

U. S. DEPARTMENT OF COMMERCE
 ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
 IN COOPERATION WITH PENNSYLVANIA DEPARTMENT OF COMMERCE
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 36

LATITUDE 41° 23'N
 LONGITUDE 79° 49W
 ELKV. (GROUND) 987 Feet

CLIMATOLOGICAL SUMMARY

STATION Franklin, Pennsylvania

MEANS AND EXTREMES FOR PERIOD 1931 - 1960

Month	Temperature (°F)									** Mean degree days	Precipitation Totals (Inches)								Mean number of days					Month
	Means			Extremes			Mean	Greatest daily	Year		Snow, Sleet				Precip. 10 inch or more 90° and above	Temperatures		below 32° and below 0° and below						
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest					Year	Mean	Maximum monthly	Year		Greatest daily	Year		Max.	Min.				
																					30	30	30	
(a) Jan.	36.6	30	30	30	1950	30	1948	30	30	30	1937	30	30	30	1948	30	1949	30	30	30	30	30	Jan.	
Feb.	37.1	17.2	27.2	72	1932	-23	1934	1058	2.43	1.62	1950	10.9	23.5	1947	11.0	1960	7	0	9	26	25	25	Feb.	
Mar.	45.4	24.2	34.8	81	1945	-22	1934	936	3.24	1.50	1938	10.6	30.0	1947	11.0	1942	9	0	0	25	25	25	Mar.	
Apr.	57.7	35.1	46.4	87	1942	13	1934	558	3.82	2.15	1937	2.0	9.5	1943	5.5	1938	9	0	0	15	0	0	Apr.	
May	71.3	44.6	58.0	94	1936	23	1947	245	4.35	2.98	1946	0	0	0	0	0	8	3	0	3	0	0	May	
June	79.7	53.8	66.9	101	1934	32	1945	57	3.87	2.45	1944	0	0	0	0	0	3	3	0	0	0	0	June	
July	84.1	57.5	70.8	106	1936	40	1956	6	4.33	2.78	1941	0	0	0	0	0	6	7	7	0	0	0	July	
Aug.	82.3	56.2	69.2	101	1933	36	1935	28	3.11	3.00	1941	0	0	0	0	0	6	5	5	0	0	0	Aug.	
Sept.	75.5	49.6	62.6	100	1932	27	1957	123	3.13	2.75	1937	0	0	0	0	0	7	2	0	1	0	0	Sept.	
Oct.	64.7	38.9	51.8	88	1951	16	1936	415	3.03	4.00	1954	0.1	2.0	1934	2.0	1934	7	0	0	8	0	0	Oct.	
Nov.	49.8	30.6	40.2	81	1950	-1	1950	744	3.07	1.78	1955	6.1	32.0	1950	18.0	1950	9	0	2	19	0	0	Nov.	
Dec.	38.4	21.6	30.0	71	1934	-14	1950	1085	2.57	1.74	1942	11.2	37.0	1944	18.0	1944	7	0	9	27	1	1	Dec.	
Year	60.2	37.4	48.8	106	July 1936	-23	Feb. 1934	6405	40.01	4.00	Oct 1954	51.5	37.0	Dec. 1944	18.0	N. Dec 50-44	93	17	35	151	6	6	Year	

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

† Trace, an amount too small to measure.

* Less than one half.

** Base 65°F

CLIMATE OF FRANKLIN, PENNSYLVANIA

Franklin, the county seat of Venango County, is situated in the Allegheny River Valley at the confluence of French Creek and the Allegheny River in northwestern Pennsylvania. Steep sided higher terrain rises within several hundred feet in all directions with elevations above sea level ranging from slightly less than 1000 feet in the city to 1500 feet on the adjacent tree covered high plateau.

A predominant air flow from continental sources produces a climate characterized by comparatively long cold winters, warm summers and adequate precipitation throughout the year at Franklin. Noticeable weather changes are experienced every few days especially during the cold season which extends from November through March. Severe cold spells are confined to the December through February period when frigid outbreaks varying in length up to a week or more are common. During 1 such occasion temperatures dipped to -30°F on January 5, 1904, the lowest ever recorded at Franklin. Because of more persistent daytime cloudiness in winter, the daily temperature range is relatively small. Abundant sunshine, warm temperatures and comparatively low humidities combine to produce pleasant summer conditions most of the time. Daytime maxima reach mostly into the 80s and nighttime minima almost invariably dip into the 50s due to cool air drainage from the nearby higher terrain. Hot weather is normally confined to 20 days or less per year although there have been as many as 22 days with 90° or higher temperatures in July, 1935, the hottest month of record. The highest temperature ever registered at Franklin is 106° set July 9, 1936 and equaled 5 days later during a heat wave that sent maximum temperatures to 100° or higher on 7 consecutive days.

During the spring and fall transition seasons, day to day temperatures fluctuate widely and the diurnal range is broad. Daytime maxima normally reach into the 50s by early April but nights remain cool into May. The date of the last 32° temperature in spring is May 13. In the fall the first signs of approaching colder weather usually becomes apparent by early October with the average date of the first 32° temperature October 6 even though daily maxima climb into the 60s through the remainder of the month. Year to year variations in weather

patterns have resulted in 32° temperatures as late as June 12 and as early as September 14 over the period of record. Chances of a freeze after May 22 or before September 29, however, are only 25%. The growing season, defined as the period between the last 32° temperature in spring and the first in fall, averages 146 days but has ranged from 111 days in 1906 and 1929 to 182 days in 1964.

An average of 40 inches of precipitation is normally well distributed throughout the year. With the exception of February and December, monthly totals average better than 3 inches and more than 4 inches in May and July. Rainfall during the 5 month May through September growing season averages 47% of the total annual precipitation. Record monthly amounts of 7.8 to 10.7 inches have occurred from April through November with the latter amount measured in July 1958. Much of the warm season rainfall is produced from showers and thunderstorms, the latter averaging 30 to 35 per year. As a result, summer rainfall is mostly of short duration. Amounts of as much as 1.7 inches in 1 hour and 2.4 inches in 2 hours have been observed at Franklin. Infrequent dry spells of varying durations and magnitudes occasionally develop particularly during summer and fall. A 40 day dry spell in the fall of 1963 yielded only .12 inch rainfall, this observed during October, 1963, the driest month of record. The probability of receiving less than 2 inches of precipitation per month, however, is less than 25%.

Snowfall is both frequent and abundant in the Franklin area. The snow season usually gets underway in November and extends into early April with seasonal snowfall averaging 51.5 inches. Year to year snowfall totals vary widely ranging from 15 inches in the winter of 1959-1960 season. Snow covers the ground to varying depths on an average of 73 days per winter. Surrounding nearby higher elevations receive somewhat more snow and snow covers the ground on a greater number of days per season.

Nelson M. Kauffman
 State Climatologist
 U. S. Weather Bureau
 New Cumberland, Pennsylvania
 June 1966

FRANKLIN, PENNSYLVANIA

Average Temperature (°F)

FRANKLIN

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	27.4	29.9	32.6	43.3	59.4	68.0	74.6	68.7	68.0	53.2	46.5	36.0	51.0
1932	28.0	33.2	28.6	42.4	58.0	67.5	69.8	69.9	64.5	52.3	36.7	30.9	49.5
1933	34.0	27.0	32.3	43.6	60.3	70.2	72.4	70.0	66.7	49.6	35.2	30.9	49.7
1934	30.8	11.2	29.2	45.2	61.0	72.9	75.1	67.6	66.7	50.0	42.8	28.5	48.4
1935	26.1	25.2	40.2	45.6	54.2	67.2	76.2	70.8	62.5	51.6	41.0	25.1	48.8
1936	22.2	18.0	38.0	43.2	61.2	67.9	72.6	72.4	65.1	51.2	36.7	31.2	48.1
1937	33.6	28.8	30.5	45.5	60.7	65.4	69.7	71.4	68.4	47.1	34.6	25.8	47.8
1938	26.0	31.3	38.0	47.2	58.4	64.0	69.9	70.4	60.2	52.2	40.4	30.2	48.3
1939	28.4	28.6	31.6	42.4	55.8	67.1	68.4	69.2	62.0	52.4	36.8	32.4	48.3
1940	16.3	25.8	29.4	42.6	52.2	66.1	70.2	67.6	59.7	47.8	39.1	34.6	46.3
1941	26.6	23.8	27.8	52.2	57.8	66.9	71.4	65.6	63.2	54.2	41.6	34.6	48.8
1942	25.9	22.8	37.6	50.8	59.0	67.4	69.0	67.4	61.4	52.2	40.4	28.0	48.4
1943	26.8	27.0	33.7	40.4	57.3	71.2	70.7	68.3	59.3	48.2	37.2	26.2	47.2
1944	30.0	25.8	33.6	43.6	64.0	68.5	70.5	69.6	61.2	50.1	41.6	24.8	48.6
1945	18.4	26.1	45.6	50.1	52.9	64.5	69.8	68.4	64.8	49.4	40.8	24.2	47.9
1946	27.4	27.4	46.6	45.2	55.9	65.2	69.2	64.4	63.7	54.6	42.4	32.5	49.6
1947	32.4	21.6	28.8	47.0	55.2	64.5	67.8	75.2	63.8	57.6	37.2	29.2	48.4
1948	18.4	25.0	37.2	50.4	55.5	65.5	68.8	68.8	62.6	49.4	44.9	32.2	48.4
1949	34.0	33.2	35.3	44.6	58.4	69.8	74.1	69.3	57.7	55.2	40.0	33.1	50.4
1950	36.8	28.5	30.6	41.6	56.7	63.9	66.8	67.1	60.3	53.0	41.6	24.7	47.6
1951	28.1	27.9	36.0	44.7	58.3	66.0	69.7	67.0	60.1	53.3	33.3	29.0	46.0
1952	30.1	29.9	33.4	47.8	53.7	67.3	71.0	67.1	61.2	47.0	43.5	33.4	48.8
1953	33.8	32.5	39.7	45.8	61.4	68.1	71.3	70.0	62.7	53.8	42.4	34.4	51.3
1954	28.4	34.4	36.2	53.9	55.1	68.3	69.8	68.4	64.0	54.6	40.5	29.5	50.3
1955	25.5	29.9	38.6	41.6	60.9	63.7	74.7	73.2	63.8	53.3	38.4	28.6	50.4
1956	27.0	30.2	34.9	45.7	56.1	67.0	69.2	68.3	59.5	54.9	42.5	37.7	49.4
1957	22.7	33.1	38.1	49.4	59.2	68.1	69.2	67.3	61.3	49.3	41.2	34.7	49.5
1958	27.2	20.1	35.5	49.8	57.1	62.4	71.7	68.5	61.8	52.0	43.2	31.6	47.5
1959	23.4	29.7	35.1	49.2	62.6	67.1	71.7	74.2	66.5	54.0	39.0	33.6	50.5
1960	30.7	29.5	28.7	52.5	57.2	66.1	68.2	71.0	66.4	51.5	42.6	22.4	48.6
1961	21.3	31.0	39.6	43.1	55.1	65.8	70.9	70.8	68.2	55.8	42.0	30.8	49.6
1962	25.2	23.1	35.2	47.0	63.4	68.0	67.4	69.0	58.1	53.4	39.3	24.4	48.2
1963	20.4	13.6	37.9	47.0	56.4	66.9	70.4	66.2	60.5	57.4	43.7	24.2	47.5
1964	27.5	24.4	38.3	48.3	60.9	66.0	72.4	65.7	61.9	49.8	44.0	31.4	49.2
1965	26.2	26.1	32.4	44.9	62.6		67.1	67.2	64.1	50.2	39.8	32.9	47.6

STATION HISTORY

Continuous weather records of both temperature and precipitation from this station date back to January 1937 when an instrument shelter, maximum and minimum thermometers and a standard 8 inch rain gage were installed in mountainous terrain at the headwaters of Patchel Run Creek 3.7 miles from Franklin at an elevation of 1000 feet above sea level. Observations were taken from this site by employees of the Venango Water Company until January 1910 when the instruments were moved 4.4 miles south-southeast to the east bank of the Allegheny River, 50 feet from water's edge and 300 feet west of a sharply rising mountain at an elevation of 957 feet above sea level. At this site the observations were taken by F. E. Dixon January 1910-June 1924, R. A. Fergus July 1924-July 1935 and R. L. Walters August 1935-November 1936. In December 1936 the equipment was moved 0.2 miles west to the west side of the Allegheny River, 200 feet from water's edge at an elevation of 987 feet above sea level. Since 1936 to the present time the weather instruments have been moved insignificantly small distances a number of times but have remained within the city limits with observers as follows:

- W. K. Fuller December 1936-October 1939
- W. K. Fuller November 1939-September 1952
- W. K. Elliott October 1952-October 1956
- C. S. Smith November 1956-May 1957
- R. D. Rhoads June 1957-August 1958
- V. A. Rhoads September 1958-September 1962
- R. A. Reich October 1962-August 1965
- G. L. Tompkins September 1965-to date

Total Precipitation (Inches)

FRANKLIN

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	1.54	2.04	2.19	4.51	6.69	3.29	3.24	1.30	3.26	2.31	2.76	4.31	37.44
1932	6.34	1.56	2.89	3.19	3.42	2.86	4.55	2.64	1.99	3.41	5.35	2.23	50.73
1933	1.45	2.49	4.93	3.89	5.84	2.12	1.59	3.16	4.12	1.97	3.86	3.43	39.13
1934	2.45	1.06	3.16	2.38	0.49	2.77	6.51	3.77	3.18	2.75	3.37	2.24	30.53
1935	2.61	2.63	1.87	1.25	3.10	4.27	6.55	3.86	1.78	1.81	2.42	2.81	35.16
1936	1.93	1.87	5.06	3.24	2.88	2.20	3.65	5.46	4.12	4.24	4.24	2.24	38.90
1937	10.32	2.11	1.94	6.57	5.30	3.38	3.37	4.27	3.14	3.26	2.07	2.11	52.13
1938	3.08	3.66	3.98	3.35	3.24	3.69	5.34	2.93	4.23	1.43	3.32	1.18	38.00
1939	3.08	3.58	3.24	2.22	1.56	2.54	3.93	1.63	4.83	3.97	0.71	2.43	24.16
1940	0.99	2.73	3.25	4.79	4.78	4.76	4.78	2.38	2.21	2.21	3.78	3.90	39.09
1941	0.26	0.74	1.54	1.53	2.70	3.78	5.67	7.80	1.86	4.20	1.75	1.83	35.66
1942	0.98	2.74	5.37	2.76	4.73	2.32	3.78	3.21	1.90	4.40	4.09	1.56	45.92
1943	1.77	2.63	2.36	3.35	4.73	4.83	4.32	1.68	4.80	4.80	1.48	1.00	36.91
1944	1.99	1.98	3.24	3.61	5.73	3.74	1.81	1.68	2.99	2.99	2.38	3.16	35.60
1945	1.47	1.94	4.86	3.61	3.98	3.16	4.83	2.93	4.79	4.79	3.81	1.65	44.97
1946	1.38	3.31	2.43	1.36	9.38	4.06	1.39	1.06	4.92	4.92	1.96	2.37	35.50
1947	3.96	1.43	2.67	4.62	6.45	4.68	4.30	2.71	1.97	1.07	3.50	1.71	37.44
1948	2.54	2.62	3.03	5.89	3.42	6.07	4.28	3.11	3.08	3.08	4.14	2.43	42.18
1949	4.44	1.94	2.01	3.28	4.28	2.85	5.09	3.23	5.24	1.30	1.43	2.43	37.74
1950	5.88	4.08	4.12	4.15	3.53	3.82	5.07	1.18	4.10	1.95	5.36	2.12	45.38
1951	3.13	2.55	4.86	3.89	3.54	5.11	4.86	.97	4.18	1.34	4.48	3.85	42.76
1952	6.03	2.95	1.64	3.24	7.13	1.20	3.38	3.22	3.74	1.44	3.29	2.21	40.30
1953	2.85	1.21	3.03	3.14	8.13	4.02	2.96	1.84	3.65	.48	1.29	2.02	35.27
1954	2.30	1.22	3.88	5.82	2.15	3.78	3.25	2.03	2.27	7.78	2.02	4.00	40.50
1955	2.16	2.68	5.18	5.18	2.87	3.31	6.01	3.82	1.54	5.23	3.72	.84	42.54
1956	1.37	5.09	5.06	4.95	5.13	5.17	3.96	6.91	4.11	1.15	1.33	3.01	47.24
1957	2.26	1.64	2.32	6.16	4.11	6.16	1.90	.80	4.03	1.53	3.20	4.02	38.13
1958	3.20	.85	1.51	4.02	3.27	4.79	10.69	4.04	4.76	2.01	3.65	1.09	43.88
1959	5.36	3.80	2.42	5.53	2.73	5.59	6.32	1.60	.75	8.32	4.59	3.85	50.86
1959	5.36	3.80	2.42	5.53	2.73	5.59	6.32	1.60	.75	8.32	4.59	3.85	50.86
1960	3.59	3.59	1.60	2.05	6.07	3.46	3.72	3.29	1.78	1.44	1.99	1.64	34.25
1961	1.26	3.46	3.22	5.96	2.80	3.65	4.36	2.83	2.95	2.37	3.86	1.54	38.82
1962	2.99	2.64	2.55	2.27	1.91	5.07	3.66	3.05	3.48	2.22	1.58	2.02	33.42
1963	1.64	1.43	2.75	2.08	2.97	1.69	4.66	2.67	1.99	.12	5.10	3.11	30.21
1964	2.59	3.14	5.05	6.12	2.49	4.04	6.29	8.73	1.71	1.98	2.92	3.90	47.96
1965	5.45	3.17	3.52	2.85	4.07	4.46	2.25	3.69	4.08	3.93	4.32	.70	42.49

Note: Since 30 years in the standard period covered by climatological summaries of this type, only the period 1931 through 1960 were summarized in the "Means and Extremes" table.