

# Climatography of the United States No. 20

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

Station: AURORA RESEARCH FARM, NY

1971-2000

COOP ID: 300331

Climate Division: NY10

NWS Call Sign:

Elevation: 830 Feet

Lat: 42°44N

Lon: 76°39W

## 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	31.4	16.0	23.7	68	1967	26	33.9	1990	-21	1982	22	14.4	1977	1281	0	.0	.0	1.5	17.0	29.1	3.3
Feb	33.3	16.9	25.1	67+	1981	20	32.4	1984	-19	1979	11	12.9	1979	1118	0	.0	.0	2.6	13.6	25.6	2.0
Mar	42.5	25.1	33.8	85	1986	31	41.2	1973	-11	1993	19	24.9	1984	969	0	.0	.0	7.8	6.5	23.9	.3
Apr	54.9	35.7	45.3	93	1990	29	50.6	1991	10+	1995	5	38.5	1975	591	0	.0	@	19.0	.6	12.4	.0
May	68.0	47.2	57.6	94	1987	31	64.9	1991	24	1962	9	50.7	1997	262	33	.0	.6	29.6	.0	1.2	.0
Jun	76.8	56.5	66.7	96	1991	28	70.7	1991	34+	1980	9	62.2	1985	55	104	.0	1.4	30.0	.0	.0	.0
Jul	81.5	60.9	71.2	101	1988	17	74.6+	1999	43	1979	5	67.6	1992	10	202	@	3.5	31.0	.0	.0	.0
Aug	79.7	59.4	69.6	97+	1991	31	73.3	1988	37	1965	30	66.6	1982	16	157	.0	1.6	31.0	.0	.0	.0
Sep	71.9	52.2	62.1	98	1991	17	65.8	1971	27	1981	30	58.5	1975	118	29	.0	.6	29.9	.0	.2	.0
Oct	59.9	41.9	50.9	87	1963	8	57.7	1971	20	1976	27	45.8	1972	440	3	.0	.0	25.5	.0	5.1	.0
Nov	47.6	33.2	40.4	81	1982	3	47.1	1975	5	1976	30	34.1	1976	738	0	.0	.0	11.7	1.7	15.3	.0
Dec	36.6	22.7	29.7	69	1998	7	37.2	1998	-15	1980	25	17.2	1989	1096	0	.0	.0	3.3	10.4	26.1	.6
Ann	57.0	39.0	48.0	101	Jul 1988	17	74.6+	Jul 1999	-21	Jan 1982	22	12.9	Feb 1979	6694	528	@	7.7	222.9	49.8	138.9	6.2

+ 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/normal/usnormals.html](http://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: 1956-2001

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

009-A

# 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: AURORA RESEARCH FARM, NY**

**COOP ID: 300331**

**Climate Division: NY10**

**NWS Call Sign:**

**Elevation: 830 Feet Lat: 42°44N**

**Lon: 76°39W**

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	1.92	1.54	1.75	1996	20	4.75	1978	.48	1989	15.6	5.3	.9	.1	.46	.64	.92	1.17	1.42	1.68	1.98	2.33	2.79	3.52	4.21
Feb	1.88	1.67	2.24	1961	4	4.12	1971	.56	1987	12.6	5.0	.7	.2	.62	.79	1.06	1.28	1.49	1.72	1.96	2.24	2.61	3.18	3.70
Mar	2.50	2.28	1.83	1999	4	4.93	1994	1.11	1981	14.0	6.6	1.3	.3	1.20	1.41	1.71	1.94	2.16	2.38	2.62	2.89	3.22	3.73	4.18
Apr	3.28	3.01	1.91	1991	22	7.33	1993	.96	1975	15.1	8.1	2.1	.4	1.36	1.66	2.08	2.43	2.75	3.08	3.44	3.85	4.36	5.15	5.87
May	3.17	2.93	1.36	1988	17	6.96	1984	.95	1993	13.8	8.1	1.9	.4	.98	1.28	1.72	2.11	2.48	2.87	3.29	3.79	4.44	5.44	6.37
Jun	4.09	4.03	3.70	1972	22	11.37	1972	.89	1991	13.9	8.3	2.6	.8	1.39	1.77	2.34	2.82	3.28	3.75	4.27	4.87	5.64	6.84	7.94
Jul	3.31	3.30	2.85	1988	22	8.81	1992	1.00	1983	12.0	7.5	2.2	.5	1.34	1.65	2.08	2.43	2.76	3.10	3.46	3.89	4.42	5.23	5.97
Aug	3.61	3.25	2.84	1974	28	7.58	1974	1.43	1985	11.7	6.6	2.1	.8	1.41	1.75	2.22	2.62	2.99	3.37	3.78	4.25	4.85	5.77	6.61
Sep	4.21	3.57	3.91	1975	26	8.68	1975	2.09	1998	13.7	7.7	3.0	1.0	1.64	2.03	2.59	3.05	3.49	3.93	4.41	4.97	5.68	6.76	7.75
Oct	3.20	2.77	2.36	1977	17	6.67	1995	.96	1994	14.8	7.0	1.7	.7	1.18	1.48	1.91	2.27	2.61	2.96	3.34	3.78	4.35	5.21	6.00
Nov	3.36	3.06	2.73	1996	9	6.35	1996	.84	1998	14.6	8.0	1.9	.5	1.14	1.46	1.92	2.32	2.69	3.08	3.51	4.01	4.64	5.63	6.54
Dec	2.45	2.33	1.57	1978	25	4.92	1990	.72	2000	14.9	6.2	1.4	.2	.86	1.09	1.42	1.70	1.97	2.25	2.56	2.91	3.36	4.06	4.70
Ann	36.98	36.61	3.91	Sep 1975	26	11.37	Jun 1972	.48	Jan 1989	166.7	84.4	21.8	5.9	28.27	30.00	32.19	33.84	35.29	36.68	38.11	39.68	41.57	44.28	46.61

+ 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: 1956-2001

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

Complete documentation available from:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

# 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](http://www.ncdc.noaa.gov)

**Station: AURORA RESEARCH FARM, NY**

**COOP ID: 300331**

**Climate Division: NY10**

**NWS Call Sign:**

**Elevation: 830 Feet**

**Lat: 42°44N**

**Lon: 76°39W**

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	14.2	10.8	5	4	11.0	1987	3	39.3	1978	26	1978	22	19	1994	11.1	5.4	1.1	.4	.1	22.0	14.0	8.6	2.9
Feb	11.4	10.1	6	4	8.7	1978	7	24.5	1994	28	1994	10	22	1994	8.6	4.8	1.1	.3	.0	22.1	16.7	12.1	6.5
Mar	11.2	8.6	3	2	14.0	1993	14	42.0	1993	43	1994	4	23	1994	6.2	3.8	1.3	.5	.1	11.5	6.8	5.3	2.0
Apr	3.8	2.5	#	#	8.0	1990	5	13.0	1990	12	1983	21	2	1975	2.2	1.4	.5	.2	.0	2.5	1.4	.7	@
May	.4	.0	#	0	3.5	1996	12	3.5	1996	4	1996	12	#+	1996	.1	.1	.1	.0	.0	.1	.1	.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	.2	.0	#	0	2.9	1988	22	2.9	1988	3	1988	22	#+	1993	.2	.1	.0	.0	.0	.2	@	.0	.0
Nov	5.7	5.5	1	#	8.0	1995	15	14.0	1997	17	1995	17	4	1995	3.5	2.2	.6	.3	.0	4.8	2.0	.9	.2
Dec	12.0	10.0	2	2	17.0	1997	30	30.2	1997	20	1978	30	5	1995	8.3	4.7	1.1	.3	.1	14.8	6.7	3.5	.6
Ann	58.9	47.5	N/A	N/A	17.0	Dec 1997	30	42.0	Mar 1993	43	Mar 1994	4	23	Mar 1994	40.2	22.5	5.8	2.0	.3	78.0	47.7	31.1	12.2

+ 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:

[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

# Climatography of the United States

## No. 20 1971-2000

**Station: AURORA RESEARCH FARM, NY**

**COOP ID: 300331**

**Climate Division: NY10**

**NWS Call Sign:**

**Elevation: 830 Feet**

**Lat: 42° 44N**

**Lon: 76° 39W**

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	5/23	5/20	5/17	5/14	5/10	5/06	4/30
32	5/12	5/09	5/06	5/04	5/02	4/30	4/28	4/26	4/22
28	5/01	4/27	4/24	4/22	4/20	4/17	4/15	4/12	4/08
24	4/19	4/15	4/12	4/09	4/07	4/04	4/01	3/29	3/25
20	4/11	4/06	4/03	3/31	3/28	3/25	3/22	3/19	3/14
16	4/05	3/31	3/28	3/26	3/23	3/21	3/18	3/15	3/11
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	9/18	9/23	9/26	9/29	10/01	10/04	10/07	10/10	10/15
32	9/28	10/04	10/08	10/11	10/15	10/18	10/21	10/25	10/31
28	10/09	10/15	10/20	10/24	10/28	10/31	11/04	11/09	11/16
24	10/24	10/30	11/03	11/06	11/10	11/13	11/16	11/20	11/26
20	11/09	11/14	11/18	11/22	11/25	11/28	12/02	12/06	12/12
16	11/19	11/25	11/28	12/01	12/04	12/07	12/10	12/14	12/19
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	161	153	147	142	137	132	127	121	113
32	184	177	172	168	165	161	157	152	146
28	219	209	202	196	190	185	179	171	162
24	242	233	227	221	216	211	206	199	191
20	265	257	251	246	241	237	232	226	218
16	275	268	264	259	255	251	247	242	235

\* 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:

[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: AURORA RESEARCH FARM, NY**

**COOP ID: 300331**

**Climate Division: NY10**

**NWS Call Sign:**

**Elevation: 830 Feet Lat: 42°44N Lon: 76°39W**

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	1281	1118	969	591	262	55	10	16	118	440	738	1096	6694
60	1126	978	814	444	157	15	0	1	41	299	588	941	5404
57	1033	894	721	358	107	6	0	0	18	224	499	848	4708
55	971	838	659	305	80	3	0	0	10	181	441	786	4274
50	816	698	512	186	33	0	0	0	1	95	304	635	3280
32	315	254	115	5	0	0	0	0	0	0	24	192	905

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	58	60	170	404	793	1040	1216	1164	901	587	276	119	6788
55	0	0	0	14	160	352	503	451	221	54	3	0	1758
57	0	0	0	8	125	295	441	389	170	36	1	0	1465
60	0	0	0	3	82	215	348	297	103	17	0	0	1065
65	0	0	0	0	33	104	202	157	29	3	0	0	528
70	0	0	0	0	10	34	89	60	3	0	0	0	196

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	6	12	68	213	541	793	960	907	654	340	114	23	6	18	86	299	840	1633	2593	3500	4154	4494	4608	4631
45	1	1	33	125	396	643	805	752	505	213	60	6	1	2	35	160	556	1199	2004	2756	3261	3474	3534	3540
50	0	0	18	69	261	495	650	597	358	120	23	1	0	0	18	87	348	843	1493	2090	2448	2568	2591	2592
55	0	0	6	38	157	350	495	442	228	53	9	0	0	0	6	44	201	551	1046	1488	1716	1769	1778	1778
60	0	0	3	15	83	223	340	297	122	16	1	0	0	0	3	18	101	324	664	961	1083	1099	1100	1100
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	6	42	123	314	501	636	594	392	181	58	6	0	6	48	171	485	986	1622	2216	2608	2789	2847	2853

(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](http://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](http://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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)