

NWS Houston, Texas August 2018 Regional Climate Summary

Produced by Nikki Hathaway and Charles Roeseler

... The Month of August left SE TX Feeling Warm and Dry. ...

Average temperatures for the month of August at Houston Hobby were the 5th warmest recorded and 7th warmest at the city of Galveston. Temperatures for the first half of August were near to slightly below normal but towards the later half of the month, 6 records were broken in total at both the city of Houston and Houston Hobby. Rainfall was 2 to 3 inches below normal during the month of August and many locations failed to tally even an inch of rain. The city of College Station recorded 0.21 inches of rain and this ties for the 8th driest August on record. The month ended with severe drought conditions in Madison, Brazos, and Houston counties, and roughly 63% of southeast Texas was experiencing drought conditions.

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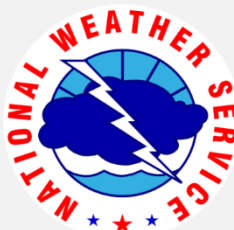
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Precipitation

There is little to discuss in terms of August precipitation as there was very little of it. Across southeast Texas, climate sites were well below normal, with departures ranging from 2-4 inches. Though we did see some precipitation during the first half of the month, the rainfall totals were not nearly enough to put a dent on drought conditions. The end of the month resulted in severe drought in portions of our northern counties and abnormally dry to moderate drought across a majority of Southeast Texas. The city of College Station tied for its 8th driest August on record, while the city of Houston ranked 13th and Houston Hobby ranked 14th driest for precipitation throughout the month of August.

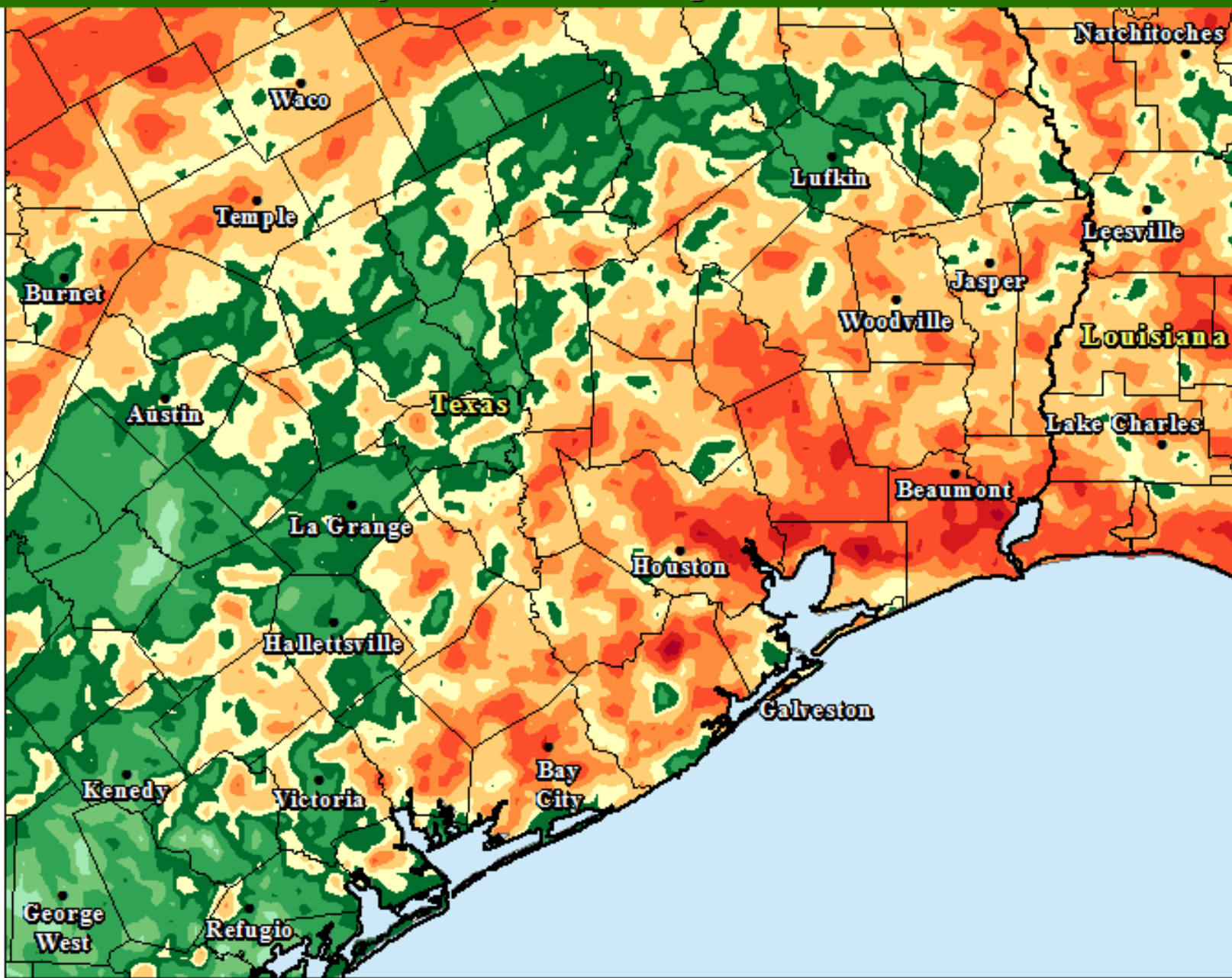
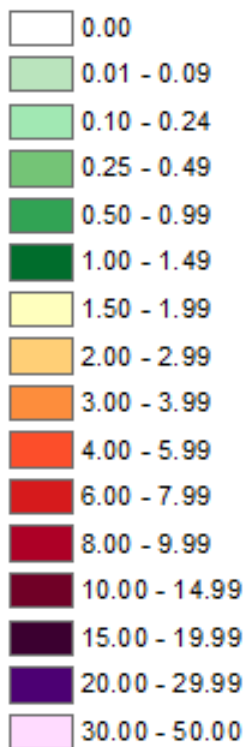
Site	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)
Galveston (GLS)	1.37	-3.02	9	1.39 August 31 st to 1 st
Houston Hobby (HOU)	1.69	-3.37	18	0.73 August 11th
City of Houston (IAH)	0.85	-2.91	13	1.56 August 31 st to 1 st
College Station (CLL)	0.21	-2.47	6	0.21 August 12th



Precipitation (Continued)

Total Monthly Precipitation - August 2018

Inches



Created by the
NWS Forecast Office
Houston/Galveston, TX



0 25 50
Miles

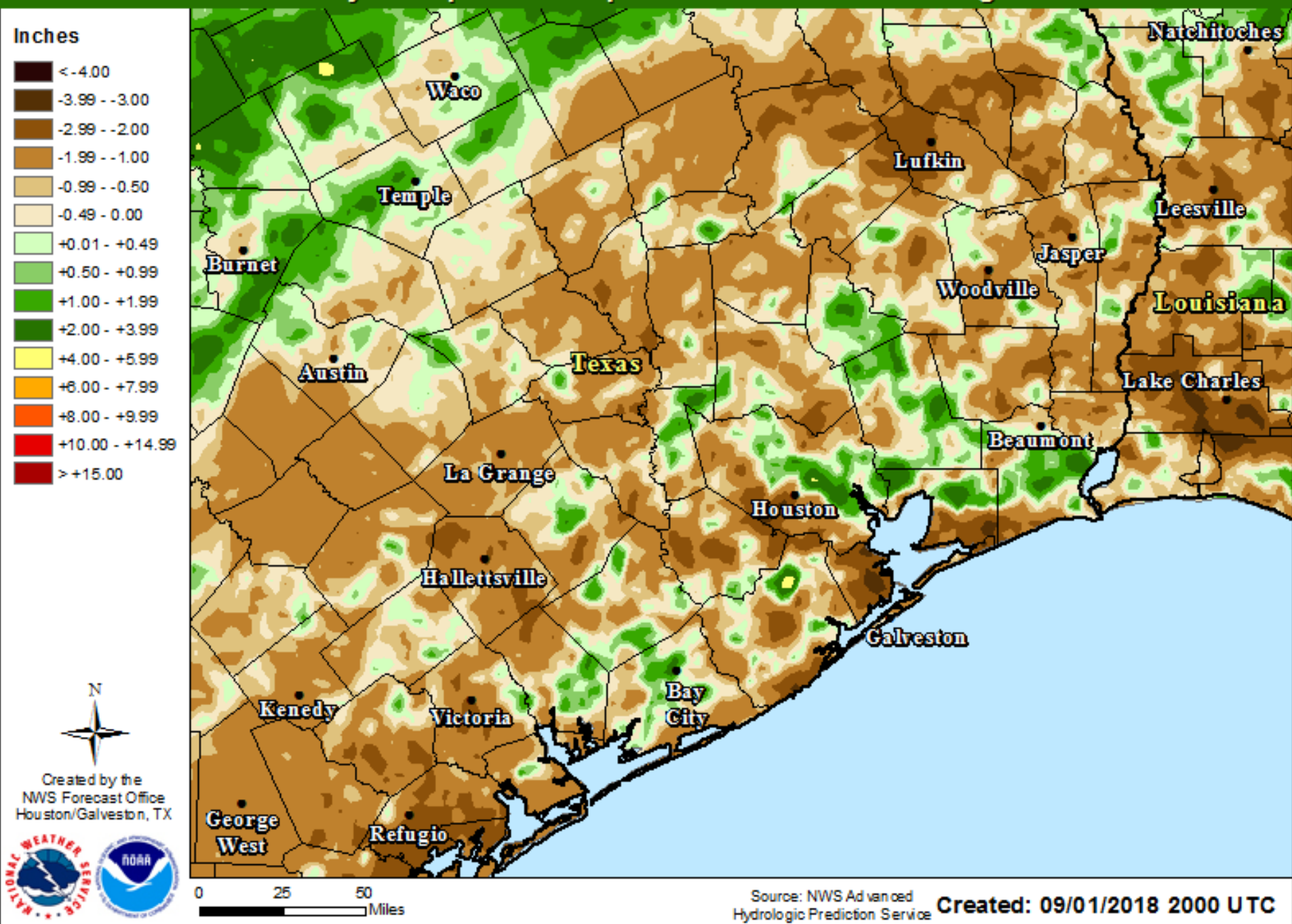
Source: NWS Advanced Hydrologic Prediction Service
Created: 09/01/2018 2000 UTC

One of our lonely
thunderstorm
days on August
9th.



Precipitation (Continued)

Total Monthly Precipitation Departure From Normal - August 2018



Temperatures

Temperatures were near to below normal for the first half of the month, heavily influenced by precipitation and cloud cover, while the second half of the month was very dry and warm leaving daily temperatures well above normal. The average of the monthly temperatures were therefore only slightly above normal by 1-2 degrees, depending on the climate site across southeast Texas. A total of 6 daily temperature records occurred in the month of August, of which were either record high minimum temperatures or high maximum temperatures. The city of Galveston tied its 7th warmest recorded average monthly temperature for August, while Houston Hobby tied its 5th warmest on record. Additionally, the city of Galveston is still holding its title of 4th warmest year-to date average temperature from Jan 1st through August 31st.

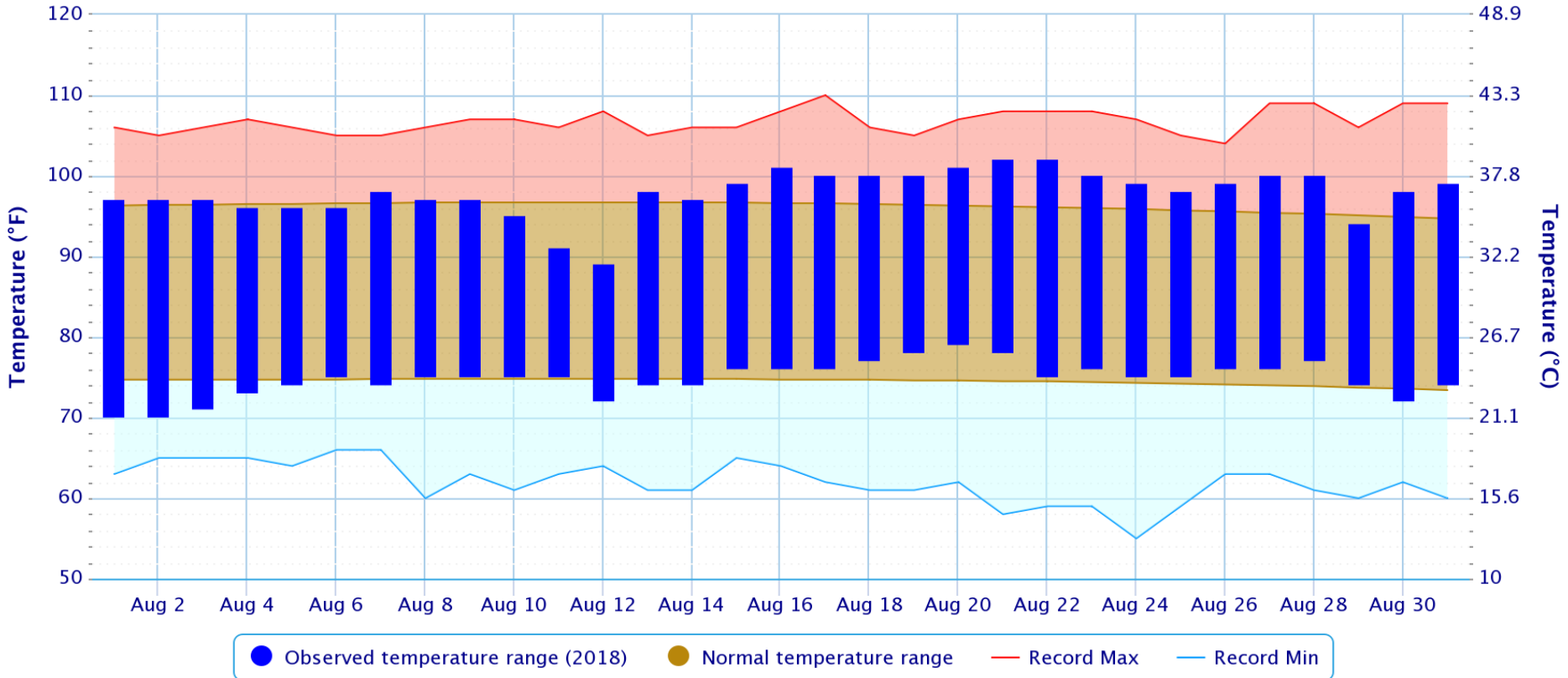
Site	Average Temp (F)	Average High Temp (F)	Average Low Temp (F)	Normal Average Temp (F)	Departure From Normal (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	85.8	91.0	80.6	85.0	+0.8	95 on August 22nd	74 on August 4th
Houston Hobby (HOU)	85.9	94.4	77.4	84.2	+1.7	100 on August 22nd	74 on August 30th & 3rd
City of Houston (IAH)	85.3	95.0	75.7	84.6	+0.7	100 on August 21st	71 on August 2nd
College Station (CLL)	86.3	97.8	74.7	85.3	+1.0	102 on August 22nd and 21st	70 on August 2nd and 1st



Temperatures

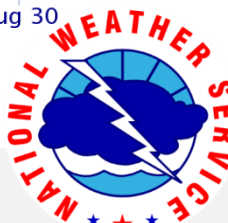
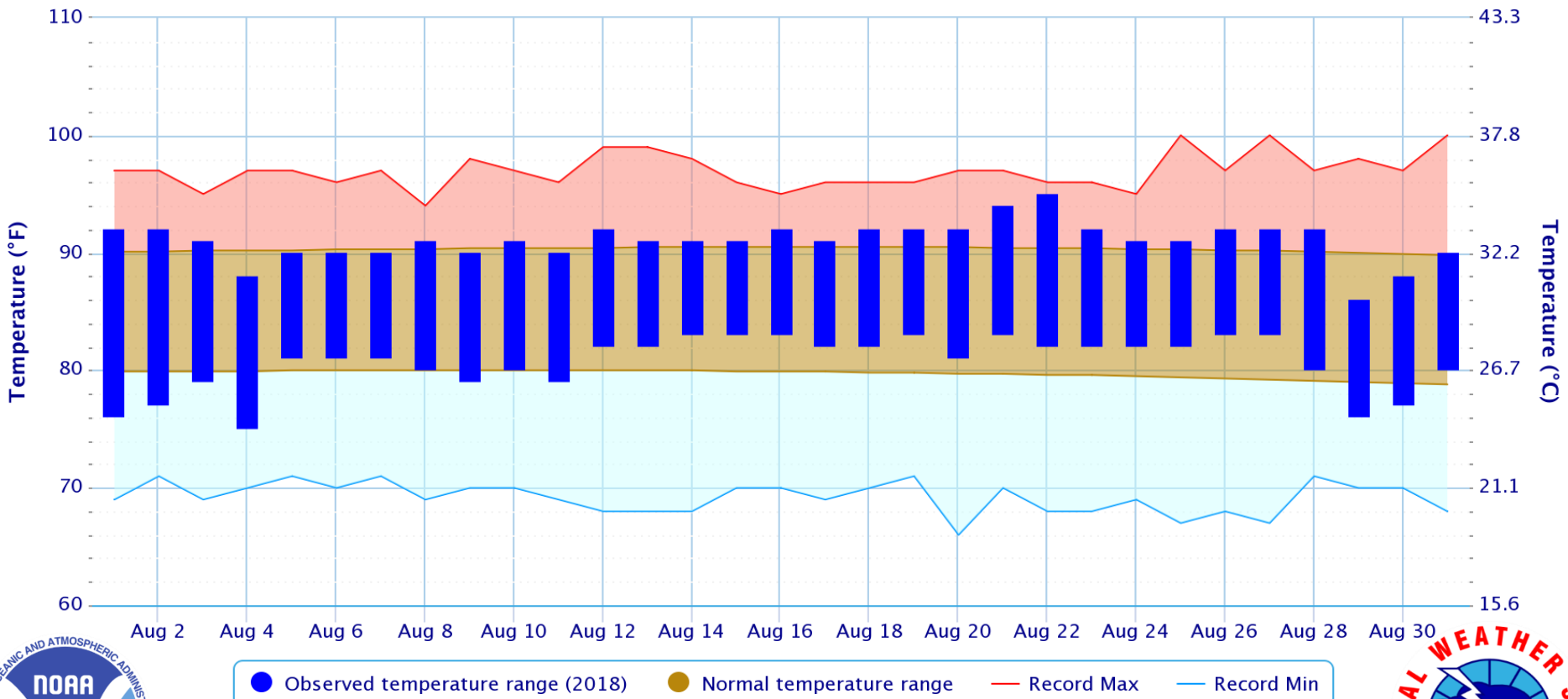
Daily Temperature Data – College Station Area, TX (ThreadEx)

Period of Record – Max temperature: 1888-10-01 to 2018-08-31; Min temperature: 1882-05-15 to 2018-08-31. Normals period: 1981-2010. Click and drag to zoom chart.



Daily Temperature Data – Galveston Area, TX (ThreadEx)

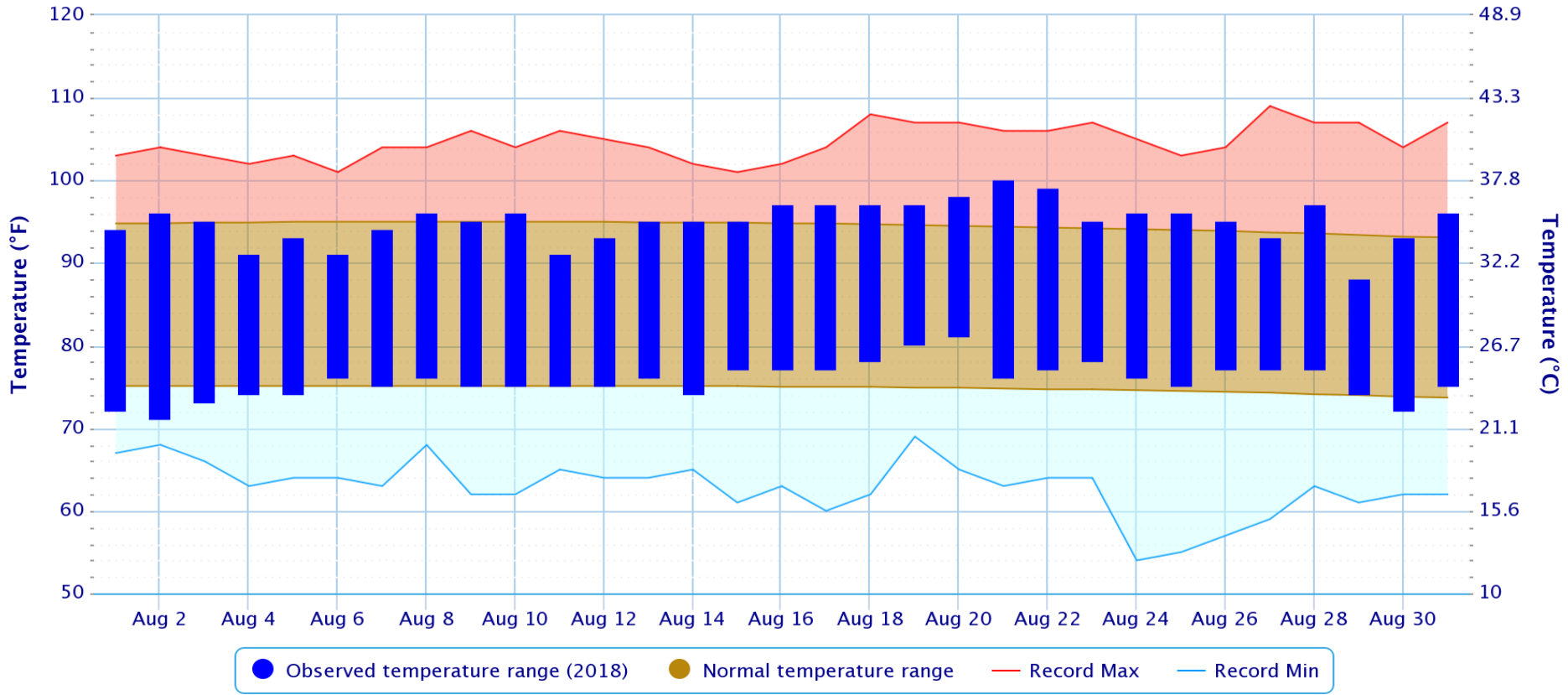
Period of Record – 1874-05-10 to 2018-08-31. Normals period: 1981-2010. Click and drag to zoom chart.



Temperatures

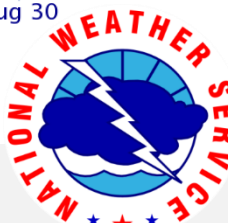
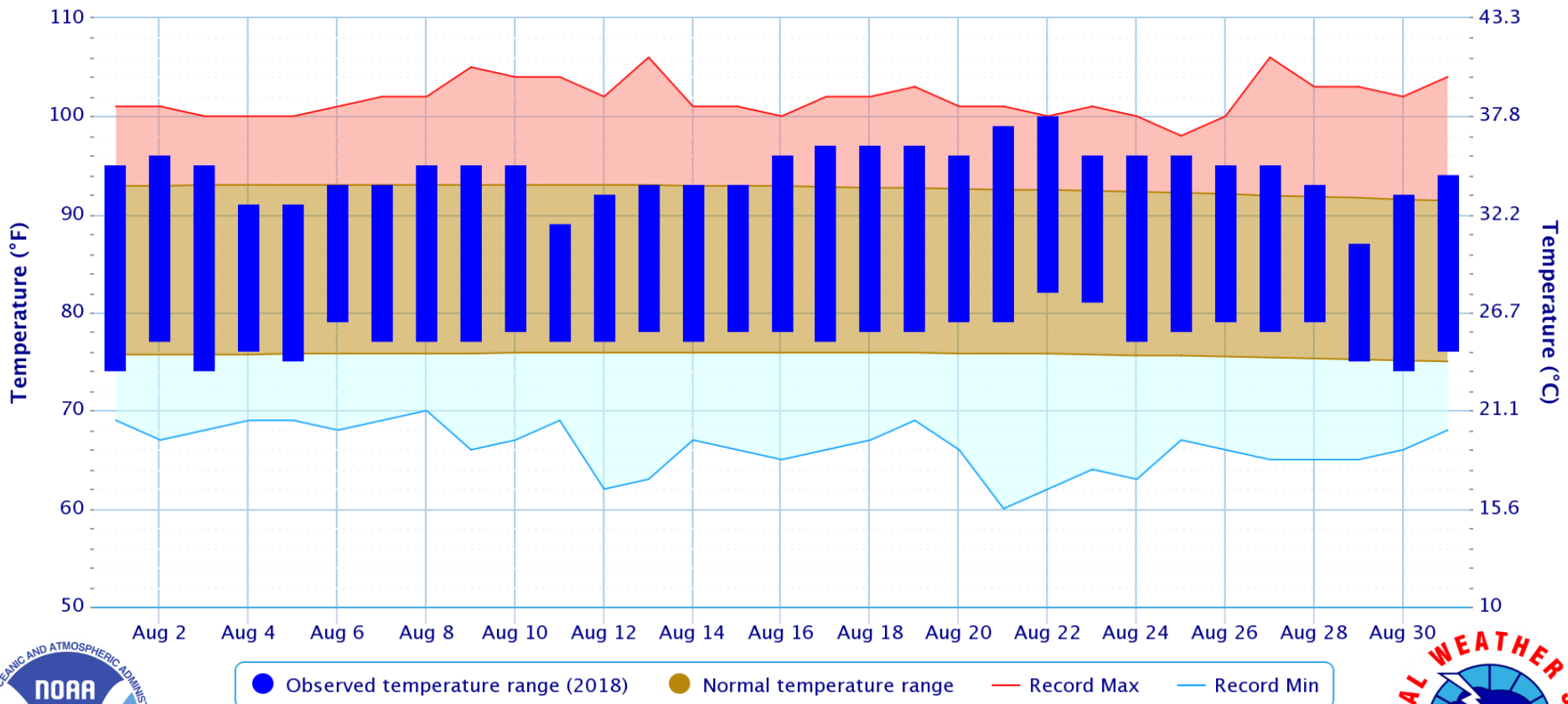
Daily Temperature Data – Houston Area, TX (ThreadEx)

Period of Record – 1889-05-01 to 2018-08-31. Normals period: 1981-2010. Click and drag to zoom chart.



Daily Temperature Data – HOUSTON WILLIAM P HOBBY AP, TX

Period of Record – 1930-08-01 to 2018-08-31. Normals period: 1981-2010. Click and drag to zoom chart.

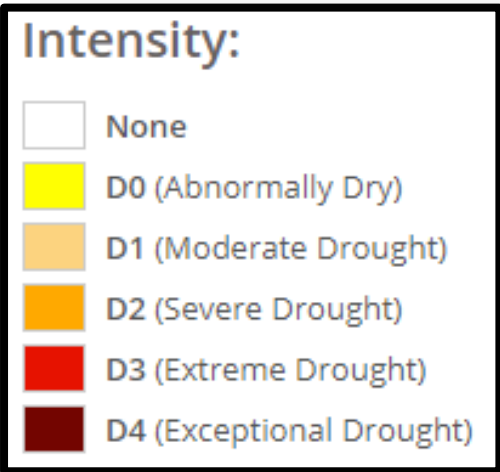
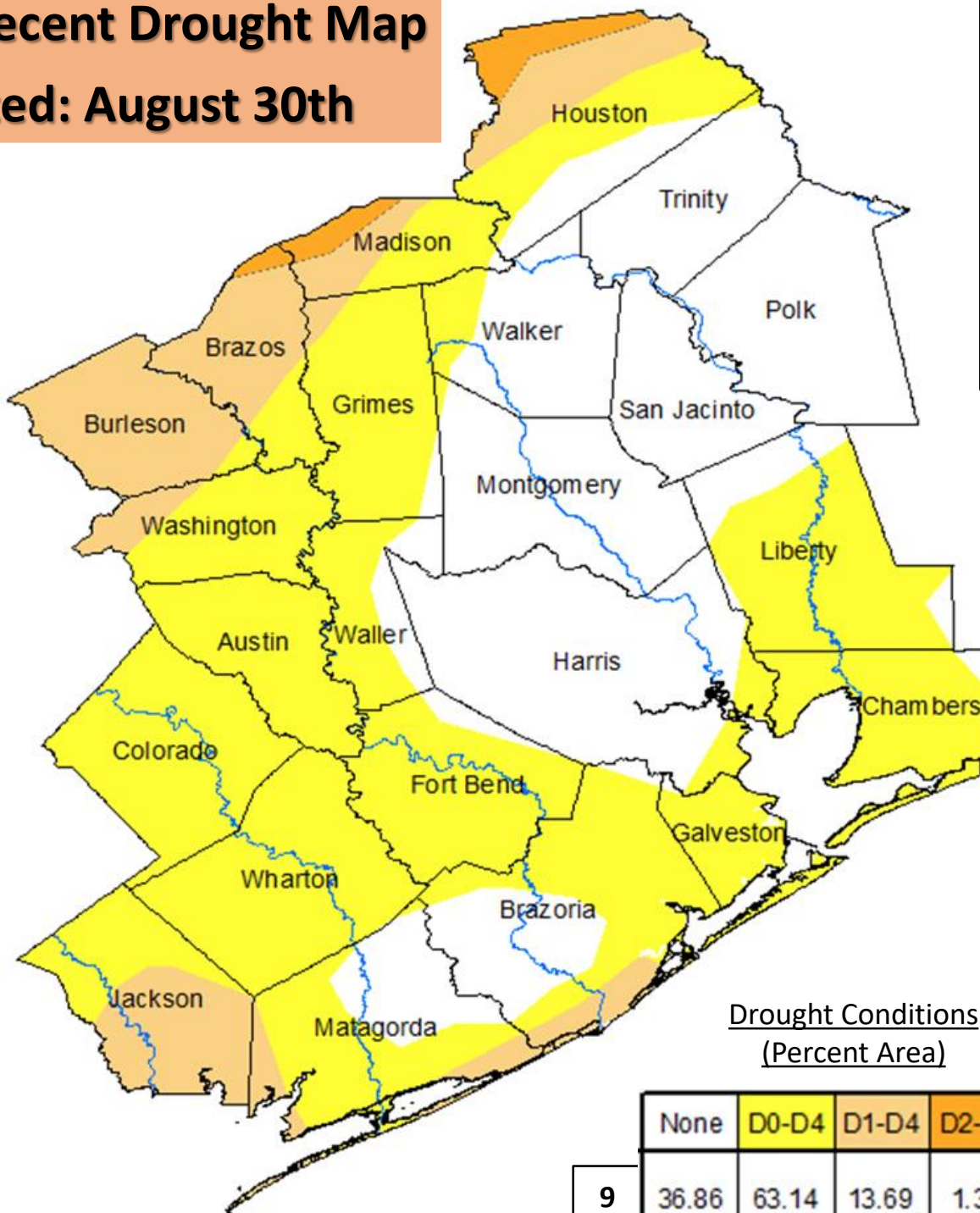


Drought Conditions

Severe drought conditions expanded into Houston, Madison, and Brazos counties in this week's drought update. Abnormally dry conditions expanded eastward through Galveston, Chambers, Harris, and Liberty counties and continues in the counties where it was just introduced last week. Additionally, moderate drought also expanded along the coast across Jackson, Matagorda, and Brazoria counties. At this time, a half inch to two inches of rainfall is forecast as we move through next week, with the best chance of rainfall focused along the coast. Roughly 63% of the forecast area is experiencing drought conditions, with 14% of the southeast Texas under moderate drought, and 1% under severe drought. Because only 1% of the forecast areas is under severe drought we will wait on the issuance of a drought statement to account for the potential upcoming rainfall expected over the next few days. The next USDM Drought Report will be released on September 6th.

Most Recent Drought Map

Posted: August 30th



Drought Conditions
(Percent Area)

Source: <http://droughtmonitor.unl.edu>

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
9	36.86	63.14	13.69	1.36	0.00	0.00



August Daily Record Reports

Overall, temperatures for the first half of August were near normal. As a result, a total of 6 daily records were set across the four primary climate sites.

Site	Date	Record Type	New Record	Previous Record
City of Houston	Aug 19 th	High Min Temp	80	Tied in 1968
City of Houston	Aug 20 th	High Min Temp	81	Tied in 2011
Houston Hobby	Aug 22 nd	High Max Temp	100	Tied in 2011
Houston Hobby	Aug 22 nd	High Min Temp	82	80 in 2007
Houston Hobby	Aug 23 rd	High Min Temp	81	80 in 2007
Houston Hobby	Aug 26 th	High Min Temp	79	78 in 2014



100+ Degree Day Climatology

Below are the dates in which both the city of Houston, Houston Hobby Airport, and the city of College Station recorded max temperatures of 100+ degrees.

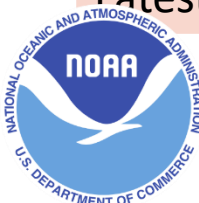
Dates of 100+ Degree Days for July 2018

City of Houston	City of College Station
08-21-2018, Max Temp: 100°	08-16-2018, Max Temp: 101°
	08-17-2018, Max Temp: 100°
City of Houston	08-18-2018, Max Temp: 100°
08-22-2018, Max Temp: 100°	08-19-2018, Max Temp: 100°
	08-20-2018, Max Temp: 101°
	08-21-2018, Max Temp: 102°
	08-22-2018, Max Temp: 102°
	08-23-2018, Max Temp: 100°
	08-27-2018, Max Temp: 100°
	08-28-2018, Max Temp: 100°

The following tables show both the first and last 100+ degree days ranked by date given its earliest, average, for both the City of Houston and City of College Station. Interesting to note, both Houston Hobby and the city of Houston recorded 100+ degree days later this year than their average last 100+ degree day (Houston Hobby: 08/08 & city of Houston: 08/09)

	City of Houston	City of College Station
Earliest First 100+ Degree Day	6-02-2011	5-27-1906
Average First 100+ Degree Day	7-19	7-10
Latest First 100+ Degree Day	9-01-1985	9-02-1989

	City of Houston	City of College Station
Earliest Last 100+ Degree Day	6-13-2006	7-26-1994
Average Last 100+ Degree Day	8-09	8-28
Latest Last 100+ Degree Day	9-27-2005	10-06-1892



August Heat

In 2018, the spring was near normal in terms of temperatures, but the last four months including August, have been unseasonably warm and 2018 is continuing to rise up in rank. This year the city of Galveston remains the 4th warmest year on record. The remaining three locations also all rose in ranking once including this year's August data. The long term outlook suggest the potential for above normal temperatures in September and therefore year-to-date average temperatures will likely increase.

Year-To Date Average Temperature Jan 1st through August 31st

City of Houston			City of Galveston			City of College Station			Houston Hobby		
1 st	74.3	2017	1 st	75.8	2017	1 st	73.9	2011	1 st	75.1	2017
2 nd	74.2	2012	2 nd	75.4	2012	2 nd	73.7	2012	2 nd	74.5	2012
3 rd	73.9	2011	3 rd	74.1	2000	3 rd	73.3	2017	3 rd	74.3	2011
4 th	73.3	1962	4 th	74.0	2018	-	73.3	1911	4 th	74.0	2000
-	73.3	1911	-	74.0	2006	4 th	73.1	1925	5 th	73.8	1998
8 th	72.8	2018	5 th	73.7	1999	13 th	71.5	2018	10 th	72.9	2018

The following table shows the significant warmest average temperatures for the month of August.

August Average Temperatures					
Houston Hobby			City of Galveston		
1 st	89.1	2011	1 st	88.5	2011
2 nd	86.9	2010	2 nd	87.3	2010
3 rd	86.4	1999	3 rd	86.6	2012
4 th	86.2	2009	-	86.6	2005
5 th	85.9	2018	4 th	86.5	2009
-	85.9	2012	5 th	86.1	2015
-	85.9	1962	6 th	85.9	1999
6 th	85.8	1951	7 th	85.8	2018
7 th	85.7	2017	-	85.8	1995



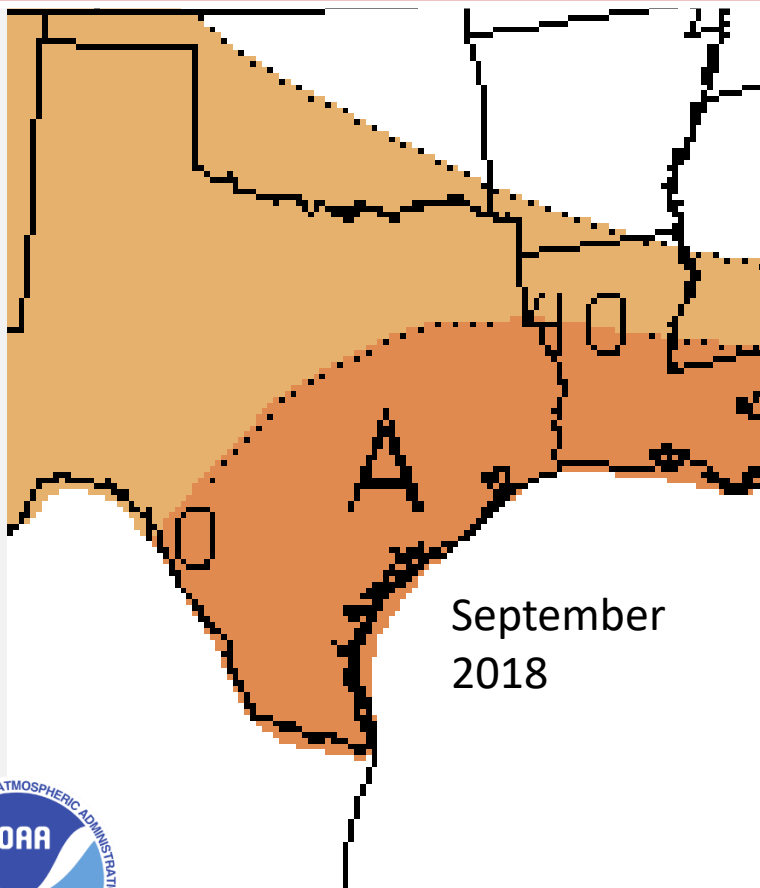
September Outlook

The latest outlook from the Climate Prediction Center (CPC) calls for a 40% probability of above normal temperatures, 33.3% chance of near normal temperatures, and a 26.7% chance for below normal temperatures for southeast Texas. In terms of precipitation for the month of September across the region of southeast Texas, there is a 40% probability of below normal rainfall, 33.3% chance for near normal rainfall, and 26.7% chance for below normal rainfall.

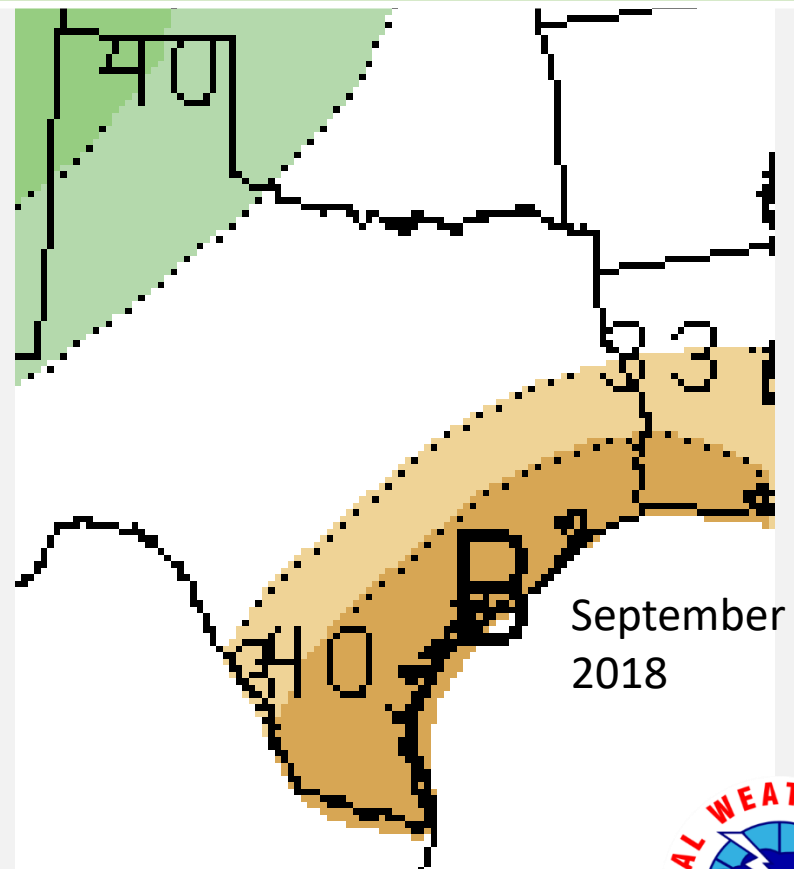
Site	Average Temp(°F)	Normal High (°F)	Normal Low (°F)
Galveston	81.6	87.4	75.9
Houston Hobby	80.1	88.4	71.7
City of Houston	79.8	89.7	69.8
College Station	80.0	90.5	69.4

Site	Normal Monthly Precipitation (in.)
Galveston (GLS)	6.03
Houston Hobby (HOU)	5.21
City of Houston (IAH)	4.12
College Station (CLL)	3.18

Upcoming Temperature Outlook



Upcoming Precipitation Outlook



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 Sante 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).

Houston Hobby (HOU)

Records are based upon observations beginning in August 1931.

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 .

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.

