

Flash Flooding on Big Piney Creek at Twin Bridges, Highway 164 Pope County, Arkansas

**Angela Braden
Geologist
Arkansas Geological Commission, 2005**

This picture was taken on the morning of April 24, 2004 of the Highway 164 bridge over Big Piney Creek after three days of heavy rainfall. The National Weather Service at Little Rock reported that over the seventy-two hour period rainfall totals in the headwaters area had reached 9.32 inches at Deer with isolated places receiving over ten inches. Significant flooding occurred on several streams in the region, mainly along the Buffalo and White Rivers. The Buffalo River at St. Joe reached the 3rd highest stage on record (46.5 feet/flood stage is 27 feet), www.srh.noaa.gov/lzk/html/flood0404-nf.htm.



The USGS Arkansas Water Science Center recorded the maximum water level from their USGS gauging station at Big Piney Creek Highway 164 Bridge on April 24, 2004 as 23.79 ft. and a minimum stage of 9.19 ft. The mean discharge on this day was 37,100 ft³/sec. In some areas such as Lee Creek and West Fork of the White River near Fayetteville, flooding levels were at the 500-year flood (USGS personal communication). This means that there is a 0.2% chance of this kind of flood in any given year.

The picture below shows a farmers' flooded field located just southeast of the Highway 164 bridge. Big Piney Creek is flowing south (out the top of the picture) in the upper right corner of the photo. This day, the farmer was making sure all of his cattle had reached higher ground.



A small whirlpool developed alongside the highway near the bridge, probably due to a culvert underneath.



Little Piney Creek also experienced flash flooding as seen in the photo below. This picture was taken the same morning (April 24, 2004) on Little Piney Creek at The Narrows just east of Highway 123 north of Hagarville, Arkansas.



The heavy rainfall also caused small landslides to develop alongside Highway 123 near Ft. Douglas and north of Ludwig, Arkansas (picture below).

