



NWS Houston, Texas November 2017 Regional Climate Summary

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. . . The month of November enhanced drought conditions across SE TX . . .

Above normal temperatures along with below normal monthly rainfall totals, allowed drought conditions to expand across SE TX in the month of November. Every county within the CWA ended the month under abnormally dry to moderate drought conditions. Average temperatures remained approximately five degrees above normal across the City of Houston, Galveston, College Station and Houston Hobby. Multiple weak cold fronts helped to provide the occasional break from the heat. The strongest cold front of the month left below normal temperatures for Thanksgiving day.

Little precipitation left a deficit of 2 to 5 inches for monthly rainfall across the region. Houston Hobby received the most rainfall which was just over an inch over for the entire month. Most of the precipitation recorded for the month occurred on the first day of November.

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Precipitation

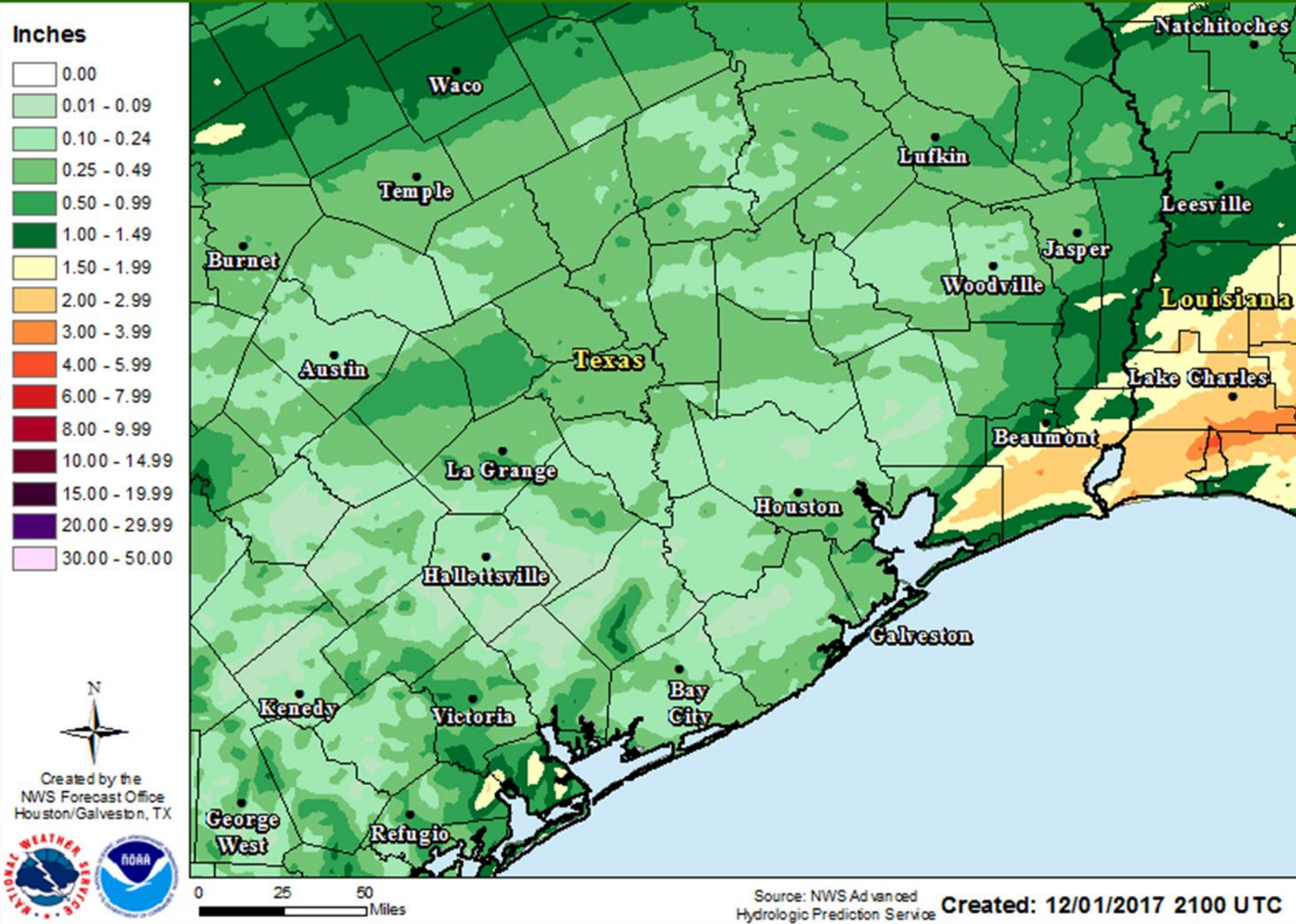
Most of the total rainfall that occurred throughout November occurred on the first of the month. The City of Galveston, Houston, and College Station all ended the month with around a half inch of rainfall. Houston Hobby was the only primary site location to receive more than an inch, ending the month with 1.11 inches of total precipitation. Little measurable rainfall occurred with any of the weak cold fronts that pushed through the region. Additionally, the synoptic set up which kept the jet stream well north of the region, left SE TX under the influence of the subtropical ridge through much of November, helping to keep conditions dry.

Site	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunderstorm Days	Maximum Daily Precipitation (in./date)
Galveston (GLS)	0.43	-4.08	1	0.54 Oct. 31 st - Nov. 1st
Houston Hobby (HOU)	1.11	-3.21	0	0.81 Nov. 1st
City of Houston (IAH)	0.50	-3.84	0	0.44 Nov. 1st
College Station (CLL)	0.59	-2.63	0	0.95 Oct. 31 st - Nov. 1st



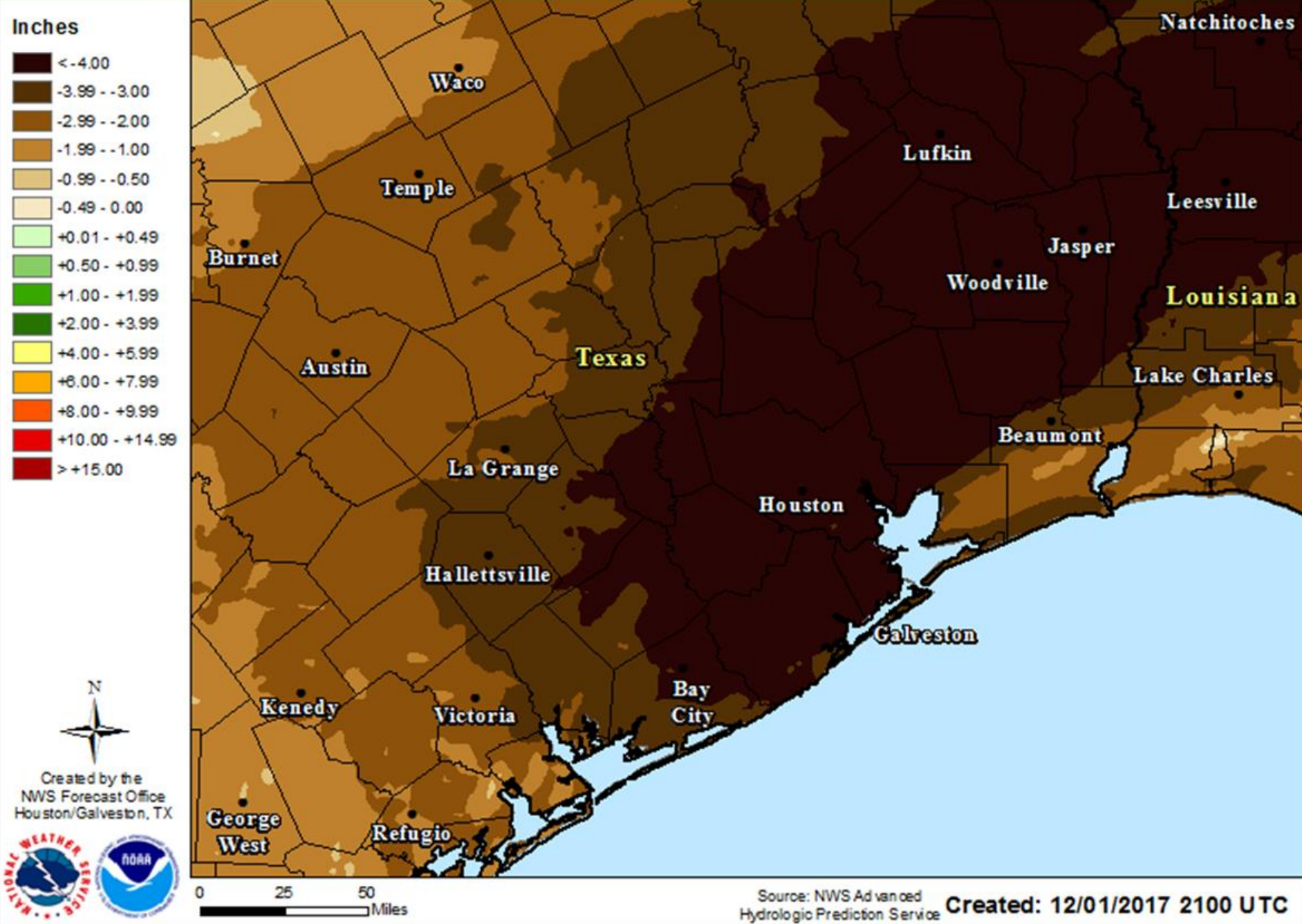
Precipitation

Total Monthly Precipitation - November 2017



Precipitation

Total Monthly Precipitation Departure From Normal - November 2017



Temperatures

November brought another month of record breaking above normal temperatures across SE TX. High temperatures reached into the upper 80s to low 90s on the warmest days of the month, which all occurred during the first week. Overall, average monthly temperatures were approximately five degrees above normal. All four primary stations ranked in the top ten warmest November on record. The following table shows the rankings of the warmest average temperatures for the month of November.

Site	Average Temperature	Ranking
City of Galveston	69.5	6th
Houston Hobby	68.4	4th
City of Houston	67.2	7th
City of College Station	65.9	3rd

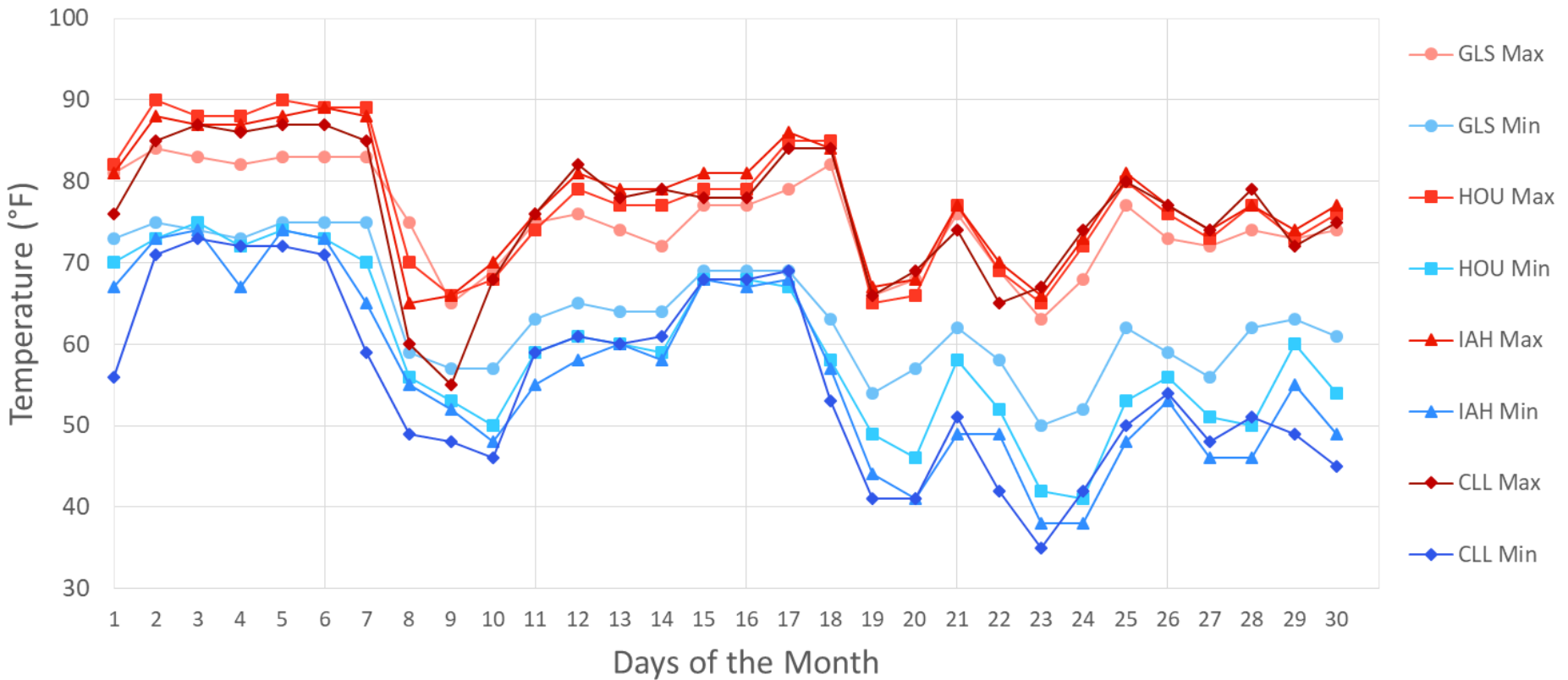
Site	Average Temp (F)	Average High Temp (F)	Average Low Temp (F)	Normal Average Temp (F)	Departure From Normal (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	69.5	75.1	63.8	65.1	+ 4.4	84 on 2 nd	50 on 23 rd
Houston Hobby (HOU)	68.4	77.5	59.3	63.2	+ 5.2	90 on 2 nd & 5 th	41 on 24 th
City of Houston (IAH)	67.2	77.9	56.5	62.3	+ 4.9	89 on 6 th	38 on 24 th & 23 rd
College Station (CLL)	65.9	76.2	55.5	60.8	+ 5.1	87 on 5 th & 6 th	35 on 23 rd



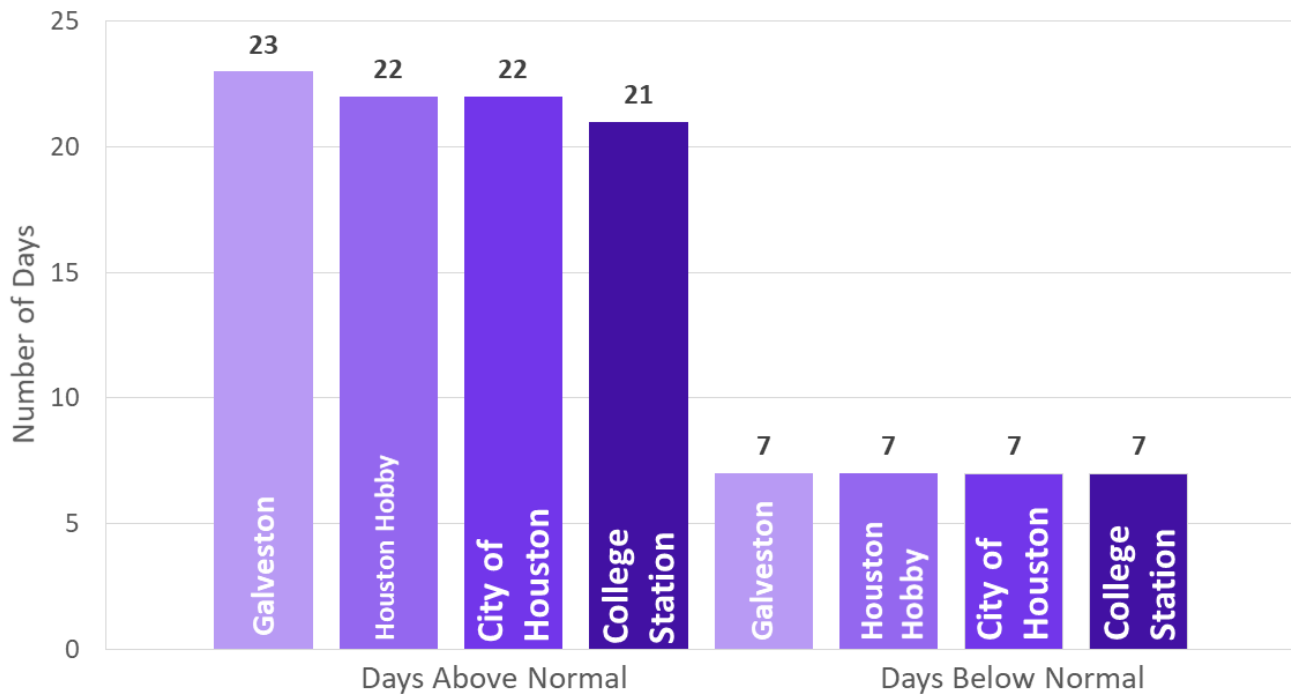
Temperatures (Continued)

Below is a line graph of temperature trends for the four primary climate sites, as well as a bar graph comparing above and below normal temperature days throughout the month of November.

November Temperature Trends



Mean Departure from Normal Distribution

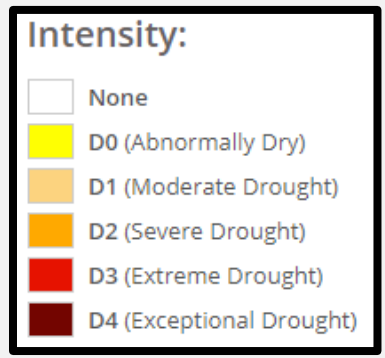
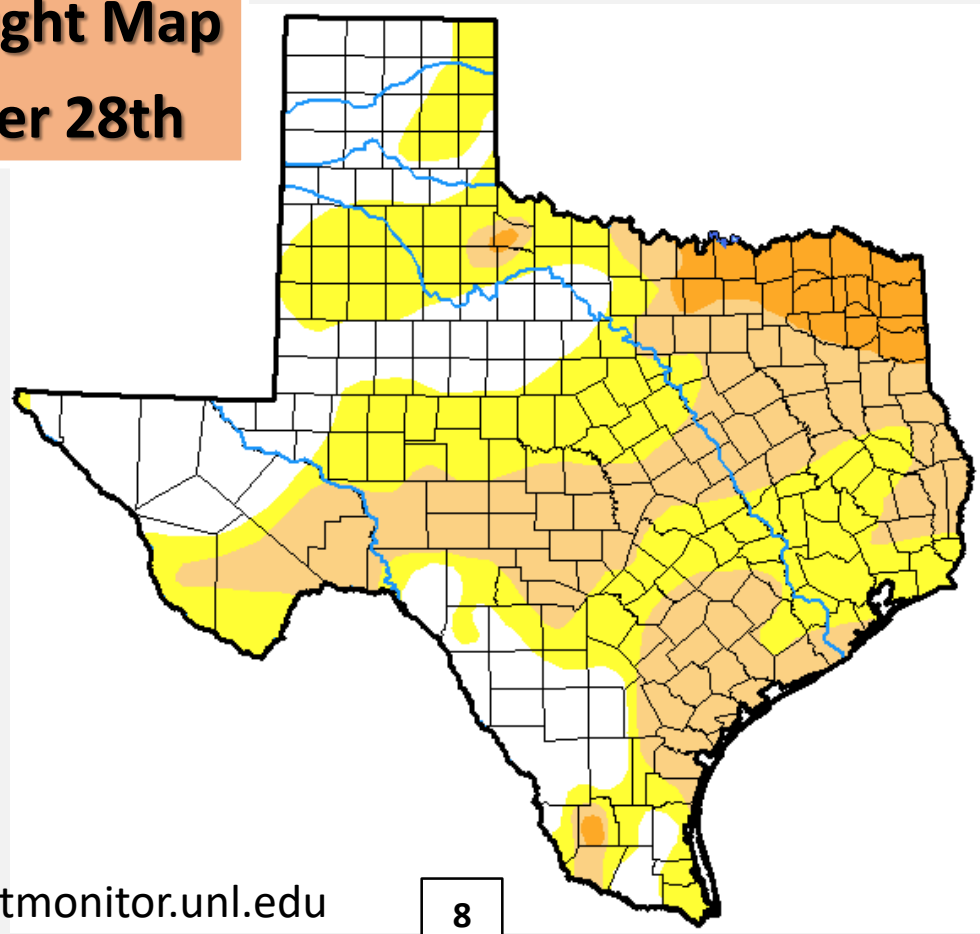


Drought Conditions

Due to large departures from monthly rainfall totals as well as above normal temperatures throughout the month of November, Southeast Texas underwent a large expansion of abnormally dry (D0) to moderate drought conditions (D1). Since September 1st, the City of Houston's rainfall totals have been -9.01 inches below normal, College Station: -6.80, and Galveston: -13.03. As a result evaporation rates has been high, not allowing much moisture to be retained within the soil. The following table lists the abnormal dry or drought conditions by county as noted by the U.S. Drought Monitor.

Weekly Updates (Date Posted)	Intensity and Impacts	Impacting the following Counties
November 7 th	No Drought Conditions	None
November 14 th	D0	Matagorda & Brazoria
November 21 st	D0	Matagorda, Brazoria, Galveston, Jackson, Wharton, Colorado, Austin, Burleson, Brazos, Grimes, Madison, Houston, Polk, Liberty
November 28 th	D1	Colorado, Jackson, Matagorda, Galveston, Polk, Liberty, Houston
	D0	Rest of CWA

**Most Recent Drought Map
Posted: November 28th**



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



Monthly Record Temperature and Rainfall Data

There were only a total of 26 new records made throughout the month of November across SE TX primary climate sites.

Site	Date	Record Type	New Record	Previous Record
GLS	Nov. 5 th	High Min Temp	75	Tied in 1946
	Nov. 5 th	High Max Temp	83	Tied in 1886
	Nov. 6 th	High Max Temp	83	Tied in 2005
	Nov. 7 th	High Min Temp	75	Tied in 1915
	Nov. 7 th	High Max Temp	83	Tied in 1995
HOU	Nov. 2 nd	High Min Temp	73	72 in 2000
	Nov. 2 nd	High Max Temp	90	88 in 2016
	Nov. 3 rd	High Min Temp	75	72 in 2016
	Nov. 4 th	High Max Temp	88	Tied in 1988
	Nov. 5 th	High Min Temp	74	71 in 2015
	Nov. 5 th	High Max Temp	90	87 in 2005
	Nov. 6 th	High Min Temp	73	72 in 2015
	Nov. 6 th	High Max Temp	89	88 in 1963
	Nov. 7 th	High Max Temp	89	87 in 1973
	Nov. 17 th	High Max Temp	85	Tied in 2013



Monthly Record Temperature and Rainfall Data (Continued)

There were only a total of 26 new records made throughout the month of November across SE TX primary climate sites.

Site	Date	Record Type	New Record	Previous Record
IAH	Nov. 2 nd	High Min Temp	73	71 in 1946
	Nov. 3 rd	High Min Temp	74	Tied in 1994
	Nov. 5 th	High Min Temp	73	71 in 1922
	Nov. 5 th	High Max Temp	88	Tied in 1963
	Nov. 6 th	High Min Temp	73	71 in 1989
	Nov. 6 th	High Max Temp	89	88 in 1963
	Nov. 7 th	High Max Temp	88	Tied in 1969
	Nov. 17 th	High Max Temp	86	85 in 2013
	Nov. 18 th	High Max Temp	84	Tied in 1973
	CLL	Nov. 5 th	High Min Temp	72
Nov. 18 th		High Max Temp	84	Tied in 1986



December Outlook

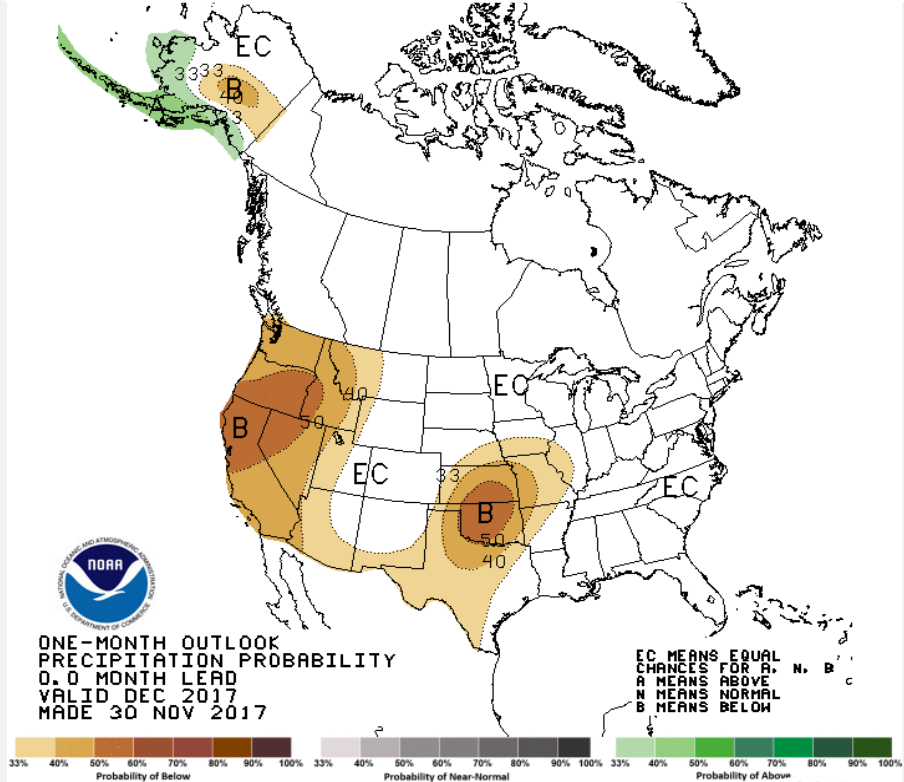
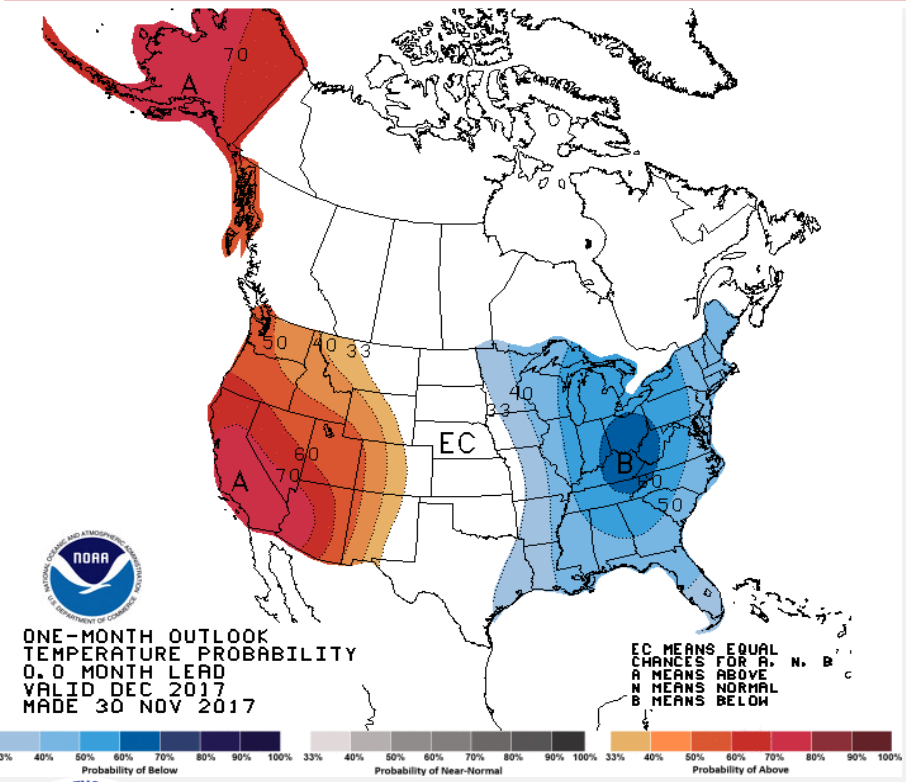
The latest outlook from the Climate Prediction Center (CPC) calls for an increased likelihood of below normal temperatures and around normal precipitation for the month of December.

Site	Average Temp(°F)	Normal High (°F)	Normal Low (°F)
Galveston	57.3	63.9	50.7
Houston Hobby	55.6	64.5	46.7
City of Houston	54.4	64.3	44.6
College Station	52.2	62.3	42.2

Site	Normal Monthly Precipitation (in.)
Galveston (GLS)	3.52
Houston Hobby (HOU)	4.03
City of Houston (IAH)	3.74
College Station (CLL)	3.23

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.

