

ILLINOIS WATER AND CLIMATE SUMMARY

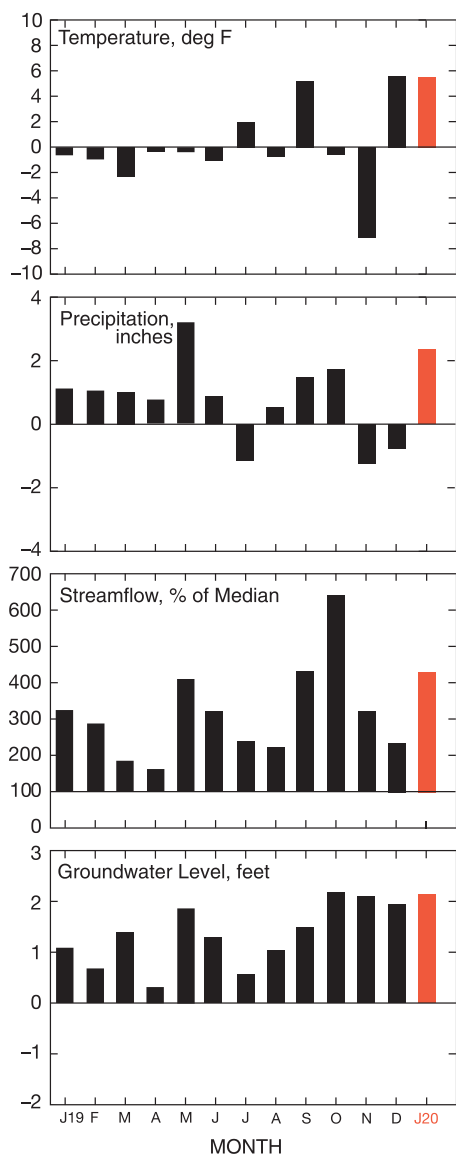


Figure 1. Statewide departures from normal.

January 2020 OVERVIEW

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

Air temperatures averaged 31.9°F in January, 5.5° above the long-term average (Figure 1). The southeast crop reporting district (CRD) was the warmest with an average of 37.7°. The lowest regional temperature was 27.1°, reported by the northwest CRD.

Precipitation averaged 4.25 inches, 2.18 inches above the long-term average (Figure 1). The east-southeast CRD was the wettest with an average of 6.03 inches. The driest was the northwest CRD with 2.32 inches.

Mean provisional streamflow aggregated statewide was above the long-term median flow for January, about 425% of median (Figure 1). Monthly mean discharge values ranged from above normal to much above normal for January. Water levels crested above the local flood stages at most Illinois River gaging stations, along the lower Mississippi River in southern Illinois, and on the Ohio River at Cairo.

Water surface levels at the end of January were below the full pool or target level at 3 of 22 reporting reservoirs. At the end of January, Lake Shelbyville was 10.3 feet above the winter target level, Carlyle Lake was 11.4 feet above the winter target level, and Rend Lake was 5.1 feet above the spillway level. Lake Michigan's mean level exceeded the previous record high monthly mean level for January (in 102 years of record).

Shallow groundwater levels statewide were above normal this month with an average departure of 2.11 feet from the period of record (Figure 1). An increase of 0.15 feet in departures was observed from the deviation in normal groundwater levels between December and January. Levels averaged 0.50 feet above December 2019 and 0.70 feet above January 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.

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

Temperatures averaged 31.9°F, 5.5° above the long-term average (Table 1, Figure 2). This was the 13th warmest January on record back to 1895. Following a very warm end to December, temperatures remained much above average across the state for most of January. During the first 15 days of the month, temperatures statewide were 8°–10° above average. Most stations recorded their monthly maximum temperatures on January 10 or 11, ranging from the low 50s in northern Illinois to the low 60s in southern Illinois. The warmest reading of the month, 65°, occurred at a station near Rend Lake (Franklin County) on January 10 and at four stations on January 11: one near Cairo (Alexander County), one near Carbondale (Jackson County), and one each in Pope and Pulaski Counties.

Some cooler days occurred in the middle of the month, especially January 19–23. Most stations recorded their monthly minimum temperatures during this time, with most dropping into the single digits. The lowest reading of the month for Illinois was -3°, recorded near Galena (Jo Daviess County) on January 19 and near Walnut (Bureau County) and Altona (Knox County) on January 20. Temperatures turned mild again at the end of January, especially in northern Illinois with the last seven days of the month 6°–10° above average along and north of I-74.

For the month, January temperatures ranged from 3° above average in western Illinois to up to 7° above average in east central Illinois and near Rockford. There were also very few days with temperatures below average; for example, the station at the State Climatologist Office in Champaign only had four days with daily mean temperatures below average (January 16, 19–21). The National Centers for Environmental Information (NCEI) reported that 21 daily high maximum and 36 daily high minimum temperature records were broken in Illinois in January.

Precipitation averaged 4.25 inches in January, 2.18 inches above the long-term average (Table 1, Figure 2), and the 11th wettest January on record back to 1895. Totals ranged from near 2 inches in northwestern Illinois to up to 8 inches along the I-70 corridor. Most of the state received more than 1 inch above average, with areas along I-70 receiving up to 4 inches above average. The highest monthly total in Illinois of 8.26 inches was recorded at a station near Altamont (Effingham County). A large amount of precipitation fell statewide

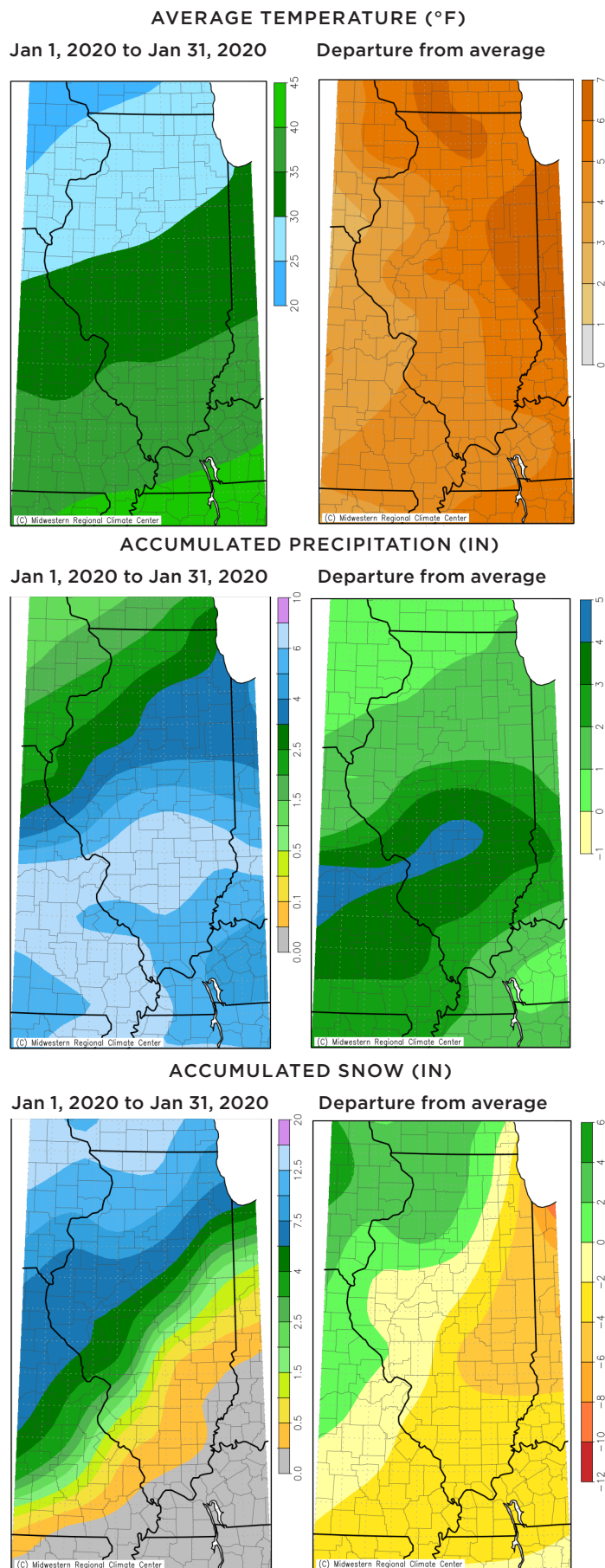


Figure 2 Illinois temperature, precipitation, snow and their departures from average for January 2020.

Source: cli-MATE, Midwestern Regional Climate Center.

<http://mrcc.illinois.edu/CLIMATE>, accessed on February 6, 2020.

during the second weekend of the month (January 10-12). Nearly all central and southern Illinois received 2-5 inches of precipitation those days from a massive winter storm moving through the state, accompanied by mild temperatures. This storm broke several three-day January total precipitation records and caused flooding along many rivers in central and southern Illinois. More of this precipitation fell as snow in the northwestern part of the state, resulting in the lower precipitation totals there.

Snow: Almost the entire state saw measurable snow during January, except for some areas along the Wabash and Ohio Rivers (Figure 2). Snowfall totals were highest in northwestern Illinois with many stations recording over a foot of snow for January with totals decreasing from northwest to southeast. The highest monthly snowfall total in Illinois of 15 inches was recorded at three stations: one near Davis (Stephenson County), one near Oregon (Ogle County), and one near Walnut (Bureau County). Many areas of northwestern Illinois received around 2 inches or more of snow than average, while most areas east of I-55 received 2-4 inches below average. These differences can be partly explained by the temperature differences across the state (Figure 2). For example, during the large January 10-12 storm, the air was colder longer in the northern and western parts of the state, causing more of the precipitation to fall as snow, resulting in over an inch in those areas. The southern and eastern parts of the state were warmer longer and thus received more precipitation as rain instead of snow, also leading to higher precipitation totals.

Severe weather reports: The NOAA Storm Prediction Center recorded five severe weather reports for January in Illinois, one for a tornado and four for wind. (Multiple reports can be generated for a single event.) All five reports came from southern Illinois during January 10-11 overnight as the major storm system crossed the state. The National Weather Service confirmed a brief EF-1 tornado in west central Union County during the early morning hours.

Drought: The United States Drought Monitor reported Illinois free of drought and abnormally dry conditions throughout January (Figure 4), thanks in part to the above average precipitation across the state. Soil moisture and streamflows remained near or above average across the state the entire month.

Table 1 Temperature and Precipitation for January 2020

	Temp. (°F)	Departure from long- term avg. (1981-2010)	Precip. (in)	Departure from long- term avg. (1981-2010)
Illinois	31.9	+5.5	4.25	+2.18
CRD 1 (northwest)	27.1	+5.7	2.32	+0.90
CRD 2 (northeast)	28.6	+6.0	2.94	+1.26
CRD 3 (west)	29.3	+4.3	2.64	+1.04
CRD 4 (central)	30.6	+5.7	3.64	+1.79
CRD 5 (east)	31.6	+6.8	3.85	+1.91
CRD 6 (west southwest)	32.6	+4.5	5.44	+3.39
CRD 7 (east southeast)	34.4	+5.9	6.03	+3.54
CRD 8 (southwest)	36.7	+4.8	5.77	+3.01
CRD 9 (southeast)	37.7	+5.7	5.76	+2.64

Data from NOAA's National Centers for Environmental Information, accessed 2/6/2020.

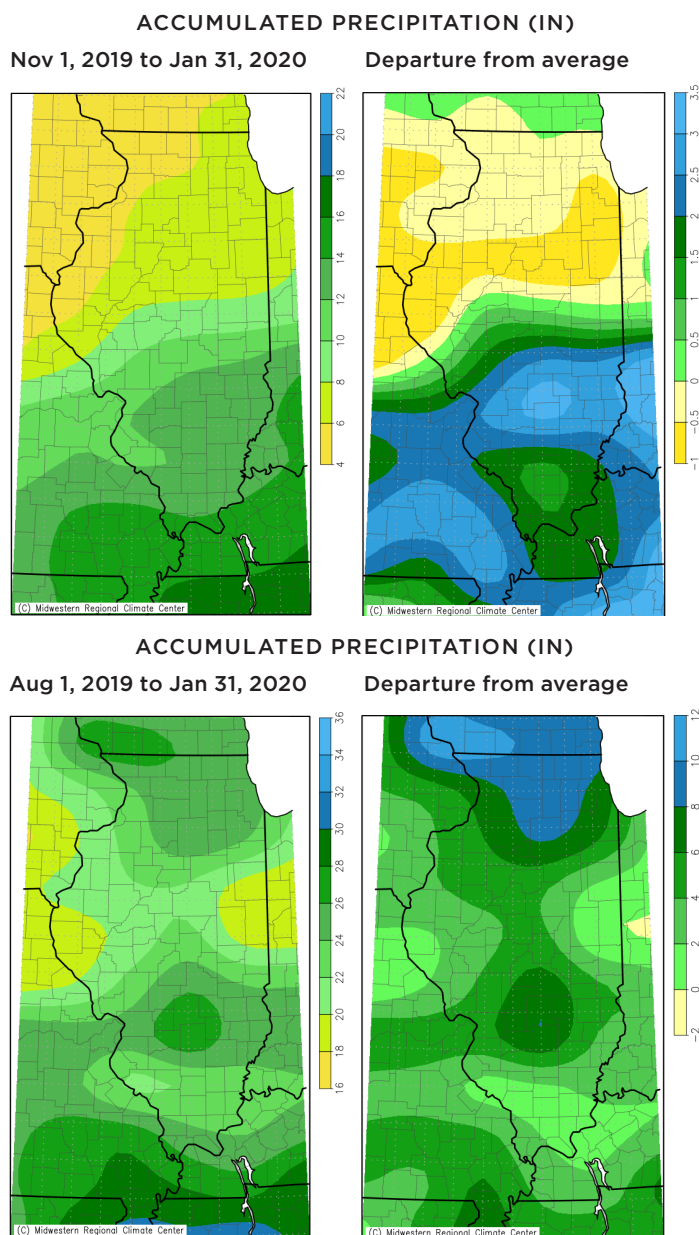
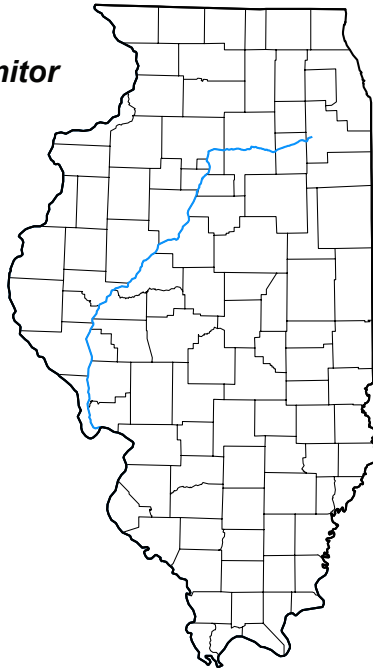


Figure 3. Illinois precipitation and precipitation departure from average for last 3 months (top), and last 6 months (bottom).

Source: cli-MATE, Midwest Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>, accessed on February 6, 2020.

U.S. Drought Monitor Illinois



January 28, 2020
(Released Thursday, Jan. 30, 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 01-21-2020	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 10-29-2019	99.31	0.69	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 01-29-2019	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>

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Richard Heim
NCEI/NOAA

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 7.1 mph in January, 0.1 mph lower than in December and 1.2 mph lower than the network's long-term average. ICN Stelle had the windiest month, having both the month's highest average with 10.9 mph and the highest recorded wind gust, reporting 45.8 mph on January 18.

Air temperatures were warmer than normal, averaging 31.8° or 4.1° higher than the long-term average. Monthly high temperatures ranged from the high 40s to the mid-60s, 18° to 26° warmer than the long-term monthly averages. The network's highest temperature was 65.9°, recorded on January 11 at ICN Carbondale.

The network saw much cooler temperatures as well. The station minimum monthly temperatures were 9° to 17° colder than the long-term averages. January's coldest temperature was -2.2°, measured at ICN Freeport on January 19.

Soil temperatures remained warmer with network averages in the mid-30s or 2° to 3° above normal. Temperatures fell below freezing at all measured depths. Under sod, temperatures ranged from 24.3° to 52.8° at depths of 4 inches and 29.0° to 50.2° at 8 inches. Temperatures under bare soil ranged from 17.5° to 57.6° at 2 inches and 21.4° to 54.5° at 4 inches.

Precipitation for January averaged 4.75 inches across ICN, more than double the monthly network average of 2.27 inches. Almost 60% fell in a three-day period from January 9 to 11 during which ICN Dixon Springs recorded 4.22 inches. The lowest total of the month was 2.36 inches at ICN Freeport and the highest was 8.67 inches at ICN Brownstown.

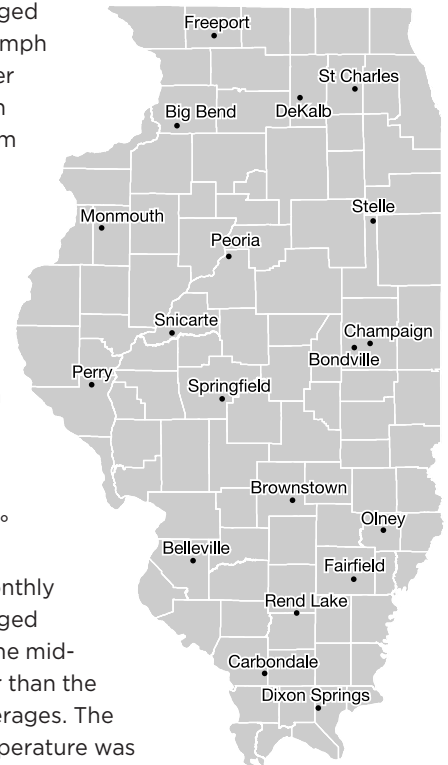


Figure 4. U.S. Drought Monitor report for Illinois. Source: U.S. Drought Monitor. Author: Richard Heim, NCEI/NOAA <http://droughtmonitor.unl.edu>, accessed on February 6, 2020.

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

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m²)
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	7.2	202.2	35.9	63.2	14.1	35.8	192.9
Big Bend	7.6	208.1	36.7	53.7	0.1	28.2	162.6
Bondville	10.8	211.5	42.5	58.6	3.7	31.3	172.5
Brownstown	6.6	201.7	35.2	59.5	9.6	33.9	184.6
Carbondale	6.5	189.4	37.5	65.9	15.3	37.4	187.9
Champaign	4.9	209.5	35.9	59.0M	3.0M	31.5M	158.9
DeKalb	8.3	206.3	41.7	47.5	-1.8	26.9	186.8
Dixon Springs	4.4	183.4	32.7	65.2	14.9	38.2	164.4
Fairfield	6.3	191.3	35.6	64.0	12.7	35.8	190.0
Freeport	4.9	207.8	27.9	49.1	-2.2	25.7	145.9
Monmouth	10.2	218.1	44.5	57.2	-1.3	27.3	203.1
Olney	5.5	196.1	36.4	63.5	12.6	35.5	192.1
Peoria	7.4	213.0	35.4	54.6	-0.2	29.4	170.3
Perry	6.4	220.0	37.6	59.7	3.1	30.6	189.0
Rend Lake	5.0	196.8	37.2	64.5	14.9	36.7	185.2
Snicarte	9.0	223.8	42.7	57.3	2.5	30.1	186.4
Springfield	5.7	213.7	32.7	59.3	4.9	32.1	163.4
St. Charles	6.8	208.5	40.4	49.3	-0.6	28.3	157.4
Stelle	10.9	208.9	45.8	53.7	1.5	29.8	158.4

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	83.4	7.22	30.8	1.10	39.0	39.7	34.9	38.6
Big Bend	87.9	2.55	24.9	0.7	34.5	33.9	33.9	35.1
Bondville	90.1	4.94	28.6	0.77	34.6	38.7	35.4	34.8
Brownstown	83.2	8.67	29.0	1.00	40.2	39.6	36.1	35.5
Carbondale	84.4	6.07	32.4	1.14	42.8	41.5	40.1	39.2
Champaign	87.7	5.29	28.1M	0.60M	36.9	38.2	35.9	35.4
DeKalb	89.3	2.54	24.1	0.72	35.1	34.9	34.9	33.0
Dixon Springs	80.5	6.77	32.0	1.04	42.4	43.6	40.7	42.2
Fairfield	83.5	5.78	30.9	1.07	41.0	41.4	38.2	40.7
Freeport	85.2	2.36	21.7	0.65	36.0	34.4	32.0	31.6
Monmouth	88.7	2.55	24.2	0.83	34.0	34.3	33.6	31.5
Olney	81.1	5.41	29.9	1.08	38.7	39.5	40.8	40.3
Peoria	83.9	3.03	24.9	0.84	36.2	34.8	34.1	33.4
Perry	84.1	3.88	26.0	0.96	36.4	37.4	35.4	35.1
Rend Lake	78.1	6.18	30.0	1.15	39.6	40.7	40.8	40.0
Snicarte	81.3	3.69	24.8	1.00	34.7	35.6	33.5	34.6
Springfield	82.8	5.20	27.2	0.86	36.7	36.6	35.2	34.7
St. Charles	85.3	3.76	24.2	0.71	35.0	35.9	33.5	32.2
Stelle	86.5	4.41	26.2	0.76	35.4	35.6	34.8	32.9

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.

In mid-January, the Illinois River crested above the local flood stages at most gaging stations downstream of the Fox River, the Mississippi River crested above the local flood stages at gaging stations from the Illinois River to the Ohio River, and the Ohio River crested above the flood stage at Cairo.

Provisional monthly mean flows for 26 streamgaging stations located throughout Illinois are shown in Table 4. Mean values posted by the USGS are listed if available; otherwise, daily mean discharge data posted by the USGS are used to estimate the mean flow for the month. Long-term mean flows for each month are published by the USGS. The month's median flow for each station listed in Table 4 was determined by ranking the January mean flow for each year of record, and selecting the middle value, 50 percent exceedence probability.

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 January (approximately 425 percent of the median) and above the mean for January (approximately 290 percent of the mean). Monthly mean discharge values ranged from above normal to much above normal for January.

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 20 reservoirs for which levels were reported last month and this month, reported end-of-January water levels were lower at 4 reservoirs, higher at 10 reservoirs, and about the same as last month at 6 reservoirs. For the 22 reservoirs with measurements reported at the end of January, water levels were below normal target pool or spillway level at 3 reservoirs, above normal target pool or spillway level at 13 reservoirs, and at about full pool level at 6 reservoirs.

Beginning with this issue of the Illinois Water & Climate Summary, the years of record and corresponding average month-end water levels at Raccoon Lake and at Paris East and West Lakes are adjusted to include only the period after the respective public water supplies switched to primary sources other than these lakes. The period of voluntary reporting to the WARM Program has been longer.

Major Reservoirs. Compared to water levels at the end of December, at the end of January the water level at Lake Shelbyville was 3.6 feet higher, Carlyle Lake was 7.8 feet higher, and Rend Lake was 2.0 feet higher. At the end of January, Lake Shelbyville was 10.3 feet above the winter target level, Carlyle Lake was 11.4 feet above the winter target level, and Rend Lake was 5.1 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 2020 mean level for Lake Michigan was 581.6 feet. The monthly mean level one year ago (January 2019) was 580.1 feet. The long-term average lake level for January is 578.4 feet, based on 1918-2018 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 581.6 feet. All values are provided by the U.S. Army Corps of Engineers Detroit District.

Table 3. Peak Stages for Major Rivers during January 2020

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	15.3	12
	La Salle	224.7	20	23.7	13
	Peoria	164.6	18	18.8	18-19
	Havana	119.6	14	18.1	21
	Beardstown	88.6	14	19.5	21-22
	Hardin	21.5	25	26.1	13
Mississippi	Dubuque	579.9	17	13.0	31
	Keokuk	364.2	16	9.0	13
	Quincy	327.9	17	13.1	12
	Grafton	218.0	18	20.0	13
	St. Louis	180.0	30	30.5	13
	Chester	109.9	27	32.9	14
	Thebes	43.7	33	36.2	15
Ohio	Cairo	2.0	40	49.4	16-17

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 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	83	7,989	3,418	3,016	much above normal	9	31
Rock River near Joslin	9549	75	12,655	5,697	4,676	much above normal	5	30
Pecatonica River at Freeport	1326	99	1,677	777	650	much above normal	4	31
Green River near Geneseo	1003	80	1,336	568	384	much above normal	7	31
Edwards River near New Boston	445	80	523	250	140	above normal	15	26
Kankakee River at Momence	2294	105	4,642	2,337	2,155	much above normal	9	31
Iroquois River near Chebanse	2091	93	4,461	2,054	1,679	above normal	13	31
Fox River at Dayton	2642	100	N/A	1,554	1,168	N/A	N/A	19
Vermilion River at Pontiac	579	73	1,250	423	259	much above normal	8	31
Spoon River at Seville	1636	100	2,116	1,042	664	above normal	16	31
LaMoine River at Ripley	1293	94	1,511	649	348	above normal	14	31
Bear Creek near Marceline	349	73	421	151	64	above normal	13	31
Mackinaw River near Congerville	767	72	1,364	526	285	above normal	11	31
Salt Creek near Greenview	1804	75	3,487	1,312	860	much above normal	8	30
Sangamon River at Monticello	550	105	973	446	267	above normal	16	31
South Fork Sangamon near Rochester	867	68	3,119	662	300	much above normal	7	29
Illinois River at Valley City	26,743	78	43,071	21,840	17,120	much above normal	8	31
Macoupin Creek near Kane	868	88	3,094	551	226	much above normal	3	31
Vermilion River near Danville	1290	95	2,800	1,213	711	above normal	12	31
Kaskaskia River at Vandalia	1940	47	8,165	2,586	2,091	much above normal	2	31
Shoal Creek near Breese	735	73	3,569	706	338	much above normal	4	31
Embarras River at Ste. Marie	1516	103	6,022	1,737	1,132	much above normal	7	31
Skillet Fork at Wayne City	464	97	2,286	651	355	much above normal	8	31
Little Wabash below Clay City	1131	102	6,077	1,438	744	much above normal	5	31
Big Muddy at Plumfield	794	46	2,423	885	757	much above normal	8	31
Cache River at Forman	244	93	1,329	497	373	much above normal	7	31

Notes:

Source streamflow data are obtained from the U.S. Geological Survey.

N/A = not available (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 reported in U.S. Geological Survey (USGS) Water Resources Data, Illinois, Water Year 2016.

Table 5. Reservoir Levels in Illinois, January 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	November reported pumpage (million gallons)
Altamont	Effingham	582.0	+0.1	+0.1	-1.4	35	5.7
Bloomington	McLean	719.5	+0.3	+0.2	-2.5	32	N/A
Carlinville	Macoupin	571.1	+0.2	+0.2	-0.5	34	25.3
Carlyle ⁽¹⁾	Clinton	443.0	+11.4	+7.8	+1.9	42	N/A
Decatur ^(1,3)	Macon	612.5	0.0	-0.4	+0.2	36	1,002.3
Evergreen ⁽⁴⁾	Woodford	720.0	+0.1	0.0	-2.1	29	N/A
Glenn Shoals ⁽²⁾	Montgomery	590.0	N/A	N/A	+0.1	25	w/Hillsboro
Highland	Madison	500.0	+0.5	-0.7	0.0	31	29.9
Hillsboro ⁽²⁾	Montgomery	589.0	N/A	N/A	+0.1	24	N/A
Jacksonville ⁽²⁾	Morgan	644.0	N/A	N/A	-0.4	13	w/Mauvaise Terre
Kinkaid	Jackson	420.0	-0.4	+1.7	-0.3	31	44.6
Lake of Egypt	Williamson	500.0	N/A	N/A	0.0	26	N/A
Mattoon	Coles	632.0	0.0	N/A	-0.3	23	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	N/A	N/A	-0.3	21	4.6
Pana	Christian	641.6	+0.1	0.0	-1.0	35	N/A
Paradise	Coles	685.0	0.0	N/A	-0.1	28	57.2
Paris (east) ⁽⁵⁾	Edgar	660.0	+0.2	0.0	+0.1	9	Not PWS
Paris (west) ⁽⁵⁾	Edgar	660.1	+0.2	0.0	+0.1	9	w/Paris (east)
Raccoon ⁽¹⁾⁽⁵⁾	Marion	477.0	+0.6	+0.1	-0.2	12	89.0
Rend	Franklin	405.0	+5.1	+2.0	+2.2	42	N/A
Salem ⁽³⁾	Marion	546.5	0.0	0.0	-0.5	25	22.5
Shelbyville ⁽¹⁾	Shelby	594.0	+10.3	+3.6	+3.4	42	Not PWS
Sparta ⁽³⁾	Randolph	497.0	-0.1	+0.4	-0.8	22	N/A
Spring ^(3,4)	McDonough	654.0	0.0	-0.2	-0.2	36	51.2
Springfield ^(1,3)	Sangamon	559.6	0.0	0.0	-1.3	36	519.8
Taylorville	Christian	590.0	+0.1	+0.1	-0.3	26	48.6
Vermilion ⁽⁴⁾	Vermilion	581.7	-0.1	-0.1	-0.3	34	201.5

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 14 observation wells, which are remote from pumping centers, were above normal for January. Levels averaged 2.11 feet above normal and ranged from 0.53 feet below to 5.19 feet above normal levels (Table 6).

Comparison to December 2019. Shallow groundwater levels were above those of the previous month. Levels averaged 0.50 feet above and ranged from 2.21 feet below to 5.81 feet above December levels.

Comparison to January 2019. Shallow groundwater levels in January were above levels from one year ago. Levels averaged 0.70 feet below and ranged from 0.73 feet below to 3.29 feet above January 2019 levels.

Table 6. Month-End Shallow Groundwater Level Data Sites, January 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	1.83	2.55	-0.57	-0.41
2	Mt. Morris	Ogle	55.00	14.66	4.70	5.19	-0.31	N/A
3	Crystal Lake	McHenry	18.00	3.78	0.87	1.52	0.0	-0.10
4	Fermi Lab	DuPage	15.00	3.85	1.73	2.22	-0.71	2.38
5	Good Hope	McDonough	30.00	5.13	1.91	2.71	-0.02	-0.70
6	Snicarte	Mason	42.00	37.81	-0.46	-0.53	-0.51	-0.41
7	Coffman	Pike	28.00	9.48	3.21	3.20	2.43	3.29
8	Greenfield	Greene	20.70	7.67	5.60	3.97	5.81	2.89
9	Janesville	Coles	11.00	4.73	0.10	0.30	-2.21	-0.17
10	St. Peter	Fayette	15.00	1.67	0.16	0.33	0.06	N/A
11	SWS #2	St. Clair	80.00	11.24	1.90	3.47	0.84	N/A
12	Boyleston	Wayne	23.00	N/A	N/A	N/A	N/A	N/A
13	Sparta	Randolph	27.00	3.43	1.90	3.42	1.08	N/A
14	SE College	Saline	11.00	0.95	1.94	1.80	-0.07	0.92
15	Bondville	Champaign	21.00	4.29	-0.62	-0.56	0.68	-0.73
					1.77	2.11	0.50	0.70

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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