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### **Climate of Flagstaff, Arizona (Revision 7)**

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January 2014

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**CLIMATE OF FLAGSTAFF, ARIZONA**

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National Weather Service Office  
Flagstaff, Arizona

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## I. CLIMATE OF FLAGSTAFF, ARIZONA

### NARRATIVE GEOGRAPHICAL AND CLIMATOLOGICAL SUMMARY

Flagstaff is majestically located on a plateau in the center of the largest stand of Ponderosa Pine in the United States, at the base of the San Francisco Peaks (Arizona's highest mountains - 12,633 feet). The plateau, with an average elevation of around 7000 feet, is the southern edge of the Colorado plateau and curves from the Grand Canyon southeastward across mid-Arizona and then eastward into New Mexico. Flagstaff is the hub for north-south and east-west travel across northern Arizona, and is the "gateway" to numerous recreational areas in Arizona, including the Grand Canyon.

Flagstaff's elevation of 7000 feet assures a variety of weather including cold winters and mild pleasant summers, moderate humidity, and considerable diurnal temperature changes. Only limited farming is carried on because of the shortness of the growing season, even though the average precipitation for Flagstaff is 21.86 inches. The average date of the last occurrence of 32°F in the spring is June 10 and that of the first 32°F temperature in the fall is September 24. However, the summers in Flagstaff are one of its best kept secrets with an average maximum temperature in July of 81.2°F, and an all-time record high of 97°F. On average, only 3 days in the summer have maximum temperatures of 90°F or higher. Summer minimum temperatures are cool and refreshing with temperatures often dipping into the 40s with an occasional night in the 30s.

The moderate summer heat gives way to a cooler but nonetheless pleasant fall period with maximum temperatures generally in the 60s with minimum temperatures falling below freezing. Winter weather typically begins by November and becomes well entrenched by December, with frequent light to moderate snows and increasingly colder weather. By December, minimum temperatures are generally in the teens, however afternoon maximum temperatures still average in the 40s, due to the amount of sunshine the station receives. Because of its location with respect to the typical jetstream and high altitude, Flagstaff is one of the ten most sunny locations for National Weather Service offices in the United States, averaging 78 percent of the possible sunshine throughout the year. Even with all of this winter sunshine, significant snowfall can be expected during the winter with an average snowfall of around 102 inches per year. Between storms, when dry high pressure builds in, winds become light and fresh snow cover is on the ground, minimum temperatures can plummet. The all-time record low for Flagstaff is -30°F.

By mid-April, winter weather usually begins to break, and although snow is not uncommon in May, warm spells become more frequent. Snowfall has been reported as late as June. Spring in Flagstaff is typically breezy and dry with little precipitation occurring in May and early June.

There are two distinct periods of precipitation in Flagstaff. The first occurs during the

winter months from November through April when the jetstream can be located over the state allowing Pacific storm systems to move overhead. The other distinct period is classified as the summer rainy season, or “summer monsoon”. The monsoon rainy period usually occurs during July and August when most of Arizona is subjected to widespread thunderstorm activity. These thunderstorms are extremely variable in intensity and location and occur mainly between the hours of 11 a.m. and 6 p.m.

Prevailing winds at Flagstaff are southwesterly most of the year. This is due to terrain influences and short-wave weather disturbances moving across the Great Basin region of the West. Winds of damaging force (greater than 60 mph) are rare but may occur around some of the mountain locations during the winter and spring months. Additionally some thunderstorms may produce local wind gusts over 60 mph for short durations.

Since there is no concentration of industry, smoke pollution is almost nonexistent, and the air is remarkably free of contaminants of any kind, although smoke from residential fireplaces can become a problem on some of the colder nights due to strong radiational inversions that develop. During the winter and spring months, fog occasionally forms due to radiational cooling from snow cover on the ground. However, this fog usually breaks up quickly by morning. In spite of the elevation, periods of low ceilings and limited visibilities are usually of short duration.

## A HISTORY OF WEATHER OBSERVATIONS AT FLAGSTAFF

The first official weather station in Flagstaff was established September 9, 1898. The office was located at the southeast corner of Aspen Avenue and Park Street in a one-story five-room brick building known as the “Milligan Cottage”. The first observer was Miss Elizabeth Renoe, who later married a young attorney who became the first United States Senator from Arizona, Senator Henry Ashurst.

On March 15, 1912, the station was moved to Sitgreaves and Ellery Streets, which was one-half mile southeast of the previous location. The station remained at this location until October 29, 1919. The station was then moved to 602 North Leroux Street.

On June 1, 1943, the weather station was moved to the Federal Post Office Building in downtown Flagstaff. A first-order weather station was then established.

On January 12, 1950, the weather station was moved to the Flagstaff Pulliam Airport, four miles south of downtown Flagstaff. The station and the weather service office remained at the airport until June 1994 when the National Weather Service office moved to the Camp Navajo Army Depot in Bellemont. An automated weather station (ASOS) remains at the Flagstaff Pulliam Airport recording the official observations for Flagstaff. The ASOS was commissioned July 1, 1994.

## SOME HIGHLIGHTS OF THE WEATHER RECORDS IN FLAGSTAFF

Many unusual weather events have taken place in Flagstaff since official weather observations began on September 9, 1898. The following is a brief description of some of the more extreme conditions recorded since then.

The all-time record high temperature for Flagstaff of 97<sup>0</sup>F occurred on July 5, 1973. Skies were clear and winds were generally light westerly, although by afternoon winds were generally around 10 mph. The early morning temperature of 51<sup>0</sup>F was very close to the normal of 48<sup>0</sup>F. The next day a weak cold front approached the state, keeping the afternoon high temperature only at 89<sup>0</sup>F.

The all-time record warmest minimum temperature for Flagstaff was broken on back to back nights in 2002. On July 1, 2002 the mercury fell to only 67 degrees breaking the previous record of 66 degrees set in 1949. This record was then broken again the next night when the temperature only fell to 68 degrees. Oddly enough, the dew point temperatures were only in the lower 40s during this period and there wasn't any extensive cloud cover or winds to keep the temperatures from falling rapidly. However, there was a large fire burning to the east of Flagstaff, with some smoke in the area that may have contributed to the record warm overnight temperatures.

The longest consecutive stretch of days with maximum temperatures of 90<sup>0</sup>F or greater in Flagstaff was 11 days. This occurred during June 21 - July 1, 1990. The highest temperature reached during this longest stretch of warm weather was 94<sup>0</sup>F.

The longest consecutive stretch of days with maximum temperatures of 85<sup>0</sup>F or greater in Flagstaff was 22 days. This occurred during June 10 - July 1, 1974.

The maximum number of days in a calendar year with temperatures of 90<sup>0</sup>F or greater was 15 set in 1974. Of note, 14 of those days occurred in June. The maximum number of days in a year with temperatures of 85<sup>0</sup>F or greater was 48 days which was also set in the warm summer of 1974. 21 of these days occurred in June of that year.

The coldest temperature ever recorded in Flagstaff was -30<sup>0</sup>F which was observed on January 22, 1937. The maximum temperature reached that day was 12<sup>0</sup>F, which was a 42<sup>0</sup>F diurnal spread.

The maximum number of consecutive days with minimum temperatures of 0<sup>0</sup>F or lower was eight. This stretch of cold weather occurred from December 27, 1966 - January 3, 1967.

The maximum number of days in a calendar year with temperatures of 0<sup>0</sup>F or lower was 27 set in 1932. The maximum number of days in any month with temperatures of 0<sup>0</sup>F or lower was 17 set in the extremely cold month of January 1937. The average minimum temperature that month was -2.9<sup>0</sup>F which was about 18 degrees below normal.

Snow in Flagstaff is highly variable as well. The most snowfall ever recorded during the winter season (October - May) was 210.0 inches in the winter of 1972-73. On the other extreme,



the least snowfall ever recorded at Flagstaff during the winter season was 11.2 inches which was set in the winter of 1933-34.

The all-time record for heaviest precipitation during any calendar day at Flagstaff was 3.93 inches which was set on February 19, 1993. Interestingly enough, this precipitation all fell in the form of rain, with temperatures remaining in the middle and upper 30s through the entire 24 hours. Another 1.18 inches of precipitation fell the next day, however temperatures fell during the morning hours, changing the rain to snow, with a snow accumulation of 3.2 inches by the end of the day.

February 1993 was the wettest month on record, with 10.05 inches of precipitation falling during that period. Additionally, January 1993 was the wettest January on record with 9.55 inches of precipitation falling. Thus, almost 20 inches of precipitation (or almost the entire normal precipitation for the year for Flagstaff) fell in a two month period of time. December 1992 was the second wettest December on record, giving a three month total from December 1992 through February 1993 of 27.38 inches which is by far the wettest three month period of time in Flagstaff climatological history. Needless to say, this period was known for the magnitude of flooding which occurred across the area.

The most snowfall to occur within a continuous stormy period, occurred from December 13 - December 20, 1967, when 84.6" of snow fell. By the end of this event, 83 inches of snow lay on the ground, essentially paralyzing the city of Flagstaff and most of northern Arizona for over a week.

The greatest number of consecutive days without measurable precipitation was recorded from September 24 - December 31, 1999, a total of 99 days! The greatest number of consecutive days with measurable precipitation was 17 days set during the period of July 20 - August 5, 1968, when a total of 3.29" of precipitation fell.

The most precipitation ever recorded in one calendar year at Flagstaff was 36.59 inches, set during 1965. The least precipitation recorded in one calendar year at Flagstaff was 9.90 inches, set in 1942. Average annual precipitation for Flagstaff is 21.86 inches.

## II. TEMPERATURE RECORDS

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899-2013

MONTH: January

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	61	1981		17	1919		34	1934		-21	1919
2	60	1902		19	1919		41	1997		-21	1919
3	62	1918		17	1949		31	2005		-19	1937
4	64	1927		12	1971		33	1991		-22	1971
5	61	1948		10	1971		33	1991		-22	1910
6	61	1969		8	1971		33	1921		-18	1910
7	65	1914		17	1913		34	1993		-17	1913
8	62	2002		23	1937		39	1962		-12	1989
9	61	1996		22	1937		34	2005		-9	1937
10	65	1990		21	1937		35	2005		-15	1937
11	63	1990		24	2013		36	1982		-23	1913
12	59	2002		5	1963		35	1981		-20	1963
13	59	2000		19	2007		38	1957		-7	2013
14	65	1943		16	2013		35	1909		-15	2007
15	65	1943		19	2007		35	1938		-12	1937
16	60	1974		21	1987		36	1976		-8	1915
17	62	1971		21	1960		35	1914		-13	1987
18	64	1971		22	1943		35	1914		-8	1995
19	62	1986		22	1937		32	1998		-13	1943
20	61	1950		16	1937		34	1969		-14	1922
21	60	1944		15	1937		35	1969		-24	1937
22	62	1970		12	1937		31	2009		-30	1937
23	61	1970		17	1932		36	2009		-15	1937
24	61	1982		15	1937		36	2009		-15	1964
25	61	1975		24	1937		35	2013		-17	1937
26	60	1987		22	1979		37	2013		-15	1937
27	61	2003		21	1948		34	2013		-13	1979
28	63	1986		20	1979		34	1911		-13	1918
29	60	1986		15	1979		36	1911		-12	1932
30	66	1971		24	1916		33	1963		-19	1979
31	63	1971		19	1916		34	1963		-25	1916
Month	66	1971		5	1963		41	1997		-30	1937

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899-2013

MONTH: February

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	60	2003		17	1917		40	1963		-23	1985
2	62	1976		12	2011		37	1935		-14	1922
3	64	1953		20	1933		34	1928		-22	1922
4	64	1963		23	1955		34	1931		-16	1955
5	67	1963		21	1899		34	1907		-21	1985
6	65	1963		7	1989		33	1978		-21	1899
7	66	1963		14	1933		36	1932		-18	1903
8	65	1996		22	1929		36	1957		-17	1933
9	64	1996		20	1939		37	1922		-21	1929
10	65	1951		21	1965		35	1922		-17	1933
11	62	1971		21	1965		35	1971		-12	1908
12	58	2002		21	1905		32	2005		-16	1965
13	68	1977		22	1949		36	2003		-18	1905
14	64	1957		25	1942		35	1977		-15	1949
15	65	1996		25	1990		33	1941		-10	1942
16	70	1977		21	1910		35	1904		-3	1990
17	66	1996		27	1917		34	1986		-8	1956
18	65	1977		24	1917		36	2005		-11	1942
19	65	1981		25	1918		38	1986		-6	1942
20	65	1977		18	1955		41	1996		-11	1955
21	60	1995		23	1913		42	1996		-9	1955
22	64	2002		25	1913		41	1901		-10	1955
23	66	1946		24	1969		40	1918		-6	1960
24	66	1904		27	1987		42	1904		-4	1909
25	70	1986		27	1987		41	1904		-10	1919
26	71	1986		25	1962		36	1989		-7	1977
27	64	1921		25	1996		36	1904		-12	1962
28	65	1999		29	2004		40	1938		-16	1962
29	59	2008		32	1916		33	1908		-3	1996
Month	71	1986		7	1989		42	1996		-23	1985

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899-2013

MONTH: March

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	67	2009		21	1971		37	1920		-10	1997
2	66	2009		24	1951		36	1974		-1	1971
3	66	1910		24	1966		39	1967		-9	1915
4	68	1910		23	1969		35	1995		-16	1966
5	68	1910		32	1976		37	1995		-5	1948
6	68	1910		29	1969		36	1918		-2	1935
7	66	1972		26	1969		38	2002		-1	1945
8	67	1989		28	1969		32	1975		-4	1969
9	70	1989		30	2013		40	1943		0	1964
10	70	1989		25	1969		40	1985		-9	1958
11	69	1900		25	2006		40	1918		-5	1948
12	72	1900		25	1956		38	1938		-1	1917
13	70	2007		27	1962		40	1989		-9	1962
14	69	2007		25	1969		39	1984		-4	1990
15	72	2007		29	1917		35	1943		-3	1962
16	72	2007		29	2008		39	1914		-1	1969
17	73	2007		33	1963		37	1996		3	1991
18	68	2004		32	1924		33	1974		-1	1954
19	71	1907		30	2012		36	1912		1	1963
20	72	2004		30	1955		38	1904		-1	1935
21	70	2004		28	2000		42	1916		5	1948
22	68	2004		28	1952		37	1929		-1	1952
23	67	1990		30	1936		36	2002		-1	1973
24	70	1956		28	1929		37	1943		0	1904
25	72	1988		24	1913		39	1899		1	1913
26	73	1988		32	1950		37	1971		-8	1902
27	70	1986		21	1975		40	2008		-1	1975
28	68	1971		26	1975		39	1967		-7	1975
29	70	1934		27	1998		38	2002		10	1944
30	70	1971		33	1998		39	1903		1	1998
31	73	1966		35	1949		41	1903		3	1912
Month	73	2007		21	1975		42	1916		-16	1966

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899-2013

MONTH: April

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	74	2011		31	1999		40	1986		2	1970
2	72	1966		29	1999		42	2001		-2	1975
3	71	1961		30	1999		40	2001		8	1980
4	74	1961		27	1999		39	1909		5	1977
5	75	1959		30	1921		40	1919		8	1958
6	75	1989		34	1929		40	1946		4	1922
7	80	1989		28	1975		40	1931		10	1922
8	78	1989		30	1975		41	2007		14	1999
9	75	1989		32	1943		40	1962		9	1953
10	74	1989		31	1979		42	1948		7	2011
11	75	1907		29	1927		47	1989		10	1945
12	75	1904		28	1967		44	1982		7	1953
13	75	1962		36	1912		40	1988		0	1965
14	75	1937		33	1938		42	2013		5	1972
15	76	1948		33	1998		43	2008		11	1965
16	77	1948		30	1976		43	1937		13	1995
17	77	1946		33	1995		43	1964		15	2009
18	79	1989		32	1995		46	1981		15	2013
19	77	1989		29	1933		51	2001		10	1917
20	78	1989		33	1995		45	1925		8	1966
21	78	1989		34	1932		44	1989		12	1972
22	76	1949		30	1925		46	1930		11	1963
23	77	1949		36	1925		44	1981		14	1963
24	77	1949		41	2005		47	1943		10	1900
25	78	1996		38	1994		45	1959		13	1961
26	79	1996		34	1985		45	1917		17	1984
27	77	2000		37	1932		44	1946		10	1984
28	80	1992		30	1970		49	1981		13	1970
29	78	1992		35	1942		51	1981		7	1970
30	78	1981		34	1915		48	1995		10	1967
Month	80	1992		27	1999		51	2001		-2	1975

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899-2013

MONTH: May

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	80	1947		27	1915		44	1981		17	1972
2	84	1947		33	1915		46	2009		13	1915
3	88	1947		37	1905		46	2007		7	1915
4	88	1947		38	1905		44	1947		18	1915
5	86	1947		38	1975		45	1992		18	1950
6	82	1947		38	1995		48	2000		14	1975
7	81	1989		38	1964		44	1934		15	1938
8	85	1989		36	1930		48	1934		17	1965
9	81	1934		38	1922		46	1989		14	1930
10	82	1934		34	1922		53	2000		19	1953
11	86	1996		39	1933		47	2004		16	1933
12	86	1996		43	1982		50	1934		20	1983
13	82	1984		42	1998		48	1999		18	1953
14	83	1938		41	1977		47	2003		21	1942
15	81	1937		45	1957		50	1938		20	1968
16	80	1970		46	1953		51	1996		16	1955
17	82	2009		46	1962		48	1974		20	1943
18	82	1970		43	2011		47	1976		21	1977
19	85	2008		37	1902		56	1996		20	1971
20	84	2008		44	1917		52	1901		18	1899
21	82	2005		42	1975		50	2009		21	1974
22	85	1984		50	2008		50	2010		21	1972
23	85	2000		43	2008		48	2009		23	1927
24	83	1983		41	1965		47	2000		23	1909
25	84	1951		47	1965		54	1951		18	1980
26	87	1951		52	1917		53	1942		19	1916
27	87	1974		51	1929		50	2006		23	1916
28	86	2000		51	1953		51	1925		24	1929
29	86	2000		39	1971		50	1928		22	1918
30	88	2002		49	1988		51	1939		18	1918
31	89	2002		49	1917		51	2003		23	1988
Month	89	2002		27	1915		56	1996		7	1915

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899-2013

MONTH: June

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	88	1977		48	1991		52	2002		24	1923
2	86	1977		44	1899		54	1910		22	1955
3	86	1996		53	1925		51	1960		23	1971
4	89	1990		46	1915		53	2006		23	1908
5	88	2010		56	1932		53	2006		25	1943
6	90	2010		54	1934		53	2006		28	1971
7	89	1985		58	1941		59	2006		24	1954
8	91	2013		49	1907		55	1981		24	1950
9	90	2013		55	1965		53	1990		24	1950
10	87	1910		49	1957		56	2010		28	1998
11	90	1918		57	1928		57	1911		26	1954
12	91	1918		49	1927		53	1906		27	1976
13	92	1974		50	1955		57	1959		30	1976
14	92	1974		60	1901		57	2006		25	2001
15	92	1974		57	1997		55	1961		28	2001
16	92	1940		56	1995		54	1918		24	1907
17	92	1940		54	1995		57	1949		23	1923
18	92	1940		60	1979		54	1988		24	1995
19	92	1936		64	1975		54	1961		25	1979
20	92	1936		60	1923		57	1922		30	2011
21	93	1936		53	1947		57	1918		28	1975
22	94	1954		66	1912		59	1971		31	1947
23	93	1974		66	2000		59	1958		31	1948
24	94	1974		66	1934		59	1954		32	1975
25	95	1970		68	1969		64	1902		30	1965
26	96	1970		63	1965		58	1981		26	1975
27	94	1974		63	1906		62	1980		26	1965
28	96	2013		58	1988		60	1931		30	1965
29	93	1990		69	1938		61	1961		30	1913
30	92	1990		69	1911		65	1990		31	1913
Month	96	2013		44	1899		65	1990		22	1955



DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899- 2013

MONTH: July

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	92	2013		58	1911		67	2002		33	2004
2	92	1969		72	1938		68	2002		34	1997
3	93	2007		62	1912		61	1973		34	1997
4	96	2007		66	1912		61	2013		32	1912
5	97	1973		66	1952		60	1957		32	1955
6	96	1989		66	1968		62	1996		35	1978
7	92	1905		66	1982		64	1951		32	1955
8	92	2002		66	1950		62	1951		32	1955
9	94	2003		68	1914		60	1985		34	1926
10	94	2003		66	1930		59	2010		37	1926
11	92	2003		66	1999		62	1958		40	1979
12	94	2002		62	1918		62	1940		39	1952
13	94	1972		67	1912		65	1935		35	1904
14	92	1902		64	1910		61	2002		38	1962
15	92	1970		67	1919		60	1903		37	2011
16	92	1961		70	2013		62	1961		37	2001
17	93	2009		64	1902		62	1988		40	1904
18	93	2005		68	1919		60	1936		42	1940
19	92	1989		68	1994		62	2009		34	1987
20	91	1939		68	1991		63	1901		42	1940
21	92	1937		61	1986		62	1964		38	1924
22	92	1996		65	1913		63	1996		38	1995
23	92	1996		66	1915		66	1949		37	1987
24	91	1937		64	1955		60	2011		39	1995
25	92	1931		62	1955		61	1929		41	1913
26	92	1935		65	1912		61	1943		40	1913
27	93	1947		68	1912		61	2003		36	1913
28	94	1995		64	1987		60	2006		36	1913
29	92	2002		64	1905		61	1947		37	1913
30	92	1943		66	1921		60	2010		40	1913
31	91	1977		67	1921		61	1901		43	1997
Month	97	1973		58	1911		68	2002		32	1955

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1899-2013

MONTH: August

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	92	1977		60	1919		60	1980		42	1915
2	93	1902		65	2010		63	2000		43	1976
3	91	1994		66	1907		61	1980		37	1956
4	91	1994		66	2006		61	1901		35	1956
5	90	1944		68	1931		65	1903		35	1976
6	90	1983		62	2013		57	1981		36	1953
7	92	1978		64	2010		62	1903		39	1991
8	90	1980		67	1930		60	1965		35	2009
9	89	1980		64	1918		58	1970		35	2009
10	89	2002		66	1981		59	1940		40	2009
11	91	1980		65	1918		57	2006		36	1900
12	92	1944		62	1979		60	2002		36	1999
13	90	2002		66	1916		60	1980		39	1999
14	89	2002		63	1999		61	1901		33	1976
15	88	1962		61	1961		59	1980		33	1968
16	89	1939		65	1947		58	1963		37	1968
17	88	2002		67	1979		57	1945		38	1979
18	87	2002		65	1979		57	2012		36	1975
19	88	1973		65	1979		57	2002		35	1979
20	90	2009		67	1920		58	2002		35	1979
21	90	2009		64	1921		62	1928		33	1979
22	88	1938		58	1992		60	2010		32	1968
23	90	1985		53	1992		58	2007		24	1968
24	91	1985		64	1986		57	1944		30	1968
25	88	1985		64	2013		57	1988		36	2002
26	88	1974		64	1972		59	2011		37	1989
27	88	1944		62	1993		57	1937		36	1978
28	89	1948		58	1951		56	1967		33	1920
29	91	1948		57	1951		57	2010		37	1956
30	90	1948		63	1909		57	1929		36	1975
31	89	1950		63	1966		56	2012		35	1957
Month	93	1902		53	1992		65	1903		24	1968

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1898-2013

MONTH: September

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	91	1948		63	1913		56	1995		33	1962
2	91	1948		64	1940		55	1936		35	1953
3	91	1948		62	1961		56	2004		34	1973
4	90	1945		63	1936		57	1998		27	1961
5	89	1945		59	1939		56	1980		31	1961
6	87	1977		55	1975		56	2011		33	1985
7	89	1977		62	1975		55	1903		35	1970
8	88	1977		61	1908		57	1919		33	1935
9	87	1977		58	2013		55	2003		31	2001
10	87	1990		63	2013		56	1939		28	1912
11	88	1990		59	2012		54	1952		30	1986
12	88	1990		56	1927		54	1914		25	1985
13	89	1990		56	1927		55	1970		26	1952
14	88	2000		57	1911		57	1938		29	1988
15	87	2000		53	1906		52	1997		26	1903
16	88	2000		59	1996		60	1929		28	1971
17	88	1956		49	1923		56	1929		27	1903
18	86	1956		46	1965		54	1942		27	2006
19	84	1956		51	1965		53	1992		25	1971
20	83	2000		54	1965		53	1939		23	1971
21	84	1943		57	2004		56	1928		23	1955
22	83	1949		53	1941		53	2000		20	1912
23	86	1944		51	1986		56	1931		25	1970
24	85	1947		41	1986		51	1939		25	1918
25	85	1947		46	1986		54	1929		24	1959
26	84	1899		53	1913		50	1926		22	1934
27	83	2009		52	1936		49	1977		23	1900
28	83	2010		51	1945		52	1911		21	1900
29	83	2010		48	2005		50	1911		22	1902
30	83	2010		54	1971		51	1944		24	1907
Month	91	1948		41	1986		60	1929		20	1912

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1898- 2013

MONTH: October

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	85	1980		41	1959		53	1981		20	2009
2	82	1991		45	1959		49	1951		18	1971
3	83	1980		46	1908		50	1989		21	1902
4	83	1947		49	1916		50	2007		15	1908
5	80	1991		40	1912		48	2007		14	1969
6	81	1987		42	1912		50	1972		18	1912
7	80	1965		47	2011		47	1923		19	2007
8	80	1980		41	1939		52	1926		21	1900
9	81	1996		41	1961		45	1988		20	1970
10	81	1996		44	1960		49	2003		20	1973
11	80	1965		42	1969		47	1981		19	1920
12	83	1950		39	1947		46	1987		9	1969
13	79	1950		41	1920		46	1991		12	1969
14	78	1991		39	1928		46	1944		18	1975
15	78	1991		38	1960		43	1938		19	1966
16	78	1991		38	1994		44	1972		13	1984
17	78	1973		31	1971		44	2004		18	1998
18	78	1921		33	1908		45	1972		10	1971
19	77	2003		38	1920		44	1979		6	1971
20	77	2003		32	1920		43	1951		4	1949
21	75	2003		37	1920		46	1901		5	1949
22	76	2003		32	1906		43	2001		9	1906
23	76	2003		38	1920		45	1944		10	1906
24	79	1959		42	1919		43	1960		9	1975
25	78	1959		37	1971		43	2011		11	1975
26	75	1959		30	1996		43	1927		14	1972
27	75	2008		36	1996		45	1927		10	1970
28	74	1950		32	2009		46	1981		13	1954
29	72	2008		31	1971		40	1992		9	1971
30	72	1934		32	1961		42	2003		-2	1971
31	70	1999		31	1972		42	2003		7	1935
Month	85	1980		30	1996		53	1981		-2	1971

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1898- 2013

MONTH: November

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	73	1916		35	1956		41	2003		11	1943
2	73	1977		32	1946		41	1973		10	1956
3	74	1977		32	1936		41	1987		8	1922
4	73	1975		32	1922		40	2001		-1	1922
5	70	1976		35	1925		41	1960		1	1922
6	72	1934		33	2011		41	1960		7	1935
7	71	1934		32	2011		39	1905		8	1947
8	74	1973		35	1919		44	1931		7	2011
9	71	1973		35	1966		42	2002		3	1898
10	71	1973		33	2000		41	1991		5	1946
11	73	1973		31	2000		40	1991		7	1950
12	70	1967		30	1972		44	2009		3	1898
13	72	1967		22	1916		43	1983		-3	2000
14	70	1967		30	1985		39	1962		-5	1985
15	70	1999		24	1964		39	2008		2	1985
16	70	1981		21	1958		39	2008		-1	1964
17	67	2007		22	1958		36	1982		-10	1964
18	68	1898		25	1969		38	1913		-13	1958
19	69	1949		22	1994		40	1950		-6	1985
20	71	1976		22	1979		35	2011		-5	1964
21	70	1950		28	1979		41	1966		-5	1979
22	68	1903		22	1931		41	1919		-2	1931
23	69	1954		25	1931		41	1965		-4	1931
24	68	1970		20	1931		42	1965		-7	1902
25	70	1949		24	1931		38	1919		-8	1906
26	70	1977		26	1918		35	1958		-8	1906
27	68	1949		25	1976		33	2008		-5	1984
28	68	1980		26	1999		30	2006		-3	1905
29	68	1949		24	1975		34	1954		-8	1905
30	66	1995		25	1991		39	2007		-4	2010
Month	74	1977		20	1931		44	2009		-13	1958

DAILY MAXIMUM AND MINIMUM TEMPERATURE EXTREMES  
1898-2013

MONTH: December

<u>Date</u>	<u>High Max</u>	<u>Year</u>		<u>Low Max</u>	<u>Year</u>		<u>High Min</u>	<u>Year</u>		<u>Low Min</u>	<u>Year</u>
1	66	2008		24	1991		36	1954		-7	1905
2	62	1946		27	1913		36	1906		-5	1991
3	67	1977		27	1913		37	1926		-2	1968
4	67	1965		26	1909		37	1926		-4	1955
5	67	1989		21	2011		37	1921		-1	1953
6	62	1977		19	1960		42	1966		-6	1951
7	66	1958		10	1978		34	2007		-19	1978
8	62	1976		12	1978		35	1957		-23	1978
9	62	1977		19	1951		32	1965		-9	2013
10	65	1939		23	1898		36	1996		-10	2013
11	68	1950		18	1949		36	1996		-11	1961
12	64	1921		26	1972		33	1937		-16	1961
13	67	2010		17	1967		39	1995		-19	1931
14	66	1946		20	1967		36	1934		-14	1972
15	63	1929		22	1971		36	2010		-14	1931
16	63	1958		21	1971		38	1957		-18	1971
17	65	1980		22	1967		32	1929		-14	1928
18	65	1901		22	1924		32	2010		-14	1908
19	62	1958		22	1924		37	2010		-14	1924
20	61	1917		22	1967		38	2010		-12	1924
21	61	1969		14	1990		33	2010		-6	1967
22	64	1901		21	1990		33	2010		-16	1968
23	63	1901		16	1990		33	1955		-23	1990
24	61	1933		17	1974		36	1983		-17	1974
25	67	1980		20	1987		37	1971		-14	1926
26	63	1980		19	1916		34	1923		-16	1924
27	67	1980		18	1916		36	1983		-14	1926
28	61	1980		25	1988		35	1992		-12	1966
29	62	1945		22	1966		37	1980		-13	1988
30	62	1917		21	1966		34	1977		-16	1911
31	62	1945		17	2010		36	1909		-16	1911
Month	68	1950		10	1978		42	1966		-23	1990

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES  
(September 1898 - December 2013)

<u>Month</u>	<u>Normal*</u>	<u>Highest Monthly Average Temperature</u>		<u>Lowest Monthly Average Temperature</u>	
		<u>Temp</u>	<u>Year</u>	<u>Temp</u>	<u>Year</u>
JANUARY	29.9	37.1	2003	12.7	1937
		37.0	1986	19.7	1949
		36.2	1981	19.8	1932
		35.0	1953	21.0	1913
		34.4	1900	21.3	1922
FEBRUARY	32.1	38.2	1947	19.5	1939
		38.0	1904	20.4	1933
		37.9	1907	20.6	1919
		37.4	1934	22.0	1903
		37.2	1995	22.5	1955
MARCH	37.0	44.9	1934	26.8	1973
		41.8	1989	27.3	1969
		41.1	1910	28.1	1962
		40.9	1900	28.6	1952
		40.8	1947	29.0	1917
APRIL	43.3	50.4	1989	36.2	1975
		49.0	1992	36.9	1983
		48.5	1981	37.2	1998
		48.4	1946	37.4	1970
		47.9	1949	37.5	1999
MAY	51.6	56.8	1984	44.6	1917
		55.6	1934	44.9	1953
		55.4	2000	45.1	1915
		55.3	2001	45.3	1908
		55.3	1947	45.4	1930
JUNE	59.9	66.5	1974	53.0	1965
		66.1	1981	54.2	1907
		64.7	1918	54.7	1923
		64.4	1990	55.0	1998
		63.8	1940	55.1	1995

\*Monthly normals based on climatological normals 1981-2010.

HIGHEST AND LOWEST MONTHLY AVERAGE TEMPERATURES  
(September 1898 - December 2013)

<u>Month</u>	<u>Normal*</u>	<u>Highest Monthly Average Temperature</u>		<u>Lowest Monthly Average Temperature</u>	
		<u>Temp</u>	<u>Year</u>	<u>Temp</u>	<u>Year</u>
JULY	66.1	69.3	1901	61.1	1912
		69.0	1980	61.7	1955
		68.7	1931	62.6	1911
		68.4	1996	62.7	1914
		68.4	1942	62.7	1913
AUGUST	64.2	67.5	1944	59.5	1968
		67.2	1945	60.5	1979
		66.8	1995	60.6	1916
		66.7	1939	60.7	1906
		66.5	1991	60.8	1956
SEPTEMBER	57.4	62.1	1947	52.3	1912
		61.9	1933	52.8	1900
		61.5	1956	53.0	1986
		60.7	1983	53.0	1971
		60.7	1949	53.1	1985
OCTOBER	46.8	52.5	1988	38.6	1971
		52.1	1950	40.4	1969
		51.2	1964	41.2	1908
		51.1	1952	42.0	1919
		50.9	1933	42.4	1984
NOVEMBER	36.7	44.9	1949	29.6	1972
		42.3	1995	30.4	1952
		41.8	1981	30.7	2000
		41.8	1942	31.2	1979
		41.5	1927	31.3	1964
DECEMBER	29.6	39.8	1980	21.9	1972
		37.6	1977	21.9	1932
		37.0	1939	22.0	1911
		36.5	1958	22.1	1909
		36.4	1981	22.2	1905

\*Monthly normals based on climatological normals 1981-2010.



! Author Note: Due to the fact that weather stations were often moved, especially in the early days of the National Weather Service, some records are more representative than others. Even though all temperature and precipitation observations are valid for their particular locations, some locations have proven to be more representative of the general surrounding area than others. In the Flagstaff climatology, there are two periods of observations which appear to be not as representative, due to their locations.

The first of these periods is from March 15, 1912- October 29, 1919 when the observations were taken near the intersection of Sitgreaves and Ellery Streets. This location appears to have been a cold location, with numerous record lows occurring here. When compared to other locations in Arizona during this same period of time, this unusual cold tendency appears to be due to instrument error, or to improper siting. You will note many daily, monthly, and yearly cold records occurring during the 1912-1919 period.

The other period of suspect climate information is during the period from June 1, 1943 - January 11, 1950 when the observations were being recorded at the old Flagstaff post office, located downtown. Again, due to improper siting of the instruments on the post office roof, the temperatures occurring at this location appear to be unnaturally too warm when compared to surrounding stations. You will note many daily, monthly, and yearly warm records occurring during the 1943-1950 period.

With time, these biased records will be overwritten by new records, however until that happens, data from these two periods of record should be viewed with respect to their siting.

HIGHEST AND LOWEST ANNUAL TEMPERATURE  
(1899-2013)

<u>Highest Annual Average</u>		<u>Lowest Annual Average</u>	
<u>Temp</u>	<u>Year</u>	<u>Temp</u>	<u>Year</u>
49.5	1981	42.9	1913!
48.9	1934	43.0	1915!
48.1	1943!	43.4	1979
48.1	1940	43.4	1912!
48.0	2012	43.6	1971
47.9	2003	43.6	1919
47.9	1946	43.9	1972
47.8	1989	43.9	1955
47.7	1996	43.9	1917!
47.7	1977	43.9	1908

Average Annual  
Temperature\*  
46.3

\* Averages based on climatological normals 1981-2010.

! These years should be viewed with caution due to suspect observations.

AVERAGE NUMBER OF DAYS PER YEAR WITH MAXIMUM TEMPERATURES  
 90 DEGREES OR HIGHER AND 32 DEGREES OR LOWER  
 (1981-2010)

90 Degrees or higher.....2 days  
 32 Degrees or lower.....11 days

AVERAGE NUMBER OF DAYS PER YEAR WITH MINIMUM TEMPERATURES  
 OF 32 DEGREES OR LOWER AND 0 DEGREES OR LOWER  
 (1981-2010)

32 Degrees or lower.....197 days  
 0 degrees or lower.....4 days

FREEZE AND GROWING SEASON DATA

The longest growing season on record.....153 days in 2009\*  
 The shortest growing season on record.....73 days in 1968\*

Average growing season.....114 days

Average date of the last spring frost (32 degrees).....June 10  
 Average date of the first fall frost (32 degrees).....September 24

Average date of the last spring freeze (28 degrees).....May 21  
 Average date of the first fall freeze (28 degrees).....October 9

\* Based on the last day of 32 degrees in the spring and the first days of 32 degrees in the fall.

GREATEST NUMBER OF CONSECUTIVE DAYS WITH  
 MAXIMUM TEMPERATURES  
 85 DEGREES OR HIGHER  
 (September 1898 - July 2012)

<u>Days</u>	<u>Date</u>
22	June 10 - July 1, 1974
20	July 17 - Aug 5, 2000
15	July 3 - July 17, 2003
15	July 24 - Aug 7, 1995
15	July 5 - July 19, 1901
14	June 18 - July 1, 1990
14	June 24 - July 7, 1973
13	July 27 - Aug 8, 1978
13	June 19 - July 1, 1929

Only periods with 13 or more days are tabulated.

GREATEST NUMBER OF CONSECUTIVE DAYS WITH  
 MAXIMUM TEMPERATURES  
 90 DEGREES OR HIGHER  
 (September 1898 - July 2002)

<u>Days</u>	<u>Date</u>
11	June 21 - July 1, 1990
6	July 3 - July 8, 1989
5	July 1 - July 5, 2007
5	July 9 - July 13, 2003
5	June 26 - June 30, 1974
4	July 12 - July 15, 2005
4	July 26 - July 29, 1995
4	June 27 - June 30, 1980
4	June 21 - June 24, 1974
4	June 12 - June 15, 1974
4	July 2 - July 5, 1973
4	July 12 - July 15, 1972
4	June 24 - June 27, 1970
4	July 14 - July 17, 1948
4	July 26 - July 29, 1947
4	July 30 - Aug 2, 1938
4	July 23 - July 26, 1931
4	June 20 - June 23, 1929

Only periods with 4 or more days are tabulated.

GREATEST NUMBER OF CONSECUTIVE DAYS WITH  
 MINIMUM TEMPERATURES  
 0 DEGREES OR LOWER  
 (September 1898 - October 2013)

<u>Days</u>	<u>Date</u>
8	Dec 27, 1966 - Jan 3, 1967
8	Dec 31, 1918 - Jan 7, 1919
7	Dec 15, 1928 - Dec 21, 1928
7	Dec 23, 1926 - Dec 29, 1926
6	Dec 22, 1990 - Dec 27, 1990
6	Jan 3, 1971 - Jan 8, 1971
6	Jan 11, 1963 - Jan 16, 1963
6	Jan 1, 1960 - Jan 6, 1960
6	Jan 21, 1937 - Jan 26, 1937
6	Dec 16, 1932 - Dec 21, 1932
6	Dec 24, 1909 - Dec 29, 1909
6	Feb 4, 1903 - Feb 9, 1903
6	Dec 30, 1911 - Jan 5, 1912

Only periods with 6 or more days are tabulated.

### III. PRECIPITATION RECORDS

MAXIMUM AND MINIMUM PRECIPITATION BY MONTHS  
WITH YEAR OF OCCURRENCE  
(September 1898 - December 2013)

	<u>Normal*</u>	<u>Maximum Monthly Precipitation</u>		<u>Minimum Monthly Precipitation</u>	
		<u>Amount</u>	<u>Year</u>	<u>Amount</u>	<u>Year</u>
JANUARY	2.05"	9.55"	1993	0.00"	1972
		8.16"	1916	0.02"	2002
		7.21"	1949	0.02"	1912
		6.58"	2005	0.06"	2011
		6.52"	1980	0.08"	1971
FEBRUARY	2.16"	10.05"	1993	Trace	1967
		8.36"	1901	0.02"	1972
		7.81"	1980	0.02"	1912
		5.96"	1976	0.07"	2002
		5.79	1905	0.08"	1924
MARCH	2.12"	6.75"	1970	Trace	1972
		6.18"	1973	0.03"	1997
		6.05"	1906	0.04"	2008
		6.00"	1991	0.06"	1933
		5.69"	1982	0.08"	1959
APRIL	1.15"	5.62"	1965	Trace	2008
		4.47"	1917	Trace	1991
		4.21"	1900	0.01"	1989
		3.85"	1903	0.06"	1916
		3.83"	1988	0.07"	1996
MAY	0.63"	4.14"	1992	0.00"	2012
		2.40"	1915	0.00"	2004
		2.27"	1901	0.00"	2002
		2.16"	1979	Trace	1996
		2.08"	2009	Trace	1974
JUNE	0.36"	2.92"	1955	0.00"	2012
		2.79"	1956	0.00"	2011
		2.19"	1949	0.00"	2002
		1.93"	1972	0.00"	1998
		1.88"	1903	0.00"	1971

\*Climatological Standard Normals 1981-2010.

MAXIMUM AND MINIMUM PRECIPITATION BY MONTHS  
WITH YEAR OF OCCURRENCE  
(September 1898 - August 2013)

	<u>Maximum Monthly Precipitation</u>			<u>Minimum Monthly Precipitation</u>	
	<u>Normal*</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>	<u>Year</u>
JULY	2.61"	7.58"	1919	Trace	1993
		7.57"	2013	0.21"	1997
		6.62"	1986	0.23"	1900
		6.06"	1930	0.29"	2000
		5.94"	2010	0.32"	1963
AUGUST	3.11"	8.77"	1904	0.26"	1962
		8.06"	1986	0.37"	1924
		6.73"	1909	0.54"	1915
		6.10"	1902	0.58"	1976
		5.80"	1992	0.61"	1912
SEPTEMBER	2.38"	6.75"	1983	Trace	1992
		6.60"	1958	Trace	1973
		6.18"	1990	Trace	1957
		4.85"	1965	Trace	1955
		4.80"	1986	0.02"	1956
OCTOBER	1.66"	9.86"	1972	0.00"	1917
		4.90"	1941	0.00"	1902
		4.89"	1899	Trace	1999
		4.64"	1987	Trace	1952
		4.58"	1907	Trace	1950
NOVEMBER	1.76"	7.10"	1905	0.00"	1999
		6.75"	1902	0.00"	1932
		6.64"	1985	0.00"	1916
		6.16"	1978	0.00"	1904
		5.50"	1919	0.00"	1903
DECEMBER	1.87"	7.30"	1967	0.00"	1917
		6.78"	1992	Trace	1999
		6.63"	1965	Trace	1958
		6.17"	1966	0.01"	2005
		5.74"	1908	0.01"	1929

\*Climatological Standard Normals 1981-2010.

GREATEST DAILY 24-HOUR PRECIPITATION (INCHES)

(Midnight - Midnight)

September 1898 - December 2013

JANUARY			FEBRUARY			MARCH			APRIL		
Date	24 Hr Pcpn	Year		24 Hr Pcpn	Year		24 Hr Pcpn	Year		24 Hr Pcpn	Year
1	2.08	1910		1.01	1919		2.81	1970		2.95	1903
2	1.45	1922		2.30	1901		0.95	1978		0.91	1977
3	1.23	2005		1.35	1901		2.11	1938		1.02	1965
4	1.57	2005		1.44	1958		1.14	1908		1.19	1929
5	1.15	1974		2.29	1976		0.77	1907		0.80	2001
6	1.23	1965		1.59	1965		0.85	2000		0.41	2002
7	1.42	1993		1.24	1901		0.53	2010		0.62	1946
8	1.65	1993		2.05	1993		1.27	1918		1.04	1935
9	1.13	1905		2.07	1976		0.70	1926		0.73	2011
10	1.61	1911		1.63	1978		1.85	1912		0.71	1965
11	0.97	2005		1.36	2005		1.91	1982		1.09	1905
12	1.00	2001		0.70	1931		1.43	1906		1.67	1941
13	1.12	1997		1.84	1992		1.27	1905		0.65	1976
14	0.42	1969		2.37	1980		1.31	1944		0.71	1976
15	0.92	1978		1.07	1927		0.77	1945		0.48	1976
16	0.84	1917		1.40	1927		1.27	1930		1.80	1934
17	1.83	1979		0.49	1971		0.73	1922		1.67	1917
18	1.73	1952		0.65	1980		1.39	2012		0.72	1968
19	0.74	1937		3.93	1993		1.58	1994		0.44	1951
20	0.90	1917		1.18	1993		0.69	1981		0.56	1995
21	3.39	2010		1.03	1944		1.02	1991		1.70	1985
22	1.53	1909		0.68	1907		1.28	1954		1.08	1925
23	1.73	1943		0.62	1957		1.09	1954		0.45	1999
24	1.11	1944		1.19	1987		1.14	1902		1.01	1990
25	1.70	1901		0.84	1958		1.83	1910		0.36	1994
26	1.55	2013		1.17	1902		1.10	1989		1.22	1963
27	1.81	1916		0.80	1905		0.59	1938		0.69	1994
28	0.85	1916		1.80	1991		1.13	1998		1.01	1900
29	2.05	1915		0.73	1960		0.83	1967		0.74	1951
30	1.21	1922					0.84	1970		0.78	1954
31	0.87	1919					1.24	1903			
Month	3.39	2010		3.93	1993		2.81	1970		2.95	1903



GREATEST DAILY 24-HOUR PRECIPITATION (INCHES)

(Midnight - Midnight)

September 1898 - December 2013

	MAY		JUNE		JULY		AUGUST				
<u>Date</u>	<u>24 Hr Pcpn</u>	<u>Year</u>		<u>24 Hr Pcpn</u>	<u>Year</u>		<u>24 Hr Pcpn</u>	<u>Year</u>		<u>24 Hr Pcpn</u>	<u>Year</u>
1	0.77	1915		0.31	1991		0.51	1911		1.38	1906
2	0.75	1901		0.91	1999		1.76	2013		1.71	1963
3	0.97	1908		0.31	1915		0.92	1944		1.64	1907
4	0.67	1960		0.52	1986		1.85	1986		1.11	1993
5	0.55	1992		0.40	1903		1.06	1967		0.76	2000
6	0.93	1921		0.55	1993		0.55	1990		2.16	1986
7	0.33	1927		0.28	1912		0.77	1974		1.14	1937
8	0.77	1976		0.34	1907		1.33	1981		1.38	1959
9	0.85	1922		0.26	1983		0.88	1988		1.40	1977
10	0.63	1944		1.47	1957		0.96	2013		1.30	1953
11	0.81	1980		0.39	1927		1.03	1918		1.10	1979
12	0.45	1965		1.32	1955		0.69	1918		1.99	1987
13	0.53	1994		1.58	1955		1.55	1976		3.04	1986
14	0.72	1901		0.88	1921		0.84	2012		1.10	1909
15	0.52	1951		0.09	1965		2.55	1964		1.10	1921
16	0.30	1951		0.17	1933		1.05	1908		0.85	1958
17	0.96	1903		0.70	1933		1.08	1911		1.28	1920
18	0.65	2011		0.89	1949		1.27	2010		1.07	1989
19	0.50	1957		0.45	1967		2.14	1986		0.90	1984
20	0.95	1900		0.32	1925		1.59	1986		1.84	2004
21	0.52	1975		0.68	1958		1.20	1918		1.88	1932
22	0.78	2009		1.27	1922		1.51	1962		2.75	1992
23	0.97	1919		0.17	2000		1.35	1983		1.62	1988
24	1.11	1965		0.29	1922		1.37	1984		1.13	2005
25	0.23	1994		0.78	1954		1.35	2003		1.10	1931
26	0.75	1992		0.32	1954		1.61	1969		0.98	1984
27	0.68	1901		0.75	1940		1.13	1905		0.90	2007
28	0.61	1990		0.66	1938		2.19	1929		2.28	1951
29	0.92	1992		2.40	1956		1.37	1977		1.62	1951
30	0.46	1986		0.39	1956		1.33	2010		1.23	1946
31	0.39	2003					1.14	2005		1.79	1963
Month	1.11	1965		2.40	1956		2.55	1964		3.04	1986

GREATEST DAILY 24-HOUR PRECIPITATION (INCHES)  
(Midnight - Midnight)  
September 1898 - July 2002

SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
<u>Date</u>	<u>24 Hr Pcpn</u>	<u>Year</u>		<u>24 Hr Pcpn</u>	<u>Year</u>		<u>24 Hr Pcpn</u>	<u>Year</u>		<u>24 Hr Pcpn</u>	<u>Year</u>
1	1.32	1998		1.85	1959		1.53	1987		1.38	2007
2	0.86	1990		1.03	1981		1.30	1957		0.94	1906
3	0.59	1907		1.34	1968		1.46	1957		1.33	1908
4	0.65	1970		1.60	1972		0.65	2011		1.55	1992
5	2.84	1970		1.80	1940		0.71	1987		0.98	1966
6	0.82	2002		2.34	1993		0.95	1915		2.87	1966
7	1.08	2002		1.55	1924		0.76	1969		1.75	2009
8	1.07	2011		1.36	1961		1.80	1966		0.83	1972
9	1.61	2003		1.13	1960		0.87	1915		1.10	1965
10	1.40	1924		0.58	1985		1.90	1923		0.97	1961
11	1.97	1985		1.52	1899		3.21	1978		0.98	1927
12	1.80	1927		1.10	1899		2.00	2003		0.88	1937
13	2.75	1941		1.31	1941		0.75	1910		1.52	1967
14	1.50	1999		0.76	2006		1.96	1991		1.41	1967
15	0.46	1906		0.82	1994		1.25	1991		2.08	1908
16	1.29	2007		1.77	1971		0.71	1969		1.74	1908
17	1.71	1925		0.97	1907		1.30	1953		1.20	1978
18	2.11	1965		1.75	1949		0.66	1973		2.65	1978
19	1.03	2004		1.52	1972		0.49	1940		2.32	1967
20	1.52	1952		1.18	1979		1.85	1902		1.16	1968
21	0.81	1990		0.94	2004		1.50	2004		1.03	1909
22	1.03	1958		0.60	2000		0.68	1965		1.50	1965
23	2.71	1983		0.57	1921		1.64	1906		1.38	1945
24	1.65	1900		2.42	1992		0.55	1918		0.44	1959
25	1.00	1986		1.48	1998		2.00	1985		1.31	1940
26	1.35	1997		0.67	1982		1.85	1919		1.83	1971
27	1.56	1903		0.82	1991		2.96	1919		1.22	1984
28	1.79	1958		1.61	2004		1.86	1975		2.50	1992
29	1.70	1971		1.24	1987		1.42	1985		3.33	2004
30	1.75	1983		1.54	1920		2.13	1982		2.95	1951
31				1.79	1987					1.22	1915
Month	2.84	1970		2.42	1992		3.21	1978		3.33	2004

GREATEST NUMBER OF DAYS WITH 0.01 INCH OR MORE AND 0.10 INCH  
OR MORE BY MONTH AND YEAR OF OCCURRENCE  
(1899-2013)

<u>Month</u>	<u>0.01 Inch or more</u>		<u>Year</u>	<u>0.10 Inch or more</u>		<u>Year</u>
	<u>Average # of Days</u>	<u>Greatest # of Days</u>		<u>Average # of Days</u>	<u>Greatest # of Days</u>	
January	7.3	18	1993	4.4	17	1993
February	7.4	16	2005	4.7	14	1905
March	7.8	21	1973	4.9	15	1973
April	5.8	20	1926	3.2	11	1926
May	3.9	15	1992	1.8	11	1992
June	2.9	10	1988	1.3	8	1972
July	11.9	21	1959	6.6	16	1919
August	12.4	23	1904	6.9	18	1904
September	7.0	16	1997	4.0	13	1996
October	5.2	15	1972	3.1	13	1972
November	4.8	15	1931	3.0	11	1905
December	6.7	18	1984	4.1	12	1984
Annual	83.0!	121	1941	48.0!	73	1905

GREATEST NUMBER OF DAYS WITH 0.25 INCH OR MORE AND 0.50 INCH  
OR MORE BY MONTH AND YEAR OF OCCURRENCE  
(1899-2013)

<u>Month</u>	<u>0.25 Inch or more</u>		<u>Year</u>	<u>0.50 Inch or more</u>		<u>Year</u>
	<u>Average # of Days</u>	<u>Greatest # of Days</u>		<u>Average # of Days</u>	<u>Greatest # of Days</u>	
January	2.5	11	1993	1.3	7	1993*
February	2.7	10	1905	1.1	6	1980*
March	2.8	9	1992*	1.1	5	1978*
April	1.8	8	1965	0.7	6	1965
May	0.9	6	1992	0.3	3	1992*
June	0.5	4	1903	0.2	2	1988*
July	3.7	14	1919	1.6	6	1917
August	3.7	10	1934*	1.7	6	1909*
September	2.3	9	1939	1.1	5	1958
October	1.9	9	1972*	1.1	6	1972
November	1.8	9	1905	0.9	5	1905
December	2.5	9	1965	1.0	5	1966*
Annual	27.0!	47	1905	12.1!	24*	1965

\* Also recorded in earlier years.

! May be different than sum of average number of days due to rounding.

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.01 INCH OR MORE  
 (Periods with 10 or more days tabulated)  
 (September 1898 – December 2013)

<u>Days</u>	<u>Period</u>	<u>Total Rainfall</u>
17	July 20 - August 5, 1968	3.29"
13	July 18 - July 30, 1959	1.85"
13	August 23 - September 4, 1925	1.96"
11	February 7 - February 17, 1992	3.69"
11	January 19 - January 29, 1969	4.05"
11	January 9 - January 19, 1949	4.52"
11	July 10 - July 20, 1919	4.32"
10	August 5 – August 14, 2005	1.84"
10	August 31 – September 9, 2003	2.71"
10	February 13 - February 22, 1980	7.81"
10	August 8 - August 17, 1947	3.21"
10	December 24, 1941 - January 2, 1942	1.56"
10	April 26 - May 5, 1926	1.36"
10	July 17 - July 26, 1909	1.61"
10	July 26 - August 4, 1908	3.30"

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.25 INCH OR MORE  
 (Periods with 5 days or more tabulated)  
 (September 1898 - December 2013)

<u>Days</u>	<u>Period</u>	<u>Total Rainfall</u>
7	December 13 - December 19, 1967	7.06"
7	July 10 - July 16, 1919	3.50"
6	July 20 - July 25, 1915	4.38"
5	September 7 – September 11, 2013	2.93"
5	February 17 - February 21, 1980	4.36"
5	October 31 - November 4, 1957	4.57"
5	February 13 - February 17, 1927	3.92"

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.50 INCH OR MORE  
 (Periods with 4 or more days tabulated)  
 (September 1898 - December 2013)

<u>Days</u>	<u>Period</u>	<u>Total Rainfall</u>
4	February 18 - February 21, 1980	4.06"
4	January 25 - January 28, 1916	3.92"
4	July 22 - July 25, 1915	3.65"
4	October 11 - October 14, 1899	4.61"

GREATEST NUMBER OF CONSECUTIVE DAYS WITH 0.75 INCH OR MORE  
 (Periods with 3 or more days tabulated)  
 (September 1898 - July 2013)

<u>Days</u>	<u>Period</u>	<u>Total Rainfall</u>
3	December 5 - December 7, 1966	4.79"
3	January 6 - January 8, 1993	3.89"
3	February 28 - March 2, 1978	3.47"
3	July 23 - July 25, 1915	3.03"
3	March 24 - March 26, 1906	2.62"
3	October 11 - October 13, 1899	3.87"

GREATEST NUMBER OF CONSECUTIVE DAYS WITHOUT MEASURABLE  
 PRECIPITATION (Less than 0.01 inch) DURING AN ENTIRE YEAR  
 (September 1898 – December 2013)

<u>Days</u>	<u>Period</u>	<u>Days</u>	<u>Period</u>
99	September 24 - December 31, 1999	67	April 27 - July 2, 2002
93	April 3 - July 4, 1974	66	April 27 - July 1, 2012
77	October 3 - December 18, 1903	64	February 7 - April 10, 1972
77	September 10 - November 25, 1898	63	March 29 - May 30, 1991
75	April 19 - July 2, 1996	63	October 26 - December 27, 1989
69	April 21 - June 28, 1966	62	May 1 - July 1, 1942

EXCESSIVE STORMS\*  
1898-2013  
(tabulated only for storms\* with 3.50" or greater)

<u>Days</u>	<u>Period</u>	<u>Total Precip</u>	<u>Highest daily total</u>
10	February 13 - February 22, 1980	7.80"	2.37"
8	December 13 - December 20, 1967	7.20"	2.32"
8	February 14 - February 21, 1993	6.48"	3.93"
5	December 3 - December 7, 1966	5.50"	2.87"
9	January 6 - January 14, 1993	5.40"	1.65"
6	January 18 - January 23, 2010	5.31"	3.39"
8	February 27 - March 6, 1978	5.12"	1.41"
7	October 31 - November 6, 1957	4.76"	1.46"
5	October 3 - October 7, 1972	4.70"	1.70"
11	January 9 - January 19, 1949	4.51"	1.09"
7	July 20 - July 26, 1915	4.48"	1.19"
6	January 25 - January 30, 1916	4.32"	1.81"
9	August 21 - August 29, 1904	4.32"	1.44"
11	July 10 - July 20, 1919	4.29"	0.76"
7	February 11 - February 17, 1927	4.20"	1.40"
11	January 19 - January 29, 1969	4.07"	1.30"
6	September 5 - September 11, 2002	3.89"	1.12"
2	December 28 - December 29, 2004	3.88"	3.33"
6	October 15 - October 20, 1972	3.78"	1.52"
11	February 7 - February 17, 1992	3.74"	1.84"
17	July 20 - August 5, 1968	3.74"	0.50"
6	March 11 - March 16, 1982	3.66"	1.91"
6	February 27 - March 4, 1938	3.60"	2.11"
7	January 14 - January 20, 1916	3.50"	1.32"

\* An excessive storm has been defined as a period of time where measurable precipitation falls on consecutive days, leading to 3.50 inches or greater accumulation by the time the precipitation ends.

FLAGSTAFF ARIZONA YEARLY PRECIPITATION RECORD  
(1899-2013)

1899	19.32"				
1900	16.57"	1935	16.42"	1970	24.02"
1901	21.48"	1936	19.30"	1971	21.01"
1902	25.86"	1937	19.41"	1972	24.67"
1903	25.05"	1938	20.48"	1973	19.71"
1904	20.07"	1939	12.91"	1974	17.41"
1905	34.53"	1940	21.22"	1975	20.10"
1906	22.70"	1941	25.02"	1976	20.12"
1907	25.02"	1942	9.90"	1977	18.77"
1908	25.91"	1943	17.34"	1978	30.72"
1909	22.75"	1944	17.50"	1979	19.68"
1910	18.25"	1945	17.62"	1980	29.30"
1911	26.00"	1946	21.74"	1981	23.37"
1912	17.69"	1947	13.14"	1982	31.09"
1913	15.27"	1948	15.39"	1983	29.47"
1914	17.40"	1949	26.79"	1984	20.09"
1915	25.54"	1950	10.76"	1985	26.67"
1916	23.38"	1951	25.79"	1986	32.39"
1917	18.82"	1952	20.06"	1987	23.98"
1918	21.29"	1953	12.81"	1988	21.68"
1919	28.28"	1954	19.55"	1989	14.44"
1920	19.33"	1955	17.97"	1990	25.67"
1921	22.93"	1956	10.37"	1991	21.83"
1922	25.07"	1957	24.26"	1992	34.71"
1923	21.07"	1958	21.22"	1993	35.60"
1924	16.74"	1959	20.42"	1994	21.95"
1925	19.08"	1960	16.66"	1995	19.09"
1926	16.58"	1961	18.95"	1996	11.81"
1927	24.03"	1962	18.11"	1997	17.84"
1928	14.88"	1963	14.53"	1998	27.37"
1929	15.52"	1964	19.04"	1999	15.79"
1930	21.24"	1965	36.59"	2000	15.40"
1931	20.34"	1966	20.28"	2001	17.55"
1932	21.94"	1967	22.27"	2002	12.88"
1933	15.60"	1968	16.53"	2003	17.85"
1934	14.80"	1969	23.31"	2004	23.61"
				2005	24.01"
				2006	15.56"
				2007	17.46"
				2008	18.85"
				2009	11.65"
				2010	27.89"
				2011	20.67"
				2012	14.89"
				2013	24.77"

15 WETTEST YEARS  
(1899 - 2013)

<u>Rank</u>	<u>Amount</u>	<u>Year</u>
1	36.59"	1965
2	35.60"	1993
3	34.71"	1992
4	34.53"	1905
5	32.39"	1986
6	31.09"	1982
7	30.72"	1978
8	29.47"	1983
9	29.30"	1980
10	28.28"	1919
11	27.89"	2010
12	27.37"	1998
13	26.79"	1949
14	26.67"	1985
15	26.00"	1911

15 DRIEST YEARS  
(1899 - 2013)

<u>Rank</u>	<u>Amount</u>	<u>Year</u>
1	9.90"	1942
2	10.37"	1956
3	10.76"	1950
4	11.65"	2009
5	11.81"	1996
6	12.81"	1953
7	12.88"	2002
8	12.91"	1939
9	13.14"	1947
10	14.44"	1989
11	14.52"	1963
12	14.80"	1934
13	14.88"	1928
14	14.89"	2012
15	15.27"	1913

\*AVERAGE YEARLY PRECIPITATION: 21.86"

\* Based on the 30 year average yearly precipitation from 1981-2010.



FLAGSTAFF SEASONAL SNOWFALL\*  
(1899-2013)

1900	70.0"!	1935	44.1"	1970	95.7"	2005	131.7"
1901	124.5"	1936	16.0"	1971	56.6"	2006	44.6"
1902	76.8"	1937	97.6"	1972	50.3"	2007	50.4"
1903	128.3"	1938	42.0"	1973	210.0"	2008	99.5"
1904	41.4"	1939	70.2"	1974	70.0"	2009	86.0"
1905	92.2"	1940	48.4"	1975	141.1"	2010	140.5"
1906	63.8"	1941	61.5"	1976	131.6"	2011	88.4"
1907	86.4"	1942	65.0"	1977	70.2"	2012	102.9"
1908	69.2"	1943	64.4"	1978	116.3"	2013	69.7"
1909	73.4"	1944	99.5"	1979	145.5"		
1910	82.9"	1945	84.0"	1980	177.1"		
1911	34.3"	1946	51.5"	1981	92.4"		
1912	70.6"	1947	32.4"	1982	121.6"		
1913	65.4"	1948	107.0"	1983	142.6"		
1914	39.6"	1949	167.0"	1984	32.0"		
1915	117.0"	1950	63.3"	1985	136.0"		
1916	129.5"	1951	73.8"	1986	105.4"		
1917	111.1"	1952	105.9"	1987	121.6"		
1918	28.7"	1953	60.0"	1988	104.5"		
1919	69.8"	1954	89.0"	1989	77.7"		
1920	74.7"	1955	67.6"	1990	113.4"		
1921	53.3"	1956	42.7"	1991	127.9"		
1922	96.6"	1957	50.1"	1992	158.9"		
1923	96.7"	1958	70.8"	1993	150.0"		
1924	54.5"	1959	53.8"	1994	109.5"		
1925	49.5"	1960	77.6"	1995	99.1"!		
1926	29.3"	1961	53.9"	1996	28.5"!		
1927	48.7"	1962	128.5"	1997	107.5"!		
1928	39.0"	1963	47.3"	1998	136.7"		
1929	50.0"	1964	89.4"	1999	72.0"		
1930	57.3"	1965	166.7"	2000	74.4"		
1931	18.0"	1966	83.4"	2001	125.1"		
1932	92.9"	1967	63.1"	2002	38.9"		
1933	66.0"	1968	150.4"	2003	54.9"		
1934	11.2"	1969	134.7"	2004	48.1"		

\* Snowfall is for the period of July through June ending in the year indicated.

! Estimated

15 SNOWIEST SEASONS  
(July 1899 - June 2013)

<u>Rank</u>	<u>Amount</u>	<u>Year</u>
1	210.0"	1972-1973
2	177.1"	1979-1980
3	167.0"	1948-1949
4	166.7"	1964-1965
5	158.9"	1991-1992
6	150.4"	1967-1968
7	150.0"	1992-1993
8	145.5"	1978-1979
9	142.6"	1982-1983
10	141.1"	1974-1975
11	140.5"	2009-2010
12	136.7"	1997-1998
13	136.0"	1984-1985
14	134.7"	1968-1969
15	131.7"	2004-2005

15 LEAST SNOWIEST SEASONS  
(July 1899 - June 2013)

<u>Rank</u>	<u>Amount</u>	<u>Year</u>
1	11.2"	1933-1934
2	16.0"	1935-1936
3	18.0"	1930-1931
4	28.5"	1995-1996
5	28.7"	1917-1918
6	29.3"	1925-1926
7	32.0"	1983-1984
8	32.4"	1946-1947
9	34.3"	1910-1911
10	38.9"	2001-2002
11	39.0"	1927-1928
12	39.6"	1913-1914
13	41.4"	1903-1904
14	42.0"	1937-1938
15	42.7"	1955-1956

AVERAGE\* YEARLY SNOWFALL: 101.7"

\* Based on the 30 year average yearly snowfall from 1981-2010.

GREATEST DAILY 24-HOUR SNOWFALL (INCHES)

(Midnight - Midnight)

September 1898 - December 2013

JANUARY			FEBRUARY			MARCH			APRIL		
<u>Date</u>	<u>24 Hr Snow</u>	<u>Year</u>		<u>24 Hr Snow</u>	<u>Year</u>		<u>24 Hr Snow</u>	<u>Year</u>		<u>24 Hr Snow</u>	<u>Year</u>
1	9.8	1907		13.6	1990		26.0	1970		9.0	1999
2	6.2	1990		24.0	1901		9.5	1964		17.8	1997
3	13.6	2005		13.5	1901		11.9	1976		10.2	1965
4	18.8	2005		10.5	1939		11.0	1923		9.8	1999
5	12.1	1974		19.9	1976		7.0	2004		4.0	1999
6	13.0	1992		15.2	1965		14.3	2000		7.2	2001
7	16.5	1937		12.4	1901		7.6	2000		6.0	1998
8	9.1	1985		12.9	2009		13.8	1992		7.4	1975
9	8.8	1980		14.6	2009		8.9	1948		13.2	2011
10	15.1	1949		15.0	1978		17.5	1969		7.8	1965
11	10.0	1930		8.7	1973		19.3	1952		6.0	1967
12	8.2	1960		6.1	1959		10.2	2006		12.0	1941
13	16.4	1997		9.5	1992		7.1	1990		5.4	1976
14	3.7	1993		16.0	2001		13.0	1944		9.7	2012
15	8.9	1978		10.0	1932		10.6	1987		5.0	1976
16	13.0	1928		5.2	1975		17.6	1986		15.0	1917
17	14.7	1988		4.8	1971		5.8	1963		10.0	1988
18	13.2	1980		16.0	1917		19.5	2012		9.3	1968
19	11.0	1935		12.1	2011		9.0	1980		5.0	1966
20	7.1	1954		8.7	1987		7.8	1981		8.9	1995
21	19.6	2010		10.0	1944		15.4	1991		11.1	1988
22	14.9	2010		9.7	2008		12.2	1973		7.5	1988
23	17.3	1943		6.0	1948		11.4	1964		3.2	1900
24	19.9	1949		21.1	1987		11.2	1902		4.9	1994
25	16.0	1923		12.4	1998		12.0	1903		4.1	1994
26	13.1	1948		6.1	1962		14.9	1991		8.5	1985
27	16.0	1916		11.9	1997		6.6	1998		8.7	1994
28	7.2	1979		11.0	1991		11.6	1973		10.1	1900
29	18.0	1915		6.4	1960		12.8	1998		9.5	1951
30	9.6	1980					8.9	1970		10.0	1915
31	12.0	1922					6.9	1970			
Month	19.9	1949		24.0	1901		26.0	1970		17.8	1997

GREATEST DAILY 24-HOUR SNOWFALL (INCHES)

(Midnight - Midnight)

September 1898 - December 2013

MAY			JUNE			JULY			AUGUST		
<u>Date</u>	<u>24 Hr Snow</u>	<u>Year</u>		<u>24 Hr Snow</u>	<u>Year</u>		<u>24 Hr Snow</u>	<u>Year</u>		<u>24 Hr Snow</u>	<u>Year</u>
1	5.0	1915									
2	7.5	1901		TR	1992						
3	9.0	1904		TR	1949						
4	3.9	1905		TR	1999						
5	4.6	1969		TR	1999						
6	4.5	1949		TR	1993						
7	2.1	1964		TR	1992						
8	4.7	1979		0.5	1907						
9	0.5	1922									
10	TR	2011		TR	1949						
11	0.3	1957									
12	2.0	1968									
13	3.7	2008									
14	0.3	1998									
15	6.0	1951									
16	1.9	1944									
17	9.0	1903									
18	1.6	2011									
19	0.9	1917									
20	0.4	1975									
21	4.7	1975		TR	1947						
22	0.6	2008									
23	4.4	2008									
24	6.6	1965									
25	TR	1996									
26	TR	1993									
27	0.8	1962									
28	2.0	1962									
29	2.5	1971									
30	TR	1988									
31	TR	1991									
Month	9.0	1903		0.5	1907		0.0	ALL		0.0	ALL

GREATEST DAILY 24-HOUR SNOWFALL (INCHES)

(Midnight - Midnight)

September 1898 – December 2013

SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
Date	24 Hr Snow	Year		24 Hr Snow	Year		24 Hr Snow	Year		24 Hr Snow	Year
1				0.3	1959		1.0	2000		6.0	2011
2				0.2	1907		8.0	1974		4.5	1947
3				0.2	1986		6.0	1922		6.1	1961
4				TR	1946		5.0	1925		14.6	1992
5				3.6	1912		5.7	2011		8.5	1992
6				0.7	1912		6.3	1977		11.5	1943
7				TR	2011		6.8	2011		20.1	2009
8				5.0	1961		11.2	1966		8.3	1972
9				2.0	1961		2.5	2008		14.0	1931
10				0.6	2013		6.2	1982		12.9	2007
11				0.6	1997		11.2	1972		9.6	2001
12	TR	1909		0.2	1947		18.4	1985		14.0	1932
13				TR	1947		5.0	1961		26.8	1967
14				8.2	1994		12.8	1993		15.5	1967
15				4.5	1980		11.8	1991		11.7	2012
16				5.9	1971		11.5	1958		8.0	2008
17				6.7	1971		4.7	1972		10.0	1924
18	TR	1950		5.5	1908		6.5	1994		7.2	2002
19	2.0	1965		4.7	1949		5.5	1979		22.7	1967
20				7.0	1920		20.0	1902		11.2	1968
21				5.5	2004		15.4	1905		19.6	1909
22				1.1	2004		5.6	2013		12.7	1965
23	TR	1989		TR	1953		11.5	1906		11.0	1997
24	0.9	1986		1.0	1920		15.5	1906		4.0	1914
25				9.1	1972		8.0	1983		12.0	1916
26				4.2	1996		6.4	1990		14.1	1979
27	TR	2013		1.5	1996		23.0	1919		4.7	1946
28				9.8	2004		14.2	1975		9.2	1936
29	0.3	1905		6.0	1922		12.1	1985		12.5	1989
30				9.5	1974		13.4	1982		31.0	1915
31				9.0	1920					20.0	1915
Month	2.0	1965		9.8	2004		23.0	1919		31.0	1915

TR = TRACE

SNOWIEST CALENDAR DAYS IN FLAGSTAFF  
(1899 - 2013)  
(Midnight to Midnight)

<u>Rank</u>	<u>Amount</u>	<u>Date</u>
1	31.0"	Dec 30, 1915
2	26.8"	Dec 13, 1967
3	26.0"	Mar 1, 1970
4	24.0"	Feb 2, 1901
5	23.0"	Nov 27, 1919
6	22.7"	Dec 19, 1967
7	21.1"	Feb 24, 1987
8	20.1"	Dec 7, 2009
9	20.0"	Dec 31, 1915
10	20.0"	Nov 20, 1902
11	19.9"	Feb 5, 1976
12	19.9"	Jan 24, 1949
13	19.6"	Jan 21, 2010
14	19.6"	Dec 21, 1909
15	19.5"	Mar 18, 2012

GREATEST CONSECUTIVE DAYS WITH  
MEASURABLE SNOW ON THE GROUND IN FLAGSTAFF  
(1950 - 2013)  
(Based on the 5 a.m. measurement)

<u>Rank</u>	<u>Days</u>	<u>Dates</u>
1	140	Dec 5, 1972 - Apr 23, 1973
2	93	Dec 9, 2007 - Mar 10, 2008
3	82	Dec 8, 2009 - Feb 27, 2010
4	80	Dec 22, 1959 - Mar 10, 1960
5	76	Dec 10, 1965 - Feb 23, 1966
6	70	Dec 13, 1967 - Feb 20, 1968
7	64	Jan 3 - Mar 7, 1955
8	57	Jan 9 - Mar 6, 2001
9	54	Jan 3 - Feb 25, 2005
10	53	Dec 14, 2008 - Feb 4, 2009
11	53	Jan 15 - Mar 8, 1979
12	50	Nov 28, 1975 - Jan 16, 1976
13	46	Feb 7 - Mar 24, 1969
14	44	Dec 14, 2012 - Jan 26, 2013
15	44	Dec 20, 1991 - Feb 1, 1992

MAXIMUM MONTHLY SNOWFALL  
WITH YEAR OF OCCURRENCE  
(September 1898 - December 2013)

	<u>Normal*</u>	<u>Amount</u>	<u>Year</u>
JANUARY	23.2"	104.8"	1949
		63.4"	1980
		59.4"	1979
		56.4"	2010
		56.3"	2005
FEBRUARY	20.9"	84.3"	1901
		45.5"	1990
		42.1"	1969
		41.0"	1998
		40.7"	1987
MARCH	20.7"	79.4"	1991
		77.4"	1973
		67.3"	1970
		48.4"	2000
		45.6"	1981
APRIL	7.1"	58.3"	1965
		41.8"	1999
		40.3"	1900
		34.5"	1917
		33.1"	1988
MAY	0.7"	15.0"	1904
		10.2"	1903
		10.0"	1908
		9.0"	1905
		8.7 "	2008
JUNE	0.0"	0.5"	1907
		TR	1999
		TR	1993
		TR	1992
		TR	1949!

\* Climatological Standard Normals 1981-2010.

! Also occurred in earlier years.

MAXIMUM MONTHLY SNOWFALL  
WITH YEAR OF OCCURRENCE  
(September 1898 - December 2013)

	<u>Normal*</u>	<u>Amount</u>	<u>Year</u>
JULY	0.0"	0.0"	ALL
AUGUST	0.0"	0.0"	ALL
SEPTEMBER	0.0"	2.0"	1965
		0.9"	1986
		0.3"	1905
		TR	2013
		TR	1993!
OCTOBER	1.5"	24.7"	1971
		19.0"	1920
		16.6"	1974
		16.4"	2004
		11.8"	1972
NOVEMBER	10.7"	42.6"	1902
		40.7"	1985
		39.5"	1991
		30.3"	1919
		27.9"	1906
DECEMBER	16.9"	86.0"	1967
		66.3"	1915
		41.7"	1992
		39.1"	2008
		38.5"	1965

\* Climatological Standard Normals 1981-2010.

! Also occurred in earlier years.



EXCESSIVE SNOWSTORMS\* AT FLAGSTAFF  
 (January 1899- December 2013)  
 (tabulated only for storms\* with 25" or greater)

<u>Days</u>	<u>Period</u>	<u>Total Snow</u>	<u>Highest daily total</u>
8	December 13 - December 20, 1967	84.6"	26.8"
6	January 18 - January 23, 2010	54.2"	19.6"
3	December 29 - December 31, 1915	54.0"	31.0"
9	January 9 - January 17, 1949	48.4"	15.1"
4	February 1 - February 4, 1901	47.4"	24.0"
4	January 22 - January 25, 1949	43.5"	19.9"
5	April 1 - April 5, 1999	41.3"	11.0"
6	January 25 - January 30, 1916	39.0"	16.0"
4	November 20 - November 23, 1902	38.6"	20.0"
2	January 3 - January 5, 2005	35.0"	18.8"
6	February 6 - February 11, 1901	33.6"	12.4"
4	February 28 - March 3, 1970	33.3"	26.0"
6	April 7 - April 12, 1965	32.6"	9.9"
8	December 25 - January 1, 1937	32.2"	10.8"
7	March 7 - March 13, 2006	31.2"	14.8"
4	February 23 - February 26, 1987	31.2"	21.1"
5	January 14 - January 18, 1979	30.7"	14.3"
5	April 1 - April 5, 1997	29.7"	17.8"
8	January 15 - January 22, 1917	29.7"	12.0"
3	February 8 - February 10, 2009	29.3"	14.6"
4	April 13 - April 16, 1976	28.7"	10.5"
6	March 5 - March 10, 2000	28.3"	14.3"
3	April 15 - April 17, 1917	27.5"	15.0"
3	November 23 - November 25, 1906	27.2"	15.5"
3	January 28 - January 30, 1980	27.1"	15.3"
3	February 4 - February 6, 1976	26.9"	19.9"
6	January 20 - January 25, 1962	26.7"	13.7"
9	December 30 - January 7, 1982	26.6"	9.4"
2	March 18 - March 19, 2012	26.4"	19.5"
5	January 10 - January 14, 1930	26.5"	10.0"
5	March 26 - March 30, 1998	26.4"	12.8"
2	November 27 - November 28, 1919	26.0"	23.0"
3	January 22 - January 24, 1943	25.9"	17.3"
5	April 1 - April 5, 1965	25.7"	10.2"
5	December 7 - December 11, 2007	25.4"	12.9"
3	November 27 - November 29, 1975	25.2"	14.2"

\* An excessive snowstorm has been defined as a period of time where measurable snowfall occurs on consecutive days, leading to 25 inches or greater accumulation by the time the snowfall ends.

AVERAGE NUMBER OF DAYS WITH SNOWFALL OF 1 INCH OR MORE  
(1951-2013)

JANUARY	4.1
FEBRUARY	4.0
MARCH	4.4
APRIL	2.2
MAY	0.4
JUNE	0
JULY	0
AUGUST	0
SEPTEMBER	*
OCTOBER	0.5
NOVEMBER	2.0
DECEMBER	3.6
ANNUAL	21.1

AVERAGE NUMBER OF DAYS WITH THUNDERSTORMS  
(1965-1994)

JANUARY	*
FEBRUARY	0.3
MARCH	0.6
APRIL	1.3
MAY	2.6
JUNE	3.7
JULY	16.4
AUGUST	15.6
SEPTEMBER	6.7
OCTOBER	2.2
NOVEMBER	0.6
DECEMBER	0.2
ANNUAL	50.1

\* Less than 0.1 occurrences.

## MONSOON SEASON STATISTICS

(1899 - 2013)

Monsoon Season is defined as June 15 – September 30

<u>Normal*</u>	Wettest		Driest	
	<u>Amount</u>	<u>Year</u>	<u>Amount</u>	<u>Year</u>
8.31"	20.00"	1986	2.31"	1978
	15.70"	2013	2.87"	2009
	13.95"	1904	2.94"	1991
	13.16"	1983	3.12"	1973
	12.65"	1911	3.22"	1957
	12.21"	1990	3.33"	1979
	11.99"	1998	3.80"	1942
	11.99"	1919	3.84"	1944
	11.61"	1927	3.98"	1948
	11.56"	1970	4.29"	1928

\*based on 1981-2010 climatological normals

#### IV. MISCELLANEOUS INFORMATION

SUNSHINE, CLOUDINESS, AND FOG AT FLAGSTAFF  
(1965-1994)

<u>Month</u>	<u>Sunshine</u>		<u>Sky Cover (Sunrise - Sunset)</u>			<u>Dense Fog</u>
	Percent Possible <u>Sunshine</u>	Avg Amt of Sky <u>CoverClear</u>	<u>Cloudy</u>	Partly <u>Cloudy</u>	<u>Days</u>	Number of
January	77%	5.2	12.4	6.3	12.3	1.8
February	73%	5.3	10.7	6.0	11.5	1.8
March	76%	5.3	11.6	7.8	11.6	1.6
April	82%	4.7	12.4	8.8	8.7	1.2
May	88%	4.1	15.2	9.3	6.5	0.2
June	86%	3.0	18.5	7.7	3.9	0
July	75%	5.3	9.1	13.1	8.8	0.2
August	76%	5.1	9.8	13.1	8.1	0.3
September	81%	3.7	15.7	9.6	4.7	0.5
October	79%	3.6	17.1	7.0	6.9	0.9
November	75%	4.2	15.4	6.6	8.0	1.2
December	73%	4.8	13.9	6.5	10.7	1.9
Annual	78%	4.5	161.8	101.7	101.6	11.5

Dense fog is when the visibility is restricted to 1/4 mile or less for at least part of the day. Sky cover is expressed in a range from 0 to 10, with 0 representing no clouds or obscuring phenomena, and 10 representing a complete sky cover. A further break-down is as follows:

Clear	0/10 to 3/10 sky cover
Partly Cloudy	4/10 to 7/10 sky cover
Cloudy	8/10 to 10/10 sky cover

NORMAL HEATING DEGREE DAYS FOR FLAGSTAFF  
(1981-2010)

JANUARY	1088
FEBRUARY	923
MARCH	868
APRIL	649
MAY	417
JUNE	170
JULY	32
AUGUST	56
SEPTEMBER	229
OCTOBER	566
NOVEMBER	849
DECEMBER	1096
ANNUAL	6943

NORMAL COOLING DEGREE DAYS FOR FLAGSTAFF  
(1981-2010)

JANUARY	0
FEBRUARY	0
MARCH	0
APRIL	0
MAY	0
JUNE	17
JULY	64
AUGUST	33
SEPTEMBER	3
OCTOBER	0
NOVEMBER	0
DECEMBER	0
ANNUAL	117

A degree day is a measure of the departure of the average daily temperature from 65 degrees. Each degree that the daily temperature is below 65 degrees is equal to one heating degree day. Each degree that the daily temperature is above 65 degrees is equal to one cooling degree day. For example, if the average temperature on a particular day was 55 degrees, the heating degree days would then be  $65-55=10$  heating degree days. If the average daily temperature was 72 degrees, the cooling degree days would then be  $72-65=7$  cooling degree days. Each day of the month would be calculated in the same fashion, with negative differences counted as zero.

Heating and cooling degree days are useful in the computation of fuel and power consumption and are used by utility companies to determine heating and cooling requirements.

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

The daily values presented in these tables are not simple means of observed daily values. They are interpolated using a much less variable set of monthly normals calculated using the natural spline function.

In leap years, use the February 28th values for the 29th, and adjust the heating degree monthly totals accordingly.

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**JANUARY**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	42	17	29	36	0	.07
2	42	17	29	36	0	.07
3	42	17	29	36	0	.07
4	42	17	29	36	0	.07
5	42	17	29	36	0	.08
6	42	17	30	36	0	.07
7	42	17	30	35	0	.07
8	42	17	30	35	0	.07
9	42	17	30	35	0	.07
10	42	17	30	35	0	.08
11	42	17	30	35	0	.07
12	42	17	30	35	0	.07
13	42	17	30	35	0	.06
14	42	17	30	35	0	.07
15	43	17	30	35	0	.06
16	43	17	30	35	0	.07
17	43	17	30	35	0	.07
18	43	17	30	35	0	.06
19	43	18	30	35	0	.07
20	43	18	30	35	0	.06
21	43	18	30	35	0	.06
22	43	18	30	35	0	.05
23	43	18	30	35	0	.06
24	43	18	30	35	0	.06
25	43	18	30	35	0	.06
26	43	18	30	35	0	.06
27	43	18	30	35	0	.06
28	43	18	30	35	0	.06
29	43	18	30	35	0	.06
30	43	18	31	35	0	.07
31	43	18	31	34	0	.07
<b>TOTAL</b>				<b>1088</b>	<b>0</b>	<b>2.05</b>
<b>AVG</b>	<b>42.5</b>	<b>17.3</b>	<b>29.9</b>			



NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**FEBRUARY**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	43	18	31	34	0	.07
2	43	18	31	34	0	.07
3	43	18	31	34	0	.07
4	43	18	31	34	0	.07
5	44	18	31	34	0	.07
6	44	18	31	34	0	.07
7	44	18	31	34	0	.08
8	44	18	31	34	0	.07
9	44	19	31	34	0	.08
10	44	19	31	34	0	.07
11	44	19	31	34	0	.08
12	44	19	32	33	0	.07
13	44	19	32	33	0	.08
14	45	19	32	33	0	.07
15	45	19	32	33	0	.08
16	45	19	32	33	0	.09
17	45	20	32	33	0	.08
18	45	20	32	33	0	.08
19	45	20	33	32	0	.08
20	46	20	33	32	0	.08
21	46	20	33	32	0	.09
22	46	20	33	32	0	.08
23	46	20	33	32	0	.08
24	46	21	33	32	0	.08
25	46	21	34	31	0	.08
26	47	21	34	31	0	.08
27	47	21	34	31	0	.08
28	47	21	34	31	0	.08
<b>TOTAL</b>				<b>923</b>	<b>0</b>	<b>2.16</b>
<b>AVG</b>	<b>44.8</b>	<b>19.3</b>	<b>32.1</b>			

In leap years, use the February 28 values for February 29 and adjust the monthly totals.

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**MARCH**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	47	21	34	31	0	.07
2	47	22	35	30	0	.07
3	48	22	35	30	0	.08
4	48	22	35	30	0	.08
5	48	22	35	30	0	.08
6	48	22	35	30	0	.07
7	48	22	35	30	0	.08
8	49	23	36	29	0	.07
9	49	23	36	29	0	.08
10	49	23	36	29	0	.07
11	49	23	36	29	0	.07
12	50	23	36	29	0	.07
13	50	23	37	28	0	.08
14	50	23	37	28	0	.07
15	50	24	37	28	0	.08
16	50	24	37	28	0	.07
17	51	24	37	28	0	.06
18	51	24	37	28	0	.07
19	51	24	38	27	0	.07
20	51	24	38	27	0	.07
21	52	24	38	27	0	.06
22	52	24	38	27	0	.07
23	52	25	38	27	0	.06
24	52	25	38	27	0	.07
25	52	25	39	26	0	.06
26	53	25	39	26	0	.06
27	53	25	39	26	0	.06
28	53	25	39	26	0	.05
29	53	25	39	26	0	.06
30	54	25	40	26	0	.05
31	54	26	40	25	0	.05
<b>TOTAL</b>				868	0	2.12
<b>AVG</b>	50.4	23.6	37.0			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**APRIL**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	54	26	40	25	0	.05
2	54	26	40	25	0	.05
3	55	26	40	25	0	.05
4	55	26	41	25	0	.05
5	55	26	41	24	0	.04
6	55	26	41	24	0	.05
7	56	27	41	24	0	.04
8	56	27	41	24	0	.05
9	56	27	42	23	0	.05
10	56	27	42	23	0	.05
11	57	27	42	23	0	.04
12	57	28	42	23	0	.04
13	57	28	43	22	0	.04
14	58	28	43	22	0	.04
15	58	28	43	22	0	.04
16	58	28	43	22	0	.04
17	59	29	44	21	0	.04
18	59	29	44	21	0	.03
19	59	29	44	21	0	.04
20	60	29	44	21	0	.03
21	60	30	45	20	0	.03
22	60	30	45	20	0	.03
23	61	30	45	20	0	.03
24	61	30	46	19	0	.03
25	61	31	46	19	0	.03
26	62	31	46	19	0	.02
27	62	31	47	19	0	.03
28	62	31	47	18	0	.03
29	63	32	47	18	0	.03
30	63	32	47	18	0	.03
<b>TOTAL</b>				<b>649</b>	<b>0</b>	<b>1.15</b>
<b>AVG</b>	<b>58.2</b>	<b>28.5</b>	<b>43.3</b>			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**MAY**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	63	32	48	17	0	.03
2	63	32	48	17	0	.02
3	64	33	48	17	0	.03
4	64	33	49	17	0	.02
5	64	33	49	16	0	.02
6	65	33	49	16	0	.02
7	65	33	49	16	0	.02
8	65	34	50	15	0	.02
9	66	34	50	15	0	.02
10	66	34	50	15	0	.02
11	66	34	50	15	0	.01
12	67	34	51	14	0	.02
13	67	35	51	14	0	.02
14	67	35	51	14	0	.01
15	68	35	51	14	0	.02
16	68	35	52	13	0	.02
17	68	35	52	13	0	.02
18	69	35	52	13	0	.02
19	69	36	52	13	0	.02
20	69	36	53	12	0	.03
21	70	36	53	12	0	.02
22	70	36	53	12	0	.02
23	70	36	53	12	0	.02
24	71	36	54	11	0	.02
25	71	37	54	11	0	.02
26	71	37	54	11	0	.02
27	72	37	54	11	0	.02
28	72	37	55	10	0	.02
29	72	37	55	10	0	.02
30	73	37	55	10	0	.02
31	73	38	55	10	0	.02
<b>TOTAL</b>				<b>417</b>	<b>0</b>	<b>0.63</b>
<b>AVG</b>	<b>68.1</b>	<b>35.0</b>	<b>51.6</b>			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**JUNE**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	74	38	56	10	0	.01
2	74	38	56	9	0	.02
3	74	38	56	9	0	.01
4	75	38	56	9	0	.01
5	75	39	57	8	0	.01
6	75	39	57	8	0	.01
7	76	39	57	8	0	.01
8	76	39	58	8	0	.01
9	76	40	58	7	0	.01
10	77	40	58	7	0	.01
11	77	40	59	7	0	.01
12	77	41	59	7	0	.01
13	77	41	59	6	0	.01
14	78	41	59	6	0	.01
15	78	41	60	6	0	.01
16	78	42	60	5	0	.00
17	79	42	60	5	0	.01
18	79	43	61	5	1	.01
19	79	43	61	5	1	.01
20	79	43	61	4	1	.01
21	80	44	62	4	1	.01
22	80	44	62	4	1	.01
23	80	44	62	4	1	.01
24	80	45	63	3	1	.02
25	81	45	63	3	1	.01
26	81	46	63	3	1	.02
27	81	46	63	3	1	.02
28	81	46	64	3	1	.02
29	81	47	64	2	1	.02
30	81	47	64	2	1	.02
<b>TOTAL</b>				<b>170</b>	<b>17</b>	<b>0.36</b>
<b>AVG</b>	<b>77.9</b>	<b>41.9</b>	<b>59.9</b>			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35° 08' N  
Longitude: 111° 40' W  
Elevation: 7006 Feet

**JULY**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	81	47	64	2	2	.04
2	82	48	65	2	2	.04
3	82	48	65	2	2	.04
4	82	48	65	2	2	.04
5	82	49	65	2	2	.05
6	82	49	65	1	2	.05
7	82	49	66	1	2	.06
8	82	50	66	1	2	.06
9	82	50	66	1	2	.07
10	82	50	66	1	2	.07
11	82	51	66	1	2	.07
12	82	51	66	1	2	.08
13	82	51	66	1	2	.08
14	82	51	66	1	2	.08
15	82	51	67	1	2	.09
16	82	52	67	1	2	.09
17	81	52	67	1	2	.10
18	81	52	67	1	2	.09
19	81	52	67	1	2	.10
20	81	52	67	1	2	.10
21	81	52	67	1	2	.10
22	81	52	67	1	2	.10
23	81	52	67	1	2	.11
24	81	52	67	1	2	.10
25	81	52	67	1	2	.11
26	81	52	66	1	2	.11
27	80	52	66	1	2	.11
28	80	52	66	1	2	.12
29	80	52	66	1	2	.11
30	80	52	66	1	2	.12
31	80	52	66	1	2	.12
<b>TOTAL</b>				<b>32</b>	<b>64</b>	<b>2.61</b>
<b>AVG</b>	<b>81.2</b>	<b>50.9</b>	<b>66.1</b>			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35° 08' N  
Longitude: 111° 40' W  
Elevation: 7006 Feet

**AUGUST**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	80	52	66	1	2	.11
2	80	52	66	1	2	.11
3	80	52	66	1	2	.11
4	79	52	66	1	2	.11
5	79	52	66	1	2	.11
6	79	52	66	1	2	.11
7	79	52	65	1	2	.10
8	79	52	65	1	1	.11
9	79	51	65	1	1	.10
10	79	51	65	1	1	.11
11	79	51	65	1	1	.10
12	79	51	65	1	1	.11
13	79	51	65	1	1	.10
14	79	51	65	2	1	.10
15	79	51	65	2	1	.10
16	78	50	64	2	1	.10
17	78	50	64	2	1	.10
18	78	50	64	2	1	.10
19	78	50	64	2	1	.10
20	78	50	64	2	1	.10
21	78	49	64	2	1	.09
22	78	49	64	2	1	.10
23	78	49	63	2	1	.09
24	78	49	63	2	1	.10
25	78	49	63	3	1	.09
26	78	48	63	3	1	.09
27	77	48	63	3	1	.09
28	77	48	63	3	0	.10
29	77	48	62	3	0	.09
30	77	47	62	3	0	.09
31	77	47	62	3	0	.09
<b>TOTAL</b>				<b>56</b>	<b>33</b>	<b>3.11</b>
<b>AVG</b>	<b>78.4</b>	<b>50.1</b>	<b>64.2</b>			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**SEPTEMBER**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	77	47	62	3	1	.09
2	77	47	62	4	1	.09
3	76	46	61	4	1	.09
4	76	46	61	4	0	.09
5	76	46	61	4	0	.10
6	76	45	61	5	0	.08
7	76	45	60	5	0	.09
8	75	45	60	5	0	.08
9	75	44	60	5	0	.08
10	75	44	60	6	0	.09
11	75	44	59	6	0	.08
12	74	43	59	6	0	.09
13	74	43	59	7	0	.08
14	74	43	58	7	0	.08
15	73	42	58	7	0	.09
16	73	42	58	8	0	.07
17	73	42	57	8	0	.08
18	72	41	57	8	0	.08
19	72	41	57	9	0	.07
20	72	41	56	9	0	.08
21	71	40	56	9	0	.07
22	71	40	55	10	0	.08
23	71	39	55	10	0	.08
24	70	39	55	10	0	.07
25	70	39	54	11	0	.08
26	70	38	54	11	0	.06
27	69	38	54	12	0	.07
28	69	37	53	12	0	.06
29	68	37	53	12	0	.07
30	68	37	52	13	0	.06
<b>TOTAL</b>				<b>229</b>	<b>3</b>	<b>2.38</b>
<b>AVG</b>	<b>72.9</b>	<b>42.0</b>	<b>57.4</b>			



NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**OCTOBER**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	68	36	52	13	0	.06
2	67	36	52	13	0	.06
3	67	36	51	14	0	.06
4	66	35	51	14	0	.06
5	66	35	50	15	0	.06
6	66	35	50	15	0	.06
7	65	34	50	15	0	.05
8	65	34	49	16	0	.05
9	65	34	49	16	0	.05
10	64	33	49	16	0	.05
11	64	33	48	17	0	.05
12	63	33	48	17	0	.06
13	63	32	48	17	0	.05
14	63	32	47	18	0	.05
15	62	32	47	18	0	.06
16	62	31	47	18	0	.05
17	62	31	46	19	0	.06
18	61	31	46	19	0	.05
19	61	31	46	19	0	.06
20	61	30	45	20	0	.04
21	60	30	45	20	0	.05
22	60	30	45	20	0	.05
23	60	29	44	21	0	.04
24	59	29	44	21	0	.05
25	59	29	44	21	0	.05
26	58	29	44	22	0	.04
27	58	28	43	22	0	.06
28	58	28	43	22	0	.05
29	57	28	43	22	0	.06
30	57	28	42	23	0	.06
31	57	27	42	23	0	.06
<b>TOTAL</b>				<b>566</b>	<b>0</b>	<b>1.66</b>
<b>AVG</b>	<b>62.0</b>	<b>31.5</b>	<b>46.8</b>			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**NOVEMBER**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	56	27	42	23	0	.06
2	56	27	41	24	0	.06
3	55	27	41	24	0	.05
4	55	26	41	24	0	.06
5	55	26	40	25	0	.06
6	54	26	40	25	0	.06
7	54	25	40	25	0	.05
8	53	25	39	26	0	.06
9	53	25	39	26	0	.05
10	53	25	39	26	0	.06
11	52	24	38	27	0	.05
12	52	24	38	27	0	.06
13	51	24	38	27	0	.05
14	51	23	37	28	0	.05
15	51	23	37	28	0	.06
16	50	23	37	29	0	.06
17	50	23	36	29	0	.06
18	49	22	36	29	0	.06
19	49	22	35	30	0	.05
20	49	22	35	30	0	.07
21	48	21	35	30	0	.06
22	48	21	34	31	0	.06
23	48	21	34	31	0	.07
24	47	20	34	31	0	.07
25	47	20	33	32	0	.06
26	46	20	33	32	0	.07
27	46	20	33	32	0	.06
28	46	19	33	32	0	.06
29	45	19	32	33	0	.05
30	45	19	32	33	0	.06
<b>TOTAL</b>				<b>849</b>	<b>0</b>	<b>1.76</b>
<b>AVG</b>	<b>50.5</b>	<b>22.9</b>	<b>36.7</b>			

NORMALS  
FLAGSTAFF, AZ

1981 to 2010

Latitude: 35<sup>0</sup> 08' N  
Longitude: 111<sup>0</sup> 40' W  
Elevation: 7006 Feet

**DECEMBER**

<u>DATE</u>	<u>TEMPERATURE</u>			<u>DEGREE DAYS</u>		<u>PRECIPITATION</u>
	<u>MAX</u>	<u>MIN</u>	<u>AVG</u>	<u>HDD</u>	<u>CDD</u>	<u>DAILY</u>
1	45	19	32	33	0	.05
2	45	18	31	34	0	.06
3	44	18	31	34	0	.05
4	44	18	31	34	0	.06
5	44	18	31	34	0	.06
6	44	18	31	34	0	.05
7	43	17	30	35	0	.06
8	43	17	30	35	0	.06
9	43	17	30	35	0	.06
10	43	17	30	35	0	.06
11	43	17	30	35	0	.05
12	43	17	30	35	0	.06
13	42	17	30	36	0	.06
14	42	17	29	36	0	.06
15	42	16	29	36	0	.06
16	42	16	29	36	0	.05
17	42	16	29	36	0	.06
18	42	16	29	36	0	.06
19	42	16	29	36	0	.06
20	42	16	29	36	0	.06
21	42	16	29	30	0	.06
22	42	16	29	36	0	.06
23	42	16	29	36	0	.07
24	42	16	29	36	0	.06
25	42	16	29	36	0	.07
26	42	16	29	36	0	.06
27	42	16	29	36	0	.07
28	42	16	29	36	0	.06
29	42	17	29	36	0	.07
30	42	17	29	36	0	.07
31	42	17	29	36	0	.07
<b>TOTAL</b>				1096	0	1.87
<b>AVG</b>	42.5	16.8	29.6			

FLAGSTAFF, ARIZONA  
 Rise and Set for the Sun for 2014  
 U. S. Naval Observatory  
 Washington, DC 20392-5420

Location: W111 37, N35 13

Mountain Standard Time

Day	Jan.		Feb.		Mar.		Apr.		May		June		July		Aug.		Sept.		Oct.		Nov.		Dec.	
	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set	Rise	Set
01	0735	1725	0726	1755	0656	1822	0613	1848	0535	1912	0513	1936	0516	1945	0536	1930	0559	1853	0621	1810	0648	1732	0717	1714
02	0735	1726	0725	1756	0655	1823	0612	1849	0534	1913	0513	1936	0516	1945	0536	1929	0600	1852	0622	1809	0649	1731	0718	1714
03	0735	1727	0724	1757	0653	1824	0610	1850	0533	1914	0513	1937	0517	1945	0537	1928	0601	1850	0623	1807	0650	1730	0718	1714
04	0735	1728	0723	1758	0652	1825	0609	1850	0532	1915	0512	1938	0517	1945	0538	1927	0601	1849	0624	1806	0651	1729	0719	1714
05	0736	1729	0722	1759	0651	1826	0608	1851	0531	1916	0512	1938	0518	1944	0539	1926	0602	1848	0625	1805	0652	1728	0720	1714
06	0736	1730	0721	1800	0649	1827	0606	1852	0530	1916	0512	1939	0518	1944	0539	1925	0603	1846	0625	1803	0653	1727	0721	1714
07	0736	1730	0721	1801	0648	1827	0605	1853	0529	1917	0512	1939	0519	1944	0540	1924	0603	1845	0626	1802	0654	1726	0722	1714
08	0736	1731	0720	1802	0647	1828	0603	1854	0528	1918	0512	1940	0519	1944	0541	1923	0604	1843	0627	1801	0655	1725	0723	1714
09	0735	1732	0719	1803	0645	1829	0602	1854	0527	1919	0512	1940	0520	1944	0542	1922	0605	1842	0628	1759	0656	1725	0723	1714
10	0735	1733	0718	1804	0644	1830	0601	1855	0527	1920	0511	1941	0520	1943	0542	1921	0606	1841	0629	1758	0657	1724	0724	1714
11	0735	1734	0717	1805	0643	1831	0559	1856	0526	1921	0511	1941	0521	1943	0543	1920	0606	1839	0629	1756	0658	1723	0725	1715
12	0735	1735	0716	1806	0641	1832	0558	1857	0525	1921	0511	1942	0522	1943	0544	1918	0607	1838	0630	1755	0659	1722	0726	1715
13	0735	1736	0715	1807	0640	1832	0557	1858	0524	1922	0511	1942	0522	1942	0545	1917	0608	1836	0631	1754	0659	1722	0726	1715
14	0735	1737	0714	1808	0638	1833	0556	1858	0523	1923	0511	1942	0523	1942	0546	1916	0609	1835	0632	1753	0700	1721	0727	1715
15	0734	1738	0713	1809	0637	1834	0554	1859	0522	1924	0511	1943	0523	1941	0546	1915	0609	1833	0633	1751	0701	1720	0728	1716
16	0734	1739	0711	1810	0636	1835	0553	1900	0522	1924	0512	1943	0524	1941	0547	1914	0610	1832	0634	1750	0702	1720	0728	1716
17	0734	1740	0710	1811	0634	1836	0552	1901	0521	1925	0512	1943	0525	1940	0548	1913	0611	1830	0634	1749	0703	1719	0729	1716
18	0734	1741	0709	1812	0633	1837	0550	1902	0520	1926	0512	1944	0525	1940	0549	1911	0612	1829	0635	1747	0704	1719	0730	1717
19	0733	1742	0708	1813	0631	1837	0549	1903	0520	1927	0512	1944	0526	1939	0549	1910	0612	1827	0636	1746	0705	1718	0730	1717
20	0733	1743	0707	1814	0630	1838	0548	1903	0519	1928	0512	1944	0527	1939	0550	1909	0613	1826	0637	1745	0706	1718	0731	1718
21	0732	1744	0706	1815	0629	1839	0547	1904	0518	1928	0512	1944	0527	1938	0551	1908	0614	1825	0638	1744	0707	1717	0731	1718
22	0732	1745	0705	1816	0627	1840	0545	1905	0518	1929	0513	1944	0528	1937	0552	1906	0615	1823	0639	1743	0708	1717	0732	1719
23	0731	1746	0703	1817	0626	1841	0544	1906	0517	1930	0513	1945	0529	1937	0552	1905	0615	1822	0640	1741	0709	1716	0732	1719
24	0731	1747	0702	1818	0624	1842	0543	1907	0517	1930	0513	1945	0530	1936	0553	1904	0616	1820	0641	1740	0710	1716	0733	1720
25	0730	1748	0701	1818	0623	1842	0542	1907	0516	1931	0513	1945	0530	1935	0554	1903	0617	1819	0641	1739	0711	1716	0733	1720
26	0730	1749	0700	1819	0622	1843	0541	1908	0516	1932	0514	1945	0531	1935	0555	1901	0618	1817	0642	1738	0712	1715	0733	1721
27	0729	1750	0658	1820	0620	1844	0540	1909	0515	1933	0514	1945	0532	1934	0555	1900	0618	1816	0643	1737	0713	1715	0734	1722
28	0728	1751	0657	1821	0619	1845	0539	1910	0515	1933	0514	1945	0533	1933	0556	1859	0619	1814	0644	1736	0714	1715	0734	1722
29	0728	1752			0617	1846	0537	1911	0514	1934	0515	1945	0533	1932	0557	1857	0620	1813	0645	1735	0715	1715	0734	1723
30	0727	1753			0616	1846	0536	1912	0514	1935	0515	1945	0534	1931	0558	1856	0621	1812	0646	1734	0716	1714	0735	1724
31	0726	1754			0615	1847			0514	1935			0535	1930	0558	1855			0647	1733			0735	1724