U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH STERLING CHAMBER OF COMMERCE
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 — 5

CLIMATOLOGICAL SUMMARY

LATITUDE 40° 37' N
LONGITUDE 103° 12' W
ELEV. (GROUND) 3939 feet

STATION STERLING, COLORADO

MEANS AND EXTREMES FOR PERIOD 1910 - 1959

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	** Mean degree days	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet (1910 - 1949): Mean	Maximum monthly	Year	Greatest daily	Year	Mean number of days: Precip. .10 inch or more	Temperatures Max.: 90° and above	32° and below	Temperatures Min.: 32° and below	0° and below	Month
(a)	50	50	50	50		50			50	50		40	40		40		30	30	30	30	30	
Jan.	38.9	10.0	24.4	71	1950	-29	1942+	1260	.30	1.21	1939	4.4	15.0	1940	8.0	1944	1	0	9	31	6	Jan.
Feb.	44.1	14.5	29.3	76	1927	-29	1951+	1000	.33	.76	1918	4.9	14.0	1931	8.0	1918	1	0	6	28	4	Feb.
Mar.	51.5	21.3	36.4	86	1910	-20	1922	890	.75	1.70	1923	7.1	22.6	1944	8.0	1927	2	0	3	28	1	Mar.
Apr.	62.3	32.7	47.5	91	1934	-3	1920	520	1.74	2.23	1929	3.8	27.0	1920	10.0	1920	4	0	*	13	0	Apr.
May	71.0	43.1	57.0	95	1934	22	1924	280	2.59	2.16	1913	0.4	6.5	1915	4.0	1915	6	1	0	2	0	May
June	81.6	52.4	67.0	106	1954	29	1919	70	2.41	2.81	1940	0	0	-	0	-	6	7	0	*	0	June
July	88.5	56.7	72.6	105	1954+	35	1910	10	1.82	2.05	1956	0	0	-	0	-	5	16	0	0	0	July
Aug.	86.8	55.8	71.3	104	1938	32	1913	10	1.86	2.80	1936	0	0	-	0	-	5	13	0	0	0	Aug.
Sept.	78.5	45.4	62.0	100	1947	15	1913	140	1.24	1.91	1938	0.2	4.0	1945	3.0	1942	3	4	0	2	0	Sept.
Oct.	67.3	33.2	50.2	97	1910	-6	1917	460	.92	1.91	1916	1.2	10.8	1929	9.0	1929	2	*	*	13	0	Oct.
Nov.	52.3	20.7	36.5	86	1950	-13	1940+	850	.47	1.87	1922	3.8	18.0	1929	8.0	1942+	2	0	3	29	1	Nov.
Dec.	40.3	12.6	26.5	74	1939	-33	1919	1210	.48	1.03	1913	5.9	16.0	1931	12.0	1931	1	0	7	31	3	Dec.
Year	63.6	33.2	48.4	106	June 1954	-33	Dec. 1919	6700	14.91	2.81	June 1940	31.7	27.0	April 1920	12.0	Dec. 1931	38	41	28	177	15	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 STERLING

Sterling is located in northeastern Colorado in the broad valley of the South Platte River. The surrounding area is relatively level, sloping gradually downward toward the northeast along the river, and gradually upward in other directions, reaching 4500 feet at about 20 miles north, west, and south of Sterling. The front range of the Rocky Mountains runs north and south about 120 miles to the west. A considerable area of Logan County along the South Platte River is irrigated, and the county is one of the main sugar beet producing areas of the state. Winter wheat is grown extensively in the non-irrigated areas.

The climate is that of the semi-arid high plains, and so is of the continental type with large ranges in temperature, low precipitation, low relative humidity, abundant sunshine, and considerable wind. The climate is greatly modified by the presence of the mountain barriers to the west. The prevailing air circulation from the west brings dry air to the region, as most of the moisture has been removed in passage of the air over the mountains. The winds from the west are also warmed in descending from higher levels, and in the cold season moderate the temperatures that would otherwise average much colder.

Interruptions of the flow from the west by air moving down from the north bring the coldest weather of the year, driving temperatures below zero on occasion, and when severe and accompanied by snow and strong northerly winds become blizzards. Warm moist air from the Gulf of Mexico, rising into the High Plains area in the spring and summer, contributes the heaviest precipitation of the year. Hot and dry air from the southwest brings the highest summer temperatures. Accompanied by very low relative humidity, these afford less discomfort than would be experienced in areas of greater humidity.

PRECIPITATION The average annual precipitation is just under 15 inches for the period summarized, but this has varied from just over 7 inches to over 22 inches in individual years. The distribution of precipitation through the year is fortunate in that over 11 inches, or about 75% of the annual total, falls during the growing season from March through August. The average annual snowfall is over 31 inches, with snowfall likely at any time from September to May. Summer precipitation is in the form of scattered thundershowers, which are usually brief and light, but some of the largest daily precipitation amounts have fallen in these local storms. Hail may accompany these storms, and may at times be severely damaging to crops. Tornadoes may occur in the area, but they are infrequent and those that do occur are usually small and cause limited damage.

TEMPERATURE Temperature extremes show a wide range between the highest and lowest of record, but average conditions are more accurately indicated by the average maximum and minimum values. Summer afternoons are hot but the temperature drops rapidly in the evening, cooling an average of over 30 degrees by the next morning. Cold winter temperatures are associated with air from the north, and usually do not last as the cold air drains away in a few days to lower elevations to the east and is replaced by milder air from the west.

SEASONS

WINTER January is the coldest month of the year, with an average high temperature of just under 40 degrees, which produces some thawing most afternoons. Temperatures above 70 degrees have been recorded in all three winter months, December through February. Winter is the driest season of the year, total precipitation averaging only 1.11 inches, about 7% of the annual average total. Almost all of the precipitation during the winter falls in the form of snow, averaging 14.2 inches of snow, about 45% of the average total for the year. Much of this snow is light and powdery and drifts easily if it falls during periods of high wind.

SPRING Precipitation increases rapidly during spring, with the months March through May having four times the winter moisture. Spring produces an average of 5.08 inches, or about 34% of the yearly average total precipitation. Much of this falls as snow, with some of the heaviest snowfalls on record occurring in March and April. Spring snow is wetter and heavier and somewhat less likely to blow and drift, but as springtime winds are often stronger, some drifting still takes place. Dust storms are most common in spring months after a period of dry weather when the ground is bare. Temperatures rise rapidly in spring with zero lows rare after March, and afternoon temperatures average above 70 degrees after April.

SUMMER June through August is usually the wettest season of the year, producing an average of 6.09 inches of rain, about 41% of the yearly total precipitation. Most of the summer rain is in the form of local scattered thundershowers that sometimes produce brief heavy downpours. Strongest winds at this season are brief gusts associated with the thunderstorms. Afternoon temperatures average above 80 degrees through the three months of summer, with occasional temperatures above 100 degrees likely during any of them. Skies are generally clear during summer mornings, with an increase of cloudiness during the afternoon. Most of the thundershowers occur during the afternoon or evening.

AUTUMN The thundershower period ends rather abruptly in September and precipitation drops sharply in the fall. Precipitation for the months September through November averages 2.63 inches, about 18% of the yearly total. Snow may fall as early as September but is usually sparse and light until November. Brief cold and frost may come during any fall month, but the temperature does not regularly drop below freezing at night until November. Temperatures above 90 degrees have been reached in all fall months except November.

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	T	.00	.50	.84	2.22	1.98	1.18	2.75	.67	1.97	.37	1.37	13.85
1926	.30	.09	1.09	.51	2.79	2.77	3.55	1.77	.63	1.04	1.27	.72	16.53
1927	.10	.39	2.02	3.37	1.00	3.71	2.21	2.50	1.65	.22	.84	.25	18.26
1928	.18	.18	.34	.74	4.76	4.07	2.98	1.18	.18	1.73	.49	.00	16.83
1929	.01	1.04	.47	5.17	.97	1.64	2.02	1.58	3.08	2.94	1.09	.00	20.01
1930	.31	.15	.44	1.48	3.76	1.32	3.17	4.53	2.08	1.17	1.05	T	19.46
1931	.00	1.37	1.35	.85	1.85	2.91	1.03	.70	1.01	.45	.45	.57	11.94
1932	.30	.57	.97	1.71	1.10	1.01	1.61	2.50	.12	.47	.14	.52	11.02
1933	.00	.12	.81	3.25	2.89	.23	1.51	3.21	1.62	.00	.05	.73	14.42
1934	.22	1.45	.53	.73	2.65	3.78	.99	.28	.23	.00	.10	.12	11.08
1935	.03	.32	1.42	2.48	5.99	1.08	.16	.61	2.86	.08	.26	.04	15.33
1936	.41	.09	.33	1.14	2.85	1.47	2.17	3.27	.95	1.17	.03	.22	14.10
1937	.21	.04	.56	.60	2.57	3.37	1.17	.90	.80	.06	.13	.93	11.34
1938	.06	.07	.77	2.61	4.56	2.14	1.73	1.03	3.08	.00	.55	.11	16.71
1939	1.92	.20	.56	.63	.89	2.72	.94	1.72	.24	.51	.00	.61	10.94
1940	.72	.23	1.85	1.29	.33	4.17	.78	.54	1.83	.68	.63	.75	13.80
1941	.33	.04	1.18	2.07	1.22	2.74	3.64	2.24	2.69	1.58	.02	.43	18.18
1942	.88	.71	.14	3.67	4.09	3.94	1.91	1.33	2.16	2.41	.94	.02	22.20
1943	.06	.15	.42	2.28	3.14	2.38	1.26	.66	.00	.61	T	.88	11.84
1944	1.28	.37	1.72	2.42	2.18	.80	2.60	.92	.48	.57	1.19	.29	14.82
1945	.42	.24	.14	2.32	2.42	3.85	1.71	3.19	1.44	.97	.30	.04	17.04
1946	.22	.07	1.77	.98	2.67	2.09	.73	.75	1.82	1.21	1.59	.00	13.90
1947	.02	.08	1.08	1.67	2.16	5.32	2.65	1.13	.91	1.22	.70	.27	17.21
1948	.15	.35	.42	.42	2.07	3.95	2.10	3.23	.32	.27	.30	.19	13.77
1949	.23	.00	1.46	.32	2.81	5.63	.70	1.43	.01	1.60	T	.02	14.21
1950	.05	.29	.32	1.10	2.41	1.19	1.72	.98	2.37	.14	.22	.15	10.94
1951	.24	.29	.10	1.95	.93	3.76	2.15	2.05	1.40	1.71	.31	.30	15.19
1952	.36	.58	.44	1.99	3.71	.73	.13	2.47	.81	.30	.86	.54	12.92
1953	.18	.54	.83	3.06	.64	2.25	2.72	2.18	.10	1.15	.89	.90	15.44
1954	.14	T	.32	.30	1.70	.93	2.16	.61	.50	.47	T	.14	7.27
1955	.22	.20	.11	.50	4.94	2.39	1.78	1.82	1.41	.32	.77	.02	14.48
1956	.17	.10	.17	.49	1.41	3.55	3.73	1.98	.00	.39	1.59	.61	14.19
1957	.05	T	.34	1.53	4.49	2.89	3.11	1.10	.14	1.05	.26	.15	15.11
1958	.07	.42	1.24	1.94	2.14	2.49	3.81	2.03	2.34	.11	.13	.55	17.27
1959	.44	.25	1.15	.28	4.91	2.25	.75	1.09	1.36	1.20	T	T	13.68

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	17.1	35.1	38.4	50.2	58.2	68.2	72.9	70.1	62.8	43.5	37.6	27.6	48.5
1926	25.8	36.6	37.0	47.0	58.6	65.8	71.5	72.3	60.0	50.8	37.0	23.8	48.8
1927	28.8	35.6	35.4	47.2	59.2	64.2	70.4	66.3	60.8	52.4	40.6	20.8	48.3
1928	30.4	30.5	39.4	45.4	59.0	60.0	70.9	69.6	60.0	48.6	34.8	24.5	47.8
1929	22.6	17.6	37.9	46.1	55.4	65.5	72.8	73.2	58.0	49.8	23.9	25.0	45.6
1930	9.6	36.0	35.3	54.8	55.0	68.0	74.0	72.0	62.8	51.4	39.8	29.4	49.0
1931	31.5	36.2	37.1	54.4	56.1	72.2	75.5	71.6	67.8	54.6	36.6	28.3	51.8
1932	22.4	33.8	30.6	51.3	60.4	67.6	75.9	73.9	63.4	48.4	41.4	16.2	48.8
1933	28.2	23.0	40.3	47.2	55.9	73.8	75.8	71.1	66.0	54.0	42.0	36.6	51.2
1934	34.7	33.7	42.5	51.0	65.2	70.7	77.1	74.2	59.3	56.2	41.0	29.8	53.0
1935	30.7	34.2	42.6	45.1	51.5	67.0	76.7	73.2	61.7	49.5	34.2	29.4	49.6
1936	23.8	15.8	36.1	46.8	60.4	69.6	77.0	73.7	62.6	46.8	36.3	29.7	48.2
1937	6.8	24.4	33.4	47.4	60.4	64.6	75.4	75.8	64.7	49.2	34.4	22.5	46.6
1938	26.0	30.8	41.0	48.1	55.8	69.0	73.3	75.0	63.7	52.7	33.5	25.5	49.5
1939	27.4	21.2	28.6	47.8	59.8	66.6	75.0	70.0	63.8	49.6	38.6	34.4	49.4
1940	17.0	32.1	39.8	45.7	58.1	69.2	74.2	69.7	65.2	53.6	32.0	27.8	48.7
1941	29.4	31.3	36.0	48.0	61.7	65.4	71.4	71.4	60.2	48.6	38.4	27.3	49.1
1942	16.2	15.4	34.4	52.0	54.9	64.6	72.6	70.4	59.2	52.4	38.4	31.0	46.8
1943	27.9	37.9	29.6	53.4	53.4	65.4	75.0	74.1	60.3	48.8	39.0	25.3	49.2
1944	24.8	29.7	31.6	43.6	60.0	66.4	71.5	71.9	60.9	51.3	37.9	22.6	47.5
1945	27.2	31.2	39.2	41.6	55.0	59.4	71.8	70.0	57.0	51.0	37.6	25.7	47.2
1946	29.3	33.4	42.9	54.5	52.2	67.0	74.4	70.5	61.4	47.4	31.5	33.5	49.8
1947	28.5	26.4	34.4	46.4	55.2	62.2	73.0	74.0	63.8	54.2	30.6	29.4	48.1
1948	23.9	23.7	31.0	52.6	59.0	66.6	73.2	72.2	64.8	48.6	34.1	26.5	48.0
1949	10.5	25.8	37.2	49.0	58.7	65.6	73.0	71.1	60.4	47.3	44.2	27.2	47.5
1950	20.9	33.2	34.0	45.4	51.7	67.7	71.4	68.6	61.0	55.6	35.9	32.8	48.2
1951	25.9	28.2	33.5	42.9	58.3	61.5	69.3	71.8	59.4	48.9	34.9	24.6	46.6
1952	28.1	31.4	31.7	48.3	57.0	71.7	74.8	72.1	63.8	51.2	31.8	21.5	48.6
1953	31.4	31.6	43.2	42.6	55.1	70.4	75.3	72.5	65.2	54.5	39.6	27.5	50.7
1954	27.5	41.1	33.5	52.2	55.7	69.5	77.1	72.7	66.2	48.8	41.2	29.5	51.2
1955	19.5	23.7	34.7	49.4	59.8	63.8	75.4	75.3	63.9	52.7	31.6	27.8	48.1
1956	29.7	23.4	37.0	45.0	59.5	71.8	72.3	68.1	59.9	50.8	32.7	31.3	48.5
1957	21.0	36.1	35.9	42.3	54.7	65.9	74.0	72.1	58.2	49.7	34.1	34.9	48.3
1958	28.8	32.2	27.9	44.5	62.2	67.9	70.0	72.8	64.0	50.3	36.5	28.1	48.8
1959	24.5	25.8	36.1	46.0	57.6	72.0	72.7	72.7	60.1	45.9	34.1	33.9	48.5

STATION HISTORY

The first weather observations for Sterling were taken for a few months in 1890. Records used in this summary are from the station operated by the Great Western Sugar Company at its plant one mile south-southwest of the Sterling post office. Observations were started at this location on November 10, 1909, and have continued uninterrupted to the present time.

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Weather Bureau Office
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