

## ILLINOIS WATER AND CLIMATE SUMMARY

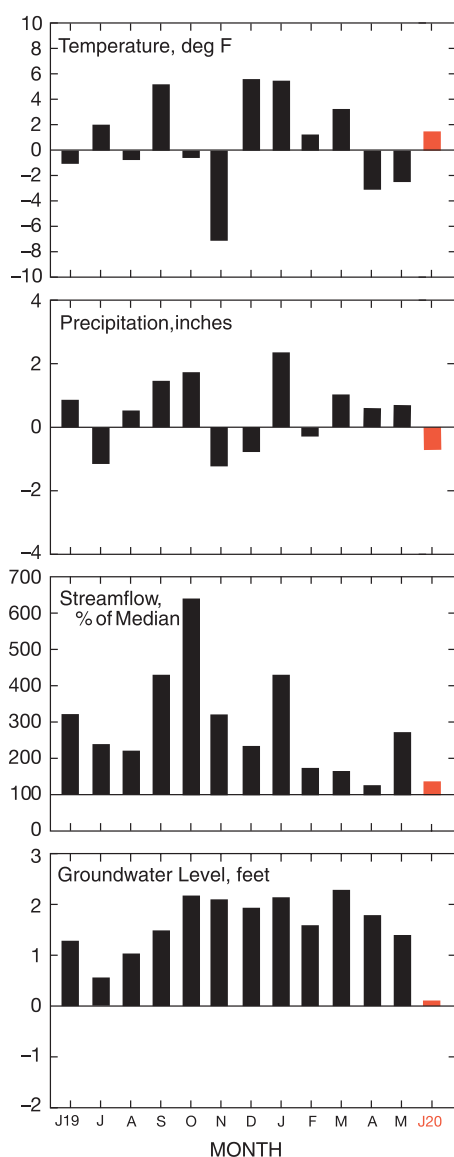


Figure 1. Statewide departures from normal.

### JUNE 2020 OVERVIEW

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

**Air temperatures** averaged 73.7°F in June, 1.8° above the long-term average (Figure 1). The southwest crop reporting district (CRD) was the warmest with an average of 75.7°F. The lowest regional temperature was 71.8°F, reported by the northeast CRD.

**Precipitation** averaged 3.56 inches, 0.65 inches below the long-term average (Figure 1). The southeast CRD was the wettest with an average of 5.10 inches. The driest was the central CRD with 2.34 inches.

**Soil moisture** declined during the first half of June but rose with increased rain in the second half. Overall, there was no change in moisture levels at 2-inch depths, but declines occurred at depths from 4 to 20 inches.

**Mean provisional streamflow** aggregated statewide was above the long-term median flow for June, about 130% of median (Figure 1). Monthly mean discharge values ranged mostly from normal to above normal for June. Water levels of the Illinois River below Starved Rock, the Mississippi River at most west-central and southern Illinois streamgauge locations, and the Ohio River at Cairo exceeded the local flood stages in early to mid-June.

**Water surface levels** at the end of June were below the full pool or target level at 5 of 23 reporting reservoirs. At the end of June, Lake Shelbyville was 9.2 feet above the summer target level, Carlyle Lake was 0.8 feet above the summer target level, and Rend Lake was 2.6 feet above the spillway level. Lake Michigan's mean level exceeded the previous record high monthly mean level for June (in 102 years of record).

**Shallow groundwater levels** statewide were near the long-term average this month with an average departure of 0.07 feet from the period of record (Figure 1). A decrease of 1.32 feet in departures was observed from the deviation in normal groundwater levels between May and June. Levels averaged 1.89 feet below May 2020 and 1.55 feet below June 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.

June in Illinois was warmer and drier than average across most of the state.

**Temperatures** averaged 73.7°F, 1.8° above the long-term average (Table 1, Figure 2a). Monthly average temperatures ranged from around 70° in northern Illinois to the mid-70s in southern Illinois. Following an above average end to May, June temperatures were generally 1 to 3° above average across most of the state, with the highest departures above average near Chicago. Southern Illinois was closer to average. The monthly maximum temperatures at nearly all stations were in the 90s, with the warmest reading of the month, 98°F, recorded at a station near Flora (Clay County) on June 7. Monthly minimum temperatures generally ranged from the mid-40s in northern Illinois to the mid-50s in southern Illinois. The lowest reading of the month, 43°F, was recorded at a station in McHenry County on June 15.

**Growing degree days** (DD, base 50°, from April 1) ranged from around 1000 DD in northern Illinois to around 1500 DD in far southern Illinois (Figure 2b). This was slightly above the long-term average in northeastern Illinois around Chicago. Most of the rest of the state was below average, with the largest departures up to 150 DD below average in southern Illinois.

**Precipitation** averaged 3.56 inches in June, 0.65 inches below the long-term average (Table 1, Figure 2a). Following a wetter than average spring, most parts of the state were drier than average in June. This was especially true in the central

Table 1. Temperature and Precipitation for June 2020

	Temp. (°F)	Departure from long- term avg. (1981–2010)	Precip. (in)	Departure from long- term avg. (1981–2010)
Illinois	73.7	+1.8	3.56	-0.65
CRD 1 (northwest)	72.2	+2.4	4.07	-0.52
CRD 2 (northeast)	71.8	+2.5	3.43	-0.63
CRD 3 (west)	73.7	+1.9	4.38	-0.02
CRD 4 (central)	73.9	+2.3	2.34	-1.74
CRD 5 (east)	73.0	+1.7	3.95	-0.19
CRD 6 (west southwest)	74.6	+1.7	2.89	-1.24
CRD 7 (east southeast)	74.0	+1.0	3.45	-0.75
CRD 8 (southwest)	75.7	+1.5	2.81	-1.31
CRD 9 (southeast)	74.7	+0.7	5.10	+0.99

Data from NOAA's National Centers for Environmental Information, accessed 7/8/2020.

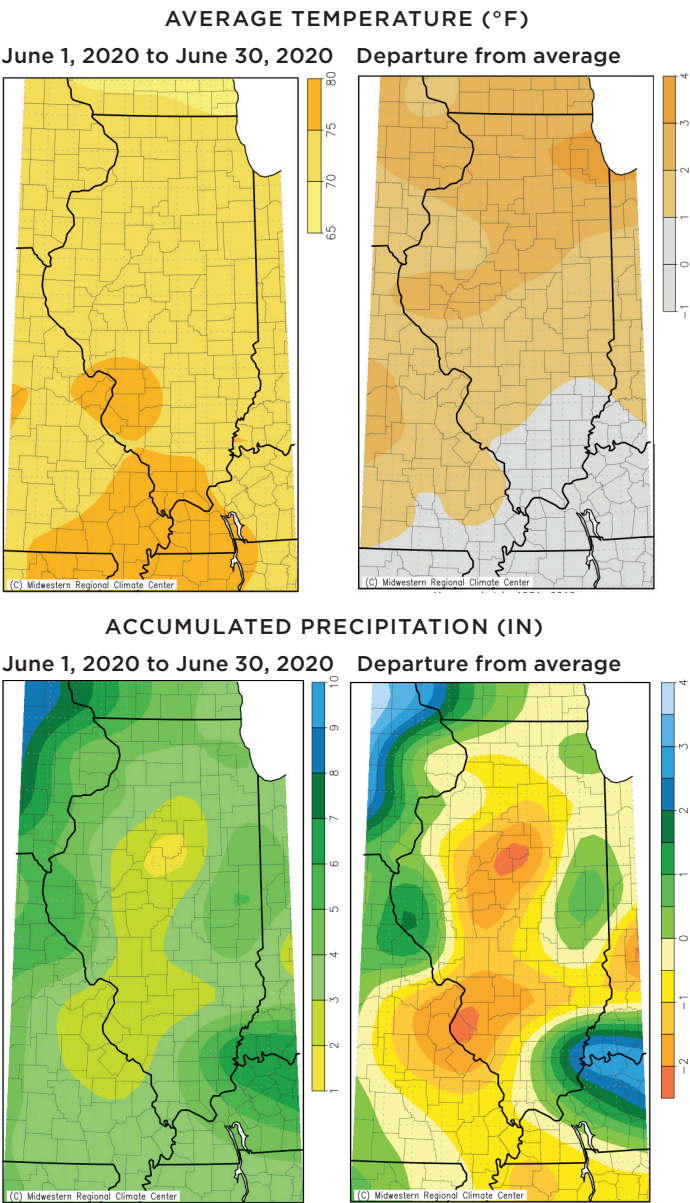


Figure 2a. Illinois temperature and precipitation and their departures from average for June 2020. Source: cli-MATE, Midwestern Regional Climate Center. <http://mrcc.illinois.edu/CLIMATE>. Information accessed on July 8, 2020.

part of Illinois along and to the east of the Illinois River, where totals were generally less than 3 inches, often more than an inch below average. An area between Bloomington and Peoria was especially dry, with many stations in McLean, Woodford, and Tazewell Counties reporting less than 2 inches for the month, including 0.52 inches at a station near Morton (Tazewell County). An area near St. Louis also reported widespread totals of 2 inches or more below average, especially to the southeast of the city.

However, there were some smaller areas of Illinois that did receive above average precipitation in June. These included areas of both east- and west-central Illinois, centered around the Champaign (Champaign County) and Quincy (Adams County) areas. In both counties, multiple stations recorded over 8 inches for the month, including a station near Quincy recording 8.82 inches, the highest monthly total in the state. Many stations in Champaign and Vermilion Counties, as well as some surrounding areas, recorded 5 to 7 inches for June, in large part due to a storm the night of June 3, which produced 2 to 4 inches of precipitation in the area. Another spot with above average precipitation was the area around White and Gallatin Counties, with totals in the area up to 2 inches above average. A station near Rosiclare (Hardin County) recorded 7.83 inches for June.

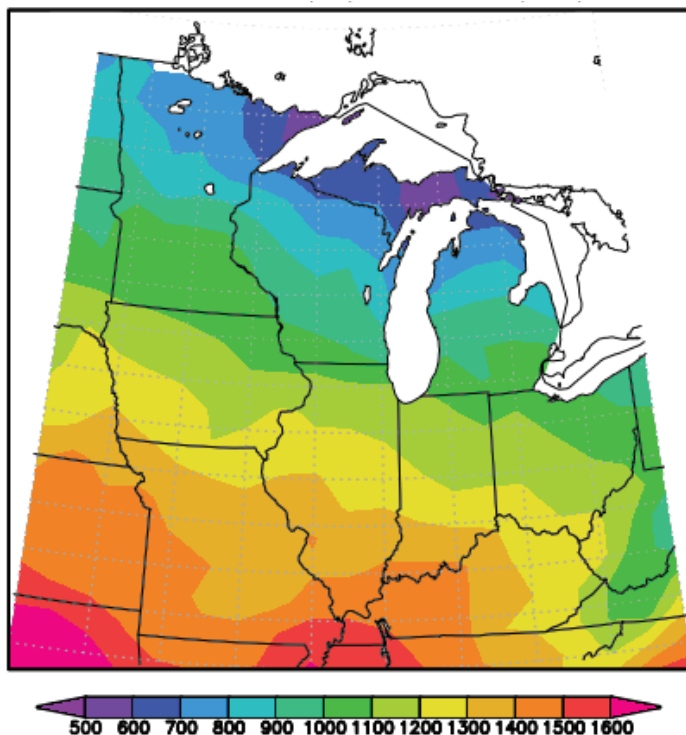
These precipitation totals can largely be explained by the typical summertime convective pattern Illinois experienced in June. Storms tend not to be very widespread, dropping

heavy precipitation on small, isolated areas. While most of the state was dry in June, a few small areas that just happened to be where these larger storms developed received above average totals.

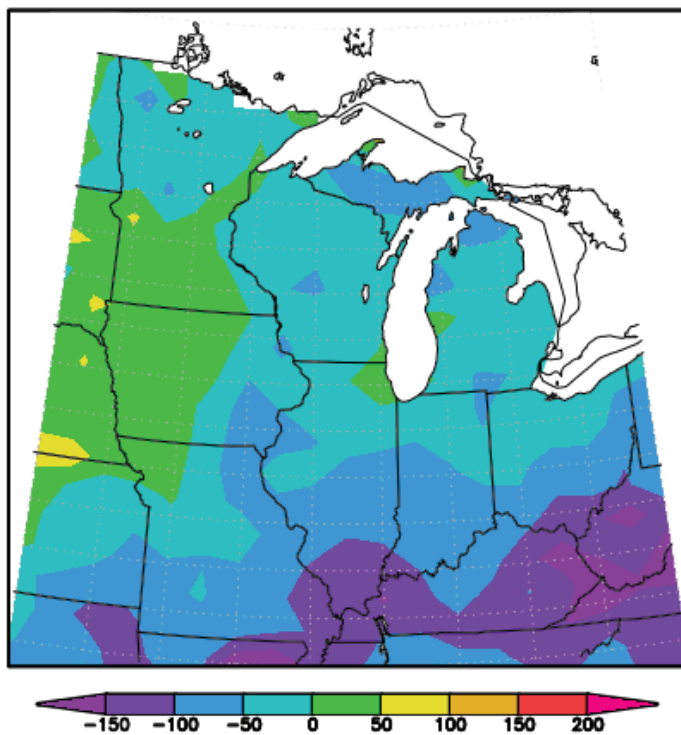
**Severe weather reports:** The NOAA Storm Prediction Center recorded 92 severe weather reports for June in Illinois, 1 for a tornado, 10 for hail, and 81 for wind. (Multiple reports can be generated for a single event.) Most reports came from the northern part of the state, including a few dozen from a storm system that moved across that area the afternoon and evening of June 26.

**Drought:** For the first time since the end of October 2019, the United States Drought Monitor classified portions of Illinois as abnormally dry (D0) in June. By the middle of the month, the below average precipitation had dried soils in parts of southern Illinois enough to warrant the classification. The continued hot and dry conditions led to other areas being classified as abnormally dry by the end of the month as well, as impacts such as rapidly drying soils and corn leaf rolling became more apparent (Figure 4). These areas included those to the southeast of St. Louis, along I-70, to the east of the Illinois River, and to the southwest of Chicago. Altogether, these areas accounted for about 27% of the state on the June 30 map. Although being abnormally dry is not officially considered drought (D1 or higher), it is the precursor to developing drought conditions.

TOTAL MGDD FROM 4/1/2020 TO 6/30/2020



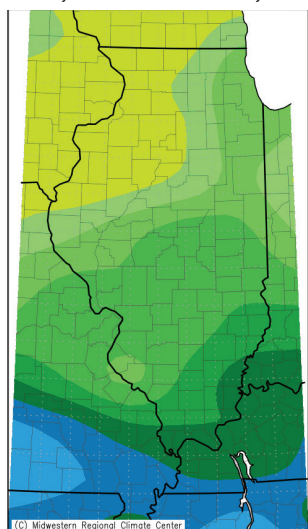
MGDD DEPARTURE FROM 4/1/2020 TO 6/30/2020



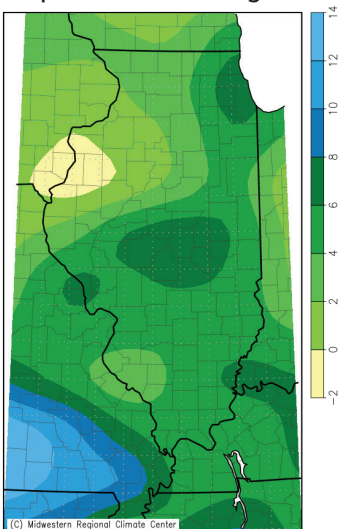
**Figure 2b. Illinois growing degree days and departure from average through the end of June.** Source: Midwestern Regional Climate Center. <http://mrcc.illinois.edu>, accessed on July 1, 2020.

ACCUMULATED PRECIPITATION (IN)

Jan 1, 2020 to June 30, 2020

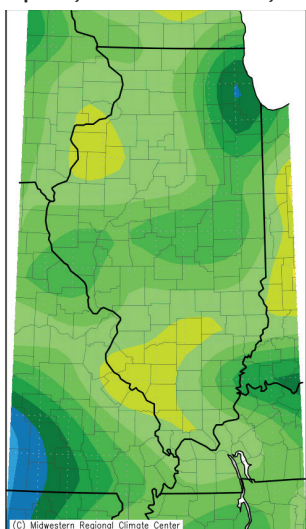


Departure from average

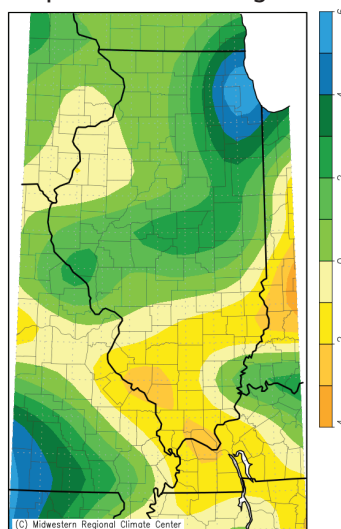


ACCUMULATED PRECIPITATION (IN)

April 1, 2020 to June 30, 2020



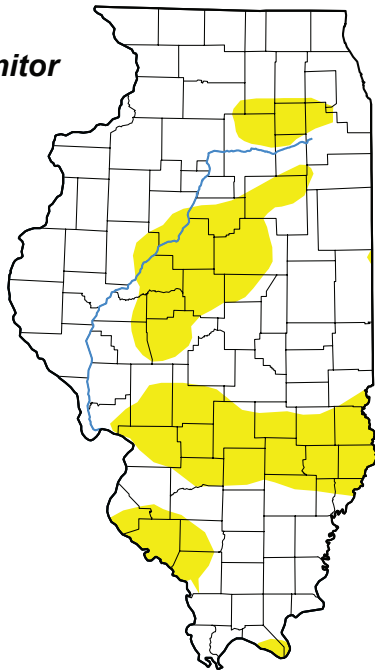
Departure from average



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



## U.S. Drought Monitor Illinois



**June 30, 2020**  
(Released Thursday, Jul. 2, 2020)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
<b>Current</b>	72.91	27.09	0.00	0.00	0.00	0.00
<b>Last Week</b> 06-23-2020	69.62	30.38	0.00	0.00	0.00	0.00
<b>3 Months Ago</b> 03-31-2020	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Calendar Year</b> 12-31-2019	100.00	0.00	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 10-01-2019	82.16	7.06	10.59	0.19	0.00	0.00
<b>One Year Ago</b> 07-02-2019	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>

### Author:

Adam Hartman  
NOAA/NWS/NCEP/CPC

## 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 June are presented in Table 2.

**Wind** speeds averaged 5.8 mph in June, a decline of 0.8 mph from May and 0.1 mph lower than the long-term network average. ICN Stelle had the month's highest average at 8.9 mph. The highest recorded wind gust was 53.7 mph measured at ICN Bondville on June 3.

**Air temperatures** continued to increase with a network average of 74.0°, 13.1° higher than in May and 2.1° higher than the long-term average. All stations recorded monthly highs in the 90s. The highest temperature was 96.4°, which was recorded at the Belleville station on June 6. Station lows ranged from the mid-40s to the mid-50s, with the lowest being 46.9° measured at ICN St. Charles on June 15.

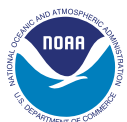
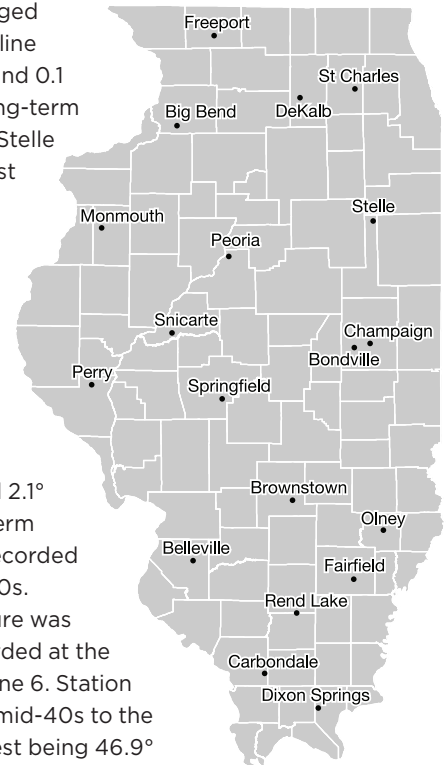
**Soil temperatures** rose 12 to 14° from May to averages in the 70s at all depths. Under bare soil, temperatures ranged from 54.8 to 106° at 2-inch depths and 59.2 to 97.5° at 4 inches. Temperatures under sod ranged from 61.3 to 102.2° at 4 inches and 61.4 to 87.6° at 8 inches.

**Precipitation** varied greatly across the network in June as monthly totals ranged from 1.20 inches at Peoria to 9.32 inches at ICN Dixon Springs. Overall, the network averaged 4.17 inches for the month, 0.58 inches higher than the long-term average.

**Soil moisture** declined the first part of the month, falling 45% from June 1 to 19 at 2-inch depths. Increased rain the last 11 days caused moisture levels to rise and end the month as it began with a state average of 0.33 water fraction by volume (wfv).

There were overall declines at depths from 4 to 20 inches, however. At 20 inches, moisture levels fell 18%. The largest drops were in western Illinois with a drop of 38% for the month.

Soil moisture also declined at the 39- and 59-inch depths, ending the month 6 and 2% lower, respectively.



**Figure 4. U.S. Drought Monitor report for Illinois.** Source: U.S. Drought Monitor. Author: Adam Hartman, NOAA/NWS/NCEP/CPC  
<http://droughtmonitor.unl.edu>, accessed on July 8, 2020.

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

Station	Wind			Air Temperature (°F)			Total Solar Radiation (MJ/m <sup>2</sup> )
	Avg. Speed (mph)	Avg. Direction (°)	Max. Gust (mph)	Max.	Min.	Avg.	
Belleville	5.6	177.9	34.4	96.4	52.5	76.8	769.1
Big Bend	6.6	178.3	35.9	92.3M	48.8M	72.5M	744.4
Bondville	8.9	182.1	53.7	90.8M	52.3M	73.8M	686.2M
Brownstown	5.5	172.2	37.1	94.6	55.0	74.7	756.2
Carbondale	4.9	185.2	33.0	95.4	50.8	75.0	793.8
Champaign	2.9	178.0	28.0	92.4	51.4	74.1	761.2
DeKalb	7.7	191.9	44.1	94.7	47.7	72.4	779.3
Dixon Springs	2.7	176.3	32.6	92.9	52.0	73.9	742.3
Fairfield	5.2	173.5	33.5	92.8	54.8	75.0	773.4
Freeport	3.7	186.0	35.5	93.0	49.3	71.6	756.8
Monmouth	8.9	180.2	48.0	92.0	54.1	73.4	757.0
Olney	4.9	186.1	29.7	94.3	54.6	74.9	792.3
Peoria	6.6	181.0	37.8	92.9	52.3	73.9	754.7
Perry	4.8M	182.9M	30.5M	91.5M	48.7M	73.6M	733.3M
Rend Lake	4.1	180.2	28.5	95.9	53.2	75.5	742.2
Snicarte	7.8	175.7	43.6	94.0	52.6	74.4	745.3
Springfield	4.6	179.7	29.2	93.1	55.4	75.4	743.4
St. Charles	5.4	168.4	36.5	93.3M	46.9M	71.8M	759.5
Stelle	8.9	171.8	45.5	94.2	48.3	72.8	755.4

**Table 2. continued**

Station	Average Relative Humidity (%)	Total Precip. (in)	Average Dew Point (°F)	Total Potential Evapotranspiration (in)	Average Soil Temperature (°F) at			
					4" under Sod	8" under Sod	4" under Bare Soil	2" under Bare Soil
Belleville	70.6	4.03	65.2	6.75	73.9	72.5	77.5	83.6
Big Bend	70.9M	3.14	61.1M	6.36M	72.4	70.9	74.5	77.0
Bondville	65.1M	5.36	59.8M	6.07M	73.5	73.8	77.2	77.7
Brownstown	69.0	4.29	62.6	6.51	72.8	71.4	76.1	77.0
Carbondale	79.7	5.49	67.1	6.60	77.5	75.4	77.0	78.1
Champaign	68.9	5.79	61.8	6.35	76.9	75.7	80.0	81.4
DeKalb	64.9	3.29M	58.4	6.86	71.0	70.0	76.0	77.5
Dixon Springs	76.4	9.32	64.9	6.14	76.8	75.3	79.2	82.1
Fairfield	70.5	2.81	63.6	6.58	74.1	73.0	86.9	81.0
Freeport	68.0	5.22	59.2	6.21	73.6	70.5	73.9	74.8
Monmouth	69.8	4.08	61.4	6.64	72.7	70.7	76.1	76.6
Olney	69.3	1.72	62.9	6.78	77.0	76.4	79.7	79.8
Peoria	64.6	1.20	59.8	6.69	72.2	69.8	76.2	77.5
Perry	73.0M	4.30M	63.3M	6.22M	74.3M	72.9M	77.1M	78.8M
Rend Lake	67.9	4.51	63.1	6.45	79.4	77.9	75.9	76.8
Snicarte	67.1	2.75	61.4	6.71	81.4	78.8	79.7	82.2
Springfield	63.1	5.34	60.6	6.48	76.3	74.5	78.9	83.2
St. Charles	67.6M	3.15	59.1M	6.44M	70.9	68.0	76.9	76.8
Stelle	66.4	3.37	59.6	6.72	71.3	68.8	76.3	77.5

M = Missing data.

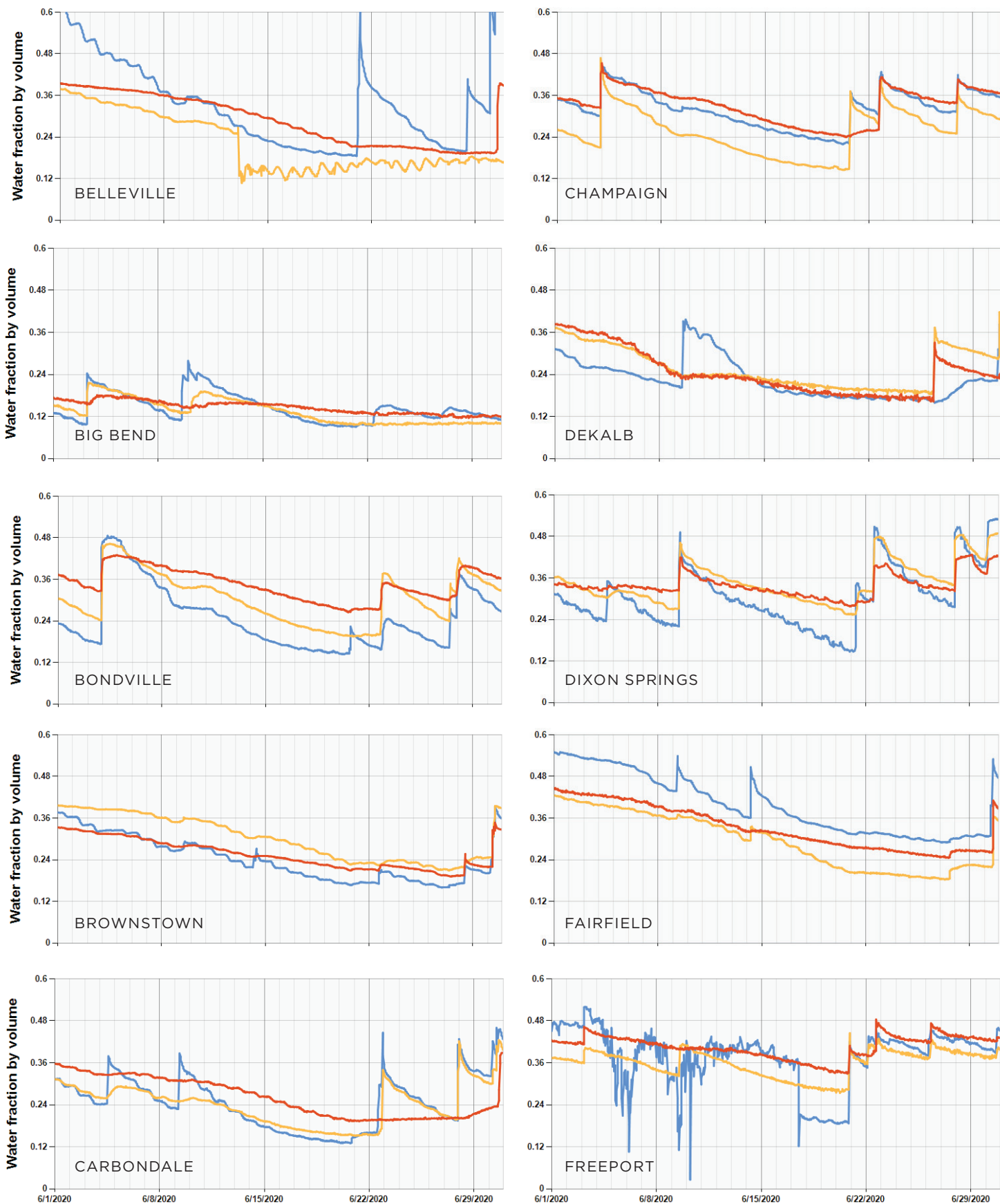


Figure 5. June soil moisture levels at ICN stations: — 2 in, — 4 in, and — 8 in

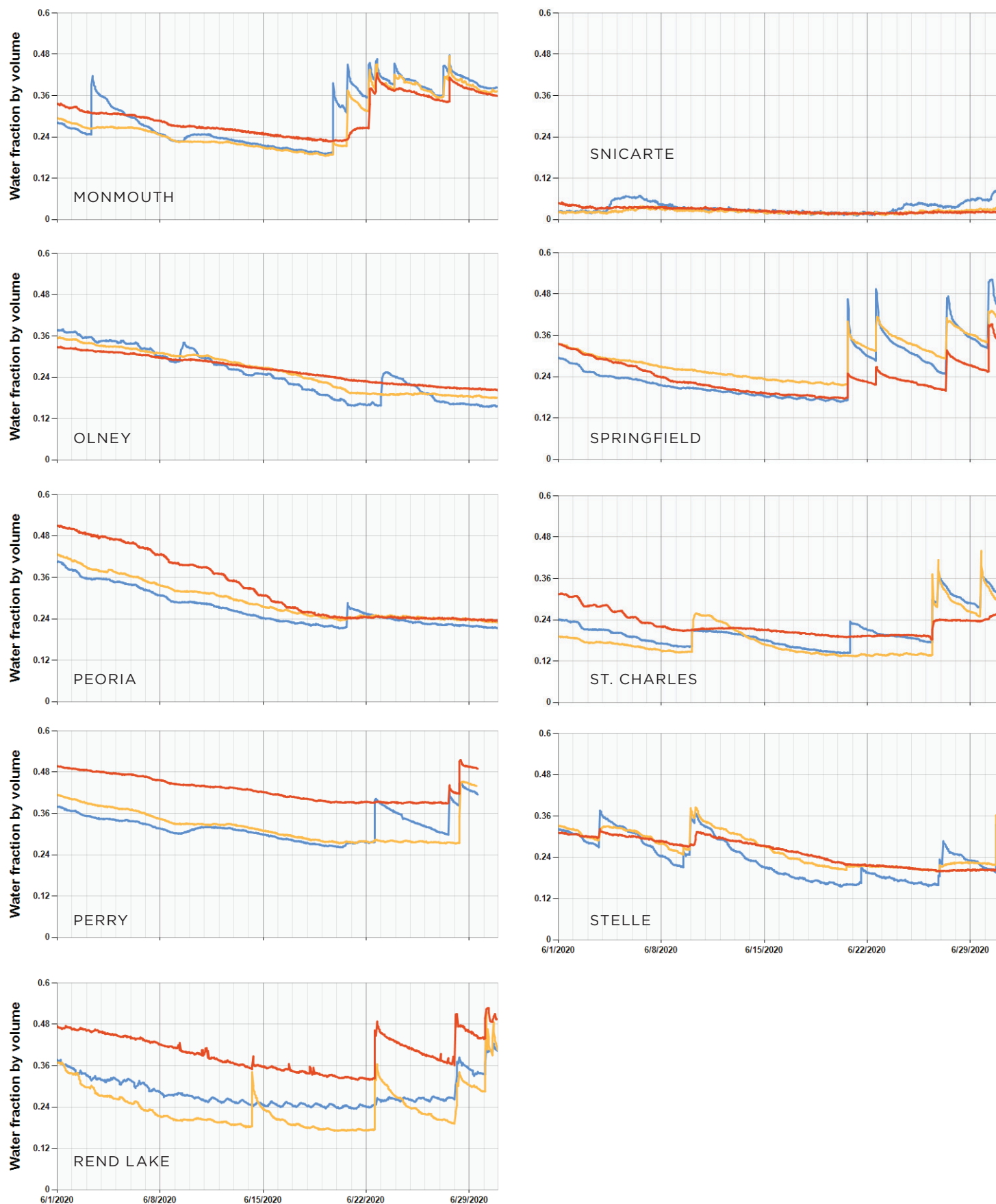


Figure 5. June soil moisture levels at ICN stations: — 2 in, — 4 in, and — 8 in



# 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.

Illinois River water levels from Starved Rock Lock and Dam downstream were above the local flood stages at the beginning of June, eventually receding to below the local flood stages. The Mississippi River crested above the local flood stages at most locations downstream of the Iowa River to the Illinois River in mid-June, and downstream of the Illinois River in early June. The Ohio River crested above the flood stage at Cairo at the beginning of June.

**Provisional monthly mean flows** for this month for 26 streamgaging stations located throughout Illinois are shown in Table 4, compared to statistics of past records 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 June (approximately 130 percent of the median) and slightly below the mean for June (approximately 95 percent of the mean). Monthly mean discharge values ranged mostly from normal to above normal for June, except some southern Illinois streams where monthly mean streamflows were below normal.

**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-May water levels at 23 reservoirs for which levels were reported last month and this month, reported end-of-June water levels were lower at 10 reservoirs, higher at 7 reservoirs, and about the same as last month at 6 reservoirs. For the 23 reservoirs with measurements reported at the end of June, water levels were below normal target pool or spillway level at 5 reservoirs, above normal target pool or spillway level at 13 reservoirs, and at about full pool level at 5 reservoirs.

**Major Reservoirs.** Compared to water levels at the end of May, at the end of June the water level at Lake Shelbyville was 2.4 feet lower, Carlyle Lake was 3.3 feet lower, and Rend Lake was 1.5 feet lower. At the end of June, Lake Shelbyville was 9.2 feet above the summer target level, Carlyle Lake was 0.8 feet above the summer target level, and Rend Lake was 2.6 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 June 2020 mean level for Lake Michigan was 582.2 feet. The monthly mean level one year ago (June 2019) was 581.8 feet. The long-term average lake level for June is 579.3 feet, based on 1918-2019 data. In this period of record, the lowest mean level for Lake Michigan for June occurred in 1964 at 576.6 feet, and the highest mean level for June occurred in 1986 at 581.8 feet. The month-end level of Lake Michigan was 582.2 feet. All values are provided by the U.S. Army Corps of Engineers Detroit District.

**Table 3. Peak Stages for Major Rivers during June 2020**

River	Station	River mile*	Flood stage (feet)*	Peak stage (feet)**	Date
Illinois	Morris	263.1	16	9.6	30
	La Salle	224.7	20	23.2	01
	Peoria	164.6	18	23.3	01
	Havana	119.6	14	23.2	01
	Beardstown	88.6	14	25.1	01
	Hardin	21.5	25	31.1	01
Mississippi	Dubuque	579.9	17	14.6	05
	Keokuk	364.2	16	13.9	11
	Quincy	327.9	17	18.0	11
	Grafton	218.0	18	22.5	01
	St. Louis	180.0	30	31.8	01
	Chester	109.9	27	33.7	02
	Thebes	43.7	33	35.7	02-03
Ohio	Cairo	2.0	40	46.7	01

**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, June 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	74	8,316	5,034	4,111	above normal	13	30
Rock River near Joslin	9,549	80	12,441	8,661	7,147	above normal	21	30
Pecatonica River at Freeport	1,326	105	2,218	1,145	969	above normal	10	30
Green River near Geneseo	1,003	84	956	1,038	882	normal	43	30
Edwards River near New Boston	445	85	564	515	403	normal	32	30
Kankakee River at Momence	2,294	107	2,533	2,346	2,079	normal	33	30
Iroquois River near Chebanse	2,091	97	1,698	2,325	1,726	normal	52	30
Fox River at Dayton	2,642	105	3,018	2,228	1,822	above normal	26	30
Vermilion River at Pontiac	579	77	345	619	440	normal	62	30
Spoon River at Seville	1,636	105	1,498	1,775	1,138	normal	42	30
LaMoine River at Ripley	1,293	99	770	1,339	769	normal	50	30
Bear Creek near Marceline	349	76	320	362	126	above normal	29	30
Mackinaw River near Congerville	767	75	556	827	638	normal	53	30
Salt Creek near Greenview	1,804	78	1,356	2,027	1,518	normal	56	30
Sangamon River at Monticello	550	110	843	557	416	above normal	21	30
South Fork Sangamon near Rochester	867	70	485	992	592	normal	57	30
Illinois River at Valley City	26,743	81	50,203	32,569	28,480	above normal	19	30
Macoupin Creek near Kane	868	92	414	642	335	normal	44	30
Vermilion River near Danville	1,290	98	2,046	1,364	1,057	above normal	22	30
Kaskaskia River at Vandalia	1,940	50	2,246	1,899	1,716	normal	42	30
Shoal Creek near Breese	735	77	130	618	368	below normal	77	30
Embarras River at Ste. Marie	1,516	108	2,311	1,483	998	above normal	24	30
Skillet Fork at Wayne City	464	102	104	366	153	normal	57	30
Little Wabash River below Clay City	1,131	105	215	992	495	below normal	71	30
Big Muddy River at Plumfield	794	49	639	834	664	normal	53	30
Cache River at Forman	244	97	232	219	152	above normal	29	30

**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, June 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	May reported pumpage (million gallons)
Altamont	Effingham	582.0	-0.8	-0.7	-0.9	35	6.5
Bloomington	McLean	719.5	+0.2	+1.9	-0.5	33	N/A
Carlinville	Macoupin	571.1	0.0	0.0	-0.3	34	24.0
Carlyle <sup>(1)</sup>	Clinton	445.0	+0.8	-3.3	+2.4	42	N/A
Decatur <sup>(1,3)</sup>	Macon	614.3	0.0	-0.1	-0.1	36	1,009.5
Evergreen <sup>(4)</sup>	Woodford	720.0	-0.6	-0.8	-0.9	29	N/A
Glenn Shoals <sup>(2)</sup>	Montgomery	590.0	N/A	N/A	-0.1	26	w/Hillsboro
Highland	Madison	500.0	-0.1	-0.1	0.0	31	31.5
Hillsboro <sup>(2)</sup>	Montgomery	589.0	N/A	N/A	-0.1	25	40.8
Jacksonville <sup>(2)</sup>	Morgan	644.0	N/A	N/A	0.0	19	w/Mauvaise Terre
Kinkaid	Jackson	420.0	+0.4	+0.2	0.0	31	48.7
Lake of Egypt	Williamson	500.0	+1.7	+1.3	-0.2	24	N/A
Mattoon	Coles	632.0	0.0	0.0	-0.1	26	w/Paradise
Mauvaise Terre <sup>(2)</sup>	Morgan	588.5	N/A	N/A	0.0	20	no meter
Mt. Olive (new)	Macoupin	600.0	N/A	N/A	-0.1	10	w/Mt. Olive (old)
Mt. Olive (old)	Macoupin	654.0	N/A	N/A	-0.4	21	5.3
Pana	Christian	641.6	+0.1	+0.1	-0.4	35	N/A
Paradise	Coles	685.0	0.0	0.0	-0.2	30	60.5
Paris (east) <sup>(5)</sup>	Edgar	660.0	+0.2	0.0	+0.1	9	Not PWS
Paris (west) <sup>(5)</sup>	Edgar	660.1	+0.2	0.0	+0.1	9	w/Paris (east)
Raccoon <sup>(1)(5)</sup>	Marion	477.0	+0.3	-0.4	0.0	12	93.0
Rend	Franklin	405.0	+2.6	-1.5	+2.7	42	N/A
Salem <sup>(3)</sup>	Marion	546.5	-0.2	+0.6	-0.6	25	27.7
Shelbyville <sup>(1)</sup>	Shelby	599.7	+9.2	-2.4	+5.5	42	Not PWS
Sparta <sup>(3)</sup>	Randolph	497.0	+0.6	+1.1	-1.1	22	N/A
Spring <sup>(3,4)</sup>	McDonough	654.0	+0.3	+0.3	0.0	35	45.7
Springfield <sup>(1,3)</sup>	Sangamon	560.0	+0.3	-0.1	0.0	36	587.0
Taylorville	Christian	590.0	-0.1	-0.6	+0.1	27	48.6
Vermilion <sup>(4)</sup>	Vermilion	581.7	0.0	0.0	-0.1	35	218.1

**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 July 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 near the long-term average for June. Levels averaged 0.07 feet above average and ranged from 2.16 feet below to 4.44 feet above normal levels (Table 6).

**Comparison to May 2020.** Shallow groundwater levels were below those of the previous month. Levels averaged 1.89 feet below and ranged from 4.29 feet below to 1.27 feet above May 2020 levels.

**Comparison to June 2019.** Shallow groundwater levels in June were below levels from one year ago. Levels averaged 1.55 feet below and ranged from 5.14 feet below to 1.28 feet above June 2019 levels.

**Table 6. Month-End Shallow Groundwater Level Data Sites, June 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	4.32	-0.90	-0.96	-2.84	-1.12
Bondville	Champaign	21.00	5.49	-1.25	-1.53	N/A	-0.70
Bondville (ICN)	Champaign	20.00	3.99	-2.01	0.06	-0.64	-0.55
Boyleston	Wayne	23.00	6.80	-2.41	-2.16	-1.78	-1.34
Brownstown	Fayette	15.00	2.98	-0.70	-0.73	-1.85	-2.16
Carbondale	Jackson	26.00	5.18	-0.57	-0.68	-1.29	-2.16
Coffman	Pike	28.00	9.44	1.01	1.39	-4.21	-1.48
Crystal Lake	McHenry	18.00	3.32	0.18	0.95	-0.48	-0.23
DeKalb	DeKalb	25.00	4.14	-1.50	-1.64	-1.67	-1.77
Fairfield	Wayne	21.00	4.49	0.02	-0.06	-3.38	-2.59
Fermi Lab	DuPage	15.00	7.66	-1.11	-1.18	-3.93	-0.49
Freeport	Stephenson	26.00	13.62	1.81	1.81	-1.69	-5.14
Galena	JoDaviess	25.00	18.40	0.52	1.74	-0.19	-0.93
Good Hope	McDonough	30.00	4.74	-0.12	0.90	-0.46	-0.73
Greenfield	Greene	21.00	10.07	0.09	-0.18	-3.48	-1.38
Janesville	Coles	11.00	5.28	-0.41	0.10	-0.49	-0.61
Monmouth	Warren	27.00	9.36	-0.79	-0.77	-0.73	-1.59
Mt. Morris	Ogle	55.00	14.03	0.88	2.51	-3.06	-2.94
Olney	Richland	19.00	4.50	-0.93	-0.95	-3.05	-2.55
Perry	Pike	20.00	4.28	0.56	0.57	-1.53	-2.38
Rend Lake	Jefferson	21.00	2.81	1.20	1.23	-1.79	0.41
SE College	Saline	11.00	5.09	0.14	-0.11	-1.45	-2.39
Snicarte	Mason	42.00	37.96	-1.07	-1.54	1.27	1.28
Sparta	Randolph	27.00	6.81	-1.25	-0.50	-4.29	N/A
Springfield	Sangamon	20.00	4.51	-0.72	-0.23	-1.39	-2.52
St. Charles	Kane	21.00	16.66	3.87	4.44	-2.99	-2.78
St. Peter	Fayette	15.00	3.75	-1.52	-0.65	-1.65	N/A
SWS #2	St. Clair	80.00	N/A	N/A	N/A	N/A	N/A
Averages				-0.26	0.07	-1.89	-1.55

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>

## ILLINOIS STATE WATER SURVEY

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