

ILLINOIS WATER AND CLIMATE SUMMARY

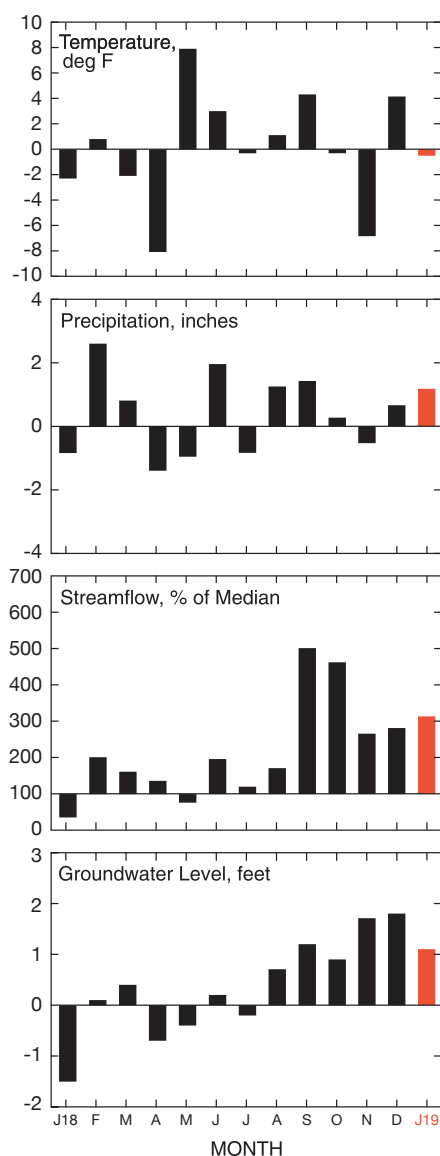


Figure 1. Statewide departures from normal

JANUARY 2019 OVERVIEW

Temperatures were below and precipitation was 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 25.9°F in January, 0.5° below the long-term average (Figure 1). The southwest crop reporting district (CRD) was the warmest with an average of 33.3°F. The lowest regional temperature was 19.5°, reported by the northwest CRD.

Precipitation averaged 3.24 inches, 1.17 inches above the long-term average (Figure 1). The southeast district was the wettest with an average of 4.77 inches. The driest was the northeast CRD with 2.35 inches.

Mean provisional streamflow aggregated statewide was above the long-term median flow for January, about 310% of median (Figure 1). Monthly mean discharge values ranged from above normal to much above normal for January. The Illinois, Mississippi, and Ohio Rivers each crested above local flood stages at some locations.

Water surface levels at the end of January were below the full pool or target level at 4 of 26 reporting reservoirs. At the end of January, Lake Shelbyville was 5.8 feet above the winter target level, Carlyle Lake was 4.6 feet above the winter target level, and Rend Lake was 5.1 feet above the spillway level. The Lake Michigan mean level was above its long-term mean for the month.

Shallow groundwater levels statewide were above normal this month with an average departure of 1.1 feet (Figure 1). A decrease of 0.7 feet in departures was observed from the deviation in normal groundwater levels between December and January. Levels averaged 0.1 foot above December levels and were 2.3 feet above January levels of last year.

Weather/Climate Information

— BRIAN KERSCHNER

The following description of temperatures, growing degree days, precipitation, 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 slightly cooler and significantly wetter than average.

Temperatures averaged 25.9°F, 0.5° lower than the long-term average (Table 1, Figure 2). The month began with unseasonably warm weather. In the first 10 days of January, a statewide temperature departure of 11.2° above average occurred. Station highs were generally in the 50s and 60s. The highest for January was 66° at two stations, Grand Chain Dam (Pulaski County) on January 2, and Jerseyville (Jersey County) on January 8.

Despite the early warmth, a late-month Arctic air outbreak set many daily station all-time record cold temperatures across the state. During the mornings of January 30 and 31, numerous locations in northern Illinois reported temperatures in the -20°s with some locations reporting below -30°. Mount Carroll (Carroll County) had the coldest reading in the state, recording -38° on January 31. If verified, this temperature will become the new all-time record cold temperature for the State of Illinois.

Precipitation was above normal for the month, averaging 3.24 inches or 1.17 inches above the long-term average (Table 1, Figures 2, 3). The largest totals fell in far southern Illinois, where multiple locations received 5 to 6 inches of precipitation. The highest was a station near Cobden (Union

Table 1. Temperature and Precipitation for January 2019

	Temp. (°F)	Departure from long- term avg. (1981–2010)	Precip. (in)	Departure from long- term avg. (1981–2010)
Illinois	25.9	-0.5	3.24	+1.17
CRD 1 (northwest)	19.5	-1.9	2.71	+1.29
CRD 2 (northeast)	21.2	-1.4	2.35	+0.67
CRD 3 (west)	24.0	-1.0	2.89	+1.29
CRD 4 (central)	23.6	-1.3	3.08	+1.23
CRD 5 (east)	24.0	-0.8	2.94	+1.00
CRD 6 (west southwest)	27.9	-0.2	3.43	+1.38
CRD 7 (east southeast)	28.7	+0.2	3.52	+1.03
CRD 8 (southwest)	32.9	+1.0	3.79	+1.03
CRD 9 (southeast)	33.3	+1.3	4.77	+1.65

Data from NOAA's National Centers for Environmental Information, accessed 2/6/2019.

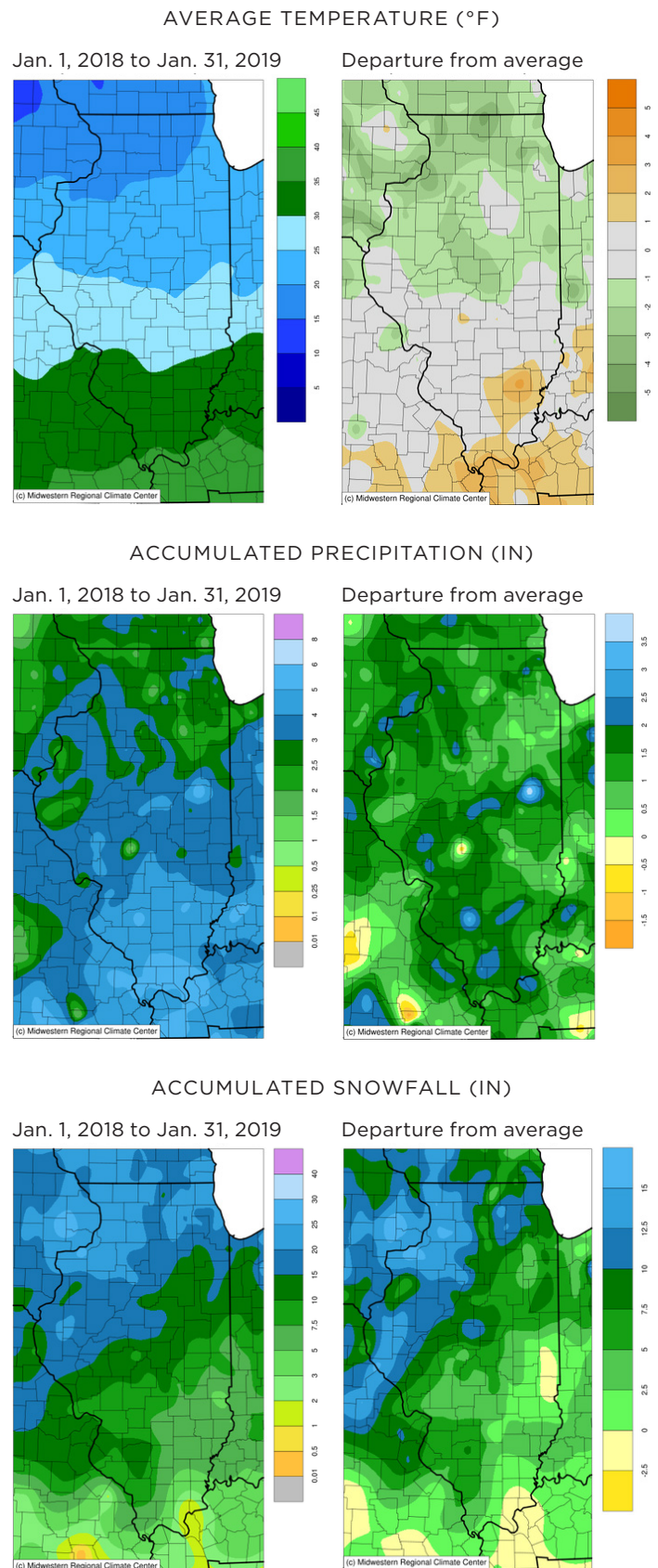
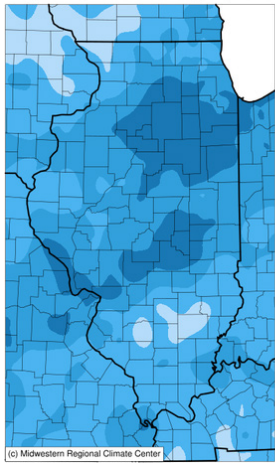


Figure 2. Illinois temperature, precipitation, and their departures from average for January 2019

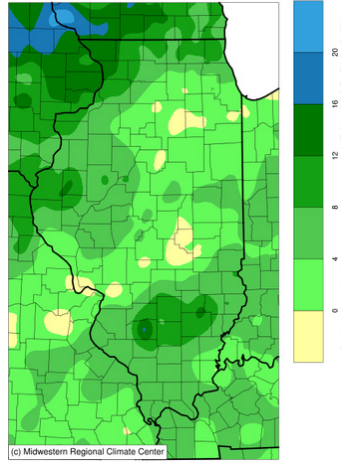
Source: cli-MATE, Midwestern Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>, accessed on Feb. 8, 2019.

ACCUMULATED PRECIPITATION (IN)

Aug. 1, 2018 to Jan. 31, 2019



Departure from average



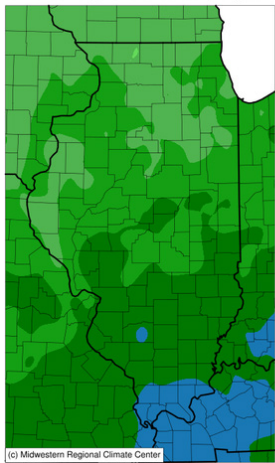
County) where 6.52 inches were reported for the month.

Snow accumulation was abundant and occurred statewide during January. Accumulations of 15 inches or greater were common in the west central and northern portions of the state. Moline (Rock Island County) had the month's largest reported total with 30.2 inches, ranked as the snowiest January on record for the station.

The NOAA Storm Prediction Center did not record any **severe weather** reports in January.

Illinois remained **drought**-free (Figure 4). In the U.S. Drought Monitor's January 31 map, no part of the state was listed as in drought or as abnormally dry.

Nov. 1, 2018 to Jan. 31, 2019



Departure from average

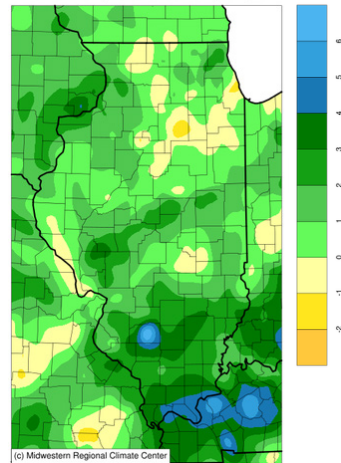
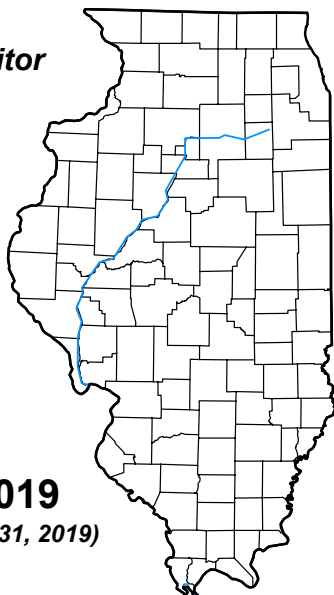


Figure 3. Illinois precipitation and precipitation departure from average for last 6 months (middle) and last 3 months (bottom)

Source: cli-MATE, Midwestern Regional Climate Center.

<http://mrcc.illinois.edu/CLIMATE>, accessed on Feb. 8, 2019.

U.S. Drought Monitor Illinois



January 29, 2019
(Released Thursday, Jan. 31, 2019)
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 01-22-2019	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 10-30-2018	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2019	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 09-25-2018	96.92	3.08	0.00	0.00	0.00	0.00
One Year Ago 01-30-2018	45.09	37.93	15.80	1.18	0.00	0.00

Intensity:

D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought
D2 Severe Drought	

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



Illinois Climate Network (ICN)

— JENNIE ATKINS

The Illinois Climate Network (ICN) consists of 19 stations across the state that collect hourly weather and soil information. ICN data for January are presented in Table 2.

Wind speeds averaged 8.2 mph for the month, 0.1 mph below the network's long-term average. The highest average was 12.7 mph from ICN Bondville. Wind gusts reached the 30s and 40s for most stations. The Stelle station reported the highest measured gust at 49.1 mph on January 8.

Air temperatures averaged 25.6°F in January, 2.1° below the long-term average. However, the average belies the large temperature differences that occurred during the month. The state had unseasonably warm weather at the end of the first week and the beginning of the second. All stations reported highs in the 50s and 60s. ICN Perry measured 64.7°F on January 7, the highest of the month.

The last week of the month brought bitter cold to the state. Sixteen of the 19 ICN stations had lows below zero. ICN St. Charles had the lowest temperature of the month, recording -3.1°F on January 31.

Soil temperatures averaged in the mid-30s for the month, 1 to 2° above the long-term averages. Temperatures dipped below freezing at every depth, while highs for the month were in the 50s.

Under bare soil, temperatures ranged from 7.3 to 56.2° at depths of 2 inches and 9.7 to 54.3°F at 4 inches. Temperatures under sod ranged from 14.7° to 52.2° at 4 inches and 20.7 to 50.4° at 8 inches.

Precipitation was higher than normal in January, averaging 3.27 inches across the network or 1.00 inch above the long-term average. The highest monthly totals were in southern Illinois where ICN Dixon Springs measured 5.73 inches, the highest of the month.

Soil moisture information will return to the IWCS in spring 2019.

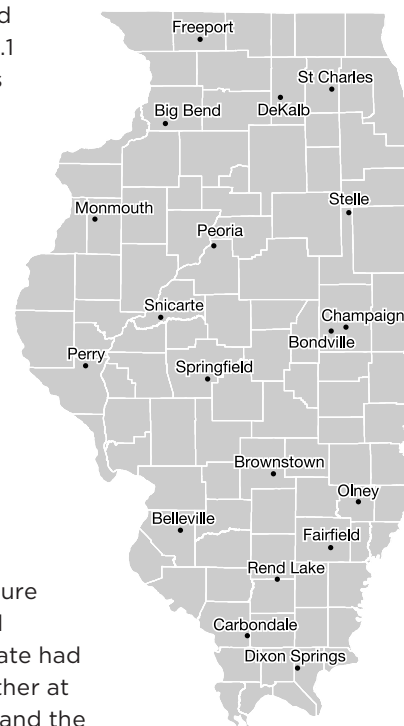


Figure 4. U.S. Drought Monitor report for Illinois Source: U.S. Drought Monitor. Author: Brian Fuchs, National Drought Mitigation Center. <http://droughtmonitor.unl.edu>, accessed on Feb. 8, 2019.

Table 2. Data from the Illinois Climate Network (ICN), January 2019

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m²)
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	8.5	206.7	41.0	62.5	-3.4	31.2	194.1
Big Bend	8.2	194.9	38.3	56.0	-32.1	19.8	205.6
Bondville	12.7	207.3	45.3	57.1	-17.2	23.4	233.0
Brownstown	8.3	202.8	40.3	57.5	-9.5	28.5	192.5
Carbondale	7.3	220.2	36.6	59.8	3.5	33.3	198.9
Champaign	6.0	201.7	34.3	57.3	-17.7	24.4	192.5
DeKalb	9.8	199.8	35.6	53.2	-32.3	17.9	211.9
Dixon Springs	5.2	213.5	36.5	62.6	8.2	35.6	180.2
Fairfield	7.3	207.0	38.4	57.1	-3.6	30.8	202.2
Freeport	6.1	197.7	35.1	51.7	-29.8	17.5	168.1
Monmouth	11.5	204.8	41.1	59.5	-22.1	20.6	241.4
Olney	6.4	202.1	32.8	57.6	-5.7	30.3	202.8
Peoria	8.5	204.0	37.8	60.9	-20.7	23.2	198.3
Perry	7.3	211.0	34.0	64.7	-12.8	26.3	216.7
Rend Lake	6.1	207.4	29.3	59.0	1.2	32.4	187.5
Snicarte	10.8	196.7	45.1	64.1M	-15.5M	24.7M	223.6
Springfield	6.8	200.1	39.7	61.8	-13.2	26.8	200.2
St. Charles	7.0	181.4	37.5	52.9	-33.1	19.4	163.5
Stelle	12.2	204.8	49.1	56.2	-22.6	20.7	236.8

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	2" under Bare Soil	4" under Bare Soil
Belleville	83.3	3.49	26.4	1.0	37.4	38.3	32.7	36.2
Big Bend	83.3	2.47	15.4	0.7	33.8	33.4	32.8	34.1
Bondville	84.5	2.92	19.4	0.8	32.3	37.3	33.4	31.9
Brownstown	80.4	3.93	23.0	0.9	39.2	38.6	35.2	34.1
Carbondale	80.0	4.80	27.4	1.1	41.4	40.2	38.1	37.4
Champaign	81.6	3.11	19.4	0.8	34.9	36.6	33.9	32.8
DeKalb	87.3	1.59	14.7	0.6	35.0	34.8	35.9	34.1
Dixon Springs	78.7	5.73	29.1	1.0	40.5	41.7	38.4	35.9
Fairfield	79.9	4.54	25.1	1.0	38.8	39.7	37.0	38.7
Freeport	84.7	2.79	13.6	0.6	35.4	33.8	31.9	31.5
Monmouth	84.1	1.58	16.4	0.8	33.2	33.3	32.2	30.7
Olney	79.8	4.25	24.6	1.0	37.3	38.2	38.5	37.9
Peoria	77.3	2.22	16.9	0.8	35.5M	32.6	32.8	33.4
Perry	82.4	3.19	21.3	0.9	35.4	36.5	34.7	33.8
Rend Lake	80.8	5.23	26.8	1.0	37.6	38.7	39.0	37.9
Snicarte	77.2	1.97	18.3M	1.00M	32.9M	34.2M	31.4M	32.1M
Springfield	80.6	3.18	21.3	0.9	35.1	35.2	33.1	32.0
St. Charles	81.2	2.95	14.5	0.6	34.2	35.1	33.7	32.1
Stelle	82.8	2.18	16.3	0.8	35.0	35.1	32.7	31.7

M = Missing data.

Other Precipitation Networks

— ERIN BAUER

Imperial Valley. The average network precipitation for January 2019 was 1.96 inches, which is slightly above the previous 26-year network average (Figure 5a). The largest monthly gage total was in the northern portion of the network. Monthly gage totals varied 1.24 inches across the network, from 1.49 inches at site #11, between Forest City and San Jose, to 2.73 inches at site #2, north of Manito. The 1981–2010 30-year average precipitation amounts for January at Havana and Mason City are 2.08 and 1.92 inches, respectively. The January 2019 network average of 1.96 inches is 106 percent of the 26-year (1993–2017) IVWA January network average of 1.85 inches. The Imperial Valley Water Authority funds this 20-station precipitation network operated by the Illinois State Water Survey.

Cook County. During January 2019, precipitation in Cook County was below average (Figure 5b). Regionally, precipitation was highest along the northern two-thirds of the west side of the network. The region with the lowest precipitation was in the northeastern corner of the county. Precipitation values ranged from 1.18 inches at site #2 (Winnetka, near Hibbard St. and Willow Rd.) to 2.01 inches at sites #7 (Chicago, near N. Kenmore Ave and W. Buena Ave.) and #11 (LaGrange, near W 79th St. and Howard Ave.). Across the network, precipitation varied 0.83 inches. The network average of 1.63 inches is about 80 percent of the 29-year (1990–2018) January network average of 2.04 inches. The Illinois State Water Survey operates this 25-station precipitation network funded by the U.S. Army Corps of Engineers.

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.

In January, the Illinois River crested above the local flood stages at Havana, Beardstown, and Hardin. The Mississippi River crested above the local flood stages at Grafton

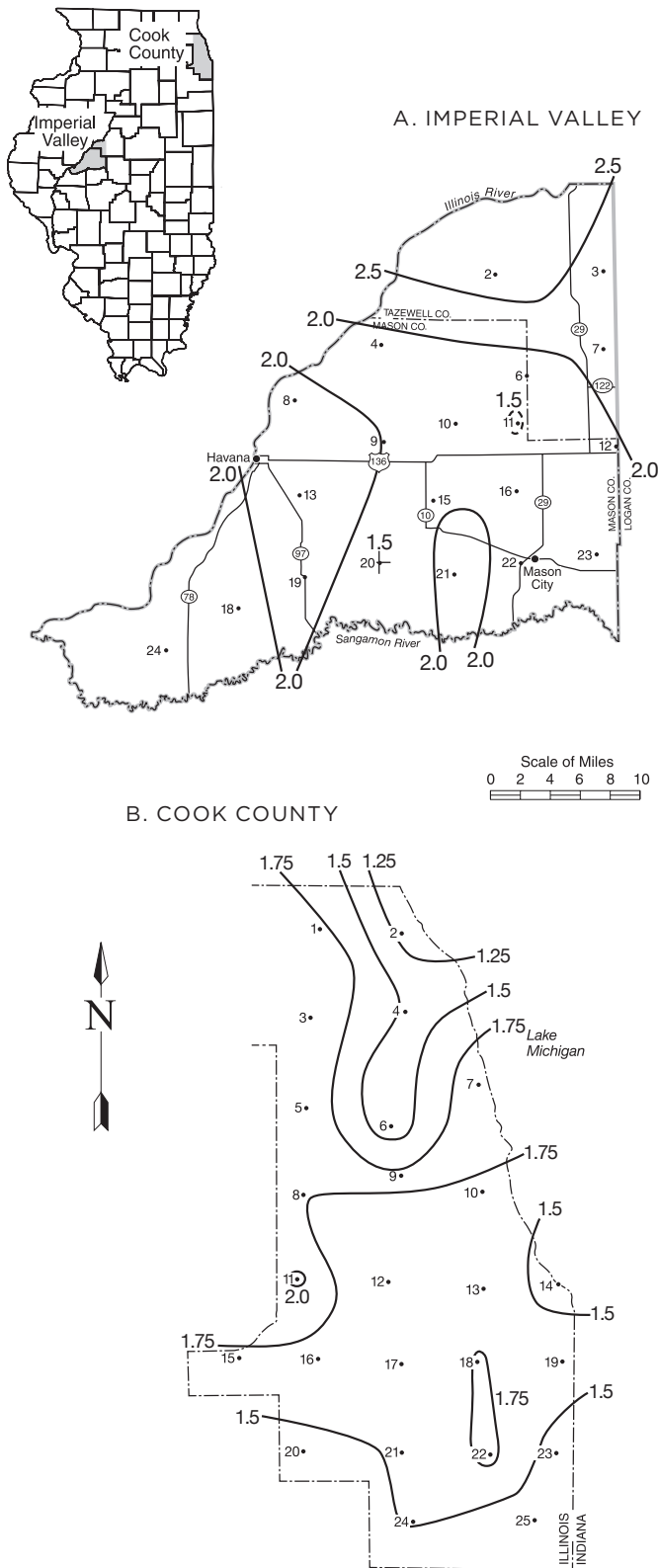


Figure 5. Precipitation totals (inches) for (a) Imperial Valley Water Authority and (b) Cook County raingage networks January 2019

and from Chester (below St. Louis) downstream to the confluence of the Ohio River. The Ohio River level exceeded the flood stage at Cairo during most of the month.

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

Table 3. Peak Stages for Major Rivers during January 2019

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	10.8	02
	La Salle	224.7	20	19.8	03
	Peoria	164.6	18	15.7	06-09
	Havana	119.6	14	15.6	07-10
	Beardstown	88.6	14	16.2	07-09
	Hardin	21.5	25	25.1	03
Mississippi	Dubuque	579.9	17	10.7	08
	Keokuk	364.2	16	10.3	02
	Quincy	327.9	17	14.0	02
	Grafton	218.0	18	18.5	03
	St. Louis	180.0	30	26.8	02
	Chester	109.9	27	28.4	03
	Thebes	43.7	33	34.3	05
Ohio	Cairo	2.0	40	49.4	06

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 2019

Station	Drainage area (sq mi)	Years of record	2018 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	82	8,700	3,418	3,016	much above normal	5	25
Rock River near Joslin	9549	74	12,750	5,697	4,676	above normal	11	25
Pecatonica River at Freeport	1326	98	1,994	777	650	much above normal	5	31
Green River near Geneseo	1003	79	~1,200	568	384	N/A	N/A	20
Edwards River near New Boston	445	79	562	250	140	above normal	16	31
Kankakee River at Momence	2294	100	~3,200	2,337	2,155	N/A	N/A	24
Iroquois River near Chebanse	2091	93	3,913	2,054	1,679	above normal	16	31
Fox River at Dayton	2642	98	3,430	1,554	1,168	much above normal	7	28
Vermilion River at Pontiac	579	73	716	423	259	above normal	17	31
Spoon River at Seville	1636	100	1,936	1,042	664	above normal	17	31
LaMoine River at Ripley	1293	94	1,610	649	348	above normal	11	31
Bear Creek near Marceline	349	73	456	151	64	above normal	12	31
Mackinaw River near Congerville	767	68	1,100	526	310	above normal	14	31
Salt Creek near Greenview	1804	75	3,103	1,312	860	above normal	12	31
Sangamon River at Monticello	550	105	1,111	446	267	above normal	12	31
South Fork Sangamon near Rochester	867	68	973	662	300	above normal	23	31
Illinois River at Valley City	26,743	78	38,061	21,840	17,120	above normal	19	31
Macoupin Creek near Kane	868	88	1,823	551	226	much above normal	7	31
Vermilion River near Danville	1290	95	2,933	1,213	711	above normal	12	31
Kaskaskia River at Vandalia	1940	47	5,137	2,586	2,091	much above normal	10	31
Shoal Creek near Breese	735	73	2,087	706	338	much above normal	9	31
Embarras River at Ste. Marie	1516	103	4,113	1,737	1,132	above normal	12	31
Skillet Fork at Wayne City	464	97	1,634	651	355	above normal	11	31
Little Wabash below Clay City	1131	102	3,076	1,438	744	above normal	13	31
Big Muddy at Plumfield	794	46	2,076	885	757	above normal	13	31
Cache River at Forman	244	93	1,297	497	373	much above normal	8	31

Notes:

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

N/A = not available (due to ice or equipment problems).

*As reported in U.S. Geological Survey (USGS) Water Resources Data, Illinois, Water Year 2016.

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.

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 310 percent of the median) and above the mean for January (approximately 215 percent of the mean). Monthly mean discharge values ranged from above normal to much above normal for January. Due primarily to ice conditions late in the month, some streamflow data this month are unavailable and are partly approximated at some stations.

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 25 reservoirs for which levels were reported last month and this month, reported end-of-January water levels were lower at 12 reservoirs, higher at 7 reservoirs, and about the same as at the end of last month at 6 reservoirs. For the 26 reservoirs with measurements reported at the end of January, water levels were below normal target pool or spillway level at 4 reservoirs, above normal target pool or spillway level at 13 reservoirs, and at about full pool level

Table 5. Reservoir Levels in Illinois, January 2019

Reservoir	County	Normal pool or target level (feet)	Current level difference from normal or target (feet)	Monthly change (feet)	Average difference from normal or target (feet)	Years of record	December reported pumpage (million gallons)
Altamont	Effingham	582.0	0.0	-0.4	-1.5	34	5.6
Bloomington	McLean	719.5	+0.5	+0.2	-2.6	31	N/A
Carlinville	Macoupin	571.1	+0.2	+0.2	-0.6	33	22.3
Carlyle ⁽¹⁾	Clinton	443.0	+4.6	+0.7	+1.8	41	N/A
Decatur ^(1,3)	Macon	612.5	-0.1	-1.1	+0.3	35	986.1
Evergreen ⁽⁴⁾	Woodford	720.0	0.0	+0.5	-2.2	28	N/A
Glenn Shoals ⁽²⁾	Montgomery	590.0	+1.0	N/A	+0.1	24	w/Hillsboro
Highland	Madison	500.0	0.0	-0.3	0.0	30	33.5
Hillsboro ⁽²⁾	Montgomery	589.0	N/A	N/A	+0.1	24	N/A
Jacksonville ⁽²⁾	Morgan	644.0	0.0	0.0	-0.5	12	w/Mauvaise Terre
Kinkaid	Jackson	420.0	-1.1	-0.5	-0.2	30	54.8
Lake of Egypt	Williamson	500.0	+0.3	-0.2	0.0	25	N/A
Mattoon	Coles	632.0	0.0	0.0	-0.4	22	w/Paradise
Mauvaise Terre ⁽²⁾	Morgan	588.5	0.0	0.0	0.0	19	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	5.0
Pana	Christian	641.6	+0.1	-0.1	-1.0	34	N/A
Paradise	Coles	685.0	0.0	0.0	-0.1	27	57.7
Paris (east)	Edgar	660.0	+0.2	-0.2	-0.2	34	Not PWS
Paris (west)	Edgar	660.1	+0.2	-0.2	+0.1	24	w/Paris (east)
Raccoon ⁽¹⁾	Marion	477.0	+0.1	-0.4	N/A	N/A	89.9
Rend	Franklin	405.0	+5.1	+1.2	+2.2	41	N/A
Salem ⁽³⁾	Marion	546.5	-0.1	-0.2	-0.5	24	21.2
Shelbyville ⁽¹⁾	Shelby	594.0	+5.8	-1.6	+3.4	41	Not PWS
Sparta ⁽³⁾	Randolph	497.0	-0.2	0.0	-0.9	21	N/A
Spring ^(3,4)	McDonough	654.0	0.0	0.0	-0.2	35	46.2
Springfield ^(1,3)	Sangamon	559.6	+0.1	-0.1	-1.3	35	591.7
Taylorville	Christian	590.0	+0.2	+0.3	-0.3	25	56.4
Vermilion ⁽⁴⁾	Vermilion	581.7	0.0	+0.1	-0.3	33	200.5

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.

Table 6. Month-End Shallow Groundwater Level Data Sites, January 2019

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	18.55	+2.42	+3.01	-0.79	+2.83
2	Mt. Morris	Ogle	55.00	NA	NA	NA	NA	NA
3	Crystal Lake	McHenry	18.00	3.68	+1.08	+1.61	-0.14	-0.09
4	Fermi Lab	DuPage	17.00	6.23	-0.57	-0.09	-2.62	-1.39
5	Good Hope	McDonough	30.00	4.43	+2.51	+3.48	-0.62	+6.09
6	Snicarte	Mason	42.00	37.40	-0.26	-0.13	+0.03	-2.97
7	Coffman	Pike	28.00	12.77	-0.38	-0.04	+3.66	+3.83
8	Greenfield	Greene	20.70	10.56	+2.43	+1.15	+4.75	+8.75
9	Janesville	Coles	11.00	4.56	+0.28	+0.48	-1.89	+0.43
10	St. Peter	Fayette	15.00	NA	NA	NA	NA	NA
11	SWS #2	St. Clair	80.00	NA	NA	NA	NA	NA
12	Boyleston	Wayne	23.00	NA	NA	NA	NA	NA
13	Sparta	Randolph	27.00	NA	NA	NA	NA	NA
14	SE College	Saline	11.00	1.87	+1.10	+0.94	-0.21	+4.57
15	Bondville	Champaign	21.00	3.56	+0.01	+0.15	-1.24	+0.65
Averages					+0.86	+1.06	+0.09	+2.27

Notes: N/A = Data not available.

at 9 reservoirs. Kinkaid Lake has been intentionally drawn down this winter.

Major Reservoirs. Compared to water levels at the end of December, at the end of January the water level at Lake Shelbyville was 1.6 feet lower, Carlyle Lake was 0.7 feet higher, and Rend Lake was 1.2 feet higher. At the end of January, Lake Shelbyville was 5.8 feet above the winter target level, Carlyle Lake was 4.6 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 2019 mean level for Lake Michigan was 580.1 feet. The monthly mean level one year ago (January 2018) was 579.8 feet. The long-term average lake level for January is 578.4 feet, based on 1918-2017 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 level for January occurred in 1987 at 581.3 feet. The month-end level of Lake Michigan was 580.1 feet. All values are provided by the U.S. Army Corps of Engineers Detroit District.

Groundwater Information

— KEN HLINKA

Comparison to Average Levels. Shallow groundwater levels in 10 observation wells, which are remote from pumping centers, were above normal for the month of January. Levels averaged 1.1 feet above normal and ranged from 0.1 foot below to 3.0 feet above normal levels (Table 6).

Comparison to Previous Month. Shallow groundwater levels were above those of the previous month. Levels averaged 0.1 foot above and ranged from 2.6 feet below to 4.8 feet above December levels.

Comparison to Same Month, Previous Year. Shallow groundwater levels in January were above levels measured one year ago. Levels averaged 2.3 feet above this month and ranged from 3.0 feet below to 8.8 feet above levels of January 2018.

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>

NCDC - National Climatic Data Center, <http://www.ncdc.noaa.gov>

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