

Climatology of the United States

No. 20

1971-2000

Station: REPUBLIC, WA

COOP ID: 456974

Climate Division: WA 9

NWS Call Sign:

Elevation: 2,610 Feet Lat: 48°39N

Lon: 118°44W

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	29.7	15.4	22.6	51	1971	31	30.4	1981	-33	1957	24	9.4	1979	1316	0	.0	.0	@	17.0	30.0	4.6
Feb	37.5	19.7	28.6	58+	1988	21	36.4	1991	-25	1956	1	19.5	1989	1019	0	.0	.0	1.3	6.6	26.4	2.1
Mar	47.5	25.3	36.4	72	1994	31	42.6	1992	-19	1955	4	28.8	1971	887	0	.0	.0	11.7	.6	26.8	.2
Apr	57.7	30.4	44.1	87	1977	24	49.1	1987	13	1975	1	39.3	1982	629	0	.0	.0	25.1	.0	18.9	.0
May	65.7	37.6	51.7	96	1986	29	57.1	1993	11	1954	1	47.3	1974	415	1	.0	.2	30.1	.0	6.8	.0
Jun	72.6	43.5	58.1	96	1973	23	63.6	1992	26	1952	13	53.5	1981	223	14	.0	1.0	30.0	.0	.8	.0
Jul	80.4	47.2	63.8	103	1994	23	69.6	1985	29	1952	4	57.9	1993	110	71	.3	5.3	31.0	.0	.1	.0
Aug	81.0	46.5	63.8	102	1961	5	68.4	1986	30+	1969	29	59.0+	1995	106	66	.1	5.8	31.0	.0	.2	.0
Sep	71.4	38.7	55.1	98	1967	1	60.7	1998	19+	2000	23	49.3	1972	314	14	.0	.7	29.8	.0	5.1	.0
Oct	56.8	30.3	43.6	84	1992	2	49.1	1988	1	1984	31	40.5+	1984	665	0	.0	.0	23.5	.1	19.1	.0
Nov	38.2	24.2	31.2	64	1975	4	37.0	1999	-20	1985	23	16.4	1985	1015	0	.0	.0	2.3	6.1	24.6	.8
Dec	28.9	16.1	22.5	52	1956	10	30.3	1979	-38	1968	30	12.2	1984	1319	0	.0	.0	@	19.4	29.9	3.6
Ann	55.6	31.2	43.5	103	Jul 1994	23	69.6	Jul 1985	-38	Dec 1968	30	9.4	Jan 1979	8018	166	.4	13.0	215.8	49.8	188.7	11.3

+ 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

083-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: REPUBLIC, WA

COOP ID: 456974

Climate Division: WA 9

NWS Call Sign:

Elevation: 2,610 Feet Lat: 48°39N

Lon: 118°44W

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	1.41	1.50	2.70	1953	2	3.17	1998	.39	1989	9.0	4.9	.4	.0	.45	.58	.78	.95	1.11	1.28	1.47	1.68	1.96	2.40	2.80
Feb	1.33	1.12	1.04	1958	25	3.21	1999	.07	1988	7.2	4.6	.3	.0	.27	.39	.59	.76	.94	1.13	1.35	1.61	1.96	2.51	3.03
Mar	1.33	1.18	1.91	1995	15	3.48	1984	.22	1979	7.2	4.2	.4	.1	.38	.50	.69	.86	1.02	1.19	1.38	1.60	1.88	2.33	2.75
Apr	1.31	1.24	.93	1969	29	2.60	1993	.15	1977	7.1	4.2	.5	.0	.36	.49	.68	.84	1.00	1.17	1.36	1.58	1.87	2.32	2.74
May	2.05	1.44	1.68	1998	27	6.26	1998	.33	1982	9.4	5.7	.8	.2	.39	.57	.87	1.15	1.43	1.74	2.08	2.50	3.05	3.94	4.79
Jun	1.75	1.59	1.56	1991	7	3.78	1991	.10	1974	7.6	4.7	.9	.2	.43	.60	.85	1.08	1.30	1.54	1.80	2.12	2.53	3.17	3.78
Jul	1.28	1.05	1.44	1982	1	4.15	1993	.02	1994	5.2	3.4	.8	.1	.07	.14	.29	.46	.66	.89	1.18	1.54	2.06	2.95	3.83
Aug	1.07	1.04	2.50	1983	10	2.63	1978	.00	1988	4.3	2.7	.6	.1	.02	.08	.21	.36	.53	.73	.98	1.30	1.75	2.52	3.30
Sep	.93	.77	1.37	1973	20	2.88	1997	.00	1990	5.1	2.6	.4	.1	.03	.09	.21	.34	.49	.66	.87	1.13	1.49	2.11	2.71
Oct	.87	.84	.85	1996	28	2.03	1981	.00	1972	5.1	2.9	.4	.0	.03	.10	.23	.35	.49	.65	.84	1.07	1.39	1.93	2.46
Nov	1.72	1.32	.96	1951	30	4.67	1973	.09	1976	9.3	5.7	.5	.0	.27	.42	.67	.90	1.15	1.42	1.72	2.09	2.59	3.41	4.18
Dec	1.81	1.34	1.42	1987	6	4.15	1996	.36	1989	9.9	6.6	.7	@	.41	.58	.84	1.08	1.32	1.58	1.86	2.20	2.65	3.36	4.03
Ann	16.86	16.95	2.70	Jan 1953	2	6.26	May 1998	.00+	Sep 1990	86.4	52.2	6.7	.8	10.96	12.06	13.49	14.60	15.59	16.55	17.55	18.67	20.04	22.04	23.79

+ 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

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: REPUBLIC, WA

COOP ID: 456974

Climate Division: WA 9

NWS Call Sign:

Elevation: 2,610 Feet

Lat: 48°39N

Lon: 118°44W

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	11.4	11.6	10	10	9.3	1998	14	21.7	1982	26	1997	19	23	1997	7.7	4.3	1.2	.2	.0	26.9	24.8	22.0	15.3
Feb	6.0	6.5	10	10	9.6	1973	4	13.5	1989	26	1997	14	24	1997	3.7	2.1	.6	.2	.0	21.6	19.9	18.9	11.1
Mar	2.5	1.2	3	1	5.0	1985	28	11.4	1971	24	1997	1	14+	1997	1.6	1.0	.2	@	.0	5.1	3.8	2.9	1.1
Apr	.4	.0	#	0	2.5	1986	12	3.5+	1986	7	1975	2	1	1975	.3	.2	.0	.0	.0	.3	.2	.2	.0
May	.0	.0	0	0	.5	1988	3	.5	1988	0	0	0	0	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	.4	.0	#	0	5.0	1984	26	5.0	1984	3	1991	24	#+	1994	.2	.1	.1	@	.0	.2	@	.0	.0
Nov	7.2	5.7	1	#	6.8	1975	30	30.5	1973	14	1994	29	5	1984	3.7	2.5	.8	.3	.0	6.3	3.3	1.6	.2
Dec	15.7	15.1	6	5	6.7	1980	3	41.7	1996	30	1996	30	20	1996	7.9	5.5	1.5	.3	.0	23.9	20.0	14.3	6.6
Ann	43.6	40.1	N/A	N/A	9.6	Feb 1973	4	41.7	Dec 1996	30	Dec 1996	30	24	Feb 1997	25.1	15.7	4.4	1.0	.0	84.3	72.0	59.9	34.3

+ 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/normal/usnormals.html

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

Station: REPUBLIC, WA

COOP ID: 456974

Climate Division: WA 9

NWS Call Sign:

Elevation: 2,610 Feet

Lat: 48°39N

Lon: 118°44W

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	7/10	7/04	6/30	6/26	6/23	6/20	6/16	6/12	6/07
32	6/25	6/17	6/11	6/06	6/02	5/28	5/23	5/18	5/10
28	5/27	5/21	5/17	5/14	5/11	5/08	5/05	5/01	4/25
24	5/07	5/02	4/28	4/24	4/21	4/18	4/15	4/11	4/05
20	4/21	4/14	4/09	4/05	4/01	3/28	3/24	3/19	3/12
16	3/26	3/19	3/15	3/11	3/07	3/03	2/27	2/23	2/16
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	8/13	8/18	8/22	8/25	8/27	8/30	9/02	9/06	9/10
32	8/29	9/03	9/07	9/10	9/13	9/16	9/20	9/23	9/29
28	9/14	9/18	9/21	9/24	9/26	9/29	10/01	10/04	10/08
24	9/25	9/30	10/03	10/06	10/09	10/12	10/14	10/18	10/22
20	10/02	10/08	10/12	10/16	10/20	10/23	10/27	11/01	11/07
16	10/22	10/28	11/02	11/06	11/10	11/14	11/18	11/23	11/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	85	78	73	68	64	60	56	51	44
32	131	122	115	108	103	97	91	84	74
28	160	153	147	142	138	133	128	123	115
24	194	186	180	175	170	165	160	154	146
20	230	220	213	207	201	195	189	182	172
16	275	266	259	253	247	242	236	229	219

* 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: REPUBLIC, WA

COOP ID: 456974

Climate Division: WA 9

NWS Call Sign:

Elevation: 2,610 Feet Lat: 48°39N Lon: 118°44W

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	1316	1019	887	629	415	223	110	106	314	665	1015	1319	8018
60	1161	879	732	479	268	113	41	38	193	510	865	1164	6443
57	1068	795	639	390	189	66	18	17	134	418	775	1071	5580
55	1006	739	577	332	144	42	10	9	101	357	715	1009	5041
50	851	599	424	199	60	10	1	1	41	215	567	854	3822
32	343	162	45	2	0	0	0	0	0	4	148	347	1051

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	50	68	181	364	609	781	985	983	690	361	123	51	5246
55	0	0	0	3	40	133	282	280	101	2	0	0	841
57	0	0	0	1	23	97	228	225	74	1	0	0	649
60	0	0	0	0	9	54	157	153	43	0	0	0	416
65	0	0	0	0	1	14	71	66	14	0	0	0	166
70	0	0	0	0	0	2	21	17	3	0	0	0	43

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	0	0	26	156	371	548	747	745	458	159	11	0	0	0	26	182	553	1101	1848	2593	3051	3210	3221	3221
45	0	0	1	70	228	399	592	590	314	70	0	0	0	0	1	71	299	698	1290	1880	2194	2264	2264	2264
50	0	0	0	21	119	254	437	435	186	22	0	0	0	0	0	21	140	394	831	1266	1452	1474	1474	1474
55	0	0	0	0	46	135	288	287	87	3	0	0	0	0	0	0	46	181	469	756	843	846	846	846
60	0	0	0	0	11	54	154	153	25	0	0	0	0	0	0	0	11	65	219	372	397	397	397	397
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	33	134	255	349	471	478	328	134	3	0	0	0	33	167	422	771	1242	1720	2048	2182	2185	2185

(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