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: RUTH, NV **COOP ID: 267175**

Climate Division: NV 2 **NWS Call Sign:** **Elevation: 6,840 Feet** **Lat: 39˚17N** **Lon: 114˚59W**

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	39.1	6.3	22.7	62	1994	19	30.0	1986	-30	1972	4	15.6	1979	1312	0	.0	.0	2.8	6.4	30.7	8.7
Feb	42.9	10.8	26.9	68	1963	24	34.4	1995	-31+	1989	6	21.2	1990	1069	0	.0	.0	5.5	3.9	27.7	4.3
Mar	48.0	19.1	33.6	70	1997	20	39.8	1972	-19	1966	4	27.7	1977	975	0	.0	.0	13.2	1.3	29.9	1.0
Apr	56.1	23.9	40.0	80	1992	29	46.2	1992	-12	1963	22	31.4	1975	750	0	.0	.0	21.6	.5	26.8	.1
May	65.1	31.2	48.2	88	1970	18	53.1	1992	5	1967	1	43.6	1977	522	0	.0	.0	27.9	@	18.6	.0
Jun	76.6	38.2	57.4	93	1974	30	61.4	1974	18	1968	30	52.9	1995	241	13	.0	1.4	29.7	.0	5.6	.0
Jul	85.0	45.0	65.0	100	1998	18	68.0	1996	18	1968	1	60.0	1993	61	61	.1	7.1	31.0	.0	.4	.0
Aug	82.9	43.8	63.4	96	1996	12	66.9	1971	22	1960	23	58.4	1976	90	38	.0	2.9	31.0	.0	.9	.0
Sep	74.2	34.1	54.2	92	1996	1	57.4	1990	12+	1965	18	49.1	1986	325	1	.0	@	29.6	.0	13.6	.0
Oct	61.9	24.4	43.2	86+	1996	9	49.4	1988	-5	1971	30	37.5	1984	679	0	.0	.0	26.4	.3	28.3	.1
Nov	47.6	15.5	31.6	80	1965	1	36.7	1995	-19	1964	18	22.5	2000	1003	0	.0	.0	13.0	2.6	29.0	2.1
Dec	40.4	6.5	23.5	64	1958	4	29.9	1980	-34	1990	22	16.2	1990	1288	0	.0	.0	5.3	6.2	30.8	6.9
Ann	60.0	24.9	42.5	100	Jul 1998	18	68.0	Jul 1996	-34	Dec 1990	22	15.6	Jan 1979	8315	113	.1	11.4	237.0	21.2	242.3	23.2

\+ 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: 1958-2000

(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	.94	.85	.85	1964	22	2.34	1993	.22+	1991
Feb	.94	.72	1.86	1969	25	3.12	1998	.00	1988
Mar	1.17	1.06	1.80	1995	11	4.00	1995	.00	1997
Apr	1.08	.85	1.16	1978	7	4.58	1978	.08	1993
May	1.56	1.28	1.10	1987	18	4.31	1987	.19	1978
Jun	.94	.87	1.37	1963	11	3.11	1995	.00	1986
Jul	.88	.72	1.51	1987	21	2.43	1987	.00	2000
Aug	1.07	1.09	1.45	1976	1	2.81	1984	.04	1985
Sep	.98	.76	1.70	1997	3	3.53	1982	.05+	1979
Oct	1.32	1.32	1.64	1976	2	3.14	1981	.00	1999
Nov	.77	.59	1.80	1969	7	3.01	1987	.09	1977
Dec	.80	.64	1.31	1966	6	3.02	1971	.00+	1989
Ann	12.45	12.50	1.86	Feb 1969	25	4.58	Apr 1978	.00+	Jul 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.7	2.7	.3	.0
Feb	6.4	3.1	.4	.0
Mar	9.4	3.6	.3	@
Apr	7.2	3.0	.3	@
May	8.2	4.6	.7	@
Jun	5.1	2.8	.4	.1
Jul	5.3	2.5	.4	@
Aug	6.2	2.5	.3	.1
Sep	5.1	2.6	.6	.2
Oct	5.0	3.1	.7	.1
Nov	5.0	2.3	.2	@
Dec	4.9	2.2	.3	@
Ann	74.5	35.0	4.9	.5

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	.24	.33	.46	.58	.70	.83	.96	1.13	1.35	1.69	2.01
Feb	.04	.12	.26	.39	.54	.71	.91	1.15	1.49	2.06	2.61
Mar	.12	.26	.45	.62	.79	.98	1.19	1.45	1.78	2.33	2.85
Apr	.14	.23	.38	.54	.69	.87	1.07	1.32	1.66	2.22	2.76
May	.28	.42	.65	.86	1.08	1.31	1.58	1.90	2.33	3.03	3.69
Jun	.05	.13	.27	.41	.56	.73	.92	1.16	1.49	2.04	2.57
Jul	.07	.17	.31	.44	.57	.72	.88	1.09	1.36	1.80	2.22
Aug	.13	.21	.36	.51	.67	.85	1.06	1.31	1.66	2.23	2.78
Sep	.04	.09	.21	.34	.49	.67	.89	1.18	1.59	2.29	2.99
Oct	.20	.38	.61	.79	.97	1.16	1.37	1.62	1.95	2.47	2.96
Nov	.11	.17	.28	.39	.50	.62	.76	.94	1.17	1.55	1.92
Dec	.00	.00	.21	.35	.49	.64	.81	1.02	1.29	1.74	2.18
Ann	7.87	8.72	9.83	10.68	11.45	12.21	12.99	13.87	14.94	16.52	17.90

+ 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: 1958-2000
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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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	10.8	10.4	5	4
Feb	10.0	7.0	4	2
Mar	7.9	5.0	1	1
Apr	6.0	3.3	#	#
May	1.8	1.0	#	#
Jun	.1	.0	#	0
Jul	.0	.0	0	0
Aug	.0	.0	#	0
Sep	.1	.0	#	0
Oct	2.9	.8	#	#
Nov	5.2	4.5	1	#
Dec	8.3	7.2	3	2
Ann	53.1	39.2	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	9.0	1994	26	19.7	1995	23	1993	18	16	1993
Feb	11.0	1994	8	27.2	1998	21	1993	28	14	1993
Mar	8.7	1974	3	22.1+	1991	20+	1993	1	6	1993
Apr	7.5	1978	7	17.8	1998	8	1978	7	2	1975
May	5.0	1975	5	12.0	1975	6	1975	5	1	1977
Jun	1.0	1990	1	1.0+	1995	1+	1995	7	#+	1995
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	1	1987	15	#	1987
Sep	2.0	1986	25	2.0	1986	2	1986	25	#+	1986
Oct	7.0	1991	27	11.9	1971	8	1986	19	2	1998
Nov	10.0	1997	27	18.5	1994	10	1997	27	3+	2000
Dec	10.0	1977	18	23.0	1971	22	1985	1	12	1985
Ann	11.0	Feb 1994	8	27.2	Feb 1998	23	Jan 1993	18	16	Jan 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	5.6	4.1	1.3	.5	.0
Feb	5.3	3.4	1.0	.4	.1
Mar	4.4	3.0	.9	.3	.0
Apr	2.8	2.0	.6	.1	.0
May	1.1	.9	.2	.1	.0
Jun	.1	.1	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.1	.1	.0	.0	.0
Oct	1.4	1.1	.4	.2	.0
Nov	3.3	2.1	.7	.1	.1
Dec	4.1	2.8	1.0	.3	.1
Ann	28.2	19.6	6.1	2.0	.3

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	22.0	15.3	10.2	3.2
Feb	17.6	11.8	6.7	2.7
Mar	9.3	3.9	1.8	.4
Apr	3.4	.9	.3	.0
May	1.1	.3	.1	.0
Jun	.1	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.1	.0	.0	.0
Oct	1.6	.7	.4	.0
Nov	6.6	2.0	.7	.1
Dec	15.8	8.9	4.3	.6
Ann	77.6	43.8	24.5	7.0

+ 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	7/27	7/21	7/16	7/12	7/08	7/05	7/01	6/26	6/19
32	7/10	7/04	6/29	6/25	6/22	6/19	6/15	6/10	6/04
28	6/26	6/20	6/16	6/12	6/09	6/05	6/02	5/28	5/22
24	6/12	6/06	6/02	5/29	5/26	5/22	5/18	5/14	5/08
20	5/24	5/18	5/13	5/09	5/06	5/02	4/28	4/24	4/18
16	5/12	5/05	5/01	4/27	4/23	4/20	4/16	4/11	4/05

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	8/06	8/11	8/15	8/18	8/22	8/25	8/28	9/01	9/06
32	8/19	8/23	8/26	8/29	9/01	9/03	9/06	9/09	9/14
28	9/02	9/06	9/09	9/12	9/14	9/17	9/19	9/23	9/27
24	9/06	9/12	9/16	9/19	9/22	9/26	9/29	10/03	10/08
20	9/19	9/24	9/28	10/01	10/04	10/07	10/10	10/14	10/19
16	9/28	10/04	10/09	10/13	10/16	10/20	10/23	10/28	11/03

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	73	63	56	49	44	38	31	24	14
32	93	85	80	75	70	65	60	55	47
28	121	113	107	102	97	92	87	81	73
24	143	135	129	124	119	114	109	104	96
20	175	167	161	155	150	145	140	134	125
16	203	193	186	180	175	169	163	156	147

***** 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	1312	1069	975	750	522	241	61	90	325	679	1003	1288	8315
60	1157	929	820	600	372	129	12	22	187	524	853	1133	6738
57	1064	845	727	512	288	80	3	6	119	432	763	1040	5879
55	1002	789	665	455	236	55	1	2	83	372	703	978	5341
50	847	649	511	318	129	16	0	0	25	234	554	823	4106
32	313	188	88	28	1	0	0	0	0	8	114	293	1033

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	24	43	136	267	502	762	1023	971	666	352	101	27	4874
55	0	0	0	4	24	127	311	260	58	3	0	0	787
57	0	0	0	1	14	92	251	202	35	1	0	0	596
60	0	0	0	0	5	51	167	125	13	0	0	0	361
65	0	0	0	0	0	13	61	38	1	0	0	0	113
70	0	0	0	0	0	1	10	5	0	0	0	0	16

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	2	24	92	268	533	781	755	427	156	13	0	0	2	26	118	386	919	1700	2455	2882	3038	3051	3051
45	0	0	0	38	151	387	626	600	285	67	0	0	0	0	0	38	189	576	1202	1802	2087	2154	2154	2154
50	0	0	0	8	66	251	471	445	159	14	0	0	0	0	0	8	74	325	796	1241	1400	1414	1414	1414
55	0	0	0	0	21	135	318	292	63	0	0	0	0	0	0	0	21	156	474	766	829	829	829	829
60	0	0	0	0	1	50	176	152	13	0	0	0	0	0	0	0	1	51	227	379	392	392	392	392
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	16	46	121	238	408	536	519	368	206	50	11	0	16	62	183	421	829	1365	1884	2252	2458	2508	2519

(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