The Springfield Weather Bureau Chronicles

Back in the old days, observers at the Weather Bureau office in Springfield took several observations each day. These consisted of temperature, precipitation, snowfall, barometric pressure, cloud cover, and sunshine. While specific observation sheets were used to log the data, remarks and comments on the weather were either hand-written or typed onto separate pages.

Here are some of the notable events in Springfield, as recorded by Weather Bureau observers.

October 1916:
"The greatest October snowfall on record occurred on the 20th, when 1.8 in. were recorded. This is the earliest in the season on record where 0.1 in. or more fell, and is the second time in October that a measurable amount was recorded."

April 1917:
"An Earthquake of moderate intensity occurred at 2:54 p.m. of the 9th. It was felt at the Weather Bureau station as a series of rather rapid oscillations in a direction from east to west, and lasting about one second. No damage was done, but considerable excitement resulted as it was experienced rather generally. Reports indicated that shocks occurred at most central and southern Illinois towns. Instances were reported of houses jarring violently, people being frightened, telephone bells ringing, and shutters on switchboards being jarred open by the vibrations. At some of the fire stations in Springfield, the men were roused from sleep by the "rocking of the beds". *[Ed. note: This was an earthquake centered near De Soto, Missouri, about 35 miles south-southwest of St. Louis. It rated as a Category VI on the Modified Mercalli Intensity Scale, somewhere between 5.0 and 5.9 on the Richter Scale.]*

May 1917:
"On the afternoon of the 26th one of the most violent and destructive tornadoes in the history of Illinois swept across the central portion of the state practically wiping out the town of Modesto, which is about 30 miles southwest of Springfield, and causing great loss of life and destruction of property at Mattoon and Charleston. The storm passed about 23 miles due south of Springfield, and showers of leaves and twigs were reported to have fallen at places in the south portion of the city." *[Ed. note: This tornado event is the 3rd deadliest on record in Illinois; originally believed to be a single tornado, later research indicated it was 4 to 8 separate tornadoes. A total of 101 people were killed, including 53 at Mattoon and 38 at Charleston.]*

October 1917:
"On the 27th, an unusually fine lunar corona of two concentric rings, complete, was observed for only about one-half minute at 10:49 p.m. While the outer ring was fainter than the inner one, it was by far the more beautiful, its narrow border of red shading off into a very distinct, though delicate blue band of about two thirds of a degree in width. The radius of the primary ring was about 2 degrees and the secondary about 4 degrees. The phenomenon had, no doubt, been in existence for a considerable time; but the layer of thin cirro stratus cloud through which the moon had been shining, rapidly passed over giving place to bright and unobstructed moonlight."

January 1918:
"One of the most serious traffic-damaging conditions on record occurred 10th - 14th. With an accumulated depth of 9.5 inches on ground, snow began falling at 7:45 p.m. of the 10th, and by 8:00 a.m. of the 11th it was being driven by a brisk northwest wind, increasing, and accompanied by rapidly falling temperature. The snowfall ended at 5:20 p.m. (amounting to 5.4 inches); but the strong wind continuing, caused the light and fluffy snow to drift badly until late of the night of the 12th, although there have been deeper individual drifts in previous storms. By 3:00 a.m. of the 12th, the temperature had fallen to 20 degrees below zero, breaking all former minimum records for January with the exception of that month in 1884.

"During the day (11th) traffic was considerably hampered, and from Friday night (11th) until Sunday evening (13th) was entirely suspended with the exception of the Illinois Traction System, which maintained occasional service to Decatur and Elkhart. By Sunday evening (13th), all railroads except the C&A managed to operate one or two trains two and from Springfield. No train entered or left the city from Friday night (11) until Monday morning (14th) on the C&A, and their Peoria Division was not in operation until Thursday the 17th. City traffic, in general, was badly demoralized and street car service seriously

impaired. Considerable difficulty was experienced Friday, and on Saturday conditions were still worse: three lines not operating, and all cars taken off at 7:00 p.m. Partial service was resumed Sunday. The entire Second Street line, however, was not operated from Friday until Sunday evening.

"The unusual combination of deep and drifting snow with high wind and extremely low temperatures produced a condition unprecedented in years. During the night of the 13th, 1.7 inches more of snow fell, making a total accumulated depth of 16.3 inches, which is the greatest depth of snow on ground ever recorded."

March 1918:

"An auroral display, probably the most brilliant ever witnessed in this part of the country, was observed from 5:48 p.m. of March 7th to about 10:40 p.m. The phenomenon consisted, at first, of a perfectly formed arch of pale green light stretching across the northern sky from horizon to horizon. This band was about 15 degrees wide. At 7:30 two spots appeared simultaneously at either end of the arch, extending upward in pulsating streamers of light until a secondary archi or semicircle was transcribed across the sky. This arch moved slowly southward, its crown eventually passing through and slightly beyond the zenith, where it rested for some time. The extremities of the upper arch remained at the east and west horizons long after the crown of the arch had disappeared, and these two sections became quite luminous at intervals during the continuance of the display. In the primary arch the altitude of the crown was 35 degrees, and the azimuth, 195 degrees; the azimuth of the western extremity was 130 degrees, and of the eastern, 260 degrees. The crown of the secondary arch passed through the zenith to a point 80 degrees above the south horizon; the azimuth of the western extremity was 105 degrees, and of the eastern, 265 degrees.

"At intervals, streamers of soft vibrating radiance, the hues ranging from deep rose to purple, yellow, white and green, extended upward from the main arch in sunburst effect, and were most pronounced a little to the west of north. Fields of dull crimson came into view intermittently, the brightest glows appearing in the west about 9:50, in the east about 9:55, and in the north about 10:00 p.m. All of these roseate illuminations, which would subside every few minutes to again appear in increased brilliance, were confined to the region lying between the two arches. There remained but slight traces of the luminosity at 10:30 and it had entirely disappeared at 10:42 p.m. Telegraph wires running north and south were noticeably affected during the display, but not those running east and west. The wires would alternately go out of commission and then return to normal. [Written by H. Merrill Wills]

June 6, 1918:

"SOLAR ECLIPSE:--The sun's disk entered penumbra at 4:26 p.m. and passed out at 6:26 p.m., the maximum shadow being reached at 5:28 p.m. The greatest obscuration was 0.85. About 20 minutes after the sun entered penumbra the temperature began to fall rapidly, the thermograph trace showing a dip of 3 degrees below the normal for this time of day. The rate of fall decreased as the sun emerged from the shadow, when the trace again resumed its natural decline. The sky was clear during the entire period."

December 1918:

"The most important feature of the month was the damaging ice and sleet storm of the 17th and 18th. Precipitation began at 4:55 p.m. of the 16th and continued as rain, sleet, or snow, or some combination of the three, until the evening of the 18th, a period of approximately 52 hours. A total of 3.63 inches of precipitation was recorded. Rain fell with the temperature as low as 25, freezing to all exposed objects. Crippled street car service was maintained on parts of three lines, but normal conditions of city transportation were not restored on all lines for more than two weeks. In two places street cars were seen frozen in the ice and had been abandoned by their crews. About 3000 telephones were reported out of order, and about one-half of the electric light customers had no service. Telephone and telegraph companies reported not a single line out of the city. The tree damage was severe. Limbs fell continuously, in some cases breaking trolley and other wires. Many beautiful shade trees were a total wreck. Live wires of 500 volts were a common sight on the streets. At close of month some ice is still on trees and there is no diminution of the one inch crust on ground. Fortunately there was not much wind. Some of the city's factories and many coal mines were shut down because there was no electricity to run the machinery. Many homes were without telephones, lights, electricity for cooking, and coal. Following this a cold wave arrived on the 19th and remained for about 52 hours, the average temperature for that period being 5 degrees above zero. The damage in the city and county was several hundred thousand dollars."

May 8, 1923:

"Moist snow began to fall at 7:05 a.m. and continued until 7:52 a.m. Part of that time it was mixed with rain,

but it was estimated at .03 of water was obtained from melted snow. From 3:42 p.m. until 3:45 p.m. ball snow fell so fast that one could hardly see across the street. This is the latest date snow was ever recorded at Springfield."

September 1926:
"The total precipitation, 15.16 inches, was almost 4 and a half times the normal, and was 2.45 more than any previous month of any name. ... The amount of rainfall from 3d to 8th, inclusive, was 10.83 inches, an amount never before equaled in six days, and only two entire months had more. The fall of 5.51 inches occurred in about 13 hours. The area of the city of Springfield is 9.72 square miles, or 6220.8 acres. If .01 inch of rainfall equals about one ton to the acre (which is too low) then Springfield received 3,427,660 tons of water in 13 hours. If this were all deposited on one city block a wall a quarter of a mile high would be required to hold it. Its weight would be about 135 times the weight of a modern steel and brick building 8 or ten stories high.

"As a result of all this rain and the saturation of the ground thousands of basements were flooded and subways were blocked in a number of places. There was considerable washing on the Park drives. One man was killed by electricity while working in basement. 1500 telephones were silenced. Force of the water in sewers blew off section of basement floor. Eight feet of water in one basement. 500 tourists marooned. State roads closed in several directions and part of roadway washed out. A 40-acre lake formed in south part of city. Some corn in lowlands completely covered -- entire loss."

October 1926:
"The heavy rains so prevalent in September extended into October, 3.41 inches falling on Oct. 1 and 2d. ... From Aug. 29 to Oct. 2, inclusive, a period of 35 days, a total of 19.85 inches of rain fell, more than half the normal for the entire year.... The highways were in very bad condition during the first [10 days]. Paved roads were submerged and dirt roads were impassable. Traffic on the Peoria road was stopped the first of the month and was not opened until the 13th. Thousands of acres of bottom corn were distroyed [sic]."

April 1927:
"The most important feature of the month was the tornado on the 19th. It had its inception in Lincoln County, Missouri, and after crossing the Mississippi River travelled northeastward over nine or ten or perhaps more counties in Illinois. It passed within two and one-fifth miles of the station at Springfield at 1.14 p.m. A number of persons were killed and injured in Sangamon county and property losses amounted to over $100,000. The barometer fell rather rapidly from about 11.30 a.m. until shortly after 1.00 p.m., about .10 inch, rose suddenly .10 inch, then fell a little; after which it went up gradually."

November 1927:
"A maximum temperature of 71.4 at about 8 p.m. (the highest temperature ever recorded so late in the season) on the 29th, was followed by a snowstorm of 3.3 inches the next day. By noon of the 30th the temperature had reached the freezing point. The snowstorm was heavy at 11:30 a.m. and accompanied by a 25 mile an hour wind. The sleet that fell when the rain was changing to snow was only a trace and did no damage."

July 1928:
"First July aurora ever recorded at this station occurred on the 7th. Nearly vertical white bands or streamers were present in the north, with a dull red spot to the east and the west."

September 19, 1928:
"Cirrus clouds were observed moving from the southeast. This was a few days after the hurricane which struck Florida." *[Ed. note: This was the "Lake Okeechobee Hurricane", a Category 4 hurricane affecting Florida, killing 1,836 people.]*

May 1929:
"The most unusual feature of the weather here this month was the snow storm on the second. This is the first time measurable snowfall has occurred in Springfield later than April 24. The snow mostly melted as it fell, but unmelted snowfall varying in depth depending on surface. Measurements in the Executive Mansion grounds on the lawn and bare dirt varied from 0.4 inch to 0.9 inch, with 0.6 considered as a good average. On roofs and similar places there was more. One place, just outside the office window on the

hotel roof, measured 1.8 inches at one time. Very little appeared on street pavements.... Snow had all disappeared before two o'clock in afternoon."

October 1929:
"The most unusual feature of the month's weather was the snow, most of which fell on the 23rd, only a trace on the 24th.... The maximum snow depth was 2.4 inches, measured at 7:00 pm. ... Only twice has there been a fall of more than one inch of snow in October at this station since the record was begun. On Oct. 20, 1916, 1.8 inches was measured, and October 29, 1925, 2.6 inches. The fall this year was the greatest of record so early in the season."

March 1931:
"The snowstorm of the 5th-8th inclusive was the most interesting feature of an otherwise colorless March. The fall from that storm was 14.3 inches, the second largest fall in the history of the station. The fall which exceeded it being in Feb. 1900. The snow drifted considerably and halted traffic. In fact the city was closed to all automobile traffic from any of the nearby towns for a time. It was several days before all highways were open."

June 1931:
"The most unusual feature of June was its warm period at the termination. The mean maximum temperature for the last 7 days of the month averaged 100 degrees! On the 27th a new max. record was set for June 0.3 degrees higher than the old mark of 101.0 degrees established in 1911. On the 28th, it only missed equalling it by 0.1 degree. On the 29th a new record of 101.7 degrees was set - only to be broken by the 102.3 on the next day. The minimum temperature of the 29th -- 81.8 degrees -- was the highest minimum ever recorded in June and has only been equalled once in any month -- July 1879.

December 1931:
"December was unusually warm. Its mean temperature of 41.0 was 9.3 degrees above the normal, and brought the annual mean up to 57.4, breaking the previous record of 57.0 by 0.4 degree. ... The year ended with the grass still green and with pansies seen in bloom. Strawberry vines in some instances were budding."

August 1932:
"A partial eclipse of the sun occurred on the 31st. A few thin clouds passed across the sun about the time of maximum obscuration but at no time was the sun obscured by clouds during the eclipse. The sky became cloudy and the sun obscured by clouds immediately at the end of the eclipse. The temperature fell 3.0 degrees in 30 minutes during the latter part of the advance of the eclipse and to the time of maximum obscuration, under similar conditions of wind direction, velocity, and clouds."

May 1933:
"The storm of May 9...carried hail which caused 20,000 dollars damage in glass breakage and about 30,000 dollars damage to roofs. One stone was measured by an observer, to be 2 1/2 inches in diameter. For a period of 10 minutes pellets the size of golf balls peppered the greater part of the city."

March 1934:
"Snowfall was abundant. More snow occurred during the month just closed than in any March since 1906, and is exceeded only once in the history of the station. The March of 1906 totaled 23.4 inches of snow, while the March just past totaled 15.7 inches."

March 1935:
"Dust storms occurred on the 5, 16, 20, 21, 28, 29, and 30th. The worst of these storms was that which lasted from D.N.A. of the 28th to 11 a.m. of the 30th. This storm cut the visibility as low as one-fourth mile on the 28th and materially hampered air commerce. There was considerable nasal discomfort attributed to dust, and it was reported as having detrimental effects in cases of pulmonary illness."

May 1934:
"May was a record producing month in regards to both temperature and precipitation. ... The maximum of the 30th (96.2 degrees) was a new extreme for May, but endured only one day when it was exceeded by a temperature of 100.7 degrees on the 31st. This temperature was the highest ever recorded prior to June 9th. ... The month was very dry, the total of 0.32 inch being the least ever recorded in May and was exactly

one-third of the previous low established in 1913. ... The unusually high temperatures, in combination with the extreme dryness, was disastrous to practically all vegetation and city lawns were badly seared and browned. The first hazard was greatly increased due to the drying out of frame structures. In suburban areas wells dried and fires were increasingly difficult to battle."

July 1934:
"The past month was the warmest ever recorded at Springfield. The mean temperature of 83.4 degrees was 6.9 degrees above the normal and was 0.4 of a degree higher than the previous record month. A total of 23 ninety degree days and 7 one hundred degree days were recorded. The conclusion of July saw an accumulated total of 54 ninety degree days and 14 one hundred degree days. Prior to this year only 9 100-degree days had been recorded in any one year. ... The average maximum temperature for six consecutive days was 105 degrees. The extreme for the month, 106.7 degrees, was 0.4 degree short of the all time mark, established on July 22, 1901."

August 1934:
"The high temperature record, 107.1 degrees of July 22, 1901, was broken by a temperature of 107.5 degrees on the 8th. This record lasted for only one day when on the 9th a new all time high was set with 108.3 degrees. The minimum temperature of 82.8 degrees on the 9th was the highest minimum temperature of any day on record."

June 9, 1936:
"The maximum wind velocity for the month was 38 miles per hour from the northwest. The wind brought a large amount of dust in the form of a definite cloud that cut visibility to 1/2 mile, the temperature dropped from 95 degrees a little before 4 o'clock to 71 degrees shortly after, a fall of 22 degrees. The atmosphere was darkened to such an extent that automobiles and street-cars turned on their head-lights to avoid collisions. No damage was reported other than a few limbs of trees blown down."

June 19, 1936:
"A remarkable rise in temperature, the greatest ever recorded within a 24-hour period for April to October, occurred on the 19th, between the hours of 6 A.M. and 4 P.M., from 56 to 99 degrees, a rise of 43 degrees."

July 1936:
"Temperature for this month was unusual in the fact that many station records were equalled or exceeded; beginning on the fourth, the maximum temperature each day (until and including the fifteenth) exceeded previous daily records for that time of year, and on the fourteenth, the temperature was higher than all previous records -- absolute maximum 109.5 at 3:10 P.M. The heat actually caused thirty deaths and was a contributing factor in twenty others. There were fifty-one heat prostrations from the heat reported. Temperatures were above 100 degrees for 12 consecutive days, doubling the former record."

October 1941:
"Total precipitation for the month was 13.39 inches, which is 10.86 inches above normal. This was the heaviest precipitation ever recorded for October locally and the second heaviest for any month within the record of the station, dating from 1879, exceeded only by that of September 1926 (15.16 inches). The greatest rainfall for 5 minutes, 10 minutes, 15 minutes, and 2 hours for October also occurred, as well as the greatest for 24 hours -- 5.65 inches.

"A small tornado occurred on the 4th, affecting a limited area in the northeastern outskirts of the city about 4:20 p.m. Width of the path was about 40 ft. and length under two miles, with direction toward the northeast. Contact with the earth was not continuous. Several thousand dollars property damage was caused."

May 2, 1942:
"A tornado skirted Springfield, striking nearby areas, causing damage estimated at $400,000 in three adjacent counties. The only report of damage in the Springfield area was at the Winch greenhouses, northwest of the city, with estimated losses of $8,000. A hailstorm on May 1st caused slight damage at the Winch greenhouses, besides property damage of $75,000 in the vicinity northwest of the city. The hailstones were large, ranging from 0.50 inch to 0.75 inch in diameter."

September 1942:
"Both snow and sleet occurred on two days. The only previous record of snow in September was a trace on the 18th in 1918. ... The frost which occurred on the 28th was the first killing frost of the season. Although the deposit was not heavy, susceptible plants were killed. This is the earliest damaging frost recorded since 1928."

December 1942:
"A rather unusual event was the occurrence of hail during December, since hail has only been recorded twice before in record -- in 1907 and 1914. Another rare occurrence for December was a thunderstorm which accompanied the hail."