

Climatology of the United States

No. 20

1971-2000

Station: SPOKANE AP, WA

COOP ID: 457938

Climate Division: WA 9

NWS Call Sign: GEG

Elevation: 2,356 Feet Lat: 47° 37N

Lon: 117° 32W

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	32.8	21.7	27.3	62	1918	1	35.8	1983	-24	1950	29	10.5	1979	1169	0	.0	.0	.5	13.2	25.9	1.8
Feb	39.3	25.7	32.5	63	1995	20	39.2	1991	-24	1996	2	21.8	1989	916	0	.0	.0	3.3	5.5	22.3	.8
Mar	48.6	30.4	39.5	72	1941	28	45.5	1992	-10	1891	3	34.0	1975	790	0	.0	.0	13.5	.5	20.4	.0
Apr	57.5	35.5	46.5	90+	1977	24	51.7	1980	14	1936	1	41.7	1975	557	1	.0	@	25.1	.0	10.1	.0
May	66.2	42.6	54.4	97	1928	25	59.8	1993	24	1954	1	49.6	1996	338	11	.0	.3	30.2	.0	1.7	.0
Jun	73.9	49.2	61.6	101	1992	23	68.0	1992	33	1984	1	56.6	1991	149	46	.1	1.5	29.9	.0	.0	.0
Jul	82.5	54.6	68.6	108	1928	26	75.3	1998	37	1981	8	60.2	1993	44	155	.5	7.8	31.0	.0	.0	.0
Aug	82.6	54.5	68.6	108	1961	4	73.9	1971	35+	1965	29	63.9	1995	42	154	.3	7.5	31.0	.0	.0	.0
Sep	72.5	45.9	59.2	98+	1988	3	65.3	1990	22+	2000	23	53.3	1985	196	26	.0	1.0	29.9	.0	.9	.0
Oct	58.5	35.8	47.2	87	1943	4	53.3	1988	9	1935	31	43.4	1984	554	1	.0	.0	25.7	.1	9.7	.0
Nov	41.1	28.7	34.9	70	1903	1	41.4	1999	-21	1985	23	21.7	1985	897	0	.0	.0	5.3	4.3	19.9	.4
Dec	32.8	21.6	27.2	60	1939	10	35.2	1979	-25	1968	30	16.2	1983	1168	0	.0	.0	.7	13.8	26.7	1.7
Ann	57.4	37.2	47.3	108+	Aug 1961	4	75.3	Jul 1998	-25	Dec 1968	30	10.5	Jan 1979	6820	394	.9	18.1	226.1	37.4	137.6	4.7

+ 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: 1889-2001

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

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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: SPOKANE AP, WA

COOP ID: 457938

Climate Division: WA 9

NWS Call Sign: GEG

Elevation: 2,356 Feet Lat: 47°37N

Lon: 117°32W

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	1.82	1.83	1.26	1954	21	3.79	1974	.38	1985	13.1	6.3	.4	@	.73	.90	1.14	1.33	1.52	1.71	1.91	2.14	2.44	2.89	3.31
Feb	1.51	1.50	1.10	1927	1	3.27	1999	.35	1988	11.1	5.3	.4	.0	.49	.64	.85	1.03	1.20	1.38	1.58	1.81	2.10	2.56	2.99
Mar	1.53	1.53	.96	1989	9	3.81	1995	.43	1992	11.1	5.5	.5	.0	.51	.66	.87	1.05	1.22	1.40	1.60	1.82	2.12	2.57	2.99
Apr	1.28	1.11	1.23	2000	13	2.62	1978	.13	1977	9.3	4.1	.4	@	.30	.42	.61	.78	.94	1.12	1.32	1.55	1.86	2.36	2.82
May	1.60	1.46	1.62	1907	19	3.11	1990	.20	1982	10.1	4.7	.9	.0	.50	.65	.88	1.07	1.26	1.45	1.67	1.92	2.24	2.75	3.21
Jun	1.18	1.06	1.66	1897	17	2.84	1983	.23	1974	7.9	3.5	.4	.1	.34	.45	.62	.76	.91	1.05	1.22	1.41	1.67	2.06	2.43
Jul	.76	.51	1.08	1892	1	2.33	1990	.00+	1994	5.4	2.3	.3	@	.00	.06	.18	.30	.42	.57	.74	.94	1.23	1.71	2.19
Aug	.68	.61	1.44	1923	20	1.83	1976	.00+	2000	4.6	1.9	.3	.0	.00	.04	.13	.23	.35	.48	.63	.83	1.10	1.57	2.03
Sep	.76	.79	1.51	1927	10	1.87	1995	.00+	1999	5.4	2.4	.2	.1	.00	.02	.11	.21	.33	.48	.67	.91	1.26	1.86	2.46
Oct	1.06	.82	1.41	1899	19	3.27	1996	.03	1987	7.0	3.2	.4	.0	.08	.15	.28	.43	.59	.78	1.00	1.28	1.68	2.34	2.99
Nov	2.24	2.01	1.41	1902	8	5.10	1973	.22	1976	13.0	6.7	1.0	.1	.54	.75	1.08	1.37	1.66	1.96	2.30	2.71	3.25	4.09	4.89
Dec	2.25	2.21	1.39	1987	9	4.93	1987	.60	1976	13.3	7.3	.9	@	.69	.90	1.22	1.49	1.76	2.03	2.34	2.69	3.15	3.86	4.52
Ann	16.67	16.28	1.66	Jun 1897	17	5.10	Nov 1973	.00+	Aug 2000	111.3	53.2	6.1	.3	11.72	12.67	13.90	14.83	15.65	16.45	17.28	18.20	19.31	20.92	22.32

+ 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: 1889-2001

(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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COOP ID: 457938

Climate Division: WA 9

NWS Call Sign: GEG

Elevation: 2,356 Feet

Lat: 47°37N

Lon: 117°32W

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	12.5	10.5	4	3	8.7	1993	3	30.9	1975	26	1993	6	17	1993	9.2	4.4	1.1	.3	.0	6.2	1.8	.0	.0
Feb	8.0	6.1	3	1	11.0	1993	19	28.5	1975	28	1975	10	14	1985	5.9	2.8	.7	.2	@	3.9	1.5	.6	.0
Mar	2.7	2.0	1	#	4.0	1989	1	9.6	1985	10	1989	3	3	1996	3.5	.9	.1	.0	.0	1.2	.6	.3	.0
Apr	.7	#	#	0	3.5	1982	7	6.0	1982	2	1990	28	#+	1999	.8	.3	.1	.0	.0	.1	.0	.0	.0
May	.1	.0	0	0	.8	1984	6	.8	1984	0	0	0	0	0	.3	.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	.4	.0	#	0	3.3	1975	25	3.9	1975	2	1971	31	#+	1991	.4	.2	@	.0	.0	@	.0	.0	.0
Nov	6.4	5.0	1	#	9.0	1973	4	23.7	1973	12	1985	27	6	1985	4.7	2.0	.6	.2	.0	2.3	.4	.1	.0
Dec	13.7	10.4	3	1	8.3	1984	29	40.2	1992	20+	1992	29	9	1985	9.4	4.6	1.5	.5	.0	6.5	2.7	1.1	.0
Ann	44.5	34.0	N/A	N/A	11.0	Feb 1993	19	40.2	Dec 1992	28	Feb 1975	10	17	Jan 1993	34.2	15.2	4.1	1.2	@	20.2	7.0	2.1	.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

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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	6/09	6/03	5/30	5/26	5/23	5/20	5/16	5/12	5/07
32	5/18	5/12	5/08	5/05	5/02	4/29	4/26	4/22	4/17
28	5/06	4/30	4/25	4/21	4/18	4/14	4/11	4/06	3/31
24	4/17	4/09	4/03	3/29	3/25	3/20	3/15	3/09	3/01
20	3/23	3/14	3/08	3/02	2/25	2/20	2/14	2/07	1/29
16	3/11	3/02	2/23	2/18	2/13	2/07	2/02	1/26	1/17
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	9/13	9/17	9/20	9/22	9/24	9/26	9/29	10/02	10/05
32	9/19	9/23	9/27	9/30	10/03	10/06	10/09	10/12	10/17
28	9/28	10/04	10/08	10/11	10/15	10/18	10/22	10/26	11/01
24	10/06	10/12	10/17	10/20	10/24	10/27	10/31	11/04	11/10
20	10/19	10/27	11/02	11/07	11/11	11/16	11/20	11/26	12/04
16	10/26	11/06	11/14	11/21	11/27	12/03	12/10	12/18	12/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	143	136	131	127	123	119	115	110	103
32	176	168	163	158	153	148	143	138	130
28	206	197	190	184	179	174	168	162	152
24	241	231	224	218	212	207	200	193	183
20	293	281	273	265	259	252	244	236	224
16	332	316	305	296	287	278	268	257	241

* 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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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	1169	916	790	557	338	149	44	42	196	554	897	1168	6820
60	1015	769	636	405	202	72	16	15	120	401	754	1018	5423
57	922	685	543	319	138	39	7	5	77	311	664	925	4635
55	860	629	481	264	102	24	3	3	54	254	605	863	4142
50	711	495	332	145	38	5	0	0	18	134	466	708	3052
32	253	118	18	0	0	0	0	0	0	1	103	238	731

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	54	103	245	436	695	887	1134	1134	816	472	149	51	6176
55	0	0	0	14	84	213	422	422	169	19	0	0	1343
57	0	0	0	8	61	167	362	362	130	11	0	0	1101
60	0	0	0	4	35	110	276	276	81	5	0	0	787
65	0	0	0	1	11	46	155	154	26	1	0	0	394
70	0	0	0	0	2	13	67	66	6	0	0	0	154

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	4	17	65	216	456	654	897	893	587	250	36	2	4	21	86	302	758	1412	2309	3202	3789	4039	4075	4077
45	0	2	19	107	305	504	742	738	438	134	10	0	0	2	21	128	433	937	1679	2417	2855	2989	2999	2999
50	0	0	0	49	179	355	587	584	298	58	0	0	0	0	0	49	228	583	1170	1754	2052	2110	2110	2110
55	0	0	0	15	86	223	432	430	172	21	0	0	0	0	0	15	101	324	756	1186	1358	1379	1379	1379
60	0	0	0	2	37	115	283	281	88	3	0	0	0	0	0	2	39	154	437	718	806	809	809	809
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	4	40	130	266	393	559	565	353	151	8	0	0	4	44	174	440	833	1392	1957	2310	2461	2469	2469

(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.

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