



**NOAA TECHNICAL MEMORANDUM
NWS WR-249**

CLIMATE OF TUCSON

**John R. Glueck
National Weather Service Office
Tucson, AZ**

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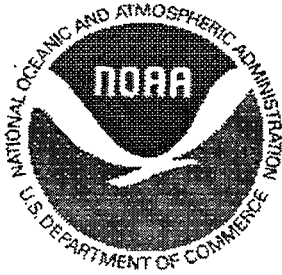
ESSA Technical Memoranda (WRTM)

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- 22 Derivation of Radar Horizons in Mountainous Terrain. Roger G. Pappas, April 1967.

ESSA Technical Memoranda, Weather Bureau Technical Memoranda (WBTM)

- 25 Verification of Operation Probability of Precipitation Forecasts, April 1966-March 1967. W. W. Dickey, October 1967. (PB-176240)
- 26 A Study of Winds in the Lake Mead Recreation Area. R. P. Augulis, January 1968. (PB-177830)
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- 125 Statistical Guidance on the Prediction of Eastern North Pacific Tropical Cyclone Motion - Part II. Preston W. Leftwich and Charles J. Neumann, August 1977. (PB 273 155/AS)
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National Weather Service Office
Tucson, AZ**

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Atmospheric Administration
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**This publication has been reviewed
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THE CLIMATE OF TUCSON, ARIZONA

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I. INTRODUCTION

This paper presents a climatic history of Tucson, Arizona spanning a 100+ year period of continuous record keeping (1894-1996; unvalidated 1866-1894). Detailed tables of daily, monthly, and yearly records of temperature, precipitation and snowfall are presented for each month.

This paper briefly discusses the geography of the Tucson area, the history of the National Weather Service, the observational history of weather data collection in Tucson, and monthly climatological weather summaries. This text is followed by six appendices to allow easy access to the data. The last five issuances of 30-year climatic normals, issued by the National Climatic Data Center (NCDC) in Asheville, North Carolina, can be found in Appendices A and B. Appendix A shows daily and monthly meteorological records (temperature, precipitation, and for some months, snowfall) for each month of the year. Length of record averages for the 100+ years of continuous record keeping are also presented in this appendix. In addition, decadal averages of observed data for each of the eleven decades on record are presented. Appendix B shows yearly and seasonal records. Included are tables for each season's temperature and precipitation. Yearly/monthly temperature and precipitation records are

presented along with yearly/seasonal snowfall records. Length of record averages are also presented along with decadal averages for each of the 11 decades on record.

Appendix C takes a look at the summer thunderstorm season, otherwise known as the summer monsoon, considered by many to be the fifth season in Tucson. Nearly 46 percent of Tucson's annual rainfall total occurs during the monsoon season. This appendix discusses contributing factors leading to the seasonal change in wind patterns which brings additional moisture into Arizona. Appendix D shows miscellaneous data covering a variety of topics ranging from a statistical look at major holidays to record consecutive days of temperature and precipitation above certain values. Appendix E shows data (temperature, precipitation, and snowfall) gathered for the period October 1894 to December 1996 in tabular form. These tables are broken into two groups, calendar day frequency tables and monthly/annual tables. Finally, Appendix F shows data (temperature and precipitation) that was gathered between 1866 and 1894. These data sets were not included in any monthly or yearly records as no reliable daily data were found to verify them.

II. GEOGRAPHICAL AND CLIMATOLOGICAL SUMMARY

Tucson is located in the Sonoran Desert region of southern Arizona about 60 miles north of the Mexican border. The metropolitan area of Tucson is situated in a valley surrounded by spectacular mountain ranges. The Santa Catalina Mountains, elevation up to 9300 feet MSL, border the north-northeast side of Tucson. The Rincon Mountains, elevation up to 9000 feet, border the east side of Tucson while the Tucson Mountains, elevation up to 5000 feet MSL, border the west side of Tucson. About 30 miles south of Tucson lie the Santa Rita Mountains, elevation up to 9500 feet MSL. Within the Tucson Basin, the land is flat or gently rolling with many dry washes. These dry washes can quickly fill up to dangerous proportions when flash floods occur during the summer thunderstorm season. The soil is a mix of sand and clay. Native vegetation is mostly brush, cacti, and small trees which is typical of a low latitude desert climate.

Tucson is well known for its fantastic year-round weather. The annual average high temperature is 82 degrees F and the average low temperature is 54 degrees F. As the geographical position of Tucson is in the desert, the climate is characterized by a long, hot season, beginning in April and ending in October. Average precipitation is twelve inches with the summer thunderstorm season, normally from July 1 through September 15, accounting for 46 percent of the annual rainfall. Sunshine is abundant across Arizona with Tucson receiving around 86 percent of the possible sunshine.

Surface winds in the valley are influenced, to a considerable extent, by the adjacent mountains and by the slope of the valley floor. Under light pressure gradients, this effect is evident in the frequently noted change in wind direction from the southeast during the night and early morning hours, then veering to the northwest during the warmer portion of the day. The strongest peak wind speed, not associated with thunderstorms but usually driven by synoptic scale systems, is usually from the west to southwest and east to southeast.

III. HISTORY OF THE NATIONAL WEATHER SERVICE

In the late 1860s, the need for a national weather service became quite apparent. Congress took up this issue and in 1870 authorized a resolution for the development of a national weather service (Whitnah 1961). President Grant signed this resolution into law on February 9, 1870. The Army Signal Service was selected for the collection of weather data since it had developed a communications system during the Civil War. The first years saw the service covering only the East and Gulf coasts and the Great Lakes regions. Then, in 1872, Congress expanded the area to include the entire country.

In 1891, the Army Signal Service became part of the United States Department of Agriculture and was renamed the Weather Bureau. In 1940, the Weather Bureau was transferred to the Department of Commerce where it remains today. In 1965, the Environmental Science Services

Administration (ESSA) incorporated the Weather Bureau into its operations. In 1970, the Bureau's name was changed to the National Weather Service, and it became an integral part of the National Oceanic and Atmospheric Administration (NOAA).

IV. WEATHER HISTORY IN TUCSON

The collection of weather records in Tucson dates back to the territorial days of the 1800's. The first weather station in Tucson was established by the United States Signal Corp at Fort Lowell in November 1866. Weather records were kept at Fort Lowell, even after a move eight miles northeast of Tucson in 1875, until 1890 when the station was discontinued. When the fort was moved in 1875, another weather station was established. This new station began in November 1875 at Main and Congress streets; moved July 23, 1878 to Meyer and Congress streets; moved again on June 30, 1879 to Ott Street, east of the old Cosmopolitan Hotel; moved again on December 1, 1880 to the northwest corner of Court House Square. The Southern Pacific Railroad collected the data at this location for the National Weather Service until September 1891 when the weather observation point moved to the University of Arizona. Only monthly data have been found for the period 1866 to 1891 (See Appendix F).

The University of Arizona continued to be the official location for weather data collection in Tucson until early 1930, although it still continues to collect weather data today as part of the nationwide cooperative network. In early

1930, the official site was moved to the Tucson Municipal Airport (TMA). TMA would later become Davis-Monthan Air Force Base. Official observations were then taken at the TMA by the Civil Aviation Administration (CAA).

The United States Weather Bureau established an office in Tucson on June 17, 1940; but a portion of the responsibility for the observational program was still retained by the CAA. Observation duties were assumed by the Weather Bureau on a part-time basis on July 5, 1940, and completely on a 24-hour basis on August 1, 1940. The Weather Bureau office relocated into Building #12 at the new Tucson Municipal Airport, presently Tucson International Airport, on October 14, 1948.

On October 15, 1958, the observation point was moved into the new tower and operations building at Tucson International Airport. This location remained the same until June 4, 1980 when it was moved to a new National Weather Service building near the control tower.

Weather data collection has come a long way since 1866 when humans did all of the collection of observations. The technological revolution has made it possible for a machine to do what humans used to do, that is, collect weather data. So on July 1, 1996, the National Weather Service, in conjunction with a nationwide modernization of the National Weather Service, commissioned its weather machine called ASOS or Automated Surface Observation System.

On February 25, 1997, in accordance with the modernization of the National Weather Service, the Tucson weather office moved the forecast and warning responsibilities into its new location at the University of Arizona. The new office is co-located with the United States Geological Survey (USGS) in the Environment and Natural Resources Building (ENRB) on campus. Hourly observations continue to be collected at the airport.

V. MONTHLY CLIMATOLOGIES

January Weather

The month begins with average highs around 63 degrees F, then warms slowly to 66 degrees F by the end of the month. Average lows for the month are generally around 38 or 39 degrees F. A few outlying areas around the Tucson metropolitan area can see temperatures in the 20's at times. Temperature extremes for the month range from a record high of 88 degrees F set on January 4, 1927, to a record low of 6 degrees F set on January 7, 1914. The low of 6 degrees F is the all-time low temperature for Tucson on record.

January is the middle of the winter wet season with normal precipitation of 0.87 of an inch. Monthly extremes range from 4.81 inches in 1993, to zero inches recorded five times (1972, 1928, 1924, 1912, and 1903). It does snow occasionally in Tucson during the month of January. The last measurable January snow event in Tucson occurred back in 1990 when 1.5 inches and 1.2 inches of snow fell on the 19th and 20th,

respectively. The most snowfall recorded on one day occurred on January 16, 1987 when 4.3 inches fell. The monthly snowfall record is 6 inches which occurred back in 1898.

The number of daylight hours increases during the month from 10 hours 5 minutes on the first to 10 hours 37 minutes on the 31st, a gain of 32 minutes.

February Weather

The month begins with average highs around 66 degrees F and average lows around 40 degrees F, and ends with average highs around 70 degrees F and average lows around 42 degrees F. Temperature extremes for the month range from a record high of 92 degrees F set on February 14, 1957, to a record low of 17 degrees F set on February 7, 1899. Again, as in January, a few outlying areas around the Tucson metropolitan area may have temperatures in the 20's at times.

The end of the winter wet season occurs during February. Normal precipitation for the month is 0.70 of an inch. Monthly extremes range from 4.15 inches in 1905, to zero rainfall recorded three times (1984, 1972, and 1898). The past 100+ years of records for Tucson show that measurable snowfall has been recorded 19 times during February. The last measurable snowfall recorded in Tucson during the month of February was back in 1990 when 1.2 inches fell on the 2nd and a half an inch fell on the 14th. The most snowfall recorded for one day occurred on February 8, 1908 when 4 inches fell. The monthly snowfall record is 4.9 inches which occurred in 1903.

The number of daylight hours increases from 10 hours 36 minutes on the 1st, to 11 hours 29 minutes by the end of the 28th or 29th (leap years). This is a gain of 53 minutes.

March Weather

The month begins with average highs around 70 degrees F and average lows around 43 degrees F, and ends with average highs around 77 degrees F and average lows around 47 degrees F. Temperature extremes for the month range from a record high of 99 degrees F set on March 26, 1988, to a record low of 20 degrees F set on March 4, 1965. Although March is the beginning of the spring growing season, a few outlying areas around the Tucson metropolitan area may still have low temperatures in the 20's at times. As a result, some localized areas may still experience a hard freeze.

Normal precipitation during the month of March is 0.72 of an inch. Monthly extremes range from 3.88 inches in 1905, to zero rainfall recorded five times (1984, 1956, 1933, 1928, and 1898). The past 100+ years of records for Tucson show that measurable snowfall has been recorded nine times during the month of March. The last measurable snowfall recorded during March in Tucson was back in 1991 when 0.3" fell on the 16th. The most snowfall recorded for one day occurred on March 12, 1922, when 6 inches fell. This daily snowfall total also is the monthly snowfall record for March.

The number of daylight hours increases from 11 hours 31 minutes on the 1st, to 12 hours 29 minutes on the 31st, a gain

of 58 minutes. The vernal equinox, otherwise known as the beginning of spring, begins on about March 20 when the sun crosses the equator into the Northern Hemisphere.

April Weather

The month begins with average highs around 77 degrees F and average lows around 47 degrees F, and ends with average highs around 85 degrees F and average lows around 54 degrees F. Temperature extremes for the month range from a record high of 104 degrees F set on April 20 and 21, 1989, to a record low of 27 degrees F set on April 4, 1945. Outlying areas around Tucson are still at risk for a late season killing freeze during the first week of April.

April is the beginning of the dry season with normal precipitation of 0.3 of an inch. Monthly extremes range from 3.53 inches in 1905, to zero rainfall recorded ten times with the last occurrence in 1993. The past 100+ years of records for Tucson show that measurable snowfall has been recorded twice during the month. The last measurable April snowfall was recorded back in 1976 when 2 inches fell on the 16th. This daily snowfall record is also the monthly snowfall record for April.

The number of daylight hours increases from 12 hours 31 minutes on the 1st, to 13 hours 25 minutes on the 30th, a gain of 54 minutes.

May Weather

The month begins with average highs around 85 degrees F and average lows

around 54 degrees F, and ends with average highs around 95 degrees F and average lows around 63 degrees F. Temperature extremes for the month range from a record high of 111 degrees F set on May 29, 1910, to a record low of 32 degrees F set on May 3, 1899.

May is the driest month in Tucson with normal rainfall of only 0.18 of an inch. Monthly extremes range from 1.34 inches in 1931, to zero rainfall recorded 19 times with the last occurrence in 1996.

The number of daylight hours increases from 13 hours 27 minutes on the 1st, to 14 hours 6 minutes on the 31st, a gain of 49 minutes.

June Weather

The month begins with average highs around 96 degrees F and average lows around 63 degrees F, and ends with average highs around 101 degrees F and average lows around 72 degrees F. Temperature extremes for the month range from a record high of 117 degrees F set on June 26, 1990, (also the Tucson all-time record high temperature on record) to a record low of 43 degrees F set on June 4, 1908.

June is the second driest month and is at the end of the driest part of the year (April through June). Normal rainfall is 0.2 of an inch. Monthly extremes range from 2.07 inches in 1938, to zero rainfall recorded 11 times. The last occurrence of zero June rainfall was June 1983.

The number of daylight hours increases from 14 hours 7 minutes on the 1st, to 14 hours 13 minutes on the 30th, a gain of

six minutes. Summer begins during June, usually around the 20th, when the sun reaches its northern most latitude (23.4 degrees North or over the Tropic of Capricorn).

July Weather

The month begins with average highs around 101 degrees F and average lows around 72 degrees F and ends with average highs around 98 degrees F and average lows around 74 degrees F. The onset of the summer monsoon season results in higher humidity values as dewpoints rise, making the environment a little more uncomfortable.

Temperatures extremes range from a record high of 114 degrees F set twice, occurring first on July 4, 1989 and then tied on July 28, 1995, to a record low of 49 degrees F set on July 3, 1911.

Rainfall increases dramatically across Tucson in July. This increase coincides with the onset of the summer monsoon season. Normal rainfall is 2.37 inches with monthly extremes ranging from 6.24 inches in 1921, to 0.04 of an inch in 1995.

The number of daylight hours decreases from 14 hours 13 minutes on the 1st, to 13 hours 44 minutes on the 31st, a loss of 29 minutes.

August Weather

The month begins with average highs around 98 degrees F and average lows around 74 degrees F, and ends with average highs around 96 degrees F and average lows around 71 degrees F. The monsoon season continues during

August with higher humidity values making conditions feel uncomfortable. Temperature extremes range from a record high of 112 degrees F set on August 1, 1993, to a record low of 55 degrees F set on August 20, 1917.

Monsoonal moisture persists during August as the normal rainfall for the month is 2.19 inches. Monthly extremes range from 7.93 inches in 1955, to 0.08 of an inch in 1924.

The number of daylight hours decreases from 13 hours 44 minutes on the 1st, to 12 hours 51 minutes on the 31st, a loss of 53 minutes.

September Weather

The month begins with average highs around 96 degrees F and average lows around 71 degrees F, and ends with average highs around 90 degrees F and average lows around 63 degrees F. Temperature extremes range from a record high of 107 degrees F (which occurred nine times, with the last occurrence on September 11, 1990), to a record low of 43 degrees F set on September 26, 1913.

The monsoon season begins to wind down, with September 15 usually marking the end of the summer thunderstorm season. Normal rainfall is 1.67 inches with monthly extremes ranging from 5.11 inches in 1964, to zero inches in 1953. Tucson is susceptible to very heavy rainfall during September due to Eastern Pacific tropical systems moving north along the Mexican coastline.

The number of daylight hours decreases from 12 hours 49 minutes on the 1st, to 11 hours 54 minutes on the 30th, a loss of 55 minutes. The autumnal equinox, otherwise known as the beginning of fall, begins generally around September 22nd, when the sun crosses the equator into the Southern Hemisphere.

October Weather

The month begins with average highs around 90 degrees F and average lows around 63 degrees F and ends with average highs around 79 degrees F and average lows around 51 degrees F. Average lows begin the month in the low 60's and drop into the lower 50's by the 31st. Temperature extremes range from a record high of 102 degrees F set on October 3, 1993, to a record low of 26 degrees F set on October 30, 1971.

Normal rainfall is 1.06 inches with monthly extremes ranging from 4.98 inches in 1983, to zero inches recorded ten times. The last occurrence of zero rainfall in October was in 1982. Tucson is again susceptible to very heavy rainfall during October due to Eastern Pacific tropical systems moving north along the Mexican coastline.

The number of daylight hours decreases from 11 hours 51 minutes on the 1st, to 10 hours 55 minutes on the 31st, a loss of 56 minutes.

November Weather

The month begins with average highs around 78 degrees F and average lows around 50 degrees F, and ends with average highs around 68 degrees F and

average lows around 42 degrees F. Temperature extremes for the month range from a record high of 94 degrees F set on November 1, 1924, to a record low of 19 degrees F set on November 19, 1921. The average date for the first freezing temperatures of the season is November 23 with outlying areas around Tucson at risk for a hard freeze.

Normal precipitation is 0.67 of an inch with monthly extremes ranging from 4.61 inches in 1905, to zero inches recorded 12 times. The last occurrence of zero rainfall was in 1980. The past 100+ years of records for Tucson show that measurable snowfall has been recorded twice during November. The last measurable November snowfall in Tucson occurred in 1964 when 0.10 of an inch fell on the 15th. Recently though, a trace of snow fell on November 19, 1994. The most snowfall recorded in one day occurred on November 16, 1958, when 6.4 inches fell. This total is also the monthly snowfall record for November.

The number of daylight hours decreases from 10 hours 53 minutes on the 1st, to 10 hours 13 minutes on the 30th, a loss of 40 minutes.

December Weather

The month begins with average highs around 67 degrees F and average lows around 42 degrees F, and ends with average highs around 63 degrees F and average lows around 38 degrees F. Temperature extremes range from a record high of 85 degrees F set four times, the last occurring on December 8, 1939, to a record low of 10 degrees F set on December 14, 1901. A hard freeze

may also occur during the month, especially if one had not occurred in November.

Normal precipitation is 1.07 inches with monthly extremes ranging from 5.85 inches in 1914, to zero inches recorded six times with the last occurrence in 1981. The past 100+ years of records for Tucson show that measurable snowfall has been recorded 16 times during December. The last measurable December snowfall recorded in Tucson occurred in 1990 when 0.6 of an inch fell on the 22nd. The most snowfall recorded on one day occurred on December 8, 1971 when 6.8 inches fell. This is also the monthly snowfall record for December.

The number of daylight hours decreases from 10 hours 12 minutes on the 1st, to 10 hours 5 minutes on the 31st, a loss of 7 minutes. Winter begins during December, usually around the 21st, when the sun reaches its southern most latitude (23.4 degrees South or over the Tropic of Cancer).

VI. REFERENCES

Bryson, R. A., and W. P. Lowry, 1955: Synoptic climatology of the Arizona singularity. *Bulletin of the American Meteorology Society*, **36**, 329-339.

Carleton, A. M., 1986: Synoptic-dynamic character of 'bursts' and 'breaks' in the south-west U.S. summer precipitation singularity. *Journal of Climatology*, **6**, 605-622.

Hales, J. E. Jr., 1972: Surges of maritime tropical air northward over the Gulf of

California. *Monthly Weather Review*, **100**, 298-306.

Hales, J. E. Jr., 1974: Southwestern United States summer monsoon source Gulf of Mexico or Pacific Ocean? *Journal of Applied Meteorology*, **13**, 331-342.

Maddox, R. A., D. M. McCollum, and K. W. Howard, 1995: Large-scale patterns associated with severe thunderstorms over Central Arizona. *Weather and Forecasting*, **10**, 763-778.

Sellers, W. D., 1960: *Arizona Climate*. University of Arizona Press.

Sellers, W. D., R. H. Hill, 1974: *Arizona Climate 1931-1972*. University of Arizona Press, 616 pp.

Sellers, W. D., R. H. Hill, and M. Sanderson-Rae, 1985: *Arizona Climate, The first hundred years*. University of Arizona, 143 pp.

Whitnah, D. R., 1961: *A history of the United States Weather Bureau*. University of Illinois Press, 267 pp.

U.S. Department of Commerce, Weather Bureau, WB Form 1030, Monthly

Meteorological Summary, 1941-1948, Tucson, Arizona.

U.S. Department of Commerce, Weather Bureau, Local Climatological Data, Monthly Summary, 1949-1970, Tucson, Arizona.

U.S. Department of Commerce, National Weather Service, Local Climatological Data, Monthly Summary, 1970-1996, Tucson, Arizona.

Tucson, Arizona, station logs.

Daily data from University of Arizona, 1894-1930.

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APPENDIX A

DAILY AND

MONTHLY RECORDS

DAILY RECORDS FOR JANUARY
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION		SNOWFALL	
AVERAGES				RECORDS		RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR	INCHES	YEAR
1	63	39	51	79	1981	22	1919*	.42	1951	2.0	1906
2	63	39	51	83	1918	19	1911*	.47	1982	1.2	1990
3	63	38	51	87	1896	17	1911	.69	1957	T	1971
4	63	38	51	88	1927	16	1949	.85	1920		
5	63	38	51	81	1927	17	1949	1.00	1946		
6	63	38	51	83	1927	15	1910	1.08	1935		
7	63	38	51	80	1948	6	1913	1.21	1993	4.0	1937
8	63	38	51	82	1969*	13	1913	.34	1957*	T	1946
9	63	38	51	81	1948	24	1899	.70	1905		
10	63	38	51	87	1953	24	1937*	1.17	1905		
11	63	38	51	82	1990*	18	1918	1.08	1960	2.7	1898
12	63	38	51	82	1923	18	1964*	.71	1981	1.0	1951
13	64	38	51	78	1928	21	1963*	.46	1993	1.0	1937
14	64	38	51	81	1912	22	1940	.72	1920		
15	64	38	51	80	1912	23	1964	.87	1978	.7	1949
16	64	39	51	81	1921	22	1919	.37	1987	4.3	1987
17	64	39	51	82	1923	19	1987	.80	1979	T	1949
18	64	39	51	83	1935	21	1925	1.32	1993	.2	1907
19	64	39	51	85	1971	22	1936*	2.63	1916	1.5	1990
20	64	39	51	84	1971*	22	1936*	.62	1938	.4	1987
21	64	39	51	81	1950	17	1922	.40	1982*	.8	1937
22	64	39	51	80	1986	15	1937*	.39	1977	T	1973
23	64	39	52	80	1986	17	1937	.56	1985		
24	65	39	52	81	1953	17	1937	.48	1962	3.3	1898
25	65	39	52	81	1935	17	1898	.41	1949	3.5	1949
26	65	39	52	82	1951	21	1932	.67	1985	T	1949
27	65	39	52	86	1987	18	1904	.77	1961		
28	65	39	52	83	1906	23	1932	.57	1941		
29	65	39	52	82	1986	19	1932	.93	1936	1.2	1979
30	65	39	52	82	1987	25	1979*	.83	1983		
31	66	39	52	83	1911	22	1949	.96	1986		

* - ALSO IN EARLIER YEARS. T - TRACE, AN AMOUNT TOO SMALL TO MEASURE.
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD.

NORMAL TEMPERATURE FOR JANUARY	51.3
RECORD HIGH TEMPERATURE FOR JANUARY	88 SET IN 1927 (4)
RECORD LOW TEMPERATURE FOR JANUARY	6 SET IN 1913 (7)
NORMAL PRECIPITATION FOR JANUARY	0.87 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL	2.63 INCHES SET IN 1916 (19)
RECORD MONTHLY PRECIPITATION TOTAL	4.81 INCHES SET IN 1993
RECORD LOW MONTHLY PRECIPITATION TOTAL	ZERO INCHES SET 5 TIMES (1972..1928..1924..1912..1903)
RECORD ONE-DAY SNOWFALL TOTAL	4.3 INCHES SET IN 1987 (16)
RECORD MONTHLY SNOWFALL TOTAL	6.0 INCHES SET IN 1898

**ALL-TIME TUCSON JANUARY TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST JANUARYS

1)	58.6	1986
2)	56.1	1956
3)	55.4	1969
4)	55.2	1993
5)	54.9	1927
6)	54.7	1981
7)	54.6	1911
8)	54.3	1980
9)	54.1	1923
10)	53.9	1953

TOP 10 COLDEST JANUARYS

1)	41.2	1937
2)	43.0	1949
3)	43.3	1932
4)	44.8	1913
5)	45.4	1904
6)	46.1	1898
7)	46.2	1926
8)	46.6	1899
9)	46.7	1955
10)	46.8	1960

NORMAL TEMPERATURE FOR JANUARY (1961-1990)	51.3
NORMAL TEMPERATURE FOR JANUARY (1951-1980)	51.1
NORMAL TEMPERATURE FOR JANUARY (1941-1970)	50.9
NORMAL TEMPERATURE FOR JANUARY (1931-1960)	49.8
NORMAL TEMPERATURE FOR JANUARY (1921-1950)	49.7
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	50.6

AVERAGE TEMPERATURE DURING THE 1990's	53.0
AVERAGE TEMPERATURE DURING THE 1980's	52.7
AVERAGE TEMPERATURE DURING THE 1970's	50.3
AVERAGE TEMPERATURE DURING THE 1960's	50.4
AVERAGE TEMPERATURE DURING THE 1950's	52.1
AVERAGE TEMPERATURE DURING THE 1940's	50.3
AVERAGE TEMPERATURE DURING THE 1930's	48.5
AVERAGE TEMPERATURE DURING THE 1920's	50.1
AVERAGE TEMPERATURE DURING THE 1910's	49.5
AVERAGE TEMPERATURE DURING THE 1900's	50.4
AVERAGE TEMPERATURE DURING THE 1890's	48.6

TOP 10 WARMEST JANUARY DATES

1)	88	1/ 4/1927
2)	87	1/10/1953
	87	1/ 3/1896
4)	86	1/27/1987
5)	85	1/19/1971
6)	84	1/ 4/1994
	84	1/19/1986
	84	1/20/1971
	84	1/20/1951
	84	1/27/1935

TOP 10 COLDEST JANUARY DATES

1)	6	1/ 7/1913
2)	13	1/ 8/1913
3)	15	1/22/1937
	15	1/ 6/1910
	15	1/22/1904
6)	16	1/ 4/1949
	16	1/ 4/1911
8)	17	1/ 6/1971
	17	1/ 6/1950
	17	1/ 5/1949
	17	1/24/1937
	17	1/23/1937
	17	1/21/1922
	17	1/ 3/1911
	17	1/25/1898

**ALL-TIME TUCSON JANUARY PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST JANUARYS

1)	4.81	1993
2)	4.00	1916
3)	2.94	1979
4)	2.37	1957
5)	2.29	1920
6)	2.25	1905
7)	2.22	1946
8)	2.05	1978
9)	2.01	1960
10)	1.92	1917

TOP 10 DRIEST JANUARYS

1)	ZERO	1972
	ZERO	1928
	ZERO	1924
	ZERO	1912
	ZERO	1903
6)	TRACE	1970
	TRACE	1958
	TRACE	1948
9)	.01	1996
10)	.02	1994

NORMAL PRECIPITATION FOR JANUARY (1961-1990)	.87
NORMAL PRECIPITATION FOR JANUARY (1951-1980)	.83
NORMAL PRECIPITATION FOR JANUARY (1941-1970)	.77
NORMAL PRECIPITATION FOR JANUARY (1931-1960)	.82
NORMAL PRECIPITATION FOR JANUARY (1921-1950)	.63
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.88

AVERAGE PRECIPITATION DURING THE 1990's	1.37
AVERAGE PRECIPITATION DURING THE 1980's	1.06
AVERAGE PRECIPITATION DURING THE 1970's	.83
AVERAGE PRECIPITATION DURING THE 1960's	.82
AVERAGE PRECIPITATION DURING THE 1950's	.79
AVERAGE PRECIPITATION DURING THE 1940's	.73
AVERAGE PRECIPITATION DURING THE 1930's	.85
AVERAGE PRECIPITATION DURING THE 1920's	.51
AVERAGE PRECIPITATION DURING THE 1910's	1.22
AVERAGE PRECIPITATION DURING THE 1900's	.78
AVERAGE PRECIPITATION DURING THE 1890's	.95

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	2.63	1/19/1916
2)	1.32	1/18/1993
3)	1.21	1/ 7/1993
4)	1.17	1/10/1905
5)	1.08	1/11/1960
	1.08	1/ 6/1935
7)	1.00	1/ 5/1946
8)	.96	1/31/1986
9)	.93	1/29/1936
10)	.92	1/ 5/1991

**ALL-TIME TUCSON JANUARY SNOWFALL RECORDS
(1895-1996) 102 YEARS**

TOP 10 SNOWIEST JANUARYS

1)	6.0	1898
2)	5.8	1937
3)	4.7	1949
	4.7	1987
5)	2.8	1951
6)	2.7	1990
7)	2.0	1913
	2.0	1906
9)	1.3	1960
10)	1.2	1979

AVERAGE SNOWFALL FOR ALL YEARS ON RECORD 0.3

AVERAGE SNOWFALL DURING THE 1990's	0.4
AVERAGE SNOWFALL DURING THE 1980's	0.5
AVERAGE SNOWFALL DURING THE 1970's	0.2
AVERAGE SNOWFALL DURING THE 1960's	0.1
AVERAGE SNOWFALL DURING THE 1950's	0.3
AVERAGE SNOWFALL DURING THE 1940's	0.5
AVERAGE SNOWFALL DURING THE 1930's	0.6
AVERAGE SNOWFALL DURING THE 1920's	0
AVERAGE SNOWFALL DURING THE 1910's	0.2
AVERAGE SNOWFALL DURING THE 1900's	0.3
AVERAGE SNOWFALL DURING THE 1890's	1.2

TOP 10 SNOWIEST JANUARY DAYS

1)	4.3	1/16/1987
2)	4.0	1/ 7/1937
3)	3.5	1/25/1949
4)	3.3	1/24/1898
5)	2.7	1/11/1898
6)	2.0	1/11/1913
	2.0	1/ 1/1906
8)	1.8	1/ 1/1951
9)	1.5	1/19/1990
10)	1.2	1/ 2/1990

DAILY RECORDS FOR FEBRUARY
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION		SNOWFALL	
AVERAGES				RECORDS		RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR	INCHES	YEAR
1	66	40	53	83	1911	22	1946	.36	1926		
2	66	40	53	82	1934	22	1916	.54	1940	1.2	1990
3	66	40	53	86	1925	21	1910	.45	1927	1.1	1985
4	66	40	53	84	1925	21	1955	.76	1958	1.1	1985
5	66	40	53	85	1963	20	1955	.88	1939	T	1899
6	67	40	53	86	1963	24	1955	.94	1905	1.3	1899
7	67	40	53	84	1963*	17	1899	1.26	1966	1.0	1933
8	67	40	54	81	1963*	18	1933	.86	1980	1.2	1966
9	67	40	54	82	1996*	23	1933*	.57	1981	1.7	1965
10	67	41	54	86	1951	24	1965	.75	1908	2.2	1965
11	67	41	54	84	1951	22	1933	1.22	1950		
12	67	41	54	86	1988	20	1948	.87	1931	1.1	1946
13	68	41	54	89	1957	21	1948	.97	1992	4.0	1908
14	68	41	54	92	1957	24	1908	.67	1954	.5	1990
15	68	41	54	85	1957	24	1964	.49	1931	3.1	1903
16	68	41	55	85	1994	21	1910	.38	1911	2.0	1928
17	68	41	55	82	1994*	19	1910	.59	1905	1.0	1956
18	68	41	55	83	1958*	19	1910	.55	1905		
19	68	41	55	85	1981	25	1955	.28	1993	.6	1990
20	69	42	55	89	1943	23	1955	.73	1915	T	1971*
21	69	42	55	82	1982*	20	1955	.98	1973	T	1975*
22	69	42	55	85	1991	20	1955	.74	1941	T	1975*
23	69	42	55	87	1989	25	1975*	.29	1948		
24	69	42	56	91	1904	26	1909	1.23	1930	.5	1953
25	69	42	56	91	1921	24	1960	1.04	1987	T	1935
26	69	42	56	88	1986	25	1912	.60	1931		
27	70	42	56	88	1986*	26	1937	1.10	1942	1.0	1929
28	70	42	56	85	1986*	25	1939	.74	1918		
29	70	42	56	85	1988	32	1924	.66	1948		

* - ALSO IN EARLIER YEARS. T - TRACE, AN AMOUNT TOO SMALL TO MEASURE.
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD.

NORMAL TEMPERATURE FOR FEBRUARY	54.4
RECORD HIGH TEMPERATURE FOR FEBRUARY	92 SET IN 1957 (14)
RECORD LOW TEMPERATURE FOR FEBRUARY	17 SET IN 1899 (7)
NORMAL PRECIPITATION FOR FEBRUARY	0.70 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL	1.26 INCHES SET IN 1966 (7)
RECORD MONTHLY PRECIPITATION TOTAL	4.15 INCHES SET IN 1905
RECORD LOW MONTHLY PRECIPITATION TOTAL	ZERO INCHES SET 3 TIMES (1984..1972..1898)
RECORD ONE-DAY SNOWFALL TOTAL	4.0 INCHES SET IN 1908 (13)
RECORD MONTHLY SNOWFALL TOTAL	4.9 INCHES SET IN 1903

**ALL-TIME TUCSON FEBRUARY TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST FEBRUARYS

1)	61.1	1957
2)	60.6	1995
3)	60.3	1954
4)	59.8	1991
5)	59.3	1988
6)	59.1	1968
7)	58.9	1996
8)	58.7	1943
9)	58.4	1976
10)	58.2	1989

TOP 10 COLDEST FEBRUARYS

1)	45.3	1903
2)	45.6	1939
3)	47.5	1933
4)	47.7	1964
	47.7	1960
6)	47.8	1966
7)	48.1	1919
8)	48.6	1956
9)	48.8	1955
10)	49.3	1899

NORMAL TEMPERATURE FOR FEBRUARY (1961-1990)	54.4
NORMAL TEMPERATURE FOR FEBRUARY (1951-1980)	53.7
NORMAL TEMPERATURE FOR FEBRUARY (1941-1970)	53.5
NORMAL TEMPERATURE FOR FEBRUARY (1931-1960)	52.9
NORMAL TEMPERATURE FOR FEBRUARY (1921-1950)	53.2
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	53.7

AVERAGE TEMPERATURE DURING THE 1990's	56.9
AVERAGE TEMPERATURE DURING THE 1980's	55.9
AVERAGE TEMPERATURE DURING THE 1970's	54.4
AVERAGE TEMPERATURE DURING THE 1960's	52.7
AVERAGE TEMPERATURE DURING THE 1950's	54.0
AVERAGE TEMPERATURE DURING THE 1940's	53.4
AVERAGE TEMPERATURE DURING THE 1930's	52.9
AVERAGE TEMPERATURE DURING THE 1920's	54.0
AVERAGE TEMPERATURE DURING THE 1910's	51.8
AVERAGE TEMPERATURE DURING THE 1900's	52.2
AVERAGE TEMPERATURE DURING THE 1890's	52.7

TOP 10 WARMEST FEBRUARY DATES

1)	92	2/14/1957
2)	91	2/25/1921
	91	2/24/1904
4)	89	2/24/1989
	89	2/25/1986
	89	2/13/1957
	89	2/20/1943
8)	88	2/27/1986
	88	2/26/1986
	88	2/27/1906

TOP 10 COLDEST FEBRUARY DATES

1)	17	2/ 7/1899
2)	18	2/ 8/1933
3)	19	2/18/1910
	19	2/17/1910
5)	20	2/22/1955
	20	2/21/1955
	20	2/ 5/1955
	20	2/12/1948
9)	21	2/ 4/1955
10)	21	2/13/1948
	21	2/16/1910
	21	2/ 3/1910

**ALL-TIME TUCSON FEBRUARY PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST FEBRUARYS

1)	4.15	1905
2)	2.95	1931
3)	2.90	1980
4)	2.43	1935
5)	2.27	1941
6)	2.25	1966
7)	2.08	1908
8)	2.00	1948
9)	1.92	1942
10)	1.86	1913

TOP 10 DRIEST FEBRUARYS

1)	ZERO	1984
	ZERO	1972
	ZERO	1898
4)	TRACE	1974
	TRACE	1924
	TRACE	1910
	TRACE	1902
	TRACE	1895
9)	.01	1961
10)	.02	1947

NORMAL PRECIPITATION FOR FEBRUARY (1961-1990)	.70
NORMAL PRECIPITATION FOR FEBRUARY (1951-1980)	.63
NORMAL PRECIPITATION FOR FEBRUARY (1941-1970)	.64
NORMAL PRECIPITATION FOR FEBRUARY (1931-1960)	.84
NORMAL PRECIPITATION FOR FEBRUARY (1921-1950)	.92
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.81

AVERAGE PRECIPITATION DURING THE 1990's	1.15
AVERAGE PRECIPITATION DURING THE 1980's	.92
AVERAGE PRECIPITATION DURING THE 1970's	.53
AVERAGE PRECIPITATION DURING THE 1960's	.62
AVERAGE PRECIPITATION DURING THE 1950's	.59
AVERAGE PRECIPITATION DURING THE 1940's	1.00
AVERAGE PRECIPITATION DURING THE 1930's	1.21
AVERAGE PRECIPITATION DURING THE 1920's	.51
AVERAGE PRECIPITATION DURING THE 1910's	.86
AVERAGE PRECIPITATION DURING THE 1900's	1.13
AVERAGE PRECIPITATION DURING THE 1890's	.11

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	1.26	2/ 7/1966
2)	1.23	2/24/1930
3)	1.22	2/11/1950
4)	1.10	2/27/1942
5)	1.04	2/25/1987
6)	.98	2/21/1973
7)	.97	2/13/1992
8)	.94	2/ 6/1905
9)	.91	2/ 7/1941
10)	.88	2/ 5/1939

**ALL-TIME TUCSON FEBRUARY SNOWFALL RECORDS
(1895-1996) 102 YEARS**

TOP 10 SNOWIEST FEBRUARYS

1)	4.9	1903
2)	4.0	1908
3)	3.9	1965
4)	2.3	1990
5)	2.2	1985
6)	2.0	1928
7)	1.3	1899
8)	1.2	1966
9)	1.1	1946
10)	1.0	1956
	1.0	1933
	1.0	1929

AVERAGE SNOWFALL FOR ALL YEARS ON RECORD	0.3
AVERAGE SNOWFALL DURING THE 1990's	0.3
AVERAGE SNOWFALL DURING THE 1980's	0.2
AVERAGE SNOWFALL DURING THE 1970's	0
AVERAGE SNOWFALL DURING THE 1960's	0.5
AVERAGE SNOWFALL DURING THE 1950's	0.2
AVERAGE SNOWFALL DURING THE 1940's	0.1
AVERAGE SNOWFALL DURING THE 1930's	0.1
AVERAGE SNOWFALL DURING THE 1920's	0.3
AVERAGE SNOWFALL DURING THE 1910's	0
AVERAGE SNOWFALL DURING THE 1900's	0.9
AVERAGE SNOWFALL DURING THE 1890's	0.3

TOP 10 SNOWIEST FEBRUARY DAYS

1)	4.0	2/13/1908
2)	3.1	2/15/1903
3)	2.2	2/10/1965
4)	2.0	2/16/1928
5)	1.7	2/ 9/1965
6)	1.3	2/ 6/1899
7)	1.2	2/ 2/1990
	1.2	2/ 8/1966
9)	1.1	2/ 4/1985
	1.1	2/ 3/1985
	1.1	2/12/1946
	1.1	2/ 6/1903

DAILY RECORDS FOR MARCH
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION		SNOWFALL	
AVERAGES				RECORDS		RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR	INCHES	YEAR
1	70	43	56	87	1986	25	1909	.47	1968		
2	70	43	56	91	1910	24	1971*	.68	1981	4.0	1964
3	70	43	56	90	1910	22	1971*	.60	1981	3.8	1976
4	70	43	56	91	1910	20	1965	.91	1943	T	1976*
5	70	43	56	96	1910	28	1948*	.56	1923	T	1946*
6	71	43	57	93	1910	27	1896	.66	1905		
7	71	43	57	88	1989*	26	1922	.72	1958		
8	71	43	57	90	1989	28	1942*	.47	1905	T	1964
9	71	43	57	93	1989	24	1922	1.19	1952	3.4	1952
10	71	44	57	97	1989	24	1922	1.07	1927	T	1935
11	71	44	58	92	1989	26	1899	.46	1975	.5	1975
12	72	44	58	93	1989	26	1899	.74	1922	6.0	1922
13	72	44	58	88	1989*	26	1956	.97	1982		
14	72	44	58	87	1934	27	1962	.59	1973	T	1969
15	72	44	58	93	1910	24	1907	.37	1941		
16	73	44	59	90	1994	24	1917	1.20	1930	.3	1991
17	73	45	59	88	1994*	24	1917	.65	1986		
18	73	45	59	95	1907	24	1903	.58	1944		
19	73	45	59	95	1907	22	1897	.65	1914		
20	74	45	59	92	1990	29	1903	.36	1957		
21	74	45	60	90	1910	31	1927	.46	1924		
22	74	45	60	90	1990*	26	1955	.41	1954		
23	74	46	60	92	1896	25	1898	1.05	1920		
24	75	46	60	93	1896	25	1897	.41	1902	1.5	1902
25	75	46	61	94	1896	25	1901	1.42	1903	.1	1949
26	75	46	61	99	1988	26	1913	.62	1989		
27	75	46	61	94	1988	28	1913	.65	1992		
28	76	47	61	91	1943	28	1898	.45	1992	T	1975
29	76	47	61	91	1943*	27	1907	.68	1926		
30	76	47	62	92	1950	31	1901*	.28	1967		
31	77	47	62	91	1989*	25	1897	.41	1905		

* - ALSO IN EARLIER YEARS. T - TRACE, AN AMOUNT TOO SMALL TO MEASURE.
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD.

NORMAL TEMPERATURE FOR MARCH 58.7
RECORD HIGH TEMPERATURE FOR MARCH 99 SET IN 1988 (26)
RECORD LOW TEMPERATURE FOR MARCH 20 SET IN 1965 (4)

NORMAL PRECIPITATION FOR MARCH .72 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL 1.42 INCHES SET IN 1903 (25)
RECORD MONTHLY PRECIPITATION TOTAL 3.88 INCHES SET IN 1905
RECORD LOW MONTHLY PRECIPITATION TOTAL ZERO SET 5 TIMES
(1984..1956..1933..1928..1895)

RECORD ONE-DAY SNOWFALL TOTAL 6.0 INCHES SET IN 1922 (12)
RECORD MONTHLY SNOWFALL TOTAL 6.0 INCHES SET IN 1922

**ALL-TIME TUCSON MARCH TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST MARCHS

1)	65.0	1989
	65.0	1972
3)	63.9	1934
4)	63.8	1986
5)	63.1	1910
6)	62.8	1994
7)	62.7	1911
	62.7	1900
9)	62.0	1967
10)	61.8	1990
	61.8	1978
	61.8	1943

TOP 10 COLDEST MARCHS

1)	51.5	1973
2)	52.6	1952
3)	53.0	1909
4)	53.3	1962
5)	53.6	1917
6)	53.9	1913
7)	54.0	1948
	54.0	1915
	54.0	1897
10)	54.1	1905
	54.1	1902

NORMAL TEMPERATURE FOR MARCH (1941-1990)	58.7
NORMAL TEMPERATURE FOR MARCH (1951-1980)	57.8
NORMAL TEMPERATURE FOR MARCH (1941-1970)	57.6
NORMAL TEMPERATURE FOR MARCH (1931-1960)	58.0
NORMAL TEMPERATURE FOR MARCH (1921-1950)	57.9
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	58.1

AVERAGE TEMPERATURE DURING THE 1990's	60.4
AVERAGE TEMPERATURE DURING THE 1980's	59.7
AVERAGE TEMPERATURE DURING THE 1970's	58.0
AVERAGE TEMPERATURE DURING THE 1960's	57.5
AVERAGE TEMPERATURE DURING THE 1950's	58.2
AVERAGE TEMPERATURE DURING THE 1940's	57.6
AVERAGE TEMPERATURE DURING THE 1930's	58.0
AVERAGE TEMPERATURE DURING THE 1920's	57.2
AVERAGE TEMPERATURE DURING THE 1910's	58.1
AVERAGE TEMPERATURE DURING THE 1900's	57.0
AVERAGE TEMPERATURE DURING THE 1890's	57.4

TOP 10 WARMEST MARCH DATES

1)	99	3/26/1988
2)	97	3/10/1989
3)	96	3/ 5/1910
4)	95	3/19/1907
	95	3/18/1907
6)	94	3/27/1988
	94	3/25/1896
8)	93	3/12/1989
	93	3/ 9/1989
	93	3/25/1988
	93	3/15/1910
	93	3/ 6/1910
	93	3/26/1896
	93	3/24/1896

TOP 10 COLDEST MARCH DATES

1)	20	3/ 4/1965
2)	22	3/ 3/1971
	22	3/ 3/1965
	22	3/19/1897
5)	23	3/ 4/1917
6)	24	3/ 2/1971
	24	3/ 4/1966
	24	3/10/1922
	24	3/ 9/1922
	24	3/17/1917
	24	3/16/1917
	24	3/ 3/1917
	24	3/15/1907
	24	3/ 2/1906
	24	3/18/1903

ALL-TIME TUCSON MARCH PRECIPITATION RECORDS
(1895-1996) 102 YEARS

TOP 10 WETTEST MARCHS

1)	3.88	1905
2)	2.32	1930
3)	2.26	1952
4)	2.20	1973
5)	2.12	1992
	2.12	1912
7)	1.98	1981
8)	1.96	1920
9)	1.82	1958
10)	1.79	1968

TOP 10 DRIEST MARCHS

1)	ZERO	1984
	ZERO	1956
	ZERO	1933
	ZERO	1928
	ZERO	1895
6)	TRACE	1971
	TRACE	1959
8)	.01	1972
9)	.03	1955
10)	.04	1940

NORMAL PRECIPITATION FOR MARCH (1961-1990)	.72
NORMAL PRECIPITATION FOR MARCH (1951-1980)	.68
NORMAL PRECIPITATION FOR MARCH (1941-1970)	.64
NORMAL PRECIPITATION FOR MARCH (1931-1960)	.53
NORMAL PRECIPITATION FOR MARCH (1921-1950)	.68
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.72

AVERAGE PRECIPITATION DURING THE 1990's	.91
AVERAGE PRECIPITATION DURING THE 1980's	.90
AVERAGE PRECIPITATION DURING THE 1970's	.75
AVERAGE PRECIPITATION DURING THE 1960's	.51
AVERAGE PRECIPITATION DURING THE 1950's	.70
AVERAGE PRECIPITATION DURING THE 1940's	.59
AVERAGE PRECIPITATION DURING THE 1930's	.70
AVERAGE PRECIPITATION DURING THE 1920's	.91
AVERAGE PRECIPITATION DURING THE 1910's	.61
AVERAGE PRECIPITATION DURING THE 1900's	.88
AVERAGE PRECIPITATION DURING THE 1890's	.28

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	1.42	3/25/1903
2)	1.20	3/16/1930
3)	1.19	3/ 9/1952
4)	1.07	3/10/1927
5)	1.05	3/23/1920
6)	.97	3/13/1982
7)	.91	3/ 4/1943
8)	.90	3/10/1935
9)	.78	3/16/1905
10)	.74	3/12/1922

**ALL-TIME TUCSON MARCH SNOWFALL RECORDS
(1895-1996) 102 YEARS**

TOP 10 SNOWIEST MARCHS

1)	6.0	1922
2)	5.7	1964
3)	3.8	1976
4)	3.4	1952
5)	1.5	1902
6)	.5	1975
7)	.3	1991
8)	.1	1949
9)	Trace	1992

(last of 6 occurrences)

AVERAGE SNOWFALL FOR ALL YEARS ON RECORD	0.2
AVERAGE SNOWFALL DURING THE 1990's	>Trace
AVERAGE SNOWFALL DURING THE 1980's	0
AVERAGE SNOWFALL DURING THE 1970's	0.4
AVERAGE SNOWFALL DURING THE 1960's	0.6
AVERAGE SNOWFALL DURING THE 1950's	0.3
AVERAGE SNOWFALL DURING THE 1940's	0
AVERAGE SNOWFALL DURING THE 1930's	0
AVERAGE SNOWFALL DURING THE 1920's	0.6
AVERAGE SNOWFALL DURING THE 1910's	0
AVERAGE SNOWFALL DURING THE 1900's	0.2
AVERAGE SNOWFALL DURING THE 1890's	0

TOP 10 SNOWIEST MARCH DAYS

1)	6.0	3/12/1922
2)	4.0	3/ 2/1964
3)	3.8	3/ 3/1976
4)	3.4	3/ 9/1952
5)	1.7	3/ 3/1964
6)	1.5	3/24/1902
7)	0.5	3/11/1975
8)	0.3	3/16/1991
9)	0.1	3/25/1949
10)	Trace	11 times

DAILY RECORDS FOR APRIL
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION		SNOWFALL	
AVERAGES				RECORDS		RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR	INCHES	YEAR
1	77	47	62	91	1989*	31	1938	.35	1905		
2	77	48	62	93	1959*	28	1917	.60	1922	1.0	1956
3	78	48	63	97	1943	30	1897	.13	1981		
4	78	48	63	94	1943	27	1945	.66	1964		
5	78	48	63	96	1989	28	1901	.40	1921		
6	78	48	63	98	1989	32	1936*	.36	1906		
7	79	49	64	99	1989	30	1909	.42	1951		
8	79	49	64	99	1989	33	1929	1.03	1919		
9	79	49	64	97	1989	34	1928	.67	1926		
10	80	49	65	96	1989*	28	1922	.16	1968		
11	80	49	65	95	1988*	32	1922	.48	1969		
12	80	50	65	96	1988	34	1967	.74	1941	T	1967
13	81	50	65	96	1963*	33	1912	.60	1905		
14	81	50	66	99	1925	33	1922	.25	1916		
15	81	50	66	97	1937*	35	1945	.68	1988		
16	81	50	66	98	1948	34	1976*	.33	1988	2.0	1976
17	82	51	66	97	1987*	30	1924	.44	1970		
18	82	51	66	98	1989	31	1896	.16	1917		
19	82	51	67	101	1989	33	1933*	.44	1987		
20	83	51	67	104	1989	34	1933	.74	1952		
21	83	52	67	104	1989	38	1941*	.30	1932		
22	83	52	67	98	1965	33	1904	.70	1913		
23	83	52	68	96	1949*	37	1923*	.81	1905		
24	84	52	68	99	1996	35	1937	.40	1930		
25	84	52	68	99	1910	34	1960	.32	1963		
26	84	53	68	99	1992	34	1921	.03	1985		
27	84	53	69	101	1992	36	1920	.42	1905		
28	85	53	69	101	1992	38	1932*	.33	1905		
29	85	53	69	102	1992	36	1970	.20	1951		
30	85	54	69	102	1943	36	1899	.40	1981		

* - ALSO IN EARLIER YEARS. T - TRACE, AN AMOUNT TOO SMALL TO MEASURE.
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD.

NORMAL TEMPERATURE FOR APRIL 65.8
RECORD HIGH TEMPERATURE FOR APRIL 104 SET IN 1989 (20 & 21)
RECORD LOW TEMPERATURE FOR APRIL 27 SET IN 1945 (4)

NORMAL PRECIPITATION FOR APRIL .30 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL 1.03 INCHES SET IN 1919 (8)
RECORD MONTHLY PRECIPITATION TOTAL 3.53 INCHES SET IN 1905
RECORD LOW MONTHLY PRECIPITATION TOTAL ZERO INCHES SET IN 1993
(last of 10 occurrences)

RECORD ONE-DAY SNOWFALL TOTAL 2.0 INCHES SET IN 1976 (16)
RECORD MONTHLY SNOWFALL TOTAL 2.0 INCHES SET IN 1976

**ALL-TIME TUCSON APRIL TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST APRILS

1)	73.8	1989
2)	71.4	1954
3)	70.7	1992
4)	70.6	1946
5)	70.4	1943
6)	70.1	1987
	70.1	1962
8)	69.7	1990
9)	69.2	1959
	69.2	1950

TOP 10 COLDEST APRILS

1)	57.8	1975
2)	58.3	1905
3)	58.6	1920
4)	58.7	1912
5)	59.1	1900
6)	59.6	1973
7)	59.8	1941
8)	60.3	1983
9)	60.6	1933
10)	61.1	1970
	61.1	1922

NORMAL TEMPERATURE FOR APRIL (1961-1990)	65.8
NORMAL TEMPERATURE FOR APRIL (1951-1980)	64.9
NORMAL TEMPERATURE FOR APRIL (1941-1970)	65.5
NORMAL TEMPERATURE FOR APRIL (1931-1960)	65.9
NORMAL TEMPERATURE FOR APRIL (1921-1950)	65.0
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	65.0

AVERAGE TEMPERATURE DURING THE 1990's	68.1
AVERAGE TEMPERATURE DURING THE 1980's	67.4
AVERAGE TEMPERATURE DURING THE 1970's	63.6
AVERAGE TEMPERATURE DURING THE 1960's	65.2
AVERAGE TEMPERATURE DURING THE 1950's	66.4
AVERAGE TEMPERATURE DURING THE 1940's	65.7
AVERAGE TEMPERATURE DURING THE 1930's	65.6
AVERAGE TEMPERATURE DURING THE 1920's	62.7
AVERAGE TEMPERATURE DURING THE 1910's	63.7
AVERAGE TEMPERATURE DURING THE 1900's	62.6
AVERAGE TEMPERATURE DURING THE 1890's	65.6

TOP 10 WARMEST APRIL DATES

1)	104	4/21/1989
	104	4/20/1989
3)	102	4/29/1992
	102	4/30/1943
5)	101	4/28/1992
	101	4/27/1992
	101	4/19/1989
8)	100	4/30/1992
	100	4/27/1910
10)	99	4/24/1996
	(last of 8 occurrences)	

TOP 10 COLDEST APRIL DATES

1)	27	4/ 4/1945
2)	28	4/10/1922
	28	4/ 2/1917
	28	4/ 5/1901
5)	30	4/17/1924
	30	4/ 7/1909
	30	4/ 3/1897
	30	4/ 2/1897
9)	31	4/ 1/1938
	(last of 6 occurrences)	

**ALL-TIME TUCSON APRIL PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST APRILS

TOP 10 DRIEST APRILS

1)	3.53	1905
2)	1.66	1951
3)	1.51	1952
4)	1.42	1926
5)	1.15	1988
6)	1.12	1900
7)	1.10	1919
8)	1.06	1941
9)	1.03	1898
10)	.80	1987

1)	ZERO	1993
	ZERO	1991
	ZERO	1989
	ZERO	1972
	ZERO	1960
	ZERO	1954
	ZERO	1914
	ZERO	1909
	ZERO	1904
	ZERO	1903

NORMAL PRECIPITATION FOR APRIL (1961-1990)	.30
NORMAL PRECIPITATION FOR APRIL (1951-1980)	.32
NORMAL PRECIPITATION FOR APRIL (1941-1970)	.35
NORMAL PRECIPITATION FOR APRIL (1931-1960)	.27
NORMAL PRECIPITATION FOR APRIL (1921-1950)	.32
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.34

AVERAGE PRECIPITATION DURING THE 1990's	.09
AVERAGE PRECIPITATION DURING THE 1980's	.36
AVERAGE PRECIPITATION DURING THE 1970's	.24
AVERAGE PRECIPITATION DURING THE 1960's	.29
AVERAGE PRECIPITATION DURING THE 1950's	.42
AVERAGE PRECIPITATION DURING THE 1940's	.33
AVERAGE PRECIPITATION DURING THE 1930's	.16
AVERAGE PRECIPITATION DURING THE 1920's	.49
AVERAGE PRECIPITATION DURING THE 1910's	.36
AVERAGE PRECIPITATION DURING THE 1900's	.54
AVERAGE PRECIPITATION DURING THE 1890's	.36

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	1.03	4/ 8/1919
2)	.81	4/23/1905
3)	.74	4/20/1952
	.74	4/12/1941
5)	.70	4/22/1913
6)	.68	4/15/1988
	.68	4/23/1942
8)	.67	4/ 9/1926
9)	.66	4/ 4/1964
10)	.60	4/ 2/1922

ALL-TIME TUCSON APRIL SNOWFALL RECORDS
(1895-1996) 102 YEARS

TOP SNOWIEST APRILS

1)	2.0	1976
2)	1.0	1956
3)	TRACE	1967

TOP SNOWIEST APRIL DAYS

1)	2.0	4/16/1976
2)	1.0	4/ 2/1956
3)	TRACE	4/12/1967

DAILY RECORDS FOR MAY
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION	
AVERAGES				RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR
1	85	54	70	100	1943	37	1906	.69	1941
2	86	54	70	102	1947	39	1967	.17	1904
3	86	54	70	105	1947	32	1899	.57	1930
4	86	55	70	103	1947	35	1899	.18	1918
5	86	55	70	102	1947	38	1950	.45	1969
6	87	55	71	104	1989	39	1917*	.48	1978
7	87	55	71	105	1989	37	1915	.13	1995
8	87	56	72	106	1989	40	1965*	.07	1987
9	87	56	72	101	1934*	40	1896	.32	1912
10	88	56	72	106	1934	39	1930*	.37	1904
11	88	56	72	105	1996	37	1922	.06	1987
12	88	57	73	107	1996	38	1933	.15	1957
13	89	57	73	105	1988	39	1933	.08	1977
14	89	57	73	104	1988	41	1933	.13	1987
15	89	57	73	104	1934	43	1933	1.34	1931
16	90	58	74	106	1934	44	1911	.12	1989
17	90	58	74	102	1956	44	1911	.11	1975
18	90	58	74	101	1996*	47	1962*	.29	1940
19	91	59	75	104	1925	42	1903	.74	1917
20	91	59	75	102	1986	39	1902	.28	1987
21	91	59	75	105	1914	42	1899	.21	1920
22	92	60	76	105	1989	43	1902	.25	1919
23	92	60	76	106	1984	44	1927	.52	1919
24	93	60	77	104	1984*	42	1909	.50	1967
25	93	61	77	105	1896	43	1980	.08	1967
26	93	61	77	107	1951	44	1916	.44	1926
27	94	61	78	107	1951	44	1917	.06	1992
28	94	62	78	107	1958	45	1905	.89	1943
29	95	62	78	111	1910	43	1918	.37	1907
30	95	63	79	110	1910	42	1909	.44	1986
31	95	63	79	107	1910	44	1918	.13	1914

* - ALSO IN EARLIER YEARS.

NORMAL TEMPERATURE FOR MAY	74.0
RECORD HIGH TEMPERATURE FOR MAY	111 SET IN 1910 (29)
RECORD LOW TEMPERATURE FOR MAY	32 SET IN 1899 (3)

NORMAL PRECIPITATION FOR MAY	.18 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL	1.34 INCHES SET IN 1931 (15)
RECORD MONTHLY PRECIPITATION TOTAL	1.34 INCHES SET IN 1931
RECORD LOW MONTHLY PRECIPITATION TOTAL	ZERO INCHES SET IN 1996 (last of 19 occurrences)

**ALL-TIME TUCSON MAY TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST MAYS

1)	79.9	1984
2)	79.1	1958
3)	79.0	1996
4)	78.3	1934
5)	78.1	1993
6)	77.4	1989
7)	77.2	1963
8)	76.8	1986
	76.8	1947
10)	76.7	1992
	76.7	1952

TOP 10 COLDEST MAYS

1)	64.6	1905
2)	66.5	1917
3)	67.0	1915
4)	67.1	1933
5)	67.6	1935
6)	67.9	1899
7)	68.2	1908
8)	68.6	1909
9)	68.8	1953
10)	69.0	1921

NORMAL TEMPERATURE FOR MAY (1961-1990)	74.0
NORMAL TEMPERATURE FOR MAY (1951-1980)	73.2
NORMAL TEMPERATURE FOR MAY (1941-1970)	73.6
NORMAL TEMPERATURE FOR MAY (1931-1960)	73.5
NORMAL TEMPERATURE FOR MAY (1921-1950)	73.1
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	73.0

AVERAGE TEMPERATURE DURING THE 1990's	75.8
AVERAGE TEMPERATURE DURING THE 1980's	75.1
AVERAGE TEMPERATURE DURING THE 1970's	72.4
AVERAGE TEMPERATURE DURING THE 1960's	73.3
AVERAGE TEMPERATURE DURING THE 1950's	73.7
AVERAGE TEMPERATURE DURING THE 1940's	74.4
AVERAGE TEMPERATURE DURING THE 1930's	72.2
AVERAGE TEMPERATURE DURING THE 1920's	73.1
AVERAGE TEMPERATURE DURING THE 1910's	70.9
AVERAGE TEMPERATURE DURING THE 1900's	70.3
AVERAGE TEMPERATURE DURING THE 1890's	72.5

TOP 10 WARMEST MAY DATES

1)	111	5/29/1910
2)	110	5/30/1910
3)	107	5/12/1996
	107	5/28/1958
	107	5/27/1951
	107	5/26/1951
	107	5/31/1910
8)	106	5/ 8/1989
	106	5/28/1984
	106	5/23/1984
	106	5/29/1958
	106	5/27/1958
	106	5/16/1934
	106	5/10/1934
	106	5/28/1896
	106	5/26/1896

TOP 10 COLDEST MAY DATES

1)	32	5/ 3/1899
2)	35	5/ 4/1899
3)	37	5/11/1922
	37	5/ 7/1915
	37	5/ 4/1915
	37	5/ 1/1906
7)	38	5/ 5/1950
	38	5/12/1933
	38	5/ 7/1933
	38	5/ 4/1913
	38	5/ 4/1912

**ALL-TIME TUCSON MAY PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST MAYS

1)	1.34	1931
2)	1.11	1992
3)	.93	1930
4)	.89	1943
5)	.82	1919
	.82	1917
7)	.74	1987
	.74	1941
9)	.67	1979
10)	.62	1967

TOP 10 DRIEST MAYS

1)	ZERO	1996
	(last of 19 occurrences)	

NORMAL PRECIPITATION FOR MAY (1961-1990)	.18
NORMAL PRECIPITATION FOR MAY (1951-1980)	.14
NORMAL PRECIPITATION FOR MAY (1941-1970)	.14
NORMAL PRECIPITATION FOR MAY (1931-1960)	.13
NORMAL PRECIPITATION FOR MAY (1931-1960)	.21
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.20

AVERAGE PRECIPITATION DURING THE 1990's	.34
AVERAGE PRECIPITATION DURING THE 1980's	.22
AVERAGE PRECIPITATION DURING THE 1970's	.21
AVERAGE PRECIPITATION DURING THE 1960's	.13
AVERAGE PRECIPITATION DURING THE 1950's	.09
AVERAGE PRECIPITATION DURING THE 1940's	.26
AVERAGE PRECIPITATION DURING THE 1930's	.28
AVERAGE PRECIPITATION DURING THE 1920's	.11
AVERAGE PRECIPITATION DURING THE 1910's	.28
AVERAGE PRECIPITATION DURING THE 1900's	.18
AVERAGE PRECIPITATION DURING THE 1890's	.02

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	1.34	5/15/1931
2)	.89	5/28/1943
3)	.74	5/19/1917
4)	.69	5/ 1/1941
5)	.57	5/ 3/1930
6)	.52	5/23/1919
7)	.50	5/24/1967
8)	.48	5/ 6/1978
9)	.45	5/ 5/1969
10)	.44	5/30/1986
	.44	5/26/1926

DAILY RECORDS FOR JUNE
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION	
AVERAGES				RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR
1	96	63	80	105	1938	44	1916	.12	1914
2	96	64	80	105	1994*	45	1895	.59	1899
3	97	64	80	107	1996*	46	1906	.06	1979*
4	97	64	81	112	1990	43	1908	.15	1979
5	97	65	81	108	1990*	46	1908	.08	1987
6	98	65	82	108	1912	52	1917*	.08	1987
7	98	65	82	109	1985	46	1925	.17	1900
8	98	66	82	111	1985	46	1925	.22	1979
9	99	66	82	109	1985*	50	1907	.44	1990
10	99	66	83	110	1896	53	1941*	.54	1914
11	99	67	83	111	1933	49	1913	.22	1903
12	100	67	83	109	1995*	49	1913	.38	1973
13	100	67	84	110	1924	53	1919	.19	1991
14	100	68	84	111	1993	54	1922*	.12	1921
15	100	68	84	110	1896	48	1901	.01	1905
16	100	68	84	109	1988*	50	1962	.20	1918
17	101	69	85	109	1989*	52	1944*	.14	1904
18	101	69	85	113	1989	49	1921	.12	1967
19	101	69	85	112	1989	50	1921	.92	1930
20	101	69	85	109	1993*	53	1920	.07	1925
21	101	70	85	112	1990*	50	1923	.71	1950
22	101	70	86	114	1988	55	1907	.53	1950
23	101	70	86	113	1988	57	1916*	.63	1940
24	101	70	86	113	1994	57	1907	1.27	1954
25	101	71	86	115	1994	56	1907	.66	1984
26	101	71	86	117	1990	55	1965	.25	1962
27	101	71	86	112	1990	57	1965	.54	1909
28	101	71	86	115	1994	57	1941*	1.56	1938
29	101	72	86	116	1994	57	1906	.55	1912
30	101	72	86	112	1989	58	1913	.55	1925

* - ALSO IN EARLIER YEARS.

NORMAL TEMPERATURE FOR JUNE 83.8
RECORD HIGH TEMPERATURE FOR JUNE 117 SET IN 1990 (26)
RECORD LOW TEMPERATURE FOR JUNE 43 SET IN 1908 (4)

NORMAL PRECIPITATION FOR JUNE .20 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL 1.56 INCHES SET IN 1938 (28)
RECORD MONTHLY PRECIPITATION TOTAL 2.07 INCHES SET IN 1938
RECORD LOW MONTHLY PRECIPITATION TOTAL ZERO INCHES SET IN 1983
(last of 11 occurrences)

**ALL-TIME TUCSON JUNE TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST JUNES

1)	89.2	1994
2)	88.6	1990
3)	87.4	1996
4)	86.8	1988
	86.8	1974
6)	86.5	1986
7)	86.3	1987
8)	86.2	1956
9)	86.1	1981
10)	85.8	1985
	85.8	1978

TOP 10 COLDEST JUNES

1)	77.6	1965
2)	77.7	1905
3)	78.0	1907
4)	78.2	1913
5)	78.4	1923
6)	78.9	1945
7)	79.2	1908
8)	79.4	1901
9)	79.5	1932
	79.5	1921

NORMAL TEMPERATURE FOR JUNE (1961-1990)	83.8
NORMAL TEMPERATURE FOR JUNE (1951-1980)	83.0
NORMAL TEMPERATURE FOR JUNE (1941-1970)	82.1
NORMAL TEMPERATURE FOR JUNE (1931-1960)	82.7
NORMAL TEMPERATURE FOR JUNE (1921-1950)	82.1
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	82.5

AVERAGE TEMPERATURE DURING THE 1990's	85.6
AVERAGE TEMPERATURE DURING THE 1980's	84.7
AVERAGE TEMPERATURE DURING THE 1970's	83.2
AVERAGE TEMPERATURE DURING THE 1960's	81.6
AVERAGE TEMPERATURE DURING THE 1950's	83.7
AVERAGE TEMPERATURE DURING THE 1940's	82.3
AVERAGE TEMPERATURE DURING THE 1930's	81.7
AVERAGE TEMPERATURE DURING THE 1920's	81.2
AVERAGE TEMPERATURE DURING THE 1910's	81.9
AVERAGE TEMPERATURE DURING THE 1900's	80.4
AVERAGE TEMPERATURE DURING THE 1890's	81.9

TOP 10 WARMEST JUNE DATES

1)	117	6/26/1990
2)	116	6/29/1994
3)	115	6/28/1994
	115	6/25/1994
5)	114	6/22/1988
6)	113	6/26/1994
	113	6/24/1994
	113	6/26/1993
	113	6/28/1990
	113	6/25/1990
	113	6/18/1989
	113	6/23/1988

TOP 10 COLDEST JUNE DATES

1)	43	6/ 4/1908
2)	44	6/ 1/1916
3)	45	6/ 1/1908
	45	6/ 2/1895
5)	46	6/ 8/1925
	46	6/ 7/1925
	46	6/ 5/1908
	46	6/ 3/1906
9)	47	6/ 2/1955
10)	48	6/ 1/1936
		(last of 7 occurrences)

**ALL-TIME TUCSON JUNE PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST JUNES

1)	2.07	1938
2)	1.46	1954
3)	1.31	1914
4)	1.27	1899
5)	1.24	1950
6)	1.14	1940
7)	1.12	1930
8)	1.05	1984
9)	.86	1925
10)	.68	1972

TOP 10 DRIEST JUNES

1)	ZERO	1983
	ZERO	1975
	ZERO	1969
	ZERO	1968
	ZERO	1945
	ZERO	1942
	ZERO	1923
	ZERO	1917
	ZERO	1906
	ZERO	1901
	ZERO	1897

NORMAL PRECIPITATION FOR JUNE (1961-1990)	.20
NORMAL PRECIPITATION FOR JUNE (1951-1980)	.22
NORMAL PRECIPITATION FOR JUNE (1941-1970)	.20
NORMAL PRECIPITATION FOR JUNE (1931-1960)	.29
NORMAL PRECIPITATION FOR JUNE (1921-1950)	.30
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.25

AVERAGE PRECIPITATION DURING THE 1990's	.17
AVERAGE PRECIPITATION DURING THE 1980's	.21
AVERAGE PRECIPITATION DURING THE 1970's	.24
AVERAGE PRECIPITATION DURING THE 1960's	.12
AVERAGE PRECIPITATION DURING THE 1950's	.41
AVERAGE PRECIPITATION DURING THE 1940's	.15
AVERAGE PRECIPITATION DURING THE 1930's	.41
AVERAGE PRECIPITATION DURING THE 1920's	.27
AVERAGE PRECIPITATION DURING THE 1910's	.31
AVERAGE PRECIPITATION DURING THE 1900's	.15
AVERAGE PRECIPITATION DURING THE 1890's	.34

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	1.56	6/28/1938
2)	1.27	6/24/1954
3)	.92	6/19/1930
4)	.71	6/21/1950
5)	.66	6/25/1984
	.66	6/25/1899
7)	.63	6/23/1940
8)	.59	6/ 2/1899
9)	.55	6/30/1925
	.55	6/29/1912

DAILY RECORDS FOR JULY
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION	
AVERAGES				RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR
1	101	72	86	111	1990	57	1928	.71	1898
2	101	72	86	111	1994*	59	1992	.65	1917
3	101	72	86	111	1989*	49	1911	1.40	1959
4	100	73	87	114	1989	59	1935	.70	1921
5	100	73	87	111	1992*	54	1912	1.03	1952
6	100	73	87	109	1989	59	1902	.49	1982
7	100	73	87	110	1942*	58	1938	1.47	1974
8	100	73	87	111	1994*	63	1936*	1.29	1897
9	100	73	87	110	1979	58	1926	.74	1932
10	100	74	87	109	1979*	60	1926	.59	1917
11	100	74	87	111	1958	68	1937*	.90	1919
12	100	74	87	109	1994*	63	1960	1.31	1923
13	100	74	87	110	1994*	62	1936	.62	1912
14	100	74	87	109	1994*	65	1962	1.16	1964
15	99	74	87	108	1988	62	1905	1.12	1990
16	99	74	87	108	1925	64	1905	1.90	1919
17	99	74	87	109	1992	65	1909*	1.84	1908
18	99	74	87	109	1992*	60	1913	.97	1919
19	99	74	87	108	1989*	65	1948*	1.39	1970
20	99	74	87	109	1989	63	1906	1.11	1979
21	99	74	87	107	1931	64	1913	1.35	1910
22	99	74	87	107	1994*	63	1973*	2.12	1955
23	99	74	86	109	1987	62	1913	.98	1941
24	99	74	86	109	1987	62	1913	1.87	1948
25	99	74	86	109	1943	65	1913	1.27	1981
26	99	74	86	112	1995	59	1913	2.00	1936
27	98	74	86	113	1995	59	1913	1.84	1945
28	98	74	86	114	1995	62	1913	1.88	1921
29	98	74	86	110	1995	62	1913	3.93	1958
30	98	74	86	109	1986*	64	1919*	1.08	1964
31	98	74	86	111	1986	66	1955*	1.43	1955*

* - ALSO IN EARLIER YEARS.

NORMAL TEMPERATURE FOR JULY	86.6
RECORD HIGH TEMPERATURE FOR JULY	114 SET IN 1995 (28) & 1989 (4)
RECORD LOW TEMPERATURE FOR JULY	49 SET IN 1911 (3)
NORMAL PRECIPITATION FOR JULY	2.37 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL	3.93 INCHES SET IN 1958 (29)
RECORD MONTHLY PRECIPITATION TOTAL	6.24 INCHES SET IN 1921
RECORD LOW MONTHLY PRECIPITATION TOTAL	.04 INCHES SET IN 1995

**ALL-TIME TUCSON JULY TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST JULYS

1)	90.4	1994
2)	89.9	1989
3)	89.7	1942
4)	88.8	1951
5)	88.6	1996
	88.6	1980
7)	88.4	1995
	88.4	1931
9)	88.3	1947
	88.3	1900

TOP 10 COLDEST JULYS

1)	81.4	1912
2)	82.8	1950
3)	83.1	1919
	83.1	1914
5)	83.5	1974
	83.5	1913
7)	83.6	1911
8)	83.9	1976
	83.9	1908
10)	84.1	1984
	84.1	1975
	84.1	1921

NORMAL TEMPERATURE FOR JULY (1961-1990)	86.6
NORMAL TEMPERATURE FOR JULY (1951-1980)	86.2
NORMAL TEMPERATURE FOR JULY (1941-1970)	86.3
NORMAL TEMPERATURE FOR JULY (1931-1960)	86.3
NORMAL TEMPERATURE FOR JULY (1921-1950)	86.2
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	86.2

AVERAGE TEMPERATURE DURING THE 1990's	87.8
AVERAGE TEMPERATURE DURING THE 1980's	86.8
AVERAGE TEMPERATURE DURING THE 1970's	86.0
AVERAGE TEMPERATURE DURING THE 1960's	85.7
AVERAGE TEMPERATURE DURING THE 1950's	86.2
AVERAGE TEMPERATURE DURING THE 1940's	87.1
AVERAGE TEMPERATURE DURING THE 1930's	86.6
AVERAGE TEMPERATURE DURING THE 1920's	86.2
AVERAGE TEMPERATURE DURING THE 1910's	84.4
AVERAGE TEMPERATURE DURING THE 1900's	85.6
AVERAGE TEMPERATURE DURING THE 1890's	86.0

TOP 10 WARMEST JULY DATES

1)	114	7/28/1995
	114	7/ 4/1989
3)	113	7/27/1995
4)	112	7/26/1995
5)	111	7/ 8/1994
	111	7/ 2/1994
	111	7/ 5/1992
	111	7/ 4/1992
	111	7/ 1/1992
	111	7/ 3/1989
	111	7/31/1986
	111	7/ 5/1983
	111	7/11/1958
	111	7/ 8/1920
	111	7/ 3/1907
	111	7/ 2/1907

TOP 10 COLDEST JULY DATES

1)	49	7/ 3/1911
2)	54	7/ 5/1912
3)	55	7/ 5/1904
4)	57	7/ 1/1928
5)	58	7/ 7/1938
	58	7/ 9/1926
	58	7/ 1/1913
8)	59	7/ 2/1992
	59	7/ 4/1935
	59	7/27/1913
	59	7/26/1913
	59	7/ 6/1902

**ALL-TIME TUCSON JULY PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST JULYS

1)	6.24	1921
2)	6.17	1981
3)	5.53	1919
4)	5.45	1990
5)	5.20	1958
6)	5.10	1955
7)	4.82	1964
8)	4.77	1908
9)	4.44	1974
10)	4.27	1907

TOP 10 DRIEST JULYS

1)	.04	1995
2)	.11	1895
3)	.25	1920
4)	.26	1993
5)	.27	1947
6)	.37	1987
7)	.41	1994
8)	.42	1902
9)	.44	1991
10)	.61	1939

NORMAL PRECIPITATION FOR JULY (1961-1990)	2.37
NORMAL PRECIPITATION FOR JULY (1951-1980)	2.42
NORMAL PRECIPITATION FOR JULY (1941-1970)	2.38
NORMAL PRECIPITATION FOR JULY (1931-1960)	2.06
NORMAL PRECIPITATION FOR JULY (1921-1950)	1.80
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	2.16

AVERAGE PRECIPITATION DURING THE 1990's	1.34
AVERAGE PRECIPITATION DURING THE 1980's	2.34
AVERAGE PRECIPITATION DURING THE 1970's	2.15
AVERAGE PRECIPITATION DURING THE 1960's	2.13
AVERAGE PRECIPITATION DURING THE 1950's	3.16
AVERAGE PRECIPITATION DURING THE 1940's	1.69
AVERAGE PRECIPITATION DURING THE 1930's	1.46
AVERAGE PRECIPITATION DURING THE 1920's	1.93
AVERAGE PRECIPITATION DURING THE 1910's	2.84
AVERAGE PRECIPITATION DURING THE 1900's	2.29
AVERAGE PRECIPITATION DURING THE 1890's	2.13

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	3.93	7/29/1958
2)	2.12	7/22/1955
3)	2.00	7/26/1936
4)	1.90	7/16/1919
5)	1.88	7/28/1921
6)	1.87	7/24/1948
7)	1.84	7/27/1945
	1.84	7/17/1908
9)	1.82	7/22/1910
10)	1.64	7/16/1972

DAILY RECORDS FOR AUGUST
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION	
AVERAGES				RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR
1	98	74	86	112	1993	64	1935	2.88	1935
2	98	74	86	110	1918	59	1917	1.52	1897
3	98	73	86	110	1994	63	1955	2.28	1955
4	98	73	86	109	1994*	63	1911	.67	1901
5	98	73	86	108	1995*	64	1916	1.12	1916
6	98	73	85	109	1995	63	1928	1.88	1955
7	97	73	85	108	1995	64	1912	1.07	1983
8	97	73	85	107	1995	61	1895	1.40	1895
9	97	73	85	109	1915	61	1925	2.48	1923
10	97	73	85	109	1994*	62	1925*	1.23	1955
11	97	73	85	108	1993	62	1917*	2.07	1995
12	97	72	85	108	1993	57	1900	1.38	1966
13	97	72	85	106	1996*	63	1925*	1.81	1993
14	97	72	85	106	1994*	61	1918	2.25	1940
15	97	72	85	109	1915	63	1918*	1.10	1979
16	97	72	84	108	1992	60	1938	.91	1944
17	97	72	84	107	1992	60	1938	1.27	1955
18	97	72	84	106	1987	61	1918	1.03	1936
19	97	72	84	110	1915	60	1924	.84	1920
20	96	72	84	110	1915	55	1917	.68	1904
21	96	72	84	108	1930	59	1917	.88	1945
22	96	71	84	110	1930	62	1895	2.48	1961
23	96	71	84	107	1985	60	1900	1.96	1992
24	96	71	84	108	1985	60	1900	.93	1986
25	96	71	84	106	1985*	60	1900	.80	1984
26	96	71	84	106	1901	63	1906	.99	1903
27	96	71	84	106	1930	60	1900	.70	1911
28	96	71	83	106	1948	59	1900	.81	1969
29	96	71	83	107	1985*	58	1917	1.73	1910
30	96	71	83	106	1985*	61	1920*	1.35	1914
31	96	71	83	108	1950	62	1895	1.66	1957

* - ALSO IN EARLIER YEARS.

NORMAL TEMPERATURE FOR AUGUST 84.5
RECORD HIGH TEMPERATURE FOR AUGUST 112 SET IN 1993 (1)
RECORD LOW TEMPERATURE FOR AUGUST 55 SET IN 1917 (20)

NORMAL PRECIPITATION FOR AUGUST 2.19 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL 2.88 INCHES SET IN 1935 (1)
RECORD MONTHLY PRECIPITATION TOTAL 7.93 INCHES SET IN 1955
RECORD LOW MONTHLY PRECIPITATION TOTAL .08 INCHES SET 1924

**ALL-TIME TUCSON AUGUST TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST AUGUSTS

1)	90.2	1994
2)	87.3	1995
3)	86.9	1962
4)	86.8	1915
5)	86.6	1991
	86.6	1989
7)	86.4	1996
	86.4	1981
	86.4	1977
	86.4	1953
	86.4	1944

TOP 10 COLDEST AUGUSTS

1)	80.8	1923
2)	81.2	1968
3)	81.3	1971
4)	81.5	1964
5)	81.7	1959
6)	81.8	1961
	81.8	1955
	81.8	1921
	81.8	1918
10)	81.9	1906

NORMAL TEMPERATURE FOR AUGUST (1961-1990)	84.5
NORMAL TEMPERATURE FOR AUGUST (1951-1980)	84.0
NORMAL TEMPERATURE FOR AUGUST (1941-1970)	83.8
NORMAL TEMPERATURE FOR AUGUST (1931-1960)	83.1
NORMAL TEMPERATURE FOR AUGUST (1921-1950)	83.8
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	84.2

AVERAGE TEMPERATURE DURING THE 1990's	86.2
AVERAGE TEMPERATURE DURING THE 1980's	85.1
AVERAGE TEMPERATURE DURING THE 1970's	84.2
AVERAGE TEMPERATURE DURING THE 1960's	83.6
AVERAGE TEMPERATURE DURING THE 1950's	84.1
AVERAGE TEMPERATURE DURING THE 1940's	84.4
AVERAGE TEMPERATURE DURING THE 1930's	84.2
AVERAGE TEMPERATURE DURING THE 1920's	83.7
AVERAGE TEMPERATURE DURING THE 1910's	83.9
AVERAGE TEMPERATURE DURING THE 1900's	83.6
AVERAGE TEMPERATURE DURING THE 1890's	83.8

TOP 10 WARMEST AUGUST DATES

1)	112	8/ 1/1993
2)	110	8/ 3/1994
	110	8/22/1930
	110	8/ 2/1918
	110	8/20/1915
	110	8/19/1915
7)	109	8/ 6/1995
(last of 11 occurrences)		

TOP 10 COLDEST AUGUST DATES

1)	55	8/20/1917
2)	57	8/12/1900
3)	58	8/29/1917
4)	59	8/21/1917
	59	8/ 2/1917
	59	8/28/1900
7)	60	8/17/1938
(last of 8 occurrences)		

**ALL-TIME TUCSON AUGUST PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST AUGUSTS

1)	7.93	1955
2)	5.61	1935
3)	4.93	1993
4)	4.55	1992
5)	4.48	1895
6)	4.31	1945
7)	4.28	1961
8)	4.24	1983
9)	4.19	1984
10)	4.06	1923

TOP 10 DRIEST AUGUSTS

1)	.08	1924
2)	.10	1926
3)	.23	1976
4)	.32	1975
5)	.45	1994
6)	.46	1953
7)	.48	1962
8)	.54	1973
9)	.56	1905
10)	.78	1918

NORMAL PRECIPITATION FOR AUGUST (1961-1990)	2.19
NORMAL PRECIPITATION FOR AUGUST (1951-1980)	2.13
NORMAL PRECIPITATION FOR AUGUST (1941-1970)	2.34
NORMAL PRECIPITATION FOR AUGUST (1931-1960)	2.06
NORMAL PRECIPITATION FOR AUGUST (1921-1950)	2.15
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	2.25

AVERAGE PRECIPITATION DURING THE 1990's	2.91
AVERAGE PRECIPITATION DURING THE 1980's	2.66
AVERAGE PRECIPITATION DURING THE 1970's	1.48
AVERAGE PRECIPITATION DURING THE 1960's	2.37
AVERAGE PRECIPITATION DURING THE 1950's	2.42
AVERAGE PRECIPITATION DURING THE 1940's	2.37
AVERAGE PRECIPITATION DURING THE 1930's	2.52
AVERAGE PRECIPITATION DURING THE 1920's	1.70
AVERAGE PRECIPITATION DURING THE 1910's	1.89
AVERAGE PRECIPITATION DURING THE 1900's	1.97
AVERAGE PRECIPITATION DURING THE 1890's	2.98

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	2.88	8/ 1/1935
2)	2.48	8/22/1961
	2.48	8/ 9/1923
4)	2.28	8/ 3/1955
5)	2.25	8/14/1940
6)	2.07	8/11/1995
7)	2.05	8/ 1/1964
8)	1.99	8/22/1898
9)	1.96	8/23/1992
10)	1.88	8/ 6/1955

DAILY RECORDS FOR SEPTEMBER
(1895-1996) 102 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION	
AVERAGES				RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR
1	96	71	83	107	1950	58	1914	1.28	1954
2	95	70	83	107	1899	57	1914	.70	1988
3	95	70	83	107	1983*	58	1913	1.72	1996
4	95	70	83	106	1945	56	1961	1.90	1970
5	95	70	83	107	1945	53	1921	1.06	1909
6	95	70	83	106	1952	56	1921	.88	1897
7	95	70	82	104	1979*	57	1920	1.13	1950
8	95	70	82	105	1994*	58	1912	.94	1919
9	95	69	82	105	1990	51	1912	.99	1977
10	95	69	82	107	1990	53	1912	2.85	1964
11	94	69	82	107	1990	55	1928*	2.12	1921
12	94	69	81	105	1943	55	1920	1.48	1966
13	94	69	81	107	1895	52	1952	.90	1992
14	94	68	81	103	1956*	50	1900	1.30	1911
15	94	68	81	105	1928	52	1930	1.18	1944
16	94	68	81	104	1928*	50	1903	1.07	1925
17	93	67	80	105	1956	52	1915*	1.33	1991
18	93	67	80	105	1956	53	1906	1.01	1925
19	93	67	80	103	1934*	53	1909	.73	1983
20	93	67	80	104	1926	50	1965	.36	1974
21	92	66	79	105	1954	47	1965	1.10	1978
22	92	66	79	106	1989	50	1895	.80	1934
23	92	66	79	102	1908*	48	1941	1.32	1929
24	92	65	78	104	1899	49	1923	2.57	1943
25	91	65	78	104	1899	48	1913	1.25	1976
26	91	65	78	104	1899	43	1913	2.40	1962
27	91	64	78	102	1994	46	1915	1.38	1926
28	91	64	77	103	1994	44	1936*	2.15	1995
29	90	63	77	101	1917	44	1923*	1.02	1983
30	90	63	76	101	1989	44	1965	.75	1946

* - ALSO IN EARLIER YEARS.

NORMAL TEMPERATURE FOR SEPTEMBER	80.4
RECORD HIGH TEMPERATURE FOR SEPTEMBER	107 SET IN 1990 (11) (last of 8 occurrences)
RECORD LOW TEMPERATURE FOR SEPTEMBER	43 SET IN 1913 (26)
NORMAL PRECIPITATION FOR SEPTEMBER	1.67 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL	2.85 INCHES SET IN 1964 (10)
RECORD MONTHLY PRECIPITATION TOTAL	5.11 INCHES SET IN 1964
RECORD LOW MONTHLY PRECIPITATION TOTAL	ZERO INCHES SET IN 1953

**ALL-TIME TUCSON SEPTEMBER TEMPERATURE RECORDS
(1895-1996) 102 YEARS**

TOP 10 WARMEST SEPTEMBERS

1)	84.5	1989
2)	84.3	1956
3)	84.2	1994
4)	84.1	1979
5)	83.5	1992
6)	83.3	1952
7)	83.2	1951
8)	83.0	1947
9)	82.9	1954
	82.9	1953

TOP 10 COLDEST SEPTEMBERS

1)	76.3	1964
2)	76.4	1970
3)	76.7	1923
	76.7	1900
5)	76.8	1965
	76.8	1912
7)	76.9	1919
	76.9	1904
9)	77.0	1961
10)	77.2	1920

NORMAL TEMPERATURE FOR SEPTEMBER (1961-1990)	80.4
NORMAL TEMPERATURE FOR SEPTEMBER (1951-1980)	80.4
NORMAL TEMPERATURE FOR SEPTEMBER (1941-1970)	80.1
NORMAL TEMPERATURE FOR SEPTEMBER (1931-1960)	80.4
NORMAL TEMPERATURE FOR SEPTEMBER (1931-1960)	80.1
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	80.2

AVERAGE TEMPERATURE DURING THE 1990's	81.8
AVERAGE TEMPERATURE DURING THE 1980's	80.5
AVERAGE TEMPERATURE DURING THE 1970's	79.6
AVERAGE TEMPERATURE DURING THE 1960's	79.6
AVERAGE TEMPERATURE DURING THE 1950's	81.8
AVERAGE TEMPERATURE DURING THE 1940's	81.3
AVERAGE TEMPERATURE DURING THE 1930's	79.9
AVERAGE TEMPERATURE DURING THE 1920's	79.4
AVERAGE TEMPERATURE DURING THE 1910's	79.4
AVERAGE TEMPERATURE DURING THE 1900's	78.7
AVERAGE TEMPERATURE DURING THE 1890's	80.7

TOP 10 WARMEST SEPTEMBER DATES

1)	107	9/11/1990
	107	9/10/1990
	107	9/ 3/1983
	107	9/ 1/1950
	107	9/ 3/1948
	107	9/ 5/1945
	107	9/ 2/1899
	107	9/13/1895
9)	106	9/22/1989
	106	9/ 6/1952
	106	9/ 3/1952
	106	9/ 2/1948
	106	9/ 4/1945

TOP 10 COLDEST SEPTEMBER DATES

1)	43	9/26/1913
2)	44	9/30/1965
	44	9/28/1936
	44	9/29/1923
	44	9/28/1923
	44	9/29/1915
	44	9/28/1904
8)	45	9/29/1934
	45	9/30/1915
	45	9/30/1907
	45	9/30/1905

**ALL-TIME TUCSON SEPTEMBER PRECIPITATION RECORDS
(1895-1996) 102 YEARS**

TOP 10 WETTEST SEPTEMBERS

1)	5.11	1964
2)	4.28	1983
	4.28	1929
4)	3.68	1996
5)	3.59	1943
6)	3.58	1970
7)	3.53	1966
8)	3.05	1954
9)	3.01	1921
10)	2.95	1925

TOP 10 DRIEST SEPTEMBERS

1)	ZERO	1953
2)	TRACE	1973
	TRACE	1968
	TRACE	1959
	TRACE	1957
6)	.01	1912
7)	.02	1989
	.02	1979
9)	.03	1899
10)	.05	1955

NORMAL PRECIPITATION FOR SEPTEMBER (1961-1990)	1.67
NORMAL PRECIPITATION FOR SEPTEMBER (1951-1980)	1.33
NORMAL PRECIPITATION FOR SEPTEMBER (1941-1970)	1.37
NORMAL PRECIPITATION FOR SEPTEMBER (1931-1960)	1.00
NORMAL PRECIPITATION FOR SEPTEMBER (1921-1950)	1.48
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	1.33

AVERAGE PRECIPITATION DURING THE 1990's	1.71
AVERAGE PRECIPITATION DURING THE 1980's	1.74
AVERAGE PRECIPITATION DURING THE 1970's	1.41
AVERAGE PRECIPITATION DURING THE 1960's	1.81
AVERAGE PRECIPITATION DURING THE 1950's	.60
AVERAGE PRECIPITATION DURING THE 1940's	1.62
AVERAGE PRECIPITATION DURING THE 1930's	1.01
AVERAGE PRECIPITATION DURING THE 1920's	1.87
AVERAGE PRECIPITATION DURING THE 1910's	.93
AVERAGE PRECIPITATION DURING THE 1900's	.96
AVERAGE PRECIPITATION DURING THE 1890's	.94

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	2.85	9/10/1964
2)	2.57	9/24/1943
3)	2.40	9/26/1962
4)	2.15	9/28/1995
5)	2.12	9/11/1921
6)	1.90	9/ 4/1970
7)	1.88	9/24/1929
8)	1.72	9/ 3/1996
9)	1.48	9/12/1966
10)	1.47	9/26/1919

DAILY RECORDS FOR OCTOBER
(1894-1996) 103 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION	
AVERAGES				RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR
1	90	63	76	101	1955	42	1907	2.96	1983
2	89	62	76	101	1980	42	1927	1.73	1970
3	89	62	75	102	1993	45	1930*	1.18	1914
4	89	61	75	100	1917	40	1908	.63	1972
5	88	61	75	101	1917	39	1908	1.09	1989
6	88	61	74	101	1987*	39	1908	1.47	1977
7	88	60	74	101	1987	41	1913	.64	1977
8	87	60	73	101	1910	42	1970	.62	1960
9	87	59	73	100	1996	42	1939*	.55	1933
10	87	59	73	99	1996	38	1949	1.10	1933
11	86	59	72	99	1950*	37	1912	.25	1974
12	86	58	72	99	1992	35	1924	.94	1932
13	85	58	72	97	1989*	43	1931	.55	1916
14	85	57	71	98	1991*	33	1920	.72	1988
15	85	57	71	98	1991	38	1928*	.35	1994
16	84	57	70	100	1991	32	1899	.70	1985
17	84	56	70	96	1933	37	1899	.97	1971
18	84	56	70	98	1933*	35	1904	1.01	1972
19	83	55	69	99	1921	33	1908	1.75	1972
20	83	55	69	95	1952*	35	1908	.93	1988
21	82	55	68	96	1909	33	1920	1.55	1978
22	82	54	68	93	1952*	29	1908	.23	1957
23	82	54	68	94	1933	29	1906	.66	1896
24	81	53	67	96	1959	33	1935	.50	1925
25	81	53	27	94	1990*	33	1908	.20	1944
26	81	53	67	95	1934	32	1899	1.61	1996
27	80	52	66	94	1937	35	1970	.50	1991
28	80	52	66	94	1934*	29	1897	.58	1896
29	79	51	65	92	1950*	32	1912	1.64	1902
30	79	51	65	91	1990*	26	1971	1.47	1951
31	79	51	65	93	1916	29	1900	.44	1926

* - ALSO IN EARLIER YEARS.

NORMAL TEMPERATURE FOR OCTOBER 70.4
RECORD HIGH TEMPERATURE FOR OCTOBER 102 SET IN 1993 (3)
RECORD LOW TEMPERATURE FOR OCTOBER 26 SET IN 1971 (30)

NORMAL PRECIPITATION FOR OCTOBER 1.06 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL 2.96 INCHES SET IN 1983 (1)
RECORD MONTHLY PRECIPITATION TOTAL 4.98 INCHES SET IN 1983
RECORD LOW MONTHLY PRECIPITATION TOTAL ZERO INCHES SET IN 1982
(last of 10 occurrences)

**ALL-TIME TUCSON OCTOBER TEMPERATURE RECORDS
(1894-1996) 103 YEARS**

TOP 10 WARMEST OCTOBERS

1)	76.8	1950
2)	76.4	1952
3)	75.3	1988
4)	75.1	1987
5)	74.3	1955
6)	74.2	1992
	74.2	1954
8)	74.0	1991
9)	73.7	1978
10)	73.3	1977

TOP 10 COLDEST OCTOBERS

1)	63.8	1908
2)	64.0	1919
3)	64.2	1971
4)	65.0	1920
5)	65.1	1970
6)	65.4	1923
7)	65.7	1912
8)	65.9	1946
9)	66.2	1916
10)	66.3	1984

NORMAL TEMPERATURE FOR OCTOBER (1961-1990)	70.4
NORMAL TEMPERATURE FOR OCTOBER (1951-1980)	70.4
NORMAL TEMPERATURE FOR OCTOBER (1941-1970)	70.1
NORMAL TEMPERATURE FOR OCTOBER (1931-1960)	70.0
NORMAL TEMPERATURE FOR OCTOBER (1921-1950)	69.6
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	69.7

AVERAGE TEMPERATURE DURING THE 1990's	72.4
AVERAGE TEMPERATURE DURING THE 1980's	70.1
AVERAGE TEMPERATURE DURING THE 1970's	69.3
AVERAGE TEMPERATURE DURING THE 1960's	70.2
AVERAGE TEMPERATURE DURING THE 1950's	72.4
AVERAGE TEMPERATURE DURING THE 1940's	69.6
AVERAGE TEMPERATURE DURING THE 1930's	69.2
AVERAGE TEMPERATURE DURING THE 1920's	68.6
AVERAGE TEMPERATURE DURING THE 1910's	67.5
AVERAGE TEMPERATURE DURING THE 1900's	68.4
AVERAGE TEMPERATURE DURING THE 1890's	68.6

TOP 10 WARMEST OCTOBER DATES

1)	102	10/ 3/1993
2)	101	10/ 7/1987
	101	10/ 6/1987
	101	10/ 2/1980
	101	10/ 1/1955
	101	10/ 6/1934
	101	10/ 6/1929
	101	10/ 6/1928
	101	10/ 5/1917
	101	10/ 8/1910

TOP 10 COLDEST OCTOBER DATES

1)	26	10/30/1971
2)	29	10/22/1908
	29	10/23/1900
	29	10/31/1906
	29	10/28/1897
6)	31	10/31/1912
7)	32	10/30/1929
	32	10/31/1922
	32	10/29/1912
	32	10/23/1908
	32	10/22/1906
	32	10/26/1899
	32	10/16/1899

**ALL-TIME TUCSON OCTOBER PRECIPITATION RECORDS
(1894-1996) 103 YEARS**

TOP 10 WETTEST OCTOBERS

1)	4.98	1983
2)	4.51	1972
3)	3.31	1896
4)	2.62	1957
5)	2.59	1914
6)	2.36	1977
7)	2.12	1974
8)	2.09	1988
9)	2.03	1985
10)	2.00	1933

TOP 10 DRIEST OCTOBERS

1)	ZERO	1982
	ZERO	1973
	ZERO	1952
	ZERO	1938
	ZERO	1935
	ZERO	1923
	ZERO	1915
	ZERO	1909
	ZERO	1903
	ZERO	1898

NORMAL PRECIPITATION FOR OCTOBER (1961-1990)	1.06
NORMAL PRECIPITATION FOR OCTOBER (1951-1980)	.88
NORMAL PRECIPITATION FOR OCTOBER (1941-1970)	.66
NORMAL PRECIPITATION FOR OCTOBER (1931-1960)	.64
NORMAL PRECIPITATION FOR OCTOBER (1921-1950)	.47
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.75

AVERAGE PRECIPITATION DURING THE 1990's	.72
AVERAGE PRECIPITATION DURING THE 1980's	1.28
AVERAGE PRECIPITATION DURING THE 1970's	1.45
AVERAGE PRECIPITATION DURING THE 1960's	.46
AVERAGE PRECIPITATION DURING THE 1950's	.71
AVERAGE PRECIPITATION DURING THE 1940's	.61
AVERAGE PRECIPITATION DURING THE 1930's	.43
AVERAGE PRECIPITATION DURING THE 1920's	.38
AVERAGE PRECIPITATION DURING THE 1910's	.80
AVERAGE PRECIPITATION DURING THE 1900's	.48
AVERAGE PRECIPITATION DURING THE 1890's	.94

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	2.96	10/ 1/1983
2)	1.75	10/19/1972
3)	1.73	10/ 2/1970
4)	1.64	10/29/1902
5)	1.61	10/26/1996
6)	1.55	10/21/1978
7)	1.47	10/ 6/1951
	1.47	10/30/1983
9)	1.21	10/ 2/1983
10)	1.18	10/ 3/1914

DAILY RECORDS FOR NOVEMBER
(1894-1996) 103 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION		SNOWFALL	
AVERAGES				RECORDS		RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR	INCHES	YEAR
1	78	50	64	94	1924	32	1972*	.42	1987		
2	78	50	64	93	1916	33	1956	.21	1923*		
3	77	49	63	91	1931	28	1956	.74	1983		
4	77	49	63	91	1909	29	1956*	.07	1994		
5	77	48	62	91	1934	27	1935*	.64	1995*		
6	76	48	62	93	1934	29	1935*	.87	1915		
7	76	48	62	89	1934	28	1947*	.54	1963		
8	75	48	62	91	1906	27	1924*	.88	1905		
9	75	47	61	92	1906	29	1918*	.45	1969		
10	75	47	61	91	1934	27	1919	1.47	1923		
11	74	47	60	91	1894	29	1935*	1.40	1994		
12	74	46	60	89	1906*	25	1898	.76	1931		
13	73	46	60	88	1990	21	1898	1.57	1968		
14	73	46	59	88	1990	24	1916	.61	1924		
15	73	46	59	89	1906	28	1929	.53	1993	.1	1964
16	72	45	59	89	1906	26	1909	1.07	1952	6.4	1958
17	72	45	59	86	1990	24	1958	1.27	1900		
18	72	45	58	86	1990	24	1911	.60	1941		
19	71	44	58	87	1897	19	1921	1.12	1900	T	1994
20	71	44	58	87	1897	26	1921	.30	1913		
21	71	44	57	89	1897	22	1898	.84	1905		
22	70	44	57	90	1924	24	1979*	2.09	1931		
23	70	43	57	87	1917*	25	1916*	1.83	1895		
24	70	43	57	86	1981*	28	1979*	.91	1895		
25	69	43	56	86	1894	26	1992	1.25	1935		
26	69	43	56	86	1950	27	1938*	.48	1905		
27	69	43	56	85	1950	25	1911	.42	1909		
28	68	43	56	85	1945	24	1934	.92	1919		
29	68	42	55	83	1970*	23	1934	.58	1981	T	1975
30	68	42	55	84	1910	24	1934	.74	1982		

* - ALSO IN EARLIER YEARS. T - TRACE, AN AMOUNT TOO SMALL TO MEASURE.
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD.

NORMAL TEMPERATURE FOR NOVEMBER 59.2
RECORD HIGH TEMPERATURE FOR NOVEMBER 94 SET IN 1924 (1)
RECORD LOW TEMPERATURE FOR NOVEMBER 19 SET IN 1921 (19)

NORMAL PRECIPITATION FOR NOVEMBER .67 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL 2.09 INCHES SET IN 1931 (22)
RECORD MONTHLY PRECIPITATION TOTAL 4.61 INCHES SET IN 1905
RECORD LOW MONTHLY PRECIPITATION TOTAL ZERO INCHES SET IN 1980
(last of 12 occurrences)

RECORD ONE-DAY SNOWFALL TOTAL 6.4 INCHES SET IN 1958 (16)
RECORD MONTHLY SNOWFALL TOTAL 6.4 INCHES SET IN 1958

**ALL-TIME TUCSON NOVEMBER TEMPERATURE RECORDS
(1894-1996) 103 YEARS**

TOP 10 WARMEST NOVEMBERS

1)	64.3	1949
2)	64.0	1894
3)	63.2	1942
4)	63.1	1995
5)	63.0	1950
6)	62.9	1967
7)	62.7	1954
8)	62.6	1965
9)	62.1	1981
	62.1	1939

TOP 10 COLDEST NOVEMBERS

1)	52.9	1972
2)	53.1	1922
3)	53.5	1948
4)	54.0	1938
	54.0	1931
	54.0	1929
7)	54.1	1947
8)	54.3	1957
9)	54.4	1961
10)	54.5	1935
	54.5	1898

NORMAL TEMPERATURE FOR NOVEMBER (1961-1990)	59.2
NORMAL TEMPERATURE FOR NOVEMBER (1951-1980)	58.7
NORMAL TEMPERATURE FOR NOVEMBER (1941-1970)	58.5
NORMAL TEMPERATURE FOR NOVEMBER (1931-1960)	58.1
NORMAL TEMPERATURE FOR NOVEMBER (1921-1950)	58.2
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	58.5

AVERAGE TEMPERATURE DURING THE 1990's	59.4
AVERAGE TEMPERATURE DURING THE 1980's	59.2
AVERAGE TEMPERATURE DURING THE 1970's	58.2
AVERAGE TEMPERATURE DURING THE 1960's	59.3
AVERAGE TEMPERATURE DURING THE 1950's	58.9
AVERAGE TEMPERATURE DURING THE 1940's	58.3
AVERAGE TEMPERATURE DURING THE 1930's	57.8
AVERAGE TEMPERATURE DURING THE 1920's	57.3
AVERAGE TEMPERATURE DURING THE 1910's	57.2
AVERAGE TEMPERATURE DURING THE 1900's	58.4
AVERAGE TEMPERATURE DURING THE 1890's	58.4

TOP 10 WARMEST NOVEMBER DATES

1)	94	11/ 1/1924
2)	93	11/ 6/1934
	93	11/ 2/1916
4)	92	11/ 2/1910
	92	11/ 9/1906
6)	91	11/ 1/1939
	91	11/10/1934
	91	11/ 5/1934
	91	11/ 3/1931
	91	11/ 2/1931
	91	11/ 1/1918
	91	11/ 1/1916
	91	11/ 4/1909
	91	11/ 8/1906

TOP 10 COLDEST NOVEMBER DATES

1)	19	11/19/1921
2)	21	11/13/1898
3)	22	11/21/1898
4)	23	11/29/1934
5)	24	11/22/1979
	24	11/17/1958
	24	11/30/1934
	24	11/28/1934
	24	11/14/1916
	24	11/18/1911
	24	11/22/1898

ALL-TIME TUCSON NOVEMBER PRECIPITATION RECORDS
(1894-1996) 103 YEARS

TOP 10 WETTEST NOVEMBERS

1)	4.61	1905
2)	4.30	1895
3)	3.72	1931
4)	3.43	1923
5)	3.13	1919
6)	2.45	1900
7)	1.98	1913
8)	1.90	1952
9)	1.89	1935
10)	1.86	1968

TOP 10 DRIEST NOVEMBERS

1)	ZERO	1980
	ZERO	1970
	ZERO	1954
	ZERO	1945
	ZERO	1943
	ZERO	1932
	ZERO	1917
	ZERO	1916
	ZERO	1912
	ZERO	1903
	ZERO	1897
	ZERO	1894

NORMAL PRECIPITATION FOR NOVEMBER (1961-1990)	.67
NORMAL PRECIPITATION FOR NOVEMBER (1951-1980)	.62
NORMAL PRECIPITATION FOR NOVEMBER (1941-1970)	.56
NORMAL PRECIPITATION FOR NOVEMBER (1931-1960)	.62
NORMAL PRECIPITATION FOR NOVEMBER (1921-1950)	.76
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	.77

AVERAGE PRECIPITATION DURING THE 1990's	.70
AVERAGE PRECIPITATION DURING THE 1980's	.68
AVERAGE PRECIPITATION DURING THE 1970's	.60
AVERAGE PRECIPITATION DURING THE 1960's	.72
AVERAGE PRECIPITATION DURING THE 1950's	.53
AVERAGE PRECIPITATION DURING THE 1940's	.61
AVERAGE PRECIPITATION DURING THE 1930's	.96
AVERAGE PRECIPITATION DURING THE 1920's	.71
AVERAGE PRECIPITATION DURING THE 1910's	.95
AVERAGE PRECIPITATION DURING THE 1900's	1.10
AVERAGE PRECIPITATION DURING THE 1890's	1.00

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	2.09	11/22/1931
2)	1.83	11/23/1895
3)	1.57	11/13/1968
4)	1.47	11/10/1923
5)	1.40	11/11/1994
6)	1.27	11/17/1900
7)	1.25	11/25/1935
8)	1.12	11/19/1900
9)	1.09	11/25/1925
10)	1.07	11/16/1952

ALL-TIME TUCSON NOVEMBER SNOWFALL RECORDS
(1894-1996) 103 YEARS

TOP SNOWIEST NOVEMBERS

1)	6.4	1958
2)	0.1	1964
3)	TRACE	1994
	TRACE	1975

TOP SNOWIEST NOVEMBER DAYS

1)	6.4	11/16/1958
2)	.1	11/15/1964
3)	TRACE	11/19/1994
	TRACE	11/29/1975

DAILY RECORDS FOR DECEMBER
(1894-1996) 103 YEARS

DAILY TEMP				MAXIMUM TEMP		MINIMUM TEMP		PRECIPITATION		SNOWFALL	
AVERAGES				RECORDS		RECORDS		RECORDS		RECORDS	
DAY	HI	LO	AV	F	YEAR	F	YEAR	INCHES	YEAR	INCHES	YEAR
1	67	42	54	84	1926	26	1934	.20	1933	T	1982
2	67	42	54	85	1911	28	1905	.99	1906		
3	67	41	54	84	1954	22	1934	2.15	1906		
4	66	41	54	85	1895	21	1909	1.16	1992	T	1971*
5	66	41	54	83	1939*	17	1909	2.10	1994		
6	66	41	53	84	1939	18	1912	.81	1986	T	1978*
7	66	41	53	82	1970*	20	1960	.21	1926	T	1978*
8	65	41	53	85	1939	19	1916	.68	1904	6.8	1971
9	65	40	53	84	1933	23	1978*	.94	1965		
10	65	40	53	82	1950*	19	1916	.89	1965	T	1949
11	65	40	52	83	1939	15	1916	1.02	1940	1.0	1928
12	65	40	52	78	1995*	20	1916	.53	1905	T	1985
13	64	40	52	79	1995*	19	1911	.91	1902	T	1987*
14	64	40	52	79	1939*	10	1901	1.01	1967	T	1987*
15	64	40	52	81	1969	19	1911	1.22	1967		
16	64	40	52	79	1980*	19	1901	.99	1908		
17	64	39	51	82	1939	19	1911	.70	1987	1.6	1967
18	64	39	51	80	1950	23	1933*	.67	1978	1.0	1911
19	63	39	51	81	1917	19	1895	.46	1967		
20	63	39	51	80	1921	20	1897	1.07	1914	1.4	1949
21	63	39	51	80	1917	20	1930	.36	1923	.2	1968
22	63	39	51	82	1917	16	1897	1.01	1914	1.5	1932
23	63	39	51	78	1955*	19	1912	.58	1914	.3	1965
24	63	39	51	79	1936	16	1974	1.19	1914	1.2	1941
25	63	39	51	82	1933	21	1903	.71	1944	4.0	1916
26	63	39	51	82	1933	16	1895	.68	1994	T	1988*
27	63	39	51	82	1928	20	1895	.77	1984	T	1969
28	63	39	51	82	1922	18	1954	1.11	1906		
29	63	39	51	85	1921	20	1988	.80	1960		
30	63	39	51	82	1917	14	1895	1.07	1978	T	1982*
31	63	38	51	81	1917	11	1905	1.40	1915	2.0	1915

* - ALSO IN EARLIER YEARS. T - TRACE, AN AMOUNT TOO SMALL TO MEASURE.
BLANK UNDER SNOWFALL INDICATES NO SNOWFALL FOR PERIOD OF RECORD

NORMAL TEMPERATURE FOR DECEMBER	52.0
RECORD HIGH TEMPERATURE FOR DECEMBER	85 SET IN 1939 (8) (last of 4 occurrences)
RECORD LOW TEMPERATURE FOR DECEMBER	10 SET IN 1901 (14)
NORMAL PRECIPITATION FOR DECEMBER	1.07 INCHES
RECORD ONE-DAY PRECIPITATION TOTAL	2.15 INCHES SET IN 1906 (3)
RECORD MONTHLY PRECIPITATION TOTAL	5.85 INCHES SET IN 1914
RECORD LOW MONTHLY PRECIPITATION TOTAL	ZERO INCHES SET IN 1981 (last of 6 occurrences)
RECORD ONE-DAY SNOWFALL TOTAL	6.8 INCHES SET IN 1971 (8)
RECORD MONTHLY SNOWFALL TOTAL	6.8 INCHES SET IN 1971

**ALL-TIME TUCSON DECEMBER TEMPERATURE RECORDS
(1894-1996) 103 YEARS**

TOP 10 WARMEST DECEMBERS

1)	58.1	1980
2)	56.9	1977
	56.9	1950
4)	56.3	1940
	56.3	1939
6)	55.6	1958
7)	55.5	1955
	55.5	1946
9)	55.0	1981
	55.0	1979

TOP 10 COLDEST DECEMBERS

1)	45.0	1911
2)	45.8	1912
3)	47.0	1974
	47.0	1932
	47.0	1916
6)	47.1	1971
	47.1	1905
8)	47.2	1898
9)	47.3	1920
10)	47.5	1914
	47.5	1909

NORMAL TEMPERATURE FOR DECEMBER (1961-1990)	52.0
NORMAL TEMPERATURE FOR DECEMBER (1951-1980)	52.0
NORMAL TEMPERATURE FOR DECEMBER (1941-1970)	52.0
NORMAL TEMPERATURE FOR DECEMBER (1931-1960)	51.9
NORMAL TEMPERATURE FOR DECEMBER (1921-1950)	52.0
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	51.5

AVERAGE TEMPERATURE DURING THE 1990's	53.1
AVERAGE TEMPERATURE DURING THE 1980's	52.8
AVERAGE TEMPERATURE DURING THE 1970's	51.4
AVERAGE TEMPERATURE DURING THE 1960's	51.5
AVERAGE TEMPERATURE DURING THE 1950's	53.0
AVERAGE TEMPERATURE DURING THE 1940's	52.4
AVERAGE TEMPERATURE DURING THE 1930's	51.7
AVERAGE TEMPERATURE DURING THE 1920's	50.7
AVERAGE TEMPERATURE DURING THE 1910's	48.9
AVERAGE TEMPERATURE DURING THE 1900's	50.3
AVERAGE TEMPERATURE DURING THE 1890's	50.8

TOP 10 WARMEST DECEMBER DATES

1)	85	12/ 8/1939
	85	12/29/1921
	85	12/ 2/1911
	85	12/ 4/1895
5)	84	12/ 3/1954
	84	12/ 6/1939
	84	12/ 9/1933
	84	12/ 1/1926
9)	83	12/ 8/1981
	(last of 7 occurrence)	

TOP 10 COLDEST DECEMBER DATES

1)	10	12/14/1901
2)	11	12/31/1905
3)	14	12/30/1895
4)	15	12/11/1916
5)	16	12/24/1974
	16	12/22/1897
	16	12/31/1895
	16	12/26/1895
9)	17	12/ 5/1909
10)	18	12/28/1954
	18	12/ 6/1912

ALL-TIME TUCSON DECEMBER PRECIPITATION RECORDS
(1894-1996) 103 YEARS

TOP 10 WETTEST DECEMBERS

1)	5.85	1914
2)	5.02	1965
3)	4.57	1906
4)	3.71	1994
5)	3.47	1992
6)	3.44	1967
7)	3.30	1984
8)	2.82	1940
9)	2.73	1978
10)	2.64	1923

TOP 10 DRIEST DECEMBERS

1)	ZERO	1981
	ZERO	1973
	ZERO	1958
	ZERO	1917
	ZERO	1907
	ZERO	1901
7)	TRACE	1996
	TRACE	1900
	TRACE	1899
10)	.05	1988

NORMAL PRECIPITATION FOR DECEMBER (1961-1990)	1.07
NORMAL PRECIPITATION FOR DECEMBER (1951-1980)	.94
NORMAL PRECIPITATION FOR DECEMBER (1941-1970)	.94
NORMAL PRECIPITATION FOR DECEMBER (1931-1960)	.92
NORMAL PRECIPITATION FOR DECEMBER (1921-1950)	.94
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	1.02

AVERAGE PRECIPITATION DURING THE 1990's	1.50
AVERAGE PRECIPITATION DURING THE 1980's	.89
AVERAGE PRECIPITATION DURING THE 1970's	.85
AVERAGE PRECIPITATION DURING THE 1960's	1.41
AVERAGE PRECIPITATION DURING THE 1950's	.56
AVERAGE PRECIPITATION DURING THE 1940's	1.08
AVERAGE PRECIPITATION DURING THE 1930's	.91
AVERAGE PRECIPITATION DURING THE 1920's	.79
AVERAGE PRECIPITATION DURING THE 1910's	1.33
AVERAGE PRECIPITATION DURING THE 1900's	1.23
AVERAGE PRECIPITATION DURING THE 1890's	.71

TOP 10 ONE-DAY PRECIPITATION TOTALS

1)	2.15	12/ 3/1906
2)	2.10	12/ 5/1994
3)	1.40	12/31/1915
4)	1.22	12/15/1967
5)	1.19	12/24/1914
6)	1.16	12/ 4/1992
7)	1.11	12/28/1906
8)	1.07	12/30/1978
	1.07	12/20/1914
10)	1.02	12/11/1940

**ALL-TIME TUCSON DECEMBER SNOWFALL RECORDS
(1894-1996) 103 YEARS**

TOP 10 SNOWIEST DECEMBERS

1)	6.8	1971
2)	4.0	1916
3)	3.6	1987
4)	2.0	1915
5)	1.6	1967
6)	1.5	1911
	1.5	1932
8)	1.4	1949
9)	1.2	1941
10)	1.0	1928

AVERAGE SNOWFALL FOR ALL YEARS ON RECORD 0.3

AVERAGE SNOWFALL DURING THE 1990's	0.1
AVERAGE SNOWFALL DURING THE 1980's	0.4
AVERAGE SNOWFALL DURING THE 1970's	0.7
AVERAGE SNOWFALL DURING THE 1960's	0.2
AVERAGE SNOWFALL DURING THE 1950's	0
AVERAGE SNOWFALL DURING THE 1940's	0.3
AVERAGE SNOWFALL DURING THE 1930's	0.2
AVERAGE SNOWFALL DURING THE 1920's	0.1
AVERAGE SNOWFALL DURING THE 1910's	0.8
AVERAGE SNOWFALL DURING THE 1900's	0
AVERAGE SNOWFALL DURING THE 1890's	0

TOP 10 SNOWIEST DECEMBER DAYS

1)	6.8	12/ 8/1971
2)	4.0	12/25/1916
3)	2.6	12/25/1987
4)	2.0	12/31/1915
5)	1.6	12/17/1967
6)	1.5	12/22/1932
7)	1.4	12/20/1949
8)	1.2	12/24/1941
9)	1.0	12/24/1987
	1.0	12/11/1928
	1.0	12/18/1911

APPENDIX B

YEARLY...MONTHLY

AND

SEASONAL RECORDS

ALL-TIME TUCSON YEARLY TEMPERATURE RECORDS
(1895-1996) 102 YEARS

TOP 10 WARMEST YEARS

1)	71.4	1989
2)	71.0	1994
3)	70.6	1996
	70.6	1954
5)	70.5	1988
6)	70.4	1986
7)	70.3	1995
8)	70.2	1993
	70.2	1943
10)	69.8	1992

TOP 10 COLDEST YEARS

1)	65.0	1912
	65.0	1905
3)	65.3	1913
4)	65.7	1920
	65.7	1919
6)	65.8	1909
7)	65.9	1908
8)	66.1	1971
	66.1	1964
	66.1	1903

NORMAL YEARLY TEMPERATURE (1961-1990)	68.4
NORMAL YEARLY TEMPERATURE (1951-1980)	68.0
NORMAL YEARLY TEMPERATURE (1941-1970)	67.8
NORMAL YEARLY TEMPERATURE (1931-1960)	67.7
NORMAL YEARLY TEMPERATURE (1921-1950)	67.6
AVERAGE YEARLY TEMPERATURE FOR ALL YEARS ON RECORD	67.9

AVERAGE YEARLY TEMPERATURE DURING THE 1990's	70.1
AVERAGE YEARLY TEMPERATURE DURING THE 1980's	69.2
AVERAGE YEARLY TEMPERATURE DURING THE 1970's	67.6
AVERAGE YEARLY TEMPERATURE DURING THE 1960's	67.6
AVERAGE YEARLY TEMPERATURE DURING THE 1950's	68.8
AVERAGE YEARLY TEMPERATURE DURING THE 1940's	68.1
AVERAGE YEARLY TEMPERATURE DURING THE 1930's	67.4
AVERAGE YEARLY TEMPERATURE DURING THE 1920's	67.1
AVERAGE YEARLY TEMPERATURE DURING THE 1910's	66.7
AVERAGE YEARLY TEMPERATURE DURING THE 1900's	66.6
AVERAGE YEARLY TEMPERATURE DURING THE 1890's	67.3

**ALL-TIME TUCSON MONTHLY & DAILY TEMPERATURE RECORDS
(1894-1996) 103 YEARS**

TOP 10 WARMEST MONTHS/YEAR

1)	90.4	JUL/1994
2)	90.2	AUG/1994
3)	89.9	JUL/1989
4)	89.7	JUL/1942
5)	89.2	JUN/1994
6)	88.8	JUL/1951
7)	88.6	JUL/1996
	88.6	JUN/1990
	88.6	JUL/1980
10)	88.4	JUL/1995
	88.4	JUL/1931

TOP 10 COLDEST MONTHS/YEAR

1)	41.2	JAN/1937
2)	43.0	JAN/1949
3)	43.3	JAN/1932
4)	44.8	JAN/1913
5)	45.0	DEC/1911
6)	45.3	FEB/1903
7)	45.4	JAN/1904
8)	45.6	FEB/1939
9)	45.8	DEC/1912
10)	46.1	JAN/1898

TOP 10 WARMEST DATES/YEAR

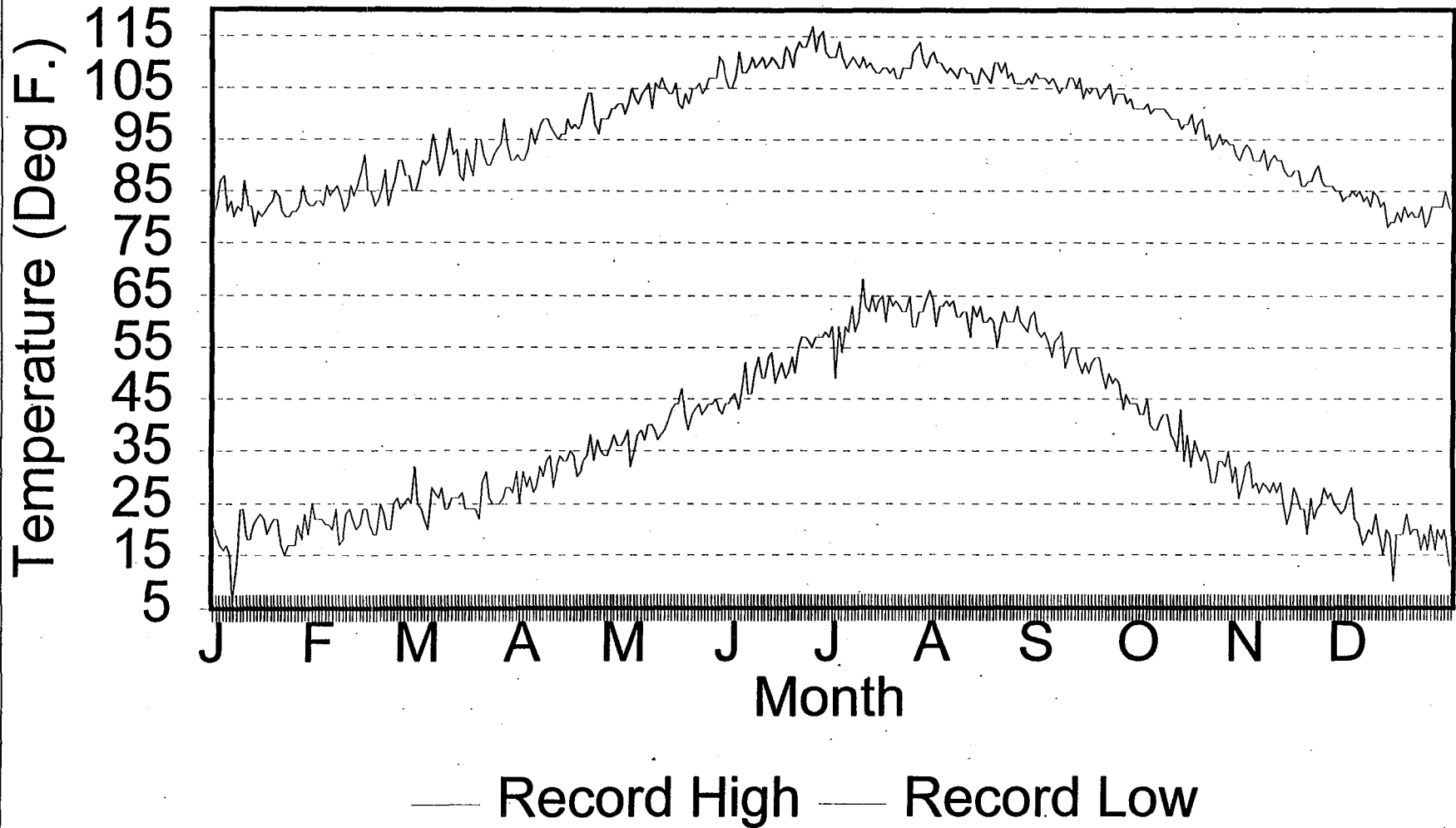
1)	117	JUN 26 1990
2)	116	JUN 29 1994
3)	115	JUN 28 1994
	115	JUN 25 1994
5)	114	JUL 28 1995
	114	JUL 4 1989
	114	JUN 22 1988
8)	113	JUN 27 1995
	113	JUN 26 1994
	113	JUN 24 1994
	113	JUN 26 1993
	113	JUN 28 1990
	113	JUN 25 1990
	113	JUN 18 1989
	113	JUN 23 1988

TOP 10 COLDEST DATES/YEAR

1)	6	JAN 7 1913
2)	10	DEC 14 1901
3)	11	DEC 31 1905
4)	13	JAN 8 1913
5)	14	DEC 30 1895
6)	15	JAN 22 1937
	15	DEC 11 1916
	15	JAN 6 1910
	15	JAN 22 1904
10)	16	DEC 24 1974
	16	JAN 4 1949
	16	JAN 4 1911
	16	DEC 22 1897
	16	DEC 31 1895
	16	DEC 26 1895

All-time daily temperature records

Tucson, AZ (1894-1996)



ALL-TIME TUCSON YEARLY PRECIPITATION RECORDS
(1895-1996) 102 YEARS

TOP 15 WETTEST YEARS

1)	24.17	1905
2)	21.86	1983
3)	19.90	1914
4)	18.01	1919
5)	17.99	1964
6)	16.42	1992
7)	16.26	1931
8)	15.90	1955
9)	15.85	1941
10)	15.77	1935

TOP 15 DRIEST YEARS

1)	5.07	1924
2)	5.34	1953
3)	5.53	1947
4)	6.28	1976
5)	6.48	1989
6)	6.50	1928
7)	6.64	1975
8)	7.04	1956
9)	7.05	1939
10)	7.22	1973

NORMAL YEARLY PRECIPITATION (1961-1990)	12.00
NORMAL YEARLY PRECIPITATION (1951-1980)	11.14
NORMAL YEARLY PRECIPITATION (1941-1970)	11.05
NORMAL YEARLY PRECIPITATION (1931-1960)	11.00
NORMAL YEARLY PRECIPITATION (1921-1950)	10.66
AVERAGE YEARLY PRECIPITATION FOR ALL YEARS ON RECORD	11.51

AVERAGE YEARLY PRECIPITATION DURING THE 1990's	12.92
AVERAGE YEARLY PRECIPITATION DURING THE 1980's	13.24
AVERAGE YEARLY PRECIPITATION DURING THE 1970's	10.74
AVERAGE YEARLY PRECIPITATION DURING THE 1960's	11.39
AVERAGE YEARLY PRECIPITATION DURING THE 1950's	10.97
AVERAGE YEARLY PRECIPITATION DURING THE 1940's	11.03
AVERAGE YEARLY PRECIPITATION DURING THE 1930's	10.90
AVERAGE YEARLY PRECIPITATION DURING THE 1920's	10.17
AVERAGE YEARLY PRECIPITATION DURING THE 1910's	12.37
AVERAGE YEARLY PRECIPITATION DURING THE 1900's	11.70
AVERAGE YEARLY PRECIPITATION DURING THE 1890's	10.87

**ALL-TIME TUCSON MONTHLY & DAILY PRECIPITATION RECORDS
(1894-1996) 103 YEARS**

TOP 15 WETTEST MONTHS/YEAR

1)	7.93	AUG/1955
2)	6.24	JUL/1921
3)	6.17	JUL/1981
4)	5.85	DEC/1914
5)	5.61	AUG/1935
6)	5.53	JUL/1919
7)	5.45	JUL/1990
8)	5.20	JUL/1958
9)	5.11	SEP/1964
10)	5.10	JUL/1955
11)	5.02	DEC/1965
12)	4.98	OCT/1983
13)	4.93	AUG/1993
14)	4.82	JUL/1964
15)	4.81	JAN/1993

TOP 15 DRIEST MONTHS/YEAR

1) ZERO MAY/1996
(last of 82 occurrences)

of montly occurrences

JAN - 5	JUL - 0
FEB - 3	AUG - 0
MAR - 5	SEP - 1
APR - 10	OCT - 10
MAY - 19	NOV - 12
JUN - 11	DEC - 6

**** NOTE ****

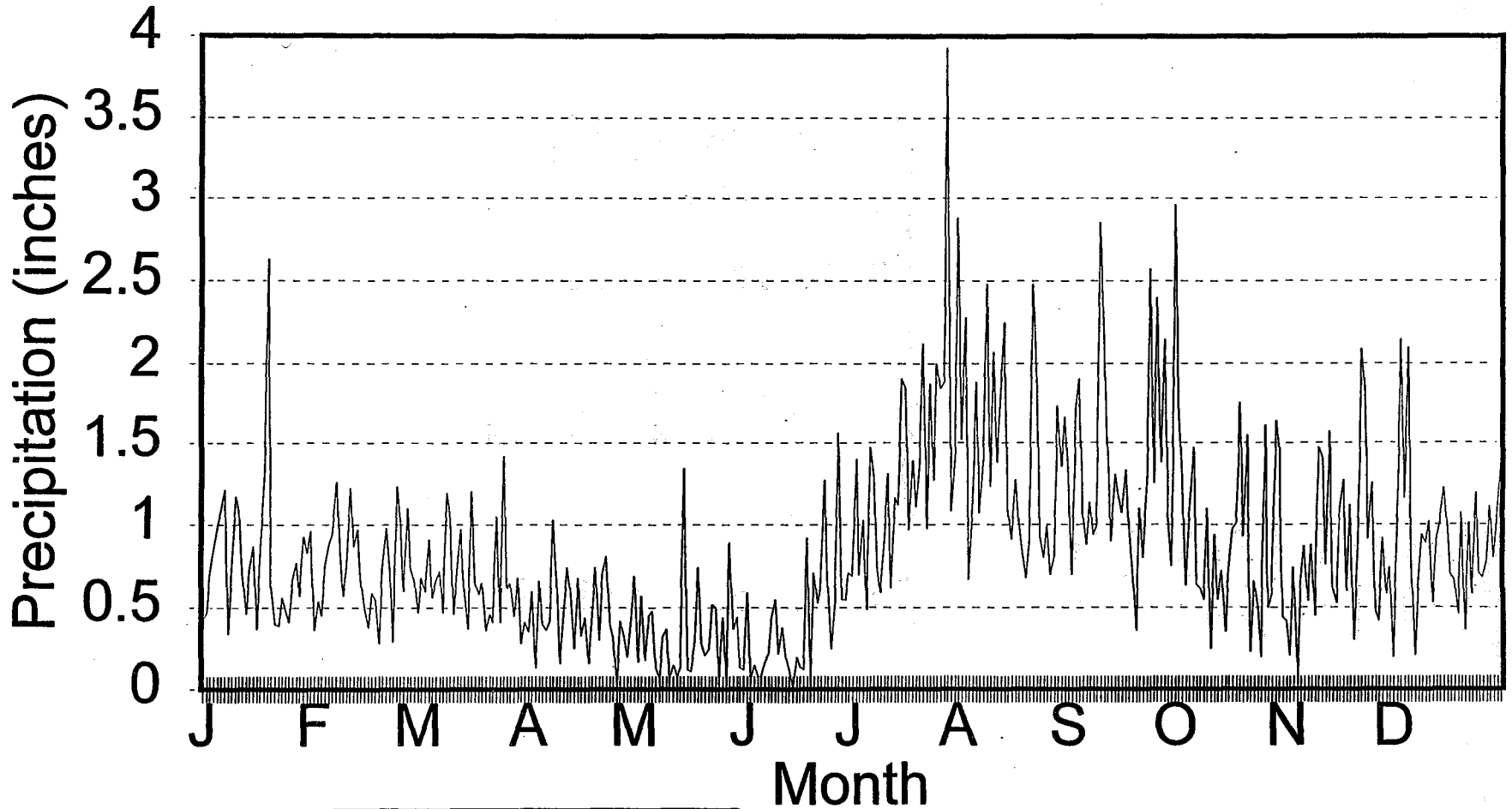
77 months have only recorded a TRACE also

ALL-TIME ONE-DAY PRECIPITATION RECORDS

1)	3.93	JUL. 29, 1958
2)	2.96	OCT. 1, 1983
3)	2.88	AUG. 1, 1935
4)	2.85	SEP. 10, 1964
5)	2.63	JAN. 19, 1916
6)	2.57	SEP. 24, 1943
7)	2.48	AUG. 22, 1961
	2.48	AUG. 9, 1923
9)	2.40	SEP. 26, 1962
10)	2.28	AUG. 3, 1955
11)	2.25	AUG. 14, 1940
12)	2.15	SEP. 28, 1995
	2.15	DEC. 3, 1906
14)	2.12	JUL. 22, 1955
	2.12	SEP. 11, 1921

All-time daily rainfall records

Tucson, AZ (1894-1996)



— Daily rainfall

ALL-TIME TUCSON SEASONAL PRECIPITATION RECORDS
(1894-1996) 103 YEARS

TOP 10 WETTEST SEASONS/YEAR

1)	13.06	SUMMER	1955
2)	10.97	FALL	1983
3)	9.78	WINTER	1992-93
4)	9.01	WINTER	1965-66
5)	8.86	WINTER	1914-15
6)	8.79	SUMMER	1990
7)	8.73	SUMMER	1964
8)	8.25	SUMMER	1921
9)	8.16	SUMMER	1984
10)	7.73	SUMMER	1907

TOP 10 DRIEST SEASONS/YEAR

1)	.01	SPRING	1959
2)	.03	SPRING	1933
3)	.06	SPRING	1955
4)	.09	SPRING	1895
5)	.12	SPRING	1928
6)	.13	SPRING	1897
7)	.18	FALL	1953
	.18	SPRING	1910
9)	.25	SPRING	1972
	.25	SPRING	1962

ALL-TIME TUCSON YEARLY SNOWFALL RECORDS
(1895-1996) 102 YEARS

TOP 10 SNOWIEST YEARS

1)	8.3	1987
2)	6.8	1971
3)	6.4	1958
4)	6.2	1949
5)	6.0	1922
	6.0	1898
7)	5.8	1976
	5.8	1964
	5.8	1937
10)	5.6	1990

AVERAGE YEARLY SNOWFALL FOR ALL YEARS ON RECORD	1.2
AVERAGE YEARLY SNOWFALL DURING THE 1990's	0.8
AVERAGE YEARLY SNOWFALL DURING THE 1980's	1.1
AVERAGE YEARLY SNOWFALL DURING THE 1970's	1.5
AVERAGE YEARLY SNOWFALL DURING THE 1960's	1.5
AVERAGE YEARLY SNOWFALL DURING THE 1950's	1.5
AVERAGE YEARLY SNOWFALL DURING THE 1940's	0.9
AVERAGE YEARLY SNOWFALL DURING THE 1930's	0.8
AVERAGE YEARLY SNOWFALL DURING THE 1920's	1.0
AVERAGE YEARLY SNOWFALL DURING THE 1910's	1.0
AVERAGE YEARLY SNOWFALL DURING THE 1900's	1.3
AVERAGE YEARLY SNOWFALL DURING THE 1890's	1.5

ALL-TIME TUCSON MONTHLY & DAILY SNOWFALL RECORDS
(1894-1996) 103 YEARS

TOP 10 SNOWIEST MONTHS/YEAR

1)	6.8	DEC/1971
2)	6.4	NOV/1958
3)	6.0	MAR/1922
	6.0	JAN/1898
5)	5.8	JAN/1937
6)	5.7	MAR/1964
7)	4.9	FEB/1903
8)	4.7	JAN/1987
9)	4.7	JAN/1949
10)	4.0	DEC/1916
	4.0	FEB/1908

TOP 10 SNOWIEST DATES/YEAR

1)	6.8	12/ 8/1971
2)	6.4	11/16/1958
3)	6.0	3/12/1922
4)	4.3	1/16/1987
5)	4.0	3/ 2/1964
	4.0	1/ 7/1937
	4.0	12/25/1916
	4.0	2/13/1908
9)	3.8	3/ 3/1976
10)	3.5	1/25/1949

**ALL-TIME TUCSON SEASONAL SNOWFALL RECORDS (JULY-JUNE)
(1894-1996) 103 YEARS**

TOP 10 BIGGEST SNOWFALL SEASONS

1)	6.8	1971-72
2)	6.4	1958-59
3)	6.0	1921-22
	6.0	1897-98
5)	5.8	1975-76
	5.8	1936-37
7)	5.7	1963-64
8)	5.0	1989-90
9)	4.9	1902-03
10)	4.8	1948-49

AVERAGE SNOWFALL FOR ALL YEARS ON RECORD 1.2

AVERAGE SNOWFALL IN A SEASON DURING THE 1990's	0.2
AVERAGE SNOWFALL IN A SEASON DURING THE 1980's	1.2
AVERAGE SNOWFALL IN A SEASON DURING THE 1970's	1.6
AVERAGE SNOWFALL IN A SEASON DURING THE 1960's	1.5
AVERAGE SNOWFALL IN A SEASON DURING THE 1950's	1.7
AVERAGE SNOWFALL IN A SEASON DURING THE 1940's	0.8
AVERAGE SNOWFALL IN A SEASON DURING THE 1930's	0.8
AVERAGE SNOWFALL IN A SEASON DURING THE 1920's	1.1
AVERAGE SNOWFALL IN A SEASON DURING THE 1910's	1.1
AVERAGE SNOWFALL IN A SEASON DURING THE 1900's	1.5
AVERAGE SNOWFALL IN A SEASON DURING THE 1890's	1.5

**ALL-TIME TUCSON WINTER SEASON TEMPERATURE RECORDS
(1894-1996) 102 YEARS (DECEMBER-FEBRUARY)**

TOP 10 WARMEST WINTERS

1)	56.6	1980-81
2)	56.1	1985-86
3)	55.7	1979-80
4)	55.6	1956-57
5)	55.5	1994-95
6)	55.4	1995-96
7)	55.2	1942-43
8)	55.1	1940-41
9)	54.6	1975-76
10)	54.5	1977-78

TOP 10 COLDEST WINTERS

1)	46.8	1912-13
2)	47.4	1932-33
3)	47.6	1898-99
4)	48.1	1948-49
	48.1	1936-37
6)	48.2	1918-19
7)	48.3	1902-03
8)	48.4	1914-15
9)	48.5	1916-17
10)	48.7	1959-60
	48.7	1931-32

NORMAL TEMPERATURE FOR THE WINTER SEASON (1961-1990)	52.6
NORMAL TEMPERATURE FOR THE WINTER SEASON (1951-1980)	52.3
NORMAL TEMPERATURE FOR THE WINTER SEASON (1941-1970)	52.1
NORMAL TEMPERATURE FOR THE WINTER SEASON (1931-1960)	51.5
NORMAL TEMPERATURE FOR THE WINTER SEASON (1921-1950)	51.6
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	51.9

AVERAGE WINTER SEASON TEMPERATURE DURING THE 1990's	54.5
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1980's	53.8
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1970's	51.9
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1960's	51.5
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1950's	53.0
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1940's	52.2
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1930's	50.8
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1920's	51.5
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1910's	49.9
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1900's	51.0
AVERAGE WINTER SEASON TEMPERATURE DURING THE 1890's	50.6

**ALL-TIME TUCSON WINTER SEASON PRECIPITATION RECORDS
(1894-1996) 102 YEARS (DECEMBER-FEBRUARY)**

TOP 10 WETTEST WINTERS

1)	9.78	1992-93
2)	9.01	1965-66
3)	8.86	1914-15
4)	7.33	1904-05
5)	7.08	1906-07
6)	6.93	1915-16
7)	6.52	1940-41
8)	6.44	1994-95
9)	6.09	1984-85
	6.09	1978-79

TOP 10 DRIEST WINTERS

1)	.31	1958-59
2)	.35	1963-64
3)	.36	1966-67
4)	.53	1901-02
5)	.62	1946-47
6)	.69	1895-96
7)	.73	1922-23
8)	.76	1924-25
9)	.82	1974-75
10)	.93	1973-74

NORMAL PRECIPITATION FOR THE WINTER SEASON (1961-1990)	2.64
NORMAL PRECIPITATION FOR THE WINTER SEASON (1951-1980)	2.40
NORMAL PRECIPITATION FOR THE WINTER SEASON (1941-1970)	2.41
NORMAL PRECIPITATION FOR THE WINTER SEASON (1931-1960)	2.58
NORMAL PRECIPITATION FOR THE WINTER SEASON (1921-1950)	2.49
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	2.72

AVERAGE WINTER SEASON PRECIPITATION DURING THE 1990's	4.42
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1980's	2.86
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1970's	2.28
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1960's	2.97
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1950's	1.82
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1940's	2.75
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1930's	2.95
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1920's	1.86
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1910's	3.42
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1900's	3.06
AVERAGE WINTER SEASON PRECIPITATION DURING THE 1890's	1.92

**ALL-TIME TUCSON SPRING SEASON TEMPERATURE RECORDS
(1895-1996) 102 YRS (MARCH-MAY)**

TOP 10 WARMEST SPRINGS

1)	72.0	1989
2)	70.4	1934
3)	69.9	1986
4)	69.7	1996
5)	69.5	1943
6)	69.3	1993
7)	69.0	1994
8)	68.9	1992
	68.9	1990
10)	68.8	1954

TOP 10 COLDEST SPRINGS

1)	59.0	1905
2)	60.7	1917
	60.7	1915
4)	61.0	1975
5)	61.4	1973
6)	61.7	1909
7)	61.8	1933
	61.8	1920
	61.8	1912
10)	62.4	1903

NORMAL TEMPERATURE FOR THE SPRING SEASON (1961-1990)	66.2
NORMAL TEMPERATURE FOR THE SPRING SEASON (1951-1980)	65.3
NORMAL TEMPERATURE FOR THE SPRING SEASON (1941-1970)	65.6
NORMAL TEMPERATURE FOR THE SPRING SEASON (1931-1960)	65.8
NORMAL TEMPERATURE FOR THE SPRING SEASON (1921-1950)	65.3
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	65.4

AVERAGE SPRING SEASON TEMPERATURE DURING THE 1990's	68.1
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1980's	67.4
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1970's	64.7
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1960's	65.3
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1950's	66.1
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1940's	65.9
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1930's	65.3
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1920's	64.4
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1910's	64.2
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1900's	63.3
AVERAGE SPRING SEASON TEMPERATURE DURING THE 1890's	64.8

ALL-TIME TUCSON SPRING SEASON PRECIPITATION RECORDS
(1895-1996) 102 YEARS (MARCH-MAY)

TOP 10 WETTEST SPRINGS

1)	7.43	1905
2)	3.82	1930
3)	3.79	1952
4)	3.62	1926
5)	3.42	1992
6)	3.26	1941
7)	2.80	1981
8)	2.72	1912
9)	2.55	1919
10)	2.41	1968

TOP 10 DRIEST SPRINGS

1)	.01	1959
2)	.03	1933
3)	.06	1955
4)	.09	1895
5)	.12	1928
6)	.13	1897
7)	.18	1910
8)	.25	1972
	.25	1962
10)	.27	1950

NORMAL PRECIPITATION FOR THE SPRING SEASON (1961-1990)	1.20
NORMAL PRECIPITATION FOR THE SPRING SEASON (1951-1980)	1.14
NORMAL PRECIPITATION FOR THE SPRING SEASON (1941-1970)	1.13
NORMAL PRECIPITATION FOR THE SPRING SEASON (1931-1960)	.93
NORMAL PRECIPITATION FOR THE SPRING SEASON (1921-1950)	1.21
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	1.25

AVERAGE SPRING SEASON PRECIPITATION DURING THE 1990's	1.34
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1980's	1.48
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1970's	1.19
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1960's	.92
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1950's	1.21
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1940's	1.18
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1930's	1.15
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1920's	1.51
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1910's	1.25
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1900's	1.61
AVERAGE SPRING SEASON PRECIPITATION DURING THE 1890's	.66

ALL-TIME TUCSON SUMMER SEASON TEMPERATURE RECORDS
(1895-1996) 102 YEARS (JUNE-AUGUST)

TOP 10 WARMEST SUMMERS

1)	89.9	1994
2)	87.4	1996
3)	87.3	1989
4)	86.8	1988
5)	86.5	1985
6)	86.4	1995
7)	86.2	1987
	86.2	1978
9)	86.1	1993
	86.1	1980

TOP 10 COLDEST SUMMERS

1)	81.3	1923
2)	81.8	1921
	81.8	1913
	81.8	1908
5)	82.2	1965
6)	82.3	1912
	82.3	1907
8)	82.5	1916
9)	82.7	1906
	82.7	1905

NORMAL TEMPERATURE FOR THE SUMMER SEASON (1961-1990)	85.0
NORMAL TEMPERATURE FOR THE SUMMER SEASON (1951-1980)	84.4
NORMAL TEMPERATURE FOR THE SUMMER SEASON (1941-1970)	84.1
NORMAL TEMPERATURE FOR THE SUMMER SEASON (1931-1960)	84.0
NORMAL TEMPERATURE FOR THE SUMMER SEASON (1921-1950)	84.0
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	84.3

AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1990's	86.6
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1980's	85.5
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1970's	84.5
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1960's	83.7
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1950's	84.7
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1940's	84.7
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1930's	84.2
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1920's	83.7
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1910's	83.4
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1900's	83.2
AVERAGE SUMMER SEASON TEMPERATURE DURING THE 1890's	84.0

**ALL-TIME TUCSON SUMMER SEASON PRECIPITATION RECORDS
(1895-1996) 102 YEARS (JUNE-AUGUST)**

TOP 10 WETTEST SUMMERS

1)	13.06	1955
2)	8.79	1990
3)	8.73	1964
4)	8.25	1921
5)	8.16	1984
6)	7.73	1907
7)	7.70	1914
8)	7.67	1919
9)	7.36	1898
10)	7.15	1945

TOP 10 DRIEST SUMMERS

1)	.81	1926
2)	1.12	1994
3)	1.40	1924
4)	1.51	1976
5)	1.58	1942
6)	1.62	1977
7)	1.77	1900
8)	1.85	1939
9)	1.90	1905
10)	1.92	1902

NORMAL PRECIPITATION FOR THE SUMMER SEASON (1961-1990)	4.76
NORMAL PRECIPITATION FOR THE SUMMER SEASON (1951-1980)	4.77
NORMAL PRECIPITATION FOR THE SUMMER SEASON (1941-1970)	4.92
NORMAL PRECIPITATION FOR THE SUMMER SEASON (1931-1960)	5.23
NORMAL PRECIPITATION FOR THE SUMMER SEASON (1921-1950)	4.25
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	4.65

AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1990's	4.43
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1980's	5.20
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1970's	3.87
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1960's	4.63
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1950's	5.99
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1940's	4.21
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1930's	4.39
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1920's	3.90
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1910's	5.04
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1900's	4.41
AVERAGE SUMMER SEASON PRECIPITATION DURING THE 1890's	5.45

**ALL-TIME TUCSON FALL SEASON TEMPERATURE RECORDS
(1895-1996) 102 YEARS (SEPTEMBER-NOVEMBER)**

TOP 10 WARMEST FALLS

1)	73.3	1954
2)	72.7	1995
	72.7	1950
4)	72.4	1989
5)	72.3	1990
	72.3	1977
7)	72.1	1952
8)	71.8	1953
9)	71.7	1988
	71.7	1967

TOP 10 COLDEST FALLS

1)	66.0	1972
	66.0	1923
	66.0	1919
4)	66.4	1920
5)	66.5	1912
6)	66.6	1961
	66.6	1908
8)	66.7	1971
9)	66.9	1916
10)	67.2	1970
	67.2	1946
	67.2	1935

NORMAL TEMPERATURE FOR THE FALL SEASON (1961-1990)	70.0
NORMAL TEMPERATURE FOR THE FALL SEASON (1951-1980)	69.8
NORMAL TEMPERATURE FOR THE FALL SEASON (1941-1970)	69.6
NORMAL TEMPERATURE FOR THE FALL SEASON (1931-1960)	69.5
NORMAL TEMPERATURE FOR THE FALL SEASON (1921-1950)	69.3
AVERAGE TEMPERATURE FOR ALL YEARS ON RECORD	69.4

AVERAGE FALL SEASON TEMPERATURE DURING THE 1990's	71.2
AVERAGE FALL SEASON TEMPERATURE DURING THE 1980's	69.9
AVERAGE FALL SEASON TEMPERATURE DURING THE 1970's	69.0
AVERAGE FALL SEASON TEMPERATURE DURING THE 1960's	69.7
AVERAGE FALL SEASON TEMPERATURE DURING THE 1950's	71.1
AVERAGE FALL SEASON TEMPERATURE DURING THE 1940's	69.8
AVERAGE FALL SEASON TEMPERATURE DURING THE 1930's	69.0
AVERAGE FALL SEASON TEMPERATURE DURING THE 1920's	68.4
AVERAGE FALL SEASON TEMPERATURE DURING THE 1910's	68.5
AVERAGE FALL SEASON TEMPERATURE DURING THE 1900's	68.5
AVERAGE FALL SEASON TEMPERATURE DURING THE 1890's	68.7

ALL-TIME TUCSON FALL SEASON PRECIPITATION RECORDS
(1895-1996) 102 YEARS (SEPTEMBER-NOVEMBER)

<u>TOP 10 WETTEST FALLS</u>			<u>TOP 10 DRIEST FALLS</u>		
1)	10.97	1983	1)	.18	1953
2)	7.54	1905	2)	.36	1979
3)	6.90	1972	3)	.37	1955
4)	6.70	1964	4)	.47	1973
5)	6.02	1919	5)	.59	1938
6)	5.73	1895	6)	.64	1956
7)	5.61	1996	7)	.88	1928
8)	5.31	1970		.88	1917
9)	5.27	1925	9)	.93	1904
10)	5.10	1978	10)	.95	1898

NORMAL PRECIPITATION FOR THE FALL SEASON (1961-1990)	3.40
NORMAL PRECIPITATION FOR THE FALL SEASON (1951-1980)	2.83
NORMAL PRECIPITATION FOR THE FALL SEASON (1941-1970)	2.59
NORMAL PRECIPITATION FOR THE FALL SEASON (1931-1960)	2.26
NORMAL PRECIPITATION FOR THE FALL SEASON (1921-1950)	2.71
AVERAGE PRECIPITATION FOR ALL YEARS ON RECORD	2.86

AVERAGE FALL SEASON PRECIPITATION DURING THE 1990's	3.13
AVERAGE FALL SEASON PRECIPITATION DURING THE 1980's	3.70
AVERAGE FALL SEASON PRECIPITATION DURING THE 1970's	3.46
AVERAGE FALL SEASON PRECIPITATION DURING THE 1960's	2.99
AVERAGE FALL SEASON PRECIPITATION DURING THE 1950's	1.83
AVERAGE FALL SEASON PRECIPITATION DURING THE 1940's	2.84
AVERAGE FALL SEASON PRECIPITATION DURING THE 1930's	2.40
AVERAGE FALL SEASON PRECIPITATION DURING THE 1920's	2.95
AVERAGE FALL SEASON PRECIPITATION DURING THE 1910's	2.68
AVERAGE FALL SEASON PRECIPITATION DURING THE 1900's	2.54
AVERAGE FALL SEASON PRECIPITATION DURING THE 1890's	3.19

APPENDIX C

THE “SUMMER MONSOON”

TUCSON'S FIFTH SEASON, THE SUMMER MONSOON

The summer thunderstorm season, otherwise known as the summer monsoon, is considered to be the fifth season in Tucson and brings needed rainfall as well as spectacular nighttime lightning displays to the Tucson metro area. This fifth season is the period between the hot, dry weather of May and June and cooler, moist days of mid-September and October. The Tucson metro area receives around 46% of its annual rainfall (or about six inches) during the monsoon season.

The word monsoon comes from the Arabic word *mausim* which means season or wind shift. In general terms it means a seasonal directional change of the wind flow across an area or region. Most people consider the monsoon of India to be the true monsoon where as much as 400 inches of rain may fall. In Arizona, it is the change from dry to wet that distinguish the monsoon, not the amount of rainfall.

So what factors lead to this wind shift? Arizona's climate is dominated by westerly winds for most of the year. During late spring and early summer, the subtropical high pressure ridge (the Bermuda high) expands west and north across North America pushing the westerlies north. This process shifts the middle to upper wind pattern from predominately westerly to an east through south direction. At the surface, intense daytime heating of the desert creates rising air and surface low pressure (a thermal low) across northern Baja and the southwestern deserts. The two features combine to transport moisture northward from the eastern tropical Pacific, western Mexico and the Gulf of California. However, some speculation remains about the source of this moisture.

This "source of moisture" topic has been debated for years with early theory indicating the primary moisture source being the Gulf of Mexico. It was hypothesized in the 1950s and 1960s that the Gulf of Mexico moisture was advected across Mexico into the southwestern United States via the easterly middle to high level winds (Bryson and Lowry 1955). In the 1970s, researchers identified the Gulf of California as a role player in advecting moisture (via gulf surges) north across the deserts of the southwest United States (Hales 1972, 1974). Since the early 1990s, the research project *SWAMP* (SW Arizona Monsoon Project) has provided considerable evidence showing the Gulf of California is the moisture source of Arizona's summer thunderstorms.

Monsoon thunderstorms are convective in nature and form as intense surface heating is combined with sufficient moisture. This doesn't mean that thunderstorms occur every day in Tucson. There are peaks and lulls during the summer monsoon which have been dubbed as *bursts* and *breaks* (Carleton 1986). Bursts can last as long as several days while breaks can last for several weeks. Certain synoptic patterns are associated with breaks and bursts (Carleton 1986, Maddox et al. 1995).

Typically in Tucson, thunderstorms will develop over the mountains surrounding the metro area early in the afternoon and move across the city later in the afternoon. The monsoon thunderstorms generally travel from the east-southeast to the west-northwest associated with the mean middle and upper wind flow pattern.

On occasions, a line of thunderstorms will move off the Mogollon Rim and move south-southwest across the Tucson metro area during the late night and/or the early morning hours. Summer monsoon thunderstorms can pack a wallop with very strong gusty winds, heavy downpours, hail, blowing dust and dangerous lightning. Flash flooding associated with intense thunderstorms is fairly common across the Tucson metro area as dry washes tend to fill up quickly.

The monsoon season usually ends abruptly when the middle to upper westerly wind pattern starts to move south, surface pressures rise over the southwest deserts, thus decreasing the northward advection of monsoon moisture from Mexico.

In Arizona the operational criteria for the onset of "monsoon" conditions is a prolonged (three consecutive days or more) period of dew points averaging 55 degrees F or higher. The monsoon in Tucson, on average, begins around July 5th and ends around September 15th.

ALL-TIME TUCSON MONSOON TEMPERATURE RECORDS
(1895-1996) 102 YEARS (JULY 1 THRU SEPTEMBER 15TH)

TOP 10 WARMEST MONSOONS/YEAR

1)	89.2	1994
2)	87.7	1989
3)	87.4	1995
4)	86.5	1951
5)	86.4	1942
6)	86.2	1953
7)	86.0	1993
	86.0	1988
	86.0	1977
	86.0	1948
	86.0	1944
	86.0	1924

TOP 10 COLDEST MONSOONS/YEAR

1)	81.1	1912
2)	82.1	1921
3)	82.3	1923
4)	82.4	1919
5)	82.6	1908
6)	82.8	1904
7)	82.9	1974
	82.9	1961
	82.9	1914
	82.9	1913
	82.9	1989

NORMAL TEMPERATURE (MONSOON SEASON) (1961-1990) 84.9
 AVERAGE TEMPERATURE (MONSOON SEASON) FOR ALL YEARS ON RECORD 84.6

AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1990's 86.2
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1980's 85.3
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1970's 84.5
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1960's 84.0
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1950's 84.9
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1940's 85.4
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1930's 84.6
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1920's 83.9
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1910's 83.5
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1900's 83.9
 AVERAGE TEMPERATURE (MONSOON SEASON) DURING THE 1890's 84.5

ALL-TIME TUCSON MONSOON PRECIPITATION RECORDS
(1895-1996) 102 YEARS (JULY 1ST THRU SEPTEMBER 15TH)

TOP 10 WETTEST MONSOONS/YEAR

1)	13.49	1964
2)	13.03	1955
3)	10.49	1921
4)	9.26	1966
5)	9.20	1990
6)	8.41	1907
7)	8.34	1919
8)	7.83	1897
9)	7.72	1981
10)	7.54	1970

TOP 10 DRIEST MONSOONS/YEAR

1)	1.41	1924
2)	1.73	1976
3)	1.82	1900
4)	2.10	1962
5)	2.12	1902
6)	2.23	1926
7)	2.25	1994
8)	2.28	1973
9)	2.34	1989
10)	2.45	1918

NORMAL MONSOON PRECIPITATION (1961-1990) 5.46

AVERAGE MONSOON PRECIPITATION FOR ALL YEARS ON RECORD 5.15

AVERAGE MONSOON PRECIPITATION DURING THE 1990's 5.20

AVERAGE MONSOON PRECIPITATION DURING THE 1980's 5.83

AVERAGE MONSOON PRECIPITATION DURING THE 1970's 4.60

AVERAGE MONSOON PRECIPITATION DURING THE 1960's 5.94

AVERAGE MONSOON PRECIPITATION DURING THE 1950's 5.89

AVERAGE MONSOON PRECIPITATION DURING THE 1940's 4.61

AVERAGE MONSOON PRECIPITATION DURING THE 1930's 4.57

AVERAGE MONSOON PRECIPITATION DURING THE 1920's 4.44

AVERAGE MONSOON PRECIPITATION DURING THE 1910's 5.29

AVERAGE MONSOON PRECIPITATION DURING THE 1900's 4.82

AVERAGE MONSOON PRECIPITATION DURING THE 1890's 5.79

ALL-TIME ONE-DAY MONSOON RAINFALL RECORDS

1)	3.93	JUL. 29, 1958
2)	2.88	AUG. 1, 1935
3)	2.85	SEP. 10, 1964
4)	2.48	AUG. 22, 1961
	2.48	AUG. 9, 1923
6)	2.28	AUG. 3, 1955
7)	2.25	AUG. 14, 1940
8)	2.12	JUL. 22, 1955
	2.12	SEP. 11, 1921
10	2.07	AUG. 11, 1995

APPENDIX D

MISCELLANEOUS DATA

RECORD CONSECUTIVE DAYS WITH HIGH TEMPERATURES OF....:

110 DEGREES OR BETTER:

1) 6 days (6/24 - 6/29) 1994 113 115 113 111 115 116
2) 5 days (6/24 - 6/28) 1990 110 113 117 112 113

105 DEGREES OR BETTER:

1) 24 days (6/23 - 7/16) 1994
2) 18 days (7/24 - 8/10) 1995

100 DEGREES OR BETTER:

1) 39 days (6/ 7 - 7/15) 1987
2) 32 days (6/13 - 7/14) 1942

95 DEGREES OR BETTER:

1) 63 days (7/17 - 9/17) 1924
2) 59 days (6/ 1 - 7/29) 1988

90 DEGREES OR BETTER:

1) 126 days (6/ 1 - 10/ 4) 1924
2) 103 days (5/29 - 9/ 8) 1946

RECORD CONSECUTIVE DAYS WITH LOW TEMPERATURES OF....:

70 DEGREES OR MORE:

1) 74 days (6/24 - 9/ 5) 1977
2) 64 days (6/29 - 8/31) 1996

40 DEGREES OR LESS:

1) 52 days (11/ 8 - 12/29) 1929
2) 45 days 12/ 6/1974 - 1/19/1975

32 DEGREES OR LESS:

1) 17 days 12/28/1912 - 1/13/1913 **** note**** coldest temperature
on record recorded on 1/7/1913 (6 degrees)
17 days (1/19 - 2/ 4) 1904
17 days (1/11 - 1/27) 1898

25 DEGREES OR LESS:

1) 8 days (12/ 8 - 12/15) 1916
8 days (1/25 - 2/ 1) 1904

20 DEGREES OR LESS:

1) 5 days (1/ 4 - 1/ 8) 1971 18 19 17 20 20

HIGH TEMPERATURE OF 100 DEGREES OR BETTER:

Average first occurrence -- May 27th
Earliest first occurrence -- April 19, 1989
Latest first occurrence -- June 22, 1905

Average last occurrence -- September 17th
Earliest last occurrence -- August 8, 1966 &
August 8, 1961
Latest last occurrence -- October 16, 1991

Normal (1961-90) # of days in a year with highs of 100 degrees or better: 46

Avg. # of days during the 1990's with highs of 100 degrees or better: 71
Avg. # of days during the 1980's with highs of 100 degrees or better: 59
Avg. # of days during the 1970's with highs of 100 degrees or better: 39
Avg. # of days during the 1960's with highs of 100 degrees or better: 34
Avg. # of days during the 1950's with highs of 100 degrees or better: 51
Avg. # of days during the 1940's with highs of 100 degrees or better: 52
Avg. # of days during the 1930's with highs of 100 degrees or better: 51
Avg. # of days during the 1920's with highs of 100 degrees or better: 50
Avg. # of days during the 1910's with highs of 100 degrees or better: 49
Avg. # of days during the 1900's with highs of 100 degrees or better: 48
Avg. # of days during the 1890's with highs of 100 degrees or better: 44

Most number of days in a year with highs of 100 degrees or better:

- 1) 99 days in 1994
- 2) 93 days in 1989
- 3) 78 days in 1988
- 4) 77 days in 1993 and 1991

Least number of days in a year with highs of 100 degrees or better:

- 1) 21 days in 1967
- 2) 23 days in 1923 and 1897
- 4) 26 days in 1975..1965 and 1964

MONTHLY OCCURRENCES OF 100 DEGREES OR BETTER:

<u>MONTH</u>	<u>NORMAL</u>	<u>MOST</u>	<u>LEAST</u>
APRIL	0	4 (1992)	0 (many times)
MAY	2	12 (1988)	0 (many times)
JUNE	15	28 (1946)	3 (1965)
JULY	15	28 (1942/1920)	6 (1919)
AUGUST	9	30 (1994)	0 (1971*)
SEPTEMBER	5	16 (1953)	0 (many times)
OCTOBER	0	4 (1991/1917)	0 (many times)

LOW TEMPERATURE OF 32 DEGREES OR LOWER:

Average first freezing date of the season -- November 23rd
 Earliest first freezing date of the season -- October 16, 1899
 Latest first freezing date of the season -- January 25, 1978

Average last freezing date of the season -- March 7th
 Earliest last freezing date of the season -- December 30, 1979
 Latest last freezing date of the season -- May 3, 1899
 ** note ** -- Definition of season (July 1st - June 30th).

Normal(1961-90) # of days in a year with lows of 32 degrees or lower: 18

Avg. # of days during the 1990's with lows of 32 degrees of lower:	11
Avg. # of days during the 1980's with lows of 32 degrees of lower:	11
Avg. # of days during the 1970's with lows of 32 degrees of lower:	18
Avg. # of days during the 1960's with lows of 32 degrees of lower:	20
Avg. # of days during the 1950's with lows of 32 degrees of lower:	19
Avg. # of days during the 1940's with lows of 32 degrees of lower:	23
Avg. # of days during the 1930's with lows of 32 degrees of lower:	38
Avg. # of days during the 1920's with lows of 32 degrees of lower:	41
Avg. # of days during the 1910's with lows of 32 degrees of lower:	43
Avg. # of days during the 1900's with lows of 32 degrees of lower:	40
Avg. # of days during the 1890's with lows of 32 degrees of lower:	44

Most number of days in a year with lows of 32 degrees of lower:

- 1) 65 days in 1917
- 2) 63 days in 1922
- 3) 62 days in 1912

Most number of days in a season (July-June) with lows of 32 degrees of lower:

- 1) 74 days in 1916-17
- 2) 66 days in 1898-99
- 3) 63 days in 1911-12

Least number of days in year with lows of 32 degrees or lower:

- 1) 2 days in 1980
- 2) 3 days in 1995
- 3) 4 days in 1991..1981..1961 and 1957

Least number of days in a season (July-June) with lows of 32 degrees or lower:

- 1) 4 days in 1980-81
- 2) 5 days in 1995-95..1977-78 and 1941-42

MONTHLY OCCURRENCES OF 32 DEGREES OR LOWER:

<u>MONTH</u>	<u>NORMAL</u>	<u>MOST</u>	<u>LEAST</u>
JANUARY	6	27 (1904)	0 (1986*)
FEBRUARY	4	21 (1903)	0 (many times)
MARCH	1	14 (1917)	0 " "
APRIL	0	2 (1936*)	0 " "
MAY	0	1 (1899)	0 " "
OCTOBER	0	2 (1912*)	0 " "
NOVEMBER	2	14 (1916)	0 " "
DECEMBER	5	22 (1920/1911)	0 " "

FIRST AND LAST OCCURRENCE OF HIGH AND LOW TEMPERATURES

HIGH TEMPERATURE

High Temp of	FIRST OCCURRENCE			LAST OCCURRENCE		
	Earliest	Latest	Average	Earliest	Latest	Average
80>	1/ 2/1918	5/ 6/1905	Feb. 13	10/16/1972	12/31/1917	Nov. 24
85>	1/ 3/1896	5/15/1905	Mar. 17	10/10/1957	12/29/1921	Nov. 7
90>	2/14/1957	5/16/1933	Apr. 12	9/22/1919	11/22/1924	Oct. 20
95>	3/ 5/1910	6/ 6/1971	May 3	9/11/1974	10/26/1934	Oct. 4
100>	4/19/1989	6/22/1905	May 27	8/ 8/1966	10/16/1991	Sep. 17
105>	5/ 3/ 1947	8/ 3/1975	June 13	6/21/1897	9/22/1989	Aug. 6
110>	5/ 29/1910	8/19/1915	June 28	6/ 8/1995	8/22/1930	July 4

LOW TEMPERATURE

Low temp of	FIRST OCCURRENCE			LAST OCCURRENCE		
	Earliest	Latest	Average	Earliest	Latest	Average
<40	10/ 4/1908	11/30/1939	Nov. 3	3/ 5/1989	5/20/1902	Apr. 15
<35	10/12/1924	1/24/1978	Nov. 15	1/23/1992	5/ 4/1899	Mar. 22
<32	10/16/1899	1/25/1978	Nov. 23	12/30/1979	5/ 3/1899	Mar. 7
<30	10/22/1908	2/ 2/1956	Dec. 3	11/24/1979	4/17/1924	Feb. 23
<25	11/12/1898	3/15/1907	Dec. 26	11/17/1958	3/31/1897	Jan. 31
<20	11/19/1921	3/ 4/1965	Jan. 2	12/ 7/1960	3/ 4/1965	Jan. 9
<15	12/11/1916	1/22/1937	Jan. 3	12/11/1916	1/22/1937	Jan. 3

RECORD CONSECUTIVE DAYS OF PRECIPITATION...

0.01" or more:

		Avg./day
1)	8 days 8/ 5-12/1972	0.25"
	8 days 12/13-20/1967	0.42"
	8 days 7/19-26/1955	0.36"
	8 days 7/10-17/1953	0.21"
	8 days 7/16-23/1946	0.25"

0.25" or more:

		Avg./day
1)	6 days 9/28/1983 - 10/ 3/1983	1.12"

0.50" or more:

		Avg./day
1)	3 days 10/ 1- 3/1983	1.63"
	3 days 8/ 7- 9/1983	0.77"
	3 days 12/22-24/1914	0.93"
	3 days 8/29-31/1914	0.87"

1.00" or more:

		Avg./day
1)	2 days 10/ 1- 2/1983	2.09"
	2 days 9/10-11/1982	1.04"
	2 days 10/18-19/1972	1.38"
	2 days 12/14-15/1967	1.12"
	2 days 9/11-12/1966	1.43"
	2 days 9/23-24/1929	1.60"
	2 days 7/21-22/1910	1.59"

CONSECUTIVE DAYS OF NO PRECIPITATION:

1)	90 days 3/29/1909 - 6/26/1909
2)	83 days 10/18/1917 - 1/ 8/1918
3)	81 days 4/ 3/1974 - 6/22/1974
	81 days 1/ 1/1972 - 3/21/1972
5)	79 days 1/18/1984 - 4/ 5/1984

CONSECUTIVE DAYS OF PRECIPITATION (TRACE OR LESS):

1)	114 days 9/ 8/1950 - 12/30/1950
2)	110 days 3/15/1996 - 7/ 2/1996
3)	109 days 1/29/1895 - 5/17/1895
4)	108 days 9/23/1917 - 1/ 8/1918
5)	100 days 3/30/1897 - 7/ 7/1897

STATISTICAL LOOK AT MAJOR HOLIDAYS FOR TUCSON ARIZONA

The data used spans the period from 1894 through 1996

January 1st - NEW YEAR'S DAY

Average High -	62.4	Record High -	79	1981
Average Low -	35.9	Record Low -	22	1919/1911
Average Precip. -	.02"	Record Precip. -	.42"	1951
Average Snowfall -	.1"	Record Snowfall -	2.0"	1906

Since 1895 precipitation was recorded on 20 New Year's Days. Snow has also occurred four times on New Year's Day (1.2" in 1960..1.8" in 1950..0.8" in 1907 and 2.0" in 1906).

EASTER

The holiday is observed on the first Sunday after the first full moon after the vernal equinox. The holiday occurs in either late March or during the month of April.

****note**** Averages and records are separated for March and April.

EASTER - overall records

Average High -	81.0	Record High -	96	4/20/1930
Average Low -	47.0	Record Low -	33	3/30/1975
				3/27/1910
Average Precip. -	.03"	Record Precip. -	.81"	4/23/1905

Since 1895 rainfall was recorded on only eight Easters.

EASTER - occurring in the month of March

Average High -	77.2	Record High -	90	3/30/1986
Average Low -	46.3	Record Low -	33	3/30/1975
				3/27/1910
Average Precip. -	.03"	Record Precip. -	.62"	3/26/1989

Since 1895 rainfall was recorded on only one of the twenty Easters that were observed in March.

EASTER - occurring in the month of April

Average High -	82.0	Record High -	96	4/20/1930
Average Low -	47.2	Record Low -	35	4/ 3/1904
Average Precip. -	.03"	Record Precip. -	.81"	4/23/1905

Since 1895 rainfall was recorded on seven Easters that were observed in April.

MEMORIAL DAY

The holiday occurs on the last Monday in the month of May.

Average High -	93.5	Record High -	110	5/30/1910
Average Low -	60.2	Record Low -	45	5/29/1905
Average Precip. -	> TRACE	Record Precip. -	.05"	5/29/1972

Since 1895 rainfall was recorded on only six Memorial Days.

July 4th - THE FOURTH OF JULY

Average High -	100.9	Record High -	114	1989
Average Low -	72.0	Record Low -	59	1935
Average Precip. -	.03"	Record Precip. -	.70"	1921

Since 1895 rainfall was recorded 34 times on the Fourth of July.

LABOR DAY

The holiday occurs on the first Monday in the month of September.

Average High -	96.2	Record High -	105	9/ 3/1979
				9/ 3/1945
Average Low -	69.0	Record Low -	53	9/ 5/1921
Average Precip. -	.04"	Record Precip. -	1.18"	9/ 4/1939

Since 1895 rainfall was recorded 30 times on Labor Day.

THANKSGIVING DAY

The holiday occurs on the fourth Thursday in the month of November.

Average High -	70.8	Record High -	86	11/24/1904
Average Low -	40.9	Record Low -	24	11/22/1979
Average Precip. -	.02"	Record Precip. -	.46"	11/23/1944

Since 1894 rainfall was recorded on ten Thanksgiving Days.

December 25th - CHRISTMAS DAY

Average High -	64.7	Record High -	82	1933
Average Low -	36.0	Record Low -	21	1903
Average Precip. -	.03"	Record Precip. -	.71"	1944
Average Snowfall -	1.0"	Record Snowfall -	4.0"	1916
		Record Snow/Ground -	2.0"	1987

Since 1894 precipitation was recorded on 21 Christmas Days. Snow has also occurred four times on Christmas Day (2.6" in 1987.. trace in 1974..4.0" in 1916 and 0.5" in 1911).

APPENDIX E

CALENDAR DAY FREQUENCY

AND

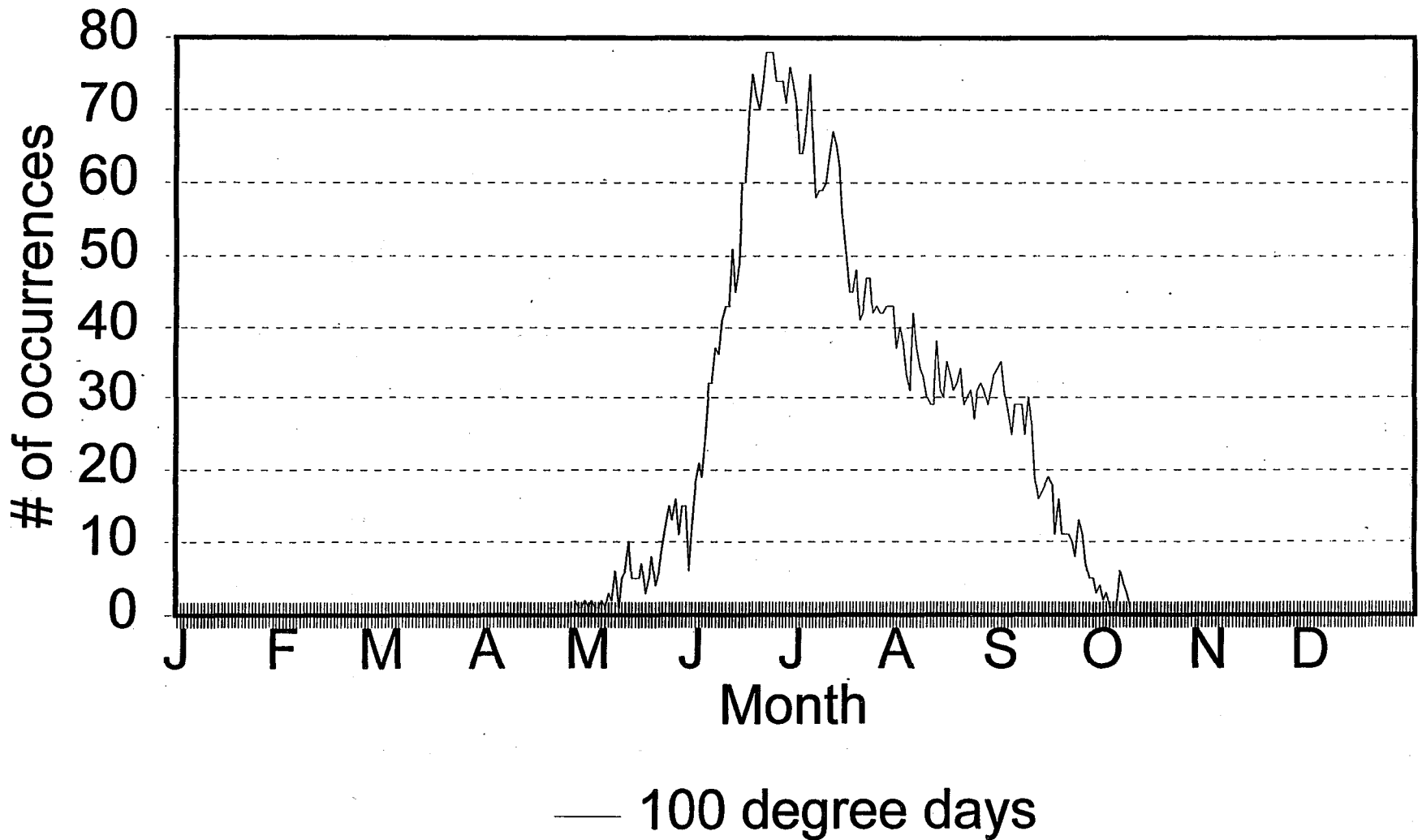
MONTHLY/ANNUAL TABLES

CALENDAR DAY OCCURRENCES OF MAXIMUM TEMPERATURE (=> 100)
(1894-1996) 103 YEARS

<u>DAY</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
1	-	-	-	-	1	11	74	37	35	2	-	-
2	-	-	-	-	2	18	71	40	31	3	-	-
3	-	-	-	-	1	21	64	38	28	1	-	-
4	-	-	-	-	1	19	64	33	25	1	-	-
5	-	-	-	-	2	25	68	31	29	1	-	-
6	-	-	-	-	1	32	75	42	29	6	-	-
7	-	-	-	-	3	32	66	37	29	4	-	-
8	-	-	-	-	2	37	58	34	25	3	-	-
9	-	-	-	-	6	36	59	33	30	1	-	-
10	-	-	-	-	1	41	59	30	26	-	-	-
11	-	-	-	-	5	43	60	29	19	-	-	-
12	-	-	-	-	6	43	64	29	16	-	-	-
13	-	-	-	-	10	51	67	38	17	-	-	-
14	-	-	-	-	5	45	65	31	18	-	-	-
15	-	-	-	-	5	49	62	30	19	-	-	-
16	-	-	-	-	5	60	55	35	18	1	-	-
17	-	-	-	-	7	60	50	33	11	-	-	-
18	-	-	-	-	3	70	45	31	16	-	-	-
19	-	-	-	1	5	75	45	32	11	-	-	-
20	-	-	-	1	8	72	48	34	11	-	-	-
21	-	-	-	1	4	70	41	29	11	-	-	-
22	-	-	-	-	6	73	42	30	10	-	-	-
23	-	-	-	-	9	78	47	31	8	-	-	-
24	-	-	-	-	12	78	47	27	13	-	-	-
25	-	-	-	-	15	78	42	31	11	-	-	-
26	-	-	-	-	13	74	43	32	7	-	-	-
27	-	-	-	2	16	74	42	31	5	-	-	-
28	-	-	-	1	11	74	42	29	5	-	-	-
29	-	-	-	1	15	71	43	31	3	-	-	-
30	-	-	-	2	15	76	43	33	4	-	-	-
31	-	-	-	-	6	-	43	34	-	-	-	-

The above table shows, for example, a maximum temperature of 100 degrees or more occurred 64 times on July 4th during the period of record..103 years (1894-1996).

Daily highs of 100 degrees or better Tucson, AZ (1894-1996)

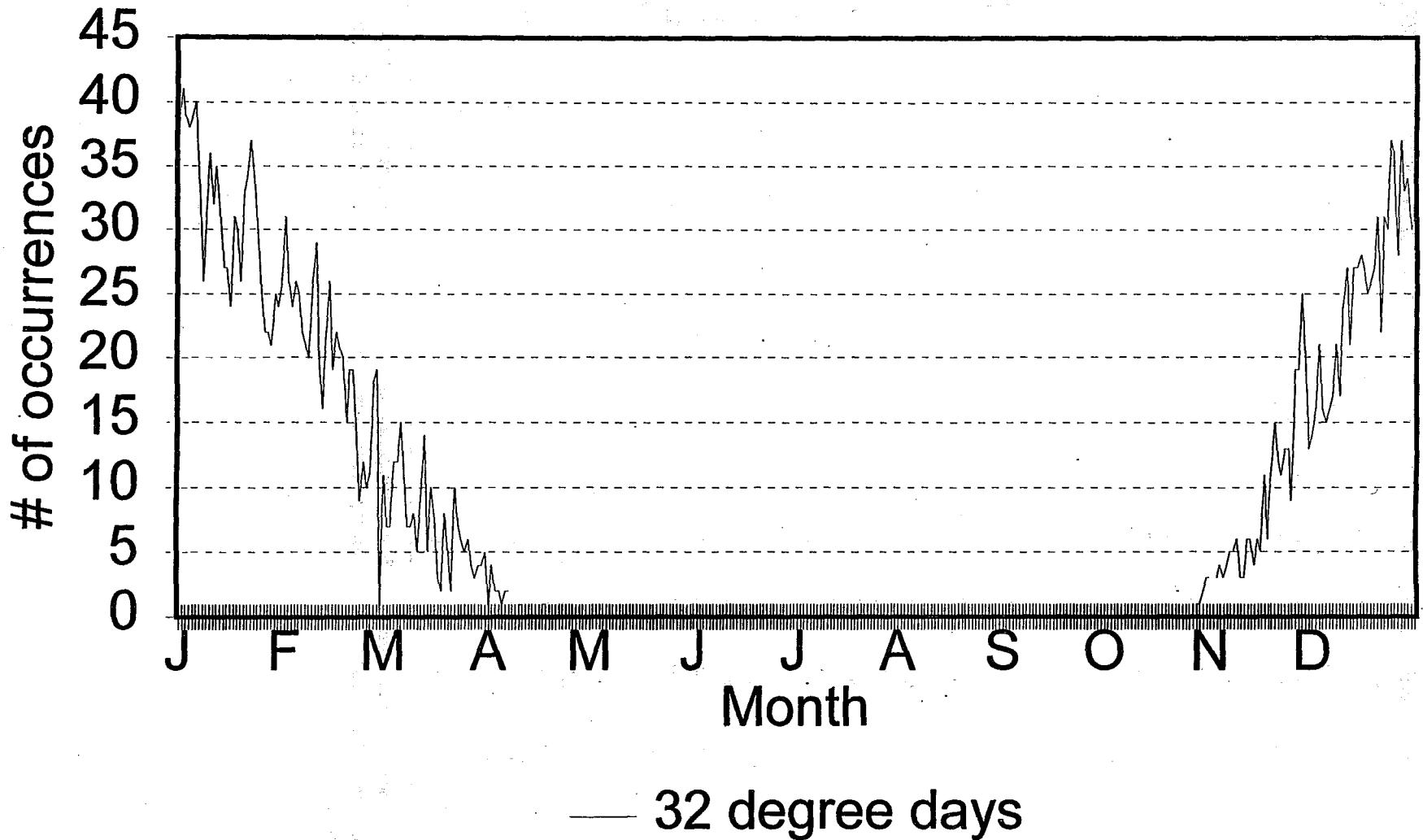


CALENDAR DAY OCCURRENCES OF MINIMUM TEMPERATURE (= < 32)
1894-1996 103 YEARS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	38	31	11	1	-	-	-	-	-	-	3	14
2	41	26	7	4	-	-	-	-	-	-	-	16
3	39	24	7	2	1	-	-	-	-	-	3	21
4	38	26	12	2	-	-	-	-	-	-	4	16
5	39	25	12	1	-	-	-	-	-	-	3	15
6	40	22	15	2	-	-	-	-	-	-	4	16
7	34	21	11	2	-	-	-	-	-	-	5	17
8	26	20	7	-	-	-	-	-	-	-	5	21
9	31	26	7	-	-	-	-	-	-	-	6	17
10	36	29	8	1	-	-	-	-	-	-	3	24
11	32	20	5	1	-	-	-	-	-	-	3	27
12	35	16	9	-	-	-	-	-	-	-	6	21
13	31	22	14	-	-	-	-	-	-	-	6	27
14	27	26	5	-	-	-	-	-	-	-	4	27
15	27	19	10	-	-	-	-	-	-	-	6	28
16	24	22	8	-	-	-	-	-	-	1	5	27
17	31	21	3	1	-	-	-	-	-	-	11	25
18	30	20	2	1	-	-	-	-	-	-	6	26
19	26	15	8	-	-	-	-	-	-	-	11	27
20	33	19	5	-	-	-	-	-	-	-	15	31
21	34	19	2	-	-	-	-	-	-	-	12	22
22	37	13	10	-	-	-	-	-	-	2	11	31
23	34	9	7	-	-	-	-	-	-	2	13	30
24	30	12	6	-	-	-	-	-	-	-	13	37
25	25	10	5	-	-	-	-	-	-	-	9	36
26	22	11	6	-	-	-	-	-	-	1	18	28
27	22	18	4	-	-	-	-	-	-	-	19	37
28	21	19	3	-	-	-	-	-	-	1	25	33
29	25	1	4	-	-	-	-	-	-	1	20	34
30	24	-	4	-	-	-	-	-	-	2	13	30
31	26	-	5	-	-	-	-	-	-	3	-	31

The above table shows, for example, a minimum temperature of 32 degrees or less occurred 38 times on January 1st during the period of record..103 years (1894-1996).

Daily lows of 32 degrees or less Tucson, AZ (1894-1996)

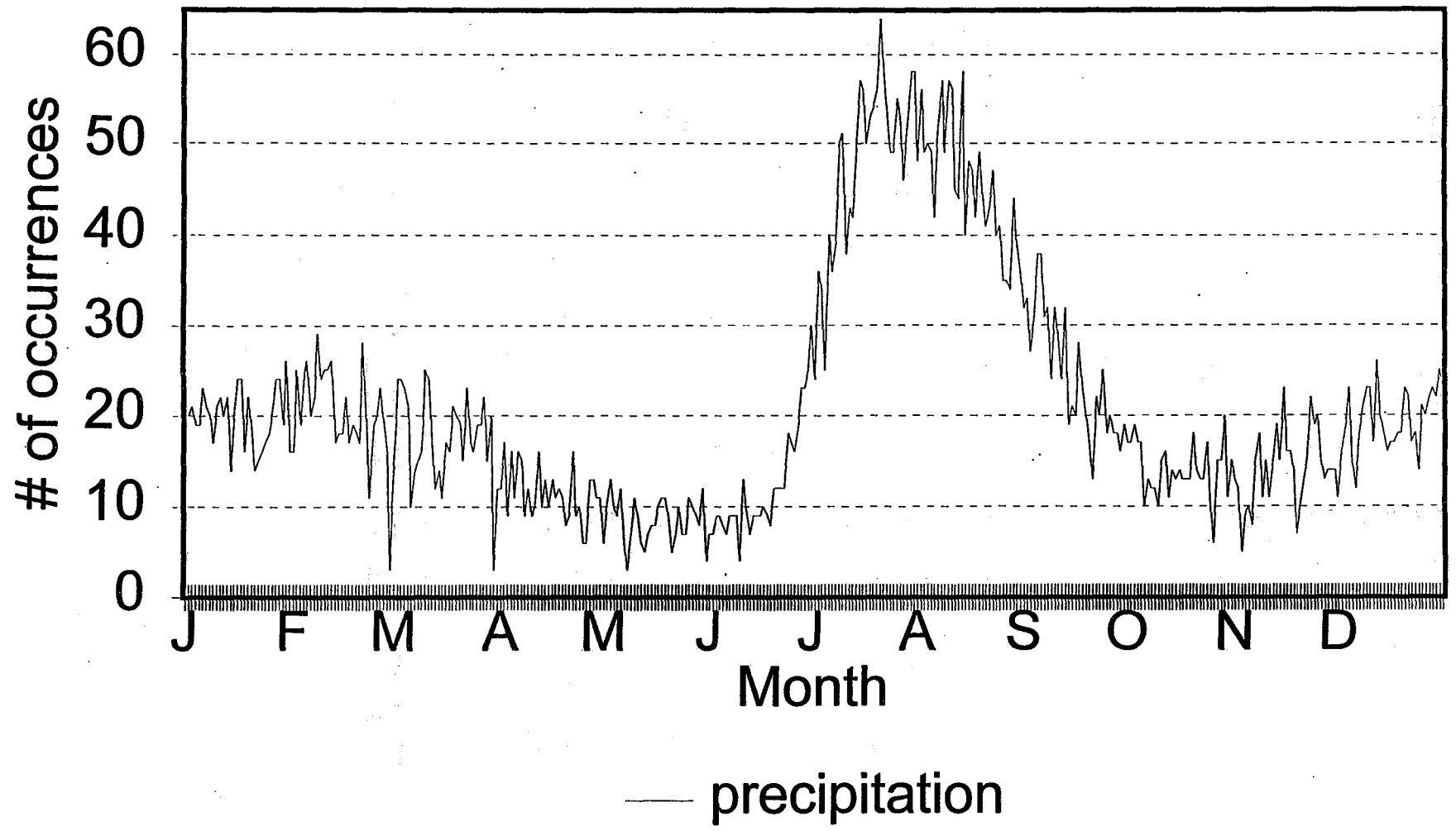


CALENDAR DAY OCCURRENCES OF PRECIPITATION (Trace or more)
(1894-1996) 103 YEARS

<u>DAY</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
1	20	16	15	12	6	7	30	48	32	17	13	11
2	20	25	24	17	10	7	24	56	33	17	12	16
3	21	19	24	9	13	9	36	49	27	19	5	19
4	19	24	23	16	10	9	34	50	31	17	9	23
5	19	26	21	11	9	8	25	49	38	17	10	15
6	23	20	10	16	12	7	40	42	38	10	8	12
7	21	22	14	15	6	9	36	52	31	13	15	18
8	20	29	15	9	3	9	39	57	32	12	18	21
9	17	24	16	12	7	9	50	49	24	12	11	23
10	21	25	25	9	11	4	51	57	32	10	15	23
11	22	25	24	10	9	13	38	56	29	15	11	17
12	20	26	17	16	6	9	43	45	24	16	15	26
13	22	17	12	10	5	7	42	44	32	11	19	20
14	14	18	14	13	7	9	49	58	19	14	15	18
15	20	18	11	10	8	9	57	40	21	13	23	16
16	24	22	17	13	8	9	56	48	20	14	16	17
17	24	17	16	11	10	10	50	47	28	13	16	17
18	16	19	21	12	11	9	53	42	23	13	14	18
19	22	18	20	11	11	8	54	49	20	13	7	18
20	18	17	19	8	9	12	56	44	17	18	10	23
21	14	28	15	9	5	12	64	41	13	14	13	22
22	15	18	23	16	7	12	58	43	22	13	15	17
23	16	11	17	9	10	12	53	47	20	13	22	18
24	17	19	16	10	7	18	49	40	25	17	19	14
25	18	20	19	6	7	17	49	41	18	10	20	21
26	21	23	19	6	11	16	55	35	20	6	15	20
27	24	19	22	13	10	19	52	35	18	15	13	22
28	24	16	15	13	9	23	46	34	18	15	14	23
29	19	3	20	11	8	23	52	44	16	20	14	22
30	26	-	3	11	12	25	58	39	19	11	14	25
31	16	-	12	-	4	-	58	36	-	15	-	23

The above table shows, for example, that precipitation of a trace or more has occurred 34 times on July 4th during the period of record..103 years (1894-1996).

Daily recorded rainfall(trace or more) Tucson, AZ (1894-1996)



CALENDAR DAY OCCURRENCES OF MEASURABLE PRECIPITATION (=> .01")
(1894-1996) 103 YEARS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	14	12	13	7	4	5	18	33	21	10	7	5
2	14	19	20	10	4	2	16	34	18	10	8	10
3	15	14	16	7	5	3	28	32	23	14	4	15
4	13	14	18	10	7	6	24	34	17	15	5	17
5	12	18	16	8	6	4	13	28	24	12	9	12
6	17	17	9	11	6	4	27	28	27	8	6	10
7	14	19	10	10	2	5	19	35	16	11	11	11
8	15	22	13	6	1	7	26	44	21	8	14	17
9	13	18	13	8	4	3	26	34	13	8	8	16
10	14	17	20	6	4	3	28	40	19	7	12	16
11	20	19	15	7	5	6	26	34	18	9	9	14
12	13	17	15	9	4	4	26	26	16	12	13	19
13	13	13	8	6	4	4	25	29	20	7	12	14
14	11	13	8	7	5	2	30	37	9	9	12	11
15	16	12	7	7	5	1	39	31	11	8	18	14
16	15	16	12	9	3	6	41	33	14	10	15	15
17	16	14	10	7	4	5	37	36	19	9	10	14
18	12	13	15	7	10	6	31	21	15	10	11	17
19	15	15	12	8	5	3	40	30	14	9	7	15
20	15	12	15	5	6	5	37	30	10	13	7	18
21	13	17	12	4	4	6	44	27	7	12	6	16
22	9	14	12	12	2	5	41	31	15	8	10	12
23	9	5	13	5	6	7	38	34	15	9	15	17
24	13	13	14	7	5	3	39	25	21	11	17	9
25	13	16	13	3	5	9	32	25	15	9	16	17
26	15	12	16	2	6	8	39	19	12	4	13	17
27	17	15	18	6	2	7	39	21	14	10	8	15
28	19	11	12	10	5	12	22	17	14	8	11	17
29	18	3	12	4	3	13	33	32	15	12	12	15
30	17	-	3	6	5	18	39	21	13	11	12	20
31	15	-	6	-	1	-	42	25	-	12	-	16

The above table shows, for example, that precipitation of 0.01" or more has occurred 24 times on July 4th during the period of record..103 years (1894-1996).

CALENDAR DAY OCCURRENCES OF PRECIPITATION (=> .10")
(1894-1996) 103 YEARS

<u>DAY</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
1	8	8	6	4	4	1	8	21	15	4	3	2
2	6	6	10	7	1	2	7	20	10	6	3	7
3	12	9	10	1	1	-	13	18	14	7	3	10
4	10	10	10	7	2	2	14	20	9	8	-	10
5	7	13	10	3	3	-	6	17	16	7	4	11
6	9	9	6	6	4	-	15	17	12	5	5	6
7	7	13	4	3	1	1	10	19	9	9	4	7
8	8	12	1	3	-	3	12	21	13	5	10	11
9	8	10	9	5	3	2	15	19	8	5	4	11
10	9	12	12	3	2	1	14	21	10	3	9	8
11	11	8	9	4	-	2	15	22	11	4	5	10
12	7	10	8	7	1	2	16	15	10	6	10	10
13	10	10	5	3	-	2	14	14	10	3	4	10
14	5	7	5	2	1	1	14	21	6	4	8	7
15	8	7	5	4	4	-	17	20	7	2	12	7
16	8	11	4	3	1	3	18	15	6	6	12	10
17	8	7	8	3	3	1	23	20	7	4	6	9
18	4	7	5	2	3	1	15	12	8	5	8	13
19	9	4	7	6	3	1	22	17	6	6	3	9
20	10	6	7	1	3	-	20	16	5	6	2	14
21	6	9	5	2	2	2	22	14	5	5	5	9
22	4	4	7	4	2	3	28	20	7	5	6	8
23	4	3	7	4	3	2	18	20	11	3	11	10
24	8	6	8	1	2	2	14	15	12	6	12	5
25	7	6	6	1	-	6	19	7	11	3	11	12
26	7	6	11	-	4	3	19	12	7	2	6	9
27	11	7	8	4	-	3	21	10	6	5	6	8
28	11	7	4	4	1	7	14	9	9	7	4	9
29	14	3	6	1	2	6	24	19	10	7	9	9
30	8	-	1	3	3	11	16	9	7	9	6	5
31	6	-	5	-	1	-	20	16	-	5	-	9

The above table shows, for example, precipitation of 0.10" or more has occurred 14 times on July 4th during the period of record..103 years (1894-1996).

CALENDAR DAY OCCURRENCES OF PRECIPITATION (=> .25")
(1894-1996) 103 YEARS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3	3	4	1	2	-	6	14	7	4	3	-
2	3	5	6	4	-	2	2	13	3	4	-	4
3	7	4	7	-	1	-	6	12	10	7	2	7
4	6	7	5	2	-	-	2	12	5	8	-	5
5	6	3	3	1	1	-	4	9	7	4	3	8
6	6	6	2	1	2	-	5	7	5	3	3	2
7	3	8	1	1	-	-	6	10	5	5	2	-
8	2	6	1	3	-	-	8	11	9	4	3	4
9	4	3	4	2	2	1	9	14	3	3	2	6
10	4	7	7	-	2	1	7	10	7	2	3	5
11	6	5	2	2	-	-	7	12	6	1	4	4
12	5	3	4	6	-	1	8	10	5	4	5	5
13	5	4	2	1	-	-	6	7	5	2	2	5
14	2	4	3	1	-	-	8	12	4	3	3	6
15	3	6	1	3	2	-	10	14	6	1	6	2
16	1	4	3	2	-	-	12	12	2	3	7	5
17	4	4	3	2	-	-	14	8	3	2	4	5
18	3	3	4	-	2	-	10	7	4	5	4	5
19	2	1	5	2	1	1	14	9	3	5	2	3
20	8	3	1	1	1	-	11	11	3	4	1	6
21	3	3	4	1	-	2	15	8	1	3	4	5
22	2	2	2	2	1	2	15	11	5	-	4	4
23	2	2	4	3	2	2	9	7	6	2	9	5
24	3	5	3	1	1	1	11	12	6	2	7	2
25	2	2	2	1	-	2	10	3	7	-	6	6
26	3	3	4	-	4	1	8	5	6	1	3	6
27	5	3	3	2	-	1	9	7	3	3	4	3
28	6	4	2	1	1	4	9	3	7	5	2	6
29	7	2	5	-	2	4	11	6	8	5	6	4
30	2	-	1	1	2	4	8	5	4	5	2	2
31	2	-	2	-	-	-	7	9	-	2	-	7

The above table shows, for example, precipitation of 0.25" or more has occurred 2 times on July 4th during the period of record..103 years (1894-1996).

CALENDAR DAY OCCURRENCES OF PRECIPITATION (=> .50")
(1894-1996) 103 YEARS

<u>DAY</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
1	-	-	-	-	1	-	5	4	3	3	-	-
2	-	1	1	1	-	1	1	9	1	4	-	2
3	4	-	2	-	1	-	4	9	5	3	2	4
4	1	4	2	2	-	-	1	5	4	2	-	2
5	4	1	1	-	-	-	3	3	3	2	2	1
6	2	3	2	-	-	-	-	5	2	2	2	2
7	2	4	1	-	-	-	2	3	3	2	1	-
8	-	3	-	1	-	-	3	4	6	1	2	2
9	2	1	4	2	-	-	4	9	2	1	-	4
10	3	2	4	-	-	1	2	4	4	2	2	3
11	2	1	-	-	-	-	3	7	4	-	2	2
12	2	2	2	1	-	-	7	6	3	3	1	2
13	-	2	1	1	-	-	1	6	1	1	1	4
14	2	1	1	-	-	-	1	3	2	1	2	5
15	2	-	-	3	1	-	4	7	3	-	1	2
16	-	-	3	-	-	-	5	5	1	2	4	2
17	1	1	1	-	-	-	5	2	1	1	3	1
18	1	1	1	-	-	-	4	2	3	1	3	1
19	1	-	2	-	1	1	6	3	1	1	2	-
20	2	1	-	1	-	-	5	2	-	1	-	2
21	-	1	-	-	-	1	8	3	1	1	3	-
22	-	1	-	1	-	1	8	8	2	-	3	3
23	1	-	1	2	1	1	3	3	2	2	2	1
24	-	3	-	-	1	1	8	7	4	1	3	1
25	-	1	1	-	-	2	7	1	4	-	2	1
26	1	1	2	-	-	-	4	3	5	1	-	2
27	2	1	1	-	-	1	4	5	3	1	-	2
28	1	3	-	-	1	1	3	1	2	1	1	5
29	4	1	1	-	-	1	6	2	5	2	1	1
30	2	-	-	-	-	1	4	4	2	3	1	2
31	1	-	-	-	-	-	4	4	-	-	-	1

The above table shows, for example, precipitation of 0.50" or more has occurred 1 time on July 4th during the period of record, .103 years (1894-1996).

CALENDAR DAY OCCURRENCES OF PRECIPITATION (=> 1.00")
 (1894-1996) 103 YEARS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-	-	-	-	-	-	-	2	1	1	-	-
2	-	-	-	-	-	-	-	4	-	2	-	-
3	-	-	-	-	-	-	2	4	2	1	-	1
4	-	-	-	-	-	-	-	-	2	-	-	1
5	1	-	-	-	-	-	1	1	1	1	-	1
6	1	-	-	-	-	-	-	2	-	1	-	-
7	1	1	-	-	-	-	1	1	2	-	-	-
8	-	-	-	1	-	-	2	2	-	-	-	-
9	-	-	1	-	-	-	-	3	-	-	-	-
10	1	-	1	-	-	-	-	1	2	1	1	-
11	1	1	-	-	-	-	-	2	3	-	1	1
12	-	-	-	-	-	-	4	1	2	-	-	-
13	-	-	-	-	-	-	-	2	-	-	1	-
14	-	-	-	-	-	-	1	1	1	-	-	1
15	-	-	-	-	1	-	1	1	1	-	-	1
16	-	-	1	-	-	-	2	-	1	-	1	-
17	-	-	-	-	-	-	1	1	1	-	1	-
18	1	-	-	-	-	-	-	1	1	1	-	-
19	1	-	-	-	-	-	3	-	-	1	2	-
20	-	-	-	-	-	-	2	-	-	-	-	1
21	-	-	-	-	-	-	4	-	1	1	-	-
22	-	-	-	-	-	-	3	4	-	-	1	1
23	-	-	1	-	-	-	-	2	2	-	1	-
24	-	1	-	-	-	1	3	-	2	-	-	1
25	-	1	1	-	-	-	1	-	1	-	2	-
26	-	-	-	-	-	-	2	-	3	1	-	-
27	-	1	-	-	-	-	2	-	2	-	-	-
28	-	-	-	-	-	1	2	-	1	-	-	1
29	-	-	-	-	-	-	1	1	1	1	-	-
30	-	-	-	-	-	-	1	3	-	1	-	1
31	-	-	-	-	-	-	2	1	-	-	-	1

 The above table shows, for example, precipitation of 1.00" or more has not occurred yet on July 4th during the period of record..103 years (1894-1996).

CALENDAR DAY OCCURRENCES OF SNOWFALL (Trace or more)
 (1894-1996) 103 YEARS

<u>DAY</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
1	4	-	-	-	-	-	-	-	-	-	-	1
2	3	4	1	1	-	-	-	-	-	-	-	-
3	1	2	2	-	-	-	-	-	-	-	-	-
4	-	1	3	-	-	-	-	-	-	-	-	2
5	-	1	2	-	-	-	-	-	-	-	-	-
6	-	3	-	-	-	-	-	-	-	-	-	2
7	1	2	-	-	-	-	-	-	-	-	-	2
8	1	1	1	-	-	-	-	-	-	-	-	1
9	-	3	2	-	-	-	-	-	-	-	-	-
10	-	2	1	-	-	-	-	-	-	-	-	1
11	2	-	1	-	-	-	-	-	-	-	-	2
12	2	2	1	1	-	-	-	-	-	-	-	1
13	2	1	-	-	-	-	-	-	-	-	-	4
14	-	2	1	-	-	-	-	-	-	-	-	3
15	1	2	-	-	-	-	-	-	-	-	1	-
16	3	3	1	1	-	-	-	-	-	-	1	-
17	1	1	-	-	-	-	-	-	-	-	-	1
18	2	-	-	-	-	-	-	-	-	-	-	2
19	1	2	-	-	-	-	-	-	-	-	1	-
20	3	2	-	-	-	-	-	-	-	-	-	3
21	1	2	-	-	-	-	-	-	-	1	-	1
22	1	1	-	-	-	-	-	-	-	-	-	2
23	-	-	-	-	-	-	-	-	-	-	-	1
24	1	1	2	-	-	-	-	-	-	-	-	2
25	1	1	1	-	-	-	-	-	-	-	-	4
26	1	-	-	-	-	-	-	-	-	-	-	2
27	-	2	-	-	-	-	-	-	-	-	-	1
28	-	-	1	-	-	-	-	-	-	-	-	-
29	1	-	-	-	-	-	-	-	-	-	1	-
30	-	-	-	-	-	-	-	-	-	1	-	2
31	-	-	-	-	-	-	-	-	-	-	-	7

 The above table shows, for example, snowfall of a Trace or more has occurred seven times on December 31st during the period of record (1894-1996).

CALENDAR DAY OCCURRENCES OF SNOWFALL (=> 1")
 (1894-1996) 103 YEARS

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3	-	-	-	-	-	-	-	-	-	-	-
2	1	1	1	1	-	-	-	-	-	-	-	-
3	-	1	2	-	-	-	-	-	-	-	-	-
4	-	1	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-
6	-	2	-	-	-	-	-	-	-	-	-	-
7	1	1	-	-	-	-	-	-	-	-	-	-
8	-	1	-	-	-	-	-	-	-	-	-	1
9	-	1	1	-	-	-	-	-	-	-	-	-
10	-	1	-	-	-	-	-	-	-	-	-	-
11	2	-	-	-	-	-	-	-	-	-	-	1
12	1	1	1	-	-	-	-	-	-	-	-	-
13	1	1	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	1	-	-	-	-	-	-	-	-	-	-
16	1	1	-	1	-	-	-	-	-	-	1	-
17	-	1	-	-	-	-	-	-	-	-	-	1
18	-	-	-	-	-	-	-	-	-	-	-	1
19	1	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	1
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	1
23	-	-	-	-	-	-	-	-	-	-	-	-
24	1	-	1	-	-	-	-	-	-	-	-	2
25	1	-	-	-	-	-	-	-	-	-	-	2
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	1	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-
29	1	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	1

 The above table shows, for example, snowfall of an inch or more has occurred three times on January 1st during the period of record (1894-1996).

MONTHLY AND ANNUAL AVERAGE TEMPERATURES
1894-1996 103 YEARS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1894	--	--	--	--	--	--	--	--	--	71.3	64.1	54.8	-----
1895	52.0	53.9	59.0		74.8	81.1	86.2	82.8	80.8	68.9	55.1	48.6	-----
1896			61.5	63.9	73.6		85.0	84.1	80.7	68.8	58.1	53.7	-----
1897	49.6	50.7	54.1	65.2	75.7	80.1			80.2	67.6	60.5	48.9	-----
1898	46.2	57.2	55.8	67.4			86.3	84.8	79.3	68.5	54.5	47.3	-----
1899	46.6	49.3	56.6	65.7	68.0	80.9	86.6	83.6	82.4	67.1	58.0	51.5	66.4
1900	52.9	52.1	62.7	59.1	74.6	82.6	88.3	82.7	76.6	68.5	60.2	51.6	67.6
1901	51.0	52.0	55.6	61.7	72.2	79.4	87.3	84.8	79.6	69.4	61.4	50.4	67.1
1902	50.4	52.6	54.1	66.3	71.5	83.1	84.4	84.1	79.8	71.0	55.0	50.3	66.9
1903	48.9	<u>45.3</u>	55.1	62.2	70.0	80.4	85.8	85.8	78.4	67.4	60.1	51.8	65.9
1904	45.4	56.2	60.2	63.9	72.8	81.8	84.9	82.4	77.0	68.4	58.7	47.8	66.6
1905	48.7	50.6	54.0	58.4	<u>64.6</u>	77.8	84.2	86.1	80.4	69.8	57.6	47.2	<u>65.0</u>
1906	50.6	55.2	58.4	62.0	69.7	80.0	86.2	81.8	79.1	68.8	57.8	53.5	66.9
1907	51.4	56.0	58.4	65.2	70.8	78.0	85.8	83.0	80.0	69.6	58.1	51.4	67.3
1908	51.2	51.4	58.8	64.2	68.2	78.2	83.8	82.4	78.2	<u>63.8</u>	58.0	51.0	65.8
1909	53.8	50.4	53.0	63.4	68.6	81.4	85.0	82.8	77.8	67.7	57.3	47.4	65.7
1910	50.0	50.1	63.1	66.8	75.3	82.8	85.8	85.3	82.0	70.4	58.0	52.6	68.5
1911	54.6	51.8	62.7	64.8	72.7	81.4	83.6	85.0	81.2	67.0	51.0	<u>45.0</u>	66.7
1912	50.6	51.7	55.9	58.7	70.7	83.0	<u>81.6</u>	82.6	76.8	65.6	57.2	45.8	<u>65.0</u>
1913	44.8	50.2	53.9	64.0	71.1	78.2	83.5	83.5	78.0	66.9	59.5	48.8	65.2
1914	53.8	52.3	60.7	65.8	73.6	82.2	83.1	84.2	80.0	66.8	60.4	47.5	67.5
1915	46.8	51.0	53.8	61.2	67.0	81.2	87.2	86.9	78.4	70.7	57.2	49.4	65.9
1916	50.8	57.9	61.6	64.0	70.4	80.2	84.4	82.8	79.4	66.2	55.4	47.0	66.7
1917	48.6	50.1	53.6	61.8	66.6	82.2	85.6	83.1	80.1	70.8	60.2	53.0	66.3
1918	47.8	54.6	60.9	64.2	69.6	85.4	86.2	81.8	81.4	70.0	56.2	49.0	67.3
1919	47.6	48.0	54.9	65.5	72.0	82.4	83.1	83.2	76.9	64.0	57.5	52.8	65.7
1920	51.8	55.2	54.8	58.5	71.8	79.8	87.4	82.6	77.2	65.0	56.8	47.3	65.7
1921	52.0	54.0	60.7	61.6	69.0	79.5	84.1	81.8	78.6	70.6	58.3	54.4	67.0
1922	48.0	52.6	55.4	60.6	73.4	83.0	85.6	84.2	80.6	69.4	53.0	53.6	66.6
1923	54.0	53.8	56.0	64.2	74.3	78.4	84.5	<u>80.8</u>	76.7	65.4	56.0	49.8	66.2
1924	48.8	54.3	52.4	61.6	73.8	84.4	86.6	86.1	81.8	67.4	59.5	50.4	67.3
1925	47.6	56.4	60.5	65.4	74.9	80.3	88.2	83.6	78.2	68.1	56.2	50.3	67.5
1926	46.2	55.3	59.6	64.7	72.0	82.5	85.5	86.0	80.9	71.2	59.0	50.6	67.8
1927	54.8	56.4	57.0	54.8	73.2	80.3	87.0	84.0	78.9	69.1	61.7	48.3	68.0
1928	50.8	52.0	60.3	62.9	75.4	82.0	87.2	83.5	81.0	70.6	57.9	49.8	67.8
1929	48.0	49.8	55.8	62.3	73.2	81.6	86.2	84.2	79.7	69.7	54.0	52.8	66.4
1930	49.8	55.8	56.6	67.9	70.0	82.7	85.9	85.3	78.2	67.3	57.8	50.3	67.3
1931	49.8	53.6	57.8	67.2	73.4	81.5	88.6	82.2	80.5	68.8	54.3	48.4	67.2
1932	43.3	54.6	57.4	63.5	71.7	79.6	85.5	85.2	80.6	67.8	60.0	47.2	66.4
1933	47.7	47.5	57.8	60.6	67.1	82.4	87.4	85.8	81.6	72.0	59.4	52.2	66.8
1934	49.4	56.4	63.9	69.0	78.4	79.8	87.8	83.6	79.6	70.6	56.7	52.3	69.0
1935	52.1	55.0	55.0	64.7	67.6	82.0	85.7	82.3	78.3	68.8	54.6	51.5	66.5
1936	48.8	53.2	59.0	66.9	75.3	83.8	86.8	83.8	77.6	68.6	59.9	50.8	67.9
1937	<u>41.2</u>	52.8	56.0	62.8	73.8	81.2	86.3	86.0	81.8	71.0	59.4	54.3	67.2
1938	52.4	54.2	57.6	65.5	71.3	81.8	84.4	83.3	81.2	70.0	54.8	53.0	67.5
1939	50.4	45.5	59.2	67.2	74.0	82.6	87.2	84.6	79.4	67.5	62.2	56.2	68.0

Record monthly and annual temperatures are shown in **bold** (warmest) & underlined (coldest).

MONTHLY AND ANNUAL AVERAGE TEMPERATURES
1894-1996 103 YEARS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1940	52.6	52.8	59.6	65.4	76.0	83.4	87.2	84.4	80.8	70.7	56.8	56.5	68.9
1941	52.6	56.5	56.9	59.8	72.9	80.2	86.4	83.2	79.4	67.2	60.6	52.0	67.3
1942	53.0	50.8	55.8	63.6	73.1	82.9	89.8	85.2	81.6	69.4	63.2	54.2	68.5
1943	52.8	58.7	61.8	70.4	76.3	83.2	88.0	83.9	82.0	70.8	61.6	52.5	70.2
1944	50.4	50.7	56.4	63.0	73.4	80.6	87.4	86.4	79.6	72.8	55.9	52.3	67.4
1945	50.7	53.6	54.6	63.4	73.6	78.9	86.5	84.2	80.9	71.6	58.5	50.4	67.2
1946	48.0	52.0	59.4	70.6	73.0	85.4	86.0	84.0	80.9	65.9	54.8	55.6	68.0
1947	48.4	57.8	59.6	64.8	76.8	82.1	88.2	83.7	83.0	70.4	54.2	48.2	68.1
1948	51.5	50.8	54.0	68.0	75.1	83.4	86.8	85.2	82.6	71.1	53.6	51.2	67.8
1949	43.0	50.2	57.6	67.4	73.4	83.0	85.0	84.2	82.2	66.4	64.3	50.8	67.3
1950	50.4	57.2	60.7	69.2	71.6	81.6	82.8	84.7	78.3	76.8	63.0	56.9	69.4
1951	50.3	53.7	57.4	64.4	74.0	80.5	88.8	84.9	83.2	72.5	58.5	51.5	68.3
1952	51.7	51.6	52.7	65.1	76.8	83.4	86.0	85.3	83.3	76.4	56.4	50.1	68.2
1953	53.9	52.2	60.6	65.2	68.9	84.1	86.8	86.4	82.9	71.0	61.6	48.6	68.5
1954	53.5	60.3	59.3	71.5	75.9	83.1	86.8	83.4	82.9	74.2	62.7	53.3	70.6
1955	46.7	48.8	59.6	64.4	71.8	82.3	84.6	81.8	81.2	74.3	58.5	55.5	67.4
1956	56.1	48.7	60.2	64.2	75.8	86.2	85.4	84.0	84.3	70.2	57.8	52.5	68.8
1957	53.8	61.1	59.6	66.2	71.2	85.3	88.1	84.2	81.3	67.9	54.3	54.9	69.0
1958	51.4	55.8	54.2	64.5	79.1	84.9	86.9	84.5	80.5	71.9	57.8	55.6	68.9
1959	53.8	51.5	58.2	69.2	72.5	85.4	86.6	81.8	80.2	69.7	58.5	51.4	68.2
1960	46.8	47.8	61.0	65.7	71.9	83.5	86.0	84.2	81.2	67.3	59.2	49.1	67.0
1961	52.5	53.0	58.2	66.2	72.9	84.7	86.1	81.8	77.1	68.5	54.4	50.5	67.1
1962	49.0	54.7	53.3	70.1	71.7	80.3	84.9	87.0	81.3	70.6	61.5	54.0	68.2
1963	48.3	57.5	57.7	64.0	77.3	80.5	87.6	82.3	82.4	73.2	59.3	52.7	68.6
1964	47.5	47.7	54.8	63.2	73.2	82.0	86.2	81.6	<u>76.3</u>	72.1	55.2	52.4	66.0
1965	53.6	51.1	55.1	64.5	70.1	<u>77.5</u>	85.0	84.0	76.8	71.9	62.6	52.1	67.1
1966	47.7	47.8	60.1	66.8	76.1	82.8	85.3	82.9	78.3	68.1	61.1	52.4	67.4
1967	51.4	55.6	62.1	62.1	71.9	80.7	85.4	84.6	80.7	71.6	62.9	48.6	68.1
1968	52.4	59.1	58.7	63.2	73.3	83.5	84.9	81.3	80.7	71.7	58.3	50.6	68.1
1969	55.5	53.1	54.3	66.6	74.9	80.7	86.1	86.3	81.2	66.8	59.6	52.4	68.0
1970	50.0	57.0	55.9	61.1	75.2	83.4	87.2	84.8	76.4	65.1	60.1	51.8	67.3
1971	50.5	52.3	59.8	62.8	69.3	81.2	87.5	81.3	79.1	64.2	56.8	47.1	66.0
1972	50.4	55.8	65.0	65.8	72.3	81.6	86.6	82.9	78.6	66.5	<u>53.0</u>	49.0	67.3
1973	47.6	53.4	<u>51.6</u>	59.7	73.0	81.4	84.3	84.7	79.6	70.7	58.4	52.3	66.4
1974	50.2	51.9	60.1	66.1	74.3	86.9	83.5	83.0	77.8	69.1	57.5	47.0	67.3
1975	49.8	50.7	55.3	<u>57.9</u>	69.8	80.5	84.2	85.8	80.0	69.5	59.3	53.0	66.3
1976	52.6	58.4	58.2	64.8	74.5	83.4	83.9	85.3	77.7	67.8	60.0	52.2	68.3
1977	50.7	56.9	55.7	67.0	70.8	84.7	87.0	86.4	82.0	73.3	61.7	56.9	69.4
1978	53.1	53.6	61.8	65.2	73.1	85.8	88.1	84.7	80.9	73.8	58.5	49.7	69.0
1979	48.4	53.8	56.4	65.6	72.2	83.1	87.5	83.4	84.2	73.0	56.6	55.0	68.3
1980	54.3	57.9	57.5	65.6	71.5	84.9	88.6	84.6	80.5	69.6	59.5	58.1	69.4
1981	54.8	57.1	57.1	69.1	73.4	86.1	85.2	86.4	80.7	68.1	62.2	55.0	69.6
1982	50.7	54.7	57.7	66.1	72.3	80.5	84.8	83.9	79.2	67.0	57.7	50.1	67.0
1983	52.9	53.8	57.3	60.4	73.8	81.6	86.9	84.0	82.2	69.5	57.4	53.5	67.8
1984	51.8	53.7	60.5	64.0	79.9	83.1	84.2	82.9	81.5	66.3	57.8	51.5	68.1

Record monthly and annual temperatures are shown in **bold** (warmest) & underlined (coldest).

MONTHLY AND ANNUAL AVERAGE TEMPERATURES
1894-1996 103 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1985	50.3	<u>53.1</u>	58.7	68.7	75.9	85.8	87.5	86.1	77.4	70.0	58.0	52.9	68.7
1986	58.7	56.9	63.8	69.0	76.8	86.6	85.5	86.0	79.0	69.6	59.8	52.3	70.3
1987	50.9	54.2	57.9	70.1	74.3	86.3	87.4	85.1	79.9	75.1	58.9	50.3	69.2
1988	53.0	59.4	61.4	68.0	76.4	86.8	87.9	85.9	80.4	75.3	59.2	51.9	70.5
1989	49.9	58.2	65.0	73.8	77.4	85.4	90.0	86.6	84.5	71.1	61.7	53.0	71.4
1990	51.8	52.8	61.8	69.7	75.2	88.7	85.0	82.6	82.2	73.1	61.6	51.1	69.6
1991	52.3	59.8	55.4	65.2	73.5	81.5	87.5	86.6	80.7	74.0	58.9	54.3	69.1
1992	51.6	57.3	59.4	70.8	76.7	84.5	86.8	85.1	83.6	74.2	56.1	51.4	69.8
1993	55.2	54.0	61.3	68.6	78.1	85.0	88.0	85.5	81.4	72.6	58.8	53.4	70.2
1994	53.7	55.2	62.9	68.6	75.6	89.2	90.4	90.3	84.2	70.5	56.7	53.9	70.9
1995	52.6	60.7	61.2	64.8	72.6	83.3	88.4	87.3	82.9	72.4	63.1	54.0	70.3
1996	53.6	58.9	61.1	68.9	79.0	87.4	88.6	86.4	77.7	70.4	60.9	53.5	70.6

Record monthly and annual temperatures are shown in **bold** (warmest) & underlined (coldest).

**MONTHLY AND ANNUAL MAXIMUM TEMPERATURE EXTREMES
1894-1996 103 YEARS**

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1894	--	--	--	--	--	--	--	--	--	97	90	79	-----
1895	76	84	92	95	102	108	106	106	107	93	83	85	108
1896	--	--	94	93	106	110	104	104	102	91	83	76	110
1897	71	80	80	97	98	105	103	101	99	92	89	80	105
1898	73	83	82	95	---	---	108	106	102	98	90	74	108
1899	74	79	88	92	98	106	107	104	107	93	88	78	107
1900	76	80	92	88	102	108	108	105	100	92	88	78	108
1901	76	82	86	92	97	108	108	106	104	98	85	83	108
1902	80	81	84	94	98	112	108	109	105	95	81	78	112
1903	76	76	82	92	102	108	106	108	104	93	88	78	108
1904	79	91	88	92	99	107	107	100	97	97	86	78	107
1905	67	70	74	79	97	102	107	107	103	96	82	72	107
1906	83	88	87	92	99	107	108	102	102	96	92	78	108
1907	76	82	95	96	101	107	111	102	102	96	85	78	111
1908	76	84	88	91	96	108	106	100	102	98	88	74	108
1909	82	76	81	91	96	106	108	102	100	96	91	79	108
1910	78	82	96	100	111	109	110	107	103	101	92	83	111
1911	83	83	88	90	97	107	106	106	101	95	80	85	107
1912	81	80	80	90	102	108	105	106	101	91	88	72	108
1913	72	76	90	90	101	105	109	103	102	94	85	74	109
1914	81	79	88	95	105	107	103	106	99	95	83	73	107
1915	76	77	80	89	98	106	109	110	102	95	--	82	110
1916	73	82	90	94	99	107	107	102	100	96	93	79	107
1917	72	80	88	91	96	110	107	102	103	101	88	82	110
1918	83	80	87	90	96	108	105	110	102	99	91	82	110
1919	74	78	86	96	97	111	103	105	100	86	83	77	111
1920	80	76	80	86	101	106	111	105	102	97	83	80	111
1921	81	91	89	93	98	109	106	103	101	99	85	85	109
1922	76	81	83	92	105	111	107	106	104	98	81	82	111
1923	83	82	82	89	101	110	108	99	100	94	74	73	110
1924	73	80	82	88	100	110	107	105	105	96	94	80	110
1925	80	86	91	99	104	106	109	103	100	100	80	75	109
1926	74	84	84	94	100	109	107	104	104	98	84	84	109
1927	88	82	86	96	103	108	106	106	102	96	88	77	108
1928	79	81	88	95	101	107	107	106	105	101	88	82	107
1929	77	78	86	91	99	111	106	102	102	101	84	79	111
1930	75	83	81	96	99	110	108	110	103	94	86	75	110
1931	75	79	89	89	98	105	108	102	101	94	91	74	108
1932	79	82	85	91	100	110	106	105	103	93	84	77	110
1933	75	80	86	88	103	111	106	109	104	98	87	84	111
1934	77	82	91	94	106	107	109	107	103	101	93	75	109
1935	84	85	82	93	94	106	106	103	101	99	86	78	106
1936	75	80	88	96	100	111	108	105	104	99	86	79	111
1937	72	79	83	97	102	106	110	106	102	97	88	77	110
1938	76	79	85	97	104	106	107	108	101	98	81	83	108
1939	80	78	89	95	100	107	106	104	104	92	91	85	107

monthly and annual record high temperatures are shown in **BOLD**.

**MONTHLY AND ANNUAL MAXIMUM TEMPERATURE EXTREMES
1894-1996 103 YEARS**

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1940	82	85	87	94	99	108	110	104	102	95	87	80	110
1941	72	82	83	87	100	105	107	103	100	93	85	82	107
1942	82	78	85	92	103	109	110	104	102	94	86	78	110
1943	76	89	91	102	101	106	109	103	105	94	85	73	109
1944	78	78	82	88	101	107	109	109	103	97	87	75	109
1945	74	80	83	95	96	105	104	105	107	94	89	75	107
1946	78	79	88	95	95	107	105	105	102	89	84	82	107
1947	80	83	88	94	105	104	110	105	105	98	90	76	110
1948	81	83	80	98	101	107	108	106	107	95	81	76	108
1949	68	80	87	97	104	107	106	105	103	92	86	78	107
1950	84	79	92	95	96	107	106	108	107	99	86	82	108
1951	82	86	81	92	107	106	108	104	104	97	80	78	108
1952	78	75	80	91	98	107	107	104	106	97	87	75	107
1953	87	80	90	94	98	109	110	105	104	98	87	76	110
1954	79	83	85	96	97	108	108	105	105	98	88	84	108
1955	77	82	87	90	101	110	108	100	103	101	85	79	110
1956	79	79	91	89	102	109	108	104	105	97	85	77	109
1957	75	92	88	91	98	111	109	102	100	98	76	75	111
1958	75	83	77	95	107	107	111	101	101	93	82	82	111
1959	79	75	82	94	99	107	104	100	103	96	77	76	107
1960	73	76	87	93	102	108	105	104	100	92	83	80	108
1961	74	80	85	94	98	106	105	103	95	91	78	73	106
1962	73	83	87	96	97	106	103	107	104	92	86	76	107
1963	77	86	86	96	100	104	107	98	101	96	85	73	107
1964	76	76	87	94	100	104	106	102	98	95	85	74	106
1965	77	79	86	98	100	104	107	104	97	98	85	78	107
1966	75	72	85	89	100	105	105	100	99	91	84	80	105
1967	81	83	89	88	99	105	107	104	100	95	87	70	107
1968	75	85	85	89	102	110	105	98	102	94	85	80	110
1969	82	77	91	94	103	106	108	106	101	95	79	81	108
1970	77	81	79	87	101	111	106	102	102	85	83	82	111
1971	85	80	90	92	94	105	108	97	101	89	86	78	108
1972	77	83	91	92	95	105	107	107	97	97	78	74	107
1973	76	77	77	89	98	107	107	103	104	95	87	83	107
1974	79	81	85	94	104	109	101	100	101	93	79	72	109
1975	77	78	84	87	97	103	103	106	96	94	88	80	106
1976	79	82	85	89	98	108	105	104	96	89	83	73	108
1977	74	81	84	91	103	108	104	105	102	100	86	78	108
1978	74	77	87	91	103	108	108	101	98	95	85	76	108
1979	73	82	82	90	96	108	110	104	105	99	83	79	110
1980	72	82	78	96	101	108	107	106	102	101	89	81	108
1981	79	85	83	94	93	107	106	105	99	89	86	83	107
1982	80	84	81	92	97	106	106	104	104	94	81	78	106
1983	77	78	83	89	105	104	111	103	107	89	83	76	111
1984	76	76	85	95	106	103	105	105	102	88	88	74	106

monthly and annual record high temperatures are shown in **BOLD**.

**MONTHLY AND ANNUAL MAXIMUM TEMPERATURE EXTREMES
1894-1996 103 YEARS**

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1985	71	81	84	94	99	111	109	108	100	97	87	77	111
1986	84	89	92	94	102	108	111	106	105	91	81	78	111
1987	86	81	85	97	97	109	110	106	102	101	85	81	110
1988	81	86	99	96	105	114	108	106	104	99	90	80	114
1989	74	89	97	104	106	113	114	105	106	97	88	78	114
1990	83	86	92	96	103	117	111	105	107	95	88	79	117
1991	74	85	87	92	101	110	109	106	103	100	88	76	110
1992	75	83	86	102	99	108	111	108	103	99	84	76	111
1993	76	77	85	99	104	113	109	112	103	102	86	79	113
1994	84	85	90	97	105	116	111	110	105	92	86	77	116
1995	76	83	87	94	100	110	114	109	104	97	85	79	114
1996	80	82	87	99	107	107	106	106	97	100	87	82	107

monthly and annual record high temperatures are shown in **BOLD**.

MONTHLY AND ANNUAL MINIMUM TEMPERATURE EXTREMES
1894-1996 103 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1894	--	--	--	--	--	--	--	--	--	39	35	30	-----
1895	27	29	30	31	47	45	63	61	50	38	27	14	14
1896	--	--	27	31	40	59	67	69	52	42	30	27	27
1897	26	25	22	30	52	50	65	66	62	29	28	16	16
1898	17	32	25	34	45	--	66	66	54	38	21	22	17
1899	20	17	26	36	32	48	68	62	52	32	32	22	17
1900	27	25	31	35	45	57	61	57	50	29	32	25	25
1901	19	31	25	28	41	48	66	63	49	46	36	10	10
1902	25	24	28	38	39	50	59	65	53	43	30	26	24
1903	27	24	24	37	42	57	61	65	50	35	35	21	21
1904	15	24	30	33	41	55	55	65	44	35	32	28	15
1905	26	28	36	36	39	52	62	66	45	40	31	11	11
1906	22	31	24	31	37	46	61	61	52	29	27	29	22
1907	26	27	24	35	42	50	65	63	45	42	30	20	20
1908	26	22	28	36	41	43	64	63	48	29	25	23	22
1909	29	23	25	30	41	53	64	62	52	36	26	17	17
1910	15	19	33	35	42	52	61	63	54	38	34	23	15
1911	16	27	35	38	43	51	49	63	62	41	24	19	16
1912	21	25	32	33	38	53	54	64	51	31	31	18	18
1913	6	28	26	36	38	49	58	63	43	40	35	28	6
1914	26	26	33	39	41	52	64	63	57	40	35	22	22
1915	22	28	30	36	37	--	67	67	44	--	--	--	--
1916	23	22	30	34	44	44	63	63	52	38	24	15	15
1917	28	27	23	28	39	48	65	55	50	36	30	22	22
1918	18	24	34	34	43	49	66	61	55	36	27	27	18
1919	20	29	29	38	49	50	64	65	54	35	26	28	20
1920	30	30	30	33	41	53	61	60	49	33	29	19	19
1921	22	23	35	32	40	49	64	64	53	35	19	27	19
1922	17	23	24	28	37	53	67	65	38	32	25	27	17
1923	19	25	28	37	43	50	66	63	44	34	28	27	19
1924	24	25	28	30	47	55	64	60	52	35	27	25	24
1925	18	33	29	32	47	46	62	61	52	42	29	24	18
1926	24	29	32	41	44	58	58	63	59	44	32	24	24
1927	28	34	31	38	43	49	67	65	51	41	35	24	24
1928	22	26	32	34	50	51	57	63	54	38	25	23	22
1929	22	26	29	33	43	52	69	67	59	32	29	23	22
1930	26	31	30	40	39	52	68	67	50	40	27	20	20
1931	23	32	29	44	46	55	66	66	49	41	27	23	23
1932	19	25	30	36	42	48	66	64	57	36	32	22	19
1933	26	18	28	33	38	51	67	63	56	48	29	23	18
1934	21	28	37	31	46	50	65	68	45	39	23	22	21
1935	21	29	29	34	43	50	59	64	56	33	27	25	21
1936	22	27	29	31	44	48	62	64	44	42	31	27	22
1937	15	26	31	35	41	53	66	64	61	46	33	31	15
1938	26	28	31	31	41	56	58	60	61	40	27	27	26
1939	26	25	28	40	49	55	69	65	49	42	35	24	24

monthly and annual record low temperatures are shown in BOLD.

MONTHLY AND ANNUAL MINIMUM TEMPERATURE EXTREMES
1894-1996 103 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1940	22	28	30	40	49	61	62	64	61	42	29	33	22
1941	30	37	36	34	45	53	65	65	48	37	30	28	28
1942	27	28	28	37	45	56	70	64	62	38	28	29	27
1943	30	27	40	42	47	55	67	67	60	41	30	32	27
1944	23	28	31	36	46	52	65	66	59	48	31	30	23
1945	30	31	30	27	49	54	68	66	49	42	32	22	22
1946	24	22	34	39	49	61	66	66	61	44	30	30	22
1947	23	32	35	39	50	58	68	66	63	44	28	24	23
1948	25	20	28	38	49	56	65	67	60	43	29	23	23
1949	16	25	31	38	49	54	67	65	66	35	37	22	16
1950	17	32	35	40	38	53	68	67	55	52	37	34	17
1951	28	27	26	39	42	54	70	63	63	43	35	27	27
1952	25	25	32	43	48	57	68	67	52	51	32	28	25
1953	29	23	33	38	42	54	69	68	58	42	25	24	23
1954	31	31	29	45	46	54	69	64	61	42	35	18	18
1955	25	20	26	37	41	47	63	63	58	46	31	33	20
1956	33	25	26	34	47	63	66	61	64	37	28	36	25
1957	29	33	36	42	46	59	69	65	58	44	30	27	27
1958	27	31	33	37	52	60	66	68	54	46	24	28	24
1959	26	27	28	44	43	59	68	68	57	39	34	28	26
1960	24	24	30	34	46	57	63	67	58	45	27	20	20
1961	32	32	34	43	46	52	64	64	56	38	32	32	32
1962	21	29	27	44	46	50	65	65	60	45	32	35	21
1963	21	33	30	37	53	53	70	66	63	51	39	27	21
1964	18	24	29	38	41	58	69	65	56	50	31	32	18
1965	30	22	20	37	40	52	68	66	44	41	37	30	20
1966	27	29	24	43	52	56	66	68	63	43	32	23	23
1967	20	30	32	34	39	55	68	69	63	41	38	26	20
1968	32	30	36	37	47	54	68	63	55	45	33	19	19
1969	27	28	27	43	39	57	69	70	61	41	34	24	24
1970	23	24	36	36	43	57	69	70	55	35	39	29	23
1971	17	27	22	39	46	50	68	67	55	26	35	27	17
1972	23	30	35	37	48	61	66	64	55	38	32	26	23
1973	26	33	33	35	44	56	63	66	55	43	32	28	26
1974	28	26	32	39	44	58	67	67	60	39	35	16	16
1975	25	25	31	34	40	59	67	69	59	40	31	26	25
1976	23	31	30	33	48	54	68	66	59	45	29	27	23
1977	29	28	34	37	47	63	70	70	64	51	38	36	28
1978	29	29	39	37	48	59	67	68	55	49	37	20	20
1979	25	32	35	36	44	56	67	63	62	42	24	31	25
1980	34	38	38	40	43	54	68	66	60	39	32	31	31
1981	35	29	38	38	51	62	68	66	61	35	34	27	27
1982	29	29	31	40	49	57	62	65	53	39	34	27	27
1983	30	33	35	36	47	58	64	65	63	52	30	30	30
1984	28	28	34	37	50	63	67	67	62	47	26	30	26

monthly and annual record low temperatures are shown in **BOLD**.

MONTHLY AND ANNUAL MINIMUM TEMPERATURE EXTREMES
1894-1996 103 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1985	31	24	32	43	50	55	70	66	55	50	31	26	24
1986	36	31	37	41	44	64	65	68	54	44	35	29	29
1987	19	32	33	42	50	62	64	64	57	54	32	23	19
1988	26	35	31	39	40	55	69	70	53	56	32	20	20
1989	24	31	32	41	48	58	70	65	57	40	32	26	24
1990	28	23	30	45	49	57	66	65	59	44	30	21	21
1991	26	33	34	37	44	52	67	68	62	36	35	29	26
1992	28	36	39	44	50	58	59	63	63	50	26	29	26
1993	31	34	38	42	51	51	68	65	57	46	31	30	30
1994	29	27	40	42	51	63	67	69	62	42	28	32	27
1995	31	40	32	38	44	54	63	68	59	46	35	32	31
1996	28	35	34	43	55	60	70	70	60	38	31	26	26

monthly and annual record low temperatures are shown in BOLD.

MONTHLY AND ANNUAL PRECIPITATION AMOUNTS
1894-1996 103 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1894	---	---	---	---	---	---	---	---	---	.46	.00	1.70	-----
1895	.56	T	0	T	.09	.02	.11	4.48	.75	.68	4.30	.08	11.07
1896	.53	.08	.27	.12	T	.19	3.45	1.25	1.13	3.31	.30	.76	11.39
1897	1.79	.08	.13	T	0	0	1.98	3.43	2.71	.54	0	.11	10.77
1898	1.10	0	.63	1.05	0	.20	3.22	3.94	.10	0	.85	1.63	12.72
1899	.78	.39	.37	.62	T	1.27	1.87	1.82	.03	.67	.56	T	8.38
1900	.16	.49	.54	1.12	T	.17	.65	.95	.85	.41	2.45	T	7.79
1901	1.15	1.38	.64	.04	.41	0	2.57	1.99	.28	1.18	.08	0	9.72
1902	.53	T	.44	T	T	.19	.42	1.31	.58	1.64	1.34	2.15	8.60
1903	0	1.11	1.63	0	.20	.22	1.52	2.67	1.17	0	0	.28	8.80
1904	.20	.54	.06	0	.61	.18	1.75	2.65	.89	.04	T	.93	7.85
1905	2.25	4.15	3.88	3.53	.02	.24	1.10	.56	2.84	.09	4.61	.90	24.17
1906	.50	.33	.33	.50	T	0	1.82	2.53	.43	T	.74	4.57	11.75
1907	1.76	.75	.56	.15	.43	T	4.27	3.46	.80	1.13	.78	0	14.09
1908	.76	2.08	.39	.10	.16	T	4.77	2.18	.55	.26	.17	2.62	14.04
1909	.51	.50	.33	0	0	.54	4.04	1.36	1.25	0	.87	.81	10.21
1910	1.02	T	.10	.08	T	.12	4.21	2.55	.30	.04	1.32	.06	9.80
1911	1.31	.99	.25	.27	0	.07	1.57	2.06	2.65	1.23	T	.85	11.25
1912	0	.37	2.12	.28	.32	.61	3.00	.96	.01	1.78	0	.39	9.84
1913	.80	1.86	.12	.70	T	.08	1.32	1.21	.14	.22	1.98	.89	9.32
1914	.15	.52	1.18	0	.49	1.31	2.94	3.45	.40	2.59	1.02	5.85	19.90
1915	1.33	1.68	.76	.35	.15	.14	2.39	1.51	.92	0	1.04	2.35	12.62
1916	4.00	.58	.50	.51	0	.07	2.03	2.26	1.29	1.10	0	.81	13.15
1917	1.92	.44	.15	.28	.82	0	3.90	2.31	.88	T	0	0	10.70
1918	1.40	1.26	.32	.04	.18	.34	1.54	.78	.13	.68	1.04	1.41	9.12
1919	.26	.87	.63	1.10	.82	.32	5.53	1.82	2.54	.35	3.13	.64	18.01
1920	2.29	1.00	1.96	.16	.21	.56	.25	2.84	.74	.55	.01	.15	10.72
1921	.34	.47	.13	.62	T	.22	6.24	1.79	3.01	.25	.59	.12	13.78
1922	1.20	.20	1.36	.76	.15	.44	1.73	1.18	1.73	.22	.32	.10	9.39
1923	.27	.36	.65	.53	.05	0	3.00	4.06	.23	0	3.43	2.64	15.22
1924	0	T	1.65	.41	T	.17	1.15	.08	.19	.16	.61	.65	5.07
1925	.04	.07	.15	.36	T	.86	1.20	1.52	2.95	1.08	1.24	.33	9.80
1926	.64	.67	1.60	1.42	.60	.01	.70	.10	2.82	1.36	.34	1.89	12.15
1927	.07	1.02	1.40	.44	.01	.20	1.33	1.51	2.34	T	.09	1.33	9.74
1928	0	.83	0	.03	.09	.09	1.78	2.28	.36	.08	.44	.52	6.50
1929	.28	.49	.17	.17	T	.10	1.94	1.62	4.28	.07	.05	.16	9.33
1930	.81	1.23	2.32	.57	.93	1.12	1.03	1.47	.37	.09	1.04	.29	11.27
1931	.68	2.95	.16	.48	1.34	.49	1.07	3.96	.94	.05	3.72	.42	16.26
1932	.74	1.27	.40	.32	T	.16	2.58	1.61	.23	1.62	0	2.01	10.94
1933	.93	.24	0	.03	0	.10	1.60	2.23	1.62	2.00	.47	.38	9.60
1934	.50	.30	.39	.03	.05	.14	1.16	2.41	1.07	T	.50	2.04	9.59
1935	1.25	2.43	1.46	T	.14	T	.87	5.61	.88	0	1.89	1.24	15.77
1936	.96	.92	.55	.07	T	.06	2.82	3.03	1.51	.34	1.13	.85	12.24
1937	1.62	.23	.63	.01	.25	T	2.06	1.29	1.43	.05	.19	.67	8.43
1938	.65	.88	.43	.08	.11	2.07	.78	2.37	.50	0	.09	.93	8.89
1939	.35	1.60	.69	.04	0	T	.61	1.24	1.53	.18	.54	.27	7.05

Record monthly/annual precipitation totals are shown in **BOLD**.

MONTHLY AND ANNUAL PRECIPITATION AMOUNTS
1894-1996 103 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1940	.45	1.42	.04	.21	.52	1.14	.84	2.84	2.72	.13	1.62	2.82	14.75
1941	1.43	2.27	1.46	1.06	.74	T	2.51	1.99	1.20	.53	.65	2.01	15.85
1942	.50	1.92	.23	.79	0	0	.68	.90	1.78	.60	T	.47	7.87
1943	.44	.39	1.27	.03	.89	.13	1.09	3.04	3.59	.25	0	.79	11.91
1944	.36	1.10	1.01	.56	.37	.04	1.77	1.78	2.08	1.13	1.78	1.55	13.53
1945	.58	.47	.53	.11	0	0	2.84	4.31	.14	1.13	0	.47	10.58
1946	2.22	.22	.50	.14	0	.04	2.44	3.61	2.26	.82	1.10	.46	13.81
1947	.14	.02	.39	T	.04	.05	.27	2.24	.47	.80	.70	.41	5.53
1948	T	2.00	.29	T	0	.06	3.02	1.08	1.11	.56	.06	.93	9.11
1949	1.19	.20	.19	.38	0	.02	1.42	1.92	.81	.52	.17	.84	7.66
1950	.30	1.48	.26	T	.01	1.24	3.72	.86	1.15	T	T	.27	9.29
1951	1.12	.13	.12	1.66	.01	T	1.49	2.66	.34	1.91	1.27	.99	11.70
1952	.24	.08	2.26	1.51	.02	.30	3.25	1.56	.80	0	1.90	.73	12.65
1953	.06	.96	.60	.06	T	.03	2.87	.46	0	T	.18	.12	5.34
1954	.78	.75	1.01	0	.47	1.46	2.03	2.00	3.05	.02	0	.06	11.63
1955	1.89	.19	.03	T	.03	.03	5.10	7.93	.05	.32	T	.33	15.90
1956	1.08	.54	0	.31	T	.36	2.77	1.12	.37	.27	T	.22	7.04
1957	2.37	.36	.93	.16	.33	.17	1.25	3.92	T	2.62	.56	.89	13.56
1958	T	1.15	1.82	.48	.02	.51	5.20	.91	.21	1.21	1.09	0	12.80
1959	.03	.28	T	.01	0	T	3.92	2.79	T	.70	.29	1.97	9.99
1960	2.01	.42	.25	0	.08	.25	.73	2.09	1.20	.71	.07	.93	8.74
1961	.95	.01	.41	T	0	.26	1.81	4.28	.51	.65	.44	1.57	10.89
1962	1.39	.33	.25	T	0	.25	1.38	.48	2.86	.22	.49	.93	8.58
1963	.59	.81	.34	.32	T	T	1.66	2.86	1.45	.60	1.26	.08	9.97
1964	.14	.13	.81	.67	0	.01	4.82	3.90	5.11	.91	.68	.81	17.99
1965	.45	.64	.27	.23	T	.01	2.13	1.12	.82	.07	.77	5.02	11.53
1966	1.74	2.25	.19	.12	.11	.02	2.57	3.31	3.53	.32	.06	.19	14.41
1967	.04	.13	.41	.29	.62	.42	2.72	2.00	1.35	1.03	.48	3.44	12.93
1968	.18	.99	1.79	.62	T	0	1.97	1.12	T	.09	1.86	.32	8.94
1969	.74	.50	.34	.60	.46	0	1.51	2.57	1.31	.03	1.06	.82	9.94
1970	T	.34	1.13	.45	.03	.33	2.53	1.43	3.58	1.73	0	.43	11.98
1971	.04	.50	T	.56	.01	T	2.18	3.29	1.75	1.18	.69	1.97	12.17
1972	0	0	.01	0	.24	.68	3.49	2.93	1.09	4.51	1.30	.61	14.86
1973	.06	1.60	2.20	.02	.09	.50	1.74	.54	T	0	.47	0	7.22
1974	.93	T	.55	T	0	.01	4.44	1.04	1.69	2.12	.81	.33	11.92
1975	.36	.13	.95	.27	.11	0	2.38	.32	1.26	T	.34	.52	6.64
1976	.06	.53	.38	.57	.23	.10	1.18	.23	1.68	.37	.48	.47	6.28
1977	1.83	.04	.74	.43	.08	.06	.76	.80	1.41	2.36	.33	1.33	10.17
1978	2.05	1.75	.89	.01	.61	.22	.78	1.59	1.66	1.86	1.58	2.73	15.73
1979	2.94	.42	.64	.04	.67	.53	2.04	2.60	.02	.33	.01	.15	10.39
1980	.73	2.90	1.22	.08	T	.23	1.78	1.95	2.93	.22	0	.19	12.23
1981	1.29	.71	1.98	.56	.26	.16	6.17	.80	1.10	.06	.61	0	13.70
1982	1.56	.06	1.26	.05	.51	.13	2.13	2.51	2.69	0	1.30	1.59	13.79
1983	1.70	.94	1.28	.14	T	0	1.98	4.24	4.28	4.98	1.71	.61	21.86
1984	.62	0	0	.36	.06	1.05	2.92	4.19	1.81	.77	.45	3.30	15.53

Record monthly/annual precipitation totals are shown in **BOLD**.

**MONTHLY AND ANNUAL PRECIPITATION AMOUNTS
1894-1996 103 YEARS**

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1985	1.71	1.08	.20	.45	T	.07	3.14	1.97	1.13	2.03	.95	.15	12.88
1986	.98	1.13	1.30	T	.44	.06	1.82	3.56	.31	.50	.42	1.28	11.80
1987	.59	1.64	.83	.80	.74	.16	.37	2.79	2.30	.34	.44	1.50	12.50
1988	.41	.53	.35	1.15	.02	.15	1.69	3.64	.80	2.09	.75	.05	11.63
1989	.96	.23	.62	0	.13	.06	1.42	.90	.02	1.84	.12	.18	6.48
1990	.96	.71	.38	.10	.03	.64	5.45	2.70	1.63	.58	.23	1.54	14.95
1991	1.15	.91	1.40	0	0	.20	.44	2.17	1.54	.73	.80	1.44	10.78
1992	1.21	1.80	2.12	.19	1.11	.07	.93	4.55	.94	.03	T	3.47	16.42
1993	4.81	1.50	.49	0	.59	.02	.26	4.93	.46	.81	.98	.14	14.99
1994	.02	1.03	1.14	.04	.52	.26	.41	.45	1.46	.76	1.83	3.71	11.63
1995	1.41	1.32	.54	.28	.15	T	.04	3.71	2.29	.36	.86	.22	11.18
1996	.01	.81	.32	T	0	T	1.88	1.87	3.68	1.74	.19	T	10.50

Record monthly/annual precipitation totals are shown in **BOLD**.

APPENDIX F

MONTHLY/ANNUAL TABLES for (1866 - 1894) data

MONTHLY AND ANNUAL AVERAGE TEMPERATURES
1866-1894 28 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1866												66.5	-----
1867	51.0	45.7	54.4	63.5	78.5	85.6	87.3	85.6	84.7	76.4	65.2	59.7	69.8
1868	48.7	56.2	62.5	70.5	73.2	85.7	88.2	84.4	81.8	73.9	56.8	49.4	69.3
1869	46.6	48.6	59.8	66.0	76.1	88.6	89.0	82.9	78.9	68.6	59.0	47.6	67.6
1870	50.2	53.1	58.4	68.4	78.5	82.3	83.7	83.1	77.7	69.9	59.6	45.9	67.6
1871	51.8	51.1	58.0	62.3	78.3	84.3	87.5	86.6	85.1	72.4	58.0	55.3	69.6
1872	49.3	55.6	61.7	64.0	78.6	88.2	86.0	85.4	79.9	73.5	55.5	54.9	69.4
1873	51.8	53.0	65.1	68.1	77.1	87.7	90.9	81.9	80.1	70.8	59.9	48.9	69.6
1874	53.1	48.0	54.2	60.5	74.6	84.8	84.0	82.7	83.2	71.7	57.6	48.9	66.9
1875	47.8	51.8	56.0	69.3	81.7	89.2	85.7	87.3	81.3		59.2	47.4	-----
1876	47.3	53.0	56.8	70.6	80.5	90.4	88.4	83.6	80.7	67.0	58.7	48.7	68.8
1877	50.5	56.5	63.2	64.5	74.7	87.9	92.6	90.2	80.3	65.2	52.1	47.0	68.7
1878	47.4	48.6	57.2	66.5	78.3		92.7	86.0	76.5	70.9	60.1	50.8	-----
1879	51.4	57.3	62.0	69.0	78.8	89.7	88.1	86.7	81.7	66.6	53.6	50.4	69.6
1880	46.8	44.2	55.0	63.5	75.0	88.4	85.8	81.9	78.9	64.1	49.9	48.9	65.2
1881	43.5	53.4	56.0	69.4	77.1	87.3	86.4	82.7	77.0	67.0	51.0	49.9	66.7
1882	45.2	47.2	56.4	63.3	72.9	81.0	88.5	82.0	77.4	64.4	57.1	49.2	65.4
1883	42.3	47.8	55.9	62.1						66.4	58.5	49.8	-----
1884	44.8	56.8	56.3	62.0						70.9			-----
1885													-----
1886			56.7	65.3	80.2	86.7	90.1	86.4	81.1	68.8	53.8	53.1	-----
1887	49.5	51.8											-----
1888													-----
1889	40.9	44.0	58.6	66.2	71.5	81.2	86.6	86.4	76.3	68.8	56.2	56.6	66.1
1890	49.8	52.4	58.5	65.1	71.9	78.2	86.1	80.2	80.0	67.2	58.0	60.6	67.3
1891	47.7	52.5	59.8	71.5	78.0	84.5	90.7	86.8	81.2	70.8	58.9	44.4	68.9
1892	49.2	52.8	57.0	61.8	69.6	79.2	87.6	85.0	81.1	66.9	58.6	46.3	66.3
1893	51.3	54.0	56.0	63.6	71.2	83.6	85.0	81.8	77.0	65.5	54.0	50.4	66.1
1894	45.2	47.3	54.9	64.7	72.3	77.0	85.2	82.6	77.7				-----

**MONTHLY AND ANNUAL MAXIMUM TEMPERATURE EXTREMES
1879-1894 16 YEARS**

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1879				109									-----
1880							108	107	105	95	81	82	-----
1881	81	87	92	99	102	106	111	115	104	105	85	86	115
1882	85	76	90	98	98	107	109	110	105		89	82	110
1883	74	79	78	88						94	89	76	-----
1884	78	86	86	91						98			-----
1885													-----
1886			91	91	109	110	111	111	105	97	86		111
1887	82												-----
1888													-----
1889	72		86	100	105	108	111	108	101	101	92	87	111
1890	86	87	89	94	105	108	109	101	101	98	98	83	108
1891	75	67	80	96	95	106	109	105	100	91	89	77	109
1892	75	78	83	91	100	107	106	107	102	94	83	76	107
1893	73	80	92	91	98	107	107	102	99	92	84	76	107
1894	75	75	86	91	100	104	106	100	100				106

**MONTHLY AND ANNUAL MINIMUM TEMPERATURE EXTREMES
1880-1894 15 YEARS**

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1880							48	49	43	27	18	16	-----
1881	15	18	21	35	45	68	64	50	42	29	20	19	15
1882	13	21	21	29	40	47	64	65	46		24	9	9
1883	0	20	35	35						26	25	28	0
1884	12	20	33	34						41			-----
1885													-----
1886			30	33	41	52	68	67	49	32	15		-----
1887	18												-----
1888													-----
1889	35	22	35	36	37	52	63	66	45	35	26	29	22
1890	20	21	21	39	44	44	65	63	54	35	24	25	20
1891	16	31	40	55	65	68	68	68	60	35	30	11	11
1892	17	30	32	32	38	39	67	65	60	35	33	16	16
1893	23	31	30	36	42	55	64	62	50	38	29	22	22
1894	18	20	24	34	43	48	66	64	46				

MONTHLY AND ANNUAL PRECIPITATION AMOUNTS
1867-1894 28 YEARS

<u>YEAR</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>
1867					0	0	2.90	1.40	.60	T	.20	1.70	-----
1868	.57	.57	.30	1.09	1.00	0	3.34	.67	3.83	.25	.32	.50	12.44
1869	1.09	1.58	.70	T	0	.35	2.49	6.31	.30	.03	1.01	.83	14.69
1870	.02	.20	.03	.16	0	T	2.82	2.04	T	0	0	.94	6.21
1871	.52	.64	.16	.04	T	.40	1.02	3.70	2.00	T	.21	1.00	9.69
1872	.54	.12	0	.05	.01	.26	3.94	3.81	3.06	.40	0	1.39	13.58
1873	0	.69	1.01	0	T	0	.08	2.73	.62	0	1.32	.97	7.42
1874	1.76	1.66	1.19	.43	.07	0	4.82	1.93	0	1.08	.92	.37	14.23
1875	.37	1.22	0	.09	0	.20	4.22	2.09	2.39	0	.18	.82	11.16
1876	.37	.25	1.22	0	0	.29	3.71	4.19	2.28	.96	.75	0	14.02
1877	.19	2.53	.20	.57	.41	0	3.04	.02	2.44	.46	0	2.91	12.77
1878	.22	1.00	1.77	.52	0	.65	5.72	4.71	.08	0	1.31	.68	16.66
1879	2.02	.94	.83	.02	0	.01	.84	1.76	.74	.94	.60	3.31	12.01
1880	.56	.15	.41	.04	0	T	1.62	1.28	1.89	.09	0	.57	6.61
1881	.05	.25	1.17	.62	.04	0	5.69	3.92	2.37	.62	0	.19	14.92
1882	1.75	1.64	.72	.05	.01	.99	2.63	6.32	.32	0	1.12	.04	15.59
1883	1.27	.51	1.14	T	.35	.71	1.80	1.23	0	.48	.04	.95	8.48
1884	.83	2.59	1.95	1.17	.23	.23	.32	1.15	.30	2.24	.34	4.72	15.07
1885	0	.42	.40	0	0	.13	1.00	1.76	.12	0	.42	1.01	5.26
1886	1.61	.35	.87	.06	0	0	1.06	2.47	.44	.31	.45	.40	8.02
1887	0	.85	0	.38	.32	.26	5.08	1.25	2.08	1.72	.74	.27	12.95
1888	.73	.57	1.03	T	.32	.55	1.58	.92	.10	.78	2.06	1.96	10.60
1889	1.74	1.06	1.98	.18	T	.30	5.66	2.06	3.12	.36	.32	1.59	18.37
1890	1.27	.76	.29	.91	0	T	2.37	5.23	1.44	.62	.83	1.32	15.04
1891	.16	3.28	.16	0	.22	.27	.70	2.26	.48	0	T	.25	7.78
1892	1.52	2.63	.98	.18	.17	.10	1.00	2.14	.37	.27	T	.25	9.61
1893	.27	.82	1.16	T	.75	0	2.78	5.40	1.02	0	.43	.49	13.12
1894	.11	1.04	1.16	T	.05	T	1.60	1.01	T				

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- 188 The Use and Interpretation of Isentropic Analyses. Jeffrey L. Anderson, October 1984. (PB85-132694)
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