

# 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: TEEC NOS POS, AZ**

**1971-2000**

**COOP ID: 028468**

**Climate Division: AZ 2**

**NWS Call Sign:**

**Elevation: 5,290 Feet Lat: 36° 55N**

**Lon: 109° 05W**

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	41.7	21.1	31.4	69	1971	10	38.5	1999	-18	1974	3	22.3	1979	1042	0	.0	.0	6.1	4.9	28.1	.8
Feb	49.4	26.3	37.9	73	1980	3	44.9	1995	-11+	1989	7	27.8	1974	761	0	.0	.0	14.0	1.1	22.9	.2
Mar	58.6	32.7	45.7	82	1989	10	51.3	1989	8+	1965	3	41.1	1979	600	0	.0	.0	26.5	@	15.5	.0
Apr	68.2	39.3	53.8	102	1980	25	60.7	1992	17+	1979	2	48.2	1983	346	8	@	.1	28.9	.0	5.4	.0
May	77.8	48.4	63.1	99	2000	29	69.9	2000	27+	1979	10	58.3	1995	137	78	.0	1.6	31.0	.0	.5	.0
Jun	89.0	57.9	73.5	105+	1974	30	77.9	2000	38+	1979	9	68.3	1979	14	267	1.7	15.9	30.0	.0	.0	.0
Jul	92.8	63.9	78.4	104+	1989	6	81.6	2000	44	1995	4	72.5	1979	0	414	1.6	23.8	31.0	.0	.0	.0
Aug	90.1	62.2	76.2	103	1975	6	79.8+	2000	40	1979	17	70.7	1979	1	346	.4	17.9	31.0	.0	.0	.0
Sep	81.8	53.6	67.7	97+	1995	4	71.9	2000	30	1965	19	63.2	1985	46	127	.0	3.3	30.0	.0	.1	.0
Oct	69.2	40.9	55.1	98	1963	3	60.0	1988	21+	1989	31	49.7	1984	318	9	.0	.0	30.2	.0	4.4	.0
Nov	53.6	30.2	41.9	79	1966	15	46.5	1991	5	1976	29	37.1	1979	694	0	.0	.0	20.1	.1	19.7	.0
Dec	43.2	21.5	32.4	79	1979	8	38.4	1980	-14	1968	24	22.6	1978	1011	0	.0	.0	6.6	3.0	28.3	.5
Ann	68.0	41.5	54.8	105+	Jun 1974	30	81.6	Jul 2000	-18	Jan 1974	3	22.3	Jan 1979	4970	1249	3.7	62.6	285.4	9.1	124.9	1.5

+ 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/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1962-2001

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

092-A

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**Station: TEEC NOS POS, AZ**

**COOP ID: 028468**

**Climate Division: AZ 2**

**NWS Call Sign:**

**Elevation: 5,290 Feet Lat: 36°55N**

**Lon: 109°05W**

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	.73	.48	1.20	1995	5	2.85	1997	.00	1994	4.3	2.3	.3	@	.01	.04	.12	.21	.33	.47	.64	.87	1.20	1.77	2.35
Feb	.43	.39	.65	1963	11	1.14	1975	.00+	1999	3.3	1.5	.1	.0	.00	.03	.09	.15	.23	.31	.41	.53	.70	.99	1.28
Mar	.65	.54	1.13	1964	24	1.98	1983	.00+	1999	4.9	2.4	.1	.0	.00	.00	.04	.12	.23	.36	.54	.76	1.10	1.67	2.26
Apr	.44	.31	.97	1988	16	1.51	1985	.00+	2000	2.9	1.7	.1	.0	.00	.00	.00	.11	.21	.31	.42	.56	.75	1.06	1.36
May	.62	.55	1.05	1999	4	1.85	1992	.00+	1998	3.5	1.7	.2	@	.00	.00	.08	.17	.28	.40	.56	.76	1.03	1.51	1.99
Jun	.24	.10	.82	1969	26	1.14	1973	.00+	1998	1.9	.8	.1	.0	.00	.00	.00	.01	.06	.12	.19	.28	.41	.65	.88
Jul	.96	.60	2.00	2001	13	2.52	1999	.00+	1994	3.7	2.4	.7	.1	.00	.06	.21	.36	.52	.70	.92	1.18	1.56	2.19	2.81
Aug	1.12	1.00	2.07	1995	22	3.89	1997	.04	1975	4.1	2.6	.6	.1	.06	.12	.26	.41	.58	.79	1.03	1.35	1.80	2.57	3.33
Sep	.72	.53	1.40+	1994	3	3.01	1976	.00+	2000	3.7	2.0	.3	.1	.00	.00	.20	.33	.45	.58	.73	.92	1.15	1.55	1.92
Oct	1.01	.73	2.00+	1996	27	4.79	1996	.00+	1999	4.1	2.5	.6	.2	.00	.00	.12	.29	.48	.69	.94	1.25	1.70	2.43	3.16
Nov	.59	.46	1.19	1962	18	2.77	1978	.00+	1999	3.9	2.3	.2	.0	.00	.00	.12	.22	.32	.43	.57	.74	.97	1.35	1.72
Dec	.57	.40	1.00	1978	6	2.09	1978	.00+	1999	3.9	2.1	.2	@	.00	.00	.08	.21	.33	.45	.58	.74	.95	1.29	1.63
Ann	8.08	7.97	2.07	Aug 1995	22	4.79	Oct 1996	.00+	Sep 2000	44.2	24.3	3.5	.5	4.85	5.43	6.20	6.80	7.34	7.87	8.43	9.05	9.82	10.95	11.94

+ 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: 1962-2001

(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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**COOP ID: 028468**

**Climate Division: AZ 2**

**NWS Call Sign:**

**Elevation: 5,290 Feet**

**Lat: 36°55N**

**Lon: 109°05W**

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	4.2	.1	#	0	13.0	1997	13	31.0	1974	10	1974	1	4	1974	1.0	.9	.5	.1	.1	2.6	1.5	.4	.1
Feb	.5	.0	#	0	3.0	1974	13	7.0	1974	8	1990	21	1	1990	.3	.2	.1	.0	.0	.1	.1	.0	.0
Mar	.5	.0	#	0	4.0	1975	15	5.0	1975	#+	1987	16	#+	1987	.2	.2	.1	.0	.0	.0	.0	.0	.0
Apr	.1	.0	#	0	2.0	1999	4	3.0	1999	#+	1999	5	#+	1999	.1	.1	.0	.0	.0	.0	.0	.0	.0
May	#	.0	0	0	#	1986	7	#	1986	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	#	1979	29	#+	1979	4	1991	29	#+	1992	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.9	.0	#	0	5.0	1973	26	5.5	1973	4	1973	26	#+	2000	.4	.4	.1	@	.0	@	@	.0	.0
Dec	1.8	.0	#	0	10.0	1978	6	14.0	1978	6	1972	5	2	1972	.7	.5	.2	.1	@	.8	.5	.1	.0
Ann	8.0	.1	N/A	N/A	13.0	Jan 1997	13	31.0	Jan 1974	10	Jan 1974	1	4	Jan 1974	2.7	2.3	1.0	.2	.1	3.5	2.1	.5	.1

+ 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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**COOP ID: 028468**

**Climate Division: AZ 2**

**NWS Call Sign:**

**Elevation: 5,290 Feet**

**Lat: 36° 55N**

**Lon: 109° 05W**

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	5/20	5/15	5/11	5/07	5/04	5/01	4/27	4/23	4/17
32	5/12	5/05	4/30	4/26	4/22	4/18	4/13	4/08	4/01
28	4/30	4/23	4/18	4/13	4/09	4/05	3/31	3/26	3/19
24	4/10	4/03	3/29	3/25	3/20	3/16	3/12	3/07	2/28
20	3/25	3/16	3/10	3/04	2/27	2/22	2/16	2/10	2/01
16	3/07	2/24	2/16	2/10	2/04	1/28	1/22	1/14	1/03
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	9/21	9/27	10/01	10/05	10/08	10/12	10/15	10/20	10/26
32	10/02	10/08	10/11	10/15	10/18	10/21	10/24	10/28	11/03
28	10/21	10/25	10/28	10/30	11/01	11/04	11/06	11/09	11/13
24	10/28	11/02	11/05	11/08	11/11	11/13	11/16	11/19	11/24
20	11/08	11/13	11/16	11/19	11/22	11/24	11/27	12/01	12/05
16	11/16	11/23	11/28	12/02	12/06	12/10	12/14	12/19	12/26
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	181	173	167	162	157	152	147	141	132
32	205	196	189	184	178	173	167	160	151
28	234	224	217	211	206	200	194	187	178
24	262	253	246	240	235	229	223	216	207
20	295	285	278	272	267	261	256	249	239
16	344	331	321	313	305	297	289	279	265

\* 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](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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**COOP ID: 028468**

**Climate Division: AZ 2      NWS Call Sign:      Elevation: 5,290 Feet    Lat: 36°55N      Lon: 109°05W**

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	1042	761	600	346	137	14	0	1	46	318	694	1011	4970
60	887	621	447	219	64	3	0	0	12	190	544	856	3843
57	794	537	358	156	35	1	0	0	4	127	454	763	3229
55	732	481	302	120	22	0	0	0	2	92	395	701	2847
50	586	352	178	52	5	0	0	0	0	34	254	546	2007
32	164	45	3	0	0	0	0	0	0	0	7	115	334

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	145	208	426	652	964	1243	1437	1369	1071	714	303	127	8659
55	0	0	12	82	273	553	724	656	383	93	1	0	2777
57	0	0	6	57	224	494	662	594	325	66	0	0	2428
60	0	0	2	31	159	406	569	501	243	35	0	0	1946
65	0	0	0	8	78	267	414	346	127	9	0	0	1249
70	0	0	0	1	29	150	260	200	49	1	0	0	690

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	15	66	209	418	726	1001	1193	1129	834	483	126	12	15	81	290	708	1434	2435	3628	4757	5591	6074	6200	6212
45	1	17	99	282	572	851	1038	974	684	333	54	1	1	18	117	399	971	1822	2860	3834	4518	4851	4905	4906
50	0	0	34	162	419	701	883	819	534	205	12	0	0	0	34	196	615	1316	2199	3018	3552	3757	3769	3769
55	0	0	7	69	276	551	728	664	384	98	1	0	0	0	7	76	352	903	1631	2295	2679	2777	2778	2778
60	0	0	0	22	153	402	573	509	244	30	0	0	0	0	0	22	175	577	1150	1659	1903	1933	1933	1933
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	17	54	151	284	465	643	777	745	541	316	96	9	17	71	222	506	971	1614	2391	3136	3677	3993	4089	4098

(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> |
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## 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)