NOAA TECHNICAL MEMORANDUM
NWS WR-152

CLIMATE OF SALT LAKE CITY, UT

William J. Alder, Sean T. Buchanan, William Cope (Retired), James A. Cisco, Craig C. Schmidt, Alexander R. Smith (Retired), Wilbur E. Figgins (Retired)
National Weather Service Forecast Office
Salt Lake City, Utah

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Sixth Revision

U.S. DEPARTMENT OF COMMERCE / National Oceanic and Atmospheric Administration / National Weather Service

NOAA TECHNICAL MEMORANDA
National Weather Service, Western Region Subseries

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Sixth Revision

UNITED STATES
DEPARTMENT OF COMMERCE
Mickey Kantor, Secretary

National Oceanic and
Atmospheric Administration
D. James Baker, Under Secretary
and Administrator

National Weather Service
Elbert W. Friday, Jr., Assistant
Administrator for Weather Services

This publication has been reviewed and is approved for publication by Scientific Services Division, Western Region

Delain A. Edman, Chief
Scientific Services Division
Salt Lake City, Utah

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Salt Lake City, Utah

I. INTRODUCTION

The purpose of this publication is to attempt to bring together under one cover as much data as possible concerning the climate of Salt Lake City. This was a difficult undertaking because of the wide variance of climate in the Salt Lake area. The Wasatch Mountain range, immediately east of the city, and the location of the Great Salt Lake, a short distance to the west, cause a great difference in local microclimates.

The Salt Lake City weather records began over 100 years ago; however, the statistics in this report are based on the airport weather records which began May 1, 1928. The airport location continues to the present to be the National Weather Service's official weather observing location for the Salt Lake City area. This provides us with over 6 decades of continuous weather information that was observed from an existing or comparable exposure location. However, it must be remembered that various extremes stated in this paper have, no doubt, been exceeded at other sites in the locality. Any summary such as this must be taken in the context of giving a general view of Salt Lake Valley conditions, with the details only being applicable to the airport environs.

II. GEOGRAPHICAL AND CLIMATOLOGICAL SUMMARY

Salt Lake City is located in a northern Utah valley surrounded by mountains on three sides and the Great Salt Lake to the northwest. The city varies in altitude from near 4200 feet to 5000 feet above sea level (ASL).

The Wasatch Mountains to the east have peaks to nearly 12,000 feet ASL. Their orographic effects cause more precipitation in the eastern part of the city than over the western part.

The Oquirrh Mountains to the southwest of the city have several peaks to above 10,000 feet ASL. The Traverse Mountain Range at the south end of the Salt Lake Valley rises to above 6,000 feet ASL. These mountain ranges help to shelter the valley from storms from the southwest in winter, but are instrumental in developing thunderstorms which can drift over the valley in the summer.

Besides the mountain ranges, the most influential natural condition affecting the climate of Salt Lake City is the Great Salt Lake. This large inland body of water, which never freezes over due to its high salt content, can moderate the temperatures of cold winter winds blowing from the northwest and helps drive a lake/valley wind system. The warmer lake water during the fall through the spring also contributes to increased precipitation in the valley downwind from the lake. The combination of the Great Salt Lake and the Wasatch Mountains often enhances storm precipitation in the valley.

Salt Lake City normally has a semi-arid continental climate with four well-defined seasons. Summers are characterized by hot, dry weather, but the high temperatures are usually not oppressive since the relative humidity is generally low and the nights usually cool. July is the hottest month with average maximum readings in the nineties.

The average temperature range is about 30 degrees in the summer and 18 degrees during the winter. Summer temperatures above 102 degrees or winter temperatures colder than -10 degrees occur only 1 season out of 4.

Winters are cold, but usually not severe. Mountains to the north and east act as a barrier to frequent invasions of cold continental air. The average annual snowfall is under 60 inches at the airport, but much greater amounts fall on higher bench locations. Heavy fog often develops under temperature inversions in the winter and can persist for several days.

Precipitation, generally light during the summer and early fall, reaches a maximum in the spring when storms from the Pacific Ocean are moving through the area more frequently than in any other season of the year.

Winds are usually light, although occasional high winds have occurred in every month of the year, particularly in March.

The growing season, or freeze-free period, averages over 5 months in length. Yard and garden foliage generally are making good growth by mid April. The last freezing temperature in the spring normally occurs in late April with the first fall freeze normally occurring in mid October.

III. HISTORY OF WEATHER OBSERVATIONS AT SALT LAKE CITY

The first published weather observations of the Salt Lake area were taken in the summer of 1847 by William W. Phelps, who entered the Salt Lake valley with the Brigham Young company in July 1847. During the 1850's and 1860's, W.W. Phelps probably took most of his weather observations on or near his property that was located on the northwest corner of West Temple and 100 South Street in downtown Salt Lake City.

On January 12, 1857, W.W. Phelps presented to the Utah legislature a resolution creating the office of Superintendent of Meteorological Observations. The resolution was accepted and Phelps was appointed to fill the position. As Superintendent, Phelps used weather instruments from the Smithsonian Institution and private sources to furnish daily and monthly weather observations and summaries to the city's newspaper, the Deseret News. Figure 1 shows two of these summaries -- dated December 1857 and November 1861.

W.W. Phelps died on March 6, 1872. Subsequently, Marcus E. Jones, a professor of Botany at Salt Lake College (in 1880) and President of the Utah Academy of Science (in 1914), obtained Phelp's weather data from the Deseret News and corrected and summarized Phelp's daily weather records into monthly tabulations for the years 1847 to 1867. See figure 2.

In March 1874, the U.S. Army Signal Service of the United States government began taking official weather observations for the Salt Lake City area. Their weather station was located in a corner room on the third floor of the "Exchange Building" on the southeast corner of East Temple and First South Streets.

On July 1, 1891, the U.S. Weather Bureau was established and made part of the Department of Agriculture. At this time many Army Signal Corps personnel doffed their Army uniforms and became members of the Weather Bureau. The first civilian official in charge of the Weather Bureau Office was formerly an Army official.

Through the years, the downtown Salt Lake Weather office changed locations several times. In succession, the office was located at the following addresses:

March 19, 1874, to June 29, 1876: Corner room on the third floor of the "Exchange Building" or "Godbe Building" on the southeast corner of East Temple and First South Streets.

June 29, 1876, to July 31, 1891: In two rooms on the fourth floor of the Wasatch Hotel, southeast corner of Main and Second South Streets.

FIGURE 1

Meteorological Observations for December, 1857, by H.E. Phelps in Salt Lake City, Utah.
Taken from the Deseret News, January 6, 1858.

Meteorological Observations for November, 1861, by W.W. Phelps in Salt Lake City, Utah
Taken from the Deseret News, Janary 8, 1862.

Table

CONTAINING A SUMMARY OF METEOROLOGICAL OBSERVATIONS FOR THE MONTH ENDING DEC. 1857, G. S. L. CITY.

BY H. E. PHELPS.

Monthly Mean.	Barometer.		
7 a.m.	9 a.m.	3 p.m.	9 p.m.
25.700	25.737	25.785	25.703
Monthly Mean.	Thermometer attached.		
7 a.m.	9 a.m.	3 p.m.	9 p.m.
33	35	38	34
Monthly Mean.	Thermometer detached.		
7 a.m.	9 a.m.	3 p.m.	9 p.m.
25	27	34	27
Monthly Mean.	Wet Bulb.		
7 a.m.		3 p.m.	
32		33	

Highest and lowest range of Barometer during the month.	Highest and lowest range of thermometer during the month.
[illegible]	[illegible]

Rain water measured 5.40 inches.

A JOURNAL FOR DECEMBER 1857.

1—Cloudy: spitting snow, one inch.
2—Partially clear and mild.
3— " " "
4—Cloudy; appearance of snow.
5—Variable.
6— " storming in the mountains.
7—Snowing most of the day.
8—Clear. During the night of the 7, 3 inches snow.
9—Variable.
10— " P. m. snowing.
11— " and mild.
12—High wind &; snow melting off.
13—Cloudy.
14—Variable.
15—Partially clear.
16— " Snow all off in the valley.
17—Variable with a light snow p. m.
18—Partially clear.
19— " "
20—Variable.
21—Clear and pleasant.
22— " "
23—Warm, clear and pleasant.
24—Variable.
25—Clear.
26—Variable.
27— " and pleasant.
28—Storming most of the day.
29—Cloudy, cold wind north.
30—Variable.
31—P. m. spitting snow ½ inch.

ABSTRACT

Of Meteorogical observations for the month of November, 1861, at G. S. L. City, Utah, by W. W. Phelps.

MONTHLY MEAN.

Thermometer in open air.

7 a.m.	2 p.m.	9 p.m.
36	50	40

Dry Bulb.

7 a.m.	2 p.m.	9 p.m.
40	48	42

Wet Bulb.

7 a.m.	2 p.m.	9 p.m.
38	45	40

Highest and lowest range of Barometer: Max. 25.— Min. 25.—

Highest and lowest range of thermometer in the open air: Max. 70° Min. 17°.

The amount of Rain and Snow water was 1.76 inch. The Snow that fell during the month measured 4 inches. The weather was temperate and moist.

MONTHLY JOURNAL.

1st. Partially cloudy.
2d. Clear and cold.
3d. Partially clear.
4th. do
5th. Clear till evening, then cloudy and windy.
6th. Hazy and warm.
7th. Partially clear.
8th. Cloudy.
9th. Cloudy; storm near.
10th. Raining, and snowing on the mountains.
11th. Cloudy; gale from the west.
12th. Cloudy and dreary.
13th. Cloudy and windy.
14th. Mostly clear.
15th. Cloudy; rained 6 p.m.
16th. Clear at times.
17th. Cloudy.
18th. Stormy and windy; snowed.
19th. Clear at times, and cold.
20th. Cloudy; snowed at night.
21st. Cloudy; do
22d. A.M. clear; p.m. cloudy.
23d. Clear.
24th. Clear and hazy.
25th. Cloudy; rained at night.
26th. Cloudy.
27th. A.M. rainy; p.m. cloudy and windy.
28th. A.M. cloudy; p.m. clear.
29th. Cloudy and rainy.
30th. Rainy day.

FIGURE 2

Copy of M.E. Jones Revision of Phelp's and Son's Record

Form No. 1078–Met'l.

of M.E. Jones
vision of
elps + Son's
cord.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

Station, Salt Lake City, Utah

Data Precipitation

19	January	February	March	April	May	June	July	August	September	October	November	December	
1847	—	—	—	—	—	—	—	—	—	—	—	—	10.00 Est.
1848	—	—	—	—	—	—	—	—	—	—	—	—	12.00 Est.
1849	—	—	—	—	—	—	—	—	—	—	—	—	11.00 Est.
1850	—	—	—	—	—	—	0	1.00	—	1.00	1.00	1.50	10.00 Est.
1851	.25	1.50	.60	1.50	2.50	0	0	0	—	—	.50	.50	8.00 Est.
1852	.40	0	1.50	.25	.50	.10	2.00	—	.20	0	4.00	2.40	12.50 Est.
1853	.25	0	1.80	2.00	2.50	2.50	1.00	—	—	0	.80	.75	12.00 Est.
1854	1.00	1.50	—	—	1.50	—	2.00	2.50	1.75	2.25	.25	.55	14.00 Est.
1855	2.25	.50	2.50	1.00	.50	.25	0	.35	.35	1.00	2.50	4.00	15.20
1856	1.00	.50	.50	2.00	3.00	.01	.50	.50	.60	2.00	2.50	4.50	17.61
1857	5.95	.63	.29	.19	.83	1.00	.64	.85	.57	1.10	2.80	.54	15.49
1858	.30	1.37	2.35	2.78	.70	.78	.34	.53	.15	3.28	1.24	.62	14.44
1859	.65	3.88	3.33	1.43	1.85	.11	1.07	.13	1.58	.22	3.85	.70	18.80
1860	.45	.09	.77	1.14	2.75	.89	.29	.67	.22	1.18	.62	2.78	11.85
1861	1.20	1.15	2.04	1.34	1.10	.31	.16	1.47	.25	0	1.76	3.00	13.78
1862	2.81	.30	2.00	1.83	.56	2.36	.20	1.18	.76	.12	.07	1.00	13.19
1863	1.08	1.41	.66	2.75	.36	.30	0	.04	.88	0	1.00	1.63	10.11
1864	2.00	.65	2.52	1.38	1.95	.15	0	1.25	.72	.28	1.19	4.54	17.13
1865	1.22	3.00	2.28	.54	.26	.75	1.74	.61	1.50	1.00	.42	6.50	19.82
1866	2.00	1.60	2.60	2.60	2.07	5.33	.87	2.00	.25	1.80	2.25	4.36	27.73
1867	—	1.75	—	—	3.50	1.25	.30	—	—	—	—	—	—
1868													
1869													
1870			W.W. Phelps kept orignal record										
1871			followed by his son						Phelps				
1872			Prof Jones got them Deseret news & corrected										
1873			them from daily record.										

July 31, 1891, to March 15, 1899: Board of Trade Building at 154 West Second South Street, in rooms 50, 51, and 52 on the 5th floor.

March 15, 1899, to July 1, 1909: Southeast corner of Second South and West Temple Streets, on the 6th floor, rooms 601, 628, and 629. On July 1, 1904, the office quarters were expanded to include rooms 630 and 631.

July 1, 1909, to December 1, 1932: Boston Building on the corner of Main Street and Exchange Place occupying office rooms 1103 through 1107 in the east end of the penthouse and the east corner of the garret. Starting on May 1, 1928, an additional office was opened at the new airport west of downtown Salt Lake City.

December 1, 1932, to August 15, 1954: 501 Federal Building located at Main and Fourth South Streets.

August 15, 1954, to present: The city office was closed and its functions moved to the airport.

The Wright brothers ushered in the flying age and with it the demand for supporting airports around the country. As mentioned above, the Weather Bureau expanded their mode of operation to meet this challenge. **On May 1, 1928, the Weather Bureau established a first-order weather station at the Salt Lake Municipal Airport, 3-3/4 miles west-northwest of the downtown Federal Building at latitude 40° 46' and longitude 111° 58'. The station was located in a small house in the southeast corner of the airport complex, east of the United Airlines hanger. Elevation at the observing site was 4222 feet ASL.**

The airway and pibal observations began on the opening date with the first weather observation being taken at 6:00 a.m. May 1, 1928. The wind anemometer was located 47 feet above the ground. The thermometers were installed in a standard Weather Bureau instrument shelter with the thermometers 5 feet above the ground. The precipitation gages were placed approximately 6 feet west of the shelter with the base on the ground and top or opening 3 feet above the ground. On June 11, 1933, the weather-observing equipment was moved 800 feet north of the original location to the roof of the Airport Administration Building which was a two-story structure. The temperature apparatus was installed in a standard Weather Bureau instrument shelter with the thermometer being located 5 feet above the roof and 33 feet above ground level. The rain gages were installed on the same roof, about 20 to 25 feet immediately north of the instrument shelter. The wind instrument was 18 feet above the second-story roof or 46 feet above ground level.

During the winter of 1943-1944, a third floor was added to the Administration Building. Although the instrument shelter was able to remain on the second-story roof, just south of the new third story, the rain gages were moved to the roof of the third floor on April 1, 1944, making them 41 feet above ground level.

On July 2, 1954, the station was moved to the one-story Federal Aviation Agency - Weather Bureau Office building at 174 North 2300 West Streets or some 325 feet southeast of the previous location. The wind instruments were 33 feet above the ground, temperature instruments 6 feet above the ground, and rain gages 3 feet above the ground.

On July 29, 1960, automatic temperature and wind-measuring equipment were moved to near the major runway 3600 feet northwest of the Government building.

On March 8, 1978, the station was moved to the Executive Terminal building at 337 North 2370 West Streets approximately 1/4 mile north of the 1954 location. Wind, temperature, dew point, and visibility measuring equipment were remote sensors and were located adjacent to the main airport runway. Precipitation, solar radiation, and standby temperature measuring equipment were located about 300 feet east of the station. The new elevation of the station was 4227 feet ASL.

Ceilometer equipment, which automatically observes and records cloud heights, was first installed at the airport on March 5, 1946. The projector was located 1463 feet north of the observing quarters, and the ceilometer scanner was located on the roof of the first floor of the Administration Building about 80 feet north of the observing quarters. On October 31, 1958, a rotating beam ceilometer, with a baseline of 800 feet, was installed 1/4 mile south of the main airport runway, and then on December 12, 1976, relocated to be near the south end of the main airport runway about 4700 feet west-northwest of the Forecast Office.

On August 11, 1994, the weather office was relocated to the extreme southeast corner of the airport complex at 2242 West North Temple Street. This is about 3400 feet southeast of the previous location. The elevation of the station continued to be 4227 feet ASL. On November 15, 1994 the forecast office accepted and began using a Doppler Radar which was located on Promontory Point at the north end of the Great Salt Lake.

The present state of the art of both observing and forecasting the weather is constantly being re-evaluated for improvement. New computer-age technology is replacing the older, and often times, cumbersome methods of producing the various weather products issued to the public and special user groups. Weather forecasting programs have been developed that are especially tailored for special problem areas. The fire-weather forecasting program is a typical example. Specifically trained meteorologists utilize mobile self-contained weather stations and report directly to forest or range fire fighting crews. They give on-the-spot observations and forecasts of wind direction and speed, temperature, humidity, and other selected parameters required for maximum support to the fire fighting crews. Other special weather support programs include those in fruit-frost cooperative observing and forecasting, air pollution, aviation, and local forecasting. All these are in addition to the regular public service duties.

Climatology is an input in many of these programs. Certain combinations of pressure, wind, moisture, modified by topographical combinations yield specific characteristics of "weather". The only problem is that the atmosphere is so vast in its global scale that local combinations of specific weather yielding parameters are very difficult to duplicate. "Man" by his very existence is constantly changing the landscape--laying miles or acres of pavement and cement, building heating and cooling systems, and other modern-day miracle aids--and in the process, influencing Mother Nature's natural local temperature and wind circulation patterns.

IV. SELECTED HIGHLIGHTS OF THE SALT LAKE CITY AIRPORT WEATHER RECORDS

When the all-time high temperature of 107 degrees occurred on July 26, 1960, the surface winds, for the most part, were southerly 5-12 mph through the night and morning hours shifting to northerly 5-9 mph during the afternoon. At 3 p.m. the temperature was 103 degrees with 8 tenths of the sky covered by a combination of cumulonimbus and cirrus type clouds. The clouds thinned out during the next couple of hours and the record maximum temperature of 107 was reached. The morning minimum on the 26th of July was 63 degrees, which was only one degree warmer than the normal minimum for that date. Increasing cloudiness the following day, July 27th, accounted for a slight drop in the maximum temperature to 104 degrees. Maximum temperatures continued to decrease the next two days--down to 101 on the 28th, and finally on the 29th, down to an even 100 degrees.

February 9, 1933, was the date of the lowest temperature ever recorded at the Salt Lake airport which was 30 degrees below zero. The mercury managed to climb to 8 degrees above zero for the afternoon maximum. It was cold again the next day, February 10th, with a minimum of 26 degrees below zero. But on February 11th, the short cold snap was broken when a snow storm moved over the area and the minimum temperature rose to 1 degree above zero.

The snowiest month of the year is January with an average of 9 days with snowfall of 0.1 inch or more, and with an average monthly snowfall total of 13.2 inches. The greatest monthly snowfall total at the Salt Lake Airport was 50.3 inches that fell in January 1993.

It may be surprising to many to note that significant amounts of snow can fall as late as April. In April 1974, a total of 26.4 inches of snow fell at the Salt Lake Airport. This not only set the record for the most snow ever accumulated in the month of April, but was also the greatest monthly snowfall for the entire 1973-74 season. April 1984 was also a very snowy month with a total accumulation of 25.1 inches.

April has the distinction of having the highest average monthly precipitation with 2.21 inches followed by March with an average of 1.72 inches. The greatest total monthly precipitation of 7.04 inches fell in September 1982 when moisture from the remains of hurricane Olivia moved north through Utah. The driest month of the year is July with a monthly precipitation average of only 0.72 inches. The next driest is September with a monthly average of 0.89 inches.

The maximum 24 hour precipitation (not confined to a calendar day) ever recorded at the Salt Lake Airport was 2.41 inches on April 22-23, 1957. The maximum one hour precipitation of 1.94 inches was recorded during heavy thundershowers between noon and 1 p.m. on July 13, 1962. On that same day, hailstones up to one half inch in diameter fell, and the total 24 hour rainfall was 2.28 inches.

V. LOCAL TOPOGRAPHY EFFECTS UPON THE SALT LAKE WEATHER

Snowfall enhancement along and downwind of the Great Salt Lake is often observed. On occasion it appears that the snow area extends continuously from the lee shores of the lake to the windward slopes of the nearby mountains. The theory of this phenomenon is as follows. The Great Salt Lake, due to its high salt content, never freezes during the winter. Cold air masses moving from the Pacific or out of Canada during the fall and winter months are sometimes much colder than the water surface of the lake. As these cold air masses pass over the lake, the air is modified by the absorption of heat and moisture rising off the surface of the lake and becomes more unstable, causing what is referred to as a "lake effect" snowstorm.

An example would be, air carried by west to northwest winds blowing across the Great Salt Lake in the rear of a winter low pressure system gaining both moisture and instability over the water. Then, the induced vertical motion due to differential friction as the air moves off the water to land results in bands of heavy snow in the valley. Nearby mountain ranges force the air to be cooled by the orographic lift up the mountain slopes. This orographic lift often prolongs and increases precipitation along the windward slopes of the mountains. One such "lake effect" snow storm occurring October 17-18, 1984, was documented by WSFO Salt Lake City forecaster David Carpenter in NOAA Technical Memorandum NWS WR-190.

The surface wind pattern around the Salt Lake Valley and adjacent bench areas is greatly influenced by local topography. For example, the Great Salt Lake is responsible for local lake breezes, which usually develop by late morning or early afternoon and continues until sunset. After sunset and through the night, the surrounding mountains produce canyon breezes which extend down into the valleys..

The Great Salt Lake breeze is caused by the temperature difference of the colder lake surface and the warmer adjacent land when it is heated by the sun. Because the air over the land is warmer, it rises and is replaced by the cooler air from the lake surface. This breeze usually blows on relatively calm, sunny, summer days, and alternates with the oppositely directed nighttime land breeze or canyon breeze.

Canyon breezes occur almost every night when the sky is clear or partly cloudy. They are the result of the radiational cooling of the surface layer of air on the mountain slopes. This air cools much faster than air at the same level in the free atmosphere over the valley and, hence, sinks. The air aloft flowing toward the mountain slope to replace this sinking air gives a circulation similar to the sea-breeze circulation. Such breezes usually do not extend more than a few miles into the valleys and rarely reach excessive speeds. In fact, during the summer these cool winds are a refreshing change from the heat of the day. Only when this nocturnal cooling process is reinforced by large scale circulation do the winds reach high speeds.

Canyon winds are one form of topographic wind that create serious problems several times each year. These winds occur when strong high pressure develops over Wyoming and significantly lower pressure develops in Utah and/or Nevada. When surface pressure differences are significant between the two areas, moderate to strong easterly canyon winds blow out of the canyon mouths along the Wasatch Front from Cache to Utah counties. Occasionally the cold polar or arctic air associated with high pressure in Wyoming is deep enough to spill over the mountains. Sometimes this can result in easterly winds blowing from the mouths of canyons and steep slopes of the Wasatch Mountains into the nearby valleys. In extreme cases these winds can exceed hurricane force. In some circumstances these winds can extend into the valley. Canyon winds can cause snow to drift over heavily traveled highways, break tree limbs, topple structures, and, in general, make life unpleasant.

A strong southwest flow that proceeds a pacific cold front sometimes causes the Salt Lake Valley to experience a "rain shadow" effect. This is known as the "Oquirrh shadow," and it can prevent the Salt Lake valley from receiving significant precipitation. The area is protected by strong winds aloft that downslope the Oquirrh mountains, causing air to warm and dry out by compression. Moderate to strong southerly winds are usually an indication of a significant storm to hit the Salt Lake area. Strong northwesterly winds often blow behind a cold front and can cause havoc for drivers along interstate 80 between Salt Lake City and Wendover. These winds kick up waves along the shores of the Great Salt Lake and can cause blowing salt and sand, sometimes reducing visibilities to as low as 100 feet across the west desert. These winds often deposit a foul smelling odor in the Salt Lake Valley, known as "Lake Stink." The Lake stink is a combination of decomposing algae and brine shrimp.

VI. AIR POLLUTION AND TRAPPED AIR

Air pollution caused by stagnant air trapped under temperature inversions is another big part of the Salt Lake Valley weather regime. In Salt Lake City, the worst air stagnation occurs with stationary high pressure, both at the surface and aloft, and mainly in the months of November through February. Under this weather pattern, the wind is largely controlled by local topography rather than ambient pressure gradients; hence, it is very light and subject to diurnal variation. These light winds, when combined with frequent snow cover during the winter months, result in strong nighttime radiational cooling. At the same time, it is usually getting warmer aloft. This creates a strong surface-based temperature inversion under which cold, stable air is trapped in the valley. This air often becomes very stagnant. Such a stagnant layer is generally confined to below 6,000 feet ASL and diurnal heating is frequently unable to activate much vertical mixing in the stagnant layer. Under these conditions, bench locations above 6,000 feet ASL surrounding the valley often enjoy good ventilation or movement of air and may be much warmer than valley locations. These conditions are, respectively, due to the fact that the wind above 6,000 feet ASL is usually still controlled by pressure gradients and frequently stronger than the lower level winds, and by the fact that it is relatively warmer aloft.

There are situations that can allow some air mixing in the Salt Lake Valley that may present a problem at the surrounding higher elevations. This can happen when there is a subsidence inversion or stable layer of air between about 6 and 12 thousand feet. Subsidence is a descending motion of air in the atmosphere. A subsidence inversion is a temperature inversion produced by the adiabatic warming of this layer of subsiding air. In an adiabatic process, compression or descending motion always results in warming. Rising motion results in expansion and cooling. Surface heating usually allows mixing of the air to the base of this stable layer aloft, which gives a moderate mixing depth of air in the valley. However, if the base of the stable layer is at or just above the surrounding mountain areas, surface heating may not affect it so that it may severely restrict the vertical transport of pollutants.

VII. SOLAR ENERGY AND SKY COVER

The average annual amount of sky cover at the Salt Lake Airport (sunrise to sunset), based on a range of 0 tenths for no clouds or obscuring phenomena to 10 tenths for overcast conditions, is 5.5 tenths. The months with the highest average amount of sky cover are December and January with 7.1 tenths and 7.2 tenths respectively. The months with the lowest average sky cover are July and September with both averaging 3.5 tenths, followed closely by August with 3.6 tenths.

Based on the definition that the sky is cloudy with 8 tenths to 10 tenths of cloud cover, partly cloudy with 4 tenths to 7 tenths cloud cover, and clear with 0 tenths to 3 tenths cloud cover, there is an annual average of 134 cloudy days at the Salt Lake Airport, 103 partly cloudy days, and 128 clear days. These values are somewhat misleading because they are based on total cloud cover without any distinction between opaque and thin clouds. Some of the days listed in our climatological data as cloudy may have experienced only high, thin clouds covering 8 tenths to 10 tenths of the sky with only a few tenths of these clouds actually dense enough to block out the sun or sky.

Because solar energy is being increasingly emphasized as an alternative to fossil fuels, a more meaningful statistic than amount of sky cover may be the percent of possible sunshine received. At the Salt Lake Airport, the annual average percent of possible sunshine received is 70 percent. The sunniest days of the year are in July and September with each of these months receiving 84 percent of possible sunshine. The lowest average amount of possible sunshine is received in December with 40 percent followed by January with 48 percent.

Sunlight is usually measured in footcandles, the illuminance provided by a light source of one candle at a distance of one foot and only the visible portion of the solar spectrum is used. Full sunlight, when the sun is at its zenith, produces an illuminance of the order of 10,000 footcandles on a horizontal surface compared to full moonlight, which provides an illuminance of only about 0.02 footcandles.

The energy from this sunlight is measured in kilojoules per square meter or the langley unit which is defined as a unit of energy per unit area and is equal to one gram-calorie per square centimeter. To convert kilojoules to langleys, you multiply the kilojoule value by 0.02390.

An accurate conversion of these illumination/radiation factors is impossible, but a rough comparison on a cloudy or a cloudless day is as follows: to convert langley per minute to footcandles on a cloudy day, multiply by 7,000.

The mean daily solar radiation (in langleys) at Salt Lake City by month is as follows: January 163, February 256, March 354, April 479, May 570, June 621, July 620, August 551, September 446, October 316, November 204, and December 146 for an annual average of 394.

VIII. ACKNOWLEDGMENTS

Mr. Wilbur E. Figgins (retired) is responsible for the original research and preparation of this document. Since Mr. Figgins retirement in 1985 until the fall of 1989, Alexander Smith (retired) of the Salt Lake City WSFO staff undertook the responsibility of keeping it updated, as well as computerizing much of the content. Craig Schmidt was responsible for the maintenance and reformatting of the document through September of 1991. James Cisco took over Craig Schmidt's responsibilities until November of 1994. William Cope (retired) was responsible for updating much of the new material until his retirement in April of 1995. Sean Buchanan took over the responsibility of updating, reformatting, and creating new information for the climate book in August of 1995 to December 1995.

We would like to thank Mr. William Alder, Meteorologist in Charge, Salt Lake City Weather Service Forecast Office, for his encouragement, direction, and support in helping us complete this project. We are very grateful to Mr. L. W. Snellman, former Chief, Scientific Services Division, Western Region Headquarters, for his initial review, suggestions, candor, expertise, and encouragement to pursue the project. Additionally, our gratitude to Mr. Dean Jackman, former Deputy Meteorologist in Charge (retired), Salt Lake City WSFO, for his assistance in historical research, and for the use of information from his air pollution studies. Finally, our thanks to all individuals, past and present, whose attempts at organizing these records made our work easier.

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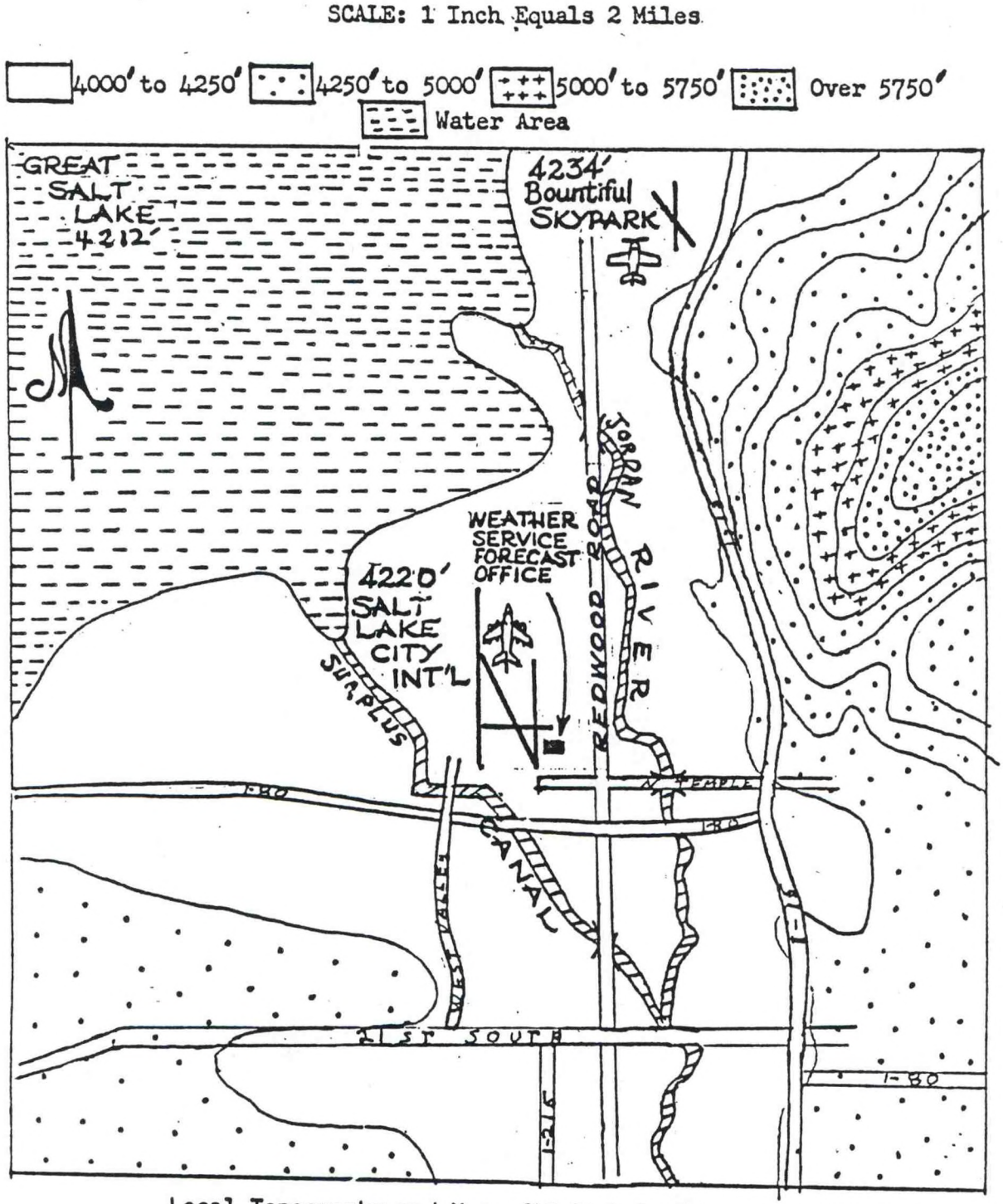
X. FIGURE 3

SLC Observation Site (Weather Service Forecast Office) In Relation To Salt Lake County



Local Topography and Map of Salt Lake Airport and Vicinity.

SUNRISE AND SUNSET AT SALT LAKE CITY, UTAH

NO. 1297

MOUNTAIN STANDARD TIME

DAY	JAN.		FEB.		MAR.		APR.		MAY		JUNE		JULY		AUG.		SEPT.		OCT.		NOV.		DEC.	
	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.	Rise A.M.	Set P.M.
1	7 52	5 11	7 38	5 45	7 02	6 19	6 12	6 52	5 27	7 24	4 59	7 53	5 00	8 03	5 24	7 44	5 54	7 01	6 24	6 10	6 58	5 24	7 32	5 01
2	7 52	5 12	7 37	5 46	7 01	6 20	6 10	6 53	5 25	7 25	4 58	7 53	5 00	8 03	5 25	7 43	5 55	6 59	6 25	6 09	6 59	5 23	7 34	5 01
3	7 52	5 13	7 36	5 48	6 59	6 21	6 09	6 54	5 24	7 26	4 58	7 54	5 01	8 03	5 26	7 41	5 56	6 57	6 26	6 07	7 00	5 22	7 35	5 01
4	7 52	5 14	7 35	5 49	6 58	6 22	6 07	6 56	5 23	7 27	4 58	7 55	5 02	8 03	5 27	7 40	5 57	6 56	6 27	6 05	7 02	5 21	7 36	5 00
5	7 52	5 15	7 34	5 50	6 56	6 23	6 05	6 57	5 22	7 28	4 57	7 56	5 02	8 02	5 28	7 39	5 58	6 54	6 28	6 04	7 03	5 20	7 36	5 00
6	7 52	5 15	7 33	5 51	6 55	6 24	6 04	6 58	5 21	7 29	4 57	7 56	5 03	8 02	5 29	7 38	5 59	6 52	6 29	6 02	7 04	5 19	7 37	5 00
7	7 52	5 16	7 32	5 53	6 53	6 26	6 02	6 59	5 19	7 30	4 57	7 57	5 03	8 02	5 30	7 37	6 00	6 51	6 30	6 01	7 05	5 18	7 38	5 00
8	7 52	5 17	7 31	5 54	6 51	6 27	6 01	7 00	5 18	7 31	4 56	7 57	5 04	8 01	5 31	7 35	6 01	6 49	6 31	5 59	7 06	5 17	7 39	5 00
9	7 52	5 18	7 30	5 55	6 50	6 28	5 59	7 01	5 17	7 32	4 56	7 58	5 05	8 01	5 32	7 34	6 02	6 47	6 32	5 57	7 07	5 16	7 40	5 00
10	7 52	5 19	7 29	5 56	6 48	6 29	5 57	7 02	5 16	7 33	4 56	7 58	5 05	8 01	5 33	7 33	6 03	6 46	6 33	5 56	7 09	5 15	7 41	5 00
11	7 52	5 21	7 27	5 58	6 47	6 30	5 56	7 03	5 15	7 34	4 56	7 59	5 06	8 00	5 34	7 32	6 04	6 44	6 34	5 54	7 10	5 14	7 42	5 00
12	7 51	5 22	7 26	5 59	6 45	6 31	5 54	7 04	5 14	7 35	4 56	7 59	5 07	8 00	5 35	7 30	6 05	6 42	6 36	5 53	7 11	5 13	7 43	5 00
13	7 51	5 23	7 25	6 00	6 43	6 32	5 53	7 05	5 13	7 36	4 56	8 00	5 07	7 59	5 36	7 29	6 06	6 41	6 37	5 51	7 12	5 12	7 43	5 01
14	7 51	5 24	7 24	6 01	6 42	6 33	5 51	7 06	5 12	7 37	4 56	8 00	5 08	7 59	5 37	7 28	6 07	6 39	6 38	5 49	7 13	5 11	7 44	5 01
15	7 50	5 25	7 22	6 02	6 40	6 34	5 49	7 07	5 11	7 38	4 56	8 01	5 09	7 58	5 38	7 26	6 08	6 37	6 39	5 48	7 15	5 10	7 45	5 01
16	7 50	5 26	7 21	6 04	6 38	6 35	5 48	7 08	5 10	7 39	4 56	8 01	5 10	7 57	5 39	7 25	6 09	6 36	6 40	5 46	7 16	5 09	7 46	5 01
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20	7 48	5 31	7 16	6 08	6 32	6 40	5 42	7 12	5 06	7 43	4 56	8 02	5 13	7 55	5 43	7 19	6 13	6 29	6 44	5 41	7 20	5 06	7 48	5 03
21	7 47	5 32	7 14	6 10	6 30	6 41	5 41	7 13	5 06	7 44	4 56	8 03	5 14	7 54	5 44	7 18	6 14	6 27	6 45	5 39	7 22	5 06	7 49	5 03
22	7 46	5 33	7 13	6 11	6 28	6 42	5 39	7 14	5 05	7 45	4 57	8 03	5 15	7 53	5 45	7 16	6 15	6 25	6 47	5 38	7 23	5 05	7 49	5 04
23	7 46	5 34	7 11	6 12	6 27	6 43	5 38	7 15	5 04	7 45	4 57	8 03	5 16	7 52	5 46	7 15	6 16	6 24	6 48	5 36	7 24	5 04	7 50	5 04
24	7 45	5 35	7 10	6 13	6 25	6 44	5 36	7 16	5 03	7 46	4 57	8 03	5 17	7 51	5 47	7 13	6 17	6 22	6 49	5 35	7 25	5 04	7 50	5 05
25	7 44	5 37	7 08	6 14	6 23	6 45	5 35	7 18	5 03	7 47	4 57	8 03	5 17	7 51	5 48	7 12	6 18	6 20	6 50	5 33	7 26	5 03	7 50	5 06
26	7 44	5 38	7 07	6 15	6 22	6 46	5 33	7 19	5 02	7 48	4 58	8 03	5 18	7 50	5 49	7 10	6 19	6 19	6 51	5 32	7 27	5 03	7 51	5 06
27	7 43	5 39	7 05	6 17	6 20	6 47	5 32	7 20	5 01	7 49	4 58	8 03	5 19	7 49	5 50	7 09	6 20	6 17	6 52	5 31	7 28	5 02	7 51	5 07
28	7 42	5 40	7 04	6 18	6 18	6 48	5 31	7 21	5 01	7 50	4 59	8 03	5 20	7 48	5 50	7 07	6 21	6 15	6 53	5 29	7 29	5 02	7 51	5 08
29	7 41	5 42	7 03	6 19	6 17	6 49	5 29	7 22	5 00	7 50	4 59	8 03	5 21	7 47	5 51	7 05	6 22	6 14	6 55	5 28	7 30	5 02	7 52	5 08
30	7 40	5 43			6 15	6 50	5 28	7 23	5 00	7 51	4 59	8 03	5 22	7 46	5 52	7 04	6 23	6 12	6 56	5 27	7 31	5 01	7 52	5 09
31	7 39	5 44			6 14	6 51			4 59	7 52			5 23	7 45	5 53	7 02			6 57	5 26			7 52	5 10

Add one hour for Daylight Saving Time if and when in use.

Prepared by
NAUTICAL ALMANAC OFFICE
UNITED STATES NAVAL OBSERVATORY
WASHINGTON, D.C. 20390

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1965

NORMALS, MEANS, AND EXTREMES

SALT LAKE CITY, UTAH

LATITUDE: 40° 47' N LONGITUDE:111° 57' W ELEVATION: FT. GRND 4221 BARO 4224 TIME ZONE: MOUNTAIN WBAN: 24127

	(a)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F														
Normals														
-Daily Maximum		36.4	43.6	52.2	61.3	71.9	82.8	92.2	89.4	79.2	66.1	50.8	37.8	63.6
-Daily Minimum		19.3	24.6	31.4	37.9	45.6	55.4	63.7	61.8	51.0	40.2	30.9	21.6	40.3
-Monthly		27.9	34.1	41.8	49.7	58.8	69.1	77.9	75.6	65.2	53.2	40.8	29.7	52.0
Extremes														
-Record Highest	66	62	69	78	86	93	104	107	106	100	89	75	67	107
-Year		1982	1972	1960	1992	1984	1979	1960	1994	1979	1963	1967	1969	JUL 1960
-Record Lowest	66	-22	-30	2	14	25	35	40	37	27	16	-14	-21	-30
-Year		1949	1933	1966	1936	1965	1962	1968	1965	1965	1971	1955	1932	FEB 1933
NORMAL DEGREE DAYS:														
Heating (base 65 °F)		1150	865	719	464	215	51	0	0	108	373	726	1094	5765
Cooling (base 65 °F)		0	0	0	0	23	174	400	329	114	7	0	0	1047
% OF POSSIBLE SUNSHINE	56	45	54	63	68	73	80	83	82	82	72	53	43	67
MEAN SKY COVER(tenths)														
Sunrise - Sunset	59	7.3	7.1	6.7	6.4	5.7	4.3	3.6	3.7	3.7	4.7	6.3	7.2	5.6
MEAN NUMBER OF DAYS:														
Sunrise to Sunset														
-Clear	66	5.6	5.2	7.0	6.7	9.1	13.8	16.7	15.8	16.5	13.9	8.4	6.3	125.2
-Partly Cloudy	66	6.5	6.9	8.2	9.4	10.2	9.8	9.8	10.7	8.3	7.7	7.1	6.5	101.0
-Cloudy	66	18.9	16.2	15.8	13.9	11.7	6.3	4.5	4.6	5.2	9.4	14.5	18.2	139.1
Precipitation														
.01 inches or more	66	9.9	8.9	9.8	9.5	8.3	5.4	4.5	5.7	5.3	6.4	8.0	9.1	90.6
Snow,Ice Pellets,Hail														
1.0 inches or more	66	4.1	3.2	2.8	1.3	0.2	0.0	0.0	0.0	0.*	0.3	2.2	3.8	17.8
Thunderstorms	66	0.3	0.7	1.3	2.2	5.3	5.3	6.7	7.7	4.2	1.9	0.5	0.3	36.5
Heavy Fog Visibility														
1/4 mile or less	66	4.5	2.3	0.3	0.1	0.*	0.0	0.0	0.0	0.0	0.*	0.9	3.6	11.8
Temperature °F														
-Maximum														
90° and above	35	0.0	0.0	0.0	0.0	0.6	9.1	23.3	19.3	3.8	0.0	0.0	0.0	56.1
32° and below	35	10.6	3.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.*	0.9	8.6	24.3
-Minimum														
32° and below	35	27.6	22.7	15.5	6.2	0.7	0.0	0.0	0.0	0.3	4.6	18.3	27.7	123.7
0° and below	35	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.8
AV. STATION PRES.(mb)	22	874.9	873.3	869.7	869.7	869.0	870.0	871.2	871.6	872.2	873.5	873.5	874.8	871.9
RELATIVE HUMIDITY (%)														
Hour 05	35	79	78	71	67	65	59	52	54	61	69	75	79	67
Hour 11 (Local Time)	35	71	64	52	44	39	31	27	30	35	43	58	70	47
Hour 17	35	69	59	47	39	33	26	22	23	29	41	59	71	43
Hour 23	35	79	77	68	61	58	49	42	45	54	66	74	79	63
PRECIPITATION (ins):														
Water Equivalent														
-Normal		1.11	1.23	1.91	2.12	1.80	0.93	0.81	0.86	1.28	1.44	1.29	1.40	16.18
-Maximum Monthly	66	3.23	3.22	3.97	4.90	4.76	2.93	2.57	3.66	7.04	3.91	2.96	4.37	7.04
-Year		1993	1936	1983	1944	1977	1947	1982	1968	1982	1981	1994	1983	SEP 1982
-Minimum Monthly	66	0.09	0.12	0.10	0.45	T	T	T	T	T	0.00	0.01	0.08	0.00
-Year		1961	1946	1956	1981	1934	1994	1963	1944	1951	1952	1939	1976	OCT 1952
-Maximum in 24 hrs	66	1.36	1.05	1.83	2.41	2.03	1.88	2.35	1.96	2.30	1.76	1.13	1.82	2.41
-Year		1953	1958	1944	1957	1942	1948	1962	1932	1982	1984	1954	1972	APR 1957
Snow,Ice Pellets,Hail														
-Maximum Monthly	66	50.3	27.9	41.9	26.4	7.5	T	T	T	4.0	20.4	33.3	35.2	50.3
-Year		1993	1969	1977	1974	1975	1993	1991	1993	1971	1984	1994	1972	JAN 1993
-Maximum in 24 hrs	66	10.7	11.9	15.4	16.2	6.4	T	T	T	4.0	18.4	11.0	18.1	18.4
-Year		1980	1989	1944	1974	1975	1993	1991	1993	1971	1984	1930	1972	OCT 1984
WIND:														
Mean Speed (mph)	65	7.5	8.2	9.3	9.6	9.5	9.4	9.5	9.7	9.1	8.5	8.0	7.5	8.8
Prevailing Direction through 1963		SSE	SE	SSE	SE	SE	SSE	SSE	SSE	SE	SE	SSE	SSE	SSE
Fastest Mile														
-Direction (!!)	59	NW	SE	NW	NW	NW	W	NW	SW	W	NW	NW	S	NW
-Speed (mph)	59	59	56	71	57	57	63	51	58	61	67	63	54	71
-Year		1980	1954	1954	1964	1953	1963	1986	1946	1952	1950	1937	1955	MAR 1954
Peak Gust														
-Direction (!!)	11	N	S	NW	NW	SW	SW	NW	SW	NW	NW	SW	S	SW
-Speed (mph)	11	59	54	59	54	69	58	63	67	61	63	54	49	69
-Date		1988	1989	1989	1984	1989	1993	1994	1989	1992	1985	1992	1992	MAY 1989

XIII. Table 3a.

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

427598 SALT LAKE CITY NWSFO LATITUDE: 40 47N LONGITUDE: 111 57W ELEVATION: 4222 FT.

	DECEMBER						JANUARY						FEBRUARY					
	TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY	
DAILY	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP
1	43	26	34	31	0	.04	35	19	27	38	0	.04	40	21	31	34	0	.04
2	42	25	34	31	0	.04	35	19	27	38	0	.04	40	22	31	34	0	.04
3	42	25	33	32	0	.04	35	19	27	38	0	.04	40	22	31	34	0	.04
4	41	25	33	32	0	.05	35	19	27	38	0	.04	40	22	31	34	0	.04
5	41	24	33	32	0	.05	35	19	27	38	0	.04	41	22	32	33	0	.04
6	41	24	32	33	0	.05	35	19	27	38	0	.04	41	23	32	33	0	.04
7	40	24	32	33	0	.05	35	18	27	38	0	.04	41	23	32	33	0	.04
8	40	23	32	33	0	.05	35	18	27	38	0	.04	42	23	32	33	0	.04
9	39	23	31	34	0	.05	35	18	27	38	0	.04	42	23	33	32	0	.04
10	39	23	31	34	0	.05	35	19	27	38	0	.04	42	24	33	32	0	.04
11	39	22	31	34	0	.05	35	19	27	38	0	.04	43	24	33	32	0	.04
12	38	22	30	35	0	.05	36	19	27	38	0	.04	43	24	33	32	0	.04
13	38	22	30	35	0	.05	36	19	27	38	0	.03	43	24	34	31	0	.04
14	38	22	30	35	0	.05	36	19	27	38	0	.03	43	24	34	31	0	.04
15	37	21	29	36	0	.05	36	19	27	38	0	.03	44	25	34	31	0	.04
16	37	21	29	36	0	.05	36	19	27	38	0	.03	44	25	34	31	0	.04
17	37	21	29	36	0	.05	36	19	28	37	0	.03	44	25	35	30	0	.04
18	37	21	29	36	0	.05	36	19	28	37	0	.03	45	25	35	30	0	.05
19	37	21	29	36	0	.05	37	19	28	37	0	.03	45	26	35	30	0	.05
20	36	20	28	37	0	.04	37	19	28	37	0	.03	45	26	36	29	0	.05
21	36	20	28	37	0	.04	37	19	28	37	0	.03	46	26	36	29	0	.05
22	36	20	28	37	0	.04	37	19	28	37	0	.03	46	26	36	29	0	.05
23	36	20	28	37	0	.04	37	20	29	36	0	.03	46	27	36	29	0	.05
24	36	20	28	37	0	.04	37	20	29	36	0	.03	46	27	37	28	0	.05
25	36	20	28	37	0	.04	38	20	29	36	0	.03	47	27	37	28	0	.05
26	35	20	27	38	0	.04	38	20	29	36	0	.04	47	27	37	28	0	.05
27	35	19	27	38	0	.04	38	20	29	36	0	.04	47	28	37	28	0	.05
28	35	19	27	38	0	.04	39	20	30	35	0	.04	48	28	38	27	0	.05
29	35	19	27	38	0	.04	39	21	30	35	0	.04						
30	35	19	27	38	0	.04	39	21	30	35	0	.04						
31	35	19	27	38	0	.04	39	21	30	35	0	.04						
MONTHLY	37.8	21.6	29.7	1094	0	1.40	36.4	19.3	27.9	1150	0	1.11	43.6	24.6	34.1	865	0	1.23
WINTER	39.2	21.8	30.5	3109	0	3.74												
ANNUAL	63.6	40.3	52.0	5765	1047	16.18												

NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F;
PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

Table 3b.

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

427598 SALT LAKE CITY NWSFO LATITUDE: 40 47N LONGITUDE: 111 57W ELEVATION: 4222 FT.

	MARCH						APRIL						MAY					
	TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY	
DAILY	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP
1	48	28	38	27	0	.05	57	35	46	19	0	.07	67	41	54	11	0	.07
2	48	28	38	27	0	.05	57	35	46	19	0	.07	67	42	54	11	0	.07
3	48	28	38	27	0	.05	57	35	46	19	0	.07	67	42	55	10	0	.07
4	49	29	39	26	0	.05	58	35	46	19	0	.07	68	42	55	10	0	.07
5	49	29	39	26	0	.06	58	36	47	18	0	.07	68	42	55	10	0	.07
6	49	29	39	26	0	.06	58	36	47	18	0	.07	68	43	56	9	0	.07
7	50	29	39	26	0	.06	59	36	47	18	0	.07	69	43	56	9	0	.07
8	50	30	40	25	0	.06	59	36	48	18	0	.07	69	43	56	9	0	.06
9	50	30	40	25	0	.06	59	36	48	17	0	.07	69	44	57	8	0	.06
10	50	30	40	25	0	.06	59	37	48	17	0	.07	70	44	57	8	0	.06
11	51	30	41	24	0	.06	60	37	48	17	0	.07	70	44	57	8	0	.06
12	51	31	41	24	0	.06	60	37	49	17	0	.07	71	44	58	7	0	.06
13	51	31	41	24	0	.06	60	37	49	16	0	.07	71	45	58	7	0	.06
14	52	31	41	24	0	.06	61	38	49	16	0	.08	71	45	58	7	0	.06
15	52	31	42	23	0	.06	61	38	49	16	0	.08	72	45	58	7	0	.06
16	52	31	42	23	0	.06	61	38	50	15	0	.07	72	45	59	7	1	.06
17	53	32	42	23	0	.06	62	38	50	15	0	.07	72	46	59	7	1	.06
18	53	32	42	23	0	.06	62	38	50	15	0	.07	73	46	59	7	1	.06
19	53	32	43	22	0	.06	62	39	51	15	0	.07	73	46	60	6	1	.06
20	53	32	43	22	0	.06	63	39	51	14	0	.07	73	47	60	6	1	.06
21	54	33	43	22	0	.06	63	39	51	14	0	.07	74	47	60	6	1	.05
22	54	33	43	22	0	.06	63	39	51	14	0	.07	74	47	61	5	1	.05
23	54	33	44	21	0	.07	64	40	52	13	0	.07	74	48	61	5	1	.05
24	55	33	44	21	0	.07	64	40	52	13	0	.07	75	48	61	5	1	.05
25	55	33	44	21	0	.07	64	40	52	13	0	.07	75	48	62	5	2	.05
26	55	34	44	21	0	.07	65	40	53	12	0	.07	75	49	62	5	2	.05
27	55	34	45	20	0	.07	65	40	53	12	0	.07	76	49	62	5	2	.05
28	56	34	45	20	0	.07	66	41	53	12	0	.07	76	49	63	4	2	.05
29	56	34	45	20	0	.07	66	41	54	12	0	.07	76	50	63	4	2	.05
30	56	34	45	20	0	.07	66	41	54	11	0	.07	77	50	63	4	2	.04
31	56	35	46	19	0	.07							77	50	64	3	2	.04
MONTHLY	52.2	31.4	41.8	719	0	1.91	61.3	37.9	49.7	464	0	2.12	71.9	45.6	58.8	215	23	1.80
SPRING	61.9	38.4	50.2	1398	23	5.83	NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F;											
ANNUAL	63.6	40.3	52.0	5765	1047	16.18	PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0											

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Table 3c.

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

427598 SALT LAKE CITY NWSFO LATITUDE: 40 47N LONGITUDE: 111 57W ELEVATION: 4222 FT.

	JUNE						JULY						AUGUST					
	TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY	
DAILY	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP
1	77	50	64	3	2	.04	89	61	75	0	10	.02	93	65	79	0	14	.03
2	78	51	64	3	2	.04	89	61	75	0	10	.02	93	65	79	0	14	.02
3	78	51	65	3	3	.04	90	61	75	0	10	.02	92	65	78	0	13	.02
4	79	51	65	3	3	.04	90	62	76	0	11	.02	92	64	78	0	13	.02
5	79	52	65	3	3	.04	90	62	76	0	11	.03	92	64	78	0	13	.02
6	79	52	65	3	3	.04	91	62	76	0	11	.03	92	64	78	0	13	.02
7	80	52	66	3	4	.04	91	62	77	0	12	.03	92	64	78	0	13	.02
8	80	53	67	2	4	.03	91	63	77	0	12	.03	92	64	78	0	13	.02
9	80	53	67	2	4	.03	92	63	77	0	12	.03	91	64	78	0	13	.03
10	81	54	67	2	4	.03	92	63	77	0	12	.03	91	64	77	0	12	.03
11	81	54	67	2	4	.03	92	63	78	0	13	.03	91	63	77	0	12	.03
12	81	54	68	2	5	.03	92	64	78	0	13	.03	91	63	77	0	12	.03
13	82	55	68	2	5	.03	93	64	78	0	13	.03	90	63	76	0	11	.03
14	82	55	69	2	6	.03	93	64	78	0	13	.03	90	63	76	0	11	.03
15	83	55	69	2	6	.03	93	64	78	0	13	.03	90	62	76	0	11	.03
16	83	56	70	1	6	.03	93	64	79	0	14	.03	90	62	76	0	11	.03
17	83	56	70	1	6	.03	93	64	79	0	14	.03	89	62	76	0	11	.03
18	84	56	70	1	6	.03	93	64	79	0	14	.03	89	62	75	0	10	.03
19	84	57	70	1	6	.03	93	64	79	0	14	.03	89	61	75	0	10	.03
20	84	57	71	1	7	.03	93	65	79	0	14	.03	89	61	75	0	10	.03
21	85	57	71	1	7	.03	93	65	79	0	14	.03	88	61	75	0	10	.03
22	85	58	71	1	7	.03	93	65	79	0	14	.03	88	61	74	0	9	.03
23	86	58	72	1	8	.03	94	65	79	0	14	.03	88	60	74	0	9	.03
24	86	58	72	1	8	.03	94	65	79	0	14	.02	87	60	74	0	9	.03
25	86	59	72	1	8	.03	93	65	79	0	14	.02	87	60	73	0	8	.03
26	87	59	73	1	9	.03	93	65	79	0	14	.02	87	59	73	0	8	.03
27	87	59	73	1	9	.02	93	65	79	0	14	.02	86	59	73	0	8	.03
28	87	60	73	1	9	.02	93	65	79	0	14	.02	86	58	72	0	7	.03
29	88	60	74	1	10	.02	93	65	79	0	14	.02	86	58	72	0	7	.03
30	89	60	75	0	10	.02	93	65	79	0	14	.02	85	58	72	0	7	.03
31							93	65	79	0	14	.02	85	58	72	0	7	.03
MONTHLY	82.8	55.4	69.1	51	174	.93	92.2	63.7	77.9	0	400	.81	89.4	61.8	75.6	0	329	.86
SUMMER	88.2	60.4	74.3	51	903	2.60	NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F;											
ANNUAL	63.6	40.3	52.0	5765	1047	16.18	PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0											

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

Table 3d.

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

427598 SALT LAKE CITY NWSFO LATITUDE: 40 47N LONGITUDE: 111 57W ELEVATION: 4222 FT.

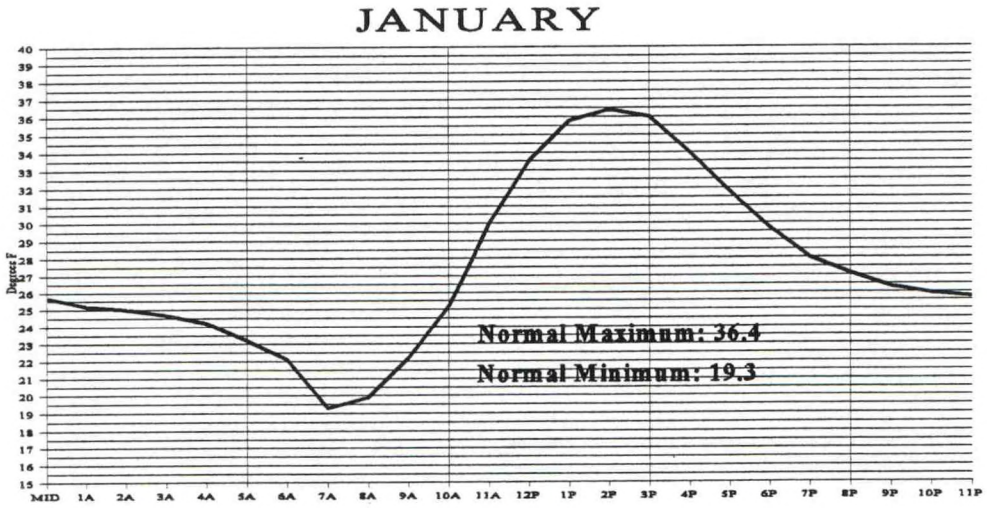
	SEPTEMBER						OCTOBER						NOVEMBER					
	TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY		TEMPERATURE			DEG	DAY	
DAILY	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP	MAX	MIN	AVG	HDD	CDD	PCP
1	85	57	71	1	7	.03	73	45	59	7	1	.05	58	35	47	18	0	.05
2	84	56	70	1	6	.04	73	45	59	7	1	.05	58	35	46	19	0	.05
3	84	56	70	1	6	.04	72	44	58	8	1	.05	57	35	46	19	0	.05
4	84	56	70	1	6	.04	72	44	58	8	1	.05	57	35	46	19	0	.04
5	83	55	69	2	6	.04	71	44	58	8	1	.05	56	34	45	20	0	.04
6	83	55	69	2	6	.04	71	43	57	9	1	.05	56	34	45	20	0	.04
7	83	54	69	2	6	.04	70	43	57	9	1	.05	55	34	44	21	0	.04
8	82	54	68	2	5	.04	70	43	56	9	0	.05	55	33	44	21	0	.04
9	82	54	68	2	5	.04	69	42	56	9	0	.05	54	33	44	21	0	.04
10	81	53	67	3	5	.04	69	42	56	9	0	.05	54	33	43	22	0	.04
11	81	53	67	3	5	.04	69	42	55	10	0	.05	53	32	43	22	0	.04
12	81	52	67	3	5	.04	68	41	55	10	0	.05	53	32	42	23	0	.04
13	80	52	66	3	4	.04	68	41	54	11	0	.05	52	32	42	23	0	.04
14	80	51	66	3	4	.04	67	41	54	11	0	.05	52	31	41	24	0	.04
15	79	51	65	3	3	.04	67	40	54	11	0	.05	51	31	41	24	0	.04
16	79	51	65	3	3	.04	66	40	53	12	0	.05	51	31	41	24	0	.04
17	79	50	64	4	3	.04	66	40	53	12	0	.05	50	31	40	25	0	.04
18	78	50	64	4	3	.04	65	39	52	13	0	.05	50	30	40	25	0	.04
19	78	50	64	4	3	.04	65	39	52	13	0	.05	49	30	39	26	0	.04
20	78	49	63	5	3	.04	64	39	52	13	0	.05	48	30	39	26	0	.04
21	77	49	63	5	3	.04	64	39	51	14	0	.04	48	29	39	26	0	.04
22	77	48	63	5	3	.05	63	38	51	14	0	.04	47	29	38	27	0	.04
23	76	48	62	5	2	.05	63	38	50	15	0	.04	47	29	38	27	0	.04
24	76	48	62	5	2	.05	62	38	50	15	0	.04	46	28	37	28	0	.04
25	75	47	61	6	2	.05	62	37	50	15	0	.04	46	28	37	28	0	.05
26	75	47	61	6	2	.05	61	37	49	16	0	.04	45	27	36	29	0	.05
27	75	47	61	6	2	.05	61	37	49	16	0	.04	45	27	36	29	0	.05
28	74	47	61	6	2	.05	60	37	48	17	0	.04	44	27	35	30	0	.05
29	74	46	60	6	1	.05	60	36	48	17	0	.04	44	26	35	30	0	.05
30	74	45	60	6	1	.05	59	36	48	17	0	.04	43	26	35	30	0	.05
31							59	36	47	18	0	.04						
MONTHLY	79.2	51.0	65.2	108	114	1.28	66.1	40.2	53.2	373	7	1.44	50.8	30.9	40.8	726	0	1.29
AUTUMN	65.4	40.7	53.1	1207	121	4.01	NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F;											
ANNUAL	63.6	40.3	52.0	5765	1047	16.18	PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0											

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

XIV. Temperature Data

The following graphs, Figures 4a - 4f are smoothed average hourly temperature curves made by using the average hourly temperature that was compiled for a 15-year period and then making slight adjustments necessary to incorporate the average synoptic temperature observations (5 am, 11 am, 5 pm, 11pm MST) for the Climatological period 1961-1990.

Note: The normal maximum and minimum temperatures (1961-1990) are also listed on each graph. This is because maximum and minimum temperature readings usually occur between the times of the hourly observations and do not fall on the average hourly temperature curve. This is especially true of the minimum temperature, because of not only the variability in time of occurrence, but also because of the usually short time period in which the minimum temperature occurs. These factors should be remembered when using the following graphs.



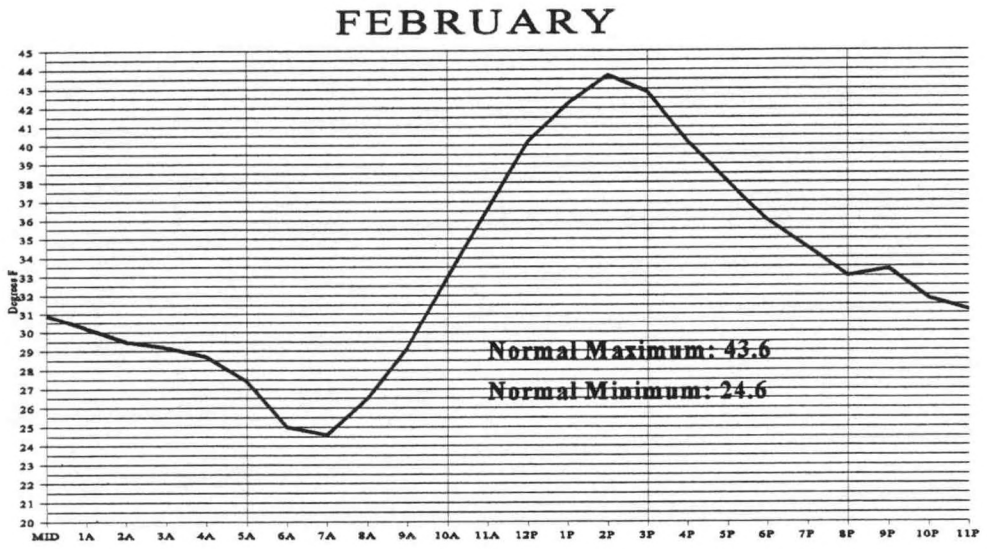
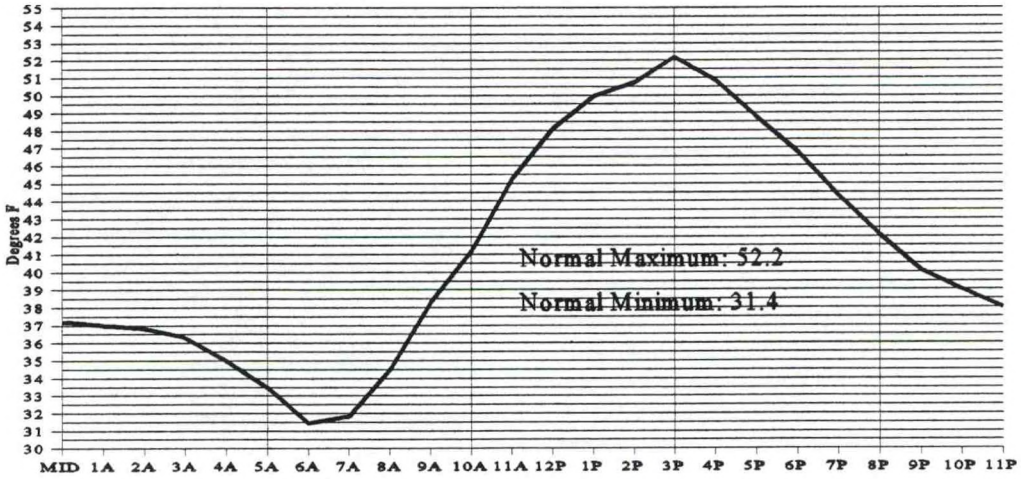


Figure 4a

MARCH



APRIL

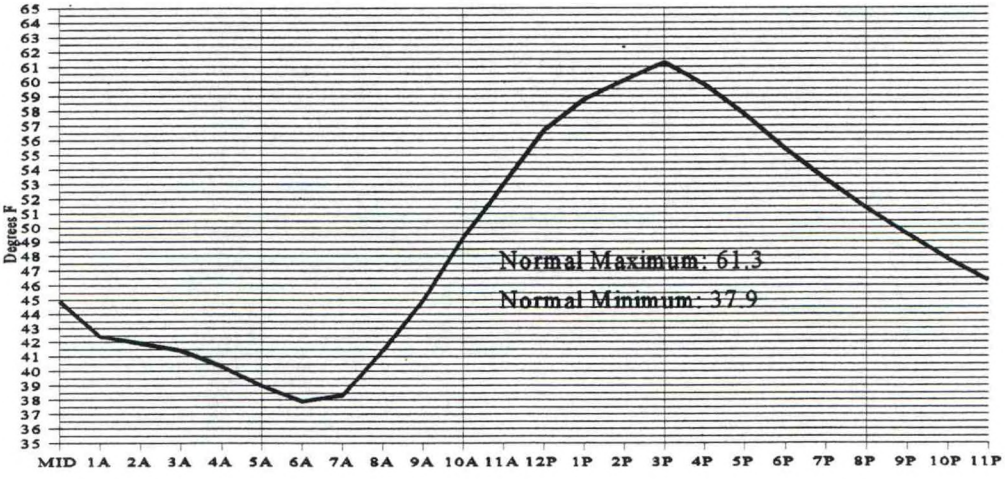


Figure 4b

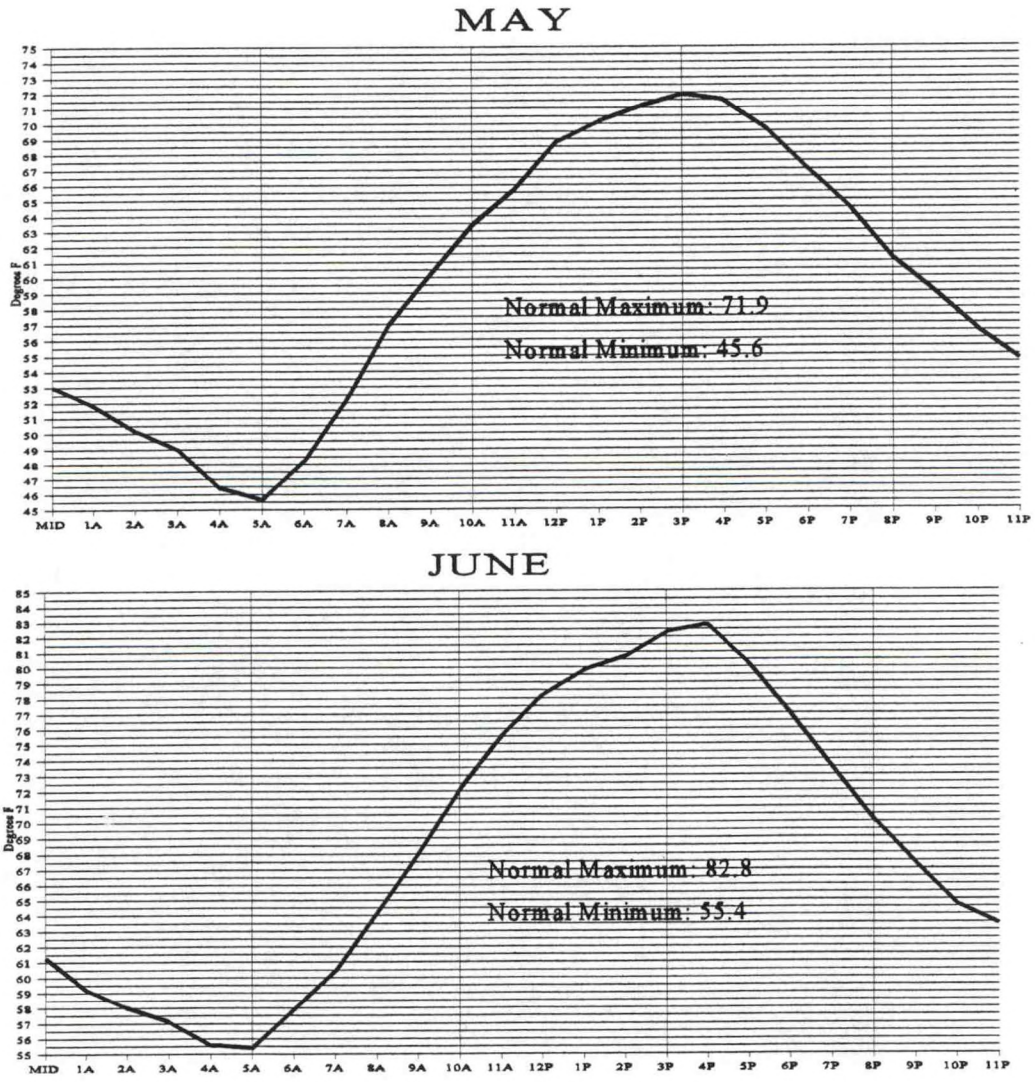
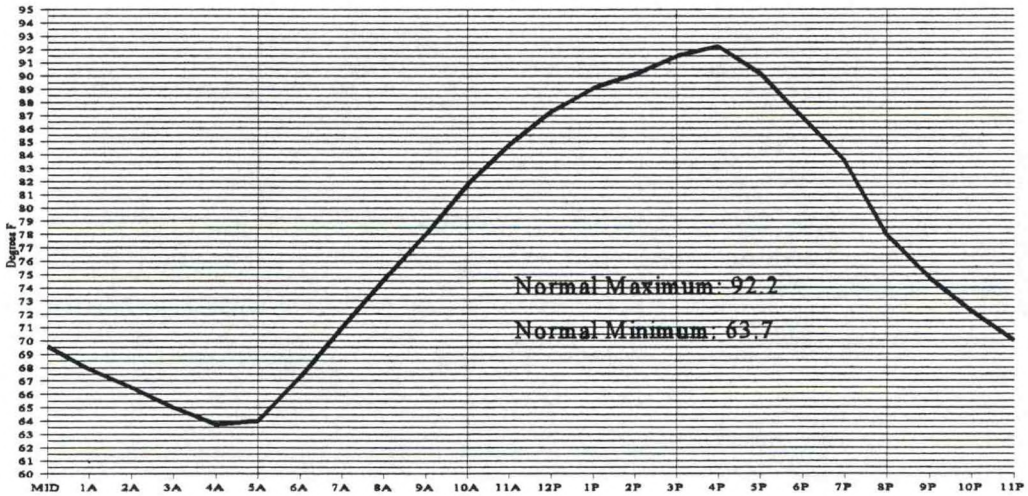

MAY
Degrees F
Normal Maximum: 71.9
Normal Minimum: 45.6
MID 1A 2A 3A 4A 5A 6A 7A 8A 9A 10A 11A 12P 1P 2P 3P 4P 5P 6P 7P 8P 9P 10P 11P
JUNE
Degrees F
Normal Maximum: 82.8
Normal Minimum: 55.4
MID 1A 2A 3A 4A 5A 6A 7A 8A 9A 10A 11A 12P 1P 2P 3P 4P 5P 6P 7P 8P 9P 10P 11P

Figure 4c

JULY



AUGUST

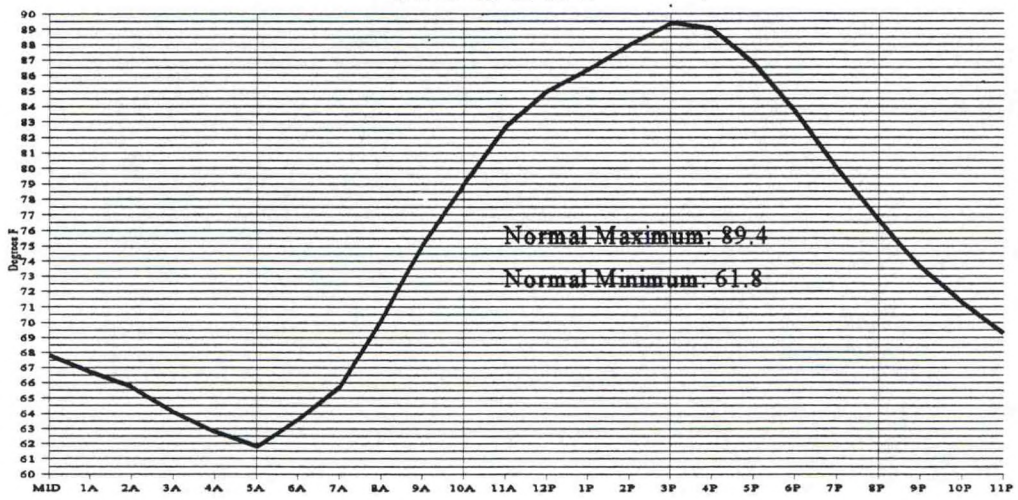
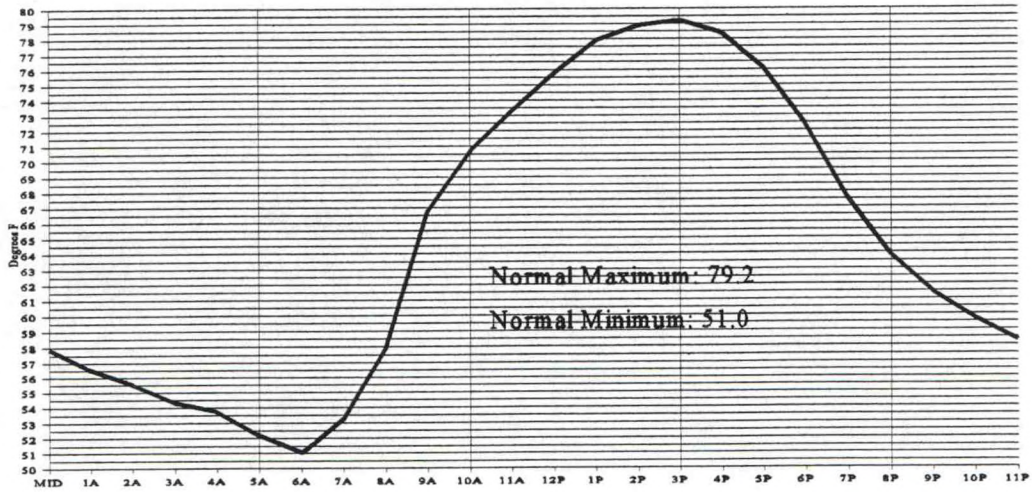


Figure 4d

SEPTEMBER



OCTOBER

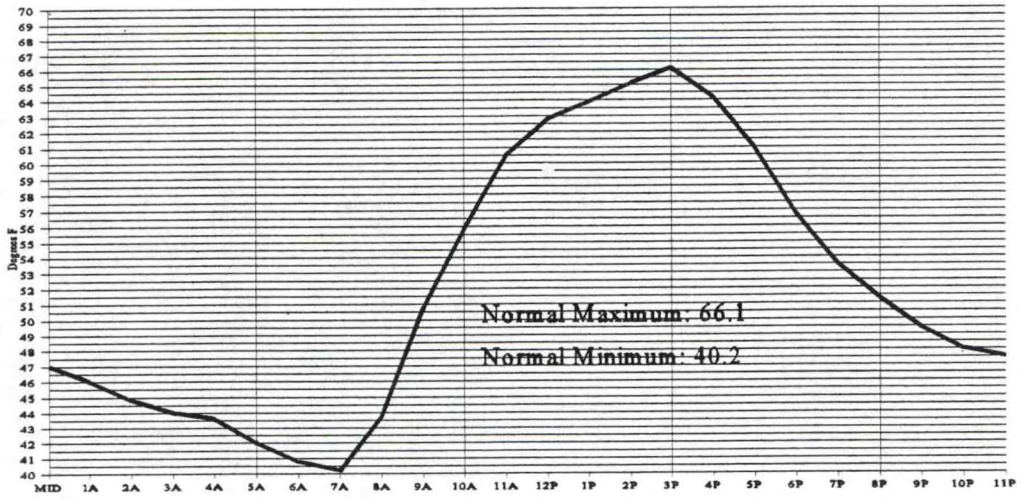
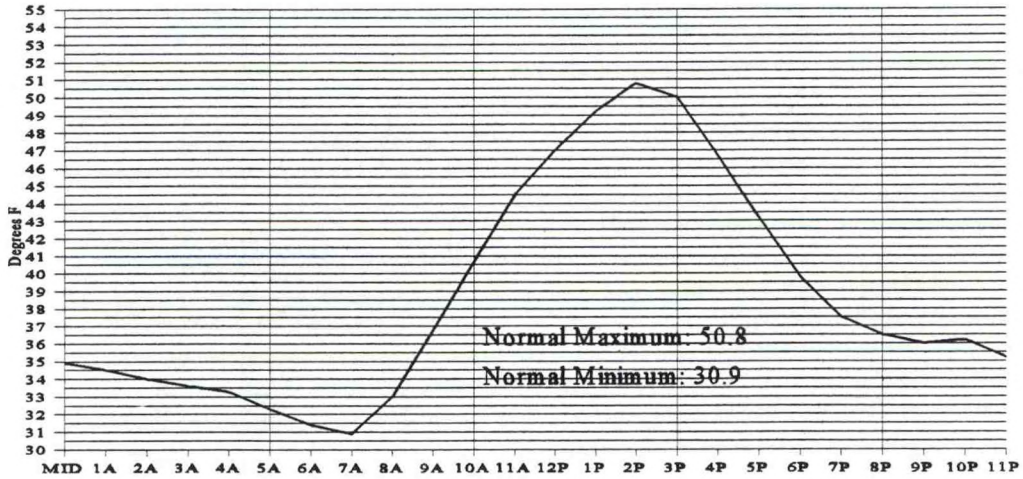


Figure 4e

NOVEMBER



DECEMBER

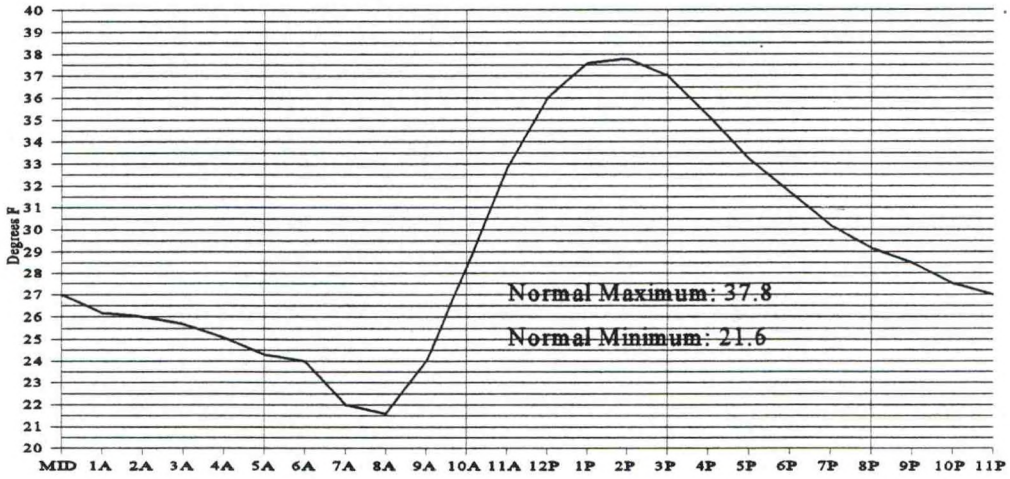


Figure 4f

TABLE 4a

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

JANUARY

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	58.1	1943		14.2	1979		42.0	1934		- 4.0	1931
2	49.9	1943		15.5	1942		36.7	1940		- 5.5	1974
3	52.1	1934		13.8	1949		33.7	1946		- 2.7	1932
4	52.9	1956		13.2	1960		37.7	1987		-13.0	1973
5	56.0	1980		14.5	1971		40.1	1978		- 6.2	1973
6	54.6	1948		10.4	1971		41.8	1965		-13.2	1942
7	58.0	1956		16.0	1937		36.2	1983		-10.8	1973
8	56.6	1945		9.1	1937		39.3	1953		-10.6	1937
9	58.6	1953		7.0	1937		42.4	1995		-11.2	1937
10	56.8	1953		18.1	1937		43.2	1995		- 7.8	1937
11	53.8	1953		10.2	1963		36.0	1971		- 8.5	1963
12	59.7	1953		3.6	1963		40.9	1969		-18.0	1963
13	57.2	1980		7.8	1963		47.0	1980		-15.0	1963
14	59.0	1945+		16.9	1964		38.5	1995		- 9.6	1932
15	56.2	1943		19.6	1947		39.8	1954		- 5.6	1964
16	56.0	1974		19.2	1984		37.8	1954		- 5.4	1947
17	54.4	1982		17.2	1949		39.6	1950		- 9.0	1930
18	54.3	1994		15.3	1930		38.9	1950		- 6.1	1984
19	52.6	1971		8.6	1963		38.1	1969		-14.8	1963
20	58.3	1953		6.6	1937		46.0	1969		- 8.0	1937
21	56.8	1943		5.9	1937		45.0	1943		-19.9	1937
22	56.3	1970		7.8	1937		43.0	1970		-14.0	1930
23	60.0	1970		9.2	1937		41.4	1970		-14.0	1962
24	59.1	1970		14.0	1929		38.9	1970		- 9.0	1929
25	58.7	1953		7.9	1949		39.0	1975		-21.7	1949
26	61.5	1982		18.1	1949		35.0	1971		-15.3	1949
27	54.1	1971		15.1	1949		39.2	1983		- 6.5	1949
28	56.6	1938		17.8	1949		39.2	1981		- 7.8	1949
29	54.3	1953		17.8	1949		36.1	1958		-11.6	1949
30	60.7	1971		18.2	1942		40.2	1965		- 5.8	1979
31	61.1	1971		16.7	1951		46.4	1963		- 8.1	1979
mnth	61.5	1982/26		3.6	1963/12		47.0	1980/13		-21.7	1949/25

+ Also occurred in earlier years.

TABLE 4b

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

FEBRUARY

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	60.8	1995		16.8	1985		38.4	1963		- 9.0	1985
2	57.5	1995		19.7	1949		37.8	1978		- 4.1	1949
3	63.6	1953		22.2	1979		38.1	1953		-10.1	1949
4	59.4	1934		20.2	1982		34.8	1958		- 1.1	1985
5	61.5	1963		17.6	1989		37.9	1963		- 7.5	1989
6	63.0	1934		16.9	1989		38.0	1934		-14.1	1989
7	59.9	1995		6.0	1933		41.0	1994		-12.2	1933
8	60.4	1945		20.3	1989		39.1	1957		- 7.4	1936
9	61.0	1951		8.0	1933		39.8	1938		-30.0	1933
10	67.9	1951		9.5	1933		47.7	1962		-26.4	1933
11	65.2	1961		19.2	1933		49.9	1961		- 0.6	1929
12	60.5	1970		23.7	1949		39.9	1970		1.1	1949
13	60.5	1971		18.2	1949		40.0	1954		- 9.0	1949
14	58.1	1971		18.8	1949		38.1	1982		-12.8	1933
15	57.6	1947		26.0	1929		44.9	1986		- 3.5	1933
16	62.3	1947		22.8	1956		43.0	1986		4.1	1933
17	62.6	1930		25.7	1956		44.3	1986		- 4.8	1933
18	66.2	1958		21.7	1942		51.3	1986		- 0.1	1942
19	66.3	1958		23.4	1955		45.0	1958		3.8	1956
20	64.9	1958		24.7	1955		42.7	1957		0.4	1955
21	66.3	1982		24.8	1955		37.7	1941		6.2	1984
22	64.8	1958		29.1	1955		42.9	1982		5.9	1975
23	60.4	1986		29.1	1960		44.2	1986		5.6	1960
24	68.1	1981		26.1	1960		45.9	1986		4.9	1960
25	68.2	1950		26.8	1964		45.0	1981		2.0	1933
26	67.0	1950		22.6	1962		40.2	1976		3.0	1962
27	67.2	1980		13.5	1962		44.1	1940		- 2.2	1962
28	68.5	1972		25.0	1960		45.0	1940		1.0	1962
29	65.9	1992		24.0	1960		40.8	1980		- 4.2	1960
mnth	68.5	1972/28		6.0	1933/7		51.3	1986/18		-30.0	1933/9

+ Also occurred in earlier years.

TABLE 4c

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

MARCH

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	66.7	1967		29.0	1971		47.4	1983		12.9	1960
2	63.9	1992		30.0	1953		48.0	1983		2.9	1971
3	67.1	1994		26.5	1966		40.2	1980		5.3	1952
4	68.7	1987		26.2	1966		47.0	1991		1.8	1966
5	67.5	1972		30.9	1955		46.0	1987		5.2	1966
6	68.5	1972		30.5	1964		43.5	1987		10.0	1964
7	65.8	1986		31.6	1964		43.0	1975		4.9	1964
8	67.7	1972		32.6	1964		46.2	1954		6.9	1964
9	76.4	1989		33.4	1964		46.2	1995		20.0	1930
10	74.5	1989		29.2	1962		52.9	1989		13.2	1964
11	70.3	1989		29.0	1962		46.0	1983		13.6	1948
12	68.2	1934		29.8	1962		45.2	1967		12.4	1990
13	70.0	1934		28.6	1962		46.0	1983		9.1	1962
14	70.0	1935		31.3	1962		42.4	1992+		10.5	1964
15	71.8	1994		32.0	1943		46.1	1992		14.9	1962
16	69.0	1967		36.4	1963		48.1	1994		10.1	1963
17	67.6	1972+		33.8	1951		48.2	1974		18.2	1942
18	72.0	1972		30.7	1965		43.6	1993		11.6	1965
19	70.7	1949		34.0	1943		48.0	1975		10.0	1965
20	70.7	1988		30.6	1955		46.0	1934		17.0	1965
21	72.6	1972		32.6	1952		46.2	1988		14.1	1948
22	74.5	1972		31.7	1952		47.1	1978		16.9	1966
23	73.4	1961		31.1	1952		47.1	1967		18.9	1952
24	77.9	1956		37.5	1980		48.1	1985		18.0	1965
25	75.1	1956		36.2	1942		50.0	1993		14.4	1965
26	77.7	1960		31.6	1975		49.4	1993		18.8	1955
27	73.0	1953		27.2	1975		51.1	1960		13.7	1931
28	76.7	1943		28.0	1975		50.0	1934		18.2	1956
29	75.0	1968		35.2	1977		56.0	1943		17.0	1975
30	73.0	1978+		38.8	1967		50.0	1978		13.0	1977
31	74.6	1966		40.9	1938		51.2	1956		19.0	1970
mnth	77.9	1956/24		26.2	1966/4		56.0	1943/29		1.8	1966/4

+ Also occurred in earlier years.

TABLE 4d

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

APRIL

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	73.5	1932		34.9	1936		49.8	1968		19.4	1936
2	77.1	1943		36.8	1945		45.8	1961		14.2	1936
3	76.0	1961		35.4	1955		48.4	1985		18.4	1945
4	75.7	1959		38.9	1955		49.1	1992		20.2	1955
5	82.2	1959		38.0	1936		52.0	1954		15.3	1955
6	81.2	1930		35.4	1929		53.0	1991		24.0	1956
7	83.7	1930		37.3	1929		50.4	1930		21.0	1929
8	80.8	1977		41.0	1933		58.4	1930		25.0	1973
9	82.0	1960		37.0	1933+		52.3	1966		22.0	1933
10	75.6	1971		36.5	1974		51.4	1942		19.0	1933
11	80.0	1934		37.9	1991		52.4	1985		21.2	1929
12	81.3	1936		38.9	1945		61.8	1992		26.0	1953
13	80.3	1988		43.8	1968		52.0	1934		24.2	1945
14	81.0	1962		44.3	1945		54.0	1935		25.0	1933
15	84.7	1985		46.9	1952		55.0	1979		24.8	1945
16	84.2	1936		42.5	1976		61.2	1985		28.0	1970+
17	85.1	1987		39.9	1941		59.0	1985		24.0	1960
18	84.3	1962		40.0	1972		59.1	1946		27.0	1941
19	85.4	1962		41.0	1933		58.0	1994		24.1	1982
20	85.1	1989		39.8	1968		53.4	1980		24.3	1982
21	84.9	1994		36.2	1963		64.1	1989		22.4	1982
22	83.0	1934		44.2	1963		56.0	1994		25.9	1963
23	85.0	1934		42.8	1960		56.0	1934		26.8	1968
24	84.5	1977		43.6	1958		58.0	1930		27.4	1950
25	84.4	1946		43.7	1984		58.0	1959		26.1	1950
26	83.6	1992		40.8	1986		55.3	1981		27.0	1975
27	84.5	1987		35.9	1970		57.3	1992		30.0	1966+
28	84.6	1987		41.9	1937		56.0	1987		28.4	1966
29	86.0	1992		43.6	1970		59.2	1987		29.2	1990
30	83.9	1959		39.6	1967		56.0	1934		28.0	1962
mnth	86.0	1992/29		34.9	1936/1		64.1	1989/21		14.2	1936/2

+ Also occurred in earlier years.

TABLE 4e

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

MAY

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	86.9	1981		45.2	1954		56.2	1943		26.9	1946
2	91.3	1947		38.7	1964		60.0	1985		28.1	1967
3	91.1	1947		43.5	1950		64.0	1985		27.6	1964
4	87.7	1947		48.8	1950		58.7	1962		31.0	1964
5	87.9	1947		44.5	1978		59.0	1979		28.0	1961
6	90.7	1947		45.5	1965		59.0	1934		25.4	1965
7	89.0	1934		45.4	1975		65.0	1934		27.2	1965
8	87.2	1962		45.6	1930		59.1	1966		30.2	1931
9	86.5	1954		46.0	1933		62.4	1962		28.2	1930
10	91.6	1961		47.4	1983		58.9	1954		31.0	1948
11	91.2	1960		44.2	1983		56.0	1934		32.0	1933
12	91.9	1960		45.2	1942		62.6	1960		32.4	1967
13	91.7	1959		50.1	1942		61.6	1993		30.0	1967
14	89.1	1936		52.6	1968		66.0	1984		33.1	1967
15	88.0	1934		50.0	1955		62.1	1987		32.4	1955
16	89.7	1948		47.6	1977		64.4	1987		30.0	1955
17	89.2	1948		48.0	1977		63.8	1934		32.7	1943
18	92.3	1932		44.6	1977		63.0	1934		33.0	1971+
19	92.9	1958		53.2	1945		59.4	1970		31.0	1960
20	92.4	1958		43.4	1975		62.9	1954		33.3	1959
21	86.2	1958		50.8	1962		62.0	1958		34.5	1959
22	89.0	1934		53.8	1986		59.3	1963		33.3	1960
23	91.0	1934		53.0	1995		68.7	1934		30.2	1966
24	90.0	1934		55.5	1939		64.0	1934		34.8	1930
25	91.5	1961		54.8	1980		63.0	1993		31.6	1975
26	92.0	1958		47.9	1929		65.7	1988		34.0	1975+
27	92.7	1951		56.7	1954		67.0	1985		32.8	1929
28	92.1	1958		55.0	1935		63.4	1985		32.4	1954
29	90.9	1939		55.2	1964		62.4	1943		37.1	1946
30	92.6	1984		52.0	1937		62.3	1984		34.0	1979
31	92.7	1956		54.1	1955		61.8	1993		35.9	1978
mnth	92.9	1958/19		38.7	1964/2		68.7	1934/23		25.4	1965/6

+ Also occurred in earlier years.

TABLE 4f

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

JUNE

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	91.8	1977		50.8	1955		59.9	1940		38.4	1969
2	89.2	1968		51.9	1943		61.7	1986		34.8	1954
3	93.7	1994		55.6	1955		63.3	1968		34.9	1929
4	96.3	1988		52.3	1943		66.2	1988		39.4	1962
5	93.3	1946		60.0	1945		67.7	1987		35.3	1937
6	94.7	1959		51.8	1932		67.0	1950		36.9	1954
7	100.2	1985		52.2	1993		64.2	1985		34.8	1962+
8	96.4	1961		55.9	1941		64.3	1985		38.5	1979
9	101.0	1973		56.8	1941		65.0	1956		36.0	1950
10	95.0	1961+		58.6	1970		65.4	1946		40.2	1947
11	96.1	1961		48.7	1947		66.0	1992		40.0	1929
12	97.5	1979		62.8	1928		67.5	1994		40.9	1970
13	98.1	1979		62.0	1957		70.0	1959		39.7	1993
14	100.5	1974		60.1	1945		68.8	1959		39.3	1981
15	101.5	1974		61.3	1957		70.8	1974		38.8	1945
16	99.7	1940		62.3	1957		71.9	1974		39.8	1939
17	103.3	1940		50.0	1939		72.0	1933		37.4	1939
18	101.8	1940		53.5	1975		70.3	1986		36.8	1928
19	101.0	1940		61.5	1975		71.9	1994		40.3	1938
20	101.1	1936		66.2	1975		72.7	1940		41.0	1929
21	103.5	1961		58.0	1948		67.9	1988		37.5	1960
22	101.0	1961		59.8	1948		73.6	1937		42.0	1960
23	100.2	1990		67.3	1993		70.9	1990		44.4	1964
24	102.0	1988		63.8	1952		71.8	1959		43.3	1993
25	101.7	1994		62.4	1969		75.3	1988		39.8	1953+
26	102.5	1970		62.9	1942		75.4	1981		42.1	1978
27	101.9	1958		60.6	1942		75.3	1981		43.4	1942
28	102.4	1961		65.0	1959		74.3	1986		40.3	1945
29	103.5	1979		63.9	1959		72.0	1935		42.2	1968
30	103.4	1990		72.7	1992		74.8	1990		39.9	1968
mnth	103.5	1979/29		48.7	1947/11		75.4	1981/26		34.8	1962/7

+ Also occurred in earlier years.

TABLE 4g

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

JULY

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	101.0	1950		62.1	1992		77.4	1990		40.0	1968
2	100.5	1990		72.9	1938		70.3	1948		43.3	1968
3	100.9	1985		70.4	1993		72.8	1988		48.9	1966
4	101.8	1936		72.1	1993		70.9	1988		46.7	1938
5	103.6	1973		65.2	1982		72.0	1992		43.8	1932
6	101.7	1973		72.7	1994		74.0	1981+		44.2	1938
7	101.5	1976		75.8	1955		73.4	1985		41.2	1928
8	100.5	1976		76.4	1937		74.0	1963		45.1	1955
9	102.1	1994+		77.6	1946		72.7	1989		48.1	1959
10	103.5	1973		70.6	1983		79.0	1956		50.2	1946
11	102.5	1976		71.8	1936		76.0	1981		48.2	1983
12	103.0	1934		74.3	1992		73.5	1980		49.0	1951
13	102.3	1939		73.6	1962		69.3	1964		46.8	1943
14	102.9	1939		78.3	1962		76.0	1931		49.0	1932
15	102.7	1960		75.1	1983		74.7	1991		52.4	1962
16	103.2	1960		77.1	1993		75.0	1968		52.0	1956
17	103.1	1960		77.7	1986		73.3	1966		52.8	1943
18	103.5	1960		74.8	1987		72.4	1977		54.2	1939
19	104.1	1960		70.0	1973		71.3	1984		52.5	1958
20	104.6	1960		79.7	1951		72.8	1960		50.2	1932
21	105.7	1931		80.0	1972+		75.0	1966		49.6	1932
22	103.1	1931		73.5	1973		74.5	1982		47.1	1954
23	103.2	1931		62.1	1993		72.4	1989		46.9	1954
24	105.4	1931		73.5	1993		77.2	1953		50.2	1954
25	103.0	1933		69.7	1941		77.4	1953		51.4	1964
26	106.6	1960		73.1	1993		74.0	1984		53.5	1993
27	105.1	1994		81.3	1993		74.2	1960		47.5	1963
28	106.4	1934		71.0	1948		76.6	1931		51.0	1929
29	105.9	1995		76.6	1950		75.4	1976		45.2	1948
30	103.0	1934		77.0	1931		74.4	1935		48.3	1950
31	102.3	1990		77.6	1975		76.8	1989		45.0	1950
mnth	106.6	1960/26		62.1	1993/23		79.0	1956/10		40.0	1968/1

+ Also occurred in earlier years.

TABLE 4h

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

AUGUST

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	101.6	1979		78.5	1965		74.4	1989		49.1	1932
2	102.9	1992		78.7	1928		72.2	1981+		45.0	1928
3	101.9	1994		77.4	1951		73.1	1992		47.0	1928
4	106.1	1994		75.9	1951		70.4	1994		47.7	1944
5	105.2	1994		78.3	1962		73.9	1994		50.4	1928
6	101.4	1995		74.3	1939		75.1	1975		48.3	1950
7	100.4	1995		79.2	1939		76.3	1995		49.0	1928
8	102.6	1990		77.3	1995		73.4	1983+		48.8	1976
9	103.1	1940		77.4	1985+		72.7	1990		50.6	1931
10	101.0	1935		75.8	1947		72.1	1983		50.2	1939
11	102.0	1972		72.1	1985		73.7	1991		47.8	1932
12	101.9	1940		74.1	1930		71.5	1980		48.9	1935
13	102.1	1937		74.0	1930		70.4	1994		50.0	1969
14	99.9	1960		68.4	1978		71.5	1992		47.1	1938
15	101.1	1962		68.4	1968		72.2	1943		49.0	1938
16	100.2	1994		72.0	1960		73.4	1995		47.5	1976
17	100.0	1934		69.0	1978		73.2	1986		47.9	1968
18	98.7	1932		69.6	1968		72.0	1934		44.9	1954
19	99.2	1961		65.7	1980		71.8	1932		47.0	1978
20	102.8	1960		71.4	1964		73.6	1961		40.0	1928
21	102.3	1960		70.0	1968+		74.3	1960		43.0	1964
22	98.9	1991		59.7	1968		72.7	1937		45.0	1933
23	98.7	1967		69.6	1968		70.3	1991		44.0	1933
24	98.9	1967		63.4	1989		70.0	1955		39.7	1928
25	99.6	1985		71.0	1933		69.6	1981		43.7	1928
26	100.5	1985		69.6	1977		73.7	1981		41.8	1992
27	98.7	1937		69.0	1977		69.9	1985		42.0	1964
28	96.6	1961+		74.6	1977		70.0	1984		42.2	1964
29	99.4	1948		68.2	1964		68.4	1981		36.8	1964
30	100.0	1954		61.2	1932		68.3	1983		38.3	1964
31	97.5	1950		69.3	1932		67.3	1983+		36.6	1965
mnth	106.1	1994/4		59.7	1968/22		76.3	1995/7		36.6	1965/31

+ Also occurred in earlier years.

TABLE 4i

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

SEPTEMBER

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	98.4	1995		57.3	1973		71.0	1929		43.0	1932
2	97.6	1947		63.8	1973		69.8	1990		40.9	1964
3	96.0	1950		65.2	1941		67.1	1990+		38.6	1961
4	98.0	1950		68.9	1929		71.3	1978		41.1	1964
5	96.0	1967		54.9	1970		73.1	1978		40.6	1956
6	96.7	1979		56.1	1970		70.0	1933		43.7	1943
7	98.6	1979		59.8	1929		67.2	1986		44.3	1948
8	100.0	1979		57.2	1973		71.1	1994		37.5	1962
9	94.6	1990		66.6	1928		72.0	1994		33.8	1962
10	93.8	1958		64.2	1986		65.6	1972		38.4	1932
11	97.1	1990		58.8	1950		69.9	1959		38.2	1947
12	99.0	1990		62.6	1988		69.0	1984		36.0	1928
13	93.3	1948		55.6	1988		66.1	1968		32.2	1928
14	96.1	1990		60.9	1982		63.1	1955		35.0	1928
15	93.2	1995		62.0	1933		71.9	1990		33.3	1936
16	94.3	1995		54.9	1965		64.3	1990		33.4	1936
17	93.2	1937		43.4	1965		62.2	1943		31.2	1965
18	94.0	1937		51.5	1978		64.0	1930		27.0	1965
19	96.7	1956		54.5	1978		65.0	1984		31.3	1964
20	91.0	1933		57.9	1941		62.3	1929		29.7	1965
21	89.5	1944		52.2	1961		58.2	1929		34.9	1968
22	91.1	1954		57.3	1961		62.0	1934		32.4	1968
23	92.1	1992		54.8	1941		62.6	1992		31.3	1968
24	90.4	1992		41.0	1934		60.9	1966		32.1	1961
25	89.5	1979		47.0	1934		64.3	1949		29.6	1970
26	88.7	1956		51.0	1934		63.9	1989		31.1	1970
27	90.5	1969		52.9	1982		58.7	1957		31.0	1934
28	91.3	1994		54.0	1982+		64.4	1981		30.7	1936
29	90.6	1969+		46.7	1982		62.2	1947		32.6	1986+
30	89.8	1957		49.3	1950		58.4	1938		29.5	1954
mnth	100.0	1979/8		41.0	1934/24		73.1	1978/5		27.0	1965/18

+ Also occurred in earlier years.

TABLE 4j

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

OCTOBER

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	88.0	1992		45.1	1971		65.5	1953		31.1	1950
2	87.5	1979		51.7	1971		58.5	1929		31.1	1959
3	88.6	1963		53.0	1994		58.0	1948		31.0	1959
4	85.8	1963		53.4	1951		56.2	1963		33.0	1928
5	86.5	1993		44.7	1941		61.8	1990		29.5	1932
6	85.5	1975		46.3	1946		61.0	1975		25.7	1955
7	87.5	1979		49.6	1949		57.8	1960		30.9	1955
8	84.6	1979+		44.9	1949		57.1	1954		29.4	1959
9	84.4	1963		41.2	1960		57.0	1983		28.9	1968
10	84.7	1955		49.3	1949		63.3	1962		28.0	1932
11	84.1	1980		49.7	1947		56.1	1995		26.8	1946
12	83.1	1958		46.9	1969		58.3	1968		28.2	1986
13	84.7	1958		47.6	1966		63.4	1962		31.0	1986
14	81.1	1958		45.1	1969		56.0	1938		27.8	1954
15	83.4	1958		42.8	1994		54.7	1946		26.3	1966
16	84.9	1991		42.0	1980		53.2	1972		26.8	1930
17	82.6	1958		43.2	1938		54.0	1943		22.8	1964
18	84.2	1958		40.8	1984+		49.6	1958		23.4	1964
19	81.8	1958		43.1	1949		51.0	1955+		25.8	1976
20	81.0	1950		40.8	1949		55.2	1961		24.3	1932
21	78.6	1967		42.3	1949		51.6	1989		26.8	1958
22	77.0	1973		45.3	1935		53.1	1991+		23.9	1966
23	77.1	1952		42.3	1975		51.4	1940		23.8	1935
24	77.9	1959		39.0	1956		52.6	1939		20.6	1935
25	78.2	1979		41.2	1954		54.0	1940		18.8	1932
26	79.5	1977		43.5	1970		52.8	1950		27.9	1970
27	76.3	1977		43.0	1991		51.9	1945		24.2	1970
28	78.5	1990		32.6	1971		50.3	1992		23.0	1970
29	79.2	1964		29.5	1971		60.4	1950		18.1	1971
30	77.3	1950		34.9	1971		65.9	1950		16.1	1971
31	73.0	1988		35.1	1971		53.2	1990		17.5	1935
mnth	88.6	1963/3		29.5	1971/29		65.9	1950/30		16.1	1971/30

+ Also occurred in earlier years.

TABLE 4k

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

NOVEMBER

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	71.8	1988+		36.9	1971		51.4	1987		15.8	1971+
2	72.7	1965		33.4	1936		50.1	1988		13.8	1956
3	70.7	1965		30.0	1936		48.5	1988		5.5	1936
4	70.2	1983		33.0	1935		54.4	1977		15.0	1936
5	71.2	1945		37.0	1935		47.4	1945		18.0	1935
6	74.2	1931		32.1	1947		52.4	1966		15.6	1947
7	73.8	1931		35.5	1945		47.4	1980		19.0	1961
8	69.5	1973		34.0	1945		43.2	1974		16.7	1948
9	73.7	1958		31.6	1950		43.0	1949		16.9	1948
10	68.8	1973		34.3	1978		45.0	1944		13.4	1950
11	72.4	1954		35.2	1938		47.0	1954		17.0	1935
12	74.7	1967		31.2	1938		47.7	1953		14.8	1929
13	70.0	1953		34.0	1964		50.2	1981		14.2	1959
14	70.8	1967		33.0	1964		51.2	1953		3.2	1955
15	70.0	1941		14.8	1955		45.9	1966		-10.0	1955
16	67.5	1981		16.0	1955		49.1	1941		-13.6	1955
17	67.8	1981		27.0	1958		46.4	1950		9.6	1958
18	65.9	1995		29.9	1958		47.0	1942		5.8	1958
19	66.8	1943		27.1	1985		45.2	1946		3.0	1930
20	64.6	1966		25.5	1977		44.2	1966		2.0	1930
21	64.6	1932		24.9	1931		45.0	1974		5.2	1931
22	63.0	1933		26.8	1931		41.0	1981		3.0	1930
23	60.8	1988		25.1	1931		43.1	1965		5.4	1940
24	65.4	1995		22.4	1931		46.9	1960		0.0	1931
25	69.4	1995		26.8	1992		46.0	1960		0.8	1931
26	67.5	1949		26.8	1952		45.8	1960		2.1	1952
27	67.2	1949		25.0	1976		39.3	1955		6.0	1952
28	65.7	1932		26.8	1930		39.0	1970		7.0	1976
29	63.3	1932		27.8	1975		41.0	1945		5.2	1931
30	68.1	1995		25.8	1930		42.4	1995		6.1	1931
mnth	74.7	1967/12		14.8	1955/15		54.4	1977/4		-13.6	1955/16

+ Also occurred in earlier years.

TABLE 41

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES, 1928-1995

DECEMBER

DAY	HIGH MAX	YEAR		LOW MAX	YEAR		HIGH MIN	YEAR		LOW MIN	YEAR
1	68.5	1995		23.8	1930		39.0	1947		6.3	1991+
2	60.8	1939		23.5	1930		40.4	1977+		6.0	1934
3	59.0	1939		27.3	1963		49.0	1980		4.9	1931
4	58.4	1980		25.0	1992		47.0	1946		2.9	1992
5	59.9	1946		16.9	1972		42.2	1946		- 2.8	1972
6	57.7	1987		23.4	1978		41.0	1946		8.5	1931
7	59.6	1939		19.0	1978		38.0	1983		0.8	1951
8	62.2	1939		18.2	1978		40.7	1950		- 3.4	1956
9	62.2	1939		12.7	1972		48.3	1939		-11.0	1972
10	66.1	1939		7.8	1972		51.0	1929		-12.8	1972
11	61.5	1993		11.5	1972		45.0	1929		-12.0	1932
12	61.0	1995		7.9	1932		48.3	1929		-20.0	1932
13	59.6	1929		10.9	1932		45.0	1929		-21.4	1932
14	63.5	1929		15.0	1932		46.3	1977		-19.0	1932
15	58.8	1946		11.1	1972		39.4	1946		-14.7	1972
16	57.8	1939		18.2	1932		40.9	1957		-13.8	1932
17	58.0	1939		18.7	1932		37.0	1939		- 4.2	1931
18	52.7	1960		23.4	1964		35.7	1955		1.0	1932
19	53.8	1955		24.8	1992		46.0	1955		- 1.0	1931
20	60.6	1981		22.2	1949		40.4	1941		- 6.6	1990
21	66.5	1969		11.4	1990		44.2	1964		- 9.4	1990
22	57.4	1964		2.0	1990		49.1	1955		- 9.8	1990
23	58.7	1933		9.1	1990		51.9	1955		-10.8	1990
24	57.0	1955		11.4	1990		41.0	1971		- 6.7	1990
25	59.2	1955		18.1	1990		46.0	1955		- 6.7	1930
26	60.0	1933		19.0	1970		43.0	1955		- 6.2	1930
27	56.8	1933		17.8	1988		41.0	1934		- 4.3	1930
28	57.2	1933		24.2	1939		40.3	1945		- 9.0	1932
29	57.6	1933		20.2	1988		41.4	1933		- 8.0	1932
30	51.0	1933		13.2	1990		42.3	1933		- 8.6	1990
31	58.3	1942		19.8	1978		39.2	1942		- 7.3	1990
mnth	68.5	1995/1		2.0	1990/22		51.9	1955/23		-21.4	1932/13

+ Also occurred in earlier years.

TABLE 5a

NORMAL MONTHLY MAXIMUM TEMPERATURE, PLUS HIGHEST AND LOWEST DAILY EXTREMES FOR EACH MONTH WITH DAY AND YEAR OF OCCURRENCE

1928 - 1995

Month	Normal Monthly Maximum	Highest Daily Maximum			Lowest Daily Maximum		
January	36.4	61.5	26	1982	3.6	12	1963
February	43.6	68.5	28	1972	6.0	7	1933
March	52.2	77.9	24	1956	26.2	4	1933
April	61.3	86.0	29	1992	34.9	1	1936
May	71.9	92.9	19	1958	38.7	2	1964
June	82.8	103.5	29	1979+	48.7	11	1947
July	92.2	106.6	26	1960	62.1	23	1993
August	89.4	106.1	4	1994	59.7	22	1968
September	79.2	100.0	8	1979	41.0	24	1934
October	66.1	88.6	3	1963	29.5	29	1971
November	50.8	74.7	12	1967	14.8	15	1955
December	37.8	68.5	1	1995	2.0	22	1990
Annual	63.6	106.6	July 26	1960	2.0	Dec 22	1990

+ Also occurred on June 21, 1961.

TABLE 5b

NORMAL MONTHLY MINIMUM TEMPERATURE, PLUS HIGHEST AND LOWEST DAILY EXTREMES FOR EACH MONTH WITH DAY AND YEAR OF OCCURRENCE

1928 - 1995

Month	Normal Monthly Minimum	Lowest Daily Minimum			Highest Daily Minimum		
January	19.3	-21.7	25	1949	47.0	13	1980
February	24.6	-30.0	9	1933	51.3	18	1986
March	31.4	1.8	4	1966	56.0	29	1943
April	37.9	14.2	2	1936	64.1	21	1989
May	45.6	25.4	6	1965	68.7	23	1934
June	55.4	34.8	7	1962+	75.4	26	1981
July	63.7	40.0	1	1968	79.0	10	1956
August	61.8	36.6	31	1965	76.3	7	1995
September	51.0	27.0	18	1965	73.1	5	1978
October	40.2	16.1	30	1971	65.9	30	1950
November	30.9	-13.6	16	1955	54.4	4	1977
December	21.6	-21.4	13	1932	51.9	23	1955
Annual	40.3	-30.0	Feb 9	1933	79.0	July 10	1956

Climatological normals based on (1961-1990) period.

+ Also occurred in earlier years.

TABLE 6a

NORMAL MONTHLY MAXIMUM TEMPERATURE, PLUS HIGHEST AND LOWEST MONTHLY AVERAGES WITH YEAR OF OCCURRENCE

1928 - 1995

Month	Normal Monthly Maximum	Highest Average Maximum	Year	Lowest Average Maximum	Year
January	36.4	48.1	1953	21.7	1949
February	43.6	54.1	1995	29.1	1933
March	52.2	62.0	1934	40.5	1952
April	61.3	70.7	1934	53.4	1975
May	71.9	82.4	1934	63.8	1933
June	82.8	92.2	1961	73.0	1945
July	92.2	98.2	1960	83.6	1993
August	89.4	95.7	1967	82.3	1968
September	79.2	87.5	1979	70.8	1965
October	66.1	74.3	1988	56.4	1946
November	50.8	58.0	1995	41.0	1994
December	37.8	48.1	1939	28.1	1930
Annual	63.6	98.2	July 1960	21.7	Jan 1949

TABLE 6b

NORMAL MONTHLY MINIMUM TEMPERATURE, PLUS HIGHEST AND LOWEST MONTHLY AVERAGES WITH YEAR OF OCCURRENCE

1928 - 1995

Month	Normal Monthly Minimum	Highest Average Minimum	Year	Lowest Average Minimum	Year
January	19.3	30.9	1953	1.4	1949
February	24.6	33.6	1986	3.4	1933
March	31.4	38.9	1992	27.2	1964
April	37.9	44.0	1992	32.5	1970+
May	45.6	52.5	1992	40.6	1930
June	55.4	61.3	1988	47.5	1945
July	63.7	67.2	1985	56.1	1993
August	61.8	66.2	1994	53.2	1928
September	51.0	58.8	1990	43.8	1964
October	40.2	45.6	1988	33.9	1932
November	30.9	35.9	1953	19.3	1930
December	21.6	30.8	1950	6.5	1932
Annual	40.3	67.2	July 1985	1.4	Jan 1949

Climatological Normals based on (1961-1990) period.

+ Also occurred in earlier years.

TABLE 7

NORMAL, HIGHEST AND LOWEST MONTHLY MEAN TEMPERATURE

1928 - 1995

	MAX	YEAR	MIN	YEAR		MAX	YEAR	MIN	YEAR
JANUARY	39.5	1953	11.6	1949	JULY	81.2	1960	69.9	1993
Normal Monthly Mean	36.8	1994	13.2	1937	Normal Monthly Mean	81.1	1989	73.8	1938
27.9	36.3	1978	18.8	1932+	77.9	80.9	1988	74.2	1986
	35.7	1938	19.2	1944		80.7	1994+	74.3	1950+
	35.5	1956	19.5	1963		80.1	1966	74.6	1952
FEBRUARY	42.3	1995	16.2	1933	AUGUST	80.8	1994	69.4	1968
Normal Monthly Mean	42.2	1934	22.6	1939	Normal Monthly Mean	78.6	1967	70.6	1928
34.1	41.7	1958	22.8	1949	75.6	78.4	1991+	70.9	1965
	41.4	1986	24.0	1955+		78.0	1981	71.9	1964
	40.4	1976	25.3	1989		77.9	1986+	72.3	1976
MARCH	49.3	1992	32.0	1964	SEPTEMBER	72.0	1990	57.5	1965
Normal Monthly Mean	49.2	1934	33.3	1952	Normal Monthly Mean	71.4	1979	59.0	1970
41.8	48.0	1978	35.1	1962	65.2	70.5	1994	59.7	1941
	47.7	1986	35.6	1948		69.7	1969	59.8	1971
	46.9	1972	35.8	1942		68.7	1938	60.0	1961
APRIL	57.1	1992	44.2	1970	OCTOBER	60.0	1988	46.6	1946
Normal Monthly Mean	56.6	1934	44.3	1975+	Normal Monthly Mean	57.9	1950	47.1	1970
49.7	56.0	1930	44.4	1929	53.2	57.8	1963	47.5	1971
	55.9	1987	44.8	1945		57.5	1952	47.7	1969
	55.7	1985	45.5	1933		56.7	1979	48.1	1932
MAY	66.7	1934	52.2	1933	NOVEMBER	46.1	1995+	31.8	1930
Normal Monthly Mean	65.6	1992	52.9	1953	Normal Monthly Mean	44.3	1981+	32.4	1938
58.8	65.1	1958	53.2	1942	40.8	44.0	1954	32.6	1994
	64.0	1969	54.3	1975+		43.6	1937	33.0	1931
	63.9	1985	54.7	1965		43.4	1974	34.1	1992
JUNE	75.7	1988	60.2	1945	DECEMBER	37.9	1977	18.0	1932
Normal Monthly Mean	74.7	1961	63.0	1944	Normal Monthly Mean	37.8	1933	18.8	1930
69.1	74.3	1994	63.2	1964+	29.7	37.1	1995+	21.0	1990
	73.5	1986	63.3	1963		36.4	1981	22.5	1931
	73.4	1974	63.6	1947		36.3	1939+	22.7	1972

+ Also occurred in earlier years.

TABLE 7a

ANNUAL HIGHEST AND LOWEST AVERAGE TEMPERATURES

1928 - 1995

Highest Annual Average	Year		Lowest Annual Average	Year
55.2	1934	Normal Annual Mean Temperature 52.0	48.2	1932
54.6	1994		48.3	1964
54.3	1981		49.0	1929
53.8	1995,40		49.4	1955,44,30
53.6	1992,58		49.6	1942
53.5	1983		49.7	1931

Climatological normals based on (1961-1990) period.

TABLE 7b

FALL HIGHEST AND LOWEST AVERAGE TEMPERATURES
(SEPTEMBER-NOVEMBER)
1928 - 1995

Highest Fall Average	Year		Lowest Fall Average	Year
56.1	1953	Normal Fall Mean Temperature	48.0	1930
55.8	1990		48.3	1971
55.6	1983		48.4	1961
55.1	1937	53.1	49.5	1946
55.0	1995+		49.6	1970+
54.9	1979+		50.1	1936
54.6	1933		50.2	1959

TABLE 7c

WINTER HIGHEST AND LOWEST AVERAGE TEMPERATURES
(DECEMBER-FEBRUARY)
1928 - 1995

Highest Winter Average	Year		Lowest Winter Average	Year
38.0	1977-78	Normal Winter Mean Temperature	19.5	1932-33
37.9	1933-34		19.9	1948-49
36.3	1994-95+		23.5	1930-31
36.2	1952-53	30.5	23.9	1931-32+
35.8	1969-70		24.0	1963-64
35.4	1958-59		24.9	1972-73
35.3	1957-58		25.1	1954-55

Climatological normals based on (1961-1990) period.
+ Also occurred in earlier years.

TABLE 7d

SPRING HIGHEST AND LOWEST AVERAGE TEMPERATURES
(MARCH-MAY)
1928 - 1995

Highest Spring Average	Year		Lowest Spring Average	Year
57.5	1934	Normal Spring Mean Temperature 50.2	44.5	1964
57.3	1992		45.5	1933
53.8	1987		46.4	1955+
53.6	1994		46.5	1942
53.5	1989		47.2	1944
53.5	1985		47.4	1945
53.3	1940		47.5	1965

TABLE 7e

SUMMER HIGHEST AND LOWEST AVERAGE TEMPERATURES
(JUNE-AUGUST)
1928 - 1995

Highest Summer Average	Year		Lowest Summer Average	Year
1994	78.6	Normal Summer Mean Temperature 74.3	1993	68.7
1988	77.7		1928	69.5
1961	77.5		1945	69.9
1985	76.6		1965	70.2
1940	76.1		1964	70.9+
1990	75.7		1951	71.0
1974	75.6		1950	71.4

Climatological Normals based on (1961-1990) period.
+ Also occurred in earlier years.

TABLE 8

RECORD NUMBER OF DAYS PER YEAR WITH MAXIMUM TEMPERATURES
90, 95, AND 100 DEGREES OR MORE
1928 - 1995

90 or Higher (1)		95 or Higher (2)		100 or Higher (3)	
82	1961	51	1961	21	1994+
77	1994	49	1994	15	1961+
75	1988	47	1940	13	1931
74	1966	44	1960	12	1990+
70	1974	43	1967	11	1973+
69	1960+	40	1988	10	1934
68	1967+	35	1979+	9	1989+
67	1940	34	1931	8	1978+
66	1979	33	1989+	7	1972+
63	1990+	31	1990+	6	1988+
54	Annual Average	23	Annual Average	5	Annual Average

+Also occurred in earlier years.
(1) - Only years with 62 or more days tabulated.
(2) - Only years with 30 or more days tabulated.
(3) - Only years with 6 or more days tabulated.

TABLE 9

AVERAGE AND GREATEST NUMBER OF DAYS PER MONTH WITH MAXIMUM TEMPERATURES
90, 95, AND 100 DEGREES OR MORE
1928 - 1995

Month	90 or Higher		95 or Higher		100 or Higher	
	Average	Maximum	Average	Maximum	Average	Maximum
May	1	7 in 1958	0		0	
June	8	20 in 1961	3	16 in 1961	1	8 in 1961
July	23	31 in 1960	12	23 in 1960	3	15 in 1960
August	18	31 in 1967	7	22 in 1967	1	7 in 1994+
September	4	12 in 1979+	1	5 in 1990	*	1 in 1979
Annual Average	54	82 in 1961	23	51 in 1961	5	21 in 1960

+Also occurred in earlier years.
* A high of 100 degrees was recorded on September 8, 1979 and is the only day in September ever to reach 100 degrees.

TABLE 10

GREATEST NUMBER OF CONSECUTIVE DAYS WITH A TEMPERATURE OF 90 DEGREES OR MORE

1928 - 1995

Days	Period	Year	Days	Period	Year
50	July 18 - September 5	1967	25	July 8 - August 1	1933
39	July 4 - August 11	1966	24	July 28 - August 24	1963
38	July 5 - August 11	1961	22	July 18 - August 8	1989
38	June 24 - July 31	1960	22	July 20 - August 10	1942
33	July 10 - August 11	1969	21	July 22 - August 11	1978
33	July 10 - August 11	1964	21	July 17 - August 6	1974
32	July 8 - August 8	1994	21	July 23 - August 12	1972
31	July 2 - August 1	1968	21	July 11 - July 31	1959
30	July 24 - August 22	1971	21	July 8 - July 28	1956
27	July 5 - July 31	1935	19	June 28 - July 16	1985
26	July 28 - August 22	1940	19	July 24 - August 11	1979

Only periods of 19 days or more tabulated.

TABLE 11

GREATEST NUMBER OF DAYS IN ONE MONTH WITH A TEMPERATURE OF 90 DEGREES OR MORE

1928 - 1995

Days	Month	Year	Days	Month	Year
31	August	1967	28	July	1989+
31	July	1960	27	July	1994+
30	July	1968+	26	July	1978
29	July	1966+	25	August	1981+
28	August	1994+	25	July	1959+

Only periods of 25 days or more tabulated.
+ Also occurred in July or August of earlier years.

TABLE 12

EARLIEST DATE OF OCCURRENCE IN THE SPRING AND THE LATEST DATE OF OCCURRENCE IN THE FALL OF 90 DEGREES OR MORE

1928 - 1995

Earliest in the Spring.....May 2, 1947
Latest in the Fall.....September 30, 1957

TABLE 13

GREATEST NUMBER OF CONSECUTIVE DAYS WITH A TEMPERATURE OF 95 DEGREES OR MORE

1928 - 1995

Days	Period	Year	Days	Period	Year
20	July 23 - August 11	1978	11	July 16 - July 26	1936
20	July 11 - July 30	1960	11	July 11 - July 21	1933
19	July 20 - August 7	1994	10	July 20 - July 29	1945
16	August 11 - August 26	1967	10	July 23 - August 1	1943
15	July 13 - July 27	1931	10	June 12 - June 21	1940
12	June 18 - June 29	1961	9	July 21 - July 29	1980
12	August 3 - August 14	1960	9	July 3 - July 11	1976
12	July 6 - July 17	1954	9	July 3 - July 11	1973
12	July 4 - July 15	1940	9	August 4 - August 12	1972
11	August 1 - August 11	1985	9	July 11 - July 19	1934
11	July 18 - July 28	1937	9	August 14 - August 22	1932

Only periods of 9 days or more tabulated.

TABLE 14

GREATEST NUMBER OF DAYS IN ONE MONTH WITH A TEMPERATURE OF 95 DEGREES OR MORE

1928 - 1995

Days	Month	Year	Days	Month	Year
23	July	1960	18	August	1969+
22	August	1967	18	July	1964+
22	July	1961	17	August	1994+
21	July	1989	17	July	1976+
20	July	1994+	16	July	1985+
19	July	1967	16	June	1961

Only periods of 16 days or more tabulated.
+ Also occurred in July or August of earlier years.

TABLE 15

EARLIEST DATE OF OCCURRENCE IN THE SPRING AND THE LATEST DATE OF OCCURRENCE IN THE FALL OF 95 DEGREES OR MORE

1928 - 1995

Earliest in the Spring.....June 4, 1988
Latest in the Fall.....September 19, 1956

TABLE 16

GREATEST NUMBER OF CONSECUTIVE DAYS WITH A TEMPERATURE
OF 100 DEGREES OR MORE
1928 - 1995

Days	Period	Year	Days	Period	Year
9	July 14 - July 22	1960	4	July 15 - July 18	1979
8	July 20 - July 27	1931	4	July 24 - July 27	1978
6	July 25 - July 30	1994	4	July 8 - July 11	1973
6	July 6 - July 11	1976	4	July 3 - July 6	1973
6	July 24 - July 29	1960	4	August 9 - August 12	1972
5	August 3 - August 7	1994	4	August 12 - August 15	1962
5	July 2 - July 6	1985	4	June 20 - June 23	1961
4	June 29 - July 2	1990	4	July 10 - July 13	1954
4	June 23 - June 26	1990	4	July 24 - July 27	1943
4	August 3 - August 6	1979	4	July 16 - July 19	1940

Only periods of 4 days or more tabulated.

TABLE 17

GREATEST NUMBER OF DAYS IN ONE MONTH WITH A TEMPERATURE
OF 100 DEGREES OR MORE
1928 - 1995

Days	Month	Year	Days	Month	Year
15	July	1960	8	June	1961
13	July	1994	7	August	1994
12	July	1931	7	July	1978+
9	July	1989+	6	June	1990
8	July	1976	6	July	1985+

Only periods of 6 days or more tabulated.
+ Also occurred in July or August of earlier years.

TABLE 18

EARLIEST DATE OF OCCURRENCE IN THE SPRING AND THE LATEST DATE OF
OCCURRENCE IN THE FALL OF 100 DEGREES OR HIGHER
1928 - 1995

Earliest in the Spring.....June 7, 1985
Latest in the Fall.....September 8, 1979

TABLE 19

GREATEST NUMBER OF DAYS IN ONE MONTH WITH A MAXIMUM TEMPERATURE
OF 32 DEGREES OR BELOW
1928 - 1995

Days	Month	Year	Days	Month	Year
26	January	1949+	17	January	1929
25	January	1944	16	December	1972+
25	December	1930	16	January	1950
24	January	1931	15	January	1989+
23	January	1973	15	December	1967
22	January	1984+	15	February	1950
21	January	1979+	14	January	1993+
20	December	1985+	14	December	1990+
20	January	1942+	13	January	1985
19	January	1947	13	December	1968+
18	January	1964	13	February	1949
17	February	1933			

Only months with 13 or more days tabulated.
+ Also occurred in earlier years.

TABLE 20

GREATEST NUMBER OF CONSECUTIVE DAYS WITH A MAXIMUM TEMPERATURE
OF 32 DEGREES OR BELOW
1928 - 1995

Days	Period	Days	Period
18	December 20, 1990 - January 6, 1991	15	December 28, 1946 - January 11, 1947
18	January 23, 1949 - February 9, 1949	14	December 23, 1987 - January 5, 1988
17	January 21, 1962 - February 6, 1962	14	January 8, 1987 - January 21, 1987
15	December 16, 1985 - December 30, 1985	14	December 29, 1972 - January 11, 1973
15	January 20, 1979 - February 5, 1979		

Only periods of 14 or more days tabulated.

TABLE 21

NORMAL NUMBER OF DAYS WITH A MAXIMUM TEMPERATURE OF 32 DEGREES OR BELOW

November.....1 day	January.....11 days	March.....1 day
December.....9 days	February.....4 days	Annual.....26 days

Climatological Normals based on (1961-1990) period.

TABLE 22

GREATEST NUMBER OF CONSECUTIVE DAYS WITH A MINIMUM OF 32 DEGREES OR BELOW
1928 - 1995

Days	Time Period
94	November 14, 1930 - February 15, 1931
88	December 1, 1932 - March 8, 1933
85	November 20, 1990 - February 12, 1991
81	November 15, 1928 - February 3, 1929
62	January 6, 1928 - March 8, 1928
62	December 21, 1943 - February 21, 1944
61	December 31, 1984 - March 1, 1985
60	November 21, 1963 - January 19, 1964
57	December 28, 1975 - February 22, 1976
55	January 3, 1955 - February 25, 1955

Only periods of 55 days or more tabulated.

TABLE 23

AVERAGE NUMBER OF DAYS WITH A MINIMUM OF 32 DEGREES OR BELOW
1928 - 1995

Month	Number of Days
January	28 days
February	23 days
March	16 days
April	6 days
May	1 day
June	0
July	0
August	0
September	0
October	5 days
November	18 days
December	28 days
Annual Average	125 days

TABLE 24

GREATEST NUMBER OF DAYS IN ONE MONTH WITH A MINIMUM TEMPERATURE OF 0 DEGREES OR BELOW

1928 - 1995

Days	Month	Year	Days	Month	Year
15	January	1949	7	January	1973
14	January	1937	7	December	1932
12	December	1930	6	January	1974+
11	February	1933	6	December	1931
9	December	1990	6	February	1929
9	December	1972	5	January	1984+
9	January	1932	5	February	1949
8	January	1942			

Only months with 5 or more days tabulated.
+ Also occurred in earlier years.

TABLE 25

GREATEST NUMBER OF CONSECUTIVE DAYS WITH A MINIMUM TEMPERATURE OF 0 DEGREES OR BELOW

1928 - 1995

Days	Period	Days	Period
13	December 20, 1930 - January 1, 1931	6	January 7, 1937 - January 12, 1937
8	December 9, 1972 - December 16, 1972	6	December 11, 1932 - December 16, 1932
7	January 20, 1937 - January 26, 1937	5	December 29, 1990 - January 2, 1991
7	February 4, 1933 - February 10, 1933	5	January 17, 1984 - January 21, 1984
6	December 20, 1990 - December 25, 1990	5	January 21, 1962 - January 28, 1962
6	January 3, 1973 - January 8, 1973	5	February 7, 1929 - February 11, 1929
6	January 24, 1949 - January 29, 1949		

Only periods of 5 or more days tabulated.

TABLE 26

AVERAGE NUMBER OF DAYS WITH A MINIMUM TEMPERATURE OF 0 DEGREES OR BELOW

1928 - 1995

November..... 0 days	January..... 2 days	Annual..... 3 days
December..... 1 day	February..... less than 1/2 day	

TABLE 27

FREEZE DATA -- SALT LAKE AIRPORT
1928 - 1995

FREEZE (32 DEGREES OR BELOW)					
Earliest Date in the Spring	Latest Date in the Spring	Average Date in the Spring	Earliest Date in the Fall	Latest Date in the Fall	Average Date in the Fall
March 11, 1992	May 28, 1954		Sept 13, 1928	Nov 14, 1988	
March 19, 1940	May 25, 1975		Sept 17, 1965	Nov 13, 1944	
March 21, 1989	May 23, 1966		Sept 18, 1946	Nov 11, 1987	
March 30, 1985	May 19, 1931		Sept 19, 1942	Nov 9, 1985	
April 3, 1944	May 19, 1938		Sept 19, 1964	Nov 8, 1983	
April 8, 1994	May 19, 1950		Sept 22, 1968	Nov 5, 1974	
April 8, 1981	May 19, 1960	April 30	Sept 24, 1961	Nov 3, 1940	October 15
April 8, 1973	May 16, 1955		Sept 25, 1958	Nov 3, 1992	
April 9, 1952	May 13, 1943		Sept 25, 1970	Nov 1, 1977	
April 9, 1936	May 13, 1951		Sept 27, 1934	Oct 31, 1981	
April 10, 1976	May 13, 1967		Sept 27, 1936	Oct 30, 1979	
April 13, 1987	May 11, 1930		Sept 28, 1941	Oct 29, 1993	
April 13, 1980	May 11, 1933		Sept 28, 1971	Oct 28, 1972+	
April 14, 1993					

+ Also occurred in earlier years.

*FREEZE-FREE PERIOD				
Longest		Shortest		Average Length
Days	Date	Days	Date	
236	March 12 - November 2, 1992	124	May 29 - September 29, 1954	
223	March 31 - November 8, 1985	132	May 8 - September 16, 1965	
209	March 22 - October 17, 1989	134	May 20 - September 30, 1950	
205	April 20 - November 10, 1987	136	May 6 - September 18, 1964	
203	April 8 - October 29, 1994	137	May 8 - September 21, 1968	167 days
197	April 14 - October 29, 1993	139	May 24 - October 9, 1966	
195	May 3 - November 13, 1988	139	May 2 - September 17, 1946	
195	April 17 - November 7, 1983	139	May 23 - October 8, 1982	
194	April 23 - November 2, 1940	140	May 7 - September 23, 1961	
194	Aril 21 - October 31, 1977	141	May1 - September 18, 1942	
193	May 4 - November 12, 1944+			

*Freeze-free period is the number of days between the last freeze (32 degrees or below) in the Spring and the first freeze (32 degrees or below) in the Fall.

+ Also occurred in earlier years.

TABLE 28

GROWING SEASON DATA -- SALT LAKE AIRPORT
1928 - 1995

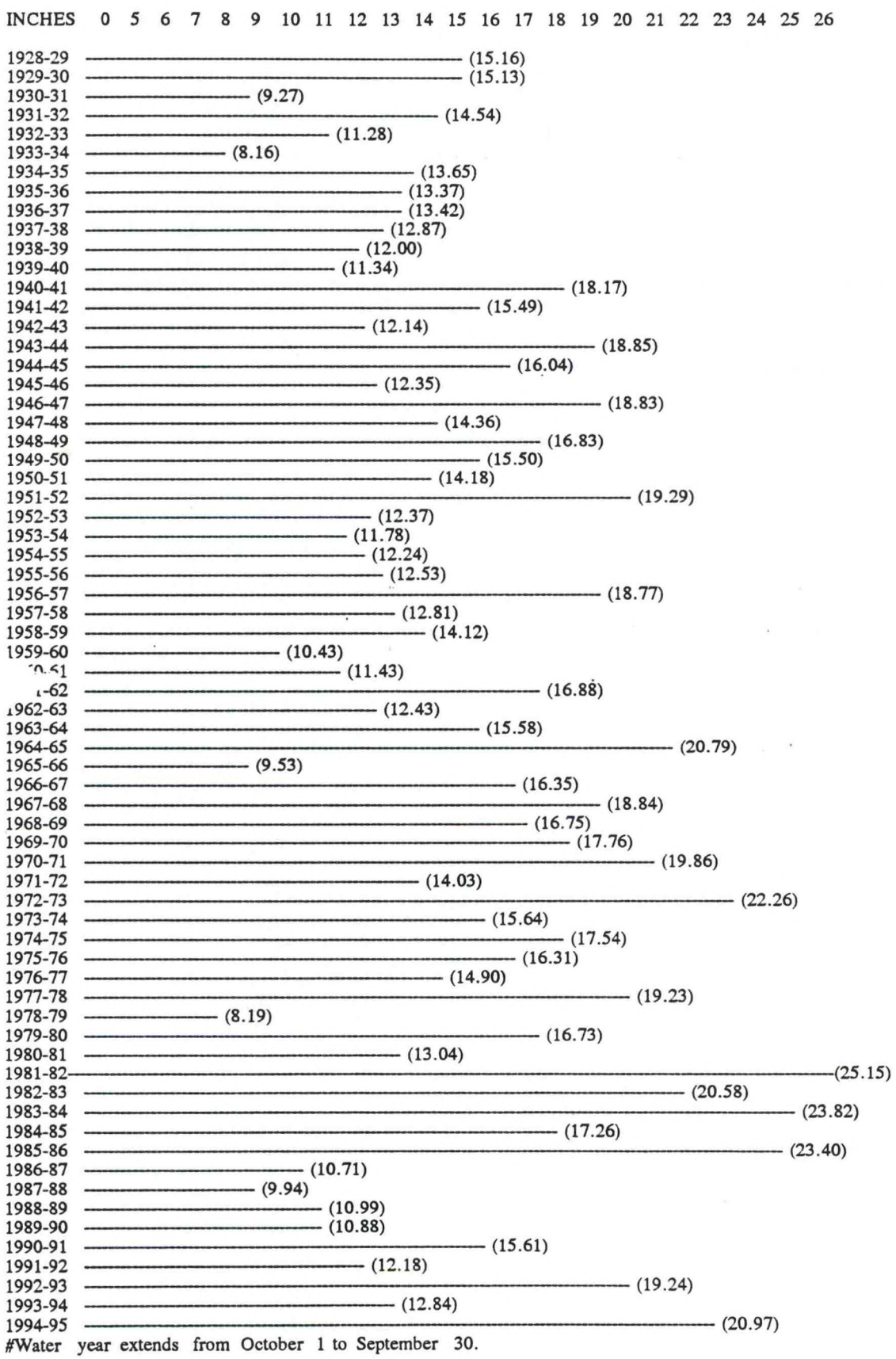
Minimum Temperature Base	Latest in Spring	Spring Average	First in Fall	Fall Average
32 or below	May 28, 1954	April 30	September 13, 1928	October 15
28 or below	May 9, 1930	April 12	September 18, 1965	October 25
24 or below	April 21, 1982	March 24	October 17, 1964	November 9
20 or below	April 10, 1933	March 10	October 25, 1932	November 22
16 or below	April 5, 1955	February 24	October 30, 1971	November 28
10 or below	March 19, 1965	February 9	November 3, 1936	December 11

Minimum Temperature Base	Minimum Length of Growing Season		Maximum Length of Growing Season		Average Length
	Period	Days	Period	Days	Days
32 or below	May 29 - September 29 1954	124	March 11 - November 3 1992	237	167
28 or below	May 9 - October 16 1930	159	February 8 - November 3 1992	270	199
24 or below	April 17 - October 29 1960	194	January 27 - November 26 1934	302	226
20 or below	April 2 - November 2 1936	213	January 26 - November 30 1934	307	254
16 or below	April 2 - November 2 1936	213	December 21 - December 5 1977 - 1978	348	278
10 or below	February 28 - November 18 1929	262	November 22 - February 1 1994 - 1996	436	310

Growing season is the number of days between the last selected minimum temperature base in the spring and the first selected minimum temperature base in the fall.

FIGURE 5

SALT LAKE CITY AIRPORT SEASONAL PRECIPITATION RECORD
1928-1929 to 1994-1995 (Water Year)#



#Water year extends from October 1 to September 30.

TABLE 29

MAXIMUM AND MINIMUM TOTAL ANNUAL PRECIPITATION BY CALENDAR YEAR

1929 - 1995

Maximum Annual Precipitation					Minimum Annual Precipitation			
Amount	Year	Amount	Year		Amount	Year	Amount	Year
24.26"	1983	19.87"	1970	Normal Annual Precip.	8.70"	1979	10.11"	1933
22.86"	1982	19.40"	1986		8.99"	1966	10.34"	1935
21.55"	1984	18.87"	1993	16.18"	9.29"	1988	10.69"	1990
21.11"	1968	18.79"	1941		9.36"	1939	10.72"	1958
20.39"	1973	18.49"	1944		9.42"	1931	10.87"	1989

Normal annual precipitation from Climatological Standard Normals (1961-1990).

TABLE 30*

THE AVERAGE TIME INTERVAL (RETURN PERIOD) BETWEEN THE OCCURRENCE OF THE LISTED PRECIPITATION AMOUNTS AND THAT OF AN EQUAL OR GREATER AMOUNT

1929 - 1970#

Return Period (Years)	Duration of precipitation						
	5 minutes	10 minutes	15 minutes	30 minutes	1 hour	2 hours	24 hours
1	.03	.06	.08	.13	.19	.28	.65
2	.15	.24	.29	.36	.45	.58	1.34
5	.24	.40	.48	.62	.74	.89	1.79
10	.30	.52	.64	.85	1.02	1.17	2.10
50	.43	.81	1.12	1.63	1.93	2.02	2.81
100	.48	.95	1.38	2.09	2.49	2.51	3.13

* This table, for example, states that the average time interval is 100 years before 0.48 inches of rain or more falls at the Salt Lake Airport in a 5 minute period, or 0.95 inches or more in a 10 minute period, or 1.38 inches or more in a 15 minute period, etc. In another example, the table also states that about once in every 10 years it is possible for 0.30 inches or more of precipitation to fall at the Salt Lake Airport in 5 minutes, 0.52 inches or more in 10 minutes, or 0.64 inches or more in 15 minutes, etc.

This table was compiled using hourly data and Pearsons distribution system by Mr. A.L. Zimmerman, former Hydrologist in Charge of the Colorado Basin River Forecast Center.

TABLE 31

WATER YEAR PRECIPITATION
1928-1995

1	1933-34	8.16	67
2	1978-79	8.19	66
3	1930-31	9.27	65
4	1965-66	9.53	64
5	1987-88	9.94	63
6	1959-60	10.43	62
7	1986-87	10.71	61
8	1989-90	10.88	60
9	1988-89	10.99	59
10	1932-33	11.28	58
11	1939-40	11.34	57
12	1960-61	11.43	56
13	1953-54	11.78	55
14	1938-39	12.00	54
15	1942-43	12.14	53
16	1991-92	12.18	52
17	1954-55	12.24	51
18	1945-46	12.35	50
19	1952-53	12.37	49
20	1962-63	12.43	48
21	1955-56	12.53	47
22	1957-58	12.81	46
23	1993-94	12.84	45
24	1937-38	12.87	44
25	1980-81	13.04	43
26	1935-36	13.37	42
27	1936-37	13.42	41
28	1934-35	13.65	40
29	1971-72	14.03	39
30	1958-59	14.12	38
31	1950-51	14.18	37
32	1947-48	14.36	36
33	1931-32	14.54	35
34	1976-77	14.90	34
35	1929-30	15.13	33
36	1928-29	15.16	32
37	1941-42	15.49	31
38	1949-50	15.50	30
39	1963-64	15.58	29
40	1990-91	15.61	28
41	1973-74	15.64	27
42	1944-45	16.04	26
43	1975-76	16.31	25
44	1966-67	16.35	24
45	1979-80	16.73	23
46	1968-69	16.75	22
47	1948-49	16.83	21
48	1961-62	16.88	20
49	1984-85	17.26	19
50	1974-75	17.54	18
51	1969-70	17.76	17
52	1940-41	18.17	16
53	1956-57	18.77	15
54	1946-47	18.83	14
55	1967-68	18.84	13
56	1943-44	18.85	12
57	1977-78	19.23	11
58	1992-93	19.24	10
59	1951-52	19.29	9
60	1970-71	19.86	8
61	1982-83	20.58	7
62	1964-65	20.79	6
63	1994-95	20.97	5
64	1972-73	22.26	4
65	1985-86	23.40	3
66	1983-84	23.82	2
67	1981-82	25.15	1

TABLE 32

NORMAL, MAXIMUM AND MINIMUM MONTHLY PRECIPITATION TOTALS

1928 - 1995

	MAX	YEAR	MIN	YEAR		MAX	YEAR	MIN	YEAR
JANUARY	3.23	1993	.09	1961	JULY	2.57	1982	T*	1963
Normal Monthly Total	3.14	1940	.17	1935	Normal Monthly Total	2.52	1962	.01	1947
1.11	2.87	1980	.34	1948	0.81	2.17	1951	.02	1960
	2.73	1953	.39	1945		1.92	1945	.04	1988+
	2.39	1956	.41	1966		1.72	1984	.05	1958
FEBRUARY	3.22	1936	.12	1946	AUGUST	3.66	1968	T*	1944
Normal Monthly Total	2.84	1969	.13	1988	Normal Monthly Total	3.28	1945	.03	1985+
1.23	2.32	1968	.27	1931	0.86	3.06	1930	.07	1967
	2.25	1980	.35	1990+		2.94	1932	.10	1975
	2.20	1958	.39	1953		2.64	1983	.14	1939
MARCH	3.97	1983	.10	1956	SEPTEMBER	7.04	1982	T*	1951+
Normal Monthly Total	3.67	1944	.14	1965	Normal Monthly Total	4.07	1973	.02	1952
1.91	3.56	1952	.20	1955	1.28	2.80	1970	.03	1974
	3.47	1978	.48	1934		2.75	1986	.05	1987+
	3.44	1975	.57	1969		2.55	1991	.06	1932
APRIL	4.90	1944	.45	1981+	OCTOBER	3.91	1981	0	1952
Normal Monthly Total	4.57	1974	.46	1989	Normal Monthly Total	3.70	1984	T*	1978+
2.12	4.55	1986	.59	1977	1.44	3.61	1946	.01	1988
	4.43	1984	.64	1985		3.23	1971	.17	1935
	3.86	1963	.65	1954		2.79	1949	.18	1944
MAY	4.76	1977	T*	1934	NOVEMBER	2.96	1994	.01	1939
Normal Monthly Total	3.99	1993	.01	1940	Normal Monthly Total	2.63	1985	.03	1976
1.80	3.68	1995+	.14	1972	1.29	2.57	1934	.05	1943
	3.39	1986	.18	1969		2.52	1973	.10	1959
	3.37	1957	.19	1929		2.46	1992	.13	1929
JUNE	2.93	1947	T	1994	DECEMBER	4.37	1983	.08	1976
Normal Monthly Total	2.83	1969	.01	1946+	Normal Monthly Total	3.82	1964	.10	1986
0.93	2.78	1944	.03	1988	1.40	3.22	1972	.13	1989
	2.73	1967+	.04	1958		2.90	1951	.28	1962
	2.61	1964	.06	1978+		2.80	1970	.37	1980

(T) A trace means too small to measure.

Annual average 16.18 inches based on (1961-1990) period.

+ Also occurred in earlier years.

TABLE 33

MAXIMUM AND MINIMUM WATER YEAR PRECIPITATION

1928-1929 through 1994-1995

Maximum Seasonal Precipitation	Year		Minimum Seasonal Precipitation	Year
25.14"	1981-1982	Normal Water Year Precipitation 16.18"	8.16"	1933-1934
23.82"	1983-1984		8.19"	1978-1979
23.40"	1985-1986		9.27"	1930-1931
22.26"	1972-1973		9.53"	1965-1966
20.97"	1994-1995		9.94"	1987-1988
20.79"	1964-1965		10.43"	1959-1960
20.58"	1982-1983		10.71"	1986-1987

Water year begins October 1 and ends September 30.
Normal water year precipitation based on Climatological Standard Normals (1961-1990).

TABLE 34a

GREATEST 24-HOUR PRECIPITATION (Inches)
(Midnight to Midnight)
1928 - 1995

	JANUARY			FEBRUARY			MARCH			APRIL	
DAY	24-HR PCPN	YEAR		24-HR PCPN	YEAR		24-HR PCPN	YEAR		24-HR PCPN	YEAR
1	.20	1940		.43	1989		.59	1977		.95	1984
2	.75	1940		.89	1936		1.11	1941		1.57	1986
3	.45	1940		.40	1945		.66	1938		.73	1994
4	.27	1978		.44	1976		.63	1938		.67	1947
5	.81	1987		.47	1974		.55	1978		.76	1941
6	.41	1944		.81	1969		.48	1930		.62	1929
7	.52	1993		.32	1950		.50	1960		.58	1946
8	.56	1975		.65	1959		.59	1986		.94	1949
9	.51	1993		.41	1976		.64	1987		1.19	1974
10	.26	1968		.36	1947		.65	1952		1.54	1974
11	.26	1965		.44	1995		.82	1990		.27	1970
12	.43	1932		.64	1952		.47	1944		.65	1944
13	.28	1971+		.60	1970		1.56	1944		.98	1972
14	1.36	1953		.54	1987		.41	1960+		1.01	1952
15	.91	1995		.55	1936		.92	1963		.51	1969
16	.56	1956		.44	1969		.53	1975		1.12	1941
17	.54	1978		.49	1955		.61	1968		.89	1953
18	.36	1951		.75	1954		.43	1937		1.07	1959
19	.61	1973		.38	1974		.68	1983		.95	1984
20	.56	1962		.45	1930		.69	1946		.90	1932
21	.53	1953		.45	1979		.71	1980		.56	1962
22	.81	1951		.43	1992		.83	1964		1.00	1957
23	.52	1967		.72	1930		.88	1949		1.46	1958
24	.54	1934		.55	1943		.66	1952		.70	1945
25	.46	1959		.90	1969		.68	1975		1.62	1976
26	.44	1969		.51	1981		.55	1981		.69	1962
27	.61	1956		.41	1947		.81	1940		.53	1991
28	.45	1965		.30	1930		.51	1963		.62	1970
29	.49	1980		.16	1940		.73	1967		.71	1967
30	.16	1958					.72	1948		.50	1953
31	.48	1939					.78	1936			
max	1.36	1953 /14th		.90	1969 /25th		1.56	1944 /13th		1.62	1976 /25th

+ Also occurred in earlier years.

TABLE 34b

GREATEST 24-HOUR PRECIPITATION (Inches)
(Midnight to Midnight)
1928 - 1995

	MAY			JUNE			JULY			AUGUST	
DAY	24-HR PCPN	YEAR		24-HR PCPN	YEAR		24-HR PCPN	YEAR		24-HR PCPN	YEAR
1	.57	1987		.86	1943		.85	1980		.28	1960
2	.82	1938		.82	1991		.24	1949		1.72	1930
3	.56	1991		.58	1944		.09	1993		1.22	1945
4	.92	1993		.45	1984		.46	1961		1.62	1954
5	1.12	1965		.80	1954		.41	1982		.48	1977
6	.99	1993		.43	1932		.52	1937		.40	1946
7	.57	1933		.94	1964		.25	1984		.16	1979
8	1.03	1986		.94	1968		.27	1980		.94	1968
9	.87	1992		.98	1970		.52	1950		.37	1930
10	1.03	1985		.78	1945		.46	1936		.69	1947
11	1.20	1983		1.36	1947		.29	1930		.27	1993
12	.69	1995		.71	1967		.30	1989		.50	1930
13	1.03	1957		.43	1976		2.28	1962		.72	1978
14	.69	1977		.31	1955		.18	1959		.85	1968
15	.76	1981		.53	1956		.14	1942		.54	1961
16	1.55	1942		.43	1957		.94	1967		.38	1984
17	.86	1944		.62	1964		.69	1976		.70	1983
18	1.00	1977		.32	1975		.47	1965		.90	1983
19	1.08	1957		.41	1975		.90	1971		1.42	1945
20	1.00	1949		.40	1967		.24	1954		.97	1986
21	.89	1992		1.75	1948		.59	1987+		1.05	1965
22	.55	1976		.25	1948		.30	1979		1.04	1960
23	.53	1968		.27	1967		.65	1993		.45	1976
24	.29	1995		1.08	1969		.75	1955		.30	1949
25	1.27	1973		.36	1969		.23	1965		.16	1984
26	.59	1977		.42	1965		.53	1941		1.96	1932
27	.60	1959		.42	1959		.57	1951		.32	1932
28	.78	1935		.39	1959		1.25	1982		.51	1971
29	.63	1946		.22	1971		1.36	1969		.91	1958
30	.80	1937		.11	1940		1.65	1945		.15	1963
31	.56	1947					.75	1952		.32	1963
max	1.55	1942 /16th		1.75	1948 /21st		2.28	1962 /13th		1.96	1932 /26th

+ Also occurred in earlier years

TABLE 34c

GREATEST 24-HOUR PRECIPITATION (Inches)
(Midnight to Midnight)
1928 - 1995

	SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER	
DAY	24-HR PCPN	YEAR		24-HR PCPN	YEAR		24-HR PCPN	YEAR		24-HR PCPN	YEAR
1	1.37	1973		.39	1983		.88	1936		.74	1982
2	.20	1973		.47	1976		1.00	1992		.73	1942
3	.73	1929		1.34	1951		.40	1988		.63	1938
4	.44	1992		.44	1939		.45	1940		.63	1948
5	2.19	1970		1.00	1944		.71	1972		.72	1956
6	.81	1965		.64	1977		.55	1953		.40	1951
7	1.29	1991		1.53	1993		.63	1970		.74	1946
8	.81	1991		.50	1981		.47	1966		.91	1985
9	.64	1986		.46	1960		.78	1995		.98	1970
10	1.15	1982		1.05	1947		.82	1949		.35	1965
11	.86	1985		.57	1984		.66	1985		.79	1968
12	.17	1940		.59	1928		.96	1994		.89	1937
13	.89	1982		.84	1966		.43	1983		.73	1994
14	.66	1977+		.95	1968		.71	1955		.48	1983
15	.23	1959		1.06	1937		.93	1952		.51	1934
16	.31	1965		.94	1938		1.13	1954		.77	1936
17	1.38	1978		.64	1969		.67	1930		.77	1970
18	.82	1947		1.23	1984		1.01	1941		.52	1977
19	.56	1972		.65	1979		.50	1977		.37	1929
20	.57	1984		.67	1949		.52	1992		.45	1967
21	.42	1945		.40	1943		.50	1955		.34	1979+
22	.68	1977+		.32	1970		.78	1974		.46	1951
23	1.09	1973		.53	1991		.57	1946		1.10	1964
24	.41	1930		.64	1956		.44	1951		.53	1964
25	.95	1986		.52	1989		.52	1950		.56	1959
26	2.27	1982		.90	1982		.49	1973		.57	1946
27	.84	1982		.82	1991		.84	1960		.58	1948
28	.96	1982		1.08	1946		.31	1975		1.21	1972
29	1.01	1995		.86	1981		.31	1975		.61	1972
30	1.20	1971		.45	1968		.56	1945		.30	1975+
31				.77	1971					.41	1940
max	2.27	1982 /26th		1.53	1993 /7th		1.13	1954 /16th		1.21	1972 /28th

+ Also occurred in earlier years.

TABLE 35

RECORD MAXIMUM PRECIPITATION FOR SPECIFIED TIME PERIODS

Month	5 Minutes	10 Minutes	15 Minutes	30 Minutes	1 Hour	2 Hour	3 Hour	*24 Hours
January	0.06 8/1975 13/1971	.10 13/1971	.12 14/1980 8/1975 13/1971	.22 14/1980	.39 14/1980	.58 14/1980	.78 14/1980	1.36 14/1953
February	.13 6/1950	.25 6/1950	.26 6/1950	.28 6/1950	.31 6/1950	.60 6/1969	.64 6/1969	1.05 25-26/1958
March	.33 2/1989	.43 2/1989	.45 2/1989	.50 2/1989	.53 1/1989	.55 2/1989	.64 7-8/1960	1.83 13-14/1944
April	.11 28/1973	.15 24/1951 30/1936	.20 23/1965	.33 23/1958	.44 25/1976 23/1958	.80 23/1958	.95 23/1958	2.41 22-23/1957
May	.30 26/1941	.44 26/1941	.47 26/1941	.48 26/1941	.48 26/1941	.52 10/1946	.71 19/1957	2.03 15-16/1942
June	.26 24/1936	.32 15/1956	.36 24/1936	.46 24/1936	.48 21/1948 24/1936	.63 21/1948	.75 21/1948	1.88 21-22/1948
July	.50 13/1962	.92 13/1962	1.26 13/1962	1.79 13/1962	1.94 13/1962	1.99 13/1962	1.99 13/1962	2.35 12-13/1962
August	.34 19/1945	.52 4/1954	.78 4/1954	1.08 4/1954	1.31 4/1954	1.50 4/1954	1.53 4/1954	1.96 26/1932
September	.35 14/1977	.45 14/1977	.57 14/1954	.62 14/1977	.63 14/1977	.74 26/1982	.97 26/1982	2.30 26-27/1982
October	.12 7/1993 2/1976	.23 7/1993	.32 7/1993	.45 7/1993	.71 7/1993	.83 10/1947	.95 10/1947	1.76 17-18/1984
November	.10 17/1948	.18 17/1948	.19 17/1948	.21 17/1948	.33 15/1952	.53 15/1952	.59 12/1964	1.13 16/1954
December	.08 23/1982 23/1964	.10 23/1982 23/1964	.13 5/1956	.22 5/1956	.30 23/1964	.52 12/1937	.66 12/1937	1.82 28-29/1972
Annual	.50 July 13 1962	.92 July 13 1962	1.26 July 13 1962	1.79 July 13 1962	1.94 July 13 1962	1.99 July 13 1962	1.99 July 13 1962	2.41 April 22-23 1957

Period of record 1936-1991.....excluding 1938-1940.

* Not confined to midnight-midnight.

TABLE 36

AVERAGE AND GREATEST NUMBER OF DAYS PER MONTH WITH AT LEAST
0.01, 0.10, 0.50, AND 1.00 INCH OF PRECIPITATION
(MIDNIGHT-MIDNIGHT)
1928 - 1995

Month	0.01 inch or more			0.10 inch or more			0.50 inch or more			1.00 inch or more		
	Avg Days	Most Days	Year	Avg Days	Most Days	Year	Avg Days	Most Days	Year	Avg Days	Most Days	Year
Jan	10	16	1993	4	9	1993	0	3	1953	*	1	1953
Feb	9	15	1993	4	10	1940	0	3	1936	0	0	----
Mar	10	17	1975+	5	12	1983	1	3	1977+	*	1	1944+
Apr	10	16	1978+	5	12	1963+	1	5	1944	*	2	1974+
May	8	17	1995+	4	10	1981+	1	3	1993+	*	2	1957
Jun	5	17	1967	3	8	1969	*	2	1964+	*	1	1985+
Jul	4	12	1936	2	6	1965	*	3	1951	*	1	1969+
Aug	6	13	1945	2	7	1982	*	3	1971+	*	2	1945
Sep	5	15	1982	2	10	1982	1	5	1982	*	2	1982+
Oct	6	13	1981+	4	12	1981	1	3	1984+	*	1	1993+
Nov	8	17	1994+	4	9	1985+	1	3	1955	*	1	1992+
Dec	10	24	1983	5	14	1983	*	3	1964	*	1	1972+
Annual	91	140	1983	43	71	1983	6	12	1977+	1	4	1957+

+ Also occurred in earlier years.
* Average is less than 1/2 day.

TABLE 37

GREATEST NUMBER OF CONSECUTIVE DAYS WITH A TRACE OR MORE
1928 - 1995

Days	Period	Total Rainfall
24	November 17 - December 10, 1983	2.19"
18	December 22, 1991 - January 8, 1992	.75"
18	January 28 - February 14, 1984	.34"
17	December 15 - December 31, 1968	1.13"
16	February 11 - February 26 1936	2.04"
16	April 17 - May2, 1951	2.62"
16	February 8 - February 23, 1986	.80"
15	December 16 - December 30, 1985	.23"
15	January 24 - February 7, 1979	.12"
15	February 5 - February 19, 1978	1.56"
15	January 19 - February 2, 1969	1.23"
15	March 28 - April 11, 1958	1.57"

Only 15 or more days tabulated.

TABLE 38

GREATEST NUMBER OF CONSECUTIVE DAYS WITH .01 INCH OR MORE OF PRECIPITATION

1928 - 1995

# Days	Period	Total Rainfall
10	February 14 - February 23, 1980	2.12"
9	December 19 - December 27, 1983	1.78"
9	December 19 - December 27, 1981	1.34"
9	May 20 - May 28, 1962	1.56"
9	December 29 - January 6, 1940	2.66"
8	October 11 - October 18, 1993	1.02"
8	June 3 - June 10, 1984	1.73"
8	September 26 - October 3, 1983	1.47"
8	November 22 - November 29, 1977	.41"
8	January 4 - January 11, 1975	.98"
8	October 24 - October 31, 1971	2.10"
8	February 17 - February 24, 1968	.93"
8	March 27 - April 4, 1958	.87"
8	May 13 - May 21, 1949	2.27"
8	January 8 - January 15, 1949	.86"

8 or more days tabulated.

TABLE 39

GREATEST NUMBER OF CONSECUTIVE DAYS WITH .10 INCH OR MORE OF PRECIPITATION

1928 - 1995

# Days	Period	Total Rainfall
7	September 24 - September 30, 1982	4.79"
6	May 3 - May 8, 1993	3.56"
6	January 6 - January 11, 1993	1.85"
6	May 30 - June 3, 1944	2.32"
5	May 22 - May 26, 1995	1.45"
5	October 29 - November 2, 1992	1.92"
5	May 14 - May 18, 1977	2.76"
5	April 22 - April 26, 1971	1.32"
5	April 26 - April 30, 1970	2.20"

5 or more days tabulated.

TABLE 40

GREATEST NUMBER OF CONSECUTIVE DAYS WITH .25 INCH OR MORE OF PRECIPITATION

1928 - 1995

# Days	Period	Total Rainfall
5	May 14 - May 18, 1977	2.76"
5	June 3 - June 7, 1945	1.64"
4	May 3 - May 6, 1993	2.69"
4	May 6 - May 9, 1986	2.55"
4	April 27 - April 30, 1970	2.05"
4	May 21 - May 24, 1968	1.62"
4	November 18 - November 21, 1950	1.18"

8 or more days tabulated.

TABLE 41

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT EVEN A TRACE OF PRECIPITATION

1928 - 1995

# Days	Period
62	September 12 - November 12, 1952
30	August 18 - September 16, 1944
30	September 20 - October 19, 1978
29	June 18 - July 16, 1944
29	January 2 - January 30, 1961
28	June 27 - July 24, 1931
28	October 3 - October 30, 1933
27	September 13 - October 9, 1942
27	June 25 - July 21, 1963
27	July 30 - August 25, 1985
26	May 2 - May 27, 1934
26	November 7 - December 2, 1936
26	August 30 - September 24, 1943
26	August 12 - September 6, 1950
26	August 23 - September 17, 1962
26	October 15 - November 9, 1962

TABLE 42

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE PRECIPITATION, BUT INCLUDING TRACES

1928 - 1995

# Days	Period
63	September 11 - November 12, 1952
61	June 25 - August 24, 1963
56	June 2 - July 26, 1935
56	July 21 - September 17, 1944
52	September 14 - November 4, 1958
45	June 14 - July 28, 1959
44	October 28 - December 10, 1939
42	June 3 - August 14, 1978
42	September 20 - October 31, 1978
38	August 30 - October 6, 1943
38	August 7 - September 13, 1974
37	September 5 - October 11, 1987
37	September 22 - October 28, 1964
36	August 21 - September 23, 1933
35	August 12 - September 15, 1993
35	December 27 - January 30, 1961
35	August 21 - September 24, 1979
35	August 8 - September 11, 1988

TABLE 42a

CHANCES OF MEASURABLE PRECIPITATION ON ANY GIVEN DAY OF THE YEAR
BASED ON **1928 - 1995** PERIOD OF RECORD

Day	January	February	March	April	May	June
1	25.4%	26.9%	28.4%	35.8%	29.4%	35.3%
2	29.9%	32.8%	53.7%	38.8%	23.5%	27.9%
3	31.3%	22.4%	38.8%	25.4%	22.1%	25.0%
4	32.8%	23.9%	26.9%	22.4%	27.9%	27.9%
5	40.3%	22.4%	38.8%	23.9%	27.9%	23.5%
6	25.4%	32.8%	22.4%	29.9%	33.8%	26.5%
7	26.9%	28.4%	20.9%	31.3%	32.4%	29.4%
8	31.3%	37.3%	22.4%	28.4%	36.8%	27.9%
9	25.4%	31.3%	22.4%	37.3%	25.0%	30.9%
10	32.8%	29.9%	25.4%	32.8%	32.4%	22.1%
11	38.8%	29.9%	40.3%	31.3%	25.0%	13.2%
12	31.3%	40.3%	25.4%	22.4%	29.4%	22.1%
13	34.3%	35.8%	41.8%	22.4%	20.6%	16.2%
14	32.8%	40.3%	43.3%	29.9%	23.5%	14.7%
15	34.3%	31.3%	29.9%	19.4%	32.4%	16.2%
16	35.8%	37.3%	26.9%	20.9%	32.4%	20.6%
17	31.3%	38.8%	37.3%	31.3%	23.5%	17.6%
18	35.8%	41.8%	26.9%	37.3%	20.6%	13.2%
19	31.3%	29.9%	31.3%	38.8%	25.0%	11.8%
20	31.3%	29.9%	22.4%	29.9%	25.0%	11.8%
21	29.9%	25.4%	26.9%	35.8%	26.5%	13.2%
22	34.3%	34.3%	28.4%	34.3%	25.0%	11.8%
23	38.8%	35.8%	40.3%	29.9%	23.5%	8.8%
24	35.8%	28.4%	41.8%	29.9%	27.9%	16.2%
25	29.9%	25.4%	34.3%	44.8%	22.1%	10.3%
26	25.4%	28.4%	26.9%	37.3%	23.5%	14.7%
27	31.3%	29.9%	32.8%	37.3%	30.9%	10.3%
28	38.8%	23.9%	22.4%	40.3%	22.1%	2.9%
29	28.4%	25.0%	35.8%	40.3%	22.1%	8.8%
30	29.9%		37.3%	31.3%	26.5%	7.4%
31	32.8%		34.3%		32.4%	

TABLE 42b

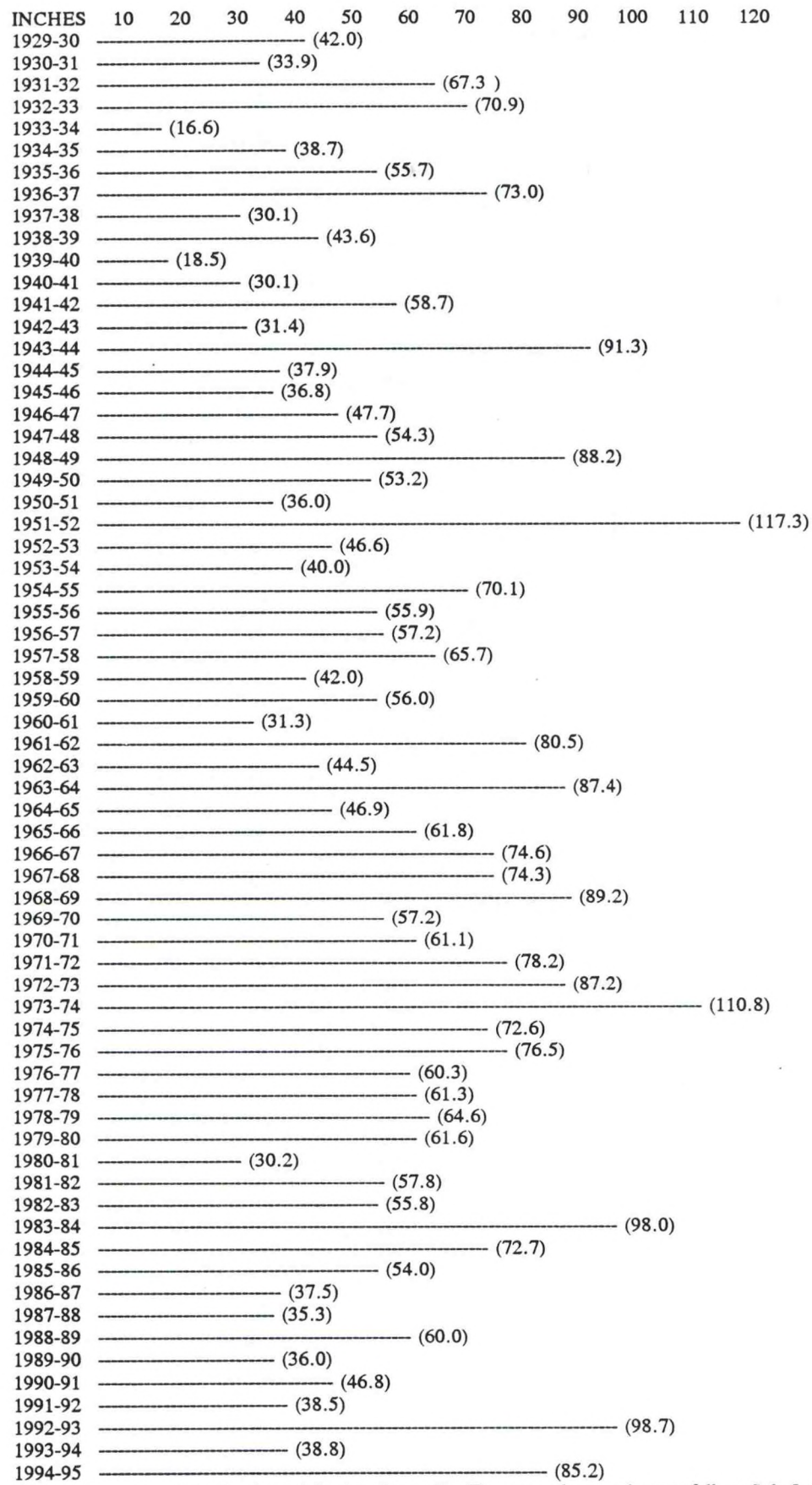
CHANCES OF MEASURABLE PRECIPITATION ON ANY GIVEN DAY OF THE YEAR
BASED ON **1928 - 1995** PERIOD OF RECORD

Day	July	August	September	October	November	December
1	9.0%	17.9%	13.4%	17.9%	25.4%	32.8%
2	7.5%	16.4%	17.9%	20.9%	25.4%	28.4%
3	10.4%	11.9%	14.9%	19.7%	25.4%	23.9%
4	10.4%	23.9%	17.9%	22.4%	22.4%	34.3%
5	7.5%	19.4%	16.4%	14.9%	19.4%	23.9%
6	10.3%	20.9%	19.4%	14.9%	20.9%	23.9%
7	13.4%	10.4%	14.9%	25.4%	34.3%	32.8%
8	16.2%	17.9%	14.9%	19.4%	23.9%	19.4%
9	11.8%	17.9%	11.9%	23.9%	17.9%	28.4%
10	16.2%	10.4%	20.9%	22.4%	25.4%	26.9%
11	16.2%	17.9%	19.4%	11.9%	29.9%	26.9%
12	14.9%	23.9%	17.9%	25.4%	29.9%	25.4%
13	9.0%	16.4%	16.4%	28.4%	31.3%	26.9%
14	10.4%	28.4%	16.4%	20.9%	31.3%	14.9%
15	14.9%	26.9%	9.0%	25.4%	26.9%	23.9%
16	14.7%	23.9%	10.4%	25.4%	22.4%	25.4%
17	17.6%	20.9%	16.4%	16.4%	40.9%	32.8%
18	13.2%	22.4%	22.4%	20.9%	35.8%	25.4%
19	19.1%	23.9%	22.4%	17.9%	26.9%	34.3%
20	13.4%	14.9%	28.4%	17.9%	31.3%	25.4%
21	17.9%	16.4%	16.4%	16.4%	26.9%	32.8%
22	16.7%	16.4%	16.4%	14.9%	26.9%	32.8%
23	18.2%	13.4%	23.9%	17.9%	17.9%	34.3%
24	16.7%	17.9%	20.9%	16.7%	29.9%	25.4%
25	19.7%	19.4%	22.4%	14.9%	28.8%	34.3%
26	16.7%	19.4%	11.9%	16.4%	24.2%	29.9%
27	10.6%	17.9%	19.4%	23.9%	26.9%	28.4%
28	13.6%	20.9%	14.9%	29.9%	26.9%	40.3%
29	19.7%	20.9%	13.4%	23.9%	19.4%	43.3%
30	21.2%	9.0%	22.4%	23.9%	22.7%	34.3%
31	17.9%	10.4%		28.4%		28.4%

FIGURE 7

SALT LAKE CITY AIRPORT SEASONAL SNOWFALL RECORD

1929-1930 to 1994-1995 (Season)



The snow season extends from July 1 to June 30. The normal annual snowfall at Salt Lake City International is 64.5 inches. Normal annual snowfall based on (1961-1990) period.

TABLE 43

NORMAL, MAXIMUM AND MINIMUM MONTHLY SNOWFALL (INCHES)

1928 - 1995

	MAX	YEAR	MIN	YEAR		MAX	YEAR	MIN	YEAR
JANUARY	50.3	1993	0.1	1961	JULY				
Normal Monthly Total	32.3	1937	2.4	1938	Normal Monthly Total				
12.7"	30.4	1967	2.5	1935	0.0				
	30.1	1949	2.8	1970					
	28.1	1933	3.7	1948					
FEBRUARY	27.9	1969	T	1953	AUGUST				
Normal Monthly Total	27.5	1989	0.3	1957	Normal Monthly Total				
9.3"	20.9	1936	0.4	1988	0.0				
	20.1	1944+	0.8	1963+					
	19.0	1952	0.9	1931					
MARCH	41.9	1977	0	1993	SEPTEMBER	4.0	1971	0	1995+
Normal Monthly Total	35.6	1952	T	1940+	Normal Monthly Total	2.2	1965		
11.6"	33.5	1964	0.2	1992	0.2"	1.0	1978		
	30.8	1944	0.4	1959					
	25.3	1962	0.6	1955					
APRIL	26.4	1974	0	1954+	OCTOBER	20.4	1984	0	1993+
Normal Monthly Total	25.1	1984	T	1989+	Normal Monthly Total	16.6	1971	T	1994+
7.3"	23.6	1970	0.1	1994+	2.1"	10.4	1957		
	21.8	1955	0.2	1969		8.3	1961		
	15.5	1958	0.3	1981		6.0	1972		
MAY	7.5	1975	0	1994+	NOVEMBER	33.3	1994	0	1939
Normal Monthly Total	5.3	1965+			Normal Monthly Total	27.2	1985	T	1976+
1.1"	5.0	1983			6.5"	19.5	1973	0.1	1995
	4.6	1978				18.5	1931	0.4	1953
	2.9	1955				18.0	1975	0.6	1987+
JUNE					DECEMBER	35.2	1972	0.9	1962
Normal Monthly Total					Normal Monthly Total	34.3	1948	1.0	1937
0.0					13.7"	34.2	1983	1.2	1976
						33.3	1968	1.4	1995
						27.3	1932	1.7	1989+

Hail not included. Climatological normals based on (1961-1990) period.

(T) Trace means too small to measure.

+ Also occurred in earlier years.

TABLE 44

MAXIMUM AND MINIMUM SEASONAL SNOWFALL

1928-1929 through 1994-1995

Maximum Seasonal Snowfall	Winter Season		Minimum Seasonal Snowfall	Winter Season
117.3"	1951-1952		16.6"	1933-1934
110.8"	1973-1974	Normal Annual Snowfall	18.5"	1939-1940
98.7"	1992-1993		30.1"	1940-1941+
98.0"	1983-1984	64.5"	30.2"	1980-1981
91.3"	1943-1944		31.3"	1960-1961
89.2"	1968-1969		31.4"	1942-1943
88.2"	1948-1949		33.9"	1930-1931

Normals from Climatological Standard Normals (1961-1990).
+ Also occurred in previous years.

TABLE 45a

GREATEST 24-HOUR SNOWFALL (Inches)
(Midnight to Midnight)
1928 - 1995

	JANUARY			FEBRUARY			MARCH			APRIL	
DAY	MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR
1	4.6	1937		10.9	1989		7.3	1977		6.0	1984+
2	9.0	1993		5.0	1936		10.1	1977		9.6	1955
3	6.3	1944		7.0	1936		4.2	1962		7.2	1983
4	3.3	1929		6.0	1938		3.0	1938		3.9	1947
5	6.1	1987		6.2	1974		2.4	1980		1.6	1941
6	7.6	1967		7.9	1969		4.0	1930		3.1	1968
7	7.7	1974		3.1	1966		2.0	1945		0.5	1982
8	6.4	1985		8.5	1959		2.6	1958		0.9	1984
9	8.4	1993		4.5	1965		4.8	1948		9.0	1929
10	4.0	1968		7.7	1984		7.4	1962		11.8	1974
11	7.5	1993		5.0	1949		11.0	1952		2.3	1991
12	5.7	1932		7.7	1952		1.8	1964		3.8	1974
13	3.0	1971+		5.8	1968		9.4	1944		7.9	1972
14	8.5	1953		7.2	1944		9.3	1944		1.5	1977
15	4.9	1991		3.1	1978		7.9	1964		2.2	1967
16	6.5	1959		4.2	1992		5.6	1958		4.2	1941
17	4.3	1936		3.1	1955		6.3	1968		3.7	1944
18	5.0	1964		7.4	1961		2.1	1968+		6.5	1972
19	7.5	1973		2.4	1989		6.1	1983		2.1	1987
20	9.7	1962		3.9	1985		4.4	1944		5.4	1968
21	4.5	1953		3.1	1975		6.4	1980		4.5	1968
22	5.4	1949		9.9	1994		11.5	1964		1.8	1970
23	5.5	1950		6.4	1956		2.8	1975		10.1	1958
24	4.9	1957		5.1	1972		4.7	1952		1.6	1945
25	3.6	1967		8.3	1969		4.5	1975		8.5	1975
26	4.7	1969		3.1	1958		4.2	1981		8.1	1955
27	5.1	1980		6.3	1947		2.6	1981		6.3	1991
28	5.8	1933		3.0	1930		3.0	1987		6.4	1970
29	9.9	1980		T	1984+		8.2	1967		5.8	1967
30	2.1	1932					5.2	1980		3.5	1970
31	6.8	1939					8.0	1936			
mnth	9.9	1980 /29th		10.9	1989 /1st		11.5	1964 /22nd		11.8	1974 /10th

Hail not included.
(T) Trace means too small to measure.
+ Also occurred in earlier years.

TABLE 45b

GREATEST 24-HOUR SNOWFALL (Inches)
(Midnight to Midnight)
1928 - 1995

	MAY			JUNE			JULY			AUGUST	
DAY	MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR
1	0.9	1988		T	1990						
2	4.9	1964		T	1943						
3	2.2	1950									
4	4.0	1975									
5	5.3	1965		T	1954						
6	1.1	1975									
7	T	1979+									
8	1.0	1993									
9	T	1986+									
10	0.1	1953									
11	5.0	1983									
12	T	1995+									
13	T	1956+		T	1976						
14	T	1968									
15	2.9	1955									
16	T	1978+									
17	1.4	1971		T	1929						
18	1.0	1960									
19	T	1975+									
20	T	1975+									
21	T	1975+									
22	T	1975+									
23	0										
24	T	1980+									
25	T	1980									
26	T	1929									
27	T	1929									
28	T	1982									
29	0			T	1968						
30	0										
31	0										
mnth	5.3	1965 /5th		T	1990+						

Hail not included.
(T) Trace means too small to measure.
+ Also occurred in earlier years.

TABLE 45c

GREATEST 24-HOUR SNOWFALL (Inches)
(Midnight to Midnight)
1928 - 1995

	SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER	
DAY	MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR		MAX 24-HR SNOW	YEAR
1				0.7	1971		2.9	1956		7.3	1982
2				T	1971		5.5	1957		4.5	1952
3				T	1969		3.1	1973		2.0	1971
4				0			3.0	1940		8.7	1948
5				T	1941		5.0	1947		4.4	1956
6				T	1970+		2.6	1986		6.1	1956
7				T	1970+		4.6	1945		4.5	1994
8				T	1961		2.3	1983		10.5	1985
9				T	1973+		2.0	1935		5.5	1931
10				T	1969+		4.8	1978		4.0	1949
11				0			4.7	1985		9.5	1968
12				T	1969		5.1	1985		2.2	1972
13				3.6	1966		8.3	1994		7.3	1994
14				0.1	1969		6.9	1955		2.6	1948
15				0.2	1984		9.5	1958		3.2	1992
16	T	1946		T	1984+		5.0	1994		8.5	1967
17	2.2	1965		4.8	1984		11.0	1930		8.8	1970
18	1.0	1978		13.8	1984		4.1	1985		3.7	1977
19				T	1984+		6.9	1941		5.2	1951
20				1.0	1949		7.0	1946		6.6	1967
21				2.0	1961		4.3	1961		4.0	1979
22				0.5	1995		3.6	1992		4.7	1987
23				T	1975+		3.0	1931		3.8	1948
24	T	1984		6.6	1956		4.9	1951		7.6	1932
25	T	1986+		T	1954		5.7	1944		5.9	1943
26	T	1934		1.6	1984		7.0	1973		4.3	1936
27				5.8	1971		4.6	1960		8.1	1948
28				6.3	1961		3.5	1975		12.6	1972
29	T	1950		3.5	1972		5.3	1991		8.0	1936
30	4.0	1971		2.2	1981		4.2	1967		5.8	1992+
31				8.5	1971					4.7	1965+
mnth	4.0	1971 /30th		13.8	1984 /18th		11.0	1930 /17th		12.6	1972 /28th

Hail not included.
(T) Trace means too small to measure.
+ Also occurred in earlier years.

TABLE 46

GREATEST SNOWFALL (INCLUDING ICE PELLETS) IN ANY 24 HOURS AND
GREATEST DEPTH OF SNOW ON THE GROUND

1928 - 1995

Month	Greatest Snowfall in any 24 hour period			#Greatest Depth of snow on ground		
	Amount	Days	Year	Amount	Days	Year
January	10.7"	28-29	1980	25"	12	1993
	9.7"	20	1962	23"	23-24	1949
	9.7"	2-3	1993	17"	31	1937
	9.0"	6-7	1967	13"	7	1967
	8.5"	14	1953	12"	29-30	1980
February	11.9"	1-2	1989	17"	1-2	1949
	9.9"	22	1994	15"	1	1937
	8.8"	10-11	1984	13"	2,4	1989+
	8.7"	14-15	1944	11"	3	1936+
	8.6"	4-5	1974			
March	15.4"	13-14	1944	14"	2	1977
	13.9"	1-2	1966	11"	2	1966+
	13.8"	10-11	1952	9"	10	1962+
	11.8"	21-22	1964	8"	11-12	1990+
April	16.2"	9-10	1974	12"	10	1974
	11.1"	22-23	1958	10"	23	1958
	10.7"	25-26	1984+	9"	2	1955
	9.7"	27-28	1970	8"	28	1970
May	6.4"	4-5	1975	5"	2	1964
	5.3"	5	1965	4"	5	1978
	5.0"	11	1983	3"	4-5	1975
	4.9"	2	1964	2"	11	1983+
September	4.0"	30	1971	4"	30	1971
	2.2"	17	1965	1"	17	1965
	1.0"	18	1978			
October	18.4"	17-18	1984	14"	18	1984
	8.5"	31	1971	8"	31	1972
	6.7"	31-1	1956	6"	24	1956
	6.3"	28	1961	4"	29	1972
November	11.0"	17	1930	11"	19	1985
	9.9"	14-15	1958	10"	15-16	1958
	9.3"	12-13	1994	9"	23-24	1992
	8.8"	18-19	1985	8"	15	1955
	7.5"	19-20	1992	7"	26-27	1973+
	7.0"	20	1946			
December	18.1"	28-29	1972	16"	28	1948
	13.4"	16-17	1970	15"	29	1972
	10.7"	7-8	1985	14"	25	1932
	10.5"	27-28	1948	13"	25-28	1983+
Greatest	18.4"	October 17-18, 1984		25"	January 12, 1993	

\+ Also occurred in earlier years.

\# Greatest snow depth in a given snow episode.

TABLE 47

EARLIEST AND LATEST DATE AND AMOUNT OF MEASURABLE SNOWFALL (0.1 INCH OR MORE) AND THE AVERAGE DATE OF THE FIRST MEASURABLE SNOWFALL

1928 - 1995

Earliest Fall Date and amount of Snowfall		Latest Fall Date and amount of Snowfall		Latest Spring Date and amount of Snowfall	
Date	Amount (Inches)	Date	Amount (Inches)	Date	Amount (Inches)
September 17, 1965	2.2"	December 25, 1943*	5.9"	May 18, 1977	0.5"
September 18, 1978	1.0"	December 25, 1939	0.5"	May 18, 1960	1.0"
September 30, 1971	4.0"	December 23, 1937	1.0"	May 17, 1971	1.4"
October 13, 1966	3.6"	December 9, 1949	3.6"	May 15, 1978	4.4"
October 14, 1969	0.1"	December 7, 1974+	2.4"	May 11, 1983	5.0"
October 15, 1984	0.2"	December 4, 1976	0.3"	May 11, 1967	1.0"
October 20, 1949	1.0"			May 10, 1953	0.1"
October 22, 1995	0.5"			May 8, 1993	1.0"
October 24, 1975	0.1"			May 8, 1930	1.0"

Average Date of first snowfall.....November 9th.
Average Date of last snowfall.....April 18th.

TABLE 48

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 1.0 INCH OR MORE OF SNOW ON THE GROUND

1928 - 1995

Days	Period
86	November 17, 1930 - February 11, 1931
83	December 20, 1983 - March 11, 1984
82	December 9, 1932 - February 28, 1933
77	December 14, 1948 - February 28, 1933
66	December 22, 1988 - February 25, 1989
61	January 9, 1985 - March 10, 1985
57	December 13, 1990 - February 7, 1991
54	December 28, 1972 - February 19, 1973
54	January 3, 1955 - February 25, 1955
52	December 30, 1992 - February 19, 1993

TABLE 49

AVERAGE, MAXIMUM AND MINIMUM NUMBER OF DAYS WITH MEASURABLE SNOWFALL BY SEASON

1928-1929 through 1994-95

Maximum Number of Days		Average Number of Days	Minimum Number of Days	
Days	Season		Days	Season
63	1983-1984	36	9	1939-1940
56	1992-1993		11	1933-1934
52	1973-1974		18	1946-1947
51	1963-1964		21	1958-1959
50	1978-1979+		22	1962-1963+
48	1984-1985+		23	1993-94+

TABLE 50

MAXIMUM SNOWFALL FROM ANY SINGLE STORM#

1928 - 1995

Amount in Inches	Duration of snowfall	
	Began	Ended
23.3"	1:10 pm January 6, 1993	11:05 am January 10, 1993
21.6"	March 12, 1944	March 15, 1944
18.4"	5:04 am October 17, 1984	10:35 am October 18, 1984
18.1"	1:03 pm December 28, 1972	1:30 pm December 29, 1972
17.4"	5:43 am March 1, 1977	3:35 am March 3, 1977
17.4"	6:02 pm April 9, 1974	8:20 pm April 10, 1974

#Storm total not limited to 24 hours.

TABLE 51

AVERAGE, MAXIMUM AND MINIMUM NUMBER OF DAYS WITH MEASURABLE SNOWFALL
1928 - 1995

Monthly Average	Monthly Maximum		Monthly Minimum	
	Days	Year	Days	Year
September	1	1978+	0	1995+
Average				
*				
October	6	1971	0	1994+
Average	4	1984		
*	3	1989		
November	13	1994	0	1976+
Average	11	1985	1	1995+
4	10	1975+		
	9	1988+		
	8	1978+		
	7	1992+		
December	21	1983	1	1962+
Average	15	1951+	2	1995+
8	14	1970+		
	13	1973+		
	12	1969+		
January	19	1993	1	1961
Average	17	1979	2	1953+
9	16	1937	3	1940+
	15	1949	4	1994+
	14	1932		
February	15	1993+	0	1953
Average	12	1960+	1	1973+
6	11	1985	2	1991+
	10	1984		
March	17	1977	0	1993+
Average	15	1964	1	1994+
5	13	1952	2	1991+
	12	1944		
	11	1938		
April	11	1970	0	1989+
Average	8	1984	1	1994+
3	7	1991+		
	6	1967		
May	3	1975	0	1995+
Average	2	1993+		
*				

* The average number of days with measurable snowfall is less than 1 day.

TABLE 52

AVERAGE AND MAXIMUM NUMBER OF DAYS WITH SNOWFALL (INCLUDING ICE PELLETS) OF 1 INCH OR MORE AND 3 INCHES OR MORE

Month	Snowfall 1 inch or more **1928-1995**			Snowfall 3 inches or more **1951-1995**		
	Average Days	Maximum Number		Average Days	Maximum Number	
		Days	Year		Days	Year
September	*	1	1978+	*	1	1971
October	*	3 2 1	1984 1991+ 1973+	*	2 1	1984+ 1972+
November	2	10 8 7 6	1994 1985 1931 1975+	1	5 3 2	1994+ 1978+ 1992+
December	4	15 9 8	1983 1932 1972+	2	5 4 3	1972+ 1982+ 1970+
January	4	11 9 7	1993 1949+ 1967+	2	5 4 3	1993+ 1965 1980+
February	3	8 7 6	1989+ 1976 1979+	1	4 3 2	1969 1995 1993+
March	3	10 9 8	1964 1977+ 1962	1	5 4 3	1977 1952 1980+
April	1	6 5 4	1974 1984+ 1991+	1	4 3 2	1984+ 1974+ 1995+
May	*	3 1	1975 1993+	*	1	1983+
Season	18	32 27 26 25 24	1983-84+ 1975-76 1992-93+ 1932-33 1994-95	8	15 14 13 12 11	1951-52 1973-74 1994-95 1968-69+ 1992-93

* Average is less than 1/2 day.
\+ Also occurred in earlier years.
\# Snowfall season extends from July 1 through June 30.

TABLE 53

AVERAGE AND GREATEST NUMBER OF DAYS
WITH THUNDERSTORMS AND HAIL
1928 - 1995

Month	Thunderstorms			Hail		
	Average Days	Greatest Days	Year	Average Days	Greatest Days	Year
January	0	2	1987+	0	2	1969+
February	0	4	1936	0	2	1950
March	1	5	1958	0	2	1961
April	2	7	1930	1	3	1973+
May	5	13	1980	1	3	1980+
June	5	19	1967	1	4	1944
July	7	14	1985+	0	2	1969
August	8	16	1952+	0	2	1991+
September	4	10	1937	0	2	1973
October	2	6	1983+	0	2	1945
November	0	3	1971+	0	1	1983+
December	0	3	1964	0	3	1964
Annual	34	57	1983+	3	13	1945

+ Also occurred in earlier years.

TABLE 54

AVERAGE RELATIVE HUMIDITY* BY TIME PERIODS
1951 - 1995

Month	5 am MST	11 am MST	5 pm MST	11 pm MST
January	79%	71%	69%	79%
February	78%	64%	59%	77%
March	71%	52%	47%	68%
April	67%	44%	39%	61%
May	65%	39%	33%	58%
June	59%	31%	26%	49%
July	52%	27%	22%	42%
August	54%	30%	23%	45%
September	61%	35%	29%	54%
October	69%	43%	41%	66%
November	75%	58%	59%	74%
December	79%	70%	71%	79%
Annual	67%	47%	43%	63%

*Relative humidity is the most common form of measuring water vapor in the air. Expressed as a percentage, it denotes the amount of moisture in the air, compared to the maximum amount of moisture the air can hold at a given temperature. A relative humidity of 100% indicates a saturated air mass.

TABLE 55

SUNSHINE, SKY COVER, AND HEAVY FOG

		Sky Cover (Sunrise- Sunset)				Heavy Fog		
			Average Number of Days					
Month	Avg. Pct of Possible **Sunshine**	Avg Amt of Sky Cover (tenths)	Clear	Partly Cloudy	Cloudy	Average Number of Days	Greatest Number of Days	Year
January	45%	7.3	5	6	19	5	21	1931
February	54%	7.1	5	7	16	2	13	1985
March	63%	6.7	7	8	16	0	5	1984
April	68%	6.4	7	9	14	0	2	1958
May	73%	5.7	9	10	12	0	2	1964
June	80%	4.3	14	10	6	0	0	----
July	83%	3.6	17	10	4	0	0	----
August	82%	3.7	16	11	5	0	0	----
September	82%	3.7	17	8	5	0	0	----
October	72%	4.7	14	8	9	0	1	1971+
November	53%	6.3	8	7	15	1	4	1968+
December	43%	7.2	6	7	18	4	14	1980
Annual	67%	5.6	125	101	139	12	37	1931

Period of Record:
Average percent of possible sunshine....
January through June: 1936-1939; 1942-1995.
July through November: 1935-1938; 1942-1995.
December: 1935-1938; 1941-1995.
Average amount of sky cover (sunrise to sunset): 1936-1995.
Average number of days of clear, partly cloudy, and cloudy and average number of days with heavy fog: 1929-1995.
Greatest number of days with heavy fog: 1928-1995.

Sky cover is expressed in a range from 0 (for no clouds) to 10 (for sky completely covered by clouds).
Clear.....0/10 to 3/10 sky cover.
Partly cloudy....4/10 to 7/10 sky cover.
Cloudy.....8/10 to 10/10 sky cover.

Heavy fog is defined as fog reducing visibility to 1/4 mile or less.

+ Also occurred in earlier years.
Total sunshine available at Salt Lake City is 267,341 minutes per year.

TABLE 56a

AVERAGE, MAXIMUM, AND MINIMUM NUMBER OF DAYS IN MONTH WITH CLEAR, PARTLY CLOUDY, AND CLOUDY SKIES

JANUARY - JUNE

1928 - 1995

	CLEAR					PARTLY CLOUDY					CLOUDY				
MONTH	Average	Maximum/Year		Minimum/Year		Average	Maximum/Year		Minimum/Year		Average	Maximum/Year		Minimum/Year	
JAN	5	13	1961+	0	1950	6	17	1930	1	1981+	19	29	1967	8	1930
		12	1968	1	1967+		13	1939	2	1978+		28	1981	10	1961
		10	1948+	2	1981+		12	1992	3	1986+		26	1950	11	1935
FEB	5	12	1964+	0	1979	7	15	1930	2	1993	16	26	1979	7	1935
		10	1955+	2	1990+		12	1935	3	1989+		25	1962	9	1988+
		9	1988+				11	1980	4	1992+		21	1993+	10	1964
									5	1986+					
MAR	7	14	1994	1	1949	8	15	1961+	2	1960	16	24	1983+	7	1956+
		12	1968+	2	1984+		13	1972+	3	1971+		23	1949	8	1939+
		11	1965	3	1983+		12	1950	4	1995+		21	1989	9	1994
		10	1985+											11	1972+
APR	7	15	1934	2	1991+	9	19	1942	2	1951	14	22	1995	6	1939+
		12	1977+	3	1995+		16	1938	4	1963		20	1965+	7	1931
		11	1933+	4	1993+		15	1932	5	1995+		19	1983+	9	1985+
												18	1988+		
MAY	9	19	1929	1	1962	10	18	1941+	5	1990+	12	20	1977	2	1928
		18	1936	3	1995+		17	1960	6	1978+		19	1980	4	1939+
		17	1931	4	1981		16	1932	7	1984+		18	1981+	6	1969
JUN	14	22	1935	4	1969	10	21	1930	3	1938	6	17	1964	0	1935+
		21	1929	7	1964+		15	1982+	5	1986+		12	1969+	2	1990+
		20	1974+	8	1967		14	1969	6	1994+		11	1948+		
		19	1994									10	1995		

+ Also occurred in earlier years.

Clear skies defined as 0/10 to 3/10 sky cover.
Partly cloudy skies defined as 4/10 to 7/10 sky cover.
Cloudy skies defined as 8/10 to 10/10 sky cover.

TABLE 56b

AVERAGE, MAXIMUM, AND MINIMUM NUMBER OF DAYS IN MONTH
WITH CLEAR, PARTLY CLOUDY, AND CLOUDY SKIES

JULY - DECEMBER

1928 - 1995

	CLEAR					PARTLY CLOUDY					CLOUDY				
MONTH	Average	Maximum/Year		Minimum/Year		Average	Maximum/Year		Minimum/Year		Average	Maximum/Year		Minimum/Year	
JUL	17	25	1978	9	1987+	10	19	1960	3	1955	4	10	1987	0	1956+
		24	1955+	10	1966+		17	1966+	4	1978+		9	1985+	1	1969+
		23	1942+	11	1937		16	1984	5	1993+		7	1986+		
AUG	16	26	1944	3	1930	11	19	1982	4	1933+	5	13	1930	0	1985+
		25	1933+	4	1929		18	1929	5	1978+		11	1968	1	1974+
		23	1993+	6	1982		17	1945+	6	1993+		10	1957	2	1995+
SEP	17	27	1933	3	1940	8	17	1940	2	1933	5	15	1959	0	1962
		26	1962+	7	1986		15	1976	3	1979+		14	1982	1	1974+
		25	1979+	8	1982		14	1978	4	1975+		13	1961		
OCT	14	24	1952	5	1957	8	13	1963+	2	1942	9	17	1993	1	1929
		23	1933	7	1993+		12	1995+	3	1994+		16	1972	2	1952
		21	1954	8	1982+		11	1957+	4	1991+		15	1994+	3	1965+
NOV	8	22	1936	0	1988	7	13	1932	2	1944	15	24	1970	3	1929
		19	1939+	2	1983		12	1967	3	1994+		23	1994+	4	1936
				3	1985+		11	1969+	4	1979+		22	1983	5	1954+
DEC	6	15	1960	0	1950	7	13	1939	1	1985+	18	29	1983	9	1939
		14	1959	1	1983+		12	1940+	3	1963+		28	1950	10	1960
		13	1956+				11	1970	4	1982+		27	1985	11	1953+
ANNUAL	125	188	1933	88	1967	101	163	1930	70	1979	139	182	1983	87	1933
		162	1929	89	1981		134	1941	78	1964		172	1981	91	1939
		156	1952	94	1982		117	1967	83	1978+		163	1978+	96	1929

\+ Also occurred in earlier years.

Clear skies defined as 0/10 to 3/10 sky cover.
Partly cloudy skies defined as 4/10 to 7/10 sky cover.
Cloudy skies defined as 8/10 to 10/10 sky cover.

TABLE 57

AVERAGE WIND SPEED, PREVAILING DIRECTION, FASTEST MILE, AND PEAK GUST

	*February 1930 - December 1995	
	Average Speed MPH	Prevailing Direction (1)
January	7.5 mph	SSE
February	8.2 mph	SE
March	9.3 mph	SSE
April	9.6 mph	SE
May	9.5 mph	SE
June	9.4 mph	SSE
July	9.5 mph	SSE
August	9.7 mph	SSE
September	9.1 mph	SE
October	8.5 mph	SE
November	8.0 mph	SSE
December	7.5 mph	SSE
Annual	8.8 mph	SSE

	*July 1935 - December 1995				*August 1954 - December 1995			
	Fastest Mile (2)				Peak Gust (3)			
	Speed MPH	Direction	Day	Year	Speed MPH	Direction	Day	Year
January	59(3)	NW	10	1980	69(3)	NW	10	1980
February	56(3)	SE	18	1954	54(3)	S	1	1989+
March	71(3)	NW	10	1954	62(3)	S	2	1974
April	57	NW	11	1964	69	W	22	1961
May	57	NW	21	1953	69(3)	SW	28	1989
June	63	W	3	1963	94	NW	3	1963
July	51	NW	25	1986	74	NW	18	1981
August	58	SW	6	1946	74	NW	13	1978
September	61(3)	W	3	1952	71(3)	NW	5	1972
October	67(3)	NW	27	1950	71(3)	NW	5	1967
November	63(3)	NW	11	1937	59(3)	NW	4	1968
December	54	S	25	1955	60	N	15	1981
Annual	71(3)	NW	March 10	1954	94	NW	June 3	1963

+ Also occurred in earlier years. *Period of Record

(1) The prevailing direction is the most frequent observed direction from which the wind blows during a specific time period.

(2) Fastest mile is the fastest one minute observed wind speed taken from a multiple register that contains a time record of the passing of each mile of wind.

(3) Wind gusts are reported when rapid fluctuations in wind speed result in a variation of 10 kts (11mph) or more between peaks and lulls. The duration of each gust is usually less than 20 seconds.

An official wind gust must be recorded on an instantaneous wind-speed recorder. This type of instrument was not available at Salt Lake International Airport until August 15, 1954. Hence, the periods of record for fastest mile and peak gust differ, and should be taken into account when using this table. (Note that the record fastest mile for March is much higher than the record peak gust. This is because an actual measurement of the gust on an instantaneous wind-speed recorder was not available at that time.)

TABLE 58

PRESSURE RECORDS

SEA LEVEL PRESSURE
1928 - 1995

Month	Highest	Day	Year	Lowest	Day	Year
January	31.01	1	1979	29.04	12	1932
February	30.83	8	1989+	29.08	6	1937
March	30.78	11	1951	29.07	2	1989
April	30.58	6	1939	29.14	22	1960+
May	30.50	15	1970	29.11	29	1988
June	30.39	15	1981	29.17	22	1944
July	30.36	12	1989	29.30	4	1986
August	30.33	31	1987	29.39	31	1944
September	30.52	25	1970	29.33	4	1970
October	30.67	31	1981	29.23	29	1935
November	30.89	23	1938	29.02	30	1982
December	31.09	8,9	1956	29.01	1	1982
Extremes	31.09	December 8,9	1956	29.01	December 1	1982

STATION PRESSURE
1928 - 1995

Month	Average	Highest	Day	Year	Lowest	Day	Year
January	25.84	26.39	28	1962	24.85	12	1932
February	25.79	26.38	12	1943	24.92	6	1937
March	25.68	26.30	11	1951	24.99	10	1954+
April	25.68	26.19	6	1939	25.03	11	1935
May	25.66	26.14	15	1970	25.16	23	1953
June	25.69	26.04	22	1964	25.11	8	1944
July	25.73	26.07	8	1959	25.30	8	1954
August	25.74	26.01	20	1961	25.32	29	1932
September	25.76	26.16	25	1970	25.25	2	1936
October	25.79	26.26	19	1964	25.12	29	1935
November	25.79	26.38	23	1938	25.10	15	1952
December	25.83	26.43	8,9	1956	24.98	30	1951
Extremes	25.75	26.43	December 8,9	1956	24.85	January 12	1932

+Also occurred in earlier years.

*Highest and lowest station pressure tabulations discontinued January 1971.

The average station pressure values in this table have been continued through the present.

TABLE 58a

AVERAGE MONTHLY STATION PRESSURE REDUCED TO SEA LEVEL

January	30.16	May	29.96	September	30.07
February	30.11	June	29.99	October	30.11
March	29.98	July	30.04	November	30.11
April	29.98	August	30.05	December	30.15

Annual 30.06

TABLE 59

NORMAL, HIGHEST AND LOWEST HEATING DEGREE DAYS BY MONTHS
AND YEAR OF OCCURRENCE (BASE 65 DEGREES)
1928 - 1995

Month	Normal	Highest	Year	Lowest	Year
July	0	23	1938	0	1995+
August	0	49	1968	0	1995+
September	108	239	1965	7	1979
October	373	573	1946	158	1988
November	726	995	1930	559	1995
December	1094	1459	1932	835	1977
January	1150	1658	1949	784	1953
February	865	1363	1933	637	1934
March	719	1016	1964	484	1934
April	464	619	1970	268	1934
May	215	415	1933	56	1934
June	51	185	1945	0	1977
Annual	5765	6875	1932	4590	1934

TABLE 60

NORMAL HIGHEST AND LOWEST COOLING DEGREE DAYS BY MONTHS
AND YEAR OF OCCURRENCE (BASE 65 DEGREE)
1928 - 1995

Month	Normal	Highest	Year	Lowest	Year
January	0	0	----	0	----
February	0	0	----	0	----
March	0	0	----	0	----
April	0	25	1987	0	1993+
May	23	181	1934	0	1953
June	174	334	1988	40	1945
July	400	510	1960	178	1993
August	329	489	1940	185	1928
September	114	208	1979	21	1965
October	7	29	1963	0	1994+
November	0	0	----	0	----
December	0	0	----	0	----
Annual	1047	1549	1994	616	1965

Climatological Normals based on the (1961-1990) period.
+ Also occurred in earlier years.

NOTE: Heating and cooling degree days are used as an indication of fuel and energy consumption. One heating or cooling degree day is given for each degree that the daily mean temperature departs below or above 65 degrees respectively.

TABLE 61

WARMEST AND COLDEST SUMMER SEASONS (JUNE, JULY, AUGUST) WITH THEIR AVERAGE MEAN TEMPERATURE AND AMOUNT OF PRECIPITATION RECEIVED DURING THE PERIOD
1928 - 1995

Warmest			Climatological Normals for Summer Season		Coldest		
Year	Mean Temperature	Precipitation (Inches)			Year	Mean Temperature	Precipitation (Inches)
1994	78.6	0.67"	Temperature	Precipitation	1993	68.7	2.98"
1988	77.7	0.29"	74.3	2.60"	1928	69.5	1.31"
1961	77.5	1.83"			1945	69.9	7.93"
1985	76.6	2.18"			1965	70.7	5.45"
1940	76.1	0.59"			1964	70.9	3.04"
1990	75.7	1.76"			1944	70.9	2.82"
1974	75.6	0.78"			1932	70.9	4.58"
1960	75.5	0.74"			1951	71.0	4.05"

TABLE 62

WARMEST AND COLDEST WINTER SEASONS (DECEMBER, JANUARY, FEBRUARY) WITH THEIR AVERAGE MEAN TEMPERATURE, TOTAL SNOWFALL, AND DAYS WITH SNOW DURING THE PERIOD
1928-1929 TO 1994-1995

Warmest					Coldest				
Year	Mean Temp	Total Snow (Inches)	#Days with Snow	Total Pcpn (Inches)	Year	Mean Temp	Total Snow (Inches)	#Days with Snow	Total Pcpn (Inches)
1977-78	38.0	39.3"	28	5.21"	1932-33	19.5	66.2"	36	3.77"
1933-34	37.9	13.6"	9	3.77"	1948-49	19.9	74.7"	36	5.58"
1994-95	36.3	38.0"	22	4.32"	1930-31	23.5	15.0"	15	1.51"
1937-38	36.3	15.9"	15	2.71"	1928-29	23.9	24.2"	25	2.13"
1952-53	36.2	25.2"	8	4.28"	1931-32	23.9	41.9"	31	3.09"
1969-70	35.8	22.7"	20	3.87"	1963-64	24.0	39.1"	30	2.06"
1958-59	35.4	29.9"	15	3.55"	1972-73	24.9	59.7"	22	5.62"

Climatological Normals for Winter Season			
Temperature	Snow (Inches)	#Days with Snow	Precipitation
30.5	35.7"	23	3.74"

Climatological Normals based on (1961-1990) period.

TABLE 63

WARMEST AND COLDEST SPRING SEASONS (MARCH, APRIL, MAY) WITH THEIR AVERAGE MEAN TEMPERATURE AND AMOUNT OF PRECIPITATION RECEIVED DURING THE PERIOD
1928 - 1995

Warmest				Climatological Normals for Spring Season			Coldest			
Year	Mean Temp	Precip (inches)	Snowfall (Inches)	Temp	Precip	Snow	Year	Mean Temp	Precip (Inches)	Snowfall (Inches)
1934	57.5	0.93"	2.0"				1964	44.5	7.72"	40.7"
1992	57.3	3.93"	0.6"				1933	45.5	5.69"	4.7"
1987	53.8	4.72"	5.1"				1955	46.4	3.59"	25.3"
1994	53.6	5.51"	3.2"	50.2	5.83"	20.0"	1942	46.5	6.03"	11.4"
1989	53.5	4.06"	2.1"				1944	47.2	10.24"	37.2"
1985	53.5	5.39"	8.7"				1945	47.4	3.76"	20.2"
1940	53.3	2.69"	T				1965	47.5	4.46"	8.8"

TABLE 64

WARMEST AND COLDEST FALL SEASONS (SEPTEMBER, OCTOBER, NOVEMBER) WITH THEIR AVERAGE MEAN TEMPERATURE AND AMOUNT OF PRECIPITATION RECEIVED DURING THE PERIOD
1928 - 1995

Warmest				Climatological Normals for Fall Season			Coldest			
Year	Mean Temp	Precip (inches)	Snowfall (Inches)	Temp	Precip	Snow	Year	Mean Temp	Precip (Inches)	Snowfall (Inches)
1953	56.1	1.41"	0.4"				1930	48.0	5.08"	15.9"
1990	55.8	2.49"	4.8"				1971	48.3	6.01"	26.0"
1983	55.6	4.88"	5.9"				1961	48.4	3.85"	19.4"
1937	55.1	3.76"	T	53.1	4.01"	8.8"	1946	49.4	5.35"	9.5"
1995	55.0	2.71"	0.6"				1970	49.5	6.68"	1.0"
1979	54.8	2.32"	4.6"				1941	49.6	4.62"	11.1"
1933	54.6	1.49"	1.0"				1936	50.1	2.84"	6.5"

TABLE 65

HOLIDAY WEATHER INFORMATION

1929 - 1995

	Avg Max Temp	Avg Min Temp	High Max Temp	Date	Low Max Temp	Date	High Min Temp	Date	Low Min Temp	Date	Chnc of .01 inch or more pcpn	Pct of days with 0.1 inch or more snow	Max 24 hour snow	Date
NEW YEARS DAY January 1	35	19	58.1	1943	14.2	1979	42.0	1934	-4.0	1931	25%	22%	4.6"	1937
PRESIDENTS DAY February 18 - February 25	46	26	64.8	1958	29.1	1955	42.9	1982	5.9	1975	33% #	21% *	2.7"	1942
EASTER SEASON March 15 - April 15	57	35	83.7	4/7 1930	27.2	3/27 1975	61.8	4/12 1992	10.0	3/19 1965	30% #	13% *	11.8	4/10 1974
MEMORIAL DAY Last Monday in May	76	49	92.7	5/31 1956 +	52.0	5/30 1937	66.6	5/27 1974	32.4	5/28 1954	26% #			
INDEPENDENCE DAY July 4	90	62	101.8	1936	72.1	1993	70.9	1988	46.7	1938	10%			
PIONEER DAY July 24	94	65	105.4	1931	73.5	1993	77.2	1953	50.2	1954	17%			
LABOR DAY First Monday in September	84	56	98.0	9/4 1950	57.3	9/1 1973	71.3	9/4 1978	38.6	9/3 1961	17% #			
UTAH STATE FAIR September 1 - 15	83	54	100.0	9/8 1979	54.9	9/5 1970	73.1	9/5 1978	32.2	9/13 1928	16% #			
HALLOWEEN October 31	59	36	72.0	1990	35.1	1971	53.2	1990	17.5	1935	28%	6%	8.5"	1971
THANKSGIVING DAY November 22 -28	46	28	68.6	11/ 25 1960	22.5	11/ 24 1931	46.9	11/ 24 1960	0.0	11/ 24 1931	26% #	19% *	7.0"	11/ 26 1973
CHRISTMAS DAY December 25	36	20	59.2	1955	18.1	1990	46.0	1955	-6.7	1930	34%	30%	5.9"	1943

These percentages relative to the probability of precipitation on any one day of the given period.

* These percentages relative to the probability of snowfall on any one day of the given period.

+ Also occurred on May 27, 1951.

WHITE CHRISTMAS OCCURRENCES IN SALT LAKE CITY

1928-1995

NUMBER OF YEARS WITH TRACE OR MORE FALLING
33 OUT OF 68 YEARS=49% OF THE TIME

NUMBER OF YEARS WITH 0.1 INCH OR MORE FALLING
19 OUT OF 68 YEARS=28% OF THE TIME

NUMBER OF YEARS WITH 0.5 INCH OR MORE FALLING
14 OUT OF 68 YEARS=21% OF THE TIME

NUMBER OF YEARS WITH 1 INCH OR MORE FALLING
10 OUT OF 68 YEARS=15% OF THE TIME

NUMBER OF YEARS WITH 2 INCHES OR MORE FALLING
6 OUT OF 68 YEARS=9% OF THE TIME

NUMBER OF YEARS WITH 3 INCHES OR MORE FALLING
4 OUT OF 68 YEARS=6% OF THE TIME

NUMBER OF YEARS WITH 5 INCHES OR MORE FALLING
1 OUT OF 68 YEARS=1% OF THE TIME

NUMBER OF YEARS WITH TRACE OR MORE ON THE GROUND
45 OUT OF 68 YEARS=66% OF THE TIME

NUMBER OF YEARS WITH 1 INCH OR MORE ON THE GROUND
31 OUT OF 68 YEARS=46% OF THE TIME

NUMBER OF YEARS WITH 3 INCHES OR MORE ON THE GROUND
17 OUT OF 68 YEARS=25% OF THE TIME

NUMBER OF YEARS WITH 5 INCHES OR MORE ON THE GROUND
9 OUT OF 68 YEARS=13% OF THE TIME

NUMBER OF YEARS WITH 10 INCHES OR MORE ON THE GROUND
1 OUT OF 68 YEARS=1% OF THE TIME

NUMBER OF YEARS WITH NO SNOW FALLING OR ON THE GROUND
18 OUT OF 68 YEARS=26% OF THE TIME

NUMBER OF YEARS WITH NO SNOW ON THE GROUND
23 OUT OF 68 YEARS=34% OF THE TIME

NUMBER OF YEARS WITH A TRACE OR NO SNOW ON THE GROUND
37 OUT OF 68 YEARS=54% OF THE TIME

NUMBER OF YEARS WITH NO SNOW FALLING
35 OUT OF 68 YEARS=51% OF THE TIME

NUMBER OF YEARS WITH A TRACE OR NO SNOW FALLING
49 OUT OF 68 YEARS=72% OF THE TIME

146 The BART Experiment. Morris S. Webb, October 1979. (PB80 155112)
147 Occurrence and Distribution of Flash Floods in the Western Region. Thomas L. Dietrich, December 1979. (PB80 160344)
149 Misinterpretations of Precipitation Probability Forecasts. Allan H. Murphy, Sarah Lichtenstein, Baruch Fischhoff, and Robert L. Winkler, February 1980. (PB80 174576)
150 Annual Data and Verification Tabulation - Eastern and Central North Pacific Tropical Storms and Hurricanes 1979. Emil B. Gunther and Staff, EPHC, April 1980. (PB80 220486)
151 NMC Model Performance in the Northeast Pacific. James E. Overland, PMEL-ERL, April 1980. (PB80 196033)
152 Climate of Salt Lake City, Utah. Wilbur E. Figgins (Retired) and Alexander R. Smith. Sixth Revision, July 1992. (PB92 220177)
153 An Automatic Lightning Detection System in Northern California. James E. Rea and Chris E. Fontana, June 1980. (PB80 225592)
154 Regression Equation for the Peak Wind Gust 6 to 12 Hours in Advance at Great Falls During Strong Downslope Wind Storms. Michael J. Oard, July 1980. (PB91 108367)
155 A Raininess Index for the Arizona Monsoon. John H. Ten Harkel, July 1980. (PB81 106494)
156 The Effects of Terrain Distribution on Summer Thunderstorm Activity at Reno, Nevada. Christopher Dean Hill, July 1980. (PB81 102501)
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158 Hydrology Practicum. Thomas Dietrich, September 1980. (PB81 134033)
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