

NWS Houston, Texas September 2021 Regional Climate Summary

Produced by Jimmy Fowler

...Hurricane Nicolas Brought Heavy Coastal Rain; First Cold Fronts of the Season Arrive...

September was truly a transition month with a tropical system, Hurricane Nicolas, making landfall in the region in the first half of the month then our first significant front of the season arrives at the end of the month. Nicolas brought heavy rain, gusty winds, and coastal flooding to parts of the region. Most of Nicholas's rain fell along and south of I-10. Because of this, D0-Abnormally Dry conditions started to spread into the northern third of the area. The fall season's first significant cold front arrived on the 22nd bringing overnight lows into the 50-60s for most of the area.

Photo Credit:
NWS HGX Meteorologist
Jimmy Fowler

Table of Contents

Page Number	Page Title
1	Cover
2	Table of Contents
3	By the Numbers
4	Precipitation Summary
5	Precipitation Graph
6	Precipitation Imagery
7	Temperature Summary
8	Temperature Charts
9	Daily Record Reports
10	Drought Monitor
11	Hurricane Nicolas
12	Climate Primary Site History



By the Numbers: **September 2021**



Location (records started)	Average Temp	Ranking	Total Rainfall	Ranking
City of Houston, TX (1888)	79.5°F	66 th Warmest	8.73"	12 th Wettest
Houston Hobby, TX (1930)	81.4°F	14 th Warmest	7.61"	20 th Wettest
City of Galveston, TX (1871)	83.0°F	16 th Warmest	6.40"	53 rd Wettest
City of College Station, TX (1882)	81.4°F	27 th Warmest	2.75"	64 th Wettest
Conroe, TX (1997)	76.8°F	4 th Coolest	3.84"	10 th Wettest
Huntsville, TX (1997)	79.4°F	13 th Coolest	2.20"	16 th Wettest
Sugar Land, TX (2000)	81.0°F	14 th Coolest	3.86"	9 th Wettest
Palacios, TX (1943)	80.4°F	32 nd Warmest	2.37"	21 st Driest
Clover Field (Pearland), TX (1997)	80.0°F	8 th Coolest	8.32"	5 th Wettest
David Wayne Hooks (Tomball), TX (1998)	78.9°F	8 th Coolest	3.55"	11 th Wettest
Angleton, TX (1998)	78.6°F	7 th Coolest	5.63"	11 th Wettest
League City, TX (1990)	79.5°F	14 th Warmest	11.99"	6 th Wettest



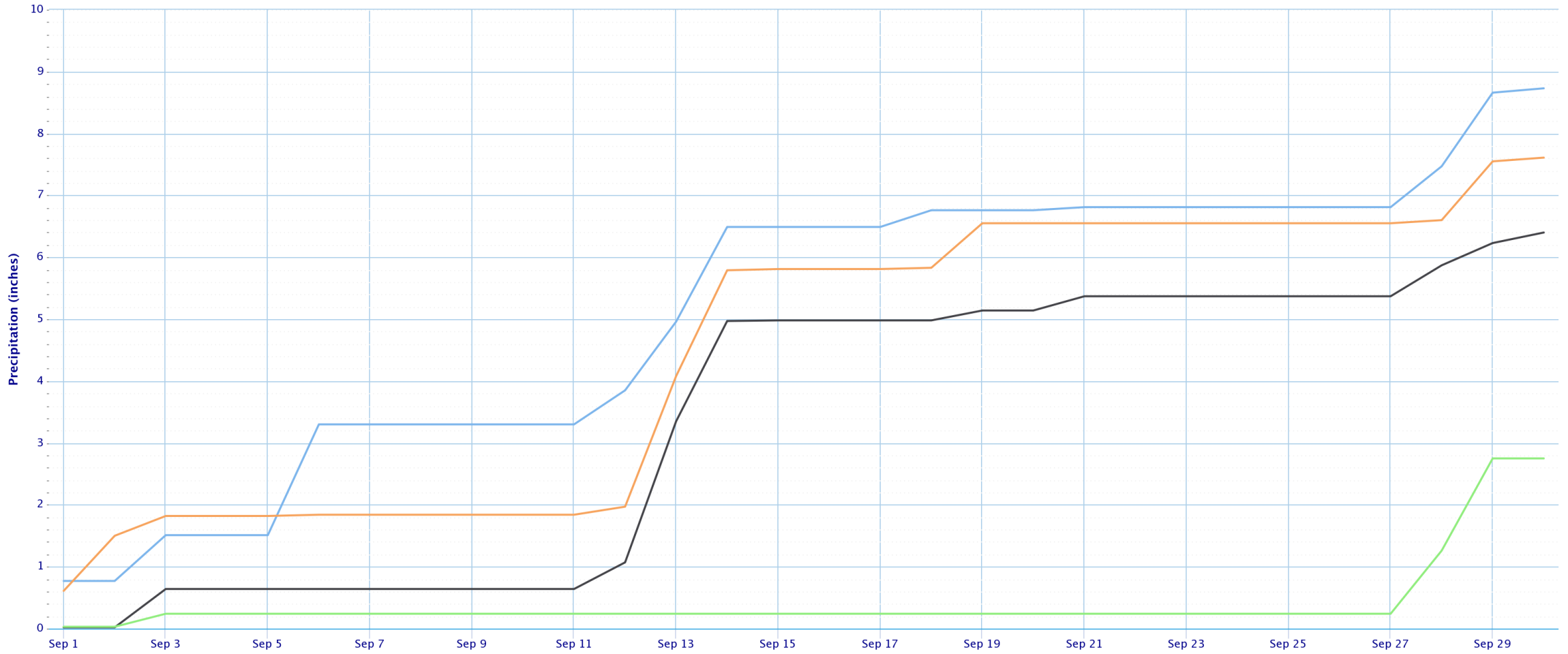
Precipitation

Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	6.40	-0.25	9	2.28	13 th
Houston Hobby (HOU)	7.61	+1.85	6	2.11	13 th
City of Houston (IAH)	8.73	+4.02	9	1.53	14 th
College Station (CLL)	2.75	-0.75	5	1.49	29 th

Precipitation Accumulation Graph

Accumulated Precipitation

Green/black diamonds represent subsequent/missing values



City of Houston

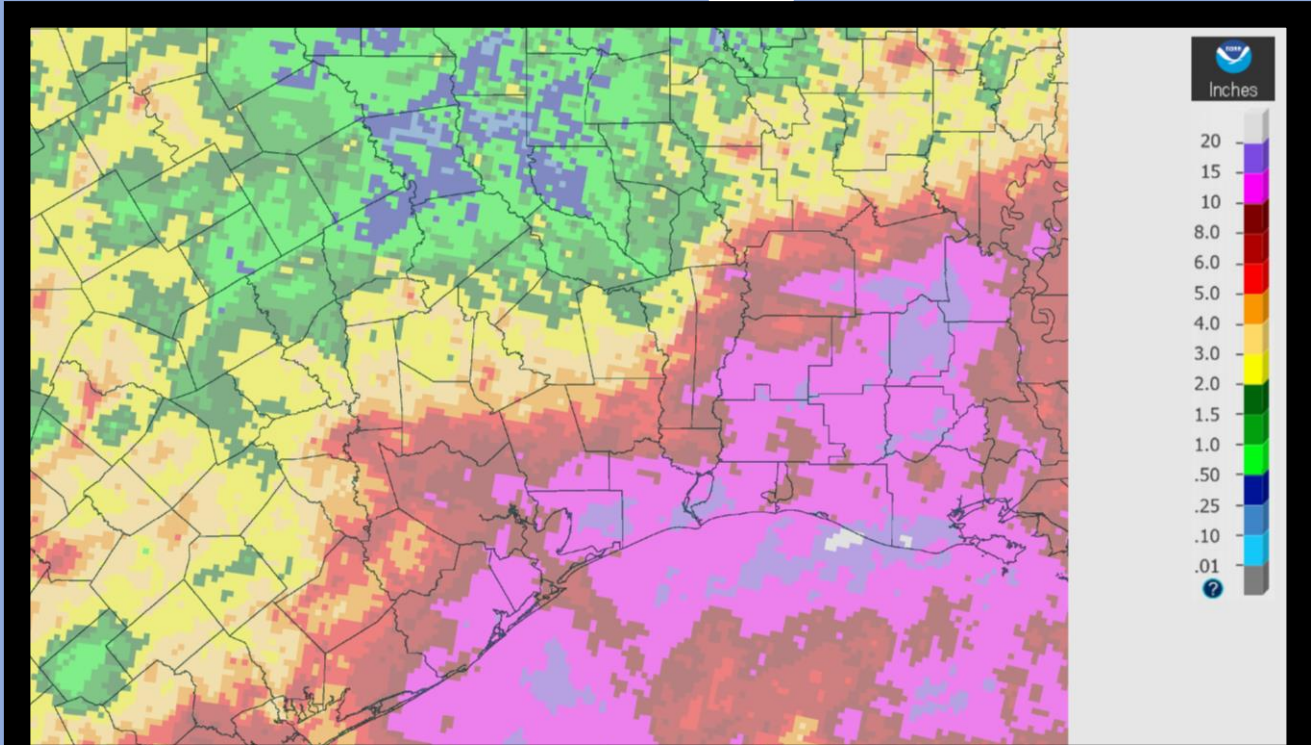
City of Galveston

City of College Station

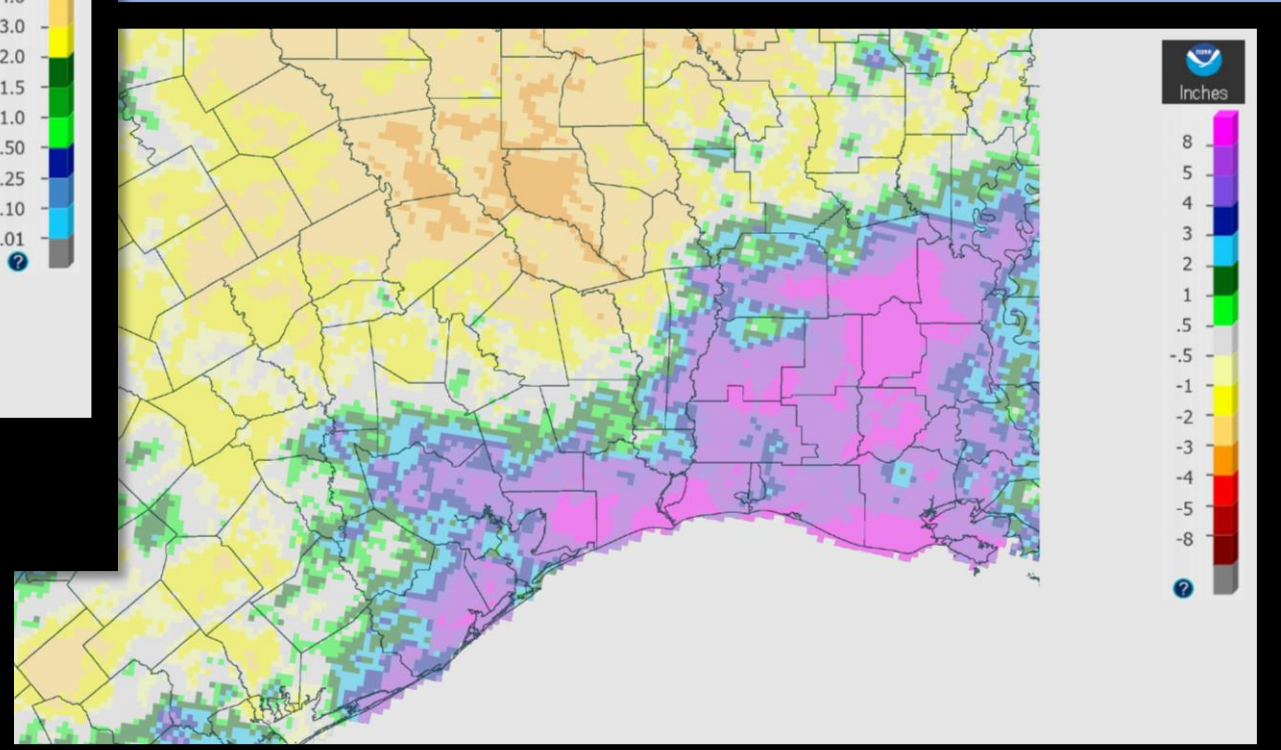
Houston-Hobby



Precipitation Maps



Monthly Total Precipitation (inches)



Monthly Departure from Normal Precipitation (inches)

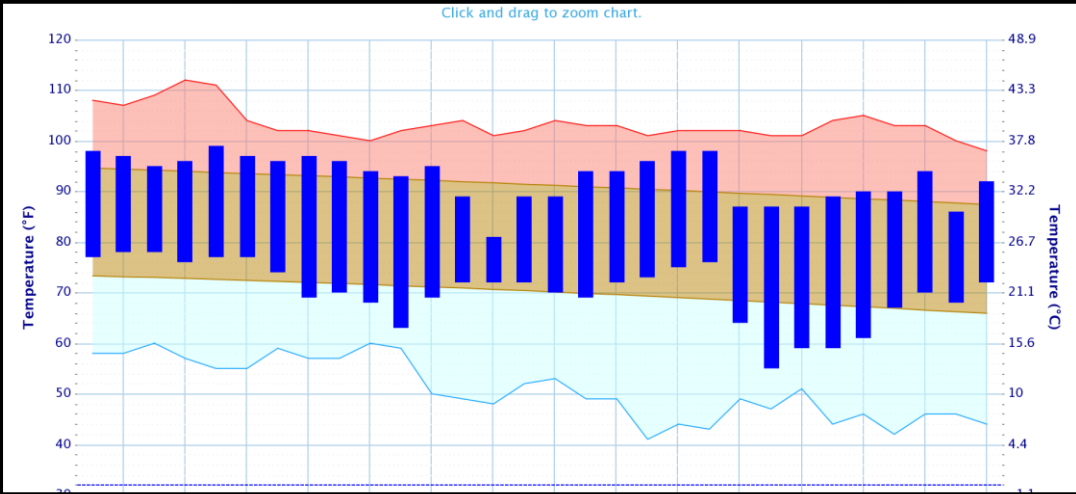


Temperature

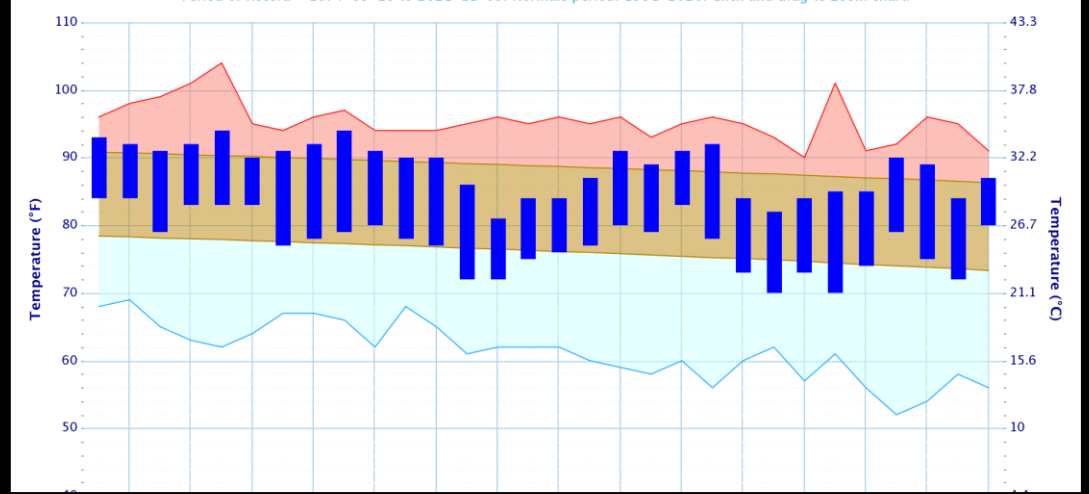
Location	Average High Temp (F)	Average Low Temp (F)	Average Temp (F)	Normal Average Temp (F)	Departure From Normal Average (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	88.5	77.4	83.0	82.4	+0.6	94 on the 5 th & 9 th	70 on the 23 rd & 25 th
Houston Hobby (HOU)	90.3	73.4	81.9	81.1	+0.8	97 on the 1 st , 4 th , & 21 st	63 on the 23 rd
City of Houston (IAH)	89.5	69.5	79.5	80.5	-1.0	97 on the 2 nd	57 on the 23 rd
College Station (CLL)	92.8	70.1	81.4	80.6	+0.8	99 on the 5 th	55 on the 23 rd

Temperature Charts

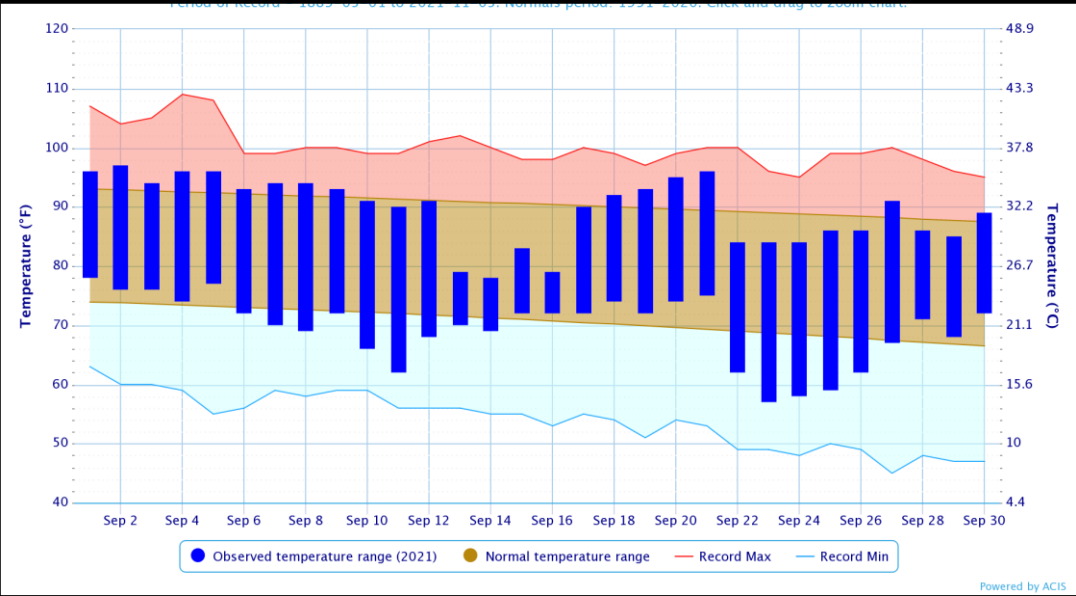
City of College Station



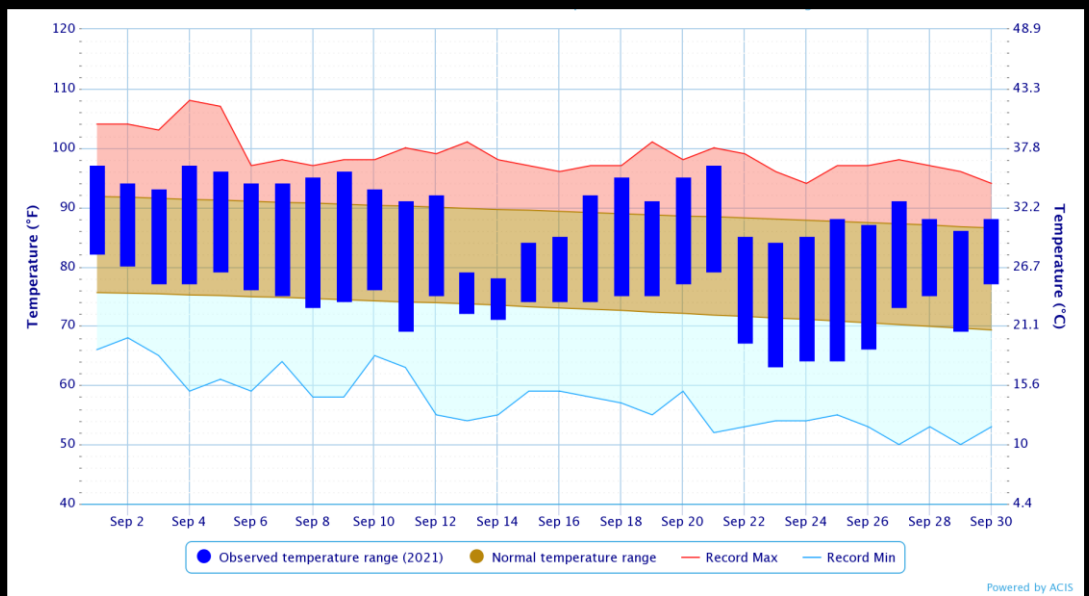
City of Galveston



City of Houston



Houston-Hobby



Daily Record Reports

Site	Date	Record Type	New Record	Previous Record
Houston-Hobby	September 21 st	High Minimum Temp	79° - T	79° in 2018
City of Galveston	September 6 th	High Minimum Temp	83° - T	83° in 2016
City of Galveston	September 20 th	High Minimum Temp	83° - T	83° in 2017

There were 3 daily records set during the month of September.



High Max

Low Max

Precip

Key

Snow

High Min

Low Min



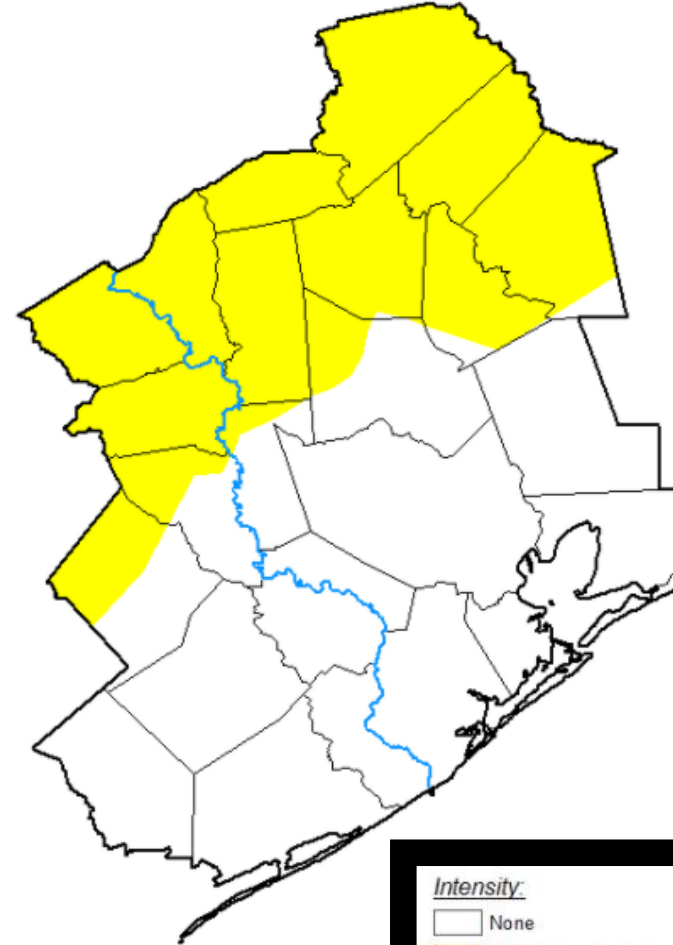
Drought Monitor

As of September 28th

U.S. Drought Monitor

Houston/Galveston, TX WFO

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



The continued dry weather across the north brought D0-Abnormally Dry conditions back into the area.

Intensity:

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

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Hurricane Nicolas

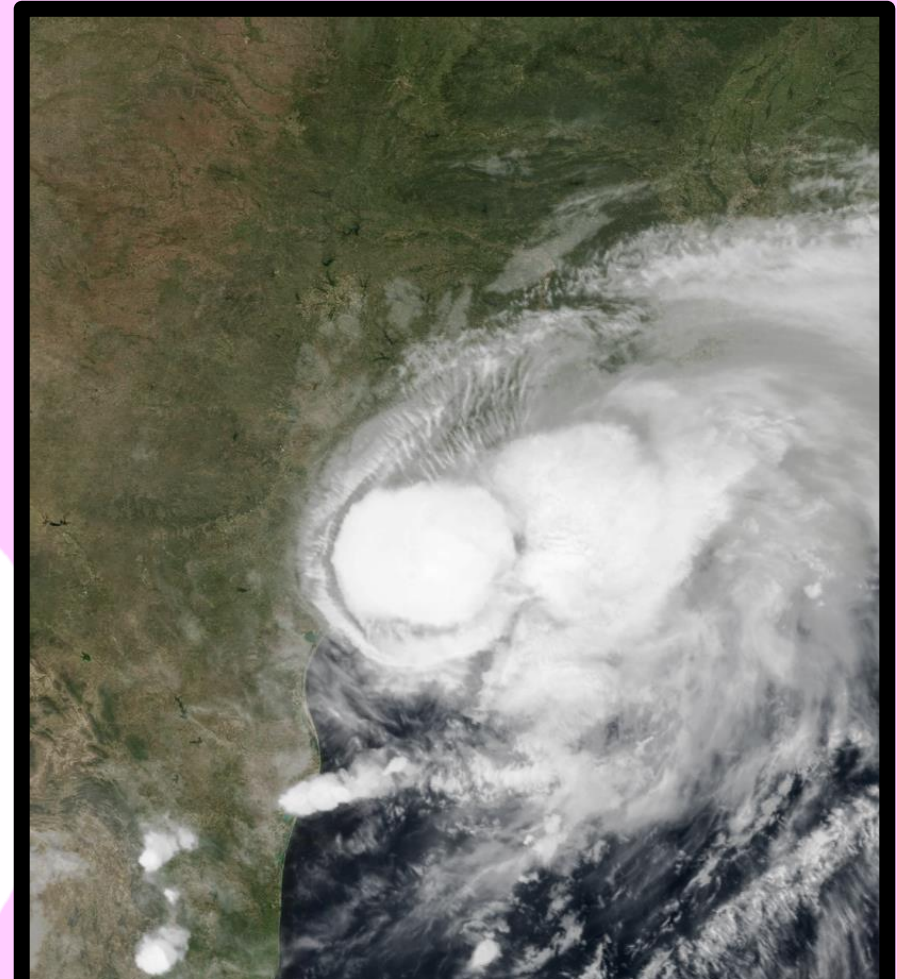
11

Formed	Dissipated	Min Pressure	Max Sustained Wind
Sept 12 th	Sept 18 th	988 mb	75 mph

On Sunday, September 12, Tropical Storm Nicholas formed in the southwestern Gulf of Mexico, about 130 miles northeast of Veracruz, Mexico. It strengthened gradually as it moved northward along the western edge of the Gulf of Mexico, bringing rains to the Texas Gulf Coast as it slid along its track not far off the coastline through Sunday and Monday.

On Monday night, shortly before it made landfall, Nicholas was upgraded to a hurricane as it produced wind gusts as high as 94 mph at a WeatherFlow sensor on Matagorda Bay. The storm made landfall shortly after midnight on Tuesday about 10 miles west-southwest of Sargent Beach, in rural Matagorda County.

Through Monday night and into Tuesday morning, the storm brought gusty winds to much of coastal Southeast Texas, resulting in power outages to nearly half a million people. It also dumped several inches of rain on the Southeast Texas Gulf Coast and barrier islands, resulting in flash flooding.



Hurricane Nicolas on September 14th, 2021 as it made landfall

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.

