

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: STEWART MOUNTAIN, AZ

1971-2000

COOP ID: 028214

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,422 Feet Lat: 33° 33N

Lon: 111° 32W

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	66.0	37.6	51.8	87	1971	19	56.2	1981	17	1971	8	47.4	1979	410	0	.0	.0	30.5	.0	7.4	.0
Feb	69.8	39.7	54.8	90	1963	7	60.0	1995	23+	1990	17	50.4	1975	291	3	.0	.0	27.7	@	2.9	.0
Mar	74.6	43.8	59.2	98	1988	27	66.8	1972	22	1971	2	52.8	1973	224	43	.0	1.1	31.0	.0	.8	.0
Apr	82.6	49.2	65.9	103	1989	21	74.0	1989	32	1970	15	58.5	1975	98	125	.5	7.6	30.0	.0	.0	.0
May	91.2	57.6	74.4	109+	2000	31	80.9	1997	36+	1988	7	70.1	1971	13	305	3.8	19.7	31.0	.0	.0	.0
Jun	101.2	66.5	83.9	120	1990	27	88.5	1981	43	1988	1	79.4	1998	0	565	19.7	28.8	30.0	.0	.0	.0
Jul	103.6	73.9	88.8	119+	1995	31	91.3	1980	59+	1995	23	84.6	1986	0	735	25.7	30.8	31.0	.0	.0	.0
Aug	102.3	72.7	87.5	114	1972	2	90.9	1998	56	1968	23	84.6	1988	0	697	24.4	30.5	31.0	.0	.0	.0
Sep	97.6	66.8	82.2	112+	1995	1	86.8	1979	46	1965	30	75.0	1986	0	516	12.5	27.4	30.0	.0	.0	.0
Oct	87.2	54.5	70.9	106+	1980	3	75.3	1977	30	1971	30	64.2	1971	31	212	2.4	13.6	31.0	.0	@	.0
Nov	74.3	42.0	58.2	94+	2001	3	64.1	1999	24	1987	29	54.1	2000	226	22	.0	.6	29.9	.0	2.5	.0
Dec	66.3	37.0	51.7	85	1980	26	59.2	1980	18	1990	23	45.9+	1987	416	2	.0	.0	30.3	.0	7.9	.0
Ann	84.7	53.4	69.1	120	Jun 1990	27	91.3	Jul 1980	17	Jan 1971	8	45.9+	Dec 1987	1709	3225	89.0	160.1	363.4	@	21.5	.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: 1948-2001

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

088-A

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No. 20

1971-2000

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Station: STEWART MOUNTAIN, AZ

COOP ID: 028214

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,422 Feet Lat: 33°33N

Lon: 111°32W

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	1.68	1.50	1.79	1993	8	7.78	1993	.00	1972	5.5	3.6	1.2	.2	.02	.10	.29	.52	.78	1.10	1.50	2.02	2.76	4.03	5.31
Feb	1.58	1.31	1.63	1965	7	6.33	1998	.00+	1984	4.6	2.9	1.3	.3	.00	.03	.18	.38	.63	.94	1.34	1.87	2.63	3.97	5.34
Mar	1.89	1.75	2.15	2000	5	5.46	1991	.00+	1997	5.3	3.6	1.5	.2	.00	.00	.29	.63	.98	1.37	1.82	2.39	3.16	4.40	5.64
Apr	.48	.40	1.25	2001	6	2.27	1988	.00+	2000	2.3	1.2	.3	@	.00	.00	.00	.00	.12	.26	.42	.62	.87	1.30	1.71
May	.30	.14	.96	1979	19	2.00	1992	.00+	2000	1.8	1.2	.1	.0	.00	.00	.00	.00	.04	.12	.22	.35	.54	.87	1.20
Jun	.15	.01	1.37	1949	18	1.49	1972	.00+	1999	.9	.3	.1	@	.00	.00	.00	.00	.00	.00	.03	.10	.22	.48	.76
Jul	1.08	.68	3.25	1967	17	4.24	1984	.00	2000	4.3	2.4	.7	.3	.02	.07	.20	.35	.52	.73	.98	1.31	1.77	2.56	3.36
Aug	1.57	1.24	4.30	1951	28	4.91	1992	.21	1973	6.1	3.7	1.0	.2	.24	.38	.60	.82	1.05	1.29	1.57	1.92	2.38	3.13	3.85
Sep	1.14	.82	3.10	1970	6	3.82	1983	.00+	2000	3.9	2.2	.7	.4	.00	.00	.15	.33	.52	.75	1.03	1.40	1.90	2.77	3.63
Oct	1.25	.69	1.83	1972	19	6.69	1972	.00+	1999	3.4	2.2	.8	.4	.00	.00	.10	.34	.59	.86	1.18	1.58	2.13	3.04	3.96
Nov	1.23	1.16	3.41	1993	15	5.45	1993	.00+	1999	3.1	2.1	.8	.3	.00	.00	.20	.40	.61	.85	1.15	1.52	2.03	2.89	3.75
Dec	1.35	.89	2.74	1978	17	5.30	1992	.00+	2000	4.3	2.9	.8	.2	.00	.00	.04	.21	.43	.72	1.10	1.59	2.31	3.56	4.87
Ann	13.70	11.95	4.30	Aug 1951	28	7.78	Jan 1993	.00+	Dec 2000	45.5	28.3	9.3	2.5	6.05	7.28	8.98	10.37	11.66	12.97	14.37	15.97	17.99	21.07	23.84

+ 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: 1948-2001

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

Complete documentation available from:

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

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Station: STEWART MOUNTAIN, AZ

COOP ID: 028214

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,422 Feet

Lat: 33°33N

Lon: 111°32W

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:

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No. 20 1971-2000

Station: STEWART MOUNTAIN, AZ

COOP ID: 028214

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,422 Feet

Lat: 33° 33N

Lon: 111° 32W

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	4/14	4/03	3/25	3/18	3/12	3/05	2/26	2/17	2/06
32	3/18	3/07	2/27	2/20	2/13	2/07	1/31	1/23	1/12
28	3/02	2/16	2/06	1/29	1/20	1/12	1/02	12/19	0/00
24	1/25	1/07	12/18	0/00	0/00	0/00	0/00	0/00	0/00
20	12/31	12/18	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	11/01	11/07	11/11	11/14	11/17	11/20	11/23	11/27	12/03
32	11/11	11/17	11/21	11/24	11/27	11/30	12/04	12/08	12/13
28	11/20	11/30	12/07	12/14	12/20	12/26	1/03	1/15	0/00
24	12/13	12/22	1/03	0/00	0/00	0/00	0/00	0/00	0/00
20	12/20	1/07	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	290	276	266	258	250	242	233	224	210
32	325	312	302	294	286	278	270	260	247
28	>365	>365	>365	344	329	317	306	294	278
24	>365	>365	>365	>365	>365	>365	>365	>365	340
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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Station: STEWART MOUNTAIN, AZ

COOP ID: 028214

Climate Division: AZ 6 NWS Call Sign: Elevation: 1,422 Feet Lat: 33° 33N Lon: 111° 32W

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	410	291	224	98	13	0	0	0	0	31	226	416	1709
60	263	167	128	41	3	0	0	0	0	7	121	274	1004
57	184	108	83	22	1	0	0	0	0	2	75	197	672
55	139	77	58	14	0	0	0	0	0	1	52	154	495
50	57	21	20	3	0	0	0	0	0	0	15	72	188
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	613	637	842	1017	1314	1555	1758	1720	1506	1204	785	608	13559
55	39	69	187	341	601	865	1045	1007	816	492	147	50	5659
57	22	44	150	289	540	805	983	945	756	431	111	31	5107
60	9	19	102	218	449	715	890	852	666	343	66	14	4343
65	0	3	43	125	305	565	735	697	516	212	22	2	3225
70	0	0	15	57	181	416	580	542	370	110	4	0	2275

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	373	447	610	790	1080	1333	1524	1486	1274	965	562	377	373	820	1430	2220	3300	4633	6157	7643	8917	9882	10444	10821
45	229	308	456	640	925	1183	1369	1331	1124	810	413	230	229	537	993	1633	2558	3741	5110	6441	7565	8375	8788	9018
50	107	179	305	491	770	1033	1214	1176	974	655	270	114	107	286	591	1082	1852	2885	4099	5275	6249	6904	7174	7288
55	34	77	174	346	615	883	1059	1021	824	500	150	39	34	111	285	631	1246	2129	3188	4209	5033	5533	5683	5722
60	2	22	80	218	461	733	904	866	674	353	63	4	2	24	104	322	783	1516	2420	3286	3960	4313	4376	4380
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	261	304	392	502	672	795	938	921	799	611	378	264	261	565	957	1459	2131	2926	3864	4785	5584	6195	6573	6837

(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/normal/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