



NWS Houston, Texas September 2023 Regional Climate Summary

Produced by Jimmy Fowler

...More Heat...Exceptional Drought Expands...

Another month of above normal heat and below normal precipitation. Most locations saw their hottest Septembers on record, or at least within the top three hottest. This heat and general lack of precipitation led to the expansion of Exceptional Drought (D4) to expand across almost the entire region.

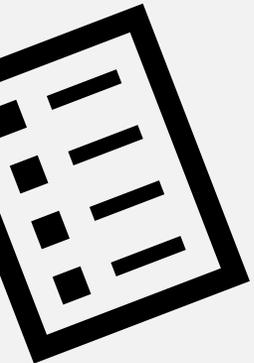
Table of Contents

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 – 9	Temperature Charts
10 – 14	Daily Record Reports
15	Drought Monitor
16	Next Month Outlook
17	ENSO Review
18	Climate Primary Site History



By the Numbers: September 2023

Location (records started)	Average Temp	Ranking	Total Rainfall	Ranking
City of Houston, TX (1888)	85.3°F	Warmest on Record	2.77"	54 th Driest
Houston Hobby, TX (1930)	86.4°F	Warmest on Record	3.31"	28 th Driest
City of Galveston, TX (1871)	85.7°F	2 nd Warmest	2.01"	27 th Driest
City of College Station, TX (1882)	88.0°F	Warmest on Record	0.85"	21 st Driest
Palacios, TX (1943)	84.7°F	3 rd Warmest	0.50"	Driest on Record
Huntsville, TX (1997)	85.0°F	Warmest on Record	2.50"	11 th Driest
Sugar Land, TX (2000)	85.8°F	Warmest on Record	1.09"	4 th Driest
Conroe, TX (1997)	82.9°F	Warmest on Record	2.27"	8 th Driest
Clover Field (Pearland), TX (1997)	86.0°F	Warmest on Record	4.13"	9 th Driest
David Wayne Hooks (Tomball), TX (1998)	86.0°F	Warmest on Record	0.54"	Driest on Record
Angleton, TX (1998)	83.2°F	3 rd Warmest	2.42"	5 th Driest
League City, TX (1990)	84.2°F	2 nd Warmest	4.66"	15 th Driest



Precipitation

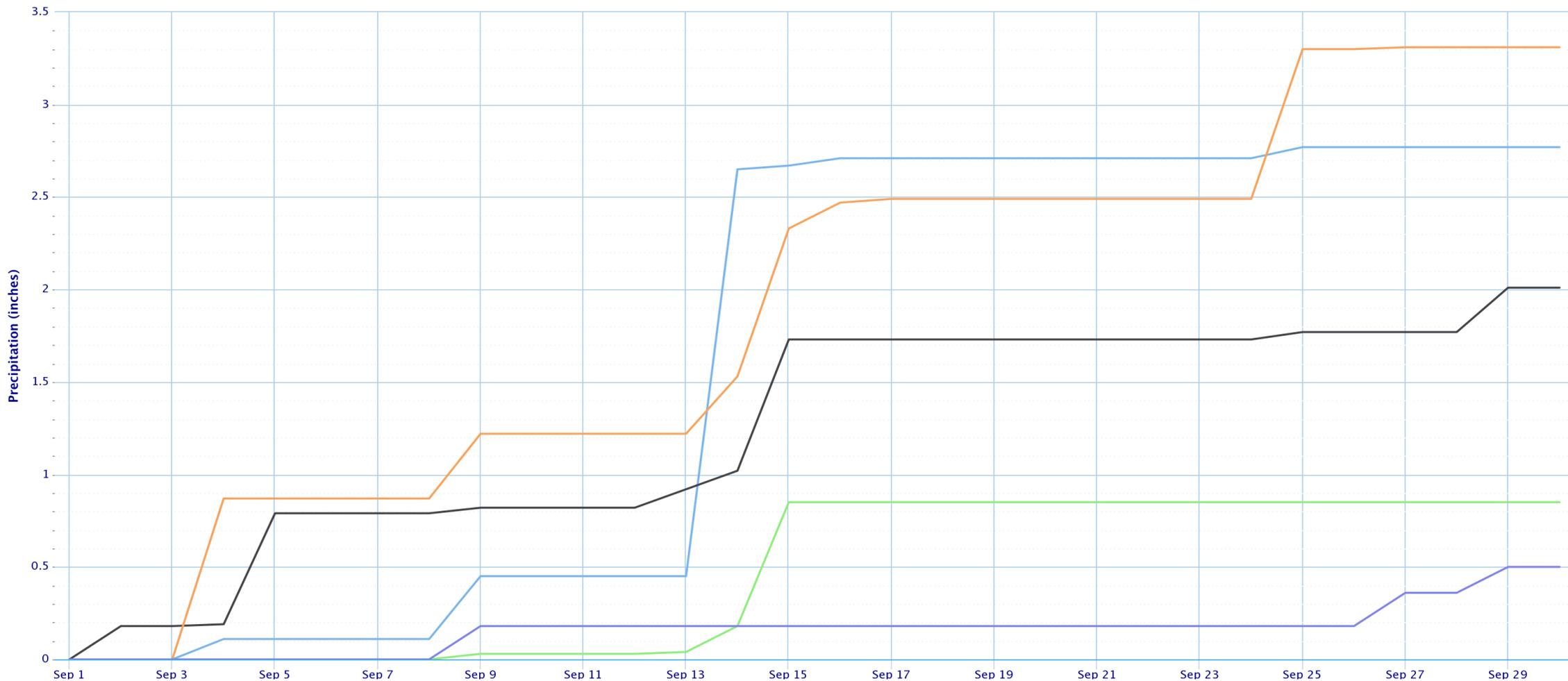
Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	2.01	-4.64	10	0.71	15 th
Houston Hobby (HOU)	3.31	-2.45	9	3.50	15 th
City of Houston (IAH)	2.77	-1.94	8	2.20	14 th
College Station (CLL)	0.85	-2.65	7	0.67	15 th
Palacios (PSX)	0.50	-3.89	10	0.18	9 th & 27 th



Precipitation Accumulation Graph

Accumulated Precipitation

Green/black diamonds represent subsequent/missing values



City of Houston

City of Galveston

City of College Station

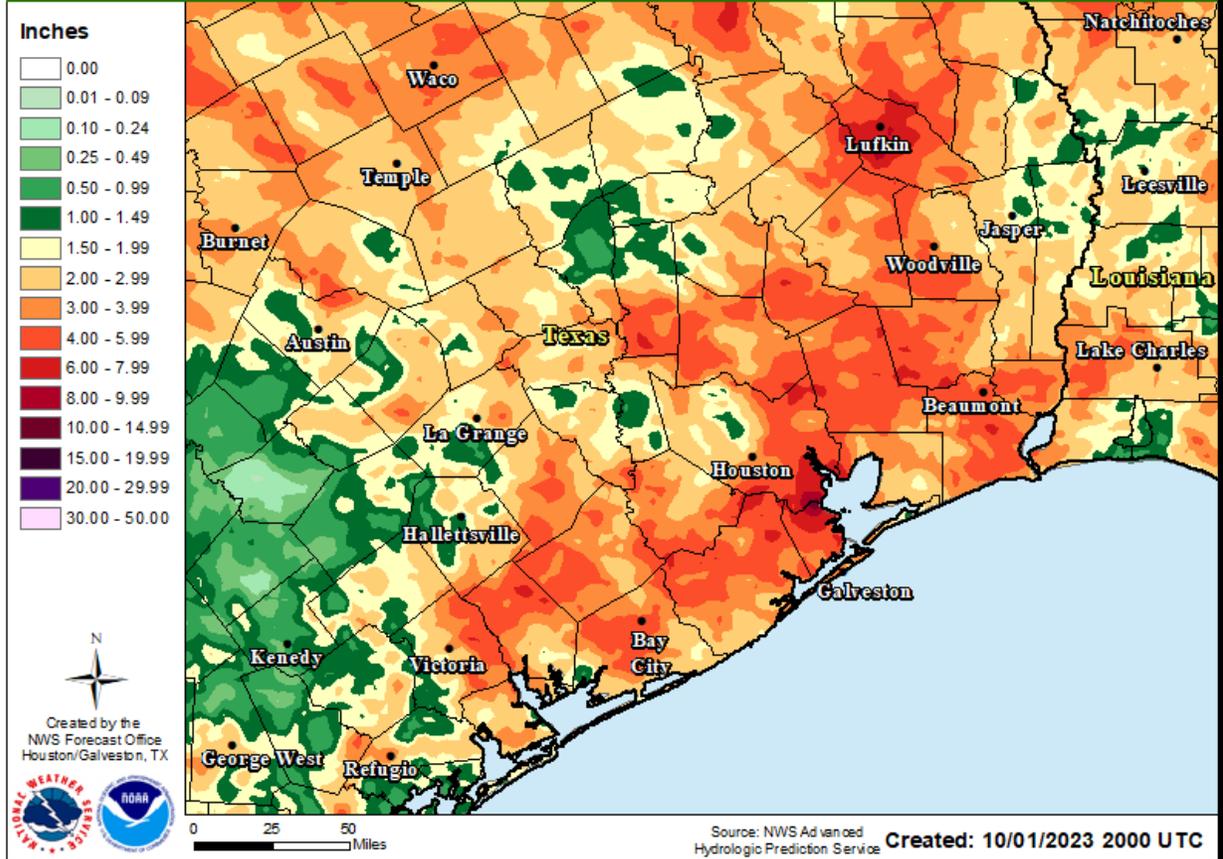
Houston-Hobby

Palacios

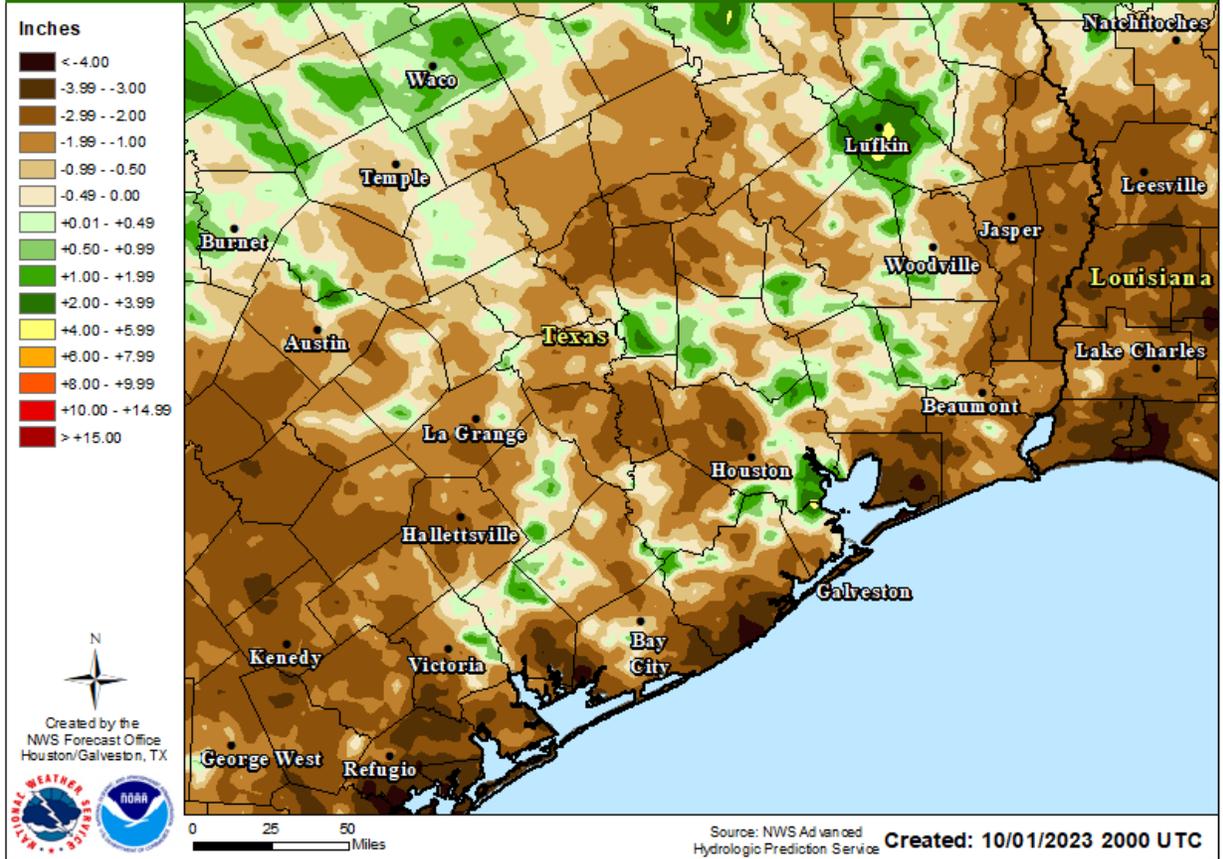


Precipitation Maps

Total Monthly Precipitation - September 2023



Total Monthly Precipitation Departure From Normal - September 2023



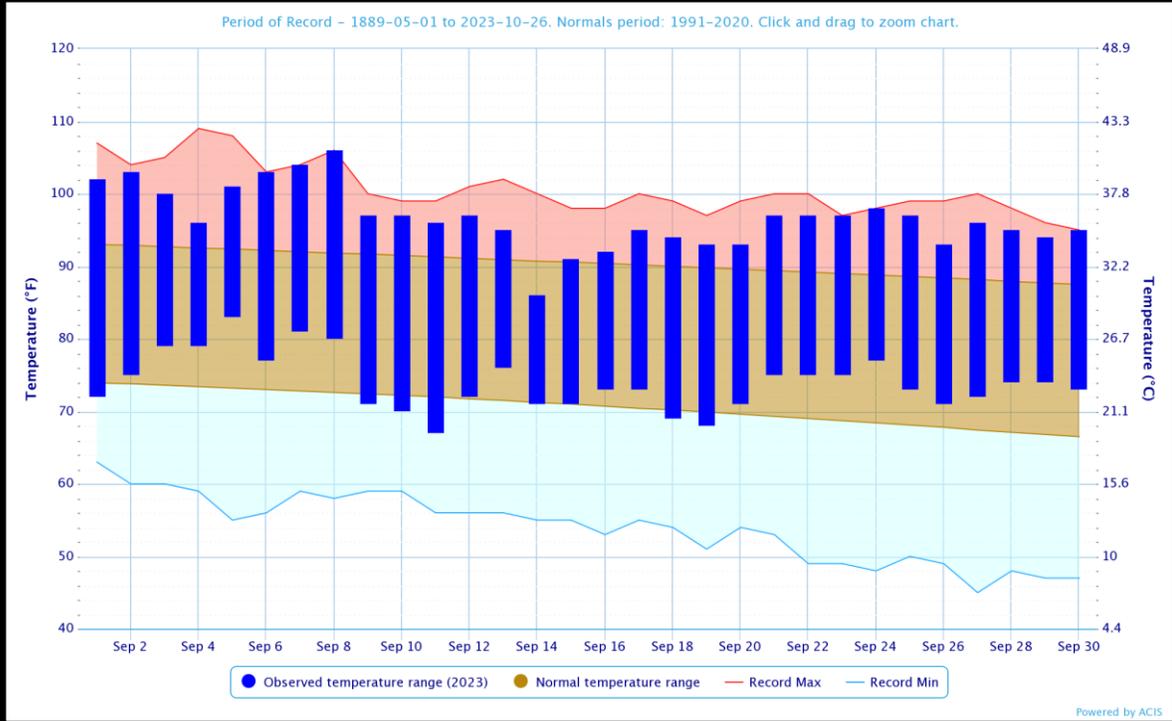
Temperature

Location	Average High Temp (F)	Average Low Temp (F)	Average Temp (F)	Departure From Normal Average (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	91.5	79.9	85.7	+3.3	96 on the 8 th	75 on the 15 th & 18 th
Houston Hobby (HOU)	95.9	76.9	86.4	+5.3	104 on the 8 th	72 on the 19 th
City of Houston (IAH)	96.7	73.9	85.3	+4.8	106 on the 8 th	67 on the 11 th
College Station (CLL)	99.7	76.3	88.0	+7.4	109 on the 8 th	69 on the 11 th & 18 th
Palacios (PSX)	93.0	76.4	84.7	+3.2	95 on the 8 th , 11 th & 18 th	70 on the 19 th

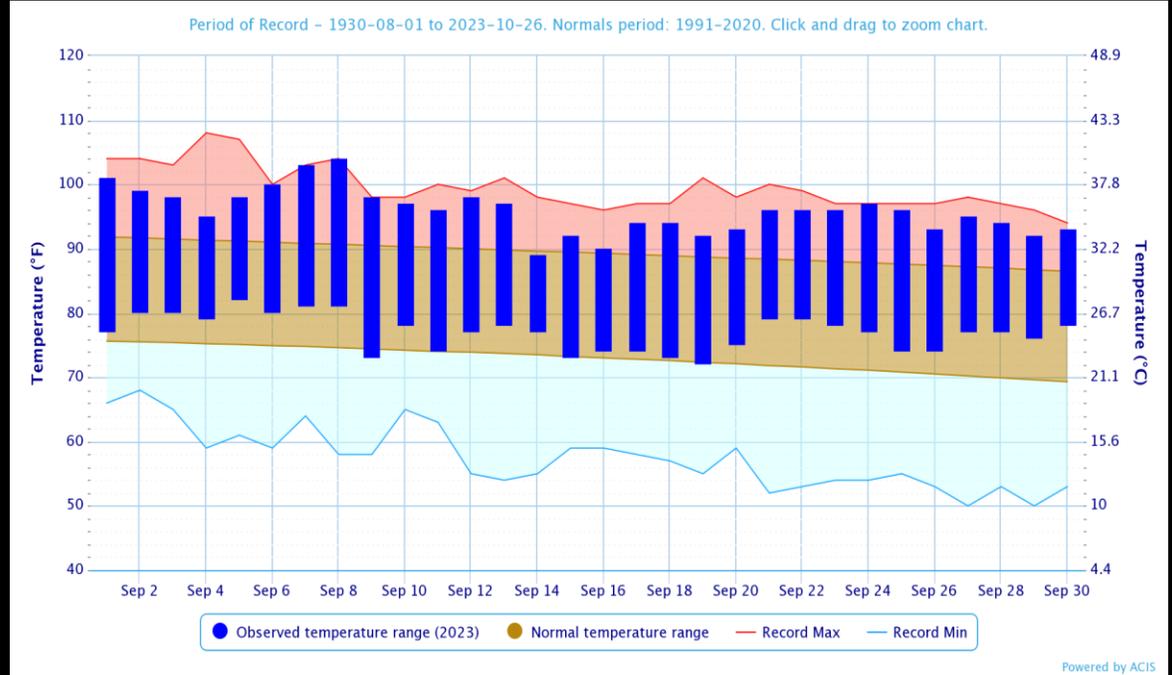


Temperature Charts

City of Houston

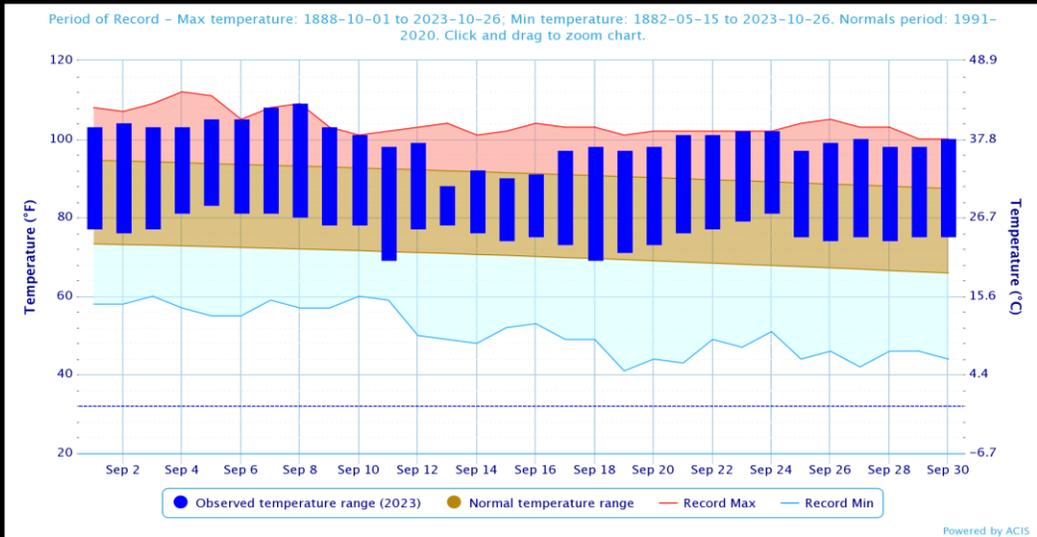


Houston-Hobby

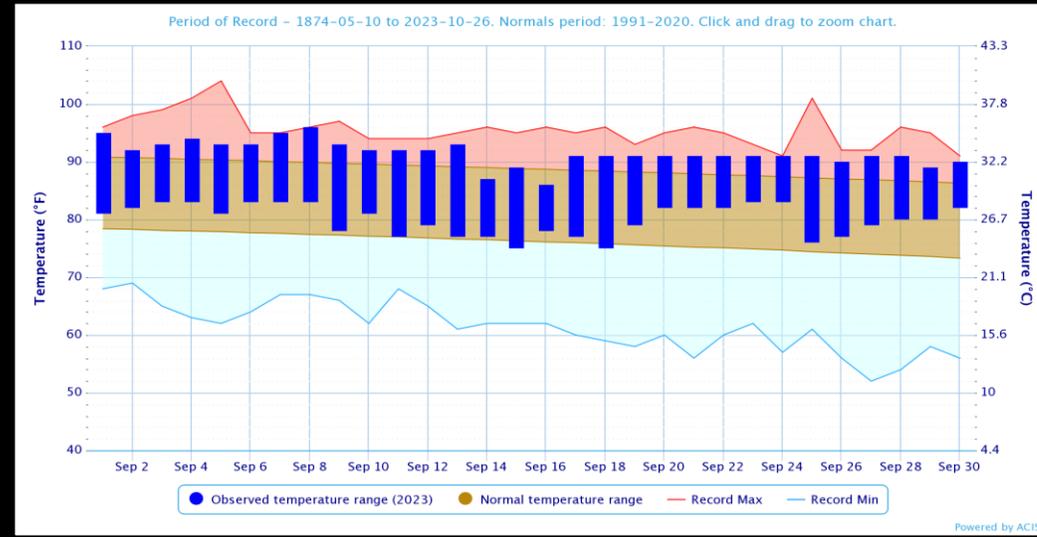


Temperature Charts

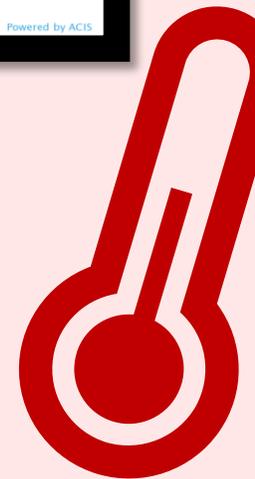
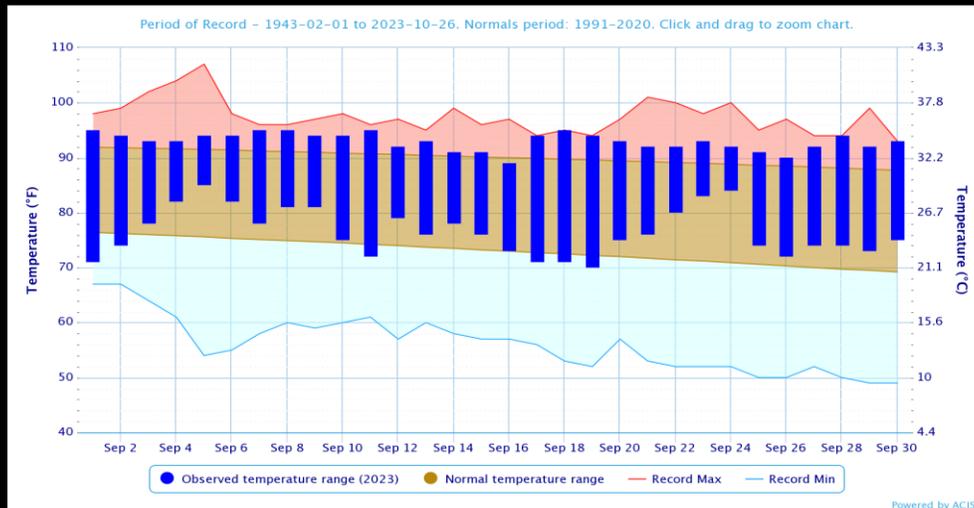
City of College Station



City of Galveston



Palacios



Daily Record Reports – City of College Station

Date	Record Type	New Record	Previous Record
4 th	High Minimum	81°F	80°F in 1914
5 th	High Minimum	83°F	82°F in 1914
6 th	High Minimum	81°F	78°F in 1943
6 th	High Maximum	105°F	104°F in 1913
7 th	High Minimum	81°F	77°F in 2015
7 th	High Maximum	108°F	102°F in 1963
8 th	High Maximum	109°F	102°F in 1902
9 th	High Maximum	103°F	101°F in 1924
9 th	High Minimum	78°F	77°F in 2010
10 th	High Minimum	78°F	77°F in 2010

Date	Record Type	New Record	Previous Record
10 th	High Maximum	101°F	100°F in 2000
23 rd	High Maximum	102°F	101°F in 1893
24 th	High Maximum	102°F	101°F in 1892
24 th	High Minimum	81°F	76°F in 2019
30 th	High Maximum	100°F	98°F in 1955

There were 15 daily records set at College Station this month.



Key

High Max

Low Max

Precip

Snow

High Min

Low Min

Daily Record Reports – City of Houston

Date	Record Type	New Record	Previous Record
5 th	High Minimum	83°F	80°F in 1963
6 th	High Maximum	102°F	99°F in 2019
7 th	High Minimum	81°F	78°F in 1926
7 th	High Maximum	104°F	99°F in 2019
8 th	High Minimum	80°F	79°F in 1949
8 th	High Maximum	106°F	100°F in 1907
23 rd	High Maximum	97°F	96°F in 2022
24 th	High Maximum	98°F	95°F in 2022
30 th	High Maximum	95°F – T	95°F in 1998

There were 9 daily records set at Houston this month.



Key

High Max

Low Max

Precip

Snow

High Min

Low Min

Daily Record Reports – Houston-Hobby

Date	Record Type	New Record	Previous Record	Date	Record Type	New Record	Previous Record
5 th	High Minimum	82°F	80°F in 2000	24 th	High Minimum	77°F – T	77°F in 1993
6 th	High Maximum	100°F	97°F in 2020				
6 th	High Minimum	80°F	78°F in 2018				
7 th	High Maximum	103°F	98°F in 1963				
7 th	High Minimum	81°F	78°F in 2016				
8 th	High Maximum	104°F	97°F in 1999				
8 th	High Minimum	81°F	78°F in 2016				
9 th	High Maximum	98°F – T	98°F in 1931				
21 st	High Minimum	79°F – T	79°F in 2021				
24 th	High Maximum	97°F	95°F in 2022				

There were 11 daily records set at Houston-Hobby this month.



Key

High Max

Low Max

Precip

Snow

High Min

Low Min

Daily Record Reports – City of Galveston

Date	Record Type	New Record	Previous Record
6 th	High Minimum	83°F – T	83°F in 2021
7 th	High Minimum	83°F – T	83°F in 2020
7 th	High Maximum	95°F	94°F in 1876
8 th	High Maximum	96°F – T	96°F in 1995
23 rd	High Minimum	83°F	82°F in 2019
24 th	High Minimum	83°F	82°F in 1998
24 th	High Maximum	91°F	90°F in 2017

There were 7 daily records set at Houston-Hobby this month.



Key

High Max

Low Max

Precip

Snow

High Min

Low Min

Daily Record Reports – Palacios

Date	Record Type	New Record	Previous Record
5 th	High Minimum	85°F	84°F in 2012
6 th	High Minimum	82°F – T	82°F in 1951
17 th	High Maximum	94°F – T	94°F in 1982
18 th	High Maximum	95°F – T	95°F in 1947
19 th	High Maximum	94°F – T	94°F in 2016
23 rd	High Minimum	83°F – T	83°F in 2006
24 th	High Minimum	84°F	83°F in 2005
28 th	High Maximum	94°F – T	94°F in 1949
30 th	High Maximum	93°F – T	93°F in 2019

There were 9 daily records set at Palacios this month.



High Max

Low Max

Precip

Snow

High Min

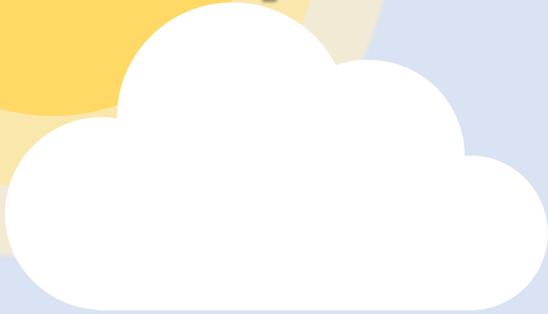
Low Min



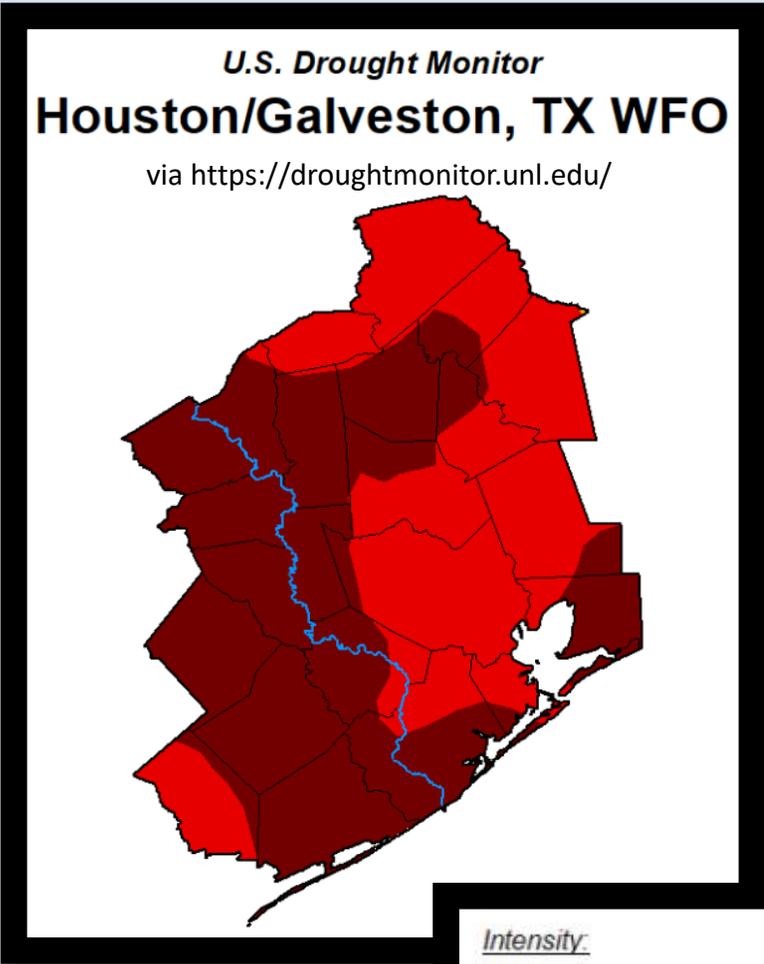
Key

Drought Monitor

As of September 26th



Drought continued to worsen through the month due to the extreme heat and just isolated precipitation. All of the region is now in either Extreme (D3) or Exceptional (D4) Drought.



Intensity:

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

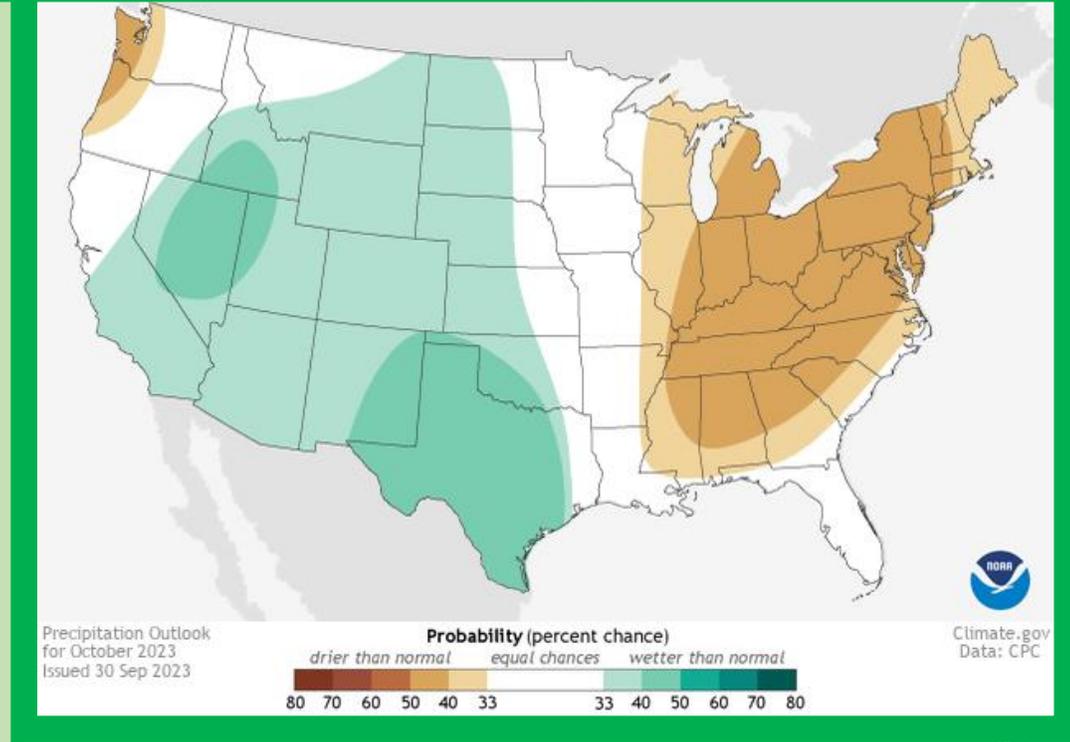
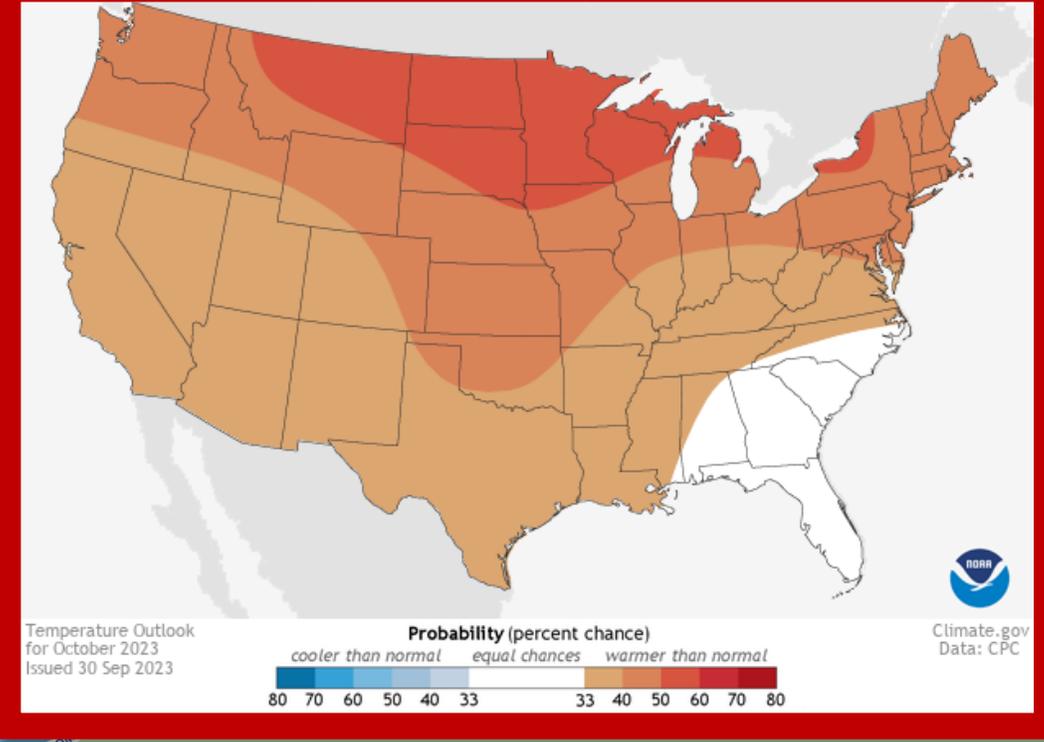
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>



October Outlook

Location	Average Temp(°F)	Normal High (°F)	Normal Low (°F)
Galveston	75.3	82.1	68.6
Houston Hobby	73.0	82.1	63.9
City of Houston	71.8	82.8	60.9
College Station	71.1	81.9	60.2
Palacios	73.9	83.7	64.1

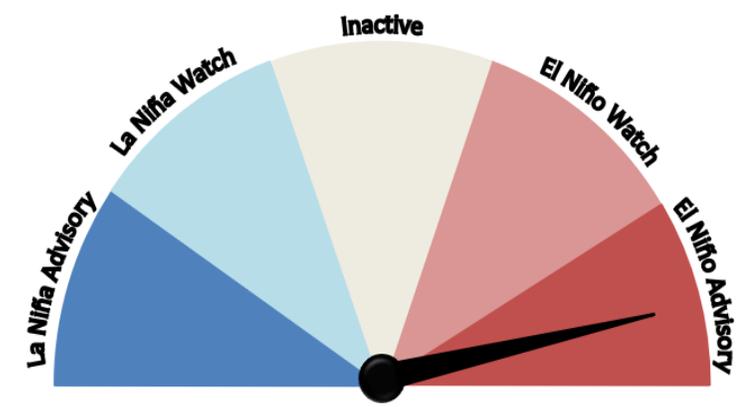
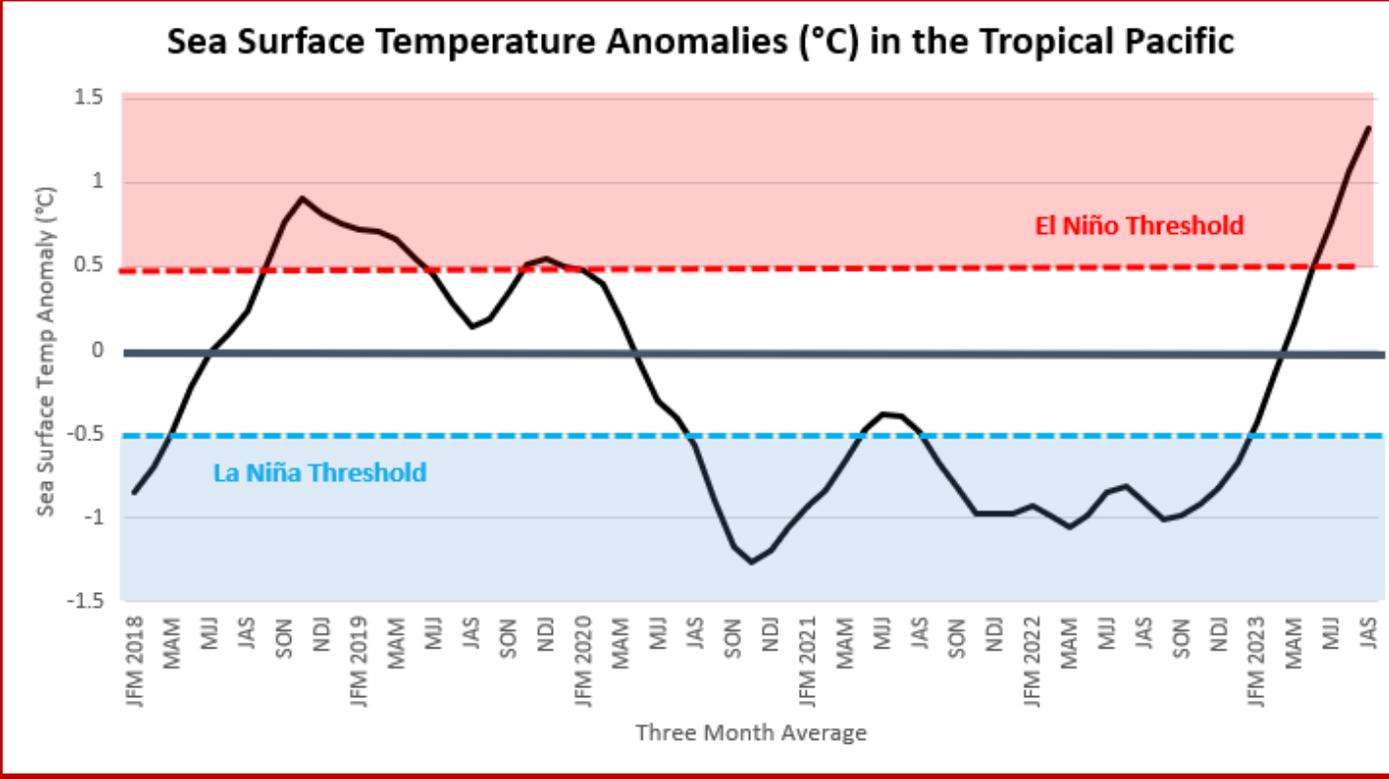
Location	Normal Monthly Precipitation (in.)
Galveston	5.15
Houston Hobby	5.78
City of Houston	5.46
College Station	4.93
Palacios	4.33



Current ENSO Phase: El Niño

The Climate Prediction Center's ENSO Forecast: El Niño Advisory

- El Niño conditions are present and are expected to gradually strengthen through the Winter.



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)

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).

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.

Houston Hobby (HOU)

Records are based upon observations beginning in August 1931.

Palacios (PSX)

Records are based upon observations beginning in February 1943.

