

ILLINOIS WATER AND CLIMATE SUMMARY

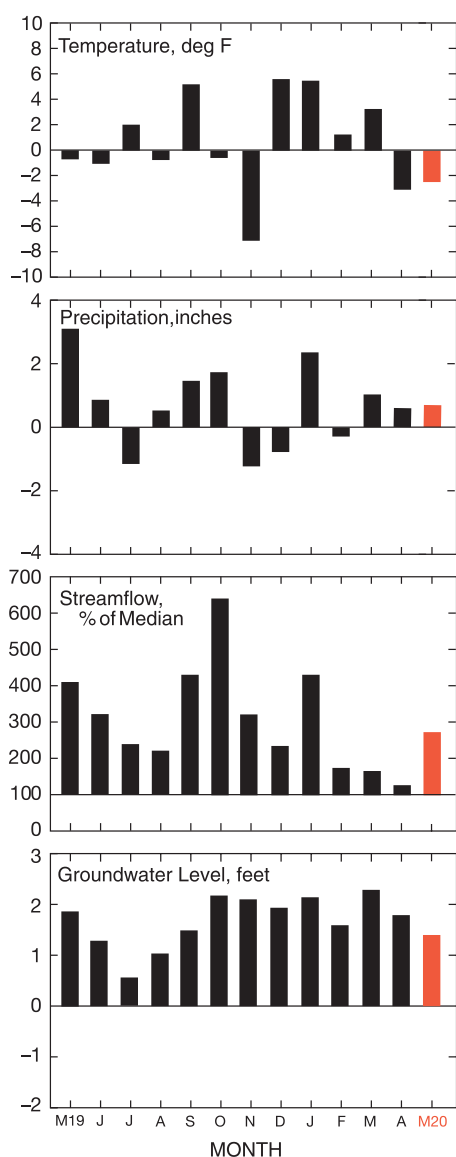


Figure 1. Statewide departures from normal.

MAY 2020 OVERVIEW

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

Air temperatures averaged 60.4°F in May, 2.3° below the long-term average (Figure 1). The southwest crop reporting district (CRD) was the warmest with an average of 63.2°F. The lowest regional temperature was 58.2°F, reported by the northwest CRD.

Precipitation averaged 5.20 inches, 0.60 inches above the long-term average (Figure 1). The northeast CRD was the wettest with an average of 6.92 inches. The driest was the east-southeast CRD with 4.18 inches.

Soil moisture declined overall in May at depths from 2 to 8 inches. Levels remained high at depths of 20 inches and greater, showing no significant changes.

Mean provisional streamflow aggregated statewide was above the long-term median flow for May, about 285% of median (Figure 1). Monthly mean discharge values ranged mostly from above normal to much above normal for May. In May, the Illinois River crested above the local flood stages at all gaging stations. In late May, the Mississippi River rose above the local flood stages at Illinois locations from Pike County downstream, and the Ohio River rose above the local flood stage at Cairo.

Water surface levels at the end of May were below the full pool or target level at 4 of 25 reporting reservoirs. At the end of May, Lake Shelbyville was 11.6 feet above the summer target level, Carlyle Lake was 4.2 feet above the summer target level, and Rend Lake was 4.1 feet above the spillway level. Lake Michigan's mean level exceeded the previous record high monthly mean level for May (in 102 years of record).

Shallow groundwater levels statewide were above normal this month with an average departure of 1.39 feet from the period of record (Figure 1). A decrease of 0.47 feet in departures was observed from the deviation in normal groundwater levels between April and May. Levels averaged 0.62 feet below April 2020 and 0.83 feet below May 2019 levels.

Weather/Climate Information

— KEVIN GRADY

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

May in Illinois was colder and wetter than average across most of the state, with some parts of southeastern Illinois drier than average.

Temperatures averaged 60.4°F, 2.3° below the long-term average (Table 1a, Figure 2a). Monthly average temperatures ranged from the upper 50s in northern Illinois to the mid-60s in far southern Illinois, 1–3° below average across the state.

Following a below average end to April, colder temperatures continued into the first part of May, with temperatures the first 15 days of the month 6–8° below average across most of the state. During one cold spell, temperatures May 8–13 were 10–15° below average throughout Illinois. Many stations recorded their monthly minimum temperatures on May 9, generally ranging from the mid-20s in northern Illinois to the mid-30s in southern Illinois as most areas along and to the north of I-72 fell below freezing. This included the lowest reading of the month, 23°F, recorded at a station near Galena (Jo Daviess County).

Much warmer temperatures returned by the end of May, generally 3–7° above average the last 10 days of the month. Most stations recorded their monthly maximum temperatures between May 24 and 28, generally ranging from the mid-80s to around 90°. The warmest reading of the month, 91°F, was recorded at a station near Crab Orchard (Williamson County) on May 25 and at a station near Robinson (Crawford County) on May 26.

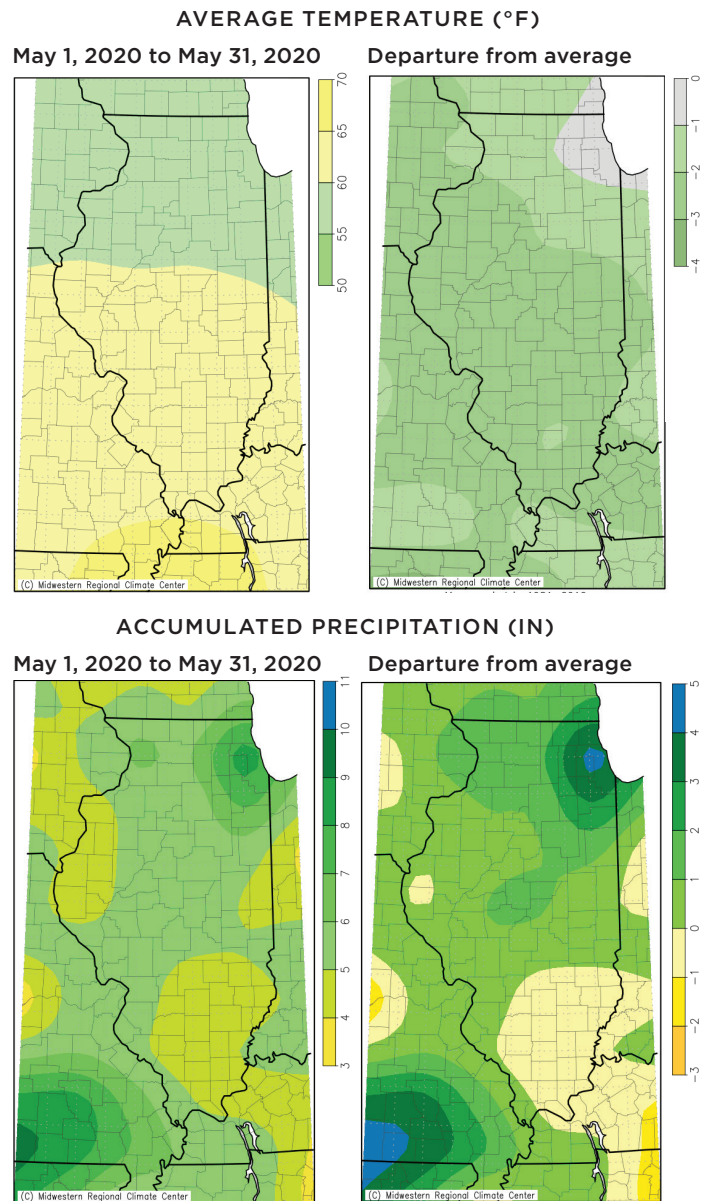


Figure 2a. Illinois temperature and precipitation and their departures from average for May 2020. Source: cli-MATE, Midwest Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>. Information accessed on June 8, 2020.

Table 1.a Temperature and Precipitation for May 2020

	Temp. (°F)	Departure from long- term avg. (1981–2010)	Precip. (in)	Departure from long- term avg. (1981–2010)
Illinois	60.4	-2.3	5.20	+0.60
CRD 1 (northwest)	58.2	-2.2	5.47	+1.28
CRD 2 (northeast)	58.4	-1.3	6.92	+2.79
CRD 3 (west)	60.1	-2.4	4.72	+0.06
CRD 4 (central)	60.1	-2.2	5.19	+0.81
CRD 5 (east)	59.6	-2.2	5.26	+0.93
CRD 6 (west southwest)	61.1	-2.7	5.24	+0.62
CRD 7 (east southeast)	61.1	-2.7	4.18	-0.71
CRD 8 (southwest)	63.2	-2.3	4.98	-0.13
CRD 9 (southeast)	63.0	-2.3	4.68	-0.62

Data from NOAA's National Centers for Environmental Information, accessed 6/8/2020.

Table 1.b Temperature and Precipitation for Spring (March–May) 2020

	Temp. (°F)	Departure from long- term avg. (1981–2010)	Precip. (in)	Departure from long- term avg. (1981–2010)
Illinois	51.5	-0.7	13.47	+2.14
CRD 1 (northwest)	48.6	-0.6	12.28	+2.22
CRD 2 (northeast)	48.3	-0.5	14.80	+4.88
CRD 3 (west)	50.9	-0.8	11.25	+0.15
CRD 4 (central)	50.9	-0.6	13.85	+3.18
CRD 5 (east)	50.2	-0.8	12.76	+2.16
CRD 6 (west southwest)	52.6	-1.0	13.91	+2.59
CRD 7 (east southeast)	52.5	-1.0	13.26	+1.12
CRD 8 (southwest)	55.3	-0.5	13.93	+0.80
CRD 9 (southeast)	55.1	-0.6	15.31	+1.50

Data from NOAA's National Centers for Environmental Information, accessed 6/8/2020.

Growing degree days (DD, base 50°, from April 1) ranged from around 400 DD in northeastern Illinois to over 700 DD in far southern Illinois (Figure 2b). This was below the long-term average across the entire state, ranging from around 60 DD below average in northeastern Illinois to around 150 DD below average in southern Illinois.

Precipitation averaged 5.20 inches in May, 0.60 inches above the long-term average (Table 1a, Figure 2a). May started dry across Illinois, with precipitation for the first 12 days of the month up to an inch below average for most of the state. In the middle of the month, a series of convective storms produced heavy rainfall across much of the northern half of Illinois, with most areas to the north of I-70 receiving more than 2.5 inches of rain between May 14 and 18. The heaviest rains fell in northeastern Illinois with widespread totals of 6 to 8 inches in the area around Chicago during this period, creating flash flooding problems in many urban areas. O'Hare Airport reported 3.53 inches on May 14, breaking its one-day precipitation record for May. Monthly totals in the Chicago area were commonly 7-9 inches, 2-4 inches above

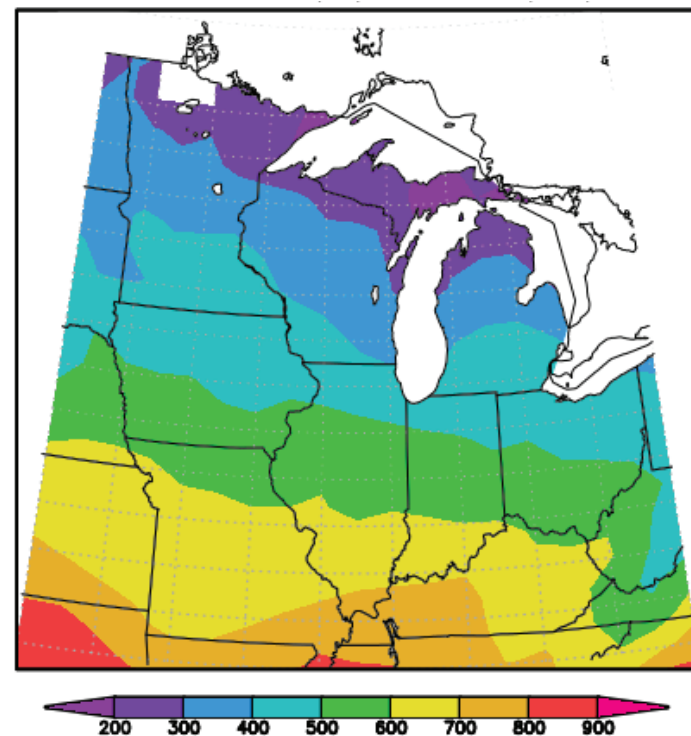
normal. The highest monthly total was 11.12 inches, recorded at a station near Oak Lawn (Cook County).

Outside northeastern Illinois, monthly totals were generally 4-6 inches, up to an inch above average in some places. Southeastern Illinois received slightly below average precipitation for May, as the area did not receive as much precipitation in the middle of the month. Finally, some stations around Chicago reported a trace of snow on May 11.

Severe weather reports: The NOAA Storm Prediction Center recorded 92 severe weather reports for May in Illinois, 21 for tornadoes, 11 for hail, and 60 for wind. (Multiple reports can be generated for a single event.)

Drought: The United States Drought Monitor reported Illinois free of drought and abnormally dry conditions throughout May (Figure 4). A wet end to April and above average precipitation in May kept streamflows and soil moisture near to above average across most of the state throughout the month. While southeastern Illinois received slightly below average precipitation for May, conditions there through the end of the month were not considered too worrisome and the resulting impacts were minimal.

TOTAL MGDD FROM 4/1/2020 TO 5/31/2020



MGDD DEPARTURE FROM 4/1/2020 TO 5/31/2020

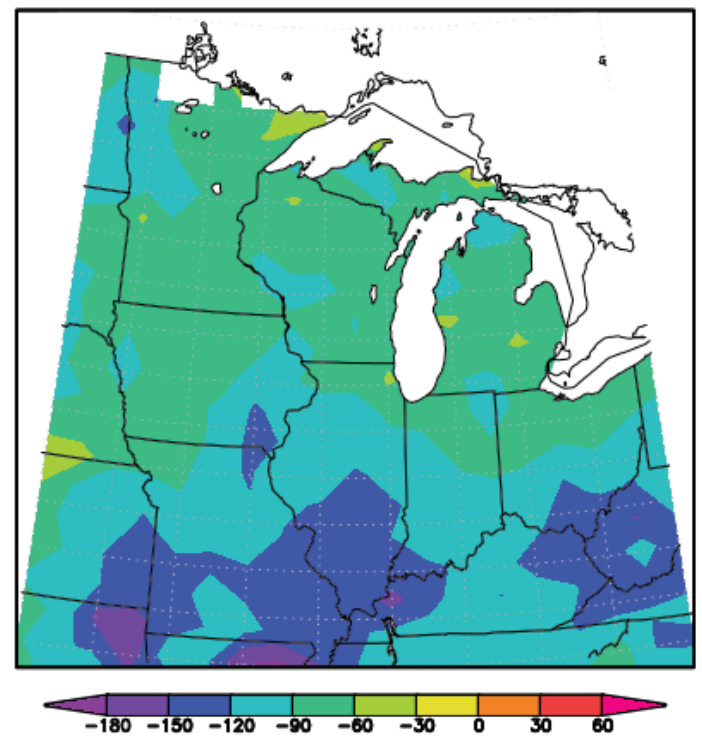


Figure 2b. Illinois growing degree days and departure from average through the end of May. Source: Midwestern Regional Climate Center. <http://mrcc.illinois.edu>, accessed on June 1, 2020.

Spring (March–May) was wetter and slightly colder than average across the state. Seasonal temperatures averaged 51.5°F statewide, 0.7° below the long-term average (Table 1b), ranging from the upper 40s in northern Illinois to the mid-50s in southern Illinois. Following a very warm winter, temperatures in March and the first part of April remained above average. Temperatures then dropped well below average in the middle of April and generally remained below average through the middle of May, including a freeze event May 9 for most of the northern part of the state. May then ended with above average temperatures for its last 10 days. Overall, the warm and cold periods almost canceled each other out so that the season was only slightly cooler than average across the entire state by up to 1°.

Spring precipitation averaged 13.47 inches, 2.14 inches above average (Table 1b, Figure 3). Seasonal totals generally ranged from around 10 inches in western Illinois to up to 20 inches near Chicago. The highest seasonal total was 20.53 inches, recorded at a station near Oak Lawn (Cook County). All three months finished with above average precipitation, despite April starting relatively dry across most of the state. The central and northeastern parts of the state were the wettest, generally along the I-55 corridor where departures of 2–4 inches or more above average were common. Particularly wet areas included the area between Springfield and Decatur due to heavy precipitation the last week of April as well as the Chicago area due to mid-May storms. Southeastern Illinois was wet in March and, despite both April and May being dry, finished spring slightly above average. Only a small part of western Illinois was below average for the season. Illinois remained free of drought throughout the spring.

Most areas to the north of I-70 received accumulating snow this spring with the highest totals of up to 8 inches generally along the I-80 and I-88 corridors, with even higher amounts possible locally. The highest seasonal total was 12.4 inches, recorded at a station near Kewanee (Henry County). Most of the snow came in three main events: one March 14–15 primarily in east central Illinois, one March 22–23 primarily in northeastern Illinois, and one the night of April 16 primarily in northwestern Illinois. Most areas between I-72 and I-90 were above average for spring, with the highest departures of up to 3–4 inches near the Quad Cities.

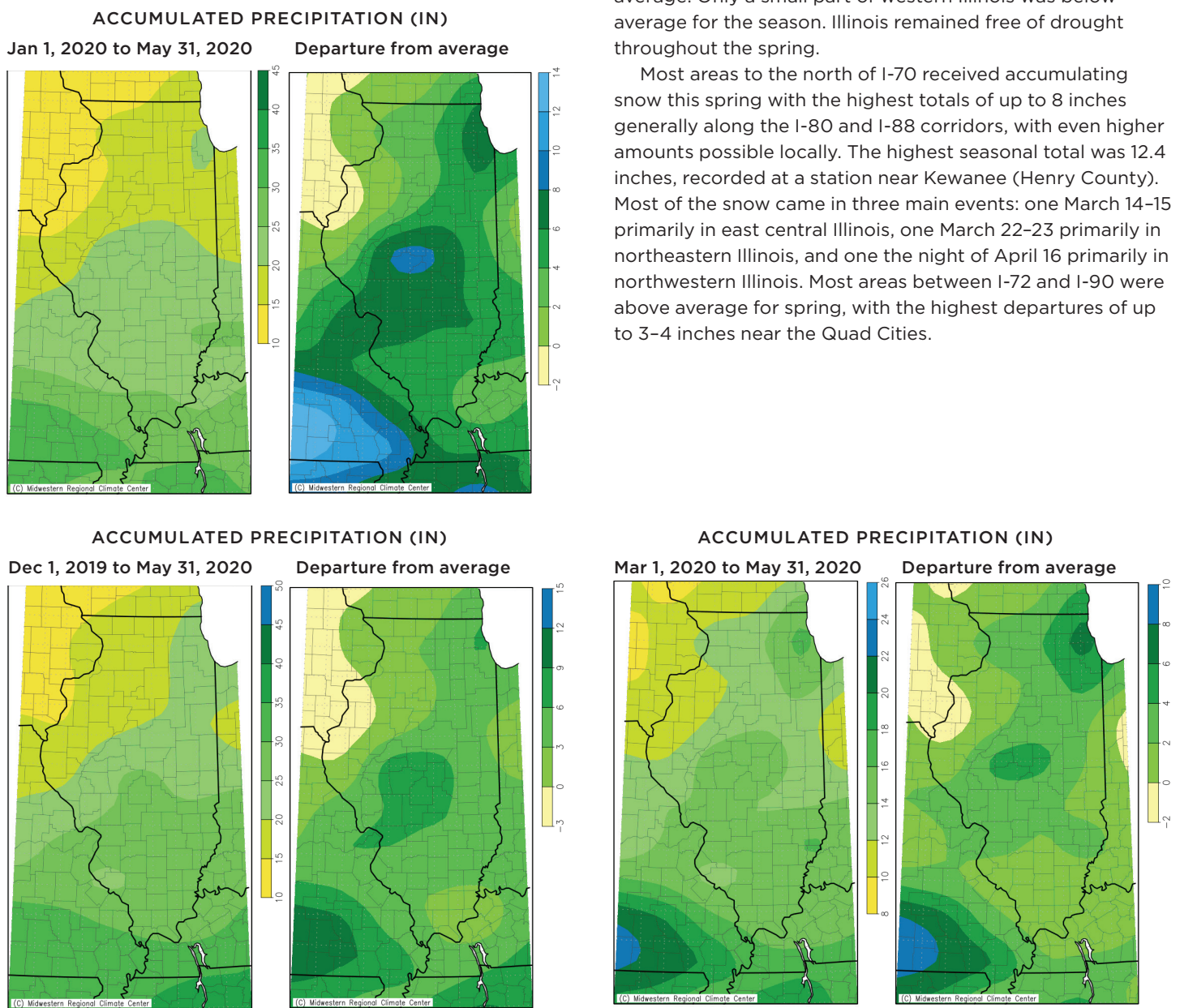
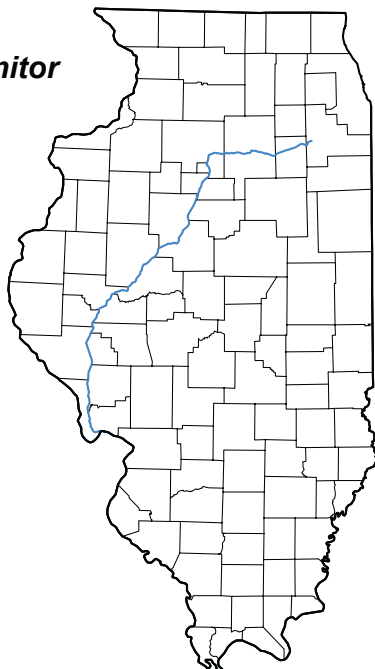


Figure 3. Illinois precipitation and precipitation departure from average for year-to-date (top left), last 6 months (bottom left), and last 3 months (bottom right). Source: cli-MATE, Midwest Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>. Information accessed on June 8, 2020.

U.S. Drought Monitor Illinois



May 26, 2020
(Released Thursday, May. 28, 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 05-19-2020	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 02-25-2020	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 05-28-2019	100.00	0.00	0.00	0.00	0.00	0.00

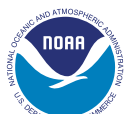
Intensity:

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>

Author:

Curtis Riganti
National Drought Mitigation Center



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 May are presented in Table 2.

Wind speeds declined to a May average of 6.6 mph, 1.3 mph lower than in April and 0.6 mph below the long-term network average. ICN Bondville had the windiest month with an average wind speed of 10.6 mph. The highest wind gust was 47.6 mph, recorded at ICN Big Bend on May 26.

Air temperatures rose more than 10°F from April to an average of 60.9°F. Most stations reported monthly lows below freezing as the state had cooler than normal weather the second week of May. The network's lowest temperature in May was 25.5°F, recorded at ICN Stelle on May 9. Warmer temperatures at the end of May caused station temperatures to rise to the mid- to high 80s with the month's highest temperature, 89.7°F, reported at ICN Dixon Springs on May 25.

Soil temperatures rose 9 to 11°F from April to averages in the low to mid-60s. Temperatures averaged 1 to 2°F below the long-term averages. Under bare soil, temperatures ranged from 34.5 to 101.9°F at the 2-inch depths and 40.8 to 95.1°F at 4 inches. Temperatures under sod ranged from 45.7 to 82.7°F at 4 inches and 47.9 to 78.4°F at 8 inches.

Precipitation averaged 4.85 inches for the network in May, 0.83 inches above the long-term average. Most precipitation fell in the middle of the month (May 11-20) when the state saw 3.15 inches or 65% of the month's total. The highest totals were recorded at the northern stations. ICN St. Charles in the northeast reported 6.79 inches, the highest for the month.

Soil moisture declined overall at the 2- to 8-inch depths. Heavy rains in mid-May led to wetter soils in all regions of the state. However, drier and warmer weather the last third of the month caused soils to dry rapidly. Soil moisture levels at 2-inch depths averaged 0.35 water fraction by volume (wfv) on May 31, a 17% decrease from May 1. Declines of 12% and 7% were seen at 4 and 8 inches, respectively.

Soil moisture remained high at 39 and 59 inches with end-of-month averages of 0.46 and 0.42 wfv.

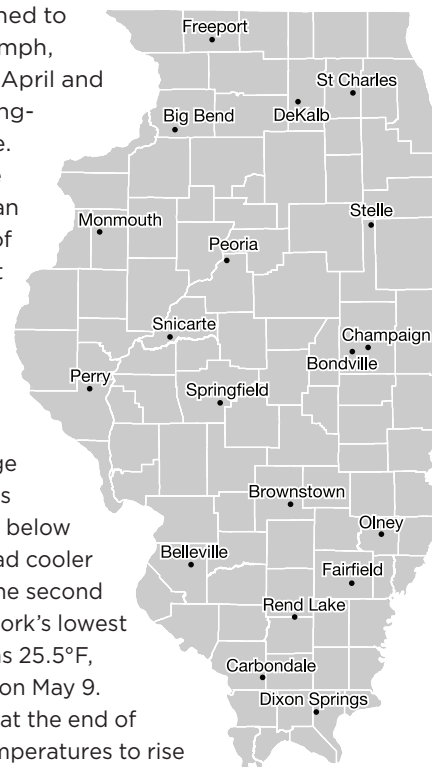


Figure 4. U.S. Drought Monitor report for Illinois. Source: U.S. Drought Monitor. Author: Curtis Riganti, National Drought Mitigation Center
<http://droughtmonitor.unl.edu>, accessed on June 8, 2020.

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

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m²)
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	6.5	181.2	37.6	89.6	36.4	63.9	594.1
Big Bend	7.9	186.7	47.6	86.2	28.4	59.8	599.2
Bondville	10.6	178.9	39.5	85.9	28.7	60.2	630.2
Brownstown	5.9	178.6	31.8	87.6	33.2	61.5	585.2
Carbondale	5.5	200.2	30.9	89.1M	32.5M	63.7	619.6
Champaign	3.7	177.2	31.3	87.5	30.2	60.6	603.9
DeKalb	9.2	181.2	39.2	87.1	26.4	58.0	612.0
Dixon Springs	3.3	186.6	27.8	89.7	30.9	63.4	604.4
Fairfield	5.7	179.1	35.4	88.8	33.2	62.5	622.8
Freeport	4.9	186.4	29.6	85.5	26.1	57.6	592.1
Monmouth	10.1	196.3	36.4	88.1	28.4	60.0	590.7
Olney	5.0	176.3	35.3	89.0	32.2	62.6	635.9
Peoria	7.0	182.3	34.2	86.7	28.0	59.9	576.3
Perry	5.8	202.1	33.4	87.0M	30.8	60.8	569.2
Rend Lake	4.2	184.9	28.6	87.9	37.2	63.2	574.0
Snicarte	9.5	189.5M	38.1	89.2M	32.1	61.3	586.5
Springfield	5.2	189.6	31.5	87.5	32.2	61.6	585.7
St. Charles	6.1	170.3	26.0	87.8	25.6	58.2	644.2
Stelle	9.9	173.5	42.8	87.8	25.5	58.9	592.2

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	78.8	4.28	56.3	4.59	63.2	61.9	62.7	69.2
Big Bend	73.8	6.62	50.1	4.58	59.7	58.3	62.3	65.3
Bondville	78.1	4.20	52.5	4.67	60.8	62.1	63.0	63.5
Brownstown	78.1	3.10	53.9	4.39	62.5	61.2	63.5	64.1
Carbondale	82.6	3.40	57.4	4.63	66.9	64.8	65.6	66.3
Champaign	76.5	4.65	52.3	4.56	64.4	62.9	65.3	66.4
DeKalb	73.7	6.12	48.5	4.54	59.0	57.7	60.9	61.8
Dixon Springs	77.8	4.15	55.4	4.60	66.3	65.4	66.7	69.7
Fairfield	78.3	4.68	54.9	4.62	63.7	62.5	68.7	67.2
Freeport	70.8	4.97	46.8	4.40	59.3	56.7	59.8	60.1
Monmouth	73.2	4.90	50.0	4.61	59.1	57.3	61.8	61.9
Olney	75.6	4.28	54.0	4.81	65.3	64.8	66.5	66.1
Peoria	73.3	4.90	50.3	4.44	61.3	57.8	60.9	61.7
Perry	77.7	3.39	52.7	4.30	62.9	61.5	63.3	64.5
Rend Lake	74.5	5.02	54.1	4.46	67.6	66.7	66.0	66.5
Snicarte	71.2	3.88	50.8M	4.75M	59.3M	64.4M	64.8	67.2
Springfield	72.5	6.59	51.7	4.55	64.3	62.1	63.7	65.2
St. Charles	71.5	6.79	47.8	4.78	58.8	57.2	63.1	63.0
Stelle	74.9	6.22	50.2	4.50	58.0	56.1	61.2	61.5

M = Missing data.

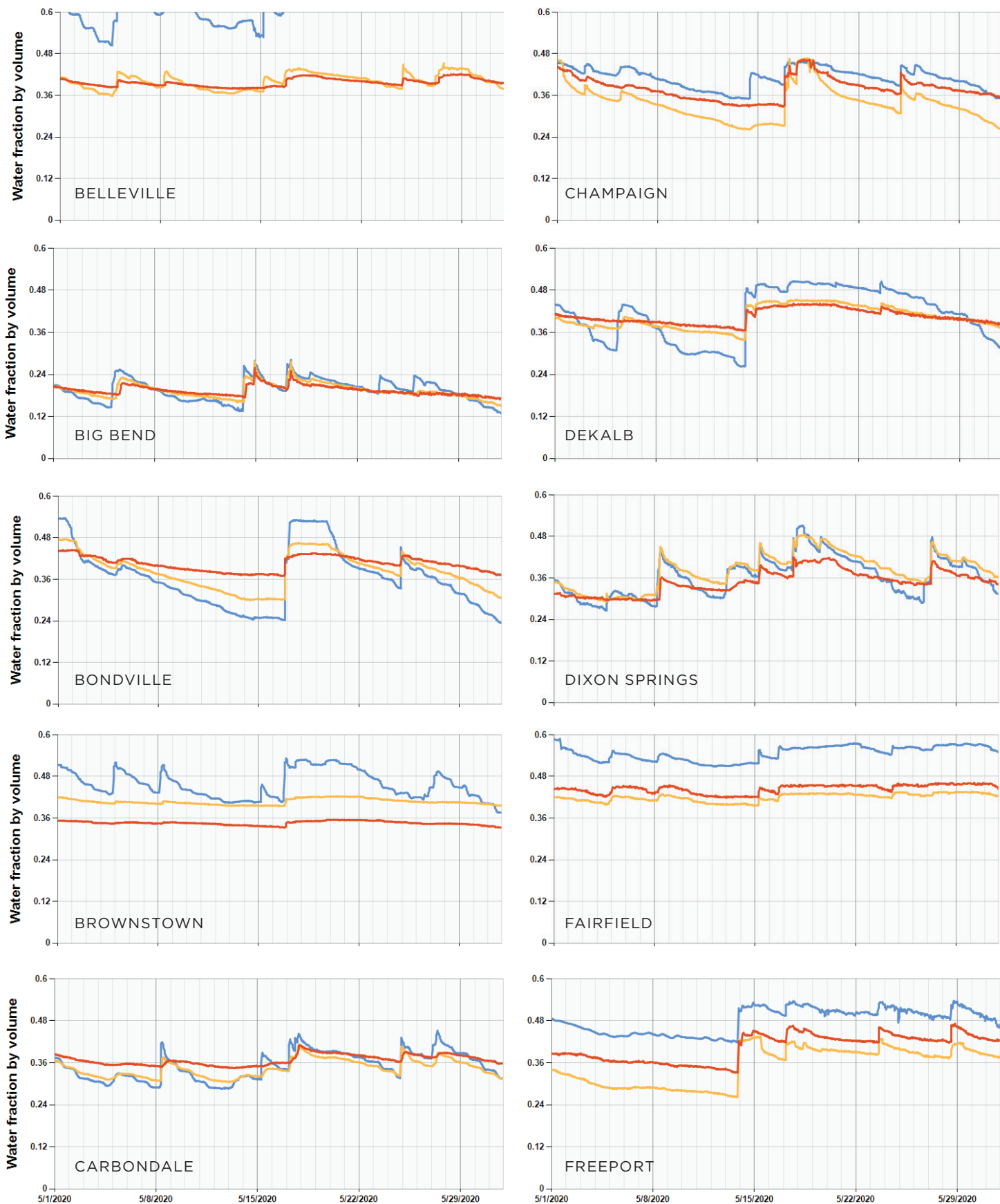


Figure 5. May soil moisture levels at ICN stations: — 2 in, — 4 in, and — 8 in

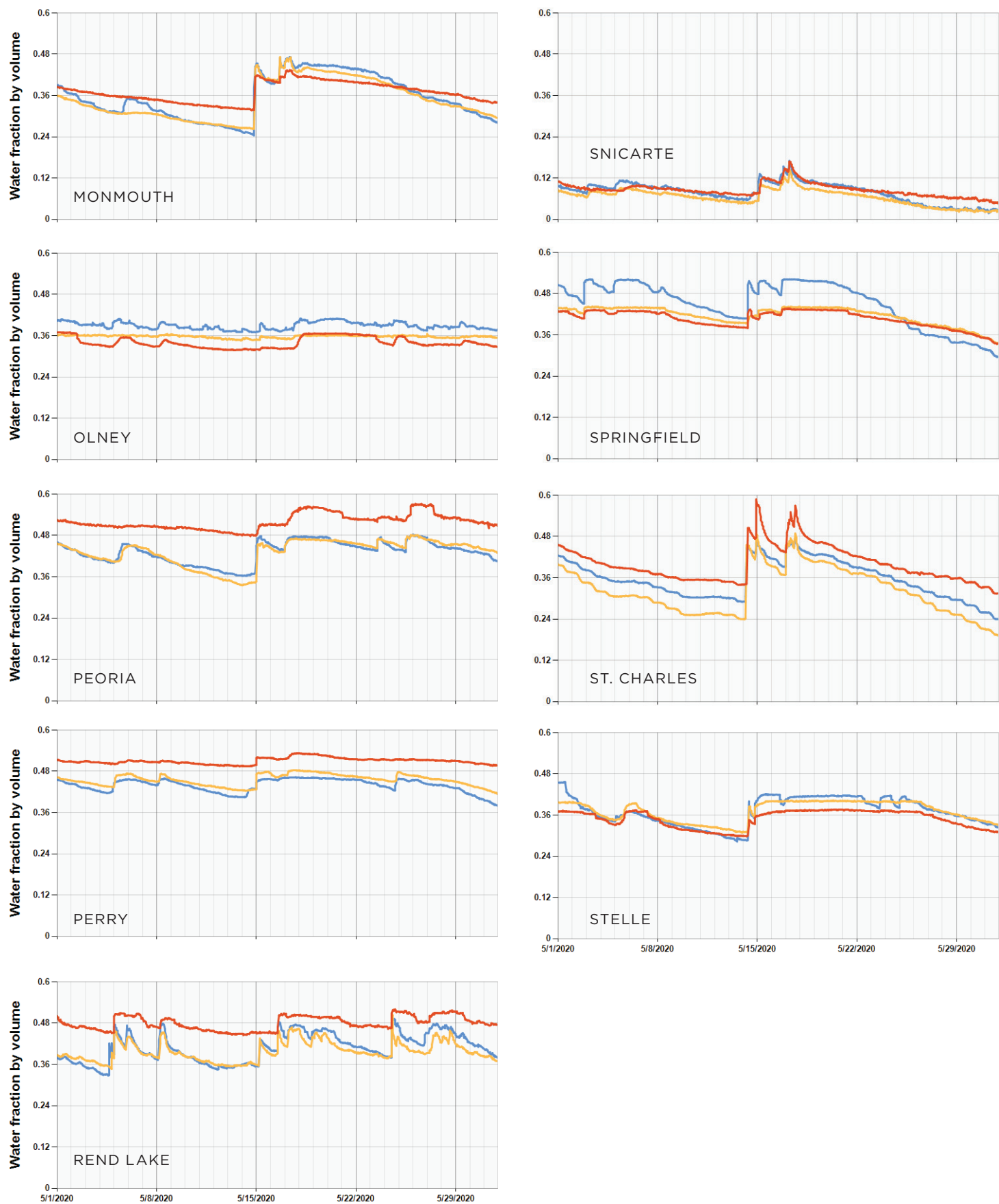


Figure 5. May soil moisture levels at ICN stations: — 2 in, — 4 in, and — 8 in

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 May, the Illinois River crested above the local flood stages at all gaging stations. Illinois River water levels were above the local flood stages from Havana downstream throughout the month. The Mississippi River rose above the local flood stages from the confluence of the Salt River, Iowa, across from Pike County, downstream to the Ohio River at the end of May. The Ohio River rose above the flood stage at Cairo toward the end of the month.

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

The statewide percent of historical mean flow and percent of historical median flow are calculated by dividing the sum of the average flows this month at stations in Table 4 by the sum of the historical mean and median flows calculated for the month, respectively, at the same stations. This method is intended to weight individual observations proportionately in the aggregate comparison. (The Illinois River and Rock River stations are excluded from the statewide calculation because other rivers listed in Table 4 contribute to their flow.)

Mean provisional flow aggregated statewide, using the available monthly mean data shown this month in Table 4, was above the median value for May (approximately 285 percent of the median) and above the mean for May (approximately 210 percent of the mean). Monthly mean discharge values ranged mostly from above normal to much above normal for May, except in southernmost Illinois where monthly mean streamflows were in the normal range.

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-April water levels at 24 reservoirs for which levels were reported last month and this month, reported end-of-May water levels were lower at 12 reservoirs, higher at 8 reservoirs, and about the same as last month at 4 reservoirs. For the 25 reservoirs with measurements reported at the end of May, 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 at 8 reservoirs.

Major Reservoirs. Compared to water levels at the end of April, at the end of May the water level at Lake Shelbyville was 10.5 feet higher, Carlyle Lake was 3.3 feet higher, and Rend Lake was 0.7 feet lower. At the end of May, Lake Shelbyville was 11.6 feet above the summer target level, Carlyle Lake was 4.2 feet above the summer target level, and Rend Lake was 4.1 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 May 2020 mean level for Lake Michigan was 581.9 feet. The monthly mean level one year ago (May 2019) was 581.3 feet. The long-term average lake level for May is 579.0 feet, based on 1918–2019 data. In this period of record, the lowest mean level for Lake Michigan for May occurred in 1964 at 576.6 feet, and the highest mean level for May occurred in 1986 at 581.6 feet. The month-end level of Lake Michigan was 582.1 feet. All values are provided by the U.S. Army Corps of Engineers Detroit District.

Table 3. Peak Stages for Major Rivers during May 2020

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	24.8	19
	La Salle	224.7	20	33.1	20
	Peoria	164.6	18	27.9	22
	Havana	119.6	14	25.2	26
	Beardstown	88.6	14	26.6	27
	Hardin	21.5	25	31.2	30
Mississippi	Dubuque	579.9	17	12.9	30-31
	Keokuk	364.2	16	12.0	30-31
	Quincy	327.9	17	15.8	30-31
	Grafton	218.0	18	22.2	31
	St. Louis	180.0	30	31.4	31
	Chester	109.9	27	32.4	31
	Thebes	43.7	33	34.9	31
Ohio	Cairo	2.0	40	46.6	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, May 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	9,181	5,970	5,176	above normal	13	31
Rock River near Joslin	9,549	80	18,577	9,445	8,319	much above normal	7	31
Pecatonica River at Freeport	1,326	105	1,977	1,096	884	much above normal	10	31
Green River near Geneseo	1,003	83	2,165	1,083	883	much above normal	8	31
Edwards River near New Boston	445	85	829	578	399	above normal	28	31
Kankakee River at Momence	2,294	107	6,077	2,966	2,883	much above normal	2	31
Iroquois River near Chebanse	2,091	96	5,509	2,771	2,229	much above normal	10	31
Fox River at Dayton	2,642	105	9,331	2,736	2,317	much above normal	2	31
Vermilion River at Pontiac	579	77	2,212	785	588	much above normal	6	31
Spoon River at Seville	1,636	105	3,690	1,946	1,281	above normal	18	31
LaMoine River at Ripley	1,293	99	2,888	1,555	854	above normal	18	31
Bear Creek near Marceline	349	76	533	437	195	above normal	27	31
Mackinaw River near Congerville	767	74	2,653	970	772	much above normal	5	31
Salt Creek near Greenview	1,804	78	6,121	2,464	1,905	much above normal	6	31
Sangamon River at Monticello	550	110	1,546	733	512	above normal	13	31
South Fork Sangamon near Rochester	867	69	3,194	1,089	682	much above normal	4	31
Illinois River at Valley City	26,743	81	77,119	38,066	34,760	much above normal	5	31
Macoupin Creek near Kane	868	92	3,073	1,016	463	much above normal	10	31
Vermilion River near Danville	1,290	98	3,329	1,731	1,278	above normal	13	31
Kaskaskia River at Vandalia	1,940	50	3,790	2,095	1,568	above normal	21	31
Shoal Creek near Breese	735	77	1,817	958	629	above normal	13	31
Embarras River at Ste. Marie	1,516	108	4,045	2,020	1,272	above normal	13	31
Skillet Fork at Wayne City	464	102	716	677	338	above normal	27	31
Little Wabash River below Clay City	1,131	105	1,952	1,537	806	above normal	23	31
Big Muddy River at Plumfield	794	49	1,331	1,540	967	normal	45	31
Cache River at Forman	244	97	256	460	337	normal	58	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, May 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	April reported pumpage (million gallons)
Altamont	Effingham	582.0	-0.1	-0.3	-0.6	36	5.8
Bloomington	McLean	719.5	-1.8	-2.3	-0.3	33	N/A
Carlinville	Macoupin	571.1	0.0	-0.1	0.0	34	21.8
Carlyle ⁽¹⁾	Clinton	445.0	+4.2	+3.3	+2.3	42	N/A
Decatur ^(1,3)	Macon	614.3	+0.1	-0.2	-0.1	36	972.1
Evergreen ⁽⁴⁾	Woodford	720.0	+0.2	0.0	-0.8	29	N/A
Glenn Shoals ⁽²⁾	Montgomery	590.0	+0.1	+0.1	+0.1	26	w/Hillsboro
Highland	Madison	500.0	0.0	-1.4	+0.1	31	28.6
Hillsboro ⁽²⁾	Montgomery	589.0	N/A	N/A	0.0	25	38.9
Jacksonville ⁽²⁾	Morgan	644.0	N/A	N/A	-0.1	20	w/Mauvaise Terre
Kinkaid	Jackson	420.0	+0.2	+0.2	+0.2	31	44.7
Lake of Egypt	Williamson	500.0	+0.3	+0.3	0.0	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	N/A	N/A	-0.4	14	w/Mt. Olive (old)
Mt. Olive (old)	Macoupin	654.0	0.0	N/A	-0.3	23	4.9
Pana	Christian	641.6	0.0	-0.2	-0.3	36	N/A
Paradise	Coles	685.0	0.0	0.0	-0.1	30	54.3
Paris (east) ⁽⁵⁾	Edgar	660.0	+0.2	-0.3	+0.1	10	Not PWS
Paris (west) ⁽⁵⁾	Edgar	660.1	+0.2	-0.3	+0.1	10	w/Paris (east)
Raccoon ⁽¹⁾⁽⁵⁾	Marion	477.0	+0.7	+0.5	+0.2	12	87.2
Rend	Franklin	405.0	+4.1	-0.7	+3.3	42	N/A
Salem ⁽³⁾	Marion	546.5	-0.8	-0.9	-0.6	25	22.5
Shelbyville ⁽¹⁾	Shelby	599.7	+11.6	+10.5	+3.7	42	Not PWS
Sparta ⁽³⁾	Randolph	497.0	-0.5	-0.6	-0.8	22	N/A
Spring ^(3,4)	McDonough	654.0	0.0	-0.2	+0.1	36	42.4
Springfield ^(1,3)	Sangamon	560.0	+0.4	0.0	+0.1	36	496.4
Taylorville	Christian	590.0	+0.5	+0.5	0.0	27	47.2
Vermilion ⁽⁴⁾	Vermilion	581.7	0.0	+0.1	-0.1	35	190.0

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 June 1 values.

(2) Instrumentation not available to measure height of water elevation above spillway.

(3) Natural inflow can be supplemented by other sources.

(4) Normal pool elevations have changed during period of record reported.

(5) Years of record and average since supply switched to different source. Period of reporting is longer.

Groundwater Information

— JENNIE ATKINS

Comparison to Period of Record. Shallow groundwater levels in 27 observation wells were above normal in May. Levels averaged 1.39 feet above normal and ranged from 2.81 feet below to 7.62 feet above normal levels (Table 6).

Comparison to April 2020. Shallow groundwater levels were below those of the previous month. Levels averaged 0.62 feet below and ranged from 2.87 feet below to 1.50 feet above April 2020 levels.

Comparison to May 2019. Shallow groundwater levels in May were below levels from one year ago. Levels averaged 0.83 feet below and ranged from 6.29 feet below to 1.65 feet above May 2019 levels.

Table 6. Month-End Shallow Groundwater Level Data Sites, May 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	1.48	0.84	0.84	-0.87	-1.43
Bondville	Champaign	21.00	N/A	N/A	N/A	N/A	N/A
Bondville (ICN)	Champaign	20.00	3.35	0.10	0.18	-2.87	-1.07
Boyleston	Wayne	23.00	5.02	-1.22	-1.18	-0.89	0.09
Brownstown	Fayette	15.00	1.13	0.43	0.41	-1.13	-0.98
Carbondale	Jackson	26.00	3.89	-0.58	-0.65	0.09	-1.24
Coffman	Pike	28.00	5.23	4.09	3.77	0.90	1.09
Crystal Lake	McHenry	18.00	2.84	0.65	1.15	0.67	-0.36
DeKalb	DeKalb	25.00	2.47	-0.32	-0.39	-1.22	-1.59
Fairfield	Wayne	21.00	3.73	1.31	1.66	-2.41	-1.92
Fermi Lab	DuPage	15.00	1.11	1.98	1.98	-0.48	0.31
Freeport	Stephenson	26.00	11.93	3.30	3.30	1.37	-2.19
Galena	JoDaviess	25.00	18.21	0.88	2.14	0.32	-1.16
Good Hope	McDonough	30.00	4.28	0.12	1.13	-0.36	-1.13
Greenfield	Greene	21.00	6.59	2.08	1.73	-2.01	-0.37
Janesville	Coles	11.00	4.79	0.41	0.52	-1.40	0.22
Monmouth	Warren	27.00	8.63	-0.24	-0.19	0.88	-2.09
Mt. Morris	Ogle	55.00	10.97	3.55	5.40	1.50	-6.29
Olney	Richland	19.00	1.45	1.02	1.08	-1.28	-0.60
Perry	Pike	20.00	2.75	1.65	1.55	-1.83	1.65
Rend Lake	Jefferson	21.00	1.02	2.36	2.42	0.22	0.87
SE College	Saline	11.00	3.64	0.28	0.14	0.50	-0.75
Snicarte	Mason	42.00	39.23	-1.77	-2.81	-0.27	0.90
Sparta	Randolph	27.00	2.52	1.53	2.74	-0.75	N/A
Springfield	Sangamon	20.00	3.12	0.35	0.72	-2.52	-1.49
St. Charles	Kane	21.00	13.67	6.89	7.62	-1.06	-1.28
St. Peter	Fayette	15.00	2.10	-0.15	0.48	-0.59	N/A
SWS #2	St. Clair	80.00	11.41	0.37	1.80	-1.17	-0.04
Averages				1.11	1.39	-0.62	-0.83

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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