

# SOIL MOISTURE SUMMARY

Illinois State Water Survey  
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## **Soil moisture in Illinois at the end of January was generally below normal near the surface and largely above normal in deeper layers.**

Precipitation during January was below to much below average across all of Illinois, especially in central areas, where roughly one-third of normal precipitation was recorded. Consequently, near-surface soil moisture values fell below normal (Figure 1). In the 0- to 6-inch layer, values ranged from 70 percent of normal at Monmouth to 98 percent at Perry and Springfield. Conditions in the 6- to 20-inch layer were a little more moist, varying from 72 percent at Springfield to 113 percent at Olney and Carbondale. Soil moisture in the 20- to 40- inch layer continued to reflect the wet year just past and was generally above normal: 69 percent at Springfield to 156 percent at Olney. Conditions varied the greatest in the 40- to 72-inch, ranging from 61 percent of normal at Freeport to 175 percent in southwestern Illinois. Overall, soil moisture in Illinois at the end of January was slightly above normal (Figure 2).

Compared to conditions at the end of December, changes in soil moisture at the end of January generally were small statewide (Table 1). Moisture in the 0- to 6-inch layer increased by 28 percent at Fairfield, but elsewhere varied by 7 percent or less. Decreases dominated in the 6- to 20- and 20- to 40-inch layers, but changes at all sites were 9 percent or less.

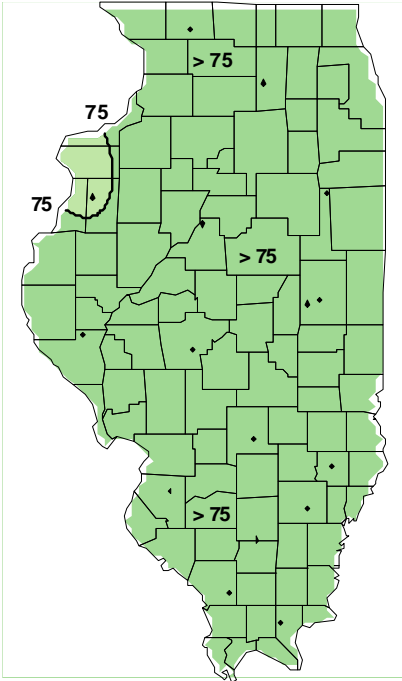
Extended climate outlooks issued by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Prediction Center for February call for a slight chance of above normal temperatures in southern Illinois and a large chance of above normal precipitation across the state. Outlooks for February through April call for a slight chance of above normal temperature statewide and a small chance of above normal precipitation in southeastern Illinois.

**Table 1. Soil Moisture in Various Layers on February 1, 2009**

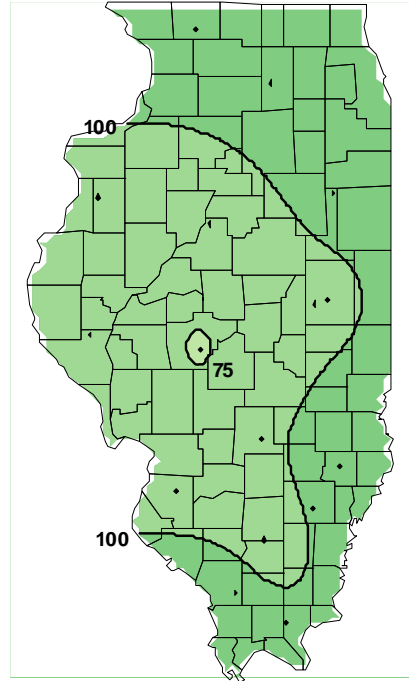
<i>Location</i>	<i>Feb 1 0 - 6 (inches)</i>	<i>Change from Jan 1 (%)</i>	<i>Feb 1 6 - 20 (inches)</i>	<i>Change from Jan 1 (%)</i>	<i>Feb 1 20 - 40 (inches)</i>	<i>Change from Jan 1 (%)</i>
Freeport (NW)	2.1	0	5.0	-2	7.4	-2
DeKalb (NE)	2.1	-4	5.2	-6	7.6	-2
Monmouth (W)	1.9	0	4.4	-9	7.1	-5
East Peoria (C)	2.2	0	5.1	-6	7.7	-2
Stelle (E)	2.0	-1	5.2	0	7.6	3
Champaign (E)	2.0	0	5.0	-3	7.6	-3
Bondville (E)	2.0	-5	5.0	-6	7.0	-4
Perry (WSW)	2.2	-4	5.1	-6	7.7	-1
Springfield (WSW)	2.2	-2	4.8	-7	7.3	-4
Brownstown (ESE)	2.1	-4	4.6	-8	7.3	-3
Olney (ESE)	2.1	-2	5.0	-3	7.5	2
Belleville (SW)	2.1	-3	4.8	-9	7.6	-4
Carbondale (SW)	2.0	-7	5.0	-3	7.7	-1
Ina (SE)	2.2	-7	5.0	-5	7.8	-2
Fairfield (SE)	2.0	-3	4.6	-12	7.3	1
Dixon Springs (SE)	2.2	28	5.0	-4	7.7	0



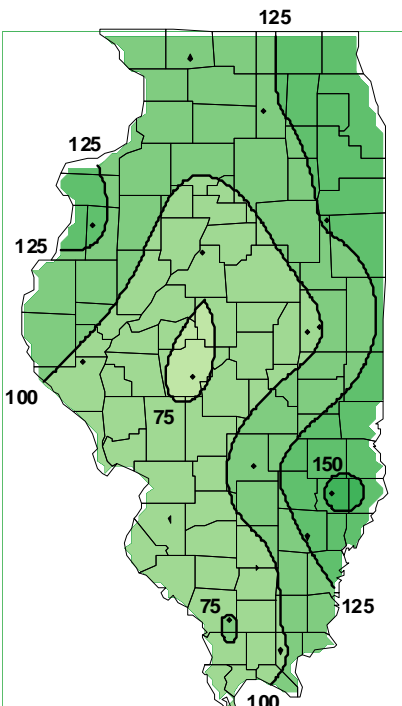
0 - 6 inch Soil Layer



6 - 20 inch Soil Layer



20 - 40 inch Soil Layer



40 - 72 inch Soil Layer

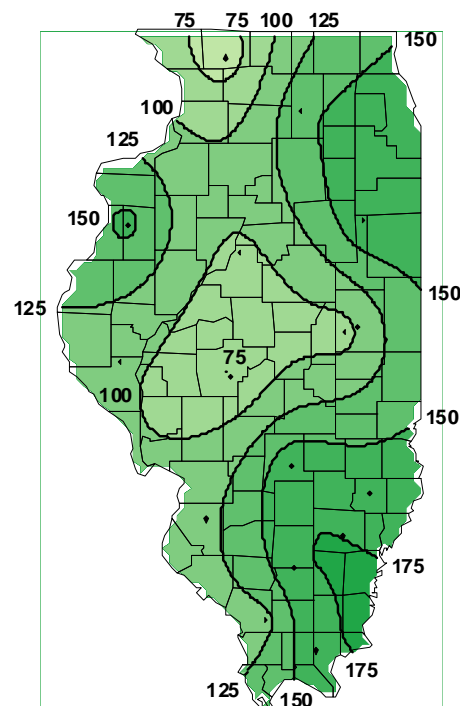


Figure 1. January 1, 2009 observed percent of normal soil moisture based on 1985-1995 mean.

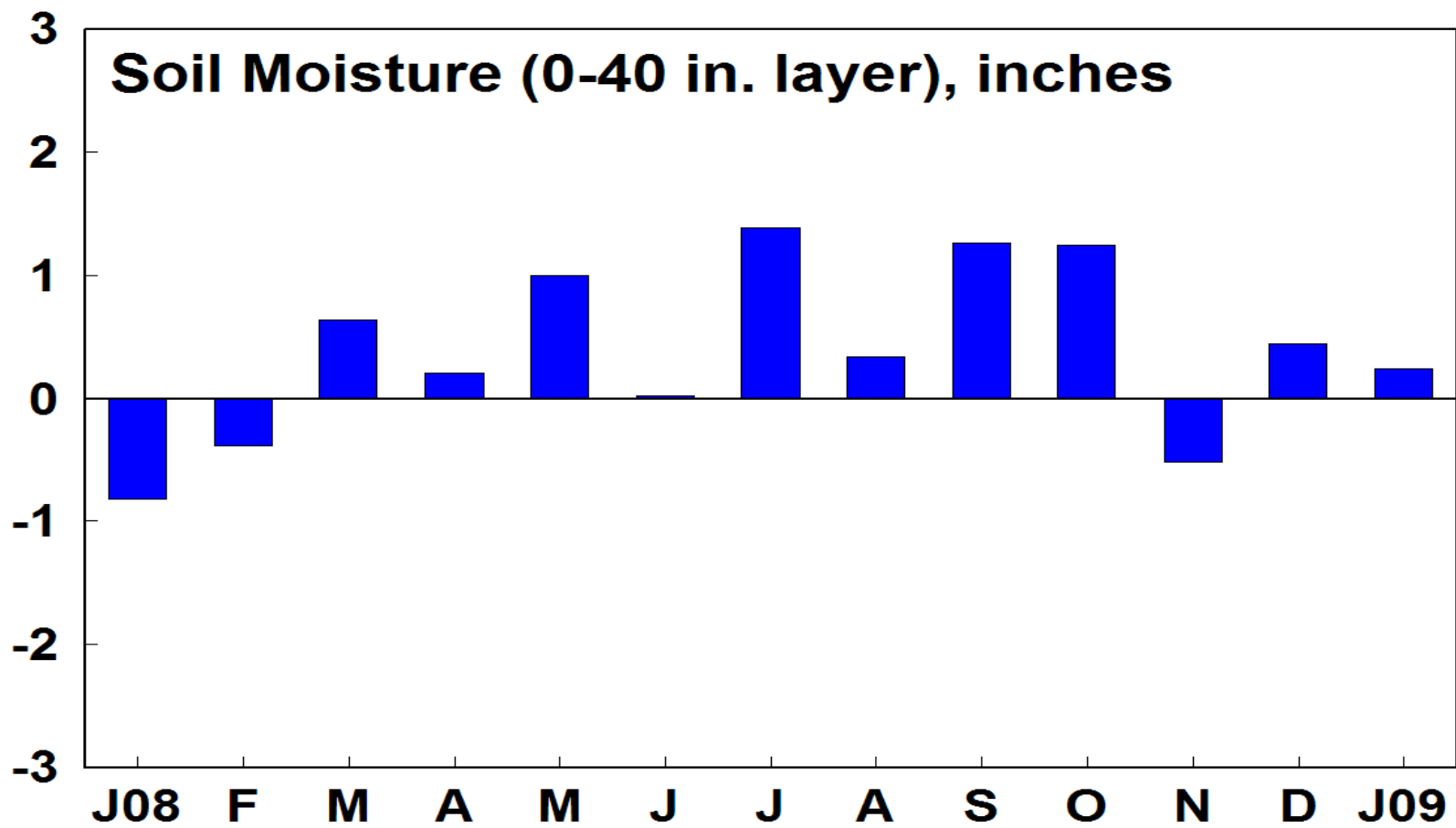


Figure 2. Illinois soil moisture departures from normal (1985-1995).