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

COOP ID: 020672

Lon: 113°57W

Station: BEAVER DAM, AZ

Climate Division: AZ 1 NWS Call Sign:

Temperature (°F)

Elevation: 1,875 Feet Lat: 36°54N

Daily Daily Highest Lawest Lawest																					
	Mea	n (1)						Extr	emes			•		Mean	Numb	er of I	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	57.7	33.2	45.5	78	1971	21	52.7	1986	12+	1971	5	39.7	1979	606	0	.0	.0	26.7	.0	15.9	.0
Feb	64.1	37.4	50.8	87+	1986	26	56.1	1995	14	1985	1	46.4	1979	399	0	.0	.0	27.0	.1	7.9	.0
Mar	70.9	41.9	56.4	91+	1997	20	62.7	1972	19	1975	29	49.0	1991	293	26	.0	.2	30.8	.0	3.7	.0
Apr	79.9	48.1	64.0	101+	2000	26	71.0	2000	27	1999	1	57.2	1975	135	105	.1	4.7	30.0	.0	.7	.0
May	89.8	57.9	73.9	110	2000	23	81.1	1997	33	1975	7	67.0	1991	26	300	3.8	16.3	31.0	.0	.0	.0
Jun	100.6	66.9	83.8	117	1970	27	88.2	1974	42	1979	18	78.6	1991	0	561	16.7	27.4	30.0	.0	.0	.0
Jul	105.3	73.7	89.5	120	1998	16	93.1	1971	50	1958	5	86.5	1982	0	761	27.3	30.7	31.0	.0	.0	.0
Aug	103.2	72.8	88.0	115+	1980	11	91.6	1994	51+	1980	31	83.9	1979	0	713	22.8	30.3	31.0	.0	.0	.0
Sep	96.0	65.0	80.5	110+	1982	2	84.4	1974	37	1971	30	74.9	1986	1	466	9.3	24.6	30.0	.0	.0	.0
Oct	83.6	52.5	68.1	106	1980	1	74.7	1988	27+	1971	30	62.7	1984	70	164	.6	7.8	30.9	.0	.4	.0
Nov	68.0	40.0	54.0	89	1980	5	59.6	1995	15	1976	28	48.2	1994	338	8	.0	.0	29.3	.0	6.5	.0
Dec	58.5	32.7	45.6	85	1956	5	52.7	1980	4	1990	23	38.2	1990	602	0	.0	.0	27.4	.1	16.6	.0
Ann	81.5	51.8	66.7	120	Jul 1998	16	93.1	Jul 1971	4	Dec 1990	23	38.2	Dec 1990	2470	3104	80.6	142.0	355.1	.2	51.7	.0

⁺ Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 008-A

- (2) Derived from station's available digital record: 1956-2001
- (3) Derived from 1971-2000 serially complete daily data

[@] Denotes mean number of days greater than 0 but less than .05

⁽¹⁾ From the 1971-2000 Monthly Normals

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Climate Division: AZ 1 NWS Call Sign: Elevation: 1,875 Feet Lat: 36°54N Lon: 113°57W

										Pı	recipi	tation	(incl	nes)										
	Mea	ans/	P	recipi	itatio	on Total					lean N of D	ays (3	3)	Proba		M	nonthly/ onthly/Ar	annual j indic	precipita ated am	vs Probal	l be equ	els		an the
	Medi	ans(1)				Latreme	,				any 11c	cipitatio			Th	ese value	s were de	termined	from the	incomplet	e gamma	distributi	ion	
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	1.01	.76	1.11	1980	29	3.17	1993	.00+	1976	5.4	3.2	.4	.1	.00	.08	.24	.40	.56	.75	.98	1.25	1.62	2.25	2.87
Feb	.95	.70	1.02	1969	26	4.19	1998	.00+	1977	5.3	2.9	.6	@	.00	.00	.19	.35	.52	.70	.92	1.20	1.56	2.18	2.78
Mar	1.09	.69	.98	1979	28	3.23	1992	.00+	1999	6.3	3.5	.4	.0	.00	.00	.17	.34	.53	.75	1.01	1.34	1.80	2.58	3.35
Apr	.37	.23	.63	1967	12	1.50	1988	.00+	1992	3.4	1.2	@	.0	.00	.00	.05	.11	.17	.25	.34	.45	.62	.89	1.17
May	.34	.19	1.35	1958	11	1.96	1977	.00	1984	2.7	1.1	.1	.0	.00	.01	.04	.07	.13	.19	.28	.40	.57	.88	1.20
Jun	.18	.03	.67	2000	29	1.12	1987	.00+	1986	1.4	.5	.1	.0	.00	.00	.00	.00	.01	.04	.09	.17	.30	.53	.79
Jul	.53	.34	1.25	1991	9	3.19	1984	.00+	2000	2.8	1.3	.3	.1	.00	.01	.07	.14	.22	.33	.46	.63	.88	1.32	1.76
Aug	.67	.61	1.11	1998	24	2.24	1983	.00+	1985	3.9	1.8	.4	@	.00	.10	.24	.35	.45	.57	.69	.84	1.05	1.37	1.69
Sep	.48	.27	1.01	1972	19	1.78	1972	.00+	2000	2.8	1.3	.2	@	.00	.00	.03	.09	.17	.27	.40	.57	.81	1.23	1.66
Oct	.76	.61	1.21	1983	1	2.15	1987	.00+	1999	4.0	2.1	.3	@	.00	.05	.16	.27	.40	.54	.72	.93	1.23	1.73	2.23
Nov	.69	.62	1.63	1967	29	2.06	1978	.00+	1999	3.7	1.9	.4	@	.00	.00	.15	.27	.39	.52	.68	.87	1.12	1.54	1.96
Dec	.52	.32	1.24	1971	25	2.22	1984	.00+	1999	3.5	1.7	.1	@	.00	.00	.05	.11	.20	.31	.44	.62	.88	1.33	1.80
Ann	7.59	7.20	1.63	Nov 1967	29	4.19	Feb 1998	.00+	Sep 2000	45.2	22.5	3.3	.2	4.19	4.79	5.58	6.21	6.78	7.35	7.94	8.62	9.45	10.69	11.79

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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: 1956-2001

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

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COOP ID: 020672

Station: BEAVER DAM, AZ

Climate Division: AZ 1 NWS Call Sign: Elevation: 1,875 Feet Lat: 36°54N Lon: 113°57W

		I Fall Depth Depth Daily Year Day Monthly Year Daily Year Day Mean Year																					
		Snow Fall Snow Depth Median Median Median Snow Fall															Mea	n Nui	mber	of Day	ys (1)		
	Mean	s/Medi	ians (1)	1					Extre	mes (2)							ow Fa				Snow : = Thr	_	
Month	Snow Fall Mean	Fall	Depth	Depth	Daily Snow	Year	Day	Monthly Snow	Year	Daily Snow	Year	Day	Monthly Mean Snow	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	.2	.0	0	0	2.5	1975	28	2.5	1975	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	1.0	1979	1	1.0	1979	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	1.0	1975	29	1.0	1975	#	1971	16	#	1971	@	@	.0	.0	.0	.0	.0	.0	.0
Dec	.0	.0	#	0	1.0	1990	20	1.0	1990	1	1990	31	#	1990	@	@	.0	.0	.0	@	.0	.0	.0
Ann	.2	.0	N/A	N/A	2.5	Jan 1975	28	2.5	Jan 1975	1	Dec 1990	31	#+	Dec 1990	.1	.1	.0	.0	.0	@	.0	.0	.0

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[@] 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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COOP ID: 020672

Station: BEAVER DAM, AZ

Climate Division: AZ 1 NWS Call Sign:

Lat: 36°54N Elevation: 1,875 Feet Lon: 113°57W

				Freez	e Data										
			Spri	ng Freeze D	ates (Month/	(Day)									
Tomp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated	(*)							
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	5/03	4/25	4/19	4/13	4/08	4/03	3/29	3/23	3/14						
32	4/21	4/12	4/05	3/30	3/25	3/19	3/14	3/07	2/26						
28	3/29	3/19	3/12	3/07	3/01	2/24	2/18	2/11	2/02						
24	3/03	2/20	2/12	2/05	1/29	1/23	1/16	1/07	12/27						
20	2/15	2/03	1/25	1/16	1/07	12/27	12/08	0/00	0/00						
16	1/09	12/20	11/24	0/00	0/00	0/00	0/00	0/00	0/00						
			Fal	l Freeze Da	tes (Month/D	ay)									
TE: (TE)	Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) 10														
Temp (F)	36														
36	10/18	10/23	10/27	10/30	11/02	11/05	11/08	11/11	11/16						
32	10/24	10/30	11/03	11/06	11/09	11/13	11/16	11/20	11/26						
28	11/07	11/12	11/16	11/19	11/22	11/25	11/28	12/02	12/07						
24	11/19	11/25	11/29	12/03	12/06	12/09	12/13	12/17	12/23						
20	11/28	12/09	12/17	12/25	1/03	1/14	0/00	0/00	0/00						
16	12/08	12/27	0/00	0/00	0/00	0/00	0/00	0/00	0/00						
				Freeze F	ree Period		•	•							
(F)			Probability	of longer th	an indicated	freeze free p	eriod (Days))							
Temp (F)	28														
36	236	226	219	213	207	201	195	188	178						
32	260	249	241	235	229	223	216	209	198						
28	294	284	277	271	265	259	253	246	236						
24	354	334	323	315	308	300	293	284	271						
20	>365	>365	>365	>365	>365	351	334	321	306						
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.

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Climate Division: AZ 1 NWS Call Sign: Elevation: 1,875 Feet Lat: 36°54N Lon: 113°57W

				Deg	ree Days to	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	606	399	293	135	26	0	0	0	1	70	338	602	2470
60	451	264	179	68	8	0	0	0	0	27	211	448	1656
57	365	190	126	40	3	0	0	0	0	13	147	361	1245
55	307	146	96	27	2	0	0	0	0	7	111	305	1001
50	182	63	38	9	0	0	0	0	0	1	46	181	520
32	3	0	0	0	0	0	0	0	0	0	0	4	7

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	420	525	756	960	1297	1551	1784	1736	1455	1117	660	425	12686
55	11	27	139	296	585	861	1071	1023	765	412	80	13	5283
57	7	15	107	249	525	801	1009	961	705	355	57	8	4799
60	0	5	68	187	437	711	916	868	615	276	31	1	4115
65	0	0	26	105	300	561	761	713	466	164	8	0	3104
70	0	0	8	47	186	413	606	558	320	82	1	0	2221

	Growing Degree Units (2) Crowing Degree Units (Monthly) Crowing Degree Units (Accumulated Monthly)																								
Base														Growing Degree Units (Accumulated Monthly)											
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
40														508	1012	1705	2721	3991	5480	6924	8093	8914	9304	9497	
45	5 83 190 352 543 861 1120 1334 1289 1019 666 253												83	273	625	1168	2029	3149	4483	5772	6791	7457	7710	7794	
50	21	88	215	398	706	970	1179	1134	869	512	141	24	21	109	324	722	1428	2398	3577	4711	5580	6092	6233	6257	
55	1	28	106	265	551	820	1024	979	719	367	59	1	1	29	135	400	951	1771	2795	3774	4493	4860	4919	4920	
60	0	5	44	151	401	670	869	824	569	237	20	0	0	5	49	200	601	1271	2140	2964	3533	3770	3790	3790	
Base	se Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)				
50/86	50/86 140 223 337 452 633 760 878 877 719 519 267 147												140	363	700	1152	1785	2545	3423	4300	5019	5538	5805	5952	

(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

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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

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

- a. Temperature/ Precipitation Tables
 - 1. 1971-2000 Monthly Normals
 - 2. Cooperative Summary of the Day
 - 3. National Weather Service station records
 - 4. 1971-2000 serially complete daily data

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

1971-2000 serially complete daily data

- b. Degree Day Table
 - 1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
 - 2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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