U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: MINIDOKA DAM, ID **COOP ID: 105980**

Climate Division: ID 7 **NWS Call Sign:** **Elevation: 4,164 Feet** **Lat: 42˚41N** **Lon: 113˚30W**

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	35.4	15.4	25.4	58+	1974	16	33.8	1998	-41	1962	22	13.3	1979	1228	0	.0	.0	1.0	11.3	29.8	2.9
Feb	41.8	19.8	30.8	69	1995	25	39.4	1992	-29	1985	1	18.5	1985	958	0	.0	.0	5.6	5.1	26.2	1.3
Mar	51.1	26.5	38.8	77+	1986	28	46.3	1992	-7	1985	4	27.3	1985	813	0	.0	.0	16.6	.7	23.8	.1
Apr	60.0	33.0	46.5	87	1992	30	53.8	1987	16+	2001	9	39.7	1975	555	0	.0	.0	25.9	.0	13.5	.0
May	69.0	41.2	55.1	93	1954	19	62.0	1992	15	1967	1	50.6	1999	316	8	.0	@	30.1	.0	2.7	.0
Jun	79.3	48.5	63.9	100	1990	29	69.5	1986	29	1954	1	58.5	1998	111	77	@	3.8	30.0	.0	.1	.0
Jul	88.3	54.2	71.3	106	1998	18	75.2	1989	36	1981	8	63.3	1993	18	211	.4	13.1	31.0	.0	.0	.0
Aug	88.1	52.9	70.5	105+	2000	1	74.6	1991	33	1992	26	66.1	1980	23	192	.5	12.8	31.0	.0	.0	.0
Sep	77.8	44.3	61.1	99	1998	5	68.1	1990	19	1965	19	55.7	1985	164	45	.0	2.1	29.9	.0	1.6	.0
Oct	64.6	34.3	49.5	88+	1992	2	57.0	1988	6	1971	29	45.4	1984	483	1	.0	.0	28.1	.1	10.3	.0
Nov	47.4	25.0	36.2	75	1988	1	42.7	1999	-6	1985	23	27.3	1985	864	0	.0	.0	10.8	2.5	23.5	.2
Dec	36.8	16.9	26.9	67	1999	1	33.5	1980	-26	1990	23	13.8	1985	1182	0	.0	.0	1.7	9.7	29.4	2.6
Ann	61.6	34.3	48.0	106	Jul 1998	18	75.2	Jul 1989	-41	Jan 1962	22	13.3	Jan 1979	6715	534	.9	31.8	241.7	29.4	160.9	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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1947-2001

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

Issue Date: February 2004

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	1.02	.89	1.14	1963	31	3.19	1980	.08	1977
Feb	.83	.76	.66	1986	18	2.97	1986	.01	1997
Mar	1.02	.92	.86	1995	21	2.71	1983	.04	1992
Apr	.92	.83	.90	1971	25	2.79	1971	.18	1977
May	1.19	.99	.92	1949	17	3.45	1980	.13	1974
Jun	.84	.71	.96	1972	7	3.01	1995	.01	1994
Jul	.32	.17	1.13	1950	8	1.30	1975	.00+	1990
Aug	.38	.29	1.32	1991	28	1.51	1976	.00+	2000
Sep	.67	.42	1.52	1998	22	3.14	1998	.00+	1988
Oct	.71	.64	1.14	1975	26	2.25	2000	.00	1988
Nov	1.03	.91	1.00	2001	29	3.78	1983	.00	1976
Dec	.92	.55	1.52	1964	23	4.20	1996	.05	1979
Ann	9.85+	9.70+	1.52+	Sep 1998	22	4.20	Dec 1996	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.0	3.0	.3	.0
Feb	7.4	2.9	.2	.0
Mar	8.0	3.5	.3	.0
Apr	7.6	3.2	.3	.0
May	8.4	3.8	.4	.0
Jun	5.6	2.5	.2	.0
Jul	3.0	1.1	.1	.0
Aug	4.2	1.0	.1	@
Sep	4.2	2.1	.3	@
Oct	5.1	2.3	.2	@
Nov	8.4	3.7	.2	.0
Dec	7.5	3.0	.2	.0
Ann	78.4	32.1	2.8	@

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.14	.23	.37	.52	.66	.83	1.02	1.25	1.56	2.08	2.57
Feb	.08	.14	.25	.37	.50	.64	.80	1.01	1.30	1.78	2.24
Mar	.11	.18	.33	.47	.62	.79	.99	1.24	1.58	2.15	2.70
Apr	.18	.26	.40	.52	.65	.78	.94	1.12	1.36	1.76	2.13
May	.19	.30	.47	.63	.80	.98	1.19	1.45	1.79	2.34	2.86
Jun	.05	.09	.19	.31	.44	.59	.77	1.01	1.35	1.92	2.49
Jul	.00	.01	.05	.10	.15	.22	.29	.39	.53	.77	1.02
Aug	.00	.02	.07	.13	.20	.27	.36	.47	.62	.88	1.14
Sep	.00	.00	.12	.23	.34	.48	.63	.83	1.10	1.55	2.00
Oct	.04	.10	.21	.31	.42	.55	.69	.88	1.12	1.53	1.93
Nov	.05	.14	.29	.44	.60	.79	1.00	1.27	1.64	2.25	2.85
Dec	.04	.09	.19	.32	.46	.63	.83	1.10	1.48	2.14	2.79
Ann	5.84	6.56	7.52	8.26	8.94	9.60	10.29	11.08	12.04	13.46	14.71

+ 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: 1947-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	5.7	4.3	3	2
Feb	3.9	3.4	2	1
Mar	2.2	1.8	1	#
Apr	.5	.0	#	0
May	.2	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.3	.0	#	0
Nov	4.1	3.1	#	#
Dec	4.5	3.0	1	#
Ann	21.4	15.6	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	10.0	1993	14	14.5	1996	24	1993	14	12	1993
Feb	6.0	1972	24	11.1	1985	15	1985	7	11	1985
Mar	8.0	1985	2	8.0	1985	18	1985	2	10	1985
Apr	2.0	1984	25	3.5	1984	3	1985	2	#+	1986
May	4.0	1975	4	4.0	1975	3	1975	4	#+	1983
Jun	.5	1979	7	.5	1979	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	1.5	1971	31	1.8+	1981	1+	1995	22	#+	1995
Nov	4.5	1971	14	16.8	1985	12	1985	30	4	1985
Dec	8.0	1992	30	13.2	1972	12	1985	1	7	1985
Ann	10.0	Jan 1993	14	16.8	Nov 1985	24	Jan 1993	14	12	Jan 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.6	2.3	.5	.2	@
Feb	3.2	1.8	.4	.2	.0
Mar	1.5	1.0	.2	@	.0
Apr	.5	.2	.0	.0	.0
May	.2	@	@	.0	.0
Jun	@	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.4	.2	.0	.0	.0
Nov	2.7	1.6	.3	.0	.0
Dec	3.7	2.1	.4	.2	.0
Ann	16.8	9.2	1.8	.6	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	14.9	8.5	5.6	2.6
Feb	7.8	4.9	3.7	1.1
Mar	2.6	1.6	1.2	.7
Apr	.2	.1	.0	.0
May	@	@	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	.0	.0	.0
Nov	3.3	1.3	.7	.3
Dec	8.9	4.4	2.0	.1
Ann	37.8	20.8	13.2	4.8

+ 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	6/24	6/17	6/12	6/07	6/03	5/30	5/25	5/20	5/13
32	6/02	5/26	5/22	5/18	5/14	5/11	5/07	5/02	4/26
28	5/13	5/07	5/04	4/30	4/27	4/24	4/21	4/17	4/12
24	5/02	4/25	4/20	4/15	4/12	4/08	4/03	3/29	3/23
20	4/22	4/13	4/07	4/01	3/28	3/23	3/17	3/11	3/02
16	3/24	3/16	3/10	3/05	3/01	2/24	2/19	2/13	2/05

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	8/30	9/04	9/08	9/11	9/15	9/18	9/21	9/25	9/30
32	9/12	9/17	9/21	9/24	9/27	9/30	10/03	10/07	10/12
28	9/25	10/01	10/06	10/09	10/13	10/16	10/20	10/25	10/31
24	10/06	10/12	10/16	10/20	10/23	10/26	10/30	11/03	11/09
20	10/22	10/27	10/31	11/04	11/07	11/10	11/14	11/18	11/23
16	10/28	11/03	11/08	11/11	11/15	11/19	11/23	11/27	12/03

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	130	121	114	108	103	97	91	85	75
32	159	151	145	140	135	130	125	119	111
28	192	184	178	173	168	163	158	152	144
24	223	213	206	200	194	188	182	175	165
20	252	242	235	229	224	218	212	205	196
16	287	277	270	264	259	253	247	240	231

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1228	958	813	555	316	111	18	23	164	483	864	1182	6715
60	1073	818	658	413	187	45	3	4	78	334	714	1027	5354
57	980	734	567	331	126	22	0	1	44	252	624	934	4615
55	918	678	509	281	93	12	0	0	28	203	565	872	4159
50	765	547	368	174	35	2	0	0	6	102	424	717	3140
32	288	164	50	7	0	0	0	0	0	1	72	242	824

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	83	129	260	442	715	957	1216	1193	871	541	198	83	6688
55	0	0	6	26	95	279	503	480	209	30	1	0	1629
57	0	0	2	17	66	229	442	419	165	17	0	0	1357
60	0	0	0	8	34	162	351	329	110	6	0	0	1000
65	0	0	0	0	8	77	211	192	45	1	0	0	534
70	0	0	0	0	1	27	104	90	13	0	0	0	235

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	0	12	75	228	474	722	970	939	630	314	57	4	0	12	87	315	789	1511	2481	3420	4050	4364	4421	4425
45	0	1	28	120	327	572	815	784	481	191	16	0	0	1	29	149	476	1048	1863	2647	3128	3319	3335	3335
50	0	0	3	54	201	424	660	629	339	96	0	0	0	0	3	57	258	682	1342	1971	2310	2406	2406	2406
55	0	0	0	17	98	284	505	474	212	34	0	0	0	0	0	17	115	399	904	1378	1590	1624	1624	1624
60	0	0	0	2	35	161	350	320	108	7	0	0	0	0	0	2	37	198	548	868	976	983	983	983
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	12	62	164	300	454	610	598	415	232	43	1	0	12	74	238	538	992	1602	2200	2615	2847	2890	2891

(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:
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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

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/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