

NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) Tulsa, Oklahoma (TSA)
	MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS	
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		REPORT FOR: MONTH July YEAR 2008
		SIGNATURE Steven F. Piltz (Meteorologist-in-Charge)
		DATE August 11, 2008

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)

July is climatologically one of the drier months of the year across the Tulsa HSA. Normal rainfall for the month of July ranges from 2.6 inches in McIntosh County to 3.4 inches in Ottawa County. The Ozark region of northwest Arkansas averages 3.1 inches for the month.

The first part of July 2008 remained wet across the Tulsa HSA, with the second half of the month remaining fairly dry with primarily scattered diurnal thunderstorms across the higher terrain of northwest Arkansas and southeast Oklahoma. On July 4th, rains affected northwest Arkansas and the adjacent portions of Oklahoma, with several areas receiving 3 to 5 inches of rain. Much of the HSA received precipitation on July 9th-11th as a slow moving cold front affected the region. Northeast Oklahoma had the highest rainfall during this time, with amounts of 1.5 to 2.5 inches common and embedded areas of 3 to 5 inches over the three day period. The last significant rainfall of the month occurred on July 13th, with the bulk of the precipitation affecting areas north of Interstate 40. Widespread rains of 0.5 to 1.5 inches affected much of the area, with locations along Highway 412 receiving 1.5 to 4 inch amounts. Strong high pressure then set up over the region, with hot and dry conditions ensuing. Far northeast Oklahoma finally saw some rain again on the 27th, with amounts generally less than 1 inch, though a few locations near the Kansas border received closer to 3 inches. Finally, another weak front moved through the area at the end of the month, with most of the HSA receiving around 1 inch or less of precipitation July 30th-31st. The exception was across northern Osage and northern Washington Counties, where amounts to around 3 inches fell.

Based on the RFC precipitation analysis (Fig. 1), rainfall totals for the month ranged from 3 to over 10 inches across the northern half of the HSA, with widespread totals of 4 to 6 inches. This resulted in near to twice the normal July precipitation for this area (Fig. 2). According to the Oklahoma Climatological Survey (OCS), the northeast OK climate division had its 20th wettest July since 1921. However, due to the amount of rainfall earlier this year across this area, the northeast OK climate division has had the 2nd wettest summer so far (June – July), and is currently running as the wettest year-to-date (January through July) on record since 1921.

Across the southern half of the HSA, rainfall totals were generally 3 inches or less (Fig. 1), corresponding to less than 50% of normal for July across this area (Fig. 2). Some areas of east central and southeast Oklahoma, as well as West Central Arkansas (including the Fort Smith area) received less than 25% of normal precipitation for July. In fact, according to the OCS, the southeast OK climate division had its 10th driest July since 1921. However, for the calendar year, the southeast OK climate division is still running as the 16th wettest January through July period. The east central OK climate division had its 39th driest July, though January through July is the 8th wettest on record for this period.

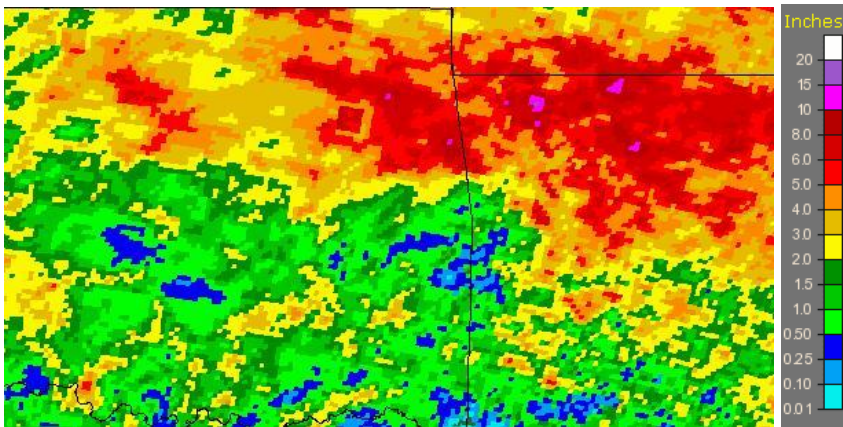


Fig. 1. July 2008 Monthly Observed Precipitation from the RFC analysis.

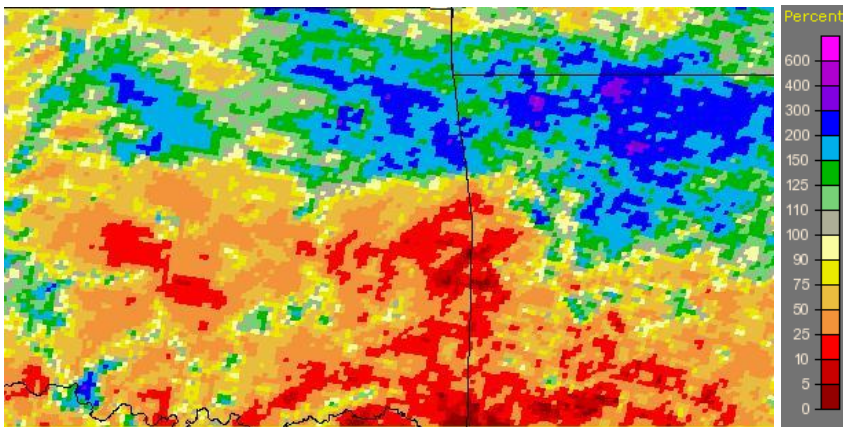


Fig. 2. July 2008 Monthly Percent of Normal Precipitation from the RFC analysis.

Below is a list of the highest rainfall measurements (in inches) in the Tulsa HSA this July based on ASOS, COOP, and Oklahoma Mesonet stations:

Pryor, OK (mesonet)	8.17	Westville, OK (mesonet)	7.87	Fayetteville Exp. Station (coop)	6.76
Claremore (mesonet)	5.80	Copan (mesonet)	5.44	Bristow (coop)	5.50

During the first part of July, two rivers reached minor flood, the Arkansas River near Muskogee, OK and the Neosho River near Commerce, OK. Of note, the Arkansas River remained near flood at Muskogee, OK through the first couple of weeks in July, primarily due to the USACE regulation of area dams to mitigate the high levels of area reservoirs. Please refer to the E-3 for specific rise above/fall below flood stage times and crest information.

As of the end of July, all reservoirs in the Tulsa HSA were at 90% to 100% of their conservation pools. A few reservoirs continued to operate within 10% of their flood pools, with the highest flood pools noted at Keystone (9%), Copan (9%), and Oologah (6%).

By the end of July, the US Drought Monitor issued on July 29, 2008 indicated abnormally dry conditions across western Choctaw County in southeast Oklahoma. Elsewhere across the Tulsa HSA, drought was not a concern. According to the Climate Prediction Center (CPC), the 3-month temperature and precipitation outlooks for the August-October period indicate an equal chance for above, near, and below normal conditions across the Tulsa HSA.

Nicole M^cGavock,
Service Hydrologist WFO Tulsa

Products issued:

- 1 River Flood Warning
- 2 River Flood Statements
- 30 River Statements
- 0 Hydrologic Outlooks