

# Climatology of the United States

No. 20

1971-2000

Station: WHITEHALL, NY

COOP ID: 309389

Climate Division: NY 7

NWS Call Sign:

Elevation: 119 Feet

Lat: 43° 33N

Lon: 73° 24W

## 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	30.3	11.8	21.1	64+	1995	16	31.0	1990	-36+	1994	27	9.7	1994	1363	0	.0	.0	.9	17.3	29.4	7.6
Feb	33.5	12.9	23.2	61	1957	26	32.3	1981	-38	1979	18	11.0	1979	1171	0	.0	.0	1.3	12.8	26.2	5.9
Mar	44.0	24.0	34.0	84+	1998	31	40.6	1973	-27	1948	6	27.3	1984	961	0	.0	.0	7.8	3.9	24.7	1.3
Apr	58.0	36.3	47.2	93+	1962	28	51.9	1987	7	1965	1	40.3	1972	536	0	.0	.1	22.5	.1	11.6	.0
May	71.9	47.8	59.9	94+	1979	10	64.5	1998	27+	1966	10	55.4	1997	187	28	.0	.5	30.8	.0	.7	.0
Jun	80.3	56.3	68.3	102	2001	16	72.3	1976	31+	1958	7	64.7	1985	28	127	.0	2.4	30.0	.0	.0	.0
Jul	84.9	60.9	72.9	103	1953	18	77.1	1995	43	1979	5	69.0	1992	1	247	.1	5.9	31.0	.0	.0	.0
Aug	81.6	59.3	70.5	101	1949	11	75.3	1973	37+	1982	29	67.1	1982	11	179	.0	2.0	31.0	.0	.0	.0
Sep	72.5	51.6	62.1	99	1953	2	66.6	1971	26	1947	27	59.0	1984	119	30	.0	.3	30.0	.0	.4	.0
Oct	60.2	40.7	50.5	87	1963	8	56.7	1971	17	1972	20	46.0	1972	451	1	.0	.0	27.5	.0	6.3	.0
Nov	47.1	32.3	39.7	79	1950	3	45.9	1975	-2	1951	28	34.9	1996	759	0	.0	.0	11.0	1.5	17.5	.0
Dec	35.2	20.3	27.8	68	1998	7	34.3	1982	-28	1968	26	10.2	1989	1156	0	.0	.0	2.0	11.0	27.9	2.3
Ann	58.3	37.9	48.1	103	Jul 1953	18	77.1	Jul 1995	-38	Feb 1979	18	9.7	Jan 1994	6743	612	.1	11.2	225.8	46.6	144.7	17.1

+ 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: 1932-2001

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

086-A

# Climatology 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: WHITEHALL, NY**

**COOP ID: 309389**

**Climate Division: NY 7**

**NWS Call Sign:**

**Elevation: 119 Feet**

**Lat: 43°33N**

**Lon: 73°24W**

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	3.31	2.89	1.96	1998	8	7.34	1999	.60	1981	10.9	6.7	2.2	.8	.96	1.28	1.75	2.16	2.56	2.97	3.43	3.97	4.68	5.77	6.79
Feb	2.33	2.32	2.18	1974	23	5.75	1981	.17	1987	8.2	5.0	1.5	.4	.51	.73	1.07	1.38	1.69	2.02	2.39	2.84	3.42	4.36	5.24
Mar	2.97	3.14	2.44	1977	14	5.43	1977	.53	1981	10.3	6.5	2.0	.6	1.14	1.42	1.82	2.14	2.45	2.77	3.11	3.51	4.01	4.79	5.49
Apr	3.03	2.68	2.80	1968	25	6.65	1983	.50	1999	10.7	6.9	2.2	.5	1.05	1.34	1.75	2.10	2.44	2.78	3.16	3.60	4.16	5.04	5.84
May	3.76	3.06	2.75	1940	29	7.78	1983	1.23	1993	13.0	7.8	2.5	.7	1.24	1.60	2.12	2.57	2.99	3.44	3.92	4.49	5.21	6.34	7.38
Jun	3.29	2.81	4.00	1952	2	9.64	1998	1.34	1988	11.7	6.9	2.1	.6	1.29	1.59	2.03	2.39	2.73	3.07	3.44	3.88	4.43	5.27	6.04
Jul	4.09	3.79	3.72	1935	7	9.93	1996	1.26	1973	11.1	7.1	2.5	1.3	1.55	1.93	2.47	2.93	3.36	3.80	4.28	4.83	5.53	6.62	7.61
Aug	4.28	3.97	4.01	1998	11	9.36	1990	1.36	1982	10.8	7.0	2.5	1.2	1.74	2.13	2.69	3.14	3.58	4.01	4.48	5.03	5.72	6.77	7.73
Sep	3.77	3.69	4.25	1999	17	7.11	1981	1.28	2000	10.6	6.6	2.3	1.1	1.28	1.64	2.16	2.60	3.03	3.46	3.94	4.49	5.20	6.31	7.32
Oct	3.53	2.86	2.62	1990	24	7.74	1995	.50	1994	10.7	6.5	2.3	1.1	.97	1.30	1.81	2.26	2.69	3.15	3.66	4.26	5.03	6.26	7.40
Nov	3.52	3.37	2.44	1959	28	6.80	1972	1.47	1981	11.2	7.2	2.5	.7	1.67	1.98	2.39	2.73	3.05	3.36	3.69	4.08	4.55	5.28	5.93
Dec	2.85	2.65	2.89	1996	2	7.58	1973	.93	1989	10.1	6.1	2.0	.4	.79	1.06	1.48	1.83	2.18	2.55	2.96	3.44	4.06	5.04	5.95
Ann	40.73	39.94	4.25	Sep 1999	17	9.93	Jul 1996	.17	Feb 1987	129.3	80.3	26.6	9.4	30.12	32.21	34.86	36.87	38.64	40.35	42.11	44.04	46.38	49.76	52.67

+ 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: 1932-2001

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

Complete documentation available from:  
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Station: WHITEHALL, NY

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Climate Division: NY 7

NWS Call Sign:

Elevation: 119 Feet

Lat: 43°33N

Lon: 73°24W

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	18.6	16.9	0	0	18.0	1994	18	53.5	1994	#+	1992	28	0	0	6.9	5.0	2.2	1.2	.3	@	@	@	@
Feb	12.2	11.4	0	0	12.0	1983	7	36.0	1993	#+	1999	25	0	0	4.9	3.5	1.6	.8	.1	@	@	@	@
Mar	13.1	12.0	#	0	13.0	1984	13	33.6	1971	4	1990	21	#	1990	4.2	3.2	1.6	1.0	.2	@	@	@	@
Apr	2.5	.4	0	0	9.0	1983	16	16.6	1983	#+	2000	6	0	0	.8	.7	.4	.2	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	2000	.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	.5	2000	30	.5	2000	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	4.2	1.5	0	0	20.0	1971	26	26.5	1971	#+	2000	21	0	0	1.9	1.2	.5	.2	.0	.0	.0	.0	.0
Dec	13.2	12.7	#	0	15.0	1978	25	34.9	1972	5	1990	4	#	1990	5.0	3.7	1.6	.9	@	@	@	@	@
Ann	63.8	54.9	N/A	N/A	20.0	Nov 1971	26	53.5	Jan 1994	5	Dec 1990	4	#+	May 2000	23.7	17.3	7.9	4.3	.6	.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	5/27	5/22	5/18	5/15	5/12	5/09	5/06	5/03	4/28
32	5/11	5/08	5/05	5/03	5/01	4/29	4/27	4/25	4/21
28	4/30	4/27	4/25	4/23	4/21	4/19	4/17	4/15	4/11
24	4/21	4/17	4/14	4/11	4/09	4/06	4/04	3/31	3/27
20	4/10	4/06	4/03	4/01	3/29	3/27	3/24	3/22	3/17
16	4/04	3/31	3/27	3/25	3/22	3/20	3/17	3/14	3/09
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	9/22	9/24	9/26	9/28	9/30	10/02	10/05	10/08
32	9/24	9/29	10/02	10/04	10/06	10/09	10/11	10/14	10/19
28	10/06	10/11	10/15	10/19	10/22	10/25	10/29	11/02	11/07
24	10/18	10/24	10/28	10/31	11/04	11/07	11/10	11/14	11/20
20	10/31	11/05	11/10	11/13	11/17	11/20	11/23	11/28	12/04
16	11/14	11/19	11/22	11/25	11/28	12/01	12/04	12/08	12/12
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	154	148	145	141	138	135	132	128	123
32	173	168	164	160	157	154	151	147	142
28	203	196	191	187	183	180	176	171	164
24	229	222	217	212	208	204	200	195	188
20	255	247	241	236	231	227	222	216	207
16	270	263	258	254	250	246	242	237	230

\* 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:  
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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	1363	1171	961	536	187	28	1	11	119	451	759	1156	6743
60	1208	1031	806	392	90	4	0	0	41	304	609	1001	5486
57	1115	947	713	310	52	1	0	0	18	225	519	908	4808
55	1053	891	651	260	34	0	0	0	9	178	460	846	4382
50	898	751	499	153	8	0	0	0	1	86	317	695	3408
32	385	296	96	4	0	0	0	0	0	0	24	240	1045

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	46	49	159	458	864	1089	1269	1192	901	573	255	107	6962
55	0	0	0	24	185	399	556	479	220	37	0	0	1900
57	0	0	0	14	141	340	494	417	169	22	0	0	1597
60	0	0	0	6	86	253	401	324	102	9	0	0	1181
65	0	0	0	0	28	127	247	179	30	1	0	0	612
70	0	0	0	0	5	43	112	71	4	0	0	0	235

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	2	3	50	239	607	844	1017	933	644	327	92	7	2	5	55	294	901	1745	2762	3695	4339	4666	4758	4765
45	0	0	18	136	453	694	862	778	495	198	46	3	0	0	18	154	607	1301	2163	2941	3436	3634	3680	3683
50	0	0	8	70	307	544	707	623	351	100	15	0	0	0	8	78	385	929	1636	2259	2610	2710	2725	2725
55	0	0	3	32	185	396	552	469	220	42	4	0	0	0	3	35	220	616	1168	1637	1857	1899	1903	1903
60	0	0	0	11	94	252	398	317	115	9	0	0	0	0	0	11	105	357	755	1072	1187	1196	1196	1196
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	34	144	370	549	686	623	391	177	47	3	0	0	34	178	548	1097	1783	2406	2797	2974	3021	3024

(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)