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	REPORT FOR: MONTH **June** YEAR **2008**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Steven F. Piltz** (Meteorologist-in-Charge) DATE **July 3, 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)

June is historically a transitional month between the wettest month of the year (May) and one of the drier months (July) for the Tulsa HSA. However, for the second year in a row, northeast Oklahoma experienced one of its wettest Junes in history, according to the Oklahoma Climatological Survey (OCS). In fact, this year, the Northeast Oklahoma climatological district had its wettest June on record since 1921. Two rivers also reached their major flood stages this month.

Normal rainfall in the month of June ranges from 3.9 inches in McIntosh County to 5.9 inches in Wagoner County. The Ozark region of northwest Arkansas averages 5.1 inches for the month.

This June continued the above normal precipitation trend seen across the Tulsa HSA this year. June 2008 rainfall totals ranged from over 10 inches across much of northeast Oklahoma to 3 to 10 inches elsewhere (figure 1). This yielded departures from normal of over 200% across most of northeast Oklahoma, with a few spots reaching around 300% of June rainfall normals (figure 2). Elsewhere across the HSA, departures from normal ranged from around 75% to around 150%.

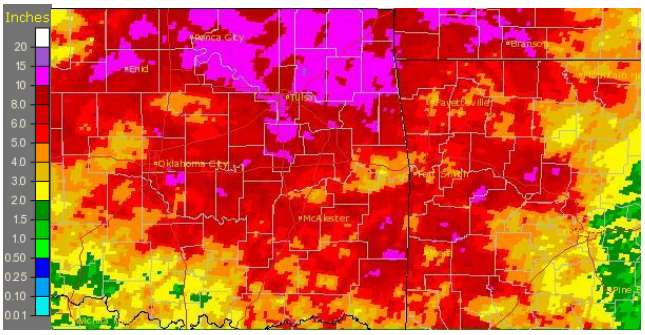

Figure 1. June 2008 total rainfall

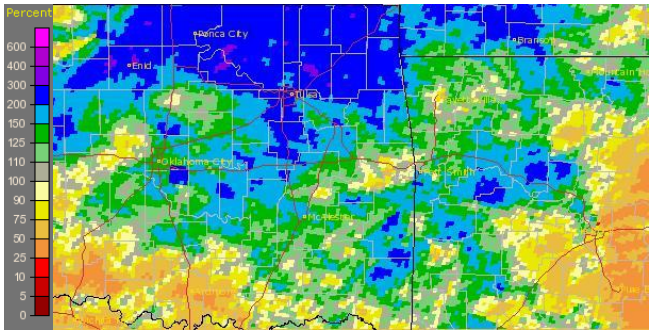

Figure 2. June 2008 rainfall percent of normal

According to the Oklahoma Climatological Survey (OCS), the northeast climate division of Oklahoma had its wettest June ever; the east central climate division reached its 12th wettest June; and the southeast climate division recorded its 19th wettest June since 1921. In Tulsa, OK, June 2008 ranked as the 8th wettest June since 1888 with 9.43 inches of rain, and in Fort Smith, AR, this June was the 11th wettest June on record since 1900. After many months of above normal precipitation across the Tulsa HSA, northeast Oklahoma has experienced its 2nd wettest January – June period since 1921 according to the OCS, with east central Oklahoma ranking as 7th wettest and south central Oklahoma as 8th wettest. Further, Tulsa, OK has recorded its 2nd wettest January 1 – June 30 period this year with 35.98 inches (1973 is the wettest since 1893 with 36.28"). According to the ABRFC precipitation analysis, all of the Tulsa HSA is running from 100% to over 200% percent of normal for 2008 so far (figure 3).

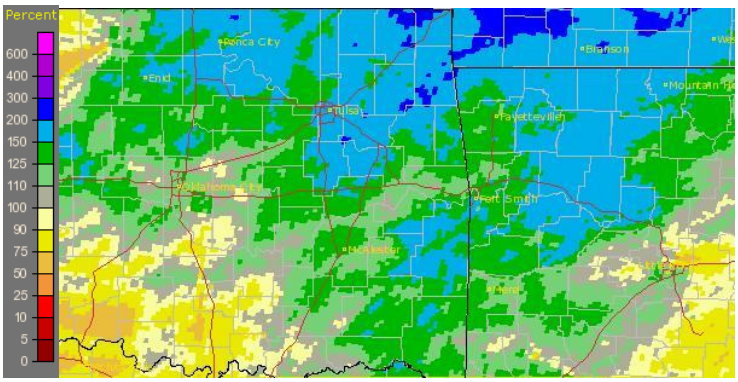

Figure 3. January-June 2008 percent of normal rainfall.

Here are some of the highest precipitation totals for June 2008, dominated by northeast OK stations:

Claremore, OK (mesonet)	13.58	Jay, OK (mesonet)	12.08	Inola, OK (mesonet)	11.13
Spavinaw, OK (mesonet)	13.12	Copan, OK (mesonet)	11.78	Mannford 6NW, OK (coop)	10.97
Vinita, OK (mesonet)	13.06	Ralston, OK (coop)	11.14	Hectorville, OK (mesonet)	10.86

The large precipitation totals this month were primarily due to a series of mesoscale convective complexes that affected the region during the beginning and middle of the month. The heaviest period of rain occurred from June 8 – 9. On June 8th, the storm system affected primarily northeast Oklahoma, where 3 to 6 inches fell along and north of a Pawnee to Tulsa to Pryor line, and 1 to 3 inches fell elsewhere. The next day, widespread rainfall again affected the area, with the heaviest amounts of 1.5 to 6 inches this time occurring primarily south of Interstate 40. From June 16-21, rainfall amounts ranging from half an inch to around 2.5 inches occurred each day across primarily eastern Oklahoma. Several other days with rainfall amounts of 1 to near 4 inches occurred: June 1st, northeast of a Bristow to Poteau line; June 13, entire HSA; June 15, northeast Oklahoma; June 28, southeast Oklahoma.

This amount of rainfall during the month lead to rising rivers, with levels exceeding major flood stage at two locations. Bird Creek at Avant (AVTO2) crested at 27 feet at 6 pm on June 9th (major flood stage is 26 feet) and was above the major flood level for approximately 11 hours. The Caney River near Collinsville (CVLO2) also crested above its major flood stage at 11 pm on June 11th with a crest of 33.57 feet (major flood stage is 33 feet), and remained in major flooding for approximately 27 hours. Out of the 39 river flood warnings issued this month, 15 warnings were issued on June 9th, and 9 were issued on June 16th. Please refer to the June E-3 report for specific flooding/crest information.

Reservoir levels remained high during the month, and at the end of June 2008, all reservoirs were at 100 percent of their conservation pools and most remained at or below 50 percent of their flood pools.

The U.S. Drought Monitor (USDM) from July 1, 2008 did not show any drought in the Tulsa HSA, and the US Seasonal Drought Outlook issued June 19, 2008 did not indicate any drought developing during the June 19 through September period. The Climate Prediction Center (CPC) outlook for the July through September 3-month period showed an equal chance for above, near, and below normal precipitation.

Nicole McGavock,
Service Hydrologist, WFO Tulsa

Products issued:

39	River Flood Warnings
242	River Flood Statements
39	River Statements
0	Hydrologic Outlooks