

ILLINOIS WATER AND CLIMATE SUMMARY

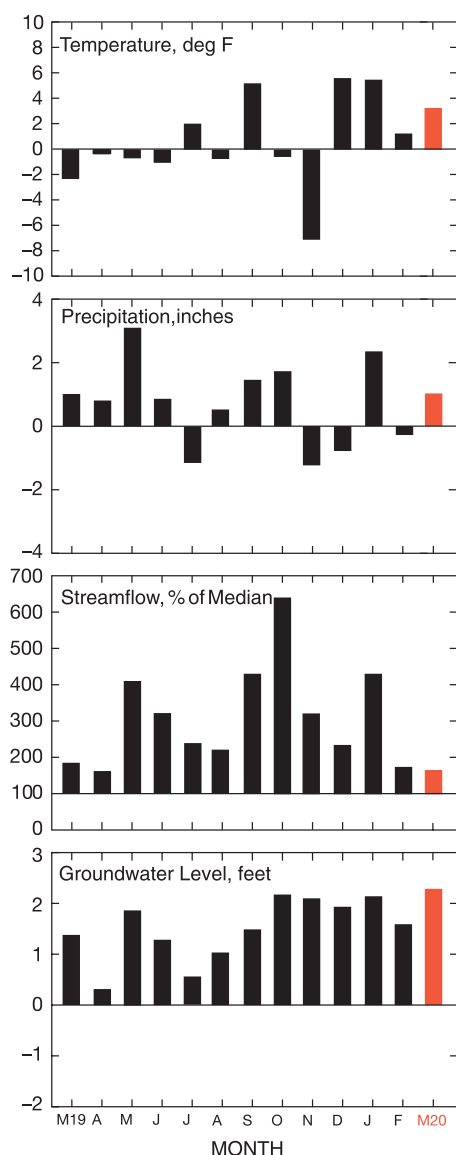


Figure 1. Statewide departures from normal.

March 2020 OVERVIEW

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

Air temperatures averaged 44.6°F in March, 3.3° above the long-term average (Figure 1). The southeast crop reporting district (CRD) was the warmest with an average of 50.1°F. The lowest regional temperature was 40.3°F, reported by the northeast CRD.

Precipitation averaged 3.91 inches, 0.95 inches above the long-term average (Figure 1). The southeast CRD was the wettest with an average of 6.80 inches. The driest was the central CRD with 2.82 inches.

Soil Moisture remained high in March. Moisture levels at 2 inches increased 7% on average to 0.42 water fraction by volume (wfv) across the state. Levels rose 5% at 4 inches and showed no significant changes at depths of 8 inches or more.

Mean provisional streamflow aggregated statewide was above the long-term median flow for March, about 170% of median (Figure 1). Monthly mean discharge values generally ranged from normal to above normal for March. By the end of the month, water levels had reached the local flood stages along the Illinois border on the Ohio River and on the Mississippi River from Rock Island downstream. The Illinois River also reached local flood stages at some locations.

Water surface levels at the end of March were below the full pool or target level at 3 of 24 reporting reservoirs. At the end of March, Lake Shelbyville was 2.5 feet above the April 1 target level, Carlyle Lake was 2.2 feet above the April 1 target level, and Rend Lake was 5.4 feet above the spillway level. Lake Michigan's mean level exceeded the previous record high monthly mean level for March (in 102 years of record).

Shallow groundwater levels were above normal this month with an average departure of 2.27 feet from the period of record (Figure 1). An increase of 0.68 feet in departures was observed from the deviation in normal groundwater levels between February and March. Levels averaged 0.82 feet above February 2020 and 0.48 feet above March 2019 levels.

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.

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

Temperatures averaged 44.6°F, 3.3° above the long-term average (Table 1, Figure 2) and tied with 1990 for the 18th warmest March on record (back to 1895). March marked the fourth consecutive month of above average temperatures going back through December. Monthly average temperatures ranged from the upper 30s in northern Illinois to the lower 50s in southern Illinois, with departures of 2° to 4° above average across most of the state. Most stations recorded their monthly maximum temperatures in the last six days of the month, although some stations in northern Illinois recorded theirs on March 9. These maximum temperatures generally ranged from the mid-60s in northern Illinois to around 80° in far southern Illinois. The warmest reading of the month, 81°F, was recorded at three stations: one in Alexander County on March 26, one near Dixon Springs (Pope County) on March 26, and one near Rosiclare (Hardin County) on March 27.

Coming off a cold spell at the end of February, many stations recorded their monthly minimum temperatures on March 1, generally ranging from the lower teens in northern Illinois to the mid-20s in southern Illinois. The lowest reading of the month, 8°F, was also recorded at three stations, all on March 1: one near Elizabeth (Jo Daviess County), one near Morrison (Whiteside County), and one near Altona (Knox County). Some stations, especially in far southern Illinois, recorded their monthly minimum temperatures on March 7 instead.

Precipitation averaged 3.91 inches in March, 0.95 inches above the long-term average (Table 1, Figure 2). Totals generally ranged from over 2 inches in parts of north central Illinois to around 7 inches in southern and southeastern Illinois, with a few areas receiving close to 8 inches. The highest monthly total was 8.31 inches, recorded at a station near Clay City (Clay County). That station also recorded a one-day precipitation total of 4.50 inches on March 20, as a storm system produced heavy precipitation throughout southern and southeastern Illinois, especially along and north of the I-64 corridor. March precipitation throughout most of southern Illinois was well above average by over 1 inch in southwestern Illinois and 2 to 3 inches in southeastern Illinois. This continued the wet pattern seen in the area since January (Figure 3). The rest of Illinois also received above average March precipitation, with northern Illinois about 1 inch above average and central Illinois closer to but still slightly above average.

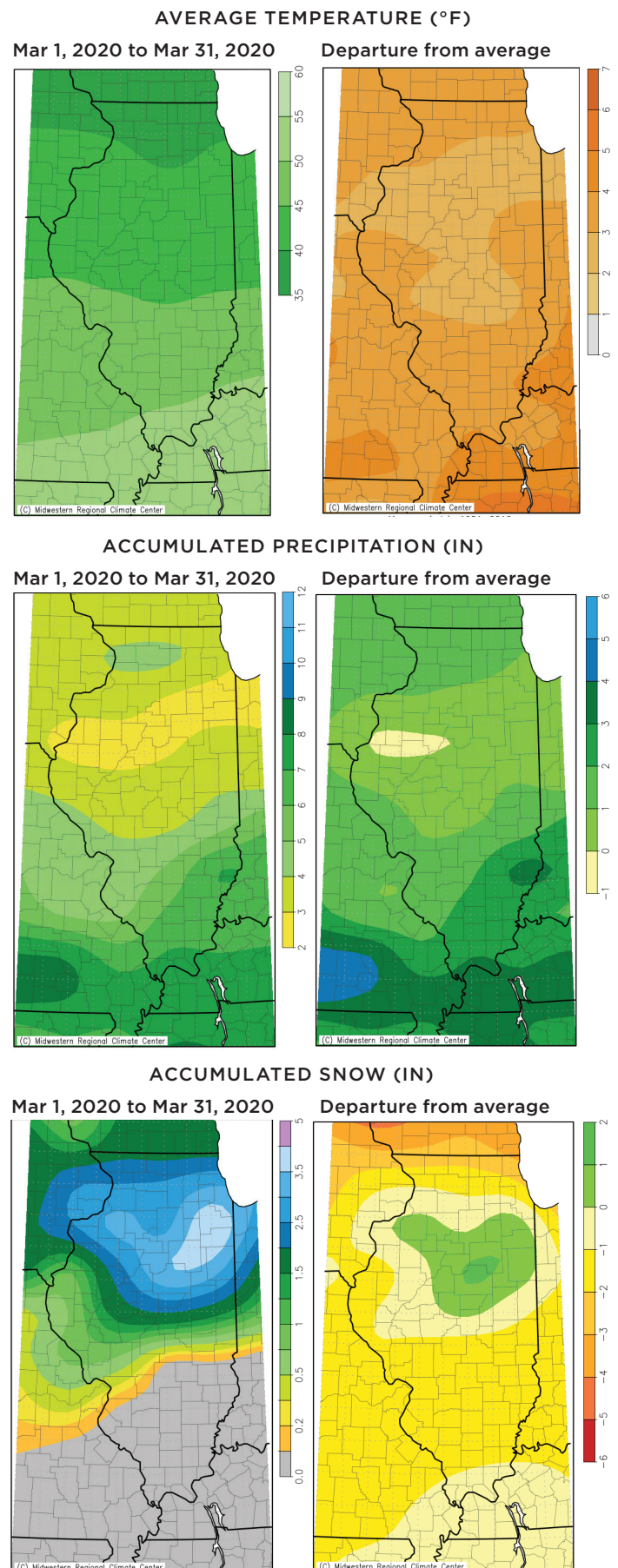


Figure 2. Illinois temperature, precipitation, snow and their departures from average for March 2020. Source: cli-MATE, Midwestern Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>. Information accessed on April 8, 2020.

Snow: Most areas to the north of the I-70 corridor saw measurable snow in March (Figure 2). Areas along and to the north of the I-74 corridor generally received 2 to 3 inches of snow or more, with the highest totals around 5 to 6 inches occurring just south and southwest of Chicago. The highest monthly snowfall total in Illinois of 7.1 inches was recorded at a station near Morris (Grundy County).

Most of the March snow in Illinois was produced by two systems. The first came through March 14-15, affecting primarily east central Illinois with up to 2 inches. The larger storm occurred March 22-23, producing its heaviest snow along the I-80 corridor in northern Illinois and being largely responsible for the highest totals in northeastern Illinois. For example, 5.8 of the 7.1 inches recorded at the station near Morris in March was reported on March 23. Overall, areas of north central Illinois received up to about 1 inch or more above average snow for March, while most of the rest of the state received about 1 to 2 inches below average.

Severe weather reports: The NOAA Storm Prediction Center recorded 37 severe weather reports for March in Illinois, 8 for tornadoes, 20 for hail, and 9 for wind. (Multiple reports can be generated for a single event.) The National Weather Service confirmed 7 tornadoes in Illinois in March. (One produced two storm reports.) Two EF-1 tornadoes occurred in southern Illinois on the afternoon of March 19. Another four EF-1 and one EF-U (rating unknown) tornadoes occurred in northwestern Illinois on the evening of March 28, including one touchdown in southwest Peoria near the airport.

Drought: The United States Drought Monitor reported Illinois free of drought and abnormally dry conditions throughout March (Figure 4). Above average precipitation throughout most of northern Illinois helped soil moisture and streamflows remain near or above average for most of March, despite a relatively dry February. Meanwhile, the southern half of the state remained especially wet, with many areas south of I-72 already receiving over 4 inches of precipitation above normal for the year so far (Figure 3), or about 150% of average.

Table 1 Temperature and Precipitation for March 2020

	Temp. (°F)	Departure from long- term avg. (1981-2010)	Precip. (in)	Departure from long- term avg. (1981-2010)
Illinois	44.6	+3.3	3.91	+0.95
CRD 1 (northwest)	40.7	+3.2	3.45	+1.01
CRD 2 (northeast)	40.3	+2.7	3.29	+0.93
CRD 3 (west)	43.6	+3.0	2.87	+0.19
CRD 4 (central)	43.6	+3.3	2.82	+0.14
CRD 5 (east)	42.6	+2.8	2.98	+0.32
CRD 6 (west southwest)	46.0	+3.1	3.69	+0.77
CRD 7 (east southeast)	46.3	+3.3	4.68	+1.41
CRD 8 (southwest)	49.9	+4.0	5.24	+1.41
CRD 9 (southeast)	50.1	+4.3	6.80	+2.64

Data from NOAA's National Centers for Environmental Information, accessed 4/8/2020.

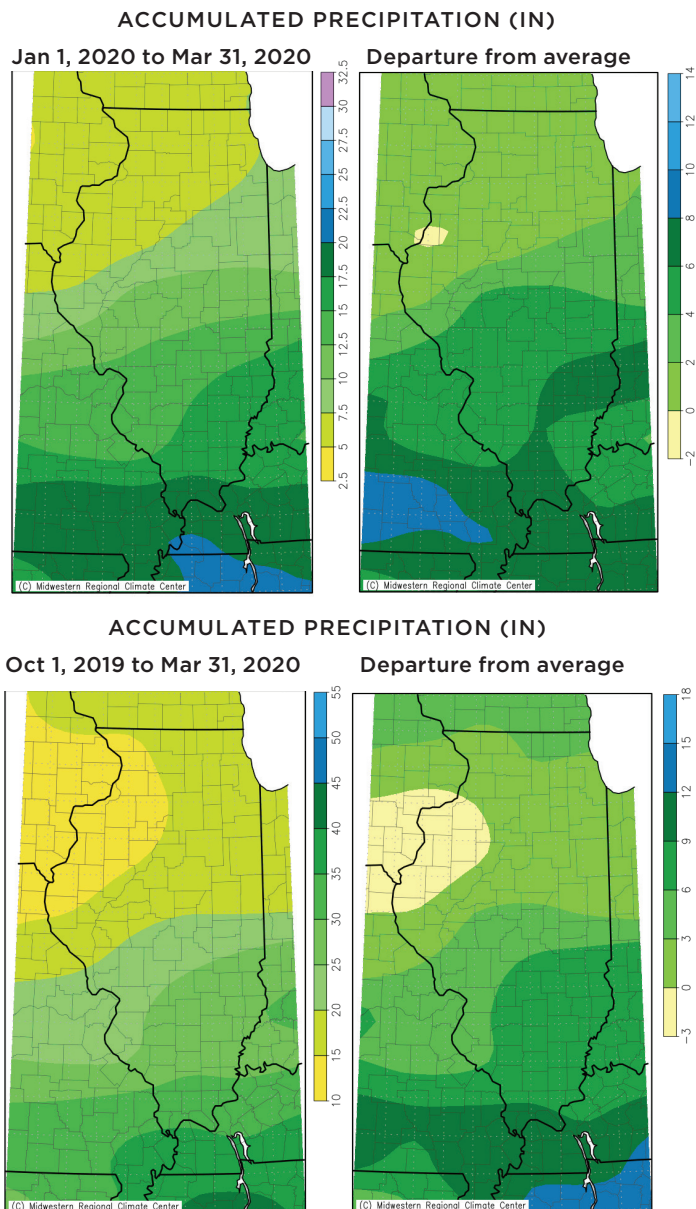
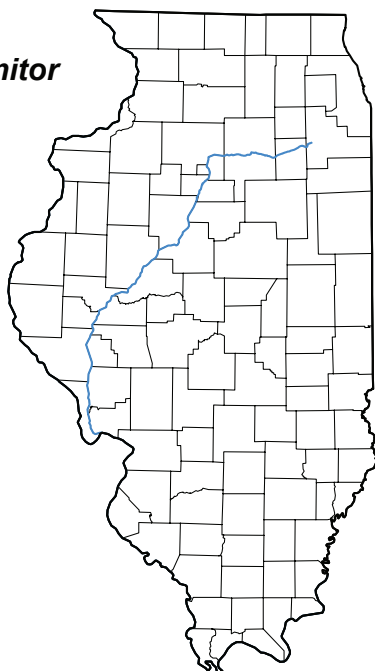


Figure 3. Illinois precipitation and precipitation departure from average for last 3 months (top), and last 6 months (bottom).

Source: cli-MATE, Midwest Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>. Information accessed on April 8, 2020.

U.S. Drought Monitor Illinois



March 31, 2020
(Released Thursday, Apr. 2, 2020)
Valid 8 a.m. EDT

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 03-24-2020	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 12-31-2019	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 04-02-2019	100.00	0.00	0.00	0.00	0.00	0.00

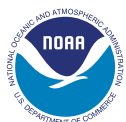
Intensity:

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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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 March are presented in Table 2.

Wind speeds averaged 8.0 mph for the month, an increase of 0.4 mph from February but 0.6 mph lower than the network's long-term average. ICN Bondville had the highest average with 11.8 mph. The highest recorded wind gust was 52.9 mph at ICN Snicarte on March 29.

Air temperatures rose in March to an average of 44.5°, 12.9° warmer than February and 2.0° higher than the long-term average. Station highs ranged from the mid-60s to the low 80s. ICN Dixon Springs had the highest reported temperature for the month, recording 80.6° on March 26. Lows were in the 20s for most stations. The month's lowest was 16.6°, recorded at ICN St. Charles on March 7.

Soil temperatures also increased in March with temperatures averaging from 8° (2 inches under bare soil) to 13° (8 inches under sod) warmer at the end of the month. Temperatures were 2° above the long-term average. Under bare soil, temperatures ranged from 30.4° to 74.2° at depths of 2 inches and 31.3° to 69.7° at 4 inches. Temperatures under sod had ranges from 32.2° to 66.4° at 4 inches and 32.3° to 61.1° at 8 inches.

Precipitation was higher than the long-term averages at all stations in March. Overall, the network averaged 4.64 inches for the month, 1.93 inches more than normal. The highest totals were mainly in the south where ICN Dixon Springs recorded 7.61 inches, the highest for the month.

The high precipitation led to increases in **soil moisture**. On average, moisture levels at 2 inches rose 7% in March to 0.42 water fraction by volume (wfv). The highest increases were in northern Illinois where levels rose 31%. However, despite the wet weather, southern Illinois saw no overall change since most soils in the region had already reached their saturation point.

A slighter increase was seen at 4 inches. Levels remained high but steady at depths of 8 inches or more.

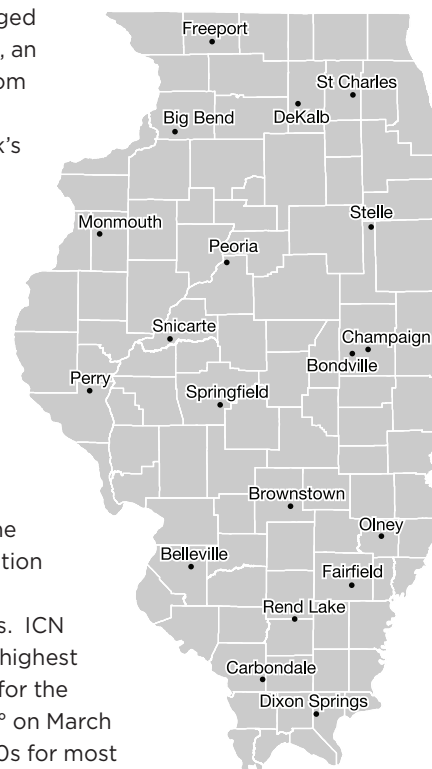


Figure 4. U.S. Drought Monitor report for Illinois. Source: U.S. Drought Monitor. Author: David Simeral, Western Regional Climate Center
<http://droughtmonitor.unl.edu>, accessed on April 8, 2020.

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

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m²)
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	7.8	174.1	37.5	78.8	25.0	49.3	348.2
Big Bend	8.7	182.3	39.5	68.4	24.0	41.4	332.1
Bondville	11.8	176.3	46.3	69.3	20.4	43.0	353.9
Brownstown	7.5M	174.3M	42.2M	74.9	25.5	46.9	335.2
Carbondale	7.4	178.7	37.5	78.9	22.6	50.5	364.7
Champaign	5.4	174.8	34.5	70.2	21.3	43.6	329.4
DeKalb	9.6	179.7	44.0	64.1	20.7	38.4	351.5
Dixon Springs	4.8	166.4	31.0	80.6	23.5	51.0	350.2
Fairfield	7.4	168.9	40.0	76.1	24.7	48.4	355.9
Freeport	6.3	185.2	32.4	64.4	22.2	38.3	333.0
Monmouth	11.3	186.8	44.1	70.1	21.5	41.7	369.8
Olney	6.5	176.2	35.7	75.8	23.4	48.0	347.4
Peoria	8.4	177.8	42.8	70.6	24.7	42.4	345.3
Perry	7.4	184.5	38.3	73.3	23.3	45.0	360.5
Rend Lake	5.4	178.2	36.0	78.2	24.4	49.1	349.3
Snicarte	10.4	172.8	52.9	72.5	23.0	43.8	371.3
Springfield	6.7	176.4	35.5	70.9	27.9	45.4	351.5
St. Charles	7.3	174.6	39.0	65.7	16.6	39.4	351.3
Stelle	11.2	176.8	43.9	65.7	18.5	40.5	312.2

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	77.1	3.82	41.4	2.53	47.7	46.8	46.1	50.5
Big Bend	79.8	7.15	34.8	2.03	40.3	39.1	42.5	44.6
Bondville	84.2	3.37	38.0	2.05	42.8	44.9	44.6	44.6
Brownstown	76.9	4.55	39.3	2.00M	48.3	46.0	46.6	46.9
Carbondale	80.1	6.62	43.5	2.58	51.5	49.3	50.5	50.6
Champaign	80.9	3.49	37.3	2.03	45.6	45.4	45.6	45.9
DeKalb	84.1	4.28	33.6	1.85	40.7	39.5	42.7	41.7
Dixon Springs	74.2	7.61	42.0	2.54	51.4	50.8	51.6	53.7
Fairfield	78.2	6.26	41.1	2.41	48.9	48.1	48.8	51.1
Freeport	78.9	3.60	31.7	1.89	40.3	38.2	38.0	38.3
Monmouth	79.9	2.53	35.1	2.25	41.1	40.2	43.0	42.5
Olney	75.8	7.32	40.0	2.40	48.4	48.2	51.1	51.1
Peoria	75.2	3.21	34.2	2.23	43.9	40.6	42.8	43.0
Perry	75.0	3.61	36.1	2.47	45.3	44.5	46.3	47.2
Rend Lake	73.4	6.41	40.1	2.50	49.8	49.7	50.4	50.5
Snicarte	73.4	2.45	34.9	2.56	46.0	45.5	45.0	47.0
Springfield	74.1	4.51	36.5	2.37	46.2	44.6	46.0	46.4
St. Charles	78.2	4.32	32.5	2.05	41.9	41.0	42.1	41.5
Stelle	82.0	3.04	34.9	1.83	40.1	38.8	42.6	41.4

M = Missing data.

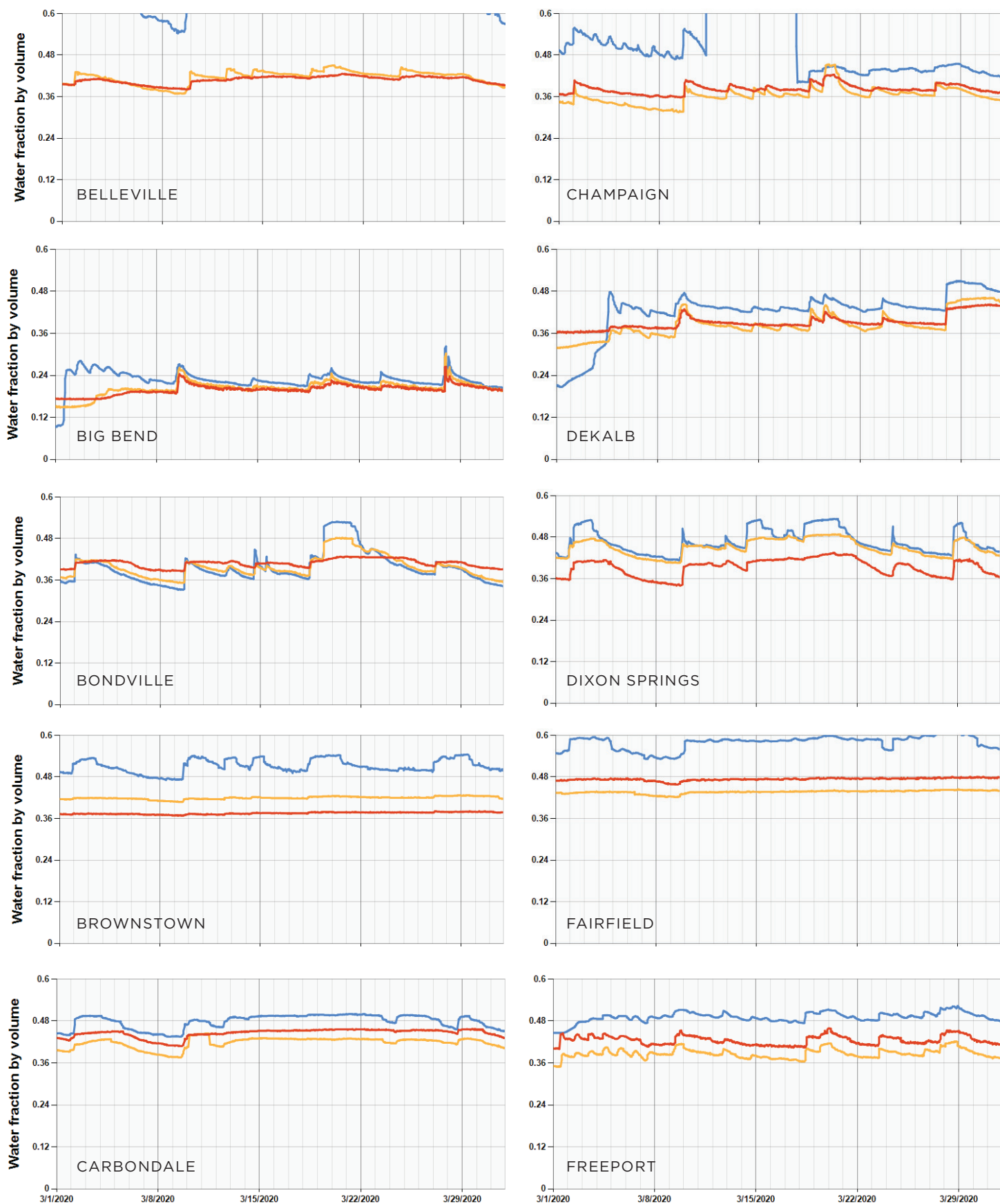


Figure 5. March soil moisture levels at ICN stations: — 2 in, — 4 in, and — 8 in

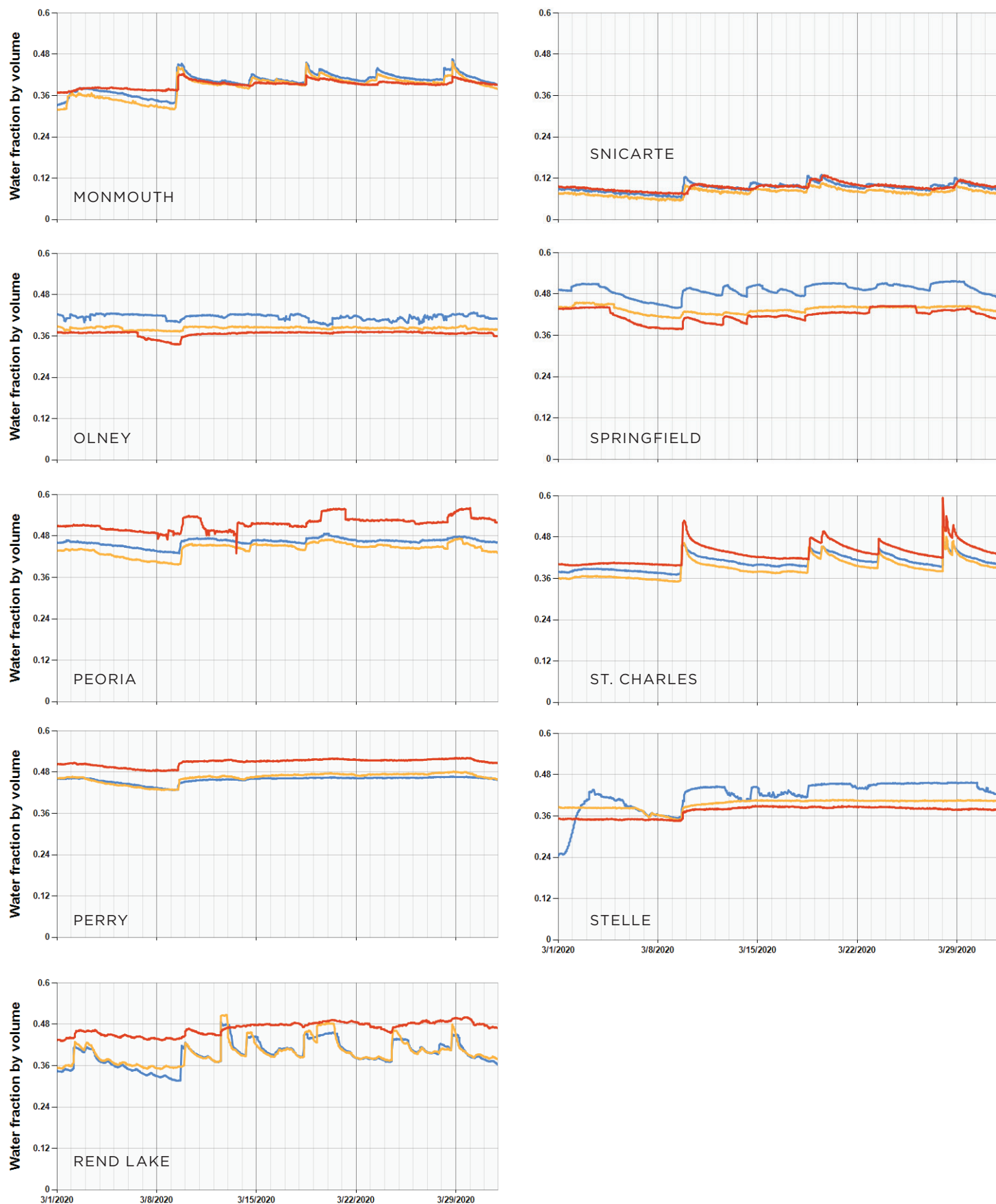


Figure 5. March soil moisture levels at ICN stations: — 2 in, — 4 in, and — 8 in

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.

At the end of March, Illinois River water levels reached local flood stages near Utica and LaSalle, and at gaging stations from Havana downstream. In late March, the Ohio River exceeded the local flood stages along the Illinois border, and the Mississippi River reached or exceeded local flood stages from Rock Island downstream to Cairo. The Ohio River was above the flood stage at Cairo throughout March.

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 for the same month.

Beginning with the February 2020 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 does 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; it 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 March (approximately 170 percent of the median) and above the mean for March (approximately 140 percent of the mean). Monthly mean discharge values generally ranged from normal to above normal for March.

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-February water levels at 23 reservoirs for which levels were reported last month and this month, reported end-of-March water levels were lower at 9 reservoirs, higher at 7 reservoirs, and about the same as last month at 7 reservoirs. For the 24 reservoirs with measurements reported at the end of March, water levels were below the normal target pool or spillway level at 3 reservoirs, above the normal target pool or spillway level at 16 reservoirs, and at about the full pool level at 5 reservoirs.

Major Reservoirs. Compared to water levels at the end of February, at the end of March the water level at Lake Shelbyville was 2.6 feet higher, Carlyle Lake was 2.5 feet lower, and Rend Lake was 0.9 feet higher. At the end of March, Lake Shelbyville was 2.5 feet above the April 1 target level, Carlyle Lake was 2.2 feet above the April 1 target level, and Rend Lake was 5.4 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 March 2020 mean level for Lake Michigan was 581.4 feet. The monthly mean level one year ago (March 2019) was 580.3 feet. The long-term average lake level for March is 578.4 feet, based on 1918-2019 data. In this period of record, the lowest mean level for Lake Michigan for March occurred in 1964 at 576.1 feet, and the highest mean level for March occurred in 1986 at 581.1 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 March 2020

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	10.0	30
	La Salle	224.7	20	20.5	30
	Peoria	164.6	18	16.6	31
	Havana	119.6	14	16.3	31
	Beardstown	88.6	14	17.7	31
	Hardin	21.5	25	28.2	31
Mississippi	Dubuque	579.9	17	16.2	26-31
	Keokuk	364.2	16	16.1	30-31
	Quincy	327.9	17	19.5	31
	Grafton	218.0	18	22.4	31
	St. Louis	180.0	30	30.4	22
	Chester	109.9	27	33.8	27
	Thebes	43.7	33	36.3	26-27
Ohio	Cairo	2.0	40	52.6	31

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, March 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	6,363	80	10,959	7,541	7,059	above normal	17	31
Rock River near Joslin	9,549	80	16,282	11,377	10,355	above normal	20	31
Pecatonica River at Freeport	1,326	105	2,717	1,789	1,583	above normal	18	31
Green River near Geneseo	1,003	83	1,340	1,097	919	above normal	28	31
Edwards River near New Boston	445	85	393	526	415	normal	54	31
Kankakee River at Momence	2,294	107	3,594	3,372	3,270	normal	38	31
Iroquois River near Chebanse	2,091	95	3,643	3,175	2,782	normal	34	31
Fox River at Dayton	2,642	105	4,326	3,398	3,090	above normal	28	31
Vermilion River at Pontiac	579	77	889	754	670	above normal	28	31
Spoon River at Seville	1,636	105	1,591	1,730	1,287	normal	43	31
LaMoine River at Ripley	1,293	98	1,740	1,317	883	above normal	24	31
Bear Creek near Marceline	349	76	621	373	247	above normal	23	31
Mackinaw River near Congerville	767	75	1,295	944	700	above normal	25	31
Salt Creek near Greenview	1,804	78	3,347	2,098	1,729	above normal	19	31
Sangamon River at Monticello	550	110	1,103	710	610	above normal	20	31
South Fork Sangamon near Rochester	867	69	2,050	992	693	above normal	11	31
Illinois River at Valley City	26,743	81	39,803	34,755	30,490	normal	37	31
Macoupin Creek near Kane	868	91	1,665	876	571	above normal	12	31
Vermilion River near Danville	1,290	98	2,497	1,732	1,442	above normal	27	31
Kaskaskia River at Vandalia	1,940	50	4,072	2,935	2,498	normal	31	31
Shoal Creek near Breese	735	77	1,549	953	750	above normal	20	31
Embaras River at Ste. Marie	1,516	108	3,613	2,185	1,887	above normal	20	31
Skillet Fork at Wayne City	464	102	1,686	821	727	above normal	13	31
Little Wabash River below Clay City	1,131	104	3,330	1,763	1,486	above normal	14	31
Big Muddy River at Plumfield	794	49	2,076	1,357	1,174	above normal	22	31
Cache River at Forman	244	97	1,227	627	451	much above normal	10	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 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, March 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	February reported pumpage (million gallons)
Altamont	Effingham	582.0	0.0	-0.1	-0.5	36	5.1
Bloomington	McLean	719.5	+0.2	-0.1	-0.7	33	N/A
Carlinville	Macoupin	571.1	+0.2	0.0	-0.1	33	22.0
Carlyle ⁽¹⁾	Clinton	443.0	+2.2	-2.5	+1.3	42	N/A
Decatur ^(1,3)	Macon	612.5	+1.0	+0.4	+0.8	36	978.0
Evergreen ⁽⁴⁾	Woodford	720.0	+0.1	0.0	-1.0	29	N/A
Glenn Shoals ⁽²⁾	Montgomery	590.0	+1.0	+1.0	+0.2	25	w/Hillsboro
Highland	Madison	500.0	+0.5	-0.1	+0.2	31	26.6
Hillsboro ⁽²⁾	Montgomery	589.0	N/A	N/A	+0.1	24	40.8
Jacksonville ⁽²⁾	Morgan	644.0	N/A	N/A	-0.1	17	w/Mauvaise Terre
Kinkaid	Jackson	420.0	+0.1	+1.1	+0.2	31	49.8
Lake of Egypt	Williamson	500.0	N/A	N/A	+0.3	26	N/A
Mattoon	Coles	632.0	0.0	0.0	-0.1	26	w/Paradise
Mauvaise Terre ⁽²⁾	Morgan	588.5	N/A	N/A	+0.1	22	no meter
Mt. Olive (new)	Macoupin	600.0	0.0	N/A	-0.4	15	w/Mt. Olive (old)
Mt. Olive (old)	Macoupin	654.0	0.0	0.0	-0.2	21	4.7
Pana	Christian	641.6	+0.1	-0.1	-0.3	36	N/A
Paradise	Coles	685.0	0.0	0.0	0.0	30	55.5
Paris (east) ⁽⁵⁾	Edgar	660.0	+0.3	-0.1	+0.2	10	Not PWS
Paris (west) ⁽⁵⁾	Edgar	660.1	+0.3	-0.1	+0.2	10	w/Paris (east)
Raccoon ⁽¹⁾⁽⁵⁾	Marion	477.0	+0.8	+0.5	0.0	12	81.8
Rend	Franklin	405.0	+5.4	+0.9	+3.8	42	N/A
Salem ⁽³⁾	Marion	546.5	-0.2	-0.1	-0.2	25	21.9
Shelbyville ⁽¹⁾	Shelby	594.0	+2.5	+2.6	+0.5	42	Not PWS
Sparta ⁽³⁾	Randolph	497.0	-0.2	-0.1	-0.7	22	N/A
Spring ^(3,4)	McDonough	654.0	N/A	N/A	+0.1	36	49.8
Springfield ^(1,3)	Sangamon	559.6	-0.4	0.0	-0.5	36	519.9
Taylorville	Christian	590.0	+0.1	0.0	0.0	27	50.4
Vermilion ⁽⁴⁾	Vermilion	581.7	+0.1	+0.1	-0.2	34	191.7

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 April 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. Thirteen observation wells were added to the /WCS beginning this month. These wells are co-located at Illinois Climate Network stations. Each has at least 15 years of data. Historical data are available on the Water & Atmospheric Resources Monitoring (WARM) Program website (<https://www.isws.illinois.edu/warm/>).

Comparison to Period of Record. Shallow groundwater levels in 26 observation wells were above normal for March.

Levels averaged 2.27 feet above normal and ranged from 1.02 feet below to 10.61 feet above normal levels (Table 6).

Comparison to February 2020. Shallow groundwater levels were above those of the previous month. Levels averaged 0.82 feet above and ranged from 0.62 feet below to 6.65 feet above February 2020 levels.

Comparison to March 2019. Shallow groundwater levels in March were above levels from one year ago. Levels averaged 0.48 feet above and ranged from 1.78 feet below to 3.64 feet above March 2019 levels.

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

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)	Previous month (feet)	Previous year (feet)
Belleville	St Clair	15.00	1.78	-0.05	-0.14	-0.59	-0.59
Bondville	Champaign	21.00	N/A	N/A	N/A	N/A	N/A
Bondville (ICN)	Champaign	20.00	2.45	0.23	0.27	-0.56	-0.26
Boyleston	Wayne	23.00	N/A	N/A	N/A	N/A	N/A
Brownstown	Fayette	15.00	0.05	0.68	0.73	0.05	0.19
Carbondale	Jackson	26.00	2.43	-0.23	-0.22	-0.06	0.07
Coffman	Pike	28.00	5.41	4.09	3.75	1.20	3.64
Crystal Lake	McHenry	18.00	3.6	0.45	0.95	0.29	0.35
DeKalb	DeKalb	25.00	0.86	1.12	0.97	1.69	0.58
Fairfield	Wayne	21.00	1.09	0.88	0.86	-0.32	0.11
Fermi Lab	DuPage	15.00	2.43	1.84	2.07	3.63	2.36
Freeport	Stephenson	26.00	10.64	7.07	7.07	4.82	2.49
Galena	JoDaviess	25.00	18.58	1.44	2.56	0.71	-1.67
Good Hope	McDonough	30.00	4.25	0.42	1.56	0.75	-1.20
Greenfield	Greene	21.00	4.1	5.41	3.93	0.42	0.24
Janesville	Coles	11.00	4.14	0.29	0.38	0.11	-1.78
Monmouth	Warren	27.00	9.11	0.13	0.35	0.14	-0.03
Mt. Morris	Ogle	55.00	8.89	8.81	10.13	6.65	N/A
Olney	Richland	19.00	0.81	0.27	0.26	-0.56	-0.08
Perry	Pike	20.00	1.08	5.69	5.50	-0.25	3.27
Rend Lake	Jefferson	21.00	1.03	1.88	1.91	0.38	1.15
SE College	Saline	11.00	1.28	0.15	0.10	-0.09	N/A
Snicarte	Mason	42.00	38.14	-0.55	-1.02	-0.07	0.49
Sparta	Randolph	27.00	2.9	0.88	1.56	0.93	N/A
Springfield	Sangamon	20.00	1.58	3.63	3.12	-0.62	0.36
St. Charles	Kane	21.00	13.1	10.02	10.61	2.93	1.14
St. Peter	Fayette	15.00	1.76	-0.55	-0.16	-0.05	N/A
SWS #2	St. Clair	80.00	11.74	0.06	1.82	-0.17	N/A
				2.08	2.27	0.82	0.48

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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