

Climatography of the United States No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: BARTLETT DAM, AZ

1971-2000

COOP ID: 020632

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,650 Feet Lat: 33°49N

Lon: 111°39W

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	66.6	40.8	53.7	88	1971	19	59.9	1986	21+	1971	7	46.2	1979	355	4	.0	.0	30.4	.0	2.1	.0
Feb	70.5	43.2	56.9	91+	1963	7	62.6	1991	22+	1985	1	52.1	1998	240	11	.0	@	27.6	.0	1.3	.0
Mar	74.7	46.5	60.6	97	1988	27	70.6	1972	26	1971	1	52.8	1973	209	71	.0	1.2	30.9	.0	.4	.0
Apr	82.8	51.7	67.3	103	1989	21	75.4	1989	34+	1977	2	59.1	1975	94	162	.6	7.8	29.9	.0	.0	.0
May	92.0	59.7	75.9	112	1951	27	82.4	1997	38+	1964	6	69.9	1980	10	346	4.6	20.2	31.0	.0	.0	.0
Jun	102.1	68.3	85.2	120	1990	27	90.1	1974	46	1993	7	79.4	1998	0	606	20.6	28.9	30.0	.0	.0	.0
Jul	105.0	74.7	89.9	122	1995	29	93.1	1998	57	1972	20	86.5	1984	0	771	27.5	30.8	31.0	.0	.0	.0
Aug	103.3	74.8	89.1	116	1957	1	93.7	1998	58	1941	31	85.7	1984	0	745	25.1	30.5	31.0	.0	.0	.0
Sep	98.3	69.4	83.9	117	1950	2	88.5	1979	48	1982	30	76.3	1985	0	566	13.3	27.3	30.0	.0	.0	.0
Oct	87.7	59.5	73.6	110+	1964	6	80.0	1988	36	1971	29	67.4	1984	22	289	2.7	13.8	31.0	.0	.0	.0
Nov	75.1	47.6	61.4	95	1999	8	68.5	1999	25	1964	16	56.5	1994	171	63	.0	.8	29.9	.0	.6	.0
Dec	66.9	41.6	54.3	88+	1950	11	62.2	1980	22	1978	6	49.1	1978	343	10	.0	.0	30.3	.0	2.1	.0
Ann	85.4	56.5	71.0	122	Jul 1995	29	93.7	Aug 1998	21+	Jan 1971	7	46.2	Jan 1979	1444	3644	94.4	161.3	363.0	.0	6.5	.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: 1939-2001

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

006-A

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COOP ID: 020632

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,650 Feet Lat: 33°49N

Lon: 111°39W

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	1.80	1.53	2.00	1993	11	9.53	1993	.00	1972	5.3	3.4	1.1	.4	.01	.05	.19	.39	.65	1.00	1.45	2.07	2.98	4.62	6.31
Feb	1.83	1.16	2.61	1980	19	8.57	1980	.00+	1984	4.9	3.1	1.3	.5	.00	.00	.22	.52	.86	1.24	1.70	2.28	3.09	4.43	5.77
Mar	2.27	2.18	4.12	1978	1	7.36	1978	.00+	1984	6.1	4.1	1.7	.5	.00	.00	.38	.74	1.13	1.58	2.13	2.81	3.74	5.33	6.90
Apr	.64	.44	1.48	1965	4	2.77	1999	.00+	1996	2.7	1.4	.4	.1	.00	.00	.00	.09	.21	.36	.54	.78	1.12	1.71	2.29
May	.33	.04	1.67	1979	19	3.44	1992	.00+	2000	1.7	.9	.1	@	.00	.00	.00	.00	.00	.05	.14	.29	.54	1.02	1.53
Jun	.25	.00	2.26	1972	23	4.07	1972	.00+	1999	.8	.4	.1	.1	.00	.00	.00	.00	.00	.00	.01	.10	.33	.82	1.38
Jul	1.34	1.16	2.10	1990	3	4.77	1999	.00	1997	4.8	2.8	.8	.2	.04	.14	.33	.52	.74	.98	1.28	1.65	2.16	3.02	3.87
Aug	1.83	1.49	4.00	1951	28	5.78	1992	.22+	1994	6.4	3.7	1.0	.4	.23	.38	.64	.89	1.16	1.46	1.80	2.23	2.81	3.76	4.68
Sep	1.28	1.02	4.50	1970	6	4.34	1983	.00+	2000	3.9	2.5	1.1	.3	.00	.00	.18	.40	.64	.91	1.22	1.61	2.15	3.03	3.90
Oct	1.40	1.24	2.62	2000	23	6.89	1972	.00+	1999	3.8	2.2	1.0	.4	.00	.00	.10	.27	.49	.77	1.14	1.64	2.36	3.65	4.97
Nov	1.25	1.01	2.71	1993	15	4.12	1982	.00+	1999	3.5	2.3	.9	.2	.00	.07	.25	.44	.65	.89	1.18	1.54	2.04	2.89	3.73
Dec	1.63	1.29	3.43	1978	17	5.51	1984	.00+	2000	4.5	2.8	1.0	.3	.00	.00	.15	.39	.68	1.02	1.44	1.99	2.76	4.05	5.37
Ann	15.85	14.43	4.50	Sep 1970	6	9.53	Jan 1993	.00+	Dec 2000	48.4	29.6	10.5	3.4	7.88	9.22	11.04	12.50	13.85	15.19	16.61	18.24	20.27	23.31	26.04

+ 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: 1939-2001

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

Complete documentation available from:

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Station: BARTLETT DAM, AZ

COOP ID: 020632

Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,650 Feet

Lat: 33° 49N

Lon: 111° 39W

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	#	1990	15	#+	1990	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1991	16	#+	1991	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	.2	1990	22	.2	1990	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	.2	Dec 1990	22	.2	Dec 1990	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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Climate Division: AZ 6

NWS Call Sign:

Elevation: 1,650 Feet

Lat: 33° 49N

Lon: 111° 39W

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	4/06	3/25	3/17	3/10	3/03	2/24	2/17	2/09	1/28
32	3/08	2/21	2/10	2/01	1/23	1/13	1/02	12/19	0/00
28	2/03	1/20	1/07	12/24	0/00	0/00	0/00	0/00	0/00
24	1/19	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	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	11/12	11/19	11/25	11/29	12/04	12/08	12/13	12/18	12/26
32	11/19	11/29	12/06	12/13	12/19	12/25	1/02	1/14	0/00
28	12/10	12/24	1/06	1/22	0/00	0/00	0/00	0/00	0/00
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	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	314	301	291	283	275	267	259	249	236
32	>365	>365	>365	345	330	318	307	295	280
28	>365	>365	>365	>365	>365	>365	>365	>365	324
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
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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COOP ID: 020632

Climate Division: AZ 6 NWS Call Sign: Elevation: 1,650 Feet Lat: 33° 49N Lon: 111° 39W

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	355	240	209	94	10	0	0	0	0	22	171	343	1444
60	215	130	123	42	2	0	0	0	0	6	90	211	819
57	146	83	81	24	0	0	0	0	0	2	55	148	539
55	110	56	58	16	0	0	0	0	0	1	37	114	392
50	40	15	22	5	0	0	0	0	0	0	12	46	140
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	673	696	886	1058	1358	1596	1794	1768	1556	1289	881	690	14245
55	70	108	230	385	645	906	1081	1055	866	577	229	91	6243
57	44	78	192	333	584	846	1019	993	806	517	187	63	5662
60	20	42	141	261	493	756	926	900	716	427	132	33	4847
65	4	11	71	162	346	606	771	745	566	289	63	10	3644
70	0	2	30	87	217	457	616	590	417	173	23	1	2613

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	423	493	636	827	1112	1363	1556	1528	1321	1041	637	441	423	916	1552	2379	3491	4854	6410	7938	9259	10300	10937	11378
45	274	350	483	677	957	1213	1401	1373	1171	886	487	294	274	624	1107	1784	2741	3954	5355	6728	7899	8785	9272	9566
50	143	216	330	527	802	1063	1246	1218	1021	731	340	163	143	359	689	1216	2018	3081	4327	5545	6566	7297	7637	7800
55	53	112	200	382	647	913	1091	1063	871	577	213	65	53	165	365	747	1394	2307	3398	4461	5332	5909	6122	6187
60	14	41	102	253	494	763	936	908	721	427	112	16	14	55	157	410	904	1667	2603	3511	4232	4659	4771	4787
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	257	304	392	524	697	824	953	947	838	670	397	264	257	561	953	1477	2174	2998	3951	4898	5736	6406	6803	7067

(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 are 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