

Climatology of the United States

No. 20

1971-2000

Station: KINGSTON, RI

COOP ID: 374266

Climate Division: RI 1

NWS Call Sign:

Elevation: 100 Feet

Lat: 41°29N

Lon: 71°32W

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	38.2	19.0	28.6	68	1932	14	36.1	1990	-23	1942	11	19.4	1981	1128	0	.0	.0	4.9	8.2	27.2	2.1
Feb	40.0	20.7	30.4	67	1991	5	37.1	1998	-22	1934	7	20.2	1978	971	0	.0	.0	5.2	5.8	24.1	1.3
Mar	47.4	28.0	37.7	82	1945	29	43.1	2000	-10	1967	19	31.9	1984	846	0	.0	.0	13.2	.9	21.3	@
Apr	57.3	35.9	46.6	89	1976	18	49.7	1976	9	1954	4	41.4	1972	553	0	.0	.0	25.4	@	11.1	.0
May	67.6	45.3	56.5	95	1996	20	61.4	1991	25+	1956	9	53.2	1971	272	6	.0	.3	30.9	.0	1.8	.0
Jun	76.0	54.5	65.3	95+	1929	18	68.3	1999	30+	1930	1	61.2	1985	61	67	.0	1.0	30.0	.0	.0	.0
Jul	81.2	60.2	70.7	99	1926	22	75.1	1994	38	1945	12	67.8	1978	5	183	.0	2.6	31.0	.0	.0	.0
Aug	80.1	59.2	69.7	100	1975	2	72.8	1988	33+	1940	25	66.9+	1986	8	153	@	1.0	31.0	.0	.0	.0
Sep	73.5	51.7	62.6	95	1953	2	65.8	1971	25	1957	29	59.1	1978	104	31	.0	.3	30.0	.0	.6	.0
Oct	63.5	40.2	51.9	87+	1927	2	56.9	1990	13	1940	28	47.7	1988	408	1	.0	.0	30.2	.0	8.1	.0
Nov	52.8	33.1	43.0	78	1990	3	47.2	1994	-4	1989	24	36.9	1976	662	0	.0	.0	20.2	.1	16.4	@
Dec	42.7	24.4	33.6	73	1998	7	39.3	1990	-17	1942	17	19.9	1989	975	0	.0	.0	8.2	3.9	24.4	.5
Ann	60.0	39.4	49.7	100	Aug 1975	2	75.1	Jul 1994	-23	Jan 1942	11	19.4	Jan 1981	5993	441	@	5.2	260.2	18.9	135.0	3.9

+ 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/normals/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1926-2001

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

001-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: KINGSTON, RI

COOP ID: 374266

Climate Division: RI 1

NWS Call Sign:

Elevation: 100 Feet

Lat: 41°29N

Lon: 71°32W

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	4.72	4.56	3.93	1962	7	12.41	1979	.90	1981	10.7	7.4	3.2	1.4	1.33	1.78	2.46	3.05	3.63	4.23	4.90	5.68	6.70	8.30	9.80	
Feb	3.83	3.44	3.26	1960	26	7.31	1998	.91	1987	9.0	6.3	2.7	1.1	1.35	1.71	2.23	2.68	3.10	3.53	4.00	4.55	5.26	6.35	7.35	
Mar	4.92	4.77	3.82	2001	30	10.06	1980	.92	1981	10.6	7.0	3.3	1.5	1.87	2.33	2.99	3.53	4.05	4.58	5.15	5.82	6.66	7.96	9.14	
Apr	4.71	4.68	3.46	1964	15	12.96	1983	1.21	1985	10.4	6.9	3.3	1.5	1.41	1.85	2.52	3.10	3.66	4.25	4.89	5.65	6.63	8.16	9.59	
May	4.14	3.25	4.24	1984	31	9.60	1978	1.03	1992	12.2	7.6	2.5	.9	1.20	1.59	2.18	2.70	3.20	3.72	4.30	4.98	5.86	7.24	8.52	
Jun	3.98	3.44	4.95	1982	5	14.35	1982	.05	1999	9.6	6.1	2.3	1.1	.38	.66	1.20	1.75	2.35	3.04	3.84	4.85	6.23	8.53	10.78	
Jul	3.31	2.41	4.23	1996	13	7.35	1996	1.05	1987	8.8	5.4	2.2	.9	.81	1.12	1.60	2.03	2.45	2.90	3.41	4.00	4.79	6.03	7.19	
Aug	4.40	3.52	5.34	1955	12	12.71	1985	.54	1993	9.0	6.2	2.8	1.2	.82	1.22	1.86	2.46	3.07	3.72	4.47	5.37	6.56	8.48	10.30	
Sep	4.16	4.09	6.48	1961	21	7.60	1999	.92+	1986	9.3	6.1	2.9	1.2	1.09	1.48	2.09	2.62	3.14	3.69	4.30	5.03	5.97	7.46	8.85	
Oct	3.92	3.76	5.09	1932	18	8.02	1977	.63	1994	9.3	6.3	2.8	1.1	1.25	1.62	2.17	2.64	3.10	3.57	4.08	4.69	5.46	6.68	7.80	
Nov	5.11	4.58	4.43	1983	25	13.00	1983	.76	1976	9.9	6.9	3.4	1.8	1.49	1.97	2.71	3.34	3.96	4.60	5.31	6.14	7.23	8.92	10.50	
Dec	4.62	4.27	4.28	1986	3	9.78	1986	.90	1989	11.0	7.5	3.1	1.3	1.22	1.65	2.32	2.91	3.49	4.10	4.78	5.58	6.62	8.27	9.81	
Ann	51.82	50.64	6.48	Sep 1961	21	14.35	Jun 1982	.05	Jun 1999	119.8	79.7	34.5	15.0	38.87	41.43	44.69	47.14	49.30	51.38	53.52	55.87	58.71	62.81	66.33	

+ 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: 1926-2001

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

Complete documentation available from:
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

Station: KINGSTON, RI

COOP ID: 374266

Climate Division: RI 1

NWS Call Sign:

Elevation: 100 Feet

Lat: 41°29N

Lon: 71°32W

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	9.4	8.8	1	1	13.0	1996	8	24.5	1978	20	1996	8	6	1996	4.0	2.7	1.1	.4	.1	9.6	5.7	2.9	.5
Feb	8.6	8.1	2	1	21.3	1978	7	24.8	1978	25	1978	8	8	1978	3.9	2.5	.9	.4	.1	8.4	4.6	2.0	.7
Mar	3.3	1.7	#	#	10.2	1999	15	13.6	1978	9	1978	18	4	1978	1.6	1.1	.6	.2	@	2.7	1.4	.4	.0
Apr	1.1	.0	#	0	7.4	1997	1	10.1	1996	7	1997	1	1	1982	.3	.3	.1	.1	.0	.3	.2	.1	.0
May	#	.0	#	0	#	1995	1	#+	1995	#	1977	9	#	1977	.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	2.2	1972	19	2.2	1972	5	1972	19	#+	1979	.1	@	.0	.0	.0	.0	.0	.0	.0
Nov	.8	.0	#	0	7.5	1989	23	7.5	1989	7	1989	23	1	1989	.2	.2	.1	.1	.0	.3	.2	.1	.0
Dec	4.7	4.2	1	#	16.5	1981	6	20.8	1981	16	1981	6	4	1981	2.4	1.4	.5	.3	@	3.6	1.9	1.5	.2
Ann	28.0	22.8	N/A	N/A	21.3	Feb 1978	7	24.8	Feb 1978	25	Feb 1978	8	8	Feb 1978	12.5	8.2	3.3	1.5	.2	24.9	14.0	7.0	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:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: KINGSTON, RI

COOP ID: 374266

Climate Division: RI 1

NWS Call Sign:

Elevation: 100 Feet

Lat: 41°29N

Lon: 71°32W

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	6/07	6/01	5/28	5/25	5/22	5/19	5/15	5/11	5/06
32	5/21	5/17	5/14	5/11	5/08	5/06	5/03	4/30	4/25
28	5/07	5/03	4/30	4/27	4/25	4/22	4/19	4/16	4/12
24	4/23	4/18	4/15	4/12	4/09	4/07	4/04	4/01	3/27
20	4/05	3/31	3/28	3/25	3/23	3/20	3/18	3/15	3/10
16	3/30	3/24	3/20	3/16	3/13	3/10	3/06	3/02	2/25
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	9/06	9/10	9/14	9/17	9/20	9/22	9/25	9/29	10/04
32	9/21	9/25	9/28	9/30	10/03	10/05	10/07	10/10	10/14
28	10/01	10/06	10/09	10/13	10/16	10/19	10/22	10/25	10/31
24	10/13	10/17	10/21	10/24	10/27	10/29	11/01	11/05	11/09
20	10/26	11/02	11/07	11/11	11/15	11/19	11/23	11/28	12/05
16	11/13	11/19	11/23	11/27	11/30	12/04	12/07	12/12	12/18
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	140	133	128	124	120	116	112	107	101
32	160	155	152	149	147	144	141	138	134
28	191	185	181	177	173	170	166	161	155
24	216	211	206	203	199	196	193	188	183
20	262	253	247	241	236	231	226	219	210
16	286	278	271	266	261	256	251	245	237

* 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

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

Station: KINGSTON, RI

COOP ID: 374266

Climate Division: RI 1

NWS Call Sign:

Elevation: 100 Feet

Lat: 41°29N

Lon: 71°32W

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	1128	971	846	553	272	61	5	8	104	408	662	975	5993
60	973	831	691	403	145	14	0	0	33	263	512	820	4685
57	880	747	598	315	87	4	0	0	13	186	423	727	3980
55	818	691	536	259	58	1	0	0	6	142	364	665	3540
50	663	551	383	136	15	0	0	0	1	60	226	518	2553
32	203	149	34	0	0	0	0	0	0	0	6	116	508

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	97	103	211	437	757	997	1201	1168	917	616	333	164	7001
55	0	0	0	6	101	308	488	455	233	45	1	0	1637
57	0	0	0	2	69	251	426	393	179	27	0	0	1347
60	0	0	0	0	34	170	333	300	109	10	0	0	956
65	0	0	0	0	6	67	183	153	31	1	0	0	441
70	0	0	0	0	0	15	67	48	3	0	0	0	133

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	22	24	77	230	529	777	971	935	690	387	161	48	22	46	123	353	882	1659	2630	3565	4255	4642	4803	4851
45	3	3	33	119	376	627	816	780	540	249	85	20	3	6	39	158	534	1161	1977	2757	3297	3546	3631	3651
50	0	0	8	53	238	477	661	625	392	137	39	1	0	0	8	61	299	776	1437	2062	2454	2591	2630	2631
55	0	0	3	16	119	329	506	471	256	66	9	0	0	0	3	19	138	467	973	1444	1700	1766	1775	1775
60	0	0	0	3	53	196	351	318	141	21	0	0	0	0	0	3	56	252	603	921	1062	1083	1083	1083
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	9	14	47	138	315	493	655	631	439	244	90	25	9	23	70	208	523	1016	1671	2302	2741	2985	3075	3100

(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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. 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