ILLINOIS
Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

January 2021

ILLINOIS WATER AND CLIMATE SUMMARY

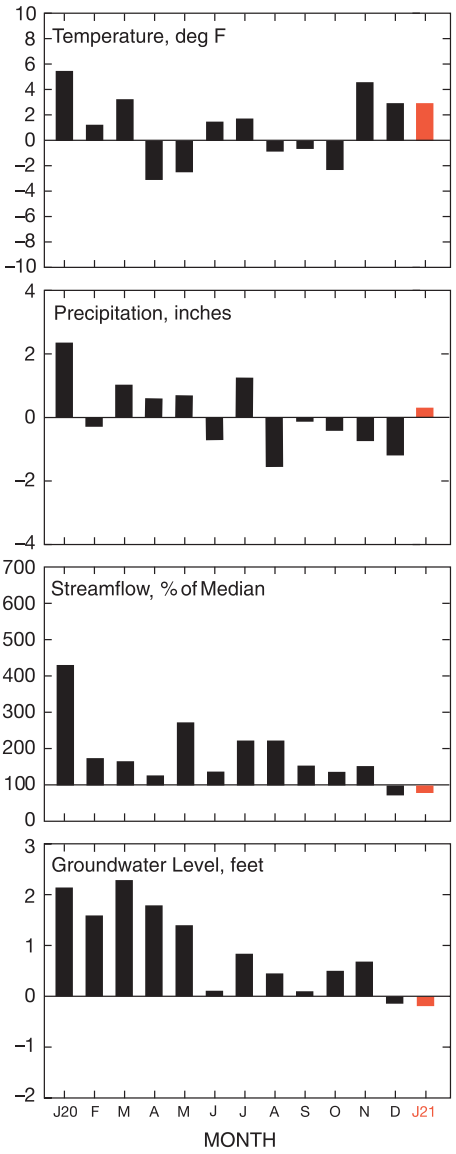

Figure 1. Statewide departures from normal.

JANUARY 2021 OVERVIEW

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

Air temperatures statewide averaged 29.5°F in January, 3.1° above the long-term average (Figure 1). The southeast crop reporting district (CRD) was the warmest with an average of 34.8°F. The lowest regional temperature of 24.7°F was reported by the northwest CRD. Departures from average ranged from 3.8° above average in the northeast CRD to 2.7° above average in the southwest CRD.

Precipitation statewide averaged 2.32 inches, 0.25 inches above the long-term average (Figure 1). The southwest CRD was the wettest with an average of 3.26 inches. The driest was the northeast CRD with 1.60 inches. Departures from average ranged from 0.65 inches above average in the west-southwest CRD to 0.08 inches below average in the northeast CRD.

Mean provisional streamflow aggregated statewide was below the long-term median flow for January, about 75% of median (Figure 1). Monthly mean discharge values ranged mostly from below normal to normal for January.

Water surface levels at the end of January were below the full pool or target level at 7 of 23 reporting reservoirs. At the end of January, Lake Shelbyville was 0.9 feet above the winter target level, Carlyle Lake was 1.3 feet above the winter target level, and Rend Lake was 3.3 feet above the spillway level. Lake Michigan's mean level was above its long-term mean for the month.

Shallow groundwater levels statewide were near the long-term average this month with an average departure of 0.13 feet below the period of record (Figure 1). Levels averaged 0.64 feet above December 2020 and 2.58 feet below January 2020 levels.

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Weather/Climate Information

— KEVIN GRADY

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

January in Illinois was slightly wetter and much warmer than average across most of the state.

Temperatures averaged 29.5°F, 3.1° above the long-term average (Table 1, Figure 2). Monthly average temperatures in January ranged from the mid-20s in northern Illinois to the mid-30s in southern Illinois. These temperatures were above average across the state, with departures generally ranging 2–4° above average, with the highest departures in northeastern Illinois, including 5.4° above average at O'Hare Airport. This made January the third consecutive month of well above average temperatures across Illinois, following a very warm November and December. Temperatures were above average throughout most of the month, with monthly maximum temperatures ranging from around 40° in northern Illinois to the mid-50s in southern Illinois. The warmest reading of the month, 56°F, was recorded at a station near Carbondale (Jackson County) on January 15 and a station near Belleville (St. Clair County) on January 22. Despite the general warmth, there were a few below average days toward the end of the month when most stations reached their monthly minimum temperatures, ranging from the negative single digits in northern Illinois to the upper teens in southern Illinois. The lowest reading of the month, -9°F, was recorded at a station near Stockton (Jo Daviess County) on January 23.

Precipitation averaged 2.32 inches in January, 0.25 inches above the long-term average (Table 1, Figure 2). Most of Illinois received slightly above average precipitation in January, with departures in west central Illinois generally around half an inch above average and with the highest departures around St. Louis, closer to an inch above average. Despite these above average totals, most of January was dry like the months that preceded it. After most of the state received over half an inch of precipitation the first few days of the month, the state then entered a dry period with most of Illinois receiving less than half an inch of precipitation during the three-week period from January 4 to 24.

During the last week of the month, a series of winter storms impacted the state, bringing widespread precipitation over an inch across most of the state and over 2 inches across much of southern Illinois. This was enough to raise monthly precipitation totals to just above average across most of the state, despite the dryness earlier in the month. January precipitation totals generally ranged from around 1.5 inches in northern Illinois, where more of the precipitation fell as snow, to around 4 inches in far southern Illinois. A station in Pope County had the highest monthly total of 5.31 inches.

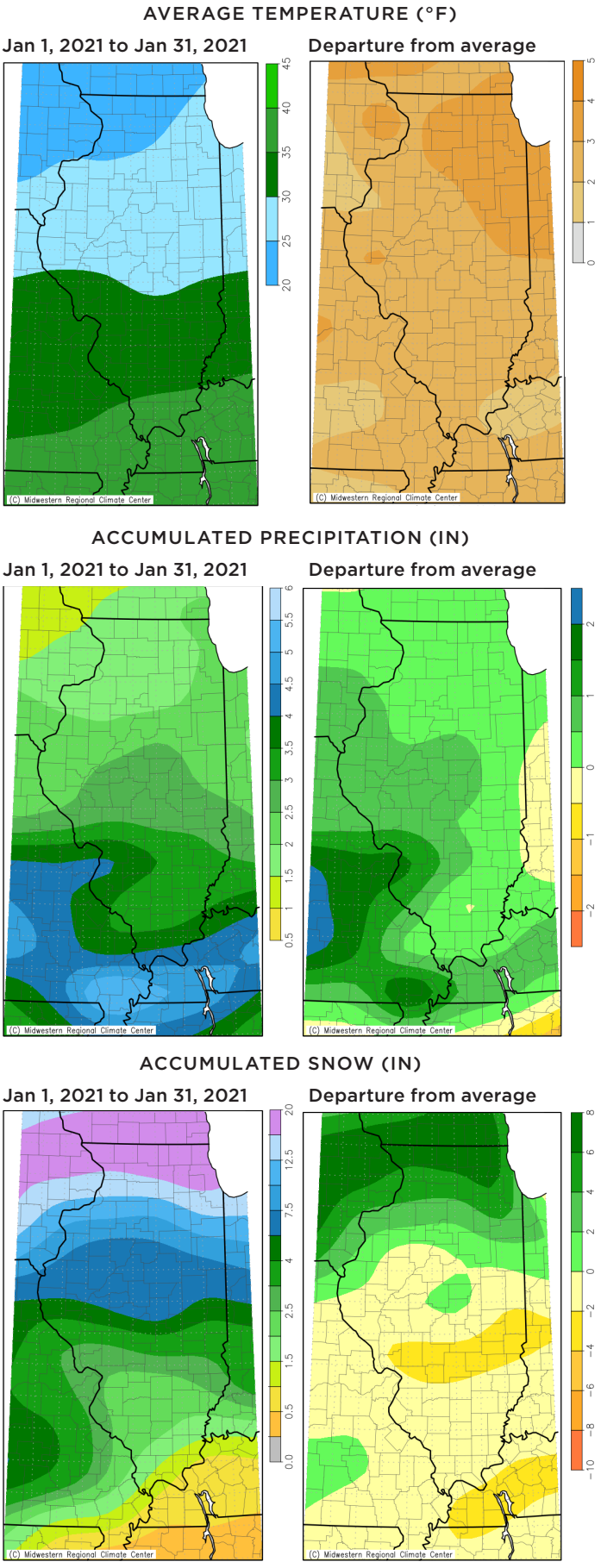


Figure 2. Illinois temperature, precipitation, snow and their departures from average for January 2021. Source: cli-MATE, Midwestern Regional Climate Center. https://mrcc.illinois.edu/CLIMATE. Information accessed on February 8, 2021.

Snow: Nearly every part of Illinois received at least 1 inch of snow in January (Figure 2). The heaviest totals were in the northernmost part of Illinois, where monthly totals generally ranged from 15 to 20 inches. This was especially true in the Chicagoland area, where the highest January total of 23.7 inches was recorded at a station near Hoffman Estates (Cook County). O'Hare Airport recorded 21.9 inches for January after recording only 2.8 inches for December, highlighting how much snowier January was around Chicago. Much of this snow came during the last week of January, as a series of winter storms impacted much of the area. The previous three weeks had not been quite as snowy, with totals generally only around 3–4 inches in northern Illinois from January 4 to 24.

Monthly totals gradually decreased to the south, generally reaching around 5 inches in central Illinois near the I-72 corridor. Much of this snow fell during the first few days of the month, especially in the Bloomington and Decatur areas. In southern Illinois, January totals were generally around 1–3 inches. Monthly totals were generally around 6 inches above average in northern Illinois, while areas along the I-74 corridor were closer to average. Much of central and southern Illinois was slightly below average for the month by up to around 2 inches in some areas.

Severe weather reports: The NOAA Storm Prediction Center (SPC) did not record any severe weather reports for January in Illinois.

Drought: Drought and abnormally dry conditions persisted in generally the same areas of central Illinois at about the same intensities throughout January. This was in large part due to the warm and dry conditions these areas experienced throughout most of the month. However, January is climatologically one of the driest months in Illinois, and conditions were not bad enough to warrant further deterioration in most areas. One of the main concerns this time of year is recharging soil moisture before the spring planting season; soil moisture remained very low across central Illinois throughout January.

The driest areas of the state continue to be along and just to the north of the I-72 corridor, where six-month precipitation deficits of 5 inches or more persist in most areas (Figure 3). On the January 26 United States Drought Monitor map (Figure 4), about 41% of Illinois was classified as abnormally dry (D0) or worse, mostly between Interstates 70 and 80. This included a corridor of moderate drought (D1) from the Illinois River near Morgan and Scott Counties east-northeast to Iroquois and Kankakee Counties and an area of severe drought (D2) around southern Logan County, which has persisted since mid-November.

Table 1 Temperature and Precipitation for January 2021

	Temp. (°F)	Departure from long-term avg. (1981–2010)	Precip. (in)	Departure from long-term avg. (1981–2010)
Illinois	29.5	+3.1	2.32	+0.25
CRD 1 (northwest)	24.7	+3.3	1.70	+0.28
CRD 2 (northeast)	26.4	+3.8	1.60	-0.08
CRD 3 (west)	28.0	+3.0	1.73	+0.13
CRD 4 (central)	28.1	+3.2	2.34	+0.49
CRD 5 (east)	28.4	+3.6	2.02	+0.08
CRD 6 (west southwest)	30.9	+2.8	2.70	+0.65
CRD 7 (east southeast)	31.4	+2.9	2.62	+0.13
CRD 8 (southwest)	34.6	+2.7	3.26	+0.50
CRD 9 (southeast)	34.8	+2.8	3.19	+0.07

Data from NOAA's National Centers for Environmental Information, accessed 2/8/2021.

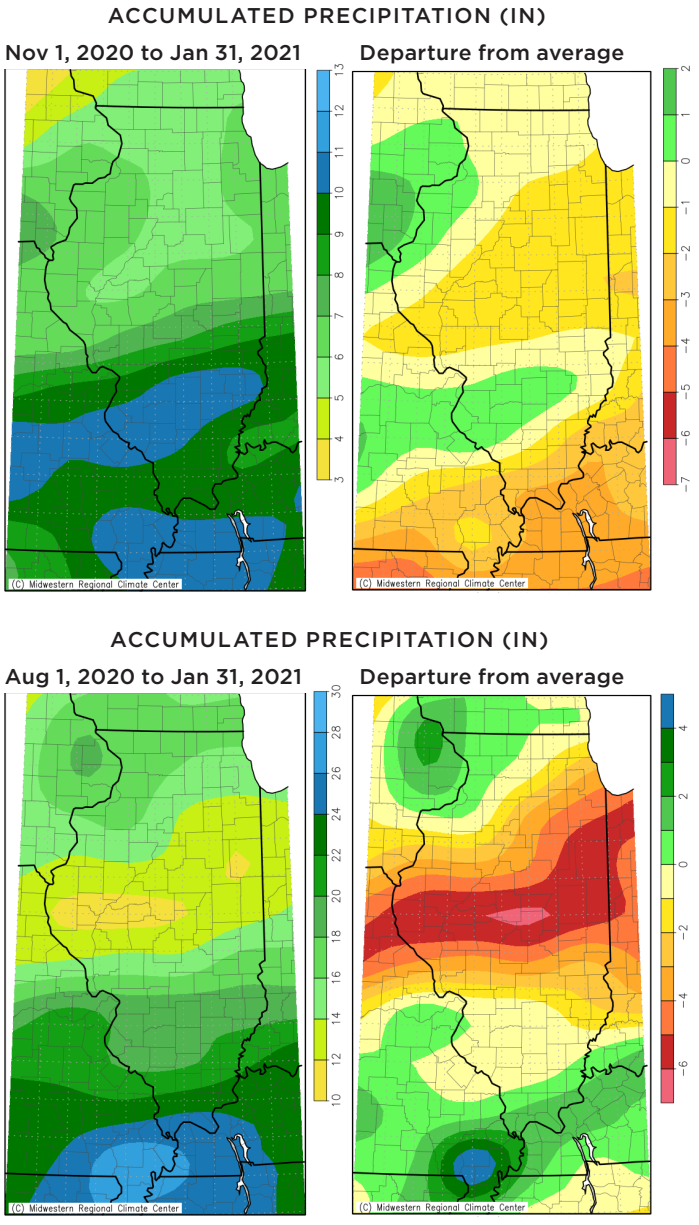
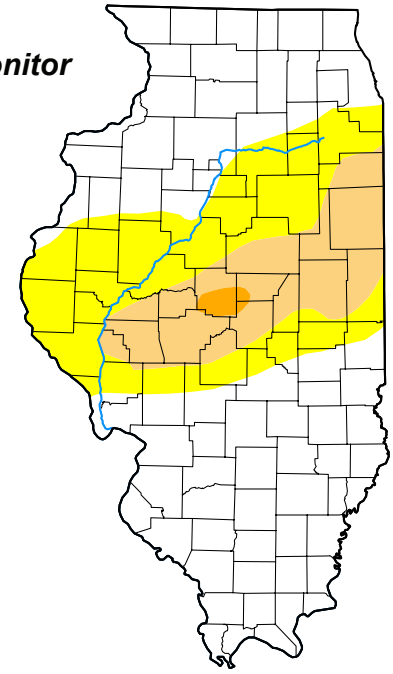


Figure 3. Illinois precipitation and precipitation departure from average for last 3 months (top) and for last 6 months (bottom). Source: cli-MATE, Midwestern Regional Climate Center. https://mrcc.illinois.edu/CLIMATE. Information accessed on February 8, 2021.

U.S. Drought Monitor

Illinois



January 26, 2021

(Released Thursday, Jan. 28, 2021)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	58.65	25.34	15.27	0.73	0.00	0.00
Last Week *01-19-2021*	61.32	23.79	13.49	1.39	0.00	0.00
3 Months Ago *10-27-2020*	50.86	33.86	15.27	0.00	0.00	0.00
Start of Calendar Year *12-29-2020*	54.89	28.75	14.34	2.02	0.00	0.00
Start of Water Year *09-29-2020*	42.28	54.03	3.69	0.00	0.00	0.00
One Year Ago *01-28-2020*	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme 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:

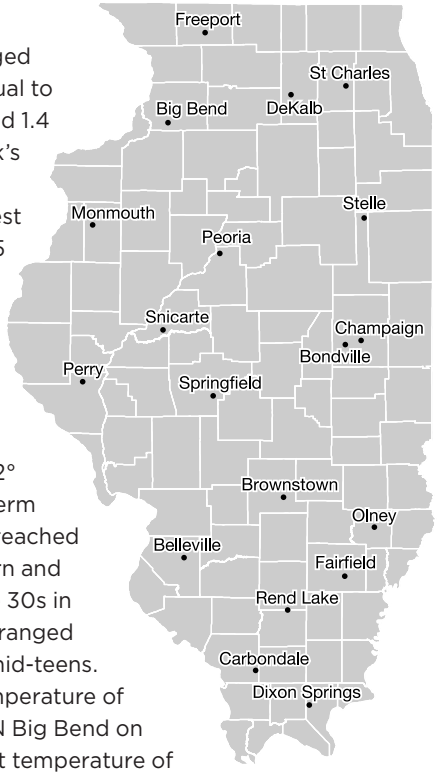
Richard Tinker
CPC/NOAA/NWS/NCEP

Figure 4. U.S. Drought Monitor report for Illinois. Source: U.S. Drought Monitor. Author: Richard Tinker, CPC/NOAA/NWS/NCEP https://droughtmonitor.unl.edu, accessed on February 8, 2021.

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 January are presented in Table 2.



Wind speeds averaged 6.9 mph in January, equal to December's average and 1.4 mph below the network's long-term average. ICN Bondville had the highest monthly average at 10.5 mph and the highest reported wind gust, measuring 41.9 mph on January 19.

Air temperatures fell 3° from December to an average of 30°F, 2° above January's long-term average. Station highs reached into the 50s for southern and central stations and the 30s in the north. Station lows ranged from the negatives to mid-teens. The month's lowest temperature of -5° was recorded at ICN Big Bend on January 28. The highest temperature of 55° was measured at ICN Rend Lake on January 14.

Soil temperatures fell 2 to 3° from in December to averages in the mid-30s. Temperatures were 1 to 2° below the long-term averages. Under bare soil, temperatures ranged from 21 to 54° at 2-inch depths and 28 to 48° at 4 inches. Temperatures under sod ranged from 31 to 46° at 4 inches and 32 to 44° at 8 inches.

Precipitation increased at most ICN stations in January. The network averaged 2.88 inches for the month, 0.92 inches more than in December and 0.61 inches above the long-term average. Sixty percent fell in the last week of the month as the southern stations reported 2.47 inches between January 25 and 31. ICN Belleville had the month's highest total with 4.09 inches.

Soil moisture data will return to the IWCS in Spring 2021.

Table 2. Data from the Illinois Climate Network (ICN), January 2021

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m²)
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	6.9	207.9	33.3	54.5	6.8	32.9	205.7
Big Bend	6.5	184.1	30.4	38.9	–4.7	25.0	199.6
Bondville	10.5	203.5	41.3	47.8	6.3	29.0	185.9
Brownstown	7.3	204.3	28.3	51.7	4.9	31.7	195.8
Carbondale	6.5	214.8	28.9	53.9	13.3	35.0	218.8
Champaign	4.9	200.0	25.8	47.9M	9.5	29.2	169.1
DeKalb	8.4M	194.9M	30.9M	38.5M	–1.2	24.3	216.1
Dixon Springs	4.8	198.5	30.3	53.5	17.0	35.6	197.5
Fairfield	6.4	203.5	26.6	53.2	10.7	33.0	215.9
Freeport	4.8	192.7	32.2	37.0	–3.8	23.2	182.9
Monmouth	9.9M	204.4M	40.2M	39.8	1.1	26.3	219.7
Olney	5.7	196.3	28.1	52.7	9.2	32.7	207.2
Peoria	7.0M	201.0M	31.3M	47.1M	5.5	27.7	160.8
Perry	5.6M	191.9M	29.1M	52.8M	1.5M	30.1M	132.5M
Rend Lake	5.5	209.8	27.0	54.8	13.4	34.3	206.9
Snicarte	8.8M	194.8M	40.4M	51.2	3.6	29.8	180.7
Springfield	5.4	207.0	25.8	50.6	5.6	29.8	181.7
St. Charles	6.3	188.4	29.2	38.5	–2.0	25.9	182.9
Stelle	9.2M	206.8M	39.7M	44.5	5.6	27.5	166.0

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	79.6	4.09	26.9	1.13	37.3	38.1	36.2	35.5
Big Bend	88.2	2.09	21.9	0.74	33.4	32.9	33.5	31.9
Bondville	88.0	2.66	25.7	0.80	32.3	36.6	32.7	32.0
Brownstown	80.9	3.75	26.2	1.04	39.7	38.7	34.5	34.1
Carbondale	84.3	3.34	30.3	1.15	40.9	39.8	38.2	37.4
Champaign	86.8	2.68	25.5	0.78	35.5	36.7	34.1	33.6
DeKalb	89.6	1.36	21.6	0.71	34.7	34.2	34.9	33.6
Dixon Springs	80.1	4.00	29.5	1.13	40.0	41.1	38.4	39.9
Fairfield	83.1	3.50	28.1	1.08	38.7	39.6	37.5	38.3
Freeport	87.5	2.34	19.9	0.67	34.6	34.5	32.7	32.5
Monmouth	88.7	1.75	23.3	0.84	32.6	33.1	33.0	31.3
Olney	81.3	3.30	27.3	1.06	36.8	39.2	36.8	36.2
Peoria	84.1	2.76	23.3	0.77	34.7	34.8	32.6	32.1
Perry	83.2M	2.78M	24.9M	0.68M	35.3M	36.0M	34.0M	33.9M
Rend Lake	78.5	3.44	28.0	1.16	37.9	39.0	40.0	37.4
Snicarte	84.2	2.50	25.3	0.91	33.7	34.6	33.4	33.4
Springfield	82.9	2.87	24.9	0.88	36.1	35.6	33.7	33.3
St. Charles	86.5	2.90	22.2	0.72	33.5	34.5	33.8	32.4
Stelle	86.7	2.67	24.0	0.73	33.7	34.2	32.5	31.5

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 NWS. Flood stage is defined locally for each gage location.

Provisional monthly mean flows for this month for 26 streamgaging stations located throughout Illinois are shown in Table 4, compared to statistics of past record of monthly mean flows at those stations for the same month. Both recent and long-term data are retrieved from USGS online data services following the end of the month. Years of record values in Table 4 represent the number of past monthly values included in the Table 4 statistics; at some stations, the available record may not be continuous. Additional source data may be available from USGS.

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 below the median value for January (approximately 75 percent of the median) and below the mean for January (approximately 50 percent of the mean). Monthly mean discharge values ranged mostly from below normal to normal for January. Ice conditions affected recorded data at several stations. In Table 4, flow conditions for the Pecatonica River at Freeport and the Edwards River near New Boston were estimated from data available for part of the month and nearby streamgage observations.

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-December water levels at 22 reservoirs for which levels were reported last month and this month, reported end-of-January water levels were lower at 4 reservoirs, higher at 15 reservoirs, and about the same as at the end of December at 3 reservoirs. For the 23 reservoirs with measurements reported at the end of January, water levels were below normal target pool or spillway level at 7 reservoirs, above normal target pool or spillway level at 14 reservoirs, and at about full pool level at 2 reservoirs.

Major Reservoirs. Compared to water levels at the end of December, at the end of January the water level at Lake Shelbyville was 3.3 feet lower, Carlyle Lake was 0.9 feet higher, and Rend Lake was 1.1 feet higher. At the end of January, Lake Shelbyville was 0.9 feet above the winter target level, Carlyle Lake was 1.3 feet above the winter target level, and Rend Lake was 3.3 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 January 2021 mean level for Lake Michigan was 580.9 feet. The monthly mean level one year ago (January 2020) was 581.6 feet. The long-term average lake level for January is 578.4 feet, based on 1918–2019 data. In this period of record, the lowest mean level for Lake Michigan for January occurred in 2013 at 576.0 feet, and the highest mean level for January occurred in 1987 at 581.3 feet. The month-end level of Lake Michigan was 580.7 feet. All values are provided by the U.S. Army Corps of Engineers Detroit District.

Table 3. Peak Stages for Major Rivers during January 2021

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	5.4	15, 18
	La Salle	224.7	20	12.1	05, 17
	Peoria	164.6	18	12.3	22
	Havana	119.6	14	7.0	various
	Beardstown	88.6	14	9.8	05
	Hardin	21.5	25	20.3	08
Mississippi	Dubuque	579.9	17	9.3	09
	Keokuk	364.2	16	4.5	08
	Quincy	327.9	17	11.7	various
	Grafton	218.0	18	16.1	31
	St. Louis	180.0	30	8.4	31
	Chester	109.9	27	11.1	31
	Thebes	43.7	33	15.9	30
Ohio	Cairo	2.0	40	33.0	08

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, January 2021

Station	Drainage area (sq mi)	Years of record*	2021 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	6,363	81	4,321	3,605	3,173	above normal	28	31
Rock River near Joslin	9,549	81	~ 6,200	5,983	4,932	normal	36	27
Pecatonica River at Freeport	1,326	106	N/A	814	662	above normal	N/A	N/A
Green River near Geneseo	1,003	84	540	591	405	normal	40	31
Edwards River near New Boston	445	86	N/A	255	141	normal	N/A	N/A
Kankakee River at Momence	2,294	106	1,405	2,384	2,246	normal	68	31
Iroquois River near Chebanse	2,091	96	< 320	2,088	1,694	below normal	83	27
Fox River at Dayton	2,642	106	1,635	1,619	1,220	normal	40	28
Vermilion River at Pontiac	579	78	65	442	264	below normal	78	31
Spoon River at Seville	1,636	106	340	1,052	665	normal	66	31
LaMoine River at Ripley	1,293	99	147	655	348	below normal	70	31
Bear Creek near Marceline	349	76	N/A	155	65	N/A	N/A	N/A
Mackinaw River near Congerville	767	76	202	538	309	normal	62	31
Salt Creek near Greenview	1,804	79	228	1,348	954	below normal	80	31
Sangamon River at Monticello	550	110	23	457	267	below normal	88	31
South Fork Sangamon near Rochester	867	71	13	711	348	below normal	86	31
Illinois River at Valley City	26,743	82	5,410	22,331	17,555	much below normal	96	31
Macoupin Creek near Kane	868	92	153	583	242	normal	59	31
Vermilion River near Danville	1,290	99	178	1,251	715	below normal	81	31
Kaskaskia River at Vandalia	1,940	51	1,383	2,690	2,126	normal	68	31
Shoal Creek near Breese	735	78	361	750	372	normal	51	31
Embarras River at Ste. Marie	1,516	109	839	1,793	1,132	normal	57	31
Skillet Fork at Wayne City	464	103	634	669	368	normal	34	31
Little Wabash River below Clay City	1,131	106	1,111	1,496	773	normal	41	31
Big Muddy River at Plumfield	794	49	681	925	780	normal	53	31
Cache River at Forman	244	98	538	508	367	above normal	30	31

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 exceedance.
Below normal flow = 70-90% chance of exceedance.
Normal flow = 30-70% chance of exceedance.
Above normal flow = 10-30% chance of exceedance.
Much above normal flow = 0-10% chance of exceedance.
***As calculated from past monthly mean flow values retrieved from U.S. Geological Survey (USGS) data services this month.**
Note: Several stations were affected by ice in January.

Table 5. Reservoir Levels in Illinois, January 2021

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	December reported pumpage (million gallons)
Altamont	Effingham	582.0	+0.4	+1.3	–1.4	36	5.5
Bloomington	McLean	719.5	–3.3	+0.9	–2.4	33	N/A
Carlinville	Macoupin	571.1	+0.1	+0.1	–0.5	35	25.3
Carlyle[1]	Clinton	443.0	+1.3	+0.9	+2.1	43	N/A
Decatur[1,3]	Macon	612.5	–1.3	+0.5	+0.2	37	1,024.6
Evergreen[4]	Woodford	720.0	–3.0	–0.3	–2.1	30	N/A
Glenn Shoals[2]	Montgomery	590.0	N/A	N/A	+0.1	25	w/Hillsboro
Highland	Madison	500.0	+1.2	+1.1	0.0	32	28.5
Hillsboro[2]	Montgomery	589.0	N/A	N/A	+0.1	24	40.4
Jacksonville[2]	Morgan	644.0	N/A	N/A	–0.4	13	w/Mauvaise Terre
Kinkaid	Jackson	420.0	+0.3	+0.1	–0.3	32	48.5
Lake of Egypt	Williamson	500.0	+0.4	–0.1	0.0	27	N/A
Mattoon	Coles	632.0	0.0	+0.7	–0.3	24	w/Paradise
Mauvaise Terre[2]	Morgan	588.5	N/A	N/A	0.0	20	no meter
Mt. Olive (new)	Macoupin	600.0	N/A	N/A	–0.7	13	w/Mt. Olive (old)
Mt. Olive (old)	Macoupin	654.0	–0.4	+1.3	–0.3	21	5.3
Pana	Christian	641.6	–1.8	N/A	–0.9	36	N/A
Paradise	Coles	685.0	+0.1	+0.1	–0.1	29	55.0
Paris (east)[5]	Edgar	660.0	+0.2	0.0	+0.1	10	Not PWS
Paris (west)[5]	Edgar	660.1	+0.2	0.0	+0.1	10	w/Paris (east)
Raccoon[1][5]	Marion	477.0	+0.1	–0.6	–0.1	13	93.4
Rend	Franklin	405.0	+3.3	+1.1	+2.3	43	N/A
Salem[3]	Marion	546.5	+0.1	+0.3	–0.5	26	23.3
Shelbyville[1]	Shelby	594.0	+0.9	–3.3	+3.6	43	Not PWS
Sparta[3]	Randolph	497.0	N/A	N/A	–0.8	23	N/A
Spring[3,4]	McDonough	654.0	+0.1	+0.1	–0.2	37	41.9
Springfield[1,3]	Sangamon	559.6	–1.9	+0.3	–1.2	37	562.9
Taylorville	Christian	590.0	–0.2	+0.1	–0.3	27	47.1
Vermilion[4]	Vermilion	581.7	0.0	0.0	–0.3	35	197.4

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 February 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 27 observation wells were near the long-term average for January. Levels were 0.13 feet below average and ranged from 8.90 feet below to 5.37 feet above normal levels (Table 6).

Comparison to December 2020. Shallow groundwater levels were above those of the previous month. Levels averaged 0.64 feet above and ranged from 2.25 feet below to 4.98 feet above December 2020 levels.

Comparison to January 2020. Shallow groundwater levels in January were below levels from one year ago. Levels averaged 2.58 feet below and ranged from 15.42 feet below to 2.32 feet above January 2020 levels.

Table 6. Month-End Shallow Groundwater Level Data Sites, January 2021

Well name	County	Well depth (feet)	This month's reading (depth to water, feet)	15-year avg. level (feet)	Deviation from Period of record avg. (feet)	Deviation from Previous month (feet)	Deviation from Previous year (feet)
Belleville	St Clair	15.00	0.10	4.21	3.82	1.70	0.85
Bondville	Champaign	21.00	10.07	–6.18	–6.18	0.06	–5.78
Bondville (ICN)	Champaign	20.00	9.04	–4.82	–5.04	–0.22	–7.11
Boyleston	Wayne	23.00	3.99	–0.15	–0.73	0.11	0.68
Brownstown	Fayette	15.00	0.00	1.57	1.53	0.06	0.12
Carbondale	Jackson	26.00	2.12	1.29	1.22	0.91	0.08
Coffman	Pike	28.00	N/A	N/A	N/A	N/A	N/A
Crystal Lake	McHenry	18.00	4.03	0.37	1.25	–0.06	–0.25
DeKalb	DeKalb	25.00	4.86	–0.52	–0.67	0.76	–2.84
Fairfield	Wayne	21.00	0.34	1.81	1.69	0.13	0.28
Fermi Lab	DuPage	15.00	7.59	–2.16	–1.47	0.58	–3.74
Freeport	Stephenson	26.00	19.55	–1.33	–1.22	–0.64	–6.50
Galena	JoDaviess	25.00	21.29	–0.57	0.22	–0.27	–2.33
Good Hope	McDonough	30.00	7.74	–0.85	0.09	2.00	–2.61
Greenfield	Greene	22.00	15.40	–2.35	–3.69	1.31	–7.73
Janesville	Coles	11.00	2.47	2.23	2.51	2.61	2.26
Monmouth	Warren	27.00	9.57	1.57	1.27	1.29	–0.80
Mt. Morris	Ogle	55.00	22.77	–3.88	–2.86	–0.58	–8.11
Olney	Richland	19.00	0.00	1.29	1.21	0.16	0.38
Perry	Pike	20.00	17.90	–8.06	–8.90	–2.25	–15.42
Rend Lake	Jefferson	21.00	0.62	2.80	2.78	1.03	0.77
SE College	Saline	11.00	0.10	2.63	2.58	0.40	0.85
Snicarte	Mason	42.00	35.49	1.53	1.76	–0.04	2.32
Sparta	Randolph	27.00	1.39	3.63	5.37	4.98	2.04
Springfield	Sangamon	20.00	9.01	–2.51	–2.56	0.97	–7.10
St. Charles	Kane	21.00	25.72	–2.64	–2.03	–0.77	–10.63
St. Peter	Fayette	15.00	1.51	0.36	0.49	0.59	0.16
SWS #2	St. Clair	80.00	10.68	2.24	3.97	2.41	0.56
				–0.32	**–0.13**	**0.64**	**–2.58**

Notes: N/A = Data not available.

Data sources for this publication include the following:
CPC - Climate Prediction Center, https://www.cpc.ncep.noaa.gov/index.php
ISWS - Illinois State Water Survey, https://www.isws.illinois.edu
MRCC - Midwestern Regional Climate Center, https://mrcc.illinois.edu
NCEI - National Centers for Environmental Information, https://www.ncei.noaa.gov
NWS - National Weather Service, https://www.nws.noaa.gov
SPC - Storm Prediction Center, https://www.spc.noaa.gov
USACE - U.S. Army Corps of Engineers, http://rivergages.com, https://www.lre.usace.army.mil
USDM - U.S. Drought Monitor, https://droughtmonitor.unl.edu
USGS - U.S. Geological Survey, https://waterdata.usgs.gov/il/nwis
WARM - Water and Atmospheric Resources Monitoring Program, https://www.isws.illinois.edu/warm

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