



May 2023

Monthly Hydrologic Report (E5)

NWS Austin/San Antonio, TX

Prepared by: Chris Morris

June 12, 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

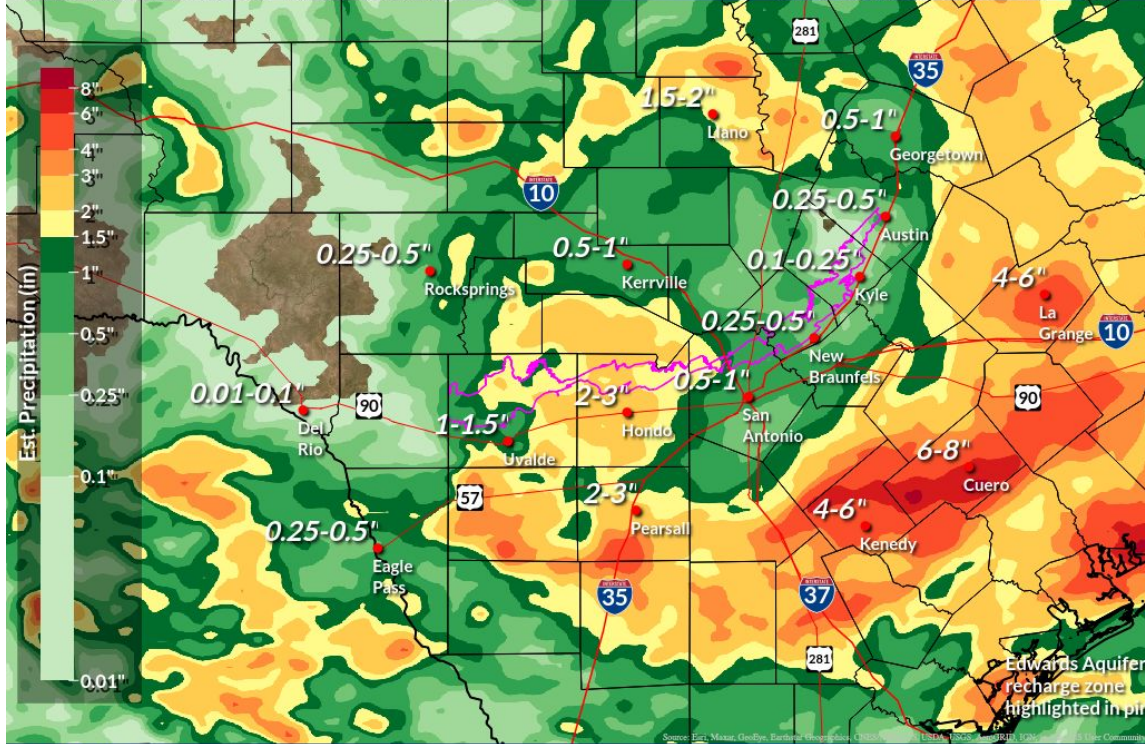
Recap

- The first 10 days of May were marked by multiple rounds of rainfall.
- This rainfall resulted in minor to moderate flooding primarily on the San Antonio River at Runge, TX.
- Isolated urban flooding also occurred but quickly receded once rainfall ended.

10-Day Estimated Rainfall

Valid: 05/01/2023 07:00 AM - 05/11/2023 07:00 AM CDT

Weather Forecast Office
Austin/San Antonio, TX
Issued May 11, 2023 9:45 AM CDT



NWSSanAntonio

weather.gov/ewx



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

National Weather Service
Austin/San Antonio, TX



Monthly Summary

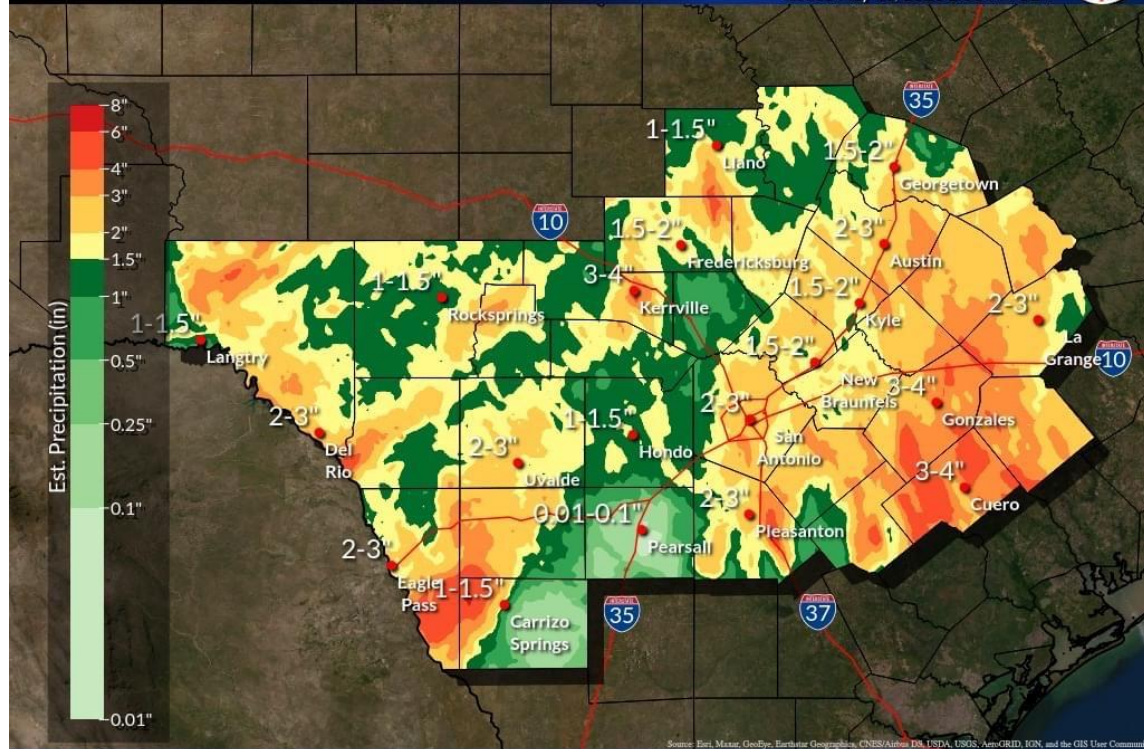
Recap

- A sizable portion of the monthly rainfall occurred in one widespread rainfall event.
- A convective complex developed and moved out of Mexico during the afternoon hours of the 14th before becoming a line and slowly moving across the area.
- The rainfall coupled with already high flows on area rivers to result in moderate to major flooding across the lower portions of the San Antonio and Guadalupe river basins.
- The following are forecast and data points which reached flood stage from this event and through the remainder of the month of May.

Observed Rainfall 12PM Fri to 2PM Sat

Weather Forecast Office
Austin/San Antonio, TX

Issued May 13, 2023 2:33 PM CDT



Source: Esti, Mazar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

[f](#) [t](#) [v](#) [NWSSanAntonio](#)

[weather.gov/ewx](#)



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



Monthly Summary

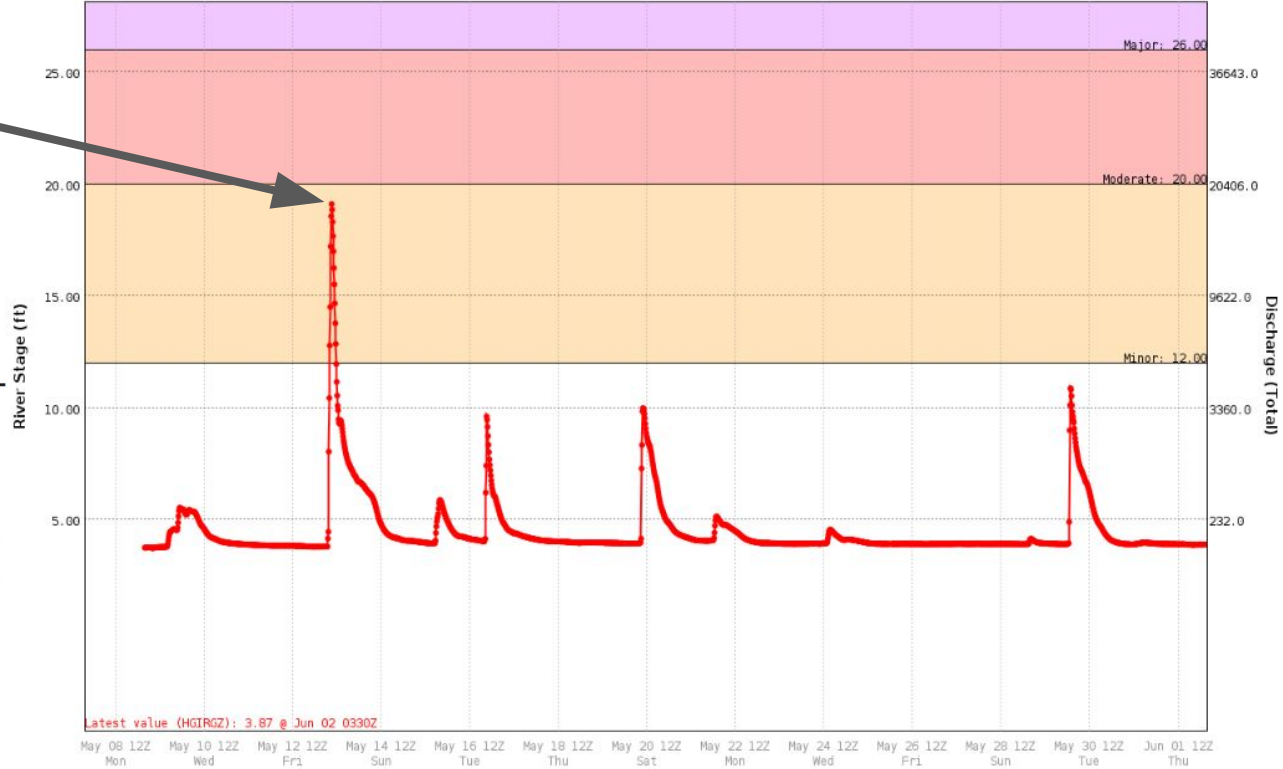
Recap

- Max Flood Category: Minor
- Reached Flood: 5/13 between 3:00-3:15am
- Crest: 19.09ft May 13th 4:15am
- Dropped below flood: 5/13 6:45am

SNPT2 : San Antonio River - San Antonio Loop 410

Bexar County, TX

WFO: EWX



- using custom time span -

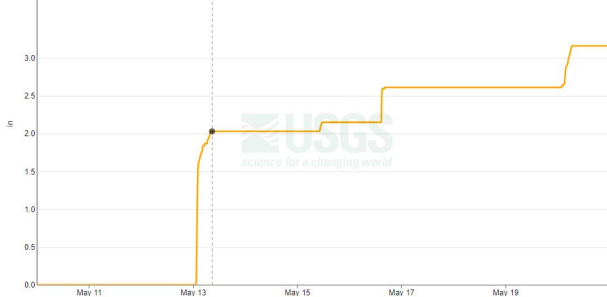
San Antonio Rv at Loop 410, San Antonio, TX -

08178565

May 10, 2023 - May 20, 2023

Precipitation, total, in

2.03 in - May 13, 2023 08:45:00 AM CDT



National Oceanic and Atmospheric Administration

U.S. Department of Commerce

National Weather Service
Austin/San Antonio, TX



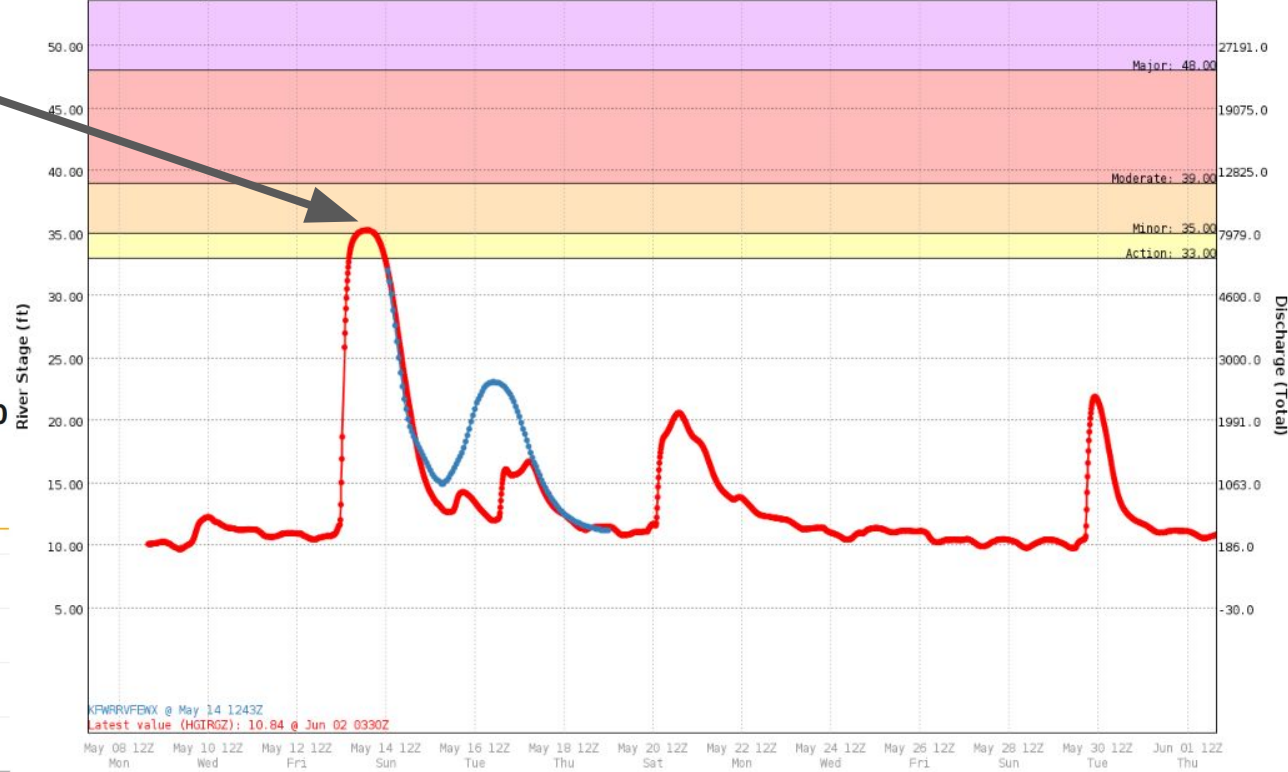
Monthly Summary

Recap

- Max Flood Category: Minor
- Reached Flood: 5/13 11:15am
- Crest: 35.21ft 5/13 8:45pm
- Dropped below flood: 5/14 6:30am

ELMT2 : San Antonio River - Elmendorf
Bexar County, TX

WFO: EWX

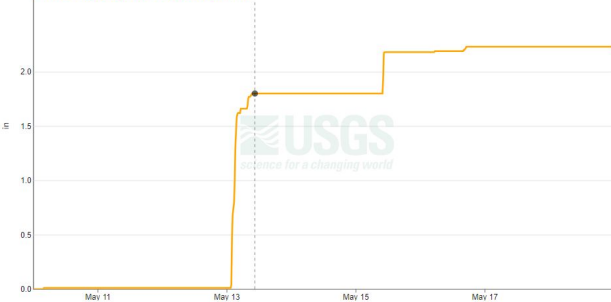


KFWRFVFWX @ May 14 1243Z
Latest value (HGTRGZ): 10.84 @ Jun 02 0330Z

San Antonio Rv nr Elmendorf, TX - 08181800

May 10, 2023 - May 18, 2023
Precipitation, total, in

1.8 in - May 13, 2023 10:30:00 AM CDT





Monthly Summary

Recap

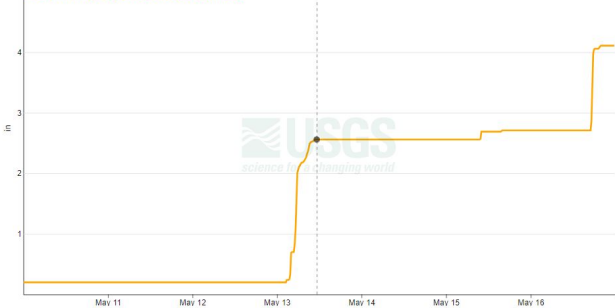
- Max Flood Category: Minor
- Reached Flood: 5/13 between 12:00-12:15pm
- Crest: 18.82ft on 5/13 at 3:45pm
- Dropped below flood: 5/13 at 8:00pm

Cibolo Ck nr Falls City, TX - 08186000

May 10, 2023 - May 16, 2023

Precipitation, total, in

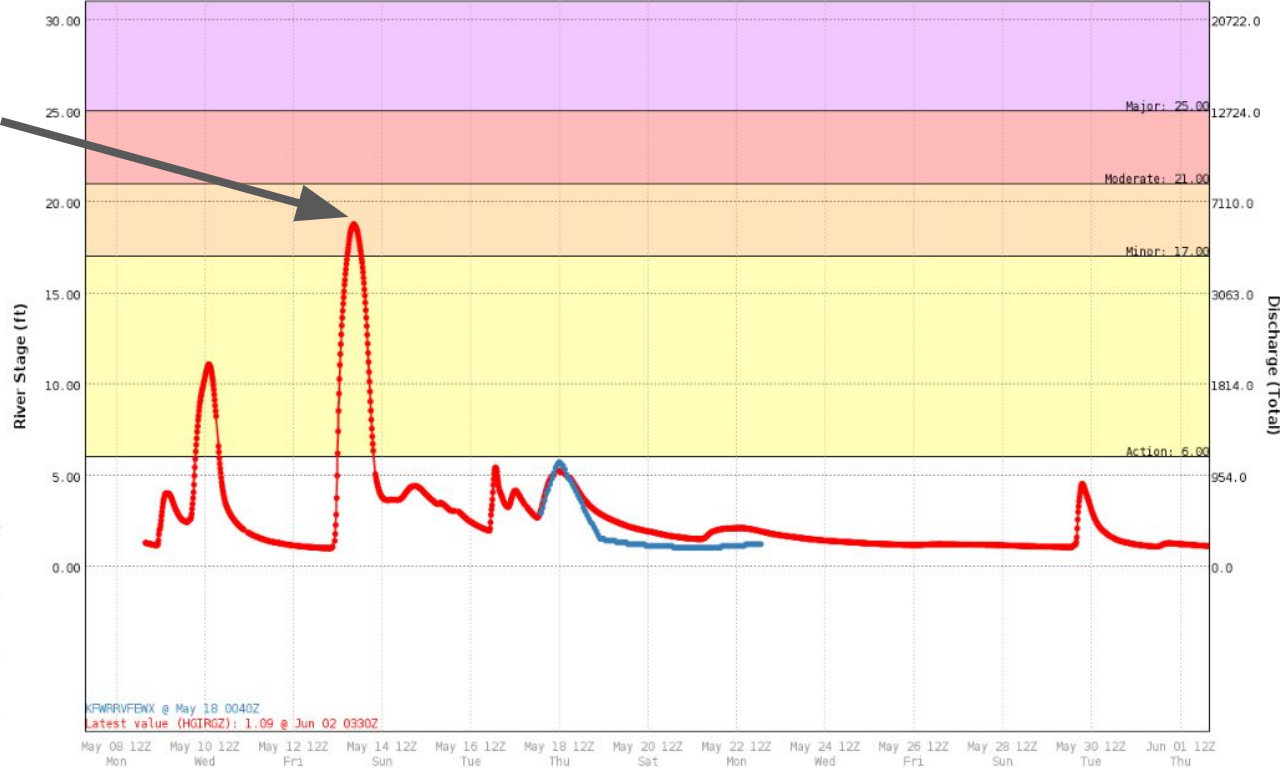
2.56 in - May 13, 2023 11:15:00 AM CDT



FCT2 : Cibolo Creek - Falls City

Karnes County, TX

WFO: EWX



KFWRRVFEWX @ May 18 0040Z
Latest value (HGIRGZ): 1.09 @ Jun 02 0330Z





Monthly Summary

Recap

- Max Flood Category: Moderate
- Reached Flood: 5/9 at 11:45pm
- Crest: 32.65ft on 5/10 at 6:45pm
- Dropped below flood: 5/11 at 9:00am

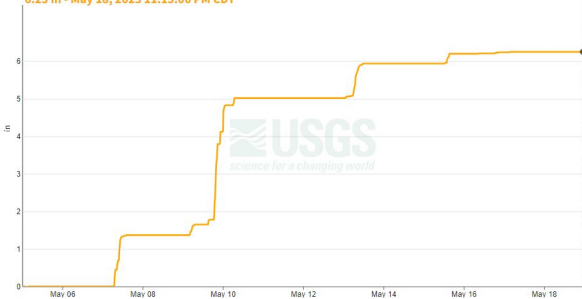
- Max Flood Category: Moderate
- Reached Flood: 5/13 at 12:15pm
- Crest: 35.06ft on 5/14 at 8:45am
- Dropped below flood: 5/15 at 12:00am

San Antonio Rv at SH 72 nr Runge, TX -
08188060

May 5, 2023 - May 18, 2023

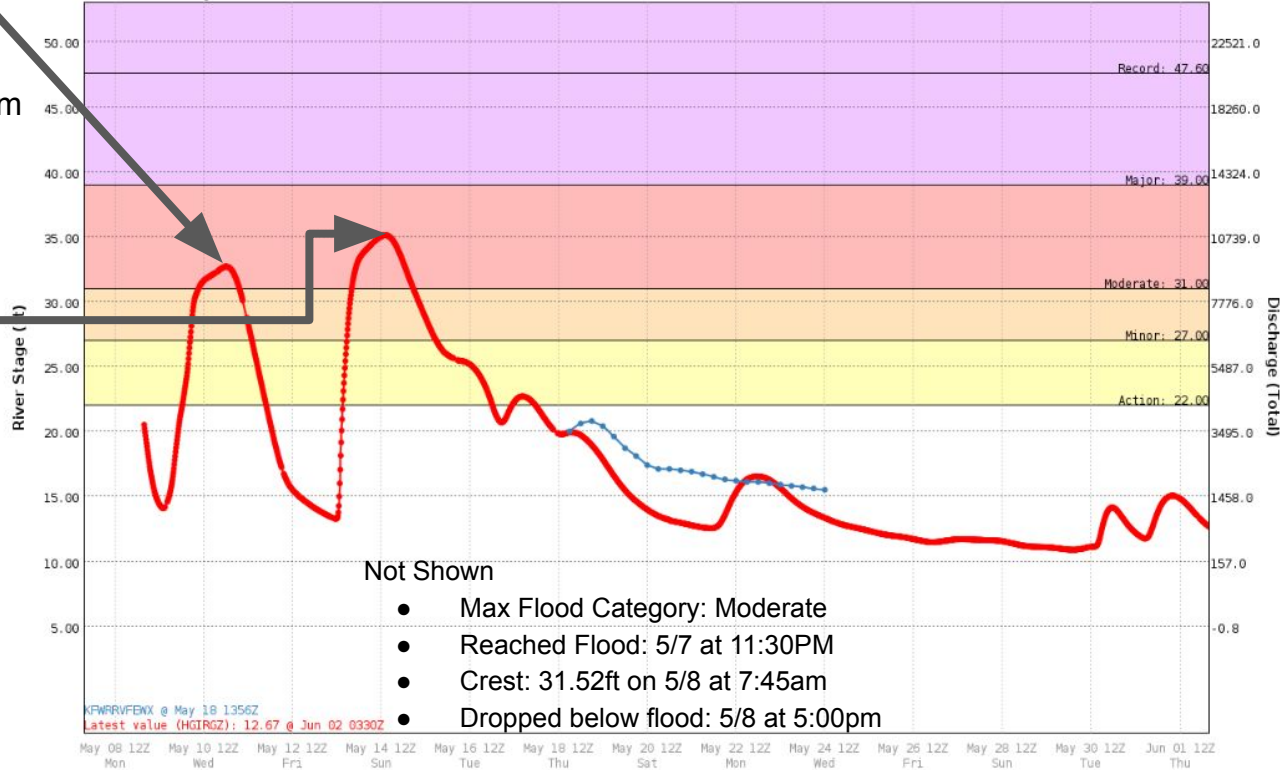
Precipitation, total, in

6.25 in - May 18, 2023 11:15:00 PM CDT



SRRT2 : San Antonio River - Hwy 72 near Runge
Karnes County, TX

WFO: EWX



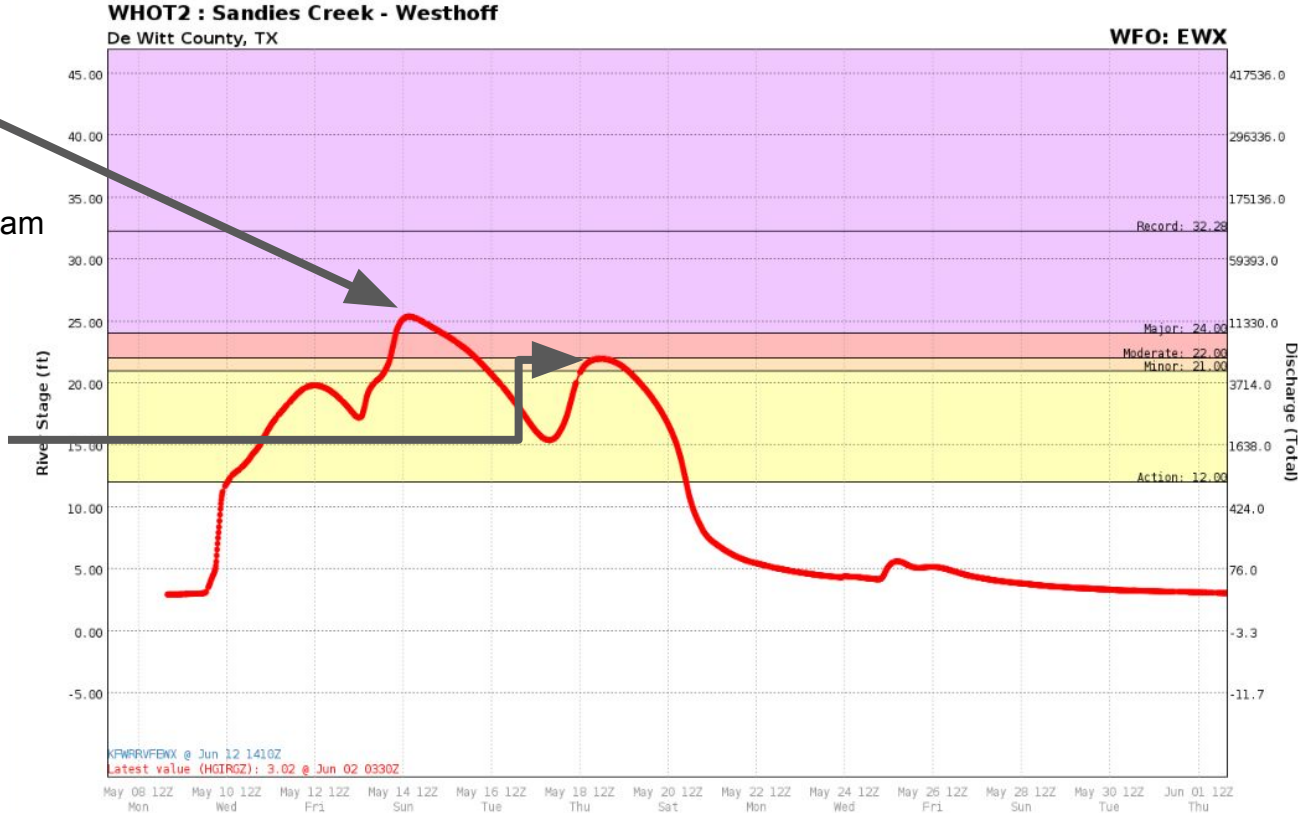


Monthly Summary

Recap

- Max Flood Category: Major
- Reached Flood: 5/13 at 9:15pm
- Crest: 25.34ft on 5/14 at 10:15am
- Dropped below flood: 5/16 at 5:00am

- Max Flood Category: Minor
- Reached Flood: 5/18 at 8:00am
- Crest: 21.94ft on 5/18 at 6:45pm
- Dropped below flood: 5/19 at 9:00am





Monthly Summary

Recap

- Max Flood Category: Minor
- Reached Flood: 5/13 at 3:45pm
- Crest: 29.18ft on 5/15 at 5:30pm
- Dropped below flood: 5/16 at 10:30pm

Guadalupe Rv at Cuero, TX - 08175800

May 12, 2023 - May 18, 2023

Precipitation, total, in

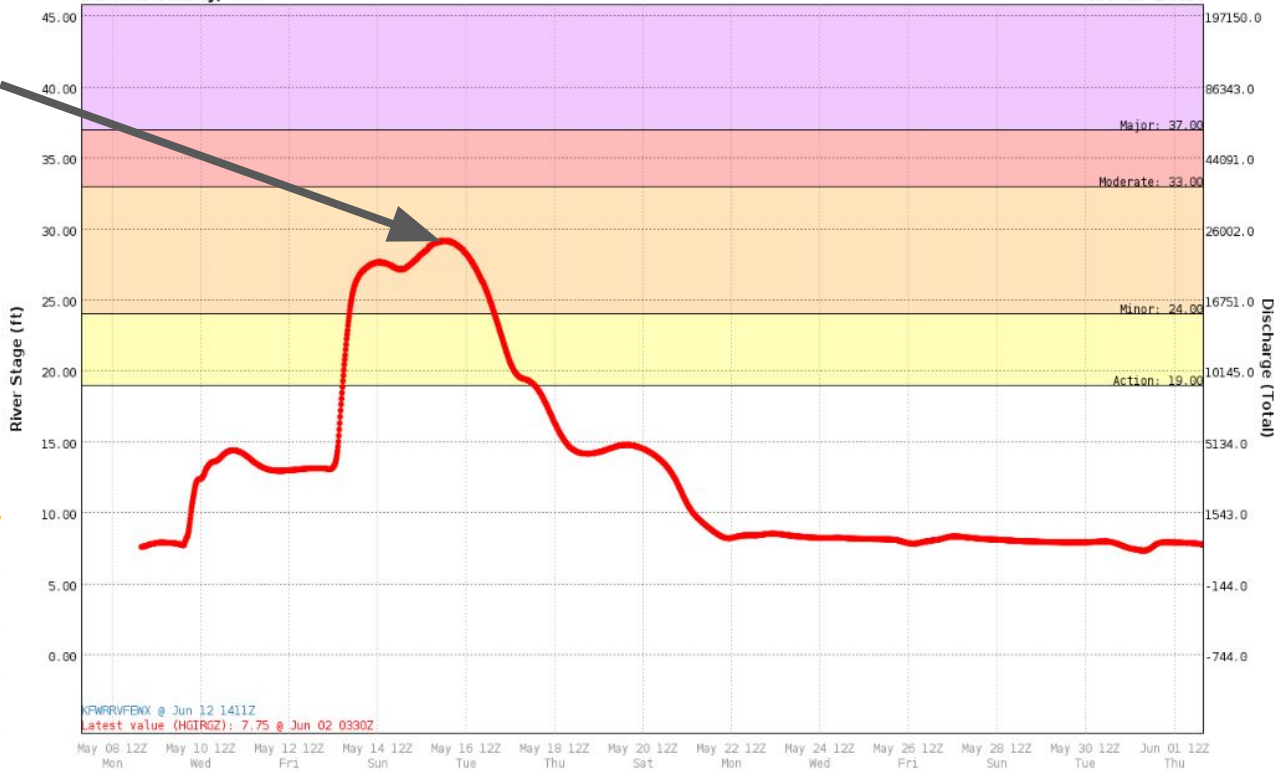
2.84 in - May 13, 2023 11:00:00 AM CDT



CUET2 : Guadalupe River - Cuero

De Witt County, TX

WFO: EWX

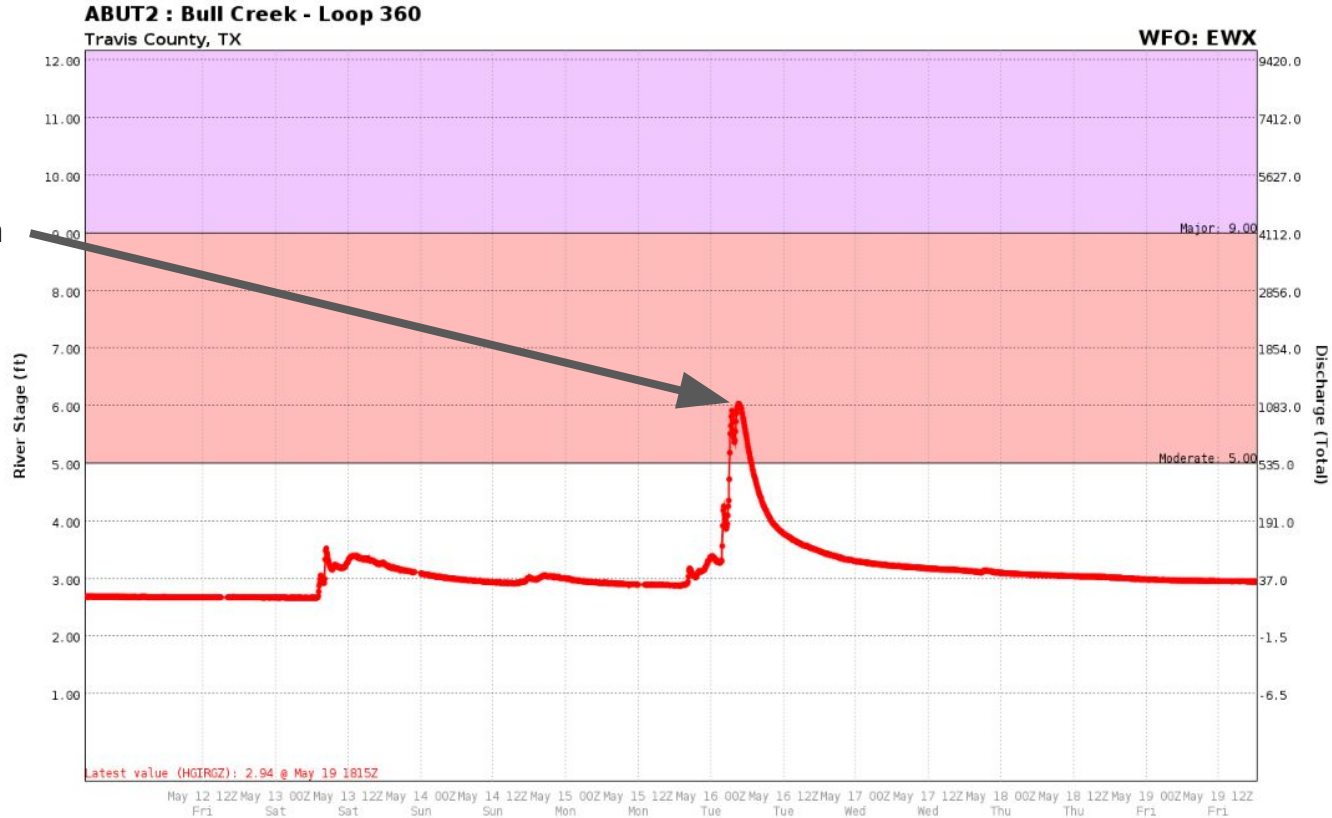




Monthly Summary

Recap

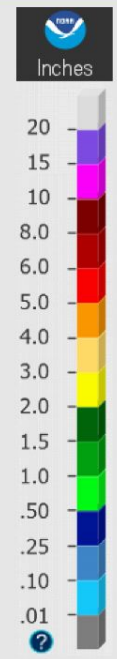
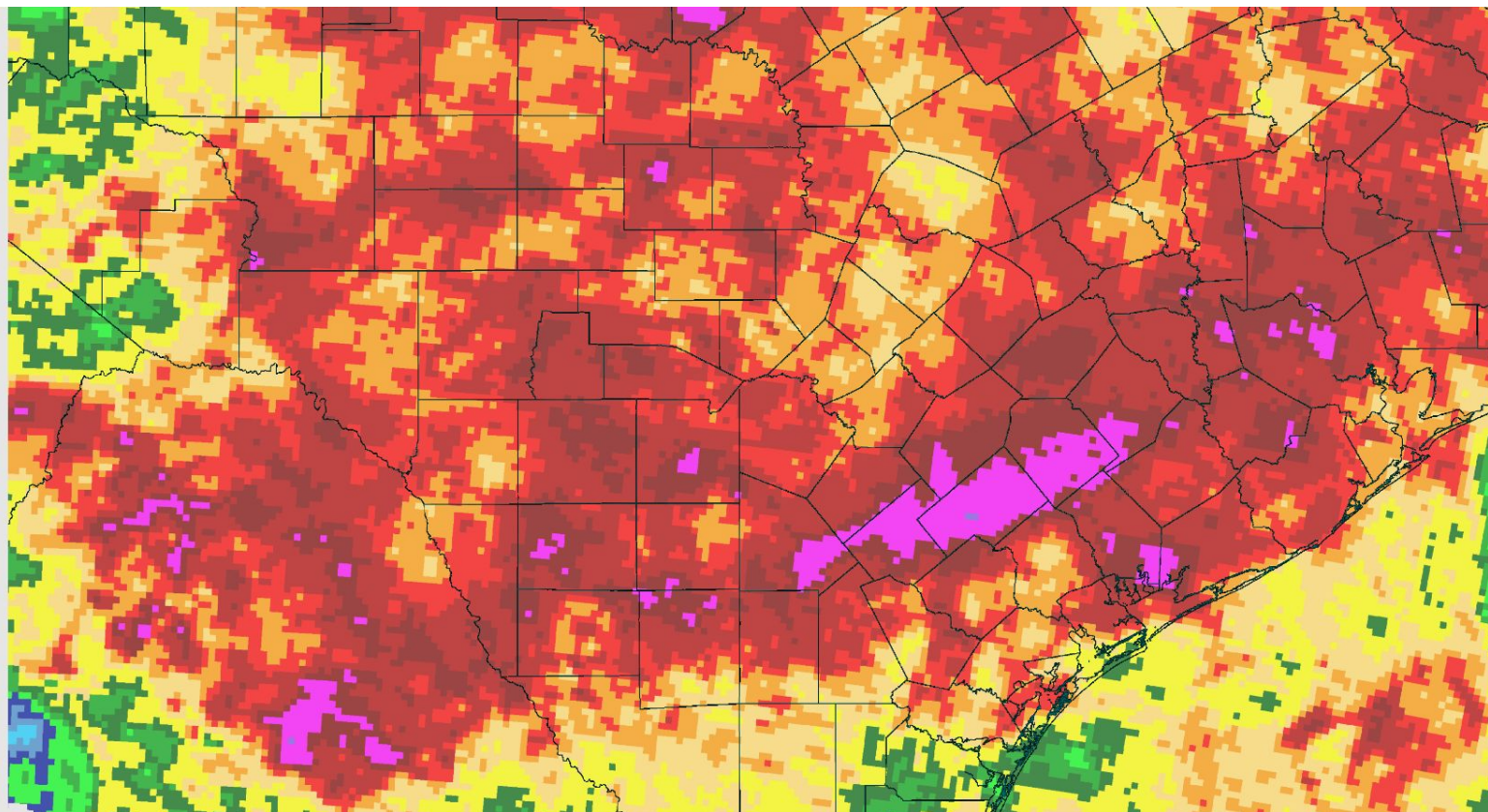
- Max Flood Category: Moderate
- Reached Flood: 5/15 between 10:05 -10:10pm
- Crest: 6.14ft on 5/15 at 11:40pm
- Dropped below flood: 5/16 at 1:45am





May 2023 Rainfall

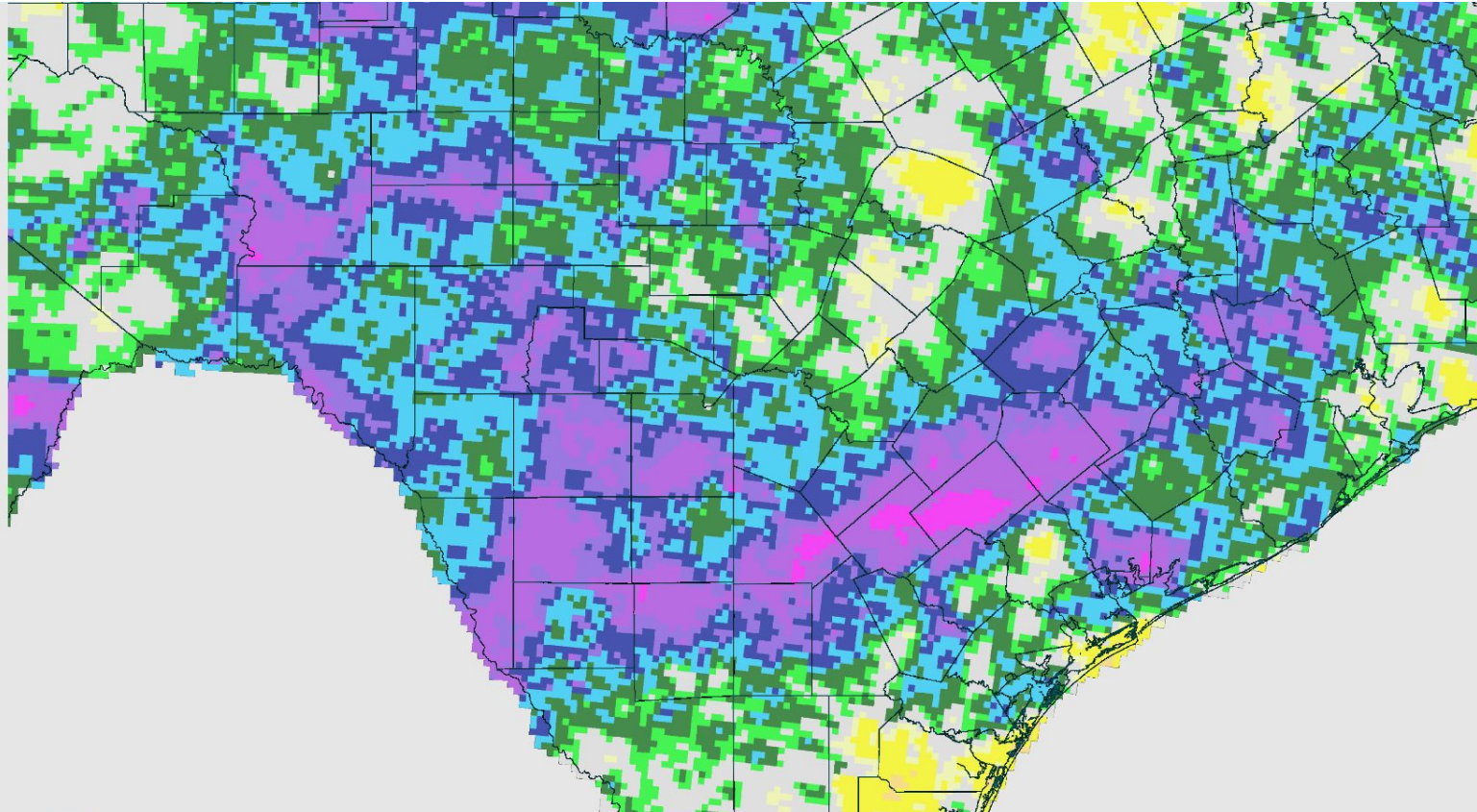
Observed Rainfall (Inches)





May 2023 Rainfall

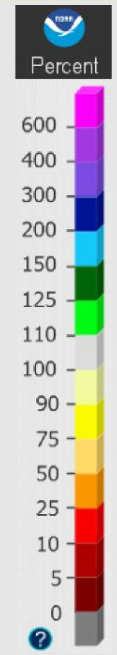
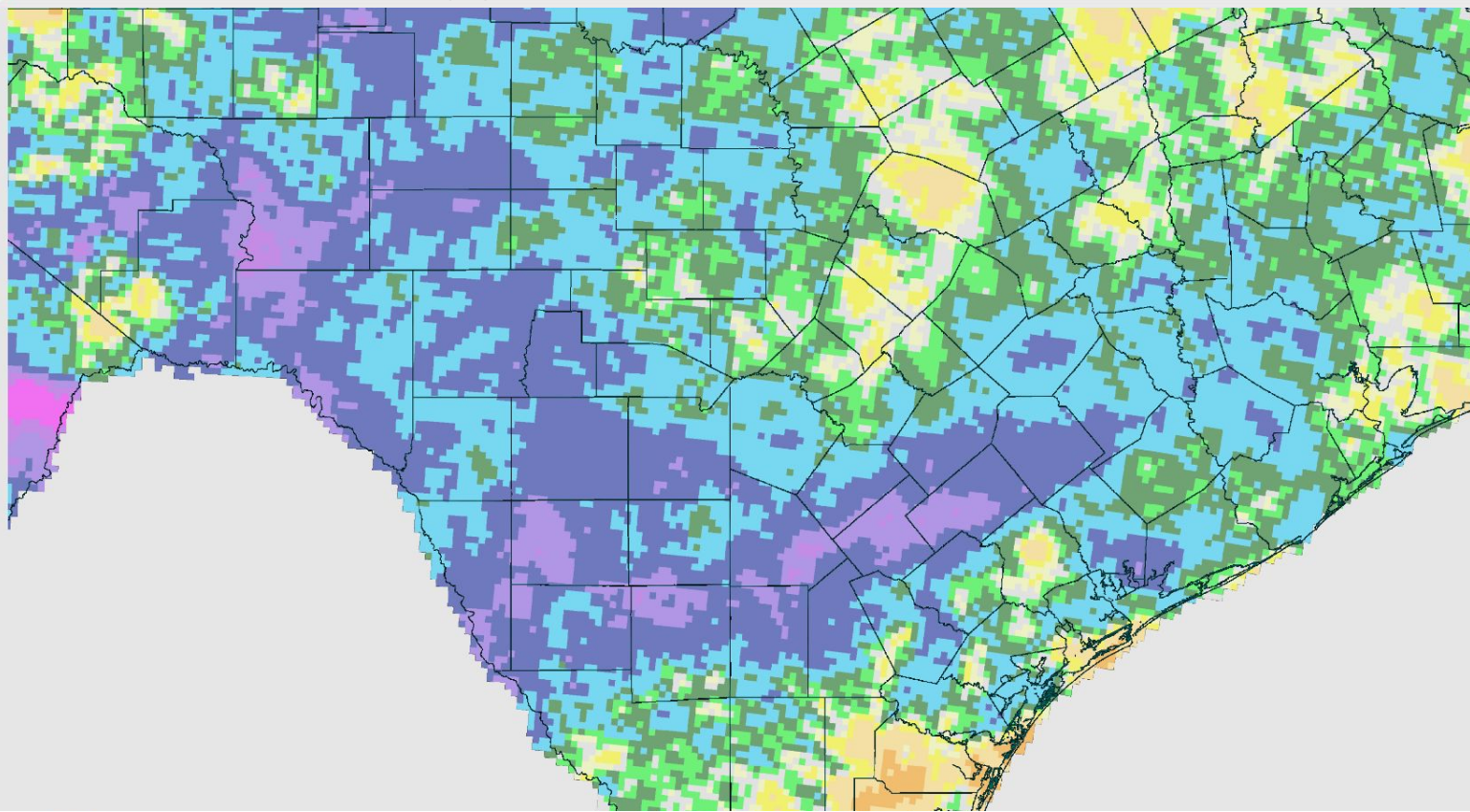
Departure from Normal Rainfall (Inches)





May 2023 Rainfall

Percent of Normal Rainfall (%)

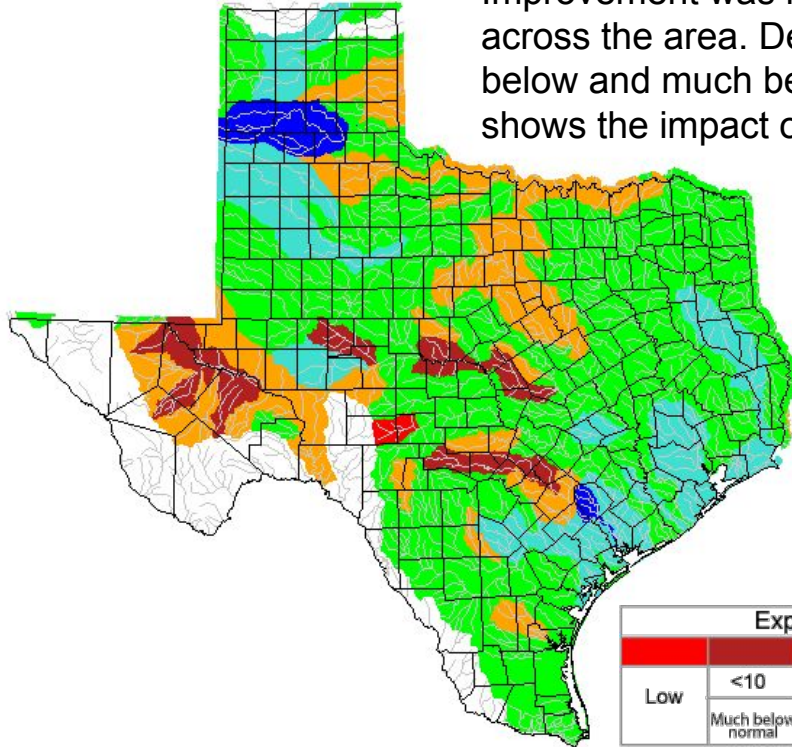




May 2023 - Historical Streamflow Comparison

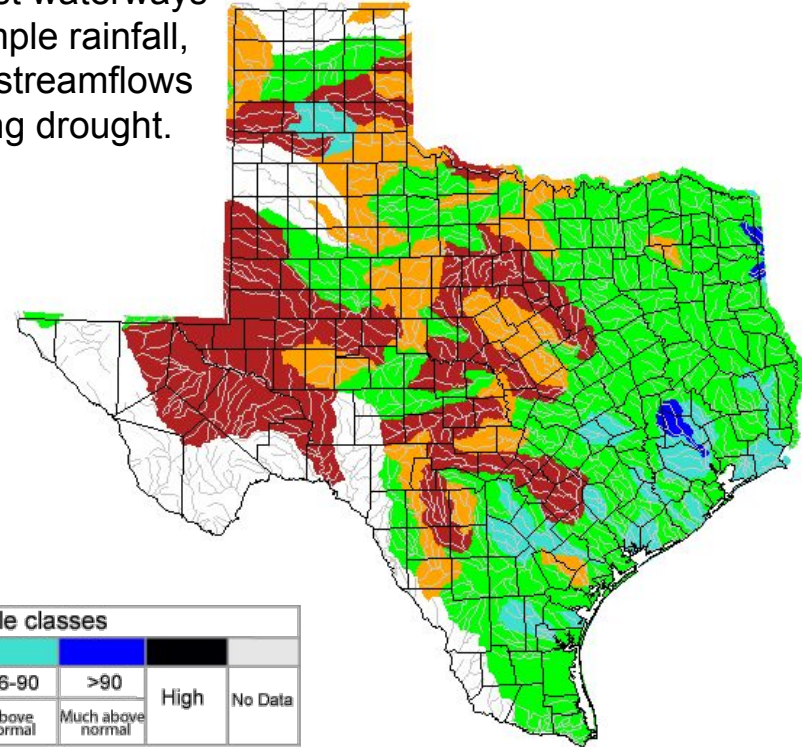
Streamflow Comparison

May 2023



Improvement was noted on most waterways across the area. Despite the ample rainfall, below and much below normal streamflows shows the impact of long running drought.

April 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	Percent of Normal
Austin – Bergstrom	3.46”	5.00”	13.46”	15.00”	90%
Austin – Mabry	4.30”	5.04”	12.64”	14.87”	85%
Del Rio	5.02”	3.06”	8.26”	6.98”	118%
San Antonio	3.92”	4.40”	11.84”	12.83”	92%

*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	3.67"	4.60"	18.95"	17.21"	110%
Corpus Christi	3.33"	3.38"	12.45"	10.38"	120%
Laredo	3.20"	2.76"	7.63"	7.56"	101%
San Angelo	4.19"	3.05"	6.42"	8.12"	79%
Victoria	3.10"	5.23"	17.33"	15.86"	109%
Waco	5.26"	4.44"	15.26"	16.32"	94%

*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	1002.50	+1.32
Lake Travis	681	639.25	+1.35
Canyon Lake	909	896.96	-0.03
Medina Lake	1064.2	981.24	-0.34
Lake Amistad	1117	1068.16	-7.4





Hydrologic Products Issued for the Month

Product Issued	Number Issued	Additional Comments
River Flood Warning (FLW)	9	
River Flood Statement/Area Flood Advisory (FLS)	86	
Flood Watch (FFA)	1	
Flash Flood Warning (FFW)	19	
Flash Flood Statement (FFS)	19	
Hydrologic Outlook (ESF)	6	AHPS probabilistic forecasts for the Brazos, Colorado, Guadalupe, San Antonio, Pecos, and Nueces Rivers

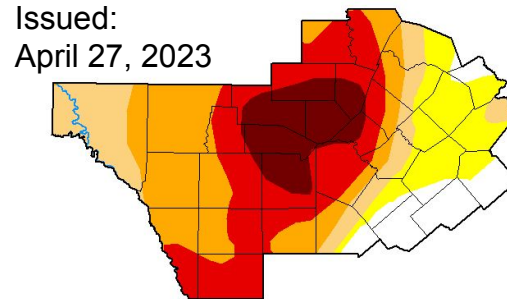
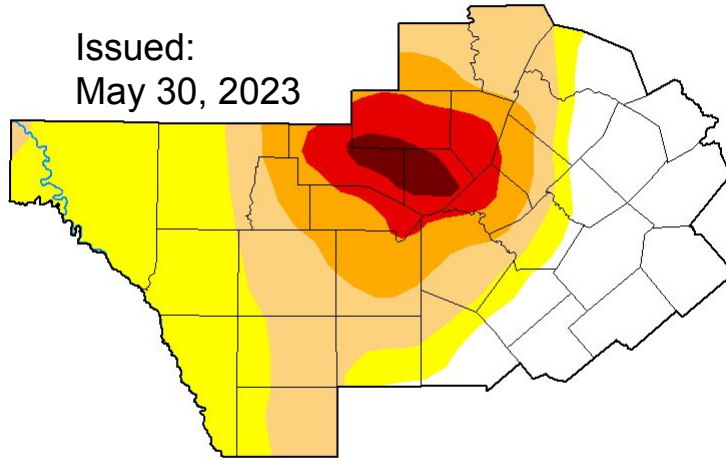


Drought Conditions

Monthly Drought Monitor Comparison

Multiple rounds of rainfall helped to bring significant improvements in drought conditions across the forecast area. While the D3 and D4 areas were reduced, other drought indicators still show the impacts of long term drought.

- D3/D4 drought encompasses 10% of the CWA
- Drought doesn't affect 54% of the CWA



May 30, 2023
(Released Thursday, Jun. 1, 2023)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	25.14	28.60	24.10	12.26	7.74	2.16
Last Week 15-23-2023	25.08	21.45	29.74	13.83	7.74	2.16
Months Ago 12-28-2023	0.95	13.56	31.74	22.87	20.72	10.15
Start of end of Year 11-03-2023	6.21	14.33	40.02	19.13	11.66	8.65
Start of later Year 10-27-2022	1.55	13.06	33.69	29.92	16.79	4.98
One Year Ago 15-31-2022	0.00	1.57	14.11	27.88	33.53	22.91

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought





One Month Outlook

Looking at the Monthly Outlook for June

- The Precipitation Outlook leans towards above normal precip chances across the southern Edwards Plateau, and Hill Country while the remainder of the area shows equal chances for above, below, and near normal chances.
- The Temperature Outlook shows equal chances for above, below, or near normal for the month of June.

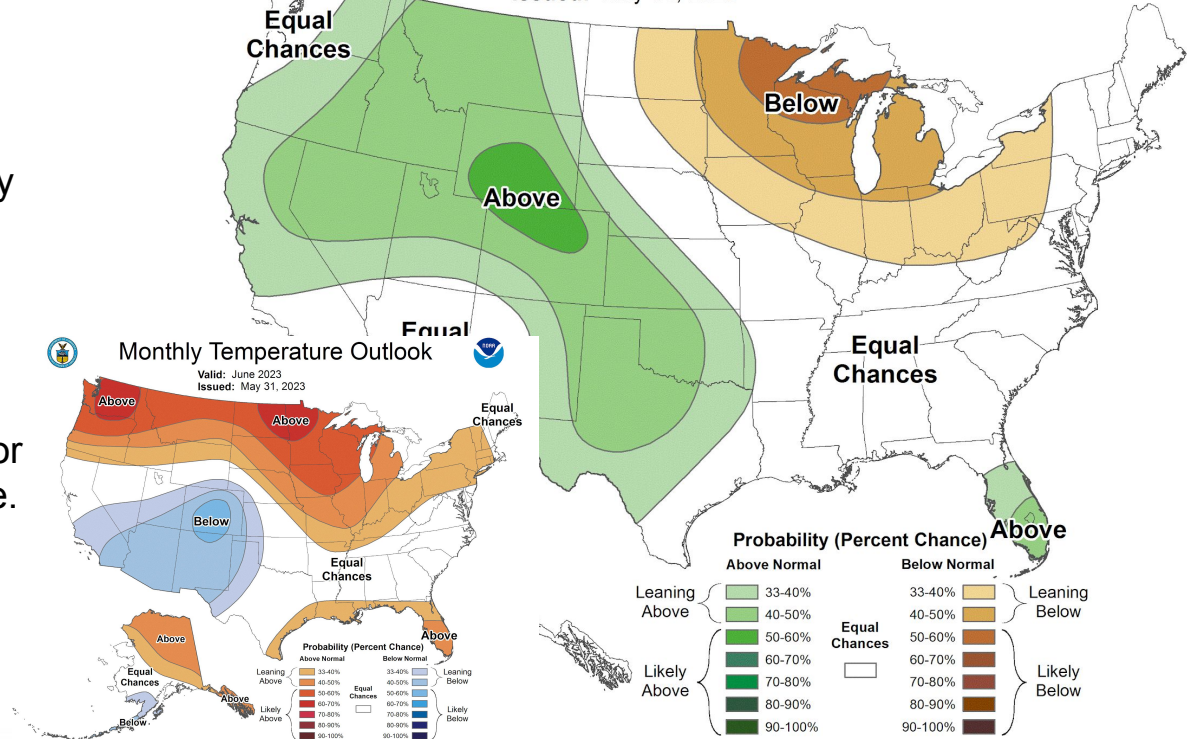
[Click for latest graphics](#)



Monthly Precipitation Outlook



Valid: June 2023
Issued: May 31, 2023





Three Month Outlook

Looking at the Seasonal Outlooks

- The Precipitation Outlook continues to show equal chances for above, below, normal amounts.
- The Temperature Outlook continues to show above normal for the entire area.

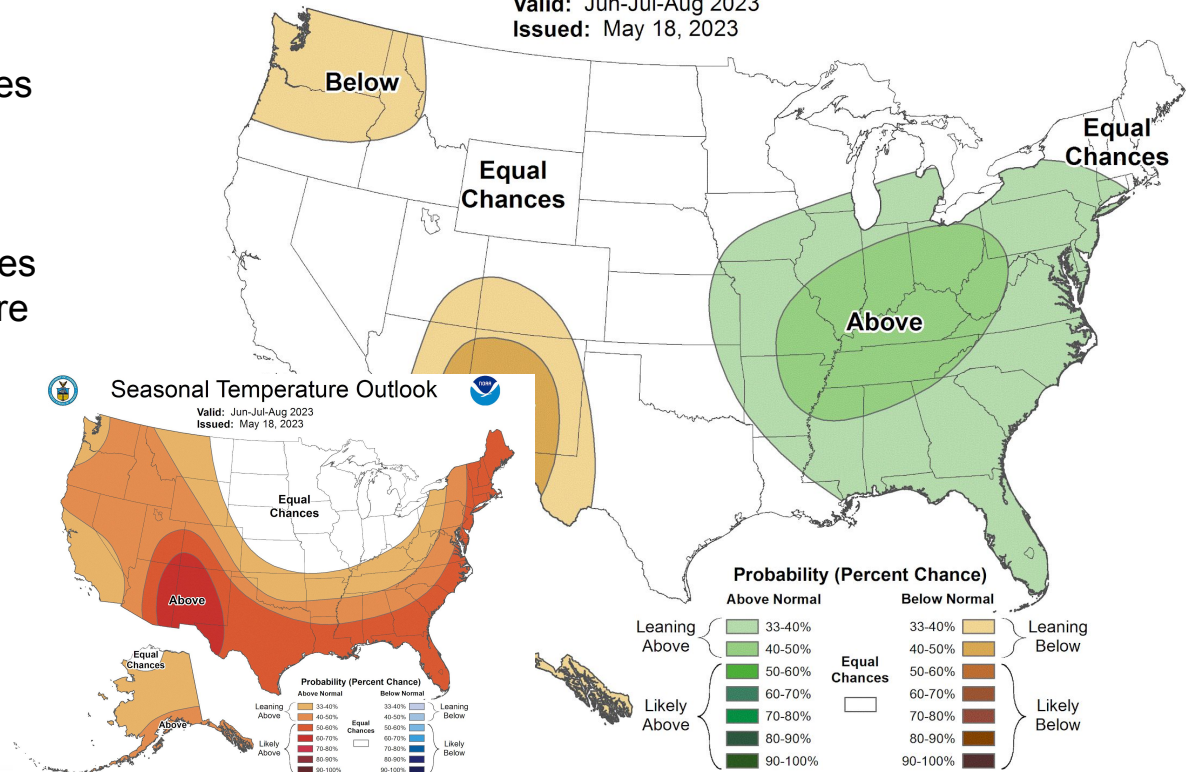
[Click for latest graphics](#)



Seasonal Precipitation Outlook



Valid: Jun-Jul-Aug 2023
Issued: May 18, 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/>