

Climatology of the United States

No. 20

1971-2000

Station: FORT VALLEY, AZ

COOP ID: 023160

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,347 Feet Lat: 35° 16N

Lon: 111° 45W

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	42.6	11.3	27.0	65+	1996	9	33.7	1986	-37	1963	12	18.7	1973	1180	0	.0	.0	6.9	3.4	30.8	5.5
Feb	45.4	14.6	30.0	69+	1996	18	35.7	1995	-32	1985	1	24.5	1990	980	0	.0	.0	9.6	1.9	28.0	2.6
Mar	49.6	19.0	34.3	72	1997	20	40.6	1972	-22	1966	4	24.6	1973	951	0	.0	.0	16.4	.9	30.5	.9
Apr	57.4	22.8	40.1	80+	1996	27	46.7	1989	-7	1965	13	34.3	1975	747	0	.0	.0	23.6	.2	28.7	@
May	66.7	28.0	47.4	90	1984	23	53.1	1984	6	1915	3	42.0	1977	546	0	.0	@	30.1	.0	24.6	.0
Jun	77.9	34.4	56.2	97	1954	23	61.0	1994	19+	1951	2	51.5	1991	275	9	.0	1.7	29.9	.0	12.5	.0
Jul	80.8	43.4	62.1	98	1985	5	65.3	1996	26+	1987	23	58.0	1987	114	23	.0	2.6	31.0	.0	1.9	.0
Aug	78.4	43.5	61.0	93+	1994	6	65.4	1994	20	1968	22	56.6	1976	146	20	.0	.8	31.0	.0	1.5	.0
Sep	73.0	36.3	54.7	90	1977	6	58.8	1983	11	1912	22	50.4	1985	313	2	.0	@	29.8	.0	9.7	.0
Oct	62.8	26.4	44.6	85	1980	1	49.4	1988	-9	1949	21	39.2	1971	633	0	.0	.0	27.3	.1	26.6	@
Nov	50.6	17.8	34.2	74	1980	9	41.3	1995	-16+	1964	17	28.7	2000	925	0	.0	.0	16.5	1.0	28.9	1.3
Dec	43.3	12.3	27.8	69	1950	12	34.5	1980	-30+	1990	23	20.5	1990	1153	0	.0	.0	9.0	3.3	30.7	4.3
Ann	60.7	25.8	43.3	98	Jul 1985	5	65.4	Aug 1994	-37	Jan 1963	12	18.7	Jan 1973	7963	54	.0	5.1	261.1	10.8	254.4	14.6

+ 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: 1909-2001

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

038-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: FORT VALLEY, AZ

COOP ID: 023160

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,347 Feet Lat: 35°16N

Lon: 111°45W

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	2.26	1.87	2.03	1997	13	8.44	1993	.00+	1994	6.8	4.8	1.3	.4	.00	.17	.53	.89	1.26	1.69	2.19	2.80	3.65	5.07	6.47
Feb	2.47	2.25	2.47	1993	20	6.44	1980	.01	1972	6.5	4.5	1.6	.5	.17	.32	.63	.97	1.35	1.79	2.32	2.99	3.93	5.53	7.10
Mar	2.45	2.02	2.93	1991	1	8.81	1991	.00	1972	7.3	5.3	1.6	.4	.06	.22	.54	.89	1.28	1.73	2.28	2.99	3.97	5.64	7.29
Apr	1.26	1.15	2.12	1941	12	4.56	1988	.00+	1991	4.5	2.8	.6	.1	.00	.11	.32	.52	.73	.96	1.23	1.56	2.02	2.77	3.50
May	.87	.72	1.63	1937	29	5.16	1992	.00+	2000	4.4	2.6	.5	.0	.00	.03	.13	.25	.39	.57	.78	1.05	1.45	2.12	2.80
Jun	.42	.23	2.49	1955	13	3.25	1972	.00+	1998	2.5	1.4	.1	.0	.00	.00	.00	.02	.09	.18	.30	.47	.72	1.17	1.63
Jul	2.67	2.44	3.50	1990	15	6.47	1996	.01	1993	9.6	5.4	1.6	.4	.23	.41	.76	1.13	1.54	2.00	2.55	3.25	4.20	5.81	7.38
Aug	2.93	2.84	3.17	1984	20	6.91	1984	.00	1998	10.4	6.2	1.9	.5	.77	1.19	1.66	2.03	2.38	2.73	3.11	3.54	4.10	4.96	5.75
Sep	2.06	1.88	3.10	1983	24	6.57	1983	.00	1973	6.8	4.4	1.0	.5	.02	.10	.32	.59	.91	1.30	1.80	2.45	3.38	5.01	6.65
Oct	1.58	1.10	2.23	1912	5	9.55	1972	.00	1999	4.8	2.9	.9	.4	.05	.16	.37	.60	.85	1.14	1.49	1.94	2.55	3.59	4.62
Nov	1.64	1.36	2.62	1987	1	6.55	1985	.00+	1999	4.5	3.0	.8	.4	.00	.00	.29	.59	.90	1.23	1.61	2.09	2.73	3.76	4.78
Dec	1.49	1.19	2.20	1923	26	4.61	1984	.00	1985	5.1	3.4	.9	.1	.04	.14	.34	.55	.79	1.07	1.40	1.82	2.41	3.40	4.39
Ann	22.10	22.33	3.50	Jul 1990	15	9.55	Oct 1972	.00+	May 2000	73.2	46.7	12.8	3.7	14.54	15.96	17.80	19.22	20.48	21.72	23.00	24.43	26.17	28.72	30.95

+ 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: 1909-2001

(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: FORT VALLEY, AZ

COOP ID: 023160

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,347 Feet

Lat: 35° 16N

Lon: 111° 45W

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	21.1	18.0	8	6	18.0	1980	30	47.5	1982	34	1993	31	23	1985	4.9	4.6	2.5	1.4	.4	17.0	14.9	13.0	7.4
Feb	15.0	15.8	10	8	28.0	1987	24	28.0	1987	38	1985	4	29	1993	4.4	4.0	1.7	.9	.2	8.9	7.3	5.7	1.9
Mar	16.6	11.0	6	3	14.0	1982	20	88.0	1973	48	1973	29	36	1973	4.8	4.3	2.3	1.2	.3	10.5	6.5	4.3	2.5
Apr	5.4	2.0	1	0	11.0	1976	16	23.0	1976	42	1973	3	21	1973	1.8	1.5	.6	.2	.1	2.5	1.7	1.1	.3
May	.3	.0	#	0	3.0	1976	8	3.0	1976	3	1976	8	#+	1976	.2	.2	@	.0	.0	.2	@	.0	.0
Jun	.1	.0	0	0	1.3	1991	1	1.3	1991	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	1.7	.0	#	0	11.0	1972	24	15.0	1974	11+	1974	29	1	1974	.7	.6	.1	.1	.1	.6	.2	.2	.1
Nov	8.7	6.0	1	0	15.0	1982	30	25.5	1982	20	1975	29	5	1973	2.3	2.1	1.2	.5	.1	5.8	4.7	3.4	1.0
Dec	11.3	11.0	3	1	15.0	1984	12	27.2	1972	19	1984	16	12	1975	3.5	3.1	1.4	.7	.1	11.3	7.9	6.4	3.2
Ann	80.2	63.8	N/A	N/A	28.0	Feb 1987	24	88.0	Mar 1973	48	Mar 1973	29	36	Mar 1973	22.6	20.4	9.8	5.0	1.3	56.8	43.2	34.1	16.4

+ 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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Climatography of the United States

No. 20 1971-2000

Station: FORT VALLEY, AZ

COOP ID: 023160

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,347 Feet

Lat: 35° 16N

Lon: 111° 45W

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	7/22	7/18	7/15	7/12	7/10	7/07	7/05	7/02	6/27
32	7/17	7/12	7/09	7/06	7/04	7/01	6/28	6/25	6/20
28	7/09	7/03	6/29	6/25	6/22	6/18	6/15	6/10	6/04
24	6/21	6/14	6/09	6/05	5/31	5/27	5/23	5/18	5/11
20	6/02	5/27	5/23	5/20	5/16	5/13	5/09	5/05	4/29
16	5/18	5/10	5/05	4/30	4/25	4/21	4/16	4/10	4/02
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	8/04	8/11	8/15	8/19	8/22	8/26	8/30	9/03	9/09
32	8/10	8/18	8/23	8/28	9/02	9/06	9/11	9/16	9/24
28	8/28	9/03	9/08	9/12	9/15	9/19	9/23	9/27	10/03
24	9/11	9/18	9/23	9/27	9/30	10/04	10/08	10/13	10/19
20	9/23	9/30	10/05	10/10	10/14	10/18	10/22	10/27	11/03
16	10/03	10/09	10/14	10/18	10/21	10/25	10/29	11/02	11/08
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	63	56	51	47	43	39	35	30	23
32	88	78	71	65	59	53	47	40	30
28	113	103	96	90	85	79	73	66	56
24	152	141	134	127	121	115	109	101	90
20	173	165	159	154	150	145	140	134	126
16	212	201	192	185	178	172	164	156	144

* 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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**Climatology
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No. 20
1971-2000

Station: FORT VALLEY, AZ

COOP ID: 023160

Climate Division: AZ 2 NWS Call Sign: Elevation: 7,347 Feet Lat: 35° 16N Lon: 111° 45W

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	1180	980	951	747	546	275	114	146	313	633	925	1153	7963
60	1025	840	796	597	393	154	33	54	179	478	775	998	6322
57	932	756	703	507	307	100	11	22	114	387	685	905	5429
55	870	700	641	448	252	70	4	11	79	329	625	843	4872
50	715	560	490	308	138	23	0	1	24	198	475	688	3620
32	198	120	85	20	1	0	0	0	0	4	68	193	689

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	41	64	157	262	478	724	932	898	680	394	133	63	4826
55	0	0	0	1	17	105	223	195	69	6	0	0	616
57	0	0	0	0	9	74	168	144	44	3	0	0	442
60	0	0	0	0	3	38	97	84	18	0	0	0	240
65	0	0	0	0	0	9	23	20	2	0	0	0	54
70	0	0	0	0	0	0	2	2	0	0	0	0	4

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	0	0	20	90	256	506	701	665	452	188	23	0	0	0	20	110	366	872	1573	2238	2690	2878	2901	2901
45	0	0	0	26	128	356	546	510	303	82	0	0	0	0	0	26	154	510	1056	1566	1869	1951	1951	1951
50	0	0	0	2	43	211	391	355	165	18	0	0	0	0	0	2	45	256	647	1002	1167	1185	1185	1185
55	0	0	0	0	9	100	237	201	63	0	0	0	0	0	0	0	9	109	346	547	610	610	610	610
60	0	0	0	0	0	32	102	76	12	0	0	0	0	0	0	0	0	32	134	210	222	222	222	222
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	16	31	64	152	282	434	488	458	363	226	83	21	16	47	111	263	545	979	1467	1925	2288	2514	2597	2618

(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