

Climatography of the United States

No. 20

1971-2000

Station: HUGO, OK

COOP ID: 344384

Climate Division: OK 9

NWS Call Sign:

Elevation: 570 Feet Lat: 34°00N Lon: 95°31W

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	51.4	28.8	40.1	81+	1950	26	47.5	1990	0	1962	10	28.6	1979	773	0	.0	.0	19.4	1.4	17.6	.0
Feb	57.1	33.1	45.1	90	1996	21	53.9	1976	-6	1951	2	33.4	1978	560	0	.0	@	21.7	.5	10.5	.0
Mar	64.9	40.8	52.9	92	1974	31	57.8	1974	7	1948	11	48.0	1975	378	1	.0	@	29.4	@	4.2	.0
Apr	73.3	49.7	61.5	94	1987	29	66.7	1981	26	1968	12	56.8	1983	138	33	.0	.3	30.0	.0	.2	.0
May	80.4	59.5	70.0	98+	1951	30	73.9	1998	36	1960	1	65.6	1976	25	178	.0	1.9	31.0	.0	.0	.0
Jun	87.6	66.6	77.1	105	1953	14	81.1	1998	50	1972	1	74.3	1976	0	364	.5	13.9	30.0	.0	.0	.0
Jul	92.9	70.0	81.5	114	1998	31	89.1	1998	54	1972	6	77.9	1976	0	509	5.1	25.6	31.0	.0	.0	.0
Aug	93.3	68.4	80.9	110+	1956	6	86.5	1998	53+	1967	13	75.2	1992	1	492	7.0	25.7	31.0	.0	.0	.0
Sep	86.0	61.8	73.9	108	1985	1	81.4	1998	38+	1981	19	66.4	1974	14	282	1.4	13.3	30.0	.0	.0	.0
Oct	76.2	50.8	63.5	100	1963	4	66.9	1971	22+	1980	30	56.8	1976	111	64	.0	1.7	30.9	.0	.4	.0
Nov	63.0	39.8	51.4	88	1960	15	58.0	1999	13	1976	29	44.6	1972	415	6	.0	.0	27.2	@	5.4	.0
Dec	53.9	31.8	42.9	84+	1951	31	51.1	1984	-4	1989	23	30.6	1983	687	0	.0	.0	22.3	.9	14.4	.1
Ann	73.3	50.1	61.7	114	Jul 1998	31	89.1	Jul 1998	-6	Feb 1951	2	28.6	Jan 1979	3102	1929	14.0	82.4	333.9	2.8	52.7	.1

+ 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: 1948-2001

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

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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: HUGO, OK

COOP ID: 344384

Climate Division: OK 9

NWS Call Sign:

Elevation: 570 Feet Lat: 34°00N

Lon: 95°31W

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	2.58	2.52	5.25	1949	24	6.46	1998	.06	1986	7.5	5.3	1.9	.6	.38	.60	.97	1.33	1.70	2.11	2.58	3.15	3.93	5.19	6.40	
Feb	3.25	3.22	4.50	1983	21	7.12	1997	.34	1996	6.3	4.8	2.3	1.0	.73	1.03	1.51	1.94	2.36	2.82	3.33	3.94	4.74	6.01	7.21	
Mar	4.12	4.10	3.85	1977	27	8.84	1973	.94	1972	8.7	5.8	2.9	1.5	1.29	1.69	2.27	2.76	3.25	3.74	4.29	4.93	5.76	7.05	8.24	
Apr	3.88	3.25	3.03	1953	29	8.25	1991	.29	1987	8.5	6.0	2.8	1.5	1.14	1.51	2.06	2.54	3.01	3.50	4.03	4.67	5.48	6.77	7.96	
May	5.69	5.07	5.04	1968	17	11.20	1982	.75	1988	9.6	7.2	3.8	2.0	2.04	2.58	3.35	4.00	4.62	5.26	5.95	6.76	7.79	9.37	10.83	
Jun	4.82	5.06	4.53	1962	1	10.36	2000	1.09	1994	7.8	6.4	3.0	1.5	1.27	1.73	2.43	3.04	3.64	4.28	4.98	5.81	6.90	8.61	10.21	
Jul	3.04	2.45	4.40	1976	2	9.77	1996	.11	1993	5.8	4.2	1.8	.9	.22	.42	.80	1.22	1.69	2.23	2.87	3.69	4.82	6.73	8.63	
Aug	2.49	1.94	4.22	1955	4	9.38	1996	.14	2000	5.1	3.6	1.8	.9	.23	.41	.74	1.09	1.47	1.90	2.40	3.04	3.91	5.36	6.78	
Sep	3.84	3.23	7.00	1957	22	11.85	1973	.05	1982	7.1	5.1	2.5	1.2	.34	.61	1.12	1.65	2.23	2.90	3.69	4.67	6.04	8.31	10.55	
Oct	4.97	4.70	7.05	1954	1	12.10	1972	.07	1978	7.6	5.6	2.7	1.6	.39	.71	1.36	2.05	2.81	3.68	4.72	6.04	7.87	10.94	13.97	
Nov	4.70	4.69	4.60	1978	16	10.08	1978	.53	1989	7.5	5.5	3.2	1.6	1.01	1.44	2.13	2.76	3.38	4.05	4.80	5.71	6.90	8.80	10.59	
Dec	3.97	3.44	6.00	1971	10	11.97	1971	.32	1981	8.2	5.6	2.5	1.2	.89	1.25	1.84	2.36	2.89	3.44	4.07	4.82	5.80	7.37	8.85	
Ann	47.35	46.30	7.05	Oct 1954	1	12.10	Oct 1972	.05	Sep 1982	89.7	65.1	31.2	15.5	32.82	35.60	39.19	41.92	44.35	46.71	49.15	51.85	55.14	59.92	64.06	

+ 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: 1948-2001

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

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COOP ID: 344384

Climate Division: OK 9

NWS Call Sign:

Elevation: 570 Feet

Lat: 34°00N

Lon: 95°31W

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	.7	.0	#	0	5.0	1978	19	5.0	1978	7	1978	19	2	1978	.5	.3	.1	.1	.0	.1	.0	.0	.0
Feb	1.2	.0	#	0	5.0	1978	18	9.0	1978	8	1979	7	1	1985	.4	.4	.2	.1	.0	.3	.1	@	.0
Mar	.4	.0	#	0	3.0	1975	13	3.0+	1989	3	1989	7	#+	1995	.2	.2	@	.0	.0	.2	.1	.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	.2	.0	#	0	2.0	1980	27	2.0	1980	1+	1993	26	#+	1993	.1	.1	.0	.0	.0	@	.0	.0	.0
Dec	.4	.0	#	0	7.0	1983	16	7.0	1983	5	1975	25	1	1990	.4	.2	.1	.1	.0	.2	.1	.0	.0
Ann	2.9	.0	N/A	N/A	7.0	Dec 1983	16	9.0	Feb 1978	8	Feb 1979	7	2	Jan 1978	1.6	1.2	.4	.3	.0	.8	.3	@	.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:

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NWS Call Sign:

Elevation: 570 Feet

Lat: 34°00N

Lon: 95°31W

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	4/16	4/12	4/09	4/06	4/04	4/01	3/30	3/27	3/23
32	4/07	4/02	3/30	3/27	3/24	3/21	3/18	3/14	3/09
28	3/24	3/17	3/12	3/08	3/05	3/01	2/25	2/20	2/14
24	3/13	3/05	2/27	2/22	2/17	2/12	2/07	2/01	1/23
20	3/06	2/24	2/17	2/11	2/06	1/31	1/25	1/18	1/08
16	2/24	2/15	2/08	2/02	1/27	1/21	1/14	1/05	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	10/14	10/20	10/24	10/27	10/30	11/03	11/06	11/10	11/16
32	10/23	10/29	11/02	11/06	11/10	11/13	11/17	11/21	11/27
28	10/29	11/05	11/11	11/15	11/20	11/24	11/28	12/04	12/11
24	11/10	11/18	11/23	11/28	12/02	12/06	12/11	12/16	12/23
20	11/19	12/01	12/09	12/16	12/23	12/30	1/06	1/14	1/26
16	12/02	12/12	12/19	12/25	12/30	1/05	1/12	1/22	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	228	222	217	213	209	205	201	196	190
32	252	245	239	234	230	226	221	215	208
28	282	274	268	264	259	255	250	244	237
24	319	308	300	294	287	281	274	267	256
20	>365	352	332	322	313	305	297	288	276
16	>365	>365	>365	355	337	327	318	308	297

* 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

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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	773	560	378	138	25	0	0	1	14	111	415	687	3102
60	621	430	237	53	4	0	0	0	2	43	283	538	2211
57	535	355	165	24	1	0	0	0	0	21	214	452	1767
55	477	308	125	12	0	0	0	0	0	11	175	396	1504
50	343	207	54	1	0	0	0	0	0	2	96	271	974
32	48	19	0	0	0	0	0	0	0	0	2	26	95

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	298	386	646	885	1176	1354	1532	1515	1258	976	583	362	10971
55	15	31	59	207	463	664	819	802	568	274	66	20	3988
57	10	21	36	159	402	604	757	740	508	221	45	13	3516
60	3	12	15	99	312	514	664	647	419	151	24	6	2866
65	0	0	1	33	178	364	509	492	282	64	6	0	1929
70	0	0	0	6	78	218	354	346	166	19	0	0	1187

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	175	280	506	712	971	1152	1324	1314	1068	778	419	214	175	455	961	1673	2644	3796	5120	6434	7502	8280	8699	8913
45	93	180	360	562	816	1002	1169	1159	918	623	286	115	93	273	633	1195	2011	3013	4182	5341	6259	6882	7168	7283
50	44	98	235	413	661	852	1014	1004	768	472	180	60	44	142	377	790	1451	2303	3317	4321	5089	5561	5741	5801
55	16	49	135	275	506	702	859	849	618	326	98	23	16	65	200	475	981	1683	2542	3391	4009	4335	4433	4456
60	0	16	67	156	354	552	704	694	470	199	44	9	0	16	83	239	593	1145	1849	2543	3013	3212	3256	3265
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	112	182	314	454	656	796	880	864	712	503	251	133	112	294	608	1062	1718	2514	3394	4258	4970	5473	5724	5857

(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.

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| <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 |
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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