

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: FLAGSTAFF PULLIAM AP, AZ

1971-2000

COOP ID: 023010

Climate Division: AZ 2

NWS Call Sign: FLG

Elevation: 7,003 Feet Lat: 35°08N

Lon: 111°40W

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	42.9	16.5	29.7	66	1971	30	37.0	1986	-22	1971	4	22.6	1979	1099	0	.0	.0	8.1	4.0	30.5	2.2
Feb	45.6	18.8	32.2	71	1986	26	37.2	1995	-23	1985	1	25.9	1979	930	0	.0	.0	10.2	2.5	27.7	1.0
Mar	50.3	22.8	36.6	73+	1988	26	41.8	1989	-16	1966	4	26.8	1973	880	0	.0	.0	16.9	1.0	29.5	.3
Apr	58.4	27.3	42.9	80+	1992	28	50.4	1989	-2	1975	2	36.2	1975	668	0	.0	.0	24.1	.4	24.6	@
May	67.6	34.0	50.8	87+	1974	27	56.8	1984	14	1975	6	45.6	1980	446	0	.0	.0	30.1	.0	13.0	.0
Jun	78.7	41.4	60.1	96	1970	26	66.5	1974	22+	1955	2	55.0	1998	174	23	.0	1.7	29.9	.0	2.7	.0
Jul	82.2	49.9	66.1	97	1973	5	69.0	1980	32+	1955	8	62.8	1987	33	64	.0	2.1	31.0	.0	.0	.0
Aug	79.7	49.1	64.4	92+	1978	7	66.9	1995	24	1968	23	60.5	1979	56	36	.0	.6	31.0	.0	.0	.0
Sep	73.8	41.7	57.8	90	1950	1	60.7	1983	23+	1971	20	53.0	1986	224	3	.0	.0	29.9	.0	2.3	.0
Oct	63.1	31.1	47.1	85	1980	1	52.5	1988	-2	1971	30	38.6	1971	554	0	.0	.0	27.8	.1	18.2	@
Nov	50.8	22.1	36.5	74+	1977	3	42.3	1995	-13	1958	18	29.6	1972	850	0	.0	.0	16.5	1.1	28.0	.3
Dec	43.7	16.6	30.2	68	1950	11	39.9	1980	-23+	1990	23	21.9	1972	1085	0	.0	.0	9.5	4.1	30.0	1.8
Ann	61.4	30.9	46.2	97	Jul 1973	5	69.0	Jul 1980	-23+	Dec 1990	23	21.9	Dec 1972	6999	126	.0	4.4	265.0	13.2	206.5	5.6

+ 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: 1950-2001

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

035-A

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Climate Division: AZ 2

NWS Call Sign: FLG

Elevation: 7,003 Feet Lat: 35°08N

Lon: 111°40W

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	2.18	1.76	1.83	1979	17	9.55	1993	.00	1972	8.0	5.0	1.4	.3	.04	.17	.43	.74	1.08	1.49	1.99	2.64	3.55	5.09	6.64
Feb	2.56	1.99	3.93	1993	19	10.05	1993	.02	1972	8.1	5.2	1.4	.5	.18	.34	.67	1.02	1.41	1.86	2.41	3.10	4.07	5.69	7.30
Mar	2.62	2.53	2.81	1970	1	6.18	1973	.00	1972	9.4	6.1	1.6	.3	.08	.28	.64	1.02	1.44	1.92	2.49	3.21	4.21	5.89	7.55
Apr	1.29	1.21	1.70	1985	21	3.83	1988	.00	1991	5.8	3.1	.8	.1	.03	.10	.26	.44	.65	.89	1.19	1.57	2.10	3.01	3.92
May	.80	.71	1.11	1965	24	4.14	1992	.00+	1996	5.4	2.4	.4	.0	.00	.04	.15	.27	.40	.56	.75	.98	1.32	1.88	2.44
Jun	.43	.24	2.40	1956	29	1.93	1972	.00+	1998	2.7	1.4	.2	.0	.00	.00	.00	.07	.15	.25	.37	.53	.75	1.13	1.51
Jul	2.40	2.26	2.55	1964	15	6.62	1986	.00	1993	11.3	5.5	1.3	.4	.29	.59	.99	1.34	1.68	2.05	2.46	2.96	3.61	4.66	5.65
Aug	2.89	2.82	3.04	1986	13	8.06	1986	.58	1976	12.8	6.7	1.7	.5	.73	1.00	1.42	1.79	2.16	2.54	2.98	3.49	4.16	5.22	6.21
Sep	2.12	1.67	2.84	1970	5	6.75	1983	.00+	1992	7.7	4.3	1.3	.5	.00	.11	.42	.74	1.09	1.50	1.99	2.60	3.47	4.93	6.38
Oct	1.93	1.19	2.42	1992	24	9.86	1972	.00	1999	5.7	3.6	1.3	.4	.03	.12	.35	.61	.91	1.28	1.73	2.32	3.16	4.60	6.05
Nov	1.86	1.27	3.21	1978	11	6.64	1985	.00+	1999	5.1	3.5	1.2	.4	.00	.00	.39	.71	1.03	1.39	1.82	2.34	3.04	4.21	5.35
Dec	1.83	1.28	2.95	1951	30	6.78	1992	.00	1999	6.6	4.1	.9	.3	.05	.16	.40	.66	.95	1.29	1.70	2.22	2.95	4.19	5.41
Ann	22.91	21.76	3.93	Feb 1993	19	10.05	Feb 1993	.00+	Dec 1999	88.6	50.9	13.5	3.7	13.35	15.06	17.33	19.11	20.72	22.30	23.96	25.83	28.14	31.56	34.57

+ 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: 1950-2001

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

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Station: FLAGSTAFF PULLIAM AP, AZ

COOP ID: 023010

Climate Division: AZ 2

NWS Call Sign: FLG

Elevation: 7,003 Feet

Lat: 35°08N

Lon: 111°40W

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	23.0	21.1	4	3	15.6	1982	21	63.4	1980	34+	1979	30	12	1979	7.4	4.8	2.9	1.9	.3	19.0	15.5	12.1	5.2
Feb	22.2	23.0	5	3	21.1	1987	24	45.5	1990	40+	1979	3	22	1979	7.3	4.7	2.6	1.4	.3	17.4	13.6	10.9	6.1
Mar	25.4	23.7	3	1	18.1	1991	1	79.4	1991	36+	1973	30	21	1973	8.3	5.7	3.2	1.5	.4	10.7	7.7	5.5	2.5
Apr	10.1	5.3	1	1	11.1	1988	21	33.1	1988	31	1973	1	9	1973	3.9	2.3	1.2	.7	.2	3.5	2.1	1.5	.8
May	1.3	.4	#	0	4.7	1975	21	8.2	1975	4	1975	21	#	1994	1.1	.5	.1	.0	.0	.2	@	.0	.0
Jun	#	.0	#	0	#	1993	6	#+	1993	0	0	0	#	1979	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1985	.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	.9	1986	24	.9	1986	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	3.1	.0	#	0	9.5	1974	30	24.7	1971	11+	1974	30	1+	1974	1.2	.6	.3	.3	.0	.8	.5	.3	.1
Nov	13.8	9.6	1	1	18.4	1985	12	40.7	1985	23	1975	30	4	1973	3.8	2.7	1.5	1.0	.4	5.6	4.1	2.9	.9
Dec	15.8	15.6	3	2	14.6	1992	4	41.7	1992	22	1975	1	11	1992	6.2	4.0	1.7	.9	.2	13.5	10.8	7.6	2.5
Ann	114.7	98.7	N/A	N/A	21.1	Feb 1987	24	79.4	Mar 1991	40+	Feb 1979	3	22	Feb 1979	39.2	25.3	13.5	7.7	1.8	70.7	54.3	40.8	18.1

+ 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: FLAGSTAFF PULLIAM AP, AZ

COOP ID: 023010

Climate Division: AZ 2

NWS Call Sign: FLG

Elevation: 7,003 Feet

Lat: 35°08N

Lon: 111°40W

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	7/07	7/02	6/28	6/25	6/22	6/19	6/16	6/12	6/07
32	6/23	6/18	6/15	6/12	6/09	6/07	6/04	6/01	5/27
28	6/17	6/10	6/06	6/02	5/29	5/25	5/22	5/17	5/11
24	5/31	5/23	5/18	5/13	5/09	5/05	4/30	4/25	4/17
20	5/12	5/04	4/29	4/24	4/20	4/15	4/10	4/05	3/28
16	4/24	4/17	4/12	4/08	4/04	3/31	3/27	3/22	3/15
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	8/24	8/30	9/03	9/07	9/11	9/14	9/18	9/23	9/29
32	9/11	9/15	9/18	9/20	9/22	9/25	9/27	9/30	10/04
28	9/24	9/29	10/02	10/05	10/08	10/11	10/14	10/17	10/22
24	10/02	10/08	10/12	10/15	10/18	10/21	10/25	10/29	11/03
20	10/14	10/19	10/22	10/25	10/28	10/31	11/03	11/07	11/12
16	10/22	10/28	11/01	11/05	11/08	11/11	11/15	11/19	11/25
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	106	97	91	85	80	75	70	63	54
32	120	114	111	107	104	101	98	94	89
28	155	147	141	136	131	126	121	115	107
24	189	180	173	167	161	156	150	143	133
20	220	210	203	197	191	185	179	172	162
16	247	237	229	223	217	211	205	197	187

* 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

**Climatology
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No. 20
1971-2000**

Station: FLAGSTAFF PULLIAM AP, AZ

COOP ID: 023010

Climate Division: AZ 2 NWS Call Sign: FLG Elevation: 7,003 Feet Lat: 35°08N Lon: 111°40W

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	1099	930	880	668	446	174	33	56	224	554	850	1085	6999
60	941	779	727	516	302	93	4	9	109	404	708	925	5517
57	848	695	634	432	226	56	1	2	61	318	618	832	4723
55	786	639	572	377	182	37	0	0	39	266	558	770	4226
50	631	499	423	250	94	11	0	0	9	153	411	615	3096
32	147	86	52	17	0	0	0	0	0	3	51	168	524

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	55	82	176	336	583	841	1055	1004	772	472	176	66	5618
55	0	0	0	3	27	173	342	292	113	8	0	0	958
57	0	0	0	1	14	128	280	231	73	3	0	0	730
60	0	0	0	0	4	75	189	144	31	1	0	0	444
65	0	0	0	0	0	23	64	36	3	0	0	0	126
70	0	0	0	0	0	5	8	3	0	0	0	0	16

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	1	11	44	146	350	609	816	762	538	251	51	3	1	12	56	202	552	1161	1977	2739	3277	3528	3579	3582
45	0	0	3	60	207	460	661	607	391	132	9	0	0	0	3	63	270	730	1391	1998	2389	2521	2530	2530
50	0	0	0	13	97	315	506	452	247	45	0	0	0	0	0	13	110	425	931	1383	1630	1675	1675	1675
55	0	0	0	0	30	179	351	297	119	8	0	0	0	0	0	0	30	209	560	857	976	984	984	984
60	0	0	0	0	1	80	197	151	32	0	0	0	0	0	0	0	1	81	278	429	461	461	461	461
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	23	37	72	158	285	437	530	485	366	220	75	26	23	60	132	290	575	1012	1542	2027	2393	2613	2688	2714

(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