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: FAYETTEVILLE EXP STN, AR **COOP ID: 032444**

Climate Division: AR 1 **NWS Call Sign:** **Elevation: 1,270 Feet** **Lat: 36˚06N** **Lon: 94˚10W**

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	44.3	24.2	34.3	76+	1928	11	42.6	1990	-23	1930	22	22.4	1979	953	0	.0	.0	12.6	5.6	23.5	1.1
Feb	50.5	28.8	39.7	86	1996	23	49.8	1976	-24	1899	12	29.2	1978	710	0	.0	.0	16.2	3.2	17.5	.6
Mar	58.9	37.6	48.3	96	1907	21	53.3	1974	-11	1948	12	41.3	1996	520	0	.0	.0	24.0	.5	10.4	@
Apr	68.5	46.2	57.4	96	1902	29	63.4	1981	18+	1920	5	51.3	1983	246	17	.0	.0	28.7	.0	2.5	.0
May	75.8	55.1	65.5	95	1934	31	70.7	1987	28	1954	4	60.3	1976	90	103	.0	.2	31.0	.0	.0	.0
Jun	83.6	63.8	73.7	104	1933	23	77.8	1994	41	1956	2	69.6	1982	8	269	@	4.2	30.0	.0	.0	.0
Jul	89.1	68.6	78.9	111	1954	14	84.2	1980	48+	1915	5	75.7	1972	0	430	.9	15.7	31.0	.0	.0	.0
Aug	88.9	66.8	77.9	109+	1909	17	83.4	1980	44	1915	31	71.4	1992	4	402	.8	14.6	31.0	.0	.0	.0
Sep	80.7	59.2	70.0	105+	1939	2	77.4	1998	29	1984	30	62.8	1974	42	190	.3	5.3	30.0	.0	@	.0
Oct	70.4	47.3	58.9	96	1909	6	63.3	1971	17	1917	30	52.7	1976	217	26	.0	.1	30.2	@	2.1	.0
Nov	57.1	37.3	47.2	90	1909	4	56.0	1999	5	1959	17	39.7	1976	536	2	.0	.0	22.8	.5	10.6	.0
Dec	47.7	28.1	37.9	78	1951	31	44.4	1984	-12	1989	23	23.5	1983	840	0	.0	.0	15.8	3.3	20.9	.5
Ann	68.0	46.9	57.5	111	Jul 1954	14	84.2	Jul 1980	-24	Feb 1899	12	22.4	Jan 1979	4166	1439	2.0	40.1	303.3	13.1	87.5	2.2

\+ 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: 1890-2001

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

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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	2.14	1.73	4.10	1916	27	7.39	1998	.14	1976
Feb	2.41	2.48	4.63	1966	9	6.05	1990	.22	1996
Mar	4.17	3.93	3.75	1906	23	8.79	1973	.55	1971
Apr	4.33	3.93	5.00	1893	30	8.27	1990	.46	1989
May	5.06	5.00	7.38	1950	10	12.06	1990	1.33	1988
Jun	5.26	5.32	7.80	1982	16	14.24	2000	1.16	1984
Jul	3.14	2.78	9.60	1960	25	8.95	1992	.62	1993
Aug	3.00	2.45	5.10	1905	19	6.97	1986	.01	2000
Sep	4.83	4.49	4.64	1949	18	11.51	1986	.52	1979
Oct	3.74	3.52	4.78	1920	15	9.62	1984	.48	1977
Nov	4.74	5.00	3.87	1994	5	10.83	1996	.40	1989
Dec	3.20	2.32	4.82	1982	3	9.29	1982	.32	1989
Ann	46.02	45.50	9.60	Jul 1960	25	14.24	Jun 2000	.01	Aug 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.6	3.7	1.4	.6
Feb	7.2	4.3	1.5	.7
Mar	9.4	6.5	3.1	1.3
Apr	9.9	6.5	3.2	1.2
May	11.7	7.8	3.7	1.4
Jun	9.6	7.1	3.6	1.6
Jul	7.4	4.9	1.8	.8
Aug	7.7	5.1	2.0	.8
Sep	8.9	6.2	2.8	1.6
Oct	7.8	5.1	2.5	1.2
Nov	8.2	5.7	3.1	1.8
Dec	7.8	4.8	2.3	.9
Ann	102.2	67.7	31.0	13.9

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	.24	.41	.71	1.01	1.32	1.68	2.10	2.61	3.32	4.48	5.60
Feb	.48	.69	1.05	1.37	1.70	2.05	2.45	2.94	3.57	4.60	5.57
Mar	1.08	1.47	2.08	2.61	3.14	3.69	4.31	5.04	5.99	7.49	8.90
Apr	1.14	1.55	2.17	2.73	3.27	3.84	4.47	5.23	6.21	7.75	9.20
May	1.96	2.43	3.10	3.66	4.18	4.72	5.30	5.97	6.83	8.14	9.34
Jun	1.31	1.80	2.57	3.25	3.92	4.63	5.42	6.36	7.59	9.54	11.37
Jul	.48	.75	1.20	1.64	2.09	2.58	3.14	3.83	4.75	6.26	7.70
Aug	.31	.53	.94	1.36	1.81	2.31	2.91	3.66	4.68	6.37	8.02
Sep	1.13	1.58	2.29	2.92	3.55	4.22	4.97	5.86	7.03	8.89	10.63
Oct	.91	1.26	1.80	2.29	2.77	3.28	3.85	4.53	5.41	6.82	8.14
Nov	1.09	1.53	2.22	2.84	3.47	4.12	4.86	5.75	6.91	8.75	10.48
Dec	.50	.78	1.24	1.68	2.14	2.64	3.21	3.91	4.85	6.37	7.82
Ann	31.65	34.40	37.94	40.63	43.04	45.37	47.79	50.47	53.73	58.47	62.58

\+ 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: 1890-2001
(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	2.6	.3	#	0	9.0	1977	10	19.3	1977	10	1996	2	2	1977	1.0	.8	.3	.2	.0	2.3	.9	.3	@
Feb	2.1	1.1	#	0	5.5	1975	23	8.6	1985	6+	1985	6	1+	1985	1.2	.8	.3	@	.0	1.8	.9	.3	.0
Mar	.2	.0	#	0	2.0	1974	21	2.0	1974	9	1999	14	1	1989	.2	.1	.0	.0	.0	.3	.2	.1	.0
Apr	#	.0	0	0	#	1984	20	#+	1984	#+	1984	20	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1995	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.1	1993	30	.1	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.8	.0	#	0	5.0	1971	23	5.8	1975	3	1971	23	#	1995	.3	.2	.1	.1	.0	.1	@	.0	.0
Dec	1.1	.0	#	0	5.5	1984	5	6.5	1984	6+	1984	7	1+	1984	.6	.5	.2	@	.0	.9	.1	.1	.0
Ann	6.8	1.4	N/A	N/A	9.0	Jan 1977	10	19.3	Jan 1977	10	Jan 1996	2	2	Jan 1977	3.3	2.4	.9	.3	.0	5.4	2.1	.8	.0

+ Also occurred on an earlier date(s) #Denotes trace amounts

(1) Derived from Snow Climatology and 1971-2000 daily data

@ Denotes mean number of days greater than 0 but less than .05

(2) Derived from 1971-2000 daily data

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

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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	5/08	5/03	4/29	4/26	4/23	4/20	4/17	4/13	4/08
32	4/25	4/20	4/16	4/13	4/10	4/07	4/04	3/31	3/26
28	4/13	4/08	4/04	4/01	3/29	3/26	3/23	3/19	3/14
24	4/01	3/26	3/22	3/19	3/16	3/13	3/09	3/05	2/28
20	3/25	3/16	3/10	3/05	2/28	2/23	2/18	2/11	2/03
16	3/14	3/05	2/27	2/21	2/16	2/11	2/05	1/30	1/21

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	9/25	9/30	10/03	10/07	10/10	10/13	10/16	10/19	10/25
32	10/07	10/13	10/17	10/20	10/24	10/27	10/30	11/03	11/09
28	10/19	10/25	10/30	11/03	11/06	11/10	11/14	11/18	11/25
24	10/29	11/04	11/09	11/12	11/16	11/20	11/23	11/28	12/04
20	11/06	11/13	11/19	11/23	11/28	12/02	12/07	12/12	12/19
16	11/13	11/23	11/30	12/06	12/11	12/17	12/23	12/30	1/09

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	192	184	178	173	169	164	159	154	145
32	220	212	206	201	196	191	186	180	172
28	242	235	230	226	222	218	213	208	201
24	268	260	254	249	245	240	235	229	221
20	307	295	286	279	272	265	258	249	237
16	334	316	307	300	293	287	280	272	261

***** 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	953	710	520	246	90	8	0	4	42	217	536	840	4166
60	798	576	373	136	33	1	0	0	12	112	397	689	3127
57	708	498	289	85	15	0	0	0	5	68	318	603	2589
55	653	447	238	59	8	0	0	0	2	46	270	545	2268
50	509	328	135	18	1	0	0	0	0	13	170	408	1582
32	136	60	4	0	0	0	0	0	0	0	10	84	294

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	206	274	506	761	1036	1251	1453	1421	1138	832	466	267	9611
55	10	17	28	129	331	561	740	708	450	165	36	15	3190
57	3	12	17	96	276	501	678	646	393	125	24	11	2782
60	0	7	8	56	201	411	585	553	310	76	13	4	2224
65	0	0	0	17	103	269	430	402	190	26	2	0	1439
70	0	0	0	3	40	147	279	260	101	5	0	0	835

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	79	156	317	543	800	1025	1217	1183	914	605	287	113	79	235	552	1095	1895	2920	4137	5320	6234	6839	7126	7239
45	36	86	206	400	645	875	1062	1028	765	456	183	60	36	122	328	728	1373	2248	3310	4338	5103	5559	5742	5802
50	12	42	117	272	492	725	907	873	615	316	103	23	12	54	171	443	935	1660	2567	3440	4055	4371	4474	4497
55	1	19	61	162	345	575	752	718	470	196	50	7	1	20	81	243	588	1163	1915	2633	3103	3299	3349	3356
60	0	3	27	85	210	425	597	564	335	102	15	0	0	3	30	115	325	750	1347	1911	2246	2348	2363	2363
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	52	106	196	335	513	705	841	806	606	382	171	74	52	158	354	689	1202	1907	2748	3554	4160	4542	4713	4787

(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