

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
 IN COOPERATION WITH RUTLAND CHAMBER OF COMMERCE
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 43

LATITUDE 43° 36'
 LONGITUDE 72° 58'
 ELEV. (GROUND) 620 ft.

CLIMATOLOGICAL SUMMARY

STATION RUTLAND, VERMONT

MEANS AND EXTREMES FOR PERIOD 1931-60

Month	Temperature (°F)									** Mean degree days	Precipitation Totals (Inches)						Mean number of days					
	Means			Extremes			Mean	Greatest daily	Year		Snow, Sleet			Precip. 1.0 inch or more	Temperatures							
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest					Year	Mean	Maximum monthly		Year	Greatest daily	Year	90° and above		32° and below		
																		Max.	Min.	32° and above	32° and below	
(a)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30					
Jan	30.9	11.6	21.3	70	1950	-27	1948	1350	2.55	2.00	1945	14.9	33.0	1958	11.0	1934	7	0	17	30	7	Jan
Feb	32.9	12.3	22.6	65	1957+	-30	1943+	1195	2.06	1.47	1939	13.9	25.8	1934	12.0	1958	5	0	13	27	6	Feb
Mar	41.6	21.8	31.7	81	1946+	-20	1950	1030	2.52	2.32	1931	11.2	23.1	1956	13.0	1960	7	0	6	26	1	Mar
Apr	55.6	33.9	44.8	89	1941	10	1954	605	2.94	2.24	1934	3.2	12.5	1939	7.5	1943	8	0	*	13	0	Apr
May	68.5	43.9	56.2	91	1932	20	1947	280	3.61	2.94	1955	0.2	5.5	1945	3.0	1945	9	*	0	4	0	May
Jun	76.9	53.1	65.0	95	1941+	28	1945	70	4.07	3.51	1940	0	-	-	-	-	8	1	0	*	0	Jun
Jul	81.1	57.5	69.3	97	1953+	39	1936	20	4.42	4.32	1941	0	-	-	-	-	7	2	0	0	0	Jul
Aug	78.9	55.3	67.1	97	1933	32	1940	55	3.32	3.81	1949	0	-	-	-	-	6	2	0	*	0	Aug
Sep	71.3	48.0	59.7	93	1937	23	1947	180	3.81	2.54	1953	T	T	1953+	T	1953+	7	*	0	2	0	Sep
Oct	60.9	38.2	49.6	85	1949	16	1936	480	2.94	2.16	1932	0.1	3.0	1952	2.5	1952	6	0	0	9	0	Oct
Nov	47.4	29.3	38.4	79	1950	-10	1938	800	3.16	2.50	1950	4.3	25.0	1943	13.0	1943	7	0	2	20	*	Nov
Dec	34.2	16.9	25.6	67	1932	-30	1933	1220	2.31	2.40	1952	8.2	23.8	1956	9.0	1933	6	0	13	28	4	Dec
Year	56.7	35.2	46.0	97	1953+	-30	1943+	7285	37.71	4.32	1941	56.0	33.0	1958	13.0	1960+	83	5	51	159	18	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F

+ Also on earlier dates, months, or years.

* Less than one half.

CLIMATE OF RUTLAND

The city of Rutland lies in the short and narrow valley of the Otter Creek and East Creek Rivers. Elevation at the junction of the rivers is about 540 feet above sea level. Surrounding the valley are the imposing peaks and ridges of the Green Mountains whose most commanding heights stand eastward of Rutland. Killington Peak, highest in the area, rises to more than 4200 feet above sea level about 8 miles to the east. Pico Peak, 3965 feet, is about the same distance to the east-northeast. To the west of the valley, the highest rises are not much more than 2000 feet. The nearest large body of water is Bomoseen Lake about 12 miles to the west-northwest.

The climate of Rutland is continental in character although some coastal storms do affect this area. General climatic features of this city include: (1) Changeableness in the weather, (2) large range of temperature both daily and annual, (3) great differences between the same seasons in different years, and (4) equable distribution of precipitation.

Although weather records are available for Rutland for the 14 years preceding the 30-year period covered by the table above, most of the extremes of temperature and precipitation contained in the table were not exceeded in the earlier years. One notable exception was the record rainfall of November 3-4, 1927, which triggered floods of unparalleled devastation. The 24 hour rainfall measured at 8 A.M. on the 4th was 6.12 inches, and the total storm yield was 8.47 inches.

Like most of New England, Rutland has no pronounced rainy or dry season. The larger normal amounts noted in the warmer months come from showers and thunderstorms which frequently attend frontal passages. The reduced amounts of winter-time precipitation are chiefly produced by eastward-moving "lows" that pass within effective distance of the station. These "lows" are usually not prolific producers of precipitation. Moisture-laden winds from winter coastal storms are frequently blocked by the intervening high peaks and ridges. Frequency of precipitation occurrence is fairly evenly distributed through the year. Periods of severe drought are rare. However, shorter dry spells are fairly common in the summer, and irrigation may be desirable especially for the area's high value truck and fruit crops. The general water supply adequacy is assured by the regularity of the annual precipitation totals. In 6 years out of 7, the annual total exceeds 90 percent of normal. Even in the driest year precipitation was about 75 percent of normal.

Summers are pleasantly mild with afternoon temperatures around 80° and nights in the comfortably cool 50-60° range. Uncomfortably warm weather is uncommon and mostly of brief duration when it does occur. Though the average summer will have 5 days in the 90's, the actual number of such hot days in a season has ranged from none in 1950 and 1951 to 12 in 1931 and 1944. Winters are cold but periods of severe cold are usually short and are often accompanied by very light winds, which tends to remove the sting of the cold. Though the days with a temperature of zero or lower average 18 per season, they have varied from only 1 in 1936-37 up to 50 in 1933-34. Those winters were, not surprisingly, the warmest and coldest of record, with seasonal averages of 28.9° and 14.8°, respectively. Normal average temperature for December-February is 23.2°.

Based upon the occurrence of the freezing temperature 32°, Rutland's "growing season" for susceptible tender vegetation averages 131 days, from May 15 to September 23d. These dates differ from year to year but in two-thirds of the years these freezes will occur within 9 days on either side of those dates. Latest date of last freezing temperature was June 1st in 1945; earliest occurrence of first freeze was August 25, 1940. For a more severe freeze, marked by the occurrence of 28°, the season averages 157 days, from May 2d to October 6th.

The blocking effect of the high elevations to the east is again indicated by the relatively low snowfall receipt at Rutland. While the average seasonal amount is 56.0 inches, most of the more open areas of Vermont receive upwards of 80 or 90 inches. Wide variations occur in year to year snowfall. In 2 out of 3 years the seasonal total will fall within 40 to 70 inch range. One year in 10 will have less than 40 inches while in about 2 years in 10 the total will exceed 70 inches. Extremes of record are 34.2 inches in the 1937-38 season and 83.2 inches in 1947-48. More recently, 83.1 inches was recorded in 1957-58. The number of days with 1 inch or more of snowfall averages 18 per season with 5 in January, 4 each in February and March, 3 in December, and 1 each in April and November. On rare occasions a day in early May or late October will have 1 or 2 inches. Number of days with 2 inches or more averages 9 per season; with 4 inches or more, 4; 6 inches or more, 2; and 8 inches or more, 1 per season. Greatest 24 hour amount, 13.0 inches, was recorded on two occasions: November 21-22, 1943, and March 4, 1960. Heaviest storm yield was 20.0 inches on November 21-23, 1943. The snow cover in the urban area at Rutland builds to an average maximum depth of 13 inches. The average date of the maximum depth is February 10. In one winter in seven, measurable snow does not cover the ground continuously as long as one month. For the majority of winters when the snowcover does remain continuously for a longer period, the average date of beginning of this cover is January 1 and the average ending date is February 26, a period of 57 days. A snowcover has begun as early as November 22 (1943) and has persisted as late as April 4 (1956). In the surrounding countryside, especially in wooded areas, the average snow depth may build to greater depths and the date of the maximum depth may come at a later date. The snowcover period would also be more prolonged.

Rutland experiences 16 days with thunderstorms per year, on the average. Just half that number occur in June and July. These storms have occurred in every month of the year, but their occurrence in November and the winter months is rare.

In summary, Rutland's climate provides comfortable summer weather, nearly free of oppressive heat, and, therefore, a major attraction to vacationers. Winters are cold with plentiful snowfall on the surrounding hills for winter sports. Prolonged periods of severe cold are rare. Precipitation is well distributed but generally not excessive and is therefore a valuable local asset. And the frequent variation in day to day conditions throughout the year is considered stimulating to mental and physical activities.

Edward Sable, Assistant, and
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RUTLAND, VERMONT

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	18.0	18.8	32.6	45.5	56.2	63.8	72.2	66.4	62.2	50.8	43.1	26.8	46.4
1932	32.2	23.6	26.8	42.8	57.0	63.7	66.0	67.4	60.2	50.7	34.0	29.3	46.1
1933	29.7	25.1	28.2	45.0	57.2	66.8	70.2	67.2	60.4	46.2	28.5	18.6	45.2
1934	18.9	6.8	27.8	44.8	57.6	66.4	70.2	64.2	63.8	45.2	39.8	20.2	43.8
1935	14.9	20.8	32.5	43.0	51.6	64.9	71.4	67.6	56.7	49.0	39.8	19.4	44.2
1936	16.5	15.0	38.9	42.2	58.4	65.4	67.6	66.3	60.0	49.6	33.2	28.2	45.1
1937	31.0	27.6	26.6	43.3	57.2	64.6	70.6	72.1	59.5	48.2	38.6	23.6	46.9
1938	20.4	25.5	35.2	48.0	55.0	66.1	70.2	70.2	56.2	50.4	39.8	27.8	47.1
1939	20.4	23.4	28.0	41.3	57.4	64.4	69.0	70.8	59.1	48.2	33.0	25.0	45.0
1940	14.2	20.3	27.2	40.4	57.2	63.4	68.5	65.2	56.9	44.4	36.7	27.2	43.5
1941	16.8	23.4	27.0	50.1	56.8	66.1	70.0	64.5	61.7	49.6	41.3	29.8	46.4
1942	20.2	18.6	36.6	47.3	59.4	65.0	68.1	65.8	58.7	51.2	38.0	21.7	45.9
1943	16.1	22.4	30.2	37.6	55.4	68.2	69.3	66.2	58.2	49.0	35.7	21.0	44.1
1944	13.4	21.4	28.4	40.0	61.2	64.8	70.2	69.2	61.2	47.6	36.2	22.2	45.5
1945	23.4	23.4	42.4	50.0	53.0	63.4	68.6	67.0	62.6	47.7	39.6	21.6	46.1
1946	21.6	20.0	42.8	43.2	54.3	63.4	68.1	64.2	61.7	52.6	41.7	28.3	46.8
1947	25.4	21.0	31.5	43.5	55.5	63.5	70.9	71.0	60.8	55.6	35.4	21.3	46.3
1948	14.8	18.8	33.0	46.6	54.6	63.2	69.0	68.2	60.0	46.9	45.1	29.6	45.7
1949	27.3	28.0	33.7	46.0	56.0	68.9	70.9	67.7	57.3	52.7	34.9	28.9	47.7
1950	28.7	20.1	26.1	41.5	56.0	65.2	68.1	65.3	56.2	51.0	42.1	27.2	45.6
1951	25.4	26.6	33.7	45.0	55.7	63.8	68.4	64.8	59.0	50.2	34.2	26.6	46.1
1952	24.0	26.6	31.6	47.7	52.1	65.6	71.4	67.1	60.5	45.7	40.6	28.0	46.7
1953	17.6	28.4	35.4	44.4	57.8	66.1	70.1	66.1	59.8	50.1	42.6	33.7	48.3
1954	27.5	29.2	32.3	47.1	54.6	65.0	66.7	64.5	58.7	54.3	39.1	26.6	46.3
1955	18.6	24.3	31.7	47.6	60.0	65.0	72.1	71.0	58.8	51.5	36.9	19.6	46.4
1956	22.4	26.6	26.7	41.7	51.6	65.1	66.1	66.1	56.8	50.8	40.4	30.0	45.4
1957	13.6	29.0	34.5	47.6	53.4	68.1	67.5	63.6	60.6	49.5	41.1	33.0	46.9
1958	22.9	17.4	34.5	45.3	53.1	59.9	69.3	67.5	59.0	49.1	39.8	18.3	44.7
1959	20.6	17.9	31.2	46.4	60.3	64.8	71.7	70.2	63.6	49.6	38.2	29.3	46.9
1960	21.6	28.2	26.6	47.2	60.3	64.8	66.3	66.1	60.5	48.5	42.0	23.7	46.3
1961	15.2	25.0	33.0	43.6	54.8	64.8	68.8	67.6	67.5	52.6	39.7	27.6	46.7
1962	21.9	19.7	34.3	46.0	56.9	65.8	68.8	67.6	67.5	52.6	39.7	27.6	46.7

HISTORY OF WEATHER OBSERVATIONS AT
RUTLAND, VERMONT

The current unbroken series of daily observations at Rutland was begun more than 46 years ago on August 18, 1916, by Mr. George H. Ross. Instruments were located at his place of residence, 23 West Street, in a hilly area at elevation of 610 feet above sea level. Mr. Ross kept the record for 25 years until August 31, 1941. Since that time, the program has been maintained by Mr. George L. Kirk. Instruments were moved to the present site, at Mr. Kirk's residence, 8 East Washington Street, in June 1942. Instruments are located on the west slope of a hill at elevation of 620 feet.

Nearly 175 years ago, in 1789, Mr. Samuel Williams recorded daily observations of temperature, precipitation, and other conditions of the weather for the full year at Rutland. His record of precipitation (monthly and annual totals) for that year are contained in Section 84, (New Hampshire and Vermont) of the Weather Bureau series "Climatic Summary of the United States", Issue of 1934. This is the earliest record contained in the New England Issues of this series and one of the earliest for the entire country.

RUTLAND, VERMONT

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	1.58	1.29	3.25	2.11	3.73	4.15	10.17	1.78	6.47	3.19	.91	2.97	41.60
1932	3.90	1.24	2.90	2.92	2.10	2.74	5.71	5.14	2.55	3.50	5.24	.93	38.87
1933	1.70	2.20	2.98	4.67	2.38	3.63	3.69	4.82	3.71	2.55	2.05	2.48	36.86
1934	3.25	1.59	2.02	4.02	2.76	7.13	4.27	1.24	3.72	2.79	2.46	2.55	47.80
1935	3.98	1.58	1.26	3.05	2.24	7.59	6.39	3.22	3.51	1.52	6.36	.92	41.62
1936	4.24	1.37	5.37	4.37	2.94	2.03	3.96	5.15	3.20	4.91	2.56	3.25	43.35
1937	3.81	2.04	2.72	2.57	6.52	5.51	3.19	1.42	1.42	3.61	2.97	2.21	42.72
1938	2.56	2.61	1.92	2.32	3.43	2.89	4.45	6.12	9.75	1.56	2.94	3.04	43.59
1939	2.16	3.63	1.71	4.90	2.47	3.84	2.80	3.47	2.32	5.20	.86	2.14	35.50
1940	1.23	1.55	4.62	3.12	8.02	6.07	2.72	1.95	5.23	1.34	4.24	2.82	42.91
1941	1.66	1.85	1.08	.45	2.83	2.33	9.49	1.64	3.74	3.60	2.01	2.47	33.15
1942	1.40	1.30	3.42	2.13	3.63	5.41	2.64	1.14	4.44	4.09	2.61	2.34	34.55
1943	1.93	1.62	1.77	2.62	5.40	4.46	7.62	5.88	2.66	3.26	4.41	.69	42.12
1944	1.47	2.34	2.61	3.17	2.26	5.47	4.84	.84	4.27	3.81	2.46	1.69	35.23
1945	3.86	2.05	1.86	5.93	4.24	4.55	9.65	.78	6.63	5.75	3.83	1.46	50.59
1946	1.54	2.51	1.53	2.32	5.14	3.60	3.63	3.96	5.31	3.10	2.08	2.78	37.50
1947	3.33	1.87	4.30	1.72	4.49	6.40	4.41	.79	1.05	.86	3.80	1.83	34.85
1948	2.16	2.26	2.58	2.97	4.43	2.45	3.57	2.84	.71	2.43	4.98	3.07	34.45
1949	2.44	1.52	1.91	2.62	3.42	2.01	4.31	5.72	3.57	2.42	2.30	2.55	34.79
1950	3.76	1.66	2.64	1.82	1.81	2.97	4.70	4.01	2.53	1.48	5.36	2.51	35.23
1951	1.55	4.35	2.43	3.71	2.21	4.15	5.31	2.92	3.57	2.82	3.52	3.14	39.68
1952	2.51	2.34	1.44	2.99	3.10	6.62	2.89	1.93	3.28	2.57	1.29	3.77	34.73
1953	4.12	1.90	3.21	3.70	3.87	.16	2.69	2.90	4.66	3.05	2.24	3.33	35.83
1954	2.83	2.81	4.44	3.30	4.88	7.96	2.10	4.23	3.61	1.47	4.52	2.74	44.89
1955	.82	3.33	3.42	1.62	4.40	2.09	2.42	7.64	1.99	3.21	2.43	.74	34.11
1956	2.03	1.89	2.83	2.38	3.33	3.22	2.99	.53	5.32	.46	2.75	3.13	30.86
1957	1.59	.88	.92	1.71	3.45	3.81	4.78	2.92	4.56	1.50	3.20	3.87	33.19
1958	3.75	1.95	1.40	2.62	2.43	2.10	1.54	4.87	2.52	2.57	2.66	.71	29.12
1959	2.29	2.47	1.68	1.92	3.19	3.84	4.20	4.20	3.14	3.84	5.94	2.39	37.19
1960	2.94	1.94	1.49	4.31	3.14	2.93	5.45	.91	4.80	3.90	1.92	.90	34.63
1961	.97	1.76	1.37	2.68	2.58	4.63	2.88	3.05	.97	1.84	3.04	1.93	27.70
1962	1.56	1.68	1.69	1.72	3.99	3.36							