Indiana's Weather: Some Extremes and Advantages

STEPHEN S. VISHER, Indiana University

Indiana's weather is characterized by frequent and often wide fluctuations from average conditions. Some extremes presented in *Climate of Indiana*[1] are extracted here and are supplemented by several records established since it was completed, in 1940.

High Temperatures

The highest temperature officially recorded in Indiana in the shade by the U. S. Weather Bureau was 116°, on July 15, 1936, at Collegeville, near Rensselaer, Jasper County, about 45 miles south of Lake Michigan. During that hot, dry spell, several nearby stations had temperatures almost as high, as did Shoals in southern Indiana (114°). Prior to 1936, the state's highest temperature record was 113°, in southern Indiana.

Official temperatures of 100° or more have been recorded somewhere in Indiana in seven months of the year. The highest in July is 116°; in August, 111°; in June, 111°; in September, 108°; in May, 103° (at several places in S. Indiana; 99° at Fort Wayne); in October, 100°; and in April, 100°. The state's high records for the other months are: November, 91°; December, 77°; January, 80°; February, 83°; March, 91°.

The frequency of high temperatures is much greater in southern than in northern Indiana: for example, about three times as many days of 90° or higher.

Low Temperatures

The lowest official temperature record in Indiana is —35°, established on February 2, 1951, at Greensburg, in southeastern Indiana, 35 miles from the Ohio River. Scottsburg and Salem, still farther south, had temperatures almost as low. Previous to 1951, the state record had been —33°, established in Lafayette, in northwestern Indiana (January 2, 1887).

Official temperatures of zero or below have been recorded somewhere in northern Indiana from late November to early March. By months: November had —9° or —10° on the 25th in 1950 at many northern stations; December has had —30°; January, —33°; February,—35°; and March, —19° (Goshen, March 8, 1943). April has had a temperature of 7°, May of 20°, June of 30°, July of 37°, August of 33°, September of 21°, and October of 8°.

Temperatures below —10° occur fully five times as often in the northern part of the state as in the southern, and persist much longer.

The dates of the last killing frost in spring and the first in autumn are highly significant aspects of low temperatures. A killing frost has occurred as late as May 25 even in much of southern Indiana (1925), and in June in northern Indiana. The first killing frost of the autumn has

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[1] S. S. VISHER. 1944. Climate of Indiana, Indiana University Press, Bloomington, 511 p.

occurred on September 14 widely in central and northern Indiana. The most spectacular early frost was on July 29, 1936, on low muck land in northern Jasper County, the county where the all-time high temperature record of 116° was established exactly two weeks earlier. (The extreme aridity of that spell permitted a rapid escape of heat at night, and the dry muck largely prevented the movement of heat from the warm soil beneath.)

Snowfalls

As to snowfall records: 107 inches fell at LaPorte, near Lake Michigan, in 1929, and 100 inches in 1924. South Bend received 80 inches in 1914; Valparaiso, 65 inches in 1930. In central Indiana, Anderson established a record of 56 inches in 1914. The records in southern Indiana are 67 inches at Vevay, on the Ohio River in Switzerland County, in 1917, and, at the southwestern corner of the state, 47 inches at Mt. Vernon, Posey County, in 1918. For the entire state, the fall in January, 1918, averaged 25 inches, and 16 inches in February, 1910 and 1914. December got 13 inches in both 1917 and 1895; November got 7.6 inches in 1950; March got 16 inches in 1906; April got 4 inches in 1920; May got 1.3 inches in 1923; and October got 1.7 inches in 1917.

Indianapolis once got 30 inches of snow in a single month (March, 1906), and 22 inches in another month (January, 1918), while 21 inches fell in February, 1910, and in December, 1895. November got 10 inches in 1932, April 7 inches in 1886, May 2.4 inches in 1897. In one day, Indianapolis once got 12 inches (March 19, 1906).

Some places sometimes go through a winter with little snowfall; for example, the southern third of the state had an average of less than 2 inches in 1919, in contrast to 41 inches in 1917.

Heavy Rainfalls

Although, on the average, a total of approximately 39 inches of moisture is received per year in Indiana, occasionally little more than half that amount falls, and sometimes nearly twice that much. Two Weather Bureau stations, one at the southeast and the other in the northwest, have received in an entire year less than 19 inches (Valparaiso, 18.1 in 1899, Brookville, 18.7 in 1934). Conversely, annual totals in excess of 70 inches have been received at several southern stations. The highest record for a calendar year is 97.4 inches for 1890; the twelve months, November 1, 1889-October 31, 1890, received 103 inches both at Marengo, Crawford County, near the Ohio River. In the thirty days, December 27, 1936-January 25, 1937, 33 Indiana weather stations near the Ohio River received more than 15 inches of rain, five of them received from 20 to 22.4 inches. This deluge contributed to the great flood of January, 1937.

Three southwestern Indiana stations have received 10 inches of rain in a day (24 consecutive hours): Princeton, Gibson County, 10.5 inches on August 6, 1906; Huntingburg, Dubois County, 10.0 inches on January 5-6, 1895; and Elliston, Greene County, 10.0 inches on August 15-16, 1949. Two northern stations have received 7 inches in 24 hours (Valparaiso and Monticello), and several southern ones have had approximately seven inches (Indianapolis, Columbus, Bloomington, Butlerville and Marengo).

In two or three consecutive days, total falls of 8 to 11 inches have fallen at Evansville, Richmond and Hammond (as well as at the three which received 10 inches in one day).

Within five minutes, rainfalls of an inch are occasional in Indiana; in 15 minutes, two inches have fallen in Indianapolis; in 20 minutes, 4 inches at Hartford City. (Falls in three hours of more than eight inches have occurred at some stations not far from Indiana, and hence might occur in Indiana. Michigan has one 24-hour record of 14.8 inches, while New York, Pennsylvania and West Virginia each have records of more than 16 inches.)

Sunshine and Clouds

The amount of sunshine received varies widely from day to day, as well as from summer to winter. The average December-January day has about three hours of sunshine in northeastern Indiana, about four hours in southwestern; the average summer day has about ten hours in both northern and southern Indiana. In winter, cloudiness is common—occasionally there is almost no sunshine for several consecutive days. In summer, however, few days are continuously cloudy, and sunshine is much more intense than in winter. In Indianapolis, in both December and January, there are an average of about ten days which are sunless, in contrast to none in July and practically none in June and August.

Thunderstorms

About 200 thunderstorms occur annually in Indiana, but each covers only part of the state; any locality is crossed by an average of about fifty per year. Few occur in winter, almost none in northern Indiana. During the summer, an average of two or three pass near each week. Occasionally, two hit per day, and very rarely three. Conversely, weeks sometimes pass without a thunderstorm in a given locality, or without rain, as most summer rain is induced by thunderstorms.

Advantages of Indiana's Weather

The foregoing listing of extremes of temperature, etc., which have occurred clearly proves that Indiana's weather is by no means uniform or equitable. The variability or unpredictability of the weather, which is the aspect to which most people object, is far less harmful than many believe. Indeed experts who have made special studies of the subject consider variability distinctly advantageous. Regions which lack considerable weather variability are definitely handicapped. One of the advantages of variability is that it is stimulating to mind and body, whereas monotony is enervating. Another advantage is that it puts a premium on alertness and achievement. In regions that lack weather variability, people often "let things slide," say "I'll do it tomorrow." Procrastination is often "reasonable" where tomorrow's weather will presumably be like today's. Here, on the other hand, it is more logical to "do it today," as the weather may be worse tomorrow.

The numerous distressing aspects of our weather, including hot spells, cold spells, unseasonable frosts, floods, drouths, and storm, all put a premium on courageous persistence, on wise planning, and on the ability to make rational adjustments to unexpected conditions. Variability or

unpredictability is therefore more harmful to inactive people than to alert ones. Sharp weather changes require numerous adjustments to reduce suffering and loss. As wise adjustments require thought and action, and encourage forethought, frequent weather changes are stimulating.

There are numerous evidences that frequent changes of weather are relatively conducive to mental activity and hence to an advanced civilization. Regions which have relatively uniform weather generally have mostly "easy-going" people. Unless migrants from more stimulating regions comprise an important part of the population, such "pleasant" regions are characteristically backward, although they appeal to many elderly and sluggish people. Indiana's climate is more suitable for young, vigorous people than for elderly ones.

During most of the year, the weather of Indiana is close to that found by much evidence to be best for civilized man. The temperatures are within the desirable range, 40° to 65°, the humidity is favorable, the wind is moderate, the sunshine is satisfactory, and the variations from day to night and from day to day are sufficient to be stimulating, without being excessive. When excessive departures from normal do occur, we should "make the best of them," and should appreciate that they occur only intermittently.

When compared with that of other parts of the world, our weather rates relatively high. To be sure, it sometimes is too hot in summer and too cold in winter, and there are occasional spells that are too wet or too dry. But no other part of the world lacks serious defects. Vast areas are much colder or much hotter, much drier or much wetter, and less satisfactory as to sunshine and winds. The more one knows about the weather of other regions, the better one realizes that Indiana's weather, despite its imperfections, is comparatively suitable to civilized man. It is doubtful if one-eighth of the world fares better. Indeed, one of the greatest experts, Ellsworth Huntington, concluded that Indiana is in the best one-tenth of the world in this respect.