



# NWS Houston, Texas December 2018 Regional Climate Summary

**Produced by Nikki Hathaway, Josh Lichter, and Charles Roeseler**

## **. . . A Record Breaking Wet December . . .**

*Monthly rainfall totals were well above normal across SE TX, though the month ended with slightly above normal average monthly temperatures. Six daily temperature records were broken in total, with five of these daily rainfall records. Additionally, December 2018 turned out to be the 4<sup>th</sup> wettest December on record for the City of College Station and the 8<sup>th</sup> wettest December on record for the City of Houston. The extra rain helped to keep drought conditions out of SE TX once more, leaving the entire month of December drought free.*

Photo taken by NWS  
Meteorologist Wendy Wong

# Table of Contents

Page Number	Page Title
1	Cover
2	Table of Contents
3	Precipitation
4	Abnormally Wet December (2018)
5	Total Monthly Precipitation
6	Total Monthly Precipitation Departure from Normal
7	Temperatures
8-9	Monthly Temperature Charts
10	Drought Conditions
11	December Daily Record Reports
12	January Outlook
13	Climate Primary Site History



# Precipitation

*A cold front welcomed the start of December bringing precipitation and below normal temperatures the first week of the month. A second cold front pushed through SE TX by the end of the first week which brought plenty of moisture leading to more precipitation. The city of College Station had it's 4<sup>th</sup> wettest calendar day ever recorded in December on the 7<sup>th</sup>, while the city of Houston had it's 5<sup>th</sup> wettest calendar day also on the 7<sup>th</sup>, associated with this cold front. High pressure dominated much of the second week of December leading to very little precipitation during that week. Another cold front stalled as a surface low pressure system sagged south into the region by the end of the second week, bringing the return of precipitation. By the third week, a coastal low skirted the north TX coastline bringing with it Gulf moisture and more in the way of showers and isolated thunderstorms. An additional cold front swept through the region just in time for Christmas Day. This boundary later transitioned into another coastal low bringing more precipitation on the 26<sup>th</sup> and 27<sup>th</sup> resulting in river and bayou flooding. As a result, the city of College Station had it's 11<sup>th</sup> wettest calendar day on record for the month of December on the 27<sup>th</sup>. Little precipitation fell towards the end of the month, and New Years Eve remained rather dry.*

Site	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	4.17	+1.19	4	2.03	Dec. 7th
Houston Hobby (HOU)	6.20	+2.17	5	3.33	Dec. 7th
City of Houston (IAH)	7.62	+3.88	5	4.31	Dec. 7th
College Station (CLL)	9.60	+6.37	6	4.01	Dec. 7th



# Abnormally Wet December (2018)

*December 2018 was the 4<sup>th</sup> wettest December on record for the city of College Station and the 8<sup>th</sup> wettest December on record for the city of Houston. Additionally, the city of College Station had it's 4<sup>th</sup> and 11<sup>th</sup> wettest calendar days ever recorded in December, and the city of Houston had it's 5<sup>th</sup> wettest calendar day. When considering the period from December 4<sup>th</sup>, 2018 through January 4<sup>th</sup>, 2019, the city of College station is the wettest on record and the city of Houston the 4<sup>th</sup> wettest on record.*

## City of College Station December 2018 Precipitation (inches)

Wettest December	Wettest Calendar Day In December	Wettest December 4th through January 3rd
12.66 1913	7.54 12/04/1913	<b>11.64 2018-2019</b>
11.03 1892	5.79 12/15/1994	11.07 1913-1914
10.72 1994	4.93 12/02/1965	11.03 1892-1893
<b>9.60 2018</b>	<b>4.01 12/07/2018</b>	10.09 1931-1932
9.24 1891	3.95 12/12/1891	9.98 1994-1995
	<b>3.04 12/27/2018 11th</b>	

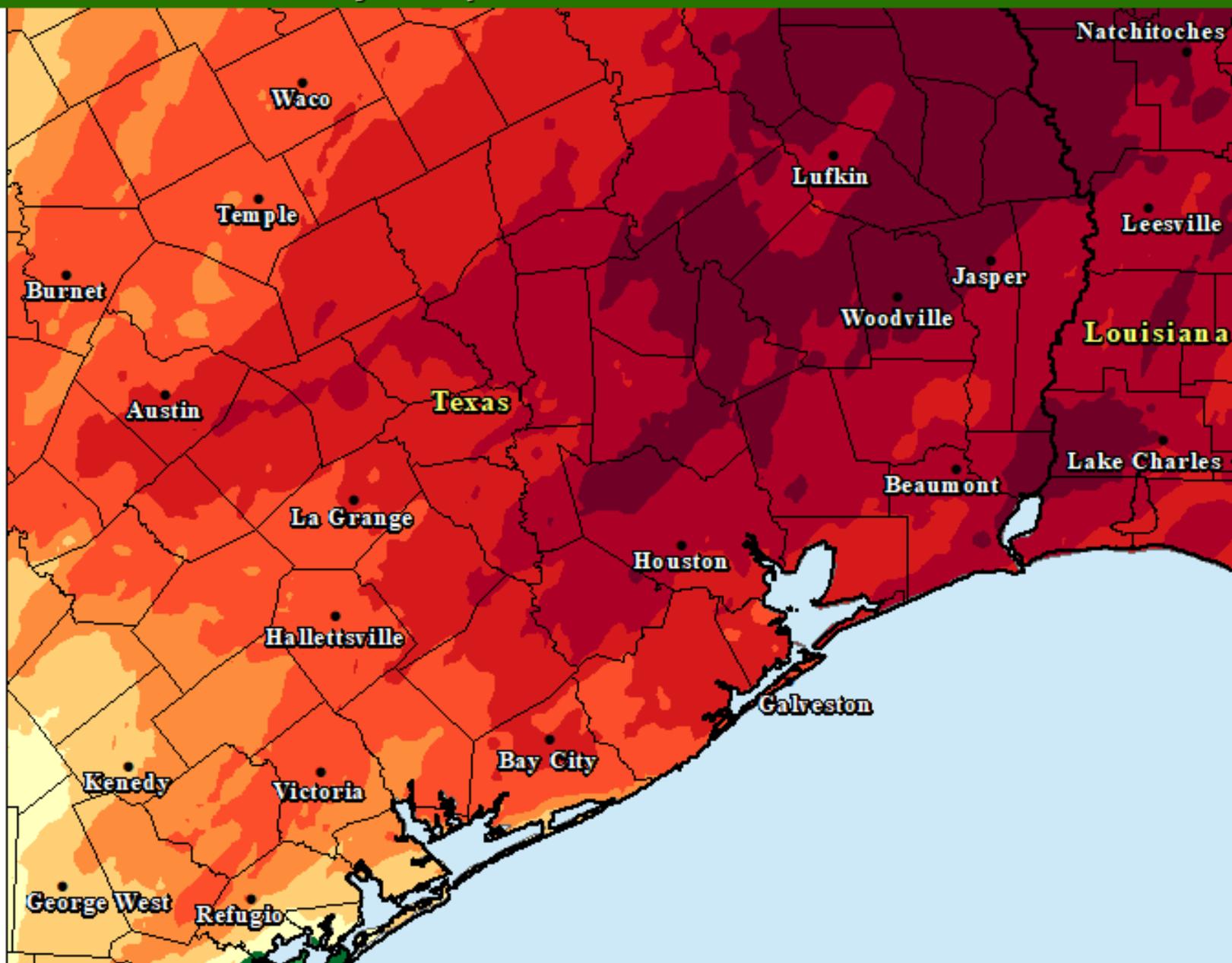
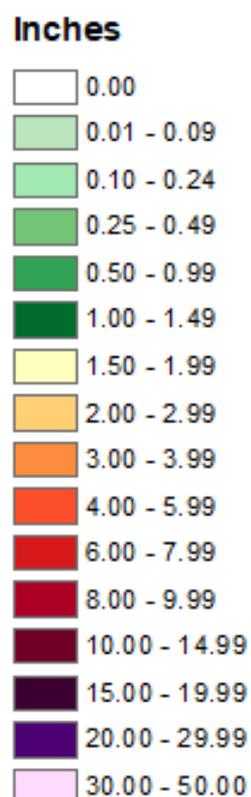
## City of Houston December 2018 Precipitation (inches)

Wettest December	Wettest Calendar Day In December	Wettest December 4th through January 3rd
14.38 1923	5.80 12/01/1914	11.61 1911-1912
11.55 1911	5.64 12/14/2005	11.55 1923-1924
11.43 1914	4.95 12/07/1935	10.23 1949-1950
10.09 1912	4.41 12/10/1923	<b>9.25 2018-2019</b>
9.62 1949	<b>4.31 12/07/2018</b>	8.97 1991-1992
<b>7.62 2018 8th</b>		

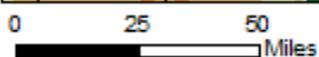


# Precipitation (Continued)

## Total Monthly Precipitation - December 2018



Created by the  
NWS Forecast Office  
Houston/Galveston, TX

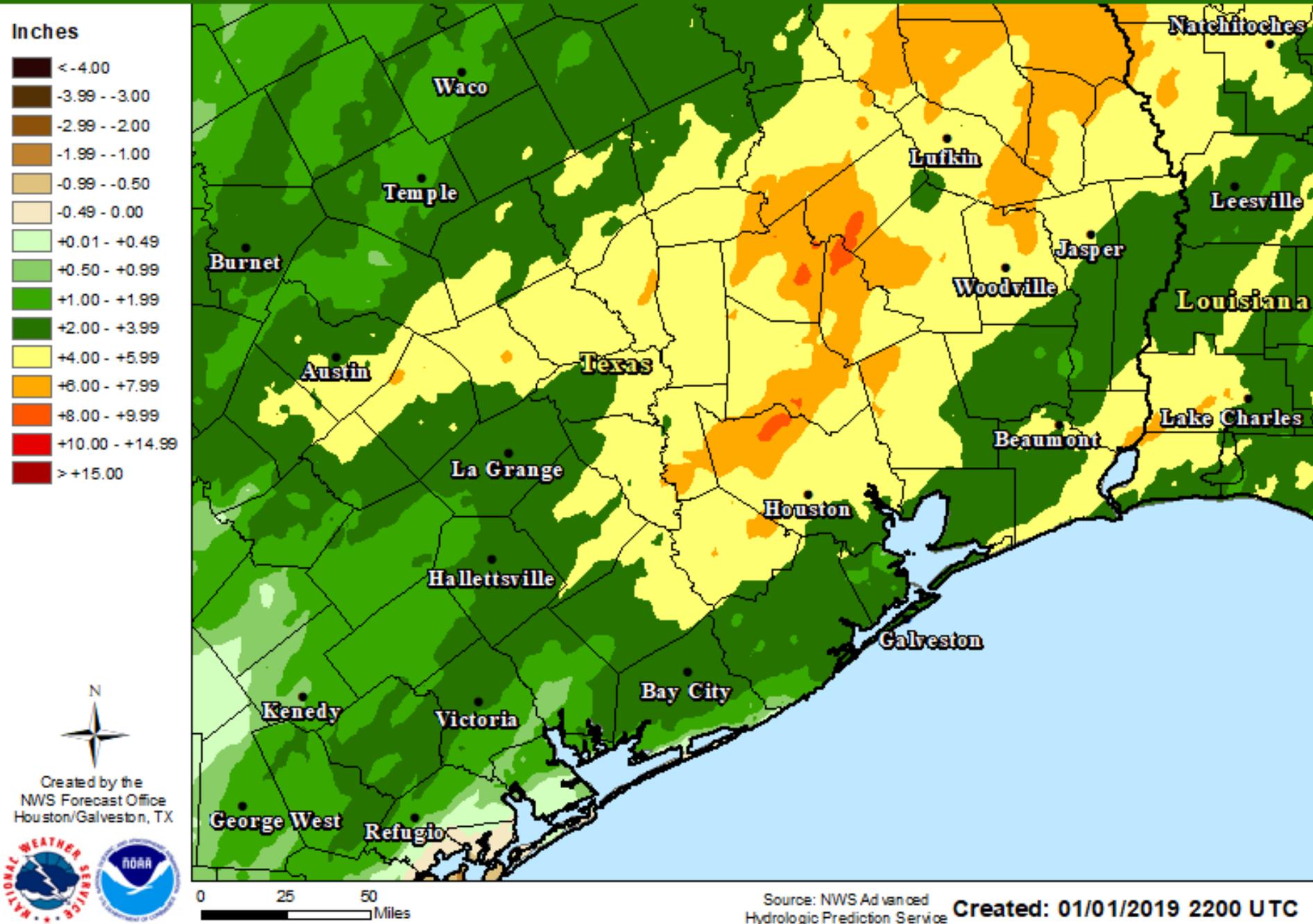


Source: NWS Advanced Hydrologic Prediction Service  
Created: 01/01/2019 2200 UTC



# Precipitation (Continued)

## Total Monthly Precipitation Departure From Normal - December 2018



# Temperatures

*Temperatures across SE TX were near normal to slightly above normal for the month of December. Periods of high pressure helped to allow for plentiful sunshine and above normal daily temperatures. Stretches of warm temperatures were balanced by well below normal temperatures thanks to multiple cold fronts that swept through the region, which brought overall average temperatures only slightly warmer than seasonal normals.*

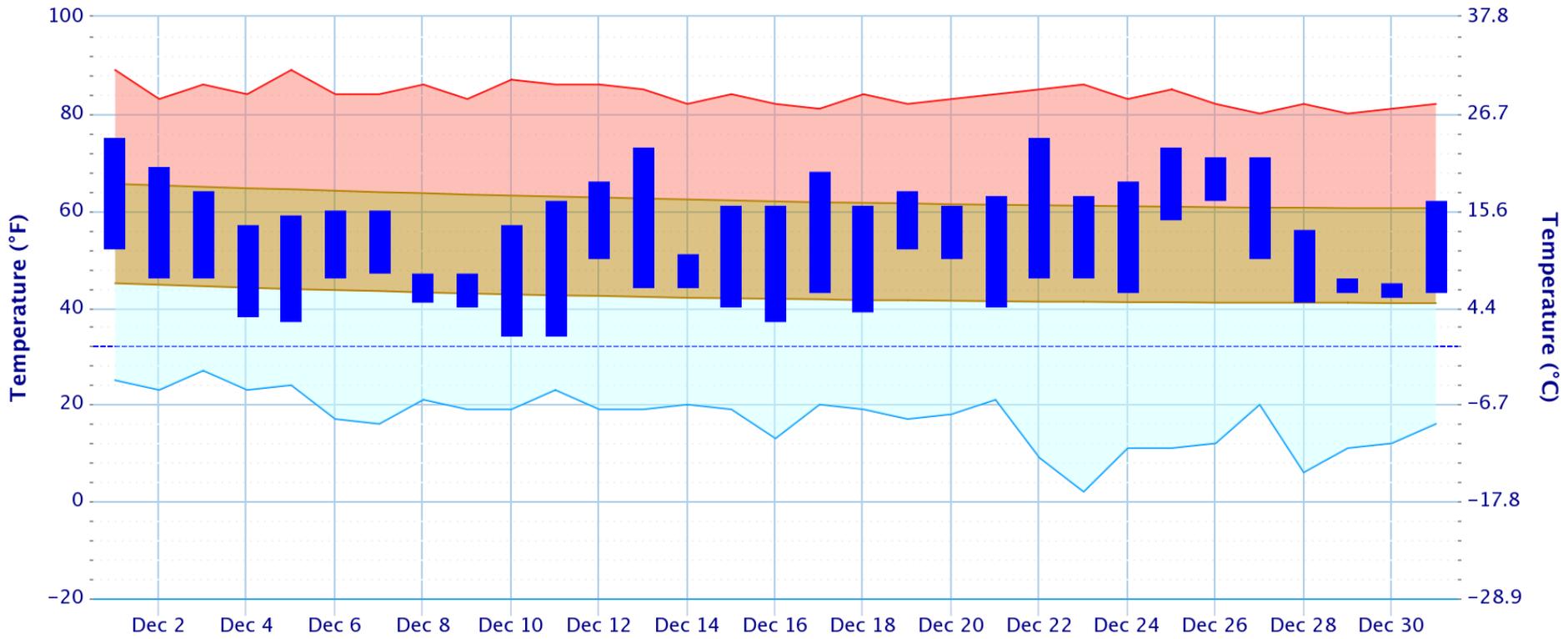
Site	Average Temp (F)	Average High Temp (F)	Average Low Temp (F)	Normal Average Temp (F)	Departure From Normal (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	58.1	64.0	52.1	57.4	+0.7	80 on December 1st	43 on December 11th
Houston Hobby (HOU)	56.7	65.0	48.4	55.6	+1.1	80 on December 1st	37 on December 11th
City of Houston (IAH)	55.6	64.7	46.4	54.4	+1.2	80 on December 1st	34 on December 11th
College Station (CLL)	53.0	61.7	44.3	52.2	+0.8	75 on December 1st & 22nd	34 on December 10th & 11th



# Monthly Temperature Charts

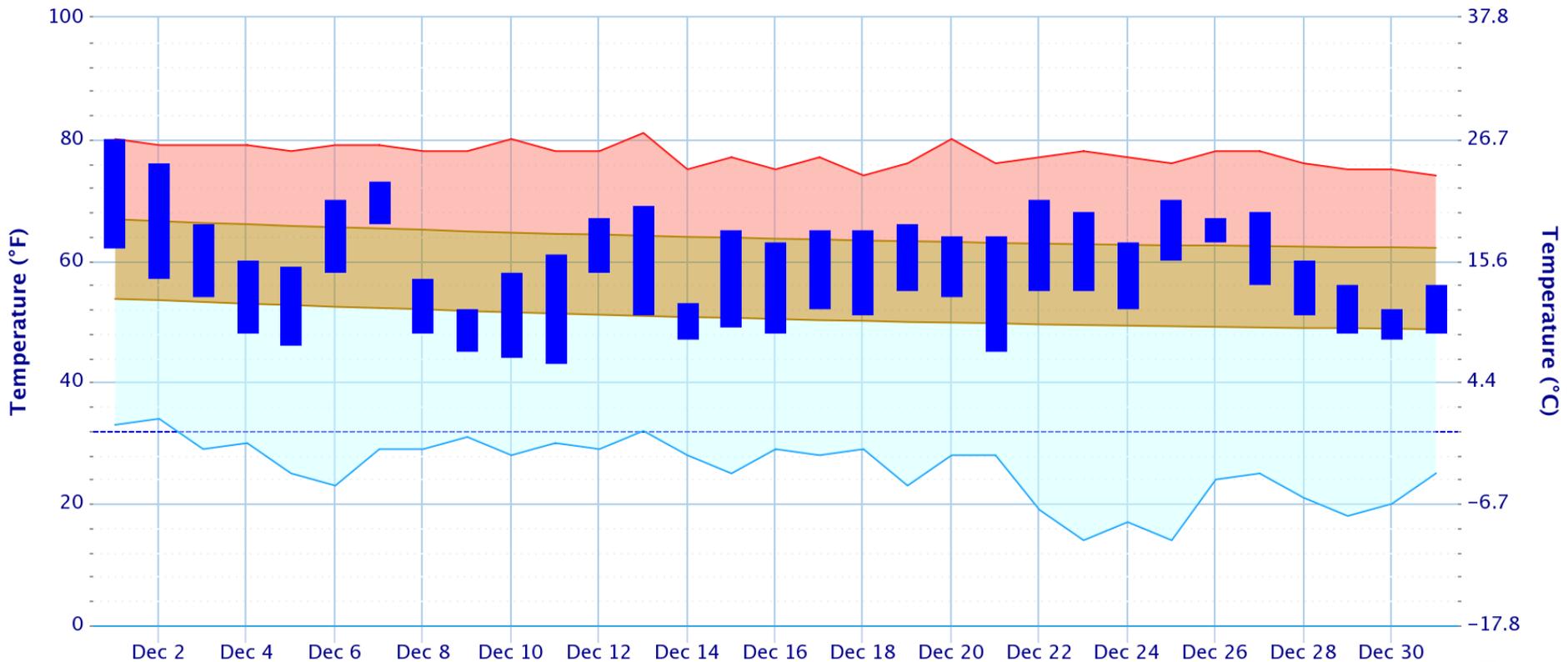
## Daily Temperature Data – College Station Area, TX (ThreadEx)

Period of Record – Max temperature: 1888-10-01 to 2019-01-03; Min temperature: 1882-05-15 to 2019-01-03. Normals period: 1981-2010. Click and drag to zoom chart.



## Daily Temperature Data – Galveston Area, TX (ThreadEx)

Period of Record – 1874-05-10 to 2019-01-03. Normals period: 1981-2010. Click and drag to zoom chart.



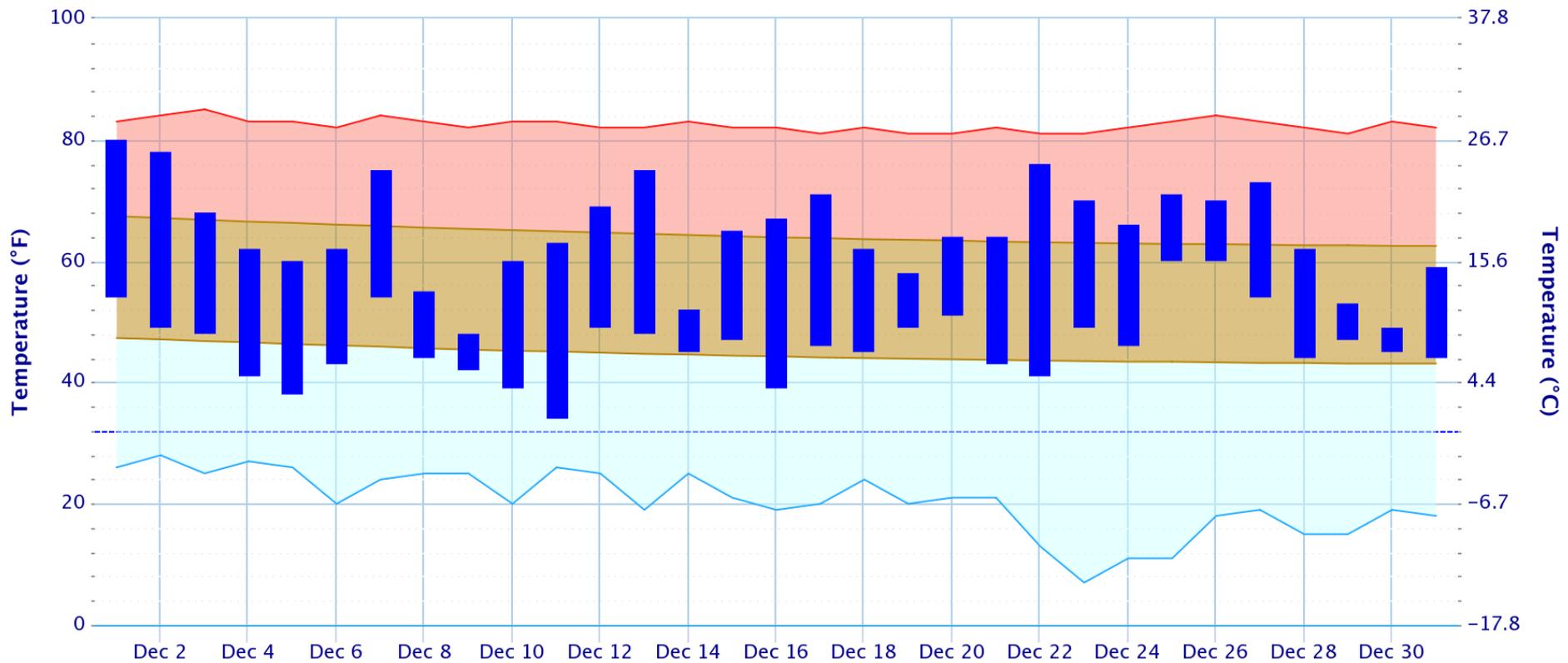
● Observed temperature range (2018)   ● Normal temperature range   — Record Max   — Record Min



# Monthly Temperature Charts (continued)

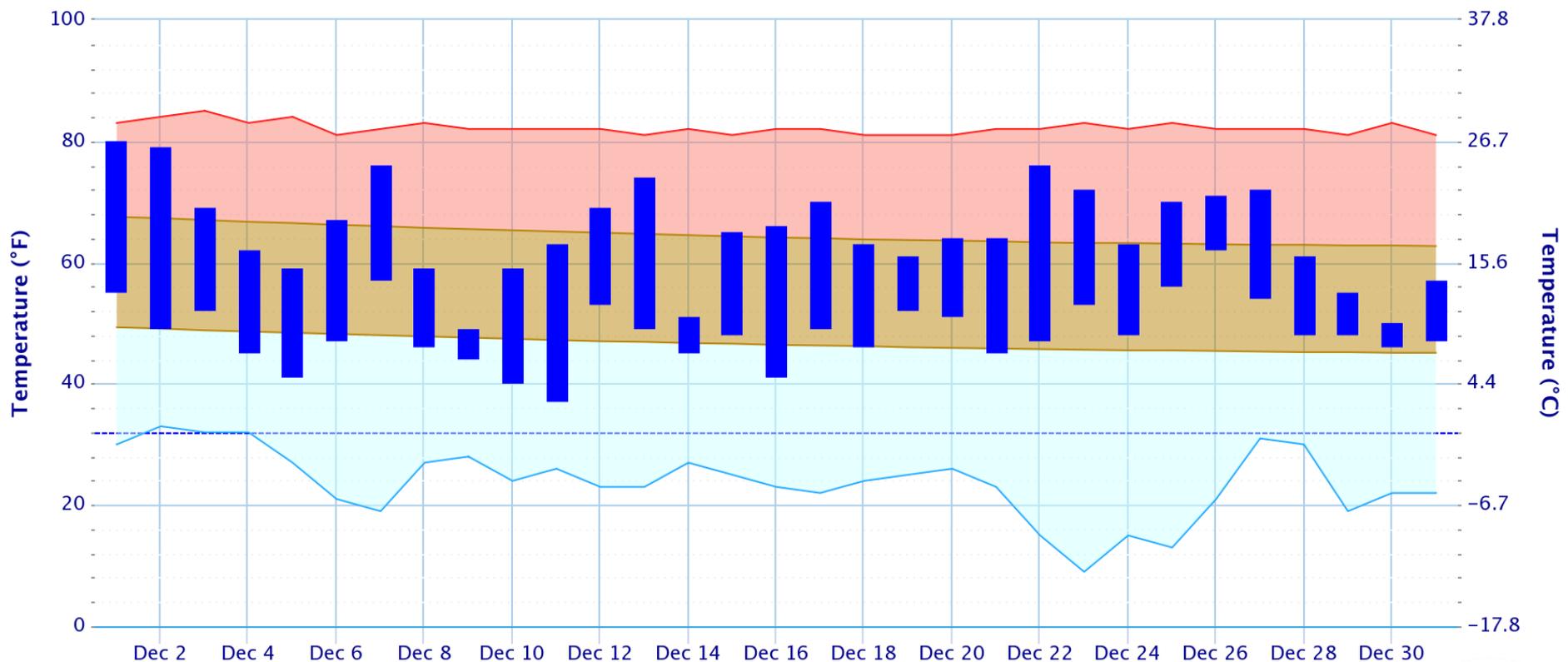
## Daily Temperature Data – Houston Area, TX (ThreadEx)

Period of Record – 1889-05-01 to 2019-01-03. 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 2019-01-03. Normals period: 1981-2010. Click and drag to zoom chart.



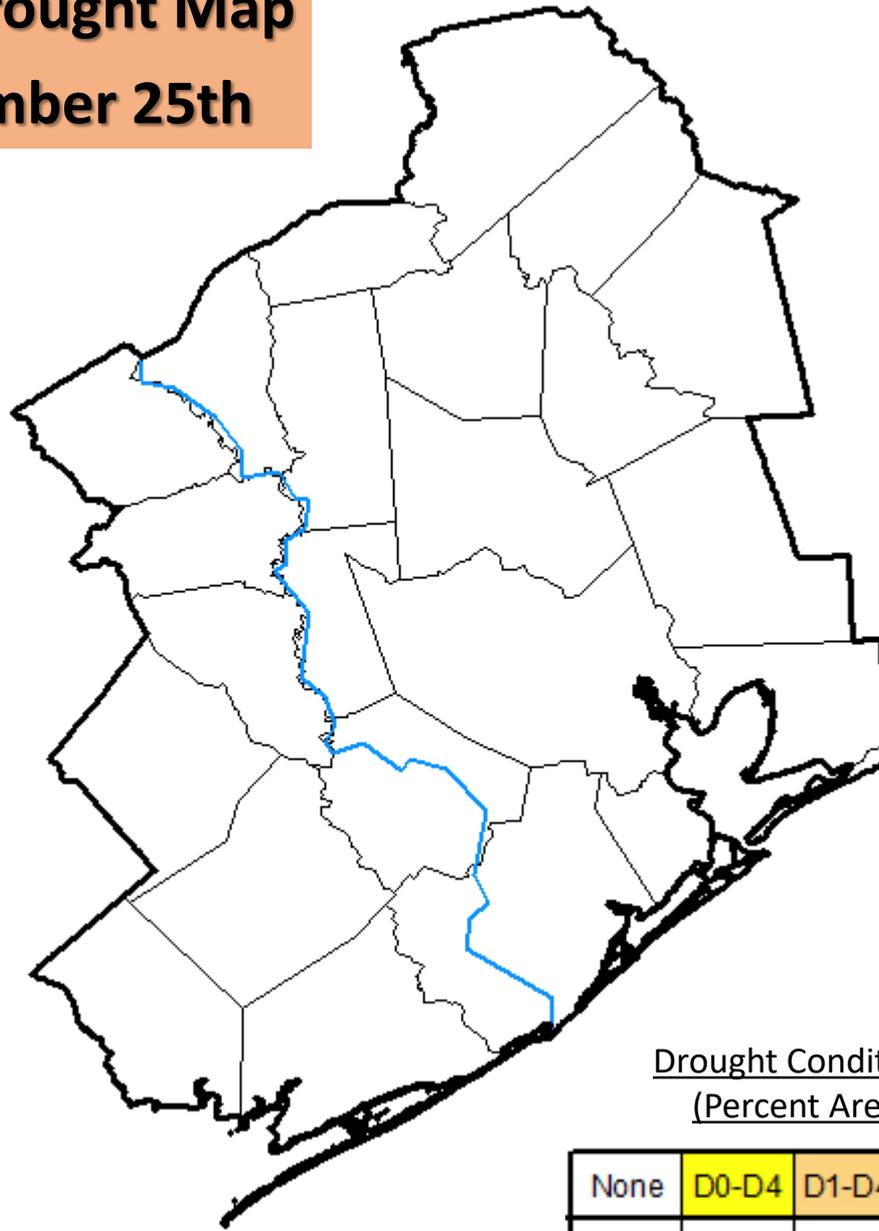
● Observed temperature range (2018)
 ● Normal temperature range
 — Record Max
 — Record Min



# Drought Conditions

The month of December ended with no locations in drought across SE TX.

**Most Recent Drought Map**  
**Posted: December 25th**



## Intensity:

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)

Drought Conditions  
(Percent Area)

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

None	D0-D4	D1-D4	D2-D4	D3-D4	D4
100.00	0.00	0.00	0.00	0.00	0.00



# December Daily Record Reports

*A total of 6 daily records were set across the four primary climate sites.*

Site	Date	Record Type	New Record	Previous Record
City of Galveston	Dec. 1 <sup>st</sup>	High Max Temp	80°	78° in 2012
City of Galveston	Dec. 7 <sup>th</sup>	Rainfall	2.03"	1.61" in 1927
Houston Hobby	Dec. 7 <sup>th</sup>	Rainfall	3.33"	2.22" in 1935
City of College Station	Dec. 7 <sup>th</sup>	Rainfall	4.01"	1.70" in 1931
Houston Hobby	Dec. 27 <sup>th</sup>	Rainfall	1.29"	1.08" in 1934
City of College Station	Dec. 27 <sup>th</sup>	Rainfall	3.04"	2.77" in 2015



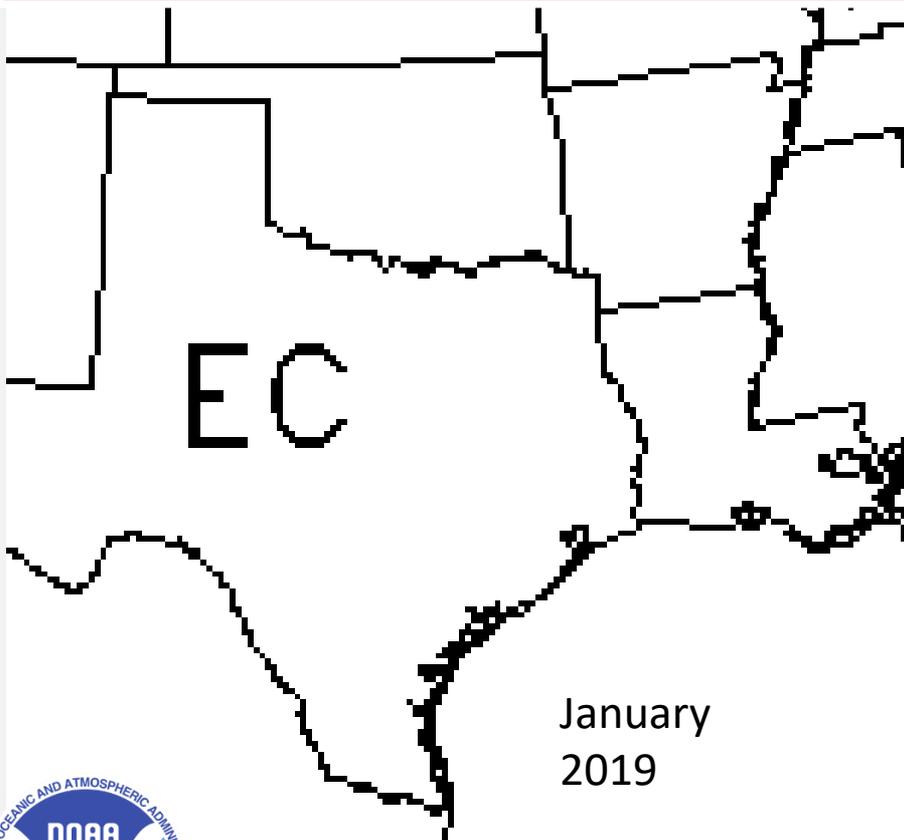
# January Outlook

For January, the latest outlook from the Climate Prediction Center (CPC) calls for a 33.3% chance of above normal temperatures, a 33.3% chance of near normal temperatures and a 33.3% chance of below normal temperatures across Southeast Texas. The precipitation outlook also calls for a 33.3% chance of above normal rainfalls, a 33.3% chance of near normal rainfall and a 33.3% chance of below normal rainfall. EC labeled across both images stands for "equal chances."

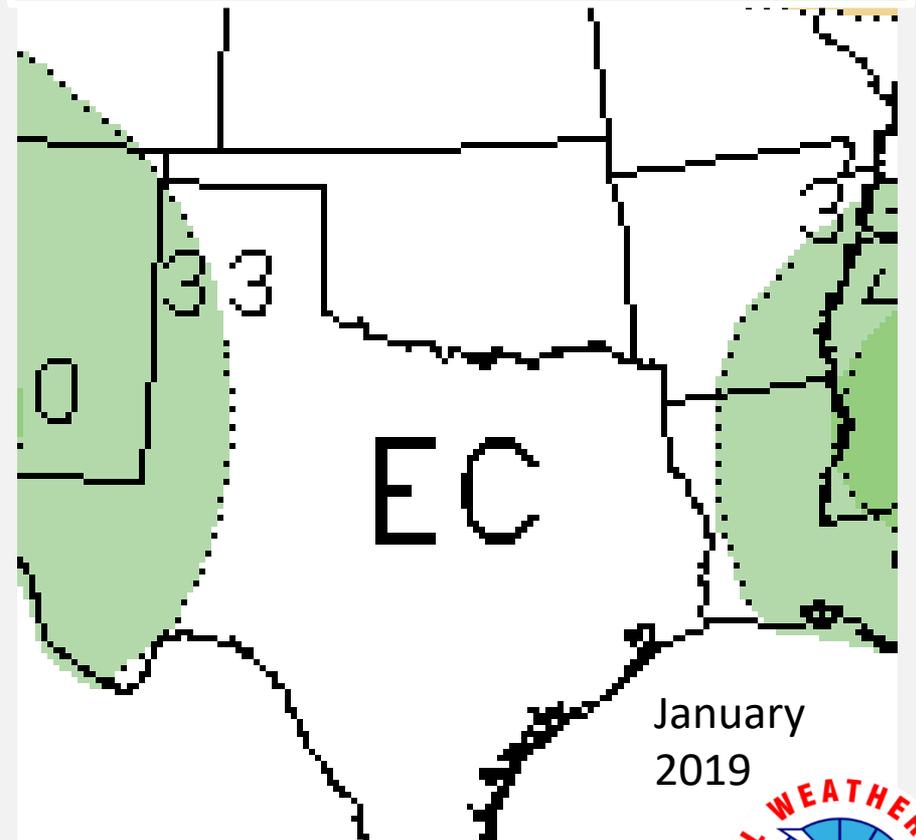
Site	Average Temp(°F)	Normal High (°F)	Normal Low (°F)
Galveston	55.2	61.8	48.6
Houston Hobby	54.1	63.0	45.1
City of Houston	53.1	62.9	43.2
College Station	51.1	61.0	41.2

Site	Normal Monthly Precipitation (in.)
Galveston (GLS)	4.20
Houston Hobby (HOU)	3.87
City of Houston (IAH)	3.38
College Station (CLL)	3.24

## Temperature Outlook



## 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.*

