

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: GRANTS PASS, OR

1971-2000

COOP ID: 353445

Climate Division: OR 3

NWS Call Sign:

Elevation: 925 Feet

Lat: 42° 26N

Lon: 123° 21W

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	47.4	31.1	39.3	69	1987	27	43.9	1998	1	1930	13	35.5	1982	799	0	.0	.0	12.7	.0	14.0	.0
Feb	54.1	32.7	43.4	76+	1971	10	48.8	1995	5+	1950	2	38.4	1989	605	0	.0	.0	21.3	.2	10.9	.0
Mar	59.8	34.1	47.0	84+	1960	20	51.1	1986	18	1956	6	43.3	1975	559	0	.0	.0	28.9	.0	9.7	.0
Apr	65.6	35.8	50.7	94	1957	29	56.1	1990	24	1997	2	44.5	1975	430	0	.0	.2	29.6	.0	5.3	.0
May	73.1	40.5	56.8	102	1986	30	61.2	1992	26	1999	9	51.7	1977	258	4	.1	2.3	30.9	.0	1.0	.0
Jun	80.8	45.4	63.1	108+	1961	16	68.8	1987	30	2001	3	58.9	1980	110	52	.6	6.6	30.0	.0	.0	.0
Jul	88.8	49.5	69.2	114	1928	23	73.0	1990	37	1929	20	62.2	1993	30	158	3.5	16.3	31.0	.0	.0	.0
Aug	89.0	48.9	69.0	108+	1998	5	73.3	1986	30	1932	17	65.3	1975	23	146	3.4	16.3	31.0	.0	.0	.0
Sep	82.7	43.0	62.9	108	1988	2	67.4	1990	27	1929	26	57.5	1978	121	55	.8	8.9	30.0	.0	.5	.0
Oct	70.4	37.4	53.9	98	1988	1	60.8	1988	20	1971	29	50.1	1971	347	3	.0	.9	30.8	.0	4.0	.0
Nov	53.3	34.6	44.0	77	1991	7	50.1	1995	12+	1978	13	37.0	1985	632	0	.0	.0	22.3	.0	6.9	.0
Dec	45.7	31.3	38.5	68	1929	13	44.0	1995	-1+	1972	10	32.7	1990	821	0	.0	.0	9.6	.7	13.5	.1
Ann	67.6	38.7	53.2	114	Jul 1928	23	73.3	Aug 1986	-1+	Dec 1972	10	32.7	Dec 1990	4735	418	8.4	51.5	308.1	.9	65.8	.1

+ 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: 1928-2001

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

050-A

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Elevation: 925 Feet Lat: 42°26N

Lon: 123°21W

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	4.96	4.61	3.35	1974	15	11.89	1995	.15	1985	15.8	9.3	3.4	1.2	.74	1.16	1.88	2.56	3.28	4.06	4.95	6.05	7.53	9.93	12.24
Feb	4.36	3.86	4.30	1956	21	10.68	1983	.18	1988	15.1	9.2	3.1	.9	.83	1.22	1.86	2.45	3.05	3.70	4.43	5.31	6.49	8.37	10.16
Mar	3.66	3.03	2.30	1938	16	8.82	1983	1.00	1988	15.9	8.4	2.1	.7	1.00	1.35	1.88	2.34	2.79	3.27	3.79	4.41	5.22	6.49	7.68
Apr	2.02	2.03	2.00	1937	13	4.60	1982	.31	1987	11.6	5.3	1.1	.2	.37	.55	.84	1.12	1.40	1.70	2.04	2.46	3.01	3.90	4.75
May	1.21	.81	1.61	1942	25	4.08	1990	.00	1982	8.4	3.7	.4	.1	.05	.15	.33	.50	.69	.91	1.16	1.48	1.92	2.65	3.37
Jun	.53	.33	1.50	1947	5	2.72	1982	.00+	2000	4.4	2.0	.2	.0	.00	.02	.07	.15	.23	.34	.47	.64	.88	1.30	1.73
Jul	.37	.11	1.52	1947	26	2.77	1992	.00+	1998	2.0	1.0	.1	@	.00	.00	.00	.00	.04	.11	.22	.38	.62	1.08	1.57
Aug	.45	.20	.75	1976	6	3.33	1976	.00+	1998	2.7	1.4	.2	.0	.00	.00	.00	.00	.04	.15	.30	.50	.80	1.33	1.88
Sep	.87	.76	2.86	1977	28	4.19	1977	.00+	1999	4.6	2.3	.5	@	.00	.00	.02	.11	.25	.44	.68	1.01	1.49	2.34	3.23
Oct	2.07	1.88	5.27	1950	29	6.10	1979	.03+	1988	7.9	4.4	1.6	.3	.12	.24	.49	.77	1.09	1.46	1.92	2.50	3.33	4.72	6.12
Nov	5.12	3.73	4.82	1996	19	15.15	1973	.67	1976	16.7	9.6	3.3	.9	.73	1.16	1.89	2.60	3.34	4.16	5.10	6.25	7.80	10.33	12.77
Dec	5.40	4.16	4.07	1965	28	20.23	1996	.65	1976	16.3	9.7	3.5	1.1	.68	1.11	1.87	2.63	3.42	4.30	5.33	6.59	8.31	11.12	13.85
Ann	31.02	29.65	5.27	Oct 1950	29	20.23	Dec 1996	.00+	Jun 2000	121.4	66.3	19.5	5.4	17.53	19.91	23.09	25.58	27.86	30.10	32.46	35.12	38.40	43.29	47.61

+ 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

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NWS Call Sign:

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Lat: 42° 26N

Lon: 123° 21W

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	1.0	.0	#	0	7.5	1971	13	14.5	1971	10	1971	14	1	1971	.5	.2	.1	.1	.0	.2	.1	.1	@
Feb	.5	.0	#	0	2.5	1971	27	6.3	1971	1	1971	27	#	1971	.4	.3	.0	.0	.0	@	.0	.0	.0
Mar	.2	.0	#	0	3.5	1971	16	3.5	1971	1+	1980	15	#+	1980	.2	.1	.1	.0	.0	.1	.0	.0	.0
Apr	#	.0	0	0	#	1986	25	#+	1986	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	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	#	.0	0	0	#	1971	27	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.0	.0	0	0	.4	1984	24	.4	1984	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Dec	1.3	.0	#	0	5.0	1972	12	12.5	1972	7	1972	13	2	1972	.7	.6	.1	.1	.0	.6	.2	.1	.0
Ann	3.0	.0	N/A	N/A	7.5	Jan 1971	13	14.5	Jan 1971	10	Jan 1971	14	2	Dec 1972	1.9	1.2	.3	.2	.0	.9	.3	.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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Lat: 42° 26N

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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	6/10	6/04	5/31	5/27	5/23	5/20	5/16	5/12	5/06
32	5/17	5/10	5/06	5/02	4/28	4/24	4/20	4/15	4/09
28	4/27	4/15	4/07	3/31	3/24	3/18	3/11	3/02	2/19
24	3/18	3/07	2/27	2/20	2/14	2/07	1/31	1/23	1/10
20	2/16	2/02	1/23	1/14	1/05	12/26	12/13	0/00	0/00
16	1/24	1/06	12/21	12/01	0/00	0/00	0/00	0/00	0/00
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	9/10	9/17	9/21	9/25	9/29	10/03	10/07	10/12	10/19
32	9/15	9/25	10/03	10/09	10/15	10/21	10/27	11/03	11/13
28	10/12	10/24	11/01	11/09	11/16	11/22	11/30	12/08	12/20
24	11/08	11/20	11/29	12/06	12/13	12/21	12/29	1/08	1/28
20	11/13	12/01	12/14	12/25	1/06	1/20	2/10	0/00	0/00
16	12/01	12/21	1/07	1/29	0/00	0/00	0/00	0/00	0/00
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	158	148	140	134	128	122	116	109	99
32	209	195	185	177	169	161	153	143	130
28	295	274	260	247	235	224	211	196	176
24	>365	336	319	308	299	290	281	270	256
20	>365	>365	>365	>365	>365	354	327	310	291
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

* 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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Elevation: 925 Feet Lat: 42°26N Lon: 123°21W

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	799	605	559	430	258	110	30	23	121	347	632	821	4735
60	644	465	405	290	129	38	6	3	48	209	482	666	3385
57	551	381	315	213	73	15	1	0	23	140	395	573	2680
55	489	326	258	168	46	8	0	0	13	102	339	511	2260
50	335	197	134	83	9	0	0	0	2	37	212	362	1371
32	11	1	0	0	0	0	0	0	0	0	7	23	42

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	235	320	464	560	768	932	1152	1146	925	679	365	225	7771
55	0	1	9	38	101	250	439	433	247	68	8	0	1594
57	0	0	4	23	66	197	378	371	197	44	4	0	1284
60	0	0	0	10	29	130	289	280	133	20	0	0	891
65	0	0	0	0	4	52	158	146	55	3	0	0	418
70	0	0	0	0	0	13	68	55	15	0	0	0	151

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	81	159	266	385	575	758	967	955	748	486	189	80	81	240	506	891	1466	2224	3191	4146	4894	5380	5569	5649
45	23	65	132	240	420	608	812	800	598	333	81	28	23	88	220	460	880	1488	2300	3100	3698	4031	4112	4140
50	0	18	47	124	275	458	657	645	448	195	23	2	0	18	65	189	464	922	1579	2224	2672	2867	2890	2892
55	0	1	2	52	152	309	502	490	302	88	3	0	0	1	3	55	207	516	1018	1508	1810	1898	1901	1901
60	0	0	0	12	70	182	347	338	171	28	0	0	0	0	0	12	82	264	611	949	1120	1148	1148	1148
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	29	90	171	262	369	471	591	580	478	329	83	27	29	119	290	552	921	1392	1983	2563	3041	3370	3453	3480

(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