

Central Region Applied Research Paper 26-04

ROCHESTER, MINNESOTA CLIMATE

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ROCHESTER, MINNESOTA CLIMATE

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I. Preface

The purpose of this publication is to provide a comprehensive look at the climate for Rochester, Minnesota. It is hoped that the many facts and figures contained in this publication will provide information and insight for our many users, from the general public and media, to those with economic interests across the area.

All temperatures are in degrees Fahrenheit, and all precipitation records are measured in inches. Unless otherwise noted, normal records are for the period of 1971-2000, monthly and daily temperature and precipitation records date back to 1886, monthly snowfall back to 1908, and daily snowfall and snow depth back to 1948. All data is up-to-date through July 2002.

II. Introduction

Rochester, Minnesota, is in the Zumbro River Valley. The south branch of the Zumbro River flows through Rochester. Within the city of Rochester three creeks flow into the south branch. Terrain around Rochester is rolling, and the elevation ranges from 1,000 to 1,300 feet above sea level.

The succession of high and low pressure systems over Rochester brings a variety of weather that is changeable. The weather pattern is continental with four definite seasons. Winters are cold, but summers are pleasant.

The season-to-season temperature variation is quite large. The average temperature for a warm winter is 20 degrees and for a cold winter it is 12 degrees. The average temperature for a warm summer is 70 degrees and a cold summer is 67 degrees, which indicates that summer temperatures are not as variable as those during the winter. The average growing season is about 140 days.

Rochester lies near the northern edge of the influx of moisture from the Gulf of Mexico. Severe storms such as blizzards, freezing rain (glaze), tornadoes, wind, and hail storms do occur. During the five month growing season, May through September, the major crops of corn, soybeans, small grains, and hay are produced. During this period, the normal rainfall is over 18 inches, approximately 65 percent of the annual precipitation.

Snowfall averages above 45 inches per season, with the snow season usually beginning in November. However, the first inch or more of snow occurs by the latter part of October once out of every ten years.

Rolling terrain and the thunderstorm probability make the south branch of the Zumbro River and its tributaries susceptible to flash flooding. Some flooding can occur with the spring snowmelt. In some instances the snowmelt is complicated with moderate spring rainfall.

(This summary is derived from the National Climatic Data Center's annual summaries for Rochester)



III. Annual Climate of Rochester

The climate of Rochester is highly continental with mild summers and very cold winters. The average annual temperature is 43.4 degrees Fahrenheit (F). July is the warmest month with an average temperature of 70.1 degrees while January is the coldest month with an average temperature of 11.8 degrees. The warmest temperature ever recorded in Rochester has been 108 degrees which occurred on the 14th of July in 1936. The coldest temperature in the weather history of Rochester was 43 below zero back on January 7th, 1887.

Precipitation in Rochester averages a bit over 30 inches a year with nearly 70% of the annual precipitation falling during the spring and summer months from April through August. Annual precipitation has ranged from a maximum of 43.94 inches in 1990, to a low of 11.65 inches in 1910. The wettest months are normally in the summer with June through August all averaging just over 4 inches of rainfall. The winter months are normally the driest since snow usually contains only about 0.10 inches of water equivalent per inch of snowfall. January and February are therefore normally the driest months of the year with an average of around one inch of water equivalent precipitation each.

Average temperatures and precipitation for the four seasons are given in Table 1. For this purpose winter is defined as December through February; spring as March through May; summer as June through August; and fall as September through November.

	Average Temperature	Average Precipitation
Winter	16.4	2.57
Spring	43.7	8.00
Summer	68.7	12.01
Fall	46.7	6.75

TABLE 1: Temperatures are in degrees, precipitation is in inches.

Average winter snowfall (measured July through June) in Rochester is 48.1 inches with the average monthly totals being fairly evenly distributed from December through March. December is on average the snowiest month with nearly 11 inches. December and March average close to 10 inches while February has about 8 inches. November and April average about 4 to 5 inches of snow. Measurable snow has been observed from early October to as late as early May.

The highest seasonal snowfall total for Rochester topped out at 84.6 inches in 1996-97. The highest snowfall for a month came a few years later, with 35.3 inches falling in December of 2000. The one-day record of 15.4 inches occurred on January 22nd of 1982, and the least snowiest season was in 1967-68, with only 9.1 inches falling.

IV. Seasonal Variations

Seasonal changes in southeast Minnesota are usually sharply defined. However, they do not correspond very well to either the official calendar seasons or the three month "meteorological seasons" as defined in the previous section. By any criteria, winter is the longest of the four seasons in Rochester while summer lasts somewhat longer than either spring or fall.

A. Winter Weather

The true winter weather season normally begins in mid to late November and extends into late March. Periods of cold weather are still likely both before and after these dates but this four month plus period is the time when average temperatures are at or below freezing and most precipitation falls in the form of snow.

The average high temperature drops to the freezing mark on the 27th of November and stays at freezing or below until March 2nd. The majority of days in mid winter have highs from the mid teens to around 30, although Arctic outbreaks may bring periods of frigid weather when high temperatures stay below zero for several days in a row. Rochester averages 36 nights per winter when the temperature falls to zero or below with 14 such nights usually occurring in January.

There are several tracks which storm systems may take to produce snow in southeast Minnesota. The heaviest snows usually develop when low pressure systems develop in the southern plains states and move northeastward into Missouri and Illinois. These storms often produce 6 to 10 inch snowfalls and may cause snows in excess of one foot.

More common are the lows which track southeastward from Alberta, Canada and the northern plains states toward the Upper Mississippi Valley. These lows, known as “Alberta Clippers”, typically produce lighter snows in the 1 to 4 inch range. Widespread blowing and drifting of snow may occur with these systems if the area of low pressure is strong. This is because the moisture content of the snow tends to be lower with these systems, leading to “lighter” or “drier” snow, which is moved more easily.

The Rochester area will experience freezing or mixed precipitation when cold high pressure is in place at the surface and a warm front approaches the region from the south. The warm air is forced to rise, causing liquid precipitation to freeze as it falls into the cold air. Bouts with freezing rain are not that common, but can occur a few times a winter season, generally at the start or end of the “winter”.

Winter is, on average, the cloudiest season of the year in Rochester with lengthy periods when low clouds cover the sky. These clouds are typically stratus or stratocumulus which develop on the western side of storms which cross the upper Midwest. Clear weather in the winter is most likely to occur when a fresh dry Arctic air mass moves south from Canada into the Midwest.

The prevailing wind directions during most of the winter are from the northwest, with average wind speeds around 13 mph.

B. Spring Weather

Spring weather normally begins around the end of March and can extend into early June, at which time the average high temperature has reached the lower to middle 70s. Thus, a typical spring lasts just slightly over two months but may seem much shorter when cold weather lingers into April and parts of May.

Average high temperatures in the spring rise from near 50 degrees at the beginning of April to the lower 70s by the end of May. Average lows rise from near 30 to near 50 during the same time interval. Freezing temperatures are common during the first half of April (averaging 13 for the month) when invading Canadian air masses are still very cold. The last frost is usually by the first or second week of May in the city of Rochester.

The jet stream gradually moves northward as spring progresses but the track of surface lows are often still to the south of Minnesota, especially in April. Significant snows are still possible when polar air is in place over the upper Midwest and lows track through the central Mississippi valley. Severe weather becomes more likely when the lows begin to track further to the north of Rochester later in the spring. The frequency of thunderstorms increases during the spring with an average of three days with thunderstorms in April and six such days in May.

Spring is, on average, the windiest season of the year and April is usually the windiest month in Rochester. This is

largely due to the strong temperature difference at this time of the year, when the polar regions are still cold but the southern U.S. has warmed up significantly.

C. Summer Weather

Summer typically lasts about three months in Rochester, extending from early June through the first week in September. After the very changeable spring weather, summer usually features consistently mild to warm temperatures in this part of Minnesota. The average high temperature is near 80 degrees from the 19th of June through August 17th. While Rochester will never be considered a “hot” spot, it does average about 8 days when the mercury reaches the 90 degree or greater mark. However, there are years when temperatures do not top 90.

Summer is normally the wettest of the seasons in Rochester due to the increased frequency of thunderstorms, with each “summer” month averaging 4 inches or greater of precipitation. There are usually around 20 days with thunderstorms, with June and July the most active.

Despite the greater precipitation, summer is probably the sunniest season of the year in Rochester. On average, Rochester is clear to partly cloudy 63% of the time during the summer, as opposed to the other seasons, which average less than 50%. Summer is also the least windy of the seasons with average speeds a bit above 10 mph. The prevailing wind direction is from the south.

D. Fall Weather

Fall weather typically begins by the second week in September and lasts until the first part of November. Fall is therefore another short season, lasting just a little longer than two months. Average high temperatures drop from the low 70s in the beginning of September to the upper 50s by the middle of October. The cooling then accelerates during late fall with normal highs only around 40 degrees by the 12th of November. Average lows fall from the low 50s in beginning of September to the middle 20s by mid November. The average first frost in Rochester occurs during the end of September and start of October.

Average precipitation drops sharply from the summer to the fall, with October and November only averaging around or slightly above 2 inches. September is somewhat higher, averaging around 3 inches. This decrease is mainly due to the fact that tropical type air masses usually stay south of Minnesota in October and the likelihood of thunderstorms drops to around two days per month in Rochester.

While September and October are typically among the sunnier months in Rochester with an average of 9 clear days, November is the cloudiest month of the year. November only averages 5 clear days, with 19 cloudy days. So the chance to see some sunshine during November is only around 37%, or close to one-third of the time. This increase in clouds is due to the onset of the winter season stratus clouds.

The first snowflakes of the season usually occur in October, as does the first measurable snow. However, the better chances for accumulating snows come in November, which averages over 5 inches for the month.

Wind speeds typically increase during the fall season with October and November having average speeds between 12 and 13 mph. The prevailing wind direction is still from the south, but northwest winds occur more frequently in November.

V. Monthly Climatology

A. January Climatology

January is the coldest month of the winter in Rochester. The average temperature for the month is 11.8 degrees Fahrenheit with an average daily high of 19.9 and an average low of 3.7. The warmest January on record occurred back in 1990 when the monthly mean temperature topped out at 25.8. The coldest January was back in 1912 when the average for the entire month was 2.3 degrees *below* zero.

On average, temperatures fall to zero or below on 14 days during the month of January. The coldest temperature in the weather records for Rochester occurred on the 7th of the month in 1887 when the mercury plunged to a frigid 42 degrees below zero. By contrast, the warmest January reading occurred in 1944 when it reached 58 on the 25th of the month.

January is normally a very dry month with an average of only 0.94 inches of water equivalent precipitation. The wettest January was in 1886 with 4.40 inches of precipitation while the driest occurred in 1961 with only .07 inches.

An average January has around 10 inches of snow, tying it with December as the snowiest month of the year. The snowiest January on record was in 1996 when 30.2 inches fell, which is also the 4th snowiest month all-time. January normally has 8 days with measurable precipitation but only 3 days of an inch or more of snowfall.

January is one of the cloudiest months of the year with an average of 7 clear, 7 partly cloudy, and 17 cloudy days. The amount of daylight does begin to increase during January, with total possible minutes increases from 8 hours 59 minutes on the 1st to 9 hours and 49 minutes on the 31st.

The average wind speed in January is 13.0 mph with the prevailing direction from the northwest.

B. February Climatology

February is the 3rd coldest month of the year in Rochester, around a degree warmer than December. The average temperature for the month is 18.4 degrees with an average daily high of 26.2 and an average daily low of 10.6. The coldest February occurred in 1936 when the average temperature was just barely above zero, at 0.5 degrees. The warmest occurred in 1931 when the monthly average was at freezing (32.0 F).

An average February has 9 days when the mercury falls to zero or lower and also has 18 days when the high temperature stays at or below freezing. The record low for the month is 39 degrees below zero, on the 20th in 1929. The warmest February temperature on record is 63 degrees on the 17th in 1981.

An average February has around 8 inches of snow, making it the least “snowiest” out of the typical winter months. However, February is also a shorter month. February is the driest month of the year with an average of only 0.75 inches of melted precipitation. The wettest was in 1915 when 2.30 inches of precipitation fell while the driest was in 1964 when only 0.04 inches occurred. The snowiest February occurred in 1959 when 19.4 inches fell while the least snowiest was in 1920 when no measurable snowfall was recorded.

An average February has 7 clear days, 6 partly cloudy days, and 15 cloudy clear days. The amount of daylight also increases sharply, from 9 hours and 52 minutes on the first of the month to 11 hours and 10 minutes on the 28th.

The average wind speed is 12.5 mph with the prevailing direction from the northwest.

C. March Climatology

March is the “last” of the winter months in Rochester with the transition toward spring starting to occur by month’s end. The normal high rises from freezing on the first to 47 on the 31st while the average low increases from 17 degrees on the first to 29 by month’s end. The monthly mean temperature for March is 30.6 degrees. The warmest March in the weather history of Rochester was in 1910 with an average temperature of 43.4 while the coldest occurred in 1888 with an average of 17.8.

March still averages 2 days when the mercury drops to zero or lower and averages almost 10 days when the high temperature stays at freezing or below. The coldest March temperature in Rochester was 31 degrees below zero on the first in 1962 while the warmest reading was a balmy 82 degrees on the 24th in 1910. Below zero readings have occurred as late as the 31st when the temperature fell to 2 below in 1934.

Average March snowfall is around 9 inches which makes it the 3rd snowiest month in an average Rochester winter. The snowiest March occurred in 1951 when 35.1 inches fell. The least snowiest March’s occurred in 1981 and 1910 when only a trace of snow fell.

March averages 1.88 inches of melted precipitation which is about twice as much as either January or February. There are normally 10 days with measurable precipitation during the month. The wettest March was in 1888 with 4.02 inches while the driest was in 1910 with only a trace.

There are normally 6 clear, 7 partly cloudy, and 18 cloudy days in March. The amount of daylight increases rapidly, from 11 hours and 13 minutes on the first to 12 hours and 42 minutes on the 31st.

The average wind speed in March is 13.2 mph, tying it with November as the 2nd windiest month on average for Rochester. The prevailing wind direction is northwest.

D. April Climatology

April is the first full month of the short spring season in Rochester. Daily high temperatures are quite variable in April making the term “normal high” rather misleading. The average high rises from 48 degrees on the first to 62 on the 30th of the month, while the average low warms from 29 degrees on the first to 40 at the end of the month. The normal mean temperature for the month is 44.7 degrees. Rochester’s warmest April occurred in 1915 with an average temperature of 55.0 while the coolest April occurred in 1950 with an average of only 37.6 degrees.

The coldest temperature ever recorded in Rochester during April was 5 degrees on the 6th in 1982. The warmest April temperature occurred on the 21st and 22nd in 1980, with highs for both days reaching 91.

April average precipitation is 3.01 inches, which makes it wetter than any of the previous months but still drier than any of the following spring or summer months. There are normally 3 days with thunderstorms during April in Rochester. The wettest April occurred in 2001 with 7.30 inches of precipitation while the driest was in 1946 with only 0.46 inches.

Average snowfall in April is 4.0 inches, but heavy snows can occur. Rochester’s snowiest April was in 1983 when 16.4 inches fell. Because of the transition from winter into the spring, there can be rather dramatic swings in the temperature and moisture content of the air, which can lead to “big” snow storms. The 2nd snowiest day on record for Rochester took place in April, with 13.6 inches falling on the 26th in 1988.

April averages 6 clear days, 7 partly cloudy, and 16 cloudy days. The amount of daylight continues to increase, with 12 hours and 45 minutes of possible sunshine on the first, climbing to 14 hours and 8 minutes on the 30th.

April is on average the windiest month of the year in Rochester with a mean wind speed of 13.7 mph. The strong temperature differences between the northern and southern parts of the U.S. and the resulting strong pressure forces are the main cause of these winds. The prevailing wind direction is from the northwest.

E. May Climatology

May is the 2nd of the spring months in Rochester with temperatures normally much warmer than those seen in April. The normal mean temperature for May is 56.9 degrees which is about 12 degrees warmer than April. Cold periods do still occur though, resulting in frosts at times, and snow is still possible but rare. The normal high rises from 62 degrees on the first to 73 on the 31st while the normal low increases from 40 degrees on the first to 51 at the end of the month. Rochester's warmest May occurred in 1934 with an average temperature of 66.2 degrees while the coolest was in 1888 with a mean temperature of 49.6 degrees.

The highest temperature ever recorded in Rochester during May was 106 deg on the 31st in 1934. That is the only occurrence of 100 degree temperatures in May in Rochester's recorded weather history, and also outdistances the second warmest May day by 10 degrees. The coldest temperature recorded in May was 21 degrees on the 3rd in 1967. Freezing temperatures are still possible throughout May as the latest occurrence of 32 degree temperatures in Rochester was on the 29th of June in 1937.

May average precipitation is 3.53 inches. The wettest May in Rochester was in 1982 with 8.41 inches of precipitation while the driest occurred in 1934 with only 0.40 inches of rainfall. The maximum one day rainfall in May occurred on the 17th in 2000 with 4.02 inches. Thunderstorms also become more frequent in May (normally 6 days) compared to earlier months.

While snow in May is very unlikely, measurable snow does fall about once every ten years. The greatest total occurred in 1944 with 2 inches. Most May snows have been either trace amounts or a few tenths of an inch.

May is slightly sunnier than April but still has more clouds on average than the summer months. There are normally 7 clear, 9 partly cloudy, and 15 cloudy days. Amount of daylight increases from 14 hours and 11 minutes on the first to 15 hours and 13 minutes on the 31st as the summer solstice rapidly approaches.

The average wind speed for May is 12.4 mph, with the prevailing wind direction from the south.

F. June Climatology

June is the first month of meteorological summer in the Rochester area even though the astronomical season doesn't officially begin until around the 21st. Average highs are in the 70s for the entire month, rising from 73 degrees on the first to 79 on the 30th. The average low rises from 51 on the first to 59 on the 30th. The normal mean temperature for the month is 66.1 degrees.

Rochester's warmest June was in 1933 with an average of 73.8 degrees while the coolest was in 1966 when the mean temperature was only 59.6 degrees. The warmest temperature ever recorded in June was 105 degrees on the 27th in 1934. The coolest June temperature was 31 degrees on the 9th in 1937. There are usually 1 to 2 days with 90 degree or greater temperatures.

June is, on average, the third wettest month of the year in Rochester with 4.00 inches of precipitation, trailing July and August. Much of this rain is produced by thunderstorms and there are normally 7 days with storms during the month. The wettest June occurred in 2000 with 12.52 inches of precipitation, which also made it the wettest month out of any month on record for Rochester. The driest June was in 1910 when only a trace of precipitation fell. The heaviest one day total of precipitation in June was 4.81 inches on the 1st in 2000.

June averages 7 clear, 11 partly cloudy, and 13 cloudy days. June features the longest possible amount of daylight in the year with a maximum of 15 hours and 28 minutes of possible sunshine for the 17th through 23rd.

June is less windy than the preceding spring months with an average wind speed of 11.4 mph. The prevailing wind direction is from the south.

G. July Climatology

July is the warmest month of the year in the Rochester area and marks the midpoint of the summer season. The normal mean temperature for the month is 70.1 degrees with an average high of 80.1 and an average low of 60.1. The warmest annual high temperatures occur on the 16th through 20th, when readings normally reach 81 degrees.

The warmest July occurred in 1936 with an average temperature of 77.6 degrees, which is also the warmest month out of any month for Rochester. The coolest was in 1992 with an average of only 64.2 degrees. The hottest temperature ever recorded in Rochester was 108 degrees, which occurred on the 14th in 1936. The coolest temperature recorded in July was 40 degrees on the 17th of the month in 1911.

Average precipitation in July is 4.61 inches which makes it the wettest month. The wettest July was in 1978 with 12.33 inches of precipitation while the driest was in 1946 with only 0.41 inches of rainfall. The greatest one day rainfall total in July was 7.47 inches on the 11th in 1981. This is also the wettest day out of any day on record. On average, there are 8 days with thunderstorms.

July is likely the “sunniest” month in Rochester with an average of 8 clear, 12 partly cloudy, and 11 cloudy days. The amount of daylight begins to decline, however, with 15 hours and 24 minutes of possible sunshine on the first of the month decreasing to 14 hours and 37 minutes by the 31st.

The average wind speed in July is 10.1 mph with the prevailing wind direction from the south.

H. August Climatology

August is the second warmest month of the year in the Rochester area with an average temperature of 67.7 degrees. The average high is 77.5 and the average low is 58.0. The normal high temperature drops from 80 on the first to 74 by the 31st.

The warmest August was in 1947 with an average temperature of 77.0 degrees, while the coolest was 63.2 in 1992. The warmest temperature ever in a Rochester August was 100 degrees which occurred several times in the month. The most recent was on the 23rd and 24th of 1948. The coolest temperature was 32 degrees, back in 1915 on the 30th.

Average August precipitation is 4.33 inches, making it the second wettest month for Rochester. As in the earlier summer months, most of this rainfall is associated with thunderstorm activity (normally 6 days during the month). The wettest August in Rochester was in 1979 with 9.52 inches of precipitation. The driest August was in 1841 with only 0.31 inches of precipitation.

August skies are normally quite sunny with an average of 9 clear, 11 partly cloudy, and 11 cloudy days. The amount of daylight continues to decrease, dropping from 14 hours and 35 minutes of possible sunshine on the first to 13 hours and 16 minutes on the 31st.

The mean wind speed in August is 9.8 mph making it the least windy month of the year. The prevailing wind direction is from the south.

I. September Climatology

September marks the beginning of the autumn season in Rochester although the first ten days or so of the month usually still have summer-like temperatures. The normal mean temperature for the month is 58.9 degrees with an average high of 69.2 degrees and an average low of 48.7 degrees. The normal high drops from 74 on the first of the month to 64 on the 30th.

The warmest September occurred in 1908 with an average temperature of 69.6 degrees while the coldest was in 1974 at 54.7 degrees. The mercury hit the 100 degree mark once in September on the 6th in 1913. The coldest temperature recorded in September was 22 degrees on the 28th in 1942.

September starts the transition to the drier fall months, with an average of 3.12 inches. There are normally 5 days with thunderstorms during the month. The wettest September occurred in 1986 with 10.50 inches while the driest was in 1953 when only .33 inches of rain fell.

September is a little more cloudy than the preceding summer months with an average of 9 clear, 7 partly cloudy, and 14 cloudy days. The amount of daylight shortens considerably in September, from 13 hours and 13 minutes on the first of the month to 11 hours and 45 minutes by the 30th.

The average wind speed in September is 10.9 mph with the prevailing direction from the south.

J. October Climatology

October marks the middle of the fall season in Rochester with average temperatures showing a marked decline from the beginning to the end of the month. The normal high drops from 64 degrees on the first to 48 degrees on the 31st while the normal low drops from 43 to 31 at the end of the month. The normal mean temperature for October is 47.0 degrees with an average high of 56.9 and an average low of 37.1 degrees.

The warmest October occurred in 1963 with a mean temperature of 58.1 degrees while the coldest was in 1917 with an average of only 37.5 degrees. The warmest temperature ever in October was 93 degrees on the 3rd in 1997. The coldest October temperature was 6 below zero on the 25th in 1887. This is also the earliest first occurrence (after the warm summer months) of a below zero day in Rochester's recorded history.

Average October precipitation is 2.20 inches which is quite a bit less than in the preceding warmer months. This is mainly due to the fact that tropical air masses which can hold more moisture are not that common in Rochester after mid-September. However, the wettest October was also the 9th wettest month ever in Rochester. This occurred in 1911 when 9.11 inches of rain fell. The driest October was in 1952 when only 0.01 inches of rain was observed. The first snowfall of the month usually occurs by late October (mostly trace amounts). October does average less than an inch of snowfall.

October averages 9 clear, 8 partly cloudy, and 15 cloudy days. The amount of daylight continues to drop rapidly with 11 hours and 42 minutes on the first, to 10 hours and 15 minutes on the 31st.

The average wind speed in October is 12.1 mph with the prevailing direction still from the south.

K. November Climatology

The month of November marks the transition from fall to winter in southeastern Minnesota, as it does across much of the upper Midwest. The average temperature falls more rapidly in November than it does in any other month. The normal high temperature at Rochester drops 17 degrees from 48 on the first to 31 on the 30th. The normal low plummets 14 degrees from 31 on the first to 17 on the 30th. Late November also marks the time when the first sub zero temperatures of the season are likely, although they can occur at any time during the month. November usually has one day with below zero readings.

During the month of November, the main polar jet stream usually migrates south of Rochester to a position over the central U.S. This migration allows developing storm systems to track further south than they do earlier in the fall. If these storms track through Iowa or the northern half of Illinois, Rochester is likely to experience some of its first measurable snows of the winter season.

The average temperature for the month of November is 31.2 degrees with an average high of 38.7 and an average low of 23.7. Rochester's warmest November occurred in 2001 when the average temperature was 45.2 degrees while the coldest November occurred back in 1985 with an average temperature of only 23.0 degrees. The all-time record high for the month is 77 degrees set on the first in 1983 while the record low is 24 degrees below zero in 1887 on the 28th.

Average November precipitation is 2.01 inches with a record maximum of 5.91 inches in 1909. The lowest monthly total is 0.01 inches, back in 1917.

November snowfall averages over 5 inches but amounts are highly variable from year to year. Many Novembers have seen only a trace of snow, but in 1985 Rochester established its record November snowfall of 22.5 inches. The one-day record of 10.6 inches on the 25th in 1952 is also the 4th snowiest day on record for Rochester.

November is the cloudiest month of the year in Rochester. A normal November has 5 clear, 6 partly cloudy, and 19 cloudy days. The amount of daylight also continues to decline, from 10 hours and 13 minutes on the first to 9 hours and 10 minutes on the 30th.

The mean wind speed in November is 13.2 mph, tying it with March as the second windiest month of the year. The prevailing wind direction shifts to the northwest.

L. December Climatology

The month of December marks the first full month of meteorological winter in the Rochester area. The monthly mean temperature is 17.3 degrees with an average daily high of 24.5 and an average low of 10.5 degrees. December is also the month when below zero temperatures become more common, with an average of 9 sub-zero days occurring during the month. The coldest temperature ever in Rochester during December occurred on the 19th in 1983 when the mercury plunged to 33 below zero, while the warmest December reading is 63 degrees on the 17th in 1939.

The coldest December ever was in 1983 when the average temperature was only 2.9 degrees, while the warmest occurred in 1931 with an average temperature of 30.6. December and January are the only months when average temperatures never reach freezing (32 F).

The average snowfall in Rochester during December is over 10 inches, making it and January the snowiest months. The average melted equivalent precipitation is, however, only 1.02 inches which actually makes December, on average, the 3rd driest month of the year. Total precipitation has ranged from a trace in 1943 to 2.83 inches in 1982. Snowfall has ranged from a trace in 1943 and 1913, to 35.3 inches in 2000. The 2000 snowfall is also the highest for any month on record. There are normally 3 days with one or more inches of snowfall.

December averages 6 clear, 6 partly cloudy, and 19 cloudy days. The amount of daylight is least in December, reaching the annual minimum of 8 hours and 54 minutes on the 20th.

The average wind speed in December is 12.8 mph with the prevailing wind direction from the northwest.

VI. Acknowledgments

Dan Baumgardt, Science and Operations Officer at WSO-La Crosse, who proofed this publication and provided many helpful hints and ideas.

Jeff Boyne, Meteorologist at WSO-La Crosse, who helped research some of the data.

VII. Sources

Much of the information was researched using “in-house” National Weather Service data bases and monthly climate summaries.

The Midwest Climate Center’s online database for Rochester MN, which was used to research some of the data and statistics.

The International Station Meteorological Climate Summary CD ROM, Ver. 3.0 from March of 1995, was also used. This CD was jointed produced by the Fleet Numerical Meteorology and Oceanography Detachment, National Climatic Data Center (NCDC), and USAFETAC OL-A.

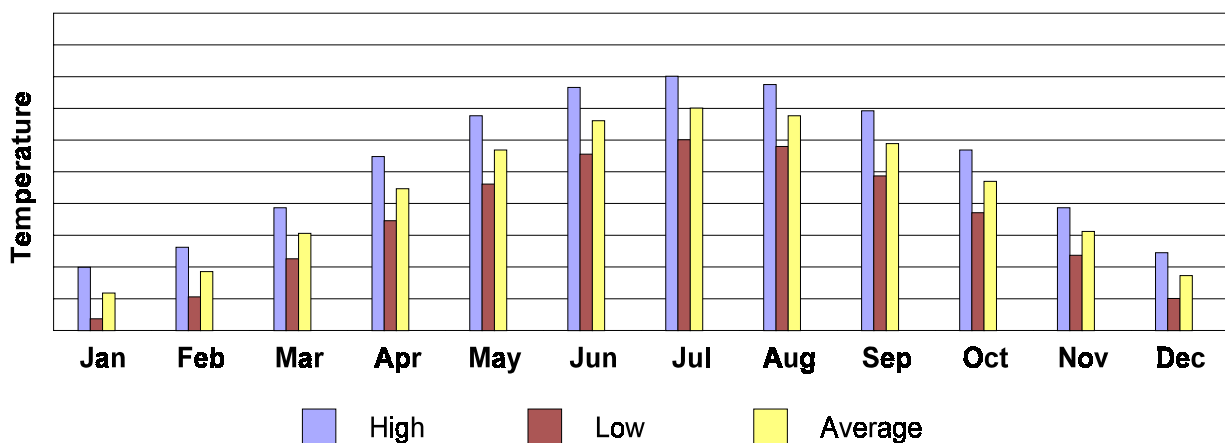
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Normals

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Normal Temperatures

1971-2000



Average Monthly Temperatures

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
High	19.9	26.2	38.7	54.8	67.7	76.6	80.1	77.5	69.2	56.9	38.7	24.5	52.6
Low	3.7	10.6	22.6	34.6	46.1	55.6	60.1	58.0	48.7	37.1	23.7	10.1	34.2
Ave	11.8	18.4	30.6	44.7	56.9	66.1	70.1	67.7	58.9	47.0	31.2	17.3	43.4

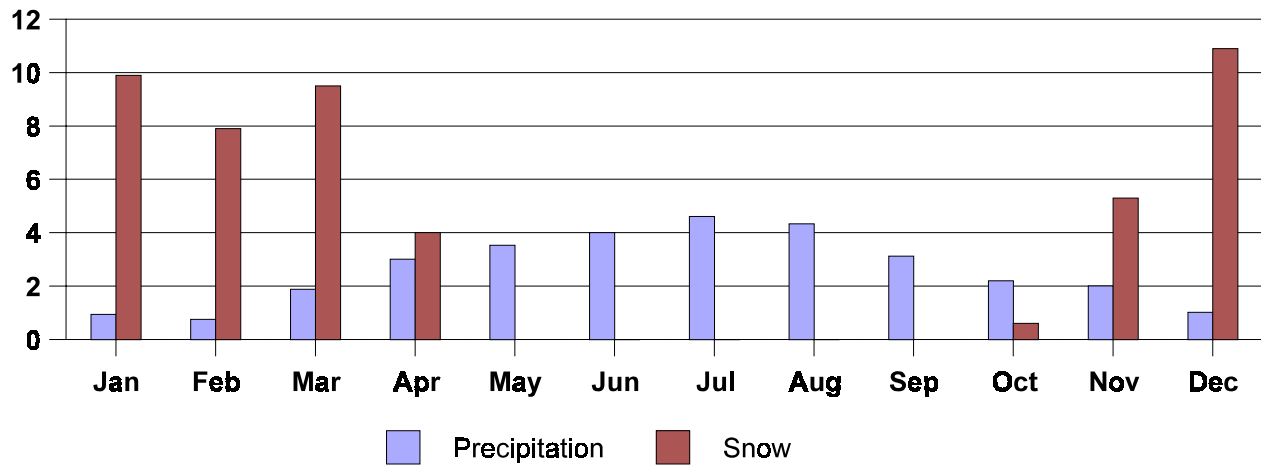
Average Number of Days With...

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
High ≥ 90	0	0	0	0.1	0.3	1.7	3.5	1.8	0.4	0	0	0	7.8
High ≤ 32	24.2	18.0	9.6	0.6	0	0	0	0	0	0.1	7.1	22.7	82.3
Low ≤ 32	30.8	27.3	26.1	12.9	2.0	0	0	0	0.8	10.1	23.3	30.3	163.6
Low ≤ 0	14.1	9.3	2.1	0	0	0	0	0	0	0	1.1	9.0	35.6

Seasonal

Spring (Mar-May)	43.7
Summer (Jun-Aug)	68.7
Fall (Sep-Nov)	46.7
Winter (Dec-Feb)	16.4

Normal Precipitation



Average Monthly Precipitation

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
Pcpn	0.94	0.75	1.88	3.01	3.53	4.00	4.61	4.33	3.12	2.20	2.01	1.02	31.40
Snow	9.9	7.9	9.5	4.0	T	0	0	0	T	0.6	5.3	10.9	*

*Snowfall is recorded on a "seasonal" basis, July-June.

Average Seasonal Snowfall (July-June)

48.1

Average Number of Days With...

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
>= 0.01	0	0	0	0.1	0.3	1.7	3.5	1.8	0.4	0	0	0	7.8
>= 1.00	24.2	18.0	9.6	0.6	0	0	0	0	0	0.1	7.1	22.7	82.3
Snowfall > 1.0	2.9	2.4	3.1	1.1	0	0	0	0	0	0.2	1.7	3.1	14.5

Seasonal

Spring (Mar-May)	8.00
Summer (Jun-Aug)	12.01
Fall (Sep-Nov)	6.75
Winter (Dec-Feb)	2.57

Other Normals

Average Number of Days With...

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
Vsby <= 1/4 mile	3.6	3.3	4.3	2.1	2.0	1.1	1.7	2.5	2.8	1.9	3.2	4.1	32.6
Thunderstorms	0.1	0.2	1.3	3.3	5.7	7.3	7.7	6.4	4.8	2.0	0.6	0.1	39.5
<i>Sky conditions</i>													
Clear	7.4	7.3	6.3	6.1	6.8	6.7	8.4	8.7	9.1	8.5	5.0	6.0	86.3
Partly Cloudy	7.1	6.2	7.1	7.4	8.8	10.7	1.9	1.1	7.3	7.8	5.6	6.3	97.3
Cloudy	16.5	14.8	17.6	16.4	15.4	12.7	10.7	11.2	13.6	14.7	19.4	18.7	181.7

Vsby = visibility

More Normals/Averages

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yearly
Ave Wind Speed	13.0	12.5	13.2	13.7	12.4	11.4	10.1	9.8	10.9	12.1	13.2	12.8	12.1
<i>Degree Days</i>													
Heating	1659	1305	1066	6099	281	65	23	50	208	5581	1014	1479	8308
Cooling	0	0	0	1	30	99	181	135	26	1	0	0	473

Wind speed is measured in mph (miles per hour). Degree days are based on 65 F.

January Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	20	4	12	53	0	.03	744	443
2	20	4	12	53	0	.03	744	444
3	20	4	12	53	0	.03	744	444
4	20	4	12	53	0	.03	744	445
5	20	4	12	53	0	.03	744	446
6	19	4	12	53	0	.03	744	447
7	19	4	12	53	0	.03	744	448
8	19	4	12	53	0	.03	744	449
9	20	3	12	53	0	.03	744	451
10	20	3	12	53	0	.03	743	452
11	20	3	12	53	0	.03	743	453
12	20	3	11	53	0	.03	743	454
13	20	3	11	53	0	.03	742	455
14	20	3	11	53	0	.03	742	456
15	20	3	11	53	0	.03	741	457
16	20	3	11	53	0	.03	741	459
17	20	3	11	53	0	.03	740	500
18	20	3	11	53	0	.03	740	501
19	20	3	11	53	0	.03	739	502
20	20	3	11	53	0	.03	738	504
21	20	3	12	53	0	.03	738	505
22	20	3	12	53	0	.03	737	506
23	20	4	12	53	0	.03	736	508
24	20	4	12	53	0	.03	735	509
25	20	4	12	53	0	.03	735	510
26	20	4	12	53	0	.03	734	512
27	20	4	12	52	0	.03	733	513
28	20	5	13	52	0	.03	732	514
29	20	5	13	52	0	.03	731	516
30	20	5	13	52	0	.03	730	517
31	21	5	13	52	0	.03	729	518
Monthly	19.9	3.7	11.8	1636	0	0.94		

February Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	23	6	14	51	0	.03	728	520
2	23	6	15	51	0	.03	727	521
3	23	6	15	51	0	.03	725	522
4	23	8	15	50	0	.02	724	524
5	23	8	16	50	0	.02	723	525
6	23	8	16	50	0	.02	722	527
7	23	8	16	50	0	.02	721	528
8	24	9	16	49	0	.02	719	529
9	24	9	16	49	0	.02	718	531
10	24	9	17	49	0	.02	717	532
11	25	10	17	48	0	.02	715	534
12	25	10	17	48	0	.02	714	535
13	25	10	18	48	0	.02	713	536
14	26	11	18	47	0	.02	711	538
15	26	11	18	47	0	.03	710	539
16	26	11	19	47	0	.03	708	540
17	27	11	19	46	0	.03	707	542
18	27	12	20	46	0	.03	705	543
19	28	12	20	46	0	.03	704	544
20	28	12	20	45	0	.03	702	546
21	28	12	20	45	0	.03	701	547
22	29	13	21	44	0	.03	659	548
23	29	13	21	44	0	.03	658	550
24	29	13	21	44	0	.03	656	551
25	30	14	22	43	0	.03	654	552
26	30	14	22	43	0	.03	653	554
27	31	15	23	42	0	.04	651	555
28	31	15	23	42	0	.04	649	556
29	32	16	24	41	0	.04	648	558
Monthly	26.2	10.6	18.4	1336	0	0.75		

March Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	32	17	24	41	0	.04	646	559
2	32	17	24	41	0	.04	644	600
3	33	18	25	40	0	.04	643	600
4	33	18	25	40	0	.04	641	602
5	33	18	25	39	0	.04	639	603
6	34	18	26	39	0	.05	637	604
7	34	18	26	39	0	.05	636	605
8	35	19	27	38	0	.05	634	607
9	35	19	27	38	0	.05	632	608
10	36	20	28	37	0	.05	630	609
11	36	20	28	37	0	.05	629	610
12	37	21	29	36	0	.05	627	612
13	37	21	29	36	0	.06	625	613
14	37	22	30	35	0	.06	623	614
15	38	22	30	35	0	.06	622	615
16	38	23	31	34	0	.06	620	617
17	39	23	31	34	0	.06	618	618
18	39	24	32	33	0	.06	616	619
19	40	24	32	33	0	.07	614	620
20	40	24	32	33	0	.07	612	622
21	41	25	33	32	0	.07	611	623
22	41	25	33	32	0	.07	609	624
23	42	26	34	31	0	.07	607	625
24	42	26	34	31	0	.07	605	626
25	43	26	35	30	0	.07	603	628
26	44	26	35	30	0	.08	602	629
27	44	27	36	29	0	.08	600	630
28	45	27	36	29	0	.08	558	631
29	45	28	37	28	0	.08	556	633
30	46	28	37	28	0	.08	554	634
31	47	29	38	27	0	.08	553	635
Monthly	38.7	22.6	30.6	1057	0	1.88		

April Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	48	29	38	27	0	.08	551	636
2	48	29	39	27	0	.09	549	637
3	48	30	39	26	0	.09	547	639
4	49	30	40	25	0	.09	545	640
5	49	31	40	25	0	.09	544	641
6	50	31	40	24	0	.09	542	642
7	51	32	41	24	0	.09	540	643
8	51	32	41	23	0	.09	538	645
9	52	32	42	23	0	.10	537	646
10	52	33	42	22	0	.10	535	647
11	53	33	43	22	0	.10	533	648
12	53	33	43	22	0	.10	531	649
13	54	34	44	21	0	.10	530	651
14	54	34	44	21	0	.10	528	652
15	55	34	45	20	0	.10	526	653
16	55	35	45	20	0	.10	525	654
17	55	35	45	19	0	.10	523	656
18	56	36	46	19	0	.10	521	657
19	56	36	46	18	0	.10	520	658
20	57	36	47	18	0	.10	518	659
21	58	36	47	18	0	.11	517	700
22	58	37	48	17	0	.11	515	702
23	59	37	48	17	0	.11	513	703
24	59	37	48	16	0	.11	512	704
25	59	38	49	16	0	.11	510	705
26	60	38	49	15	0	.11	509	706
27	60	39	50	15	0	.11	507	708
28	61	40	51	15	1	.11	506	709
29	61	40	51	14	1	.11	504	710
30	62	40	51	14	1	.11	503	711
Monthly	54.8	34.6	44.7	603	3	3.01		

May Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	62	40	51	14	0	.11	501	712
2	62	41	51	13	0	.11	500	714
3	63	41	52	13	0	.11	459	715
4	63	42	52	12	0	.11	457	716
5	64	42	53	12	0	.11	456	717
6	64	42	53	12	0	.11	455	718
7	64	43	53	11	0	.11	453	719
8	65	43	54	11	1	.11	452	721
9	65	43	54	11	1	.11	451	722
10	66	44	55	10	1	.11	450	723
11	66	45	55	9	1	.11	448	724
12	66	45	56	9	1	.11	447	725
13	67	45	56	9	1	.11	446	726
14	67	46	57	8	1	.11	445	727
15	67	46	57	8	1	.11	444	728
16	68	46	57	8	1	.11	443	730
17	68	47	58	7	1	.11	442	731
18	69	47	58	7	1	.11	441	732
19	69	47	58	7	1	.11	440	733
20	69	47	58	7	1	.12	439	734
21	70	48	59	6	1	.12	438	735
22	70	48	59	6	1	.12	437	736
23	70	48	59	6	1	.12	436	737
24	71	49	60	5	1	.12	436	738
25	71	49	60	5	1	.12	435	739
26	71	50	61	4	2	.12	434	740
27	72	50	61	4	2	.12	433	741
28	72	51	62	3	2	.12	433	742
29	72	51	62	3	2	.12	432	743
30	73	51	62	3	2	.12	432	743
31	73	51	62	3	2	.12	431	744
Monthly	67.7	46.1	56.9	267	30	3.53		

June Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	73	51	62	5	2	.12	430	745
2	73	52	62	4	2	.12	430	746
3	74	52	63	4	2	.12	430	747
4	74	52	63	4	2	.13	429	747
5	74	53	63	3	2	.13	429	748
6	74	54	64	3	3	.13	428	749
7	74	54	64	3	3	.13	428	750
8	75	54	64	3	3	.13	428	750
9	75	54	64	3	3	.13	428	751
10	76	54	65	2	3	.13	427	751
11	76	54	65	2	3	.13	427	752
12	76	55	65	2	3	.13	427	753
13	76	55	65	2	3	.13	427	753
14	77	56	66	2	4	.13	427	753
15	77	56	66	1	4	.13	427	754
16	77	56	66	1	4	.13	427	754
17	77	56	67	1	4	.13	427	755
18	77	56	67	1	4	.14	427	755
19	78	56	67	1	4	.14	427	755
20	78	57	68	1	4	.14	428	756
21	78	57	68	1	4	.14	428	756
22	78	57	68	1	4	.14	428	756
23	79	58	69	1	5	.14	428	756
24	79	58	69	1	5	.14	429	756
25	79	58	69	1	5	.14	429	756
26	79	58	69	1	5	.14	429	756
27	79	58	69	1	5	.14	430	756
28	79	58	69	*	5	.14	430	756
29	79	59	69	*	5	.14	431	756
30	79	59	69	*	5	.14	431	756
Monthly	76.6	55.6	66.1	56	99	4.00		

July Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	79	59	69	*	5	.14	432	756
2	80	59	69	*	5	.14	432	756
3	80	59	69	*	5	.14	433	756
4	80	59	69	*	5	.14	433	756
5	80	59	69	1	5	.15	434	755
6	80	59	69	1	5	.15	435	755
7	80	59	69	1	5	.15	435	755
8	80	59	69	1	5	.15	436	754
9	80	60	70	1	6	.15	437	754
10	80	60	70	1	6	.15	438	753
11	80	60	70	1	6	.15	438	753
12	80	60	70	1	6	.15	439	752
13	80	60	70	1	6	.15	440	752
14	80	60	70	1	6	.15	441	751
15	80	60	70	1	6	.15	442	750
16	81	60	70	1	6	.15	443	750
17	81	60	70	1	6	.15	444	749
18	81	60	70	1	6	.15	445	748
19	81	60	70	0	6	.15	445	747
20	81	61	71	0	6	.15	446	746
21	80	61	71	0	6	.15	447	746
22	80	61	71	0	6	.15	448	745
23	80	61	71	0	6	.15	449	744
24	80	61	71	0	6	.15	450	743
25	80	61	71	0	6	.15	451	742
26	80	61	71	0	6	.15	452	741
27	80	61	71	0	6	.15	453	740
28	80	61	71	0	6	.15	454	739
29	80	61	71	0	6	.15	456	738
30	80	61	71	0	6	.15	457	736
31	80	61	71	0	6	.15	458	735
Monthly	80.1	60.1	70.1	16	181	4.61		

August Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	80	61	70	0	5	.15	459	734
2	80	61	70	0	5	.15	500	733
3	80	61	70	0	5	.15	501	732
4	80	61	70	0	5	.15	502	730
5	79	60	69	0	5	.15	503	729
6	79	60	69	0	5	.15	504	728
7	79	60	69	0	5	.15	505	726
8	79	59	69	0	5	.15	506	725
9	79	59	69	0	5	.15	508	724
10	79	59	69	0	5	.14	509	722
11	79	59	69	1	5	.14	510	721
12	78	59	69	1	5	.14	511	719
13	78	59	69	1	4	.14	512	718
14	78	59	68	1	4	.14	513	716
15	78	59	68	1	4	.14	514	715
16	78	58	68	1	4	.14	516	713
17	78	58	68	1	4	.14	517	712
18	77	58	68	1	4	.14	518	710
19	77	57	67	1	4	.14	519	709
20	77	57	67	1	4	.14	520	707
21	77	57	67	2	4	.14	521	705
22	77	57	67	2	4	.14	522	704
23	76	57	67	2	4	.13	523	702
24	76	57	67	2	4	.13	525	700
25	76	56	66	2	3	.13	526	659
26	76	56	66	2	3	.13	527	657
27	75	55	65	2	3	.13	528	655
28	75	55	65	2	3	.13	529	654
29	75	55	65	2	3	.13	530	652
30	74	55	65	2	3	.13	531	650
31	74	55	64	3	3	.12	533	649
Monthly	77.5	58.0	67.7	33	135	4.33		

September Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	74	54	64	3	2	.12	534	647
2	74	53	63	3	2	.12	535	645
3	74	53	63	3	2	.12	536	643
4	74	52	63	3	2	.12	537	641
5	73	52	62	3	2	.12	538	640
6	72	52	62	4	2	.12	539	638
7	72	52	62	4	2	.12	540	636
8	72	51	61	4	1	.11	542	634
9	71	51	61	4	1	.11	543	632
10	71	51	61	4	1	.11	544	631
11	70	51	61	4	1	.11	545	629
12	70	51	60	5	1	.11	546	627
13	70	50	60	5	1	.11	547	625
14	69	49	59	5	1	.11	548	623
15	69	49	59	6	1	.10	550	621
16	69	49	59	6	1	.10	551	620
17	69	48	58	6	1	.10	552	618
18	69	47	58	7	1	.10	553	616
19	68	47	58	7	1	.10	554	614
20	67	47	57	7	0	.10	555	612
21	67	47	57	8	0	.10	556	610
22	67	46	57	8	0	.10	558	609
23	66	46	56	8	0	.09	559	607
24	66	46	56	9	0	.09	600	605
25	66	45	56	9	0	.09	601	552
26	66	45	56	9	0	.09	602	559
27	66	45	56	10	0	.09	603	557
28	65	44	55	10	0	.09	605	556
29	65	43	54	10	0	.09	606	554
30	64	43	54	11	0	.08	607	552
Monthly	69.2	48.7	58.9	185	26	3.12		

October Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	64	43	54	11	1	.08	608	550
2	64	43	53	11	0	.08	609	548
3	64	43	53	12	0	.08	610	547
4	63	42	52	12	0	.08	612	545
5	62	41	52	12	0	.07	613	543
6	62	41	52	13	0	.07	614	541
7	62	41	51	13	0	.07	615	540
8	61	40	51	14	0	.07	616	538
9	60	40	50	14	0	.07	618	536
10	60	40	50	14	0	.07	619	534
11	60	39	50	15	0	.07	620	533
12	59	39	49	15	0	.07	621	531
13	59	38	49	16	0	.07	623	529
14	58	38	48	16	0	.07	624	527
15	58	38	48	16	0	.07	625	526
16	57	38	47	17	0	.07	626	524
17	57	37	47	17	0	.07	628	522
18	56	36	46	18	0	.07	629	521
19	56	36	46	18	0	.07	630	519
20	55	35	45	19	0	.07	631	518
21	55	35	45	19	0	.07	633	516
22	54	34	44	20	0	.06	634	514
23	53	34	44	20	0	.07	635	513
24	53	33	43	21	0	.07	636	511
25	52	33	43	21	0	.07	638	510
26	51	33	42	21	0	.07	639	508
27	51	33	42	22	0	.07	640	507
28	50	32	41	22	0	.07	642	506
29	50	32	41	23	0	.07	643	504
30	49	31	40	24	0	.07	644	503
31	48	31	40	24	0	.07	646	501
Monthly	56.9	37.1	47.0	530	1	2.20		

November Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	48	31	39	25	0	.07	647	500
2	48	29	38	25	0	.07	648	459
3	47	29	38	26	0	.07	650	457
4	46	29	37	26	0	.07	651	456
5	45	29	37	27	0	.07	652	455
6	44	28	36	27	0	.07	653	454
7	44	28	36	28	0	.07	655	452
8	43	27	35	28	0	.07	656	451
9	42	27	35	29	0	.07	657	450
10	42	26	34	29	0	.07	659	449
11	41	26	34	30	0	.07	700	448
12	40	25	33	30	0	.07	701	447
13	40	24	32	31	0	.07	703	446
14	39	24	32	31	0	.07	704	445
15	38	24	31	32	0	.07	705	444
16	38	24	31	33	0	.07	707	443
17	37	23	30	33	0	.07	708	442
18	37	23	30	34	0	.07	709	441
19	36	22	29	34	0	.07	710	440
20	36	22	29	35	0	.07	712	440
21	35	21	28	35	0	.07	713	439
22	35	21	28	36	0	.07	714	438
23	34	20	27	36	0	.06	715	438
24	34	20	27	37	0	.06	717	438
25	33	19	26	38	0	.06	718	436
26	33	19	26	38	0	.06	719	436
27	32	18	25	39	0	.06	720	435
28	32	18	25	39	0	.06	721	435
29	31	17	24	40	0	.06	723	434
30	31	17	24	41	0	.05	724	434
Monthly	38.7	23.7	31.2	972	0	2.01		

December Normals

(1971-2000)

Day	Temperature			Degree Days		Precipitation	Sunrise	Sunset
	Max	Min	Average	Heating	Cooling			
1	30	17	23	41	0	.05	725	434
2	30	17	23	42	0	.05	726	433
3	29	16	22	42	0	.04	727	433
4	29	16	22	43	0	.04	728	433
5	28	15	21	43	0	.04	729	433
6	28	14	21	44	0	.04	730	433
7	27	13	20	44	0	.04	731	432
8	27	13	20	45	0	.04	732	432
9	27	13	20	45	0	.04	733	432
10	26	12	19	46	0	.03	734	432
11	26	12	19	46	0	.03	735	432
12	25	11	18	47	0	.03	735	433
13	25	11	18	47	0	.03	736	433
14	25	11	18	48	0	.03	737	433
15	24	10	17	48	0	.03	738	433
16	24	10	17	48	0	.03	738	434
17	24	9	17	49	0	.03	739	434
18	23	9	16	49	0	.03	740	434
19	23	9	16	49	0	.03	740	435
20	23	8	16	50	0	.03	741	435
21	22	8	15	50	0	.03	741	436
22	22	8	15	50	0	.03	742	436
23	22	7	15	51	0	.03	742	437
24	22	6	14	51	0	.02	743	437
25	22	6	14	51	0	.02	743	438
26	21	6	14	52	0	.03	743	439
27	21	6	14	52	0	.03	744	439
28	21	5	13	52	0	.03	744	440
29	21	5	13	52	0	.03	744	441
30	21	5	13	52	0	.03	744	442
31	20	5	13	53	0	.03	744	442
Monthly	24.5	10.1	17.3	1482	0	1.02		

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Temperature Records

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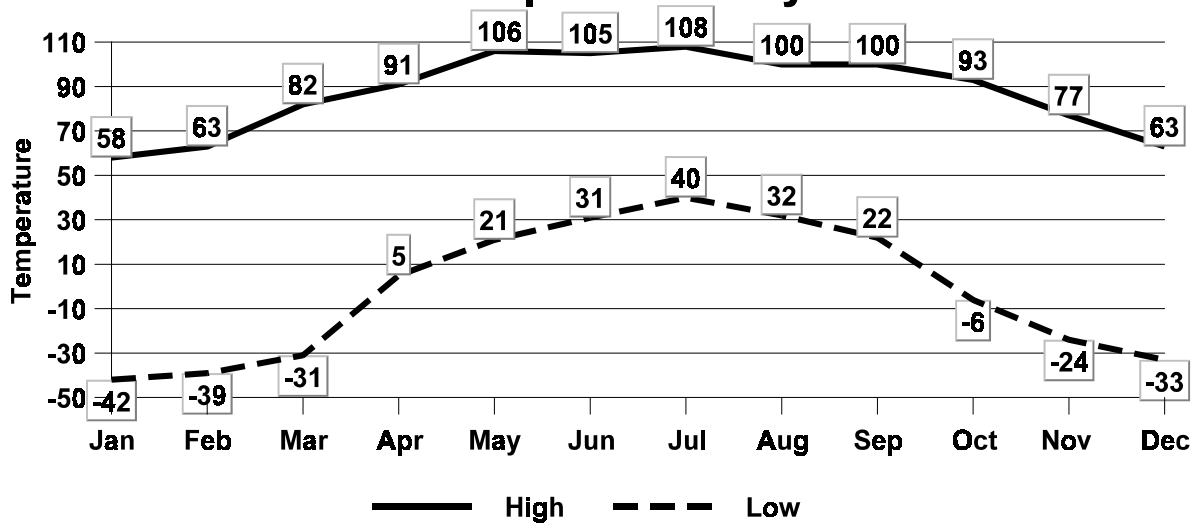
Temperature Records

Warmest Mean Temperature for a Year			Coldest Mean Temperature for a Year		
1.	49.8	1931	1.	39.8	1917
2.	47.5	1987	2.	40.9	1996
3.	47.4	1998	3.	41.0	1937
4.	46.6	1941	4.	41.1	1972
5.	46.1	1934	5.	41.2	1951
6.	46.0	1949	6.	41.4	1950
7.	45.9	1946	7.	41.5	1978
8.	45.8	1930	8.	42.0	1985
9.	45.6	1954	9.	42.1	1979
		1944			1929

Highest Mean Temperature for a Month			Lowest Mean Temperature for a Month		
1.	77.6	July 1936	1.	-2.3	January 1912
2.	77.2	July 1955	2.	-2.0	January 1888
		July 1916	3.	-1.8	January 1977
4.	77.0	August 1947	4.	-1.5	January 1979
5.	75.7	July 1935	5.	0.5	February 1936
6.	75.4	July 1949	6.	1.5	January 1887
7.	75.0	July 1957	7.	1.9	January 1918
8.	74.6	July 1974	8.	2.7	January 1893
9.	74.5	August 1955	9.	2.9	December 1983
10.	74.4	August 1937	10.	3.0	January 1982
					January 1929

Note: All records are in degrees (F) and date back to 1886.

Record Temperatures by Month



Daily Temperatures

Warmest Highs			Coldest Lows		
1)	108	July 14 th , 1936	1)	-42	January 7 th , 1887
2)	107	July 13 th , 1936	2)	-40	January 30 th , 1951
		July 12 th , 1936	3)	-39	February 20 th , 1930
4)	106	May 31 st , 1934			January 13 th , 1912
5)	105	July 10 th , 1936			January 12 th , 1912
		July 6 th , 1936			January 21 st , 1888
		June 27 th , 1934	7)	-37	January 22 nd , 1888
8)	104	July 11 th , 1936	8)	-36	January 15 th , 1888
9)	102	July 31 st , 1988	9)	-35	February 2 nd , 1996
		July 10 th , 1976	10)	-34	February 16 th , 1936
		July 19 th , 1940			January 24 th , 1935
		July 17 th , 1936			January 23 rd , 1935
		July 7 th , 1936			

Highest Mean Temperature for Months

JANUARY	FEBRUARY	MARCH	APRIL
1. 25.8 1990	1. 32.0 1931	1. 43.4 1910	1. 55.0 1915
2. 25.7 1933	2. 31.8 1954	2. 42.4 1946	2. 53.0 1977
3. 25.0 1931	3. 29.4 1998	3. 39.3 2000 1973	3. 51.7 1955
4. 24.5 1944	4. 29.3 1987		4. 51.6 1941
5. 24.3 2002	5. 28.8 1930	5. 39.0 1945	5. 50.8 1987
6. 23.0 1914	6. 28.2 1976	6. 38.7 1977	1942
7. 21.8 1919	7. 26.7 1992	7. 37.2 1918	7. 50.4 1985
8. 21.7 1989	8. 26.3 2000	8. 36.8 1968	8. 49.6 1948 1912
9. 21.4 1992	9. 26.2 1999	9. 36.2 1987	
10. 21.3 1964	10. 25.9 2002	10. 35.9 1985	10. 49.5 1976, '46
MAY	JUNE	JULY	AUGUST
1. 66.2 1934	1. 73.8 1933	1. 77.6 1936	1. 77.0 1947
2. 64.5 1977	2. 72.4 1931	2. 77.2 1955 1916	2. 74.5 1955
3. 63.3 1911	3. 72.2 1991		3. 74.4 1937
1887	4. 71.9 1956 1934	4. 75.7 1935	4. 73.6 1983
5. 63.2 1998		5. 75.4 1949	5. 73.4 1936
6. 62.6 1936	6. 71.6 1949	6. 75.0 1957	6. 73.1 1959
7. 62.4 1941	7. 71.4 1971 1911	7. 74.0 1931	7. 72.8 1909
8. 62.3 1939		8. 73.9 1983	8. 72.6 1988
9. 61.7 1988	9. 70.4 1988	9. 73.8 1943,1914	9. 72.1 1949
10. 61.3 1962,1944	10. 70.2 1919		10. 71.8 1916
SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1. 69.6 1908	1. 58.1 1963	1. 45.4 2001	1. 30.6 1931
2. 66.9 1931	2. 57.8 1947	2. 40.4 1913	2. 29.6 1959
3. 65.4 1948	3. 55.5 1956	3. 40.3 1931	3. 29.2 1913
4. 65.2 1933	4. 54.4 1953	4. 40.1 1999	4. 29.0 1918
5. 64.4 1998	5. 54.2 1914	5. 38.8 1963	5. 28.5 1965
6. 64.3 1920	6. 53.9 1973 1950	6. 37.8 1944 1934	6. 27.4 1939
7. 64.0 1919			7. 26.6 1941
8. 63.7 1978	8. 53.8 1920	8. 37.7 1990	8. 26.4 2001
9. 63.6 1936	9. 53.5 1971	9. 37.5 1975	9. 26.1 1982
10. 63.4 1939	10. 53.0 1931	10. 37.4 1953	10. 26.0 1979

Lowest Mean Temperature for Months

JANUARY	FEBRUARY	MARCH	APRIL
1. -2.3 1912	1. 0.5 1936	1. 17.8 1888	1. 37.6 1950
2. -2.0 1888	2. 5.3 1917	2. 18.1 1965	2. 37.9 1961
3. -1.8 1977	3. 5.7 1979	3. 18.9 1960	3. 38.3 1909
4. -1.5 1979	4. 7.3 1888	4. 19.9 1932	4. 39.3 1983
5. 1.5 1887	5. 8.2 1929	5. 21.0 1975	5. 39.4 1953
6. 1.9 1918	6. 8.3 1978	6. 21.3 1969 1951	6. 39.6 1975
7. 2.7 1893	7. 8.4 1887		7. 39.7 1920
8. 3.0 1982 1929	8. 9.2 1910	8. 22.0 1912	8. 40.1 1936
	9. 9.4 1989	9. 23.4 1984	9. 40.5 1956
10. 3.2 1966	10. 9.8 1937	10. 23.6 1950	10. 40.7 1951
MAY	JUNE	JULY	AUGUST
1. 49.6 1888	1. 59.6 1969	1. 64.2 1992	1. 63.2 1992
2. 51.0 1945	2. 60.2 1958	2. 66.8 1996	2. 63.6 1915
3. 51.3 1997 1967	3. 60.8 1945	1958	3. 64.0 1986
	4. 61.3 1915	4. 66.9 1967	4. 64.2 1967
5. 51.6 1968	5. 61.5 1982	5. 67.0 1915	5. 64.9 1994
6. 51.7 1954	6. 61.8 1916	6. 67.1 1971	6. 65.1 1977
7. 51.8 1983 1966	7. 61.9 1935	7. 67.3 1994	7. 65.3 1985
	8. 62.4 1917	8. 67.4 1962	8. 65.4 1997
9. 51.9 1935	9. 62.6 1985	1888	1933
10. 52.0 1947,	10. 63.0 1960	10. 67.7	10. 65.7 1950
SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1. 54.7 1974	1. 37.5 1917	1. 23.0 1985	1. 2.9 1983
2. 54.9 1965 1918	2. 41.2 1887	2. 23.8 1911	2. 6.1 2000
	3. 42.0 1988	3. 24.0 1991	3. 6.3 1985
4. 56.2 1984 1975 1888	1976	4. 24.6 1996	4. 7.8 1886
	1952	5. 24.7 1959	5. 9.1 1917
	6. 42.3 1987	6. 24.8 1951	6. 9.6 1976
7. 56.4 1943	7. 42.8 1937	7. 24.9 1976	1963
8. 56.6 1962	8. 43.3 1972	8. 26.3 1986	8. 9.7 1919
9. 56.8 1942	9. 43.6 1980	1955	9. 10.0 1989
10. 56.9 1951	10. 43.7 1919	10. 26.9 1910	10. 10.8 1950

January Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	42/1998	-29/1974	-13/1974	30/1965
2	45/1998	-27/1979	-10/1979	32/1997
3	41/1998	-28/1911	-7/1969	32/1997
4	47/1891	-32/1920	-7/1979	29/1992
5	45/1930	-27/1979	-9/1988*	29/1998*
6	46/1933	-28/1912	-10/1968*	30/1987
7	45/1933	-42/1887	-6/1994	34/1965
8	47/2002	-33/1912	-3/1970	32/1992
9	46/2002*	-30/1977	-10/1977	33/2002
10	47/1890	-28/1982	-8/1979*	32/1975
11	43/2002*	-29/1977	-6/1997	26/1996
12	44/1961	-39/1912	-3/1997	32/1995
13	50/1894	-39/1912	-10/1965	30/1958
14	50/1914	-26/1979*	-12/1963	30/1958*
15	49/1990	-36/1888	-15/1994	34/1980
16	47/1894	-29/1977	-16/1982	33/1980
17	49/1894	-25/1954	-9/1994	30/1986
18	47/1919	-31/1967	-18/1994	31/1986
19	46/1919	-32/1970	-10/1970	29/1986
20	47/1944	-26/1970	-15/1984	31/1974
21	45/1968	-39/1888	-6/1970	27/1974
22	46/1964	-37/1888	2/1966*	30/1953
23	50/1981	-34/1935	-17/1936	27/1990
24	55/1961	-34/1935	-6/1982	29/1989
25	58/1944	-23/1936	-7/1972	30/1981
26	52/2002	-30/1917	-8/1972	31/1974
27	48/2002	-26/1950	-5/1966	30/1968*
28	49/1931	-33/1915	-16/1966	31/1970
29	48/1919	-25/1951	-10/1966	25/1987
30	48/1892	-40/1951	-11/1996	33/1988
31	48/1989	-31/1918	-4/1994	33/1989

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

February Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	53/1931	-31/1918	-13/1996	28/1973
2	47/1931	-35/1996	-20/1996	27/1954
3	51/1934	-32/1912	-15/1996	32/1991
4	49/1964	-32/1891	-9/1979	31/1954
5	48/1946	-29/1979	-6/1988	28/1986
6	43/1987	-28/1936	1/1962	31/1963
7	52/1987	-21/1971	-6/1994	29/1970
8	49/2002	-27/1933	-5/1971	34/1966
9	49/1966*	-29/1933	-3/1982	34/1966
10	48/1977	-25/1937	2/1986	33/1976
11	55/1961	-23/1939	-3/1955	33/1961
12	54/1990	-24/1917	3/1955	33/1984*
13	47/1919	-16/1970	5/1920	32/1984
14	58/1954	-23/1951	6/1963	31/1954
15	49/1931	-19/1939	3/1958	35/1984*
16	59/1931	-34/1936	-3/1979	35/1981
17	63/1981	-21/1958	-3/1993	35/1981
18	60/1981	-18/1936	5/1966	37/1954
19	59/1930	-32/1929	1/1966	34/1954
20	60/1930	-39/1929	3/1967	34/1954
21	60/1930	-32/1936	-3/1963	33/1985
22	59/1930	-22/1929	0/1965	35/2000
23	56/1930	-13/1967	2/1993	38/2000
24	60/1931	-24/1913	-5/1967	41/2000
25	58/2000	-28/1940	10/1967	43/2000
26	58/1958	-28/1950	13/1963	40/1958
27	57/1976	-22/1935	-1/1962	36/1958
28	53/2000	-25/1962	-8/1962	35/1965
29	56/1964	-9/1916	10/1980	33/2000

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

March Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	56/1992	-31/1962	1/1962	35/1992
2	58/1964	-19/1913	7/1989	35/1966*
3	56/1946	-17/1913	6/2002	37/1983
4	61/2000	-13/1978	10/1978*	42/1983
5	65/2000	-17/1960	14/1972	46/1983
6	67/2000	-10/1920	12/1984	43/1992
7	75/2000	-16/1960	6/1996	49/2000
8	68/2000	-8/1943	11/1995	45/2000
9	59/1977	-11/1984	14/1984	35/1997
10	63/1977	-15/1948	2/1979	40/1966
11	60/1990	-29/1948	9/1984	43/1977
12	67/1990	-10/1956	11/1956	47/1990
13	63/1990	-9/1975	11/1993	48/1995
14	70/1910	-11/1993*	11/1993	44/1973
15	64/1995	-12/1956	10/1997	38/1966
16	73/1930	-9/1956	25/1959	39/1966
17	66/1930	-10/1909	11/1993	45/1966
18	60/1945	-8/1993	11/1965	46/1968
19	69/1910	-5/1989	10/1965	38/1976
20	72/1910	-8/1965	10/1965	35/1972
21	70/1918	-6/1965	13/1965	43/1953
22	77/1938	-12/1888	18/1965	36/1991*
23	72/1945	-8/1888	10/1965	42/1987
24	82/1910	-9/1974	16/1966*	45/1987
25	71/1939	-3/1940	12/1955	41/1986
26	73/1991	-4/1996*	6/1973	49/1977
27	74/1946	2/1964	25/1970	52/1998*
28	76/1946	0/1969	24/1964	49/1977
29	79/1986	-7/1969	13/1969	45/1976
30	77/1910	-4/1969	16/1969	51/1967
31	78/1986	-2/1934	28/1969	47/1986

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

April Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	71/1946	10/1975	22/1975	50/1963
2	75/1981	11/1954	25/1971	54/1963
3	74/1910	6/1954	25/1954	50/1981
4	77/1942	6/1995	25/1995	48/1997
5	83/1991	7/1887	25/1982	48/1997
6	89/1991	5/1982	28/1982	53/1991
7	83/1991	9/1936	29/1997*	57/1991
8	84/1931	9/1997*	26/1997	49/1988
9	76/1955	15/1982	27/1973	47/1955
10	85/1977	13/1973	32/1997	52/1977
11	82/1977	12/1973	27/1957	56/1977
12	81/1931	14/1950	34/1957	53/1968
13	80/1941	13/1962	34/1962	49/1977
14	83/1954	18/1962	33/1962	56/1976
15	80/1942	18/1962	33/1983	51/1977
16	84/1977	18/1983	31/1961	61/1976
17	84/1985	17/1983	34/1953	57/1977*
18	89/1985	16/1983	32/1953	57/1985*
19	84/1985	20/1988	31/1953	63/1985
20	85/1987	21/1956	36/1966	61/1985
21	91/1980	18/1934	42/1992	57/1985
22	91/1980	20/1936	35/1967	58/1985
23	84/1960	20/1956	38/1956	61/1960
24	82/1962	17/1956	37/1968	59/1990
25	87/1939	17/1934	36/1965	60/1990
26	84/1962	24/1930	39/1988	62/1990
27	86/1977	19/1933	41/1965	57/1990*
28	88/1910	25/1913	36/1994	59/1970
29	89/1952	17/1956	29/1983	54/1983
30	90/1952	11/1956	31/1954	50/1965

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

May Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	89/1992	25/1966	45/1953	61/1992
2	90/1959	26/1990	40/1967	67/1959
3	91/1949	21/1967	35/1954	63/1955
4	91/1918	24/1910	46/1954	64/1959
5	88/1949	26/1968	45/1994	63/2000
6	94/1934	22/1989	43/1989	60/1965
7	86/1934	24/1929	47/1962	62/1975
8	84/1916	29/1955	45/1984	63/1963
9	90/1934	22/1966	44/1960	61/1985
10	89/1887	23/1966	50/1962	61/1985
11	89/1911	26/1946	37/1966	63/1992
12	89/1940	26/1939	47/1966	60/1986
13	88/1949	27/1997	46/1974	66/1962
14	93/1932	26/1937	46/1959	64/1962
15	89/2001	27/1934	48/1970	68/2001
16	92/1936	29/1956	55/1988	67/1962
17	91/1934	29/1930	48/1957	66/1962
18	95/1934	32/1916	45/1957	63/1962
19	98/1934	23/1929	46/1971	60/1998*
20	96/1934	30/1967	53/1990	66/1975
21	88/1964	31/1929	48/1969	65/1975*
22	92/1964	30/1963	47/2001*	66/1991
23	89/1972	25/1931	46/2001	67/1991
24	86/1980*	31/1930	50/1968	60/1991*
25	89/1980	29/1934	46/1992	63/1978
26	91/1939	31/1961	52/1968	63/1967
27	93/1914	35/1971	45/1965	64/1969
28	93/1934	31/1932	48/1965	67/1991
29	94/1934	33/1965	53/1965	65/1991
30	96/1934	31/1930	54/1983	65/1953
31	106/1934	33/1931	57/1962	65/1991

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

June Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	95/1934	37/1946	55/1962	64/1991
2	94/1934	35/1888	49/1969	63/1955
3	91/1948	35/1946	50/1990	65/1991
4	93/1934	32/1945	57/2002	65/1971
5	94/1934	35/1945	54/2001*	65/1968
6	96/1933	39/1983	58/1998	67/1963
7	95/1987	33/1935	62/1953	66/1987
8	101/1985	35/1910	53/1995	66/1970
9	93/1973	31/1937	56/1998	68/1976*
10	96/1911	36/1972	63/1995	67/1973*
11	92/2001*	34/1936	55/1963	71/1954
12	95/1953	40/1936	55/1955	70/1990
13	98/1987	36/1933	64/1969	67/1956
14	97/1987	33/1933	55/1989	71/1994
15	90/1933	35/1989	60/1968	74/1994
16	99/1913	41/1989	59/1974	71/1994
17	94/1933	35/1915	67/1996	71/1994
18	94/1953	42/1920	64/1996	70/1995*
19	97/1953	42/1916	65/1969	77/1953
20	99/1933	38/1992	58/1970	71/1975
21	99/1988	37/1992	62/1981	69/1983*
22	94/1911	41/1918	57/1992*	71/1983
23	100/1934	38/1972	60/1969	66/1997
24	97/1910	40/1972	62/1967	71/1954
25	96/1911	42/1957	60/1968	73/1954
26	99/1934	44/1955	51/1968	73/1991
27	105/1934	43/1992	63/1968	74/1991
28	100/1931	40/1911	64/1983	73/1991
29	99/1931	44/1911	63/1959	72/1991*
30	100/1931	43/1941	58/1959	75/1953

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

July Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	97/1911	44/1948	68/1986*	78/1975
2	98/1911	44/1929	67/1967*	71/1974
3	102/1911	44/1917	64/1967	72/1975
4	97/1982	43/1972*	60/1967	74/1999
5	104/1911	42/1967	68/1983	73/1982
6	105/1936	46/1972*	63/1972	71/1977
7	102/1936	43/1934	66/1969	73/1980
8	99/1974*	45/1958	66/1994	71/1974
9	101/1936	45/1931	69/1996	71/1974
10	105/1936	45/1931	68/1986*	74/1976
11	104/1936	44/1945	72/1990	72/1980
12	107/1936	46/1941	70/1975	72/1966
13	107/1936	43/1975	63/1992	76/1995
14	108/1936	47/1960	69/1992	75/1980
15	100/1936	42/1930	67/1962	76/1988
16	101/1936	44/1933	70/1958	72/1964
17	102/1936	40/1911	71/1984*	74/1986
18	97/1964	45/1911	58/2000	74/1986*
19	102/1940	44/1929	67/1970	74/1957
20	100/1940	47/1970	69/1992	74/1987
21	100/1934	44/1992	67/1973	75/1983
22	101/1934	42/1947	60/1992	73/1983
23	100/1934	44/1887	61/1992	75/1972
24	99/1934	45/1887	66/1992	69/1986
25	97/1931	48/1920	68/1962	70/1982
26	99/1955	43/1911	63/1972	75/1955
27	100/1931	47/1920	64/1981	72/1955
28	100/1955	47/1934	63/1991	72/1955
29	98/1955*	45/1952	70/1992	73/1999
30	99/1917	44/1918	65/1956	77/1955
31	102/1988	45/1960	66/1965	74/2001

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

August Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	99/1988	48/1968	73/1972	75/2001
2	98/1988	43/1912	68/1956	74/1964
3	100/1930	45/1978	62/1974	74/1989*
4	100/1947	42/1912	65/1972	72/1956
5	99/1947	42/1948	69/1994	73/2001
6	94/1909	43/1910	63/1991	74/2001
7	95/1988*	44/1972*	67/1959	73/2001
8	97/1934	45/1932	64/1972*	73/2001
9	99/1936	43/1972	63/1994*	68/1992
10	96/1947	44/1982*	58/1994	71/1958
11	95/1947	42/1930	63/1964	72/1995
12	95/1947	43/1946	59/1964	72/1995
13	96/1918	40/1933	66/1986*	72/1988
14	91/1955	37/1964	66/1979	69/1978*
15	100/1936	39/1933	64/2001	70/1987
16	99/1988*	39/1933	62/1980	76/1988
17	99/1955	45/1962	67/1963	77/1988
18	99/1936	42/1915	63/1967	72/1995
19	98/1916	40/1967	62/1985	69/1982*
20	96/1955	35/1950	64/1990	74/1959
21	97/1947	45/1930	64/1966	72/1968
22	96/1916	40/1950	62/1966	73/1968
23	100/1948	43/1987*	60/1972	70/1978
24	100/1948	34/1934	63/1958	69/1960
25	97/1948	36/1958	59/1987	71/1959
26	95/1955	33/1934	60/1987	70/1993*
27	93/1984*	39/1941	58/1957	72/1990
28	96/1955	36/1893	61/1957	70/1973
29	92/1945	34/1935	58/1965	70/1991
30	96/1941	32/1915	62/1965	71/1995
31	93/1960	38/1967	55/1958	73/1960

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

September Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	94/1937	34/1909	61/1981*	71/1953
2	98/1913	35/1909	54/1952	71/1960
3	94/1937	33/1974	61/1974	69/1971
4	95/1893	36/1974	58/1974	69/1990
5	94/1913	34/1918	59/1956	72/1960
6	100/1913	36/1932	58/1965	72/1959
7	96/1913	34/1934	61/1979	70/1985*
8	97/1931	37/1995	62/1965	70/1959
9	97/1955	37/1969	60/1999*	70/1983*
10	98/1931	29/1917	58/1962	69/1982*
11	94/1931	29/1917	56/1964	68/1982
12	94/1948	30/1955	53/1989*	67/1982
13	93/1908	32/1963	52/1970	68/1994
14	95/1939	33/1929	50/1993*	69/1991
15	96/1939	35/1964	51/1993	64/1994
16	96/1939	28/1937	54/1965*	69/1955
17	94/1955	29/1916	58/1986*	74/1955
18	93/1955	26/1929	45/1991	70/1955
19	92/1908	30/1991*	47/1991	64/1972
20	92/1908	28/1991	48/1995	64/1959
21	94/1908	27/1918	47/1983	61/1986*
22	95/1908	24/1974	47/1983	63/1968
23	92/1937	28/1989	45/1965	63/1958
24	89/1891	29/1893	48/1985	57/1994*
25	89/1956	26/1893	47/1985*	56/1981
26	86/1908	26/1893	48/1965	63/1998
27	86/1943	28/1942	50/1996*	56/1956
28	85/1892	22/1942	47/1984	56/1982
29	86/1953	23/1967	42/1985	64/1982
30	86/1952	24/1939	43/1985	62/1971

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

October Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	88/1976	21/1920	43/1999	65/1971
2	90/1953	20/1974	44/1999	60/1953
3	93/1997	24/1888	43/1999	55/1972
4	83/1969	20/1935	48/1991	62/1969
5	85/1938	20/1935	40/1952	61/1955
6	89/1997	14/1935	41/2000	64/1970
7	83/1997*	22/1976	42/2000	60/1958
8	88/1916	20/1908	44/1990	62/1973
9	79/1955	21/1915	36/1985	68/1973
10	85/1930	21/1916	38/1967	59/1973
11	86/1928	17/1919	41/1959	64/1971
12	89/1910	23/1988*	39/1959	59/1995
13	85/1975	15/1917	38/1969	60/1968*
14	87/1947	15/1915	45/1991*	64/1962
15	84/1958	16/1937	41/1972	67/1968
16	85/1910	21/1937	35/1952	61/1968
17	85/1910	17/1972	36/1972	62/1953
18	84/1950	17/1992*	36/1972	61/1971
19	82/1910	13/1972	33/1960	57/1965
20	82/1953	12/1952	38/1982*	57/1958
21	85/1947	14/1930	35/1976	56/1963
22	80/1992	16/1930	40/1969	57/1963
23	78/1891	10/1936	30/1981	62/1975
24	76/1973*	12/1936	32/1981	59/2000
25	78/1989*	-6/1887	34/2001	60/2000
26	81/1955	4/1887	36/2001*	58/1971
27	77/1940	13/1936	33/1967	51/1998*
28	72/1945	11/1909	36/1988	54/1989
29	80/1950	12/1920	33/1993	54/1974
30	79/1950	11/1988	31/1991	54/1974
31	74/1950	15/1993	30/1996	54/1974

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

November Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	77/1983	10/1951	31/1996*	55/2000
2	75/1893	8/1951	19/1991	52/1987
3	73/1978	4/1991	14/1991	55/1956
4	72/1975	-2/1991	16/1991	47/1981*
5	70/1983	-4/1951	28/1967	43/1956
6	73/1893	-3/1991	13/1991	54/1975
7	73/2001*	-5/1991	15/1991	50/1977
8	75/1999	1/1991	23/1991	54/1977
9	71/1999	12/1973	26/1986	48/1999
10	68/1930	1/1986	19/1986	43/1967
11	66/1912	-6/1986	17/1986	47/1964
12	62/2001	-1/1986	18/1986	43/1994
13	71/1999	-4/1986	16/1986	47/2001
14	68/1990	-5/1916	19/1959	54/2001
15	67/2001*	-5/1915	28/1959	43/2001
16	71/1953	-6/1933	18/1955	45/1958*
17	68/1917	-4/1959	15/1959	49/1971*
18	69/1939	-4/1989	22/1989	53/1953
19	68/1930	-3/1932	13/1978	46/1982
20	68/1890	2/1985*	14/1985	39/1973*
21	69/1990	-8/1964	8/1964	41/1963
22	65/1913	-8/1937	17/1956	46/1966
23	57/1931	-11/1893	13/1970	42/1966
24	57/1890	-11/1893	11/1985	45/2001
25	61/1960	-12/1977	9/1977	36/1998
26	61/1914	-20/1977	5/1996	38/1984
27	64/1914	-12/1887	11/1985	33/2001
28	62/1909	-24/1887	6/1976	37/1998
29	62/1998	-20/1887	4/1964	54/1998
30	59/1962	-18/1893	10/1964	35/1982

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

December Record Temperatures

Day	High	Low	Lowest High	Highest Low
1	62/1998*	-18/1893	8/1966	39/1982
2	62/1982	-18/1886	4/1985*	49/1982
3	59/1962	-22/1919	7/1972	45/1962
4	56/2001*	-15/1886	1/1972	46/2001
5	62/1916	-10/1934	8/1972	34/1998
6	47/1951	-28/1972	0/1972	33/1980
7	56/1939	-28/1972	3/1972	34/1967
8	58/1946	-18/1947	3/1958	34/1952
9	52/1918	-22/1947	-8/1977	32/1987
10	58/1939	-21/1919	-1/1977	31/1979
11	55/1913	-22/1934	-2/1995*	35/1965
12	58/1968	-20/1958	2/1958	32/1965
13	55/1891	-21/1958	-6/1985	34/1993
14	52/1998*	-21/1957	-4/1989	34/1993
15	52/1913	-30/1919	-1/1963	32/1957
16	52/1959	-26/1932	1/1972	35/1977
17	63/1939	-22/1983*	-11/1983	35/1977
18	58/1890	-31/1983	-14/1983	32/1957
19	50/1890	-33/1983	-12/1983	30/1982
20	48/1967	-26/1983	-9/1989	32/1967
21	51/1967	-28/1916	-12/1989	30/1994*
22	48/1918	-22/1983	-15/1983	36/1957
23	50/1893	-29/1983	-20/1983	33/1982
24	47/1893	-26/1983	-14/1983	33/1982
25	50/1936	-25/2000	-6/1996	31/1973
26	54/1936	-26/1950	-5/1996	40/1959
27	51/1936	-31/1950	2/1993	41/1959
28	51/1984	-18/1917	5/1988	29/1958
29	46/1999	-20/1917	-5/1976	31/1965
30	52/1890	-28/1887	-9/1976	36/1965
31	49/1965	-28/1946	-12/1968	29/1990

*last of several occurrences

Note: Lowest high and highest low records only date back to August 1952.

Temperature Trivia

90 Degrees

First Occurrence		Last Occurrence	
Earliest	April 21 st , 1980: 91 degrees	Latest	October 3 rd , 1997: 93 degrees

80 Degrees

First Occurrence		Last Occurrence	
Earliest	March 24 th , 1910: 82 degrees	Earliest	September 2 nd , 1973: 81 degrees
Latest	June 18 th , 1908: 83 degrees	Latest	October 29 th , 1950: 80 degrees

70 Degrees

First Occurrence		Last Occurrence	
Earliest	March 7 th , 2000: 75 degrees	Earliest	September 19 th , 1985: 85 degrees
Latest	May 10 th , 1978: 77 degrees	Latest	November 16 th , 1953: 71 degrees

Freezing Temperatures (32 degrees)

First Occurrence		Last Occurrence	
Earliest	August 30 th , 1915: 32 degrees	Earliest	April 9 th , 1985: 22 degrees
Latest	October 29 th , 1973: 32 degrees	Latest	June 29 th , 1937: 31 degrees

Below Zero Temperatures

First Occurrence		Last Occurrence	
Earliest	October 25 th , 1887: -6 degrees	Earliest	January 19 th , 1992: -6 degrees
Latest	January 11 th , 1975: -8 degrees	Latest	March 31 st , 1969: 0 degrees
			March 31 st , 1934: -2 degrees

Largest Temperature Change in One Day

Change	Date	High	Low
1) 58	May 5 th , 1909	90	32
2) 56	February 12 th , 1939	38	-18
3) 55	February 26 th , 1940	27	-28
	February 11 th , 1937	34	-21
5) 53	October 18 th , 1939	73	20
6) 52	January 20 th , 1937	32	-20
	February 23 rd , 1918	52	0
8) 51	December 24 th , 1949	34	-17

Longest Stretch of Consecutive Days <u>Without A Freezing Temperature (32 F or below)</u>	Amount of <u>Freezing Days (32 F or below)</u> in a Winter Season (July-June)	
	Least	Most
1) 174 April 10 th 1985 - September 30 th 1985	1) 134 1933-34	1) 193 1917-18
2) 173 April 18 th 1998 - October 7 th 1998	2) 139 1914-15	2) 187 1995-96
3) 172 April 16 th 1964 - October 4 th 1964	3) 142 1998-99	3) 185 1955-56
4) 171 April 28 th 1982 - October 15 th 1982	4) 147 1999-00	4) 182 1943-44
5) 169 April 19 th 2001 - October 4 th 2001	5) 149 1997-98	5) 181 1952-53
6) 168 May 13 th 1971 - October 27 th 1971	1994-95	1916-17
7) 167 April 22 nd 1900 - October 5 th 2000	7) 152 1944-45	7) 178 1937-38
April 29 th 1965 - October 12 th 1965	8) 153 1970-71	8) 177 1989-90
9) 164 May 18 th 1973 - October 28 th 1973	9) 154 1982-83	9) 175 1992-93
April 22 nd 1948 - October 2 nd 1948	10) 155 1990-91	1988-89
	1963-64	1942-43
	1954-55	

Longest Stretch of Consecutive Days <u>Without A Below Zero Temperature (less than 0 F)</u>	Amount of <u>Below Zero Days</u> in a Winter Season (July-June)	
	Least	Most
1) 333 January 27 th 1987 - December 25 th 1987	1) 9 1997-98	1) 60 1977-78
2) 328 January 26 th 1999 - December 19 th 1999	2) 12 1986-87	2) 57 1978-79
3) 320 January 20 th 1992 - December 4 th 1992	1982-83	3) 54 1976-77
4) 305 February 13 th 1981 - December 14 th 1981	4) 15 1999-2000	1916-17
5) 304 February 16 th 1946 - December 16 th 1946	1960-61	5) 51 1935-36
6) 303 March 1 st 2001 - December 28 th 2001	6) 16 1991-92	1917-18
7) 302 February 15 th 1949 - December 13 th 1949	7) 17 1994-95	7) 49 1950-51
8) 297 January 29 th 2000 - November 20 th 2000	1952-53	8) 45 1985-86
February 26 th 1990 - December 19 th 1990	1943-44	1958-59
10) 296 February 8 th 1983 - November 30 th 1983	1941-42	10) 44 1964-65
February 13 th 1954 - December 5 th 1954		1955-56
		1942-43
		1936-37

Heat Waves and Cold Snaps

Consecutive Days with 90 degrees or greater temperatures:

14 Days: July 5th-18th, 1936

- At or above 100 12 times
- All time record high of 108 on the 14th
- Average high temperature was 102.1 degrees
- 11 record high temperatures

12 Days: July 21st -August 1st, 1941

- Did not reach 100 or greater
- Average high temperature was 93.7 degrees
- No records set

10 Days: June 18th - 27th, 1943

- Did not reach 100 or greater
- Average high temperature was 92.4
- No records set

July 21st - 30th, 1916

- Did not reach 100 or greater
- Average high temperature was 94.8 degrees
- Tied one record high temperature

9 Days: June 22nd - 30th, 1934

- At or above 100 twice
- Average high temperature was 96.4 degrees
- Two record high temperatures set or tied
- One record high low temperature set

Consecutive days with 100 degrees or greater temperatures:

9 Days: July 9th - 17th, 1936

- Average high temperature was 103.9 degrees
- Record high temperature each day
- All-time record high on station of 108 on the 14th
- Part of a 14 day stretch of 90 degree or greater temperatures

3 Days: July 21st - 23rd, 1934

- Average high temperature was 100.7 degrees
- Record high temperature each day

**Number of days with 90
degree temperatures or
greater**

1)	38	1934
2)	33	1916
3)	32	1936
4)	31	1955
5)	30	1988
6)	29	1948
7)	26	1941
8)	25	1937
9)	24	1939
10	23	1964
		1949
		1947

**Number of days with 100
degree temperatures or
greater**

1)	12	1936
2)	5	1934
3)	2	1955
		1948
		1940

Consecutive days not reaching above freezing (32 degrees):

65 Days: December 19th, 1978 - February 21st, 1979

- Average high temperature was 11.2 degrees
- Average low temperature was -6.5 degrees
- Average temperature was 2.5 degrees
- Four record low temperatures set or tied
- Five record lowest high temperatures set or tied
- Low temperature did not climb above 0 on 44 days
- High temperature did not climb above zero on 12 days

51 Days: January 3rd - February 22nd, 1936

- Average high temperature was 9.4 degrees
- Average low temperature was -10.1 degrees
- Average temperature was -0.1 degrees
- Five record low temperatures set or tied
- One record lowest high temperature
- Low temperature did not climb above 0 on 42 days
- High Temperature did not climb above 0 on 14 days

50 Days: December 8th, 1981 - January 26th, 1982

- Average high temperature was 15.7 degrees
- Average low temperature was -1.4 degrees
- Average temperature was 7.4 degrees
- One record low temperature
- Two record lowest high temperatures set or tied
- Low temperature did not climb above 0 on 27 days
- High temperature did not climb above 0 on 8 days

47 Days: January 8th - February 23rd, 1978

- Average high temperature was 13.5 degrees
- Average low temperature was -6.2 degrees
- Average temperature was 3.9 degrees
- No record lows, or record lowest high temperatures were set
- Low temperatures did not climb above 0 on 39 days
- High temperatures did not climb above 0 on 4 days

45 Days: December 14th, 1969 - January 27th, 1970

- Average high temperature was 15.6 degrees
- Average low temperature was -2.1 degrees
- Average temperature was 7.0 degrees
- Two record low temperatures set or tied
- Three record lowest high temperatures set or tied
- Low temperature did not climb above 0 on 24 days
- High temperature did not climb above 0 on 9 days

Consecutive days with temperatures not reaching above zero:

6 Days: January 22nd - January 27th, 1936

- Average high temperature was -5.0 degrees
- Average low temperature was -23.3 degrees
- Average temperature was -14.0 degrees
- One record low temperature
- Four record low high temperatures

5 Days: January 30th - February 3rd, 1996

- Average high temperature was -12.4 degrees
- Average low temperature was -27.4 degrees
- Average temperature -19.6 degrees
- One record low temperature
- Four record low high temperatures

January 1st - January 5th, 1970

- Average high temperature was -6.0 degrees
- Average low temperature was -22.0 degree
- Average temperature was -13.8 degrees
- Two record low temperatures
- Two record low high temperatures

January 17th - January 21st, 1970

- Average high temperature was -7.8 degrees
- Average low temperature was -27.4 degrees
- Average temperature was -17.4 degrees
- Two record low temperatures
- Two record low high temperatures

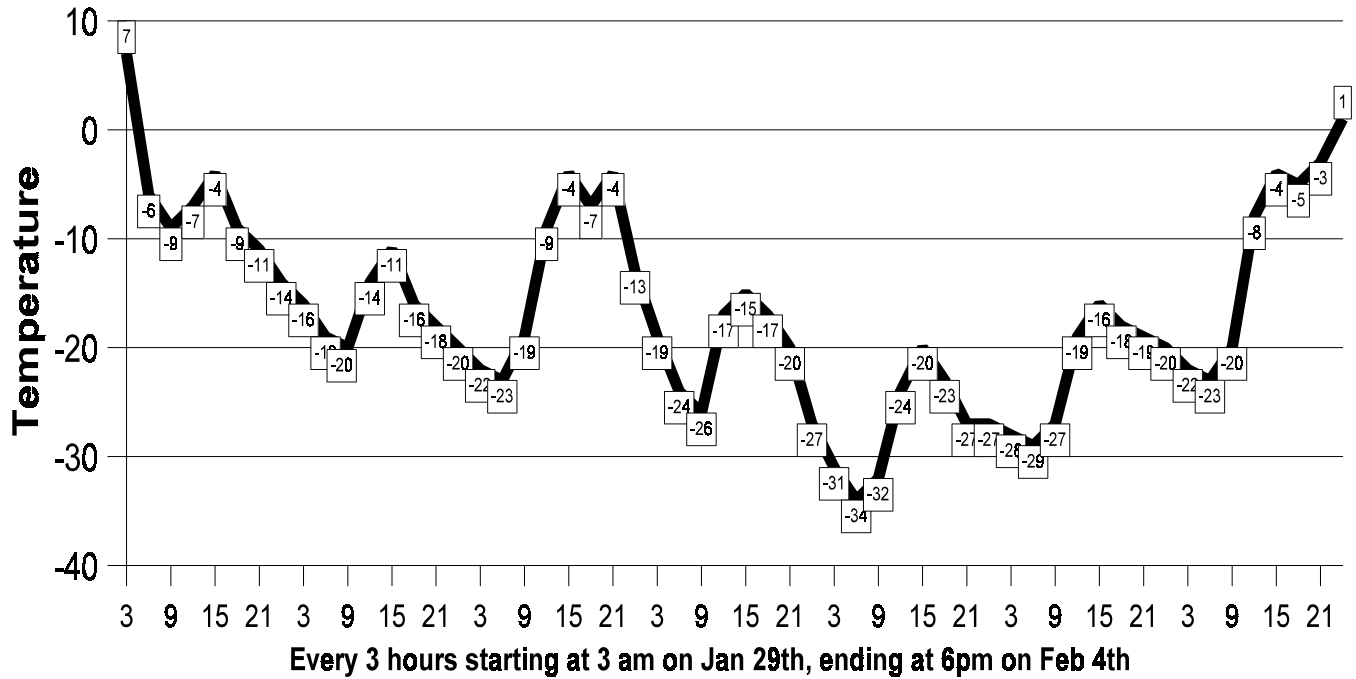
**Number of days with the HIGH
temperature at or below zero**

1)	14	1936
		1917
3)	13	1979
4)	12	1963
5)	11	1982
6)	10	1994
		1972
		1970
9)	9	1996
		1971
		1965
		1918

**Number of days with the LOW
temperature at or below zero**

1)	63	1978
2)	56	1937
3)	54	1917
4)	53	1985
		1950
6)	52	1951
7)	50	1972
8)	49	1963
		1936
10	48	1977

January 29th - February 4th, 1996



Over 162 consecutive hours with below-zero temperatures.

Seasonal Mean Temperature Records

Spring

Average is 43.7 degrees

Warmest			Coldest		
1)	52.1	1977	1)	36.7	1888
2)	49.3	1987	2)	39.2	1950
3)	48.9	1985	3)	39.5	1965
4)	48.7	1946	4)	39.8	1996
5)	48.2	1910	5)	40.2	1984
6)	47.9	2000	6)	40.4	1997
7)	47.8	1991			1975
8)	47.4	1998	8)	40.6	1960
9)	47.2	1941	9)	40.7	1956
		1911			1947
					1937

Summer

Average is 68.7 degrees

Warmest			Coldest		
1)	73.0	1949	1)	64.0	1992
2)	72.3	1955			1915
3)	72.2	1988	3)	64.9	1958
4)	71.7	1936	4)	65.7	1967
		1931	5)	66.1	1985
6)	71.4	1943	6)	66.2	1969
7)	71.1	1995			1945
		1983	8)	66.5	1917
9)	70.6	1976	9)	66.6	1996
		1959			1968
		1932			

Fall

Average is 46.7 degrees

Warmest			Coldest		
1)	53.4	1931	1)	41.8	1976
2)	52.7	1963	2)	42.3	1991
3)	50.6	1953	3)	42.5	1911
4)	50.3	1920	4)	42.6	1985
5)	50.0	2001	5)	43.1	1993
		1994			1959
		1948	7)	43.2	1887
		1914	8)	43.4	1995
9)	49.9	1971			1951
10)	49.4	1941	10)	43.5	1937

Winter

Average is 16.4 degrees

Warmest			Coldest		
1)	26.3	1930-31	1)	5.6	1978-79
2)	25.5	2001-02	2)	6.3	1886-87
3)	24.7	1997-98	3)	7.5	1887-88
4)	23.7	1986-87	4)	8.0	1935-36
5)	23.4	1918-19	5)	8.7	1977-78
6)	23.2	1991-92	6)	8.8	1916-17
7)	23.0	1931-32	7)	9.1	1917-18
8)	22.6	1982-83	8)	9.3	1892-93
9)	22.5	1959-60	9)	9.8	1976-77
10)	22.3	1943-44	10)	11.5	1950-51
					1919-20

Spring Mean

Temperatures

(March - April - May)

1909	40.9	1937	40.7	1965	39.5	1993	41.0
1910	48.2	1938	45.1	1966	42.2	1994	45.3
1911	47.3	1939	44.2	1967	42.3	1995	42.9
1912	43.7	1940	41.3	1968	45.4	1996	39.8
1913	42.2	1941	47.2	1969	42.0	1997	40.4
1914	44.4	1942	46.5	1970	43.4	1998	47.4
1915	44.9	1943	40.8	1971	42.2	1999	45.9
1916	42.7	1944	42.9	1972	43.1	2000	47.9
1917	40.8	1945	44.5	1973	45.0	2001	43.2
1918	46.3	1946	48.7	1974	43.3	2002	41.3
1919	43.9	1947	40.7	1975	40.4		
1920	42.8	1948	44.4	1976	45.7		
1921	M	1949	45.5	1977	52.1		
1922	M	1950	39.2	1978	43.6		
1923	M	1951	40.9	1979	41.3		
1924	M	1952	42.7	1980	44.7		
1925	M	1953	42.4	1981	46.2		
1926	M	1954	42.3	1982	43.3		
1927	M	1955	46.5	1983	41.1		
1928	M	1956	40.7	1984	40.2		
1929	44.9	1957	43.5	1985	48.9		
1930	45.8	1958	44.6	1986	46.2		
1931	44.7	1959	45.1	1987	49.3		
1932	41.0	1960	40.6	1988	45.9		
1933	43.4	1961	40.8	1989	42.1		
1934	46.7	1962	42.3	1990	44.9		
1935	43.2	1963	44.6	1991	47.8		
1936	44.9	1964	43.7	1992	43.9		

Note: Data unavailable from 1921-28 (M=missing).

Summer Mean Temperatures

(June-July-August)

1909	69.5	1937	69.9	1965	66.9	1993	67.0
1910	69.9	1938	68.9	1966	68.4	1994	66.9
1911	70.5	1939	70.0	1967	65.7	1995	71.1
1912	67.1	1940	69.0	1968	66.6	1996	66.6
1913	70.5	1941	70.3	1969	66.2	1997	67.4
1914	70.1	1942	68.3	1970	69.1	1998	67.5
1915	64.0	1943	71.4	1971	68.7	1999	68.5
1916	70.3	1944	69.5	1972	67.2	2000	67.6
1917	66.5	1945	66.2	1973	70.0	2001	69.2
1918	68.7	1946	68.2	1974	68.4		
1919	70.5	1947	70.4	1975	70.5		
1920	67.3	1948	70.4	1976	70.6		
1921	M	1949	73.0	1977	68.3		
1922	M	1950	67.1	1978	68.1		
1923	M	1951	67.0	1979	69.7		
1924	M	1952	69.3	1980	70.0		
1925	M	1953	70.0	1981	67.8		
1926	M	1954	70.1	1982	67.7		
1927	M	1955	72.3	1983	71.1		
1928	M	1956	69.9	1984	68.1		
1929	68.0	1957	69.9	1985	66.1		
1930	69.7	1958	64.9	1986	67.1		
1931	71.7	1959	70.6	1987	70.2		
1932	70.6	1960	67.8	1988	72.2		
1933	70.5	1961	68.7	1989	68.4		
1934	70.4	1962	67.1	1990	68.8		
1935	69.0	1963	69.0	1991	70.4		
1936	71.7	1964	68.9	1992	64.0		

Note: Data unavailable from 1921-28 (M=missing).

Fall Mean Temperatures

(September-October-November)

1909	46.5	1937	43.5	1965	46.2	1993	43.1
1910	45.8	1938	47.7	1966	46.2	1994	50.0
1911	42.5	1939	48.6	1967	44.7	1995	43.4
1912	48.2	1940	48.0	1968	47.1	1996	43.7
1913	49.2	1941	49.4	1969	46.3	1997	45.9
1914	50.0	1942	45.8	1970	47.4	1998	50.0
1915	48.3	1943	43.8	1971	49.9	1999	48.4
1916	46.8	1944	49.3	1972	44.2	2000	47.2
1917	44.4	1945	45.9	1973	49.3	2001	53.4
1918	47.1	1946	47.7	1974	45.8		
1919	45.8	1947	49.1	1975	48.9		
1920	50.3	1948	50.0	1976	41.8		
1921	M	1949	48.6	1977	46.7		
1922	M	1950	47.3	1978	46.3		
1923	M	1951	43.4	1979	47.4		
1924	M	1952	45.8	1980	46.4		
1925	M	1953	50.6	1981	46.0		
1926	M	1954	47.8	1982	47.7		
1927	M	1955	45.7	1983	47.0		
1928	M	1956	48.3	1984	46.3		
1929	45.3	1957	46.6	1985	42.6		
1930	48.2	1958	49.1	1986	44.4		
1931	53.4	1959	43.1	1987	46.4		
1932	44.6	1960	48.8	1988	45.2		
1933	47.4	1961	47.1	1989	44.7		
1934	49.1	1962	47.9	1990	48.9		
1935	46.1	1963	52.7	1991	42.3		
1936	46.2	1964	46.0	1992	44.8		

Note: Data unavailable from 1921-28 (M=missing).

Winter Mean Temperatures

(December - January - February)

1909-10	11.3	1937-38	16.8	1965-66	15.6	1993-94	12.0
1910-11	16.8	1938-39	16.8	1966-67	15.1	1994-95	19.7
1911-12	11.5	1939-40	16.9	1967-68	17.1	1995-96	14.9
1912-13	16.4	1940-41	18.0	1968-69	15.2	1996-97	14.4
1913-14	20.7	1941-42	20.8	1969-70	12.7	1997-98	24.7
1914-15	16.5	1942-43	13.3	1970-71	13.4	1998-99	20.8
1915-16	16.4	1943-44	22.3	1971-72	13.0	1999-00	21.4
1916-17	8.8	1944-45	15.3	1972-73	15.6	2000-01	11.6
1917-18	9.1	1945-46	15.8	1973-74	14.5	2001-02	25.5
1918-19	23.4	1946-47	18.5	1974-75	17.4		
1919-20	M	1947-48	14.2	1975-76	21.2		
1920-21	M	1948-49	16.3	1976-77	9.8		
1921-22	M	1949-50	15.2	1977-78	8.7		
1922-23	M	1950-51	11.5	1978-79	5.6		
1923-24	M	1951-52	17.9	1979-80	18.9		
1924-25	M	1952-53	19.5	1980-81	20.1		
1925-26	M	1953-54	22.0	1981-82	11.9		
1926-27	M	1954-55	17.4	1982-83	22.6		
1927-28	M	1955-56	12.8	1983-84	13.6		
1928-29	M	1956-57	18.5	1984-85	14.7		
1929-30	18.4	1957-58	20.0	1985-86	12.5		
1930-31	26.3	1958-59	12.2	1986-87	23.7		
1931-32	23.0	1959-60	22.5	1987-88	14.6		
1932-33	18.8	1960-61	19.3	1988-89	16.8		
1933-34	19.8	1961-62	12.5	1989-90	19.3		
1934-35	15.9	1962-63	12.2	1990-91	16.3		
1935-36	8.0	1963-64	18.3	1991-92	23.2		
1936-37	11.8	1964-65	12.2	1992-93	15.7		

Note: Data unavailable from 1921-28 (M=missing).

Precipitation Records

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Precipitation Records

Highest for One Year

1.	43.94	1990
2.	43.69	1938
3.	42.65	2000
4.	41.68	1942
5.	40.90	1973
6.	40.39	1951
7.	39.99	1986
8.	39.26	1978
9.	39.10	2001
10.	38.40	1993

Lowest for One Year

1.	11.65	1910
2.	15.44	1976
3.	19.91	1964
4.	20.21	1958
5.	20.32	1955
6.	21.19	1936
7.	21.39	1988
8.	21.92	1939
		1932
10.	22.47	1944

Number of Days with Measurable Precipitation in Year (0.01 inches or greater)

Most			Least		
1)	150	1996	1)	38	1910
2)	138	1983	2)	64	1913
3)	137	1965	3)	67	1933
		1951	4)	72	1932
5)	136	1997			1912
6)	135	1947	6)	73	1911
7)	133	1945	7)	79	1931
8)	128	1985			1930
		1984	9)	80	1917
		1979			1909
		1944			

Precipitation Totals for a Month

Highest	Lowest
1. 12.52 June 2000	1. trace December 1943
2. 12.33 July 1978	June 1910
3. 11.95 June 1914	March 1910
4. 10.50 September 1986	4. .01 October 1952
5. 10.46 July 1981	November 1917
6. 9.66 July 1938	6. .04 February 1964
7. 9.52 August 1979	7. .05 February 1910
8. 9.27 June 1990	8. .06 November 1967
9. 9.11 October 1911	February 1958
10. 9.01 July 1997	February 1920

Highest One-Day Amounts*

1. 7.47 July 11th, 1981
2. 6.22 July 5th, 1978
3. 5.98 September 12th, 1978
4. 5.24 July 26th, 1949
5. 4.81 June 1st, 2000
6. 4.02 May 17th, 2000
- June 4th, 1957
8. 3.80 June 4th, 1959
9. 3.75 April 11th, 2001
10. 3.67 June 11th, 1929

*One-day amounts are for one calendar day (12am-12am local standard time), not a 24 hour total.

Highest Precipitation for Months

JANUARY			FEBRUARY			MARCH			APRIL		
1.	4.40	1886	1.	2.30	1915	1.	4.02	1888	1.	7.30	2001
2.	2.92	1888	2.	2.21	1971	2.	4.01	1951	2.	6.47	1999
3.	2.63	1932	3.	2.06	1887	3.	3.58	1990			1990
4.	2.53	1967	4.	2.03	1951	4.	3.42	1956	4.	5.34	1929
5.	2.20	1933	5.	2.00	1981	5.	3.32	1966	5.	5.25	1991
6.	2.19	1929			1948	6.	3.10	1920	6.	4.95	1994
7.	2.07	1999	7.	1.96	1984	7.	3.02	1942	7.	4.68	1954
8.	2.00	1996	8.	1.74	1945	8.	2.97	1918	8.	4.54	1945
9.	1.91	1975	9.	1.68	2002	9.	2.94	1977	9.	4.44	1919
10.	1.86	1949	10.	1.65	1911	10.	2.91	1976	10.	4.26	1973
MAY			JUNE			JULY			AUGUST		
1.	8.41	1982	1.	12.52	2000	1.	12.33	1978	1.	9.52	1979
2.	7.42	1888	2.	11.95	1914	2.	10.46	1981	2.	7.86	1980
3.	7.37	2000	3.	9.27	1990	3.	9.66	1938	3.	7.18	1942
4.	7.28	1945	4.	8.34	1967	4.	9.01	1997	4.	6.95	1959
5.	7.19	2001	5.	7.41	1930	5.	8.73	1999	5.	6.88	1993
6.	7.14	1915	6.	7.04	1974	6.	8.29	1990	6.	6.59	1947
7.	6.70	1970	7.	6.75	1913	7.	8.14	1951	7.	6.51	1935
8.	6.53	1960	8.	6.71	1952	8.	7.24	1987	8.	6.44	1981
9.	6.42	1938	9.	6.66	1919	9.	6.96	1949	9.	6.43	1931
10.	6.06	1942	10.	6.43	1996	10.	6.95	1953	10.	6.20	1999
SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
1.		1986	1.	9.11	1911	1.	5.91	1909	1.	2.83	1982
2.	8.08	1978	2.	6.08	1970	2.	5.90	1991	2.	2.61	1911
3.	7.95	1938	3.	4.95	1979	3.	4.61	1975	3.	2.18	1940
4.	7.50	1942	4.	4.71	1998	4.	4.50	1931	4.	2.17	1948
5.	7.06	1972	5.	3.86	1966	5.	4.02	1992	5.	2.13	1887
6.	6.47	1946	6.	3.83	1941	6.	3.95	1996	6.	1.94	1945
7.	6.41	1985	7.	3.78	1984	7.	3.93	1934	7.	1.86	1968
8.	6.32	1941	8.	3.57	1986	8.	3.90	1983	8.	1.81	1950
9.	6.26	1965	9.	3.37	1971	9.	3.59	1940	9.	1.79	1984
10.	5.99	1964	10.	3.81	1969 1918	10.	3.37	1973	10.	1.75	1987

Lowest Precipitation for Months

JANUARY	FEBRUARY	MARCH	APRIL
1. .07 1961	1. .04 1964	1. Trace 1910	1. .46 1946
2. .11 1984	2. .05 1910	2. .21 1958	2. .69 1943
3. .13 1942	3. .06 1958	3. .31 1887	3. .77 1910
4. .14 1928	1920	4. .32 1994	4. .79 1936
5. .15 1958	5. .07 1912	5. .35 1912	5. .86 1957
6. .17 1962	6. .11 1982	6. .43 1978	6. 1.02 1987
7. .18 1957	7. .14 1969	7. .51 1968	7. 1.08 1966
8. .19 1913	1968	8. .53 1928	8. 1.09 1933
9. .20 1948	9. .15 1995	9. .54 1981	9. 1.11 1949
10. .23 1918	10. .18 1934 1996	10. .59 1948	10. 1.13 1918
MAY	JUNE	JULY	AUGUST
1. .40 1934	1. Trace 1910	1. .41 1946	1. .31 1941
2. 1.17 1963	2. .94 1985	2. .42 1909	2. .65 1949
3. 1.23 1948	3. 1.08 1964	3. .51 1948	3. .92 1908
4. 1.36 1967	4. 1.11 1972	4. .84 1910	4. .96 1886
5. 1.47 2002	5. 1.20 1976	5. .89 1937	5. 1.03 1933
6. 1.54 1966	6. 1.36 1982	6. 1.02 1975	6. 1.17 1970
7. 1.56 1887	7. 1.52 1988	7. 1.05 1967	7. 1.41 1950
8. 1.60 1992	8. 1.53 1965	8. 1.12 1988	8. 1.48 1919
9. 1.74 1989 1985	9. 1.59 1992	9. 1.13 1931	9. 1.50 1992
	10. 1.67 1950	10. 1.18 1964	10. 1.65 1930
SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1. .33 1953	1. .01 1952	1. .01 1917	1. Trace 1943
2. .38 1975	2. .20 1953	2. .06 1967	2. .13 1913
3. .61 1989	3. .24 1944	3. .09 1939	3. .18 1917
4. .62 1952	4. .27 1965	4. .11 1976	4. .22 1967
5. .63 1979	5. .40 1988	5. .13 1980	1958
6. .76 1976	6. .42 1910	6. .18 1962	6. .28 1962
7. .83 1956	7. .50 1945	7. .20 1910	1937
8. .99 1940	8. .52 1964	1908	8. .29 1998
9. 1.01 1981 1974	9. .56 1938	9. .26 1997	9. .32 1986
	10. .57 1932 1953	10. .27 1888	1956 1914

January Record Precipitation

	One Day	Year	Snowfall	Year
1.	0.67	1941	1.4	1999
2.	0.89	2000	6.0	2000
3.	0.77	1973	8.5	1973
4.	0.70	1997	4.1	1971
5.	0.63	1939	5.2	1994
6.	1.50	1888	5.6	1980
7.	0.21	1967	4.4	1977
8.	0.42	1937	2.1	1999
9.	0.45	1888	2.2	1963
10.	0.75	1975	3.4	1996
11.	0.23	1975	3.0	1963
12.	0.57	1993	8.4	1993
13.	0.70	1910	3.8	1979
14.	0.57	1930	4.2	1999
15.	0.77	1953	2.6	1976
16.	0.83	1980	4.7	1994
17.	0.52	1996	1.5	1970
18.	0.48	1996	6.9	1996
19.	0.58	1988	7.0	1988
20.	0.38	1941	2.3	1998
21.	0.45	1917	3.0	1998
22.	1.20	1933	15.4	1982
23.	0.50	1949	5.8	1988
24.	1.42	1967	5.4	1997
25.	0.42	1950	5.9	1996
26.	0.38	1916	7.2	1996
27.	0.52	1944	3.7	1994
28.	0.38	1968*	3.6	1986
29.	1.20	1909	4.5	1969
30.	0.25	1937	0.7	1980
31.	0.87	1933	2.9	1965

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-88.

February Record Precipitation

	One Day	Year	Snowfall	Year
1.	0.56	1933	4.6	1998
2.	0.67	1983	9.3	1983
3.	0.30	1936	1.1	1990
4.	0.56	1997	7.2	1997
5.	0.41	1946	3.4	1967
6.	0.39	1938	1.3	1981
7.	0.32	1947	0.6	1992
8.	0.78	1966	3.2	1988
9.	0.65	1909	1.1	1955
10.	0.58	1959	7.8	1959
11.	0.94	1984	5.6	1965
12.	0.13	1941	1.9	1994*
13.	0.38	1950	3.0	1973
14.	0.47	1950	1.3	1974
15.	0.36	1962	3.1	1967
16.	0.18	1990*	2.9	1990
17.	0.45	1911	1.8	1966
18.	1.20	1887	6.4	1961
19.	0.67	2002	2.3	1953
20.	0.39	2002	2.9	1953
21.	0.45	1981*	4.6	1993
22.	0.52	1913	7.0	1981
23.	0.72	1977	3.8	1985
24.	0.47	1940	2.5	1975
25.	0.40	1935	5.5	1994
26.	0.35	1998*	3.8	1984
27.	1.09	1948	3.4	1971
28.	0.50	1948	6.0	1970
29.	0.02	2000*	0.1	1976

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89.

March Record Precipitation

	One Day	Year	Snowfall	Year
1.	1.23	1965	2.9	1987
2.	0.64	1888	4.6	1989
3.	0.96	1966	9.0	1985
4.	0.67	1961	5.4	1984
5.	0.43	1946	4.2	1963
6.	0.51	1995	5.9	1995
7.	0.30	1950	3.1	1956
8.	0.69	1990	6.6	1961
9.	1.00	1992	4.7	1992
10.	1.37	1941	10.8	1956
11.	0.68	1962	5.6	1962
12.	0.88	2001	8.6	2001
13.	0.85	1997	10.5	1997
14.	1.90	1918	3.3	1989
15.	1.19	1945	2.0	1983
16.	0.82	1942	1.5	1973
17.	0.58	1986	5.1	1989
18.	0.77	1986	6.9	1971
19.	0.74	1943	5.3	1970
20.	0.95	1888	5.0	1955
21.	0.60	1953	3.8	1961
22.	1.21	1966	5.5	1966
23.	0.83	1966	5.9	1966
24.	1.51	1996	1.8	1979
25.	0.70	1937	5.4	1996
26.	1.17	1920	2.3	1974
27.	1.68	1956	3.2	1975
28.	0.63	1974	4.2	1992
29.	0.58	1979	2.9	1974
30.	1.29	1934	3.1	1976
31.	1.81	1993	7.4	1985

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89.

April Record Precipitation

	One Day	Year	Snowfall	Year
1.	0.57	1977	4.1	1962
2.	1.38	1967	2.9	1979
3.	1.21	1934	6.7	1980
4.	1.03	1887	3.3	1985
5.	0.76	1947	4.5	1979
6.	0.80	1919	2.2	1983
7.	0.78	1909	2.0	1972
8.	0.94	1991	3.1	1973
9.	0.70	1919	6.4	1973
10.	0.28	1957	1.5	1997
11.	3.75	2001	0.5	2000*
12.	0.86	1960	7.2	1962
13.	0.65	1964	3.0	1970
14.	1.90	1918	5.8	1983
15.	1.28	1992	3.3	1993
16.	0.98	1982	2.8	1961
17.	1.42	1959	2.5	1965
18.	0.84	1939	0.2	1953
19.	1.75	1993	3.0	1993
20.	1.30	1920	1.2	1978
21.	0.80	1972	4.0	2002
22.	1.50	1999	2.2	1963
23.	3.81	1990	1.1	1988
24.	1.37	1994	0.0	
25.	2.40	1929	1.7	1965
26.	1.48	1988	13.0	1988
27.	1.33	1975	1.0	2002
28.	0.63	1989*	0.3	1994
29.	1.34	1984	7.1	1956
30.	1.34	1954	1.8	1984

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89.

May Record Pcpn

	One Day	Year
1.	1.20	1936
2.	1.04	1954
3.	1.61	1888
4.	1.51	1982
5.	1.28	1991
6.	0.75	1919
7.	1.37	1998
8.	1.44	1988
9.	1.76	1990
10.	1.42	1910
11.	0.93	1920
12.	1.97	1982
13.	0.95	1995
14.	1.70	1916
15.	1.25	1909
16.	1.55	1999
17.	4.02	2000
18.	1.21	2000
19.	1.20	1959
20.	2.97	1912
21.	1.62	1945
22.	1.06	1936
23.	1.70	1920
24.	2.33	1945
25.	1.60	1939
26.	1.27	1982
27.	2.08	1970
28.	0.80	1995
29.	1.88	1980*
30.	1.70	1993
31.	1.80	1961

June Record Pcpn

	One Day	Year
1.	4.81	2000
2.	0.62	1973
3.	2.44	2002
4.	4.02	1957
5.	1.02	1957
6.	1.17	1930
7.	2.40	1914
8.	2.22	1934
9.	1.63	1974
10.	1.55	1961
11.	3.67	1929
12.	0.98	1970
13.	2.90	2000
14.	2.42	1887
15.	1.74	1967
16.	2.11	1996
17.	2.06	1993
18.	1.90	1915
19.	1.70	1931
20.	1.16	1937
21.	2.02	2002
22.	1.68	1986
23.	2.40	1949
24.	1.89	1933
25.	4.18	1913
26.	1.45	1968
27.	1.71	1998
28.	2.28	1990
29.	1.46	1963
30.	1.97	1983

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89.

July Record Pcpn

	One Day	Year
1.	1.31	1961
2.	1.34	1933
3.	1.66	1993
4.	1.75	1999
5.	6.22	1978
6.	1.22	1908
7.	2.21	1990
8.	2.04	1965
9.	3.13	2000
10.	3.01	1940
11.	7.47	1981
12.	1.73	1968
13.	1.67	1966
14.	1.37	1984
15.	1.39	1942
16.	2.00	1957
17.	2.34	1969
18.	1.98	1999
19.	2.63	1950
20.	1.20	1912
21.	2.02	1945
22.	1.54	1978
23.	1.73	1968
24.	1.85	1985
25.	2.06	1953
26.	5.24	1949
27.	2.37	1935
28.	1.21	1942
29.	1.46	1990
30.	2.60	1938
31.	1.67	1938

August Record Pcpn

	One Day	Year
1.	3.27	1931
2.	1.97	1939
3.	1.20	1940
4.	2.30	1979
5.	0.67	2000
6.	2.37	1969
7.	2.02	1991
8.	2.94	1942
9.	1.36	1948
10.	2.93	1994
11.	2.36	1937
12.	2.04	1909
13.	1.40	1911
14.	1.50	1887
15.	0.94	1993
16.	2.11	1946
17.	0.81	1976
18.	2.48	1999
19.	2.16	1990
20.	1.84	1947
21.	2.09	1979
22.	2.43	1973
23.	1.26	1943
24.	1.79	1975
25.	2.69	1983
26.	2.15	2000
27.	1.43	1946
28.	2.19	1979
29.	2.39	1956
30.	2.12	1962
31.	1.87	1981

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89.

Sept Record Pcpn

	One Day	Year
1.	2.21	1942
2.	1.35	1961
3.	1.17	1968
4.	1.50	1887
5.	2.39	1946
6.	1.27	1938
7.	2.39	1964
8.	1.09	1985
9.	1.54	1971
10.	3.11	1938
11.	1.47	1942
12.	5.98	1978
13.	1.60	1993
14.	1.47	1914
15.	3.17	1941
16.	1.60	1992
17.	2.36	1942
18.	0.97	1986
19.	2.51	1983
20.	1.62	1986
21.	1.38	1986
22.	1.19	1959
23.	1.41	1985
24.	1.11	1937
25.	2.07	1935
26.	1.47	1973
27.	1.34	1965
28.	0.90	1972
29.	1.23	1973
30.	0.87	1977

Oct Record Pcpn

	One Day	Year
1.	0.75	1971*
2.	0.58	1954
3.	1.59	1973
4.	0.54	1911
5.	1.05	1913
6.	2.85	1911
7.	1.42	1967
8.	1.98	1970
9.	1.18	1968
10.	1.42	1946
11.	1.88	1986
12.	1.15	1969
13.	1.74	1956
14.	2.81	1966
15.	1.21	1987
16.	2.35	1911
17.	0.61	1937
18.	0.62	1928
19.	1.45	1982
20.	1.41	1934
21.	0.94	1979
22.	1.94	1979
23.	1.21	1980
24.	1.18	1946
25.	0.55	1916
26.	0.88	1970
27.	1.62	1918
28.	0.64	1940
29.	0.71	1971
30.	0.66	1919
31.	1.31	1935

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89.

November Record Precipitation

	One Day	Year	Snowfall	Year
1.	2.30	1991	5.7	1991
2.	0.67	1992	2.1	1992
3.	0.82	1964	2.0	1989
4.	0.63	1988	0.9	1959
5.	1.18	1979	2.9	1959
6.	0.80	1920	0.6	1993*
7.	0.17	1972	0.3	1968
8.	1.85	1916	5.0	1985
9.	2.05	1975	3.7	1985
10.	1.59	1919	1.2	1979
11.	1.78	1940	1.6	1966
12.	0.67	1965	3.2	1988
13.	1.35	1912*	1.2	1959
14.	0.88	1973	3.0	1997
15.	0.98	1988	2.1	1956
16.	1.52	1886	3.2	1961
17.	0.67	1931	3.3	1978
18.	0.82	1957	9.7	1957
19.	1.16	1953	6.5	1970
20.	1.40	1973	5.2	1996
21.	0.66	1979	3.1	1989
22.	1.53	1963	2.9	1978
23.	0.83	1931	7.8	1991
24.	0.74	2001	2.2	1996*
25.	1.06	1952	10.6	1952
26.	0.53	1971	3.6	1971
27.	1.03	1935	4.5	1994
28.	0.90	1987	5.5	1983
29.	1.60	1991	3.8	1988
30.	0.98	1934	4.9	1985

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89.

December Record Precipitation

	One Day	Year	Snowfall	Year
1.	0.60	1985	7.3	1985
2.	0.59	1912	4.1	1984
3.	0.54	1990	8.0	1990
4.	0.84	1960	5.9	1973
5.	0.89	1982	6.1	1972
6.	0.36	1912	3.4	1969
7.	0.45	1969	5.8	1969
8.	0.51	1987	3.9	1995
9.	0.21	1918	4.4	1961
10.	1.19	1911	5.4	1970
11.	0.97	1965	4.1	2000
12.	0.48	1886	6.0	1972
13.	0.58	1975	3.0	1983
14.	0.57	1975	4.9	1984
15.	0.26	1974	4.0	1987
16.	0.70	1908	3.5	1961
17.	0.41	1977	3.8	1990
18.	0.46	1919	7.2	2000
19.	0.23	1988	2.2	1987*
20.	0.42	1988	2.6	2000
21.	0.82	1887	1.9	1993
22.	0.46	1968	6.7	1969
23.	0.26	1996	4.9	1996
24.	0.39	1982	3.8	1977
25.	0.50	1955	10.3	1955
26.	0.41	1988	3.2	1988
27.	0.91	1982	2.1	1969
28.	0.44	1982	8.1	2000
29.	0.53	1972	2.9	1978
30.	0.23	1971	3.7	1971
31.	0.75	1911	7.3	1977

*and in previous years

Note: Snowfall records date back to August 1, 1952. Rainfall records date back to 1909, including 1886-89 (but missing 1931-50).

Dry and Wet Periods

Most Consecutive Days without any MEASURABLE* precipitation:

- 57 Days:** November 9th 1943 - January 4th 1944
• 11 days with a trace (11/9, 11/10, 11/12, 11/25, 11/26, 11/28, 12/05, 12/11, 12/12, 12/26)
- 52 Days:** February 22nd - April 14th 1910
• 5 days with a trace (2/22, 2/24, 2/26, 3/1, 3/29)
- 50 Days:** November 3rd - December 22nd 1910
• 7 days with a trace (11/4, 11/14, 11/27, 12/5, 12/6, 12/7, 12/18)
- 44 Days:** May 23rd - July 5th 1910
• 2 days with a trace (5/28, 6/12)
- 36 Days:** October 25th - November 29th 1914
• 4 days with a trace (11/2, 11/12, 11/15, 11/16)

Most Consecutive Days with MEASURABLE* precipitation:

- 11 Days:** January 8th - 18th 1999
• Only a total of 0.94 inches, but 15.2 inches of snowfall.
- June 28th - July 8th 1978
• Total of 9.26 inches
• A record of 6.22 inches on July 5th (2nd wettest day on record).
- September 12th - 22nd 1965
• Total of 3.20 inches.
- 9 Days:** April 18th - 26th 1996
• Total of 1.17 inches
- July 14th - 22nd 1978
• A total of 4.27 inches

* More than a trace of precipitation.

Seasonal Precipitation Records

Spring

Average is 8.00 inches

Warmest			Coldest		
1)	15.99	1888	1)	3.12	1910
2)	15.88	2001	2)	3.59	1934
3)	14.57	1990	3)	4.14	1972
4)	14.35	1945	4)	4.37	1948
5)	12.85	1982	5)	4.43	1987
6)	12.60	1999	6)	4.85	1943
7)	12.37	1973	7)	4.89	1939
8)	12.06	1938	8)	5.06	1958
9)	11.91	1991	9)	5.18	1932
10)	11.80	1993	10)	5.28	1887

Summer

Average is 12.01 inches

Warmest			Coldest		
1)	23.33	2000	1)	3.78	1910
2)	22.86	1990	2)	4.33	1964
3)	20.36	1981	3)	4.84	1976
4)	19.87	1978	4)	5.52	1988
5)	19.32	1993	5)	6.60	1992
6)	18.90	1942	6)	7.33	1932
7)	18.69	1999	7)	7.61	1933
8)	18.23	1938	8)	7.75	1936
9)	18.20	1951	9)	8.05	1941
10)	17.04	1935	10)	8.40	1955

Fall

Average is 6.75 inches

Warmest			Coldest		
1)	14.91	1986	1)	1.49	1976
2)	13.48	1911	2)	2.34	1944
3)	12.21	1970	3)	2.48	1953
4)	11.81	1973	4)	2.60	1910
5)	11.73	1934	5)	2.66	1999
6)	11.64	1972	6)	2.71	1939
7)	11.50	1983	7)	2.87	1952
8)	11.33	1931	8)	3.15	1888
9)	11.09	1993	9)	3.27	1955

Winter

Average is 2.57 inches

Warmest			Coldest		
1)	5.50	1887-88	1)	0.71	1957-58
2)	5.01	1931-32	2)	0.80	1963-64
3)	4.92	1982-83	3)	0.92	1941-42
4)	4.69	1950-51	4)	0.97	1956-57
5)	4.29	1932-33	5)	1.13	1986-87
6)	4.25	1966-67			1967-68
7)	4.22	1948-49	7)	1.14	1994-95
8)	4.15	1970-71	8)	1.29	1930-31
9)	4.13	1940-41	9)	1.45	1917-18
10)	4.08	1945-46			1913-14

Note: Records date back to 1886, but some data is missing from 1890-1908, and 1921-28.

Spring Total Precipitation

(March - April - May)

1909	6.60	1937	6.11	1965	10.91	1993	11.80
1910	3.12	1938	12.06	1966	5.94	1994	8.49
1911	6.68	1939	4.89	1967	6.24	1995	9.07
1912	7.59	1940	6.08	1968	9.04	1996	6.30
1913	7.24	1941	8.30	1969	5.38	1997	7.00
1914	6.77	1942	10.86	1970	10.56	1998	8.86
1915	8.94	1943	4.85	1971	6.20	1999	12.60
1916	9.88	1944	8.78	1972	4.14	2000	9.18
1917	9.25	1945	14.35	1973	12.37	2001	15.88
1918	8.44	1946	5.52	1974	9.54	2002	6.11
1919	8.42	1947	8.44	1975	7.78		
1920	9.98	1948	4.37	1976	7.77		
1921	M	1949	6.17	1977	9.59		
1922	M	1950	5.81	1978	6.63		
1923	M	1951	11.16	1979	8.42		
1924	M	1952	6.62	1980	5.71		
1925	M	1953	7.99	1981	5.70		
1926	M	1954	10.49	1982	12.85		
1927	M	1955	5.88	1983	8.45		
1928	M	1956	10.34	1984	7.88		
1929	9.51	1957	6.36	1985	5.63		
1930	10.61	1958	5.06	1986	9.35		
1931	6.52	1959	8.94	1987	4.43		
1932	5.18	1960	9.38	1988	6.34		
1933	6.55	1961	9.79	1989	6.88		
1934	3.59	1962	8.00	1990	14.57		
1935	8.04	1963	5.56	1991	11.91		
1936	5.88	1964	5.46	1992	7.37		

Note: Data unavailable from 1921-28 (M=missing).

Summer Total Precipitation

(June-July-August)

1909	8.76	1937	10.15	1965	9.60	1993	19.32
1910	3.78	1938	18.23	1966	9.76	1994	13.32
1911	11.61	1939	11.47	1967	12.91	1995	10.09
1912	10.12	1940	11.70	1968	13.20	1996	11.30
1913	15.57	1941	8.05	1969	14.40	1997	14.82
1914	16.20	1942	18.90	1970	9.33	1998	13.29
1915	13.11	1943	12.14	1971	10.09	1999	18.69
1916	9.28	1944	9.26	1972	9.21	2000	23.33
1917	13.76	1945	11.63	1973	13.80	2001	12.28
1918	11.69	1946	8.86	1974	10.67		
1919	12.37	1947	14.35	1975	10.85		
1920	10.64	1948	11.78	1976	4.84		
1921	M	1949	12.84	1977	9.62		
1922	M	1950	9.41	1978	19.87		
1923	M	1951	18.20	1979	14.66		
1924	M	1952	16.80	1980	12.17		
1925	M	1953	13.08	1981	20.36		
1926	M	1954	11.39	1982	10.27		
1927	M	1955	8.40	1983	12.30		
1928	M	1956	12.34	1984	9.01		
1929	11.90	1957	14.62	1985	8.91		
1930	12.01	1958	9.30	1986	14.21		
1931	10.96	1959	14.92	1987	14.78		
1932	7.33	1960	8.94	1988	5.52		
1933	7.61	1961	11.41	1989	11.43		
1934	10.47	1962	12.92	1990	22.86		
1935	17.04	1963	10.54	1991	12.23		
1936	7.75	1964	4.33	1992	6.60		

Note: Data unavailable from 1921-28 (M=missing).

Fall Total Precipitation

(September-October-November)

1909	10.36	1937	5.55	1965	7.84	1993	4.60
1910	2.60	1938	11.09	1966	5.62	1994	6.98
1911	13.48	1939	2.71	1967	3.64	1995	6.09
1912	3.79	1940	7.51	1968	7.39	1996	8.88
1913	6.92	1941	10.93	1969	5.47	1997	4.82
1914	5.88	1942	10.20	1970	12.21	1998	6.90
1915	9.11	1943	5.20	1971	9.48	1999	2.66
1916	6.24	1944	2.34	1972	11.64	2000	5.75
1917	3.45	1945	3.85	1973	11.81	2001	7.55
1918	6.05	1946	10.80	1974	4.41		
1919	6.99	1947	7.81	1975	5.67		
1920	6.12	1948	5.23	1976	1.49		
1921	M	1949	4.81	1977	7.13		
1922	M	1950	3.32	1978	11.02		
1923	M	1951	7.35	1979	7.86		
1924	M	1952	2.87	1980	4.98		
1925	M	1953	2.48	1981	3.99		
1926	M	1954	7.14	1982	9.07		
1927	M	1955	3.27	1983	11.50		
1928	M	1956	4.45	1984	7.86		
1929	7.17	1957	5.87	1985	10.37		
1930	8.14	1958	5.42	1986	14.91		
1931	11.33	1959	7.49	1987	5.60		
1932	4.76	1960	5.09	1988	7.04		
1933	7.16	1961	7.38	1989	3.90		
1934	11.73	1962	4.01	1990	3.60		
1935	8.25	1963	6.21	1991	10.20		
1936	4.75	1964	8.87	1992	10.25		

Note: Data unavailable from 1921-28 (M=missing).

Winter Total Precipitation

(December - January - February)

1909-10	2.30	1937-38	1.94	1965-66	3.15	1993-94	2.67
1910-11	2.80	1938-39	2.40	1966-67	4.25	1994-95	1.14
1911-12	2.92	1939-40	2.50	1967-68	1.13	1995-96	2.80
1912-13	1.99	1940-41	4.13	1968-69	3.25	1996-97	3.92
1913-14	1.45	1941-42	0.92	1969-70	2.51	1997-98	3.23
1914-15	3.03	1942-43	2.68	1970-71	4.15	1998-99	3.36
1915-16	2.65	1943-44	1.69	1971-72	1.98	1999-00	3.24
1916-17	2.16	1944-45	2.79	1972-73	3.38	2000-01	3.61
1917-18	1.45	1945-46	4.08	1973-74	2.08	2001-02	3.72
1918-19	2.78	1946-47	2.51	1974-75	3.23		
1919-20	1.55	1947-48	3.83	1975-76	2.08		
1920-21	M	1948-49	4.22	1976-77	1.81		
1921-22	M	1949-50	3.61	1977-78	2.48		
1922-23	M	1950-51	4.69	1978-79	2.45		
1923-24	M	1951-52	3.04	1979-80	2.52		
1924-25	M	1952-53	2.63	1980-81	2.65		
1925-26	M	1953-54	2.06	1981-82	2.53		
1926-27	M	1954-55	2.10	1982-83	4.92		
1927-28	M	1955-56	2.32	1983-84	3.07		
1928-29	M	1956-57	0.97	1984-85	2.99		
1929-30	1.61	1957-58	0.71	1985-86	2.34		
1930-31	1.29	1958-59	2.27	1986-87	1.13		
1931-32	5.01	1959-60	2.05	1987-88	3.13		
1932-33	4.29	1960-61	1.93	1988-89	1.94		
1933-34	1.66	1961-62	2.22	1989-90	1.64		
1934-35	2.47	1962-63	1.49	1990-91	2.77		
1935-36	2.17	1963-64	0.80	1991-92	3.05		
1936-37	2.76	1964-65	2.63	1992-93	3.28		

Note: Data unavailable from 1919-1929 (M=missing).

SNOWFALL RECORDS

Highest Snowfall Totals by Month

OCTOBER	NOVEMBER	DECEMBER	JANUARY
1. 10.0 1887	1. 22.5 1985	1. 35.3 2000	1. 30.2 1996
2. 5.4 1979	2. 20.3 1991	2. 30.6 1969	2. 29.4 1999
3. 4.5 1991	3. 18.0 1886	3. 21.4 1950	3. 27.3 1982
4. 2.9 1976	4. 17.1 1996	4. 20.8 1990	4. 27.0 1932
5. 2.6 1989	5. 16.3 1911	5. 20.7 1968	5. 24.4 1979
6. 2.2 1981	6. 14.6 1952	6. 18.8 1977	6. 23.0 1910
7. 2.1 1969	7. 14.0 1983	7. 18.5 1887	7. 21.8 1994
8. 1.5 1932	1934	8. 18.3 1961	8. 21.0 1917
1888	9. 13.0 1909	1940	9. 19.3 2000
10. 1.3 1959	10. 12.6 1947	10. 17.4 1955	10. 18.2 1988
FEBRUARY	MARCH	APRIL	
1. 19.4 1959	1. 35.1 1951	1. 16.4 1983	
2. 19.1 1962	2. 25.2 1985	2. 15.6 1988	
3. 18.4 1945	3. 19.5 1944	3. 12.9 1962	
4. 17.8 1893	4. 18.9 1961	4. 12.5 1945	
5. 16.1 1981	5. 18.8 1997	5. 11.5 1952	
6. 16.0 1971	1956	6. 10.9 1980	
7. 15.9 1983	7. 18.5 1952	7. 10.4 1973	
8. 15.3 1994	8. 18.4 1940	8. 10.0 1922	
9. 15.0 1887	9. 16.5 1888	9. 9.3 1993	
10. 14.9 1950	10. 16.2 1962 1934	10. 9.0 1887	

Lowest Snowfall Totals by Month

DECEMBER	JANUARY	FEBRUARY	MARCH
1. Trace 1943 1913	1. 1961	1. 1920	1. trace 1981 1910
3. 0.7 1979 1967	2. 1920	2. 1954	3. 0.4 1968
5. 0.9 1965	3. 1957 1920	3. 1958	4. 0.5 1990
6. 1.9 1975	4. 1912	4. 1912	5. 1.2 1986
7. 2.0 1960 1929	5. 1974 1958	5. 1964 1910	6. 1.3 1946
9. 2.2 2001	7. 1944	7. 1995	7. 1.5 1973
10. 2.5 1922,186 1866	8. 1948	8. 1976	8. 2.0 1921 1911
	9. 1962	9. 1997	10. 2.4 1914
	10. 1984,1942 1916	10. 1996	

Highest Snowfall for One Month

2. 35.3" December 2000
2. 35.1" March 1951
3. 30.6" December 1969
4. 30.2" January 1996
5. 29.4" January 1999
6. 27.3" January 1982
7. 27.0" January 1932
8. 25.2" March 1985
9. 24.4" January 1979
10. 23.0" January 1910

Record One-Day Snowfall

1. 15.4" Jan 22 1982
2. 13.6" Apr 26, 1988
3. 10.8" Mar 10, 1956
4. 10.6" Nov 25, 1952
5. 10.5" Mar 13, 1997
6. 10.3" Dec 25, 1955
7. 9.7" Nov 18, 1957
8. 9.3" Feb 2, 1983
9. 9.0" Mar 3, 1985
10. 8.5" Jan 3, 1973

Number of Days with Measurable Snowfall in Season (0.1 inches or greater...July through June)

Least			Most		
1)	21	1957-58	1)	57	1974-75
2)	25	1967-68 1953-54	2)	55	1992-93 1984-85
4)	26	1986-87 1980-81	4)	54	1961-62
6)	30	1999-2000 1998-99 1948-49	5)	51	1979-80 1978-79
9)	33	1959-60 1956-57 1955-54 1949-50	7)	50	1990-91 1985-86
			9)	49	1982-83
			10)	48	1991-92

Highest Seasonal Snowfall

1.	84.6"	1996-97
2.	77.5"	1950-51
3.	74.5"	1961-62
4.	73.6"	1951-52
5.	73.3"	1978-79
6.	68.6"	1984-85
7.	68.0"	1881-82
8.	66.3"	1887-88
9.	66.0"	1983-84
10.	65.6"	2000-01

Lowest Seasonal Snowfall

1.	9.1"	1967-68
2.	10.5"	1913-14
3.	17.5"	1924-25
4.	20.5"	1910-11
5.	21.2"	1919-20
6.	21.6"	1957-58
7.	22.6"	1930-31
8.	24.4"	1956-57
9.	24.6"	1937-38
10.	24.8"	1953-54

Snow Depth

Consecutive Days with <u>an inch or more</u>			Consecutive Days with <u>10 inches or more</u>		
1)	133	Nov 17 th 1978 - March 29 th 1979 Nov 22 nd 1950 - April 3 rd 1951	1)	66	Jan 12 th 1979 - March 18 th 1979
3)	125	Nov 20 th 1981 - March 24 th 1982	2)	64	Dec 23 rd 1969 - Feb 24 th 1970
4)	123	Nov 20 th 1985 - March 22 nd 1986	3)	51	Jan 25 th 1969 - March 16 th 1969
5)	119	Dec 9 th 1969 - April 3 rd 1970	4)	50	Dec 14 th 1983 - Feb 1 st 1984
6)	116	Dec 4 th 1992 - March 29 th 1993 Dec 13 th 1974 - April 7 th 1975	5)	46	Dec 2 nd 1985 - Jan 16 th 1986 Jan 4 th 1971 - Feb 18 th 1971
8)	111	Dec 14 th 1968 - April 3 rd 1969	7)	45	Jan 25 th 1986 - March 10 th 1986 Jan 26 th 1978 - March 11 th 1978
9)	110	Nov 27 th 1971 - March 15 th 1972 Dec 11 th 1970 - March 30 th 1971 Nov 25 th 1952 - March 14 th 1953	9)	43	Feb 5 th 1975 - March 19 th 1975
			10)	42	Jan 19 th 1982 - March 1 st 1982

- Consecutive Days with 20 inches or more on the ground: 19 Days, Jan 19th 1979 - Feb 6th 1979
- Latest occurrence of 1 inch or more on the ground: May 3rd, 1954
- Earliest occurrence of 1 inch or more on the ground: October 16th, 1969

Note: Seasonal snowfall is from **July through June**. Seasonal and monthly snowfall records date back to 1908. One-day records and snow depth back to August 1, 1952.

Miscellaneous

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Killing Frosts/Freezes

(Earliest and latest occurrences of 32 degree or lower temperatures)

Spring		Fall	
Latest Last:	June 9 th , 1937	Latest First:	October 29 th , 1973
Earliest Last:	April 9 th , 1985	Earliest First:	August 30 th , 1915
Average Last:	May 9 th	Average First:	September 30 th

Year	Latest	First	Year	Latest	First
1886	no data	10/1	1916	5/16	9/16
1887	5/27	10/5	1917	5/7	9/10
1888	no data		1918	5/13	9/16
1889	5/19	9/13	1919	5/2	10/11
1890	no data		1920	5/14	10/1
1891	no data		1921	5/16	10/4
1892	5/20	10/5	1922	4/22	10/12
1893	5/28	9/24	1923	5/8	10/19
1894	4/22	9/18	1924	5/9	9/20
1895	5/21	10/1	1925	5/5	10/5
1896	4/21	9/20	1926	4/28	9/25
1897	5/25	9/20	1927	5/11	9/23
1898	4/26	9/11	1928	5/12	9/23
1899	5/13	9/26	1929	5/21	9/18
1900	5/5	10/8	1930	5/30	9/28
1901	4/22	10/4	1931	5/23	10/12
1902	4/30	9/12	1932	5/28	9/23
1903	5/3	9/18	1933	5/3	9/27
1904	5/15	10/6	1934	5/25	10/3
1905	5/26	10/11	1935	5/17	9/27
1906	5/9	10/6	1936	4/26	10/2
1907	5/30	9/25	1937	6/9	9/16
1908	no data	9/29	1938	5/24	10/20
1909	5/10	10/12	1939	5/13	9/26
1910	5/14	10/6	1940	5/1	9/26
1911	5/5	10/8	1941	4/24	9/28
1912	4/22	9/26	1942	5/16	9/27
1913	5/10	9/22	1943	5/13	9/17
1914	5/15	10/25	1944	5/6	10/9
1915	5/18	8/30			

Year	Latest	First	Year	Latest	First
1945	6/4	9/28	1982	4/27	10/16
1946	5/12	9/25	1983	5/15	9/23
1947	5/9	9/25	1984	5/1	9/25
1948	4/17	10/3	1985	4/9	10/1
1949	4/24	9/28	1986	5/3	10/6
1950	5/2	9/24	1987	5/4	10/2
1951	5/11	9/28	1988	5/17	10/4
1952	4/24	10/2	1989	5/7	9/23
1953	5/13	9/13	1990	5/11	10/9
1954	5/20	10/6	1991	4/21	9/19
1955	5/8	9/11	1992	5/5	9/28
1956	5/16	9/19	1993	4/26	9/29
1957	5/5	9/27	1994	5/6	10/9
1958	5/23	10/1	1995	4/27	9/21
1959	5/31	9/18	1996	5/13	10/3
1960	5/12	10/18	1997	5/16	10/13
1961	5/26	9/28	1998	4/17	10/8
1962	4/30	9/20	1999	4/17	9/21
1963	5/23	9/13	2000	4/21	10/6
1964	4/15	10/5	2001	4/18	10/5
1965	4/28	10/13	2002	5/20	
1966	5/10	10/1			
1967	5/22	9/28			
1968	5/10	10/3			
1969	5/12	10/14			
1970	5/2	10/10			
1971	5/12	10/28			
1972	4/26	9/29			
1973	5/17	10/29			
1974	5/6	9/21			
1975	4/22	9/25			
1976	5/8	9/23			
1977	4/25	10/6			
1978	5/3	10/7			
1979	5/12	10/9			
1980	5/7	9/23			
1981	5/11	9/28			

Christmas Facts

A few weather facts for Christmas in Rochester. Precipitation is recorded in inches. Snowfall records are since 1948. Snow on the ground records (snow depth) are at 6 am.

Temperatures

Normal High... 25

Normal Low..... 6

Record High.... 50 (1936)

Record Low..... -25 (2000)

Lowest High.... -6 (1996)

Highest Low.... 31 (1973)

Precipitation

Record..... 0.50 (1955)

Record snowfall..... 10.3 (1955)

Record depth..... 15 (1969)

Number of times with over a trace of snowfall..... 17

Number of times with an inch or more of snowfall..... 9

Climatological chance for over a trace of snowfall..... 31%

Climatological chance of an inch or more of snowfall..... 17%

Number of times with a trace or more of snow on the ground.... 52

Number of times with an inch or more of snow on the ground... 42

Climatological chance of a trace or more on the ground..... 96%

Climatological chance of an inch or more on the ground..... 78%

With a "white" Christmas generally considered an inch of snow on the ground (snow depth) or an inch falling that day...Rochester has had a "white" Christmas 42 out of 54 times since 1948...or 78% of the time. The last non-white Christmas was recently, in 1997. The high temperature was 28 that year with no snow falling or on the ground.

Non-"white" Christmases: 1949, 1953, 1958, 1965, 1966, 1967, 1979, 1980, 1982, 1986, 1988, 1997.

Percent Frequency of Various Weather Conditions from Hourly Observations (1948-1990)

Month	Thunder-storm	Rain or Drizzle	Freezing rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
Jan	*	1.2	1.7	17.2	19.4	12.6	1.7	3.7	18.0
Feb	*	2.0	1.4	14.2	16.9	13.4	2.6	2.1	17.8
Mar	0.2	4.5	1.0	12.8	17.3	13.6	2.4	1.7	17.6
Apr	0.7	10.1	0.1	4.2	13.8	10.3	1.9	0.4	12.6
May	1.5	10.4	0.0	0.2	10.4	8.9	1.9	0.4	11.0
Jun	2.5	7.8	0.0	0.0	7.7	5.3	2.3	0.0	7.5
Jul	2.1	5.9	0.0	0.0	5.9	5.7	3.9	0.0	9.3
Aug	2.1	6.9	0.0	0.0	6.9	8.91	3.9	0.0	12.5
Sep	1.3	9.6	0.0	*	9.4	10.3	2.4	0.0	12.6
Oct	0.4	8.4	0.0	0.9	9.0	10.0	1.7	0	11.6
Nov	0.1	6.5	0.8	10.6	17.0	14.3	1.7	0.9	16.6
Dec	*	2.8	2.0	17.1	21.0	18.1	1.5	2.0	21.4
Year	0.9	6.4	0.6	6.4	12.9	10.9	2.3	0.9	14.0

*less than .05 percent

Note: These percentages refer to the frequency of the various weather conditions on any given hourly observation for each month. Over 10,000 observations were used for each month.

January

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	0.0	2.0	1.5	16.8	19.4	11.6	1.1	3.7	16.3
03	0.0	1.1	1.7	17.3	19.3	12.6	0.7	3.3	16.5
06	0.0	1.2	2.6	18.6	21.6	14.2	0.4	3.5	18.0
09	0.0	1.1	2.7	19.4	22.0	18.2	2.6	3.8	24.1
12	0.0	1.2	1.7	17.3	19.5	12.8	2.9	4.5	20.0
15	0.1	0.8	1.4	15.4	16.9	11.1	2.8	4.3	18.3
18	0.0	1.1	1.1	16.6	18.3	10.6	2.3	3.7	16.3
21	0.0	1.4	1.3	15.9	17.9	10.0	1.3	3.0	14.2
ALL	*	1.2	1.7	17.2	19.4	12.6	1.7	3.7	18.0

*less than .05 percent

February

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	0.0	2.4	2.1	14.1	17.9	12.7	1.7	2.2	16.3
03	0.0	2.1	1.4	13.8	17.0	14.8	0.8	1.7	17.2
06	0.0	2.0	2.2	15.3	18.8	15.9	0.5	1.6	17.9
09	0.0	1.9	1.6	16.5	19.5	20.6	4.2	2.6	26.8
12	0.0	1.6	0.7	13.7	15.7	12.2	4.5	2.5	19.0
15	0.0	1.8	0.7	13.7	15.5	9.2	3.4	2.2	14.7
18	0.1	1.7	1.1	12.2	14.5	11.0	3.2	2.1	16.4
21	0.1	2.6	1.3	13.9	16.6	10.4	2.4	1.9	14.5
ALL	*	2.0	1.4	14.2	16.9	13.4	2.6	2.1	17.8

*less than .05 percent

March

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	0.2	4.3	1.2	13.1	18.2	12.0	0.9	1.6	14.5
03	0.2	3.5	1.5	12.3	16.4	14.5	0.4	1.6	16.5
06	0.2	4.1	1.3	13.0	17.8	18.9	0.8	1.9	21.4
09	0.1	4.5	0.9	14.6	18.5	18.1	4.1	2.4	23.9
12	0.0	4.4	0.5	12.8	16.7	12.2	4.2	1.9	18.6
15	0.2	5.6	0.5	11.6	16.3	10.5	3.7	1.6	15.7
18	0.3	5.0	0.9	11.6	16.4	11.8	3.8	1.1	16.8
21	0.4	4.7	1.4	13.4	18.6	10.8	1.4	1.5	13.6
ALL	0.2	4.5	1.0	12.8	17.3	13.6	2.4	1.7	17.6

*less than .05 percent

April

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	0.9	10.5	0.2	4.0	14.1	9.3	0.7	0.5	10.6
03	0.8	10.4	0.3	4.3	14.4	11.5	0.5	0.3	12.4
06	0.5	10.2	0.2	5.2	14.7	17.0	1.7	0.5	19.1
09	0.3	9.1	0.2	5.3	13.6	12.2	3.1	0.4	15.5
12	0.3	9.5	0.1	4.2	13.1	8.1	2.4	0.5	11.2
15	0.9	9.1	0.1	4.1	12.5	6.4	2.6	0.6	9.7
18	0.8	11.1	0.2	3.0	13.6	9.0	2.5	0.4	12.0
21	0.9	11.2	0.0	3.4	14.0	8.6	1.3	0.2	10.4
ALL	0.7	10.1	0.1	4.2	13.8	10.3	1.9	0.4	12.6

*less than .05 percent

May

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	2.1	10.4	0.0	0.2	10.5	9.1	0.5	0.0	9.5
03	1.5	9.9	0.0	0.2	9.8	10.9	0.4	0.0	11.4
06	1.4	11.4	0.0	0.2	11.0	17.3	2.5	0.0	20.0
09	0.5	10.5	0.0	0.2	10.3	10.23	3.6	0.0	13.7
12	0.7	10.0	0.0	0.2	9.8	5.6	3.1	0.0	8.9
15	1.5	10.9	0.0	0.1	10.7	5.3	2.2	0.0	7.8
18	1.4	10.4	0.0	0.2	10.5	6.3	2.3	0.0	8.6
21	2.6	10.0	0.0	0.3	10.2	6.8	1.1	0.0	7.9
ALL	1.5	10.4	0.0	0.2	10.4	8.9	1.9	0.0	11.0

*less than .05 percent

June

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	3.3	7.2	0.0	0.0	7.2	5.0	0.8	0.0	5.5
03	3.3	8.6	0.0	0.0	8.4	7.7	0.9	0.0	8.3
06	2.6	10.5	0.0	0.0	10.4	14.5	2.5	0.0	16.6
09	1.6	8.3	0.0	0.0	8.3	5.9	4.1	0.0	9.9
12	1.3	6.4	0.0	0.0	6.4	2.7	3.4	0.0	6.2
15	1.8	6.7	0.0	0.0	6.7	1.6	2.9	0.0	4.6
18	2.3	7.0	0.0	0.0	6.8	2.2	2.6	0.0	4.7
21	3.6	7.8	0.0	0.0	7.8	3.1	1.6	0.0	4.5
ALL	2.5	7.8	0.0	0.0	7.7	5.3	2.3	0.0	7.5

*less than .05 percent

July

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	3.1	6.0	0.0	0.0	5.9	5.1	2.6	0.0	7.6
03	2.7	6.3	0.0	0.0	6.3	10.2	2.1	0.0	11.9
06	2.6	7.2	0.0	0.0	7.2	16.7	4.7	0.0	20.3
09	1.6	6.2	0.0	0.0	6.2	6.3	6.2	0.0	12.2
12	1.1	4.3	0.0	0.0	4.3	2.0	4.1	0.0	6.1
15	2.0	5.3	0.0	0.0	5.3	1.4	3.6	0.0	5.0
18	2.1	6.1	0.0	0.0	6.1	1.4	4.2	0.0	5.5
21	2.0	5.8	0.0	0.0	5.7	2.8	3.5	0.0	6.2
ALL	2.1	5.9	0.0	0.0	5.9	5.7	3.9	0.0	9.3

*less than .05 percent

August

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	3.4	6.9	0.0	0.0	6.8	7.7	2.0	0.0	9.5
03	3.5	7.8	0.0	0.0	7.8	12.8	1.9	0.0	14.6
06	2.7	9.9	0.0	0.0	9.9	24.6	3.6	0.0	27.9
09	1.2	8.0	0.0	0.0	8.0	10.9	7.2	0.0	17.4
12	1.2	6.1	0.0	0.0	6.1	4.5	5.0	0.0	9.5
15	0.6	5.0	0.0	0.0	4.9	2.7	3.8	0.0	6.4
18	2.3	6.2	0.0	0.0	6.2	3.0	4.3	0.0	7.1
21	2.0	5.7	0.0	0.0	5.6	4.7	3.6	0.0	7.8
ALL	2.1	6.9	0.0	0.0	6.9	8.9	3.9	0.0	12.5

*less than .05 percent

September

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	2.2	10.0	0.0	0.0	9.9	9.3	1.0	0.0	10.2
03	1.6	9.8	0.0	0.0	9.7	13.6	1.1	0.0	14.7
06	1.5	11.6	0.0	0.0	11.5	22.5	2.0	0.0	23.9
09	0.8	11.2	0.0	0.0	10.9	14.3	4.2	0.0	18.4
12	0.9	8.6	0.0	0.0	8.4	6.2	3.4	0.0	9.5
15	0.6	7.9	0.0	0.0	7.7	4.6	2.9	0.0	7.4
18	0.9	8.5	0.0	0.0	8.2	5.7	3.3	0.0	8.8
21	2.2	9.5	0.0	0.0	9.1	6.5	1.6	0.0	7.8
ALL	1.3	9.6	0.0	0.0	9.4	10.3	2.4	0.0	12.6

*less than .05 percent

October

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	0.3	7.4	0.0	1.0	8.3	8.9	0.5	0.0	9.1
03	0.5	8.1	0.0	1.1	8.9	11.0	0.6	0.0	11.5
06	0.4	9.2	0.0	0.6	9.5	14.6	0.9	0.0	15.5
09	0.4	9.0	0.0	0.9	9.4	14.2	3.2	0.0	17.0
12	0.2	8.0	0.0	0.8	8.4	7.6	2.6	0.0	10.3
15	0.5	8.8	0.0	1.1	9.5	7.1	2.3	0.0	9.3
18	0.8	9.3	0.0	0.8	9.6	8.1	2.3	0.0	10.4
21	0.5	7.4	0.0	1.1	8.1	8.3	1.2	0.0	9.5
ALL	0.4	8.4	0.0	0.9	9.0	10.0	1.7	0.0	11.6

*less than .05 percent

November

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	0.1	7.4	0.6	9.5	16.5	12.7	0.8	0.9	14.2
03	0.2	7.4	0.8	9.8	17.1	15.0	0.5	0.8	16.2
06	0.0	6.6	1.0	11.1	17.8	17.1	0.5	0.8	18.2
09	0.0	6.9	0.9	11.3	17.8	21.5	2.9	0.9	24.9
12	0.2	6.2	0.9	11.6	17.8	14.2	2.8	0.7	17.5
15	0.1	5.7	0.5	10.4	16.2	10.4	3.0	0.9	14.1
18	0.1	6.4	0.9	10.7	17.0	11.5	2.1	1.2	14.4
21	0.2	5.6	0.7	10.2	15.8	11.8	1.2	0.9	13.5
ALL	0.1	6.5	0.8	10.6	17.0	14.3	1.7	0.9	16.6

*less than .05 percent

December

Hour L.S.T.	Thunder-storm	Rain or Drizzle	Freezing Rain or Freezing Drizzle	Snow or Sleet	Percent of Obs with Precip	Fog	Haze or Smoke	Blowing Snow	Percent of Obs with an Obscuration to Vision
00	0.0	2.8	2.5	17.2	21.7	16.1	1.2	2.0	19.0
03	0.1	2.9	1.7	17.3	20.9	17.7	0.7	1.7	19.8
06	0.0	2.3	2.7	16.4	20.7	19.4	0.7	1.7	21.5
09	0.0	2.2	2.6	17.7	21.5	24.5	1.7	2.0	28.0
12	0.0	3.6	1.1	17.7	21.6	19.7	2.4	2.4	24.2
15	0.0	2.9	1.0	17.3	20.7	16.3	2.0	2.5	20.8
18	0.0	2.8	1.8	16.3	19.8	16.2	1.5	2.1	19.5
21	0.0	2.9	2.9	16.6	21.0	15.0	1.7	2.0	18.1
ALL	*	2.8	2.0	17.1	21.0	18.1	1.5	2.0	21.4

*less than .05 percent

Percent Frequency of Hourly Total Sky Cover Amounts

(1948-1990)

Data is in percentage (%) of time that the certain sky cover occurred.

Annual

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	34.4	16.0	10.8	38.8
03	33.9	14.0	11.3	40.8
06	25.2	16.4	15.0	43.3
09	20.5	16.5	17.6	45.4
12	15.9	19.3	21.8	43.0
15	15.2	20.9	21.7	42.3
18	20.0	21.4	18.1	40.5
21	29.5	18.8	13.5	38.2
ALL	24.3	17.9	16.2	41.5

January

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	34.3	12.9	9.1	43.7
03	31.9	12.9	9.0	46.2
06	30.0	13.8	10.2	46.0
09	22.6	14.0	13.9	49.5
12	21.4	14.6	17.0	47.0
15	20.2	15.2	16.0	48.6
18	22.7	16.3	14.3	46.7
21	30.8	14.6	11.2	43.4
ALL	26.7	14.3	12.6	46.4

February

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	34.3	12.9	9.1	43.7
03	31.9	12.9	9.0	46.2
06	30.0	13.8	10.2	46.0
09	22.6	14.0	13.9	49.5
12	21.4	14.6	17.0	47.0
15	20.2	15.2	16.0	48.6
18	22.7	16.3	14.3	46.7
21	30.8	14.6	11.2	43.4
ALL	26.7	14.3	12.6	46.4

March

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	29.5	13.7	9.1	47.7
03	28.7	9.9	11.3	50.1
06	22.0	14.7	12.6	50.7
09	17.3	13.7	14.7	54.2
12	15.5	15.5	17.1	52.0
15	14.3	15.5	17.2	52.9
18	16.1	15.6	14.9	53.4
21	25.9	14.7	11.6	47.8
ALL	21.2	14.2	13.6	51.1

April

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	31.4	14.4	11.1	43.0
03	31.4	13.8	9.8	45.0
06	22.6	15.7	14.7	47.0
09	20.3	14.8	16.0	48.8
12	15.3	16.8	18.5	49.3
15	14.2	16.0	21.2	48.7
18	16.5	18.8	17.1	47.7
21	27.3	17.2	11.9	43.6
ALL	22.4	15.9	15.0	46.6

May

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	33.3	17.5	13.6	35.7
03	31.8	14.0	15.7	38.6
06	20.6	17.0	18.5	43.9
09	18.4	19.3	20.6	41.8
12	13.4	19.2	25.6	41.7
15	12.1	20.7	26.4	40.8
18	13.7	22.8	23.1	40.4
21	25.9	22.3	17.1	34.7
ALL	21.1	19.1	20.1	39.7

June

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	36.8	19.5	13.8	29.9
03	32.1	19.9	14.8	33.2
06	20.6	20.1	20.7	38.6
09	18.8	20.3	24.6	36.4
12	9.4	25.1	31.1	34.4
15	9.7	29.1	29.5	31.7
18	17.0	28.8	24.3	29.8
21	26.4	25.1	22.3	26.2
ALL	21.3	23.5	22.6	32.5

July

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	42.0	22.3	14.6	21.1
03	39.1	19.6	13.8	27.4
06	24.8	22.6	19.4	33.3
09	22.1	23.1	22.8	32.0
12	11.8	27.6	33.8	26.8
15	10.0	34.2	31.0	24.8
18	19.1	36.1	23.6	21.3
21	33.0	28.5	18.9	19.6
ALL	25.2	26.8	22.3	25.8

August

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	43.7	18.8	11.8	25.8
03	40.7	16.4	12.0	30.8
06	23.3	21.5	19.4	35.9
09	23.2	20.6	22.0	34.3
12	16.2	25.1	30.7	28.1
15	14.2	30.1	28.3	27.5
18	22.4	30.3	22.1	25.2
21	36.1	24.7	16.2	23.0
ALL	27.4	23.4	20.3	28.8

September

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	40.9	16.9	9.4	32.8
03	43.1	14.0	10.5	32.3
06	28.2	17.8	17.1	36.8
09	25.7	17.1	18.1	39.1
12	18.9	23.3	21.9	35.8
15	19.1	24.7	22.9	33.4
18	25.6	22.3	20.0	32.1
21	37.1	20.5	12.1	30.4
ALL	29.8	19.6	16.5	34.1

October

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	37.2	16.1	9.7	36.9
03	38.3	14.0	12.2	35.6
06	30.2	17.6	15.6	36.6
09	24.2	16.0	17.3	42.5
12	22.0	19.2	17.9	40.9
15	20.9	19.8	19.5	39.8
18	23.6	20.9	19.3	36.2
21	33.2	17.6	11.7	37.5
ALL	28.7	17.6	15.4	38.3

November

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	27.7	12.6	9.8	49.9
03	29.5	11.7	8.8	50.1
06	24.0	13.3	11.7	51.1
09	15.9	12.0	14.5	57.6
12	13.0	14.1	18.7	54.2
15	12.6	15.5	16.4	55.5
18	19.5	14.7	13.2	52.6
21	24.8	14.1	8.3	52.8
ALL	20.9	13.5	12.7	53.0

December

Hour (L.S.T.)	Clear	Scattered	Broken	Overcast
00	25.4	12.9	9.5	52.3
03	27.0	11.3	8.6	53.2
06	26.7	12.3	9.6	51.4
09	17.4	12.6	14.0	56.0
12	15.0	14.6	14.7	55.7
15	15.4	13.4	15.1	56.1
18	20.0	13.1	11.6	55.4
21	24.2	11.3	10.0	54.5
ALL	21.4	12.7	11.6	54.3

Flying Weather

Percent hours with Marginal Visual Flight Rules (MVFR) Conditions:
ceilings less than 5000 ft and/or visibility less than 5 miles

Hour	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
00	36	35	35	28	21	14	12	15	22	24	39	44	27
03	36	36	38	30	24	19	17	21	25	26	40	44	30
06	40	37	41	35	28	25	23	31	34	29	45	45	34
09	40	39	43	36	29	24	21	26	32	32	46	47	34
12	37	36	41	37	33	27	25	28	33	32	45	44	35
15	35	34	42	36	30	24	20	23	28	28	43	44	32
18	34	34	37	30	21	15	12	16	21	23	42	44	27
21	35	33	36	28	18	13	10	13	19	24	41	43	26
ALL	37	36	39	32	26	20	17	22	27	27	43	44	31

Percent hours with Instrumentation Flight Rules (IFR) Conditions:
ceilings less than 1000 ft and/or visibility less than 3 miles

Hour	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
00	17	16	16	11	7	4	4	6	10	9	15	22	11
03	18	17	18	14	10	8	7	10	14	10	17	24	14
06	20	20	21	18	15	12	12	19	19	14	21	26	18
09	24	21	21	16	11	7	7	12	18	15	23	29	17
12	19	16	17	11	6	4	2	4	9	8	19	24	12
15	17	14	15	9	4	2	2	3	7	7	14	21	9
18	15	14	14	10	5	2	2	4	7	6	14	20	9
21	16	13	13	10	5	2	2	5	7	7	15	20	10
ALL	18	16	17	12	8	5	5	8	11	10	17	23	13

Percent Frequency of Daily Mean Temperatures (1948-1990)

Temp	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
>=85	0.0	0.0	0.0	0.0	0.0	0.2	1.1	0.5	0.0	0.0	0.0	0.0	0.1
>=80	0.0	0.0	0.0	0.0	0.0	2.7	8.1	4.9	1.6	0.0	0.0	0.0	1.5
>=75	0.0	0.0	0.0	0.0	2.0	14.9	29.1	20.2	5.0	0.2	0.0	0.0	6.0
>=70	0.0	0.0	0.0	1.2	9.1	36.9	61.7	46.9	13.5	1.1	0.0	0.0	14.3
>=65	0.0	0.0	0.0	3.6	21.3	61.1	88.1	74.5	27.4	5.7	0.0	0.0	23.7
>=60	0.0	0.0	0.3	9.0	39.7	85.3	98.4	91.8	49.1	14.4	0.3	0.0	32.6
>=55	0.0	0.0	1.1	16.7	60.7	96.0	99.9	98.9	72.0	27.0	1.5	0.1	39.7
>=50	0.0	0.0	3.7	30.9	80.8	99.5	100	99.9	89.1	45.1	6.7	0.2	46.6
>=45	0.0	0.6	8.3	50.8	93.1	99.9	100	100	97.2	64.3	15.0	0.7	52.8
>=40	0.2	2.2	16.3	70.5	98.5	100	100	100	99.8	82.7	27.1	1.9	58.5
>=35	2.1	6.3	31.2	87.1	99.6	100	100	100	100	93.9	45.1	6.5	64.6
>=30	9.2	20.0	50.9	95.3	100	100	100	100	100	98.4	63.1	19.5	71.6
>=25	21.0	33.8	67.6	98.3	100	100	100	100	100	99.9	79.0	36.0	78.2
>=20	35.3	48.1	81.2	99.5	100	100	100	100	100	100	88.1	51.9	83.8
>=15	47.0	60.1	88.5	100	100	100	100	100	100	100	94.0	65.0	88.0
>=10	59.6	72.9	94.9	100	100	100	100	100	100	100	97.1	75.3	91.7
>=5	69.5	82.8	97.7	100	100	100	100	100	100	100	98.8	83.9	94.4
>=0	82.2	91.7	99.8	100	100	100	100	100	100	100	99.9	91.6	97.1
>=-5	89.3	96.3	99.8	100	100	100	100	100	100	100	100	96.3	98.5
>=-10	94.6	99.1	99.8	100	100	100	100	100	100	100	100	98.3	99.3
>=-15	98.2	99.9	100	100	100	100	100	100	100	100	100	99.5	99.8
>=-20	99.9	100	100	100	100	100	100	100	100	100	100	99.8	100
>=-25	100	100	100	100	100	100	100	100	100	100	100	100	100
Mean	12.4	17.6	29.1	45.1	57.2	66.8	71.3	68.9	59.7	48.7	32.8	18.3	44.1

Note: These numbers are in reference to the percentage of time that the mean temperature is at or above the indicated temperatures.

Ex. >=40 is for mean temperatures from 40 degrees or greater. So in June, the daily mean temperature is 40 degrees or greater 100% of the time.

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Appendix

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Appendix

Wind Chill

(Wind Speed vs. Air Temperature)

calm	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93

Wind chill is based on the rate of heat loss from exposed skin caused by the combined effects of the wind and cold. In other words, how cold it actually “feels”. Ex. A wind speed of 15 mph with an air temperature of 10 above zero produce a wind chill of -7 degrees.

Conversions:

Fahrenheit to Celsius $C = 5/9 (F - 32)$

Celsius to Fahrenheit $F = 9/5 C + 32$

Miles per hour to knots: 1.15 miles per hour for every knot

1 inch of mercury = 33.865 millibars (mb)

Heat Index

(Air Temperature vs. Relative Humidity)

temp	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
115	103	107	111	115	120	127	135	143	151								
110	99	102	105	108	112	117	123	130	137	143	151						
105	95	97	100	102	105	109	113	118	123	129	135	142	149				
100	91	93	95	97	99	101	104	107	110	115	120	126	132	136	144		
95	87	88	90	91	93	94	96	98	101	104	107	110	114	119	124	130	136
90	83	84	85	86	87	88	90	91	93	95	96	98	100	102	106	109	113
85	78	79	80	81	82	83	84	85	86	87	88	89	90	91	93	95	97
80	73	74	75	76	77	77	78	79	79	80	81	81	82	83	85	86	86
75	69	69	70	71	72	72	73	73	74	74	75	75	76	76	77	77	78
70	64	64	65	65	66	66	67	67	68	68	69	69	70	70	70	70	71

The heat index is an accurate measure of how hot it really feels when relative humidity is added to the actual air temperature. Ex. An air temperature of 90 degrees, combined with a relative humidity of 60%, would make it feel more like 100 degrees.