

Central Indiana

June 2019

Climate Summary

Tied for 54th Coolest on record at Indianapolis

13th Wettest on record at Indianapolis

Temperatures

June started out warm across central Indiana, with the region enjoying highs in the 80s through the first week of the month. Beginning on the 8th, highs slipped back into the 70s as the weather turned more wet and unsettled. The arrival and passage of an upper level low pressure system on the 13th brought an unusually cool day to the region with clouds and scattered showers. Many locations did not climb out of the 60s on the 13th. As skies cleared that evening, temperatures bottomed out in the mid and upper 40s in much of central Indiana early on the 14th, the coolest morning of the month for most.

The most unsettled part of the month followed beginning on the 15th continuing through the 24th, leading to a wide variation in temperatures. Highs were only in the upper 60s and lower 70s over much of the region on the 15th as thunderstorms impacted central Indiana for much of the day. Highs would bounce between the 70s and 80s over the following week as rain and clouds influenced temperatures. With the humid airmass, lows remained in the 60s throughout this period.

A drier stretch of weather developed on the 25th and lasted through the end of June. Coincidentally, the warmest temperatures of the month, and the year to date, would come during these last few days of the month, finally signaling the arrival of summer. Many locations experienced their hottest weather on the last day of the month as temperatures surged into the lower and middle 90s in some locations. The first 70°+ nights of 2019 also came towards the end of the month. Despite the heat to end the month, much of the area ended up slightly below normal with temperatures for June.

Site	June 2019 Avg Temp	June 2019 Difference from Normal	Highest Temperature	Lowest Temperature
Indianapolis	71.2	-0.8	94 on 30	47 on 14
Lafayette	69.6	-1.9	92 on 29	43 on 14
Muncie (*)	72.3	+0.9	94 on 30	50 on 3 and 11
Terre Haute	71.9	-0.5	93 on 30	46 on 14
Bloomington	71.4	0.0	93 on 30	46 on 14
Shelbyville	72.4	+0.9	95 on 30	47 on 14
Indy – Eagle Crk. (**)	71.4	-0.9	93 on 30	46 on 14

At Indianapolis, there were 15 days with above normal average temperatures and 15 days with below normal average temperatures.

June 2019 was tied for the 54th coolest in the Indianapolis area since 1871.

(*) – Muncie temperature data missing 6/28 and 6/29.

(**) – Eagle Creek temperature data missing 6/19 and 6/20.

Precipitation

June was a very active month hydrologically with areas along and south of Interstate 70 seeing rainfall amounts of 5-8 inches above normal with most areas north of Interstate 70 seeing rainfall near normal to slightly below normal.

The first major rain event was on June 5th, as a frontal system interacting with leftover convective outflow boundaries brought several inches of rain to much of central Indiana. The heaviest rain with this system fell across southern portions of the area. The next major rainfall occurred on June 9th with an additional several inches in the same area that received rain on the 5th, as a surface low slowly moved north across central Indiana and then a cold front swung through.

A widespread area of rain occurred from June 15th through the 17th where pockets of south central Indiana saw 5-8 inches as a stalled front served as a focusing mechanism for several rounds of rain and storms. On June 15th, the addition of convective boundaries and an MCV also contributed to the formation of several tornadoes across the state. A record for the date was set at Indianapolis, where 3.85 inches fell. As more rounds of rain and storms developed on the 16th and 17th, amounts for the three day period combined with the rains from earlier in the month led to moderate flooding along the East Fork White River and lower portions of the White River along with numerous smaller streams in the basin. Thirteen Flash Flood Warnings were issued during this time with very significant flash flooding reported in Brown and Jackson counties. As a

result of the flooding, Brown County State Park was forced to close from June 17th through June 24th due to flood damage to the water filtration system and a resultant absence of potable water, and did not fully reopen until June 27th, with some hiking trails still closed due to flood damage.

Rain returned to central Indiana on the 19th as an upper wave interacted with a relatively stationary front yet again. Rainfall amounts of 1.5 to near 4 inches of rain fell on parts of western and northern Indiana, including in the Wabash basin. One of the areas with totals on the higher end of the range was in Hamilton County. Several swift water rescues were necessary as well as other rescues for stalled cars. A drier pattern began to set up across central Indiana on the 25th. From then through the end of the month, only disorganized, isolated to widely scattered diurnal convection impacted the area, bringing a dry end to an otherwise wet month.

Site	June 2019 Precipitation	June 2019 Difference from Normal	Wettest Day	Longest Dry Stretch
Indianapolis	7.51	+3.26	3.85 on 15	6 days 25-30
Lafayette	5.05	+0.95	1.48 on 19	4 days 1-4
Muncie	4.03	-0.63	1.85 on 15	6 days 25-30
Terre Haute	7.89	+3.45	2.28 on 15	4 days 25-28
Bloomington	9.58	+4.69	2.60 on 15	5 days 25-29
Shelbyville (*)	2.67	-1.73	0.80 on 9	4 days 1-4 and 25-28
Indy – Eagle Crk.	3.97	-0.42	1.95 on 15	6 days 25-30

June 2019 was the 13th wettest in the Indianapolis area since weather records began in 1871.
 (*) – Shelbyville precipitation data missing on 6/17.

Severe Weather

June was a stormy month across the Hoosier state with several notable days with severe thunderstorms.

A line of storms tracked across the region on the afternoon of the 5th, producing wind damage, large hail and heavy rainfall. Significant flooding occurred at the Tippecanoe Mall in Lafayette with parking lots covered to a depth of nearly 3 feet. Additional severe weather occurred from storms on the afternoon and evenings of the 23rd and 30th, focused especially across the western half of central Indiana. A microburst with peak winds to 70 mph damaged a pole barn and knocked over multiple trees and a dump truck in Smithville in Monroe County.

The most significant stretch of severe weather occurred on the 15th with additional rounds of severe storms on the 16th and 17th, as a warm front lifted into the area and became nearly stationary. After widespread thunderstorms and heavy rain over much of the area on the morning and afternoon of the 15th, severe thunderstorms producing tornadoes and wind damage impacted the southern half of central Indiana that evening. Seven tornadoes occurred, including two that produced EF2 damage near Ellettsville in Monroe County and across Rush County. An EF1 tornado in Owen County was notable for producing significant tree damage and crossing the White River five times. Straight-line winds with peak gusts to 100 mph caused damage to a few farms in western Decatur County. An additional area of straight-line winds with peak gusts to 80 mph produced roof and siding damage to nearly 15 homes in a neighborhood just southwest of Columbus. For more information on this event, click <https://www.weather.gov/ind/june1517severeweather>.

For information on severe weather in other areas during June, visit the Storm Prediction Center "Severe Weather Event Summaries" website at <http://www.spc.noaa.gov/climo/online/>.

Miscellaneous

The maximum wind gust at Indianapolis International Airport was 50 mph out of the west-southwest on the 23rd as thunderstorms impacted the area. Fog or haze was reported at Indianapolis on 15 days during the month, including three days with dense fog. Thunder was reported on 9 days during the month.

July 2019 Outlook

The official outlook for July 2019 from the Climate Prediction Center indicates a greater chance for near to slightly below normal temperatures for central Indiana. At Indianapolis, the average temperature for the month is 75.4 degrees. The outlook also calls for a greater chance for above normal precipitation across central Indiana. The average precipitation for July at Indianapolis is 4.55".

Data prepared by the Indianapolis Forecast Office.