

<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>April</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>May 11, 2022</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 the northwest half of the NWS Tulsa HSA received well below normal rainfall in April 2022, the southeast half received above normal rainfall, with minor to moderate flooding occurring along the Illinois River and Poteau River basins this month. A few tornadoes also impacted the area. 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 April 2022 ranged from 0.50" to around 10" northwest to southeast across eastern OK and northwest AR, with much of the area receiving 2"-6". These rainfall totals correspond to 10% to 90% of the normal April rainfall for most locations northwest of an Okmulgee, OK to Grove, OK line, and 110% to around 250% for most locations southeast of that line (Fig. 1b).

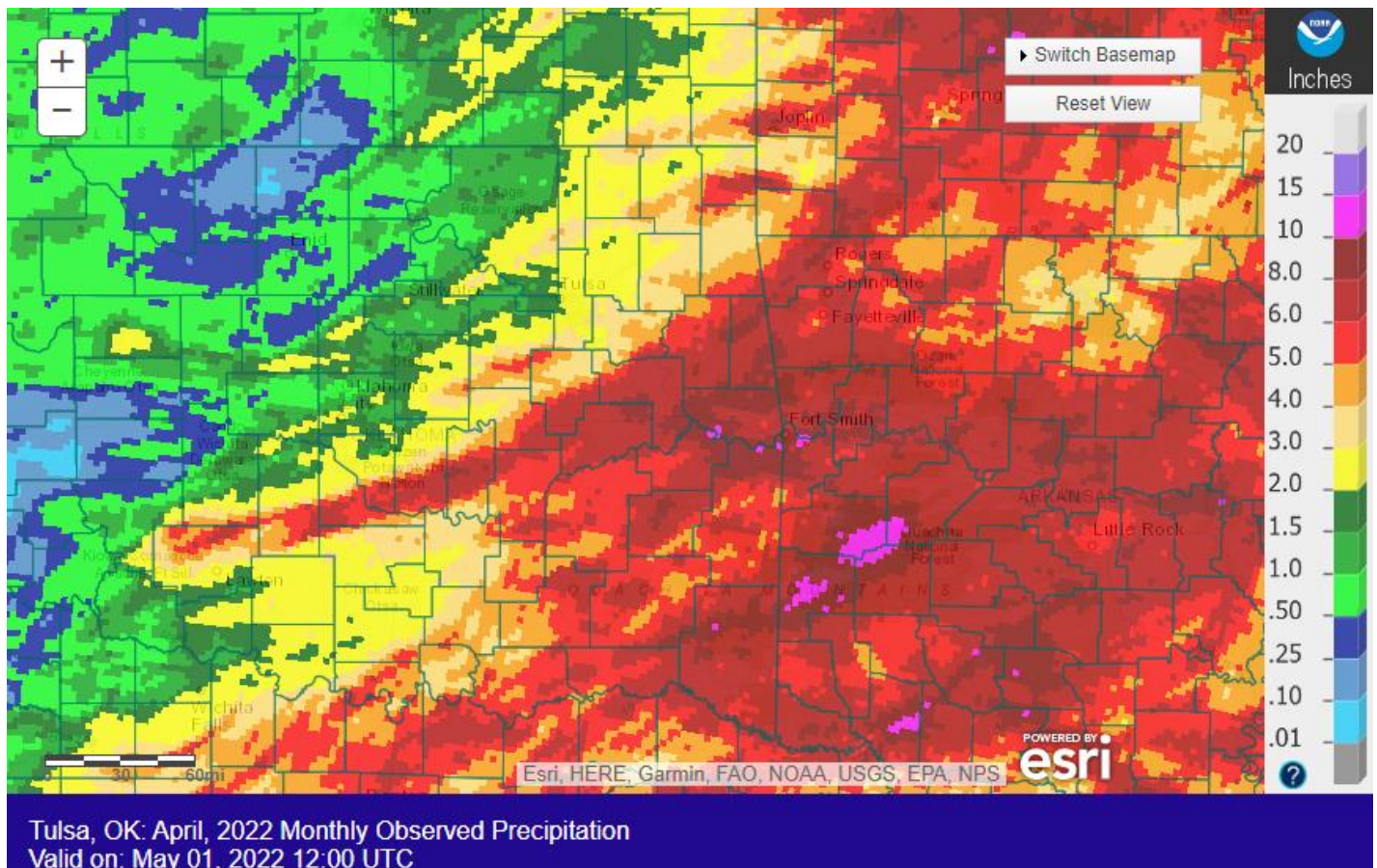


Fig. 1a. Estimated Observed Rainfall for April 2022

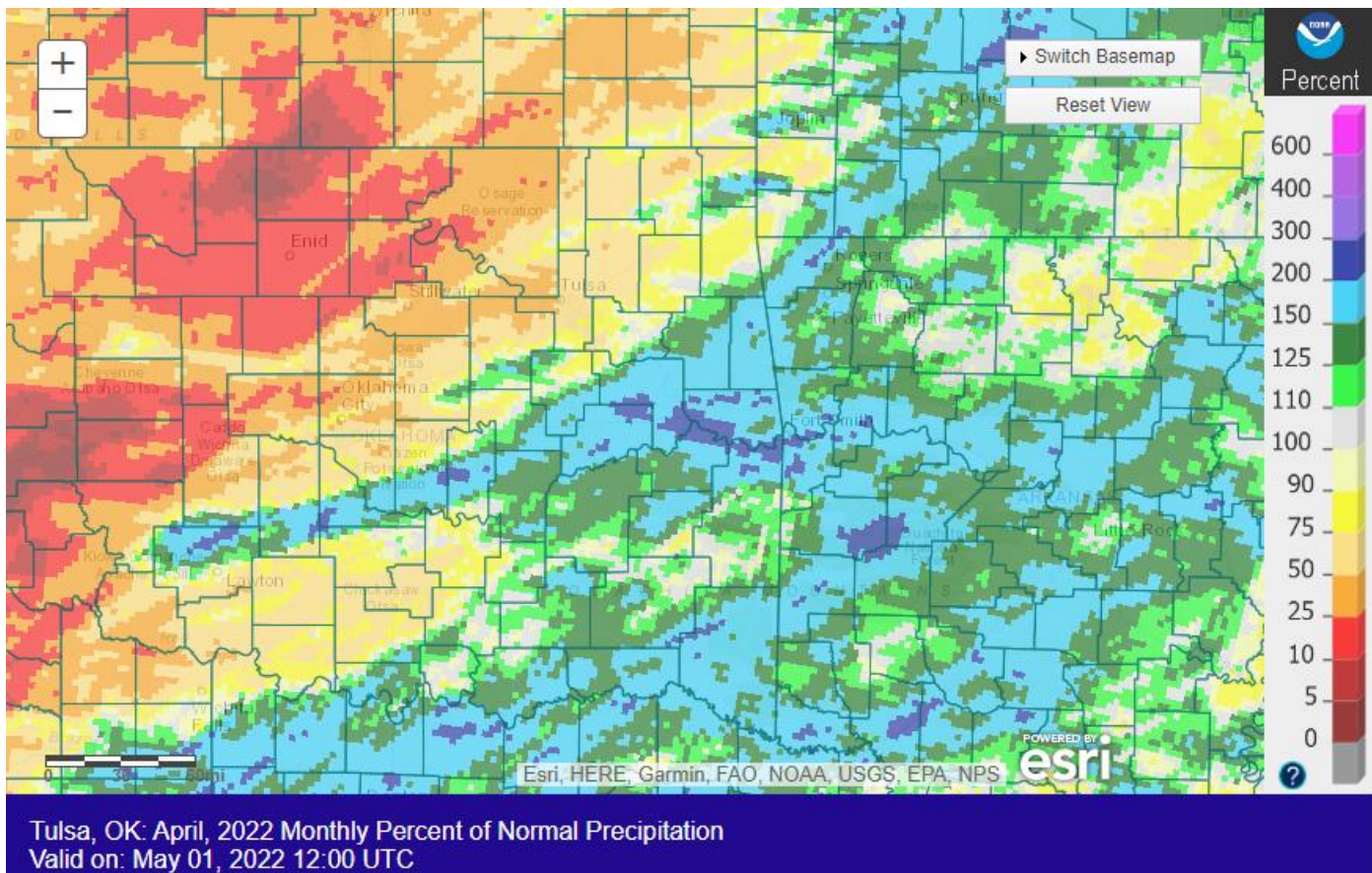


Fig. 1b. Estimated % of Normal Rainfall for April 2022

In Tulsa, OK, April 2022 ranked as the 57<sup>th</sup> warmest April (60.8°F; since records began in 1905) and the 25<sup>th</sup> driest April (2.09"; since records began in 1888). Fort Smith, AR had the 57<sup>th</sup> warmest April (62.2°F; since records began in 1883) and the 5<sup>th</sup> wettest April (9.30"; since records began in 1883). Fayetteville, AR had the 23<sup>rd</sup> warmest (59.2°F, tied 2010) and the 35<sup>th</sup> driest (3.94") April since records began in 1950.

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

Fort Smith, AR (ASOS)	9.30	Winslow 7NE, AR (coop)	8.86	Webbers Falls, OK (meso)	8.81
Westville, OK (meso)	8.72	Sallisaw 1.0SE, OK (coco)	8.72	Sallisaw, OK (meso)	8.41
NW AR Regional Airport (ASOS)	7.98	Van Buren 2.1NNW, AR (coco)	7.89	Vian 5.3ENE, OK (coco)	7.86

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

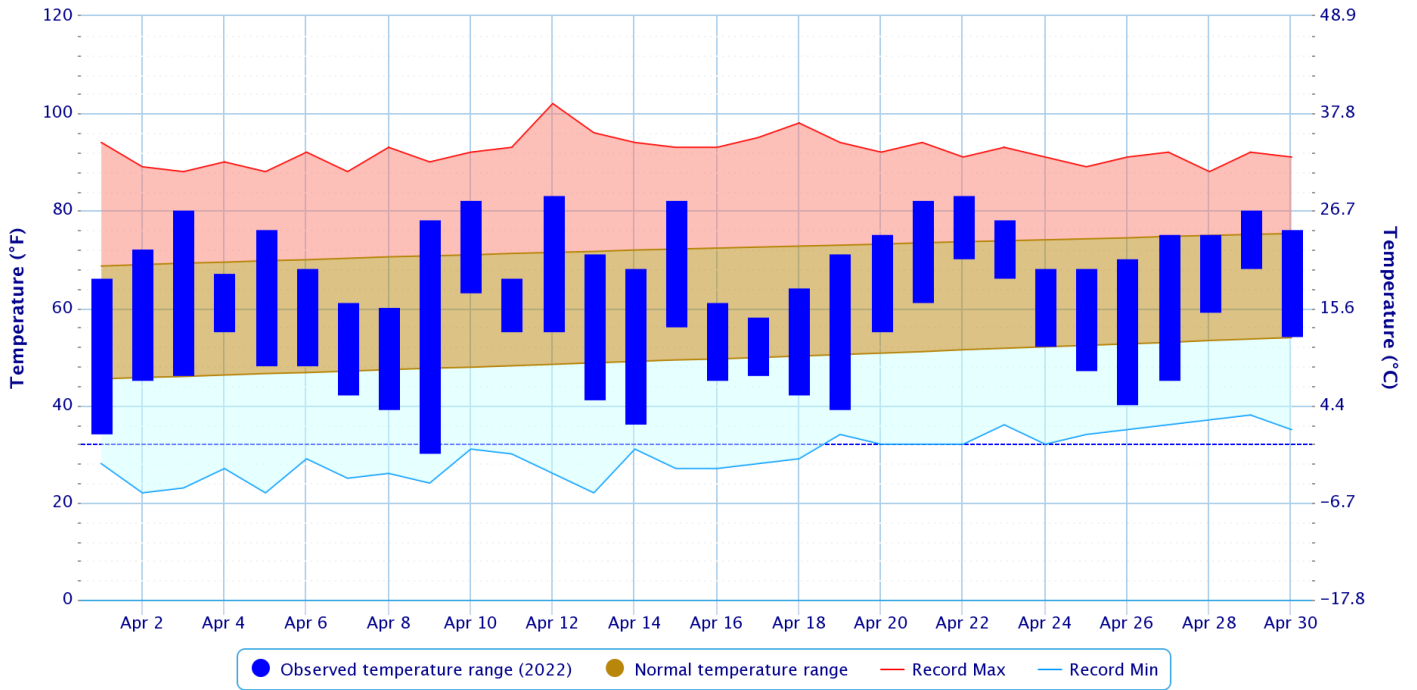
Pawnee, OK (coop)	0.87	Burbank, OK (meso)	1.11	Foraker, OK (meso)	1.35
Oilton, OK (meso)	1.51	Bartlesville, OK (ASOS)	1.83	Jenks Riverside Airt, OK (ASOS)	1.99
Drumright 0.6SW, OK (coco)	2.04	Tulsa, OK (ASOS)	2.09	Tulsa 6.3WSW, OK (coco)	2.11

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

Rank since 1921	April 2022	Spring-to-Date (Mar 1 – Apr 30)	Last 90 Days (Jan 31 – Apr 30)	Year-to-Date (Jan 1 – Apr 30)	Last 180 Days (Nov 2 – Apr 30)	Water Year-to-Date (Oct 1, 2021 – Apr 30, 2022)	Last 365 Days (May 1, 2021 – Apr 30, 2022)
Northeast OK	29 <sup>th</sup> driest	38 <sup>th</sup> driest	38 <sup>th</sup> driest	27 <sup>th</sup> driest	21 <sup>st</sup> driest	39 <sup>th</sup> driest	44 <sup>th</sup> driest
East Central OK	19 <sup>th</sup> wettest	16 <sup>th</sup> wettest	17 <sup>th</sup> wettest	29 <sup>th</sup> wettest	43 <sup>rd</sup> wettest	30 <sup>th</sup> wettest	48 <sup>th</sup> wettest
Southeast OK	25 <sup>th</sup> wettest	25 <sup>th</sup> wettest	25 <sup>th</sup> wettest	39 <sup>th</sup> wettest	36 <sup>th</sup> driest	37 <sup>th</sup> driest	43 <sup>rd</sup> wettest
Statewide	38 <sup>th</sup> driest	38 <sup>th</sup> driest	36 <sup>th</sup> driest	22 <sup>nd</sup> driest	12 <sup>th</sup> driest	23 <sup>rd</sup> driest	25 <sup>th</sup> driest

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

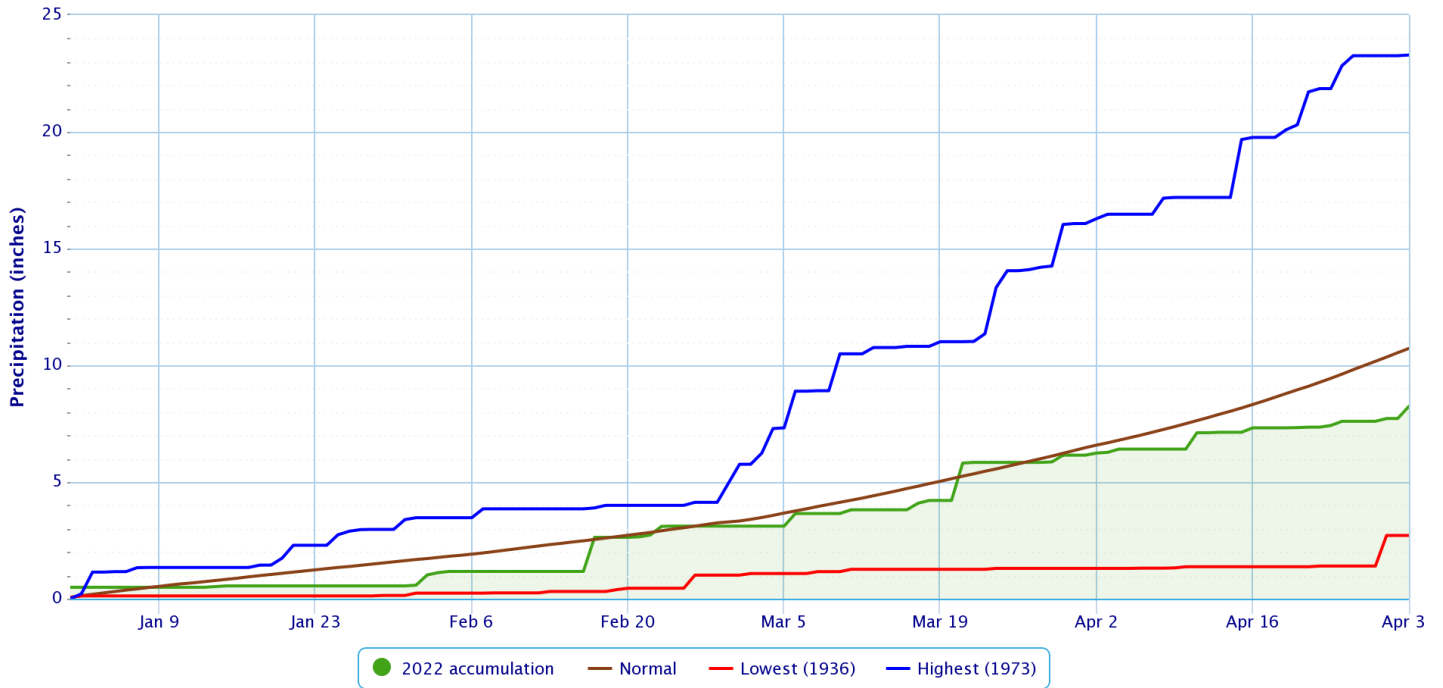
Period of Record – 1905-01-06 to 2022-05-03. Normals period: 1991-2020. Click and drag to zoom chart.



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

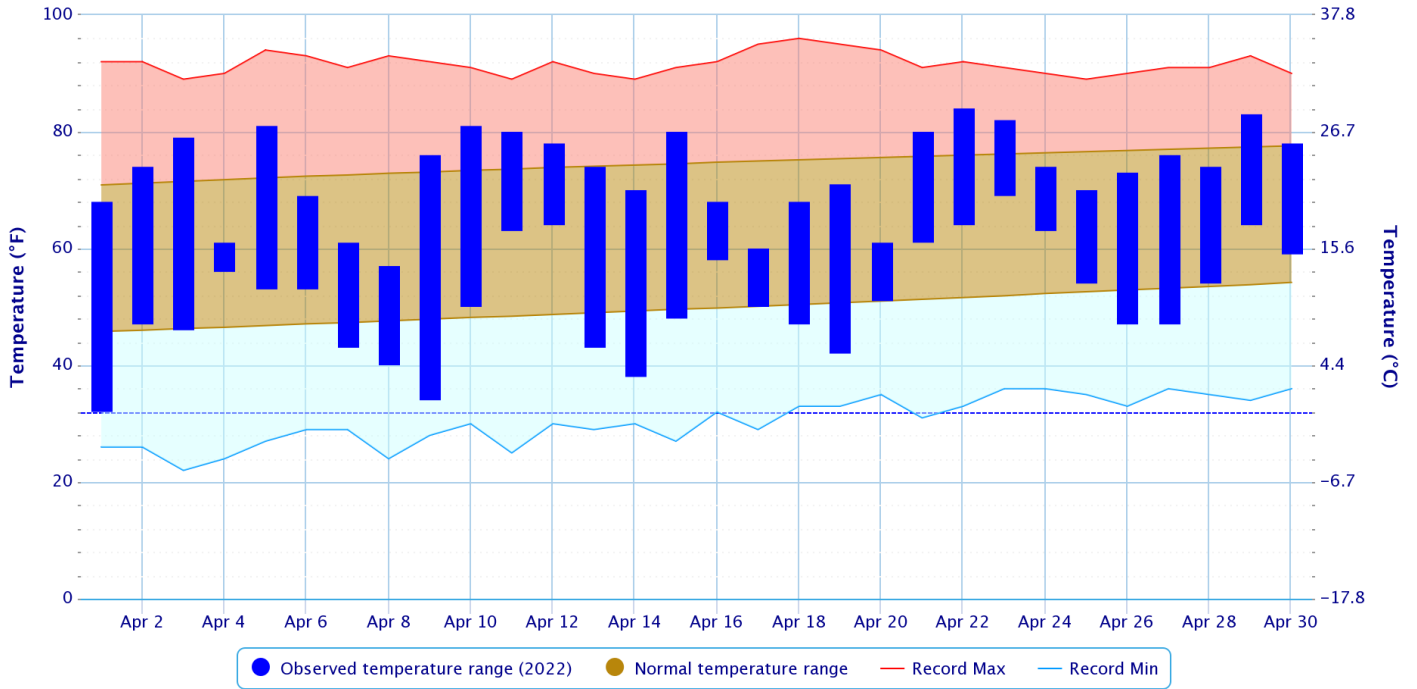
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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

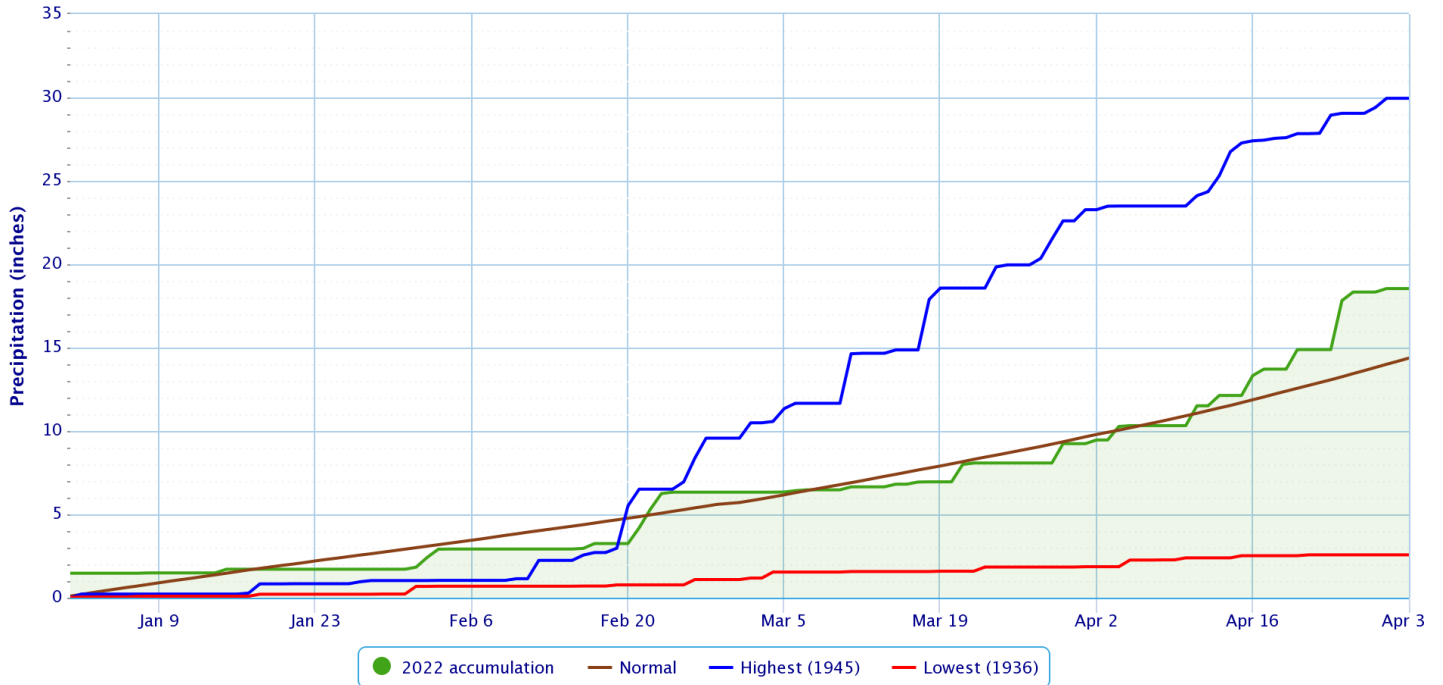
Period of Record - 1882-06-01 to 2022-05-03. Normals period: 1991-2020. Click and drag to zoom chart.



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

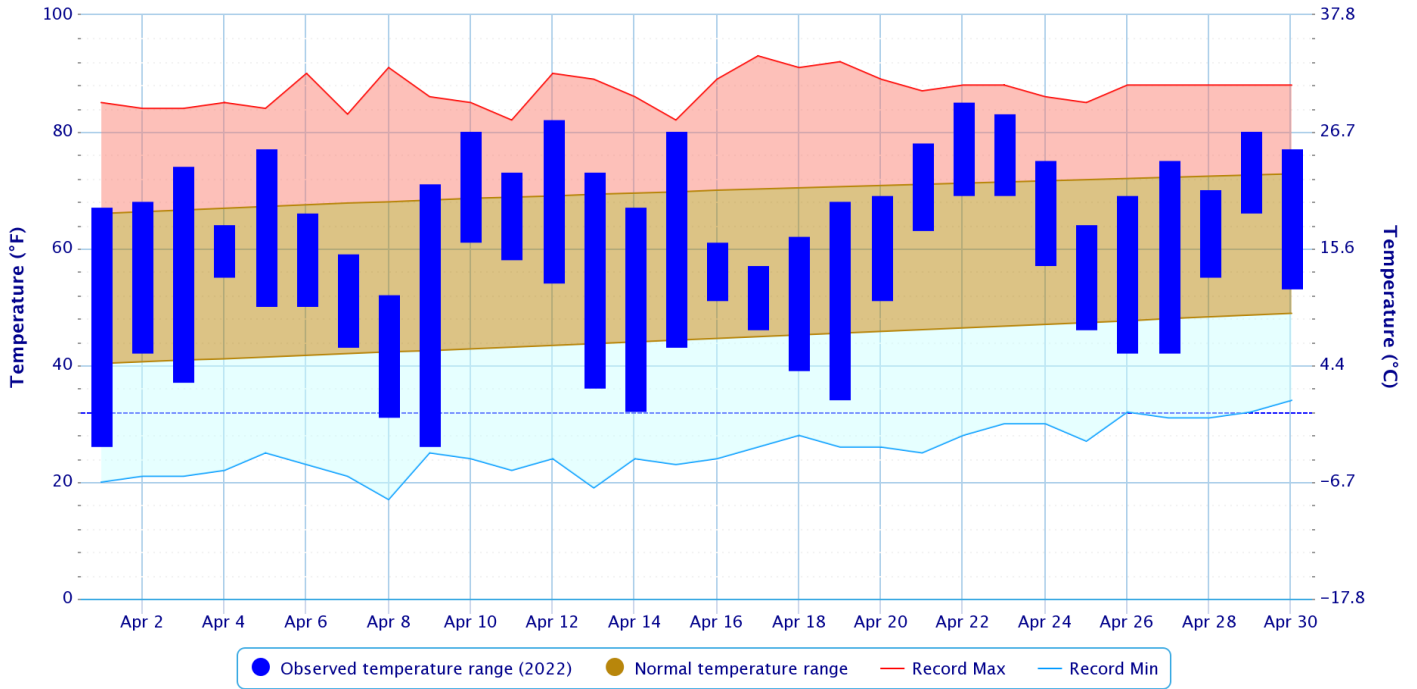
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



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

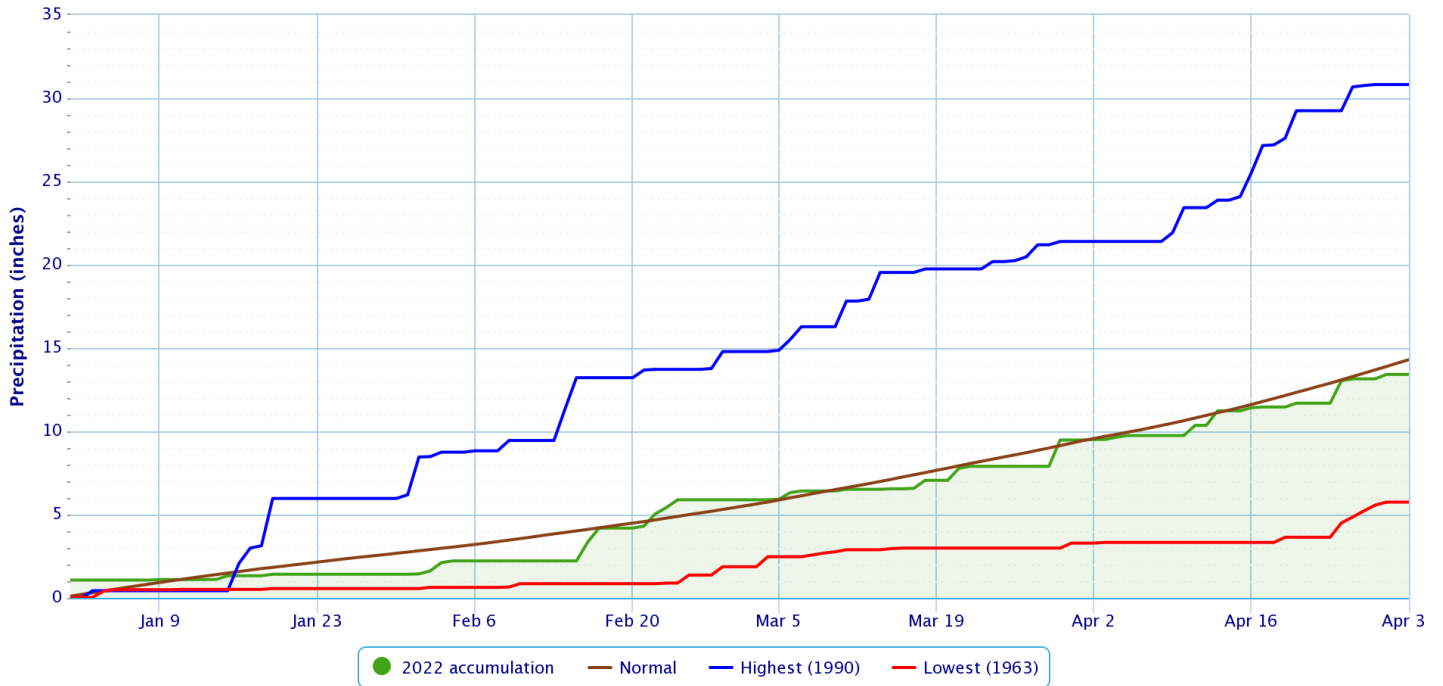
Period of Record – 1949-07-14 to 2022-05-03. Normals period: 1991-2020. Click and drag to zoom chart.



Powered by ACIS

### Accumulated Precipitation – FAYETTEVILLE DRAKE FIELD, AR

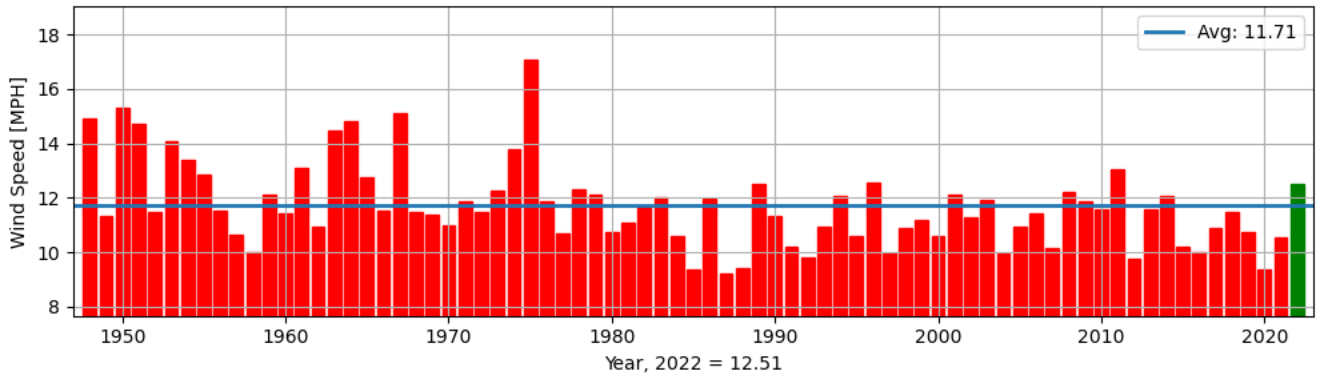
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Powered by ACIS



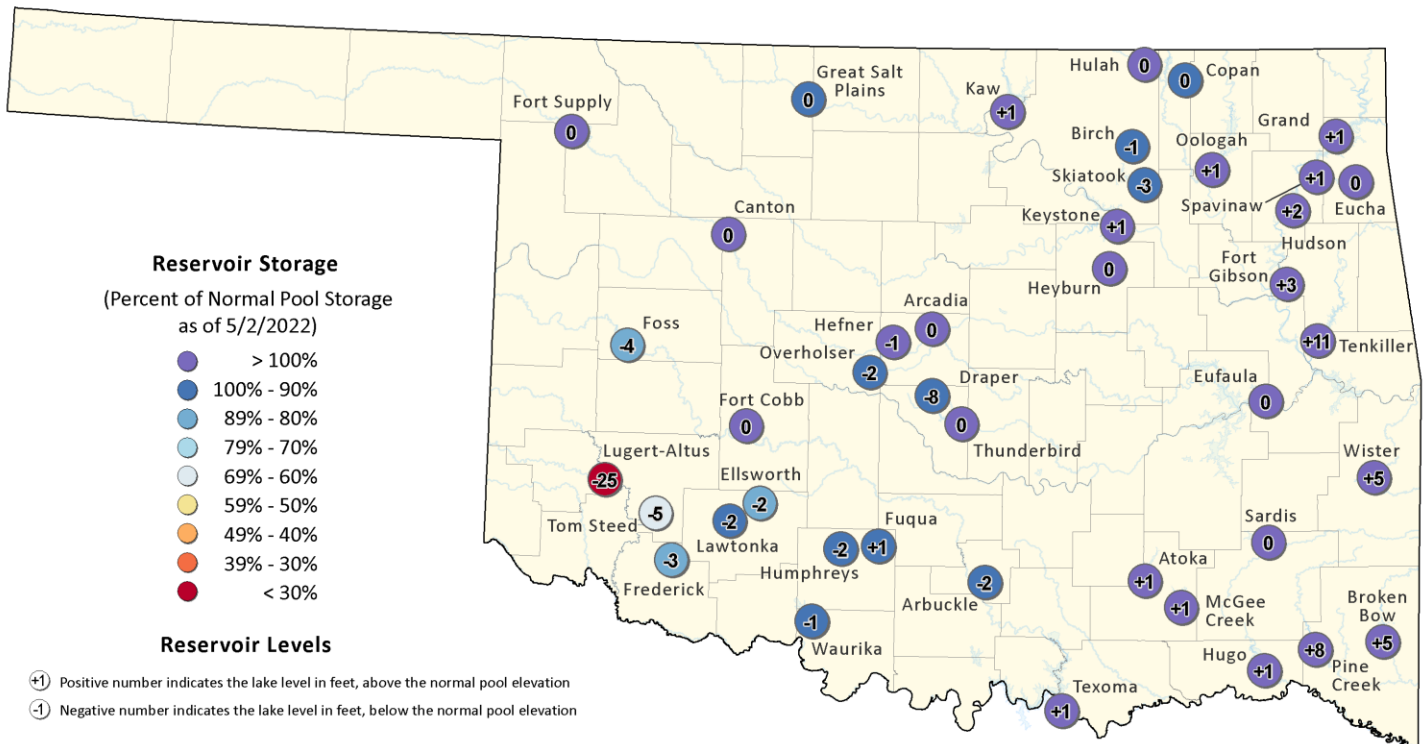
[TUL] TULSA INTL ARPT(AW)  
Average Wind Speed from 01 Apr through 30 Apr



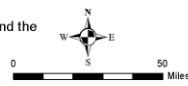
While April 2022 was quite windy, the average April wind speed in 2022 was not unusual based on the period of record at Tulsa, OK. However, it has been several years since the region has seen above average windy conditions.

**Reservoirs**

**Oklahoma Surface Water Resources**  
Reservoir Levels and Storage as of 5/2/2022



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 ([http://www.swt-wc.usace.army.mil/Daily\\_Morning\\_Reservoir\\_Report.pdf](http://www.swt-wc.usace.army.mil/Daily_Morning_Reservoir_Report.pdf)), and the U.S. Geological Survey ([http://waterdata.usgs.gov/ok/nwis/current/?type=lake&group\\_key=basin\\_cd](http://waterdata.usgs.gov/ok/nwis/current/?type=lake&group_key=basin_cd)) For more information please visit the OWRB's website at: (<http://www.owrb.ok.gov>)



According to the USACE, several lakes in the HSA were above 3% of top of their conservation pools as of 5/01/2022: Beaver Lake 72%, Lake Tenkiller 27%, Wister Lake 12%, Ft. Gibson Lake 5%, Sardis Lake 5%, and Lake Eufaula 4%. A couple of lakes were more than 3% below the top of their conservation pools: Birch Lake 91% and Skiatook Lake 92%.

# Drought

According to the [U.S. Drought Monitor](#) (USDM) from May 3, 2022 (Figs. 2, 3), Extreme (D3) Drought conditions were occurring across a portion of Osage and Pawnee Counties in eastern OK. Severe (D2) Drought conditions were present over parts of Osage, Pawnee, and far northwest Washington Counties in eastern OK. Moderate (D1) Drought conditions were occurring across portions of Osage, Pawnee, Washington, Nowata, Creek, Rogers, and Tulsa Counties in eastern OK. Abnormally Dry (but not in drought) (D0) conditions were present over portions of Osage, Washington, Nowata, Craig, Mayes, Rogers, Wagoner, Tulsa, Creek, Okfuskee, McIntosh, Pittsburg, Pushmataha, and Choctaw Counties in eastern OK. No drought or abnormally dry conditions were occurring in northwest AR.

## U.S. Drought Monitor Oklahoma

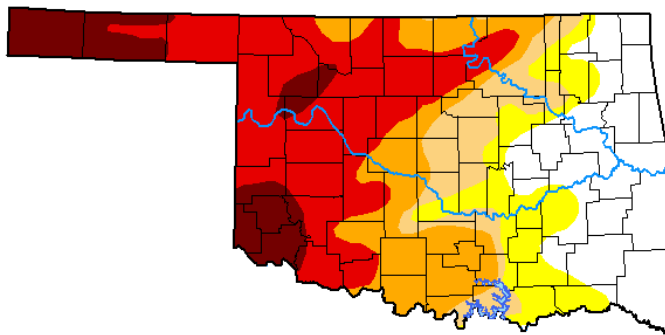
**May 3, 2022**

(Released Thursday, May. 5, 2022)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	22.77	77.23	65.34	55.29	39.38	10.40
<b>Last Week</b> <small>04-26-2022</small>	22.73	77.27	65.40	55.30	39.39	11.03
<b>3 Months Ago</b> <small>02-01-2022</small>	3.91	96.09	88.62	77.66	49.17	2.90
<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>09-28-2021</small>	6.45	93.55	73.23	23.72	2.65	0.00
<b>One Year Ago</b> <small>05-04-2021</small>	57.13	42.87	17.20	3.02	0.08	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:

David Simeral  
Western Regional Climate Center

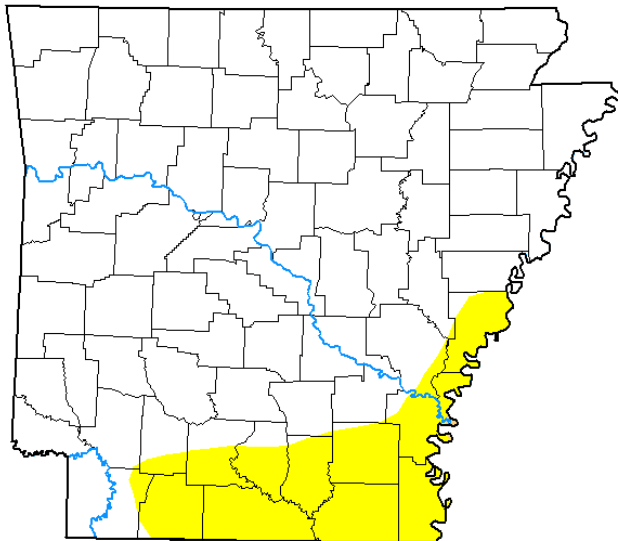


[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

Fig. 2. Drought Monitor for Oklahoma

# U.S. Drought Monitor Arkansas

**May 3, 2022**  
(Released Thursday, May 5, 2022)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	85.85	14.15	0.04	0.00	0.00	0.00
Last Week 04-26-2022	82.98	17.02	5.96	0.00	0.00	0.00
3 Months Ago 02-01-2022	57.18	42.82	29.99	19.32	3.78	0.00
Start of Calendar Year 01-04-2022	39.91	60.09	28.99	14.24	0.41	0.00
Start of Water Year 09-28-2021	51.41	48.59	5.17	0.00	0.00	0.00
One Year Ago 05-04-2021	100.00	0.00	0.00	0.00	0.00	0.00

**Intensity:**  
 None (White)      D2 Severe Drought (Orange)  
 D0 Abnormally Dry (Yellow)      D3 Extreme Drought (Red)  
 D1 Moderate Drought (Light Orange)      D4 Exceptional Drought (Dark Red)

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:**  
David Simeral  
Western Regional Climate Center



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

Fig. 3. Drought Monitor for Arkansas

## Outlooks

The [Climate Prediction Center](#) (CPC) outlook for May 2022 (issued April 30, 2022) indicates an enhanced chance for above normal temperatures and above median precipitation across all of eastern OK and northwest AR. This outlook was largely based on dynamical model output and, to a much lesser extent, La Niña impacts.

For the 3-month period May-June 2022, CPC is forecasting a greatly enhanced chance for above normal temperatures across all of eastern OK and northwest AR (outlook issued April 21, 2022). This outlook also indicates an enhanced chance for below median precipitation northwest of I-44 and an equal chance for above, near, and below median precipitation across the remainder of eastern OK and northwest AR. This outlook is based on long-term trends, La Niña impacts, current soil moisture, 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. La Niña conditions are expected to continue through summer 2022 (59% chance) and there is a 50%-55% chance of La Niña continuing in the fall. 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)

Scattered showers and thunderstorms began to affect eastern OK and northwest AR after midnight on the 4<sup>th</sup> as a mid-level wave within strong zonal flow aloft moved across the region. A cold front slowly moved into northeast OK during the early morning hours as well and became stalled near I-40 by afternoon. After a mid-day lull with just widely scattered showers across the area, showers and thunderstorms increased in coverage through the afternoon and evening hours as a second, stronger mid-level trough impacted the area. With the zonal flow nearly parallel with the stalled front, training of storms occurred along and south of the I-40 corridor through the afternoon and evening. The rain finally shifted southeast of the area shortly after midnight on the 5<sup>th</sup>. Rainfall totals ranged from around 0.25" to 2.5" (Figs. 4-6).



During the late evening of the 10<sup>th</sup>, thunderstorms developed across northeast OK along a cold front that stretched from northern Missouri, through far southeast KS, and into northeast OK. These storms moved east through the overnight and early morning hours of the 11<sup>th</sup>, affecting locations generally along and north of Highway 412 in northeast OK and northwest AR. Rainfall totals were generally around 0.50" to around 3" (Figs. 7, 8). The front continued to move slowly south during the day before becoming quasi-stationary near I-40 by evening. Widely scattered convection continued as the front moved, with isolated supercells affecting southeast OK and west central AR through the evening. Two EF-1 tornadoes occurred in west central AR (see <https://arcg.is/1eT4580> for details). In those places that had shower and thunderstorm activity, rainfall totals were around 0.50" to near 3" (Fig. 9).

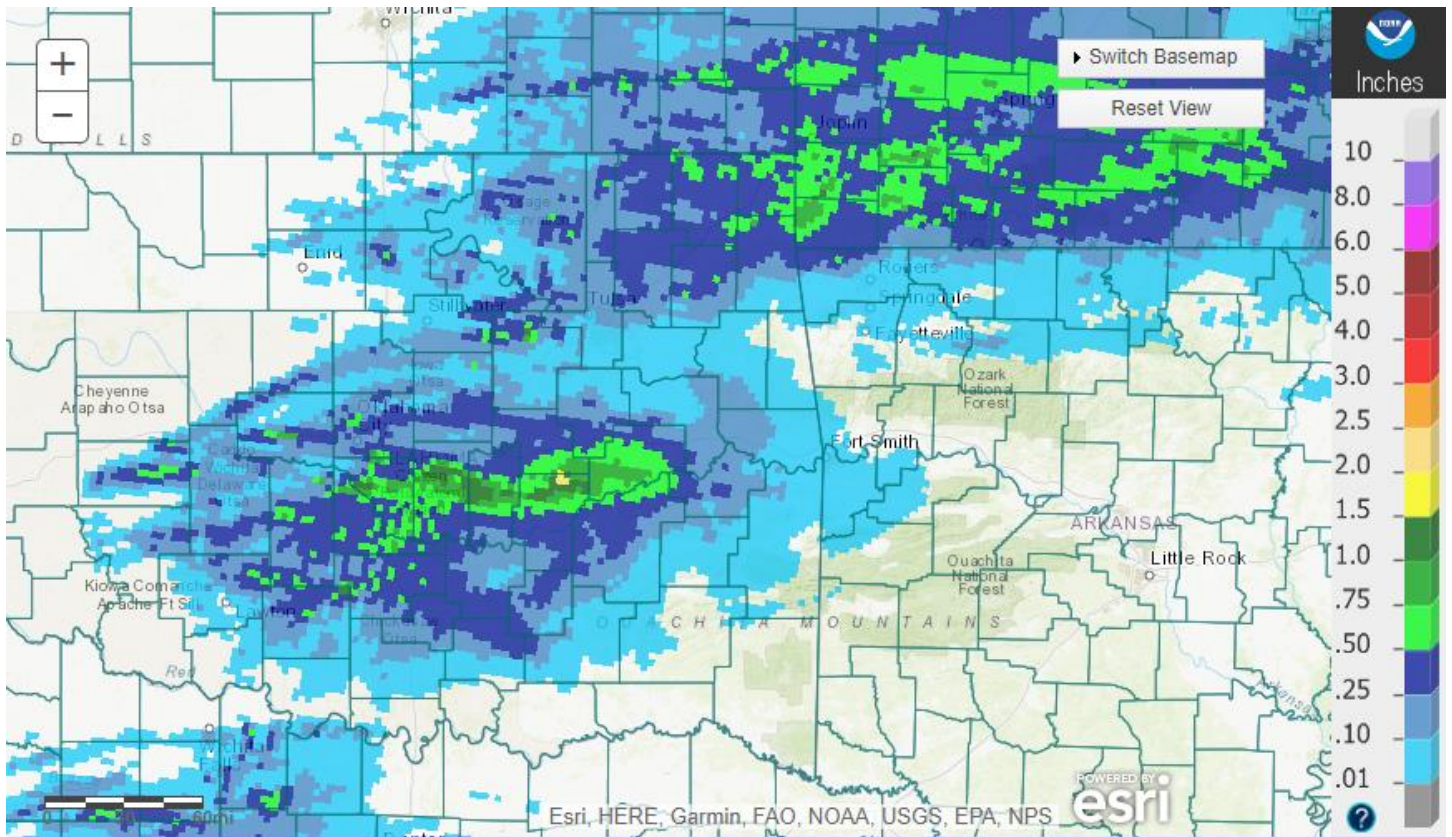
A cold front entered northeast OK during the early morning hours of the 13<sup>th</sup>, and moved southeast through the day. Just before sunrise, a line of showers and thunderstorms began to develop near the front from near Okemah to near Grove. This line of storms slowly moved to the east before exiting the region shortly after noon. The most intense storms impacted northwest AR and the adjacent portions of northeast and east central OK, with an EF-1 tornado occurring near Stilwell, OK (see <https://arcg.is/1eT4580> for details). Rainfall totals were 0.25"-3.5" (Figs. 10, 11). The heaviest rainfall was over the Illinois River basin, resulting in minor flooding (see E3 and preliminary hydrographs at the end of this report).

A couple of thunderstorms developed over Creek County near a dryline during the late evening of the 15<sup>th</sup>. Meanwhile a cold front was also moving slowly south through the area. By midnight of the 16<sup>th</sup>, the cold front provided a deeper zone of lift and combined with an intensifying low-level jet, caused additional strong to severe thunderstorm development within the warm sector across east central OK and west central AR. More scattered convection occurred across northeast and east central OK and northwest and west central AR from just before dawn through noon. All of this convection was efficient at producing rain due to precipitable water (PWAT) values of around 1.5". At times, rain rates were 1"-2" per hour. The highest rainfall totals of 1.5"-3" occurred over east central OK, with 0.50"-2" elsewhere (Figs. 12, 13).

A small area of showers and thunderstorms developed over Craig and Ottawa Counties in far northeast OK during the early morning hours of the 21<sup>st</sup> as warm air advection interacted with a warm front. By sunrise, this activity had lifted north out of OK, but not before producing some localized heavy rainfall of 0.50'-4" (Fig. 14).

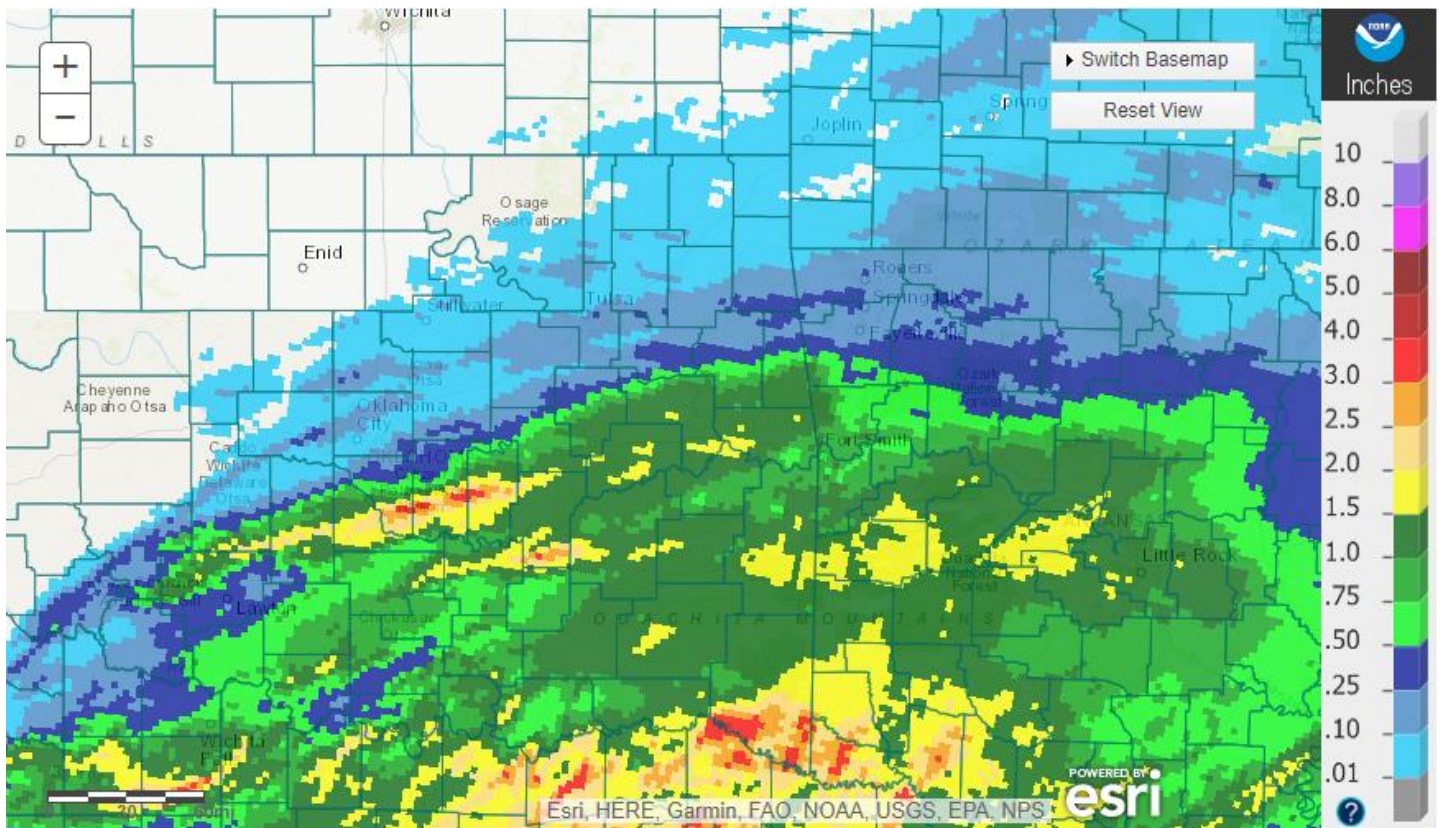
A line of elevated storms developed shortly after sunrise on the 23<sup>rd</sup> northwest of I-44 in northeast OK in response to a narrow axis of warm air advection. This activity quickly moved east, remaining north of I-44 before dissipating by noon. Convection then reinitiated mid-afternoon north of I-44, again quickly moved east, and dissipated a couple of hours later. By mid-evening, stronger surface-based convection fired along a dry line from southwest to north central OK. Several of these storms moved east into eastern OK, becoming more widespread under the influence of the low-level jet. This activity mainly affecting locations between the I-44 and I-40 corridors through the overnight hours. By sunrise on the 24<sup>th</sup>, this activity became more widely scattered as it shifted to the southeast, lingering across the region through noon. As of 7am on the 24<sup>th</sup>, rainfall totals ranged from around 0.25" to 2.5" (Fig. 15).

Starting mid-afternoon of the 24<sup>th</sup>, showers and thunderstorms increased from northwest to southeast as a cold front made its way slowly southward across the area. Precipitation initially was scattered, but became widespread by early evening as a vorticity maximum interacted with the front. By mid-evening, widespread showers and thunderstorms were impacting eastern OK and northwest AR southeast of I-44. As the frontal boundary became more parallel to the upper-level flow, its southward progress slowed and training of storms occurred. Additionally, well above normal PWAT values of 1.5" made these storms efficient rain producers. During the overnight hours, the main corridor of rain slowly shifted to the southeast, and finally moved out the region by dawn on the 25<sup>th</sup>. Rainfall totals along and south of I-44 ranged from 0.10" to 5", with a large area from south central OK through northwest AR receiving 1.5"-4" of rain (Fig. 16). This rainfall, combined with the previous day's rain (Fig. 17), resulted in rises along area creeks and rivers. Moderate flooding occurred along the Poteau River near Panama and minor flooding occurred along the Illinois River (see E3 and preliminary hydrographs at the end of this report).



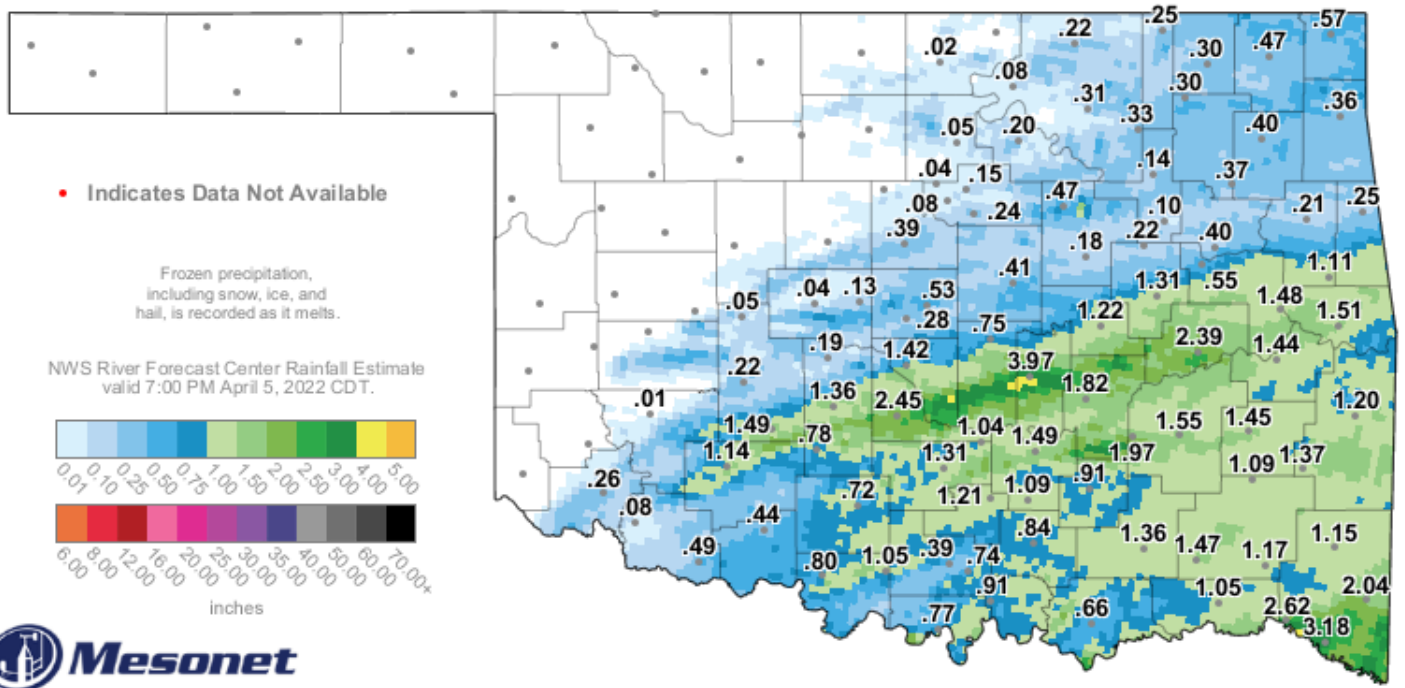
Tulsa, OK: April 04, 2022 1-Day Observed Precipitation  
Valid on: April 04, 2022 12:00 UTC

Fig. 4. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/04/2022.



Tulsa, OK: April 05, 2022 1-Day Observed Precipitation  
Valid on: April 05, 2022 12:00 UTC

Fig. 5. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/05/2022.

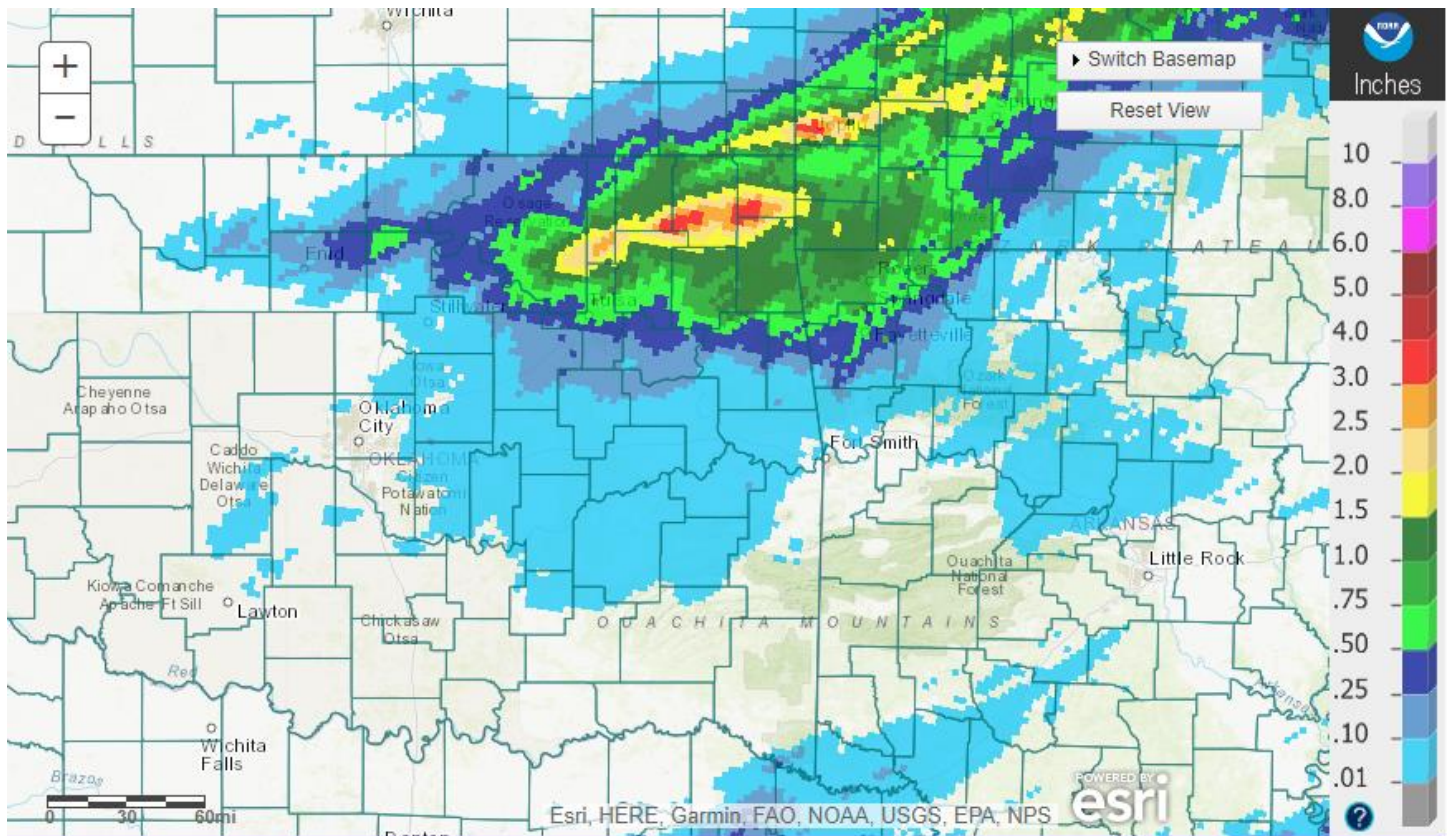


### 2-Day Rainfall Accumulation (inches)

8:40 PM April 5, 2022 CDT

Created 8:46:03 PM April 5, 2022 CDT. © Copyright 2022

Fig. 6. OK Mesonet (values) and NWS RFC rainfall estimate (image) 48-hour rainfall ending at 08:40 pm CDT 4/05/2022.



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

Fig. 7. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/11/2022.

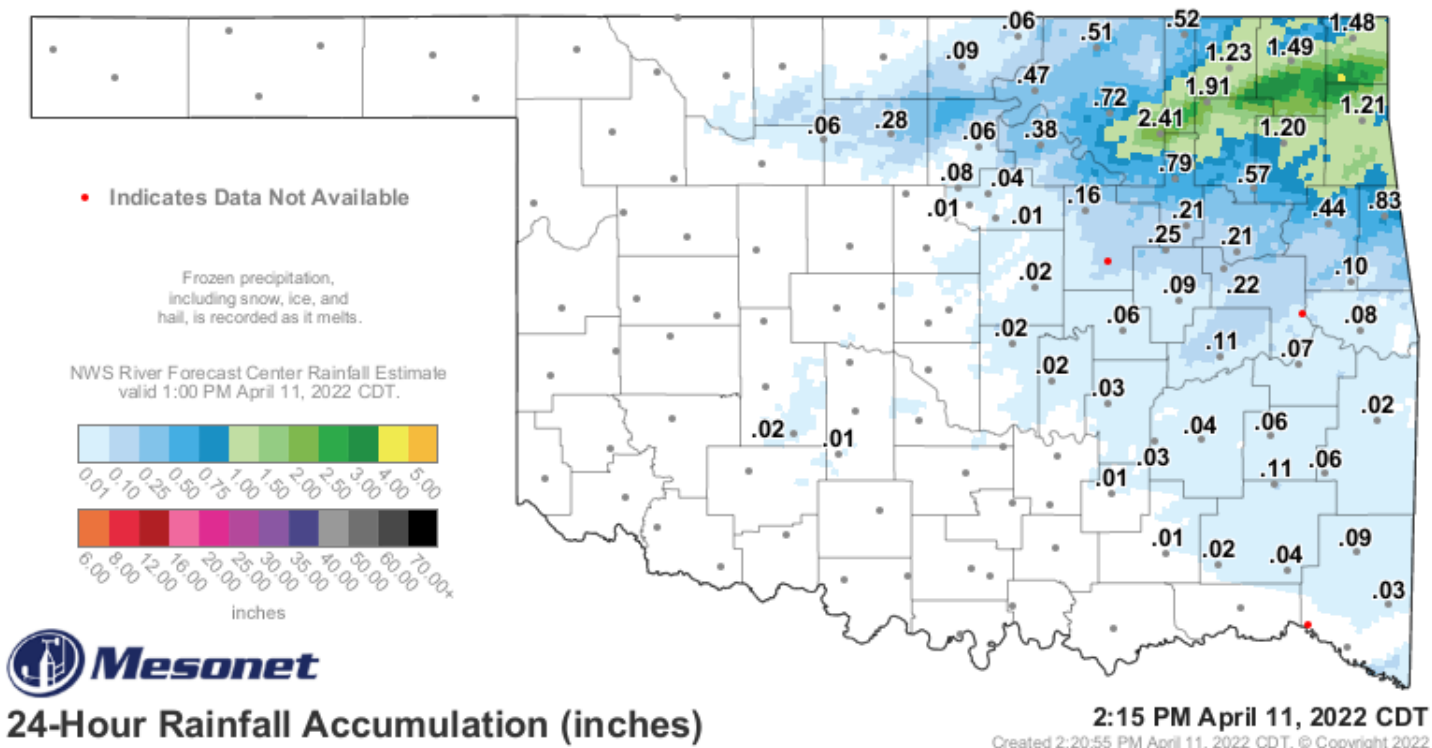


Fig. 8. OK Mesonet (values) and NWS RFC rainfall estimate (image) 24-hour rainfall ending at 02:15 pm CDT 4/11/2022.

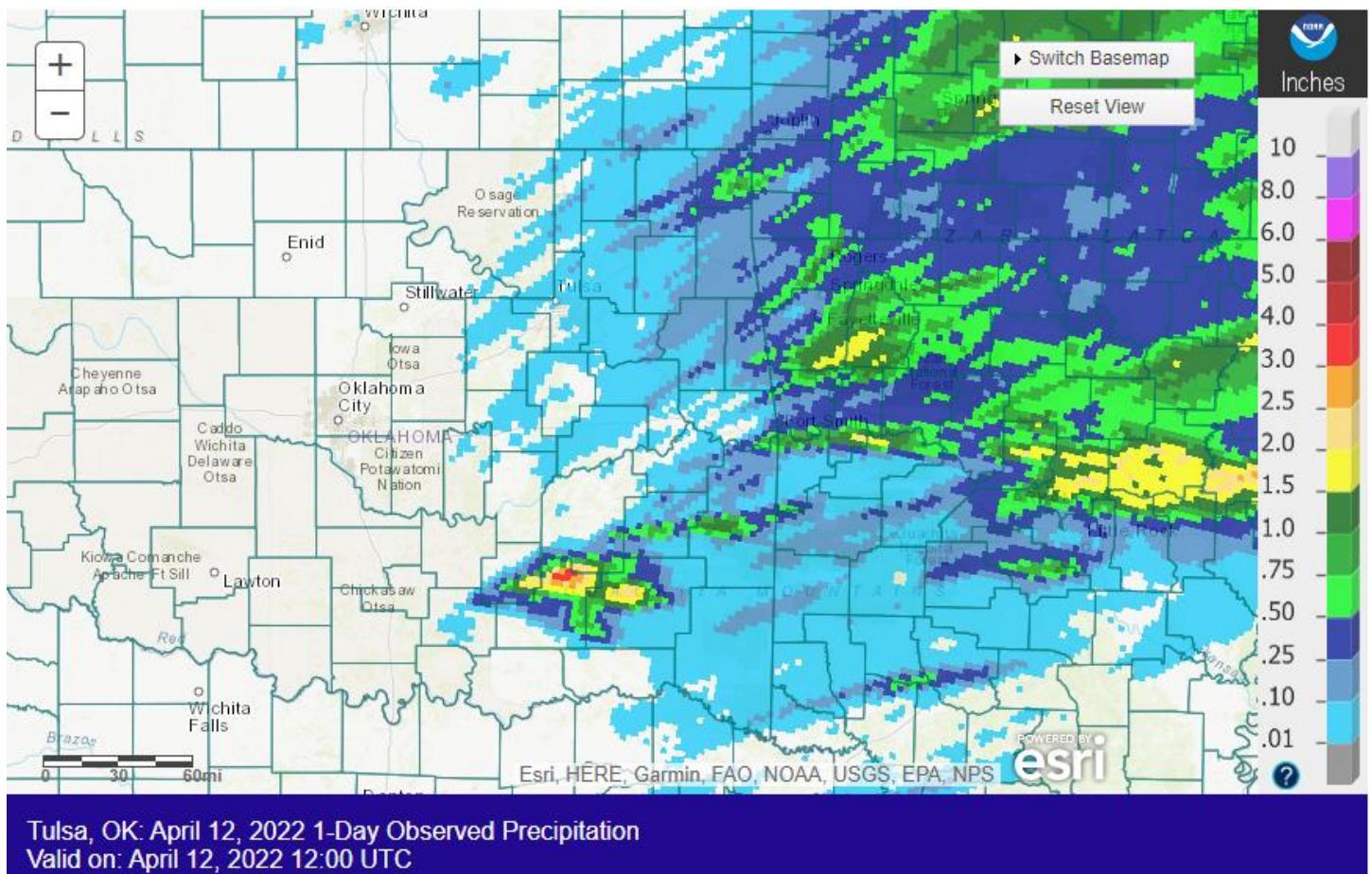
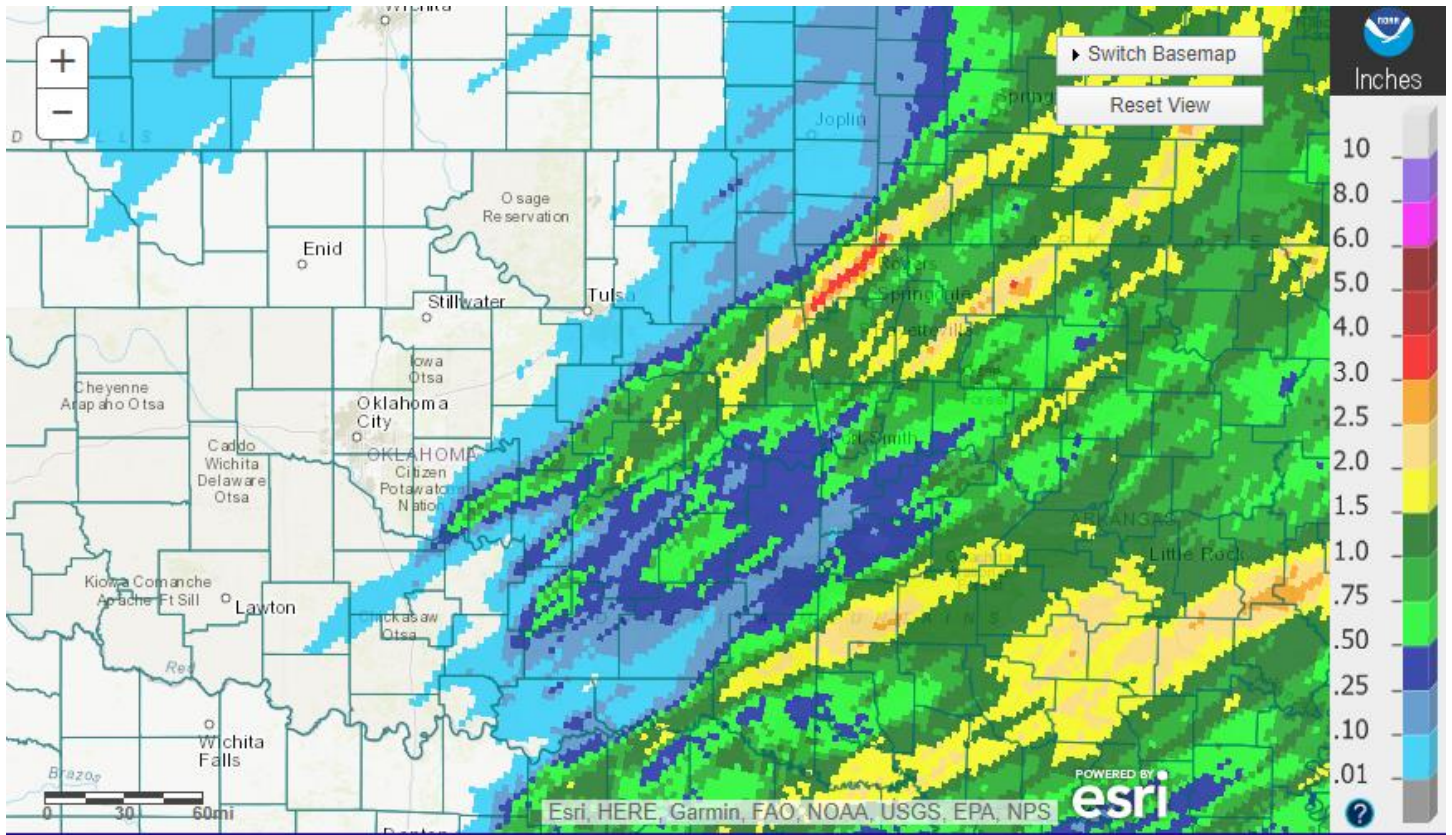


Fig. 9. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/12/2022.



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

Fig. 10. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/14/2022.

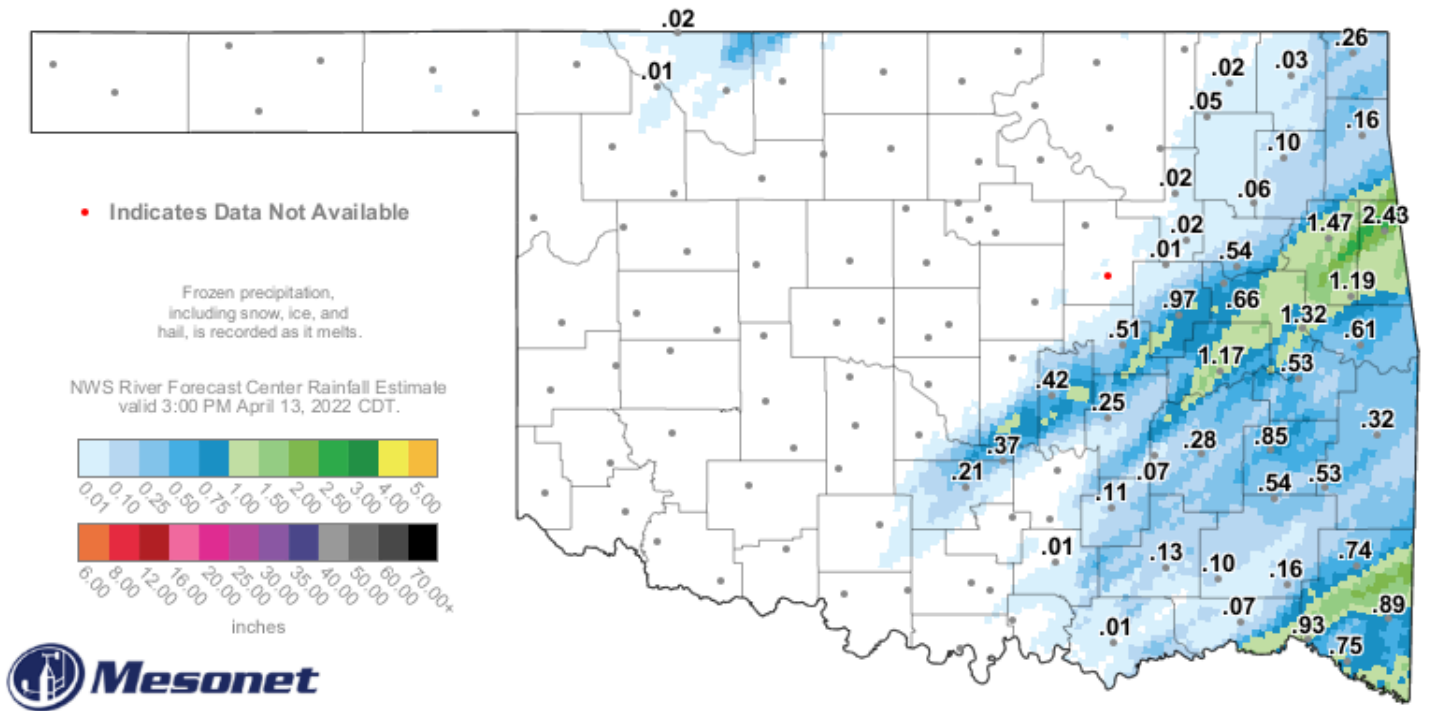
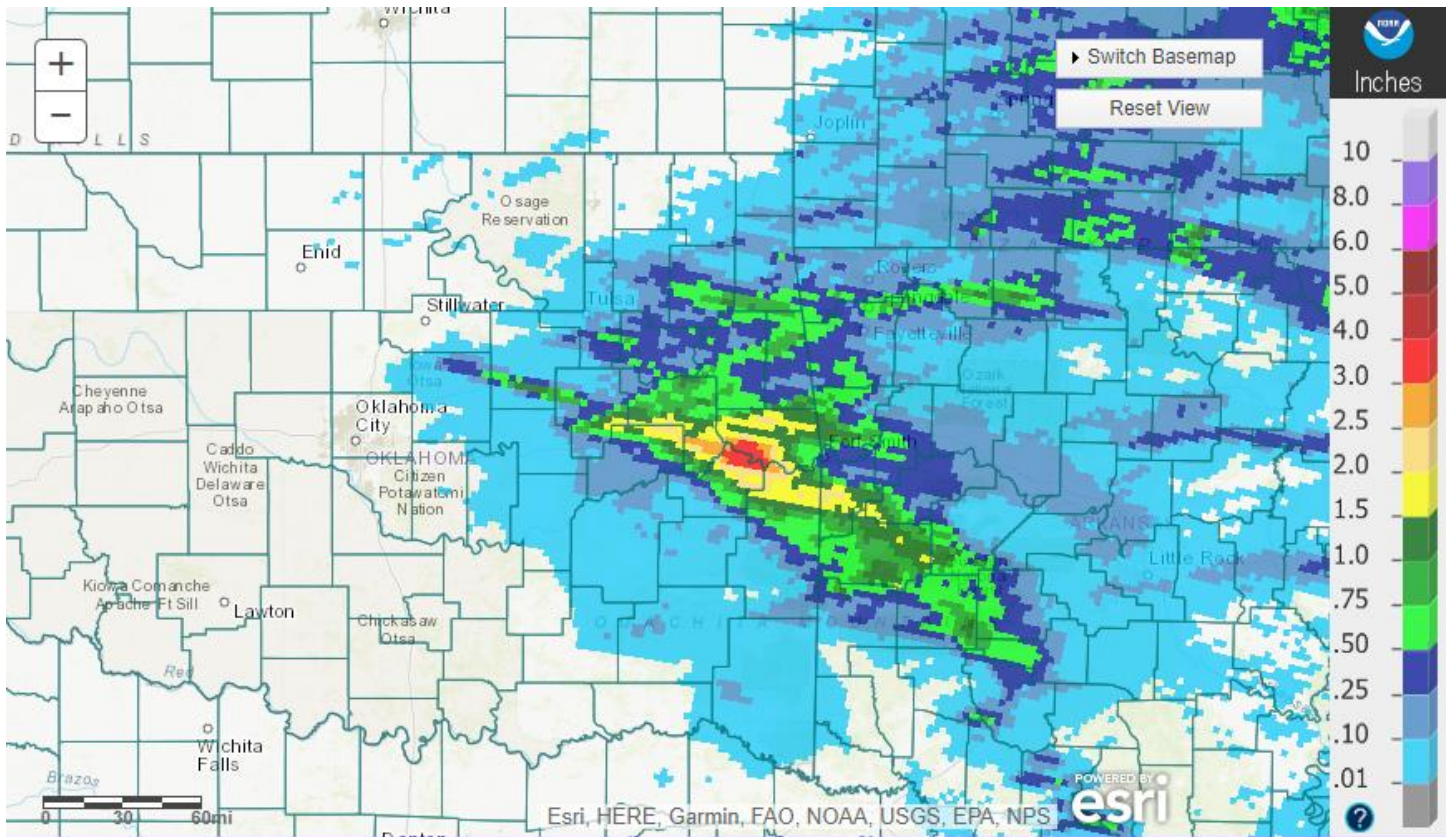
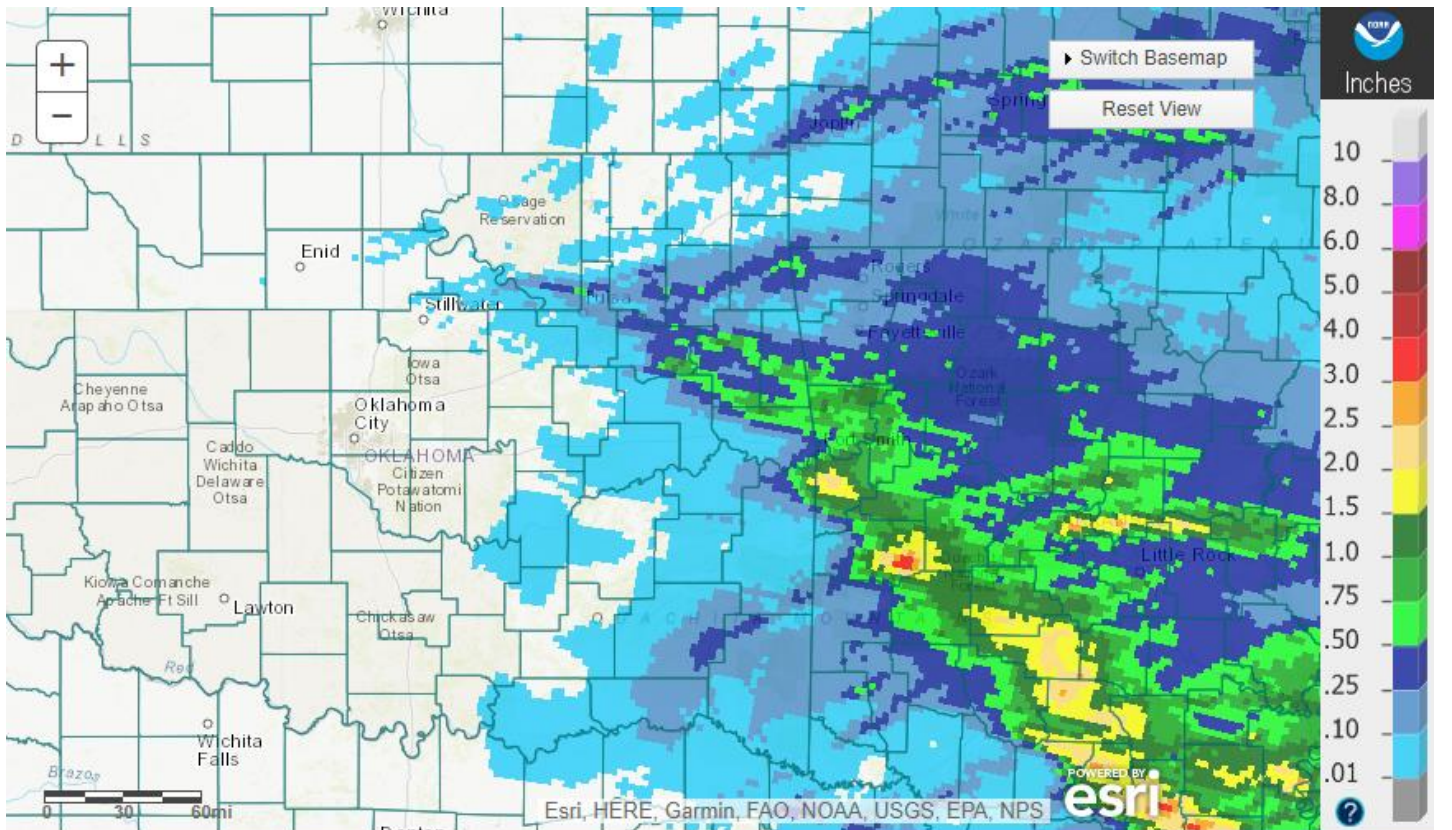


Fig. 11. OK Mesonet (values) and NWS RFC rainfall estimate (image) 24-hour rainfall ending at 04:15 pm CDT 4/13/2022



Tulsa, OK: April 16, 2022 1-Day Observed Precipitation  
Valid on: April 16, 2022 12:00 UTC

Fig. 12. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/16/2022.



Tulsa, OK: April 17, 2022 1-Day Observed Precipitation  
Valid on: April 17, 2022 12:00 UTC

Fig. 13. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/17/2022.

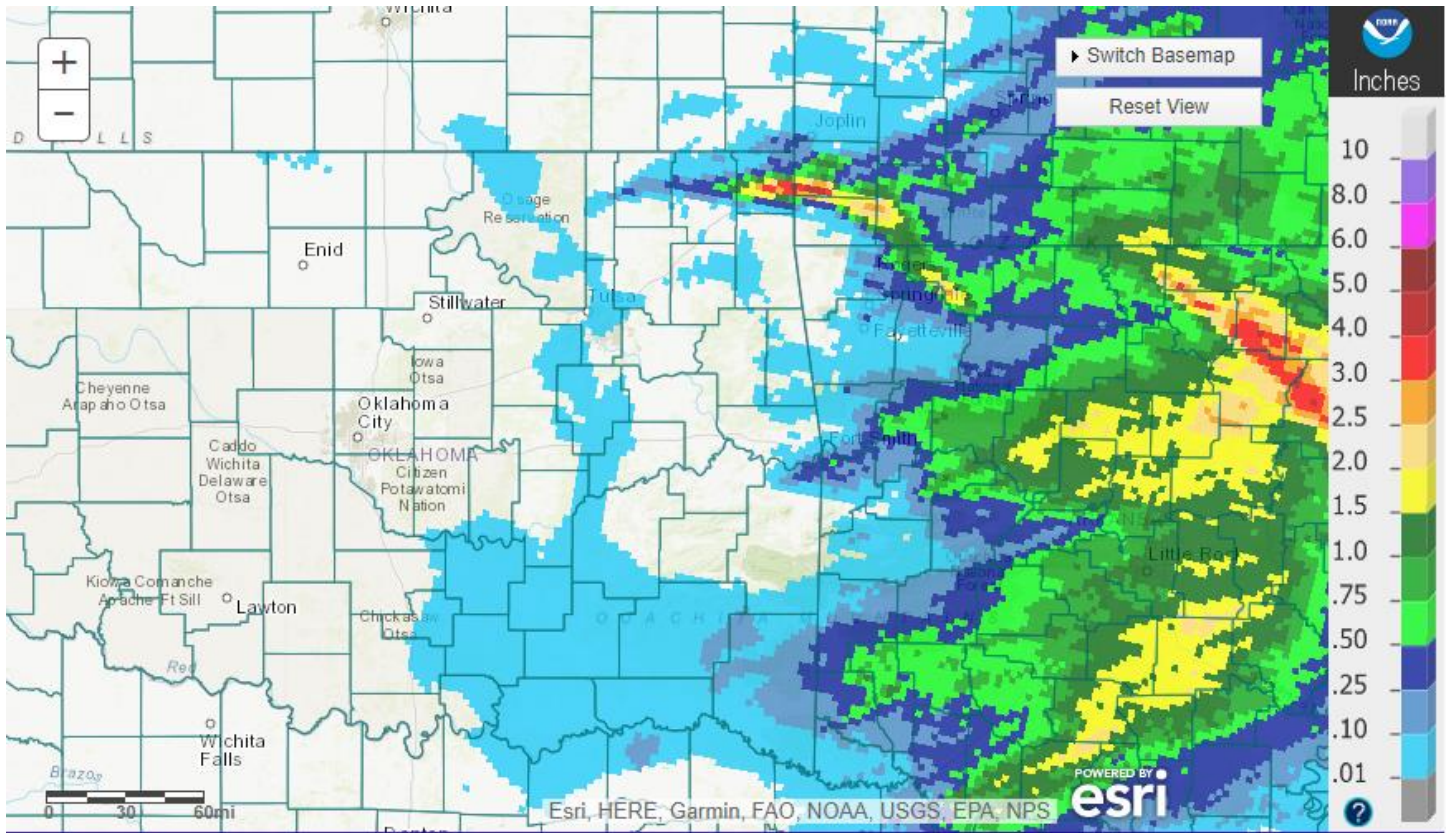


Fig. 14. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/21/2022.

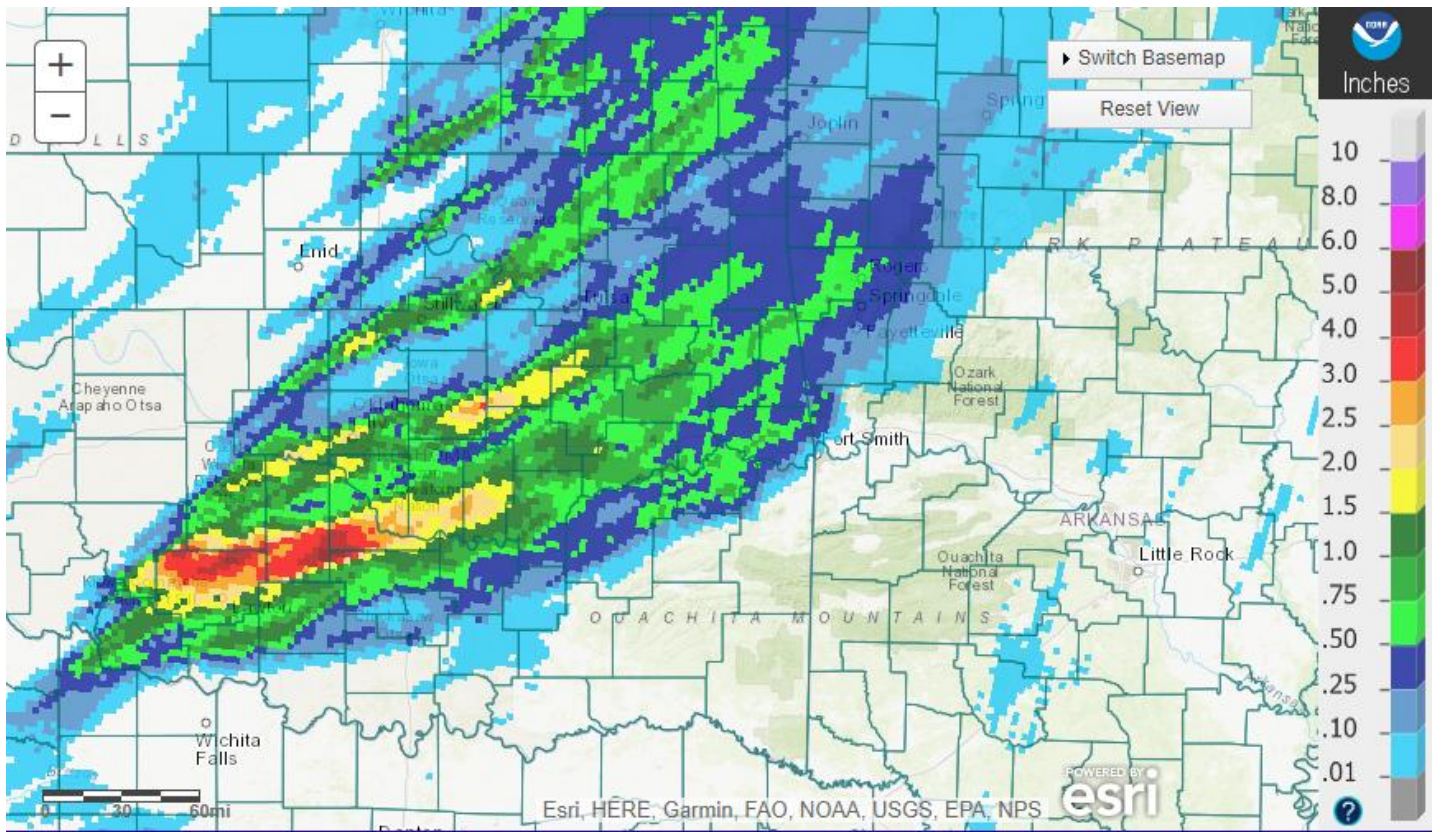
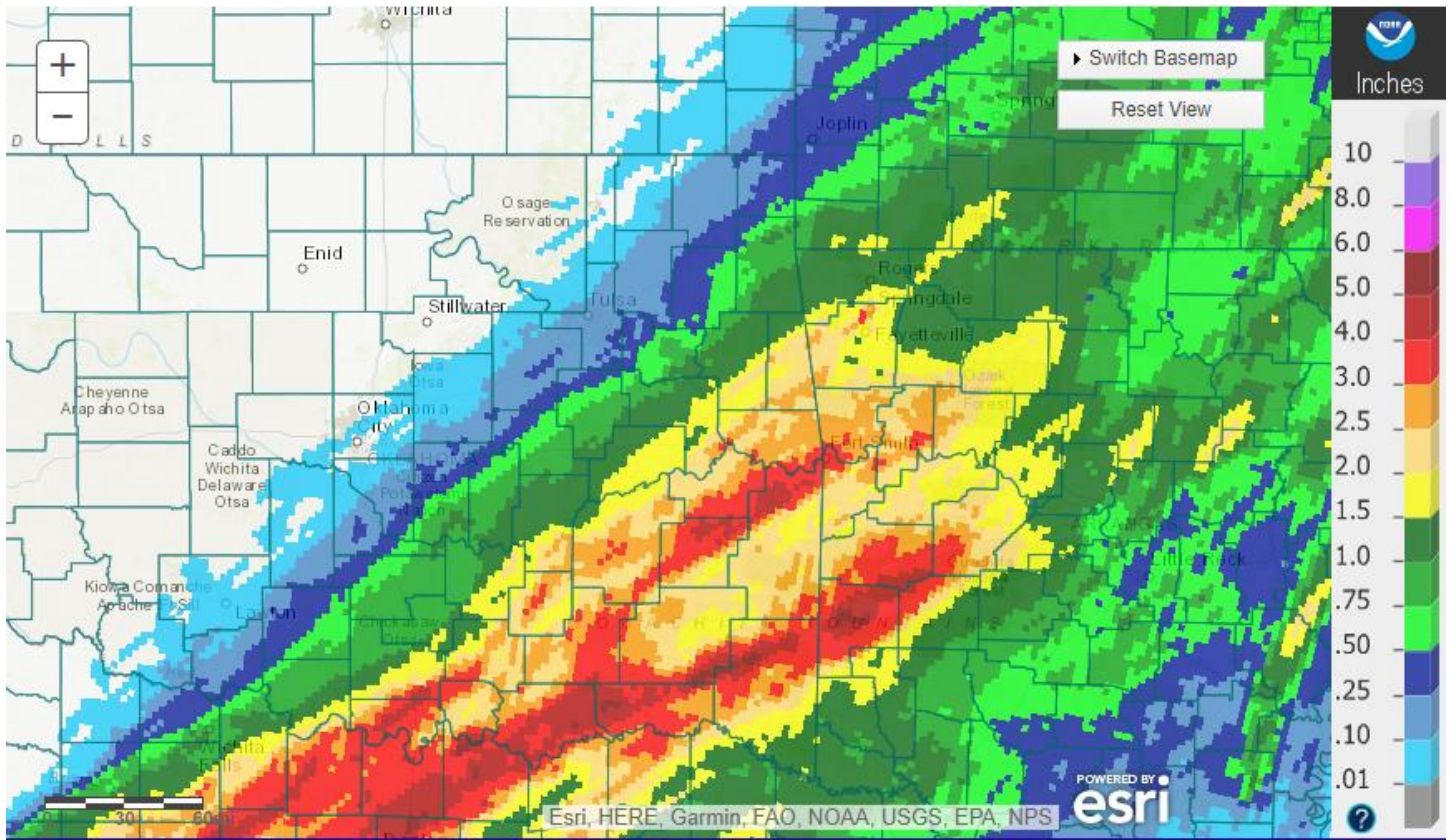
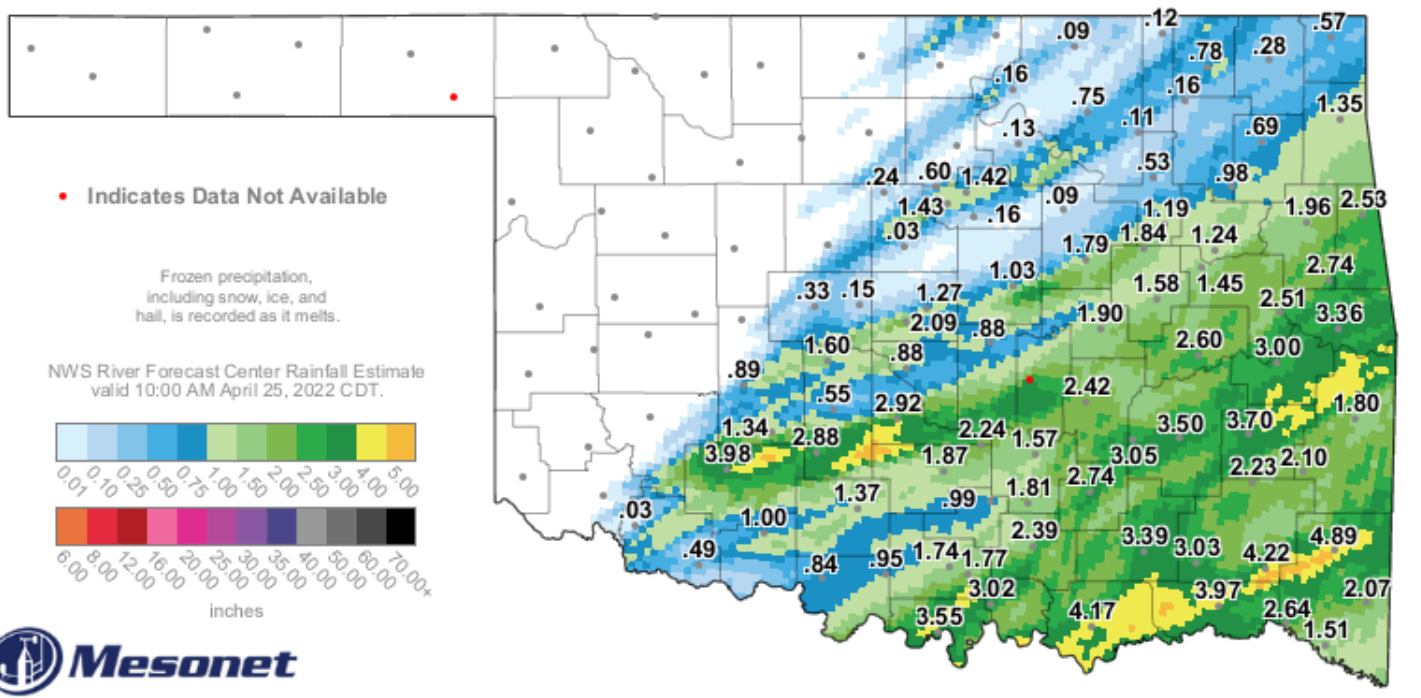


Fig. 15. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/24/2022.



Tulsa, OK: April 25, 2022 1-Day Observed Precipitation  
Valid on: April 25, 2022 12:00 UTC

Fig. 16. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/25/2022.



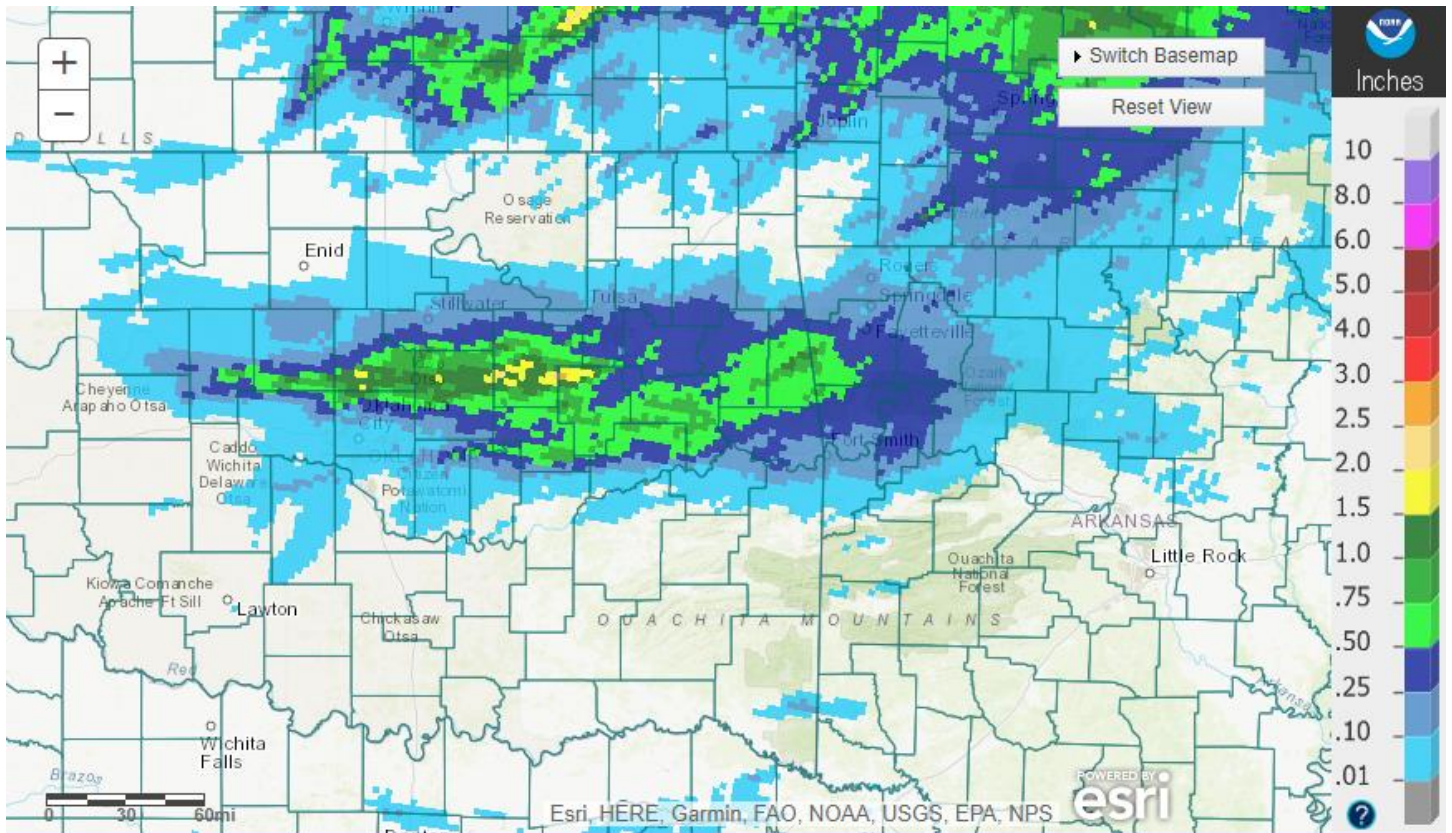
**2-Day Rainfall Accumulation (inches)**

11:55 AM April 25, 2022 CDT

Created 12:00:55 PM April 25, 2022 CDT. © Copyright 2022

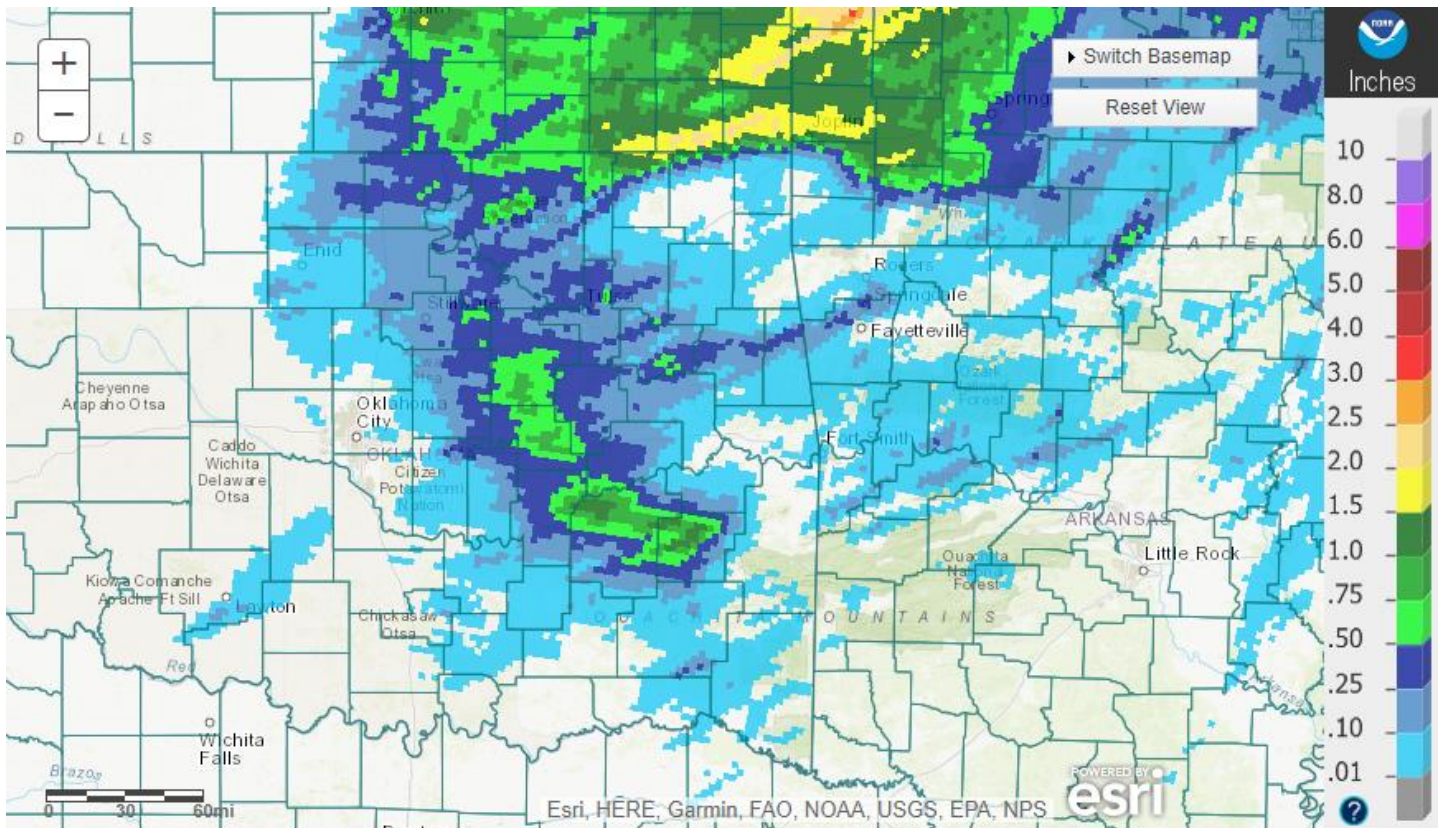
Fig. 17. OK Mesonet (values) and NWS RFC rainfall estimate (image) 48-hour rainfall ending at 11:55 am CDT 4/25/2022





Tulsa, OK: April 29, 2022 1-Day Observed Precipitation  
 Valid on: April 29, 2022 12:00 UTC

Fig. 18. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/29/2022.



Tulsa, OK: April 30, 2022 1-Day Observed Precipitation  
 Valid on: April 30, 2022 12:00 UTC

Fig. 19. 24-hour Estimated Observed Rainfall ending at 7am CDT 4/30/2022.

Shortly after sunrise through mid-afternoon of the 28<sup>th</sup>, a cluster of showers and thunderstorms associated with a gradually weakening upper-level wave moved east across northeast OK and northwest AR. Rainfall totals ranged from 0.10" to 2.5" (Fig. 18).

Around midnight of the 30<sup>th</sup>, a line of thunderstorms along a cold front moved into northeast OK and southeast KS. As the line progressed southeast through the overnight hours, it began to weaken and became more of a scattered line. Rainfall totals in eastern OK and northwest AR were primarily 0.10" to around 1". However, higher rainfall totals of 1"-2.5" occurred in far southeast KS along the OK/KS state line (Fig. 19). This impacted the Neosho River basin but no river flooding occurred.

Written by:

Nicole McGavock  
Service Hydrologist  
WFO Tulsa

### **Products issued in April 2022:**

\*CWYO2 became a daily river forecast point September 7, 2016

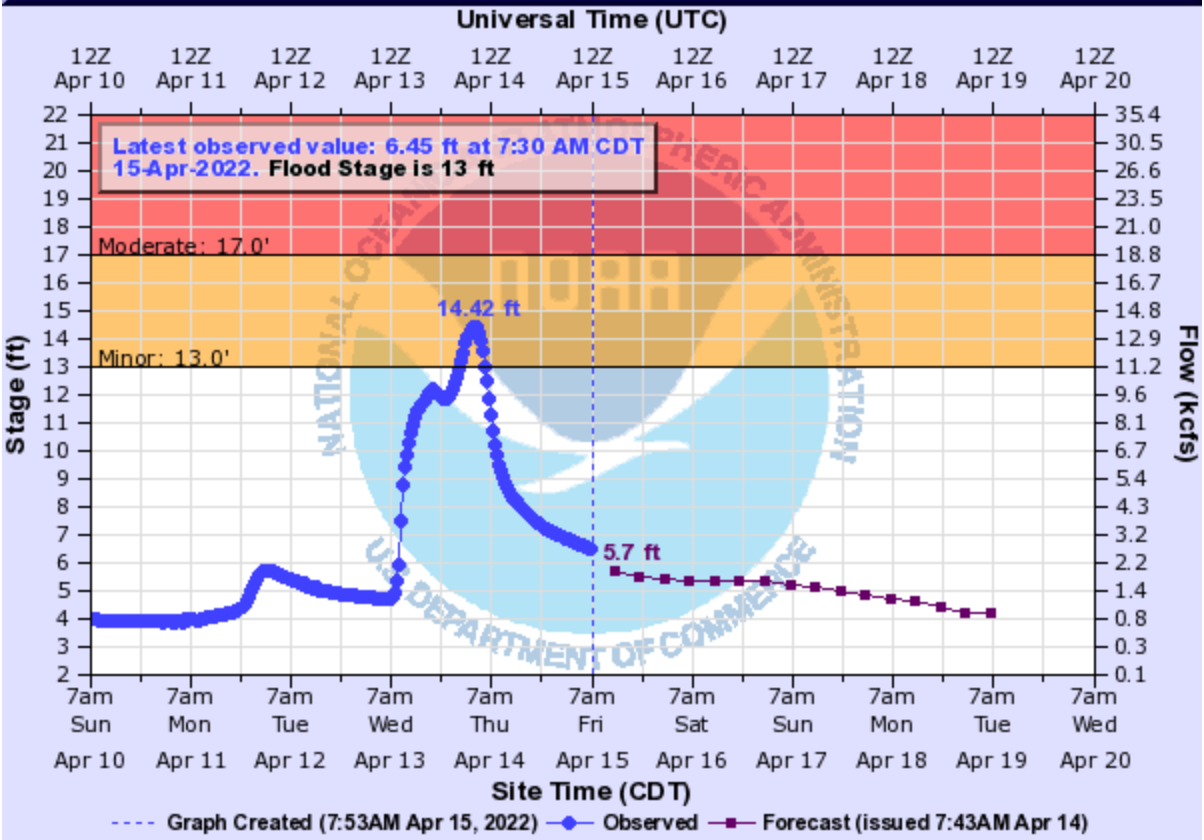
\*MLBA4 and OZGA4 transferred to NWS Tulsa HSA February 5, 2014

\*Mixed case River Flood products began July 31, 2013

- 2 Flash Flood Warnings (FFW)
- 4 Flash Flood Statements (FFS)
- 2 Flash/Areal Flood Watches (FFA) (12 Watch FFA CON/EXT/EXA/EXB/CAN)
- 10 Urban and Small Stream Advisories (FLS)
- 1 Areal Flood Warnings (FLW)
- 1 Areal Flood Statements (FLS)
- 8 River Flood Warnings (FLW) (includes category increases)
- 49 River Flood Statements (FLS)
- 7 River Flood Advisories (FLS) (15 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:**

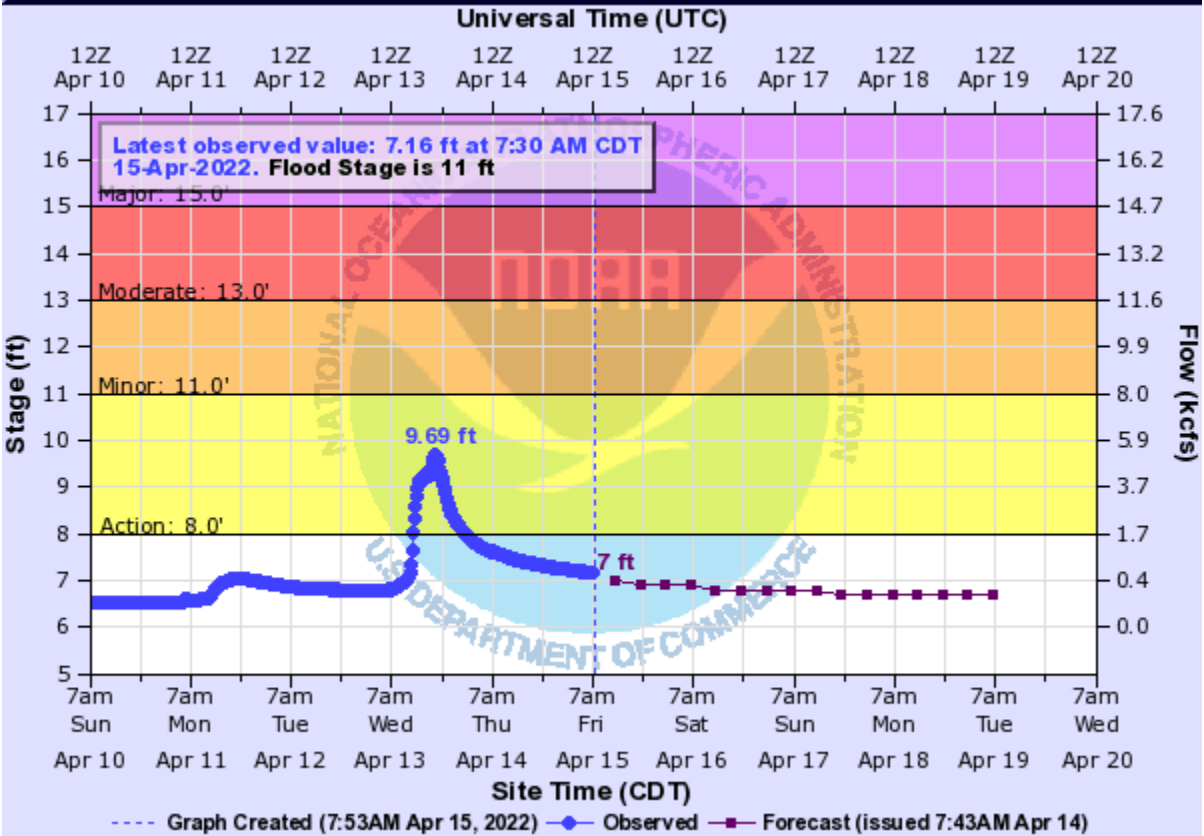
## ILLINOIS RIVER (AR OK) NEAR WATTS



WTT02(plotting HGIRG) "Gage 0" Datum: 893.78'

Observations courtesy of US Geological Survey

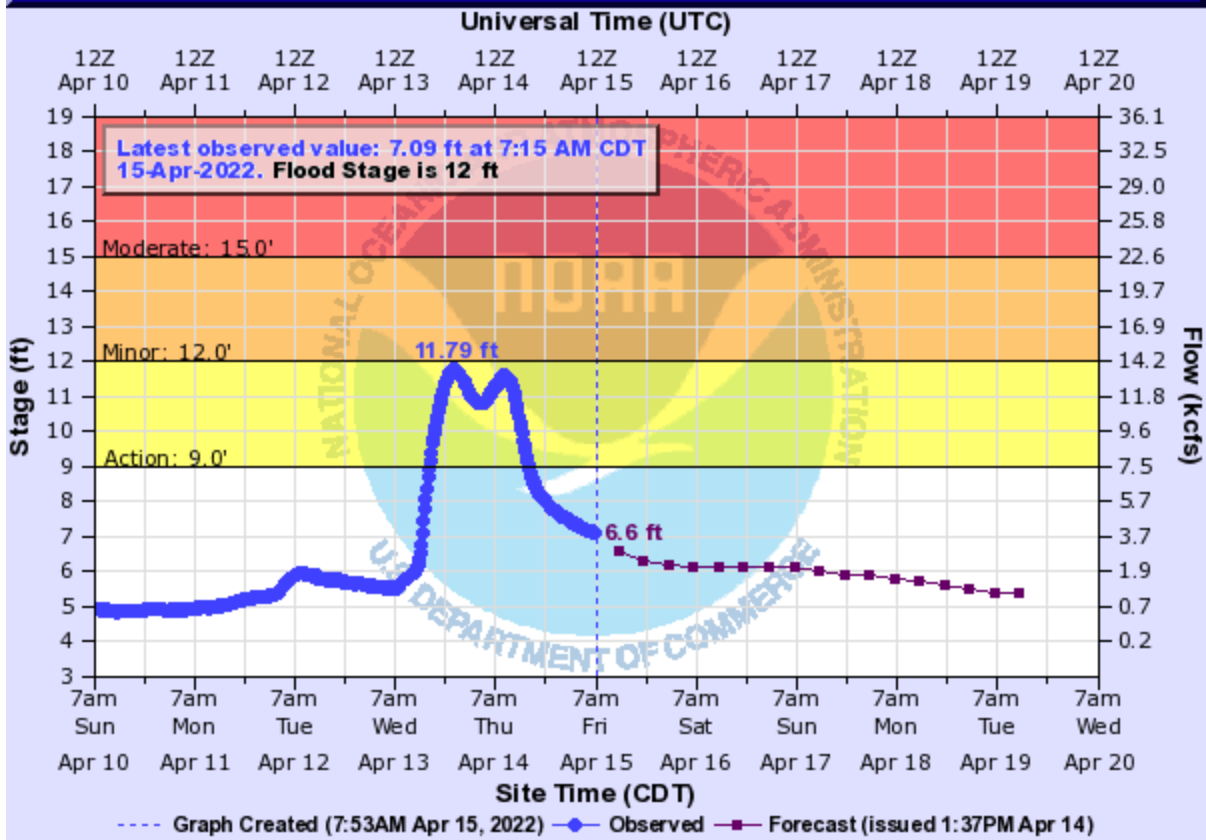
## FLINT CREEK (OK) NEAR KANSAS



KNS02(plotting HGIRG) "Gage 0" Datum: 854.59'

Observations courtesy of US Geological Survey

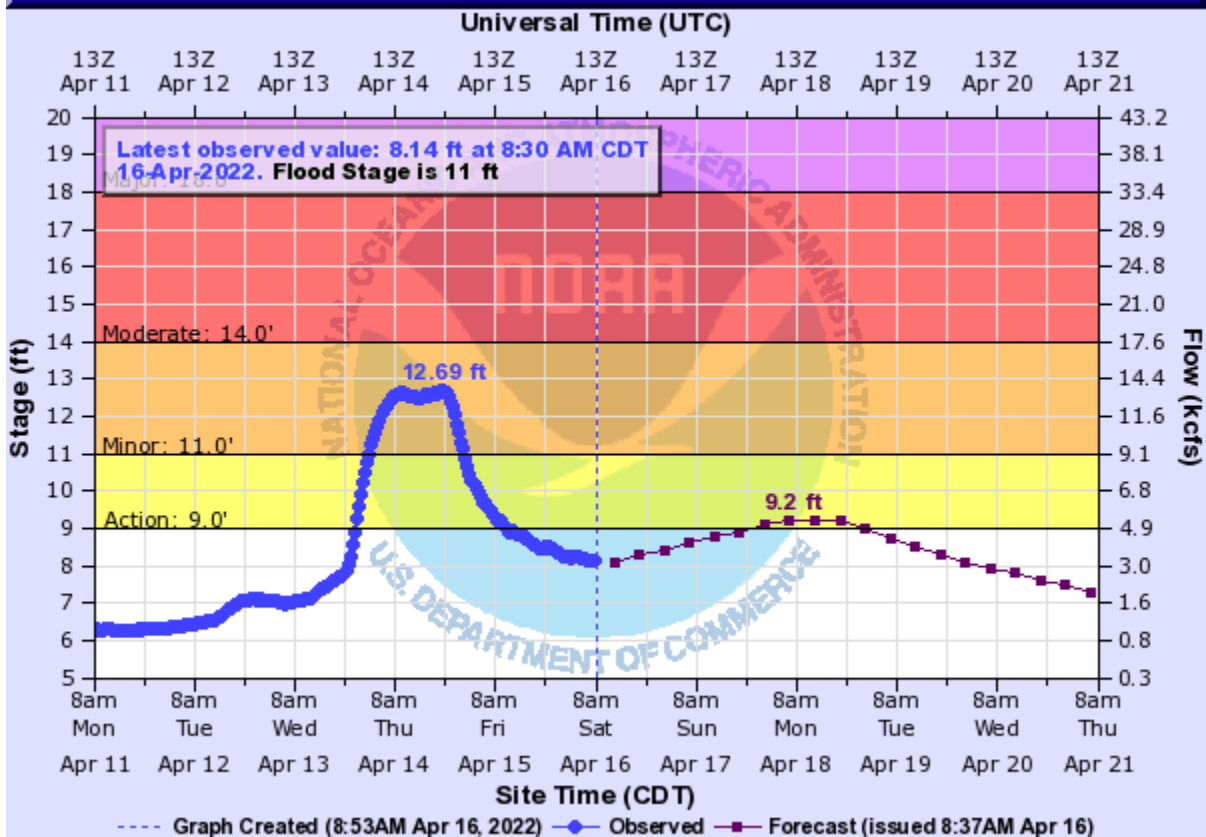
## ILLINOIS RIVER (AR OK) AT CHEWEY



CWY02(plotting HGIRG) "Gage 0" Datum: 800.88'

Observations courtesy of US Geological Survey

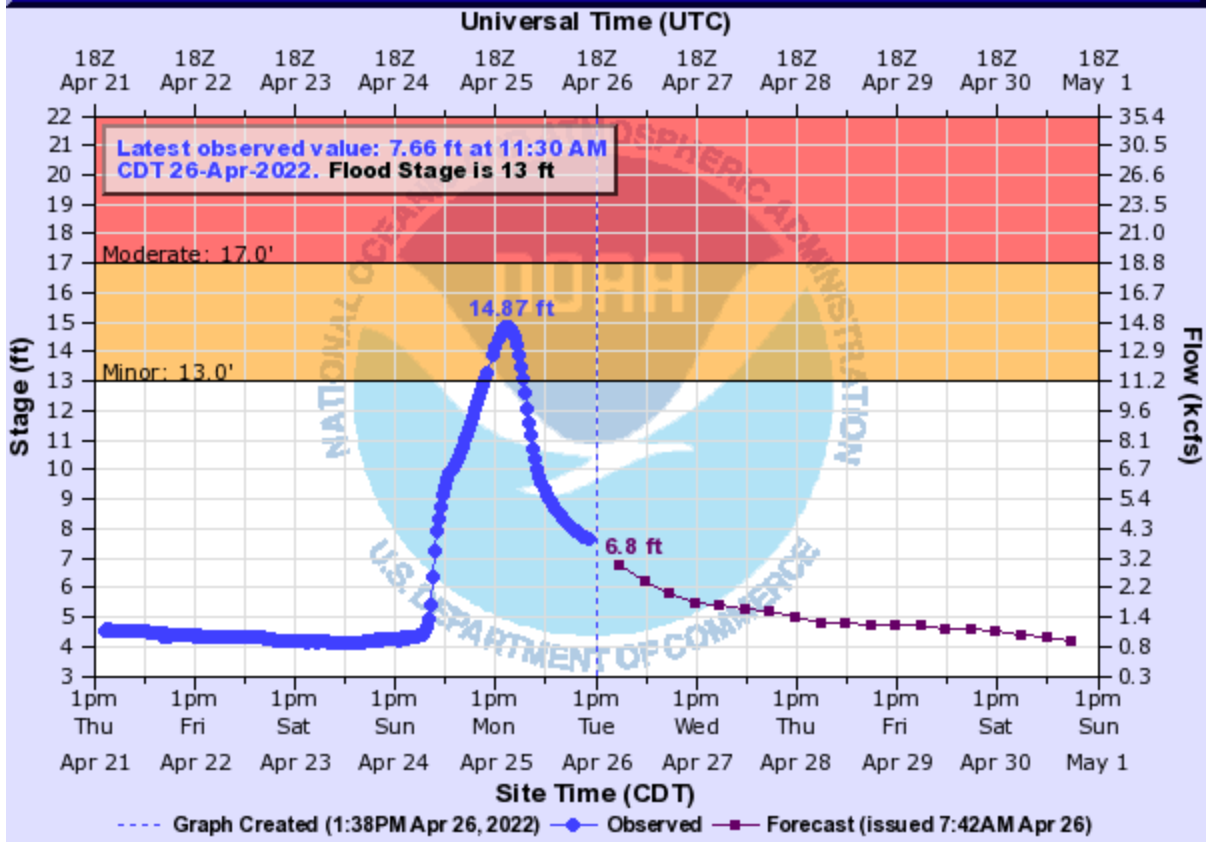
## ILLINOIS RIVER (AR OK) NEAR TAHLEQUAH



TAL02(plotting HGIRG) "Gage 0" Datum: 664.14'

Observations courtesy of US Geological Survey

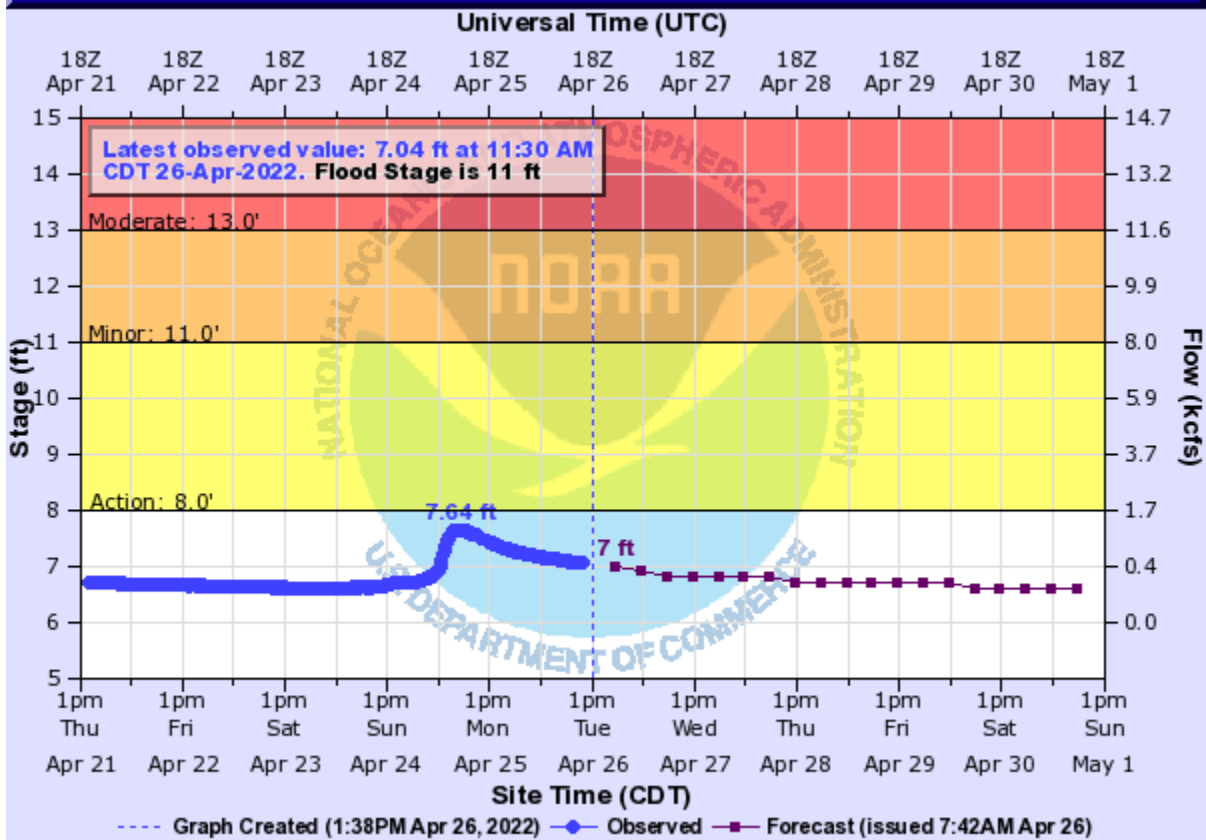
## ILLINOIS RIVER (AR OK) NEAR WATTS



WT02(plotting HGIRG) "Gage 0" Datum: 893.78'

Observations courtesy of US Geological Survey

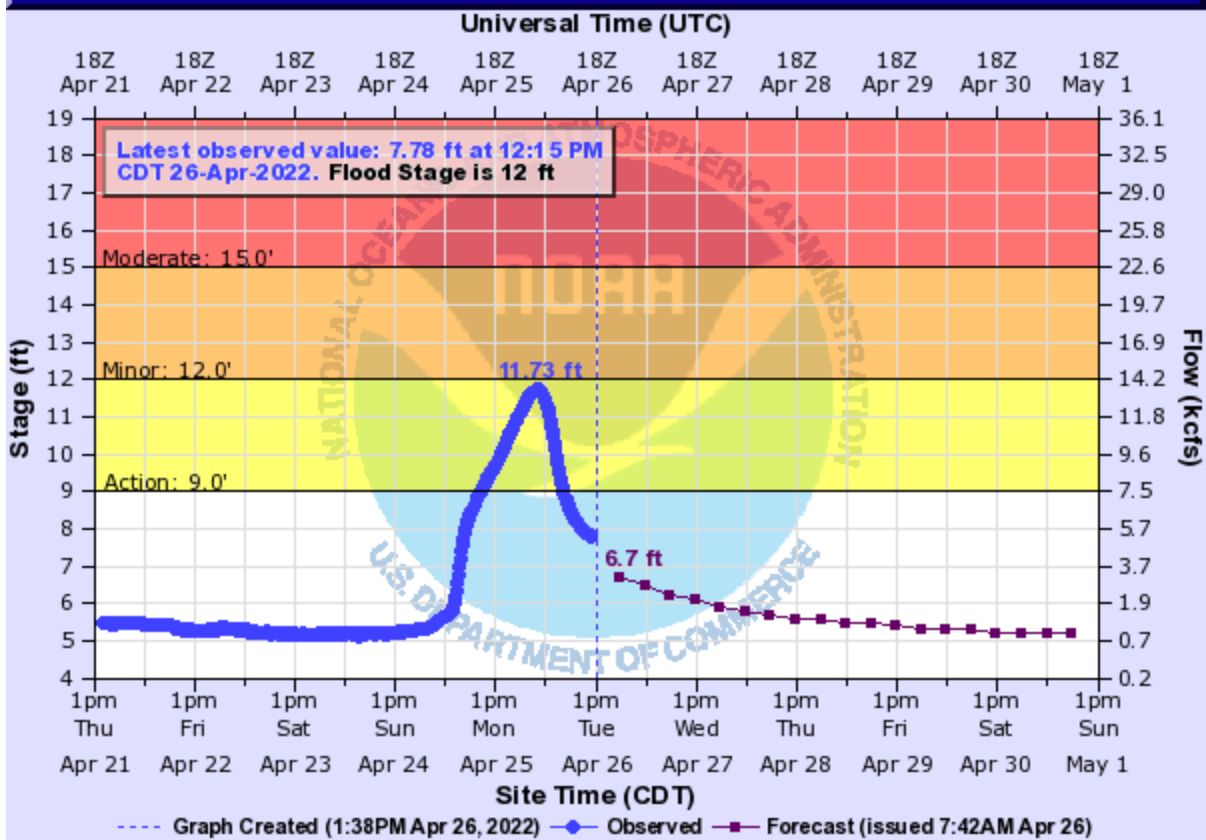
## FLINT CREEK (OK) NEAR KANSAS



KNSO2(plotting HGIRG) "Gage 0" Datum: 854.59'

Observations courtesy of US Geological Survey

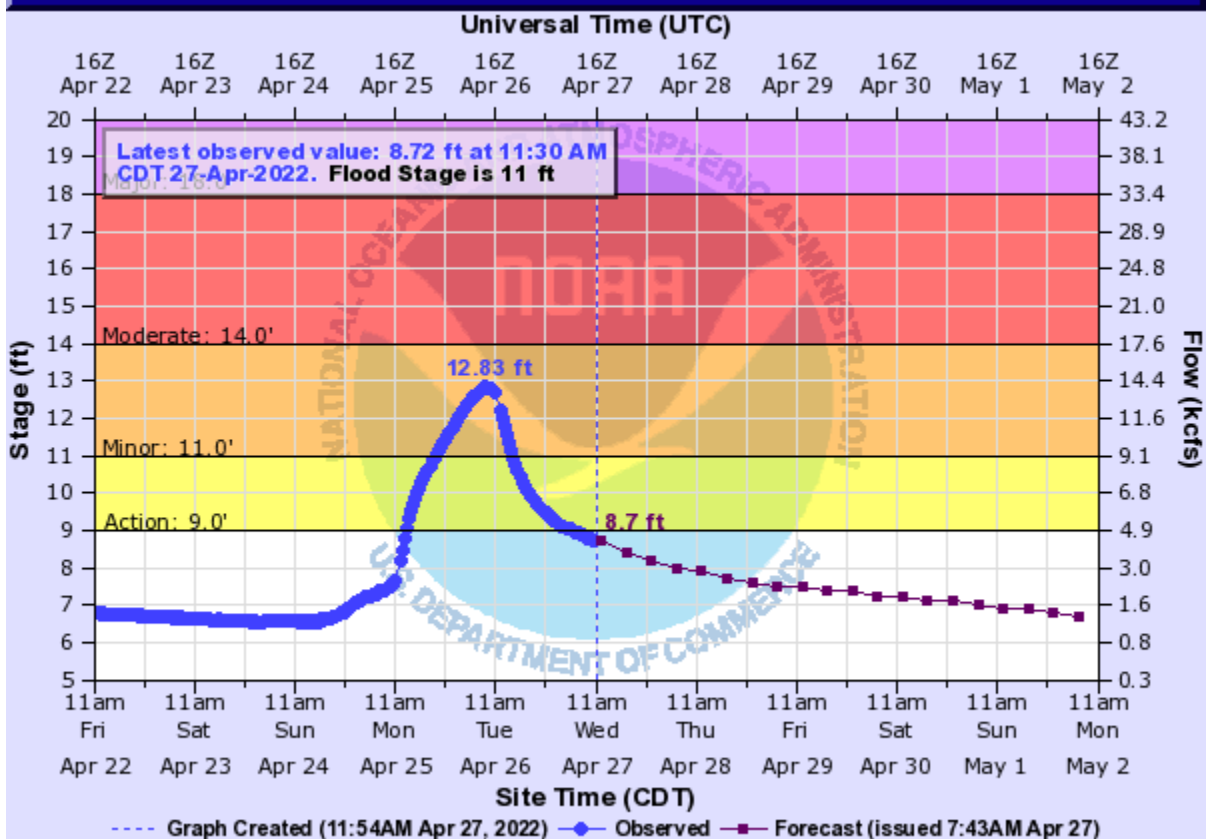
## ILLINOIS RIVER (AR OK) AT CHEWEY



CWY02(plotting HGIRG) "Gage 0" Datum: 800.88'

Observations courtesy of US Geological Survey

## ILLINOIS RIVER (AR OK) NEAR TAHLEQUAH

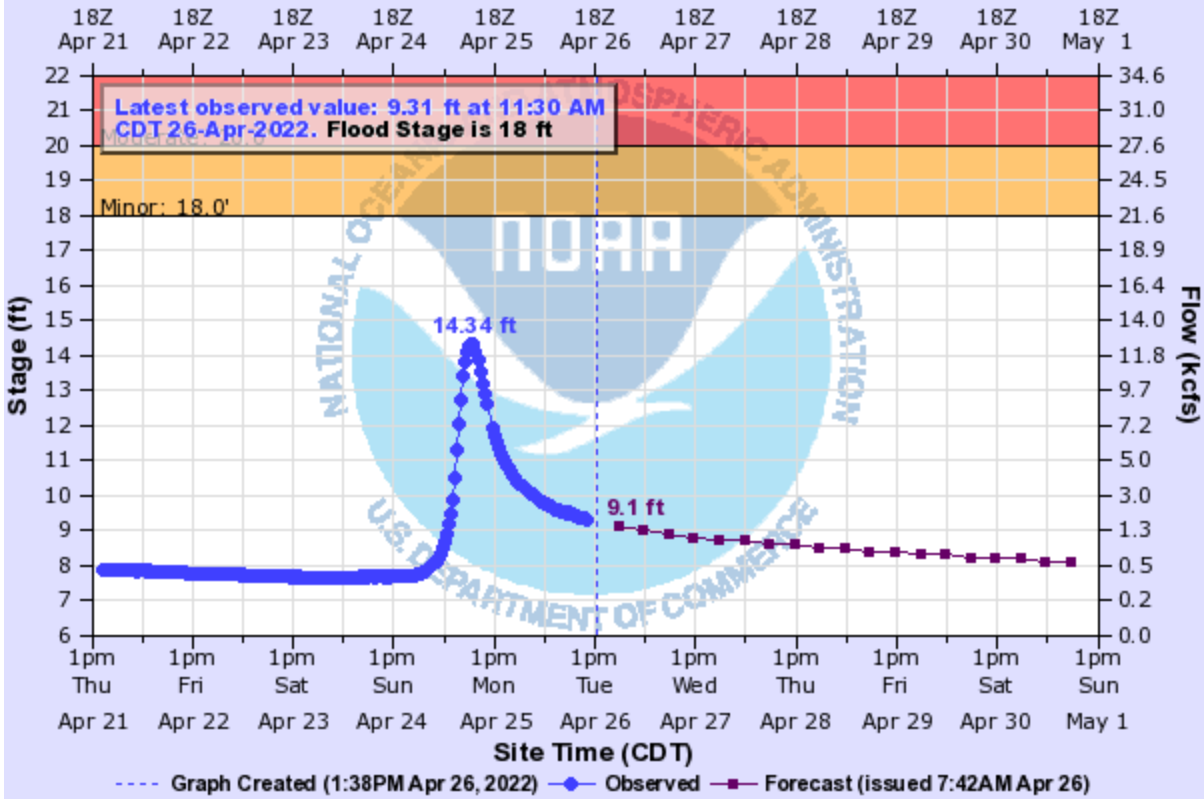


TALO2(plotting HGIRG) "Gage 0" Datum: 664.14'

Observations courtesy of US Geological Survey

## BARON FORK AT ELDON

Universal Time (UTC)

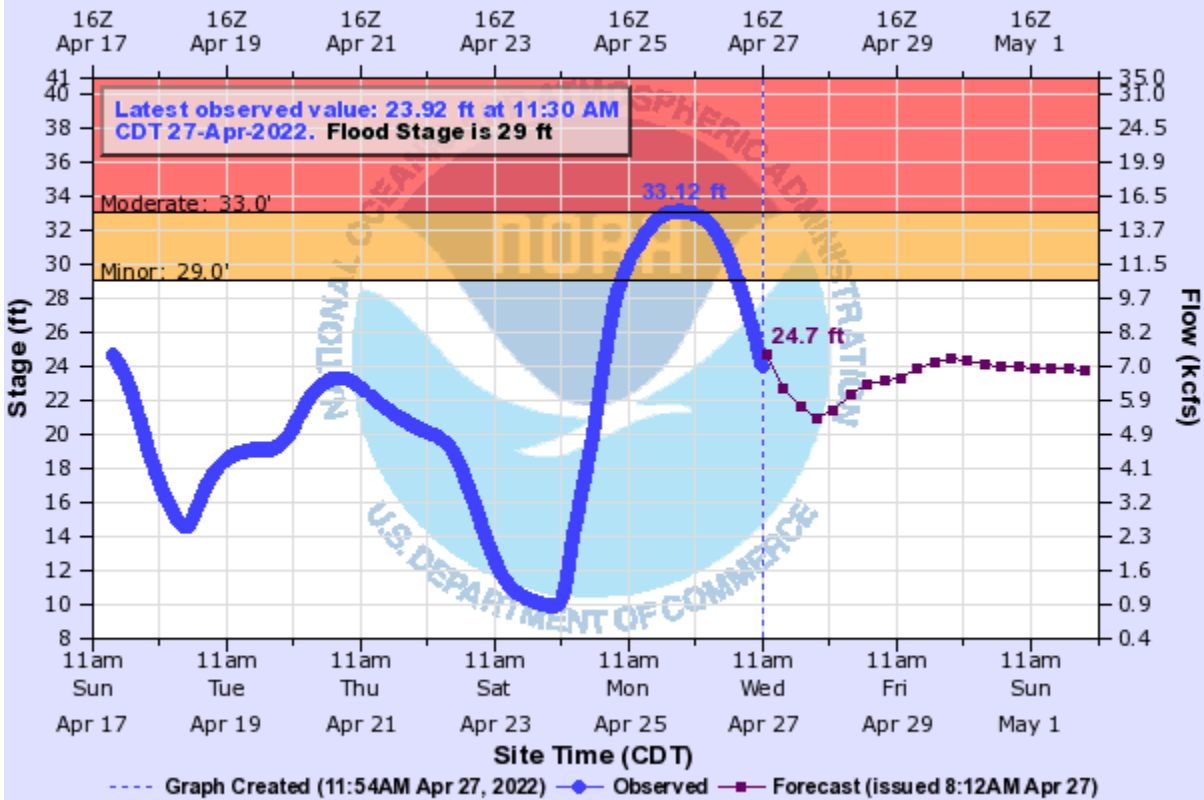


ELDO2(plotting HGIRG) "Gage 0" Datum: 701.14'

Observations courtesy of US Geological Survey

## POTEAU RIVER NEAR PANAMA

Universal Time (UTC)

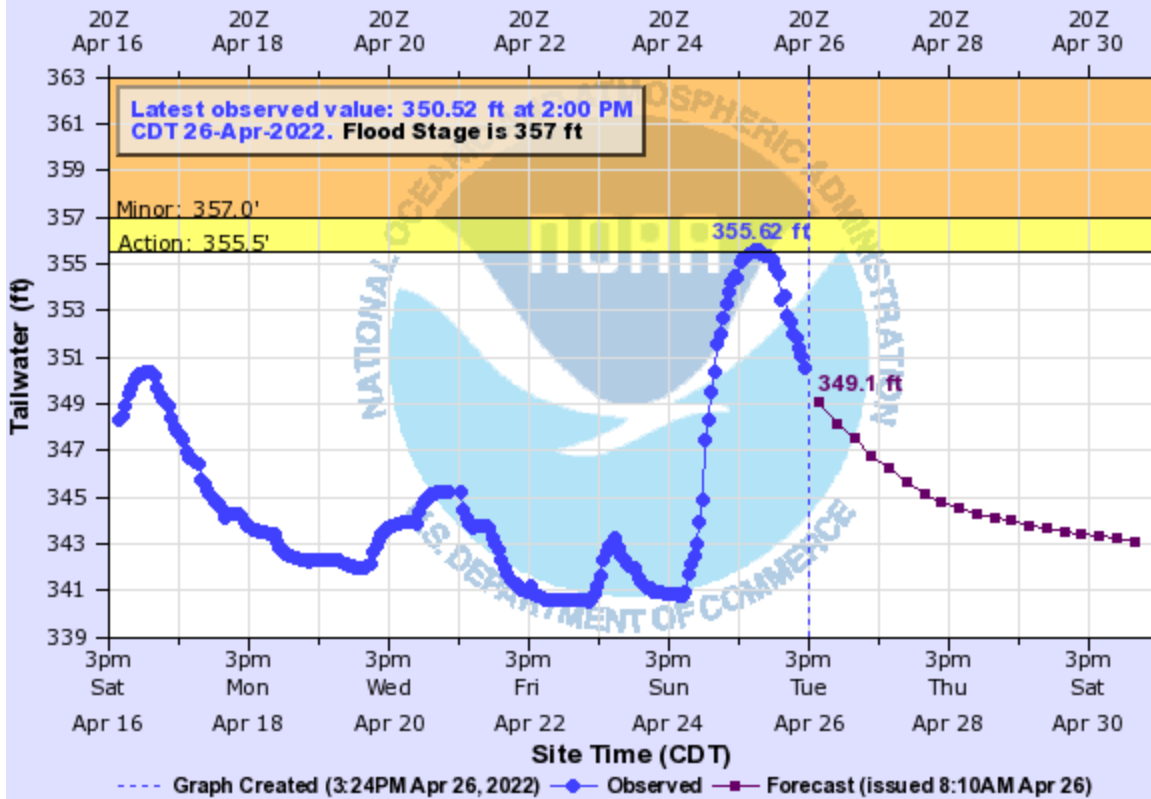


PANO2(plotting HGIRG) "Gage 0" Datum: 387.96'

Observations courtesy of US Geological Survey

## ARKANSAS RIVER AT OZARK L/D TAILWATER

Universal Time (UTC)

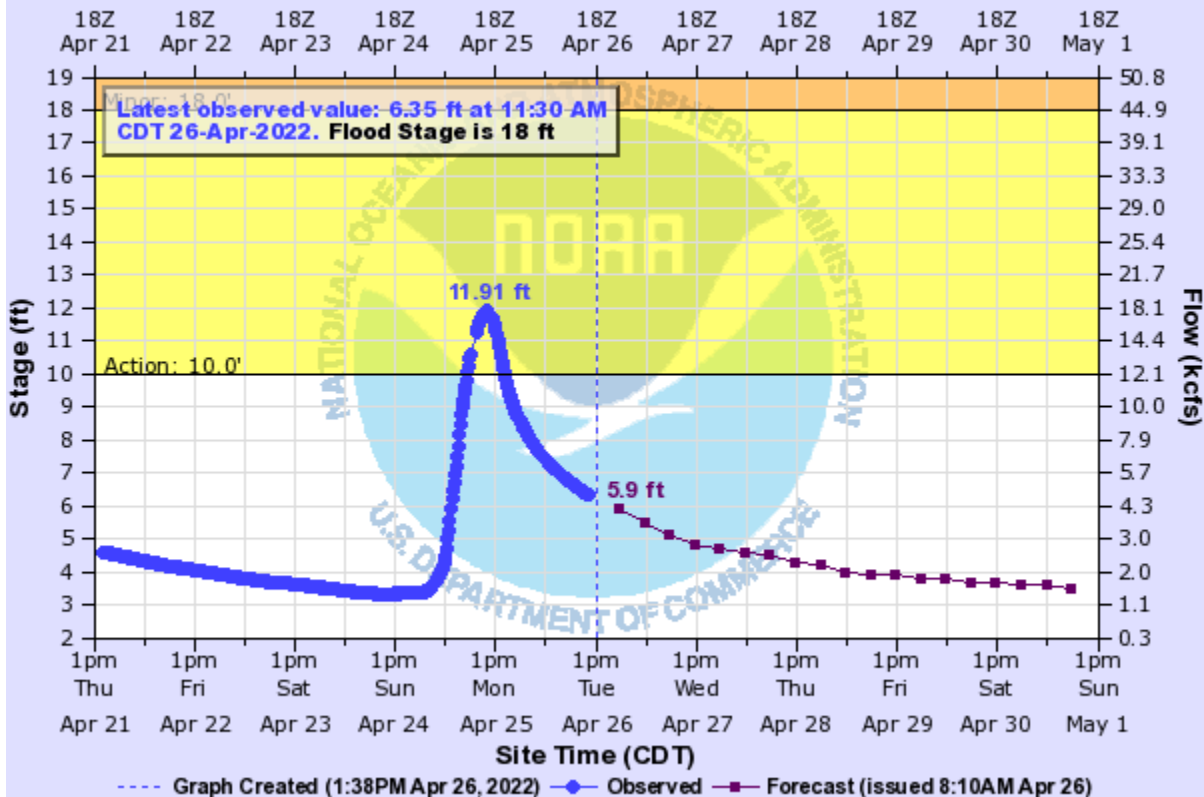


OZGA4(plotting HTIRG) "Gage 0" Datum: 0'

Observations courtesy of US Army Corps of Engineers - LRD

## MULBERRY RIVER (AR) NEAR MULBERRY

Universal Time (UTC)



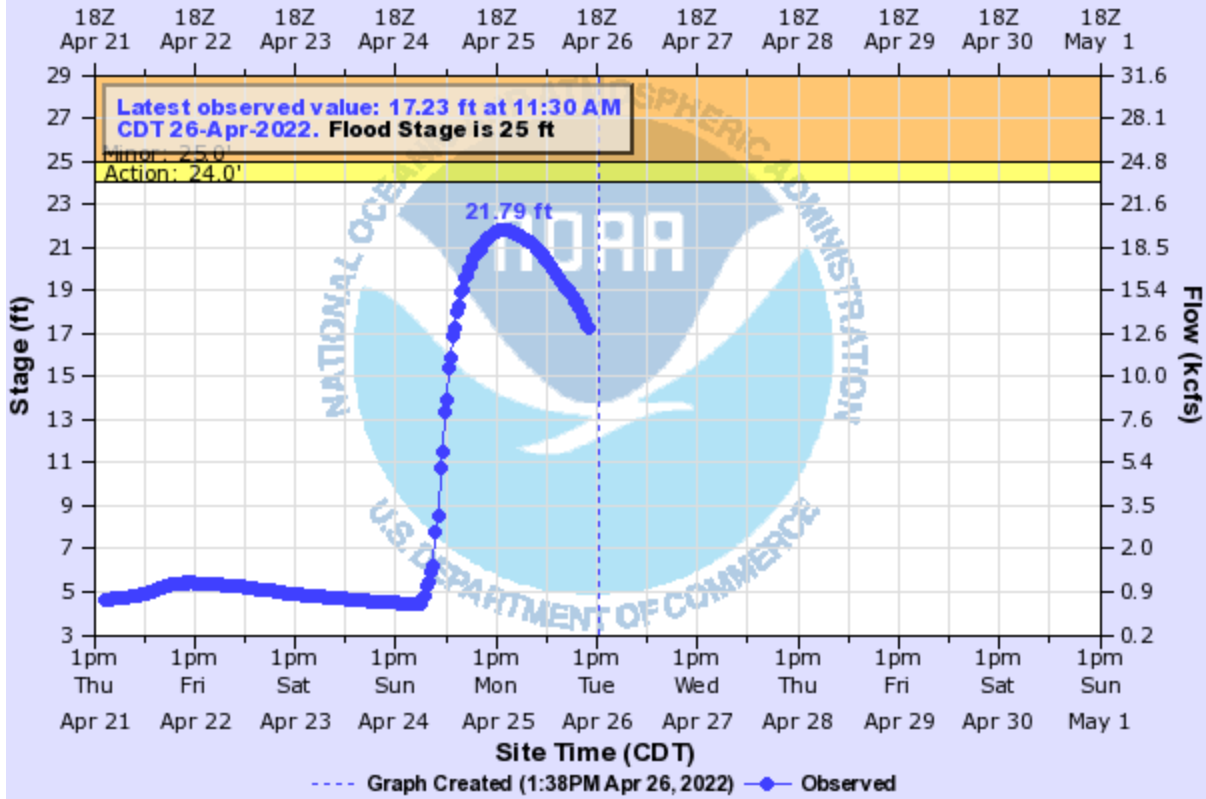
MLBA4(plotting HGIRG) "Gage 0" Datum: 432.75'

Observations courtesy of USGS/USACE/ADEQ



# KIAMICHI RIVER NEAR ANTLERS

Universal Time (UTC)



ANTO2(plotting HGIRG) "Gage 0" Datum: 420.1'

Observations courtesy of US Geological Survey