



# NWS Houston, Texas July 2020 Regional Climate Summary



**Produced by Jimmy Fowler**

*...Above Normal Temperatures continue across Southeast Texas...*

*...Hurricane Hanna makes Landfall in South Texas...*

*July started unseasonably warm with a heat wave midmonth that brought triple digit heat to the area. Temperatures became closer to normal by the end of the month thanks to increased cloud cover, but not enough to counterbalance the hot start. Overall, the month of July was about two degrees above normal with 28 daily temperature records broken throughout the month. There were also three daily rainfall records set throughout the month due to strong, slow moving thunderstorms: 2.32" on the 21<sup>st</sup> in Galveston, 1.41" on the 21<sup>st</sup> in Houston-Hobby, and 1.43" on the 28<sup>th</sup> in College Station. The storm that brought that record rainfall in College Station also produced a wind gust of 69 MPH.*

*Hurricane Hanna was the most notable event to impact the Texas Gulf Coast during the month of July. It formed on July 23<sup>rd</sup>, reached Tropical Storm strength a day later, and became a hurricane on July 25<sup>th</sup>. It made landfall on July 25<sup>th</sup> in Padre Island, TX with maximum sustained winds of 90 mph. Hanna was the earliest "H" storm to form on record for the Atlantic Basin, beating the old record held by Tropical Storm Harvey which formed on August 2<sup>nd</sup>, 2005.*

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# By the Numbers: July 2020



Location (records started)	Average Temp	Ranking	Total Rainfall	Ranking
City of Houston, TX (1888)	86.6°F	5 <sup>th</sup> Warmest	3.01"	60 <sup>th</sup> Driest
Houston Hobby, TX (1930)	86.3°F	6 <sup>th</sup> Warmest	7.36"	20 <sup>th</sup> Wettest
City of Galveston, TX (1871)	86.2°F	8 <sup>th</sup> Warmest	6.88"	22 <sup>nd</sup> Wettest
City of College Station, TX (1882)	86.7°F	11 <sup>th</sup> Warmest	2.47"	44 <sup>th</sup> Wettest
Conroe, TX (1997)	85.1°F	5 <sup>th</sup> Warmest	2.27"	14 <sup>th</sup> Wettest
Huntsville, TX (1997)	86.1°F	6 <sup>th</sup> Warmest	3.53"	10 <sup>th</sup> Wettest
Sugar Land, TX (2000)	85.3°F	5 <sup>th</sup> Warmest	4.61"	8 <sup>th</sup> Wettest
Palacios, TX (1943)	85.7°F	10 <sup>th</sup> Warmest	3.29"	29 <sup>th</sup> Wettest
Clover Field (Pearland), TX (1997)	85.8°F	4 <sup>th</sup> Warmest	5.02"	9 <sup>th</sup> Wettest
David Wayne Hooks (Tomball), TX (1998)	85.1°F	7 <sup>th</sup> Warmest	5.33"	9 <sup>th</sup> Wettest
Angleton, TX (1998)	83.5°F	9 <sup>th</sup> Warmest	5.86"	7 <sup>th</sup> Wettest
League City, TX (1990)	85.1°F	4 <sup>th</sup> Warmest	8.65"	4 <sup>th</sup> Wettest



# Precipitation

Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	6.88	+3.08	11	2.32 <small>*Daily Record Rainfall*</small>	21 <sup>st</sup>
Houston Hobby (HOU)	7.36	+2.70	11	2.87	25 <sup>th</sup>
City of Houston (IAH)	3.01	-0.78	12	0.74	25 <sup>th</sup>
College Station (CLL)	2.47	+0.60	7	1.43 <small>*Daily Record Rainfall*</small>	28 <sup>th</sup>

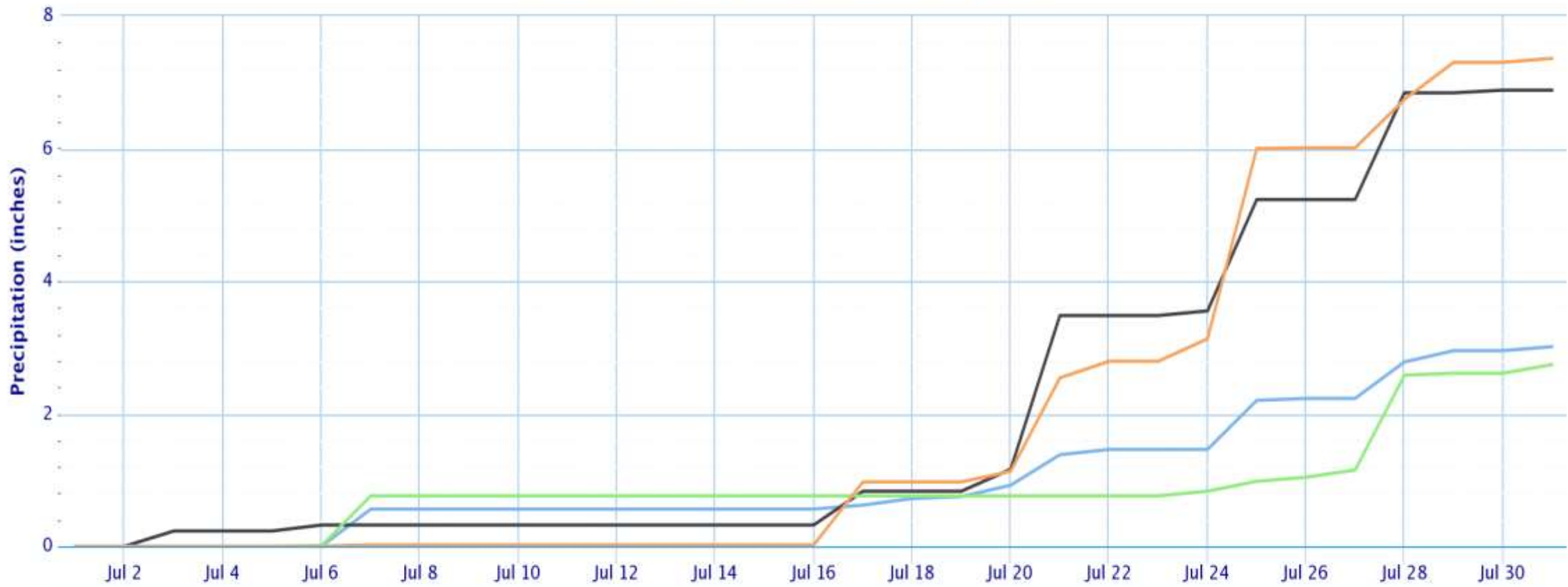
*Most of the coastal areas experienced two to three inches above normal rainfall due to rain from Hurricane Hanna and from thunderstorms forming along the sea breeze each afternoon. Further inland locations saw near normal to slightly below normal precipitation. The City of Houston was the only primary climate site to experience below normal precipitation during July. The City of College Station would have had below normal precipitation, but a slow moving thunderstorm on July 28<sup>th</sup> produced 1.43" of rain that day (about 60% of the monthly total). This set a daily rainfall record for the day. Two other daily rainfall records were set during the month, both occurring on the 21<sup>st</sup>: 2.32" of rain fell in the City of Galveston, and 1.41" at Houston-Hobby.*



# Precipitation Accumulation Graph

### Accumulated Precipitation

Green/black diamonds represent subsequent/missing values



City of Houston

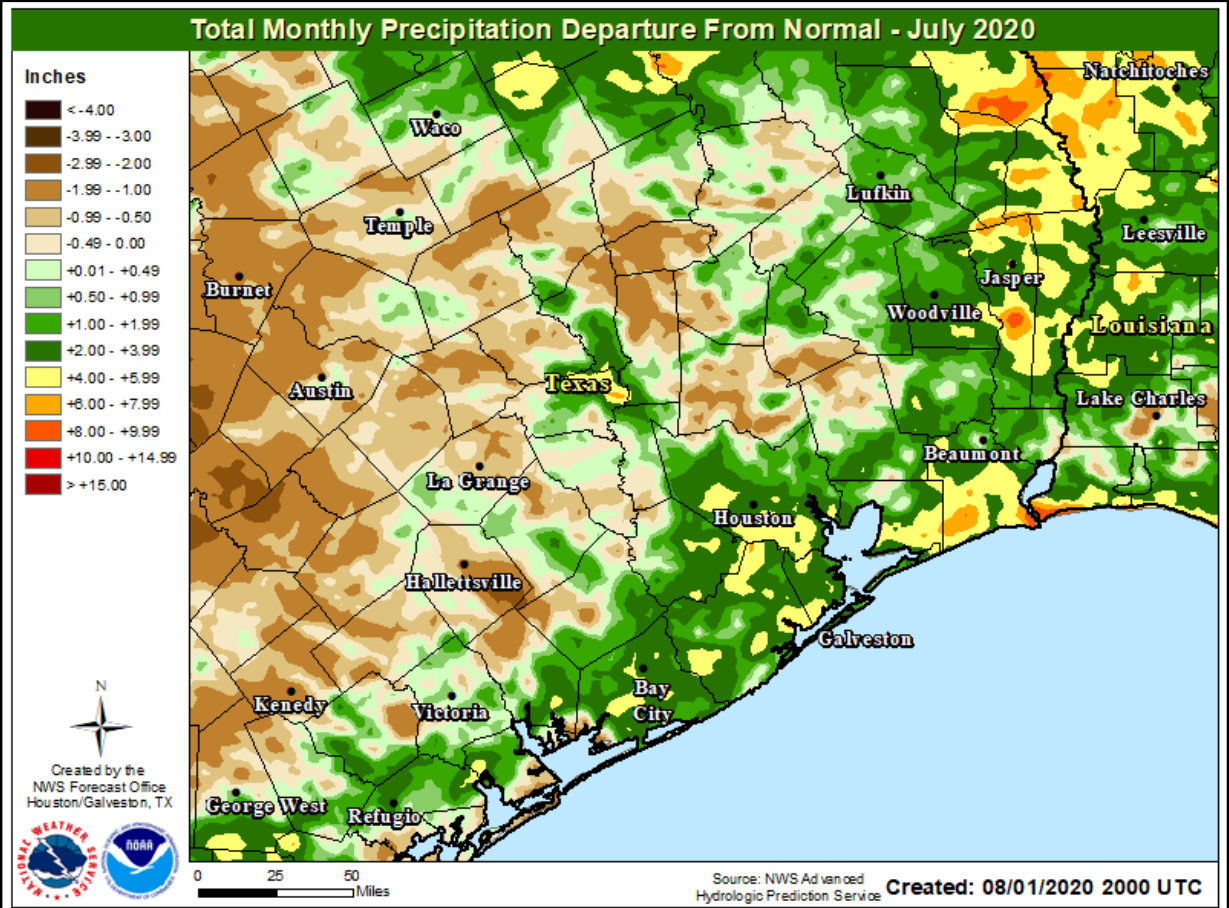
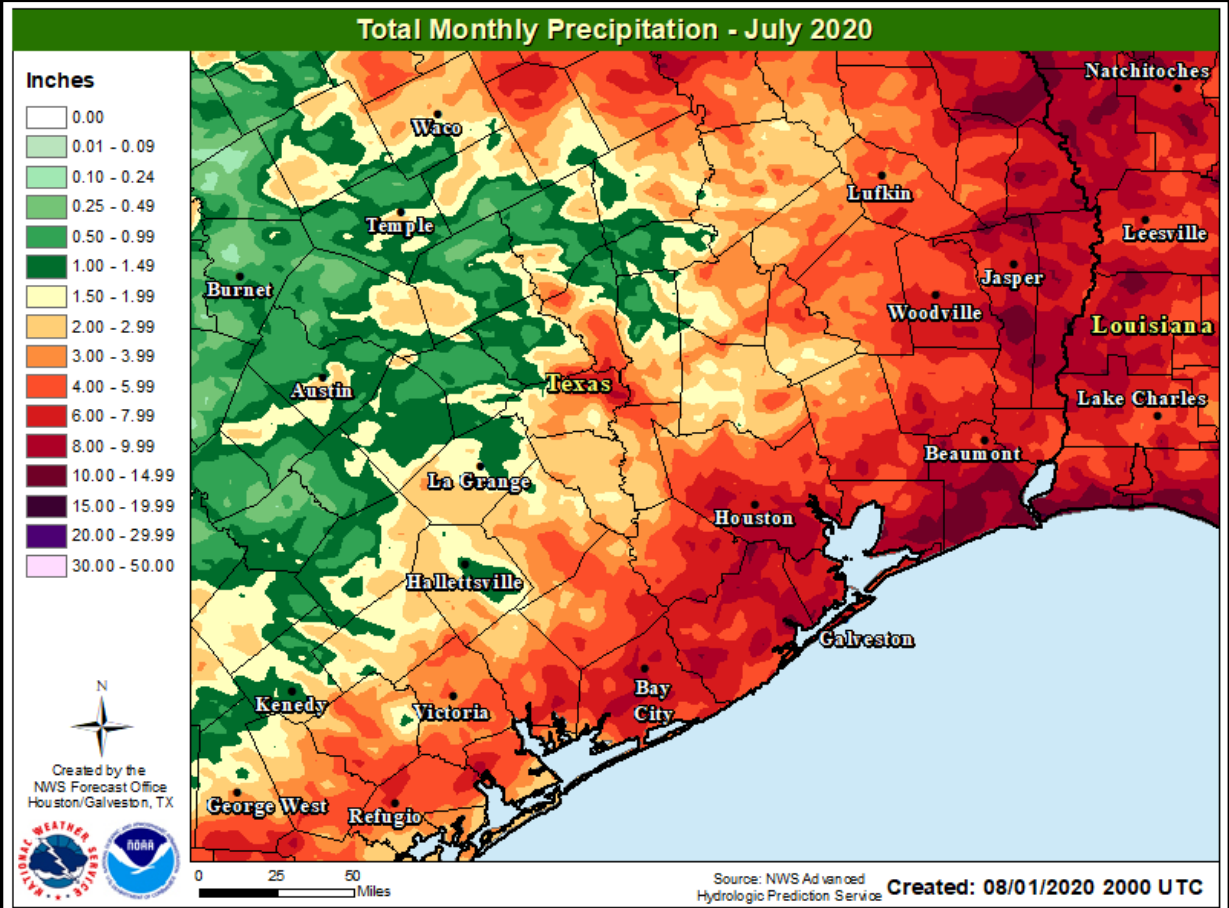
City of Galveston

City of College Station

Houston-Hobby



# Precipitation Maps



# Temperature

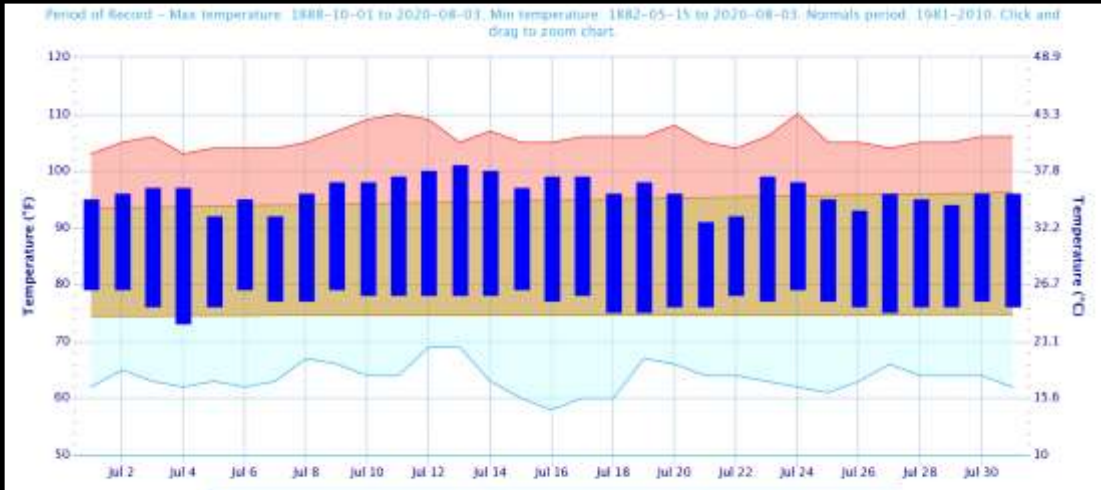
Location	Average High Temp (F)	Average Low Temp (F)	Average Temp (F)	Normal Average Temp (F)	Departure From Normal Average (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	90.8	81.6	86.2	84.5	+1.7	95 on the 4 <sup>th</sup>	76 on the 21 <sup>st</sup> & 25 <sup>th</sup>
Houston Hobby (HOU)	93.8	78.8	86.3	83.8	+2.5	99 on the 13 <sup>th</sup> & 16 <sup>th</sup>	75 on the 28 <sup>th</sup> & 29 <sup>th</sup>
City of Houston (IAH)	95.1	78.2	86.7	84.5	+2.2	101 on the 11 <sup>th</sup> & 13 <sup>th</sup>	73 on the 4 <sup>th</sup> & 29 <sup>th</sup>
College Station (CLL)	96.3	77.0	86.7	84.7	+2.0	101 on the 13 <sup>th</sup>	73 on the 4 <sup>th</sup>

*July continued the stretch of above normal temperatures the region has been experiencing with the average temperature about two degrees above normal region wide. There were 28 daily temperature records set during the month of July: 27 of them were high minimum temperature records, and one daily high maximum temperature record.*

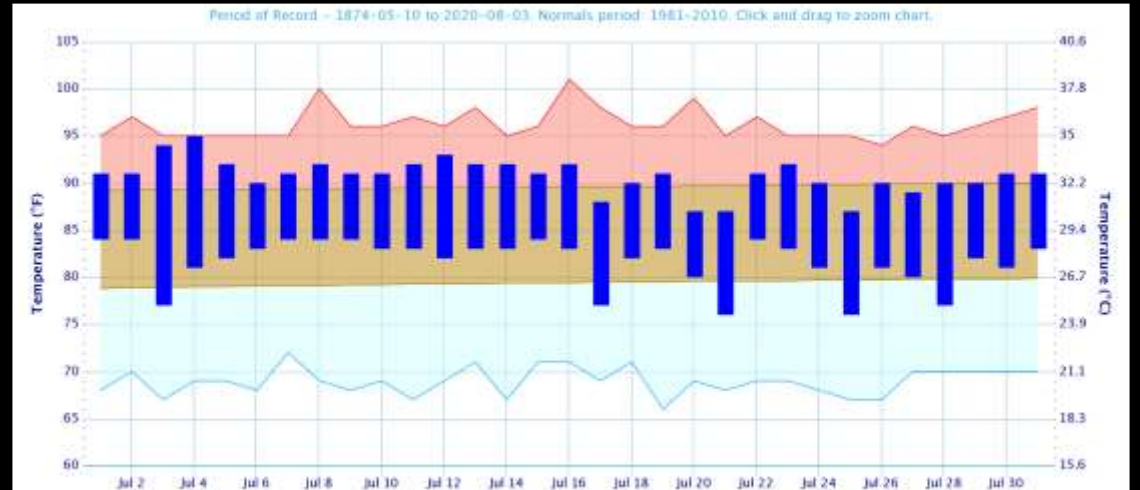


# Temperature Charts

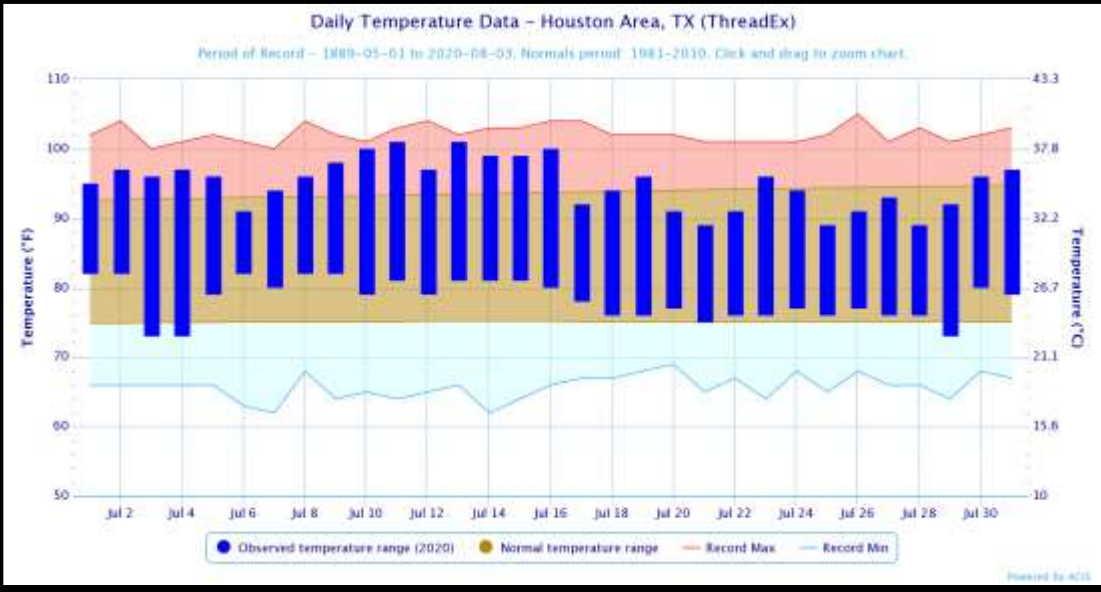
### City of College Station



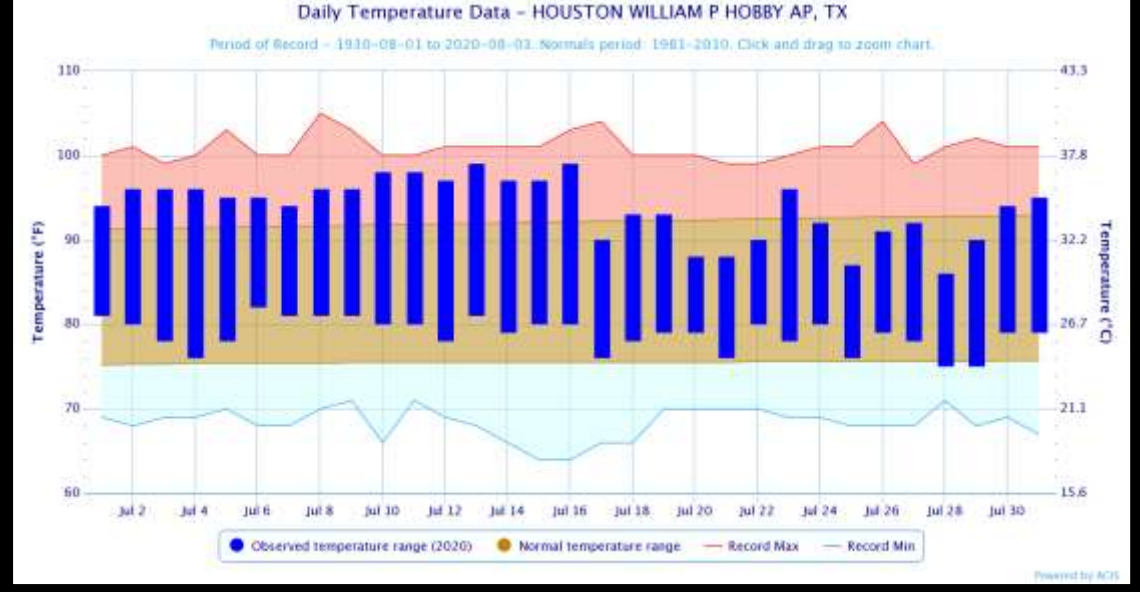
### City of Galveston



### City of Houston



### Houston-Hobby





# Daily Record Reports

Site	Date	Record Type	New Record	Previous Record
City of Houston	July 1 <sup>st</sup>	High Min Temperature	82°	80° in 1983
City of Houston	July 2 <sup>nd</sup>	High Min Temperature	82°	81° in 1992
City of Houston	July 6 <sup>th</sup>	High Min Temperature	82° - T	82° in 2016
City of Houston	July 8 <sup>th</sup>	High Min Temperature	82°	80° in 2015
City of Houston	July 9 <sup>th</sup>	High Min Temperature	82°	80° in 2019
City of Houston	July 11 <sup>th</sup>	High Min Temperature	81° - T	81° in 2016
City of Houston	July 13 <sup>th</sup>	High Min Temperature	81° - T	81° in 2016
City of Houston	July 14 <sup>th</sup>	High Min Temperature	81° - T	81° in 2011
City of Houston	July 31 <sup>st</sup>	High Min Temperature	79° - T	79° in 2012
Houston-Hobby	July 1 <sup>st</sup>	High Min Temperature	81°	80° in 1992

There were 31 daily records set during the month of July.



## Key

High Max

Low Max

Precip

High Min

Low Min



# Daily Record Reports

Site	Date	Record Type	New Record	Previous Record
Houston-Hobby	July 1 <sup>st</sup>	High Min Temperature	81°	80° in 1992
Houston-Hobby	July 2 <sup>nd</sup>	High Min Temperature	80° - T	80° in 1992
Houston-Hobby	July 6 <sup>th</sup>	High Min Temperature	82°	80° in 2016
Houston-Hobby	July 7 <sup>th</sup>	High Min Temperature	81°	80° in 2016
Houston-Hobby	July 8 <sup>th</sup>	High Min Temperature	81°	79° in 2019
Houston-Hobby	July 9 <sup>th</sup>	High Min Temperature	81°	80° in 1996
Houston-Hobby	July 10 <sup>th</sup>	High Min Temperature	80° - T	80° in 2016
Houston-Hobby	July 13 <sup>th</sup>	High Min Temperature	81°	80° in 2017
Houston-Hobby	July 14 <sup>th</sup>	High Min Temperature	79° - T	79° in 2017
Houston-Hobby	July 21 <sup>st</sup>	Daily Max Rainfall	1.41"	1.07" in 1967

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## Key

High Max

Low Max

Precip

High Min

Low Min



# Daily Record Reports

There were 31 daily records set during the month of July.



Site	Date	Record Type	New Record	Previous Record
Houston-Hobby	July 22 <sup>nd</sup>	High Min Temperature	80° - T	80° in 2019
Houston-Hobby	July 24 <sup>th</sup>	High Min Temperature	80° - T	80° in 2018
Houston-Hobby	July 26 <sup>th</sup>	High Min Temperature	79° - T	79° in 2017
City of Galveston	July 1 <sup>st</sup>	High Min Temperature	84° - T	84° in 2005
City of Galveston	July 2 <sup>nd</sup>	High Min Temperature	84° - T	84° in 1983
City of Galveston	July 4 <sup>th</sup>	High Max Temperature	95° - T	95° in 1875
City of Galveston	July 7 <sup>th</sup>	High Min Temperature	84°	83° in 2019
City of Galveston	July 8 <sup>th</sup>	High Min Temperature	84° - T	84° in 1996
City of Galveston	July 10 <sup>th</sup>	High Min Temperature	83° - T	83° in 2016
City of Galveston	July 21 <sup>st</sup>	Daily Max Rainfall	2.32"	1.45" in 1967

## Key

High Max

Low Max

Precip

High Min

Low Min



# Daily Record Reports

Site	Date	Record Type	New Record	Previous Record
City of College Station	July 28 <sup>st</sup>	Daily Max Rainfall	1.43"	1.12" in 1920

There were  
31 daily  
records set  
during the  
month of  
July.



High Max

Low Max

Key  
Precip

High Min

Low Min



# Drought Monitor

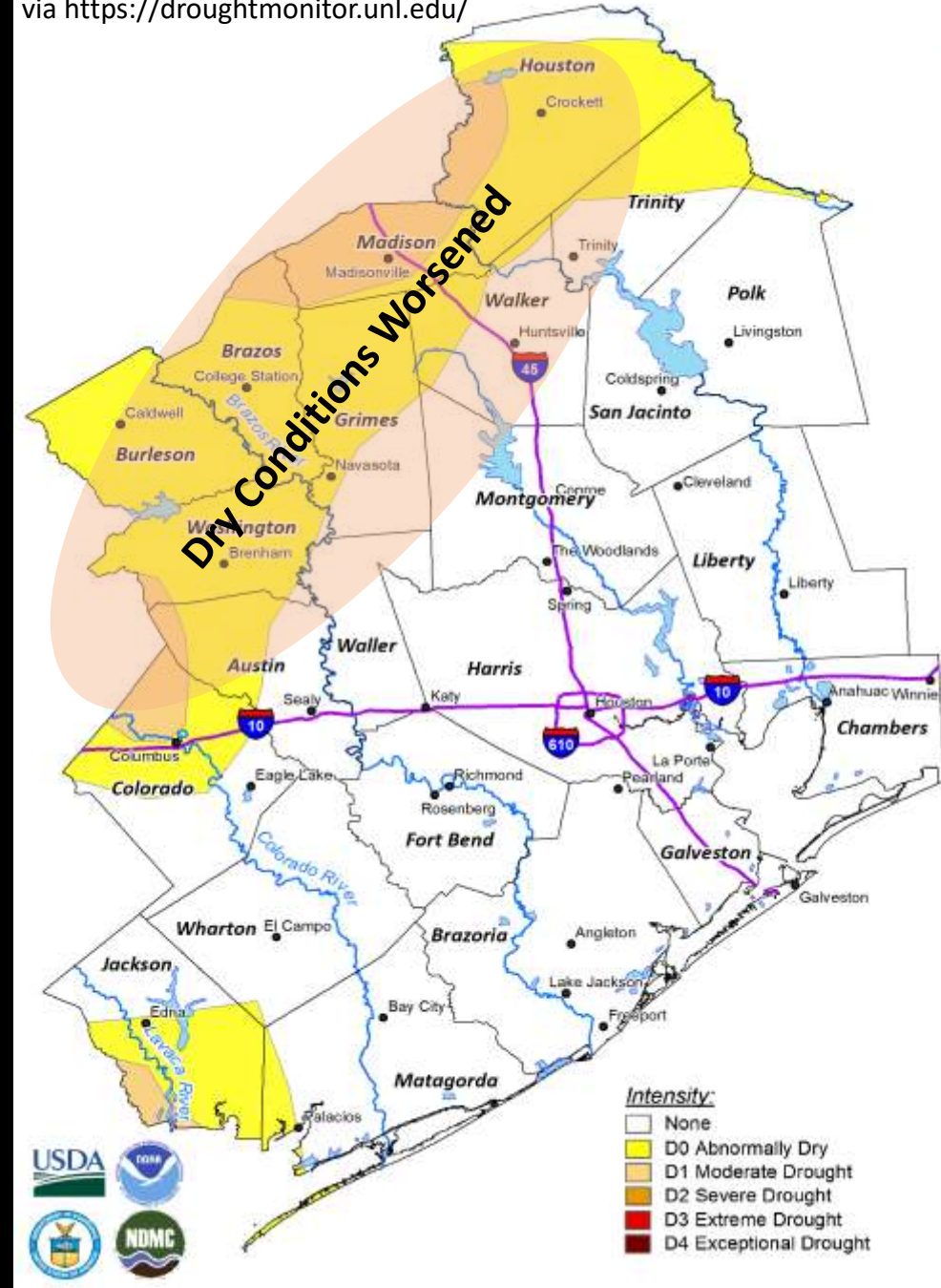
## As of July 28<sup>th</sup>

The drought conditions degraded across the northern part of the region during the month of July. There are now three pockets of Moderate Drought (D1) across the area:

- Northern Brazos County, southwestern Houston County, and most of Madison County.
- Northern Colorado County, western Austin County, and southwestern Washington County.
- Southwestern Jackson County.

Note: This does not include any changes from the rain that fell on July 28<sup>th</sup> across the northern portion of the area.

via <https://droughtmonitor.unl.edu/>

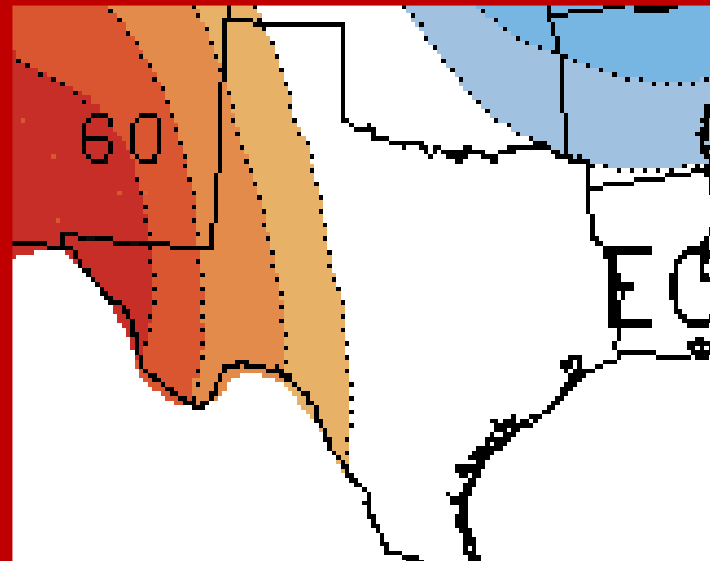


# August Climatology & Outlook

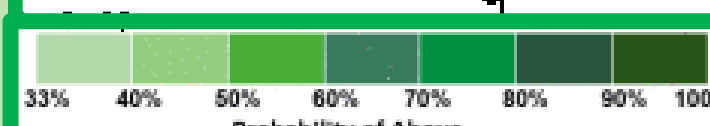
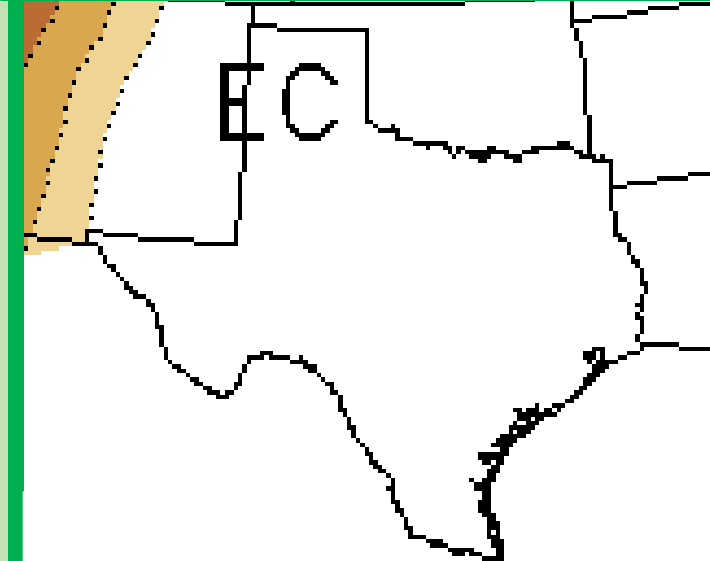
Location	Average Temp (°F)	Normal High (°F)	Normal Low (°F)
Galveston	85.0	90.3	79.7
Houston Hobby	84.2	92.6	75.7
City of Houston	84.6	94.5	74.8
College Station	85.3	96.2	74.5

Location	Normal Monthly Precipitation (in.)
Galveston	4.39
Houston Hobby	5.06
City of Houston	3.76
College Station	2.68

## Temperature Outlook

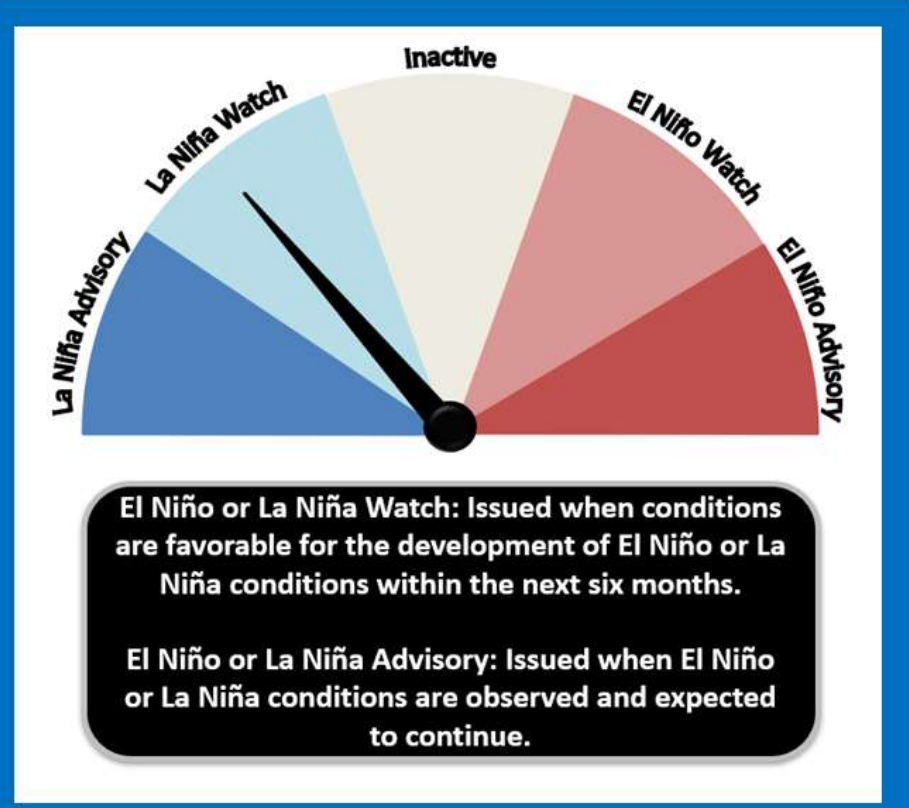
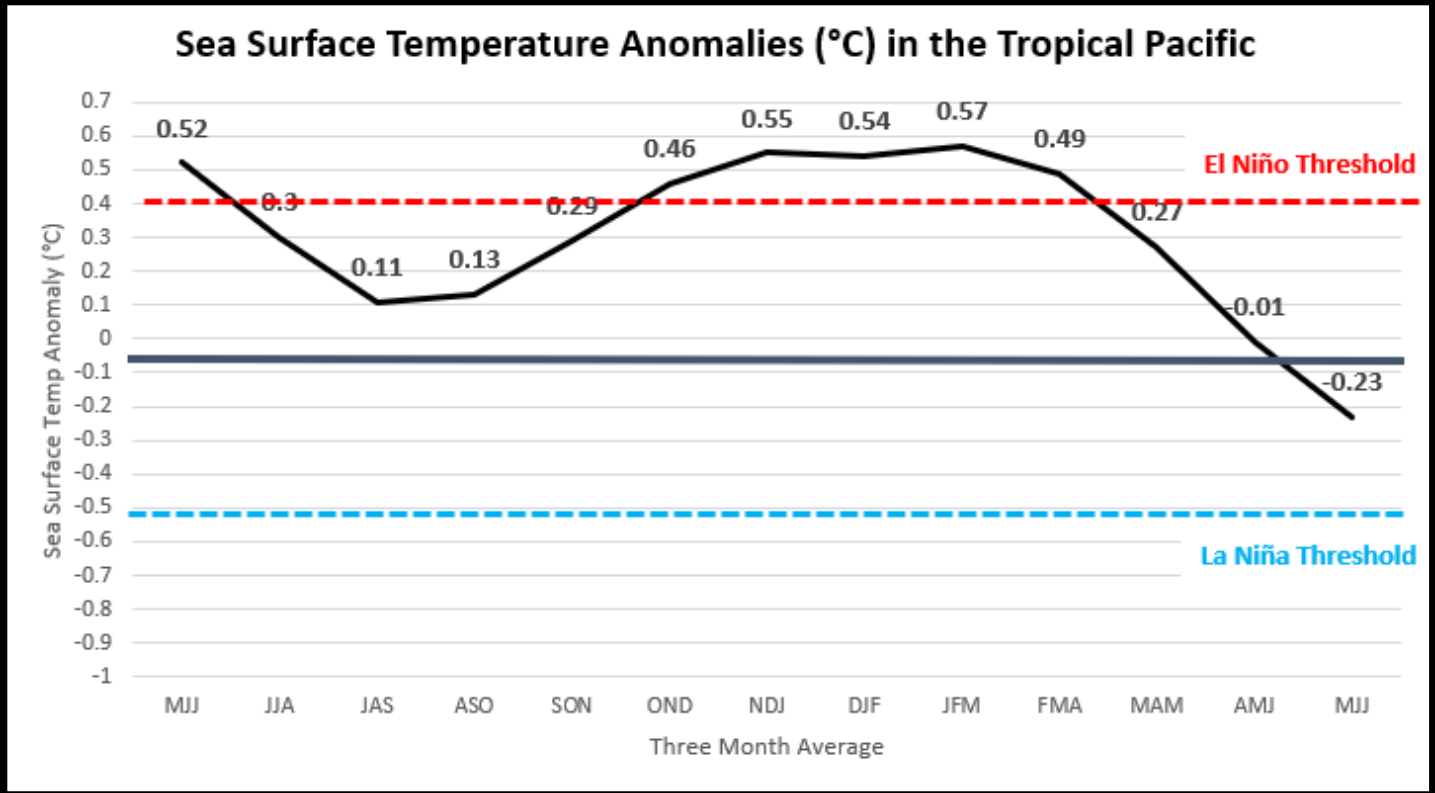


## Precipitation Outlook



### The Climate Prediction Center's ENSO Forecast: La Niña Watch

- ENSO-Neutral conditions continuing through the Summer
- 50 – 55% chance of **La Niña** conditions forming this fall and continuing into the winter → **La Niña Watch!**



# Hurricane Hanna

Formed	Dissipated	Min Pressure	Max Sustained Wind
July 23 <sup>rd</sup>	July 27 <sup>th</sup>	973 mb	90 mph

Hurricane Hanna was the eighth named tropical system and the first hurricane of the season in the Atlantic Basin. Hanna originated from a cluster of strong thunderstorms that moved over Hispaniola on July 19<sup>th</sup>. It would eventually become Tropical Depression Eight in the central Gulf of Mexico on July 23<sup>rd</sup>, reach Tropical Storm strength a day later, and become a hurricane on July 25<sup>th</sup>. It made landfall at 5pm on July 25<sup>th</sup> in Padre Island, TX with maximum sustained winds of 90 mph. Hanna brought storm surge, strong winds, and extreme rainfall to portions of South Texas and Northern Mexico.

Hanna was the earliest “H” storm to form on record for the Atlantic Basin, beating the old record held by Tropical Storm Harvey which formed on August 2<sup>nd</sup>, 2005. It was also the first hurricane to make landfall in Texas since Hurricane Harvey in 2017, and the first July landfalling hurricane since Hurricane Dolly in 2008.



Hurricane Hanna on July 25<sup>th</sup>, 2020 making landfall on Padre Island, Texas



# Climate Primary Site History

## Galveston (GLS)

*Records for Galveston are from observations at the following locations: 67-69 Strand (April 1, 1871 - Aug 31, 1874); 23rd and the Strand (Sep 1, 1874 - July 29, 1878), 1.75 miles WSW of the previous location; the Custom House at Bath Street and the Strand (July 30, 1878 - May 8, 1882); Colorado and Santa Fe Railroad Building at 25th and the Strand (May 9, 1882 - March 14, 1883); back to the Custom House which later became the Cotton Exchange Building (March 15, 1883 - June 24, 1898), about a 1/3 of a mile E of the previous Custom House location; The Levy Building at 2223 Market Street (June 25, 1898 - Nov 26, 1900); the Trust Building at Tremont and Post Office Streets (Nov 27, 1900 - June 24, 1946), one-quarter mile south of the Levy Building; the U.S. Post Office Building at 601 Rosenberg (June 25, 1946 - 1994); Scholes Field (January 1995 to present).*

## College Station (CLL)

*Records from 1893 through July 1951 are based on observations taken at the Texas Agriculture Experiment COOP Station main farm located 6 miles southwest of College Station. Records from August 1951 through the present are based on observations taken at Easterwood Field. Normal temperatures are calculated from 1981 to 2000 period.*

## City of Houston (IAH)

*Records for the City of Houston are from observations at the following locations: Cotton Station from July 1881 through September 1909, Stewart Building at Preston and Fannin from September 1909 through February 1926, Shell Building at Texas and Fannin from March 1926 through August 1938, Federal Building at Franklin and Fannin from August 1938 through May 1969, Intercontinental Airport from June 1969 to the present .*

## Houston Hobby (HOU)

*Records are based upon observations beginning in August 1931.*

