



DROUGHT ADVISORY

www.isws.illinois.edu/hilites/drought

May 25, 2012

With this update, the ISWS is recommending a drought advisory for the central and southern portions of Illinois. This advisory classification indicates that drought impacts are not yet serious, but that the probability of experiencing noticeable water resource and/or agricultural impacts later this summer and fall has increased and is now approaching 50 percent in our estimation.

Throughout this spring, climatic and hydrologic conditions in central Illinois have been very dry, with below-normal precipitation amounts of 1 to 3 inches in the last 90 days (see Figure 1) and 6 to 10 inches dating back to the summer of 2011 (see Figure 2). This spring included much above-normal temperatures that have increased evaporation rates and caused soil moisture to be dry in the upper soil layers. Since February, streamflow levels throughout central Illinois have been below-normal to much-below normal for this time of year. Until recently, however, scientists at the ISWS believed there was ample opportunity for spring rainfalls to lessen or eliminate the dry conditions.

Over the last 4 weeks, rainfall in most portions of central Illinois has averaged between 3 and 4 inches, which is only slightly below normal. And while soil moisture increased and streamflows rose in response to the rains, the improvement in most places was modest. Shallow groundwater levels have increased only slightly during this time, there has been very little cumulative recharge to groundwater over the winter and spring, and several monitoring wells continue to report their lowest reading on record for this time of year.

Meanwhile, rainfall in southern Illinois has been 3 to 7 inches below normal this spring (see Figure 1), elevating drought concerns for that part of the state. In fact, the US Drought Monitor has a large portion of southern Illinois in the category of "abnormally dry" with the far southern counties in "moderate drought".

Although parts of northern Illinois are listed by the US Drought Monitor as being "abnormally dry," Figure 1 indicates that there is only a small short-term precipitation deficit and we do not foresee any near-term drought impacts for this region. Streamflow amounts are still in a normal range for most rivers and streams in northern Illinois with the exception of smaller streams in the Chicago metropolitan region.

With the current condition, if the central and southern Illinois regions enter a dry spell lasting 3-4 weeks there will clearly be detrimental impacts to both agriculture and stream levels, especially if the pattern of above-normal temperatures continues as well. On the other hand, if we receive average rainfall in a timely manner through the summer, it could likely be sufficient to maintain agricultural needs but not be sufficient to avoid very low streamflow levels. During late summer and fall, stream levels are ordinarily sustained by base flow from shallow groundwater resources; but, as mentioned, there has been very little recharge this year of those resources.

Most community water supply reservoirs are currently at full pool, but for some there is the possibility by early June that inflows may not be able to sustain these pools and drawdown will commence. During such an early onset of reservoir drawdown, and for supplies that tend to be vulnerable to drought, it is recommended that communities may want to be more aggressive than normal in issuing water-use restrictions. For water management agencies that can control reservoir levels, consideration may be given to holding reservoir levels higher than normal to delay the occurrence of low levels later this summer.

Accumulated Precipitation (in): Departure from Mean
February 23, 2012 to May 22, 2012

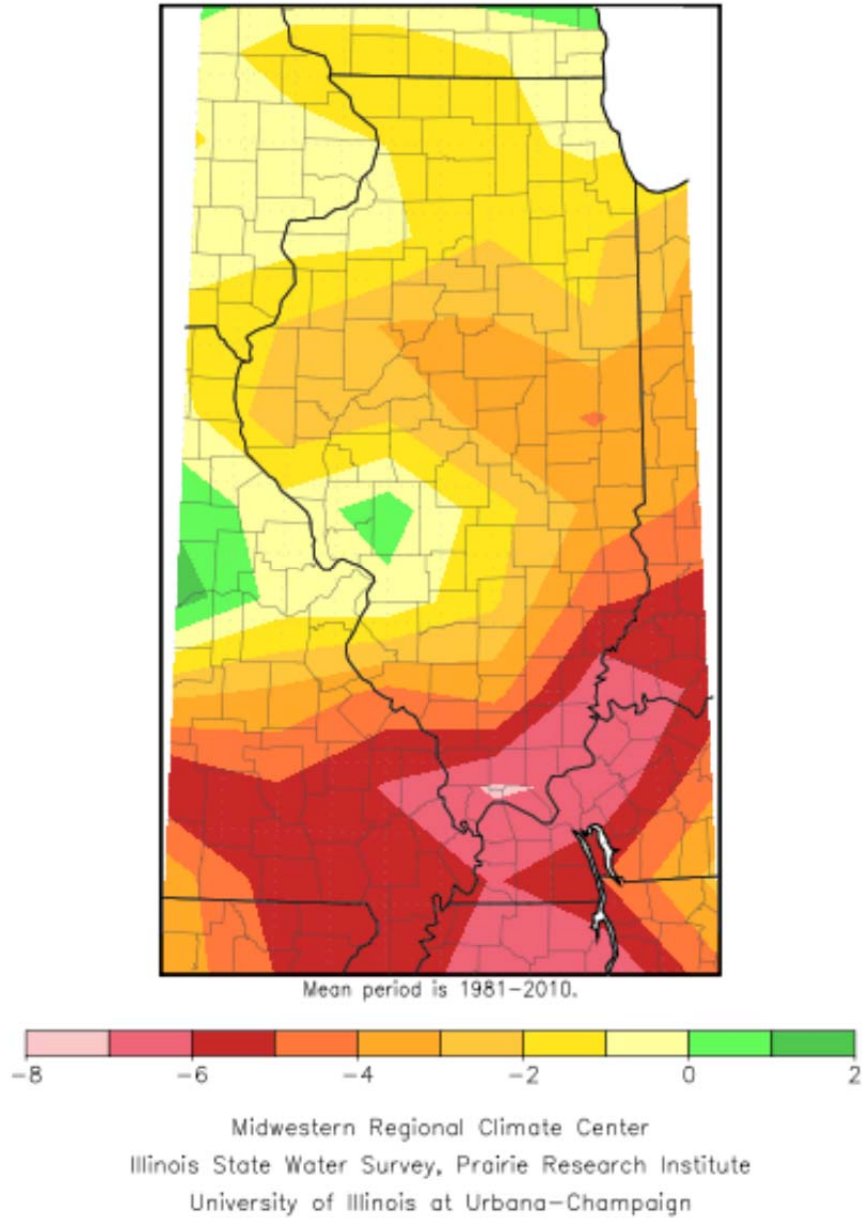


Figure 1. Precipitation departures from average in inches for the last 90 days (February 23, 2012, to May 22, 2012).

Accumulated Precipitation (in): Departure from Mean
July 1, 2011 to May 22, 2012

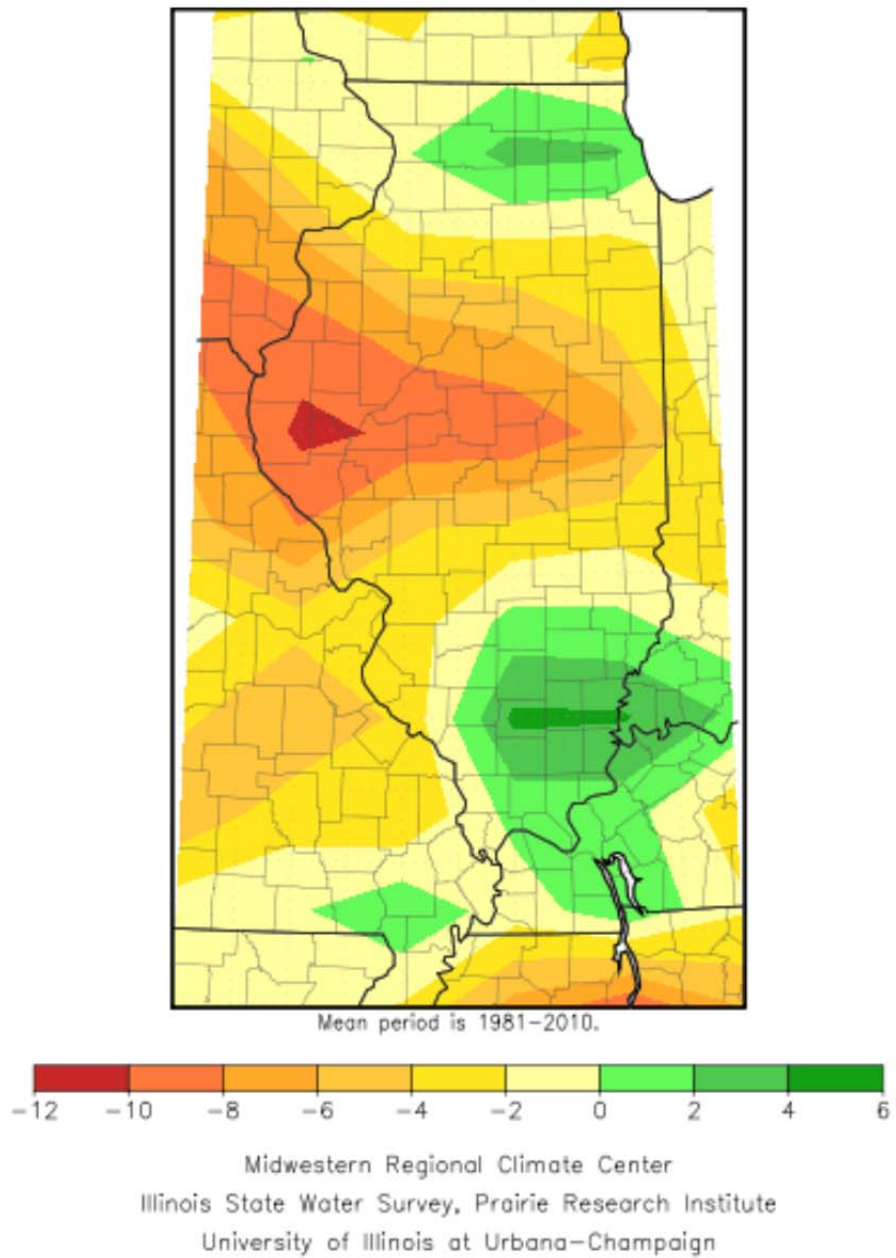


Figure 2. Precipitation departures from average in inches from July 1, 2011, to May 22, 2012.