



# DROUGHT UPDATE

**July 3, 2012**

## **Drought Conditions Expanding and Intensifying Across Illinois**

Illinois is falling deeper into drought conditions, as agricultural impacts are now becoming much more evident and hydrologic conditions continuing to deteriorate. There is very little precipitation in the forecast at a time when substantial rains are needed to avoid agricultural damages. Although drought conditions are greatest in southern Illinois and parts of central Illinois, the area of concern is also spreading to northern Illinois.

### Precipitation

Since the June 21 ISWS Drought Update, widespread rains of 0.5 to 1.5 inches fell in a band from the Quad Cities area to the Chicago area. Meanwhile, no significant rains fell over the rest of the state. The statewide average precipitation total from June 21 to July 3 was 0.5 inches, only 28 percent of normal. The statewide average temperature during this time was 78.0 degrees, 3.8 degrees above normal. Extremely hot weather occurred during the second half of this period with highs in the 90s and low 100s common across the state. At least 56 sites in Illinois broke their daily high temperature records on June 28 and 29.

The statewide average precipitation for June was 1.8 inches, which is 2.3 inches below normal and 43 percent of normal. It was the eighth driest June on record. June 1988 was the driest on record at 1.1 inches.

The statewide average precipitation for the first half of 2012 was 12.6 inches, making it the sixth driest on record. The first half of 1988 was slightly worse at 12.0 inches. The driest January-June was 1934 with only 10.3 inches.

Statewide precipitation deficits since January 1, 2012, (Figure 1) have grown to 4 to 6 inches across northern Illinois, 6 to 10 inches across central Illinois, and 10 to 12 inches or more in southern Illinois.

### Agricultural Conditions

According to the July 2 Illinois Weather and Crops Report, only 26% of the corn crop and 28% of soybeans are rated good to excellent, only about half of what was reported two weeks ago. The

lack of moisture in the top soil continues to be a primary concern, with 89% of the soils in the State considered to have short to very short moisture levels. Conditions in southern Illinois are the worst in the State, with nearly all soils considered to be very short on moisture in both the topsoil and subsoil.

### Streamflows

Figure 2 displays streamflow conditions throughout Illinois for the past 2 weeks, with flows expressed as percentiles comparing this year's June 18-July 2 period to the same period for all years of record at selected USGS gaging stations. Most streams south of I-80 are experiencing much-below normal flow levels (in the lowest 10th percentile for this time of year). The exceptions are the Kankakee River region and the western fringes of the State that have received greater amounts of rainfall over the last month. For the first half of June, most of Northern

Illinois streams were experiencing flows in the normal range, but conditions have deteriorated such that most streams in this region are now considered below normal. Although flows in many streams were below or much below normal for June, most of the current flow levels are yet close to their normal annual minimum levels. Thus, many environmental impacts associated with low stream levels have yet to be experienced this year. However, without substantial amounts of rainfall, stream levels will continue to fall in upcoming months.

### Community Water Supplies

Over the past winter and spring, the levels at Canton Lake have been at their lowest since the 1988-89 drought, and over the past month the lake has been more than 6 feet below normal. However, as of June 20, the City of Canton now obtains its water from a radial collector well near the Illinois River, and is no longer considered vulnerable to drought impacts.

Water levels at most community reservoirs in Illinois have begun to fall from their full or nearly-full levels in late spring. Several community reservoirs are already between 1.0 to 2.5 feet below full pool. Although the onset of lake drawdown is occurring early in the season for most of these reservoirs, and is significant in that regard, most community reservoir systems in Illinois were designed to provide water through multi-year drought episodes typically lasting 18 months or longer. Thus, most systems will not experience severe drought impacts for many months to come; although in many cases it may be in the community's interest to begin reducing water use in anticipation that reservoir levels will continue to fall through this year.

The ISWS has identified only two community reservoir systems that could potentially be vulnerable to a severe drought lasting fewer than 12 months: Decatur and Danville. Of these two systems, the ISWS considers Decatur to be the most at risk of experiencing shortages during a record or near-record drought condition ([www.isws.illinois.edu/data/ilcws/drought.asp](http://www.isws.illinois.edu/data/ilcws/drought.asp)), and Decatur will likely be the focus of water supply concerns over the next few months. Over the past month, the Lake Decatur level has fallen over 1 foot. At the current rate of decline, the lake will fall to an elevation of 613.0 by

mid-July and, according to the City's Drought Action Plan, the City will then implement voluntary water use restrictions and begin tapping its supplemental groundwater supplies. In anticipation of the drought, Danville has raised their lake's pool level by installing flash boards on their spillway.

### Shallow Groundwater

Communities that rely on shallow groundwater systems are also typically the first to experience drought impacts. Although the ISWS has begun receiving requests from water users looking for new sources of groundwater, we do not yet have specific reports of communities facing problems at this time or of water hauling.

The ISWS is in the process of obtaining water level records for the end of June from its shallow groundwater well network. The well data received so far indicates a continued decline in all wells from last month, and several wells continue to record the lowest-ever June reading for their periods of record.

### Federal Reservoirs

The two federal reservoirs on the Kaskaskia River, Lake Shelbyville and Carlyle Lake, are currently below their target pool level and declining. In the case of Lake Shelbyville, its target pool elevation was never reached this spring. Rend Lake, on the Big Muddy River, is currently 0.6 feet above their target pool but still well-below normal for this time of year. There are no expected water supply concerns for the federal reservoirs; although it is possible that lockages at the Kaskaskia Lock and Dam (downstream of Carlyle Lake) may be restricted if streamflows continue to decline.

Accumulated Precipitation (in): Departure from Mean  
January 1, 2012 to July 3, 2012

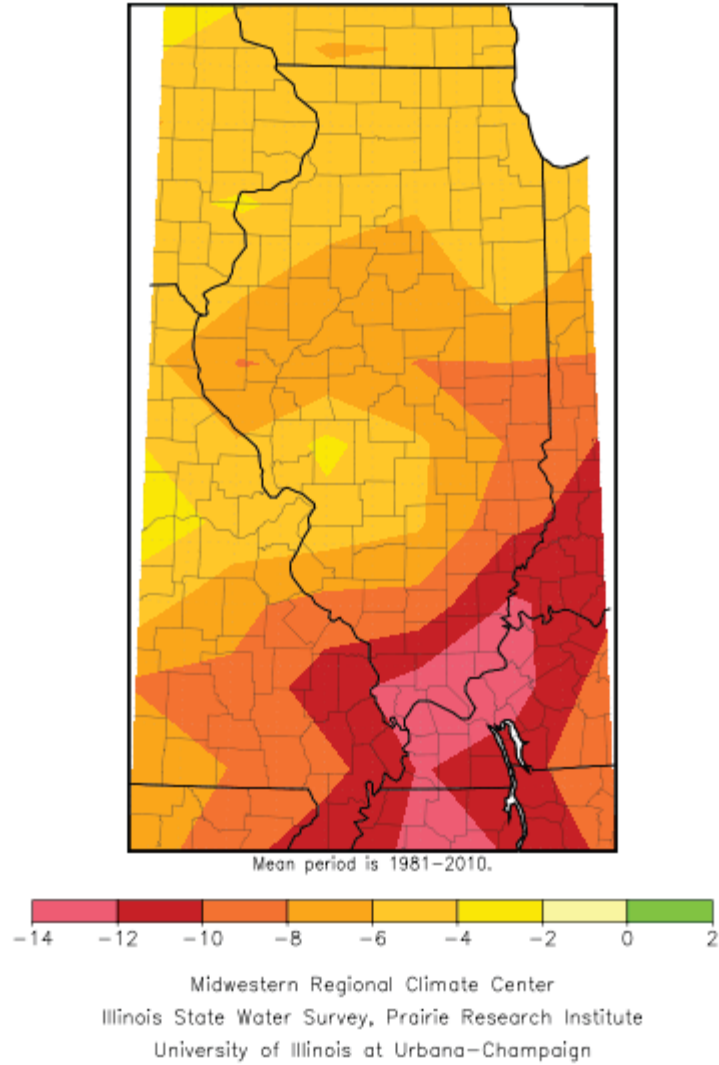
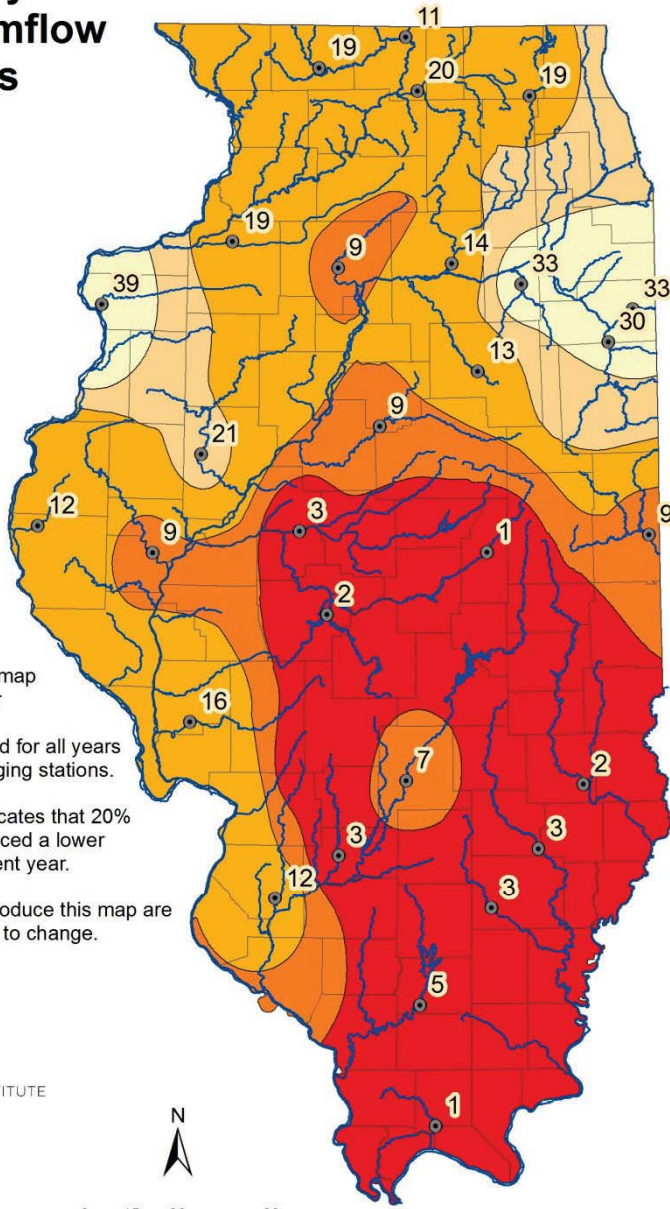
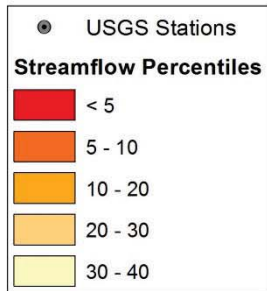


Figure 1. Precipitation deficits for Illinois from January 1 to July 3, 2012.

## June 18 - July 1 Average Streamflow Percentiles



The percentage values on this map describe Illinois streamflows for June 18, 2012 - July 1, 2012, as compared to the same period for all years of record at selected USGS gaging stations.

For example, a value of 20 indicates that 20% of the years on record experienced a lower total flow amount than the current year.

The streamflow data used to produce this map are provisional and may be subject to change.

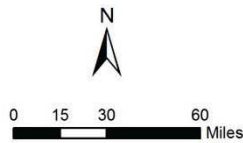


Figure 2. June 18 – July 1 average streamflow percentiles for Illinois.