

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: LYNCHBURG MUNICIPAL AP, VA

1971-2000

COOP ID: 445120

Climate Division: VA 3

NWS Call Sign: LYH

Elevation: 940 Feet

Lat: 37° 20N

Lon: 79° 12W

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	44.5	24.5	34.5	79	1932	14	43.2	1974	-10	1985	21	22.0	1977	930	0	.0	.0	10.3	4.4	22.6	.4
Feb	48.6	26.9	37.8	82	1932	11	44.8	1976	-10	1996	5	26.9	1979	749	0	.0	.0	13.2	2.4	19.2	@
Mar	57.6	34.4	46.0	87+	1986	31	50.5	1977	7+	1993	15	41.3	1975	576	3	.0	.0	23.3	.3	11.5	.0
Apr	68.0	42.6	55.3	92+	1985	22	60.4	1985	20	1985	10	51.0	1997	294	19	.0	.4	28.7	.0	2.8	.0
May	75.5	51.2	63.4	100	1941	22	68.5	1991	31+	1997	11	58.0	1997	106	72	.0	.5	31.0	.0	.1	.0
Jun	82.5	59.5	71.0	104	1934	29	74.7	1981	40+	1997	5	66.7	1972	14	210	.0	3.9	30.0	.0	.0	.0
Jul	86.4	63.7	75.1	106	1936	10	79.5	1993	49+	1997	31	72.1	2000	7	336	.1	9.6	31.0	.0	.0	.0
Aug	85.1	62.4	73.8	104	1932	31	77.3	1980	45	1965	30	71.1	1986	1	290	.1	7.1	31.0	.0	.0	.0
Sep	78.3	55.9	67.1	102	1932	1	71.4	1998	35+	2001	26	64.4	1984	48	127	.0	2.3	30.0	.0	.0	.0
Oct	68.4	43.7	56.1	98	1941	6	64.4	1984	21+	1969	24	50.3	1988	276	16	.0	@	30.6	.0	2.2	.0
Nov	58.0	35.2	46.6	83+	1974	2	53.6	1985	8	1970	25	39.8	1976	538	2	.0	.0	23.2	.1	10.7	.0
Dec	48.4	27.9	38.2	79	1998	7	46.5	1984	-4	1983	25	28.4	1989	815	0	.0	.0	13.7	2.2	19.4	@
Ann	66.8	44.0	55.4	106	Jul 1936	10	79.5	Jul 1993	-10+	Feb 1996	5	22.0	Jan 1977	4354	1075	.2	23.8	296.0	9.4	88.5	.4

+ 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: 1930-2001

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

037-A

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Elevation: 940 Feet Lat: 37°20N

Lon: 79°12W

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	3.54	3.29	2.86	1936	19	7.97	1978	.49	1981	10.6	6.8	2.5	.7	.91	1.25	1.76	2.21	2.66	3.13	3.65	4.27	5.08	6.36	7.56
Feb	3.10	2.94	2.20	1984	14	6.08	1998	.54	1978	9.5	6.2	2.0	.7	.97	1.26	1.70	2.07	2.44	2.81	3.23	3.71	4.33	5.31	6.21
Mar	3.83	3.67	4.13	1936	17	9.24	1975	.96	1985	11.0	7.1	3.0	.9	1.07	1.43	1.98	2.46	2.93	3.42	3.97	4.61	5.44	6.75	7.97
Apr	3.46	3.27	3.67	1978	26	7.95	1987	1.21+	1986	9.7	6.1	2.4	.8	1.26	1.59	2.06	2.45	2.82	3.20	3.62	4.10	4.72	5.67	6.54
May	4.11	4.01	3.30	1960	8	9.07	1971	.88	1997	12.1	7.7	2.9	1.0	1.20	1.59	2.18	2.69	3.18	3.70	4.26	4.93	5.80	7.16	8.42
Jun	3.79	3.15	6.02	1972	21	9.97	1989	.47	1986	10.3	6.1	2.5	1.0	.67	1.00	1.56	2.08	2.60	3.18	3.83	4.62	5.67	7.37	8.99
Jul	4.39	4.41	3.61	1984	20	10.30	1984	1.15	1977	11.0	7.1	3.0	1.3	1.42	1.84	2.45	2.97	3.48	4.00	4.57	5.24	6.10	7.43	8.67
Aug	3.41	3.35	5.29	1998	8	7.10	1985	.73	1995	9.3	5.7	2.4	.9	.88	1.20	1.70	2.13	2.56	3.02	3.52	4.12	4.90	6.14	7.29
Sep	3.88	2.47	6.05	1996	6	12.57	1996	.02	1978	8.6	5.6	2.4	1.0	.23	.45	.93	1.45	2.05	2.75	3.60	4.69	6.21	8.81	11.39
Oct	3.39	2.41	4.98	1954	15	11.40	1976	.01	2000	7.7	4.8	2.2	1.0	.22	.42	.85	1.31	1.83	2.44	3.17	4.11	5.42	7.63	9.83
Nov	3.18	3.08	2.54	1934	29	8.77	1985	.93	1981	8.7	5.6	2.4	.8	.91	1.22	1.67	2.07	2.45	2.86	3.30	3.83	4.51	5.57	6.56
Dec	3.23	3.19	2.68	1948	3	7.15	1973	.56	1980	10.0	6.0	2.4	.6	.95	1.25	1.72	2.11	2.50	2.91	3.35	3.88	4.56	5.62	6.61
Ann	43.31	41.84	6.05	Sep 1996	6	12.57	Sep 1996	.01	Oct 2000	118.5	74.8	30.1	10.7	30.60	33.05	36.20	38.59	40.71	42.77	44.90	47.25	50.10	54.24	57.82

+ 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: 1930-2001

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

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Climate Division: VA 3

NWS Call Sign: LYH

Elevation: 940 Feet

Lat: 37°20N

Lon: 79°12W

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	5.6	3.5	1	0	14.3	1996	7	28.3	1987	21+	1996	8	4+	1997	2.7	1.4	.6	.3	.1	5.3	2.9	1.8	.6
Feb	6.9	3.4	1	1	13.3	1987	28	26.8	1987	15	1983	12	4	1979	2.8	1.6	.7	.4	.2	4.8	2.4	1.6	.4
Mar	2.8	1.0	#	0	10.1	1993	13	13.0	1993	13	1993	14	1+	1993	1.4	.7	.3	.2	@	1.2	.8	.4	.1
Apr	.4	.0	#	0	2.5	1971	7	4.8	1971	3	1971	7	#	1971	.3	.2	.0	.0	.0	@	@	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1996	.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	.1	.0	0	0	2.4	1979	10	2.4	1979	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.5	.0	#	0	5.9	1971	24	5.9	1971	3	1971	25	#	1989	.3	.1	.1	@	.0	.2	@	.0	.0
Dec	2.3	.1	#	0	6.9	1989	12	11.2	1989	8	1989	13	2	1989	1.2	.7	.3	.1	.0	2.2	.9	.5	.0
Ann	18.6	8.0	N/A	N/A	14.3	Jan 1996	7	28.3	Jan 1987	21+	Jan 1996	8	4+	Jan 1997	8.7	4.7	2.0	1.0	.3	13.7	7.0	4.3	1.1

+ 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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Climate Division: VA 3

NWS Call Sign: LYH

Elevation: 940 Feet

Lat: 37°20N

Lon: 79°12W

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	5/12	5/08	5/04	5/01	4/29	4/26	4/23	4/20	4/15
32	4/29	4/23	4/19	4/16	4/13	4/09	4/06	4/02	3/27
28	4/15	4/10	4/06	4/03	4/01	3/29	3/26	3/22	3/17
24	4/01	3/27	3/23	3/19	3/16	3/13	3/10	3/06	2/28
20	3/24	3/17	3/12	3/08	3/04	2/28	2/24	2/19	2/12
16	3/09	3/02	2/25	2/20	2/17	2/13	2/08	2/03	1/27
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	9/30	10/04	10/06	10/09	10/11	10/13	10/16	10/19	10/22
32	10/10	10/14	10/17	10/20	10/23	10/25	10/28	10/31	11/04
28	10/17	10/23	10/27	10/31	11/03	11/06	11/10	11/14	11/20
24	10/30	11/07	11/12	11/16	11/20	11/24	11/28	12/04	12/11
20	11/13	11/20	11/25	11/29	12/02	12/06	12/10	12/15	12/22
16	11/28	12/05	12/10	12/14	12/17	12/21	12/25	12/30	1/05
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	184	177	173	169	165	161	157	152	146
32	214	206	201	196	192	188	183	178	171
28	239	231	225	221	216	211	206	200	192
24	276	266	259	254	248	243	237	230	220
20	298	289	283	278	273	268	262	256	248
16	330	321	314	308	303	298	292	286	277

* 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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COOP ID: 445120

Climate Division: VA 3 NWS Call Sign: LYH Elevation: 940 Feet Lat: 37° 20N Lon: 79° 12W

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	930	749	576	294	106	14	7	1	48	276	538	815	4354
60	790	623	436	165	41	2	0	0	10	175	407	678	3327
57	697	539	348	104	18	0	0	0	3	119	325	590	2743
55	642	483	292	72	9	0	0	0	1	89	273	532	2393
50	497	354	171	21	1	0	0	0	0	36	162	392	1634
32	120	45	4	0	0	0	0	0	0	0	4	67	240

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	182	226	464	720	994	1196	1366	1326	1084	774	464	256	9052
55	3	5	32	119	291	506	653	613	397	132	32	8	2791
57	1	3	22	91	238	446	591	551	339	98	20	5	2405
60	0	1	11	56	165	358	498	459	257	58	9	2	1874
65	0	0	3	19	72	210	336	290	127	16	2	0	1075
70	0	0	0	3	19	101	196	161	57	3	0	0	540

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	67	106	258	492	754	965	1129	1092	856	534	260	109	67	173	431	923	1677	2642	3771	4863	5719	6253	6513	6622
45	26	53	153	350	599	815	974	937	706	382	157	55	26	79	232	582	1181	1996	2970	3907	4613	4995	5152	5207
50	5	19	78	221	444	665	819	782	556	247	84	26	5	24	102	323	767	1432	2251	3033	3589	3836	3920	3946
55	0	4	33	126	301	515	664	627	406	138	37	8	0	4	37	163	464	979	1643	2270	2676	2814	2851	2859
60	0	0	12	58	172	367	509	472	266	60	9	0	0	0	12	70	242	609	1118	1590	1856	1916	1925	1925
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	44	65	158	298	473	652	777	752	555	323	152	65	44	109	267	565	1038	1690	2467	3219	3774	4097	4249	4314

(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