## 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

COOP ID: 032574

**Station: FORT SMITH RGNL AP, AR** 

Climate Division: AR 4 NWS Call Sign: FSM Elevation: 449 Feet Lat: 35°20N Lon: 94°22W

									r	Гетр	eratui	re (°F)									
	Mea	<b>n</b> (1)						Extr	emes						Days (1) emp 65		Mean	Numb	er of I	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	48.1	27.8	38.0	81	1952	19	45.4	1990	-11	1918	12	26.0	1979	851	0	.0	.0	14.5	3.3	22.6	.2
Feb	54.8	32.6	43.7	87	1911	1	51.4	1976	-9	1951	2	32.3	1978	611	0	.0	.0	18.3	1.7	15.1	@
Mar	64.2	40.9	52.6	94	1974	31	57.2	1974	7	1948	11	45.8	1996	409	8	.0	.1	27.3	.1	6.5	.0
Apr	73.2	49.0	61.1	95	1987	19	67.4	1981	22	1975	3	55.3	1983	172	43	.0	.5	29.5	.0	1.0	.0
May	80.0	58.9	69.5	99	1934	31	74.6	1987	34	1903	1	64.6	1976	32	157	.0	2.2	31.0	.0	.0	.0
Jun	87.7	67.2	77.5	106+	1936	20	81.9	1994	47+	1964	3	73.1	1974	1	364	.3	12.7	30.0	.0	.0	.0
Jul	92.9	71.4	82.2	111+	1954	13	86.7	1993	50	1972	6	78.4	1972	0	520	3.8	23.2	31.0	.0	.0	.0
Aug	92.6	70.3	81.5	113	1936	10	87.0	2000	51+	1915	31	76.3	1992	0	495	4.6	22.0	31.0	.0	.0	.0
Sep	84.9	62.9	73.9	109+	1998	4	80.5	1998	33	1967	29	66.6	1974	23	275	.9	10.3	30.0	.0	.0	.0
Oct	75.0	50.5	62.8	96+	1938	1	67.7	1971	22+	1917	30	56.0	1976	145	61	.0	1.2	30.8	.0	.8	.0
Nov	61.4	39.5	50.5	86+	1915	8	57.4	1999	8	1976	29	42.7	1976	448	5	.0	.0	24.9	.1	8.4	.0
Dec	50.9	31.1	41.0	82	1951	31	48.8	1984	-5	1989	23	29.3	1983	745	1	.0	.0	17.2	1.8	18.7	.1
Ann	72.1	50.2	61.2	113	Aug 1936	10	87.0	Aug 2000	-11	Jan 1918	12	26.0	Jan 1979	3437	1929	9.6	72.2	315.5	7.0	73.1	.3

<sup>+</sup> Also occurred on an earlier date(s)

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

Issue Date: February 2004 032-A

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1900-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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COOP ID: 032574

Climate Division: AR 4 NWS Call Sign: FSM Elevation: 449 Feet Lat: 35°20N Lon: 94°22W

										Pı	ecipi	tation	(incl	nes)										
	Mea	ans/	P	recip	itatio	on Total						ays (3	)	Proba	ability th		nonthly/	annual j indic	precipita ated am	nount	ies (1)		less tha	ın the
	Medi	ans(1)				Extremes	8			և	aily Pre	cipitatio	n		Th	ese value	s were det	ermined	from the i	incomplet	te gamma	distributi	on	
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	2.37	2.03	4.83	1949	24	7.76	1998	.20	1986	7.8	4.8	1.3	.5	.39	.60	.94	1.27	1.60	1.96	2.38	2.89	3.56	4.66	5.71
Feb	2.59	2.27	3.23	1949	13	6.50	1997	.70	1976	7.3	4.2	1.6	.7	.53	.76	1.14	1.49	1.84	2.21	2.64	3.15	3.82	4.90	5.92
Mar	3.94	4.00	3.60	1953	17	8.24	1973	.80	1971	10.1	6.4	2.6	.9	1.32	1.69	2.24	2.70	3.15	3.61	4.11	4.70	5.45	6.62	7.70
Apr	3.91	3.70	5.12	1964	3	8.48	1990	.56	1989	9.7	6.2	2.6	1.1	.88	1.24	1.82	2.33	2.85	3.40	4.01	4.75	5.71	7.25	8.70
May	5.29	5.04	4.33	1968	13	13.45	1990	1.26	1988	10.9	7.6	3.5	1.5	1.56	2.06	2.82	3.47	4.11	4.77	5.49	6.35	7.46	9.20	10.81
Jun	4.28	4.27	5.41	1945	10	8.80	2000	.63	1990	9.1	6.4	3.1	1.3	1.33	1.74	2.34	2.86	3.36	3.88	4.45	5.12	5.99	7.34	8.58
Jul	3.19	2.61	5.73	1960	23	10.38	1994	.18	1993	6.8	4.8	2.0	.9	.35	.59	1.03	1.47	1.95	2.49	3.12	3.90	4.96	6.73	8.44
Aug	2.56	2.37	5.09	1971	6	6.57	1971	.00	2000	6.6	4.2	1.8	.6	.21	.50	.91	1.29	1.68	2.10	2.58	3.17	3.95	5.23	6.45
Sep	3.61	3.47	3.41	1945	12	8.96	1974	.26	1994	8.2	5.5	2.4	1.3	.63	.94	1.47	1.96	2.47	3.02	3.64	4.40	5.41	7.04	8.60
Oct	3.94	3.78	5.30	1951	27	11.80	1984	.17	1978	8.0	5.4	2.6	1.3	.55	.88	1.44	1.99	2.56	3.19	3.92	4.81	6.01	7.98	9.87
Nov	4.80	4.13	6.81	1973	24	13.92	1994	.60	1989	7.9	6.0	3.3	1.7	.95	1.39	2.09	2.74	3.39	4.09	4.88	5.84	7.10	9.12	11.05
Dec	3.39	3.15	5.02	1927	13	10.09	1971	.27	1981	7.8	5.1	2.5	1.0	.55	.84	1.34	1.80	2.28	2.81	3.41	4.13	5.11	6.69	8.20
Ann	43.87	44.22	6.81	Nov 1973	24	13.92	Nov 1994	.00	Aug 2000	100.2	66.6	29.3	12.8	30.02	32.66	36.06	38.66	40.98	43.22	45.55	48.14	51.28	55.86	59.83

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1900-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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**COOP ID: 032574** 

Station: FORT SMITH RGNL AP, AR

Climate Division: AR 4 NWS Call Sign: FSM Elevation: 449 Feet Lat: 35°20N Lon: 94°22W

		Median         Mean         Median         Snow Fall         Snow Depth         Snow Depth         Snow Depth           .8         #         0         11.0         1988         6         13.0         1977         11+         1988         8         2+         1988           .3         #         0         5.5         1975         23         10.0         1978         5+         1985         5         1+         1988           .0         #         0         3.0         1982         5         3.3         1989         3         1989         6         #         1999           .0         0         0         #         1973         9         #+         1973         0         0         0         0         0           .0         #         0         .0         0 <th></th> <th>Mea</th> <th>n Nu</th> <th>mber</th> <th>of Day</th> <th><b>ys</b> (1)</th> <th></th> <th></th>															Mea	n Nu	mber	of Day	<b>ys</b> (1)		
	Mean	s/Medi	ians (1)	)					Extre	mes (2)							ow Fa					Depth esholo	
Month	Snow Fall Mean	Fall	Depth	Depth	Daily Snow	Year	Day	Monthly Snow	Year	Daily Snow	Year	Day	Monthly Mean Snow	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	3.1	.8	#	0	11.0	1988	6	13.0	1977	11+	1988	8	2+	1988	2.0	.9	.3	.1	@	2.8	.9	.4	.1
Feb	1.8	.3	#	0	5.5	1975	23	10.0	1978	5+	1985	5	1+	1985	1.4	.7	.2	@	.0	1.6	.5	.2	.0
Mar	.7	.0	#	0	3.0	1982	5	3.3	1989	3	1989	6	#	1994	.7	.2	.1	.0	.0	.2	@	.0	.0
Apr	#	.0	0	0	#	1973	9	#+	1973	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1997	.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	#	1993	29	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.6	.0	#	0	4.0	1976	14	4.7	1976	4	1976	14	#	1976	.4	.2	@	.0	.0	.1	@	.0	.0
Dec	.9	.0	#	0	6.7	1975	25	7.2	1975	2+	1990	27	#	1990	.7	.3	@	@	.0	.5	.0	.0	.0
Ann	7.1	1.1	N/A	N/A	11.0	Jan 1988	6	13.0	Jan 1977	11+	Jan 1988	8	2+	Jan 1988	5.2	2.3	.6	.1	@	5.2	1.4	.6	.1

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

## Climatography of the United States No. 20

1971-2000

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**COOP ID: 032574** 

Station: FORT SMITH RGNL AP, AR

**Climate Division: AR 4** 

Lat: 35°20N **NWS Call Sign: FSM Elevation: 449 Feet** Lon: 94°22W

				Freez	e Data									
			Spri	ng Freeze D	ates (Month	/Day)								
Spring Freeze Dates (Month/Day)   Temp (F)     Probability of later date in spring (thru Jul 31) than indicated(*)														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	4/25	4/21	4/18	4/16	4/14	4/11	4/09	4/06	4/02					
32	4/14	4/10	4/06	4/03	3/31	3/29	3/26	3/22	3/18					
28	4/07	3/31	3/26	3/22	3/19	3/15	3/11	3/06	2/27					
24	3/25	3/17	3/12	3/07	3/03	2/27	2/22	2/17	2/09					
20	3/11	3/03	2/26	2/21	2/16	2/12	2/07	2/01	1/24					
16	2/27	2/17	2/10	2/04	1/29	1/23	1/15	1/03	0/00					
•			Fal	l Freeze Da	tes (Month/I	Day)								
Tomp (F)		Pro	bability of ea	arlier date i	n fall (begini	ning Aug 1) t	han indicate	ed(*)						
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	10/03	10/08	10/11	10/14	10/17	10/20	10/23	10/27	11/01					
32	10/18	10/22	10/26	10/28	10/31	11/03	11/05	11/09	11/13					
28	10/29	11/03	11/07	11/10	11/13	11/16	11/20	11/24	11/29					
24	11/05	11/12	11/17	11/21	11/25	11/29	12/03	12/08	12/15					
20	11/16	11/23	11/28	12/02	12/06	12/10	12/14	12/19	12/26					
16	12/01	12/10	12/17	12/23	12/29	1/04	1/11	1/22	0/00					
•				Freeze F	ree Period									
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	)						
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	206	199	194	190	186	182	178	173	166					
32	233	226	221	217	213	209	204	199	192					
28	265	256	250	244	239	234	228	222	213					
24	299	288	280	273	266	260	253	245	234					
20	321	311	304	298	292	286	280	273	263					
16	>365	>365	>365	>365	333	321	312	303	292					

<sup>\*</sup> 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.

Complete documentation available from:

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Climate Division: AR 4 NWS Call Sign: FSM Elevation: 449 Feet Lat: 35°20N Lon: 94°22W

				Deg	ree Days t	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	851	611	409	172	32	1	0	0	23	145	448	745	3437
60	685	468	253	71	8	0	0	0	4	49	307	593	2438
57	600	392	183	37	3	0	0	0	0	24	236	507	1982
55	541	344	144	22	1	0	0	0	0	13	194	450	1709
50	404	238	69	4	0	0	0	0	0	2	111	318	1146
32	77	28	1	0	0	0	0	0	0	0	3	41	150

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	232	343	627	861	1147	1351	1543	1520	1245	941	545	302	10657
55	5	17	77	206	435	661	830	807	556	254	58	11	3917
57	3	11	56	163	374	601	768	745	497	206	41	7	3472
60	1	4	31	107	287	511	675	652	412	141	22	3	2846
65	0	0	8	43	157	364	520	495	275	61	5	1	1929
70	0	0	1	10	64	219	365	344	161	18	0	0	1182

										Gro	wing ]	Degre	e Uni	ts (2)										
Base	Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Oct         Nov         Dec           40         95         189         395         630         908         1124         1303         1281         1013         705         331         130															Growi	ng Degre	ee Units (	Accumu	lated Mo	nthly)			
														Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	95	189	395	630	908	1124	1303	1281	1013	705	331	130	95	284	679	1309	2217	3341	4644	5925	6938	7643	7974	8104
45	44         106         267         483         753         974         1148         1126         863         550         212												44	150	417	900	1653	2627	3775	4901	5764	6314	6526	6587
50	19         54         160         342         598         824         993         971         713         399         126												19	73	233	575	1173	1997	2990	3961	4674	5073	5199	5228
55	3	22	81	213	444	674	838	816	564	261	62	11	3	25	106	319	763	1437	2275	3091	3655	3916	3978	3989
60	0	3	34	110	295	524	683	661	421	148	22	0	0	3	37	147	442	966	1649	2310	2731	2879	2901	2901
Base	e Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		•
50/86	<b>0/86</b> 71 134 250 393 600 771 882 863 679 451 205												71	205	455	848	1448	2219	3101	3964	4643	5094	5299	5387

(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

#### 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

### 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