

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: PIPE SPRINGS NATL MONMNT, AZ

1971-2000

COOP ID: 026616

Climate Division: AZ 1

NWS Call Sign:

Elevation: 4,920 Feet Lat: 36° 52N

Lon: 112° 44W

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	47.9	21.7	34.8	79	1971	18	43.4	1986	-12	1979	30	23.1	1973	938	0	.0	.0	13.3	1.2	27.8	.4
Feb	53.8	25.7	39.8	78	1986	26	46.6	1995	-8	1979	4	31.4	1979	707	0	.0	.0	18.2	.7	23.0	.1
Mar	61.2	29.6	45.4	82+	1997	20	50.6	1986	4	1971	2	39.6	1973	608	0	.0	.0	27.4	.0	20.0	.0
Apr	69.3	34.9	52.1	89+	2000	27	59.0	1989	8	1975	2	45.5	1975	395	7	.0	.0	29.0	.0	10.8	.0
May	78.7	43.0	60.9	98+	2000	30	66.7	1984	20	1967	1	56.6	1971	175	47	.0	2.2	31.0	.0	1.9	.0
Jun	89.9	51.3	70.6	110	1970	26	74.6	1981	33	2001	14	65.2	1995	23	189	1.9	17.4	30.0	.0	.0	.0
Jul	94.4	59.0	76.7	108+	1985	8	80.0	1996	41	1970	1	74.2	1982	0	362	4.9	25.9	31.0	.0	.0	.0
Aug	91.7	57.7	74.7	105+	1994	4	78.2	1994	38	1968	23	72.1	1979	0	301	2.2	21.5	31.0	.0	.0	.0
Sep	84.6	49.9	67.3	100+	1995	1	70.8	1979	28+	1978	20	62.5	1986	42	109	@	6.6	30.0	.0	.2	.0
Oct	72.7	38.6	55.7	93+	1980	1	61.2	1988	10	1971	30	50.3	1984	300	10	.0	.3	30.4	.0	5.8	.0
Nov	58.0	28.1	43.1	79	1973	9	48.4	1999	0	1985	19	37.3	2000	658	0	.0	.0	23.3	.1	21.7	@
Dec	48.9	22.1	35.5	69+	1969	1	43.3	1980	-13	1990	23	28.5	1990	915	0	.0	.0	15.3	.8	27.9	.4
Ann	70.9	38.5	54.7	110	Jun 1970	26	80.0	Jul 1996	-13	Dec 1990	23	23.1	Jan 1973	4761	1025	9.0	73.9	309.9	2.8	139.1	.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: 1963-2001

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

068-A

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No. 20 1971-2000

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Station: PIPE SPRINGS NATL MONMNT, AZ

COOP ID: 026616

Climate Division: AZ 1

NWS Call Sign:

Elevation: 4,920 Feet Lat: 36°52N

Lon: 112°44W

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	1.34	.85	1.50	2001	16	6.00	1993	.00+	1976	5.4	3.9	.7	@	.00	.06	.23	.42	.64	.90	1.22	1.63	2.20	3.18	4.15
Feb	1.23	1.03	1.57	1986	15	3.30	1980	.01	1972	5.8	3.7	.8	.1	.08	.16	.31	.48	.67	.89	1.15	1.49	1.96	2.76	3.54
Mar	1.24	.93	1.14	1992	3	4.37	1992	.00+	1999	6.1	4.0	.5	.1	.00	.00	.18	.40	.63	.89	1.19	1.56	2.09	2.94	3.78
Apr	.69	.41	1.09	1988	21	3.14	1988	.00+	1989	3.9	2.0	.3	@	.00	.03	.11	.21	.32	.46	.62	.84	1.14	1.66	2.18
May	.58	.45	.95	1995	25	1.98	1995	.00	1991	4.1	1.9	.2	.0	.01	.04	.10	.18	.27	.38	.52	.69	.94	1.37	1.80
Jun	.32	.22	1.38	1968	8	1.14	1988	.00+	1996	2.0	1.0	.1	.0	.00	.00	.00	.06	.13	.20	.29	.40	.55	.81	1.06
Jul	.96	.94	1.50	1989	10	2.99	1989	.00+	1993	4.8	2.2	.5	.1	.00	.13	.32	.47	.63	.79	.98	1.20	1.50	1.99	2.46
Aug	1.41	1.38	1.86	1990	16	3.21	1992	.06	1998	6.7	3.5	.8	.3	.17	.27	.47	.67	.88	1.11	1.38	1.72	2.18	2.94	3.67
Sep	.93	.65	1.95	1990	4	3.99	1990	.00+	1989	4.2	2.3	.4	.1	.00	.00	.04	.15	.30	.49	.74	1.08	1.59	2.47	3.39
Oct	1.00	.85	1.41	2000	22	4.02	2000	.00+	1999	4.6	2.7	.5	.1	.00	.00	.12	.27	.44	.64	.89	1.22	1.68	2.47	3.26
Nov	.91	.60	1.91	1987	5	3.50	1978	.00+	1999	4.0	2.4	.5	.1	.00	.00	.12	.27	.44	.63	.85	1.14	1.53	2.18	2.83
Dec	.65	.54	1.00	1984	27	2.61	1984	.00+	1998	3.8	1.9	.3	@	.00	.00	.10	.22	.34	.47	.62	.82	1.08	1.50	1.92
Ann	11.26	10.42	1.95	Sep 1990	4	6.00	Jan 1993	.00+	Nov 1999	55.4	31.5	5.6	.9	6.11	7.01	8.21	9.16	10.03	10.88	11.79	12.82	14.09	15.99	17.67

+ 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: 1963-2001

(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: PIPE SPRINGS NATL MONMNT, AZ

COOP ID: 026616

Climate Division: AZ 1

NWS Call Sign:

Elevation: 4,920 Feet

Lat: 36° 52N

Lon: 112° 44W

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	5.1	.3	1	0	16.0	1973	4	28.7	1973	18	1973	4	9	1973	1.5	1.1	.5	.2	@	3.0	2.4	2.0	.5
Feb	1.7	.0	#	0	10.0	1997	27	10.0	1997	9	1973	3	4	1973	1.0	.5	.2	.1	@	1.0	.5	.4	.0
Mar	1.4	.0	#	0	7.5	1973	22	17.7	1973	3	1998	28	#+	1998	.7	.5	.2	@	.0	.1	.0	.0	.0
Apr	.3	.0	#	0	4.5	1999	4	4.5	1999	#+	2000	18	#+	2000	.2	.2	@	.0	.0	.0	.0	.0	.0
May	#	.0	0	0	#	1988	1	#+	1988	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	#	1996	28	#+	1996	#	1996	28	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.9	.0	#	0	8.0	1985	12	8.0+	1985	1	1984	25	#+	1991	.6	.4	.2	@	.0	.1	.0	.0	.0
Dec	1.8	.0	#	0	5.5	1978	17	9.0	1978	7	1988	25	1	1988	.8	.5	.1	@	.0	.6	.1	.0	.0
Ann	11.2	.3	N/A	N/A	16.0	Jan 1973	4	28.7	Jan 1973	18	Jan 1973	4	9	Jan 1973	4.8	3.2	1.2	.3	@	4.8	3.0	2.4	.5

+ 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/normals/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: PIPE SPRINGS NATL MONMNT, AZ

COOP ID: 026616

Climate Division: AZ 1

NWS Call Sign:

Elevation: 4,920 Feet

Lat: 36° 52N

Lon: 112° 44W

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	6/01	5/27	5/24	5/21	5/18	5/15	5/12	5/08	5/03
32	5/21	5/17	5/14	5/12	5/09	5/07	5/04	5/01	4/27
28	5/15	5/08	5/04	4/30	4/27	4/23	4/19	4/15	4/09
24	5/05	4/25	4/18	4/12	4/06	3/31	3/25	3/18	3/08
20	4/13	4/03	3/27	3/21	3/15	3/09	3/03	2/24	2/14
16	3/23	3/13	3/06	2/28	2/22	2/16	2/10	2/03	1/24
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	9/19	9/24	9/27	9/30	10/03	10/05	10/08	10/11	10/16
32	10/01	10/06	10/10	10/13	10/16	10/19	10/22	10/26	10/31
28	10/07	10/12	10/16	10/20	10/23	10/26	10/30	11/03	11/08
24	10/22	10/27	10/31	11/03	11/06	11/08	11/12	11/15	11/20
20	10/25	10/31	11/05	11/09	11/12	11/16	11/20	11/24	11/30
16	11/03	11/10	11/15	11/20	11/24	11/28	12/03	12/08	12/15
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	155	149	145	141	137	134	130	125	119
32	182	174	168	164	159	155	150	144	136
28	204	196	189	184	179	174	168	162	153
24	248	236	227	220	213	206	198	189	177
20	276	264	256	248	241	234	227	218	206
16	312	299	290	282	274	266	258	249	236

* 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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No. 20
1971-2000**

Station: PIPE SPRINGS NATL MONMNT, AZ

COOP ID: 026616

Climate Division: AZ 1 NWS Call Sign: Elevation: 4,920 Feet Lat: 36° 52N Lon: 112° 44W

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	938	707	608	395	175	23	0	0	42	300	658	915	4761
60	783	567	455	264	87	5	0	0	9	176	508	760	3614
57	690	483	367	196	52	1	0	0	3	117	420	667	2996
55	628	427	311	158	34	0	0	0	1	85	363	605	2612
50	481	296	186	81	9	0	0	0	0	32	231	452	1768
32	92	19	3	0	0	0	0	0	0	0	7	61	182

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	177	235	417	602	895	1157	1385	1324	1057	734	339	169	8491
55	0	0	13	70	216	467	672	611	369	106	5	0	2529
57	0	0	7	48	171	408	610	549	310	75	2	0	2180
60	0	0	2	26	114	321	517	456	227	41	0	0	1704
65	0	0	0	7	47	189	362	301	109	10	0	0	1025
70	0	0	0	0	13	89	211	154	34	1	0	0	502

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	30	85	206	379	658	924	1139	1081	824	501	157	34	30	115	321	700	1358	2282	3421	4502	5326	5827	5984	6018
45	1	31	98	248	504	774	984	926	674	350	74	2	1	32	130	378	882	1656	2640	3566	4240	4590	4664	4666
50	0	4	37	136	354	624	829	771	524	218	23	0	0	4	41	177	531	1155	1984	2755	3279	3497	3520	3520
55	0	0	1	54	216	474	674	616	375	109	0	0	0	0	1	55	271	745	1419	2035	2410	2519	2519	2519
60	0	0	0	15	105	327	519	461	233	37	0	0	0	0	0	15	120	447	966	1427	1660	1697	1697	1697
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	45	94	189	300	452	572	703	679	539	360	148	47	45	139	328	628	1080	1652	2355	3034	3573	3933	4081	4128

(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