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: CIRCLEVILLE, UT 1971-2000 COOP ID: 421432

Climate Division: UT 4 NWS Call Sign: Elevation: 6,050 Feet Lat: 38°10N Lon: 112°17W

									r	Гетр	eratur	re (°F)									
	Mea	n (1)						Extr	emes					Degree Base To	•		Mean	Numb	er of I	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	41.9	13.1	27.5	66	1990	9	34.8	1986	-23+	1963	12	18.1	1989	1161	0	.0	.0	6.3	4.4	30.0	4.3
Feb	47.1	18.0	32.6	72	1963	5	39.4	1995	-26+	1989	6	27.1	1985	909	0	.0	.0	11.4	1.8	26.8	1.0
Mar	53.1	23.1	38.1	77	1997	20	42.9	1972	-4	1966	4	31.6	1976	834	0	.0	.0	20.4	.4	26.5	.1
Apr	60.6	28.4	44.5	87	1962	18	51.9	1992	4	1955	4	37.5	1975	615	0	.0	.0	25.6	.0	19.9	.0
May	70.2	36.5	53.4	97	1966	28	60.3	2000	15+	1959	5	49.4	1971	366	5	.0	.2	30.4	.0	8.4	.0
Jun	81.3	44.5	62.9	100+	1961	21	66.7	1994	22	2001	14	57.7	1995	124	61	@	5.5	30.0	.0	1.5	.0
Jul	87.3	51.5	69.4	103+	1960	26	72.8	2000	32	1982	6	66.6	1993	12	148	.3	13.3	31.0	.0	@	.0
Aug	84.8	49.9	67.4	102	1960	12	70.6	2000	25	1960	17	65.0	1993	26	98	@	8.1	31.0	.0	@	.0
Sep	77.3	41.0	59.2	95+	1960	11	63.2	1979	18	1985	29	54.3	1986	191	16	.0	1.0	29.9	.0	4.1	.0
Oct	66.1	30.2	48.2	87+	1959	25	52.1	1988	-12	1971	30	42.3	1984	522	0	.0	.0	28.4	.1	18.7	.0
Nov	52.4	20.3	36.4	74+	1962	2	42.6	1999	-10	1984	27	30.2	2000	859	0	.0	.0	17.9	1.0	26.7	.6
Dec	43.7	13.1	28.4	67	1995	1	35.7	1977	-31	1990	23	20.8	1990	1135	0	.0	.0	8.3	3.6	29.8	3.2
Ann	63.8	30.8	47.3	103+	Jul 1960	26	72.8	Jul 2000	-31	Dec 1990	23	18.1	Jan 1989	6754	328	.3	28.1	270.6	11.3	192.4	9.2

⁺ Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 021-A

[@] Denotes mean number of days greater than 0 but less than .05

⁽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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										Pı	recipi	tation	(incl	ies)										
	Me	ans/	P	recip	itatio	on Total	S			М	ean N	Numbo Pays (3		Proba	ability th		nonthly/	annual j	precipita ated am	nount	ll be equ		less tha	ın the
		ans(1)				Extremes	5			D	aily Pre	cipitatio	n	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	.61	.45	.56	1980	14	2.05	1993	.01	1994	5.7	2.3	.1	.0	.03	.07	.14	.23	.32	.43	.57	.74	.98	1.40	1.81
Feb	.54	.46	.65	1996	21	1.90	1980	.00	1972	5.6	2.0	@	.0	.04	.10	.18	.26	.34	.43	.54	.67	.84	1.12	1.39
Mar	.76	.62	1.15	1984	30	1.90	1995	.00	1972	6.7	2.4	.2	.1	.05	.13	.25	.36	.47	.60	.75	.93	1.18	1.58	1.97
Apr	.64	.55	1.09	1962	29	1.83	1988	.00	1979	5.9	2.2	.1	.0	.03	.09	.19	.29	.39	.50	.63	.79	1.01	1.37	1.72
May	.90	.78	2.10	1987	18	3.27	1987	.00	1972	6.4	2.8	.2	@	.09	.20	.35	.48	.62	.76	.92	1.11	1.37	1.79	2.18
Jun	.57	.41	1.02	1949	3	1.61	1972	.00+	1978	4.2	1.8	.2	@	.00	.00	.11	.21	.31	.42	.55	.71	.93	1.30	1.66
Jul	.86	.65	.97	1977	4	2.78	1984	.00	1979	6.2	2.7	.4	.0	.07	.17	.31	.43	.56	.70	.86	1.06	1.32	1.74	2.14
Aug	1.42	1.17	1.60	2000	8	4.03	1997	.03	1976	8.1	4.0	.7	.1	.19	.30	.50	.70	.91	1.14	1.41	1.74	2.19	2.92	3.63
Sep	.95	.68	2.61	1967	23	3.27	1997	.03	1979	6.1	2.9	.3	@	.10	.17	.31	.44	.58	.74	.93	1.16	1.48	2.00	2.51
Oct	.90	.72	1.25	1980	12	2.65	1972	.00+	1999	5.3	3.0	.3	@	.00	.06	.20	.34	.49	.66	.86	1.11	1.45	2.03	2.60
Nov	.50	.42	1.08	1970	26	2.01	1978	.05	1998	4.1	1.8	.1	@	.05	.08	.15	.22	.30	.38	.48	.61	.78	1.07	1.35
Dec	.42	.39	1.50	1966	7	1.74	1983	.00+	1989	4.2	1.5	@	.0	.00	.03	.10	.17	.24	.31	.41	.52	.68	.94	1.19
Ann	9.07	8.91	2.61	Sep 1967	23	4.03	Aug 1997	.00+	Oct 1999	68.5	29.4	2.6	.2	5.56	6.20	7.04	7.69	8.28	8.86	9.46	10.14	10.97	12.20	13.27

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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

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Climate Division: UT 4 NWS Call Sign: Elevation: 6,050 Feet Lat: 38°10N Lon: 112°17W

										Snov	v (incl	hes)											
						Sn	ow To	tals									Mea	n Nu	mber	of Day	ys (1)		
	Mean	s/Medi	ians (1))					Extre	mes (2)							ow Fa					Depth esholo	
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	5.7	4.2	1	#	6.2	1982	29	18.2	1982	17	1997	13	3	1997	3.3	2.3	.6	.1	.0	7.3	2.4	.6	.0
Feb	3.0	1.7	#	#	5.2	1976	6	10.0	1990	7	1989	8	3	1989	1.9	1.3	.4	.1	.0	2.5	1.0	.2	.0
Mar	3.6	1.2	#	#	18.0	1985	28	23.5	1985	7	1984	30	1	1985	1.4	.8	.4	.1	.1	.5	.3	.1	.0
Apr	1.3	.0	#	0	4.2	1985	20	11.5	1997	2	1997	2	#+	2000	.7	.6	.1	.0	.0	.4	.0	.0	.0
May	.2	.0	#	0	3.5	1983	11	3.5	1983	#	1974	20	#	1974	.1	.1	.1	.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	.1	.0	#	0	1.5	1988	12	1.5	1988	#+	2000	8	#+	2000	@	@	.0	.0	.0	.0	.0	.0	.0
Oct	.9	.0	#	0	4.0	1971	30	8.0	1971	5	1971	30	#+	1997	.5	.4	.1	.0	.0	.2	.1	@	.0
Nov	2.6	1.1	#	#	12.0	1984	25	12.0	1984	9	1984	25	1	1994	1.4	.9	.2	@	@	1.4	.3	.1	.0
Dec	4.5	3.3	#	#	6.2	1984	20	14.3	1971	5	1984	20	1	1990	1.9	1.4	.6	.1	.0	3.4	.8	.1	.0
Ann	21.9	11.5	N/A	N/A	18.0	Mar 1985	28	23.5	Mar 1985	17	Jan 1997	13	3+	Jan 1997	11.2	7.8	2.5	.4	.1	15.7	4.9	1.1	.0

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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[@] 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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Climate Division: UT 4

NWS Call Sign:

Lat: 38°10N Elevation: 6,050 Feet Lon: 112°17W

				Freez	e Data				
			Spri	ng Freeze D	ates (Month/	Day)			
Temp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated((*)	
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	7/03	6/27	6/23	6/20	6/17	6/14	6/10	6/06	6/01
32	6/25	6/19	6/15	6/12	6/08	6/05	6/01	5/28	5/22
28	6/10	6/04	5/31	5/28	5/24	5/21	5/17	5/13	5/08
24	5/23	5/18	5/15	5/12	5/09	5/06	5/03	4/29	4/24
20	5/11	5/06	5/02	4/28	4/25	4/22	4/19	4/15	4/09
16	4/26	4/19	4/14	4/10	4/06	4/02	3/29	3/24	3/17
			Fal	l Freeze Da	tes (Month/D	ay)	•		
Temp (F)		Pro	bability of ea	arlier date i	n fall (beginn	ing Aug 1) t	han indicate	d(*)	
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	8/22	8/27	8/31	9/04	9/07	9/10	9/13	9/17	9/22
32	9/06	9/10	9/13	9/15	9/17	9/19	9/22	9/24	9/28
28	9/12	9/17	9/20	9/22	9/25	9/27	9/30	10/03	10/07
24	9/20	9/25	9/29	10/02	10/05	10/08	10/12	10/15	10/21
20	9/29	10/05	10/10	10/13	10/17	10/20	10/24	10/29	11/04
16	10/18	10/22	10/26	10/28	10/31	11/03	11/06	11/09	11/14
_				Freeze F	ree Period				
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)		
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	105	97	91	86	81	77	72	66	58
32	122	114	109	105	100	96	91	86	79
28	143	136	131	127	123	119	114	109	102
24	169	162	157	153	149	145	141	136	129
20	195	187	182	178	174	170	165	160	153
16	232	223	217	212	208	203	198	192	183

^{*} 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.

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				Deg	ree Days t	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree 1	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1161	909	834	615	366	124	12	26	191	522	859	1135	6754
60	1006	769	679	467	230	53	1	3	89	370	709	980	5356
57	913	685	586	383	162	27	0	0	48	283	619	887	4593
55	851	629	525	328	123	16	0	0	29	229	559	825	4114
50	696	489	378	207	53	3	0	0	6	118	412	670	3032
32	216	84	35	8	0	0	0	0	0	1	49	179	572

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	78	99	225	384	662	928	1159	1096	815	501	180	67	6194
55	0	0	1	13	72	253	446	383	154	17	0	0	1339
57	0	0	0	8	49	205	384	321	112	8	0	0	1087
60	0	0	0	2	24	141	292	231	63	2	0	0	755
65	0	0	0	0	5	61	148	98	16	0	0	0	328
70	0	0	0	0	0	18	46	21	2	0	0	0	87

										Gro	wing 1	Degre	e Uni	ts (2)										
Base					Growing	g Degree	Units (M	Ionthly)								Growi	ng Degre	ee Units (Accumu	lated Mo	onthly)			
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov De													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40														20	91	286	727	1442	2384	3259	3853	4143	4208	4215
45													0	1	23	124	422	987	1774	2494	2941	3106	3122	3122
50													0	1	2	41	208	624	1256	1821	2122	2195	2195	2195
55	0	0	0	8	75	276	477	410	174	18	0	0	0	0	0	8	83	359	836	1246	1420	1438	1438	1438
60	0	0	0	0	23	153	323	256	73	0	0	0	0	0	0	0	23	176	499	755	828	828	828	828
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)		
50/86	0/86 15 41 94 190 332 481 594 561 424 263 88 21												15	56	150	340	672	1153	1747	2308	2732	2995	3083	3104

(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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/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 are 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

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

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

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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