Central Indiana December 2020 Climate Summary

Tied for 46th Warmest on Record at Indianapolis

30th Driest on Record at Indianapolis

Tied for 57th Least Snowiest on Record at Indianapolis

Temperatures

It was a seasonable start to December as highs oscillated between the 30s and 40s for the most part as an extended period of dry weather settled in. After the first week of the month, temperatures warmed as southerly flow developed across the Ohio Valley, peaking on the 10th and 11th as highs rose into the 60s. On the 11th, temperatures threatened record levels at many locations in what would be the warmest temperatures recorded for the entire month.

The passage of a cold front on the 12th would bring temperatures crashing back to seasonably cool levels for mid month as highs returned largely to the 30s and lows remained in the 20s. Temperatures would again nudge up in the week before Christmas as highs rose into the 40s eventually topping off in the lower and mid 50s on the 23rd. The warmth would again be tempered by a strong cold frontal passage, this one occurring early on the 24th would pave the way for a rapid temperature drop and ultimately the coldest weather of December 2020 coincident with Christmas Eve and Christmas Day. Highs across central Indiana on Christmas Day largely remained in the teens. For Indianapolis, the high of 15° would end up as the coldest Christmas Day in the Circle City since 1985.

The arctic blast that arrived over Christmas was short lived as temperatures modified quickly in the following days after the 25th. Highs rose back into the 50s on the 27th as southerly winds brought milder air back into central Indiana. A frontal passage on the 30th would usher in colder air again as we wrapped up 2020, with highs on New Year's Eve holding in the upper 20s and lower 30s in most areas.

Average temperatures for December would end up 3° to 5° above normal at most locations across central Indiana.

Site	December 2020 Avg Temp	December 2020 Difference from Normal	Highest Temperature	Lowest Temperature
Indianapolis	34.7	**+3.1**	65 on 11	10 on 25
Lafayette	35.2	**+4.8**	63 on 11	11 on 25
Muncie	35.6	**+4.9**	64 on 11	14 on 25
Terre Haute	34.9	**+3.3**	64 on 10 and 11	10 on 25
Bloomington	35.3	**+3.1**	66 on 11	10 on 25
Shelbyville	36.1	**+4.3**	65 on 11	12 on 25
Indy – Eagle Crk.	34.9	**+3.2**	65 on 11	10 on 25

At Indianapolis, there were 15 days with above normal average temperatures, 12 days with below normal average temperatures and 4 days with normal average temperatures.

December 2020 was tied for the 46th warmest in the Indianapolis area since weather records began in 1871.

Precipitation and Snowfall

December was a dry month for Indiana. The month ended with below normal precipitation nearly everywhere, with much of the central Indiana area winding up between one and two inches below normal. A small area in southeast Indiana ended December between two and three inches below normal, an area near Lafayette was near normal to an inch below normal, and a swath from Indianapolis to Terre Haute was similar. This swath from Vincennes to Terre Haute to Indianapolis saw two to three inches of precipitation. It was surrounded by an area of 1.5 to 2 inches, with one to 1.5 inches over both northeastern and southeastern parts of central Indiana. The month was also relatively warm, with most locations ending the month just over three degrees above normal. Despite the lack of precipitation, drought and abnormally dry conditions remained relatively stable over the state for the course of December, likely due to lack of demand. While temperatures averaged above normal for the month, there was some snowfall and mixed precipitation events. Snowfall amounts ranged from a tenth of an inch across southernmost parts of the state, to one to four inches across most of central

Indiana, to a swath over central parts of northern Indiana of five to ten inches in a lake effect snow favored zone.

A few different storm systems rolled through during the month of December. The first 10 days of the month were dry at Indianapolis. Late on the 11th and lasting into the 13th though, a low pressure system moved through Illinois into central and northern Indiana and brought widespread rain and gusty winds. Rainfall amounts with this event ranged from three quarters of an inch to an inch over northwest parts of central Indiana, down to less than a quarter inch over southeastern portions of the area.

On December 16th, a low pressure system moving through the Ohio valley brought snow to central Indiana. Indianapolis received it's highest snowfall for the month with 1.8 inches. A system arriving on the 23rd brought widespread rain to the area. As temperatures dropped with the passage of a cold front on the 24th, rain changed over to snow, and snowflakes hung around into Christmas Day. On December 30th, a frontal system moving through the area brought more rain to central Indiana. There was also a precipitation mix associated with this system after the cold front went through. Precipitation totals ranged from nearly an inch and a half along the Ohio River, to three quarters of an inch to an inch along the southern counties of the forecast area, to 0.3 to 0.5 inches along and north of I-70.

Snow was observed at the Indianapolis International Airport 5 times during December, with measurable snow occurring on the 16th, 24th, and 30th.

Site	December 2020 Precipitation	December 2020 Difference from Normal	Wettest Day	Longest Dry Stretch
Indianapolis	1.63	**-1.54**	0.47 on 30	10 days 1-10
Lafayette	2.04	**-0.47**	0.60 on 12	10 days 1-10
Muncie	0.91	**-1.97**	0.40 on 30	6 days 5-10
Terre Haute	2.01	**-1.04**	0.61 on 30	7 days 4-10
Bloomington	2.00	**-1.54**	0.72 on 30	10 days 1-10
Shelbyville	1.27	**-2.00**	0.49 on 30	10 days 1-10
Indy – Eagle Crk.	1.79	**-1.29**	0.64 on 12	10 days 1-10

December 2020 was the 30th driest in the Indianapolis area since weather records began in 1871.

Severe Weather

There was no severe weather across central Indiana in December.

For information on severe weather in other areas during December, 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 49 mph out of the southwest on the 27th as strong low pressure approached from the west. Fog or haze was reported at Indianapolis on 15 days during the month. Ice pellets occurred on the 30th.

January 2021 Outlook

The official outlook for January 2021 from the Climate Prediction Center indicates greater chance of above normal temperatures and precipitation. At Indianapolis, the average temperature for the month is 28.1 degrees. The average precipitation for January at Indianapolis is 2.66 inches, with 8.6 inches of snowfall.

Data prepared by the Indianapolis Forecast Office.