

# Climatography of the United States

No. 20

1971-2000

Station: SNOWFLAKE, AZ

COOP ID: 028012

Climate Division: AZ 2

NWS Call Sign:

Elevation: 5,642 Feet Lat: 34° 30N

Lon: 110° 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	48.6	19.6	34.1	79	1943	15	40.5	2000	-30	1937	23	25.7	1992	957	0	.0	.0	15.0	1.6	27.8	.7
Feb	55.0	22.9	39.0	78+	1914	12	44.3	1996	-17	1956	4	34.3	1974	730	0	.0	.0	20.5	.4	24.2	.1
Mar	60.8	27.7	44.3	82	1989	10	48.9	1999	-5	1935	6	38.9	1973	642	0	.0	.0	27.5	.0	23.5	.0
Apr	68.8	32.7	50.8	92	1943	30	57.3	1989	3	1969	3	44.5	1975	430	2	.0	.0	28.8	.0	14.6	.0
May	77.2	39.9	58.6	98+	2000	28	64.6	2000	17	1968	6	53.6	1971	223	23	.0	1.2	30.9	.0	4.2	.0
Jun	87.3	47.6	67.5	102+	1970	26	72.0	1974	20+	1919	2	63.7	1975	49	123	.6	11.2	30.0	.0	.1	.0
Jul	90.0	56.2	73.1	104	1942	13	76.2	1996	27	1936	1	70.0	1987	1	251	.7	17.1	31.0	.0	.0	.0
Aug	87.2	55.1	71.2	102	1914	2	74.4	1995	28	1915	30	68.2	1979	4	194	.0	10.9	31.0	.0	.0	.0
Sep	81.7	47.6	64.7	98+	2000	14	68.6	1997	22+	1924	22	61.4	1985	79	69	.0	2.9	30.0	.0	.3	.0
Oct	71.2	36.0	53.6	90	1979	6	58.9	1988	11	1919	31	47.8	1971	359	4	.0	@	30.4	@	9.4	.0
Nov	58.0	26.1	42.1	90	1916	4	47.8	1995	-17	1931	24	36.5	1979	690	0	.0	.0	24.4	.1	23.9	.1
Dec	48.9	19.8	34.4	75	1958	4	40.4	1977	-24	1968	22	28.2	1990	950	0	.0	.0	16.2	1.6	27.8	.6
Ann	69.6	35.9	52.8	104	Jul 1942	13	76.2	Jul 1996	-30	Jan 1937	23	25.7	Jan 1992	5114	666	1.3	43.3	315.7	3.7	155.8	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: 1897-2001

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

085-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: SNOWFLAKE, AZ**

**COOP ID: 028012**

**Climate Division: AZ 2**

**NWS Call Sign:**

**Elevation: 5,642 Feet Lat: 34°30N**

**Lon: 110°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	.58	1.72	1941	11	2.34	1993	.02	1986	4.3	2.2	.3	.0	.02	.05	.12	.21	.32	.46	.63	.86	1.19	1.77	2.36
Feb	.72	.61	1.50	1926	16	2.33	1980	.00+	1984	4.4	2.3	.2	@	.00	.07	.20	.31	.43	.56	.71	.89	1.14	1.55	1.95
Mar	1.01	1.08	1.72	1989	26	2.41	1978	.00+	1997	4.9	3.3	.4	.1	.00	.09	.27	.43	.59	.78	.99	1.25	1.61	2.20	2.78
Apr	.42	.29	1.00	1942	24	2.05	1988	.00+	1996	2.6	1.6	.1	.0	.00	.00	.03	.12	.20	.29	.40	.54	.72	1.03	1.34
May	.59	.44	1.41	1969	7	3.65	1992	.00+	2000	2.7	1.6	.4	@	.00	.00	.00	.05	.19	.34	.52	.74	1.04	1.55	2.05
Jun	.33	.30	1.26	1955	13	1.44	1988	.00+	1998	2.2	1.1	.1	.0	.00	.00	.00	.09	.16	.23	.32	.42	.56	.80	1.03
Jul	1.75	1.46	3.24	1989	23	5.61	1989	.22	1995	8.3	5.0	.9	.1	.29	.44	.70	.94	1.19	1.45	1.76	2.13	2.63	3.44	4.21
Aug	2.44	2.03	2.74	1951	28	6.21	1992	.34	1996	9.4	6.0	1.5	.5	.74	.97	1.32	1.62	1.91	2.21	2.54	2.92	3.43	4.21	4.94
Sep	1.64	1.47	2.61	1923	17	5.25	1984	.03	1973	5.8	4.0	.9	.3	.08	.17	.36	.58	.83	1.13	1.50	1.98	2.65	3.80	4.95
Oct	1.25	1.05	2.67	1959	30	4.83	1972	.00+	1999	4.4	3.2	.7	.2	.00	.00	.23	.46	.70	.95	1.24	1.59	2.08	2.85	3.61
Nov	.93	.75	1.45	1978	24	3.90	1978	.00+	1999	3.7	2.5	.5	.2	.00	.09	.25	.40	.55	.72	.92	1.16	1.48	2.02	2.55
Dec	.89	.69	1.50+	1967	19	2.95	1992	.00+	1996	3.9	2.8	.5	@	.00	.00	.10	.23	.38	.56	.78	1.07	1.48	2.19	2.91
Ann	12.70	12.22	3.24	Jul 1989	23	6.21	Aug 1992	.00+	May 2000	56.6	35.6	6.5	1.4	8.62	9.39	10.39	11.15	11.84	12.50	13.18	13.95	14.87	16.23	17.40

+ 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: 1897-2001

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

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Station: SNOWFLAKE, AZ

COOP ID: 028012

Climate Division: AZ 2

NWS Call Sign:

Elevation: 5,642 Feet

Lat: 34° 30N

Lon: 110° 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	2.6	1.0	#	#	7.0	1987	16	9.0+	1974	8	1987	17	3	1992	1.5	1.2	.5	.2	.0	2.6	1.0	.3	.0
Feb	2.9	1.0	#	0	14.0	1987	25	17.0	1987	10	1987	25	1	1987	1.1	1.0	.4	.1	@	1.0	.3	.2	@
Mar	2.2	1.0	#	#	5.0	1980	31	9.0	2000	7	1987	1	#+	2000	1.1	1.0	.3	.1	.0	.4	.1	.1	.0
Apr	1.1	.0	#	0	8.0	1999	2	8.0	1999	4	1977	2	#+	1999	.3	.3	.2	.1	.0	.1	.1	.0	.0
May	.3	.0	#	0	8.0	1978	6	8.0	1978	#	1995	7	#	1995	@	@	@	@	.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	.4	.0	#	0	4.5	1972	30	4.5	1972	3	1972	30	#+	1997	.2	.1	.1	.0	.0	.1	.1	.0	.0
Nov	1.9	.5	#	0	10.5	1993	13	10.5	1993	8	1993	13	1	1993	.6	.6	.3	.1	@	.6	.2	.1	.0
Dec	3.8	3.0	#	#	7.0	1971	8	20.5	1971	5+	1995	17	1+	2000	1.4	1.2	.6	.2	.0	3.1	1.1	.1	.0
Ann	15.2	6.5	N/A	N/A	14.0	Feb 1987	25	20.5	Dec 1971	10	Feb 1987	25	3	Jan 1992	6.2	5.4	2.4	.8	@	7.9	2.9	.8	@

+ 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

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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	6/18	6/13	6/09	6/06	6/03	5/31	5/27	5/23	5/18
32	5/29	5/24	5/21	5/18	5/15	5/12	5/09	5/05	4/30
28	5/21	5/15	5/11	5/07	5/04	4/30	4/27	4/22	4/16
24	5/08	5/01	4/25	4/21	4/17	4/12	4/08	4/02	3/26
20	4/15	4/08	4/03	3/29	3/25	3/21	3/17	3/12	3/05
16	4/09	3/29	3/20	3/13	3/07	2/28	2/21	2/13	2/01
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	9/18	9/22	9/25	9/27	9/29	10/01	10/04	10/07	10/11
32	9/28	10/02	10/06	10/08	10/11	10/14	10/16	10/20	10/24
28	10/07	10/12	10/15	10/18	10/20	10/23	10/25	10/29	11/02
24	10/14	10/19	10/23	10/26	10/29	11/01	11/04	11/08	11/13
20	10/24	10/29	11/01	11/05	11/07	11/10	11/13	11/17	11/22
16	11/08	11/13	11/16	11/19	11/22	11/25	11/28	12/02	12/07
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	140	132	127	122	118	113	109	103	96
32	170	162	157	153	149	144	140	135	127
28	186	180	176	172	169	165	161	157	151
24	222	213	206	200	195	189	184	177	167
20	251	243	237	231	226	221	216	210	201
16	294	282	274	267	260	253	246	238	226

\* 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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**Climate Division: AZ 2      NWS Call Sign:      Elevation: 5,642 Feet    Lat: 34° 30N      Lon: 110° 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	957	730	642	430	223	49	1	4	79	359	690	950	5114
60	802	590	488	292	117	13	0	0	25	222	540	795	3884
57	709	506	397	217	71	5	0	0	10	153	450	702	3220
55	647	450	338	173	48	2	0	0	5	114	392	640	2809
50	492	312	204	88	13	0	0	0	0	46	253	485	1893
32	82	14	2	0	0	0	0	0	0	0	8	72	178

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	148	208	383	562	823	1064	1273	1213	979	669	308	145	7775
55	0	0	6	45	158	376	560	500	294	69	2	0	2010
57	0	0	3	28	119	319	498	438	239	46	1	0	1691
60	0	0	0	13	72	237	405	345	164	22	0	0	1258
65	0	0	0	2	23	123	251	194	69	4	0	0	666
70	0	0	0	0	4	47	109	72	17	0	0	0	249

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	26	68	170	335	582	841	1045	984	760	441	134	30	26	94	264	599	1181	2022	3067	4051	4811	5252	5386	5416
45	0	17	73	200	429	691	890	829	610	299	53	2	0	17	90	290	719	1410	2300	3129	3739	4038	4091	4093
50	0	0	19	95	283	541	735	674	460	170	11	0	0	0	19	114	397	938	1673	2347	2807	2977	2988	2988
55	0	0	0	32	145	392	580	519	310	70	0	0	0	0	0	32	177	569	1149	1668	1978	2048	2048	2048
60	0	0	0	5	60	245	425	364	174	17	0	0	0	0	0	5	65	310	735	1099	1273	1290	1290	1290
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	53	107	183	288	423	545	667	640	503	343	150	58	53	160	343	631	1054	1599	2266	2906	3409	3752	3902	3960

(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)