NWS Form E-5 (04-2006) (PRES. BY NWS Instruct	U.S. DEPARTMENT OF COM NATIONAL OCEANIC AND ATMOSPHERIC ADMINIST (ion 10-924) NATIONAL WEATHER S	STRATION HYDROLOGIC SERVICE AREA (HSA)
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		Austin/San Antonio (EWX)
		REPORT FOR: MONTH YEAR
		November 2022
TO: Hvo	drologic Information Center, W/OS31	SIGNATURE
NO	NOAA's National Weather Service	Chris Morris
	25 East West Highway ver Spring, MD 20910-3283	DATE
		December 8, 2022

When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).

X

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

A series of low latitude upper troughs brought a mostly cloudy, humid and warm period for the first third of the month. The eastern half of the area over the first 10 days of the month saw several rounds of light showers and drizzle with a couple stormy days, while warm and dry conditions prevailed over western counties. A weak surface trough along the middle Texas coast brought some heavy shower activity with amounts up to 1 inch over parts of the Coastal Prairies November 1st. Patchy light rain and drizzle days were noted on the 2nd, 3rd, 6th, 8th, and 9th, affecting mainly the eastern two-thirds of the area. On the 4th and 7th, deeper convection brought some spotty rains of 1 to 2 inches along and east of Highway 281.

Unseasonably warm weather came to an end on the 11th when a strong cold front arrived and brought some of the first freezes of the region on the weekend of the 12th. The associated disturbance brought solid areas of ½ to 1½ inch rains over the Hill Country and Central Texas while most areas along and south of Interstate 10 saw only spotty amounts of a trace to around ¼ inch. A disturbance aloft brought a partial return of milder air on the 14th and 15th, along with some much needed showers over the most drought stricken areas of the I-35 corridor and adjacent areas of the Hill Country and Coastal Prairies. While best rain totals were again to the east along Highway 77, solid areas of a tenth to around ⅓ inch were noted in the areas where the precipitation deficits remained the highest. Cold air would continue to be reinforced through the next couple weeks, but no significant rains were noted on the 16th through the morning of the 18th.

A series of cold front fronts and overrunning disturbances arriving on the 18th and continuing through the next several days would bring a prolonged wet pattern that would persist until Saturday the 26th. Dreary cool days of light showers and drizzle were predominant, but daily totals 1/10 to ½ inch were common during the period over the eastern two thirds of the region. The best rain chances were saved for the two days after Thanksgiving where a large upper low moved across Texas and generated widespread ½ to 2 ½ rains over nearly all areas. Through this wet period, only small parts of Maverick and Dimmitt counties would see less than ¼ inch totals. Meanwhile, nearly all areas north of Highway

90 between Del Rio and San Antonio and areas east of I-37 south of San Antonio would receive between 1.5 inches and 3 inches. The last few days of November would be mostly dry and mild.

The wet middle to latter part of November would lead to significant drought relief across much of South Central Texas. While moderate to severe drought was mostly unchanged over the Rio Grande Plains and parts of the eastern Hill Country remained in D4 (Exceptional) drought conditions, most South Central Texas enjoyed drought improvement by 1 to 2 categories. Moderate (D1) drought became the dominant classification, covering roughly 40 percent of the area. Moderate or worse drought still covers nearly 80 percent of South Central Texas, so this wet period in November may only be a brief break in what is forecast to be another abnormally dry cold season. River flows and reservoir elevation were able to recover slightly as a whole, but the driest areas continue to lead to falling reservoir elevations at Canyon Lake and Medina Lake.

## 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: <a href="http://www.weather.gov/wgrfc/">http://www.weather.gov/wgrfc/</a>

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

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

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: <a href="http://www.drought.gov/">http://www.drought.gov/</a>

## Rainfall and Reservoir Data:

### **Austin/San Antonio HSA:**

	Monthly Rainfall	Monthly Average	2022 Rainfall Through Month	1991-2020 Normal Through Month	Percent of Normal
Austin – Bergstrom	3.90"	2.68"	23.71"	32.96"	72%
Austin – Mabry	4.14"	2.92"	24.64"	33.53"	73%
Del Rio	0.62"	0.91"	15.99"	19.11"	84%
San Antonio	1.79"	2.08"	11.04"	30.38"	36%

## **Nearby offices:**

	Monthly Rainfall	Monthly Average	2022 Rainfall Through Month	1991-2020 Normal Through Month	Percent of Normal
College Station	5.16"	3.31"	29.58"	38.04"	78%
Corpus Christi	4.83"	2.03"	25.51"	29.81"	86%
Laredo	1.09"	1.04"	16.13"	20.28"	80%
San Angelo	2.78"	1.16"	12.67"	20.04"	63%
Victoria	5.05"	2.93"	23.60"	38.07"	62%
Waco	5.55"	2.71"	20.21"	33.53"	60%

<sup>\*</sup>The monthly averages and normal values are for the period 1991-2020

#### **HSA Reservoir Elevations:**

	Conservation Elevation (feet)	End of Month Elevation (feet)	Monthly Change (Feet)
Lake Buchanan	1020	1002.89	0.34
Lake Travis	681	640.64	0.66
Canyon Lake	909	899.57	-0.81
Medina Lake	1064.2	985.36	-0.88
Lake Amistad	1117	1080.78	0.86

## **Hydro products:**

River Flood Warning (FLW) -0

River Flood Statement / Flood Advisory (FLS) – 1

(1 Urban / Small Stream Flood Advisory / 0 River Flood Statement)

Hydrologic Statement (RVS) – 0

Flash Flood Watch (FFA) -0

Flash Flood Warning (FFW) -0

Flash Flood Statement (FFS) -0

Hydrologic Outlook (ESF) – 6 1 AHPS Probabilistic Forecast for Brazos River

1 AHPS Probabilistic Forecast for Colorado River

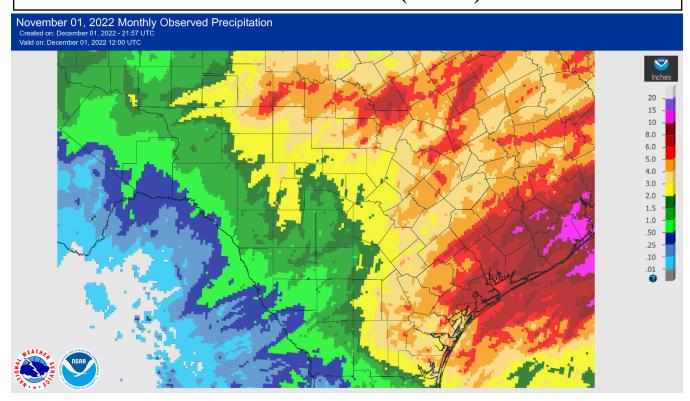
1 AHPS Probabilistic Forecast for Guadalupe River

1 AHPS Probabilistic Forecast for San Antonio River

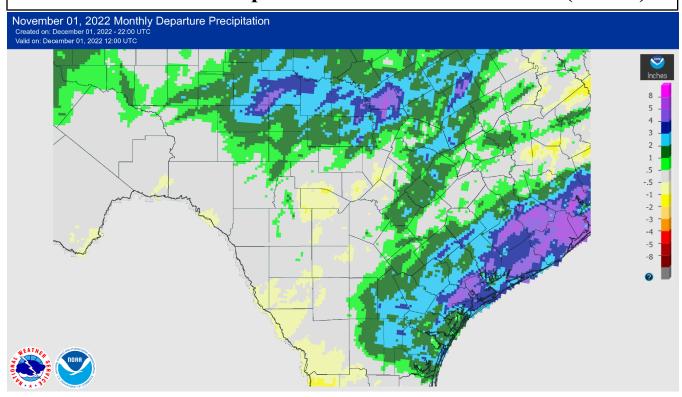
1 AHPS Probabilistic Forecast for Pecos River

1 AHPS Probabilistic Forecast for Nueces River

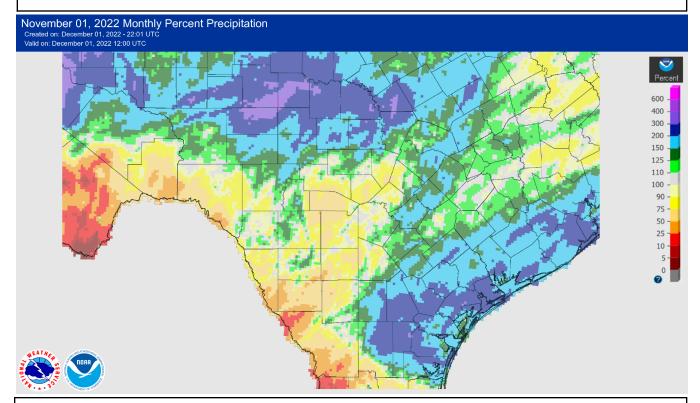
# **November 2022 - Observed Rainfall (Inches)**



# **November 2022 - Departure from Normal Rainfall (Inches)**



# **November 2022 - Percent of Normal Rainfall**



**Nov 22 - Streamflow Comparison with Historical Flows** 

