

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: WALNUT CREEK, AZ

1971-2000

COOP ID: 029158

Climate Division: AZ 3

NWS Call Sign:

Elevation: 5,090 Feet Lat: 34° 56N

Lon: 112° 49W

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	51.3	21.7	36.5	74+	1971	30	41.4	1986	-15	1971	5	29.7	1979	884	0	.0	.0	18.8	.4	28.7	.3
Feb	56.2	23.9	40.1	79	1986	26	45.4	1995	-10	1962	28	35.2	1979	698	0	.0	.0	21.3	.5	25.1	.1
Mar	61.8	27.2	44.5	85	1997	20	49.6	1972	0	1966	4	38.9	1973	635	0	.0	.0	27.7	.0	25.4	.0
Apr	69.9	31.0	50.5	92	1996	26	56.9	1989	9	1967	30	43.5	1975	440	2	.0	.1	29.1	.0	18.2	.0
May	77.5	37.8	57.7	99	1958	28	63.7	2000	9	1967	1	52.1	1971	251	24	.0	1.6	31.0	.0	7.1	.0
Jun	87.5	44.9	66.2	104+	1994	30	71.1	1974	26	1970	14	60.5	1998	74	110	1.4	13.1	30.0	.0	.6	.0
Jul	90.4	53.7	72.1	114	1969	1	75.4	1996	31+	1978	5	68.6	1987	3	221	1.7	19.2	31.0	.0	.1	.0
Aug	87.9	53.0	70.5	102	1993	1	73.8	1995	30	1978	26	66.6	1978	10	178	.2	12.6	31.0	.0	.1	.0
Sep	82.9	45.6	64.3	98+	1952	4	68.2	1983	22+	1971	20	58.2	1986	87	64	.0	4.2	30.0	.0	.9	.0
Oct	72.7	34.5	53.6	93	1952	2	58.3	1988	8	1971	30	49.5	1984	357	4	.0	.3	30.5	.0	12.5	.0
Nov	60.0	25.1	42.6	86	1997	3	49.2	1995	-4	1964	16	38.3	2000	673	0	.0	.0	25.8	@	26.3	.0
Dec	51.4	20.6	36.0	71+	1995	2	41.4	1977	-21	1968	22	28.8	1990	899	0	.0	.0	19.2	.5	28.4	.5
Ann	70.8	34.9	52.9	114	Jul 1969	1	75.4	Jul 1996	-21	Dec 1968	22	28.8	Dec 1990	5011	603	3.3	51.1	325.4	1.4	173.4	.9

+ 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: 1915-2001

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

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Station: WALNUT CREEK, AZ

COOP ID: 029158

Climate Division: AZ 3

NWS Call Sign:

Elevation: 5,090 Feet Lat: 34°56N

Lon: 112°49W

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	1.50	1.24	1.90	1957	27	6.35	1993	.00+	1972	5.6	3.5	1.0	.2	.00	.07	.27	.49	.74	1.03	1.38	1.83	2.46	3.54	4.61
Feb	2.00	1.65	2.39	1993	8	7.96	1993	.00+	1984	5.5	3.8	1.2	.6	.00	.16	.48	.79	1.12	1.50	1.94	2.47	3.22	4.46	5.67
Mar	1.66	1.26	1.93	1978	1	5.42	1991	.00+	1997	6.5	4.4	.8	.1	.00	.06	.25	.48	.75	1.08	1.48	2.00	2.74	4.01	5.28
Apr	.57	.47	1.70	1917	17	2.31	1988	.00+	1996	3.0	1.8	.3	.0	.00	.00	.10	.21	.32	.43	.56	.72	.94	1.28	1.62
May	.56	.52	1.47	1972	30	2.56	1992	.00+	2000	2.9	1.6	.2	.1	.00	.00	.00	.07	.19	.32	.48	.69	.98	1.48	1.97
Jun	.32	.08	5.50	1927	28	2.62	2000	.00+	1998	1.9	.9	.1	@	.00	.00	.00	.00	.00	.03	.16	.34	.59	1.02	1.46
Jul	1.84	1.66	2.40	1985	10	4.62	1985	.00	1993	7.4	4.2	1.2	.3	.18	.40	.71	.97	1.25	1.54	1.87	2.28	2.81	3.67	4.50
Aug	2.51	2.36	4.57	1931	6	5.50	1971	.27	1976	9.1	5.4	1.5	.5	.52	.75	1.12	1.45	1.79	2.15	2.56	3.05	3.69	4.73	5.70
Sep	1.38	1.15	3.15	1927	12	5.06	1983	.00+	1992	5.1	3.0	.7	.3	.00	.03	.18	.36	.58	.85	1.19	1.64	2.29	3.41	4.55
Oct	1.14	.54	2.70	1916	6	7.18	1972	.00+	1999	3.7	2.3	.6	.3	.00	.00	.11	.26	.45	.68	.97	1.36	1.91	2.88	3.86
Nov	1.19	.77	2.61	1978	11	5.08	1985	.00+	1999	3.3	2.2	.8	.3	.00	.00	.05	.23	.45	.71	1.03	1.45	2.04	3.04	4.07
Dec	1.12	.72	2.30	1931	10	4.72	1984	.00+	1999	4.3	2.7	.5	.2	.00	.02	.14	.28	.46	.68	.97	1.33	1.87	2.80	3.74
Ann	15.79	15.72	5.50	Jun 1927	28	7.96	Feb 1993	.00+	May 2000	58.3	35.8	8.9	2.9	9.68	10.79	12.25	13.39	14.41	15.42	16.46	17.64	19.08	21.21	23.07

+ 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: 1915-2001

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

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Station: WALNUT CREEK, AZ

COOP ID: 029158

Climate Division: AZ 3

NWS Call Sign:

Elevation: 5,090 Feet

Lat: 34° 56N

Lon: 112° 49W

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	1.0	.0	#	0	5.0	1987	5	10.0	1987	4	1988	19	#+	2000	.5	.2	.2	.2	.0	.0	.0	.0	.0
Feb	1.0	.0	#	0	6.0	1990	19	6.0	1990	1	1992	16	#+	1992	.3	.3	.2	.2	.0	.0	.0	.0	.0
Mar	.6	.0	#	0	8.0	2000	6	8.0	2000	#	2000	21	#	2000	.1	.1	.1	.1	.0	.0	.0	.0	.0
Apr	1.0	.0	0	0	9.0	1997	3	14.0	1997	0	0	0	0	0	.1	.1	.1	.1	.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	#	1990	7	#+	1990	6	1993	14	#	1993	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.8	.0	#	0	7.0	1997	22	7.0	1997	3	1987	13	#+	1999	.2	.2	.1	.1	.0	.0	.0	.0	.0
Ann	4.4	.0	N/A	N/A	9.0	Apr 1997	3	14.0	Apr 1997	6	Nov 1993	14	#+	Mar 2000	1.2	.9	.7	.7	.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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Climatography of the United States

No. 20 1971-2000

Station: WALNUT CREEK, AZ

COOP ID: 029158

Climate Division: AZ 3

NWS Call Sign:

Elevation: 5,090 Feet

Lat: 34° 56N

Lon: 112° 49W

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	6/30	6/24	6/20	6/16	6/13	6/10	6/06	6/02	5/27
32	6/15	6/08	6/03	5/30	5/26	5/22	5/18	5/12	5/05
28	5/31	5/24	5/19	5/14	5/10	5/06	5/02	4/27	4/20
24	5/19	5/09	5/02	4/26	4/20	4/14	4/08	4/01	3/22
20	5/02	4/19	4/10	4/02	3/25	3/18	3/10	2/28	2/15
16	4/07	3/24	3/15	3/07	2/27	2/20	2/12	2/02	1/20
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	9/06	9/12	9/16	9/19	9/22	9/25	9/29	10/02	10/08
32	9/17	9/23	9/27	10/01	10/05	10/08	10/12	10/16	10/22
28	9/30	10/06	10/10	10/14	10/17	10/20	10/24	10/28	11/02
24	10/15	10/20	10/24	10/27	10/30	11/02	11/05	11/09	11/14
20	10/26	10/31	11/03	11/07	11/09	11/12	11/15	11/19	11/24
16	11/06	11/12	11/17	11/21	11/24	11/28	12/02	12/07	12/13
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	123	116	110	105	101	96	91	86	78
32	161	151	143	137	131	125	119	112	101
28	183	175	169	164	159	154	149	143	135
24	229	216	207	199	192	185	177	168	156
20	271	256	246	237	228	220	211	201	186
16	313	298	287	278	269	261	251	240	225

* 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

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

Station: WALNUT CREEK, AZ

COOP ID: 029158

Climate Division: AZ 3 NWS Call Sign: Elevation: 5,090 Feet Lat: 34° 56N Lon: 112° 49W

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	884	698	635	440	251	74	3	10	87	357	673	899	5011
60	729	558	481	301	142	26	0	1	28	219	523	744	3752
57	636	474	390	225	93	12	0	0	11	150	433	651	3075
55	574	418	333	181	66	6	0	0	5	111	374	589	2657
50	419	283	200	94	22	1	0	0	0	43	236	435	1733
32	28	9	3	0	0	0	0	0	0	0	5	43	88

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	167	235	390	553	796	1026	1241	1191	967	670	322	166	7724
55	0	0	7	44	149	342	528	478	282	68	1	0	1899
57	0	0	3	28	113	287	466	416	228	45	0	0	1586
60	0	0	0	13	70	211	373	324	155	21	0	0	1167
65	0	0	0	2	24	110	221	178	64	4	0	0	603
70	0	0	0	0	5	42	92	69	16	0	0	0	224

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	34	74	172	331	565	799	1005	955	736	433	129	29	34	108	280	611	1176	1975	2980	3935	4671	5104	5233	5262
45	3	18	73	197	410	649	850	800	586	291	47	0	3	21	94	291	701	1350	2200	3000	3586	3877	3924	3924
50	0	0	19	89	263	499	695	645	436	156	9	0	0	0	19	108	371	870	1565	2210	2646	2802	2811	2811
55	0	0	0	29	135	351	540	490	289	61	0	0	0	0	0	29	164	515	1055	1545	1834	1895	1895	1895
60	0	0	0	0	51	208	385	335	156	14	0	0	0	0	0	0	51	259	644	979	1135	1149	1149	1149
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	70	119	201	310	433	531	632	613	500	364	171	74	70	189	390	700	1133	1664	2296	2909	3409	3773	3944	4018

(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