

Climatology of the United States No. 20

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

Station: NEW YORK LA GUARDIA AP, NY

1971-2000

COOP ID: 305811

Climate Division: NY 4

NWS Call Sign: LGA

Elevation: 11 Feet

Lat: 40°47N

Lon: 73°53W

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	38.6	26.5	32.6	72	1950	26	40.9	1990	-3+	1994	19	22.7	1977	1008	0	.0	.0	4.6	9.1	21.7	.2
Feb	41.2	28.3	34.8	74	1949	15	41.1	1976	-2	1963	8	23.4	1979	861	0	.0	.0	5.6	6.1	18.3	@
Mar	49.6	35.1	42.3	83+	1998	27	47.1	2000	8	1980	1	35.4	1984	713	1	.0	.0	14.3	1.0	9.9	.0
Apr	60.0	44.4	52.2	91	1976	18	55.9	1976	22+	1982	7	47.5	1975	392	6	.0	@	26.3	@	1.1	.0
May	70.6	54.3	62.4	97	1996	20	68.6	1991	38+	1983	17	58.9	1983	136	54	.0	.8	30.9	.0	.0	.0
Jun	79.3	63.7	71.5	101	1952	26	75.1	1994	46	1972	11	66.1	1972	16	209	.0	3.1	30.0	.0	.0	.0
Jul	84.7	69.5	77.1	107	1966	3	81.9	1999	56+	1988	1	73.6	2000	1	377	.2	6.3	31.0	.0	.0	.0
Aug	83.1	68.7	75.9	104	2001	9	79.2	1988	51	1982	29	72.8	1982	1	336	.0	3.9	31.0	.0	.0	.0
Sep	75.6	61.6	68.6	102	1953	2	71.7	1998	42	1950	25	64.9	1975	40	141	.0	.9	30.0	.0	.0	.0
Oct	64.5	50.9	57.7	89	1949	10	62.8	1990	30	1969	24	52.6	1972	249	17	.0	.0	30.2	.0	@	.0
Nov	53.6	41.6	47.6	83+	1950	2	52.9	1975	17	1955	29	43.3	1976	524	1	.0	.0	19.4	.1	3.2	.0
Dec	43.7	32.0	37.9	75	1998	7	44.0	1998	-1	1980	25	25.7	1989	836	0	.0	.0	8.2	3.9	14.3	@
Ann	62.0	48.1	55.1	107	Jul 1966	3	81.9	Jul 1999	-3+	Jan 1994	19	22.7	Jan 1977	4777	1142	.2	15.0	261.5	20.2	68.5	.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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

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

064-A

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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	3.56	3.45	3.13	1979	21	8.68	1979	.51	1981	10.6	6.7	2.4	.7	1.03	1.37	1.88	2.32	2.75	3.20	3.70	4.28	5.04	6.23	7.33
Feb	2.75	2.83	2.19	1966	13	5.42	1981	.78	1987	9.6	5.7	1.7	.5	.98	1.24	1.62	1.93	2.23	2.54	2.88	3.27	3.77	4.54	5.24
Mar	3.93	3.73	3.15	1977	22	8.65	1980	1.11	1981	10.5	6.8	2.8	.9	1.33	1.70	2.25	2.71	3.15	3.60	4.10	4.68	5.43	6.58	7.65
Apr	3.68	3.05	2.85	1983	10	11.51	1983	.99	1985	10.6	6.5	2.4	1.0	1.15	1.50	2.02	2.47	2.90	3.34	3.83	4.41	5.15	6.30	7.37
May	4.16	3.81	2.82	1978	14	9.27	1984	1.12	1987	11.1	7.2	3.0	1.0	1.35	1.74	2.33	2.82	3.30	3.79	4.33	4.97	5.78	7.05	8.22
Jun	3.57	3.00	4.00	1987	21	8.15	1972	.50	1999	10.1	6.1	2.4	.8	.82	1.15	1.67	2.14	2.61	3.11	3.67	4.33	5.21	6.60	7.91
Jul	4.41	4.40	3.53	1997	15	12.33	1975	.56	1999	9.5	6.5	2.8	1.3	.92	1.33	1.97	2.56	3.15	3.79	4.50	5.36	6.49	8.29	10.00
Aug	4.09	4.07	6.40	1955	12	10.31	1990	.12	1995	9.0	6.3	2.7	1.1	.63	.98	1.57	2.13	2.72	3.36	4.09	4.99	6.19	8.15	10.03
Sep	3.77	3.52	4.63	1999	16	9.63	1975	1.16	1980	8.6	5.9	2.5	1.1	1.27	1.63	2.15	2.59	3.02	3.45	3.93	4.49	5.20	6.31	7.33
Oct	3.26	3.12	3.62	1996	19	7.32	1983	.64	2000	7.9	5.1	2.3	.8	.86	1.17	1.64	2.06	2.47	2.89	3.37	3.94	4.67	5.84	6.92
Nov	3.67	3.09	4.42	1972	8	9.92	1972	.31	1976	9.0	5.8	2.5	.9	.79	1.12	1.66	2.15	2.64	3.16	3.75	4.45	5.38	6.87	8.27
Dec	3.51	3.58	2.74	1992	11	7.70	1973	.61	1980	10.8	6.5	2.5	.9	.77	1.09	1.61	2.07	2.54	3.04	3.59	4.26	5.14	6.55	7.87
Ann	44.36	43.33	6.40	Aug 1955	12	12.33	Jul 1975	.12	Aug 1995	117.3	75.1	30.0	11.0	32.92	35.17	38.04	40.20	42.10	43.94	45.83	47.92	50.43	54.06	57.19

+ 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: 1948-2001

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

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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	7.6	6.1	1	0	17.1	1996	7	27.6	1996	25+	1996	10	6	1996	4.7	2.1	.7	.4	.1	7.8	3.3	1.7	.5
Feb	7.7	4.9	1	1	17.0	1983	11	26.4	1983	22+	1983	13	6	1994	3.7	1.8	.8	.5	.1	6.5	3.4	1.9	.7
Mar	3.8	2.6	#	0	11.4	1993	13	15.4	1993	9	1993	14	1+	1994	1.8	.9	.5	.2	@	2.4	1.1	.5	.0
Apr	.4	.0	#	0	8.2	1982	6	8.2	1982	8	1982	7	1	1982	.3	.1	@	@	.0	.1	.1	.1	.0
May	#	.0	#	0	#	1977	9	#	1977	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	#	1996	.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	#	2000	29	#+	2000	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	5.7	1989	23	6.1	1989	6+	1989	24	1	1989	.3	.1	@	@	.0	.2	.1	.1	.0
Dec	3.1	1.7	#	0	13.3	2000	30	17.7	1995	15+	1995	22	3	1995	2.3	.7	.3	.2	@	1.8	.8	.5	.2
Ann	23.0	15.3	N/A	N/A	17.1	Jan 1996	7	27.6	Jan 1996	25+	Jan 1996	10	6+	Jan 1996	13.1	5.7	2.3	1.3	.2	18.8	8.8	4.8	1.4

+ 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:

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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	4/20	4/17	4/14	4/12	4/10	4/08	4/06	4/04	3/31
32	4/12	4/08	4/05	4/03	4/01	3/29	3/27	3/24	3/20
28	4/03	3/30	3/26	3/24	3/21	3/19	3/16	3/13	3/09
24	3/27	3/22	3/18	3/15	3/12	3/09	3/06	3/02	2/25
20	3/20	3/14	3/10	3/06	3/02	2/27	2/23	2/19	2/12
16	3/11	3/04	2/26	2/21	2/17	2/12	2/08	2/02	1/25
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	10/21	10/27	10/31	11/03	11/06	11/10	11/13	11/17	11/22
32	11/06	11/10	11/14	11/17	11/20	11/23	11/26	11/29	12/04
28	11/16	11/21	11/24	11/28	11/30	12/03	12/07	12/10	12/15
24	11/24	11/30	12/04	12/07	12/10	12/14	12/17	12/21	12/27
20	12/04	12/10	12/14	12/17	12/21	12/24	12/28	1/01	1/07
16	12/11	12/18	12/23	12/27	1/01	1/05	1/09	1/14	1/21
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	230	223	218	214	210	205	201	196	189
32	252	245	240	236	233	229	225	220	213
28	272	266	261	257	254	250	246	241	235
24	296	288	282	277	273	268	263	258	250
20	316	308	302	297	293	288	283	277	269
16	345	335	328	322	317	311	305	299	289

* 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	1008	861	713	392	136	16	1	1	40	249	524	836	4777
60	850	706	548	242	50	1	0	0	4	139	374	686	3600
57	757	622	455	166	23	0	0	0	1	90	289	593	2996
55	695	566	394	122	12	0	0	0	0	64	237	538	2628
50	550	434	254	44	1	0	0	0	0	21	126	395	1825
32	140	83	11	0	0	0	0	0	0	0	1	64	299

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	130	146	330	603	942	1184	1395	1356	1091	793	468	226	8664
55	0	1	9	53	241	494	682	643	402	135	24	3	2687
57	0	1	6	36	190	435	620	581	344	100	15	1	2329
60	0	0	3	18	125	346	527	488	260	58	8	1	1834
65	0	0	1	6	54	209	377	336	141	17	1	0	1142
70	0	0	0	2	20	101	224	190	60	4	0	0	601

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	38	52	146	374	707	954	1155	1116	859	554	259	80	38	90	236	610	1317	2271	3426	4542	5401	5955	6214	6294
45	11	22	74	236	552	804	1000	961	709	403	145	34	11	33	107	343	895	1699	2699	3660	4369	4772	4917	4951
50	0	4	33	127	398	654	845	806	559	259	68	9	0	4	37	164	562	1216	2061	2867	3426	3685	3753	3762
55	0	0	6	58	248	504	690	651	410	142	23	2	0	0	6	64	312	816	1506	2157	2567	2709	2732	2734
60	0	0	3	19	133	355	535	496	266	63	6	0	0	0	3	22	155	510	1045	1541	1807	1870	1876	1876
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	8	22	63	174	401	639	816	789	556	282	99	29	8	30	93	267	668	1307	2123	2912	3468	3750	3849	3878

(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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
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.

- 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/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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