

Summer 2005 Seasonal Climate Summary

By John Denman

This past summer felt quite warm and drier than normal. However, this is true only when compared with the unusually cool and moist summer of 2004.

The tables below compare the average temperatures for June 1 through August 31 for both the summers of 2004 and 2005 for the NWS forecast office in Louisville and the Lexington and Bowling Green airports.

	Average High 1970-2000	Summer 2005 Averages	Summer 2005 Departure from Normal	Summer 2004 Averages
Louisville				
High:	85.4	87.2	+ 1.8	82.8
Low:	67.7	67.1	- 0.6	63.6
Mean:	76.5	77.1	+ 0.6	73.2
Days \geq 90	26	39	+ 13	8

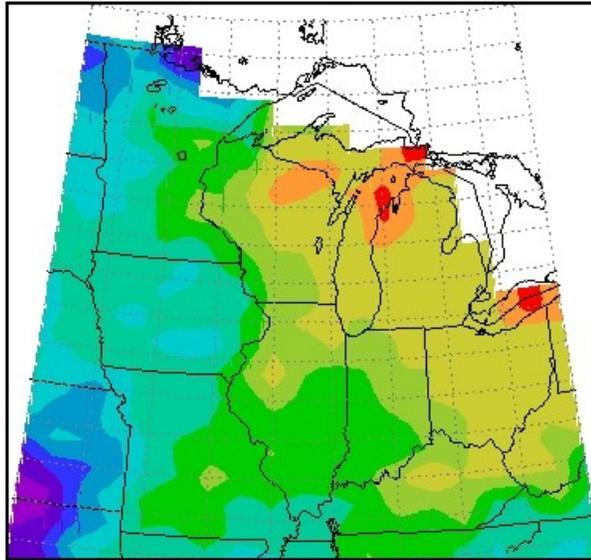
Lexington				
High:	84.3	87.2	+2.9	80.9
Low:	64.5	66.9	+2.4	62.6
Mean:	74.4	77.1	+2.7	71.7
Days \geq 90	17	37	+ 20	0

Bowling Green				
High	87.4	88.0	+ 0.6	83.7
Low:	65.6	67.7	+ 2.1	64.2
Mean:	77.5	77.9	+ 1.4	73.8
Days \geq 90	35	46	+ 11	9

A temperature of 90 degrees frequently is used as a yardstick to differentiate a hot summer day from a warm one. Note the tremendous difference in the number of 90 degree days between the last two summers. Lexington, for example, had no 90 degree days during the 2004 summer months compared with 37 this past summer.

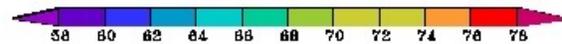
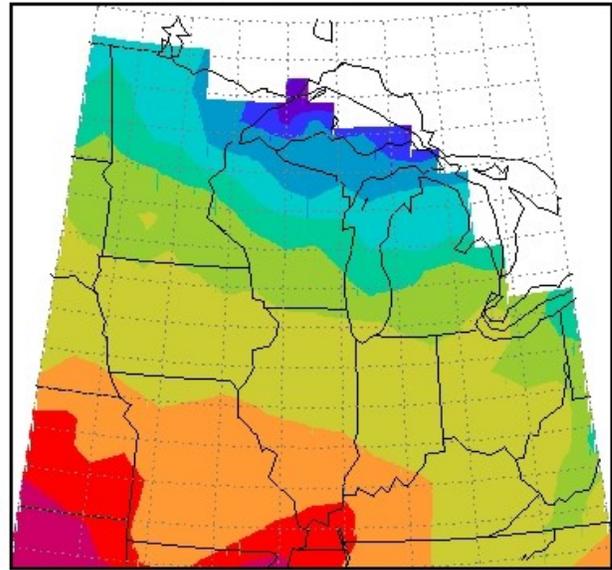
Below are maps showing the average temperature departure from normal across the Midwest for June-August 2005 (left) compared to the 1971-2000 June-August average daily temperatures (right). Note the unusual warmth across the Great Lakes (left). Summer 2005 was indeed one of the top 10 warmest on record across much of upper and central Michigan. Across Kentucky, the summer of 2005 was warm, but not excessively so. The greatest departures from normal (around 2.5 degrees) were found across the Bluegrass Region and the northeastern part of the state. These two areas also had less rainfall than the rest of Kentucky. The relative lack of rainfall contributed directly to this warmth, as less of the incoming solar radiation went into evaporating surface moisture.

Average Temperature Departure from Mean in Degrees F
June 1, 2005 to August 31, 2005



Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

June 1 to August 31
Average Daily Temperature (F)
Averaged from 1971 to 2000



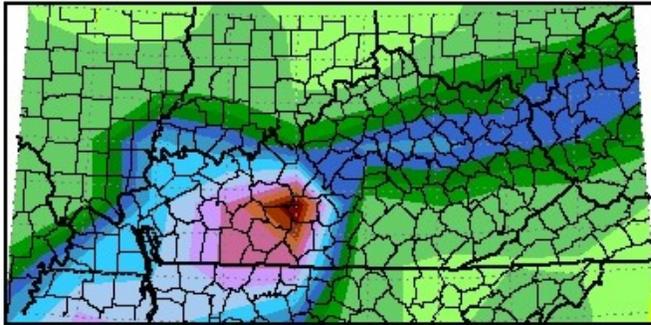
Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

Jun 1–Aug 31 2005	Average summer rainfall	Summer 2005 Averages	Summer 2005 Departure from Normal	Summer 2004 Averages
Louisville	11.47 in	12.16 in	+ 0.69	15.31 in
Lexington	13.16 in	11.43 in	-1.73	17.79 in
Bowling Green	12.19 in	14.63 in	+ 2.44	13.82 in

The table above shows the total rainfall amounts for June through August 2004 and 2005 for the three major cities in central Kentucky. The totals for 2005 are close to normal, but this is a little misleading. Much of this rain came during a 4-6 day period in late August. In general, the summer of 2005 was quite dry, with only sporadic episodes of rain.

The charts below show interesting aspects about this past summer's rainfall across Kentucky. The first chart indicates that over one half of Bowling Green's summer rain (over 7 inches) fell during a 6 day period in late August. Rainfall amounts around 4 inches also fell during this same period across Lexington and Louisville. Much of this rain was associated with the remnants of Hurricane Katrina, which greatly relieved drought conditions across the lower Ohio Valley. In addition, in early July, the remnants of Hurricane Dennis brought 1 to 3 inches of rain, as well as cool daytime highs in the mid 70s, across parts of central Kentucky and southern Indiana. Hurricanes probably played a greater role in our precipitation totals this summer than in the vast majority of past years.

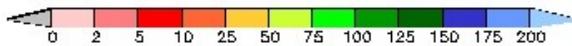
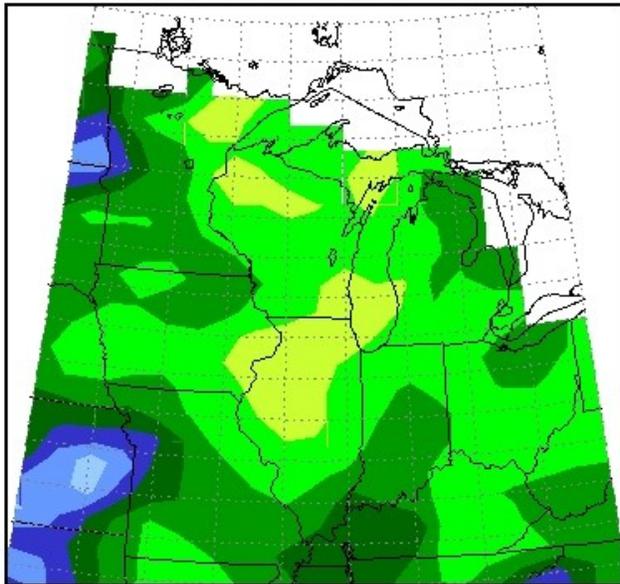
**Total Precipitation in Inches
August 25, 2005 to August 30, 2005**



Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

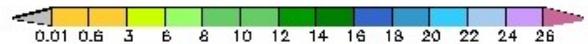
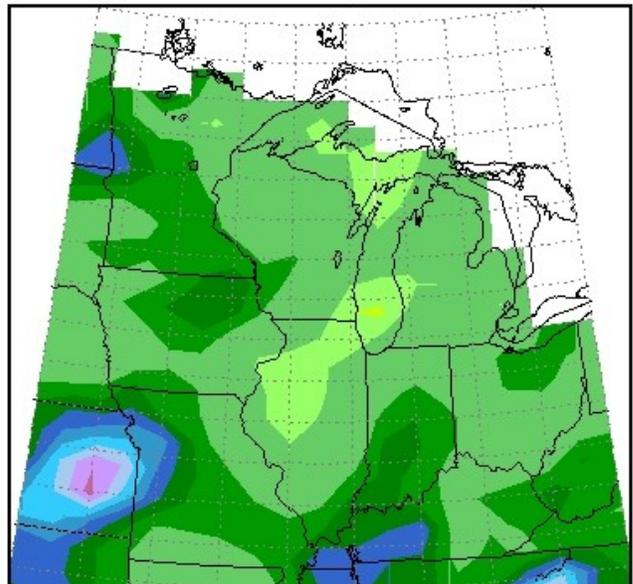
The two charts below show total Summer 2005 rainfall across the Midwest and Summer 2005 rainfall as a percentage of normal for the period 1971-2000. Across the Ohio Valley, eastern Kentucky had the least rainfall compared to a normal year, ranging from 80-100 percent, while western Kentucky had 14-18 inches of rainfall, or 125-150 percent of normal rainfall, again skewed by Katrina's remnants. Meanwhile, the severe drought across the nation's Corn Belt made headlines last summer. The charts reflect this relative lack of rainfall by showing the summer of 2005 percentages only 50-75 percent of normal over northern Illinois and eastern Iowa.

**Total Precipitation Percent of Mean
June 1, 2005 to August 31, 2005**



Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

**Total Precipitation in Inches
June 1, 2005 to August 31, 2005**



Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

City	Average Summer Rainfall	Jun 1-Aug 31 2005	Departure from Normal
Louisville	11.47 in	12.16 in	+ 0.69
Lexington	13.16 in	11.43 in	-1.73
Bowling Green	12.19 in	14.63 in	+2.44

In conclusion, despite possible perceptions to the contrary, the summer of 2005 was not all that atypical. Temperatures were slightly warmer than normal, especially across eastern Kentucky. Precipitation averaged out near normal, except across the Bluegrass Region and eastern parts of our state. However, the rainfall was highly sporadic, especially compared with the generous and well spaced rains during our summer of 2004.