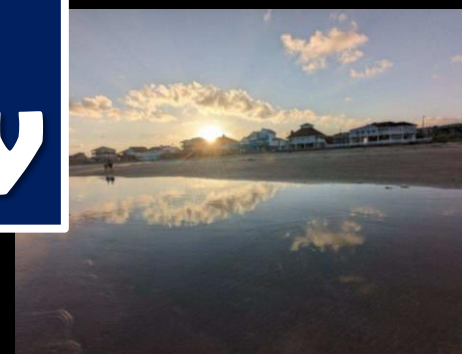


NWS Houston, Texas Annual 2023 Regional Climate Summary

Produced by Jimmy Fowler



Cover Page Photo Credit

The photographs used on the cover of this Annual SE TX Regional Climate Summary, were all taken within the HGX County Warning area during each month of the year. The top left picture on row one starts January and then from left to right we move through the calendar year with the last photograph on the bottom right representing December. NWS Houston Galveston was given permission by the following photographers to use these pictures.

<u>Month</u>	<u>Photographer</u>
January	WFO Houston/Galveston
February	Tim Cady
March	Wendy Wong
April	Jimmy Fowler
May	Jimmy Fowler
June	Jimmy Fowler
July	Wendy Wong
August	Ivan Wong
September	Jimmy Fowler
October	Hayley Adams
November	Jimmy Fowler
December	Josh Lichter

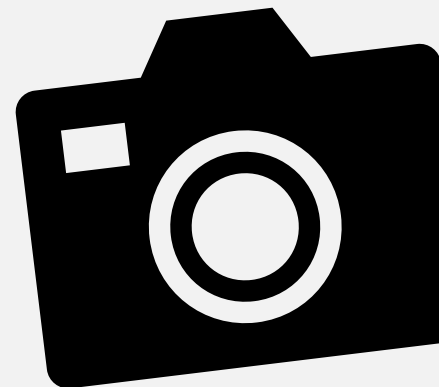


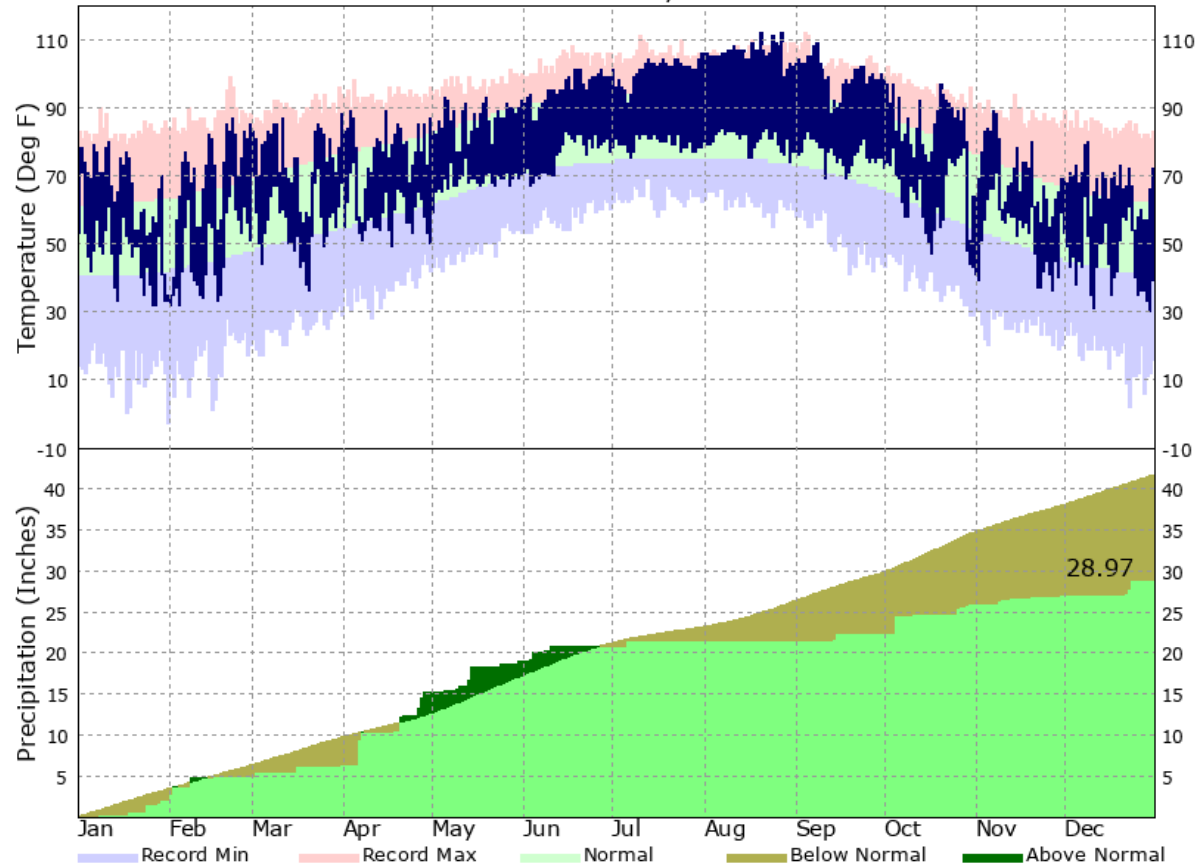
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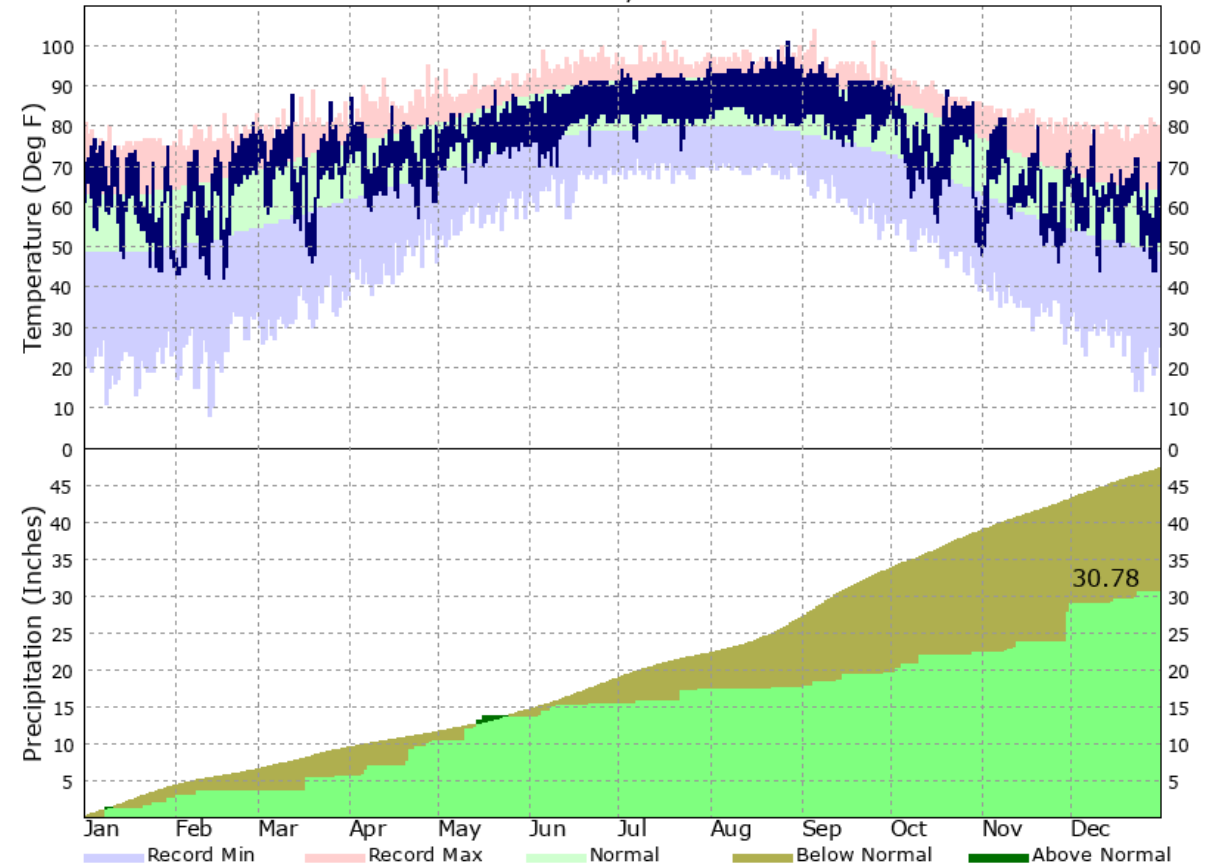


Yearly Temperature and Precipitation Graphs 4

COLLEGE STATION, TX - 2023



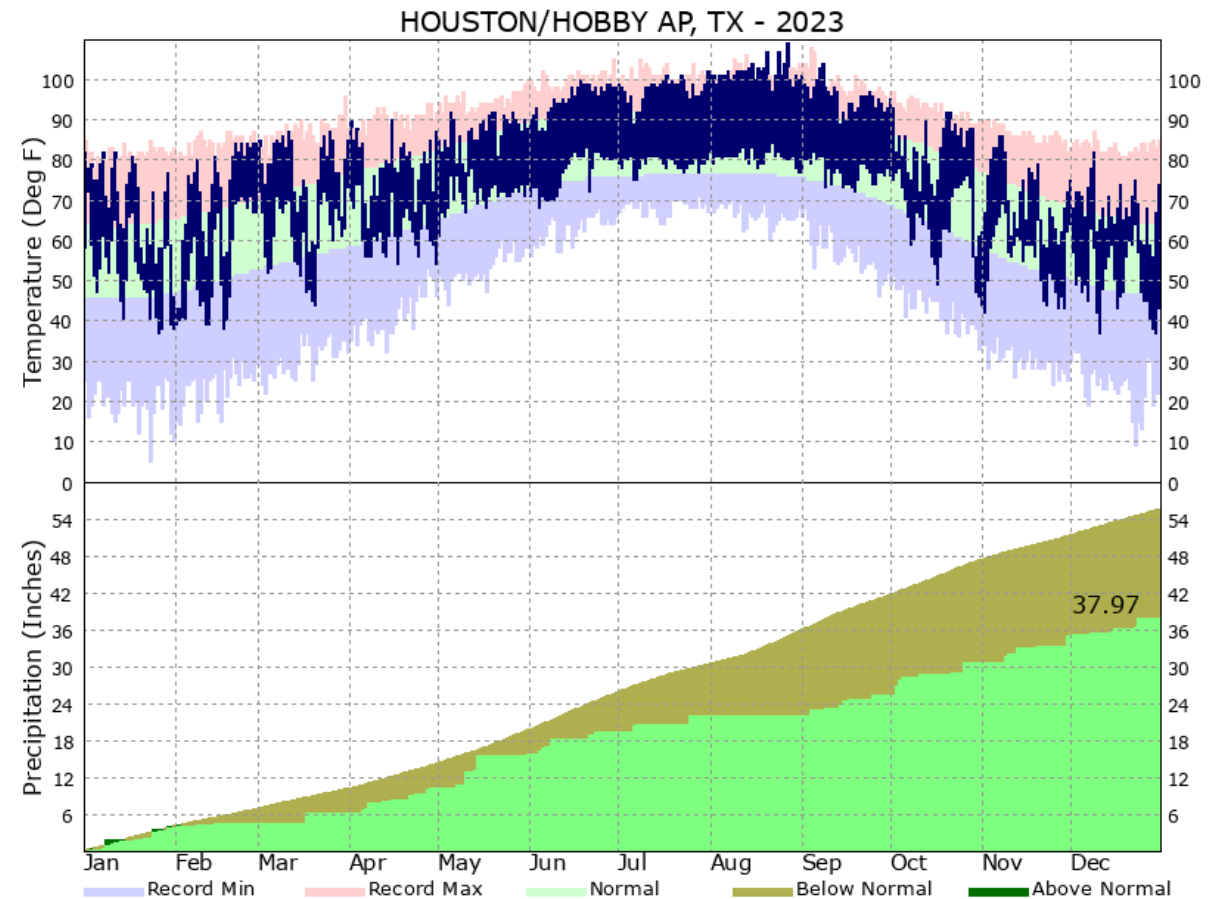
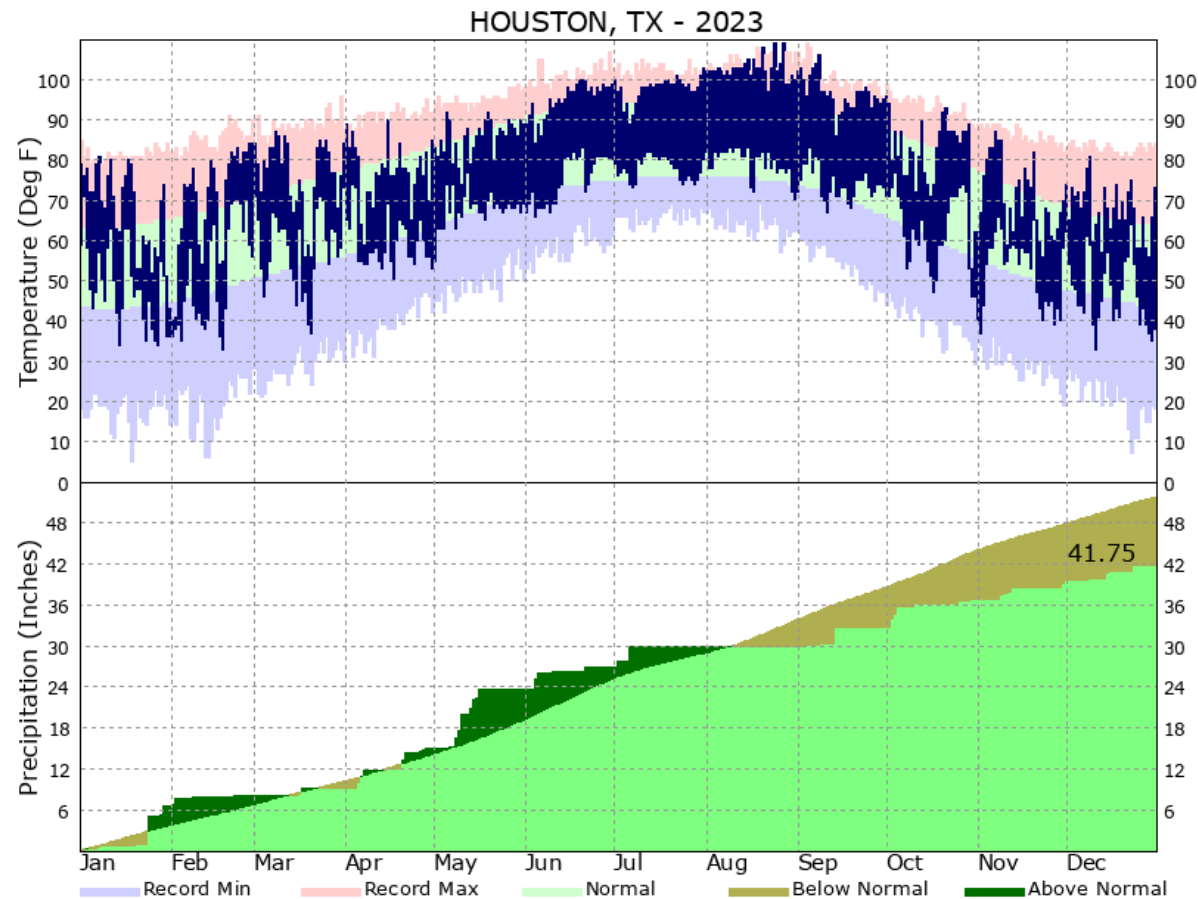
GALVESTON, TX - 2023



Observed temperatures are shown by the dark blue areas, normals with the light green areas, record highs in the light red areas, and record lows in the light blue areas. The bottom portion of the graph indicates the precipitation for the year to date. Periods that have year to date totals above the climatological normals are depicted by dark green areas. Periods that are below normal are represented by the brown areas.

Yearly Temperature and Precipitation Graphs

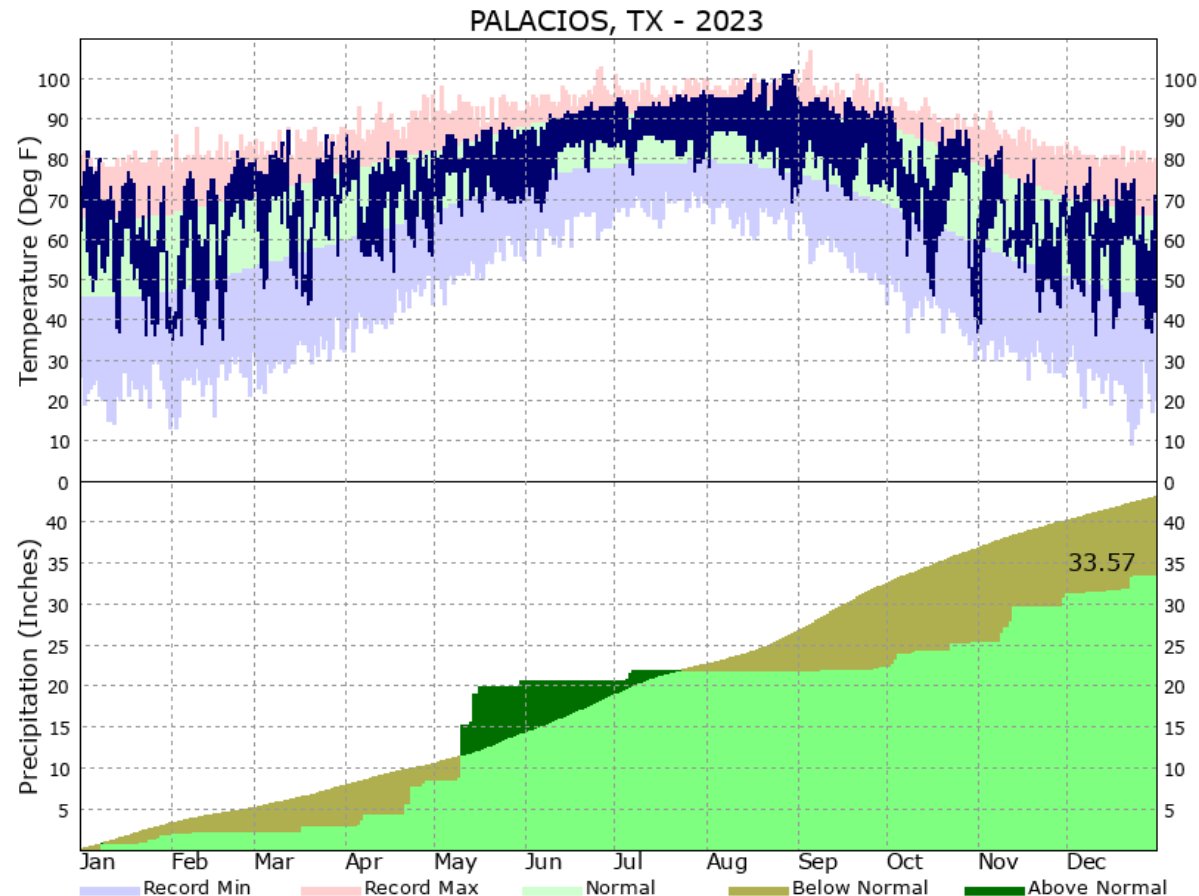
5



Observed temperatures are shown by the dark blue areas, normals with the light green areas, record highs in the light red areas, and record lows in the light blue areas. The bottom portion of the graph indicates the precipitation for the year to date. Periods that have year to date totals above the climatological normals are depicted by dark green areas. Periods that are below normal are represented by the brown areas.

Yearly Temperature and Precipitation Graphs

6



Observed temperatures are shown by the dark blue areas, normals with the light green areas, record highs in the light red areas, and record lows in the light blue areas. The bottom portion of the graph indicates the precipitation for the year to date. Periods that have year to date totals above the climatological normals are depicted by dark green areas. Periods that are below normal are represented by the brown areas.

Significant Annual Statistics – Temperature

Highest Max Temperatures

City of College Station	112°F	August 20 th & 27 th
City of Houston	109°F	August 24 th & 27 th
Houston-Hobby	109°F	August 27 th
City of Galveston	101°F	August 27 th
Palacios	102°F	August 30 th

Lowest Max Temperatures

City of College Station	35°F	Jan 31 st & Feb 1 st
City of Houston	40°F	Feb 1 st
Houston-Hobby	43°F	Feb 1 st & 2 nd
City of Galveston	45°F	Feb 2 nd
Palacios	41°F	Feb 1 st

Annual Average Temperatures

City of College Station	73.0°F	Warmest on Record
City of Houston	72.6°F	Warmest on Record
Houston-Hobby	74.3°F	Warmest on Record
City of Galveston	73.9°F	3 rd Warmest Year on Record
Palacios	73.4°F	Warmest on Record

Highest Min Temperatures

City of College Station	84°F	August 7 th & 22 nd
City of Houston	83°F	6/20, 8/9, 8/11, 8/12, 8/15, 9/5
Houston-Hobby	84°F	August 22 nd
City of Galveston	85°F	8/6,7,9,10,11,12
Palacios	87°F	8/4,5,6,7,9,10,11

Lowest Min Temperatures

City of College Station	31°F	Dec 11 th
City of Houston	33°F	Feb 18 th & Dec 11 th
Houston-Hobby	37°F	Jan 26 th & Dec 11 th
City of Galveston	42°F	Feb 12 th & 17 th
Palacios	34°F	Feb 11 th

Significant Annual Statistics – Precipitation

Annual Total Precipitation		
City of College Station	28.97"	14 th Driest
City of Houston	41.75"	49 th Driest
Houston-Hobby	37.93"	15 th Driest
City of Galveston	30.78"	15 th Driest
Palacios	33.58"	18 th Driest

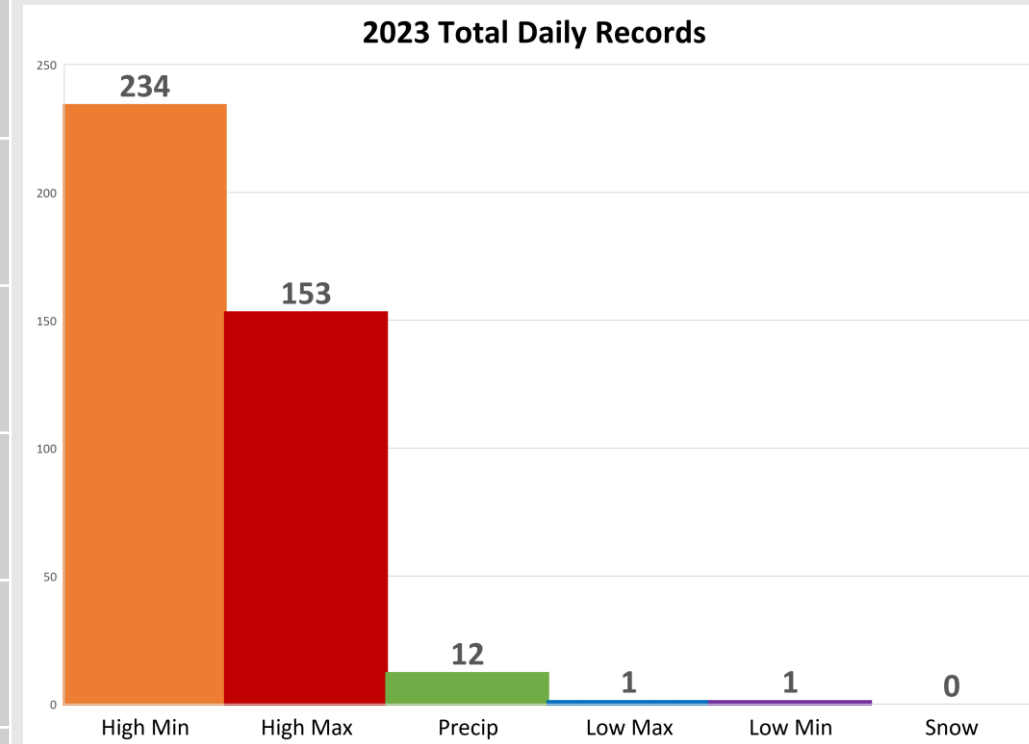
Greatest One Day Total		
City of College Station	3.02"	April 6 th
City of Houston	4.05"	January 24 th
Houston-Hobby	2.45"	May 14 th
City of Galveston	3.93"	November 30 th
Palacios	6.21"	May 10 th

Wettest Month		
City of College Station	8.94"	April
City of Houston	8.66"	May
Houston-Hobby	5.37"	May
City of Galveston	5.37"	November
Palacios	12.01"	May

2023 Daily Records

9

Record	High Max Temperature	Low Max Temperature	High Min Temperature	Low Min Temperature	Precipitation	Snowfall	Total
City of College Station	29	0	55	0	1	0	85
City of Houston	26	0	40	0	2	0	68
Houston-Hobby	43	1	57	0	3	0	104
City of Galveston	28	0	25	0	2	0	55
Palacios	27	0	57	1	4	0	89
Total	153	1	234	1	12	0	401



...Overall Warm Month with Isolated Very Heavy Rainfall...Tornado Outbreak on 1/24...

The exceptional warmth that ended 2022 stuck around through the majority of the start of 2023. Despite a cooler end to the month, overall January was four to six degrees above normal. Areas along the coast and across the northern third of the region saw below normal precipitation for the month, but a swath of heavy rainfall fell from Colorado County up through Polk County with over a foot of rainfall fell in parts of Harris County. This rainfall was able to eliminate the last remaining areas of drought in Southeast Texas. A total of 20 daily records were set across SE Texas with the majority of these being daily high maximin records.

A strong system moved through the area on the 24th that spawned five tornadoes across SE Texas with the strongest one being in Southeast Harris County. This tornado was rated an EF-3 tornado with highest estimate wind speed of 140mph as it passed through the northeast side of Deer Park near the Houston Ship Channel.

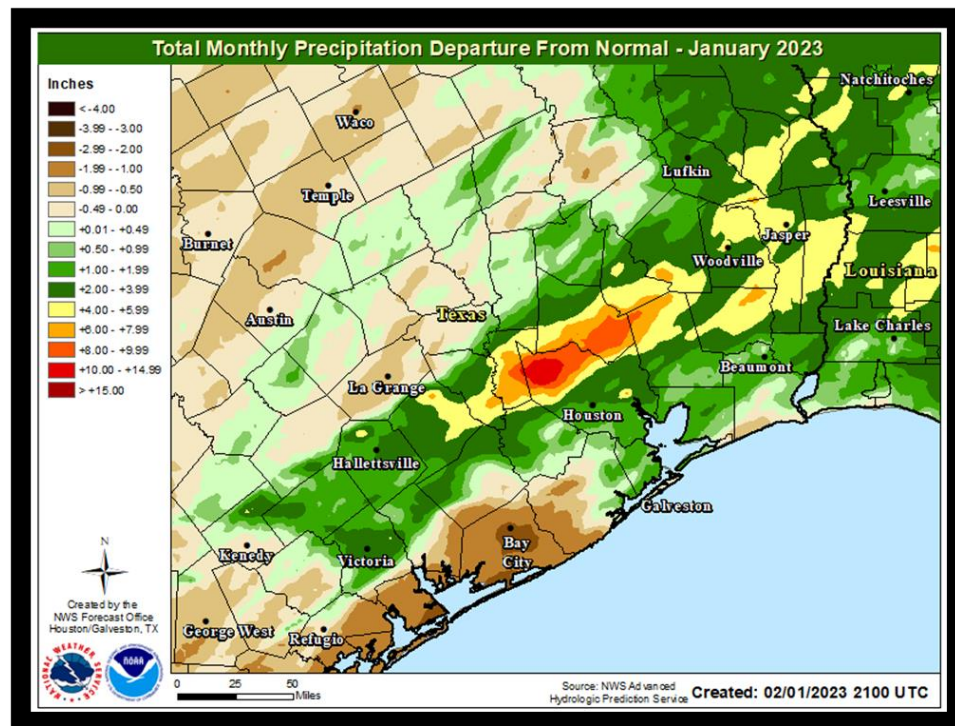
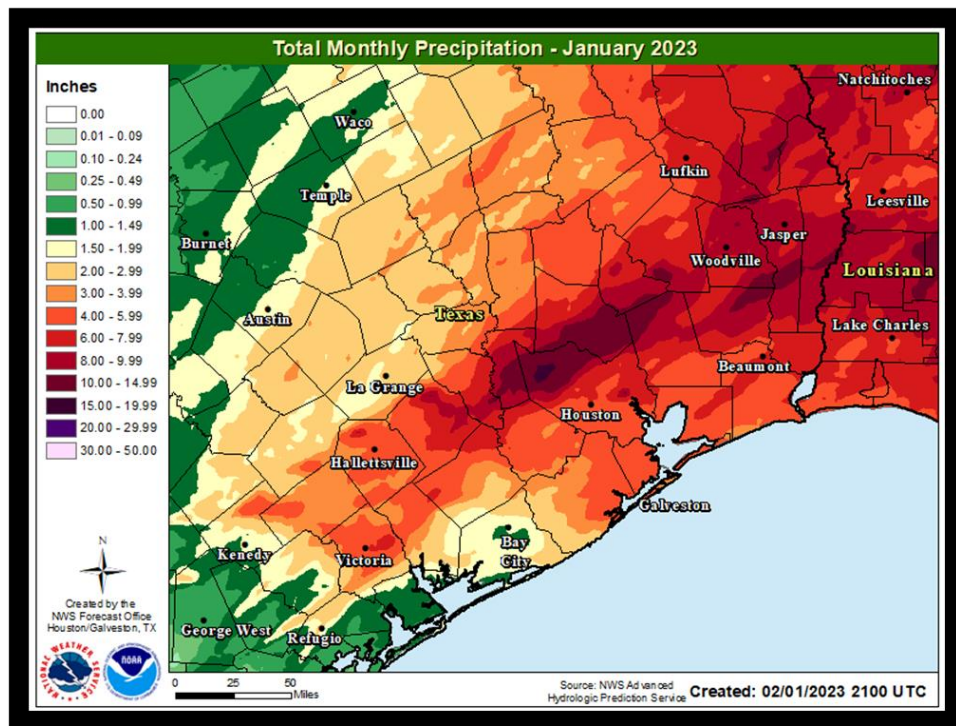
Location	Average High Temp (F)	Average Low Temp (F)	Average Temp (F)	Departure From Normal Average (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	68.1	55.5	61.8	+5.8	77 on the 4 th	44 on the 26 th & 27 th
Houston Hobby (HOU)	69.7	51.7	60.7	+5.7	82 on the 1 st , 7 th & 11 th	37 on the 26 th
City of Houston (IAH)	67.6	48.1	57.9	+4.1	81 on the 7 th	34 on the 27 th
College Station (CLL)	66.0	46.1	56.0	+4.5	80 on the 11 th	32 on the 26 th & 27 th
Palacios (PSX)	69.1	50.3	59.7	+4.1	82 on the 3 rd	36 on the 23 rd & 26 th

January 2023

11



Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	2.67	-1.63	5	1.20	8 th
Houston Hobby (HOU)	3.98	-0.11	6	1.40	8 th
City of Houston (IAH)	5.68	+2.82	5	4.05	24 th
College Station (CLL)	2.04	-1.39	7	0.92	24 th
Palacios (PSX)	1.97	-1.28	2	0.73	8 th





January 24th Tornado Outbreak

12

On January 24th a system moved through SE Texas and produced five tornadoes:

- EF-0 near Eagle Lake
- EF-0 near Needsville
- EF-0 near Pearland
- EF-2 near Cove
- EF-3 in SE Harris County

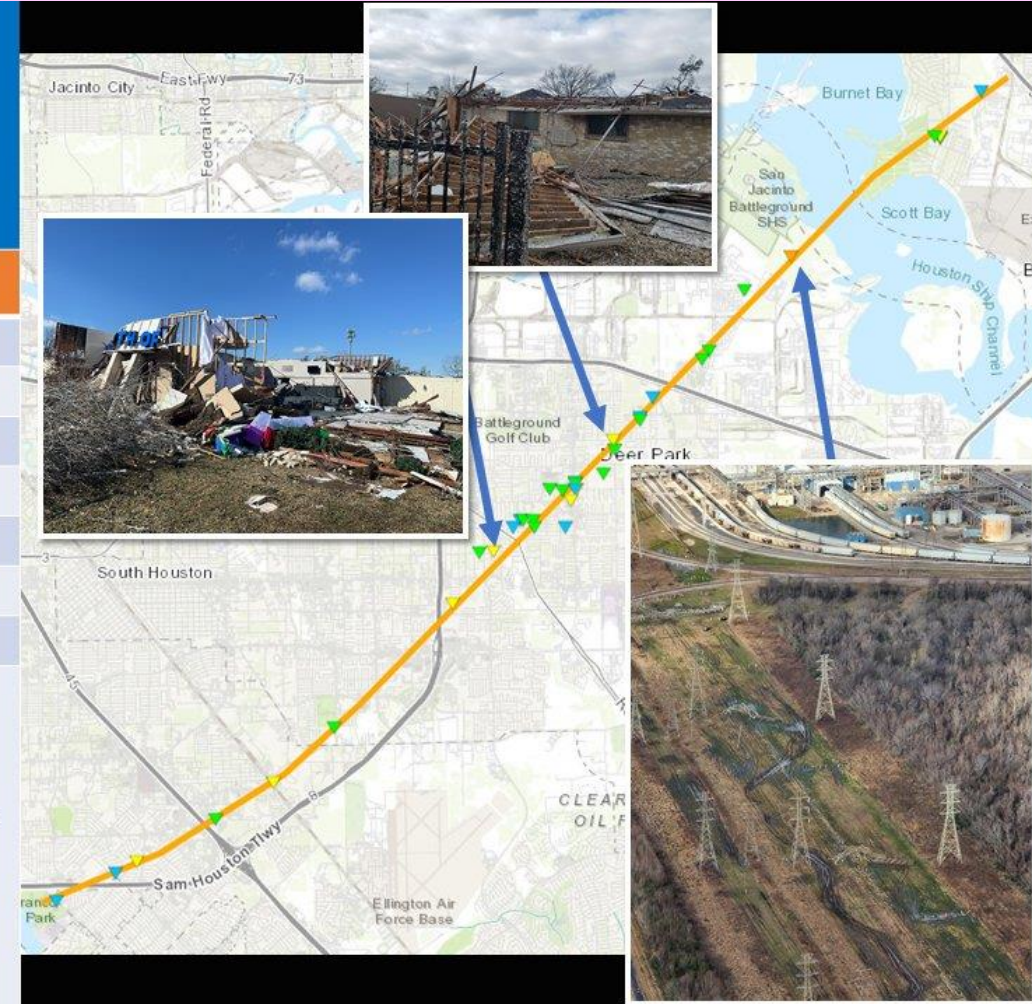
 **NATIONAL WEATHER SERVICE**
OCEANIC AND ATMOSPHERIC ADMINISTRATION
Houston/Galveston, TX

 **Preliminary Storm Information**

Southeast Harris Tornado

Date	01/24/2023
Time (Local)	2:15 PM - 2:50 PM CST
EF Rating	EF3
Est. Peak Winds	140 MPH
Path Length	18.8 Miles
Max Width	1,000 Yards
Injuries/Deaths	Some Minor Injuries/No Deaths

Tornado touched down east of El Franco Lee Park near the Sam Houston Tollway with a near-continuous path of damage extended east-northeast across portions of Southeast Houston, Pasadena, Deer Park and Baytown. Most of the damage was rated EF-0 and EF-1, but there were some spots with EF-2 damage. There were three high tension electrical towers flattened suggesting EF-3 damage northeast of Deer Park near the Houston Ship Channel. Damage became less intense north of Baytown with spotty damage as far north as TX-330 Spur.



...Warm and Dry February...End of La Nina...

After a few months of decent rainfall, Southeast Texas has once again started to dry out with most of the area experiencing one to two inches of rainfall below normal. The exception is across the extreme northern portion of the area where near normal rainfall fell. The dry weather meant that temperatures were around two to four degrees above normal and the return of drought conditions. Moderate Drought (D1) is being reported in parts of Jackson, Matagorda, Brazoria, Austin, and Washington counties. A total of 21 daily temperature records were set this month across SE Texas with all of them being either High Maximum or High Minimum records.

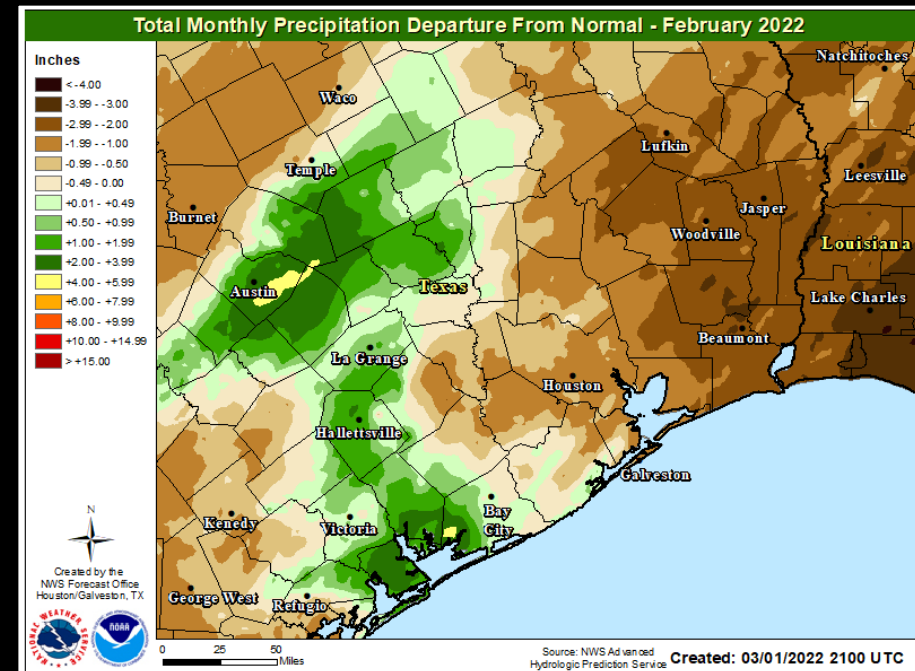
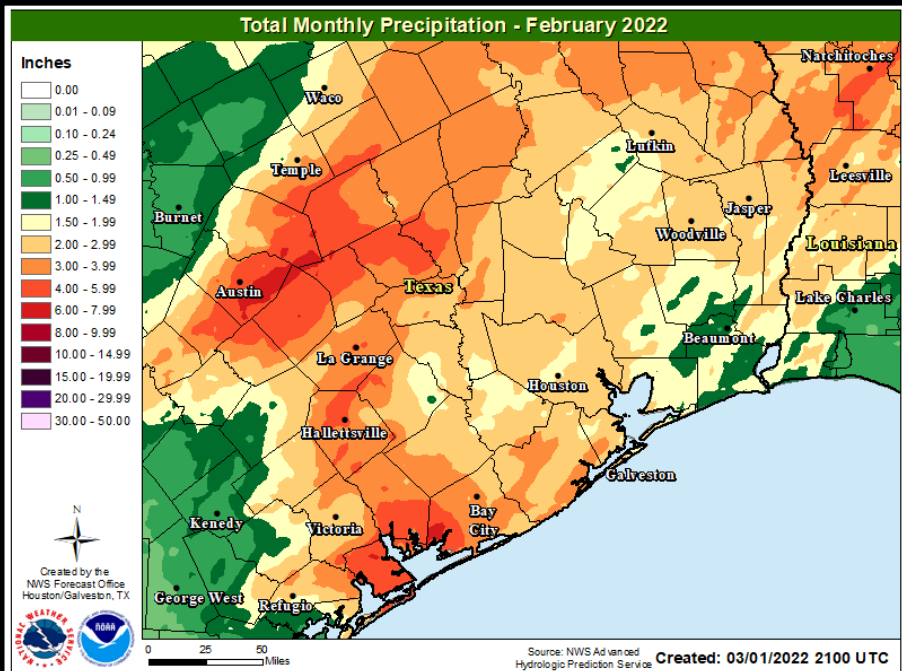
After three years of La Nina conditions in the Pacific Ocean, La Nina is finally coming to an end. ENSO-Neutral conditions are expected to persist through the Spring, and then El Nino conditions developing over the summer.

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)	68.1	55.7	61.9	+2.6	81 on the 27 th	42 on the 12 th & 17 th
Houston Hobby (HOU)	71.9	53.8	62.8	+4.3	84 on the 25 th , 27 th & 28 th	38 on the 17 th
City of Houston (IAH)	70.5	50.4	60.5	+2.8	84 on the 27 th & 28 th	33 on the 18 th
College Station (CLL)	70.1	47.1	58.6	+3.3	87 on the 22 nd	32 on the 1 st & 4 th
Palacios (PSX)	69.4	52.2	60.8	+1.5	82 on the 23 rd	34 on the 11 th





Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	1.08	-1.06	1	0.48	1 st
Houston Hobby (HOU)	0.71	-2.14	0	0.18	14 th
City of Houston (IAH)	1.49	-1.48	1	0.87	2 nd
College Station (CLL)	2.93	+0.03	3	1.03	8 th
Palacios (PSX)	0.30	-1.59	0	0.09	1 st



...Warm and Dry, Again...

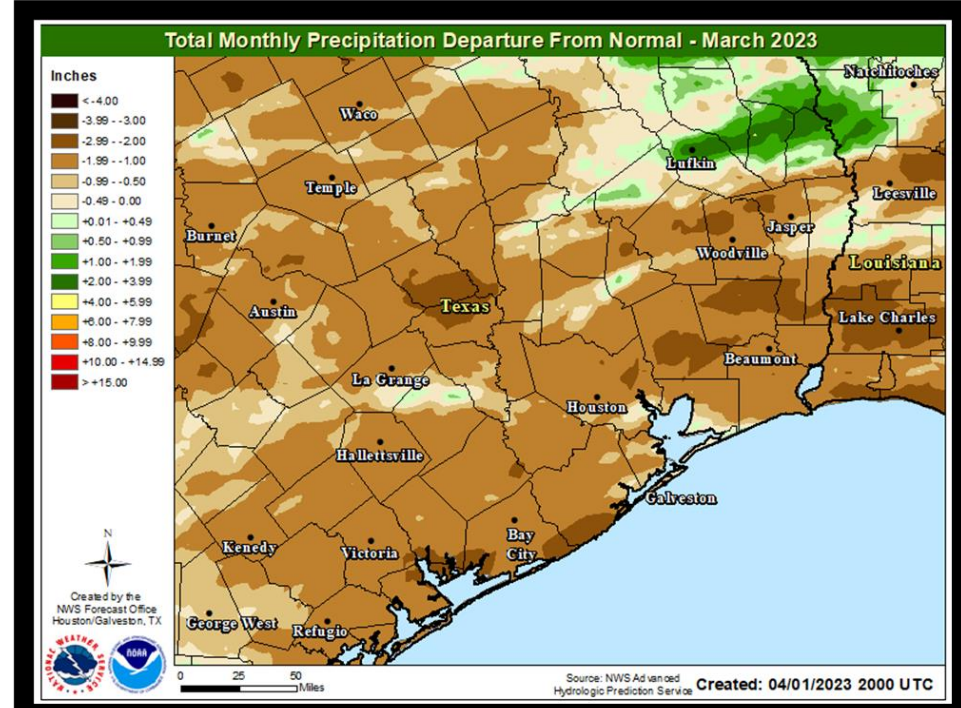
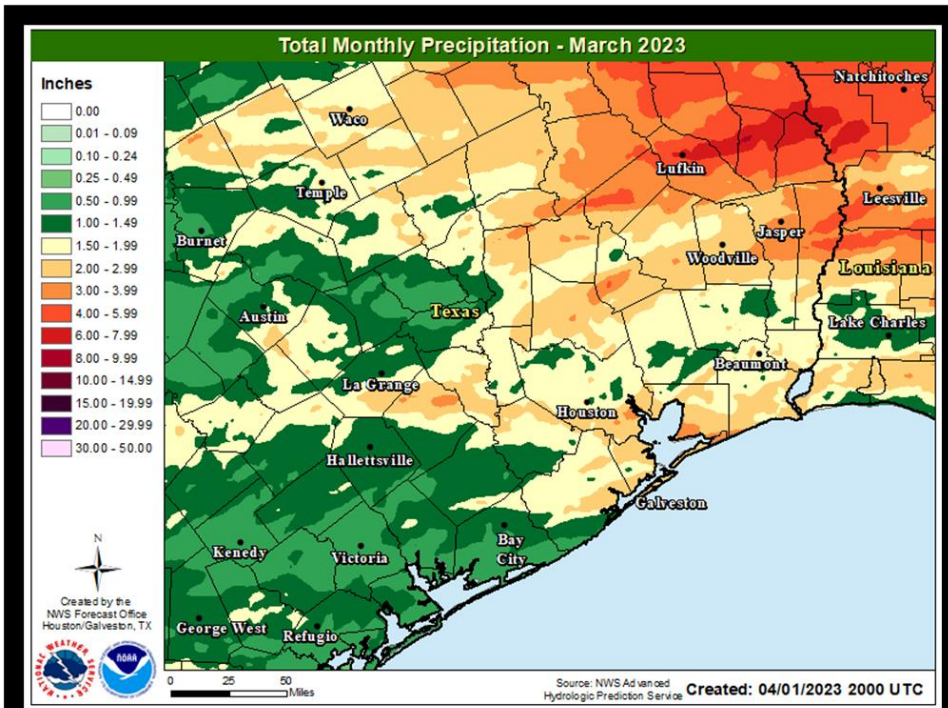
March continued the weather trends of February with continued above normal temperatures and below normal precipitation. Average temperatures across the month were generally around three to five degrees above normal, and there were a total of 37 daily temperature records (all either record high maximum or high minimum temperatures). Precipitation was lacking across the region with averages around one to three inches below normal. Because of these warmer and drier conditions drought conditions expanded across the region with Moderate (D1) to Severe Drought (D2) conditions being reported in parts of the area.



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)	74.8	63.5	69.1	+3.9	88 on the 12 th	46 on the 19 th
Houston Hobby (HOU)	77.6	61.2	69.4	+4.7	87 on the 11 th & 25 th	44 on the 20 th
City of Houston (IAH)	76.8	57.6	67.2	+3.4	87 on the 8 th	37 on the 20 th
College Station (CLL)	75.8	55.5	65.7	+3.6	88 on the 31 st	36 on the 20 th
Palacios (PSX)	76.2	61.0	68.6	+3.6	87 on the 12 th	44 on the 19 th



Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	2.04	-0.98	3	1.75	17 th
Houston Hobby (HOU)	1.78	-1.50	3	1.55	17 th
City of Houston (IAH)	1.15	-3.32	1	0.76	17 th
College Station (CLL)	1.37	-2.04	5	0.65	17 th
Palacios (PSX)	0.77	-1.94	1	0.72	17 th



...Near to slightly below normal temperatures and above normal precipitation...

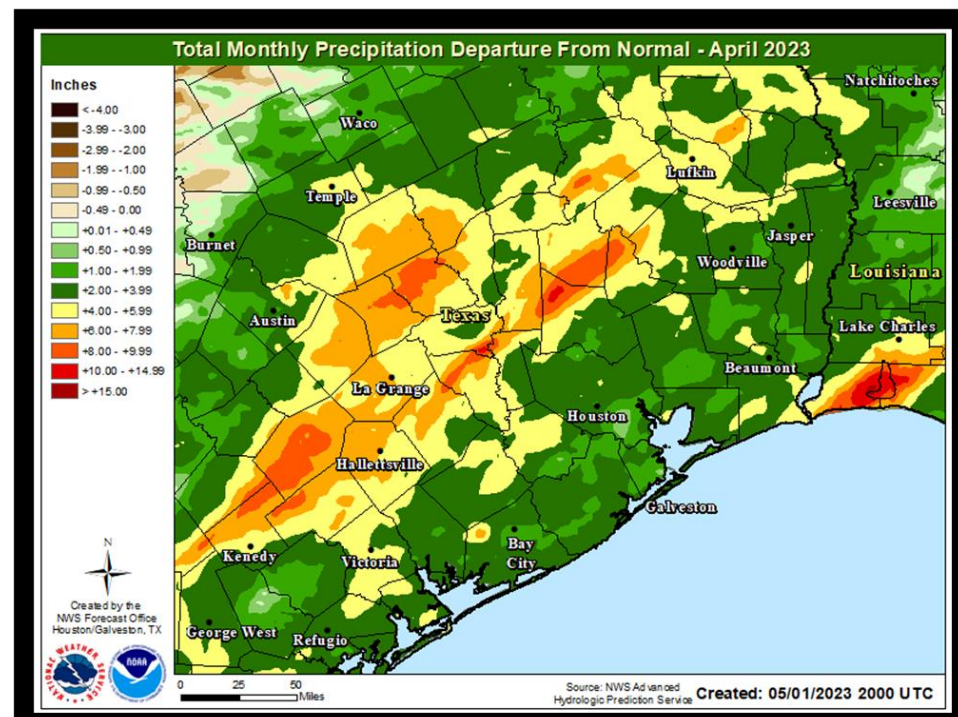
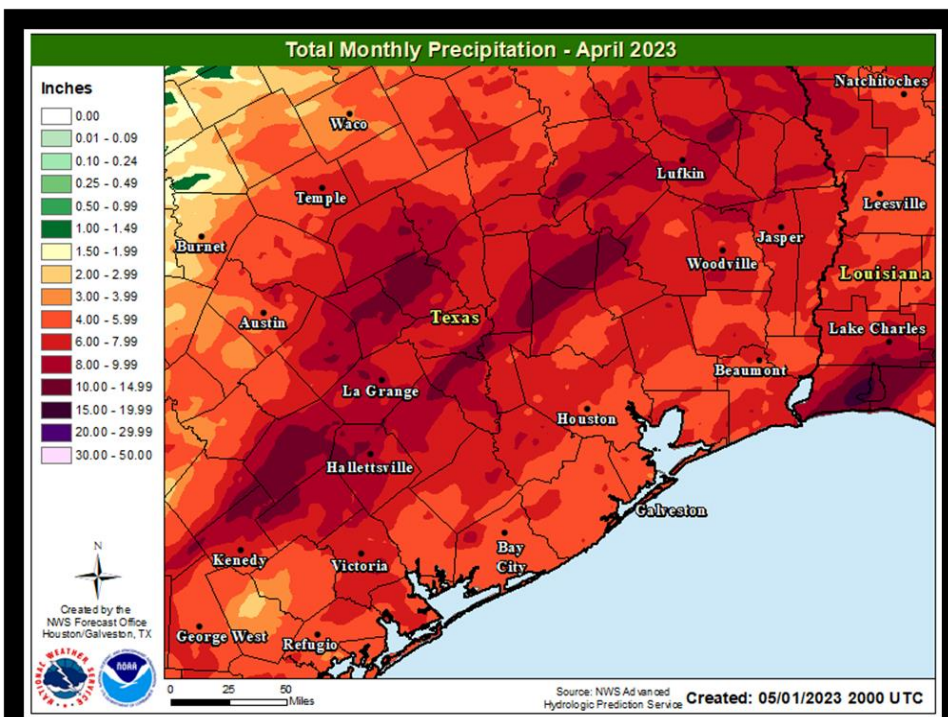
Unlike the other months so far this year, April saw multiple precipitation events leading to above to well above normal rainfall totals for the month. Generally four to six inches of rain fell during the month with swaths of up to nine inches. The continued rainfall and mostly cloudy skies meant temperatures were on the cooler side as well with average temperatures near normal to two degrees below normal. The above normal rainfall led to improvements in the drought conditions across the area with now just some Moderate Drought (D1) in coastal Matagorda County.



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)	74.8	63.5	69.1	+3.9	88 on the 12 th	46 on the 19 th
Houston Hobby (HOU)	77.6	61.2	69.4	+4.7	87 on the 11 th & 25 th	44 on the 20 th
City of Houston (IAH)	76.8	57.6	67.2	+3.4	87 on the 8 th	37 on the 20 th
College Station (CLL)	75.8	55.5	65.7	+3.6	88 on the 31 st	36 on the 20 th
Palacios (PSX)	76.2	61.0	68.6	+3.6	87 on the 12 th	44 on the 19 th



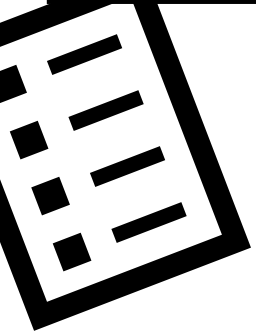
Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	4.67	+2.61	10	1.53	21 st
Houston Hobby (HOU)	4.03	-0.05	9	0.95	7 th
City of Houston (IAH)	5.87	+1.92	10	1.26	20 th
College Station (CLL)	8.94	+6.07	11	3.02	6 th
Palacios (PSX)	5.51	+2.84	9	2.12	23 rd



...Near to slightly above normal temperatures and above normal precipitation...

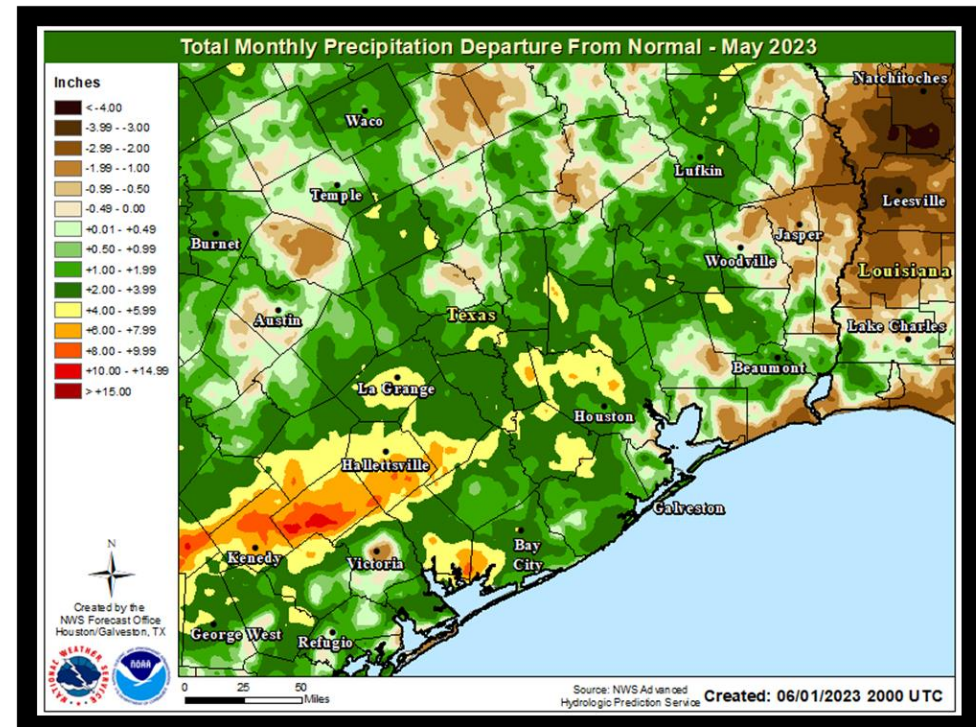
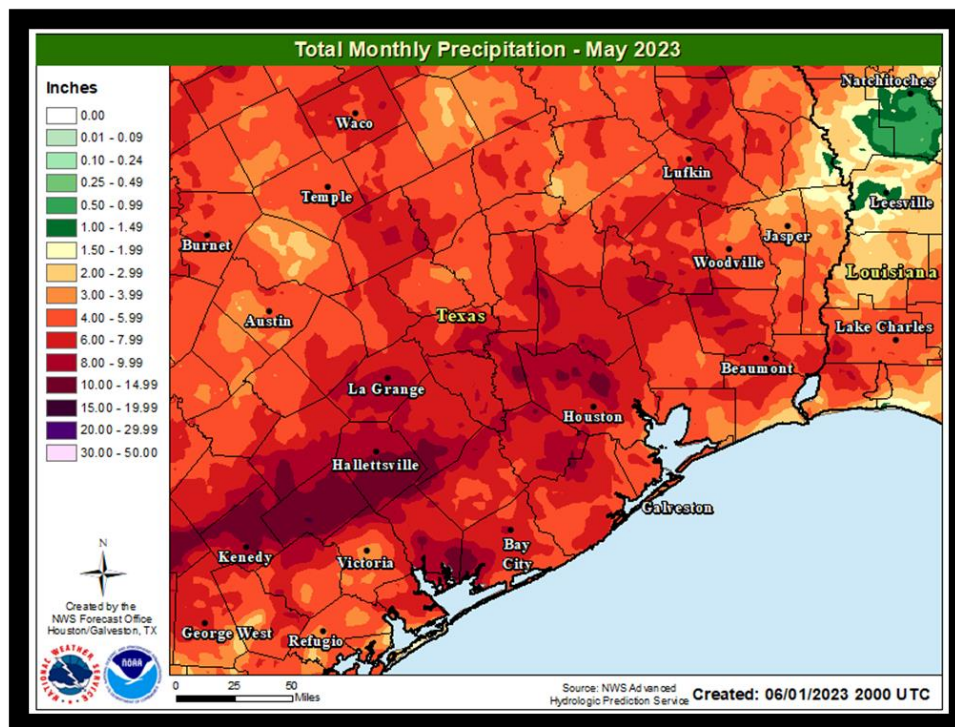
Near to well above normal precipitation continued into the month of May continuing the drought conditions across the region. In fact, there are no areas reporting even drier than normal conditions! The wettest location was Palacios with 12.01" of precipitation for the month – the fourth wettest May on record for the site. Many days of overcast skies led to below normal high temperatures, but above normal low temperatures leading to an overall slight above normal month temperature wise. There was a total of four daily records this month with only one temperature record this month – a high minimum temperature at Houston-Hobby – with the other three daily records being daily rainfall records.

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)	82.7	73.2	78.0	-0.2	89 on the 20 th	66 on the 10 th
Houston Hobby (HOU)	87.0	71.3	79.1	+1.5	92 on the 19 th , 20 th & 26 th	61 on the 1 st
City of Houston (IAH)	85.6	67.7	76.7	-0.7	92 on the 5 th & 19 th	55 on the 1 st
College Station (CLL)	86.8	68.5	77.6	+1.2	93 on the 5 th & 19 th	59 on the 1 st
Palacios (PSX)	78.1	63.0	70.6	-0.8	86 on the 1 st	52 on the 17 th





Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	3.22	+0.18	9	1.53	10 th
Houston Hobby (HOU)	5.37	-0.05	8	2.45	14 th
City of Houston (IAH)	8.66	+3.65	11	2.32	10 th
College Station (CLL)	3.67	-0.93	12	1.54	14 th
Palacios (PSX)	12.01	+8.15	8	6.21	10 th

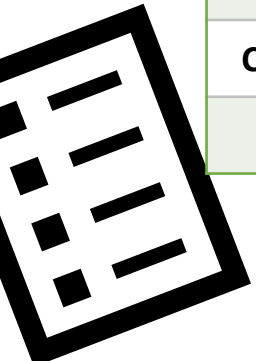


...Hot, Humid, and Dry June led to Drought's Return...

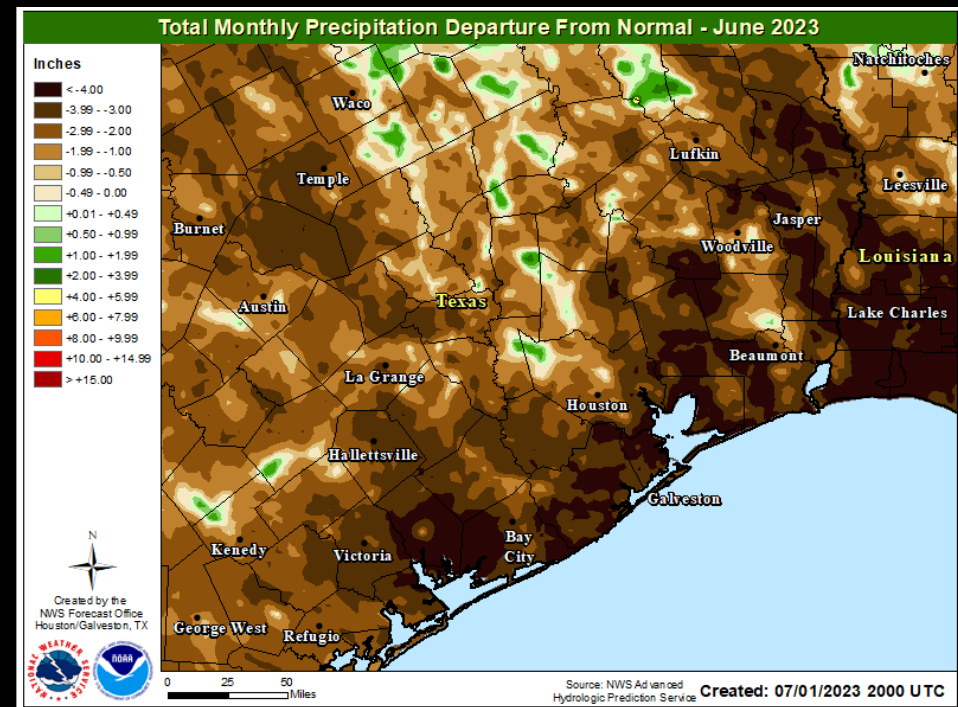
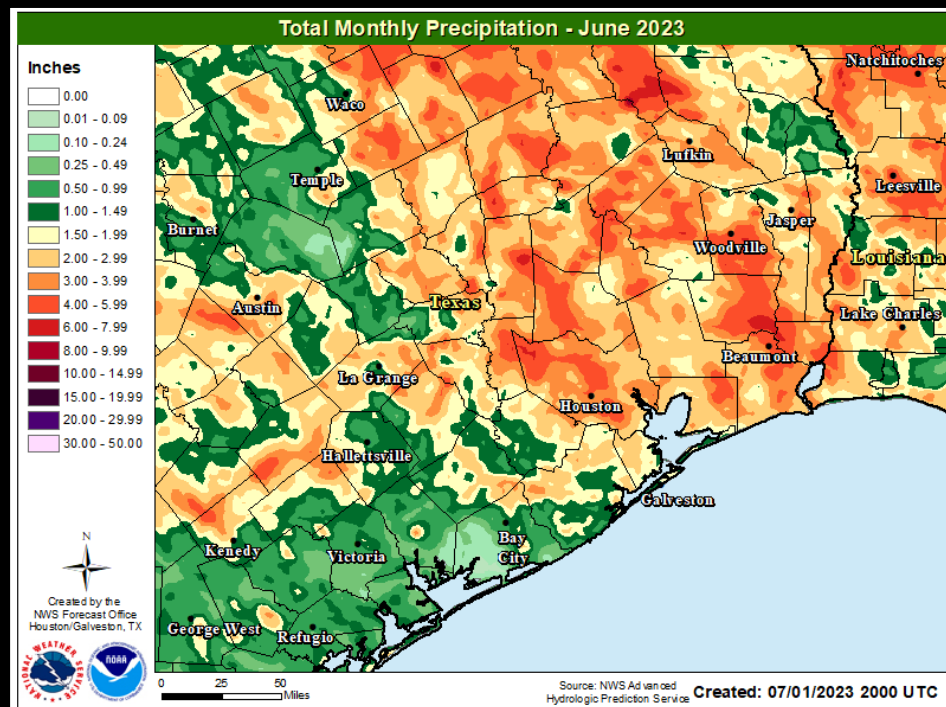
After a few months of above-normal rainfall leading to drought improvements, D0 to D1 drought conditions returned to the area in June, mainly along the coast. The hot and dry conditions were mainly driven by a strong ridge of high pressure that remained over Texas. The region experienced its first triple digit days of the year with heat indices rising to near 115°F. The region did experience severe thunderstorms with a 90mph wind gust near College Station on the 4th, and a 98mph wind gust at Bush Intercontinental – the strongest on record for the station – during the storms on the 21st. Despite these storms, rainfall for the month was about 2 to 4” below normal for most of the region.



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)	88.9	78.1	83.5	-0.3	91 on the 26 th & 30 th	70 on the 4 th & 10 th
Houston Hobby (HOU)	95.2	76.6	85.9	+3.0	100 on the 18 th	68 on the 4 th
City of Houston (IAH)	95.0	75.1	85.1	+2.1	100 on the 19 th , 20 th & 21 st	66 on the 4 th
College Station (CLL)	95.8	76.1	85.9	+3.3	101 on the 18 th , 19 th , 20 th & 27 th	67 on the 3 rd
Palacios (PSX)	90.5	78.8	84.7	+1.1	94 on the 23 rd	67 on the 6 th



Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	1.78	-2.45	4	0.71	8 th
Houston Hobby (HOU)	3.62	-2.47	8	1.28	8 th
City of Houston (IAH)	3.24	-2.76	9	1.32	4 th
College Station (CLL)	1.87	-2.14	5	0.81	4 th
Palacios (PSX)	0.07	-4.48	3	0.03	4 th



...Extreme Heat and Below Normal Rainfall...

This past July either ended up in the top five warmest July's on record at our climate sites, or was the warmest July on record. In fact, Palacios ended up experiencing its warmest month on record out of any month in the year. There were a total of 50 daily records this month with 49 of them either being record high maximum temperatures or record high minimum temperatures. The other record was a daily rainfall record for the City of Houston on the 6th. Although, rainfall was rather lacking across the area this month with the totals for the month around one to three inches below normal. The combined extreme heat and below normal precipitation led to the expansion of the drought across the area with Severe Drought now being reported.

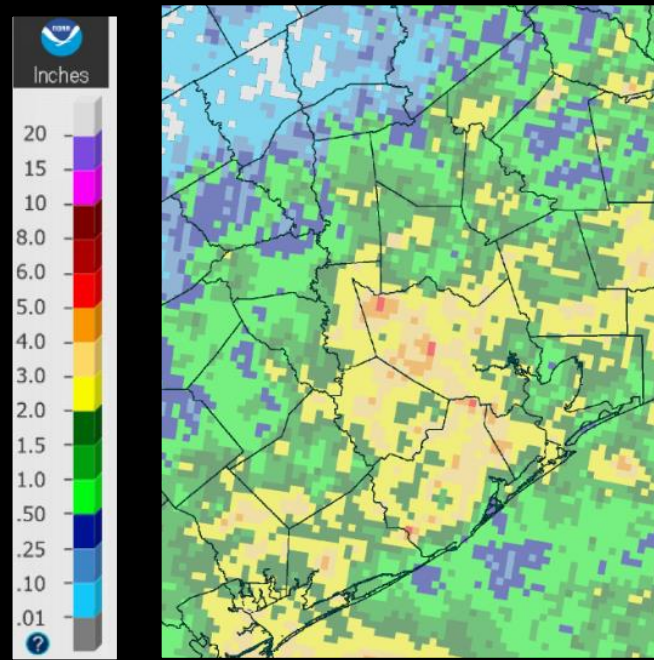


Location	Average High Temp (F)	Average Low Temp (F)	Average Temp (F)	Departure From Normal Average (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	91.7	81.2	86.5	+1.0	94 on the 2 nd & 31 st	74 on the 22 nd
Houston Hobby (HOU)	97.5	79.0	88.3	+3.5	102 on the 31 st	75 on the 6 th & 7 th
City of Houston (IAH)	97.7	77.8	87.8	+2.7	103 on the 31 st	73 on the 7 th
College Station (CLL)	101.0	79.4	90.2	+5.1	106 on the 31 st	75 on the 7 th
Palacios (PSX)	93.8	82.9	88.4	+3.0	97 on the 31 st	76 on the 7 th

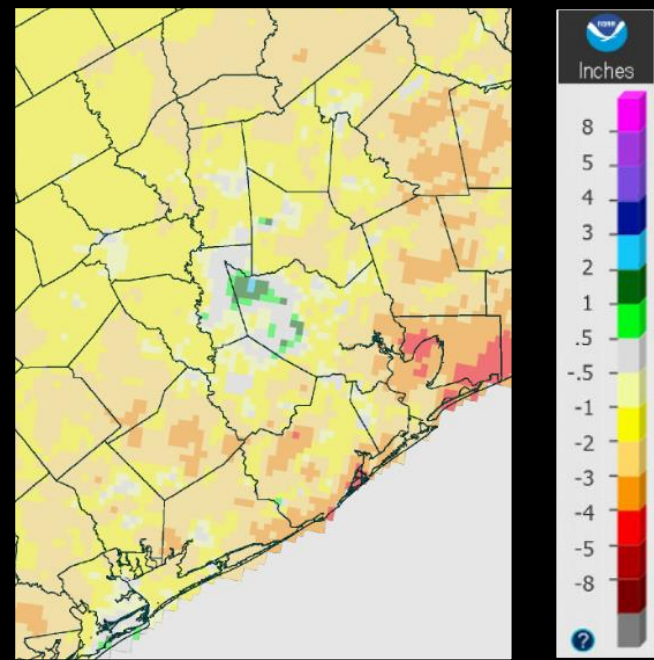
Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	1.99	-1.42	6	1.37	22 nd
Houston Hobby (HOU)	2.75	-1.84	10	1.58	25 th
City of Houston (IAH)	2.98	-0.79	4	2.18	6 th
College Station (CLL)	0.65	-1.33	3	0.64	6 th
Palacios (PSX)	1.26	-2.41	7	0.80	6 th



July Total Precipitation



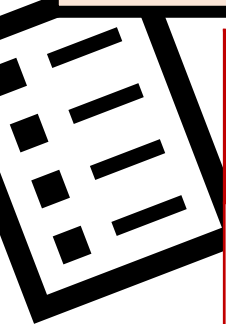
July Precipitation Departure from Normal

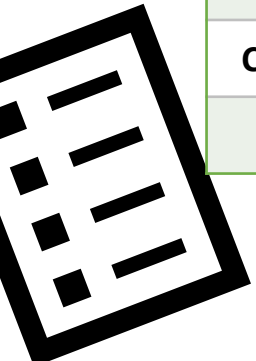


...Record Break Heat...Emergence of Exceptional Drought

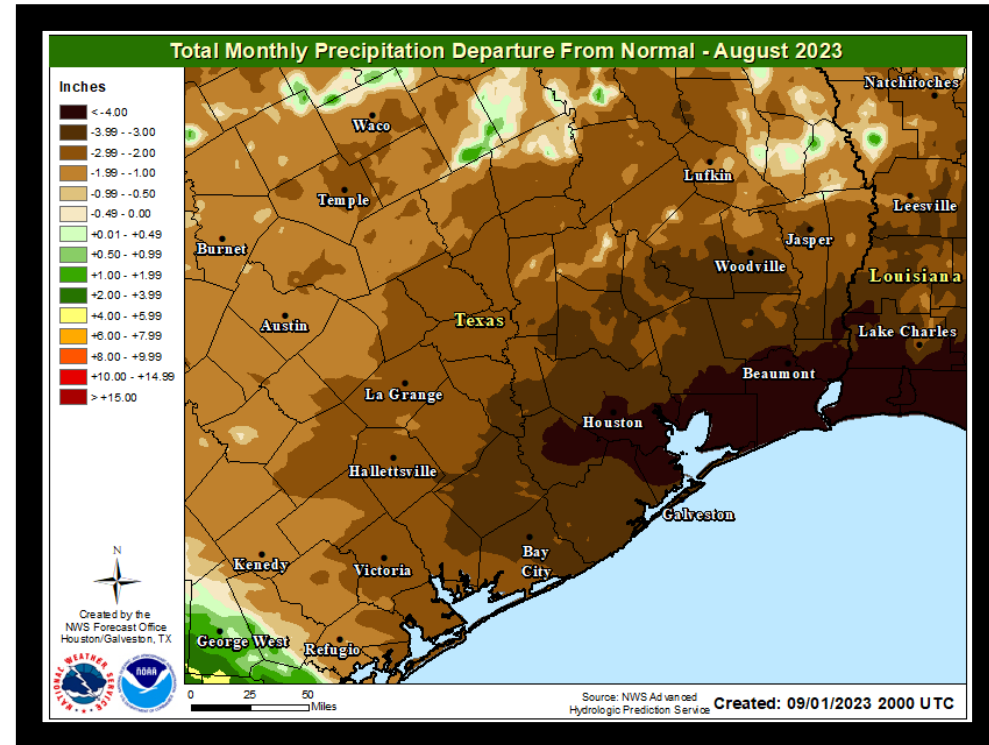
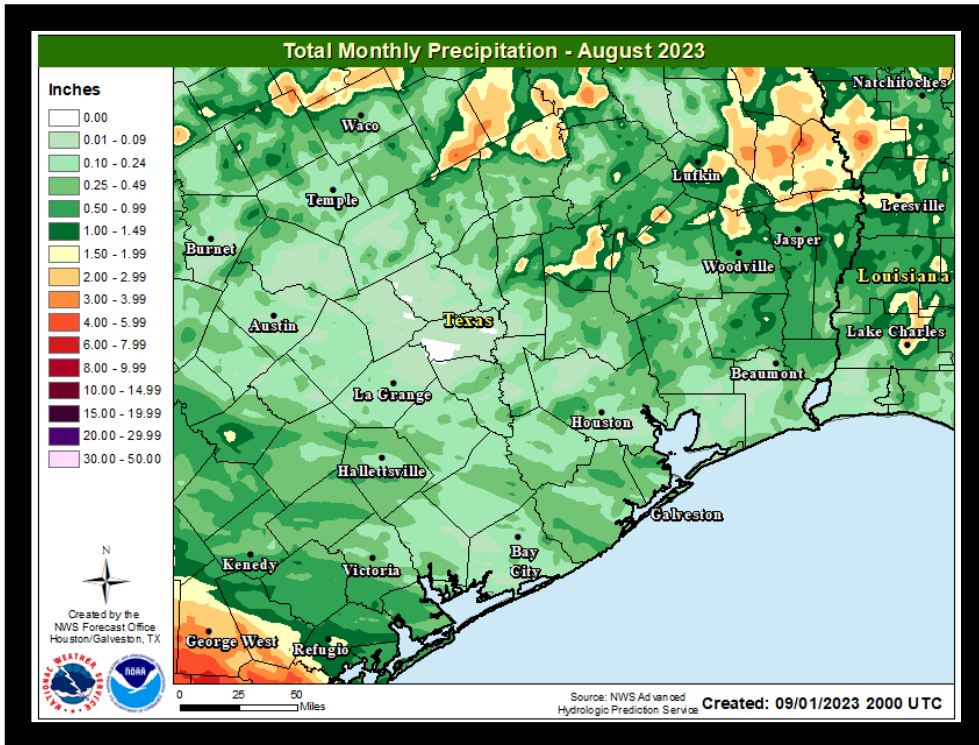
August broke almost every type of high temperature record possible. Not only did most locations experience their hottest month on record, but the City of College Station (112°F), City of Houston (109°F), and Houston-Hobby (109°F) either tied or set new all-time daily high temperatures. City of College Station and Houston-Hobby shattered the previous number of consecutive triple digit heat days. The extreme heat was only made worse by the extreme lack of precipitation. Houston-Hobby and Palacios both had there driest August's on record, and most of the area saw rainfall totals between three and six inches below normal. The combination of extreme heat and no rainfall led to an explosion of drought conditions across the area with the entire region now in at least Extreme Drought (D3) and areas along the coast in Exceptional Drought (D4) – the worst drought category.

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)	94.7	82.6	88.6	+2.7	101 on the 27 th	80 on the 27 th , 30 th & 31 st
Houston Hobby (HOU)	101.8	80.6	91.2	+6.1	109 on the 27 th	77 on the 31 st
City of Houston (IAH)	102.7	79.4	91.0	+5.8	109 on the 24 th & 27 th	70 on the 31 st
College Station (CLL)	106.2	80.2	93.3	+7.6	112 on the 20 th & 27 th	74 on the 30 th
Palacios (PSX)	96.9	82.1	89.5	+3.9	102 on the 30 th	69 on the 30 th





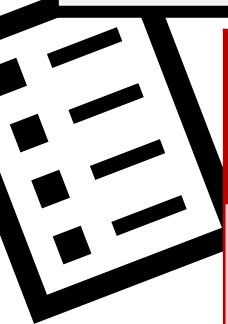
Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	0.27	-4.44	0	0.27	22 nd
Houston Hobby (HOU)	Trace	-5.44	1	Trace	22 nd , 24 th & 27 th
City of Houston (IAH)	0.01	-4.83	1	0.01	24 th
College Station (CLL)	0.06	-3.04	1	0.04	27 th
Palacios (PSX)	0.02	-3.89	0	0.02	22 nd



...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.

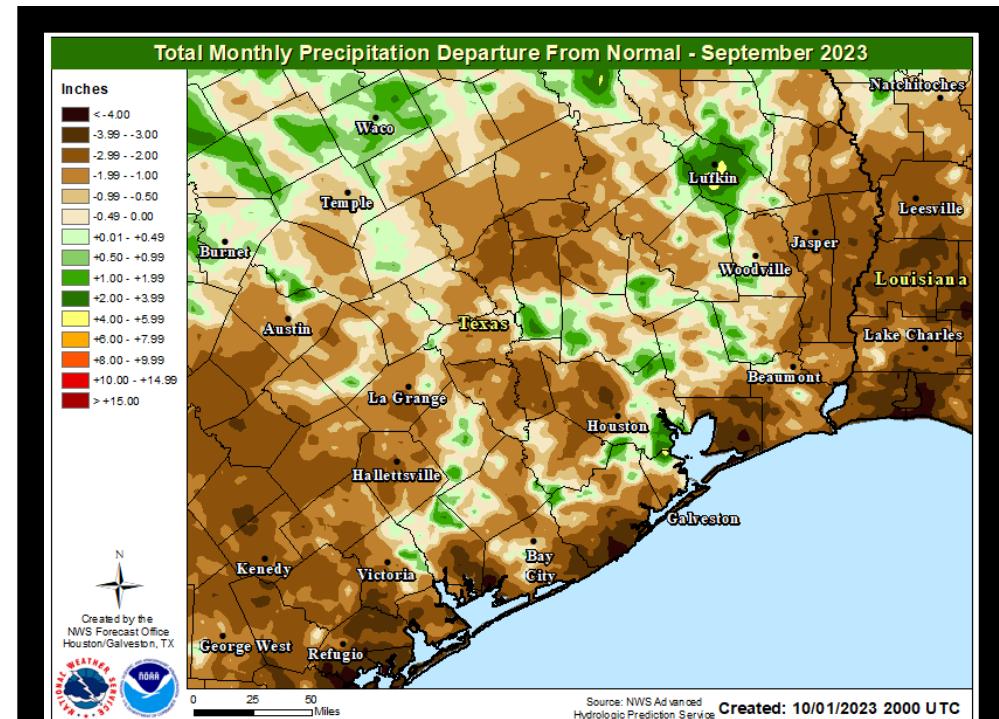
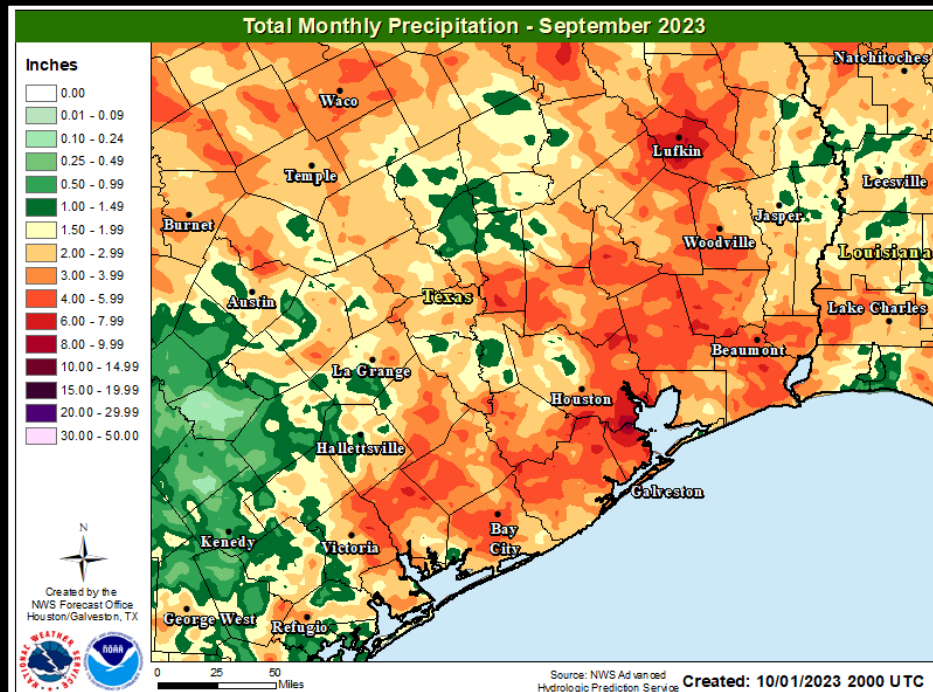
Location	Average High Temp (F)	Average Low Temp (F)	Average Temp (F)	Departure From Normal Average (F)	Maximum Temperature (F)	Minimum Temperature (F)
Galveston (GLS)	91.5	79.9	85.7	+3.3	96 on the 8 th	75 on the 15 th & 18 th
Houston Hobby (HOU)	95.9	76.9	86.4	+5.3	104 on the 8 th	72 on the 19 th
City 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



September 2023

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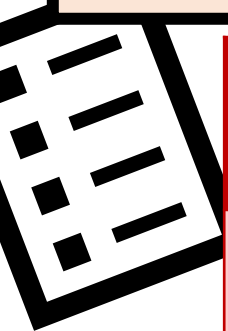
Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	2.01	-4.64	10	0.71	15 th
Houston Hobby (HOU)	3.31	-2.45	9	3.50	15 th
City of Houston (IAH)	2.77	-1.94	8	2.20	14 th
College Station (CLL)	0.85	-2.65	7	0.67	15 th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



...Finally a break from the heat...Drastic drought improvements...

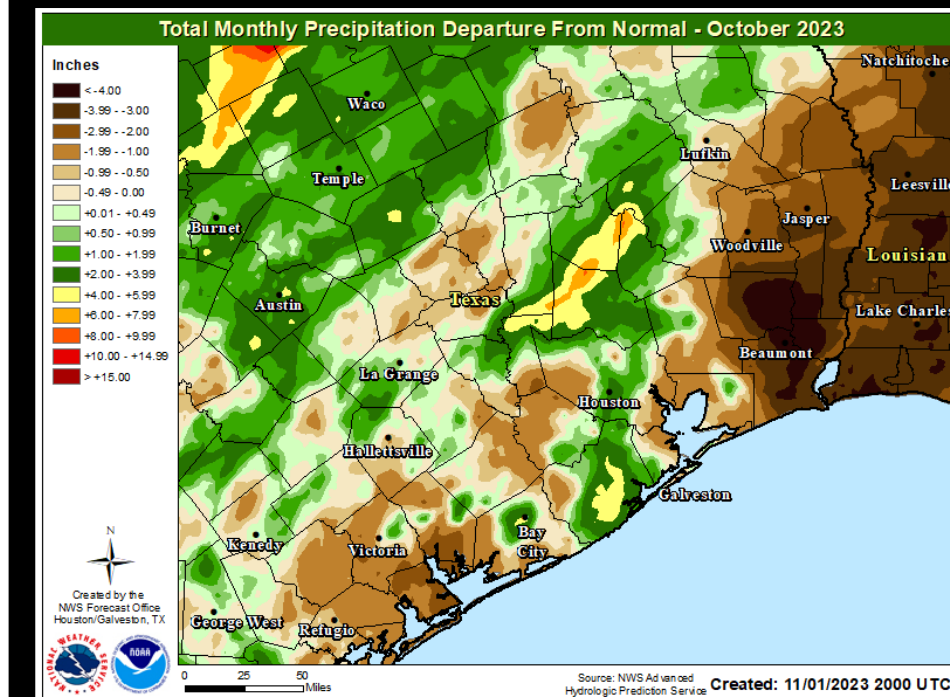
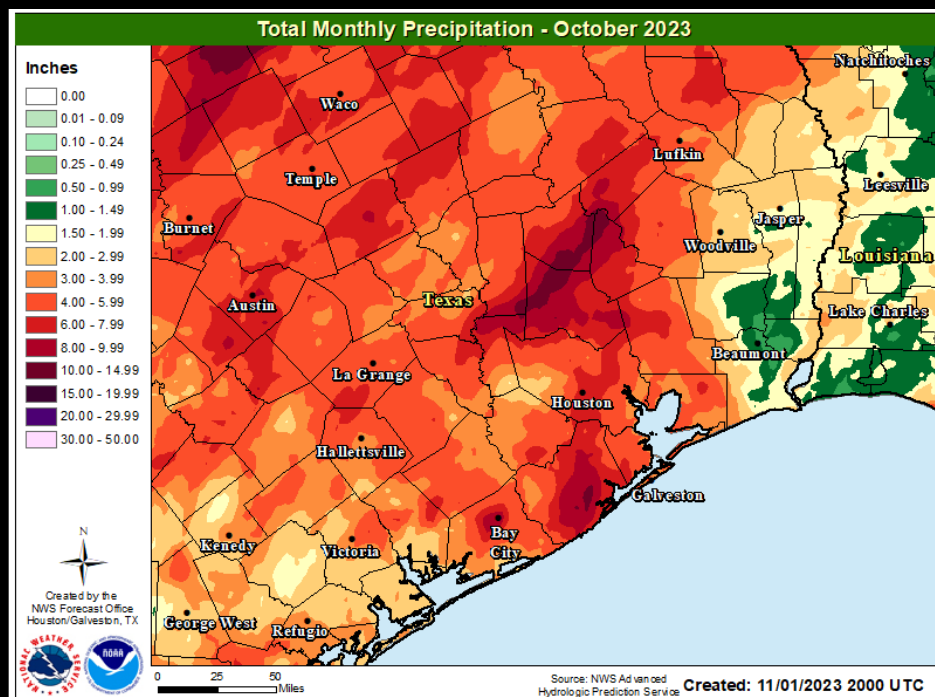
After months on end of extremely hot and dry conditions, October finally broke the streak. The start of the month was near to slightly above normal temperatures, but then the season's first strong cold front at the end of the month brought below normal temperatures. There were multiple days of scattered showers and thunderstorms producing locally heavy downpours. Most of the area generally saw three to six inches of rainfall, but there were isolated amounts as high as nine to ten inches. This led to drastic drought improvements across the area with no areas of Exceptional Drought (D4) reported by the end of the month with just some isolated spots with Extreme Drought (D3).

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)	80.6	69.0	74.8	-0.5	90 on the 1 st & 2 nd	50 on the 31 st
Houston Hobby (HOU)	82.3	65.5	73.9	+0.9	95 on the 1 st	46 on the 31 st
City of Houston (IAH)	82.1	62.3	72.2	+0.4	96 on the 1 st	46 on the 30 th & 31 st
College Station (CLL)	84.8	63.5	74.2	+3.1	98 on the 1 st	43 on the 31 st
Palacios (PSX)	81.4	64.5	73.0	-0.9	93 on the 2 nd	41 on the 31 st





Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	2.47	-2.41	3	1.21	11 th
Houston Hobby (HOU)	5.35	-0.53	4	1.72	26 th
City of Houston (IAH)	4.07	-1.39	3	1.17	3 rd
College Station (CLL)	3.72	-1.21	2	2.19	5 th
Palacios (PSX)	3.05	-1.28	2	0.82	23 rd

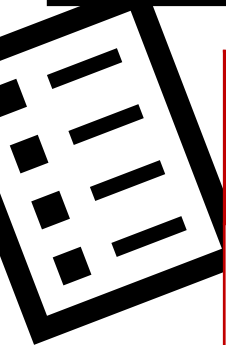


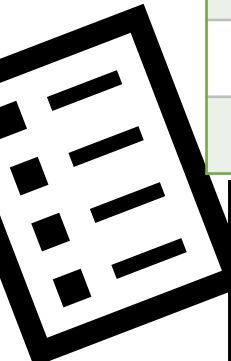
November 2023

...Near to Slight Below Normal Temperatures...More Drought Improvements...

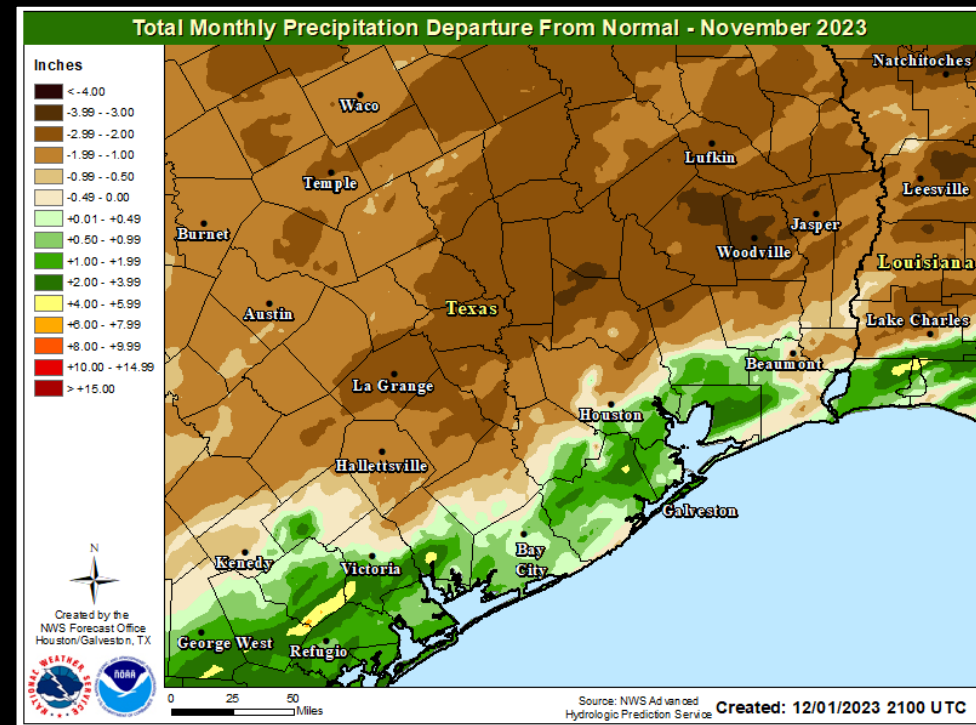
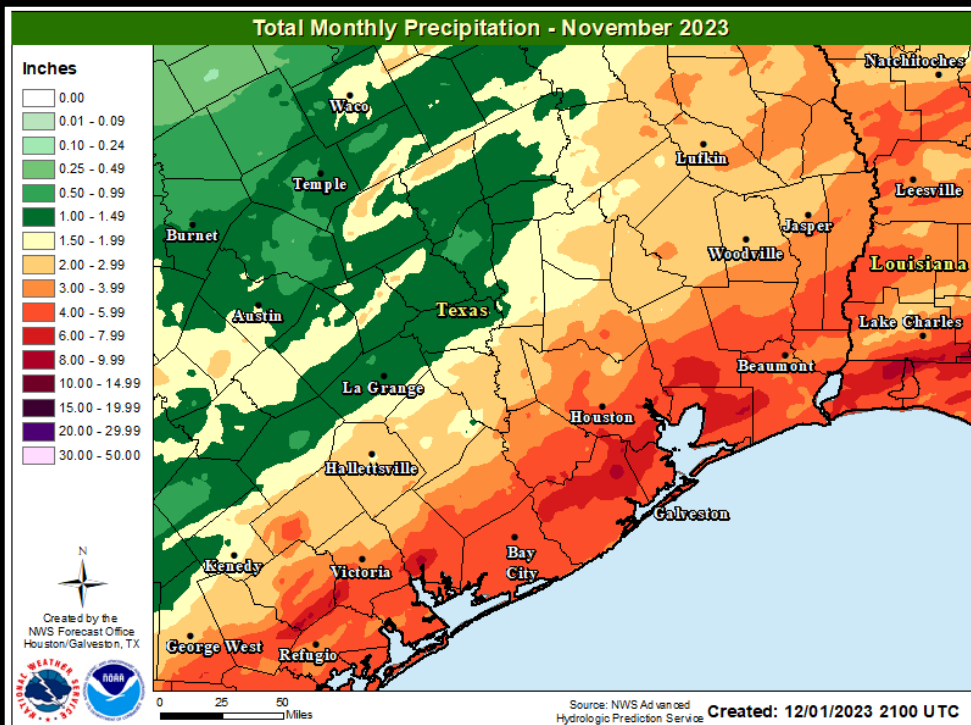
Multiple cold fronts moved through the area during the month of November leading to near to slightly below cooler than normal temperatures. The coolest temperatures were experienced along the coastal counties where the highest rainfall totals fell. Areas along and south of I-10 received around three to six inches of rain fall, while areas to the north ranged from one to three inches. Drought conditions further improved across the region with now only portions of Chambers and Liberty counties in the Extreme Drought (D3) category.

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)	69.2	58.0	63.6	-1.9	83 on the 4 th	44 on the 20 th
Houston Hobby (HOU)	70.4	54.0	62.2	-1.1	87 on the 6 th & 8 th	41 on the 13 th
City of Houston (IAH)	70.0	51.2	60.6	-1.4	86 on the 6 th & 7 th	36 on the 13 th
College Station (CLL)	68.8	51.0	59.9	-0.5	87 on the 7 th	35 on the 13 th & 20 th
Palacios (PSX)	70.1	54.6	62.3	-2.3	86 on the 7 th	38 on the 13 th





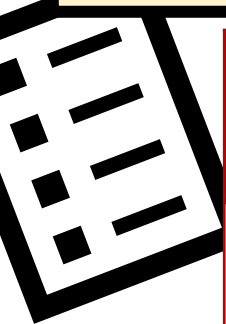
Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	5.37	+1.09	1	3.93	30 th
Houston Hobby (HOU)	4.36	+0.46	1	1.67	30 th
City of Houston (IAH)	2.36	-1.51	0	0.59	9 th
College Station (CLL)	0.94	-2.37	0	0.24	9 th
Palacios (PSX)	5.39	+2.00	1	1.11	9 th



...Slightly Above Normal Temperatures...Another Below Normal Month for Rainfall...

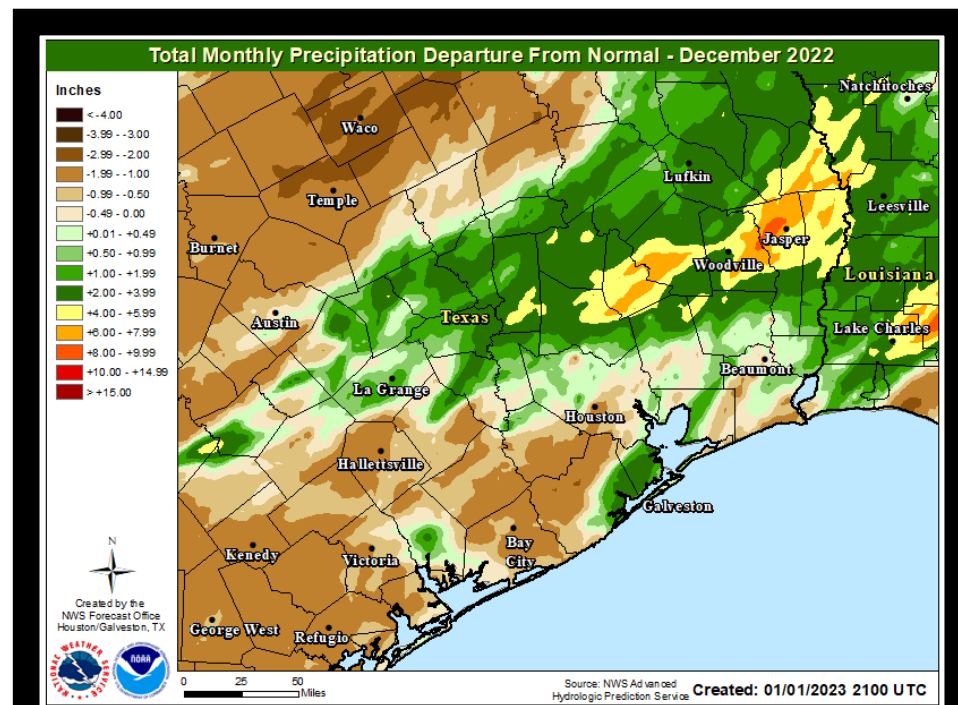
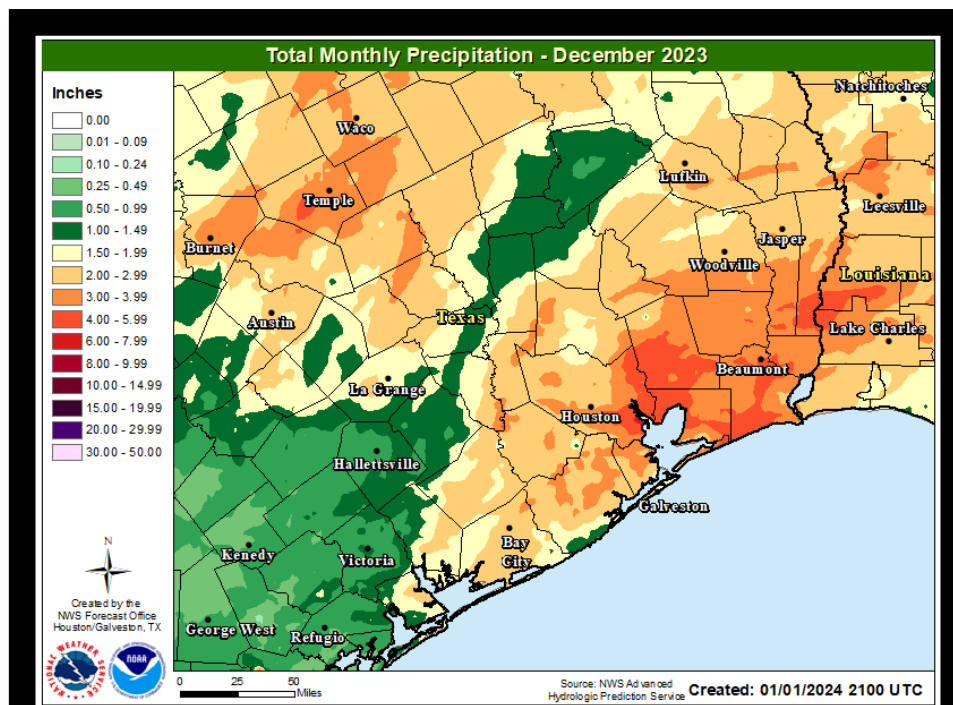
2023 ended rather quietly weather-wise after our record filled year. There was only one daily record set in our area this month, a daily rainfall record at Galveston on the 1st of the month. While there were no temperature records set this month, the month on average was about one to two degrees above normal temperature wise. There were a few cold fronts that passed through the area this month, but they didn't produce much rainfall for the area except along the coast. Because of this, drought conditions worsened north of Conroe, but improved along the coast through the month.

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)	66.5	55.1	60.8	+2.3	79 on the 9 th	44 on the 29 th & 30 th
Houston Hobby (HOU)	68.2	50.2	59.2	+2.3	82 on the 9 th	37 on the 11 th & 30 th
City of Houston (IAH)	67.7	47.0	57.3	+1.9	81 on the 9 th	33 on the 11 th
College Station (CLL)	67.2	44.8	56.0	+2.9	80 on the 9 th	30 on the 30 th
Palacios (PSX)	68.7	49.5	59.1	+1.1	78 on the 9 th	36 on the 11 th



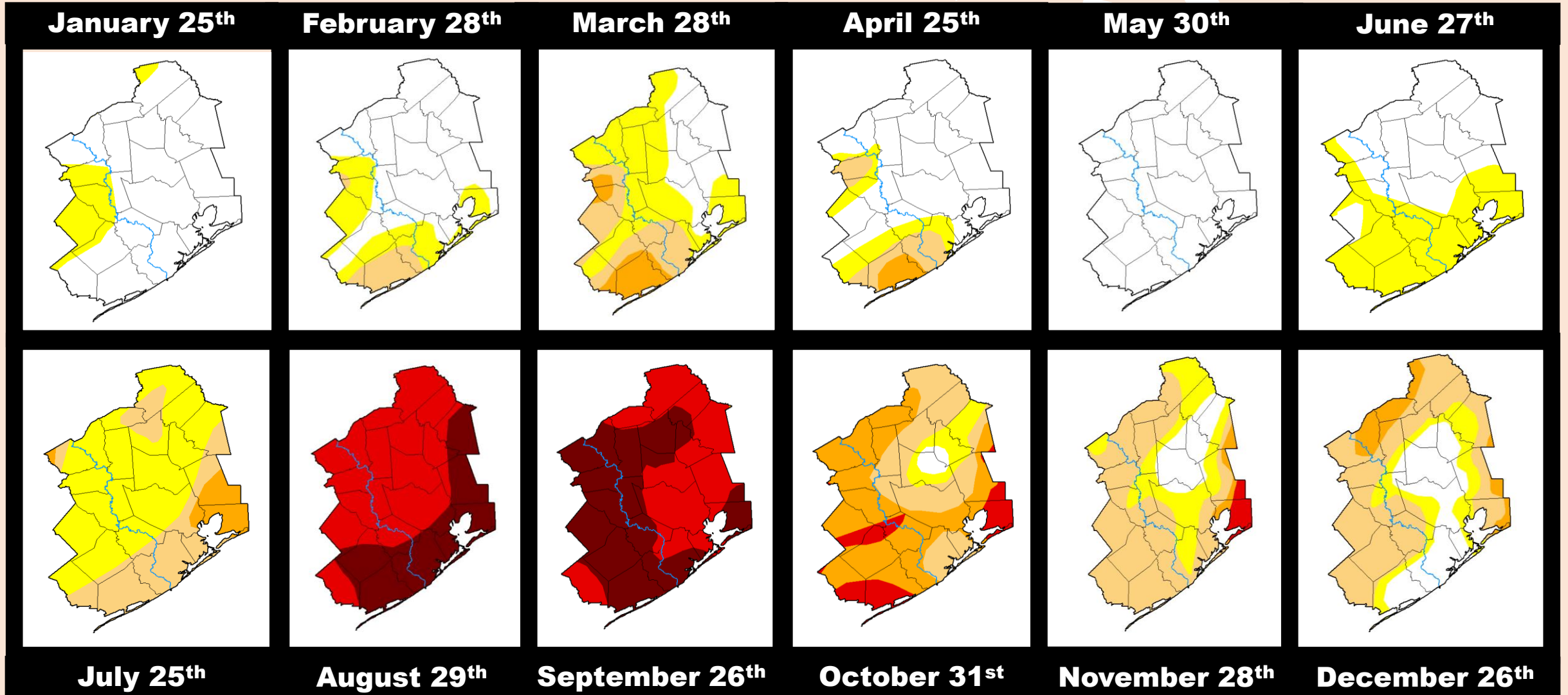


Location	Total Precipitation (in.)	Departure from Normal (in.)	Number of Thunder Days	Maximum Daily Precipitation (in./date)	
Galveston (GLS)	2.94	-1.29	2	1.32	1 st
Houston Hobby (HOU)	2.71	-1.63	2	1.44	24 th
City of Houston (IAH)	2.57	-1.46	2	1.01	15 th
College Station (CLL)	1.93	-1.78	1	1.14	24 th
Palacios (PSX)	2.72	-0.26	2	1.48	23 rd



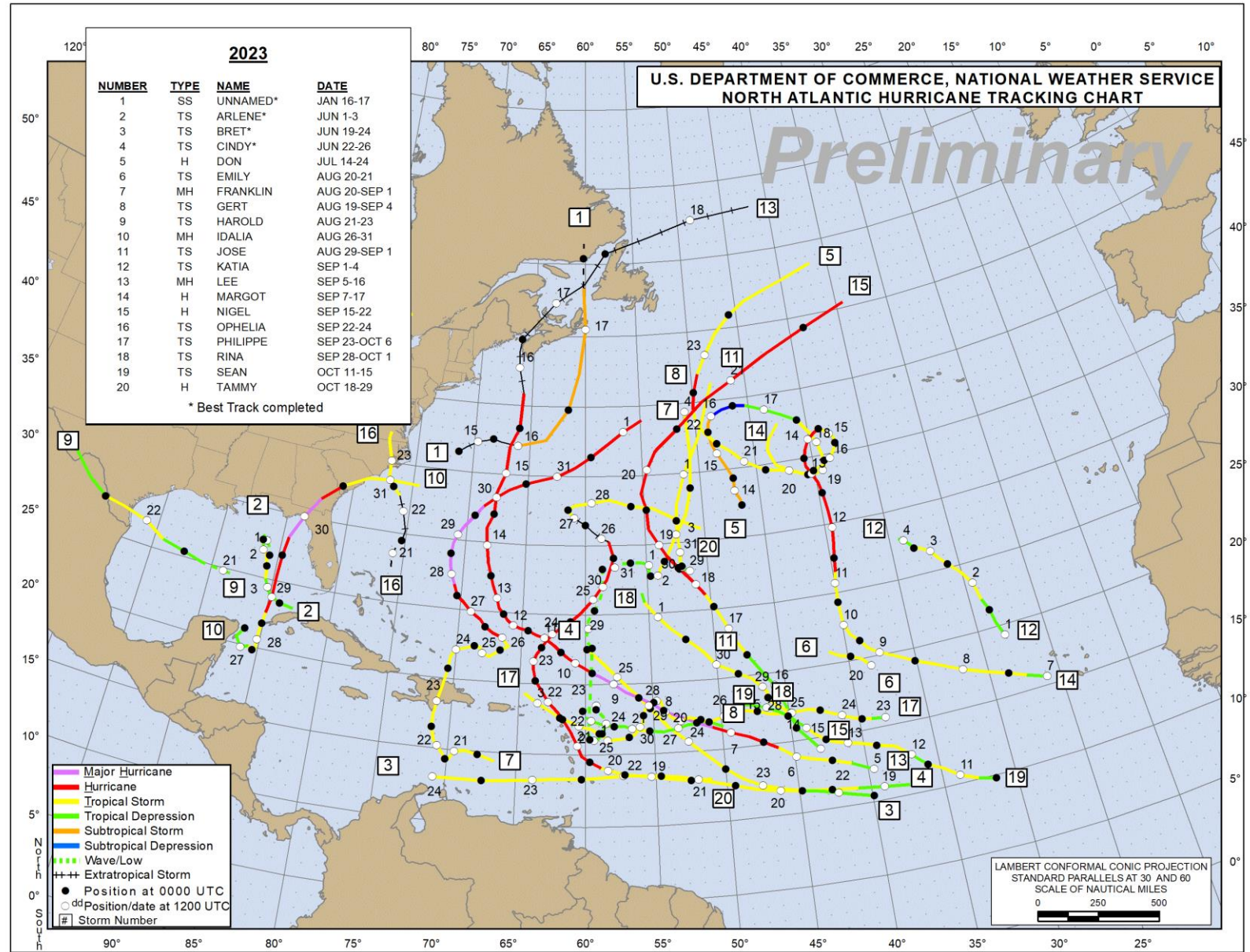
2023 Drought Evolution

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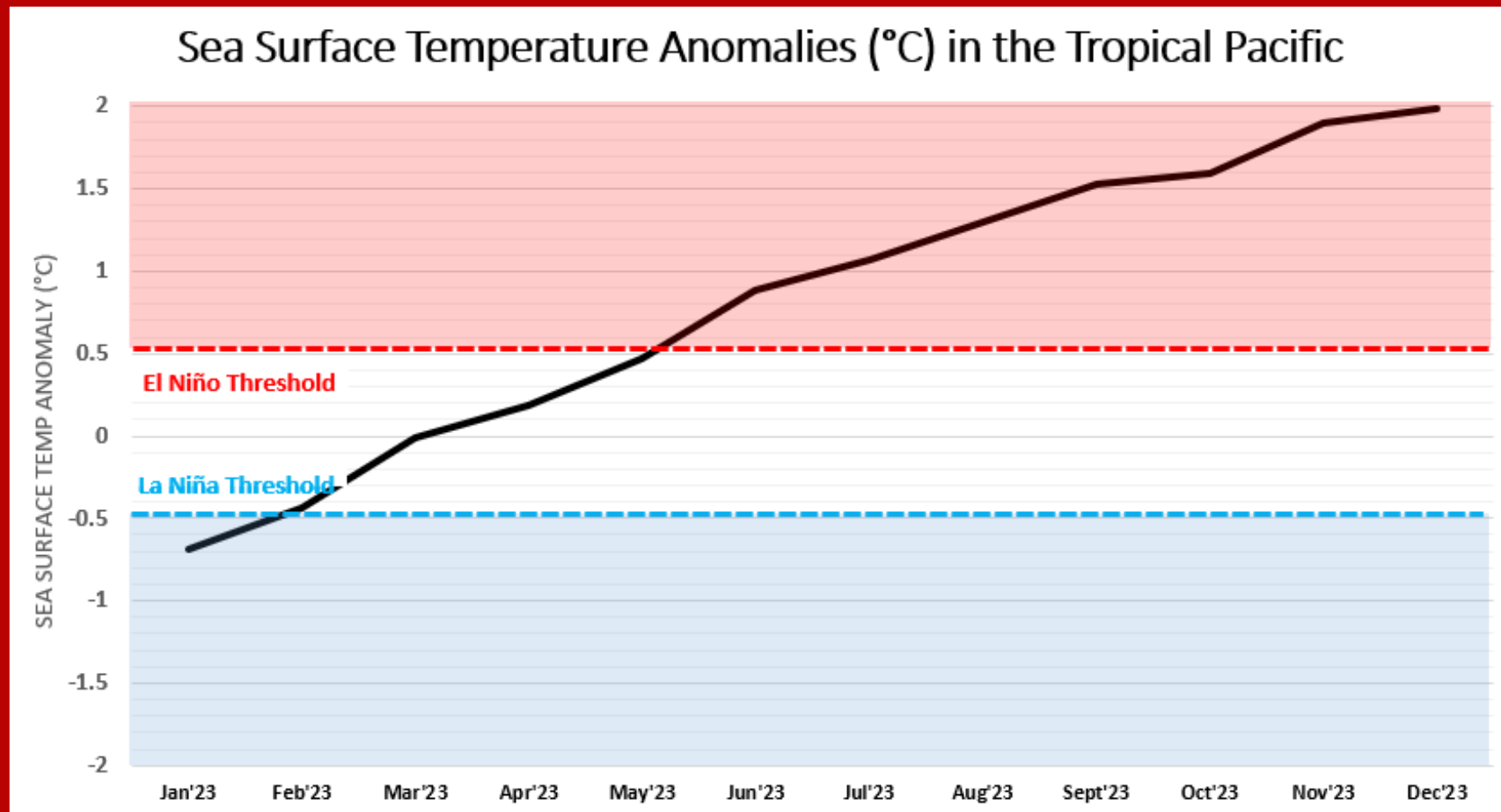
2023 Atlantic Tropical Summary

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El Niño Southern Oscillation

At the start of 2023, ENSO was in the negative phase, La Niña. But, it quickly transitioned into the positive phase, El Niño, during the spring and remained there through the year.



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.