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: ALLATOONA DAM 2, GA **COOP ID: 090181**

Climate Division: GA 1 **NWS Call Sign:** **Elevation: 975 Feet** **Lat: 34˚10N** **Lon: 84˚44W**

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	49.5	29.7	39.6	77	1975	30	51.3	1974	-6+	1963	25	28.3	1977	787	0	.0	.0	16.0	2.1	20.5	.4
Feb	54.6	31.9	43.3	80	1977	27	50.7	1990	2+	1996	5	34.9	1978	609	0	.0	.0	18.7	.8	16.5	.0
Mar	63.9	39.3	51.6	87+	1995	24	57.5	1997	7	1960	5	45.4	1971	419	4	.0	.0	27.2	.1	7.7	.0
Apr	72.2	46.6	59.4	92+	1970	24	64.6	1981	27	1992	3	54.6	1983	192	24	.0	.1	29.6	.0	1.8	.0
May	78.9	56.0	67.5	95+	1996	25	71.9	1998	35+	1952	15	60.8	1997	62	138	.0	1.1	31.0	.0	.0	.0
Jun	85.7	64.3	75.0	104	1952	29	78.7	1981	43	1956	3	70.6	1997	3	303	.1	7.9	30.0	.0	.0	.0
Jul	89.1	68.1	78.6	104+	1977	9	82.7	1993	52+	1967	16	75.5	1976	0	422	.4	13.9	31.0	.0	.0	.0
Aug	87.9	67.5	77.7	103+	2000	19	80.9	1995	51	1952	27	73.9	1992	0	393	.3	10.4	31.0	.0	.0	.0
Sep	81.6	61.8	71.7	102	1957	2	76.1	1998	34	1967	30	68.9	1974	12	212	.0	3.3	30.0	.0	.0	.0
Oct	71.4	49.7	60.6	97	1954	6	67.5	1984	26	1954	31	54.9	1987	184	46	.0	.0	30.9	.0	.7	.0
Nov	61.8	41.4	51.6	85	1961	3	59.9	1985	12	1970	24	43.7	1976	408	7	.0	.0	27.4	@	8.6	.0
Dec	52.4	33.6	43.0	78+	1998	7	50.8	1984	-2	1962	13	34.7	1989	681	0	.0	.0	19.1	.8	18.0	.1
Ann	70.8	49.2	60.0	104+	Jul 1977	9	82.7	Jul 1993	-6+	Jan 1963	25	28.3	Jan 1977	3357	1549	.8	36.7	321.9	3.8	73.8	.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/normals/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1952-2001

(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	5.42	4.89	3.86	1964	25	11.60	1972	.88	1981
Feb	4.32	4.40	3.54	1961	21	8.48	1990	.51	1978
Mar	5.47	4.74	5.32	1963	13	12.09	1976	1.80	1985
Apr	4.44	4.21	3.89	1957	5	8.26	1979	1.18	1976
May	4.19	4.11	3.03	1959	20	10.08	1973	1.27	1992
Jun	3.50	3.36	2.32	1976	20	9.81	1989	.15	1988
Jul	4.64	4.44	3.78	1958	9	9.60	1984	.90	1993
Aug	4.11	3.74	5.89	1991	12	8.92	1974	1.11	1988
Sep	4.03	3.68	4.85	1997	25	9.53	2000	.33	1984
Oct	3.44	3.28	4.50	1958	1	10.80	1995	.40	1978
Nov	4.41	4.16	3.35	1991	22	7.78	1992	2.01	1971
Dec	3.98	3.99	5.40	1961	12	7.66	1983	.92	1980
Ann	51.95	53.34	5.89	Aug 1991	12	12.09	Mar 1976	.15	Jun 1988

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.7	8.1	3.6	1.6
Feb	9.6	6.2	3.2	1.3
Mar	10.8	8.0	3.2	1.6
Apr	9.5	6.5	3.0	1.3
May	10.5	7.3	2.8	1.0
Jun	9.6	6.2	2.4	.8
Jul	11.9	7.9	2.8	1.3
Aug	10.4	6.3	2.5	.9
Sep	9.1	6.0	2.6	1.0
Oct	6.7	4.5	2.2	.9
Nov	9.4	6.4	2.7	1.5
Dec	9.7	6.5	3.0	1.2
Ann	118.9	79.9	34.0	14.4

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	2.08	2.58	3.30	3.90	4.47	5.05	5.68	6.41	7.33	8.75	10.05
Feb	1.58	1.98	2.57	3.06	3.52	4.00	4.52	5.12	5.89	7.08	8.17
Mar	1.91	2.42	3.18	3.81	4.41	5.04	5.72	6.51	7.52	9.08	10.52
Apr	1.46	1.88	2.50	3.03	3.53	4.06	4.63	5.30	6.16	7.50	8.73
May	1.35	1.75	2.34	2.84	3.32	3.82	4.37	5.01	5.83	7.11	8.29
Jun	.80	1.12	1.63	2.10	2.56	3.04	3.59	4.25	5.11	6.48	7.76
Jul	1.56	2.00	2.65	3.19	3.72	4.25	4.84	5.53	6.42	7.79	9.05
Aug	1.33	1.72	2.30	2.79	3.26	3.75	4.28	4.91	5.71	6.96	8.12
Sep	.80	1.16	1.75	2.29	2.84	3.43	4.10	4.90	5.97	7.68	9.30
Oct	.56	.85	1.35	1.83	2.32	2.85	3.46	4.20	5.19	6.80	8.34
Nov	2.06	2.44	2.97	3.40	3.80	4.20	4.63	5.12	5.73	6.66	7.49
Dec	1.37	1.74	2.29	2.76	3.20	3.66	4.16	4.74	5.49	6.64	7.71
Ann	38.07	40.80	44.26	46.89	49.21	51.44	53.75	56.29	59.36	63.81	67.64

+ 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: 1952-2001
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	-99.9	-99.9	0	0
Feb	-99.9	-99.9	0	0
Mar	-99.9	-99.9	0	0
Apr	-99.9	-99.9	0	0
May	-99.9	-99.9	0	0
Jun	-99.9	-99.9	0	0
Jul	-99.9	-99.9	0	0
Aug	-99.9	-99.9	0	0
Sep	-99.9	-99.9	0	0
Oct	-99.9	-99.9	0	0
Nov	-99.9	-99.9	0	0
Dec	-99.9	-99.9	0	0
Ann	-9.9	-9.9	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	.0	0	0	.0	0	0	0	0	0	0
Feb	#	1974	26	#	1974	0	0	0	0	0
Mar	.0	0	0	.0	0	0	0	0	0	0
Apr	.0	0	0	.0	0	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.0	0	0	.0	0	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	.0	0	0	.0	0	0	0	0	0	0
Ann	#	Feb 1974	26	#	Feb 1974	0	0	0	0	0

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	-9.9	-9.9	-9.9	-9.9	-9.9
Mar	-9.9	-9.9	-9.9	-9.9	-9.9
Apr	-9.9	-9.9	-9.9	-9.9	-9.9
May	-9.9	-9.9	-9.9	-9.9	-9.9
Jun	-9.9	-9.9	-9.9	-9.9	-9.9
Jul	-9.9	-9.9	-9.9	-9.9	-9.9
Aug	-9.9	-9.9	-9.9	-9.9	-9.9
Sep	-9.9	-9.9	-9.9	-9.9	-9.9
Oct	-9.9	-9.9	-9.9	-9.9	-9.9
Nov	-9.9	-9.9	-9.9	-9.9	-9.9
Dec	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	-9.9	-9.9	-9.9	-9.9	-9.9

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	.0	.0	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	.0	.0	.0	.0
Ann	.0	.0	.0	.0

+ 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	4/28	4/24	4/21	4/18	4/16	4/14	4/11	4/08	4/04
32	4/17	4/13	4/09	4/06	4/04	4/01	3/29	3/26	3/21
28	4/06	3/31	3/27	3/23	3/19	3/16	3/12	3/07	3/01
24	3/21	3/14	3/09	3/05	3/01	2/24	2/20	2/15	2/08
20	3/09	2/28	2/22	2/17	2/12	2/07	2/01	1/26	1/17
16	3/03	2/22	2/16	2/10	2/04	1/30	1/24	1/17	1/06

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	10/05	10/10	10/14	10/17	10/20	10/23	10/27	10/30	11/05
32	10/23	10/27	10/31	11/02	11/05	11/07	11/10	11/13	11/18
28	10/26	11/02	11/08	11/12	11/16	11/20	11/24	11/30	12/07
24	11/09	11/18	11/24	11/29	12/04	12/09	12/15	12/21	12/29
20	11/30	12/08	12/13	12/18	12/23	12/27	1/01	1/06	1/14
16	12/07	12/16	12/23	12/29	1/03	1/08	1/14	1/21	2/02

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	202	197	193	190	187	184	180	177	171
32	233	227	222	218	214	211	207	202	195
28	272	261	254	247	241	235	228	221	210
24	306	296	289	284	278	273	267	260	251
20	347	333	325	318	311	305	298	290	279
16	>365	364	346	337	329	322	314	306	295

***** 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	787	609	419	192	62	3	0	0	12	184	408	681	3357
60	640	469	279	94	20	0	0	0	2	95	275	531	2405
57	553	389	206	53	8	0	0	0	0	58	206	444	1917
55	496	337	164	33	4	0	0	0	0	40	167	388	1629
50	363	215	82	8	0	0	0	0	0	12	87	261	1028
32	63	10	0	0	0	0	0	0	0	0	0	23	96

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	299	325	609	822	1099	1291	1445	1416	1191	885	589	365	10336
55	19	8	60	165	390	601	732	703	501	212	66	17	3474
57	14	3	40	125	332	541	670	641	441	168	45	11	3031
60	8	0	20	76	250	451	577	548	352	112	24	5	2423
65	0	0	4	24	138	303	422	393	212	46	7	0	1549
70	0	0	0	4	61	169	270	242	98	13	0	0	857

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	113	170	364	585	850	1052	1197	1163	945	623	330	149	113	283	647	1232	2082	3134	4331	5494	6439	7062	7392	7541
45	50	94	239	435	695	902	1042	1008	795	468	200	77	50	144	383	818	1513	2415	3457	4465	5260	5728	5928	6005
50	25	40	137	299	540	752	887	853	645	321	110	36	25	65	202	501	1041	1793	2680	3533	4178	4499	4609	4645
55	3	14	65	181	392	602	732	698	496	196	48	11	3	17	82	263	655	1257	1989	2687	3183	3379	3427	3438
60	0	0	24	90	247	452	577	543	349	90	12	0	0	0	24	114	361	813	1390	1933	2282	2372	2384	2384
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	71	118	232	366	555	721	828	811	635	384	198	91	71	189	421	787	1342	2063	2891	3702	4337	4721	4919	5010

(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.
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