ILLINOIS
Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

April 2021

ILLINOIS WATER AND CLIMATE SUMMARY

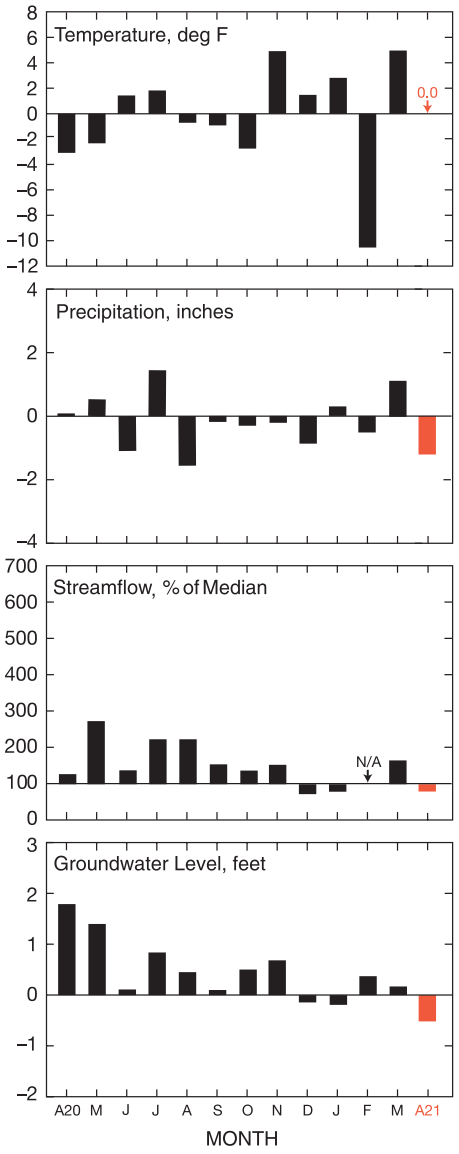

Figure 1. Statewide departures from normal.

APRIL 2021 OVERVIEW

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

Air temperatures statewide averaged 52.6°F in April, which was right at the long-term average (Figure 1). The southwest and southeast crop reporting districts (CRDs) were the warmest with an average of 55.4°F. The lowest regional average temperature was 50.3°F, reported by the northwest CRD. Departures from average ranged from 1.1° below average in the southwest and southeast CRDs to 1.7° above average in the northeast CRD.

Precipitation statewide averaged 2.95 inches, 1.29 inches below the long-term average (Figure 1). The west CRD was the wettest with an average of 4.48 inches. The driest was the northeast CRD with an average of 1.46 inches. Departures from average ranged from 2.27 inches below average in the northeast CRD to 0.55 inches above average in the west CRD.

Soil moisture levels at 2 inches declined 11% on average across the state. The greatest drops were in eastern and northern Illinois, while moisture levels remained steady in the south and west. Similar conditions were seen through the 8-inch depths. Soil moisture remained high at 39- and 59-inch depths.

Mean provisional streamflow aggregated statewide was below the long-term median flow for April, about 85% of median (Figure 1). Monthly mean discharge values were above normal for April in western Illinois and below normal to normal elsewhere. Water levels of the lower Illinois River, the Mississippi River at most streamgage locations below Quincy, and the Ohio River at Cairo were above the local flood stages at times in early to mid-April.

Water surface levels at the end of April were below the full pool or target level at 5 of 25 reporting reservoirs. At the end of April, Lake Shelbyville was 2.9 feet below the May 1 target level, Carlyle Lake was 1.0 foot below the May 1 target level, and Rend Lake was 4.0 feet above the spillway level. Lake Michigan's mean level was above its long-term mean for the month.

Shallow groundwater levels statewide were below the long-term average this month with an average departure of 0.45 feet below the period of record (Figure 1). Levels averaged 0.87 feet below March 2021 and 2.18 feet below April 2020 levels.

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Weather/Climate Information

— KEVIN GRADY

The following description of temperatures, modified growing degree days, 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.

In early May 2021, NOAA's National Centers for Environmental Information released updated U.S. Climate Normals based on the period 1991–2020. Starting with this summary, these updated normals will be used as the long-term climatological averages in this section. The temperature and precipitation graphs in Figure 1 have also been updated using these normals for all months shown.

April in Illinois was slightly warmer than average in northern Illinois while slightly cooler than average in southern Illinois. April was also wet in western Illinois while much drier than average in eastern Illinois.

Temperatures averaged 52.6°F in Illinois in April, which is also the statewide long-term average for the month (Table 1, Figure 2a). Monthly average temperatures ranged from the upper 40s in northern Illinois to the mid-50s in southern Illinois. Northern Illinois was warmer than average, especially northeastern Illinois, where departures of 1–2° above average were common. Central Illinois was close to average, while southern Illinois was slightly cooler than average by up to around 1° in some places.

Following a much warmer than average March, April began well below average across Illinois. Most stations recorded their monthly minimum temperatures during the first three days of the month, generally ranging from the upper teens in northern Illinois to around 30° in southern Illinois. The coldest reading of the month, 17°F, was recorded at stations near Sidell (Vermilion County) and McHenry (McHenry County) on April 2. Temperatures then quickly warmed statewide to well above average, with departures of 8–14° above average common across most of Illinois between April 4 and 11. This was followed by below average temperatures again

Table 1 Temperature and Precipitation for April 2021

	Temp. (°F)	Departure from long-term avg. (1991–2020)	Precip. (in)	Departure from long-term avg. (1991–2020)
Illinois	52.6	0.0	2.95	-1.29
CRD 1 (northwest)	50.3	+1.0	2.79	-0.94
CRD 2 (northeast)	50.6	+1.7	1.46	-2.27
CRD 3 (west)	51.8	-0.2	4.48	+0.55
CRD 4 (central)	52.4	+0.4	3.21	-0.67
CRD 5 (east)	51.7	+0.4	2.20	-1.66
CRD 6 (west southwest)	53.3	-0.8	3.46	-0.91
CRD 7 (east southeast)	53.4	-0.7	2.61	-2.10
CRD 8 (southwest)	55.4	-1.1	3.53	-1.52
CRD 9 (southeast)	55.4	-1.1	3.13	-1.99

Data from NOAA's National Centers for Environmental Information, accessed 5/7/2021.

AVERAGE TEMPERATURE (°F)

Apr 1, 2021 to Apr 30, 2021 | Departure from average

ACCUMULATED PRECIPITATION (IN)

Apr 1, 2021 to Apr 30, 2021 | Departure from average

ACCUMULATED SNOW (IN)

Apr 1, 2021 to Apr 30, 2021 | Departure from average

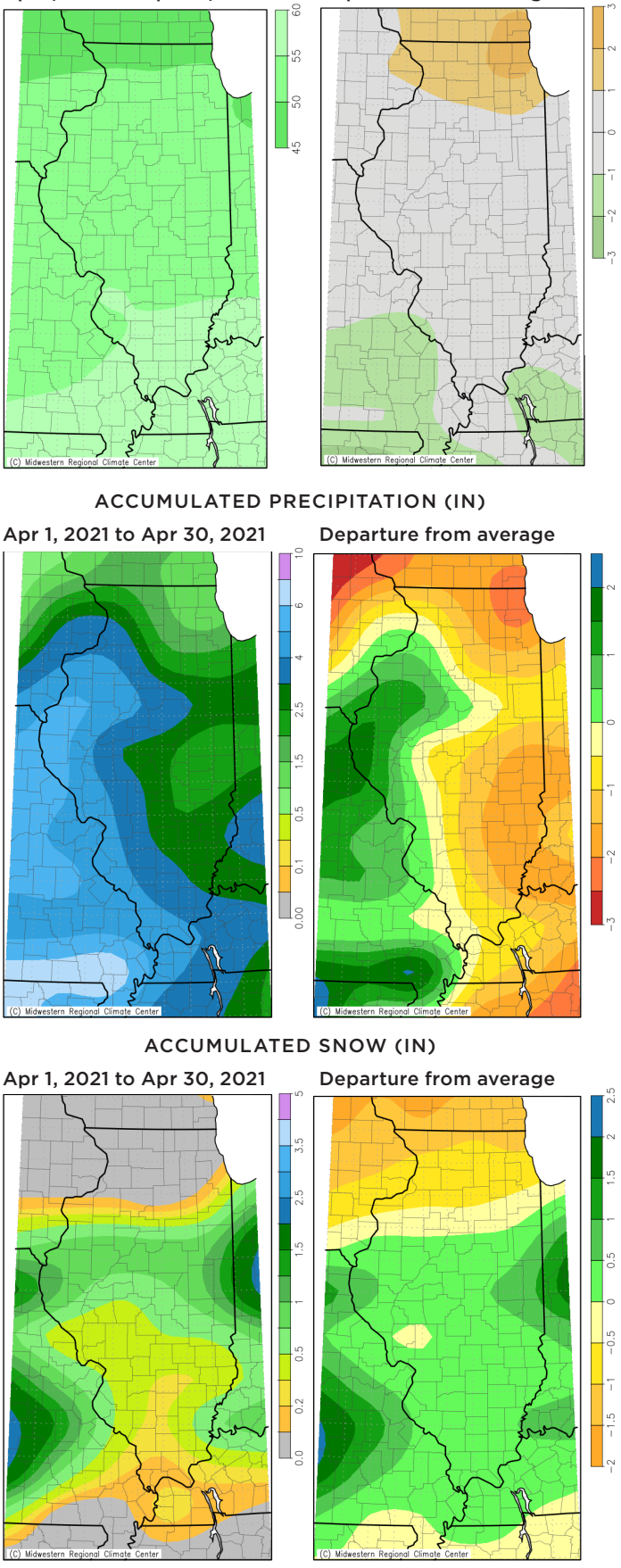


Figure 2a. Illinois temperature, precipitation, snow and their departures from average for April 2021. Source: cli-MATE, Midwestern Regional Climate Center. https://mrcc.illinois.edu/CLIMATE. Information accessed on May 7, 2021.

statewide for the middle of the month, especially between April 20 and 25 when temperatures were 7–12° below average across most of Illinois. Most stations across the state fell below freezing at least once during this period, with many in northern Illinois reaching 28° or colder.

Finally, April ended above average again, with most stations reaching their monthly maximum temperatures on April 27 or 28, and nearly all of them making it into the 80s. The warmest reading of the month, 87°, was recorded at O'Hare and Midway Airports (Cook County) and the Quad Cities Airport (Rock Island County) on April 27, as well as stations near McHenry (McHenry County), Morris (Grundy County), and Ogden (Champaign County) on April 28.

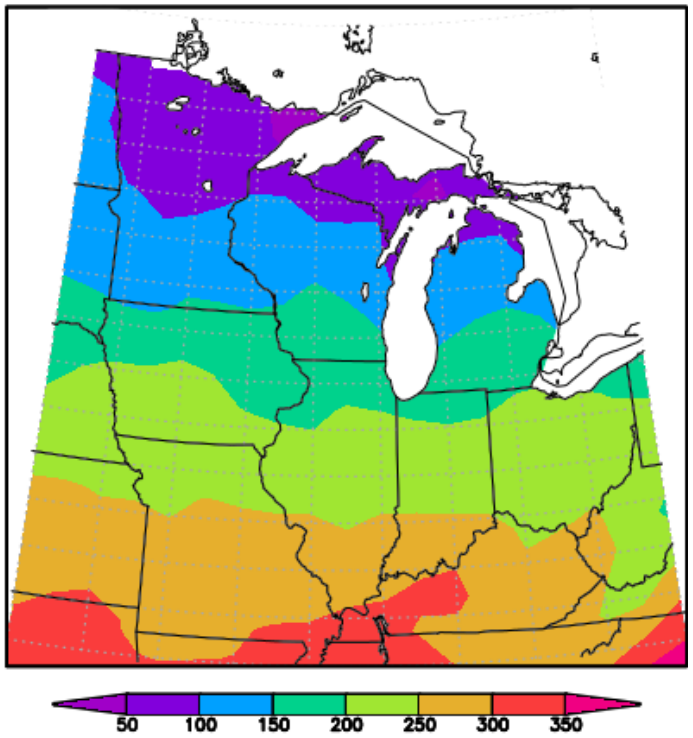
Modified growing degree days (DD, base 50°, from April 1) ranged from under 200 DD in northern Illinois to around 300 DD in far southern Illinois (Figure 2b). These values were slightly above the long-term average in northeastern Illinois, especially around Chicago. Most of the rest of the state was below the long-term average by up to around 30 DD.

Precipitation averaged 2.95 inches in April, 1.29 inches below the long-term average (Table 1, Figure 2a). Monthly totals were highest in the western parts of the state, especially along and to the west of the Illinois River in central Illinois. April precipitation totals in this area were commonly 4–6 inches, generally 1–2 inches above average. A station near Quincy (Adams County) had the highest monthly total of 6.76 inches. These big totals were in large part due to heavy rain the area received around the second weekend of the month, with many stations between the Illinois and Mississippi Rivers recording over 3 inches between April 8 and 11. The area then received below average precipitation during the second half of the month.

Most of the rest of Illinois received well below average precipitation throughout April. Monthly totals to the east of the US-51 corridor were generally below 3 inches. These totals were at least an inch below average in most areas, with higher departures closer to 2 inches below average near the Indiana border. The driest part of the state was northeastern Illinois around Chicago and to its north, which had also been dry in March. April totals in this area were generally less than 2 inches, 2–3 inches below average. O'Hare Airport recorded only 0.71 inches for April, over 3 inches below average, and its driest April on record (back to 1958).

Snow: Most areas along and to the south of I-80 in Illinois received at least 0.1 inch of measurable snow in April (Figure 2a). This snow fell on and around April 20 as a system moved through most of Illinois while temperatures were well below average. The highest totals were generally found in central Illinois where totals of 0.5–1.5 inches were common, with higher amounts possible locally. The highest monthly total of 3.0 inches was recorded at stations near Bloomington (McLean County) and Danville (Vermilion County). Most areas to the north of I-70 on average receive a few tenths of an inch of snow in April, so these totals were mostly above average in central and southern Illinois. Northern Illinois, which largely did not record any measurable snow, usually receives about an inch on average in April.

TOTAL MGDD FROM 4/1/2021 TO 4/30/2021



MGDD DEPARTURE FROM 4/1/2021 TO 4/30/2021

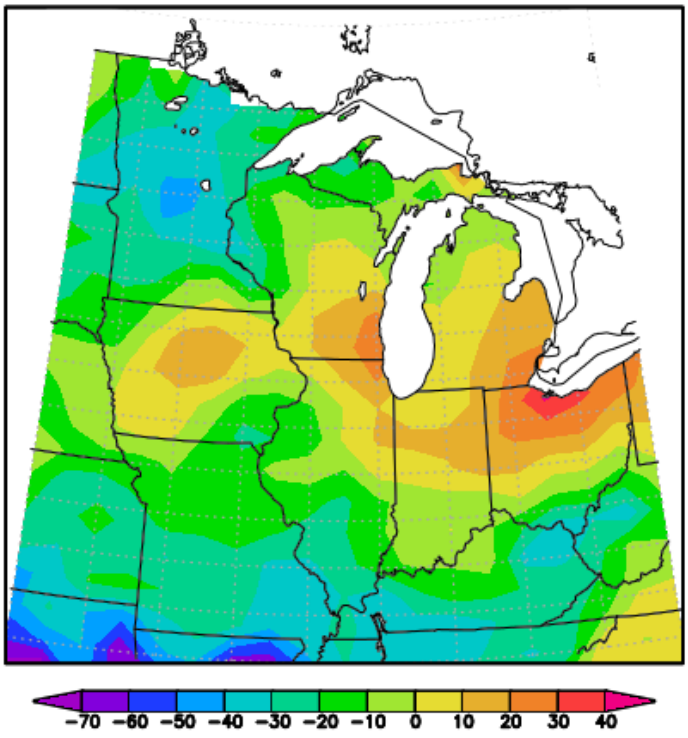


Figure 2b. Illinois modified growing degree days and departure from average through the end of April. Source: Midwestern Regional Climate Center. http://mrcc.illinois.edu, accessed on May 1, 2021.

Severe weather reports: The NOAA Storm Prediction Center (SPC) recorded 17 severe weather reports for April in Illinois: 1 for a tornado, 1 for hail, and 15 for wind. (Multiple reports can be generated for a single event.) This tied April 2019 for the fewest severe weather reports recorded in Illinois by the SPC for the month of April since 2000. Also, three out of the last four Aprils have had 20 or fewer reports in Illinois, with only 20 reports recorded in April 2018.

Drought: April began with abnormally dry conditions in northeastern Illinois after the area received below average precipitation in both February and March. On their first map for April, the United States Drought Monitor (USDM) depicted an area of abnormal dryness (D0) bordered to the south by the I-74 corridor and to the west by the I-39 corridor. This also included a small area of moderate drought (D1) in parts of Lake and McHenry Counties where streamflows were particularly low. While these conditions persisted in the same areas early in April, they began to expand farther south by the middle of the month as most of eastern Illinois continued to receive below average precipitation. The driest part of Illinois continued to be the northeastern corner of the state around Chicago, which had received several inches below average precipitation in some areas over the previous three and six months (Figure 3). By the April 27 USDM map (Figure 4), D0 or worse conditions covered most of the eastern half of Illinois, around 53% of the state. The area of D1 moderate drought had also expanded to cover most areas between Kankakee County to the south and Lake and McHenry Counties to the north, where streamflows and soil moisture continued to be low.

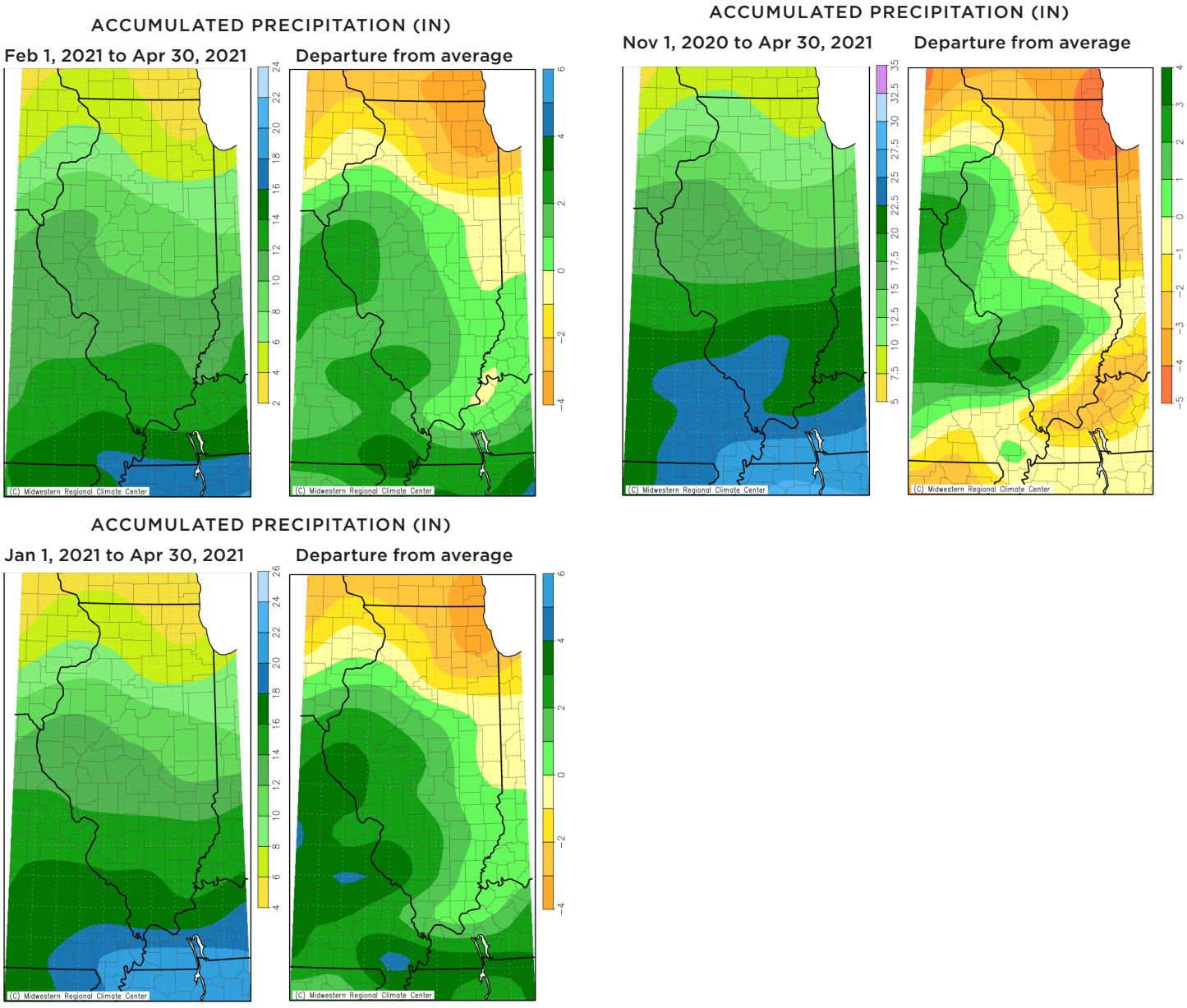


Figure 3. Illinois precipitation and precipitation departure from average for last 3 months (top left), last 6 months (top right) and year-to-date (bottom). Source: cli-MATE, Midwestern Regional Climate Center. https://mrcc.illinois.edu/CLIMATE. Information accessed on May 7, 2021.

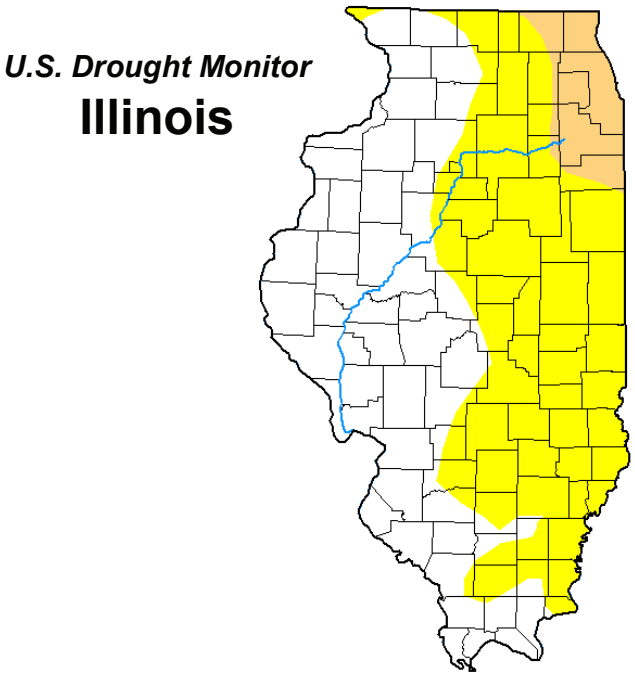


Figure 4. U.S. Drought Monitor report for Illinois. Source: U.S. Drought Monitor. Author: Richard Heim, NCEI/NOAA https://droughtmonitor.unl.edu, accessed on May 7, 2021.

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 April are presented in Table 2.

Wind speeds decreased in April to a monthly average of 7.6 mph, 0.8 mph less than in March and 1.2 mph lower than the network's long-term average. ICN Bondville had the highest monthly average at 11.9 mph. The highest wind gust was 49.7 mph, measured at ICN Monmouth on April 7.

Air temperatures rose 7° from March to an average of 53°, equal to the network's long-term average. All stations reported highs in the 80s. ICN Big Bend had the month's highest temperature, measuring 87° on April 27. Lows were in the teens and 20s. The lowest reported temperature was 17°, measured at ICN St. Charles on April 2.

Soil temperatures increased 8 to 9° from in March to averages in the mid-50s. Under bare soil, temperatures ranged from 32 to 89° at 2-inch depths and 34 to 81° at 4 inches. Temperatures under sod ranged from 37 to 74° at 4-inch depths and 40 to 68° at 8 inches.

Precipitation averaged 3.04 across the network in April, 1.04 inches less than in March and 0.56 inches below the long-term average. Several stations had totals of above 4 inches. ICN Big Bend had the month's largest total with 4.94 inches. The northeastern stations received significantly less rainfall with ICN St. Charles measuring only 1.19 inches.

Soil moisture at 2-inch depths declined 11% on average across the network with an end-of-month average of 0.33 water fraction by volume (wfv). The drop was mainly caused by low precipitation at the eastern and northeastern stations. Moisture levels fell 50% in the north to 0.15 wfv, which is near the wilting points for most soil types monitored. Soil moisture remained high in the west and south. Similar patterns were seen at depths from 4 to 8 inches. Little changes occurred at 39 and 59 inches with soil moisture remaining high.

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

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m²)
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	7.6	219.5	34.9	83.5	23.9	55.2	606.2
Big Bend	8.5	218.3	40.0	86.9	21.8	51.6	559.0
Bondville	11.9	219.5	43.7	85.1	20.7	52.1	589.4
Brownstown	7.2	215.7	33.8	83.5	27.4	56.2	608.3
Carbondale	6.6	222.0	36.0	83.2	20.6	56.0	618.4
Champaign	5.0	215.3	26.0	84.0	21.2	52.7	590.2
DeKalb	9.2	209.3	45.9	86.5	20.8	49.9	589.6
Dixon Springs	4.4	212.0	33.2	83.3	22.7	56.4	593.2
Fairfield	6.6	209.8	31.4	81.1	23.8	55.1	621.3
Freeport	6.2	218.9	32.4	85.0	22.2	50.0	547.1
Monmouth	11.4	231.7	49.7	86.5	22.8M	51.6	585.8
Olney	5.8	208.1	31.2	82.4	23.0M	55.1	618.5
Peoria	7.8	224.1	44.0	84.0	24.5	52.4	574.2
Perry	7.1	230.0	37.6	83.2M	23.0	53.8	607.3
Rend Lake	4.9	216.7	26.4	82.4	28.0	56.5	611.6
Snicarte	10.2	220.6	40.1	86.1	22.7	53.7	616.3
Springfield	6.5	226.4	34.1	81.9	26.0	53.6	595.3
St. Charles	6.8	196.4	38.6	85.5	17.1	50.2	569.7
Stelle	10.4	216.2	43.8	85.2	17.8	50.2	555.7

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	64.5	3.09	42.0	4.61	56.2	56.0	56.7	57.0
Big Bend	62.7	4.94	37.8	4.16	53.4	52.1	55.6	55.4
Bondville	68.4	1.95	40.7	4.30	51.7	51.9	54.9	55.1
Brownstown	65.9	2.82	43.7	4.49	54.9	54.1	55.1	55.3
Carbondale	72.0	3.01	45.5	4.48	57.7	55.9	56.8	57.3
Champaign	67.2	2.07	40.9	4.11	57.0	56.1	57.1	57.8
DeKalb	66.1	1.89	37.7	4.17	51.3M	49.8	52.7	53.3
Dixon Springs	65.9	4.43	43.6	4.31	58.6	58.0	58.0	60.9
Fairfield	67.2	2.55	43.3	4.45	55.8	55.4	56.8	58.9
Freeport	63.6	2.73	36.8	3.81	50.6	49.6	51.0	52.4
Monmouth	67.1	4.48	39.7	4.23	50.6	49.3	53.7	53.6
Olney	66.6	2.08	42.9M	4.44M	57.6M	57.2M	57.4M	58.8M
Peoria	64.4	3.14	39.6	4.13	52.7	51.6	52.9	53.6
Perry	64.9	3.83	41.1	4.39	54.9	53.8	55.5	56.7
Rend Lake	64.2	4.47	43.5	4.52	58.6	58.2	60.2	58.9
Snicarte	65.8	3.03	41.3	4.56	57.2	56.5	57.9	58.9
Springfield	64.9	3.64	40.9	4.25	55.2	53.5	55.4	56.2
St. Charles	65.2	1.19	37.7	3.99	52.3	50.3	55.4	55.4
Stelle	69.4	2.46	39.5	3.97	52.1	50.9	52.7	52.8

M = Missing data.

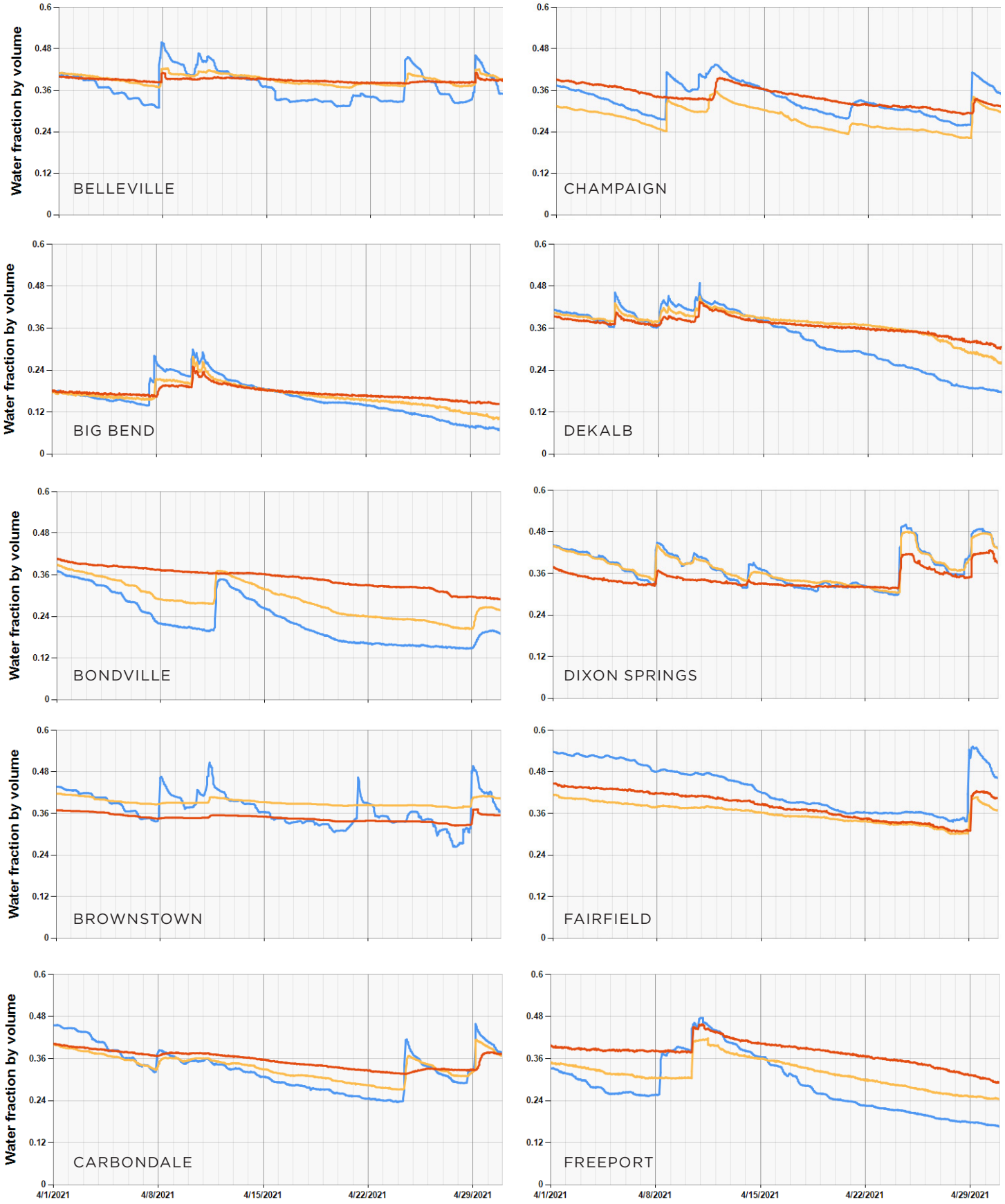


Figure 5. April soil moisture levels at ICN stations: 2 in, 4 in, and 8 in

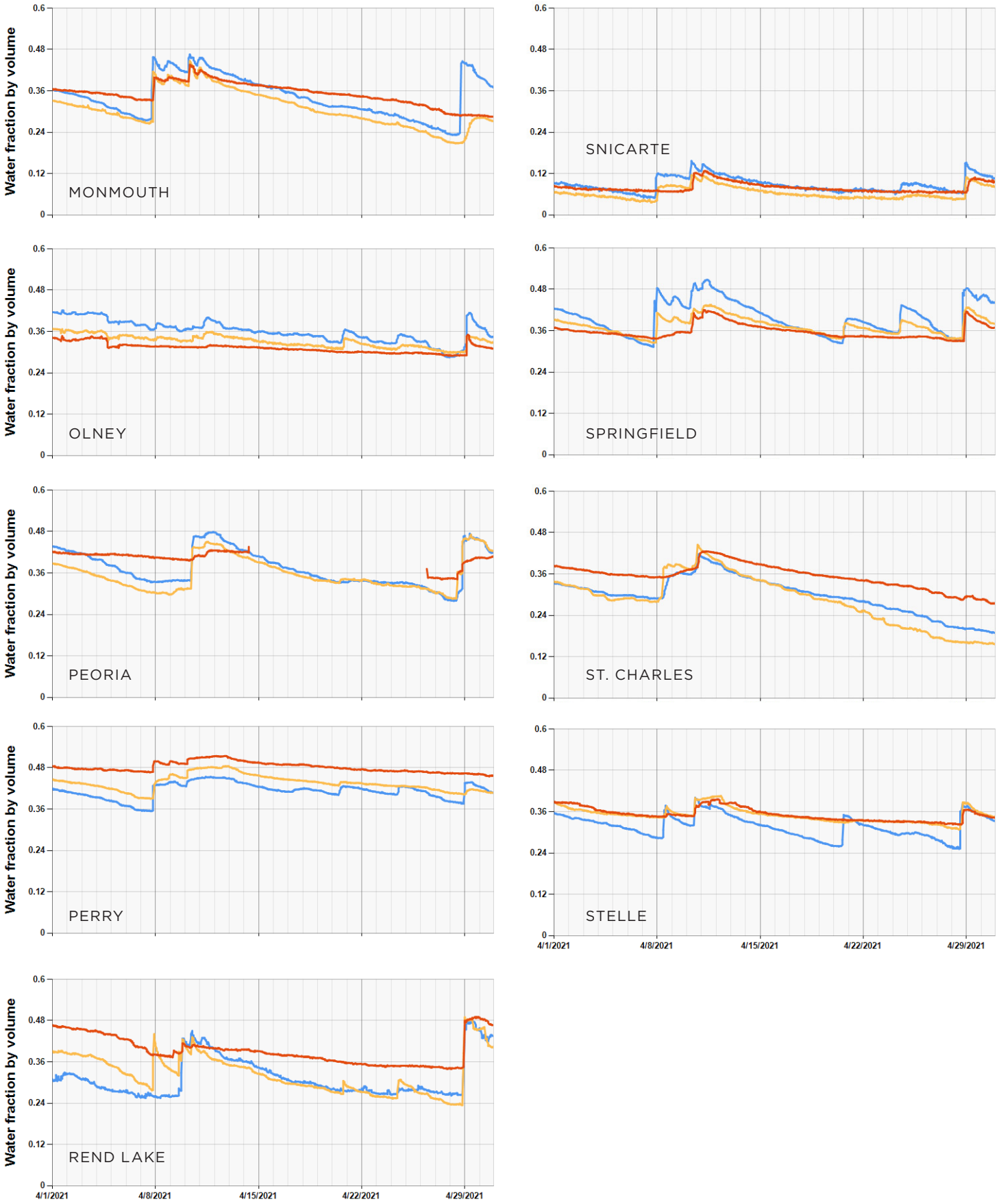


Figure 5. April soil moisture levels at ICN stations: 2 in, 4 in, and 8 in

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.

In mid-April, the Mississippi River crested above the local flood stages at most streamgaging stations below Quincy to Thebes, as did the Illinois River at Hardin. Some reaches of the lower Illinois River and the Mississippi River below St. Louis were above the local flood stages at the beginning of April. The Ohio River remained above the flood stage at Cairo through April 10.

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 the 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 April (approximately 85 percent of the median) and below the mean for April (approximately 70 percent of the mean). Monthly mean discharge values in April ranged from above normal to much above normal in western Illinois and from below normal to normal elsewhere. An estimate of monthly mean flow of the Cache River at Forman was not available due to high backwater stages during part of the month.

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-March water levels at 23 reservoirs for which levels were reported last month and this month, reported end-of-April water levels were lower at 10 reservoirs, higher at 9 reservoirs, and about the same as at the end of March at 7 reservoirs. For the 25 reservoirs with measurements reported at the end of April, water levels were below normal target pool or spillway level at 5 reservoirs, above normal target pool or spillway level at 15 reservoirs, and at about full pool level at 5 reservoirs. Carlinville supply switched back to Lake 1 in mid-April.

Major Reservoirs. Compared to water levels at the end of March, at the end of April the water level at Lake Shelbyville was 3.2 feet lower, Carlyle Lake was 2.7 feet lower, and Rend Lake was 1.4 feet lower. At the end of April, Lake Shelbyville was 2.9 feet below the May 1 target level, Carlyle Lake was 1.0 foot below the May 1 target level, and Rend Lake was 4.0 feet above the spillway level. (Seasonal target levels of Lake Shelbyville and Carlyle Lake increase from March to May. Water levels of Lake Shelbyville and Carlyle Lake at the end of April were near their respective April target levels.)

Great Lakes. Current month mean and end-of-month values are provisional and are relative to International Great Lakes Datum 1985. The April 2021 mean level for Lake Michigan was 580.5 feet. The monthly mean level one year ago (April 2020) was 581.7 feet. The long-term average lake level for April is 578.7 feet, based on 1918–2020 data. In this period of record, the lowest mean level for Lake Michigan for April occurred in 1964 at 576.2 feet, and the highest mean level for April occurred in 2020 at 581.7 feet. The month-end level of Lake Michigan was 580.5 feet. All values are provided by the USACE Detroit District.

Table 3. Peak Stages for Major Rivers during April 2021

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	6.3	01
	La Salle	224.7	20	15.4	01
	Peoria	164.6	18	13.7	01
	Havana	119.6	14	14.0	01
	Beardstown	88.6	14	14.7	01
	Hardin	21.5	25	25.7	14
Mississippi	Dubuque	579.9	17	12.7	21-23
	Keokuk	364.2	16	12.8	12
	Quincy	327.9	19	17.6	12
	Grafton	218.0	18	20.6	14
	St. Louis	180.0	30	28.9	14
	Chester	109.9	27	30.6	15
	Thebes	43.7	33	33.1	15
Ohio	Cairo	2.0	40	47.0	04

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), and from the National Weather Service.
**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, April 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	6,928	7,784	6,870	normal	46	30
Rock River near Joslin	9,549	81	10,462	11,381	10,250	normal	47	30
Pecatonica River at Freeport	1,326	106	1,311	1,307	1,078	normal	36	30
Green River near Geneseo	1,003	85	1,695	1,080	960	above normal	17	30
Edwards River near New Boston	445	85	1,399	551	401	much above normal	6	30
Kankakee River at Momence	2,294	108	1,826	3,485	3,489	below normal	88	30
Iroquois River near Chebanse	2,091	96	1,195	3,156	2,907	below normal	86	30
Fox River at Dayton	2,642	106	1,707	3,394	3,109	below normal	82	30
Vermilion River at Pontiac	579	78	225	809	673	below normal	86	30
Spoon River at Seville	1,636	106	3,141	1,909	1,530	above normal	18	30
LaMoine River at Ripley	1,293	100	2,787	1,579	1,257	above normal	19	30
Bear Creek near Marceline	349	77	896	415	299	above normal	11	30
Mackinaw River near Congerville	767	76	470	1,069	924	below normal	74	30
Salt Creek near Greenview	1,804	79	1,257	2,415	2,020	below normal	72	30
Sangamon River at Monticello	550	111	240	798	679	below normal	85	30
South Fork Sangamon near Rochester	867	71	773	1,083	852	normal	52	30
Illinois River at Valley City	26,743	82	32,953	37,526	34,600	normal	55	30
Macoupin Creek near Kane	868	93	865	1,142	693	normal	44	30
Vermilion River near Danville	1,290	99	795	1,901	1,618	below normal	78	30
Kaskaskia River at Vandalia	1,940	51	1,882	2,636	2,133	normal	60	30
Shoal Creek near Breese	735	78	382	1,051	719	normal	69	30
Embarras River at Ste. Marie	1,516	109	1,088	2,310	1,812	normal	68	30
Skillet Fork at Wayne City	464	103	159	828	726	below normal	85	30
Little Wabash River below Clay City	1,131	106	415	1,754	1,303	below normal	81	30
Big Muddy River at Plumfield	794	50	1,064	1,528	1,294	normal	56	30
Cache River at Forman	244	98	N/A	592	523	N/A	N/A	21

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.**

Table 5. Reservoir Levels in Illinois, April 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	March reported pumpage (million gallons)
Altamont	Effingham	582.0	0.0	–0.1	–0.3	35	5.9
Bloomington	McLean	719.5	+0.1	–0.2	–0.5	34	N/A
Carlinville	Macoupin	571.1	+0.1	0.0	0.0	34	24.4
Carlyle[1]	Clinton	445.0	–1.0	–2.7	+1.0	43	N/A
Decatur[1,3]	Macon	614.3	–0.1	+1.2	–0.3	37	1,062.8
Evergreen[4]	Woodford	720.0	+0.2	–0.1	–0.8	30	N/A
Glenn Shoals[2]	Montgomery	590.0	+1.0	–0.3	+0.6	26	w/Hillsboro
Highland	Madison	500.0	+0.4	0.0	+0.3	32	29.3
Hillsboro[2]	Montgomery	589.0	N/A	N/A	+0.2	24	34.5
Jacksonville[2]	Morgan	644.0	N/A	N/A	–0.1	20	w/Mauvaise Terre
Kinkaid	Jackson	420.0	+0.3	+0.2	+0.3	32	57.2
Lake of Egypt	Williamson	500.0	+0.3	0.0	+0.3	27	N/A
Mattoon	Coles	632.0	0.0	0.0	–0.1	25	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	0.0	13	w/Mt. Olive (old)
Mt. Olive (old)	Macoupin	654.0	0.0	N/A	–0.2	22	4.3
Pana	Christian	641.6	+0.1	+0.1	–0.3	36	N/A
Paradise	Coles	685.0	+0.1	+0.1	–0.1	31	58.3
Paris (east)[5]	Edgar	660.0	+0.2	–0.1	+0.3	11	Not PWS
Paris (west)[5]	Edgar	660.1	+0.2	–0.1	+0.3	11	w/Paris (east)
Raccoon[1,5]	Marion	477.0	+0.7	+0.1	–0.1	13	97.0
Rend	Franklin	405.0	+4.0	–1.4	+3.9	43	N/A
Salem[3]	Marion	546.5	–0.3	0.0	–0.4	26	26.3
Shelbyville[1]	Shelby	599.7	–2.9	–3.2	–0.5	43	Not PWS
Sparta[3]	Randolph	497.0	N/A	N/A	–0.6	24	N/A
Spring[3,4]	McDonough	654.0	+0.1	0.0	+0.2	37	44.7
Springfield[1,3]	Sangamon	560.0	+0.5	+1.0	+0.1	37	540.2
Taylorville	Christian	590.0	–0.1	–0.3	+0.1	28	49.0
Vermilion[4]	Vermilion	581.7	0.0	0.0	–0.2	35	208.7

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 May 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 26 observation wells were below the long-term average for April. Levels were 0.45 feet below average and ranged from 3.17 feet below to 1.66 feet above normal levels (Table 6).

Comparison to March 2021. Shallow groundwater levels were below those of the previous month. Levels averaged 0.87 feet below and ranged from 3.50 feet below to 2.87 feet above March 2021 levels.

Comparison to April 2020. Shallow groundwater levels in April were below levels from one year ago. Levels averaged 2.18 feet below and ranged from 12.43 feet below to 1.80 feet above April 2020 levels.

Correction for the March edition – The water level for the DeKalb well in DeKalb County was 1.73 feet, not 13.13 feet as stated in the March edition. We apologize for the error.

Table 6. Month-End Shallow Groundwater Level Data Sites, April 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	2.30	–0.59	–0.42	–0.53	–1.69
Bondville	Champaign	21.00	5.73	–1.97	–2.64	–1.99	N/A
Bondville (ICN)	Champaign	20.00	3.95	–1.26	–1.15	–2.33	–3.47
Boyleston	Wayne	23.00	n/a	N/A	N/A	N/A	N/A
Brownstown	Fayette	15.00	1.35	–0.41	–0.25	–1.26	–1.35
Carbondale	Jackson	26.00	3.97	–1.20	–1.15	–1.20	0.01
Coffman	Pike	28.00	n/a	N/A	N/A	N/A	N/A
Crystal Lake	McHenry	18.00	3.73	–0.39	0.22	–0.16	–0.22
DeKalb	DeKalb	25.00	3.17	–1.20	–1.22	–1.44	–1.92
Fairfield	Wayne	21.00	2.72	–0.26	–0.22	–1.02	–2.09
Fermi Lab	DuPage	15.00	7.87	–3.5	–3.17	–3.5	–6.55
Freeport	Stephenson	26.00	13.94	1.41	1.66	0.15	–0.64
Galena	JoDaviess	25.00	20.73	–1.7	–0.22	0.07	–2.2
Good Hope	McDonough	30.00	4.23	0.23	0.91	–0.14	–0.31
Greenfield	Greene	22.00	7.26	0.47	0.15	2.87	–2.68
Janesville	Coles	11.00	5.42	–1.42	–0.98	–0.89	–2.03
Monmouth	Warren	27.00	8.96	–0.02	0.17	–0.26	0.55
Mt. Morris	Ogle	55.00	16.85	–1.55	0.65	1.72	–4.38
Olney	Richland	19.00	3.54	–1.74	–1.70	–2.41	–3.37
Perry	Pike	20.00	2.90	0.43	0.92	–1.30	–1.98
Rend Lake	Jefferson	21.00	1.57	1.31	1.48	–0.47	–0.33
SE College	Saline	11.00	3.79	–1.58	–1.42	–1.78	0.35
Snicarte	Mason	42.00	37.16	0.29	–0.34	–0.47	1.8
Sparta	Randolph	27.00	5.33	–1.87	–0.82	–2.68	–3.56
Springfield	Sangamon	20.00	3.17	0.23	0.37	–1.02	–2.57
St. Charles	Kane	21.00	25.04	–3.75	–2.58	–0.42	–12.43
St. Peter	Fayette	15.00	3.06	–1.43	–0.96	–1.25	–1.55
SWS #2	St. Clair	80.00	12.15	–1.12	0.91	–0.79	–1.91
				–0.87	**–0.45**	**–0.87**	**–2.18**

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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