

<b>NWS FORM E-5</b> (11-88) (PRES. by NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA)	
		<b>Tulsa, Oklahoma (TSA)</b>	
<b>MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS</b>		REPORT FOR:	
		MONTH <b>December</b>	YEAR <b>2022</b>
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		SIGNATURE <b>Steven F. Piltz</b> (Meteorologist-in-Charge)	
		DATE <b>January 9, 2023</b>	

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

An "X" in the box indicates no flood stages were reached in this Hydrologic Service Area (HSA) during the month above.

While some portions of the HSA received above normal precipitation this month, most of the area remained below normal. Rises occurred along the Illinois River, but no flooding occurred. Exceptional drought continued for part of the region this month. Normal precipitation for December ranges from 1.5 inches in Pawnee County to 3.2 inches in Haskell County. Normal precipitation for the Ozark region of northwest Arkansas averages 3.2 inches for the month. This report, past E-5 reports, and monthly hydrology and climatology summaries can be found at [https://www.weather.gov/tsa/climo\\_summary\\_e5list](https://www.weather.gov/tsa/climo_summary_e5list).

### Monthly Summary

Using the radar-derived estimated observed precipitation from the RFCs (Fig. 1a), rainfall totals for December 2022 ranged from 1.5" to 6" across eastern OK and northwest AR, with much of the area receiving 2"-4". These rainfall totals correspond to 25% to 200% of the normal December rainfall, with east central OK into west central AR receiving highest percentage, and southeast OK receiving the lowest percentage (Fig. 1b).

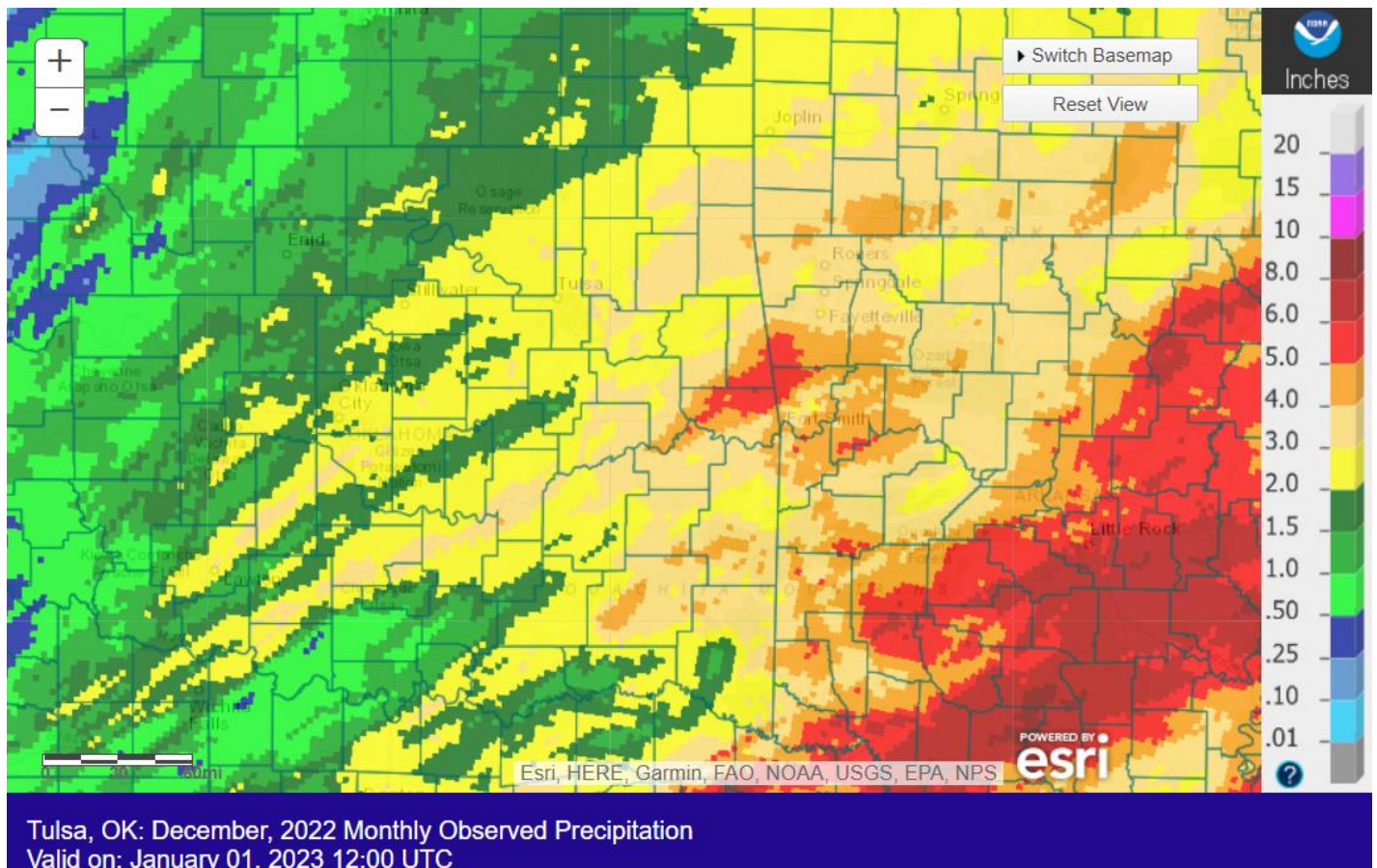
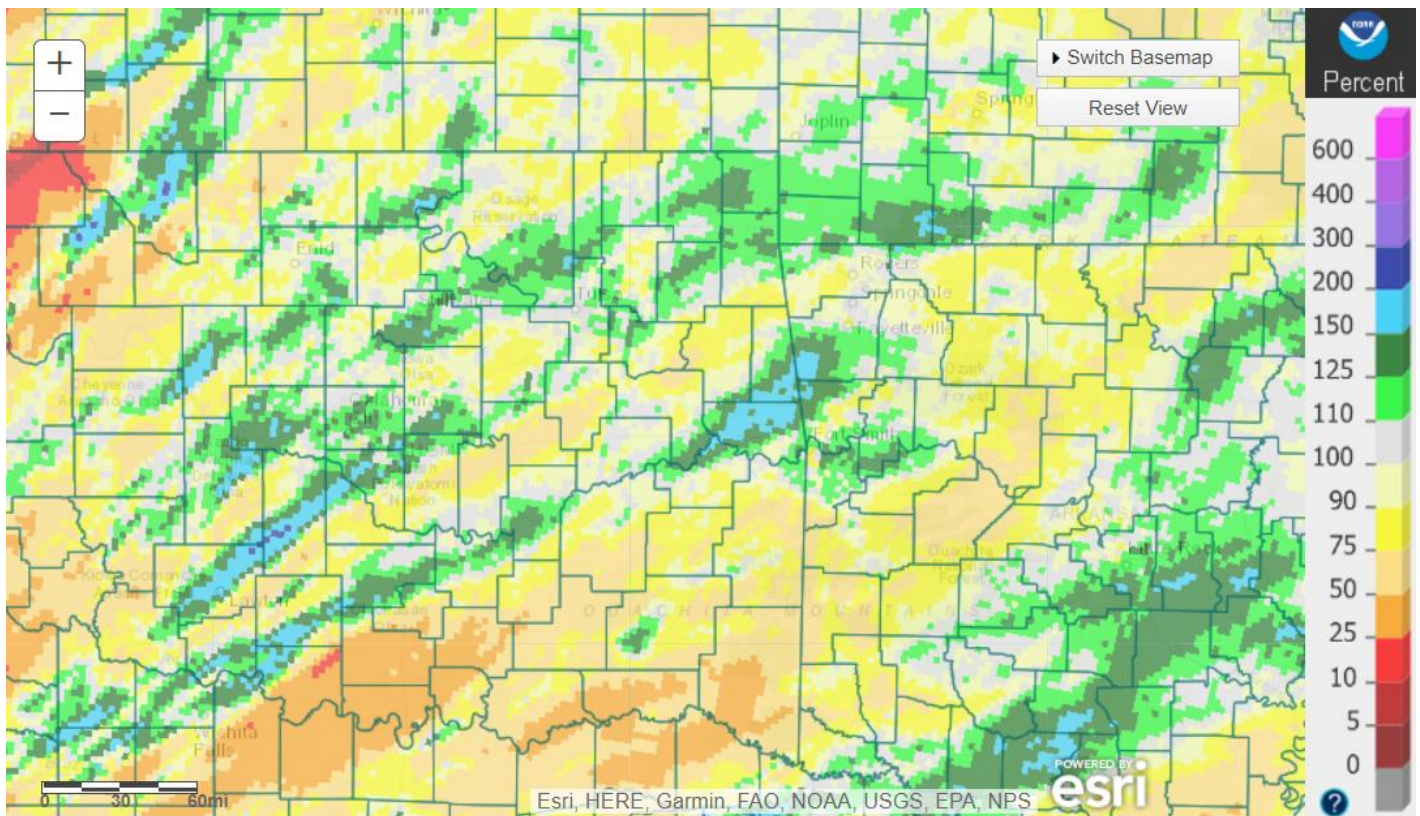


Fig. 1a. Estimated Observed Rainfall for December 2022



Tulsa, OK: December, 2022 Monthly Percent of Normal Precipitation  
 Valid on: January 01, 2023 12:00 UTC

Fig. 1b. Estimated % of Normal Rainfall for December 2022

In Tulsa, OK, December 2022 ranked as the 57<sup>th</sup> coldest December (40.4°F; since records began in 1905), the 37<sup>th</sup> wettest December (2.55"; since records began in 1888), and the 43<sup>rd</sup> snowiest December (1.2"; since records began in 1900). Fort Smith, AR had the 47<sup>th</sup> warmest December (43.7°F; since records began in 1882), the 42<sup>nd</sup> wettest December (3.96"; since records began in 1882), and the 53<sup>rd</sup> snowiest December (Trace, tied 27 other years; since records began in 1883). Fayetteville, AR had the 18<sup>th</sup> warmest (41.4°F), the 24<sup>th</sup> wettest (3.44"), and the 25<sup>th</sup> snowiest (0.8", tied 1967) December since records began in 1950.

Some of the larger precipitation reports (in inches) for December 2022 included:

Bella Vista 2.2E, AR (coco)	5.13	Bella Vista 2.5SSE, AR (coco)	5.04	Vian 5.3ENE, OK (coco)	4.97
Busch 0.4E, AR (coco)	4.79	Kingston 2S, AR (coop)	4.76	Sallisaw 1.0SE, OK (coco)	4.61
Sallisaw, OK (meso)	4.52	Cookson, OK (meso)	4.51	Holiday Island 1.3SSW, AR (coco)	4.43

Some of the lowest precipitation reports (in inches) for December 2022 included:

Copan, OK (meso)	1.70	Bartlesville, OK (ASOS)	1.73	Foraker, OK (meso)	1.77
Okemah, OK (meso)	1.78	Burbank, OK (meso)	1.87	Hugo, OK (meso)	1.88
Okmulgee, OK (meso)	1.93	Oilton, OK (meso)	2.11	Nowata, OK (meso)	2.15

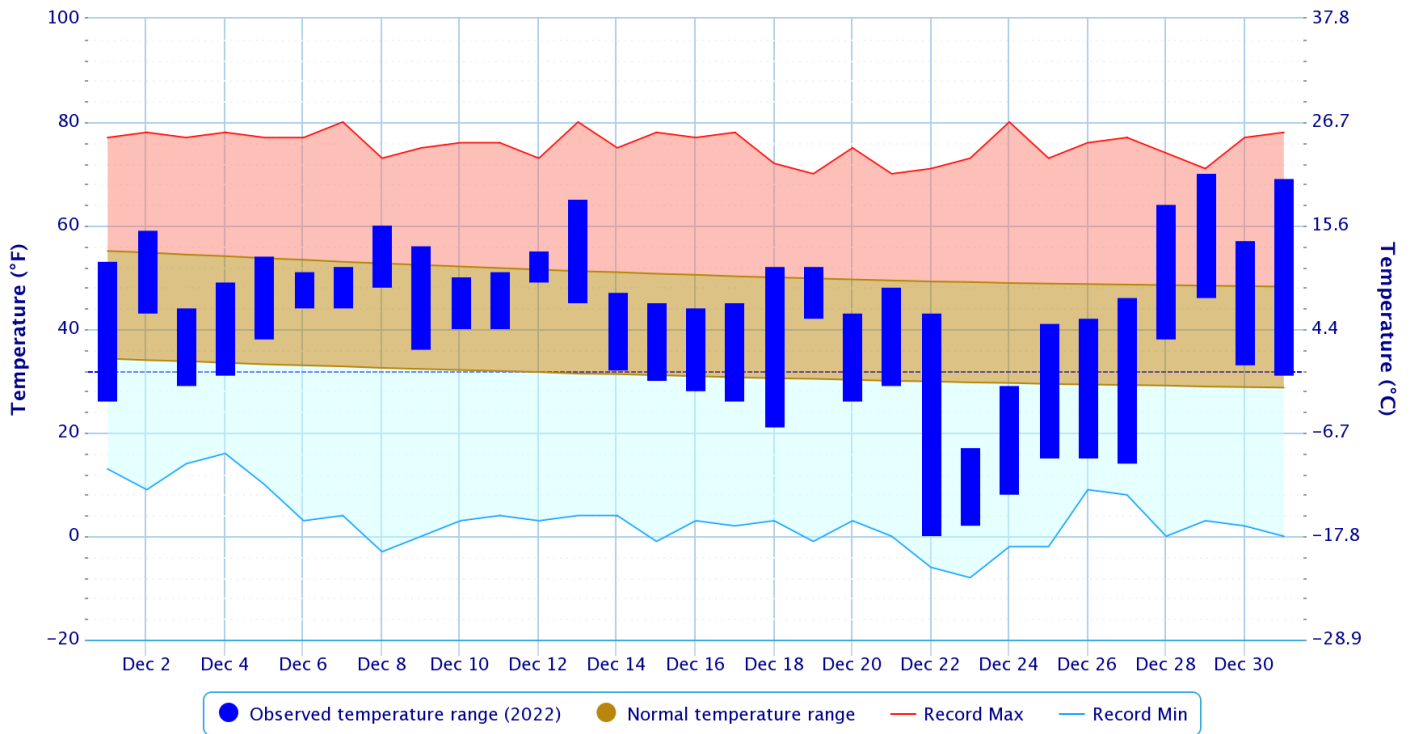
According to statistics from the [Oklahoma Climatological Survey](#) (OCS) Mesonet:

Rank since 1921	December 2022	Cool Growing Season (Sep 1 – Dec 31)	Last 60 Days (Nov 2 – Dec 31)	Last 180 Days (Jul 5 – Dec 31)	Water Year-to-Date (Oct 1 – Dec 31)	2022
Northeast OK	27 <sup>th</sup> wettest	20 <sup>th</sup> driest	29 <sup>th</sup> wettest	15 <sup>th</sup> driest	46 <sup>th</sup> driest	20 <sup>th</sup> driest
East Central OK	29 <sup>th</sup> wettest	45 <sup>th</sup> driest	20 <sup>th</sup> wettest	35 <sup>th</sup> driest	32 <sup>nd</sup> wettest	45 <sup>th</sup> wettest
Southeast OK	45 <sup>th</sup> driest	42 <sup>nd</sup> driest	37 <sup>th</sup> wettest	33 <sup>rd</sup> driest	31 <sup>st</sup> wettest	33 <sup>rd</sup> driest
Statewide	41 <sup>st</sup> wettest	28 <sup>th</sup> driest	32 <sup>nd</sup> wettest	17 <sup>th</sup> driest	44 <sup>th</sup> wettest	22 <sup>nd</sup> driest



### Daily Temperature Data – Tulsa Area, OK (ThreadEx)

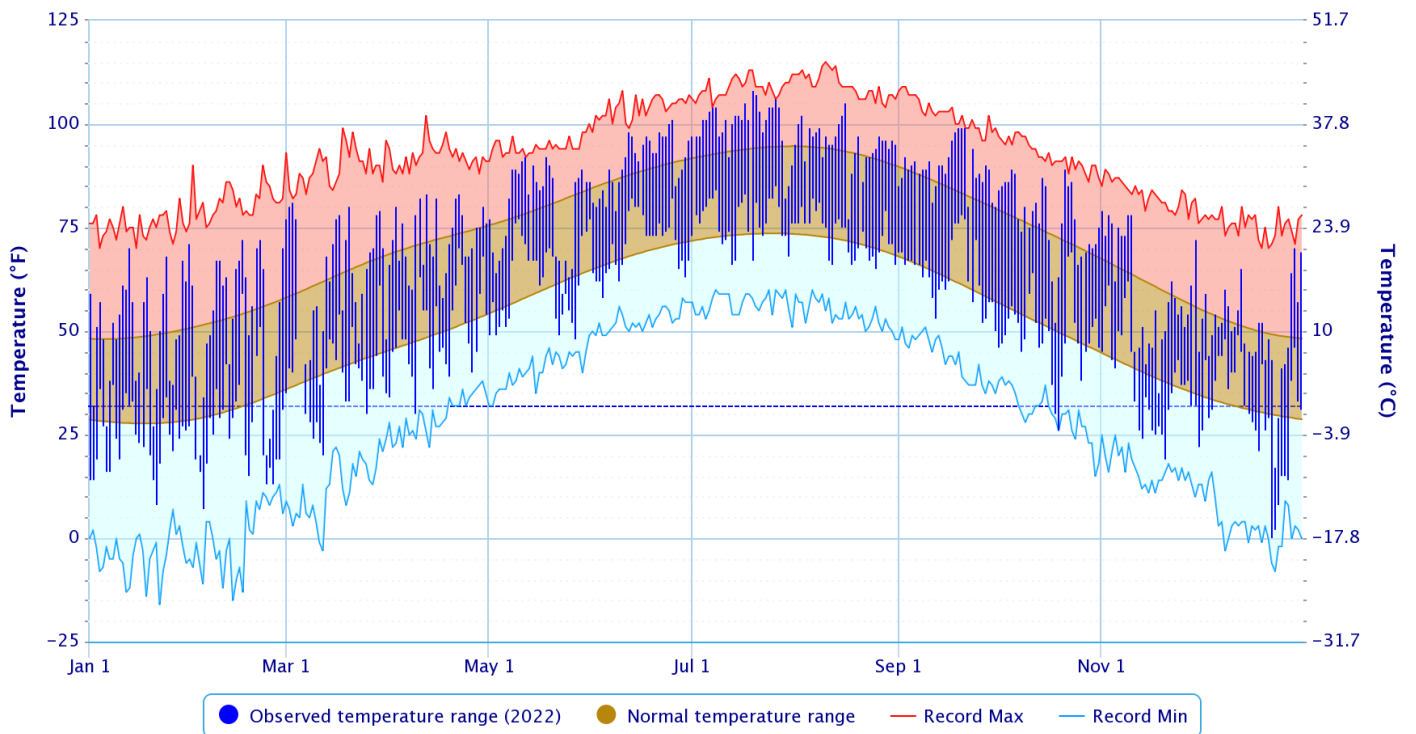
Period of Record – 1905-01-06 to 2023-01-04. Normals period: 1991-2020. Click and drag to zoom chart.



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### Daily Temperature Data – Tulsa Area, OK (ThreadEx)

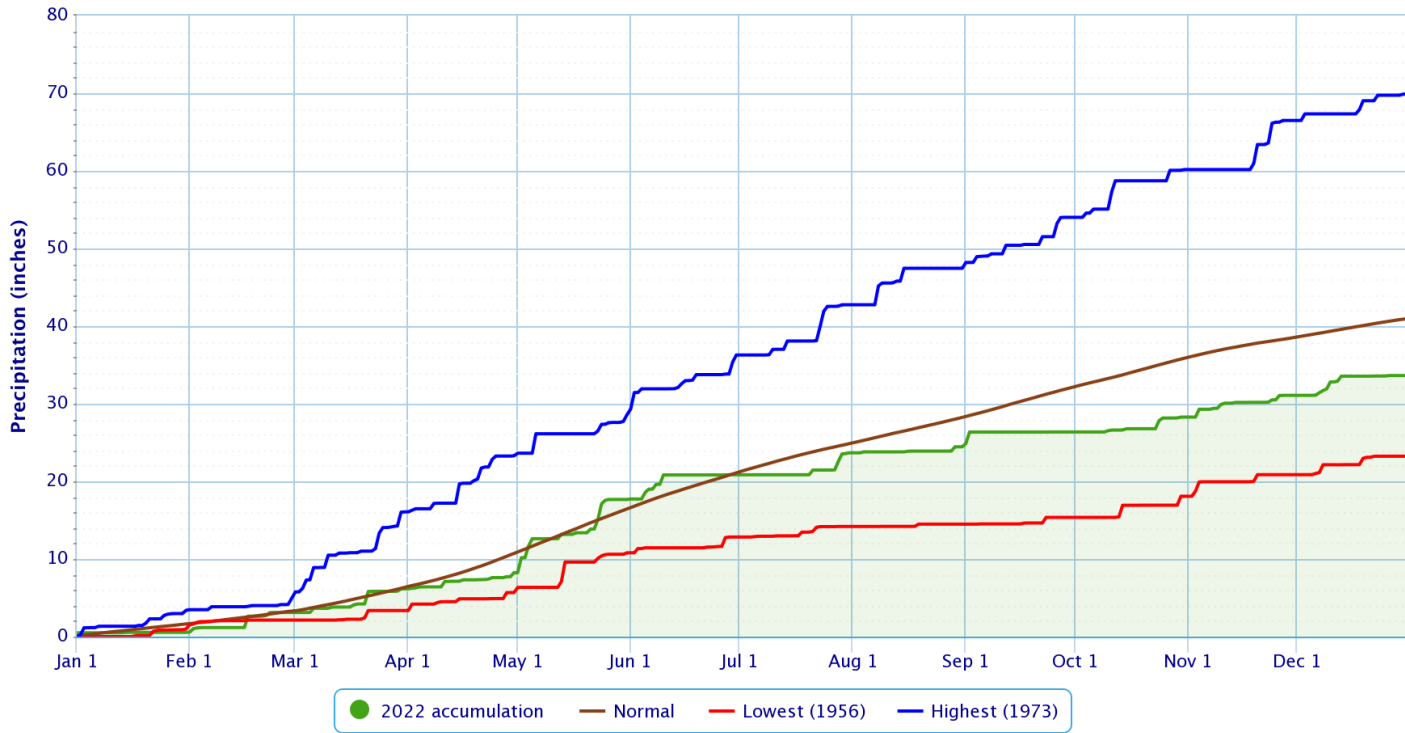
Period of Record – 1905-01-06 to 2023-01-04. Normals period: 1991-2020. Click and drag to zoom chart.



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### Accumulated Precipitation – Tulsa Area, OK (ThreadEx)

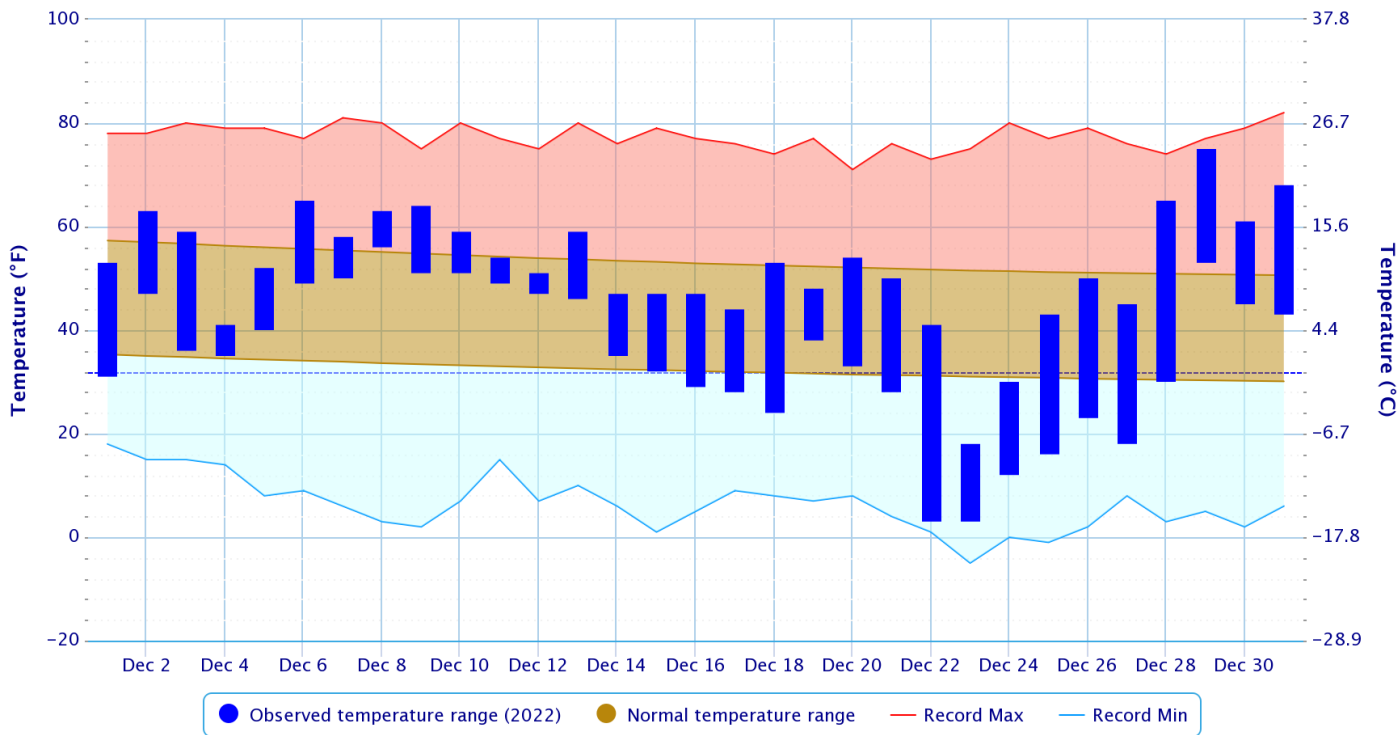
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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### Daily Temperature Data – Fort Smith Area, AR (ThreadEx)

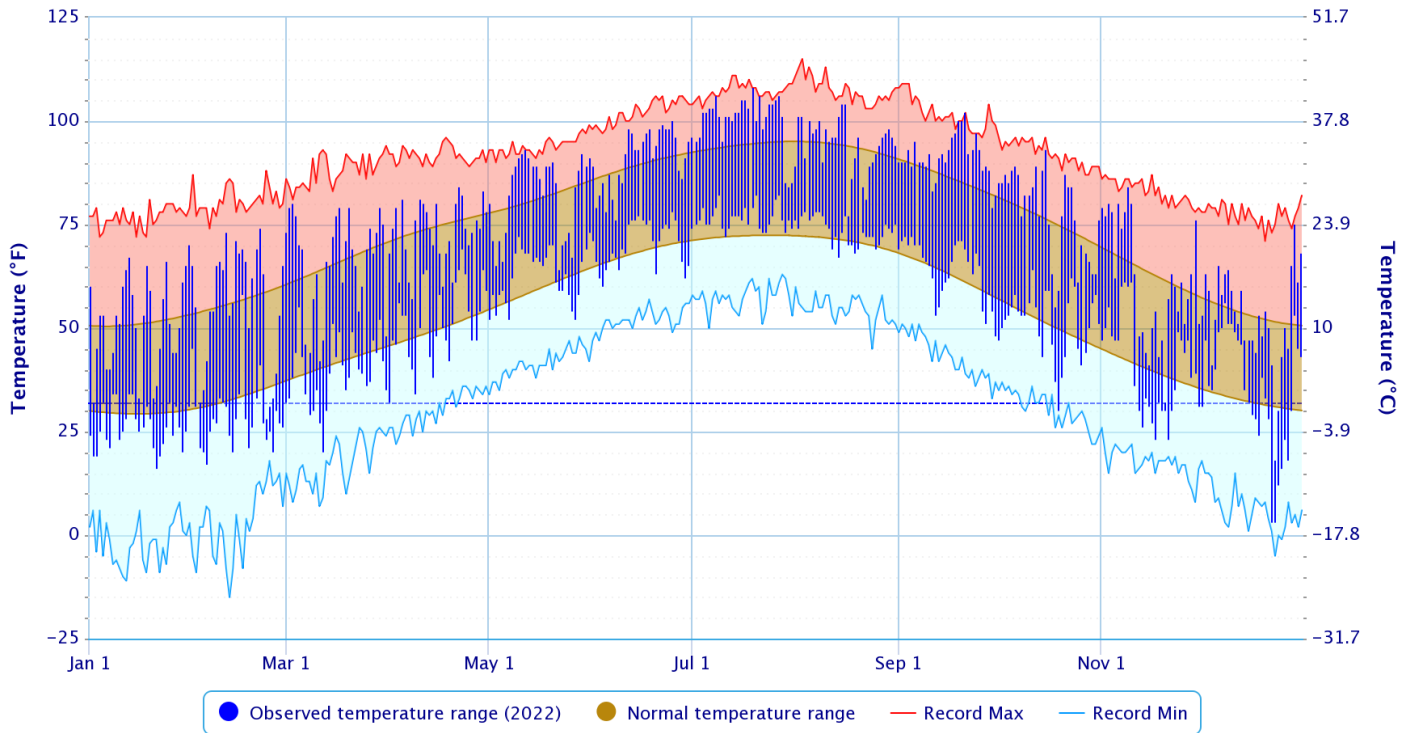
Period of Record – 1882-06-01 to 2023-01-04. Normals period: 1991-2020. Click and drag to zoom chart.



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### Daily Temperature Data – Fort Smith Area, AR (ThreadEx)

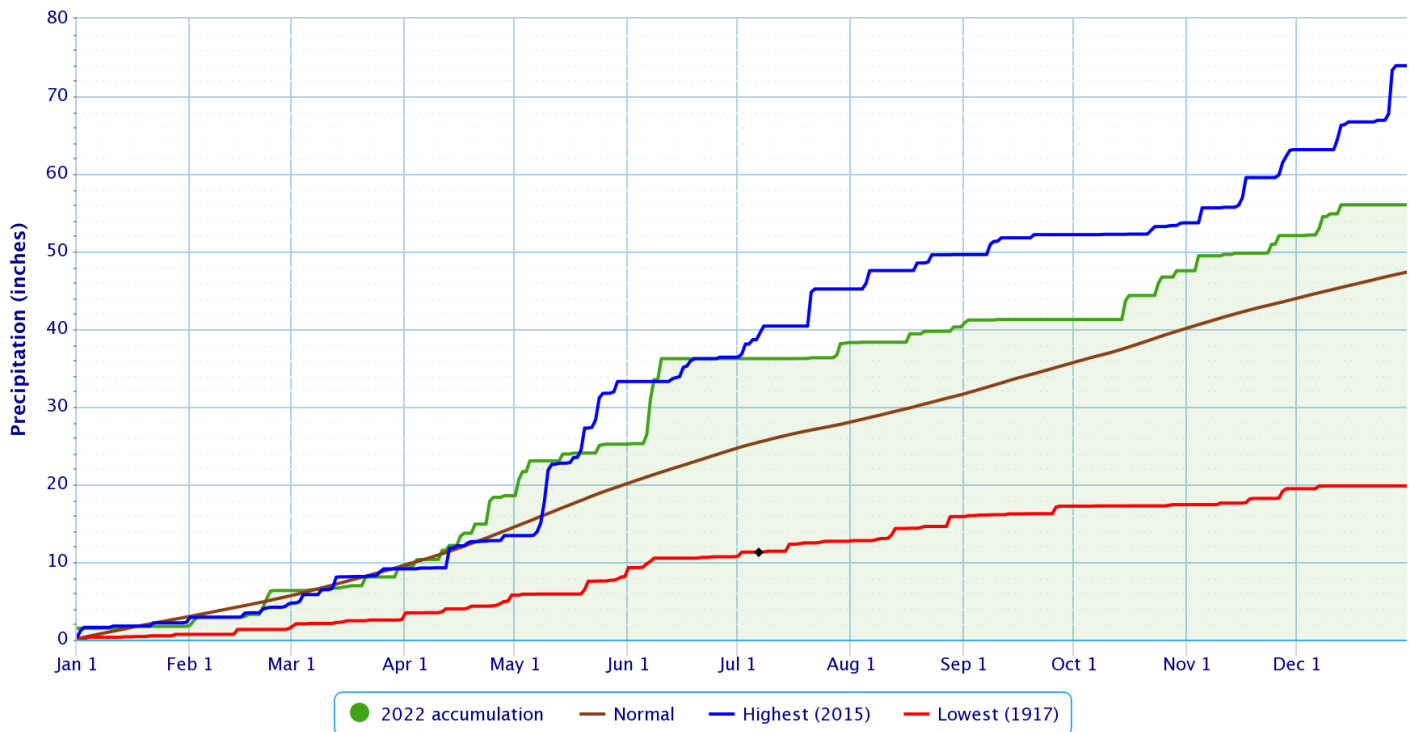
Period of Record – 1882-06-01 to 2023-01-04. Normals period: 1991-2020. Click and drag to zoom chart.



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### Accumulated Precipitation – Fort Smith Area, AR (ThreadEx)

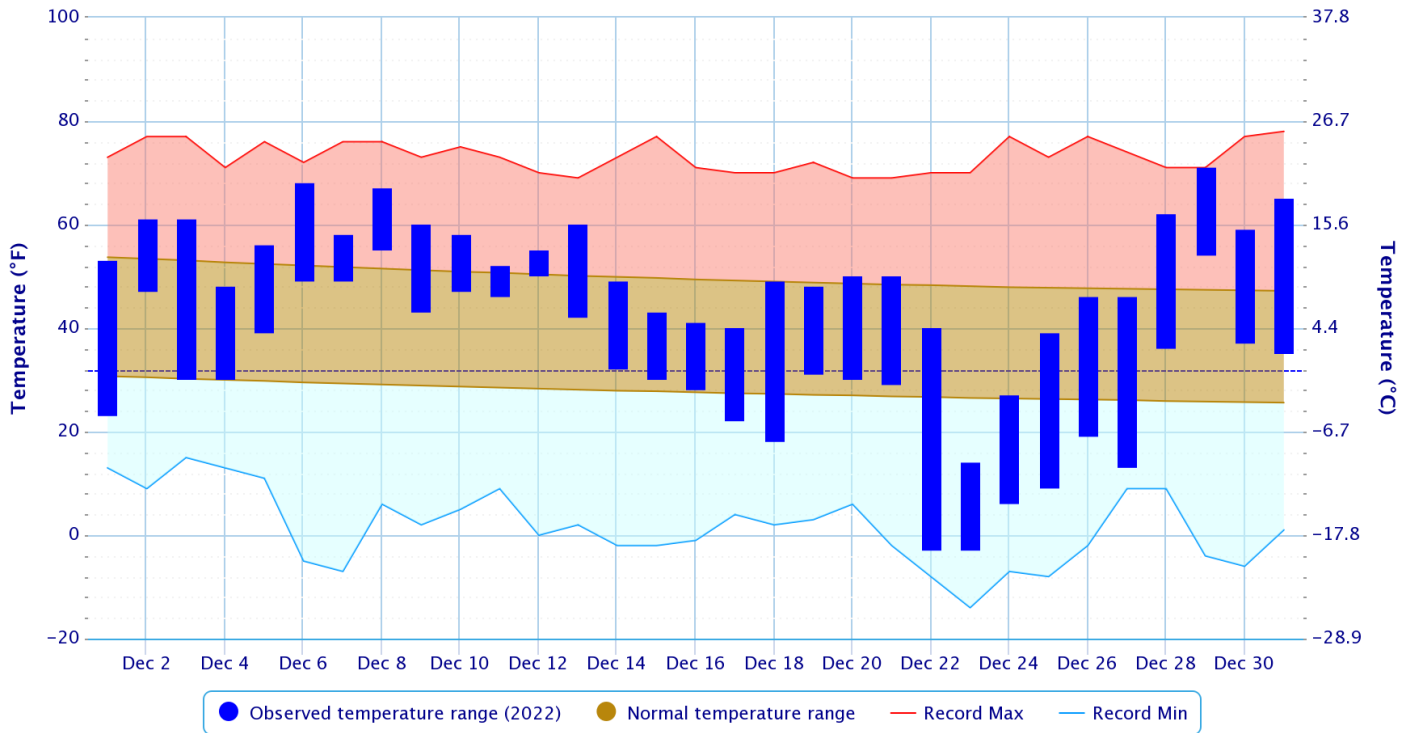
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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### Daily Temperature Data – FAYETTEVILLE DRAKE FIELD, AR

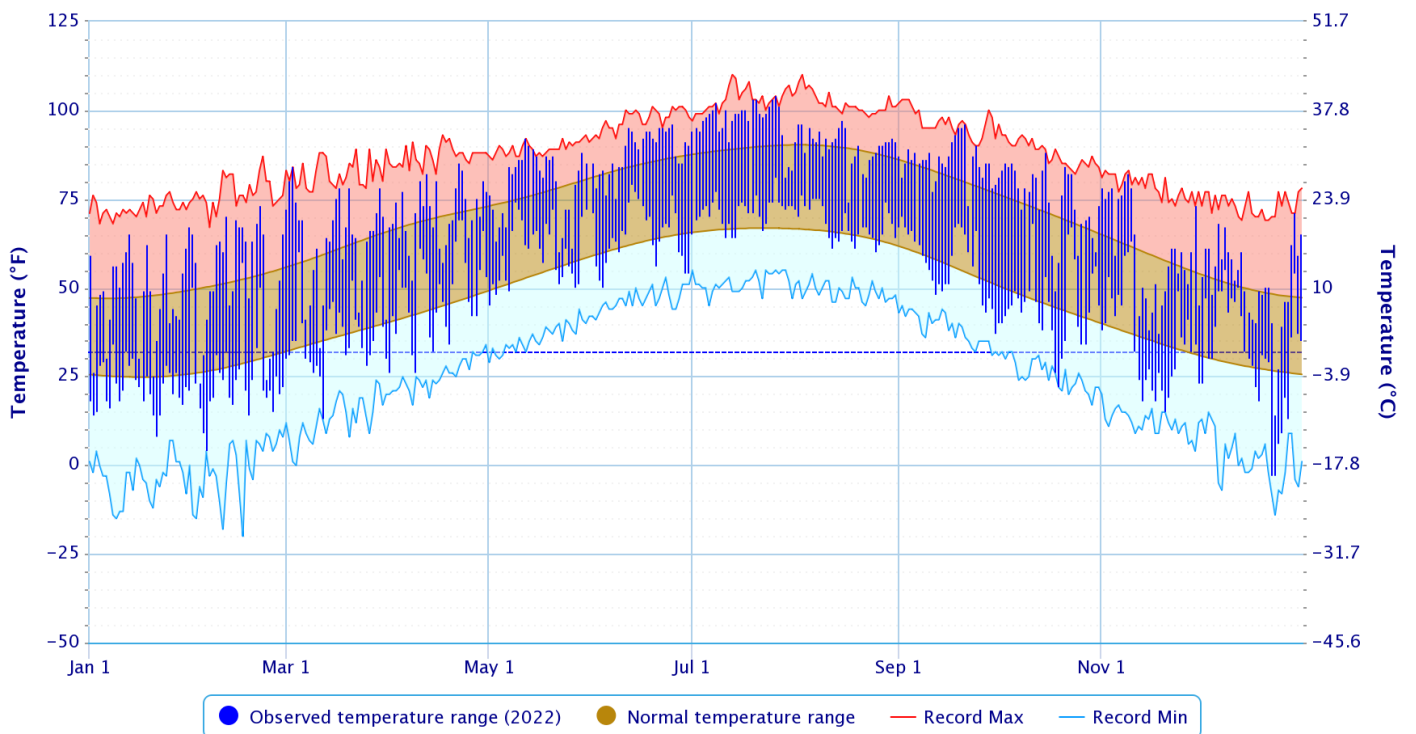
Period of Record – 1949-07-14 to 2023-01-04. Normals period: 1991-2020. Click and drag to zoom chart.



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### Daily Temperature Data – FAYETTEVILLE DRAKE FIELD, AR

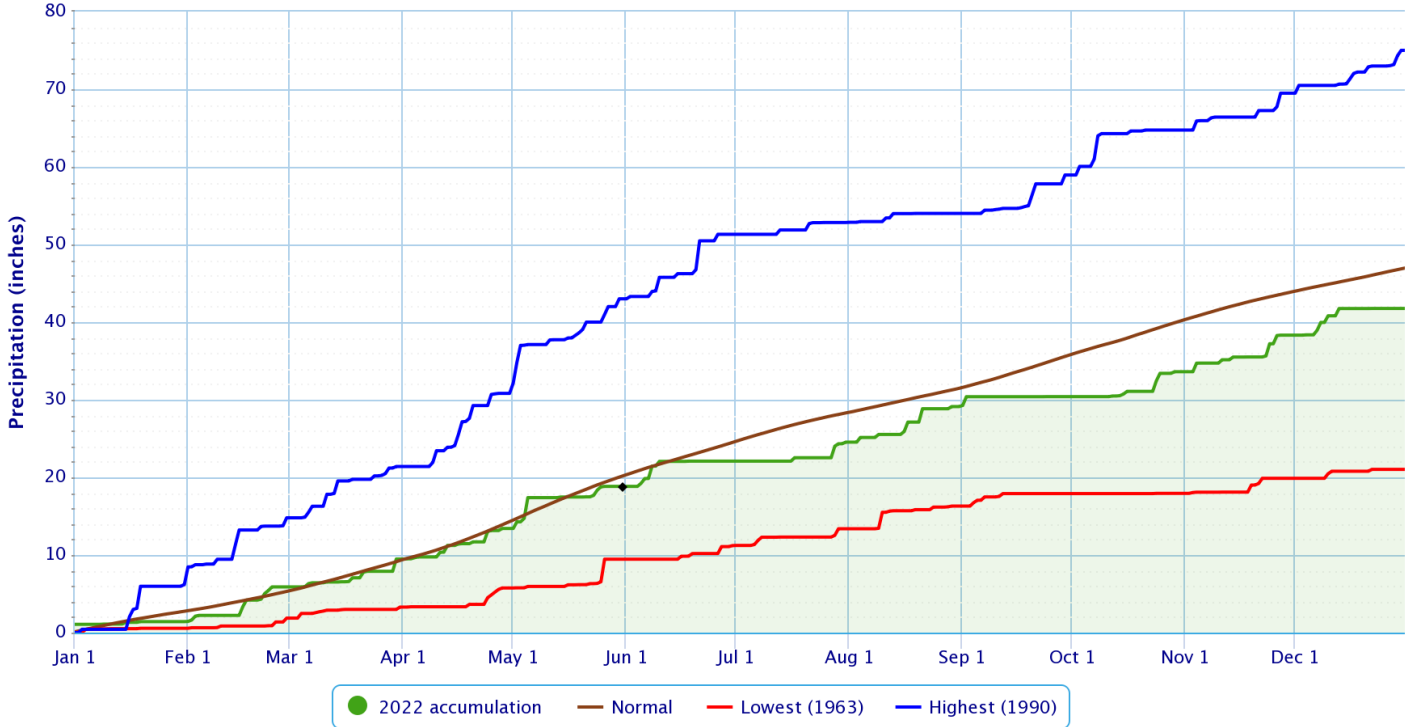
Period of Record – 1949-07-14 to 2023-01-04. Normals period: 1991-2020. Click and drag to zoom chart.



Powered by ACIS

## Accumulated Precipitation – FAYETTEVILLE DRAKE FIELD, AR

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values

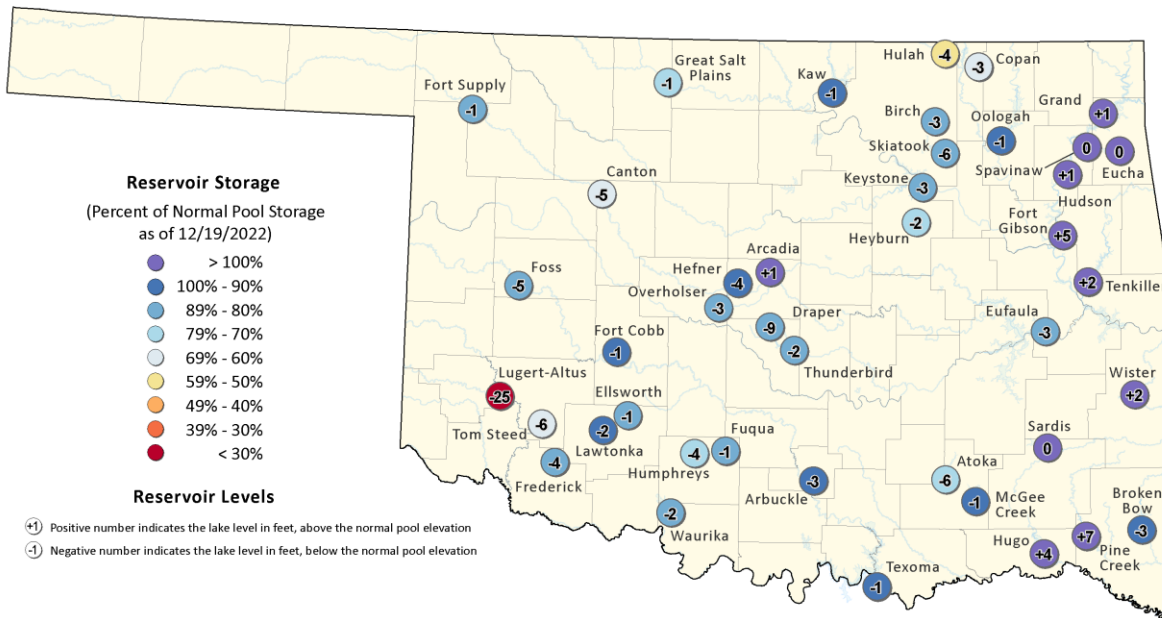


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### Reservoirs

According to the USACE, several of the lakes in the HSA were below 3% of top of their conservation pools as of 1/06/2023: Hulah Lake 54%, Heyburn Lake 57%, Copan Lake 67%, Eufaula Lake 76%, Keystone Lake 77%, Birch Lake 78%, Skiatook Lake 80%, Oologah Lake 92%, and Beaver Lake 94%. One lake was above 3% of the top of its conservation pool: Hudson Lake 5%.

### Oklahoma Reservoir Levels and Storage as of 12/19/2022



This map shows reservoir storage as a percentage of normal pool storage capacity. The source information was collected from real-time lake gages monitored by the U.S. Army Corps of Engineers ([https://www.svt-wc.usace.army.mil/Daily\\_Morning\\_Reservoir\\_Report.pdf](https://www.svt-wc.usace.army.mil/Daily_Morning_Reservoir_Report.pdf)), and the U.S. Geological Survey ([https://waterdata.usgs.gov/ok/nwis/current/?type=lake&group\\_key=basin\\_cd](https://waterdata.usgs.gov/ok/nwis/current/?type=lake&group_key=basin_cd)). For more information please visit the OWRB's website: (<https://www.owrb.ok.gov>).

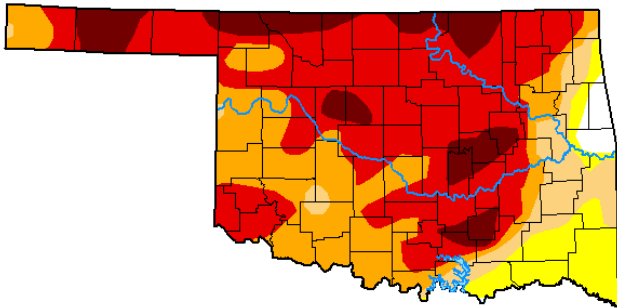


# Drought

According to the [U.S. Drought Monitor](#) (USDM) from December 27, 2022 (Figs. 2, 3), drought conditions were no longer impacting the entire HSA. However, Exceptional (D4) Drought conditions continued across portions of eastern Kay, Osage, Okfuskee, and Okmulgee Counties in eastern OK. Extreme (D3) Drought conditions were occurring in portions of eastern Kay, Osage, Pawnee, Washington, Nowata, Craig, Ottawa, Rogers, Mayes, Wagoner, Tulsa, Creek, Okfuskee, Okmulgee, Muskogee, McIntosh, and Pittsburg Counties in eastern Oklahoma. Severe (D2) Drought conditions existed in portions of Muskogee, Wagoner, Rogers, Mayes, Cherokee, Delaware, Ottawa, McIntosh, and Pittsburg Counties in eastern Oklahoma. Moderate (D1) Drought conditions were present in portions of Ottawa, Delaware, Mayes, Cherokee, Muskogee, McIntosh, Haskell, Latimer, Pittsburg, Pushmataha, and Le Flore Counties in eastern Oklahoma and Sebastian County in northwest Arkansas. Abnormally Dry (D0, but not in drought) conditions were present in Delaware, Cherokee, Sequoyah, Haskell, Le Flore, Pushmataha, and Choctaw Counties in eastern Oklahoma, and Benton and Sebastian Counties in northwest Arkansas.

## U.S. Drought Monitor Oklahoma

**December 27, 2022**  
(Released Thursday, Dec. 29, 2022)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	1.82	98.18	89.73	80.92	56.13	11.65
<b>Last Week</b> <small>12-20-2022</small>	1.82	98.18	89.73	80.92	56.13	11.65
<b>3 Months Ago</b> <small>09-27-2022</small>	0.00	100.00	99.88	94.44	64.44	17.25
<b>Start of Calendar Year</b> <small>01-04-2022</small>	5.02	94.98	88.14	72.26	40.44	0.00
<b>Start of Water Year</b> <small>09-27-2022</small>	0.00	100.00	99.88	94.44	64.44	17.25
<b>One Year Ago</b> <small>12-28-2021</small>	4.92	95.08	90.17	72.51	22.62	0.00

Intensity:

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

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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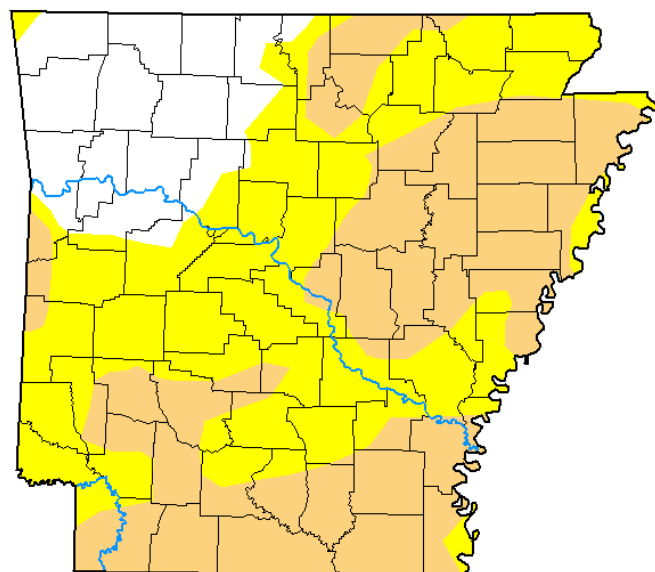
[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Fig. 2. Drought Monitor for Oklahoma



# U.S. Drought Monitor Arkansas

**December 27, 2022**  
(Released Thursday, Dec. 29, 2022)  
Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	17.03	82.97	41.38	0.00	0.00	0.00
<b>Last Week</b> 12-20-2022	17.03	82.97	41.38	0.00	0.00	0.00
<b>3 Months Ago</b> 09-27-2022	4.99	95.01	69.68	39.30	2.96	0.00
<b>Start of Calendar Year</b> 01-04-2022	39.91	60.09	28.99	14.24	0.41	0.00
<b>Start of Water Year</b> 09-27-2022	4.99	95.01	69.68	39.30	2.96	0.00
<b>One Year Ago</b> 12-28-2021	23.76	76.24	29.83	2.67	0.00	0.00

**Intensity:**

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

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

**Author:**  
Richard Heim  
NCEI/NOAA



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Fig. 3. Drought Monitor for Arkansas

## Annual Summary

Using the radar-derived estimated observed precipitation from the RFCs (Fig. 4a), rainfall totals for 2022 ranged from 25" to 60" across eastern OK and northwest AR, with much of the area receiving 30"-50". These rainfall totals correspond to 110% to around 125% of the normal annual rainfall across east central OK and far northwest/far west central Arkansas, and 50% to 90% for the remainder of eastern OK and Carroll County in northwest AR (Fig. 4b).

In Tulsa, OK, 2022 ranked as the 29<sup>th</sup> warmest Year (61.8°F, tied 2015; since records began in 1905), the 43<sup>rd</sup> driest Year (33.63"; since records began in 1888), and the 30<sup>th</sup> snowiest Year (13.5"; since records began in 1900). Fort Smith, AR had the 16<sup>th</sup> warmest Year (63.2°F, tied 2021, 2005, 1999, 1896; since records began in 1883), the 16<sup>th</sup> wettest Year (56.01"; since records began in 1882), and the 42<sup>nd</sup> snowiest Year (6.5", tied 1930; since records began in 1884). Fayetteville, AR had the 6<sup>th</sup> warmest (59.3°F), the 24<sup>th</sup> driest (41.76"), and 5<sup>th</sup> snowiest Year since records began in 1950.

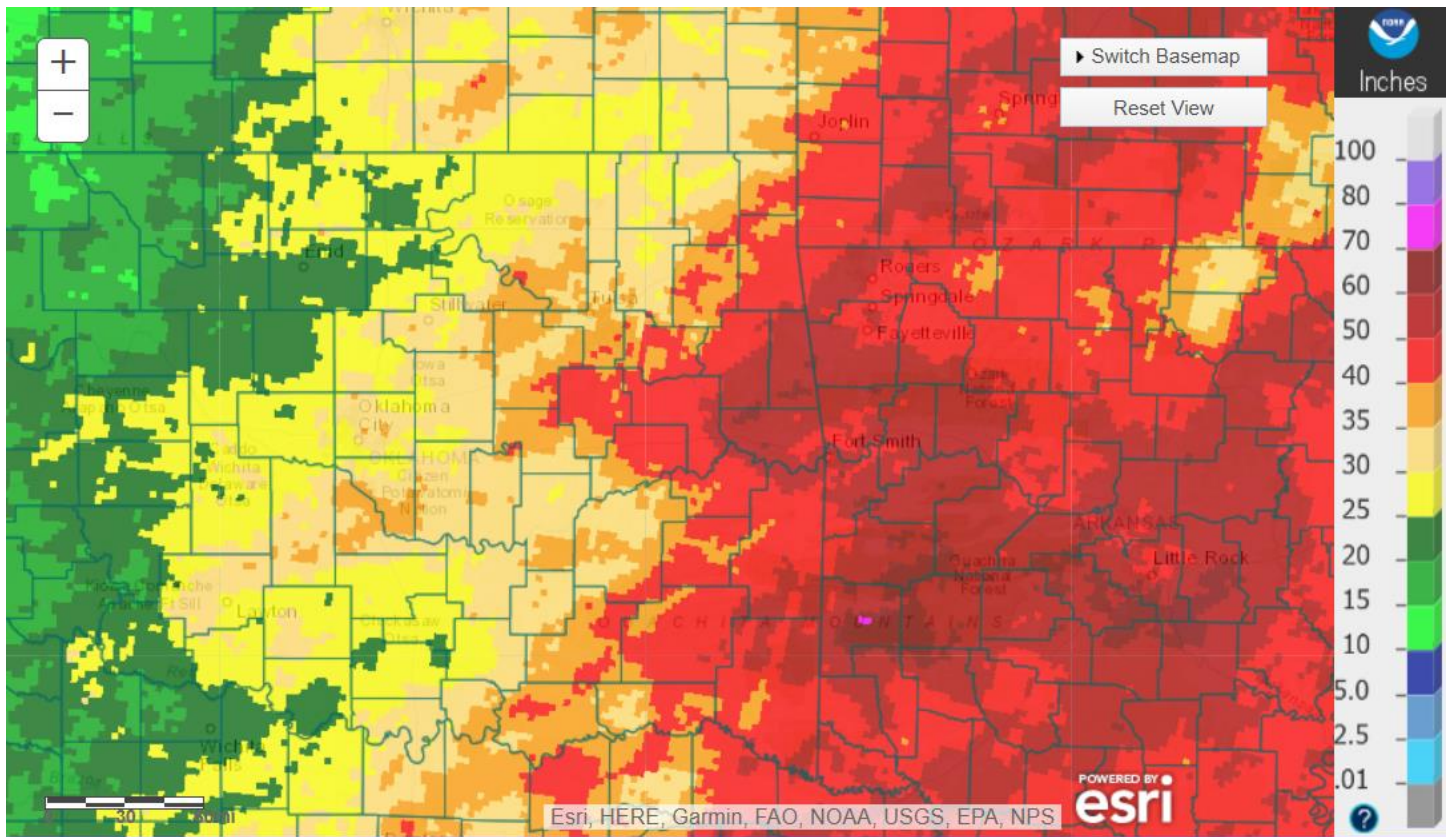
There were 21 tornadoes in the NWS Tulsa area of eastern OK and northwest AR in 2022, consisting of 1 EF-3, 1 EF-2, 15 EF-1, 3 EF-0, and 1 EF-Unknown tornadoes. More information about these tornadoes can be found at <https://arcg.is/1eT4580>.

Some of the larger precipitation reports (in inches) for 2022 included:

Kingston 2S, AR (coop)	61.57	Sallisaw 1.0SE, OK (coco)	60.35	Bunch 0.8N, OK (coco)	60.01
Winslow 7NE, AR (coop)	59.58	Sallisaw, OK (meso)	58.28	Vian 5.3ENE, OK (coco)	57.77
Cookson, OK (meso)	56.64	Bella Vista 2.5SSE, AR (coco)	56.59	Webbers Falls, OK (meso)	56.22

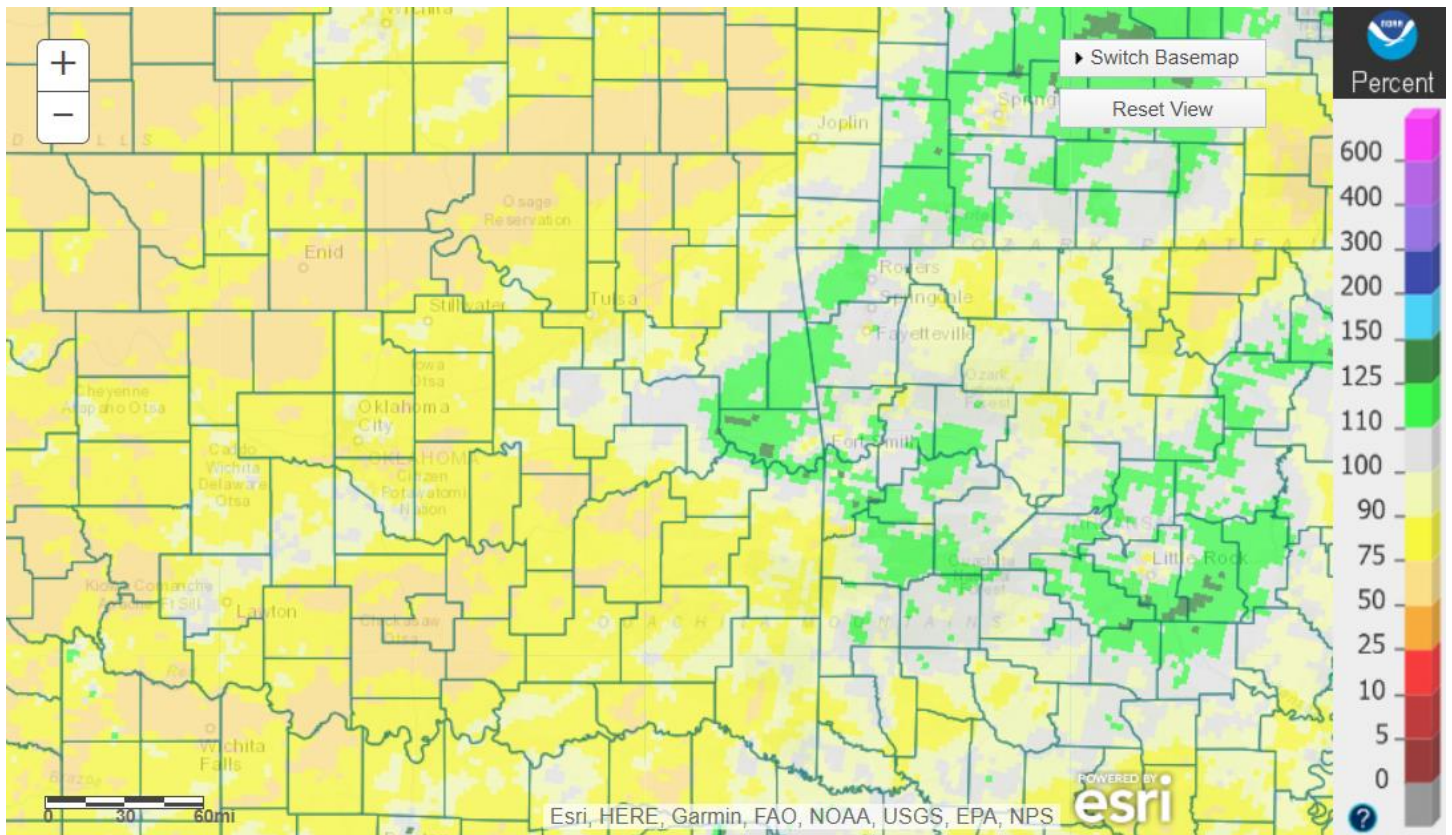
Some of the lowest precipitation reports (in inches) for 2022 included:

Foraker, OK (meso)	27.89	Bartlesville, OK (ASOS)	28.28	Burbank, OK (meso)	28.86
Pawnee, OK (meso)	29.05	Talala, OK (meso)	30.03	Copan, OK (meso)	30.20
Nowata, OK (meso)	30.31	Vinita, OK (meso)	31.26	Wynona, OK (meso)	32.47



Tulsa, OK: 2022 Annual Observed Precipitation  
Valid on: January 01, 2023 12:00 UTC

Fig. 4a. Estimated Observed Rainfall for 2022



Tulsa, OK: 2022 Annual Percent of Normal Precipitation  
Valid on: January 01, 2023 12:00 UTC

Fig. 4b. Estimated % of Normal Rainfall for 2022



## Outlooks

The [Climate Prediction Center](#) (CPC) outlook for January 2023 (issued December 31, 2022) indicates an enhanced chance for above normal temperatures across all of eastern OK and northwest AR. This outlook also indicates a slightly enhanced chance for above median precipitation across most of northwest AR, with equal chances for above, near, and below median precipitation across eastern OK. This outlook was largely based on dynamical model output and La Niña and Madden-Julian Oscillation (MJO) influences. The first half of the month is expected to be warmer than normal for much of the Plains, though there is the possibility for some below normal temperatures late in the month due to the potential for a negative North Atlantic Oscillation (NAO) pattern.

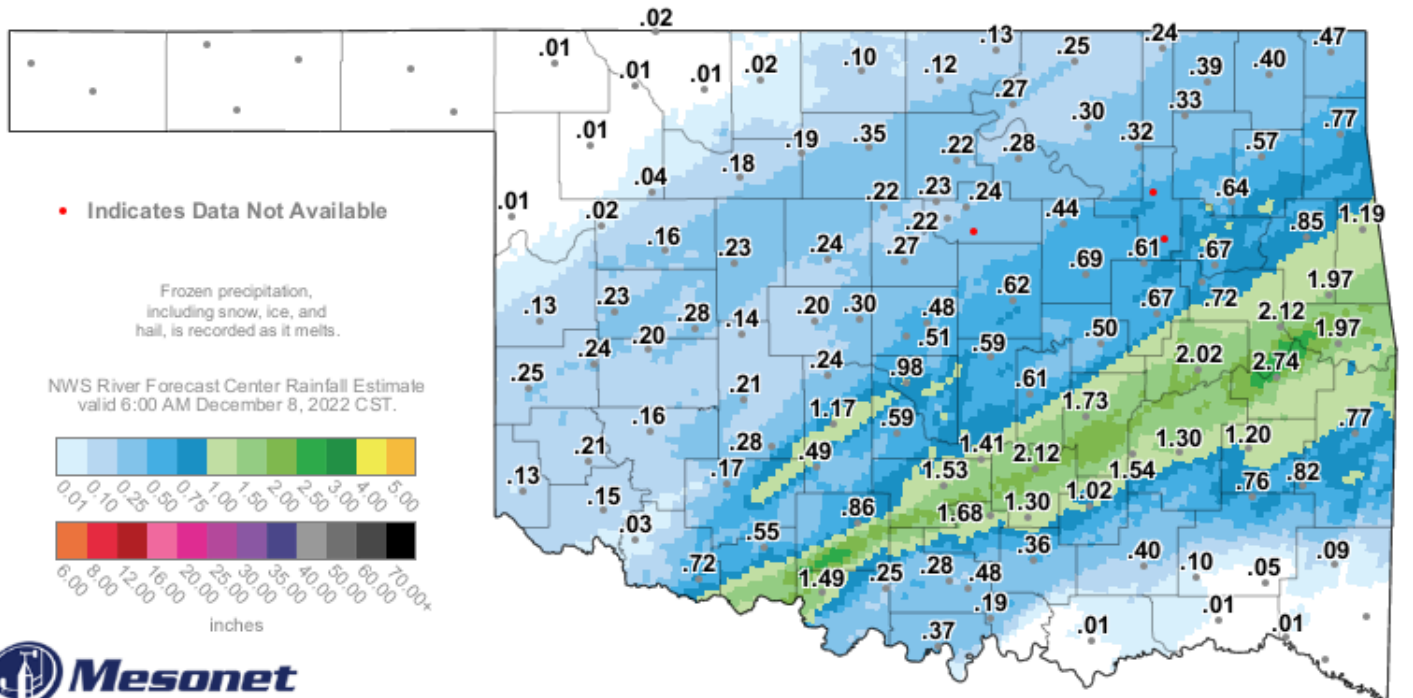
For the 3-month period January-February-March 2023, CPC is forecasting an equal chance for above, near, and below normal temperatures across all of eastern OK and northwest AR. This outlook also indicates an enhanced chance for below median precipitation from north central to southeast OK, with equal chances for above, near, and below median precipitation elsewhere across far eastern OK and northwest AR (outlook issued December 15, 2022). This outlook is based on long-term trends, La Niña impacts, and incorporates both statistical and dynamical forecast tools. According to CPC, the combined effect of the ocean-atmosphere system remains consistent with La Niña conditions. There is a 50%-50% chance for La Niña or ENSO-neutral conditions through the remainder of winter 2022-23, and a 71% chance of ENSO-neutral by early spring. CPC continues the La Niña Advisory.

**Summary of Heavy Precipitation Events** Daily quality-controlled rainfall maps can be found at: [http://water.weather.gov/precip/index.php?location\\_type=wfo&location\\_name=tsa](http://water.weather.gov/precip/index.php?location_type=wfo&location_name=tsa)

An extensive plume of subtropical moisture extended from the Pacific into the southern Plains on the 7<sup>th</sup>. The moisture plume gradually shifted north across OK and AR as an upper-level trough axis moved into the southwest U.S. and a southern stream wave lifted northeast. Showers that developed within this moisture plume began to spread east into eastern OK from central OK during the afternoon of the 7<sup>th</sup>, and became more widespread across northeast OK and northwest AR during the afternoon and evening hours. Additional scattered showers and thunderstorms developed across southeast OK into west central AR near a surface boundary. As the upper-level trough ejected into the plains late on the 7<sup>th</sup>, even more significant moisture transport occurred. This resulted in heavier rainfall during the overnight through early morning hours. This activity began to shift east during the morning, coming to an end at mid-morning of the 8<sup>th</sup>. Rainfall totals ranged from 0.25" to around 3.5" (Figs. 5-8).

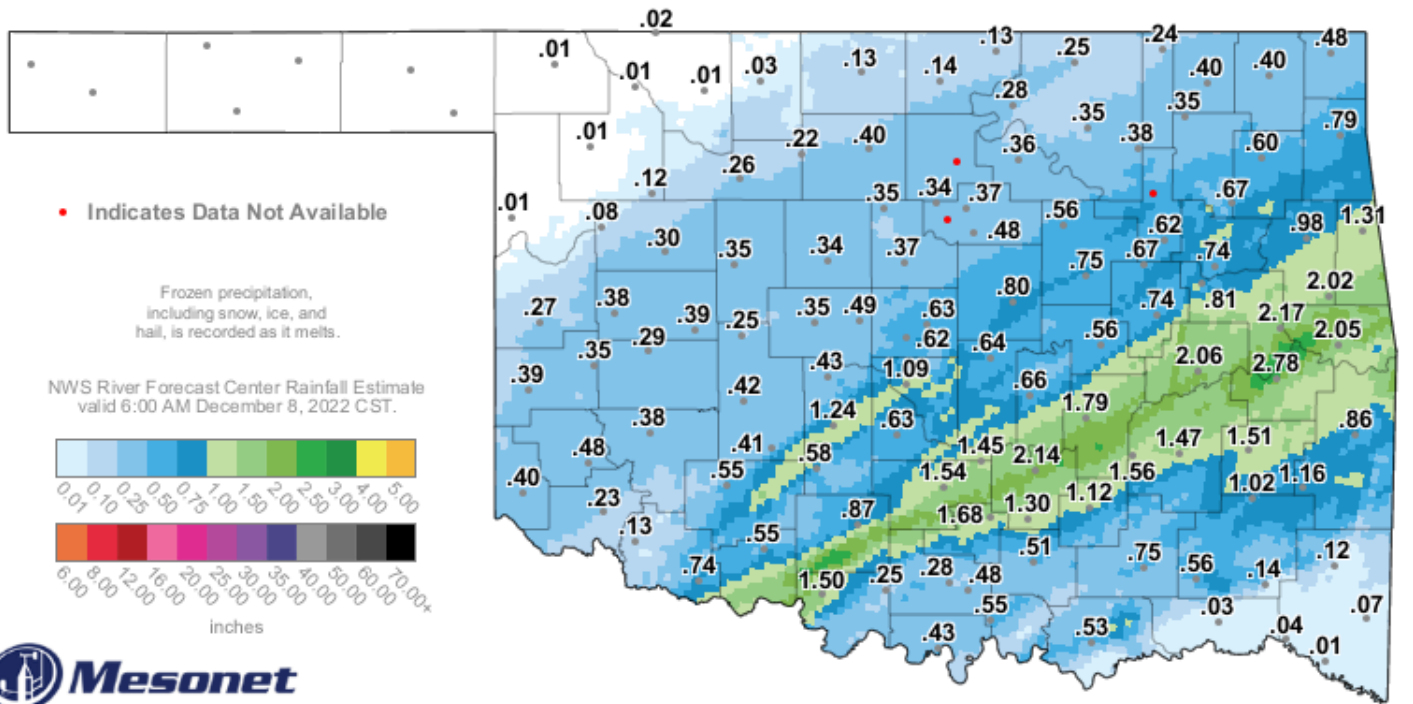
Widespread showers with embedded thunderstorms spread into northeast OK and northwest AR during the late evening hours of the 9<sup>th</sup> as a mid-level shortwave traversed the area. Low-level moisture surged north in the low-level jet and strong warm air advection regime, with precipitable water (PWAT) values climbing into the 1.25"-1.5" range (3 standard deviations above normal). The showers and thunderstorms continued through the overnight hours, finally ending from northwest to southeast across all but southeast OK through the morning of the 10<sup>th</sup>. A second wave approached the area and resulted in a continuation of showers and thunderstorms across far southeast OK near a lingering surface boundary during the afternoon through mid-evening hours of the 10<sup>th</sup>. Rainfall totals through 6 am on the 10<sup>th</sup> ranged from around 0.25" to near 2.5" in the affected locations (Figs. 9, 10), with 0.25" to 2" falling after 6 am (Fig. 11).

Scattered showers and thunderstorms developed over eastern OK around midnight on the 13<sup>th</sup> within a strengthening warm air advection pattern, spreading east into northwest AR during the overnight hours. A more significant line of showers and thunderstorms moving across OK made its way into eastern OK in the predawn hours of the 13<sup>th</sup>. This north-south line of storms marched eastward across eastern OK and western AR during the morning through early afternoon hours before shifting east of the area. Some severe weather occurred with these storms. The majority of the area received 0.50" to near 2" of rain (Figs. 12, 13). With the several recent rounds of rain over the Illinois River basin, the lower Illinois River rose above action stage (river too dangerous for floating), but did not exceed flood stage.



### 12-Hour Rainfall Accumulation (inches)

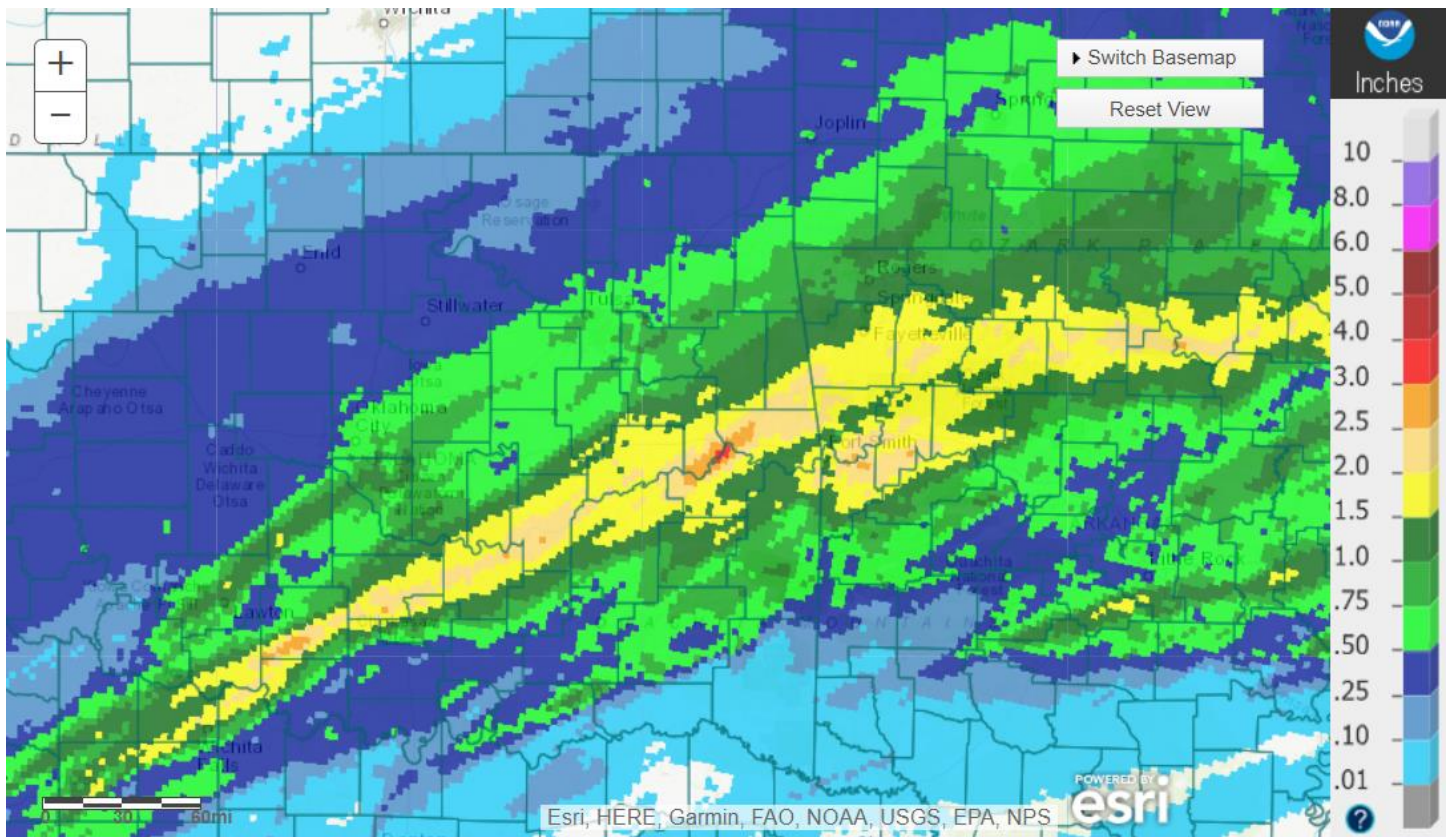
Fig. 5. OK Mesonet (values) and NWS RFC rainfall estimate (image) 12-hour rainfall ending at 7:10 am CST 12/08/2022.



### 24-Hour Rainfall Accumulation (inches)

Fig. 6. OK Mesonet (values) and NWS RFC rainfall estimate (image) 24-hour rainfall ending at 7:15 am CST 12/08/2022.

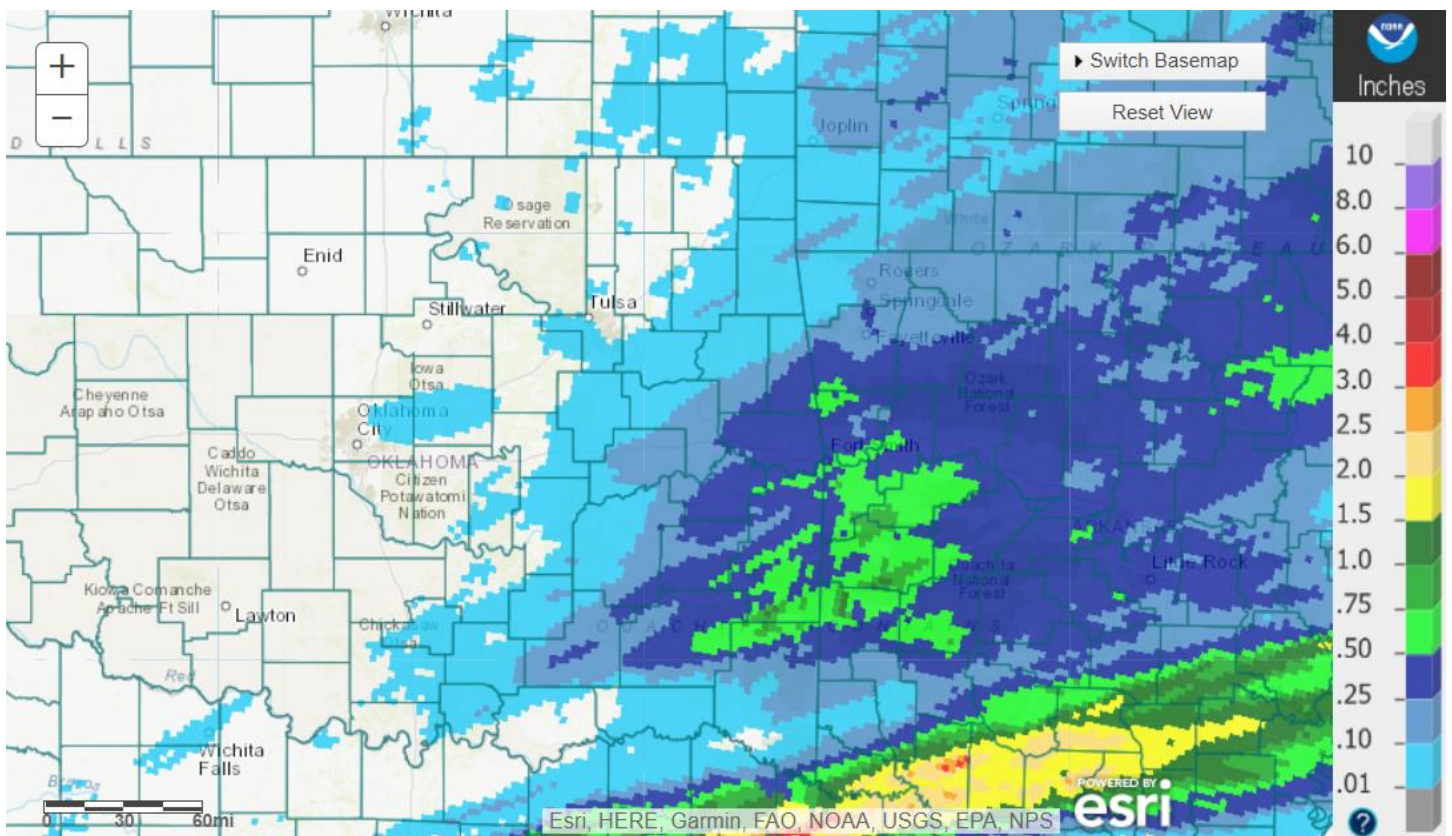




Tulsa, OK: December 08, 2022 1-Day Observed Precipitation

Valid on: December 08, 2022 12:00 UTC

Fig. 7. 24-hour Estimated Observed Rainfall ending at 6am CST 12/08/2022.

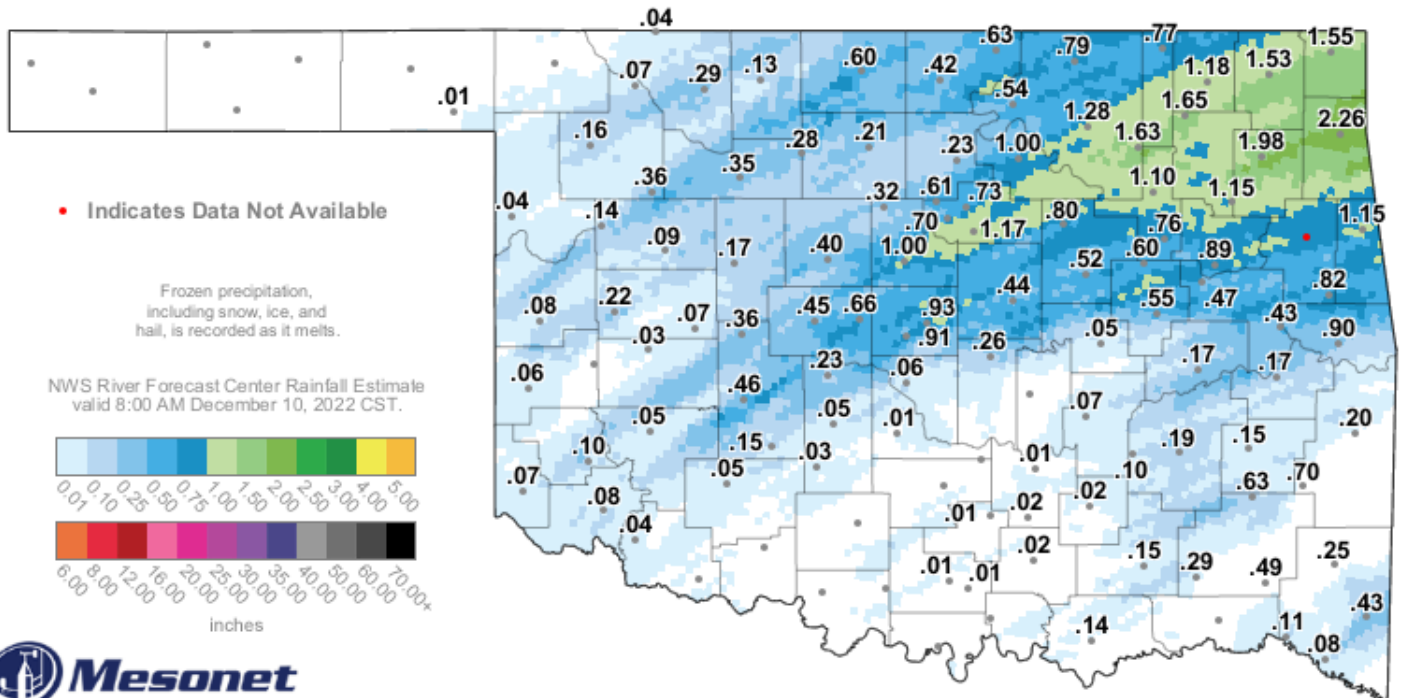


Tulsa, OK: December 09, 2022 1-Day Observed Precipitation

Valid on: December 09, 2022 12:00 UTC

Fig. 8. 24-hour Estimated Observed Rainfall ending at 6am CST 12/09/2022.



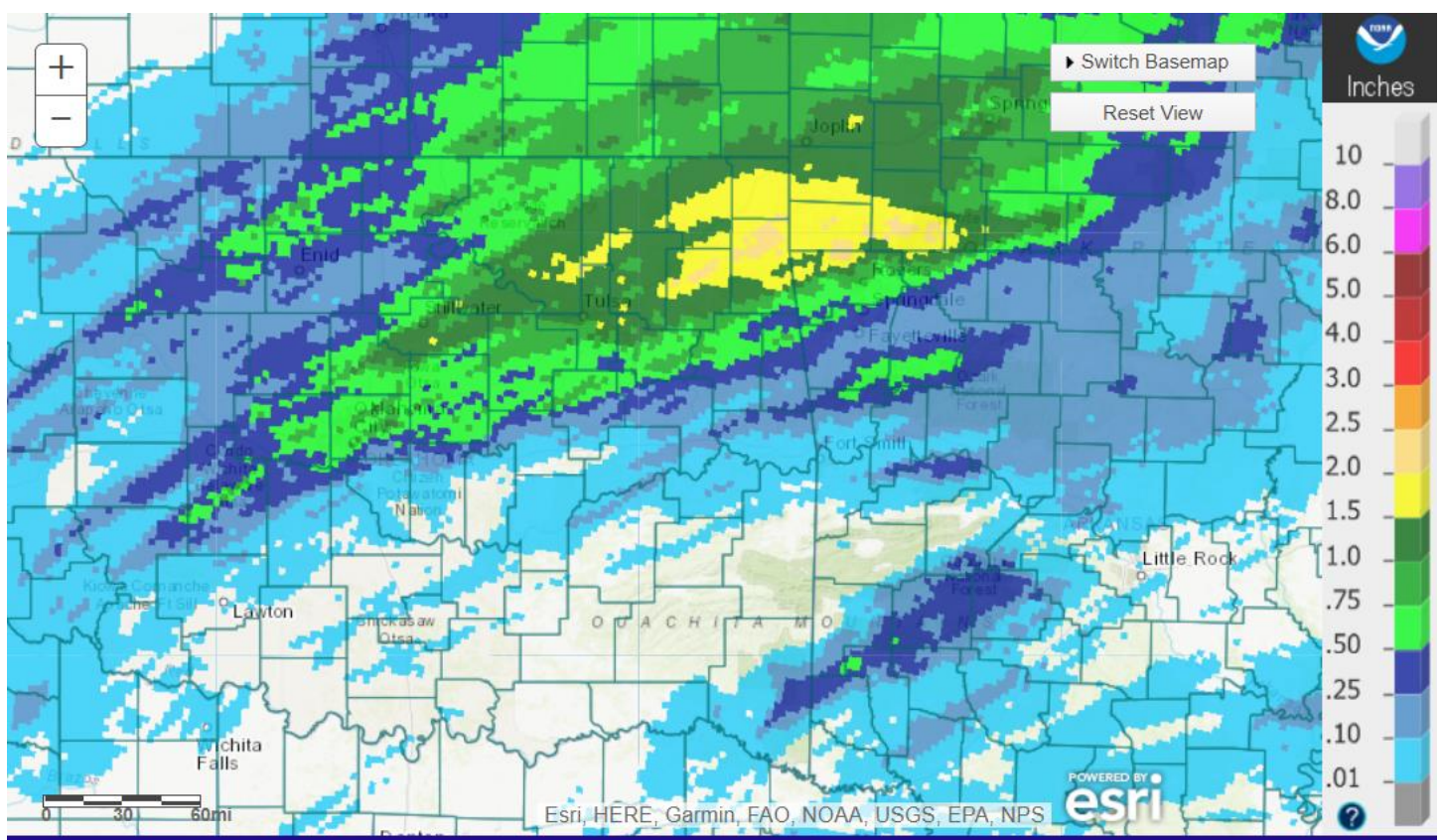


### 24-Hour Rainfall Accumulation (inches)

9:35 AM December 10, 2022 CST

Created 9:40:59 AM December 10, 2022 CST. © Copyright 2022

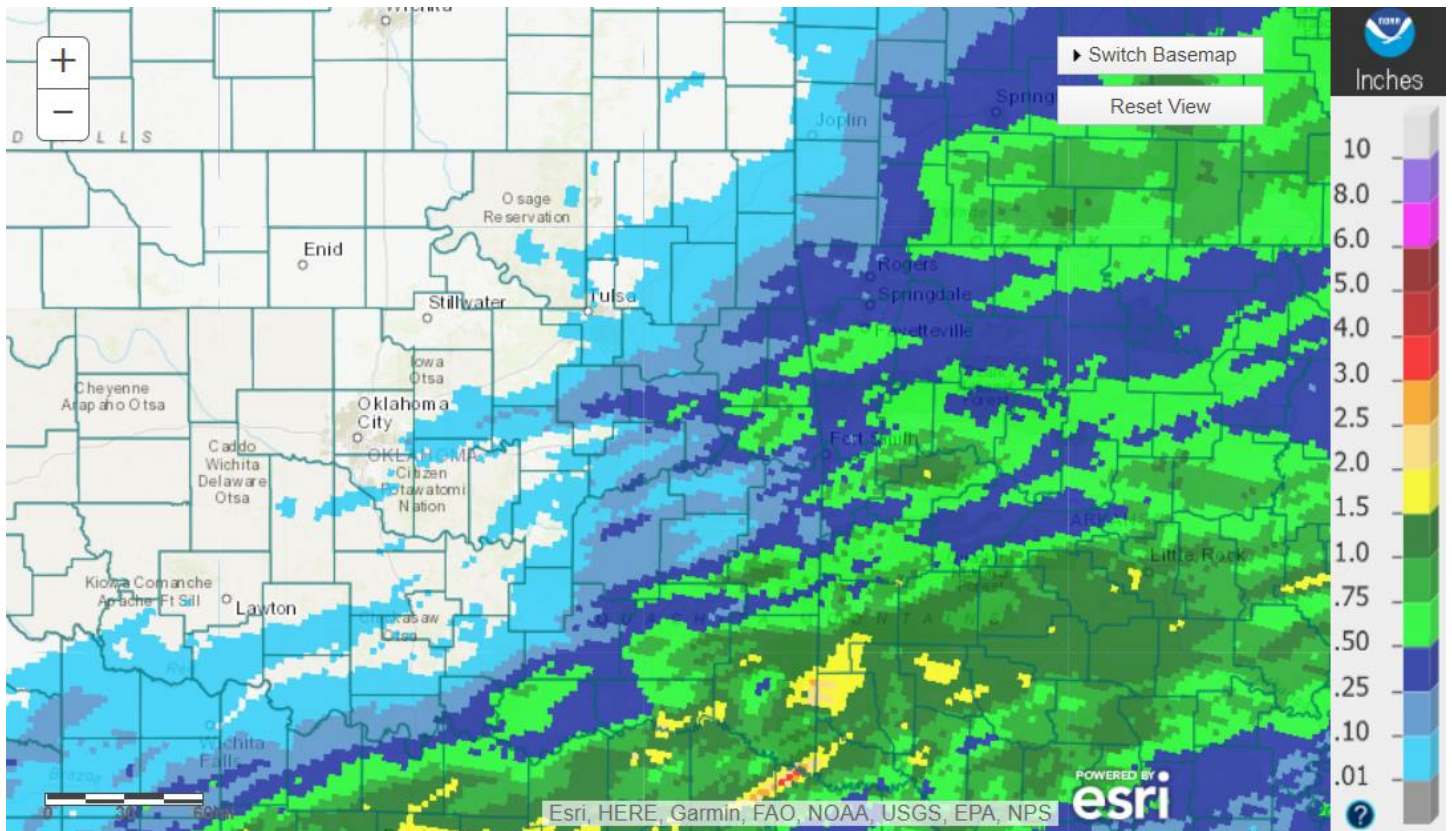
Fig. 9. OK Mesonet (values) and NWS RFC rainfall estimate (image) 24-hour rainfall ending at 9:35 am CST 12/10/2022.



Tulsa, OK: December 10, 2022 1-Day Observed Precipitation  
Valid on: December 10, 2022 12:00 UTC

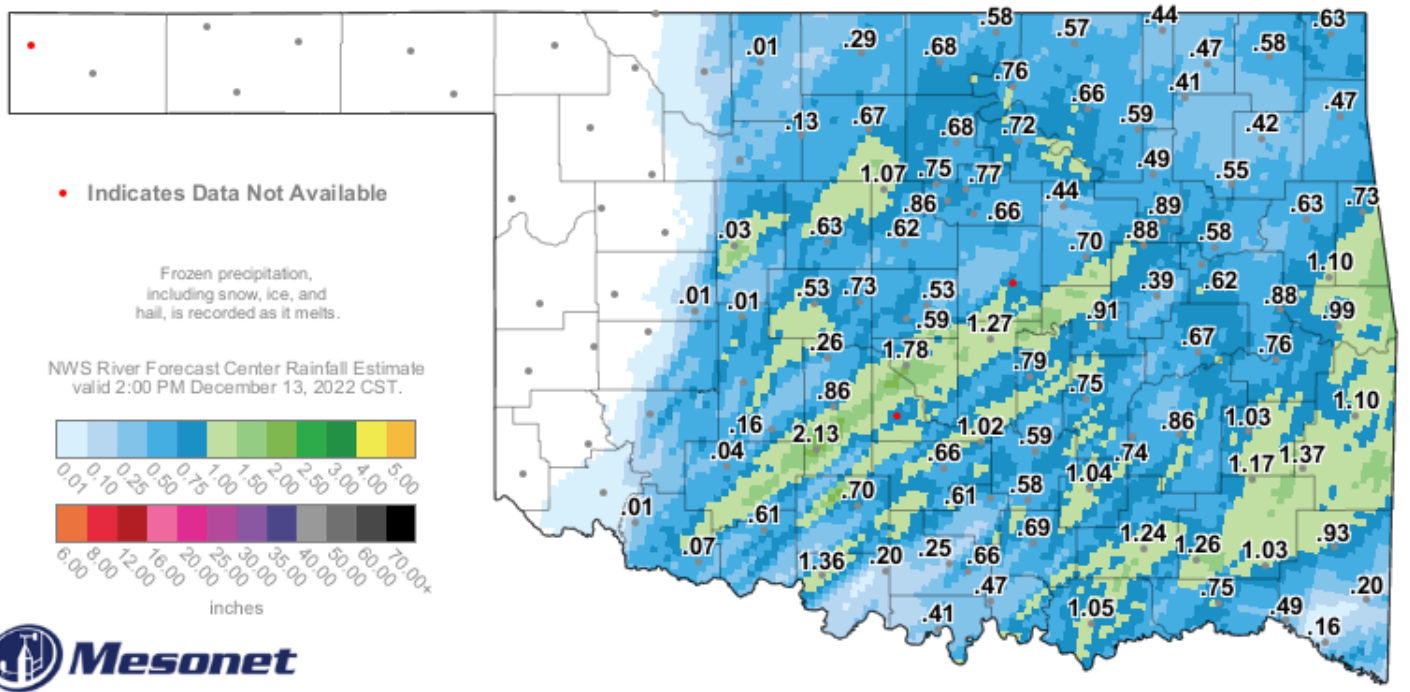
Fig. 10. 24-hour Estimated Observed Rainfall ending at 6am CST 12/10/2022.





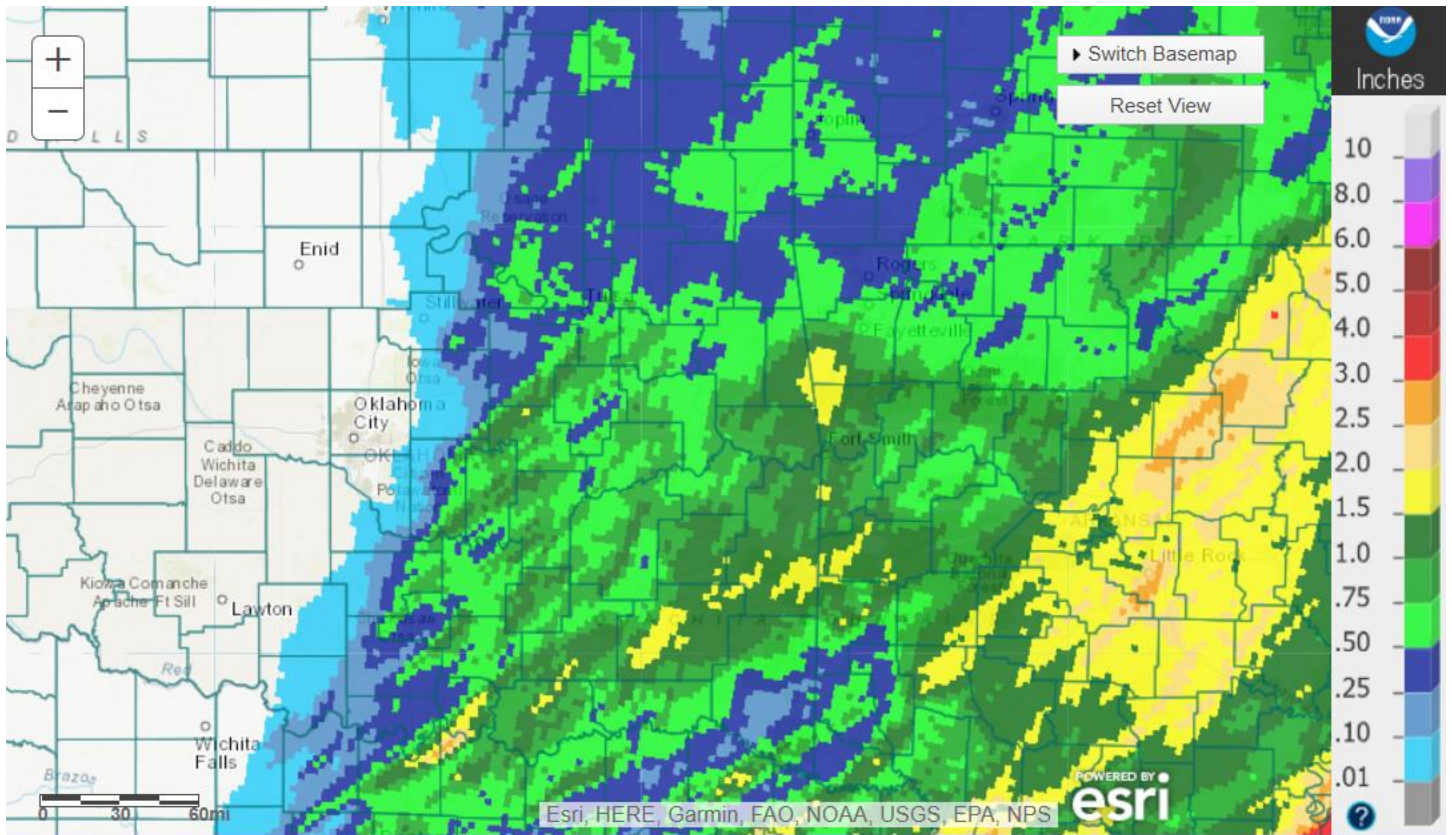
Tulsa, OK: December 11, 2022 1-Day Observed Precipitation  
Valid on: December 11, 2022 12:00 UTC

Fig. 11. 24-hour Estimated Observed Rainfall ending at 6am CST 12/11/2022.



**12-Hour Rainfall Accumulation (inches)** 3:25 PM December 13, 2022 CST  
Created 3:30:50 PM December 13, 2022 CST. © Copyright 2022

Fig. 12. OK Mesonet (values) and NWS RFC rainfall estimate (image) 12-hour rainfall ending at 3:25 pm CST 12/13/2022.



Tulsa, OK: December 14, 2022 1-Day Observed Precipitation  
 Valid on: December 14, 2022 12:00 UTC

Fig. 13. 24-hour Estimated Observed Rainfall ending at 6am CST 12/14/2022.

A strong arctic cold front moved into northeast OK during the early morning hours of the 22<sup>nd</sup>, arriving near the I-44 corridor at 5 am CST as a vigorous upper-level trough dived out of the northern Rockies and into the central Plains. The front brought plunging temperatures, strong and gusty northerly winds of 30-45 mph, bitter wind chill values, and wintry precipitation. By noon, much of the region had temperatures in the single digits, which was around 40 degrees colder than 24 hours prior. Figures 14-19 show OK Mesonet measurements at 11:55 am CST 12/22/2022, illustrating the change in weather due to the cold front. Freezing rain/drizzle fell near the front, while the precipitation quickly transitioned to snow north of the front as it continued to move quickly southeast through eastern OK and northwest AR during the morning hours. The snowfall was heaviest across northeast OK and northwest AR from mid-morning through early afternoon, with all of the snow shifting east of the area by late afternoon. Much of eastern OK and northwest AR received some snow, with totals ranging from a trace to near 3" (Fig. 20). Rainfall and liquid equivalent totals were only around 0.10" or less.



### Meteogram for Tulsa

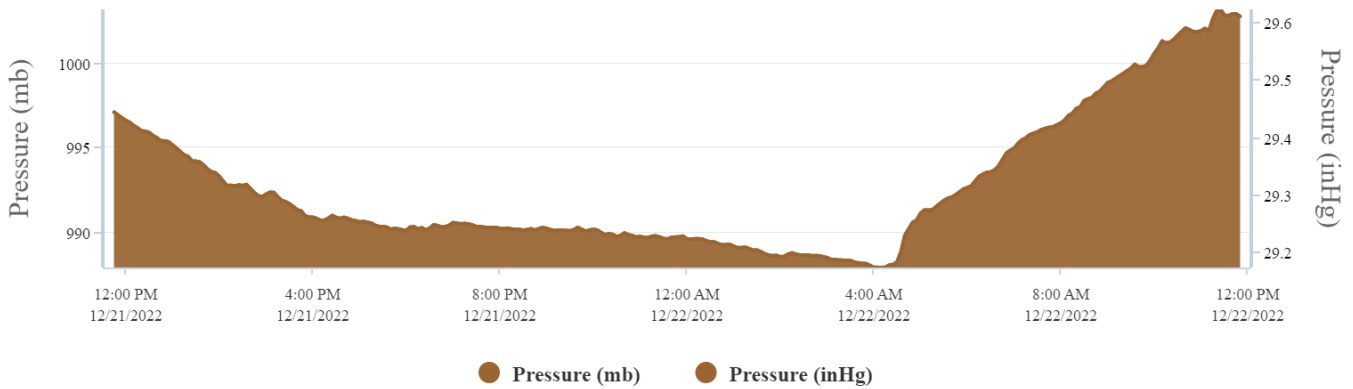
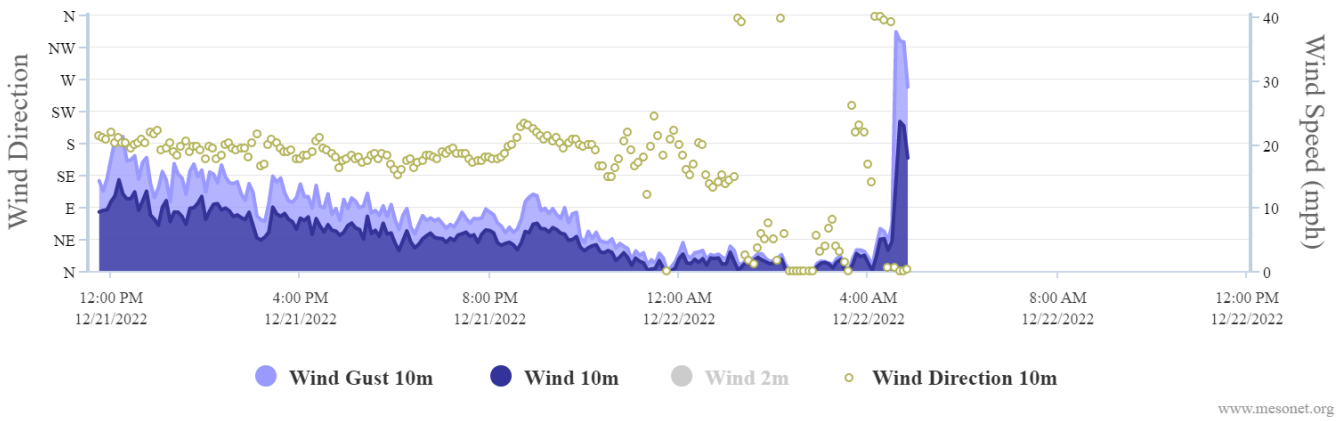
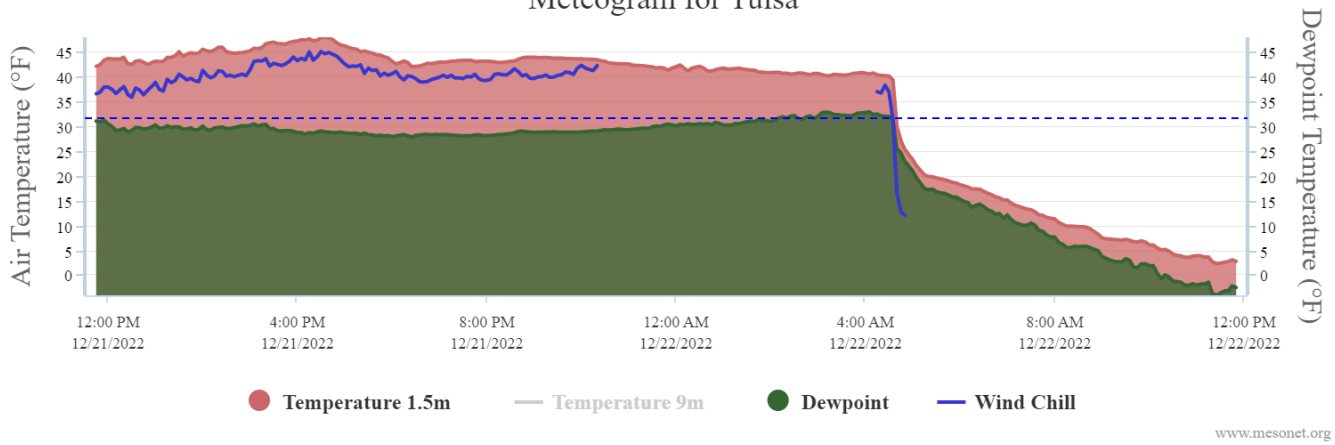
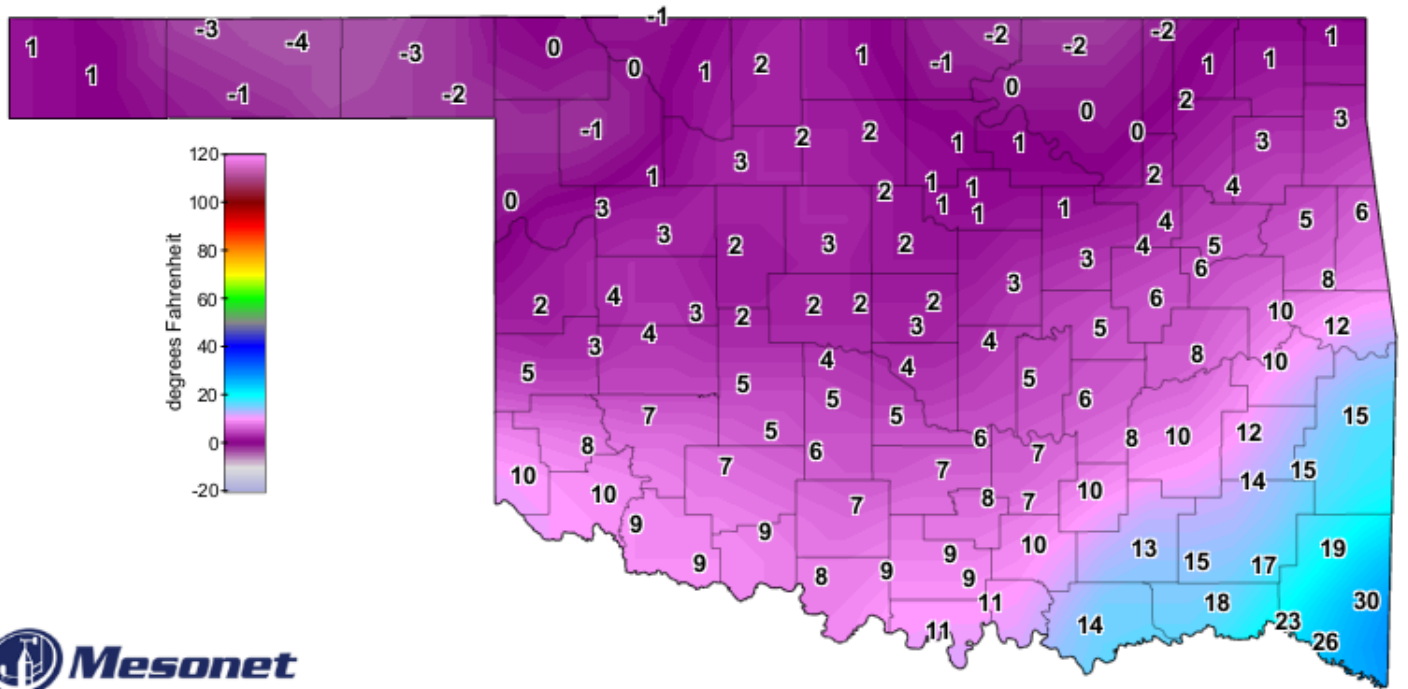


Fig. 14. OK Mesonet Tulsa station meteogram showing cold front passage on 12/22/2022 bringing a significant drop in temperatures and increase in winds (freezing rain caused the anemometer to freeze up).

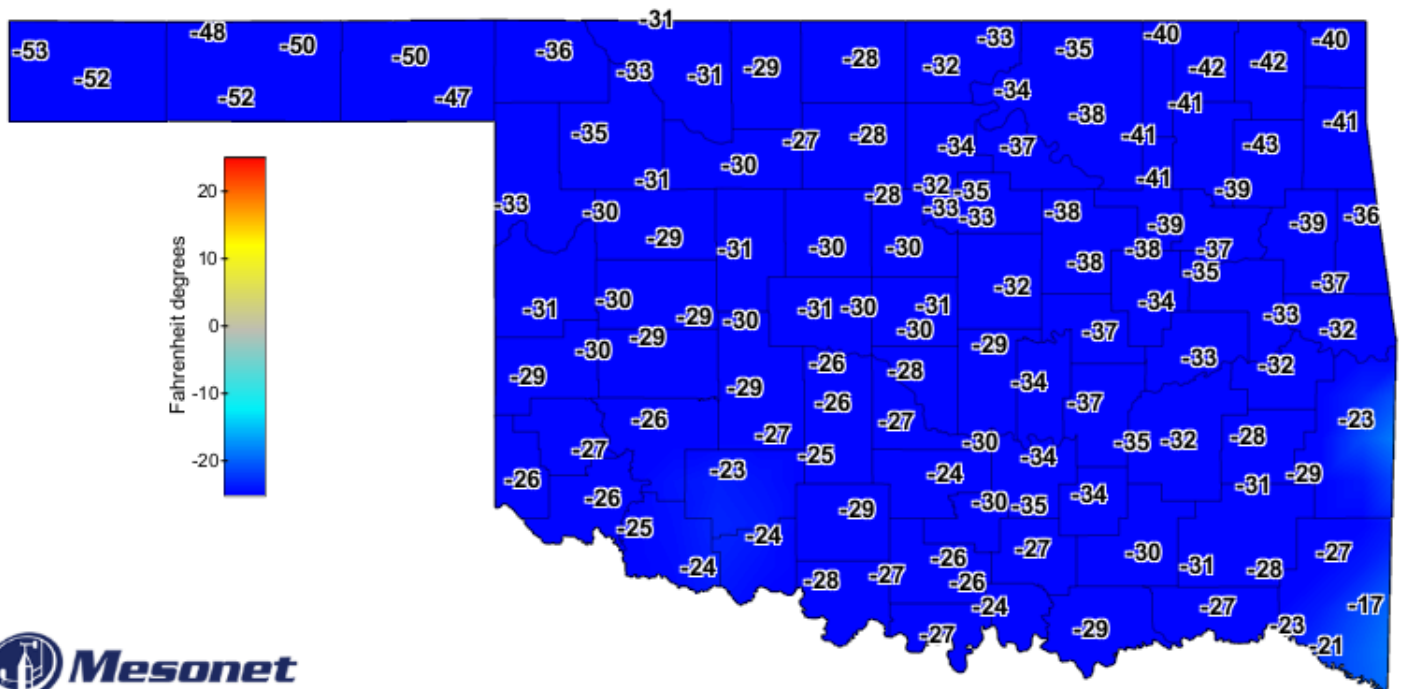


**Mesonet**  
**Air Temperature (°F)**

11:55 AM December 22, 2022 CST

Created 12:00:11 PM December 22, 2022 CST. © Copyright 2022

Fig. 15. OK Mesonet air temperature at 11:55 am CST 12/22/2022.

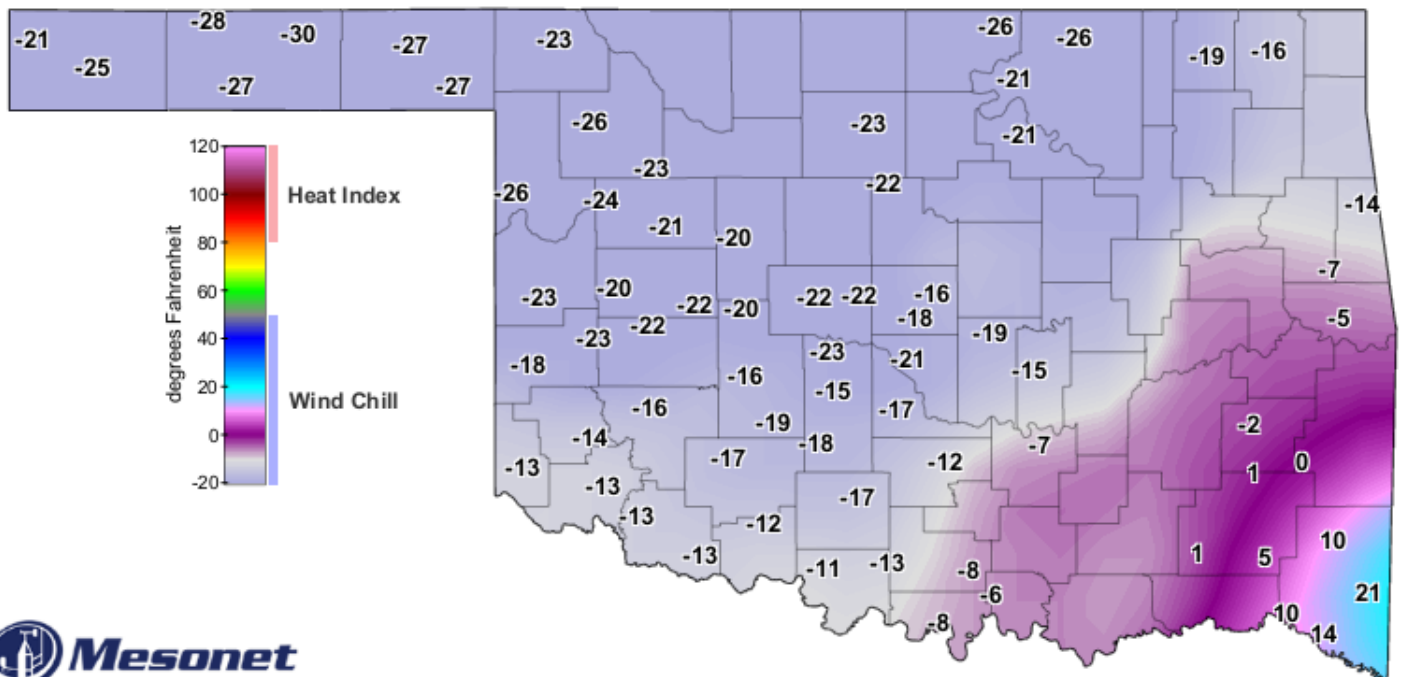


**Mesonet**  
**24-Hour Air Temperature Change (°F)**

11:55 AM December 22, 2022 CST

Created 12:00:17 PM December 22, 2022 CST. © Copyright 2022

Fig. 16. OK Mesonet 24-hour change in air temperature at 11:55 am CST 12/22/2022.

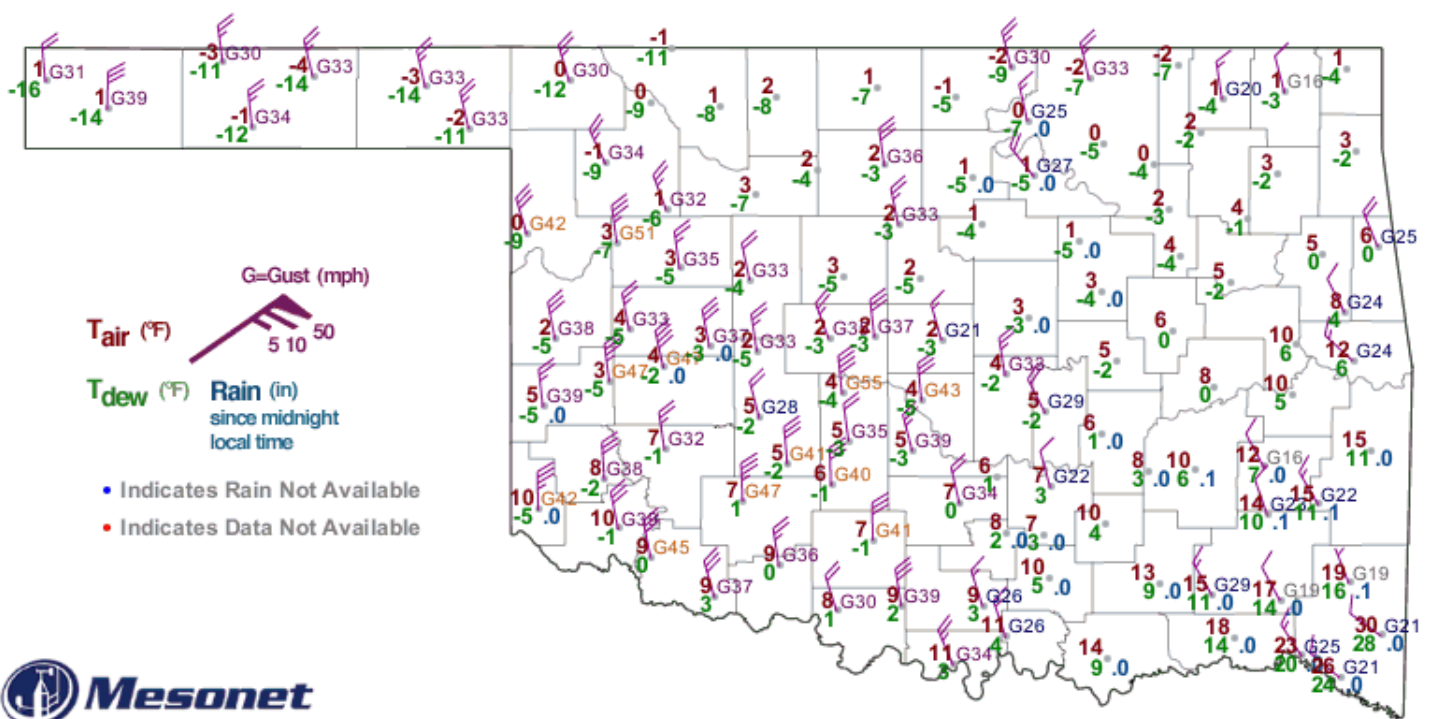


### Wind Chill / Heat Index (°F)

11:55 AM December 22, 2022 CST

Created 12:00:13 PM December 22, 2022 CST. © Copyright 2022

Fig. 17. OK Mesonet wind chill at 11:55 am CST 12/22/2022. Note: freezing rain caused the anemometers to freeze up, resulting in missing data for many stations.

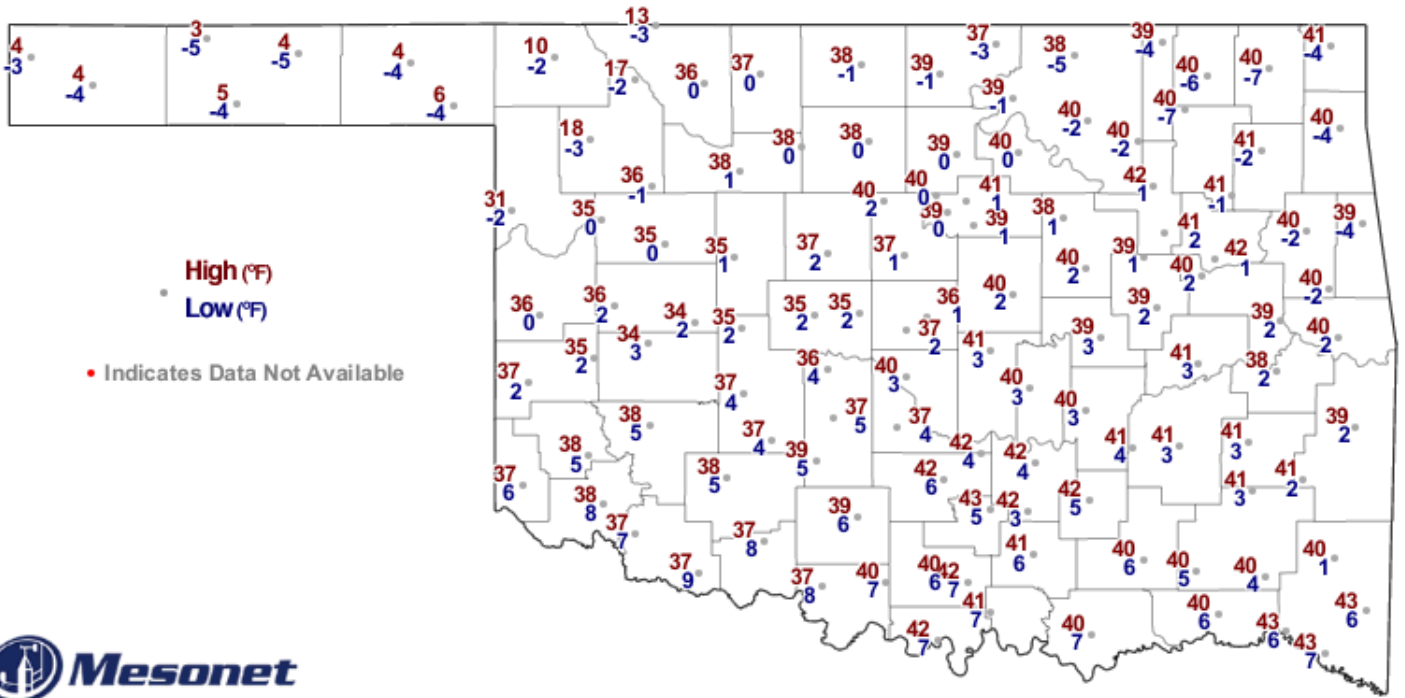


### Current Conditions

11:55 AM December 22, 2022 CST

Created 12:00:11 PM December 22, 2022 CST. © Copyright 2022

Fig. 18. OK Mesonet weather measurements at 11:55 am CST 12/22/2022. Note: freezing rain caused the anemometers to freeze up, resulting in missing wind data for many stations.



### Maximum & Minimum Air Temperatures (°F)

December 22, 2022

Created 6:30:14 AM December 23, 2022 CST. © Copyright 2022

Fig. 19. OK Mesonet maximum and minimum temperatures for 12/22/2022.



Fig. 20. Estimated snowfall for 12/22/2022.



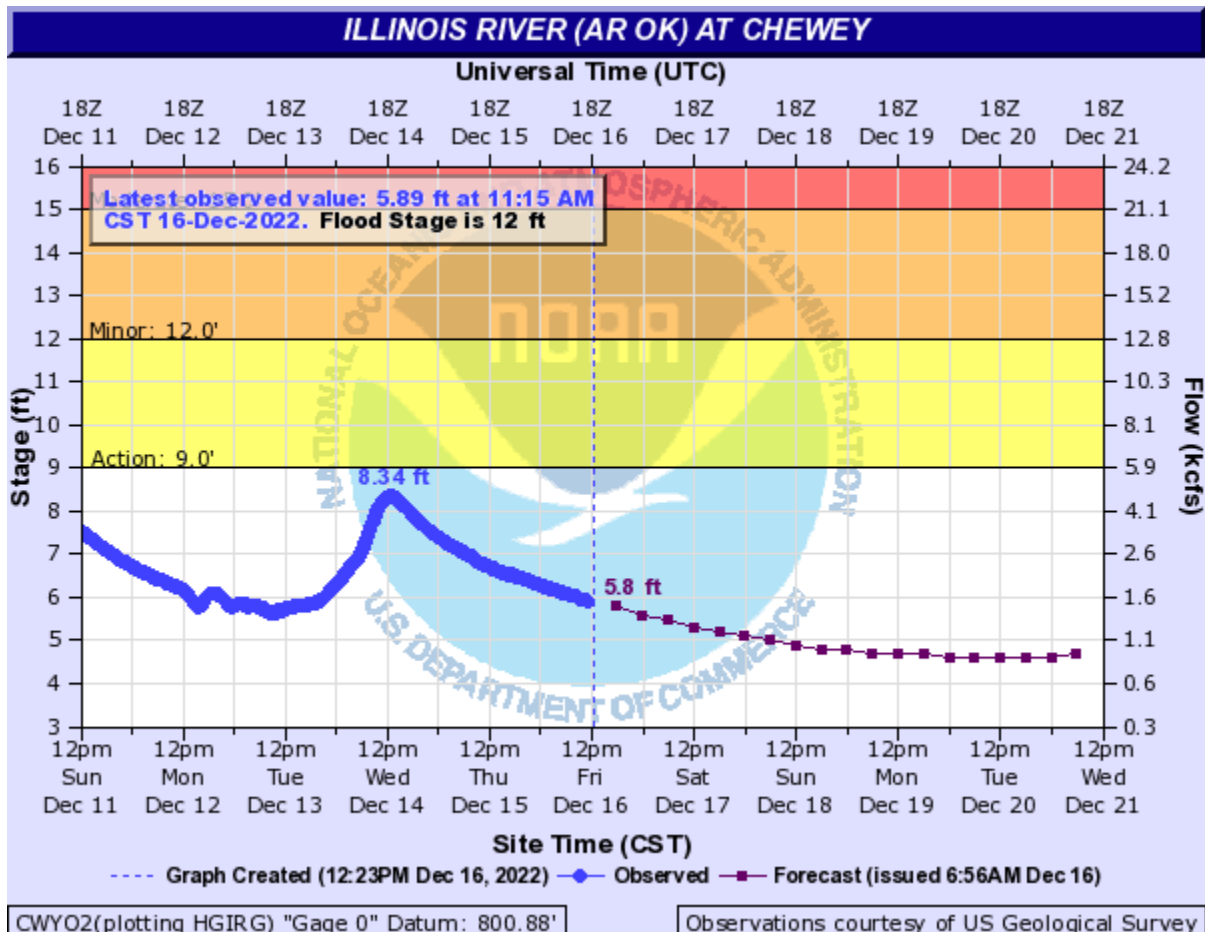
Written by:  
 Nicole McGavock  
 Service Hydrologist  
 WFO Tulsa

**Products issued in December 2022:**

- \*CWYO2 became a daily river forecast point September 7, 2016
- \*MLBA4 and OZGA4 transferred to NWS Tulsa HSA February 5, 2014
- \*Mixed case River Flood products began July 31, 2013

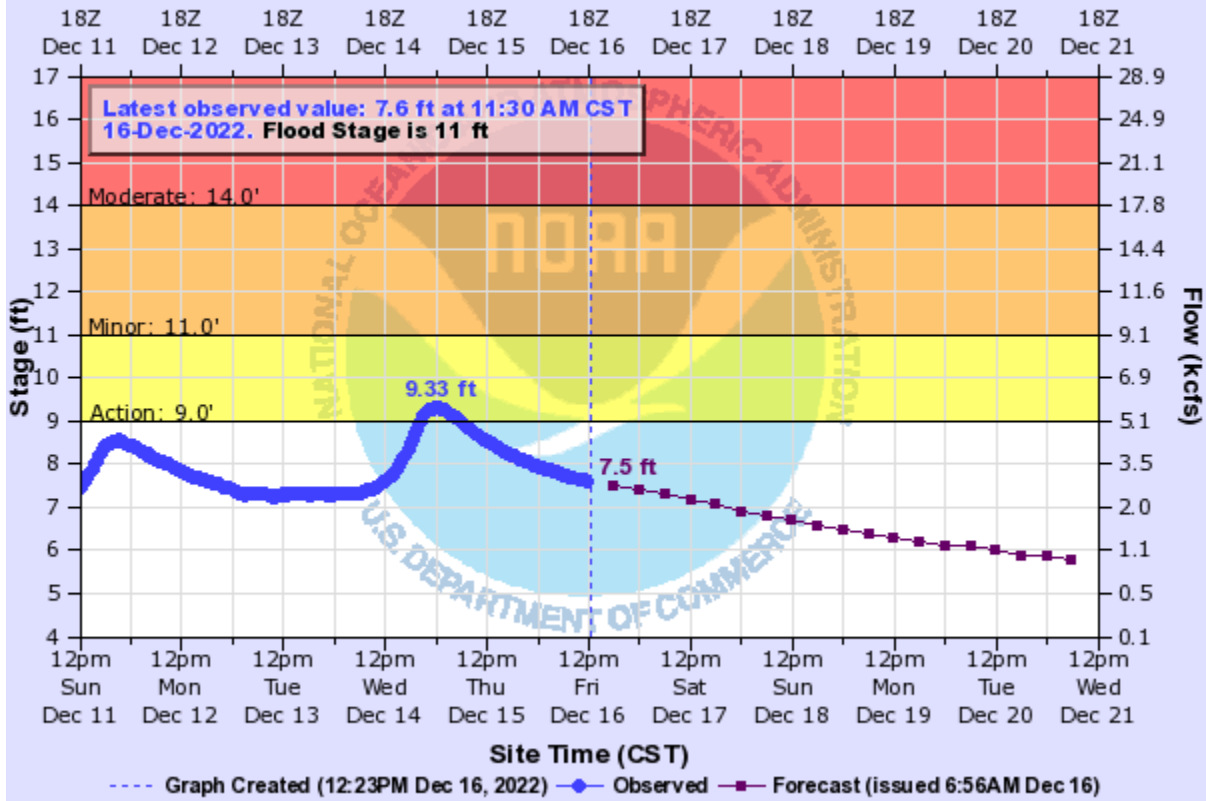
- 0 Flash Flood Warnings (FFW)
- 0 Flash Flood Statements (FFS)
- 0 Flash/Areal Flood Watches (FFA) (0 Watch FFA CON/EXT/EXA/EXB/CAN)
- 2 Urban and Small Stream Advisories (FLS)
- 0 Areal Flood Warnings (FLW)
- 0 Areal Flood Statements (FLS)
- 0 River Flood Warnings (FLW) (includes category increases)
- 0 River Flood Statements (FLS)
- 5 River Flood Advisories (FLS) (10 Advisory FLS CON/EXT/CAN)
- 0 River Flood Watches (FFA) (0 Watch FFA CON/EXT/CAN)
- 0 River Statements (RVS)
- 0 Hydrologic Outlooks (ESF)
- 1 Drought Information Statements (DGT)

**Preliminary Hydrographs:**



# ILLINOIS RIVER (AR OK) NEAR TAHLEQUAH

Universal Time (UTC)



TALO2(plotting HGIRG) "Gage 0" Datum: 664.14'

Observations courtesy of US Geological Survey