



October 2023

Monthly Hydrologic and Flood

Stage Report (E5/E3)

NWS Austin/San Antonio, TX

Prepared by: Chris Morris

November 14, 2023

An X inside this box indicates that no flooding occurred within this hydrologic service area.



National Oceanic and
Atmospheric Administration

U.S. Department of Commerce



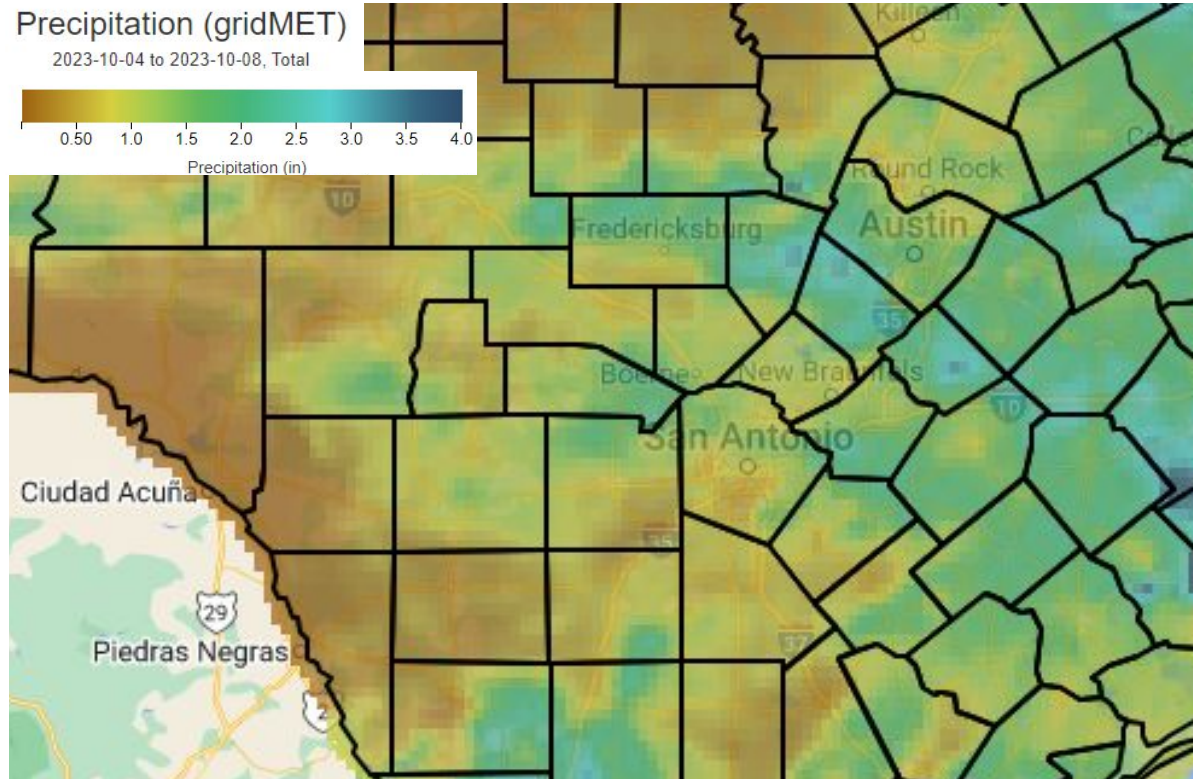
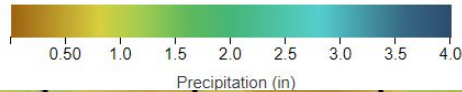
Monthly Summary

Recap

- The month of October brought some much needed rainfall for a sizable portion of the service area.
- The bulk of this rainfall occurred over during the early and late portion of the month.
- Early in the month a cold front brought a swath of needed rainfall to portions of the Hill Country, I-35 Corridor, and Coastal Plains (image to the right).
 - Given the lowered streamflows at the time, no river flooding occurred with this event.

Precipitation (gridMET)

2023-10-04 to 2023-10-08, Total



Generated by ClimateEngine.org



National Oceanic and
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National Weather Service
Austin/San Antonio, TX



Monthly Summary

Recap October 25-26th Heavy Rain and Flood

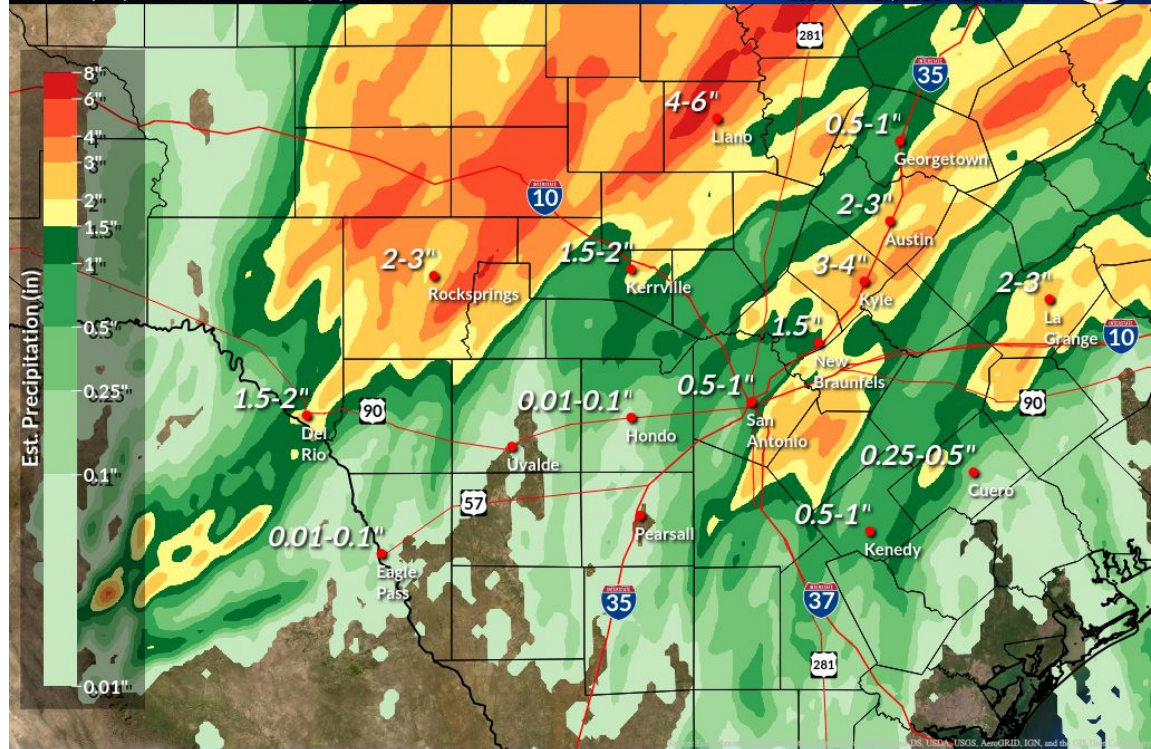
- The combination of a slowly moving cold front and remnants of Hurricane Otis combined over south central Texas to produce a prolonged period of heavy rainfall from the evening of the 25th through the 26th. Swaths of 5-7 inches occurred from the southern Edwards Plateau into the portions of the Hill Country. One report of over 8 inches came from northern Llano County line.
 - Widespread rural flooding and urban flash flood were reported.
 - Two forecast points rose into flood stage, with two non-forecast points seeing rises similar to 2015.

2-Day Estimated Rainfall

Valid: 10/25/2023 07:00 AM - 10/27/2023 07:00 AM CDT

Weather Forecast Office
Austin/San Antonio, TX

Issued Oct 27, 2023 9:15 AM CDT



f t v NWSSanAntonio

weather.gov/ewx



National Oceanic and
Atmospheric Administration

U.S. Department of Commerce

National Weather Service
Austin/San Antonio, TX



Flood Stage Report

River Flood Summary (Forecast Points)

- LLAT2 Flood Summary:
 - Max Flood Category: Moderate
 - Reached Flood: 10/26 at 5:20 am
 - Crest: 12.70ft on 10/26 at 7:35 am
 - Dropped below flood: 10/26 at 10:00 am
- Impact: Slab Road near Kingsland had several feet of rapidly flowing water over the road.
- Almost Second Flood:
 - Max Flood Category: None
 - Crest: 9.87ft on 10/27 at 5:20 am
 - Flood stage 10.0ft



LLAT2(plotting HGIRZ) "Gage 0" Datum: 970.01'

Observations courtesy of US Geological Survey

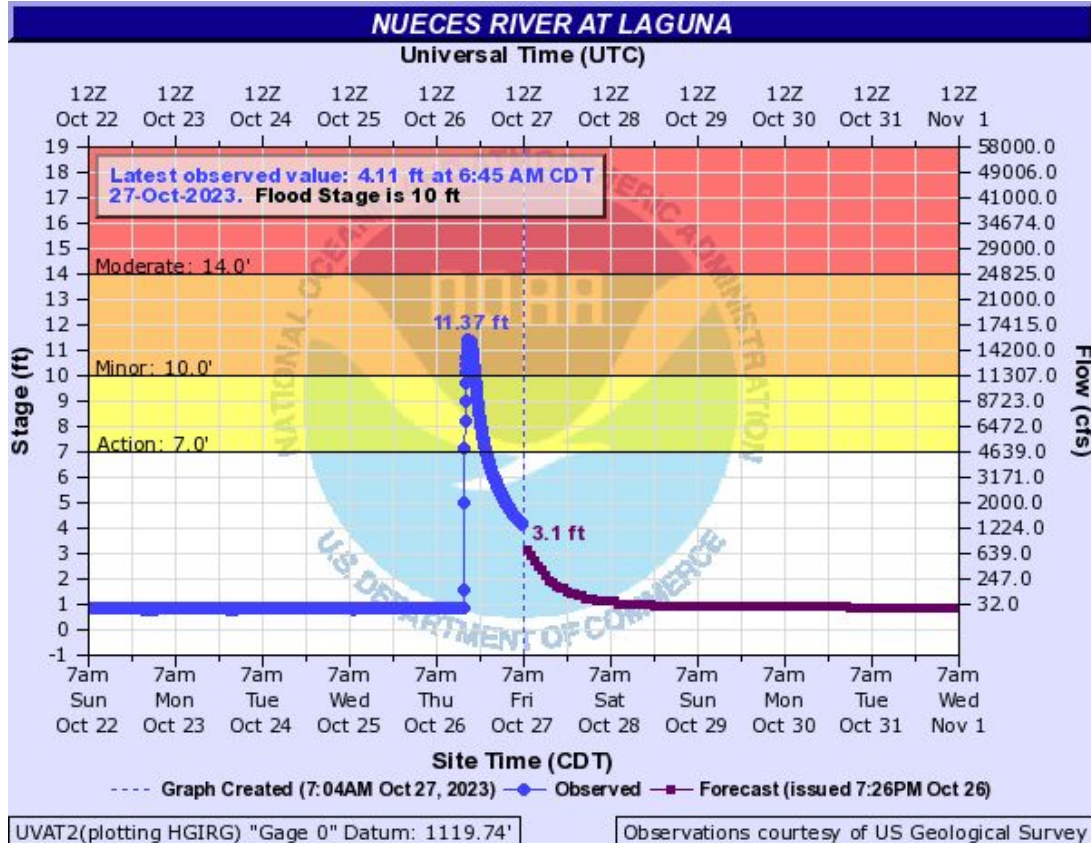




Flood Stage Report

River Flood Summary (Forecast Points)

- UVAT2 Flood Summary:
 - Max Flood Category: Minor
 - Reached Flood: 10/26 at 3:05 pm
 - Crest: 11.37ft on 10/26 at 3:45 pm
 - Dropped below flood: 10/26 at 5:40 pm
- Impact: Low water crossings along State Highway 55 from north of Barksdale to Laguna had several feet of water rapidly flowing across the road.



UVAT2(plotting HGIRG) "Gage 0" Datum: 1119.74'

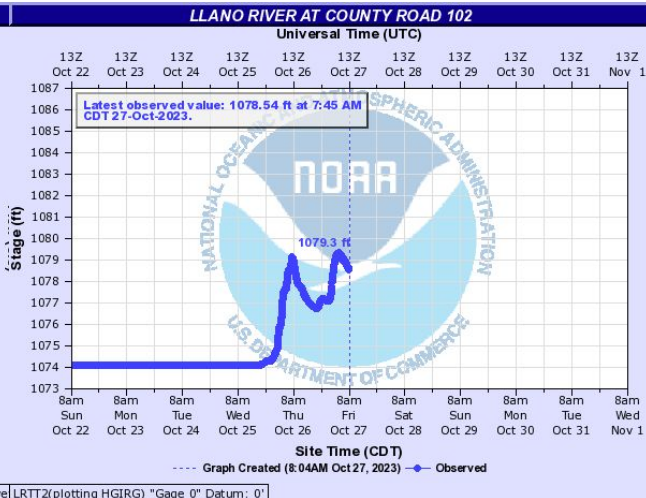
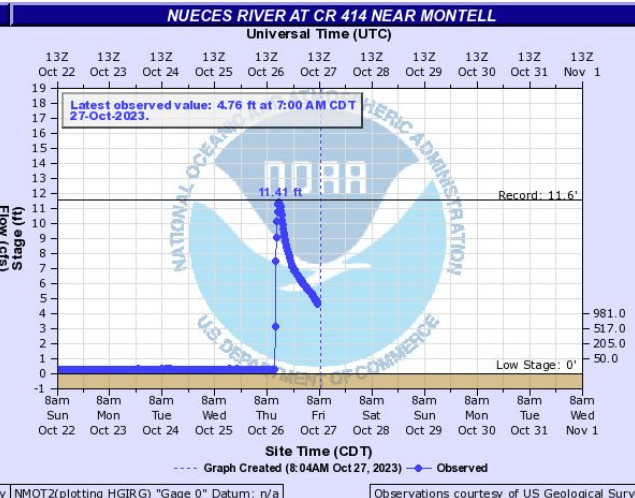
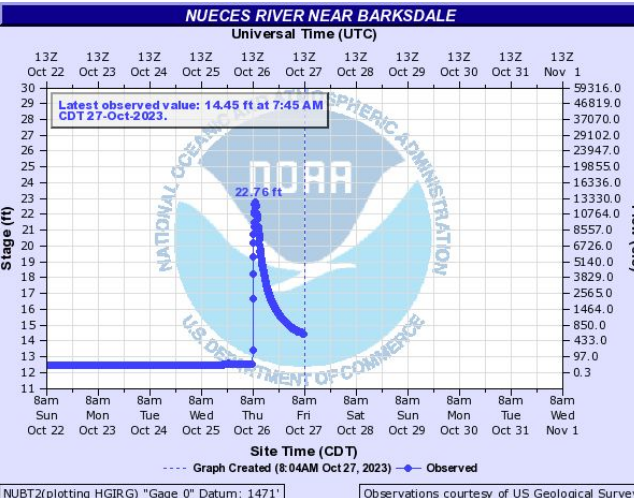
Observations courtesy of US Geological Survey





Flood Stage Report

River Flood Summary (Non-Forecast Points)



Summary:

- Crest: 22.76ft on 10/26 at 8:55 am
- Not even in the top 12 crests on record (2009-Present)

Summary:

- Crest: 11.41ft on 10/26 at 1:15 pm
- While record is listed on the graph, the gauge has a short data window (since 2014)

Summary:

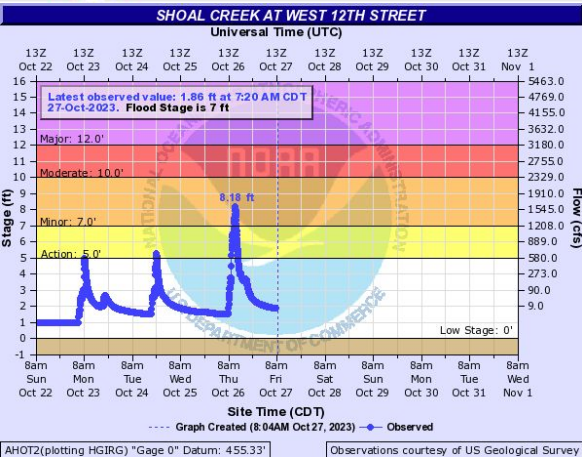
- Crest 1: 1079.11ft on 10/26 at 7:15 am
- Crest 2: 1079.30ft on 10/27 at 2:55 am
- Secondary rise was due to runoff from Junction County where 5 - 7" fell.





Flood Stage Report

River Flood Summary (Non-Forecast Points)



TEXMESONET Data Products Forecast APIs FAQ About

Display Refreshed: 08:56 AM

48 Hour Precipitation

Choose a soil parameter

Current Temp	Wind Chill	Heat Index
Humidity	Dew Point	Sea Level Press
Wind	Wind Gust	Solar Radiation
River Flow	River Stage	Station

Current Radar | Animated Radar

Historical Precipitation National Weather Service:

1 Hour	3 Hour	6 Hour
24 Hour	48 Hour	72 Hour

National Weather Service Forecasts and Alerts

Toggle Map Layers

Filter by Mesonet: Display all Mesonets

Units of Measure: US / Customary | Metric

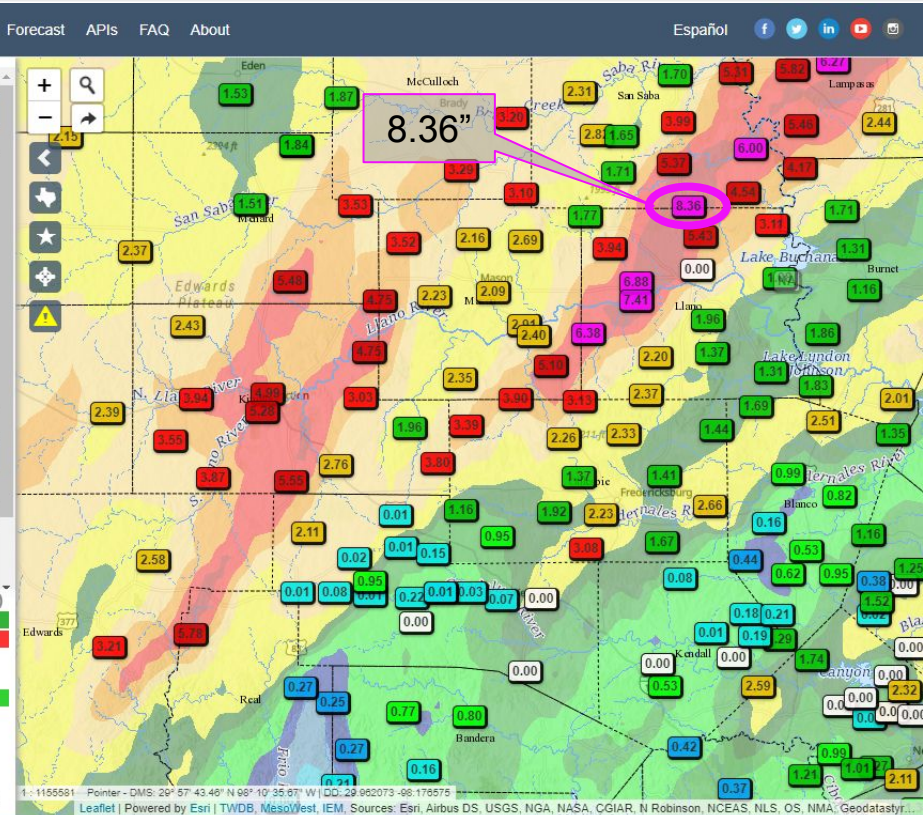
Interpolated Precipitation Last 48 Hours (inches)

0-1.0	1.01-2.5	2.51-5.0	5.01-10.0	10.01-15.0	15.01-20.0	20.01-25.0
0	0.01-2.5	2.51-5.0	5.01-10.0	10.01-15.0	15.01-20.0	20.01-25.0

48 Hour Precipitation (inches)

0	0.01-2.5	2.51-5.0	5.01-10.0	10.01-15.0	15.01-20.0	20.01-25.0
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Opacity - 50%



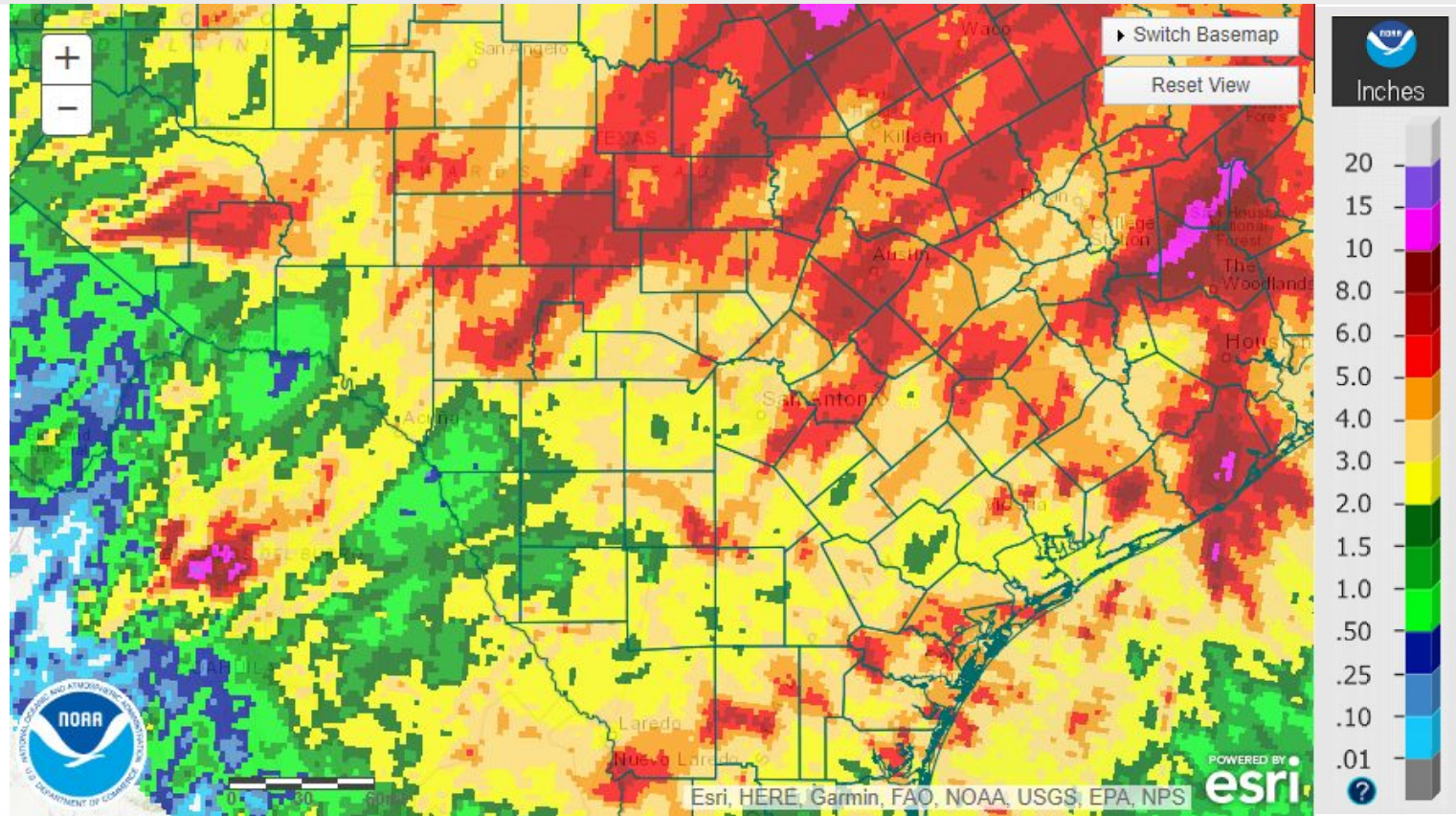
Flood Summary:

- Max Flood Category: Minor
- Reached Flood: 10/26 at 9:30 am
- Crest: 8.18ft on 10/26 at 11:05 am
- Dropped below flood: 10/26 at 11:40 am



October 2023 Rainfall

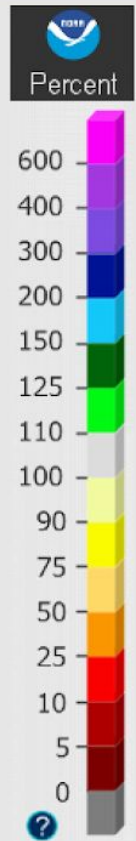
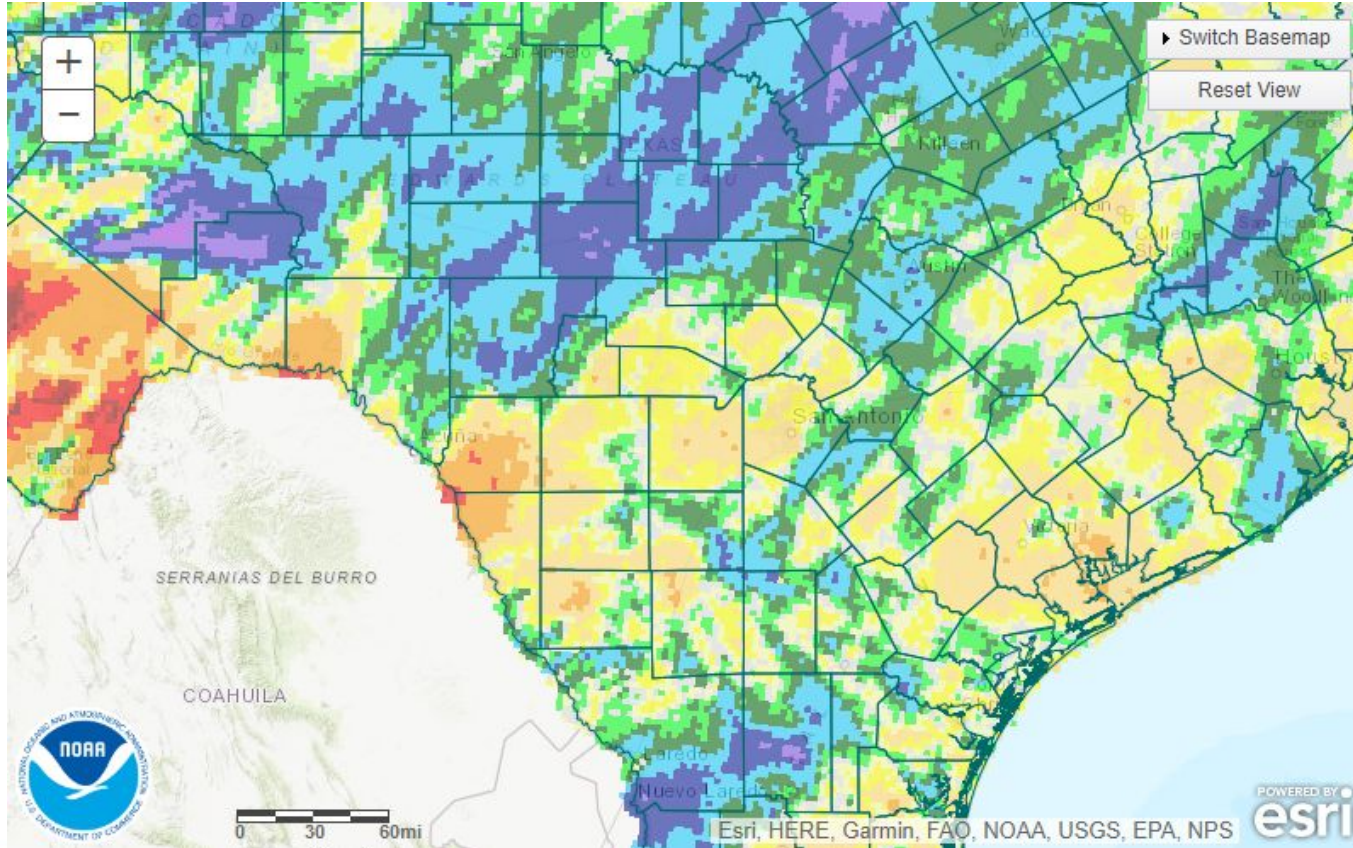
Observed Rainfall (Inches)





October 2023 Rainfall

Percent of Normal Rainfall (%)



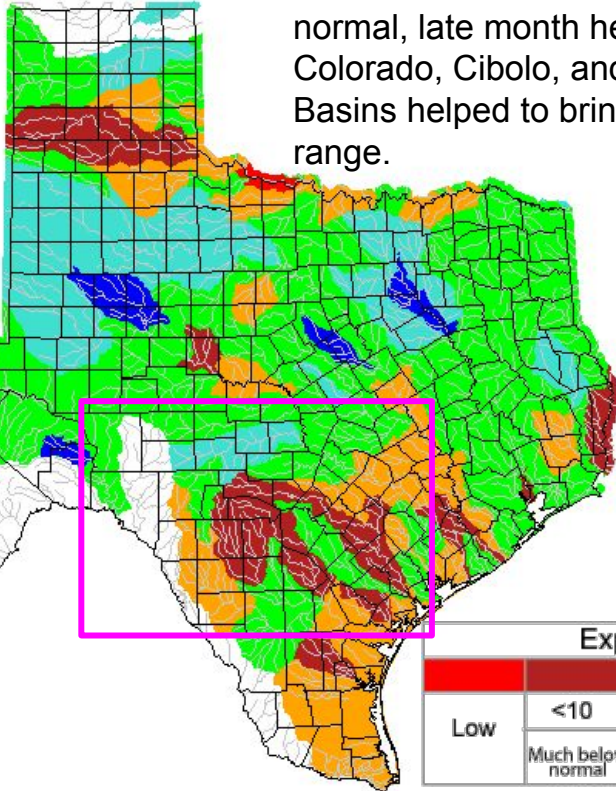


October 2023 - Historical Streamflow Comparison

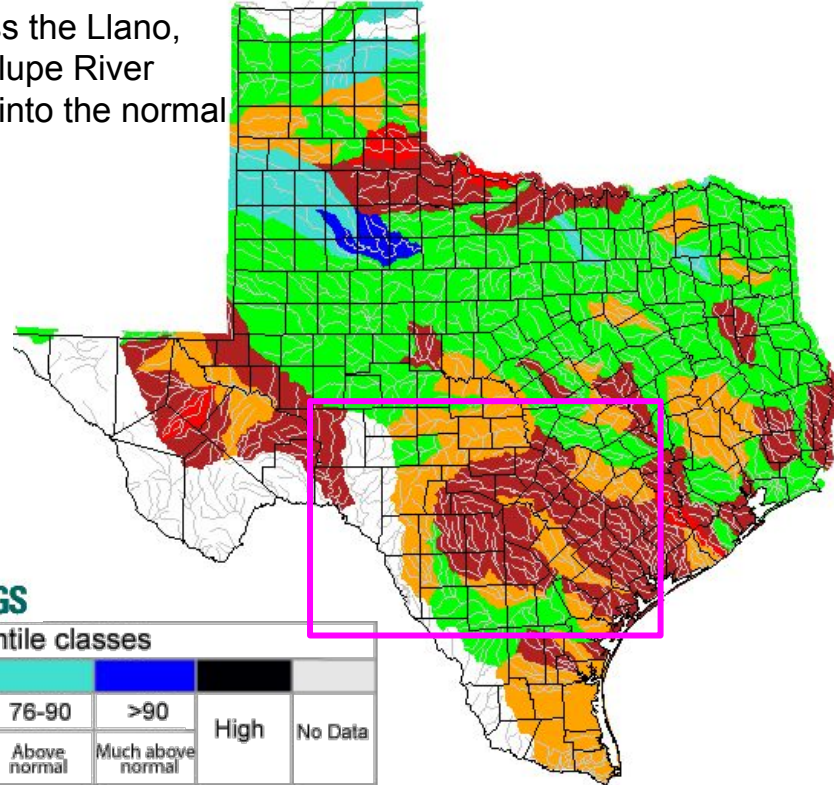
Streamflow Comparison

October 2023

While some streams remain below to much below normal, late month heavy rain across the Llano, Colorado, Cibolo, and upper Guadalupe River Basins helped to bring streamflows into the normal range.



September 2023



Explanation - Percentile classes

Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	No Data





Climate Station Rainfall Data For the Month

Austin/San Antonio Area

	Monthly Rainfall	Monthly Average	2023 Rainfall Through Month	1991-2020 Normal Through Month	2023 Percent of Normal
Austin – Bergstrom	6.07”	4.25”	23.31”	30.28”	77%
Austin – Mabry	7.15”	3.91”	23.20”	30.61”	76%
Del Rio	1.77”	2.08”	13.71”	18.20”	75%
San Antonio	3.21”	3.75”	17.50”	28.30”	62%

*The monthly averages and normal values are for the period 1991-2020





Climate Station Rainfall Data For the Month

Nearby Offices:

	Monthly Rainfall	Monthly Average	2023 Rainfall Through Month	1991-2020 Normal Through Month	Percent of Normal
College Station	3.72"	4.39"	25.48"	34.19"	75%
Corpus Christi	3.47"	3.13"	23.16"	27.78"	83%
Laredo	5.66"	1.75"	21.05"	19.24"	109%
San Angelo	3.25"	2.42"	16.41"	18.88"	87%
Victoria	2.67"	3.97"	28.25"	35.14"	82%
Waco	4.91"	4.41"	24.25"	30.82"	79%

*The monthly averages and normal values are for the period 1991-2020





Reservoir Data For the Month

Data from the TWDB [Water Data For Texas Dashboard](#)

Reservoir	Conservation Elevation (feet)	End of Month Elevation (feet)	Monthly Change (Feet)
Lake Buchanan	1020	993.89	1.09
Lake Travis	681	632.21	3.44
Canyon Lake	909	889.42	-1.32
Medina Lake	1064.2	976.31	-1.03
Lake Amistad	1117	1063.81	-2.24





Hydrologic Products Issued for the Month

Product Issued	Number Issued	Additional Comments
River Flood Warning/Area Flood Warning (FLW)	7	5 were for river forecast points while 2 were for river non-forecast points
River Flood Statement/Area Flood Advisory (FLS)	51	4 were for rivers while the rest were areal advisories
Flash Flood Watch (FFA)	1	
Flash Flood Warning (FFW)	5	
Flash Flood Statement (FFS)	4	
Hydrologic Outlook (ESF)	6	AHPS probabilistic forecasts for the Brazos, Colorado, Guadalupe, San Antonio, Pecos, and Nueces Rivers





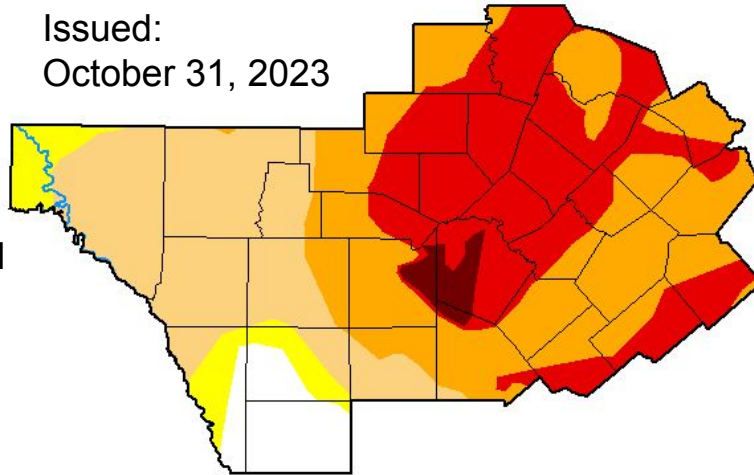
Drought Conditions

Monthly Drought Monitor Comparison

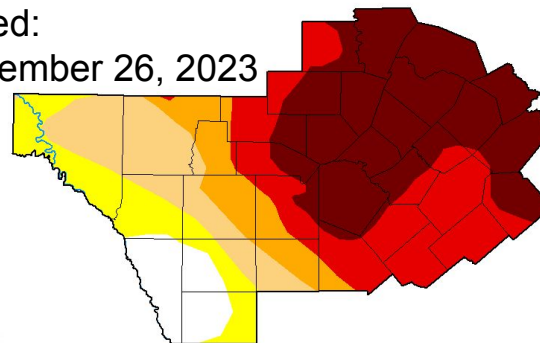
Widespread heavy rainfall during the later part of the month allowed for drastic improvement for areas in the Exceptional Drought (D4) category. Areas across the west saw less rainfall so drought conditions worsened through the month.

- D3/D4 drought encompasses 31% of the CWA
- Drought doesn't affect 11% of the CWA

Issued:
October 31, 2023



Issued:
September 26, 2023



October 31, 2023

(Released Thursday, Nov. 2, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	6.10	5.39	25.12	32.07	29.41	1.91
Last Week <i>10-24-2023</i>	6.20	6.42	20.02	8.40	31.33	27.63
3 Months Ago <i>08-01-2023</i>	0.00	32.02	22.37	19.10	18.75	7.76
Start of Calendar Year <i>01-03-2023</i>	6.21	14.33	40.02	19.13	11.66	8.65
Start of Water Year <i>09-26-2023</i>	7.30	10.81	13.65	8.95	22.09	37.20
One Year Ago <i>11-01-2022</i>	4.15	6.41	30.41	32.42	19.14	7.47

Intensity:





One Month Outlook

The most recent Monthly Outlook

- The Precipitation Outlook leans towards above normal chances for November.
- The Temperature Outlook leans towards above normal temperatures for the month of November.

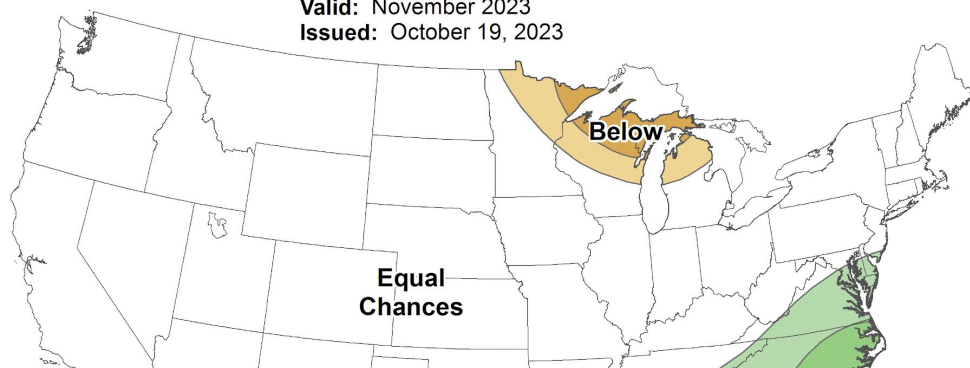
[Click for latest graphics](#)



Monthly Precipitation Outlook

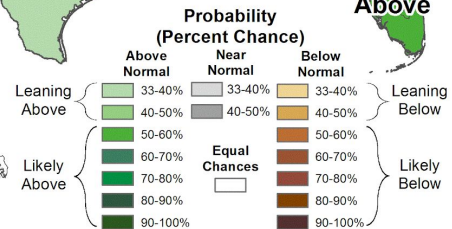
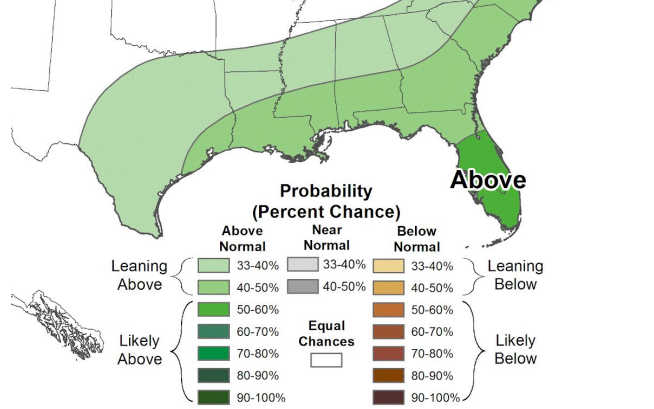
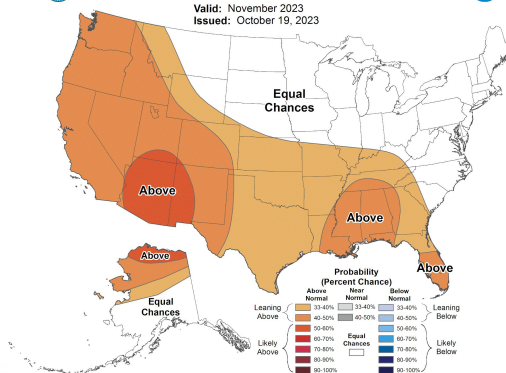


Valid: November 2023
Issued: October 19, 2023



Monthly Temperature Outlook

Valid: November 2023
Issued: October 19, 2023





Three Month Outlook

Looking at the Seasonal Outlooks

- The Precipitation Outlook leans towards chances for above normal precipitation into early next year.
- The Temperature Outlook shows equal chances for either above, below, or near normal into early next year.

[Click for latest graphics](#)

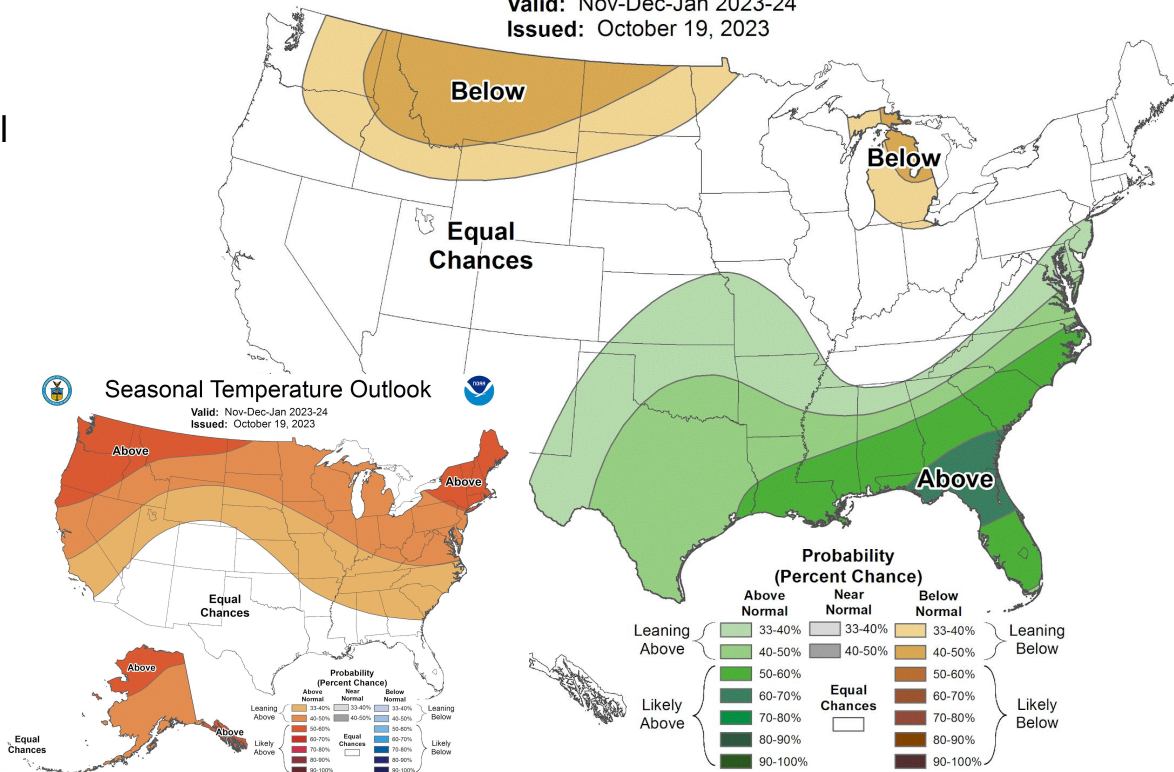


Seasonal Precipitation Outlook



Valid: Nov-Dec-Jan 2023-24

Issued: October 19, 2023





For additional rainfall, stream, soil moisture, or drought information please refer to the links provided below.

Daily, Monthly and Yearly summaries of precipitation and departure from normal are available from the West Gulf River Forecast Center at: <http://www.weather.gov/wgrfc/>

Or from the Precipitation Analysis page at: <http://water.weather.gov/precip/>

Streamflow conditions are available from the United States Geological survey at:
<http://waterdata.usgs.gov/tx/nwis/rt>

Soil moisture conditions are available from the Climate Prediction Center at:
http://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml

National Integrated Drought Information System: <http://www.drought.gov/>