

Climatology of the United States

No. 20

1971-2000

Station: RUSHVILLE, NE

COOP ID: 257415

Climate Division: NE 3

NWS Call Sign:

Elevation: 3,759 Feet Lat: 42° 43N

Lon: 102° 27W

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	.0	.0	.0	64	1998	3	.0	0	-29	1974	2	.0	0	0	0	.0	.0	3.7	11.5	30.8	6.9
Feb	.0	.0	.0	70	1995	22	.0	0	-29+	1996	3	.0	0	0	0	.0	.0	7.3	8.1	27.5	4.7
Mar	.0	.0	.0	81	1995	12	.0	0	-20	1998	11	.0	0	0	0	.0	.0	14.5	4.3	27.9	1.3
Apr	.0	.0	.0	87	1996	11	.0	0	-4	1997	13	.0	0	0	0	.0	.1	22.0	.9	18.7	.1
May	.0	.0	.0	91	2001	14	.0	0	23+	1991	5	.0	0	0	0	.0	.1	29.3	.0	3.0	.0
Jun	.0	.0	.0	98	1966	28	.0	0	31	1966	9	.0	0	0	0	.1	3.3	29.8	.0	.0	.0
Jul	.0	.0	.0	107	1964	23	.0	0	40	1990	12	.0	0	0	0	.6	9.6	31.0	.0	.0	.0
Aug	.0	.0	.0	100+	1995	17	.0	0	38	1993	31	.0	0	0	0	.4	10.0	31.0	.0	.0	.0
Sep	.0	.0	.0	100	1998	6	.0	0	22	1995	22	.0	0	0	0	@	3.1	29.1	@	2.9	.0
Oct	.0	.0	.0	90+	1997	3	.0	0	-8	1991	31	.0	0	0	0	.0	.1	25.2	.4	16.2	@
Nov	.0	.0	.0	82	1999	9	.0	0	-10	1995	3	.0	0	0	0	.0	.0	11.0	5.3	28.3	1.1
Dec	.0	.0	.0	68	1998	2	.0	0	-32+	1990	23	.0	0	0	0	.0	.0	5.0	10.7	30.8	5.1
Ann	.0	.0	.0	107	Jul 1964	23	-99.9	0	-32+	Dec 1990	23	99.9	0	0	0	1.1	26.3	238.9	41.2	186.1	19.2

+ 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/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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No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: RUSHVILLE, NE

COOP ID: 257415

Climate Division: NE 3

NWS Call Sign:

Elevation: 3,759 Feet Lat: 42°43N

Lon: 102°27W

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	.37	.33	1.20	1949	3	.98	1976	.00+	1992	2.8	1.8	@	.0	.00	.00	.11	.17	.24	.31	.38	.48	.60	.79	.98
Feb	.42	.28	.90	1966	9	1.73	1987	.00	1996	2.7	1.9	.2	.0	.01	.04	.10	.16	.23	.31	.40	.52	.68	.95	1.22
Mar	1.07	.90	1.35	1998	29	2.40	1993	.09	1981	4.3	3.0	.6	.1	.19	.29	.44	.59	.74	.90	1.08	1.30	1.60	2.07	2.53
Apr	2.09	1.83	1.89	1975	27	5.60	1999	.00	1987	5.9	4.4	1.4	.6	.21	.46	.81	1.11	1.42	1.75	2.13	2.58	3.19	4.16	5.08
May	2.87	2.50	4.80	1962	21	5.92	1995	.48	1986	7.5	6.0	2.1	.7	.91	1.18	1.59	1.93	2.26	2.61	2.99	3.43	4.00	4.89	5.71
Jun	2.96	2.54	4.11	1965	25	6.52	1993	.52	1987	7.1	5.9	2.2	.7	.79	1.07	1.50	1.88	2.25	2.63	3.06	3.57	4.23	5.27	6.24
Jul	2.66	2.32	3.80	1999	20	5.25	1999	.30	1974	6.5	5.1	1.8	.6	.76	1.02	1.40	1.73	2.05	2.39	2.76	3.20	3.77	4.66	5.49
Aug	1.89	1.52	4.60	1996	4	8.64	1996	.00	1976	5.3	4.0	1.2	.4	.12	.31	.61	.89	1.18	1.50	1.87	2.33	2.96	3.98	4.97
Sep	1.36	.95	2.12	1993	19	4.92	1973	.00	1992	3.5	2.9	.8	.2	.04	.14	.32	.51	.73	.98	1.28	1.66	2.19	3.08	3.96
Oct	1.14	.77	1.63	1998	5	4.62	1998	.00+	1999	3.0	2.5	.8	.3	.00	.00	.10	.33	.56	.80	1.09	1.45	1.94	2.73	3.55
Nov	.68	.62	.94	2000	1	2.37	1985	.00	1995	3.0	2.5	.2	.0	.11	.20	.32	.41	.50	.60	.70	.83	.99	1.25	1.49
Dec	.39	.31	.90+	1978	3	1.55	1978	.00+	1991	2.3	1.6	.1	.0	.00	.06	.14	.20	.26	.33	.40	.48	.60	.78	.95
Ann	17.90	18.05	4.80	May 1962	21	8.64	Aug 1996	.00+	Oct 1999	53.9	41.6	11.4	3.6	11.22	12.45	14.06	15.31	16.43	17.53	18.67	19.95	21.52	23.83	25.85

+ 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

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

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Station: RUSHVILLE, NE

COOP ID: 257415

Climate Division: NE 3

NWS Call Sign:

Elevation: 3,759 Feet

Lat: 42° 43N

Lon: 102° 27W

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	7.2	7.0	2	1	6.0	1976	1	16.0+	1980	16	1988	23	12	1988	2.8	2.6	1.0	.1	.0	6.2	3.5	2.0	.4
Feb	4.9	3.5	2	1	8.0	1987	25	17.5	1987	16	1987	28	10	1988	2.0	1.8	.7	.3	.0	6.3	4.2	2.4	.3
Mar	7.6	5.5	1	#	8.0	1977	11	23.0	1980	15	1987	1	5	1987	2.9	2.7	1.0	.4	.0	6.3	3.9	2.2	.4
Apr	4.5	3.0	1	#	10.0	1972	14	16.0	1975	12	1977	2	3	1977	1.5	1.5	.7	.3	.1	2.5	1.8	1.0	.3
May	#	.0	#	0	#	1997	2	#+	1997	6	1999	16	#+	1999	.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	.1	.0	#	0	2.0	1973	17	2.0	1973	5	1995	20	#+	1995	@	@	.0	.0	.0	.0	.0	.0	.0
Oct	2.5	.0	#	0	12.0	1973	12	13.0	1995	10	1982	19	1	1995	.4	.4	.2	.2	.1	.6	.4	.2	@
Nov	7.3	6.5	1	#	8.0	1978	26	17.0	1979	14	1985	30	6	1985	2.0	2.0	.9	.3	.0	4.5	3.0	1.9	.2
Dec	5.7	4.0	2	1	9.0	1978	3	20.0	1978	12	1987	28	11	1985	2.1	2.0	.8	.3	.0	7.5	4.4	1.3	.8
Ann	39.8	29.5	N/A	N/A	12.0	Oct 1973	12	23.0	Mar 1980	16+	Jan 1988	23	12	Jan 1988	13.7	13.0	5.3	1.9	.2	33.9	21.2	11.0	2.4

+ 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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Climate Division: NE 3

NWS Call Sign:

Elevation: 3,759 Feet

Lat: 42° 43N

Lon: 102° 27W

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	6/11	6/05	5/31	5/27	5/23	5/20	5/16	5/11	5/05
32	5/22	5/18	5/16	5/13	5/11	5/09	5/06	5/04	4/30
28	5/15	5/10	5/07	5/04	5/01	4/29	4/26	4/23	4/18
24	5/04	4/30	4/27	4/25	4/23	4/21	4/18	4/16	4/12
20	4/27	4/21	4/16	4/13	4/09	4/06	4/02	3/29	3/23
16	4/18	4/11	4/06	4/02	3/30	3/26	3/22	3/17	3/10
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	9/07	9/11	9/14	9/16	9/19	9/21	9/24	9/27	10/01
32	9/11	9/16	9/19	9/21	9/24	9/26	9/29	10/02	10/06
28	9/17	9/22	9/26	9/30	10/03	10/07	10/10	10/14	10/20
24	9/23	9/29	10/04	10/08	10/11	10/15	10/18	10/23	10/29
20	10/06	10/11	10/15	10/19	10/22	10/25	10/29	11/02	11/07
16	10/13	10/19	10/24	10/28	10/31	11/04	11/08	11/13	11/19
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	143	134	128	123	118	113	107	101	92
32	153	147	142	139	135	131	128	123	117
28	178	170	164	159	154	149	144	139	130
24	191	184	179	175	171	167	162	157	150
20	221	212	206	200	195	190	184	178	169
16	242	233	226	220	215	210	204	198	189

* 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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Climate Division: NE 3 NWS Call Sign: Elevation: 3,759 Feet Lat: 42°43N Lon: 102°27W

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	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	18	69	185	466	746	975	950	600	251	50	8	0	18	87	272	738	1484	2459	3409	4009	4260	4310	4318
45	0	1	25	99	322	597	820	795	457	147	18	0	0	1	26	125	447	1044	1864	2659	3116	3263	3281	3281
50	0	0	6	51	199	448	665	640	322	66	2	0	0	0	6	57	256	704	1369	2009	2331	2397	2399	2399
55	0	0	0	20	104	308	511	485	205	23	0	0	0	0	0	20	124	432	943	1428	1633	1656	1656	1656
60	0	0	0	4	40	181	359	336	111	2	0	0	0	0	0	4	44	225	584	920	1031	1033	1033	1033
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	5	32	73	151	288	463	627	602	394	212	57	16	5	37	110	261	549	1012	1639	2241	2635	2847	2904	2920

(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.

- | | |
|---|---|
| <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 |
|---|---|

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