

# Climatology of the United States

## No. 20

### 1971-2000

**Station: ALBANY INTL AP, NY**

**COOP ID: 300042**

**Climate Division: NY 5**

**NWS Call Sign: ALB**

**Elevation: 275 Feet**

**Lat: 42°45N**

**Lon: 73°48W**

### 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	31.1	13.3	22.2	65	1995	15	32.8	1990	-28	1971	19	12.7	1994	1330	0	.0	.0	1.7	16.8	29.0	5.7
Feb	34.3	15.7	25.0	68	1997	22	33.3	1981	-22	1943	15	14.5	1979	1135	0	.0	.0	2.1	12.5	25.5	3.8
Mar	44.5	25.4	35.0	89	1998	31	42.3	1973	-21	1948	6	29.1	1984	938	1	.0	.0	9.3	4.2	23.9	.4
Apr	57.3	35.9	46.6	93	1941	20	51.0	1991	10	1965	1	40.5	1975	553	3	.0	.2	22.3	.2	11.4	.0
May	69.8	46.5	58.1	94+	1981	25	62.9	1991	26	1968	8	53.3	1984	240	27	.0	.4	30.4	.0	1.1	.0
Jun	77.5	55.0	66.3	99	1952	26	69.7	1999	27	1938	3	62.5	1985	62	102	.0	1.5	30.0	.0	.0	.0
Jul	82.2	60.0	71.1	100	1953	18	74.5	1988	40	1978	2	67.0	1992	10	206	.0	4.1	31.0	.0	.0	.0
Aug	79.7	58.3	69.0	99+	1955	5	72.7	1973	34	1982	29	65.5	1982	26	157	.0	1.9	31.0	.0	.0	.0
Sep	71.3	49.9	60.6	100+	1953	3	64.8	1999	24+	1947	28	56.3	1978	168	46	.0	.3	30.0	.0	.5	.0
Oct	59.7	38.8	49.3	91	1941	5	54.4	1971	16	1969	24	44.0	1974	484	2	.0	.0	27.5	.0	8.0	.0
Nov	47.5	30.8	39.2	82	1950	2	45.2	1975	-11	1938	26	34.6	1976	772	0	.0	.0	12.3	1.2	18.4	.0
Dec	36.0	20.1	28.0	71	1984	29	34.1	1984	-22	1969	25	13.6	1989	1142	0	.0	.0	2.4	10.1	27.2	1.6
Ann	57.6	37.5	47.5	100+	Sep 1953	3	74.5	Jul 1988	-28	Jan 1971	19	12.7	Jan 1994	6860	544	.0	8.4	230.0	45.0	145.0	11.5

+ 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/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: 1938-2001

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

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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	2.71	2.16	1.78	1986	26	6.44	1978	.42	1980	12.8	5.9	1.9	.4	.59	.84	1.24	1.60	1.96	2.35	2.78	3.30	3.98	5.06	6.09	
Feb	2.27	2.08	1.82	1941	7	5.02	1981	.24	1987	10.2	5.3	1.7	.2	.72	.93	1.25	1.53	1.79	2.06	2.36	2.72	3.17	3.87	4.53	
Mar	3.17	3.11	2.02	1997	31	5.90	1977	.26	1981	12.2	6.4	2.0	.6	1.12	1.42	1.85	2.21	2.56	2.92	3.31	3.76	4.34	5.24	6.06	
Apr	3.25	3.22	2.01	1968	24	7.95	1983	.60	1999	11.9	6.8	2.0	.6	1.16	1.47	1.91	2.28	2.64	3.00	3.39	3.85	4.44	5.35	6.18	
May	3.67	3.19	2.17	1968	29	7.92	1984	1.05	1980	13.0	7.7	2.6	.6	1.27	1.61	2.12	2.54	2.95	3.37	3.83	4.36	5.05	6.11	7.08	
Jun	3.74	3.29	3.47	1952	1	7.36	1973	.74	1997	11.6	7.3	2.6	.7	1.14	1.50	2.03	2.49	2.93	3.38	3.89	4.48	5.25	6.44	7.54	
Jul	3.50	2.94	3.49	1996	13	6.96	1975	1.34	1983	10.4	6.5	2.2	.7	1.31	1.63	2.10	2.50	2.87	3.25	3.66	4.14	4.76	5.70	6.56	
Aug	3.68	3.49	4.08	1950	31	7.04	1971	1.48	1972	10.8	7.0	2.4	.9	1.56	1.89	2.36	2.74	3.10	3.47	3.86	4.31	4.88	5.74	6.53	
Sep	3.31	2.61	5.60	1999	16	11.06	1999	1.33	1973	10.7	6.7	2.1	.7	1.01	1.32	1.79	2.19	2.58	2.99	3.44	3.97	4.64	5.71	6.69	
Oct	3.23	2.65	2.82	1987	4	8.03	1995	.83	1994	9.7	5.7	2.3	.7	.99	1.29	1.75	2.14	2.52	2.92	3.35	3.87	4.53	5.56	6.51	
Nov	3.31	3.54	2.21	1990	10	8.07	1972	.91	1978	11.6	6.8	2.2	.6	1.09	1.41	1.87	2.26	2.63	3.02	3.45	3.94	4.58	5.57	6.49	
Dec	2.76	2.68	3.30	1945	25	6.73	1973	.75	1989	12.1	6.5	1.8	.3	.84	1.10	1.49	1.83	2.16	2.50	2.87	3.31	3.88	4.77	5.59	
Ann	38.60	38.69	5.60	Sep 1999	16	11.06	Sep 1999	.24	Feb 1987	137.0	78.6	25.8	7.0	29.56	31.36	33.64	35.35	36.85	38.30	39.78	41.41	43.37	46.19	48.61	

+ 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: 1938-2001

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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	17.7	15.2	4	3	13.4	1983	15	47.8	1987	24	1996	13	13	1971	10.3	4.3	1.8	1.0	.2	19.7	14.1	10.4	3.7
Feb	12.8	11.5	4	4	13.5	1988	12	28.6	1993	22	1971	8	12	1971	7.3	3.1	1.4	.7	.2	17.4	13.0	10.4	4.4
Mar	10.9	6.8	1	2	22.0	1993	13	34.3	1993	28	1993	14	9	1993	5.9	2.3	1.0	.6	.1	8.0	5.0	3.2	1.1
Apr	2.9	.3	#	0	17.3	1982	6	17.7	1982	13	1982	7	1+	1997	1.5	.5	.2	.2	.1	.8	.5	.3	.1
May	.1	.0	#	0	1.6	1977	9	1.6	1977	#	1977	9	#	2000	.1	.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	.2	.0	#	0	6.5	1987	4	6.5	1987	2	1987	5	#	1987	.1	.0	@	@	.0	.1	.0	.0	.0
Nov	5.1	2.7	#	0	21.8	1971	25	24.6	1972	18	1971	26	2+	1972	2.9	1.3	.3	.2	.1	2.8	1.3	.8	.2
Dec	13.0	11.7	2	1	11.8	1978	25	31.4	1981	14	1981	19	5+	1995	7.6	3.8	1.3	.5	.1	12.7	6.7	3.6	.7
Ann	62.7	48.2	N/A	N/A	22.0	Mar 1993	13	47.8	Jan 1987	28	Mar 1993	14	13	Jan 1971	35.7	15.3	6.0	3.2	.8	61.5	40.6	28.7	10.2

+ 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

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<b>Freeze Data</b>									
<b>Spring Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of later date in spring (thru Jul 31) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	6/01	5/27	5/23	5/20	5/17	5/13	5/10	5/06	5/01
<b>32</b>	5/15	5/10	5/07	5/05	5/02	4/30	4/27	4/24	4/19
<b>28</b>	5/01	4/27	4/24	4/22	4/19	4/17	4/14	4/11	4/07
<b>24</b>	4/21	4/17	4/14	4/11	4/09	4/06	4/04	3/31	3/27
<b>20</b>	4/09	4/05	4/02	3/31	3/29	3/26	3/24	3/21	3/17
<b>16</b>	4/02	3/29	3/26	3/23	3/21	3/18	3/16	3/13	3/08
<b>Fall Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of earlier date in fall (beginning Aug 1) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	9/11	9/15	9/18	9/20	9/22	9/25	9/27	9/30	10/04
<b>32</b>	9/23	9/27	9/29	10/01	10/03	10/05	10/07	10/10	10/13
<b>28</b>	10/02	10/07	10/11	10/15	10/18	10/21	10/24	10/28	11/03
<b>24</b>	10/16	10/21	10/25	10/29	11/01	11/04	11/07	11/11	11/17
<b>20</b>	10/28	11/03	11/07	11/11	11/15	11/18	11/22	11/26	12/02
<b>16</b>	11/13	11/18	11/22	11/25	11/28	11/30	12/04	12/07	12/12
<b>Freeze Free Period</b>									
<b>Temp (F)</b>	<b>Probability of longer than indicated freeze free period (Days)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	145	139	135	131	128	125	121	117	112
<b>32</b>	168	163	159	156	153	151	147	144	139
<b>28</b>	201	194	189	185	181	177	173	168	161
<b>24</b>	226	219	214	209	205	201	197	192	185
<b>20</b>	255	246	240	235	230	226	220	214	206
<b>16</b>	272	265	260	255	251	247	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

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### Degree Days to Selected Base Temperatures (°F)

Base	Heating Degree Days (1)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Below													
65	1330	1135	938	553	240	62	10	26	168	484	772	1142	6860
60	1171	979	776	405	126	9	0	1	60	340	625	991	5483
57	1078	895	683	320	79	3	0	0	29	259	535	898	4779
55	1016	839	621	267	55	1	0	0	16	209	475	836	4335
50	861	699	471	153	17	0	0	0	3	110	333	682	3329
32	352	246	82	2	0	0	0	0	0	0	27	223	932

### Cooling Degree Days (1)

Base	Cooling Degree Days (1)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Above													
32	37	49	173	442	811	1029	1215	1153	866	542	245	67	6629
55	0	0	6	28	151	343	502	441	203	37	7	0	1718
57	0	0	4	20	115	287	441	380	159	24	5	0	1435
60	0	0	2	11	72	208	348	290	106	11	2	0	1050
65	0	0	1	3	27	102	206	157	46	2	0	0	544
70	0	0	0	0	7	35	89	61	14	0	0	0	206

### 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	4	9	61	231	574	799	975	914	633	312	99	17	4	13	74	305	879	1678	2653	3567	4200	4512	4611	4628
45	1	0	29	129	421	649	820	759	484	185	48	4	1	1	30	159	580	1229	2049	2808	3292	3477	3525	3529
50	0	0	12	65	276	499	665	604	337	94	20	0	0	0	12	77	353	852	1517	2121	2458	2552	2572	2572
55	0	0	6	29	158	352	510	449	208	39	7	0	0	0	6	35	193	545	1055	1504	1712	1751	1758	1758
60	0	0	2	11	78	215	355	298	110	10	1	0	0	0	2	13	91	306	661	959	1069	1079	1080	1080
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	3	45	147	343	508	654	605	388	184	52	6	0	3	48	195	538	1046	1700	2305	2693	2877	2929	2935

(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:

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## 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 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/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)