

Climatology of the United States

No. 20

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

Station: MARICOPA 4 N, AZ

1971-2000

COOP ID: 025270

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,160 Feet Lat: 33°07N

Lon: 112°02W

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	66.7	35.0	50.9	86	1971	19	55.3	1986	13	1964	16	47.3	1979	439	0	.0	.0	30.7	.0	12.2	.0
Feb	71.7	38.8	55.3	90+	1986	27	60.0	1996	16	1964	2	51.1	1974	276	3	.0	@	27.9	.2	6.2	.0
Mar	77.4	43.6	60.5	99	1988	26	67.4	1972	7	1964	7	53.7	1973	188	50	.0	2.4	31.0	.0	1.5	.0
Apr	86.2	49.2	67.7	106	1989	20	75.4	1989	29	1968	19	60.5	1975	71	152	1.1	11.5	30.0	.0	.2	.0
May	95.1	58.2	76.7	113+	2000	29	83.5	1997	32	1964	2	71.2	1977	8	368	8.6	24.5	31.0	.0	.0	.0
Jun	105.0	67.4	86.2	122	1990	26	90.0	1994	43	1965	26	81.3	1991	0	635	25.1	29.5	30.0	.0	.0	.0
Jul	106.7	76.1	91.4	124	1995	28	94.3	1996	57+	1968	2	88.7	1987	0	818	28.8	30.9	31.0	.0	.0	.0
Aug	104.6	74.6	89.6	117+	1993	1	93.8	1994	54	1968	24	85.5	1979	0	763	27.1	30.8	31.0	.0	.0	.0
Sep	100.0	66.3	83.2	113	2000	14	87.4	2000	43	1968	23	78.3	1985	0	544	17.1	28.5	30.0	.0	.0	.0
Oct	88.7	52.7	70.7	109	1968	2	76.7	1988	26	1971	30	65.4	1971	35	211	3.5	15.3	31.0	.0	.2	.0
Nov	75.2	39.6	57.4	94+	2001	4	62.9	1995	16	1960	27	51.9	2000	242	14	.0	.6	30.0	.0	3.9	.0
Dec	66.5	34.0	50.3	84+	1980	16	55.0	1980	15+	1966	30	46.0	1974	458	0	.0	.0	30.7	.0	13.5	.0
Ann	87.0	53.0	70.0	124	Jul 1995	28	94.3	Jul 1996	7	Mar 1964	7	46.0	Dec 1974	1717	3558	111.3	174.0	364.3	.2	37.7	.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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1960-2001

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

053-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: MARICOPA 4 N, AZ

COOP ID: 025270

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,160 Feet Lat: 33°07N

Lon: 112°02W

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	.75	.58	1.13	1995	5	2.74	1993	.00+	2000	4.0	2.2	.3	.1	.00	.00	.02	.12	.25	.41	.62	.90	1.29	1.98	2.70
Feb	.80	.61	1.87	1965	6	3.69	1998	.00+	1989	3.6	2.0	.5	@	.00	.00	.05	.19	.34	.51	.72	.99	1.36	1.98	2.63
Mar	1.04	.94	1.80	1968	9	3.59	1992	.00+	1987	3.8	2.5	.5	.1	.00	.00	.14	.32	.51	.73	.98	1.30	1.74	2.46	3.18
Apr	.26	.15	.94	2001	6	1.52	1988	.00+	2000	1.7	.8	.1	.0	.00	.00	.00	.00	.06	.13	.21	.32	.47	.73	.99
May	.14	.00	.48	1979	19	1.50	1994	.00+	2000	.9	.3	.0	.0	.00	.00	.00	.00	.00	.00	.01	.08	.22	.48	.77
Jun	.11	.00	2.42	1967	18	1.21	2000	.00+	1998	.7	.4	@	.0	.00	.00	.00	.00	.00	.00	.00	.02	.12	.37	.67
Jul	.96	.46	1.43	1984	18	4.54	1984	.02	1995	3.6	2.0	.7	.2	.03	.08	.18	.30	.45	.63	.85	1.15	1.57	2.30	3.04
Aug	.89	.72	1.90	1969	18	2.39	1997	.00	1977	3.7	2.2	.6	.1	.03	.10	.23	.36	.50	.66	.85	1.09	1.42	1.98	2.52
Sep	.76	.55	1.39	1966	12	2.45	1983	.00+	1988	3.3	2.0	.4	.1	.00	.00	.12	.24	.37	.52	.71	.94	1.25	1.78	2.31
Oct	.66	.32	1.76	1972	19	3.57	1972	.00+	1999	3.0	1.4	.4	.1	.00	.00	.02	.10	.20	.35	.53	.77	1.13	1.75	2.40
Nov	.63	.44	1.80	1968	15	3.44	1993	.00+	1999	2.4	1.6	.4	.1	.00	.00	.04	.12	.23	.36	.53	.75	1.07	1.62	2.18
Dec	.98	.53	1.49	1967	15	3.19	1986	.00+	2000	4.1	2.2	.7	.2	.00	.00	.00	.11	.28	.50	.78	1.15	1.69	2.65	3.63
Ann	7.98	6.96	2.42	Jun 1967	18	4.54	Jul 1984	.00+	Dec 2000	34.8	19.6	4.6	1.0	3.52	4.24	5.23	6.04	6.79	7.55	8.37	9.30	10.48	12.27	13.89

+ 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: 1960-2001

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

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: MARICOPA 4 N, AZ

COOP ID: 025270

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,160 Feet

Lat: 33°07N

Lon: 112°02W

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	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	.0	N/A	N/A	.0	0	0	.0	0	0	0	0	0	0	.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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

**Climatography
of the United States
No. 20
1971-2000**

Station: MARICOPA 4 N, AZ

COOP ID: 025270

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,160 Feet

Lat: 33°07N

Lon: 112°02W

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	4/22	4/13	4/07	4/01	3/27	3/22	3/17	3/11	3/02
32	4/03	3/24	3/17	3/11	3/06	2/28	2/22	2/15	2/06
28	3/09	2/26	2/18	2/12	2/05	1/30	1/23	1/15	1/04
24	2/19	2/07	1/29	1/21	1/13	1/04	12/23	0/00	0/00
20	1/20	1/09	12/31	12/20	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	10/23	10/28	10/31	11/04	11/06	11/09	11/12	11/16	11/21
32	11/03	11/08	11/12	11/15	11/19	11/22	11/25	11/29	12/04
28	11/13	11/19	11/23	11/27	12/01	12/04	12/08	12/12	12/18
24	11/26	12/05	12/11	12/18	12/24	12/31	1/11	0/00	0/00
20	12/16	12/23	12/29	1/05	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	252	242	235	229	224	218	212	205	195
32	289	278	270	263	257	251	244	236	226
28	334	320	310	303	296	289	281	273	261
24	>365	>365	>365	>365	>365	336	323	312	300
20	>365	>365	>365	>365	>365	>365	>365	362	339
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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

**Climatology
of the United States**
No. 20
1971-2000

Station: MARICOPA 4 N, AZ

COOP ID: 025270

Climate Division: AZ 6 NWS Call Sign: Elevation: 1,160 Feet Lat: 33°07N Lon: 112°02W

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	439	276	188	71	8	0	0	0	0	35	242	458	1717
60	287	153	99	26	1	0	0	0	0	9	128	304	1007
57	202	95	58	13	0	0	0	0	0	3	77	218	666
55	152	64	38	8	0	0	0	0	0	1	52	165	480
50	60	15	11	1	0	0	0	0	0	0	13	68	168
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	584	651	884	1072	1384	1625	1841	1786	1534	1199	762	565	13887
55	23	71	209	389	671	935	1128	1073	844	488	123	18	5972
57	12	45	168	335	609	875	1066	1011	784	428	89	9	5431
60	3	19	115	258	517	785	973	918	694	340	50	2	4674
65	0	3	50	152	368	635	818	763	544	211	14	0	3558
70	0	0	16	76	235	486	663	608	396	110	3	0	2593

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	346	452	638	832	1140	1387	1603	1554	1309	964	537	332	346	798	1436	2268	3408	4795	6398	7952	9261	10225	10762	11094
45	201	308	483	682	985	1237	1448	1399	1159	809	388	188	201	509	992	1674	2659	3896	5344	6743	7902	8711	9099	9287
50	84	176	331	532	830	1087	1293	1244	1009	654	246	75	84	260	591	1123	1953	3040	4333	5577	6586	7240	7486	7561
55	22	75	195	385	675	937	1138	1089	859	503	124	21	22	97	292	677	1352	2289	3427	4516	5375	5878	6002	6023
60	0	18	88	251	520	787	983	934	709	356	46	0	0	18	106	357	877	1664	2647	3581	4290	4646	4692	4692
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	269	325	428	529	684	802	967	951	800	604	386	262	269	594	1022	1551	2235	3037	4004	4955	5755	6359	6745	7007

(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

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
- 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">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html
Snow Climatology Project Description, 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