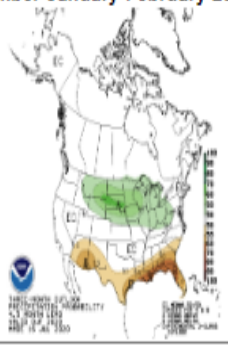
October-November-December 2020



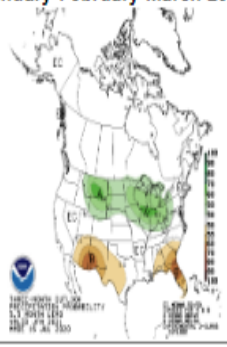
November-December-January 2020/21



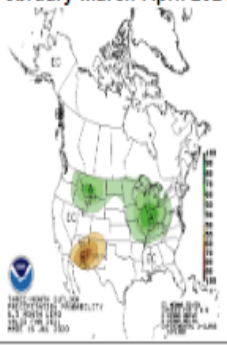
December-January-February 2020/21



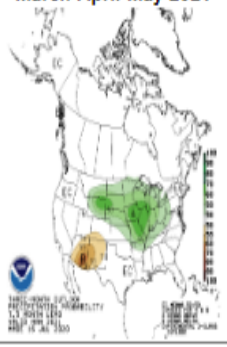
January-February-March 2021



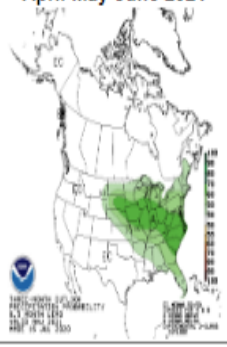
February-March-April 2021



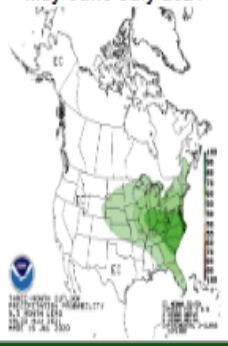
March-April-May 2021



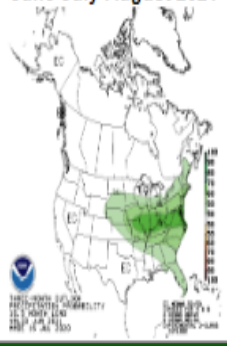
April-May-June 2021



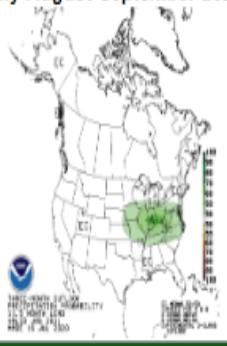
May-June-July 2021



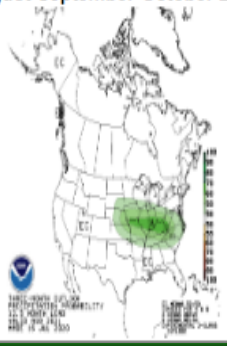
June-July-August 2021



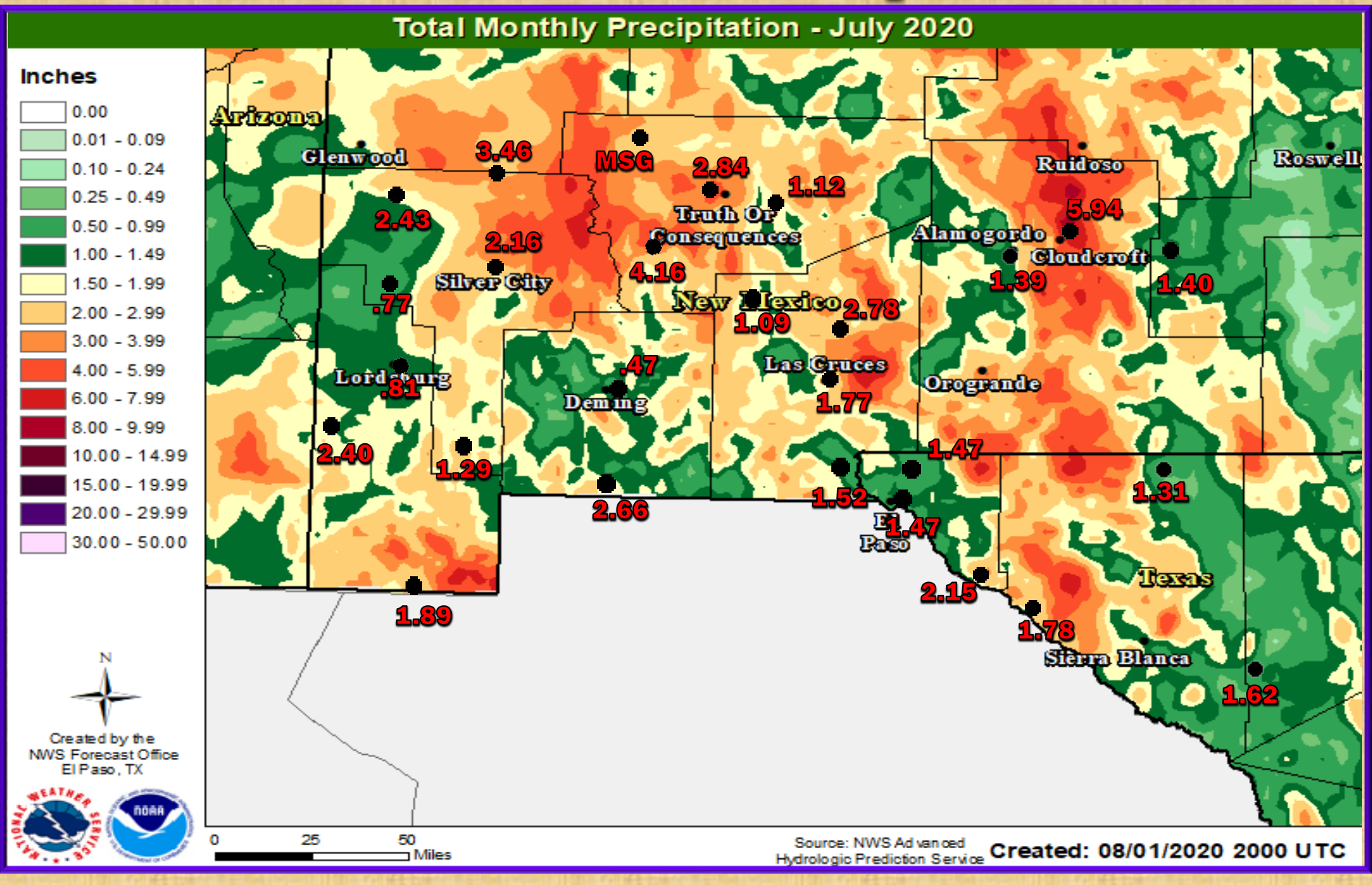
July-August-September 2021



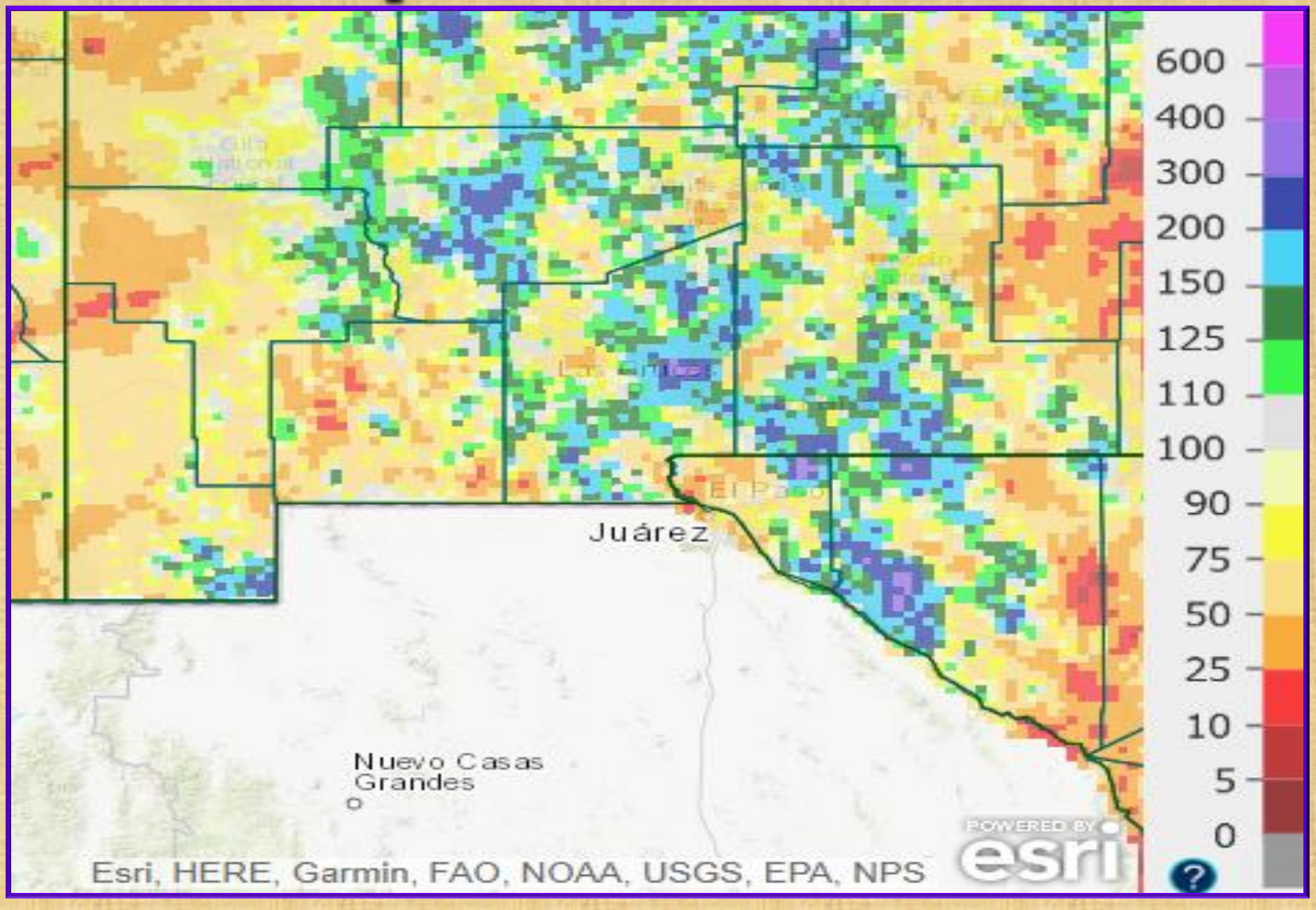
August-September-October 2021



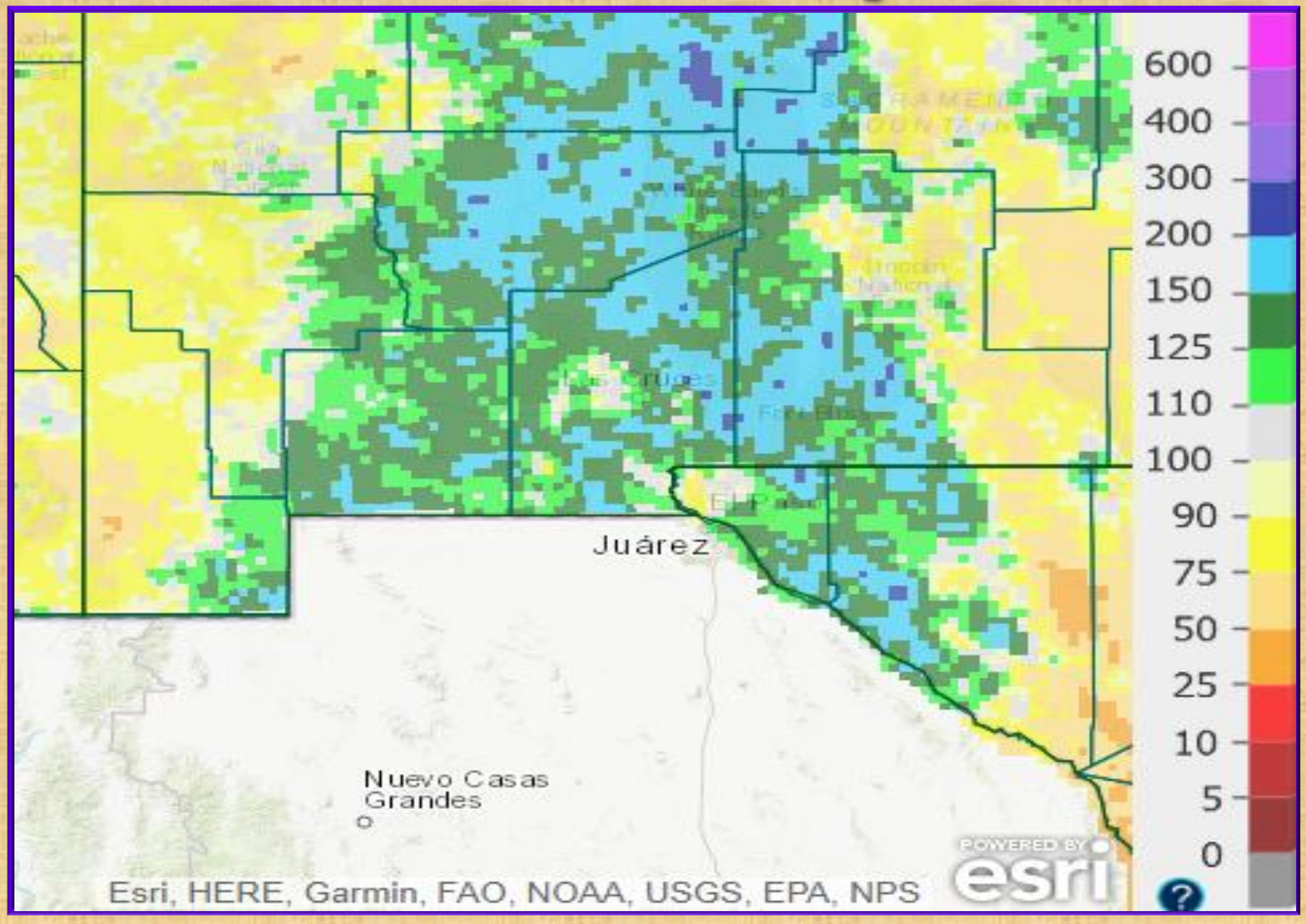
July 2020 radar rainfall estimate with surface rainfall reports



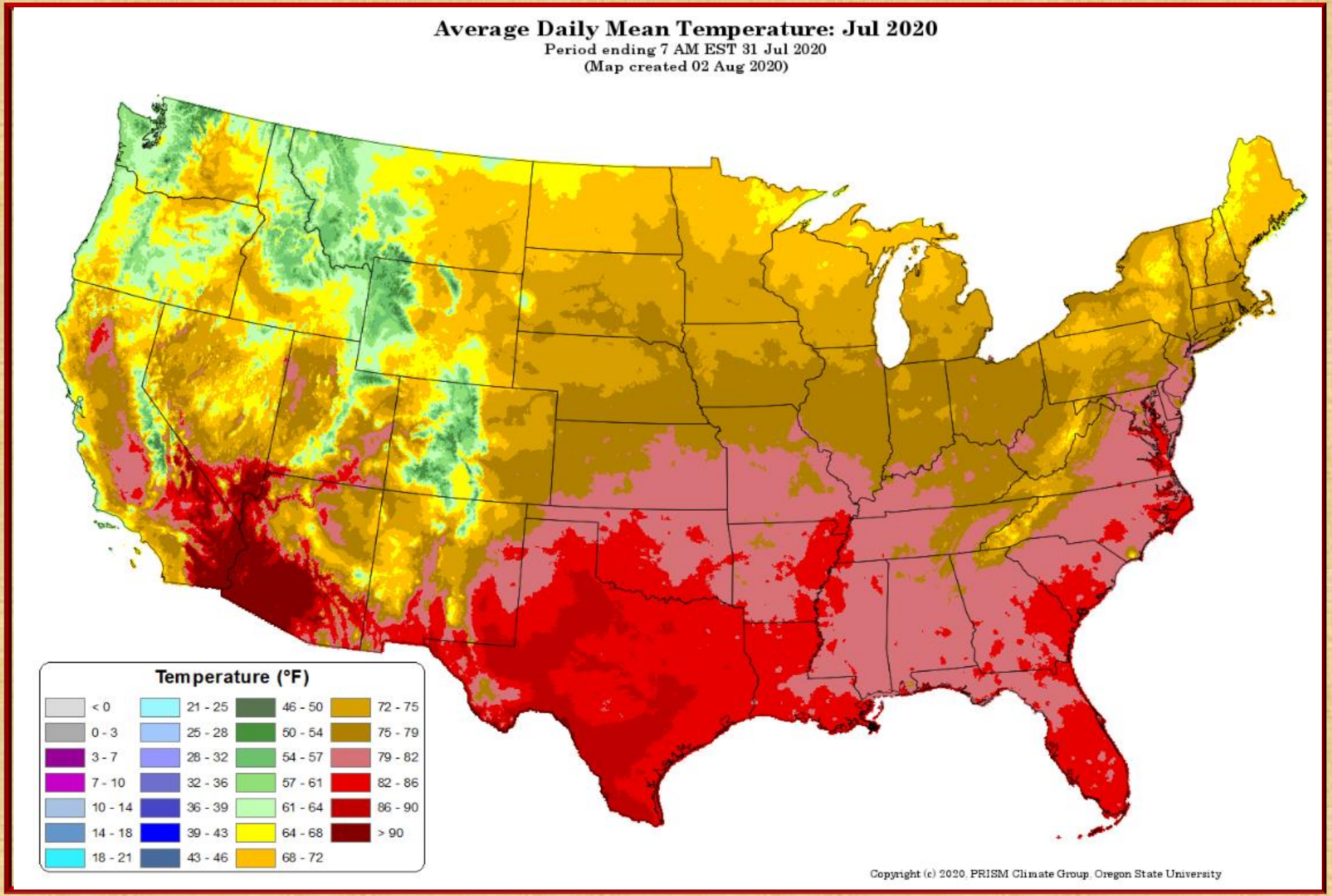
July 2020 radar rainfall estimate percent of normal



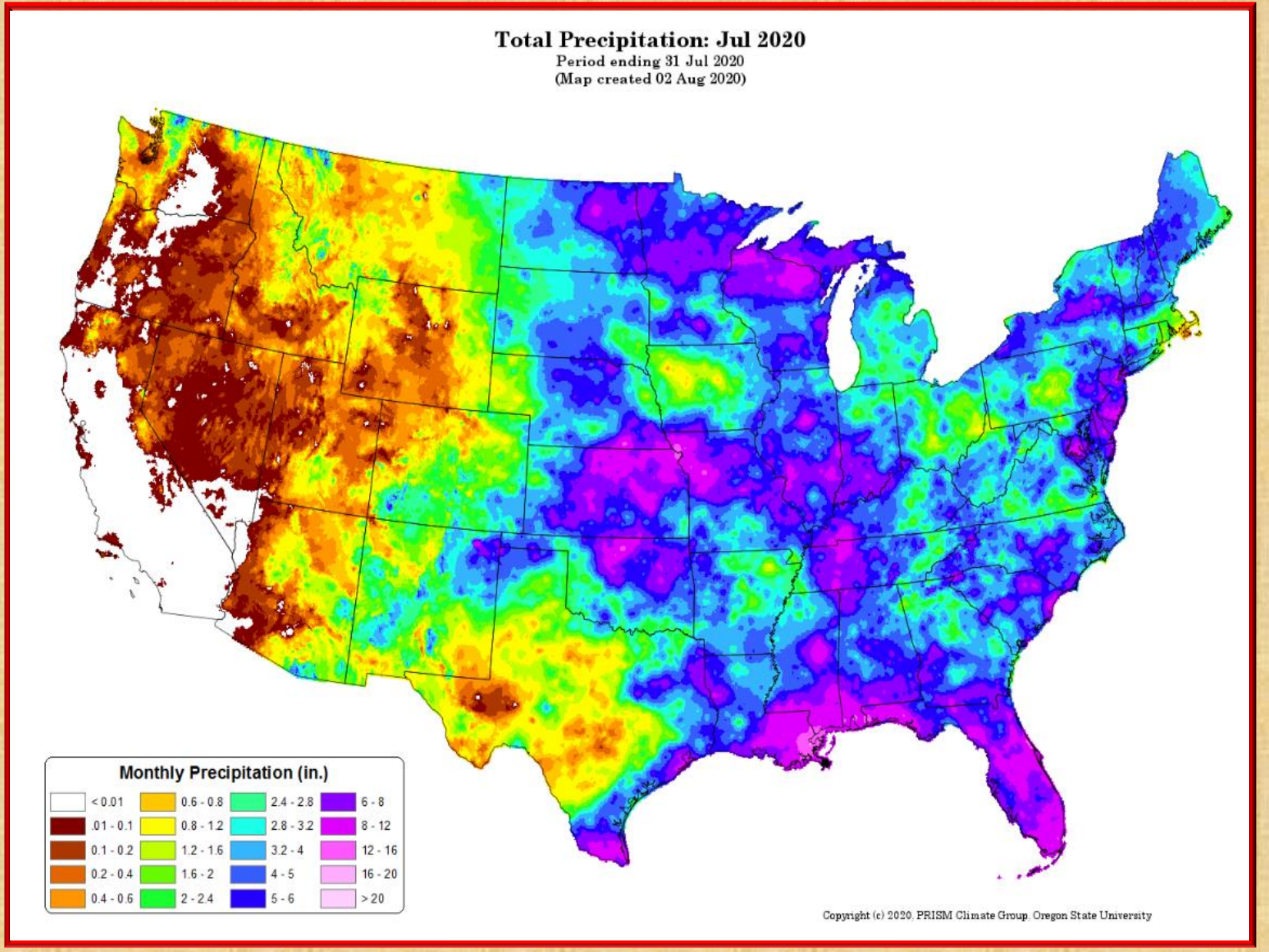
Radar rainfall estimate percent of normal for the Water Year (Oct 1 to present)



Average Daily Mean Temperature for July 2020

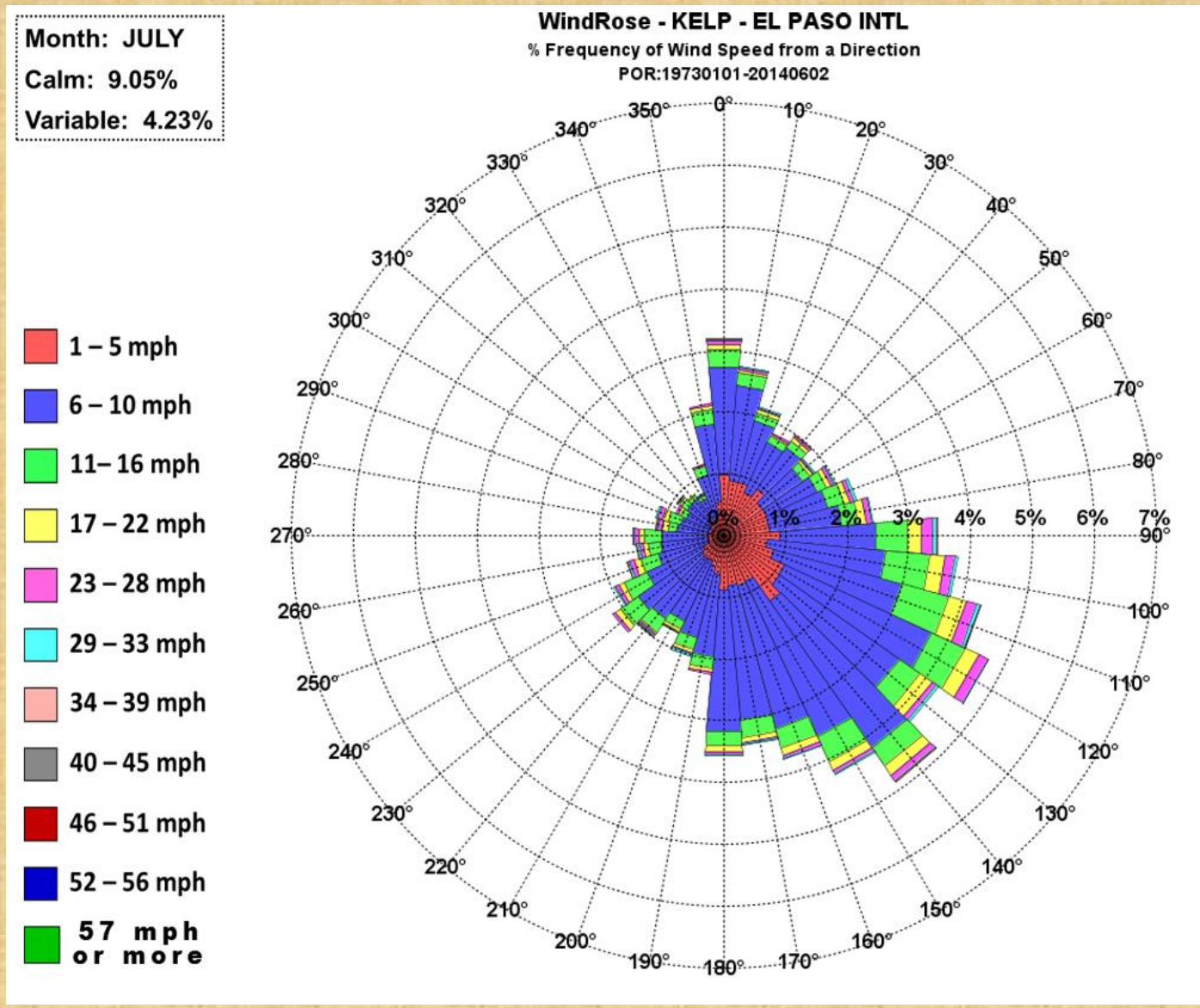


Total Precipitation for July 2020



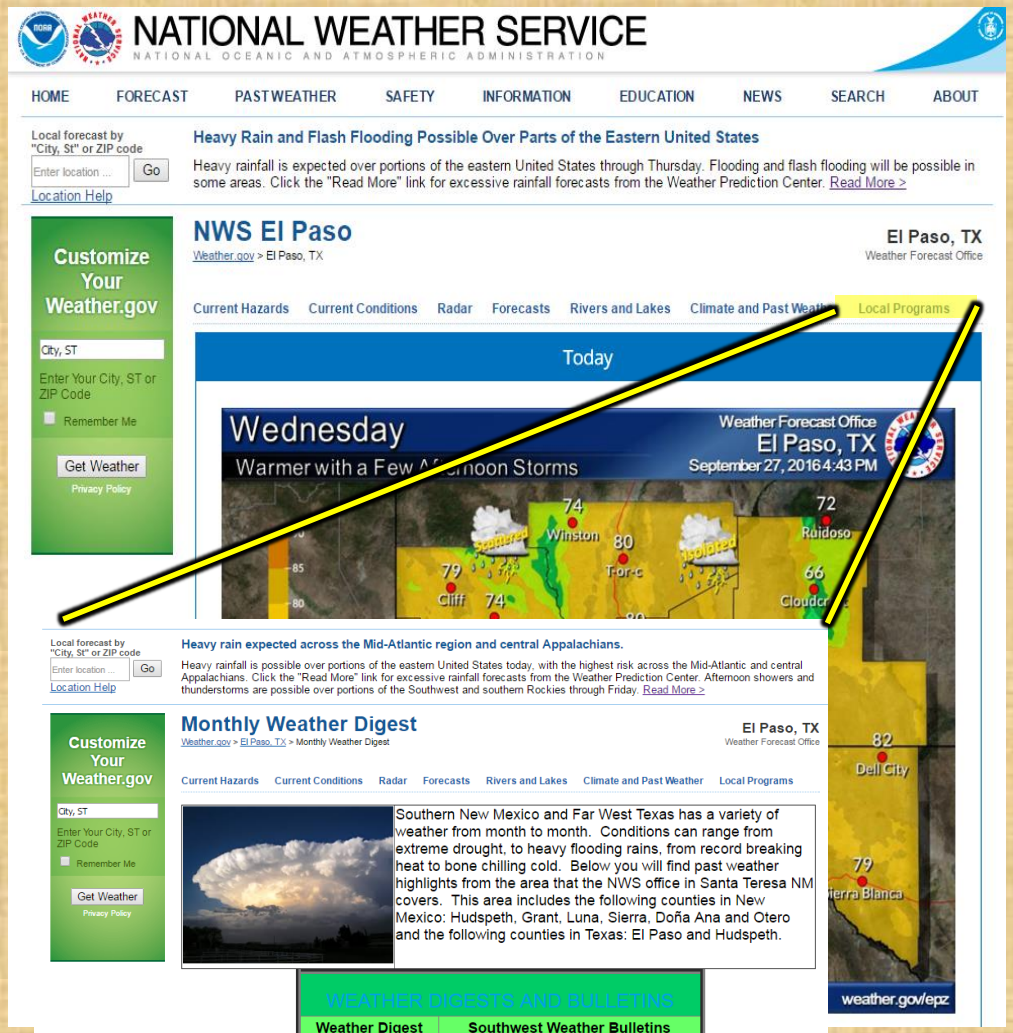
Special Features

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



Selected weather reports July 2020

Date/Time	Location (County)	Event
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



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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