

SOIL MOISTURE SUMMARY

Illinois State Water Survey
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Soil moisture in Illinois at the end of January was normal near the surface with above normal and below normal areas in deeper layers.

Precipitation in Illinois during January was below average across Illinois. Regardless, frozen top soils kept near-surface soil moisture near normal levels (Figure 1). In the 0- to 6- and 6- to 20-inch layers, values ranged from 88 percent of normal at Carbondale to 112 percent at Bondville and 80 percent at Springfield to 143 percent at Olney, respectively. Soils in deeper layers were generally wet in eastern and western Illinois and drier in central and southwestern Illinois. Values ranged from 61 percent (East Peoria) to 175 percent (Olney) in the 20- to 40-inch layer and from 72 percent (Freeport) to 178 percent (Dixon Springs) in the 40- to 72-inch layer. Overall, soil moisture in Illinois at the end of January continued to be above normal (Figure 2).

Compared to conditions at the end of December, soil moisture in Illinois by the end of January had changed by only small amounts at all sites (Table 1). Soil moisture in the 0- to 6-inch layer decreased by 10 percent at Springfield, but changed by 6 percent or less elsewhere. Changes in the 6- to 20-inch layer were less than 7 percent at all sites. Changes in the 20- to 40-inch layer were less than 6 percent.

Extended climate outlooks issued by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Climate Prediction Center for February and for February-April call for a slight chance of below normal precipitation in far eastern Illinois and equal chances of above, below, and normal precipitation elsewhere. Temperature outlooks for both periods call for equal chances of above, below, and normal values.

Table 1. Soil Moisture in Various Layers on February 1, 2010

<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)	2.3	2	5.4	3	7.8	3
DeKalb (NE)	2.3	-2	5.4	-1	7.7	0
Monmouth (W)	2.2	0	4.8	-3	7.4	-2
East Peoria (C)	2.3	-1	5.1	0	7.4	0
Stelle (E)	2.4	5	5.5	1	7.8	0
Champaign (E)	2.3	2	5.1	1	7.1	0
Bondville (E)	2.3	0	5.4	1	7.9	0
Perry (WSW)	2.3	-2	5.2	-7	7.5	-6
Springfield (WSW)	2.0	-10	5.0	-2	7.5	-1
Brownstown (ESE)	2.3	-1	5.1	-3	7.5	3
Olney (ESE)	2.1	-6	5.2	-4	7.7	-2
Belleville (SW)	2.2	-5	5.3	-1	8.1	0
Carbondale (SW)	2.3	-2	5.5	2	7.9	0
Ina (SE)	2.3	-1	5.3	-2	7.3	-1
Fairfield (SE)	2.2	-6	5.2	-2	7.8	0
Dixon Springs (SE)	2.3	-2	5.4	-1	7.9	0



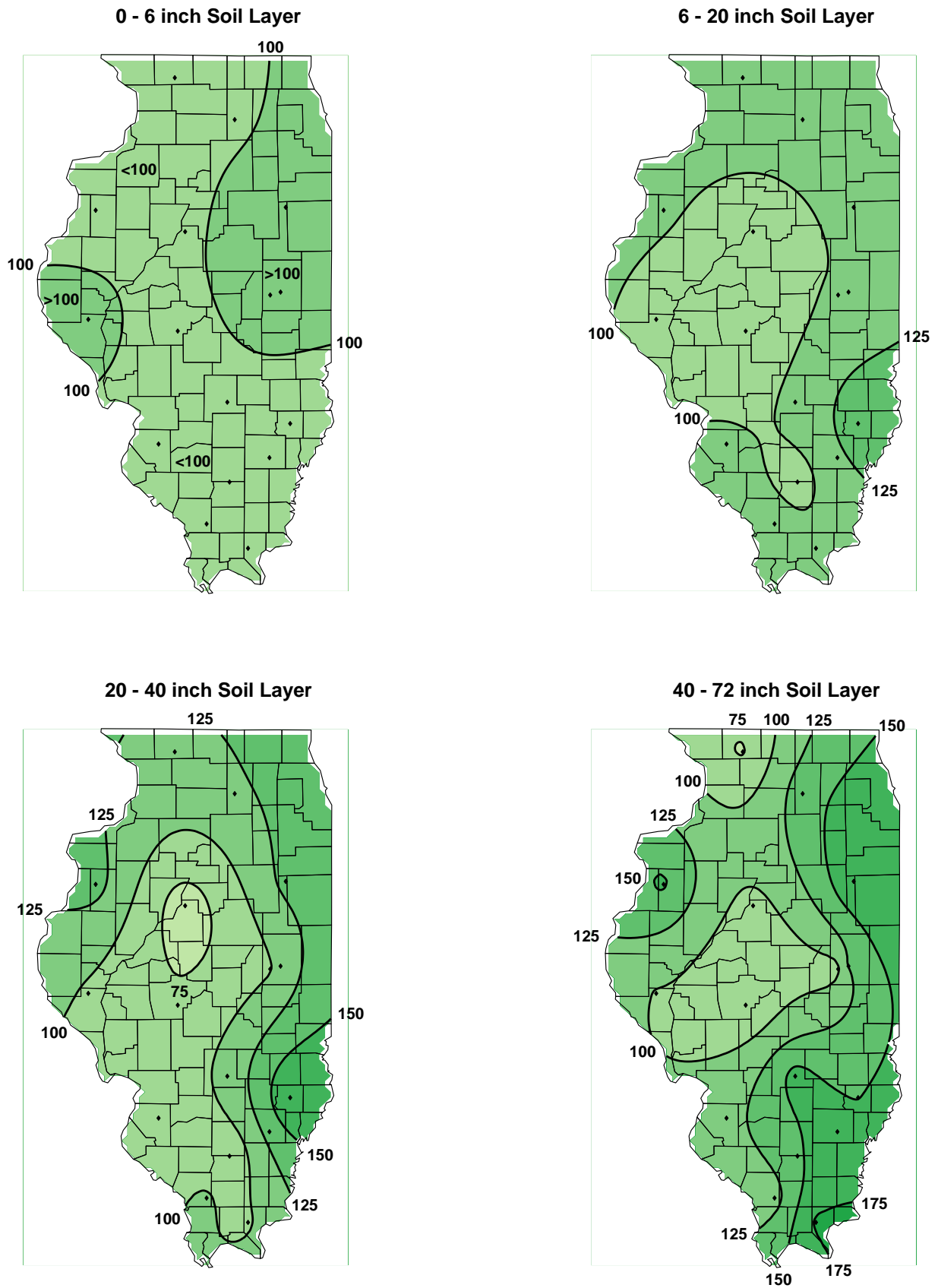


Figure 1. February 1, 2010 observed percent of normal soil moisture based on 1985-1995 mean.

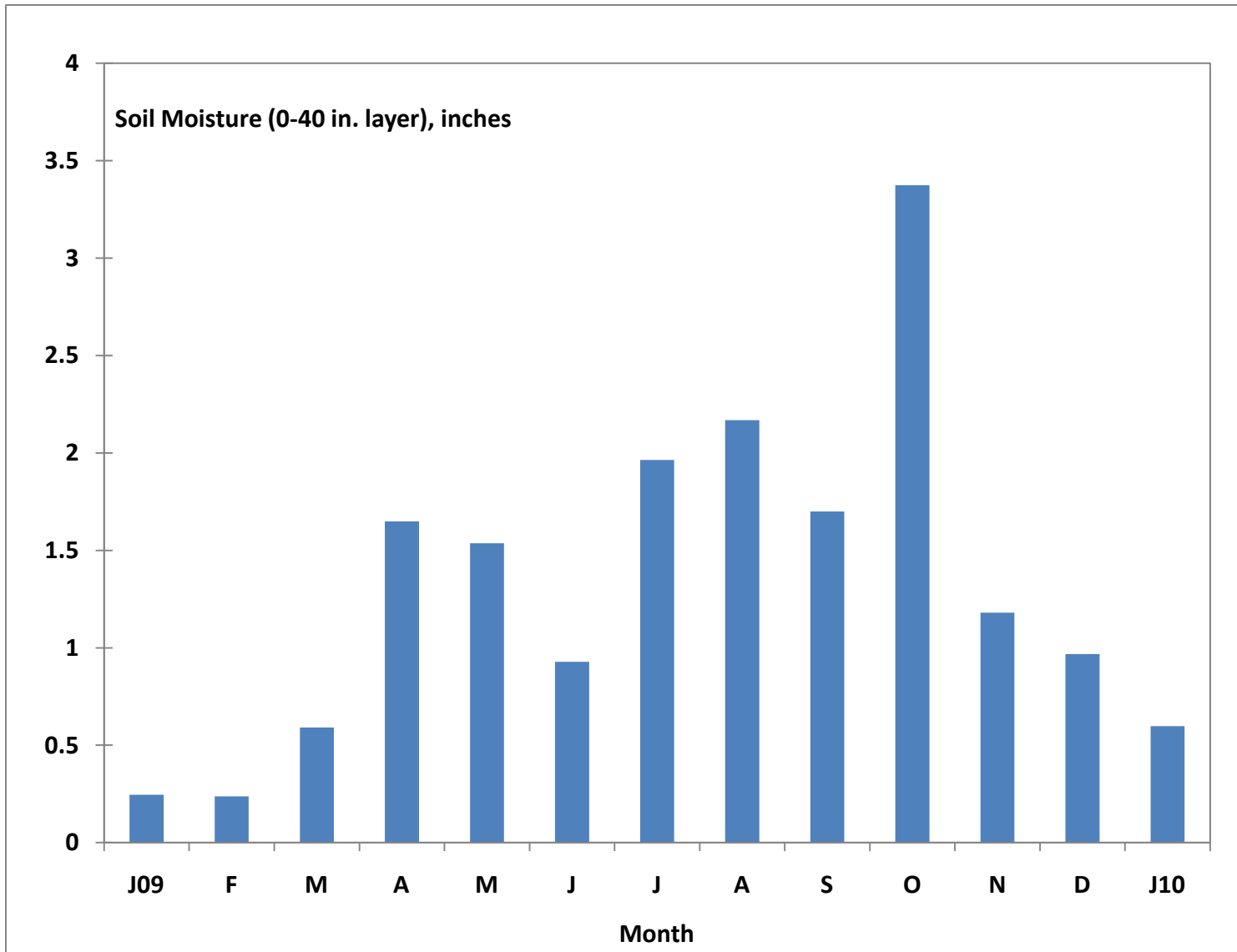


Figure 2. Illinois soil moisture departures from normal (1985-1995).