## 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

COOP ID: 425892

Lon: 111°43W

Station: MOUNTAIN DELL DAM, UT

Climate Division: UT 5 NWS Call Sign: Elevation: 5,420 Feet Lat: 40°45N

									ŗ	Tempe	eratui	re (°F)									
	Mea	<b>n</b> (1)						Extr	emes			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	36.7	15.1	25.9	64	1970	26	33.6	1998	-30	1963	11	18.2	1979	1211	0	.0	.0	2.1	8.1	29.4	3.5
Feb	41.9	18.1	30.0	68	1963	6	37.7	1995	-21+	1982	5	22.5	1985	981	0	.0	.0	5.3	3.7	27.0	1.7
Mar	49.8	24.9	37.4	75+	1956	24	43.2	1986	-14	1966	4	29.9	1976	857	0	.0	.0	15.7	.8	26.6	.4
Apr	58.7	31.5	45.1	82	1962	19	52.0	1992	4	1975	2	38.2	1975	598	0	.0	.0	24.6	@	18.6	.0
May	68.6	39.0	53.8	89+	1954	19	59.2	1992	14	1965	6	49.1	1975	352	4	.0	.0	29.7	.0	5.1	.0
Jun	79.7	45.7	62.7	100	1961	21	67.9	1988	21	1966	11	57.1	1998	128	59	.0	3.3	30.0	.0	.3	.0
Jul	87.4	52.4	69.9	102+	1960	21	72.7	1989	34	1950	30	63.1	1993	16	167	.0	11.3	31.0	.0	.0	.0
Aug	85.7	51.6	68.7	102	1962	15	72.8	1994	25	1964	29	65.8	1993	21	135	.0	8.2	31.0	.0	.0	.0
Sep	75.9	43.6	59.8	95	1959	10	65.8	1990	16	1965	18	55.0	1986	184	27	.0	.7	29.8	.0	2.2	.0
Oct	62.3	34.0	48.2	88	1963	3	54.3	1988	7	1971	30	42.0	1984	523	0	.0	.0	27.7	.1	12.8	.0
Nov	46.1	24.4	35.3	74	1965	2	42.9	1999	-16	1955	16	28.5	2000	893	0	.0	.0	12.7	1.7	25.6	.1
Dec	37.1	16.1	26.6	63	1998	3	33.8	1995	-25	1990	23	18.4	1990	1190	0	.0	.0	2.6	6.6	29.1	2.1
Ann	60.8	33.0	47.0	102+	Aug 1962	15	72.8	Aug 1994	-30	Jan 1963	11	18.2	Jan 1979	6954	392	.0	23.5	242.2	21.0	176.7	7.8

<sup>+</sup> Also occurred on an earlier date(s)

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

Issue Date: February 2004 071-A

- (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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

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Climate Division: UT 5 NWS Call Sign: Elevation: 5,420 Feet Lat: 40°45N Lon: 111°43W

										Pı	recipi	tation	(incl	nes)													
			P	recip	itatio	on Total	s			M	ean N	lumbo ays (3	_	Precipitation Probabilities (1)  Probability that the monthly/annual precipitation will be equal to or less than the indicated amount													
	Medi					Extremes	i			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	1.97	1.71	1.69	1953	14	4.54	1996	.69	1984	8.7	4.9	.6	.2	.60	.78	1.06	1.30	1.54	1.78	2.05	2.36	2.77	3.41	3.99			
Feb	1.96	1.87	1.97	1950	7	4.24	1998	.61	1990	9.8	5.6	1.2	@	.68	.87	1.14	1.36	1.58	1.81	2.05	2.33	2.70	3.26	3.78			
Mar	2.50	2.25	1.10	1983	25	5.79	1983	.83	1973	9.6	6.0	1.2	@	.93	1.16	1.50	1.78	2.05	2.32	2.62	2.96	3.40	4.08	4.70			
Apr	2.47	2.32	2.11	1957	23	6.13	1999	.42	1987	9.0	5.6	1.3	.1	.55	.77	1.14	1.46	1.79	2.14	2.53	3.00	3.62	4.61	5.54			
May	2.74	2.60	2.00	1968	23	5.73	1981	.75+	1979	11.0	6.0	2.1	.6	.72	.98	1.38	1.73	2.07	2.43	2.83	3.30	3.92	4.90	5.81			
Jun	1.39	1.40	1.95	1998	17	5.18	1998	.14	1988	6.3	3.4	.8	.2	.11	.20	.38	.57	.78	1.03	1.32	1.69	2.21	3.08	3.94			
Jul	1.08	.99	1.31	1989	13	3.00	1982	.00	1972	5.1	2.2	.7	.1	.15	.29	.47	.62	.78	.94	1.12	1.33	1.62	2.07	2.49			
Aug	1.14	1.02	1.54	1968	22	3.87	1986	.06+	1985	7.0	2.9	.6	.1	.11	.19	.34	.50	.67	.87	1.10	1.39	1.78	2.44	3.08			
Sep	2.03	1.47	2.41	1978	18	8.71	1982	.01	1979	6.9	3.6	1.2	.4	.12	.24	.49	.77	1.08	1.44	1.88	2.45	3.24	4.58	5.92			
Oct	2.65	2.84	2.16	1985	7	5.45	1981	.00	1978	6.6	4.3	1.6	.4	.28	.59	1.03	1.42	1.81	2.22	2.70	3.27	4.02	5.24	6.40			
Nov	2.12	1.92	1.64+	1970	26	4.74	1983	.08	1976	9.0	5.0	1.2	.1	.41	.61	.92	1.20	1.49	1.81	2.16	2.58	3.15	4.05	4.92			
Dec	1.99	1.82	2.05	1964	23	6.50	1983	.07	1976	8.2	4.5	1.0	.1	.19	.34	.61	.88	1.19	1.53	1.93	2.43	3.12	4.27	5.39			
Ann	24.04	24.55	2.41	Sep 1978	18	8.71	Sep 1982	.00+	Oct 1978	97.2	54.0	13.5	2.3	15.03	16.69	18.86	20.55	22.06	23.54	25.09	26.82	28.94	32.05	34.79			

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

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

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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**COOP ID: 425892** 

Station: MOUNTAIN DELL DAM, UT

**Climate Division: UT 5 NWS Call Sign:** 

Elevation: 5,420 Feet Lat: 40°45N Lon: 111°43W

										Snov	w (incl	hes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	<b>ys</b> (1)		
	Mean	s/Medi	ans (1)	)					Extre	mes (2)				ow Fa		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	23.5	19.0	12	12	18.0	1980	8	50.9	1996	38	1989	10	27	1989	6.5	6.0	2.8	1.3	.3	26.7	24.8	23.0	15.6
Feb	17.3	17.8	11	11	15.0	1982	3	26.0	1977	31	1982	3	23	1984	4.4	4.1	2.0	1.2	.2	22.3	21.1	19.4	12.9
Mar	17.0	15.3	3	3	18.0	1974	2	35.0	1982	25	1974	3	9	1984	3.4	3.2	2.0	.8	.2	11.3	8.8	6.5	3.6
Apr	7.2	1.0	1	#	16.0	1974	10	26.0	1982	16	1974	10	3	1974	1.7	1.6	1.0	.4	.2	2.6	1.8	.9	.3
May	1.0	.0	#	0	6.0	1977	18	9.0	1977	6	1983	11	#+	1986	.3	.2	.1	.1	.0	.2	.1	.1	.0
Jun	.2	.0	0	0	4.0	1981	14	4.0	1981	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	.3	.0	#	0	4.0	1971	30	4.0	1971	4	1971	30	#+	1978	.2	.1	@	.0	.0	@	@	.0	.0
Oct	1.1	.0	#	0	12.0	1996	25	12.0	1996	19	1984	18	6	1984	.6	.5	.3	.1	.0	.3	.2	.1	.0
Nov	14.1	15.0	2	1	13.0	1989	26	30.1	1973	20	1985	19	7	2000	3.3	2.9	1.8	.9	.2	7.1	5.5	4.1	1.6
Dec	15.3	15.0	7	6	28.0	1985	8	37.5	1973	66	1988	27	16+	1988	5.2	4.6	2.7	1.3	.5	21.5	18.8	15.1	8.4
Ann	97.0	83.1	N/A	N/A	28.0	Dec 1985	8	50.9	Jan 1996	66	Dec 1988	27	27	Jan 1989	25.6	23.2	12.7	6.1	1.6	92.0	81.1	69.2	42.4

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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**COOP ID: 425892** 

Lon: 111°43W

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**Station: MOUNTAIN DELL DAM, UT** 

Climate Division: UT 5 NWS Call Sign:

Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(\*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 6/28 6/21 6/16 6/12 6/08 6/03 5/30 5/25 5/18 32 6/10 6/03 5/29 5/25 5/21 5/18 5/14 5/09 5/02 28 5/28 5/21 5/15 5/11 5/06 5/02 4/28 4/22 4/15 5/02 4/23 4/15 3/31 24 5/08 4/27 4/19 4/11 4/06 20 4/30 4/22 4/17 4/12 4/08 4/04 3/30 3/24 3/17 3/30 3/25 16 4/17 4/09 4/03 3/21 3/16 3/11 3/03 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(\*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 9/07 36 8/27 9/03 9/11 9/15 9/18 9/22 9/26 10/03 32 9/14 9/19 9/23 9/26 9/29 10/01 10/04 10/08 10/13 28 9/21 9/27 10/01 10/05 10/09 10/12 10/16 10/21 10/27 24 10/08 10/14 10/18 10/22 10/26 10/30 11/02 11/07 11/13 20 10/18 10/24 10/28 11/01 11/04 11/07 11/11 11/15 11/21 10/24 11/09 11/12 11/25 12/02 16 10/31 11/05 11/16 11/20 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 129 119 111 104 98 92 85 78 67 36 32 157 148 141 135 129 124 118 111 102 28 188 177 168 155 133 161 148 141 121 24 221 210 202 196 189 183 176 168 157 244 232 195 20 224 216 209 203 187 175

239

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

247

Derived from 1971-2000 serially complete daily data

256

269

16

Complete documentation available from:

216

Elevation: 5,420 Feet

207

194

232

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<sup>\*</sup> Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1211	981	857	598	352	128	16	21	184	523	893	1190	6954		
60	1056	841	702	452	216	55	2	3	88	372	743	1035	5565		
57	963	757	609	368	149	28	0	1	50	286	653	942	4806		
55	901	701	548	315	111	16	0	0	32	234	593	880	4331		
50	746	561	400	198	45	3	0	0	7	124	447	725	3256		
32	248	136	46	8	0	0	0	0	0	1	71	218	728		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	60	79	213	401	675	920	1174	1137	833	501	168	51	6212
55	0	0	1	17	74	246	461	424	174	21	0	0	1418
57	0	0	0	11	49	198	399	363	133	11	0	0	1164
60	0	0	0	4	23	135	308	272	81	4	0	0	827
65	0	0	0	0	4	59	167	135	27	0	0	0	392
70	0	0	0	0	0	17	64	43	5	0	0	0	129

	Growing Degree Units (2)																									
Base					Growin	g Degree	Units (M	(Ionthly)					Growing Degree Units (Accumulated Monthly)													
	Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Oct         Nov         Dec         Jun													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
40	1	10	55	183	427	683	946	904	596	285	54	4	1	11	66	249	676	1359	2305	3209	3805	4090	4144	4148		
45	0	0	17	88	280	533	791	749	449	158	13	0	0	0	17	105	385	918	1709	2458	2907	3065	3078	3078		
50	0	0	0	36	154	383	636	594	307	65	0	0	0	0	0	36	190	573	1209	1803	2110	2175	2175	2175		
55	0	0	0	13	66	248	481	439	178	18	0	0	0	0	0	13	79	327	808	1247	1425	1443	1443	1443		
60	0	0	0	0	15	128	327	284	78	1	0	0	0	0	0	0	15	143	470	754	832	833	833	833		
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)				
50/86	<b>86</b> 0 13 60 152 294 452 600 578 403 222 48 5											5	0	13	73	225	519	971	1571	2149	2552	2774	2822	2827		

(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

#### 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