



# July 2024

# Monthly Hydrologic and Flood

# Stage Report (E5/E3)

NWS Austin/San Antonio, TX

Prepared by: Chris Morris

August 7, 2024

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

## Key Messages

- Well above average rainfall was observed over a sizable portion of the service area during the month of July; despite a near miss of a tropical system
  - This rainfall resulted in a few forecast points reaching flood stage, as well as localized flooding and flash flooding
- Water resource reservoirs saw some improvement while still remaining below average for this time of year
- Portions of the area saw drought conditions ease while long term deficits allowed localized extreme drought conditions to persist
- Monthly outlooks shows some hope for above normal rainfall for the southern portion of the service area while the seasonal outlook is starting to trend towards a typical La Nina fall outlook



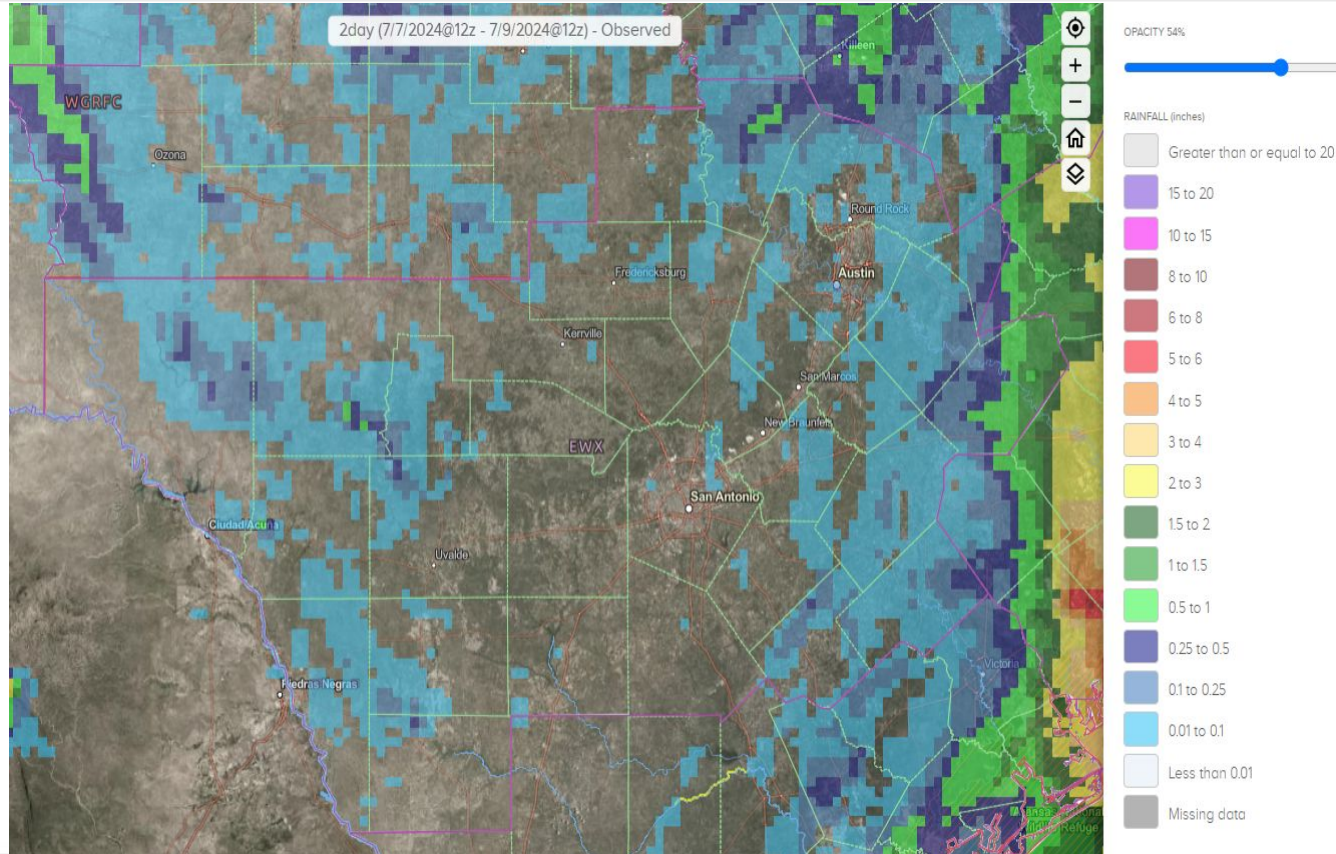




# Monthly Summary

## Recap Hurricane Beryl July 7-8th

- Hurricane Beryl's impacts were very limited across the service area.
- The far eastern portion of the Coastal Plains saw between 0.25" to 2 inches







# Monthly Summary

## Recap Heavy Rainfall July 22-29

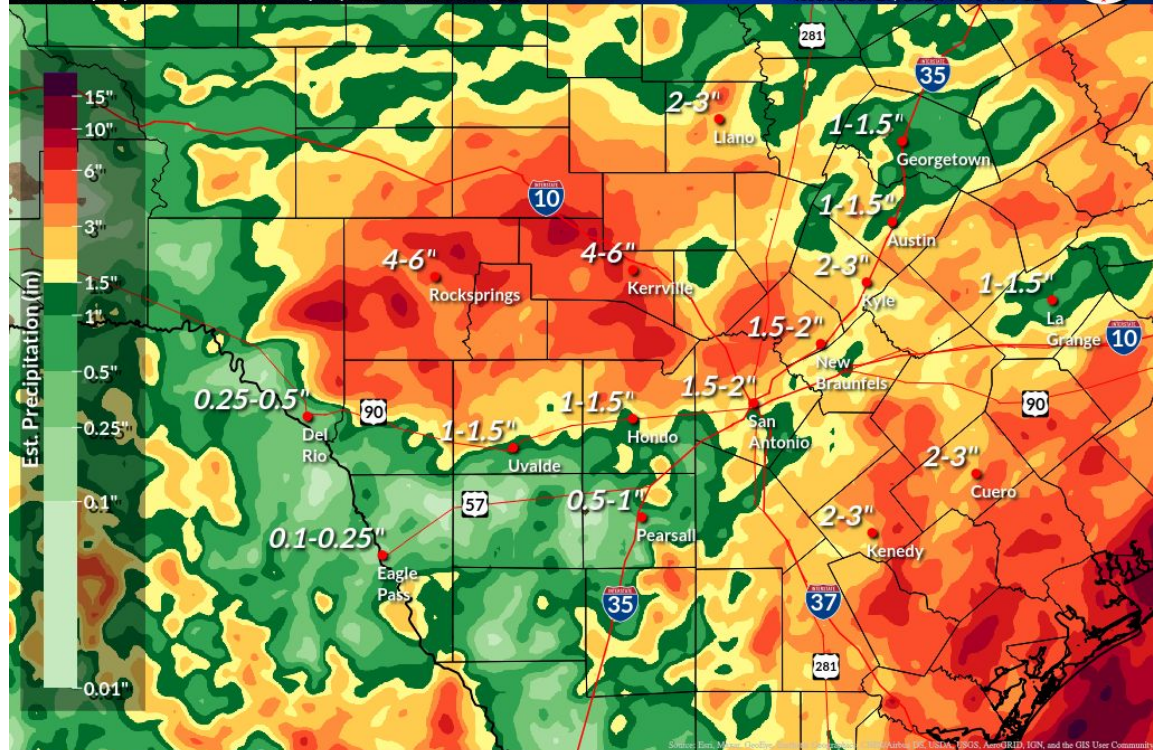
- An embedded upper shortwave, within a broad upper trough, dropped across SE New Mexico and into southern Texas before becoming cutoff.
- This allowed for multiple rounds of showers and thunderstorms while also pulling in ample Gulf moisture.
- After 7 days, wide swaths of 4 to 6 inches of rain were observed across a sizable portion of the service area with localized amounts up to 9 inches
  - Rainfall PNS - [7/24](#), [7/25](#), [7/26](#), [7/27](#), [7/29](#)

### 7-Day Estimated Rainfall

Valid: 07/22/2024 07:00 AM - 07/29/2024 07:00 AM CDT

Weather Forecast Office  
Austin/San Antonio, TX

Issued Jul 29, 2024 9:46 AM CDT



f t v NWWSanAntonio

weather.gov/ewx



National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

National Weather Service  
Austin/San Antonio, TX

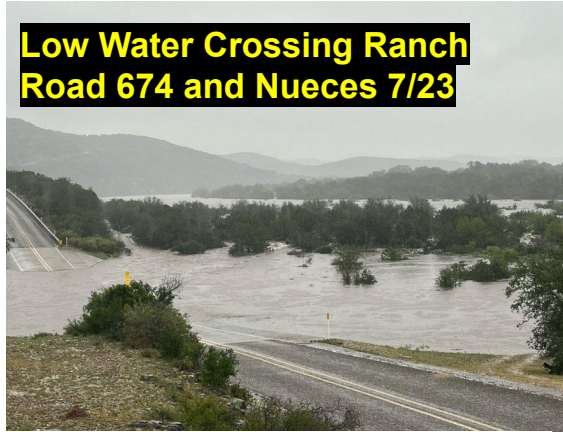


# Monthly Summary

Recap Heavy Rainfall July 22-29

- While a sizable portion of the area saw decent rainfall during this event, only a few river forecast points reached flood stage.
- However, multiple low water crossings flooded and became hazardous to utilize.

**Low Water Crossing Ranch Road 674 and Nueces 7/23**



**Guadalupe River at Louise Hays Park 7/23**



**High Water Rescue at Kingsland 7/25**





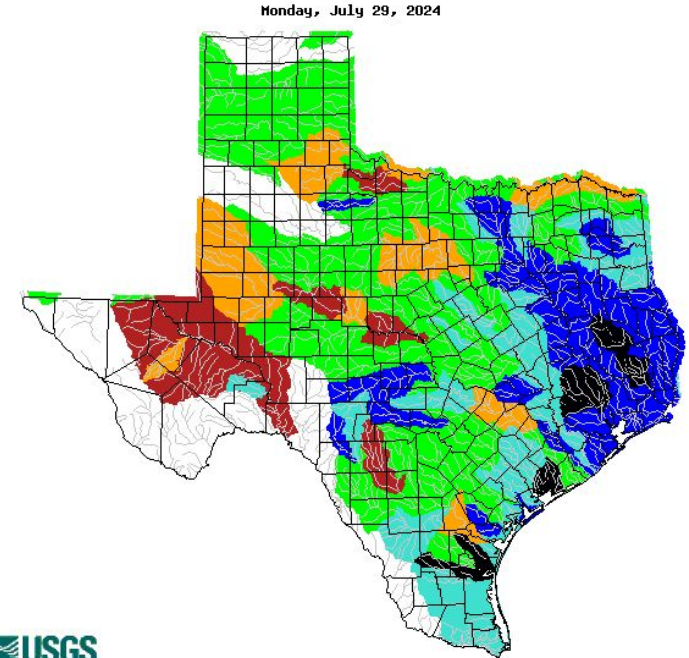


# Monthly Summary

## Recap Heavy Rainfall July 22-29

- The 7-day streamflow map shows that almost every basin (minus the Colorado south of Longhorn Dam, and the Frio/Sabinal River Basins) is at or above normal flow for this time of the year.
- This is a sizeable turn around as most basins prior to this rainfall event were either below or much below normal.
- The runoff finally allowed for some improvement on area reservoirs.
  - A table to the change in elevation can be found below.

Reservoir	Starting Elevation	Ending Elevation	Change
Travis Lake	634.25 ft	641.98 ft	+7.73 ft
Canyon Lake	884.20 ft	885.95 ft	+1.75 ft
Medina Lake	970.02 ft	976.04 ft	+6.02 ft
Amistad Lake	1047.20 ft	1048.85 ft	+1.65 ft



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





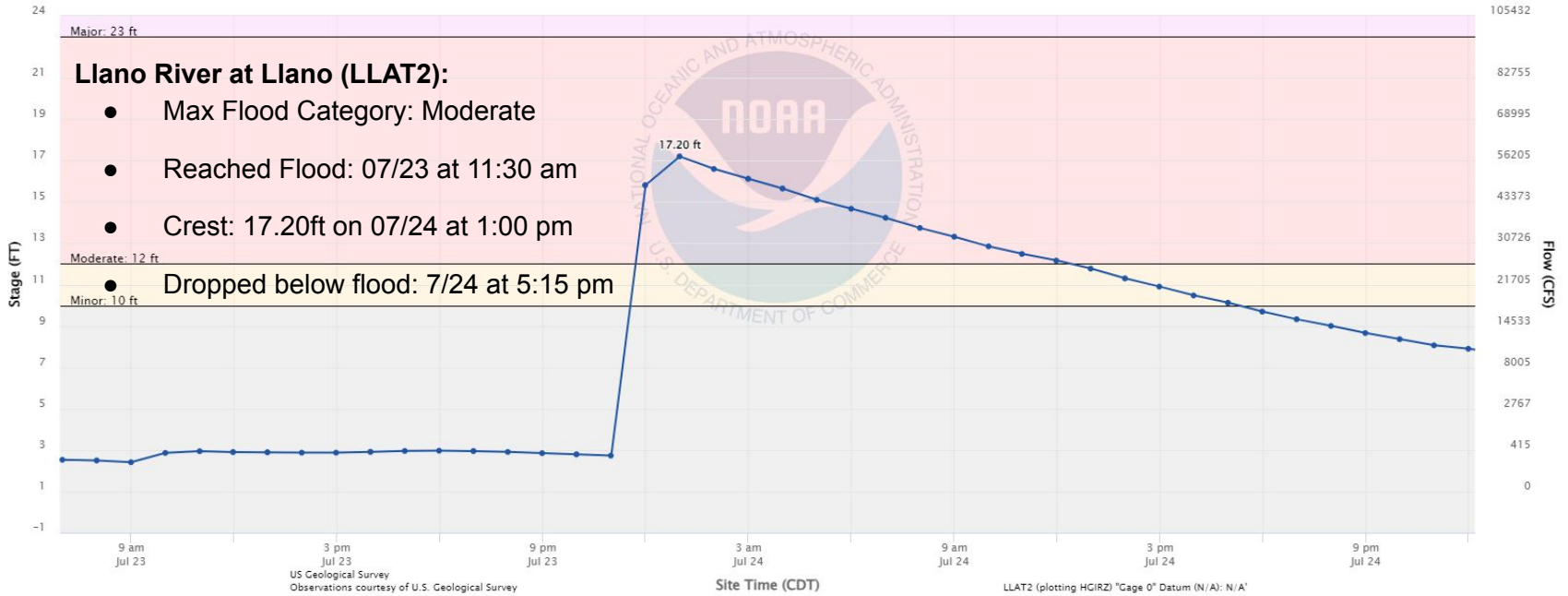
# Flood Stage Report (E3)

## River Flood Summary (Forecast Points)

Latest observed value: 3.11 ft  
10:00 AM CDT 30-Jul-2024  
Flood Stage is 10 ft

Llano River at Llano

NWSLI: LLAT2, Reach ID: 5771725



Graph Created: (10:46 AM CDT Jul 30 2024) - Forecast Issued (08:21 PM CDT Jul 24 2024)



Zoom 1d 2d 7d 14d All

Jul 23, 2024 - Jul 25, 2024







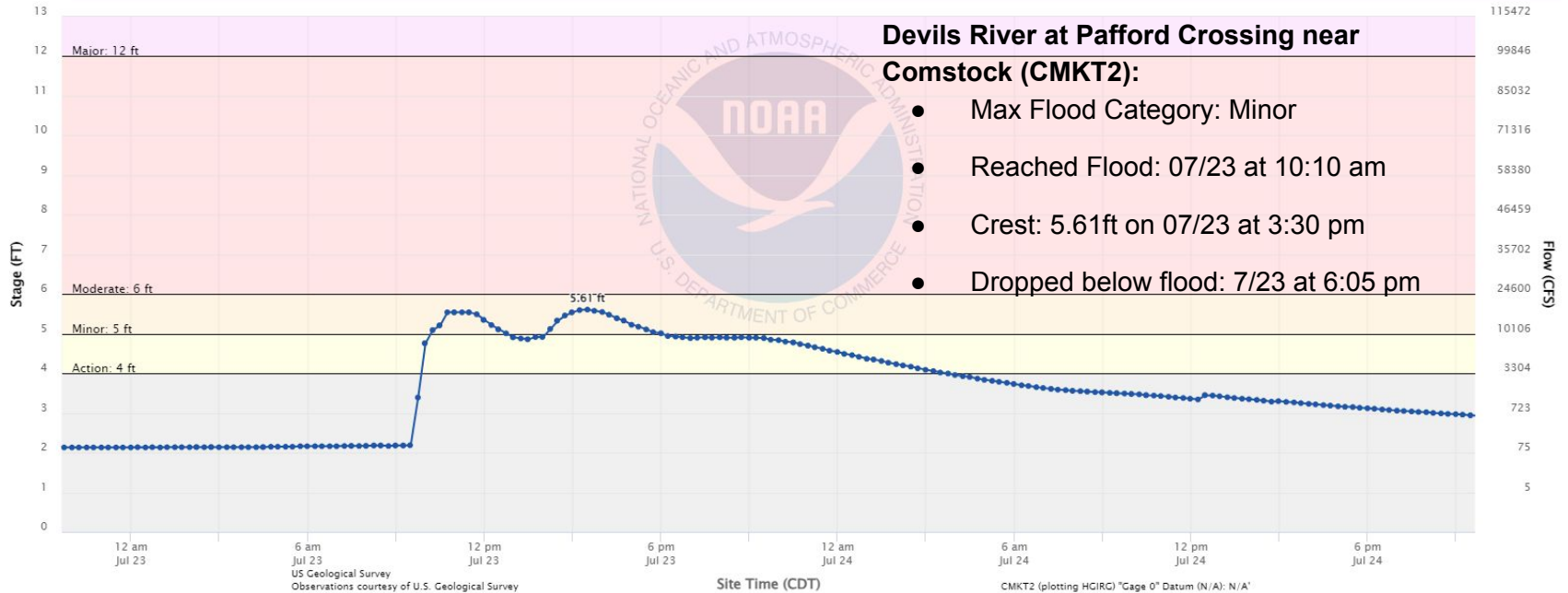
# Flood Stage Report (E3)

## River Flood Summary (Forecast Points)

Latest observed value: 2.2 ft  
10:15 AM CDT 30-Jul-2024  
Flood Stage is 5 ft

Devils River at Pafford Crossing near Comstock

NWSLI: CMKT2, Reach ID: 165886321



Graph Created: (10:46 AM CDT Jul 30 2024) - Forecast issued (01:43 PM CDT Jul 24 2024)



Zoom 1d 2d 7d 14d All

Jul 22, 2024 - Jul 24, 2024



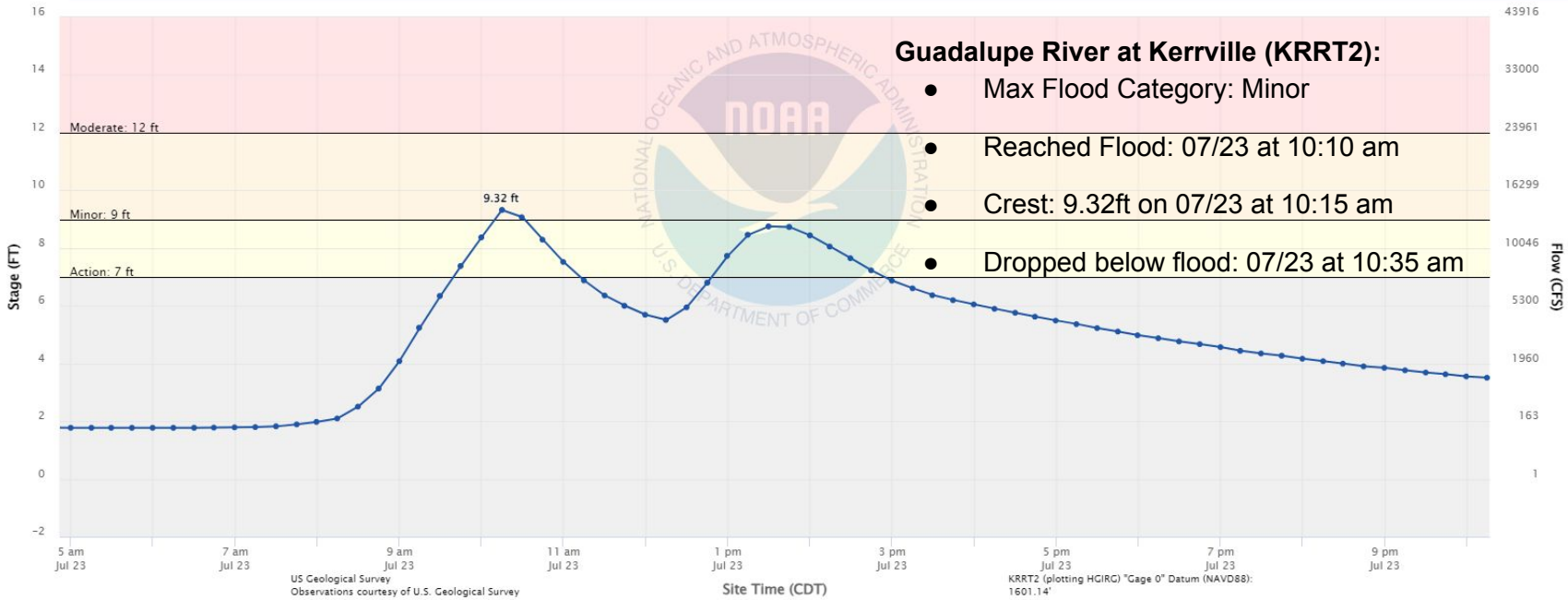


# Flood Stage Report (E3)

## River Flood Summary (Forecast Points)

Latest observed value: 1.73 ft  
7:45 AM CDT 30-Jul-2024  
Flood Stage is 9 ft

Guadalupe River at Kerrville  
NWSLI: KRRT2, Reach ID: 3585724



US Geological Survey  
Observations courtesy of U.S. Geological Survey

Graph Created: (10:47 AM CDT Jul 30 2024) - Forecast Issued (07:52 AM CDT Jul 30 2024)



Zoom 1d 2d 7d 14d All

Jul 23, 2024 — Jul 23, 2024

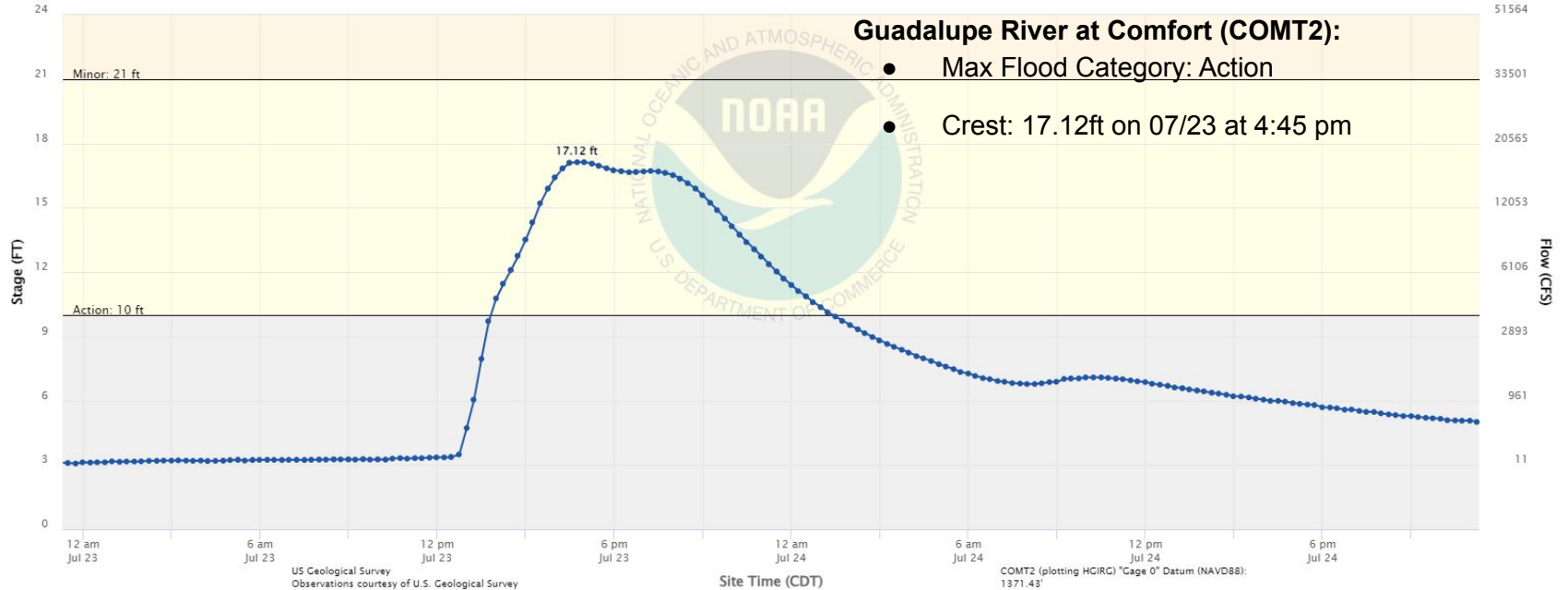


# Flood Stage Report (E3)

## River Flood Summary (Forecast Points)

Latest observed value: 3.45 ft  
9:45 AM CDT 30-Jul-2024  
Flood Stage is 21 ft

Guadalupe River at Comfort  
NWSLI: COMT2, Reach ID: 3589508



Graph Created: (10:47 AM CDT Jul 30 2024) - Forecast Issued (07:52 AM CDT Jul 30 2024)



Zoom 1d 2d 7d 14d All

Jul 22, 2024 - Jul 24, 2024





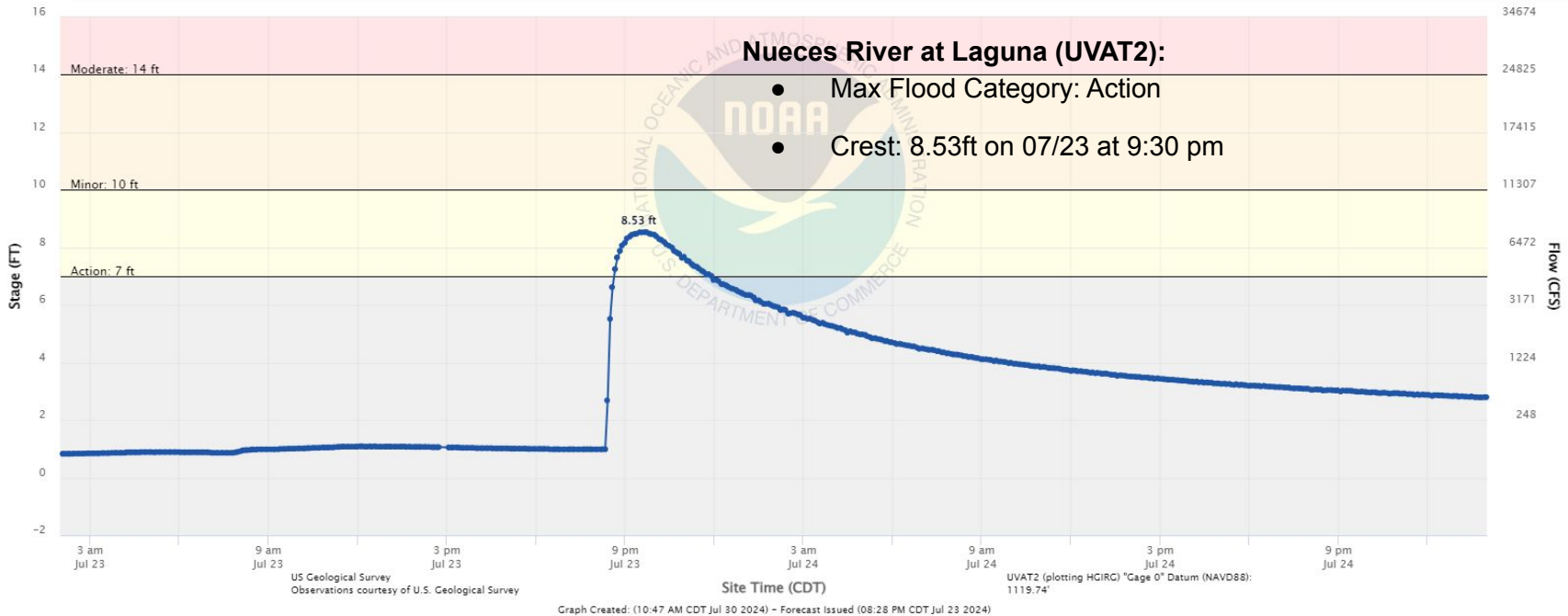


# Flood Stage Report (E3)

## River Flood Summary (Forecast Points)

Latest observed value: 1.53 ft  
10:15 AM CDT 30-Jul-2024  
Flood Stage is 10 ft

Nueces River at Laguna  
NWSLI: UVAT2, Reach ID: 7872253



Zoom 1d 2d 7d 14d All

Jul 23, 2024 — Jul 25, 2024

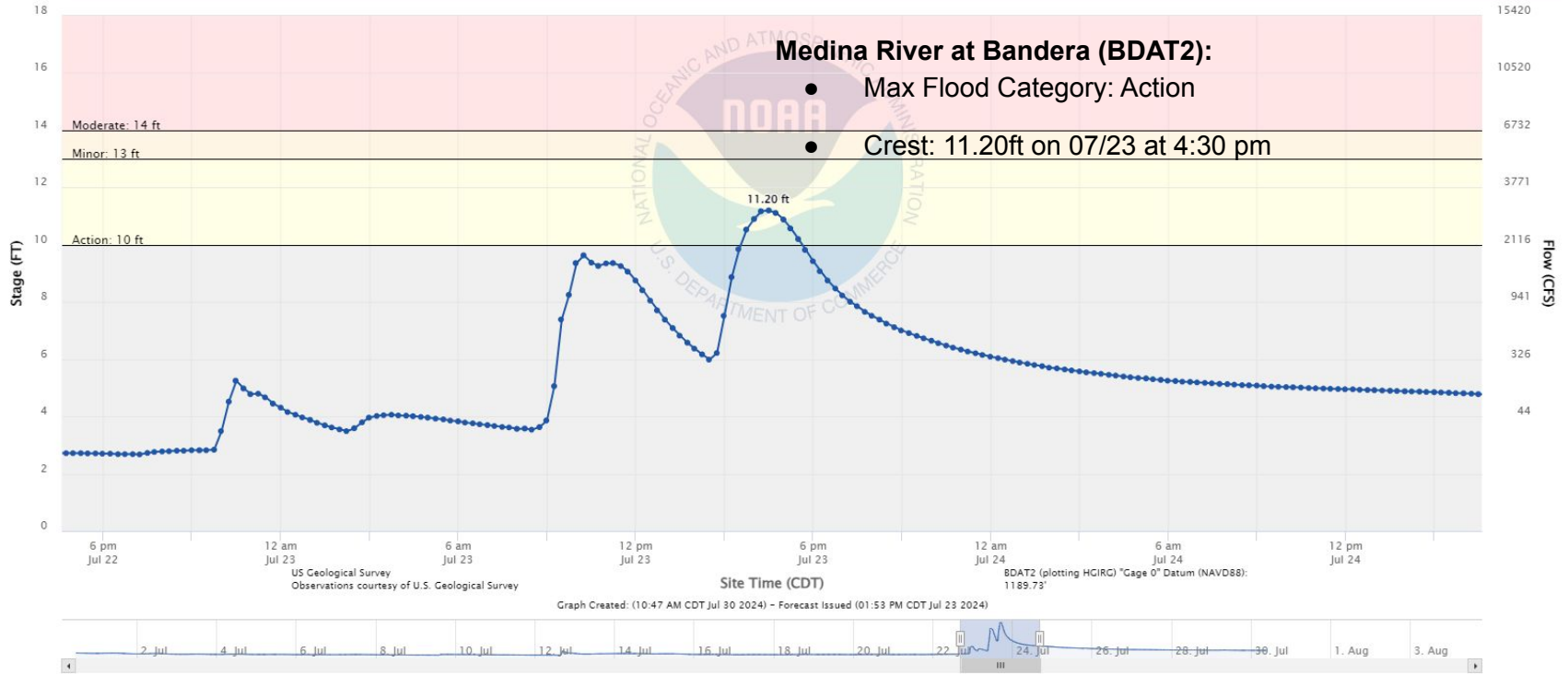


# Flood Stage Report (E3)

## River Flood Summary (Forecast Points)

Latest observed value: 3.85 ft  
9:45 AM CDT 30-Jul-2024  
Flood Stage is 13 ft

Medina River at Bandera  
NWSLI: BDAT2, Reach ID: 10833740



Zoom 1d 2d 7d 14d All

Jul 22, 2024 -- Jul 24, 2024





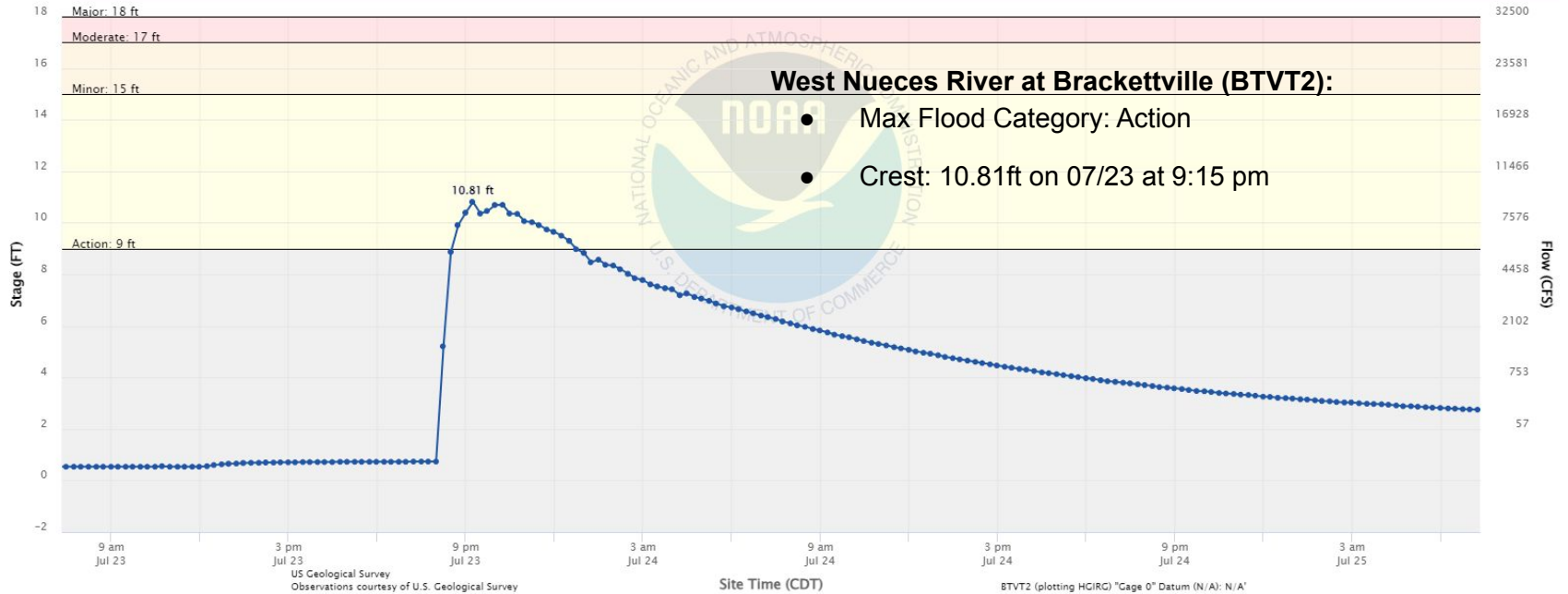
# Flood Stage Report (E3)

## River Flood Summary (Forecast Points)

Latest observed value: 1.47 ft  
9:30 AM CDT 30-Jul-2024  
Flood Stage is 15 ft

West Nueces River at Bracketville

NWSLI: BTVT2, Reach ID: 7876116



Zoom 1d 2d 7d 14d All

Jul 23, 2024 - Jul 25, 2024





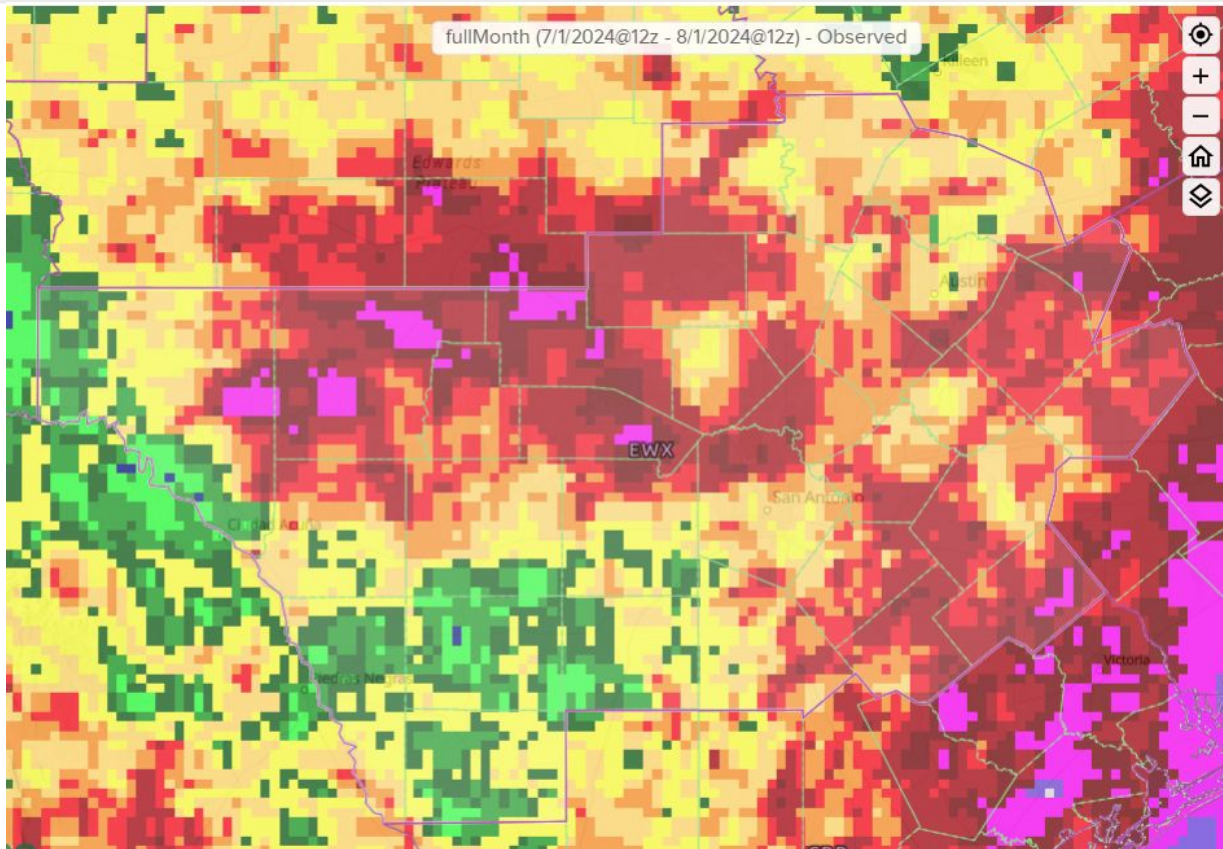
# Hydrologic Products Issued for the Month

Product Issued	Number Issued	Additional Comments
River Flood Warning/Area Flood Warning (FLW)	7	
River Flood Statement/Area Flood Advisory (FLS)	46	
Flood Watch (FFA)	2	
Flash Flood Warning (FFW)	7	
Flash Flood Statement (FFS)	7	
Hydrologic Outlook (ESF)	6	AHPS probabilistic forecasts for the Brazos, Colorado, Guadalupe, San Antonio, Pecos, and Nueces Rivers



# Monthly Rainfall

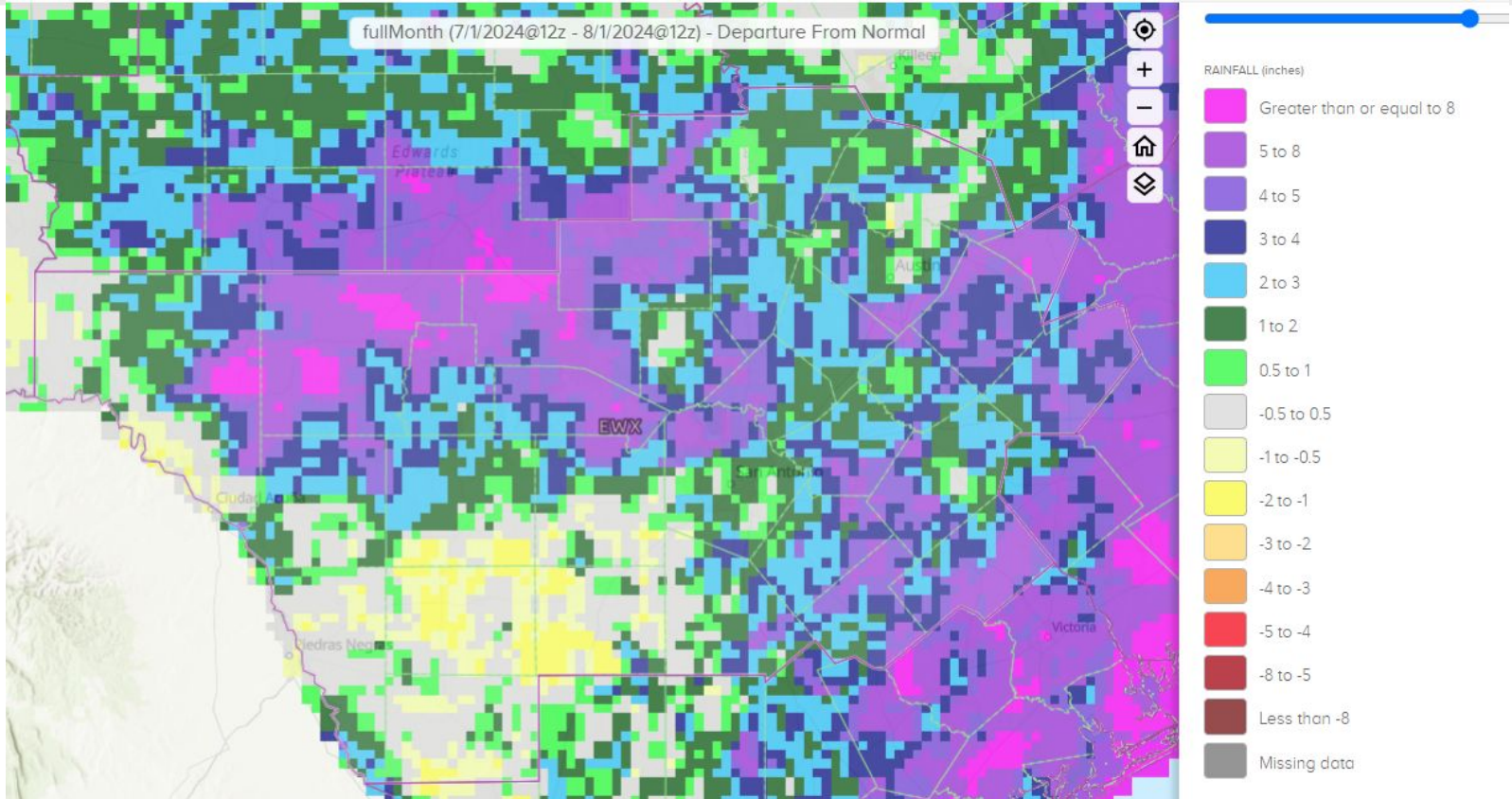
Observed Rainfall (Inches)





# Monthly Rainfall

Departure from Normal Rainfall (Inches)

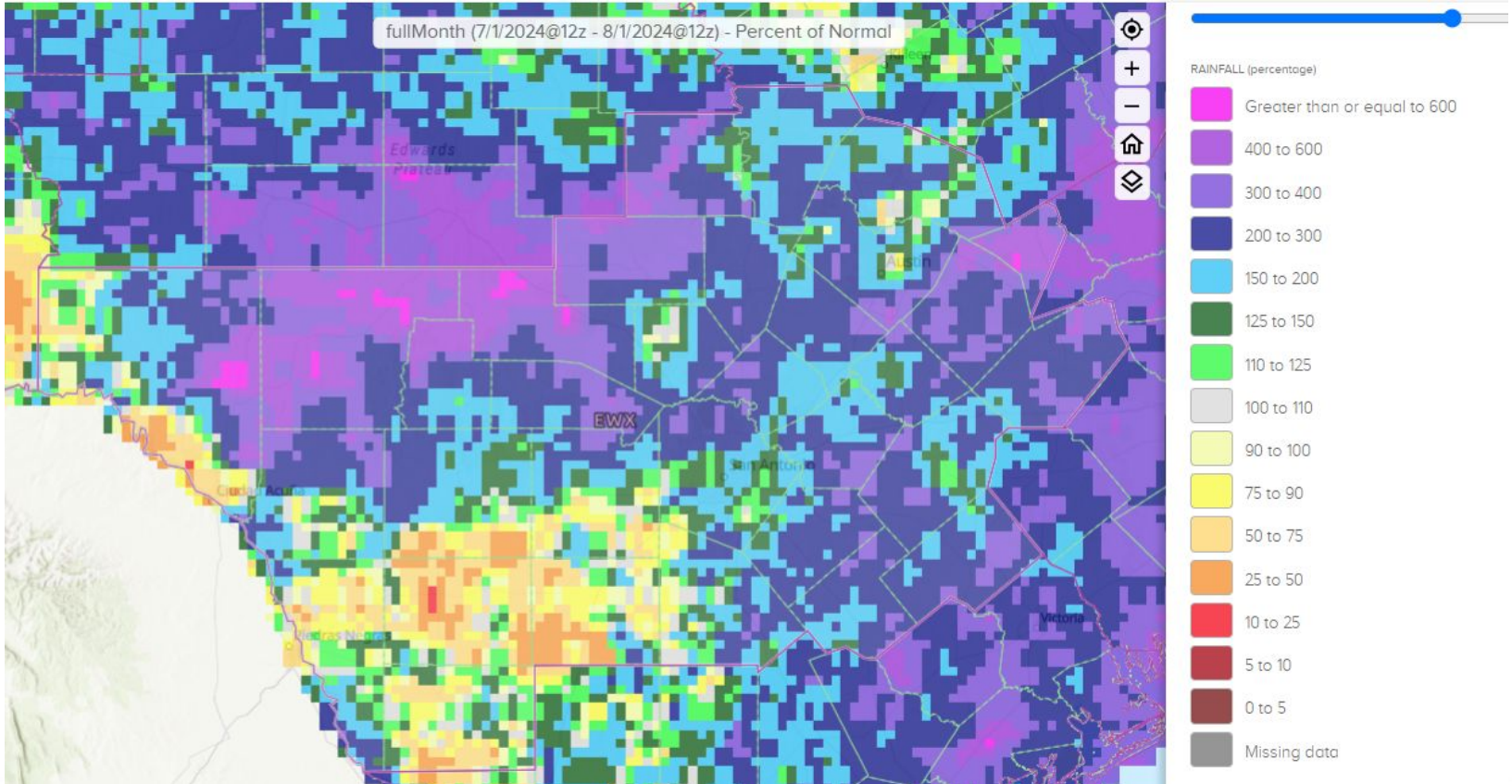






# Monthly Rainfall

Percent of Normal Rainfall (%)





# Climate Station Rainfall Data For the Month

Austin/San Antonio Area

	Monthly Rainfall	Monthly Average	2024 Rainfall Through Month	1991-2020 Normal Through Month	2024 Percent of Normal
Austin – Bergstrom	5.26”	2.16”	25.38”	20.53”	124%
Austin – Mabry	3.03”	1.96”	22.54”	20.51”	110%
Del Rio	0.57”	1.50”	2.23”	10.80”	21%
San Antonio	4.25”	2.41”	19.45”	18.52”	105%

\*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	2024 Rainfall Through Month	1991-2020 Normal Through Month	2024 Percent of Normal
College Station	4.27"	1.98"	38.51"	23.20"	166%
Corpus Christi	4.97"	2.54"	18.98"	16.48"	115%
Laredo	1.29"	2.11"	6.29"	12.17"	52%
San Angelo	1.34"	1.10"	7.53"	11.53"	65%
Victoria	6.74"	3.46"	29.40"	23.53"	125%
Waco	1.76"	1.82"	28.47"	21.49"	132%

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





# Monthly Historical Streamflow Comparison

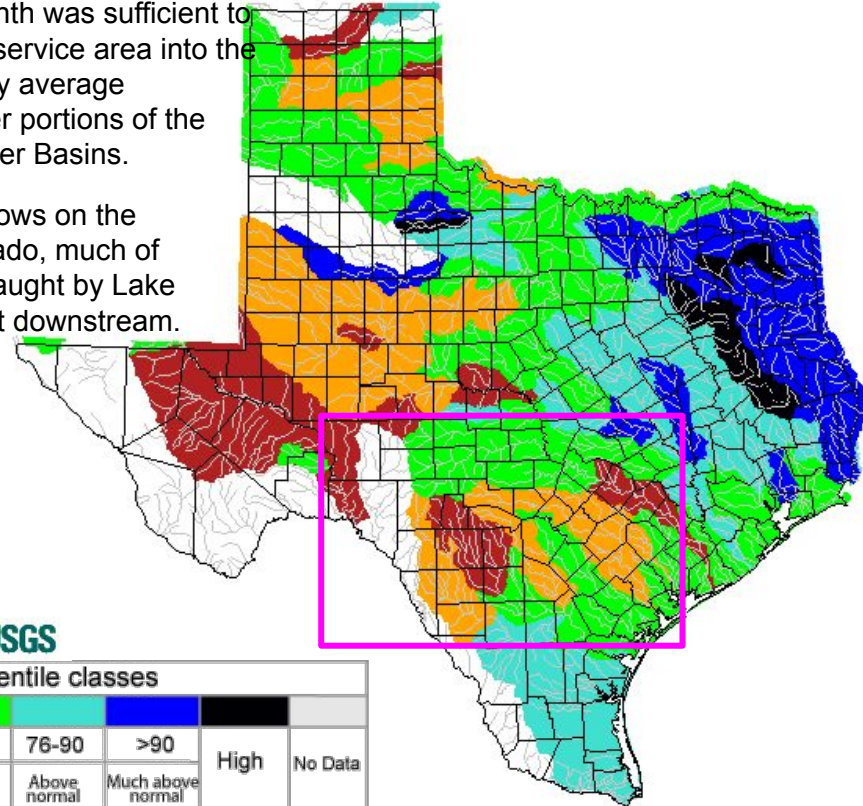
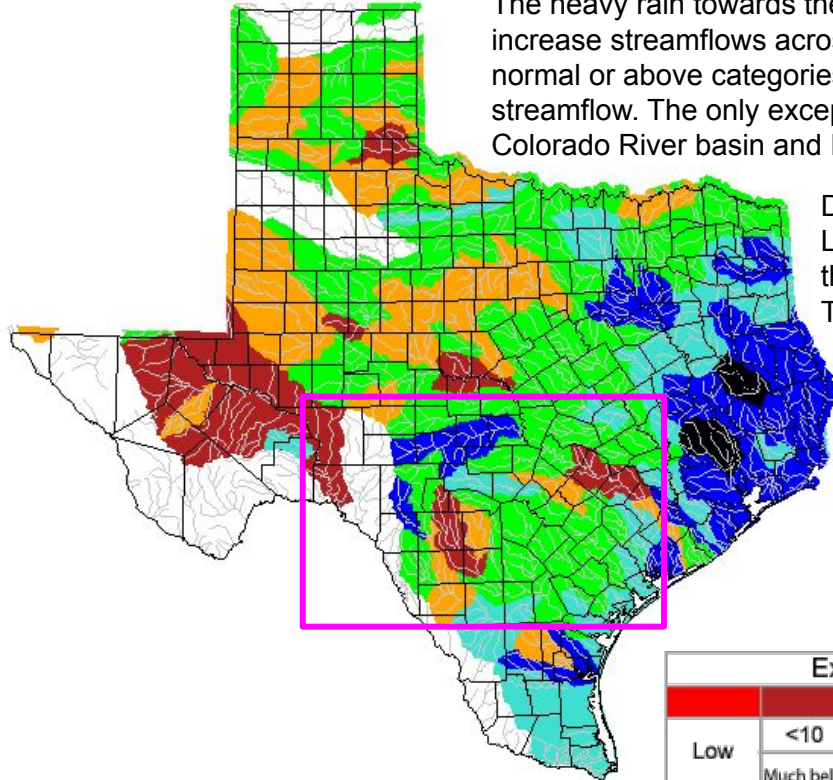
## Streamflow Comparison

July 2024

The heavy rain towards the end of the month was sufficient to increase streamflows across much of the service area into the normal or above categories for the monthly average streamflow. The only exception is the lower portions of the Colorado River basin and Frio/Sabinal River Basins.

Despite higher flows on the Llano and Colorado, much of this water was caught by Lake Travis, and didn't downstream.

June 2024



Explanation - Percentile classes

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







# 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	1007.17	-1.58
Lake Travis	681	641.97	7.65
Canyon Lake	909	885.95	0.94
Medina Lake	1064.2	975.95	5.44
Lake Amistad	1117	1048.77	1.60





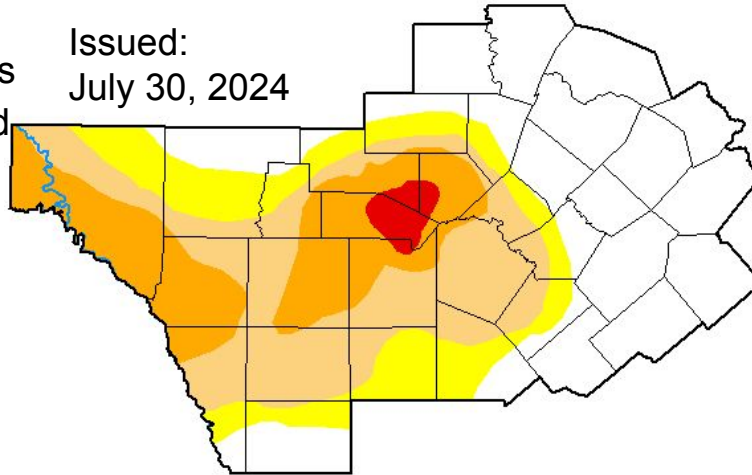
# Drought Conditions

## Monthly Drought Monitor Comparison

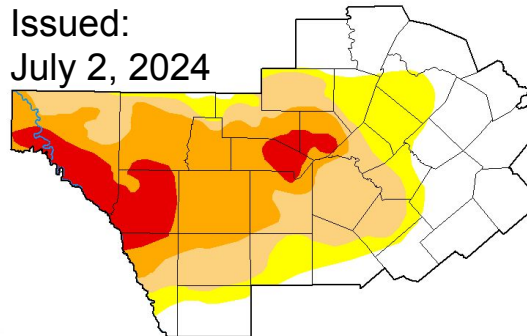
The well above normal rainfall across the Hill Country, and southern Edwards Plateau over the month of July allowed for two to three categories of drought improvement. Long standing rainfall deficits and very low water supply reservoirs have justified the continuation of the more severe categories of drought over portions of the area.

- D3 drought encompasses 1.7% of the CWA
- Drought doesn't affect 58% of the CWA

Issued:  
July 30, 2024



Issued:  
July 2, 2024



**July 30, 2024**

(Released Thursday, Aug. 1, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
<b>Current</b>	42.99	14.53	23.30	17.49	1.70	0.00
<b>Last Week</b> 07-23-2024	39.88	16.22	18.01	23.81	2.07	0.00
<b>3 Months Ago</b> 04-30-2024	22.48	7.49	24.01	38.25	7.77	0.00
<b>Start of Calendar Year</b> 01-02-2024	11.10	12.65	31.67	20.39	24.19	0.00
<b>Start of Water Year</b> 09-26-2023	7.30	10.81	13.65	8.95	22.09	37.20
<b>One Year Ago</b> 08-01-2023	0.00	32.02	22.37	19.10	18.75	7.76

Intensity:





# One Month Outlook

The most recent Monthly Outlook

- The Precipitation Outlook for the month of August shows equal chances for above, below, or near normal rainfall for much of the service area
  - A portion of the Hill Country, and I-35 corridor lean slightly below normal chances
  - Portions of the Coastal Plains and Rio Grande Plains lean towards slightly above normal chances
- The Temperature Outlooks leans towards above normal for much of the service area for August

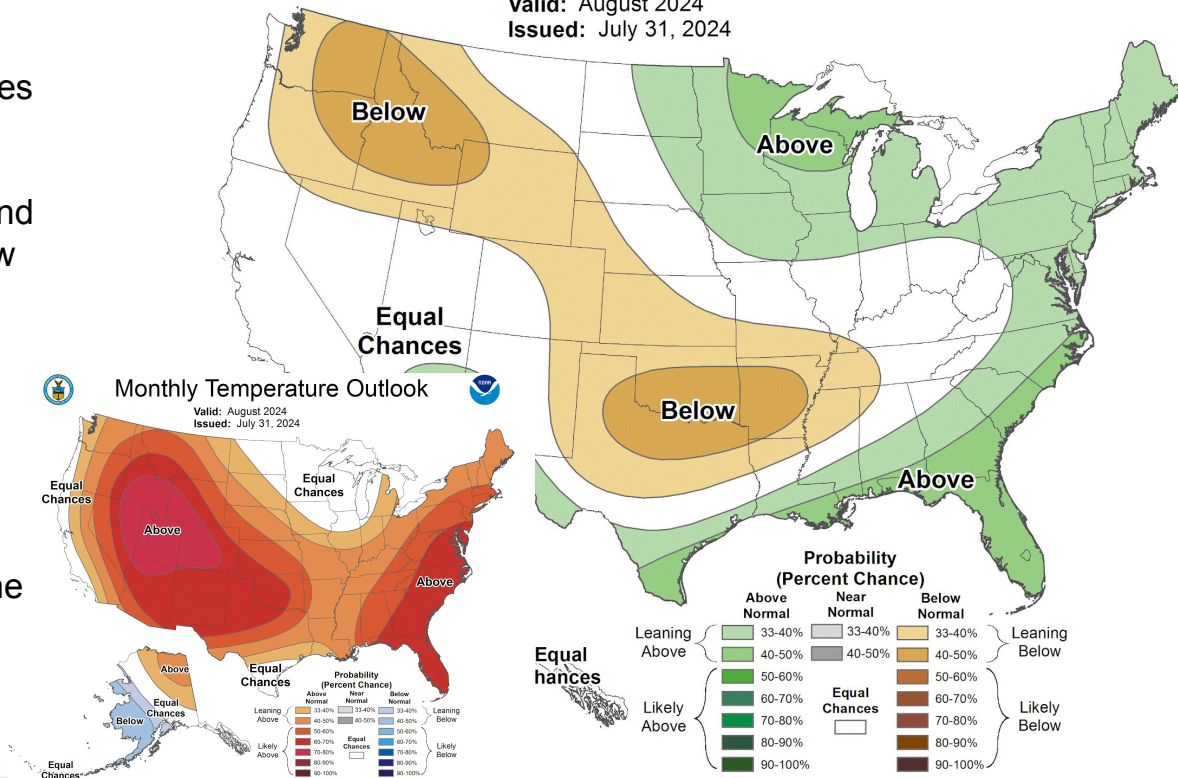
[Click for latest graphics](#)



## Monthly Precipitation Outlook



Valid: August 2024  
Issued: July 31, 2024





# Three Month Outlook

Looking at the Seasonal Outlooks

- The Precipitation Outlook shows equal chances of above, below, or near normal precipitation for much of the service area however:
  - The far eastern portions of the Coastal Plains leans slightly towards above normal precipitation chances
- The Temperature Outlook shows above normal temperatures across the service area

[Click for latest graphics](#)

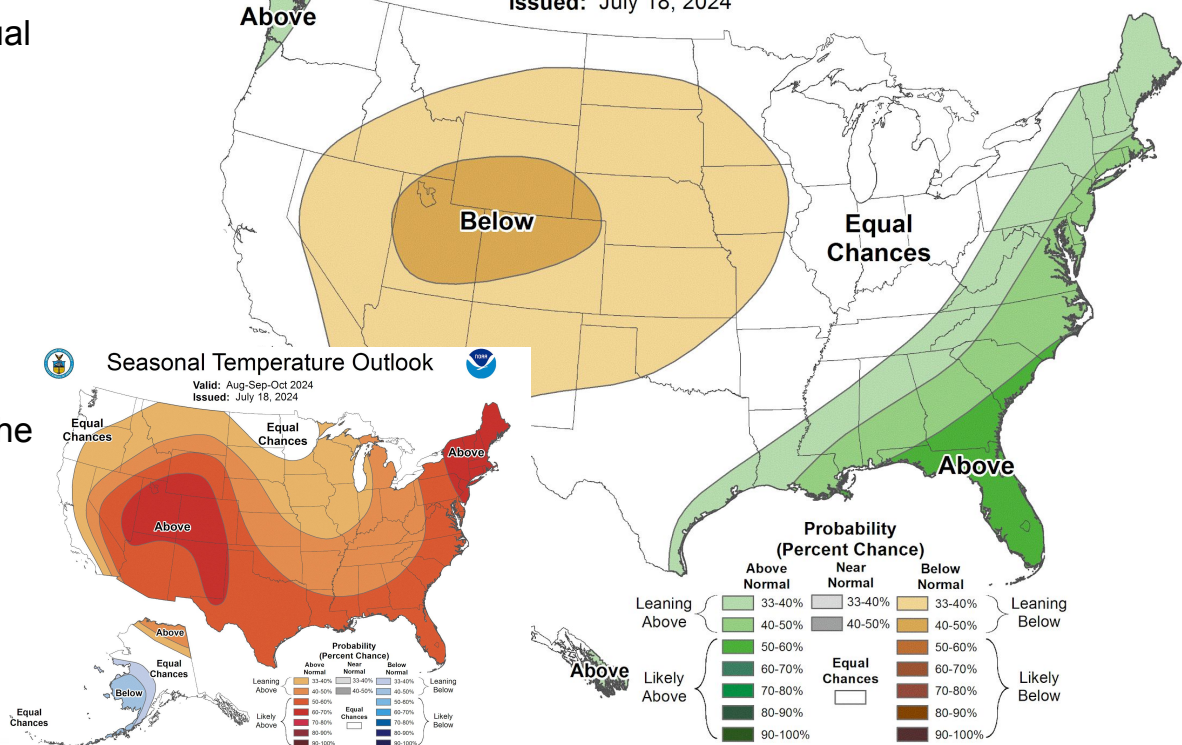


## Seasonal Precipitation Outlook



Valid: Aug-Sep-Oct 2024

Issued: July 18, 2024







**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: <https://water.noaa.gov/>

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](http://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml)

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