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2011 Midwest Summer

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Summer (June through August) in the Midwest was marked by above average temperatures, especially in July and early August, and extreme precipitation conditions. Drought conditions occurred for half of the Midwest, while at the same time, several severe precipitation events resulted in flash flooding, breaking 17 all-time precipitation records, according to the Midwestern Regional Climate Center at the Illinois State Water Survey (ISWS).

Nine all-time high maximum temperature records were broken in the Midwest this summer. The hottest temperature recorded was 115 degrees at Protem, Missouri, on August 4. A majority of the Midwest experienced above average overnight temperatures, resulting in 17 all-time high minimum temperature records broken (52 tied) during July and August, with at least one record being broken in each Midwest state.

Heavy rainfall events persisted through June, July, and August in the Midwest. There were 1,822 daily precipitation records set throughout the Midwest this summer, with 17 of those being all-time precipitation records.

On June 19 and 20, over 4 inches of heavy precipitation in southeastern Kentucky produced severe flash flooding that trapped three miners, who were later rescued. Several inches of precipitation fell in northern Ohio on the morning of July 19, causing Summit County to declare a state of emergency because flood waters were not receding.

Torrential rainfall fell in southeast Iowa and the northwest corner of Illinois on July 27 and 28, with some locations experiencing over 10 inches of precipitation (13.45 inches in Galena, Illinois). The rainfall triggered river flooding, very damaging flash flooding, and one fatality in this region.

While the majority of the Midwest received above average precipitation this past spring, very dry conditions developed and persisted throughout the summer for portions of the Midwest. On May 31, only 1 percent of the Midwest was experiencing drought conditions on the U.S. Drought Monitor.

However, by the end of August, almost half of the Midwest (48 percent) was experiencing drought conditions, affecting every Midwest state in some capacity. About 5 percent of the Midwest was classified as a D2 drought, or severe drought, as of August 30 (concentrated in southwest Missouri and across the Corn Belt in Iowa, Illinois, and Indiana).

Despite ample precipitation in June, conditions took a turn for the worse throughout the heart of the Corn Belt in southeast Iowa, central Illinois, and parts of south central Indiana. This region, which is now experiencing severe drought (D2) conditions, has received only 25 to 50 percent of its normal precipitation since July 1.

Burlington, Iowa has received only 2.79 inches since July 1 (normal precipitation for July and August is 8.52 inches), with almost half of that rainfall coming from one event on July 23. The heat and lack of precipitation is causing stress on livestock, a reduction in crop yields, and voluntary water restrictions in some communities.

Southwest Missouri received very little rainfall in June and July (25 to 50 percent of normal). At the same time, this region experienced very hot conditions (5 to 7 degrees above average temperature), which worsened the drought conditions for this part of Missouri.

On the U.S. Drought Monitor, southwest Missouri was abnormally dry (D0) by June 28, in moderate drought (D1) by July 26, and in severe drought (D2) by August 2 and has remained at this level for the past five weeks. The combination of high heat and low rainfall is especially damaging for agriculture production.

The Drought Impact Reporter states that most farmers in Barton, Dade, Jasper, and Vernon counties in Missouri are filing claims on their crops since drought and heat have stifled crop growth.

The most widespread drought conditions by state are found in Indiana (83 percent of the state's area), Illinois (79 percent), Kentucky (71 percent), Iowa (63 percent), and Missouri (59 percent). Illinois has the greatest area of severe drought, with 21 percent of the state classified as D2.