



NWS Houston, Texas July 2018 Regional Climate Summary

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... The Month of July Brought the Summer Heat...

Summer was in full swing throughout the month of July with average temperatures approximately 1-3 degrees above normal. A total of four heat advisories were issued throughout the month of July, from the 24th through the 27th. A heat advisory for Southeast Texas is defined as heat indices greater than or equal to 108 degrees or a temperature greater than or equal to 103 degrees. A total of 13 records were also recorded across the primary climate sites. Precipitation values were above normal across most of Southeast Texas.

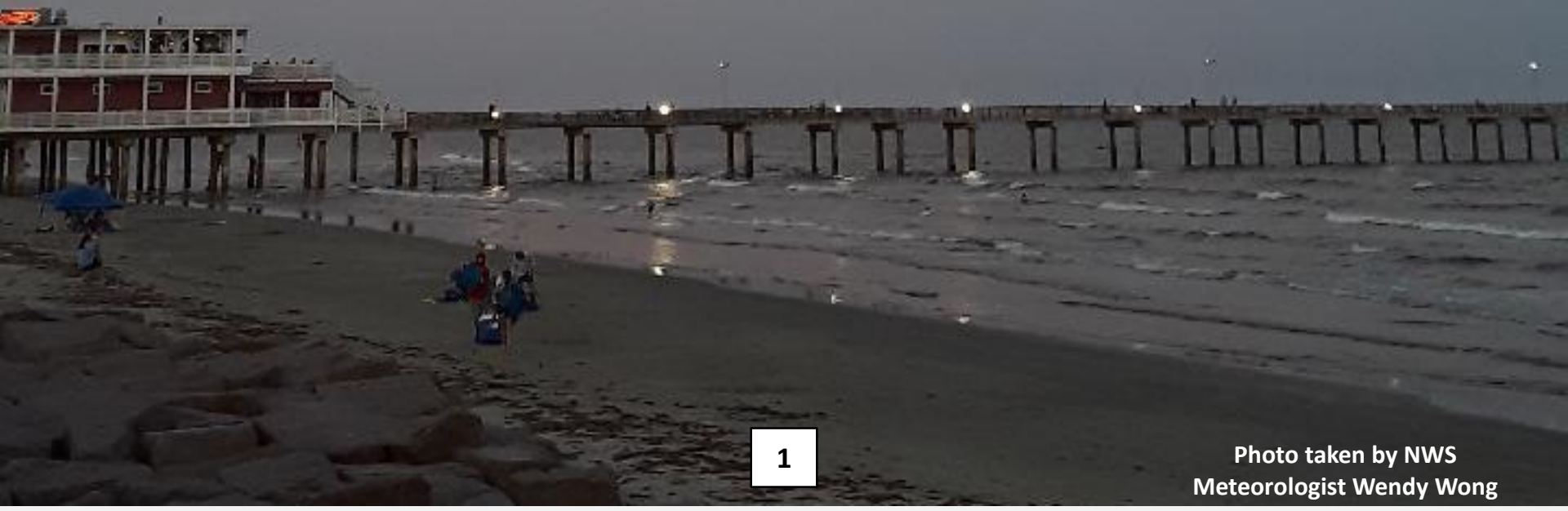


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Precipitation

Monthly precipitation values were above normal for the month of July across three of the four primary climate sites. The city of College Station was the only primary climate site to end the month below normal by 0.56 inches. The beginning of the month started out soggy, with a rather wet fourth of July where three daily maximum rainfall records were recorded. This precipitation was brought on by an upper-level disturbance that trekked across the northern Gulf of Mexico and pushed westward into the region. Otherwise, summer-like weather brought daily rainfall through the first half of the month which was mainly attributed to development of showers and thunderstorms along the diurnally driven sea breeze and other outflow boundaries. The month ended with abnormally dry drought conditions due to the lack of rainfall from the second half of the month.

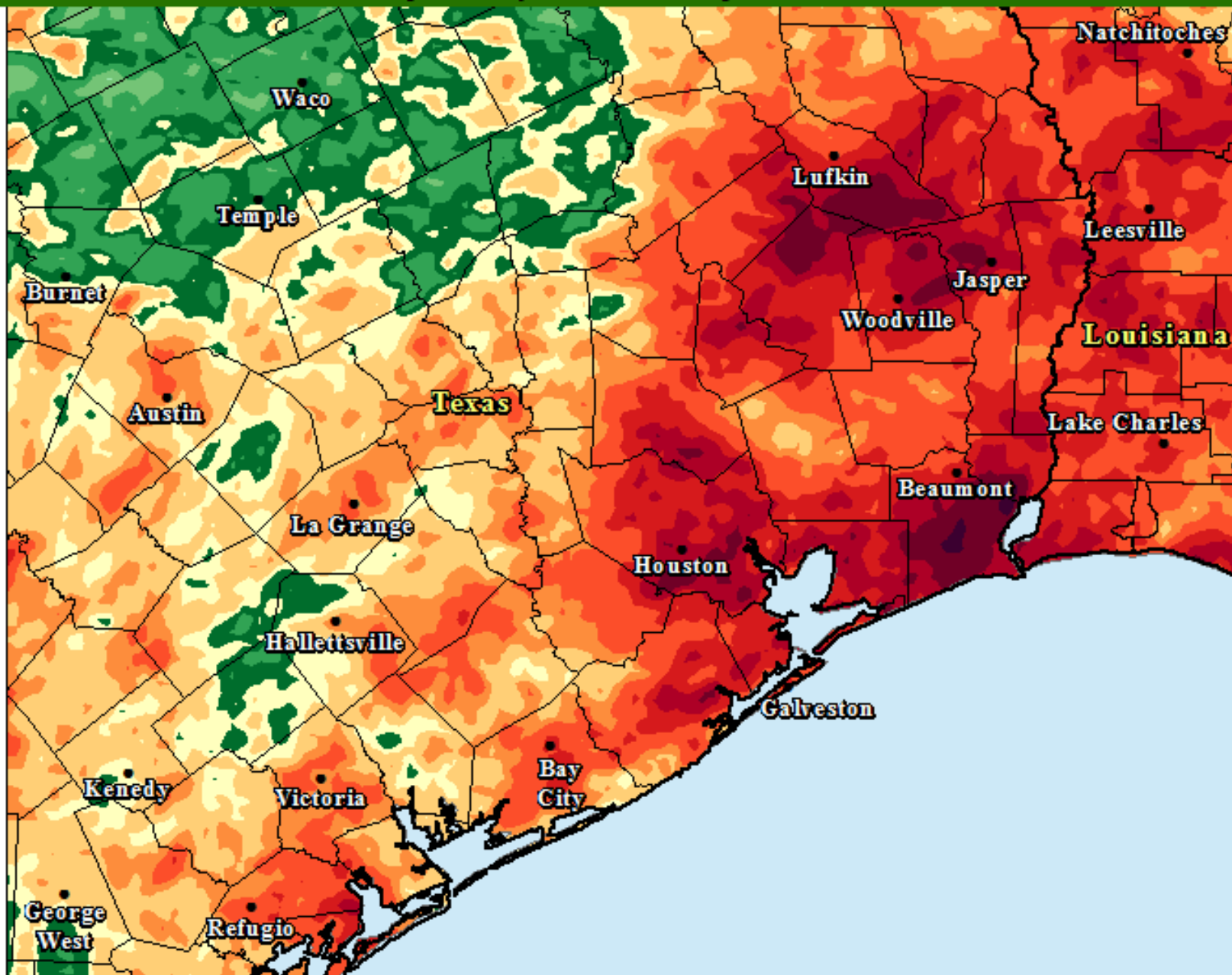
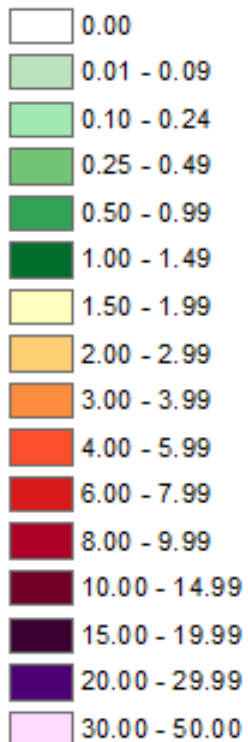
Site	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunderstorm Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	5.26	+1.46	12	2.27	July 4th
Houston Hobby (HOU)	7.99	+3.33	12	6.00	July 4th
City of Houston (IAH)	6.04	+2.25	10	4.19	July 4th
College Station (CLL)	1.06	-0.54	7	0.58	July 9th



Precipitation (Continued)

Total Monthly Precipitation - July 2018

Inches



Created by the
NWS Forecast Office
Houston/Galveston, TX



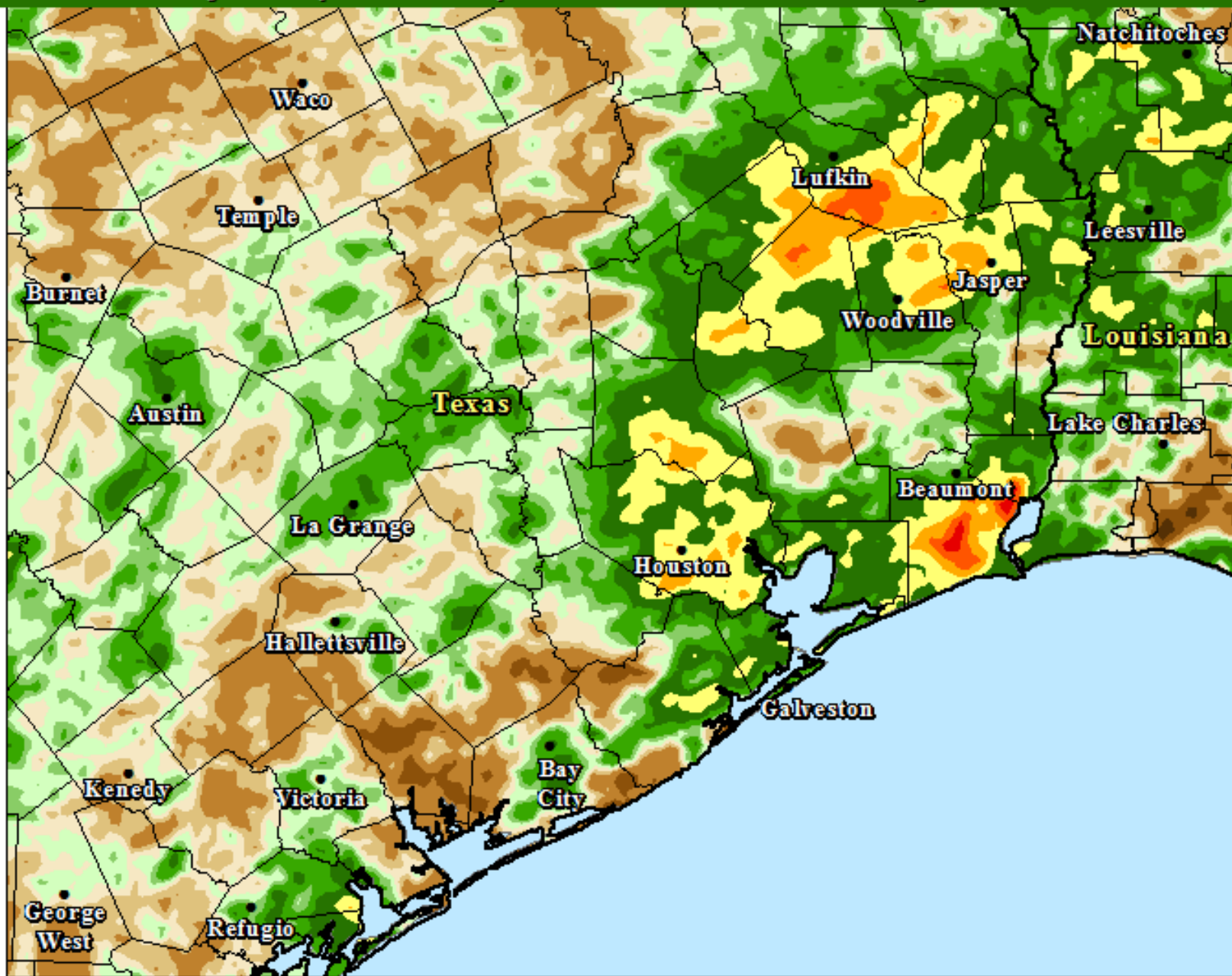
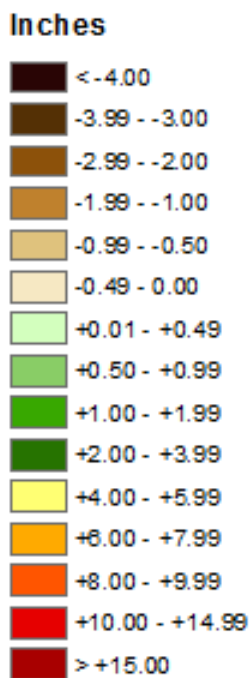
0 25 50
Miles

Source: NWS Advanced Hydrologic Prediction Service
Created: 08/01/2018 2000 UTC



Precipitation (Continued)

Total Monthly Precipitation Departure From Normal - July 2018



Created by the
NWS Forecast Office
Houston/Galveston, TX



0 25 50
Miles

Source: NWS Advanced Hydrologic Prediction Service
Created: 08/01/2018 2000 UTC



Temperatures

Temperatures throughout the month of May were 1-3 degrees above normal depending on the climate site across Southeast Texas. During the first week of July, a region of low pressure situated over the northern Gulf of Mexico shifted westward, and brought decent cloud cover and precipitation which also helped to keep temperatures slightly below normal. Most of the month of July was heavily dominated by a strong upper-level region of high pressure. This allowed for mostly clear skies and very dry conditions especially during the second half of the month, allowing average temperatures to be well above normal. A total of 10 daily temperature records occurred in the month of July. The city of Houston recorded its 10th warmest and Houston Hobby Airport 8th warmest, average monthly temperature for the month of July. Additionally, the city of Houston, Houston Hobby Airport, and city of Galveston all ranked 4th when considering the warmest average temperatures beginning on May 1st through July 31st.

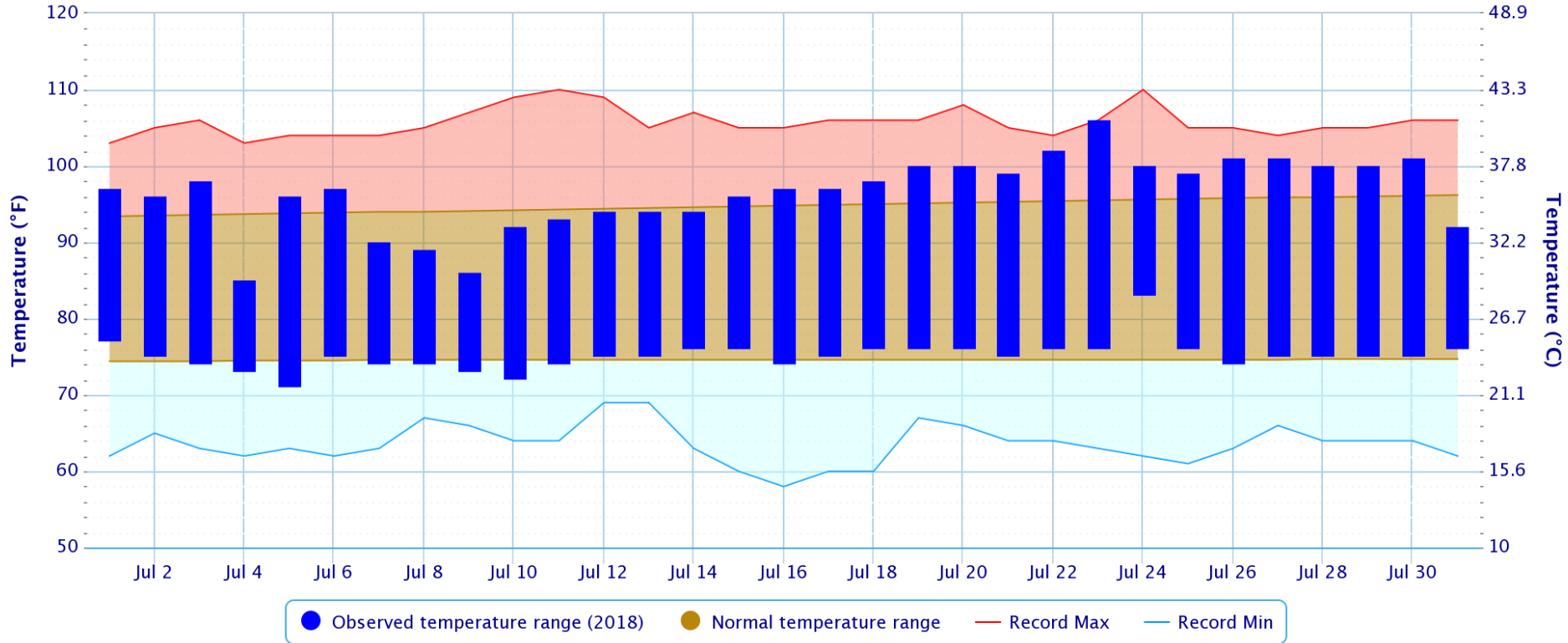
Site	Average Temp (F)	Average High Temp (F)	Average Low Temp (F)	Normal Average Temp (F)	Departure From Normal (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	84.4	89.2	79.5	84.5	-0.1	93 on July 23rd & 26th	72 on July 3rd
Houston Hobby (HOU)	85.4	94.0	76.8	83.8	+1.6	100 on July 23rd	73 on July 4th
City of Houston (IAH)	85.8	95.3	76.3	84.4	+1.4	101 on July 23rd	72 on July 4th & 5th
College Station (CLL)	85.8	96.5	75.1	84.7	+1.1	106 on July 23rd	71 on July 5th



Temperatures

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

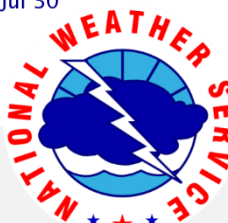
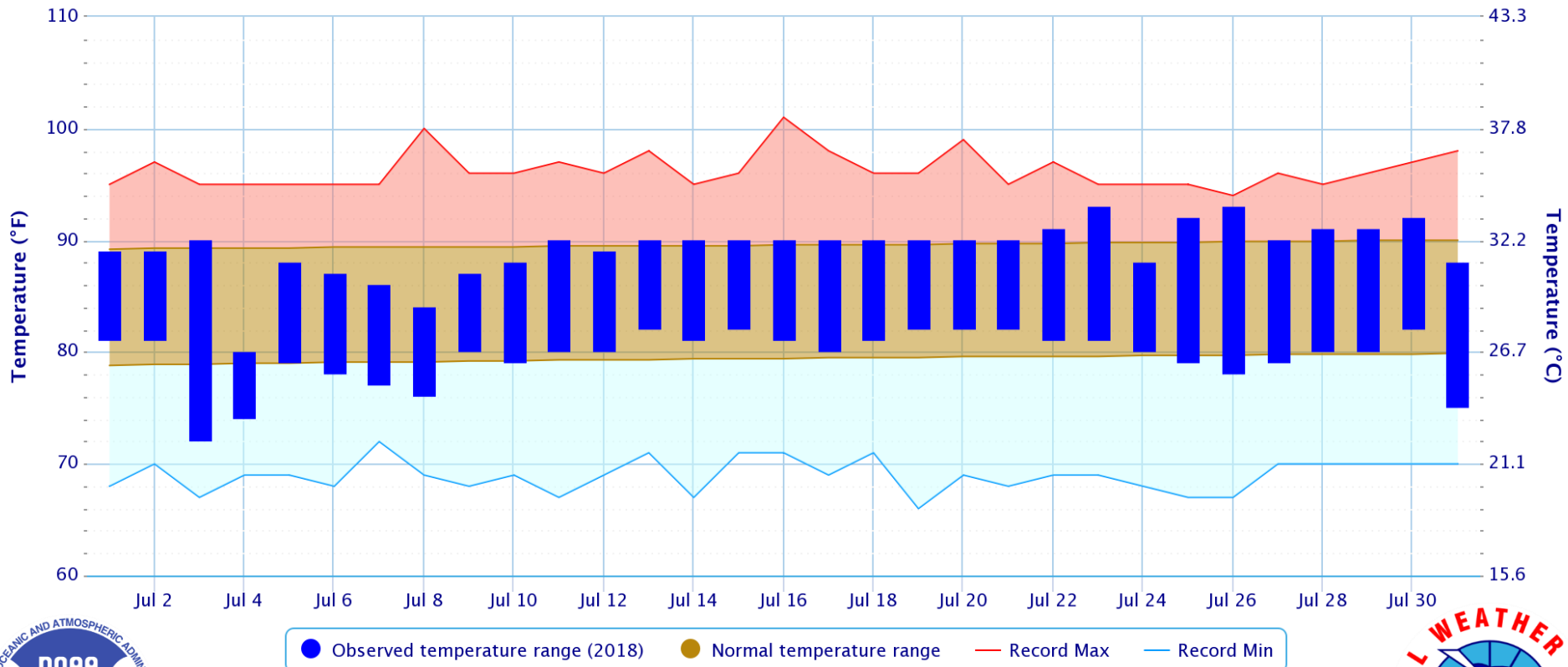
Period of Record – Max temperature: 1888-10-01 to 2018-08-01; Min temperature: 1882-05-15 to 2018-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



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Daily Temperature Data – Galveston Area, TX (ThreadEx)

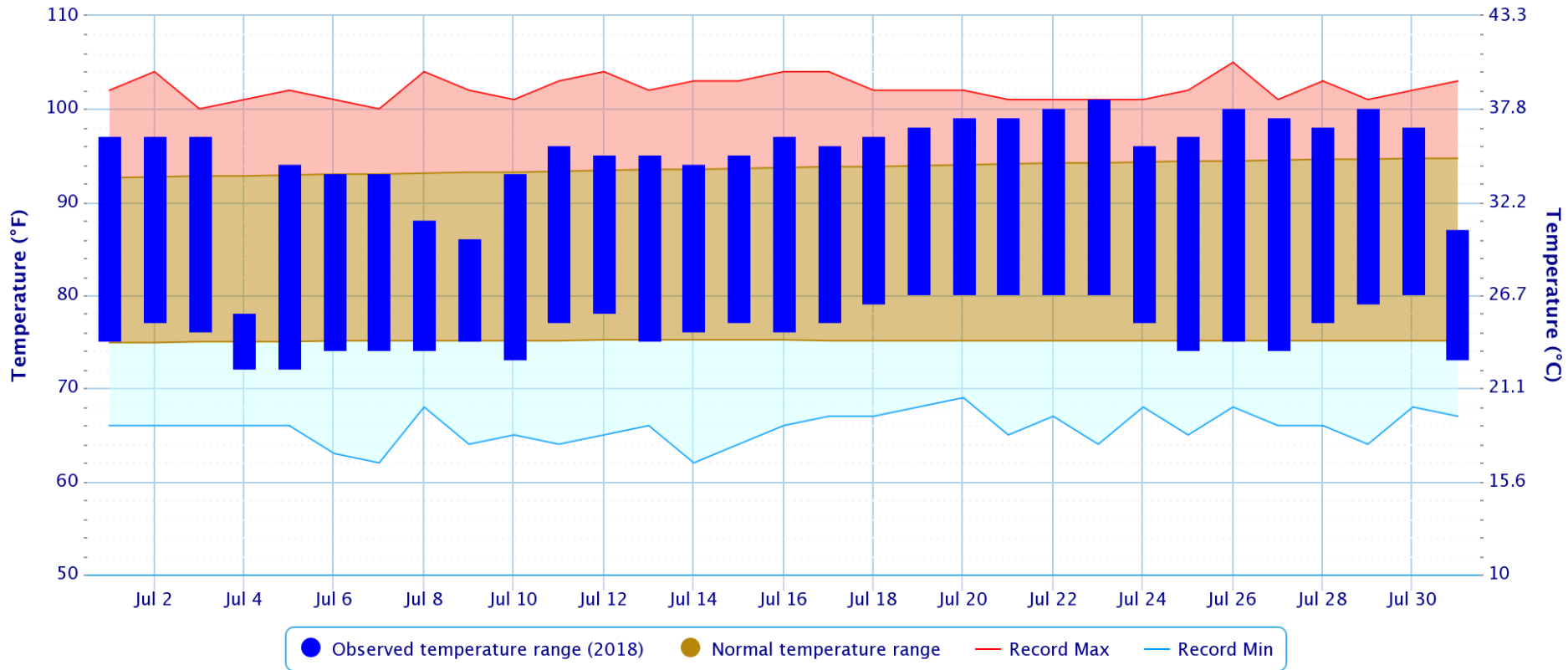
Period of Record – 1874-05-10 to 2018-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



Temperatures

Daily Temperature Data – Houston Area, TX (ThreadEx)

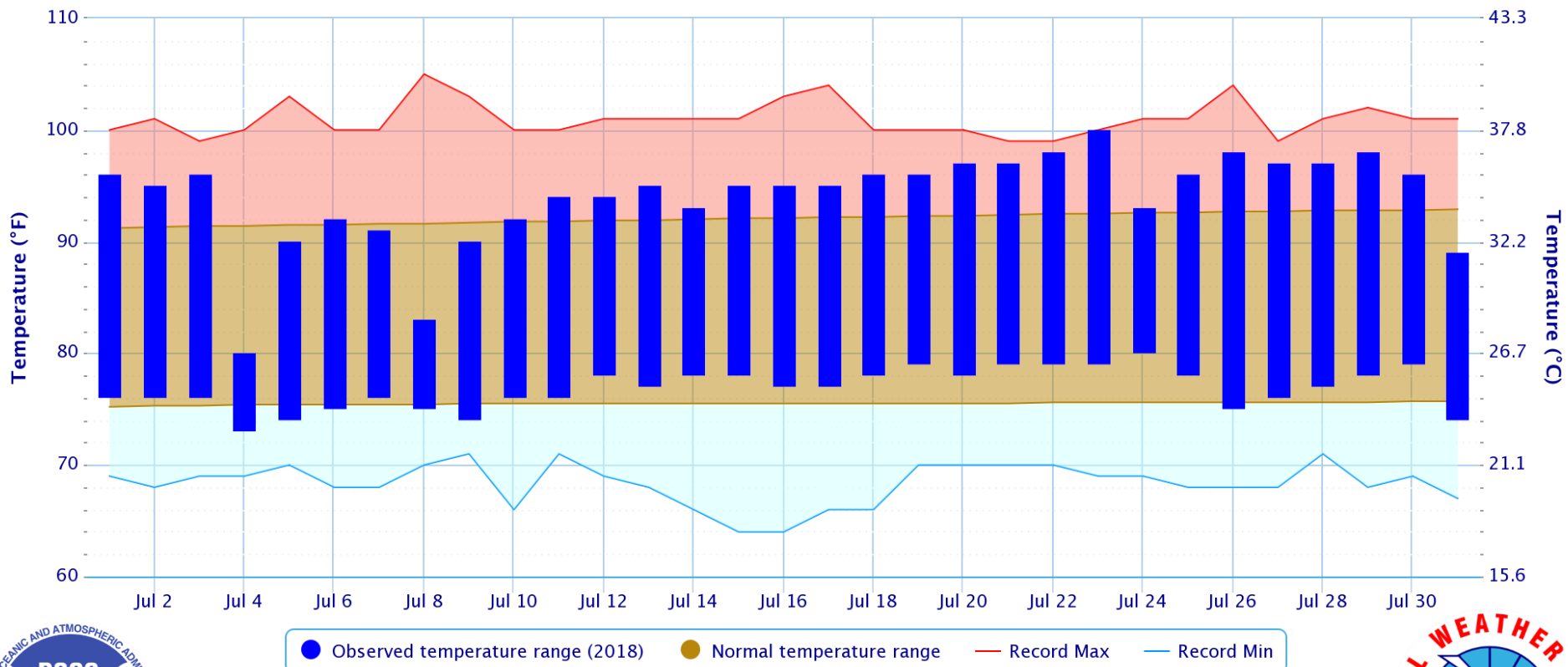
Period of Record – 1889-05-01 to 2018-08-01. Normals period: 1981-2010. Click and drag to zoom chart.



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Daily Temperature Data – HOUSTON WILLIAM P HOBBY AP, TX

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

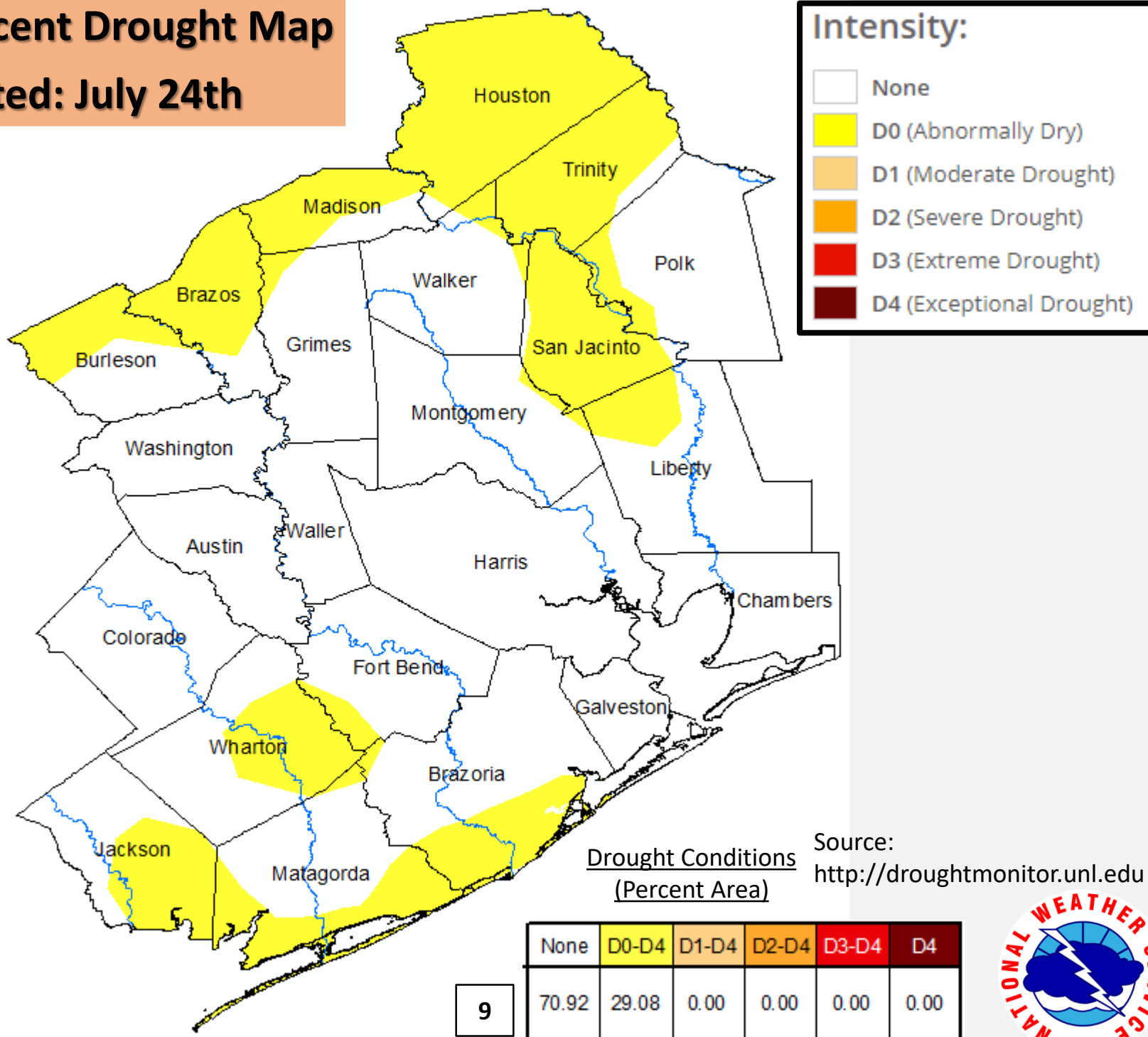


Drought Conditions

Drought conditions continued to expand and worsen across southeast Texas as indicated in the last Drought Monitor Report of July. Abnormally dry drought conditions (D0) expanded through Houston, Trinity, San Jacinto, Madison, Brazos, and Burleson counties. Along the coast, Wharton, Jackson, Matagorda, and Brazoria counties were also experiencing abnormally dry conditions. As of July 27th, Colorado, Brazos, Waller, Grimes, Madison, and Walker had outdoor burn bans in effect. Overall, roughly 29% of the forecast area was experiencing abnormally dry drought conditions.

Most Recent Drought Map

Posted: July 24th



Monthly Record Temperature Data

With July being unusually warm and wet, a total of 13 records were set across the four primary climate sites.

Site	Date	Record Type	New Record	Previous Record
City of Galveston	July 4 th	Precipitation	2.27"	2.14" in 1942
City of Houston	July 4 th	Precipitation	4.19"	3.49" in 1942
Houston Hobby	July 4 th	Precipitation	6.00"	3.04" in 1942
City of Houston	July 19 th	High Min Temp	80	Tied in 1963
City of Houston	July 20 th	High Min Temp	80	Tied in 1963
City of Houston	July 22 nd	High Min Temp	80	Tied in 1995
City of Houston	July 23 rd	High Min Temp	80	Tied in 1995
City of Houston	July 23 rd	High Max Temp	101	Tied in 1980
Houston Hobby	July 23 rd	High Max Temp	100	99 in 2000
Houston Hobby	July 23 rd	High Min Temp	79	Tied in 2017
City of College Station	July 23 rd	High Max Temp	106	Tied in 1913
City of College Station	July 24 th	High Min Temp	83	81 in 1914
Houston Hobby	July 24 th	High Min Temp	80	Tied in 2017



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
07-22-2018, Max Temp: 100	07-19-2018, Max Temp: 100
07-23-2018, Max Temp: 101	07-20-2018, Max Temp: 100
07-26-2018, Max Temp: 100	07-22-2018, Max Temp: 102
7-29-2018, Max Temp: 100	07-23-2018, Max Temp: 106
	07-24-2018, Max Temp: 100
City of Houston	07-26-2018, Max Temp: 101
7-23-2018, Max Temp: 100	07-27-2018, Max Temp: 101
	07-28-2018, Max Temp: 100
	7-29-2018, Max Temp: 100
	7-30-2018, Max Temp: 101

The following tables show the both the first and last 100+ degree days ranked by date given its earliest, average, and across both the City of Houston and City of College Station.

	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



Warm Summer Temperatures

Last year (2017) was the warmest on record for much of Southeast Texas, with both winter and spring being unusually warm. In 2018, the spring was near normal in terms of temperatures, but the last three months have also been unseasonably warm and 2018 is rising up the ranks quickly and is now the 4th warmest year on record for Galveston. The long term outlook suggest the potential for above normal temperatures in August and therefore year-to-date average temperatures will likely increase.

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

City of Houston	City of Galveston	College Station	Houston Hobby
72.9 2017	74.6 2017	71.7 2017	73.5 2017
72.5 2012	73.8 2012	71.7 2012	72.8 2012
71.8 1911	72.5 2000	71.4 2011	72.3 2000
71.5 2011	72.3 2018 4th	71.4 1911	72.1 2011
71.4 1953	-	71.3 1925	72.1 1998
70.8 2018 13th	-	69.3 2018 24th	71.0 2018 11th

When considering the warmest average temperatures beginning on May 1st through July 31st, the following records were recorded.

Average Temperatures May 1st through July 31st

City of Houston	City of Galveston	College Station	Houston Hobby
84.0 2011	83.9 2011	84.9 1998	84.6 1998
83.7 2009	83.6 1875	84.4 1996	83.6 2011
83.6 1998	83.2 2012	84.3 2011	83.4 2009
83.5 2018 4th	83.1 2018 4th	84.2 2009	82.9 2018 4th
83.3 1980	83.1 2009	...	82.9 2008
-	-	83.1 2018 9th	-



August Outlook

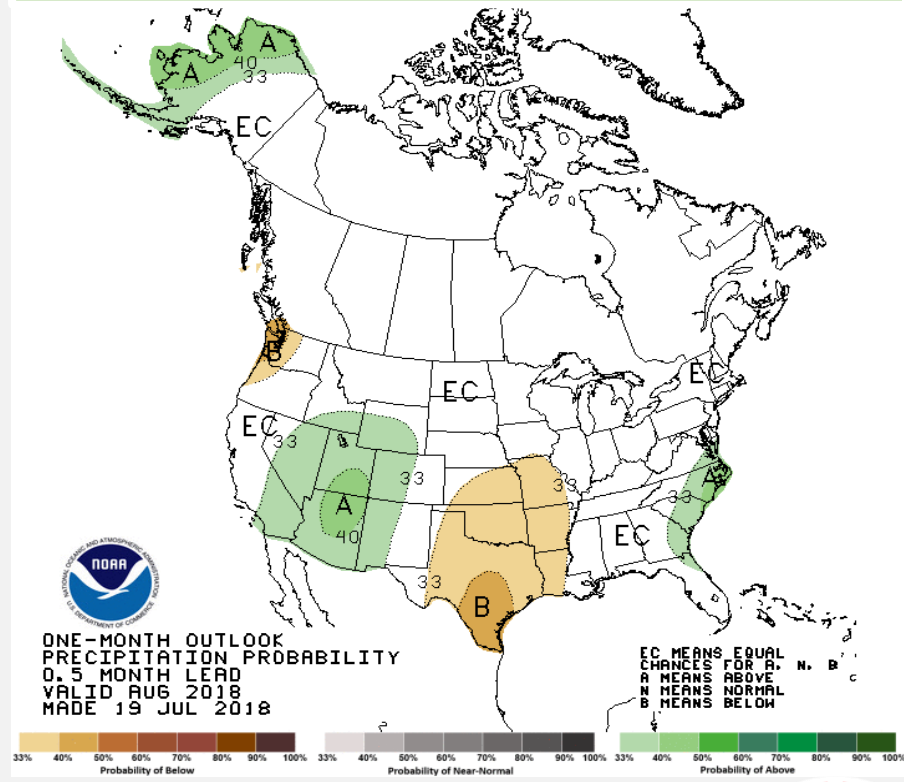
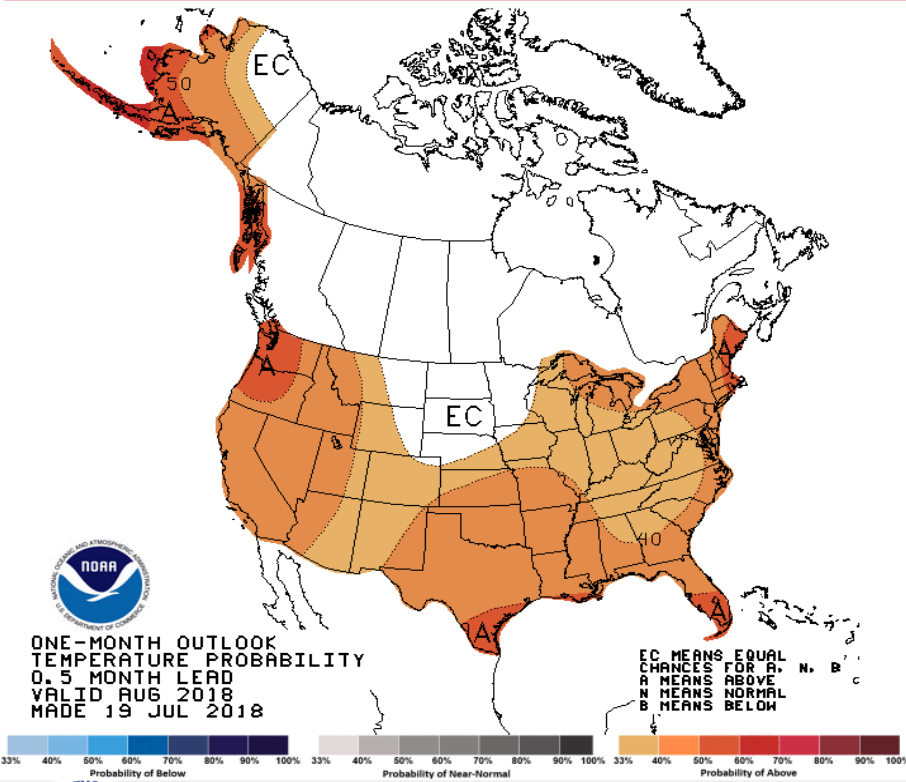
The latest outlook from the Climate Prediction Center (CPC) calls for a 50% probability of above normal temperatures, 33.3% chance of near normal temperatures, and a 16.7% chance for below normal temperatures for Southeast Texas. In terms of precipitation for the month of August across the region of 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	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

Site	Normal Monthly Precipitation (in.)
Galveston (GLS)	4.39
Houston Hobby (HOU)	5.06
City of Houston (IAH)	3.76
College Station (CLL)	2.68

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.

