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: JAMESTOWN MUNICIPAL AP, ND **COOP ID: 324413**

Climate Division: ND 5 **NWS Call Sign: JMS** **Elevation: 1,494 Feet** **Lat: 46˚56N** **Lon: 98˚40W**

Temperature (˚F)

Month	Mean (1) Daily Max	Mean (1) Daily Min	Mean (1) Mean	Extremes Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Degree Days (1) Base Temp 65 Heating	Cooling	Mean Number of Days (3) Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	17.9	-.5	8.7	54	1990	10	23.2	1990	-36	1951	29	-6.7	1982	1748	0	.0	.0	.1	24.8	30.9	16.3
Feb	24.9	6.9	15.9	64	1958	25	28.8	1987	-35	1994	9	-1.7	1979	1375	0	.0	.0	1.0	18.4	27.6	10.4
Mar	36.7	19.1	27.9	79	1963	23	37.4	1986	-24	1952	2	19.7	1996	1150	0	.0	.0	4.6	10.5	28.0	3.3
Apr	54.2	31.5	42.9	97	1992	30	54.1	1987	-6+	1975	3	33.8	1975	667	3	.0	.3	19.0	1.5	16.7	.2
May	69.1	44.2	56.7	100	1969	27	64.5	1977	16	1967	2	48.9	1979	293	34	.0	.8	29.6	.0	3.3	.0
Jun	77.2	53.5	65.4	105	1961	27	74.9	1988	32	1969	20	59.8	1982	100	111	@	2.6	30.0	.0	.0	.0
Jul	83.0	58.3	70.7	108+	1989	5	76.4	1988	38	1967	3	64.5	1992	30	205	.6	6.5	31.0	.0	.0	.0
Aug	81.9	56.1	69.0	106+	1982	2	76.0	1983	32	1982	27	61.7	1977	52	176	.7	6.5	31.0	.0	@	.0
Sep	70.3	45.4	57.9	105+	1983	2	63.7	1997	18	1965	26	53.4	1984	242	26	.2	1.6	29.0	.0	2.0	.0
Oct	56.4	33.9	45.2	94+	1992	1	49.5	1973	-1	1991	31	40.0	1976	616	0	.0	.1	22.2	.7	13.0	@
Nov	35.6	18.6	27.1	77+	1999	7	37.6	1999	-22+	1964	30	16.8	1985	1138	0	.0	.0	4.9	12.7	27.6	2.2
Dec	22.4	5.2	13.8	63	1969	1	25.8	1997	-37	1983	23	-1.4	1983	1588	0	.0	.0	.4	22.8	30.8	11.9
Ann	52.5	31.0	41.8	108+	Jul 1989	5	76.4	Jul 1988	-37	Dec 1983	23	-6.7	Jan 1982	8999	555	1.5	18.4	202.8	91.4	179.9	44.3

\+ 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: 1948-2001

(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	.62	.48	.95	1950	23	2.17	1982	.12	1990
Feb	.52	.37	1.18	1958	27	2.15	1979	.02	1988
Mar	.89	.85	1.49	1975	24	3.48	1975	.00	1986
Apr	1.36	1.00	1.85	1953	24	6.61	1986	.00+	1987
May	2.21	2.05	2.72	1953	29	5.98	1999	.25	1990
Jun	3.05	2.77	4.90	1956	6	7.64	1975	.95	1972
Jul	3.22	2.47	6.35	1993	15	11.06	1993	.63	1985
Aug	2.33	2.14	3.97	1997	31	5.73	1980	.26	1984
Sep	1.74	1.33	2.94	1992	1	5.26	1973	.01	1974
Oct	1.40	.90	2.59	1982	9	4.92	1994	.09	1993
Nov	.71	.62	1.56	1956	2	2.43	1977	.00+	1999
Dec	.44	.33	1.22	1949	11	1.21	1972	.01	1986
Ann	18.49	17.30	6.35	Jul 1993	15	11.06	Jul 1993	.00+	Nov 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.4	2.1	.1	.0
Feb	6.7	1.6	.1	.0
Mar	6.9	2.7	.3	.1
Apr	7.3	3.2	.8	.1
May	9.2	5.1	1.2	.4
Jun	10.5	6.4	1.9	.5
Jul	9.7	5.3	2.1	.8
Aug	8.6	4.7	1.4	.4
Sep	7.5	3.8	1.0	.3
Oct	6.5	2.9	1.0	.3
Nov	5.9	2.0	.2	.0
Dec	6.5	1.5	.1	.0
Ann	92.7	41.3	10.2	2.9

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	.11	.16	.25	.34	.42	.52	.62	.75	.93	1.20	1.47
Feb	.03	.06	.12	.19	.27	.37	.48	.63	.84	1.20	1.55
Mar	.08	.19	.33	.46	.60	.74	.90	1.10	1.36	1.79	2.19
Apr	.00	.07	.27	.47	.70	.96	1.28	1.67	2.23	3.16	4.09
May	.38	.57	.89	1.20	1.51	1.84	2.23	2.70	3.32	4.33	5.29
Jun	1.00	1.29	1.72	2.08	2.43	2.78	3.18	3.64	4.23	5.14	5.99
Jul	.52	.80	1.27	1.71	2.17	2.66	3.23	3.92	4.85	6.35	7.79
Aug	.37	.57	.90	1.23	1.56	1.92	2.34	2.85	3.53	4.64	5.70
Sep	.14	.25	.48	.72	.99	1.29	1.65	2.11	2.74	3.81	4.85
Oct	.06	.13	.29	.48	.69	.95	1.27	1.68	2.26	3.27	4.27
Nov	.00	.06	.19	.30	.41	.55	.70	.88	1.14	1.56	1.97
Dec	.03	.06	.11	.17	.24	.32	.41	.53	.69	.97	1.25
Ann	11.18	12.50	14.25	15.61	16.84	18.04	19.30	20.71	22.45	25.02	27.27

\+ 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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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	8.7	7.6	6	5	9.1	1996	17	26.4	1994	31+	1997	27	26	1997	7.1	3.0	.9	.3	.0	27.1	21.1	15.6	5.4
Feb	6.1	4.1	6	4	8.0	1982	23	23.9	1979	28+	1997	5	23	1997	6.1	2.1	.4	.1	.0	21.8	17.5	12.1	5.1
Mar	7.2	3.8	3	3	14.9	1975	24	34.8	1975	32+	1997	15	19	1997	5.0	2.3	.6	.2	.1	14.7	9.7	6.4	2.0
Apr	3.2	1.5	1	1	10.0	1986	14	16.8	1997	26+	1975	2	7	1975	1.9	.7	.4	.2	@	2.9	2.1	1.5	.7
May	.3	.0	#	0	6.8	1991	3	6.9	1991	4	1991	4	#	2000	.2	.1	@	@	.0	.1	@	.0	.0
Jun	#	.0	#	0	#	1998	10	#	1998	0	0	0	#	1994	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	#	0	.0	0	0	.0	0	#	1995	8	#	1995	.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	.0	.0	0	0	.2	1984	23	.3	1984	#	1984	23	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.7	.1	#	0	3.0	1971	30	3.0+	1977	3	1971	31	#	1995	.8	.2	.1	.0	.0	.3	@	.0	.0
Nov	6.8	5.6	2	1	9.6	1996	20	25.4	1993	21	1993	27	5+	1996	4.7	2.2	.8	.3	.0	11.2	5.8	3.1	.8
Dec	6.6	4.7	3	2	12.0	1988	26	21.8	1996	22+	1996	27	15+	1996	6.2	2.2	.5	.1	@	21.9	11.4	6.9	2.8
Ann	39.6	27.4	N/A	N/A	14.9	Mar 1975	24	34.8	Mar 1975	32+	Mar 1997	15	26	Jan 1997	32.1	12.8	3.7	1.2	.1	100.0	67.6	45.6	16.8

+ 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	6/05	5/31	5/27	5/24	5/21	5/18	5/15	5/11	5/06
32	5/21	5/17	5/14	5/11	5/08	5/06	5/03	4/30	4/26
28	5/13	5/08	5/05	5/02	4/29	4/27	4/24	4/20	4/15
24	5/03	4/28	4/24	4/21	4/18	4/15	4/12	4/08	4/03
20	4/18	4/14	4/11	4/09	4/06	4/04	4/01	3/29	3/25
16	4/13	4/09	4/05	4/03	3/31	3/29	3/26	3/23	3/19

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	9/13	9/16	9/18	9/21	9/23	9/26	9/30
32	9/11	9/16	9/20	9/23	9/25	9/28	10/01	10/05	10/09
28	9/21	9/25	9/29	10/02	10/04	10/07	10/10	10/13	10/18
24	9/29	10/04	10/08	10/11	10/15	10/18	10/21	10/25	10/30
20	10/10	10/15	10/19	10/22	10/25	10/28	10/31	11/04	11/09
16	10/16	10/21	10/25	10/29	11/01	11/04	11/07	11/11	11/16

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	142	134	129	124	120	115	111	105	97
32	160	153	148	143	139	135	131	126	119
28	174	169	164	161	157	154	150	146	140
24	201	194	188	183	179	174	170	164	156
20	221	214	209	205	201	197	193	188	181
16	234	227	222	218	214	210	205	200	193

***** 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	1748	1375	1150	667	293	100	30	52	242	616	1138	1588	8999
60	1593	1235	995	525	185	41	8	17	135	462	988	1433	7617
57	1500	1151	902	444	134	21	2	7	86	371	898	1340	6856
55	1438	1095	840	393	105	13	0	3	60	312	838	1278	6375
50	1283	955	689	278	50	3	0	0	18	183	690	1123	5272
32	762	499	239	38	0	0	0	0	0	6	246	607	2397

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	37	48	113	365	764	1001	1198	1147	774	413	98	43	6001
55	0	0	0	30	156	324	485	437	144	6	0	0	1582
57	0	0	0	21	123	272	425	379	110	3	0	0	1333
60	0	0	0	11	82	202	338	296	69	1	0	0	999
65	0	0	0	3	34	111	205	176	26	0	0	0	555
70	0	0	0	0	11	47	109	89	7	0	0	0	263

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	1	18	177	529	770	959	909	544	221	22	0	0	1	19	196	725	1495	2454	3363	3907	4128	4150	4150
45	0	0	4	95	381	620	804	754	400	124	8	0	0	0	4	99	480	1100	1904	2658	3058	3182	3190	3190
50	0	0	1	51	253	470	649	599	270	54	0	0	0	0	1	52	305	775	1424	2023	2293	2347	2347	2347
55	0	0	0	22	148	324	494	445	160	23	0	0	0	0	0	22	170	494	988	1433	1593	1616	1616	1616
60	0	0	0	7	76	195	342	298	84	5	0	0	0	0	0	7	83	278	620	918	1002	1007	1007	1007
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	1	15	124	322	479	619	581	329	143	17	0	0	1	16	140	462	941	1560	2141	2470	2613	2630	2630

(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