

# Climatology of the United States

No. 20

1971-2000

Station: KOFA MINE, AZ

COOP ID: 024702

Climate Division: AZ 5

NWS Call Sign:

Elevation: 1,775 Feet Lat: 33° 16N

Lon: 113° 58W

## Temperature (°F)

Mean (1)				Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Heating	Cooling	Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	65.8	46.0	55.9	86	1971	19	62.1	1986	23	1963	13	49.6	1979	294	12	.0	.0	30.6	.0	.5	.0
Feb	69.8	48.9	59.4	93	1986	26	65.2	1991	28	1990	15	53.0	1998	183	25	.0	.1	27.9	.0	.3	.0
Mar	74.5	52.0	63.3	95+	1997	20	72.9	1972	34+	1985	3	55.6	1973	158	105	.0	1.0	31.0	.0	.0	.0
Apr	82.3	57.5	69.9	104	1980	19	77.3	1989	38+	1976	16	61.4	1975	54	202	.3	7.0	30.0	.0	.0	.0
May	90.2	64.4	77.3	112	1983	28	84.9	1997	44	1955	2	70.4	1977	10	391	3.0	17.7	31.0	.0	.0	.0
Jun	100.4	73.4	86.9	117	1994	28	92.9	1981	49	1999	4	82.6	1991	0	656	18.4	28.1	30.0	.0	.0	.0
Jul	103.5	78.7	91.1	119	1995	28	95.5	1980	59	1979	18	87.8	1984	0	809	25.1	30.8	31.0	.0	.0	.0
Aug	102.0	77.9	90.0	116	1981	27	94.2	1995	59	1979	18	86.4	1983	0	772	22.9	30.3	31.0	.0	.0	.0
Sep	96.8	73.3	85.1	113	1979	10	91.4	1979	45	1965	20	78.7	1985	0	603	11.2	26.3	30.0	.0	.0	.0
Oct	86.2	63.8	75.0	109	1980	2	80.9	1999	36+	1976	31	68.9	1971	16	327	1.8	11.5	31.0	.0	.0	.0
Nov	73.7	52.6	63.2	93+	1994	1	70.5	1995	31	1964	16	57.9	1994	132	77	.0	.5	30.0	.0	.0	.0
Dec	65.8	45.9	55.9	85	1958	3	61.7	1980	26	1968	22	50.7	1987	297	13	.0	.0	30.6	.0	.4	.0
Ann	84.3	61.2	72.8	119	Jul 1995	28	95.5	Jul 1980	23	Jan 1963	13	49.6	Jan 1979	1144	3992	82.7	153.3	364.1	.0	1.2	.0

+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than .05

Complete documentation available from: [www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1952-2001

(3) Derived from 1971-2000 serially complete daily data

048-A

# Climatography of the United States

## No. 20 1971-2000

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

**Station: KOFA MINE, AZ**

**COOP ID: 024702**

**Climate Division: AZ 5**

**NWS Call Sign:**

**Elevation: 1,775 Feet Lat: 33°16N**

**Lon: 113°58W**

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.90	.60	1.40	1977	1	4.51	1993	.00+	1996	3.2	1.8	.7	@	.00	.00	.09	.21	.35	.53	.76	1.07	1.50	2.26	3.03
Feb	.78	.30	1.43	1993	8	3.38	1998	.00+	1989	3.2	1.7	.5	.2	.00	.00	.02	.10	.23	.40	.61	.90	1.33	2.09	2.88
Mar	.64	.45	2.95	1978	1	2.56	1992	.00+	1997	2.9	1.5	.3	.1	.00	.00	.01	.07	.16	.30	.48	.72	1.10	1.76	2.46
Apr	.22	.00	1.40	1965	3	2.21	1988	.00+	2000	1.2	.6	.1	@	.00	.00	.00	.00	.00	.00	.03	.14	.34	.73	1.15
May	.14	.00	1.44	1994	24	1.57	1994	.00+	2000	1.1	.4	@	@	.00	.00	.00	.00	.00	.00	.00	.04	.16	.46	.80
Jun	.03	.00	.35	1959	30	.26	1987	.00+	1998	.5	.1	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.05	.13	.19
Jul	.63	.43	4.00	1958	28	4.10	1976	.00+	2000	2.5	1.4	.5	.1	.00	.00	.08	.17	.27	.40	.56	.77	1.06	1.56	2.06
Aug	1.00	.58	3.09	1959	1	7.17	1983	.00+	1980	3.7	2.1	.7	.1	.00	.03	.14	.27	.43	.63	.88	1.20	1.66	2.45	3.26
Sep	1.06	.46	4.16	1976	25	7.55	1976	.00+	2000	2.5	1.4	.5	.3	.00	.00	.00	.08	.22	.44	.74	1.17	1.81	2.99	4.21
Oct	.58	.16	5.60	1976	23	6.33	1976	.00+	1999	1.6	1.0	.2	.1	.00	.00	.00	.00	.03	.13	.29	.55	.97	1.77	2.64
Nov	.42	.16	1.92	1969	10	2.59	1985	.00+	1999	2.0	.9	.2	.1	.00	.00	.01	.04	.10	.19	.30	.46	.71	1.14	1.60
Dec	.59	.27	1.20	1997	22	3.22	1984	.00+	2000	2.8	1.3	.4	.1	.00	.00	.00	.04	.13	.25	.42	.66	1.02	1.67	2.35
Ann	6.99	6.39	5.60	Oct 1976	23	7.55	Sep 1976	.00+	Dec 2000	27.2	14.2	4.1	1.1	2.14	2.80	3.79	4.64	5.47	6.32	7.26	8.37	9.80	12.03	14.10

+ Also occurred on an earlier date(s)

# Denotes amounts of a trace

@ Denotes mean number of days greater than 0 but less than .05

\*\* Statistics not computed because less than six years out of thirty had measurable precipitation

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1952-2001

(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

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**Station: KOFA MINE, AZ**

**COOP ID: 024702**

**Climate Division: AZ 5**

**NWS Call Sign:**

**Elevation: 1,775 Feet**

**Lat: 33° 16N**

**Lon: 113° 58W**

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	#	.0	#	0	#	1990	14	#+	1990	#	1985	2	#	1985	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	#	Feb 1990	14	#+	Feb 1990	#	Feb 1985	2	#	Feb 1985	.0	.0	.0	.0	.0	.0	.0	.0	.0

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than .05

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

Complete documentation available from:

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Freeze Data									
Spring Freeze Dates (Month/Day)									
Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	3/08	2/20	2/08	1/29	1/19	1/08	12/27	12/08	0/00
32	2/02	1/19	1/07	12/24	0/00	0/00	0/00	0/00	0/00
28	12/31	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
Fall Freeze Dates (Month/Day)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	11/19	12/03	12/13	12/22	12/30	1/09	1/20	2/11	0/00
32	12/17	12/29	1/08	1/22	0/00	0/00	0/00	0/00	0/00
28	1/24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	>365	>365	>365	>365	344	326	311	295	276
32	>365	>365	>365	>365	>365	>365	>365	341	322
28	>365	>365	>365	>365	>365	>365	>365	>365	>365
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

\* Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

**0/00** Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

Derived from 1971-2000 serially complete daily data

Complete documentation available from:

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**Climate Division: AZ 5      NWS Call Sign:      Elevation: 1,775 Feet    Lat: 33° 16N      Lon: 113° 58W**

Degree Days to Selected Base Temperatures (°F)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	294	183	158	54	10	0	0	0	0	16	132	297	1144
60	170	94	84	20	2	0	0	0	0	4	61	174	609
57	114	54	50	10	0	0	0	0	0	1	33	118	380
55	83	33	35	6	0	0	0	0	0	0	21	87	265
50	27	9	13	0	0	0	0	0	0	0	5	30	84
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	741	766	969	1138	1403	1646	1832	1795	1593	1333	935	739	14890
55	111	155	291	453	690	956	1119	1082	903	620	266	113	6759
57	80	119	245	398	628	896	1057	1020	843	559	218	83	6146
60	42	75	185	318	537	806	964	927	753	469	156	45	5277
65	12	25	105	202	391	656	809	772	603	327	77	13	3992
70	0	6	47	115	258	506	654	617	454	205	29	1	2892

Growing Degree Units (2)																								
Base	Growing Degree Units (Monthly)												Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	513	577	732	907	1167	1430	1604	1570	1368	1094	709	509	513	1090	1822	2729	3896	5326	6930	8500	9868	10962	11671	12180
45	360	433	577	757	1012	1280	1449	1415	1218	939	559	357	360	793	1370	2127	3139	4419	5868	7283	8501	9440	9999	10356
50	216	292	423	607	857	1130	1294	1260	1068	784	412	215	216	508	931	1538	2395	3525	4819	6079	7147	7931	8343	8558
55	105	167	277	460	702	980	1139	1105	918	631	269	98	105	272	549	1009	1711	2691	3830	4935	5853	6484	6753	6851
60	37	78	157	322	547	830	984	950	768	479	150	33	37	115	272	594	1141	1971	2955	3905	4673	5152	5302	5335
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	275	332	447	588	770	906	1016	1009	899	734	429	271	275	607	1054	1642	2412	3318	4334	5343	6242	6976	7405	7676

(1) Derived from the 1971-2000 Monthly Normals

(2) Derived from 1971-2000 serially complete daily data

**Note:** For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

Complete documentation available from:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

## Notes

- a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.
- b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.
- c. Only observed validated values were used to select the extreme daily values.
- d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.  
Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.
- e. Degree Days were derived using the same techniques as the 1971-2000 normals.  
Complete documentation for the 1971-2000 Normals is available on the internet from:  
[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)
- f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set.  
Documentation of the serially complete data set is available from the link below:
- g. Snowfall and snow depth statistics were derived from the Snow Climatology.  
Documentation for the Snow Climatology project is available from the link under references.

## Data Sources for Tables

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html)  
Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,  
[www1.ncdc.noaa.gov/pub/data/special/serialcomplete\\_jam\\_0900.pdf](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)