



November 2023

Monthly Hydrologic and Flood

Stage Report (E5/E3)

NWS Austin/San Antonio, TX

Prepared by: Chris Morris

December 8, 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

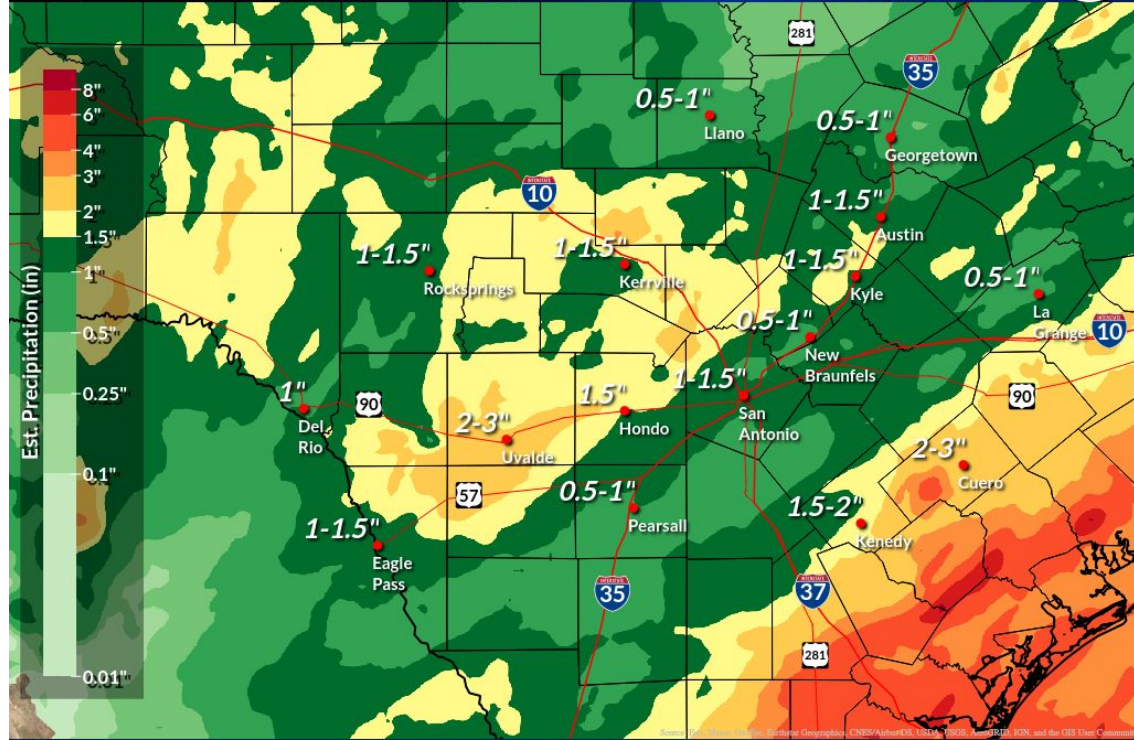
- The bulk of the precipitation seen over the course of the month of November fell from the 7th through the 14th.
- Portions of the the Rio Grande Plains, Hill Country, and Coastal Plains, saw the bulk of the rainfall during this period.
 - Maximum of 4-5 inches was seen in DeWitt County over this 7 day period.
- While rainfall amounts were healthy (2-4 inches in some places), below normal streamflows prevented any forecast point reaching minor flood stage.

7-Day Estimated Rainfall

Valid: 11/07/2023 06:00 AM - 11/14/2023 06:00 AM CST

Weather Forecast Office
Austin/San Antonio, TX

Issued Nov 14, 2023 8:46 AM CST



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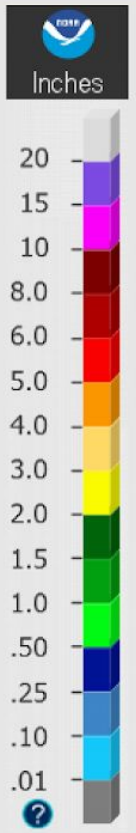
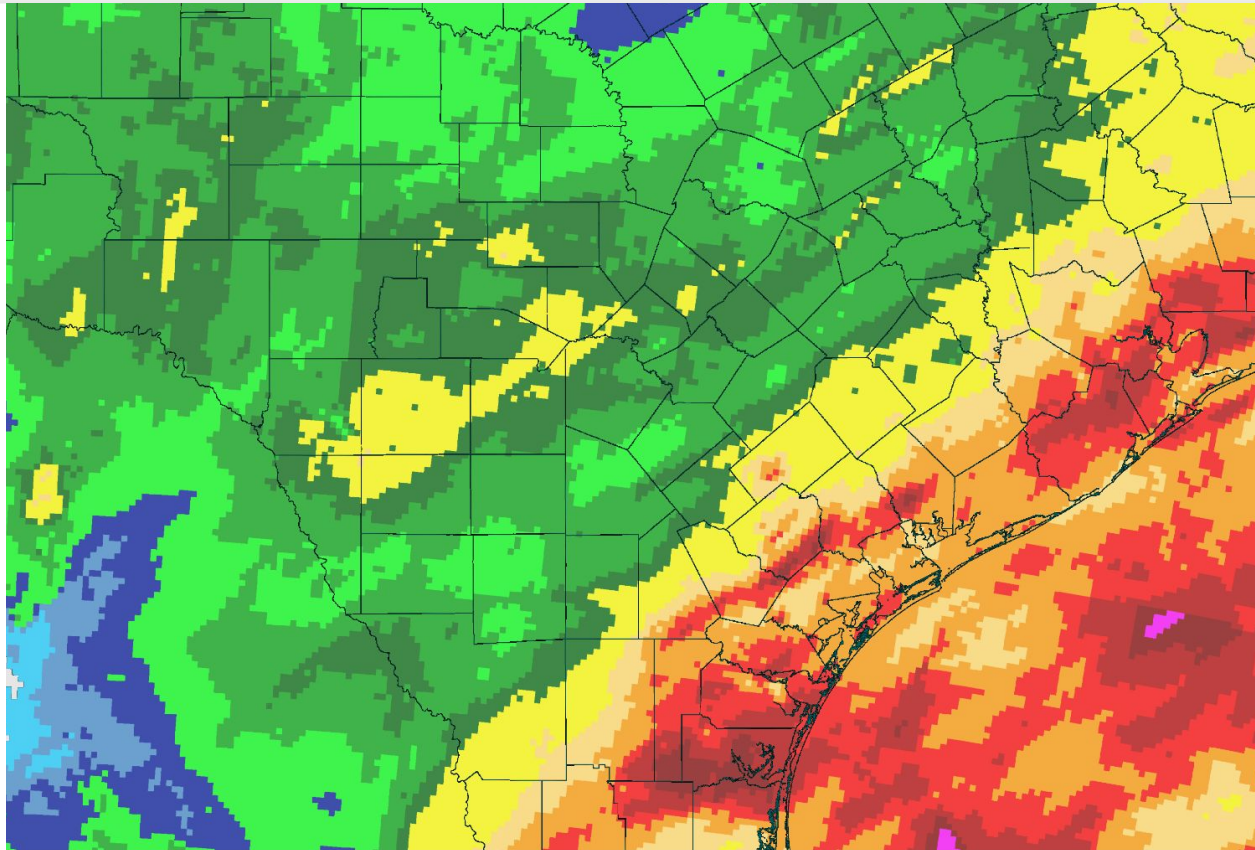
weather.gov/ewx





November 2023 Rainfall

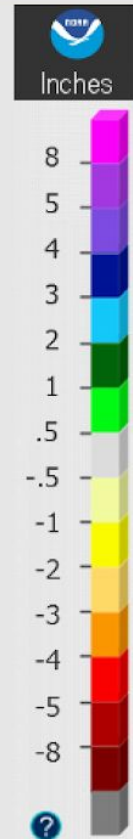
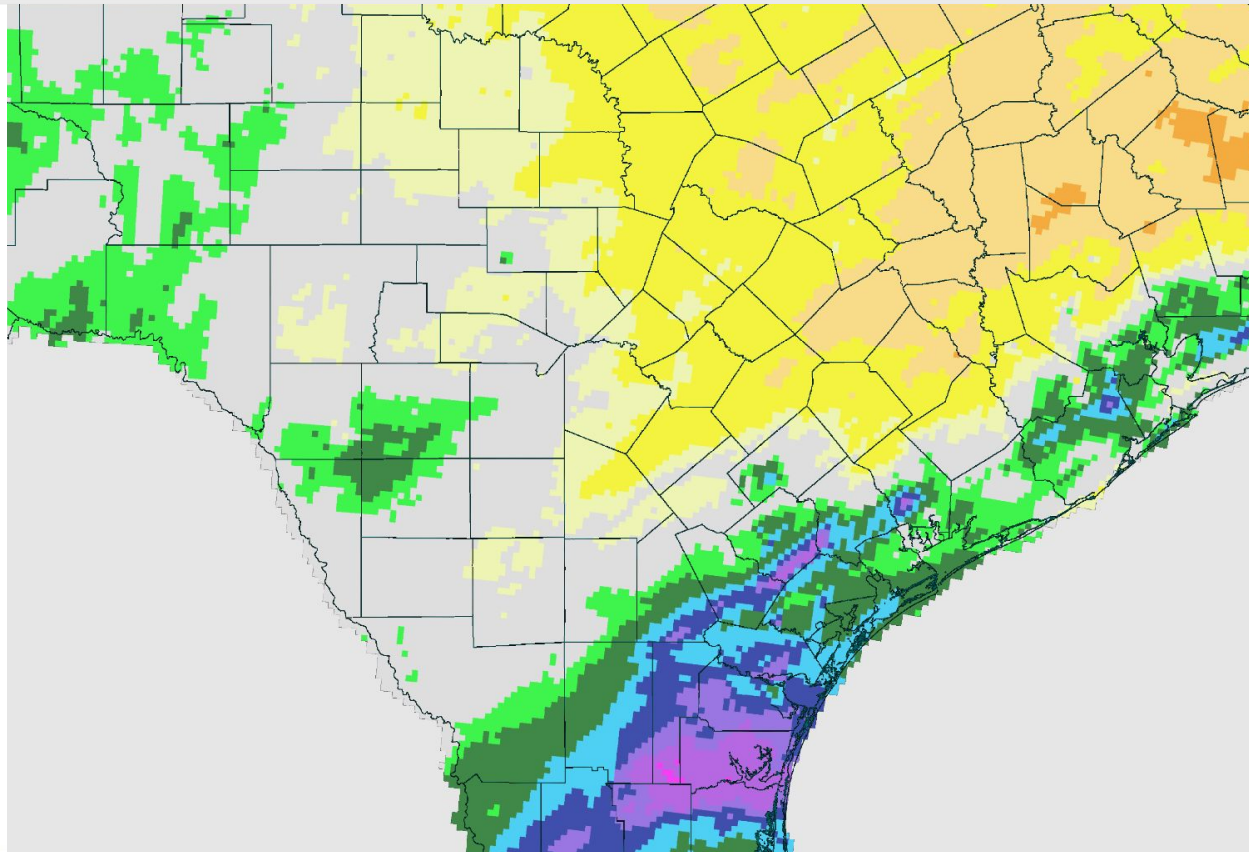
Observed Rainfall (Inches)





November 2023 Rainfall

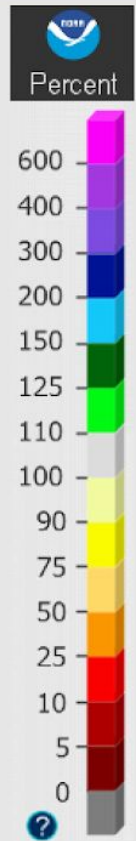
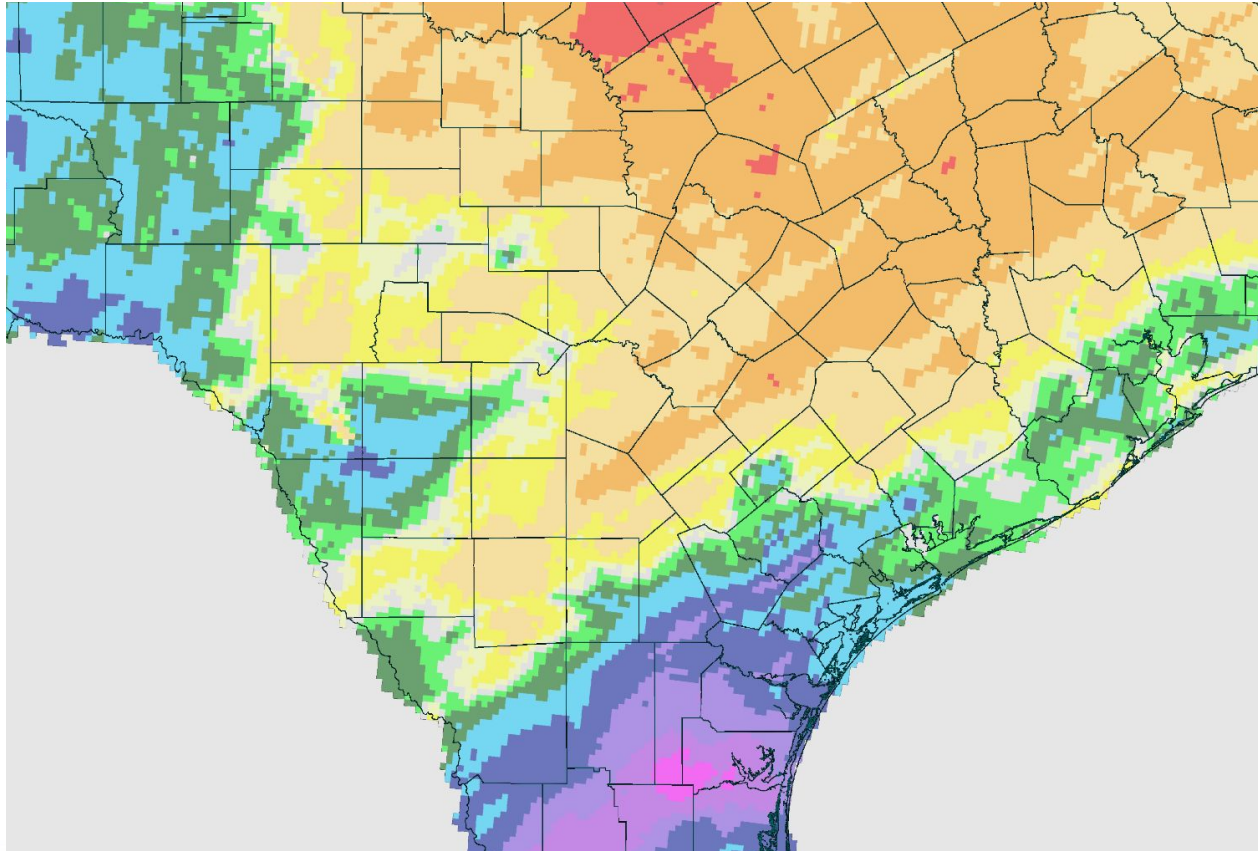
Departure from Normal Rainfall (Inches)





November 2023 Rainfall

Percent of Normal Rainfall (%)





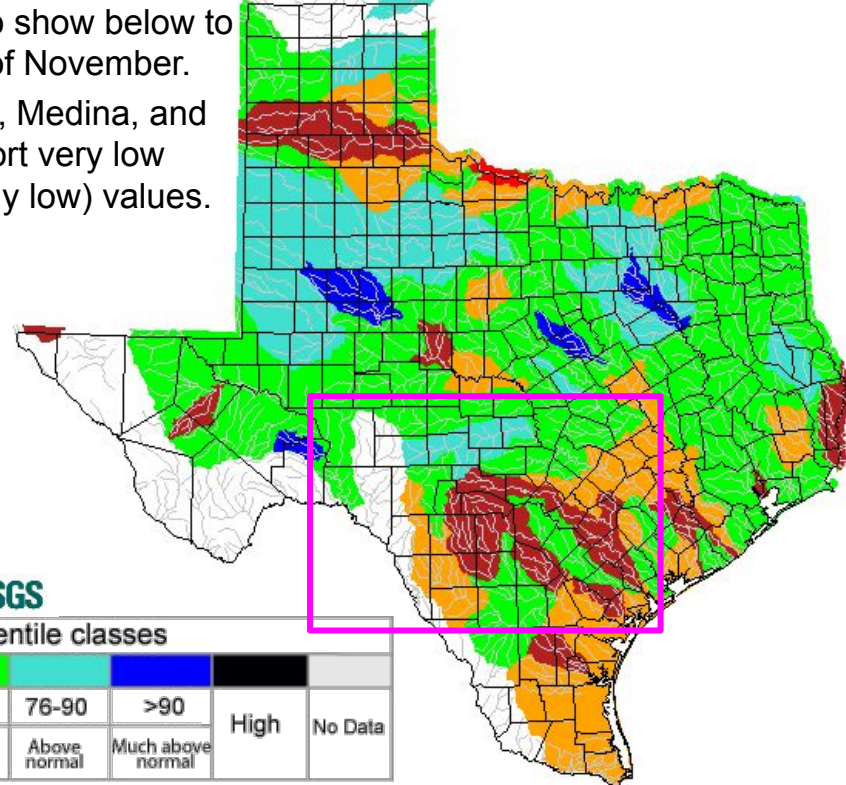
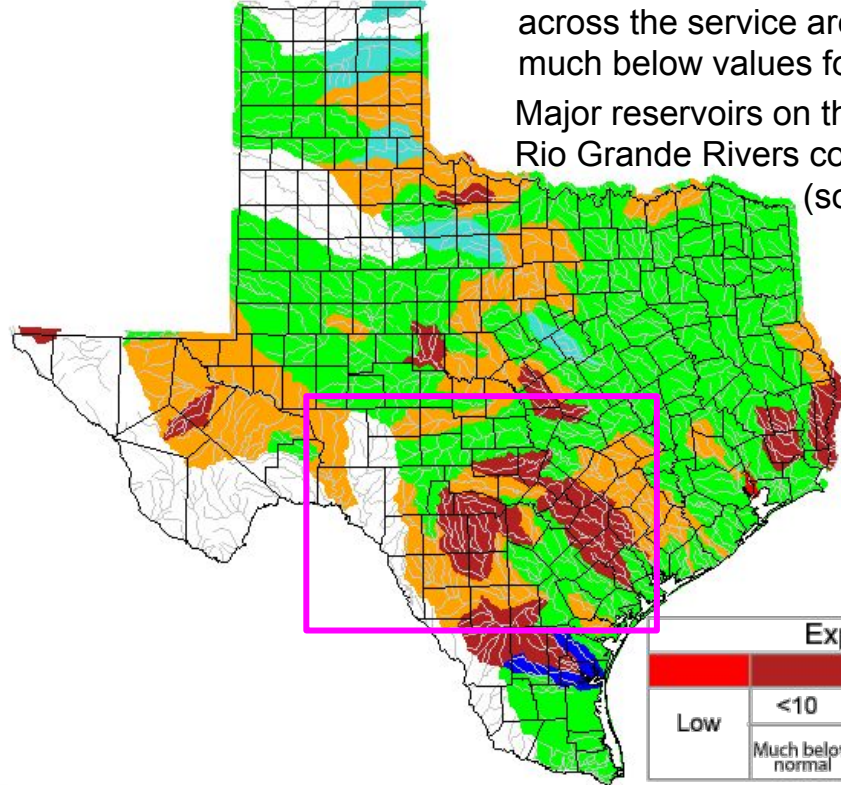
November 2023 - Historical Streamflow Comparison

Streamflow Comparison

November 2023

Outside of localized improvement, streamflows across the service area continue to show below to much below values for the month of November. Major reservoirs on the Guadalupe, Medina, and Rio Grande Rivers continue to report very low (some historically low) values.

October 2023



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		





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	1.36”	2.68”	24.67”	32.96”	75%
Austin – Mabry	1.21”	2.92”	24.41”	33.53”	73%
Del Rio	0.74”	0.91”	14.45”	19.11”	76%
San Antonio	1.40”	2.08”	18.90”	30.38”	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	0.94"	3.31"	26.42"	37.50"	70%
Corpus Christi	4.10"	2.03"	27.26"	29.81"	91%
Laredo	1.29"	1.04"	22.34"	20.28"	110%
San Angelo	0.75"	1.16"	17.16"	20.04"	86%
Victoria	3.15"	2.93"	31.40"	38.07"	82%
Waco	1.95"	2.71"	26.20"	33.53"	78%

*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	994.04	0.15
Lake Travis	681	631.47	-0.74
Canyon Lake	909	888.36	-1.06
Medina Lake	1064.2	975.65	-0.66
Lake Amistad	1117	1061.75	-2.06





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)	0	
Flash Flood Watch (FFA)	0	
Flash Flood Warning (FFW)	0	
Flash Flood Statement (FFS)	0	
Hydrologic Outlook (ESF)	6	AHPS probabilistic forecasts for the Brazos, Colorado, Guadalupe, San Antonio, Pecos, and Nueces Rivers





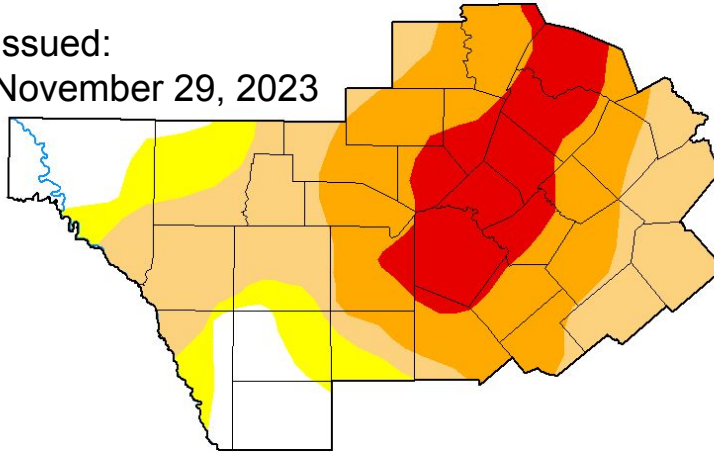
Drought Conditions

Monthly Drought Monitor Comparison

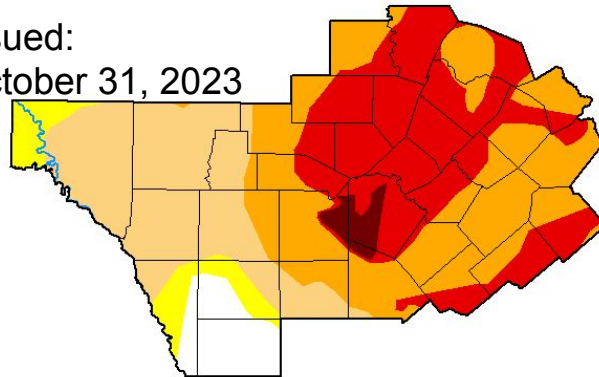
Some improvement in drought conditions were seen across portions of the service area, including the removal of the Exceptional Drought (D4) category due to the heavy rain event early in the month.

- D3/D4 drought encompasses 17% of the CWA
- Drought doesn't affect 23% of the CWA

Issued:
November 29, 2023



Issued:
October 31, 2023



November 28, 2023

(Released Thursday, Nov. 30, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	13.14	10.21	29.72	29.75	17.18	0.00
Last Week <small>11-21-2023</small>	9.92	13.38	29.76	29.75	17.18	0.00
3 Months Ago <small>08-29-2023</small>	3.21	20.60	3.87	9.12	28.10	35.11
Start of Calendar Year <small>01-03-2023</small>	6.21	14.33	40.02	19.13	11.66	8.65
Start of Water Year <small>09-26-2023</small>	7.30	10.81	13.65	8.95	22.09	37.20
One Year Ago <small>11-29-2022</small>	7.03	14.17	40.25	16.34	15.06	7.15

Intensity:





One Month Outlook

The most recent Monthly Outlook

- The Precipitation Outlook shows equal chances of above, near, or below normal precipitation for the month of December.
- The Temperature Outlook leans towards above normal temperatures for the month of December.

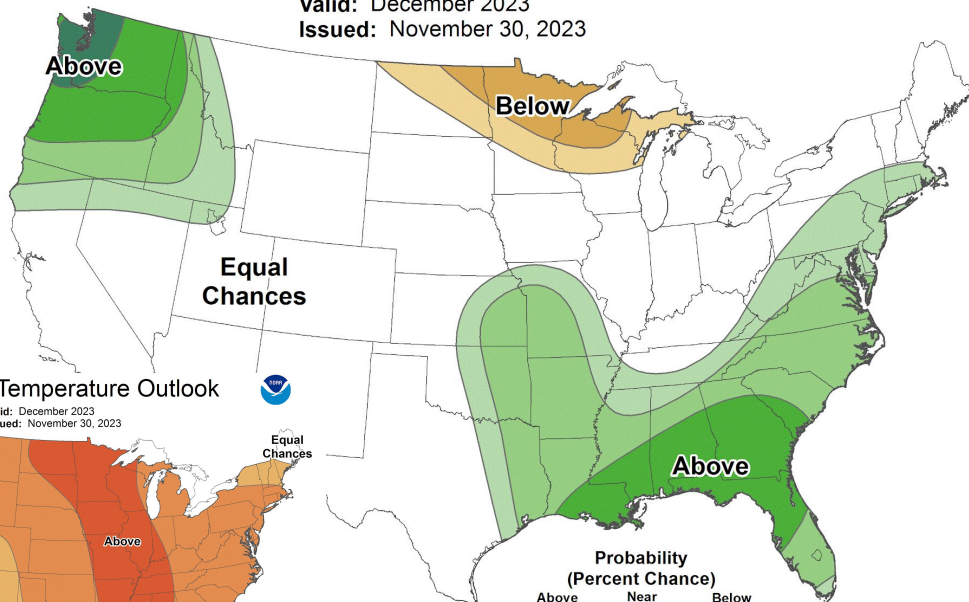
[Click for latest graphics](#)



Monthly Precipitation Outlook

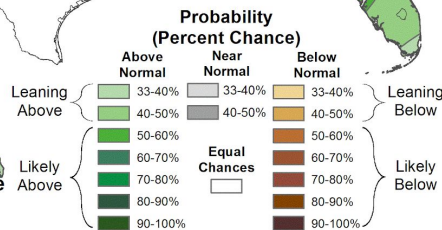
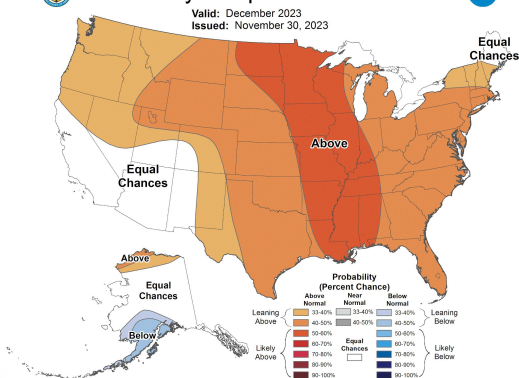


Valid: December 2023
Issued: November 30, 2023



Monthly Temperature Outlook

Valid: December 2023
Issued: November 30, 2023





Three Month Outlook

Looking at the Seasonal Outlooks

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

[Click for latest graphics](#)

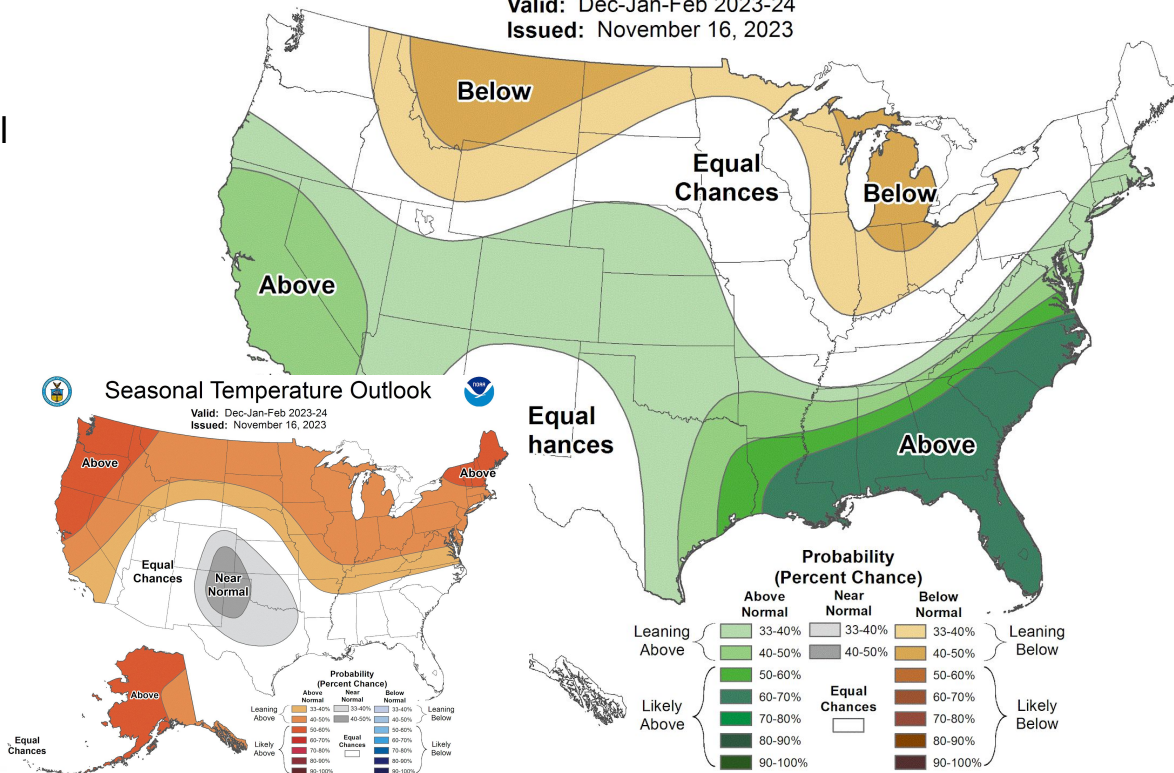


Seasonal Precipitation Outlook



Valid: Dec-Jan-Feb 2023-24

Issued: November 16, 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/>