

ILLINOIS WATER AND CLIMATE SUMMARY

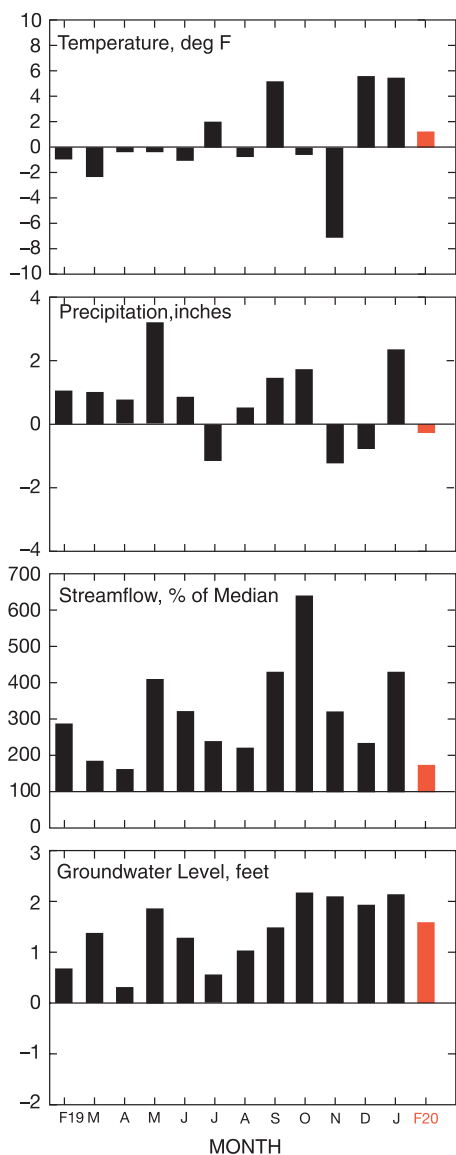


Figure 1. Statewide departures from normal.

February 2020 OVERVIEW

Temperatures were above and precipitation was below the long-term average in Illinois in February. Mean streamflow statewide was above the median for the month. Shallow groundwater levels were above the long-term depths.

Air temperatures averaged 32.1°F in February, 1.2° above the long-term average (Figure 1). The southeast crop reporting district (CRD) was the warmest with an average of 38.0°. The lowest regional temperature was 27.3°, reported by the northwest CRD.

Precipitation averaged 1.95 inches, 0.11 inches below the long-term average (Figure 1). The southeast CRD was the wettest with an average of 3.89 inches. The driest was the northwest CRD with 0.64 inches.

Mean provisional streamflow aggregated statewide was above the long-term median flow for February, about 180% of median (Figure 1). Monthly mean discharge values ranged from normal to above normal for February. The Illinois River remained above the local flood stages at Havana and Beardstown throughout February. The Ohio River was above the flood stage at Cairo for most of the month.

Water surface levels at the end of February were below the full pool or target level at 4 of 24 reporting reservoirs. At the end of February, Lake Shelbyville was 1.9 feet above the winter target level, Carlyle Lake was 5.7 feet above the winter target level, and Rend Lake was 4.6 feet above the spillway level. Lake Michigan's mean level exceeded the previous record high monthly mean level for February (in 102 years of record).

Shallow groundwater levels statewide were above normal this month with an average departure of 1.59 feet from the period of record (Figure 1). A decrease of 0.52 feet in departures was observed from the deviation in normal groundwater levels between January and February. Levels averaged 0.19 feet above January 2020 and 0.45 feet above February 2019 levels.

Weather/Climate Information

— KEVIN GRADY

The following description of temperatures, precipitation, snow, severe weather, and drought comes from data compiled by a number of networks that report to the National Oceanic and Atmospheric Administration (NOAA). These data are provisional and may change slightly over time.

February in Illinois was warmer than average across the state. The northern part of the state was drier and the southern part was wetter than average.

Temperatures averaged 32.1°F, 1.2° above the long-term average (Table 1a, Figure 2). February started very warm, continuing the above average trend from December and January. During the first four days of the month, temperatures statewide were 12° to 15° above average. Most stations in the southern two-thirds of the state recorded their monthly maximum temperatures during this time, generally ranging from the mid-60s to around 70°. The warmest reading of the month, 72°, occurred near Effingham (Effingham County) on February 4. Additionally, the National Centers for Environmental Information (NCEI) reported that 35 daily high maximum and 7 daily high minimum temperature records were broken over those four days. In northern Illinois, most stations recorded their monthly maximum during a warm period on February 23 and 24, with their highs generally only in the 50s.

Temperatures remained generally above average across Illinois until mid-month, when the first of multiple cold periods in the second half of February occurred. Most stations recorded their monthly minimum temperatures on either February 14 or 15, generally ranging from the single digits in southern Illinois to the negative teens in northern Illinois. The lowest reading of the month for Illinois was -18°, recorded near Galena (Jo Daviess County) on February 14. NCEI also reported that 32 daily low minimum and 19 daily low maximum temperature records were broken these two days (along with two more daily low maximums on February 29). Overall, from February 13 until the end of the month, most of Illinois was 3° to 5° below average. This partially offset the above average temperatures at the beginning of the month, but not completely, as most of the state was still about 1° above average for the whole month. Averages temperatures ranged from around 20°F in far northern Illinois to the upper 30s in southern Illinois.

Precipitation averaged 1.95 inches in February, 0.11 inches below the long-term average (Table 1a, Figure 2). The range of monthly precipitation totals in Illinois from north to south was quite large. In northwestern Illinois, a station near Fulton (Whiteside County) received only 0.09 inches in February, while in southern Illinois, a station near Cairo (Alexander County) received 7.34 inches, the highest monthly total. Most of the major rain systems in February tracked through southern Illinois, making the area quite wet and commonly resulting in

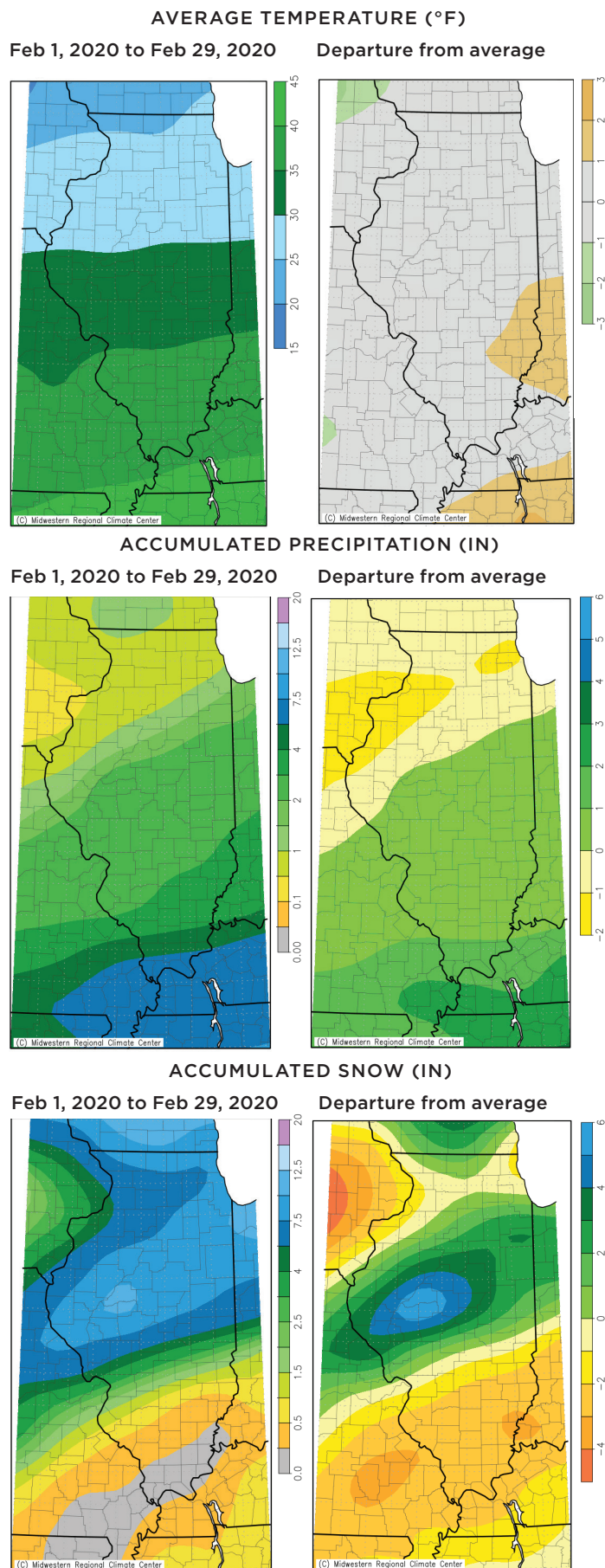


Figure 2 Illinois temperature, precipitation, snow and their departures from average for February 2020.

Source: cli-MATE, Midwestern Regional Climate Center.

<http://mrcc.illinois.edu/CLIMATE>, accessed on March 9, 2020.

precipitation totals of 3 inches or more, around an inch above average. This also left most of northern and northwestern Illinois relatively dry, with precipitation totals often less than an inch for the month, most of which fell as snow. These totals were more than an inch below average in some areas. Central Illinois received more moderate amounts of around 2 inches, close to slightly above average.

Snow: Except for far southern and southeastern Illinois, most of the state saw measurable snow in February (Figure 2). Snowfall totals in the northern half of the state were generally over 5 inches, including a broad corridor centered along I-55 between Chicago and Springfield where totals of 7 to 10 inches were common. The highest monthly snowfall total in Illinois of 15.0 inches was recorded at a station near Elburn (Kane County). An area including Cass, Menard, and Mason Counties saw the highest monthly departure from average of 5–6 inches, partly because of a mid-month storm. Away from these counties, most of the northern half of Illinois saw average to a couple of inches above average snowfall for February. Snowfall totals begin to drop off quickly a short distance south of I-72, only around 2 inches or so along the I-70 corridor, and 0.5 inches or less near most of I-64. Most areas south of I-70 saw two inches or more below average snowfall in February.

Severe weather reports: The NOAA Storm Prediction Center did not record any severe weather reports for February in Illinois.

Drought: The United States Drought Monitor reported Illinois free of drought and abnormally dry conditions throughout February (Figure 4), despite the below average precipitation in the northern part of the state. Soil moisture and streamflows remained near or above average, even across most of northern Illinois for most of February, coming off a wet January. There were also no reports of widespread impacts from the dry conditions.

Winter (December–February) was wetter and much warmer than average for most areas outside northern and northwestern Illinois, which were slightly drier than average. Seasonal temperatures averaged 33.2°F statewide, 4.1° above the long-term average (Table 1b) and the ninth warmest winter on record in Illinois (back to 1895–1896). After a cold mid-December, temperatures dramatically warmed up in the latter part of that month and generally remained above average through early February before dropping below average to end the season. Both December and January were the 14th warmest on record.

Many stations reported their seasonal highs around December 26 or 27 in the upper 50s to mid-60s, while some stations in southern Illinois reported seasonal highs in early February in the mid-60s to around 70°. Most stations reported their seasonal lows in mid-February generally ranging from the single digits in southern Illinois to the negative teens in northern Illinois. The warmest and coldest readings of the season in Illinois occurred 10 days apart: 72°F near Effingham (Effingham County) on February 4 and -18°F near Galena (Jo Daviess County) on February 14, a difference of 90°.

Winter precipitation averaged 8.13 inches, 1.31 inches above the long-term average (Table 1b, Figure 3) and the 21st wettest winter on record. A dry December statewide

was followed by a wet January, the 10th wettest January on record. February was then dry in the northern third of the state while remaining wet in the southern two-thirds. Overall, this led to areas generally to the north and northwest of the Illinois River receiving slightly below average precipitation for the winter. At the same time, most areas between the I-72 and I-64 corridors received 2 to 4 inches above average. Totals ranged from less than 5 inches in northwestern Illinois to 15 inches in southern Illinois. The largest seasonal total of 15.66 inches was recorded at a station near Cairo (Alexander County). Illinois also remained drought-free throughout the season.

Seasonal snowfall totals ranged from near 25 inches in northern Illinois to around 0.1 inch in southern Illinois (Figure 3). The highest recorded seasonal snowfall total of 25.9 inches occurred at a station near Davis (Stephenson County). The highest monthly snowfall totals occurred near the I-70 corridor in December, northwestern Illinois in January, and west central Illinois in February. West-central Illinois was also where the highest seasonal departures of up to 5 inches above normal occurred, with totals above 15 inches common. Areas of southern and extreme eastern Illinois saw seasonal totals more than 5 inches below average, with areas along Lake Michigan receiving more than 10 inches below the average seasonal snowfall.

Table 1.a Temperature and Precipitation for February 2020

	Temp. (°F)	Departure from long- term avg. (1981–2010)	Precip. (in)	Departure from long- term avg. (1981–2010)
Illinois	32.1	+1.2	1.95	-0.11
CRD 1 (northwest)	27.3	+1.1	0.64	-0.90
CRD 2 (northeast)	28.2	+1.1	0.72	-0.89
CRD 3 (west)	30.5	+0.9	1.02	-0.75
CRD 4 (central)	30.5	+1.0	1.85	+0.04
CRD 5 (east)	30.9	+1.6	1.75	-0.08
CRD 6 (west southwest)	33.3	+0.5	2.36	+0.30
CRD 7 (east southeast)	34.4	+1.5	2.57	+0.22
CRD 8 (southwest)	37.7	+1.3	3.23	+0.43
CRD 9 (southeast)	38.0	+1.7	3.89	+0.80

Data from NOAA's National Centers for Environmental Information, accessed 3/9/2020.

Table 1.b Temperature and Precipitation for Winter (December–February) 2019/2020

	Temp. (°F)	Departure from long- term avg. (1981–2010)	Precip. (in)	Departure from long- term avg. (1981–2010)
Illinois	33.2	+4.1	8.13	+1.31
CRD 1 (northwest)	28.9	+4.6	4.60	-0.40
CRD 2 (northeast)	29.8	+4.4	5.43	-0.05
CRD 3 (west)	31.6	+3.9	5.08	-0.55
CRD 4 (central)	31.9	+4.3	7.11	+0.97
CRD 5 (east)	32.1	+4.5	7.30	+1.02
CRD 6 (west southwest)	34.2	+3.5	9.57	+2.77
CRD 7 (east southeast)	35.3	+4.2	11.14	+3.26
CRD 8 (southwest)	38.0	+3.6	11.36	+2.29
CRD 9 (southeast)	38.6	+4.3	12.32	+2.30

Data from NOAA's National Centers for Environmental Information, accessed 3/9/2020.

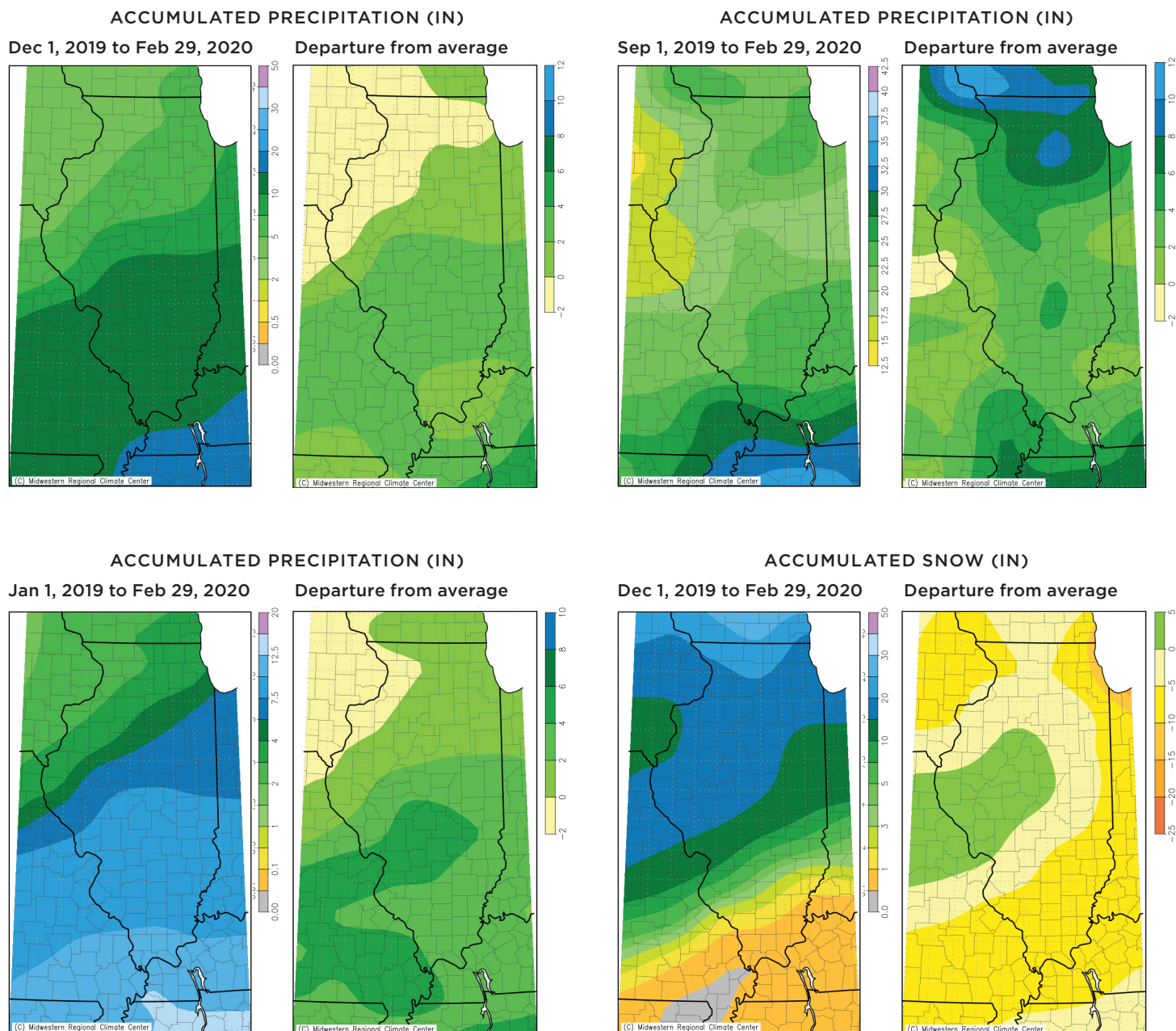
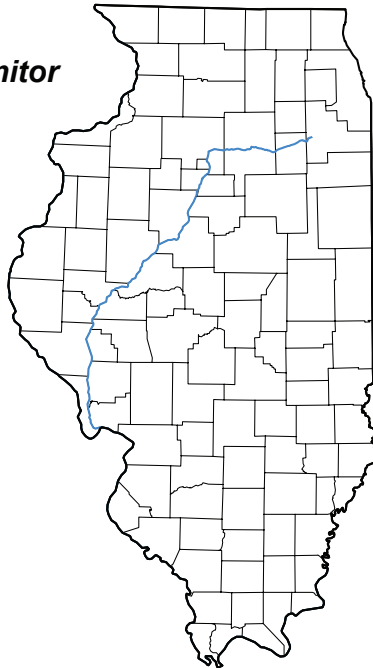


Figure 3. Illinois precipitation and precipitation departure from average for last 3 months (top left), last 6 months (top right), year-to-date (bottom left), and snow and snow departure from average for the last 3 months (bottom right). Source: cli-MATE, Midwest Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>. Accumulated Precipitation accessed on March 9, 2020 and Accumulated Snow accessed on March 10, 2020.

U.S. Drought Monitor Illinois



February 25, 2020
(Released Thursday, Feb. 27, 2020)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week 02-18-2020	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 11-26-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 12-31-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 10-01-2019	82.16	7.06	10.59	0.19	0.00	0.00
One Year Ago 02-26-2019	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Miskus
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Illinois Climate Network (ICN)

— JENNIE ATKINS

The Illinois Climate Network (ICN) collects hourly weather and soil information from 19 stations across the state. ICN data for February are presented in Table 2.

Wind speeds increased slightly in February to a monthly average of 7.6 mph, 0.5 mph higher than in January but 0.7 mph lower than the long-term average. ICN Bondville had the windiest month with a station average of 11.6 mph. The station also recorded the month's highest wind gust, 35.5 mph, on February 4.

Air temperatures fluctuated greatly during the month. Station highs ranged from the 50s in the north to the 70s in southern Illinois. However, 12 stations reported lows below zero. Overall, ICN had a network average of 31.5° for the month, 0.3° lower than in January and 0.3° below the long-term average. ICN Belleville reported the month's highest temperature measuring 73.2° on February 2. The month's lowest was -15.6° at ICN Freeport on February 14.

Soil temperatures remained warmer than usual in February. Temperatures averaged in the mid-30s at all depths, 1° to 1.5° higher than the long-term averages. All depths reported temperatures below freezing. Under bare soil, temperatures ranged from 19.0° to 58.9° at depths of 2 inches and 26.7° to 53.7° at 4 inches. Temperatures under sod ranged from 31.3° to 50.7° at 4 inches and 31.3° to 50.7° at 8 inches.

Most of the network received higher than normal **precipitation** in February. Two-thirds of the stations recorded totals that were greater than their long-term averages. Five stations in northern and western Illinois, however, had monthly totals of less than 1 inch. ICN DeKalb reported only 0.47 inches, 25% of normal. Overall, the network averaged 2.33 inches for the month, or 0.40 inches greater than the long-term average.

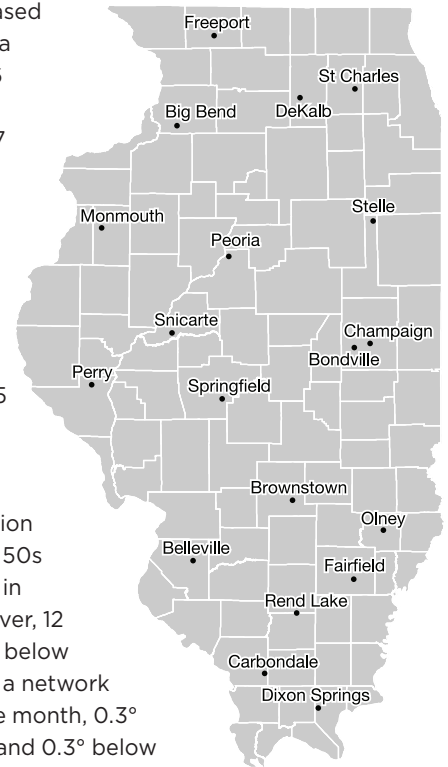


Figure 4. U.S. Drought Monitor report for Illinois. Source: U.S. Drought Monitor. Author: David Miskus, NOAA/NWS/INCEP/CPC <http://droughtmonitor.unl.edu>, accessed on March 9, 2020.

Table 2. Data from the Illinois Climate Network (ICN), February 2020

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m ²)
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	8.1	211.7	30.3	73.2	4.9	36.8	278.7
Big Bend	7.9	207.1	27.0	59.1	-7.9	28.8	305.4
Bondville	11.6	189.6	35.5	65.4	-7.2	29.9	293.4
Brownstown	7.6	191.8	28.9	66.8	2.5	34.2	256.3
Carbondale	7.3	216.8	33.1	67.4	8.3	38.2	289.7
Champaign	5.6	184.7	28.3	65.8	-5.1	30.7	232.8
DeKalb	9.4	209.7	35.2	54.8	-11.1	25.3	322.5
Dixon Springs	4.9	196.6	24.4	71.1	8.5	38.2	256.3
Fairfield	7.3	195.9	26.3	67.0	6.5	36.1	269.8
Freeport	6.2	212.1	25.3	50.2	-15.6	24.4	323.8
Monmouth	10.7	197.7	34.9	60.2	-10.8	28.2	321.0
Olney	6.1	177.9	25.5	68.7	5.5	35.6	268.7
Peoria	6.9	191.4	26.5	65.1	-10.6	29.1	270.8
Perry	5.8	205.3	25.4	64.1	-12.0	30.3	279.8
Rend Lake	5.3	205.0	23.4	70.4	8.4	37.4	265.2
Snicarte	9.0	186.3	34.0	60.4	-9.4	29.8	289.7
Springfield	6.4	189.2	24.9	64.9	-3.5	31.7	267.4
St. Charles	7.0	204.0	29.3	52.7	-10.5	26.7	286.7
Stelle	10.7	207.5	34.2	56.7	-6.3	27.9	266.6

Table 2. continued

Station	Average Relative Humidity (%)	Total Precip. (in)	Average Dew Point (°F)	Total Potential Evapotranspiration (in)	Average Soil Temperature (°F) at			
					4" under Sod	8" under Sod	4" under Bare Soil	2" under Bare Soil
Belleville	77.8t	2.35	29.9	1.55	38.9	39.0	36.0	39.9
Big Bend	76.1	0.65	21.8	1.42	33.3	32.6	33.6	35.1
Bondville	86.8	2.34	26.2	1.19	34.4	37.5	35.3	35.0
Brownstown	78.5	2.77	27.8	1.34	39.2	38.2	36.5	36.1
Carbondale	79.7	3.90	31.7	1.60	43.0	41.3	41.4	40.8
Champaign	83.0	2.82	25.9	1.11	37.0	37.9	36.1	35.7
DeKalb	81.1	0.47	20.1	1.24	33.7	33.3	35.1	33.5
Dixon Springs	76.1	5.92	30.5	1.45	42.3	42.8	41.5	43.2
Fairfield	79.0	2.84	29.7	1.45	40.2	40.2	39.0	41.7
Freeport	74.0	0.96	17.0	1.34	34.4	32.8	31.5	31.3
Monmouth	79.7	0.57	22.4	1.40	32.2	32.3	32.8	31.6
Olney	76.3	3.23	28.4	1.46	39.0	39.5	41.9	41.5
Peoria	75.8	1.75	21.9	1.34	35.4	33.2	33.9	33.6
Perry	78.9	2.27	24.0	1.32	36.2	36.5	36.0	36.2
Rend Lake	72.7	3.41	28.8	1.55	40.2	41.2	42.0	41.5
Snicarte	76.0	1.85	22.8	1.41	35.0	35.4	33.5	34.9
Springfield	77.4	3.15	25.1	1.27	36.3	35.6	35.4	35.3
St. Charles	75.0	0.98	19.4	1.31	33.8	34.3	32.9	31.5
Stelle	82.5	2.02	23.0	1.15	33.3	33.1	34.8	33.1

M = Missing data.

Surface Water Information

— BILL SAYLOR

River and stream discharge and stage data are obtained from gaging stations operated by the U.S. Geological Survey (USGS) or the U.S. Army Corps of Engineers (USACE). The USGS gaging station network is supported, in part, by the Illinois Department of Natural Resources Office of Water Resources, the Illinois State Water Survey (ISWS), and the USACE. Provisional discharge data are obtained from the USGS.

Table 3 lists the provisional peak stage for the current month compared to flood stage at selected streamgaging stations located on the Illinois, Mississippi, and Ohio Rivers. Peak stage is represented here by morning readings posted daily by the USACE or the National Weather Service. Flood stage is defined locally for each gage location.

The Illinois River remained above the local flood stages at Havana and Beardstown throughout February. The Ohio River was above the flood stage at Cairo most of the month.

Provisional monthly mean flows for this month for 26 streamgaging stations located throughout Illinois are shown in Table 4 compared to statistics of past records of monthly mean flows for the same month.

Beginning with this issue of *IWCS*, the monthly mean streamflow values for the subject month from past years of record used to calculate the statistics presented in Table 4 are retrieved automatically from USGS online data services following the end of the month. Among other limitations, monthly data used do not include months from which data are considered “incomplete” by USGS criteria. Years of record values in Table 4 represent the number of past monthly values included in the Table 4 statistics. The USGS approved data record of a given station might not be continuous to date, including in recent years. Additional source data may be available from USGS. *IWCS* readers are reminded that Table 4 monthly streamflow data are both provisional and illustrative; this summary is not an official data record and is not intended for use in any formal hydrologic analysis.

The statewide percent of historical mean flow and percent of historical median flow are calculated by dividing the sum of the average flows this month at stations in Table 4 by the sum of the historical mean and median flows calculated for the month, respectively, at the same stations. This method is intended to weight individual observations proportionately in the aggregate comparison. (The Illinois River and Rock River stations are excluded from the statewide calculation because other rivers listed in Table 4 contribute to their flow.)

Mean provisional flow aggregated statewide, using the available monthly mean data shown this month in Table 4, was above the median value for February (approximately 180% of the median) and above the mean for February (approximately 145% of the mean). Monthly mean discharge values ranged from normal to above normal for February.

Water-Supply Lakes and Major Reservoirs. Table 5 lists reservoirs in Illinois, their normal pool or target water surface elevation, and other data related to observed variations in

water surface elevations. Reservoir levels are obtained from a network of cooperating reservoir operators who are contacted each month by ISWS staff for the current water levels. Reservoir levels are reported in terms of their difference from normal pool (or target level). The average of the month-end readings for the period of record is reported in terms of the difference from normal pool or target level (column 6 of Table 5), and the number of years of record for each reservoir also is given (column 7). Most reservoirs serve as public water supplies, with the exceptions noted in the last column.

Compared to end-of-January water levels at 23 reservoirs for which levels were reported last month and this month, reported end-of-February water levels were lower at 5 reservoirs, higher at 4 reservoirs, and about the same as last month at 14 reservoirs. For the 24 reservoirs with measurements reported at the end of February, water levels were below normal target pool or spillway level at 4 reservoirs, above normal target pool or spillway level at 14 reservoirs, and at about full pool level at 6 reservoirs.

Correction to IWCS January 2020 Table 5. Please note that the monthly pumpage values in the far righthand column of Table 5 in the January 2020 issue of the *Illinois Water and Climate Summary* were December 2019 reported pumpage values, rather than November pumpage as titled. November 2019 reported pumpage values were published in the December 2019 issue of *IWCS*.

Major Reservoirs. Compared to water levels at the end of January, at the end of February the water level at Lake Shelbyville was 8.4 feet lower, Carlyle Lake was 5.7 feet lower, and Rend Lake was 0.5 feet lower. At the end of February, Lake Shelbyville was 1.9 feet above the winter target level, Carlyle Lake was 5.7 feet above the winter target level, and Rend Lake was 4.6 feet above the spillway level.

Great Lakes. Current month mean and end-of-month values are provisional and are relative to International Great Lakes Datum 1985. The February 2020 mean level for Lake Michigan was 581.5 feet. The monthly mean level one year ago (February 2019) was 580.1 feet. The long-term average lake level for February is 578.4 feet, based on 1918-2019 data. In this period of record, the lowest mean level for Lake Michigan for February occurred in 1964 at 576.1 feet, and the highest mean level for February occurred in 1986 at 581.1 feet. The month-end level of Lake Michigan was 581.4 feet. All values are provided by the U.S. Army Corps of Engineers Detroit District.

Table 3. Peak Stages for Major Rivers during February 2020

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	8.6	04
	La Salle	224.7	20	19.0	04
	Peoria	164.6	18	16.4	06
	Havana	119.6	14	16.4	01
	Beardstown	88.6	14	17.1	01
	Hardin	21.5	25	24.0	11
Mississippi	Dubuque	579.9	17	13.2	02
	Keokuk	364.2	16	9.0	05
	Quincy	327.9	17	13.5	05
	Grafton	218.0	18	16.5	06
	St. Louis	180.0	30	22.0	07
	Chester	109.9	27	24.4	08
	Thebes	43.7	33	30.8	13
Ohio	Cairo	2.0	40	51.6	22

Notes:

* River mile and flood stage from *River Stages in Illinois: Flood and Damage Data*, Illinois Department of Natural Resources, Office of Water Resources, August 2004 (and Addendum, February 2007).

**Peak stage based on daily a.m. readings, not instantaneous peak. Stage data obtained from U.S. Army Corps of Engineers.

Table 4. Provisional Mean Flows, February 2020

Station	Drainage area (sq mi)	Years of record*	2020 mean flow (cfs)	Long-term flows*		Flow condition	Percent chance of exceedence	Days of data this month
				Mean (cfs)	Median (cfs)			
Rock River at Rockton	6363	80	6,348	4,203	3,486	above normal	17	29
Rock River near Joslin	9549	80	9,932	7,009	5,854	above normal	27	29
Pecatonica River at Freeport	1326	104	1,360	1,156	902	normal	35	29
Green River near Geneseo	1003	83	1,322	799	695	above normal	19	29
Edwards River near New Boston	445	85	422	383	306	normal	36	29
Kankakee River at Momence	2294	105	3,477	2,623	2,537	above normal	22	29
Iroquois River near Chebanse	2091	95	2,937	2,630	2,107	normal	33	29
Fox River at Dayton	2642	105	3,543	2,172	1,915	above normal	19	29
Vermilion River at Pontiac	579	77	811	546	390	above normal	25	29
Spoon River at Seville	1636	105	1,720	1,472	1,336	normal	34	29
LaMoine River at Ripley	1293	98	1,199	1,042	745	normal	36	29
Bear Creek near Marceline	349	75	422	266	168	above normal	21	29
Mackinaw River near Congerville	767	75	1,023	678	531	above normal	27	29
Salt Creek near Greenview	1804	78	3,022	1,729	1,349	above normal	19	29
Sangamon River at Monticello	550	108	957	601	443	above normal	25	29
South Fork Sangamon near Rochester	867	69	1,901	877	602	above normal	14	28
Illinois River at Valley City	26,743	81	43,679	25,387	24,000	above normal	13	29
Macoupin Creek near Kane	868	91	1,520	746	464	above normal	16	29
Vermilion River near Danville	1290	98	1,889	1,519	1,072	normal	32	29
Kaskaskia River at Vandalia	1940	50	5,116	2,769	2,365	above normal	15	29
Shoal Creek near Breese	735	77	1,125	899	583	normal	32	29
Embaras River at Ste. Marie	1516	108	2,634	1,954	1,600	normal	32	29
Skillet Fork at Wayne City	464	102	973	664	506	above normal	25	29
Little Wabash River below Clay City	1131	105	2,260	1,542	1,180	above normal	24	29
Big Muddy River at Plumfield	794	48	1,731	1,064	1,068	above normal	14	29
Cache River at Forman	244	97	N/A	502	433	N/A	N/A	N/A

Notes:

Source streamflow data are obtained from the U.S. Geological Survey. N/A = not available (e.g., due to ice or equipment problems).

Much below normal flow = 90-100% chance of exceedence.

Below normal flow = 70-90% chance of exceedence.

Normal flow = 30-70% chance of exceedence.

Above normal flow = 10-30% chance of exceedence.

Much above normal flow = 0-10% chance of exceedence.

*As calculated from past monthly mean flow values retrieved from U.S. Geological Survey (USGS) data services this month.

Table 5. Reservoir Levels in Illinois, February 2020

Reservoir	County	Normal pool or target level (feet)	Current level difference from normal or target	Monthly change (feet)	Average difference from normal or target (feet)	Years of record	January reported pumpage (million gallons)
Altamont	Effingham	582.0	+0.1	0.0	-1.1	36	5.5
Bloomington	McLean	719.5	+0.3	0.0	-0.9	33	N/A
Carlinville	Macoupin	571.1	+0.2	0.0	-0.2	34	23.0
Carlyle ⁽¹⁾	Clinton	443.0	+5.7	-5.7	+1.7	42	N/A
Decatur ^(1,3)	Macon	612.5	+0.6	+0.6	+0.4	36	N/A
Evergreen ⁽⁴⁾	Woodford	720.0	+0.1	0.0	-1.3	29	N/A
Glenn Shoals ⁽²⁾	Montgomery	590.0	0.0	0.0	+0.2	25	w/Hillsboro
Highland	Madison	500.0	+0.5	0.0	+0.1	31	29.1
Hillsboro ⁽²⁾	Montgomery	589.0	N/A	N/A	+0.1	24	40.8
Jacksonville ⁽²⁾	Morgan	644.0	N/A	N/A	-0.4	17	w/Mauvaise Terre
Kinkaid	Jackson	420.0	-1.0	-0.6	0.0	31	53.2
Lake of Egypt	Williamson	500.0	N/A	N/A	+0.2	24	N/A
Mattoon	Coles	632.0	0.0	0.0	-0.1	21	w/Paradise
Mauvaise Terre ⁽²⁾	Morgan	588.5	N/A	N/A	+0.1	22	no meter
Mt. Olive (new)	Macoupin	600.0	N/A	N/A	-0.5	13	w/Mt. Olive (old)
Mt. Olive (old)	Macoupin	654.0	0.0	N/A	-0.2	22	4.8
Pana	Christian	641.6	+0.2	+0.1	-0.6	34	N/A
Paradise	Coles	685.0	0.0	0.0	-0.1	29	60.3
Paris (east) ⁽⁵⁾	Edgar	660.0	+0.3	+0.2	+0.2	9	Not PWS
Paris (west) ⁽⁵⁾	Edgar	660.1	+0.3	+0.2	+0.2	9	w/Paris (east)
Raccoon ⁽¹⁾⁽⁵⁾	Marion	477.0	+0.3	-0.2	0.1	12	91.6
Rend	Franklin	405.0	+4.6	-0.5	+2.9	42	N/A
Salem ⁽³⁾	Marion	546.5	-0.1	0.0	-0.3	24	23.0
Shelbyville ⁽¹⁾	Shelby	594.0	+1.9	-8.4	+2.9	42	Not PWS
Sparta ⁽³⁾	Randolph	497.0	-0.1	0.0	-0.5	22	N/A
Spring ^(3,4)	McDonough	654.0	0.0	0.0	0.0	32	50.8
Springfield ^(1,3)	Sangamon	559.6	0.0	0.0	-1.1	36	568.2
Taylorville	Christian	590.0	+0.1	0.0	-0.2	26	51.6
Vermilion ⁽⁴⁾	Vermilion	581.7	-0.1	0.0	-0.2	34	216.7

Notes:

Normal pool and target level datum is NGVD 1929.

Current levels reported represent water surface levels at the end of the month, not the monthly average.

Average difference from normal or target level is the arithmetic average of reported month-end values for the period of record indicated.

Years of record = total number of monthly readings included in month-end average. Total period of record may be longer.

Not PWS = not a public water supply.

N/A = not available.

(1) Target operating level may vary. Seasonal target levels this month represent March 1 values.

(2) Instrumentation not available to measure height of water elevation above spillway.

(3) Natural inflow can be supplemented by other sources.

(4) Normal pool elevations have changed during period of record reported.

(5) Years of record and average since supply switched to different source. Period of reporting is longer.

Groundwater Information

— JENNIE ATKINS

Comparison to Period of Record. Shallow groundwater levels in 14 observation wells, which are remote from pumping centers, were above normal for February. Levels averaged 1.59 feet above normal and ranged from 0.77 feet below to 5.23 feet above normal levels (Table 6).

Comparison to January 2020. Shallow groundwater levels were above those of the previous month. Levels averaged 0.19 feet above and ranged from 2.21 feet below to 3.15 feet above January levels.

Comparison to February 2019. Shallow groundwater levels in February were above levels from one year ago. Levels averaged 0.45 feet below and ranged from 1.07 feet below to 5.28 feet above February 2019 levels.

Table 6. Month-End Shallow Groundwater Level Data Sites, February 2020

No.	Well name	County	Well depth (feet)	This month's reading (depth to water, feet)	Deviation from			
					15-year avg. level (feet)	Period of record avg. (feet)	Previous month (feet)	Previous year (feet)
1	Galena	JoDaviess	25.00	18.39	1.35	2.19	-0.33	-1.00
2	Mt. Morris	Ogle	55.00	15.54	3.91	4.62	-0.88	N/A
3	Crystal Lake	McHenry	18.00	3.89	0.64	1.21	-0.11	-0.52
4	Fermi Lab	DuPage	15.00	6.06	-0.38	-0.60	-2.21	-1.07
5	Good Hope	McDonough	30.00	5.00	1.18	1.75	0.13	-1.00
6	Snicarte	Mason	42.00	38.07	-0.38	-0.77	-0.26	-0.04
7	Coffman	Pike	28.00	6.61	4.58	4.27	2.87	5.28
8	Greenfield	Greene	20.70	4.52	6.82	5.23	3.15	4.66
9	Janesville	Coles	11.00	4.25	0.12	0.29	0.48	0.36
10	St. Peter	Fayette	15.00	1.71	-0.43	-0.12	-0.04	0.06
11	SWS #2	St. Clair	80.00	11.57	1.07	2.67	-0.33	N/A
12	Boyleston	Wayne	23.00	N/A	N/A	N/A	N/A	N/A
13	Sparta	Randolph	27.00	3.83	0.15	1.72	-0.40	-0.85
14	SE College	Saline	11.00	1.19	0.39	0.31	-0.24	0.07
15	Bondville	Champaign	21.00	3.42	-0.27	-0.49	0.87	-0.50
					1.34	1.59	0.19	0.45

Notes: N/A = Data not available.

Data sources for this publication include the following:

CPC - Climate Prediction Center, <http://www.cpc.ncep.noaa.gov/index.php>

ISWS - Illinois State Water Survey, <http://www.isws.illinois.edu>

MRCC - Midwestern Regional Climate Center, <http://mrcc.illinois.edu>

NCEI - National Centers for Environmental Information, <http://www.ncei.noaa.gov>

NWS - National Weather Service, <http://www.nws.noaa.gov>

SPC - Storm Prediction Center, <http://www.spc.noaa.gov>

USACE - U.S. Army Corps of Engineers, <http://rivergages.com>, <https://www.lre.usace.army.mil>

USGS - U.S. Geological Survey, <http://waterdata.usgs.gov/il/nwis>

WARM - Water and Atmospheric Resources Monitoring Program, <http://www.isws.illinois.edu/warm>

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