

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: CASTLE HOT SPRINGS, AZ

1971-2000

COOP ID: 021353

Climate Division: AZ 3

NWS Call Sign:

Elevation: 1,990 Feet Lat: 33° 59N

Lon: 112° 22W

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	40.3	53.2	86	1971	19	60.1	1986	17+	1971	7	46.3	1979	368	1	.0	.0	30.5	.0	3.5	.0
Feb	69.3	43.2	56.3	91	1986	26	62.3	1991	24+	1990	16	50.6	1998	254	8	.0	.1	27.7	.0	1.2	.0
Mar	73.0	46.1	59.6	94	1988	25	67.7	1972	24	1971	2	51.0	1973	221	52	.0	.5	30.9	.0	.3	.0
Apr	80.5	51.1	65.8	99	1992	28	73.4	1989	32	1976	19	58.5	1975	107	130	.0	4.3	30.0	.0	@	.0
May	89.4	58.7	74.1	110	2001	31	80.0	1984	39	1964	5	68.3	1977	18	298	2.2	16.1	31.0	.0	.0	.0
Jun	99.9	67.8	83.9	117	1973	27	89.6	1974	47	1998	12	77.7	1998	0	566	15.6	28.1	30.0	.0	.0	.0
Jul	102.9	74.7	88.8	120	1995	28	92.2	1972	57	1997	1	85.7	1993	0	738	22.9	30.5	31.0	.0	.0	.0
Aug	101.2	73.4	87.3	113+	1998	28	90.0	1973	58	1999	11	84.7	1990	0	691	20.3	30.4	31.0	.0	.0	.0
Sep	96.1	68.4	82.3	111	1971	12	85.8	1979	47	1965	20	76.8	1985	0	518	7.7	25.9	30.0	.0	.0	.0
Oct	86.0	58.1	72.1	104	1980	1	77.8	1988	32+	1971	30	65.8	1971	29	247	1.1	10.5	31.0	.0	.1	.0
Nov	74.2	46.6	60.4	93+	2001	4	67.0	1999	25+	1976	28	55.0	2000	182	44	.0	.4	29.9	.0	.5	.0
Dec	66.7	40.6	53.7	85	1975	9	60.1	1980	22	1968	20	49.1+	1978	355	3	.0	.0	30.5	.0	3.5	.0
Ann	83.8	55.8	69.8	120	Jul 1995	28	92.2	Jul 1972	17+	Jan 1971	7	46.3	Jan 1979	1534	3296	69.8	146.8	363.5	.0	9.1	.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: 1959-2001

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

022-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: CASTLE HOT SPRINGS, AZ

COOP ID: 021353

Climate Division: AZ 3

NWS Call Sign:

Elevation: 1,990 Feet Lat: 33°59N

Lon: 112°22W

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	1.97	1.36	2.10	1993	8	11.45	1993	.00+	2000	4.2	2.8	1.4	.5	.00	.00	.00	.13	.39	.79	1.35	2.15	3.36	5.60	7.94
Feb	2.09	1.47	2.68	1978	28	8.35	1980	.00+	1999	3.9	3.2	1.4	.6	.00	.00	.19	.52	.89	1.33	1.87	2.56	3.54	5.19	6.85
Mar	2.17	1.75	3.35	1991	1	8.19	1978	.00+	1997	4.8	3.6	1.6	.5	.00	.00	.24	.60	.99	1.45	1.99	2.69	3.66	5.28	6.90
Apr	.61	.36	1.72	1976	14	2.75	1976	.00+	2000	2.0	1.5	.4	.2	.00	.00	.00	.07	.22	.38	.56	.78	1.08	1.59	2.08
May	.30	.08	1.46	1979	20	1.89	1979	.00+	2000	1.5	.9	.1	@	.00	.00	.00	.00	.00	.06	.16	.31	.53	.92	1.33
Jun	.12	.00	1.05	1967	18	.87	1972	.00+	1999	.7	.5	.1	.0	.00	.00	.00	.00	.00	.00	.01	.07	.19	.40	.63
Jul	1.35	.99	1.88	1974	18	3.68	1984	.00+	2000	4.0	2.6	.8	.2	.00	.00	.36	.60	.83	1.08	1.36	1.71	2.16	2.91	3.63
Aug	2.02	1.63	3.32	1990	14	5.87	1983	.00	1977	4.3	3.1	1.1	.4	.11	.30	.61	.91	1.23	1.58	1.99	2.49	3.18	4.32	5.43
Sep	1.15	1.07	4.00	1966	12	4.33	1976	.00+	2000	3.5	2.4	.8	.2	.00	.00	.19	.41	.62	.86	1.12	1.46	1.92	2.65	3.38
Oct	1.10	.62	2.60	2000	27	7.00	1972	.00+	1999	2.6	2.0	.8	.3	.00	.00	.07	.22	.41	.64	.93	1.32	1.87	2.83	3.81
Nov	1.21	.72	2.25	1965	23	5.07	1978	.00+	1999	2.3	1.8	.9	.3	.00	.00	.00	.10	.37	.68	1.04	1.51	2.15	3.25	4.33
Dec	1.38	.47	2.95	1965	10	5.99	1992	.00+	2000	3.4	2.3	.9	.6	.00	.00	.02	.15	.35	.63	1.01	1.55	2.34	3.78	5.29
Ann	15.47	14.47	4.00	Sep 1966	12	11.45	Jan 1993	.00+	Dec 2000	37.2	26.7	10.3	3.8	6.82	8.20	10.13	11.70	13.16	14.64	16.23	18.05	20.34	23.82	26.97

+ 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: 1959-2001

(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: CASTLE HOT SPRINGS, AZ

COOP ID: 021353

Climate Division: AZ 3

NWS Call Sign:

Elevation: 1,990 Feet

Lat: 33°59N

Lon: 112°22W

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	#	1987	20	#	1987	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.2	.0	0	0	6.0	1985	2	6.0	1985	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	#	1994	19	#	1994	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	0	0	#	1985	11	#	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.2	.0	N/A	N/A	6.0	Feb 1985	2	6.0	Feb 1985	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:

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

Climatography of the United States

No. 20 1971-2000

Station: CASTLE HOT SPRINGS, AZ

COOP ID: 021353

Climate Division: AZ 3

NWS Call Sign:

Elevation: 1,990 Feet

Lat: 33° 59N

Lon: 112° 22W

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	4/11	3/30	3/21	3/14	3/07	2/28	2/21	2/12	1/31
32	3/15	3/02	2/21	2/13	2/06	1/29	1/21	1/12	12/30
28	2/08	1/25	1/14	1/03	12/20	0/00	0/00	0/00	0/00
24	2/01	1/12	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	11/06	11/12	11/17	11/21	11/25	11/29	12/03	12/08	12/15
32	11/11	11/22	11/30	12/06	12/13	12/19	12/26	1/04	1/17
28	12/05	12/18	12/28	1/08	1/22	0/00	0/00	0/00	0/00
24	12/31	1/24	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	304	290	279	271	263	254	246	235	221
32	>365	347	330	317	306	296	284	272	254
28	>365	>365	>365	>365	>365	>365	361	335	315
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:

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

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

Station: CASTLE HOT SPRINGS, AZ

COOP ID: 021353

Climate Division: AZ 3 NWS Call Sign: Elevation: 1,990 Feet Lat: 33° 59N Lon: 112° 22W

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	368	254	221	107	18	0	0	0	0	29	182	355	1534
60	226	139	129	49	4	0	0	0	0	8	93	216	864
57	152	89	85	27	1	0	0	0	0	3	55	146	558
55	113	61	60	18	0	0	0	0	0	1	36	109	398
50	39	16	22	5	0	0	0	0	0	0	10	39	131
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	655	679	854	1013	1303	1556	1761	1714	1508	1241	852	672	13808
55	55	96	201	341	590	866	1048	1001	818	530	198	68	5812
57	32	68	164	290	530	806	986	939	758	469	157	43	5242
60	13	34	115	221	439	716	893	846	668	381	105	19	4450
65	1	8	52	130	298	566	738	691	518	247	44	3	3296
70	0	1	19	63	179	418	583	536	368	138	13	0	2318

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	409	483	611	781	1057	1319	1513	1471	1265	987	616	423	409	892	1503	2284	3341	4660	6173	7644	8909	9896	10512	10935
45	265	340	457	631	902	1169	1358	1316	1115	832	466	276	265	605	1062	1693	2595	3764	5122	6438	7553	8385	8851	9127
50	133	205	307	482	747	1019	1203	1161	965	677	321	148	133	338	645	1127	1874	2893	4096	5257	6222	6899	7220	7368
55	51	101	176	338	592	869	1048	1006	815	523	193	54	51	152	328	666	1258	2127	3175	4181	4996	5519	5712	5766
60	9	37	84	207	439	719	893	851	665	375	93	10	9	46	130	337	776	1495	2388	3239	3904	4279	4372	4382
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	259	291	379	496	678	812	948	932	819	637	381	265	259	550	929	1425	2103	2915	3863	4795	5614	6251	6632	6897

(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