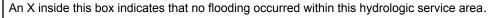


November 2024 Monthly Hydrologic and Flood Stage Report (E5/E3)

NWS Austin/San Antonio, TX

Prepared by: Chris Morris December 15, 2024



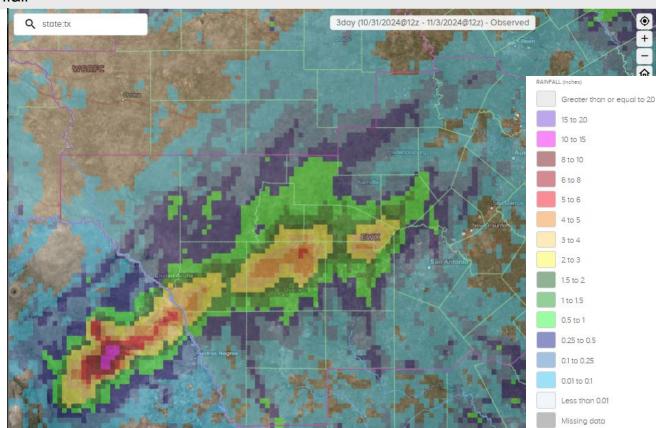


Monthly Summary Recap: Early November Rainfall

Stagnant thunderstorms over the

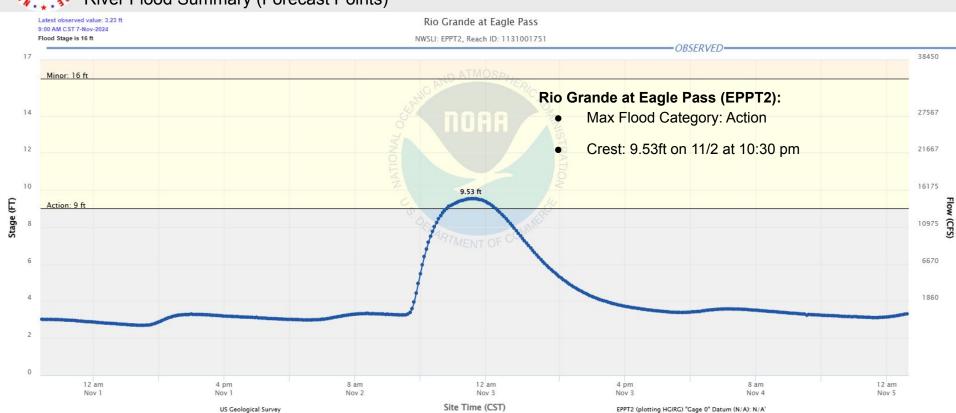
Stagnant thunderstorms over the Mexican Mountains produced localized rainfall amounts up to 10 to 15 inches.

- The runoff from these storms resulted in the Rio Grande River at Eagle Pass rising into Action stage.
- Additional rises were seen in the Frio and Sabinal basins, however these rises did not result in any forecast point reaching action stage
- Localize flooding was observed on smaller tributaries; specifically
 Brushy Creek flooded Highway
 127 3 miles southeast of Concan.





Flood Stage Report (E3) River Flood Summary (Forecast Points)



Graph Created: (09:32 AM CST Nov 7 2024) - Forecast Issued (09:04 AM CST Nov 7 2024)

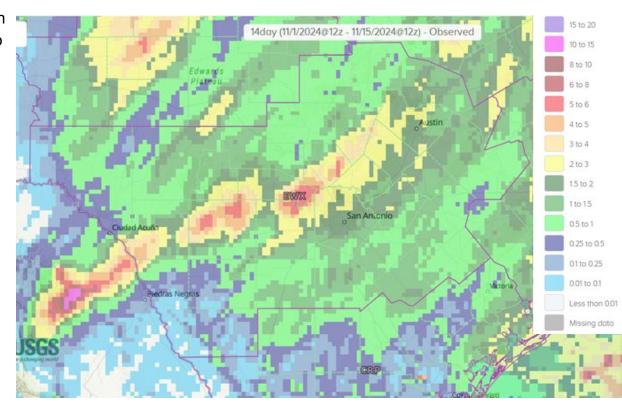


Monthly Summary

Recap: Early November Rainfall

Training storms ahead of a slowly southeastern moving cold front brough widespread rainfall to much of the service area on Nov 3rd and 4th.

- A swath of greater than 5 inches of rain stretched from Uvalde to Blanco Counties.
- Flooding and flash flooding was observed
 - One fatality occurred in Medina County.
- Given low streamflows prior to this rainfall, river responses were a little more localized.
 - One forecast point reached actions stage while two non-forecast points reached into minor flood stage.

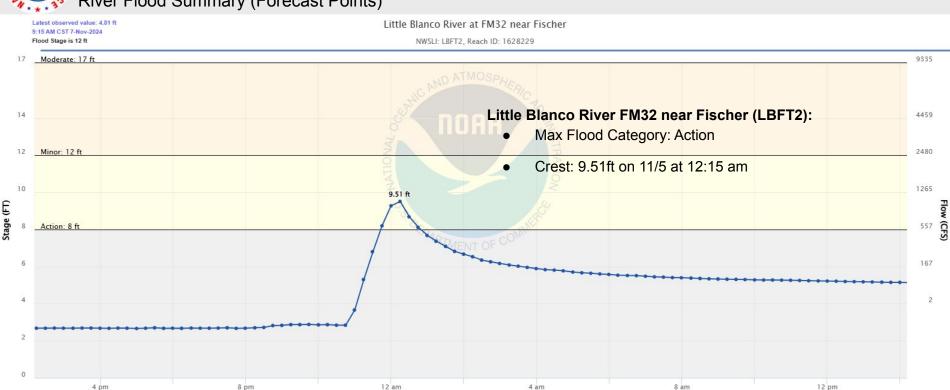


Flood Stage Report (E3) River Flood Summary (Forecast Points)

Nov 4

Observations courtesy of U.S. Geological Survey

US Geological Survey



Site Time (CST)

Nov 5

Nov 5

LBFT2 (plotting HGIRG) "Gage 0" Datum (NAVD88):

Nov 5



Nov 4

Nov 5

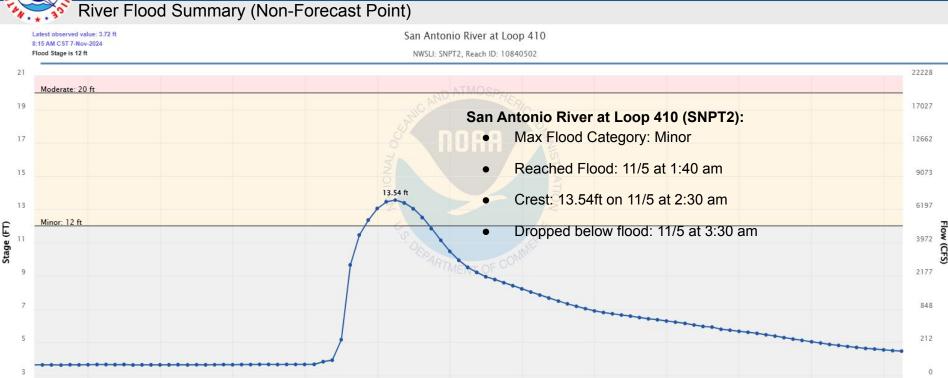
Flood Stage Report (E3) River Flood Summary (Non-Forecast Point)

10 pm

Nov 4

Observations courtesy of U.S. Geological Survey

US Geological Survey



Site Time (CST)

6 am

Nov 5

10 am

Nov 5

SNPT2 (plotting HGIRG) "Gage 0" Datum (N/A): N/A'

2 am

Nov 5



6 pm

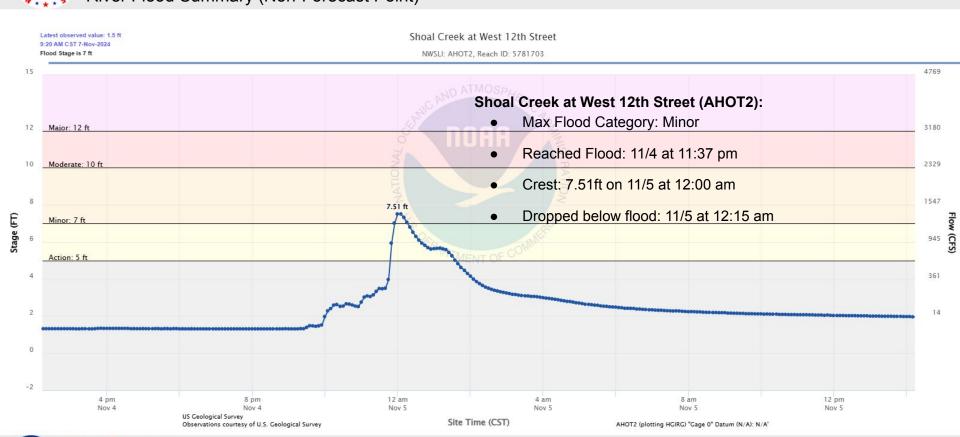
Nov 4

National Weather Service Austin/San Antonio, TX

2 pm

Nov 5

Flood Stage Report (E3) River Flood Summary (Non-Forecast Point)





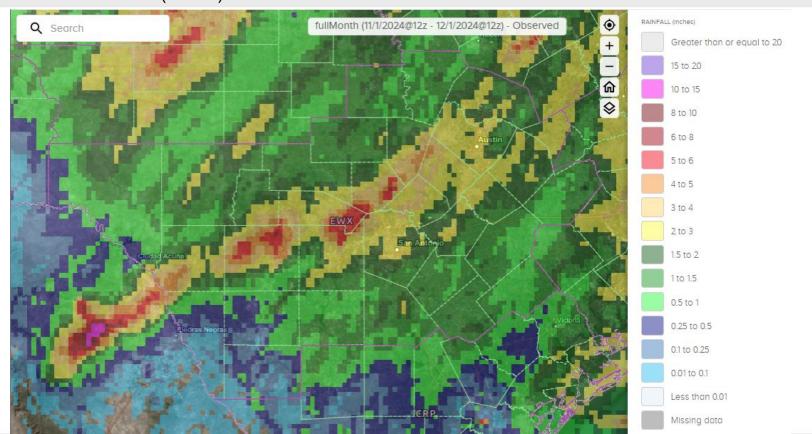


Hydrologic Products Issued for the Month

| Product Issued | Number Issued | Additional Comments |
|---|---------------|---|
| River Flood Warning/Area Flood Warning (FLW) | 0 | |
| River Flood Statement/Area Flood Advisory (FLS) | 7 | |
| Flood Watch (FFA) | 0 | |
| Flash Flood Warning (FFW) | 3 | |
| Flash Flood Statement (FFS) | 3 | |
| Hydrologic Outlook (ESF) | 6 | AHPS probabilistic forecasts for the Brazos, Colorado, Guadalupe, San Antonio, Pecos, and Nueces Rivers |



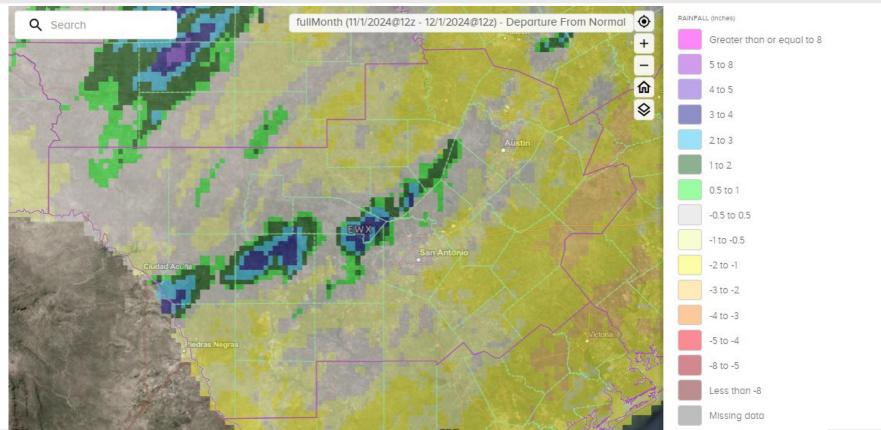
Monthly Rainfall Observed Rainfall (Inches)





National Weather Service Austin/San Antonio, TX

Monthly Rainfall Departure from Normal Rainfall (Inches)

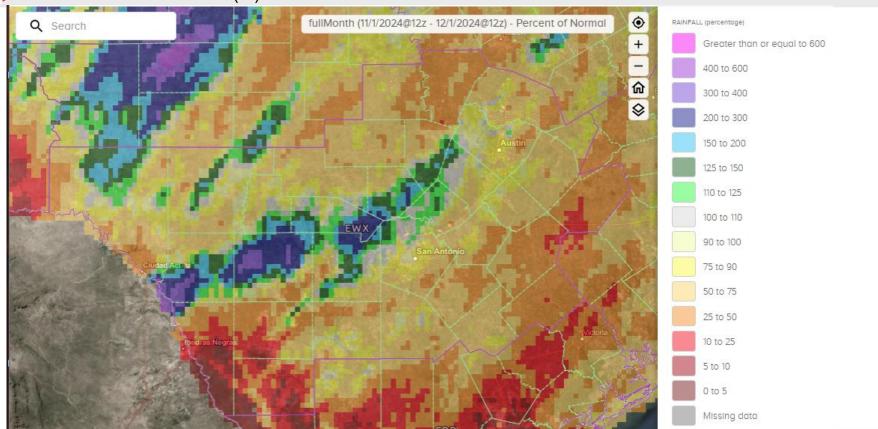




National Weather Service Austin/San Antonio, TX

Monthly Rainfall

Percent of Normal Rainfall (%)





National Weather Service Austin/San Antonio, TX



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 | 1.51 | 2.68" | 28.23" | 32.96" | 86% |
| Austin – Mabry | 2.26" | 2.92" | 26.69" | 33.53" | 80% |
| Del Rio | 0.23" | 0.91" | 10.38" | 19.11" | 54% |
| San Antonio | 1.80" | 2.08" | 23.10" | 30.38" | 76% |

^{*}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 | 2.46" | 3.31" | 42.40" | 37.50" | 113% |
| Corpus Christi | 0.15" | 2.03" | 26.22" | 29.81" | 88% |
| Laredo | 0.03" | 1.04" | 8.36" | 20.28" | 41% |
| San Angelo | 6.08" | 1.16" | 19.09" | 20.04" | 95% |
| Victoria | 0.47" | 2.93" | 33.69" | 38.07" | 88% |
| Waco | 1.89" | 2.71" | 32.45" | 33.53" | 97% |

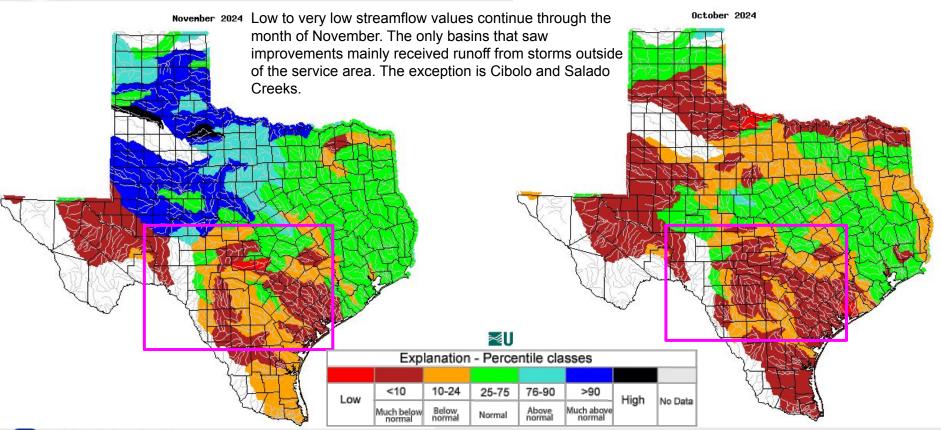
^{*}The monthly averages and normal values are for the period 1991-2020



EATHER SE

Monthly Historical Streamflow Comparison

Streamflow Comparison





National Weather Service Austin/San Antonio, TX

Reservoir Data For the Month

Data from the TWDB Water Data For Texas Dashboard

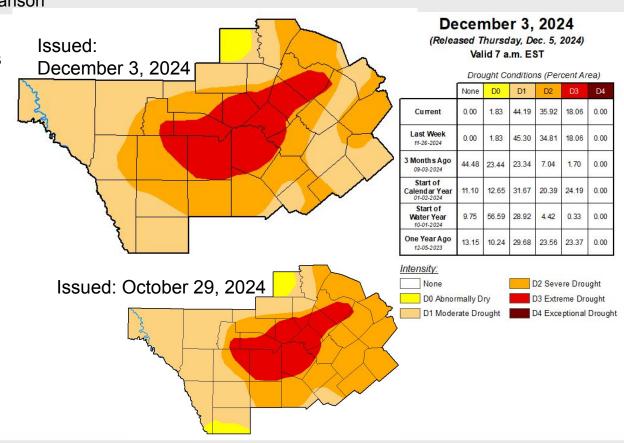
| Reservoir | Conservation Elevation (feet) | End of Month Elevation (feet) | Monthly Change (Feet) |
|---------------|----------------------------------|----------------------------------|--------------------------|
| Lake Buchanan | 1020 | 1004.41 | 0.75 |
| Lake Travis | 681 | 638.20 | -0.47 |
| Canyon Lake | 909 | 881.46 New record low | -0.79 |
| Medina Lake | 1064.2 | 972.75 | 0.15 |
| Lake Amistad | 1117 | 1051.11 | -0.15 |



Drought Conditions Monthly Drought Monitor Comparison

Only slight changes were noted with respect to drought categories across the service area. Only minor expansion of D1 across the Winter Garden, while seeing some improvements within the Coastal Plains thanks to the early month rainfall.

- D3 drought expanded to encompass 18% of the CWA
- Drought doesn't affect 0% of the CWA



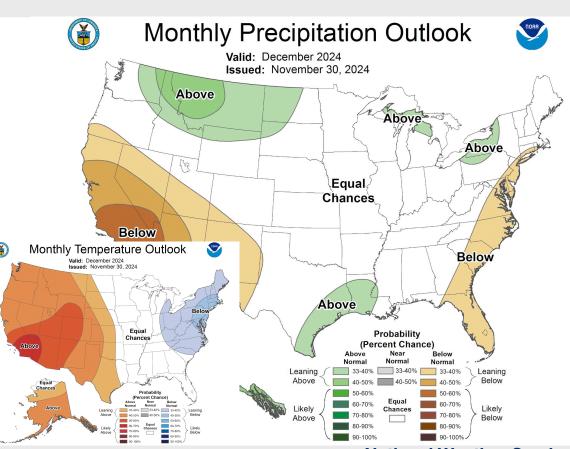




The Monthly Outlook for December

- The Precipitation Outlook shows a leaning towards above normal rainfall for the month of December across the eastern half of the service area while the western half has equal chances for at, below, or near normal rainfall
- The Temperature Outlook continues to lean towards above normal temperatures for the entire service area

Click for latest graphics



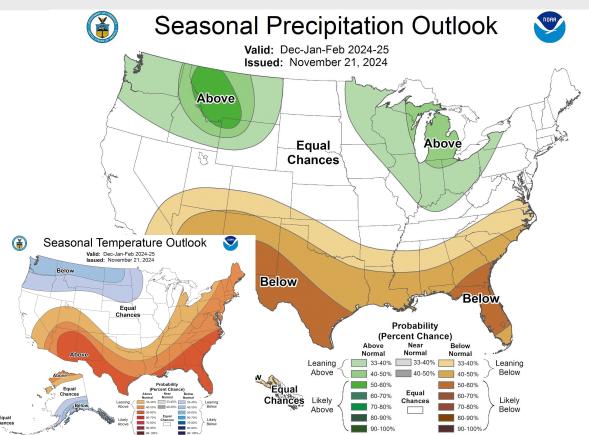




Looking at the Seasonal Outlook

- The Precipitation Outlook for the Winter shows the likelihood of below normal precipitation for the entire service area
- Much like the monthly outlook, the Temperature Outlook for the Winter shows the likelihood for above normal temperatures across the service area

Click for latest graphics







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/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/

