NWS Houston, Texas December 2021 Regional Climate Summary

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Jeffry Evans

Produced by Jimmy Fowler

...Warmest December on Record for Most of Southeast Texas...

Extremely warm conditions led to our warmest December on record for most of the area, and it wasn't even close. There were 74 daily temperature records set across the area for either record daily high mins or maxes with Galveston, Houston, and Houston-Hobby experiencing their warmest December days on record. This past December was closer climatologically to our typical March/April than it was to our typical December. Below average rainfall for the month led to the expansion of drought conditions across most of the area.

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By the Numbers: December 2021

Location (records started)	Average Temp	Ranking	Total Rainfall	Ranking
City of Houston, TX (1888)	67.8°F	Warmest on Record	2.10"	29 th Driest
Houston Hobby, TX (1930)	69.8°F	Warmest on Record	1.85"	20 th Driest
City of Galveston, TX (1871)	69.9°F	Warmest on Record	1.19"	11 th Driest
City of College Station, TX (1882)	66.5°F	2 nd Warmest	2.29"	47 th Driest
Conroe, TX (1997)	64.9°F	Warmest on Record	4.43"	5 th Wettest
Huntsville, TX (1997)	67.0°F	Warmest on Record	1.15"	4 th Driest
Sugar Land, TX (2000)	69.2°F	Warmest on Record	2.40"	9 th Driest
Palacios, TX (1943)	67.9°F	Warmest on Record	0.90"	12 th Driest
Clover Field (Pearland), TX (1997)	67.9°F	Warmest on Record	3.01"	10 th Driest
David Wayne Hooks (Tomball), TX (1998)	67.2°F	Warmest on Record	1.70"	7 th Driest
Angleton, TX (1998)	68.1°F	Warmest on Record	2.41"	12 th Driest
League City, TX (1990)	67.2°F	Warmest on Record	2.00"	5 th Driest





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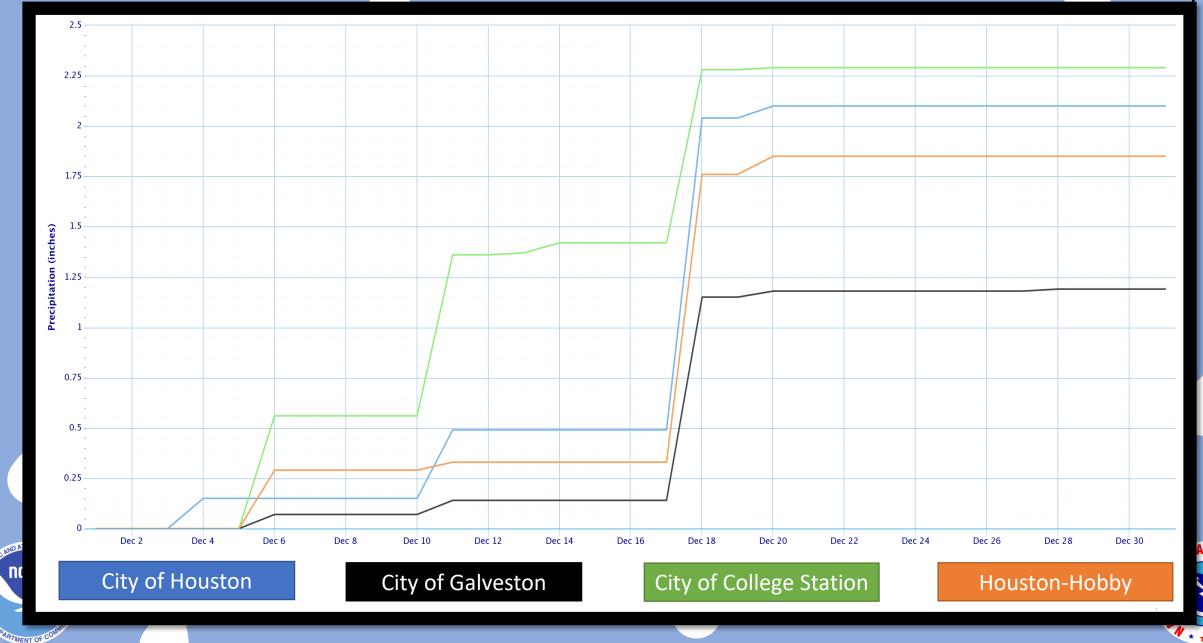
Precipitation

Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days		ly Precipitation date)
Galveston (GLS)	1.19	-3.04	2	1.01	18 th
Houston Hobby (HOU)	1.85	-2.49	2	1.43	18 th
City of Houston (IAH)	2.10	-1.93	2	1.55	18 th
College Station (CLL)	2.29	-1.42	2	0.86	18 th





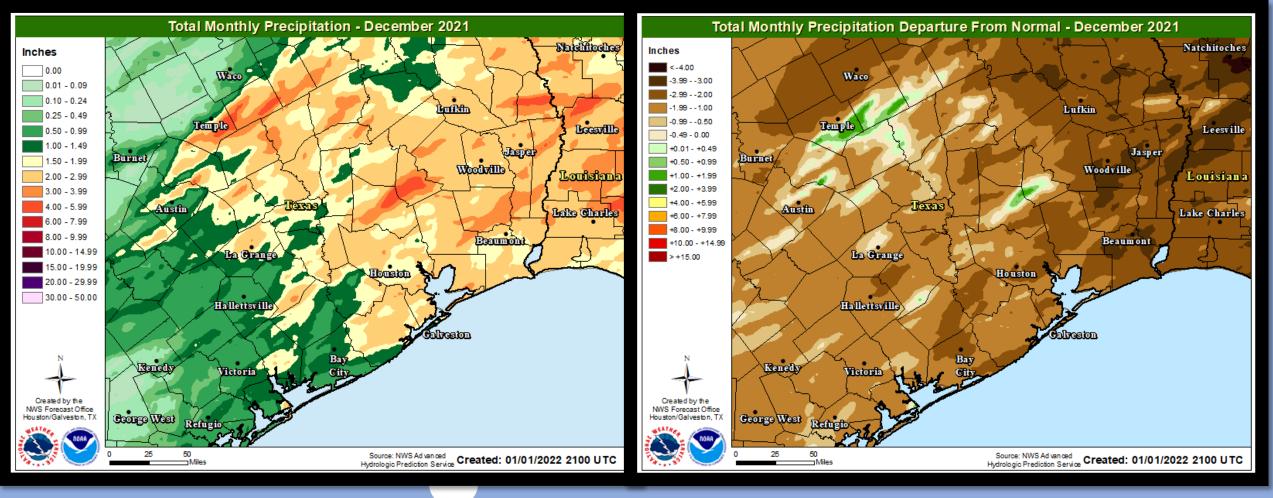
Precipitation Accumulation Graph



Precipitation Maps

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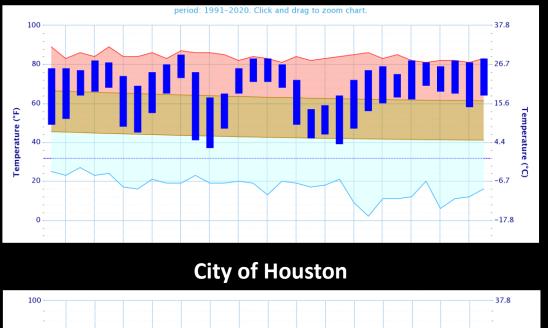
Location	Average High	Average Low	Average Temp	Normal Average	Departure From Normal	Maximum Temperature	Minimum Temperature
Galveston (GLS)	Temp (F) 75.5	Temp (F) 64.2	(F) 69.9	Temp (F) 58.5	Average (F) +11.4	(F) 82 on the 28 th	(F) 49 on the 12 th
Houston Hobby (HOU)	78.2	61.4	69.8	56.9	+12.9	87 on the 9 th	42 on the 21 st
City of Houston (IAH)	76.9	58.8	67.8	55.4	+12.4	85 on the 9 th & 10 th	40 on the 12 th & 21 st
College Station (CLL)	75.8	57.1	66.5	53.1	+13.4	85 on the 10 th	37 on the 12 th

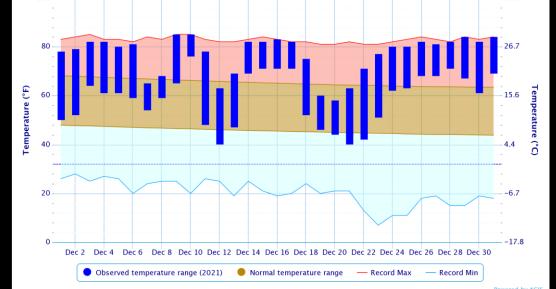




Temperature Charts

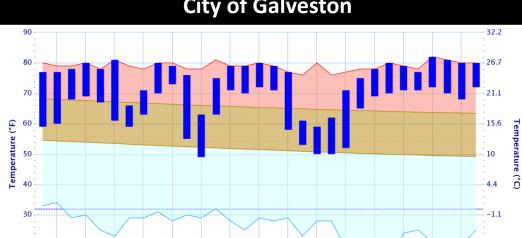
City of College Station



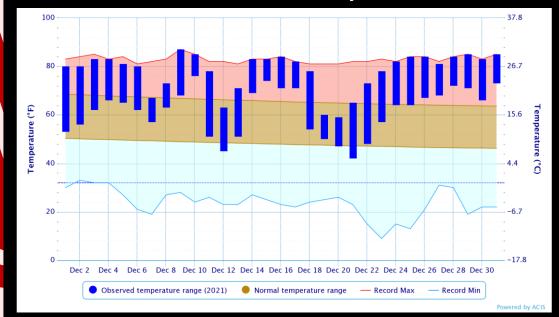


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Houston-Hobby



Exceptional Warmth

City of Houston							
1	1 67.8 2021						
2	64.4	1933					
3	63.4	1984					
4	61.4	1922					
5	60.5	1970					

Houston-Hobby						
1	69.8	2021				
2	64.8	1984				
3	64.0	1933				
4	62.4	1970				
5	61.9	1971				

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December 2021 was the warmest December on record for Houston-Hobby, City of Houston, and City of Galveston beating the previous warmest December by +5.0°F, +3.4°F, and 3.5°F, respectively. The City of College Station was the second warmest December on record missing the number one spot by 0.1°F.

This past December was closer climatologically to April than our normal December weather.

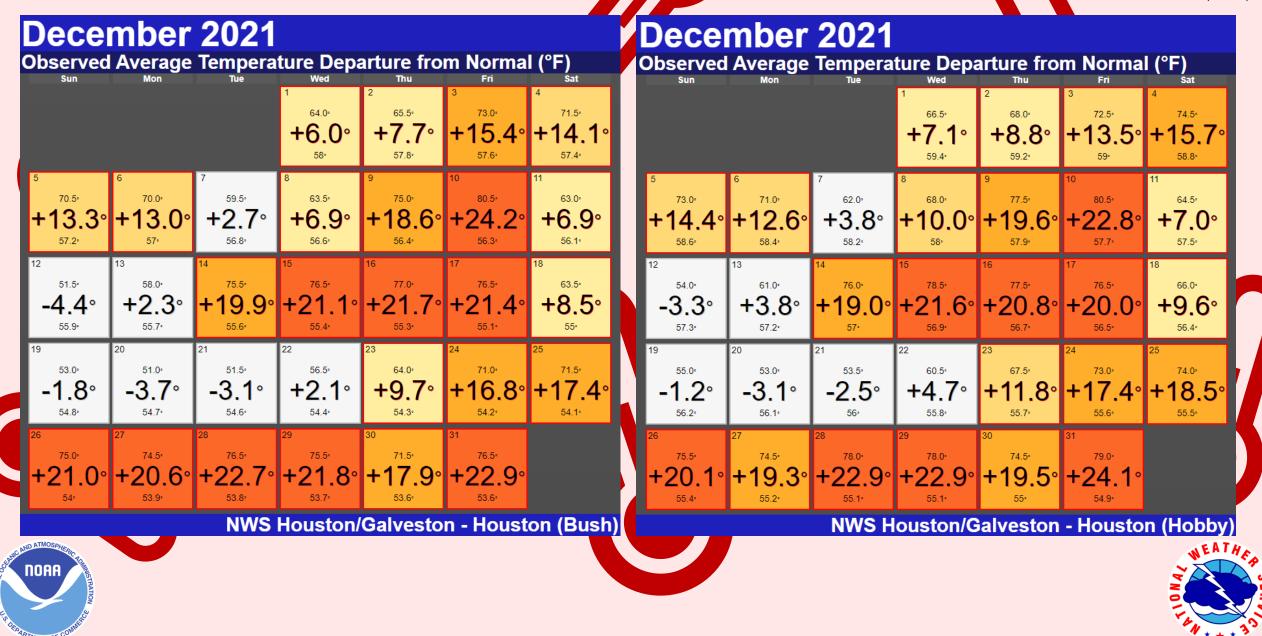
Galveston in particular had an exceptionally warm month with 30 new daily record high maximum or high minimum temperatures. Before this past December, Galveston only reached 80 degrees four times in its recorded climatology during the month of December. This year alone it reached 80 degrees nine times.

Houston, Galveston, and Houston-Hobby all saw their all-time December high temperatures this month.

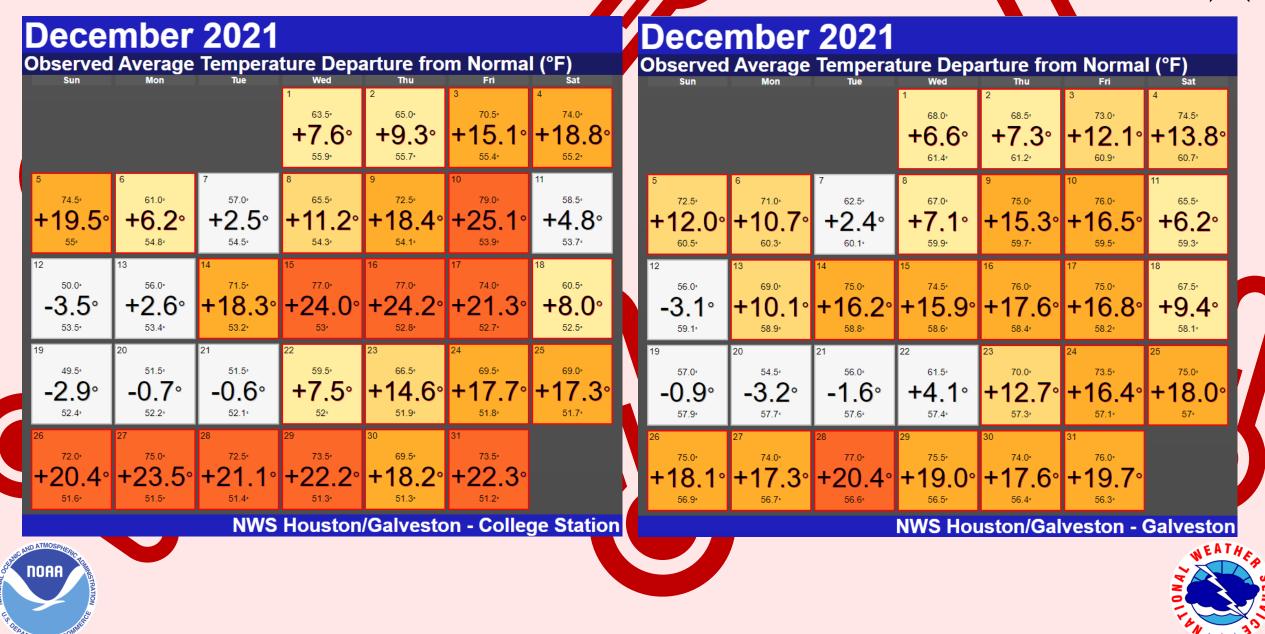
		9					
Cit	City of Galveston						
1	69.9	2021					
2	66.4	1889					
3	65.6	1933					
4	62.9	2016					
5	62.4	1984					
City o	f College S	tation					
1	66.6	1889					
2	66.5	2021					
3	60.7	1984					
4	60.1	1933					
5	58.7	1906					



Exceptional Warmth



Exceptional Warmth



Site	Date	Record Type	New Record	Previous Record	
City of College Station	December 10 th	High Minimum Temp	73°	66° in 1889	
City of College Station	December 15 th	High Minimum Temp	71°	70° in 1948	There were
City of College Station	December 16 th	High Minimum Temp	71°	70° in 1924	74 daily records set
City of College Station	December 16 th	High Maximum Temp	83°	82° in 1924	during the month of
City of College Station	December 26 th	High Maximum Temp	82° - T	82° in 1889	December.
City of College Station	December 27 th	High Maximum Temp	81°	80° in 1889	
City of College Station	December 27 th	High Minimum Temp	69°	68° in 1923	\leq
City of College Station	December 29 th	High Maximum Temp	82°	80° in 1984	
City of College Station	December 30 th	High Maximum Temp	81° - T	81° in 1951	
City of College Station	December 31 st	High Maximum Temp	83°	82° in 1951	
High Max	Low Max	Key Precip	Snow	High Min Low	Min

Site	Date	Record Type	New Record	Previous Record	
City of Houston	December 9 th	High Maximum Temp	85°	84° in 2019	
City of Houston	December 10 th	High Minimum Temp	76°	67° in 1983	There were
City of Houston	December 10 th	High Maximum Temp	85°	83° in 1939	74 daily records set
City of Houston	December 15 th	High Minimum Temp	71° - T	71° in 1948	during the month of
City of Houston	December 16 th	High Minimum Temp	71°	69° in 1933	December.
City of Houston	December 16 th	High Maximum Temp	83°	83° in 1971	
City of Houston	December 17 th	High Maximum Temp	82°	81° in 2016	
City of Houston	December 27 th	High Minimum Temp	68°	67° in 2016	
City of Houston	December 28 th	High Maximum Temp	82° - T	82° in 2016	
City of Houston	December 28 th	High Minimum Temp	71°	70° in 2016	
High Max	Low Max	Key Precip	Snow	High Min Low	Min



Site	Date	Record Type	New Record	Previous Record	
City of Houston	December 29 th	High Maximum Temp	84°	82° in 1974	
City of Houston	December 31 st	High Minimum Temp	69°	69° in 1983	There were
City of Houston	December 31 st	High Maximum Temp	84°	83° in 1939	74 daily records set
Houston-Hobby	December 4 th	High Maximum Temp	83° - T	83° in 1977	during the
Houston-Hobby	December 9 th	High Maximum Temp	85° Warmest December High on Record	84° in 2019	month of December.
Houston-Hobby	December 10 th	High Maximum Temp	85°	82° in 1939	
Houston-Hobby	December 10 th	High Minimum Temp	76°	67° in 2007	
Houston-Hobby	December 14 th	High Minimum Temp	69° - T	69° in 1948	
Houston-Hobby	December 14 th	High Maximum Temp	83°	82° in 1995	
Houston-Hobby	December 15 th	High Maximum Temp	83° - T	83° in 2019	SEATH.
High Max	Low Max	Key Precip	Snow H	ligh Min Low	Min



Site	Date	Record Type	New Record	Previous Record	
Houston-Hobby	December 15 th	High Minimum Temp	74°	70° in 1948	
Houston-Hobby	December 16 th	High Maximum Temp	84°	82° in 2016	There were
Houston-Hobby	December 16 th	High Minimum Temp	71°	68° in 1933	74 daily records set
Houston-Hobby	December 17 th	High Maximum Temp	82° - T	82° in 2016	during the month of
Houston-Hobby	December 24 th	High Maximum Temp	82° - T	82° in 1948	December.
Houston-Hobby	December 25 th	High Maximum Temp	84°	83° in 2015	
Houston-Hobby	December 26 th	High Maximum Temp	82° - T	82° in 2016	\sim
Houston-Hobby	December 28 th	High Minimum Temp	72°	70° in 2016	
Houston-Hobby	December 28 th	High Maximum Temp	84°	82° in 2016	
Houston-Hobby	December 29 th	High Maximum Temp	85° Warmest December High on Record	81° in 1984	
		Кеу			
High Max	Low Max	Precip	Snow H	ligh Min Low	Min Frances

Site	Date	Record Type	New Record	Previous Record	
Houston-Hobby	December 29 th	High Minimum Temp	71°	69° in 1984	
Houston-Hobby	December 30 th	High Maximum Temp	83° - T	81° in 1974	There were
Houston-Hobby	December 31 st	High Maximum Temp	85° Warmest December High on Record	81° in 1951	74 daily records set during the
Houston-Hobby	December 31 st	High Minimum Temp	73°	68° in 1951	month of
City of Galveston	December 4 th	High Maximum Temp	80°	79° in 2012	December.
City of Galveston	December 5 th	High Maximum Temp	78° - T	87° in 1998	
City of Galveston	December 6 th	High Maximum Temp	81°	79° in 2012	
City of Galveston	December 9 th	High Minimum Temp	70°	69° in 2019	
City of Galveston	December 9 th	High Maximum Temp	80°	78° in 2019	
City of Galveston	December 10 th	High Minimum Temp	73°	68° in 2007	NEATHA
High Max	Low Max	Key Precip	Snow	ligh Min Low	Min

Site	Date	Record Type	New Record	Previous Record	
City of Galveston	December 14 th	High Maximum Temp	79°	75° in 1995	
City of Galveston	December 14 th	High Minimum Temp	71°	69° in 1933	There were
City of Galveston	December 15 th	High Maximum Temp	79°	77° in 2019	74 daily records set
City of Galveston	December 15 th	High Minimum Temp	70° - T	70° in 1933	during the month of
City of Galveston	December 16 th	High Maximum Temp	80°	76° in 2019	December.
City of Galveston	December 16 th	High Minimum Temp	72°	68° in 1933	
City of Galveston	December 17 th	High Maximum Temp	79°	77° in 2016	
City of Galveston	December 17 th	High Minimum Temp	71°	69° in 2016	
City of Galveston	December 18 th	High Maximum Temp	77°	74° in 1889	
City of Galveston	December 24 th	High Minimum Temp	69°	68° in 1948	
Key					
High Max	Low Max	Precip	Snow	High Min Low	Min Francisco



Site	Date	Record Type	New Record	Previous Record	
City of Galveston	December 24 th	High Maximum Temp	78°	77° in 2016	
City of Galveston	December 25 th	High Minimum Temp	70°	69° in 2015	There were 74 daily records set
City of Galveston	December 25 th	High Maximum Temp	80°	76° in 2016	
City of Galveston	December 26 th	High Minimum Temp	71°	70° in 2015	during the
City of Galveston	December 26 th	High Maximum Temp	79°	78° in 2016	month of December.
City of Galveston	December 27 th	High Minimum Temp	71°	69° in 2016	
City of Galveston	December 28 th	High Maximum Temp	82° Warmest December High on Record	76° in 2016	
City of Galveston	December 28 th	High Minimum Temp	72°	68° in 2016	
City of Galveston	December 29 th	High Maximum Temp	81°	75° in 1889	
City of Galveston	December 29 th	High Minimum Temp	70°	67° in 1984	SEATHA
High Max	Low Max	Key Precip	Snow	ligh Min Low	Min



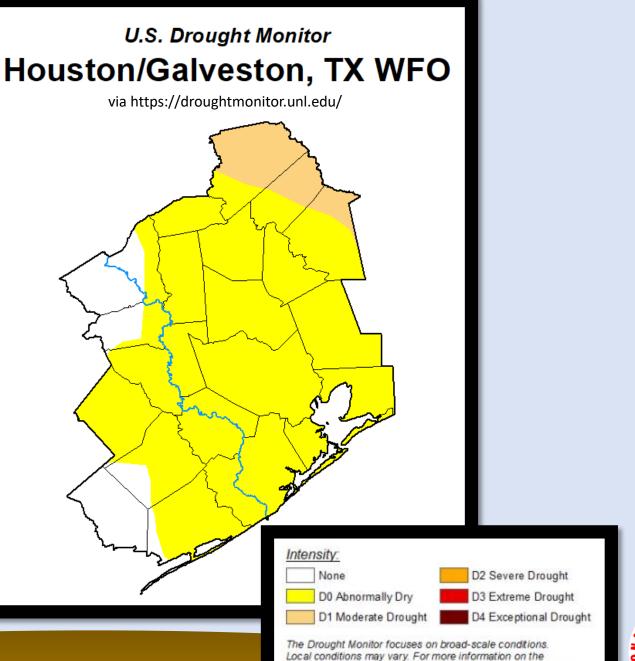
Site	Date	Record Type	New Record	Previous Record
City of Galveston	December 30 th	High Maximum Temp	80°	75° in 2020
City of Galveston	December 30 th	High Minimum Temp	68°	67° in 1984
City of Galveston	December 31 st	High Maximum Temp	80°	74° in 1921
City of Galveston	December 31 st	High Minimum Temp	72°	66° in 1875

December.



Drought Monitor As of December 28th

Hot and dry conditions led to the expansion of DO-Abnormally Dry conditions across most of the area by the end of the month. D1-Moderate Drought persists across the northern portions of Houston, Trinity, and Polk counties.

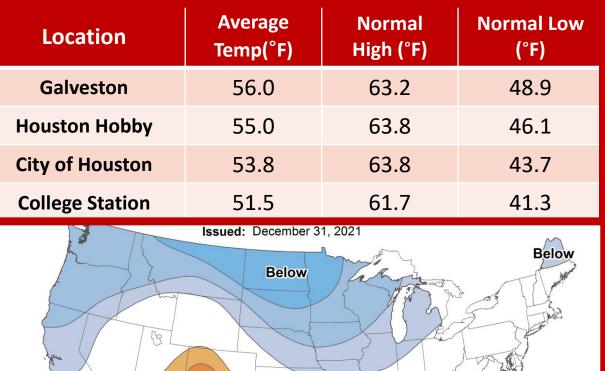


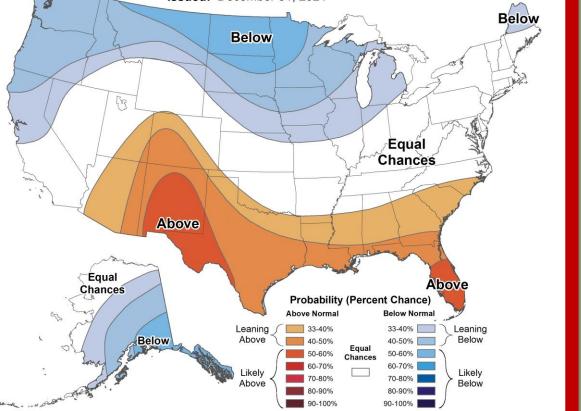
Drought Monitor, go to https://droughtmonitor.uni.edu/About.aspx



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January Outlook





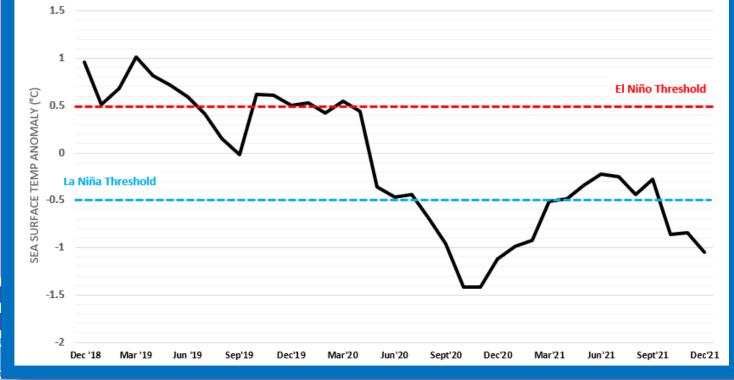
Location	Normal Monthly Precipitation (in.)		
Galveston	4.30		
Houston Hobby	4.09		
City of Houston	3.76		
College Station	3.43		
Below Be			

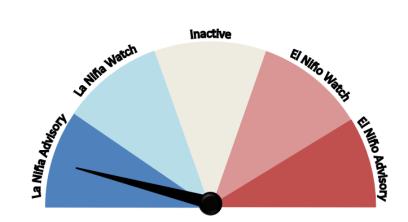


The Climate Prediction Center's ENSO Forecast: La Niña Advisory

• La Niña conditions are expected to continue with 95% chance through the Winter, and then 60% chance of ENSO-Neutral by Spring.

Sea Surface Temperature Anomalies (°C) in the Tropical Pacific





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.

Climate Primary Site History



Galveston (GLS)

College Station (CLL)

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).

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.



