

# NWS Houston, Texas February 2021 Regional Climate Summary

**Produced by Jimmy Fowler**

## ***...Record Cold during Mid-Month Winter Outbreak; Continued Dryness...***

*This past February will be one many of us remember for a long time. An arctic cold front that moved through the area Valentine's Day Weekend brought a prolonged period of extremely cold temperatures, multiple days of wintry precipitation, and a multitude of impacts to the region. There were a total of 30 daily records set this month with most of them being either daily snowfall records or low maximum or minimum temperatures. Although, the region quickly warmed up in the week following the cold air outbreak – in fact, Houston-Hobby experienced a record high minimum temperature just six days after a record low minimum temperature. The region also continued to be unseasonably dry expanding the drought conditions across the western and northern portions of the region.*

Photo Credit:  
Marcie Gray

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# By the Numbers: February 2021



Location (records started)	Average Temp	Ranking	Total Rainfall	Ranking
City of Houston, TX (1888)	51.7°F	20 <sup>th</sup> Coolest	1.66"	34 <sup>st</sup> Driest
Houston Hobby, TX (1930)	53.7°F	19 <sup>th</sup> Coolest	1.90"	28 <sup>th</sup> Driest
City of Galveston, TX (1871)	53.9°F	35 <sup>th</sup> Coolest	1.07"	28 <sup>th</sup> Driest
City of College Station, TX (1882)	48.2°F	12 <sup>th</sup> Coolest	1.85"	46 <sup>th</sup> Driest
Conroe, TX (1997)	49.3°F	3 <sup>rd</sup> Coolest	1.66"	11 <sup>th</sup> Driest
Huntsville, TX (1997)	48.7°F	2 <sup>nd</sup> Coolest	2.02"	10 <sup>th</sup> Driest
Sugar Land, TX (2000)	53.7°F	5 <sup>th</sup> Coolest	1.86"	11 <sup>th</sup> Driest
Palacios, TX (1943)	52.8°F	11 <sup>th</sup> Coolest	0.40"	7 <sup>th</sup> Driest
Clover Field (Pearland), TX (1997)	53.2°F	3 <sup>rd</sup> Coolest	0.83"	5 <sup>th</sup> Driest
David Wayne Hooks (Tomball), TX (1998)	47.1°F	3 <sup>rd</sup> Coolest	1.64"	10 <sup>th</sup> Driest
Angleton, TX (1998)	53.0°F	4 <sup>th</sup> Coolest	0.62"	5 <sup>th</sup> Driest
League City, TX (1990)	52.8°F	4 <sup>th</sup> Coolest	1.38"	8 <sup>th</sup> Driest



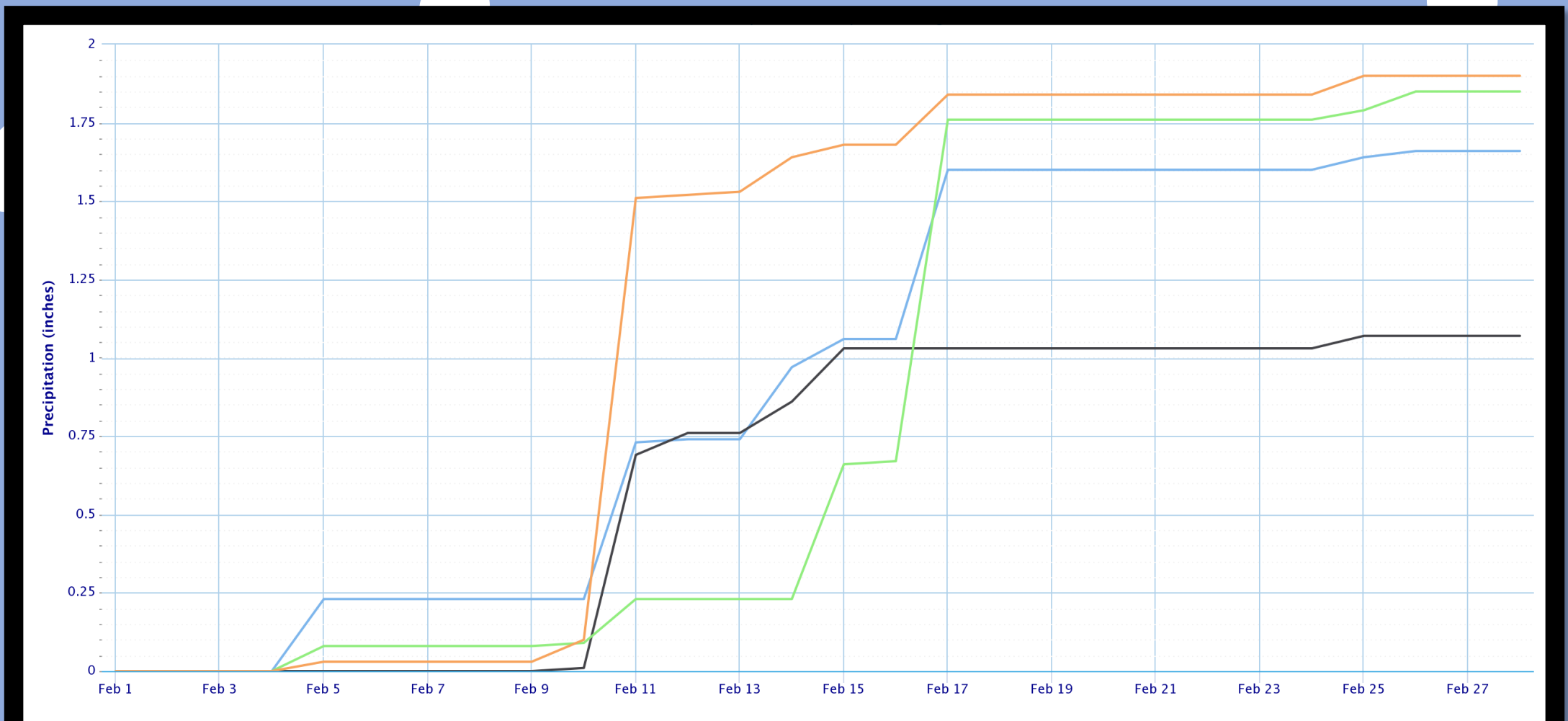


# Precipitation

Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	1.07	<b>-1.50</b>	3	0.68	11 <sup>th</sup>
Houston Hobby (HOU)	1.90	<b>-1.31</b>	1	1.41	11 <sup>th</sup>
City of Houston (IAH)	1.66	<b>-1.54</b>	2	0.54	17 <sup>th</sup>
College Station (CLL)	1.85	<b>-1.00</b>	1	1.09	17 <sup>th</sup>

*Unseasonably dry conditions continued into February with most of the region experiencing around one to two inches below normal. There were multiple days of wintry precipitation experienced in the middle of the month – College Station saw the highest amount of snow with a total of three inches, but experienced ice or snow for a total of five days. Accumulating snow was seen at Houston, Hobby, and Galveston on February 15<sup>th</sup>.*

# Precipitation Accumulation Graph



City of Houston

City of Galveston

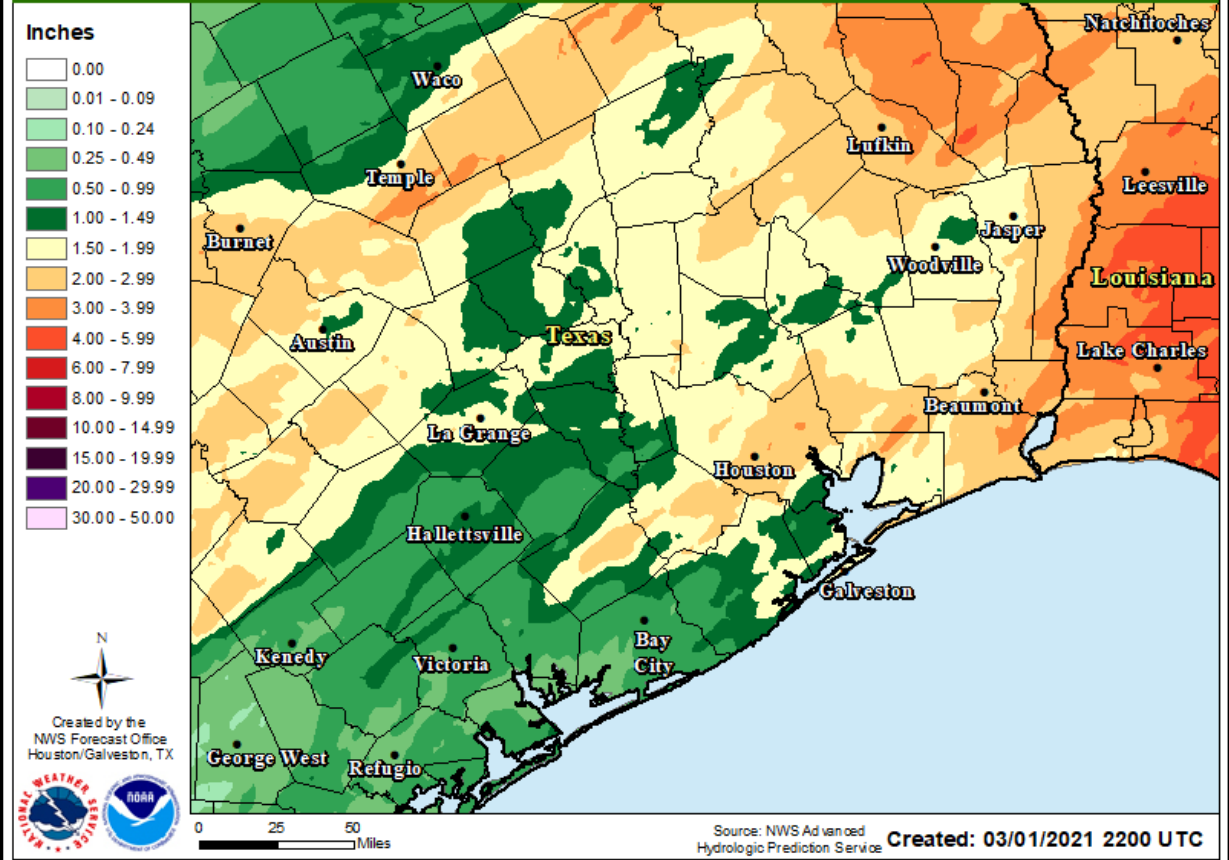
City of College Station

Houston-Hobby

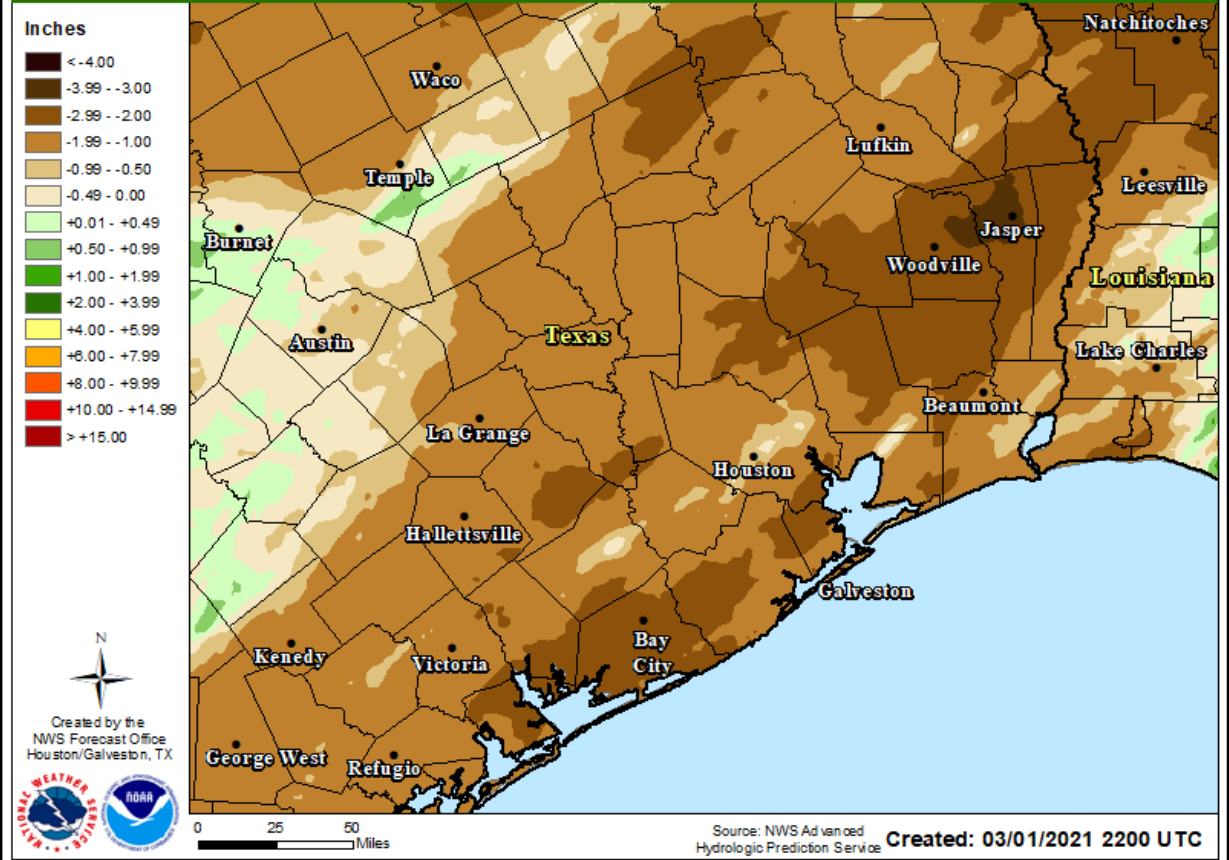


# Precipitation Maps

### Total Monthly Precipitation - February 2021



### Total Monthly Precipitation Departure From Normal - February 2021



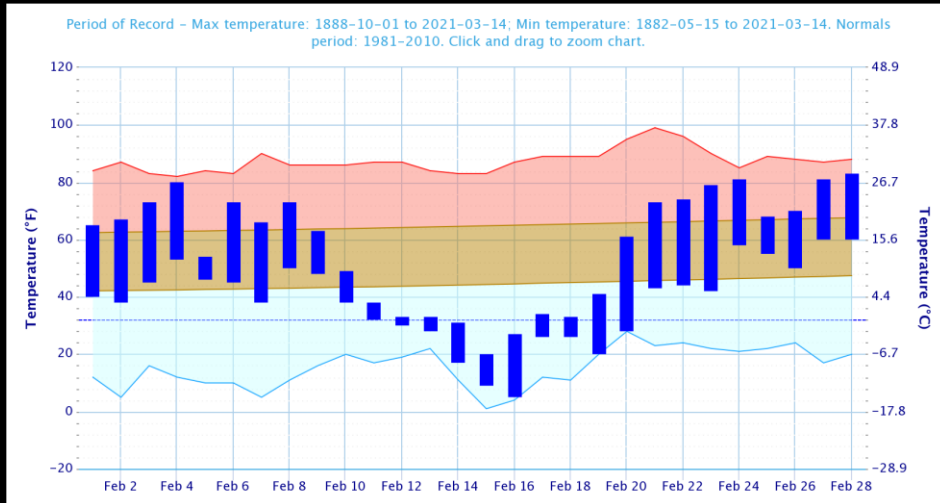
# Temperature

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)	60.1	47.7	53.9	57.6	-3.7	74 on the 10 <sup>th</sup> & 28 <sup>th</sup>	20 on the 16 <sup>th</sup>
Houston Hobby (HOU)	62.2	45.2	53.7	57.3	-3.6	82 on the 28 <sup>th</sup>	15 on the 16 <sup>th</sup>
City of Houston (IAH)	61.2	42.3	51.7	56.4	-4.7	82 on the 28 <sup>th</sup>	13 on the 16 <sup>th</sup>
College Station (CLL)	58.0	38.4	48.2	54.6	-6.4	83 on the 28 <sup>th</sup>	5 on the 16 <sup>th</sup>

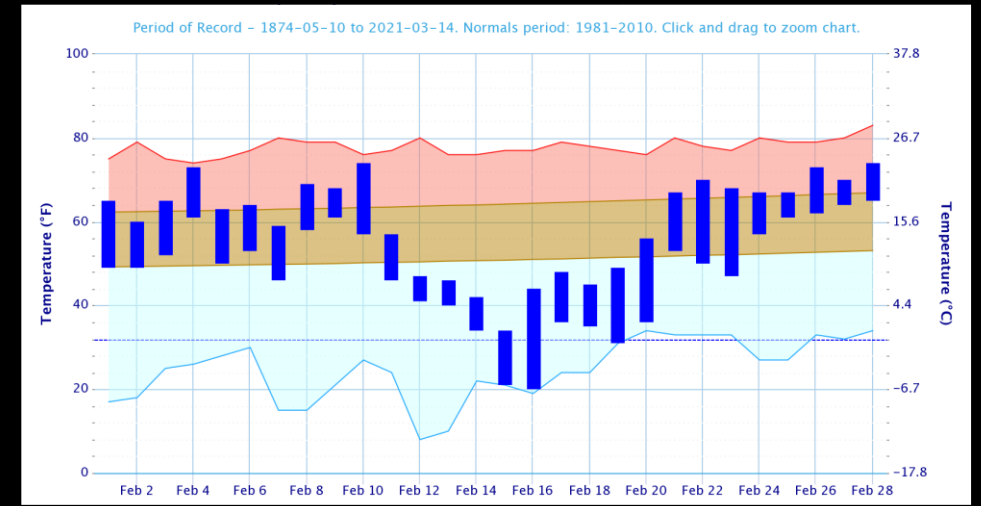
*The arctic cold front ushered in a prolonged period of extremely cold air between the 14<sup>th</sup> and 20<sup>th</sup> with multiple record low minimum and maximum temperatures experienced across the area. While there was some warmer conditions at the end of the month, most of the area ended the month between three and six degrees below normal.*

# Temperature Charts

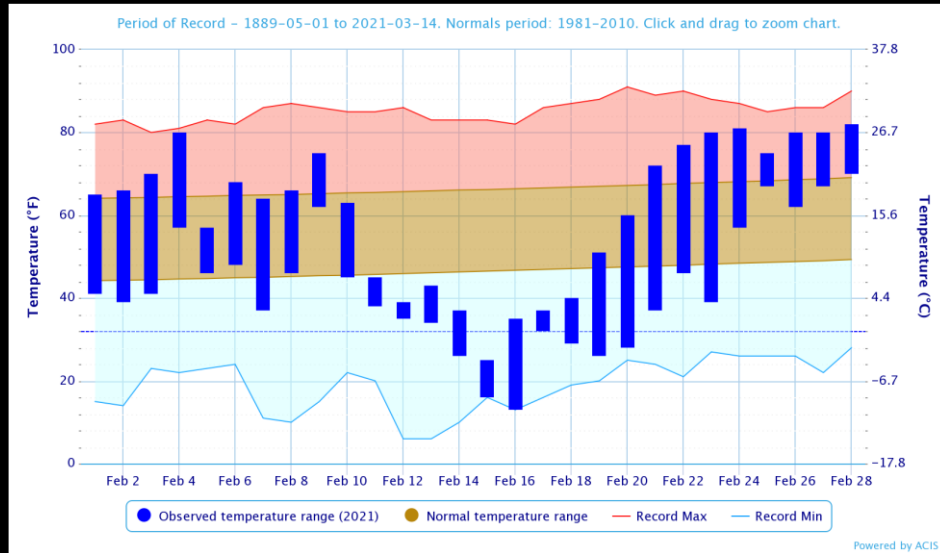
### City of College Station



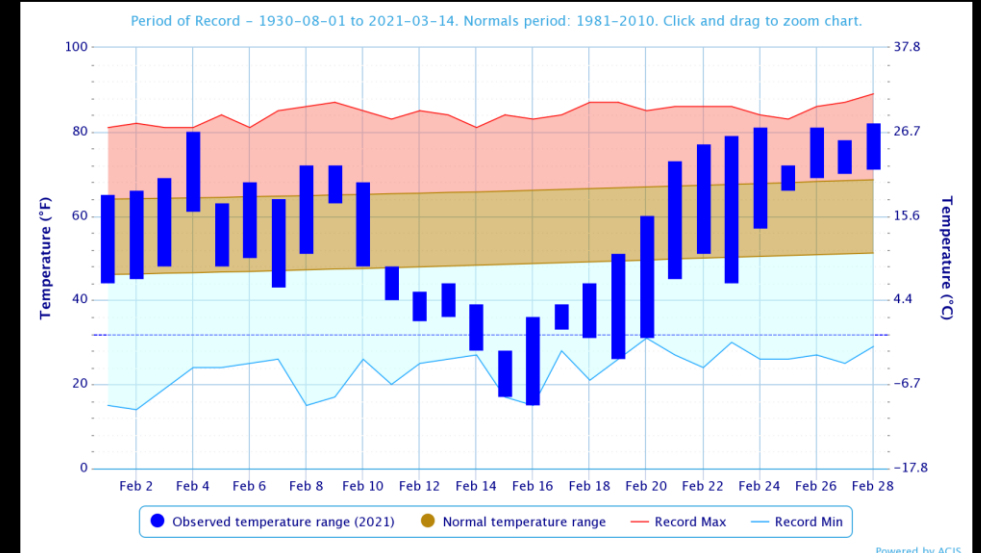
### City of Galveston



### City of Houston



### Houston-Hobby





# Daily Record Reports

Site	Date	Record Type	New Record	Previous Record
City of Galveston	February 15 <sup>th</sup>	Low Minimum Temp	21°	24° in 1909
City of Galveston	February 19 <sup>th</sup>	Low Minimum Temp	31°	32° in 1978
Houston-Hobby	February 13 <sup>th</sup>	Low Maximum Temp	44°	45° in 2004
Houston-Hobby	February 14 <sup>th</sup>	Daily Snowfall	Trace	No Snowfall on Record
Houston-Hobby	February 15 <sup>th</sup>	Low Maximum Temp	28°	35° in 1951
Houston-Hobby	February 15 <sup>th</sup>	Low Minimum Temp	17°	31° in 1951
Houston-Hobby	February 15 <sup>th</sup>	Daily Snowfall	0.5"	No Snowfall on Record
Houston-Hobby	February 16 <sup>th</sup>	Low Maximum Temp	36°	50° in 2007
Houston-Hobby	February 16 <sup>th</sup>	Low Minimum Temp	15°	28° in 1951
Houston-Hobby	February 19 <sup>th</sup>	Low Minimum Temp	26° - T	26° in 1978

There were 30 daily records set during the month of February.



### Key

High Max

Low Max

Precip

Snow

High Min

Low Min

# Daily Record Reports

Site	Date	Record Type	New Record	Previous Record
Houston-Hobby	February 20 <sup>th</sup>	Low Minimum Temp	31°	32° in 1978
Houston-Hobby	February 26 <sup>th</sup>	High Minimum Temp	69° - T	69° in 1944
Houston-Hobby	February 27 <sup>th</sup>	High Minimum Temp	70°	69° in 2017
Houston-Hobby	February 28 <sup>th</sup>	High Minimum Temp	71°	45° in 2017
City of Houston	February 15 <sup>th</sup>	Low Maximum Temp	25°	32° on 1909
City of Houston	February 15 <sup>th</sup>	Low Minimum Temp	16°	18° in 1905
City of Houston	February 15 <sup>th</sup>	Daily Snowfall	1.0"	No Snowfall on Record
City of Houston	February 16 <sup>th</sup>	Low Maximum Temp	35°	36° in 1895
City of Houston	February 16 <sup>th</sup>	Low Minimum Temp	13° - T	13° in 1895
City of College Station	February 12 <sup>th</sup>	Low Maximum Temp	33°	34° in 1895

There were 30 daily records set during the month of February.



### Key

High Max

Low Max

Precip

Snow

High Min

Low Min

# Daily Record Reports

Site	Date	Record Type	New Record	Previous Record
City of College Station	February 14 <sup>th</sup>	Low Maximum Temp	31° - T	31° in 1895
City of College Station	February 14 <sup>th</sup>	Daily Snowfall	Trace	No Snowfall on Record
City of College Station	February 15 <sup>th</sup>	Daily Snowfall	3.0	No Snowfall on Record
City of College Station	February 16 <sup>th</sup>	Low Maximum Temp	71°	45° in 2017
City of College Station	February 16 <sup>th</sup>	Daily Snowfall	Trace	No Snowfall on Record
City of College Station	February 17 <sup>th</sup>	Daily Snowfall	Trace	No Snowfall on Record
City of College Station	February 18 <sup>th</sup>	Low Maximum Temp	25°	32° on 1909
City of College Station	February 18 <sup>th</sup>	Daily Snowfall	Trace	No Snowfall on Record
City of College Station	February 19 <sup>th</sup>	Low Minimum Temp	20°	22° in 1978
City of College Station	February 20 <sup>th</sup>	Low Minimum Temp	28° - T	28° in 1929

There were 30 daily records set during the month of February.



### Key

High Max

Low Max

Precip

Snow

High Min

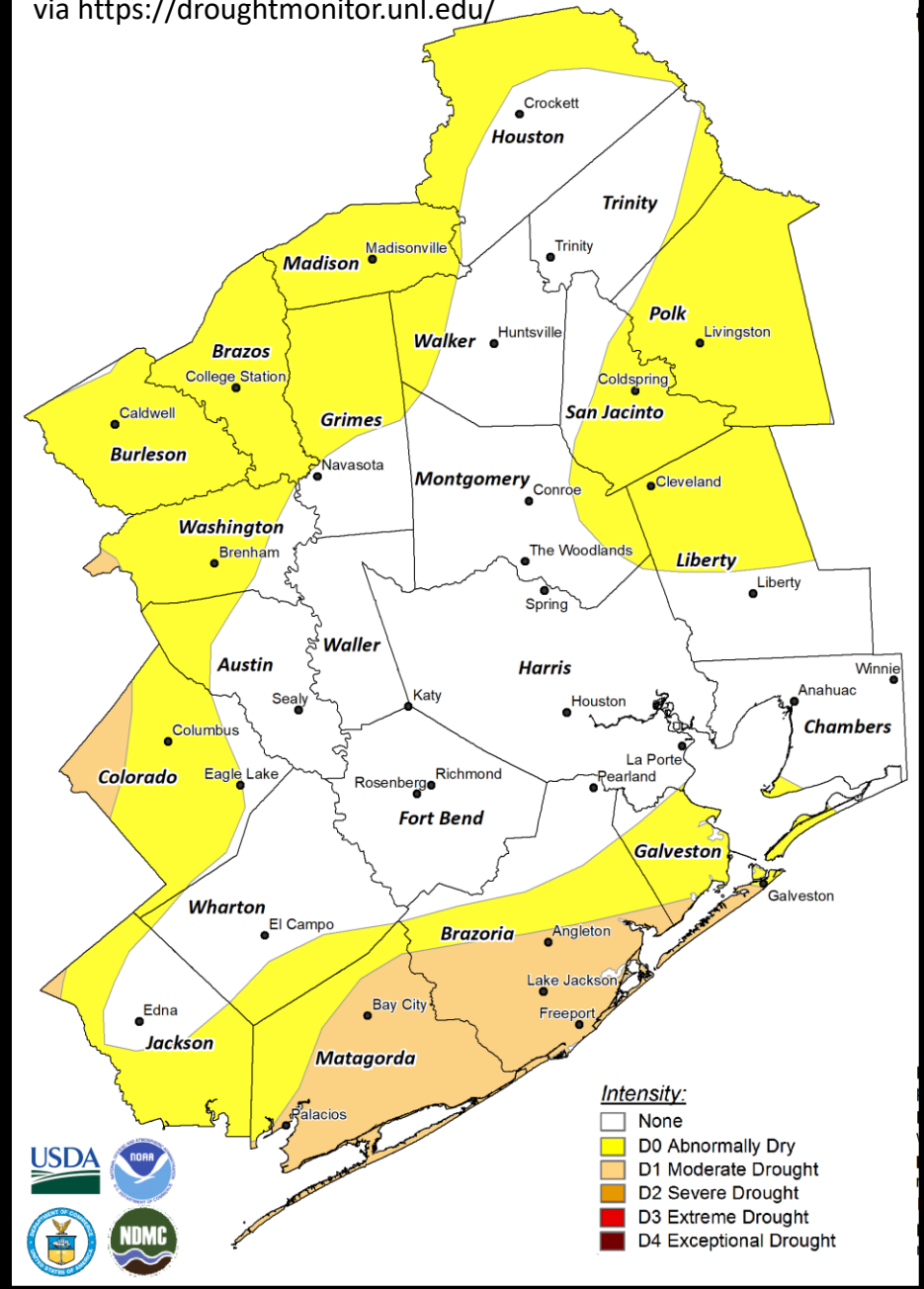
Low Min

# Drought Monitor

## As of February 23<sup>rd</sup>

*The continued dryer than normal conditions expanded the drought across the coastal, western, and northern portions of the region during the month of February. By the end of February, there was D1-Moderate Drought conditions experienced across western Washington, Colorado, and Jackson counties and down along coastal Galveston, Brazoria, and Matagorda counties. Drought conditions are expected to continue and expand during the month of March.*

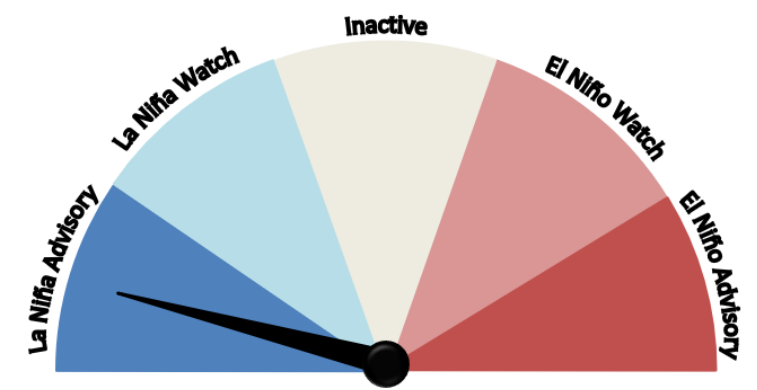
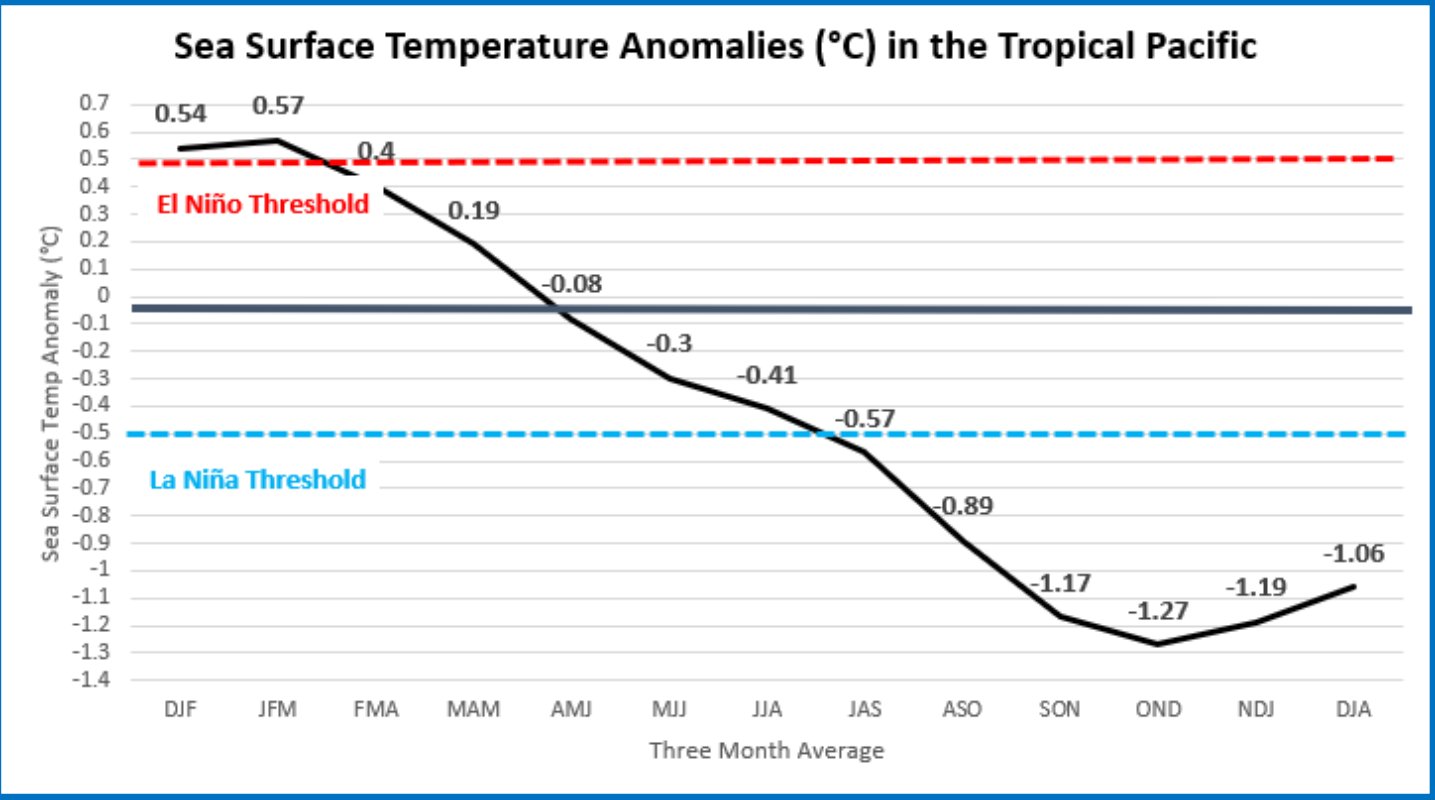
via <https://droughtmonitor.unl.edu/>





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

- **La Niña** conditions are present
- 60% chance of ENSO-Neutral conditions forming in the Spring



**El Niño or La Niña Watch:** Issued when conditions are favorable for the development of El Niño or La Niña conditions within the next six months.

**El Niño or La Niña Advisory:** Issued when El Niño or La Niña conditions are observed and expected to continue.



# Winter Outbreak

The Winter Outbreak that occurred on Valentine's Week 2021 brought not only snow, sleet, and freezing rain to Southeast Texas, but also extreme cold temperatures that lasted for several days. This was one of the most impactful winter events in recent history that brought multiday road closures, power outages, loss of heat, broken pipes, and other societal impacts for the region. While the damage is still being assessed, this will likely go down as the first billion dollar disaster of 2021 globally, and potentially the most costly weather disaster for the state of Texas in history, surpassing even Hurricane Harvey from 2017.

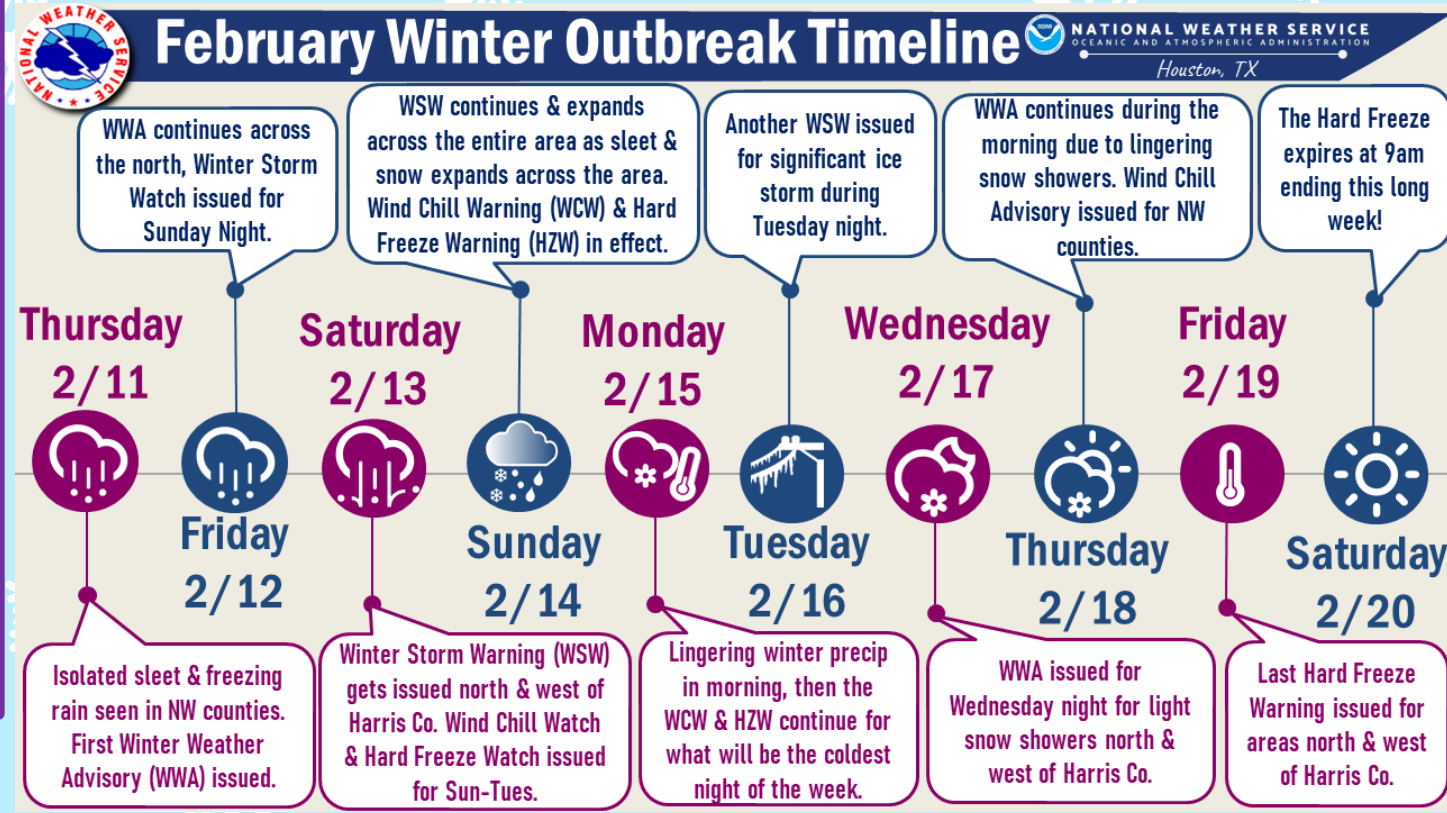
Visit [www.weather.gov/hgx/2021ValentineStorm](http://www.weather.gov/hgx/2021ValentineStorm) for more information.



Frozen Fountain  
via Brett Coomer – Houston Chronicle



Snow Covered Beach in Galveston  
via Michael Garske



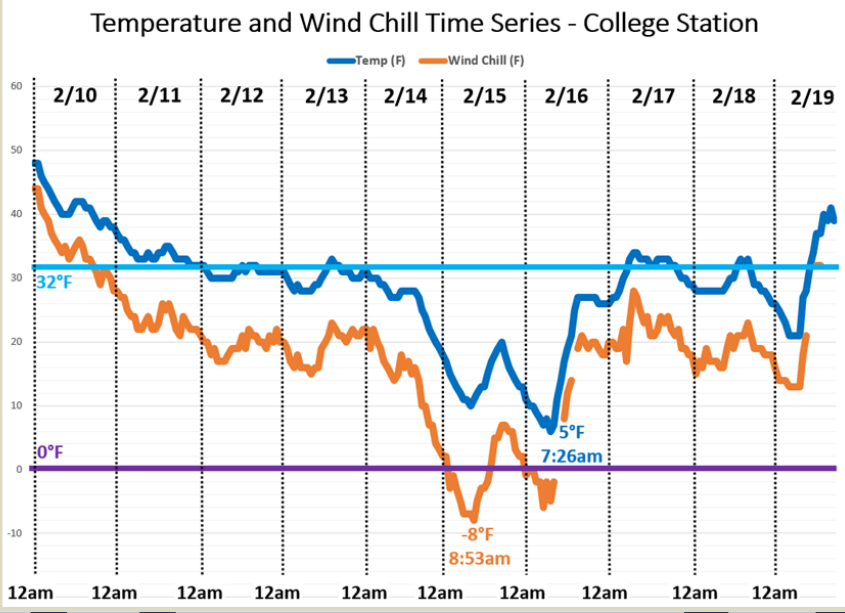
# Frigid Temperatures

## College Station

**Coldest Temperature:**  
5°F at 7:26am on the 16<sup>th</sup>

**Coldest Wind Chill:**  
-8°F at 8:53am on the 15<sup>th</sup>

**Longest Stretch of Freezing Temperatures:**  
86 consecutive hours from 3:53pm on 2/13 to 5:53am on 2/17

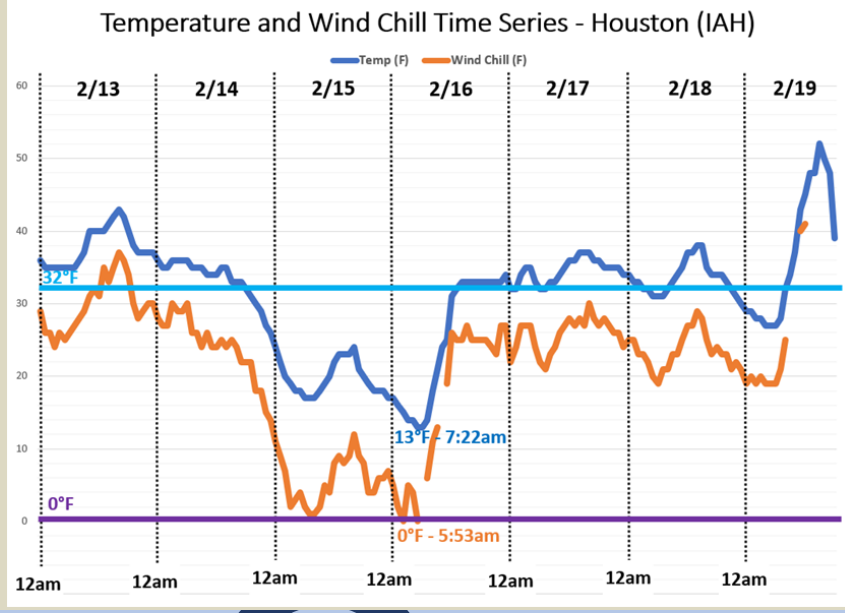


## Houston

**Coldest Temperature:**  
13°F at 7:22am on the 16<sup>th</sup>

**Coldest Wind Chill:**  
0°F at 5:53am on the 16<sup>th</sup>

**Longest Stretch of Freezing Temperatures:**  
44 consecutive hours from 6:53pm on 2/14 to 1:53pm on 2/16

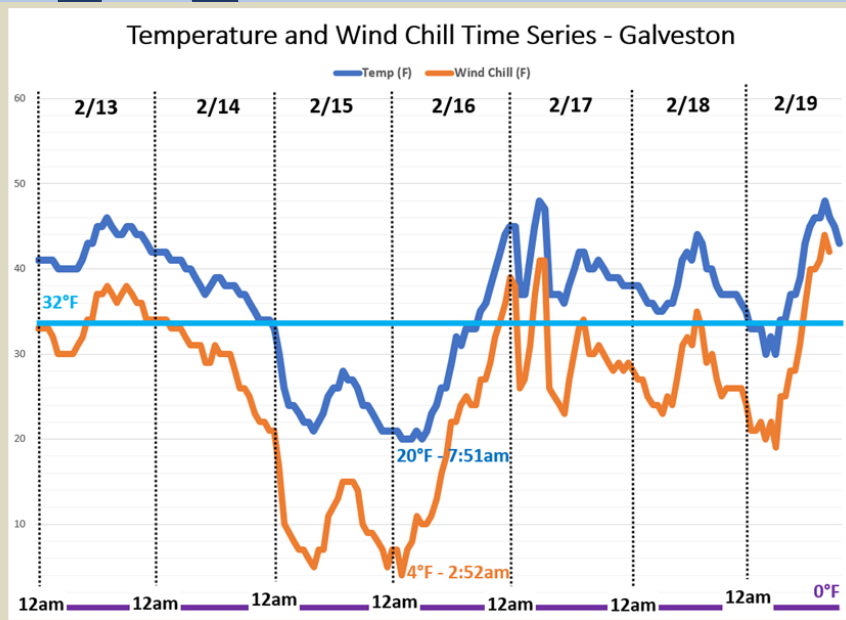


## Galveston

**Coldest Temperature:**  
20°F at 7:51am on the 16<sup>th</sup>

**Coldest Wind Chill:**  
4°F at 2:52am on the 16<sup>th</sup>

**Longest Stretch of Freezing Temperatures:**  
37 consecutive hours from 1:52am on 2/15 to 2:52pm on 2/16

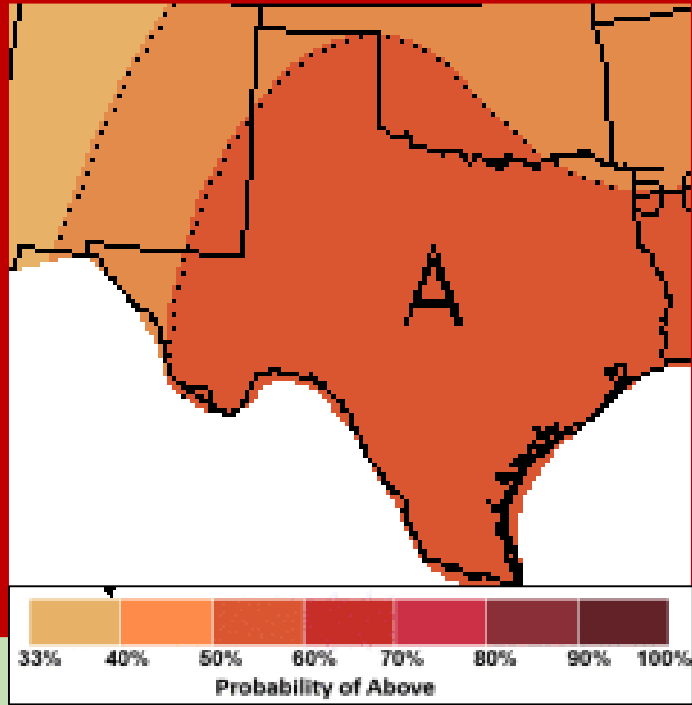


# March Outlook

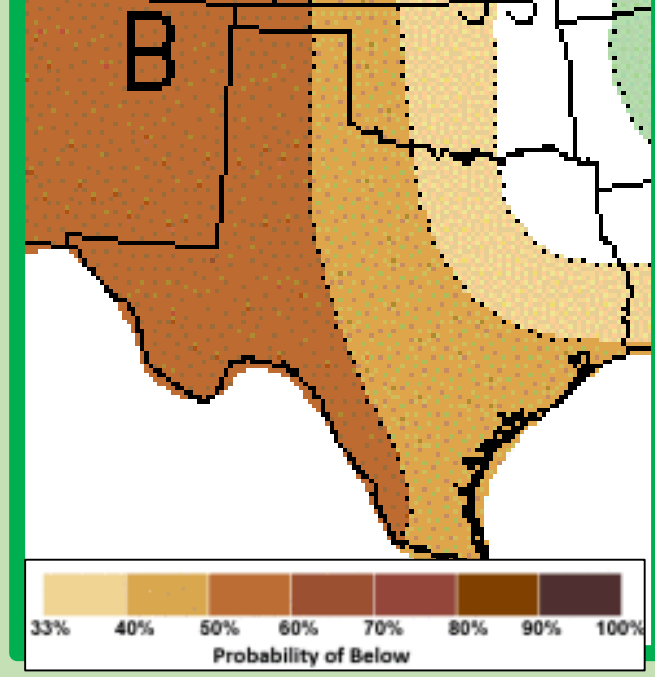
Location	Average Temp(°F)	Normal High (°F)	Normal Low (°F)
Galveston	63.4	70.2	56.6
Houston Hobby	63.3	72.4	54.3
City of Houston	62.7	73.0	52.5
College Station	61.4	71.7	51.0

Location	Normal Monthly Precipitation (in.)
Galveston	3.16
Houston Hobby	3.20
City of Houston	3.41
College Station	3.17

## Temperature Outlook



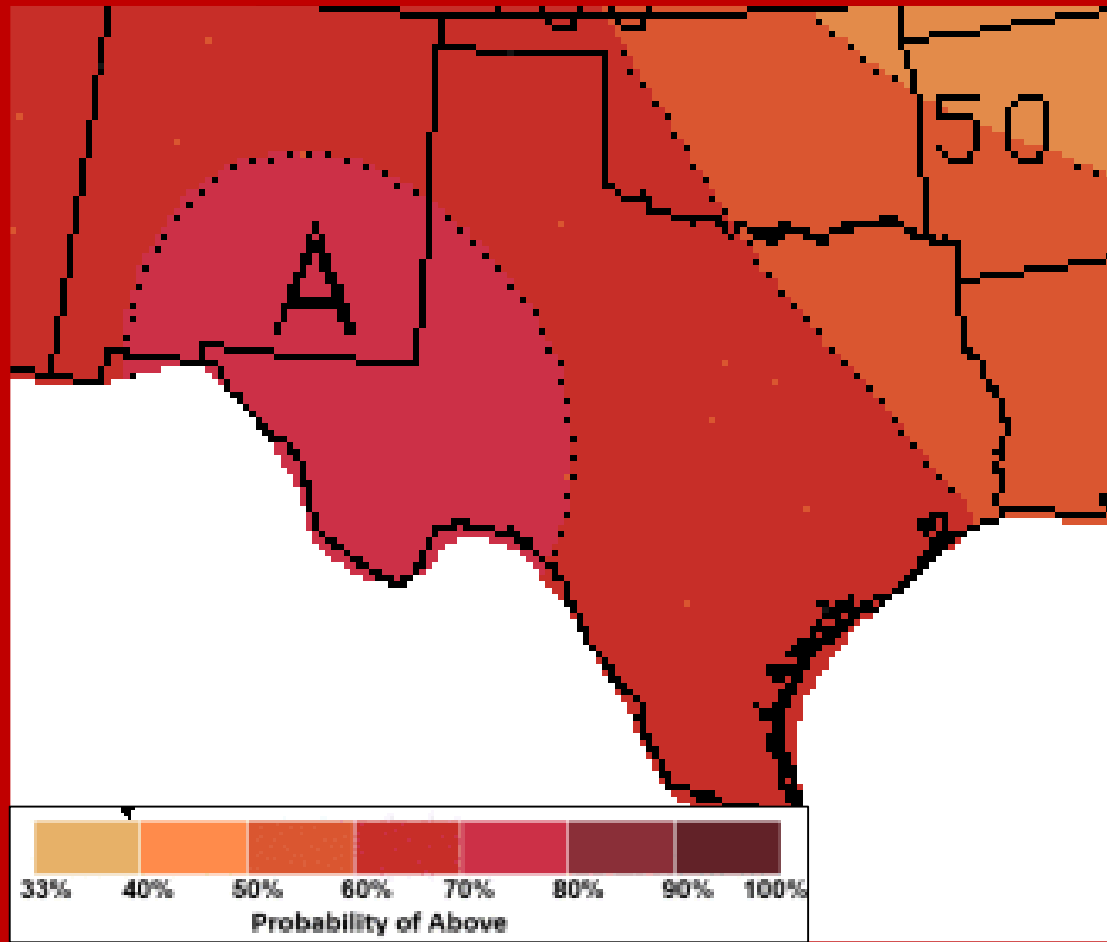
## Precipitation Outlook



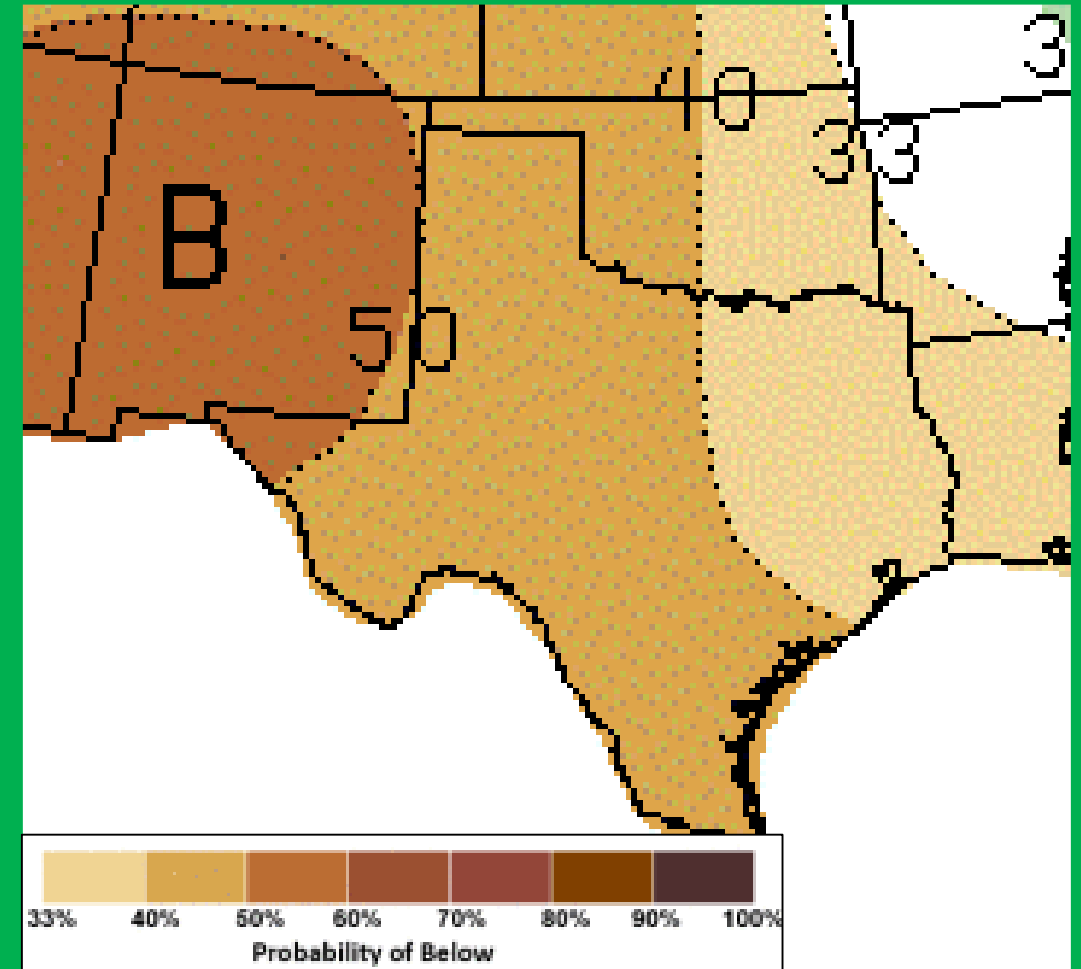


# Spring Outlook (March – May)

## Temperature Outlook

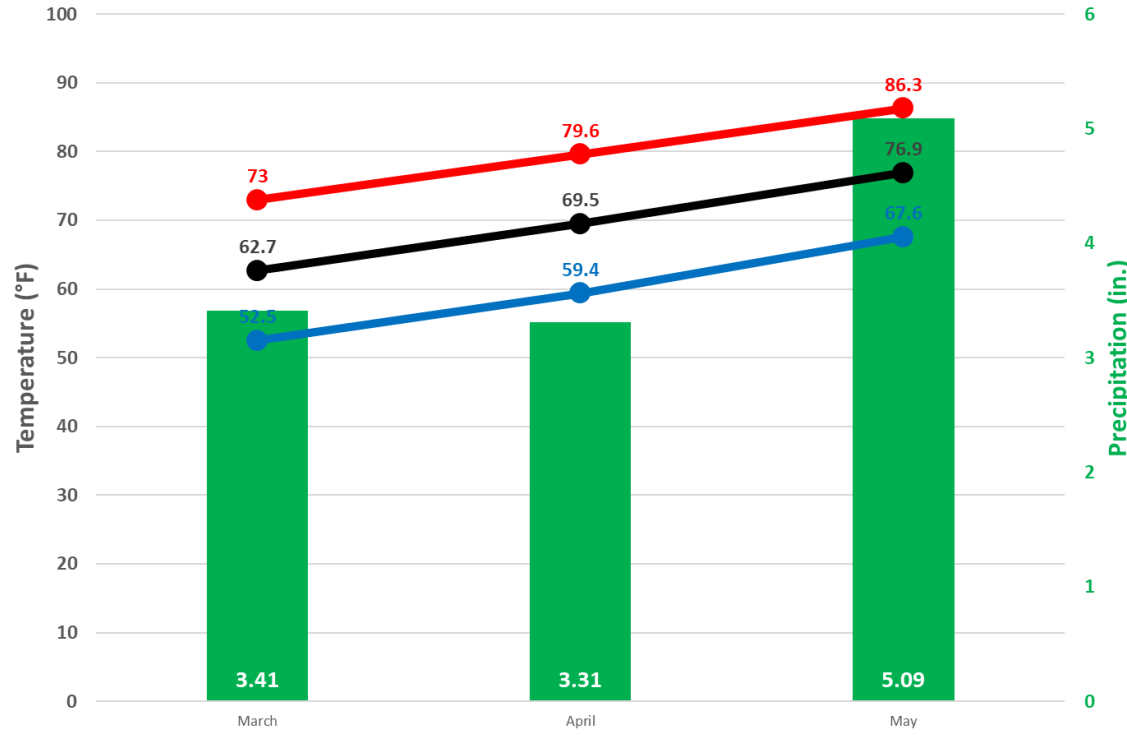


## Precipitation Outlook

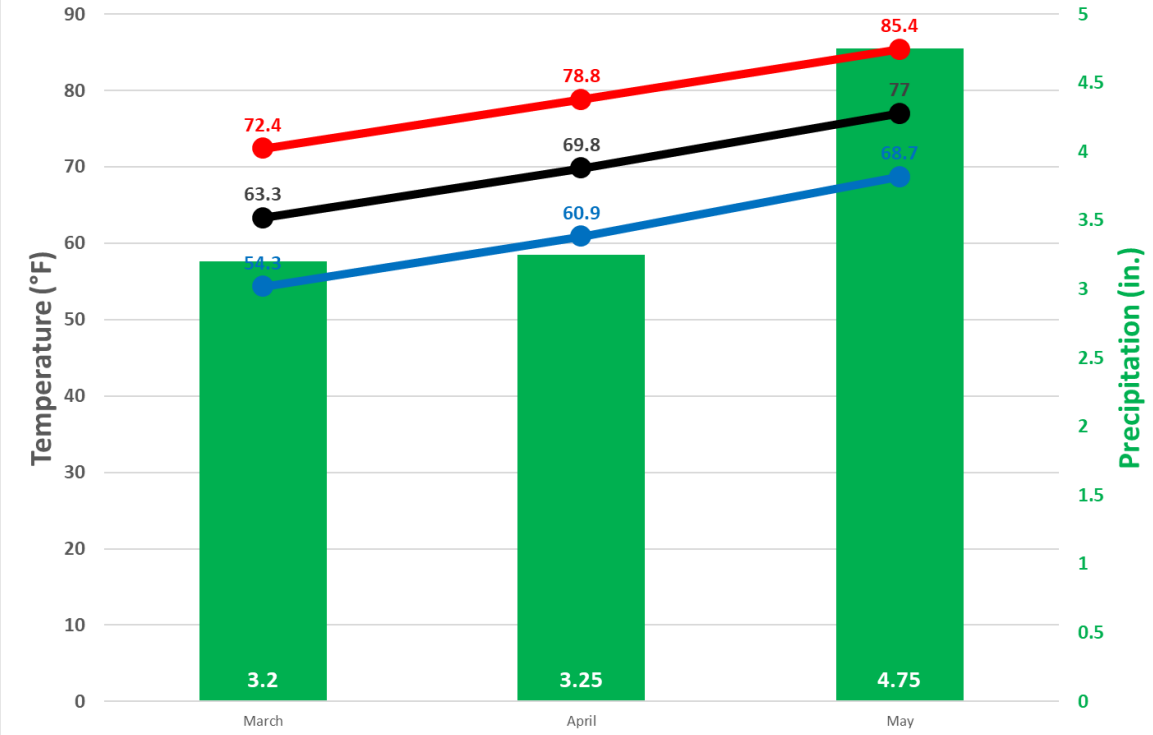


# Spring Climatology (March – May)

### City of Houston: Spring Climatology



### Houston-Hobby: Spring Climatology



### Legend

Green Bar: Average Precipitation

Red Line: Average Max Temperature

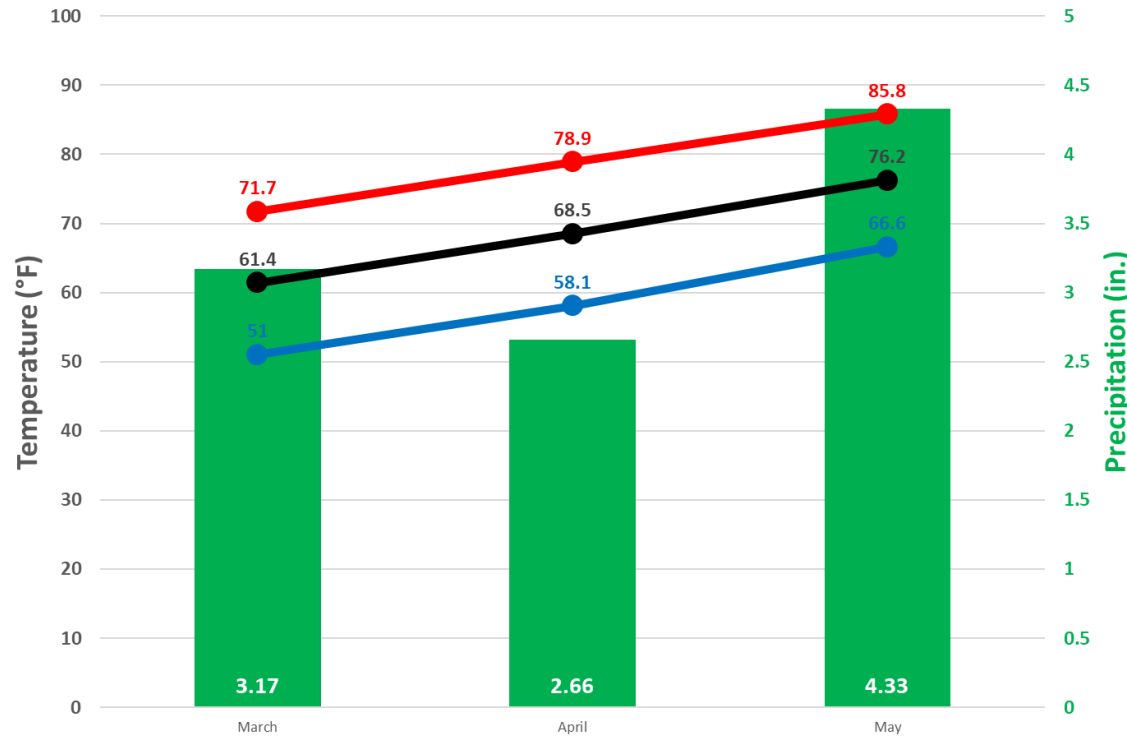
Black Line: Average Temperature

Blue Line: Average Min Temperature

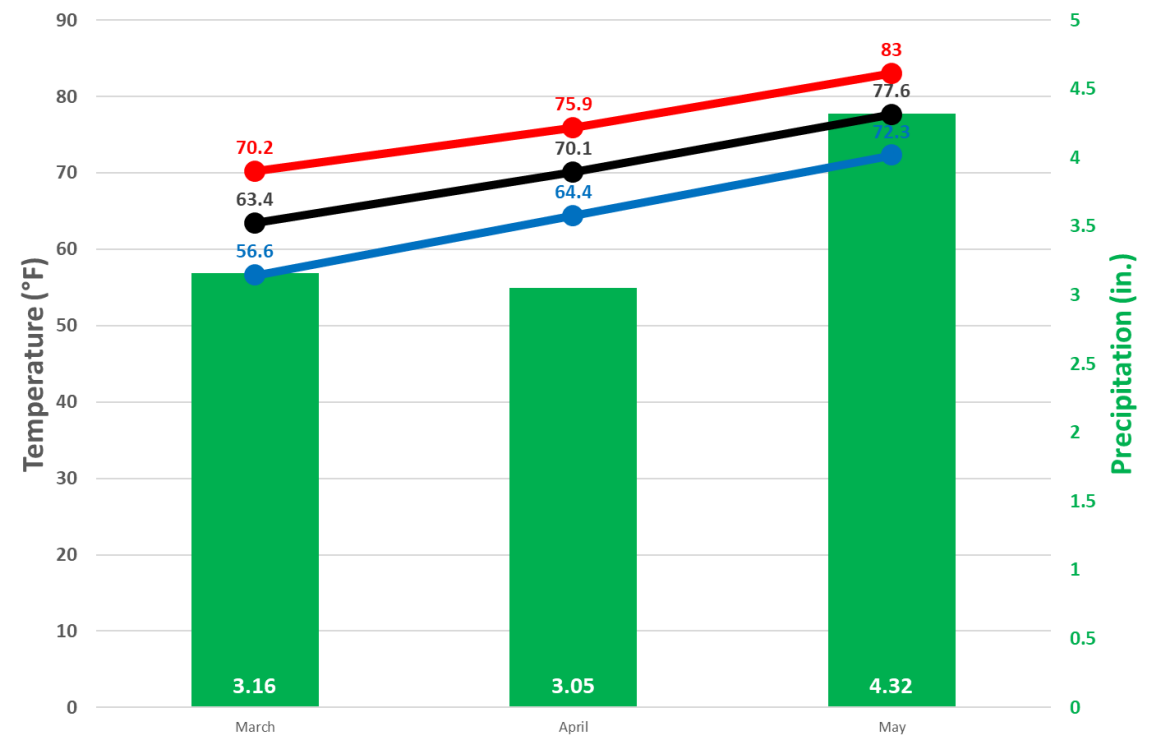


# Spring Climatology (March – May)

### City of College Station: Spring Climatology



### City of Galveston: Spring Climatology



## Legend

Green Bar: Average Precipitation

Red Line: Average Max Temperature

Black Line: Average Temperature

Blue Line: Average Min Temperature



# 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.*

