

Climatology of the United States No. 20

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

Station: NORTH PLATTE RGNL AP, NE

1971-2000

COOP ID: 256065

Climate Division: NE 7

NWS Call Sign: LBF

Elevation: 2,779 Feet Lat: 41°07N

Lon: 100°40W

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	36.5	9.9	23.2	73	1990	10	32.0	1986	-25	1950	26	6.4	1979	1312	0	.0	.0	5.4	11.4	31.0	7.1
Feb	43.3	15.4	29.4	79	1962	11	37.2	1991	-22+	1981	11	16.9	1978	1013	0	.0	.0	9.9	7.8	27.7	3.5
Mar	52.1	23.8	38.0	86+	1986	28	44.4	1986	-22	1960	3	31.3	1996	853	0	.0	.0	16.9	3.3	26.3	.7
Apr	62.7	33.4	48.1	98	1992	30	55.7	1981	7+	1975	3	42.2	1983	519	4	.0	.3	24.6	.4	13.5	.0
May	72.0	44.5	58.3	102	1996	16	64.3	1977	19	1989	1	52.4	1995	240	22	@	.6	30.5	.0	2.3	.0
Jun	82.6	54.2	68.4	107	1952	15	74.1	1988	29	1969	2	63.6	1982	46	139	.5	5.8	29.9	.0	@	.0
Jul	88.4	60.2	74.3	112	1954	11	79.1	1974	39	1997	4	68.3	1992	6	279	1.7	13.3	31.0	.0	.0	.0
Aug	86.8	58.4	72.6	105	1954	3	79.0	1995	35	1976	28	66.2	1992	14	234	.8	11.1	31.0	.0	.0	.0
Sep	78.0	46.7	62.4	102+	1990	13	68.5	1998	17	1984	29	57.9	1993	158	70	.2	4.5	29.6	.0	2.3	.0
Oct	65.6	33.7	49.7	94	1990	5	53.8	1979	10+	1993	30	46.1	1976	481	2	.0	.3	27.6	.2	13.8	.0
Nov	48.5	20.7	34.6	82	1980	6	41.8	1999	-13	1976	28	24.6	2000	902	0	.0	.0	14.5	4.1	27.6	1.0
Dec	39.2	12.1	25.7	75	1980	17	34.2	1979	-34+	1989	22	7.7	1983	1222	0	.0	.0	7.4	9.6	30.8	4.2
Ann	63.0	34.4	48.7	112	Jul 1954	11	79.1	Jul 1974	-34+	Dec 1989	22	6.4	Jan 1979	6766	750	3.2	35.9	258.3	36.8	175.3	16.5

+ 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

082-A

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Climate Division: NE 7

NWS Call Sign: LBF

Elevation: 2,779 Feet Lat: 41°07N

Lon: 100°40W

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	.39	.34	1.35	1949	3	.99	1976	.00	1997	5.0	1.3	.1	.0	.04	.09	.15	.21	.27	.33	.40	.48	.59	.77	.94
Feb	.51	.26	1.10	1971	18	1.98	1978	.00	1996	5.4	1.4	.2	@	.01	.03	.09	.16	.24	.33	.45	.61	.84	1.22	1.61
Mar	1.24	1.00	1.84	1981	28	2.98	1992	.05	1994	7.2	2.9	.6	.2	.13	.23	.40	.57	.76	.97	1.21	1.51	1.93	2.62	3.29
Apr	1.97	1.71	2.22	1971	19	5.01	1984	.10	1989	8.5	4.4	1.2	.3	.34	.51	.80	1.07	1.35	1.65	1.99	2.41	2.96	3.85	4.71
May	3.34	3.10	2.20	1995	27	6.32	1982	1.16	1994	11.4	6.7	2.4	.9	1.40	1.71	2.13	2.48	2.81	3.15	3.50	3.92	4.44	5.23	5.96
Jun	3.17	2.87	3.61	1955	27	6.12+	1993	.87	1985	9.7	6.0	2.4	.6	1.06	1.36	1.80	2.17	2.53	2.90	3.30	3.77	4.38	5.32	6.18
Jul	3.17	2.95	3.15	1964	10	7.05	1979	.64	1980	10.6	6.1	2.2	.9	.92	1.22	1.68	2.07	2.45	2.85	3.29	3.81	4.48	5.54	6.52
Aug	2.15	1.82	3.76	1950	11	6.30	1992	.25	1975	8.5	4.2	1.5	.4	.46	.66	.97	1.26	1.54	1.85	2.20	2.61	3.16	4.03	4.86
Sep	1.32	1.15	2.50	1963	15	5.55	1996	.14	1983	6.8	3.0	.8	.3	.13	.22	.40	.59	.79	1.01	1.27	1.61	2.06	2.81	3.55
Oct	1.24	1.21	1.92	2000	28	3.24	2000	.05	1988	5.5	2.7	.7	.3	.11	.20	.36	.54	.73	.94	1.19	1.51	1.95	2.68	3.40
Nov	.76	.71	1.09	1979	5	2.89	1979	.02	1989	5.0	1.8	.4	@	.04	.07	.16	.26	.38	.52	.69	.91	1.22	1.76	2.30
Dec	.40	.28	.70	1978	2	1.22	1977	.00	1988	4.0	1.2	.1	.0	.00	.02	.06	.11	.17	.24	.34	.47	.66	.99	1.33
Ann	19.66	19.27	3.76	Aug 1950	11	7.05	Jul 1979	.00+	Jan 1997	87.6	41.7	12.6	3.9	13.82	14.95	16.39	17.49	18.47	19.41	20.39	21.47	22.78	24.69	26.34

+ 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

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Climate Division: NE 7

NWS Call Sign: LBF

Elevation: 2,779 Feet

Lat: 41°07N

Lon: 100°40W

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	5.1	4.5	1	1	11.9	1976	1	17.1	1976	12+	1976	3	5+	1988	4.9	1.5	.4	.1	@	12.4	5.8	2.2	.3
Feb	4.8	2.6	1	1	6.9	1980	7	20.6	1978	13+	1993	25	6	1993	4.5	1.6	.5	.2	.0	7.4	3.2	2.0	.4
Mar	5.2	4.1	#	1	11.6	1980	28	21.9	1980	18	1980	29	2	1980	4.6	1.5	.5	.1	@	4.1	1.8	.6	.1
Apr	2.7	.9	#	0	8.5	1984	2	14.5	1984	8	1984	3	1	1984	2.0	.8	.3	.1	.0	1.3	.4	.1	.0
May	.0	.0	#	0	.2	1984	7	.2	1984	#	1979	10	#	2000	.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	.2	.0	0	0	3.0	1985	28	3.1	1985	#+	2000	24	0	0	.2	.1	@	.0	.0	.0	.0	.0	.0
Oct	1.1	.0	#	0	4.1	1995	23	7.3	1991	4	1991	31	#	1997	.6	.4	.1	.0	.0	.4	.1	.0	.0
Nov	5.0	3.9	1	0	9.7	2000	11	17.5	1979	13	1979	22	4	1971	3.0	1.4	.6	.2	.0	4.9	2.4	1.2	.1
Dec	4.3	2.9	1	1	7.6	1978	2	14.1	1973	9+	1982	28	4	1983	3.8	1.1	.4	.2	.0	8.3	3.2	1.7	.0
Ann	28.4	18.9	N/A	N/A	11.9	Jan 1976	1	21.9	Mar 1980	18	Mar 1980	29	6	Feb 1993	23.6	8.4	2.8	.9	@	38.8	16.9	7.8	.9

+ 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 7

NWS Call Sign: LBF

Elevation: 2,779 Feet

Lat: 41° 07N

Lon: 100° 40W

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	6/02	5/28	5/24	5/21	5/18	5/15	5/11	5/07	5/02
32	5/23	5/18	5/14	5/11	5/09	5/06	5/03	4/29	4/25
28	5/15	5/10	5/06	5/03	5/01	4/28	4/25	4/21	4/17
24	5/02	4/28	4/25	4/22	4/20	4/17	4/14	4/11	4/07
20	4/23	4/17	4/13	4/09	4/06	4/02	3/30	3/25	3/19
16	4/10	4/04	3/31	3/28	3/24	3/21	3/17	3/13	3/07
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	9/09	9/13	9/16	9/18	9/20	9/22	9/25	9/27	10/01
32	9/12	9/16	9/19	9/21	9/24	9/26	9/28	10/01	10/05
28	9/17	9/23	9/27	9/30	10/04	10/07	10/10	10/14	10/20
24	9/27	10/03	10/06	10/10	10/13	10/16	10/19	10/23	10/28
20	10/09	10/13	10/17	10/19	10/22	10/24	10/27	10/30	11/04
16	10/16	10/21	10/24	10/27	10/30	11/02	11/05	11/09	11/14
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	137	132	128	125	121	117	113	106
32	155	149	145	141	137	134	130	125	119
28	176	169	164	159	155	151	147	141	134
24	196	189	184	179	176	172	167	162	155
20	219	212	207	202	198	194	190	184	177
16	242	234	229	224	219	215	210	204	196

* 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

Complete documentation available from:
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COOP ID: 256065

Climate Division: NE 7 NWS Call Sign: LBF Elevation: 2,779 Feet Lat: 41°07N Lon: 100°40W

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	1312	1013	853	519	240	46	6	14	158	481	902	1222	6766
60	1140	858	684	367	126	12	0	4	65	325	762	1064	5407
57	1047	775	591	287	79	4	0	1	35	240	672	971	4702
55	985	725	529	238	55	2	0	0	21	188	612	909	4264
50	833	594	382	135	17	0	0	0	4	87	470	761	3283
32	351	216	43	1	0	0	0	0	0	0	100	296	1007

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	38	96	238	481	808	1082	1299	1245	904	550	170	52	6963
55	0	0	3	38	151	397	586	532	251	41	1	0	2000
57	0	0	1	27	114	339	524	471	206	26	0	0	1708
60	0	0	0	14	69	257	432	379	147	12	0	0	1310
65	0	0	0	4	22	139	279	234	70	2	0	0	750
70	0	0	0	1	4	58	149	113	27	0	0	0	352

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	2	29	98	273	569	848	1062	1007	673	327	59	5	2	31	129	402	971	1819	2881	3888	4561	4888	4947	4952
45	0	4	43	165	416	698	907	852	528	206	21	0	0	4	47	212	628	1326	2233	3085	3613	3819	3840	3840
50	0	0	14	88	277	548	752	697	386	107	4	0	0	0	14	102	379	927	1679	2376	2762	2869	2873	2873
55	0	0	0	39	155	406	597	542	258	44	0	0	0	0	0	39	194	600	1197	1739	1997	2041	2041	2041
60	0	0	0	17	74	264	442	390	153	11	0	0	0	0	0	17	91	355	797	1187	1340	1351	1351	1351
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	20	50	109	207	355	543	689	654	439	258	83	28	20	70	179	386	741	1284	1973	2627	3066	3324	3407	3435

(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.

- 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/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